A Bit About Me

Hi. My name is Marc Terreur, but some call me Marcus. I'm a Belgian luthier, and my company is called Marcus Guitars & Basses. If you're interested, you can see some of my work here.

Another great passion in my life, besides guitars, is writing. I love language and am fascinated by it. Consequently, back in 2015, my decision to start a blog didn't come as a surprise to those who know me well.

It goes without saying that a writer should be familiar with his subject. If he wants to teach about it, he should be an expert. The following will hopefully reassure you that I'm entitled to write about understanding guitars.

- I play the guitar since age 10 or 11, took up the electric bass a few years later. Many other instruments followed: banjo, mandolin, ukulele, lap steel, upright bass, and more. They're all different, but on the other hand, they're all members of the same family. Their strings vibrate alike.

- I've studied math and sciences in high school, and I must say: having some understanding of physics turned out to be highly beneficial. I wasn't able to put my Master in Sociology to much use, though.
- Since my mid-teens, I've been customizing my own instruments. We didn't have internet in the 70s, and books on the subject were scarce. Therefore, my first efforts involved a lot of trial and error. I learned a lot that way.
- In 1992, I discovered that a School of Lutherie had been founded, only a 45 minute drive away from my home. I took classes from 1992 to 1996 and built several guitars and basses there. The very first was an unconventionally designed seven-string electric bass that was tested and approved at the time by the great American jazz bassist John Patitucci.
- I turned professional in 1995. In those starting years—to make ends meet—I worked for four different stores. I stopped doing that a long time ago, but the biggest music store in Belgium still sends its customers to me whenever their guitars need serious repair.
- In the past, I have been writing guitar tech columns and instrument reviews for two Belgian music magazines. That was fun to do!
- Over the years, I appear to have built a solid reputation, but I did so without advertising. The positive reviews I got in different guitar magazines (foreign and domestic) may have helped a bit, but I know for a fact that word of mouth did most of the work for me.
  Although there may be guitar techs nearer to their homes, customers come to my workshop from all over Belgium, some from the Netherlands. Often, one setup is enough to convince them to bring in all their other guitars as well. I cannot begin to count the number of guitars that have passed through my shop.

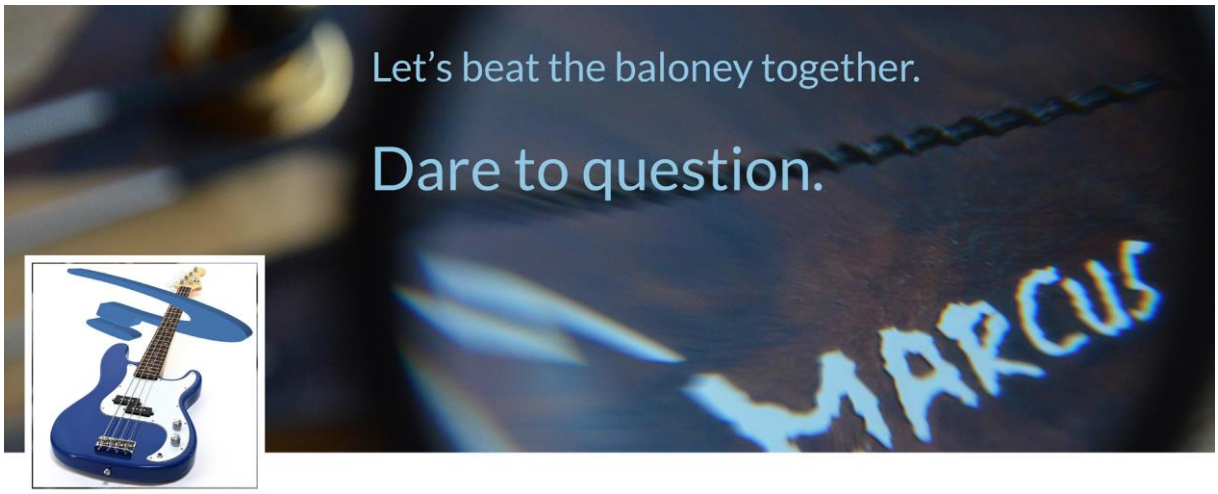
In 2015, the time felt right to share some ideas with you. And look what happened: the blog is now a book. From the bottom of my heart, I thank you for buying it.

