



TRIOLOGY

Model 3103

**THREE-IN-ONE
PERFORMANCE PICKUP**

**MAGNETIC, PIEZO, & MICROPHONE - ALL IN ONE
PREAMP IN PICKUP • VOLUME ADJUSTMENTS ONBOARD
EASY INSTALLATION • CONVENIENTLY REMOVABLE**



DEAN MARKLEY STRINGS, INC.

3350 Scott Blvd. #45 • Santa Clara, CA 95054
1-408-988-2456 • 1-800-800-1008 • Fax 1-408-988-0441
www.DeanMarkley.com • Email info@DeanMarkley.com
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Trilogy™ is a revolutionary design in acoustic amplification. It actually incorporates three separate pickups and a preamp, all part of one housing. Each of the three pickups is the very best of its type. And... Trilogy™ does not require cutting unsightly, tone changing sections or holes in your beautiful guitar.

Why is using three pickups in one so important to the sound of your music?

Well, throughout the history of acoustic pickup design there have been three basic types of acoustic pickups. Each design has its highlights and flaws and companies have endlessly attempted to engineer the best tone out of each design.

The Magnetic Pickup: (Also called a sound-hole pickup.) Magnetic pickups are installed in the sound-hole and “pick up” the magnetic responses of the strings—similar to a pickup used on an electric guitar. The pickup’s coil windings, pole-piece sizes, and magnet size are all designed to produce the most accurate “acoustic” tone. The magnetic pickup is usually more bass responsive. The pickup actually receives its response from the magnetic steel core of bronze or brass acoustic guitar strings. These pick-ups produce very little feed back, do not normally need a pre-amp, some are portable “pop-ins,” and they are the most popular for quick installs and a decent tone.

The Transducer Pickup: Transducer pickups sense vibrations. Two types are popular—a stick-on style, which may be placed at different locations on the guitar top, and an Under-The-Bridge-Saddle pickup, which is installed under the bridge saddle. Unfortunately, with stick-on type transducers, the response from the top of the guitar will also pick up unwanted nuances such as finger, pick, and arm noises.

A better transducer system is the Under-The-Bridge-Saddle transducer. This pickup reduces unwanted noises and has good acoustic tone. The tone is more “trebly” than the magnetic pickup. It may be used with or without a pre-amp. Using a pre-amp will increase the response, and with tone controls can be an excellent choice for a permanent install.

The Condenser Mic: Microphones inside the guitar produce very good acoustic tones. Care must be used, however, because of increased feed back possibilities and the inherent proximity effect. Simply, the proximity effect will tend to produce higher levels of bass tones. Also, for superior tone, a condenser mic must be used and driven by a battery powered pre-amp.

Enter Trilogy™ – The patent pending superior design of the Trilogy™ pickup utilizes all three types of acoustic amplification devices: a superior Magnetic pickup, a superb Under-The-Bridge-Saddle transducer pickup, and a high quality Condenser Mic, which is located inside Trilogy™.

Trilogy’s Outstanding Features:

- Magnetic pickup—an extremely low noise, single coil with individual

string adjustments for balanced tone

- Under-The-Bridge-Saddle transducer—For independent response of each string, this transducer has six individual sensors. The gold-plated casing provides a level surface for equal string volume.
- High quality Condenser mic located inside Trilogy™
- A blender pickup system that does not require cutting any tone-altering holes in your fine guitar
- Gold plated pole pieces, connectors, and End-Pin Jack
- The pre-amp system is conveniently “hidden” within the pickup assembly.
- Easy installation. No soldering required. (Installation normally takes 30–45 minutes.)
- May be easily removed, as all components use plug-style connectors.
- Easily reached volume controls for onboard adjustments

INSTALLATION INSTRUCTIONS

Most players realize that the investment in their prized guitar deserves a professional installation of Trilogy™. Your investment will be only a fraction more to have your pickup installed by someone who is experienced in pickup installation.

You can install Trilogy™ yourself if you have patience, care, and some degree of basic guitar mechanics. This pickup has been uniquely designed for simple installation and requires no soldering for ordinary applications.

NOTICE: Installer assumes all responsibility for damage to pickup, or guitar components. Be certain you read and fully understand all instructions. Have a clear, clean workspace to do the installation. Use tools in strict accordance with manufacturers recommendations and warnings. When in doubt, seek the advice of a qualified guitar specialist.

Read ALL directions thoroughly BEFORE starting installation!

