

Congratulations
ON YOUR PURCHASE

You have taken the first step in creating a guitar that is uniquely yours. This instruction manual provides general instructions that are widely applicable to most models we sell. Wiring Diagrams and tips for specific models, including some video walk-throughs can be found on our support page at thefretwire.com/support.

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BEFORE STARTING

The kit you bought is unlike other products. Because it is a kit of parts rather than a finished product, some effort is needed to turn it into the instrument you are hoping for. Glue spots or unfinished edges are common, and may require sanding. Occasionally a small dent or crack will need to be filled. This is normal, the extra effort will make your guitar even better.

If you run into big bumps along the way, please contact us. We'd love to do what we can to help you have a successful build.

Tips Getting Started

1. Inspect and Test fit before starting - Discover a cracked headstock when you take the kit out of the box? We can help with that. Discovering it after you've applied a finish and glued it into your guitar? That makes things trickier. Inspect parts thoroughly for the best warranty experience.
2. Veneers do not need sanding - They are already prepped for finish. If you do sand, it should only be by hand with a very fine grit.
3. Power Tools Not Needed - Yes the drill can screw things in faster, but it can also screw things in sideways, strip heads off, and cause other messes. As there are only a handful of parts, manual tools can save your build.
4. Take your time - A high quality build takes time and patience. It will be worth it.

INSPECTING & TEST FITTING PARTS



Before you start with your build, test fit all the parts. This will avoid unpleasant surprises from coming up down the road.

Neck Joint

The neck should fit firmly in the neck pocket. This is especially important on set neck (glued) kits, to ensure the structural integrity of the guitar. If the neck pocket is too tight, a small amount of sanding in the neck pocket is usually sufficient to put it in place. If the neck fit is slightly loose, a small shim of any material will help close the gap.

Bolt on necks should have a snug fit for cosmetic reasons only. A small gap (less than 1/16" or so) is not uncommon. That will not affect the structural integrity, playability, or tone of your guitar.

Many kits have a fretboard that overhangs the body slightly. There could be a small gap under the fretboard on the side or the front edge of the fretboard. This gap is by design to give the fretboard the right height for the string action. The gap is cosmetic and can be ignored or filled as you see fit.

Seating the Neck

The neck pocket of most guitars is slightly tapered, getting wider toward the upper frets of the neck. For this reason, the neck needs to be placed in the neck pocket from the right direction in order to fit.

Necks are tapered, so they must be inserted into the neck pocket from the correct angle in order to fit.



Checking the String Length

While this is almost never an issue, it's a good idea to make sure the neck will be positioned correctly in relation to the bridge in order to have the correct intonation.

**INSPECTING & TEST
FITTING PARTS (cont.)**

Contrary to the commonly shared idea, scale length is not the distance from the strings to the bridge. Scale length is the distance from the Nut to the crown of the 12th fret multiplied by two. The distance from the nut to the bridge is the string length. String length is normally the scale length + 1/16 to 1/8 Inch, depending on where you measure. The reason for this is that the string length needs to be long enough to compensate for the string thickness when you press a string to a fret. Bass string length is longer than treble string length.

A good example of this is on a standard LP guitar. You may have noticed the bridge is not parallel to the pickups or the tailpiece. It is placed at a slight angle. This provides the compensation for the various string weights.

On your guitar kit, measure from the nut to the 12th fret, then double that number and add 1/16". This should roughly be the measurement from the nut to the center of the bridge. Most bridges are adjustable to help fine-tune the intonation as part of the final setup.

Neck Angle

Many guitars (especially those with set necks) have necks that angle back a ways. This is normal, and not a defect. To ensure the angle is correct before securing the neck, put the neck and the bridge hardware in position. Take a long straight edge or a string and run it from the nut to the bridge. If the angle is correct, the straight edge should follow the fretboard at a nice, even plane. If the straight edge intersects with the fretboard or the gap gets larger as you move down the fretboard, ensure the neck is straight by adjusting the truss rod. Truss rod adjustment will be explained in the next section.

Inspect Other Parts

Parts should be in good condition. Other than expected cleanup issues such as sanding or filling, they should be ready to use. If you find a broken or unrepairable part, please let us know so we can replace it for you.

Inventory

The bags of various screws and other parts can be intimidating at first glance, but most parts become self evident as the build proceeds. There won't often be more than one place where any given part can go. Process of elimination will quickly clear up any anxiety. Most model-specific instructions include a labeled part guide to help you identify parts in your kit.

