

THE ANGEL™ PZ DP233 INSTALLATION INSTRUCTIONS

FIG. 1

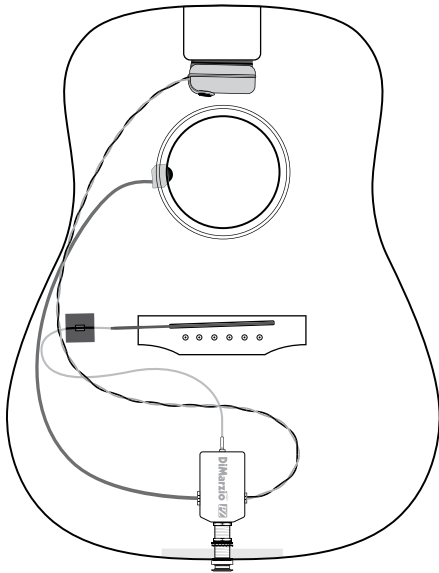


FIG. 2A



FIG. 3

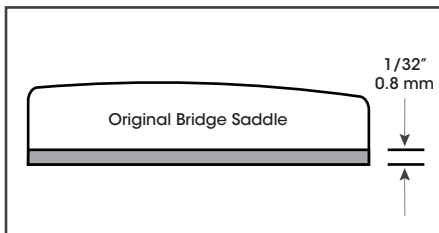
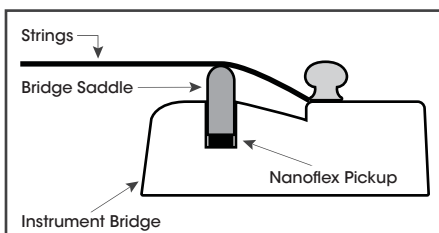


FIG. 4



The Angel™ PZ combines the Shadow Nanoflex undersaddle pickup with a specially designed preamp. It includes a volume control mounted within the soundhole for easy access. The preamp is powered by a 9-volt battery (not included), which is mounted in the guitar on or near the neck block in a battery pouch. The Angel™ PZ works with standard bronze strings, but nickel-wound and compound strings can also be used. It will also work with nylon strings. **[FIG. 1]**

IMPORTANT: Installation of The Angel™ PZ is complex. We strongly recommend that installation be done by a qualified guitar technician.

INCLUDED IN THIS PACKAGE

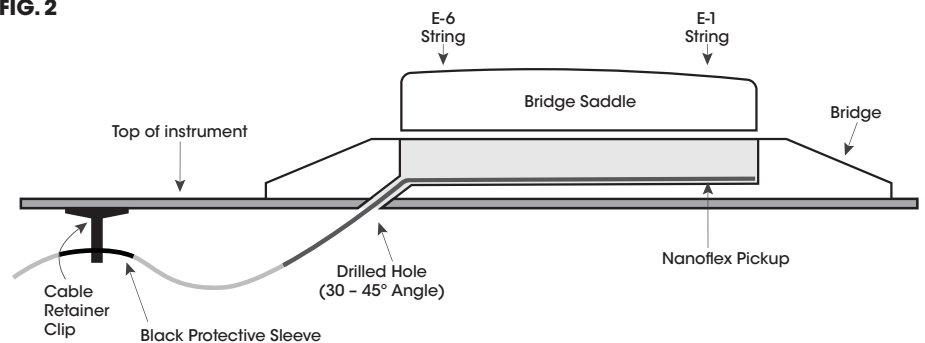
- (1) Nanoflex undersaddle pickup
- (1) The Angel™ PZ preamp module and endpin jack
- (1) Self-stick dual volume control assembly
- (1) Self-stick battery pouch
- (1) 20-inch (51 cm) pickup-to-preamp cable
- (1) 3/32-inch Allen wrench
- (4) Self-adhesive cable retainer clips
- (1) Self-adhesive piezo cable retainer clip
- (2) Alcohol wipes
- (1) Instruction sheet
- (1) Warranty card

Please read the installation instructions carefully. Installation of The Angel™ PZ requires the use of the included preamp/endpin jack.

INSTALLING THE NANOFLEX UNDERSADDLE PICKUP

Measure the string height of the first and sixth strings before removing the strings and record the measurements. Carefully remove the original saddle and drill a hole with a #42 drill bit (0.093-inch or 2.40 mm) in the corner of the saddle slot at the bass string side of the bridge. **[SEE FIG. 2.]** The hole must be drilled at an angle of 30° - 45°. Check the top bracing before drilling the hole to avoid damage. Clean up the saddle slot and remove all wood dust and chips. Route the pickup cable through the hole in the bridge from underneath the bridgeplate and place the pickup into the saddle slot with "NFX top" showing. **[FIG. 2A]** To restore the overall height of the bridge, reduce the height of the saddle by 1/32 inch (0.8 mm) **[FIG. 3]** by sanding the bottom surface of the saddle. It is important that the bottom of the saddle be absolutely flat.

