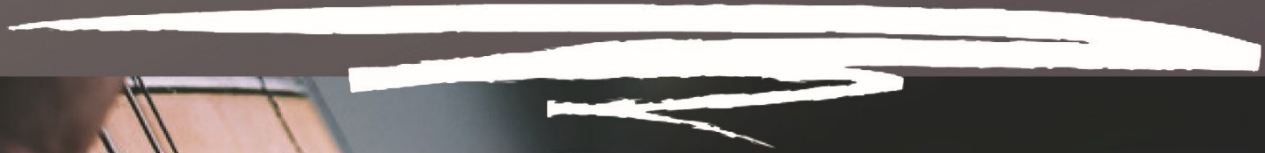


GUITAR & BASS



BY JONNY BLACKWOOD

QUICK SETUP GUIDE



Blackwood Guitarworks

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Blackwood Guitarworks Quick Setup Guide for Electric Guitar and Bass

By Jonny Blackwood

Published by Blackwood Guitarworks

Email: info@blackwoodguitarworks.com

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Published 2019

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(click the image to visit the website)

A dark brown banner with a blurred background of guitar strings. In the top left corner is the GuitarTricks logo, which consists of a red circle containing a white 'G' followed by the text 'GUITARTRICKS' in white. The main text is centered and reads 'LEARN TO PLAY GUITAR THE EASY WAY!' where 'EASY' is in a large, bold, yellow font and the rest is in white. Below this is the text 'Award-Winning Online Guitar Lessons' in white. At the bottom left is a yellow rectangular button with the text 'TRY IT FREE!' in black.

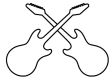
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QUICK SETUP GUIDE FOR ELECTRIC GUITAR AND BASS

BY JONNY BLACKWOOD

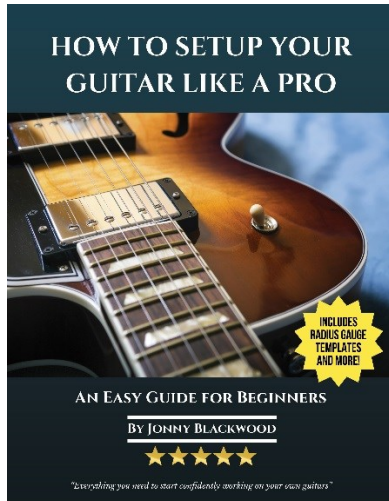
Introduction



Every guitar or bass will benefit from a setup— whether it is a brand-new instrument or one that has been around the block. It is really surprising how a few adjustments can totally transform an instrument’s playability and performance. New guitars are often set up at the factory or at least roughed in, but even a factory setup can be improved upon. Wooden instruments are also affected by travel, storage, warehousing, and environmental influence, such as variance in temperature and humidity. After a long journey to the guitar store (and sometimes from the store to you), an instrument may have been exposed to multiple conditions and localities. Besides that, an instrument should be checked over and readjusted after string gauge and/or tuning changes, as well as after any seasonal changes. The following is a basic guide for general adjustments that anyone can do. They are to be done in the order presented for the best results. For a more detailed explanation, visit the links to our website. We are adding more content regularly to answer all your guitar setup and maintenance questions. If you require any of the tools or supplies listed, there are further links at the very end of this document that will take you right to some of our favourites online.



The following articles have been excerpted from *“How to Setup Your Guitar Like A Pro: An Easy Guide for Beginners”*



“Everything you need to start confidently working on your own guitars is right here.”

The ultimate guitar setup guide for beginners just got better! Recently updated to include over 100 pages and 260 photos covering all the aspects of a pro-level guitar setup, such as cleaning & maintenance, neck adjustments, string height adjustments (bridge saddle and nut), pickup height adjustments, intonation, and more. Learn how to dial in the perfect setup, step-by-step, on any guitar- with precision and measurability! Use the included cut-out tool templates to broaden your skills. Makes an excellent starter book or reference for budding professionals.

