



User Guide



© Trance Audio, Inc., U.S.A.

THE AMULET M™

Dual-Mono Guitar Pickup System User Guide

© 2012-2021 Trance Audio, Inc.™ All Rights Reserved

Trance Audio, Inc., PO Box 1686, Freedom, CA 95019

Tel: (831) 688-9699 email: info@tranceaudio.com | www.tranceaudio.com

Warranty

This warranty covers all defects in materials and workmanship for a period of one year from the date of purchase by the original owner. Cases may arise where our Service Department or one of Trance Audio's authorized service centers will ask for a copy of your sales receipt to facilitate warranty service. Please keep your purchase receipt in a safe place.

Trance Audio™ does not cover:

- Damages due to improper or inadequate maintenance, accident, abuse, misuse, alteration, unauthorized repairs, tampering, or failure to follow normal operating procedures as outlined in the owner's manual.
- Deterioration or damage of the cabinet.
- Damages occurring during any shipment of the product for any reason.
- Any product that has been modified by anyone other than Trance Audio, Inc.

Limitation of Implied Warranties

No warranty is expressed or implied. Trance Audio specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

Exclusion of Certain Damages

Trance Audio's liability for a product found defective is limited to repair or replacement of the unit, at our option. In no event shall Trance Audio be liable for damages based on inconvenience, whether incidental or consequential, loss of use of the unit, loss of time, interrupted operation or commercial loss, or any other consequential damages.

Some states do not allow limitation of the duration of implied warranties or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

How To Obtain Warranty Service

All Trance Audio products are manufactured with the highest standards of quality. If you find that your transducer or preamp does require service, it may be done by an authorized Trance Audio service center. Please contact Trance Audio at (831) 688-9699. We will either refer you to an authorized service center or ask that you return your transducer or preamp to the factory. When returning a product to the factory, you will be issued a Return Authorization number. Please label all cartons, shipping documents and correspondence with this number.

CAUTION

Trance Audio recommends that Acoustic Lens™ and Amulet M™ installation be done by a professional luthier or guitar repair technician.

Installers: Please read the following instructions carefully, and please contact us by phone or email with any questions. We will not be responsible for any damage to the guitar or personal injury resulting from installation of this product.



First of all, thank you for purchasing what we feel is the finest acoustic guitar pickup system available today. As you use your Amulet M, we're quite sure you'll feel the same way.

The heart of the Amulet M is the Acoustic Lens™ pickups. Our Acoustic Lens pickups deliver crispness and accuracy, coupled with incredible warmth and presence. The Amulet M's preamp perfectly complements this incredible transducer. Super-wide dynamic range, low distortion and low noise were the primary design goals behind the Amulet M preamp. Dual pickups allow you to adjust the bass and treble balance of your guitar without using any EQ whatsoever. The Amulet M system lets you hear your acoustic guitar as you've never heard it before.

The on-board Dual Mono preamp is designed to perfectly complement the Acoustic Lens' unique requirements and to amplify the low level signals from the pickups as soon as possible. The signal that leaves your guitar through the endpin jack is high level, low impedance, and most of all, high quality. Power is provided by an on-board 9-volt battery with more than 100 hours of battery life available. The output signal presented to your mixer or power amp is the true sound of your guitar, in microscopic wondrous detail. From here, the signal can be routed to a mixer, effect unit or power amplifier, and then to a high quality speaker system.

Our goal at Trance Audio is to further state-of-the-art, acoustic guitar music. The Amulet M series provides the true sound of your acoustic guitar and is designed to interface easily with any audio device.

The Amulet M™ consists of:

