

Specifications
and User's Guide



professional microphones



M Series

M9

Large Diaphragm
Tube Condenser Microphone



M9

Large Diaphragm Condenser Tube Microphone

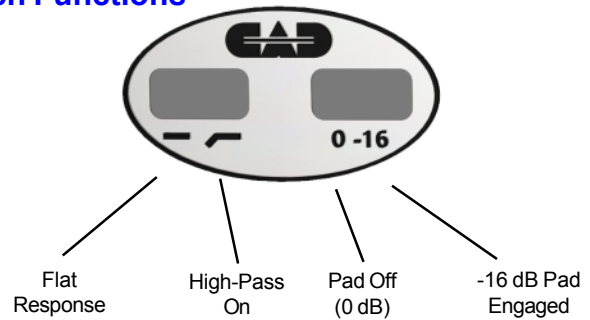
The M9 is a cardioid single tube externally biased condenser microphone that features servo-valve technology. The M9 is a natural bridge between the valve technology developed for the VX2 microphone and the servo opamp technology developed for the M-Series microphones. The head amp in the M9 microphone is a 12AX7 tube in a circuit that is optimized for super wide dynamic range and low noise. The output stage is a high speed dual opamp in a balanced differential configuration that allows long cables to be used without affecting microphone performance.

The M9 has extremely wide frequency response and dynamic range with a slight rising response characteristic at 12KHz. The M9 is ideal for both vocal and instrument recording applications. The M9 comes complete with a suspension shock mount, heavy duty analog power supply, and a 30 foot professional 7 conductor cable.

This Microphone Demands Respect!!*

* For the potentially lethal voltages inside the microphone and power supply during operation. Never open the microphone housing when it is connected to the power supply. The power supply has no user serviceable parts inside. The power supply should only be opened by a qualified service technician.

M9 Switch Functions



For most applications, the pad switch should be left in the 0dB position, and the Hi-Pass switch should be in the flat position. When miking loud sources such as drums and amplified instruments, the pad switch may be needed. If audible clipping occurs, first try adjusting the input pad or trim control on your mixer. If this has no effect, then engage the -16 dB pad on the microphone. The HI-Pass filter can be engaged when it is desired to reduce low frequency levels.

Use and Operation

Mount the microphone in the desired location. Plug the included seven pin cable into the microphone and the power supply. The output of the microphone is at the 3 pin XLR connector on the power supply. Use a standard balanced 3 pin XLR cable to connect the microphone output to the input of your mixer or recorder. Phantom power is not required. Plug the power supply into your AC mains supply. Turn the power supply on using the rocker switch on the right side of the front panel of the power supply. The LED on the rocker switch will light. Allow a few minutes for the vacuum tube in the microphone to warm-up and stabilize. The output level of the M9 is quite high. It is recommended that you start with trim control or input level control turned down on your mixer or recorder. It is also recommended that you turn down your input level whenever changing any of the switch settings on the microphone. When miking very close vocals, we recommend singing slightly off axis, or using a "P-Pop Filter" such as CAD's EPF-15.

Care and Maintenance

The M9 should be kept in clean dry environment, free from temperature extremes. If the housing becomes soiled, it can be cleaned with a cloth moistened in isopropyl alcohol.

Power Supply

The M9 power supply is set for 117VAC operation at the factory. (For units sold in the U.S.A.) For 220VAC operation, change the switch on the rear panel of the supply to 220V, and replace the fuse with the proper value.



Fuse

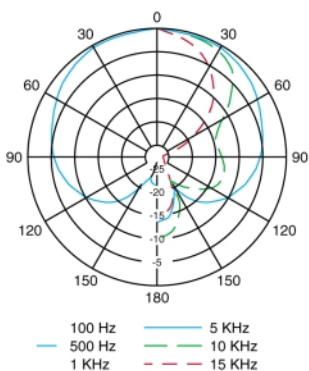
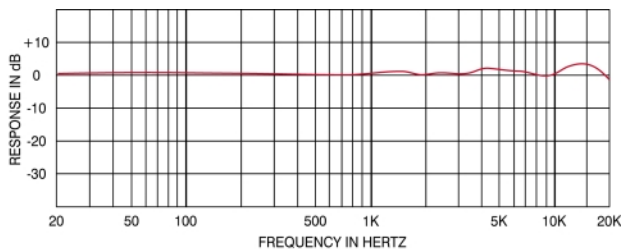
The fuse holder for the M9 power supply is located on the rear panel. The fuse is a 5mm X 20mm size, 0.08 Amp Slow Blow @ 250v for 220VAC operation, or 0.125 Amp @ 250V for 117 VAC operation. In the event that the fuse needs to be replaced, make sure to select a replacement fuse of equal rating.

Tube Replacement

The tube used in the M9 has been hand selected for low noise, and burned in to provide years of service. The tube used in the M9 is a 12AX7 type. The actual number that appears on the tube in your microphone may be different. This tube is a very popular type used in a variety music and recording related products. However, to insure continued operation within factory specs, it is recommended that you purchase replacement tubes from CAD. Contact the CAD Customer Service Department at 1-888-702-7075.

To gain access to the tube, first disconnect the microphone from its power supply. Remove the microphone from the mount by unscrewing the large knob at the bottom of the mic. Remove the mic housing by unscrewing the four screws on the back of the mic. Carefully remove the housing.

M9 Frequency Response and Polar Characteristics



M9 Specifications

Type:

Side address, true condenser.

Capsule:

1.1" inside diameter, gold sputtered.

Frequency Response:

Capsule: 10Hz - 20 kHz.

Head Amplifier: 4Hz - 200KHz

Polar Pattern:

Cardioid.

Impedance:

Low (200 ohms nominal).

Output Level At 1 kHz.:

Open Circuit Voltage:

-53 dB (0 dB = 1 volt per microbar).

-56 dB (0 dB = 1 volt per microbar).

Dynamic Range:

118.5 dB (Noise floor to max SPL @ less than 0.2% THD).

120 dB (Noise floor to max SPL @ less than 5.0% THD).

Equivalent Noise Level:

15 dB Equivalent SPL, A weighted.

Maximum Output Level:

+8 dBV (@ 140 dB SPL, less than 5.0% THD).

Maximum SPL:

154.5 dB SPL (-16dB pad).

156 dB SPL (-16dB pad).

Total Harmonic Distortion:

Less than 0.2% @ 138.5 dB SPL without pad.

Less than 5.0% @ 140 dB SPL without pad.

Switches:

Hi-Pass: (3dB @ 100Hz.)

Pad: 0dB & -16dB (Non-Capacitive)

Capsule Capacitance:

68 pF.

Powering:

Included MV200 analog power supply.

Connector:

7 pin XLR, on microphone and power supply.

3 pin XLR, audio out from power supply.

Cable:

Professional quality 7 conductor, 30 ft. long. Gold plated connectors.

Finish:

Blue housing, satin nickel plated screen assembly with black accents.

Included Accessories:

30 ft. professional quality 7 conductor cable with gold plated XLR male and female connectors.

MV200 Analog Power Supply.

Line Cord.

Rugged carrying case.

Suspension Shock Mount.



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