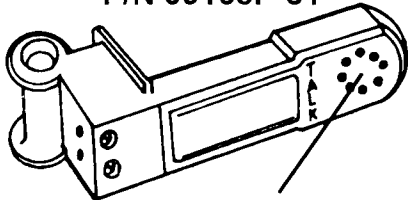


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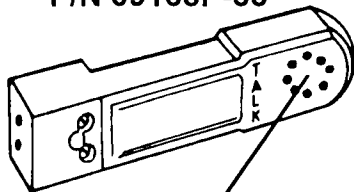
ELECTRET MICROPHONE FOR USE IN AIRCRAFT

MODEL M-7/DC P/N 09168P-31



TALK SIDE

MODEL M-7A P/N 09168P-33



TALK SIDE

The David Clark Company Electret Microphone is a noise cancelling type designed to operate in place of carbon and amplified dynamic microphones. This microphone will not operate in circuits that do not supply a DC bias voltage. Most modern aviation communications equipment do supply this required voltage. If you are not certain, consult your radio technical manual or with your avionics shop.

NOTE

We strongly recommend that the master gain control located within the radio be optimized by a competent avionics technician whenever adding a new model microphone. The David Clark Company Incorporated Model M-7/DC and M-7A Microphones are designed to conform to guidelines set forth by The Radio Technical Commission for Aeronautics. Document No. RTCA/DO-170.

SPECIFICATIONS

1. DC supply voltage and source resistance: 8 to 16 volts, 220 to 2200 ohms – not polarity sensitive.
2. Output voltage, 1000 Hz for 114 dB SPL (re: .0002 microbar) input, as a function of DC source resistance and AC input impedance.

TYPICAL OUTPUT VOLTAGES

AC Input Impedance \ DC Bias Resistor	1000 ohms	470 ohms	150 ohms
1000 ohms	.74 V	.59 V	.28 V
500 ohms	.60 V	.50 V	.27 V
150 ohms	.31 V	.28 V	.19 V

- Notes: 1. 8.0 V DC supply
2. Signal: 114 dB SPL re: .0002 microbar

3. *Frequency Response*: designed for optimum speech intelligibility and noise cancellation.
4. *Ambient noise level*: Communications can be carried on in noise levels up to 120 dB SPL (re: .0002 microbar) with adequate signal to noise ratio. **Microphone must be zero to 1/8" from lips at corner of mouth for best signal to noise ratio (maximum noise cancellation).**
5. Dimensions: 3/4 x 4-1/64 x 1-27/32 (19 x 16 x 47mm).
6. Weight: 0.2 oz. (5.6 grams).



ENVIRONMENTAL QUALIFICATION FORM
Models M-7/DC and M-7A Electret Microphone
TSO Number: TSO-C58a

CONDITIONS	DO-160B PARAGRAPH #	DESCRIPTION OF CONDUCTED TESTS
Temperature and Altitude	4.0 Rev. 1	Equipment tested to Categories A2 + B1
Low Temperature	4.5.1	
High Temperature	4.5.3	
Altitude	4.6.1	
Decompression	4.6.2	Decompression tested at 38,000 ft.
Over Pressure	4.6.3	
Temperature Variation	5.0	Equipment tested to Category B
Humidity	6.0	Equipment tested to Category A
Shock	7.0	No test required
Operational	7.2	
Crash Safety	7.3	
Vibration	8.0	Equipment tested without shock mounts to Categories P,A,K, and S (DO-160B, Table 8-1)
Explosion	9.0	No test required
Waterproofness	10.0	No test required
Fluids Susceptibility	11.0	No test required
Sand and Dust	12.0	No test required
Fungus	13.0	No test required
Salt Spray	14.0	No test required
Magnetic Effect	15.0	Equipment tested as Class Z
Power Input	16.0	No test required
Voltage Spike Conducted	17.0	Equipment tested to Category A
Audio Frequency Conducted Susceptibility	18.0	No test required
Induced Signal Susceptibility	19.0	Equipment tested to Category B
Radio Frequency Susceptibility	20.0	Equipment tested to Category B
Radio Frequency Emission	21.0	Equipment tested to Category B
Other Tests		None
REMARKS:		
<p style="text-align: center;">- Tests were performed at: NTS, National Technical Systems, Acton Division, Acton, MA, 01720 and David Clark Co., Inc., Worcester, MA. 01615-0054</p>		