PickupBender™

Select X10

User Guide

1.1

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Patent Pending.

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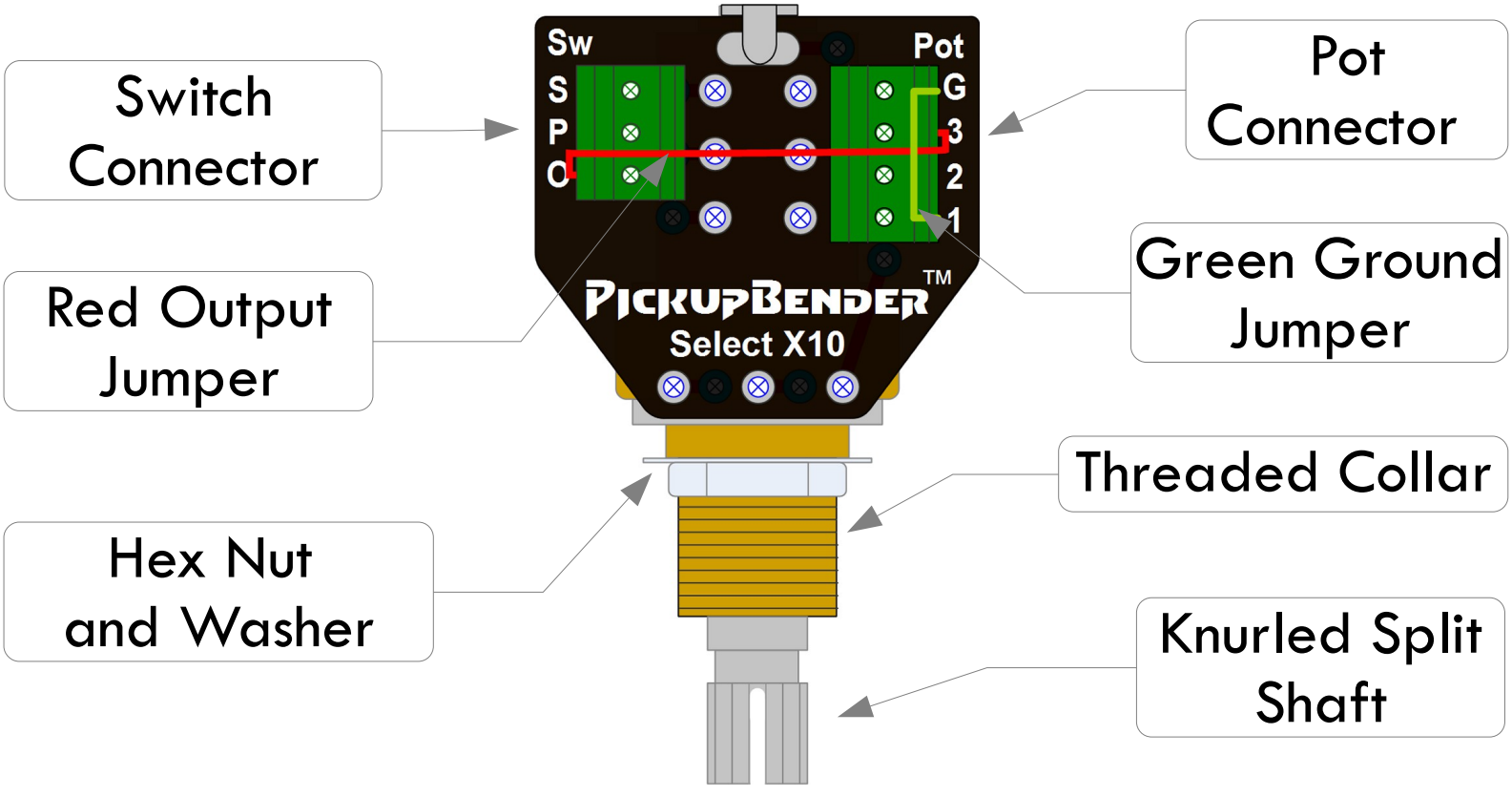
Contents

What's In The Box?

- PickupBender™ control switch
- Jumper wires (ground & output)
- Install kit (mini screwdriver, hex nut, flat washer, lock washers, hookup wire, B connectors)
- User guide (this booklet)

Big Picture


Switch Connector
Red Output Jumper
Hex Nut and Washer
Pot Connector
Green Ground Jumper
Threaded Collar
Knurled Split Shaft
Sw
S
P
O
Pot
G
3
2
1
PickupBender™
Select X10

Before You Install

The PickupBender™ Select X10 can be used on guitars with 3 pickups and a standard 5-position blade style selector switch to add the missing pickup combinations – bridge & neck pickups only, and all 3 pickups.

