

## Installation Instructions BM-1 Neo - For fixed bridge Bouzoukis, Mandolas, Mandolins with a Gibson style tailpiece

The Neo jack assembly provides a 1/4" output jack and is designed to fit mandolins, mandolas, bouzoukis, and similar instruments that have a 'Gibson' style tailpiece. The diagram to the right shows the dimensions of the jack assembly.

Note that a normal 'Gibson' style tailpiece has the center to center spacing of the upper two screws at approximately 26 mm (1.07"). This allows the jack assembly to mount in the same position and using the same screw holes through the tailpiece.

### Installing the Jack Assembly

- 1) The BM-1 comes with an Neo series jack assembly that mounts to the instrument as shown.
- 2) Remove the two upper tailpiece screws.
- 3) Position the jack assembly so that the screws may be re-inserted through the jack assembly slots and into the original mounting holes through the tailpiece and the body and end block.
- 4) The jack assembly comes with a small assortment of screws and flat washers that may be used as necessary if the original screws prove to be too short upon reinstallation.
- 5) Route the lead wire from sensor so that it remains out of the way beneath the strings.

Note: The jack assembly extends 3/4" (20mm) beyond the body line of the instrument. Please make sure that there is room in your case or that you can modify your case slightly to accommodate this.

### Installing the BM-1

- 1) The sensing element for the BM-1 pickup requires a flat area approximately 1/4" high by 2 1/4" in length on the saddle part of the bridge of the instrument. Check the fit of the element against the bridge. Re-contour or shape the bridge if necessary.
- 2) The BM-2 comes supplied with 3M VHB tape for installing the sensor to the bridge.
- 3) Take a piece of the VHB tape and stick it to the non-label side of the sensor. Remove the protective strip on the tape. Support the bridge so that it doesn't move. Press the sensor firmly into position as shown in the photo. Note that each strip of the VHB tape can only be used one time as it will lose its adhesion if it is reused.

### A Word About Amplification:

BM-1 passive pickup has been designed to operate properly and sound good without the use of a preamp when plugged into any normal electric guitar amp. As a non-preamped piezo pickup the BM-1 has an impedance of approximately 2 mega ohms which most electric guitar amps will handle. As with any passive pickup, the sound can be further enhanced and EQ'd with an outboard preamp.

**PA systems:** If you require the added ability to be able to plug directly into a P.A. or mixer then a preamp designed for pickups will be necessary. The preamps that are built into PA systems are microphone preamps and generally will not work properly with a passive pickup.

**Acoustic Amps:** If you are plugging into an acoustic amp a preamp may be required depending upon the design of that acoustic amp. Acoustic amps may or may not require the use of a preamp with a passive pickup and that will depend upon whether or not there is a special built in preamp section within that amp that specifically allows for the choice of plugging in either a passive (non-preamped) or active (preamped) pickup. This choice is quite often a second channel or a pushbutton on the amp's control panel. Many acoustic amps show a selection that may indicate the choice of 'high impedance' and 'low impedance'. Low impedance in these instances usually indicates that in this range the amp will handle an impedance of 1000 ohms or less - which will allow active pickups with preamps to be used.

High impedance in these instances may indicate an allowable impedance in the 2 or 3 mega ohm range - which will allow passive pickups to be used. Or it may indicate a maximum input impedance allowed of 20,000 ohms or less - which will handle magnetic electric guitar pickups but not passive pickups. You should carefully read the technical specifications of your acoustic amp in order to see what it will do.

