

ADJUST FOR			
10.240 MHz PLL REFERENCE: RX Mode, AM, Freq. to 26.965MHz Band D Fine and coarse clarifier control to center detent. Remove TP7-TP9 jumper PCB.	Connect Frequency counter to IC5 Pin 4.		Check for 10.240MHz \pm 200 Hz. If tolerance is beyond this, replace X1 (10.240MHz).
VCO BUFFER: RX Mode, AM, Freq. to 26.965MHz Band D Fine and coarse clarifier control to center detent.	Connect scope to TP3 (top bare lead of R74)	L18	Adjust for max. RF (0.80V p-p typical).
	Connect scope to L22 secondary (bare lead of L50).	L22	Adjust for max. RF (2.0V p-p typical)
VCO: RX Mode, AM, Freq. to 26.965MHz Band D Fine and coarse clarifier control to center detent.	Connect DC voltmeter to TP2 (top bare lead of R116)	L17	Adjust for 3.20 VDC \pm 0.1 Vdc. Recheck at 25.615MHz for approx 2.0V. and 28.305MHz for approx 5.0V.
PLL OFFSET OSCILLATOR: RX Mode, AM, Freq. to 26.965MHz Band D Fine and coarse clarifier control to center detent. Modes as indicated.	Connect Frequency Counter to TP3 (top bare lead of R74).	L19	AM: Adjust for 16.2700MHz \pm 20 Hz.
		L20	USB: Adjust for 16.2725MHz \pm 20 Hz.
		L21	LSB: Adjust for 16.2675MHz \pm 20 Hz.

SETTINGS	CONNECTION	ADJUST	ADJUST FOR
AM/FM RF & IF SENSITIVITY: Frequency to 26.965 MHz Mode AM Clarifier controls at center detent. RF GAIN fully clockwise. SQUELCH fully counter clockwise NB/ANL to OFF VOLUME to comfortable level. RF Generator output to 26.965 MHz at 1uV modulated 30% with 1 KHz audio tone.	Connect AF VTVM or scope across speaker terminals. RF Generator to ANT Jack	(in order) L6, L7 L8, L10 L11, L12 L3, L4	Adjust for max. output reading on AF VTVM or Scope.
SSB IF SENSITIVITY: Set mode to USB. RF Generator output to 26.965 MHz at Adjust Coarse & Fine Clarifier 1uV, modulation off. Adjust fine clarifier for peak reading on S-meter.	Same as above	L13, L14	Adjust L13, L14 for maximum as in Step 1.
Set mode to AM. Set frequency to Ch.1 lowest band, then Ch.40 highest band as required.	Same as above	L6, L7	Recheck sensitivity across full radiobandwidth. If necessary, retune L6 & L7 to balance RF sensitivity across bandwidth.
FM DETECTOR: Mode FM. Set FM RF Generator to 26.965 MHz 0.5uV deviated 3 KHz with 1KHz audio tone. Reduce VOLUME as required.	Connect AF VTVM or scope to IC2 Pin 7. RF Generator to ANT Jack	L5	Adjust for maximum audio output.
SSB S-METER: Set mode to USB. Increase RF Generator output to 26.966 MHz 100uV (-67 dBm) unmodulated. Set Squelch fully counterclockwise.	RF Generator to ANT Jack	VR2	Adjust for S-9 reading.
AM/FM S-METER: Set mode to AM. RF Generator output to 100uV unmodulated. Set Squelch fully counterclockwise.	Same as above	VR1	Adjust for "S-9" meter reading.
AM/FM SQUELCH RANGE: Increase RF Generator output to 10mV. Set Squelch Control fully clockwise.	Same as above	VR4	Adjust to the squelch just closes.
SSB SQUELCH RANGE: Set mode to USB.	Same as above	VR3	Adjust to the squelch just closes.
NOISE BLANKER: Set radio to 26.975MHz Set mode to AM. Set RF generator output to 26.965MHz at 1000uV unmodulated. Set NOISE BLANKER switch to "ON".	Connect DC Voltmeter to TP1 (Cathode of D2).	L1, L2	Adjust for maximum DC voltage.

