



Your Everything Guitar Company

Solo ACK-10 DIY Classical Guitar Kit

Assembly Manual
ACK-10

V 2.0

Show Off Your Custom Built Guitar!

When you have finished your guitar, please take some nice looking, high quality pictures and send them to guitarofthemonth@sologuitars.com for potential posting on our social media. In addition, you'll automatically be entered in our Guitar of The Month contest!



<https://www.facebook.com/SoloMusicGear>



<https://www.instagram.com/SoloMusicGear>



<https://www.twitter.com/SoloMusicGear>



<https://www.youtube.com/c/SoloGuitars>

Remember, you can always find us online at [Sologuitars.com](https://www.sologuitars.com) if you have any questions or to look at our vast selection of DIY guitar kits, parts, luthier tools & accessories.

Alternatively you can call us at 1-800-632-SOLO (7656).

Welcome...

Hi, and congratulations on purchasing this Solo DIY Classical Guitar Kit! As you know, a great deal of the 'difficult' work on this guitar has already been completed to a very high quality standard. All the cutting, shaping, drilling and fretwork (including fret dressing and fret levelling) has been completed by our technicians, to ensure you will end up with a functional instrument. It's up to you to do your research, read this manual and check over all the parts to make sure that you will have a successful build!

Before You Start...

We do our very best to accurately and safely package the SOLO Guitar Kits, but just like anyone else, we aren't always perfect. Therefore, before you start any work on this kit, please unpack the body, neck and all the hardware and screws to double check you have received all the parts. You can lay the pieces out on a table and compare them to the parts photo for accuracy. Also, carefully examine the body and neck for any issues like cracks or serious dents which may have to be addressed before you begin finishing and assembling. If you have any questions or concerns please contact us at www.sologuitars.com.

There are several websites that address guitar building and finishing, as well as guitar set-up. Although we don't endorse any specific website, we suggest you take some time and look over some of these websites to familiarize yourself with the guitar building process, and to make yourself aware of handy tricks and details that will aid you in completing this kit successfully. We might also suggest enlisting the help of friends who may have experience in woodwork, wood finishing and/or electronics if not guitar building.

Safety Measures and Disclaimers...

Please be aware and use all safety precautions when working on this kit, for example safety glasses, dust masks, respirators and protective gloves. Always work in a well lit area with proper ventilation for dust and fumes. If you are a novice, please enlist the help of more experienced friends or professionals.

We all know there is a right way and a wrong way to do things, and since we can't be there to help you decide which way is which.....we have to add in this disclaimer!

Remember, all the major manufacturing has been professionally completed on this instrument. All the cutting, rounding, routing and binding has been completed by our factory. Only some basic skills and patience are required in order to complete the work and end up with a beautiful and playable instrument!

Let's get started!

Tools and Materials:

Before you start working on your DIY guitar project, please check all the parts received in this kit.

You may or may not require the following tools and materials to complete this instrument kit :

1. Sandpaper with varying grits (180, 240, 320, 400 grits)
2. Selection of files both flat and rounded
3. Chisels and sharp razor knife
4. Fine toothed handsaw (although extremely unlikely)
5. Selection of screwdrivers both large and small
6. Finishing Supplies
7. Selection of flat open ended wrenches
8. Drill (either hand or powered) and selection of drill bits
9. Small hammer and/or dead-blow hammer
10. Measuring instruments will include two straight edges at least 12" long
11. Masking or painters tape
12. Glues including wood glue, epoxy and cyano-acrylate (super glue)
13. Strap Clamp or Clamping cauls for gluing the neck to the body
14. Wood veneer for shimming (different thicknesses)
15. Certain kits will require some specialized tools not listed here.

Safety: There will always be some woodworking that is required, whether it be sanding drilling cutting or gluing. We expect that you will use common sense in making sure you are working safely; in a ventilated area, and that you use the proper safety equipment including eye and ear protection. Whether you are doing the wood portion or the finishing, always enlist the help of people who are familiar with these skills in order to be safe. It's always better to be safe than to be sorry!

Checklist: Now that you have received your new Solo DIY kit, we suggest that you read through all the instructions at least once, so you are familiar with the process of assembling this instrument, and so that you can recognize the parts described. Once you have read through, take a few minutes and check all the parts you have received. Because you are familiar with the manual, you should be able to ensure you have everything required to complete this kit.

