



PH: (414) 358-0333 • Fax: (414) 358-3337 • BBS: (414) 358-3472 **AMATEUR ELECTRONIC SUPPLY** inc. MILWAUKEE, WI WICKLIFFE, OH ORLANDO, FL CLEARWATER, FL LAS VEGAS, NV 1-800-558-0411 1-800-321-3594 1-800-327-1917 1-800-557-4237 IN-STATE

IG-738 THE NEXT GENERATION



Don't let your contest results depend on "previous generation" technology. Get the Dxer's advantage with the "Next Generation" IC-738.

FEATURES

- □ New DDS Technology
- □ 100W (SSB, CW, FM) 40W AM Standard
- □ AT-170 High Speed Automatic Antenna Tuner (160-10 Meters)
- **Two Antenna Connectors** (Front Panel Switchable)
- □ 4 Function Meter (SWR/ALC/PO/S) D VOX
- D RF Gain
- Pass Band Tuning
- D Notch Filter
- 10 Electronic Scratch Pad Memories 101 Memory Channels
- (10 split, 2 scan edge)
- □ RIT/∆Tx Functions
- Quick Split w/Simultaneous Display Speech Compressor
- □ Attenuator (20 db)
- □ Pre Amplifier (20 db)
- Double Band Stacking Registers
- □ Set Mode Menu to **Customize Operation**
- Menu Selectable CW Filters
- D Noise Blanker
- D Fast/Slow AGC
- High Dynamic Range/Low Distortion
- Built-in Electronic Keyer
- Direct Keyboard Entry □ Hand Microphone Included (HM-36)
- Computer Control Port (CI-V)

n	High tech and compact, the PLL unit improves frequency resolution to 1 Hz step. You'll experience an analog feeling of the tuning, faster PLL lockup times, improved phase noise blocking and high dynamic range.	
n	AT-170 Advanced Tuner Preset memories, in 100kHz steps, provide very high speed tuning. "Automatic re-tune" turns the AT-170 on, and tunes, when SWR exceeds 1.5:1 "Through inhibit" permits tuning at SWR conditions up to 3:1 (when your antenna be can't tuned to 1.5:1). "Sensitive/Normal" gives you the choice of minimum possible SWR or 1.5:1. This eliminates tuning each time you transmit, unless desired.	
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DDS (Direct Digital Synthesis) ICOM's unique DDS IC is used for the LPL Circuit.

NEXT GENERATION TECHNOLOGY

100% Full Duty The final power amplifier outputs a stable 100 W in SSB. CW and FM. modes. The aluminum die cast frame, large heatsink and innovative twin cooling fan system stabilize the PA circuit to ensure 100% duty cycle operation.

Quick Split Operation Pre-programmable offsets, simultaneous display of Tx and Rx frequencies and XFC (Transmit Frequency Change) give you a competitive edge when calling Dx stations operating split frequencies. "Split Lock" permits changes in your Management transmit frequency while protecting your receive frequency against accidental changes.

Next Generation **CW** Operation

Next

Next Generation

Tuner

Next

Next

Generation

Duty Cycle

Generation

Frequency

Generation

Circuitry

CW Contest Package Our built-in electronic keyer with separate key jack, full breakin (QSK) and separate jacks for an extended CW key or memory keyer, make a competitive package for CW contesting. For example, use a memory keyer (or TNC with (W capability) to make contacts easily, then use your paddle for normal operation.

CO

ICOM America, Inc. Corporate Headquarters 2380-116th Ave. N.E., Bellevue, WA 98004

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AES® Amater	ar Radio Equipmo	ent Price List				
AEA (AEA)Reg SaleDC-1 Cigarette lighter cord $\Delta mwfv$ \$ 7.00KK-1 Keyboard keyer for IBM PC199.00189%DATA CONTROLLERSPK-121200 bps VHF/UHF packet controller\$ 129.00119%100K/PK-12100K MailDrop upgrade; PK-1250.00119%REMEMBER to Ask Your	AEA - continued Reg Sale AC-1 12vdc 600 ma adaptor 21.00 PK-88 RS-232 TNC controller Dmfv 149.00 129 ⁹⁵ AC-1 12vdc 600 ma adaptor 21.00 21.00 PC-Pakratt-88 IBM program for PK-88 49.00 PK-96 9600 baud packet controller/18K mem 229.00 199 ⁹⁵ 100K 100K memory upgrade for PK-96 50.00 279.00 249 ⁹⁵ PK-96/100K 9600 baud controller/100K mem 279.00 249 ⁹⁵ 399.00 CALL PK-900 Multi-mode digital controller w/FAX 569.00 469 ⁹⁵ 569.00	AEA - continued Reg Sale ARE-20 Digitalker Voice synth freq counter ∆mv 250.00 199*5 RL-60 Radio Link HF remote via handheld 329.00 289*5 ST-1 Satellite tracking hardware/software 399.00 369*5 AVT Master Amiga Video Sys; SSTV/FAX ∆mwfv 319.00 239*5 DM-1 2m/220/440 FM deviation meter 169.00 159*5 430-16 16 el 430MHz 14.3db beam ∆wfv 119.00 89*5 ATV Workbook				
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Low-Cost Shipping see details p. 152 Copyright [®] 1994 AMATEUR ELECTRONIC SUPPLY [®] All prices & specifications are subject to change without notice. Due to foreign currency fluctuations, promotions, manufacturer's coupons, etc. prices may vary. Please confirm prices before ordering. AES [®] is not responsible for typographical errors or omissions.	Combo PC-Pakratt for Windows & Log Windows † 169.00 159 ³⁵ Extra PK-232 to radio open ended cable 9.00 9.00 IH CABLE PK-232 - Icom/Yaesu/Alinco HT 25.00 IM CABLE PK-232 - Icom 8-pin mic cable 25.00 IW CABLE PK-232 - Icom IC-W2A cable 25.00 IW CABLE PK-232 - Icom IC-W2A cable 30.00 KA CABLE PK-232 - Kenwood 13-pin cable 30.00 KH CABLE PK-232 - Kenwood HT cable 25.00 KM CABLE PK-232 - Kenwood HT cable 25.00	105 50 Years of ARRL 4.00 110 200 Meters and Down (early ham radio) 8.00 115 AX.25 (packet radio) 8.00 120 Advanced Class License Manual 8.00 126 Antenna Book w/IBM software 30.00 130 Antenna Compendium 10.00 135 Antenna Compendium II 12.00 140 Antenna Impedance Matching 20.00				
CODES SHOWN NEXT TO PRICES (T) • Item too large for UPS. Truck shipment only. No COD, send payment in advance or use charge card for merchandise; freight charges will be collected upon delivery. NOTE: Charges for truck shipments from 1-99 lbs are running a minimum of \$80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.	YM CABLE PK-232 - Yaesu 8-pin mic cable 25.00 RS-232 Y cable	145 Complete DX'er 12.00 150 Data Book 15.00 155 Extra Class License Manual 8.00 160 FCC Rule Book 9.00 165 First Steps in Radio 6.00 170 General Class License Manual 12.00 175 Gil Cartoon Book 5.00 180 Grid Locator Atlas 5.00				
 (D) • DISCONTINUED by Manufacturer but still available from stock in limited quantities when this price list was published. (†) • TEMPORARY LOW PRICE due to Special Purchase, overstock, etc. Quantities may be limited at price shown. (Δ) • Item not discontinued by Manufacturer but probably will not be available from our stores when present stock sold out. End of line STORE LOCATION CODES (means Close-out or Special items were at these stores): (m) Milwaukee; (w) Wickliffe; 	50' shielded loop cable, new style29.00100' shielded loop cable w/connectors39.00IT-1 IsoTuner Automatic tuner for IsoLoop279.00IsoPole 1442m base station antenna59.00IsoPole 220220MHz base station antenna59.00IsoPole 440440MHz base station antenna89.00HR-12m ½ wave telescopic whip w/BNC24.00	185 Hints and Kinks 10.00 190 Hostage in the Woods 6.00 195 Introduction to Morse Code cassettes 10.00 200 Log Book 3.50 205 Low Profile Amateur Radio 8.00 210 Morse Code the Essential Language 6.00 215 Morse Tutor software for IBM 20.00 220 Night Signals 6.00				
(f) Orlando; (c) Clearwater; (v) Las Vegas; (*) all AES stores STORE HOURS: Mon thru Fri 9-5:30; Sat 9-3 Order from your nearest AES® Store for <u>1 to 2</u> <u>day delivery</u> to most areas in the 48 States	HR-2 220MHz ½ wave telescopic whip w/BNC 24.00 HR-4 440 ½ wave telescopic whip/BNC Dwfv 24.00 SWR-121 HF Antenna performance analyzer 399.00 349 ³⁵ SWR-121 V/U VHF/UHF ant performance analy 469.00 399 ³⁵ AA.COM SWR curve IBM soft; 121/121V/U 75.00 69 ⁹⁵ Carrying Case For SWR-121/121V/U 29.00 MISCELLANEOUS APE 60/UL 60 Hamink Phase controller \$260.00 220 ⁸⁵	230 Novice Notes: The Book 6.00 236 Now You're Talking II (new ham) 19.00 240 Operating Manual 18.00 250 1995 Passport to Worldband Radio 19.95 255 QST binder 12.00				
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The Clearwater, FL 800-line is In-State, only

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EBP-6NA 9.6v 450ma nicad batteryDw EBP-8NAZ 12v 700ma nicad batteryDm EDC-2 Cig charging cord; EBP-7NAZ	83.00 9.00	69 ⁹⁵	DF
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	DX-B 160-80-40-30m 60' sloper ant	69.95	
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	Delta-C Kit w/ctr ins/2 end ins/static protect	29.95	43.
	Delta-CIN Antenna end insulatoreach	1.00	
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	6-01 Mastering the Morse Code	\$ 1.50 2.50	
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	17-01 Extra Class FCC Test Manual	5.95	
	23-01 Novice Theory Course	6.95	
	26-01 Advanced Class FCC Test Manual	5.95	
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80	78-01 Codeless Technician FCC Test Manual	9.95	
	102-01 Amateur Radio Theory Course	7.95	
	EN-1 Novice Class Exam	1.95	
	CODE COURSES - CASSETTE TAPES		
	100-T Junior code tape, 0-7½ wpm	\$ 5.95	
	101-T Senior code tapes, 0-18 wpm 103-T Advanced code tape, 8-18 wpm	10.95	
	104-T Extra Class code tape, 20 wpm	5.95 5.95	
ALL	105-QT General Class QSO code course tape	5.95	
	106-QT Extra Class QSO code course tape	5.95	
	107-PC Morse Code Course for IBM	19.95	
	NP-1 Novice Code & Theory Course	10.95	
	CODE PRACTICE OSCILLATORS & CODE KE OCM-2K Code oscillator & CW monitor kit		
	OCM-2W Wired oscillator & CW monitor	\$ 19.95 24.95	
	K-1 Bakelite type key	7.95	
	K-4 Brass type key	12.95	
	PREAMPLIFIERS		
	TPA Tunable preamp & indoor active ant		699
	P-9T Power supply for TPA	9.50	1
	PT-3 2-54 MHz transceiver preamp	124.95	1199
	P-12T Power supply for PT-3	9.95	
	M-300 20K ohms/volt multimeter	\$ 19 95	99
	FILTERS	ψ 10.00	
ALL	HP-75T 75 ohm high-pass filter	\$ 12.95	
ALL	HP-300T 300 ohm high-pass filter	12.95	
4495	AMERITRON (AMR)		
ALL	AL-80B 1kw PEP out linear (3-500Z)		1069
ALL	AL-82 1.5kw PEP out linear (2 3-500Zs)	2095.00	1769
ALL	AL-811 600w PEP out linear (3 811As)	649.00	5899
	AL-811H 800w PEP out linear (4 811As) AL-1200 1.5kw PEP out linear (3CX-1200A7)	795.00	719 st 1829
ALL	AL-1200 1.3kw PEP out linear (3CA-1200A7) AL-1500 Linear amplifier (8877)	2695.00	2249
	ALS-500M 600w PEP out solid state mob amp	799.00	679%
		1299.00	1099
	ATR-15 1.5kw antenna tuner	399.00	34995
ALL	ICP-120 120v inrush protector	79.00	
	ICP-240 240v inrush protector	79.00	
ALL	QSK-5 Stand alone T/R switch	349.00	2999

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AMERITRON - continued	Reg	Sale
QSK-5PC PC board kit; T/R switch	249.00	
CF-5 Cooling fan for QSK-5	39.95	10405
RCS-4 4-pos wireless remote coax switch RCS-8V 160-2m 5-pos remote coax switch	134.00 149.00	
Note: RCS-8V requires 8-wire control cable.	110100	
AMSOFT (AMS)		
world of Ham Radio IBM shareware	\$ 79.95	29 ⁹⁵
ANLI (ANL)		
A-1000 2m/440 8.5/11.8db 17.5' base ant		169 ⁹⁵
AL-800 2m/440 BNC rubber duck antenna RD-8 2m/440 6.5" BNC whip	37.90 19.95	
RD-78 2m/440 15" BNC whip	23.90	
S-1 2m/440 2.15/3.2db 14" whip	24.90	
CM-1 Clip mt w/angle adjustable BNC, coax	18.95	
CM-2 Clip mt w/BNC, coax WA-1 Window/sun roof clip mt w/BNC, coax	16.95 19.95	
AT-2 2m/440 3/5db NMO mt mobile ant	43.95	
AT-2/Plus 2m/440 4.1/6db NMO mt mob ant .	54.95	
AT-2A 2m/220 3/3.8db NMO mt mobile ant AT-2A/Plus 2m/220 4.1/4.8 NMO mt mob ant	43.95	
AT-2/Plus Tri 2m/220/440 4.1/4.8/6db NMO	54.95 64.95	
AT-3 2m/440 2.15/3db 19" UHF mt mob ant .	29.95	
AT-4/NMO 2m/440 3/5.5db 38" NMO mob ant AT-4/UHF 2m/440 3/5.5db 38" UHF mt mob ant	43.95	
MC-1/NMO NMO-style magnet mt w/coax	39.95 25.95	
MC-1/UHF UHF-style magnet mt w/coax	25.95	
TA-1/NMO NMO-style trunk mt w/coax	25.95	
TA-1/UHF UHF-style trunk mt w/coax SB-152 12vdc 6.5A port batt power pack	25.95 59.95	
SB-752 12vdc 8.5A port batt power pack	69.95	
SB-791 5A ps w/cig outlet; not for radio .Dmv	29.95	24 ⁹⁵
Antenna Specialist	S (AS	SP)
VHF/UHF ANTENNAS		,
AP-143 2m 3db on glass cellular look-alike ant	\$ 65.00	5995
APR151.3 2m 3db on glass antenna AP-453 440 on glass cellular look-alike ant	49.25 65.00	44 ⁹⁵ 59 ⁹⁵
APR450.5G 440 5db on glass antDmwfv	54.50	4995
KAV-382 On glass replacement mtg kit	7.75	
ASPC201L 108-512MHz ¼ wv ¾ " hole ant ∆mwf HOLE PLUGS	22.75	1495
ASC-34 For 11/6" holeDmwfv	\$ 4.75	149
ASC-35 For ³ / ₄ " holeDmf	2.25	
ASC-37 For %" holeDmwfv ASC-39 For %" holeDmwfv	2.25 2.25	004
Antenna Supermark		99¢
Eavesdropper* 60-11m trap dipole SWL ant	\$ 79 95	INT)
*Specify SO-239 or twin-lead	φ / 0.00	
SWL Sloper 120-11m SWL antenna	79.95	
ARTSCI (ART)		
Amateur Handbook Lost Users Manuals	\$ 14.95 19.95	
Riding the Airwaves with Alpha & Zulu	19.95	
US Repeater Guide	9.95	
ASTATIC (AST)		
10DA-L Dynamic mic head (no stand or cable)	\$ 69.99	4995
D-104-L Crystal mic head (no stand or cable) T-UG9 Amplified desk stand	49.99 52.00	39 ⁹⁵ 49 ⁹⁵
T-UG9-D104 Amp mic, 6-wire w/stand	99.99	7995
MC-320 Crystal mic cartridge for D-104	19.99	
MC-321 Ceramic mic cartridge for D-104	19.99	
ASTRON (ASR)		
RS-4L 3A ps, 4A surge, w/cig lighter socket	\$ 57.95	4995
RS-7A 5A power supply, 7A surge RS-10A 7.5A power supply, 10A surge	68.95 85.95	59 ⁹⁵ 69 ⁹⁵
RS-12A 9A power supply, 12A surge	85.95 99.95	7995
RS-12S 9A ps, 12A surge, w/speaker	112.95	8995
RS-20A 16A power supply, 20A surge	121.95	99 ⁹⁵
RS-35A 25A power supply, 35A surge RS-35A/220V 220v 25A ps, 35A surge	197.95 217.75	149 ⁹⁵ 169 ⁹⁵
RS-50A 37A power supply, 50A surge	285.95	21995
RS-70A 57A power supply, 70A surge	339.95	259 ⁹⁵
RS-20M 16A ps w/meters, 20A surge RS-35M 25A ps w/meters, 35A surge	144.95 204.95	119 ⁹⁵ 169 ⁹⁵
	204.90	103.0

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	ASTRON - continued	Reg	Sale
5	RS-50M 37A ps w/meters, 50A surge		239
	RS-70M 57A ps w/meters, 70A surge	372.95	2899
5	VS-20M Variable 16A ps/meters, 20A surge		1399
5	VS-35M Variable 25A ps/meters, 35A surge	238.95	1899
	VS-50M Variable 37A ps/meters, 50A surge	330.95	2599
	RM-35M 25A rack mt ps/meters, 35A surge	318.95	249 ⁹
5	RM-50M 37A rack mt ps/meters, 50A surge		2799
	RM-60M 50A rack mt ps/meters, 55A surge		3599
5	12/115 200w solid state 12vdc-115vac inverter .		59 ⁹
	2412 9A 22-32vdc to 13.8vdc converter		59 ⁹
	2412-20 16A 22-32vdc to 13.8vdc converter	103.95	799
	AZDEN (AZD)		
	DM-10 20 ohm headphones for HF radio		49 ⁹
	HS-03 Boom mic/headphones for HF Xcvr		69 ⁹
	PCS-7500H 50w 6m FM Xcvr w/TTP mic		3899
	PCS-7800H 50w 10m FM Xcvr w/TTP mic		3899
	PCS-7000H 50w 2m FM Xcvr w/TTP mic		3349
	PCS-7200 25w 220 FM Xcvr w/TTP mic		4099
	PCS-7300H 35w 440 FM Xcvr w/TTP mic		4399
	AZ-11 5w 10m FM HT/batt/cgr/TTP		3799
	AZ-21A 5w 2m FM HT/batt/cgr/TTP AZ-61 5w 6m FM HT/batt/cgr/TTP		299 ⁹ 379 ⁹
	AD-16 DC power cord for HT		3/9"
	ARD-6M 6m HT gain antenna		349
	ARD-10M 10m HT gain antenna		399
	BP-11A Extra 5w battery		599
	LC-16 Soft case		199
	SDX-514W Speaker/mic		499
	AZIMUTH (AZI)		
	BP-3/7826 Nicads (3 AAA); 2 needed; ALT-6 Dm	\$ 7.95	49
	CA-2/7192 Vinyl carrying case; ALT-6Dm	12.95	19
	DSK/7194 Stainless desk stand; ALT-6Dm	15.95	2 ⁹⁸
	FML/7197 Flat stainless mtg plate; ALT-6 .Dm	12.95	29
	PS-12/7822 AC power adapter/cgr; ALT-6 .Dm	9.95	29
	RG-3/7830 Rain collector, self dump; ALT-6 Dm	49.95	299
	AWZ WAZ QSL library	19.95	1498
	GC-24 Large LCD 24-hour clock	29.95	
	B & K (B&K)		
	AUDIO TEST INSTRUMENTS		
-	2005A RF generator		
5	2000 MTO TU I	\$275.00	23/9
	ZUU9 MIS IV-stereo generator	\$275.00	
	2009 MTS TV-stereo generatorD	\$275.00 399.00	
	CAPACITANCE METERS	399.00	
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt)	399.00 \$134.00 115.00	33995
A	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter	399.00 \$134.00 115.00 279.00	339 ⁹⁵ 114 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter	399.00 \$134.00 115.00 279.00 325.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter	399.00 \$134.00 115.00 279.00 325.00 199.00	33995 11495 9695 22995 25995 16995
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge	399.00 \$134.00 115.00 279.00 325.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 100 MHz frequency counter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 169 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 214 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 214 ⁹⁵ 259 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge 878 Universal hand-held LCR bridge 800 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 214 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00 399.00	339 ⁹⁵ 114 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 214 ⁹⁵ 259 ⁹⁵ 339 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge 600 MHz frequency counter 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm detersal counter 1856A	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00	339 ⁹⁵ 114 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 214 ⁹⁵ 259 ⁹⁵ 339 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm frequency counter 100 CRT restorer/analyzer 480 CRT restorer/analyzer	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 214 ⁹⁵ 239 ⁹⁵ 339 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge 000 MHz frequency counter 1806 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm multi-function ctr CRT RESTORER/ANALYZERS 480 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DIGITAL PRODUCTS DIGITAL PRODUCTS	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00	33995 11495 22995 25995 21995 21995 21995 33995 62995 89995
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm multi-function ctr CRT RESTORER/ANALYZERS 480 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DIGITAL PRODUCTS DP-21 Dp:tal logic probe	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$ 34.00	339 ⁹⁴ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 259 ⁹⁵ 339 ⁹⁵⁵ 629 ⁹⁵ 899 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm multi-function ctr CRT RESTORER/ANALYZERS 480 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DIGITAL PRODUCTS DP-21 Digital logic probe DP-31 Digital pulser probe	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00	33995 11495 9695 22995 25995 16995 21995 33995 33995 62995 89955 62995 89955
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr CRT RESTORER/ANALYZERS 480 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DIGITAL PRODUCTS DP-21 Digital logic probe DP-31 Digital pulser probe DP-51 Digital probe	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr CRT RESTORER/ANALYZERS 480 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DP-21 Digital logic probe DP-31 Digital pulser probe DP-51 Digital pulser grobe DP-101 Digital pulsing probe	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00	33995 11495 9695 22995 25995 16995 21995 33995 33995 62995 89955 62995 89955
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter 878 Universal hand-held LCR bridge 878 Universal hand-held LCR bridge COUNTERS 1803C 1803C 100 MHz frequency counter 1806 100 MHz multi-function counter 1807 1.3GHz 1 ppm frequency counter 1823 175 MHz universal counter 1823 175 MHz universal counter 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm multi-function ctr 1856A 1.3 GHz 1 ppm multi-function ctr CRT restorer/analyzer 490 CRT restorer/analyzer 490 Tri Dynamic restorer/analyzer DP-21 Digital logic probe DP-31 Digital pulser probe DP-51 Digital pulser <td>399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00</td> <td>339⁹¹ 114⁹⁵ 96⁹⁵ 229⁹⁵ 259⁹⁵ 169⁹⁵ 214⁹⁵ 339⁹⁵ 629⁹⁵ 39⁹⁵⁵ 29⁹⁵ 34⁹⁵ 79⁹⁵ 94⁹⁵</td>	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00	339 ⁹¹ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 214 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 39 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 79 ⁹⁵ 94 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00	339 ⁹¹ 114 ⁹² 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 899 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 79 ⁹⁵ 94 ⁹⁵ 66 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00	339 ⁹² 114 ⁹² 96 ⁹⁵ 229 ⁹⁵ 229 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 899 ⁹⁵ 629 ⁹⁵ 34 ⁹⁵ 79 ⁹⁵ 94 ⁹⁵ 66 ⁹⁵ 226 ⁹⁵ 66 ⁹⁵ 226 ⁹⁵ 66 ⁹⁵ 226 ⁹⁵ 226 ⁹⁵ 226 ⁹⁵ 26 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00	339 ⁹¹ 114 ⁹² 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 899 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 79 ⁹⁵ 94 ⁹⁵ 66 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00 339.00	339 ⁹⁵ 114 ⁹⁵ 229 ⁹⁵ 229 ⁹⁵ 219 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 899 ⁹⁵ 29 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 79 ⁹⁵ 94 ⁹⁵ 226 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 269.00 269.00 269.00 269.00 269.00 269.00 275.00 275.00 275.00 299.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 200.	339 ⁹¹ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 259 ⁹⁵ 339 ⁹⁵⁵ 629 ⁹⁵ 89 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 94 ⁹⁵ 66 ⁹⁵ 226 ⁹⁵ 39 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 39 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 339.00 479.00 269.00 269.00 269.00 269.00 269.00 269.00 269.00 275.00 275.00 275.00 299.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 290.00 200.	339 ⁹⁵ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 229 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 229 ⁹⁵ 339 ⁹⁵ 629 ⁹⁵ 29 ⁹⁵ 29 ⁹⁵ 29 ⁹⁵ 629 ⁵⁵ 29 ⁹⁵ 29
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00 339.00 479.00 269.00 339.00 111.00	339 ⁹¹ 114 ⁹¹ 96 ⁹² 229 ⁹⁵ 229 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 229 ⁹⁵ 339 ⁹⁵⁵ 629 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 24 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 29 ⁹⁵⁵ 20 ⁹⁵⁵ 2
	CAPACITANCE METERS 810A 200 pF to 20 mF capacitance meter 815 Tester (cap/res/Hfe/diode/batt) 820 .1pF to 1F capacitance meter 830 200 pF to 200mF autoranging meter 875A Digital LCR meter	399.00 \$134.00 115.00 279.00 325.00 199.00 275.00 \$209.00 249.00 299.00 399.00 499.00 \$739.00 1049.00 \$34.00 39.00 95.00 111.00 \$79.00 269.00 339.00 479.00 269.00 339.00 111.00	339 ⁹¹ 114 ⁹⁵ 96 ⁹⁵ 229 ⁹⁵ 259 ⁹⁵ 169 ⁹⁵ 219 ⁹⁵ 169 ⁹⁵ 259 ⁹⁵ 339 ⁹⁵⁵ 629 ⁹⁵ 89 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 94 ⁹⁵ 66 ⁹⁵ 226 ⁹⁵ 39 ⁹⁵⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 34 ⁹⁵ 29 ⁹⁵ 39 ⁹⁵⁵ 29 ⁹⁵ 29 ⁹⁵⁵ 29 ⁹⁵

ISOLATION TRANSFORMER 114 20,000 ohms/volt analog multimeter \$199,00 16 MULTIMETERS (ANALOG) 1114 20,000 ohms/volt analog multimeter \$100 3117 MULTIMETERS (ANALOG) 1117 Pocket size analog multimeter \$100 310 MULTIMETERS (DIGITAL) 129,00 100 MULTIMETERS (DIGITAL) 129,00 MULTIMETERS (DIGITAL) 330 750A AC multi-function clamp meter 199,00 199,00 MULTIMETERS (DIGITAL) 330 1000A multi-function clamp meter 199,00 199,00 MULTIMETERS (DIGITAL) 330 1000A multi-function clamp meter 199,00 199,00 MULTIMETERS (DIGITAL) 330 199,00 113 310,00 199,00 114 MULTIMETERS (DIGITAL) 330 199,00 114 199,00 114 MULTIMETERS (DIGITAL) 330 199,00 114 199,00 114 MULTIMETERS (DIGITAL) 330 199,00 114 199,00 114 MULTIMETERS (DIGITAL) 330 199,00 1199,00 114	e	B & K - continued	Reg	Sale
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VIDEO TEST INSTRUMENTS	A005 00 400	OF
1211D Portable color generatorD 1221 Portable NTSC video generatorD	\$235.00 199 369.00 299	
1249A NTSC generator w/RGB	569.00 489	
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B & W COAX SWITCHES (B&V	V)	
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Note: Above switches provide grounding	ng of unuse	
terminals, & are supplied w/face plates & kno		95
CR-115 Coax ant relay - 48 to 130vac .Dmwv LOW-PASS FILTERS	42.50 39	33
FL-10/1500 1.5-30 MHz, 1kw, 52 ohms	\$ 50.00	
FL-10/1500/70 1.5-30MHz/1kw/72 ohmDm ANTENNAS	55.00 19	95
AP-10 57" portable 40/20/15/10/6/2m ant	\$ 69.95	
AT-55 40/20/15/10m 55' trap antenna	79.95 74	95
AT-55K As above, but kit	69.50 49	
AT-110 80/40/20/15/10m 110' trap antenna AT-110K As above, but kit	89.50 84 ^s 76.95 69 ^s	
AS-160 160/80/40/20m 137' trap dipole	149.50 139	
AS-80 80/40/20m 78' trap dipole	115.75 109	
AS-40 40/20/15/10m 40' trap dipole	149.50 139	
AS-20 20/15/10m 23' trap dipole	115.75 99 ^s 115.75 99 ^s	
AXS-80 80/40/15m 64' trap dipole	115.75 99 ^s 115.75 99 ^s	
AC-3.5-30 80-10m 8-band 90' dipole	198.00 179	35
AC-1.8-30 Continuous 1.8-30 MHz antenna	198.00 179 ⁹	
BWD-1.8-30 1.8-30 MHz 90' folded dipole	198.00 179	
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52 OHM COAXIAL CABLE	- 1 24	
8216 RG-174 (sub-miniature)per ft. 8216	27 20 249	r
8216	37.29 24 ⁹ 129.87 89 ⁹	
8216	259.74 169 ⁹	5
9201 RG-58 (solid center)per ft.	200	
9201	29.74 18 ⁹ 109.89 79 ⁹	
9201	216.45 1299	
8240 RG-58U (solid center)per ft.	26	
8240	38.20 24 ⁹ 131.00 89 ⁹	-
8240	262.00 169 ⁹	
8259 RG-58AU (stranded center)per ft.	290	
8259	43.00 26 ⁹ 137.00 89 ⁹	1
8259 1000 ft. Roll	276.00 169 ⁹	1
8219 RG-58AU (stranded, foam)per ft. 8219	57.25 209	
8219	57.25 29 ⁹ 155.00 99 ⁹	
8219	387.50 1899	- 1
8262 RG-58C (non-contaminating)per ft.	36¢	5
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8262 8262			119 ⁹⁵ 219 ⁹⁵
9258	RG-8X (stranded, foam)per ft.		36¢
9258	100 ft. Roll		3295
9258		217.56	9995
9258	1000 ft. Roll		18995
8237	RG-8Uper ft.	100.00	64¢
8237 8237		102.00 390.00	59 ⁹⁵ 239 ⁹⁵
8214	RG-8U (foam)per ft.	330.00	235¢
8214	100 ft. Roll	101.00	4995
8214		452.00	229 ⁹⁵
8214		898.00	42995
9913 9913	RG-8U (low loss)	113.00	5995
9913		244.00 486.00	129 ⁹⁵ 229 ⁹⁵
9251	RG-8A (non-contaminating)per ft.	400.00	87¢
9251		132.09	7795
9251		492.84	299 ⁹⁵
8267	RG-213 (non-contaminating)per ft.		76¢
8267 8267		507.10	66 ⁹⁵ 279 ⁹⁵
8242	RG-9U (double shielded)per ft.,m	597.18	2/9 ⁵⁵ 4 ⁹⁵
8242		715.00	455 34995
	HM COAXIAL CABLE		
8241	RG-59U (72 ohm, solid center)per ft.		28¢
8241		44.00	2495
8241 8241		123.00 246.00	79 ⁹⁵ 149 ⁹⁵
8238	RG-11 (72 ohm, stranded center) per ft.	240.00	79¢
8238		124.32	6995
8238		470.64	279 ⁹⁵
8213	RG-11 (72 ohm, solid, foam)per ft.		69¢
8213 8213		360.00	5995 23995
	IR CABLE	500.00	233
8484	4-wire; 4-20 ga; U-105per ft.		28¢
8484		48.00	2495
8484 8484		185.00 370.00	99 ⁹⁵ 189 ⁹⁵
8448	8-wire; 2-18, 6-22 ga; CD-45/HAM-IV per ft.	570.00	46¢
8448		103.75	4295
8448			1 59 ⁹⁵
8448		820.00	31995
9405 9405	8-wire; 2-16, 6-18 ga; HAM-IV/T ² X per ft		59¢ 5495
9405		585.00	24995
9405			48995
ANTE	NNA WIRE		
8000 8000	No. 14 stranded ant wireper ft.	30.50	20¢ 1695
8000			16 ⁵⁵ 149 ⁹⁵
	ALUMINUM GROUND WIRE	2.0.00	
8018	Multiples of 50 fteach	\$ 19.00	1295
8018		150.00	99 ⁹⁵
Note:	All above roll pricing is for rolls as s lengths, even if more than roll leng	the shown only	y; all
multin	le of roll length shown, are sold at the	per ft. pri	Ce.
FOAN	COAX w/PL-259s ON BOTH ENDS		
9349	3' RG-58AU foam	\$ 19.32	1495
9350	15' RG-58AU foam	21.63	1695
9347	20' RG-58AU foam, 1 PL-259Dmwfv 50' RG-58AU foam	19.32 32.13	995 2495
	50' RG-8U foam		4495
9355	75' RG-8U foam	84.00	5995
9356	100' RG-8U foam	101.85	79 ⁹⁵
BE			
DM-10	LMERIT (BLM) 3½-digit digital multimeter	\$ 19.95	
DM-10	IS 3 ¹ / ₂ -digit dig multimeter w/case Dmfv	24.95	
DM-30	Wide range digital multimeterWide range dig multimeter/freq test	54.95	
Sin Ot	inde range and marineter ned rest	00.00	

	Reg	Sale
BENCHER (BEN)		
BY-1 lambic keyer paddle w/black base	\$ 72.95	6995
BY-2 lambic keyer paddle w/chrome base	89.95	8495
BY-3 lambic keyer paddle, gold plated	249.95	19995
BY-4 lambic paddle/blk base/gold components	149.95	12995
ST-1 Single lever keyer paddle, black base	72.95	69 ⁹⁵
ST-2 Single lever kyr paddle, chrome base†	89.95	69 ⁹⁵
ST-3 Single lever keyer paddle, gold plated .†	249.95	18995
ST-4 Sgl lever paddle/blk base/gold components+	149.95	10995
RJ-1 Dix hand key w/navy knob/black base	69.95	
RJ-2 Dlx hand key w/navy knob/chrome base	79.95	
ZA-1A 3.5-30 MHz 1:1 balun	34.95	
HWK Balun hardware kit for 2" boom	8.95	
YA-1 1kw low pass filter	54.95	
BIRD (BIR)		
43 Thruline Directional wattmeter, SO-239s .		
4300-400 Peak reading conversion kit		
43P Peak reading directional meter, SO-239s .		
4431 Wattmeter, variable RF tap, SO-239s		
Elements (Table 1) 50H-1000Heach	76.00	

TABLE	1 Sta	andard	Flem	ent
INDLL	1 34	illuaru	LIGH	CIII

110.00

61.00

82.00

Elements (Table 1) 2500H, 5000Heach

Elements (Table 1) 25-1000 MHzeach

Low-power elements (Table 2)each

1	Frequency Bands (MHz)					
Power Range	2- 30	25- 60	50- 125	100- 250	200- 500	400 1000
5 watts	_	5A	5B	5C	5D	5E
10 watts	-	10A	10B	10C	10D	10E
25 watts		25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

	1	TABLE 2 Low-I	Power Element	S	
	1 watt	Cat. No.	2.5 watts	Cat. No.	-
	60-80 MHz		60-80 MHz	060-2	
	80-95 MHz		80-95 MHz	080-2	
	95-125 MHz 110-160 MHz		95-125 MHz 150-250 MHz	095-2 150-2	
	150-250 MHz		200-300 MHz	200-2	
	200-300 MHz		250-450 MHz	250-2	
	275-450 MHz		400-850 MHz	400-2	
	425-850 MHz 800-950 MHz		800-950 MHz	800-2	
	000-950 WHZ	000-1			
				41.00	
	EC-1 Element c	ase		32.00	
	80F 5w dummy			69.00	
1	80M 5w dummy	load w/type N	maleΔm	69.00	
	8080 25w dumr			98.00	
1	8085 50w dumr	ny load w/type	N male QC	140.00	
	4273 1.5-35 MH	z variable RF	sig sampler*	120.00	
	4273-100 For B			130.00	
	4275 20-1000 M			115.00	
	*2 QC connecto			110100	
	4275-100 For B			130.00	
	4304A 25-1000			470.00	
1	QUICK CHANG	E CONNECTO	DRS (OC)		
	4240-050 UHF f			\$ 8.00	
	4240-179 UHF r	nale (PL-259)	each	41.00	
	4240-062 Type	N female	each	8.00	
	4240-063 Type I	N male	each.Amwf	17.00	
	4240-125 BNC	female	each	17.00	
	4240-132 BNC	male	each. Amwf	49.00	
	Other Bird ite			rder	
	BUCK				
-		VIAJ I	ER (BUC	(EQ 00	
	HamCall CD-RO			φ 50.00	
	BUTTE	:KNU	(BUT)		
1	HF-6VX 80/40/3	0/20/15/10m	26' vert ant	\$246.75	19995
1	HF-9VX 80/40/3				24995
	A17-12 17 & 1	2m kit for HF-	6VX	54.25	4995
	CPK Counterp	oise kit		61.25	5495

Amateur Electronic Supply® 4 Winter 1994/1995 Note: The Clearwater 800-line is In-State, only....

BUTTERNUT - continued	Reg	Sale
MPS Mounting post sleeve		9 95
RMK-II Roof mounting kit w/radials		
STR-II Radial kit only	54.25	
TBR-160S 160m resonator for HF-6VX HF-2V 80/40m 32' vertical	89.25 231.00	7995
30-MRK 30m resonator for HF-2V	54.25	
TBR-160S 160m resonator		
HF-5B 2 el 20/17/15/12/10m butterfly beam	376.25	
10-11 2 el butterfly beam; 10 & 11m . Amwfv	166.25	
CES (CES)		
410 Personal Patch interconnect	\$250.00	16995
SSI-68 Simplex autopatch	460.00	26995
SDI-50 Dix spix/dpix autopatch/rptr controller .	760.00	39995
CQ (CQX)		- 12%
Ruvers Guide	\$ 5 95	
CAMBRIDGE (CAM)	ψ 0.00	
CANDRIDGE (CAM)	A	
The Art of Electronics (book)	\$ 59.95	
CIRCUIT WORKS	(CIR)	1.1.
Conductive Pen	\$ 10.95	
CLOCKS		-
AEA World Clock	\$ 25.00	
BMI 972A 12" 12-hour wall clock	37.95	
BMI 972AD 14" 12/24-hour wall clock	39.95	
BMI 973A 12" 24-hour wall clock	59.95	49 ⁹⁵
MFJ 105B 24-hour quartz wall clock	19.95	
MFJ 107B 24-hour digital clock MFJ 108B 24/12-hour dual disp digital clock	9.95	THE
MFJ 112 Deluxe world map clock	19.95 24.95	2 3 3 3
MFJ 112 Delake world map clock	39.95	1.1.1
	00.00	The is a
COAX SEAL (UNV)	A 0.40	1000
104 ½" x 60" coax seal	\$ 2.49	50 95 C
COMET (CMT)		17.778
MOBILE ANTENNAS		2-34
B-10 2m/440 2.15db 12" cell look-alike ant .	\$ 38.95	1000
B-10NMO 2m/440 2.15db 12" cell look-alike NMO	38.95	
B-20 2m/440 2.15/5db 30" cell look-alike ant .	54.95	
B-20NMO 2m/440 2.15db/5db 30" cell look NMO	54.95	4995
CA-28HR 10m 7' fold-over mobile antDmwv CA-214W 2m/220 3' 1.7/3.4db mob ant Dmwf		39 ⁹⁵ 49 ⁹⁵
CA-220JR 220 3.4db 2' 9" fold-over antDmv		1995
CA-220MR 220 4.2db 3' 3" fold-over ant	44.75	10
CA-430HG 440 5db 2' 5" mobile antDmv		2995
CA-2405 2.4 GHz 7db 17" fg type N antenna .	50.95	
CA-HV 40/15/10/6/2m 5' 10" mobile ant		11995
L-14 20m loading coil for CA-HV		0.007
CHL-21J 2m/440 0/2.15db 12" mob antDv CHL-23J 2m/440 2.15/3.8db 20" mobDv		2495
CHL-233 2m/440 2.15/3.8db 20° mobDv CHL-350 10/6m 0/2.15db fold-over 7' ant	34.95 71.50	29 ⁹⁵ 64 ⁹⁵
CMW-202N 900 MHz 5.1db 18" type N ant	39.95	04**
CX-224 2m/220/440 2.15/3.2/5.5db 42" mobile	79.95	7495
CX-224NMO 2m/220/440 2.15/3.2/5.5db 42" NMO	79.95	7495
CX-801 2m/440/1.2 3/6.8/9.6db 39" N .Dmwv	89.95	59 ⁹⁵
FJ-15S 6m/2m/440 2.15/4.5/72.db 5' mobile	97.95	92 ⁹⁵
FL-7HA 40m 40" mobile antenna	72.95	64 ⁹⁵
FL-14HA 20m 37" mobile antenna	72.95	64 ⁹⁵
FL-28HA 10m 33" mobile antenna FL-50HA 6m 33" mobile antenna		64 ⁹⁵ 64 ⁹⁵
FL-62S 2m/440 3.5/6.2db 3' 5" mobile ant		7495
FL-67S 2m/440 4.5/7.2db 4' 11" mobile	96.95	8995
FS-74B 440/1.2 black 5.1/7.2db 22" N mob	79.95	7495
FS-92B 2m/440/1.2 2.1/4.1/6.8 23" type N	79.95	7495
HA-4S 40/15/12/10m 4' 5" mobile ant	179.95	1 59 ⁹⁵
L-14HS 20m loading coil for HA-4S	29.95	10 23
SB-2 2m/440 2.15/3.8db 18" mobile ant	35.95	
SB-2NMO 2m/440 2.15/3.8db 18" NMO ant SB-5 2m/440 3/5.5db 38" mobile antenna	35.95 58.95	5495
SB-5 2m/440 3/5.5db 38 mobile antenna SB-5NMO 2m/440 3/5.5db 38" NMO antenna.	58.95	5495
ci cini rito 5.5.500 50 millo antenna.	82.95	7795
		7795
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant SB-7NMO 2m/440 4.5/7.2db 4' 7" NMO ant	82.95	
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant SB-7NM0 2m/440 4.5/7.2db 4' 7" NM0 ant SB-25 2m 4.1db 4' 8" mobile antenna	49.95	
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant SB-7NM0 2m/440 4.5/7.2db 4' 7" NMO ant SB-25 2m 4.1db 4' 8" mobile antenna SB-25NM0 2m 4.1db 4' 8" NMO mobile ant	49.95 49.95	
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant SB-7NM0 2m/440 4.5/7.2db 4' 7" NM0 ant SB-25 2m 4.1db 4' 8" mobile antenna	49.95	66 ⁹⁵

COMET continued	Deer
COMET - continued	Reg
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N SB-123 1.2GHz 7.2db 24" type N mobile ant .	84.95
SB-214W 2m/220 3' 1.7/3.4db mob ant	54.95 62.95
WP-57 2m/440 2.15/5.2db 30w on glass ant Dm	129.95
WP-75B 440/1.2 4.9/6.5db 30w on glass BNC Dmv	144.95
WP-75N 440/1.2 4.9/6.5db 30w on glass NDv	144.95
MOBILE MOUNTS, ETC	A 00.05
3D4M Mobile mt, 13' coax w/UHF connectors 3D4N Mobile mt, 13' coax w/type N	\$ 23.95 24.95
3D5M Mobile mt, 15 coax w/UHF connectors	24.95
5D4N Roof mount, 13' coax w/type N	29.95
AD-10N N-NMO mount adapter	17.95
AD-15M UHF-NMO mount adapter	17.95
BMG-BB Med duty blk mag mt, BNC/BNC Dmwf BMG-M Med duty black mag mt w/UHF conn .	39.95 42.95
CA-MS1 Mag mt only, no coax; add 3D4M, etc	29.95
CK-5M DIx 13' cable w/UHF connectors	37.95
CK-5M5 Dix 16.5' cable w/UHF connectors	39.95
CK-5N Dlx cable assembly w/type N GR-5M Dlx tnk lip mt w/ coax; matches SB	39.50 64.95
GR-5N Dix the lip mt w/ coax; matches SB	65.95
MG-SRB Med duty mag mt w/UHF/BNC	38.95
MG-SRM Med duty mag mt w/UHF connectors	36.95
MS-3FVMM Std duty mag mt w/UHF connectors .	39.95
MS-3FVNN Std duty mag mount w/type N MS-5LXMM Hvy duty mag mt w/UHF connectors	42.95 56.95
MS-5LXNN Hvy duty magnet mount w/type N.	59.90
RS-9 Trunk lip mount, no coax	13.95
RS-20 Gtr mt for small/med ants, no coax	29.95
RS-21 Adj 360 degree hatch/tnk mt, no coax	29.95
RS-25 Adj pipe clamp mount, no coax RS-80 Adjustable gutter mount, no coax	32.95 29.95
RS-81 Adj trunk/hatch mount, no coax	29.95
RS-820 Low profile trunk lip mount, no coax .	36.95
RS-850 Lug rack/to 1.75" pipe mt, no coax	39.95
TS-1M Trunk lip mt w coax	44.95
TS-5M Low prof tnk lip mt w/dlx cableDmf TS-103NN Trunk lip mt w/coax, type N	54.95 39.35
TS-106NN Dlx tnk lip mt/coax, type N .Dmwfv	55.95
WS-1M Window clip mt w/UHF connectors	61.95
5D-FB Low loss 7.3mm ($\frac{1}{4}$ ") coax100m, Δ m	183.85
5D-NJC Female N connector; 5D coaxΔm 10D-FB Low loss 13.1mm (½") coax100m,Δm	7.95 426.00
10D-NJC Female N connector; 10D coax . Δm	420.00
BASE STATION ANTENNAS	0.00
CA-2x4Z 2m/440 8.2/11.5db 15' 11" NDmw	\$209.95
CA-62DB 52-54MHz 6.5db 21.75' base ant	147.95
CA-350DB 10/6m 2.15/6.5db 22' 7" ant CA-712EF 440 9db 10' 5" base antenna	289.95 134.95
CA-1218G 1.2GHz 12db 7.75' HD NDmfv	134.95
CA-1243E 440/1.2 GHz 6/8.4db 3' 4" type N	94.95
CA-1243Z 440/1.2 GHz 9.4/12.8db 7' type N .	161.95
CA-ABC21 2m 3.4db 4' 7" base antenna CA-ABC23 2m 7.8 db 13' 4" base antenna	59.95 134.95
CA-F22GF 136-175 6db 8' 10" tunableT	134.95
CA-F72GF 440-470 6db 3' 6" tunable ant	119.25
CA-Super22 220 6.6db 8' 2" base ant	135.00
CFC-771 900MHz 4.5' 7.14db type N ant CMR-241 2m/440 4.5/7.2db 6.5' base ant	97.40 169.95
CMR-1215 1.2GHz 11db 6.6' type N ant .Dmv	229.95
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant .	219.95
CX-902 2m/440/1.2 6.5/9/9db 10' NDmwv	189.95
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam	139.95
FP-19 900 MHz 16db 7' 4" type N antenna GP-3 2m/440 4.5/7.2db 5' 11" base antenna	119.95 121.25
GP-6 2m/440 6.5/9db 10' 2" base antenna	174.95
GP-9 2m/440 8.5/11.9db 17' 8" antenna	219.95
GP-9N 2m/440 8.5/11.9db 17' 8" N antenna.	219.95
GP-15 6/2m/440 3/6.2/8.6db 8' base GP-21 /CA-1221S 1.2GHz 14.8db 8.5' N ant	159.95 164.95
GP-24 2.4GHz 12.4db 2' type N base ant	199.95
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N	149.95
GP-98 2m/440/1.2 6.5/9/13.5db 9'.8" N ant	229.95
GPX-2010 2m/440 9.5/13.2db 23' 4" antenna NCG-1422B 2m/220 2.15/3.4db 3' 8" .Dmwfv	395.95 119.50
PYA-913 900MHz 13el 15.8db 4' 8" type N beam .	144.95

	COMET continued		0.
Sale	COMET - continued	Reg	Sale
69 ⁹⁵	DUPLEXERS AND TRIPLEXERS CF-142 1.3-150/200-480 600/400w UHF/leads	\$ 68.95	62 ⁹⁵
59 ⁹⁵	CF-360A 1.3-30/50-470 600w UHF w/leads	69.95	6295
7995	CF-413A 440/1.2 500/200w N w/leads	68.10	62 ⁹⁵
89 ⁹⁵ 89 ⁹⁵	CF-413B 440/1.2 500/200w N/UHF/N leads CF-416A 2m/440 800/500w UHF w/leads	68.10 58.70	62 ⁹⁵ 52 ⁹⁵
	CF-416C 2m/440 800/500w N/UHF/N leads	58.70	5295
	CF-416W 1.3-250/400-1400 400/200w N/leads	84.95	7695
	CF-530 1.3-90/125-470 600w UHF w/leads	69.95	6495
25	CF-4130A 440/1.2 500/200w N, no leads CF-4160I 2m/440 800/500w UHF/UHF/N, no leads	69.00 52.25	62 ⁹⁵ 49 ⁹⁵
	CF-4160J 2m/440 800/500w S0-239, no leads	52.25	4995
100	CF-4160K 2m/440 800/500w all UHF, no leads .	52.25	4995
	CFX-324A 2m/220/440 600w UHF w/leads CFX-324B 2m/220/440 600w UHF, no leads	99.95 95.00	89 ⁹⁵ 84 ⁹⁵
	CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads	81.95	69 ⁹⁵
250	CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads . CFX-514 HF/2m/440 800/800/500w UHF w/leads .	81.95	69 ⁹⁵
	CFX-514 HF/211/440 800/800/500w UHF no leads	79.95	74 ⁹⁵ 69 ⁹⁵
5995	CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads .	82.95	7495
59 ⁹⁵	CFX-4310C 2m/440/1.2; Kenwood TM-741A/941A	82.95	7495
	CFX-5140 HF/6m/2m/440 800/800/500w UHF, no leads HT AND HAND-HELD SCANNER ANTENNA	79.95	7495
	CH-32 2m/440 1.75" BNC antenna	\$ 33.95	
	CH-72S 2m/440 0/3.2db 15" BNC antenna	32.95	
5495	CH-720C 2m/440 semi-rigid 0/3.8db 18" BNC	37.95	
04-	CH-1200WS 1.2GHz 5.6db 13" BNC HT ant Dwv CH-701X 2m/440/900 2/3.4/5.5db 19" BNC	32.95 48.95	
1000	CH-722SA 2m/440 3/5.5db BNC whip ant	44.95	
	CY-1205 1.2 GHz 11db 7" BNC HT beam	41.45	
	SH-55 2m/440 1.5/3.2db 15" BNC ant SH-95 2m/440/1.2 1.5/2.15/5.5db BNC ant	32.95 49.95	
	SWR/POWER METERS & MINIMETERS	45.50	
	CD-160H 1.6-60 MHz 2kw SWR/power Dm		12995
3995	CD-270 140-525 MHz 200w SWR/powerDm CM-120 1240-1300 MHz type N minimeter	159.95 89.95	109 ⁹⁵ 79 ⁹⁵
3695	CM-120 1240-1300 MHz type N minimeter CM-300 220-240 MHz minimeterDf	51.95	3495
3495	CM-400 430-450 MHz minimeter Dmwfv	51.95	3495
36 ⁹⁵ 54 ⁹⁵	CM-400N 430-450 MHz N minimeterDwfv	55.50	3695
12995	CM-420N 140-150/430-450 N minimtrDwv CM-690 1.9-60 MHz 20/150w minimeter	78.95 75.95	54 ⁹⁵ 69 ⁹⁵
595	CM-720 140-150/430-450 MHz minimeter	75.95	6995
28995	CM-720N 140-150/430-450 type N minimeter	79.95	7495
6 ⁹⁵	CM-900 900-920 MHz type N minimeter CM-1200 1240-1300 MHz N minimeter Dmwfv	89.95 89.95	79 ⁹⁵ 69 ⁹⁵
13995	CMX-1 1.8-60 MHz 2000w SWR/pwr/rem head	209.95	18995
12795	CMX-2 1.8-200 MHz 200w SWR/pwr/rem head CMX-3 140-525 MHz 200w SWR/pwr/rem head	199.95 189.95	17995
249 ⁹⁵ 119 ⁹⁵	EKS-3 10' remote head extension cable	23.95	16995
8995	NCG-2000 140-525 MHz 200w SWR/power	99.95	8995
7995	ACCESSORIES		
13995	CS-290P 1500MHz 150w N lightning protect CS-400P 500MHz 250w lightning protect	\$ 39.95 34.95	
11995	CSP-30 Mini speaker w/magnet mt	29.25	
12495	CSP-80 Mini spkr w/mag mt, noise filt, mute	37.95	
10695	CSW-20 0-950MHz coax switch CSW-20N 0-1300MHz type N coax switch	57.60 99.95	49 ⁹⁵ 84 ⁹⁵
119 ⁹⁵ 79 ⁹⁵	HM-P2F Mini spkr/mic; Ali/Ico/Sta/Yae	32.95	0400
14995	HM-P2K Mini spkr/mic for Kenwood	32.95	
14995	HM-P4F Mini "HT" spkr/mic; Ali/Ico/Sta/etc HM-P4K Mini "HT" spkr/mic for Kenwood	32.95 32.95	
199 ⁹⁵ 129 ⁹⁵	HM-P4Y Mini "HT" spkr/mic for Yaesu	32.95	
11995	COMFOCUS (CMF)		
9995	Softwave SW/VHF Rcvr hard/software; IBM Dmf	1735.00	1469
99 ⁹⁵ 149 ⁹⁵		-	
189 ⁹⁵	REMEMBER to Asl	(Yo	ur
189 ⁹⁵	Salesperson About .		
139 ⁹⁵ 139 ⁹⁵	Late Breaking "Hot D	eals	77
169 ⁹⁵	Latest Sale Prices		
12995	Monthly Specials		100
199 ⁹⁵ 299 ⁹⁵	• Coupons, etc.		No.
69 ⁹⁵	Info also available on the AES	se BB	S
12995	1-414-358-347	12	12
	1 11 000 047	-	

	Reg	Sale
Communications Specialist	S (CC	(MC
SS-32P Programmable CTCSS encoder	\$ 28.95	
SS-32SMP Hybrid micro-sized encoder	27.95	
TE-64 64-tone CTCSS/burst switch encoder	79.95	
TS-32P 32-tone CTCSS prog encoder/decoder . DTD-1 DTMF decoder	57.95 59.95	
	55.55	
CONNECTORS		
AMPHENOL COAX CONNECTORS (AMP)	¢ 0 00	
83-1SP-1050 Male coax plug (PL-259) 83-1SP Silver plated coax plug (PL-259)	\$ 2.23 3.46	
Van Gorden (VAN) silver plated teflon PL-259	2.99	
83-185 Reducer for RG-58 (UG-175)	.74	
83-168 Reducer; RG-59/RG-8X (UG-176)	.80	
83-1AP Right angle adaptor (UG-646) 83-1J Double female adaptor (PL-258)	6.85 3.95	
83-1R Female chassis mt socket (SO-239)	2.41	
83-1H Hood for in-line use (UG-106)	3.97	
83-1T T-connector adaptor (M-358)	9.77	
83-877 Double male adaptor 83-878 Single hole %" chassis socket ∆mwfv	9.95 3.10	
	4.04	
31-002 BNC male connector for RG-58 31-012 BNC male connector; RG-59/RG-8X	4.04	
31-221 BNC female chassis socket Δ mwfv	2.39	195
82-24 Type N female chassis mt socket	5.42	
82-61 Type N male connector for RG-8	8.79	
82-64 Type N right angle adaptor Δ mwfv 82-202-1006 Type N male; Belden 8214/9913.	23.91 8.41	895
82-209 Type N female in-line for RG-8	7.40	
34025 Type N male connector for RG-58	7.83	
AMPHENOL COAX ADAPTORS (AMP)		
2900 SO-239 to BNC male adaptor	\$ 11.15	
4400 SO-239 to type N male adaptor 34125 Type N female - PL-259 adapt	15.41 24.98	1995
45250 Type N double male adaptorΔmwfv	16.19	
31-28 BNC female to PL-259 adaptor ∆mwfv	10.37	-
83-10 SO-239 to Motorola/phono plug	10.84	
AIM COAX CONNECTORS & ADAPTORS (
25-7302 0-900MHz teflon insulator PL-259 25-7351 Chassis mt S0-239 double female	\$ 4.50 5.60	
25-7365 BNC female to SO-239 double remain	4.90	
25-7420 BNC male to SO-239	3.80	
26-8010 Type N double female	5.70	
26-8011 Type N chassis mount 26-8015 N male to SO-239		
26-8016 BNC female to N male	7.90	
26-8017 BNC male to N female		
27-8110 BNC female to RCA male		
27-8120 BNC female to PL-259 27-8130 BNC double male		
27-8140 BNC t; 2 female, 1 male		
27-8142 BNC T, 3 male		
27-8450 BNC chassis mt, 4 screw holes	3.50	
27-8460 %" hole BNC chassis mt		
27-8470 Dual BNC chassis mount 29-3855 BNC female to SMA male		
29-4140 SO-239 to mini PL-259	5.50	
SWITCHCRAFT MICROPHONE CONNECTO	DRS (SI	
480 .206" 3-cond mic plug (Collins) Δm		
\$-260 .206" 3-cond mic plug (Drake)		
Switchcraft 1/4 " Plugs w/Solder Termi	inals (S	
 267 3-conductor, plastic handle	\$ 4.45 5.15	
260 3-conductor w/screw terminals		
297 3-conductor, metal handle	5.35	
250 2-conductor, plastic handle		
 220 As abv, w/screw terminals, rt angle plug 280 2-conductor, metal handle 	4.40	
SWITCHCRAFT PHONO-TYPE CONNECTO		
3501MC Phono plug with cable clamps Δm		
3502 Shielded phono plug	1.75	5
3507 RF-type phono plug)
VANCO MICROPHONE CONNECTORS (VO		
CBC-2 2-pin female mic plug CBC-3 3-pin female mic plug		
CBC-4 4-pin female mic plug		

ale CONNECTORS - continued CBC-4P Panel mt 4-pin male 1.99 CBC-5 5-pin female mic plug 3.87 CBC-5P Panel mt 5-pin male 1.99 CBC-6 6-pin female mic plug 4.06 3 98 CBC-6P Panel mt 6-pin male CBC-8 8-pin female mic plug 5.89 CBC-8P Panel mt 8-pin male 5.57 KENWOOD DIN PLUGS (KEN)
 7-pin DIN plug
 \$ 3.92

 8-pin DIN plug
 4.51

 13-pin DIN plug
 6.76
 VANCO MINI PHONE PLUGS (VCO) P-25 2.5mm sub-miniature phone plug \$.99 P-35 3.5mm miniature phone plug 99 P-12V Cig lighter plug w/leads 2.91 Connect Systems (CSY) cs-700 Simplex interconnect \$470.00 34995 CS-800 Full duplex patch & repeater controller . 470.00 34995 CS-900 Simplex interconnect 470.00 34995 Private Patch V Multi-mode interconnect 713.00 49995 9801 Elec voice delay (EVD); Private Pch V . 141.50 12995 8200D Full duplex patch/repeater controller .. 713.00 49995 CS-1688 Deluxe DTMF decoder/controller 213.00 16995 COYNE (COY) HAM RADIO TEST GENERATOR FOR MACINTOSH MacHam no code Technician, includes Novice 2A \$ 39.95 MacHam General 34 95 MacHam Advanced 34.95 MacHam Radio Morse Code training software 39.95 **CROSS DEVICE** (CRS) STUF Coax connector waterproofing filler \$ 4.50 **CROWN METAL** (CRO) SOLID BASE COPPERWELD ANTENNA WIRE AN-122 100 feet No. 12 \$ 24.95
 AN-123
 150 feet No. 12
 29.95

 AN-124
 250 feet No. 12
 49.95

 AN-126
 500 feet No. 12
 84.95
 79⁹⁵

 AN-128
 1000 feet No. 12
 154.95
 129⁹⁵
 AN-142 100 feet No. 14 19.95
 AN-143
 150 feet No. 14
 24.95

 AN-144
 250 feet No. 14
 29.95

 AN-146
 500 feet No. 14
 54.95
 AN-148 1000 feet No. 14 104.95 8995 AN-181 250 feet No. 18 14.95 AN-182 500 feet No. 18 24.95 CUSHCRAFT (CUS) **VHF/UHF FM BEAMS (Vertical polarization)** 4395 A148-3S 2m, 3 el wideband beam \$ 46.00 A148-10S 2m, 10 el wideband beam 7295 82.00 A148-20S 2 A148-10S vert stacked 224.00 17995 A449-6S 440 MHz, 6 el, 3' boom, 10 db 57 00 **53**⁹⁵ 7495 A449-11S 440 MHz, 11 el, 4.5' boom, 13 db .. 83.00 99.00 7995 A270-10S 2m/440, 5/5 el, 6.17' boom, 10 db FM VERTICAL STACKING KITS* (Adds 3 db) A14-VPK Stacking kit for 2 A147-4Dmwfv \$ 61.00 2995 3995 A14-SK Harness only for 2 A148-3S 46.00 A148-VPKS Stacking kit for 2 A148-3S/10S .. 103.00 7995 3995 46.00 A148-SK Harness only for 2 A148-10S A449-VPKS Stacking kit; 2 A449-6S/11S 62.00 **59**95 3995 A449-SK Harness only for 2 A449-6S/11S 46.00 *Prices are for stacking kits only FM RINGOS - 1/2 Wave Verticals - 3.75 db AR-10 10m FM Ringo, 1000w \$ 68.00 59⁹⁵ 59⁹⁵ AR-2 2m FM, 1000w 48.00 3995 AR-220 220 MHz FM, 500w 47.00 3995 3995 AR-450 440 MHz FM, 500w 47.00 6995 AR-270 2m/440 MHz FM, 250w, 3.7/5.5db 86.00 AR-270B 2m/440 MHz FM base ant 125.00 9995 **RINGO RANGERS - FM Verticals - 6 db** ARX-2 2m FM Ringo Ranger \$ 58.00 4995

Reg Sale CUSHCRAFT - continued **Reg Sale** ARX-2B 2m FM Ringo Ranger II, 1000w 70.00 5995 5995 ARX-220B 220 FM Ringo Ranger II, 500w 70.00 70.00 5995 ARX-450B 440 FM Ringo Ranger II, 500w 7295 ARX-450BN 440 FM Ringo Ranger II w/type N. 85.00 **HIGH PERFORMANCE 2m/440 VERTICALS** ARX-270N 2m/440 9/12 db fg type N ant \$268.00 20995 ARX-270U 2m/440 9/12 db fg S0-239 ant 268.00 20995 FM 4-POLES (less vertical support mast) AFM-4DA 2m FM, 23' high, 6/9 db \$141.00 11295 AFM-24DA 220 MHz FM, 15' high, 6/9 db 125.00 9995 AFM-44DA 440 MHz FM, 8' high, 6/9 db 109.00 8995 TWIST. OSCAR BEAMS (Horiz/Vert Polarization) A144-10T 2m, 10 el, 5' boom, 10 db ...Dmwfv \$103.00 7995 A144-20T 2m, 20 el, 10' boom, 12 db .Dmwfv 148.00 9995 A147-20T 2m FM/SSB, 10' bm, 12 db .. Dmwv 120.00 8995 9995 A148-20T 2m 20el 10.8'bm 11.1db twist 120.00 290.00 19995 22XB 2m 22el 19.3' bm 14db circ beam/relay 416TB 432 twist, 16el, 6'boom, 12db .. Dmwf 121.00 8995 738XB 432 38el 14.3'bm 15.5db circ w/relay 268.00 18995 PS-4 Remote polarity switch, needs 12vdc 150.00 11995 A14T-MB Oscar mtg boom & bracket .. Dmwfv 49.00 3995 AOP-1 Oscar pack: A144-20T/416TB/A14T-MB Dmwfv 300.00 19995 **BOOMER ANTENNAS** 617-6B 6m Boomer, 6 el, 34' boom, 14 db \$407.00 29995 124WB 2m Boomer, 4 el, 4' boom, 10.2 db 70.00 6395 13B2 2m Boomer, 13 el, 15' boom, 15.8 db ... 138.00 11295 17B2 2m Boomer, 17 el, 31' boom, 18 db 237.00 18995 26B2 2 13B2s vertically stacked 390.00 299³⁵ 220B 220 Boomer, 17 el, 19' boom, 17 db 185.00 13995
 224WB
 220 Boomer, 4 el, 3' boom, 10.2db
 67.00
 59⁹⁵

 225WB
 220 wideband Boom, 15el, 10'bm, 15.5db
 143.00
 109⁹⁵
 424B 432 Boomer, 24 el, 17.5' boom, 18 db .. 158.00 12695 **BOOMER STACKING KITS*** 617-SK Harness, pwr divider for 2 617-6Bs .. \$152.00 10995 324-QK Quad stacking kit for 4 32-19s .. Dmv 575.00 12995 22-SK Harness, power divider; 2 13B2s 93.00 7995 22N-SK Harness, pwr divider; 2 17B2s 152.00 11995 14995 26B2-VPK Vertical polar kit; 2 13B2s 200.00 11995 224-QK Quad stack kit; 4 215WBs/214Bs .Dw 390.00 220-SK Harness, power divider for 2 220Bs ... 93.00 69⁹⁵ 220-QK Quad stacking kit for 4 220BsDf 390.00 11995 PD-2 Power divider for 2 13B2s 46.00 3995 PD-2N Power divider for 2 17B2s 87.00 6995 PD-4 Power divider for 4 13B2s 4995 58.00 PD-4N Power divider for 4 17B2s 108.00 7995 3995 PD-222 Power divider for 2 220 Boomers 46.00 PD-224 Power divider for 4 220 Boomers 58.00 4995 *Prices are for stacking kits only VHF/UHF BEAMS (Horizontal polarization) 8995 A50-3S 6m, 3 el, 6' boom, 8 db, stainless hdwre \$105.00 A50-5S 6m, 5 el, 12' boom, 10 db, stainless hdwre 173.00 13995 A50-6S 6m, 6 el, 20' boom, 11db, stainless hdwre 282.00 21995 A144-7S 2m, 7 el, 8' boom, 10 db 5395 57.00 7295 82.00 A148-10S 2m, 10 el wideband beam A430-11S 430 MHz, 11 el, 4' boom, 13 db 83.00 7295 HORIZONTAL STACKING KITS* (Adds 3 db) 3995 A535-SK For 2 A50-3S/5S \$ 46.00 4995 A561-SK For 2 A50-6S 60.00 A17-SK For 2 A144-7S, 79" spacing 46.00 3995 A11-SK For 2 A144-11, 79" spacingDmwf 45.00 1995 A148-SK Harness only for 2 A148-10S 46.00 3995 A41-SK For 2 A430-11S, 26" spacing 46.00 3995 *Prices are for stacking kits only **CUSHCRAFT/SIGNALS MOBILE ANTENNAS** CS-28M 10m magnet mt antenna \$ 64.00 5995 55.00 4995 CS-50 6m ¾" hole mt 3 db antenna 5995 CS-50M 6m magnet mt 3 db antenna 64.00 CS-50T 6m trunk lip mt 3 db antenna 64.00 **59**95 42.00 3995 CS-1147M 2m ¼ wave magnet mt antenna ... 4995 CS-147 2m ¾" hole mt 3 db antenna 55.00 64.00 5995 CS-147M 2m magnet mt 3 db antenna 5995 CS-147T 2m trunk lip mt 3 db antenna 64.00 CS-147A 2m coil & whip only 43.00 3495 4495 CS-220 220 ¾" hole mt 3 db antenna 55.00 5495 CS-220M 220 magnet mt 3 db antenna 64.00

CUSHCRAFT - continued	Dog	Sala
CS-220T 220 trunk lip mt 3 db antenna	Reg 64.00	5495
CS-1450M 440 ½ wave magnet mt antenna	42.00	3495
CS-450 440 ¾" hole mt 5 db antenna	55.00	4495
CS-450M 440 magnet mt 5 db antenna	64.00	54 ⁹⁵
CS-450T 440 trunk lip mt 5 db antenna CS-450A 440 coil & whip only	64.00 43.00	54 ⁹⁵ 34 ⁹⁵
CS-270M 2m/440 3.7/6 db magnet mt ant	43.00	72 ⁹⁵
CS-270A 2m/440 s.770 db magnet int ant	43.00	3995
MOUNTS ONLY FOR ABOVE MOBILE ANTE		6. Trs
CS-MG Magnetic mount	\$ 29.00	
CS-TL Trunk lip mount	29.00	1000 100
PORTABLE ANTENNAS BN-220RC 220 2" BNC duck; Icom/YaeDm	\$ 19.00	795
PORTABLE ANTENNAS FOR KENWOOD	φ 15.00	
TK-141S 2m 3" TK duck for KenwoodDm	\$ 17.00	895
TK-220B 220 6" TK duck for KenwoodDm	17.00	5 ⁹⁵
TK-440B 440 6" TK duck for KenwoodDm	17.00	595
SKYWALKER HF BEAMS 40-2CD 40m, 2 el, 23' boom, 5.5 db	\$596.00	39995
20-4CD 20m, 4 el, 32' boom, 10 db	596.00	39995
20-3CD 20m, 3 el, 20' boom, 8 db	417.00	299 ⁹⁵
15-4CD 15m, 4 el, 20' boom, 10 db	337.00	22995
15-3CD 15m, 3 el, 14' boom, 8 db 10-4CD 10m, 4 el, 16' boom, 10 db	290.00 285.00	199 ⁹⁵ 199 ⁹⁵
10-3CD 10m, 3 el, 10' boom, 8 db	221.00	14995
TEN-3 10m, 3 el, 8' boom, 8 db	143.00	11495
MULTIBAND VERTICAL ANTENNAS		
AV-5 80/40/20/15/10m 25' vertical		15995
AV-3 20/15/10m 14' vertical AP-8A 80-10m 8-band ruggedized vertical	117.00 278.00	94 ⁹⁵ 209 ⁹⁵
APR-18A Radial kit	65.00	6295
R-5 20/17/15/12/10m half wave vert	382.00	279 ⁹⁵
R-7 40/30/20/17/15/12/10m vertical	510.00	37995
ROTATABLE DIPOLES D-3 20/15/10m World Ranger dipole	\$232.00	15995
D-3W 30/17/12m rotatable dipole	237.00	16995
D-4 40/20/15/10m World Ranger dipole	315.00	229 ⁹⁵
D-40 40m World Ranger dipole	282.00	19995
MULTIBAND BEAM ANTENNAS A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwre	\$483.00	32995
A-743 40m or 10 MHz add-on kit; A-3/A-3S	153.00	12995
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	578.00	39995
A-744 40m or 10 MHz add-on kit; A-4/A-4S	153.00	12995
A-3WS 17 & 12m, 3 el, 14' boom, 8 db A-103 30m add-on kit for A-3WS	378.00 153.00	269 ⁹⁵ 109 ⁹⁵
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP	800.00	52995
AFB-2 160-10m 9-band balun	60.00	49 ⁹⁵
LIGHTNING ARRESTORS	¢ 10.00	
LAC-1 SO-239/PL-259 coax arrestor LAC-2 SO-239/SO-239 coax arrestor	\$ 12.00 12.00	
LAC-4 200w SO-239 gas tube arrestor	41.00	3795
LAC-4H 2kw SO-239 gas tube arrestor	45.00	39 ⁹⁵
LAC-4N 200w type N gas tube arrestor	53.00	4795
LAC-4NH 2kw type N gas tube arrestor LC-2 Extra 200w cartridge for LAC-4/4N	55.00 17.00	49 ⁹⁵
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	19.00	
5VB Vinyl connector bootspack of 5	12.00	
DC SALES (DCS)		
Tenna Hitch Antenna mount for trailer hitch .	\$ 32.95	
DRSI (DRS)		in no
DPK-2 1200 baud packet radio TNC \Dwfv	\$114.95	G. 140
M-2400 2400 baud VHF modem; PCPA1/3 .Dmv		99 ⁹⁵
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DRSI - continued	Dog	c
PCPA-1 Packet adapt plug-in card;	Reg IBM∆fv 149.95	
HF Modem Ext HF modem PCPA-1		
PCPA-3 Dual serial packet adapt; I		
Radio cable		
RS-232 cable	Δmwfv 12.95	
DAIWA (DAI)		
CS-201 2-position 600 MHz coax sv	vitch \$ 25.95	;
CS-401 4-position 800 MHz coax sv	vitch 139.95	1
CN-101 1.8-150MHz SWR/power me		
CN-103M 140-525MHz SWR/power		
CN-410M 3.5-150MHz 15/150w mo		
CN-460M 140-450MHz 15/150w mo CN-465M 140-450MHz 15/75w mot		
DP-820 140-525MHz dig SWR/powe		
DP-830 1.8-150/140-525 digital SV		
NS-660PA 1.8-150 30/300/3kw PEP		1
DAVIS (DAV)		
7400 Perception II indoor WX unit	\$150.00) 1
7415 Wizard II-S weather station	150.00) 1
7425 Wizard III weather station	195.00	
7440 Monitor II weather station		
7852 Rain Collector II, 0.01"		
7859 External temp/humd Sensor 7862 Weatherlink IBM interface/s		
7866 Weatherlink Mac interface/s		
7867 Weatherlink IBM conversion		
7868 Weatherlink Mac conversion		
7870 Modem adapter for 7862/78		
7873 Cig lighter power cord 7876 4-conductor 40' extension c		
7876 4-conductor 40' extension c 7878 6-conductor 40' extension c		
	x cable 15.00	
7880 8-conductor 25' junction bo 7881 8-conductor 50' junction bo	x cable 25.00)
7882 8-conductor 100' junction b		
7890 Mast mount anemometer 7520 Stand alone 0.01" rain gauge		
	/elec cli 55.00	1
DIAMOND (DIA)		
METERS		
SX-100 1.6-60 MHz 30/300/3kw PE SX-200 1.8-200 MHz 5/20/200w PE		
SX-200 1.8-200 MHZ 5/20/200W PE		
SX-600 Dual band 1.8-160 /140-525 200v		
SX-1000 1.8-160 /430-1300MHz 200w H	PEP meter 293.95	2
SX-9000 1.8-160/430-1300MHz aut	to mtr Dmf 299.95	2
MOBILE ANTENNAS		
CR-214S 2m/220 2.1/3.4db 37" mo		
CR-224A 2m/220 5/6db 69" mobile CR-320A 2m/220/440 2.15/3.8/5.5		
NR-72BNMO Black 2m/440 2.15/3.8/3.3		
NR-73BNMO Blk 2m/440 2.15/5.5db		
NR-124 1.2GHz 8.4db 25" type N m	obile ant . 66.95	;
NR-140A 220 4db 37" mobile anter	ina 60.95	
NR-770HA 2m/440 3/5.5db 40" mo NR-770HNMO 2m/440 3/5.5db 40" NN	bile ant 62.95	
NR-770RA 2m/440 3/5.5db 39" mo		
NR-790A 2m/440 4.5/7.2db 57" mo	bile ant 94.95)
NR-2000NA 2m/440/1.2 3/6/9.7db 3	9" N mob . 92.95	;
SG-2000A 2m 5.2db 62" mobile and	tenna 89.95)
SG-7200NM0 2m/440 3.2/5.7db 38"		
SG-7000A 2m/440 2.15/3.8db 19" (SG-7500A 2m/440 3.5/6db 41" mol		
SG-7900A 2m/440 5/7.6db 62" mol		
TG-509 2m/440 2.1/5.5db 34" glas		
	- 1.50-5	

				2
g	Sale	DIAMOND - continued	Reg	Sale
95		RH-77CA 2m/440 15" BNC rubber gain ant	34.95	3295
95		RH-205 2m % wave telescopic HT antenna	27.95	1.54
95	69 ⁹⁵	RH-951 2m/440/1.2GHz 15" BNC rubber ant .	57.95	52 ⁹⁵
95		MOBILE MOUNTS		
95		DP-SPM/5D Hvy duty mag mt, cable; 45" max	\$ 45.95	
		DP-SPM/58U Mag mt w/RG-58U; 45" max	43.95	
95		DPK-4NM-M Hvy mag mt, Yaesu N, 45" max .	52.95	
95	10995	DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max DPK-5NM Hvy duty mag mt, cbl, N, 45" max Df	59.95 56.95	
95	8995	FE-5M Two-stage coax & SO-239 mtg group .	40.95	1.11
95	8995	GLP-5 UHF base mtg group hrdwr; mini coax	10.45	1.20
95	8995	GLP-5N UHF mtg grp hrdwr; mini coax, Yae N	11.45	
95	8995	GLP-58 UHF base mounting group hardware .	10.45	
95 95	89 ⁹⁵ 249 ⁹⁵	K-200 Folding hatch/tnk mt; NR/SG ants	43.95	
95	31995	K-200KM Folding hatch/tnk mt/coax; NR/SG .	73.95	
95	18995	K-300 Folding gutter mt; NR/SG antennas	39.95	
		K-300KM Folding gutter mt w/coax; NR/SG K-300M Gutter mt w/cable; NR/SG ants	67.95 83.95	
00	10095	K-400 Hatch/trunk mt; NR/SG antennas	41.95	10.00
00	12995	K-400K-3/8M Trunk mount w/cable; %-24	78.95	12 11
00	129 ⁹⁵ 169 ⁹⁵	K-400M Hatch/trunk mt w/cable; NR/SG ants	82.95	-
00	34995	K-400NMO Dlx hatch/trunk mt w/cable; NMO	67.95	
00	6995	K-540 Mirror/luggage rack mount	39.95	244
00	10995	K-540KM Mirror/luggage rack mt w/coax	67.95	
00	13995	K-550 Luggage mt; new mini vans (use GLP)	51.95	
00	139 ⁹⁵	K-550KM Luggage mt w/SO-239 base/coax	73.95	
00		K-600M Tilt angle trunk mt w/cable K-600N Tilt angle tnk mt w/type N, cable	72.95 78.95	
00		K-600P Tilt angle trunk mt w/cable, Yaesu N	76.95	
00		MCR-L Mag mt HT base/retractable coax/BNC	55.95	
00		MCR-M Mag mt HT base w/coax/tiltable BNC	47.95	
00		NMO-UHF Adapter to NMO; not for SG, 45" max .	23.95	
00		Larsen PO-K Roof mt, coax; NR/SG ants, 45" max	23.00	
00		Larsen PO-TLM Tnk mt, coax; NR/SG ants	26.35	
00		BASE STATION ANTENNAS	****	40005
00		CP-4A 40/20/15/10m 11' 200w PEP vertDmw		169 ⁹⁵ 229 ⁹⁵
00	89 ⁹⁵	CP-6 80/40/20/15/10/6m 15' 200w PEP vert Dmw D-130J 25-1300 MHz 200w discone ant	324.95 101.95	9495
		DP-GH62 6m 6db 21' base antenna	157.95	14795
		F-22A 2m 6.7db 10.5' base antenna	114.95	10495
95	15795	F-22J 143.5-146.5MHz 6.7db 10.5' base ant	114.95	10495
95	126 ⁹⁵	F-23A 2m 7.8db 15' base antenna	172.95	162 ⁹⁵
95	14795	F-23C1 148-154MHz 7.8db 15' comm base	183.95	15995
	23995	F-23J 143.5-146.5MHz 7.8db 15' base ant		16295
95	26995	F-142A 220 MHz 5.5db 6' base antenna	136.95	124 ⁹⁵ 226 ⁹⁵
95	26995	F-718A 440 11.5db 15' type N base antenna F-718C2 460-472MHz 11.5db 15' N comm	246.95 261.95	23995
95	57 ⁹⁵	F-718J 428-442MHz 11.5db 15' N base ant	246.95	22695
95	9995	F-718L 420-430MHz 11.5db ATV N base ant .	246.95	21995
95	9395	F-1230A 1.2GHz 13.5db 10.5' type N base ant .	178.95	1 64 ⁹⁵
95	4495	U-200 440/1.2GHz 8.3/11.7db 6' N base ant .	141.95	129 ⁹⁵
95	57 ⁹⁵	U-300A 440/1.2GHz 8.6/13.2db 8.3' N base ant .	178.95	15995
95	61 ⁹⁵	U-5000A 2m/440/1.2GHz 4.5/8.3/11.7db 6' N	167.95	15795
95	5595	V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3' X-50A 2m/440 4.5/7.2db 5.6' base antenna .	172.95 125.95	162 ⁹⁵ 115 ⁹⁵
95	57 ⁹⁵	X-200A 2m/440 4.5/7.200 5.6 base antenna	167.95	15795
95 95	59 ⁹⁵ 57 ⁹⁵	X-300A 2m/440 6.5/9db 10.2' base ant	183.95	17395
95	5/55 8995	X-500HNA Hvy duty 2m/440 8.3/11.7db 17.8' N ant	269.95	24995
95	8795	X-510MA 2m/440 8.3/11.7db 17.2' base ant	219.95	19995
95	8495	X-510NA 2m/440 8.3/11.7db 17.2' type N ant .	219.95	19995
95	8395	X-510NJ 143.5-146.5/428-442MHz 17.2' N	219.95	18995
95	68 ⁹⁵	X-700HA 2m/440 9.3/13db 24' base ant	439.95	39995
95	8195	X-2200A 2m/220 6/7.8db 11.5' base ant X-3200A 2m/220/440 6/7.8/8db 10' base	183.95 241.95	173 ⁹⁵ 221 ⁹⁵
95	11495	X-6000A 2m/420/1.2 6.5/9/10db 10.5' N	241.95	19995
95	17995	A COUCH 211/11/01.2 0.0/0/1000 10.0 N	210.00	100



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300-line is In state, only...

Note: The Clearwater, FL 800-line is In state, only...

DIAMOND - continued	Reg	Sale
MX-37MB HF-440/1.2 100/50w S0-239 Dmv	\$ 79.95	3995
MX-37N HF-440/1.2 100/50w type N duplexer	60.95	
MX-72D HF-2m/440 400/150/100w duplexer	54.95	
MX-72DN As MX-72D, w/type N on 440	62.95	57 ⁹⁵
MX-72H As MX-72D, w/12" cables	58.95	
MX-72N As MX-72D, type N on 440, 12" cables .	58.95	
MX-214 2m/220 150/100w w/12" cables	73.95	68 ⁹⁵
MX-324 2m/220/440 triplexer	115.95	10595
MX-2000 HF-6m/2m/440 400/400/250w triplexer	102.95	97 ⁹⁵
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	99.95	94 ⁹⁵
MX-3000D As MX-3000, no cables	99.95	9495
MX-3000DN As MX-3000, type N on 440, 1.2.	99.95	94 ⁹⁵
MX-3000N As MX-3000, type N, 12" cables	99.95	94 ⁹⁵
ACCESSORIES		
CA-23R DC-1GHz 200w N lightning protect Dmwf	\$ 39.95	29 ⁹⁵
CA-35R DC-500MHz 400w lightning protect	36.95	
CX-210A 1.5kw DC-1000MHz coax switch	51.95	49 ⁹⁵
CX-210N 1.5kw DC-1500MHz N coax switch	93.95	8495
DL-30A 15/100w peak 0-500MHz dummy Dm	29.95	22 ⁹⁵
DL-30N 15/100w peak 0-500MHz N dummy	49.95	
HB-100 Desk mount bracket for HT	44.95	
HB-400 HT air vent dash mount	19.95	
HB-450 HT adjustable air vent dash mount	69.95	
HB-500 Remote head air vent dash mount	22.95	C 495
HB-650 HT door mt; side window/glove box	69.95 29.95	64 ⁹⁵
SM-505KTS Spkr/mic for Kenwood TR-2500	28.95	1695
SW-2 2-pos 0-500MHz coax switchDmw		
Diamond Systems	(DS)	()

IDM LICENCE COUDEE, THEODY/DECIII ATIONS/CODE

IBM LICENSE COOKSE; IMEOKI/KEGOLAI	INN2/P	UDE
DSI-IBM-N Novice Class License software	\$ 49.95	39 ⁹⁵
DSI-IBM-T Technician Class License software .	44.95	3495
DSI-IBM-NC No Code Tech Class License software .	59.95	49 ⁹⁵
DSI-IBM-G General Class License software	44.95	3495
DSI-IBM-A Advanced Class License software	59.95	49 ⁹⁵
DSI-IBM-E Extra Class License software	59.95	49 ⁹⁵

DIGIMAX (DIG)

D-500 512 MHz 8-digit counter - 1 PPM	\$149.95	
D-510A 1 GHz 8-digit counter - 1 PPM	179.95	159 ⁹⁵
D-612 1.2 GHz 9-digit counter1 PPM		
D-1200 1.2 GHz 9-dig .1 PPM ctr/audio mult	299.95	269 ⁹⁵
AC-12 9vdc adaptor	8.95	
AM-12 10X/100X audio multiplier Amwfv	39.95	29 ⁹⁵
AM-500X X10/X100 audio multiplierΔm	69.95	1995
B-12 Dry cell holder, switch for D-612	10.95	
BAC-5 Nicad batt pack for D-500/D-510A	29.95	
BAC-12 Nicad batt pack; D-612/D-1200	34.95	
RF-500X Inline RF sampler, 250w maximum .	39.95	
T-1200 21" BNC telescopic antenna	8.95	

DRAKE (DRA)

R-8 1290 World band shortwave receiver	\$999.00	979 ⁹⁵
1590 35-55, 108-174 MHz VHF converter	209.00	
1591 Interface software for computers	59.00	
MS-8 1592 Speaker	49.00	
7850 R-8 technical manual	39.95	
SW-8 Shortwave receiver	599 00	

EDCO (EDC)

TX-146	2m	50w	40db	3-stage	helical	filter	 \$	89.95)
		-							

EIMAC TRANSMITTING TUBES	(EIM)
3-400Z/8163	\$199.00
3-500Z	183.00
3-1000Z/8164	764.00
3CX800A7	412.00
3CX1200A7	665.00
4-400A/8438	208.00
4CX250B/7203	131.00
4CX1000A/8168	711.00

Extended Holiday Hours!