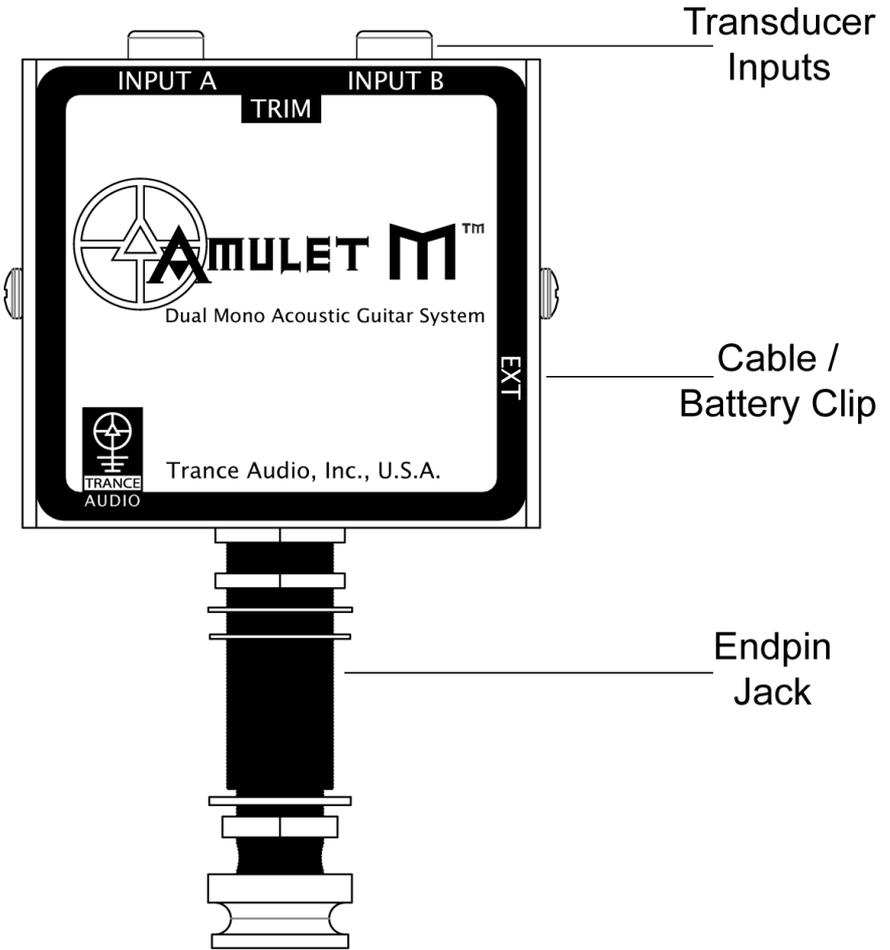
- **Acoustic Lens™ Transducers** (*pair*)
- **Dual Mono Preamp/Endpin** (*installed inside the guitar*)
- **Battery bag with Battery clip**

The Amulet M-V™ adds:

- **Soundhole-mounted Volume Control and battery indicator** (*with cable*)

The Amulet M-VT™ adds:

- **Soundhole-mounted Volume/Tone control with battery** (*with cable*)



DUAL MONO PREAMP FEATURES

Amulet M™

The Amulet M utilizes our newly-designed **Acoustic Engine™** technology, providing each transducer with its own extremely low noise preamp, and providing the ability to easily balance between the two transducers to get the exact response desired from your instrument. These signals are combined to a monaural signal, and buffered to produce a hum and noise-free signal at the endpin jack that's ready to plug into any system. This allows you to get the maximum dynamic range and lowest noise possible from the transducers to produce a clear, defined sound that easily captures the nuances and dynamics of your performance.

BUILT-IN LOW CUT FILTER

The Amulet M system includes our high quality low cut filter built into its circuitry. This filter eliminates any subsonic information below 40 Hz that might cause noise or distortion in your amplification rig. This filter has been carefully engineered to leave the low end response of your guitar intact, even when tuned to far below normal pitch.

ENDPIN JACK

The endpin jack serves as the audio output of the system, the power on/off switch, and also as the strap button where you can secure the back of the strap for your instrument. A high-quality Switchcraft jack is used to insure a long and trouble-free performance. The endpin jack connects your instrument via a standard 1/4" MONO guitar cable to your amplifier, external effects device or mixer. It also serves as the on/off switch for the system, so be sure to unplug the cable when not in use to preserve battery life.

NOTE: Use of a STEREO 1/4" cable (sometimes called a TRS connector) will not allow the system to properly power up, and must be avoided.

TRANSDUCER INPUTS:

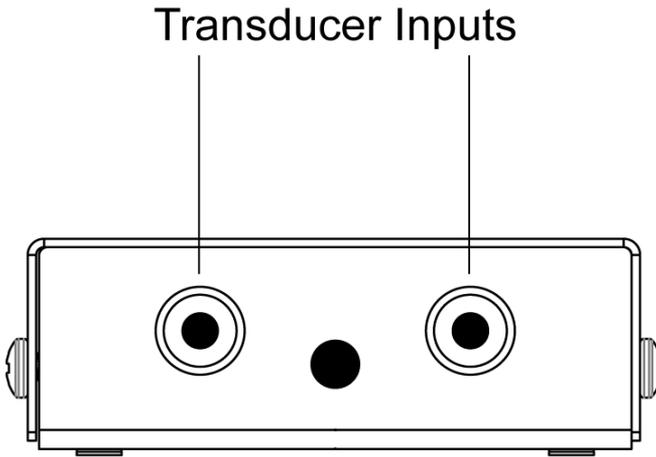
INPUT A

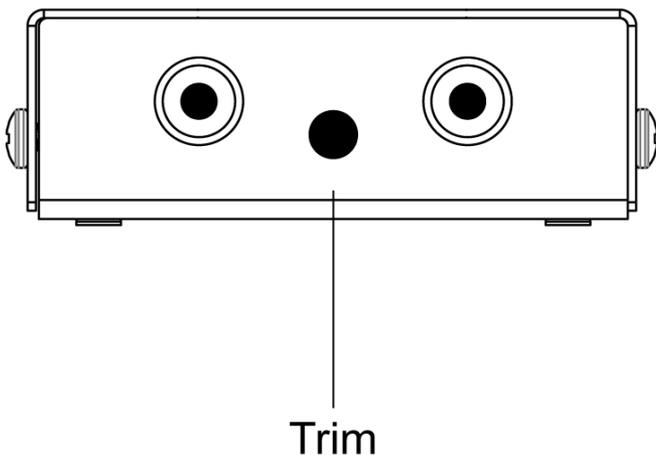
This input typically has the Bass side Acoustic Lens™ transducer plugged into it in most installations. Its gain is variable, and can be set using the TRIM potentiometer, located between the Input A and Input B jacks.

INPUT B

This input typically has the Treble side Acoustic Lens transducer plugged into it in most applications. Its gain is fixed, and is not affected by the TRIM control.

Note: The frequency response of the INPUT A and INPUT B preamplifiers is identical, and the Bass and Treble side Acoustic Lenses can be plugged into either one with no change in performance, if so desired. Both input jacks have a shorting design and will not produce hum or buzz if nothing is plugged in.



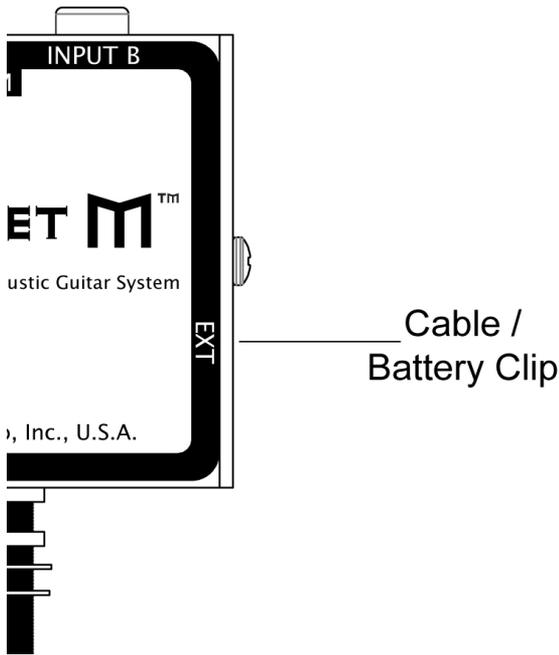


TRIM Control

The TRIM control is accessible through the hole located between the INPUT A and INPUT B jacks. This control can be adjusted using a small flat-bladed screwdriver or a #1 size Phillips head screwdriver. Its location allows it to be adjusted using a long screwdriver through the soundhole of the instrument, if you don't wish to remove the electronics.

Like any regular volume control, it has mechanical stops at each end of the rotation, so take care when adjusting not to try to force it past its limits, or you will damage it.

The TRIM control affects the gain of the INPUT A preamplifier ONLY, so it essentially acts as a balance control for the system. Turning the control to the left (CCW) increases the gain of the INPUT A preamplifier, and makes the Bass side Acoustic Lens louder in the mix. Turning the control to the right (CW) decreases the gain of the INPUT A preamplifier, making the INPUT B Acoustic Lens louder in the mix. Careful adjustment will allow you to tune in the exact balance between the bass and treble strings of your instrument. The adjustment range is typically +/- 3dB, wide enough to accommodate any desired balance. This is a "set and forget" type control, so once the proper balance is found, it will usually not require any further adjustment.



EXT (Cable/Battery Clip)

The EXT connector allows you to interface your AMULET M system to a variety of controls designed to fit your particular working style. The available options are:

AMULET M This option allows for a no-frills setup that provides just the battery connections to a 9-volt battery. This provides a plug-and play system with no onboard controls to worry about.