SETTINGS	CONNECTION	ADJUST	ADJUST FOR
Remove TP7-TP9 Jumper PCB.			
TX FREQUENCY: Set mode to LSB	Connect Frequency Counter to TP3 (top bare lead of R74).	VR21	Key TX; Adjust for 16.2675MHz \pm 20 Hz.
CARRIER OSCILLATOR OFFSETS: TX Mode Freq. to 26.965MHz Band D	Connect Frequency Counter to TP6 (top bare lead of R102).	L28	LSB/TX mode: Adjust for 10.6975MHz \pm 20Hz.
	Connect Frequency Counter to TP6 (top bare lead of R102).	L27	USB/TX mode: Adjust for 10.6925MHz \pm 20 Hz.
	Connect Frequency Counter to (top bare lead of R151).	L26	AM/TX mode: Adjust for 10.6950MHz \pm 20 Hz.
DRIVER BIAS: Band Switch & Ch. Selector to 26.965 MHz Ch.1 Band D Mode to USB MIKE GAIN at minimum.	Connect DC Ammeter between TP9 and TP8.	VR11	Key TX adjust for 50-75mA.
FINAL BIAS: Band Switch & Ch. Selector to 26.965 MHz Ch.1 Band D Mode to USB MIKE GAIN at minimum.	Connect DC Ammeter between TP9 and TP7.	VR10 VR20	Key TX & adjust VR10 & VR20 for minimum (0mA) current. Next adjust VR10 for 50mA, then adjust VR20 for 100mA total.
Replace TP7-TP9 Jumper PCB.			
RF AMP CHAIN: Replace PCB shorting jumper. Set mode to AM. Set RF power switch to H.	Connect wattmeter to ANT output.	L43, L44, L42, L40, L33	Key TX & adjust (in order) for maximum RF output . Recheck power at lowest & highest channels; readjust if necessary for balance across entire bandwidth.
SSB CARRIER BALANCE: Set mode to USB MIKE GAIN to minimum.	Connect wattmeter to ANT output.	VR7	Key TX; adjust for mim. carrier leakthrough on scope or wattmeter. Recheck on LSB mode. If necessary readjust for best balance of sideband suppression between LSB & USB
SSB ALC: Mode to USB. MIKE GAIN to maximum. Inject two-tone audio signal of 500 Hz and 2400 Hz, 30 mV (-18 dBm) at MIC jack.	Connect wattmeter to ANT output. audio generator to Mic Jack	VR12	Key TX; adjust for 25 watts PEP.
AM CARRIER POWER HIGH: Set mode to AM, MIKE GAIN at minimum. RF Power to H.	Connect wattmeter to ANT output.	VR13	Key TX; adjust for for 10 watts CAUTION! Do not exceed this level. Damage to power transistors and inability to achieve 100% modulation from insufficient audio power will result.
AM CARRIER POWER MED: Set mode to AM, MIKE GAIN at minimum. RF Power to M.	Connect wattmeter to ANT output.	VR24	Key TX & adjust for 4 watt output. (NOTE: VR24 is not marked on the PCB.)
AM CARRIER POWER LOW:	Connect wattmeter to	VR16	Key TX & adjust for 1 watt output

Set mode to AM, MIKE GAIN at minimum. RF Power to L.	ANT output.		
RF METER: Set mode to AM, MIKE GAIN at minimum. RF Power to H.	Connect wattmeter to ANT output.	VR8	Adjust so panel meter agrees with wattmeter.
AMC: Mode to AM. MIKE GAIN to maximum. Inject audio signal of 1KHz 30mV (- 18 dBm) at MIC jack.	Connect modulation meter to ANT output.	VR14	Adjust for 100% on modulation meter.
FM DEVIATION: Mode to FM MIKE GAIN to maximum. Inject 1 KHz, 30 mV audio signal at mike jack.	Connect deviation meter to ANT output.	VR5	Adjust for 4.5KHz on deviation meter.



