

Before you start, **read these instructions first** to understand what you need to do to install this product.

Assumptions

This upgrade is designed to use your existing Master Volume and Tone control for all of your pickups.

Note: *Active (uses batteries) or Pizeo pickups are not supported.*

Tools Needed

You may need one or more of the following tools (*not included with purchase*) to install this upgrade.

- Wire cutters / Wire strippers
- Regular pliers
- Small Phillips & straight slot screwdriver
- Ohmmeter to measure continuity
- Optional: Soldering iron (25/30 watt max.) with fine tip, rosin-core solder .022" dia.

Preamble

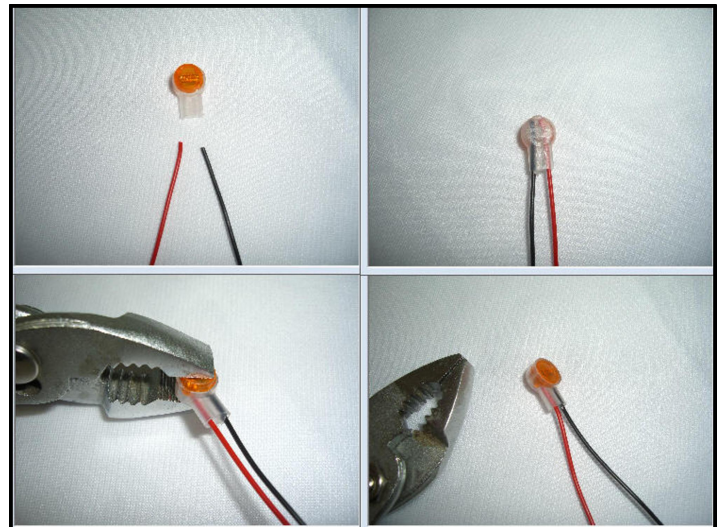
This **2020 Paranormal Cyclone** Upgrade will have you cutting existing wires on your instrument. You may need to make wire connections, increase the length of existing wires, and remove some wood in your instrument body cavity. Because you will make changes to your instrument, you need to have a plan to install your product.

See the *Reference Drawing* on a later page of this document. Use a pencil to draw the original circuit of your instrument **before** proceeding. By recording where wires (*and their colors*) were removed from your instrument, you have a way to restore it to its original condition should it become necessary.

Since there is a large variation of pickup wiring that spans 50 years, you will need to draw your own pickup switch used in your original circuit

Adding Extra Wire

If your pickup wires are too short to easily reach the specified connection of the green terminal strip on the S3-Switch circuit board, here is what to do. Measure out the needed length of the RED or BLACK in the included **PARTS BAG** to permit the wire to reach the applicable connection. A length of 3" is budgeted for each wire extension. Completely insert the unstripped end of each wire into the 2-wire UY2 yellow/clear connector and clamp down using regular pliers.



Use pliers to squeeze the UY2 connector yellow top button so it is flush with the clear body to create a permanent electrical connection. **Verify electrical continuity between the two pickup wires with an ohmmeter (some coil resistance will be present).**

2020 PARANORMAL CYCLONE UPGRADE

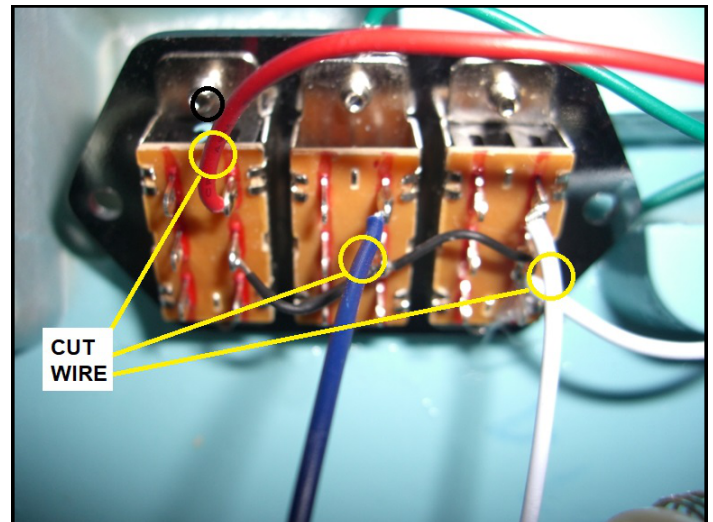
You have received an assembled and tested **2020 Paranormal Cyclone Upgrade** that is designed to install onto a your guitar. It contains our S3-Switch. In general, no soldering is needed to install this product. You will use your own pickups. The following items are included in a Parts Bag.