******Now updated and expanded with additional content including a section on restringing, neck shimming, scale length determination and new images! ******

Included in the book:

- An 8-step method for electric, acoustic & bass guitar setups
- How to adjust neck relief (bow) for optimum playability
- How to adjust string height for your playing style and guitar type
- How to file nut slots, adjust pickup height and set the intonation accurately
- How to adjust Fender-style tremolo's, Gibson hard-tails, Floyd Rose & other floating bridge types
- How to adjust the saddle on your acoustic steel string or nylon string guitar
- Manufacturer's setup specs from Fender, Gibson, Ibanez, Jackson, Gretsch and others
- Exclusive setup specifications from the author's best playing guitars & basses
- Cut-out templates for radius gauges, under-string radius gauges & an action ruler
- A handy measurement conversion chart & more!

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1. Change the Strings

Why Change the Strings?



Strings get old and corroded and lose their tone and tuning. New strings will sustain and produce a clear, crisp tone while keeping their tune and intonation. Over time, the dirt and oils from your hands build-up on the strings causing them to tarnish. They should be changed when they become dirty and dull sounding. Some people prefer that dull sound, and that's fine— for those that do, get more hours out of that old set of strings and clean them after playing, so the dirt and rust don't build-up on them.

This will also help your frets last much longer (cruddy old strings are like files on frets).

How Often Should You Change the Strings?

If you play often, you will need to change them more frequently. Every person is different, not only in their preferences but also in how dirty and quickly their strings become. With average playing time, you may get a few months before needing a change. Other times, a regular professional player may change them a few times a week, or more.

How Do You Know if the Strings Need to be Changed?

- Doesn't tune well or sound in tune
- The strings are discoloured and tarnished
- The sound is dull and flat
- You can't remember when you last changed them it's been so long
- You break a string (change the whole set!)

What You Will Need?

- A new set of strings
- A string winder helps speed things along
- A set of side-cutters/ or wire cutters
- A tuner

Restranging Tips



On traditional-style tuners, always have sufficient windings around the string post. This will help keep the strings in tune and prevent slipping, as well as provide a healthy downward pitch behind the nut- contributing to good tone. A good rule of thumb is 3-4 windings for wound strings, and anywhere from 4-6 for treble strings. Measure the right amount of slack by pulling the string 2 to 2-1/2" passed the tuner. Keep the string pinched in your left hand and pull it back towards the string post to hold the amount of slack.



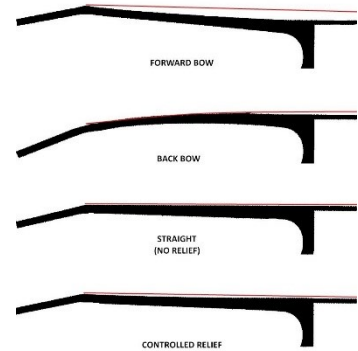
Hold the string down towards the base of the string post and simultaneously keep some back tension on it while tuning up to pitch. This process will help ensure the string is wrapped well and cinched-up around the string post.



Stretch the strings thoroughly to properly “seat” them and to minimize slippage and tuning issues. Add some Vaseline or pencil lead to the nut slots to further improve tuning and prevent binding at the nut.

2. Adjust the Neck (relief/bow)

Typically, a guitar neck needs adjustment after changing tuning or string gauge. Additionally, the neck may need adjustment any time after the guitar has been subjected to temperature or humidity fluctuations such as in typical seasonal changes. Check the amount of relief or bow in the neck and determine if any adjustment is needed. Most players feel that a near-straight neck is the most comfortable to play on, but this is subject to personal preference. Usually, there should be a small amount of relief in the neck for optimal playing, about the thickness of a business card or less.



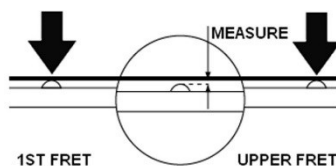
What You Will Need

- The guitars’ truss rod adjustment key
- A capo
- Automotive feeler gauges or string action ruler (if you want to measure your results)

How to Check the Neck Relief (Bow)?

