Maintenance For All Styles Of Guitar
Changing Strings & Making Adjustments

Guitar Care For Beginners

The Beginner's Guide For Guitar Maintenance

EXCLUSIVE COURSE

FOR ALL STYLES OF GUITAR

Introduction

A guitar can be classified as a stringed instrument. This is such because its sound is produced from the vibrations of the strings.

Interestingly enough, and as expected, guitars have many different types of strings however generally speaking there are 2 main types: steel and nylon.

Steel strings are used on both electrical and acoustic guitars, while nylon strings are primarily used for classical and flamenco guitars. Even though these strings are made with either steel or nylon, they're almost always wound with either nickel , brass or copper alloys.

For most standard strings on an electrical guitar, only the 4th, 5th and 6th strings are wound. Some guitars have up to 12 strings and so, of course, they will be tuned differently from standard guitars. Each string does not have the same thickness as a different note is required from each of them.

Electrical guitar strings that are wound are created by rolling a white metallic string around another string located centrally. The materials used in the wrapping of the central string depend on the durability and the tone needed by the musician, however, typically nickel or nickel alloy is used.

Now that you understand the general basics of guitar strings and their differences, it's time to move on to analyzing the strings a bit more in depth. This will allow you (as the player) to determine which style and type of string you need to best suit your needs and playing style.

The Gauge of the String

The gauge of the string is referred to as the thickness of the string which is usually measured in the fractions of an inch.

There are usually two types of gauges of a string: Light Gauge and Heavy Gauge.

The “Light Gauge” strings are best for musicians who like to play fast and with ease. It should be noted however that they tend to not hold their tune very well, have little sustain and produce very little volume.

The “Heavy Gauge” strings are the ones mostly preferred by musicians because of their tones and how they feel. These strings are good for guitars players who prefer their guitars on a lower tune and who wish to have their sustains much longer in dropped tuning.

Destruction of Strings

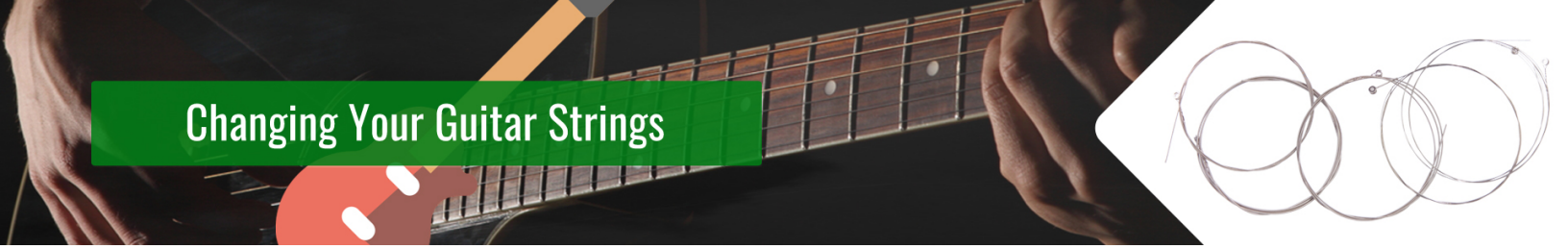
Even though strings are so efficient in the guitar playing industry, they're very fragile and can break for various reasons.

If one plays too aggressively, it may help to snap a string. This can be resolved by changing your playing style although I personally do not recommend that at all. I say, continue to Jam on! Your guitar strings may also break because they're too old and have lost their elasticity.

Over tuning can cause your guitar strings to break as well because you may wind the tuning pegs too high. It's advised that you tune your guitar with the strings facing away from you.

Some sharp areas on the guitar such as the bridge, nut and turning peg may also help in the breaking of the strings.

Guitar strings should be cared for as they're the main source needed for the sound of the instrument. Change your strings on a regular basis and try out different gauges to see what fits your style.



As stated in the previous section, strings need to be changed regularly to prevent damage and preserve the sound. But how does one change these strings? And when should we change them?

When you change the strings depend on how often you play your guitar. The more time spent playing the guitar is related to how often you should change the strings. What most professionals tend to do is change their strings before each gig. If you use this technique, you should remember that the strings need to break in properly.

Anyways, here is how you change your strings:

First, remove the old strings by detuning the machine heads until all the strings from the headstock are loose enough allowing you to pull each string from the headstock. You can also cut them with a pair of wire cutters but be sure that they're loose. Don’t want any accidents now do we.

Next up, we have the installation process. How you go about doing this is dependent on the type of guitar you have. However the strings are usually held in place by fixtures behind or on the bridge at one end and by turning the machine head at the headstock at the other.