FIG. 2



Insert the saddle back into the slot and secure it temporarily with a piece of tape. Later, when you restring the guitar, make sure the strings do not tilt the bridge saddle forward toward the

FIG. 5

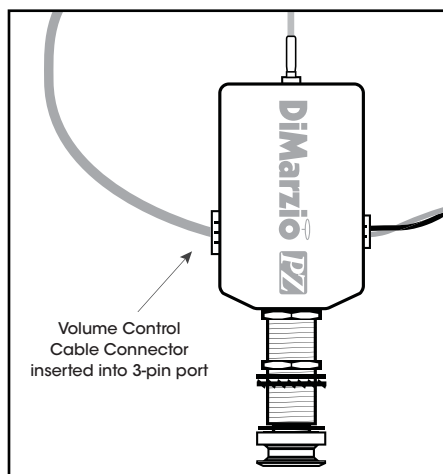


FIG. 6

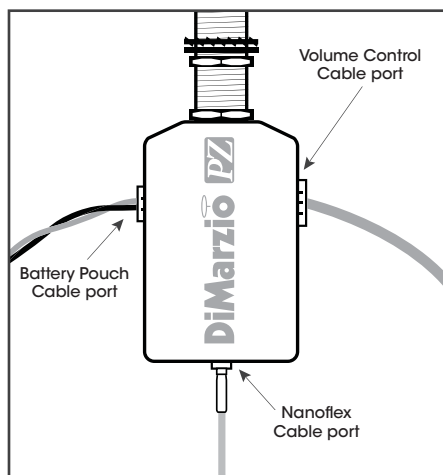
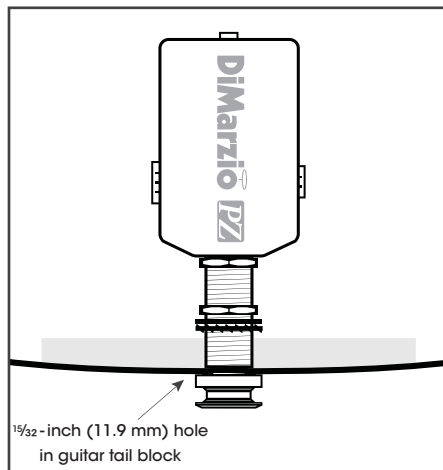


FIG. 7



neck. [FIG. 4]

Use the black cable retainer clip to guide the wire from the pickup to the underside of the top and secure the cable into it. [FIG. 2] Failing to secure the cable will cause excess noise. The clip should secure the cable where the cable is insulated with the black protective sleeve. Do not attach the clip on the exposed braided metal section of the cable.

PREPARING THE ANGEL™ PZ PREAMP

The Angel™ PZ preamp has an output jack for a standard guitar cable and three inputs to connect the cables from the volume control, the battery, and the pickup. All three cables must be plugged into the preamp before the preamp is installed in the guitar.

VOLUME CONTROL: Look carefully at the volume control connector before plugging it into the preamp so that you insert it in the correct direction. Attempting to force the connector upside down will damage the preamp. The volume control cable connector must be inserted firmly into the 3-pin port on the side of the preamp. [FIG. 5]

BATTERY: Look carefully at the battery connector before plugging it in so that you insert it in the correct direction. Attempting to force the connector upside down will damage the preamp. The battery cable connector must be inserted firmly into the 2-pin port on the side of the preamp opposite the volume control cable.

PICKUP CABLE: The pickup cable must be inserted firmly into the mini jack on the end of the preamp. [FIG. 6] Note the mini jack is labeled "NANOFLEX".

When the pickup cable, volume control and battery cable have been connected to the preamp, install the preamp in the guitar.

PREAMP INSTALLATION

With the strings removed, place your guitar on a flat surface.

The preamp [FIG. 7] requires a clean 15/32-inch (11.9 mm) hole in the tail block of the instrument.

IMPORTANT NOTE: If your guitar already has a hole of the correct diameter for an endpin jack in the tail block, proceed to the paragraph below to complete the installation of the preamp. If your guitar does not already have a hole of the correct diameter, we strongly recommend that a qualified guitar technician install the preamp as follows:

- Remove the existing endpin and place a piece of masking tape on the outside of the instrument over the endpin area to prevent chipping of the guitar finish.
- Enlarge the hole with a 15/32-inch (11.9 mm) tapered reamer, available from Stewart-MacDonald (www.stewmac.com), part number 4323.
- Remove the masking tape and proceed with the installation.

Remove the strap nut, hex nut, and one flat washer from the end of the preamp assembly. There should still be one locking washer, one flat washer, and two hex nuts remaining on the jack.

