

GM 5 Mandolin/Violin Gooseneck Microphone
GM 9 Dobro/Archtop Gooseneck Microphone
GM 16 Guitar Gooseneck Microphone
GM 17 Banjo Gooseneck Microphone

General Description

The GM 5 is a 5" gooseneck microphone for a mandolin or violin.

The GM 9 is a 9" gooseneck microphone for a dobro or archtop guitar.

The GM 16 is a 16" gooseneck microphone for an acoustic guitar.

The GM 17 is a 17" gooseneck microphone for a banjo.

This gaggle of gooseneck (geeseneck?) microphones are designed to mount inside acoustic instruments. Each microphone is a uni-directional electret condenser which can be positioned for the best sound within the instrument. It requires a special 6 volt 2-wire phantom power (T-power) supply to operate, supplied on Rane's AP 13 Acoustic Preamplifier (for which these assemblies are intended to be used). A second pair of leads are provided to connect to an existing piezo pickup. Output is derived from a 1/4" TRS jack at the mounting end of the gooseneck that provides the pickup wired to the tip and the microphone wired to the ring. This jack can replace the existing endpin or 1/4" connector on the instrument body. If a TRS cable is used, both pickup and mic signals are kept separate on a single stereo cable. If a mono 1/4" cable is used, only the pickup will be active.

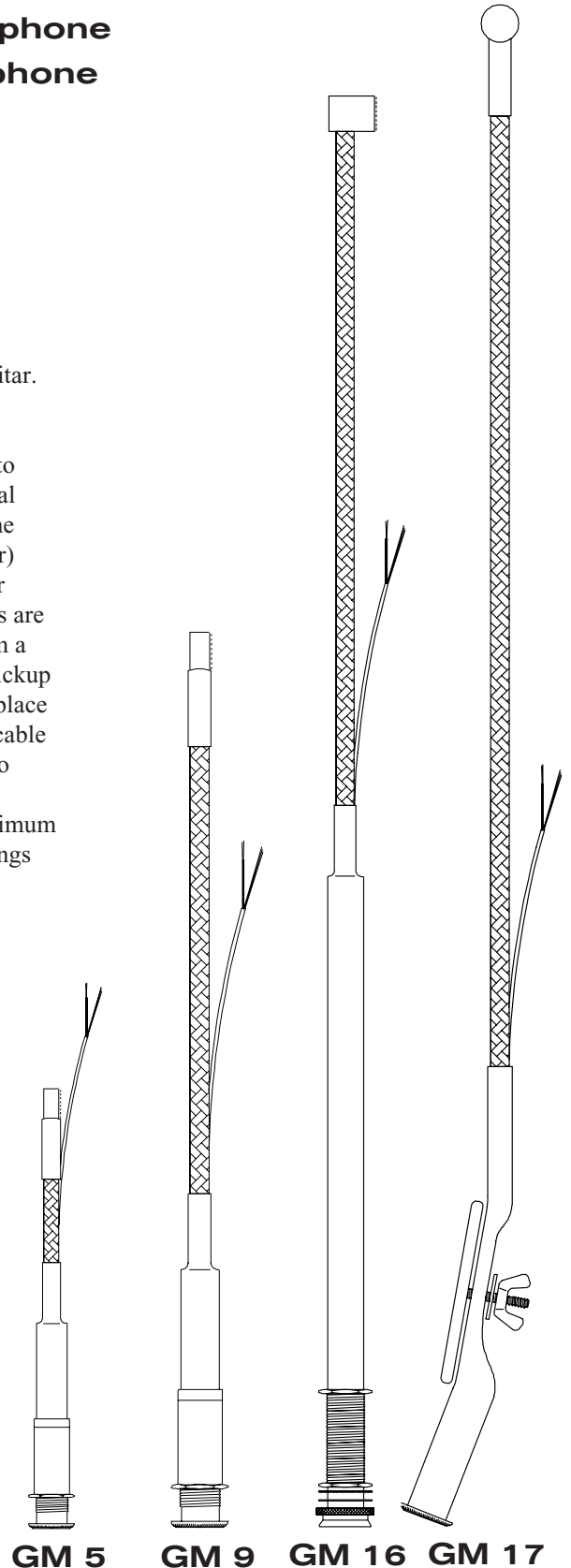
Frequency response of the mic is 50 Hz-18 kHz ± 5 dB, with a maximum SPL of 120 dB. Sensitivity is -64 dB (0 dB=1V/ μ bar). The scale drawings to the right are one-half actual size.