Parts Enclosed

- (1) Trilogy™ Master Pickup assembly
- (1) Under-The-Bridge-Saddle transducer with attached cable
- (1) End-Pin Jack assembly with outside retaining nut and strap holder nut
- ABS plastic retaining clips with adhesive backing
- Metal flex retaining clips with adhesive backing
- (1) Battery holder assembly unit with mounting screws
- (1) 9-volt battery

Tools Needed

Variable speed drill

1/8" (3.175 mm) drill bit

3/16" (4.763 mm) Tapered step bit

9/16" (14.288 mm) Open end wrench

#1 Phillips head screwdriver

3/32" (2.381 mm) Allen wrench

String – 16" (40.64 cm) length

15/32" (11.906 mm) Tapered reamer (optional)

5-Minute epoxy (optional)

Hardwood shim (optional) Fine Grit Sandpaper

Awl (Center Punch) Fine Tooth Metal File

Part I – Installing the End-Pin Jack

Method One: [Preferred method] Done by hand; accurate but time consuming.

1. Remove the currently installed strap End-Pin.
2. With a 15/32" (11.906 mm) reamer, widen the hole size to 15/32" (11.906 mm). (Available from Stewart McDonald, 1-800-848-2273, part #4323.)
3. Proceed with Step 4 in Method Two.

Method Two: This method is much quicker and also works acceptably, but is not recommended for instruments with abalone or decorative veneers at the end block.

1. Remove the currently installed strap End-Pin.
2. Apply masking tape around exposed hole to protect the instrument's finish.
3. Using a sharp 3/16" (4.763 mm) Tapered step bit, line up the End-Pin hole and begin drilling, keeping the step bit at a 90 degree angle to the guitar bottom. Use steady, even pressure. Allow the step bit to go all the way thru the End-Pin block of the instrument (**ensuring drill chuck does not come in contact with the outside of the body of the guitar**) so that the diameter of the hole is continuous—all the way thru. **Allow the drill bit to come to a complete stop before removing from guitar.**
4. To install the gold plated End-Pin Jack:

A. Thread the larger (9/16" or 14.288 mm) hex nut and lock washer onto the End-Pin Jack assembly, so the end of the jack sits approximately 5/16" (7.938 mm) outside the body of the guitar (no more than 11/32" or 8.731 mm). See C below.

B. Place assembly inside the guitar and push through the hole. If the hole is difficult to reach, use a string threaded from the outside of the guitar and tied to the End-Pin Jack. Pull the string and jack through the hole.

C. Now the strap holder may be installed. The jack should sit approximately 5/16" (7.938 mm) outside the body of the guitar (no more than 11/32" or 8.731 mm). Now is the time to adjust the nut on the inside of the guitar so you have the proper amount of the jack showing on the outside of the guitar.

D. Slide the small washer and nut over the jack. Using the 3/32" (2.381 mm) Allen wrench, through the small hole at the end of the input jack, tighten the nut with the (9/16" or 14.288 mm) open-end wrench while holding the jack in place with the Allen wrench (little more than hand tight).

E. Place strap holder over End-Pin Jack and tighten.

Part II – Installing Under-The-Bridge-Saddle Transducer

Before you get started, remove your guitar's strings. It is imperative that the bottom of your saddle slot is flat and uniform. If it is cut unevenly or

warped, this may cause a string balance problem. It is recommended that if your slot is uneven, you take it to a professional technician to address the problem.

1. On the bass side, a hole must be drilled for the transducer wire. Correctly installed, each string should pass over the center of each string transducer. To insure correct positioning, line up the transducer with the string peg holes in the bridge. Now, mark the spot in the saddle slot for the hole. Drill with 1/8" (3.175 mm) drill bit using care to maintain a 90-degree angle to the top of the guitar. **It is important that you drill straight so as not to widen the existing slot on either side.** Remove any wood chips and foreign material from the saddle slot.

2. Insert pickup. The pickup should sit comfortably in the slot without binding on the sides or the ends of the pickup.

3. It will be necessary to "shave down" your saddle to compensate for the height of your new transducer pickup, approximately 1/16" (1.191 mm). Make sure the bottom of your saddle is completely flat to ensure maximum contact between saddle and pickup for even string volume.

Part III – Installing Battery Clip

The battery clip may be installed in one of two locations.

