

# Blind Gee's Fretting Tutorial

It has taken me a while to get a system going for fretting a gat, so I thought some of you might pick up a tip here and there from how I do it. This isn't advanced stuff, but some smart shortcuts to a better job would have been handy for me when I started, so I'm sharing my meager knowlege in the hope that it saves someone some heartache, somewhere. OK, are you sitting comfortably? Well straighten up, Snowflake, this isn't camp!

## Before you start:

This is the order I do stuff in:

- 1) Glue fingerboard to neck.
- 2) Level the fingerboard so it is dead flat. It's a lot easier to sand the board than to level wildly uneven frets. I use a long spirit level, simply because it has a nice flat edge and was way cheaper than a milled straight edge. Use a sanding block and keep at it until you can't see any light coming between your straight edge and the fingerboard. Be careful – it's easy to tilt the block on the edge of the fingerboard and round that edge off. You don't want that. That's why I do it before step 3. If I'm going to take some width out, a little bit of rounding won't matter because it will be taken off anyway.
- 3) Cut and sand neck width, making sure to have a dead straight and square edge. You need this for your square when you mark and cut the slots. **DON'T taper your neck width yet, because it will be extremely difficult to cut your frets perpendicular.** (By taper I mean that your neck when finished is narrower at the nut than at the bridge end. I don't always do it, but it happens later if I do.)
- 4) Mark off and cut fret slots. I use the ExMI's fret calculator.  
<http://windworld.com/features/tools-resources/exmis-fret-placement-calculator/>  
It's got a cool feature – stretch compensation. If you're setting your actions up a bit high and/or your fretwire is not as low-profile as found on commercial gats, it really helps in avoiding sharp notes. Like most calculators, it tries to impress me by going to 3 decimal points. Why don't girls ever do that? I round off to the nearest 0.5mm because by the time I've marked them out with a pencil then cut the slots I'm not going to be nearer than that anyway.  
I tape a metal 100cm ruler down at the 0 fret position so it won't move, and make a pencil mark for each fret then use a T-square on my **dead square, straight fingerboard edge** to draw a line right across.  
To cut the slots I use a Stew Mac fret saw because I could'nt find an alternative with a thin enough blade. Best \$80 I ever spent. Except getting that witness taken care of. I use a triangle square that's nice and chunky and makes a good saw guide edge. Some people use a scroll saw instead of a hand saw, which works well too.
- 5) Neck tapering, but I don't always taper my necks.
- 6) Dot inlays and fine-finish fingerboard. I mark the middle of the fingerboard at 1<sup>st</sup> fret and at 15<sup>th</sup> fret, draw a line right down the middle of the fingerboard, then a diagonal line from edge-to-edge of the fret slots on the one's I'm going to inlay dots on. Where the diagonal line crosses the centre line is bang in the middle of the space. Then use a brad-pointed drill bit of same diameter as your dots and drill to a depth that lets the dots sit just above the fingerboard. Glue them in and sand flat. Then do your fine sanding to make the whole fingerboard silky. You can do your side dots now too. Go on. I dare you.
- 7) Install the frets. Hey, someone should write a little tutorial on that!

- 8) Drill the tuner holes. Use a drill press! I got a little one that my power drill clamps into. It was \$20 and a lifesaver. I thin my headstocks from the back, so by drilling from the top it doesn't matter if the wood splinters out on the back at this point. If you aren't thinning from the back, drill a small pilot hole right through first and then drill the big hole from both sides, being careful not to go right through. The holes meet up in the middle and no splintered surfaces.
- 9) Shape the back of the neck and thin the headstock to the right thickness for the tuners. The reason you don't do all this earlier? Because it's easier to work on the fingerboard and drill the tuner holes while you have a nice flat back on the neck. And any splintering from the quick and dirty tuner drilling method will be thinned away. Also, when you're banging in frets and otherwise being studly, you'd just be marking up the back of your lovely smooth-finished neck.
- 10) Reward yourself.

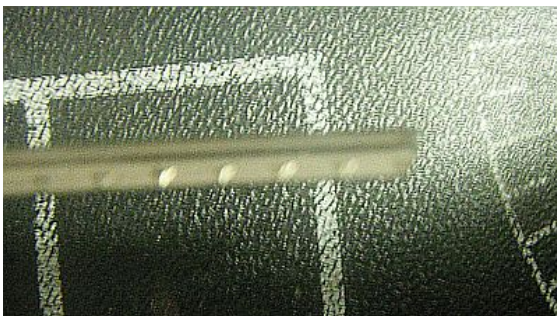
### The Main Event

OK, now the whole point of this was to share my fretting method so here we go!

This method ensures a smooth feel to the frets, as in they don't feel sharp on the underside of your fingers. Plus zero waste. At the end of this tutorial you'll find bank account details so you can send me all the money you save.

I get my fretwire in longer lengths, not precut. Unless you're building a Strat neck, precut frets will equal a lot of waste.

**Step one.** First prepare the end of the fretwire that is going on the bottom side of the fingerboard (the side you'll be running your fingers along. Make sure the tang (that's the bit that drives into the wood) is not sticking out longer than the fret. Flat or even a little filed away is essential.



Shut up! I didn't say it was a photography class.

I usually work with five or more lengths at a time so I can get on a roll on each task rather than constantly switching to and fro.

**Step two.** Bevel the end of the fret with a flat file at about 45 degrees. You know what a pro fret looks like. Make it look like that.

**Step three.** When you bevel the fret, it makes a sharp corner on each side. This is the ouchy bit that makes you cry like a wuss when you play. With the flat file, round those edges off so they feel nice and smooth. You've kinda made the end of the fret bullet-nosed now. No sharp edges for your soft, spoiled hands.