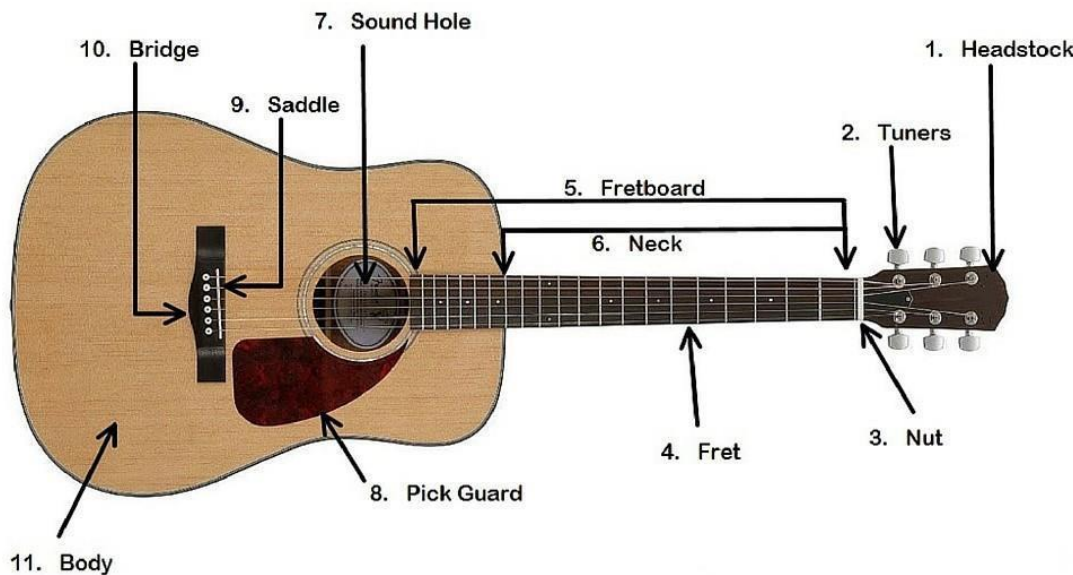
1. Classical Body
2. Classical Neck
3. 2 Strip Tuners with 8 screws
4. 1 Classical Bridge
5. 1 Bridge Saddle
6. 1 Classical Nut
7. 1 Classical Rosette Decal
9. 1 set Classical strings

Before you begin to assemble any of the Solo kits, setting out a schedule of how you want to go about each instrument is vital. Not all our kits follow the same path when it comes to finishing and assembly. First examine all the parts, especially the bodies and necks. Are there imperfections? Are there dings and bumps you may have to sand out or fill? Are the frets all seated properly and are there any sharp ends that extend past the edge of the neck that may need to be filed smooth. Making sure all of the parts are as close to perfect as you can make them, will aid in a successful assembly. If you have decided to apply a finish or paint to the body and neck of this instrument, you may want to go through the whole assembly to make sure everything fits and all the holes are drilled before you embark on the finish (or paint).

Then, when your finish (or paint) has been applied and cured, you can assemble the instrument with the confidence that comes from knowing everything will fit, or you could go through the finishing process after you assemble the kit.

Disclaimer : We make sure the materials we include in our kits are safe to use and do not present any significant health risk. However, we cannot take responsibility for any existing health conditions that may affect the person building these kits, nor any responsibility arising from the assembly or work required in order to complete the kit. The kits can be assembled without any finish or coating being applied, so we leave the entire subject of applying a finish or coating to the bodies and necks up to the individual. There are ample websites and videos on the internet that can assist you in putting a beautiful and lasting finish on this instrument, plus there are often classes available in night school and local businesses that will be an aid to this process. We therefore do not take any responsibility in any issues that may arise from or because of the finish application to this instrument. Likewise, we are not here to instruct in the art of soldering or woodworking, so the responsibility lies with the person assembling this kit to obtain the proper instruction or help on any part of the assembly process, and to complete the assembly process in a safe manor. If we could be there with you to help you along, we would.....but we can't.

Assembling the Solo DIY Classical Guitar Kit

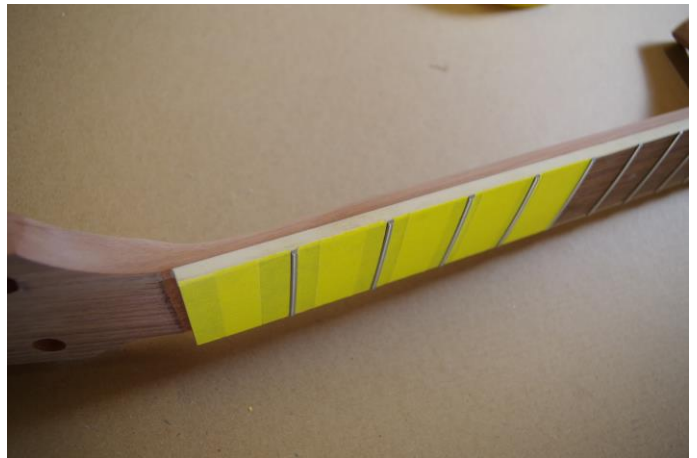


Your DIY kit may vary from this photo. Pick guard sold separately

If you have read through the two introductory pages, you will have already taken account of your parts and made sure everything is correct and fits where it needs to. The neck and body are both flawless, the tuners and grommets fit the holes in the headstock, and you have the rest of the required parts.

