Solo SRBK-15 Style DIY Electric Bass Guitar Kit

Assembly Manual
SRBK-15

V 1.02

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Materials List

- Bushings for tuners (5 pcs)
- Neck
- Tuning Machines (5 pcs, 5 mounting screws & 5 washers)
- Strings (5 pcs)
- Strap Buttons (2 pcs, 2 mounting screws included)
- Back cavity cover (4 mounting screws included)
- Neck Pickup (H) (with Screws and springs)
- Bridge Pickup (H) (with Screws and springs)
- Neck screws and washers (4 each)
- Bridge (6 mounting screws included)
- Truss Rod cover (3 screws included)
- Body
- 2 Volume pots, 2 Tone pot, 4 knobs
- Output Jack (1 hex nut included)
- Wires, including ground wire
- Cord
- Hex wrench for truss-rod adjustment
- Allen Key for saddle adjustment

Show Off Your Custom Built Guitar!

When you have your guitar finished, please take a few pictures and send them to us for potential posting into the picture gallery on our website.

Post your photos to our Facebook page
http://Facebook.com/SoloMusicGear

Post your photos to The Solo Café
http://TheSoloCafe.com

Remember, you can always find us online at http://SoloMusicGear.com to upgrade your parts, try a new kit, or ask us a question.

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Thank you for purchasing a Solo DIY guitar kit. This unfinished guitar kit has everything for building an electric bass guitar – you will need only some basic tools and finishing supplies. All challenging wood cutting, drilling and shaping is already professionally done, as well as fret leveling and dressing.

1. CHECKLIST

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

2. TOOLS AND MATERIALS NEEDED

You will need the following tools and materials:

1. Sand Paper (180, 240 and 320 grit)
2. Sanding Block
3. Soldering Iron & Solder
4. Masking Tape
5. Finishing Supplies
6. Screwdrivers
7. Power Drill

3. SAFETY MEASURES

Some woodworking skills are required to complete this project. Always be aware of the necessary safety precautions and follow them – be sure to use safety glasses and a dust mask when you are working with any tools. If you are a novice, you should look for help and guidance of a more experienced friend. And never forget that it's always better safe than sorry.

4. FINISHING THE BODY AND NECK

Before you start finishing the neck, please inspect the frets and the fingerboard. Even though all wood is kiln-dried it may still shrink a little so you may get sharp fret edges.
In this case you need to use a fine needle file (Emory boards for finger nails can be used instead) to remove all sharp edges: first make all fret edges flat with the fretboard edges on both sides, than use masking tape on the top of the fretboard to protect it, and work on each fret's edge to smooth it by slightly rounding it. Before removing the masking tape, consider polishing the frets with fine steel wool.

STEP 1 – The body and neck have been coated with a poly resin sealant. They need to be sanded before

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finishing. DO NOT SAND THE FINGERBOARD.
For sanding both neck and body, use a flat sanding block for all flat surfaces and by hand for edges and rounded/curved surfaces. Start with 180 grit sandpaper, continue with 240 and finish with 320, always moving along the grain only. Before the final sanding, wipe the wood with a damp cloth and let it dry to raise the wood grain.

STEP 2 – There are many different ways to apply finish to your guitar. Do a little research to decide which type of finish you want to use. One good starting point is to review tutorials at the Project Guitar website: http://www.projectguitar.com/tut/tutorial5.htm

STEP 3 - For any type of spraying finish (lacquer or paint) you will need to mask three areas with masking tape: neck pocket on the body, neck's fingerboard and truss rod nut. Press the tape tightly to the wood, not allowing any gaps at the edges, to completely prevent the finish leaking to these areas.

STEP 4 - You will also need to make hangers for both the body and neck (if you want to apply any spraying finish). Make them from a strong metal wire (wire dress/coat hanger can be used for it).

STEP 5 – Apply the finish by following the manufacturer instructions. Remember that spraying the finish is not an easy process as it requires certain skill and experience – you might want to practice first on some scrap wood. Always remember your safety – work only in a well ventilated area, away from any open fire and wear a respirator mask and safety glasses.

STEP 6 – Final polishing for high gloss finishes can be done manually or using a power drill with a foam polishing pad. The finishing tools and materials are readily available in many automotive/hardware supplies stores.