- Several business cards and AweSome Musical Instruments headstock decal to apply to your instrument
- Several yellow UY2 wire connectors
- An equal length each of black and red insulated wire (*to lengthen wire if needed*)

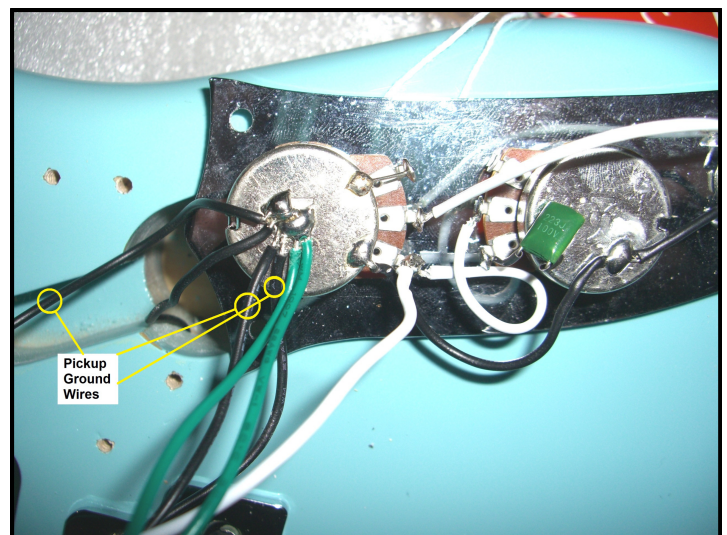
Preparation

1. Loosen or remove your guitar strings.
2. Remove your existing pickguard attaching screws. Store them in a small bowl. Remove your pickguard.
3. Remove the slide switch plate screws. Store them in a safe place. Remove the slide switch plate.
4. Remove the Volume-Tone control plate screws. Store them in a safe place. Remove the control plate.

5. Cut the **three** hot (+) pickup wires (*red: neck, blue: middle, white: bridge*) where they are attached to each slide switch (*leave a 1/4" length of colored insulation connected to each slide switch.*)

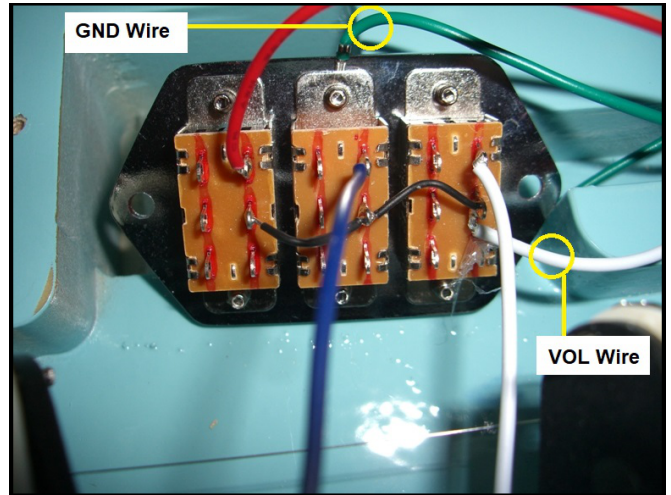


6. Cut the **three** pickup ground (-) wires (*black*) attached to the back of the volume control housing (*leave a 1/4" length of colored insulation connected to your volume control.*)



7. Cut the Green ground (GND) wire attached to the middle pickup switch body (for reference, leave a 1/4" length of colored insulation connected to the wire.) Strip off 3/8" insulation from the end of the wire and twist the exposed wire strands so they are tightly bound. You can lightly "tin" the wires with solder.

8. Cut the White signal (VOL) wire attached to the switches (for reference, leave a 1/4" length of colored insulation connected to the wire.) Strip off 3/8" insulation from the end of the wire and twist the exposed wire strands so they are tightly bound. You can lightly "tin" the wires with solder.



