BARSTOW

Active - Model 3102

High Performance Piezo Pickup With Class A Gold River™ Accelerator Jack™

Individual Sensors For Independent String Response
Class A Accelerator Jack™ • Solderless Connections

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Dean Markley's Barstow™ Active™ pickup is a high perfromance Under-The-Bridge-Saddle™ transducer with a built in discrete Class A Pre-amp that beautifully enhances acoustical reproduction and smooth, flowing string balance. The Barstow™ Active™ pickup has excellent acoustical tone reproduction, and reduces unwanted noises commonly found with stick-on type transducers. The Barstow™ Active™ pickup requires no maintenance and is unseen when installed in your guitar. Only you will know you have a pickup installed, unless your friends see the guitar cable connected to the Gold-Plated Gold River™ Accelerator Jack™… a beautiful addition to any guitar.

Outstanding Features Of Barstow™ Active™

- 24-K Gold-Plated transducer pickup, with solderless mini-plug connector
- 24-K Gold-Plated Gold River™ Accelerator Jack™ - with built in discrete Class A Pre-amp and solderless mini-jack connector
- 6 Individual string sensors for independent string response
- Sensors mounted in 24-K Gold-Plated steel casing, providing a level surface for balanced string volume
- Solderless, mini-plug connectors for easier installation

Parts Enclosed

(1) Gold-Plated Barstow™ Under-The-Bridge-Saddle™ transducer - with solderless mini-jack connector
(1) 24-K Gold-Plated Gold River™ Accelerator Jack™ - with built in discrete Class A Pre-amp and solderless mini-jack connector
(1) 9-Volt Battery clip holder - with screws
(1) 3 inch piece of Velcro
4) Stick-on flexible metal, cable ties with adhesive backing

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

Tools Needed (Continued)

Piece of string – 16" (40.64 cm) length
15/32" (11.906 mm) tapered reamer (optional)
Awl (center punch)
Fine Tooth Metal File
Pair sharp scissors
Sandpaper, 120 grit
5-Minute epoxy (optional)
Hardwood shim (optional)

INSTALLATION INSTRUCTIONS

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

You can install the Barstow™ Active™ yourself if you have patience, care, and some knowledge of basic guitar mechanics. The Barstow Active™ has been uniquely designed for simple installation and requires no soldering for ordinary applications.

NOTICE: Installer assumes all responsibility for damage to the Barstow™ 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 the manufacturer's recommendations and warnings. When in doubt, seek the advice of a qualified guitar specialist.

Read ALL directions thoroughly BEFORE starting installation!

Part I – Installing the Barstow™ Under-The-Bridge-Saddle™ Transducer

Before you get started, 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 volume balance problem. It is recommended that if your slot is uneven, you take it to a professional technician to address the problem.

1. Start by removing all of the strings, one at a time. **Don't cut your strings off unless you loosen them first.** The resulting jolt that the neck takes if the strings are cut before loosening is not good for the neck.

2. Before removing the bridge saddle, take a sharp pencil and make a mark on the saddle all along where the saddle meets the bridge. Now remove the bridge saddle.

3. Correctly installed, each string should pass over the center of a string transducer. Keeping that in mind, correctly position the transducer by lining up the transducer with the string peg holes. On the bass side of the bridge saddle slot, a 1/8" hole must be drilled for the transducer wire to go through. Mark the spot in the saddle slot for the transducer wire's hole. Drill with 1/8" drill bit, using care to maintain a 90-degree angle from the top of the guitar. It is important that you drill straight so as to not widen the existing slot on either side. Remove any wood chips and foreign material from the saddle slot.

4. Insert pickup by pushing the male mini-jack down through the hole in the bridge saddle slot. The pick up should sit comfortably in the slot without binding on the sides or the ends of the pickup.

5. It will be necessary to "shave down" your saddle to compensate for the height of your new transducer pickup (approximately 1/16"). (Make sure the bottom of your saddle is completely flat to ensure maximum contact between saddle and pickup for even string volume.) A good method for shaving the bottom of the bridge saddle is to tape #120 grit sandpaper to a piece of glass. Lay the glass flat on the table, sandpaper side up. Place the base of the saddle straight up and down on the sandpaper and with side to side motion, lightly sand off the excess material that needs to be removed. Remove only a small amount. Then place the saddle into the bridge saddle slot, on top of the pickup. Push down and see how much material still needs to be removed from the bottom of the bridge saddle. Repeat this procedure a little at a time until the line you marked on the saddle evenly touches all along the bridge as it was before you installed the pickup. Take your time. Don't rush this.