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EIMAC - continued	Reg	Sale
4X150A/7034	148.00	
8873	458.00	
8874/3CX400A7	415.00 499.00	
8875	935.00	
Also see TUBES	000.00	
FORBES GROUP		
VT-14 2m Ventenna 3' 2.6 db base ant	\$ 49.95	4495
VT-22 220 Ventenna 25" 2.6 db base ant	49.95	4495
VT-27 2m/440 Ventenna base antenna	74.95	6695
VT-44 440 Ventenna 14" 2.6 db base ant	49.95	4495
VT-15S Scanner Ventenna 3' 2.6 db base	49.95	4495
VT-SWL SWL Ventenna 3' 20db active rcv Δmv	129.95	9995
Gamber-Johnson	GAM)	
SS-100 Super slide mount w/ant plug	\$ 72.26	49 ⁹⁵
SS-101 Extra base for SS-100	29.75	
GAP Verticals (GAP)		
DX-VIII 80/40/20/15/12/10/6/2m, 31.5'		
(SYN) 100 ' ½2" black double braided rope	6.95 269.00	
DX-VI 40/20/17/15/12/10m 21.5', rigid DX-IV 160/80/40/20m 45'; needs 350' guy		
(SYN) 350 ' ³ / ₆ " black double braided rope	39.95	
Titan DX 80/40/30/20/17/15/12/10m, 25'		
We do NOT carry GAP antennas at Wick		hio.
GLEN MARTIN (GME		
RT-424 4.5' roof-top tower, 8 sq ft 85 mph	\$144 95	
RT-832 8' roof-top tower, 8 sq ft 85 mph	205.45	
RT-936 9' roof-top tower, 28 sq ft 85 mph	356.00	
RT-1732 17.5' roof-top tower, 12 sq ft 85 mph		
M-1330A 30' alum twr 12 sq ft/Hazer/10' mast T	1539.56	
M-1340A 40' alum twr 12 sq ft/Hazer/10' mast T M-1350A 50' alum twr 12 sq ft/Hazer/10' mast T	1/44.56	
M-1840A 40' alum twr 16 sq ft/Hazer/10' mast T		
M-1850A 50' alum twr 16 sq ft/Hazer/10' mast T	2292.64	
LR-8400 Lightning rod kit (complete)	148.95	
MC-10 Mast clamp; 2 required	24.95	
GK-2100 Complete Phillystran guy kit; 50' twr	237.23 339.95	
H-2 175 lb load 12 sq ft HD aluminum Hazer H-3 150 lb load 8 sq ft std aluminum Hazer .	245.95	
H-4 200 lb load 16 sq ft galv steel Hazer	326.95	
MA-1049 9' 1.92" OD aluminum mast	64.95	
MA-5050 5' 1.33" OD aluminum mast	34.95	
ML-2500 Messenger line kit; Rohn towers TB-25 Thrust bearing (2 sealed bearings)	65.60	
All GLEN MARTIN items are shipped PREPAID (Glen I	Martin's e	xpense)
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merchandise from the factory. This means that y	ou may b	e billed
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enough manpower and/or equipment on hand.	be sure	to navo
GOLD LINE (GOL)		
1043 Signal Hunter 10m DF ant	\$ 55.00	3995
GRUNDIG (GRU)		
Cosmopolit Port AM/FM/SW/LW RcvrDwfv	\$249.95	16995
Satellit 700 AC/DC/batt AM/FM/SW/LW Rcvr .	499.95	
Traveller II Port AM/FM/SW/LW Rcvr/clock	109.95	9995
Yacht Boy 206 Portable AM/FM/SW/LW Rcvr	139.95	
Yacht Boy 220 Port AM/FM/SW/LW RovrDmv	129.95 199.95	
Yacht Boy 230 Port AM/FM/SW/LW Rcvr Dm Yacht Boy 235 Portable AM/FM/SW/LW Rcvr	159.95	
Yacht Boy 400 Portable AM/FM/SW/LW Rcvr	249.95	
HAL (HAL)		
PCI-4000/M Multi-mode clover unit; IBMm	\$795.00	6999
ST-8000 HF modemm	3495.00	3269
HEIL (HEI)		
PRO-SET-4 Deluxe boom mic/headset/HC-4	\$122.00	1
PRO-SET-5 Deluxe boom mic/headset/HC-5		
AD-1-I Adapter cord for Icom		
AD-1-K Adapter cord for Kenwood		
AD-1-Y Adapter cord for Yaesu BM-5-4 Boom mic/single headset (HC-4)	13.00	
BM-5-5 Boom mic/single headset (HC-5)	64.90	

	HEIL - continued	Reg	Sale
	BM-5-4-1 Bm mic/single headset; Icom (HC-4)	69.90	
	BM-5-4-K Bm mic/single headset; Kenwood (HC-4) .	69.90	
	BM-5-4-Y Bm mic/single headset; Yaesu (HC-4) .	69.90	
	BM-5-5-1 Bm mic/single headset; Icom (HC-5) .	69.90	
	BM-5-5-K Bm mic/single headset; Kenwood (HC-5) .	69.90	
	BM-5-5-Y Bm mic/single headset; Yaesu (HC-5) .	69.90	
	BM-10-4 Boom mic/headset (HC-4)	71.90	
j	BM-10-5 Boom mic/headset (HC-5)	71.90	
j	BM-10-4-I Boom mic/headset; Icom (HC-4)	85.90	
ĵ	BM-10-4-K Boom mic/headset; Kenwood (HC-4)	85.90	
j	BM-10-4-Y Boom mic/headset; Yaesu (HC-4) BM-10-5-I Boom mic/headset; Icom (HC-5)	85.90 85.90	
j	BM-10-5-K Boom mic/headset; Kenwood (HC-5)	85.90	
j	BM-10-5-Y Boom mic/headset; Yaesu (HC-5) .	85.90	
	FS-1 Foot switch	24.95	
5	HS-1 Hand switch	19.95	
	HC-4 DX'ers 'dream machine' mic element	28.90	
	HC-5 Mic element for Icom SM-5/SM-6	28.90	
	HM-10-4-1 Microphone for Icom (HC-4)	85.90	
	HM-10-4-K Microphone for Kenwood (HC-4)	85.90	
	HM-10-4-Y Microphone for Yaesu (HC-4)	85.90	
	HM-10-5-I Microphone for Icom (HC-5)	85.90	
	HM-10-5-K Microphone for Kenwood (HC-5)	85.90	
	HM-10-5-Y Microphone for Yaesu (HC-5)	85.90	
	HM-10-Dual-I Microphone for Icom	131.90	
	HM-10-Dual-K Microphone for Kenwood	131.90	
	HM-10-Dual-Y Microphone for Yaesu	131.90 49.95	
	MA-1 Clamp and arm for HM-10 TB-1 Table base mic stand for HM-10	49.95	
	B-4 Microphone boom (HC-4)	41.90	299
	B-5 Microphone boom (HC-5)	41.90	299
	B-4-I Microphone boom; Icom (HC-4) Δ mwf	47.90	399
	B-4-K Mic boom; Kenwood (HC-4) Amwf	47.90	399
	B-4-T Mic boom; Ten-Tec (HC-4)Δm	47.90	249
	B-4-Y Microphone boom; Yaesu (HC-4) Amwf	47.90	399
	B-5-I Microphone boom; Icom (HC-5) Amwf	47.90	399
	B-5-K Mic boom; Kenwood (HC-5)	47.90	
	B-5-Y Microphone boom; Yaesu (HC-5) ∆mwf	47.90	399
	CC-1-I Cable for Icom	21.90	
	CC-1-K Cable for Kenwood	21.90	
	CC-1-Y Cable for Yaesu	21.90	
	SA-1 5w sound system w/active EQ	89.90	
	FL-1 FlexliteDm FL-2 FlexliteDm	22.90 32.50	
	Ham Radio Handbook	10.00	
	Ear Pads	5.00	
)	Boom Clin	5.00	
e li	HUSTLER (HUS) RM-80 80m CW 400w PEP resonator		
e		\$ 20.05	
d	KM-80 80m CW 400W PEP resonator	\$ 20.95	

Reg Sale

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RM-80 80m CW 400w PEP resonator	\$ 26.95
RM-75 75m phone 400w PEP resonator	26.95
RM-40 40m 400w PEP resonator	24.95
RM-30 30m 400w PEP resonator	24.95
RM-20 20m 400w PEP resonator	21.95
RM-17 17m 400w PEP resonator	21.95
RM-15 15m 400w PEP resonator	15.95
RM-12 12m 400w PEP resonator	15.95
RM-11 11m 400w PEP resonator	15.95
RM-10 10m 400w PEP resonator	15.95
RMX-B Black 10m resonator w/mast	34.95
RMX-W White 10m resonator w/mast	34.95
RM-80S 80m CW 2kw PEP resonator	49.95
RM-75S 75m phone 2kw PEP resonator	49.95
RM-40S 40m 2kw PEP resonator	35.95
RM-20S 20m 2kw PEP resonator	28.95
RM-15S 15m 2kw PEP resonator	24.95
RM-11S 11m 2kw PEP resonator	23.95
RM-10S 10m 2kw PEP resonator	23.95
MO-1 54" mast for fender or deck mount	31.95
MO-2 54" mast for bumper mount	31.95
MO-3 54" no break-over mast	23.95
MO-4 22" mast for special applications	19.95
VP-1 Tri-band adapter	5.95
RSS-2 Resonator spring	9.95
QD-2 Stainless quick disconnect	19.95
L-14-144 12' RG-58, PL-259 to lugs	9.95
L-14-240 20' RG-58, PL-259 to lugs	12.95

, WB9LSR

HUSTLER - continued	Reg	Sale
LU-216 18' RG-58, PL-259s both ends	13.95	
STAINLESS 2" MOBILE BALL MOUNTS		
SSM-1 Ball & spring, cadmium hardware	\$ 46.95	
SSM-2 Ball, cadmium hardware SSM-3 Stainless steel spring	26.95 24.95	
1-1/2" MOBILE BALL MOUNTS	24.55	
C-32 Chrome plated ball	\$ 11.95	
C-30 Chrome plated spring	11.95	
C-29 Stainless steel spring	17.95	
BM-1 Single strap bumper mt w/C-32	21.95	
3/8-24 THREAD MOBILE MOUNTS GCM-1 Rain gutter mount	\$ 12.05	
HLM Trunk lip mount w/swivel	\$ 12.95 22.95	
HOT Hustloff trunk lip mt w/swivel	23.95	
MM-3 Universal mount with 17' coax	21.95	
RVM Recreational vehicle mount TGM-1 Trunk grove mount	20.95 12.95	
TLM Trunk lip mount	21.95	
HF ANTENNAS		
4-BTV 40/20/15/10m 21' trap vertical		99 95
5-BTV 80/40/20/15/10m 25' trap vertical		12995
30-MTK 30m trap kit for 4-BTV/5-BTV 6-BTV 80/40/30/20/15/10m 24' trap vert	41.95 209.95	39 ⁹⁵ 149 ⁹⁵
G-2537 10m 4.2db vertical antenna	134.00	9995
VRK-1 Radial kit for HF verticals	37.95	
VHF BASE STATION ANTENNAS		
G-3754 6m 4.2db vertical antenna	\$134.00	99 ⁹⁵
G6-144B 2m 6 db 10' vertical antenna G6-270R 2m/440 6db 7.6' base station ant		109 ⁹⁵ 149 ⁹⁵
G7-144 2m 7 db 15' vertical antenna	199.95	14995
G7-220 220 MHz 7 db 10' vertical antenna	189.95	139 ⁹⁵
G6-440 440 MHz 6 db 7' vertical antenna	179.95	12995
SPIRIT VHF/UHF BASE ANTENNAS (Spec		
HSU-14448 2m unity gain base antenna*T HS3-14448 2m 3db base antenna*T†m	\$400.00	219 ⁹⁵ 299 ⁹⁵
HS6-14448 2m 6db base antenna*T	750.00	43995
HS6-43050 430-450MHz 6 db base ant*T	697.00	379 ⁹⁵
HS9-43050 430-450MHz 9 db base ant*T		419 ⁹⁵
HS6-12430 1.2GHz 6 db base antenna*T	485.00	
HS9-12430 1.2GHz 9 db base antenna*T HS10-12430 1.2GHz 10 db base antenna*T	766.00 766.00	419 ⁹⁵ 419 ⁹⁵
HS12-12430 1.2GHz 12 db base antenna*T	965.00	52995
*Specify exact frequency and height above groun	d that the	e Spirit
antenna will be mounted above surrounding terrain are drop-shipped (shipped direct to you from the Hu		
these factory drop-shipments we prefer payment i	n full with	order,
however, we will accept your credit card with the u we will process the charge when we order the merce	handise fi	rom the
factory. This means that you may be billed before	you recei	ve your
drop-shipped merchandise. Shipment is FOB Minera truck, COD for freight charges only. Freight charges	i wells, te will be co	exas via
upon delivery by the carrier. Please allow sufficient		
on these special order antennas. VHF MOBILE ANTENNAS		
BBL-144A 2m FM ¾" hole mt antenna, 3.4db	\$ 39.95	
BBLT-144A 2m FM trunk lip mt ant, 3.4 db	47.95	42 ⁹⁵
CG-144 2m FM %-24 ant, 7' high, 5.2 db	31.95	4005
CGT-144 2m FM trunk mt ant, 7' high, 5.2db CG-220 220 FM %-24 antenna, 5.2 db	51.95 31.95	49 ⁹⁵
CGT-220 220 MHz 5.2 db trunk mt antenna	51.95	4495
FX-2 2m FM 3.4 db magnetic mt antenna	33.95	
FX-28 2m FM 3.4 db black mag mt antenna .	38.95	
FX-220 220 FM 3.4 db magnetic mt ant	33.95	
FX-220B 220 FM 3.4 db black mag mt ant FXM FX-style magnet mount w/coax	38.95 19.95	
MKR-2 Radial kit for SF-2/CG-144	20.95	
RX-2 2m FM 3.4db magnetic mount ant	24.95	
RX-220 220 FM 3.4db magnetic mt antenna .	24.95	
RX-440 440 FM 5 db magnetic mt antenna	24.95 14.95	
SF-2 2m FM %-24 ant, 4' high, 3.4 db SF-220 220 MHz %-24 antenna, 3 db	14.95	
THF 140-500 MHz ¼ wave trunk mount ant	23.95	
UGM 140-500 MHz $\frac{1}{4}$ wave BNC mag mt ant .	21.95	
UHT-1 140-500 MHz ¼ wave roof mt ant	14.95	
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HUSTLER CUSTOMER SERVICE Phone 1-817-325-1386

9		Reg	Sale
	HY-GAIN (HYG)		
	TRI-BAND BEAMS (20-15-10m)		
	398S TH11DXS 11el 20/17/15/12/10m, 24' bm .		
	391S TH7DXS 7el, 24'boom, 8.7db w/balun	733.30	
	393S TH5Mk2S 5el, 19' boom, 8.5db, balun . 395S Explorer 14 4el, 14' boom, 8db, balun .	629.30 486.70	529 ⁹⁵ 409 ⁹⁵
	396S QK-710 10MHz or 40m EX add-on	153.30	13995
	388\$ TH3Mk4 3 el, 14' boom, 8.1db	369.00	309 ⁹⁵
	221S-1 TH3JRS 3el, 12'boom, 750w PEP, 8db	306.70	259 ⁹⁵ 259 ⁹⁵
	390S TH2Mk3S 2 el, 6' boom, 5.5 db MONOBAND BEAMS	310.70	233
	371S Discoverer 7-1 30m or 40m rotatable dipole	\$242.70	219 ⁹⁵
	372S Discoverer 7-2 40m 2el 23' boom 6.5db	544.00	45995
	373S Discoverer 7-3 3rd el; 372S; 35' bm 8.7db	342.70	289 ⁹⁵
	377S-1 205CA 20m 5el, 34' boom, 11.6db .T 394S 204BAS 20m 4 el, 26' boom, 10 db	609.30 444.00	519 ⁹⁵ 369 ⁹⁵
	226S 203BAS 20m 4 el, 26 boom, 10 db	266.70	22995
	376S 155B/CAS 15m 5 el, 26' boom, 12 db	344.00	289 ⁹⁵
15	236S 153BAS 15m 3 el, 12' boom, 8.5 db	164.00	13995
15	375S 105B/CAS 10m 5 el, 24' boom, 12 db	226.70	199 ⁹⁵ 109 ⁹⁵
15	239S-1 103BAS 10m 3 el, 8' boom, 8.5 db 1009AA LP-1009AA 13-30 MHz 12 el LPm	118.70	99995
15 15	1010AA LP-1010AA 10-30 MHz 14 el LPm		1449
	MULTI-BAND VERTICALS		
	188S DX-88 8-band vertical antenna	\$313.30	269 95
15	1895 GRK-88 Ground radial kit	62.70	59 ⁹⁵
15	1905 RRK-88 Roof radial kit 1915 160MK-88 160m kit for 188S	80.00 164.00	72 ⁹⁵ 139 ⁹⁵
15	182S 18HTS Hy-Tower 5-band, 50' highT	681.30	59995
15	LC-160Q 160m loading coil for Hy-Tower	53.05	49 ⁹⁵
15	385S 14AVQ/WBS 40/20/15/10m, 18'	148.00	
	384S 12AVQS 20/15/10m, 13.5' high 184 14RMQ Roof kit-12/14AVQ/S, 18AVT/S	101.30 61.30	89 ⁹⁵ 59 ⁹⁵
15 15	193S 18VS 80-10m trapless vert, 18' high	50.70	4995
15	MULTI-BAND DOUBLETS	00.70	10
15	380S 2BDQS 80/40m 101' trap doublet	\$108.00	99 ⁹⁵
15	383\$ 5BDQS 80/40/20/15/10m 94' trapt†		17995
15	381S 19PD 80-10m 233' 1-band port dipole	218.70	189 ⁹⁵
15 15	VHF/UHF BASE STATION ANTENNAS	\$200.20	189 ⁹⁵
15	343S 66DX 6m 6el beam, 24' boom, 15 db 230S-1 64DX 6m 4el beam, 12'boom, 12.7db		99 ⁹⁵
it	232S 215DX 2m 15el beam, 28'boom, 14.2db.		
S	214S-1 214FM 2m 14el beam, 15'boom, 13db .	66.70	
n r,	208S-1 28FM 2m 8el beam, 12'boom, 11.8db 205S-1 25FM 2m 5el beam, 6'boom, 9.1db	58.70 42.70	
it	203S-1 23FM 2m 3 el beam, 3.5'boom, 6.1db	33.30	
e Ir	231S 70-31DX 430 31el beam, 24'bm, 17.6db .	184.00	1 59 95
a d	338 GPG2B 2m 3.4 db ground plane ant	38.70	
u y	331S V-42R 2m/440 3/5 db type N base ant 335S-1 V-2R 2m 3 db ground plane ant	142.70 93.30	129 ⁹⁵ 84 ⁹⁵
	337S-1 V-2R 211 5 db ground plane ant	89.30	7995
	OSCAR LINK ANTENNAS		
15	216S 216SAT 2m 16el 145.9MHz 11.5db bm	\$186.70	169 ⁹⁵
	215S 7030SAT 435 MHz 30 el 14 db beam		159 ⁹⁵ 50 ⁹⁵
15	217 60" x 1½" fiberglass crossboom 218S OSCAR Link Complete Oscar ant sys	65.30 418.70	59 ⁹⁵ 359 ⁹⁵
15	ACCESSORIES	410.70	222
	155 CI Center insulator for doublets	\$ 12.00	
	156 El 7" doublet end insulatorspair	6.70	
	157S CIC Dipole center insulator w/SO-239.	21.30	
	242S BN-86 80-10m balun 243S BN-4000B 4kw PEP 160-10m beam balun	33.30 85.30	
	244S BN-4000D 4kw PEP 160-10m dipole balun	85.30	79 95
	245\$ BN-4000N 4kw PEP 80-10m N beam balun	96.00	89 ⁹⁵
	2400-155 62400155 Contester bm mic/headset	81.30	7495
	610-1 (Telex) 600 ohm headphonesDmwfcv		9 ⁹⁵
	HY-GAIN CRANK-UP TOWERS 129 HG-37SS 37' self-supporting towerT	1406 70	1169
	125-1 HG-52SS 52' self-supporting towerT	2366.70	1949
	130-1 HG-54HD 54' hvy duty self-supportT	2866.70	2369
	131-1 HG-70HD 70' hvy duty self-supportT		3399
	116 HG-5 5' 2" OD .120 wall steel mast 117 HG-10 10' 2" OD .120 wall steel mast Tw		89 95
	118 HG-15 15' 2" OD .120 wall steel mast .T	152.00	149 ⁹⁵

LUV CAIN continued		
HY-GAIN - continued	Reg	Sale
121B HG-TBT Thrust bearing w/sleeve	80.00	7495
122 HG-COA Coax arm*, tower legs 1"-1½"	21.30	
*One required per section		
140 HG-TOA Tilt-over 'gin-pole'T	670.70	569 ⁹⁵
Hy-Gain Towers are shipped PREPAID (Hy-Gain's e	(pense) via	truck
direct from the factory (48 states). Any other H	-Gain ant	ennas,
rotors, or accessories on the same order as a H also be shipped PREPAID from the factory. On thes	y-Gain tow	er will
we prefer payment in full with order, however, we	will accer	intents
credit card with the understanding that we will pr	ocess the	charge
when we order the merchandise. This means at y	ou may be	billed
before you receive your order. Please allow suffici Most truck lines will not unload the tower, so pleas	ent deliver	y time.
enough manpower and/or equipment on hand.	e ne sure i	0 11946
HY-GAIN ANTENNA ROTORS		
305 AR-40 Solid state light duty rotor	\$213.30	19995
302 CD-45-II Medium duty rotor		27995
304 HAM IV Heavy duty rotor		36995
303 T ² X Tailtwister extra heavy duty rotor	504.00	
300 HDR-300 Deluxe digital hvy duty rotor		929 ⁹⁵
OPTIONAL ACCESSORIES FOR ROTORS		
51467-10 MSHD Lwr mast support; HAM IV/T ² X	\$ 73.30	
51472-10 MSLD Lwr mast support; CD45II/AR40	22.70	
50559-10 TSP-1 Tower spacing kit	20.70	
See BELDEN for rotor cable		
	0005.00	
IC-781 Xcvr/Rcvr/ps/auto tuner/spectrum scope	8835.00	CALL
FL-103 2.8 KHz SSB filter	89.00	69 ⁹⁵
UT-36 Voice synthesizer	54.00 4125.00	CALL
IC-765 Xcvr/ps/keyer/auto tuner CR-282 High stability crystal unit	122.00	CALL 11295
FL-53A 250 Hz CW filter (2nd IF)	178.00	15995
FL-101 250 Hz CW filter (1st IF)	96.00	100
FL-102 6 KHz AM filter	68.00	59 95
HM-36 Scanning hand mic	54.00	
MB-19 Rack mounting handles	54.00	
SM-6 Desk microphone	93.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
UT-30 Tone encoder	40.00	
UT-36 Voice synthesizer	54.00	
FL-70 2.8 KHz wide SSB filter; 751AΔm	88.00	4995
MB-18 Mobile mount for IC-751A	43.00	2495
IC-737 Xcvr/Rcvr/auto tuner/kyr/mic Dmwfcv	1801.00	1099
IC-737A Xcvr/Rcvr/tune/kyr/mic/VOX Dmwfcv		CALL
IC-738 Xcvr/SW Rcvr/tuner/keyer/mic/VOX		CALL
IC-736 Xcvr w/6m/tuner/power supply PS-55 Power supply		CALL 289 ⁹⁵
PS-15 20A power supply		27995
AH-3 Automatic antenna tuner		49995
AH-2B Bumper mt & whip for AH-3	275.00	23495
AT-150 100w 9-band automatic ant tuner .	580.00	48995
CR-282 High stability crystal unit	122.00	112 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv	120.00	69 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF)	120.00 178.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF)	120.00 178.00 178.00	69 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-100 500 Hz CW filter (1st IF)	120.00 178.00 178.00 96.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 FL-101 FL-101	120.00 178.00 178.00 96.00 96.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 FL-101 FL-101 HM-36 Extra scanning hand mic FL-101 FL-101 FL-101 FL-101	120.00 178.00 178.00 96.00 96.00 54.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 Start ascanning hand mic MB-49 Mobile mounting bracket Start ascanning hand mic Start ascanning hand mic	120.00 178.00 178.00 96.00 96.00 54.00 43.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 SM filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SM-6 SM filter (1st IF)	120.00 178.00 178.00 96.00 96.00 54.00 43.00 93.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 SM filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00	69 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 SM filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SM-6 SM filter (1st IF)	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-20 Speaker w/audio filter Speaker w/audio filter	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-10D 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 SP-7 Small external speaker SP-7 SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asi Salesperson About	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-10D 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-70 Speaker w/audio filter SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asi Salesperson About • Late Breaking "Hot I	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737 Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A FL-53A 250 Hz CW filter (2nd IF) FL-100 FL-100 500 Hz CW filter (1st IF) FL-101 FL-101 250 Hz CW filter (1st IF) FL-101 HM-36 Extra scanning hand mic MB-49 Mbile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 SP-7 Small external speaker SP-20 SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder I External speaker UT-30 Tone encoder Item Speaker I External speaker UT-30 Tone encoder Item Speaker I External speaker UT-30 Tone encoder Item Speaker I External speaker UT-30 Tone encoder I External speaker I External speaker I External speaker I External speaker I External speaker </th <th>120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00</th> <th>69⁹⁵ 159⁹⁵ 159⁹⁵ 96⁹⁵ 199⁹⁵ 94⁹⁵</th>	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-10D 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-70 Speaker w/audio filter SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asi Salesperson About • Late Breaking "Hot I	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asl Salesperson About • Late Breaking "Hot I • Latest Sale Prices • Monthly Specials	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asis Salesperson About Late Breaking "Hot I Latest Sale Prices Monthly Specials Coupons, etc.	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-10D 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asl Salesperson About . • Late Breaking "Hot I • Latest Sale Prices • Monthly Specials • Coupons, etc. Info also available on the AES	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00 K YOU	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵
EX-1514 VOX unit for IC-737Dmwfv FL-52A 500 Hz CW filter (2nd IF) FL-53A 250 Hz CW filter (2nd IF) FL-100 500 Hz CW filter (1st IF) FL-101 250 Hz CW filter (1st IF) HM-36 Extra scanning hand mic MB-49 Mobile mounting bracket SM-6 Desk microphone SP-3 External speaker SP-7 Small external speaker SP-7 Small external speaker SP-20 Speaker w/audio filter SP-21 External speaker UT-30 Tone encoder REMEMBER to Asis Salesperson About Late Breaking "Hot I Latest Sale Prices Monthly Specials Coupons, etc.	120.00 178.00 96.00 96.00 54.00 43.00 93.00 102.00 68.00 225.00 100.00 40.00 K YOU	69 ⁹⁵ 159 ⁹⁵ 159 ⁹⁵ 96 ⁹⁵ 199 ⁹⁵ 94 ⁹⁵

ICOM - continued	Reg	Sale
EX-241 Marker unit for IC-745	37.00	
EX-242 FM unit for IC-745		
IC-735 Xcvr/SW Rcvr w/mic	1485.00	CALL
PS-55 Power supply	345.00	28995
PS-15 20A power supply AH-2 Antenna tuning sys w/bpr mt & whip .	330.00 941.00	27995 78995
AH-2A Antenna tuning system only		57995
AT-150 100w 9-band automatic ant tuner .	580.00	48995
EX-243 Electronic keyer unit	100.00	94 ⁹⁵
FL-32A 500 Hz CW filter FL-63A 250 Hz CW filter	92.00	
MB-5 Mobile mount	88.00 43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 95
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	1 99 95
UT-30 Tone encoder IC-728 Xcvr/SW Rcvr w/mic	40.00 1325.00	CALL
IC-729 Xcvr/SW Rcvr w/6mDmwfv	1525.00	CALL 1099
PS-55 Power supply	345.00	28995
PS-15 20A power supply	330.00	27995
AH-3 Automatic antenna tuner	594.00	499 ⁹⁵
AH-2B Bumper mt & whip for AH-3	275.00	23495
AT-160 Attached automatic ant tuner CR-64 High stability oscillator crystal	442.00 114.00	369 ⁹⁵ 104 ⁹⁵
EX-1514 VOX unit	120.00	69 ⁹⁵
FL-100 500 Hz CW filter	96.00	00
FL-101 250 Hz CW filter	96.00	
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	0.005
SP-3 External speaker SP-7 Small external speaker	102.00 68.00	96 ⁹⁵
SP-20 Speaker w/audio filter	225.00	19995
UI-7 AM/FM module for IC-728	86.00	100
UT-30 Tone encoder	40.00	
IC-725 Xcvr/SW Rcvr w/micDmwfv	972.00	798 95
\$50 coupon - IC-725 until gone!	245 00	0.0.005
PS-55 Power supply AH-3 Automatic antenna tuner	345.00 594.00	289 ⁹⁵ 499 ⁹⁵
AH-2B Bumper mt & whip for AH-3	275.00	23495
CR-64 High stability oscillator crystal	114.00	10495
EX-1514 VOX unit	120.00	69 ⁹⁵
FL-100 500 Hz CW filter FL-101 250 Hz CW filter	96.00	
MB-5 Mobile mount	96.00 43.00	
SM-6 Desk microphone	93.00	
SP-20 Speaker w/audio filter	225.00	199 95
SP-21 External speaker	100.00	94 95
UI-7 AM/FM module	86.00	
UT-30 Tone encoder IC-707 Xcvr/SW Rcvr w/mic	40.00 1032.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	27995
AH-3 Automatic antenna tuner	594.00	499 ⁹⁵
AH-2B Bumper mt & whip for AH-3	275.00	23495
AT-160 Attached automatic ant tuner EX-1514 VOX unit∆mwfv	442.00 120.00	369 ⁹⁵ 69 ⁹⁵
FL-52A 500 Hz CW filter (2nd IF)	178.00	159 ⁹⁵
FL-53A 250 Hz CW filter (2nd IF)	178.00	15995
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	0.005
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker SP-20 Speaker w/audio filter	68.00 225.00	19995
SP-21 External speaker	100.00	9495
UI-9 FM module	82.00	
UT-30 Tone encoder	40.00	
IC-2KL 160-15m/WARC solid state linear		CALL
IC-4KL 1kw output solid state linear OPC-118 Adapter; 2KL/4KL; 725/735/765	9000.00	CALL
AH-2 Antenna tuning sys w/bpr mt & whip	941.00	789 ⁹⁵
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ICOM - continued	Reg	Sale
AH-2A Antenna tuning system only	691.00	579 ⁹⁵
OPC-137 Adapt; AH-2/2A - IC-751A/745 Dmwfv AT-150 100w 9-band automatic ant tuner		48995
OPC-137 Adapt; AT-150 - IC-751A/745 Dmwfv	18.00	
AT-500 500w 9-band automatic ant tuner OPC-118 Adapter; AT-500; 725/735/765/781 .	995.00 18.00	CALL
SHORTWAVE RECEIVERS	10.00	
R-1* .1MHz-1.3GHz AM/FM handheld Rcvr	\$577.00	CALL
R-1-15 .1MHz-1.3GHz AW/FM hand Rcvr/cell blkd HP-4 Lightweight headphones	577.00 21.00	CALL
Note: R-1/R-1-15 use 'S'-series HT accessories		
R-71A 100 KHz - 30 MHz dig keyboard Rcvr		CALL
CK-70 (EX-299) 12v DC option CR-64 High stability oscillator crystal	30.00 114.00	10495
EX-257 FM unit	79.00	
EX-310 Voice synthesizer FL-32A 500 Hz CW filter	77.00 92.00	
FL-44A SSB filter	206.00	179 ⁹⁵
FL-63A 250 Hz CW filter	88.00	
MB-12 Mobile mount RC-11 Infrared wireless remote control	43.00 105.00	99 95
SP-3 External speaker	102.00	9695
UI-8 FM unit for R-72Δm	86.00	54 ⁹⁵
R-100* .1MHz-1.856GHz AM/FM 12v Rcvr R-100-11 .1MHz-1.856GHz am/fm 12v Rcv/cell blkd	850.00 850.00	CALL
AD-15A Power supply	63.00	59 95
AH-7000 25-1000 MHz discone antenna CP-11 Cig cord w/noise filter	150.00 29.00	13495
HP-4 Lightweight headphones	21.00	
R-7000* 25 MHz - 2 GHz scanning receiver		CALL
AH-7000 25-1000 MHz discone antenna CK-70 (EX-299) 12v DC option	150.00 30.00	13495
EX-310 Voice synthesizer	77.00	
MB-12 Mobile mount RC-12 Infrared wireless remote control	43.00 100.00	94 95
SP-3 External speaker	100.00	9695
TV-R7000 ATV unit for R-7000	270.00	229 ⁹⁵
R-7100 * 25 MHz - 2 GHz scanning Rcvr R-7100-12 25 MHz-2 GHz scan Rcvr/cell blkd	1850.00 1850.00	CALL
AH-7000 25-1000 MHz discone antenna	150.00	13495
MB-5 Mobile mount MB-23 Carrying handle	43.00 11.00	
SP-3 External speaker	102.00	96 95
SP-7 Small external speaker SP-20 Speaker w/audio filter	68.00	10095
TV-R7100 TV/FM adapter	225.00 310.00	199 ⁹⁵ 259 ⁹⁵
UT-36 Voice synthesizer	54.00	
R-9000 * .1-1999.8MHz Rcvr/spectrum scope *United States & state government agencie	6825.00 s or a no	CALL litical
subdivision thereof and communications uti	lity comp	anies
and their legal agents ONLY may purchase un of R-1, R-100, R-7000, R-7100 and/or R-90	blocked m	nodels
government or communications utility com	pany use	
Special Order! Mail or FAX purchase order to A	ES.	
SP-20 Speaker w/audio filter UT-36 Voice synthesizer	225.00 54.00	199 ⁹⁵
6m TRANSCEIVERS		
IC-575H 100w 6 & 10m FM/SSB/CW Xcvr PS-55 Power supply	2460.00 345.00	CALL 289 ⁹⁵
AH-610 Dual band 6/10m base antenna	137.00	129 ⁹⁵
EX-20 6/10m automatic ant selector	97.00	10.405
CR-64 High stability oscillator crystal FL-100 500 Hz CW filter	114.00 96.00	10495
FL-101 250 Hz CW filter	96.00	
FL-102 6 KHz AM filter UT-36 Voice synthesizer	68.00 54.00	
2m TRANSCEIVERS	04.00	
IC-281H 50w 2m FM Xcvr/TTP/9600 baud		CALL
OPC-347 23' DC power cable OPC-440 Mic extension cable	34.00 62.00	
UT-66 Voice synthesizer	60.00	
UT-85 Tone squelch unit IC-275H 100w 2m FM/SSB/CW Xcvr	55.00	CALL
PS-55 Power supply	1915.00 345.00	CALL 28995
AG-25 Mast mounted GaSFET preamp	160.00	14995
CR-64 High stability oscillator crystal EX-1514 VOX unit	114.00 120.00	104 ⁹⁵ 69 ⁹⁵
	AE0.00	

	ICOM continued		
e	ICOM - continued	Reg	
95	FL-83 CW filter	109.00	99 95
95	UT-34 Tone squelch unit	68.00	
140	UT-36 Voice synthesizer	54.00	CALL
LL	IC-2330A 45w 2m/25w 220 FM Xcvr/TTP IC-3230A 25w 2m440 FM Xcvr/TTPDwfv	1020.00 772.00	CALL 54995
	IC-3230H 45w 2m/35w 440 FM Xcvr/TTP Dmwfv	799.00	549 ⁵⁵ 629 ⁹⁵
	\$20 coupon - IC-3230H until gone!		
LL	HM-56A Extra autodial TTP mic		10995
LL	UT-55 DTMF tone encoder/decoder unit	50.00	
	UT-66 Voice synthesizer; 2330A/3230A/H UT-67 Tone squelch unit	60.00	
	IC-2340 45w 2m/35w 440 FM Xcvr/TTP mic	90.00 744.00	CALL
LL	OPC-347 23' DC power cable	34.00	and the factor
95	OPC-440 Mic extension cable	62.00	
	UT-55 DTMF tone encoder/decoder unit		
	UT-66 Voice synthesizer UT-89 Tone squelch unit		
95	IC-2700H 50w 2m/35w 440 FM Xcvr/TTP mic	959.00	CALL
	BC-96 Microphone holder	31.00	- net
	EX-1513 Infrared sub receiver	20.00	
95	HM-90A Wireless microphone	152.00	139 ⁹⁵
95	MB-58 Remote controller bracket OPC-347 23' DC power cable	28.00	
95	OPC-438 11.5' separation kit	30.00	
	OPC-439 23' separation kit	44.00	
95	OPC-440 Mic extension cable	62.00	
95	OPC-441 Speaker extension cable	24.00	
	UT-66 Voice synthesizer UT-84 Tone squelch unit		
	IC-820H 2m/430 SSB/FM satellite Xcvr/9600	80.00 1999.00	CALL
L 95	PS-55 Power supply	345.00	CALL 28995
-0	PS-15 20A power supply	330.00	27995
	AG-25 2m mast mounted GaSFET preamp	160.00	149 ⁹⁵
	AG-35 430 MHz mast mounted preamp CR-293 High stability xtal unit	165.00	154 ⁹⁵ 249 ⁵
95	CR-293 High stability xtal unit FL-132 CW filter	276.00 96.00	249 ⁹⁵
95	HM-12 Scan hand microphone	96.00 54.00	
95	MB-5 Mobile mount	43.00	
L L	SM-6 Desk microphone	93.00	
.L. 95	SP-3 External speaker	102.00	96 ⁹⁵
	SP-7 Small external speaker SP-20 Speaker w/audio filter	68.00 225.00	199 ⁹⁵
	SP-20 Speaker w/audio filter SP-21 External speaker		199 ⁹⁰ 94 ⁹⁵
95	UT-36 Voice synthesizer	54.00	
95	UT-50 Tone decoder IC-Delta-100H 2m/440/1.2 GHz FM Xcvr/TTP	54.00	
95	IC-Delta-100H 2m/440/1.2 GHz FM Xcvr/TTP	1570.00	CALL
	MB-50 Remote controller bracket OPC-332 11.5' separation kit	21.00	
L	OPC-332 11.5 separation kit	22.00 27.00	
al	OPC-335 16.4' speaker cable	29.00	
S	OPC-347 23' DC power cable	34.00	
s	UT-66 Voice synthesizer	60.00	
у,	UT-75 DTMF decoder unit UT-76 Tone squelch unit	50.00	100%
	AH-32 2m/440 dual band mobile antenna	120.00 60.00	10995
35	Larsen PO-K Roof mt, coax for AH-32	23.00	
	Larsen PO-MM Magnet mt, coax; AH-32	30.40	
L	Larsen PO-TLM Trunk lip mt, coax; AH-32	26.35	0.00
L 95	Icom AHB-32 Tnk lip mt, coax; AH-32 ∆mwfv	55.00	3995
35	Accessory for IC-u2AT BC-50 Desk quick cgr; not for BP-20∆m	\$120.00	60%
	IC-2AT 1.5w 2m FM HT/batt/cgr/TTPDf	\$120.00 359.00	69 ⁹⁵ 219 ⁹⁵
35	AD-12 External pwr adapter; 2/4GAT/32AT .	359.00	2130
	BA-10 Bottom slide cap	10.00	
	BC-16U Wall charger; BP-5A/7/8 only	29.00	
	BC-25U Extra wall charger; BP-3 only	25.00	1000
	BC-35 Drop-in rapid charger; all batteries . BP-2* 425ma 7.2v long life batt; all HTs	120.00 62.00	10995
L	BP-2 ^{**} 425ina 7.2V long life batt; all HTs BP-3 250ma 8.4V battery; all HTs	47.00	
	BP-4 Alkaline battery case; all HTs	25.00	
	BP-5* 425ma 10.8v high power batt; all HTs .	79.00	
	*BC-35 required to charge BP-2/5		
L	BP-5A 425 ma 10.8v direct charge batt; all BP-7 425 ma 13 5v 5w batt; deluxe HTs only	79.00	
5	BP-7 425ma 13.5v 5w batt; deluxe HTs only . BP-8 800ma 8.4v long life batt; all HTs	88.00 87.00	
5	BP-70 * Extra 270ma 13.2v batt; 2GAT/32AT .	87.00	
5	*BP-70 9-hours max charge time in BC-35		
	CM-12 Alkaline batt case (10 AAs); dlx HTs .	30.00	

ICOM - continued	Reg	Sale	ICOM - continued
CP-1 Cig cgr; BP-3/7/8//DC cord; dlx HTs	-		BP-130 Battery case
CP-10 Battery separation cable w/clip			BP-131 900ma 7.2v battery/mic
CP-11 Cig cord w/noise filter; dlx HTs	29.00		BP-132 600ma 12v battery/mic
DC-1 DC operation module; std HTs			BP-157 900ma 7.2v battery
FA-2 Extra 2m flexible antenna			CP-13 Cig cable w/filter
FA-140B Extra 2m flex ant for IC-2GAT FA-1443B Extra 2m/440 dual band flex ant .			HM-9 Speaker/microphone HM-46 Slim-line speaker/mic
HH-SS Handheld shoulder strap	21.00		HM-54 Hvy duty spkr/mic
HM-9 Speaker/mic; all HTs	53.00		HM-55A Speaker/mic w/TTP
HM-46 Slim-line speaker/mic	50.00		HM-75 Speaker/mic w/remote control
HM-46L Slim-line spkr/mic for 2GAT	50.00		HS-51 Headset w/VOX
HS-10 Boom mic/headset HS-10SA VOX unit (deluxe HTs only)	40.00		LC-103 Vinyl case; IC-W21A w/BP-130/1 LC-104 Vinyl case; IC-W21A w/BP-132.
HS-105B PTT switchbox	50.00 50.00		LC-105 Vinyl case; IC-W21A w/BF-132
HS-51 Headset w/VOX	70.00		LC-106 Vinyl case; IC-W21AT w/BP-132
LC-02AT Leather case; dlx HTs w/BP-7/8Dm	28.00	19 95	MB-30 Mobile/wall bracket
LC-2AT Leather case; IC-2AT w/BP-3Dm		19 ⁹⁵	OPC-288 Mini DC pwr cord
LC-2GAT Leather case for IC-2GATDm LC-11 Vinyl case; deluxe HTs w/BP-3Dm	28.00	19 ⁹⁵ 14 ⁹⁵	IC-W2A 2/5w 2m/440 HT/batt/cgr/TTP Dm
LC-12 Vinyl case; deluxe HTs w/BP-5Dm	17.00 12.00	1400	AD-14 BC-74 charge adapter AD-20 BC-77 charge adapter
LC-14 Vinyl case; dlx HTs w/BP-7/8Dmwf		19 95	AH-20 Replacement rcv ant for IC-2SRA
LC-32AT Leather case for IC-32ATDm	26.00	1995	BA-11 Bottom cap
LC-38 Vinyl case; 2GAT w/BP-2/3/4Dm	17.00	1495	BA-12 Drop-in charger adapter
LC-39 Vinyl case: 2GAT w/BP-5/70Dmwfv		1995	BC-72 Rapid desk charger
LC-40 Vinyl case; 2GAT w/BP-5A/7/8 Dmwv LC-41 Vinyl case; 32AT w/BP-2/3/4Dm	21.00 17.00	19 ⁹⁵ 12 ⁹⁵	BC-74 Extra wall cgr; 24AT & S-series
LC-42 Vinyl case; 32AT w/BP-5/70Dm	17.00	995	BC-77 Extra wall cgr; W2A/2SRA BP-81 7.2v 110ma battery
LC-43 Vinyl case; 32AT w/BP-5A/7/8Dm	22.00	1495	BP-82 7.2v 300ma battery
MB-16 Window/car door mount	29.00		BP-83 7.2v 600ma battery
MB-16D Mobile mtg bkt for all HTs	29.00	0.445	BP-84 7.2v 1000ma battery
MB-24 Window/car door mt; 2GAT∆mwfv RB-1 Vinyl waterproof radio bag	29.00 39.00	24 ⁹⁵	BP-85 12v 340ma 5w battery BP-90 AA battery case
UT-40 Tone squelch decoder; 2GAT/32AT	60.00		CP-12 Cig lighter cable w/filter
Accessories for P-series hand-helds			CP-13 Cig cable w/filter; W2A/2SRA
BC-80 Desk cgr; BP-112-114, BP-81-85	\$150.00	139 ⁹⁵	HM-9 Speaker/microphone
BC-74 Extra wall charger; BP-111-114			HM-46 Slim-line speaker/mic
BP-110 Alkaline battery case BP-111 Extra 7.2v 400ma 1.5w battery	25.00 62.00		HM-54 Hvy duty spkr/mic; not for 2G/W2 HM-65 Slim-line spkr/mic; W2A/2SRA
BP-112 7.2v 700ma 1.5w battery	68.00		HM-70 Speaker/mic; W2A/2SRA
BP-113 7.2v 1200ma 1.5w battery	92.00		HS-51 Headset w/VOX
BP-114 12v 400ma 5w battery		99 ⁹⁵	HS-60 VOX headset; W2A/2SRA
CP-12 Cig lighter cable w/filter HM-9 Speaker/microphone	29.00 53.00		LC-24(L) Leather case; 24AT/BP-85 LC-53 Vinyl case; 2SA w/no battery
HM-46 Slim-line microphone	50.00		LC-55 Vinyl case; 2SA/BP-82/83/90
HM-54 Heavy duty speaker/mic	60.00		LC-57 Vinyl case; 2SAT w/no batteryD
HS-51 Headset w/VOX	70.00		LC-59 Vinyl case; 2SAT w/BP-82/83/90 D
LC-91 Vinyl case; BP-111Dmwf	25.00		LC-61 Vinyl case; 2SAT w/BP-84/85D
LC-92 Vinyl case; BP-110/112Dm LC-93 Vinyl case: BP-113/114Dm	17.00 17.00		LC-63 Vinyl case; 24AT/BP-81/BA-11 LC-65 Vinyl case; 24AT/BP-82/83/90
MB-30 Mobile/wall bracket	29.00		LC-66 Vinyl case; 24AT w/BP-84/85Dr
OPC-254 Mini DC power cable	9.00		LC-71 Case; W2A/2SRA w/BP-81/BA-11
UT-49 DTMF decoder unit	54.00		LC-72 Case; W2A/2SRA w/BP-82/83/90
IC-2iA 2m FM HT/batt/cgrDmwfv	387.00	249 ⁹⁵	LC-73 Case; W2A/2SRA w/BP-84/85 LC-SAT(L) Leather case; 2SAT w/BP-85 .
\$50 coupon - IC-2iA until gone! AD-26 Adapter for BC-79A w/BP-121-124	13.00		MB-22 Alligator belt/pocket clip
BC-79A Desk charger (adapter required)	150.00	13995	MB-25 Stainless steel wall storage unit
BP-120 AA alkaline battery case	25.00		MB-30 Mobile/wall bracket
BP-121 7.2v 400ma battery	62.00		OPC-254 Mini DC power cable
BP-122 7.2v 700ma battery BP-123 7.2v 1200ma battery	68.00 92.00		OPC-288 Mini DC pwr cord; W2A/2SRA UT-49 DTMF decoder unit for S-series
BP-124 12v 400ma battery	116.00	10495	UT-50 Tone decoder
CP-13L Cigarette lighter cable	29.00	101	UT-51 Programmable tone encoder unit
HM-9L Speaker/mic	53.00		IC-2GXAT 2m FM HT/batt/cgr/TTP
HM-46L Speaker/mic w/ear jack	50.00	0.095	IC-2GXAT/HP 7w 2m FM HT/batt/cgr/TTP . AD-25 Battery charger adapter
HM-55A Speaker/mic w/TTP† HS-51 Headset w/VOX	115.00 70.00	89 ⁹⁵	AD-28 Batt pack adapter for rapid charg
LC-83 Vinyl case for BP-121	25.00		BC-77 Extra wall charger
LC-84 Vinyl case for BP-120/122	25.00		BC-79A Desk charger (adapter required)
LC-85 Vinyl case for BP-123/124	25.00		BP-130A Battery case
MB-30 Mobile/wall bracket OPC-288L DC power cable	29.00 14.00		BP-132A 600ma 12v battery/mic BP-157A 900ma 7.2v battery
IC-V21AT 2m/220 FM HT/batt/cgr/TTP	716.00	CALL	BP-160 700ma 7.2v battery
IC-W21A 2m/440 FM HT/batt/cgrDm	572.00	29995	BP-174 600ma 12v battery
IC-W21AT 2m/440 FM HT/batt/cgr/TTP	536.00	CALL	CP-13L Cigarette lighter cable
AD-25 Battery charger adapter	45.00		HM-46 Slim-line speaker/mic HM-54 Heavy duty spkr/mic
AD-28 Batt pack adapter for rapid charger BC-77 Extra wall charger	13.00 29.00		HM-54 Heavy duty spkr/mic HM-55A Speaker/mic w/TTP
BC-79A Desk charger (adapter required)		13995	HS-51 Headset w/VOX

BC-79A Desk charger (adapter required) 150.00 13995

	Reg	Sale	ICOM - continued	Reg	Sale
	25.00		LC-116 Carrying case; BP-130A/157A/160.	27.00	
	96.00		LC-117 Carrying case for BP-132A	27.00	
	109.00 62.00		MB-30 Mobile/wall bracket OPC-288L DC power cable	29.00 14.00	
	29.00		SP-13 Earphone	3.00	
	53.00		UT-49 DTMF decoder unit	54.00	
•••••	50.00		IC-Delta-1A 2m/440/1.2 FM HT/batt/cgr/TTP	987.00	CALL
	60.00 69.00		AD-22 External battery charge adapter AD-27 Charge adapt; BP-101 - 103/BC-79	45.00 13.00	
	70.00		BP-100 Battery holder		
	70.00		BP-101 700ma 7.2v battery	68.00	
/131	27.00		BP-102 1200ma 7.2v battery	94.00	
/131	27.00 27.00		BP-103 600ma 12v battery UT-70 Tone encoder/decoder	110.00	99 ⁹⁵ 129 ⁹⁵
2	27.00		IC-T21A 2m FM HT/batt/cgr/TTP	145.00 455.00	CALL
	29.00		AD-44 Desk charger adapter	13.00	OTTLE
	14.00		BC-74 Extra wall charger	29.00	
mwfv	579.00 31.00	43995	BC-79A Desk charger (adapter required)	150.00	1 39 95
	45.00		BP-151 800ma 6v battery BP-152 1100ma 6v battery	42.00 48.00	
Α	20.00		BP-153 600ma 12v battery	109.00	10495
	8.00		BP-159 Battery case	25.00	
	21.00	10405	CP-12 Cig lighter cable w/filter	29.00	
	135.00 29.00	124 ⁹⁵	HM-46 Slim-line speaker/mic HM-54 Heavy duty spkr/mic	50.00	
	29.00		HM-55A Speaker/mic w/TTP		
	55.00		HM-75 Speaker/mic w/remote control		
†	60.00	49 ⁹⁵	HS-51 Headset w/VOX		
•••••	65.00		LC-109 Vinyl case for BP-151/159		
•••••	87.00 113.00	10995	LC-110 Vinyl case for BP-153 LC-111 Vinyl case for BP-152	27.00 27.00	
	25.00	100	MB-30 Mobile/wall bracket		
	29.00		OPC-254 Mini DC power cable		
	29.00		SP-13 Earphone	3.00	
•••••	53.00 50.00		RP-1520 25w 2m FM repeater	2900.00	CALL
	60.00		220 MHz TRANSCEIVERS	¢150.00	CALL
	55.00		IC-03AT 2.5w 220 HT/batt/cgr/TTP IC-3SAT 2/5w 220 HT/batt/cgr/TTP	\$450.00	CALL
	60.00		IC-P3AT Mini 220 FM HT/batt/cgr/TTP .Dmwfv	452.00	30995
•••••	70.00		\$30 coupon - IC-P3AT until gone!		
Dm	88.00 26.00		IC-03AT uses same accessories as IC-02AT/HP		
Dm	21.00	295	IC-3SAT uses same accessories as IC-2SAT IC-P3AT uses same accessories as IC-P2AT		
Dm	21.00	2 ⁹⁵	IC-38A 25w 220 FM Xcvr w/TTP mic	600.00	CALL
.Dmv	25.00	1995	RP-2210 25w 220 MHz FM repeater		
Dmf Dmw	25.00 25.00	1995 1995	430/440 MHz TRANSCEIVERS	2000.00	Onen
Dm	17.00	1295	IC-4SRA 2/5w 440 HT/25-905MHz Rcvr Dmwfv	\$631.00	399 95
Dm	17.00		IC-4GXAT 440 FM HT/batt/cgr/TTP	389.00	CALL
Dmfv	25.00	1 9 ⁹⁵	IC-P4AT Mini 440 FM HT/batt/cgr/TTP .Dmwfv	504.00	289 ⁹⁵
1	25.00 25.00		\$50 coupon - IC-P4AT until gone! IC-4iA 440 FM HT/batt/cgr	460.00	CALL
)	25.00		IC-T41A 440 FM HT/batt/cgr/TTP	472.00	CALL
.Dm	28.00	19 95	IC-X2A 5/1w 440/1.2 HT/batt/cgr/TTP .Dmwfv	772.00	499 ⁹⁵
	11.00		IC-X21AT 440/1.2 FM HT/batt/cgr/TTP	960.00	CALL
t	30.00 29.00		IC-4GAT uses same accessories as IC-2GAT IC-4SAT uses same accessories as IC-2SAT		
	9.00		IC-4SRA uses same accessories as IC-2SRA		
	14.00		IC-4GXAT uses same accessories as IC-2GXAT		
	54.00		IC-P4AT uses same accessories as IC-P2AT		
 H	54.00		IC-4iA uses same accessories as IC-2iA IC-T41A uses same accessories as IC-T21A		
t	60.00 359.00	CALL	IC-X2A uses same accessories as IC-W2A		
	399.00	CALL	IC-X21AT uses same accessories as IC-W21AT		
	45.00		IC-475H 75w 430-450 FM/SSB/CW Xcvr		CALL
rger	13.00		PS-55 Power supply		289 ⁹⁵
1) (t	29.00 150.00	13995	AG-35 Mast mounted preamp CR-64 High stability oscillator crystal	165.00 114.00	154 ⁹⁵ 104 ⁹⁵
	25.00		EX-1514 VOX unit	120.00	69 ⁹⁵
	109.00	10495	FL-32A CW filter	92.00	-
	62.00		AMATEUR	ECA	1000
	48.00 76.00		AMATEUN ELECTRONIC SUPPLY TUBUSCONTANT		
	29.00		Credit		10 A
	50.00		VICE NAME HERE COMER details pp. 15	2 154-1	55
	60.00	0.007			
†	115.00 70.00	89 ⁹⁵	Matter d VISA	G	
*****	70.00				/

HS-51 Headset w/VOX

ICOM - continued	Reg	Sale
UT-34 Tone squelch unit		
UT-36 Voice synthesizer	54.00	
RP-4020 25w 440 MHz FM repeater	2637.00	CALL
RP-4020/50w 50w 440 MHz FM repeater	3125.00	CALL
1.2 GHz TRANSCEIVERS		
IC-12GAT 1w 1.2GHz HT/batt/cgr/TTPDmwv	\$505.00	37995
FA-1240T Extra flexible ant; IC-12GAT∆m Note: IC-12GAT uses same accessories as IC-2GA	21.00 r	1995
CR-263 High stability unit; IC-1275ÅDm		3995
TV-1275 ATV adapter for IC-1275ADm	123.00 340.00	11995
RP-1220 10w 1.2 GHz FM repeater		CALL
MULTI-BAND FM TRANSCEIVER	5400.00	UNLL
IC-901 Fiber optic 50w 2m/35w 440 FMDw	1141.00	89995
EX-766 Interface/cable for tnk mtg Amwy		6995
EX-767 Power cable connector box Amw	65.00	
MB-21 Bracket for controller unit Amwfv		
MB-31 Mounting bkt for band units . Amwv	14.00	
MB-32 Mobile mount for trunk	21.00 75.00	6995
OPC-243 30' DC cable	34.00	03
UT-40 Tone squelch decoder	60.00	
UT-48 DTMF encoder/decoder unit \Dmwfv	54.00	49 95
UX-R91A 50-905 MHz receiver unit Amv	584.00	489 ⁹⁵
UX-19A 10w 10m unitDmwfv	343.00	19995
UX-59A 10w 6m unitDm	400.00	29995
UX-S92A 2m SSB/CW moduleDmfv UX-39A 25w 220 unitΔmv	679.00 516.00	229 ⁹⁵ 229 ⁹⁵
UX-129A 10w 1.2 GHz unitDm	624.00	
MULTI-BAND ALL-MODE TRANSCEIVERS	024.00	020
IC-970H 45w 2m/430 Xcvr w/ps	\$3964.00	
PS-55 Power supply	345.00	28995
PS-15 20A power supply	330.00	279 ⁹⁵
AG-25 2m mast mounted GaSFET preamp	160.00	1 49 ⁹⁵
AG-35 430 MHz mast mounted preamp	165.00	15495
AG-1200 1.2 GHz mast mounted preamp CR-293 High stability xtal unit	137.00 276.00	129 ⁹⁵ 249 ⁹⁵
EX-243 Electronic keyer unit	100.00	94 ⁹⁵
FL-132 Main band CW filter	96.00	54
FL-133 Sub band CW filter	96.00	
MB-19 Rack mounting handles	54.00	
SP-20 Speaker w/audio filter	225.00	19995
TV-970 1.2 GHz ATV unit for IC-970A/H UT-34 Tone squelch unit	510.00 68.00	42995
UT-36 Voice synthesizer	54.00	
UX-R96 Extended receive unit		41995
UX-97 1.2 GHz band unit	1141.00	94995
UX-98 2.4 GHz module (Special Order)	2110.00	1699
ACCESSORIES		
CT-16 Satellite interface unit	\$116.00	10995
CT-17 CI-V level converter	123.00	11495
UX-14 CI-IV/CI-V converter for CT-17 EX-309 Interface plug; 751/271/R71AΔm	90.00 88.00	2495
EX-310 Voice synthesizer	77.00	24.00
EX-627 HF auto ant selector; up to 7 ants	373.00	31995
HM-5 Noise canx mobile mic, 4-pin	68.00	2995
HM-7 Amplified mobile mic, 8-pin	54.00	
HM-8 TTP microphone, 8-pin	95.00	
HM-12 Scan hand microphone	54.00	
HM-14 Scan/TTP mic; 25A/H/28A/45A HS-15 Goose neck mobile microphone ∆mwfv	82.00 54.00	3995
HS-15SB PTT switchbox	37.00	2995
MB-23 Side mount carrying handle	11.00	
OPC-047 24-pin optional acc cord Amwfv	16.50	
OPC-137 24-pin adaptr cable; all base Dmwfv	18.00	
PS-30 20A systems ps w/6-pin cord	470.00	399 95
0PC-052 2-pin cord	11.00	
PS-45 Compact 8A power supply	11.00 176.00	1 59 95
SM-6 Electret desk microphone	93.00	100
SM-8 2-connector desk mic w/up/down scan	145.00	13495
SM-20 Stand mic for base stations	188.00	1 69 95
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ICOM - continued SP-7 Small external speaker 68.00 SP-10 Slim-line external speaker 50.00 SP-12 Slim-line speaker w/visor clip 32.00 SP-20 Speaker w/audio filter 225.00 199⁹⁵ INNOVA (INN) 06-1101 12vdc 6.5 amp/hour power pack..... \$ 61.52 4995 06-9509 AC/DC adapter 13.62 06-1130 Compact 12vdc 3 amp/hr pack/adapt 61.50 4995 INTERFLEX (INT) dspGOLD Software for AEA DSP-2232f \$129.95 KaGOLD DualPort Software for KPC/KAMf 79.95 KaGOLD DualPort w/Pactor Soft; KPC/KAMf 99.95 PkGOLD Enhanced Software; PK-88/232f 79 95 PkGOLD w/Pactor Software for PK-232MBX .f 99.95 PkGOLD DualPort Soft; PK-88/PK-232Df 129.95 **8Q**95 PkGOLD Dual Port w/Pactor For PK-88/232 .. f 149.95 PkGOLD/900 Software for PK-900f 129.95 J-COM (JCO) HB12 HamBase 1.2 51/4" IBM U.S. hams ... Am \$ 49.95 4495 VQ Ventriloquist voice keyer, in enclosure . Δv 149.95 11995 VQPCB Ventriloguist PC board onlyDm 134.95 **QQ**95 JPS (JPS) NF-60 Auto DSP audio spectral notch filter ... \$160.00 14995 NIR-10 Dlx noise/notch DSP bandpass filter . 349.95 NRF-7 Noise remover and filter unit 219.95 NTR-1 Wide band noise and tone remover 169.95 SSTV-1 DSP slow scanTV filterm 160.00 Power Pack 115vac/12vdc adapter 16.00 JRC (JRC) CFL-218A 1.8 KHz crystal IF filter; all∆m \$154.00 **QQ**95 CFL-231 300 Hz crystal IF filter; all∆m 154.00 **99**95 CFL-232 500 Hz crystal IF filter; all∆m 154.00 9995 **CFQ-3003** Transceive cable set Δm 122.00 7995 4495 NFG-97 Antenna tuner; JST-135/135HP ... Am 348.00 23995 NFG-230 Auto ant tuner; 135/135HPDm 717.00 49995 **69**95 NVT-58 Hand microphone; JST-135∆m 40.00 2495 62CJD00139 RTTY ptr cbl; NRD-525 4m 68.00 2995 6ZCJD00350 RS-232C interface cbl; 535D ... Δm 68.00 2995 3999 CFQ-3890 JST-135/JRL-2000F control cbl ∆m 68.00 4995 JSC (JSC) ROTOR CABLE JRR-420 4-wire; U-105/U-110 Aw, per ft. 17¢ 1495 **49**⁹⁵ 19¢ 1695 **59**95 **99**⁹⁵ **COAX ASSEMBLIES w/PL-259s** JFB-58-12LP 12' RG-58U, PL-259 - lugs .Dmwfv \$ 6.99 295 JFB-58-20LP 20' RG-58U, PL-259 to lugs .Dmw 495 8.49 JFA-08Q-12LP 12' RG-8X, PL-259 - lugs ..Dmwf 295 7 95 K-COM (KCO) RF-1 Modular telephone RFI filter \$ 16.95 RF-1/2-line Two-line modular RFI filter 22.95 RF-1/coiled Coiled cord modular RFI filter 22.95 RF-2 Hard-wired telephone RFI filter 10.95 KLM (KLM) **ANTENNAS** 160V 160, 80 or 40m vertical, 24' high \$268.00 229⁹⁵ 80M-1 80m rotatable dipole, 90' long*T 879.00 63995 80M-1R 80m rotatable dipole w/relays*T 1235.00 88995 80M-2 80m 2 el beam, 36' boom, 4 db *T 2895.00 2089 80M-2R 80m 2 el beam w/relays *T 3581.00 2579 80M-3 80m 3 el beam, 60' boom, 7 db *T 4792.00 3699

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MC-60A 8-pin amp desk mic w/up-down	151.95	14195
MC-80 8-pin electret desk mic w/up-down .	107.95	9995
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TM-241A 50w 2m FM Xcvr w/TTP mic	459.95	CALL
\$30 rebate from Kenwood - TM-241A thru		
TM-331A 25w 220 FM Xcvr w/TTP mic	539.95	CALL
TM-441A 35w 440 FM Xcvr w/TTP mic TM-541A 10w 1.2GHz FM Xcvr w/TTP mic	539.95 649.95	CALL
DRU-1 Digital recorderDmwfv	125.95	GALL 9995
DTU-2 Digital paging unit		00
IF-20 Interface for 4 XcvrsDm	139.95	59 ⁹⁵
PG-4J Extension cable kitDm	47.95	19 95
KQT-8/TSU-6 Prog CTCSS decoder	46.95	
PG-4G Extra control cableDm	22.95	9 95
TM-251A 50w 2m FM Xcvr/TTP/9600 baud	529.95	CALL
TM-451A 35w 440 FM Xcvr/TTP/9600 baud	559.95 38.95	CALL
ME-1 Memory expansion PG-5A Packet data cable	14.95	
TSU-8 CTCSS decoder	55.95	
MC-48B Up-down 8-pin TTP microphone	83.95	
Accessories: TH-A/B/2600A/3600A/2500)/3500	
DC-26 DC adapter; TR-2600A/3600ADm	\$ 37.95	19 95
RA-9B 220 BNC stubby duckDm	18.95	2 ⁹⁵
PB-24 Nicad batt w/cgr adapt; 2400	54.95	
Accessories for TH-225A/315A/415A/20	5AT	
KNB-4/PB-4 1600ma 7.2v (1.5w) batt Dmwfv	\$ 76.95	69 ⁹⁵
PB-3 800ma 7.2v batteryDmwfcv	62.95	1995
SC-27 Soft case for PB-12; 225ADm	19.50	2 ⁹⁵
TSU-4 Decoder; TH-225A/315A/415AΔm	46.95	
Accessories for TH-75A/77A/25AT/26AT	¢ 00.05	0.05
BC-2 Wall charger for PB-10Dmwv	\$ 22.95	2 ⁹⁵
BT-6 6-AA battery caseDm	26.95 26.95	295
PG-3E Cig cord w/filter for DC-1	34.95	-
DC-4 Mobile charger for PB-10Dmwf	20.95	295
KNB-5A 800ma 7.2v battery	58.95	
KNB-6A 1600ma 7.2v (2.5/2w) battery	97.50	
KNB-7A 800ma 12v (5w) batt (not 55AT)	76.95	
KQT-8/TSU-6 CTCSS encoder/decoder	46.95	2 4 05
KSC-8/BC-10 Compact chargerDmwfv KSC-12/KSC-7/BC-11 Rapid chargerDmwfv	38.95	34 ⁹⁵ 89 ⁹⁵
KVC-1 /DC-5 Mobile cgr for PB-6/7/9Dmwfv	99.95 33.95	2495
	00100	

KENWOOD - continued	Reg	Sa
KWR-1/WR-1 Water resistant bagDmwf		1
PB-5 200ma 7.2v (2.5/2w) batteryDmwfv	59.95	
SC-14 Soft case for PB-5; 25/45ATDm	25.95	
SC-17 Soft case for PB-5 w/55ATDm		
SC-18 Soft case for PB-6/BT-6 w/55ATDm SC-19 Soft case for PB-7/8 w/55ATDm	22.95	
Accessories for TH-26AT/46AT	22.95	
SC-24 Soft case for PB-5/BT-7Dm	\$ 22 95	
SC-26 Soft case for PB-7/8/9Dm	22.95	
TH-47A 1.5w 440 FM HT/batt/cgr/TTPDv		24
Accessories for TH-27A/47A		
BC-14 Extra wall charger for PB-13	\$ 24.95	
SC-32 Soft case for PB-14Dm	21.95	
TH-28A 2.5w 2m FM HT/batt/cgr/TTP TH-48A 2w 440 FM HT/batt/cgr/TTP	399.95	C C
TH-78A 2.5/2w 2m/440 HT/batt/cgr/TTP Dmwfv	599.95	42
Accessories for TH-28A/48A/78A	000100	
BC-15A Rapid charger for PB-13/14/17/18	\$114.95	
BH-6 Swivel mount	39.95	
BT-8 AA alkaline battery case		
EMC-1 Lapel clip mic/ear piece HB-2 Wrist strap	41.95 16.95	
HMC-2 VOX/boom mic headset	69.95	
KLF-3/PG-3F Cig cord w/filter	23.50	
ME-1 Memory expansion PB-13 700ma 7.2v battery	38.95 63.95	
PB-14 300ma 12v (5w) battery	63.95 89.95	
PB-17 700ma 12v (5w) battery	99.95	
PB-18 1100ma 7.2v battery	86.95	
PG-2W DC cable w/fuse		
PG-3H Cig lighter cord w/filter RA-3 2m BNC ¾ wave telescopic antenna	34.95 22.95	
RA-5 2m ¼ wv/440 % wv BNC tele ant	28.95	
SC-33 Small soft case; 28A/48A	22.95	
SC-34 Large soft case; 28A/48A	22.95	
SC-35 Regular soft case; 78A SC-36 Large soft case; 78A	19.95 21.95	
SMC-31 Speaker/mic w/right angle plug	59.95	
SMC-32 Mini water resistant rt angle spkr/mic .	48.95	
SMC-33 Speaker/mic w/remote control	62.95	
SMC-34 Spkr/mic w/vol cont & function keys WR-2 Water resistant bag	64.95 29.95	
TH-22AT 3w 2m FM HT/batt/cgr/TTP	29.95	C/
\$20 rebate from Kenwood - TH-22AT thru	11/30/94	
99 cent cordurov case - TH-22AT/42AT th	ru 12/31/	/94
TH-42AT 2.5w 440 FM HT/batt/cgr/TTP	389.95	
TH-79A 2.7w 2m/440 FM HT/batt/cgr/TTP 99 cent corduroy case - TH-79A thru 12/	599.95 31/94	C/
BH-6 Swivel mount	39.95	
BT-9 4-AA battery holder	26.95	
EMC-1 Lapel clip mic/ear piece	41.95	
HB-2 Wrist strap HMC-2 VOX/boom mic headset	16.95 69.95	
KSC-14 2-pack rapid charger	84.95	
PB-32 600ma 6v battery	64.95	
PB-33 1200ma 6v battery	89.95	
PB-34 600ma 9.6v (5w) battery PG-2W DC cable w/fuse	89.95 15.95	
PG-3H Cig lighter cord w/filter	34.95	
RA-3 2m BNC ¾ wave telescopic antenna	22.95	
RA-5 2m ¼ wv/440 % wv BNC tele ant	28.95	
SC-37 Soft case; TH-22/42AT w/PB-30/32 . SC-39 Soft case; TH-22/42AT w/PB-33/34 .	22.95 22.95	
SC-41 Soft case; TH-79A w/PB-32	22.95	
SC-43 Soft case; TH-79A w/PB-33/34	22.95	
SMC-31 Speaker/mic w/right angle spkr/mic	59.95	
SMC-32 Mini water resist rt angle spkr/mic SMC-33 Speaker/mic w/remote control	48.95 62.95	
SMC-34 Spkr/mic w/vol cont/function keys	64.95	
TSU-8 CTCSS decoder	55.95	
WR-2 Water resistant bag	29.95	
LARSEN (LAR)		
27-31 MHz ANTENNAS		
NLA-27 10m ant only (no mount)Dmwfv		3
NLA-27-K 10m %" snap mt antDmwfv	51.40	4
NMO-27 10m ant only (no mount)	32.25	2

Sale	LARSEN - continued	Reg	Sale
1995	NMO-27-K 10m ¾" hole mt ant	45.25	4095
995 295	47-54 MHz ANTENNAS		
100	NLA-50 6m ant only (no mount)Dmwv		3595
100	NLA-50-K 6m %" snap mt antDmwv	51.40	4695
100	NMO-50 6m ant only (no mount)	32.25	2995
	144-174 MHz ANTENNAS NLA-150 2m ant only (no mt), 3 db∆mwfv	¢ 20 00	3295
495	NLA-150 2m and only (no mt), 5 db∆mwrv NLA-150-K 2m ¾" snap mt ant, 3 db∆mwrv	\$ 38.00 50.50	32°5 4395
195	NLA-150-MM 2m mag mt ant, 3 db	68.40	5895
249 ⁹⁵	NLA-150-TLM 2m tnk lid mt ant, 3 db . Amwy	64.40	5395
	NLA-150-TMB 2m tnk gtr mt ant, 3 db	58.35	48 95
9 95	NMO-150 2m ant only (no mount), 3 db	29.40	2695
CALL	NMO-150B 2m black ant only (no mt), 3 db NMO-150-K 2m ¾" hole mt ant, 3 db	31.85	2895 3895
CALL	NMO-150-MM 2m magnetic mt ant, 3 db	42.40 58.15	52 ⁹⁵
42895	NMO-150-TLM 2m trunk lid mt ant, 3 db	53.00	4895
	OM-150-K 2m no gnd plane ant, 2 db∆mwf	45.85	2995
	220-265 MHz ANTENNAS		
	NLA-220 220 ant only (no mt), 3 dbDmwfv	\$ 36.35	3295
	NLA-220-K 220 %" snap mt ant, 3 db .Dmwfv	48.85	4395
	NLA-220-MM 220 mag mt ant, 3 dbDmwf NLA-220-TLM 220 tnk mt ant, 3 dbDmw	66.75	5895 5395
	NLA-220-TLM 220 thk mt ant, 5 dbDhw NLA-220-TMB 220 thk gtr mt ant, 3 dbDwf	62.75 56.70	
	NMO-220 220 ant only (no mount), 3 db	31.10	2795
	NMO-220-K 220 ³ / ⁴ " hole mt ant, 3 db	44.10	3995
	NMO-220-MM 220 magnetic mt ant, 3 db	59.85	5395
	NMO-220-TLM 220 trunk lid mt ant, 3 db	54.70	49 ⁹⁵
	OM-220-K 220 no gnd plane ant, 2 db $\dots \Delta wv$	47.50	29 ⁹⁵
	440-460 MHz ANTENNAS	* * * * *	
	NLA-440 440 ant only (no mt), 5 dbDmwv	\$ 34.85	3195
	NLA-440-K 440 %" snap mt ant, 5 dbDmwv NLA-440-MM 440 mag mt ant, 5 dbDmwv	47.35 65.25	42 ⁹⁵ 57 ⁹⁵
	NLA-440-TLM 440 tnk mt ant, 5 dbDmw	61.25	5295
	NLA-440-TMB 440 tnk gtr mt ant, 5 dbDwf	55.20	4695
	NMO-440 440 ant only (no mount), 5 db	28.15	2595
	NMO-440B 440 black ant only (no mt), 5 db .	34.35	3195
	NMO-440-K 440 ³ / ⁴ hole mt ant, 5 db	41.15	3795
	NMO-440-MM 440 magnetic mt ant, 5 db NMO-440-TLM 440 trunk lid mt ant, 5 db	56.90 51.75	51 ⁹⁵ 46 ⁹⁵
	OM-440-K 440 no gnd plane ant, 2 dbDmv	52.15	2995
	NLA-2/70 2m/440 ant (no mt), 2/4db Δ mwf	51.15	4395
CALL	NLA-2/70-K 2m/440 ³ / [*] snap, 2/4db Amwf	63.65	5495
4	NLA-2/70-MM 2m/440 mag, 2/4 db Amwf	81.55	68 95
CALL	NLA-2/70-TLM 2m/440 tnk mt, 2/4db Amw	77.55	63 ⁹⁵
CALL	NMO-2/70 2m/440 2-band ant (no mt), 2/4db	46.65	4195
	NMO-2/70-K 2m/440 ¾" hole mt ant, 2/4db NMO-2/70-MM 2m/440 mag mt ant, 2/4 db	59.65 75.40	53 ⁹⁵ 67 ⁹⁵
	NMO-2/70-TLM 2m/440 mag int ant, 2/4 db	70.25	63 ⁹⁵
	P0-2/70 2m/440 2-band ant (no mt)Δw	50.85	3995
	NLAQ 136-512 MHz ¼ wv ant (no mt) .Δmwfv	14.40	00
	NLAQ-K 136-512 ¼ wv ¾" snap mt antDwfv	23.25	
	NMOQ-Spec 136-512 MHz ¼ wave ant (no mt) .	9.35	
	NMOQ-Spec-B 136-512 black ½ wv ant (no mt)	12.60	
	NMOQ-Spec-K 136-512MHz ¼ wv ¾" hole ant . NMO-1290 1.2 GHz ant only (no mt)	22.35 30.85	2795
	BSA-150-K 2m base/BSA-K/NLA-150	74.15	27 ⁹⁵ 59 ⁹⁵
	BSA-220-K 220 base/BSA-K/NLA-220Dwf	72.50	59%
	BSA-440-K 440 base/BSA-K/NLA-440	74.15	5995
	FB1-136 Base station 136-230 MHz ant	132.50	11995
	ON GLASS ANTENNAS		
	KG-144-PL 2m 3 db on glass antennaDmf	\$ 61.35	55 ⁹⁵
	KG-144-UD-PL 2m 3 db on glass antenna KG-220-UD-PL 220 3 db on glass antenna	64.65 64.65	5895 5895
	KG-440-N 440 2.4 db N on glass antDmwv	54.15	3995
	KG-440-PL 440 2.4 db on glass antDmwf	49.15	4295
	KG-440-UD-PL 440 2.4 db on glass antenna	52.50	4795
	KG-2/70-UD-PL 2m/440 2.5/4.5db on glass KG-Reinstall Reinstall kit for KG-ants	88.35 5.00	7995
	KULDUCKIES - For Hand-helds	5.00	
	KD4-146 2m BNC Kulduckie	\$ 16.65	
	KD4-2/70 2m/440 BNC Kulduckie	26.65	
3595	KD4-222 220 BNC Kulduckie	16.65	
4695	KD4-445 440 short BNC Kulduckie Amwfv	16.65	9 95
2995	KD14-445 440 ¼ wave BNC Kulduckie	16.65	

LARSEN - continued	Reg	Sale
KD4-146-HQ 2m part helical, part ¼ wave BNC .	20.65	
KD14-2M-HW 2m ½ wave BNC antenna	32.50	
KD14-440-HW 440 ½ wave BNC antenna	32.50	
ACCESSORIES & REPLACEMENT PARTS	* ~ ~ ~ ~	FOR
AD-2/70 100w 2m/440 duplexer	\$ 66.60	59 ⁹⁵ 39 ⁹⁵
BSA-K Base station mounting kitΔwf CRK NLA contact replacement kitΔmwv	44.90 1.90	39.0
NLA-150-CO Extra coil for NLA-150	28.85	2495
NLA-220-CO Extra coil for NLA-220Dw	27.15	2495
NLA-B %" snap mt only for NLA ant Amwfv	4.25	~ .
NLA-CAP Rain cap for NLA mount Amwfv	3.25	
NLA-K ¾" snap mt kit w/coax; NLA ant ∆mwfv	12.50	
NLA-MM Magnet mt, coax for NLA ant Δmwf	30.40	
NLA-TLM Tnk lip mt, coax for NLA ant Amw	26.40	
NMO-150-CO Extra coil for NMO-150	20.25	
NMO-150-BCO Extra black coil; NMO-150B NMO-220-CO Extra coil for NMO-220	20.25 21.90	
NMO-CAP Rain cap for NMO mount	3.25	
NMO-CAP-B Black rain cap for NMO mount	3.25	
NMO-K 3/4" hole mt w/coax for NMO ant	13.00	
NMO-MM Magnet mt, coax for NMO ant	28.75	
NMO-TLM Trunk lip mt, coax for NMO ant	23.60	
NMO-TLM-B Black tnk lip mt, coax; NMO ant .	25.35	
PO-K Roof mt, coax for SO-239 ant PO-MM Magnet mt, coax for SO-239 ant	23.00	
PO-TLM Trunk lip mt, coax for SO-239 ant	30.40 26.35	
RG-NLA Extra NLA rubber gaskets (3) Δ mwfv	20.33	
RG-NMO Extra NMO rubber gaskets (3)	2.10	
SPRING Shock spring	6.60	
TMB-34 Trunk mtg bkt for NMO antenna	4.50	
TMB-34B Black trunk mtg bkt for NMO ant	6.50	
TMB-38 Trunk mtg bkt for NLA ant∆mwf	4.50	
TMB-38B Black trunk mtg bkt for NLA Amf	6.50	
W-154 Extra closed coil whip; 440 ant ∆mwfv W-490 49" whip	17.20 9.20	
W-490B Black 49" whip	11.60	
MFJ ANTENNA TUNERS (MFJ)		
989C DIx 3kw PEP w/roller inductor	\$2/0.05	29995
986 3kw PEP w/roller inductor	289.95	25995
962C 1.5kw PEP/meter/switch/balun	229.95	20995
949E 300w/meter/dummy/sw/balun/AC ps .†	139.95	12995
948 300w/meter/switch/balun	129.95	11995
941E 300w w/meter, switch, balun	109.95	9995
945D 300w tuner w/meter 20 Mobile bracket for 945D	89.95 4.95	84 ⁹⁵
934 300w tuner w/artificial ground	4.95	15995
901B Versa Tuner 200w ant tuner	59.95	
16010 200w random wire tuner	39.95	
910 80-10m mobile antenna matcher	19.95	
921 2m/220 300w PEP tuner/SWR/wattmeter	69.95	
924 440 MHz 300w PEP tuner/SWR/wattmeter	69.95	
MEMORY KEYERS 451 Dedicated CW keyboard w/memory	\$ 99.95	9495
451X Morse keyboard interface only	\$ 99.95 79.95	94 ³⁵ 74 ⁹⁵
452 CW keyboard/keyer w/disp/keyboard	129.95	11995
452X CW keyboard/keyer w/disp, no keyboard	99.95	8995
498 Dix CW keyboard/keyer w/disp/keyboard .	179.95	169 ⁹⁵
498X DIx CW keyboard w/disp, no keyboard	159.95	14995
77 Wired remote control for 486 Δm	19.95	1495
484C 12 25-char/25-100 char msgsDmwfv	149.95	79 ⁹⁵
75 Remote pad for 484CDmv 490 492 keyer/Bencher paddle combination	14.95 164.95	10 ⁹⁵ 149 ⁹⁵
490X 492 keyer for use w/Bencher or 564	104.95	9995
564 Deluxe jambic paddle for 490X	49 95	00-

564 Deluxe iambic paddle for 490X

49.95

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	492 192 char menu driven memory keyer	99.95	8
	80 8000 char memory expansion for 492	14.95	
	492X Memory keyer w/8000 char expansion	114.95	10
5	78 Remote control for 492/492X 493 32,000 char menu driven mem keyer	19.95 139.95	12
5	79 Remote control for 493	139.95	14
	551 IBM AT-101 keyboard for 493	39.95	
5	5409 493 9-pin serial port 6' cable	12.95	
5	5425 493 25-pin serial port 6' cable	12.95	
	ELECTRONIC KEYERS	+	
	407C Deluxe electronic keyerDwf	\$ 69.95	6
	4016 Econo keyer	49.95	
	KEYER/PADDLES	10.00	
	422B Keyer/Bencher paddle combination	\$134.95	12
	422BX Keyer only	79.95	7
	1305 5vdc power supply	12.95	
	564 Deluxe iambic paddle for 422BX	49.95	
	COMPUTER INTERFACES	¢ 00 05	
	1224 Interface 1264 Tape software for VIC/C64; 1224 ∆mf	\$ 99.95 19.95	1
	1265 Disk software for VIC/C64; 1224	19.95	
	1285 Software for IBM; 1224	19.95	
	1225 Receive only interface	69.95	E
	1264B Tape software; VIC/C64; 1225∆mf 1265B Disk software; VIC/C64; 1225 ∆mwf	19.95	
	1265B Software for IBM; 1225	19.95 19.95	
	1270C Packet radio TNC2	119.95	10
	47A Mailbox 32K mem board; 1270/1274	49.95	
	47B Mailbox 128K mem board; 1270/1274	69.95	
	47C Mailbox 512K mem board; 1270/1274	239.95	20
	2400 2400 baud modem 9600 9600 baud modem	89.95 109.95	10
	1270CT Turbo packet w/2400 baud	209.95	17
	1270CQ Packet w/9600 baud modem	229.95	19
	1274T Turbo controller w/2400 baudDm	229.95	14
	1274CT Turbo controller w/2400 baudDm	229.95	16
5	1276 Packet/Pactor controller	159.95	14
5	1276T Packet/Pactor Turbo controller	249.95	22
5	1278B Multi-mode controller w/Pactor	299.95	28
5	45A 32K RAM IC only 45B 128K RAM IC only	14.95 34.95	
5	45C 512K RAM IC only	219.95	18
5	48 1278 upgrade	24.95	
	48B 1278B upgrade	24.95	
5	48E 1278 packet encryption EPROM	29.95	
	48X 1278 expanded mailbox firmware52 TNC2 deviation meter board	24.95 29.95	
	56A Pactor/mailbox 32K board for 1278B	69.95	
	56B Pactor/mailbox 128K board for 1278B.	89.95	
	56C Pactor/mailbox 512K board; 1278B	239.95	20
	2400 2400 baud modem 9600 9600 baud modem	89.95	10
5	1278T Turbo controller/2400 baudDm	109.95 359.95	10
5	1278BT Turbo controller/2400 baud/Pactor	369.95	33
5	1282 C64 starter pack	24.95	
5	1282B Multicom package; C64/128	39.95	
5	1282BD Multicom 64 disk only 1283 Tape software; C64 & VIC-20∆mfv	29.95 24.95	1
5	1283 Tape software; C64 & VIC-20	24.95	
5	1284D 1284 disk only	14.95	
5	1284M 3½" IBM starter pack	24.95	
5	1284MD 1284M disk only	14.95	
	1287 Macintosh starter pack 1287B Mac multicom starter pack	24.95 49.95	
	TEOTO Mac multicom statter pack	45.50	

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8995	1287D 1287 disk only	14.95	Jaic
03	1287BD 1287 disk only	39.95	
10495	1289 5¼" multicom software for IBM	59.95	
	1289D 1289 disks only	49.95	
12995	1289M 3½" multicom software for IBM	59.95	
	1289MD 1289M disks only	49.95	
	49 1289 color SSTV/print upgrade∆m	19.95	1495
	1290 Amiga multicom starter pack Amwv	49 .95	39 ⁹⁵
	1290D 1290 disk onlyΔmv	39.95	29 ⁹⁵
	1214PC Multimode interface for IBM	149.95	13995
64 ⁹⁵	59 1214 5 ¹ / ₄ " software upgrade	29.95	
	59M 1214 3½" software upgrade 40B TNC2 upgrade 32K/RAM	29.95	
	406 TNC2 upgrade 32K KAW	39.95 19.95	
	40CX TNC2 upgrade; expanded RAM mailbox	19.95	
12495	40E TNC2 packet encryption EPROM	29.95	
7495	43 Real time clock for TNC	29.95	
	44 Plug-in scope tuning adapter	39.95	
	44X Scope tuning adapter; 1278 & others	49.95	
0.495	1271 Packet card for C64/128	49.95	
94 ⁹⁵ 14 ⁹⁵	1272B TNC to microphone interface	34.95	
1400	1272BX TNC/mic switch; PK-232	39.95	
	1272BYH TNC/mic switch; KAM HF	39.95	
64 ⁹⁵	1272BYV TNC/mic switch; KAM VHF	39.95	
1495	1272BZ TNC/mic switch; PK-88	39.95	
1495	1272M TNC/mic RJ-45 switch; MFJ/PK-900 1272MX TNC/mic RJ-45 switch; PK-232	34.95 39.95	
	1272MXH TNC/mic RJ-45 switch; FK-252	39.95	
1 09 95	1272MYV TNC/mic RJ-45 switch; KAM VHF; KPC3	39.95	
	1272MZ TNC/mic RJ-45 switch; PK-88	39.95	
	1273 Packet tuning indicatorDmwfv	49.95	
20995	SSB/CW FILTERS		
10.495	722 SSB/CW notch filter	\$ 79.95	7495
104 ⁹⁵ 179 ⁹⁵	752C Dual tunable SSB/CW filter	99.95	
19995	784 Super DSP filter	219.95	199 ⁹⁵
14995	PHONE PATCH		
169 ⁹⁵	624D Phone patch w/audio VU meter	\$ 89.95	8495
14995	DUMMY LOADS		
229 ⁹⁵	250 2kw PEP dummy load w/oil	\$ 49.95	
26995	250X 2kw PEP dummy load, less oil		
203~	260B 300w 0-150 MHz dry dummy load	29.95	
	260BN 300w 0-150 MHz type N dry dummy	34.95	
18995	264 1.5kw 0-650 MHz dry dummy load	59.95	
	264N 1.5kw 0-650 MHz type N dry dummy	69.95	
	SWR/WATTMETERS	¢ 00 05	
	812B 14-170 MHz SWR/FS/wattmeter 815B 160-6m cross-needle SWR/wattmeter	\$ 29.95 69.95	
	816 1.8-30 MHz toroidal SWR/wattmeter	29.95	
	817 2m/440 cross needle meter	79.95	7495
	840 2m 5w wattmeter/dummy load for HT	19.95	17
20995	841 2m 5w in-line HT wattmeter/SWR	39.95	
20900	SHORTWAVE ACCESSORIES	00.00	
10495	306 Car radio SWL converter	\$ 79.95	7495
24995	956 LW/MW/SW preselector/tuner	39.95	14
33995	959B Receiver ant tuner w/preamp	89.95	
	1020A .3-30 MHz indoor active rcv ant	79.95	
	1022 300KHz-200MHz active rcv antenna	39.95	
	1024 .05-30 MHz outdoor active rcv ant	129.95	119 ⁹⁵
19 ⁹⁵	1040B Deluxe receiver preselector	99.95	
	1045B Receiver preselector	69.95	64 ⁹⁵
	ACCESSORIES		
	1305 5vdc 300ma adapter		
	1312 12vdc 300ma adapter, 2.5mm plug	12.95	
	1312B 12vdc 300ma adapter, 2.1mm plug	12.95	
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MFJ - continued	Reg Sale	1	Reg Sale		Reg Sale
1315 12vdc 500ma adapter	14.95	1631 Technician theory tutor software; Mac	29.95	5080X PK-232 - Yaesu 8-pin cable	14.95
30 Golden Classics book	9.95	1632 General theory tutor software for Mac	29.95	5080YH KAM HF port - Yaesu 8-pin cable	14.95
31 Oscar book	7.95	1633 Advanced theory tutor software; Mac	29.95	5080YV KAM VHF/KPC3 - Yaesu 8-pin cable	14.95
32 Packet Made Easy book	9.95	1634 Extra theory tutor software for Mac	29.95	5080Z PK-88 - Yaesu 8-pin cable	14.95
33 Mobile Handbook book	12.95	1635 No-code theory tutor software for Mac	49.95	5082 Open end - 8-pin mic cable	9.95
35 World of Ham Radio book	7.95	16801 Windows software package; Icom	109.95 99 ⁹⁵		14.95
36 Shortwave Listeners Guide; Apts/Condos .	9.95	1680K Windows software package; Kenwood .	109.95 9995		14.95
37 Ham Communications Circuit Files book	9.95	1680Y Windows software package; Yaesu	109.95 9995		14.95
38 Easy-up Antennas book	16.95	1681 Log Windows software 1682 Packet Windows software	69.95 29.95	5084YV KAM VHF/KPC3 - Icom 8-pin cable	14.95
105B 24-hour quartz wall clock	19.95	16831 Rig Windows software for Icom	29.95	5084Z PK-88 - Icom 8-pin cable 5086 MFJ TNC - Kenwood/Alinco 8-pin cable .	14.95 14.95
107B24-hour digital clock108B24/12-hour dual disp digital clock	9.95 19.95	1683K Rig Windows software for Kenwood	29.95	5086X PK-232 - Kenwood/Alinco 8-pin cable	14.95
112 Deluxe world map clock	24.95	1683Y Rig Windows software for Yaesu	29.95	5086YH KAM HF port - Ken/Ali 8-pin cable	14.95
114 Large LED 24-hour clock	39.95	53831 Icom Xcvr interface cable	49.95	5086YV KAM VHF/KPC3 - Ken/Ali 8-pin cable	14.95
202B RF noise bridge	59.95	5383K Kenwood Xcvr interface cable	49.95	5086Z PK-88 - Kenwood/Alinco 8-pin cable	
203 160-10m bandswitched dip meter	99.95 89 95	FOODY V V 11 F 11	49.95	5222 Open end - Alinco split HT cable	9.95
204B Antenna bridge	79.95 74 95	1700B Combination ant/xmtr switch	64.95	5224 Open end - Ico/Yae/Ali/RS HT cable	9.95
205 160-10m antenna resistance meter	89.95 8495	1701 6-position coax switch	34.95	5226 Open end - Kenwood HT cable	
206 Antenna current probe	79.95 69 95	1702B 2-position coax switch	21.95	5268 Open end - modular phone plug cable	7.95
207 160-10m SWR analyzer	79.95 74 95	1702BN 2-pos 1.1 GHz type N switch	31.95	5412 IBM printer cable	9.95
208 2m SWR analyzer	79.95 74 95	1704 4-pos 500 MHz switch/lightning protect .	59.95	5413 RS-232 cable DB-25M-252	9.95
209 1.8-170 MHz SWR analyzer		1704N 4-position type N switch	69.95	5414 RS-232 cable DB-25M-9F2	9.95
217 SWR analyzer, 30-50 MHz	79.95 69 95	1710 2m ¾ wave telescopic antenna	9.95	5803/10 3' coax jumper cable	4.95
218 SWR analyzer, 150-170 MHz	79.95 69 95		14.95	8100K Shortwave regenerative Rcvr kit	59.95
219 SWR analyzer, 440 MHz	99.95 89 ⁹⁵	1714 2m ½ wave telescopic antenna	16.95	8100W Shortwave regenerative Rcvr wired	79.95 72 ^s
249 1.8-170 MHz SWR analyzer/LCD counter .	199.95 17995	1716 2m/440 duck for HT	16.95	8400K 2m receiver kit	69.95 64 9
259 1.8-170 MHz SWR analyzer/RF res meter	219.95 199 ⁹⁵	1717 Gain 2m/440 duck for HT 1718 2m shorty duck for HT	19.95	8400W 2m receiver wired	
29 Padded carrying pouch; 209/249/259	19.95	1724B 2m/440 magnet mt antenna	12.95 14.95	9015 5w 15m CW Xcvr	179.95 154 ⁹
66 1.8-30/30-170 MHz dip coils; 249/259	19.95	1728 2m % wave magnet mt antenna	24.95	9017 5w 17m CW Xcvr	1/9.95 149 ^s
280 Mobile compact speaker	19.95	1728B 2m % wave magnet int antenna	24.95	9020 5w 20m CW Xcvr	1/9.95 1549
283 Speaker/mic, split jack; Alinco 284 Speaker/mic; Icom/Yaesu/Alinco	24.95 24.95	1730 2m pocket roll-up vertical ant	14.95	9030 5w 30m CW Xcvr	
285 Mini spkr/mic; Icom/Yaesu/Alinco	24.95	1740 2m ¼ wave ground plane ant	12.95	9040 5w 40m CW Xcvr	1/9.95 134°
285L Mini spkr/mic L for Icom/Yaesu/Alinco	24.95	1750 2m % wave ground plane ant	19.95	27 Handle for CW station 412 Plug-in Curtis keyer	4.95 39.95
285W Mini spkr/mic for Icom W2A	24.95	1752 220 % wave ground plane ant	19.95	726 Plug-in audio filter	29.95
286 Speaker mic; Kenwood	24.95	1754 2m/440 ground plane antenna	24.95	971 200w portable ant tuner w/meter	89.95 84 ⁹
287 Mini spkr/mic; Kenwood	24.95	1763 2m 3el portable beam	39.95	1770 Portable 15m dipole	34.95
287L Mini spkr/mic L for Kenwood	24.95	1764 2 & 6m dual ½ super gain base ant	34.95	1771 Portable 17m dipole	34.95
323 Keep-it-up battery maintainer	59.95	1765 Direct feed pwr splitter/harness ∆mwfv	29.95 24 ⁹⁵	1772 Portable 20m dipole	34.95
346 600 MHz LCD frequency counter	189.95 16995	1766 Stacked 2m dual % base antenna	89.95 84 95	1773 Portable 30m dipole	34.95
411 Personal Morse Code Tutor	79.95 74 95	1768 2m/440 beam antenna	49.95	1774 Portable 40m dipole	34.95
432 Voice Memory Keyer	99.95 94 95	1780 14-30 MHz 150w 2 'x 2' box loop ant		4112 Portable power pack	49.95
462B RTTY/ASCII/CW/AMTOR Rcvr multi-reader	149.95 139 ⁹⁵	1782 Super Hi-Q 10-30MHz loop/basic control	269.95 239 ⁹⁵	4114 Rechargeable power pack	
557 Deluxe code oscillator w/key	24.95	1786 Super Hi-Q 10-30MHz loop/dlx control	299.95 209 33	9115B 9015 Xcvr/971 tuner/4114 ps/1770 ant	
701 Toroid RFI filterspack of 4	14.95	1312B 12vdc 300ma adapter; 1782/1786 1792 80/40m 33' vertical antenna		9117B 9017 Xcvr/971 tuner/4114 ps/1771 ant	
704 1kw low-pass filter	39.95	1793 80/40/20m vertical antenna	179.95 159 ⁹⁵	9120B 9020 Xcvr/971 tuner/4114 ps/1772 ant	329.80 299 ^s
850 AC line voltage monitor 912 W9INN remote balun	19.95	1796 40/20/15/10/6/2m 10' vertical ant	199.95 179 ⁹⁵	9130B 9030 Xcvr/971 tuner/4114 ps/1773 ant	
916 2m/440 duplexer	39.95 29.95	1798 80/40/30/20/17/15/12/10/6/2m 20' vert	269.95 249 ⁹⁵	9140B 9040 Xcvr/971 tuner/4114 ps/1774 ant	
931 Artificial ground unit	79.95 74 95	1824BB Cell look alike BNC scanner ant	19.95	9420X 12w 20m SSB Xcvr w/mic	229.95 209 ⁹
1112 Multiple DC outlet	29.95	1824BM Cell look Motorola plug scanner ant	19.95	415 SSB Xcvr CW adaptor	39.95
1116 Dix multiple DC outlet	44.95	1828B Magnet mt BNC scanner antenna	29.95	4110 Portable AC power supply	39.95
1118 High current multiple DC outlet	64.95	1828M Mag mt Motorola plug scanner ant	29.95	MIRAGE (MIR)	
1202 Contest Connie voice keyer/interface	149.95 134 95	1864 Base scanner antenna w/preamp	79.95 69 95	A-1015G 6m FM/SSB 10/150w amp/preamp	\$367.00 3399
1266 C64 disk code tutor program	19.95	2040 Repeater controllerDmwfv	449.95 269 ⁹⁵	A-1035G* 6m FM/SSB 10/350w 28v amp/pre	616.00 549 ⁹
1267 C64 cart code tutor programDmv	29.95 1495	3036 The Packet Radio Operators book	12.95	B-23 2m FM/SSB 2/30w amplifier	
76 1266/67 interface brd; kyr/keyboard ∆mwfv	19.95 14 95	3101 Fox Hunt Adventure book	7.95	B-23G 2m FM/SSB 2/30w amp/preamp	
1268 IBM PC memory keyer	49.95	3210 Novice license guide	7.95	B-215G 2m FM/SSB 2/150w amp/preamp	
1269 IBM code tutor	19.95	3211 Tech Plus license guide	7.95	B-108G 2m FM/SSB 10/80w amp/preamp	214.00 1949
1281 IBM Easy-DX logging program	39.95	3212 No code tech license guide	14.95	B-1016G 2m FM/SSB 10/160w amp/preamp .	
1286 Gray Line DX Advantage prog; IBM	29.95	3213 General license guide	7.95	B-1030G 2m FM/SSB 10/300w amp/preamp .	
1288 Picture passing packet soft; IBMDm	9.95 295	3214 Advanced license guide	7.95 7.95	B-1060G* 2m FM/SSB 10/600w 28v amp/pre	
1292 Video digitizer for IBM	199.95 179 95	3215 Extra license guide 3301 Troubleshooting Antenna & Feedlines book	12.95	B-2516G 2m FM/SSB 25/160w amp/preamp .	
1610 Novice theory tutor software for IBM	29.95	3302 73 Dipole and Long-Wire Antennas	12.95	B-2530G 2m FM/SSB 25/300w amp/preamp .	
1611 Technician theory tutor software; IBM	29.95	3303 73 Vertical, Beam, and Triangle Ants	12.95	B-2560G* 2m FM/SSB 25/600w 28v amp/pre	
1612 General theory tutor software for IBM1613 Advanced theory tutor software; IBM	29.95 29.95	3304 Technician Antenna Handbook	9.95	B-5016G 2m FM/SSB 50/160w amp/preamp .	
1614 Extra theory tutor software for IBM	29.95	3502 Solid State QRP Projects	12.95	B-5030G 2m FM/SSB 50/300w amp/preamp B 5060C* 2m FM/SSB 50/600w 28v amp/pre	
1615 No-code theory tutor software for IBM	49.95	3504 FET Principles, Experiments & Projects .	16.95	B-5060G * 2m FM/SSB 50/600w 28v amp/pre	
1621 40-10m 54" portable ant w/tuner	79.95 74 95	5024 MFJ TNC - Ico/Yae/Ali/RS HT cable	14.95	*Requires 28 volts; information on combining included in operations manual.	power suppries
1630 Novice theory tutor software for Mac	29.95	5024X PK-232 - Ico/Yae/Ali/RS HT cable	14.95		100 00 1000
	20.00	5024YV KAM VHF/KPC3 - Ico/Yae/Ali/RS HT cbl	14.95	C-22 220 FM/SSB 2/20w amplifier	122.00 109 ⁹
100000	-	5024Z PK-88 - Ico/Yae/Ali/RS HT cable	14.95	C-22G 220 FM/SSB 2/20w amp/preamp	167.00 149 ⁹
QUICK	57.5.6	5026 MFJ TNC - Kenwood HT cable	14.95	C-211G 220 FM/SSB 2/110w amp/preamp C-106G 220 FM/SSB 10/60w amp/preamp	337.00 299 ⁹ 225.00 199 ⁹
(by much	- Jong	5026X PK-232 - Kenwood HT cable	14.95	C-1012G 220 FM/SSB 10/120w amp/preamp	337.00 299 st
DELIVERY!	Y. J.	5026YV KAM VHF/KPC3 - Kenwood HT cable	14.95	C-1022G 220 FM/SSB 10/120w amp/preamp	616.00 549 st
		50267 PK-88 - Kenwood HT cable	14 95		

50262 PK-88 - Kenwood HT cable

5080 MFJ TNC - Yaesu 8-pin cable

14.95

14.95

315.00 28995

616.00 549⁹⁵

C-2512G 220 FM/SSB 25/120w amp/preamp

C-2522G 220 FM/SSB 25/220w amp/preamp

from 6 locations ...

