

Chapter 1: Tools 'n Jigs

1. Fret Buzz Locating Tool:

This tool is very simple to use and even easier to make. Its purpose is to locate fret buzzing so that you know which frets to file or where to adjust your truss rod.

Materials needed for the tool:

- 2 x AA battery's (led version)
- 1 x 9V battery (buzzer version, combined version)
- 1 x led (led version, combined version)
- 1 x 5V buzzer (buzzer version, combined version)
- 2 x 180Ω resistor (buzzer version)
- 1 x 150Ω resistor (led version)
- 1 x 1m electric wire
- Piece of circuit board
- Plastic tube to fit the circuit in

The buzzer version:

This version works with the schematic below (fig. 1).

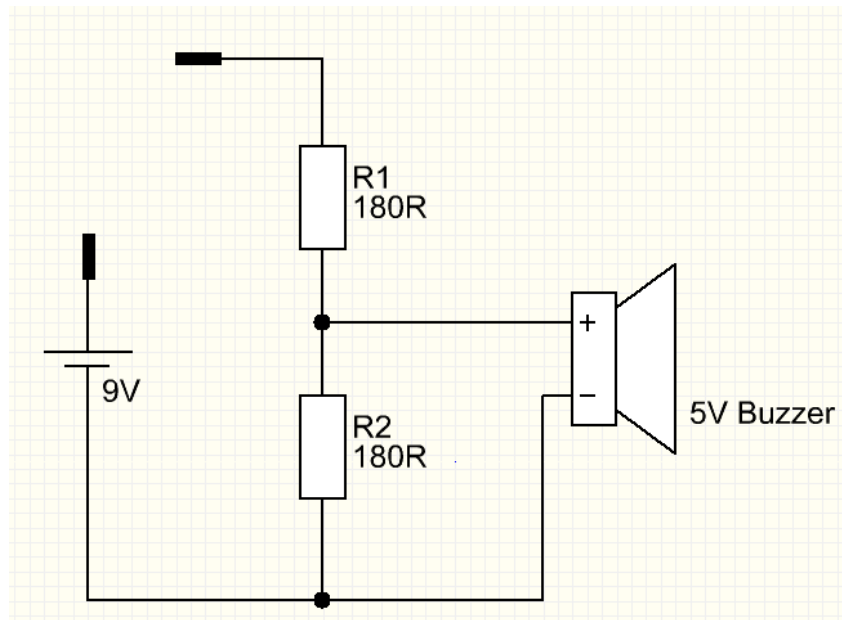


Fig. 1 Fret buzz locator with a buzzer

When mounted on a circuit board it would look similar to what you see in fig. 2. Connect the 9V+ wire to the string you want to test (above the nut). Move the other wire from fret to fret while plucking the string. In case there are beeps or cracking noises coming from the buzzer you have found a fret which causes fret buzz.

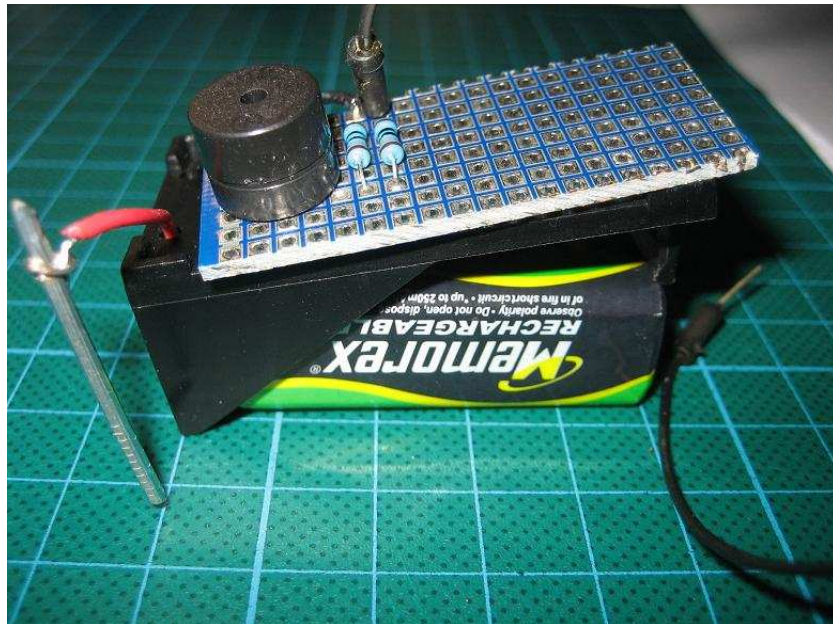


Fig. 2 Fret buzz locater prototype

The led version:

The schematic of this version (fig. 3) is even easier than the one with a buzzer. A resistor is connected in series with a LED to limit the current through the led. One end of the battery gets connected to the string you're testing. A wire gets soldered to the beginning of the resistor. When holding the wire to a fret it will conduct a current in case there is any buzzing. The led will emit light.

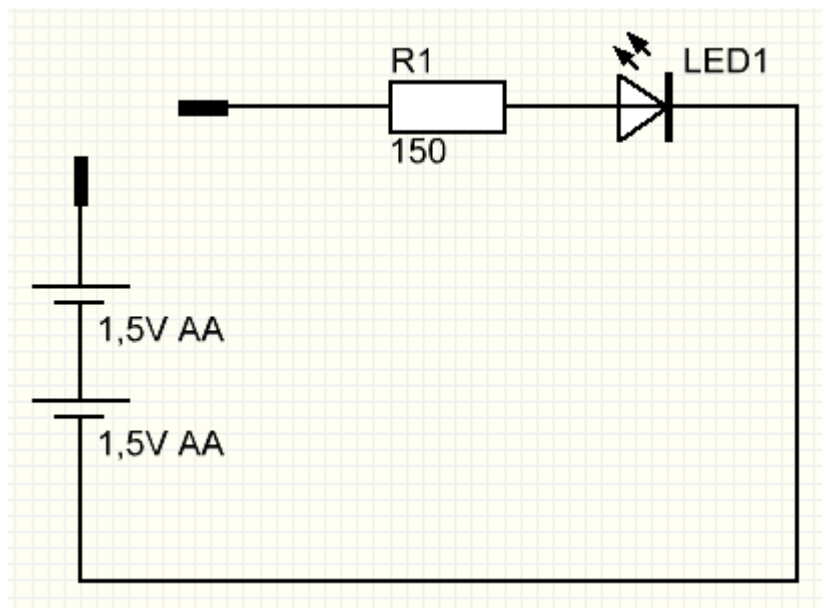


Fig. 3 Fret buzz locator with a led

Improvements:

- To connect the 9V+ wire to the string you can make use of small crocodile clamps. These ensure good conduction and decrease the chance of testing a wrong string.

2. Spool Clamps:

Often used when making acoustic guitars or violins. They're easy to make and cheap as well.

Materials needed for the tool:

- 1 x desired length M8 threaded bar
- 1 x round wooden bar diameter 45mm (min total length = 65mm)
- 1 x cork
- 2 x rondel
- 1 x M8 wing nut



3. Cam Clamps

4. Planer jig:

I've seen lots of planer jigs but this one seems most handy to me. It's designed by ArieBombarie over at the guitarproject forums. His jig not only allows planing a piece of wood. It also allows routing under a certain angle.

Materials needed for the tool:

- 4 x ± 10cm length M12 bolts
- 8 x M12 nut
- 1 x piece of 2,3cm thick MDF → 50 x 60cm (base)
- Aluminum L-profile



5. Planer jig II:

This jig is one that I designed for myself. During my \$210 Telecaster Challenge Build (tdpri.com!) I've been pointed out at a way to get body blanks perfectly flat. Before going over to the jig I'd like to point out the working principle.

Materials needed for the manual jig:

- Straight beam of wood → 3" x 20" long
- Sticky sand paper → 60, 80 and 120 grit
- Something to clamp the blank so that it can't move around



Fig. 4 How it's done by hand

Make a nice straight beam of wood 3 x 20 " long, nice and straight. Then put sticky sand paper on it and use it like a huge file on the face and back. Start with 60 or 80 grit to loose the high spot, then 120 for the entire surfaces. It will take a while, but you will have a perfect face and back. Hold your giant file slightly left and right and sand from the bottom to the neck pocket. To check your evolution from bumpy to flat you just have to put some pencil on it. When all the pencil lines are gone it should be flat.