AMULET M-V This option provides a soundhole-mounted volume control thumbwheel, and an integrated low battery warning LED indicator. This allows you to set the volume of your guitar from your instrument, and make on-the fly changes during performance. When the thumbwheel is rotated to the right (towards the bridge) the volume is increased. When rotated to the left (towards the neck) the volume is gradually reduced, until it is completely muted at the full left position. The volume control is specially tapered to give you a smooth range of gain control. It's always a good idea to lower the volume all the way when plugging or unplugging your guitar cord in order to protect your speakers.

NOTE: These descriptions of the way the controls operate are based on having the controls mounted on the right side of the soundhole, so they are visible to the right-handed player. The controls can also be mounted on the left side of the soundhole if desired, and doing so will reverse the positions of the controls, as well as their operation (i.e. rotating the volume thumbwheel towards the neck on this type of installation will increase the volume).

The LED battery indicator will glow very dimly during operation, and when the battery voltage drops to the point where it needs to be replaced, the LED will flash brightly at 1 second intervals, alerting you that you have a few hours or so to replace the battery without compromising the audio performance of the system. The system will operate at peak performance for 100+ hours (with a standard alkaline battery) before the battery needs to be changed.

AMULET M-VT This option includes all the features of the AMULET M-V option, and adds a tone control thumbwheel as well. When rotated completely to the right (towards the bridge) the control allows the full range sound of the transducers to come through. When rotated to the left (towards the neck of the instrument) the upper frequencies are gradually reduced, allowing you to make any desired tonal mix right from your instrument. The thumbwheel control is designed to make subtle changes to the upper frequencies for the first half of the rotation to allow for more precise control, and makes increasingly larger changes for deeper sculpting of the tone in the second half of the rotation.

NOTE: When you unplug the cable from an M-V or M-VT system, you will notice that the LED battery indicator will blink for a few seconds after being unplugged. This is normal, and shows that the voltages inside are powering down and the system is shutting off. It is recommended that you make sure that the volume thumbwheel is set to a lower (or off) position when plugging into an amplifier and then adjusting to the desired level to avoid any unpleasant surprises.

Installing Your Amulet M System

Pick a clear workbench-type place to work on your guitar to install the transducers and system. Make sure the work surface is clean, well-lit and preferably padded to help avoid scratching or damaging the finish of your instrument while working on it.

Please see the **Acoustic Lens installation Guide** online at <http://tranceaudio.com/manuals/TranceTemplateInstall.pdf> for details on pickup placement.

The Acoustic Lens pickup leads are long enough to allow them to connect to the preamp outside of the instrument while the guitar is on the bench during the initial setup of the system. This can really come in handy, allowing you to easily try different placements of the pickups to get the proper string balance and tone while plugging and unplugging the pickups from the preamp. This can often be more difficult to do if the preamp is already installed inside the guitar. This also makes for an easy final adjustment of the TRIM control once you have the pickups properly positioned, and the guitar strung up and tuned. Once the preamp is installed, you can still reach the TRIM adjustment with a long screwdriver, but you usually have to loosen at least the middle strings to get soundhole access, and it's more difficult (but not impossible) to find the trimmer location hole with the preamp inside the instrument.

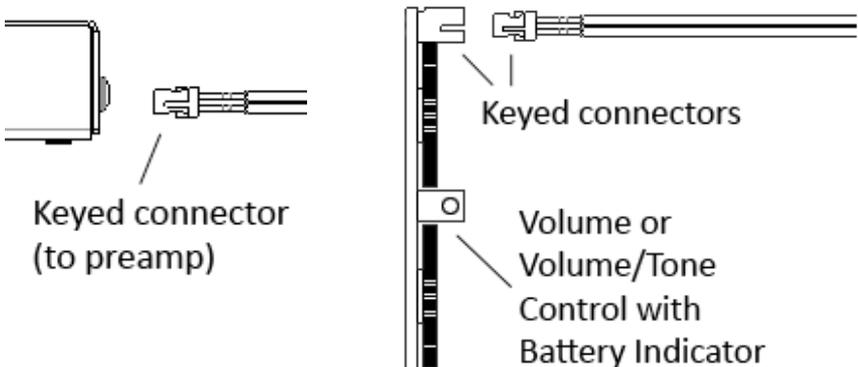
Once you've positioned the Lenses for your listening evaluation, you can feed the pickup leads through the endpin hole in the bottom of the guitar. An easy way to do this is to tape the pickup connector to an old guitar string that's been fed through the endpin hole, then pull it back through, taking care not to scratch your instrument.