MIDACE continued	Deres	0.1.
MIRAGE - continued	Reg	
C-5012G 220 FM/SSB 50/120w amp/preamp C-5022G 220 FM/SSB 50/220w amp/preamp †	315.00 601.00	279 ⁹⁵ 499 ⁹⁵
D-15N 430 FM/SSB/ATV 2/18w type N amp	187.00	169 ⁹⁵
D-26N 440 FM/SSB 2/60w type N amplifier	267.00	244 ⁹⁵ 354 ⁹⁵
D-1010N 440 FM/SSB 10/100w type N amp D-3010N 440 FM/SSB 30/100w type N amp	391.00 361.00	304°° 32995
D-100-ATVN 430 ATV 1/52w type N amp	391.00	34995
D-1010-ATVN 430 ATV 10/100w type N amp RC-1* Remote control head w/18' cable	391.00 42.00	349 ⁹⁵
*Not for B-23/C-22/D-26		
The following Repeater Amplifiers are Special Order. Specify SO-239 or type N	availabl connec	e on tors
A-1015NR 6m FM 2/80w type N amplifier A-1015R 6m FM 2/80w SO-239 amplifier	\$544.00 524.00	489 ⁹⁵ 469 ⁹⁵
B-215NR 2m FM 1/110w type N amplifier	529.00	46995
B-215R 2m FM 1/110w SO-239 amplifier	509.00	449 ⁹⁵
B-1016NR 2m FM 2/120w type N amplifier B-1016R 2m FM 2/120w SO-239 amplifierv	566.00 546.00	469 ⁹⁵ 449 ⁹⁵
B-2516NR 2m FM 12/120w type N amplifier .	520.00	429 ⁹⁵
B-2516R 2m FM 12/120w S0-239 amplifier	500.00	40995
C-211NR 220 FM .5/80w type N amplifier C-211R 220 FM .5/80w SO-239 amplifier	589.00 569.00	479 ⁹⁵ 459 ⁹⁵
C-1012NR 220 FM 5/90w type N amplifierv	589.00	47995
C-1012R 220 FM 5/90w SO-239 amplifier C-2512NR 220 FM 15/90w type N amplifier	569.00 561.00	459 ⁹⁵ 449 ⁹⁵
C-2512R 220 FM 15/90w SO-239 amplifier	541.00	429 ⁹⁵
D-1010NR 440 FM 4/80w type N amplifier	595.00	48995
D-3010NR 440 FM 12/80w type N amplifier D-100-ATVN-R 430 ATV 1/40w type N amp	566.00 595.00	459 ⁹⁵ 489 ⁹⁵
D-1010-ATVN-R 430 ATV 4/80w type N amp	595.00	489 ⁹⁵
PREAMPS KP-1/10M 10m in shack preamp	\$124.00	1 09 95
KP-1/6M 6m in shack preamp	124.00	10995
KP-1/2M 2m in shack preamp KP-1/220 220 in shack preamp	124.00 124.00	109 ⁹⁵ 109 ⁹⁵
KP-1/440 440 in shack preamp	124.00	10995
KP-2/10M 10m mast mount preamp	174.00	159 ⁹⁵ 159 ⁹⁵
KP-2/6M 6m mast mount preamp KP-2/2M 2m mast mount preamp	174.00 174.00	159%
KP-2/220 220 mast mount preamp	174.00	15995
KP-2/440 440 mast mount preamp	174.00	15995
MP-1 160-10m 25/200/2kw PEP wattmeter		189 ⁹⁵
MP-2 6 & 2m 50/500/1.5kw PEP wattmeter MP-3 420-450 5/50/500w PEP wattmeter		189 ⁹⁵ 219 ⁹⁵
MP-4 1.2 GHz 1/10/100w PEP wattmeter		229 ⁹⁵
MOTOROLA (MOT)	¢ 10.05	1495
Belt clip kit for HTsΔmf	\$ 19.90	1455
MH-900P Earpiece/bm mic/PTT; all HT but Ken	\$ 39.95	
MH-900PK Earpiece/boom mic/PTT; Ken HT MP-28 Boom mic/headset/PTT; all HT but Ken	39.95 39.95	
MP-28K Boom mic/headset/PTT for Ken HT	39.95	
Power Pocket 12v 2AH lead acid belt batt/cgr	66.95	
NAVAL (NAV)	A	
HTS-3 5-15vdc amplified speaker NEW WAVE (NEW)	\$ 29.95	
Portaple Alum mast 26' extended 7 section m	\$134.95	
Park-on Mount Welded, unpainted mtm	99.95	
NICAD BATTERIES		
GE NICADS (GEX) 2GE3A AAA size nicad∆m,pair	\$ 6.81	395
BC-8B /Charge 8 Charger for 8 nicads Δm	21.99	15 ⁹⁵
JBRO NICADS (JAB) J/BP-4 Battery; Yaesu FNB-2/A∆fv	\$ 24.95	
J/CM-2 Replacement inserts; Ico BP-2 .Δmfv	24.25	19 95
J/CM-3 Replacement inserts; Icom BP-3 Amf	27.40	1995 2495
J/CM-5 Replacement inserts; Ico BP-5 .∆mfv J/CM-7 Replacement inserts; Ico BP-7∆wfv	30.50 37.20	24 ³⁵ 29 ⁹⁵
J/CM-8 Replacement inserts; Icom BP-8 Δf	37.40	29 ⁹⁵
J/CM-7F 13.2v 450ma batt for Icom\Dmfv J/CM-8F 8.4v 850ma batt for Icom\Dmfv	72.70	49 ⁹⁵ 49 ⁹⁵
	70.00	10

-	Reg	Sale
NORCOMM (NOR) NC-401 Sub-miniature DTMF decoderm	\$ 59.95	
NYE VIKING (NYE)		
ANTENNA TUNERS AND ACCESSORIES	****	
MBIV-A1 3kw tuner without balun∆mwfv MBIV-A2 3kw tuner with balun∆mwfv	\$638.00 693.00	519 ⁹⁵ 529 ⁹⁵
MBV-A 3kw tuner with ant switch & meters	791.00	69995
MBV-B As MBV-A, without meters 020-001 2kw low-pass filter	627.00 45.00	549 ⁹⁵
RFM-003 3kw power monitor w/3kw coupler .	375.00	32995
RFM-005 5kw power monitor w/5kw coupler .	395.00	34995
C-1.8-30-5C 300/500w coupler PHONE PATCHES	85.00	79 ⁹⁵
047-001 Phone patch w/4-pin, no spkr Amfv	\$143.00	10995
047-002 Phone patch w/8-pin, no spkr 047-003 Phone patch w/8-pin & spkr	159.00 170.00	144 ⁹⁵ 149 ⁹⁵
SQUEEZE PADDLE	170.00	145
SSK-001 Dual paddle Super Squeeze Key	\$ 51.00	49 ⁹⁵
MASTER KEY 330-001 Black enamel base w/cable, plug	\$ 61.00	59 95
HEAVY DUTY SPEED-X KEYS WITH NAVY	,	
320-001 No shorting switch	\$ 28.60	
320-003 As above, w/shorting switch	32.45 30.50	
322-003 As above, w/shorting switch	34.65	
STANDARD SPEED-X KEYS 310-001 Black, no shorting switch	\$ 26.40	
310-003 As above, w/shorting switch	30.25	
312-001 Brass arm, no shorting switch 312-003 As above, w/shorting switch	28.60 32.45	
315-001 Polished brass oval key, steel base .	51.75	
315-003 As above, w/shorting switch	57.50	
013-001 Navy knob	\$ 7.50	
300-001 Black plastic base for keysDmwfv 300-002 Hvy steel base, no-skid feet for keys .	8.00 15.50	195
CODE PRACTICE SETS (BUZZER)	13.30	
404-001 Code practice set, no key∆mwfv 404-002 Code practice set w/hand key∆mfv	\$ 23.00 49.40	14 ⁹⁵ 39 ⁹⁵
Oak Bay Technologie		
AM-101B BNC duck window mount	\$ 24.95	AR)
CA-232HH Handheld packet cable	34.95 34.95	
CA-232U Universal packet cable LP-11P 1.8-30 MHz 1kw low-pass filter	69.95	
LP-50 1.8-54 MHz 1kw low-pass filter PS-101 Heavy duty DC power strip	69.95 79.95	
Optoelectronics (O		
R-10 30-2000MHz FM communications interceptor	\$359.00	
Scout 25 10-2800MHz freq recorder/counter .	399.00	
OUTBACKER (OUT) 0B-8 300w PEP 6' 75-10m 8-band mobile ant	¢250.00	
OB-8HP 500w PEP 6' 75-10m 8-band mobile ant	289.00	
OB-S8 8-band mobile ant w/storage bag	289.00	
OB-8TRI 3-pc 300w PEP 6' 8-band port ant OB-JR8 150w PEP 4' 75-10m 8-band mob ant .	319.00 229.00	
Perth 7.5' 75/40/30/20/17/12/10m mobile ant	274.00	
OB-M 300w PEP 6' 75/40/20/17/10m/HF marine .	389.00	
OB-SB %-24 spring and ½" hole base Diamond K-400K-3/8M %-24 trunk mt, coax	82.00 78.95	
Palomar Engineers) (PA	L)
FER-2 RF Territe toroid kit	\$ 18.00	
LA-1 Loop amplifier; matches loop to Rcvr 5-15 MHz plug-in loop (HF-1)	99.95 89.95	
1.6-5 MHz plug-in loop (160m, 80m)	89.95	
	89.95 89.95	
40-150 KHz plug-in loop (WWVB, Loran)	89.95	7.045
10-40 KHz plug-in loop (Omega)∆mwf M-835 Bar graph HF auto SWR/pwr meterDv	89.95 199.95	79 ⁹⁵ 179 ⁹⁵
M-840 Bar graph HF auto SWR/power meter	199.95	18995
PS-95 AC adapter for M-835/840 MLB-1 Magnetic longwire receiving balun	15.00 39.95	

PALOMAR ENG - continued	Reg	Sale
P-405 1.8-54MHz 20db 9v Rcv preamp ∆mwfv	149.95	
P-408 1.8-54MHz 20db AC Rcv preamp △mwfv	159.95	
P-410X 160-6m 20 db Xcvr preamp	179.95	
P-412X 160-6m 20 db mobile Xcvr preamp	179.95	
PF-300 SC audio filter	159.95	
PK-200 Jones dual-paddle key PT-340 Tuner-Tuner (use with ant tuner)	170.00	15955
RX-100 1-100 MHz RX noise bridge	99.95	
SB-4 2kw 1.7-30 MHz 4:1 balun w/SO-239	79.95	
VLF-A VLF converter; 10-500 KHz to 80m	79.95	
VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz	79.95 79.95	
	79.90	
PANASONIC (PAN)		
RF-B45 Compact FM/LW/MW/SW port Rcvr	\$199.95	169 ⁹⁵
RF-B65 FM/LW/MW/SW port RcvrDmwfv	279.95	23995
PENETROX (PEN)		
	¢ 7.00	
Penetrox A 4 oz tube for antennas	\$ 7.20	
PERIPHEX (PER)		
BP-7S 13.2v 1200ma battery for Icom	\$ 65.00	
BP-8S 8.4v 1200ma battery for Icom	65.00	
BP-83S 7.2v 750ma battery for Icom	43.50	
BP-84S 7.2v 1400ma battery for Icom	63.00	
BP-85S 12v 800ma battery for Icom	76.00	4000
BP-114S 12v 800ma battery for Icom	79.00	
BP-132 12v 600ma battery for Icom	54.00	
BP-132A 12v 600ma battery for Icom	54.00	
SAT Internal Internal battery; Icom IC-2SAT	25.00	
BP-3 Insert 270ma insert for Icom BP-3	18.95	
BP-5 Insert 500ma insert for Icom BP-5	24.95	
BP-7 Insert 500ma insert for Icom BP-7	29.50	
BP-8 Insert 800ma insert for Icom BP-8	29.50	
EBP-22S 12v 800ma battery for Alinco†	65.00	
EBP-24S 7.2v 1500ma battery for Allico	62.00	
FNB-2 500 ma battery for Yaesu	22.50	
FNB-12 12v 600ma battery for Yaesu	54.50	
FNB-14S 7.2v 1400ma battery for Yaesu	59.75	
FNB-26 7.2v 1000ma battery for Yaesu	60.00	
FNB-265 7.2v 1400ma battery for Yaesu		
FNB-27 12v 600ma battery for Yaesu	60.00	
FNB-275 12v 800ma battery for Yaesu		
FNB-33 6v 1200ma battery for Yaesu	53.25	
FNB-38 9.6v 600ma battery for Yaesu	66.90	
PB-1 1200ma battery for Kenwood	67.00	
PB-7S 7.2v 1400ma battery for Kenwood	59.00	
PB-8S 12v 800ma battery for Kenwood	59.00	
PB-13S 7.2v 1200ma battery for Kenwood	49.75	
PB-14S 12v 400ma battery for Kenwood†	60.00	40 °C
PB-17 12v 700ma battery for Kenwood	49.95	
PB-18 7.2v 1100ma battery for Kenwood	49.25	
PB-25S/26S 900ma battery for Kenwood	65.00	
PB-33 6v 1200ma battery for Kenwood	49.00	
PB-34 9.6v 600ma battery for Kenwood	54.00	
Santec ST-142 Battery for Santec ST-142	23.95	
PHILIPS (PHI)		
	\$ 99.90	69%
U-105 Light duty rotor	¢ 99.90 18.25	03.
	10.20	
PICQUIC (PIC)		
88101 Full size 6-in-1 screwdriver set Amv		
91102 Stubby 6-in-1 screwdriver set Amfv		
DID O		
	¢ 71.00	
PK-1 12-digit padm	\$ /1.00	

Late Breaking "Hot Deals"
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PIPO - continued

	<u> </u>	
PK-1K 12-digit pad w/delay relaym	78.00	
PK-1M 12-digit pad for surface mtgm	71.00	
PK-2 16-digit padm	76.00	
PK-2K 16-digit pad w/delay relaym	83.00	
PK-2M 16-digit pad for surface mtgm	76.00	
PK-3-12 12-dig pad w/separate electronics ∆m	58.00	3
PP-5V 12-digit vertical pad w/lightΔm	69.00	4
P-7H 12-digit horiz rugged mini pad∆m	58.00	4
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Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft."

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	MP-115 from Standard - C-468A th		
	Bottom cover	12.00	
CAX-160	Remote battery adapter Amwf	50.00	
CBT-160	Battery case	20.00	
CHP-111	Headset mic w/PTT switch	45.00	
	Headset mic w/VOX	81.00	
CLC-160	Mini carrying case	26.00	
CLC-161	Mini carrying case	26.00	
CLC-162	Mini carrying case	27.00	
CMP-111	Speaker/mic	54.00	
CMP-113	Tie-pin spkr/mic	44.00	
	Mini speaker/mic	50.00	0.005
	40 ch mem; 168A/558A∆mwfv	31.00	22 ⁹⁵
	200 ch memory; 168A/558A Mini 6v 300ma nicad batt ∆mwfv	44.00 72.00	52 95
	Mini 7.2v 700ma nicad battery	75.00	JZ
	Mini 12v 600ma nicad battery	125.00	10995
CNB-163	Mini 7.2v 1000ma nicad batt	99.00	9495
CSA-181A	Desk rapid charger	124.00	
C-188A Thi	in sub-mini 2m HT/TTPAmwfv	489.00	29995
FREE CI	MP-115 from Standard - C-188A th	ru 11/30)/94
C-288A Thi	in sub-mini 220 HT/batt/cgr/TTP	499.00	CALL
	MP-115 from Standard - C-288A th)/94
	Battery case for 4 AA		
	Battery case for 5 AA		
CHP-111	Headset mic w/PTT switch	45.00	
CHP-150 CLC-181	Headset mic w/VOX	81.00	
CLC-181	Carrying case w/CNB-181 Carrying case w/CNB-182/3/4	21.00 24.00	
CMA-181	Mobile adapter	38.00	
CMP-111	Speaker/mic	54.00	
CMP-113	Tie-pin spkr/mic	44.00	
CMP-115		50.00	
CMU-182		44.00	
CNB-181	4.8v 700ma nicad battery	57.00	
CNB-182	9.6v 600ma nicad battery	99.00	94 ⁹⁵
	6v 1100ma nicad battery	95.00	89 ⁹⁵
	6v 700ma nicad battery	67.00	
	Desk rapid charger	124.00	11995
	Omw 2m FM HT	269.00	CALL
C-12000A	Molded belt clip 50w 2m FM Xcvr w/TTP	10.50 529.00	CALL
	6.5' mic extension cable	33.50	UALL
	13' mic extension cable	45.00	
C-5608DA	50/40w 2m/440 FM/TTPDmwv	890.00	71995
	External speaker	47.00	
C-5718DA	50/40w 2m/440 FM Xcvr/packet	849.00	CALL
	Split cable for microphone	62.00	
CAW-571		43.00	
	AMATEUR	-00	mant,
(S)	AMATEUR ELECTRONIC SUPPLY?	-2w	
Binesutes W - Mesilita Din - Orlan	I-BOO-558-0411 No El-Courseo El-Ca legar Mi	and	
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NOVUS

STANDARD - continue		Reg	Sale
CAW-572 13' mic extension cable CRC-5700 Front panel w/freg disp	alav	48.00 228.00	20995
CAW-573 6.5' front panel extens		228.00	209.
CAW-574 13' front panel extens	ion cable	36.00	
CCR-708A 50-905 MHz spectral dis	play Rcvr	750.00	CALL
STARTEK (STR)			
15-BG 1-1500MHz bar graph ultra hi sen	sctr ∆mfv	\$220.00	1 69 95
15-UHS 1-1500 MHz ultra high sens	etr .∆mwv	159.00	14995
35-BG 1-3200MHz bar graph ultra hi se	ens ∆mwfv	265.00	22995
1350 1-1300 MHz frequency counte	r	129.00	11995
2500 10 Hz-2400 MHz freq counter 3500 10 Hz-3500 MHz freq counter		210.00 250.00	189 ⁹⁵ 219 ⁹⁵
ATH-10 1-1200 MHz freq counter w/	ATH	179.00	14995
ATH-15 1-1500MHz bar graph freq of	counter	235.00	18995
ATH-15/0S 1-1500Mhz ctr w/1-shot	optm	275.00	229 ⁹⁵
ATH-15/0S/HS 1500MHz/1-shot/hi s		375.00	32995
ATH-30 1-2800MHz bar graph ctr w. ATH-30/HS 2800MHz/1-shot/hi-stat	/1-SNOT	299.00 399.00	249 ⁹⁵ 339 ⁹⁵
ATH-50 5Hz-2800MHz bar/auto trig/	hi speed	339.00	28995
ATH-50/HS 2800MHzr/trig/hi spd/hi	stability	439.00	37995
BP-150 130 - 500 MHz bandpass	filter	69.00	4995
CC-90 Carrying case		12.00	1.000
DC-10 Direct probe HP-400 400 - 1500 MHz bandpas	s filtor	22.00 69.00	1995 4995
HP-800 800 MHz - 2 GHz bandpas	s filter	69.00	49%
LP-22 Lo-pass probe		29.00	2495
LP-60 DC - 60 MHz bandpass filte	er	69.00	49 ⁹⁵
M-207-IC Interface cable	•••••	10.00	2005
P-110 200 MHz X1-X10 probe RD-2750 27-50MHz rubber duck a	intonna	69.00 28.00	39 95
RD-150 150MHz rubber duck ante	nna	16.00	
RD-450 450MHz rubber duck ante	nna	16.00	
RD-800 800MHz rubber duck ante		29.00	24 95
TA-90 Telescopic antenna TA-90L Right angle telescopic ant		12.00 16.00	
		10.00	
TAB Books (TAE		¢ 12 CO	
How to be a Ham 3rd Edition	Dili ۸m	\$ 13.60 17.60	1295
447748 Shortwave Listener's Q & A		12.95	12
633626 Radio Amateur's Digital Comm		14.95	
640967 Amateur Radio Encyclopedia	a	29.95	
641351 Shortwave Radio Listening for I 643478 Complete SW Listener's Han		10.95 19.95	
643540 Beginner's Handbook of Amate		21.95	
765340 Build Your Own Shortwave A		16.95	
TEMPO (TEM)			
BP-15 Extra battery pack; S-15/S-1	5T∆m	\$ 39.00	
TIMEWAVE (TIM			
DSP-9 Digital signal processing uni		\$169.00	
DSP-9 PLUS Advanced dig sig proces	sing unit	219.00	
DSP-59 PLUS Dlx dig signal process		299.00	
Upgrade DSP-9 to ver 2.0 upgrade k	(itm	30.00	
TUBES (TUB)			
6146B Tube		\$ 14.95	
12BY7A Tube		12.95	
3-500G High dissipation tube (3-50) 572B For Yaesu, etc.		99.95 49.95	
811A For Collins, etc.		49.95	
Also see EIMAC			
TUNE BELT (TU	IND		
HH-1PS Up to 5" HT radio belt		\$ 16.95	
HH-1PM Up to 6" HT radio belt		16.95	
HH-1PL Up to 7" HT radio belt		16.95	
HH-2PM Up to 6" HT radio belt w/ba HH-2PL Up to 8" HT radio belt w/bat		17.95 17.95	
LIO TOWER		17.50	
FREE STANDING CRANK-UPS (T ² X n TX-438 38' crank-up tower			
TA-430 So Crank-up lower		1133.00	1019
TOP TRADES	H We ta	ake Cle	an
Late Model Gear in tra	de tow	ards N	lew.
Equipment shown in this ca			
	allong		

US TOWER - continued	Reg	Sale
TX-455 55' crank-up tower†T	1710.00	1499
TX-472 72' crank-up towerT	2810.00	2529
TX-472MDP 72' crank-up w/motor driveT	4521.00	4068
TX-489 89' crank-up towerT TX-489MDPL 89' crank-up w/motor driveT	4888.00	4399
FREE STANDING HEAVY DUTY CRANK-UF		6598
HDX-538 38' crank-up towerT		1319
HDX-555 55' crank-up towerT	2566.00	2309
HDX-572 72' crank-up towerT	4399.00	3959
HDX-572MDPL 72' crank-up w/motor drive .T	6721.00	6048
HDX-589MDPL 89' crank-up w/motor drive .T HDX-689MDPL 89' HD crank-up w/motorT	8/99.00	7919
HDX-5106MDPL 106' HD crank-up w/motor .T	18499.00	16649
COMPACT TMM (Top mount rotor for full		
TMM-433SS 33' crank-up towerT	1210.00	1089
TMM-433HD 33' HD crank-up towerT		
TMM-541SS 41' crank-up towerT	1588.00	1429
ACCESSORIES FOR CRANK-UP TOWERS	¢ 40.00	
CX-2 Coax arms (2) for 2-section tower CX-3 Coax arms (3) for 3-section tower	\$ 49.00	
CX-4 Coax arms (4) for 4-section tower	109.00	
CX-5 Coax arms (5) for 5-section tower	149.00	134
CX-6 Coax arms (6) for 6-section tower		170
HDP Service platformT STS-4 Rotor accessory for TX/TMM towersT	739.00	665
STS-4 Rotor accessory for TX/TMM towersT IV-16 Inverted vee arm for MA's	210.00	189
M-5 2" OD 5' mast extension for MA's	37.00	
M-5 2" OD 5' mast extension for MA's M-10 2" OD 10' mastT		
M-15 2" OD 15' mast	103.00	
M-20 2" OD 20' mastT	136.00	122
M-15R 2" OD 15' reinforced mastT	155.00	140
M-20R 2" OD 20' reinforced mastT		184
CM-20 2" OD 20' .375 wall mastT MD-75 Heavy duty 1 HP motor driveT		404
MDP-750 Pull-down drive; TX-472/HDX-555 T	989.00	890 1385
MDPL-1000 Pull-down drive; HDX-572T		1880
MRF Mast raising fixture	266.00	239
MCL-100 Limit switch package		388
RMC-1000 Remote control w/limit switch	989.00	890
RP-3 Rotor plate for 10" section	20.00 26.00	
RP-4 Rotor plate for 12½" section	26.00	
RP-5 Rotor plate for 15" section		0.07
TRX-80 Raising fixture; TX-438/455; HDX-538/555T TRX-80HD Raising fixture; TX-472/489; HDX-572/589T		387 510
TRX-100HD Raising fixture; HDX-689/5106 .T		719
TB-2US Thrust bearing; 2" mast w/2 flange holes	98.00	
MA-SERIES TUBULAR TOWERS		
MA-40 40' crank-up mast†T	\$899.00	679
MA-550 55' crank-up mast	1521.00	1069
MA-550MDP 55' crank-up mast w/motorT MA-770 70' crank-up mastT	2909.00	2618 2258
MA-770MDP 70' crank up mast w/motorT	3969.00	3572
MA-850MDP 85' crank-up mast w/motorT	5349.00	4814
MA-SERIES ACCESSORIES		
CX-2M Coax arms (2) for MA-40	\$ 53.00	
CX-3M Coax arms (3) for MA-550	79.00	110
CX-4M Coax arms (4) for MA-770 CX-5M Coax arms (5) for MA-850	132.00 159.00	119 143
MAB-40 Hinged base for MA-40T	359.00	323
MAB-550 Hinged base for MA-550T	429.00	386
MAB-770 Hinged base for MA-770T	519.00	467
MAB-850 Hinged base for MA-850T	629.00	566
MAF-40 Raising fixture for MA-40	220.00	198
MAF-550 Raising fixture for MA-550T MAF-770 Raising fixture for MA-770T	304.00 309.00	273 278
MAF-850 Raising fixture for MA-850T	409.00	368
MARB-40 Rotor base accessory for MA-40 T	549.00	494
MARB-550 Rotor base accessory for MA-550 T	649.00	584
MARB-770 Rotor base accessory for MA-770 T	769.00	692
MARB-850 Rotor base accessory for MA-850 T		818
All US TOWER products are drop-shipped (shipp from the US TOWER factory). On these factory dro	ea arrect op-shipme	to you nts we
prefer payment in full with order, however, we	will accep	t your
credit card with the understanding that we will pro when we order the merchandise from the factory.	This mean	charge is that
nien no order die incremendielie nom die ractory.	ma medi	io that

you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier. UNADILLA (See W2AU) UNIDEN (UNI) HR-2600 25w 10m FM/SSB XcvrDmwfcv \$489.95 1995 Unified Microsystems (UNM) W9XT Contest card for IBM PC & compatible \$149.95 139⁹⁵ Universal Towers (UNT) 302 9-30 9 sq ft wind load 30' alum towerT 451.00 406 **12-30** 12 sq ft wind load 30' alum towerT 593.00 534 **21-30** 21 sq ft wind load 30' alum towerT 704.00 634 **23-30** 23 sq ft wind load 30' alum towerT 932.00 839 35-30 35 sq ft wind load 30' alum towerT 1050.00 945 **4-40** 4 sq ft wind load 40' alum towerT 562.00 506 7-40 7 sq ft wind load 40' alum towerT 706.00 635 **9-40** 9 sq ft wind load 40' alum towerT 787.00 **12-40** 12 sq ft wind load 40' alum towerT 932.00 708 839 15-40 15 sq ft wind load 40' alum towerT 1042.00 938 21-40 21 sq ft wind load 40' alum towerT 1157.00 1041 23-40 23 sq ft wind load 40' alum towerT 1385.00 1247 **4-50** 4 sq ft wind load 50' alum towerT 792.00 713 5-50 5 sq ft wind load 50' alum towerT 900.00 810 7-50 7 sq ft wind load 50' alum towerT 1013.00 912 9-50 9 sq ft wind load 50' alum towerT 1126.00 1013 15-50 15 sq ft wind load 50' alum towerT 1496.00 1346 16-50 16 sq ft wind load 50' alum towerT 1614.00 1453 4-60 4 sq ft wind load 60' alum towerT 1127.00 1014 6-60 6 sq ft wind load 60' alum towerT 1382.00 1244 7-60 7 sq ft wind load 60' alum towerT 1471.00 1324 9-60 9 sq ft wind load 60' alum towerT 1577.00 1419 3-70 3 sq ft wind load 70' alum towerT 1469.00 1322 4-70 4 sq ft wind load 70' alum towerT 1805.00 1625 6-70 6 sq ft wind load 70' alum towerT 1838.00 1654 7-70 7 sq ft wind load 70' alum towerT 1922.00 1729 3-80 3 sq ft wind load 80' alum towerT 1920.00 1728 4-80 4 sq ft wind load 80' alum towerT 2293.00 2064 2-90 2 sq ft wind load 90' alum towerT 2375.00 2138 55 B-22 Base for tower 106.04 95 **B-26** Base for tower 136.33 123 RFM-14 Flat roof mt for guyed tower 42.32 38 60 **RFM-22** Flat roof mt for guyed tower 90 **RFM-26** Flat roof mt for guyed tower 133.33 120 27 41 R-18 Rotor mount 60.58 55 **SEE LITERATURE FOR CONFIGURATION OF TOWERS** 11 Top 11" top tower sectionT 113.66 102 14 Top 14" top tower section T 143.22 18 Top 18" top tower section T 259.72 129 234 14 Taper 14" taper tower sectionT 126.00 113 18 Taper 18" taper tower sectionT 203 22 Taper 22" taper tower sectionT 337.00 303 26 Taper 26" taper tower sectionT 453.00 408 11 Straight 11" straight tower sectionT 112.00 101 14 Straight 14" straight tower sectionT 126.00 113 18 Straight 18" straight tower sectionT 226.00 203 22 Straight 22" straight tower sectionT 337.00 303 26 Straight 26" straight tower sectionT 453.00 408 HD35-40 35 sq ft wind load 40' alum tower T 1616.00 1454 HD21-50 21 sq ft wind load 50' alum tower T 1724.00 1552 HD9-60 9 sq ft wind load 60' alum towerT 1808.00 1627 HD16-60 16 sq ft wind load 60' alum tower T 2178.00 1960 HD21-60 21 sq ft wind load 60' alum tower T 2295.00 2065 HD8-70 8 sq ft wind load 70' alum towerT 2034.00 1831

US TOWER - continued

Reg Sale

UNIVERSAL - continued Reg	Sale
HD12-70 12 sq ft wind load 70' alum tower T 2519.00	
HD17-70 17 sq ft wind load 70' alum tower T 2749.00	
HD21-70 21 sq ft wind load 70' alum tower T 2864.00	
HD8-80 8 sq ft wind load 80' alum towerT 2603.00	
HD9-80 9 sq ft wind load 80' alum towerT 2716.00	
HD11-80 11 sq ft wind load 80' alum tower T 3085.00	
HD12-80 12 sq ft wind load 80' alum tower T 3090.00 HD16-80 16 sq ft wind load 80' alum tower T 3317.00	
HD4-90 4 sq ft wind load 90' alum towerT 2710.00	
HD8-90 8 sq ft wind load 90' alum towerT 3198.00	
HD11-90 11 sq ft wind load 90' alum tower T 3656.00	
HD4-100 4 sq ft wind load 100' alum tower T 3630.00	3267
HD8-100 8 sq ft wind load 100' alum tower T 3884.00	
B-30 Base for HD tower 212.57	191
RFM-30 Flat roof mt for guyed tower 186.52	168
1-5/8SC Flange bearing	81
2-3/16SC Flange bearing 116.52	
Top Plate Flange plate welded to top section 21.24	19
SEE LITERATURE FOR CONFIGURATION OF TOW	ERS
30 Taper 30" taper tower sectionT 570.00	513
30 Straight 30" straight tower sectionT 570.00	513
1-1/4" OD x 10 ft aluminum mast	
1-1/2" OD x 10 ft aluminum mastT 37.84	
2" OD x 8 ft aluminum mast	
2" OD x 16 ft aluminum mastT 90.88	
All UNIVERSAL TOWERS products are drop-shipped (shipped	d direct

All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory dropshipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

VALOR (See PRO AM/Vectronics) VANCO (VCO)

SWR-1	SWR/field strength meter	\$ 36.14	19 95
	SWR/power/field strength meter		29 ⁹⁵
SWR-3	Mini SWR meter	21.68	1495

VAN GORDEN (VAN)

Hi-Q 1:1 balun		
Hi-Q 4:1 balun		
Antenna center insulator	6.95	
Antenna end insulatoreach		
Dog bone type antenna insulatoreach	.50 4.49	
NR-100 Nylon antenna guy rope	43.95	3995
D-80 80m wire dipole antenna	31.95	
SD-80 Short 80m dipole	35.95	
D-40 40m wire dipole antenna	28.95	
SD-40 Short 40m dipole	33.95	
D-20 20m wire dipole antenna	27.95	
D-15 15m wire dipole antenna	26.95	
D-10 10m wire dipole antenna	25.95	
All Bander Dipole 160-10m (w/tuner) 135' ant	29.95	
Shorty All Bander 160-10m (w/tuner) 70' ant	39.95	
G5RV Flat-top 5-band 102' antenna w/cable	50.00	
N connector Type N connector for 9913	4.95	
450 ohm insulated ladderline100 ft.	12.00	
450 ohm insulated ladderline1,000 ft.	110.00	99 ⁹⁵
8X-3ST 3' RG-8X coax/silver teflon PL259s	8.50	
8X-6ST 6' RG-8X coax/silver teflon PL259s	10.00	
8X-12ST 12' RG-8X coax/silver teflon PL259s	11.00	
8X-25ST 25' RG-8X coax/silver teflon PL259s	15.50	
8X-50ST 50' RG-8X coax/silver teflon PL259s 8X-75ST 75' RG-8X coax/silver teflon PL259s	24.00 31.00	
8X-100ST 100' RG-8X coax/silver teflon PL259s	37.00	
213-3ST 3' RG-213 coax/silver teflon PL259s 213-6ST 6' RG-213 coax/silver teflon PL259s	$11.00 \\ 14.00$	
213-12ST 12' RG-213 coax/silver teflon PL259s .	14.00	
213-25ST 25' RG-213 coax/silver tefton PL259s	25.00	
213-50ST 50' RG-213 coax/silver teflon PL259s	38.00	

VAN GORDEN - continued	Reg	Sale
213-75ST 75' RG-213 coax/silver teflon PL259s	54.00	
213-100ST 100' RG-213 coax/silver teflon PL259s	72.00	(AL)
Vectronics by VALO VC-300M 300w mobile antenna tunerm	\$139.95	/AL) 11995
VC-300DLP 300w antenna tunerm	169.95	14495
VC-300D 300w digital antenna tunerm HFT-1500 1.5kw antenna tunerm	219.95 459.95	18695 38995
HF-600QSK 1kw HF amplifier w/QSKm	1995.00	1595
HPF-1 High pass filterm	19.95	1795
LP-30 1.5kw low pass filterm LP-2500 2.5kw low pass filterm	69.95 139.95	59 ⁹⁵ 119 ⁹⁵
DL-300M 300w dummy loadm	43.95	3995
DL-650M 1.5kw dummy loadm	74.95	64 ⁹⁵
DL-2500 2.5kw dummy loadm PM-30HF 300/3kw HF wattmeterm	199.95 99.95	169 ⁹⁵ 84 ⁹⁵
PM-30UV 30/300w VHF/UHF wattmeterm	99.95	8495
VIBROPLEX (VIB)		
100 Original Presentation Super deluxe bug.		184 ⁹⁵
105 Original Deluxe Bug110 Original Standard Bug	120.00 99.00	
115 VibroKeyer Deluxe Paddle	115.00	
120 VibroKeyer Standard Paddle125 lambic Presentation Paddle	89.00 160.00	
130 lambic Pleuxe Paddle	115.00	
135 lambic Standard Paddle 140 EK-1 lambic kever w/paddle	95.00 145.00	
140 EK-1 lambic keyer w/paddle145 Brass Racer lambic paddle	65.00	
W2AU (Unadilla) (N2A)	
W2AU 1:1 80-10m balun, lightning arrestor	\$21.00	
W2AU Beam Balun, 1:1 W2AU 4:1 80-10m balun, lightning arrestor	21.00 21.00	
W2DU-HF 1:1 1.8-30 MHz choke balun	23.00	
W2DU Beam Balun 40-10m 1:1 choke balun	23.00	
W2DU-VHF 1:1 30-250 MHz choke balun HA AN-sulator center insulator	23.00 8.00	
HE END-sulator end insulatorspair	4.00	
KW-80CW Reyco 80m CW ant trapspair	44.00	39 95
KW-80F Reyco 75m phone ant trapspair KW-40 Reyco 40m antenna trapspair	44.00	
KW-30 Reyco 30m antenna trapspair	40.00	
KW-20 Reyco 20m antenna trapspair KW-17 Reyco 17m antenna trapspair	39.00 39.00	
KW-15 Reyco 15m antenna trapspair	39.00	
KW-12 Reyco 12m antenna trapspair	39.00 39.00	
KW-10 Reyco 10m antenna trapspair W2AU/W2VS 5-band ant kit (use tuner)	75.00	
WABER AC OUTLET STRIPS		
3SP 3 outlet/breaker/switch/light	\$ 16.60	895
4S 4 outlet/breaker/switchΔm 5 5 outlet w/breakerΔm	16.60 16.60	895 895
6SP 6 outlet/breaker/switch/light Δm	19.95	9 95
7S 7 outlet/breaker/switch∆m 8 8 outlet w/breaker∆m	19.95 19.95	995 995
MAZA LIL	19.99	3
VVATIL (WAH) 7740 Quick charge cordless soldering iron kit .	\$ 39.95	3495
7980 Butane soldering iron and torch	29.95	1005
7985 Butane iron/torch kit package w/case	54.95	49 95
WALNUT CREEK (CICA 650 MB of current Windows shareware .	WAL) \$ 29.95	
Garbo 250 MB DOS + 150 MB Mac programs	29.95	
Giga Games 3,000 DOS & Windows games Ham QRZ US & Canada calls plus programs	39.95 29.95	29 ⁹⁵
Hobbes Thousands of OS/2 applications	29.95	
Simtel 650 MB current DOS programs	29.95	
WELLER (WEL)	¢ 22.00	0.005
7200PK 75w soldering gun kit EC-1002-1 40w temp controlled solder stn	\$ 32.80 281.06	2695 18995
WP-25 25w professional soldering iron	37.06	
W-60P 60w temp controlled soldering iron W-100PG Hvy duty 100w temp control iron .∆mf	71.16 69.86	59 ⁹⁵ 39 ⁹⁵
WTCPT 60w temp controlled soldering stn	167.12	10995
WSTA3 Pyropen portable LP soldering iron	110.06	7495

WELLER - continued		Sale
WST2 Pyropen Jr. portable butane iron	88.36	64 ⁹⁵
YAESU (YAE)	4000.00	
FT-1000 Xcvr w/ps/tuner/keyer/mic/XF-AB \$100 coupon - FT-1000 thru 1/8/95	4099.00	CALL
BPF-1 Dual bandpass filter; crossband r	cv 189.00	16995
TCXO-1 Temperature compensated xtal o	sc 239.00	20995
XF-C 2.4 KHz SSB xtal filter (455 KHz)		
XF-D 2 KHz SSB xtal filter (455 KHz) YF-110C/XF-E 500 Hz CW xtal filter (455 KHz)		
FT-1000D Dix Xcvr w/BPF/TCX0/XF-ABCDE		
\$100 coupon - FT-1000D thru 1/8/95		
DVS-2 Digital voice recording module FIF-232C Interface for RS-232	319.00	
MD-1C8 Desk microphone		
SP-5 External spkr w/audio filter		
LL-5 Phone patch unit for SP-5		
XF-455MC 600Hz CW filter (455KHz); subro YF-110CN/XF-F 250 Hz CW xtal filter (455 KH		
YH-77ST Open-air type stereo headphon	,	
FT-990DC Xcvr w/tuner & mic	2299.00	
\$100 coupon - FT-990DC thru 1/8/95		
FP-25 Internal power supply for FT-990E		
FP-800 20A heavy duty ps for FT-990DC XF-109C 500 Hz CW filter for FT-990DC	319.00	
FT-990 Xcvr w/ps/tuner/mic/CW filter		
\$100 coupon - FT-990 thru 1/8/95		
DVS-2 Digital voice recording module FIF-232C Interface for RS-232		
MD-1C8 Desk microphone		
SP-6 External speaker w/filter) 159 ⁹¹
LL-5 Phone patch unit for SP-6		1399
TCXO-2 Temp compensated xtal oscillat		
XF-10.9M-202-01 2nd IF 2 KHz SSB filte XF-455K-251-01 2nd IF 250 Hz CW filter		
YH-77ST Open-air type stereo headphon	es. 53.00	
2M/767 (FEX-767-2M) 2m mod; 767	Δm 269.00	
6M/767 (FEX-767-6M) 6m mod; 767∆	mw 269.00	
130/767 (FEX-767-70B) 430-440 mod2 140/767 (FEX-767-70A) 440-450 mod2		
SP-767P Speaker/patch for FT-767GX	∆m 136.00	
FT-900 Xcvr/remote front panel/mic		
ATU-2 Internal antenna tuner FT-900/AT Xcvr/remote front/mic/auto tun		
FP-800 20A heavy duty power supply		
DVS-2 Digital voice recording module	319.00) 279 ⁹
FC-800 External long wire auto tuner		
FIF-232C Interface for RS-232 MD-1C8 Desk microphone		
CT-20 Mic cable for use with MD-1C8		
MH-31A8J Extra hand microphone		
MMB-20 Mobile mount		
SP-6 External speaker w/filter LL-5 Phone patch unit for SP-6		
SP-7 Mobile speaker	38.00)
TCXO-3 TCXO unit	109.00	
XF-110C 455 KHz 500 Hz CW filter XF-110CN 455 KHz 250 Hz CW filter		
XF-110S 455 KHz 2.6 KHz SSB filter		
YF-100 2nd IF 500 Hz CW filter	129.00) 119 ⁹
YF-101 2nd IF 2.6 KHz SSB filter		
YA-007FG Mobile fiberglass HF whip and YH-77ST Open-air type stereo headphon		
YSK-900 20' remote mtg kit w/tnk mtg k		
MMB-62 Remote control panel bracket	t 29.00)
FT-890 Xcvr/.1-30 MHz Rcvr w/mic	1479.00) CALI
\$150 coupon - FT-890 thru 1/8/95 ATU-2 Internal antenna tuner	279.00) 249 ⁹
FT-890/AT Xcvr/.1-30 MHz Rcvr/tuner/mic		
\$150 coupon - FT-890/AT_thru 1/8/95		
FP-800 20Å heavy duty power supply	319.00	2 79 ⁹
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YAESU - continued	Reg	Sale	YAESU - c
DVS-2 Digital voice recording module			FTS-8 Encode
FC-800 External long wire auto tuner	519.00		
FIF-232C Interface for RS-232	119.00		FVS-1A Voice
FRB-757 External relay box	39.00		Keyer-B Elect
MD-1C8 Desk microphone	139.00		MD-1C8 Desk
MH-1B8 Extra hand microphone	20.00		MH-1B8 Extra
MMP 20 Mabile mount	39.00		SP-767 Speak
MMB-20 Mobile mount SP-6 External speaker w/filter	30.00	1 5 0 95	TV-736 1.2 G
LL-5 Phone patch unit for SP-6		159 ⁹⁵ 139 ⁹⁵	FT-690R Mk II
SP-7 Mobile speaker		129	FT-290R Mk II
TCXO-3 TCXO unit	109.00	9995	FT-790R Mk II
XF-455K-251-01 2nd IF 250 Hz CW filter	179.00		CSC-19 Soft o
YA-007FG Mobile fiberglass HF whip ant		159 ⁹⁵ 139 ⁹⁵	FBA-8 Holder NC-26B Wal
YF-100 2nd IF 500 Hz CW filter	129.00	11995	FTS-7A Encod
YF-101 2nd IF 2.6 KHz SSB filter		15995	FT-5100 50/35v
YH-77ST Open-air type stereo headphones .		100	\$50 coupon
FT-840 Xcvr/SW Rcvr		CALL	FT-5200 50/35v
\$50 coupon - FT-840 thru 1/8/95	1099.00	GALL	\$50 coupon
FP-800 20A heavy duty power supply	319.00	27995	FT-6200 35/10v
FC-10 External coax fed auto tuner		33995	DVS-3 Digital
FC-800 External long wire auto tuner		44995	FRC-4 DTMF p
FIF-232C Interface for RS-232		443°° 11495	FTS-22 CTCSS
FM-747 FM unit	79.00	114	MH-27B8 Extr
MD-1C8 Desk microphone	139.00	12995	MW-1 Wireles
MMB-20 Mobile mount	30.00	125	MW-2* Wirele
SP-6 External speaker w/filter	169.00	1 59 95	* Requires ju
SP-7 Mobile speaker	38.00	100	MMB-53 Mo
TCXO-4 TCXO unit	108.00	99 95	SP-7 External
YA-007FG Mobile fiberglass HF whip ant	149.00	13995	YSK-1L Sep ki
YF-112A 6 KHz AM filter	129.00	11995	FT-912RH 10w 1
YF-112C 500 Hz CW filter	129.00	11995	AD-3 100w 2n
YH-77ST Open-air type stereo headphones .			DVS-1 Digital
FP-757HD Heavy duty supply/fan/spkr	345.00	29995	FTS-12 Decod
FP-700 Power supply	274.00	23995	MH-15C8 Extr
FC-757AT Auto antenna tuner w/memory	530.00	45995	MH-15D8 Auto
MMB-38 Mobile mounting bracket; 747 Amwf	20.00		FT-7400H 35w 4
TCX0-747 Increased stability unit; 747 ∆mwfv	42.00	3995	2400 Mic Cabl
FL-7000 Solid state amp w/auto ant tuner	2459.00	CALL	FRC-6 DTMF p
CT-11 Cable - FL-7000 to FT-890/900	20.00		FTS-17A CTCS
E-767 Cable - FL-7000 w/FT-767/990/1000	24.00		MH-27A8J Extr
FAS-1-4R Remote antenna selector	139.00	129 ⁹⁵	SP-7 External
DC-8800 DC kit for FRG-8800Dm	4.00	2 ⁹⁵	FT-2500M 50w 2
FRG-100B .1-30 MHz shortwave receiver	699.00	CALL	\$30 coupon
FM Unit-100 FM unit			2400 Mic Cabl
TCXO-4 TCXO unit	108.00	9995	FT-2200 50w 2n
YF-110C/XF-E 500 Hz CW xtal filter	169.00	14995	\$30 coupon
YF-110CN/XF-F 250 Hz CW xtal filter	179.00	15995	FT-7200 35w 44
YA-30 1.8-30 MHz broadband dipole ant	255.00	21995	DVS-3 Digital
YH-55 Lo-Z headphones	39.00		FTS-27 CTCSS
YH-77 Lightweight headphones	33.00		MW-2 Wireless
YS-60 1.8-60 MHz 2kw PEP wattmeter	133.00	12495	MMB-53 Mol
YS-500 140-520 MHz 200w PEP wattmeter	109.00		SP-7 External
FT-650 100w 12/10/6m Xcvr w/ps	1899.00	CALL	SP-3 Small mob
DVS-2 Digital voice recording module		27995	SP-4 Mobile spe
MD-1C8 Desk microphone	139.00	12995	Accessories fo
SP-5 External spkr w/audio filter		15995	FNB-2A Nicad b
LL-5 Phone patch unit for SP-5	149.00	13995	YM-24A Speaker
XF-455M6 600 Hz CW filter	169.00	14995	Acnessories fo
FT-736R 25w 2m/430 full dplx Xcvr/ps/mic	2299.00	CALL	FNB-4A 500ma
AD-3 100w 2m/440 duplexer	54.00		FTS-6 Encoder/d
E-736 DC cable	14.00		MMB-21 Mobile
FEX-736-50 6m module	339.00	299 ⁹⁵	NC-9B Wall char
FEX-736-220 220 MHz module	359.00	30995	PA-3 Mobile ada
FEX-736-1.2 1.2 GHz module	599.00	51995	FT-26/25 2w 2m
FIF-232C Interface for RS-232	119.00	11495	FT-76/25 2w 440

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Sale	YAESU - continued	Reg	Sale
279 ⁹⁵	FTS-8 Encoder/decoder	59.00	
449 ⁹⁵	FVS-1A Voice synthesizer		
11495	Keyer-B Electronic keyer unit	29.00	
10005	MD-1C8 Desk microphone		12995
129 ⁹⁵	MH-1B8 Extra hand microphone	39.00	
	SP-767 Speaker w/audio filters TV-736 1.2 GHz ATV converter	109.00	1 5 0 95
15995	FT-690R Mk II 10w 6m FM/SSB Xcvr/TTP		159 ⁹⁵ CALL
13995	FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP	729.00	CALL
	FT-790R Mk II 25w 430-450 FM/SSB/TTP	839.00	CALL
99 95	CSC-19 Soft case	22.00	CTTER.
1 59 95	FBA-8 Holder for 9 C-cell nicads	42.00	
1 39 95	NC-26B Wall charger for FBA-8		
11995	FTS-7A Encoder/decoder; current units	41.00	
1 59 ⁹⁵	FT-5100 50/35w 2m/440 FM Xcvr/TTP mic	779.00	CALL
CALL	\$50 coupon - FT-5100 thru 1/8/95	010.00	
CALL	FT-5200 50/35w 2m/440 FM Xcvr/TTP mic	819.00	CALL
27995	\$50 coupon - FT-5200 thru 1/8/95 FT-6200 35/10w 440/1.2GHz FM Xcvr/TTP	899.00	CALL
33995	DVS-3 Digital voice memory unit	146.00	129 ⁹⁵
44995	FRC-4 DTMF pager unit	43.00	120
11495	FTS-22 CTCSS decode unit	65.00	
	MH-27B8 Extra TTP microphone	59.00	
12995	MW-1 Wireless remote control micDmw	116.00	112 ⁹⁵
	MW-2* Wireless remote control mic	142.00	13495
1 59 ⁹⁵	* Requires jumper modification	7.00	
9995	MMB-53 Mobile mtg bkt for MW-1/2	7.00	
139 ⁹⁵	SP-7 External speaker YSK-1L Sep kit w/18' cable; FT-5200/6200 .	38.00	
11995	FT-912RH 10w 1.2 GHz FM Xcvr w/TTP mic	59.00 729.00	CALL
11995	AD-3 100w 2m/440 duplexer	54.00	UMLL
	DVS-1 Digital voice mem module Δ mwfcv	109.00	2995
29995	FTS-12 Decoder; 212RH/712RH/912RH	59.00	
239 ⁹⁵	MH-15C8 Extra TTP microphone	56.00	
459 ⁹⁵	MH-15D8 Autodial TTP microphone	82.00	
0.000	FT-7400H 35w 440 FM Xcvr w/TTP mic	589.00	CALL
3995	2400 Mic Cable 2' packet cable	9.00	
CALL	FRC-6 DTMF pager unit FTS-17A CTCSS decode unit	43.00	
	MH-27A8J Extra TTP microphone	60.00 62.00	
12995	SP-7 External speaker	38.00	
295	FT-2500M 50w 2m FM Xcvr w/TTP mic	449.00	CALL
CALL	\$30 coupon - FT-2500M thru 1/8/95		
JALL	2400 Mic Cable 2' packet cable	9.00	
9995	FT-2200 50w 2m FM Xcvr w/TTP mic	479.00	CALL
14995	\$30 coupon - FT-2200 thru 1/8/95	500.00	
159 ⁹⁵ (FT-7200 35w 440 FM Xcvr w/TTP mic	599.00	CALL 12095
219 ⁹⁵	DVS-3 Digital voice memory unit FTS-27 CTCSS decode unit	146.00 55.00	129 ⁹⁵
	MW-2 Wireless remote control microphone .	142.00	1 34 95
10405	MMB-53 Mobile mtg bkt for MW-2	7.00	10-1
12495	SP-7 External speaker	38.00	
	SP-3 Small mobile speaker	23.00	
CALL 279 ⁹⁵	SP-4 Mobile speaker	31.00	
129 ⁹⁵	Accessories for FT-208R/708R		
15995	FNB-2A Nicad battery pack	\$ 51.00	
13995	YM-24A Speaker/microphoneDm	39.95	
14995	Acnessories for 09-series/03-series		
CALL	FNB-4A 500ma 12v battery	\$ 65.00	
	FTS-6 Encoder/decoder; 09-seriesDm	56.00	
	MMB-21 Mobile bracketDm	16.00	
29995	NC-9B Wall charger for FNB-3/3ADm	14.00	
309 ⁹⁵	PA-3 Mobile adapter and chargerDm	28.00	22015
519 ⁹⁵ 114 ⁹⁵	FT-26/25 2w 2m FM HT/batt/cgrDmw FT-76/25 2w 440 FM HT/batt/cgrDmw	309.00 329.00	239 ⁹⁵ 249 ⁹⁵
1 1 4		329.00	24300

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	FT-815 2w 440 FM HT/batt/cgr/TTPDmwv	449.00	299
12995	FT-816 2w black 440 FM HT/batt/cgr/TTP	469.00	CAL
	CLIP-3 Belt clip	7.00	
	CSC-50 Vinyl case; 415/416 w/FNB-25	22.00	
1 59 95	CSC-52 Vinyl case; 415/416 w/FNB-26/27 .	22.00	
CALL	CSC-53 Vinyl case; 26/76/FNB-25 Amwfv	22.00	19
CALL	CSC-55 Case: 26/76 w/FNB-26/27 Amwfv	22.00	19
GALL	CSC-56 Vinyl case; 530 w/FNB-25	22.00	
	CSC-58 Vinyl case; 530 w/FNB-26/27 EDC-5B DC adapter w/noise filter	22.00 24.00	
	EDC-6 DC adapter; plug & wire only	7.00	
	FBA-12 AA cell holder	22.00	
CALL	FNB-25 600ma 7.2v nicad battery	53.00	
	FNB-26 1000ma 7.2v nicad battery	80.00	
CALL	FNB-27 600ma 12v nicad battery (5w)	80.00	
	FTS-17A CTCSS encode/decode unit	60.00	
CALL	MH-12A2B Speaker/microphone	48.00	
12995	MH-18A2B Compact lapel spkr/micDmwv MH-19A2B Earpiece/microphone	39.00	
	MH-29A2B LCD display spkr/mic; 530	44.00	
	MH-32A2B Compact lapel speaker/mic	39.00	
11295	MMB-49 Mobile mounting bracketDmwf	18.00	
13495	MMB-54 Mobile mtg bracket; FT-26/530	25.00	
	NC-18B Wall charger for FNB-27	15.00	
	NC-28B Wall charger for FNB-25/26	15.00	
	NC-42 1 hour desk quick charger	105.00	
0.411	YH-2 Lightweight VOX headset w/mic	34.00	
CALL	FT-23R-17 2.5w 2m FM HT/FNB-17/cgr	309.00	CAL
2995	FT-23R-12 5w 2m FM HT/FNB-12S/cgr	339.00	CAL
23	FT-33R 5w 220 FM HT/batt/cgr	369.00	CAL
	FT-411E 2.5w 2m FM HT/batt/cgr/TTP FT-811 2w 440 FM HT/batt/cgr/TTPDmwfv	379.00 394.00	CAL 259
CALL	\$25 coupon - FT-811 until gone! FT-911 1w 1.2 GHz FM HT/batt/cgr/TTP	549.00	CAL
	Accs for FT-23R/33R/73R/411E/811/470		UAL
	CLIP-1 Belt clip	\$ 8.00	
	CSC-24 Soft case; FT-23R w/FNB-11Dm	19.00	10
	CSC-28 Soft case; FT-23R w/FNB-12S	22.00	·
CALL	CSC-35 Soft case; FT-411E w/FNB-17	22.00	
UNEL	CSC-37 Soft case; FT-411E w/FNB-12S/14	22.00	
	CSC-43 Soft case; FT-470 w/FNB-9/17	22.00	
CALL	CSC-45 Soft case; FT-470 w/FNB-12S/14	22.00	
	CSC-48 Soft case; 23R w/FNB-17	22.00	
CALL	FBA-17 AA battery holder FNB-12S 600ma 12v (5w) battery	22.00 71.00	
12995	FNB-14 1000ma 7.2v battery	71.00	
13495	FNB-17 600ma 7.2v battery	52.00	
134**	FTS-12 Encoder/decoder for FT-23R/33R/73R	59.00	
	FTS-17A Tone squelch/pager; FT-411E	60.00	
	FTT-4 DTMF (TTP) unit for FT-23R	56.00	
	MH-12A2B Speaker/microphone	48.00	
	MH-18A2B Compact lapel spkr/micDmwv	39.00	
	MH-19A2B Earpiece/microphone	44.00	
	MH-32A2B Compact lapel speaker/mic MMB-32A Mobile hanger; not FT-470Dmwfv	39.00 14.00	
	MMB-32A mobile hanger for FT-470	14.00	
	MMB-54 Mobile marger for r1-470	25.00	
	NC-18B Wall charger for FNB-12S	15.00	
	NC-28B Extra wall charger for FNB-9/10/17	15.00	
	NC-29 Desk quick cgr; FNB-12S/14/17	76.00	
	NC-34B Wall charger for FNB-14	15.00	
23985	NC-37 1-hour desk cgr; FNB-12S/14/17	119.00	
24995	PA-6 Mobile DC adapter/cgr; FNB-9/10/14/17 .	29.00	



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YAESU - continued PA-7 Battery extension cable	-	
PA-1 Battery extension cable	33.00	995
YH-2 Lightweight VOX headset w/mic	34.00	
FT-11R 1.5w 2m FM HT/FNB-31/cgr/TTP	389.00	CALL
FT-11R/HP 5w 2m FM HT/FNB-38/cgr/TTP	399.00	CALL
\$30 coupon - FT-11R//FT-11R/HP thru 1/8 FT-41R 1.5w 440 FM HT/batt/cgr/TTP	469.00	
CA-7 2 charging sleeves; NC-50/411E/470.	24.00	CALL
CA-8 2 charging sleeves; NC-50/4112/470.	24.00	
CA-10 2 charging sleeves; NC-50/11R/41R	17.00	
CSC-61 Soft case for FNB-33/38/FBA-14	22.00	
CSC-62 Soft case for FNB-31	22.00	
FBA-14 AA battery holder	23.00	
FNB-31 600ma 4.8v (1.5w) battery	55.00	
FNB-33 1200ma 4.8v (1.5w) battery	80.00	
FNB-38 600ma 9.6v (5w) battery	80.00	
FTS-26 CTCSS decoder	57.00	
MH-12A2B Speaker/microphone	48.00	
MH-18A2B Compact lapel spkr/micDmwv	39.00	
MH-19A2B Earpiece/microphone	44.00	
MH-32A2B Compact lapel speaker/mic	39.00	
NC-34B Wall charger for FNB-33	15.00	
NC-38B Wall charger for FNB-38	15.00	
NC-55B Wall charger for FNB-31	15.00	
NC-50 1-hour dual slot charger PA-10 Mobile drop-in charger	109.00 66.00	
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	55.00	
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G-800S Med/hvy duty 450 degree 17sq ft/5-wire	369.00	CALL
\$25 coupon - G-800S thru 1/8/95 G-800SDX Med/hvy duty 17sq ft/presets/5-wire	469.00	CALL
\$25 coupon - G-800SDX thru 1/8/95	409.00	CALL
G-1000SDX HD 450 degree 23sq ft/presets/5-wire	569.00	CALL
\$25 coupon - G-1000SDX thru 1/8/95		
G-2700SDX HD 450 degree 34sq ft/presets/8-wire	1099.00	CALL
\$50 coupon - G-2700SDX thru 1/8/95		
G-2800SDX HD 450 degree 31sq ft/presets/8-wire		CALL
G-5400B Light/med 11sq ft az/el//2x8-wire	589.00	CALL
Sep Kit Separation kit for G-5400B	30.00	
GC-038 Mast clamp; 400/800/1000/5400B	29.00	
GC-048 Mast clamp; G-2700SDX	45.00	
GS-050 50mm thrust bearing; mast 1 ¹ / ₄ -2"	34.00	
GS-065 65mm thrust bearing; mast 1½-2½".	50.00	20095
GS-23 Interface; G-800/1000/2700SDX	345.00	
GS-232 Interface for G-5400B	547.00	46995
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ZENITH (ZEN)		
A-8477 75 ohm high-pass filterDmwfcv		995
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	AEA ARE-20 Digitalker voice countermwv	
	AEA AVT Master video system; Amigamwfv	
	AEA PK-88 RS-232 TNC controllermwfv	
	ALI DR-119T 45w 2m FM Xcvr/TTPwv	
	B&K 1630 0-30V, 0-3A power supplym	
	B&K 2907 Multimeterm	
	B&K 541 Component comparatorm	
	BLT 966STW 3-band wideband Ka detector.m	
	BLT 966W 3-band wideband Ka detectorm	
	CMF Softwave Receiver hard/softwaremf CMT CA-2X4Z 2m/440 type N base antmw	
	CMT CD-160H 1.6-60MHz 2kw SWR/powerm	
	CMT CD-270 140-525MHz 200w SWR/pwrm	
	CMT CMR-1215 1.2GHz 11db type N base mv	
	CMT CX-902 2m/440/1.2 base antmwv	
	CMT 10D-FB 100m ½" coaxm	
	CMT 5D-FB 100m ¼" coaxm	
	COB RD-3170 Superhet radar detectorm	
	COB RD-4120 Superhet radar detectormw	
	COU U-22 UHF HT - specify channelm	
	CUS AOP-1 Oscar pack ant systemmwfv	
	CUS 220-QK Stack kit; 4 220Bf CUS 224-QK Stack kit; 4 215WBw	
	CUS 324-QK Stack kit; 4 32-19wv	
	DIA CP-4A 40/20/15/10m vertical antmw	
	DIA CP-6 80/40/20/15/10/6m vert antmw	
	DIA SX-9000 HF/VHF/UHF automatic metermf	
	GRU Cosmopolit Port AM/FM/SW Rcvrwfv	
LL	GRU Yacht Boy 230 Port AM/FM/SW Rcvrm	
	HYG 610-1 600 ohm headphonesmwfcv	
LL	ICO IC-P3AT 220 FM HT/TTP .w/coupon,mwfv ICO IC-P4AT 440 FM HT/TTP .w/coupon,mwfv	
ш	ICO IC-U18 16 ch 5w UHF FM prog HTm	
LL	ICO IC-U400 16 ch 35w UHF keybrd mobile.m	
LL	ICO IC-W2A 2m/440 FM HT/TTPmwfv	
	ICO IC-W21A 2m/440 FM HTm	
LL	ICO IC-X2A 440/1.2 FM HT/TTPmwfv	
LL	ICO IC-12GAT 1.2 GHz FM HT/TTPmwv	
	ICO IC-2AT 2m FM HT/TTPf	
	ICO IC-21A 2m FM HTw/coupon,mwf	
	ICO IC-3230A 25w 2m/440 FM Xcvr/TTPwfv	
	ICO IC-3230H 2m/440 FMw/coupon,mwfv	
95	ICO IC-4SRA 440 FM HT/25-905 Rcvrmwfv ICO IC-725 HF Xcvrw/coupon,mwfv	
g95	ICO IC-729 HF Xcvr w/6mmwfv	
	ICO IC-737 HF Xcvr w/auto tunermwfcv	
	ICO IC-737A HF Xcvr w/auto tunermwfcv	
	ICO IC-901 50/35w 2m/440 FM Xcvrmw	
995	ICO M-11 6w VHF marine HTmwf	
	ICO M-2 5w VHF marine HTmwf	
	ICO M-5 5w VHF marine HTmwf	
	ICO TV-1275 ATV adapter for IC-1275Am	

Reg Sale	CLOSE-OUTS	- continued	Reg Sale
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Sale	CLO2E-DO12 - COUTINNED	Keg	Sale
	ICO UX-R91A Broadband rcv unit; IC-901 .mv		48995
10095	ICO UX-S92A 2m SSB module; IC-901mfv		22995
19995	ICO UX-19A 10m unit for IC-901mwfv		19995
23995	ICO UX-39A 220 unit for IC-901mv		22995
12995	ICO UX-59A 6m module for IC-901m		29995
34495	JRC JRL-2000F 160-15m HF linearm		3999
229 ⁹⁵	JRC NBD-520 DC ps for JST-135m		26995
13995	JRC NFG-230 Automatic antenna tunerm		49995
319 ⁹⁵	JRC NFG-97 Antenna tunerm		23995
189 ⁹⁵	KEN R-2000 Shortwave receivermwfv		649 ⁹⁵
149 ⁹⁵	KEN TH-78A 2m/440 FM HT/TTPmwfv		42895
1469	KEN VC-10 VHF converter for R-2000mfv		
13995			16995
129 ⁹⁵	KLM 2M-16LBX 2m 16 el beammwv		10995
10995	MFJ 1274CT Turbo controller w/2400m		16995
14995	MFJ 1274T Turbo controller w/2400m		14995
12995	MFJ 1278T Turbo controller w/2400m		24995
28995	MFJ 2040 Repeater controllermwfv		26995
12995	MOT H-5111 5w VHF marine HTmf		29995
7995	NYE MBIV-A1 3kw antenna tunermwfv		519 ⁹⁵
4995	NYE MBIV-A2 3kw ant tuner w/balunmwfv		529 ⁹⁵
14995	NYE 047-001 4-pin phone patchmfv		10995
19995	PAL M-835 HF automatic meterv		17995
11995	PAL P-405 9V HF receiver preampmwfv		119 ⁹⁵
11995	PAL P-408 AC HF receiver preampmwfv		129 ⁹⁵
12995	PAN RF-B65 FM/LW/SW port Rcvrmwfv		23995
16995	SAN ATS-808 AM/FM/SW port Rcvrmwfv		1 69 ⁹⁵
22995	SON ICF-SW800 AM/FM/SW/prog cards .mwfv		69 ⁹⁵
26995	SON IPS-360 GPS receiver w/batt casemwfv		469 ⁹⁵
16995	SON IPS-760 8 ch GPS receivermfv		948 ⁹⁵
11995	STA C-188A 2m FM HT/TTPmwfv		299 95
9 95	STA C-5608DA 2m/440 FM Xcvr/TTPmwv		71995
27995	STR 15-BG 1500 MHz bar countermfv		169 ⁹⁵
23995	STR 15-UHS 1500 MHz hi sens countermwv		149 ⁹⁵
32995	STR 2500 2400 MHz freq countermwfv		189 ⁹⁵
49995	STR 35-BG 3200 MHz bar countermwfv		22995
439%	STR 3500 3500 MHz freq countermwv		219 ⁹⁵
439°° 31995	UNI BC-200XLT 200 ch pocket scannermwfv		249 ⁹⁵
49995	UNI BC-2500XLT 25-1300MHz pocketmwfv		349 ⁹⁵
	UNI BC-8500XLT 25-1300MHz scannermwfv		349 ⁹⁵
37995	UNI BC-855XLT 50 ch prog scannermwfv		169 ⁹⁵
21995	UNI HR-2600 25w 10m FM/SSB Xcvrmwfcv		199 ⁹⁵
19995	YAE DVS-1 Memory modulemwfcv		29 ⁹⁵
54995	YAE FT-26/25 2m FM HTmw		23995
609 ⁹⁵	YAE FT-76/25 440 FM HTmw		249 ⁹⁵
39995	YAE FT-811 440 FM HT/TTPw/coupon,mwfv		23495
74895	YAE FT-815 440 FM HT/TTPmwv		29995
1099	YAE MW-1 Wireless remote micmwf		11295
1099	YAE SP-767P Speaker/patchm		12695
CALL	YAE 2M/767 2m module for FT-767GXm		24995
89995	YAE 430/767 430 module for FT-767GXmv		31995
34995	YAE 440/767 440 module for FT-767GXm		31995
31995	YAE 6M/767 6m module for FT-767GXmw		24995
35995	ZEN A-8477 75 ohm high pass filter mwfcv		995
119 ⁹⁵			



Give A Ham A Giff!

Can't decide what to give your favorite ham operator for that Birthday, Anniversary, Holiday, or Special day?

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pick exactly what they want?

AES® offers a huge selection of over 4,000 products to choose from. AES®

Gift Certificates may be purchased at our

Milwaukee store or

by calling 1-800-558-0411. What

could be easier or more appropriate for any radio enthusiast?



AES® Consumer Items Price List

A second s		
PHONES		
COBRA (COB)	Reg	Sal
46/49 MHz CORDLESS PHONES	nog	oun
CP-492 2-line/hold/page/vol controlDmf	\$169.95	79
CP-711 Cellular style/selectable chDmf	129.95	59
CP-910 900MHz 100ch dig spread spec Dmwf TELEPHONE ANSWERING MACHINES	399.95	209
AN-8560 Ans machine w/personal memoDf	\$ 69 95	32
AN-8566 Ans machine w/9# mem phDmw	129.95	59
CONNEDO & MONITOD	_	
SCANNERS & MONITOR		
Antenna Specialis	IS (A	SP
MONR1 H or U low profile roof mt monitor ant . MON-9 H & U magnet mt monitor antenna	\$ 23.50	
MONR31 L/H/U gain ground plane base ant	55.25	
BMI (BMI)		
Nitelogger Automatic recorder activator	\$ 69.95	
RC-1A Impedance matching patch cord	19.95	
CHANNEL MASTE	R (C	HA
5094A 4-band base Monitenna ant w/50' coax .	\$ 44.99	39
5095A Kit w/5094A ant, 5' tri-mast, 50' coax	55.99	49
COBRA (COB)		
SR-11 10 ch prog pocket scannerDmf SD-1E Eastern U.S. frequency bookDmf	\$219.95	89 ^s 6 ^s
	14.90	0.
GROTHE (GRO) VS-2 Emergency vehicle siren	¢ 00 00	89 ^s
VS-3 Volunteer vehicle PA/horn w/sokr	φ 99.00 159.00	129
VS-3 Volunteer vehicle PA/horn w/spkr VS-4 P/A emergency vehicle siren w/spkr	169.00	1399
JBRO (JAB)		
JB-1000 Battery; Regency HX-1000/1200 △mf	\$ 30.00	24 ⁹
MAXON (MAX)		
WX-70 Weather monitor w/alert		49 ^s
Monitor America (N	/ION)	
Monitor America Scanner frequency book	\$ 24.95	
OFFICIAL (OFF)		
Aeronautical Frequency Directorym		
Maritime Frequency Directorym UNIDEN BEARCAT	24.95	
	(UN	l)
BC-001 RF preamp for BC-590XLT	\$ 13.40 169.95	68 999
BC-148XLT 16 ch prog scan/WX alertDwfv	179.95	899
BC-147XLT-1 16 ch prog scanner/instant WX	169.95	99 9
BC-148XLT-1 16 ch prog scanner/WX alert	179.95	999
BC-178XLT 100 ch prog scan/air/WX alert BC-350A 50 ch prog/service search w/AC ps .	239.95 199.95	149 ⁹ 119 ⁹
BC-560XLA 16 ch prog scanner w/AC ps	169.95	999
BCT-2 Pre-prog warning scanner/AC ps	269.50	1599
BCT-7 Pre-prog warning scan/air/800/AC ps.	319.95	1999
BC-700A 50 ch prog/svc search/800/AC ps BC-760XLT 100 ch prog/svc search/800/AC ps	299.95 379.95	179 ⁹ 229 ⁹
BC-002 CTCSS tone board; BC-760XLT	51.89	220
BC-003 Switch box for BC-002	10.70	
BC-004 RF preamp for BC-760XLT BC-855XLT 50 ch prog scan/800 MHzDmwf	27.80 319.95	169 ⁹¹
BC-860XLT 100 ch prog scanner/air/800	319.95	1999
BC-890XLT 200 ch 956 MHz scanner/WX alert	439.99	269 st
BC-002 CTCSS tone board; BC-890XLT BC-8500XLT 500ch 25MHz-1.3GHz/WX alert Dmwfv	51.89 669.95	3499
BC-005 CTCSS tone board; BC-8500XLT	37.89	040
BC-55XLT 10 ch prog pocket scannerDmwf	179.95	89 9
BC-GOXLT 10 ch prog pocket scanner	179.95	99 9
AD-100 AC adapter/batt cgr PS-001 DC power cord	16.89 8.89	
VC-001 Carrying case	0.09 8.89	
BC-80XLT 50 ch prog pocket scanner/800	319.95	189 st
BP-70 Extra battery for BC-70XLT Amwfv	27.80	
BC-200XLT 200ch prog pocket/800 MHz .Dmwv	419.95	249 ⁹⁸
AD-140 Extra charger; BC-100XLT/200XLT .	13.29	

UNIDEN - continued	Reg	Sale
BP-200 Extra battery; BC-200XLT	32.82	
BP-205 Extra battery; BC-100XLT	3 7.23	
BC-120XLT 100 ch prog pocket w/aircraft	259.95	1499
BC-220XLT 200 ch prog pocket w/800 MHz	439.95	259 ⁹⁸
SC-150B 100 ch black sport pocket/800†	349.95	1899
AD-70 Extra charger	13.49	
BP-120 Extra battery	18.29	
LC-120 Carrying case for BC-120/220XLT	19.59	
LC-150B Carrying case for SC-150B	19.59	
Diamond RH-77CA 15" rubber gain ant	34.95	32 95
UA-502 Cig power cord	12.19	
BC-2500XLT 400ch poc/25MHz-1.3GHz Dmwfv	669.95	34995
BP-2500 Extra batt; BC-2500XLT \Dmwfv	32.49	24 95
FB-E Eastern U.S. frequency bookDm	14.95	795
NPD-001 National frequency book	14.95	
RFD-001 IN/IL/KY/OH/MI/WI freq book	14.95	

RADAR DETECTORS

BEI (BIT)

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956W 3-band wideband Ka detectorDm	\$299.95	89 95
966STW 3-band wideband Ka detectorDm	459.95	18995
966W 3-band wideband Ka detectorDm	379.95	14995
LA-132 Laser detector	129.95	49 95
COBRA (COB)		
RD-300 3-band narrow band detector Dmf	\$ 95.95	44 ⁹⁵
RD-302 3-band wide band detectorDmwf	129.95	59 95
RD-304 3-band wide band detectorDf	179.95	89 95
RD-306 3-band wide band detectorDmf	189.95	89 ⁹⁵
RD-2110 Super heterodyne detectorDm	84.95	44 ⁹⁵
RD-3170 Deluxe superhet detectorDm	299.95	7995
RD-4120 Super heterodyne detectorDmw	209.95	49 ⁹⁵
RD-6000 Solar powered radar detectorDmw	319.95	89 95
LD-200 Laser detector	79.95	59 95
RDL-412 Radar/laser detector	199.95	129 ⁹⁵
RDL-512 Radar/laser detector	219.95	149 ⁹⁵

LAND MOBILE

	Procom* 2w VHF FM hand-held/batt/cgr \$199.95	5 139 95
	ANT-2 Extra BNC flexible antenna 12.00) 995
	AUC-12 Cig lighter charger adapter) 9 95
	CAT-12 Leather carrying case) 19 ⁹⁵
1	CHB-7 Extra AC battery charger 6.50) 595
	RB-7 Extra nicad battery pack 32.00) 2995
	RSM-1 Speaker/mic) 32 ⁹⁵
1	*Available in one of three frequencies:	
	Frequency A (red) - 151.625 MHz (itinerant)	
	Frequency B (blue) - 154.570 MHz	
1	Frequency C (green) - 154.600 MHz	
	M-54 5w 4ch VHF FM hand-held/batt/cgr/151.625 299.95	5 199 ⁹⁵
	U-22* 2w 2ch UHF FM hand-held/batt/cgr Dm 279.95	5 149 ⁹⁵
	*Available in one of five frequencies:	
	Frequency A (white) - 462.575 MHz	
	Frequency B (black) - 462.625 MHz	
	Frequency C (orange) - 462.675 MHz (REACT)	
	Frequency D (brown) - 464.500 MHz (business radio	o svc)
	Frequency E (yellow) - 464.550 MHz (business radio	o svc)
	ICOM (ICO)	
		0.000
	IC-U18 16ch 5w ÙHF HT; 450-460 or 460-470Dm \$849.00	
	BM-70 Desk charger; H-18/U-18∆m 179.00	
	UT-14 Tone unit	
	IC-U400 16 ch 35w UHF keyboard mobile Dm 882.00	
	A-2 5w PEP synthesized aircraft handheld 629.00	
	A-21 5w PEP Navicom Plus aircraft handheld † 730.00	499 ⁹⁵
	MAXON (MAX)	
	MX-49FX 5 ch 49 MHz ear mic Xcvr \$ 89.95	5995
	MX-49HX 5 ch 49 MHz euro-design headset Xcvr 89.95	
	MX-49HXH Intercom headset: MX-49HX Δm 29.95	
	MX-49SX* 49 MHz euro-design headset Xcvr 59.95	
	*Available in channels A, B, & E; limited qty's in chan	
	PC-10* 49 MHz hand-held/PTT/VOX headset 59.95	

			P
e	MAXON - continued *Available in channels A, B, & E	Reg	Sale
95 95	PC-50 5ch 49MHz hand-held/PTT/VOX headset RANGER (RAN)	89.95	59 ⁹⁵
95	RCI-1000* 1w mini VHF FM hand-held/batt/cgr . BT-10 Extra nicad batteries	\$189.95 29.95	129 ⁹⁵ 24 ⁹⁵
	DG-10 Desk charging stand (use wall cgr) . LC-1000 Leather case	14.95 24.95	
95	MT-17 CTCSS encoder/decoder SRA-106A Speaker/mic *Available in one of three frequencies:	54.95 44.95	49 ⁹⁵ 39 ⁹⁵
95 95 95	Frequency A (red) - 151.625 MHz (itinerant) Frequency B (blue) - 154.570 MHz Frequency C (green) - 154.600 MHz)	

MARINE VHF FM RADIO

M-2 5w synthesized marine hand-held .Dmwf \$659	9.00 319 95
	5.00 35995
	1.00 34995
	0.00
MOTOROLA (MOT)	
).00 29 ⁹⁵
H5111 5w VHF marine hand-held∆mf 639	9.00 299 ⁹⁵
RANGER (RAN)	
RCI-6060 25w VHF marine Xcvr w/scan \$329	0.0.5 17095
	9.95 159 ⁹⁵
RCI-9000 5w 90 ch VHF marine hand-held 349	9.95 199 95
MC-635 25w 90 ch VHF marine Xcvr w/scan . \$309	9.99 14995
	5.99 179 ^{s5}
· -	
	9.99 139 ⁹⁵
	9.99 159 ⁹⁵
SHAKESPEARE (SHA)	
399-1 6 db, 9' 6" 2-piece ant, less mt∆mw \$182	95 6995
	.95 4995
, , ,	8.95 69 ⁹⁵
5202 O UD dift W/Chrome femule, less hit 123	
	8.95 24 ⁹⁵
	9.95 1495
	9.95 49 95
420-M-2 3 db, 5' mast mount antenna Δmwf 107	
5204-8 Combo CB/VHF marine 8' antenna 179	
390 23' 2-piece SSB antenna, less mtΔTm 172	2.95 69 ⁹⁵
REMEMBER to Ask About	
 Late Breaking "Hot Deals 	577
Latest Sale Prices	
Monthly Specials	
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• Coupons, etc.

Info also available on the AES® BBS 1-414-358-3472



The Amateur Radio Sales Area at AES® Headquarters in Milwaukee, WI

24 Amoteur Electronic Supply® Order today for Same Day Shipping from our 50,000+ Sq. ft. Warehouse in Milwaukee, or from our Branch Stores



Low Profile/Broadband Omni-directional Antennas for 2m, UHF & 1.2GHz

Strong! ... providing the highest performance and durability possible. Virtually impervious to wind and weather – the ideal choice for areas with hurricane force winds, hostile environments, or for remote sites.

Standard Features ...

- Gain: 0, 3, 6, 9, 12dBd
- Polarization: Vertical
- VSWR: 1.5:1
- Wind rating: 140 to 160 mph
- Feed lines: Copper
- Radome: White Fiberglass
- Mounting: Aluminum Mast
- Clamps: Galv. Steel, accepts support pipe up to 3¹/₄" O.D.
- Lightning: Direct Ground

For 2 Meters ...

Gain	0, 3, or 6dBd models
	6 MHz
Power Rating	600 Watts (max.)
Weight	
Wind Load	
Wind Area	1.4 sq. ft. (6dB model)

For UHF (406-510MHz) ...

	~/
Gain	6dBd or 9dBd models
Bandwidth	
Power Rating	600 Watts (max.)
Weight	13.7 lbs.
Wind Load	
Wind Area	1.2 sq. ft. (6dB model)

For 1.2-1.3 GHz ...

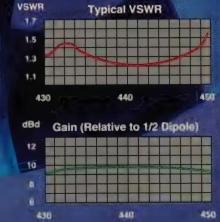
Gain	
Power Rating	300 Watts (max.)
	10 lbs.
Wind Load	50 lbs (6dB model)
Wind Area	1 sq. ft. (6dB model)

►HSU-14448 2m unity gain base antenna	\$219.95
▶HS3-14448 2m 3db base antenna	\$299.95
▶HS6-14448 2m 6db base antenna	\$439.95
HS6-43050 430-450MHz 6db base antenna	\$379.95
▶ HS9-43050 430-450MHz 9db base antenna	\$419.95
► HS6-12430 1.2GHz 6db base antenna	\$319.95
HS9-12430 1.2GHz 9db base antenna	\$419.95
H\$10-12430 1.2GHz 10db base antenna	\$419.95
► H\$12-12430 1.2GHz 12db base antenna	\$529.95

All SPIRIT MODELS are Drop Shipped from the Factory. See pg. 9 under HUSTER for details.

Relation Pattern (fielative Field)

Vertical



For Spirit Models and Pricing – see HUSTLER in the Price List.

CLOCKS FOR THE HAMSHACK



▶972A (left) • Battery operated 12-hour time quartz controlled clock with 12" dial and sweep second hand. Black tex tured case and clear glass crystal. Uses 1 (size AA) battery. 14 dia. x 13/4" d. Looks good in shack!..... \$3795 \$4995 ▶973A (right) • 24-hour version ...



Model 972AD 14" diameter 12/24 hour format \$3995 wall clock

MFJ

105B 24 Hour Quartz Wall Clock Handsome black, 10" diameter face. sweep second hand. Uses single "A battery, not included. \$1995



112 Dx'ers World Map Clock and Calendar Latest electronic and display technology shows a World Map with 25 major world cities selectable by pushbutton. 12-hour

time format with alarm feature. Large 1/2" LCD readout shows: Time, Month and Day in 24 dif-

ferent world time zones. Includes handy tilt bracket and long \$2495 life lithium battery. 5¼"w x 3¼"h x %"d ...



▶114 Giant LED 24/12-hour clock. Four 2.3" digits. User selectable 12 or 24 -hour display format. 110VAC with battery \$3995 back-up. 61/2"h x 13"w x 1"d



Small 24-hour Clocks Two models - a Dual Clock with separate UTC and local time displays, and a Single Clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included. >107B Single Clock, 2¼"w x 1"h x 2"d \$ 995 1995

▶ 108B Dual Clock, 4¼*w x 1*h x 2*d....

NAVAL



HTS-3 Audio Booster Speaker Improves audio from HT's, Walkman, etc. with a 10dB audio amplifier and quality 31/2" speaker. Requires (4) AA batteries; alkaline or nicads, or 5-15VDC. Has built-in NiCad charger. Comes with 5 ft. audio cord with plug and stereo to monaural converter. 21/1*w x 41/2*h x 21/2*d, 1 lb \$2995

ASTRON Power Supplies





The alternative to more costly "matching" power supplies

Features: 105-125V AC input, 13.8V DC output; internally adjustable from 11–15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavyduty heat sink • 3-wire cord • One-year warranty • Made in U.S.A. Separate voltage and ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage and ampere meters, plus voltage adjustment (2–15V DC) on VS-20M, VS-35M and VS-50M. Models RM-35M, RM-50M and RM-60M are rack mount.

Astron Model	Cont. Amps		Size (in.) h w d	Ship. wt.	Regular Price	AES Price
RS-7A	5	7	3¾ x 6½ x 9	9	\$68.95	\$59 ⁹⁵
RS-10A	7%	10	4 x 7½ x 10¾	11	85.95	69 ⁹⁵
RS-12A	9	12	4½ x 8 x 10¾	13	99.95	79 ⁹⁵
RS-20A	16	20	5 x 9 x 10½	18	121.95	99 ⁹⁵
RS-35A	25	35	5 x 11 x 11	27	197.95	149 ⁹⁵
RS-50A	37	50	6 x 13¾ x 11	46	285.95	219 ⁹⁵
RS-70A	57	70	6 x 13¾ x 12	48	339.95	259 ⁹⁵
with se	parat	e volt	/amp meter	S		
RS-20M	16	20	5 x 9 x 10½	18	144.95	119 ⁹⁵
RS-35M	25	35	5 x 11 x 11	27	204.95	169 ⁹⁵
RS-50M	37	50	6 x 13¾ x 11	46	314.95	239 ⁹⁵
RS-70M	57	70	6 x 13¼ x 12	48	372.95	289 ⁹⁵
with va	ariabl	e outp	out & separa	ate vol	lt/amp m	eters
VS-20M	16	20	5 x 9 x 10½	20	170.95	139 ⁹⁵
VS-35M	25	35	5 x 11 x 11	29	238.95	189 ⁹⁵
VS-50M	37	50	6 x 13¾ x 11	46	330.95	259 ⁹⁵
Rack n	nount	mode	els – separat	te volt	/amp me	ters
RM-35M		35	5¼ x 19 x 12	38	318.95	249 ⁹⁵
RM-50M	37	50	5¼ x 19 x 12	50	354.95	279 ⁹⁵
RM-60M	50	55	7 x 19 x 12	60	467.95	359 ⁹⁵

►ASTRON RS-4L Power supply with built-in cigarette lighter receptacle on the front panel. 13V DC @ 4 Amps peak, 3 Amps \$4995 continuous. 31/2"h x 61/2"w x 41/4"d, 6 lbs. **ASTRON RS-12S** Power supply with built-in speaker. Rated

\$8995 13VDC @ 12A pk., 9A cont. 4½"h x 8"w x 9"d, 13 lbs **ASTRON Solid-state Power Inverters**

General Purpose

▶12/115 Converts 12V DC to 115VAC @ 60 Hz output. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers your ham rig, small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W, overload protected. Produces a square wave output which is not recommended for devices where high transients are not tolerable. 41/2"h x 8"w x 9"d, 9 lbs. Aircraft

▶2412 Converts 22 to 32V DC input to 13.8V DC output @ 9 \$5995 amps. Eliminates tapping into 28V battery for 12V >2412-20 Same as above, but rated 16 amps output \$7995

NORCOMM

Sub-miniature Touch-Tone® Decoder

>NC-401 Designed for selective signaling in many applications. Combines two distinct, separately addressable DTMF Decoders in

one unit for multiple user-configurable output functions. Decodes all 16 standard DTMF characters with an address length of 1-14 characters and features E²Prom memory for non-volatile storage of programmed codes, input and output functions, remote programming, deadbeat disable and user outputs. Programs by means

of a conventional DTMF Encoder. Comes with 12" multiple leads \$5995 and plug. 0.80"w x 1.37"l x 0.23"h





ELECTRONICS CORPORATION

Portable Power for anything with a male cigarette lighter plug – HAM transceivers, cellular phones, spotlights, inverters, etc ...



>06-1101 DC POWERPACK Contains an Internal maintenance-free. sealed lead-acid rechargeable battery rated 12VDC @ 6.5 Amp/Hour, fused at 10 amp. Recharging time from a vehicle with engine running is 1 to 3 hours, or from optional AC/DC adapter, 8 to 10 hours, 7¼ "w x 3¼ "d x 10"h. 6.8 lbs \$4995 \$995 ▶06-9509 AC/DC adapter

▶06-1130 DC POWERPACK Like, but smaller than the 06-1130. The internal maintenancefree sealed lead-acid battery is rated 12VDC @ 3 Amp/Hour, fused at 10 amp. Recharging time from running vehicle is 2 to 4 hours, or from included AC/DC adapter, 4 to 6 hours 3"w x 3"d x 7½"h, 3 lbs....\$4995



Forbes Group **Ventenna**TM

Stealth! Get around those antenna restrictions and finicky neighbors. The Ventenna is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1" to 21/2" plumbing vent pipe, connect up your coax and you're on the air. Ready to go!-no tuning or measuring is required. Choose from single band models for 2M, 220MHz or 440MHz and a 2M/440MHz Dual Bander



Model	Description	Price
VT-14	2 meters, 3 ft. tall, 2.6dB gain	\$4495
VT-22	220MHz, 25" tall, 2.6dB gain	\$4495
VT-27	2m/440MHz Dual bander	\$66 ⁹⁵
VT-44	40MHz, 14" tall, 2.6dB gain	\$4495
VT-155	Scanner Model 3 ft. tall, 2.6dB gain	\$4495
VT.SW	SWL Model 3 ft. tall, 20dB active gain	\$9995

Circuit Works

Conductive Pen

Features a specially formulated silver thermoplastic designed to link circuit board components, repair traces, make jumpers and shield deli cate electronics. Easy to apply, air drys in 3 to 5 minutes at room temperature.

achieves maximum conductivity after 20 minutes. Can be heat cured in 1 to 2 minutes at 250 to 300°F. May be soldered at 350°F for <5 seconds after heat cure by using a low temperature tin, lead or silver solder with flux for best results. Traces 1/32" and wider – contains enough material for 100 ft..... \$1095

TOP TRADES: We take Clean, Late Model Gear in trade towards New Equipment shown in this catalog ... Write or Call for a quote Today!