Select X10 can be installed as a volume or tone control, but it's best to install Select X10 as a volume control.

PickupBender™ control switches are passive (non-powered) devices that combine an integrated switchable wiring mod with a volume/tone control. They replace existing volume or tone controls without the need to drill new holes. They are

easily installed without soldering in most solid and hollow body guitars with passive pickups.

Mounting Clearances

- Mounting hole diameter: ⅜(0.375) inch.
- Threaded collar length: ⅜(0.375) inch.
- Body cavity depth inside guitar: 1¼ (1.25) inches.
- Mounting surface thickness: ¼ (0.25) inch maximum.

If mounting PickupBender™ in the guitar body (instead of the pickguard) and the body thickness between the bottom of the control cavity and outside of the body is too thick,

you will need to lower the area around the mounting hole on the inside of the cavity until the threaded collar extends through the body just enough to thread the hex nut on the collar (about ⅛ inch). You can use a rotary tool or other tools for this purpose.

⚠ Lowering the body cavity requires significant skill. If you are not comfortable with doing this yourself, have a qualified guitar technician perform this alteration.

Any damage caused during installation is not covered by the product warranty.

Control Knob

The PickupBender™ split shaft fits a course knurled 18-tooth push-on knob. This is the most common type of push-on knob. A fine 24-tooth push-on knob (usually found on vintage guitars) will fit too tight on the split shaft and may damage the switch when the knob is removed.

You can also use a a set-screw type knob on the split shaft. If you do, be careful to avoid damaging the teeth on the split shaft when tightening the set screw.

⚠ **Damage caused by using a control knob other than a course knurled 18-tooth split shaft is not covered by the product warranty.**

How To Install

Tools Needed

- Mini screwdriver (included)
- Wire cutters and strippers, or scissors and knife
- Pliers or wrench
- Crimping tool for B connectors (optional)
- Masking or cellophane tape
- Permanent marker, pen, or pencil

Using B Connectors

The included B connectors and hookup wire can be used to extend your guitar wiring if necessary. B connectors are easy to use and provide a strong dependable connection for splicing wires together.

Strip ¼ inch off the end of the wires, fully insert the wires into the wide opening of the B connector, and flatten the middle section of the connector with pliers, crimper, or similar tool.

Figure A: B Connector

Remove Old Control

[1] Remove the control knob. For a push-on knob, slowly pull up with a gentle rocking motion. For a set-screw knob, loosen the set screw to remove the knob.

[2] Loosen control mounting nut. Remove nut and washer(s).

[3] For a solid body guitar, remove control cover or pickguard to expose pickup wiring.

[4] For a hollow body guitar, push old control into body and pull the control out through an access hole to expose pickup wiring.

[5] Note which pot lug is grounded, usually 1 or 2 but can be none. The ground lug may be soldered to the pot case or to a ground wire.

[6] Label each wire and component soldered to the pot lugs using tape with the lug number (**1, 2, 3**) written on it. Label ground wires soldered to the pot case with **G**.

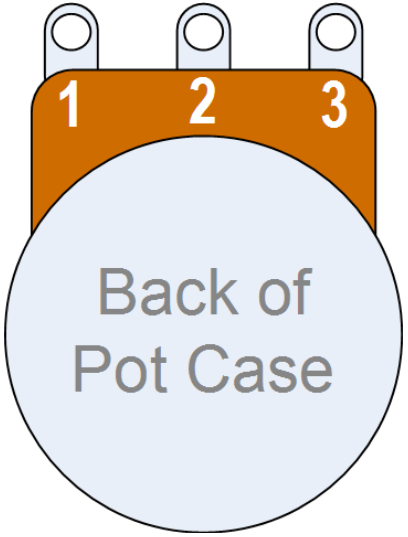


Figure B: Pot Lug Numbers

[7] Cut wires and components connected to the pot as close to the lugs as possible, and set pot aside for now.

Install PickupBender™

> ***NOTE**: For hollow body guitars, go to step 2.*

[1] For solid body guitars, insert the PickupBender™ threaded collar into mounting hole from the inside and fasten with hex nut and flat washer on the outside.

If the collar extends too high above the mounting surface, use one or more lock washers on the inside of the collar to adjust height.