I'm truly grateful for your trust.

Mission Statement

This is NOT the Guitar Gospel According to Marcus. This is NOT your Holy e-Book. I do not want you to believe.

In fact, I want you to doubt. I want you to think for yourself. Forget all that you believed to be true or simply took for granted. Dare to question the information that's out there. A lot of it is baloney. Half of what you read on guitar forums, obviously, but worse: even manufacturers' websites contain crappy guidelines.



So now you're thinking: then how can I be sure this Marcus character knows what he's talking about? (See how easy that went? You're starting to question things already!) Well, you can't. I'm sorry. Reading some of the comments that customers left on my business website might help—or for now, you might just give me the benefit and privilege of your doubt. You'll find out soon enough.

On these pages, I'll provide you with technical guitar knowledge and some surprising insights that I've gathered over three decades—four if you're willing to count my amateur days when I was merely customizing my own guitars and basses.

(This previous sentence should REALLY set off your alarm! Be especially suspicious or critical when any source, internet or other, presents anything as knowledge. Even when it's me: I don't have all the answers. I'm still learning every day.)

That being said: knowledge is one thing, but I aim to give you more.

(Pause for suspense.)

I don’t know whether you’ve noticed this, but when something is presented as fact, it’s usually just an opinion in disguise. Not here. I will always make you see WHY a given solution is correct. Like anything else in the world, guitars and other stringed instruments obey the laws of physics. Everything a capable guitar tech does is necessarily done with those laws in mind. I’ll explain them to you, plain and simple. You won’t need a college degree to understand.

As a result, you’ll be better armed to separate the internet’s fact from fiction.

As a result, you’ll better understand guitars.

And in the end, my friends, THAT will make your music better. Because there’s one thing I DO believe:

MUSIC IS MADE OF MATH AND MAGIC.

When players understand their guitars, they can concentrate on performing the magic. You are no exception. And if you let me, I’ll gladly supply some of that math.

Enjoy my book. Enjoy playing. Enjoy life.

From Chapter 3:

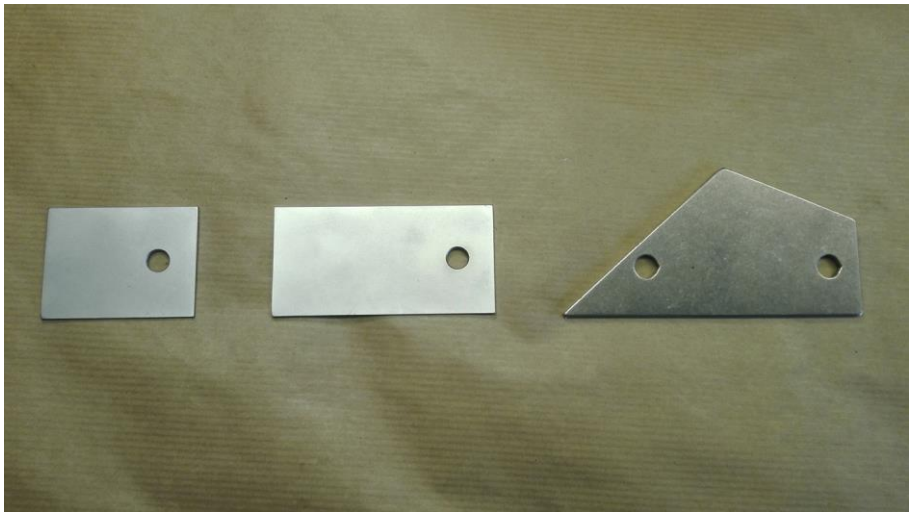
(…)

NEVER trust your eyes. ALWAYS measure. I've learned that the hard way. There's no reason YOU should have to. All you have to do is read on.