\$5995

MAXON SYSTEMS INCORPORATED

49 MHz Personal Communicators

Low Power + 1/4 mile average range + No license required

Dual conversion superhet receivers provides crisp, clear voice transmission. Units are compatible, use for group communications. Voice activated (VOX) lets you transmit/talk, or use bypass for push-to-talk (PTT). Volume and microphone sensitivity controls prevent outside noise from flase triggering the VOX circuit. MAXON Operating Channels: (A) 49.830 MHz, (B) 49.845 MHz, (C) 49.860 MHz, (D) 49.875 MHZ, (E) 49.890 MHz.

MX-49SX A single-channel unit featuring a lightweight adjustable headset with retractable whip antenna, LED indicator, boom microphone with windscreen and battery charger jack. Range up to 1/4



mile. Requires two "AA" regular or rechargable batteries . 5 21/2" x 1", 9 oz. Specify channel A, B, or E \$2995



MX-49FX Features 5 channels and a combination earphonemicrophone that that picks up voice vibrations from the ear canal for transmit, and also provides receive audio. Built-in antenna gives up to 1/8 mile range, and will not interfere with helmets.

remote PTT button and channel selector. Requires 3 "AA" bat \$5995 teries. 51/2" x 3" x 1", 6 oz. Channels A, B, C, D & E .

MX-49HX A 5 channel unit, ideal for motorcycling and snowmobiling, etc. The helmet-adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted



off/on/volume, VOX sensitivity and detent channel selector. Jacks for opt. passenger intercom headset. Requires 3 "AA" bat \$4995 teries. 3" x 5½"x 1", 6½ oz. Channels A, B, C, D & E....



7¾" x 4¾" x 3", 5½ lbs.

PC-10 Single channel unit compatible with all Maxon 49MHz units. PTT or VOX. Detachable headset with boom microphone included. Approx. 1/4-mile range. Operates on three AA alkaline batteries. Channels A, B, .\$3995 E available, specify,

▶ PC-50 Similar to PC-10, but a 5 channel \$5995 unit - A, B, C, D, and E.....

WX-70 Weather Monitor Receives weather service broadcasts on seven N.O.A.A. stations: 162.550, 162.400, 162.425, 162,475, 162,450, 162,500, and 162,525MHz. Choice of three different severe weather "Alert" warning modes. 110V with supplied AC adapter, uses a 9V battery for back-up......\$4995

AIM Electronics

AIM 38-384 Light Duty DC Power Supply Input: 115V AC, Output: 13.8V DC regulated. Rated 4 amps with 5 amp surge. On/off switch, front panel binding posts, LED "on" indicator, fuse protection.



>AIM 38-305 AC Adapter Multi-voltage, rated at 500MA. Cord has multiple application plugs and 9V snaps. Converts 117 VAC to low voltage DC to operate battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12 volts DC ... \$1295

AIM 38-312

Regulated AC Adapter Multi-voltage, rated at 1200MA. Cord has multiple application plugs and 9V snaps Converts 117 VAC to low voltage DC to operate battery powered equipment that requires 1.5, 3, 4.5, 6 \$2495 7.5, 9 or 12 volts DC.

Low Power VHF & UHF Handhelds Ideal for for short range communications at

construction sites, in factories, or security, etc.



COURIER PROCOM (A) VHF-2W. Crystals installed for one of the frequencies listed below. Rechargeable nicad batter charger, antenna, 7"h x 2½"w x 1¾"d 16 oz... \$13995 COURIER M-54 (B) VHF-5W. 4 channels, comes with 151.625MHz, 5¼"h x 2¾"w x 1½"d 15 oz.CLOSEOUT \$14995 COURIER PROCOM U-22 (C) UHF-2W. 2 channels, includes of the frequencies below. 7"h x 2½"w x 1¾"d, 16 oz. \$16995 **RANGER RCI-1000 (D) VHF-**mini-sized, 1W output, 2 channels. Includes a set of crystals installed for one of the frequencies listed below, rechargeable nicad battery and AC charger \$12995 flexible antenna. 47/8"h x 21/2"w x 7/8"d, 12 oz Available Frequencies

VHF • 151.625 (itinerant), 154.570 or 154.600MHz

UHF • 462,575 462,625, 462,675, 464,500 or 464,550MHz



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operators. Search and retrieval software for DOS and Windows 3.1* provides rapid access. Search and display by callsign, name, city, street

address, or zip code. Save to file or generate print ready mailing labels. Industry standard ASCII output files are word processor and database ready. .. \$2995

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CD-ROM disk contains nearly 550,000 U.S. HAMS and nearly 250,000 International Listings. Clubs, Military and RACES listings (nearly 2400), 100,000 U.S. calls cross references from old calls to new. Shows call sign, name, address, license class, expiration date and birth year.

Includes ore than 15,000 public domain programs and various data files. For Apple Mac and IBM PC compatible computers ... BUCHAMCALL \$5000



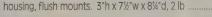
Solid bare copper-over-steel wire - ideal for antennas! Strong, has very little stretch and long service life. Copper covering for low resistance, easy to solder. Choice of 12, 14 or 18 ga., in 100, 150, 250, 500 or 1000 ft. rolls.. See Price List

RANGER Marine

RCI-6060 Keypad entry, covers all U.S. and International channels +10 weather channels. All channel scanning, direct



access to channel 16 and dual watch mode. Back-lit LCD display, power Up/Down mic switch and external speaker jack. Power: 25W (High), 1W (low). Weather resistant





\$17995

SHAKESPEARE



▶ 5202 (A) Collinear-phased 5/8-wave elements. 6dB gain. 8 ft. long, handles 50W. DC grounded. Chrome-plated brass ferrule Includes 20 ft. of coaxial cable with connector.... \$69⁹⁵ ▶497 (B) Collinear phase 5/8-wave elements. 6 db gain. 8 ft. long, handles 50W - not DC grounded. Smaller diameter absorbs flex. Includes 20 ft. coaxial cable with connector. \$4995 ▶ 5206-C (C) Economy model, end fed, 8' long with 6dB gain Handles 50W, DC grounded. 15 ft. coax. w/connector \$3995 ▶420 (D) Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5 ft. long. Polycarbonate lift and lay deck mount with leveling \$4995 plate, hardware and 20 ft coax cable with connector. ▶495 (E) Lift and lay polycarbonate deck mount... \$1495 **366H** (F) Ratchet mount with handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"-14 male \$2495 threads. Chrome plated zamac...

ICOM Aircraft & GPS

PECIAL!

>ICOM A-21 NAVICOM PLUS VHF Air Band HT 760 channels, 10 WX and 20 memory chan-

nels. Programmed scan, memory scan and lock output. 5W output. Instant 121.5MHz NAV features: 200 ch., VOR nav with CDI, radial heading to/from VOR station, auto bearing set Semiduplex-combines VOR/COM operation. 21/2"w x 7¾"h x 1½"d, 1.4 lbsLIMITED TIME \$49995 ICOM GP-22 GPS Receiver (right) Fast

and accurate positioning worldwide! instant navigation, course and speed over ground. Cross track error, ETA bearing and range to a waypoint and

more! 2%" x 1%" x 5%", 3½ oz ..\$49995





RTTY, WEFAX, Baycom, Rose, TheNet, TAPR, DSP

• FCC Rules and Regulations.

USENET Ham Radio News

Archives, ARRL Bulletins Sound Blaster Compatible, WAV

files for TNC testing

AMateur Radio Question Pools

* Windows 3.1 w/VGA display (color

or monochrome) adapter required



Shortwave Radios & Communication Receivers

▶ICF-SW10 Compact and convenient, easy to use. 12 bands-covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6"w x 3½"h x 1½"d, 12 oz......\$49⁹⁵



►ICF-SW30 12 bands.

Covers AM, FM (stereo) and 10 shortwave bands. Auto

Scan Tuning in 1 KHz steps, 15 memory presets. Clock has world and local time display, alarm and sleep timers. Requires three "AA" batteries or external 4.5VDC. 4% h x 6% w x 1% d \$99***

►ICF-SW33 WORLD BAND RADIO 13 bands, covers 0.5–26.1MHz AM and 87.6–108MHz FM stereo (with earphones). Scan tuning and 17 station memory presets. World time clock displays 38 city names and times, and has five time presets, sleep timer and auto shut-off. News/Music tone control, battery indicator. Supplied with telescopic antenna, carrying case. Requires three 'AA' batteries or external 4.5VDC. 6%''w x 3%''h x 1¼'d, 14.2 oz. S169²⁵



▶ ICF-SW55 WORLD BAND RECEIVER Similar to ICF-7600, improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires four "AA" batteries or external 6VAC, AC adapter included. 4³/₄ h x 7⁵/₆ w x 1³/₆ "d, 1³/₄ lbs. \$349³⁵





► YACHT BOY 400 Covers 1.6–30MHz, all shortwave

bands plus FM-stereo (with earphones), AM and long wave. Direct frequency entry or

scan tuning, 40 memory presets. Single sideband (SSB) with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function LCD display shows time,





 ▶ICF-2010 Covers 150KHz-30MHz, 76-108MHz and 116-136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scan, memory scan or 32 memory presets. LCD display, switchable IF bandwidth, fine tune. 12/24-hour clock with alarm, programmable timer, and sleep timer. Telescoping and built-in ferrite bar antennas, 4" speaker. Record, earphone, external antenna and DC jacks. Operates from 3 "D" and 2 "AA" batteries 12V DC, or10V AC adapter. 6%"h x 11%" w x 2%"d, 3% lbs......



► ICFthe ICFallows ing bro Name



Covers 153kHz-30MHz AM/SSB/CW and 87.6-108MHz FM (stereo with earphones). 10-key Direct Access Tuning™ and 22 station presets, LCD display. Tone control, external antenna and record jacks, clock/timer with sleep and standby functions, tilt bracket. Includes compact reel antenna, universal AC adapter and carrying case. Requires four "AA" batteries. 4%th x 7%th w x 1%th d, 1% lbs. **\$199**^{os}

FRG-100B HIGH PERFORMANCE COMMUNICATIONS RECEIVER

ce Call for Price...

Covers 50KHz-30MHz – CW, SSB, AM and optional FM modes. 50 fully-tunable memory channels store frequency, mode and filter selection; 2 additional memories provide band edge



information used in scanning. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enables convenient searching for new stations, or scanning within a known band. Twin 12 and 24 hour programmable clocks with on/off-timer and sleeptimer. CAT system for PC control. 9.3*w x 3.6*h x 9.5*d, 6.6 lbs.

THE BEST PLACE TO GO TO MEET PEOPLE WHO KNOW SHORTWAVE ...



ICOM R-71A HF RECEIVER

Covers 100kHz to 30MHz, all modes (FM is optional). Dual VFOs and direct keyboard entry, thirty-two tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional



wireless remote controller and voice synthesized readout board. 110/220V AC operation with an optional kit for 12VDC.11%" w x 4% h x 10% d, 16½ lbs.



►ICOM R-7100-12 VHF/UHF

RECEIVER Coverage from 25 to 2000MHz (except 800-900 MHz). Dial and keyboard entry, 900 numbered memory channels. Multiple scan capabilities with new window scan, clock with timer, optional TV receive capability.CALL

Covers 500kHz to 30MHz, 87 to 108MHz FM broadcast (stereo at headphone jack), and the 116 to 136MHz aircraft band. Standard and synchronous detection AM, and SSB reception on medium and shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual 6 or 4 kHz selectivity on AM, sharp 2.3kHz selectivity on SSB. High contrast LCD readout provides 100Hz tuning accuracy. Dual-

mode clock timer and 70 scannable memories. Powered by optional internal batteries or with supplied AC adapter.10"w x 4"h x 11¾ "d, 10 lbs......\$599°°

DRAKE R-8 COMMUNICATIONS RECEIVER

Covers 100kHz–30MHz with added coverage: 33–55, and 108–174MHz with optional VHF converter. Dual VF0s; 100 memories; multiple-function scanning; AM, FM, RTTY, CW, SSB modes; four voice bandwidth filters; switchable preamp/attenuator; dual noise blanker; IF shift/notch. S-meter; fluorescent display; dual time zone clock; dual antenna connectors.

enwood

▶ R-2000 COMMUNICATIONS RECEIVER Covers 150 KHz-30 MHz; 108 –174MHz with

optional VHF converter. SSB/CW/AM/FM modes. Dual digital VFOs, Ten multi-function memories. Scanning. Digital display with 100Hz resolution, three built-in IF filters, optional CW filter. S-meter noise blanker, attenuator, squelch, tone. Dual 24hour clocks w/timer, record and phone lacks



muting terminals. 117 VAC (13.8V DC opt.) 14% h x 4½ h x 8"d, 12 lbs.....CLOSEOUT \$64995



R-5000 COMMUNICATIONS

RECEIVER Covers 100 KHz–30MHz; 108–174MHz; optional VHF converter. SSB/CW/AM/FM modes. Dual VFO & keyboard frequency control, 100 multi-function memories. 6kHz and 2.5kHz SSB filters; accepts 2 more for CW, SSB or AM. Selectable AGC,

variable attenuator, noise blanker, notch filter, IF shift. Dual 24-hour clocks/timer. Mute, record and headphone jacks. Optional VHF, speaker, earphones, filters, voice synthesizer, computer control, DC cable. 117V AC (13.8VDC kit is optional.)

► MFJ-8100K & 8100W SHORTWAVE REGENERATIVE RECEIVER Coverage 75/80/49/40/30/20/25/22/19/17/16/15/13 meter bands.

Listen to AM, SSB, CW RTTY and packet. Has smooth vernier reduction drive, bandswitch, volume and RF Gain controls. Uses 9 volt battery or external source. Has 2 headphone jacks.



ICOM R-100-11 BASE OR MOBILE RECEIVER 100kHz-1856MHz (except 800–900MHz); FM, wide FM and AM. Keyboard/manual tuning, selectable steps and scan.

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►ICOM R-1-15 HANDHELD SW RECEIVER Covers 100kHz to 1300MHz (except 800–900MHz); FM/wide-FM and AM. 100 memory channels. Programmed, memory, selected mode memory, and auto memory write scanning. Rotary tuning or direct keyboard entry, LCD display, 24-hour clock with timer, adjustable LCD contrast, signal indicator. Power-saver function, built-in Nicad batteries; or use optional batteries or 6-16VDC from external source. 1%"w x 4"h x 1%"d......CALL

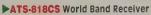
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► ATS-803A 15 bands covers 150kHz-281kHz AM/SSI







w/programmable Cassette Recorder Continuous coverage 150kHz-30MHz AM/SSB/CW, FM-stereo (via headphones). 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary Dial. AM wide/narrow filter, tone/RF gain controls, signal strength/battery indicator. Programmable recorder, play/record LED indicator, auto-stop feature. Clock with dual time display, alarm and sleep timer. Requires 7 "AA" batteries.











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Covers all shortwave bands Plus FM-stereo, AM and LW, and single sideband (SSB) circuitry allows for reception of shortwave two-way amateur, military and commercial communications, including shortwave maritime and aeronautical broadcasts.



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Satellit 7000 Portable Radio For Serious Listening

Unique Advanced Features Unprecedented memory capacity: 512 userprogrammable memory positions, plus 120 factory pre-programming frequencies. *Advanced synchronous detector:* Minimize or eliminate broadcast interference so that you receive clean, clear-sounding shortwave audio. *Excellent sensitivity:* Providing optimal reception of all broadcasts. Even weak signals come in more clearly. *Superior sideband performance:* Helps to eliminate unwanted noises and the artificial voice quality normally associated with shortwave radio broadcasts, providing you with clear, natural-sounding voice quality.

Multi-function liquid crystal display: Shows all status information includ-ing frequency, band, mode, TIME I and TIME II and status for battery switch, antenna and sensitivity selector. LCD also shows turn on/off timer, lamp on/off, beep on/off and 9/10Khz selector for MW.

Weight: 4 lbs.; 12-1/4"L x 7-1/4"H x 3"W.

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40 STATION MEMORIES

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Rated Best in its Class.

Grundig's Yacht Boy 400 has received rave reviews from the shortwave press for combining a wealth of sophisticated features in one compact, portable package that doesn't cost a fortune. It incorporates features found on stationary shortwave systems that cost thousands, such as outstanding audio quality, precise 1 kHz increment tuning, up/down slewing, frequency scanning, signal strength indication, and singlesideband signal demodulation.

Soon, you will be scanning the airwaves to tune in exotic music programs and sports events from faraway locales. The YB-400 even picks up shortwave amateur (ham radio) broadcasts and shortwave aviation/military frequencies (cockpit-to-tower communications). The possibilities for family fun, education, and enjoyment are boundless. For travel or home use, Grundig adds in a dual-time travel clock with snooze and sleep timer. FM band is stereophonic with your headphones. The lighted LCD panel is easy to read in the dark. Comes with a form-fitting pouch, integral telescoping antenna and advanced external antenna on a compact reel, carry strap, batteries, earphones and complete instructions.

Made by Germany's Grundig.

World leader in shortwave radios, the 400 measures just 7-3/4"L x 4-1/4"H x 1-1/4"W; weighs only 20 oz. It slips easily into your carry-on for travel and fits on a nightstand, office credenza, or yacht cabin console. One-year warranty.

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covering 10 bands, includ-

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A 16 channel Base unit

ing weather. Covers 29-

144-148, 148-174, 406-420, 420-

450, 450-470 and 470-512MHz.

Two-digit LED display shows the current channel selection and

scanning, Keyboard Entry; Direct Channel Access; Manual Step

Automatic Squelch; Track-Tuning; Memory Back-up, Three Scan

Frequency coverage: 29-54, 136-174 and 406-512MHz. Weather

scoping antenna included. 9"w x 2¾"h x 6½"d, 1.2 lbs \$99*

button; Priority; Lockout button; Squelch. AC adapter and tele-

DUNIDEN BC-350A 50 channel programmable Mobile or

Base unit scanner with aircraft; 11 bands, LCD display; Turbo

scan; 20 programmable private channels; 20 programmable

police channels: 10 programmable fire and emergency chan-

nels; Band scan for aircraft; Marine & weather; Band search.

Mounting bracket; AC adapter, cigarette power cord and DC

DUNIDEN BC-700A 50 channel programmable Mobile or

Base unit scanner with aircraft 12 bands, LCD display, Turbo

Scan™.Same as BC-350A with 800MHz (not cellular)....... \$179⁹⁵

power cord included. 51/4" x 615/16" x 15/6", 1 lb. 11 oz..

►UNIDEN BC-178XLT 100 channel programmable Base unit scanner with

aircraft, 11 bands, and 5 scanning

banks, LCD display; TurboScan™ & search; Weather scan & search; 5

priority channels; Data skip; Service

Programmable delay, AC adapter included

9" x 6½" x 2¾", weighs 1 lb. 7 oz. \$1495

search; Automatic squelch;

Entry; Two-Digit LED

DUNIDEN BC-148XLT-1 16 channels and 10 bands with

weather alert. Programmable; Digital; AC/DC operation.

Tuning; Scan; Lockout; Priority; Review; Weather Search;

29.7, 29.7-50, 50-54, 136-144,

Ham Radio

Police, Fire

Emergency

Weather

• More

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Speeds. 9"w x 2¾"h x 6½"d, 1.2 lbs

>UNIDEN BC-855XLT 50 pro-

grammable channels, 5 banks and 12 bands. All Public Service Bands, four Ham Bands. Federal and Military Land Mobile Bands, and AM. Large LCD displays frequen-

cies programmed and being monitored and modes. Scan delay; Track tuning; Automatic Squelch; Lockout, Weather Search; Direct Channel Access; Priority; Programmable Search; Choice of Scan Speed; Memory Back-up. 9"w x 2¼"h x 6½"d, 1.2 lbs.....CLOSEOUT \$16995

UNIDEN BC-860XLT Programmable scanner with Aircraft 100 channels 10 banks. Covers 29 to 956MHz (no cellular). Full frequency LCD; TwinTurbo[™] scan and search; One-touch weather scan; Manual channel access; Automatic squelch; Unique Data Skip feature.; Priority. 9"w x 2¼"h x 6½"d, 1.2 lbs... .\$199* ► UNIDEN BC-890XLT 200 channel programmable Mobile or

Base unit scanner with aircraft, military air and 134 m Ham Band. 14 bands, 10 scanning banks. LCD display, TurboScan™; 10 priority channels; VFO control;



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Frequency transfer: Automatic store and sorting; Count key; Weather alert; Optional CTCSS capability. AC adapter included. 10½" x 7½" x 3½", 3 lb. 10 oz. \$26995

UNIDEN BC-60XLT 10 channel, programmable handheld scanner, 10 bands. Two-digit LCD display; review; One touch weather batterylow indicator, built-in scan delay, keypad lockout. AC/DC operation, AC adapter included, 4AA batteries required for DC operation (not includ-\$9995 ed). 2% w x 6¾"h x 1½"d, 10½ oz

>UNIDEN BC-120XLT 100 channel programmable handheld scanner with Aircraft. 11 bands, 10 scanning banks, , LCD display, Turbo scan & search. One touch weather, 10 priority channels, data skip, beltclip, battery and charger included. 2%"w x 134"d x 6"h, 12.6 oz\$149"

>UNIDEN BC-220XLT 200 channel programmable handheld scanner with Aircraft and 800 MHz (no cellular). 12 bands, 10 scanning banks. Programmable search. LCD display, Turbo Scan[™] and search. One touch weather access,

10 priority channels, data skip. Belt clip, battery and charge \$25995 included. 21/2" w x 11/4" d x 6"h, 12.6 oz

DUNIDEN SC-150B 100 channel programmable handheld scanner with aircraft and 800 MHz (no cellular). 12 bands, 10 scanning banks. LCD display, 10 one-touch direct access channels, programmed band search. Turbo scan & search. One touch weather, 10 priority channels, data skip, beltclip, battery and charger included. 21/2" w x 11/4"d x 6"h, 12.6 oz. ... \$189°5

► UNIDEN BC-2500XLT 400 channel continuous band scanner, 20 scanning banks. Covers virtually every channel from 25 to 1300MHz in 12 bands. VFO control; TurboScan™; Auto-weather; Auto-store; Two rechargeable nicad batteries (1 spare), and charger, 21/2"w x 11/2"d x 6"h, 12.6 oz. CLOSEOUT \$34995

ICOM Scanning Receivers



Base or Mobile Covers 100kHz to 856MHz (no ceilular). FM, wide FM and AM modes. Keyboard or

memories, 24-hour clock, 3 antenna inputs, telescoping antenna and mobile mount. 13.8V, option-CALL

300MHz (no cellular) FM, wide FM and AM. modes. 100 memories, scanning. Rotary tune or direct keyboard entry. LCD display, 24-hr clock/timer, signal indicator, power-saver. Built-in nicad battery; CALL



externally mounted Channel Master Monitenna, Provides best reception for 30-50, 148-174, 450-470, 470-512 & 800-912 MHz bands. ► Model 5094A High-strength aluminum, and weather protected. Comes with 50 ft. length of \$3995 coaxial cable and Motorola-type plug. ► Model 5095A Everything for roof-top installation: Monitenna, 50 ft. coaxial cable with plug, 5 ft.

tri-mast mount, 2 ft. extension standout, double headed nails, and sealing washers..... \$49⁹⁵



BMI Nitelogger Automatic Recorder Activator

Accepts audio output from any 8Ω source and provides 600Ω audio and voice activated relay operation for triggering a recording device. Only three plug-in connections-one to the radios ext. speaker jack, the other two go into the remote and microphone jacks of a cassette recorder. For ham purposes this device can make a simple crossband repeater by connecting two HT's. Built-in monitor speaker with volume control, VOX \$6995 sensitivity and delay controls. AC adapter supplied ...

BMI RC-1A Impedance Matching Patch Cord Provides a proper impedance match between a nominal 8Ω source and a standard 600Ω tape recorder

lation of the audio signal and provides

proper loading for the source device while 20dB of attenuation prevents input overload. Input and output connectors are standard 3.5mm mini-plugs... \$1995

MONITOR AMERICA



► The National Communications Guide, 2nd edition. Contains over 800 pages of frequencies for federal, state, county

and city public safety agencies all across the United States! Includes channelization plans and usages, maps, 10 codes and unit designators. Also lists amusement, sport, railway, military, marine, aircraft, national park frequencies.\$2495

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Model VS-2 Emergency Vehicle Siren • Delivers a loud 120dBa (600-1200 Hz) sound level at 4 ft. Comes prewired with 3-position switch - Siren-Off-Yelp, 5" x 7" x 8" high efficiency horn speaker, 10 ft. cable, mounting bracket and



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the speaker outside. Includes speaker, microphone, controller 10 ft. cable, mt. bracket \$12995 & hardware. 12V DC... Model VS-4 P/A

Emergency Vehicle Siren

• Features: P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn.

Volume control of all siren modes. Includes speaker, mic, con troller, 10 ft. cable, mtg bracket & hardware. 12V DC \$13995

174, 406-420, 420-450, 450-470 and 470-512MHz. Pushbutton Display; Review Key; Priority;

bracket included. 13.8V DC. 6%"w x 1%"h x 5½"d, 1¼ lbs.... \$9995

►UNIDEN BC-760XLT 100 programmable channels, 5 scan-



ning banks. 12 bands cover 29-54, 118-136, 144-174, 406-510, 470-512 and 806-956 MHz (no cellular). Auto search; Priority. 13.8V DC or 117V

with AC adapter. 61/16"w x 15/8"h x 73/4"d, 1 lb., 3 oz...

UNIDEN BCT-2 Bear Tracker Preprogrammed with all frequencies for Highway Patrol, D.O.T, Local Police and Weather Select the state which you are in and

listen! Responds to signals emitted from special "Mobile Extender" transmitters used in most Highway Patrol vehicles.



presence of patrol units within a 3 mile radius Includes mount ing bracket and DC power cord. 5"w x 7"d x 1½"h, 1 lb... \$1595

UNIDEN BC-8500XLT 500 channel programmable Base scanner. 20 scanning bands, 25-1300 MHz coverage (no cellular);



LCD alpha numeric display; TurboScan™; 10 priority channels; VFO control; Frequency transfer Automatic store and storing

count key. Optional CTCSS capability, antenna and AC adapter included. 101/2" w x 71/2"d x 31/2"h, 4 lbs. CLOSEOUT \$34995











charger., or 6-16VDC 1%"w x 4"h x 11/2"d .

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unit. 10 bands: 29.0-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-

Memory Back-up; Channel Lockout; Direct Channel Access; Weather Search; Built-in Delay; Track Tuning. mobile

DUNIDEN BC-560XLA 16 channel, programmable Mobile



Travel the Sound Waves.



Hear World Events From A World Away.







Hear It As It Happens.

Imagine being able to tune in to global broadcasts from your own small corner of the world. A Sony World Band Receiver[™] radio is your passport to travelling sound waves the world over. The magic of shortwave radio brings international radio signals right into your home or office, and the technology of Sony's World Band Receiver radios makes it easy to tune in to international music and news broadcasts, cultural and sports events, and weather and travel updates, so you can hear events as they happen!

ICF-SW10

World Band Receiver radios are designed to be compact and convenient. The ICF-SW10 model is no bigger than a paperback book, yet gives you access to thousands of news, weather, talk and music programs from around the world. The 12-band receiver offers touch-of-a button access to FM Stereo, MW and LW bands as well as 9 shortwave bands delivering a generous range of frequencies from which to choose. Analog tuning enables easy tuning to desired frequencies shown in easyto-read numerals. And a tuning indicator helps bring distant stations closer and clearer than ever. Tune in and let Sony take you there.

- 12 Band Receiver FM Stereo, MW, LW and Shortwave Bands 1-9
- Easy Analog tuning to desired stations
- Tuning Indicator for accurate tuning
- FM Stereo Headphone Jack
- DC-in Jack to conserve battery life
 Compact size: (WHD) 6" x 3 1/2" x 1 1/4"



ICF-SW30

You don't need an airline ticket or hotel reservations to experience new adventures - all you need is the Sony ICF-SW30 World Band Receiver radio. With this sophisticated 12-band receiver, you can ride the airwaves to another continent or just to the far side of your own. Special Dual Conversion Tuner Circuitry helps to avoid interference from adjacent stations, while Digital Synthesized Tuning provides on-target reception.

- 12 Band Receiver AM, FM and Shortwave Bands 1-10
- Digital Synthesized Tuning to desired stations
- LED Tuning Indicator for accurate frequency indication
- 15 Station Memory Presets
- Auto Scan Tuning to scan and preview the station you want
- IKHZ Step Tuning for exact station frequency tuning
- Dual Clock/Alarm
- Compact size: (whd) 6 5/8" x 4 1/2" x 1 3/8"

ICF-SW33

If you're looking for the perfect travelling companion, take along the ICF-SW33 World Band Receiver Radio. Its built-in World Time Clock makes it a breeze to maintain correct local time when travelling in different time zones. And with PLL Quartz Frequency Synthesis Tuning, you can choose up to 17 stations and tune them in automatically at one touch, or scan the bands with Auto Scan Tuning before stopping at the station of your choice. Other features include:

- 13 Band Receiver including FM, AM and Shortwave Bands 1-11
- World Time Clock adjustable by city
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Dual Conversion Super Heterodyne Tuner Circuitry for interference rejection
- 17 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- News/Music Tone Control
- Headphone Jack
 Compact size: (WHD) 6 1/2" x 3 11/16" x 1 3/16"



Ride The Airwaves To Places Far Away.



Experience Ancient Customs With Modern Technology.



ICF-SW7600G

ICF-SW100S



ICF-SW7600G

Get front and center seats to any event with the ICF-SW7600G World Band Receiver Radio. With multiband AM (LM, MW, SW) and FM stereo reception, you'll always have the best seat in the house. 10-Key Direct Access[™] Tuning lets you key in distant stations as easily as calling for reservations. 22 Station Memory Presets bring you quickly and easily to your favorite stations. Features include:

- AM (LW, MW, SW)/FM Stereo Reception
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- 10-Key Direct Access[™] Tuning
 SSB Reception for an even wider
- range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 22 Station Memory Presets
- Dual Conversion Super Heterodyne Circuitry for interference rejection
- Dual Wake-up Stations and Sleep Timer
- I KHZ Step Tuning
- Compact size: (WHD) 7 1/2" x 4 3/4" x 1 1/4"

ICF-SW100S

As the world gets smaller, so do Sony's World Band Radio Receivers. Weighing just over 7 ounces, the ICF-SW100S model is a wonder of technology - the size of a pocket calculator. As miniature as it is, this model is equipped with performance features of radios twice its size, delivering precise tuning, minimal interference and listening clarity. This model may be small, but when it comes to performance, you can't ask for more.

- AM (LW, MW, SW) FM Stereo Reception
- World Time Clock adjustable by city
- 24-City Name/Time Display
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 50 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- I KHZ Step Tuning
 Compact size: (WHD) 4 3/8" x 11/16" x 2 7/8"



ICF-SW55

Dance to a Latin rumba, a Russian folk dance or a Viennese waltz once you step into the world of the ICF-SW55 World Band Receiver Radio. To ensure that the program you want is at your fingertips, this model can save up to 125 station names in memory. Want to hear a British concert? Just enter "BBC", and let the music begin. And to make sight, as well as sound a simple task, we've included a backlit LCD display with highly visible digital readouts of frequency, station name, clock and other functions.

- AM (LW, MW, SW)/FM Stereo Reception
- 10-Key Direct Access[™] Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Precise Manual or Auto Scan Tuning
- 125 Station Memory Presets
- Built-in Clock with Alarm, Sleep Function and Timer Stand-by
- Universal Time Coordinator
- Backlit LCD readout

Compact size: (WHD) 7 3/4" x 5" x 1 9/16"

ICF-SW77

World travel through the radio dial has never been so effortless. The ICF-SW77 World Band Receiver Radio offers the convenience of recalling radio frequencies by the broadcaster's name, and performance features that reduce interference and fading to produce reception of incomparable quality. A generous 4" speaker provides separate bass and treble controls for broadcasts that come to life.

- AM (LW, MW, SW)/FM Stereo Worldwide Band Coverage
- 10-Key Direct Access[™] Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for a wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- Precise Manual and Auto Scan Tuning
- 162 Station Memory Presets
- Built-in Clock with Alarm, Sleep
- Function and Time Stand-by
- Universal Time Coordinator
- Backlit LCD readoutCompact size:
 - (wнd) 10 7/8" x 6 13/16" x 1 13/16"



Listen To The Rhythms Of Different Cultures.



Get The Hottest News From The Coldest Climates.



ICF-2010

ICF-2010

Sit back, take it easy and take off to the climate of your choice. With the ICF-2010 World Band Receiver Radio, you can get the hottest news from the coldest climates from the warm comfort of your easy chair. PLL Quartz Synthesis Frequency Tuning ensures that once you land on the station you want, you're there to stay. Then when you're ready to move on, Direct Access Tuning and 32 station memory presets will take you nonstop to your next destination. You'll find this little performer gets a great reception no matter where in the world you go.

- AM (LW, MW, SW)/FM Air Band Reception
- Direct Access[™] Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 32 Station Memory Presets
- Built-in Clock and Sleep Timer
- Manual or Automatic Scan Tuning
 Compact size:
 - Compact size: (WHD) 11 3/8" x 6 1/4" x 2 1/16"



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Features and specifications are subject to change without notice.

Non-metric weights and measurements are approximate.

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Printed in USA 4/94



Sony Electronics Inc. 1 Sony Drive Park Ridge, NJ 07656



▶ MFJ-1024 Outdoor Active Antenna Covers 50kHz–30MHz. Consists of a 54 in. telescopic whip and amplifier module that mounts outside. The module is connected by 50 ft. of RG-58/U coax (supplied) to an inside control unit which contains a 20dB attenuator and a gain control to prevent receiver overload from the amplified signals. Switches select between two receivers, and auxiliary antenna. LED "on" indicator. RCA phono auxiliary input and output jacks. 12VDC or 110VAC with MFJ-1312 AC adapter. Control: 6"w x 2"h x 5"d, Module: 3"h x 4"w x 4"d ...**119**⁹⁵



► MFJ-1020A Indoor Active Antenna Covers 300kHz-30MHz in five bands. A 21 inch telescoping antenna provides maximum signal strength. Unit functions as a preselector when

using an external antenna. Minimizes intermodulation, improves selectivity and reduces noise. Tune, Band, Gain, On-Off/Bypass controls. Uses 9 volt battery (not included), 9-18VDC or 110VAC with MFJ-1312 AC adapter. $5^*w x 2^*h x 6^*d$

MFJ-959B Antenna Tuner &

Preamplifier Covers 1.6–30MHz continuous, provides the



proper impedance match between antenna and receiver for maximum signal transfer and best reception. Built-in 20dB preamplifier with gain control, 20dB Attenuator Front panel switches select from two antennas inputs and outputs for two receivers. 9-18VDC or 110VAC with MFJ-1312. 5"x 2"x 6" ... **\$89**95



▶ MFJ-752C SSB/CW Audio Filter Zero in and pull out stations from noise and interference. Peak, notch, low or high pass signals to eliminate hetrodynes and interference. Filters tune 300–3000Hz, bandwidth varies from 40 Hz to almost flat, notches to 70dB, noise limiter. Switchable Inputs for two radios. 9-18VDC or 110VAC with MFJ-1312. 10°w x 2°h x 6°d. \$9495

► MFJ-722 SSB/CW Filter Razor sharp switch-selectable SSB/CW filter. For CW: selectable bandwidths of 80, 110, 150 and 180Hz centered on 750Hz. For SSB: steep-skirted, 300–3000Hz filtering with tunable 70dB notch. Headphone jack, built-in speaker w/2W amp. 9-18VDC or 110VAC with MEJ-1312. .\$7495

▶ MFJ-956 LW/MW/SW Preselector/Tuner (left) Greatly improves the reception of signals from 150kHz-30MHz. Tuning boosts signals while rejecting images, intermodulation, and other phantom signals. S0-239 connectors. 2"h x3"w x4"d \$3995

MFJ-784 Super DSP

Filter Digital Signal Processing automatically eliminates hetrodynes, reduces noise



and interference on SSB/CW/AM, all digital modes, VHF, EME and satellite. Tunable FIR linear phase filters minimize ringing, prevent data errors, and have up to 60dB attenuation, just 75Hz away. Five tunable DSP filters, tune each lowpass, highpass, notch, and bandpass filter, including optimized SSB and CW filters. Vary bandwidth to pinpoint and eliminate interference. Five preset filters, and 10 programmable preset filters that can be customized. Automatic notch filter searches for, and eliminates multiple hetrodynes. Adaptive noise reduction silences QRN. Built-in 2W audio amp., ACC keeps audio level constant. 12VDC or 110VAC with opt. MFJ-1315. 2% "h x 9"w x 6"d **\$199***5

See the Index for more MFJ Products...



► AMECO TPA Tunable Preamplifier and Active Antenna Covers 2 to 30 MHz in 5 bands A dual function receiver accessory – may be used with an With more than 2008

outside antenna as a tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. 9VDC, 110VAC with optional PT-9T AC adapter. 2½ "h x 8"w x 6½"d \$6995



PALOMAR Receiver Preamplifiers (right)

Features same as above except for receiver only. Includes a two position antenna switch and switchable 20dB attenuator. Covers 1.8–54MHz, adds 20dB gain and additional selectivity.

P-405 (9 VDC) \$119⁹⁵
 P-408 (115 VAC) \$129⁹⁵
 PALOMAR PF-300 Audio Filter (left) Connects between



▶ PALOMAR LA-1 LOOP Antenna (right) Picks up less noise than other antennas. Frequency Range: VLF to 15MHz. Six plugin loops for the various frequency ranges rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamp compensates for small size. 2%"h x 7%"w h x 6"d \$99°5

▶ Plug-in Loops for: 10–40kHz, 40–150kHz, 150–550KHz, 550–1600kHz, 1.6–5MHz or 5–15MHz range each \$89^{s5}
 ▶ PALOMAR VLF Converters (left) Receives and converts the 10 to 500kHz VLF (Very Low Frequency) band to 80M. Two models allow tuning of this low range on a general coverage receiver or ham band transceiver. Requires 9V battery. 2th x 4^t/w^{*} x 5^{td}
 ▶ VLF-A Ham Band only, use with a transceiver\$79^{s5}

VLF-S use with a General Coverage receiver. \$7995

ANTENNA SUPERMARKET Shortwave Antenna



specify with 100 ft. of 72Ω twin lead, or weatherproofed SO-239 center connector for coaxial cable, (not supplied. $\$79^{95}$

► EAVESDROPPER™ SWL

SLOPER Shortwave Antenna End-fed, coil loaded with underslung parallel element. Mounts in a sloping configuration. Covers AM broadcast, 120 and 90M, and all Shortwave bands 7–13M. Overall 67

ft., comes fully assembled. Includes Zap-Trapper® lightning arrestor, S0-239 connector, and 50 ft. of nylon rope . . . **\$79**⁵⁵

ALPHA DELTA SWL Sloper Antenna Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an appropriate antenna tuner – up to 2000WI. Overall length is 60 ft, requires 50Ω coaxial cableDX-SWL **\$69**⁹⁵

Noise Killer Filters

Advanced DSP Filters Improve reception by simultaneously reducing random noise, heterodynes, reducing QRM and providing razor sharp audio for SSB and CW modes. The DSP filter features third generation 16 bit processoing and 16 bit DSP A/D and D/A chip. Processor runs at 13 million instructions per second allowing multiple functions at the same time. A must for the weak signals and noisy bands as a result of the Low SUNSPOT CYCLE. All Timewave DSP filters feature simple installation in receiver audio output, and drive speakers and headphones directly.



▶ DSP-9 Version 2.0 CW/SSB Filter Push button selectable bandpass, automatic notch and random noise filters for SSB/CW and Data. SSB filter bandwidths: 1.6, 2.0, 2.4kHz. or 1.8, 2.4, 3.1 kHz, field programmable. CW filter bandwidths: 100, 200 and 500Hz with center frequencies of 600/750Hz or 400/500, field programmable. Reduces white noise, static, QRM, etc-dramatically! Excellent for HF and Satellite work.Self test mode can be initiated by user. 12VDC-1A. 6*w x 6*d x 1%*h, 2 lbs...\$169°°



▶ DSP-9 Plus SSB/CW/Data Filters Push button selectable bandpass, automatic notch and random noise filter for SSB/CW and Data. SSB filter bandwidths 1.6, 2.0, 2.4, kHz or 1.8, 2A, 3.1 kHz., field programmable. CW filter bandwidths 100, 200, and 500 Hz with center frequencies of 400, 500, 600, 800 Hz; any two field programmable. Optimum data filter for HF Packet, GTOR®, AMTOR, and RTTY. ALL data modes have selectable center frequencies user programmable, default is USA std. 2210 Hz. AGC button for wider dynamic range, plus acts as an automatic CW boost/peaking enhancer. Aux audio output jack for data. PTT input for break-in, CW sidetone, bypass and muting. Relay passes audio directly to speaker with pushbutton bypass or power off, self test. 12VDC-1A. 6"w x 6"d x1%"h, 2.2 lbs **\$21900**



▶ DSP-59 Plus Perfect for the Ham and SWL hobbyist. Features 225 combinations of high and low pass filters for voice and special modes. Over 300 CW and data filters (25 to 600Hz) allow the user to select almost any filter needed for a specific application, including RTTY, SSTV, AMTOR, C-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax and AM. Voice filters from 200 Hz (highpass). 13 CW center frequencies from 400 Hz. to 1.0 kHz on front panel. Push button selection of relay, bypass, AGC, HP/LP/BP, hetrodyne elimination and random noise reduction. Kills hetrodynes with notch up to 50dB. Dramatic random noise, etc. Marker for spotting the narrow CW filter, self test mode. Requires 12VDC-1A. 7½"w x 8"d x 1¾"h, 2.2 lbs......\$299°°



▶Passport to World Band Radio A guide for Shortwave listening containing data on every international broadcast station; names, locations, frequencies, operating times, coverage, target area, transmit power, and more. A guide to hourly English language programs, worldwide. Includes comprehensive test reports on many shortwave receivers, and a Shortwave Buyer's Guide ARR 250 \$1995





► AEA PK-12 Packet Controller A low cost, 1200 bps VHF/UHF TNC. Includes AEA's MailDrop feature, HOST mode, and Cateway firmware. Comes with 15K Mailbox and is expandable to 100K. Made for traveling, it weighs under 12 oz, measures 5%" w x 1%"d x 1%"h. 12VDC@ <80mA. 7%" w x 6"d x 1%"h, 2% lbs\$119°5









►MFJ-1278BT Turbo Same as MFJ-1278B above except Turbo version, includes a 2400 baud modem\$33995

► MFJ-1270CQ TAPR TNC-2 Clone 9600 baud TNC....... \$19995

► MFJ-1289 Multicom Program for MFJ-1278B • Supports color SSTV, 16-level FAX, packet picture. Menu driven, bursting with features - one key micro, call alert, auto router, auto parameters setting to TNC, text editor, 32K receiver buffer, and more! Complete with cable. (IBM 5-1/4") \$5995

▶ MFJ-462B Multi-Reader An easy way to copy RTTY, ASCII, CW and AMTOR signals from Commercial,

Military, Diplomatic, Weather, Aeronautical, Marine, Amateur, etc. Plugs into the earphone jack of a shortwave receiver decodes and displays messages on a 2-line, 16



character LCD display, 12VDC or 110VAC with MFJ-1312B AC adapter



HAL COMMUNICATIONS

▶ PCI-4000/M Multimode HF MCBSR. A fullsize 13½" DSP card for 386 or 486 PC's that provides the best all-around performance on RTTY, AMTOR, PACTOR and CLOVER modes. The PCI-4000/M lets you work those signals that are just too weak for most other modes. The operating software for your PC is included and updates are available through HAL Techline. Also included is a phono connector cable to your radio system and a comprehensive technical manual. Third party software is available for specific operating requirements. 1-year HAL warranty....\$699⁹⁵

HAL TECHLINE: 217-367-5547







KAM Plus All Mode Communicator Features two radio ports, a Personal Packet Mailbox and two modems for simultaneous VHF/HF gateway operation. VHF port supports 1200 baud Packet and reception of WEFAX. The HF port supports all HF modes: CW, RTTY/ASCII, AMTOR-AMTOR 625, NAVTEX/AMTEX, PACTOR G-TOR and WEFAX; MARS compatible. Software Carrier Detect, KISS mode, real-time clock, battery back-up and KA-NODE operation. Operates RS-232 port or the TTL port used on standard shifts and can be user programmed for any shift. 12VDC. 1%"h x 6"w x 9"d, 2% lbs.

► KPC-4 Packet Communicator Features similar to KPC-3 but speed only 1200 bps or higher. Includes simultaneous dual radio ports which allow gateway operation. 32K RAM, expandable to 64K. 1¾"h x 6"w x 9"d\$299⁹⁵

▶ D4-10 High Speed Data Radio Designed to couple with the KANTRONICS Data Engine and DE 19K2/9K6 modem card for 19,200 or 9600 baud operation on 100kHz channels within the 70cm band. 10W output. 12VDC. 1¾" x 6" x 8", 2 lbs.....\$349⁹⁵

► KTU with Weathernode Weather sensors attach to the KTU, the KTU attaches a TNC. Connect and request weather statistics, via packet. Temperature probe with 40 ft. cable included. Optional wind speed/direction sensor and rain gauge\$309⁹⁵

Amateur Electronic Supply® Log on to our Computer Bulletin Board (414)-358-3472, for the latest New & Used Gear Prices, Specials & Promotions, etc. 41

Comparing the KPC-9612 to any other TNC of equal cost would be like comparing what you see here to a gentle breeze.

Until now, all TNCs in this price range could operate at only one baud rate at a time. Now, Kantronics has created a whirlwind with its newest TNC: the KPC-9612. This is a dual-port TNC,

meaning it can send and receive messages at 9600 baud and 1200 baud *at the same time*. So what you get with the KPC-9612 is twice the power for the

same price. You can also choose a 32K RAM or, for extra mailbox space, a 128K RAM. Either way, the KPC-9612 is portable and is only a wisp larger than the KPC-3, and it can run on a single 9-volt battery.

If you've been asking where you can find a small, inexpensive, dual-port TNC, look no further. The answer is blowin' in the wind.



Kantronics KPC-9612

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Powerful Performers

rfconcepts amplifiers now contain the power of a wave. We've combined the performance of the newest wave solder technology with the power of **rf**concepts amps. So what you get are highquality amplifiers built to last.

rfconcepts offers a full line of VHF and UHF FM amplifiers with a variety of input and output ranges. Most of our amps feature GaAsFET preamplifiers and all are made in the U.S.A.

Featured below are some of our most powerful performers. Feel the power; catch the wave. Contact your dealer today.



Kantronics/rfconcepts' new state-of-the-art wave solder machine



rfc 2-23 2-meter, low-power amplifier

Designed for use with 2-meter HTs, this amp's small size and low power requirements make it excellent for portable use. With 2 watts in you get 30 watts of RF output power, and the receive GaAsFET preamplifier will typically produce 15 dB of gain.



rfc 2-315 2-meter, high-power amplifier

This 2-meter amp boosts typical transceiver output power up to 170 watts. With 30 watts of input, the amp delivers 150 watts; with 40 watts of input, it delivers 170 watts. The rfc 2-315 also includes a receive GaAsFET preamplifier with 18 dB of gain.





rfc 4-310 70-cm, high-power amplifier

This high-power amplifier can boost input power starting at only 0.5 watts! And with 30 watts of input, you'll get a full 100 watts out. Equipped with a receive preamplifier capable of 12 dB gain, this 70-cm power amplifier will meet all your power-boosting needs.

a division of Kantronics Co., Inc

Data Controllers Put You In Control

- Dual simultaneous ports.
- Automatic signal idenfication.
- 9600 bps modem option available.
- 8-pole Chebyshey bandpass filter.
- Dual-port Gateway: Packet to AMTOR, Packet to • PACTOR, and Packet to Packet.
- Twenty software selectable moderns.
- 17K Packet, PACTOR, and AMTOR MailDrop. •
- 16-level gray scale fax with opt. software. •
- Same modes as the PK-232MBX.
- Full PACTOR Memory ARQ. •





- DSP-1232 has two switchable ports.
- DSP-2232 has two simultaneous ports.
- Same modes as the PK-232MBX.
- Includes modems for satellite use.
- Automatic signal identification.
- 17K Packet, PACTOR, and AMTOR MailDrop.
- DSP-2232 has dual-port Gateway: Packet to AMTOR, Packet to PACTOR, & Packet to Packet.
- DSP-2232 features front panel LCD
- Up/Down Doppler shift for PSK modems.
- 9600 bps modem included.

- Designed for multi-mode operation.
- Internal 1200 bps VHF modem.
- Automatic signal identification.
- 18K Packet, PACTOR, and AMTOR MailDrop.
- 2400 bps modem option.
- 8-pole Chebyshev bandpass filter.
- Modes: Morse code, Baudot, RTTY, ASCII, AM-TOR/SITOR, PACTOR, VHF & HF packet, B&W fax receive/transmit, NAVTEX/AMTEX, and **ARRL** Information Services.
- Gateway as a node.







Call (800) 432-8873 for a complete catalog or information on a specific product. Connect with us



- PK-96 is a 9600 bps packet-only controller with 9600 bps K9NG and G3RUH compatible direct frequency modulation and 1200 bps VHF packet.
- PK-12 offers 1200 bps VHF packet at less than 80 mA of power.
- PK-96 features true DCD state machine for open squelch operation.
- 32K RAM, easily expandable to 128K.
- KISS mode for TCP/IP compatibility.
- Control of third-party MailDrop traffic.

Advanced Electronic Applications, Inc. 2006 196th Street Southwest P. O. Box C2160 Lynnwood, WA 98036 (206) 774-5554



0 to 9600

With Packet Transmission

Satisfy your need for speed with the new PK-96 9600 baud packet controller from AEA.

This high-performance machine comes standard with 1200 baud AFSK tone signaling, as well as 9600 baud K9NG and G3RUH compatible direct frequency modulation. The PK-96 makes an excellent terrestrial or satellite data controller. It can be used for high-speed data links to eliminate bottlenecks and in-

crease system capacity.

Big capability in a small package is what

you get from the PK-96. Under the hood, there is a 18K battery-backed MailDrop which is easily expandable to 100K. MailDrop allows you to automatically control third-party traffic and receive and reverse-forward messages.

Bring your system up to speed. Call AEA's Literature Request Line at (800) 432-8873 for more informa-

> tion, or call us direct at (206) 774-5554. Contact your favorite ham radio equipment dealer for the best pricing.

DAVIS

Computerized Weather Stations

Gives Wind, Temperature, Rain and Barometric Trend. Humidity, Dew Point, Alarms. Download and Graph Data on your PC - remote with Modem Interface. Central Junction Box for Easy Hookup, Modular Design. Perfect for NOAA Weather Monitoring Stations.

Model 7440

Barometric pressure from 26.00 to 32.00 in. of mercury (660 to 812 mm or 880 to 1084 mb). • Trend arrow shows if pressure is stable or increasing or decreasing • Alarm for change greater than .02, 0.4, or .06 inches of mercury.

Inside humidity from 10% to 90%. • Outside humidity optional, requires external humidity/temp sensor, below High and low humidity readings with time and date • Alarms for high/low humidities. 1%" x 4%" LCD display \$34995 EXTERNAL HUMIDITY/TEMP SENSOR

Model 7859 Optional, allows the Model 7740 Weather Station to measure outside humidity, dew point and temperature. Come with 40 ft. interconnecting cable \$10995

For More WeatherSTAR options - See Price List

Model 7425

Inside temperature from 32°F to 140°F (0°C to 60°C) • Outside temperature from 50°F to 140°F (-45°C to 60°C) • High and low temperatures with time and date • Alarms for high and low temperatures

WIND SPEED AND DIRECTION

Wind direction in 1° or 10° increments • Wind speed to 126 mph (203kph, 109 knots for 56.0 m/s) • High wind gust with time and date • Alarm for high wind speed.

Wind chill to -134°F (-92°C) • Low wind chill with time and date Alarm for low wind chill

12 or 24 hour • Time alarm • Date • ³/₄" x 3¹/₄" LCD display

Model 7852 Rain collector Self dumping, monitors rainfall daily and accumulated in 0.1* increments • Extension cables for anemometer or junction box \$16995



WeatherSTAR Link Interface Software, cable, serial port adapters to connect IBM compatibles to WeatherSTAR sta tions 7862 \$13995

TUNE BELT Handheld RadioBelt



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available in two sizes to fit virtually any handheld.	
HH-1PS Radio belt for up to 5" HT	\$169
HH-1PM Radio belt for up to 6" HT	\$169
HH-1PL Radio belt for up to 7" HT	\$169
HH-2PM Radio belt for up to 6" HT, w/batt pocket	\$179
HH-2PL Radio belt for up to 8" HT, w/batt pocket	\$17%



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DM-3000 & DM-3050 Wide Range

Multimeters Big, 21/2"w x 11/4"h, 31/2 digit

and 24 ranges, DM3050 has 10 functions

LCD readout • DM3000 has 8 functions

and 27 ranges • 10M Ω input • Manual

selection • AC: 750V • DC: $1000V • \Omega$ to

Intel 486 SX-33

• 213Mb Hard disk

• DOS 6.2

Call for Prices -

- A True Plug & Play Computing Solution
- ✓ Two Models Slim, perfect for dedicated Packet Service
- Desktop for the user who wants more ... the all around computing solution!

AES 486SX

Drives

Keyboard

The Two Year Parts & Labor Limited Warranty is handled by:

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Bel Merit Multimeters

.28 SVGA Monitor

• 3.5 (1.44) and 5.25 (1.2)

High Density Floppy DIsk

Keytronics 101 Ergonomic

AES 486DX66

- Desktop Case 7 Drive Bays Keytronics 101 Key
- VESA Local Bus Motherboard
- 486 DX33 CPU
- 4Mb High Speed RAM
- 340Mb Hard Disk
- VLB IDE/IO Card
- I Mb SVGA Video Card
- **High Density Floppy Disk** Drives • .28 SVGA Non-interlaced Monitor
 - DOS 6.2 and Windows 3.1

Ergonomic Keyboard

3.5 (1.44) and 5.25 (1.2)

UNIFIED Microsystems **W9XT Contest Card** for IBM™ PC and Compatible

This 5" x 4½" plug-in card

occupies a single 8-bit PC slot,

does voice recording and playback, and CW keying. Enough memory to store a full 16 seconds of voice which can be partitioned between four messages of different lengths for playback on command. The microphone input is sampled at an 8-kHz rate resulting in audio that is of high quality and natural sounding. The card is non-volatile and does not use any disk space. On CW, the card frees up the PC port, and uses a relay which allows operation with positive or negative-keyed rigs. The W9XT Card works with all rigs and is compatible with popular logging programs. A stand alone support program is included with the card. Low RF emissions - FCC Class-B certified \$13995



20M • DC Current: to 20A • Capacitance to 20uF • Diode test • DM-3050 has continuity beeper and tests frequency test to 200kHz • 31/2"w x 71/2"h x 11/2"d, 10½ oz. Test leads and 9V battery DM-3000 \$5495 • DM-3050 \$5995



New Wave Antenna







Telephone Interconnects ...

You can access your Home telephone line from your Mobile or Handheld by installing an Interconnect Device on your existing base station radio.

CES

► SDI-50 Automatic Simplex Interconnect Uses VOXenhanced sampling, gives telephone phone access to handhelds and mobiles. Remotely programmable from any touch phone.



calling. Automatic CW ID, converts base stations to a remote station accessible from any telephone. AC adapter and cables \$39995 included. 141/8" w x 83/4" d x 113/6" h, 33/4 lbs

SSI-68 Simplex Interconnect For mobile applications, controlled by DTMF audio from mobile or telephone. Interface and

software allows for operation with a wide variety of radio and



telephone systems. VOX-enhanced sampling for optimum performance. Comes with telephone cable, computer interface and AC adapter. 8% w x 6% d x 1% h, 2% lbs..... \$26995

▶410 Personal Patch An economy, easy to use basic interconnect. Does not have all of the user programmable features found in the



nects. 10-16V DC. 8% "w x 6% "d x 11/4"h, 21/2 lbs



RP-1520 (2-meters) Covers 144-148MHz FM with 25W output. Fully synthesized - no retuning after changing frequency. Features: User programmable call sign ID; Hang-up and time out timers: Manual transmit: DTMF decoder for remote control operation; Local inhibit function and CTCSS encoder; Excellent IMD attenuation. Sensitivity: <0.5uV for 12 dB SINAD. Built-in speaker and microphone connector. 117V AC or 13.8V DC. CALL 16¾"w x 5%"h x 14½"d, 37½ lbs....

▶ RP-2210 (220 MHz) Features are similar to RP-1520 shown above. Covers 220 to 225 MHz in 5 kHz tuning step increments with 25W output. CTCSS and hang-up timer are dip-switch programmable. EPROM programming for ID



▶ RP-4020 (440 MHz) Similar to RP-1520/2210 except for different appearance. Covers 430 to 450 MHz with 25W output. The DTMF code includes a 4-digit password to prevent unde-

Siled Terrote control access	
▶ RP-4020/50W (440 MHz) 50W output	CALL
BB.1220 (1.2 GHz) Similar to ICOM repeaters above	Synthe-

sized, covers 1240 to 1300 MHz with 10W (high) or 1W (low) output. Battery back-up connector. Most functions can be CALL remotely controlled using DTMF codes



Connect Systems, Inc.

STANDARD FEATURES (all models): Built-in programming Keyboard and Digital display • Redial • Single or multi-digit access codes • Secret toll override access code • Toll Restrict Regenerated tone or pulse dialout • Ringout on 1–9 ring Line In use detect • Call waiting • CW ID • Hookflash • More!

Private Patch V Top-of the line! - a user programmable multi-mode interconnect that can operate the following modes.



Repeater Maker. Private modes built-in for future use. Ninety memory speed-dialer and remote base mode, included. Connects to the microphone and speaker lacks of any simplex transceiver for VOX simplex; other modes require internal con-\$49995 nections. 12V DC. 11% w x 7% d x 1% h, 3½ lbs

▶9801 Electronic Voice Delay (EVD) Option Provides a full 1/2-second of delayed telephone audio to eliminate word clipping caused by slow switching radios. For use with the Private \$12995 Patch V in the VOX mode only

▶ cs.700 intelligent interconnect For Simplex operation. Offering selectable VOX Enhanced or VOX Controlled sampling

which allows the mobile operator to have positive control at all times



Requires a simple Internal connection to the discriminator of your simplex transceiver. Nine memory speed-dialer is standard. 12VDC. 6% w x 71/6 d x 111/6 h, 21/2 lbs. \$34995

CS-800 Full Duplex Interconnect Operates full or half duplex, and also has a built-in Repeater Maker that allows you to



turn your radio into a powerful repeater system. Use with any dual ban-

der transceiver or connect to your existing repeater for Full Duplex patch, A nine memory Speed Dialer is standard, 12V DC 6%"w x 7%6"d x 11%6"h, 2½ lbs



tion Interconnect Voice activated, can be used simplex or through any remotely

located repeater. The standard 1/2-second Electronic Voice Delay totally eliminates syllable or word clipping and results in outstanding simplex performance. Ninety memory Speed-dialer and Remote base mode included. Requires only connections are to the microphone and speaker jacks of your simplex trans \$34995 ceiver. 12V DC. 67/8 w x 71/6 d x 111/6 h, 21/2 lbs



▶1995 ARRL HANDBOOK The 72st Edition! The guide to radio theory that every ham should know, including the latest digital modes and hundreds of explanatory and practical circuits. Practical construction projects that will allow beginners, old-timers and everyone in between to build amateur gear for their stations. A reference guide with updated lists of parts and equipment suppliers and other

data on solid-state components and transmitting tubes. Over 1100 pages, more than 2100 charts & illustrations. See Price List



No holes! ... The small tuning unit attaches to the glass inside the vehicle, and couples capacitively thru-the-glass to a full 1/2 wavelength element mounted on the outside. Installs with DUOBOND™ adhesive that holds fast but is easily removed without damage. Rated for 100 watts. Includes adhesive, 15 ft. coax and connector...... See Antenna Specialists in the Price List.



KENWOOD Accessories

► HS-5 Headphone Specifically designed for use with communications systems. Provides natural sound and eliminates uncomfortable pressure feeling permitting long hours of fatigue-free listening. 200mW maximum, input, 8Ω , 150Hz to 4kHz response. The 78" cord has a standard 1/4" phone plug \$799 attached. 12 oz.



PC-1A Phone Patch Controller Interfaces transceiver and telephone line. Has 8-pin plug for to KENWOOD transceivers, but may be used with most other equipment with changes in connections. Features NULL control, receiver/transmitter gain controls and VU level meter. 5¾"w x 2¼"h x 5"d, 1¾ ibs \$124° ►LF-30A HF Low Pass Filter Reduces the possibility of causing television and broadcast interference by suppressing harmonics contained in RF signals from transmitters operating in the 1.9-28MHz range. The cutoff frequency is 30MHz, and the atten uation is greater than 90dB from 90-300MHz. Rated 1KW PEP \$59° (SSB), 52Ω input/output. 9½" x 2" x 1%6", 1.2 lbs

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CS-900 Control Sta

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Hams love antenna books and this book is no exception. Written by world, renowned author Bob Haviland, W4MB, The Quad Antenna is the authoritative technical book on the design, construction, characteristics and applications of Quad Antennas. Discover how to easily build a quad

antenna for your station that will help you fill your logbook with rare DX that you have only dreamed about before. \$15.95

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The Packet Radio Operator's Manual

This book is written by CQ columnist and Amateur Radio Packet authority Buck Rogers, K4ABT, An all new introduction and it is the perfect single source, whether you're an advanced user or just starting out. Learn about packet radio without all the technical jargon. Also

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plete tutorial on exotic propagation modes as well as pages of data and sources for additional information \$15.95

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Take advantage of the 20 years of research and practical experience of naval communications engineer Capt. Paul H. Lee, USN(ret), N6PL. Learn the basic theory, design, and practice of the vertical antenna. Discover easy construction projects such as a fourband DX vertical or a broadband array for 80 meters. Ever wonder how to build a functional directive vertical system? Paul Lee can get you started today!

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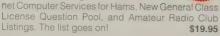
1995

NEW

ALMANAC

1995 CQ Amateur Radio Almanac, 2nd Edition

If you're looking for information about ham radio, it's in the 1995 Amateur Radio Almanac This Sourcebook is filled with over 500 pages of facts, tables, graphs, maps, and other information in an easy-to-read format. Here's just a sample of what's new this year: Amateur Radio Around the World, Expanded Coverage of Inter-



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For the newcomer to contesting or an experienced veteran, this video is for you! You'll get advice and operating tips from some of contest-



cessful competitors, including Ken Wolff, K1EA, Dick Newell, AK1A, and CQ's own contest columnist, John Dorr, K1AR. Here's just a sample of what you'll see: what contesting's all about, explaining contest jargon, tips for beginners, how to compete from a small station, operating secrets from the "pros", live QSOs from world class stations, VHF/UHF contesting \$19.95

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48







ALINCO ELECTRONICS INC. Handhelds • Mobiles • Packet

DJ-180T 2 Meter HANDHELD Simple, intuitive operation makes it easy to operate so it's not necessary to spend hours studying the instruction manual. Large 16digit DTMF pad, highly visible illuminated LCD display.



Covers 144-148MHz transmit/130-174 MHz receive. 10 multi-function memory channels including one Call channel-can be upgraded to 50 or 200 channels with optional plug-in chips stores all operating parameters including odd splits (0-15.995MHz). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. CTCSS encode and decode are standard. Automatic power off, low battery indicator. 5.3"h x 2.3"w x 1.3"d, 0.77 lbs

• Model DJ-180TH is 5 watts with a 12V-700 mAh battery standard.

DJ-F1T 2 Meter MINI HANDHELD Covers 144–148MHz transmit/138–174 MHz receive, also 118-136MHz (AM) receive with modification-programmable VFO range. 40 multi-function memory channels including Call one channel, 8 scanning modes, priority function (dual watch). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. Pager and code squelch, optional VOX operation. CTCSS DTMF encode and decode are standard. Illuminated DTMF keypad, autodialer, battery saver. 4.3 "h x 2.1"w x 1.5"d, 14 oz. • The Model DJ-F1T/HP is 5 watts with a 12V-600mah battery standard

DJ-G1T 2 Meter HANDHELD w/"Channel Scope"



Monitor 7 different memory channels simultaneously! The over-sized display shows seven bargraphs, each assignable to an independent memory channel. If one or more memory channels becomes active, it shows on the corresponding bar-graph lets you know-relative signal strength too. The display can also show activity on the entire band in 5, 10, 12.5, 15, 20, 25, 30 or 50KHz steps-like a spectrum analyzer. Covers 144-148MHz plus 440-449.995MHz receive only (cross-band semi-duplex operation). Also, 118-136 (AM) aircraft receive. Out-

put: 2.0W with standard. 7.2V-700 mAh battery; 5W with opt. battery or 13.8V. 80 multi-function memory channels (odd splits on all), 6 scan modes, 5 autodialer memories. CTCSS encode standard, DSQ for private paging, great audio, and more! 5"h x 2"w x 1.75"d, weighs only 13 oz.

DJ-580T 2 Meter TWINBAND HANDHELD • One of the most popular, ever! • A super-compact 2m/440MHz HT with full-duplex cross-band capability and Super Audio! Covers 144-148/440-440.995MHz transmit and 130-174/410-470MHz receive. MARS/CAP transmit and 118-136MHz (AM) after modification. Simultaneous receive on both UHF/VHF at the same time using separate squelch and volume controls-also receive on one band while transmitting on the other. 40 multifunction memories-intermix any combination of VHF and UHF, 8 scan modes. Output: 2.0W on both bands with standard 7.2V-700 mAh battery;

5W with optional battery or 13.8V. CTCSS encode and decode are standard. Autodialer, DTMF code squelch and paging functions. Illuminated keypad, battery saver automatic power off-more! 6.65"h x 2.24"w x 1.23"d, 0.97 lbs

STOP THE PRESS! Just Announced ... two New **ALINCO Handhelds!**



The New DJ-582T VHF/UHF FM Handheld Transceiver has the same standard features as the popular DJ-580T, plus these new additional features: Bigger bold keypad buttons; Easier to grasp control knobs: Accelerated scan speed; Bright red TX LED for positive transmit indication; Channels Display The New DJ-480T UHF FM Handheld Transceiver features similar design, and offers

simple program as found in the DJ-180T

DR-130T 2 Meter MOBILE 50/5W output-covers 144-148MH transmit/140-174MHz receive. 20 multi-function memory chan



chip. four scan modes. Large LCD with choice of frequency or channel dis play. 50 tone CTCSS encode and optional decode.Timeout timer (30-450 sec.) clone capability. DTMF microphone with

UP/DOWN buttons and DTMF encoder. 13.8V @ 9.5A. 51/2" w x 1%"h x 6"d, 2% lbs • Model DR-430T is 440MHz, 35W version.

DR-600TB 2m/70cm TWINBAND MOBILE Two radios in one Rugged, wide coverage, and high-tech features, suitable as a mobile or base. Covers 144-148/440-450MHz transmit and

150-173/410-470MHz receive. Modifiable for 118-136MHz (AM) aircraft band receive and MARS/CAP transmit Dual watch, full duplex cross band operation,



with independent controls for each band. 28 multi-function memory channels, multi-function scanning. Output: 45W (2m)/35W (440MHz). Optional kit allows separation of front pane from the transceiver for custom install, remote control possible from any DTMF capable 2m or 70cm transceiver. CTCSS encode and optional decode, separate VHF/UHF outputs, Remote control microphone allows control of a number of functions. Large dual LCD display. 13.8V @ 10A. 5%"w x 2"h x 7"d, 3¾ lbs.

DR-1200T 2 Meter DATA RADIO Engineered for optimum Packet Radio performance and operating convenience. Support



1200/2400 BAUD, modifiable to 9600 Covers 144-148MHz with 5, 10 12.5, 15, 20 and 25KHz resolution. 14 multifunction memory chan

nels, 4 scanning modes 5W/5W output. Illuminated LCD display with function indicators

programmable CTCSS encode and decode. Includes TNC interface cable, voice operation requires optional microphone. 13.8\ @ 5.5A. 5½ "w x 2"h x 6¼ "d, 2.2 lbs. Model DR-1200TH2 supports 9600 BAUD high speed operation.

DR-MOGT 6 Meter Mobile Transceiver Find exciting communications on the 50MHz band. Working DX is possible over

several hundred to several thousands of miles, taking advantage of many forms of propagation. The DR-M06 operates in the FM mode and cov-



ers 50 to 54MHz with 100 memory channels and 10/1 watt out put. Programmable offset, built-in 50 tone encoder with decoder optional, DTMF microphone included, Requires 13.8V DC at 3 amps. 5½"w x 1½ "h x 4½"d, 760g.

See page 2 for accessories... Call for Prices on major items

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	* Auto Power Shut-Off
	* Battery Power Saver: Approxi- mately 28 mA in Save Mode
1	★ Dimensions: 6%"h x 2%"w x 1%6"h
	★ Weight: Approx. 1 lb. ★ TRANSMITTER: High Power 5
	Watts; Low Power 0.5 Watts
	Model AZ-21A 2-meters; 144–148MHz transmit, 136–174MHz FM plus 118-135.995 MHz AM receive\$299 ^{s5}
	Model AZ-61 6-meters; 50–54MHz FM transmit, 46–54 MHz FM receive. \$379 ⁹⁵
	Model AZ-11 10-meters; 28–29.7MHz FM transmit,
	28–29.995MHz receive\$379 ⁹⁵
5	
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	FM receive, 50/5 watts. \$389 ⁹⁵ PCS-7800H 10-meters: 28–29.7MHz FM transmit.
	28–29.995MHz receive, 50/5 watts
	 PPCS-7200 220MHz; 215–230MHz FM, 25/5W\$409⁹⁵ PPCS-7300H 440MHz; 420–470MHz FM, 35/5W\$439⁹⁵
	AZDEN Headphones
i	headpholes
	Con contras
	The Model DM-10 Headphones ((left) and the Model HS-03 Headphones with Boom Microphone (right) have been
	specifically designed to enhance voice reception and transmis- sion. The lightweight, soft ear pads and adjustable headband
	permit long hours of use. The earphones on both models have a 20Ω impedance and a 200-5000Hz response with a 6dB rise at

More Alinco on pp. 50 to 52

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is supplied. DM-10 \$4995 • HS-03 \$6955

2400Hz, 1/4" phone plug is supplied. The dynamic boom micro-

4000Hz response with a 6dB rise at 2500Hz. An 8-pin connector

phone on the HS-03 features a 500Ω impedance and a 300-

<complex-block>

DR-600T (144 MHz/440 MHz)

The outstanding abilities of the DR-600T set it apart from every other radio. Features like Wide Frequency Coverage, Excellent Intermod Rejection, Direct Frequency Entry from the microphone, Three Output Power Selections, Autopatch Memories, and 6 Scanning Modes make the DR-600T the radio of choice for demanding users. The Remote Mount Head allows for custom installation in most any vehicle, and also helps to deter theft.

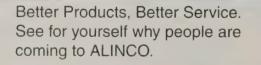
This road-ready rig can also be remote controlled by any radio that transmits DTMF tones. This remarkable feature allows the DR-600T to act as a full-featured Cross-Band Repeater. For added control, a security code can be programmed that will allow control only by the control operator (you).

DJ-G1T

The DJ-G1T 2m HT from ALINCO scores another "First" for Amateur Radio technology. Our new "Channel Scope" feature opens new doors for Ham operators. Now it is possible to visually monitor up to 7 memory channels at once with just a glance at the display.

Also, the Channel Scope feature can be used to show band activity in the frequency domain, much like a Digital Spectrum Analyzer. Hunting for band activity just got easier.

Other outstanding features include 440 Receive, 80 Memory channels, AM Aircraft receive, 5 Autodialer channels, DSQ for private paging, Cross-Band Semi-Duplex, 6 Scan Modes, and Odd Splits on all Memory Channels.





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The ONLY Choice



DR-130/430T: Power Play

The DR-130T packs a big punch. This compact radio delivers 50 Watts of cool running power, and offers the durability and reliability that Hams have come to expect from ALINCO. The DR-430T is a 70-cm version of the same radio, and can supply 35 watts of output power

These rigs offer 12 additional CTCSS tones (50 total) for compatibility with any repeater system. 20 memory channels are included, but if more channels are needed, simply plug in the optional EJ-19U module, and 100 memory channels will be available. All memory channels can store 'odd split' frequencies, and also store CTCSS encode/decode status.

A 1750Hz tone burst feature is included, and the LCD display has two modes: 'Commercial Display' which shows only the channel number, and 'Amateur Display' which shows channel numbers and frequency. The simple layout of the front panel offers maximum operating efficiency with no confusion, and a built-in Time Out Timer (TOT) can be programmed from 30-450 seconds.

DJ-180T/ TH: Survival of the fittest

The rugged DJ-180T features an ergonomics design that fits in your hand like a glove. Excellent sensitivity and great sound make this the radio of choice for demanding operators. The DJ-180TH (High power version) comes with a 12V battery and delivers 5 watts of solid output power.

STEP APO

INGO

.

Ten memory channels come standard, and the unit can be upgrade to 50, or even 200 memory channels with the optional plug-in chips. The DJ-180T comes standard with CTCSS encode <u>and decode</u>, and also has an Automatic Power Off (APO) feature that extends battery life.

Odd Splits! This radio can store repeater offsets from 0 to 15.995 MHz. A different offset can be stored in each memory channel, and most other functions can also be stored independently in each memory channel.

Check out the affordable technology of the 90's. Check out Alinco.



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DEMAND THE BEST



DJ-580T Best Performance

The <u>Right</u> Features: Alinco's DJ-580T offers powerful user friendly features that make operating easier. Many new radios available today are so complex that an instruction manual needs to be carried with the radio. We have designed the DJ-580T to be user-friendly, but also sophisticated: It has the features you need, without any useless bells and whistles. This radio can receive 130-174 MHz, 420-474 MHz, and can be modified to receive AM from 118-142 MHz. Other outstanding features include cross-band repeat function, full duplex operation, backlit keypad, 8 scanning modes, CTCSS encode / decode, and DSQ for private paging.

The DJ-580T will deliver a solid 5 Watts of power with the optional 12V battery, and our EMS-8Z Remote Speaker Microphone offers remote control of memory channels and scanning features.



DJ-F1T / DJ-F1TH Best of Both Worlds

Small size combined with durability? It sounds like Alinco is breaking the rules again.

Most of the 'micro' handhelds that we've checked out seem to suffer from the same problems: Weak audio, flimsy construction, difficult to use keypads, and poor performance. The DJ-F1T overcomes these problems, offering reliability and performance that surpasses any handheld radio available today. Our unique 'clam shell' battery design allows for a full size keypad for convenient use, and a large speaker for outstanding audio quality. All this is packed into a cast aluminum frame and tough poly-plastic case that has set a new industry standard for durability.

Standard features include: 40 memory channels (odd splits on all), 3 output power levels, DSQ code squelch and private paging, illuminated DTMF keypad, CTCSS encode, Automatic Power Off, and 8 scan modes. The DJ-F1T will receive 130-174 MHz and can be modified to receive AM from 118-142 MHz.

Better Products, Better Service. See for yourself why people are coming to ALINCO.





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No matter what your frequency requirements (2, 6, 10, 220, 440), when you buy a mono-bander factory-direct from Azden, you'll enjoy these five great advantages:

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FLEXIBILITY: We go the extra step, like CAP and MARS mods at no charge, with proper documentation.

TWO YEAR WARRANTY: The only manufacturer confident enough to offer this, everything is covered for the first year, and we only charge for labor in the second year.

So whether you're buying a mobile, handheld radio or communications headset, come to Azden. We understand.

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The QMS is an SGC Smartuner[®] automatic antenna coupler, an SG303 extended fullrange antenna, and the special exterior—waterproof—mounting package, all in one.

The QMS is that large box strapped to the side. We admit, at first glance it looks a little unusual.

But once you use it, you'll find an almost unbelievable jump in reception and transmitting range (3-20 db). The **QMS** makes a typical HF-SSB perform like it's never performed before. Match it with a cutting edge SGC HF-SSB and it will blast holes through major mountain ranges and probably some laws of physics. Power and focus are everything in HF-SSB ham rigs, Buy this and own the best base station on-or off-the road.

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Mounting the tuner and antenna on the outside reduces engine noise and eliminates power-draining antenna wire runs between the antenna ____ and tuner.



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STANDARD

C-168A 2 Meter Handheld • Very small! Covers 144–147.995 MHz transmit and 115–175 MHz receive,

including (AM) aircraft band. Modifiable for MARS/CAP transmit*, 40-memory channels (optional 200 channel memory unit plugs-in). 7 types and 3 modes of scanning. Output: 2.5W output with included 700 mAh, 7.2V battery; 5W at 12V. CTCSS encode and decode, DTMF squelch with page. 4.9"h x 1.8"w x 1.2"d, 10 oz

C-468A Same as C-168A described above. but covers 438-449.995MHz transmit and 400-470MHz receive.

CALL for Prices...

C-188A 2 Meter Thin Handheld Small – fits in shirt pocket, slide-cover protects keyboard. Covers 144-147.995MHz and 115-175MHz receive including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40 memory channels (optional extra 40 or 200 memory units plug-in). Ten 15-digit autodial memories. Output: 2.5W with included 700 mAh 6V battery; 5W at 9.6V. 7 types and 3 modes of scanning. CTCSS encode and decode. 5.8"h x 2.3"w x 1.0"d, 10 oz.

C-288A Same as **C-188A** but covers 220-225 MHz transmit and 115-249 MHz (Standard's Super-Extended receive).

CALL for Prices...

►C-528A Deluxe Twin Band Handheld 2 Meters and 440MHz .Covers 144-147.995 &

438-449.995MHz transmit, 130-170 & 400-470MHz receive Modifiable for MARS/CAP transmit*. Full-duplex



cross-band repeat. 40 memory channels (20+20) + 2 call + 2 vfo. Output 2.8W (2M), 2.5W (440MHz) with the supplied 700 mAh, 7.2V battery and 5W with a 12VDC source. Five scan modes per band. CTCSS encode and decode included. DTMF squelch and page. New flex design antenna. 61/3"h x 21/4"w x 11/4"d, 17 oz C-228A Same as C-528A but 2m/220 MHz-covers 144-147.955 & 220-224.995 transmit and 130-174 & 220-245 MHz receive. Output: 2.5W on both bands

C-628A Same as C-528A but 440MHz/1.2 GHz. Covers 438-449.995 tx, 400-470MHz rx and 1240-1300MHz transmit and receive. Output: 2.5W (440MHz), 1W (1.2GHz).

Handhelds • Mobiles

C-558A Dlx. Super Compact Twin Band HT Covers 2 meters and 440MHz. Ranges: 144-147.995 and 438-449.995MHz transmit, 115-170 and 400-470MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. Fullduplex cross-band repeat. 40 memory channels; optional extra 40 or 200 plug-in memory units available. Ten 15-digit autodial memories. Output: 2.8W (2M), 2.5W (440MHz) with supplied 700 mAh, 7.2V battery or 5W at 12VDC. Five scan modes; 3 types on each band. CTCSS encode and decode included. 5%"h x 2%"w x 1%"d, 12.5 oz...... CALL

> *Modifications for MAR/CAP transmit require an appropriate license.

C-108A 2 Meter Handheld TINIEST HANDHELD EVER! Fits in your shirt pocket! 200mW output - plenty for hamfests, picnics, conventions, or working nearby repeaters. Extended receive: 100–175MHz including AM aircraft band, 20 memories, CTCSS encode built-in (23 tones). Four scan modes Powered by just two alkaline AA batteries. 3¼"h x 2¾"h x 1"d, 5 oz..... CALL

C-158A 2 Meter Handheld Covers 144–148MHz. Modifiable for MARS/CAP transmit*. 20 memories. 7 scanning modes. CTCSS encode and decode built-in. Output is 2W with the supplied 700mAh battery pack, and 5W with a 12V. source. 5%"h x 2¼ "w x 1.2"d, 13 oz ... CALL

C-178A Dual Band Handheld Up to 5W on 2M and 50mW on 440MHz. Covers 144-148MHz and 438-450MHz transmit. Extended receive: 110-174 and 320-475MHz, including AM aircraft band. Modifiable for MARS/CAP transmit*. 40 memory snap-in chip with optional extra 40 or 200 memory chips available. CTCSS encode and decode. Seven scanning modes, including CTCSS scan. 2W/2m with supplied 700mAH, 7.2V battery 5W/2M at 12V. 4%"h x 2¼"w x 1¼ "d, 13 oz.. CALL



C-1208DA 2 Meter Mobile 50W of power totally controlled from the microphone! Remote the radio anywhere: the micro-

phone has a large LCD display, all controls, and speaker. Super extended receive 100-200 and 250-520MHz including (AM) aircraft band. 100 memories. CTCSS encode and decode built-in. 10 DTMF autodial memories of 15 digits each. Plug-in ready without modification for high-speed 9600 baud packet (or 1200/2400). Six scan modes, including priority and CTCSS. Modifiable for MARS/CAP transmit*. 5½ "w x 5¾"d, 1.7 lbs.

►C-5718DA Twin Band Mobile • 2M/440MHz with 110-199 and 250-499 MHz extended receive including (AM) aircraft band Operate as one unit with an optional snap-on twin frequency display front panel, or remotely,

out of the way, using the optional front panel extension cable. Also, control the radio remotely with the unique remote control microphone which has a back-lit keypad, twin LCD display and speaker-built-in! Power: 50W (2m) 40W (440MHz). 40 memories (optional 200 channel memory



chip plugs-in). CTCSS encode and decode built-in. Crossband repeat mode. Full-duplex crossband transmit and receive. DTMF paging and coded squelch. 8 kinds of scan, including CTCSS scan-each band scans separately. Dual frequency receive: 2-VHF, or 2-UHF, or 1-VHF and 1-UHF. Packet ready for 9600 (1200/2400) baud, and interface for VHF/UHF; just add a TNC Modifiable for MARS/CAP tx*. 1%"h x 5½"w x 5%6"d, 2.2 lbs. CALL

CCR-708A Communications Test Receiver with Spectral Display Scope Full Coverage from 50 to 904.995MHz. LCD spectral display scope used for evaluating signal strength and



tracking down near by interfering sig nals. 100 memory channels. AM, N/FM, and W/FM modes. Display range: 100 KHz, 250 KHz, or 1000 KHz. 13.8V DC or 120V with supplied AC adapter. 2%"h x 7%"w x CALL 7%"d, 4.6 lbs.

See the Price list for optional accessories for these STANDARD Radios.

Log into the AES[®] BBS! (414) 358-3472 (8-N-1 up to 14.4k baud) Prices • Specials • Used & Demo Updates • Important Info



SG-2000 Amateur HF Transceiver A rugged Commercial Grade HF transceiver that provides 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode



programmed with 644 ITU channels and 100 user defined channels that can be set to the Ham frequencies within the 1.8-30 MHz range; receives 500kHz-

30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories in user adjustable scan speeds and rates. The large LCD, wide-angle display has adjustable backlighting which provides easy viewing night or day. The SG-2000 operates as a single unit, or the front panel can be removed to function as a remote head. Built-in computer control capability allows the SG-2000 to be controlled by any standard RSS-232 protocol connector for easy operation on all digital modes. Requires 12VDC @ 16A. 4¾"h x 10"w x 15"d, 12 lbsSGC 04-01 \$1479°

See the Price List for optional accessories for the SG-2000, and other SGC products.



SG-230 The Smartuner® An automatic HF antenna tuner capable of tuning any length antenna from 8 to 80 ft. long with in the 1.8-30MHz frequency range; 160 meter operation

requires a minimum length of 8 ft. Operates with very low power, even tunes itself on an SSB signal; handles up to 150W. A microprocessor controls the switching of 64 input and 32 output capacitor combina-

tions, plus 256 inductance combinations in a pi-network to tune an unknown antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof, great for mobile-marine! Requires 10 to 15VDC @ 0.9A 12"w x 16"d x 3"h, 8 lbs... ..SGC 54-12 \$489⁹⁵

▶SG-500 The SmartPowerCube™ A fully automatic bandswitching, microprocessor controlled HF linear amplifier designed to do exceptional service in fixed, mobile, and marine



applications in the 1.6 to 24 MHz range. A rugged power source with a cast aluminum enclosure and extra heavy duty heat sinks, powder coat finish, and the most durable electronic components and assembly techniques. Nearly indestructible, compact and light, specifically designed to operate in

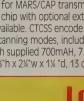
an unattended manner making it Ideal for installations where access to the amplifier is limited. Output is 500W PEP, with 50 to 90W input: CW rating is 500W out for 10 min, or unlimited with optional fan. Requires 10.0 to 18.0 VDC @ 40A average (SSB), 90A peak, or CW. 6"h x 12¼"d x 11½"w, 21 lbsscc 52-93 \$94995



► QMS Antenna Tuner System The QMS is an SGC Smartuner® automatic antenna coupler, an SG-303 9 ft. extended full range antenna, and a special exterior-waterproof mounting package, all-in-one. It looks unusual, but it gives any mobile operating in the 1.8–30MHz

range with up to 150W, an almost unbelievable jump in reception and transmitting range (3-20dB). Mounting the tuner on the outside reduces engine noise and eliminates power draining antenna wire runs between the antenna and tuner. It attaches to vehicle using high suction devices and nylon webbing, and provides a rugged antenna installation without drilling any holes. 18"w x 12"d x 5"h, 24 lbs. See Price List





Here's the tiniest hand-held Amateur transceiver ever offered! Standard's C108A is truly the rig you'll want to carry with you all the time. Its 200 mW output is ample for hamfests, picnics, conventions — or even for working nearby repeaters. With its 100-175 MHz receiver, you can also monitor the public service, marine and aircraft (AM detector) bands along with your favorite 2-meter frequencies.

JUST LOOK AT WHAT YOU GET WITH THE C108A:

- 100-174.995 MHz receive, FM or AM detector
- 200 mW Transmit Power
- 20 memories; stores frequency, offset and CTCSS tone
- CTCSS built-in; 23 tones available
- Scan modes: 1 MHz, Full Range, Memory, and Memory-Scan-Memory; programmable for Pause and Busy
- DC Power: 2 alkaline AA penlight cells

PLUS Battery Save and Auto Power Off, Keyboard Lock. The C108A measures only 2.3"x3.2"x1", weighs less than 5 oz.—get one for your shirt pocket today!

ACCESSORIES:

CHP111	Headset microphone
CHP150	VOX microphone
CLC401	Standard soft case
CLC402	Deluxe soft case
CMP111	Speaker microphone
CMP113	Tie pin microphone
CMP115	Mini speaker microphon
CNB401	NiCad battery pack
CSA401A	NiCad battery charger



2 WETERS IN YOUR SHIRT POCKET!

FM TRANSCEIVE

STANDARD

Actual size!

FCC APPROVAL PENDING

For more information on the C108A and other STANDARD products, please contact your nearest STANDARD dealer. Specifications, features and price are subject to change without obligation or notice.

Standard Amateur Radio Products, Inc. P.O. Box 48480 Niles, Illinois 60714 Tel. (312) 763-0081 Fax (312) 763-3377

WE'RE STANDARD AND WE'VE GOT YOUR STYLE!

STANDARD PIONEERS ANOTHER FIRST!! THE C5718DA & C1208DA IS PACKET READY! Designed with packet in mind. Out-of-the-box high-speed, 9600 baud, interface. Just connect your TNC to the radio and you're on the high speed packet network. Also, operates at 1200 and 2400 baud equally well.





C5718DA



C5718DA TWIN-BAND MOBILE 50 Watts of power totally controlled from the microphone! Remote this radio anywhere!

Unsurpassed intermod rejection. Built in Antenna Duplexer. Dual frequency receive; two VHF, two UHF, or VHF/UHF. Frequency range: Receives 110-199.995 MHz (including AM aircraft) and 250-499-995 MHz 50 Watts 2M, 40 Watts 70cm (3W Low, 10W Medium selectable) Memories: 40 (20 per band); stores frequency, offsets and CTCSS tones 200 memory channel option, CMU182. CTCSS Encode /Decode standard Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz. Full Duplex cross band operation with CTCSS tones. Paging/Coded squelch. DTMF autopatch dialing, 6 memories, 15 digits. Eight kinds of scan, including priority and CTCSS. Memory scan lock-out. Back-lit Keypad and Display Auto mute opposite band, three settings (-6, -12 and -18dB). Cooling fan built- in. Size: 5.51"W 1.57"H 5.31"D Weight 2.2 lbs.. Mobile bracket and power cord (2M) included.

MARS and CAP modification available (permit required), Specifications, features and pice are subject to change without obligation or police STANDARD Amateur Radio, Products, Inc. P.O. Box 48480, Niles, Illinois 60714

C1208DA

STANDARD HAS EVERYTHING IN THE SPEAKER-MIC WHILE DELIVERING UP TO 50 WATTS!

C1208DA TWIN-BAND MOBILE The smallest, lowest price 2 meter mobile radio that delivers all the features. Mount it under a seat or even in the trunk using the optional extension cable (CAW561 or CAW562).

Frequency range: Receives 110-199.995 MHz (including AM aircraft) and 250-519.995 MHz. 50 Watts, 10W and 3W selectable Built in Antenna Duplexer for 450 MHz receive Memories: 100; stores frequency, offsets and CTCSS tones. CTCSS Encode/Decode standard.

Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 Khz. Paging/Coded squelch. DTMF autopatch dialing, 10 memories, 15 digits. Six kinds of scan, including priority and CTCSS. Back-lit Keypad and Display Auto mute: four settings (-10, -20, -30 and off) Semi Duplex cross-band operation with CTCSS tones Cooling fan built-in

Size: 5.51 "W-1.18"H 5.79"D: Weight 1.65 lbs. Mobile bracket and power cord (3M) included.



STANDARD

C528A

C628A

11600 29150

C528A 2 Meters & 440MHz **Deluxe Twin-Band HT**

5 W (2M and 440) at 12 VDC

C228A

14200 5551

- 40 memories (20 + 20 "limited")
 130-174 and 300-474 MHz extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

Superior Intermod Rejection:

*Modifiable for MARS/CAP

C558A 2 Meters & 440MHz Elegance, Balance & Twin-Band Performance

- 5 W (2M and 440) at 12 VDC
- 40+ memories (optional 200+ with plug-in chip)
- 115-174 and 340-474 MHz extended receive lincluding AM air band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C228A 2 Meters & 220MHz **Deluxe Twin-Band HT**

C558A

GET A GRIP.

STATE

- 5 W (2M and 220) at 12 VDC
- 40 memories (20 + 20 "limited")
- 130-174 and 200-244 MHz extended receive
- I auto dial memory
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C628A 440 & 1.2 GHz **Deluxe Twin-Band HT**

- 5 W (440) and 1 W (1.2 GHz) at 12 VDC
- 40 memories (20 +20 "limited")
- 300-474 and 1220-1340 MHz extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

STANDARD is the world's largest manufacturer of VHF-UHF Amateur Radio Equipment. For further information contact your Standard dealer or call (312)763-0081 FAX (312)763-3377 Standard Amateur Radio Products, Inc. P.O. Box 48480 Niles, Illinois 60714

* Modifications for MARS/CAP transmit require an appropriate license. Specifications, features and price are subject to change without obligation or notice.



C158A 2 Meters The Affordable HT

- 5 Watts at 12 VDC
- 20 memories
- 130-170MHz extended receive
 Uppurpared 0, 152 microwalts
- Unsurpassed 0.158 microvolts sensitivity
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C288A 220MHz The Slim-Line HT Fits in your shirt p<u>ocket!</u>

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-249MHz super extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

C168A 2 Meters The Deluxe Small HT

- 5 Watts at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C188A 2 Meters The Slim-Line HT Fits in your shirt pocket!

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C178A 2 Meters (+ low power 440) The Deluxe Dual-Band HT

- Single-Band Price 5 W (2M)
- at 12 VDC & 50mW (440) • 40+ memories (or optional 200+
- with plug-in chip)
 110-174 & 320-474MHz extended Rx
- 110-174 & 320-474MHz extended Rx (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C468A 440MHz The Deluxe Small HT

- 5 W at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 400-474MHz extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

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* Modifications for MARS/CAP transmit require an appropriate license. Specifications, features and price are subject to change without obligation or notice.

ampteur Fleetronic **ICOM** Amateur Radio Equipment

►IC-781 All-mode 160-10M transceiver with 100kHz-30MHz receiver, built-in automatic antenna tuner and AC supply.