Once you've got the pickups installed where you want them on your instrument, and the balance adjusted with the TRIM control, you can finish installing the Amulet M preamp inside your instrument.

The Amulet M can be installed to accommodate having the Thumbwheel Controls on either side of the soundhole. This allows setup for either right or left handed players, or allows you to make the choice to have the controls visible to you while you're playing (allowing you to, for example, place favorite settings markers or dots on the Thumbwheels), or hidden from view on the opposite side of the soundhole.

The Amulet M preamp should be installed in the instrument with the EXT jack facing the side of the guitar where the Thumbwheel Controls are going to be installed.

NOTE : The cable that connects to the EXT jack has a keyed design so that it only plugs in correctly with the plug oriented in **ONE DIRECTION**. If you look at the side of the small black plugs on the connector cable, you will see a small ridge on either side of the plug, closer to one side than the other. If you look closely at the connector (either the Amulet M EXT jack or the connector on the soundhole Thumbwheel controls) that it plugs into, you'll see a slot cut into each side, that will mate with the ridges on the connector, but **ONLY WHEN IT IS PLUGGED IN CORRECTLY**. This is called a polarized connector, and it insures that all of the cable wires get hooked up correctly during installation. Make sure the two are lined up correctly, and don't try to force the plug in. If it won't go, this would be the probable reason!



For installation of the system with no controls (battery clip only)

install the Amulet M preamp so that the EXT jack will be facing down while the instrument is being played. This assures that the battery bag and battery will safely sit at the bottom side of the instrument while playing. For Amulet M-V or M-VT systems, install the battery bag on or near the neck block for easy battery access.

You can place the assembled system on top of the guitar to figure out where the best locations would be for the cable clip(s) along the side of the instrument with the Thumbwheel Controls installed (cover the top with a T-shirt or other soft cloth to prevent finish scratches).

Make sure that the cable will be held securely between the controls and the preamp so it won't be rattling against the side, back or top of the guitar (which would be picked up and amplified), but still has enough slack to make sure that the connections stay secure and are not pulled loose. The volume board connector cable uses the larger adhesive "C" clips, which are shipped already attached to the cable. During the installation process, you can decide on the adhesive locations inside the guitar for these clips, and whether you will use one or both of the supplied large "C" clips.

The system is also supplied with a single smaller "C" clip. This clip is used to hold the excess pickup cables securely inside the guitar after the installation is complete, and keep them from rattling around during your performance. An excellent way to accomplish this is to tie both cables together in a loose single knot, and clip the bottom part of this loop into the small clamp which is stuck to the middle of the back of the guitar, about halfway between the bridgeplate and the preamp. You can adjust the size of this loose loop/knot to take up any extra cable slack and keep the pickup wires secure.

It is very important to prepare the surface of the guitar in any spot where you are going to apply adhesives, whether it is the Velcro patch used for the battery bag, the stick on cable holders, the volume control board or the pickups themselves. The surfaces inside a guitar collect dust and dirt, and the process of finishing a guitar will often leave behind sawdust as well as lacquer or other types of spray.

After deciding where the adhesive parts are going to be placed, prepare these surfaces by lightly sanding them with 100 grit sandpaper on a small sanding block to remove any surface contamination. Blow out any dust using compressed air if possible, and wipe these surfaces with a small clean cloth that has been *very lightly* moistened with Windex to pick up any remainder. Let these areas dry completely (at least a half an hour) before applying the adhesive items. Not cleaning and preparing the surface will cause premature failure of the adhesive.

Once the "C" clips are placed, install the preamp with the pickups plugged in and the cable attached to the EXT jack. After tightening the endpin jack correctly, attach the other end of the cable to the Volume Control board (if applicable) and install it properly at the edge of the soundhole with the thumbwheels extending enough to allow for easy access while playing. Be sure that it is firmly adhered along the entire length of the adhesive strip and press it in place for a minute or so to allow it to bond securely. Finally, clip the cable into the "C" clips along the side and adjust the cable so it is held securely without placing excess tension on the EXT jack or the volume board assembly.

When installing the Thumbwheel Controls in the soundhole, it is not only very important to properly clean the area where it will be installed, but also be sure to pick an area where the entire adhesive surface of the controls can be securely attached. Most guitars will have enough free area around the soundhole to accomplish this*, but if a brace is blocking the area, then have your luthier or repair person see about making and attaching a same-thickness shim to properly extend the area where the controls can be attached. If the adhesive is only partly attached to a flat surface, it will be much more likely to come loose at some point.