If the collar is too short to attach the hex nut and flat washer, lower the area around the mounting hole on the inside of guitar cavity (see page 7).

[2] Insert pot wires labeled **1, 2, 3,** or **G** into matching pot connector slots (figure C next page) and tighten screws. **If replacing a tone control, remove and save the output jumper wire.**

> ***TIP:*** *Loosen connector screw to open connector clamp so wires will fit in the slot. Tighten the connector screw to close the clamp and hold the wires in place. Use the included mini screwdriver to loosen/tighten the screws.*

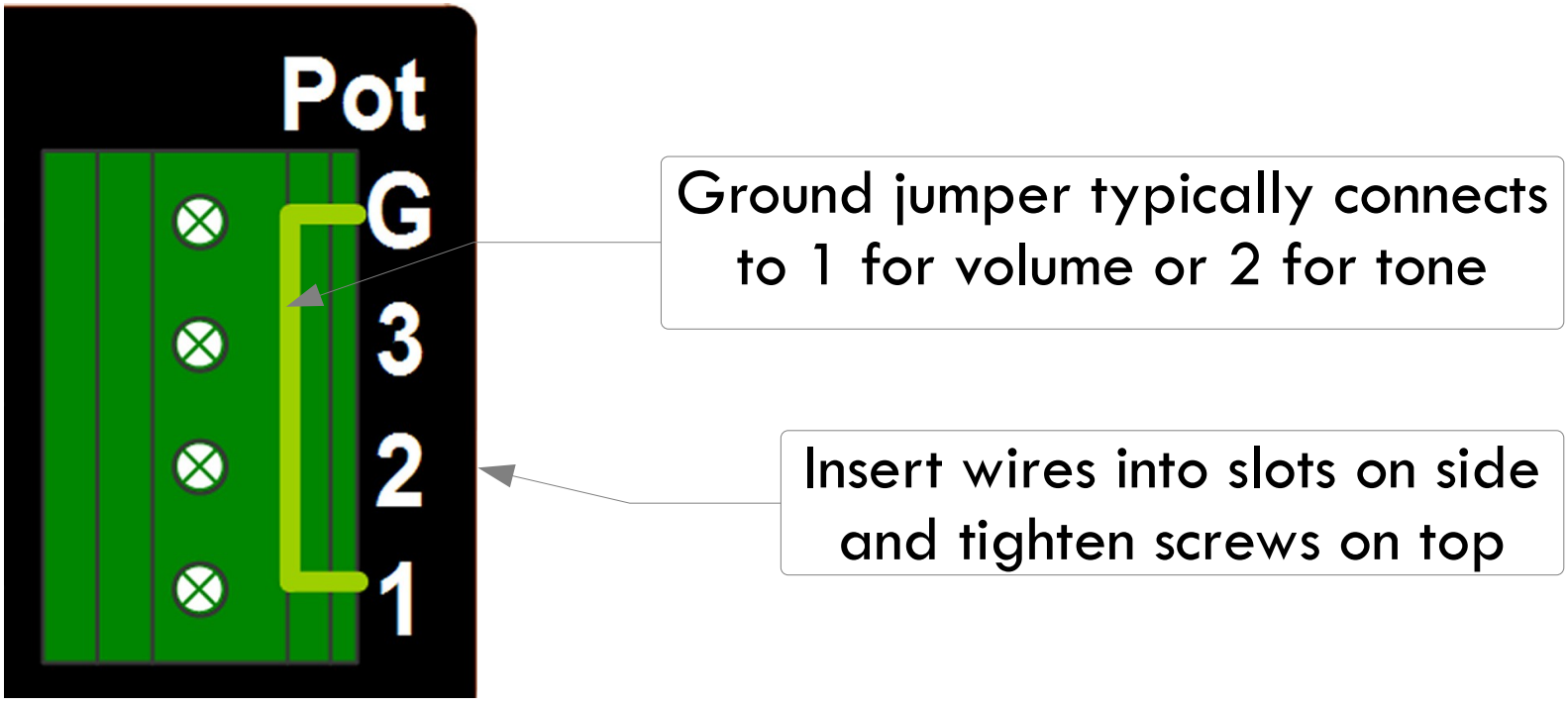


Figure C: Pot Connector

[3] The ground jumper is installed in pot connector slots **G** and **1** for a typical volume pot. If necessary, move the jumper from slot **1** to the slot with the same number as the grounded lug of the original pot and tighten screw.