10-150W output, Dual VFOs, 99 memories, band stacking registers and scanning. A 5" CRT spectrum scope shows relative signal strengths, clear spots, pile-ups, etc. Displays VFO frequencies, memory contents, function menus, notes, 15 operational screens, packet and AMTOR data. Dual Watch monitors two frequencies, RF speech processor, electronic kever-QSK CW, Noise blanker, W/N CW/SSB filters. Audio filter, twin PBT, CW pitch. RIT/XIT, preamp and attenuator. 5%"h x 16¾"w x 16¼"d, 51 lbs. ▶IC-765 All mode 160-10M transceiver with 100kHz-30MHz

2 ieraso - 19 91

receiver, built-in automatic antenna tuner and AC supply, Full duty cycle, 10-100W output. Direct keyboard entry, dual VEOs. 99 memories.

band stacking register and multiple scanning functions. RF speech processor, electronic keyer and QSK CW. IF shift, notch, CW pitch and CW narrow filter. Noise blanker, RIT/XIT, receiver preamp and attenuator, CI-V. 5%"h x 16¾"w x 16¼"d, 39 lbs. ▶ 1C-737A All mode 160-10M transceiver with 100kHz -30MHz receiver, built-in automatic antenna tuner and automatic

antenna selector. 100W output. VOX , electronic keyer and QSK

CW Keypad for direct frequency entry and band selection, D D S 101 memories, memo pads, three types of scanning. Double band



stacking registers, PBT and notch, RIT and ATX functions. Speech compressor, preamplifer/attenuator, all mode squelch. Hand mic. supplied. 12VDC -20A. 13" x 41/2" x 111/4", 18 lbs

▶1C-736 Looks like IC-737A – covers 160-10M plus 6M and 500kHz-30MHz receive. Internal HF/6m antenna tuner with presets, automatic antenna selector and AC power supply. 100W output. Double band stacking registers, 1 Hz tuning resolution, 101 memories, multiple scanning modes, VOX, full and semibreak-in CW, PBT and notch filter. 13"w x 4½"h x 11¼"d, 23 lbs.

▶IC-728 160-10M with 500kHz-33MHz receive. SSB, CW and AM



receive are standard, AM transmit and FM optional. Dual VFO, 26 memories. DDS, PBT. speech compressor, three scanning func tions, band stacking reg

ister, QSK CW, 10Hz step tuning + RIT, noise blanker, preamp and attenuator, all mode squeich. 12VDC-20A 3¾"h x 9½"w x 9½"d, 10 lbs.

The New! FICOM IC-738 ... **Check It Out on the Inside Front Cover**

▶ 1C-820H 2m/440MHz transceiver. SSB/CW/FM, 45/40W. Normal dual band operation plus additional features for satellite

reverse tracking for different modes; independent.uplink/downlink control for doppler shift compensation: separate satellite VFO and satellite



Hi!... I'm Jim, WB9LSR

Call me anytime at

1-800-558-0411

memories for quick switching from normal to satellite operation DDS, 2 VFOs, 1Hz tuning steps. IF shift, AF speech processor multiple scan modes, CW semi-break-in and sidetone, RIT. 9600 baud packet ready. 12VDC-16A. 3%"h x 9%"w x 9%"d, 11 lbs.

► 1C-970H 2m/440MHz FM/SSB/CW transceiver with optional 1.2GHz operation and extended receive module. Normal dual

band operation plus features suitable for satellite. EME and propagation work. 45/40W output 396 memory and 5 call channels dual watch.



built-in pager, code squelch and optional pocket beep functions. Simultaneous dual band receive with multiple main and sub-band scan modes; independent dials, volume and squelch controls. Automatic uplink/downlink frequency tracking. 12V DC-16A. 5%"h x 16¾"w x 16¼"d, 32 lbs.

UHF/VHF Three models - similar in appearance and function SSB/CW/FM. Dual VFOs, 99 memories - programmable call chan-



nel, multiple scan functions. AF speech compressor, full or semi break-in CW Noise blanker, notch filter, PBT, narrow/wide filter switch, RIT, variable tone,

all-mode squelch, data switch for packet. Optional tone squelch and voice synthesizer. 334"h x 91/2"w x 91/2"d, 131/2 lbs.

▶IC-275H 2 meters; 10-100W, 12VDC-20A

▶IC-475H 440MHz; 10-75W, 12VDC-20A.

▶IC-575H 6 & 10-meters; 26-56MHz rx, 10-100W, 12VDC-20A ►IC-DELTA-100H High performance triple band VHF/UHF

FM. Covers 2 meters, 440MHz and 1.2GHz. Power out: 50W (2m), 35W (440MHz), 10W (1.2GHz). Eight selectable band combinations, 642 memories. Multiple scanning functions. Detachable control panel and full remote control microphone. 14 DTMF autodial



memories, three external speaker jacks. PL tone encode included.12VDC-12A. 2"h x 5½"w x 7"d, 4½ lbs.

►IC-281H 2 meter tx/rx and 440

MHz rx full duplex, crossband operation, 50W. 70 allocatable memories, 10 scratch pad memories. Packet plug and play - 9600bps, data filter cir-

cuitry. Auto repeater functions, auto channel advance, remote control microphone. 12VDC-10.5A 1%"h x 5½"w x 6½"d, 2.1 lbs.

▶IC-2340 Dual Band 2M/ 440MHz, 45/35W. Full duplex crossband, 100 memories-50 each band with programmable band

and memory scan. Auto repeater shift, built-in duplexer and programmable encoder DTMF autodial.Opt. tone scan, voice synth. Remotable-opt. remote



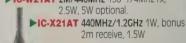
12VDC-10.5A. 1%"h x 5½"w x 6½"d, 2.9 lbs

IC-2700H Dual Band 2M/440MHz, 50/35W. Independent dual bands, 100 allocatable memories. Multiple scan functions. Detach-



mic, remotable. Optional infrared wireless mic. Auto repeater shift, built-in pager, code squelch, PL encode. DTMF autodialer, timeout timer, auto power off. Optional tone scan, voice synthesizer. 12VDC-10.5A. 2"h x 5½"w x 5½"d, 3.2 lbs

IC-W21AT 2M/440MHz 138–174MHz rx,



IC-DELTA-1A Tri Band 2m/70cm/1.2GHz. Covers 140-150MHz, 440-450MHz and 1240-1300MHz.

Extended 2M receive 138-174MHz for NOAA and public service broadcasts. Single/dual or simultaneous three band reception - monitor everything at once, 2W out on 2m and 70cm; 5W with optional battery; 1W out on 1.2GHz. 78 memories (26 per band) store frequency, offset, PL tone and digital squelch settings. Four DTMF autodialing memories, all PL tones, 24-hour clock with on/off timers. Separate controls /functions for each band 5¾"h x 2‰"w x 11‰"d, 20 oz.

►IC-3SAT 220MHz 2W - 5W with optional battery or 13.8VDC into external DC jack. 48 memory channels and 1 programmable call channel. VFO and memory scan functions, with frequency skip. DTMF, 10 DTMF memories. Auto power off, builtin clock. Small - 4¾"h x 256"w x 156"d, 13 oz.

ICOM accessories pp 9–12 **ICOM Customer Service Hotline ...** Call (206) 454-8155





tery capacity indicator, power on/off timers and auto power off. 41/6"h x 21/8"w x 13/8"d, 11 oz. ►IC-T41A covers 440MHz tx/rx, 2M receive

Prices and Trade-in Q

►IC-2GXAT 2-Meter Handheid 3W standard

7W capable, with optional battery pack or

13.5VDC. 43 memory channels - 40 regular 1 call channel and 2 scan edge channels, pro-

grammed or memory scan with skip function.

function, tone scan. DTMF redial, and 5 DTMF auto dial memories, selectable DTMF speed.

CH number indication. Automatic repeater

Built-in sub-audible tone encoder, optional

tone squelch and pocket beep. Automatic

Power Saver function. Rugged die-cast aluminum case, splash resistant body.

IC-2GXAT/HP as above, but 7W standard.

41% h x 21/1 w x 1% d, 13 oz.

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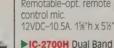
Call Toll Free 1-800-558-0411

The 21AT Series ... Dual Band Handhelds

3 models, similar appearance and basic features. Receive two frequencies simultaneously on the same band, plus full crossband operation. 32 memory channels, 1 call channel and 2 scan edge channels per band. Built-in pocket beep, pager, code squeich and tone squeich, 4 DTMF memory channels Separate speaker control for routing one or both bands to an external speaker. Repeater quick memory, repeater output control automatically adjusts transmit power based on received signal strength. Automatic power down, power on, power off, battery capacity indicator, 900mAh battery standard, 4%"h x 2¼"w x 1%"d, 11 oz



ICOM







VHF FM



IC-T41A UHF FM Transceiver

Maximum Comfort

Elastomer Construction - This special material provides a comfortable, positive grip. The compact design fits the natural curve of your fingers and hand - especially welcome during long operating times. **Backlit Keypad** – Ample spacing between keys for positive, error free operation. Large Display – Indicates 17 different functions, battery capacity and subband frequency.

Feel The Comfort Of Extended **Operations With The IC-T21A!**

Full Crossband Duplex Operation

Dual Band Receive Capability - Permits reception of another band (i.e.: 440 MHz on the IC-T21A).

Full Crossband Duplex Operation – Possible with the unique "whisper mode" microphone (standard) for telephone type QSO's.



6 Hours Operating Time*

Low Power Consumption – Consumes only 8 mA while standing by.

Auto Power Control – Conserves the battery by monitoring the repeater signal strength and selecting the best matching output power from 5 levels (down to 15 mW).

Auto Low Power Function – Automatically selects 15 mW just before battery exhaustion so you can complete your QSO. * 5.5 to 6 hours with 1:1:8 duty cycle (Tx high : RX : Standby)

Battery Capacity Indicator – Shows battery capacity.

New Scanning Standards

Ultra High Speed Scan -3 to 4 times faster than most other handhelds (33 channels/sec., 12.5 memory ch./sec.). **Bonus Bond** – Can be scanned while the main band is being scanned (e.g.: 70 cm for the IC-T21A).

Backlit Keypad!

6 Priority Watch Modes - Check for other signals while operating on a VFO frequency.

Ultra-Convenient Repeater Operations

Subaudible Tone Scan - Detects, displays and programs the tone frequency into the VFO. Permits access to a repeater when you don't know the tone frequency.

Auto Repeater Function - Automatically activates repeater settings (duplex ON/OFF. duplex direction, tone encoder ON/OFF) when the operating frequency falls in the repeater output range.

Repeater Memory – Quickly recall settings of your last worked repeater (RPT-M key). **5 DTMF Memories** – Automatically dial your favorite telephone numbers.

Selectable DTMF Transmission Speed -

Adjust the IC-T21A/T41A to the capabilities of the repeater (5 cps, 2.5 cps, 1.6 cps, 1 cps).



Powerful 6 W Output Power*

Our newly designed SC-1257 power module provides all the power necessary to reach fringe areas. Accepts 4-16 V input. With a 13.5 V DC power source.

Innovative Memory Functions

114 Memory Channels - Store all repeater information.

Memory Select Channels – For quick access, up to 30 can be designated Memory Select Channels.

Memory Transfer - Quickly transfers a memory channel's contents to VFO. Useful for searching for signals near a memory channel. **EEPROM** – Memory information is retained virtually forever.

And More!

• Includes Flexible Antenna, Belt Clip, Handstrap, Rechargeable Ni-Cd Battery Pack and Charger • Built-in Pager, Code Squelch, Pocket Beep & Tone Squelch

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The new IC-2700H or IC-2340H give you a choice of features and budget. Choose the one that best fits your needs. Either way you win ... it's an ICOM!

DUAL BAND FM TRANSCEIVER IC-2700H

DUR

IC-2700H

The IC-2700H

features a

mounting kit you can

mount the faceplate in an easy-to-see

location while keeping the main body in

a secure place, such as the trunk of your

car. With its Easy to Read Display, all

indications are visible and separate for

The IC-2700H has Independent Controls

and Switches for each band. Often-used

each band providing safe operation

while driving.

Detachable Front

Panel. With the optional

Inice

ICOM

IC-2700H with supplied HM-92 DTMF Microphone.

IC-2700H

- Covers 2 M (144-148 MHz) and UHF (440-450 MHz)
- D 50 W VHF, 35 W UHF (selectable)
- Detachable Front Panel
- 3 Channel Scratch Pad Memory
 Separate Tuning Dial, Volume and
- Squelch Control for Each Band
- FULL Remote Control Microphone
- INFRARED Wireless Microphone (opt.)
 3 Repeater Quick Memories
- 3 Repeater Wick memories
 118 Total Memory Locations
- Remoteable DTMF Control
- Auto Repeater Duplex Direction
- V/V or U/U Simultaneous Receive of 2 Signals on the Same Band
- Built-in Pager and Code Squelch
- 24 Squeich Levels
- One-touch PTT with Time-out Timer
- Tone Scan (w/optional UT-84)

IC-2340H

- Covers 2 M (144-148 MHz) and UHF (440-450 MHz)
- 45 W VHF, 35 W UHF (selectable)
 Independent Controls
- 110 Total Memory Locations
- Auto Repeater Offset Function
- Remote DTMF Mic (opt. UT-55)
- 14 Autodialing Memories
- Direct Frequency Input
- One-push Action Buttons
- 🗖 Built-in Duplexer
- 2.4 W Audio
- Large, Easy to Read Display
- Tone Scan (opt. UT-89)
- □ Voice Synthesizer (opt. UT-66)
- Optional Pager and Code Squelch
- Optional Tone Squelch and Pocket Beep

Cutting-Edge Technology & Features...

Wireless IC-2700H HM-90 infrared mic (optional).

CIUE)

dials and switches for each band are duplicated, providing true dual band operation in V/V, U/U or V/U modes.

The supplied **DTMF Microphone** provides *full remote control of all transceiver functions.* The optional **Wireless Infrared Microphone** also provides full control. The IC-2700H *can even be controlled by a passenger in the back seat of a vebicle! Talk about back seat driving!*

Transmitted frequencies are *automatically* entered into **Scratch Pad Memories** for easy recall. Each band has 6 scratch pads, 3 for duplex settings (repeater use) and 3 for simplex settings. The **Memory Allocation Function** allows you to divide the memory channels between bands to suit your preferences -20 to 80 memories can be allocated to a band for a 2 band total of 100.

The **Auto Repeater Function** automatically selects the proper duplex offset direction, allowing you to work repeaters with ease.

The optional **Tone Scan Function** scans for and sets the subaudible tone frequency being transmitted by another station for you. This is especially helpful when travelling in unfamiliar territory.

OR...True Dual-Band Operation

IC-2340H with supplied HM-77 DTMF Microphone.

Display is easy to view and operate, even while driving.

The IC-2340H features 110 Memory Channels (each band

has 50 regular memories, 2 scratch pad memories, 1 call channel and 2 scan edges).

One Push Button Controls allow you to adjust functions on your IC-2340H with a single push of a button. This offers increased operating convenience and safety while driving.

The IC-2340H also offers both an Auto Repeater Function and optional Tone **Scan Function**. Just as with the IC-2700H, the IC-2340H will automatically select the proper duplex and offset direction for repeater operations. It will also scan for and set the subaudible tone frequency being transmitted by other stations.



ICOM America, Inc. Corporate Headquarters 2380-116th Ave. N.E., Bellevue, WA 98004

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IC-2340H

The IC-2340H offers **Independent Controls and Switches** for each band (VFO/MHz, Memory/Call, Volume/ Squelch and main tuning dial) for **True Dual Band Operation.** Both frequencies are "stacked" for quick visual reference and greater driving safety.

Easy to read in ambient light or direct sunlight, the IC-2340H's Large

Call our Brochure Hotline for FREE literature on ICOM radios: (206) 450-6088. Experience the Quality .



With ICOM's New IC-281H . . It's Not Just 2 M Anymore!

(2 M mobile transceiver with 440 MHz receive)).

New Exciting Features!

Bonus Receive Band – The 430 (440) MHz bonus band is available for receive. Enables full duplex, crossband operation between the 2 M and 70 cm bands. Crossband repeat from 440 MHz to 2 M.

Scratch Pad Memories – 10 scratch pad memories automatically store your 10 previously transmitted frequencies (5 simplex and 5 duplex) for instant recall. No fumbling around trying to write down, or store into regular memories, frequencies which you want to use temporarily.

Memory Allocation Function – 60 regular memory channels can be divided between the main and bonus band. You can organize your memories for maximum efficiency and listening preference.

Automatic Memory Channel Advance -

After a memory channel is programmed, the channel indicator automatically advances, speeding up the programming process.

Tone Scan* – Scans, detects *and sets* the subaudible tone. Permits access to a repeater when you don't know the tone frequency.

MONI

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Voice Synthesizer* –

The IC-281H announces the operating frequency, enabling quick confirmation without taking your eyes off the road. Very helpful for visually impaired operators, too.

Packet "Plug and Play" Operation

Data Jack – Connects a TNC directly to the modulation circuit for packet convenience. **9600 BPS Capability** – No modifications necessary. Provides higher performance packet operations.

Modulation Circuit – Newly designed, prevents over modulation even during high data throughput.



Rugged, Durable Construction Die Cast Aluminum Frame Construction – Meets the highest standards to provide reliability and long life. Will enhance your trade-in value years later.

ICOM

DATA

BUSY

44MHz FM TRANSCEIVER 10-281H

Large Heat Sink – Dissipates the heat to maintain power output and stability characteristics.

Simple Operation

Remote Control Microphone – Puts the operation of several functions at your fingertips.

Auto Dialing Capability – Programs 14 telephone numbers for autodial via repeater autopatch.

"One Push" Action Switches – Eliminates the need for "two step" function switch operation. Simplifies mobile operations for convenience and safety.

Large Display – Easy to see and logically organized for easy interpretation.

Auto Power Off – Shuts the transceiver down (when programmed). Great for bedside use.

Compatible Accessories – For easy mounting and operation.

And More!

Built-in Pager and Code Squelch
 Optional Tone Squelch and Pocket Beep
 Scanning

DTMF

DUP

TOI

LOW

IC-281H 144 MHz FM Transceiver

BAND

M/CALL

V/MHz

PRIO

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Microphones • Headsets • Accessories



A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Specify HEIL HC-4 or HC-5 mic cartridge (below)\$122⁰⁰ Adapter cables for ICOM, KENWOOD or YAESU transceiversea. \$13⁰⁰





HEIL - SA-1 Compact Sound System

This is a an ingenious compact sound system that improves audio to allow opera tors to do a better job of hearing weak signals. It makes it easier to sort out the ranones, and provides high quality audio like never heard before from amateur radio transceivers, communications receivers, handhelds or scanners.

Normally, the speaker built into radios as well as external accessory speakers and very inexpensive transducers. Their inherent low efficiency, poor frequency response and high distortion levels aren't able to produce high quality audio.

To overcome poor audio, the SA-1 is designed with a high quality 5W amplified driving a 4" broadband speaker that works into a ported cavity. A pre-amplified circuit contains a variable equalizer allowing tonality adjustment of the received audio for maximum articulation. The SA-1 requires 12V DC @ 600 ma for operation. It comes with an audio input cable, DC input plug and hookup sheet.... **\$89**%



HEIL – Replacement Microphone Cartridges

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the "sound of your station" you can solve this problem by replacing the cartridge in your microphone with a Heil Key Element for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

HEIL HC-4 - The DX Dream Machine

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response.of 500Hz–3800Hz with a 10dB peak at 2000Hz, and a sharp I2dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: $2k\Omega @ 1000Hz - works$ well into low (500-600 Ω) and medium (2k-5k Ω) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h... **\$28**⁹⁰ **64**



HEIL HC-5 – The Key Element

The replacement microphone cartridge for everyday Rag Chewin, Engineered with full range articulation and maximum voice clarit Not mushy, bassy paging-type audio, but very clear, easy to unde stand SSB audio. Response: 350Hz-4000Hz. with a sharp roll-o under 300Hz and above 3100Hz with a peak at 2100Hz. Impedanc $2k\Omega @ 1000Hz - works$ well into low ($500-600\Omega$) and medium (2l $5k\Omega$) inputs. Cardioid pattern. Size: .530"d x .850"w x .310"h... **\$28**

Prices and Trade-in Qu **KENWOOD** Amateur Radio Equipment Call Toll Free 1-800-558-0411

The World's Smallest HF Transceiver!

TS-50S All-mode, 160-10M with 500kHz-30MHz receiver, 100 memories, and scanning functions, 100W output CW/SSB/FM; 25W AM. Dual VFOs, 100 memories. Programmable

function keypad, large LCD display with dimmer, menu programming, DDS with "Fuzzy" control logic, speech processor. Rif., TF-set, IF shift, AIP, CW reverse, ali-mode squelch, noise blanker, selectable full or semi break-in. Computer controllable. 12V DC-20A. 2% th x 7% ^{tw} x 9% ^{td}, 6.4 lbs

TS-60S 6-meter transceiver with features/specifications same as the TS-50S except – receiver is 50-50MHz only. Power is 90W in SSB/CW/FM modes; 23W AM, and CTCSS encode is built-in.

►TS-950SDX All mode 150W 160-10M with 100kHz-30MHz receiver, built-in antenna tuner. Simult. dual receive, MARS modifiable. 150W

F



out (50V MOS FET finals). Dual digital VFOs, direct band key access, 100 memories, multiple scan functions. Speech processor, QSK semi-break-in, IF VBT, AF VBT, SSB slope tuning. Rx/tx DSP w/23 position AF digital filter, auto AGC, 500 Hz sub-receiver CW filter. DDS. Memory keyer, remote key pad, speaker outputs for main and sub receivers. Filters: 1st/2nd IF 500Hz, 2nd IF 250 Hz, 6kHz AM, 2.4kHz SSB. Selectable tone or CTCSS, computer interface, built-in AC supply. 5% "h x 15% "w x 15%"d, 50.7 lbs



►TS-850S All-mode 100W 160-10M transceiver with 100kHz to 30MHz receiver. MARS modifiable. Dual VFOs, keypad frequency entry, 100 memories, multi-

mode scanning. Speech processor, full/semi-break-in CW-fine tuning on CW. IF notch and audio filters, SSB slope tuning, CW kever, dual noise blanker, squelch, RIT/XIT. Hand microphone supplied. Optional internal antenna tuner, ext. DSP Processing. and AC supply. 12V DC -20A. 13"w x 43/4 "h x 131/8"d, 24 lbs. TS-850S/AT same, but built-in antenna tuner.

TS-450S All mode 100W 160-10M transceiver with 500kHz-

MHz receiver. Dual VFOs, keypad entry. 100 multi-function memories, multi-scan functions. Speech processor, dual noise blankers. RIT/XIT IF shift. AF notch



filter. Digital bar meter. Optional internal 80-10M automatic.

antenna tuner, external DSP and external mobile antenna tuner 101/2"w x 33/4" x 12"d, 13.9 lbs. TS-450S/AT same, but built-in antenna tuner. TS-690S same as TS-450S, but includes the 6-meter band with 50W output.

TS-140S All mode 100W, 160-10M transceiver with 500kHz-30MHz receiver. VFO tuning or with



up/down frequency switches. Dual VFOs, 31 multi-function memories, programmable memory and multiple scanning capabilities. 10 memories store trans-

mit/receive frequencies independently for repeater operation. Programmable band marker, noise blanker, IF shift, RIT, speech processor with audio compression, QSK or semi break-in CW. 12V DC -20A. 4¼"h x 11"w x 12"d, 13 lbs.

TS-790A All-mode three-band VHF/UHF transceiver with 2m/440MHz standard; 1.2GHz is optional. 45/40W; 10W



(1.2GHz). Keyboard entry plus dual VFOs for each band, and channelized for FM repeaters. Dual receive on 2M/440MHz, 2M/1.2GHz or 440/1.2GHz bands. Dual

displays. 59 memories, scanning. Full duplex, doppler frequency correction for Oscar. Speech processor, IF shift, CW narrow filter. Optional computer control. 12V DC -15A. 43/h x 13"w x 13"d, 20 lbs.

TM-255A All-mode 2M transceiver. 144-148MHz coverage is modifa-

ble for MARS/CAP. 100 memory channels plus 1 call channel. 40/5W output. DDS. built-in 9600/1200 baud



packet capability. AIP, IF shift,

noise blanker. DTSS and pager function, tone alert system with elapsed time indicator, S-meter squelch, all mode squelch, TXCO temp. compensated crystal oscillator. CTCSS encode; decode optional, 12V DC -13A, 214"h x 7"w x 8%"d, 6 lbs. TM-455A is same as TM-255A, but 430–440MHz.

FM Mobiles – 4 models feature: 20 multi-function memories,

CTCSS encode, tone alert, timeout timer, auto power off. Band and memory scanning with selectable scan steps and memory channel lockout. 5½"w x 1%"h x 6¾"d, 2¾ lbs.



TM-241A 2 Meters: 144-148MHz tx , 118-173.99 rx, 50W • TM-331A 220MHz, 25W • TM-441A 440MHz, 35W.• TM-541A 1.2GHz; 10W.

>TM-251A 2 meter FM with 118-174MHz and 300–370MHz receive, 50W, 41 memories; up to 200 opti. Dual band receive,

1200/9600 bps packet compatible. Programmable VFO, full-duplex cross-band repeat. CTCSS encoder; decode opt., auto repeater offset, multiple scan modes. Large multi-function LCD with

dimmer, CH display



number. DTSS selective call with page, digital recording system, S-meter squelch, DTMF memories. 12V DC -11A. 1% "h x 5½"w x 65/6"d, 2.2 lbs

TM-451A same, but 440MHz tx/rx and 2M rx, 35W.

►TM-742A 2 meter/440MHz dual/triple band FM transceiver Optional band units for 1.2GHz, 220, 50 or 28MHz. 2m: rx 138-173MHz; tx 144-148MHz, modifiable for MARS/CAP. 440MHz: 438-449.995 MHz. Output: 2m

(50W), 2m (35W.). Dual watch for simultaneous 2m/440 receive. Direct entry from microphone. 100 memories/band. programmable memory



encoder, selectable full duplex, operates as a cross band repeater with mod. 12 V DC -11A. 2"h x 6"w x 8"d, 4 lbs. TM-642A covers 2-meters/220MHz-50/25W TM-942A covers 2m/440MHz-50/35W and 1.2GHz-10W.



packet compatible. 72 memories, dual receive on the same band, programmable scan, cross-band repeat. S-meter squelch, DTSS selective call with pager. AIP, auto simplex checker, automatic band change, dual channel watch. Encode built-in; decode optional. 12V DC-11A. 1%6 "h x 5½" w x 6"d, 2.6 lbs

TH-22AT and TH-42AT FM Handhelds

Similar Features: Ultra compact! MOS FET low voltage power module, operates from 5-16VDC. 40 memories channels + one call channel, and odd offset capability in one. Selectable memory CH number mode. Multiple scanning functions; carrier or time-operated

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scan stop modes, busy channel lockout. DTSS with pager function, tone alert with elapsed time indication. DTMF memory function for autodial operation.CTCSS decoder built-in; decode optional, wireless cloning. Batt. saver, time out timer. 23/16"w x 45%"h x 1"d, 9 oz. TH-22AT 2 meters: 136-174MHz rx. 144-148MHz tx. 3.0W out; 5W w/12V or opt.battery. TH-42AT 440MHz: 438-450MHz tx and rx. 2.5W output.; 5W w/12V or optional battery

>TH-28A and TH-48A FM Handhelds

Similar Features: Single band transmit, switchable dual-band receive for semi-duplex crossband operation. MARS/CAP modifiable. Six character alphanumeric LCD display, 40 multifunction memories, memory paging, band or memory scanning. DTMF memory function for autodial operation. Tone alert system with time indicator. Digital clock, CTCSS encode/decode, timeout timer. 1.9"w x 4.6"h x 1.5*d, 12 oz



TH-28A 2 meters: 118-174MHz receive, 144-148MHz transmit + 438-450MHz UHF receive. 2.5W output, 5W with optional battery. TH-48A 440MHz: 438-449.995MHz transmit and receive + 136-174MHz VHF receive. 2.0W output, 5W with optional battery

TH-79A FM Dual Bander

2m/440MHz; 144-148 tx, 118-174MHz rx and 438-450MHz tx/rx. Modifiable for MARS/CAP. High efficiency FET power module: 2.5W out-2 meters, 2.0W



optional battery. Dot-matrix alphanumeric LCD and menu system, CH display function. 82 non-volatile memory channels. Multiple scan modes, ID, DTSS and page functions. DTMF memory function for autodial operation. Fullduplex, cross band repeat, dual receive simultaneously receive two frequencies even on the same band. Tone alert system with elapsed time indicator. Three selectable power levels, auto power off and battery saver. CTCSS encode/decode. 2% "w x 5.3"h x 1.6"d, 11 oz.

... all accessories for these **KENWOOD** products are listed on p.p. 13 & 14 Kenwood Customer Relations: 310-639-5300 Kenwood BBS: 310-761-8284

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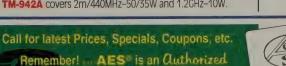


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Explore New Frontiers!

Advanced technology moves Kenwood's HF rigs to the top.

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TS-450SAT/S • TS-690S

- 160m to 10m amateur band operation, S00kHz to 30MHz general coverage receiver
 6m amateur band and 50–54MHz general coverage receive (TS-690S)
- •DDS (Direct Digital Synthesizer) & digital PLL system
- •AIP (Advanced Intercept Point) system
- •Automatic antenna tuner (built-in or optional)
- •IF shift function tuning •AF notch filter
- •Heavy duty cycle design •100 memory channels

TS-850SAT/S

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver DDS (Direct Digital Synthesizer)
 & digital PLL system AIP (Advanced Intercept Point) system
- Automatic antenna tuner (built-in or optional)
- •IF slope tuning •IF notch filter
- •Electronic message keyer circuit with weighting control
- •100 memory channels •Digital recording system (optional)

TS-950SDX

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver
- •Built-in DSP (Digital Signal Processor)
- •MOS-type FET final section •Dual frequency receive
- •150W PEP output (SSB/CW/FSK/FM)
- DDS (Direct Digital Synthesizer)
 Menu system
- •AIP (Advanced Intercept Point) system
- •Automatic antenna tuner •IF slope tuning •IF notch filter
- •100 memory channels •Built-in AC power supply

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KENWOOD ELECTRONICS CANADA INC. 0070 Kestrel Read Massissaga. Ontario Canada 131 138

KENWOOD

Kenwood's TS-50S : Awesome HF Versatility

TS-50S

HE TRANSCEIVER THOM

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For the Amateur Radio enthusiast, going "beyond bounds" is what it's all about. That's why Kenwood created the TS-50S, the world's smallest and smartest HF transceiver. The choice is yours: you can mount it in a vehicle, take it on a DX-pedition, or even install it permanently as a base station transceiver. Yet despite its size, the TS-50S provides a maximum output of 100W and the sort of sophisticated features normally found only inside a shack. Take for example the 100 memory channels for independent storage of transmit/receive parameters, the microprocessor-controlled DDS with innovative "fuzzy" control, and Kenwood's own AIP for superior dynamic range. There's also a powerful menu system, IF shift and CW reverse mode for interference reduction, TF-SET, and a noise blanker--plus everything you need for split-frequency operations. So, if you want HF operation beyond bounds, check out the TS-50S at your favorite authorized Kenwood Amateur Radio Dealer today!

KENWOOD

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POWER

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AT TUNE

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Features

- State of the second coverage second coverag
- DDS(Direct Digital Synthesizer) with
- fuzzy logic control ■ Lorge LCD panel with digital bar meter
- Auto-mode capability
- I Menu system
- AIP (Advanced Intercept Point)
- Switchable AGC Circuit (SLOW/FAST)
- All-mode squeich
- CW reverse mode
- Full break-in and semi break-in
- 20dB attenuator
- Multi-function microphone supplies
- ERF output power control
- (100W, 50W, 10W)
- Optional 500Hz CW filter (TK-107C)
- Optional external antenna
- tuner(AT-50)

KENWO

Optional computer interface (IF-10D)

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Pure and simple, the concept reads like this: "rock-solid performance with straightforward operation, at an affordable cost". And Kenwood's TM-241A (144MHz) FM mobile transceiver symbolizes this perfectly.

Great looks and rugged construction are just the beginning. The TM-241A's user-friendly controls make mobile QSOs a snap, and a powerful 50-watt amplifier lets you work simplex with confidence or hit those distant repeaters. Reception specs are equally impressive: intermod characteristics have been improved* to reduce interference from strong adjacent band signals. Plus, there are 20 multi-function memory channels for programming combinations of frequency, sub-audible tone, and repeater offset.

So, if you're looking for true mobile performance, go back to the basics and reach for Kenwood's TM-241A.

- memory scan with channel lock-out
- Time-operated & carrier-operated scan middle
- Built in selectable CICSS tone encoder
- Auto repecter offset
- I Tone alert with elapsed time indicator
- DTSS for selective calling and paging
- (with optional DTU-2) I Time-out timer
- Auto power-all with worning beeper
- Meets U.S. military standards for shock and
- vibration (MIL-STD 810C/D/E)* Modifiable for MARS/CAP use
- (permits required)

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These specifications guaranteed for Amoteur band only. *Current K&K2 versions with serial number 5080000 or later

Kenwood's TM-942A/742A/642A-Triple Triumph

NEW TM-642A

TM-942A

Peatures

Good things come in threes. Like Kenwood's distinctive TM-942A (144MHz/ 440MHz/1200MHz), TM-742A (144MHz/440MHz), and new TM-642A (144MHz/ 220MHz)—high-performance FM multibanders that demonstrate the best in mobile communications technology. Besides offering triple receive and display capability, the TM-942A can even receive all three bands simultaneously. For the TM-742A and TM-642A, you can choose one of several optional band units, enabling triple band operation with the same triple simultaneous receive. Top-notch features include 101 memory channels (all available for split operation), automatic band change, DTSS with page, and S-meter squelch. There's even a wireless remote control function. Yet operation is remarkably simple, thanks to sophisticated microprocessor control, highvisibility illuminated keys, and clear status displays. You wouldn't expect any less from Kenwood. But there's more: you can mount the controls and display separately from the main unit (requires optional kit) for unique 3-way convenience. Max. 50W output (144MHz), 25W (220MHz), 35W (440MHz), 10W (1200MHz)

101 memory channels & memory bank system

6970

22438

- Independent SQL & VOL controls for each band
- Automatic band change
- Built in DTSS selective colling feature with page
- Selectable frequency step II 8 scan modes per band
- I Time Operated & Contier Operated scan stop modes
- Direct frequency entry with supplied microphono
- I Tone alert with classed time indicator
- S-meter squelch, noise squelch & outo squelch
- I Cross-band repeater I Muting for sub-band circun
- I Multiple lock functions I Wireless remote control function
- Built in CTCSS encoder & optional TSU-7 decoder
- 1 Date & time display, stopwatch, alorm & an/off time:
- II 3-position RF output power control

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- Auto power-off with warning beeper II Time out fimer
- Separate control & display units (optional coble kits)

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KENWOOD COMMUNICATIONS CORPORATION AMATEUR RADIO PRODUCTS GROUP P.O. HOX 22745, 2201 East Daminguez St. Long Beach, CA 30901-5745 KENWOOD ELECTRONICS CANADA INC, B070 Kestrel Road, Mississauga, Ontario L57 158

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TM-742A

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- # 107 microsy clasmets # blos 40W subput (TM 258Å), 32W (TM-456Å) # 0055 (Great Digital Symtomicer) with lozzy logit territy Twin tuning nials # Data-monu system Bennin OTSS wen pres & All' (Assessed Interest Point)
- # (F-SHIFT (SSB, GW) & Polan neine hisrker # Semi brank-to # VE-SET
- nande me gain zanirol casull e slief nysleni wite elsestal firm indicator
- @ Turit in TCXD (temperature-compensal
- # 5-pin milli Dili consector for 1200,9603 pro packet # S-mater projekth # All mode incollets
- I Burt-in CTCSE untoday, with optional TSU-a decoder Auto power-of E Time-out lime

CM-255A/4 9600 ALL-MODE TRANSCEIVERS

Get back. All-mode transceivers are on the move, with the launch of Kenwood's innovative new TM-255A (144MHz) and TM-455A (430MHz). Both models feature a detachable front panel-a world first in this category-for easy mounting in any vehicle. But whether mobile or stationary, you can count on peerless performancein FM, SSB and CW modes. Because "compact" doesn't mean "compromise". Take for example the 101 memory channels-plus memory shift, memory scroll, and a full range of scan functions. Among the many other impressive features are built-in DTSS with page function, DDS with "fuzzy" control, a jack for 1200/9600bps packet communications, and comprehensive noise reduction measures-including Kenwood's exclusive AIP, IF-SHIFT and a noise blanker. Truly a powerful package, but surprisingly easy to operate, thanks to the DTMF microphone with programmable keys, dual-menu system, and twin tuning dials. All-mode versatility at its best. And Kenwood made it happen.

KENWOOD COMMUNICATIONS CORPORATION AMATEUR RADIO PRODUCTS C P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 9080 KENWOOD ELECTRONICS CANADA INC.



On-Board Guidance System

for a DELUXE CORDURA SOFT CASE with purchase of a TH-79A, now through Dec. 31, 1994 See Kenwood dealer for details

New I-79A FM DUAL BANDER

Information at your fingertips. Everything you need to know about operating the new TH-79A FM dual-bander (144MHz/440MHz) can be viewed in its unique dot-matrix LCD with alphanumeric display. No need for the manual. In addition to this innovative guide function, the TH-79A sports a userfriendly menu system, providing easy access to the many powerful features of this slim-line handheld transceiver. Such as 82 non-volatile memory channels with ID, DTSS and page functions, and a DTMF memory function for auto-dial operation. Full-crossband duplex operation is available, as is the ability to receive two frequencies on the same band (VHF+VHF or UHF+UHF) simultaneously. And thanks to the FET power module, long hours of operation are possible on one charge. With the TH-79A, transceiver technology enters the 21st century.

Features

C AH I

2 7W GUIDHI (144MHD), 2W OLIDBA MACNING HOM MUSTEET anwer module and supplied EV buttery; SW pulped using optional PB-34

₩ Dual

- Con-matrix LCD with minurpaids system

- 82 non-volatile momony channels with I0
 DTMF keypad with manager function
 DTSS (Qual-Tone Scheldt System) with page
- Builin CTCSS ione encodercierade:
- Automatic band change Power-en call sign display
- Auto repeater offset (VHF) I hopet overvoltage warming
- 3 sosition curput power continu
 Auto power-off and ballery sure function. II Trink-out Unit:
- B Mumple scan modes TE Grana-band repeater function
- Page asswer-back function
 I Chansel display function
- I Widebard receiver cararage, including AM receive on the **Hircraft band**
- Magifiable for MARS/CAP unit!

cilisations guaranteed for Amateur bands only mits required. Specifications guaranteed for Am teed for Amateur bands only

KENWOOD

KENWOOD COMMUNICATIONS CORPORATION AMATEUR FADIO PRODUCTS GRO P.O. 80X 22745, 2201 East Dominguez 57, Long Beach, CA 90801-57 Customer Support/Brochures (310) 639-5300
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When you chose Amateur Radio, you made a commitment to a learning experience that lasts a lifetime. When you got on the air, you began to realize the astonishing feats you could accomplish. Amateur Radio has been challenging and rewarding. It's changed your world for the better and was the right choice for you.

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Dues are \$30 in US/\$42 elsewhere (US funds). An Amateur Radio operator's license is not a membership requirement. The only qualification needed is an interest in Amateur Radio. Individuals who are age 65 or over, upon submitting one-time proof of age, may request the dues rate of \$24 in the US, \$36 elsewhere (US funds). Immediate relatives of a member who receives QST and reside at the same address may request family membership at \$4 per year. Blind individuals may join without QST for \$4 per year. If you are 21 or younger, a special rate may apply. Write to ARRL for details. Payment Enclosed					
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participate in ARRL "Members Only" operating awards and Field Organization programs.

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and MUCH MORE!

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Electronic

YAESU Amateur Radio Equipment

Call Toll Free 1-800-558-0411

FT-1000 All mode-200W, 9-band HF transceiver with 100kHz-30MHz receive, 99 memories and built-in antenna tuner with 39

presets. Manual tuning or direct keyboard entry. Simultaneous dual receive with two uning knobs, balance and dual displays:

optional crossband dual

\$ E C & CCCC

receive module and Digital Voice Storage for playback of 16-sec. receive memory, plus two 8-second "CQ Contest" messages on transmit, Antenna selector, electronic keyer, independent filter ection. Cascaded filter selections, width control, IF shift, IF notch, squelch, noise blanker, CW audio peak filter. Built-in AC supply. 6"h x 16"w x 15"d, 58 lbs.

FT-1000D Deluxe version with dual bandpass filter for crossband receive, temperature compensated crystal oscillator, 2.4kHz/2KHz SSB filters and 500Hz CW crystal filter.

FT-990 All mode - 100W, 160-10M transceiver with 100kHz-OMHz receiver, 99 tunable and scannable memories , and built-



in antenna tuner with 39 presets. Dual VFOs, digital IF shift and notch, speech processor. Special provisions for CW, RTTY and Packet. Digital Voice Contest

option. Built-in AC supply, 1234"w x 412"h x 1112"d, 30 lbs. FT-990DC as above, but 12VDC-20A , no AC or CW filter

FT-900/AT All mode - 100W, 160-Om transceiver with 100kHz-30MHz receive and built-in antenna tuner. Direct keypad entry, 100 memories. 21/1 h x 81/1 w x 1%"d front sub-panel optionally mounts sepa-



ately from the main body. CW full break-in keying, noise blanker, notch/shift, CTCSS encode with repeater off set, twin stacking VFOs. 12VDC-20A.

FT-900 as above without built-in antenna tuner.

FT-890 All mode -100W 160-10M transceiver with 100kHz-30MHz receive. Two independent A/B VFOs for each band–20



total, hold frequencies and modes, clarifier offsets and repeater shifts. 32 memories store data for both VEO's - a total of 84 independent sets of frequency, mode and

other selections that can be tuned and scanned. Noise blanker. all-mode squelch, AF speech processor, built-in iambic keyer Provisions for internal automatic antenna tuner. 13.5VDC - 20A 9% w x 3% h x 9½ d, 12.3 lbs.

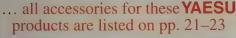
FT-890/AT as above w/built-in in automatic antenna tuner.

FT-840 All-mode-100W 160-10M transceiver with 100kHz-

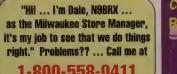
30MHz receive. Two independent A/B VFO's for each band hold frequencies and mode. 100 memories with independent transmit and receive per memory, built-in



CTCSS encode, IF shift and direct digital synthesis receiver. Two opt. antenna tuners. 13VDC -20A. 4"h x 9½"w x 10"d, 10 lbs.







tuner. Covers 160-12 meters, rated at 600W output with 70W drive. 5"h x 15"w x 15"d, 66 lbs. More FL-7000 specs on RF Power Amplifier page

FRG-100B Newest high performance, all mode communications receiver with

FL-7000 Solid-State HF Linear Amplifier with built-in antenna

50kHz-30MHz cover-

age. 12V DC. 9¼"w x

3½"h x 9½"d, 6½" lbs.

More FRG-100B specs

on Shortwave page.



FT-650 100W - 6, 10 and 12M all mode transceiver with 24.5 to 56.0 MHz receiver. 105 memories: 99 for channels, 4 pro-

grammable scan memories and 2 priority channels. 1.2db NF receive preamplifier with switched 5 MHz bandwidth varactor tuned BPF, Direct Digital Synthesis and auto-

matic seeking notch filter. Built-in AC supply or direct 12V DC.@ 18A operation. 5¼"h x 11¼"w x 11¼"d, 18 lbs.

FT-736R All-mode, 2M/430 multi-band VHF/UHF transceiver. Optional band modules for 50MHz, 220MHz, and 1.2GHz. 10W



out on 50MHz and 1.2GHz, 25W on the others, 14 VFO modes, 100 multi-function memories, 10 fullduplex memories. Satellite function, inde-

pendent or synchronous operation of VFOs. Speech processor, iambic CW keyer, QSK or semi-full break-in CW. IF shift tuning, CW carrier shift, audio peak filter. All-mode squelch, noise blanker, illuminated multi-function meter. AFSK input for packet, CAT System bus for PC control. Built-in AC supply, or 12V DC with optional power cord. 51/8"h x 141/2"w x 111/2"d, 19.8 lbs.

▶FT-2200 2M FM transceiver.with 110-180MHz receive, including aircraft. 50W, 53 memory channels (Odd splits in any mem-

ory). Built-in DTMF paging, coded squeich, userselectable tuning steps, back-lit microphone, programmable CTCSS encode 2VDC -10A. 1%*h x 51/2"w x 61/2"d, 21/4 lbs. FT-7200 as above but 440MHz, 35W.



FT-2500M 2M FM Transceiver with 140-174MHz receive, 50W. 31 memories, MIL-STD rated for shock/vibration. New front

panel design-rubber coated knobs and large amber alpha-numeric display. Big heat sink and one piece diecast chassis. Exclusive track tuning feature reduces

intermodulation and frontend overload. Auto.power off, programmable timeouttimer, manual or auto back-lit

display adjustment, back-lit DTMF keypad microphone.CTCSS encode built-in. 12VDC-10A. 6"w x 1%"h x 7"d, 2% lbs.

Trade-up Time?...Call us!

FT-5200 Dual Band 2m/440MHz, 50/35W transceiver with 140–174 MHz 2m receive, 32 tunable memories. Back-lit DTMF

Prices and Trade-in Quotes



microphone, detachable front panel. Built-in duplexer, CTCSS encode. Optional digital voice memory, DTMF paging unit, CTCSS dual decoder, wireless

microphone/remote controller, external speaker and remote separation kit. 12VDC-10A. 5½"w x 1%"h x 6"d, 2 lb. FT-6200 Covers 440MHz/1.2GHz, 35w/10w

FT-5100 Like FT-5200 without remote capability. 94 memories, DTMF paging, coded squelch and back-lit DTMF mic.

FT-7400H 440MHz, 35W transceiver. Rugged, built to take off-road abuse. 31 full function memories,. Multiple scan modes



with lockout, selectable stops and priority. CTCSS encoder, optional decoder. Programmable call channel automatic repeater offset. backlit

DTMF microphone. 12VDC- 10A. 6"w x 1%"h x 7"d, 1½ lbs PORTABLES • Three models: same appearance and function. 2.5W out when operating from 12V DC-1.1A, or with optional snap-on C-cell battery case. DTMF microphone with up-down control, dual VFOs, 10 multi-function memo-

ries with scanning, programmable band scan, Offset tuning for satellites, LCD. 21/8"h x 61/4"w x 71/2"d, 2.6 lbs. FT-290R MkII 2m, 25W FT-690R MkII 6m, 10W

FT-790R MkII 430-450MHz, 25W



FT-11R 2M handheld with 110–180MHz receive including AM aircraft. 150 memories, 6-character alpha-numeric display, DTMF autodialer, DTMF paging/coded squelch, transmit and receive battery savers. CTCSS encode included, decode optional. 1.5W, 5W optional – 4 power levels. Small – 4%"h x 2¼"w x 1¾"d, 1 lb. ▶FT-11R/HP same as FT-11R but 5W standard FT-41R same as FT-11R but 440MHz.

FT-411E 2M handheld.with 140-174MHz receive, 2.5W. Keypad and rotary-dial entry, 2 VFOs, 49 memories, scanning. DTMF autodialer with 10 memories. CTCSS encode/decode, battery saver, automatic power off. 5½"h x 2¼"w x 1½"d, 0.85 lb. FT-911 same as FT-411E but 1.2GHz, 1W.

FT-816 440MHz handheld. 2W, 5W optional. 2 VFOs, 41 memories. DTMF paging and coded squelch, 10 memory autodialer, CTCSS encode/decode, VOX. 21/8"w x 53/8"h x 13/8"d, 121/2 oz.

▶ FT-530 Dual-Band 2m/440MHz handheld with 130–174MHz 2m receive Dual in-band receive, 41 memories per band, DTMF paging and coded squelch, clock with timers, battery saver, backlit keypad, cross-band repeat function, 2 VFOs per band; VFO and direct keypad entry. Automatically adjusts output level according to received signal. 5¾"h x 2½"w x 1¾"d, 0.9 lb.



Amoteur Electronic Supply Concentrations + Large Inventory + Low Prices + Top Trades + Fast Shipping + In-House Warranty Service 73





The Yaesu Holiday Sale is on! Cash off, at the register! From October 1, 1994 through January 8, 1995! Don't miss these great savings on 15 super Yaesu products from the exciting FT-1000D to the popular FT-11R! See your Yaesu dealer for details and fill those holiday wish lists now!

FT-11R/41R 2m/70cm Handhelds

Frequency Coverage: Wide Receiver Coverage: FT-11: 110-180 MHz RX, 144-148 MHz TX

FT-41: 430-450 MHz RX/TX Selectable Alpha Numeric Display

 New Compact Battery Design 4.8V produces 1.5 Watts
 9.6V produces Full 5 Watts*

- 150 Memory Channels (75 when Alpha Numeric)
- AM "Aircraft" Receive (110-136 MHz)
 Small Compact Size w/ Easy
- Operation (measures only: 4"H x 21/4"W x 1"D)
- Rx/Tx Battery Savers
 High-efficiency MOS FET Power Module
- Large Back-Lit Keypad and Display
- Up/Down Volume/Squelch Controls
- Built-in DTMF Paging/Coded
 Squelch
- Automatic Power Off (APO)
 Accessories:

FNB-31 4.8V, 600 mAh Battery FNB-33 4.8V, 1200 mAh Battery FNB-38 9.6V, 600 mAh Battery FBA-14 6 AA Size Battery Case FTS-26 CTCSS Decode Unit NC-50 Dual Slot 1-Hour Desk Charger CA-10 Charge Adapter (required w/ NC-50) *ET-11 Only.

FT-41. 3.5 Watts

"Look, alphanumeric display and a 4.8V battery. Terrific! " "Small and thin – with a full sized keypad! How'd they do that?"

"Yaesu did it again!"



NEW Alphanumeric Display First time for Yaesu HT Full function LCD combines letters and numbers.

- NEW Up/Down

Thumb Control with Volume and Squelch Bar Graph. No other radio has this. Back lit, too!

NEW Compact Battery Design 4.8V gets you 1.5 Watts. A first

for amateur radio.

Get a grip on this!

AESU

World's smallest size HT with a full sized keypad Measures only: 4"H x 2¼"W x 1"D

Small" is relative, isn't it? It could mean size – which in this case it does. And, it could mean "reduced", which it doesn't! Nothing missing from the hot new FT-11R HT from Yaesu except bulk! You're going to wonder just how all the features of this full-function radio fit in. Until you remember Yaesu pioneered 2-way radio micro technology.

To see what this really means to you,

check out all the new features. Like the alphanumeric display. This Yaesu HT first, lets you tag your favorite frequency by name, call sign or number. Or, the new "voltage stingy" battery. It's an industry first for amateur radio. Smaller and compact, the 4.8V battery gives you 1.5 watts on TX. And, if that's not enough, there's an optional drop in, dash mount battery charger. You see it's not a small time performer. Just small sized. The FT-11R. Another small example of Yaesu superiority. See your dealer today!



Performance without compromise.54

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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

"Dual Decode. Now that's a first!"

"Wow, a real Battery Voltage Readout!"

YAESU

44755

145.54ª

"Built-in VOX? Right!"

"Yaesu did it again!"

The second se				
FEATURES	Yaesu FT-530	Kenwood TH-78A	Alinco DJ-580	Icom IC-W-21AT
Memory Channels	82	50	40	70
Slide-out Lithium Battery	YES	NO	NO	NO
Dual CTCSS Decoder	YES	NO	NO	YES
Battery Voltage Readout	YES	NO	NO	NO
Automatic CTCSS Tone Search	YES	NO	NO	NO
Transmit Battery Saver (Repeater & Simplex Operation)	YES	NO	NO	NO
Built-In Vox	YES	NO	NO	NO
One Touch Reverse Button	YES	NO	NO	NO
Dual In-Band Receive (V+V, U+U)	YES	YES	NO	YES
Programmable External Speaker Audio	YES	NO	NO	YES
Optional Digital Display Mic with "S" Meter	YES	NO	NO	NO
AM Aircraft Receive	YES	YES	YES	YES

You can always count on... AES®

To stock **YAESU** products for *Prompt Shipment*, and for *Service after the Sale*.

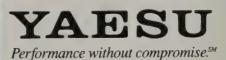
The Best

FT-530					
Dual Band Handheld					
 Frequency Coverage: 					
2-Meter 130-174 MHz RX					
144-148 MHz TX					
70 cm 430-450 MHz RX/TX					
 4 TX Power levels: w/FNP 25: 2.0.15.10.0 FW 					
w/FNB-25: 2.0, 1.5, 1.0, 0.5W w/FNB-27: 5.0, 3.0, 1.5, 0.5W					
 DTMF Paging and Coded Squelch 					
 AOT – Auto On-Timer with built-in 					
clock and alarm functions					
 IBS – Intelligent Band Select (pro- 					
vides automatic TX band select on					
scan stop)					
 Backlit keypad and display with 					
time delay					
Built-in cross-band repeat function					
APO – Automatic Power Off S Watta output w/ ENP 27 battany					
 5 Watts output w/ FNB-27 battery or 12 VDC 					
 2 VFO's for each band 					
Accessories:					
NC-42 1-Hour Desk Charger					
FNB-25 600 mAh Battery (2 watt)					
FNB-26 1000 mAh Battery (2 watt)					
FNB-27 600 mAh Battery (5 watt)					
FBA-12 6 AA Cell Holder					
CSC-56 Vinyl Case w/ FNB-25					
CSC-58 Vinyl Case w/ FNB-26/27 E-DC-5B 12 VDC Adaptor					
YH-2 Headset for VOX					
MH-12A2B Speaker Mic					
MH-18A2B Lapel Speaker Mic					
MH-19A2B Mini Earpiece Mic					
MH-29A2B LCD Display Mic with					
Remote Functions					
MMB-54 Mobile Mounting					
Hanger					

vs. "the rest".

No other dual band handheld beats the FT-530 on features for performance and ease of use. With the largest backlit keypad available, 82 memories, exclusive Dual CTCSS Decode and AM Aircraft Receive, the FT-530 is simply the best value there is.

Compare for yourself, then forget "the rest." See your dealer for the best dual band handheld you can buy. The FT-530.



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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

FT-2500M/FT-7400H 2m/70cm Mobiles

LOW 28

VOL

Specifications

 Frequency Coverage: FT-2500M RX: 140-174 MHz TX: 144-148 MHz FT-7400H RX/TX: 430-450 MHz Rugged Military Spec Design Advanced Track Tuning (ATT) Selectable Alpha-Numeric Display Largest Display Available • Power Output: FT-2500M 50/25/5 Watts FT-7400H 35/20/5 Watts Flip Up Front Control Panel Hides Seldom Used Buttons Backlit DTMF Mic 31 Memory Channels CTCSS Encode Built-in Automatic Power Off (APO)* Time-Out Timer (TOT)* Manual* or Automatic **Backlighting Adjustment Accessories:** FTS-17A CTCSS Decode Unit

FRC-6 DTMF Paging Unit SP-4 External Speaker FP-800 Power Supply "No other mobile has a Military spec rating. This radio can really take it!"

"New Omni-Glow display and backlit DTMF Mic, too. Both Yaesu 'firsts'!"

POWER

SOL

"3-stage advanced track tuning really reduces intermod. Its great!"

"Yaesu did it again."

APPROVED +++++

Performance beyond the call of duty.

J ust when you thought you had the most formidable mobile built, we made the FT-2500M – the next evolution of powerful, rugged mobile radios.

The FT-2500M takes the durable quality, features, and performance of the popular FT-2400H and goes one better! A new easy-to-operate front panel design with rubber coated knobs, new, large state of the art Omni-Glow display to provide enhanced viewing at all angles and light levels, and Yaesu's exclusive 3-Stage Advance Track Tuning feature that reduces intermodulation and frontend overload puts the FT-2500M as close as you can get to commercial grade performance in amateur frequencies.

The FT-2500M is the only mobile with a Military spec rating and the most often used controls on the front and those you "set and forget" neatly hidden. It's the first mobile radio with a backlit DTMF mic, too. With its extra large heat sink and one-piece die-cast chassis, the tough FT-2500M is unlike any other mobile in its class.

Test the mettle of your mobile. If it doesn't measure up to the endurance standards of the U.S. Military, get the FT-2500M. For flawless performance in rough and rugged situations, the FT-2500M is really formidable – just what you'd expect from Yaesu. See it at your dealer today!



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FT-2200/7200

D/ MR

YAESU PETRANSCEIVER FT-2500M

Just 5.5"W x 1.6"H x 6.5"D, the FT-2200/7200 radios are designed to fit into today's more compact cars with ease.

SPECIFICATIONS • Frequency Coverage: SPECIFICATIONS • Frequency Coverage: FT-2200 RX: 110-180 MHz, TX: 144-148 MHz. FT-7200 RX/TX: 430-450 MHz. • Wide Receiver Coverage: 110-180 MHz • AM "Aircraft" Receive: 110-139 MHz • Built-in DTMF Paging/Coded Squelch • Selectable Channel Only Display • 10 Memory DTMF Auto Dialer • Backlit DTMF Mic • Power Output 50/25/5 Watts (FT-7200 35 Watts) • 50 Memory Channels • Remote Operation w/ Optional Digital Voice Storage System. Accessories: See your authorized Yaesu dealer.



"Built-in duplexer and 94 memories!"

"Comes with a backlit DTMF Mic!"

MARIES

FIN

FT-5100

2M·

Operation)

Control

Operation

Dimmer

2M:

Accessories:

Dual Band Mobile

Frequency Coverage: 130-174 MHz RX

DTMF Paging and Coded

Full Duplex Cross Band

Built-In Antenna Duplexer

Back Lit DTMF Microphone Automatic 8 Level Display

Built-In Cross Band Repeat **RF Output Power:**

70 cm: 35/5 watt (high/low)

FTS-22 CTCSS Dual Decoder SP-7 External Speaker MW-2 Wireless Microphone/

Controller

50/5 watt (high/low)

Squelch Included. Packet Radio TNC Jack Built-In To Back of Radio CTCSS Encode Built-In Dual Receive with Balance

144-148 MHz TX 70 cm: 430-450 MHz RX/TX 94 Memories (47 per band) Odd Splits In Any Memory Dual in-band receive (V/V, U/U or V/U Receive

"Great price and smallest dual band made, too!"

"Yaesu did it again!"

ultimate de nition BAND LOW FT-5100

DUAL BAND FM TRANSCEIVER

ow you can listen to two, 2 meter frequencies, or two, UHF frequencies, at the same time with In-Band Dual Receive*. Although equipped with tradi-tional dual band, Yaesu has taken receive two steps beyond in the remarkable FT-5100. Combined in one compact mobile transceiver, it's the ultimate meaning of "dual band".

With 94 memory channels - more than any other radio in its class - and the optional MW-2 Wireless Mic, the flexibility of the FT-5100 is matchless. But to make sure the FT-5100 is complete, and an even better value, unlike the competition, there's a backlit DTMF mic included.

Through advanced miniaturization technology you'll find practical additions like the built-in antenna duplexer - an option on similar transceivers – and equally important, DTMF paging and coded squelch. All in the smallest dual band made!

Priced for the shrewd buyer, you've got to hear it to believe it. Dual band re-defined. Combinations like this can't

In-Band Dual Receive available only on FT-5100.



be found anyplace else, so contact your nearest Yaesu dealer and tell him you want the "ultimate dual band". The FT-5100.





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Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

"200 watts, real cross band receive, even two flywheel-weighted main knobs!"

RX ANT

"Yaesu did it again!"

"Right, there's only one real performer – the FT-1000."

FT-1000 All Mode HF Transceiver

RF Power Output: Up to 200 Watts

- True Cross-band Dual Receive:
- Two Large Tuning Knobs
- Front Panel RX Antenna
- Switch: For Beverage or Loop • Direct Digital Synthesis (DDS)
- Automatic Antenna Tuner: Built-in, 30 Memories
- Frequency Range: 100kHz-30MHz (RX), 160-10 meters (TX)
- 100 Memories: Independent ATU and Mode/IF Filter Memory
- CW Spot and Two CW Key Jacks for Maximum Convenience
- Dynamic Range: 108 dB
- Optional Digital Voice Recorder (DVS-2): 16 Seconds Each RX/TX

Accessories:
 SP-5 External Desk-top
 Speaker

LL-5 Phone Patch Unit

MD-1C8Desktop MicrophoneYH-77STStereo HeadphonesFL-7000500W Linear Amplifier

Hear signals you've never heard before.



You're a competitor. You want optimum receiver performance and you want "muscle" on transmit. First with 200 watts – more power than any competing transceiver – and "hand warm" at maximum RF. It's easy to see why the FT-1000 has been judged "best overall" by top DX'ers worldwide.

For elite-class contesting and DX operation, exclusive features maximize your score. Dual Receive – Watch a multiplier or new country on one frequency, run QSOs on another. Diversity Reception – Use two antennas at different heights or opposite polarization. Extensive Cascaded IF Filtering – For "low end" battles. Dramatic front panel design features two flywheelweighted tuning knobs, RX antenna selector and two large displays.

A perfect blend of electronics and human engineering, the FT-1000 is the Best of our Best!

To hear signals you've never heard before and get the competitive edge, see your Yaesu dealer today.



Performance without compromise.³⁴

Extensive Cascaded IF Filtering – For Tow end Datties. © 1993 Yaesu USA, 17210 Edwards Road, Cerritos, CA 90701 (310) 404-2700 Specifications subject to change without notice, Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details

Introducing an HF

"With the small snap-off remote front panel design, it's an HF mobile."

HF TRANSCEIVER

180



"It's a great base, too. Direct keypad entry, built-in antenna tuner, CW keyer with adjustable speed, 100 Watts, Omni-Glow display... Wow!"

"Yaesu did it again!"

Remote front panel control head measures only 2-1/4"H x 9-1/8"W x 1-1/4" D.

-

CW.

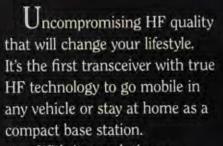
AM

FM

FT-900

HAM/GEN

CRUT



POWER

TUNER

METER

YAESU

SEW HE

With its revolutionary, small, snap-off remote panel, the controls of the FT-900AT can install almost anyplace in your car, truck or camper. Since the 100 Watt RF deck can be installed under a seat or in your car trunk, it's away from critical automotive electronic wizardry. And, for ultimate convenience, the built-in antenna tuner simplifies in-car operation.

As a base station, the compact full function FT-900AT includes direct keypad entry for pinpoint accuracy during quick band/frequency changes. Other



The FT-900AT controls mount almost anywhere in your car, truck or camper. features you'll like include CW keyer with front panel speed adjustment, speech processor, twin stacking VFOs, and IF Shift and Notch. No competitor offers this! Bonuses, such as signal strength, power output, SWR and ALC digital meters, add value to the FT-900AT, and the proven duct-flow cooling system provides excellent long-term transmit power output reliability and frequency stability.

Compact HF Transceiver **FT-900AT**

that's going places.

For ease of use, Yaesu's exclusive Omni-Glow display enhances viewing in any light condition.

100 Watt RF deck can mount in trunk. or under seat.



Trust Yaesu to know what you want. True HF you can take with you or leave at home!



And, since the high speed antenna tuner is built-in. it means less clutter in your shack.

For sheer high-performance, anywhere, the incomparable FT-900AT ranks with the FT-1000 to further establish Yaesu as the choice of the world's top DX'ers.

Available now at your Yaesu dealer.



Choice of the World's top DX'ers

Specifications

- **Remote Front Panel Design**
- Built-In Auto Antenna Tuner Direct Keypad Entry when
- used as a Base Station Large, Bright Omni-Glow™
- LCD Display 100W on SSB, CW, FM
- modes; 25W on AM IF Shift and 30db Notch Filter
- Digital S/RF, SWR & ALC Meters
- Programmable CTCSS Encode w/Repeater Offset
- Direct Digital Synthesis (DDS)
- 100 Memory Channels
- Frequency Range RX: 100 kHz-30 MHz
- TX: 160-10 meters
- CW Full Break-in Keying w/ Adjustable Speed
- Fast/Slow AGC Circuit
- Intercept Point Optimization Duct Flow Cooling System
- Twin Band Stacking VFOs
- Built-in Noise Blanker
- Built-in Adjustable Speech Processor

ACCESSORIES: YSK-900 Remote Mount Kit **MMB-62** Controller Bracket MMB-20 Mobile Mtg. Bracket SP-7 Mobile External Spkr. SP-6 Base Station External Spkr. **DVS-2** Digital Voice Recorder FP-800 20A HD Power Supply YH-77ST Headphone



Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details © 1994 Yaesu USA 17210 Edwards Road, Cernitos, CA 90703 (310) 404-2700

Our rotators keep



Not shown: G-800S, G-800SDX

Specifications subject to change without notice. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

YAESU G-800S

Medium/Heavy-duty for medium/large arrays. Looks like G-1000SDX. Model SDX has variable speed and presets.

Rotor diameter
Rotor height 12½ in.
Maximum antenna wind load 21 sq. ft.
Rotation torque 43-79 ft./lbs.
Stationary torque
450° rotation (S) 55 sec, (SDX) 43-93 sec.
Mast diameter accepts $1\frac{1}{2}$ to $2\frac{1}{2}$ in.
Rotor cable required 5-conductor
Shipping weight 17 lbs.
All models in stock for Same Day Shipping

YAESU G-1000SDX

Deluxe-Heavy-duty for Large HF arrays. Features full 450° rotation with convenient control box presets.

Rotor diameter7½ in.	
Rotor height	
Maximum antenna wind load 23 sq. ft.	
Maximum vertical load 1760 lbs.	
Rotation torque 43 to 79 ft./lbs.	
Stationary torque 433 ft./lbs.	
450° rotation time43 to 93 seconds	5
Mast diameteraccepts $1\frac{1}{2}$ to $2\frac{1}{2}$ in	
Rotor cable required 5-conductor	
Shipping weight 19 lbs	

YAESU G-2700SDX

	Deluxe-Heavy-duty and high-tech, for Very Large amateur antenna arrays. 450 rotation with control box presets.
	Rotor diameter 10 i
	Rotor height14 i
	Maximum antenna wind load 34 sq.
	Vertical load 880 lbs/1760 momenta
	Braking torque 1736 ft./lb
	Rotation torque 57.9 to 217 ft./lb
	450° rotation time40 to 120 second
ľ	Mast diameteraccepts 1% to 2½ i
	Rotor cable 6-conduct
	Shipping weight 30 lb

CALL FOR PRICES ON ALL OF THESE YAESU PRODUCTS!

These YAESU Computer Control Interfaces allow rotator control from the serial port of your PC ...



The model ST-1... Makes Working Satellites a Breeze!

Satellite Tracking Hardware and Software for Yaesu 5400/5600 Rotators

Works with InstantTrack, QuickTrack, and Real Track software; tunes **FT-736R**, **TS-790**, **IC-970** and the **IC-475/275** combination transceivers. The ST-1 provides automatic control of antennas and transceiver tuning to simplify satellite operation. A a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the righ up-link and down-link frequencies. As the satellite moves along its path, the antennas automatically track and the transceiver tuning is corrected for the Doppler shift. Uses one serial port and parallel por from host computer, works with other software, suc **369**^s

you spinnin

G-500A Elevation rotator for space communication antennas.

G-5400B Azimuth-Elevation combination for space communication antennas: DIN computer connection.

© 1993 Yaesu USA, 17210 Edwards Road, Cerritos, CA 90701 (310) 404-2700.

YAESU G-500A

Elevation rotator, for satellite earth station and other space communication antennas. 180° rotation, only

Rotor diameter
Rotor height 10½ in.
Maximum antenna wind load 12 sq. ft.
Rotation torque
Stationary brake torque 144 ft./lbs.
180° Elevation rotation time 61 seconds
Mast diameter accepts 1½ to 2½ in.
Boom diameteraccepts 1¼ to 1% in.
Rotor cable required 6-conductor
Shipping weight

TIP: Use Belden 8448 8-wire rotor cable for YAESU rotors. You can double-up the motor wires, or the extra wires may be used to control polarization shift, preamplifiers, etc.

YAESU G-5400B

Light/Medium duty Azimuth-Elevation rotator combination, for satellite or moonbounce applications.

Rotor diameter
Rotor height
Maximum antenna wind load 11 sq. ft.
Maximum vertical load 440 lbs.
Elevation rotation torque 101 ft./lbs.
Azimuth rotation torque 44 ft./lbs.
Elevation brake torque
Azimuth brake torque 145 ft./lbs.
180° Elevation rotation time 58 seconds
360° Azimuth rotation time

ROTORS ARE IN STOCK! AES® is the World's Largest **YAESU** Rotor Distributor Call to Order Yours ... Today!

For the best choice in rotators, and the only rotators manufactured by a major amateur radio manufacturer, see Yaesu!

Choose from antenna rotators capable of handling light-duty TV antennas to large HF arrays as well as Azimuth-Elevation combinations for satellite applications.

Yaesu rotators are designed for smooth and guiet operation without noisy wedge brakes that can irritate your neighbors and are housed in weatherproof, die-cast aluminum enclosures permanently lubricated for maintenance-free operation. And, they're compatible with most U.S. manufactured antenna tower accessory shelves. To insure maximum satisfaction, Yaesu rotators are backed by a One-Year Warranty and 35-plus years of radio communication engineering know-how.

Contact your Yaesu dealer for full details and specifications and keep your antennas spinning!

YAESU Performance without compromise.SM

G-5400B specs continued:

	Pointing accuracy ± 4%
I	Mast diameteraccepts 2 to 2½ in.
	Boom diameteraccepts 1¼ to 1% in.
	Rotor cable Two runs of six-conductor.
	Shipping weight
s	

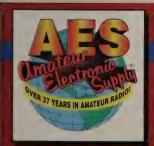
Available Soon! ...

Top-of-the line! YAESU G-2800SDX Rotor

A low-profile, high torgure rotor for large antenna arrays and other heavy-duty applications. Featuring 450° of rotation, variable rotating speed, presets with an illuminated radial compass display.

Max. ant. wind load 31 sq. ft. Rotor Cable Maximum vert. load. 880 lbs. Shipping weight Braking torque. 1810 ft./lbs. PRICE

. .6-conductor .30 lbs



Locations + 4 In-House WARRANTY Service Centers + Low Prices + Top Trades · Our Own Credit Card · Toll Free Lines · Large Stocks · Fast Shipping **HEADQUARTERS - MILWAUKEE, WI** 414-358-0333 = 800-558-0411 = Fax 414-358-3337 24-hour BBS 414-358-3472 (8-N-1, up to 14.3k baud) WICKLIFFE, OH • 216-585-7388 • 800-321-3594 • Fax 216-585-1024 ORLANDO, FL . 407-894-3238 . 800-327-1917 . Fax 407-894-7553 CLEARWATER, FL . 813-461-4267 . 800-557-4237 . Fax 813-443-7893 LAS VEGAS, NV • 702-647-3114 • 800-634-6227 • Fax 702-647-3412



HF Power Amplifiers ...



► AMERITRON ALS-600 No tune, solid-state FET linear with continuous coverage 1.5-22MHz; 10/12M with easy-toinstall optional kit*. 100W drive for 700W PEP SSB, 500W CW output, Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, front panel ALC control. Transmit, ALC, SWR LED indicators. Includes separate 110/220V power supply \$1099 Both units are 6"h x 9½"w x 12"d, 48 lbs (total).



AMERITRON ALS-500M No tune, solid-state FET linear that is Ideal for mobile operation. Continuous coverage 1.5-22MHz; 10/12M with easy-to-install optional kit*. Four 2SCC2879's deliver 600W PEP SSB, 400W CW with less than 100W drive. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, remote ON/OFF control. Requires 13.8VDC-80A peak for PA, and separate 12-15VDC-4A for con trol and bias circuits. 3%"h x 9"w x 15"d, 7 lbs \$679"



▶ AMERITRON AL-80B Desktop linear amplifier. Covers 160-15M including WARC and MARS; modifiable for 10/12 meters*. Single 3-500Z; 85W drive, 1KW PEP SSB/850W CW output. Dual illuminated cross-needle meters, QSK compatible built-in 110/220V supply. 14"w x 8"h x 15%"d, 52 lbs..... \$1069

AL-82 AL-1200 AL-1500 similar in appearance



AMERITRON AL-82 Full legal output! Covers 160-12M; owner modifiable for 10M*. Uses two Eimac 3-500Z tubes and CW/RTTY or SSB bias settings. 100W drive, 1500W continuous output. Built-in power supply with heavy-duty Hypersil® trans \$1769 former, 220V-15A. 10"h x 17"w x 18"d, 76 lbs

▶ AMERITRON AL-1200 Full legal output! Covers all ham bands 1.8-21MHz + WARC bands; owner modifiable for 10M* Single Eimac 3CX-1200A7 ceramic tube requires 100W drive for 1500W output. Heavy silver-plated tank components, built-in heavy-duty power supply with Hypersil® transformer, 220V-15A \$1829 10"h x 17"w x 18"d, 83 lbs

AMERITRON AL-1500 Full legal output! Covers 160-12M; owner modifiable for 10M* Uses a single Eimac 8877 ceramic tube to deliver 1500W+ output with only 65W drive. Heavy-duty built-in power supply with Hypersil® transformer, 220V-15/ \$2249 10"h x 17"w x 18"d, 77 lbs.



► AMERITRON AL-811 Low cost Desktop linear! Covers 160-12M; owner modifiable for 10M* Uses three 811A tubes with tuned input to deliver 600W PEP SSB/500W CW output with 75W drive. Vernier drive plate tuning, illuminated grid and plate voltage/current meters, adjustable ALC. Built-in 110/220 \$58995 power supply. 16"d x 13% "w x 8"h, 40 lbs.

AMERITRON AL-811H Similar to AL-811, but uses four 811A tubes for 800W PEP SSB output with 75W input\$719*



► ICOM IC-2KL Solid-state, broadband/no tune-up linear amplifier. Covers 160-15M. 50-80W drive provides 600W PEP SSB and 500W CW output. Separate power amplifier and power supply units. Automatic band switching operation when using with an ICOM transceiver. 110V-20A (220V with modification). Both units are: 4%"h x 9%"h x 15%"d, 45 lbs (total) CALL



▶ ICOM IC-4KL Solid-state, broadband/no-tune-up linear with separate controller and RF units. Covers 160-12M. Four 8 transistor modules, 100W drive produces 1000W output (one-hour at full duty cycle). Built-in automatic antenna tuner with memory and 40V-60A power supply. QSK full-break-in CW operation. Dual meters show SWR, final amplifier current and temperature, and output. Automatic operation with ICOM transceivers. 110V or 220V-18A (recommended), Controller: 5¾"h x 7¾"w x 13½"d, 66 CALL lbs. Amplifier: 11%"h x 16%"w x 18"d, 79 lbs.



KENWOOD TL-922A Maximum legal power linear amplifier. Covers 160-15M; user modifiable for 10M* Uses two Eimac 3-500Z tubes in class AB₂ grounded grid circuit requiring only 80W drive to produce 1500W PEP SSB output. Features rugged, heavy-duty electrical and mechanical construction of the highest quality, and convenient recessed lifting handles. Built-in 110/220V AC power supply. 15½" x 7½"h x 16¾"d, 83 lbs CALL



VECTRONICS (VAL) HF-600QSK KW desktop linear amplifier. Covers 160-15M including WARC and MARS operation; user modifiable for 10M*. Class AB₂ grounded grid circuit, 8802 carbon anode (3-500Z type) zero-bias triode. Tuned input, 60W drive/600W output - continuous duty SSB, 50% other modes. Cross needle metering system, adjustable ALC, vernier tuning and loading, high speed dual vacuum relay system for CW, AMTOR \$1595 RTTY, 7½"h x 14"w x 16½"d, 35 lbs..



YAESU FL-7000 Solid-state, broadband/no tune-up linear amplifier with built-in automatic antenna tuner and power supply. Covers 160-12M, owner modifiable for 10M* Only 70W drive for 600W output. SSB duty cycle - 30 minutes; full carrier - 2 minutes. Full break-in for CW, HF Packet and AMTOR modes. Tuner memory holds settings and antenna selection. Circuit automatically turns off amplifier and attempts to rematch if SWR exceeds 2:1 Automatic selection of four different antennas with optional unit. Automatic band change when used with YAESU transceivers; interface cables for the various models are optional, see price list CALL 110/220V. 5"h x 15"w x 15"d, 60 lbs.

RF Concepts VHF/UHF Amplifiers

 Single & Duoband models FM/CW/SSB modes GaAs FET preamplifier Overdrive protection 12V DC RFC 1-year warranty 							
Model	input	output	amps	Price			
2-meters			-				
2-23	0.2-5W	30W @ 2W in	5	\$13995			
2-315	30-50W	150-170W	25	289 ⁹⁵			
VHF 1-60)* 1W	60 @ 1W in	10	239 ⁹⁵			
2-417	0.2-50W	170W @ 45W in	22	289 ⁹⁵			
220MHz							
3-22	5W	20W	4	\$144 ⁹⁵			
3-211	2W	110W	22	32995			
3-112	0.2-15W	120W @10W in	12	329 ⁹⁵			
3-312	30W	120W	22	299 ⁹⁵			
440MHz							
4-32	3W	20W	4	\$179 ⁹⁵			
4-110	10W	100W	22	36995			
4-310	30W	100W	20	369 ⁹⁵			
UHF-50*	3W	50W	10	269 ⁹⁵			
	nd - 2m/440 N						
2/70*	(3W) (5W)		6	\$239 ⁹⁵			
2/706	(3W) (5W)		6	259 ⁹⁵			
2/70H*	(28W) (20W)	(200W) (125W)	40	719 ⁹⁵			

2/70H* (28W) (20W) (200W) (125W) 40

MIRAGE VHF/UHF Amplifiers



SSB/FM/CW • Automatic antenna changeover with adjustable SSB delay . 10dB gain Low Noise receive preamp • Overload protection • Optional remote control . Mobile use, or Base with an adequately rated DC power supply (ASTRON recommended!) • MIRAGE 5year Warranty, 1 year on RF power transistors.

Model	MHz	input	out	amps	preamp	SALE
A-1015G	50-54	10W	150W	23	ves	\$33995
A-1035G	50-54	10W	350W	23*	ves	549 ⁹⁵
B-23	144-148	2W	30W	5	no	114 ⁹⁵
B-23G	144-148	2W	30W	5	yes	154 ⁹⁵
B-215G	144-148	2W	150W	20	yes	319 ⁹⁵
B-108G	144-148	10W	80W	12	yes	194 95
B-1016G	144-148	10W	160W	25	yes	319 95
B-1030G	144-148	10W	300W	48	yes	579 ⁹⁵
B-1060G	144-148	10W	600W	52*	yes	899 ⁹⁵
B-2516G	144-148	30W	160W	25	yes	269 ⁹⁵
B-2530G	144-148	30W	300W	48	yes	579 ⁹⁵
B-2560G	144-148	25W	600W	52*	yes	899 ⁹⁵
B-5016G	144-148	50W	160W	24	yes	269 ⁹⁵
B-5030G	144-148	50W	300W		yes	569 ⁹⁵
B-5060G	144-148	50W	600W	45*	yes	899 ⁹⁵
C-22	222-225	2W	20W	5	no	109 ⁹⁵
C-22G	222-225	2W	20W	5	yes	149 ⁹⁵
C-211G	222-225	2W	110W	20	yes	299 ⁹⁵
C-106G	222-225	10W	60W	12	yes	199 ⁹⁵
C-1012G	222-225	10W	120W	5	yes	299 ⁹⁵
C-1022G	222-225	10W	2200		yes	549 ⁹⁵
C-2512G	222-225	30W	120W		yes	289 ⁹⁵
C-2522G	222-225	30W	200W		yes	549 ⁹⁵
C-5012G	222-225	50W	120W		yes	279 ⁹⁵
C-5022G	222-225	50W	240W	42	yes	499 ⁹⁵
D-15N	425-450	2W	15W	3	no	169 ⁹⁵
D-26N	430-450	2W	60W		no	244 ⁹⁵
D-1010N	430-450	10W	100W		no	35495
D-3010N	430-450	30W	100W		no	32995
D-100-ATVN	430ATV	1W	52W		no	34995
D-1010ATVN	430ATV	10W	100W		no	34995
* at	28VDC	N deno	otes Ty	pe-N c	onnector	S
RC-1 Remo						mplifiers \$42 °

Amoteur Electronic Supply' *FCC rules permit a properly licensed amateur to modify an amplifier for 10M use ... contact the manufacturer for details. 84

MIRAGE Amateur Band Amplifiers • VHF

ALL VHF MODELS FEATURE

- GaAs-FET Receive Pre-Amp
- Noise Figure less than 0.6 dB
- Adjustable Pre-Amp Gain to Prevent Intermodulation
- Pre-Amp Gain Over 20dB on High Position
 - Variable automatic Relay Switching with delay adjustment for SSB
- High VSWR Shutdown

- Intermittent Duty Cycle With Internal Over-Temperature Protection
- **Complete Front Panel Switching**
- All Mode Operation (SSB, CW or FM)
- **Overcurrent Shutdown**
- . **Remote Control Outlet**

WARRANTY: Amplifiers are warranteed for 5 years (parts & labor), except power transistors (1 year).

6 METER AMPLIFIERS - 50 - 54 MHz



A1015-G 10W In - 150W Out

A1035-G 10W In - 350W Out

SPECIFICATIONS:

RF POWER IN1 to 15 Watts
 RF POWER OUT
 150 Watts

 CURRENT/ VOLTAGE
 18-22 Amps @ 13.8 Volts

 SIZE
 12" X 3" X 5.5"

2.0 to 15 Watts 350 Watts 18-22 Amps @ 27-30 Volts 12" X 3" X 5.5" 5 lbs.

B-23-G

2W In - 30W Out

FEATURES

Compact Size

Complete Front Panel Switching

Has No VSWR Shutdown No Remote Outlet

100mW to 5 Watts

30 Watts

3.5" X 2" X 7" 1.25 lbs.

2 METER AMPLIFIERS - 144 - 148 MHz



SPECIFICATIONS:

 RF POWER OUT
 30 Watts

 CURRENT/ VOLTAGE
 5 Amps @ 13.8 Volts

 SIZE
 4" X 2" X 4.5"
 WEIGHT 1 lb.



SPECIFICATIONS:

2W In - 30W Out **FEATURES** Handie-Talkie Amp Has No Power or VSWR Shutdown

B-23 (without pre-amp)

No Remote Outlet

B-108-G 10W In - 80W Out FEATURES

Excellent for Handie-Talkies

FEATURES 1 Watt in will give 60 Watts out

100mW to 15 Watts 160 Watts 20-25 Amps @ 13.8 Volts 12" X 3" X 5.5" 5 lbs.

200mW to 40 Watts 160 Watts 17-22 Amps @ 13.8 Volts 12" X 3" X 5.5" 5 lbs.

B-2516-G

35W to 55 Watts 160 Watts 17-22 Amps nom. @ 13.8 Volts 12" X 3" X 5.5" 5 lbs.

B-5030-G

50W In - 300W Out **FEATURES** High Speed RF Switching Relay

1W to 60 Watts 300 Watts + 48 Amps nom. @ 13.8 Volts 10" X 12" X 5" 15 lbs. 85

R-2530-6 6 MIRAGE/KLM

SPECIFICATIONS: RF POWER IN

B-1030-G 10W In - 300W Out **FEATURES Excellent for Handie-Talkies**

B-215-G 2W In - 150W Out

-

FEATURES Designed for Handie-Talkies

200mW to 5 Watts 150 Watts 20-25 Amps @ 13.8 Volts 12" X 3" X 5.5" 5 lbs.

> **B-5016-G** 50W In - 160W Out

5 Amps @ 13.8 Volts

B-1016-G 10W In - 160W Out

30W In - 160W Out

B-2530-G 25W In - 300W Out **FEATURES** Linear Curve: 1W-30W, 45W max

High Speed RF Switching Relay

1W to 45 Watts

300 Watts +

48 Amps nom. @ 13.8 Volts

10" X 12" X 5"

15 lbs.

MIRAGE Amateur Band Amplifiers • VHF

2 METER AMPLIFIERS - 144 - 148 MHZ (CONTINUED)



B-1060-G 10W In - 600W Out **FEATURES** Excellent for Handie-Talkies

B-2560-G 25W In - 600W Out

B-5060-G 50W In - 600W Out

SPECIFICATIONS:	
RF POWER IN	
RF POWER OUT	
CURRENT/ VOLTAGE	
SIZE	
WEIGHT	

1 W to 10 Watts 600 Watts 42-52 Amps @ 28 Volts* 10" X 12" X 5" 15 lbs.

10 W to 30 Watts 600 Watts 42-52 Amps @ 28 Volts* 10" X 12" X 5" 15 lbs.

30 W to 60 Watts 600 Watts 35-45 Amps @ 28 Volts* 10" X 12" X 5" 15 lbs.

* Two 13.8 Volt power supplies can be combined in a series to provide 27.6 Volts for operating these new amplifiers. Application information is provided in the operations manual to safely combine power supplies.

METER AMPLIFIERS - 223 - 225 MHz 11/4



SPECIFICATIONS:

RF POWER IN

C-22 (Without Pre-Amp) 2W In - 20W Out **FEATURES** Compact Size

No Power or VSWR Shutdown No Remote Outlet Excellent for H/T's

WEIGHT...... 1 lb.

C-22-G 2W In - 20W Out

FEATURES Compact Size No VSWR Shutdown No Remote Outlet Excellent for H/T's

100mW to 5 Watts

20 Watts

5 Amps @ 13.8 Volts

3.5" X 2" X 7"

1.25 lbs.

FEATURES Excellent for H/T's

C-106-G

10W In - 60W Out

C-211-G 2W In - 110W Out **FEATURES** Excellent for H/T's

300mW to 15 Watts 60 Watts 10-12 Amps @ 13.8 Volts 8" X 3" X 5.5" 3 lbs.

300mW to 4 Watts 110 Watts 18-20 Amps @ 13.8 Volts 12" X 3" X 5" 5 lbs.



SPECIFICATIONS: RF POWER IN

C-1012-G 10W In - 120W Out **FEATURES** 1 Watt in will give 15 Watts out

300mW to 15 Watts

300mW to 40 Watts 120 Watts 16-18 Amps nom. @ 13.8 Volts 12" X 3" X 5.5" 5 lbs.

C-2512-G

25W In - 120W Out

35W to 55 Watts 120 Watts 16-18 Amps nom. @ 13.8 Volts

C-5012-G

50W In - 120W Out

SPECIFICATIONS: REPOWER IN RF POWER OUT

C-1022-G 10W In - 220W Out

C-2522-G

25W In - 220W Out

1W to 30 Watts 220 Watts with 30 Watt Drive 48 Amps nom. @ 13.8 Volts 13" X 10" X 5" 13 lbs.

12" X 3" X 5.5" 5 lbs.

C-5022-G 50W In - 220W Out

35W to 55 Watts 220 Watts 48 Amps @13.8 Volts 12" X 3" X 5.5" 5 lbs.

MIRAGE 70cm Amplifiers • 420-450MHz - UHF

ALL UHF MODELS FEATURE...

- All-Mode FM, SSB, CW, ATV
- Voltage 13.8 vDC

- Adjustable Delay for SSB
 - **Remote Control Outlet**
- 50Ω Impedance (input & output)
- Use with MIRAGE/klm's 440 Antennas... Model numbers 440-6X, 440-10X and 440-16X.

AIRAGE

SPECIFICATIONS:

RF POWER IN	
RF POWER OUT	
CURRENT	
SIZE	
WEIGHT	



PROPERTY.

SPECIFICA	TIONS:
RF POWER	IN

SIZE

D-15-N 1W In - 15W Out **FEATURES** Special for ATV Service

as well as SSB and FM All Solid State -No Relays No Remote Outlet Excellent for H/T's

2W In - 60W Out **FEATURES** Special for ATV Service

D-26-N

as well as SSB and FM 1 Watt in will Give 51W out Excellent for H/T's

> 400mW to 5 Watts 2W In 60W Out 12 Amps nominal 8.25" X 2.5" X 7" 4 lbs

D-1010-ATVN 10W In-100W Out

FEATURES

Specially designed for amateur television Can also be used for SSB and FM 2W in will give you 52W output 420 - 450 MHz

1W to 15 Watts

600 WATTS

UII ().

MIRAGE/KLM 2 Meters

D-1010N 10W In-100W Out **FEATURES**

430 - 450 MHz SSB/FM Can be modified for ATV Service

D-3010-N 30W In-100W Out **FEATURES**

430 - 450 MHz SSB/FM

300mW to 15 Watts 100W 20 Amps 12" x 3" x 5.5" 6 lbs.

5W-45 Watts 100W 20 Amps 12" x 3" x 5.5" 6 lbs

D-100-ATVN 2W In-52W Out **FEATURES**

Specifically designed for amateur television Can also be used for SSB and FM 420 - 450 MHz

> 500mW to 5 Watts 52W 20 Amps 12" x 3" x 5.5" 6 lbs.



MIRAGES's 600 Watt Output, 2-Meter Amplifiers are available in Input powers of 10W, 25W or 50W, ... all with MIRAGES's special features including GaAS-FET Receive-Amp, intermittent duty cycle with internal over temperature protection, all mode operation (SSB, CW or FM), preamp gain over 20 dB, overcurrent shutdown, etc.

Model#	Input	Output	Current	Voltage
B-1060G	10W	600W	52 Amps	27.6 VDC*
B-2560G	25W	600W	52 Amps	27.6 VDC
B-5060G	50W	600W	52 Amps	27.6 VDC

*These amplifiers utilize 27.6 Volt mosfet devices. From the instructions supplied by MIRAGE, you can easily couple two heavy-duty 13.8 volt supplies together to provide the required operating voltage.



MIRAGE HF/VHF/UHF PreamplifierS

Model KP-1 • In-Shack model, available for 10M, 6M, 2M, 1-1/4M and 70cm. Features an in-line design with automatic RF sensed transmit/receive switching. The Low Noise (0.68dB) GaAs-FET circuit boosts weak receive signals up to 20-25dB or 10-15dB with internal attenuator switched in. Maximum thru power: 165W Requires 12-15VDC. 4-1/4 " x 2-1/2" x 1-3/16".

Model KP-2 • Mast-Mounted model, similar to KP-1, except installed on a 4-1/2" x 5" mounting plate and supplied with a 2-1/16" mast clamp; also has weatherproof type-N connectors. Mounts outside near the antenna for maximum signal input and lowest line loss. DC insertion module provides power and remote control directly thru the transmission line.

MIRAGE Amplifier **Remote Control Head**



Model RC-1 • Usable with most MIRAGE RF Power Amplifiers. Provides convenient remote control operation of: Power On/Off, Preamp On/Off, SSB/FM mode switch. Supplied with 18 ft. control cable; longer lengths available on special order. 1-3/4 " x 3-1/4 " x 2-1/2"



MIRAGE Repeater Amplifiers • VHF/UHF

ALL TRANSISTORS ARE MOUNTED ON A COPPER BASE IMBEDDED INTO THE HEATSINK. THIS UNIT IS DESIGNED FOR CONTINUOUS DUTY.

FEATURES 50, 144 AND 220 MHz Models

Cool Running — A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. The chassis cover is perforated so air convection will keep the circuit board area cool.

Dual Protection - The amplifiers have two temperature sensors; one on the heatsink and one on the circuit board. If conditions cause either area to overheat, the amplifier will shut off until it cools down to a safe temperature.

Bypass Mode — These models will feed the exciter output straight through to the antenna in an over-temperature condition. The bypass mode can also be remotely selected by proper interfacing to the repeater controller. Either a relay contact or a TTL logic can be used to select the bypass mode or amplified mode of operation.

Reduced Relay Wear - The amps have a selectable long release time (adjustable up to 5 secs.) for the RF change-over relay. This prevents unnecessary relay action during repeater operation.

On-Site Control --- The bypass mode and relay release time can be selected with built-in switches. The optional MIRAGE RC-1 remote control box can be used to switch these functions up to 18 feet away from the amplifier.