Although it's advised that you use new strings, some guitarists use a special technique to revive used steel strings. They boil them.

This is done for about 10-15 minutes and helps in the removal of excess grime, providing you with a temporary fix.

In electrical guitars, strings are replaced by taking the end of the steel string without the ball end and threading it into the the fixture at the bridge. The string should be pulled until the ball end prevents it from going any further. The strings are secured at the machine head. The capstan to which the string is attached stands out vertically from the headstock and strings are passed through the hole in the side of the capstan.

The end is passed around and under and trapped in place when the machine head is tightened. Some capstans have vertical slots instead of holes. To use these cut the string to length and insert into the tip of the captan. Then bend the string to one side then wind it around. Next, slowly turn the machine head for each string increasing the tension until the string becomes suitably tight.

It's important to note that after putting on strings on any guitar, they need to be stretched. When you first tune the guitar, pull the strings from the fret board the release it. If the pitch drops, retune and repeat until all the strings stay in tune.

How To Restring An Electric Guitar

For a beginner, this can be a bit hard but it will get easier over time.

To restring the electric guitar one will need a new set of strings obviously, a string winder (recommended), a pair of wire cutters and a guitar tuner (recommended).

At least an hour should be set aside to complete the process.

Tip: DO NOT REMOVE ALL SIX STRINGS AT ONCE

Why? Well some guitars depend on the tension of strings and they may fall apart.

Anyways, let’s get to work.

If your guitar has a locking nut tremolo (whammy bar) system you will have to unlock it. It works best if you remove the clamps completely and work with just the nut until the restringing process is done and the strings are stretched and tuned. Then replace the locking clamps and fine tune using the tuners on the tremolo bridge.

Use your string winder and loosen the string until there is enough slack that you can unwind the string from the tuning post by hand.

Use your wire cutters to cut off the curled end of the string and discard. Do this to minimize the chance of scratching the finish of your guitar. Push/pull the string back through the bridge slowly making sure it does not drag across the body. You don't want restringing your guitar to result in refinishing your guitar!

Next, unwrap the appropriate new string. Insert it through the bridge of the guitar, over the saddle, up the neck, over the nut and into the hole in the tuning post. Again make sure the trailing end of the string doesn't drag across the guitar body.

Start turning the tuner by hand making sure the string wraps over the top of the tuning post. Ideally you want to have 3-4 wraps of the string around the tuner, but this is nothing to stress over. Turn the tuner until the slack is out and the string is properly seated in the nut and over the bridge saddle.

Next clip the excess string off close to the tuner and use your string winder to bring the string up to pitch. Use your digital tuner and tune to pitch.

Next, grab the string with your picking hand halfway between the bridge and the nut and lightly tug the string away from the fret-board. Do not pull really hard, but just hard enough to pull the stretch out of the string and tighten it around the tuner post.

Tune to pitch and repeat the stretching process until the string stays in tune.

Now repeat the entire process for the remaining five strings. Know that the pitch of the new strings may fluctuate as you work on the remaining strings.

This is especially true with a Floyd Rose or similar type floating bridge. When you have replaced and stretched the last string make sure all six strings are still in tune. If you have a locking tremolo system, replace the clamps for the locking nut, tighten, and use the bridge fine tuners to get the proper pitch.

The final step is the best one; sit back, crank up your amp and enjoy. Make sure you play something with lots of note bending in it and make sure the stretch is all played.

How To Restring A Classical Guitar

As with the electric guitar, when changing the strings on a classical guitar, it's best to change them one at a time. It's not good to have a sudden release of tension then have it applied forcefully again later.

Also it's important to never never tune the string more than one tone above its normal pitch and remember that classical guitars **do not** use steel strings.

To string the guitar:

First, unwind the old string until it gets quite floppy then unthread it from the capstan and untie it from the bridge and discard it.

Start stringing the guitar by slipping the string through the corresponding hole in the bridge from the sound hole end. Leave approximately 1½ inches of the string sticking out past the back of the bridge. Pull the extra string length towards the sound hole and loop it around the string where it originally entered the bridge. Loop the string under and over itself on top of the bridge twice. This forms a figure 8. Pull the string tightly away from the sound hole and attach it to the tuning peg.

Loop the string at the peg head and then twist it around itself before tightening the peg.

Continue to restring the other strings one by one using the above method.

After all the strings are restrung, start to tune the strings by starting with the first E treble string. Use the tuning fork to get the A note on the 5th fret. You can tune the other strings from this.

There is another way of securing the string to the bridge.

This is called the Letter D method or the "D Method" for short.

