Electric Guitar Body - B.C. Rich Warlock

EG3Dprinting

VIEW IN BROWSER

updated 21. 4. 2023 | published 21. 4. 2023

Summary

A fully-functional guitar body designed based on the B.C. Rich Warlock guitar.

Hobby & Makers > Music

Tags: hexagon guitar body electric honeycomb hex wood warlock bc tone rich

Here's a B.C. Rich Warlock style guitar body I made. This is a fully functioning guitar body, just add a neck and electronics! I started making this in July 2022 right around the time Stranger Things 4 ended since I wanted the guitar from the show but with a 3D printed twist. This model includes both a solid and a honeycomb version whether you want to print a more authentic and traditional version of the warlock or if you want it to be more unique.
I used absolutely bottom of the barrel parts to get this to a fully functioning state and it works exactly like any other regular guitar. The best part though is that you can add any number of high-end parts to make it sound and feel exactly how you would like it. This body is made to use a Floyd Rose setup, but I've included a block that you can use if you don't want to use it as a proper tremolo system and rather as a “fixed” bridge. Here's a general run down of the parts that I used to build this (keep in mind that these are bottom shelf cheap parts so they may go in

and out of stock as time goes on).

Strap Buttons	Amazon.com: Musiclily Metal Guitar Strap Buttons End Pins for Fender Style Acoustic Classical Electric Guitar Bass Ukulele,Black(Pack of 4) : Musical Instruments
Pots (x3)	Amazon.com: Fender 500K, Split Shaft Potentiometer for Volume or Tone : Musical Instruments
Tuners	Amazon.com: Musiclily 6 inline Sealed Guitar Tuners Tuning Pegs Machine Heads Set,Kidney Button Chrome : Musical Instruments
Output Jack	Amazon.com: RuiLing 2PCS Square Jack Output Plate Guitar Bass Jack Socket for Electric Guitar Parts and Accessories Black : Musical Instruments
Pickup Rings	Amazon.com: 2PCS Yootones Metal Humbucker Pickup Ring Cover Frame Replacement Compatible with LP SG Guitar Mounting Electric Guitars (Black) : Musical Instruments
3-Way Toggle	Amazon.com: Musiclily Metric 3 Way Short Straight Guitar Toggle Switch Pickup Selector for Epiphone Les Paul Electric Guitar,Black Top with Black Tip(Pack of 2) : Musical Instruments
Floyd Rose Bridge	Amazon.com: Ubrand Eelectric Guitar Double Locking Tremolo Bridge for Floyd Rose Style Replacement, Black, (2101-SQQ-BK) : Musical Instruments
Pickups	Amazon.com: FLEOR Neck+Bridge Pickup Set Double Coil Humbucker Pickups for Electric Guitar Pickup Replacement-Black : Musical Instruments
Knobs	Amazon.com: Pack of 4pcs Brass Knob Volume Tone Control Knobs for Electric Guitar Bass Screw Type : Musical Instruments
Neck Plate	Amazon.com: Musiclily Metal Neck Plate for Fender Strat Tele Electric Guitar or Bass,Black : Musical Instruments
Neck	24 Frets Rosewood Guitar Neck for Ibanez Guitar 14.9" Radius Polished Gloss | eBay
Strings	Amazon.com: Ernie Ball Regular Slinky Nickel Wound Electric Guitar Strings 3-pack, 10-46 Gauge (P03221) : Everything Else

As of when I bought the parts, total cost was about $170 USD. Along with those main parts you'll also want to get a piece of aluminum or steel that is about 1/8" or 12 mm thick, 2" or 50 mm wide, and 5" or 125 mm long. This is used when gluing the pieces together so that there is a very stiff section between the neck and bridge so there can be minimal body flex when all put together. This is technically doable without that piece as I

have other 3D printed guitars without a piece like that, but I've seen it where an improper gluing or other factors may cause catastrophic failure when tensioning the strings.

In order to have a full body, you'll want to print everything in the ‘Main Body’ folder as well as everything in the ‘Honeycomb’ folder if you want the honeycomb pattern OR everything in the ‘Solid’ folder if you want a solid body. Also make sure to print 5 of the ‘Tall’ pegs and 1 of the ‘Small’ Pegs for assembly and gluing. Putting together the pieces isn't all too hard, you just need to have a proper work environment and some patience. All you really need is somewhere with a large, flat surface. Pro-tip is to use parchment paper on top of your workspace so any squeeze out of the epoxy doesn't glue the guitar to the workspace!