MHz Freq. Range	Model Number	Watts Power Input	for	PECIFICATIC Watts Max. Cont Output	Amps Nominal Current	Power Supply (vDC)	RF Connector
50-54	A1015R	3-4		110	16-18	13.8	Teflon SO-239
144-148	B215R	1		110	16-18	13.8	Teflon SO-239
145-148	B1016R	3-4		120	16-18	13.8	Teflon SO-239
145-148	B2516R	10-12		120	14-15	13.8	Teflon SO-239
223-225	C211R	.36		80	15-16	13.8	Teflon SO-239
223-225	C1012R	5		90	16-18	13.8	Teflon SO-239
223-225	C2512R	13-15		90	13-14	13.8	Teflon SO-239
440-450	D1010RN	2-4		80	14-15	13.8	Teflon "N" UG58AU
440-450	D3010RN	10-12		80	11-13	13.8	Teflon "N" UG58AU
420-450 ATV	D100-ATVRN	.5-1		40	12-14	13.8	Teflon "N" UG58AU
420-450 ATV	D1010-ATVRN	2-4		80	15-16	13.8	Teflon "N" UG58AU

FEATURES 440 MHz and ATV Models

Cool Running - A 10" high by 19" wide full finned rack-mounted heatsink keeps the transistor temperatures low for long life. The chassis cover is perforated so air convection will keep the circuit board area cool. The RF board is low-loss Teflon for minimum dielectric heating.

Reliable --- The RF change-over relay has been eliminated on this model to provide the highest order of reliability. Teflon connectors are standard on this well-designed unit.

Protection — The amplifier will shut off if conditions cause the heatsink temperature to raise to an unsafe level.

All-Mode Operation - Class AB linear operation is rated for FM, SSB, CW and ATV operation.

WARRANTY ON ALL REPEATER AMPLIFIERS

NS.

Warranty - RF power devices are guaranteed for one year against failure due to defective workmanship or materials. All other components are guaranteed for two years.

MIRAGE Watt/SWR Meters • HF/VHF/UHF



FEATURES:

- · Peak or Average Reading
- Reads SWR Directly-Without Extra Charts or Graphs
- · Functions: Power Forward/Reverse, Peak/Average and SWR

WARRANTY:

5 Years Parts & Labor

SPECIFICATIONS:

VR SENS
-2 Watts
-2 Watts
5 Watts
1 Watt

- Remote Coupler Mounting
- Line impedance 50 Ω
- Insertion Loss-negligible
- Power requirements 9-13.6 vDC internal battery or AC adaptor jack

POWER RANGE

- 25,200 & 2000 Watts 50,500 & 1500 Watts 5.50 & 150 Watts 1.10 & 100 Watts
- Low Battery Indicator Triplett Meter Movement
- · Weight 3.5 lbs.

SWR & Power Meters...



Carrying case, dummy load, elements and connectors are optional. Case will hold three additional elements (6) instead of dummy load as shown.

BIRD 43 THRULINE® Wattmeter Measures incident and reflected power in 50Ω coaxial transmission lines with 5% of full scale accuracy; insertion VSWR is less than 1.05. Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged aluminum case. Supplied with UHF female (S0-239) Quick Change (QC) type connectors; optional UHF, N and BNC types available. Optional plug-in elements (see table below) provide a wide choice of frequency ranges from 2–1000MHz, with power levels up to 5000W (2–30MHz) and up to 1000W (30–1000MHz). Select one or more elements now, add

others as needed. 6%⁺h x 5%⁺w x 3%⁺d, 3 lbs......**\$230**⁰⁰ **43P** Peak Reading Wattmeter Meter Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors and accessories. Requires two 9V batteries......**\$345**⁰⁰

TABLE 1 Standard BIRD Elements

Frequency Bands (MHz)								
Power Range	2- 30	25- 60	50- 125	100- 250	200- 500	400 1000		
5 watts	restance	5A	5B	5C	5D	5E		
10 watts	_	10A	10B	10C	10D	10E		
25 watts		25A	25B	25C	25D	25E		
50 watts	50H	50A	50B	50C	50D	50E		
100 watts	100H	100A	100B	100C	100D	100E		
250 watts	250H	250A	250B	250C	250D	250E		
500 watts	500H	500A	500B	500C	500D	500E		
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E		
2500 watts	2500H							
5000 watts	5000H							

TABLE 2 Low-Power BIRD Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
60-80 MHz	060-1	60-80 MHz	060-2
80-95 MHz	080-1	80-95 MHz	080-2
95-125 MHz	095-1	95-125 MHz	095-2
110-160 MHz	110-1	150-250 MHz	150-2
150-250 MHz	150-1	200-300 MHz	200-2
200-300 MHz	200-1	250-450 MHz	250-2
275-450 MHz	275-1	400-850 MHz	400-2
425-850 MHz	425-1	800-950 MHz	800-2
800-950 MHz	800-1		

BIRD Variable RF Signal Samplers

Stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control. 4273 1.5–35MHz, 5KW 4275 20–1000MHz, 1KW

Models 4273-100 and 4275-100 fasten directly to QC equipped BIRD products.

See Price List for BIRD carrying cases, QC connectors, element and sampler pricing ...

Gift Certificates

End Birthday and Holiday Confusion! Give your Ham Friends an **AES**® Gift Certificate ... <u>or</u> tell your family YOU want one!

It's E-Z, just Call Toll Free and use a Credit Card!



COMET Three models with separate meter and RF sensor with 6 ft. long cable. Lighted, cross-needle meter with three selectable power ranges, shows forward and reflected power, and SWR simultaneously, plus indicates DC voltage from power source. 50Ω , 12VDC. 4% w x 3% h x 1% d, 1 lb, 4 oz.

 CMX-1
 1.8–60MHz; 30, 300, 2000W ranges
 \$189**

 CMX-2
 1.8–200MHz; 20, 50, 200W ranges
 179**

 CMX-3
 140–525MHz; 20, 50, 200W ranges
 169**



DIAMOND Meters Five models, all measure Power and SWR with 5–10% of full scale accuracy. illuminated meter, sensor switch and LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.), ratings vary with frequency. All have SO-239 connectors, except the SX-1000 which has a Type-N. The SX-600 and SX-1000 are dual band. 12VDC required for displays. 6*w x 2%*h x 4*d, 2 lbs:

SX-100	1.6-60MHZ, 50/300/3000W ranges	51
SX-200	1.8-200MHz, 5/20/200 ranges1	26
SX-400	140-525MHz, 5/20/200W ranges 14	47
SX-600	1.8-160MHz and 140-525MHz, 5/20/200W2	39
SX-100	0 1.8-160MHz and 430-1300MHz, 5/20/200W2	69





DAIWA NS-660PA SWR Meter (left) Covers 1.8–150MHz, with 30/300/3000W ranges. Cross-needle meter shows RMS or PEP forward and reverse power, and SWR simultaneously. 50Ω, S0-239 connectors. 7¼ "w x 3¾ "h x 5¼ "d, 2¼ lbs...........\$189⁹⁵
 DAIWA DP-830 Digital SWR Meter (right) Covers 1.8–150 and 149–525MHz. Fully automatic! Large LCD displays forward RMS or PEP power, and SWR by digits and bargraph, simultaneously. Power ranges: 1.5KW (1.8–150MHz) and 150W (140–525MHz). SWR beep tones, clock function displays four different times. 50Ω, S0-239 connectors. 5%" w x 2½"h x 4¼"d, 2½ lbs.....\$319⁹⁵
 DAIWA DP-820 Digital SWR Meter Same as DP-830, except covers 140–525MHz, 150W and no clock function.......\$249⁹⁵



DAIWA CN-410M Compact SWR and Power Meter For mobile or base use. Covers 3.5–30MHz, rated at 150W with 15/150W forward and 50W/5W reflected power ranges. Backlighted, cross-needle meter shows forward/reverse power and SWR simultaneously. 50Ω input with S0-239

connectors, mt. bracket. 2¼"w x 3"d x 3¼"d, 10 oz.... \$89" CN-460M Same features and rating as CN-410M, except covers the 140–450MHz range \$89" CN-465M Same features and rating as CN-410M/460M, propert of CFUM of CFUM of CFUM of CFUM

except covers 140–450MHz, 75W with 15/75W forward and 5/25W reflected ranges. **\$89**^{se} See Index for more Diawa products...





MIRAGE Meters Four models – all measure RMS and peak forward and reverse power, and SWR directly. High quality meter, remote coupler mount mounting. 50Ω coaxial, SO-239 input and output connectors, negligible insertion loss. $5\%^{+}h \times 4\%^{+}w \times 55^{+}d$, 3% lbs. Requires 9V battery, 9 –13.6V DC, or AC adapter. Low battery indicator.

MP-1	1.8 - 30 MHz; 25, 200, 2000W ranges	5189 ⁹⁵
MP-2	50 - 200MHz; 50, 500, 1500W ranges	18995
MP-3	425 – 450MHz; 5, 50, 500W ranges	21995
MD.4	1260 - 1300MHz 1 10 100W ranges	22095



 VANCO SWR1 Combination Field strength and SWR meter for 3.5 – 150MHz. 52Ω, 6th x 2^{tw} x 2^{kt}d, 14 oz.
 \$19⁹⁵
 VANCO SWR2 Combination Power, SWR and Field Strength Meter for 1.7–150MHz. 0–10W and 0–100W ranges, ±10%. accuracy. 52Ω, 6th x 2^{tw} x 2^{td}, 14 oz.
 \$29⁹⁵
 VANCO SWR3 Economy SWR meter for 1.7 – 30MHz with ±5% accuracy. 52Ω, S0-239 connectors. 2^{kt} x 3th x 3^{tt}.
 \$14⁹⁵

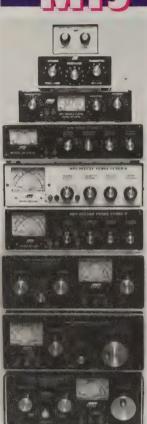




 ▶YAESU YS-60 SWR/Power Meter • Monitors both average (CW) and peak (SSB) transmitter power output, and VSWR of antenna system. Covers 1.6-60MHz and measures up to 2KW with meter ranges of 20/200/2000W. 50Ω, SO-239 connectors. Requires external 12V DC for meter lamps and internal op amplifier circuits. 4¼ w x 2%⁺h x 3½⁺d, 1½ bs......\$124⁹⁵
 ▶YAESU YS-500 SWR/Power Meter Similar to YS-60 above, but covers 140–525MHz, and up to 200W with meter ranges of 4/20/200W. 12V not required.....\$109[∞]

89

Amoteur Electronic Supply ® 5 Locations + Large Inventory + Low Prices + Top Trades + Fast Shipping + In-House Warranty Service



TUNERS, SWITCHES, DUMMY LOADS & METERS

▶MFJ-16010 Random Wire Tuner (top) • Covers 1.8–30 MHz continously, and handles 200W PEP. Lets you operate all bands anywhere, from apartment, motel, camping, etc. with \$3995 any transceiver using a random length wire antenna. Ultra small - 2w° x 3°h x 4°d. ▶ MFJ-901B Versa Tuner • Covers 1.8–30 MHz continuously, and handles 200W PEP Matches coaxial cable, random length wires and balanced lines (built-in 4:1 balun). Very popular for use between a transceiver and a final amplifier for proper matching and full drive, or as a mobile antenna tuner. The smallest Versa Tuner. 5"w x 2"h x 6"d. \$5995

▶ MFJ-945D Mobile Tuner • Covers 1.8–30 MHz and handles 300W PEP. Extends mobile antenna bandwidth and eliminates having to frequently stop, get out, and adjust your whip when making frequency changes. Matches coax cable only, has built-in cross-needle SWR \$8495 bridge and wattmeter with 50/300 and 5/30W ranges. 8"w x 2"h x 6"d . ►MFJ-941E Versa Tuner II • Covers 1.8–30 MHz and handles 300W PEP. Matches every thing! - coax fed dipoles, vees, whips, verticals, beams, random wires and balanced lines (built-in 4:1 balun). Built-in lighted Cross-Needle SWR/Power meter with 300/50W and 30/5W ranges. Fight position antenna switch to select two coax lines (direct or thru tuner)

\$9995 random wire/balanced line, or external dummy load. 10%"w x 2%"h x 7"d . ▶ MFJ-948 Deluxe Tuner • Covers 1.8–30 MHz and handles 300W PEP. Has all features of MFJ-941E, plus it has a larger lighted peak reading Cross-Needle SWR/Power meter with 300/50W & 30/5W ranges, and lamp switch. \$11995

►MFJ-949E Deluxe Versa Tuner II • Has the same power, tuning, and switching capability as MFJ-941E described above. In addition, it has a lighted peak reading Cross-Needle \$12995 SWR/Wattmeter, and a built-in 300W 50 Ω dummy load. 10%"w x 2%"h x 7"d. ▶ MFJ-962C Versa Tuner III • Covers 1.8–30 MHz and handles 1.5KW PEP. Matches coax.

random wire or balanced line (built-in heavy-duty 4:1 balun). Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges. Six position switch for 2 coax \$20995 lines (direct or thru tuner), random wire and balanced lines. 10³/₄" w x 4³/₂" h x 15" d ▶MFJ-986 Differential-T Tuner™ • Covers 1.8–30 MHz, handles 3KW PEP, tunes most

antennas. Features a broadband T-network with roller inductor and differential capacitor Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/50W and 2000/500W ranges. Roller inductor spinner knob with 3-digit turns counter, 6-position antenna switch and external dummy load switches, 4:1 balun. 10%"w x 4%"h x 15"d.. \$25995

▶ MFJ-989C Versa Tuner V • Heavy-Duty! Covers 1.8–30 MHz, handles 3KW PEP matches everything! - coax fed antennas, random length wires, and balanced lines. Features a roller inductor with spinner knob and 3-digit turns counter. Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges, 50Ω- 300 watt dummy load, 4:1 balun, 6 position antenna switch, and tilt bail. 10%"w x 4½"h x 15"d ... \$29995

►MFJ-1704 Antenna Switch 4 positions, plus

MFJ-921 (VHF) / MFJ-924 (UHF) Tuners For base or mobile operation, they match a wide range of impedances. The

MEJ-921 covers 2 meters and 220MHz, the MFJ-924 covers 440MHz only. Both are rated at 300W PEP and



a tuned counterpoise.

fed antennas

Improves efficiency and pat

tern, Covers 1.8-30MHz, RF

ammeter aids tuning, 71/2"w

x 3½"h x 7"d. Not for coaxial

\$7495

▶MFJ-931 Artificial Ground Eliminates problems caused by an inadequate ground. Resonates a random length wire to act as





grounded for lightning protection. 10"w x 3"h x 1½"d.......\$3495 ▶ 1700B Antenna/Transceiver Switch Select from 1-6 anten-



nas and 1-6 rigs in any combination. Tuner. SWR meter, linear, etc. can be left in line to operate with any

combo, 50-750, Handles 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused \$6495 positions ground for protection. 10"w x 3"h x 1½"d...

▶ MFJ-1702B Antenna Switch 2 positions plus center ground, 50Ω . Rated to 500MHz with <0.2dB loss, 2.5KW PEP or 1 KW CW, >60dB isolation @ 300 MHz/>50 dB @ 450 MHz. Unused terminal grounds for lightning protection \$2195 ►MFJ-1702BN Low loss on UHF, with Type N \$3195 connectors, good up to 1.1 GHz ...





MFJ-850 Line Voltage Monitor Plug into any AC outlet and monitor line voltage on an \$1995 expanded 95-135V scale ...



and provides two pair of high current (total 30A) for HF or VHF rigs, and six pair of binding posts for other 12V station access \$6495 sories. Has built-in voltmeter, switch and fuses. ▶ MFJ-1116 DC Power Outlet Connects to 12VDC source and provides 8 HD-5 5-way binding posts for powering multiple items. Bult-in voltmeter, switch and fuse. RF bypassed, outlets \$4495 spaced for banana jacks 131/2" w x 21/4 "h x 21/2" "d .

\$2995 MFJ-1112 as above, 5 posts, no meter or switch.





See Price List and Index

for other MFI models



► MFJ-259 HF/VHF SWR Analyzer with RF Resistance Meter Has all or the features of the MFJ-249, but also allows measurement of RF feedpoint resistance up to 500Ω at minimum SWR. Take the quesswork out of building matching networks and baluns, you can watch the effects of spacing on radiation resistance \$19995 as you adjust your antenna.....

MFJ-29 Carrying pouch for 249/259 .\$19⁹⁵ ▶ MFJ-66 Dip meter adapter for MFJ-249/259, Two coils for \$199 coverage of 1.8-30MHz and 30-170 MHz ...

MFJ-812B

VHF SWR/Wattmeter Covers 2meter and 220MHz bands. Reads forward and reflected power on 30 and 300W scales, and SWR. Reads SWR from 14MHz thru 220MHz and



relative field strength from 1-220MHz, 4½"w x 2¼"h x 3"d \$299 ▶ MFJ-816 HF SWR Wattmeter Similar to MFJ-812B, but covers 1.8-30MHz. Reads forward/reflected power on 30/300W \$299 scales and SWR, no field strength. 41/2"w x 21/2"h x 3"d .



►MFJ-815B SWR/Wattmeter Covers 1.8-30MHz. Lighted Cross-Needle meter simultaneously monitors peak or average, forward and reflected power and SWR at a

glance, without adjustments. Two ranges: 200W/2000W forward, and 50/500W reflected. 71/4"w x 4½"h x 3½"d. Meter light requires 12VDC... \$69%

▶MFJ-817 Same as MFJ-815B but covers 144 and 440MHz. Power ranges are 200/20W forward, and 50/5W reflected ..\$7495

MFJ CW Transceivers

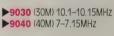
Single band, CW only, 5 models. Compact portable. up to 5 watts output. Features incl. superhet receiver. speaker, vernier

0



tuning, 8-pole crystal filter, RIT, ACC, semi/full break-in, sidetone. 12-15 VDC. 6"x 61/2" x 21/2". All ... \$15495, except 9017 ... \$14995

Models and Coverage ▶9015 (15M) 21-21.2 MHz >9017 (17M) 18.068-18.110MHz >9040 (40M) 7-7.15MHz ▶9020 (20M) 14-14.075MHz



MFJ-9420X 20-meter SSB Travel Radio Features 12W output. a hot receiver and potent speech processor. Smooth reduction-\$20995 drive VFO tuning, S-meter. 12VDC. 2%"x 61/2" x 6"



MFJ-1786 Hi-Q Loop Antenna Covers 10–30MHz, continuous. Tunable from controller that features an SWR/Wattmeter and auto band selection. Only 36" diameter, installs almost anywhere! \$26995 Uses 50Q coax, no separate control cable needed.

MFJ-949E *Deluxe* **300** Watt Tuner *More hams use MFJ-949's than any other tuner in the world! Why settle for an imitation when you can have the real thing?*

In Stock at AES stores



Includes FREE AC adapter for meter light

More hams use MFJ-949's than any other antenna tuner in the world!

Why? Because the world's leading tuner has *earned* a worldwide reputation for being able to match just about anything.

MFJ-949's have been highly refined and have years of *proven* reliability.

Every MFJ-949E comes with ... MFJ's famous one year *No Matter What*[™]

unconditional guarantee ... first-rate performance ... unbeatable quality ... the best tuner value in ham radio -- all from the world's most trusted name in antenna tuners.

Now the latest MFJ-949E gives you even more features and more value than ever at a new lower price.

Why take chances with an imitation when you can have the *real thing* from the world's most trusted name in antenna tuners.

More reasons why more hams use MFJ-949's than any other antenna tuner in the world...

Full 1.8-30 MHz Operation

1000 volt tuning capacitors, extra heavy duty inductor switch, Teflon[®] insulating washers and proper L/C ratio gives you arc-free no worries operation with up to 300 watts from 1.8 to 30 MHz.

Lighted Cross-Needle Meter

MFJ's lighted Cross-Needle Meter shows you SWR, forward and reflected power *simultaneously*. It reads both *peak* and average power on 300 or 30 watt ranges.

The meter is illuminated for easy reading in dim light and has an ON/OFF lamp switch. The meter lamp uses 12 VDC or 110 VAC. A *free* AC adapter is included at no extra cost.

Tunes any Antenna

The MFJ-949E tunes out SWR on dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave receiving antennas... nearly anything! Use coax feed, random wire or balanced

lines. Has oversized *heavy duty* 4:1 balun.

Super Antenna Switch



MFJ's 8 position *super* antenna switch lets you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through your MFJ-949E or direct to your transceiver.

MFJ-949E or direct to your transceiver. MFJ's Cross-Needle SWR/Wattmeter is always active for monitoring forward and reflected power and SWR.

QRM-Free PreTune™

Why take chances? Why take chances with an imitation when you can have the real thing from the most trusted name in antenna tuners?

> MFJ's *QRM-Free PreTune*^w lets you pre-tune your MFJ-949E off-the-air into a built-in dummy load without causing QRM. Pre-tuning into a dummy load makes tuning your actual antenna faster and easier.

Full Size Dummy Load

The MFJ-949E has a *full size* noninductive 50 ohm dummy load measuring 3/4 inch diameter by 5 inches. It *easily* handles 300 watts of abusive tune-up power.

You'll find it handy for tuning, testing and repairing your rig, setting power level, adjusting your mic gain and more.

Watchout for cheap midget size dummy loads that changes resistance as it heats up -- marginal ones could burn up your transceiver.

Custom Inductor Switch

The inductor switch is the most likely component to burn up in *any* antenna tuner. The inductor switch in the MFJ-949E

was *custom* designed to withstand the extremely high RF voltages and currents that are developed in your tuner -- it's not a flimsy *plastic* switch made for small signals and wired with *tiny* gauge wire.

Superior Cabinet

Each MFJ-949E cabinet is chemically treated and has a new tough scratch-proof *vinyl* cladding -- not paint that can scratch or chip off. You won't find a tougher,

longer lasting finish anywhere.

Detailed logging scales and legends are *permanently* silk screened on a *real* aluminum front panel and back panel -it's not merely a plastic decal or glued-on paper strip that can peel off.

Superior Materials Superior Construction

Every MFJ-949E use Teflon®

insulating washers, countersunk screws for meter bracket, wing-nut for ground post, fire-retardant epoxy glass PC board (*not* canvas based), heavy .063 inch thick aluminum chassis (*not* flimsy .050 inch), heavy gauge wire used throughout (*not* small gauge), custom cabinet (*not* multi- purpose with unused holes

and internal protruding screws).

No Matter What[™] Guarantee

Every MFJ-949E is backed by MFJ's famous one year *No Matter What*[~] unconditional guarantee. That means we will repair or replace your MFJ-949E (at our option) *no matter what* for a full year.

Others may give you a *limited* warranty on defects in material and workmanship.

But what do you do if it burns up and they say, "Sorry, your *limited* warranty does not cover that?"

Continuing Service

Only MFJ gives you a *direct* toll-free technical help line answered by *electronic technicians* who are experts in antenna tuners. We're here to help keep your MFJ product performing flawlessly -- no matter how long you own it -- just call toll-free 800-647-TECH(8324).

AMETEUR ELECTRONIC SUPPLY, INC. 5710 W. Good Hope Road; Milwaukee, WI 53223

Milwaukee, WI 800-558-0411 Wickliffe, OH Clearwater, FL Orlando, FL Las Vegas, NV 800-634-6227

MFJ... making quality affordable

NYE VIKING



► MB-V-A 3KW antenna tuner. Low-pass Pi-Net tuning 1.8–30MH2 continuous. Heavy duty silver plated continuously variable inductor with 25:1 vernier dial. 7KV variable capacitor and 15KV switch selected fixed output capacitors. Tunes antennas 1/4-wave length or longer from 40–200Ω and provides harmonic suppres-



sion (some antennas not tunable at 1.8 MHz). Automatic, metering of SWR without reset or calibration. Separate RMS 300W/3KW wattmeter, automatically switched. Precision 2½"

recessed and backlit meters display SWR and power, continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas; 2 coaxial, single wire and balanced line, and tuner bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000 Ω , and unbalanced output down to 20 Ω . Requires 9V battery for meterng and external 12VDC for meter lights. 14% w x 6% h x 12% d, 18 lbs.... **\$699**⁹⁵



NYE Power Monitor System

NYE Power Monitor System A combination fully automatic SWR meter, Peak and RMS reading wattmeter, reverse power meter and self contained automatic lockout (ALO) relay circuit. A separate calibrated coupler covers 1.8–30MHz and may be remotely mounted. Adjustable hold time captures RF peaks and shows true PEP output. Separate SWR meter reads direct, without adjustment, from 0.5W-SKW. The ALO circuit connection can provide automatic shutdown of your linear amplifier in case an unexpected excessive SWR condition should occur. This unit is powered by nicad batteries which are kept charged by a small amount of the applied RF, or by the separate AC adapter supplied for charging and backlighting of the panel meters. 3%"h x 7%" x 5"d. S0-239 connectors.

▶ RFM-003 has 3KW coupler/meter range	\$329 ^{9!}
RFM-005 has 5KW coupler/meter range	\$3499
C-1.8-30-5C Optional 300/500W Coupler.	\$799

 NYE Phone Patch (left)
 Interface your transceiver with a telephone line and run phone patches while retaining full mic. function. Automatic line level control for comfortable monitoring and NULL control for superb VOX operation. 1%"h x 7%" w x 4%"d

 •047-001
 has 4-pin mic connecto
 Closeout
 \$109">\$109">\$109">\$109">\$109">\$109">\$109">\$50"

 •047-002
 has 4-pin mic connecto
 Closeout
 \$109">\$109">\$109">\$109">\$109">\$109">\$50"

 •047-002
 has 8-pin microphone connector
 144">\$149">\$144">\$144">\$109">\$109">\$109">\$50"

 NYE Low Pass Filter (right) Eliminates TVI caused by harmonics from transmitters operating in the 1.8-30MHz falling in the TV bands. Rated at 2KW, handles 5KW SSB peaks. Flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors, both ends.
 •020-001
 \$450"

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JPS Communications, Inc.

DSP solves noise problems! ...



Noise & Interference Reduction Unit

►NIR-10 Installs at the audio output of a communications receiver. Provides Real time 40MHz Digital Signal Processing to enhance the quality of received voice/CW signals. NIR Mode: reduces or eliminates hetrodynes, ignition, power line and white noise, RTTY interference. Peak function: reduces white noise and interference. Notch Filter mode: easily removes multiple hetro-dynes. Band Pass mode: features adjustable center frequency, selectable bandwidths, extremely steep skirts and greater than 60 dB ultimate rejection. 12VDC, 2*h x 7*w x 6*d, 2 lb.... \$349*5



DSP Spectral Notch Filter





▶ NTR-1 A general purpose audio processing unit for noise reduction and multiple tone removal for AM/FM, or other wideband 160–6600Hz signals. Provides narrow band 100–3400Hz operation for SSB, CW or Data. Reduces atmospheric noise through dynamic peaking and rapidly removes multiple tones from voice signals. Installs at receiver audio output, has built-in audio power amplifier. 12VDC. 1%⁺h x 6% "w x 5"d, 2 lbs. \$169⁹⁵



SSTV-1 Designed to improve Slow Scan Television (SSTV) reception. Two DSP filters reduce or eliminate adjacent channel and in-band interference which can cause "tears" and color shifts, really clears up noisy and distorted SSTV pictures. Sharp cutoff passband centered at the sync pulse frequency of 1200Hz, yet wide enough to pass VIS and other information. Linear phase, steep skirted 1500Hz–2300Hz passband for the picture data. Effectively removes any offending tones, interference, etc., below 1050Hz and above 2300Hz. 12VDC, 1%"h x 6"w x 4%"d, 2 lbs. (Milwaukee store only)
 Power Pack 115VAC adapter for above JPS units.....\$160°0

QUICK DELIVERY! from S locations ...

Popular Microphones ...





▶ 444D (left) A dual-impedance CONTROLLED MAGNETIC® fixed station microphone with a 200 to 6000Hz response, tailored for optimum speech intelligibility. Switch selectable for high $(15k\Omega - 10M\Omega)$ or low $(200-100\Omega\Omega)$ impedance inputs, and for Normal or VOX operation. Momentary or locking push-to-talk switch bar, 2% vertical height adjustment. Coiled three-conductor microphone cord, supplied with a wiring guide, requires proper connector. 2 lbs, 6 oz. **\$82**⁹⁵

526T Series II SUPER PUNCH[®] (center) A dynamic microphone with a solid-state preamplifier and adjustable volume control. Works into 500 to 5000Ω inputs impedances allowing replacing ceramic or dynamic original equipment. Tailored 200 to 6000Hz frequency response. Momentary or locking push-to-talk bar. Coiled 5-conductor cord, wiring guide, requires a connector and 9V battery. 2 lbs, 11 oz\$112³⁵



It's Easy! . . all the LATEST study material needed for the FCC Exam • Theory, Code, and Regulations – included. Prep material for Amateur Licenses Novice through Extra class and No-Code Technician! Software includes complete FCC VEC questions, all sub elements, generates 1000's of practice tests, keeps score, plus a code teaching program.

DS-IBM-N Novice class ... \$3995 DS-IBM-T Technician class \$3495 DS-IBM-A Advanced class \$4995 DS-IBM-NC No Code Tech \$4995 DS-IBM-E Extra class ... \$4995





▶B&K 390 Test Bench™ (left) A multi-function multimeter. with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7½* x 3½* x 1½*, 17 oz.

▶B&K 2860 Digital Multimeter (center) Rugged construction with water resistant case. AC/DC Voltmeter AC/DC Ammeter (20A range); Ohmmeter, Audible Continuity Check; Diode Test. 3% digit, 0.8" LCD readout. 6%" x 3%₁" x 1¼", 12 oz. \$84⁹⁵
 ▶B&K 2704A Digital Multimeter (right) Handy for the tool kit! Measures: DCV 200mV-1000V; ACV 200mV-750V; DCand AC current to 10A; Resistance, 0.1Ω to 20MΩ; Capacitance to 20UF; and Transistor gain (uFE). 5% " x 3" x 1¼", 13 oz.

DIGIMAX Frequency Counters

K-COM Telephone RF Interference Filters

▶ D-1200/D-612 Frequency Counters Ideal for solving difficult bench and field problems involving complex PLL, TV Tuner, VTR, and computer circuits. – plus, they can help to keep your



QSOs on the correct frequency! Both models meet all FCC land mobile, broadcast, and telecommunications requirements. 9 digit LED, 0.5" seven segment display, leading zero

Stops telephone

suppression for error-free readings. Built-in 10 MHz, 0.1 PPM (20°-40°C) 10MHz proportional oven. When checking audio frequency tones, the built in audio multiplier in the D-1200 will resolve 1/1000th Hz in 10 sec., 1/100Hz in 1 sec., and 1/10 Hz in 0.1 sec. The. D-612 resolves 1 Hz in 1 sec. and 1/10 Hz in 10 sec. except when using the *optional* AM-12 audio multiplier, then the resolution is the same as the D-1200. The D-1200 also has a prescale input sensitivity control – and the D-612/D-1200 include a 1.2 GHz prescaler. Both operate from external 8-14.5VDC @ 200-500ma, internal 6 °C° cell battery pack, 115V with *optional* AC-12 adapter or *optional* BAC-12 rechargeable battery pack. 3%th x 8%^{tw} x 9°d. • D-612 does not include carrying handle.

See Digimax in the Price List

D-500/D-510A Frequency Counters Excellent accuracy and high reliability, make these units the perfect choice for the



bench, tool box, or ham shack. The D-500 covers 50Hz to 512MHz and will resolve 1 Hz to 50 MHz and 10 Hz to 500

MHz; the D510A covers 50 Hz to 1 GHz. and will resolve 10 Hz to 1 GHz. 8 digit LED, 0.5" high seven segment display, leading zero suppression for error-free readings. Contains a 1 PPM (17° to 35°C) TXC0 time base. Operates from external 8-14.5V DC @100-250ma., 115V with optional AC-12 adapter or optional BAC-5 rechargeable battery pack.

1½"h x 5"w x 5¼"d. **Optional Accessories** AC-12 9V DC Adapter; AM-12 10X/100X Audio Multiplier; AM-500X 10X/100X Audio Multiplier; B-12 Dry Cell Holder, switch for D-612; BAC-12 Nicad battery Pack for D-612/D-1200; BAC-5 Nicad Battery for D-500/D-510; RF-500X 250W In-line RF Sampler; T-1200 21" BNC Telescopic Antenna.





 B&K 878 Dual-Display LCR Meter with Statistical Functions Excellent for sorting parts. Simultaneously displays measured value and Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. Relative mode displays difference between the measured and reference component values. Tolerance mode "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value.
 Selectable, 120Hz or 1kHz. 1½" x 3½" x 7½", 14 oz.
 B&&K 815 Parts Tester (center) Tests transistors, SCRs, diodes, LEDs and batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. Big 0.8" LCD display. 6%" x 3%e" x 1¼", 12 oz.

▶B&K 3011B 2MHz Function Generator (right) Generates sine, triangle, square, pulse and ramp waveforms. TTL and CMOS Pulse outputs. 9% x 3% x 11%, 6 lbs. \$226⁹⁵



General Purpose Power Supplies

Lab Quality – reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple and conservatively rated for continuous operation at maximum rating.

► Model 1686 High Current (left) Output: 3 to 14VDC @ 2.5 to 12A. Rated for continuous 12A duty at 13.8V DC without overheat. Reverse polarity, overload and short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Coarse and fine voltage adjust and current limit. 5½" x 5¾" x 12", 12 lbs. \$169⁹⁵

Scopes and Counters For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high



accuracy over a wide range of frequencies and conditions. See the Price List for the complete B&K listing



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Look over the Goodies in this Catalog, then use this Handy Coupon to tell us what you've got and we'll rush you our quote ... Pronto!

Looking for good Used Gear? We always have hundreds of items in stock, just let us know what you need!



Cure phone RFI in the most irritating cases even when dealing with full legal limit power output. Use any number of filters with no adverse effect on telephone performance. Comes fully assembled, with complete installation instructions. **RF-1** For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc.; has \$1695 standard RJ-11 modular connectors..... RF-1/2-line The correct filter for two-line telephone sets. Standard use or with multi-line electronic key phone systems typically found in businesses. \$2295 RF-1/coiled Recommended when RFI enters through the \$2295 coiled telephone cord. **PRF-2** Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring; inside phone jacks, behind wall mounted telephones, etc..... \$1095

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STARTEK INTERIMATIONIAL INC NE 38th St., Ft. Lunderda le FL 33334

All instruments are true Pocket Size: 4" High x 3.5" Wide x 1" Deep. <14 cubic in and are shipped with factory installed Ni-Cod batteries and AC charger/adapter. Antennas are optional

LATONEO	CALL reg \$179	CALL reg \$235	CALL reg \$299	CALL reg \$339		
FREQUENCY RANGE	1 MHZ - 1200 MHZ	1 MHZ - 1500 MHZ	1 MHZ - 2800 MHZ	5 HZ - 2800 MHZ		
AUTO TRIGGER & HOLD	YES	YES	YES	YES		
SIGNAL BAR GRAPH	NO	YES	YES	YES		
LOW BATTERY IND.	NO	YES	YES	YES		
ONE-SHOT & RESET	NO	OPTIONAL	YES	YES		
HI-Z LOW RANGE	NO	NO	NO	YES		
OPTION #HST-15 is a high accuracy, high stability, time base upgrade that						

can be ordered with any ATH series model (0.2PPM TCXO)\$Call

Extend readablility distance with **BAND PASS FILTERS.** \$Call #LP-60 DC - 60 MHZ #BP-150 130 - 500 MHZ #HP-400 400 - 1500 MHZ

#HP-800 800 - 2000 MHZ

Q4



The A-99 is a half wave over a quarter wave variable mutual inductance tuned antenna for 10-17M.

It's economical and easy to use! - it features the Solarcon Twin Ring

"Adjust-A-Match" tuning which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. **Optional Ground Plane Radial** Kit makes it perform even better!

Simple! - raising the rings raises the frequency and lowering the rings lowers the resonant frequency.

A real beauty! --- rugged three-piece white fiberglas construction with triple plated brass fittings. It's easy it assemble and install.

A-99 Specifications

Height	17 ft. 8 in.			
Sections				
Bands	10–17 meters			
Gain	3 dBi			
Power Limit	2000 Watts			
Radiation Angle	<20 degrees			
	DC Grounded			
Mounting	1-1/2" mast max.			
Connector	SO-239			
PRICE	\$59 ⁹⁵			
GPK-1 Ground Plane Radial Kit\$3995				

ANTENNAS

MFJ Keyers, etc



dle Combination This Keyer unit installs on top of a Bencher lambic Paddle. If you already own a Bencher paddle, buy just the keyer

MFJ-422B Kever-Pad-

unit, if not, buy the combo. Speed is 9–50 wpm, it has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic/tune or automatic modes. Keys grid block, cathode or solid state. Requires a 9V battery or AC adapter. 41%" x 25%" x 51/2"d.

MFJ-422B Combo \$12495 • MFJ-422BX Keyer only \$7495

MFJ-407C Deluxe

Electronic Keyer Features dot-dash memories, self completing dots and dashes; jam-proof spacing.



RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone and volume, ON/OFF, tune, auto/semi-automatic. Rear switch selects A or B-type iambic keying. Built-in speaker, requires 9V battery (not included), or \$6495 optional MFJ-1312B 110VAC adapter. 7" x 2" x 6"d.

MFJ-401C Econo Electronic Keyer II Similar to MFJ-407C described above, but with external speed and volume controls, internal weight and tune controls. Requires a 9V battery (not \$4995 included), or adapter

► NEW! MFJ-492 Menu Driven Memory Keyer No keypad, and no complex sequences to remember-just follow the menu! From the menu you can save and play messages, decrement



serial numbers, set speed, weight, sidetone, jambic, semi-auto, handkey, message queue, paddle command modes - turn on/off sidetone, transmitter tune.

keying output on/off - select iambic A or B, reverse paddle, Morse trainer, and store starting serial number. Commands can also be keyed from the paddle. Holds 192 characters in four soft sectored message memories, and is expandable to over 8K characters in eight memories with lithium battery back-up. Front panel control for speed (5-100 WPM) and volume. Built-in sidetone speaker, direct and grid block keying output. Requires 9V battery or optional 110VAC adapter. 61/2" x 21/2" x 61/4" \$8995 ▶MFJ-493 Like MFJ-492, but with 32K characters of memory. IBM keyboard input and QSO simulator... \$12995

►MFJ-490 Memory Keyer/Bencher Combo Has nearly all the features of the MFJ-492 in a compact configuration that mounts right ont he Bencher iambic paddle. 5" x 3" x 5%", 9V \$14995 ►MFJ-490X Memory Keyer/Bencher Combo The MFJ-490 \$9995 less Paddle and memory expansion kit not available ... ►MFJ-451 Morse Keyboard A stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character mes sages. Requires 12VDC or MFJ-1312B 110VAC adapter \$9495 MFJ-452 Morse Keyboard with 16 characters LCD display. Comes with keyboard \$11995



MFJ-557 Deluxe Code Practice Oscillator An oscillator and key mounted on a heavy non-skid base. Speaker, adjustable tone and volume controls, and earphone jack

Uses 9V battery or opt. AC adapter. 81/2" x 21/4" x 33/4" \$2495 ►MFJ-564 Deluxe lambic Paddle, chrome base -\$4995

▶MFJ-411



\$9495

learn from zero code speed all the way to Extra Class with customized code practice. Features include Random QSO Mode, Word recognition Mode. Requires 9V battery. 3"x1%" x 5%"\$7495

►MFJ-432 Voice Keyer Clone your voice! Store phrases like

'CQ Contest this is K9KHW..."You're 59"...QTH is Wisconsin, etc. Store four messages totaling 20 seconds. Uses 9V battery or 110 VAC



with optional MFJ-1312B. 61/2 w x 21/2 h x 61/2 d

BENCHER



Iambic & Single Lever Paddles (left) Highest Quality – features full range adjustment of tension and contact spacing. Self adjusting nylon and steel bearings, heavy gold-plated solid silver contact points, and polished lucite paddles. Precision machined, chrome plated brass frame, and heavy chrome, gold or black painted steel base with non-skid feet.

>"RJ" Hand Morse Keys (right) Features include oil impregnated sintered bearings at pivot points and stainless steel adjustment screws used throughout. A complete range of locking adjustments of all movements and tensioning is provided. Available with chrome plated or black painted steel base.

NYE VIKING Kevs

▶ 330-001 Master Key For the expert, but perfect for the beginner! Isolated contact assembly keeps keying circuit separate from all parts. Heavy die-cast body,



no need to secure to table for stability. Cold plated silver contacts, adjustable action key arm, Navy-type \$5995 knob, 3 ft. cord with phone plug, black plated finish ... **SSK-001 Super Squeeze Key** Use with

any electronic keyer for fast, comfortable electronic keying action. Heavy, gold-plated silver contacts, nickelplated brass hardware, and heavy \$4995 base with non-skid feet

Speed-X Code Keys Six standard models (top), four Heavy Duty models (bottom) all with gold-plated heavy silver contacts, adjustable key action and heavy die-cast bases. Available with or without switches, brass or nickel plated hardware, stan dard or Navy-type knobs. Optional matching heavy steel base plate with non-skid feet. See NYE VIKING in the Price List



VIBROPLEX Keys

"The Oldest Name in Amateur Radio"

Original "Bug" Press the thumb piece to the right, and the vibrating bar produces one, or a string of dots - automatically. Dashes are made to the left, manually. A sliding weight



adjusts the speed for 20 wpm or less. Silver contacts, non skid feet. Standard model has painted base and chrome top parts, Deluxe model has polished chrome base and top parts and fine jewel movements for smooth operation.

Standard (#110) - \$9900 • Deluxe (#105) - \$12000 Original Presentation The finest quality semi-automatic

key available. It offers real jewel movements and widest speed range from less than 20 to 55 wpm, plus bright chrome parts (#100) \$18495 mounted on a 24-caret gold base plate.



Amateur Electronic Supply ® Winter 94/95

adjustable speed (#140) \$14500



Advanced Electronics Applications , Inc.



► AEA IsoLoop 10-30TM A compact omnidirectional HF antenna covering 10–30MHz continuous with a 150W rating. Compact 35° diameter, can be mounted vertically or horizontally. No rotor, antenna tuner, ground plane, or ground radials are required. It's highly efficient, because it's tunable to the operating frequency by a step motor driven variable tuning capacitor, controlled from operating position. The special design also reduces TVI problems and attenuates out of band signals. The IsoLoop 10-30 is ideal for those with antenna restrictions. It's perfect for condos, apartments, attics, RV's. It comes fully assembled with power supply, manual controller unit, and 50 ft. of shielded control cable. Mast not included. 30 lbs\$329^{s5}



► AEA IT-1 IsoTuner A

state-of-the-art automatic antenna tuner for the IsoLoop 10-30. It replaces the original manual controller to provide quick automatic tuning to any frequency from 10 to 30MHz. Manual tuning is still available, if desired, via thumb-wheel. 12-button

keypad operation with audible beep; also announces completion of tuning and error conditions. Eight frequency memories. 10-segment LED bar monitors the tuning process, indicates the frequency, and displays any error codes. Memory back-up, serial computer interface with PC utility software included. 12V DC, AC adapter included. 4%"h x 6% "d x 5%"w, 4 lb, 4 oz.....\$239"

AEA IsoPole Omni-Directional VHF & UHF Base Station Antennas

Top performing models for 144, 220 and 440 MHz. These antennas yield the maximum gain attainable for their respective lengths, and a zero degree radiation angle which puts most of the signal right on the horizon. Exceptional decoupling results in simple tuning and a significant reduction in TVI potential and noise pick-up. Broad frequency range - typical SWR is 1.4 to 1 or better across the entire band.

Model	IsoPole 144	IsoPole 220	IsoPole 440
Frequency:	135-160MHz	210-220MHz	415-465MHz
2:1 Bandwidth:	10 MHz	15 MHz	22 MHz
Power Rating:	1 KW	1 KW	1 KW
Length:	125.5"	79.25°	46"
Wind Area:	< 1ft ²	< 0.75 ft ²	< 0.2 ft ²
Connector:	SO-239	S0-239	Type N
PRICE	\$ 59 °°	\$49 ⁹⁵ SPECIAL!	\$8900



► AEA Hot Rods High performance 1/2-wave telescoping antennas for HTs, providing gain and extended range. No ground plane is required for efficient operation so they actually outperform the longer 5/8's. 20% shorter and lighter, which is more convenient, and places less stress on your HT. In the collapsed position, Hot Rods will perform like a helical quarterwave. Handles over 25W, useful for portable base or mobile. BNC connector. ► HR-1 (2M) ● ► HR-2 (220MHz).....each \$24°°



SWR-121 HF & VHF/UHF Graphic Antenna Analysts These compact, battery powered units measure, compute, and present a graphical display curve of SWR versus frequency on a high resolution LCD display. They show an antennas performance over it's operating spectrum, its center frequency SWR and return loss. Range: (HF) 1–32MHz; (V/U) 120–175MHz, 200–225MHz, and 400–475MHz. Both have an SWR range up to 10:1. All functions, frequency, and display width adjustments are controlled via the front panel keypad. An RS-232 interface for IBM PC-compatible computer allows remote control, remote display, and plot saving (optional AA.Com software required). Uses 8 AA alkalines (supplied) or 12-16VDC. 8'h x 4%'w x 2%'d, 1 lb, 10 oz.

SWR-121 HF \$349⁹⁵ • SWR-121 V/U VHF/UHF \$399⁹⁵ AA.COM PC Software \$69⁹⁵



► AEA KK-1 Keyboard Keyer for PC Turns any standard AT-compatible keyboard into a feature packed Morse machine. Short-term memory, message repeat, and nestable message buffers make it versatile and easy to use. Total message capacity: 7,913 characters. Code practice mode allows you to choose between words commonly heard on the air and random groups of selectable length and difficulty. Speed is selectable from the keyboard or the front-panel knob. Also features a built-in iambic keyer and Farnsworth code practice. Cable included. \$189^{s5}





► AEA RL-60 RadioLink Remotely control Control your HF rig with your Handheld Radio. Easy plug-in interface to link your radio and a base station. Change bands, frequency, and mode from any handheld or mobile radio that has Touch Tone. Works with ICOM, KENWOOD, and YAESU radios with a computer port. \$289⁹⁵ ►AEA ARE-60/HL-60 HamLink A phone controller which allows operation of your HF rig via T/T phone. Check into your favorite \$23995 net or call CQ from your office, or any other location. ► AEA ARE-10 The Silencer A 2 to 4-digit DTMF decoder and an external speaker that works with any FM radio to eliminate unwanted conversations. It's silent until a proper DTMF code is received, then the speaker turns on to enable the user to hear the ...Closeout \$79*5 incoming call. 12VDC. 4¼ "h x 3"w x 3"d ► AEA ARE-20 Digitalker (shown) A Voice Synthesized Frequency Counter for the visually impaired that announces the transmit fre quency of VHF/UHF radios. Place radio next to the DigiTalker and transmit, the frequency is announced. For longer range, an exter







►AEA PC Pakratt for Windows 2.0 New features allow you to send, receive and display ANSI graphics for PACTOR. Works with all AEA data controllers-including the new PK-12, 1200bps TNC and the PK-96, 9600/1200bps TNC. Now compatible with Log Windows version 2.0; you can run both programs at once! Run two AEA data controllers simultaneously, minimized or from the background. Separate windows for mailbox operation and QS0 logging. Includes PK-FAX, B&W fax display program. Requires Windows 3.1 or higher.



► AEA PC Pakratt II Split-screen terminal program for all digital and WEFAX modes. Works with IBM-compatibles and all AEA data controllers including the new PK-12, 1200 bps TNC and the PK-9600/1200 bps TNC. On-screen help menus; full QSO logging features; DOS gateway. Supports PACTOR. PK-FAX B&W fax dis play program. DOS 3.0 or higher is required. \$6495 ►AEA AEA-FAX-900 The software-only version of the AEA-FAX package. Puts the PK-900 in Host mode and displays weather FAX pictures in up to 16 shades of gray. Also automatic receive \$7500 slide show mode, more... ► AEA COM Pakratt with FAX Split terminal program for PK-232MBX and Commodore C64/128 operation. Includes COM Pakratt and COM FAX programs on ROM cartridge, and RS-232 \$7495 to TTL interface \$6495 ► MacRatt with FAX Software; Apple MacIntosh.

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nal. antenna jack is provided. 5%"h x 4"w x 3"d .. Closeout \$199"

Go Far With an Antenna From AEA

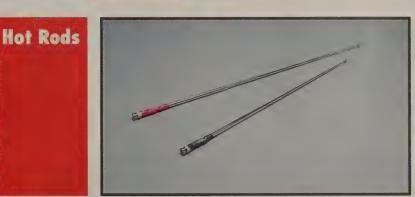
- A 35" loop antenna that performs like a fullwave dipole cut to the length of the frequency being used.
- The ideal compact antenna for amateurs facing antenna restrictions or space limitations.
- Efficiency ranges from 72% on 20m, rising to 96% on 10m.
- High-Q design results in narrow bandwidth.
- Frequency range: 10-30 MHz, continuous.
- Omnidirectional, comes with manual tuner.
- Optional automatic tuner available.





- Patented decoupling cones give you maximum gain possible on the horizon for the length.
- Unique conical shape means lowest feedline pick-up of computer hash noise of any competing antenna.
- Built to withstand the harshest weather.
- Allows broad frequency coverage with full power output over entire band.
- An impedance matching network designed for maximum legal power.
- Available in 144, 220, or 440 MHz versions.

- High-performance, telescoping handheld halfwave antennas.
- Achieves higher gain than any 5/8 wave, two-meter telescopic antenna for handhelds.
- They can handle over 25 watts of power, making the Hot Rods ideal as a portable base or mobile antenna.
- Collapsed, they perform electrically like helical quarter-wave flexible antennas.
- Available in the HR-1 half-wave 2M and the HR-2 half-wave 220 MHz versions.





Call (800) 432-8873 for a complete catalog or information on a specific product. Contact your favorite amateur radio equipment dealer for best pricing.

SWR-121 Antenna Analyzers

IsoPole

- Digital display of antenna's resonant frequency.
- Graphic display shows the antenna's SWR curve over an entire range, not just one frequency.
- Battery powered—designed for portability.
- Measure the return/loss in a length of coax.
- Digital SWR readout at center frequency.
- Optional software lets you view, save, and print plots to your PC-compatible computer.
- UHF/VHF version covers 120-175, 200-225, and 400-475 MHz.
- HF version covers 1.0-31.999 MHz.

Advanced Electronic Applications, Inc. 2006 196th Street Southwest P. O. Box C2160 Lynnwood, WA 98036 (206) 774-5554

A contraction of the second second	BE	LDE	IN (Coaxial C	able —	See Pric	e List	tantat in David	and a state	er and the man
	Belden number	RG- type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
9201/8240	9201	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
	8240	58/U	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	4.5 dB
8259/8262	8259	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
8219	8219	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
9258	8262	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non- contam. PVC	50	66%	4.9 dB
	9258	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
8237/9251/8267	8237	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	2.2 dB
	8214	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
8214	9913	8/U	.405	#9½ solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.4 dB
9913	9251	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non- contam. PVC	52	66%	2.2 dB
8241	82 67	213/U	.405	#13 stranded copper	Soliđ polyethylene	97% bare copper	Non- contam. PVC	50	66%	2.2 dB
	8241	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
8238	8238	1 1/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
8213	8213	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

UNADILLA (W2AU)



►W2AU/W2VS 5-Band Antenna Kit (A)

Low SWR on 80 and 40 meters, resonant on 10, 15 and 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and assembly instruct \$7500 tions. Approximately 110 ft. long, rated 2KW PEP

REYCO W2VS Antenna Traps (B)

Add these traps to your dipole for multiband operation on two to six bands. For example: add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20, 40, 80 and 160 meters, add all five pairs - 33 combinations!

Selecting Traps

List the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency. **See Price List**

W2AU Ferrite Baluns (C)

Provides a smooth transition from unbalanced coaxial transmission line to balanced antennas - dipoles, guads, yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lighting protection, has convenient center eye hook for support. Usable from 3-40MHz and rated at 2KW PEP. Available in 1:1 or each \$21º 4:1 ratios, or beam.

►W2DU Non-Transformer Choke Baluns

High efficiency, 1:1 ratio. The HF model is the only one available that works on 160 meters! Handles VSWR up to 5:1 at legal limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. Models: HF (1.8-30MHz), VHF (30-250MHz) Beam Balun (40-10 meters) each \$2300



Antenna component protection ... **Coax Seal**[™] Hand Moldable Plastic



Quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes - adheres tightly to vinyl and poly vinyl coax outer jackets. Simply wrap it on like you would regular tape, then mold it to any shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal by simply re-forming the same material. Non-toxic, non-contaminating Roll, 1/2" wide x 60" UNV 104. \$249

STUF Dielectric Waterproofing Filler for Coaxial Connectors Waterproofs from the inside out! High purity macroscopic foam, dielectrically simulates the coaxial cable core. No insertion loss. Contains no silicones, etc. to harm cable material Just fill connector and tighten. Filler hydraulically channels into all connec-**CRS STUF** tor voids and ports where moisture can infiltrate, and seals \$450 Non-harding, easy removal. per tube Quick & easy About 4.5¢ per connection.

PENETROX A A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing, bolts at later date a breeze • 4 oz tube PENETROX A. .\$720

	BROADBAND HF/VHF/UHF COAXIAL
	PROTECTORS Multi-strike capability with low strike throughput enclosure. VSWR: ≤1.1 over frequency
	FLANGE MOUNT (left)
	IS-50UX-C0 Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W \$52 IS-50UX-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W \$52 IS-50NX-C2 Range: 125MHz to 1000MHz. Max.Power: VHF 375W, UHF (low) 125W, 800MHz -1 CHz 50W. Type N \$52
l	BULKHEAD MOUNT (right) IS-B50LU-C0 Frequency Range: 1.5MHz to 400MHz. Maximum
	Power: HF 2kW, VHF 375W, UHF 125W
	IS-B50LU-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W
ļ	IS-B50LN-C2 Range: 125MHz - 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. Type N

K-PolyPhaser

Lightning

Protection

ROTOR CONTROL 8-LINE PROTECTOR (left)

IS-RCT Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated - faster than gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7½"h x 3¼"w x 2½"d. \$4695

►IN-LINE PHONE LINE PROTECTOR (right)

Model IS-SPTL Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines handles standard ring voltages to 105Vrms. Handles surges up to 26 or 40kA without damaging let through voltages. Shielded metal enclosure. 134"h x 41/2"w x 31/4"d. \$5725

POWER LINE EXTENSION PROTECTOR

In-line. multi-stage EMP rated protectors provide multi-strike



power line protection, filtering and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, clrcuit breaker for added protection. All alu-

minum grounded enclosure, 43/4"wide. 120V AC IS-PLDO-120-15A with 15' cord, 120VAC @ 15A \$143⁹⁵ IS-PLDO-120-20A with 6' cord, 120V AC @ 20A. \$17925

COPPER AND ALUMINUM GROUNDING PANELS

Aluminum or copper plate .062" panels mounted on painted off-white 1/2" plywood backing.

Used to mount/ground protectors and to establish a single point location for grounding equipment racks/chassis. Mounts on 16" on center, comes with (4) concrete anchors, (10) mounting screws, 10 ft. of 1-1/2" copper ground ing strap (2) brass sandwich





\$52st

\$52^{ss}

plates and joint compound. 18"w x 12"h AL-SPGP Aluminum single point ground panel. **CU-SPGP** Copper single point ground panel.

LOW INDUCTANCE COPPER INTERCONNECT STRAP

Copper strap has an advantage over wire when used for a ground path because it has lower inductance and cannot be fused open by lightning. For example: 1.5" strap has a lower inductance than #2.0 stranded wire. Easy to work with (cut, solder, etc.) – 6 AWG thickness (.0159"). Useable above or in-ground applications. Sold by the foot up to 450' lengths 1.5" wide - 95¢/ft. • 3" wide - \$275/ft. • 6" wide - \$395/ft.





pretuned. Covers 3.5–30MHz continuous with VSWR less than 2:1. 52Ω coax feed, 90 ft long, rated 2KW PEP. Install as a hori \$17995 zontal flattop, an inverted-V, or sloper for DX...... **BWD 1.8-30** Same as AC 3.5-30 but covers 1.8-30MHz con tinuous. Rated at 2KW PEP, 90 ft. long \$179⁹⁵



AC 1.8-30 Continuous Coverage End-fed "V" Covers 1.8-30 MHz with VSWR less than 2:1, rated 2KW PEP. Requires 80 ft. of horizontal space, or when limited, can be shorted further \$17995 with only a slight loss of efficiency.....



AS-160 160/80/40/20 meter Dipole or V At 137 feet, long. is only about half-the-length of a full-sized 160 meter dipole, yet due to its design, it is an efficient radiator. It also gives excellent full-size performance on 80, 40 and 20 metersl. Three sets of traps isolate a half-wave on each band. When using "no-tuneup" transceivers for 160M operation, an antenna tuner is recommended to provide a better match for greater power transfer and bandwidth. Direct feed for 52Ω coax with S0-239 connect \$139⁹⁵ tor. 500 watts PEP

AS-80 80/40/20 meter Dipole or Inverted V Similar in construction to the AS-160 above, except only two sets of traps. Where installation space is at a premium, this antenna can provide excellent coverage of 80 meters with a shortened overall length of only 78 feet. Operates with low SWR on all three

►AS-40 40/20/25/10 meter Dipole or Inverted V Two sets of				
traps, rated at 500W PEP. Overall length is 40 ft\$13995				
►AS-20 20/15/10 meter Dipole or Inverted V Two sets of				
traps rated at 500W PEP. Overall length is 23 ft\$99 ⁹⁵				

Gift Certificates

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Coaxial Switches, etc.

B&W Antennas for Very Limited Space

- 52/75Ω 2KW SSB
- Negligible insertion loss VSWR less than 1.2:1 up to 150 MHz • Crosstalk at 30 MHz -45 dB between adjacent outlets, -60dB between alternate outlets

CSR-5G 5-position, side SO-239 connectors, wall mount, grounding position. \$4995

CS-6G 6-position, locates on operating desk or mounts to wall, SO-239 connectors, grounding for protection .. \$4995



FL-10/1500 Low Pass Filter Eliminates TVI due to HF (1.5-30



MHz) transmitter harmonics. 52Ω , 1000W rating. Sharp cutoff, high attenuation of undesired harmonics with less than 0.3 db insertion loss......\$5000

VS-300A Antenna Tuner Covers 1.8 to 30MHz, rated for

300W RF input. Matches coaxial cable, balanced line or single wire antenna. Built-in antenna switch selects one of two



coaxial fed antennas, wire antenna, or bypass. Internal 4:1 balun, and meter with 300W forward and 30W reflected scales \$9995



ZA-1A 1:1 HF Balun For 80 thru 10M dipoles, vees, quads and yagis. Transforms 52Ω unbalanced coaxial line to a 52Ω balanced feed. Helps reduce feedline radiations, increases efficiency and reduces TVI/BCI. No ferrite core, which allows it to

accept a substantial mismatch at legal power, allowing use of an antenna tuner. DC grounded for lightning protection. HWK hardware kit available for mounting to a 2" boom \$3495 YA-1 Low Pass Filter Eliminate TVI caused by transmitted

harmonics, For 1.8–29.7MHz, rated 1.5KW or 5KW peak.>80dE \$5495 attenuation at 54MHz. 21/2"w x 91/2"l x 21/2"h, 2 lbs

Van Gorden Engineering



Dipole Antennas Complete with Hi-Q balun, #14 stranded copper antenna wire, ceramic insulators, and 100 ft. of nylon support rope. Rated for full legal power- may be used as an

D-15 for 15m, 22 ft long D-40 for 40/15m, 66 ft long D-10 for 10m, 16 ft long See Price List Shortened dipole model construction is the same but includes

See Price List SD-80 for 75/80m, 90 ft. long SD-40 for 40m, 45 ft. long



G5RV Multiband Antenna Covers 3.5 to 30MHz, and also 1.8 MHz as a Marconi type antenna with a tuner and good ground. Consists of a 102 ft. flattop with a 31 ft. section of 300Ω KW twinlead, a transformer/coupler and 70 ft. of RG-8X mini-foam coaxial cable w/S0-239 connector, 2KW PEP, assembled .. \$5000



All-Bander Dipole Antenna Covers 160-10M with the use of an antenna tuner with balanced output. Full 135 ft. long-or less, if installed as an inverted V or sloper-trim to fit small lots Assembled with #14gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. Rated at 2KW PEP \$29⁹⁵ SHORTY All-Bander As above, but with loading coils to shorten the physical length-70 ft. overall length...... \$3995



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BUTTERNUT **HF** Antennas



The HF-5B "Butterfly"™ **COMPACT BEAM** for 10-12-15-17-20 meters

- Unique design reduces the size but not the performance. • No lossy traps - the entire element radiates
- 3dB gain on 20 meters, up to 5dB on 10 and 15 meters - equivalent to rotary dipole performance on 17 meters.
- Boom length: 6 ft., wingspan: 12½ ft., handles 1.2 KW final input.
- 2.9 sq. ft. wind area, weighs 17 lbs, turns easilty with a TV rotor, with up to 11/2" mast.

Verticals

Uses Highest-Q tuning circuits (no lossy traps) to out-perform other multi-band designs of comparable size.

- Model HF-6VX (left)
- Automatic bandswitching on 80, 40, 30, 20, 15 and 10 meters
- Add-on kits for 160, 17 and 12 meters 26 ft. tall, self-supporting, legal limit
- Model HF-2V (right)

RF power limit.

• Automatic 80/40 meter bandswitching, addon units for 160 or 30 meters. • Low Angle of radiation – great for DX!

• 32 ft. tall, self supporting, handles the legal





\$19995

\$18995

Ground independent-operate 40, 20, 15, 10, 6 and 2 meters without a ground or radials. Automatic bandswitching, low-angle and omni-directional radiation for great DX. Selfsupporting and just 12 ft. tall, with a 24 inch footprint - mounts anywhere from ground level to roof-top. E-Z to tune, handles up to 1500 watts PEP SSB power \$17995 ▶MFJ-1798 1/2-wave Vertical Antenna Similar operation as MFJ-1796, but **10 bands**. Covers 75/80, 40, 20, 15, 10, 6 and 2 meters 20 ft. tall, E-Z to assemble \$24995



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AMERITRON **Remote Coaxial Switches**



in and out of mount

instantly - without

having to attach or

remove cables.

Power, Ground

Antenna, and

Speaker leads con-

automatically, RF

nect and disconnect

RCS-4 Remote Coaxial Switch Provides convenient selection of up to four different HF antennas while using just one coaxial feed line, and no addi tional control cable. The weatherproof switch box locates out on the tower. mast or at another remote location. The control box located at your operating position, switches antennas with a con-

trol voltage routed directly through the coaxial cable. Rated for 1.8–30MHz, and handles the legal amateur power limit .. \$12495

RCS-8V Independently or simultaneously selects up to five different antennas using just one coaxial feedline and a single 8-wire control cable. Internal wiring allows user to ground or float unused terminals as required. Rated to handle 5KW below 30MHz \$13995 and 1KW up to 150MHz







Radio Mount

components are designed for a low SWR up to 500MHz. Adapts to most radios; bracket adjusts to case and can be conveniently \$4995 attached above or below the radio unit **SS-101** Extra base for multiple vehicle use. \$29⁷⁵

DC SALES 'Tenna Hitch'

Consists of a heat treated, high strength aluminum bracket with an insulated standard. 3/8" x 24 thread antenna mounting stud. Just install under the ball of your Class-I or Class-II trailer hitch and attach the coaxial cable. Rugged!-handles the largest



mobile antennas, and does not interfere with trailer towing capability. No holes to drill, all hardware supplied . \$3295



EDCO **TX-146**

Solves intermod problems by simply adding back in what the newer wide-band

radios leave out - a high quality helical filter. The EDCO hi-tech, 3-stage, fully automatic filter will attenuate signals outside the 2 meter band by as much as 40dB when switched on!

!Simply connect the TX-146 inline with the radio's 2M antenna line (or the VHF side of the duplexer in dual-band installations) and hook the filter up to +12VDC. An R.F. sensing circuit automatically switches relays to bypass the filter during transmit, at up to 50W. Includes an on/off switch and L.E.D. power-on indica tor-switch the filter off when it's not needed . \$8995

OAK BAY TECHNOLOGIES



►LP-11P Commercial Grade Low Pass Filter Installs in transmission line between HF Transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within TV

bands. Eleven pole Chebishev design covers 1.8 thru 30MHz with <.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. 50 Ω , handles 1 KW RF. **\$69**⁹⁵

AM-101B Rubber Duck Window Mount Improves HT per-

formance when operating mobile by getting RF out of the car Great for emergencies, rental cars, etc. The custom stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 50 Ω , handles 15W, dual/twin band compatible \$2495



PS-101 High Current 12V Power Strip Make just one con-



nection to power your source (battery, power supply, etc.) to conveniently distribute power to multiple devices. Provides five outputs with two fused at 20

Amps, and three at 30 Amps. Rugged screw and clamp connections. Rated to handle 50 Amps total current. Comes with 5 ft of #8 gauge hook-up wire, terminal lugs and fuses ... \$7995

CA-232U Uni-Cable™

Interface A universal Packet TNC cable that provides interfacing between popular TNCs and all popular VHF/HF transceivers. No soldering required, easily programmed by user to mate with 8-pin mic. connectors.... \$3495





CA-232HH Uni-Cable™ Interface Connects popular TNCs to popular handhelds that use 2.5mm and 3.5mm microphone and earphone jacks. No \$3495 soldering required

HYGAIN/TELEX

>2400-155 Contester A high quality headset and boom mounted noise canceling microphone combination with 100-8000Hz response for maximum QSO intelligibility. The boom rotates and can be worn on either side, and the microphone automatically shuts off when placed upright. The dynamic headphones have comfortable foam cushions with remov able washable socks . \$7495





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VECTRONICS Ham Accessories

TVI FILTERS

►LP-30 TVI Filter Suppress television interference at the source, from HF transmitters operating below 30MHz. Use between transmitter and antenna or tuner to provide



up to -70dB attenuation of harmonics that could fall in the TV bands. For 52Ω, up to 30MHz, rated 1500W continuous\$5995



LP-2500 Rated for 2500W continuous RF power .. \$119" HPF-1 High Pass Filter Installs between transmitter and antenna or tuner to reduce harmonic television interference (TVI) radiated by

transmitters operating below 30MHz. Low receive loss in the TV passband (52 to 550MHz), unique shield-breaking circuit config-

uration prevents antenna cable from acting like an HF antenna. For 300Ω unbalanced system, and supplied with baluns with Type F connectors for 75Ω\$17⁹⁵



DUMMY LOADS



DL-300M Dry Dummy load Simulates an accurate 50 antenna up to 150 MHz enabling you to test your transmitter without radiating a signal on the air. Power handling curve rated at 300W for

seconds. VSWR <1.3:1 at 150MHz. 5"h x 2"d x 2% "h, 8 oz ... \$3995 DL-650M Dry Dummy load Good up to 650MHz. Power han-

dling curve rated at 1500W for 10-seconds, down to 100W for 10-minutes VSWR <1.3:1 at 500MHz \$6495

DL-2500 High Power Dry Dummy



15-seconds, down to 100W for 40

load A fan cooled heavy

duty load for up to 150MHz. Power handling curve

rated at 2500W for 1-minute, down to 500W for 10 minutes. \$169%



UNIDEN HR-2600 10m Transceiver

AES has sold 1000's of these radios! They provide loads of fun on 10 meters operating Base or Mobile for local communications as well as occasional worldwide DX. Participate in Club Events, Nets, Repeaters & Emergency Communications.

- BAND: 10 meters only; 28.0 to 29.7 MHz
- MODES: FM SSB CW AM
- ✓ POWER: 25W SSB/CW PEP, 10W AM/FM
- V FEATURES: • Selectable step digital VFO tunes with knob, switches or up/down buttons on microphone. • Multi-function LCD display • Scan mode • Noise blanker • RIT • automatic squelch • SWR indicator • 100kHz offset for repeater operation more! • 2% "h x 7¼"w x 9¾"d • Requires 13.8 VDC @ 5A



ANTENNA TUNERS

VC-300M Mobile Antenna Tuner Compact, lightweight and

economical for base or mobile. Compatible with almost any antenna, including vertical, dipoles, inverted Vees, beams and mobile whips that are fed by coaxial cable, and open feeders, balanced lines, or sin-



ale wires. Designed to provide matching from 1.8 to 30 MHz, and up to 300W continuous RF power capability. Dual-movement cross-needle meter simultaneously monitors RF power and SWR. Compact - 71/4"w x 31/2"h x 83/4"d, 21/2 lbs. \$119⁹⁵



VC-300DLP Antenna Tuner A good quality, economical antenna tuner designed to provide matching from 1.8 to 30 MHz, and up to 300W continu-

ous RF power capability from 3.5 to 30MHz (150W on 1.8MHz). Built-in dummy load, a dual-movement cross-needle peak or average reading meter, and a meter light. Compatible with almost any antenna including verticals, dipoles inverted Vees, beams and mobile whips that are fed by coaxial cable, and balanced lines or single wire; a 4:1 balun and six position antenna selector switch are built-in. 101/4"w x 91/2"d x 31/2"h, 31/2 lbs..\$14495

VC-300D Antenna Tuner identical function and specifications as the VC-300-DLP above, but has the additional capability to show a peak power indication by using an



instantaneous responding digital bargraph display. A LEVEL and DELAY control has been added to calibrate the display to the \$186⁹⁵ meter, and to vary the delay response.

► HFT-1500 Antenna Tuner Rated 1500W (3KW PEP) 1.8 to 30MHz, 1000W (2KW PEP) on 160 and 10M. Features a cranked continuous roller inductor with a turns counter, and vernier tun-



ing on both the antenna and Input capacitors. A dual-movement cross-needle meter shows average forward and reverse power, and SWR; a 21-segment digital bargraph

indicates peak power. For accuracy, a true RF directional coupler sensor is used for the internal wattmeter function. Includes a built-in 4:1 balun for balanced antenna feedline and six-position antenna selector switch. 51/2"h x 121/2"w x 12"d, 10 lbs..... \$38995

Opto Electronics

R-10 FM Communications Interceptor Recieves FM signals from 30MHz to over 2GHz, without gaps. Unlike scanners that



must be tuned or scanned through a fixed frequency range, the interceptor receives through the range without tuning, and provides a new dimension to recreational monitoring. Take it with with you on cruise ships, to military bases, theme parks, the zoo, airports, to space shuttle launches, sporting events, car races and anywhere else twoway FM communication is used .The Interceptor is completely automatic for hands free operation. The actual distance from which the Interceptor can detect a

transmission will vary depending upon the RF Floor and the presence of other strong signals, distances of 200 to 400 feet from a 5W UHF or VHF transmitter are typical. \$359

Scout 25 Frequency Scout Automatically finds and records frequencies in the 10MHz to 2.8GHz frequency range, from 15

to 400 ft. away depending upon conditions; 9-digit display, 16-segment signal level bargraph. Differentiates between random noise and coherent RF transmissions. Ideal for surveillance walk-by situations; has a built-in vibrator to secretly let you know that you've got a frequency. For drive by applications, a double beep indicates a new frequency; a single beep indicates that an already recorded frequency has been hit again. Up to 250

hits can be counted for each of 50 frequency memories. Internal battery gives 6+ hours operating time, charger for one-hour rapid-charge included. 31/2"h x 21/2"w x 11/2"d; 81/2 oz.. \$39900



COMET WS-1M Window Mounting Bracket Perfect for using on vans and mini-trucks with pop-out windows, rental cars, etc. A multi-adjustable mounting bracket includes 11% ft. of high quality coaxial cable with gold-plated UHF connectors attached. Suction cups on the inside as well as outside of the bracket, along with heavy-duty construction allows for mounting gain-type antennas such as the COMET B-20 or COMET SB-5 dualbander models, and others .\$5495



COMET CA-HV HF Mobile Antenna Switch between four HF bands without getting out to changing coils or plugs. Standard coils include 40, 15, 12, 10M; opt. 20M coil available. Compact and lightweight, only 1 lb, 14 oz, and just 4 ft. 10 in. tall which allows for more convenient HF mounting options than conventional HF mobile antennas. May be mounted on a trunk-lip style bracket such as the COMET RS-820 (shown), or a rain gutter mount such as the RS-80. High guality construction includes a gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a hinged base, allowing a 90-degree fold-over for entering garages, parking structures, etc...\$11995



NCG

Power Pocket Portable or extra power for Emergencies, Hamfests, Hiking, etc. A 12V/2A/H sealed leadacid rechargeable battery provides hours of extended talk time, up to 6 times longer than standard battery packs, and can be recharged to 100% anytime without the memory effect. Compact carrying case with belt loop and shoulder

strap, and the entire pack weighs only 30 oz. Simply plug your radio into the included female adapter socket. Complete recharge in 6 to 8 hours, with the supplied 110VAC to 12V charger. Only, 3½"w x 1"d x 6½"h, 30 oz \$6695

> NCG Light-weight boom microphone and earpiece with a dual action PTT/STL Press the button for pus-to-talk, or slide the button for slide-to-lock convenience. A good alternative to cumbersome headset boom microphones. Good transmit and receive audio. MH-900P Icom, Standard Yaesu and \$3995 MH-900PK Kenwood version..\$39⁹⁵

NCG Light-weight boom microphone/headset for handheld radios Conveniently folds-up for easy storage Boom microphone pivots to allow left or right ear speaker position. PTT

MP-28 icom, Standard Yaesu and \$3995 \$3995 MP-28K Kenwood version ...





DC Power: 13.8VDC at 4.5 amps max.

\$99⁹⁵

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- Frequency: 144–148MHz



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1. LED Charging Indicator

2. DC 3-6-9v Selector Switch

800-666-ANLI For Hams Who Demand High Quality ...

Power Station

3. Charge Input Cigarette Socket 3,6,9,12V DC / Power Supply + Battery 4. DC 3-6-9v Output Connector Sturdy construction • High quality durable black chrome 5 Voltmeter Gel-Cell Battery, Charge Up To 1,000 Times Clean design Weather proof 6. LED Power "On" Indicator 7. Main Power On/Off Switch • Low wind load Fiber glass DC 12v Output Cigarette Socket 8. Double Spring loaded also for scanning Output (+ -) Terminal-15A (max. 100A within 1-2 minutes ۵ for starting auto engine) AT-2 146 / 445 MHZ 3/5 db AT-2A 146 / 220 MHZ 3/3.9 db **Provides Power To:** AT-2 plus 146 / 445 MHZ 4.1/6 db Cellular telephones / Communication radios 146 / 220 MHZ 4.1/4.8 db AT-2A plus 2 8 Boost charge 12 VOLT batteries AT-2 plus-TRI 146/ 220/445MHZ 4.1/4.8/6 db Camcorders 3 Portable TV's & radio / cassette VSWR **AT-2** players 7 • Power tools 20 • Re-chargeable nickel cadmium 4 batteries 6 5 130 160 MHZ USE AS: **146 MHZ 1.0** ▼2 160 MHZ 1.3 Emergency power source **SB - 152 6.5AMP/HR** Auto jump-start (car,boat,etc...) • DC power supply Voltmeter **SB - 752 8.5AMP/HR** • Battery Charger & many more . Dimension: 7 LB, H8", W7" X 4.5" 400 445 500 MHZ Quick Recharge 7 445 MHZ 1.1 [US patent pending] 2 - 3hrs from car (while driving) cable included 6 - 8 hrs from AC adapter (provided) automatic "full charge" shut off circuit. .

Mounts





CM-1 BNC CLIP ANGLE ADJUSTABLE

CM-2 BNC CLIP



1 RD-8: 144/440/900MHz 10W 7" Wide-Band, also for scanning

2 IN 1 MODEL

4	RD-78:	144/440/900MHz 2.15/3db15" Wide Band, also for scanning	
5	S-1:	144/440MHz 2.15dbi/3db 50W 14"	
6	AT-3:	144/440MHz 2.15dbi/3db 100W 1'5" UHF only	
7	AT-2:	200W 1'10" Broad Band NMO only	
8	AT-4:	144/440MHz 3/5.5db 200W 3'2".Fold over. NMO/UHF	



TA-1 Angle Adjustable Trunk Mount NMO/UHF

MC-1 Hi-Flux Magnet Mount NMO/UHF





S-1 (Antenna) WA-1 (Mount) With the WA-1 Windows Clip Mount, you can mount your H.T.(or ANLI S-1) Antenna to your car window or sunroof.



MODERN, MULTI-BAND ANTENNA SYSTEMS

Featuring the COMET exclusive SLC System. The SLC actually increases the gain of the Dual/TriBand Antennas. A completely pre-formed phasing coil and phosphorous copper element produces a low-loss, highly effective, high gain antenna. All COMET antennas are pre-tuned and come complete will all mounting hardware. Simply mount to your mast and experience incredible COMET performance!

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vice, or a complete catalog, please call us at 800/962-2611. We're confi dent COMET products and accessories will enable you to enjoy Amateur Radio to its fullest!



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MODERN, MULTI-BAND ANTENNA SYSTEMS

104

MOBILE ANTENNA PRODUCTS



Modern, high-performance stations use COMET Antennas, Duplexers, Triplexers and Accessories! COMET products are designed to provide an exceptional level of signal quality and coverage area. Whether operating mobile or from your base station, COMET products make you sound good. No other product line has the selection, convenience, quality and performance!



R5 / R7 Halfwave HF Verticals



The right antennas for every ham.

The "R" series antennas have revolutionized the way hams look at verticals. Dedicated hams all over the world have tried the R5 and R7 and have been amazed that these compact, rugged verticals can perform the way they do. The outdated idea that a vertical antenna is a serious compromise has been put to rest. Not only are these antennas compact and able to fit just about anywhere, but they're built strong and built to last.

The R5 and R7 are the result of decades of experience in antenna design. They have proven themselves on Arctic DX-peditions, tropical island contest stations, ocean vessels and even on a hot air balloon trip. Their greatest success, though, has been in amateur home stations throughout the world where they provide exceptional performance.

Whether you understand the technology involved or not, know that these compact antennas perform like no others. Tune in on 10 to 40 meters and talk to many enthusiastic R5 and R7 owners.

- No Ground Radials
- Compact Size
- Low Angle Radiation
- Automatic Band Switching
- Broadband Matching
- Mount Anywhere
- No Moving Parts

MODEL	R5	R7
Frequency, MHz 28	, 24, 21, 18, 14	28, 24, 21, 18, 14, 10, 7
Gain, dBi	3	and the second
Electrical Wavelength	Halfwave	Halfwave
SWR 2:1 Bandwidth	10 m-2 MHz	10 m-2 MHz
	12 m-100 KHz	12 m-100 KHz
	15 m-450 KHz	15 m-450 KHz
	17 m-100 KHz	17 m-100 KHz
	20 m-350 KHz	20 m-150 KHz
		30 m-50 KHz
		40 m-75 KHz
Power Rating, Watts PE	P 1800	1800
Radiation Angle, Degree	s 16	16
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern I	Deg. 360	360
Height, ft (m)	17 (5.2)	22.5 (6.9)
Mast Size Range, in	1.5-1.75	1.5-1.75
(cm)	(3.8-4.4)	(3.8-4.4)
Wind Load, ft2 (m2)	1.4 (.13)	2.25 (.21)
Weight, Ib (kg)	8.7 (4)	12.3 (5.6)
49" Counterpoise Radial	s Supplied 4	7

10, 12, 15, 17, 20 Meters



Thousands of R5's are currently in use by satisfied hams worldwide. This compact, 17 foot high halfwave has

gained popularity because of its reputation for uncanny performance level's and the fit-anywhere convenience of a vertical without ground radials. Put the world in your log book on 10 through 20 meters with the Cushcraft R5 halfwave vertical.

"It did everything I hoped and more... In 27-1/2 hours of operating over 5-1/2 days, we made 2788 CW QSO's with 87 countries..." *

QST, Oct. 1990

"I had used the antenna with my RV in Mexico and worked over 80 countries." * CQ, Nov. 1989

"I must congradulate Cushcraft for a wellmade, easy-to-use antenna." * Practical Wireless, Sept. 1992





"The antenna was of vital importance to me as I used it twice a week to speak to my wife and children back in New York." (WA2RUD / 5H3WL / 5Z4PI)

"The R5 works superb. Best DX vertical I ever had during 30 years of ham practice." (DJ8WI)

"Everything assembled beautifully and how nice not having to have an antenna tuning unit when band changing." (G4JZK)

"Thanks for designing such an excellent antenna that provides so much fun for us apartment dwellers." (N1LKH)

* Reprinted by permission from QST, CQ and Practical Wireless magazines.



10, 12, 15, 17, 20, 30, 40 Meters



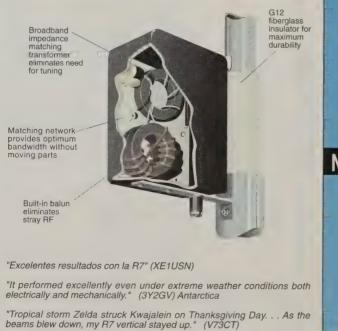
This 22 foot marvel packs a punch on 10 to 40 meters that has to be experienced to be believed. With only 7 short counterpoise rods, the R7 will fit just about anywhere. If you're looking for the most performance in the smallest package then the R7 is for you. Precisely

tuned radio frequency traps optimized for each band and strategically placed X-hats enable the R7 to radiate a low angle signal that makes working DX a snap. Experience 7 band performance anywhere with the incredible R7.

"It's an excellent solution for somebody who's looking for a low-profile homestation antenna that works well on 40 through 10 meters... ideal for portable operation because it easily breaks down into a small package, and you don't have to worry about a radial system or finding trees for supports." *

QST, August 1992

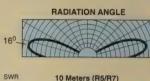
"The instructions are very detailed and clear. . .the antenna goes together in about 30 minutes. . . running 100 Watts and using the R7 I managed to work DXCC (actually 117 countries). . .hardware is of very outstanding material, and the antenna is best described as rugged." * CQ, August 1992

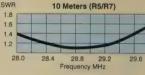


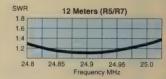
"Used R7 on IOTA EU-135 expedition. . . Beautiful performance!" (SM3DMP)

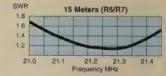


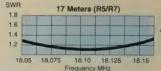
The R7 and R5 do not need ground radials. Because of their compact size, they are perfectly suited for almost any limited space application. Whether you're operating from a balcony, RV, rooftop or mobile environment, you will find the R7 and R5 to be exceptional performers.

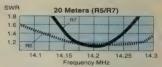


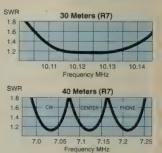












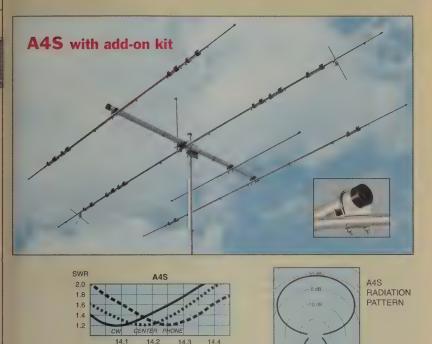
* Reprinted by permission from QST, CQ and Practical Wirless magazines

10, 15, 20, 40 Meters

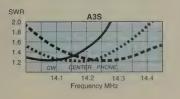
Cushcraft Tribanders Make More DX Fun!

Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!

Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S, A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!







Frequency MHz



Cushcraft Corporation, Manchester, NH

A4S Four Element Beam

With stainless steel hardware.

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

A3S Three Element Beam

With stainless steel hardware.

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a fullsize tribander, the A3S is right for you!

MODEL	A4S	A3S
Frequency, MHz	28, 21, 14	28, 21, 14
No. Elements	4	3
Forward Gain, dBd	8.9	8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth KHz	>500	>500
Power Rating, Watts PEP	2000	2000
3 dB Beam Width, Deg. E Plan	ne . 58	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)
Boom Diameter, In (cm)	2 (5.10)	1.5 (3.81
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft ² (m ²)	5.50 (0.51)	4.36 (0.47)
Weight, lb (kg)	37 (16.8)	27 (12.9)

30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

A743	7 MHz/10 MHz kit for A3S
A744	7 MHz/10 MHz kit for A4S
A103	10 MHz kit for A3WS

MODEL	A743/A744		A103
BAND	7 MHz (40 m)	10 MHz (30 m)	10 MHz (30 m)
Driven Element with			
Adapter kit, ft (m)	33.19 min.	27.12 min.	32.1
	35.33 max.	28.4 max.	
	(10.12-10.77)	(8.27-8.66)	(9.8)
Windloading ft2 (m2)	.58 (.05)	.27 (.03)	.45 (.04)
Bandwidth, KHz	125	150	250
Power Rating, Watts	2000 PEP	2000 PEP	2000 PEP
Side Rejection, dB	20	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)	3.25 (1.47)

10 through 20 Meters



Skylog

- Continuous five band coverage from 13.5 to 32 MHz
- · Constant gain over entire frequency range
- · 6.4 dBd gain, 65 degree beamwidth
- · High efficiency design, antenna stays cool and VSWR steady
- 18 foot boom and 19.5 foot turning radius

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

	CT DELTCH WAS DESCRIPTION OF THE PARTY OF	
NODEL	AJWS	ASL2010
Frequency, MHz	24, 18	13.5-32
No. Elements	3	8
Forward Gain, dBd	8.0	6.4
Front to Back Ratio, dB	25	15-20
SWR 1.2:1 Typical		
2:1 Bandwidth	300 KHz	18.5 MHz
Power Rating, Watts	2000 PEP	2000
3 dB Beam Width, Deg. E Plane	60	65
Boom Length, ft (m)	14 (4.27)	18 (5.48)
Boom Diameter, In (cm)	1.50 (3.81)	2.0 (5.08)
Longest Element, ft (m)	25.1 (7.66)	38 (11.58)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	14.4 (4.4)	19.25 (5.86)
Mast Size Range, in	1.25-2	1.5-2
(cm)	(3.18-5.08)	(3.18-5.08)
Wind Load, ft ² (m ²)	4.1 (.38)	10.1 (.93)
Weight, Ib (kg)	22.5 (10.2)	55 (25.5)

A3WS WARC Bands 3 Element Beam

Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.

Rotatable Dipoles

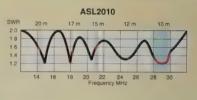
Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multiband dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

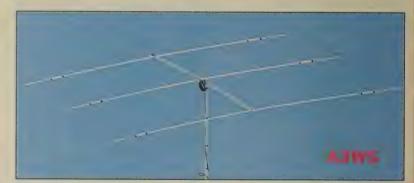
D3W World Ranger Dipole

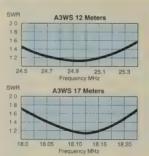
The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.













MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350	>500	>200
		40>125		
Power Rating				
Watts PEP	2000	2000	2000	2000
Length ft	42.25	35.8	25.8	34.0
(m)	(12.88)	(10.92)	(7.86)	(10.37)
Mast Size, in(cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft2 (m2)	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



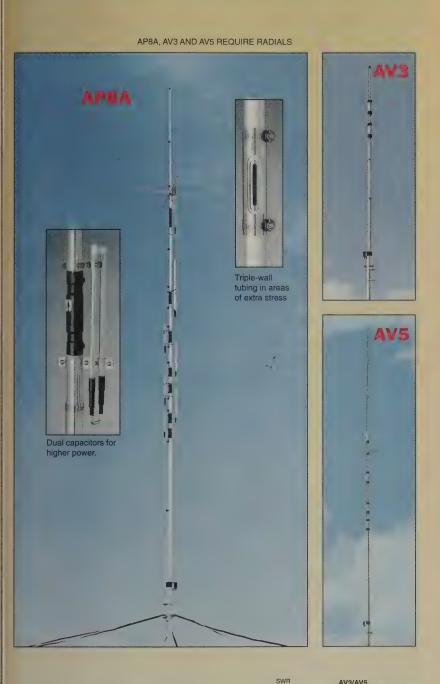
Typical Dipole **Radiation Pattern**

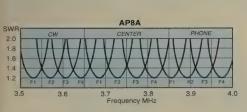
Multiband HF Quarterwave Verticals

10 Through 80 Meters

Multiband verticals are a cost effective solution to the space problems that many of us face. Cushcraft AV3, AV5 and AP8A verticals are the right choice when a beam is not practical.

Our AV3 three-band and AV5 five-band are economical and offer good performance. They may be your first choice in multiband verticals because of their broadband performance, enclosed traps, and stainless steel hardware.





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16	······································	1111				
1.4	-	-	TRAIL	-		
1.2		CW	CEI	ITER	PHO	VE
	14.0	14.1	14	.2	14.3	14
		Fn	equency	MHz		
SWR		,	AV3/AV	5		
18	100.	E	1 1	1		
1.6		1111			/	
1.4			101-10-		-	-
1.2		CW	CEA	ITER	PHO	ALLE ST
		CW		· · · · · ·	11101	T. and

AP8A, Eight Bands In One Tough Antenna

The AP8A is the next generation eight-band quarterwave that has been strengthened with thick wall tubing, up to three layers deep in some sections, and high tensile strength fiberglass. The traps have been beefed up to handle the legal limit and are moisture sealed. You can be up and running on 10 through 80 meters in no time. (The APR-18A Radial Kit will make the job even easier.) The key to the AP8A's eight band coverage is the automatic bandswitching and efficient traps. The traps are parallel LC circuits which allow broadband operation. The AP8A is a very popular antenna with new hams because it's such a great value. Eight bands in one rugged antenna at an affordable price.

	MODEL	АРВА
-	Frequency, MHz	28, 24, 21, 18, 14, 10, 7, 3.5
	Electrical Wavelength	the Milder Streets and the deal 1/4
	SWR 1.2:1 Typical	
	2:1 Bandwidth F	ull Band Except 40M>150 KHz & 80 M>80 KHz
	Power Rating, Watts PEP	2000
	Radiation Angle, degrees	18
	Frequency Selection	Automatic
	Horizontal Radiation Patte	m, degrees and an electric sector 360
	Height, ft (m)	26 (7.92)
	Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)
	Wind Load, ft ² (m ²)	1.7 (.16)
	Weight, Ib (kg)	¹ Control 10 Test and a Graphic 9.5 (4.3)
	Radials Required	Normally
	Radial Kit Available	Yes, APR18A

APR18A Radial Kit

The Cushcraft APR-18A radial kit is the perfect match for the AP8A, AV3, AV5, or any quarterwave amateur HF vertical where a good low angle signal on the horizon and a low VSWR are important. The kit offers maximum performance on all HF bands and consists of only 9 multiple and single-conductor radials, with a maximum length of only 31 feet. It's great for quick installation at either ground level or rooftop sites.

AV3 Three Band & AV5 Five Band

Our AV3 handles 10, 15, and 20 meters with fine performance and easy assembly. It has the same rugged construction as the AV5. The AV5 works with the popular 10, 15, 20, 40 and 80 meter bands with broad bandwidth and full legal power. For versatility, this is the antenna for you!

MODEL	AV3	AV5
Frequency, MHz	28, 21, 14	28, 21, 14, 7, 3.5
Electrical Wavelength	1/4 1.5	1/4
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band	Full Band except
		80 M>70 KHz
Power Rating, Watts PEP	2000	2000
Radiation Angle, degrees	18	18
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern, deg.	360	360
Height, ft (m)	14 (4.2)	25 (7.4)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft ² (m ²)	1.02 (.1)	1.89 (.19)
Weight, lb (kg)	5 (2.3)	8 (3.6)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	Yes, APR18A

Skywalker Monoband HF Yagis

10, 15 Meters



10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

MODEL	10-4CD	10-3CD
Frequency, MHz	28.0-29.7	28.0-29.7
No. Elements	4 .	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>900	>1400
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	40	40
Boom Length, ft (m)	16 (4.88)	10 (3.05)
Boom Diameter, In (cm)	2.0	1.63-1.50
	(5.08)	(4.1-3.8)
Longest Element, ft (m)	17.58 (5.34)	17.66 (5.38)
Element Center Dia, in (cm)	.8863	.8863
	(2.2-1.6)	(2.2-1.6)
Turning Radius, ft (m)	11.5 (3.5)	10 (3.05)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	3.1 (.29)	2.3 (.21)
Weight, Ib (kg)	18 (8.16)	11 (5.00)

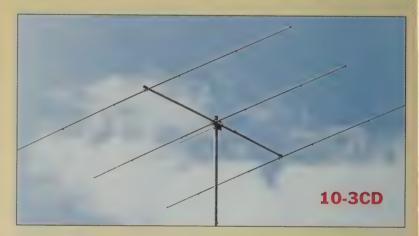
More Performance Than You Ever Imagined

More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

Assembly is easy and installation can often be done by one person! Skywalkers are contest winners. One of these fine antennas is perfect for you.