**SHAPING THE
HEADSTOCK**

Many guitar kits come with an oversized, unshaped headstock. These headstocks, affectionately called "paddles", are intended to be shaped by you- the builder.

The major guitar manufacturers we know and love normally carry trademark protections for elements of their iconic designs. This includes headstock shapes. For this reason we cannot sell headstocks shaped like your favorite brand, nor do we supply templates to make that happen. However, a quick internet search will normally turn up the template you are looking for.

Is it legal?

Is it legal to use a template to shape your guitar the same as a major brand?

Yes. It is your wood, you can shape it however you like.

Is it legal to shape it like a Fender Stratocaster, put a Fender logo on it, and sell it on eBay as a genuine Fender?

No. That is fraud. Don't do that.

Many customers elect to draw their own shape. This is a great way to go. Afterall, anyone can go buy a name brand guitar, you might as well make yours unique.

After selecting the shape, transfer the design to the headstock. Use a heavy cardstock to cut the template if needed, and trace around the outside edge.

Before cutting, test fit the tuners in place to ensure your design will not interfere with the way the back of the tuners mount to the headstock.

Cut your design using a coping saw, band saw, or jigsaw. Be sure to keep the saw square with the headstock as you cut (unless you intentionally don't want square edges). For fine details, small files can help you obtain the shape you want quickly. Finish by sanding any rough edges with a medium grit sandpaper.

LEVELING THE NECK & FRETS



Nothing determines the playability of your guitar more than having a straight neck with level frets. The effort needed in the setup process will take some time to get right.

Some of this work can be done prior to installing the neck, but many tests and procedures will need to be repeated after installing the neck and adding string tension.

All of the guitar kits we sell feature dual-action truss rods. This will help control the straightness of the neck, and counteract the effect of the string tension. Necks are straightened from the factory, but many factors such as time, humidity, and materials can affect the neck before you start your build. Begin by looking down the length of the fretboard. Ideally the neck is flat. If not, it may have a bit of a concave or a convex bend. Either of these situations can be addressed with an adjustment of the truss rod.

Truss Rod Adjustments

- An Allen Wrench for adjusting the truss rod is included in your kit. It is hidden away, normally in the same bag that includes the output cable.
- Truss Rod adjustments should happen slowly. Normally $\frac{1}{4}$ turn is enough to get the neck in line. If more adjustment is needed, spread the process over a few days to allow the wood time to adjust.

Concave Bend

If the neck is bending forward, adjust the truss rod by inserting the included Allen Wrench into the truss rod nut which is normally located at the base of the guitar headstock. Turn the nut clockwise to add tension. This will slowly pull the headstock back.

Convex Bend

If the neck is bending backward, adjust the truss rod by inserting the included Allen Wrench into the truss rod nut which is normally located at the base of the guitar headstock. Turn the nut counter-clockwise to add tension. This will slowly pull the headstock forward.

All of the frets on the kits we sell are leveled, crowned, and polished at the factory. This is intended to reduce the amount of setup required. However, the act of building the guitar, adjusting the neck, and adding string tension, some frets may need to be addressed.

Inspect for high frets by using a fret rocker, or other piece of robust flat material. Place the rocker on each fret one at a time, and try to rock from one side to the other onto the adjoining frets. If the rocker doesn't rock, that fret

**LEVELING THE
NECK & FRETS (cont.)**

is level with its neighbors and you can move to the next fret. Continue this process for the length of the fretboard on both the bass and treble sides of the fretboard.

Another method is to color the tops of each fret with a marker, such as a Sharpie. Then, take a long sanding block or a level, wrap it in sandpaper, and sand the length of the fretboard a few times. Any high frets will lose their marker quickly.

If a high fret is encountered, first check to see if it is seated correctly. If it is not, a swift blow with a rubber mallet may put it into place.

If it is already seated correctly, use a small file to slowly work down the height of the fret. Frets are a fairly soft metal, so approach the process with care and check the level frequently.

Once the fret is level with the others on the fretboard, it will have a flatter top. Flat frets can be crowned using a crown file, or a small detail file.

Tip: Mask the fretboard on each side of the fret you are working on to ensure that you don't accidentally damage the fretboard.

FINISH

Oh boy! Here is where the fun starts. We could write a whole book about applying a finish to an instrument. In fact, people have. Rather than trying to be the authority on guitar finishes, here are some tips and additional resources you might find useful. Our official stance is that these are not "paint by numbers" projects, and we love seeing adventurous, creative choices made with finishes.