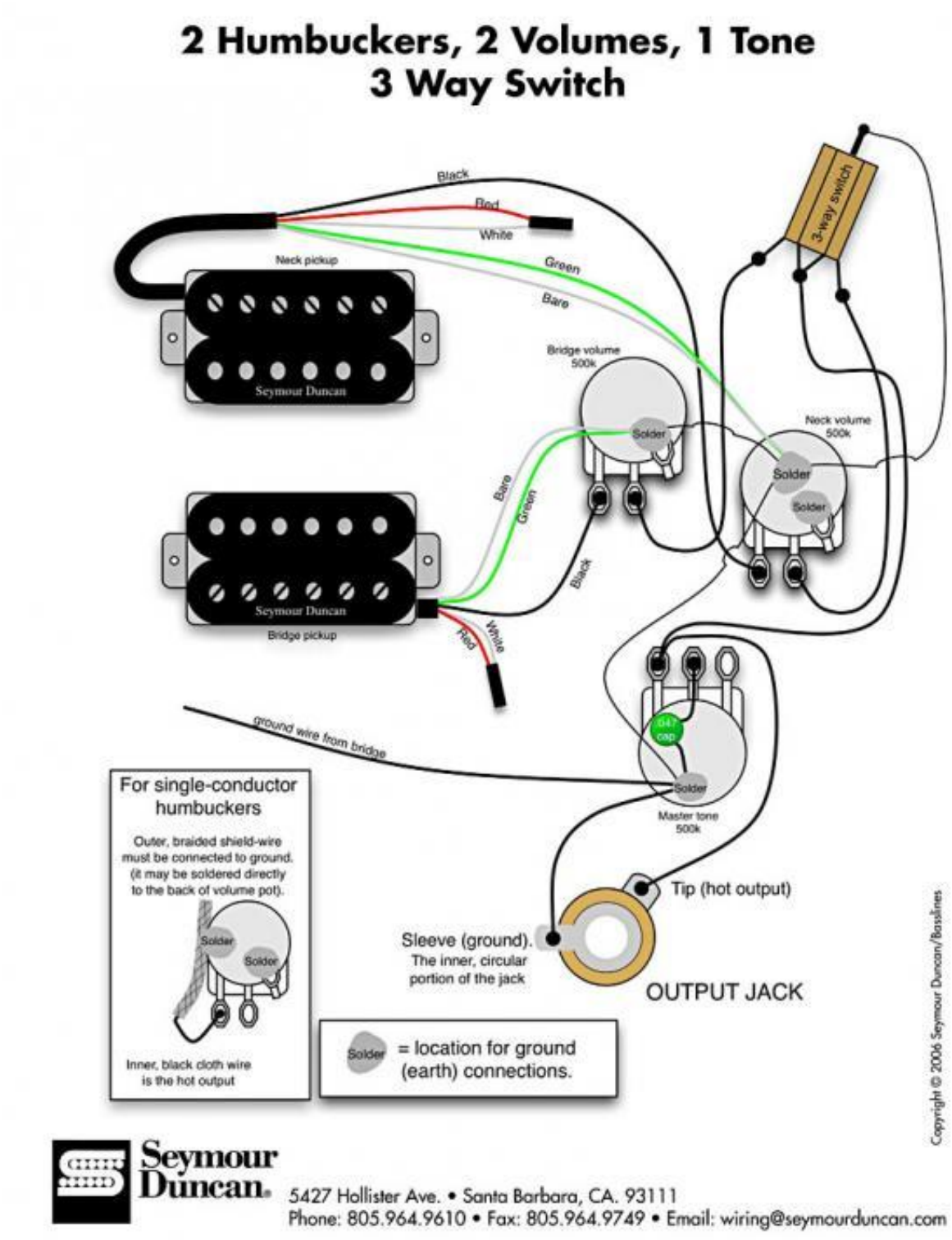
Once you have all the body pieces printed out you'll want to start gluing. I use a 5 minute 2-part epoxy from any hardware store (I get mine from Harbor Freight since its super cheap and works the same as any other brand). Start with gluing together the 2 middle pieces, ‘Middle Bottom’ and ‘Middle Top’. It's at this point you'll want to use that piece of steel/ aluminum. Slide it in the slot between the two pieces and make sure both pieces still touch so you can have proper glue coverage. Give full coverage of the epoxy on all flat mating surfaces, enough to cause some squeeze-out (You'll sand that down later). Make sure to hold or clamp the pieces together while the epoxy dries. Again, it only takes about 5 minutes so once that's dry move on to the next step.

Next move on to gluing the ‘Right’ side pieces. Do the same as for the first two pieces, and only glue two pieces at a time until the glue is dry. Here you'll also want to start using the pegs for alignment. Once those 3 pieces are glued up and dry move on to the left side pieces.

If you're using the honeycomb pieces, they can be a little tricky, just make sure you get every touching-surface glued and aligned solidly. Once all those sections are dried, move on to gluing each of those sections together.

Now you should have a fully glued and dried guitar body, probably with some dried squeeze out in the joints. I use a chisel or razer to chip off any of the excess that isn't fully adhered and then any of the stuck-on excess I use a palm sander to sand down flush with the surface. At this point you have a functional guitar body. If you want to go further and make it fully smooth and painted, I would give a solid 150-250 grit sand on the whole body to get a base surface to work with. Find any places with holes or defects and fill them with wood putty or body filler and sand it smooth. Next I would use a filler primer to get any of the remaining small imperfections and sand until smooth again. Then you can move on to painting and clear coat from there.

Now onto electronics. While not quite as simple as using a loaded pickguard with everything already soldered together, if you can follow lines, you can wire this up. I used this wiring diagram to guide me through and it is a match for the parts that I used. Just be careful using the soldering iron around the body, it will melt obviously if you touch the body with it. (Ask me how I know...)



Model files

Full Bodies

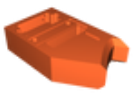
2 files

full-body.stl

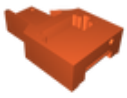
full-body-solid.stl

Main Body

5 files

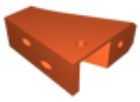


warlock-middle-bottom.stl



warlock-middle-top.stl

warlock-top-right.stl



warlock-middle-right.stl

warlock-bottom-right.stl

Honeycomb

3 files

warlock-bottom-left.stl

warlock-top-left.stl

warlock-left-middle.stl

Solid

3 files

warlock-bottom-left-solid.stl

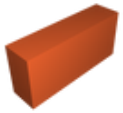
warlock-top-left-solid.stl

warlock-left-middle-solid.stl

Extra Bits

6 files

control-cover.stl



block.stl

tremolo-cover.stl

small-peg.stl

shim.stl

tall-peg.stl

License ©

This work is licensed under a
Creative Commons (4.0 International License)

Attribution—Noncommercial—Share Alike

✖ | Sharing without ATTRIBUTION
✔ | Remix Culture allowed
✖ | Commercial Use
✖ | Free Cultural Works
✖ | Meets Open Definition