> ***TIP***: *If there are more ground wires than can fit into the **G** slot, connect the multiple ground wires to a short length of hookup wire using a B connector (both included) and insert the single wire into the **G** slot.*

[4] Identify your pickup wires. Pickups can have from 1 to 4 wires plus a ground wire or braided shielding.

The pickup hot wire is connected to the 5-position selector switch. You can connect the Select X10 to the bridge pickup (recommended) or neck pickup. See *Using Select X10* on page 28 for how the Select X10 works when connected to the neck or bridge pickups.

[5] Cut the bridge or neck pickup hot wire so each end reaches the PickupBender™ switch connector, and strip ¼ inch from each of the cut ends. If both cut ends reach the PickupBender™ switch connector, skip to step [7].

[6] If one or both ends of the cut wire do not reach the PickupBender™ switch connector, extend the cut ends as follows:

[a] Strip ¼ inch from each end of a length of hookup wire (included).

[b] Connect one end of the hookup wire to the end of the cut wire using a B connector (included).

[c] Repeat for the other cut wire if needed.

[7] Insert the cut wire connected to the 5-position selector switch into the **S** switch connector slot. Tighten screw.

[8] Insert the cut wire connected to the pickup into the **P** switch connector slot. Tighten screw.

[9] If Select X10 is the volume control:

[a] Insert the included output jumper into the **O** switch connector slot (figure D page 22). Tighten screw.

[b] Insert the other end of the output jumper into the same pot connector slot as the wire from the 5-position selector switch. Tighten screw.

[c] Skip to step [13].