6. Tape the bridge saddle to the bridge to hold the saddle and pickup in place.

Part II– Installing the Gold River™ Accelerator Jack™

Important Note: If your guitar presently has a typical electrical End-Pin Jack™ in the end block, you may remove it and proceed to step 4 in Method Two.

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 through the End-Pin block of the instrument, **ensuring the drill's chuck does not come in contact with the outside of the body of the guitar,** so that the diameter of the hole is a continuous 15/32"—all the way through. **Allow the drill bit to come to a complete stop before removing from guitar.** Remove any particles of wood that are left over.

4. Now the Gold-Plated Gold River™ Accelerator Jack™ is ready to be installed:

4A. Remove the strap holder, smaller hex nut, and small inner-diameter, flat, silver washer from the end of the jack.

4B. Move the larger (9/16" / 14.288 mm) hex nut, lock washer, and flat silver washer on the Gold River™ Accelerator Jack™ assembly as far as it will go towards the wired end of the jack.

4C. Insert the male mini-jack on the end of the Barstow™ transducer into the female connector in the Gold River™ Accelerator Jack™.

4D. Place the Gold River™ Accelerator Jack™ assembly inside the guitar and push through the end-pin hole. If this hole is difficult to reach, use a string threaded from the outside of the guitar and tie it to the Gold River™ Accelerator Jack™. Pull the string and jack through the hole.

4E. Screw the small inner-diameter, flat, silver washer and smaller hex-nut onto the smaller (in diameter) threads of the jack and tighten it firmly.

4F. Now is the time to tighten the nut on the inside of the guitar so the jack sets firmly in the end-pin hole. Hold the jack in place with the Allen wrench in the small hole at the outside end of the input jack. Tighten the nut with the (9/16" / 14.288 mm) open-end wrench (a little more than hand-tight - so it holds in place).

4G. Place strap holder over Gold River™ Accelerator Jack™ and tighten hand-tight.

Part III – Installing Battery Clip Holder

The battery clip holder may be installed in a number of locations. We prefer location 3, below, because it is not so permanent, nor does it cover *some* serial numbers.

1. Neck block with screws

1A. Position clip on neck block. Using an awl (center punch), mark holes.

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

2. Inside Upper Bout (side of guitar)

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

2B. After making the shim, pre-drill holes in the shim and attach metal battery holder with the enclosed screws.

2C. 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.

3. Velcro installation, in the corner of neck block and upper bout of guitar.

3A. Separate the two pieces of Velcro.

3B. Align the 2 velcro pieces, with the "fuzzy" side facing the "prickly" side. Press the two sides together firmly so they are tightly together.

3C. Using a sharp pair of scissors, cut the two connected 3 inch pieces of Velcro in half, leaving equal length pieces.

3D. Remove the protective paper from the "fuzzy" side of one of the combined sets. Attach the sticky adhesive side of the velcro to the back of the battery holder.

3E. Repeat step 3D with the other half of the connected Velcro and attach it to one of the sides of the battery holder.

3F. Locate the area to the right of the neck block and against the upper bout side of the guitar, where you want to place the battery holder. Try pushing it into place before removing the protective paper from the adhesive.

3G. Once you are comfortable with the positioning, remove protective paper from back of both "prickly" sides of the Velcro pieces. Then push the battery holder into your chosen location. Press firmly to make sure the Velcro attaches firmly to guitar.

3H. Attach the red and black battery wire clip from the Accelerator Jack™ to the 9-volt battery and place the battery in the battery clip holder.

Part IV - Installing the Flexible Metal Clips

It is time to determine if you need to install any of the flexible metal clips to keep any wires from rattling around in your guitar. If you find that the wire is rattling, put a clip on the wire. Then position a clip inside the guitar on the top or top corners where the wire will not rattle. Remove the protective adhesive backing from the clip and press into place.

Now… Replace your strings with a new set and get it tuned up. You're ready to go!

USING YOUR BARSTOW™ ACTIVE™ PICKUP

Your Barstow™ Active™ pickup will give you many years of enjoyable playing. If at sometime you decide you would like to "supe up" your Barstow™ Active™, think about adding a Tahoe™ magnetic sound hole pickup to your Barstow™ Active™. (There is an extra lug on the active preamp jack to wire it to.) Then you can run the two pickups into two different channels of your amp, PA, or two separate amplifiers. With some imagination (and a few good effect pedals) you can pull off some fantastic sounds with stereo pickups. (You would need a Stereo Cable.)

See the complete line of pickups and accessories of the Dean Markley West Coast Series™ Acoustic Gear™ at your local Authorized Dealer, or on the **www.DeanMarkley.com** web site.