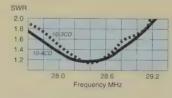


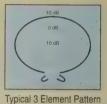
15 Meters

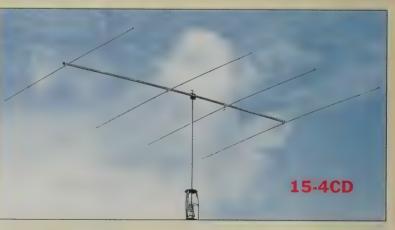
These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

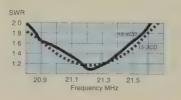
The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

	Panlar milaiotectorementaria da compositiva ana com	
MODEL	15-4CD	15-3CD
Frequency, MHz	21.0-21.45	21.0-21.45
No. Elements	. 4 .	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	500	500
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	20 (6.10)	14 (4.27)
Boom Diameter, In (cm)	2.0	2.0
	(5.08)	(5.08)
Longest Element, ft (m)	23.33 (7.11)	23.16(7.06)
Element Center Dia, in (cm)	1 (2.5)	1 (2.5)
Turning Radius, ft (m)	15.4 (4.72)	13.5 (4.11)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	4.5 (.42)	3.4 (.32)
Weight, Ib (kg)	25 (11.34)	20 (9.07)











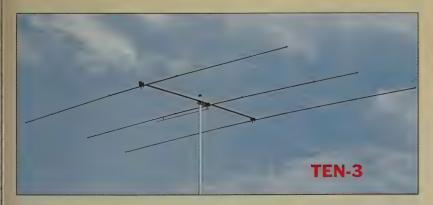
Typical 3 Element Pattern

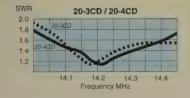
Skywalker Monoband HF Yagis

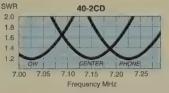
10, 20, 40 Meters











40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

MODEL	40-2CD	TEN-3
Frequency, MHz	7.0-7.3	28-29.7
No. Elements	2 - 13 a - 4 - 5 - 1	3
Forward Gain, dBd	5.5	8
Front to Back Ratio, dB	20	25
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	200	>1500
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	70	64
Side Lobe Attenuation	>40	>40
Boom Length, ft (m)	23(6.9)	8 (2.44)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	1.38-1.25(3.5-3.2)
Longest Element, ft (m)	43 (12.9)	18 (5.49)
Element Center Dia., in (cm)	1.25 (3.1)	.75 (1.9)
Turning Radius, ft (m)	23.93 (7.29)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft ² (m ²)	6.38 (.57)	2.0 (.20)
Weight, Ib (kg)	44 (19.8)	9.9 (4.45)

_			
	MODEL	20-4CD	20-3CD
	Frequency, MHz	14.0-14.35	14.0-14.35
	No. Elements	4 18/12 B	3
	Forward Gain, dBd	10.0	8.0
	Front to Back Ratio, dB	30 2 102 102 10	30
	SWR 1.2:1 Typical		
	2:1 Bandwidth, KHz	>400	>300
	Power Rating, Watts PEP	2000	2000
	3dB Beamwidth, Degrees		
	E Plane	56	57
	Side Lobe Attenuation, dB	>40	>40
	Boom Length, ft (m)	32 (9.75)	20 (6.1)
	Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	2.0 (5.08)
	Longest Element, ft (m)	36.08 (11.00)	35.95(10.96)
	Element Center Dia., in (cm)	1.25 (3.1)	1.25 (3.1)
	Turning Radius, ft (m)	23.75 (7.2)	20 (6.1)
1	Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
	Wind Load, ft ² (m ²)	8.1 (.75)	5.5 (.51)
	Weight, Ib (kg)	55 (24.95)	30 (13.61)

Boomer Sideband / CW Yagis



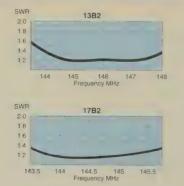
17B2 - 17 Element CW/SSB

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBd gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector. The improved Boomer brace system is easier to install. 17B2 is a new stronger Boomer with a cleaner profile, less weight and wind load. All these features result in contest winning performance and more day to day operating enjoyment.

13B2 -13 Element Wideband

The new 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector.

MODEL	13B2	17B2
Frequency, MHz	144-148	144-145
No. Elements	13	17
Forward Gain, dBd	15.8	18.0
Front to Back Ratio, dB	26	26
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 18	2 x 14.5
H Plane	2 x 19	2 x 15
Side Lobe Atten., dB, E Plane	>60	>60
Boom Length, ft (m)	15 (4.57)	31 (9.45)
Electrical Wavelength	2.2	4.5
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	1.8 (.17)	3.9 (.36)
Weight, Ib (kg)	6.7 (.31)	15.75 (7.14)



Boomers are easily stacked for more gain. See page 17 for details.

"The 13B2 was very easy to assemble. Very good instructions. High quality parts. A very neat looking antenna." (NM8T)

"Reliable contacts [on 13B2] to repeaters 100 miles using low power. Horizontally polarized 150 miles plus." (N9MHV)

"New 17B2 is nice improvement over 4218XL both mechanically and electrically." (VE3ASO)

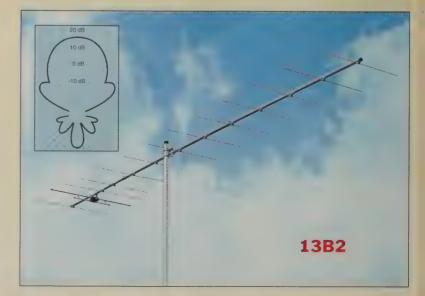
The Boomer tradition continues.

New Boomers offer more gain and cleaner patterns with greater mechanical strength. New element spacings and lengths plus an improved feed system make it happen. Select from the 17B2 for the strongest signal on the low end of the band or the 13B2 for broadband performance across the band.

Cushcraft Boomers all feature solid rod elements, stainless steel hardware and very easy to follow assembly instructions. Simple tools and a little time are all that are needed for assembly. The new Boomer line will make your operating time more rewarding and enjoyable. Move up to the new Boomers today.



The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.



Sideband Yagis

70 CM, 2, 6 Meters







6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

MODEL	A50-35	A50-55	A50-6S
Frequency, MHZ	50-54	50-54	50-54
No. Elements	3 (s)	5 11 Mar 11/	6
Forward Gain, dBd	8	10.5	11.6
Front to Back Ratio, dB	20	24	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1 138	>1 20 - 5	>1
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	76	56	48
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)
Mast Size Range, in (cm)	1.5-2	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1) . :	(3.8-5.1)
Wind Load, ft2 (m2)	1.80 (0.17)	2.9 (0.273)	4.46 (.41)
Weight, Ib (kg)	7 (3.2)	11 (5.0)	18 (8.2)



A50-6S RADIATION PATTERN

70 CM / 2 Meters

A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

MODEL	A144-75	A148-10S	A430-115
Frequency	144-146	144-148	430-435
No. Elements	7	10	11
Forward Gain, dBd	11.1	13.2	13.2
Front to Back Ratio, dB	20	24	20
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	≥4	>10
Power, Watts PEP	1000	1000	350
3dB Beamwidth, Deg.			
E Plane	46	40	38
H Plane		46	
Boom Length, ft (m)	8.2 (2.5)	12 (3.6)	4.7 (1.40
Longest Element, in (cm)	40 (101.6)	40.3 (102.4)	14 (35.5)
Turning Radius, ft (m)	4.9 (1.5)	6 (1.8)	2.6 (.81)
Mast Size Range, in (cm)	1.5-2	1.25-2.0	1.25-1.5
	(3.8-5.1)	(3.2-5.1)	(3.1-3.8)
Wind Load, ft ² (m ²)	0.81 (0.08)	1.21(0.11)	0.42 (.04)
Weight, lb (kg)	4 (1.8)	6 (2.7)	3 (1.4)

1¹/₄, 2 Meters



13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.

124WB - 4 Element Wideband

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.

MODEL	124WB	13B2	2682
Frequency, MHZ	144-148	144-148	144-148
No. Elements	4	13	26
Forward Gain, dBd	10.2	15.8	18.8
Front to Back Ratio, dB	19	26	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>4	>4
Power Rating, Watts PEP	2000	2000	2000
3dB Beamwidth, Degrees			
E Plane	60	2x18	2x18
H Plane	88	2x19	2x9.5
Side Lobe Attenuation,			
dB, E Plane	40	>60	>60
Boom Length, ft (m)	4 (1.22)	15 (4.57)	15 (4.57)
Electrical Wavelength	.5	2.2	2.2
Longest Element, in (cm)	40.75 (104)	39.75 (101)	39.75 (101)
Turning Radius, ft (m)	4 (1.22)	8.9 (2.7)	10.4 (3.18)
Mast Size Range, in (cm)	1.25-2	1.5-2	1.5-2
The second s	(3.2-5.1)	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	.34 (.034)	1.8 (.17)	4.84 (.45)
Weight, Ib (kg)	3 (1.36)	6.7 (.31)	21.5 (9.75)
	. ,	. ,	. ,

MODEL	224WB	225WB
Frequency, MHZ	222-225	222-225
No. Elements	4	15 - St. 5 1 45 8 10
Forward Gain, dBd	10.2	15.5
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>5
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	60	2x17
H Plane	88	2x19
Side Lobe Attenuation,		
dB E Plane	40	60
Boom Length, ft (m)	3 (.91)	10 (3.05)
Electrical Wavelength	0.5	2.2
Longest Element, in (cm)	26.7 (68)	26.3 (67)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft ² (m ²)	.23 (.021)	.95 (.09)
Weight, Ib (kg)	1.7 (.77)	5.25 (2.4)



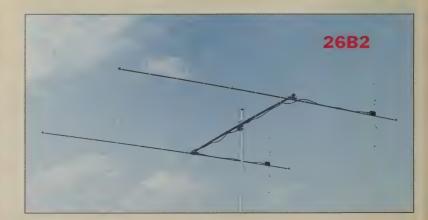


224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.



Dual Band Ringos & Mobile

70 CM, 2 Meters

Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR-270B and the CS-270M mobile mag-mount. These great products will complement our already proven AR-270 dual band compact base antenna.

AR-270B

DUAL BAND

AR-270B 5.5/7.5 dB Dual Band Ringo

This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

MODEL	AR-2	70	AR-27	0B
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dB	3.7	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation	-			
Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.1)	3) (1971)	7.7 (2.3)	
Mast Size Range, in	1.25-2 (3	.2-5.1)	1.25-2 (3.1	2-5.1)
Radial Length, in (cm)	6.75 (17.1)		20 (51)	
Wind Load, ft2 (m2)	0.27 (0.03	3)	0.47 (0.04	4)
Weight, Ib (kg)	2 (0.9)		2.4 (1.09)	

All-American Dual Band Ringo

Cushcraft's new ARX-270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.\$. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional/features like the factory installed pigtail feed and choice of UHF or/N connector makes weather-proof connections easy. These technical innovations put the ARX-270 miles ahead. The All-American Dual Bander comes factory tuned and/does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX-270.

• ARX-270U with UHF connector • ARX-270N with N-connector

Experience the performance and appearance advantages of all-aluminum dual band antennas. Both models incorporate Ringo Ranger technology in lightweight and durable designs with stainless steel hardware. Their weather-sealed phasing coils and base matching networks eliminate stray RF currents while providing a very low angle of radiation. A simple 50 Ohm cable connection is all you need to experience the full performance of your dual band 2m/70cm transceiver.

AR-270 3.7 / 5.5 dB Dual Band Ringo

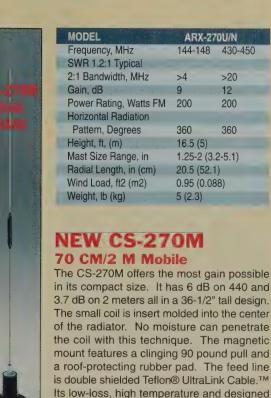
The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.



Mount it anywhere from table top to roof top. You'll enjoy

Cushcraft dual band antennas are made from a very tough copper alloy. They're silver plated for greatest efficiency. The entire matching network is

built on a PC board that surrounds the coil assuring that the antenna will not detune and will operate at peak efficiency for many



to last. The CS-270M has all of the features you will need in a dual-band mobile antenna.

70 CM, 1¹/₄, 2 Meters

Ringo Ranger II



Our Ringos are Number One. Tough performers at a good price! The Ringo family of dependable,

Tough performers at a good price! The Hingo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you.

Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

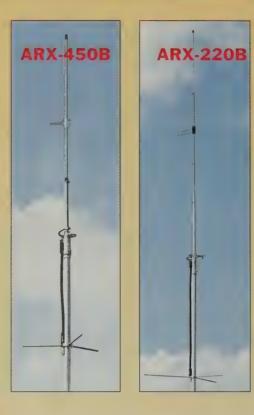
Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

Ringo Ranger II. It's the performer. Over 500,000 have been sold!

MODEL	ARX-2B	ARX-2208	ARX-450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dB	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft, (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25	1.0-1.25	7588
	(2.54-3.1)	(2.54-3.1)	(1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft ² (m ²)	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, Ib (kg)	6 (2.7)	5 (2.3)	1 (.45)

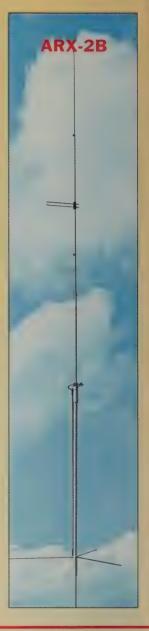


Some hams comment on the ARX-2B: "Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX-2B...the best antenna." (XE2CLB)





A270-10S 10 dB Dual Band Yagi

Increase your range by using the new Cushcraft A270-10S dual band Yagi on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting while reducing interference and increasing signal strength when receiving. The A270-10S is the perfect Yagi for packet applications. It will increase throughput while helping to eliminate retries and disconnects.

The A270-10S was designed for the ham who wants the gain and directional characteristics of a beam and the convenience of a single antenna. This new antenna covers all of 2 meters

and the 430-450 MHz band. One antenna with one feedline saves both money and tower space. It can easily be turned with a light duty rotor. Assembly is a snap with our well illustrated instruction manual. Contact your dealer today and enjoy the pleasures of dual band Yagi performance.

MODEL	A27	0-10S
Frequency, MHZ	144-148	430-450
No. Elements	-5	e 5
Forward Gain, dBd	10	10
Front to Back Ratio, dB	20	18
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	≥4	≥10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	52	52
H Plane	60	60
Boom Length, ft (m)	6.17 (1.9)	
Longest Element, in (cm)	40.3 (102	.4)
Turning Radius, ft (m)	6 (1.8)	
Mast Size Range, in (cm)	1.25-2	
	(3.2-5.1)	
Wind Load, ft ² (m ²)	.725 (.07)	
Weight, Ib (kg)	1.8 (.81)	

Mobile Antennas

70 CM, 1¹/₄, 2, 6, 10 Meters

Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



GAIN MOBILE ANTENNAS

TRUNK LIP MOUNT

BLACK MAG MOUNT



UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.



QUARTERWAVE MOBILES



CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL-259 connector are included with the CS-28M.

Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilarmetal joints. All Cushcraft mobile coil housings are ABS. impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft guarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

NEW CS-270M Dual-Band Mobile

See page 10 for a full description of this new 70cm/ 2 meter magmount mobile.

Model	Frequency	Whip	Length	Description
No.	MHz	in		
CS-270M	144-148/440-450	34	.86	Magnetic Magnetic
CS-270A	144-148/440-450	34	.86	Coil & Whip
CS-147M	144-174	49	1.25	Magnetic
CS-147T	144-174	49	1.25	Trunk Lip
CS-147	144-174	49	1.25	3/4" Hole
CS-147A	144-174	49	1.25	Coil & Whip
CS-1147M	144-148	20	.5	Magnetic
CS-220M	222-225	33	.84	Magnetic
CS-220T	222-225	33	.84	Trunk Lip
CS-220	222-225	33	.84	3/4" Hole
CS-450M	435-470	29.5	.75	Magnetic
CS-450T	435-470	29.5	.75	Trunk Lip
CS-450	435-470	29.5	.75	3/4" Hole
CS-1450M	430-450	7	.17	Magnetic
CS-50M	46-54	49	1.25	Magnetic
CS-50T	46-54	49	1.25	Trunk Lip
CS-50	46-54	49	1.25	3/4" Hole
CS-28M	28-30	49	1.25	Magnetic

Ringo, Ranger and Four Poles

70 CM, 1¹/₄, 2, 6, 10 Meters



Ringo

These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors.

Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR-2	AR-6	AR-10	AR-220	AR-450
Frequency, MHz	135-160	50-54	28-29.7	222-225	440-460
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	10	2	>1.5	10	20
Gain, dB	3.75	3.75	3.75	3.75	3.75
Power Rating, Watts FM	1000	1000	1000	500	500
Radiation Angle, Deg.	16	16	16	16	16
Horizontal Radiation					
Pattern, Degrees	360	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in(cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.75 (1.9)	.5 (1.3)
Height, ft, (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	2.6 (.78)	1.4 (.43
Mast Size Range, in (cm)	1-1.25	1-1.25	1-1.25	1-1.25	.7588
	(2.54-3.1)	(2.54-3.1)	(2.54-3.1)	(2.54-3.1)	(1.9-2.22)
Wind Load, ft ² (m ²)	.21 (.02)	.37 (.03)	1.68 (.16)	.21 (.02)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1.2 (.55)	1 (.45)

Ringo Ranger (ARX-2)

This is the antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, then the ARX-2 is for you.

Gain 5.5 dB, frequency range 135-160 MHz, SWR 2:1 bandwidth greater than 6 MHz, length 112" (2.8 m), wind area .33 ft² ($.03m^2$), mast size range 1"-1.25" (2.54-3.1 cm), weight 4 lbs (1.8 kg), power handling 1000 Watts.

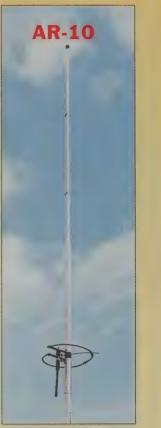
Four Pole Arrays

Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna.

Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics.

The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

MODEL	AFM-4DA	AFIA-24DA	AFNI-44DA	
Frequency, MHz	144-148	222-225	435-450	
Gain, dBd	9 Offset	9 Offset	9 Offset	
	6 Omni	6 Omni	6 Omni	
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>5	>15	
Power Rating, Watts FM	500	500	250	
Radiation Angle Degrees	6	6	6	
Horizontal Radiation				
Pattern, Degrees	360-Variable	360-Variable	360-Variable	
Height, ft (m)	23 (7.0)	15 (4.5)	8 (2.4)	
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0	1.25-2.0	
	(3.8-5.1)	(3.8-5.1)	(3.2-5.1)	
Wind Load, ft ² (m ²)	2.54 (.24)	1.85 (.17)	1.13 (.11)	
Weight, Ib (kg)	7 (3.2)	6 (2.7)	5 (2.3)	









FM Yagis

70 CM, 2 Meters

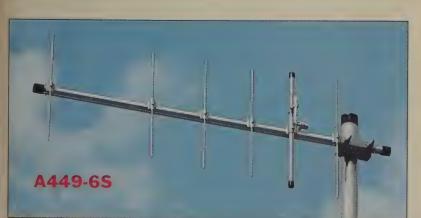




A148-10S







Performance and Value Leaders

A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation. $^{\prime}$

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

Model	A148-35	A148-10S	A148-20S
Frequency, MHz	144-148	144-148	144-148
No. Elements	3	10	20
Forward Gain, dBd	7.8	13.2	16.2
Front to Back Ratio, dB	25	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	≥4	≥4
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	66	40	20
H Plane	108	46	46
Boom Length, ft (meters)	2.8 (.85)	12(3.6)	12 (3.6)
Longest Element, in (cm)	41 (104.1)	40.3 (102.4)	40.3 (102.4)
Turning Radius, ft (m)	2.8 (.8)	6 (1.8)	6.6 (2.0)
Mast Size Range, in (cm)	1.25-2.0	1.25-2.0	1.25-2.0
	(3.2-5.1)	(3.2-5.1)	(3.2-5.1)
Wind Load, ft ² (m ²)	0.27 (0.02)	1.21 (0.11)	2.82 (0.26)
Weight, Ib (kg)	1.5 (0.7)	6 (2.7)	15 (6.8)

MODEL	A449-6S	A449-115
Frequency, MHz	440-450	440-450
No. Elements	6	11
Forward Gain, dBd	10.5	13.2
Front to Back Ratio, dB	18	20
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>10	>10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	60	48
Boom Length, ft (m)	2.9 (0.89)	4.2 (1.35)
Longest Element, in (cm)	13 (33)	13 (33)
Turning Radius, ft (m)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2.0	1.25-1.5
	(3.2-5.1)	(3.2-3.8)
Wind Load, ft ² (m ²)	0.30 (0.03)	0.39 (0.04)
Weight, Ib (kg)	3 (1.4)	4 (1.8)

Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

Antenna	Frequency MHz	Complete Kit	Harness Only
A148-3S	144.5-148	A14-VPKS	A14-SK
A148-105	144.5-148	A148-VPKS	A148-SK
A449-6S	440-450		A449-SK
A449-11S	440-450	A449-VPKS	A449-SK

Specialized Antennas

70 CM, 2 Meters



Reliable satellite communications will be yours with the new Cushcraft OSCAR antennas. The new 22XB two meter and 738XB 70 cm circularly polarized Boomer antennas offer the flexibility you need. Buy them both to create the best station possible or use a single antenna to upgrade an existing installation. Cushcraft provides polarization switches with both antennas. There are no additional options needed. Each antenna includes complete instructions on the mounting and installation of your OSCAR antenna system.

NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

NEW 738XB 70 CM OSCAR

Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.

MODEL	22XB	738XB
Frequency, MHz	144-148	432-438
No. Elements	22	38
Forward Gain, dBdc	14	15.5
Front to Back Ratio, dB	25	25
Ellipticity dB at boresight	2	2
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	4	6
Power Rating, Watts PEP	600	250 Contrast 250
3dB Beamwidth, Degrees		
E Plane	30	24
Boom Length, ft (m)	19.33 (5.9)	14.33 (4.37)
Longest Element, in (cm)	39.19 (99.6)	13.94 (35.4)
Turning Radius, ft (m)	11 (3.35)	8.5 (2.6)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.0)	(3.8-5.0)
Wind Load, ft ² (m ²)	2.6 (.24)	1.4 (.13)
Weight, Ib (kg)	11 (5)	7.6 (3.5)
Polarity switch	Included	Included





NEW A148-20T 2 Meter Hi-Lo Cross Yagi

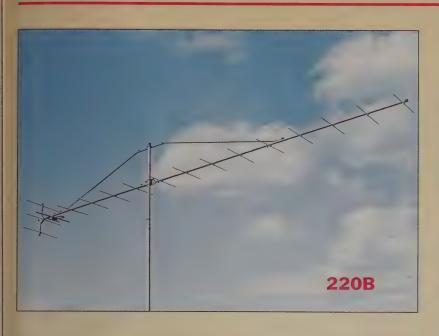
Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

A148-20T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 ft² (.11m²), and a mast size of 1.25-2 in. (3.2-5.1 cm).



Boomer Sideband / CW Yagis

70 CM, 1¹/₄, 6 Meters









TYPICAL RADIATION PATTERN

1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

MODEL	2208
Frequency, MHz	222-223
No. Elements of the second	17
Forward Gain, dBd	17.2
Front to Back Ratio, dB	30
SWR 1.2:1 Typical	
2:1 Bandwidth MHz	>2
Power Rating, Watts PEP	2000
3 dB Beamwidth, Degrees	
E Plane	2 x 13
H Plane with Market Classifier and the Market Class	2 x 14
Side Lobe Atten., dB, E Plane	60
Boom Length, ft (m) and a second state with the second	19 (5.8)
Electrical Wavelength	4.2
Longest Element, in (cm)	26 (66.2)
Turning Radius, ft (m)	9 (2.64)
Mast Size Range, in (cm) and a space space of same	1.5-2
	(3.8-5.1)
Wind Load, ft ² (m ²)	2.6 (.24)
Weight, Ib (kg)	10.5 (4.77)

6 Meters

Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

70 CM

The contest winner! The 424B will keep you at the top of the charts. Through-the-boom insulated elements, precise spacing, and high efficiency reflector systems are the features that make our 70 cm antennas the right choice for every ham. The 424B has an eye-opening 18.2 dBd forward gain for the ultimate in 70 cm enjoyment.

These boomers are equipped with stainless steel hardware, UV stabilized insulators, teflon® dielectric coaxial balun, seamless heavy-wall booms, and 50 Ohm N connector.

Equip yourself for fun and challenge of 70 cm with a Cushcraft Boomer!

MODEL	617-6B	424B
Frequency, MHz	50-51	424-435
No. Elements	6	24
Forward Gain, dBd	14.0	18.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1 ***	>12
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 9.5
H Plane	2 x 20	2 x 11
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	17.4 (5.3)
Electrical Wavelength	1.7	7.6
Longest Element, in (cm)	117 (297.2)	13 (33.8)
Turning Radius, ft (m)	17.7 (5.39)	10 (3.05)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	4.8 (.45)	2.3 (.21)
Weight, Ib (kg)	26 (11.79)	4.5 (2.05)

Antennna Accessories



Fast Acting Gas Discharge Lightning Arresters

Accessories

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanosecondsmuch quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

LAC4	200 Watt with UHF SO-239 connectors
LAC4H	2 kW with UHF SO-239 connectors
LAC4N	200 Watt with N connectors
LAC4NH	2 kW with N connectors
LC2	200 Watt replacement cartridge
LC2KW	2 kW replacement cartridge

Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

LAC-1 with UHF PL-259 and SO-239 connectors LAC-2 with UHF SO-239 connectors

Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

PD-2	for two 13B2, 124WB
PD-2N	for two 17B2
PD-4	for four 13B2
PD-4N	for four 17B2
PD-222	for two 220B, 224WB or 225WB
PD-224	for four 220B, 224WB or 225WB

Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

617-SK for two 617-6B's 22-SK for two 13B2's 22N-SK for two 17B2's











One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

All Cushcraft antennas are available through dealers worldwide.

BOOMER STACKING INFORMATION

Antenna	2x617-6B	2x13B2	4x13B2	2x220B	4x220B	2x424B	4x424B	2x17B2	4x17B2
Forward Gain, dBd	17.0	18.8	21.8	19.8	22.4	20.8	23.4	21.0	24.0
Front/Back Ratio	30	24	24	30	30	30	30	24	24
E-Plane Beamwidth,deg	2x17.5	2x18	2x9	2x13	2x6.5	2x9.5	2x4.8	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7	2x5.5	2x5.5		2x7.5	2x7.5
Vert, ft	26	9.2	9.2	8	8	5	5	11.5	11.5
(m)	7.92	2.8	2.8	2.44	2.44	1.97	1.97	3.5	3.5
Horiz, ft	-	-	9.6	-	8.5	-	5.5	-	12
(m)	-	-	3.0	-	2.59	-	2.16	-	3.7
Approximate Wt, Ib	62	22	44	23	76	15	55	32.5	115
(kg)	28.12	10.00	20.00	10.40	34.40	7.62	24.95	14.8	52.3

DIAMOND ANTENNAS-THE STANDARD BY WHICH ALL OTHERS ARE JUDGED

ACCLAIMED AS THE TECHNOLOGICAL LEADER IN SINGLE & MULTIBAND ANTENNAS **WIDE-BAND PERFORMANCE FACTORY ADJUSTED/NO TUNING REQUIRED** ●HIGHEST GAIN ●UPS SHIPPABLE ●HIGH WIND RATING ●FIBERGLASS RADOME **ODC GROUNDED OSTAINLESS HARDWARE**



X-500HNA

RUGGEDIZED BASE/ **REPEATER ANTENNA**



COAX CONNECTION AT BASE END



HEAVY DUTY BASE/ RADIAL ASSEMBLY



STRONG JOINT COUPLINGS

cories

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CONN.	HT. Ft.	RATED WIND/ MPH
X-50A	144/440	4.5/7.2	200	UHF	5.6	135
X-200A	144/440	6.0/8.0	200	UHF	8.3	112
X-300A	144/440	6.5/9.0	200	UHF	10.2	112
X-510NA*	144/440	8.3/11.7	200	N	17.2	90
X-510MA	144/440	8.3/11.7	200	UHF	17.0	90
X-500HNA	144/440	8.3/11.7	200	N	17.8	90+
X-700HA	144/440	9.3/13.0	200	UHF	24.0	90
X-2200A	144/222	6.0/7.8	150	UHF	11.5	112
X-3200A	144/222/440	6.0/7.8/8:0	100/200	UHF	10.5	112
X-6000A	144/440/1240	6.5/9.0/10.0	100/100/60	N	10.5	112





445MHz

RADIATION PATTERNS FOR X-500HNA/X-510MA/X-510NA

BAND: 144=144 - 148MHz. 222=222 - 225MHz. 420=420 - 430MHz.

GH62

430=430 - 440MHz. 440=440 - 450MHz. 1240=1240 - 1300MHz.

* X510NJ :144 - 147 / 430 -440MHz

X510

F-22

U5000





U-300A 1200MHz

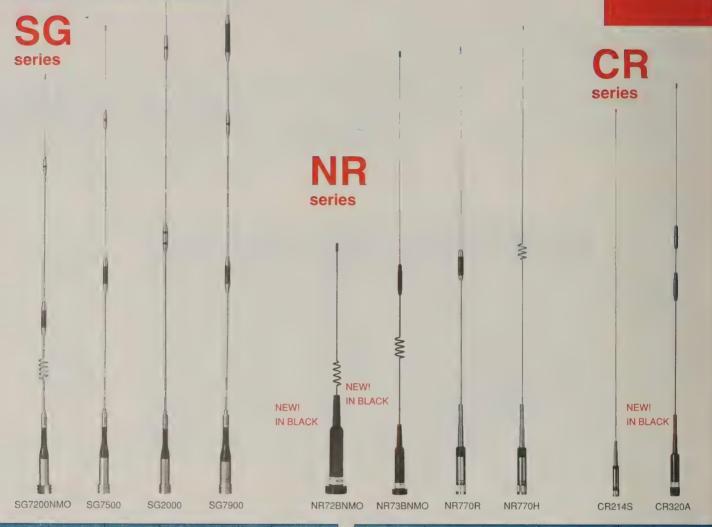
GH/F/U&Vseries

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CON N.	HT. Ft.	RATED WIND/ MPH
DP-GH62	50	6.0	200	UHF	21.0	78
F-22A	144	6.7	200	UHF	10.5	112
F-23A	144	7.8	200	UHF	15.0	90
F-142A	222	5.5	200	UHF	6.0	110
F-718A*	440	11.5	250	N	15.0	110
F-1230A	1240	13.5	100	N	10.5	90
U-200A	440/1240	8.3/11.7	100	N	5.9	135
U-300A	440/1240	8.6/13.2	100	N	8.3	110
U-5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V-2000A	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110

*F-718A:440 - 450MHz, F-718J:430 - 440MHz, F-718L:420 - 430MHz



DIAMOND'S STATE OF THE ART VHF / UHF MOBILE ANTENNAS-MAXIMUM PERFORMANCE WITHOUT COMPROMISE !!



MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ELEMENT PHASING
NR-72BNMO	2m/70cm	2.15	100	NMO	13.8	1/4 λ ,1/2 λ
NR-73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2 λ ,2-5/8 λ
NR-770SA	2m/70cm	2.15/2.15	100	UHF	16.9	1/4 λ ,1/2 λ
NR-770HA	2m/70cm	3.0/5.5	200	UHF	40.2	1/2 λ ,2-5/8 λ
NR-770HNMO	2m/70cm	3.0/5.5	200	NMO	38.2	1/2 λ ,2-5/8 λ
NR-770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2 λ ,2-5/8 λ
NR-790A	2m/70cm	4.5/7.2	120	UHF	57.5	6/8 λ ,3-5/8 λ
SG-7000	2m/70cm	2.15/3.8	100	UHF	18.5	1/4 λ ,6/8 λ
SG-7200NMO	2m/70cm	3.2/5.7	150	NMO	36.6	1/2 λ ,2-5/8 λ
SG-7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2 λ ,2-5/8 λ

MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ECEMENT PHASING
SG-7900	2m/70cm	5.0/7.6	150	UHF	62.2	7/8 λ ,3-5/8 λ
SG-2000	2m	5.2	150	UHF	62.6	7/8 λ
NR-140A	1-1/4m	3.8	100	UHF	36.2	5/8 <i>λ</i>
NR-124	23cm	8.4	100	N	25	4-5/8 λ
CR-214S	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2 λ ,5/8 λ
CR-224A	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8 λ ,2-5/8 λ
CR-320A	2m/1-1/4m/ 70cm	2.15/3.8/5.5	200/ 200/100	UHF	37.4	1/4 λ ,1/2 λ , 2-5/8 λ
NR-2000NA	2m/70cm/ 23cm	3.15/6.3/9.7	100	N	39	1/2 λ ,2-5/8 λ , 5-5/8 λ

SPECIAL FEATURES

- Factory pre-tuned /no adjustment
- Highest Performance antennas
- SG&NR series do not need grounding
- •NMO and UHF (PO) base styles
- New black color models available
- Fold-over feature on most models
 124



FOLD-OVER PATENTED ONE-TOUCH FOLD-OVER FEATURE





DIAMOND

PREMIUM GRADE ANTENNA MOUNTS BY DIAMOND

DESIGNED FOR TODAYS HIGH PERFORMANCE ANTENNAS



Super Gainer series folding type gutter mount K300M(Coaxial cable : RG188A/U+5DSFA-3.5m) UHF jack - UHF plug K300 Without cable assembly







Variable angle trunk lid mount (Coaxial cable:RG188A/U· 5DFV-5m) K600M UHF jack - UHF plug K600N N jack - N plug K600P UHF jack - N plug



Strong magnet antenna base DP-SPM / 58U(Coaxial cable : RG58A/U-4m) UHF jack - UHF plug

DP-SPM / 5D(Coaxial cable : 5D2V-4m) UHF jack - UHF plug DPK-5NM(Coaxial cable: 5D2V-4m) N jack - N plug DPK-4NM-M(Coaxial cable: 3.5DQEFV-4m) UHF jack - N plug Max.Ant.ht.48"





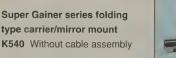
Super Gainer series hatchback door/trunk lid mount K400M(Coaxial cable:RG188A/U·5DSFA-5m) UHF jack - UHF plug K400 Without cable assembly K400K-3/8M $3/8 \times 24$ Thd with cable

NNR series hatchback door/ trunk lid mount K200 Without cable assembly





Teflon coaxial cable for mobile FE5M(Coaxial cable:RG188A/U· 5DFV-5m) UHF jack - UHF plug





DIAMOND ANTENNA BASES GLP-5D UHF base connector 5D & 8X cable GLP-58 UHF base for RG-58/U cable GLP-5N N type base 5D & 8X

Maximum Band Isolation

DUPLEXERS AND TRIPLEXERS FOR COMBINING AND SPLITTING VHF/ UHF FREQUENCIES











Lowest loss

Low VSWR

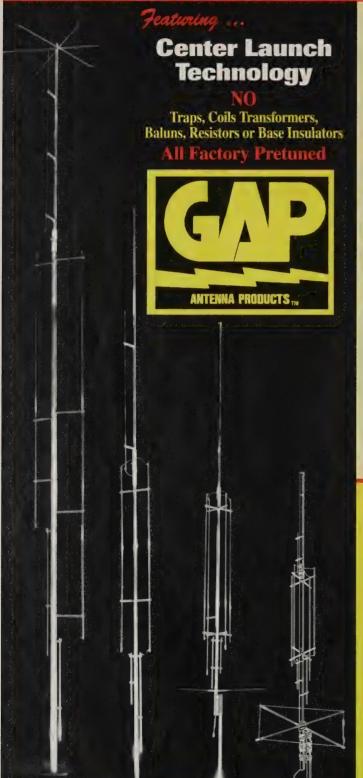


MX-MX MX MX-37N MX-72D MX-72DN MX-72H MX-72N MX-214 MX-324 MX-2000 MX-3000 3000N 3000DN 1.6-470 I PE HPE 140-150 I PE BPF HPF LPF BPF HPE L PE BPF HPF 900-1300 400-460 220-225 1.6-60 110-170 300-950 1.6-30 140-150 1.5-150 220-225 400-550 1.6-160 350-500 850-1300 100/50 400 150 100 150/100 400 200 800 600 500 800 800 500 200/100 1000 400 250 300/200 800 400 200 0.25/0.45 0.15 0.15 0.25 0.3/0.4 0.3 04 0.4 0.15 0.2 0.25 0.2 0.3 0.4 45dB 45dB 60dB 40-50dB 60dB 55dB 1.2 :1 1.2 :1 1.2:1 1.2:1 1.2 :1 1.2 :1 (M) (M) (\mathbb{N}) (M) (M) (M) (M) (N)(M) MIX MIX MIX MIX 144 430 1 MIX MIX MIX MIX MIX MIX MIX MIX 144 430 12 144 430 144 430 50 144 430 144 430 1200 144 430 1200 430 1200 144 220 44 220 430 144 430 144 430 M MM (M) (M) (M)(N) (N)M (N) (M) MMM12"cabie w 12"cabie w Direct 12"cabie w/connectors 12"cabie w/connectors **Direct connection** connectors connectors

Note:Connectors shown as "M" are low loss equivalent of SO-239 &PL-259.

Connectors shown as "N" are standard Type-N.

GAP ANTENNA PRODUCTS Antennas for Limited Space NO TRAPS All out Efficiency & Performance GAP gets it all out!



Voyager	Challenger	Eagle	Titan
DX-IV	DX-VIII	DX-VI	DX
4 Bands	8 Bands	6 Bands	8 Bands
\$39900	\$25900	\$26900	\$28900

For Antenna Performance?

For 50 years ... the vertical has not changed-it's a vertical wire, fed at the base and surrounded by a number of ground radial wires. To operate multi-band, traps are placed at appropriate points to electrically shorten the antenna to a 1/4-wave on the various bands. The *big signals* on the band do not come from these verticals, and DX contacts, even with the vertical's well known low angle radiation, do not happen consistently. The vertical is used by those hams with minimal space, finances or with local restrictions. If a new amateur asked what to put up for an antenna, he is told, "put up a dipole". *Why?* – a conventional vertical, because of it's low radiation resistance and high earth losses (even with an extensive radial system), is the *most inefficient* antenna available, and a trapped multi-band version is worse.

Did you know? ... a 26 ft. vertical on 80 meters should be 66 ft. high! The missing 40 ft. is replaced by traps. This short antenna has a radiation resistance of only 4Ω ...a virtual resistor, which when power is applied to it, radiates R.F. But isn't the only resistor in the antenna system, there are more! The most significant resistor is called *earth-loss*, which results from radials and the ground itself. If three radials are used, the earth-loss created is more than 30Ω . We now have a antenna with 4Ω that radiates and 30Ω that warms the ground, a total of 34Ω . If only 4Ω radiates, this means that if 100 watts are fed to this antenna, only 12 watts actually radiates. Inserting lossy traps adds 2Ω , and the radiated-power drops from 12 watts to 11 watts. So, traps don't matter as much as the big earth-loss.

Put out a lot of radials? ... If you had 4000 ft. of wire (for 60 radials), and the room to bury them, the earth-loss would drop from 30Ω to 4Ω . But, the radiated power for 100 watts fed, is still only 50 watts (1/2 is still warming the ground!). Now, the multi-band operation upset because a multi-band vertical must have earth-loss to work. That's why a roof-mounted multi-band vertical won't perform well on all bands. A new vertical design was needed to increase the radiation resistance and decrease or eliminate earth-losses.

The GAP antenna, a radically different vertical! ... Technically, earth-loss results from the capacitance of the antenna to ground from above the feed point. You don't find much earth-loss with dipoles, because they are elevated. GAP *elevates* the feed point to increase the radiation resistance closer to 50Ω , resulting in a better match to the feedline, and almost eliminating earth-losses. Comparing a conventional vertical's feed point at ground level vs the GAP feed at 16 ft. (Challenger), shows a reduction in loss from over 30Ω to 5Ω . The GAP design , with an antenna resistance of 50Ω , and an earth-loss of only 5Ω , is not a very lossy antenna. It's efficiency is about 90%, and compared to the 12% efficiency of a conventional vertical... the improvement is a dramatic 600%.

NO TRAPS in the GAP!... Operating as a vertical dipole with no traps, an elevated feedpoint, and unique tuner rods, enables the GAP antenna to be more reliable. It has wider bandwidth and better frequency stability, resulting in in less tuning and retuning.

Voyager DX-IV

• **Bands:** 160, 80, 40 and 20 meters • **Bandwidth:** Entire band on 80, 40 & 20 meters, 90 kHz on 160 meters • **Power Rating:** Legal limit • **Feedline:** 50Ω (coax) • **Height:** 45 ft. **Construction:** 2" diameter 6063-T832 aluminum, and all stainless hardware • **Mounting:** Aluminum pivot and guy brackets supplied • **Wind Area:** 7 sq. ft., requires 2 sets of guy ropes total 350 ft. • **Radials:** 3, each 57 ft. long • **Area Required** 25 ft. x 25 ft. for guys and radials.

Challenger DX-VIII

• **Bands:** 80, 40, 20, 15, 12, 10, 6 and 2 meters • **Bandwidth:** Entire band on 40, 20, 15 and 12 meters, 130 kHz on 80 meters and 1 MHz on 10 meters (No Traps) • **Power Rating:** Legal Limit • **Feedline:** 50Ω (coax) • **Height:** 31.5 ft. • **Weight:** 18 lbs • **Construction:** Aluminum tubing 6063-T832, and high temperature coaxial cable, stainless steel hardware. **Mounting:** Self-standing ground mount • **Radials:** 3, each 25 ft. long • **Area Required:** 10 ft. x 12 ft.

Eagle DX-VI

• **Bands:** 40, 20, 17, 15, 12, 10 meters • All out efficiency-all out performance! No coils, resistors, ground plane or earth loss. **Bandwidth:** VSWR under 2:1 on all bands with full bandwidth on 40 and 10 meters; can be custom tuned for your favorite part of the band. • **Height:** 21.5 ft. • **Weight:** 11 lbs • **Mounting:** Supplied with mount for pole, mast, tower, or ground mount, **Radials:** 3 rigid counterpoises, each only 8 ft. long.

Titan DX

• **Bands:** 80, 40, 30, 20, 17, 15, 12, 10 meters • **Bandwidth:** VSWR under 2:1 on all bands except 80m (100kHz) • **Height:** 25 ft. • **Weight:** 25 lbs • **Mounting:** Supplied with all hardware except 1-1/4" steel pipe **Counterpoise:** (4) rigid, only 80" long - no ground area required. (*GAP not available at AES® Wickliffe Store*)

The Answer is... GAP Technology:



VHF and UHF Fixed Station Vertical Antenna

G6-270R

Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged, Solid Gain and Wide Bandwidth. Consists of 5/8x over 5/8x on 2 m and 4 x 5/8x on 440 Mhz.

MECHANICAL

- Length: 7 ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Max Power: 100 watts
- Gain: 6 dBd VHF & UHF
- Bandwidth: 2MHz* (2m)
- 10 Mhz.* (440)
- Feed: Shunt, DC ground
- Connector: N female
- •Bandwidth under 1.5:1 VSWR

G6-144B

Two Meter Antenna Omnidirectional Fixed Station

6 dB GAIN – Compared to 1/2 Wave Dipole Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wavelength radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle

ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
 Maximum radiation extremely low angle 50 Ω feed impedance
- Field adjustable -140–150 MHz.
- SWR at resonance 1.2:1 measured at antenna
- Bandwidth 4Mhz @ 1.5 VSWR
- Feed-shunt with D.C. grounding
- Radiator 5/8 wave, lower section, 1/4 wave

MECHANICAL

Vertical element – 117" long, 1-1/8" telescopic to 3/8" OD high strength aluminum • Connector – SO-239 • Wind load - 26 lbs at 100mph • Completely self supporting • Mounting - vertical support up to 1-3/4" OD • Shipping wt: 6.8 lbs.

G6-440

Omnidirectional Fixed Station

Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

ELECTRICAL

- Maximum power in put: 250 watts
- Gain: 6db
- VSWR 8 MHz. under 1.5:1
- Impedance: 50 Ω nominal
- Lightning protection: direct ground
- Termination: Type N female

MECHANICAL

- Length: 87"
- Weight: 16 lbs.
- Wind Survival: 125 mph.
- Max Power: 100 watts

G7-144

Two Meter Antenna Omnidirectional Fixed Station

7 dB GAIN – Compared to 1/2 Wave Dipole

ELECTRICAL

Radiator: Collinear shunt fed. Triple 5/8 wave elements in series, separated by 2 phasing coils to produce maximum gain and extremely low angle of radiation. 7 dB gain over 1/2 wave dipole

- Omnidirectional radiation
 pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz
- Bandwidth for 2:1 or better VSWR 6MHz.
- Power: 60 watts 50 Ω feed impedance - shunt fed with DC grounding

MECHANICAL

- High strength fiberglass and aluminum
- Completely self-supporting
- Length 184"
- Radials: (4) 1/4 wave x 3/8" O.D. rod
- Connector: N-type
- Wind load: 26lbs. @ 100 mph
- Mounting: Vertical support up to 1-3/4" O.D.
- Weight: 10 lbs.

Omnidirectional Fixed Station

G7-220

7 dB GAIN – Compared to 1/2 Wave Dipole

The 7 dB omnidirectional gain (compared to a 1/2 wave dipole) of this rugged antenna means exceptonal 220 MHz. (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle for maximum radiation efficiency.

SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
 SWR at resonance: 1.2:1 at
- antenna 1.5:1
- SWR Impedance: 50 Ωs
- Radials: (4), 14-3/4" x 3/16" O.D.
- Conncetor: Type N
- Wind load 26 lbs. at 100 mph
- Mounting vertical support up to 1-3/4" O.D.
- Shipping weight: 7 lbs.

HUSTER

RELIABILITY & PERFORMANCE... BEYOND YOUR EXPECTATIONS!

Amateur Electronic Supply[®] – Your One Stop Shop For All Your Hustler Needs 127



(HUS LER) VHF and UHF Mobile Antennas



Collinear

/lodel CGT-220

5.2 dB Gain 5/8 Over 1/4-Wave Collinear unk-Lip Mount Antenna

Super gain: 5.2 dB • 1.1:1 SWR (typical) at sonance • 4 MHz band width, 1.5:1 or better WR • Power rating: 200 watts FM • Heigth: 4' 9" cluding mount • Spin knob to remove antenna Furnished with 17' of low loss coax and nnector

Iodel CG-220

as identical electrical characteristics as GT-220 but with 3/8 x 24 threaded base r use with standard ball mounts or other 8" x 24 Hustler mounts.

lodel CGT-144

2 dB Gain Over 1/4-Wave Collinear unk-Lip Mount Antenna

Super gain 5.2 dB • 6 MHz band-width, 15:1 SWR . Power rating: 200 watts FM Length: 7' 1" including mount . Spring and 80 • swivel ball for vertical positioning • 17 bax and connector . No drilling required Wt.: 3.34 lbs.

lodel CG-144

ame as CGT-144 but has 3/8"x24 readed base for use with standard Il mounts or other 3/8"x24 Hustler ounts



Model THF

Unity Gain

VHF/UHF Trunk-Lip Mount Antenna Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Easy to install trunk-lip mount attaches to rear or side of trunk lid without drilling. Supplied ready for operation with 17' of coax with connectors installed. 1.5 lbs.

Model UGM

Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector and trim chart. 1 lb.

MKR-2 Radial Kit

Model UHT-1

VHF/UHF Roof/Deck Mount Antenna

surface or on roof without pulling headliner.

Unity gain, 1/4-wave performance. Trimmab

operation on any frequency from 140 to 500

MHz. Trim chart, 15' of coax and connector

17-7 PH stainless steel radiator permits

Low profile mount designed for easy

installation in a 3/4" hole on any flat

Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8 x 24 threaded base. 2 lbs

VHF/UHF Magnetic Mount Antenna

Model

included, 1.2 lbs.



Mobile Antenna Hardware

Iuxe Mobile Mounts

antennas up to 60" in length n 3/8" x 24 threads

el FXM Heavy Duty Magnetic Mount ccepts 3/8" x 24 thread antennas beed rated to 100 mph or use with antennas up to 55" long

el HOT "HUSTLOFF" Trunk-Lip its without holes or drilling. For ity just turn knob to remove antenna nount from trunk-lid. Not removable trunk closed. 180 • swivel mount with 3/8" inreads, 17' coax with connectors red, 1.9 lbs.

HLM Deluxe Trunk-Lip Mount

Ined specifically for hatch and slanted-back les. No holes or drilling. 180 • adjustable I with 3/8" x 245 threads. 17' coax with actors attached. 1.7lbs.

el TLM Trunk-Lip Mount

Is on side of edge or trunk-lid without or drilling. Vertical mount with 3/8" x 24 ds. 17' coax with connectors attached. bs.

el GCM-1 Rain Gutter Mount

ke heavy - guage triple chrome plated brass. Is without holes or drilling on all sizes and ingle rain gutter. 180 • adjustable swivel with 24 threads. 0.8 lbs.

el MM-1 Cowl Mount

profile, installs on any flat surface, or angle, " hole. 180• split-ball swivel for optimum al positioning, 3/8" x 24 threads. 1.9 lbs.

MM-3 Cowi Mount

Is on any flat surface, or angle, in a 1" hole. swivel for optimum vertical position. 24 threads, 5' coax with connectors red. 1.3 lbs.

TGM-1 Trunk Groove Mount Is in a hidden area of trunk groove 180 • table swivel, 3/8 x 24 threads. 0.74lbs.

I RVM Recreational Vehicle Mount
 / duty design for veritcal side panel or
 rounting. Knob for rapid removal or
 rown. Optimum vertical positioning
 80 ● swivel, 3/8" x 24 threads, 17' coax,
 ing connectors, grommet, and hardware.

ax Leads

216

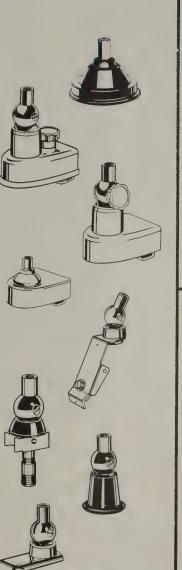
op-quality RG-58 coaxial cable L-259 connectors on both ends. ng weight 0.76 lbs.

-144

p-quality RG-58 coaxial cable --259 connector on one end lit end with lugs on the other. 1g weight 0.51 lbs.

-240

as L-14-144 except 240" ^I cable.Shipping weight 0.71 lbs.



Standard Commercial Stainless Steel

Model SSM-1

Standard commercial ball mount and stainless steel spring. Shipping weight: 2.53 lbs.

Model SSM-2 Ball mount only.

Shipping weight: 1.3 lbs.

Eastername

Bumper Mount

BM-1

Design is rugged for supporting Hustler antenna with standard or super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.

Model SSM-3

Stainless steel spring including

3/8"- 24 coupling stud.

Shipping weight 1.21 lbs.

Mount includes 180 • adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion. Shipping weight 2.70 lbs.

Quick Disconnect

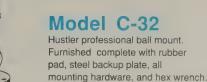
QD-2 100% Stainless Steel

Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly assures freedom against ice and dirt jam up. Accommodates small, medium and largest size mobile antennas. Equipped with 3/8"-24 threads, female one end and male on the other. Shipping weight .40 lbs.

Resonator Spring RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3-1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8"-24 threads, female on one end, male on the other. Shipping weight .36 lbs.

Professional Series -Heavy Chrome



Shipping weight: .48 lbs.

Stainless steel, corrosion resistant and electropolished spring complete with 3/8"-24 coupling stud. Shipping weight 2.70 lbs.

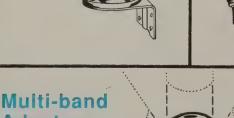
Model C-30

Chrome-plated steel spring complete with 3/8"-24 coupling stud. Shipping weight: 1.2 lbs.





129



Adapter

Model VP-1

easily and quickly.

Automatic bandswitching using any

Adapts any Hustler H.F. mast (MO-1,

three Hustler H.F. mobile resonators.

MO-2, MO-3) to tri-band operation

Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded low VSWR at band edges
- Power capability full legal limit on SSB or CW Solid one-inch fiberglass trap forms for optimum

HUSER

- electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss,high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials

Model 6-BTV

Bands	10-15-20-30-40 & 75 or 80 meters
Length/weight	24'/16.5 lbs.
Mounting	vertical support up to 1-3/4" O.D.
Wind load	29 Lbs. @ 70 mph
Power capability	Full legal limit SSB/CW
VSWR at resonance_	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on
	10-40 meters (100 KHz on 75/80
	meters)

Model 5-BTV

Bands	10-15-20-40 & 75 or 80 meters
Length/weight	25.1/17lbs.
Mounting	vertical support up to 1-3/4 O.D.
Wind load	29 lbs. @ 70 mph
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on
	10-40 meters (100 KHz on 75/80
	Meters)

Model 4-BTV

Bands	10-15-20-40 meters
Length/weight	21'5" / 15lbs.
Mounting	vertical support up to 1-3/4" O.D.
Power capability	
VSWR at resonance	
Bandwidth	VSWR 1.6:1 at band edges
	Ŭ

30 Meter Add-on Kit for 4-BTV and 5-BTV

- Model 30-MTK
- Full 30 meter Band coverage
- Will not affect normal operation
- Easy installation
- All hardware included
- Weight: 5 lbs.

Hustler Resonators

Standard Resonators

Power rating 400 watts SSB

Part	Description	Weight	Approx. Bandwidth 2:1 SWR or Better
RM-10 RM-11 RM-12 RM-15 RM-17 RM-20 RM-20 RM-30 RM-40 RM-75 RM-80	10 METER 11 METER 12 METER 15 METER 20 METER 30 METER 40 METER 80 METER	.41 lbs. .42 lbs .42 lbs .42 lbs. .46 lbs. .46 lbs. .84 lbs. .84 lbs. 1.05 lbs. 1.05 lbs	150-250 kHz 150-250 kHz 90-120 kHz 100-150 kHz 150 kHz 80-100 kHz 50-60 kHz 40-50 kHz 25-30 kHz

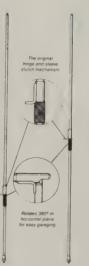
Super Resonators

Power rating full legal limit. Super Resonators also offer wider bandwidth, espically on 40, 75 and 80 meters.

Part	Description	Weight	Approx. Bandwidth 2:1 SWR or Better
RM-10-S	10 METER	1.0 lbs.	250-400 kHz
RM-11-S	11 METER	1.0 lbs.	250-400 kHz
RM-15-S	15 METER	1.2 lbs	150-200 kHz
RM-20-S	20 METER	1.2 lbs.	100-150 kHz
RM-40-S	40 METER	1.82 lbs.	50-80 kHz
RM-75-S	75 METER	2.11 lbs.	50-60 kHz
RM-80-S	80 METER	2.11 lbs	50-60 kHz

Mobile HF Antennas

Hustler Masts



MO-1 Mobile mast. 54" high for deck or fender mountingfolds over 15" above base

MO-2 Mobile mast. 54" high, for bumper mounting - folds over 27" above base.

MO-3 Mobile mast. 54" high,

Great for marine use!

> MO-4 HF Mobile Mast. • For use with Hustler HF resonators

RM-80-S

- Only 22" longSuitable for trunk or
- deck mounting
- Includes 3 new tip rods

Reliability & Performance... Beyond Your Expectations!





RMX

Mobile

2:1

white

10 Meter

1000 watt capacity

· Only 46 inches tall

VSWR - 250-400 kHz under

Can be trunk lip mounted

using model HLM or TLM

 Stainless steel impact spring built into top of coil
 Available in Black or

5BTV

THE PERFORMANCE YOU'VE ALWAYS WANTED NOW AT A PRICE YOU CAN AFFORD

Iy-Gain is the most respected name in Amateur antennas. What is important to you when you are designing your new antenna system? Durability? Performance? Best antenna or your money? Whatever your criteria, Hy-Gain antennas lead the pack. Hy-Gain antennas have always delivered performance, reliability and value from 160 meters all the way to satellite communications.

Iow did we become one of the most respected names in antennas? First of all, we develop uality designs; not just in outstanding electrical performance but also in quality hardware nd mechanical components. From thick wall aluminum tubing, stainless steel nuts and olts, machine formed and die cast brackets, every part is selected for durability and uggedness. That's why many of our antennas can survive winds of 100 miles per hour.

econdly, the designs are tested thoroughly. We're the only Amateur antenna manufacturer hat has a professional 33 acre antenna range at our factory.

and finally, we back up every antenna with our exclusive two year limited warranty, twice he warranty of many other manufacturers.

When it comes to Amateur antennas, towers and rotors you just can't do any better than fy-Gain for performance or value.

H7DX

Nothing performs like the world-famous H7DX! This high performance tribander lives you the competitive edge ou want on 10, 15, nd 20 meters.

One feedline and continuous

1010AA

coverage from 10-30 MHz, the 1010AA gives you the maximum in station flexibility. Still able to turn with a Tailtwister or HDR-300 rotor.

TH11DX

A unique design giving you the frequency coverage of a log periodic plus the performance of a monobander. Cover 10, 12, 15, 17, and 20 meters with one boom

and one feedline.

TH3Mk4

The classic design in a small tribander. Performance and value in one small package. Perfect for home stations,

this antenna is the choice for DXpeditions too!

TH5Mk2

This is our most under-rated antenna. It has almost as much gain as our TH7DX but costs over \$100 less. Perfect for crank-up tower

installations.

Explorer 14

Give your solid state transceiver a break; the Explorer 14 is the most broadbanded HF antenna around. Our exclusive Para-Sleeve design optimizes bandwidth without a tuner. Best performance on a 14' boom, priced well under \$500. A 30 or 40 meter add-on kit is available for added coverage.



009AA

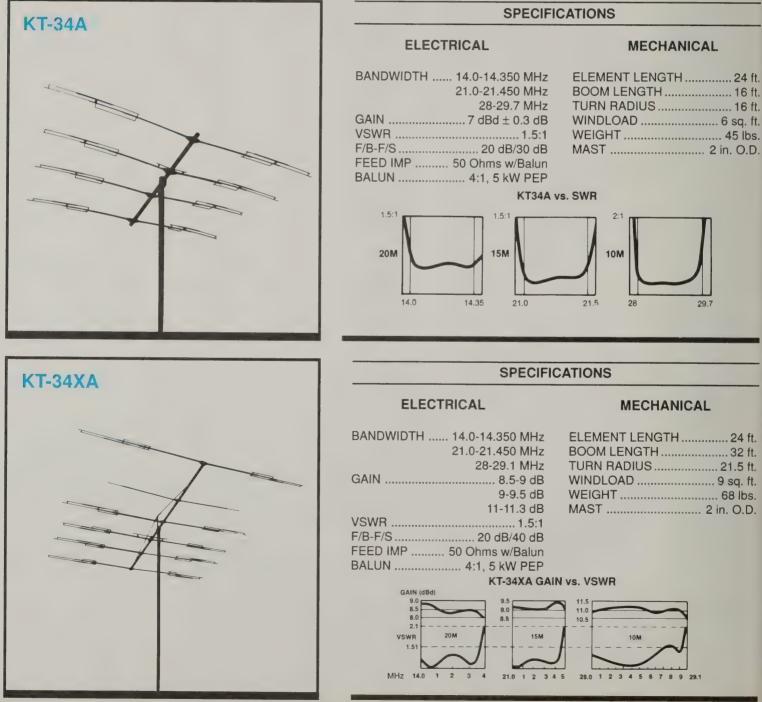
ith a single feedline. A 95 pound giant that handles 100 MPH winds. Rotates with a Tailtwister or HDR-300.

KLM TRIBANDERS

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with *KLM's* unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.



2 METER YAGIS								
2M-16LBX	2M-13LBA	2M-1	1X	2M-8	2M	-4X		
A	K T	2 MET						
	2M-20 LBX	2M-16 LBXM	2M-13 LBA	2M-11 X	2M-8	2M-4 X		
ELECTRICAL: BANDWIDTH								
GAIN	145-15.5 dBd 146-15.4 dBd 147-15.3 dBd 148-13.7 dBd			12.5 dBd	10.3 dBd	8.5 dBd		
VSWRLess than	1.5:1			1.5:1	1.5:1	1.5:1		
	30 dB							
	E=26°, H=28°							
	50 Ohms							
	4:1, 2 kW Coax		4:1, 2 KW Coax .	4:1, 2 KW Coax	1:1 Sieeve, 2 KW	4:1, 2 KW Coax		
MECHANICAL: ELEMENT LENGTH	40 5/8 in	40 5/8 in	40 5/8 in	40 5/8 in.	40 5/8 in	40 5/8 in.		
	21 ft. 10 in							
	2.19 sq. ft							
WEIGHT								
440-16X	440-10X	440-6		1.2-15LBX	1.2-2 4			









		440 MHz		— 432	MHz —		1296 N	IHz —
	440-16X	440-10X	440-6X	432-30 LBX	432-20 LBX	1.2-44 LBX	1.2-24 LBX	1.2-15 LBX
ELECTRICAL:								
BANDWIDTH	420-450 MHz	420-470 MHz	420-470 MHz	430-440 MHz	425-440 MHz	1260-1300 MHz	1260-1300 MHz	1260-1300 MHz
GAIN	14.0 dBd	11.5 dBd	8.9 dBd	17.3 dBd	15.3 dBd	18.2 dBd	16.2 dBd	13.6 dBd
VSWRLess than	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/BGreater than	20 dB	20 dB	20 dB	20 dB	20 dB	39 dB	39 dB	39 dB
FEED IMPEDANCE	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	Coax "N" 4:1, 2 kW .	Coax "N" 4:1, 2 kW	Coax "N" 4:1 2 kW	1:1 Sleeve, 2 kW	1:1 Sleeve, 2 kW	4:1 Rigid Coax	4:1 Rigid Coax	4:1 Rigid Coax
BEAMWIDTH	E=28°, H=32°	48°	60°			E=16°, H=18°	E=22°, H=24°	E=28°, H=30°
MECHANICAL: ELEMENT LENGTH	14 in. max		14 in. max	14 in. max				4.5 in.
BOOM LENGTH	10 ft. 3 in	4.75 ft	28 in		12 ft. 4 in	12 ft. 4 in	75 3/4 in	42 in.
TUDU DADULO				(9.6 wavelength)				
		4.90 ft						
WINDLOAD	0.74 sq. ft	0.53 sq. ft	0.2 sq. ft	1.72 sq. ft	0.9 sq. ft	1 sq. ft	1/2 sq. ft	1/4 sq. ft.
WEIGHT	7.5 lbs	4 lbs	1.2 lbs	9 lbs	5 lbs	10 lbs	7 lbs	4 lbs.
		1 1/2 in						
MOUNT	Center	Rear	Rear	Center	Center	Center	Center	Rear



SATELLITE CIRCULARS - VHF/UHF

425 40CV

125 190

ELECTRICAL:	214-140	2141-220	455-166	433-40CX
BANDWIDTH	144-150 MHz		420-450 MHz	420-450 MHz
GAIN	11 dBc	13 dBc	12 dBc	15.2 dBc
VSWRLess thana		1.5:1	1.5:1	1.5:1
F/BGreater than	20 dB		20 dB	20 dB
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BEAMWIDTH				
ELLIPTICITY				
BALUN				

011 000

MECHANICAL:

ELEMENT LENGTH	40.625 in. max	40.625 in. max	13.25 in. max	13.625 in. max
BOOM LENGTH	12 ft. 9 in	19 ft. 1 in	7 ft. 4 in	14 ft. 7 in.
TURN RADIUS		11 ft		8 ft., 9 in.
WINDLOAD	1.25 sq. ft	1.85 sq. ft	0.5 sq. ft	1.16 sq. ft.
WEIGHT		11 lbs	4.5 lbs	10 lbs.
MAST		2 in	1.5 in	1.5 in.
MOUNT	Center	Center	Rear	Center

POLARITY Circular R.H. and L.H. switchable using CS-3Circular R.H. and L.H. switchable using CS-2

014 440

*Derate to 250W when using Switchers (supplied)

HF LOG PERIODICS

KLM's Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA**. All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

ELECTRICAL:	10-30-7LPA	7.2/10-30LPA	6-30-15LPA
BANDWIDTH GAIN	7 dBd typ	3/7 dBd typ	5.5 to 8 dBd
VSWR F/B			
FEED IMP BALUN(S)			

MECHANICAL:

ELEMENTS	7		1.5
ELEMENT LENGTH	43 ft	46 ft	48 ft.
BOOM LENGTH	30 ft	42 ft	46 ft. (6-12-8)
TURN RADIUS	26 ft	32 ft	30 ft. (10-30-7)
WINDLOAD		12 sq. ft	24 sq. ft.
WEIGHT	70 lbs	100 lbs 150	0 lbs. (6-12-80) / 70 lbs. (10-30-7)
MAST	2 in	2 in	

10-30-7LPA

7.2/10-30LPA



SK-8 Conversion Kit

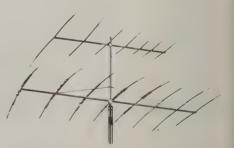
435-40CX

2M-22C

This kit enables you to add 40 Meters to your *KLM* 10-30-7LPA antenna. The SK8 kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a *KLM* 40M Dipole to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Frontto-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.

6-30-15LPA



KD Series

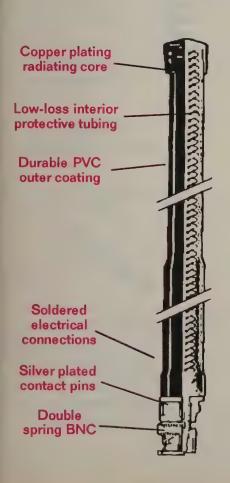
The Clear Choice

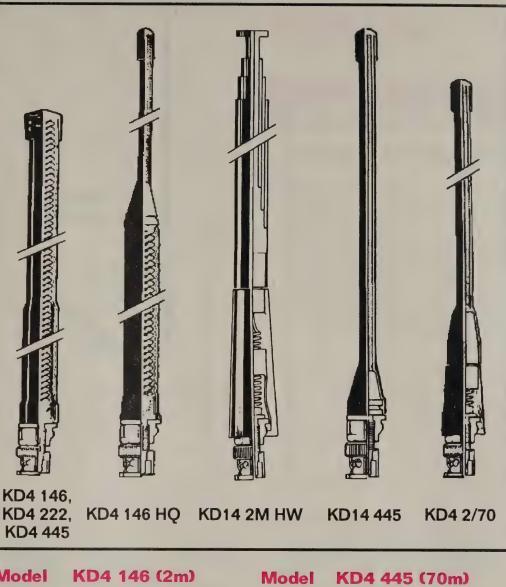
rse

Külduckie[®] Portable Antennas

Superior transmit range and tough mechanical durability are the mark of Larsen portables. All center cores are of brass or copper plated steel (not plain steel) to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Double spring BNCs reduce wear on your radio mount.

- VSWR at 1.5 to 1 or less
- All are scope tuned to precise frequency
- Special models for 35 ohm **ICOM** radios
- Dozens of model and connector options
- 3 year No-Nonsense Warranty™
- Made in USA





woder	ND4 140 (2)
Band	144-148 MHz
Electrical	1/4 wave

@ 8"

Height

Model KD4 146 HQ (2m) Band 144-148 MHz Electrical 1/4 wave @ 10.5" & 11.5" Height

KD14 2M HW (2m) Model

Band 144-148 MHz Electrical 1/2 wave, telescoping @ 8.5" to 42" Height

Model KD4 222 (1.25m)

222-224 MHz Band Electrical 1/4 wave, helical @ 5" Height

Band 442-448 MHz Electrical 1/4 wave, helical Height @ 3"

Model KD14 445 (70m)

Band 442-448 MHz Electrical 1/4 wave, full @ 6.5" Height

Model

KD4 2/70 (70m)

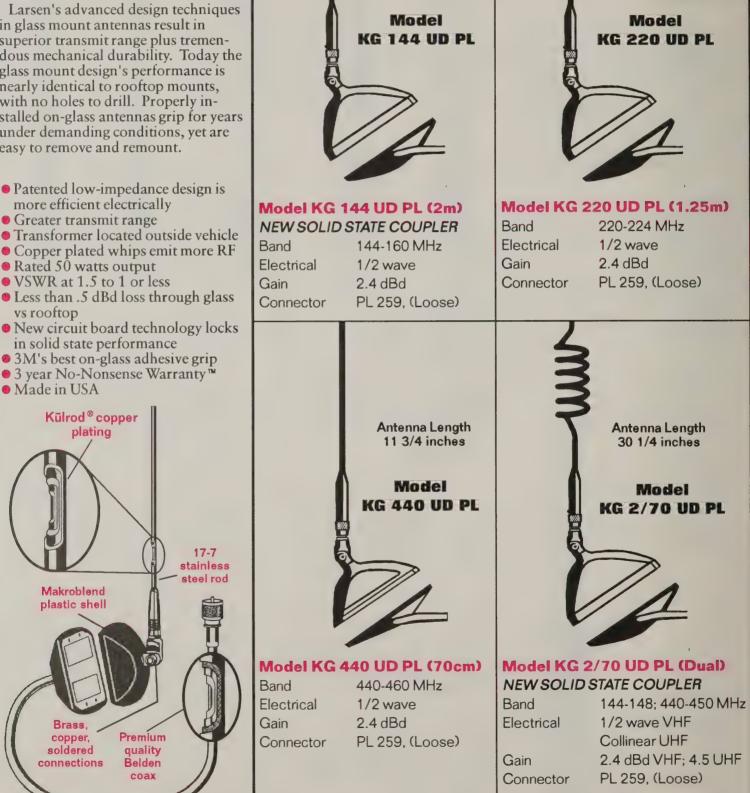
Band 144-148; 442-448 MHz Electrical 1/4 wave loaded, VHF 1/4 wave, UHF @ 8" Height



KG Series

Kūlglass[®] Antennas

Larsen's advanced design techniques in glass mount antennas result in superior transmit range plus tremendous mechanical durability. Today the glass mount design's performance is nearly identical to rooftop mounts, with no holes to drill. Properly installed on-glass antennas grip for years under demanding conditions, yet are easy to remove and remount.



Antenna Length

45 inches

Antenna Length

24 inches

NMO Series

The Clear Choice

arse

Kūlrod® Mobile Antennas

All Larsen mobile antennas meet the industry's most demanding specs for electrical efficiency and mechanical durability. The result is greater transmit range over many years of service. In addition to the popular Motorola 3/4" (NMO) mounts shown here, mobile antennas for the Larsen Mount (LM) and PO Mount (PO) are excellent choices for amateur use.

- VSWR at 1.5 to 1 or less
- Greater transmit range
- Rated 200 watts output
- 3 year No-Nonsense Warranty™
- 3/4" Motorola Style mounts
- Colors: Gray base/Chrome whip or all black

Mounts:

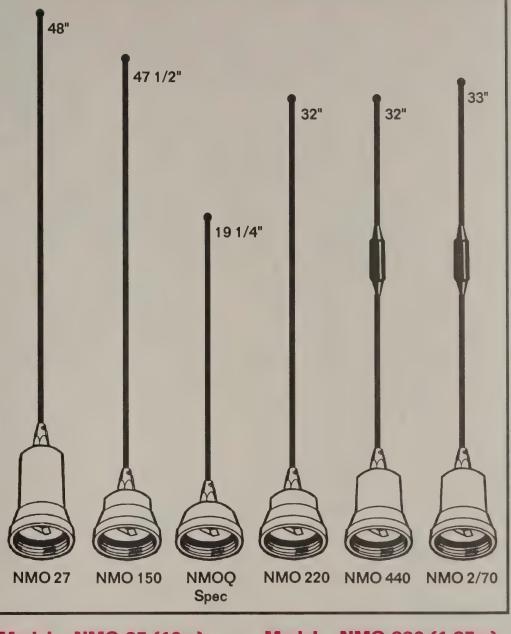
NMO K premium quality roof-top NMO MM mag mount, 90# pull strength

NMO TLM heavy duty trunk lid NMO TMB electropolished trunk gutter bracket

• Made in USA

Model NMO 440





ModelNMO 27 (10m)Band27-30 MHzElectrical1/4 wave, loadedGainUnity

Model NMO 150 (2m)

Band 144-174 MHz Electrical 5/8 wave Gain 3 dBd

ModelNMOQ SpecBand144-448 MHzElectrical1/4 waveGainUnity

ModelNMO 220 (1.25m)Band220-225 MHzElectrical5/8 waveGainUnity

Model NMO 440 (70cm)

Band440-460 MHzElectrical5/8 over 1/2Gain4.5 dBd

Model NMO 2/70 (Dual)

Band 144-148; 442-448 MHz Electrical 5/8 wave VHF Collinear UHF Gain 4 dBd UHF 2.4 dBd VHF



2m/70cm Duplexer Model D-270

Connects a VHF/UHF dual band antenna with a single feedline to separate 2m and 70 cm transceivers or a dual band transceiver without a built-in duplexer. Use in reverse for connecting separate antennas to a 2m/70cm dual band transceiver with only one RF output.

144/440 Dual Band Glass Mount Antenna

Model GM-270

- 144-148 and 440-450MHz
- Gain: 2.6dB at 2m and 6.3 dB at 70cm
- Typical VSWR: less than 2.0:1 through the bands
- Maximum power: 50 Watts
- Field tunable

Dual Band Rubber Duck

12 in. Flexible Rubber Duck Antenna with

<2:1

Unity

1995

- 14 ft. RG-58 cable with PL-259 connector
- 26" whip–copper plated and black finished
- Instructions and Mounting Hardware Included

UHF

\$3995

2 meter

144-148 435-450

50 watts 50 watts

2:1

2.1 dBi

144/440 DUAL BAND

The Clear Connection"

Magnet Mount Antenna Model PM-144-440BN

TM

Dual Band Antenna Kit: Includes 19 inch stainless steep whip, *powerful* 3 inch magnet mount base, 12 ft. of RG-58 coax cable and RNC connector

	D.10 0011110	
Specifications	2 meter	UHF
MHz Frequency	144-148	435-450
SWR		2:1
Gain	Unity	2.1 dBi
Power, FM	150 watts	150 watts
 <	¢2095	
	JZJ	

144/440 DUAL Band Magnet Mount Antenna Model MM-270B

- 144-148 and 440-450MHz 1/4 wave length (2m) and 5/8 wave length (70 cm).
- Typical VSWR: less than 1.5:1 through the bands.
- Maximum power: 50W (2m), 25W (UHF)
- 1-1/8" diameter black ABS base with *strong* Rare Earth magnet
- Height: less than 20 in.
- Brass ferrule, black chrome finished
- 9 ft. RG-174 cable with BNC Connector
- Weight: 2 ounces
 - \$39

Low Cost 2 Meter Magnet Mount Antenna Model VAA-002

A 1/4 wavelength on 2 meters, but the stainless steel whip section can be easily trimmed for operation up to 450MHz. The *strong* magnet mount base with "no scratch" rubber boot for protection mounts almost anywhere on vehicle. Rated for 200 watts and comes ready-to-go with 12 ft. of RG-58 coaxial cable and PL-259 connector. Model VAA-002BN is the same but has a BNC-type connector for direct connetion to handhelds, etc.

> VAA-002 \$1095

UHF/VHF/SWR/ Power Meter

Model PDC-9

144/450

BNC Connector

Specifications

MHZ Frequency

Power (FM)

SWR

Gain

Model 77-BNC

- RF Power: 0-50W and 0-60W
- Freq. Range: 140-170MHz 430-450MHz
- UHF female
- Size: 2¼"h x 2½"w x 1½"d
 - \$49⁹⁵

Maxi-Magnet Mount Kit Model MM-3401

Strong! Includes three big 5" magnets on a heavy aluminum frame with 3/8" x 24-thread mount, 17 ft. RG-58 cable and PL-259 connector.



VAA-002BN

7795



Full Line of Accessories including: • Tower Motor Drives • 5' to 20' Antenna Masts • 20' Chromolly Masts • Thrust Bearings • Mast Raising Fixtures • Rotating bases • Coax arms • Limit Switch Packages

MA SERIES (CRANK-UP TUBULAR TOWERS Will handle 10 sq. ft. antennas at 50 MPH winds. MODEL HEIGHT HEIGHT NUMBER WT SECTION OD BASE AES NO. MAX. MIN. SECTIONS Тор Bot. SIZE PRICE # 2'x2'x4'**\$ 679. MA-40** 40 ft. 21'6" 2 242 3" sq. 41/2" **MA-550** 55 ft. 22'1" 3 435 3" sq. 6" **MA-550MDP*** 22'1" 3 3" sq. 6" 55 ft. 620 3'x3'x6'**2258.** 22'10" 645 8" **MA-770** 71 ft. 4 3" sq. 71 ft. 3'x3'x5½"......**3572.** 8" **MA-770MDP*** 22'10" 4 880 3" sa. **MA-850MDP*** 85 ft. 23'6" 3" sa. 10"

*Standard bases and eve mounts included with all towers (except MA-770, 770-MDP and 850 MDP MDP models complete with heavy-duty motor drive with positive pull down.

5

FREE STANDING CRANK-UP TOWERS Will handle 18 sq. ft. antennas at 50 MPH winds

1128

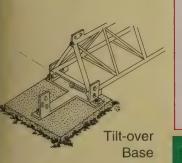
		manaic	10 39. It. ai	nemus	a. 50 m		uo:	
MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTI Top	ON OD Bot.	BASE	AES PRICE
TX-438	38 ft.	22'	2	355	12½"	15"	3'x3'x5'	\$1019.
TX-455	55 ft.	22'	3	670	12½"	18"	3' x3'x6¼"	
TX-472	72 ft.	22'8"	4	1040	121/2"	21 %"	4'x4'x7'	
TX-472MDP*	72 ft.	22'8"	4	1210	12 ½"	21%"	4'x4'x7'	
TX-489	89 ft.	23'4"	5	1590	12 ½"	25 %"	4'x4'x8½"	
TX-489MDPL*	89 ft.	23'4"	5	1800	12½"	25%"	4'x3'x8½"	6598.

*TX-472MDP includes heavy duty motor drive with positive pull down. TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECT Top	ION OD Bot.	BASE SIZE	AES PRICE
HDX-538	38 ft	21'6"	2	600	15"	18"	3'x3'x6¼'	\$1319.
HDX-555	55 ft	<mark>2</mark> 2'	3	870	15"	21 ⁵ /8"	4' x4'x6½'	2309.
HDX-572	72 ft	22'8"	4	1420	15"	25 %"	4'x4'x8½'	
HDX-572MDPL*	72 ft.	22'8'	4	1600	15"	25 %"	4'x4'x8½'	6048.
HDX-589MDPL*	89 ft.	23'8"	5	2440	15"	30% "	5'x5'x8½'	7919.
HDX-689MDPL*	89 ft.	23'8"	5	3450	18"	37½"	5'x5'x9½'	15,299.
HDX-5106MDPL	* 106 ft.	24'8"	6	3700	15"	37 ¹ / ₈ "	5'x5'x9½'	

*Includes heavy-duty motor drives with dual level wind and positive pull down. MDLP models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. * HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds.

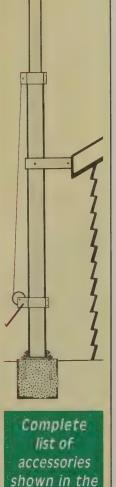


FREE STANDING "Low Profile" COMPACT CRANK-UP TOWERS

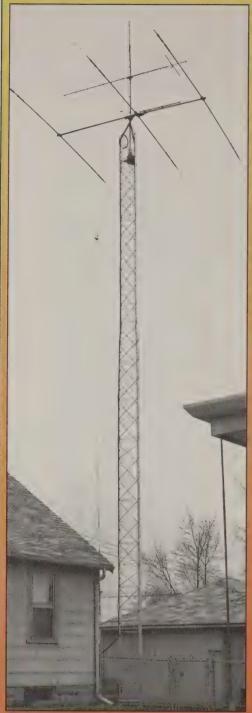
vviii na	andle 18 s	sq. n. anto	ennas at 50		vinas. (i	11111-443	nu - 24 5q.	п.)
MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTI Top	ON OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11'4"	4	315	10"	18"	3¼'x3'x6'	\$1089.
TMM-433HD	33 ft.	11 '4"	4	400	12½ "	20%"	3'x3'x5¾'	1319.
TMM-541SS	41 ft."	12'	5	430	10'	20%"	3'x3'x5½'	1429.

Rotators must be top mounted

You may obtain a detailed U.S. Tower Catalog by sending a request and \$1.00 to Amateur Electronic Supply • 5710 W. Good Hope Road. Milwaukee, WI 53223



Price List

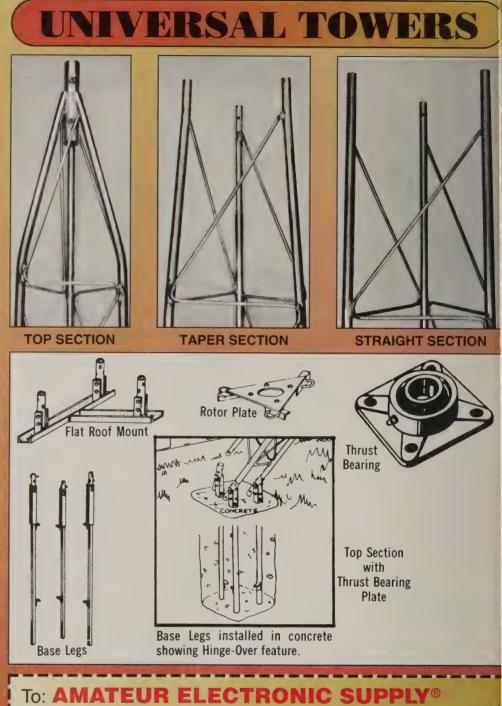


Here's a 50 ft. UNIVERSAL Self-Supporting Aluminum Tower installed at the QTH of Ted Willett W9NHE. This set up made a Big difference — he really gets out!

Before you buy a tower consider the advantages of Aluminum — it's Strong, Lightweight, Rust Free and easy to assemble and erect.

UNIVERSAL offers 10 ft. sections or complete towers ranging from 30 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

A listing and description of UNIVERSAL TOWERS is shown in the Price List. For more info fill out and mail the Coupon along with \$1.00 to receive their latest Catalog.



5710 W. Good Hope Road Milwaukee, WI 53223

Enclosed is \$1.00 ... please send me the latest UNIVERSAL TOWERS Catalog.

Name			
Ham Call (if any)			
Address			
City	State	Zip	

TOWERS & BOTORS

HY-GAIN Antenna Rotators & Towers

ROHN Towers

Heavy Duty or Extra Heavy Duty for HAM RADIO applications Rugged, all Steel Construction • "X" Brace for greater strength • Galvanized finish for long life • Tower can be fully assembled on the ground and hinged up, or built vertically, section by section • Load is rated for Free Standing, no guy wires* • Supplied with Base Stubs for concrete mounting, and Rotator Plate.

Model	Ht.	Windload	Weight
HBX-40	40 ft.	10 sq. ft.	228 lbs
HBX-48	48 ft.	10 sq. ft.	303 lbs
HBX-56	56 ft.	10 sq. ft.	385 lbs
HDBX-40	40 ft.	18 sq. ft.	281 lbs
HDBX-48	48 ft.	18 sq. ft.	363 lbs

IMPORTANT: ROHN states that "antennas devel oping a large twisting moment due to wind must not be used on these towers". Antennas should be limited to those having a maximum boom length of not more than 10 ft.

See Rohn in the Price List Milwaukee Pick-up or Drop-Shipped from Factory

U.S. Tower

▶ Featuring a large selection of Self-Supporting Crank-up towers for almost any height and strength requirement. Three compact models ... TMM-series, six standard models TX-series, and five heavy-duty models ... HDX-series. Also, seven tubular crank-up models ... MA-series. Plus, a full complement of accessories for various installations

Factory Drop-Ship See U.S. Tower in the Price List and also check the index for display page.

UNIVERSAL Towers

UNIVERSAL Model 18-50

50 ft. self-supporting aluminum tower shown installed at the QTH of W9NHE in Milwaukee, Wisconsin

FREE **STANDING ALUMINUM** TOWERS

LIGHTWEIGHT • RUST FREE EASY TO ASSEMBLE & INSTALL RUGGED • HAM RADIO, TV/FM

Configurations available from 30-100 ft. with various wind load selections to meet almost any application. Self-Supporting - no need for unsightly guy wires at rated load.

> Factory Drop-Ship **See Universal in the Price List** and also Check the Index



► AR-40 (lightweight) • For large TV/FM and smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted intower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor unit: 17%"h x 8" diameter, 12 ball bearings (two races), disc brake, mast sizes up to 21/6" diameter. Automatic, silent control box - just dial and touch for desired direction. Use Belden 8448 8-wire control cable. 14 lbs. HYG 305 \$199*

CD-45-II (medium duty) • For antennas with up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor unit: 17%"h x 8" diameter, 48 ball bearings (two races), disc brake, mast sizes up to 21/6" diameter. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face may be reversed for N or S center scale, as desired. Use Belden 8448 8-wire control cable. 20 lbs. HYG 302 \$27995

HAM IV (Heavy Duty) • For medium-sized antenna arrays with a windload area up to 15 sq. ft. when mounted in-tower, or 7.5 sq. ft. when mast mounted with optional lower support bracket. Rotor unit: 131/2"h x 8" diameter, 98 ball bearings (two races), electric locking steel wedge brake. Mast sizes up to 2%6" diameter. Illuminated indicator, separate snap action brake and rotation switches, north or south center scale - in unit. Use Belden 8448 8-wire control cable. 24 lbs. HYG 304 \$369*

PHILLIPS Antenna Rotator

U-105 Antenna Rotator • The drive unit features a durable. one-piece cast aluminum housing, large bearing surfaces, rein-

forced mast sup port for latreral loads, and a ball bearing for the thrust (vertical) load. Precision-cut, hardened steel drive train and high torque-well equipped to turn and accurately posi-



tion small to

medium VHF/UHF amateur and the largest TV/FM arrays. The control unit is smooth and quiet, fully synchronized with the drive unit by synchronous motors. .\$69°5

Rotation Range Rotation Time Rotation Torque .. Max, Vertical load... ..100 lbs.

►TB-105 Support Bearing For extra-sturdy installation when using the U-105. Relieves wear and tear on the drive unit imposed by wind loads: incorporates an all ball bearing design .\$1825 and weather-tight seal



.360° +5°-0 Support Mast Size1%-2" dia. .70 Seconds Control unit 7"w x 5%"d x 2%"h Control cable (4-wire) ... Belden 8484

The ARRL Antenna Book The 17th edition, 736 pages - nearly 1000 illustrations! Discusses: State-ofthe-art antenna and transmission line theory and construction. Antenna fundamentals, propagation, transmission lines, yagis, quads, wire antennas. Antennas for limited space, portable, mobile, VHF, UHF and microwave and space. Includes a 3-1/2" disk with highquality antenna-related software for the IBM PC \$30° >T2X Tailtwister (EXTRA HEAVY DUTY) • For larger antenna arrays with a windload area up to 20 sq. ft. when mounted intower, or 10 sq. ft. when mast mounted with optional lower support bracket. Rotor unit: Extra rugged casting-141/6"h x 95/6" diameter, 138 ball bearings (3 races), electric locking steel wedge brake. Mast sizes up to 2% " diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, north or south center scale - in unit. Use Belden 8448 8-wire control cable, 28 lbs.HYG 303 \$42995

HDR-300 (Deluxe Extra Heavy-Duty) • For large antenna arrays up to 25 sq. ft. windload (in-tower mount only). Rotor. 7"x 9" x 10"h, 138 ball bearings (3 races), solenoid operated locking brake. Masts up to 3" in dia. Digital directional indicator accurate to 1°. Separate brake and rotation controls. Use Belden 8448 8-wire control cable. 55 lbs. HYC 300 \$94995

HY-GAIN Steel Crank-up Towers

Four Models available: 37, 52, 54 and 70 ft. Factory Drop-Ship

HY-GAIN HF • VHF • UHF Antennas

Full line available from Stock!

See HY-GAIN in the Price List

Special **YAESU** Rotators

The full YAESU Rotator line is shown on pp. 82 & 83, and in the Price List.

►G-5400B Azimuth-elevation Rotator • For satellite, moonbounce and other space communications work where both horizontal and vertical rotation of the antenna is required in a single unit, Full 180° rotation, Elevation rotation time: 58 seconds; 360°. Azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and mast diameters from 2"-21/2" Control box has large dual

meters which show separate azimuth and elevation indication with a ±4% aiming accuracy

►G-500A 180° Elevation Rotor • For satellites, moonbounce

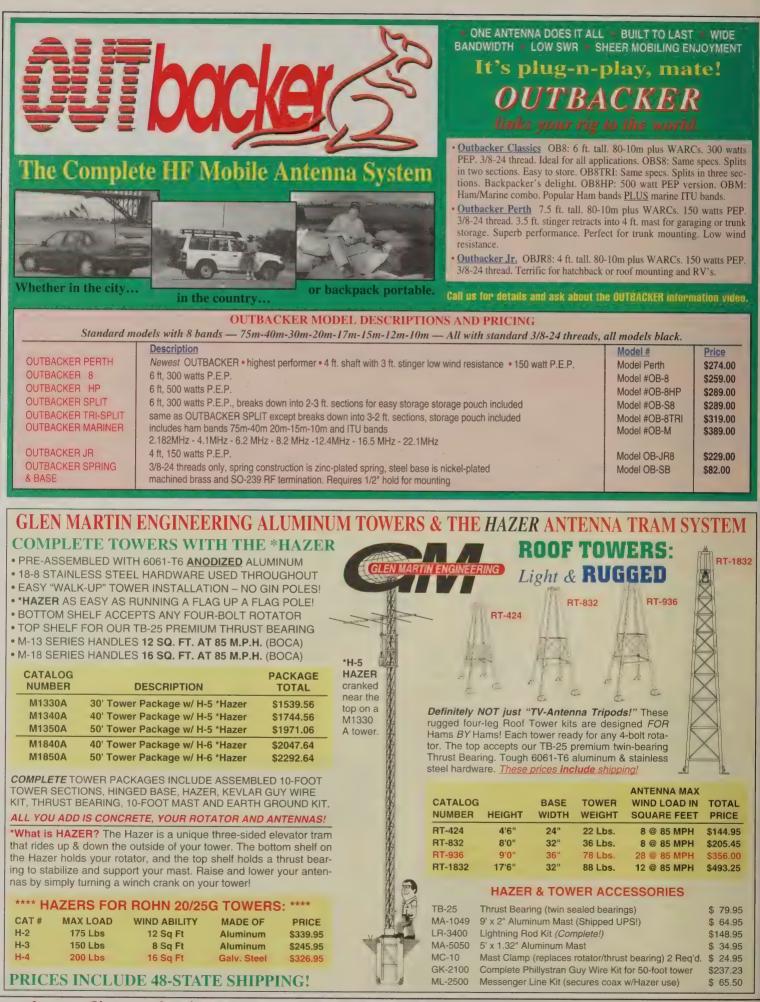


work, etc. Smooth, 180° elevation rotation takes 60 seconds. Large meter - aiming accuracy ±3%. Accepts boom diameters 11/1"-1%". Use Belden 8448 8-wire control cable. TCALL



New! AEA ST-1 Satellite Tracker Hardware and Software for Yaesu 5400/5600 Azimuth-elevation rotators Works with InstantTrack, QuickTrack, and RealTrack software; tunes FT-736R, TS-790, IC-970, and the IC-475/275 combination transceivers. Provides automatic control of antennas and transceiver tuning to simplify satellite operation. As a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the right up-link/down-link frequencies. As the satellite moves along its path, the antennas track and the transceiver tuning is corrected for the Doppler shift. Uses one serial port and parallel port from the host computer, works with other software, like PG-AEA, PB and PG. \$369°

Before you buy ... Consider that we will try to meet or beat tower quotes from other legitimate Ham Dealers... If we're high, call with your price! 141



142 Amateur Electronic Supply ... SUPER VALUES FOR HAMS!

AMECO

PT-3 Preamplifier Covers 160 thru 6 meters and useable useable with either a receiver or transceiver. Tunable low noise



and image rejection. RF sensed switch with variable delay automatically bypasses to antenna on transmit. Second receiver and \$11995 antenna capability. 12V DC. 2½"h x 8¾"w x 6½"d \$995 P-12T 12V DC power supply for above

TPA Tunable Preamp and Active Antenna A dual function receiver accessory. May be used with an outside antenna as a

tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Covers



dual gate FET circuit provides more than 20dB gain with low noise figure and improved spurious

2 to 30 MHz in 5 bands. 9V DC. 21/2"h x 8"w x 61/2"d.. \$6995 \$950 P-9T 9V DC power supply for above.