9. Confirm that the upgrade you received will lay completely flat with no interference by the wood body. If the upgrade lays flat, proceed to the next section, *Terminal Strip Connections*, to continue with the upgrade process. **Note:** Because this is a "tight" fit, you may need to loosen (not remove) the six switch mounting nuts to "adjust" the S3-Switch so the upgrade will lay flat. Then tighten the six switch mounting nuts.

Terminal Strip Connections

Here is how to attach wires to the **green** terminal strip that is on the printed circuit board. Use a small screwdriver or writing pen tip and press down on the square *release button* located directly above the wire hole. Hold the button down and insert the stripped wire completely into the wire connection hole then release the button. Lightly tug on the wire to confirm it is firmly gripped by the Terminal Strip. A legend is printed on the circuit board with the name of each terminal strip wire hole from left to right. Attach each wire to the correct terminal strip hole.

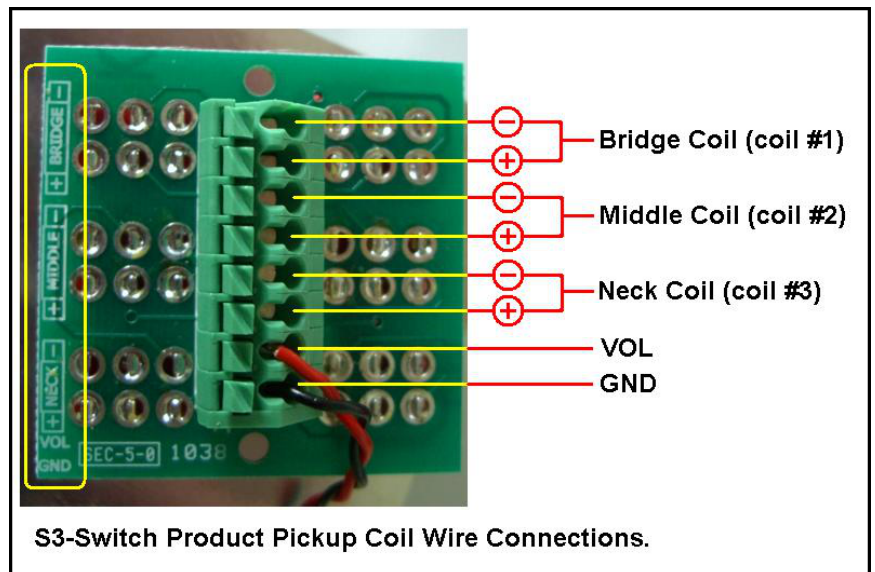
S3-Switch (8-hole green terminal strip): [GND] [VOL] [+]NECK[-] [+]MIDDLE[-] [+]BRIDGE[-]

Caution: Do not insert hard items in the wire holes because it will decrease reliable electrical connection.

S3-Switch Wire Connections

Confirm there is enough wire length from each pickup to *comfortably* reach the corresponding connectors on the green terminal strip on upgrade. If not, refer to the "Adding Extra Wire" topic (page 1 of this document).

Strip off 3/8" insulation from the end of each pickup wire and then twist the exposed wire strands so they are tightly bound. You can lightly "tin" the wires with solder.



Connecting your wires to our S3-Switch

1. Connect the Green wire to GND. (*the stock picture shows an attached Black wire*)
2. Connect the White wire to VOL. (*the stock picture shows an attached Red wire*)
3. Connect the Red (neck) pickup wire to the NECK + hole and the Black wire to the NECK – hole.
4. Connect the Blue (middle) wire to the MIDDLE + hole and the Black wire to the MIDDLE – hole.
5. Connect the White (bridge) wire to the BRIDGE + hole and the Black (bridge) wire to the BRIDGE – hole.

S3-Switch Use Summary

Here is a summary of switch use for this product (see **Figure 1** for switch identification).

Document #E will help you “map” the pickup tones you get from the S3-Switch. It is available for download from our website’s Document Library at <https://www.AweSome-Guitars.com>

SW1, SW2 and SW3 are ON-OFF-ON switches that turn on individual pickups in normal or reverse phase. SW4, SW5 and SW6 are ON-ON switches that change select pickups from *parallel* to *series* connectivity.