**Step four.** Do the same to the other end of the long length of fret wire. Hey, you're on a roll and this will save time. You'll see why. Repeat for both ends of all your fretwire lengths **except short lengths that are only long enough for one fret.** Unless you just enjoy it so much you can't stop.

**Step five.** Bang ya frets in with a rubber mallet. What you want is to have your smoothed fret end JUST inside the edge of the fingerboard. I find if I line it up right to the edge, it usually bangs in just inside the edge. Perfect! If you get one that is too far inside the edge or sticking out the end a little bit, pull it out and try again. If it wants to keep going in the same place, reverse your fretwire. The ridges on the tang will be in a different place and it will go in where it is supposed to. See why you beveled and smoothed both ends now? Anyhoo...you're aiming to be able to run your hand along those frets as you would when playing and not feel any sharp edges.

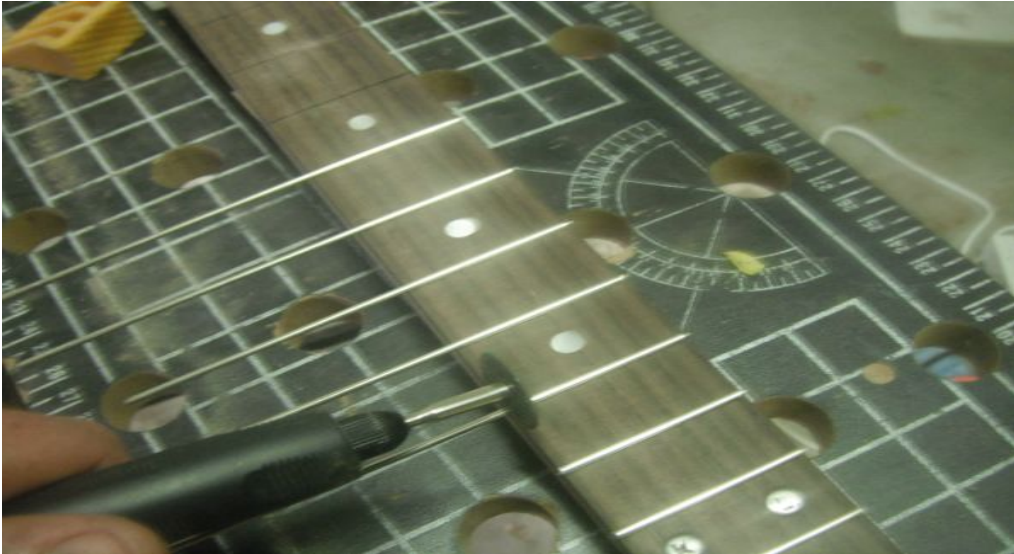
**Step six.** Cut the excess fretwire on the other side of the fingerboard off as close as you can without marking the neck with your cutting tool. I use a Dremel fake with a cutting wheel. Easy peasy! And you've wasted no wire and have minimal filing to do on the excess end.

**MUY IMPORTANTE! Use eye protection when using power tools. I'M NOT KIDDING!** Your face, meh, it probably can't get much worse. But your eyes!!! Your eyes!!! Now, you can use plain old safety goggles. I prefer to use the ballistic goggles I was issued in Afghanistan. Here's me fighting for your freedom to NOT be an idiot.



You'll see those pants again later. I mean in the pics, not in your bedroom.

Here's a neck in progress.



By the way, if you're near the Fine Images gallery in Soho, feel free to drop in and see my exhibition.

OK, so you see some frets have been banged in so they are smooth on the critical side, the excess has been trimmed off close, a few still to cut and then I repeat the whole process.

**Step seven.** Run a flat file (one with no handle so the whole thing sits flat) over the tiny bit of excess you still have until you don't hear metal being filed. You can do this quite lightly and you won't damage your fingerboard. Anyway, you're doing your fine finishing of the fingerboard sides later, so some light scratching won't kill ya.



See that? That's my hand. Cool!



**Step eight.** Bevel the unfinished side. I mounted a bit of flat file in a block of wood at an angle. I just run the wood block up and down the side of the neck a few times and, as if by magic, I have uniform bevels.



Don't be confused by this pic – you would actually be filing the opposite side to what is shown here. The side you trimmed the excess off, not the side that is already lovely and smooth.

**Step nine.** Remember what happens when you bevel a fret? Sharp corners! The good news is that because they are not on the side of the neck you run your hand along, they aren't so critical. But what the heck, let's fix 'em anyway. Using a half-round jeweller's file, CAREFULLY round of the corners. You start almost underneath it and file away from your self, rolling the file over the bevel. After about 50 frets it gets easy. Be careful not to nick your fingerboard.



There are those pants again. Why they issued dark blue pants in the dustiest place on Earth I will never know.

**Step ten.** The last step is to smooth off the bevels a bit. I made a fingerboard guard out of a bit of thin plastic so I can sand without scalloping the wood. Use something like 800 grit emery paper.



**Let's wind it up.** So you do all that and you string up your new gat and your frets are buzzing like things that buzz. What next? If you look down the fingerboard from the nut end, you might see a fret or two sticking up. First check they are seated in properly. Still acting like bees?

I use this – it's been quite good. Perhaps the best thing about it is that you fix your frets with the strings still on and under tension so the neck will be doing what it always does.

<http://www.fretrefinishing.com/>

If they are REALLY uneven, the best first step is to run a flat file over them to even them all out. I use one that I think is a knife sharpening file and looks exactly like the \$120 fret levelling ones but costs \$30.

Well, it's been fun. I feel like we got to know each other, and I hope you had a better time than I did. Just walk away. I hate goodbyes.

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