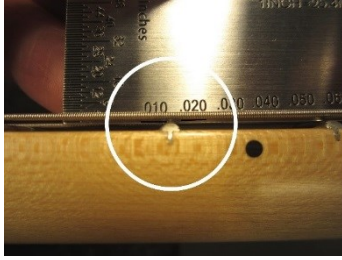


Capo the first fret. If you do not own a capo, you can use your fretting hand to bar the first fret (you can alternatively use a long straight edge across the length of the neck). With your picking hand, bar or press down the string as follows: If you have a bolt-on neck, bar the last fret on the #6 string (lowest string). If you have a set-neck (glued in), bar the fret closest to where the neck and body meet, typically the 17th-19th fret. When checking an acoustic guitar, bar the fret closest to where the neck and body meet (often the 14th fret).



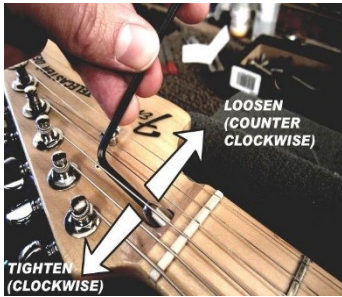
Find the centre between those two reference points (it is often the 7th or 8th fret on an electric guitar). Observe the distance between the top of the fret and the bottom of the string, as pictured. Notice the gap, if any. If you have a gap, you likely have some bow in the neck. The amount of gap is the amount of neck relief. If there is no gap, the neck is likely either dead straight or back-bowed. Remember to check these measurements while in the playing position.

How Much Relief?



You can measure the amount of relief using a string action ruler or set of automotive feeler gauges. If you don't have these tools, you can use a business card or string package for reference. For the technically minded, try setting the relief to .008"-.010" for most electrics, .010"-.012" for acoustics, and .015"-.020" for basses (check out the **Guitar Setup Calculator** available at <https://blackwoodguitarworks.com/guitar-setup-calculator/> for many more examples).

Differences In Feel



Adjust the truss rod to affect the neck relief. Keep in mind, a little goes a long way. Make your adjustments ¼ turn at a time and check the results. A straighter neck will generally feel more comfortable but may produce some unwanted string buzz if too straight. Experiment and see what will work best for you and your playing style.

Neck Relief Suggestions (Electric Guitar)

Neck Radius	Relief
7.25"	.012" (0.3 mm)
9.5" to 12"	.010" (0.25 mm)
15" to 17"	.008" (0.2 mm)

Neck Relief Suggestions (Bass Guitar)

Neck Radius	Relief
7.25"	.014" (0.35 mm)
9.5" to 12"	.012" (0.3 mm)
15" to 17"	.010" (0.25 mm)

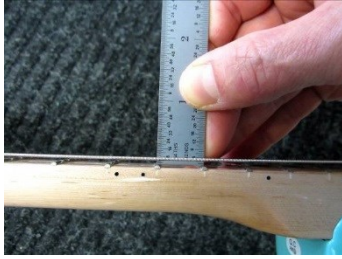
3. Adjust the String Height

Changing the string height can have a drastic effect on the feel and functionality of the guitar. If the strings are too high, the instrument is a chore to play. If they are too low, they may produce too much buzz and a lack of sustain. There is always a middle ground for every guitar type and player – one that is comfortable *and* functional.

What You Will Need

- Your guitar saddle height adjustment key (if req'd)
- Steel ruler or string action ruler

How to Adjust the String Height?



There are multiple methods to adjust the string height, depending on the guitar type and your objectives. The most consistent way is to measure the string height using a steel ruler that measures in 1/64" increments. With the capo still on the 1st fret, place the ruler on the 12th fret. Adjust the saddle or bridge so that the bottom of the string measures according to the chart below. These settings should also be measured while in playing position for accuracy. Keep in mind the following specifications are meant to be a guide. They should not be construed as hard-and-fast rules, as players' subjective requirements often differ.