Neck Prep:

After examining the neck and the fret board and ensuring that all the material is sound and free of defect, you may have to file some fret ends. When you run your fingers along the edge of the fret board you may feel the ends of the frets sticking out a bit. This is due to the wood shrinking slightly. Take masking tape and cover the entire fret board between the frets, cutting the tape off before it wraps over the edge of the binding. (see photo) now take your flat metal file and file the ends on the frets so they do not stick out. Your file should lay flat against the side of the neck on the binding and you should remove only as much as required to take the sharp bits away. You may need to take a needle file (or a proper fret file if you have one) and remove the sharp edges at the fret ends if you have them. Take great care here not to damage or mark the fretboard or the binding. If you would like your frets to be clean and polished, now would be the time to use either a scotch pad or 0000 steel wool to lightly polish the tops of your frets. Remember to clean as you go and make sure you have no metal shavings collecting on the neck



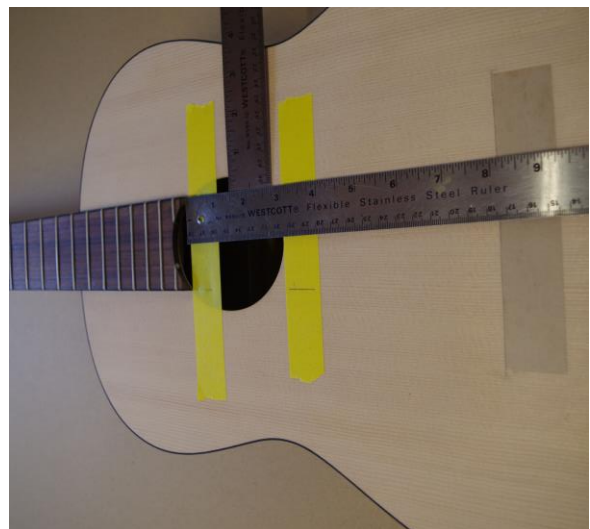
Attaching the neck to the body:

We now need to fit the neck to the body. You will notice a dovetail on the neck and a matching opening on the body, plus a slot on top of the body that will receive the truss rod. Carefully slide the dovetail together and make sure the truss rod slips into the slot. In order for this to be a tight fit at the top and the side of the body, it may take a bit of pressure or a slight impact with a rubber mallet in order to seat the neck into the neck slot. If you are satisfied with the fit, move on. If not, make the appropriate adjustments to the opening ensuring a tight fit. You may need to enlist someone with wood-working skills for this, but generally, there may just be some debris in the truss rod slot or the dovetail that would prevent the two pieces seating together. (see photo next page)



Take sandpaper and a flat sanding block (we recommend 220 or finer) and give all the surfaces on the neck and body a quick sanding to make sure you are happy with how everything feels and looks. Do not sand the fretboard (as it should still be covered in masking tape), but you could slightly sand the edges of all the binding if you find them too sharp. Slide the dovetail joint of the neck back together and make sure you are happy with all the gluing surfaces.

Important Note: It is extremely important to make sure the neck lines up with the bridge. During the manufacturing of this kit, we have placed masking tape on the top of the body exactly where the bridge should be glued. While the neck and body are temporarily assembled, place the wooden bridge that was supplied with this kit on top of the masking tape, and line up the edges. Now, take two straight edges and lay them along side of the fret board so that they extend over the top of the bridge. If everything lines up properly, the two straight edges will be the same distance from the outside bridge pin holes thus assuring the strings will align perfectly with the neck. (see photo)



Assembly:

Aside from installing the tuners and gluing in the nut, the only true assemble in this Solo Dreadnought Acoustic Guitar kit is attaching the neck to the body. In order for this to be a successful process, you need to have a couple things ready before you apply the glue.