SW1 turns on the **bridge** pickup (Coil-1), either in normal phase (down), or reverse phase (up).

SW2 turns on the **middle** pickup (Coil-2), either in normal phase (down), or reverse phase (up).

SW3 turns on the **neck** pickup (Coil-3), either in normal phase (down), or reverse phase (up).

*When all of the following switches are **down**, the pickups will be in a Parallel circuit.*

SW4 when this switch is **up** it puts the **bridge** and **middle** pickups in series. Both pickups must be on.¹

SW5 when this switch is **up** it puts the **bridge** and **neck** pickups in series. Both pickups must be on.¹

SW6 when this switch is **up** it puts the **neck** and **middle** pickups in series. Both pickups must be on.¹

SW4+SW6 when these switches are **up**, all three pickups in *series*. All pickups must be on. SW5 has no effect.

¹ The remaining *non-series* pickup may be either off -or- on (either in normal phase or reverse phase).

Validating

Connect your instrument to an amplified source with the volume set to low. Turn the switches on and off as described in “Switch Identification and Use Summary” topic while gently tapping the magnet of the pickup coil that should be “on” with a small screwdriver to confirm pickup response. Also confirm the correct operation of the Volume and Tone controls.

Installing The Upgrade

Install the upgrade (confirming it lays flush) and use the previously-removed screws to attach it. Reattach the Volume-Tone control plate. As needed, tighten/reattach your strings.

Welcome to the *Grand Canyon Wide* range of AweSome pickup tones.

Figure 1 – S3-Switch Identification

The following image shows how the switches are laid out for the upgrade.