String Height Suggestions (Electric Guitar)

Neck Radius	String Height Bass Side	String Height Treble Side
7.25"	5/64" (2 mm)	4/64" (1.6 mm)
9.5" to 12"	4/64" (1.6 mm)	4/64" (1.6 mm)
15" to 17"	4/64" (1.6 mm)	3/64" (1.2 mm)

String Height Suggestions (Bass Guitar)

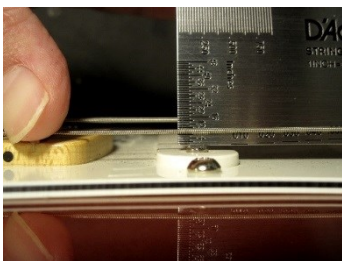
Neck Radius	String Height Bass Side	String Height Treble Side
7.25"	7/64" (2 mm)	6/64" (1.6 mm)
9.5" to 12"	6/64" (1.6 mm)	5/64" (1.6 mm)
15" to 17"	6/64" (1.6 mm)	5/64" (1.2 mm)

(check out the *Guitar Setup Calculator* available at <https://blackwoodguitarworks.com/guitar-setup-calculator/> for many more examples).

4. Adjust the Pickup Height

What You Will Need

- A screwdriver
- A steel ruler



Now that the action is set, adjust the pickup height to the strings accordingly. With the strings tuned to pitch, bar and hold down the #6 string at the last fret and place a ruler on the pickup pole as pictured. On covered humbuckers, place the ruler on the exposed pole, as opposed to the cover. There is some room to experiment with, but a reasonable distance away from the strings is 6/64" on the #6 string side. Now do the same on the treble side for the #1 string and adjust it to 4/64". These specs can be used similarly for each pickup on the guitar and later modified for

volume balance by ear if needed. For bass guitars, you will want to allow more space for the strings to travel. Try setting the pickups to 8/64" at the lowest string and 6/64" at the highest.

5. Adjust the Intonation

Intonation is the degree to which notes sound in tune. Since each string on the guitar is a different diameter and pitch, as well as a different tension, they require scaling. If you've ever tuned the guitar with an electronic tuner, and then played some notes or chords only to find they were slightly out of tune, you may need to adjust the intonation. The intonation is done at the last step because every other step will affect it.



What You Will Need

- A screwdriver or saddle adjustment wrench
- An accurate tuner

How to Check Intonation?

With the guitar tuned to pitch (and in playing position) play a harmonic note at the 12th fret on the #1 string. Check that the note is perfectly in tune and retune if needed. Now press down and play the same note naturally at the 12th fret. Keep in mind that excessive finger pressure will cause the note to sound sharp. Compare the harmonic note to the natural fretted note on the tuner. Listen to them both- they should sound the same. If they are not, the intonation requires adjustment.

How to Adjust Intonation?



The goal is to make the harmonic note at the 12th fret the same pitch as the fretted note. If the harmonic note is in tune, yet the fretted note is sharp, "lengthen" the string by adjusting the saddle further away from the neck. If the fretted note is flat, "shorten" the string by adjusting the saddle closer towards the neck. Make the adjustments in small increments while checking your progress with a tuner. Repeat the procedure until the harmonic and natural fretted notes are identical, as verified by the tuner and your ear.



Tools and Supplies Links

These items can be found at your local music and hardware stores or online (*click an image to be redirected*).



[A new set of strings](#)

[A string winder](#)

[A set of side-cutters/ or wire cutters](#)

[The guitars' truss rod adjustment key](#)

[A capo](#)

[Automotive feeler gauges](#)

[String action ruler](#)

[A screwdriver](#)

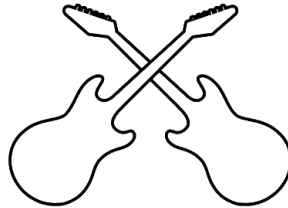
[A steel ruler](#)

[An accurate tuner](#)

[Guitar setup tool kit](#)

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