**Note:*

the Thumbwheel Volume Control board dimensions are .5" x 1.25";

the Thumbwheel Volume/Tone Control board dimensions are .5" x 2"



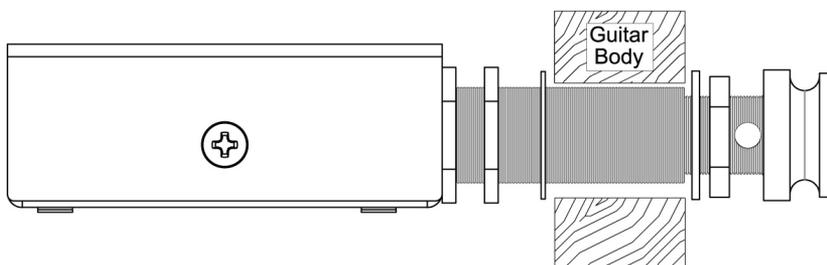
The clip on the side of the Amulet M preamp (adjacent to the EXT jack where the cable/battery clip plugs in) allows you to securely anchor the cable to the preamp and prevent it from being pulled loose or disconnected by vibration or cable routing problems.

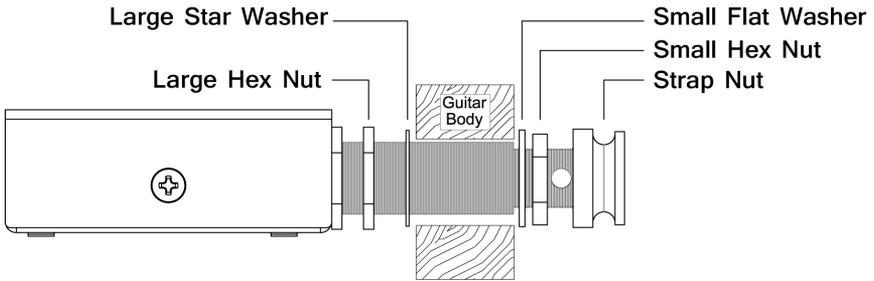
Plug the cable into the keyed EXT jack, paying attention to the orientation. Gently make sure the plug is inserted as far as it will go (the rear of it should be about even with the outside of the preamp), then insert the cable into the clip on the side of the preamp, leaving a small loop of wire as shown in the above photos. This ensures that any cable tension will not pull or wiggle the plug loose from the connector, which can cause intermittent (or no) operation of the system.

Installing Your Amulet M Preamp/Endpin

PLEASE NOTE: For installation of the Amulet M endpin jack, the endpin jack hole needs to be a standard size of 1/2". If your instrument does not already have an endpin jack hole, this must be performed by a professional luthier or an experienced guitar repair technician as damage to your guitar can result if done incorrectly.

The Amulet M's endpin can accommodate an endblock depth up to 7/8". This isn't an issue for most modern guitars, but some older instruments may have thicker endblocks. If needed, you can check the endblock depth yourself. While looking in the endblock hole, insert a piece of stiff but flexible wire of any sort (like an old guitar string) and look to see when it reaches the inside end of the endblock. Mark the part of the wire that is flush with the outside the endblock hole with a marker or a piece of tape, or bend it at a right angle to the body of the guitar so when you remove the wire from the endblock hole, you can clearly see the depth and measure with it with a ruler. If you find your endblock is thicker than 7/8", Trance Audio can supply you with a specially-designed preamp with an externally wired endpin that can accommodate an endblock up to 1 1/32" depth. Please contact us for details and cost. If your endblock is thicker than 1 1/32", you will need to contact a luthier to get the endblock internally counterbored to an appropriate depth.





Remove the Strap Nut, the Small Hex Nut and the Small Flat Washer from the AMULET M endpin assembly.

Insert the endpin assembly through the endblock hole, making sure not to allow the washers to fall off. The EXT connector on the side should be oriented to the side where the thumbwheel controls (or the battery bag for the no controls system) will be mounted.

Adjust the Large Hex Nut so the larger threads are about $\frac{1}{16}$ " shy of the outside of the endblock.

Thread the Small flat Washer and Small Hex Nut, then insert a $\frac{3}{32}$ " (2.3 mm) or smaller diameter shaft through the small cross-drilled holes at the front of the endpin shaft (a small screwdriver or drill bit should work well for this). Make a note of the position of these holes when the preamp is oriented correctly inside the guitar. You will keep them in this position as you tighten the outer nut, so the preamp will stay properly oriented when you are finished.