LOOKING AT FRETS OBJECTIVELY

For this, as always, you're going to need some sort of tool. Something with a perfectly straight edge, that you can press against three frets at a time. If the middle fret is higher than the two others, you'll be able to rock the tool.

For this kind of checking, guitar technicians use short metal straightedges of different lengths—or a single tool that combines different lengths, like the far right one in this picture.



From Chapter 4:

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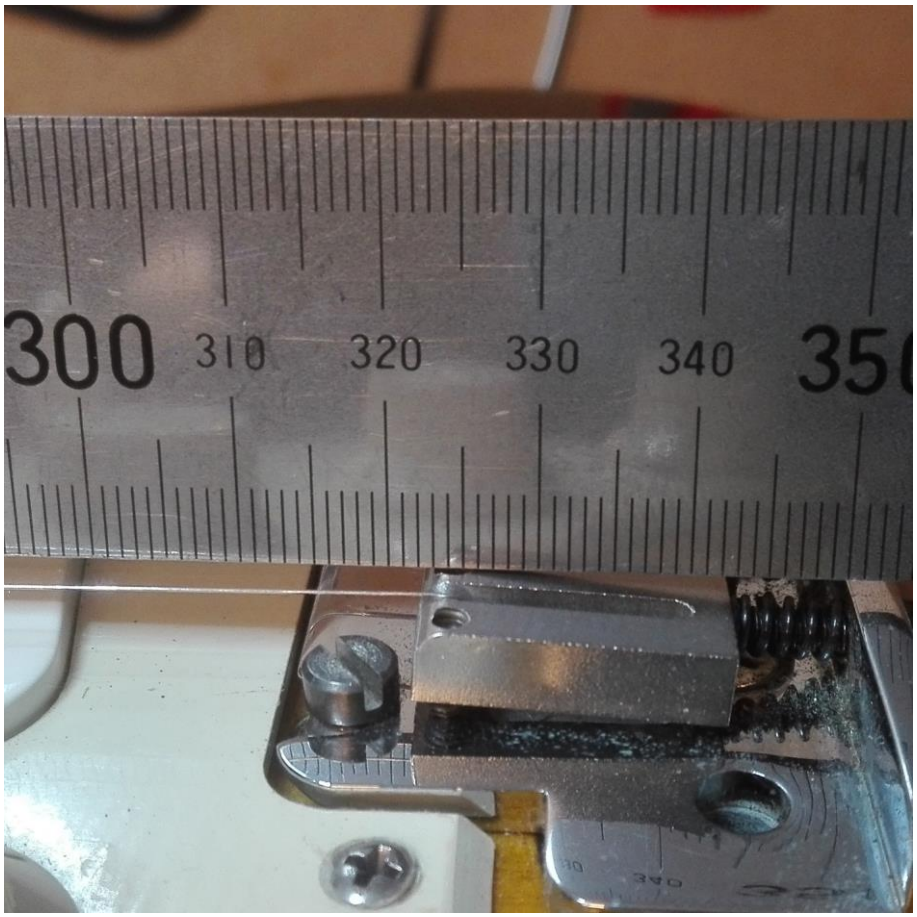


RIGHT THERE is the theoretical spot where the string should “lift off” from the saddle (note that the lift-off point is not necessarily the front edge of the saddle!). In real life, though, you need to back off a bit.

A small digression. Imagine string bending for a moment. What happens? By stretching the string, you increase the tension—therefore, the pitch rises (the note sounds higher). Well, “normal” playing does exactly the same. There is always a certain distance between the strings and the fret tops. To play a note, you depress the string, thus stretch it. Tension increases—and the pitch goes up.

By consequence, if the bridge saddle were in the theoretically correct spot, the 12th fret note—any note, in fact—would sound too high. To compensate for this (in other words: to lower the pitch again), we make the string a little longer—by moving the saddle. Higher action will require more compensation since the string-to-fret distance is greater.

Mass (string gauge) is also a factor: for the laws of physics to apply, a string would have to be infinitely thin. The thicker the string, the greater the deviation. More compensation will be required.