Microphone Placement

The black face of the mic is active, the lighter face is passive. Position the microphone approximately 1/4" beneath the soundboard near the treble side of the sound hole, with the active black face of the microphone towards the interior of the instrument (approximately towards the chest of the player in a guitar). Rotating the active face of the mic towards the back of the instrument often tends to reduce excessive bass response.

Every instrument is unique, and may require a different mic position. You are encouraged to experiment with positioning the mic until the best combination of tone and volume is produced. Like any microphone, the GM can feedback if not properly aimed relative to loudspeaker volume.

The GM is a low impedance microphone intended for use with the Rane AP 13, which contain graphic equalizers to help minimize feedback as well as provide optimum tone and balance. Also see Rane Note 131, "Microphone Options for the AP 13 Acoustic Preamp."



GM 5 and GM 9 Installation

1. Remove the brass sleeve from the GM. Enlarge the hole in the body for the brass sleeve to fit into with a 1/2" tapered reamer if necessary.
2. If the instrument has a pickup, disconnect the wires from the existing jack and connect (solder) those leads to the loose set of wires protruding from the middle of the GM. Separate and insulate the connections with electrical tape.
3. Remove the brass sleeve from the GM and glue it in place on the instrument body. After the glue has dried, insert the microphone from outside the instrument and tighten by turning clockwise. The punch mark on the jack face indicates the active face of the microphone, and should be directed toward the rear of the instrument.
4. Set the Phantom Power on the AP 13 to 6 volts. Connect a quality TRS to TRS cable from the instrument to the preamp. Set the front panel switch to TIP=PZO/RING=MIC. Consult the owner's manual of the preamp for further instructions.

GM 16 Installation

1. Remove the strings. Enlarge the hole for the endpin with a 1/2" tapered reamer if necessary.
2. If the instrument has a pickup, disconnect the wires from the existing jack and connect (solder) those leads to the loose set of wires protruding from the middle of the GM. Separate and insulate the connections with electrical tape.
3. Insert the microphone assembly through the sound hole and tighten the strap button/locknut from outside the instrument.
4. Replace the strings and tune the guitar. Set the Phantom Power on the AP 13 to 6 volts. Connect a quality TRS to TRS cable from the instrument to the preamp. Set the front panel switch to TIP=PZO/RING=MIC. Consult the owner's manual of the preamp for further instructions.

GM 17 Installation

1. Remove the wing nut and washer from the mic bracket. Remove the resonator from the banjo if it has one. If it does, slip the GM through the flange.
2. If the instrument has a pickup, disconnect the wires from the existing jack and connect (solder) those leads to the loose set of wires protruding from the middle of the GM. Solder, separate and insulate the connections.
3. Slip the part of the microphone mounting bracket with the threaded stud behind two of the hoop heads that tension the banjo head. Fit the other part (attached to the gooseneck and output jack) over the threaded stud. Then install and tighten the washers and wing nut until the microphone bracket is firmly attached to the hoop brackets.
4. Bend the gooseneck around the rim and position the microphone behind the head, approximately underneath the bridge. Set the Phantom Power on the AP 13 to 6 volts. Connect a quality TRS to TRS cable from the instrument to the preamp. Set the front panel switch to TIP=PZO/RING=MIC. Consult the owner's manual of the preamp for further instructions.