DO NOT hold the Amulet M enclosure to secure the endpin while tightening the nut instead of using the small screwdriver or other small shaft through the cross-drilled holes. This will damage the Amulet M and void the warranty.

Tighten the nut with a $\frac{1}{2}$ " open end wrench while you hold the jack in place and keep it and the preamp from turning with the small screwdriver, drill bit, etc.

Install and hand tighten the Strap Nut.

Note: When properly installed, the end of the jack will be flush or slightly ahead of the strap nut, so when a plug is inserted, it will snap securely in place. If the end of the jack is recessed too much, the cable plug will not engage properly, and may even fall out. Adjust the Large Hex Nut to achieve a proper fit of the Strap Nut when installed.

Changing/installing the Battery

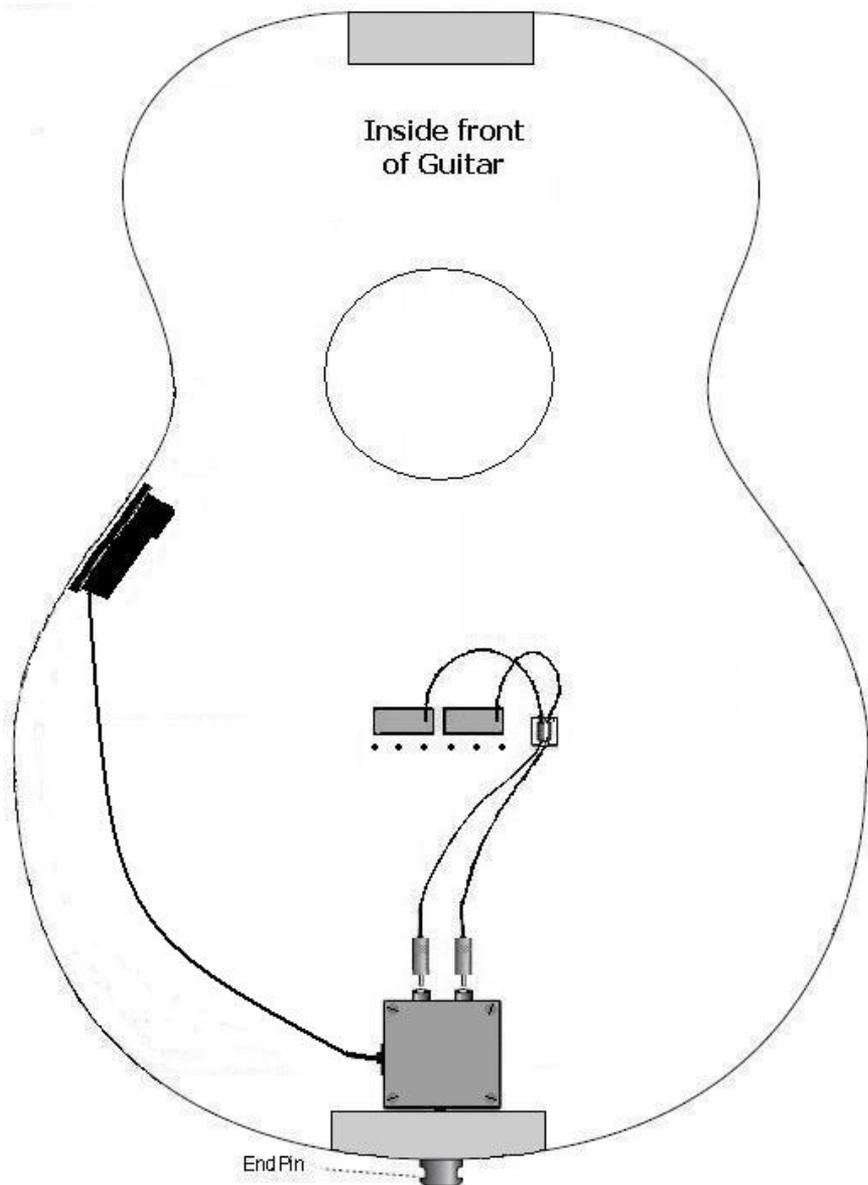
The Amulet M uses a standard 9-volt alkaline battery. Always make sure that your guitar cable is unplugged from the endpin jack before attempting to change the battery. Once a new battery is attached to the battery cable, make sure it is secured in the battery bag with the Velcro closure securely fastened, so it won't come loose inside the instrument while performing.