1. Neck block

A. Position the clip on the neck block. Using an awl (center punch), mark holes.

B. Using #1 Phillips screwdriver, fasten battery clip to neck block.

2. Inside Upper Bout (side of guitar)

A. This method requires making a hard wood shim 1/8"x 2" x 1" (3.175 mm x 50.8 mm x 25.4 mm).

B. After making the shim, pre-drill holes in the shim and attach metal battery holder with enclosed screws.

C. While holding the shim, find a convenient level spot on the inner section of the guitar side. Once you have located this spot, using five minute epoxy, mount the shim. When epoxy is dry, the battery may be installed.

Part IV – Installing Pickup Assembly

The Dean Markley Trilogy™ pickup was designed to be easily installed as well as conveniently uninstalled, with virtually no modification to your guitar. This is obtained by Trilogy's unique onboard preamp installation method, and connector jacks. No soldering is required!

1. Before installing pickup assembly, the retaining clips must be installed. The plastic clips are designed to hold the mini-jacks. The wire clips will hold the excess wire. As each guitar is different, you must experiment and decide on the most convenient locations for the clips. Normally, the best location for the clips are on the sides, or perhaps on the bracing. Secure excess wire so no vibration can occur.

2. Connect enclosed 9-volt battery to the battery holder, which has been installed in your guitar.

3. Connect the transducer cable and output cable to the wire leads on the Trilogy™ pickup assembly.

4. Pickup assembly is now ready to install in sound-hole. Loosen pickup clamps using #1 Phillips screwdriver. Place Trilogy™ in the sound-hole, moving it as close to fingerboard as possible. Make sure the gold-plated pickup adjustment screws are centered with your strings.

5. Tighten screws until clamps start to grab. Be certain the pickup is secure so a jolt to the guitar or a bump to the case will not dislodge the pickup. **(This could easily scratch your guitar if the assembly became loose. Periodically check your pickup to make sure it is not loose in the sound-hole, due to vibration or weather changes.)**

Part V – Adjusting the String Balance of Sound-hole Pickup

The six gold-plated, adjustable pole pieces have been factory adjusted for even string balance on virtually all guitars. Play the guitar for a while before

making any decisions about making adjustments on the pole pieces. They are probably already set correctly.

However, if you feel that a string is too weak or too loud and you want to make adjustments to the pole pieces, place a capo on the guitar at the 7th fret, and start with the “B” string (second string pole piece). Adjust for equal volume levels by raising or lowering the pole piece with a small flat screwdriver. Then move on to another pole piece if it is required.

Remember: The pole pieces are adjusted at the factory for an average setting for most guitars and you might not have to do any adjusting. Use caution when going into this adjustment stage. You don't want to get it “out of whack” and not be able to get it back where it was. So take your time and listen to each string carefully before making any adjustments.

USING YOUR TRILOGY PICKUP:

Notice you have 4 individual volume controls.

MAG—volume control for the magnetic sound-hole pickup

PIEZO—volume control for the Under-The-Bridge-Saddle transducer

MIC—volume control for condenser microphone installed in pickup assembly

MASTER—overall volume control for all 3 pickups

On each control, notice the volume indicators. One hash mark = zero volume; two hash marks = 50% volume; three hash marks = 100% volume.

By using the three pickup volume controls, an infinite number of blends may be attained. Once the desired tone is achieved, the overall volume may be controlled by the master control.

Now turn all controls to their lowest setting.

Using a high quality, low capacitance cable (Look for the Dean Markley solderless 24kt gold tip cable.), connect your guitar to the amp that you are going to play through. Note: The better the amp, the better the sound. If you can play through an amp with at least a 10-inch speaker and a Piezo type horn, you will probably fall in love with it.

A good way to start blending is as follows:

Adjust the MASTER control to 2/3 volume.

Adjust the MIC control to a comfortable level, somewhere around 50%. If you hear feedback, lower control slightly. This mic tone will sound very acoustic and may actually be used independently.

Adjust the PIEZO control—you will hear brilliant higher tones with good acoustic quality. This control may be adjusted slightly higher than the MIC control.

Adjust the MAG control—you will hear deep lows, a strong mid-range, and plenty of sustain.

With all three pickups now functioning, you will only need to fine tune your settings to the room acoustics. Now the master volume may be adjusted to your desired playing volume.

Now... just Keep on Pickin'!

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All specifications are subject to change without notice.

The Trilogy™ pickup was designed and engineered by Wayne A. Rogers. Patent Applied For.