MAESTRO: True Leveling Frets:
True means every fret is the same height one after the other and what no other tool does, are the same height across each fret length only made possible by matching the fret radius to the fretboard radius. If not, the frets are not level, this is basic geometry, it means the setup has to be jerry rigged, which in turn degrades play and intonation.

Most people are super reluctant to tackle this, and yet it is very straight forward and simple.

Benefits when done by following SixStringers' FretMaestro steps:
Every fret will be within +/- .0005" tolerance, perfectly matching the fretboard radius, and that means having for the first time ever for 99% of guitars, True Level Frets that allow the lowest buzz free action without or perhaps with absolute minimal neck relief.
Crystal clear intonation, bell tone vibrance, deepest easiest bends, and sustain for days even on guitars not recognized for sustain dominance. Fastest easiest play that no shop practicing 19th century ways can ever achieve. But you can, it is patiently easy with FretMaestro.

FIRST: The Tools:
1. Notched Straight Edge matching the scale length.
2. Set of feeler gauges
3. Inch Pound Torque Screwdriver (for bolt on necks).
4. Digital Gauge to measure each fret height, and nut slots
5. Fret Forensic Worksheet… download free on SixStringers.com/3rd-party.
6. Pivoting Neck Support (for the most secure stable support Vs any rigid type)
7. FretMaestro (Radius or Omni version)
8. Sandpaper, 600, 1000, and perhaps finer grit for polishing frets after level.
9. Rubbing Alcohol to clean tape residue off fretboard.
10. Belt Sander Eraser.
11. Spray Dry Lube.
12. Sharpie Marker.

SECOND: Prepare and Fret Forensics:
1. Remove Strings.

2. For Bolt on Necks: Use inch pound torque screwdriver, check every bolt/screw to ensure all click the same. Start with 15-inch pounds, if all click, go to 16, if one does not click, click all to 16 pounds, or if 17, then 17 and so on to no more than 20-inch pounds.

3. Flatten the neck using Notched Straight edge making sure to read the wood along the bridge side of the fret, not between the frets where wear can show daylight between the rule and the fretboard. This is the only correct way to use the Notched Straight Edge.

4. Use a fine feeler gauge .001" or thinner to check that no fret is lifting from its slot.

5. The digital Gauge: Typically has a 16" and sometimes 12" radius brass block. Not good for

other fretboard radii. These blocks have 4 feet, file 1/16“ off the two middle feet to eliminate a 16”R rocking on a 14”R fretboard and so on.

Next: When zeroing the dial, on the fretboard, not a fret, do this alongside the nut at mid fret, the zero will always be consistent, otherwise not.

Next: Measure from one side of the neck, so the bass side E, then mid fret, notate and move to each successive fret. When all frets are done move to the treble side, measure all high E frets. You will understand why once you begin.

Next: You are invited to text or email the Forensics, I will evaluate, notate and send back to you. Review the Forensic Worksheet, ID the lowest and highest number, the difference is how much fret leveling needs to be done. Observe the randomness of the numbers… some frets are high on the bass side, some higher on treble or middle, and few frets match. This has forever prohibited optimized play, intonation, bends, sustain, note clarity.

You are about to transform your guitar into Amazing, so amazing it will blow your mind.

THIRD: TRUE LEVEL WITH MAESTRO:

1. Start with the lowest fret, the smallest number. Note, if on frets 1-5 there are divots worn in, start with the fret having the deepest divot. Use the included height gauge to ID the setting for Maestro, if it for example reads #4, start with #3 setting just in case your read is imperfect.

2. Apply glide strip to both sides of the fret, allow a gap not greater than .0625”, this is a debris trough so that prevents grind between the Maestro and the glide strip.

3. Mark top of fret with a Sharpie, use 4 to 6 file passes (a pass in one up and one down) and inspect the sharpie, if no Sharpie is cleaned off, set Maestro to the next highest number and add a layer of Scotch tape under the glide strip. Use 4-6 passes and inspect. If no Sharpie is removed, remove the Scotch tape and test again. For sure Sharpie mark will be removed. Why this method? Using the Scotch tape shortens the file cut by .0015” and potentially saves that much fret material and the time it would take to file down .0015” that does not need to be filed. Each Maestro setting is a .003” increment, the Scotch tape makes the increment .0015” when used as directed.

4. In the above step the depth of level is established and locked in using the setting with or without Scotch Tape layer. This is used for all frets to achieve True Level. By starting with the lowest fret or the fret with the deepest groove wear we dialed in the setting and are now set for all other frets.

5. Holding Maestro: Have thumb between but not touching the depth dials. Setting the depth, both dials must be the same position/setting, use thumb nail to firmly press in the file, lightly jiggling the dial until it does not move on the press in. Make sure both dial positions are set

correctly seated.