Materials needed for the automated jig:



Chapter 2: Tips 'n Tricks

1. Choosing pickups:

A. To determine whether you need F or non F-spaced pickups measure the strings E-e over your neck and bridge pickups, if your measurement is closer to 51mm then you need F-spaced, if your measurement is closer to 48mm then non F-spaced are for you and remember, if in doubt – ask !

Chapter 3: Builds

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1. \$100 Tele: stenciled dragon guitar

A while ago there was a \$100 telecaster challenge on the tdpri forum. One of the competitors was "Martino". His build show amazing technique on stenciling images onto a guitar.

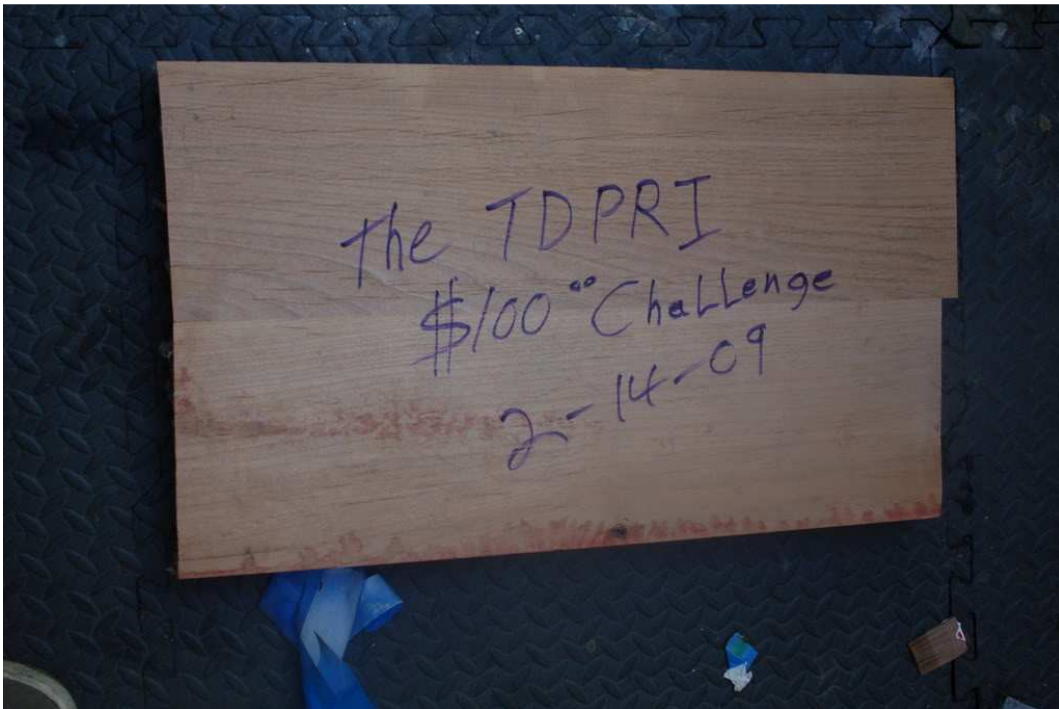


Fig. 5 The woods

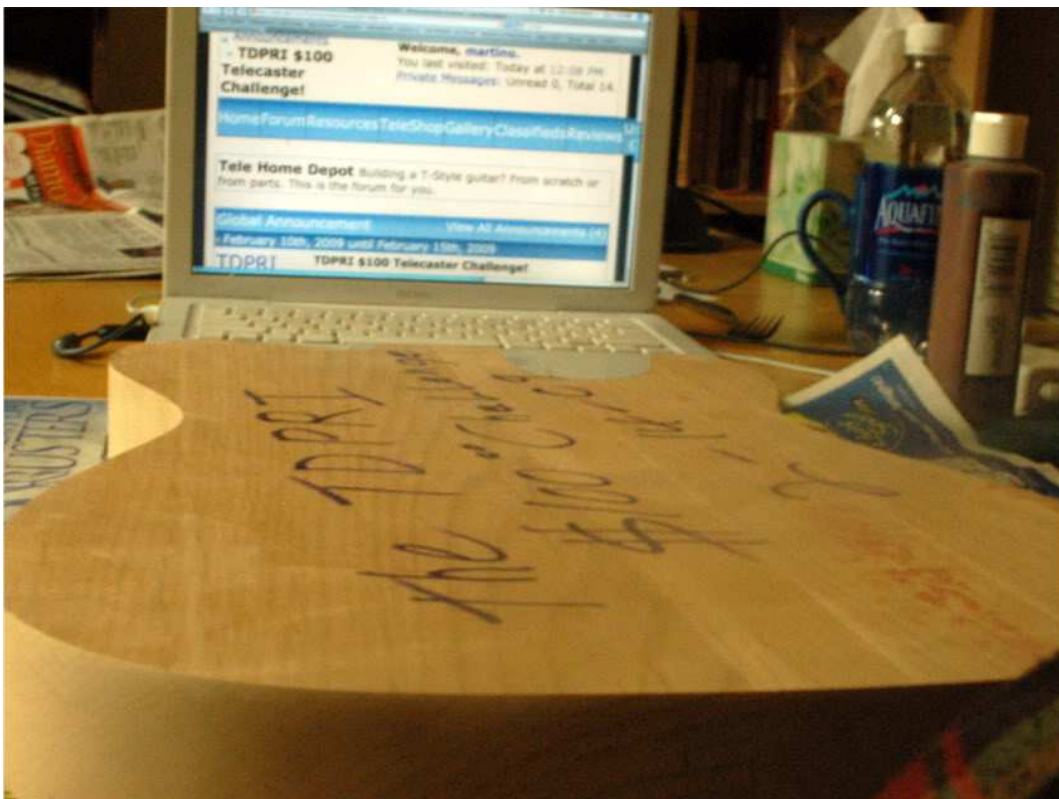


Fig. 6 24 hours later, the tele shape is born



Fig. 7 Templates ready



Fig. 8 using what's left in spraycans



Fig. 9 making templates from the T-style pattern



Fig. 10 cut close to the pencil line but not to close

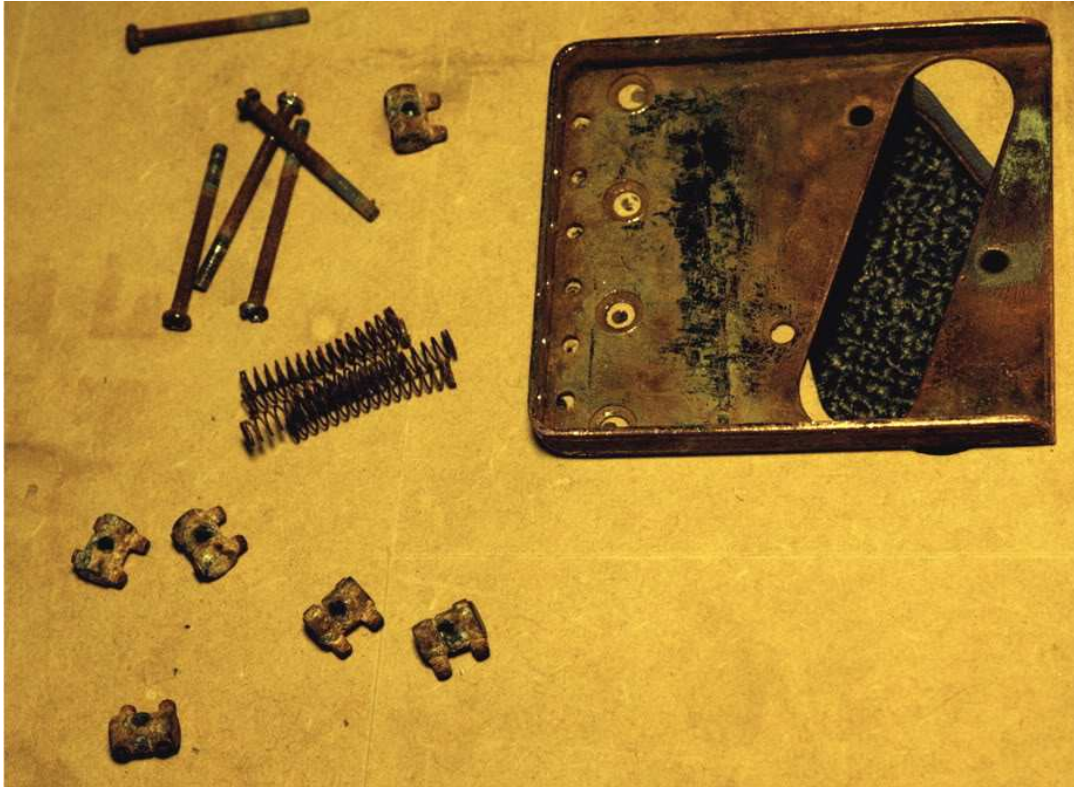