Clamping cauls : 1. From scrap wood no more than 18mm thick, cut a piece that is just narrower than the fret board extension that will be glued (this is the fret board that extends past the neck), and long enough to go from the end of the fret board past the edge of the body. Roughly 5 cm x 15 cm. You can cover the side that will sit on the frets with foam, or you could elect to cut slots where the frets sit so you will not put undue pressure on the frets. 2. If you feel under the guitar top where the fret extension will be glued, you will notice a brace at the edge of the sound hole and then an open area. Cut another piece of scrap to fit into this area and make sure it is thicker than the brace so that the brace does not interfere with your clamp. 3. Cut another piece of scrap roughly 7 cm square and cover one side in foam or cork. This will be placed on the back of the body to protect it from the third clamp.

Gluing:

The preferred glue for this process would be hide glue, but due to the difficulty in using this type of adhesive, we will stick with a decent carpenters wood glue like Titebond. The important thing to keep in mind is if the neck ever has to be removed we use steam to loosen the glue, so a waterproof glue or an epoxy will pretty much make the guitar unfixable. You are going to put glue on both sides of the dovetail but not the 'cheeks' that sit against the body. Also, place glue on the underside of the fret board ensuring proper coverage, but not so much to squeeze out. Also, you do not want to glue the truss rod. Re-assemble the neck and body joint and place cauls/clamps to ensure proper pressure on both the fret board and the dovetail joint. (see photo)



Take your two straight edges and again place them on either side of the neck, they should be in the exact same position as when you checked in the 'Prep' section and should line up with the lines you drew at that time.... if not, loosen the clamps and adjust the neck slightly so the neck aligns with your pencil lines. Leave the clamps on for a minimum of 24 hours before you remove them. If there is any glue squeeze out, you may want to remove it with a slightly damp cloth (remember, if you wet the wood again, it will all have to be sanded again before finishing) (see photo)

Gluing the Bridge:

You have waited a minimum of 24 hours and you are now ready to glue the bridge in place. At the factory, we have attached a piece of masking tape where the bridge should be glued. If you lay the bridge over this tape, you will find that the bridge is much bigger than the tape. The important part of the tape is the edge closest to the neck. Your bridge has to be glued exactly on this line to ensure proper scale length and intonation. In order to get the correct placement of the bridge along this leading line, take your two straight edges again and rest them against the sides of the fret board. you can now carefully move the bridge along the leading line until it is centered between the two straight edges. The bridge is longer than the space between the straight edges, so use the outer bridge pin holes as the markers for centre. When you are happy with the placement, hold the bridge in place and either draw a pencil line along both ends of the bridge, or place a piece of painters tape along each edge so you know exactly where to glue the bridge. Gently remove the factory tape and double check that the bridge fits nicely into this space. You will need another gluing caul for this process.....feel under the top where the bridge will be glued. There will be a flat area that you can place either an existing caul into, or you could make a new one. Double check that it fits and then take your clamps (special deep throat clamps) and clamp the bridge down **without** glue. If you are satisfied that you can get the glue on, and the caul in place plus the 2 or 3 clamps you will need to get proper even pressure over the bridge, you can remove everything and start applying glue to the bottom of the bridge. You may want to put a small piece of two-sided tape on the caul that goes inside in order to hold it in place while you apply the clamps. You may need to take small scraps of wood to sit between the clamps and the bridge to prevent marking. The bridge should be fine to glue on from the factory, but you may need to slide the bottom of the bridge over a rough sandpaper a couple times to roughen the bottom and ensure it's flatness. Apply just enough glue (Titebond again) to cover the bottom of the bridge to within a cm of the edge. Remember, when you apply the bridge and the clamps this time, the bridge will want to slide around and you don't want glue all over your top. Place the bridge into it's location and gently with a bit of pressure move it in small circles to spread and thin the glue. The top is very porous, so it won't take long for the glue to grab and get sticky so be prepared with your clamps. Once the bridge is clamped in place, double check you are within your pencil line and you should once again leave the bridge clamped for a minimum of 24 hours. Also, double check that you have no glue squeeze out, and if you do, clean that up before it cures. You can either scrape the glue or wash it out, but again, if you use water, you will have to re-sand the whole top. (see photo on next page)



[Ibex & Klemmsia clamps available here](#)

Nut & Saddle:

The supplied saddle should fit into the slot on the bridge nicely...not loose but not so tight you can't get it in or out. If this is true, leave the saddle until you are ready to install the strings (remember, the higher part of the saddle should be under the heavier strings). If you feel the saddle is too tight or too long, you will adjust these two dimensions by using a sheet of sand paper flat on a table. Lay the saddle on the sand paper and with 3 fingers spread over the length, slide it back and forth a few times, flip it over end for end and do the same. Continue until the saddle fits perfectly. For the length, just hold the saddle vertically and move it back and forth on the sand paper until it fits into the slot. You may have to re-round the ends to fit into the slot.

