# X-BRIDGE (FIXED)

INSTALLATION MANUAL & USER'S GUIDE

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### 1. PACKAGE CONTENTS

One (1) fully assembled X-Bridge

Five (5) mounting screws

One (1) prewired stereo output jack with washer and nut

One (1) volume pot (5 Megohm) with pre-soldered capacitor

One (1) hex wrench for tremolo arm and saddle height adjustments

One (1) piece of 10" insulator sleeve

One (1) coaxial cable

### 2. OVERVIEW AND CAUTIONS

The Fixed X-Bridge is made as a replacement for the basic Strat-type fixed bridge, but will replace many other fixed bridges with some modifications. It is intended for use only with guitars that have through-body string holes. The passive stereo kit provides for independent outputs for the magnetic and X-Bridge pickups via the tip and ring contacts of a stereo jack. A volume pot for the passive X-Bridge takes the place of the middle tone control. The tone functions are summed onto the other tone pot.

The included wiring directions are intended for a typical three-knob Strat but may be altered to suit other configurations.

We do not provide installation advice or support for home or hobbyist installations. Installers: please read the instructions carefully before proceeding. We will not be responsible for any damage to the guitar or personal injury resulting from installation, use or misuse of the product.

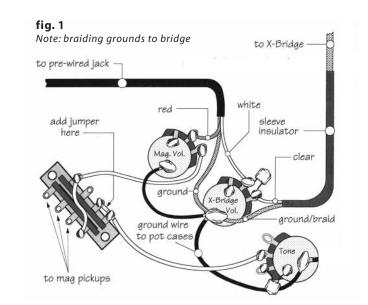
**Do not lift the saddles up off the bridge plate to see how high they will go!** This tempting investigation has a high probability of damaging the pickup. There is ample pickup wire to allow the full range of saddle movement for height and intonation.

#### 3. INSTALLATION

- 1. After removing the existing bridge from your guitar, lay your new X-Bridge on the top surface and line p the six string holes in the bridge with the six string holes in the body. Check to see if the five holes in the bridge for the mounting screws line up with the holes in the body from the bridge that you are replacing. If so, continue with step 3. Otherwise, see step 2.
- 2. If the holes do not line up you will need to drill new holes with a 3/32" drill bit. With the bridge in position over the six string holes, scribe a mark in each of the five screw holes, remove the bridge and drill the holes 7/8" deep. It may be necessary to fill the original holes prior to drilling the new ones. Do not mount the bridge to the body at this point.
- 3. Remove the existing ground wire that goes from the old bridge to the control cavity.
- 4. Both ends of the coaxial cable are pre-separated; if you line up the ends you'll see that one end is shorter than the other. The short end gets soldered to the circuit board on the bottom side of the bridge. On the circuit board there is one round solder pad and one square solder pad.

Solder the tip of the braided wire to the square pad and the inner wire to the round one. Be careful to keep the solder connections as flat as possible so that the bridge will sit evenly on the body of the quitar.

- 5. Temporarily feed the coax wire into the electronics cavity through the original ground wire hole (in some cases it may be necessary to slightly enlarge this hole) and set the X-Bridge on top of the guitar, in position.
- 6. Temporarily screw the bridge onto the body. When you tighten down the screws, the high points from the solder connections will likely prevent the bridge from sitting flat against the top. If the screws will not completely draw the bride against the top under reasonable pressure, remove the bridge and slightly deepen the indentations in the top caused by the solder pads and coax (using a dremel router or a small chisel) until the bridge will sit flat on the top. Do not make the indentation for the coax too deep; the braided portion of the coax will become the new bridge ground wire. To make adequate ground connection it must be under pressure when the bridge is secured to the top.
- 7. Now attach the X-Bridge to the guitar with the mounting screws provided.
- 8. Cover the coax wire inside the electronics cavity with the 10" piece of insulator sleeve provided (you may need to trim this to size). Use the cable tie to secure the insulation sleeve and to bundle the other wires together, as appropriate.



9. Disconnect and remove the existing jack and middle tone pot from the guitar, replace them with the prewired stereo jack and five-meg volume pot included in the kit, and connect as shown in figure 1. Remove the wire that connects the middle tone pot to the switch and solder a jumper between the two lugs on the switch for the tone controls.

Note: The volume pot has a bypass capacitor pre-soldered to it. This capacitor maintains the high frequency response of the X-Bridge as its volume is reduced. Do not remove it.

#### 4. ALTERNATE INSTALLATIONS

A. (Replaces step 9) If you wish to retain the stock controls and do not want a volume control for the X-Bridge, replace the existing jack with the prewired stereo jack provided. Solder the red wire from the prewired harness to the middle pin of the volume pot and the shield wire to a pot case. Next, solder the hot (center) wire from the coax to the white wire from the prewired jack cable inside of the control cavity.

B. If you wish to retain all of the stock controls and you want to add a volume control for the X-Bridge, it will be necessary to drill a new hole in the pickguard to add the X-Bridge volume pot. You may also need to enlarge the control cavity on the guitar. Connect everything to the jack as shown in figure 2.

Note: There are other strat models that have different tone control connections. If you have one of these, just leave the tone knobs the way they are and solder the volume pot as shown.

Note: do not combine the X-Bridge and magnetic pickups onto the same volume pot.

to pre-wired jack

to X-Bridge

sleeve insulator

red

white clear

fig. 2

to X-Bridge

ground wire to pot cases

Caution: Excess movement and undue stress on the pickup wires could cause serious damage to the pickups.

## 5. USER'S GUIDE

A guitar equipped with an X-Bridge requires the use of a stereo 'Y' cable to access both the X-Bridge and magnetic pickups. This is a cable that has a stereo plug on one end and splits off into two mono plugs at the other end, one for each signal. The magnetic pickups will be on the 'tip' and the X-Bridge will be on the 'ring.' Each signal will require its own individual channel, even in a combo amp. Do not plug them into the same channel.

For best low end response, the X-Bridge should be plugged into amplifiers, effects or D.I.s that have a one megohm or higher input impedance. This is standard, but if the X-Bridge's low end sounds wimpy, look into this. Do not plug the X-Bridge into passive D.I.s,

For optimum results, the X-Bridge and the magnetic pickups should be in phase with each other when they are mixed together. If they are in phase, the mixed sound will have a full, rich tone quality. If they are out of phase, the mixed sound may be thin through the low mids and bass range. Since there is no phase standard for magnetic pickups, there is a significant chance that the magnetics will be out of phase with the X-Bridge. To further complicate matters, there is no phase standard even between the adjacent channels in dual-channel amps. The two channels of dual-channel amps are sometimes out of phase with each other. Since it is likely that the most common usage for the X-Bridge will be into these amps, we encourage you to experiment with phase to achieve the best results.

To change the pickup phase relationship with the passive kit, you must invert the phase of one of the signals outboard of the guitar. Our Para Acoustic D.I. box works wonderfully with the X-Bridge and provides instant phase control and E.Q., and acts as a direct input to the P.A. for it. If you do not have a Para Acoustic D.I., the simplest solution is to try another amp.

Another option is to run the two signals through separate amplifiers that are spaced as far apart from each other as the 'Y' cable will allow. The phase relationship is not important when the X-Bridge is routed to the P.A. amp. If you plan to only use the X-Bridge alone (for its acoustic sound), then phase in relation to the magnetics does not matter at all.