This is usually used only for the 4th, 5th and 6th strings and is done as follows:

Start as you would with the figure 8 by passing the string through the bridge at the sound hole and leaving 1½ inches sticking out and then bring the extra string length back and loop around itself then under and over itself ONCE at the very back of the bridge forming the letter D.

Supposedly, the figure 8 is better since it has more holding power.

Some things to take note of while restringing and tuning are that nylon strings, especially trebles, are very stretchy.

On the first day they will seem to be never in tune but will stabilize the next day.

Don’t stretch the strings when restringing since this make them develop thin areas. Uneven strings do not play in tune. Most intonation problems are due to uneven strings so experiment to find the string that sounds best.

Remember to take your time when first restringing a guitar.

Take care that you learn the correct method. There will be less slippage and breakage or tuning problems if you learn the proper way to re-string your guitar(s).

When you first put on new strings play all the semitones, fret by fret, along the string length and then re-tune the guitar. This will allow the strings to stretch more quickly and settle down and stay in tune.

There are a lot of classical guitar strings on the market. It pays to experiment until you find the one that works best for you and your play style.

Restringing a guitar can be a bit daunting at first. Approach the task slowly and take time to learn the correct methods. Before you know it, it becomes a breeze!

Fixing Your Guitar (Adjusting The Bridge, Etc.)

The following four adjustments can be made to all kinds of guitars to fix them in a number of different scenarios. These adjustments will fix all guitars and make them playable to an extent. The adjustments are the amount of relief in the neck using an adjustable truss rod, the string height at the saddle, the string height at the nut and the intonation.

These adjustments should be made at least once on every guitar.

Most manufacturers do not take time to properly do these adjustments. A manufacturer only does these adjustments for the average player, but not for the individual player. So it's important to make those changes to cater to your style.

How do you adjust the amount of the neck bow?

Well, it's *supposed* to be rather simple.

Every adjustable truss rod shares the same principles of operation. Every truss rod has a threaded nut tightened on a threaded metal rod. The tension in the rod changes the curvature of the neck in which the the rod is embedded. To adjust the rod, you need to tighten or loosen the nut on the rod. When you tighten the nut, the tension increases the tension in the rod as well as the amount in which the rod counteracts the pull of the strings. This should reduce the bow in the neck.

As far as adjusting the saddle height, you can do this either before or after adjusting the string height at the nut. You should start by measuring the distance from the top of the twelfth fret to the bottom of the sixth string. Ideally, you should do this when the guitar's strings are at full strength. You should measure by laying a 6-inch ruler, on edge, adjacent to and parallel to the string.

The ruler is supported at one end of the twelfth fret and along its length by adjacent frets: eleven, ten, nine, etc. You can also use other methods to measure from the top of the twelfth to the bottom of the string.

Fixing Your Guitar (Adjusting The Bridge, Etc.)

Another thing that you might have to fix or adjust is the string height. You can start by using basic elementary geometry. You will find that the change in the string height at the twelfth fret needs to be about twice that of change at the saddle.

For instance, if a string height at the twelfth fret is 4/32" and the desired measurement is 3/32", the change in height will have to be lowered by 1/32" at the twelfth fret so it's about 2/32".

After taking measurements, you should calculate the amount that each string needs to be lowered at the saddle. You should make adjustments the saddle must project at least 1/16" from the top of the bridge. This should help you ensure that the strings exert a sufficient downward force on the saddle to stop the strings from vibrating side-to-side on the top surface of the saddle. If you cannot maintain this 1/16" projection, it will be necessary to reset or shave the bridge. This should be done by a professional repairer or a skilled amateur.

The last adjustment that you should make is to the string height at the nut.

The required tools are a short straight edge (ruler), a standard set of feeler gauges, a set of calibrated nut files, an X-acto saw and a tear-drop needle file.

You should start by measuring the height of the first fret. You measure the first fret by placing a straightedge ruler on the top of the first two frets so it straddles on the first and second frets. The slide feeler gauges should be placed between the fingerboard and the straight edge until the gauges fill in the space between the fingerboard and the straight edge.

When it doesn't fit the required measurement for a certain string height at the nut, you should properly adjust it until it does.

Conclusion

A guitar is an instrument and so like every other instrument it should be treated with care and you should develop a regiment for taking care of the instrument.

The strings should be changed regularly, and then toned (tuned) properly to allow everything to work effectively.

Adjustments will need to be made to give way for the efficient use of the guitar.

Sometimes all that a guitar needs is a little TLC to get them back in tune and ready to jam.

With all of the information you've just learned, you should have no problem taking great care of your guitar and it's strings.

Furthermore, you should be able to make any necessary adjustments to your instrument to better cater it to your needs and your playing style.

In closing, take care of your strings and your guitar as a whole and play on!