Schatten Design
Acoustic Pickups
Handmade Pickups For Acoustic Instruments
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BJ-02M Banjo Pickup & Condenser Microphone System

The M microphone in the BJ-02M system was designed to add air, clarity and sound quality to the normal attributes of the BJ-02 pickup sensor. The M microphone was not designed to be, nor is it intended to be used as a stand-alone microphone.

Important:Please read these instruction through first before installing this system.

Jack Assembly Installation

Note: If you are holding the banjo in front of you with the strings facing you and the head straight up at 12 o'clock, the normal position for the jack assembly would be at approximately 4 o'clock around the circumference of the head.

1) Remove the output jack from the bracket.
2) Position the bracket where it is to be mounted.
3) Slide the long metal clamp bar behind the tensioning hooks and secure the bracket in place with the two supplied screws.
4) Reinstall the output jack and tighten the nut.

Pickup Installation:

1) With the resonator removed, and the banjo laying upside down so that you can look at the coordinator rods and the underside of the head, you should be able to see the imprints of the bridge feet on the head. The proper placement of the pickup sensor is on the inside surface of the head directly under the center foot of the bridge. The length of the pickup is approximately the same as the length of that center foot.
2) The pickup is prewired to the jack assembly. Before gluing the pickup into place you must thread the pickup through a hole in the resonator flange at the point where you want to mount the jack assembly.
3) The suggested method of attaching the pickup to the underside of the head is by using a little bit of the supplied 5 minute epoxy. After mixing the glue, apply a small amount sparingly to the brass surface of the pickup and press it into contact with the head.
4) Making sure that you have the pickup in the correct position under the center foot of the bridge, hold the pickup in place until the glue sets (about 4 minutes).
5) After the glue is set, it is suggested that you take a bit of tape and tape the wire to the coordinator rods. This is to eliminate the possibility of the wire rattling.

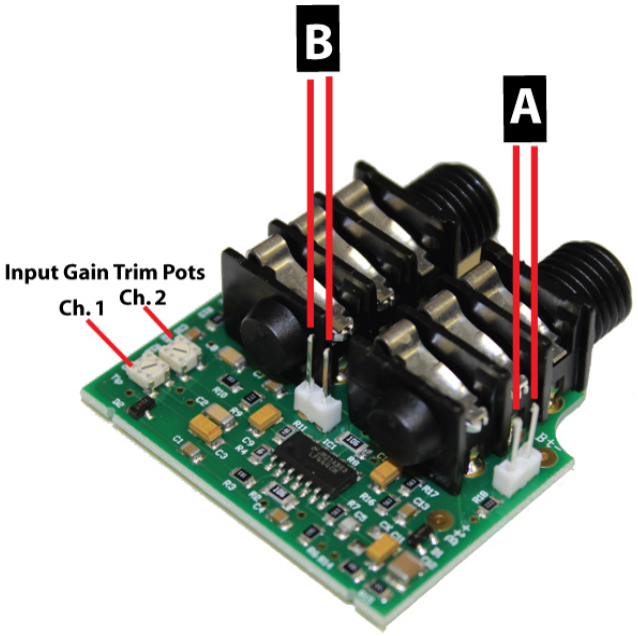
M Condenser Microphone Installation:

1) Insert the micro plug lead wire for the microphone through the same hole in the resonator flange that the pickup sensor was inserted through.
2) Plug the micro plug into the micro jack at the back end of the microphone.
3) Both putty and 3M VHB mounting tape is supplied for installing the microphone. The suggested method of mounting the mic is to use the supplied putty. The VHB may be used later for a more permanent mounting if desired.
4) The suggested mounting position for the microphone is as shown, just below and pointing at the tailpiece. The mic will be generally be placed ½" to 1" from the surface of the head.
5) Roll up a small ball of the putty (about a half inch in diameter) and place it on the bottom of the microphone. Press the microphone down firmly into the putty at the position on the rim where you want to mount the microphone.

Mini Pre 2 Preamp

Preamp Configuration: as shipped, channel one will preamp the pickup sensor, while channel two will power the condenser microphone and preamp the mic signal. A black jumper is fitted over the pins at '**A**' for this configuration.

Should you ever need to use the preamp with an instrument that has two pickups, the second channel can be reset for that second pickup by moving the black jumper from 'A' and fitting it over the pins at '**B**'. With the jumper set at 'B', power is no longer supplied to the second channel.



1/4" Input Jack

The input jack is set up to receive a stereo TRS plug. Tip will transmit (+) from the pickup sensor to channel one. Ring will transmit (+) from the mic to channel two. Sleeve is the common ground. If you plug a mono plug into the input, the tip will transmit the (+) from the pickup sensor to channel one. Channel two will not function with a mono plug. Using a mono plug into the input will not harm the preamp but it will bring the battery down fractionally quicker than normal.

1/4" Output Jack

The output jack feeds out a mono signal only. The signal is not a balanced signal.

Input Gain Trim Pots

As shipped, channel one gain is set to approximately 15% and channel two gain is set to approximately 25%. These settings are about what the input gains might be set at for most installations. You may very well have to change these settings to suit your instrument. *Important: The trim pots must be adjusted using a very small jewellers slotted screwdriver.*

Setting Up

1) Remove the back cover and attach a 9 volt alkaline or lithium battery (not included).
2) Turn the 2 external volume controls fully off, plug in the supplied stereo TRS cable to both the banjo jack assembly and the input of the Mini Pre 2.
3) Run a normal 1/4" cord from the Mini Pre 2 output to the input of your amp. Set the amp at a low setting.
4) Turn the volume control for channel one to a comfortable sound level.
5) Turn the volume control for channel two to a comfortable sound level.
6) You should now assess the relative sound levels of the pickup sensor and the microphone and adjust the input gain trim pots on the preamp circuit board as necessary.
7) Install the belt clip to the back cover of the preamp using the two supplied screws. Reinstall back cover.
8) Note that the battery within the preamp is turned on only when a plug is inserted into the output jack.

Preamp Specifications:

Input Impedance: each channel, up to 10 MOhm
Output Impedance: less than 3.5 kOhm
Input Gain: each channel 0 to 20 db via trim pots on circuit board
Battery Life: 9 volt alkaline - 1300 hours for pickup/mic configuration *Do Not Use Rechargeable Batteries*

Pickup Sensor Removal Instructions:

The pickup is glued to the underside of the head with 5 minute epoxy. This glue bond may be broken as follows:
1) Remove the strings and bridge, remove the resonator from the back of the instrument.
2) From the outside of the banjo, warm up the area of the head covering the pickup using a hair dryer.
3) Work a small thin object such as a pallette knife or thin feeler gauge into the joint between the pickup and the banjo head.
4) The pickup should come away from the head with little effort.
5) Clean up any epoxy residue left on the brass underside and edges of the pickup with a small file.
6) For re-installation, make sure to use only a 5 minute epoxy.

Warranty

We warrant to the original purchaser that our pickups are free from defects in materials and workmanship for a period of 2 (two) years. Should a product fail to perform properly within the specified warranty period you may contact your dealer or Schatten Design for instructions. No product will be accepted for warranty return by Schatten Design without a Return Authorization number.

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