High Pass Filters Stops TV, FM and VCR interference caused by harmonics and signal overload from amateur transmissions,



Model HP-300T (300Ω) • HP-75T (75Ω).



OCM-2 Combination Code Practice Oscillator and CW Monitor with volume control, 3" speaker, and headphone terminals. Requires a code key and 9V battery. Kit \$1995 • Wired \$2495

K-1 Low-cost general purpose key with phenolic base, adjustable tension and contact \$795 spacing.

K-4 Deluxe high quality key. Polished brass base, and short-\$12⁹⁵ ing bar

FCC Test Manuals New revised editions Incorporating all the latest changes in FCC



current FCC examination questions for each class, with corresponding multiple choice answers.

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Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane - No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

THIN STICK 1/4 wave telescoping dual band antenna for
144 and 220MHz bands (TS) \$1695
SUPER STICK II (A) 2 meter, 5/8-wave, flexible base loaded
telescoping antenna. 6-9db gain fully extended (54*); usable fully
collapsed, or one section 1/4 wave. Length: 54" extended, 10"
collapsed
SUPER STICK II COMBO As above but includes a 2 meter
Stubby Duck antenna (D) (SS-II/COMBO) \$2695
▶ 5/8 SLIM DUCK (B) 2-meter, 5/8-wave, 7db gain, flexible
base loaded antenna. 12" long
5/8 SLIM DUCK COMBO As above, but includes a 2 meter
Stubby Duck antenna (D)(5/8 SLD-2 COMBO) \$2495
REGULAR DUCK (C) For 2 meters. Tuned Ducks show a
3db gain over other Rubber Ducks because they are impedance
matched for hand-helds. (RD-2) \$1495
STUBBY DUCK (D) Tuned, efficient, for 2M (RDS-2) \$1495
SUPER STICK III 220MHz 5/8-wave, flexible base loaded
telescoping antenna, 6-9db gain extended; usable collapsed, or a
one section 1/4 wave. 36" extended, 8 ³ / ₄ " collapsed (ss-III) \$19 ⁹⁵
SUPER STICK III/COMBO As above but includes a 220MHz
Stubby Duck antenna (G) (SS-III/COMBO) \$2695
5/8 SLIM DUCK (E) 220MHz, 7db gain, flexible base loaded
antenna. Length: 9"
differind. Longen o minimum (d) o deo kiej y -

5/8 SLIM DUCK COMBO As above, but includes a 220MHz
Stubby Duck (G) (5/8 SLD-220 COMBO) \$2495
REGULAR DUCK (F) Tuned for 220MHz (RD-220) \$1495
STUBBY DUCK (G) Tuned for 220MHz (RDS-220) \$1495
SUPER STICK IV (H) 440MHz 5/8-wave, flexible base load-
ed telescoping antenna. 6-9db gain extended; usable collapsed.
18" extended, 5¾" collapsed (SS-IV) \$1995
SUPER STICK IV COMBO As above but includes a 440MHz
Stubby Duck (K)
SLIMLINE (I) 440MHz, 1/4-wave flexible ant (SL-440) \$1295
► 5/8 SLIM DUCK (J) 440MHz, 7db gain, flexible base loaded
antenna. Length: 5"
5/8 SLIM DUCK COMBO As above, but includes a 440MHz
Stubby Duck (K)
STUBBY DUCK (K) Tuned for 440MHz (RDS-440) \$1495
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FLEX-COIL (M) 2 meter, 1/2-wave, 7-9 dB gain, flexible base
35" fully extended (FLX 1/2 WAV2M) \$2595
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5/8-wave (440 MHz) \$1995
TAQ 1/4-wave whip, specify 2M , 220 or 440MHz \$10 ⁹⁵
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PALOMAR Engineers

PK-200 Dual Paddle Key for iambic keyers Precision made by Jones of England and imported by Palomar. Smooth solid iambic action by rotary ball bearings enclosed in machined brass block on steel base. Adjustable spring tension, paddle height and \$15995 paddle spacing. Gold-plated contacts. Engraved serial number .

PT-340 Tuner-Tuner (right) Eliminate tune-up QRM and overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Simply it on, and listen to the noise output from the Tuner-Tuner in your receiver. Adjust your station tuner for a dip in the noise (null) \$9995 that's it! Covers 1.7-30MHz. Requires 9V battery. 6" x 5" x 3"

M-835 Bargraph SWR & Power Meter Two 30 element LED displays show PEP or average power and SWR instantaneously and simultaneously, without adjustments-just select the range you need for the rig or amplifier you are using. Covers 1–30MHz with 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Requires 12VDC @ 800ma. 91/2 "w x 23/4 "h x 31/2 "d. 1 lb... CLOSEOUT \$17995

M-840 New! Replaces M-835. It features smaller size, remote sensor, higher accuracy, brighter LED bars. 3% resolution, 12VDC... \$18995

P-410X/412X Preamplifiers for Transceivers Covers 160-6M in four ranges. Installs easily in-line between transceiver and antenna. Improves reception with a high-quality preamplifier with adjustable gain up to 20dB. It provides lower noise figure, better selectivity and overload capability. Automatic bypass switching to antenna on transmit \$16995 3"h x 81/2"w x 5"d. Model P-410X (115V) or P-412X (12V)..... RX-100 Noise Bridge Just One measurement tells if your antenna is resonant, and

if not, whether it is too long or too short. Shows resistance and reactance values of coax fed antennas from 1–100MHz. Install between receiver and feedline. Tune receiver to frequency and adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters and tuners, and to adju \$7995 tuned circuit resonance. Uses 9V battery. 53/4" x 3" x 11/4"

SB-4 Balun Matches 50 Ω to 200 Ω . For high SWR applications: multi-band dipoles, antenna tuners, open wire line to coax conversions. Covers 1.7-30MHz, rated for 6KW PEP or 2KW CW- usable at full rated power with up to 10:1 SWR. Teflon insulation \$7995 epoxy encapsulated, stainless steel eyebolt on top. 4"dia. x 4" high, 2 lb...



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Unlike the usual trap antenna, there are no capacitors to break down under high RF volt-

ages. Full legal power operation – with "ISO-RES" inductors and 12 gauge insulated solid copper wire. 50 Ω direct coax feed, an antenna tuner is usually not required when operating in the resonant bands.



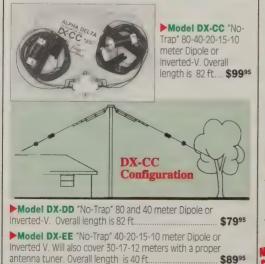
but may be safely used for multi-band operation if desired.



► Model DX-A 160-80-40 Meter 1/4-Wave Twin Sloper. A top low frequency DX antenna. Combines the tremendous DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67', the other 55' – installs like an inverted-V with ground return thru tower or down-lead ...\$5995

Model DX-B A single wire, high performance 1/4-wave DX sloper antenna for 160, 80, 40, and 30 meters. Designed for limited space installations where room doesn't allow for the DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. This permits operation on those low bands for those hams previously not able to join in on the fun because of space limitations. It's pre-assembled and pre-tuned. Just put it up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta "Iso-Res" RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50 Ω coax feed, rated for full legal power \$69*5

► Model DX-SWL SWL Broadcast Sloper Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter short-wave plus AM broadcast bands. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft...... \$69⁹⁵



Transi-Trap® Surge Protectors



Alpha Delta Transi-Trap Surge Protectors are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the **Arc-Plug**^m, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

An Arc-Plug can discharge 1000's of normal surges without replacement, and the life of the device is a function of the surge current amplitude and duration. After a sufficient number of discharges there is a gradual lowering of the breakdown voltage and insulation resistance. Replacement indicated by an increase in VSWR. If a unit is "hit" with a big strike, it is designed to fail "shorted", giving an instant indication that replacement is needed. Other brands fail "open", which leaves your expensive equipment unprotected without you knowing it.

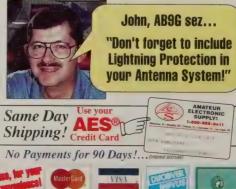
Highest quality, finest materials. – heavy cast aluminum housing, brass constant-impedance (50Ω) element, brass ground hardware and only Amphenol connectors are used.

Standard Transi-Trap units are the choice of the U.S. Military, many government agencies, worldwide. The design is based on the U.S. NCS TIB85-10 Bulletin covering lightning and EMP (electromagnetic pulse) protection.

Transi-Trap Protectors are designed for 50Ω coaxial cable and are available with standard S0-239 connectors or N-type connectors which extend operation through 1 GHz.

Five different models to choose from -

Model	RT 200W thru 500 MHz	\$32 ⁹⁵
Model	RT/N 200W thru 1GHz	3995
Model	HV 2KW thru 500 MHz	3595
Model	HV/N 2KW thru 1GHz	4295
Model	LT "T"-type, 200W thru 30 MHz	2295



Lightning Surge Protected 2 & 4 Position Coax Switches



Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected. The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable Alpha Delta Arc-Plug^m Cartridge provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal amateur power.

Four different models to choose from

DELTA-2 2-position coaxial switch with S0-239 connectors, rated for up to 500MHz
DELTA-2/N 2-position coaxial switch with N-type connec- tors, rated for up to 1.3 GHz \$64*5
DELTA-4 4-position coaxial switch with S0-239 connectors, rated for up to 500MHz
DELTA-4/N 4-position coaxial switch with N-type connec- tors, rated for up to 1.3 GHz

New! Antenna Hardware Kit



Don't assemble your next dipole antenna without one of these CENTER and END insulator combos. They're designed for strength, and to provide equipment protection with a built-in replaceable <u>SEP ARC-PLUG Static</u> <u>Electricity Protector</u>. Ideal for dipoles, Vees, zepps and other wire antennas. Rated for full legal power, also perfect for all kinds of SWL receive antenna

applications; and can be fed with either coax or balanced line. The SEP SEP ARC-PLUG protector which is mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges and routes them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges. Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to several thousand volts; so potent, they can actually puncture the dielectric of unterminated coaxial cable. The DELTA-C center insulator and DELTA-CIN end-insulators are fabricated with an extremely rugged UV and RF resistant DELTALLOY material that is so tough, you can drop it off a roof without damage. You no longer need to rely fragile ceramic or glass insulators. Only stainless steel hardware used in the center insulator for salt air and other corrosive environments, and all internal connections are hard soldered for highest reliability.

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WELLER



► W-60P 60-Watt Pencil-type Soldering Iron (A) • Temperature Controlled with tips available for 600°, 700°, or 800°F. Supplied with 1/16" 700°F screw-driver tip. Only 7½" long, 2½ oz. 6 foot cord. 120V AC \$59⁹⁵

► WP-25 25-Watt Pencil-type Soldering Iron (A) • For work on delicate electronic circuits. 750°F tip temperature. 7%" long, 1¾ oz. 4 ft. cord, 120V AC. \$37%

WSTA3 Pyropen® Butane Soldering Iron (B) • Lightweight and completely portable. Operates for up to 3 hours on a charge of cigarette lighter butane. Soldering temperature control adjustable from 392° to 932°F, with fast heat-up time-ready to solder in just 30-seconds. Supplied with tips for soldering, \$7495 hot air (1202°F), and brazing.....

WST2 Pyropen® Jr. (C) • A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. Soldering temperature adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch \$64⁹⁵ feature (2372°F). Handy pocket clip ...

>7200PK A compact,

lightweight 75W soldering gun. that handles the trickiest soldering jobs. The flat, self-supporting back acts as a convenient rest when not in use. Comes with carrying case, extra tip. and solder, 120V .\$2695

WTCPT Controlled Output Soldering Station Provides three temperature ranges: 600°F, 700°F and 800°F. This



lightweight pencil iron is safe for IC soldering. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge......\$10995 EC-1002-1 Soldering Station

Compact design, the soldering pencil stand connects to right or left side of unit. Variable temperature diode display, self feeding reservoir. Convenient tray stores extra tem-\$18995 perature sensing tips...

SOLDER-IT

Silver Bearing Solder Paste For all electrical soldering contains 2% silver. Works on ferrous and non-ferrous metals including copper, brass, bronze, nickel, platinum, chrome, monel, stainless, galvanized, gold, silver, coated steel, cast iron, and steel. Especially useful for soldering PL-259 connectors and battery pack connections. Now, solder small jobs with just the heat of a match! . . SLD SP-7D \$600

Aluminum Solder Paste For soldering aluminum to aluminum, and aluminum to almost any other metal, no flux required, flows at 395°, Great for antenna projects! Especially useful for joining dissimilar gauges of metal and for joining aluminum to copper tubing SLD ALP-21D \$600

WAHL



>7740 ISO-TIP® Cordless Soldering Iron • Contains a premium nicad battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours with a complete recharge in only 3 to 4½ hours. Tip performance up to 50 watts and over 700°! Easily replaceable battery and worklight \$3495 Comes with recharging stand, fine and heavy tips

7985 ISO-TIP® B Butane-Powered Soldering Iron • Use as a soldering iron with temperature adjustable to 1067°, as a torch with temperature adjustable up to to 2372°, or as a 400° hot blower. From 100/60/30 minutes per refill. Handy kit pack includes soldering iron with protective igniter cap, torch attachment, medium (2.4mm) tip, fine (1.00mm) tip, wiping sponge/well, and in-use stand/rest, and carrying case \$4995

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SS-32P Dip switch programmable encode provides 32 standard or EIA tone frequencies in order between 67 and 250 Hz. Microminiature – easily its inside most portable transceivers. 0.9" x 1.3" x 0.4", 6 to 25 VDC \$2895

SS-32SMP A Super small programmable CTCSS encoder for

easy installation in most handhelds. Comes standard with 32 EIA tones between 67 and 203 5 Hz. Individual tones are selectable by soldering

binary coded jumpers. 0.53" x 1.0" x 0.16", \$27⁹⁵

requires 6 to 15 VDC TE-64 A multi-purpose encoder providing 64 frequencies which include 32 sub-audible, 19 bursttone, 8 Touch-Tone and 5 test frequencies. Separate outputs for the high and low frequency ranges. 514' x 3.3" x 1.7", 6 to 30 VDC. \$7995

TS-32P Field programmable CTCSS encoder-decoder. DIP switch programmable. All 32 EIA

tones from 67-203.5 Hz are included in std. memory. 11/4" x 2", 0.4" requires 6 to 25 VDC **DTD-1** A very small high quality, low cost DTMF decoder. Capa-

ble of decoding any one of 5,040 four digit codes to provide a latched or momentary open collector output for single function operations. 11/4 x 2" x 0.4", 6 to 12 VDC \$5995



\$5795

PIPO Communications

High Quality DTMF Encoders



- Voltage 8.5 to 16V DC 12-digit or 16 digit pads • Temperature -22 to +160 F
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained NO REL
- Simple 3-wire connection

Small ! ...

▶PK-1 2.65"h x 2"w x .045"d ▶PK-2 2.65"h x 2.5"w x 045"d **K-Series** option features a built-in keying circuit and relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for O-3 seconds, time is adjustable with a trimpot.

M-Series option is a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. The package consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.

P-7 and P-8 Series Features similar to the K-Series but ruggeddesigned for the demanding Land Mobile Industry. Your choice for radios or systems exposed to harsh or



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Front panel adjustable

and schematic

abusive environments. Smallest! Features miniature electronic design, low distortion, adjustable audio output.

- **P-7H** 12 key, horiz. format, 1.50"h x 2.16"w x 0.20"d **P-7V** 12-key, vert. format, 2.16"h x 1.50"w x 0.20"d
- ▶P-8V 16-key, vertical format, 2.16"h x 1.50"w x 0.20"d

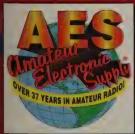


▶ PP-5 Series A 12-key encoder with sounder to confirm that each key has been fully depressed. Illuminated by two minature incandescent bulbs 2.15"h x 3.3"w x 0.5"d, 9-16 VDC.

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Note: This Used Equipment List reflects what was in our inventory when this catalog was printed. We trade, buy and sell a tremendous amount of used equipment, this is only a representation of what may be available at any given time. Each store (except Clearwater) has immediate on-line computer access of the entire AES use gear inventory by location—one phone call is all that is needed to see if an item is in stock. The letters after the price indicate which location had the particular item the time of inventory: $\mathbf{m} = \text{Milwaukee}$: $\mathbf{w} = \text{Wickliffe}$: $\mathbf{f} = \text{Orlando}$: $\mathbf{c} = \text{Clearwater}$: $\mathbf{v} = \text{Las Vegas}$ $\mathbf{f} = \text{As Vegas}$

the time of inventory: $\mathbf{m} =$	Milwaukee; $\mathbf{w} = $ Wickliffe;	f = Orlando; c = Clearwater	r; $\mathbf{v} = \text{Las Vegas.} + \text{after}$	item denotes too many acce	ssories to list.
AEA	IIC-2SAT 2m ht/84+ 309 w	PS-30 p/supply119 fv	451 cw keyboard	276 calibrator 19 w	SP-767P spkr/patch89 m
IsoLoop 10-30 ant \$199 m	IC-2SRA 2m/rcvr\$399 m	PS-430 p/s149 w	722 audio filter	444 HERCULES amp799 c	Y0-100 scope149 f
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AMERITRON	IC-471A uhf ssbxcvr 599 c	SP-31 speaker 59 w	NEWTON TVRO	CSC-29 case for ht\$14 w	Prices are subject to
AL-1500 HF amp \$1719 m	IC-475H uhf ssb1299 m	TH-27A 2m ht 239 w	GBS2000 sat test\$249 w	CT-11 cable/FL-7000 12 w	change without notice.
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PRIVATE PCH V\$389 m	LC-72 case14 m	TS-120S xcvr 349 f	RANGER	FRG-8800 rcvr529 m	
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M-54 ht 151.625 \$149 m	PS-15 power supply 119 c	TS-430S w/fm/88C 609 f	ATS-803A Receiver\$129 m	FT-101ZD mk III xcvr 499 m	
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DRAKE		TS-440S/AT w/2 filt 999 c	404C microphone\$29 f	FT-2700RH 2m/70cm.349 m	
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2400-155 contester\$59 f	JPS		ICF-SW77 receiver379 m	FT-757GX hf xcvr669 mcf	
ICOM AD 15 m/s f20m	NRF-7 filter\$149 m	TS-930S/AT hf xcvr 999 c	ICF-2002 receiver159 w	FT-767GX hf xcvr1269 m	O C A O
AD-15 p/s \$29m	JRC	TS-940S xcvrw/VS1 1269 m	ICF-2010 receiver289 mcf	FT-767GX w/2m1399 c	
AH-2A auto. tuner 349 m	JRL-2000F 1kw\$2999 f	TS-940S/AT xcvr 1399 m	ICF-7601 swl rcvr89 m	FT-790Rmk II xcvr529 m	Check for L Us Open
AT-100 ant. tuner 289 m	NRD-525 rcvr		ICF-7700 swl rcvr139 mw	FT-815 uhf ht 239 m	p to @
AT-150 ant. tuner 359 wf AT-160 tuner/728,9 299 v	NRD-525 cfl233/vhf969 f	TS-950SD HF xcvr 1999 m	PRO-80 scan rcvr299 w	FT-902DM hf xcvr619 m	
	NVA-319 169 w		STANDARD	FV-700DM rem VF079 m	
AT-500 ant. tuner 399 vc BA-12 battery adapt 12 w	KENWOOD			MMB-20 bracket19 mf	\bigcirc
		VFO-120 remote VFO79 f		MMB-38 bracket12 f	
				NC-28B charger9 w	
	_	MEJ		NC-29 desk charger49 w	
	BC-7 desk chgr	1022 active re device \$10 m		NC-37 desk charger 89 v	
		1272BX tnc/sw 29 m	228 ant tuner\$149 c	NC-9B charger5 w	
	BT-8 batt holder	1272MX tnc/sw 29 m [AMATEUR		T X I
BP-7 5w battery		1278B w/pactor		SA DICOVER	$\langle \rangle$
		1282 starter pk/C64 17 m			
		1305 5V p/supply9 w	The second second		
-		1312 12V p/supply9 wf		A BAR A	
_		1312B 12V p/supply9 f	MAN MARKE MAN	TAS DE LAN	
	-	1714 2m ht antenna9 w			
		1730 2m antenna9 m			Market State
		208 2m analyzer	the state of the s		Carlos and
		247 SWR analyzer 59 f		Checked o	A REAL PROPERTY AND A REAL
	-	283 spkr/mic19 m	John, N9COB brings our	hanned	
		4114 power pack	Used Gear up to Factory Specs	Ready to G	io!

Amateur Electronic Supply[®] You Can Depend on our Used Equipment! 146

Special Prices on New Equipment Open Cartons and Demos

The following is a list of brand New Equipment that has been demonstrated, on display or restocked. The cartons are no longer factory sealed, but each piece has been checked out in our service department and carries a 100% New Warranty. The letter after the price is the location at the time of inventory. n = Milwaukee; w = Wickliffe; f = Orlando; c = Clearwater; v = Las Vegas. Limited quantities - Order Now! Used equipment policies do not apply.

$\eta = v waukee; w = vvickille; l = 0la$	muu; c	
EA -	Special	
EA FAXII fax/wire photo program	. \$89 95	m
SP-2232 multimode controller	84995	f
-1 automatic tuner for ISOLOOP	21995	m
IM-3 morsematic kever	. 16200	W
K-88 tnc	. 11995	m
L-60 radio link hf remote via ht	260%	m١
T-1 satellite tracking hardware/soft	32995	m
WR-121V/U vhf-uhf ant analyzer	. 35995	m
LINCO		
J-F1T/HP 5w 2m FM HT	\$264 ⁹⁵	f
J-162T 2m FM HT	18995	m
J-580T 2m/440 FM HT	. 36995	f
R-1200T 2m/25W data transceiver	26500	f
R-1200TH 2m/25W data transceiver	26995	f
R-1200TH2 2m/25W 9600 baud xcvr	26995	f
R-130T 2m 50W mobile transceiver	28995	m
R-600T 2m 440 mobile transceiver	57900	f
DC-16 filtered mobile cord	1080	W
DC-43 cig liter cable	810	W
DH-5 AA dry cell holder	1395	V
ME-10 headset w/vox/ptt	61 ²⁰	W
ME-13 headset w/ear bud/mic/vox	5900	m
MECO		
PA tunable preamp	. \$6495	m
NLI	,	
B-752 12volt 8.5amp power pack	\$6295	m
STRON		
S-12A 9A power supply	\$7495	f
S-20M 16A power supply w/meters	. 10795	f
S-4L 3A power supply w/cig ltr socket		V
S-70M 57A power supply w/meters	. 25995	m
2/115 200W inverter 12v to 110	4995	m
&K		
701 digital multimeter	\$3595	m
830 multimeter	16995	m
911 digital multimeter	5395	m
&W		
L-10/1500/70 low pass filter (72 Ω)	\$1695	m
ENCHER		
Y-2 chrome iambic paddle	\$7695	m
IRD		
304A 25-1000 mhz 500W w/sampler	\$ 419 ⁰⁰	m
ES	****	
DI-50 autopatch/controller	\$35955	m
OMET	¢0.095	
IS3FVMM Onnect systems	\$69 95	۷
S-700 Simplex interconnect	\$26095	v
USHCRAFT	φ203	v
S-50M 6m mag mt antenna	\$5285	v
AC-4 blitz bug lightning arrestor	2995	v
S-4 polarity switch	8995	n
IAMOND	00	
-707E .5-1500 mhz antenna	\$9995	m
X-400 140-525 mhz 200w meter	12495	m
RAKE		
W-8 shortwave reciever	\$53995	v
ORBES		
T-44 uhf 2.6 db ventenna	\$3995	m
DINDIC		
ATELLIT 700 swl receiver	\$339 ⁹⁵	n
L.		
M-10K5 boom mic/headset;Kenwood	\$7795	V
IC-5 mic element	2595	n
IY-GAIN		
03 T ² X ant rotator	\$38500	V
05 AR-40 (220 volt version)) rotator	17695	f
COM	¢ 4 4005	
-21 aircraft hand held xcvr w/VOR	\$44995	f
C-72 rapid desk charger	9995	V
P-2 425ma/7.2V nicad battery	4900	n
P-84 7.2v 1000ma battery	1195	n
P-12 cigarette cable w/filter	1800	n
P-13 cigarette cable w/filter	1980	۷
T-17 CI-V level converter	9995	n
P-22 GPS receiver	44995	n
M-46 mini-speaker microphone	3000	1

I	earwater; \mathbf{v} = Las Vegas. Limited quanti		Orde
Į		Special	
ļ	HM-46L mini-speaker microphone	\$ 3600	m
	HM-55A spkr mic w/ttp IC-H18 vhf commercial HT	26095	v m
ł	IC-P2AT 2m HT	203-	W
l	IC-P4AT 440mhz HT	25995	f
	IC-T21A 2m HT w/440 rx	29995	mw
l	IC-W2A 2M/440mhz HT	39995	fv
l	IC-W21A 2M/440mhz HT (no ttp)	28995	m
l	IC-W21AT 2M/440mhz HT/ttp	38995	mf
ļ	IC-X2A 440/1.2ghz HT	44995	f
	IC-2GXAT 2m 3W FM HT	259%	W
l	IC-2iA 2m FM HT IC-2SRA 2m HT w/25-905mhz rx	22495	f
l	IC-258A 2m HT w/25-905mm2 fx IC-228H 45W 2m mobile	349**	mv w
l	IC-220H 45W 2m/440mhz mobile	71 95	mv
ł	IC-275H 100W 2m fm/ssb xcvr	125900	V
ł	IC-281H 50W 2m mobile w/9600	32995	v
I	IC-3230H 45W 2m/35W 440mhz mobile	56695	v
İ	IC-4GAT 440MHz FM HT	31495	v
l	IC-4SAT 440MHz FM HT	34995	V
I	IC-4SRA 440MHz FM HT w/25-905 rx	35995	m
l	IC-728 HF xcvr		m
	IC-729 HF xcvr w/6M	98910	W
I	IC-737 HF xcvr w/tuner/keyer	. 104955	WV
	IC-781 HF xcvr w/scope/tuner/keyer IC-901A 50W 2m/35W 440mhz mobile	20095	W
I	M-5 5W marine band HT	22095	m
l	PS-30 20a system power suppy	3295	V
ł	RP-1220 10W 1.2ghz repeater	224980	m
l	R-100 .1-1856mhz rcvr	59995	mv
l	R-71A 100khz-30mhz swl rcvr		m
	SM-20 stand mic for base xcvrs	13995	m
I	SP-7 small external speaker	6120	W
I	UI-7 AM/FM board IC-725/728	6120	m
ļ	SP-7 small external speaker U-2 2 ch UHF land mobile HT	6120	W
	U-2 2 ch UHF land mobile HT	26995	m
	JRC	¢00000	
	JRL-2000F 160-12m HF amplifier	\$369900	m
	JST-135 hf transceiver	. 123900	m
	KANTRONICS DE-2400 modem for Data Engine	¢ 9 0 95	m
	DVR2-2 2W 2M data/voice xcvr	15295	v
	HOSTMASTER-64 software C-64/128	5995	m
l	KPC-2400 packet TNC	12595	w
ļ	KPC-2400 packet TNC Pactor eprom option for pre V5 KAM	4995	m
ł	KENWOOD		
	AT-300 external auto ant tuner	\$54900	
l	AT-450 internal auto tuner TS-450/690S	18895	W
	HS-5 communications headphones	6695	٧
	IF-232C level translator	10/33	V
I	MC-50 desk microphone	/ 0*5	w f
	MS-1 mobile chgr/ps for TR-2500A PB-13 700mah 7.2v battery	49 ³³ 5795	T V
	SW-2100 1.8-30mhz 2KW power meter	13995	mv
l	TH-27A 2m FM HT		C
	TH-28A 2m FM HT	269%	C
	TH-47A 1.5w 440 HT	22495	f
J	TH-48A 2w 440 HT	34995	m
I	TH-78A 2m/440 FM HT	399%	Ť
	TM-642A 2m/220 FM mobile xcvr	66595	۷
i	TM-742A 2m/440 FM mobile xcvr	665%	v
	TS-450S HF xcvr w/sw rcvr	101600	W
	TS-60S_6m all mode xcvr TS-790A 45w 2m/40w 440 ssb/fm	1,61000	m f
	UT-1200 10w 1.2ghz module/TM742A	25095	V
	UT-28S 50w 10m module/TM-742A	27995	f
	VB-2530 25W 2M amp	8995	m
J	MEJ		
2	1229 interface	\$8995	m
ĺ	1270CQ packet TNC/9600 baud	17995	V
ļ	1274 packet TNC	11495	- f
j	1274C packet TNC	11995	m
	1282B multicom software C-64/128	5395	m
2	1289 multicom software IBM	5395	m
	16010 200w random wire tuner 250 dummy load	3435	v m
	346 LCD free counter	1 3 9 95	- V
2	346 LCD freq counter	100	(8-
	I wasterin Staathanta C	I I DI DI LI	KK C

N	low! Used equipment policies do n	iot app	oly.
	MIRAGE	Special	
	B1016G 2m 10/160W amplifier B-23G 2m 2/30w power amp	\$289 ⁵⁵ 139 ⁵⁵	V V
	B-5030G 2m 50/300w power amp	49995	v
	C-3022G 220mhz 30/200W amp	. 39995	m
	MOTOROLA H-5058R TRITON marine radio	\$269 ⁹⁵	m
	NYE MB-VA 3kw tuner/ant sw/meters	\$629 ⁹⁵	m
	MB-VB 3kw tuner/ant sw/no meters	49495	m
	047-001 phone patch, 8-pin w/spkr	9995	٧
	OB-8 300w 6'75-10m mobile ant	\$24900	f
	RE CONCEPTS		
	2/70G 2m/440 fm 3/30/5/20w ht amp	\$23395	mw
	4-32 440 fm 3/20w ht amp SANGEAN	13955	m
	ATS-808 SW receiver	\$149 ⁹⁵	m
	DT-200 V receiver	5995	m
	SONY ICF-SW15 portable SW receiver	¢6095	m
	ICF-SW15 portable SW receiver	14995	m m
	ICF-SW55 portable SW receiver	31495	m
	ICF-SW7600 port SW receiver	18995	m
	ICF-SW7700 portable SW rcvr ICF-2010 portable SW receiver	31495	v mv
	IPS-760 GPS receiver	84995	m
	PRO-80 handheld SW receiver	29995	mf
	STANDARD C-288A 220mhz FM HT	\$32995	m
	C-558A 2m/440 FM HT	47995	m
	C-5718DA 50w 2m/40w 440 mobile	64995	m
	STARTEK ATH-30 1-2800 counter	\$229 ⁹⁵	m
	UNIDEN		
	BCT-2 Bear Tracker scanner BC-100XLT 100ch hand held scanner	\$14995	m
	BC-100XLT 100ch hand held scanner BC-147XLT 16ch scanner		m m
	BC-177XLT 16ch scanner	12995	f
	BC-200XLT 200ch hand held scanner	22495	٧
	BC-560XLT 16ch mobile scanner BC-8500XLT 500ch 25mhz-1.3ghz scanner w/tone	34995	fv f
	BC-890XLT 200ch base scanner	23995	m
	YAESU	¢1070	
	FL-7000 solid state HF amplifier FP-757HD heavy duty power supply	26995	V
	FP-800 power supply	25100	v
	FRG-100B SWL receiver	. 499%	mw
	FT-1000D hf xcvr w/tuner/keyer/mic FT-11R 2m 1.5w mini ht		mw mwf
	FT-2200 50W 2M mobile xcvr	33995	mwf
	FT-2500M 50W 2M mobile xcvr	. 31995	WV
	FT-26/25 2w 2m FM HT FT-290R Mk II 25W 2M FM/SSB xcvr	219 ⁹⁵ 52095	m
	FT-41R 1.5w 440 FM HT		C V
	FT-5100 50W 2M /35w 440 fm mobile xcvr	54995	f
	FT-530 2M/440 FM HT		mw v
	FT-73R/TTP 440 FM HT FT-747GX hf xcvr	66995	v
	FT-811 440 FM HT	23400	v
	FT-815 440 FM HT	26900	V
	FT-840 hf xcvr FT-890 hf xcvr	103495	mf w
	FT-890/AT hf xcvr w/auto tuner	118900	mfv
	FT-900/AT hf xcvr w/auto tuner	129900	m
	FT-990 hf xcvr w/auto tuner/power supply FT-990DC hf xcvr w/auto tuner	15799	m w
	LL-5 phone patch for SP-6	11995	f
	MH-29A2B remote microphone for FT-530	9495	mv
	MW-2 wireless remote microphone		m
		one	
	(m) Milwaukee 1-800-5	58-04	11
	(w) Wickliffe 1-800-3 (f) Orlando 1-800-3		
	(1) Orlando $1-800-3$ (c) Clearwater $1-800-5$		
	(v) Las Vegas 1-800-6		



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TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose and the second	Let us give you a quote 2) on your other printing needs!
TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose) ARRL Logo BLACK 100 - \$22.50 STATE LOGO RED 250 - \$29.50 ANTENNA LOGO BLUE 500 - \$35.50 USA FLAG LOGO	Let us give you a quote 2) on your other printing needs! Amount of Order: 2 Color Print Option:
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TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 1) ARRL Logo BLACK 100 - \$22.50 STATE LOGO RED 250 - \$29.50 ANTENNA LOGO BLUE 500 - \$35.50 USA FLAG LOGO I am sending additional clean black & white art (5x7 or less) Bill me \$10.00 each for additional piece(s) of artwork 2 COLOR CARDS or Backside printing Add \$22.00 for each to Base	Let us give you a quote on your other printing needs! Amount of Order: 2 Color Print Option: Back Side Printing Unique Logo (send art):
TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 1) ARRL Logo BLACK 100 - \$22.50 STATE LOGO RED 250 - \$29.50 ANTENNA LOGO BLUE 500 - \$35.50 USA FLAG LOGO I am sending additional clean black & white art (5x7 or less) Bill me \$10.00 each for additional piece(s) of artwork 2 COLOR CARDS or Backside printing Add \$22.00 for each to Base Quantity Price (Please designate color breaks, or send copy for backside)	Let us give you a quote on your other printing needs! Amount of Order: 2 Color Print Option: Back Side Printing Unique Logo (cond art):
TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 1) ARRL Logo BLACK 100 - \$22.50 STATE LOGO RED 250 - \$29.50 ANTENNA LOGO BLUE 500 - \$35.50 USA FLAG LOGO I am sending additional clean black & white art (5x7 or less) Bill me \$10.00 each for additional piece(s) of artwork 2 COLOR CARDS or Backside printing Add \$22.00 for each to Base Quantity Price (Please designate color breaks, or send copy for backside) CUSTOM CARD 4-COLOR – CALL FOR A QUOTE!	Let us give you a quote on your other printing needs! Amount of Order: 2 Color Print Option: Back Side Printing Unique Logo (send art):
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TELEPHONE NO: PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose) ARRL Logo BLACK 100 - \$22.50 STATE LOGO RED 250 - \$29.50 ANTENNA LOGO BLUE 500 - \$35.50 USA FLAG LOGO I am sending additional clean black & white art (5x7 or less) Bill me \$10.00 each for additional piece(s) of artwork 2 COLOR CARDS or Backside printing Add \$22.00 for each to Base Quantity Price (Please designate color breaks, or send copy for backside) CUSTOM CARD 4-COLOR – CALL FOR A QUOTE! Check Mastercard Visa American Express Exp.	Let us give you a quote on your other printing needs! Amount of Order: 2 Color Print Option: Back Side Printing Unique Logo (send art): Sales Tax (applicable in WI, OH, FL & NV):



Main Store Display Area



Paul and Don in Video and Camcorder Display Area

Audio Plus is the Consumer Electronics Division of AMATEUR ELECTRONIC SUPPLY[®] with three locations: the main store in Oshkosh, Wisconsin and satellite stores in Fond du Lac and Ripon, Wisconsin.

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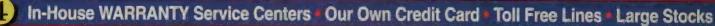
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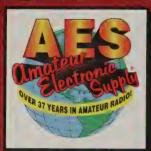


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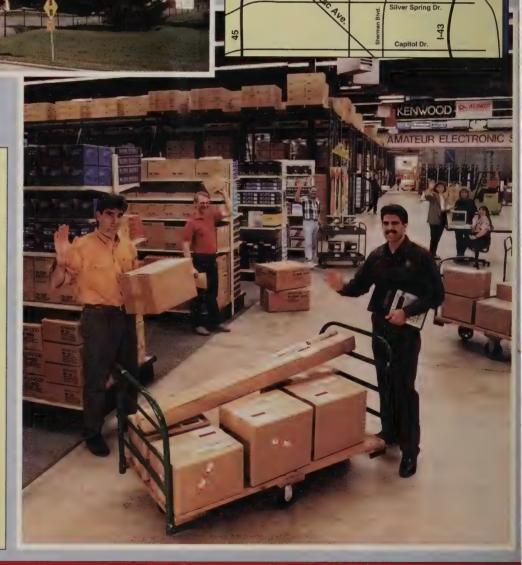
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This entire building which has over 50,000 sq. ft. of floor space, contains the AES° Main offices and Computer Center, Included are the Mail Order, Advertising and Service Departments. The large Showroom and Sales area features an extensive display of the latest Ham Equipment and other electronic goodies, and there's plenty of parking for customers. This structure was specifically designed to function as an efficient Mail Order operation with a huge warehouse that provides plenty of space for large inventories. For our customers this means fewer backorders and shipping delays. In fact, we can give Same Day Service on most Mail or Telephone orders.



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AES

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Our Service Department! ... One of the Reasons to Buy from AES[®]!

sev-



MILES, K9HMQ • Service Manager

TECHNICIANS: Currently, we have seven (three are shown) at work in their shops in Milwaukee. In addition, we have John-WA8PKB in the Wickliffe, OH store, Gil-K4ISK (shown) in Orlando, FL and Bob-KG7D in Las Vegas (shown).

EXPERIENCE: These technicians are all Factory-Trained on the major brands (ICOM, YAESU, KENWOOD), and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

WE'RE EQUIPPED TO DO THE JOB! Each shop uses a stateof-the-art Hewlett Packard 8920A test set, which replaces



RUSS, WB9PAS • Service Technician

extend our Professional Technical Service to your "out of warranty" late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the AES Service Department in Milwaukee at 414-358-0333; ask for Miles or John.

LABOR RATES: Our rate for Out-of-Warranty Service is \$51.00 per hour. *Note:* There is a \$68.00 minimum charge for service on HF/VHF Base Stations, and a \$51.00 minimum charge on VHF Mobiles and Handhelds.

POLICIES AND OTHER INFORMATION: See pps. 158 and 160 for our Policies, Warranty Information and Telephone Numbers of the Major Manufacturers.

WE'RE A FULL SERVICE DEALER! Unlike other Dealers, when you purchase a New Radio from us, our Service Department is able to provide you with *Outstanding* Technical Service.

If you have a problem, we are determined to keep you on the air! To do this, we offer Priority Warranty Service on ALL New Radios that we sell. You can be assured that if your New Radio fails within 10 days after receiving it, it will be repaired promptly, or we'll replace it! If a failure occurs after the 10 day priority period, it will be repaired under our shop's "Warranty Repairs First" policy, which will get you back on the air with a minimum delay.



JOHN, N9COB - Assistant Service Manager

eral pieces of conventional test equipment. It combines twenty-two different instruments including a spectrum analyzer, tracking generator, digital scope, distortion and SINAD meter, all mode signal generator, frequency counter and more! It's highly stable, very accurate and helps speed repairs because it's I-BASIC computer allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in high-tech soldering stations for work on the latest delicate surface mount technology.

REPAIRS: Whether you purchased from us or not, we can



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\$100.01 to \$500.00		\$6.50
\$500.01 to \$1,499.99		
81500.00 and UP Al	ES Pays th	e Shipping!

FLAT RATE DOES NOT APPLY TO DROP SHIPMENTS

- 1. Shipping charges are based on amount of the original order. Adding to or deleting from the original order will not affect the shipping charges.
- 2. The order amount on which charges are determined is pre-coupon and pre-tax.
- 3. 2nd & 3rd shipments (back-orders) are shipped PREPAID at AES® expense (UPS ground only)
- 4. COD fees not included. Add \$6.50 per carton.
- 5. Shipping charge includes adequate insurance.
- 6. Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.

Milwaukee, WI • Wickliffe, OH • Orlando, FL • Clearwater, FL • Las Vegas, NV

PREFERRED CUSTOMER

5884 3888 9999

YOUR NAME HERE

AMATEUR

ECTRONIC

UPPLY 1-800-558-0411

7. Check with sales person when ordering.

he AES[®] CREDIT CARD* makes it "E-Z"

- Good at All AES[®] Stores in person or on phone orders
- Use for anything in the AES[®] Catalog No minimum charge
- No down payment required
- No payment for 90 Days (Interest Accrues)
- Low monthly payments
- No annual fees
- Quick approval to gualifiers
- ◆ Finance up to \$5,000 ... or more!
- Be an AES[®] Preferred Customer
- Leaves other major Credit Card lines open
- Buy the gear you want NOW ... why wait? or ...
- Get approved now and have your AES[®] Credit Card ready when you need it

5710 W. Good Hope Road • Milwaukee, Wisconsin 53223 Phone: (414) 358-0333 • *Toll Free:* 1-800-558-0411 FAX: (414) 358-3337

EXPRE

Federal Express® Delivery Service Available

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SHIPPING INFORMATION: METHODS: Unless otherwise specified, orders are shipped via United Parcel Service (UPS) or Air Priority Mail. For faster service you may specify *express* methods which include: UPS Next Day Air, 2nd Day Air, 3 Day Select, Federal Express and Express Mail. RPS also available in some areas. Please allow sufficient funds for shipping charges – see reverse side. Those orders with Items exceeding UPS or USPS weight, size or value limits will be shipped via Truck or Air Freight collect. *Shipping charges are taxable in WI, FL & NV. TRADE-INS: Use a sturdy carton and plenty of packing material for protection. Ship PREPAID and FULLY INSURED. Canadians inquire about taxes and customs charges before releasing your shipment. Do not use Bus or Parcel Post. Collect shipments will not be accepted. AES* assumes no responsibility for damage in transit or for filing damage claims.

ACCOUNT NO.	Date	SHIP TO (If other than at left):
Name	Call	
Address		
City/State	Zip	
You may telephone me at (Be sure to include area code):		IF YOU HAVE MOVED since your last order, please show your old address:
Home #	Hours:	
Work #	Hours:	

QTY.	DO NOT USE	MANUFACTURER • PART OR	MODEL # • DESCRIPTION	PRICE EACH	TOTAL
	FINAL BALANCE	DUE (LINE 10) TO BE PAID BY:	LINE 1 — Total	Amount of Order	\$
AMATEU ELECTRO			LINE 2 — Subtract here AES Refund Che		
1 200 200	Master 12	UTSA .	Coupons or Special Allowances (if any)		-
			LINE 3 — Subtract TRADE-IN Allowance (Enclose mail guotation or reference telephone		
Account N	umber		I Enclose mail quotation or reference telephone	quote à list fraue-initerns.	-
			IMPORTANT! Persons having a Trade-in		
Cardholder	's Name	Card Expires	the choices in the box at the lower left of	of this Order Blank.	
Cardholder	's Signature	Date	LINE 4 —	Balance	\$
	OR MONEY ORDER	For your own protection DO NOT MAIL	LINE 5 —Sales Tax: WI- 5.5%, FL- 6%, Tax rates subject to	NV- 7%, OH-5.75% change without notice.	\$
CURRE	NCY send a Bank C	heck or Money Order. A Personal Check may r bank. Please attach your remittance firmly to	LINE 6 — UPS or Postal Charges		+
top of th	is order blank.		LINE 7 — Due AES from pre	vious order (if any)	+
and \$6.	50 COD Fee will be col	he total cost of Merchandise, Shipping Charges lected in <u>Cash or Certified Check</u> upon delivery.	LINE 8 —	Total Amount Due	\$
		RDER - NO AIR OR PARCEL POST!	LINE 9	Amount Enclosed	-
	HAVE A TRADE-IN order until you receive and	- CHECK ONE OF THE FOLLOWING:		alance Due (if any)	\$
		allowance after my Trade-in is received and approved.	LINE 10 — Final B For orders being shipped by UPS or Air Priority Ideal, etc. please	alance Due (if any)	
		of new merchandise on my Charge Card, Issue credit	and insurance. Any excess emount ramited will be promothy rat	unded DO NOT remit for Truck or Air	Freidelt

Charge the TOTAL AMOUNT (line 8) of new merchandise on my Charge Card. Issue credit to my Charge Card when my Trade-in is received and approved.

Phot

along dotted line or make

Off

orders being shipped by UPS or Air Priority Mail, etc. please allow a sufficient amount for Shipping Charges I insurance. Any excess amount remited will be promptly refunded. DO NOT remit for Truck or Air Freight oping charges, they will be collected upon delivery. Shipping charges are toxable in WI, FL & NV.

				JIANI US	E ONLY)			
Merchant Na	ame/Number:		Phone Num	ber:		_ Salespers	sons Name:	
Applicant Dr	river's License No.	/State Identification	ו No.:			State:	Expires:	
Co-Applican	t Driver's License	No./State Identifica		State:	Expires: _			
Account Nur	mber:I_I					Credit Line	\$	
Initial Purcha	ase \$			Dow	n Payment \$			
			PRIM	ARY APPL	ICANT			
Date of Birth		Soc. 8	Sec. No.:			# Dep.	(not including yourse	elf)
Present Add	ress (NO. & Stree	et):					Apt/RR:	
City:		State:		Zip:	Home Pl	none: ()	
Time at Resi	idence: Yrs.	Mos. 🔲 C)wn 📋 Re	ent 📋 Otl	ner	Мо	nthly Payment \$	
Previous Add	dress (NO. & Stre	et):					Apt/RR:	
City:			St	ate: Z	ːip:	Time at	Prev. Res.: Yr	s Mos.
Employer:		City:			State:	Business I	Phone: ()	
Net Monthly	Tin	ne at				Prev. E	Employer: Employment: `	
Other House	hold Monthly Inc		ot list income	e from Alim	nony, Child S	upport or Se	eparate Maintenanc	
PLEASE CH	ECK ONE OF TH	E FOLLOWING B	OXES:	Checking	🗌 Sav	/ings	Both 🗌 Nor	ne
			CO-	APPLICAN	Т			
Date of Birth	:	Soc. Sec.	No.:			_ Employer:		
Net Monthly	Income \$:	City	•		State:	_ Time at En	nployment: Yrs.	Months
Other House	In a lab Max and Laborate		ot list income		ony Child S	unnert er Cr	poroto Maintonana	
wish it consid	hold Monthly Inco lered for purposes	ome: you need no s of granting credit.	Net \$	e from Alim	Source: _	upport or Se		e unless you
wish it consid	lered for purposes	ome: You need no s of granting credit. TRUTH IN LEP	Net \$		Source: _			e unless you
ANNUAL PER- CENTAGE RATE FOR PURCHASES		s of granting credit.	Net \$		Source: _		METHOD OF COMPUTING THE BALANCE FOR PURCHASES	
ANNUAL PER- CENTAGE RATE FOR PURCHASES 18.9%	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE None	G of granting credit. TRUTH IN LEF GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES 25 Days	Net \$ VDING CHA TRANSACTION FEE FOR PURCHASES None	RT (Do no LATE PAYMENT FEE \$10.00	Source:	At reading) RETURNED CHECK FEE \$10.00	METHOD OF COMPUTING THE BALANCE FOR PURCHASES Average Daily Balance Method including New Purchases	MINIMUM FINANCE
ANNUAL PER- CENTAGE RATE FOR PURCHASES 18.9% APPLICATIONS (1) Certify that th (2) Acknowledge (3) Agree that if hereto, a cop (4) Agree that if installment lo (5) Understand a applicant(s) a PRIMARY You are applying for INSURANCE EL Please enroll me of Insurance which J understand that and is not required YES, I want C	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE None FOR CREDIT WILL NO this application is accept y of which has been prov your application for a c an (the terms of which ma and agree that American and American General Fin APPLICANT SIGNATURE or a credit card account w LECTION OPTION: in the ChargeGard Plan 1 understand will be ma if my account is cancelle to obtain/maintain credit.	A constrained of the second se	Net \$	RT (Do no LATE PAYMENT FEE \$10.00 EQUIRED SIGN eneral Financia on may be give o way obligated h affiliates any List that Corporation as disclosed. For remiums will be celled. I may ca	Source:	At reading)	METHOD OF COMPUTING THE BALANCE FOR PURCHASES Average Daily Balance Method Including New Purchases W YOU: terms of the Cardholder Ag n offer for a retail installme d any transactions and exp affiliate.	MINIMUM FINANCI CHARGE None preement attached ent contract or an eriences between DATE

Please mail this original, signed application to Amateur Electronic Supply; 5710 W. Good Hope Road; Milwaukee, WI 53223. <u>A photocopy or fax cannot be accepted.</u>

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18.9%	ANNUAL PERCENTAGE RATE FOR PURCHASES	LATE PAYMENT FE payment fee when y days of the Payment COLLECTION COST of your Account to a us a reasonable attr us in connection with	payment on your Account wh not paid. OVER-THE-CREDIT-LIMIT FE \$10.00 over-the-credit-limit fee.	for billing errors con shall be determined in RETURNED CHECK	INSTRUMENT: No dispute in the amount owed under this Agreement may be sent or compromised by a notation or statement on the back or front of any negotiable instrument intended for payment of the debt or by any document whether or not accompanied by a negotiable instrument which document purports to compromise or settle the debt or have us acknowledge the debt as paid in full by the act of negotiating a negotiable incompany full which document purports to make the sent to the address	 F. To notify us of a change in your name and address G. To live up to all other provisions of this Agreement YOU MAY NOT COMPROMISE A DISPUTE BY 	 D. Not to allow the authorized users. E. To give us credit in 		CH an	your Credit Limit at any time YOUR RESPONSIBILITIES	CREDIT LIMIT: We will tell you what your Credit Limit is on your Account. You prome not to allow the outstanding balance of your Account to exceed your Credit Limit. We do not have to honor any use of your Account which would cause you to exceed your Credit Limit. If you exceed your Credit Limit we may honor that use of your Account without giving up our rights, and it does not mean that we have to honor other uses which would cause your Credit Limit to be exceeded. We may increase or decrease	CONVERSHIP: The Credit Card remains our property and may be carcelled by us at any time without notice. You, and all authorized users, agree to maintain good credit with all creditors. You, and all authorized users, agree to surrender the Card and any other access devices and to discontinue utilization of the Credit Card Account by any other means immediately upon request.	and Cardholder Agreement. "Credit Card" means the Credit Card Ssued to you by us under this Agreement. This Account and all purchases made on it are not binding on us until your credit is approved. The application will be deemed approved and the Account established when we (or the merchant) give you notee of that fact. You the be deemed to have accepted the credit card Account and agreed to be bound by the terms of this Agreement by your use of the Account evidenced by a purchase slip.	The Application for a crean card autivitive account appress to where an environment Center (AGEC) for the establishment of an open end credit account. If AGEC the application, credit will be extended for (1) the purchase of goods and/or a from businesses that honor the Credit Card Account and (2) the purchase of products or services that AGEC may offer from time to time. Each person e this Agreement agrees to live up to the terms of this Agreement. DEFINITIONS: In this Agreement "We', "Our," and "Us" means American Encarcial Center OAGEC "Wo' and "You" means each person who stors the ap	CREDIT C AN AMERIC/
None	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	E: We may assess, Due Date. Payments Due Date. Payments FS: To the extent pe an attorney not a sa an attorney the and all c amy collection process	LIMIT FEE: If you e	tained in this Agree n accordance with Ut CFEE: We may asso	hispute in the amoun notation or statement it of the debt or by unnent which docume ridge the debt as paid	To notify us of a change in your name and address. To live up to all other provisions of this Agreement. UMAY NOT COMPROMISE A DISPUTE BY	allow the Account or card to be used by ized users. . us credit information as we may request from	such excess amoun	s due under the A ne monthly billing stat onsible for purchase	Ty time. LITIES UNDER THE	will tell you what your tanding balance of y r any use of your Acy inceed your Credit Li vour Credit Limit to t	bredit Card remains of ice. You, and all authorized and to discontinue tely upon request.	ement. "Credit Carr nent. This Account a it is approved. The a when we (or the me accepted the credit c nent by your use of	e establishment of a t will be extended fo honor the Credit Ca that AGFC may offit that AGFC may offit is Agreement "We", SFC."You" and "You"	CARD CARDH D APPLICATIO AN GENERAL
25 Days	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	LATE PAYMENT FEE: We may assess, and if assessed, you will pay payment lee when you fail to make at least the minimum monthly pay days of the Payment Due Date. Payments are not considered made until COLLECTION COSTS: To the extent permitted by law, if we must rele of your Account to an attorney not a sataried employee of ours, you re- us a reasonable attorney for ear and account and collection costs actual us a reasonable attorney collection proceeding as may be allowed by law us in connection with any collection proceeding as may be allowed by law	xceed your credit lim	ah law.	t owed under this Ag on the back or front of a any document wheth ent purports to compu- ent full by the act of d in full by the act of a	nd address. Agreement. PUTE BY NOTATIO	Not to allow the Account or Card to be used by anyone out authorized users. To give us credit information as we may request from time to time	o exceed your Credit it within 10 days after g your Account an ov	any other charges due under the Account, as described in accordance with the monthly billing statements we will send you. That you are responsible for purchases made by any person y Card or Account.	your Credit Linit a rany time. The second seco	 Credit Limit is on yo our Account to excee count which would ca- imit we may honor the not mean that we ha not mean that we have be exceeded. We may be exceeded. 	our property and may horized users, agree users, agree to surro utilization of the Creo utilization	and Cardholder Agreement. "Credit Card" means the Gredit Card issued to yo us under this Agreement. This Account and all purchases made on it are not br on us until your credit is approved. The application will be deemed approved and Account established when we (or the merchant) give you notice of that fact. Yo be deemed to have accepted the credit card Account and agreed to be bound by terms of this Agreement by your use of the Account evidenced by a purchase	n open end credit ac or (1) the purchase o rr (1) the purchase o rr from time to time. rr from time to time. "Our", and "Us" me "Our", and "Us" me	CREDIT CARD CARDHOLDER AGREEMENT AND APPLICATION FORM WITH AMERICAN GENERAL FINANCIAL CENTER CATION TO AMERICAN GENERAL FINANCIAL CENTER: Each perso
None	TRANSACTION FEE FOR PURCHASES	LATE PAYNERT FEE: We may assess, and if assessed, you will pay a \$10.00 late payment fee when you fail to make at least the minimum monthly payment within 10 days of the Payment Due Date. Payments are not considered made until date of receipt. COLLECTION COSTS: To the extent permitted by law, if we must refer the collection of your Account to an attorney not a salaried employee of ours, you promise to pay us a reasonable attorney's fee and all court and collection costs actually incurred by us in connection with any collection proceeding as may be allowed by law.	payment on your Account which is presented for payment and which is subsequently not paid. OVER-THE-CREDIT-LIMIT FEE: If you exceed your credit limit you will be charged a \$10.00 over-the-credit-limit fee.	you will pay a return	reement may be sett any negotiable instrum her or not accompan romise or settle the d negotiating a negotia to sent to the addu	N ON A NEGOTIAB	anyone other man yoursen and time to time.	Not to allow the outstanding balance to exceed your Credit Limit, but if you do you agree to repay us such excess amount within 10 days after our request. Exceeding the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account an over-the-credit-limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the Credit Limit will result in our charging your Account and the credit limit fee the credit limit will result in our charging your Account and the credit limit fee the credit limit limit will result in our charging your Account and the credit limit he credit limit fee the credit limit will result in our charging your Account and the credit limit he credit he credit limit he c	any other charges due under the Account, as described in this Agreement, in accordance with the monthly billing statements we will send you. That you are responsible for purchases made by any person you allow to use your Card or Account.	gree as follows: Is Finance Charges a	ur Account. You prom 9d your Credit Limit. V 1use you to exceed yv 1at use of your Accou ave to honor other us av increase or decree	CWNERSHIP : The Credit Card remains our property and may be cancelled by us a any time without notice. You, and all authorized users, agree to maintain good credit with all creditors. You, and all authorized users, agree to surrender the Card and any other access devices and to discontinue utilization of the Credit Card Account by any other means immediately upon request.	Card issued to you de on it are not bind smed approved and t ice of that fact. You eed to be bound by t ced by a purchase s	The Application for a creatic data calculation effects on whether can vote the application for a creating and one provide an open end creat facount. If AGFC accepts the application, credit will be extended for (1) the purchase of goods and/or services from businesses that honor the Credit Card Account and (2) the purchase of financiaes from businesses that AGFC may offer from time to time. Each person executing products or serves that AGFC may offer from time to time. Each person executing this Agreement agrees to live up to the terms of this Agreement. Each person accepted the application of AGFC. "AGFC. "Augment "We", "Our," and "Us" means each person who signs the application of the ap	CREDIT CARD CARDHOLDER AGREEMENT AND APPLICATION FORM WITH AMERICAN GENERAL FINANCIAL CENTER APPLICATION TO AMERICAN GENERAL FINANCIAL CENTER: Each person executing
\$10.00	LATE PAYMENT FEE	ate ion by by	d a		ent ied ble ble		10	ing I.		16. Ind	ve Ve our 15. ies ies	at dit 14. my	u by 13. Iding 13. I the 1 will 1 will 1 will 1 will 1 slip.	ng 12.	11.
\$10.00	OVER THE CREDIT LIMIT FEES	3. then to new p side of the Acco oldest Special F and then the prin delinquent Spec delinquent Spec all delinquent ar	 B. For that portion of the pa of the Account, the payme 1. First to the sum of fees 2. then to the previous bill 	Applied first to the Payment Plan Plan Planse follow the	 Delinquent S Delinquent R Special Payn Regular Rev Payments in exc 	A. Payments are allocate not made under any S in the following priority:	determination of the Finance C Rate.	AFFLICABLE LAW accordance with the by federal law, fed decision to approve	for establishment of your account, consi you to affiliates of o our affiliates.	CREDIT INFORMA to fulfill the terms c credit record may t request a consumer	amount of the unauthorized to DELAY IN TAKING ACTION if we delay taking action for other action not listed in the rights under this Agreement.	LOST OR STOLEN will not be liable fo Financial Center, S 1-800-628-9324, ora Card or Account. Ir	CHANGES TO THIS A time to time and shall g may include, without lim Annual Percentage rat If we do so, such chai If we do so, such chai and future transactions	DEFAULTS AND A at our option and w default under this A to pay any required or otherwise fail to c payment of the full if we deem ourself it to be impaired.	CANCELLATION: Wyou must surrender We may cancel this this Agreement by a Cards and other me existing obligations.
\$10.00	RETURNED CHECK FEE	ourchases. out, the payment allo ount, the payment Plan Payment Plan Purch noipal. When the pay noipal. When the pay ial Payment Plan Plan ial Plan ial Payment Plan Plan ial ial Plan ial ial Plan ial ial Plan ial ial ial ial ial ial ial ial ial ial	For that portion of the payment allocated to the Regula of the Account, the payment will apply. 1. First to the sum of fees and accrued Finance Charges. 2. then to the previous billed purchases;	applied first to the Regular Revolvin Payment Plan Purchases balances. Please follow the instructions on yo	Delinquent Special Payment Plan Purchase balances Delinquent Regular Revolving Purchase balances Special Payment Plan Purchases minimum payment Regular Revolving Purchases minimum payment due and the minimum payment due and	llocated between Sp any Special Payme riority:	e Finance Charges,	and open your Acco	this Account. You al umer report information ours for possible ma	(TION: As required to of your credit obligat be submitted to a ci- credit report on you -	thorized use. ACTION: We will n action for any reaso led in this Agreement reement.	I CARD: You may b or unauthorized use Service Center, P.O ally or in writing, of I ally or in writing, of I any case, your lial	S AGREEMENT: We all give you notice of tlimitation, changes ir rate) and changes changes will apply to ons.	CCELERATION: All without further notice Agreement. You will amount on time, ma comply with this Agree amount you owe u nsecure, believing in	Ve own the Credit Card to r the Credit Card to Agreement at any t sending us a writter eans of Account acc
Average Daily Balance Method Including New Purchases	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	cated to the Special will apply first to the ase on the Account, ment clears the deline urchase, the payment chase on the Account Payment Plan Purcha	v: v: v: d Finance Charges; ves;	g Purchases balance ur billing statement if	Delinquent Special Payment Plan Purchase balances. Delinquent Regular Revolving Purchase balances. Special Payment Plan Purchases minimum payment due. Regular Revolving Purchases minimum payment due and del	vecial Payment Plan f nt Plan (here-in Regu	Annual Percentage R	Utah, or, to the extent : AGFC will process y unt and advance credi	so agree that we may lion and other informa rketing to you of finar	CREDIT INFORMATION: As required by law, you are hereby notified that if to fulfill the terms of your credit obligations a negative credit report reflecting credit record may be submitted to a credit reporting agency. You agree that request a consumer credit report on you and may use it in connection with any ap	ot lose any of our rig n. To the extent allow nt. If we take other ac	LOST OR STOLEN CARD: You may be liable for unauthorized use will not be liable for unauthorized use that occurs after you notify Financial Center, Service Center, PO. Box 3053, Evansville, Ind 1-800.628-9324, orally or in writing, of loss, theft, or possible unauth Card or Account. In any case, your liability shall not exceed the les	CHANGES TO THIS AGREEMENT. We may change the terms of this A time to time and shall give you notice of the changes as required by law. may include, without limitation, changes in the monthly periodic rate (and the Annual Percentage rate) and changes in the method of computing Fin If we do so, such changes will apply to both the outstanding balance in and future transactions.	amounts you owe ur become immediately be in default under t ke any false or mislea ament. We may cancel s if you die, become good faith the prospe	rd. You may not assign us or any authorized ime, subject to applica request for Account tess cut in half. Cano
None	MINIMUM FINANCE CHARGE	3. then to new purchases. For that portion of the payment allocated to the Special Payment Plan Purchases side of the Account, the payment will apply first to the delinquent amount of the oldest Special Payment Plan Purchase on the Account, reducing first the interest and then the principal. When the payment clears the delinquent amount of the oldest delinquent Special Payment Plan Purchase, the payment applies to the next oldest delinquent Special Payment Plan Purchase on the Account. When the payment clears all delinquent amounts for Special Payment Plan Purchases, the payment applies all delinquent amounts for Special Payment Plan Purchases.	to the Regular Revolving Purchases side ance Charges;	applied first to the Regular Revolving Purchases balances and then to the Special Payment Plan Purchases balances. Planse for a specific number of the special Please follow the instructions on your billing statement if you have more than one purchase and with a parky with nament to a specific number.	e. elinouent amounts will	A Payments are allocated between Special Payment Plan Purchases and purchases not made under any Special Payment Plan (here-in Regular Revolving Purchases) in the following priority:	ate, and Monthly Perio	APPLICABLE LAW: This Agreement is and use governed by and metoplaced online accordance with the laws of the State of Utah, or, to the extent such laws are superseded by federal law, federal law shall apply. AGFC will process your application, make the decision to approve and open your Account and advance credit for you from our Mathement the time of the prove and open your Account and advance credit for you can material to the laws.	for establishment of this Account. You also agree that we may provide information about your account, consumer report information and other information we may have about you to affiliates of ours for possible marketing to you of financial services provided by our affiliates.	y notified that if you fail report reflecting on you You agree that we may ection with any application	DELAY IN TAKING ACTION: We will not lose any of our rights under this Agreement if we delay taking action for any reason. To the extent allowed by law, we may take other action not listed in this Agreement. If we take other action, we will not lose our rights under this Agreement.	LOST OR STOLEN CARD: You may be liable for unauthorized use of your Card. You will not be liable for unauthorized use that occurs after you notify American General Financial Center, Service Center, P.O. Box 3053, Evansville, Indiana 47730-3053, 1-800-628-9324, orally or in writing, of loss, theft, or possible unauthorized use of your Card or Account. In any case, your liability shall not exceed the lesser of \$50 or the Card or Account. In any case, your liability shall not exceed the lesser of \$50 or the card or Account.	CHANGES TO THIS AGREEMENT: We may change the terms of this Agreement from time to time and shall give you noise of the changes as required by law. Such changes may include, without limitation changes in the monthly periodic rate (and the corresponding Annual Percentage rate) and changes in the method of computing Finance Charges. If we do so, such changes will apply to both the outstanding balance in your Account and future transactions.	DEFAULTS AND ACCELERATION: All amounts you owe under this Agreement if you at our option and without further notice become immediately due and payable if you detaut under this Agreement. You will be in default under this Agreement if you fail to pay any required amount on time, make any false or misleading statements to AGC or otherwise fail to comply with this Agreement. We may cancel your Account and require payment of the full amount you owe us if you die, become bankrupt or insolvent, or if we deem ourself insecure, believing in good faith the prospect of payment thereunder to be impaired.	CANCELLATION: We own the Credit Card. You may not assign the Account. On request you must surrender the Credit Card to us or any authorized institution or merchant. We may cancel this Agreement at any time, subject to applicable law. You may cancel this Agreement by sending us a written request for Account cancellation with all your Cards and other means of Account access cut in halt. Cancellation will not affect the existing obligations.
	N D			ne	G B	(se		he he d	by by	fail bur ay on	ent ke		om ng as. 20.	e c e <u>c e</u> 2	nt. 19. 19.
Department to obtain a d and grace periods. 1 1-800-518-8866.	executing the Application, o shall bind all such persons. 26. EXECUTION OF AGREEMENT of this Agreement if we accept given a copy of this Agreement. * New York residents ma	 unit, the goous are paid for in may take possession of only the 24. ADDRESS: You may write us Post Office Box 3121, Evansville 25. OTHER PROVISIONS: (a) We shall have no liability to Account, (b) you may not a our rights without obtaining our fights without obtaining 	 PLACE TO SEND PAYMENTS: to the address we set forth on the 23. SECURITY INTEREST: (Except Vie will have a purchase money view will have a purchase in the pay view will have a purchase in the pay view will have a purchase in the pay view will have a purchase money 	We can accept late payments, r of our rights under this Agreen this Agreement any number of permitted by law, take other acti	You have the right to pay all o time without a prepayment penalt Payment does not relieve you when it comes due. We will not r	send you a billing Statement (size Payment given on the Statemen will be the greater of 3% of the due on special Payment Plan p \$10 no is navahle in full	Agreement. The lower Annua will be disclosed on the purcha	specified on the front of your E. Reduced Annual Percentage annual Percentage Rate that	D. Same as Cash - If during the of your purchase slip you pay will be assessed on the purc paid during this time period, of the numbers Multinum of the surphase Multinum of the second of the numbers of the second of the second of the surphase second of the second of the second of the surphase second of the second of the second of the surphase second of the seco	C. Deferred Payment and Defer Finance Charges will not accr Charges will accrue and payr Account.	 The Defended Fayment, Function made on your Account. B. Deferred Finance Charge Func- for the period specified on the made. Finance Charges will no 	to make purchases with the to to on your purchase slip: A. Deferred Payment Purchases Purchase for the period spec will begin to accrue on the dat		Balance of Purchases (defined Purchases and new Purchases, the date of posting. The Finance Monthly Periodic Rate of 1:37 to the Average Daily Balance. To are computed, we add the total unpaid purchases and new pur- statement yeb plus any unpaid statement yeb plus any unpaid	

terest and/or principal is reduced on Special Payment equence as the purchases occurred.

- ce Charges begin on the date of posting. You will avoid sit iyou paid the entire New Balance shown on your previous ment Due Date. If the new balance is not paid in full by ance Charges will begin to accrue on the Average Daily ance Charge will begin to accrue on the Average Daily es, whether or not billed on your periodic statement, from ance Charge on your Account is figured by applying the L375%, which is an **Annual Percentage Take** of 18.9% To get the Average Daily Balance on which Finance Charges and daily balance of purchases (both previously billed and purchases whether or not billed on your periodic billing aid balance of purchases under a Special Payment Plan Finance Charges on such day and we deduct any payments d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special d by the number of days in the statement period. (Special Ince.)
- ICHASES: In addition to Regular Revolving Purchases tated above, you may from time to time be permitted owing Special Payment Plans which will be referred
- No payment will be due on the Deferred Payment lifed on the purchase slip; however, Finance Charges the Deferred Payment Purchase posts to the Account se will not defer the payment due date for other purchases
- hases No Finance Charges will accrue on the purchase le purchase slip; however, regular payments must be t be deferred for other purchases made on your Account.
- red Finance Charges No payments will be due and te for the period specified on the purchase slip. Finance nent must be made for other purchases made on your
- a time period (the option period) specified on the front r off the balance Charges thase. However, if the balance of the purchase is not Finance Charges will be assessed from the post date syments may be required during the option period as yurchase slip and in this Cardholder Agreement.
- Pate Finance Charges will be calculated at a lower r disclosed in the Finance Charges paragraph of the Percentage Rate applicable to such special purchases use slip and on your monthly periodic statement.
- 1 PAYMENT: If your Account has a balance, we will terment) periodically. You must pay at least the Minimum to by the Payment Due Date. The Minimum Payment Total New Balance plus the monthly payment amount total New Balance of less than

r part of the balance due under the Account at any i. Payment made in an amount greater than the Minimum si your obligation to pay the next Minimum Payment fund to you a credit balance of \$1.00 or less.

- artial payments, checks and money, without losing any ent. We can also delay in enforcing our rights under imes without losing them. Also, we may, to the extent n not listed in this Agreement.
- Payments you make on the Account are to be mailed Monthly Billing Statement.
- n New York)
- security interest in all goods purchased on your Account full. If you do not make your minimum payments, we goods that have not been paid for in full.
- tt American General Financial Center, Service Center IN 47731-3121.
- you should any person refuse to honor your Card or sign your rights under the Account, (c) we may assign your consent, (d) any notice given by or to any person action taken or agreement made by any such person,
- Your signing the Application also binds you to the terms your application and extend your credit. You will be
- ly contact the New York State Banking ew omparative listing of credit card rates, fees York State Banking Department



Estamos cerca del aeropuerto internacional en Orlando, Florida



Eduardo KD4RAZ



Natán KN4BJ



Jaime N4LIO



Carlos

Llamenos ... Enviamos su pedido a la direccion especificada ... No Importa Donde! Ninguna orden demasiado grande o pequena!

Some Helpful Abbreviations ABREVIACIONES IMPORTANTES

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*

AMP	Amplificador
ANT	Antena
AT	Acoplador automatico de
	antena
BATT	Batteria
BKT	Braket de montura
BPR	Guarda choque
CGR	Cargador
CIG	Conector cigarillo
CNTR	Contador
DB	Decibeles
DLX	Lujo
DPLX	Duplexador
EL	Elemento
FREQ	Frequencia
GND	Tierra
GTR	Labio de ventana
HT	Radio de mano
HVY	Pesado
KYR	Llave
MA	Miliamperes
MAG	Magnetico
MAINT	Mantemiento
MIC	Microfono
MT	Montura
MTG	Montura
NMO	Montura Motorola
PROG	Programable
PS	Fuente de poder
PWR	Poder
RCVR	Receptor
REM	Remoto
SENS	Sensitividad
SPKR	Bocina
SPLX	Simplex
SYS	Sistema
TTP	Teclado de botones
VOL	Volumen
W/	Con
WPM	Palabras por minuto
XCVR	Transceptor

Contact: AES® Orlando, FL:

Tel. 1-407-894-3238; Toll Free 1-800-327-1917; Fax. 1-407-894-7553; International 1-407-898-1166

Payment:

Preferred payment method is by wire transfer. See bank routing instructions below. International Money Orders are Not acceptable. International Credit Cards are accepted in store only.

Method of Payment - Bank Transfer:

Barnet Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193 for credit to Amateur Electronic Supply – Acct. #1300009536. Shipping:

Shipping will be at the customer's preference. If there is no preference expressed AES will select a carrier.

Policy:

Manufacturer warranties good only in USA. If your radio needs service return it to AES with a copy of the invoice; for warranty repair it must be returned within the terms of the manufacturer's warranty. AES reserves the right to fix or replace radios as deemed necessary. Shipping costs both to and from the repair site are the full responsibility of the customer. Prices and warranties are subject to change without notice. All items may not be available to all countries. Some local laws may be applicable.

Para Contactar: AES[®] Orlando, FL:

Tel. 1-407-894-3238; Toll Free 1-800-327-1917; Fax. 1-407-894-7553; Internacionales 1-407-898-1166

Forma de pago:

El pago preferido es vía transferencía de fondos. No se aceptan giros bancarios internacionales. Tarjetas de credito internacionales se aceptan en el almacen sólamente. Nuestro dirección para la transferencía de fondos es : Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193, for credit to Amateur Electronic Supply - Acct. #1300009536.

Método de envío:

El envío será a su gusto. Sí usted no expresa sus deseos AES buscará un método adecuado.

Garantía:

La fábrica garantiza sus equipos dentro de los EE.UU. solamente. Sí su equipo necesita reparación, devuelva su equipo a AES con una cópia de la carta de garantía y factura, dentro de la plaza autorizada por la fábrica. AES se reserva el derecho de reparar ó reemplazar equipo que no funciona como diseñado por razones que no resultaron por daño durante envio. Al recibir equipo inoperativo ó con defectos, debe notificarse a AES antes de 10 dias despues de recibirlo. El equipo debe enpacarse en el carton original usando los materiales de empague originales. El costo de envío, tanto de ida como de vuelta, será la

responsibilidad del cliente. Precios y garantías pueden cambiar sin previo avíso. Algunos productos no se pueden exportar a ciertos países, de acuerdo a leyes locales.

International Inquiries • Orlando, Florida – Phone: 1-407- 898-1166

621 Commonwealth Ave. • Orlando, Florida 32803 Phone: (407) 894-3238 • *Toll Free:* 1-800-327-1917 FAX: (407) 894-7553 • International: (407) 898-1166



"Se Habla Español"

INFORMACIÓN DEL ENVIO: El envío será a su gusto. Si usted no expresa sus deseos AES buscara un método adecuado. Usamos UPS, Federal Express, Dhl ó hay un cantidad de exportadores locales. Por favor mandamos por fax, correo, ó telefono una lista de su pedido total y nosotros le contestaremos con los precios y peso total de su pedido.

Numero de cuenta	Fecha	Enviar A
Nombre	Indicativo	-
Direccion		-
Ciudad/Estado	Codigo postal	Si ha cambiado de residencia desde su ultimo pedido, favor incluir la ultima
Numero del telefono (incluir lada)		direccion tambien
Telefono del hogar	Horas	-
Telefono del trabajo	Horas	

Cantidad	No se usa	Fabricador • Parte / # de modelo • Descripcion	Precio Individual	Total
Jan Markalan Marka	an to a second state of the second	LINE 1 — Tot	al de su pedido	\$

Equipo con daños:

Equipo con daños se define a aquel equipo que, ha sufrido danos ó averías como resultado de enventos ocurridos durante transito. Sí se recibe equipo como definido anterioramente avise por escrito o fax al transpotador y a AES imediatamente. Guarde el carton de envío original y materiales de empaque para la inspeccion del transportador — esto es muy importante para la resolucion de reclamo.

Aduana:

Normalmente cargas de aduanas seran la responsibilidad del transportador. Pero, sí cargas, despachos de aduanas o costos inesperados occurren, se espera que el cliente coopera con el transportador para complir con el despejo del equipo.

LINE 1 —	Total de su pedido	\$
LINE 2 — Resta de cu	_	
LINE 3 —	Balance	\$
LINE 4 —	Costo de envio	+
LINE 5 —	Costo adicionales de pedidos previos	+
LINE 6 —	Total	\$
LINE 7 —	Blance Final	\$
and the second second second second		

For Export Call **AES[®]** Orlando

Toll Free: 1-800-327-1917 or FAX: 407-894-7553

407-898-1155

Manufacturer Phone Numbers & Warranty Information

AEA

2006 196th St. SW Units O & P Lynnwood, WA 98036 **Service/Tech Suppport:** 206-775-7373

Sales: 206-774-5554 Upgrade Hot Line: 206-774-1722 Literature Request Line: 800-432-8873 FAX: 206-775-2340 Limited Warranty: 1 year

ALINCO

438 Amapola Avenue, #130 Torrance, CA 90501

Customer Service: 310-618-8616 FAX: 310-618-8758

Limited Warranty: 1 year parts and labor. Within 15 days of purchase, extended 1 year parts and labor warranty available from ALINCO.

AMERITRON

921 Louisville Road Starkville, MS 39759

Shipping:

116 Willow Road Starkville, MS 39759

Customer Service: 601-323-8211 FAX: 601-323-6551

Limited Warranty: 1 year on all products except 2 years on AL-80B. All tubes are guaranteed by the respective tube manufacturers.

COMET (NCG)

1275 N. Grove St • Anaheim CA 92806 **Customer Service:** 800-962-2611 **FAX:** 714-630-7024 **Limited Warranty:** 90 days

CUSHCRAFT Corporation

P.O Box 4680. • Manchester, NH 03108 **Telephone:** 603-627-7877 **FAX:** 603-627-1764 **Limited Warranty:** 1 year against mate-

rial defects and workmanship.

HUSTLER

One Newtronics Place Mineral Wells, TX 76067 Customer Service: 817-325-1386 FAX: 817-328-1409

Limited Warranty: 1 year

KANTRONICS, Inc.

1202 E. 23rd St. Lawrence, KS 66046 Product Information: 913-842-7745 Service/Tech Suppport: 913-842-4476 Hours: 9 A.M. – noon & 2 PM – 5 P.M. 24 hour BBS support: 913-842-4678 (1200-14,400 v.32 bis 8 bits no parity) FAX: 913-842-2021 Limited Warranty: 1 year, parts/labor.

AZDEN

147 Hyde Park Road Franklin Square, Ny 11010 Information & Service 516-328-7506 FAX: 516-328-7506

Warranty: 2 years: 1st year parts & labor; 2nd year, parts only.

ICOM AMERICA, Inc.

2380 116th Avenue NE Bellevue, WA 98004

Telephone: 206-454-8155 Customer Service Hotline: 206-454-7619 Parts Department: 206-454-8155 FAX: 206-454-1509

Regional Customer Service Centers 18102 Sky Park South., Suite 52-B Irvine, CA 92714 Telephone: 714-852-8026 FAX: 714-852-8716 3071 #5 Road, Unit 9 Richmond, British Columbia Canada V6X 2T4

Telephone: 604-273-7400 Limited Warranty: 1year parts/labor.

KENWOOD U.S.A.

P.O. Box 22745 Long Beach, CA 90810 Telephone: 310-639-5300 Fax: 310-631-3913 Parts: 800-262-1312 • 310-515-0207 Parts Fax: 310-538-4919 Bulletin Board (Free): 310-761-8284 KENWOOD Service Center East 829 Lynnhaven Parkway, suite 130 Virginia Beach, VA 23452

Customer Relations: 804-340-1702 Fax: 804-340-6809 Parts: 800-637-0388 • 516-483-5742 FAX: 516-483-5904

Limited Warranty: 1 year, parts/labor.

LARSEN

3611 N.E. 112th Ave Vancouver, WA 98668 Customer Service: 206-944-7551 Full Warranty: 3 years

MFJ Enterprises, Inc.

P.O. Box 494 Mississippi State, MS 39762 **Telephone:** 601-323-5869 **Technical Support:** 800-647-8324 **FAX:** 601-323-6551 **Warranty:** 1 year – "no matter what"

RF PARTS (Diamond Antennas)

1320 Grand Ave. • San Marcos, CA 92069 Customer Service: 619-744-0750 (RFP) 619-744-0900 (DIA) FAX: 619-744-1943

Limited Warranty: 90 days, call for RA#

KLM

14792 172nd Drive S.E. Monroe, WA 98272

Telephone: 206-794-2923 FAX: 206-794-0294 Limited Warranty: 1 year parts/labor.

MIRAGE

P.O. Box 1000 Morgan Hill, CA 95038

Shipping: 16890 Church Street, Bldg. 14 Morgan Hill, CA 95037

Telephone: 408-779-7363 FAX: 408-779-8845

Limited Warranty: Amplifiers: 5 years. Repeater Amps: 2 years. Wattmeters: 2 years. Pre-amplifiers & RF Power transistors: 1 year.

RF CONCEPTS

1202 E. 23rd St. Lawrence, KS 66046

Product Information: 913-842-7745 **Service/Tech Suppport:** 913-842-4476 Hours: 9 A.M. 12 noon and 2 PM – 5 P.M.

24 hour BBS support: 913-842-4678 (1200-14,400 v.32 bis 8 bits no parity) **FAX:** 913-842-2021

Limited Warranty: 1 year, parts/labor.

STANDARD Amateur Radio, Inc.

P.O. Box 48480 Niles, IL 60648 Telephone: 312-763-0081 FAX: 312-763-3377 Limited Warranty: 1year, parts/labor.

STARTEK

398 NE 38th St. Fort Lauderdale, FL 3334 Telephone: 305-561-2211 FAX: 305-561-9133 Limited Warranty: 5 yrs parts, 1 yr labor

YAESU U.S.A.

17210 Edwards Road Cerritos, CA 90703 Telephone: 310-404-2700 Sales FAX: 310-404-1210 Tech Support FAX: 310-404-4828 Limited Warranty: One year, parts/labor

For other Service Information call the **AES**[®] Service Department at:

414-358-0333 Experienced and Certified technicians on staff, using the latest in techniques and test equipment.

We welcome your repair work!

Note: We are always looking for qualified Service Technicians. For information, call the alarse number and ask for Miles.

The ass family...



SQUEAK AD7K Mgr.

TOM N7GBJ

HAROLD AA7UL

RICHARD KG7QK

JOHN

BOB KG7D

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POLICIES • WARRANTIES • OTHER INFORMATION

NEW EQUIPMENT In order to guarantee Factory Sealed, Factory Fresh equipment, no free trial or evaluation is offered by AES*. All New Equipment is warranted by the Manufacturer unless otherwise stated. Authorized returns of non-defective merchandise received back on a timely basis, will be subject to a minimum 10% handling and restocking charge. No returns on antennas or items drop shipped from the factory-manufacturer warranty only. For any defective books, tapes or computer software, an exchange will be made.

DEFECTIVE ITEM??? If your NEW radio or accessory fails within 10 days after you receive it, bring it in or send it back via UPS prepaid and insured. Pack well and include original carton with all packing material, the warranty card, and a photocopy of your invoice. If we can't repair the item within a reasonable length of time, we will replace it. If the item is out of stock or back-ordered, and you can't wait for the repair, you may request a refund, or credit towards other merchandise. Not applicable to cable, antennas or towers. If you have equipment that appears defective, call our Customer Service Department at (414) 358-0333 concerning the warranty repair procedure.

USED EQUIPMENT After the purchase and receipt of USED equipment, there is a a 10-Day Trial. During this period, if the equipment you received is unsatisfactory for any reason, you may return it for a refund, less shipping charges - both ways. If there is a problem, repair parts and labor are covered under a 30 Day Warranty. Return the equipment to the store it was purchased from, prepaid and insured. We will correct the defect and return it at no charge. Within 90 days after you receive our shipment of USED equipment, we will allow you Full Trade-in toward Higher Priced NEW equipment. To qualify, the condition of the item must be as it was when you originally received it from us.

TRADE-INS We will take your clean late model SSB or FM gear in trade towards New Equipment shown in this catalog, or we will buy it outright for Cash - write or call for a quote. In order to receive the full value as quoted for your equipment it must be received by us in good electrical and physical condition, free from abnormal wear, defects, modifications, corrosion and smoke residue. The manual and any original accessories that came with the unit must be included. Note: We do not take in data controllers, UHF/VHF amplifiers or antennas.

UPS COD ORDERS (\$20 minimum) COD is available on UPS ground service only. Payment must be made at time of delivery by CASH only. Money orders, personal or certified checks will not be accepted. The COD fee is \$6.50 per carton shipped.

PRICING Due to market fluctuations or Special Purchases, we will pass on decreases in pricing to our customers whenever possible. Sometimes there are increases, so be sure to confirm pricing with your salesperson before ordering. All prices and specifications are subject to change without notice, and we are not responsible for typographical errors or omissions.

AES SHIPS TO U.S.A, it's Possessions, APO/FPO, and Canada. Canadians Note: Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. AES will not accept any shipments from Canada unless all fees are paid in advance. OTHER EXPORTS See page 156 for details.

DAMAGED ITEM??? If you receive a shipment and discover damage to it, NOTIFY THE CARRIER IMMEDIATELY. DO NOT return merchandise to us until notified to do so by the carrier. Retain all packaging materials (styrofoam peanuts, inner and outer cartons, labeling, etc. for inspection by the carrier- without this, your claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.

SPECIAL ORDER ITEMS Items marked "SPECIAL ORDER" must be paid for in advance with check or money order and are non-cancelable

FLAT RATE SHIPPING! AES has simplified shipping calculations on UPS Ground service to the 48 states by utilizing

flat rate categories. See details on page 156. All faster shipping must be paid in advance or with credit cards when ordering.

AES CREDIT CARD O.K. at any AES* location for new or used gear. No payment for 90 days (Interest accrues).

PICQUIC	17	
PIPO		Wire Transfer Inf
POLYPHASER		
PRO AM (VALOR)	10, 90	
OCL CARD HOLDERS	10	MILWAUKEE • M&I Marshall & Ilsley B
QSL CARD HOLDERS	10 10 01	
RF CONCEPTS		consin. ABA #075000051. Further cre
RF LIMITED		Bank to credit account #10-01-6953 i
RF PRODUCTS		
RADIO AMATEUR CALLBOOK		teur Electronic Supply.
RANGER		e e e e e e e e e e e e e e e e e e e
REVERE INDUSTRIES		WICKLIFFE • Society National Bank
ROHN		
SGC		29310 Euclid Avenue; Wickliffe, Ol
SAMS		
SANGEAN		#041001039 for credit to: Amateur
SHAKESPEARE	19, 24, 27	Acct #30-005-7505
SHURE	19,92	ACCL #30 003 7303
SMILEY ANTENNA	19.143	ORLANDO • Barnett Bank of Orlan
SOLARCON	19 95	
SOLDER-IT	19 145	Branch, Orlando, Florida. Routing #C
SONY		
SOUTH RIVER TRIPODS	10	to: Amateur Electronic Supply - Acct #
STANDARD	10 20 55 50	
STARTEK COUNTERS		LAS VEGAS • Bank of America, Decat
STERMAN DRINTING (OCL CARDS)		
STERMAN PRINTING (QSL CARDS)		Routing #1224 000 724 for credit to
SYNTHETIC TEXTILES (GAP)		Supply - Acct #230056248
TAB BOOK		50ppry /1000 #250050240
ТЕМРО		
TIMEWAVE		AES®
TUBES		
TUNE BELT		24 hour Milwaukee
U.S. TOWER	20, 139, 141	
USED GEAR & DEMOS		Wickliffe
UNADILLA/REYCO (W2AU)		Orlando
UNIDEN		
UNIFIED MICROSYSTEMS		Clearwater
UNIVERSAL TOWERS		Las Vegas
VALOR (PRO•AM)	21 138	Numbong
VANCO	21.89	Audio Plus
VAN GORDEN	21,00	
VECTRONICS		Oshkosh, WI.
VIBROPLEX	21, 04, 09, 101	
WABER		If you have a complaint or a new
		If you have a complaint or a pro
WALNUT CREEK		be resolved by a Store Manager
WELLER.		
YAESU		Customer Service Departmen
ZM EXPRESSIONS		
ZENITH		at 1-800-558-0411, ask for

Wire Transfer Information

MILWAUKEE • M&I Marshall & Ilsley Bank, Milwaukee, Wisconsin. ABA #075000051. Further credit to M&I Northern Bank to credit account #10-01-6953 in the name of Amateur Electronic Supply.

WICKLIFFE • Society National Bank, Wickliffe Branch, 29310 Euclid Avenue; Wickliffe, Ohio 44092. Routing #041001039 for credit to: Amateur Electronic Supply -Acct #30-005-7505

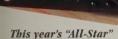
ORLANDO • Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193 for credit to: Amateur Electronic Supply - Acct #1300009536

LAS VEGAS • Bank of America, Decatur Meadows Branch. Routing #1224 000 724 for credit to Amateur Electronic Supply - Acct #230056248

24 hour	►AES®
FAX	Milwaukee
Numbers	Audio Plus Oshkosh, WI(414) 235-3204

If you have a complaint or a problem that cannot be resolved by a Store Manager you may call our **Customer Service Department in Milwaukee** at 1-800-558-0411, ask for Ray or Dan.





Line Up includes (L to R):

Тор row: IC-2340H, IC-Δ100H, IC-2700H Middle row: IC-2GXAT, IC-820H, IC-T21A, IC-281H Bottom row: IC-737A, IC-736 (Not pictured: IC-T41A UHF bandbeld and IC-481H* UHF mobile)

Get Your Mitts on an ICOM "All-Star" this Season!

IC-2340H 144/440 MHz Mobile

• Independent Controls • Auto Repeater Functions • Built In Duplexer

• 2.4 W Audio • True Dual Band

- Large Display
- 110 Memories
- CTCSS Encode

IC-A100H Triple Band Mobile

- Triple Band Flexibility Full Remote Cntrl. Mic.
- 642 Memories • High Performance
- Voice Synth. (opt.) • Detachable Panel
- 8 Selectable Band Combinations

IC-2700H 144 / 440 MHz Mobile

- V/V, U/U or V/U • Detachable Panel
- Auto Repeater Functions • Full Remote Ctrl. Mic. • Pager/Code Squelch
- CTCSS Encode
- Infrared Wireless Mic. (opt.)

IC-2GXAT 144 MHz Handheld • Auto Repeater Functions

- Tone Scan
- 350 mW Audio
- 700 mAh Battery • Selectable DTMF Speed • 7 W (opt.)

IC-820H 144/440 MHz All Mode Base Station

- Auto Satellite Features
 High Stability Crystal
- New DDS (I-Loop)
- 116 Memories

IC-T21A 2 M w/440 MHz Rx Handheld

- 114 Memories
- Tone Scan

- 80 Memories
- 9600 bps Ready · Plug & Play
 - - Tone Scan (opt.)

IC-737A 100 W HF Transceiver • 100% Duty Cycle

- New DDS (I-Loop)
- Built In Tuner • Dual Ant. Connectors
 - VOX

IC-736 100 W HF & 6 M Transceiver • Built In Power Supply

• VOX, RF Gain

with the second
at your parti ICOM dealer

- New DDS (I-Loop)
- Built In Keyer
- ICOM America, Inc. **Corporate Headquarters** 2380-116th Ave. NE, Bellevue, WA 98004 Technical Support (206) 454-7619

• 4 Function Display

• Built In Tuner (6 M too)

• Built In Keyer

- t been approved by the Federal Communications Commission. not, and may not be, offered for sale or lease, or sold or leased until wal of the FCC has been obtained. This device has not been appr This device is not and m
 - the opproval of the FCL has been anonane. © 1994 FCDM America, Inc. The FCDM topo is a registered trademark of FCDM, Inc. All stated specifications are subject to change without notice or obligation. All FCDM radius significantly exceed FCC regulations limiting spurious emissions. TEAM9344



For free literature on ICOM radios call our Brochure Hotline: (206) 450-6088

- 800 mAh Battery

• 9600 bps Ready

• Compact Size

- Auto Repeater Functions
- Selectable DTMF Speed 6 W (opt.)

IC-281H 2 M Mobile w/440 MHz Rx • Large Display

Auto Repeater Functions

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(except the Clearwater Store) to place an order up to 1:00AM Eastern Time

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"Se Habla Español

see page 156



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Please check your address label above to see if the information is correct. If you have a Ham Call, is it properly shown? - please advise us of any corrections by mail.

Watch for Mailings or Check Our BBS for Open House Dates • HOURS: Mon-Fri 9-5:30; Sat

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