The nut has been supplied slotted and sized, but sometimes the nut is slightly long and extends a little on each side of the neck. If you have already applied a finish to your guitar, you will want to sand each end equally until the nut does not protrude beyond the edge of the neck. If you have not yet applied a finish to the guitar, you can carefully file and sand the nut after it has been glued in place. Place two drops of super glue to the bottom of the nut and two or three along the flat surface that will sit against the end of the finger board, and then place the nut exactly where it belongs. With the super glue you have one chance and not a lot of time, so if you feel like you want to take your time here, use wood glue in the same manner. You will have to let the guitar sit for at least 3 hours however, and 24 hours before you string it up.



Installing the Tuners:

Now that your Solo Classical Guitar is assembled, we need to move on to the final steps. Make sure the tuners fit into the provided holes along the sides of the bridge. The tuning heads face the back of the guitar, and the small scroll at one end of the strip tuners is installed toward the end of the headstock (it should be obvious). Install the tuners one side at a time. With a 1/16" bit, drill a small pilot hole through the 4 holes in the tuner strip and install these screws (make sure you use a short drill bit or mark the drill bit so you do not drill through the headstock). Once these screws are installed, your tuners are ready to go. (see photo)



Finishing....

You can choose to use whatever finish you like on your acoustic bass, but typically we like to use something harder to protect the soft woods of an acoustic body. There are several websites on the internet that describe in detail the finishing process from start to finish. Although we do not endorse any particular site, we recommend doing your research and/or asking a friend who is skilled in finishing to assist. You should finish the guitar after the neck has been installed and before you install the bridge or tuners so you get an even finish over the entire instrument, but feel free to follow any instruction on finishing an acoustic guitar.

Once the guitar has been assembled and finished, and before you go ahead and string the instrument, you may want to apply the decal rosette that is included in the kit. We suggest you apply the decal after the finish, so that the decal does not impede whatever finish you apply to the top. If the top is going to remain natural in colour (clear finish) you can apply finish over the decal as well carefully. With water based products you don't want to loosen or lift the decal, and with chemical based finishes, you don't want a negative reaction to occur and wrinkle or ruin the decal. When you are ready, take the decal and trim it as close as possible to the outer and inner rings. Try to keep the cut lines smooth and even. Test the fit on the guitar top and re-trim as required. (next page)

Make sure the top is clear of any dust or debris and then place the decal in a bowl of slightly warm water. It will curl and then start to uncurl in less than a minute. Carefully take the decal (paper and all) and bring it close to the sound hole. Slide the decal off and gently move it into place. Once you are happy, carefully pad the decal with an absorbent cloth to remove excess water and if necessary, gently push any air bubbles under the decal to the edge. Let it dry overnight and then string the instrument or continue in your finishing process.



Final Set Up and Stringing:

There are a few more things we have to do as we prepare to string the guitar. There are 6 holes partially drilled into the bridge for the strings to be anchored in. We need to complete these holes before we go further. It is preferable to use a tapered drill bit to open up these holes, but if you do not have one, start with a 1/8" drill bit, and complete the holes through the top. You can elect to vacuum the bits inside the body from drilling, or place your hand inside with a scrap piece of wood and drill into that. Try inserting the bridge pins into the holes. They should go all the way in and rest on the bottom side of the round ball. If they don't fit in, you can try increasing the size of the hole until you are satisfied. The bridge pins should not fall in, they should require some pressure to seat them. Next we need to take the saddle and insert it into the slot on the bridge. This is where we may require some shims to raise the saddle up, or sand paper to lower the saddle. You can use veneer cut into thin strips, thin plastic or even metal for shims. Make sure they are a consistent thickness and are long enough to fill the slot.

When you are ready, install the 2 'E' strings but do not bring to pitch. As long as they are tensioned a bit we can tell how high the saddle is in relation to the neck. The saddle must be low enough so that the guitar plays effortlessly, but high enough so the strings do not buzz. If you are too high, take a sheet of sandpaper and sand the bottom of the saddle until it is the correct height. Once you are satisfied with the height, go ahead and install the other four strings and bring them to pitch. Take a look at the saddle again. Is it high enough? Take a look at the neck, is there relief or is the neck either flat or back-bowed? Take a capo and install it on the first fret, now fret each string at the 16th fret and measure the space between the string and the 8th fret.

You should have about 1/16" of space. If you have less, you will need to loosen the truss rod, and if you have more space, you will have to tighten the truss rod. This will take several adjustments over the first month or two, until the guitar neck settles down in its new role.

Double check your tuning and start playing!!