SEALERS

Our kits are sold as raw wood with no sanding sealer applied beforehand.

GRAIN FILLERS

These can be used at your discretion. Many of our woods, such as Basswood and Alder, have a fairly tight grain and filler should not be needed. Others such as Mahogany have a more open grain and a filler could be used.

MATERIALS

While "instrument grade" finishes are not required, many people choose them for the authentic colors and behaviors similar to vintage or contemporary instruments. If you'd rather use dyes, materials off the shelf of your local hardware store, or nontraditional options such as gun stock oil, that will work too.

MASKING

Mask the binding prior to applying your finish. After you apply your finish, remove the tape. You might notice that it has bled under the tape. Before you start cursing, know this is normal. The excess finish can be removed with a thinning agent such as alcohol, or scraped off using a razor blade and a steady hand.

TEMPERATURES

Follow the manufacturer's instructions for recommended ambient temperature. For spray cans, warming the spray can in a tub of hot water before use will result in a smoother finish that is less likely to splatter.

PATIENCE

Take your time when applying finishes, especially clear coats. Follow the manufacturer's instructions for wait time between coats. The difference between a \$100 guitar finish and a \$5,000 guitar finish normally lies in the number of coats and the prep work between coats, such as wet sanding.

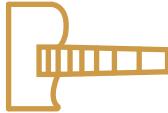
NECK INSTALLATION

Before or after finish? That is up to you. For a more uniform look, installing the neck prior to applying the finish will be the way to go. If the neck will have a contrasting color, finishing with the parts separate will make things easier. Either option is viable.

ADDITIONAL RESOURCES

If you want a specific look but you're not sure how to apply it, there are many experts on the internet making every kind of finish imaginable. YouTube will undoubtedly be full of tips, opinions, and instruction to suit the kind of finish you are looking for.

SECURING THE NECK



Whether you decide to secure the neck before or after you apply your finish, the process will be the same.

Tip: When clamping, be sure to protect the frets from damage from the clamp by using a padded clamp, or insert a rag between the clamp and the fretboard.

Set Neck

For guitars with set necks (glued in place), first, ensure the fit is correct as outlined in Section III above. Apply wood glue to the 3 mating surfaces of the neck and insert into position. Ensure the neck is seated at the back of the neck pocket, just as it was during your test fit. Use gentle pressure with a clamp and allow it to dry overnight.

Any woodglue will work fine. We sell Titebond Original, but most products at your local hardware store designed for gluing wood will work just as well.

Bolt On Necks

This neck joint version is less anxiety-inducing for novice builders. Ensure the fit is good, as outlined in Section III of this guide. Secure the neck to the guitar using a clamp. This will ensure a tight fit and help the screws to travel straight. Use the included neck plate or inserts, and secure the neck screws into position.

WIRING

Wiring diagrams for individual models can be found on the support page at thefretwire.com/support.

Similar to applying a finish, wiring can be adapted to your personal taste. We supply standard wiring diagrams to get you started, but more options exist. Here are a couple tips as you start the process:

SOLDERING BASICS

If you are new to soldering, it can be intimidating. Don't stress. It isn't too complicated. There are several Youtube tutorials you might find helpful as you start.

GROUNDING

One common aspect of building from a guitar kit is the idea of grounding different components. You will see the grounds noted on the wiring diagram with this symbol:

The principle of grounding is simple: All the components (pickups, pots, switch, jack) have a ground. All these grounds need to be connected to each other in one way or another. For instance, if the pickups are connected directly to the volume pot, the bare wire of the pickup (the ground wire) will be connected to the back of the pot. A wire will also be run from the back of the pot to the output jack. This ensures the ground has continuity from the pickup all the way to the jack.

COLORS

The colors noted on the diagrams are not set in stone, they are a representation only. Actual colors will vary over time.

BRIDGE GROUND

A commonly overlooked ground is the bridge ground wire. This goes from a grounding point (commonly the back of a pot) and makes contact with the bridge somewhere. This may come out under the bridge, like in a TL or ST guitar, or perhaps make contact with one of the bridge posts on a LP or Hollow Body style. This is an important part of making the electronics nice and quiet.

WIRING VIDEOS

In addition to the wiring diagrams, there are videos for our more popular models on thefretwire.com/support. If you are new to wiring guitars and your model does not have a video, it is recommended that you watch some of the other videos. While the specific connections might be different on your kit, the basic principles of how things are connected and grounded will add clarity as you begin.