Using care to keep the washers on the jack, bring the preamp down through the soundhole into the body and insert it into the hole in the tail block.

Adjust the internal nut so that the larger threaded section of the jack remains recessed 1/32 inch (0.8 mm) below the outside surface of the instrument and most of the smaller threaded section protrudes from the guitar. The nut on the jack closest to the preamp is factory installed and must not be adjusted. Adjusting this nut can damage the preamp.

With the preamp in place, lay the remaining flat washer over the threads outside the

FIG. 8

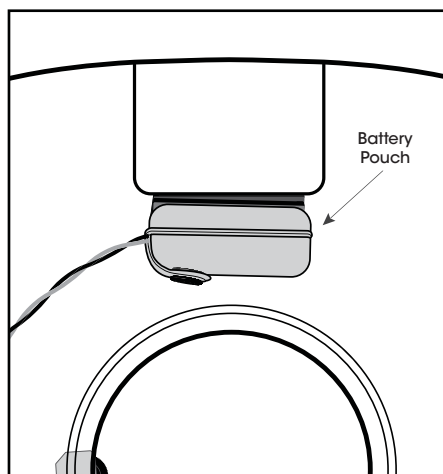
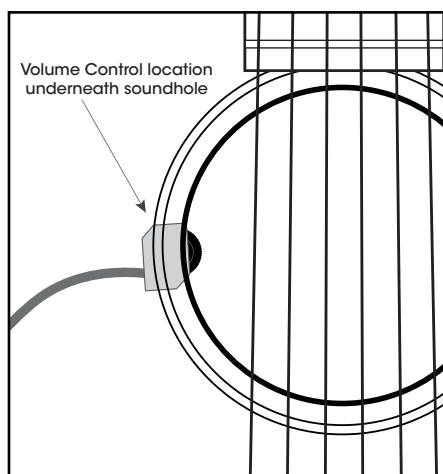


FIG. 9



instrument and install the external hex nut hand tight.

Insert the included 3/32-inch Allen wrench through the cross hole in the jack and hold firmly while tightening the nut with a wrench. To avoid damage, do not hold the preamp itself while tightening the nut. Use of a proper wrench instead of pliers will help prevent damage to the guitar. To avoid cracking the guitar finish, do not over-tighten the nut.

NOTE: If the jack will not tighten firmly, remove the external hex nut and re-adjust the internal hex nut until the larger threaded section is recessed at least 1/32-inch (0.8 mm) below the outer surface of the instrument.

Finish by installing the strap nut hand tight. It should cover the retaining nut and washer. For best results, the end of the jack should be recessed ever so slightly from the end of the strap nut.

Once the preamp is installed, install two of the self-adhesive cable retainer clips on the inner back surface of the guitar to hold down the pickup cable and prevent it from vibrating against the guitar.

BATTERY POUCH INSTALLATION

The battery pouch will be installed on the flat surface of the neck block or the side of the guitar adjacent to the neck block as shown in [FIG. 8]. Clean the area where you will mount the pouch using the included alcohol wipe or a cotton swab moistened with rubbing alcohol. Let dry. Separate the battery pouch from the Velcro patch. Peel off the paper liner from the Velcro patch and attach the patch to the chosen location. To set the adhesive, press firmly on the entire area of the patch with your fingertip, especially around the edges. Attach the battery clip to a 9V alkaline or lithium battery, install the battery into the pouch, and re-attach it to the Velcro patch. Install one of the self-adhesive cable retainer clips on the inner back surface of the guitar to hold down the battery cable and prevent it from vibrating against the guitar.

NOTE: The adhesive under the Velcro patch requires 24 hours to achieve a full bond, so take care not to stress the adhesive if you remove the battery pouch less than one day after the initial installation.

VOLUME CONTROL INSTALLATION

Find a flat area on the underside of the soundhole where the volume control will fit. Clean the area where you will mount the volume control using the included alcohol wipe or a cotton swab moistened with rubbing alcohol. Let dry. Install the volume control by peeling off the paper liner on the smooth side of the circuit board and pressing it firmly inside the soundhole as shown in [FIG. 9]. The volume control should protrude from the sound hole just far enough to be easily adjusted, as shown. Install one of the self-adhesive cable retainer clips on the inner back surface of the guitar to hold down the volume control cable and prevent it from vibrating against the guitar.

You can expect about 600 hours of playing and standby time from a fresh alkaline battery, or as much as 1000 hours from a lithium battery. To extend battery life, unplug the guitar cable from your guitar when you're finished playing. Remember, the preamp continues to operate and uses battery power whenever a guitar cable is plugged into your guitar, even if you turn down the soundhole volume control, unplug the cable from your amp or put your guitar amp on standby. A weak or distorted sound from The Angel™ PZ means it's time to replace your battery.