6. Maestro includes three files:
The workhorse is the 150 grit that is marked with the number 150 or with a star.
The Crown narrow File is “V” shaped, marked with the letter C or V, it does not take material off the top of the fret. It is intended to narrow the crown.
The Finish File is 300 grit. Never use this for leveling, use only after the 150 file has bottomed out or very close to that, then use the 300 to refine the level and debur the 150 filing.

7. How to File: File straight in line with the length of the fret to prevent side cutting. Keep Maestro perpendicular to the fretboard to not favor one side of the fret. Start slow, align your posture so your working shoulder is in direct line with the fret, this keeps the elbow from chicken winging and torquing the file out of alignment. Use the shoulder to drive the file, not the elbow. This is true of all fret files and all other files, hand saws, and many other tools. Start slow, develop a rhythm… rhythm is key to best success.

8. Clean the file as you go using a narrow piece of Belt Sander Eraser. If you have it, spray dry lube on the file to prevent fret nickel from sticking to and clogging the file. Stainless steel frets are much harder than nickel and do not clog the file.
LET THE FILE DO THE WORK: Never jam any file into a fret thinking this makes the work faster. Doing this guarantees ruining the file by either clogging it with nickel or tearing out grit by torquing against hard stainless steel; true of virtually all diamond files.

9. Maestro bottoms out on the glide strip, but if you jam the file to the fret you can wear the glide strip forcing Maestro to cut too deep. When Maestro is close to making a fret level you will see something like a pencil line made by the aluminum on the glide strip, that shows contact, and when the line runs the full length of the fret the fret is symmetrically level. Go to the next fret.
If you see that the pencil line is heavy, light, heavy, this is a tell-tale of uneven file stroke pressure, adjust to even the stroke using the pencil marks as guidelines.

10. Do all frets, then do another Fret Forensics. You will likely see that some frets are high, this is because the Maestro was not bottomed out to complete the level. This is especially true for first timers. And this is okay, it only means going back and finishing those frets.

Okay, maybe you had to go over the some frets a few times before getting the hang of bottoming out consistently. Perfectly normal. But now every fret is in True Level.

Now use 600 grit sandpaper to smooth the frets, once all frets are dry sanded, now tamp the sandpaper to a moist sponge and go over the frets again, the moistened sandpaper delivers a much smoother finish. If you prefer, you can use 1,200 grit or finer. And after this some people want to polish the frets with a polishing compound and Dremel buffer… beware, the Dremel generates heat that if the frets have been glued in will soften that glue. So, buff the fret no more than 33%, move on to the next fret, do all frets, and do this three times. It does not take

more time, but it ensures that you do not soften the glue that then allows a fret to lift out of its slot.

Next: the leveled frets are shorter than before… this means that the nut slots are most often now too high. The generic nut slot elevations above the first fret are High E and B @ .016", D & G @ .018" and Low E and D @ .02". Always make sure the neck is flat.

Next: String Action. This is subjective according play style. Aggressive means higher, intricate means lower.

Restringing:
First, put a back bow in the neck… using the notched straight edge anchored between the 21st and 22nd frets, last and next to last, measure the gap at the 1st fret, you want .0625" to .08" which when divided by 2 tells the elevation of back bow.
Why? Because you never want to tighten a truss rod under 175 lbs of string tension, doing so risks torquing out the anchor of the truss, if that happens, it's over, or it cost a lot of dollars to repair. It is not worth the risk.

Install and tune strings, check the neck, is it flat or does it still have a slight back bow. Either way suffer the string buzz for ten minutes of play allowing the strings and the neck to align, retune as you go. Check the neck again. You want it dead flat, adjust to make that happen. Tune and play another ten minutes, retuning as needed. Chances are you will not need to add neck relief because you now have True Level Frets that then makes accurate nut slots possible, that then makes accurate saddle possible, everything is for the first time ever, symmetrical, and that means compensating for 19th century errors with relief isn't necessary. But if there is a slight buzz, then only a very slight relief is required, to do this loosen the truss rod by 1/16th turn, not more, retune, play ten minutes, repeat if needed. You do not need to measure the relief, just use the 1/16th turn method and walk it in to perfection.

Over time climatic changes influence the guitar. Checking the neck 2, 3, - 4 times a year depending how radical seasonal changes are is normal. Or, having a climate-controlled music room, in which case the neck is not likely to change.
If you live in a humid climate, store the guitar in a hardshell case with a pouch of rice to absorb humidity. If you live in an arid climate, invest in a guitar humidifier (made for acoustic guitars) and use as directed. And invest in a hygrometer for the guitar case. 42% to 45% is the ideal humidity.

Where to get FretMaestro and all the other tools:
www.SixStringers.com and for 3rd party tools www.SixStringers.com/3rd-party where we have done the shopping for best quality and price.

Download the free Fret Forensic Worksheet: www.SixStringers.com/3rd-party

Customer Support: https://sixstringers.com/contact/

We encourage every customer to use Customer Support because your success is our success. SixStringers is the innovator of 21st Century Precision Guitar Tools and How To's.