Finally, wound and unwound strings behave differently, too.

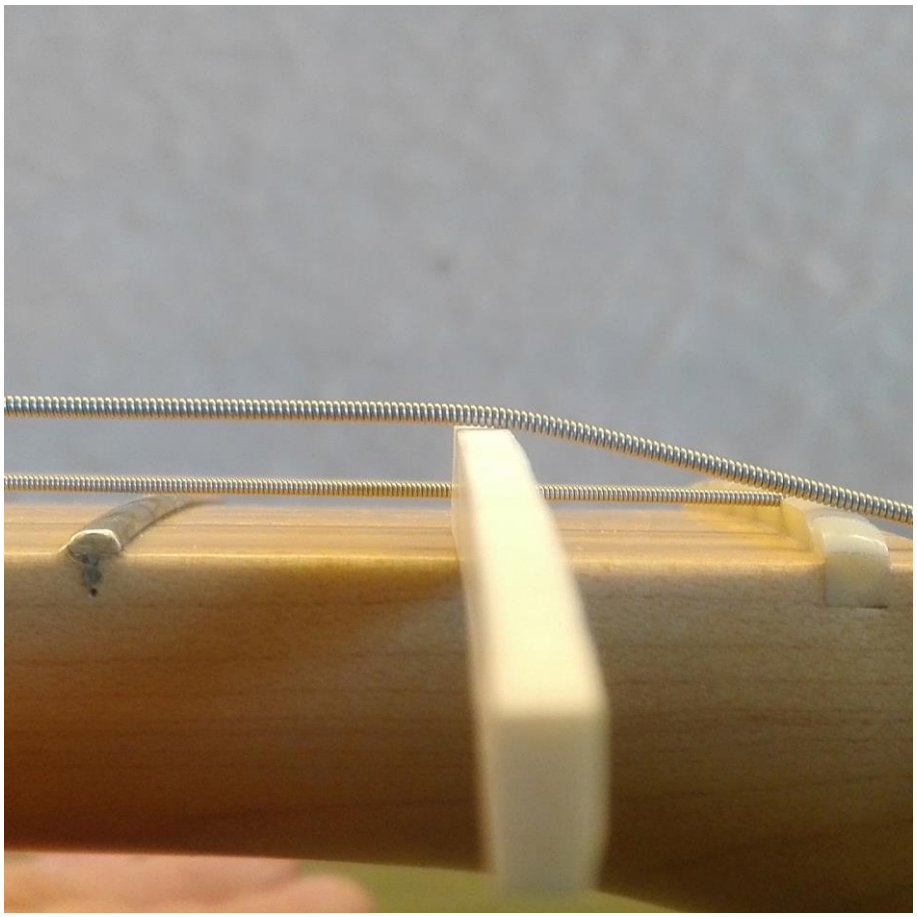
(…)

So nut slot width should be just right. Each string must be able to slide back and forth without friction, but it may NOT be able to move sideways.

That's not all, though. The angle and shape of the slot bottoms also matter.Strings, especially thicker ones, aren't perfectly flexible. When they pass over an object and are thereby forced to make an angle (yes, I'm describing what happens at the nut), you won't see crispy clean corners. The string will sort of bend or lean into its new direction. (The same thing happens when the string takes off from the bridge saddle.)

Ideally, the slot bottom should follow this natural path of the string. It should round off the corner, so to speak. A horizontal slot bottom may cause the string to buzz in its slot.

This isn't hard to understand. The photograph reveals what happens inside a nut slot with a flat bottom:



The somewhat curved shape of the string passing over the flat surface of the slot bottom results in a gap. When the string is plucked, this gap allows the string to vibrate against the slot material, generating a buzzing sound.

Yes, nut-making is a job of precision.

From Chapter 5:

(…)

From that D-string on, one last additional maneuver is added. This time, we won't be guiding the string downward just yet. Remain above the string at first, and then—once again using your index finger as a guide—utilize the loop point to cross over to the lower part of the string post. You can see what this crossing should look like in the middle part of the picture. In the lower part, you can see the result from yet another angle.