POT TYPES

Each pot is marked with either A500k or B500k. "A" pots are generally used for Volume control, as they have a logarithmic sweep that sounds more natural for volume. "B" pots are generally used for tone, as their sweep is linear. The truth is, you can use either pot in either position, the amount of adjustment will just sound slightly different as you operate the knob.

WIRING (cont.)



PICKUP POSITIONS

Some guitars feature two pickups, where one is designed to go in the neck position, and the other near the bridge. Sometimes these pickups are not labeled, and unfortunately the wiring color is not consistent. If these pickups are mounted in rings (as found in a LP and others), the pickup in the taller ring is for the bridge, and the shorter ring goes in the neck position.

TESTING

You can test your components before stringing the guitar. Plug the wiring harness in, and tap on the pole pieces of the pickup using a screwdriver or other metal object. You should hear an audible thump. If you don't, make sure the volume pots are turned up and try again. If you still get nothing, check your connections.

Hollow Body Wiring

Hollow body and Semi Hollow body guitars do not have a control access plate, which presents an additional challenge. Rest assured, people have been wiring guitars like this for about 75 years, so there is a solution!

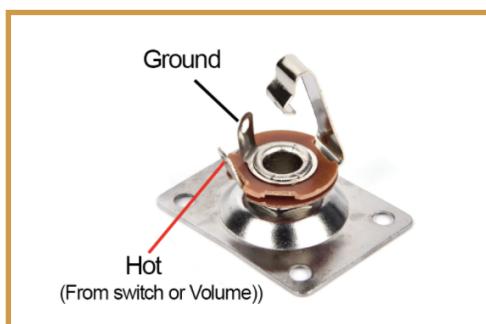
All of the soldering will be done outside of the guitar. Draw a template of the guitar to ensure you are allowing yourself long enough wires between components. Some components, such as the pickups, may need to be wired after passing the wires through an access cavity. Examine your guitar to see if those needs exist.

Once the wiring harness is complete, run a small string or dental floss through the mounting hole for the component (i.e, the switch) and out the F-Hole. Tie the switch (or pot, or jack) to the end of the string and pull. This will put the component into position, where you can secure it with the mounting nut. For a video example of this process, visit thefretwire.com/support

There are primarily two types of output jacks used on our kits. Mono and Stereo.

MONO

Mono is the most common. Connect the ground and hot wires to the jack terminals as shown:



STEREO

Stereo Jacks are connected as shown:



FINAL ASSEMBLY



With the neck in place and the wiring complete, you are now ready for final assembly and setup.

1. Insert the tuners, using hand tools and firm pressure.
2. Install the string retainers, if equipped.
3. Attach the strap knobs
4. Secure the bridge and tailpiece, if equipped.
5. Install the knobs.
6. Install the strings. The strings included in your kit are a generic set intended to help with the setup. After installing the strings, verify the straightness of the neck and the playability of the guitar. Make adjustments as needed.

Guitar Setup

Setup of the guitar ensures good intonation and playability throughout the length of the neck.

1. Ensure the neck is straight. Skipping this step will make subsequent steps impossible to complete.
2. Set the string height by adjusting the bridge. Measure the distance between the fretboard and the strings at the 12th fret. Generally this should be around 5/64" for bass strings, and 4/64" for treble.
3. Set the intonation of the guitar. An electronic tuner is very helpful for this step. Tune your guitar to its corresponding note. Now play the string at the 12th fret and check the tune. If it is in tune at the 12th fret (one octave above the open note), no adjustment is needed.

If the note at the 12th fret is sharp (too high), adjust the bridge to bring the corresponding saddle to the back, toward the bottom of the guitar. This elongates the string allowing it to sound lower. Retune using the open string, then check at 12th fret again.

If the note at the 12th fret is flat (too low), adjust the saddle forward, shortening the string between the 12th fret and the saddle. Retune using the open string, then check at the 12th fret again.

Repeat this process until your guitar is in tune with the open strings and also at the 12th fret.

Tip: If you change the gauge of the strings you use or adjust your truss rod or string height, you will need to repeat this process. The thickness of the string and distance from the fretboard affect the intonation of each string.



General Guitar Kit Instruction Manual

Show it Off

Congratulations! Your build is now complete! We'd love to see what you have created, and share it with our community.

SHARE ON INSTAGRAM
[@thefretwirestore](https://www.instagram.com/thefretwirestore)

SHARE ON THE FRET WIRE GALLERY
thefretwire.com/pages/gallery-submission