CONNECTING TO A MIXER

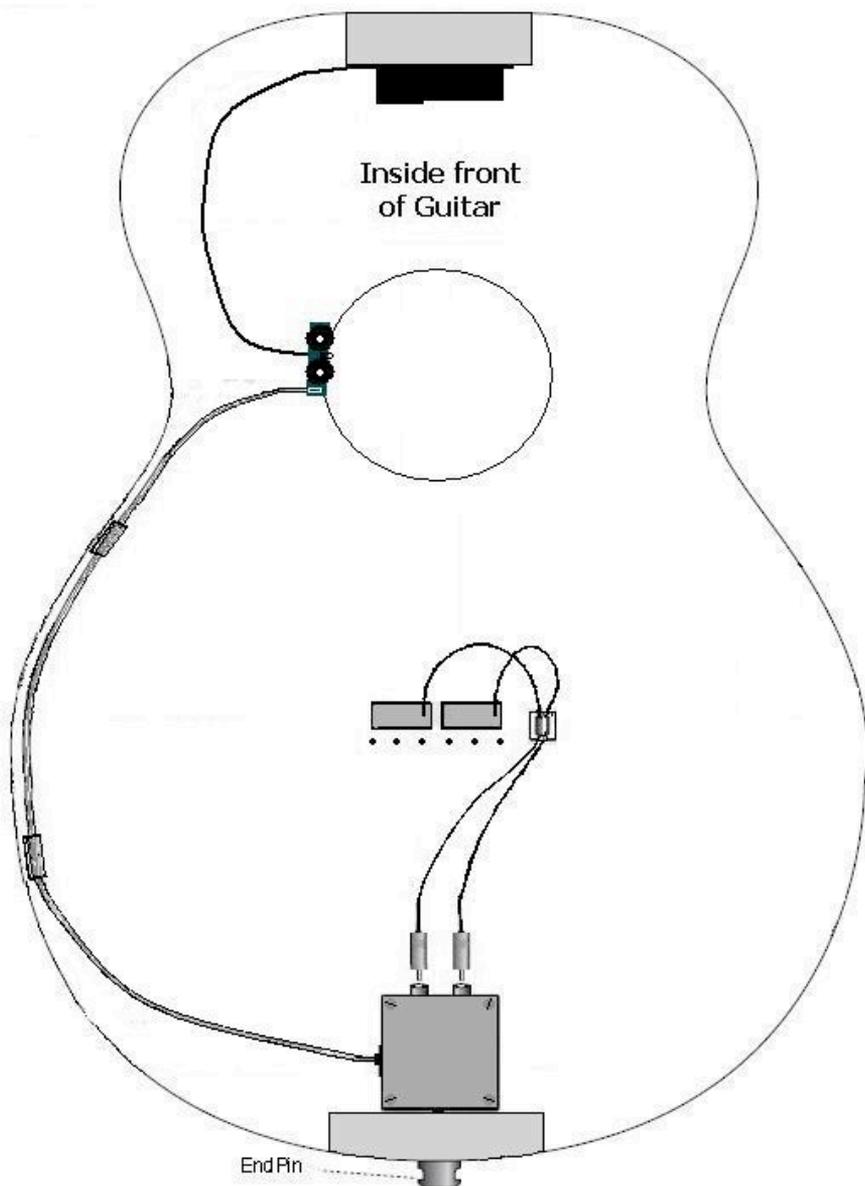
When you connect the Amulet to a high quality sound system, you gain several benefits.

First, you have additional tone controls, which allows you to “fine tune” your sound and allows you to position your sound in the stereo field. Yet another benefit of using a mixer is that you can connect effects devices to the mixer using the effects send and returns. This keeps the original signal path pure and as short as possible, and helps keep any noise generated by the effects to a minimum.

Remember that the sound system you plug into is just as important a link in the chain as anything else (maybe more!). The flatter and wider the frequency response, the better your Amulet M equipped guitar will sound. Typical electric guitar amps have a poor frequency response for acoustics, and should be avoided. Even some so-called acoustic amps can have less than ideal performance, so be sure to shop around if possible and select a system that works for you.



Installation of the Amulet M with battery clip and battery bag



Installation of the Amulet M-VT (or M-V) with cable and soundhole-mounted controls
NOTE: CONTROLS MAY BE MOUNTED ON EITHER SIDE OF THE SOUNDHOLE



Trance Audio, Inc.

Tel: (831) 688-9699 email: info@tranceaudio.com | www.tranceaudio.com
Facebook: www.facebook.com/tranceaudio Twitter: @TranceAudioInc