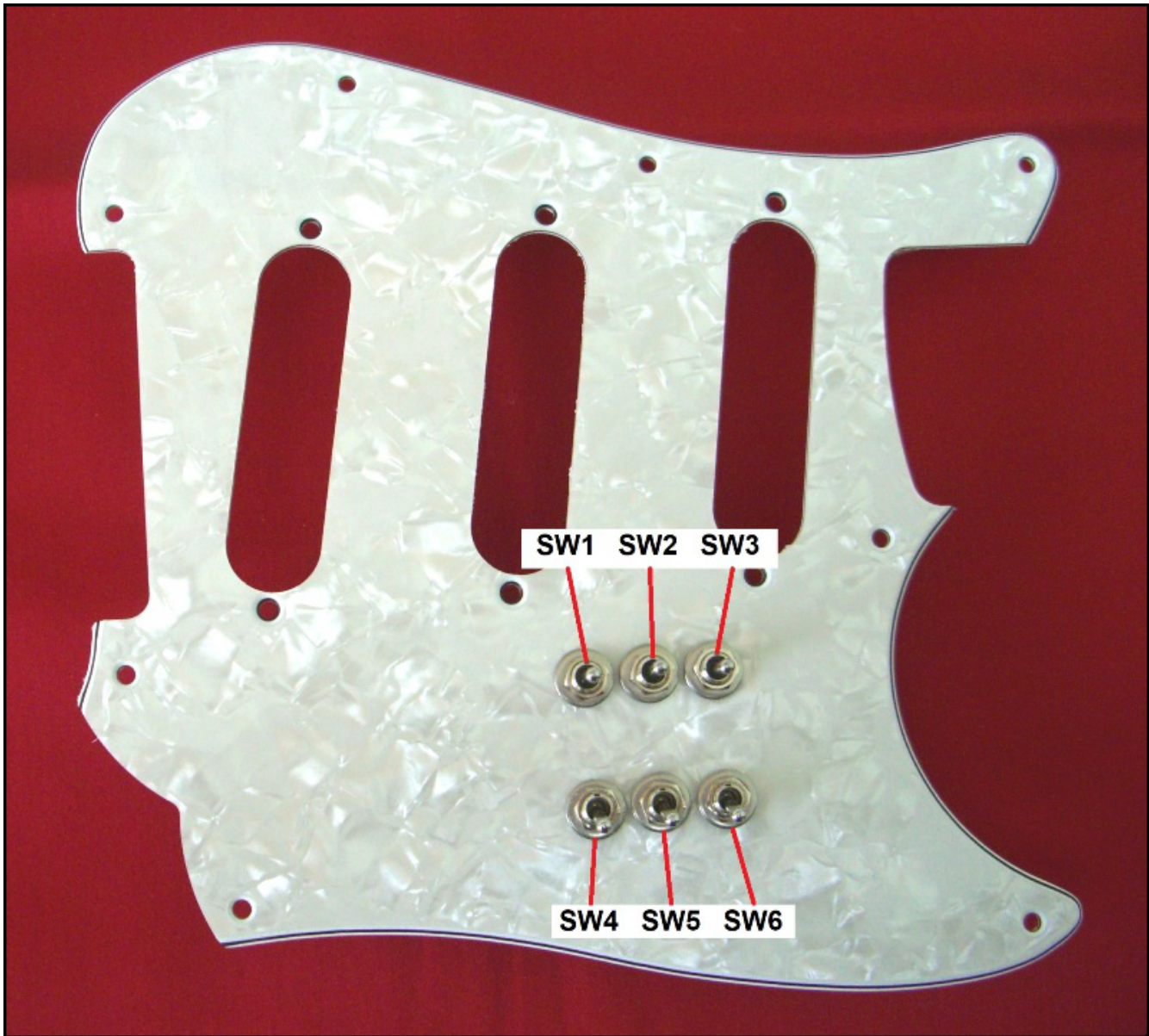
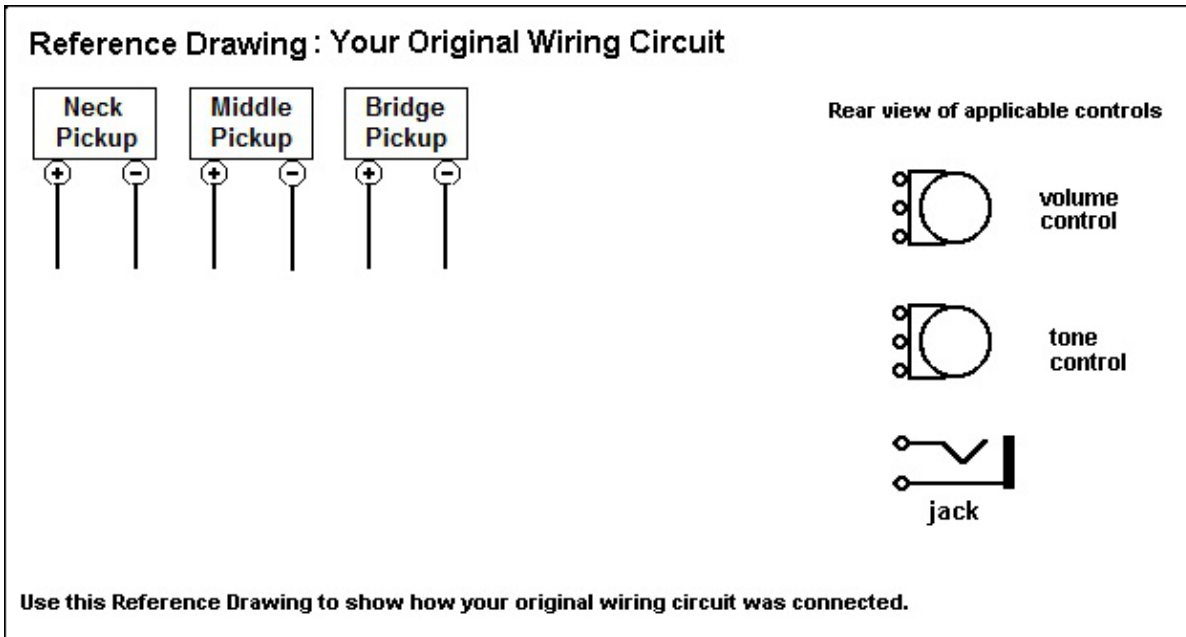


Figure 2 – Reference Drawings

Use the following image to document your instrument's original wiring. Be sure to identify wire colors where needed. Use a pencil when doing this. Draw additional controls as needed.



Suggested Volume-Tone Wiring for S3-Switch

This *generic* drawing identifies where to connect your pickups and signal/ground to your S3-Switch.

Special Note: For your upgrade, the VOL wire is White and the GND wire is Green.