Fig. 11 chosen bridge with rust from circuit board etching

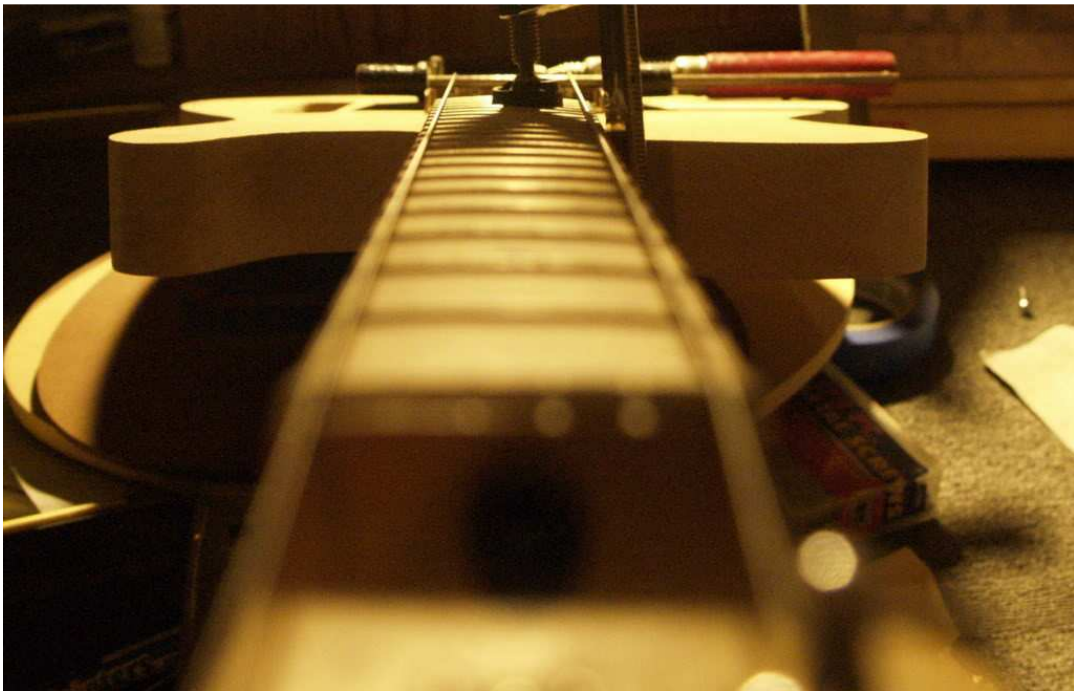


Fig. 12 test if the bridge and neck line up



Fig. 13 neck plate made from a piece of aluminum scrap



Fig. 14 aluminum control plate in the making

2. \$100 Tele: The Scattesquire

Scatter Lee from tdpri decided to join in the same \$100 telecaster challenge. The next pictures and text describe the progress of his guitar build.



Fig. 15 The woods – old piece of unknown wood, not warped and looking good