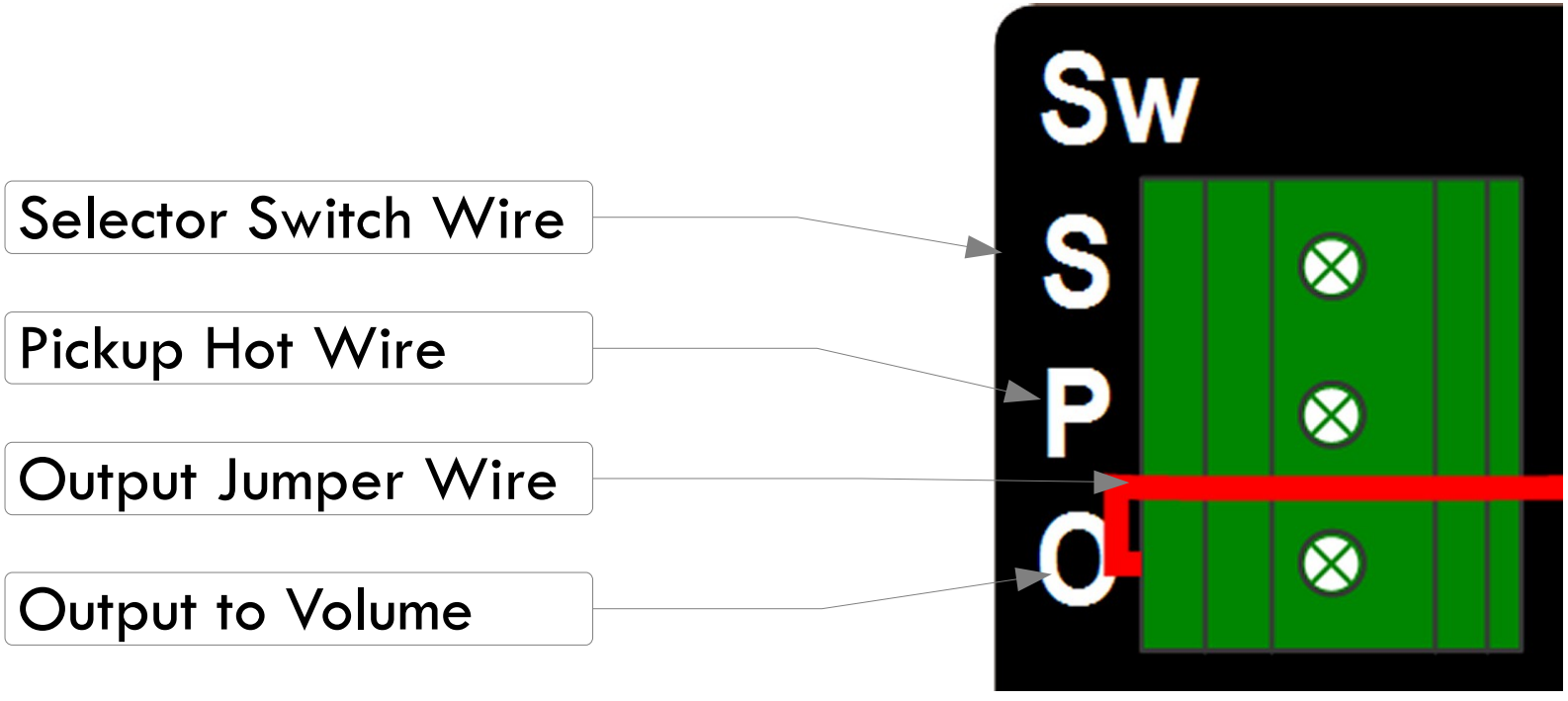


Figure D: Switch Connector

[10] If Select X10 is a tone control, locate the 5-position selector switch output wire connected to the volume control.

[11] If the volume control is ***NOT*** another PickupBender™:

[a] Cut the selector output wire near the middle and strip ¼ inch from each end of the cut wires.

[b] If both ends of the cut selector output wire reach the Select X10 switch connector, insert both cut wires in the the **O** switch connector. Tighten screw and skip to step [13].

[c] Extend the cut selector output wires if they do not reach the Select X10 switch connector.

Strip ¼ inch from each end of a length of the included hookup wire long enough to connect both ends of the cut selector output wire to the **O** switch connector.

Connect both ends of the cut output wire to the hookup wire using a B connector (included).

Insert the other end of the hookup wire into the **O** switch connector. Tighten screw and skip to step [13].

[12] If the volume control ***IS*** another PickupBender™ control:

[a] Strip ¼ inch from each end of a length of the included hookup wire that will reach between the Select X10 **O** switch connector and the PickupBender™ volume control.

[b] Insert an end of the hookup wire into the Select X10 **O** switch connector. Tighten screw.

[c] Insert other end of the hookup wire into the same pot connector slot as the wire from the 5-position selector switch. Tighten screw.

[13] Check wires attached to the connectors by ***gently*** tugging on each wire. If a wire pulls out, loosen screw, reinsert wire fully into slot, and firmly tighten screw.

[14] For hollow body guitars, feed the PickupBender™ back through access hole, insert threaded collar into mounting hole, and fasten with nut and flat washer.

> ***TIP***: *Feed length of string or wire into body through mounting hole and attach it to the split shaft. Then pull the string to guide the PickupBender™ through the mounting hole from inside of guitar.*

[15] For a push-on knob, align knob with knurling and carefully push knob onto the knurled split shaft. For a set-screw knob, place knob on knurled split shaft and tighten set screw to hold it in place (be careful to avoid damaging knurled split shaft).

Using Select X10

The PickupBender™ Select X10 works with any 5-position blade type pickup selector switch that has these standard pickup combinations:

1 – Bridge pickup only
2 – Bridge and middle pickups
3 – Middle pickup only
4 – Neck and middle pickups
5 – Neck pickup only

Pull the Select X10 control knob out to change to the alternative selector mode with the pickup combinations

below. Push in on the control knob to switch back to the standard selector mode.

If the Select X10 is connected to the **bridge** pickup, the alternative selector pickup combinations are:

1 – Bridge pickup only
2 – Bridge and middle pickups
3 – Bridge and middle pickups (same as 2)
4 – All pickups
5 – Bridge and neck pickups

For middle pickup only and neck pickup only combos, switch back to standard selector mode.

If the Select X10 is connected to the neck pickup, the alternative selector pickup combinations are:

1 – Neck and bridge pickups
2 – All pickups
3 – Neck and middle pickups (same as 4)
4 – Neck and middle pickups
5 – Neck pickup only

For middle pickup only and bridge pickup only combos, switch back to standard selector mode.

Product Warranty

Manufacturer warrants product to be free from defects in materials and workmanship under normal use and service for a period of one (1) year from date of purchase. Manufacturer, at their discretion, will either repair or replace defective product.

Modifying product in any way will void this warranty. Damage caused by improper installation or misuse of product are not covered under this warranty.

Manufacturer is not be liable for any consequential damage as a result of the product's use in any circuit or

assembly including damage caused by installation, use or misuse of product, or from any delay in the performance of this warranty due to causes beyond their control.

The foregoing warranty is in lieu of all other warranties, expressed or implied. Manufacturer neither assumes nor authorizes any person to assume any obligation or liability in connection with the sale of this product.

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