TIP: Consider an oil rubbed finish (sometimes called "wipe-on oil finish") as a good and safe alternative. Tru-Oil® (known as a "Gun Stock Finish", based on Linseed Oil) or Waterlox® (Processed Tung Oil) is highly recommended. Oil finishing takes longer, but it is very safe and easy to apply and a high quality finish can be achieved, even by a novice.

5. ASSEMBLY

STEP 1 – Install the Machine Heads neck's headstock. First tap in the machine head bushings into the holes on the headstock. For tapping, you can use either a plastic headed hammer, or a regular hammer, by placing a small piece of wood on the top of a bushing to prevent any potential damage. You may also use a medium-sized screwdriver - slide the bushing over the shaft of the screwdriver and then tap the handle of the screwdriver with a hammer (IMPORTANT: firmly support the headstock!) Next insert Machine Heads from the back and align them properly. Complete machine heads installation by tightly fastening Machine Heads with the screws.

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STEP 2 - Attach the neck to the body using 4 screws with a neckplate and a setter. This step can be performed later as you may find it easier to assemble the body without the neck.

STEP 3 – Install the bridge. First insert the ground wire (the insulation must be removed on both ends) into the hole between the predrilled mounting screw holes and the control cavity Make sure that enough length of bare metal wire is left on top of the body to make a secure contact with the bridge. Now align the bridge with mounting screw holes and attach it tightly with 4 screws.

STEP 4 – Install the pickups. Insert the height adjustment screws into the pickup ears and put the height adjustment springs on from the back. Holding the springs in place push the screws into the mounting holes and roughly adjust the pickups height.

STEP 5 - Wire all pickups and ground wire, and install output jack. For wiring instructions use the diagram on the last page of this manual.

STEP 6 – Install the Pickguard - properly align and secure with the mounting screws. Do not over tighten the screws, as it can crack the Pickguard plastic.

STEP 7 – Install the Strap Buttons. If the pilot holes for the screws are missing, you will need to drill them first. Find a proper spot right in the middle of the body's depth, centerpunch and drill a pilot hole using 3/32" (2.4mm) drill bit. Put the screw through the Strap Button then put the washer over the screw to protect the wood of the body. Tightly secure the Strap Button.

STEP 8 – The Fingerboard has been pre-oiled at the factory. However if you wish, before stringing your guitar, you can apply some more oil to the Rosewood fingerboard to protect it from possible shrinking and cracking. Tung oil or Linseed oil work well, or it's OK to use W alnut or Olive oil. One thin layer is enough. W ipe the fingerboard thoroughly with a clean cloth.

STEP 9 – Install the strings by inserting them through the holes on the back of the bridge, over the bridge saddles. Cut the string 2 tuners longer than the tuner you are going to stick it in. On D and G you will just have to estimate. Stick the end all the way down in the hole and bend a 90 degree. Hold on to the string and wind it up.

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6. TUNING AND SETUP

The open strings of a regular bass guitar, from the thickest to thinnest, in standard tuning are:

- B (1st octave) – the thickest (or lowest sounding) string - is the 5th string
- E (1st octave) – is the 4th
- A (1st octave) – is the 3rd
- D (2nd octave) – is the 2nd
- G (2nd octave) – the thinnest (or highest sounding) is the 1st string.

This tuning has one lower pitched string added to the standard 4-string tuning giving you 5 lower notes.

Some people tune a 5-string bass adding a higher string instead:

- E (1st octave) – the thickest (or lowest sounding) string - is the 5th string
- A (1st octave) – is the 4th
- D (2nd octave) – is the 3rd
- G (2nd octave) – is the 2nd.
- C (2nd octave) – the thinnest (or highest sounding) is the 1st string

This tuning has one lower pitched string added to the standard 4-string tuning giving you 5 lower notes.

There are different methods to tune a guitar. Using a digital tuner is the easiest way. However, it is good to learn tuning (and checking the accuracy of tuning) by ear with natural harmonics, unisons, octaves etc.

Guitar playability and intonation depends on its setup, so you may want to spend some time mastering the necessary skills – be persistent in finding the optimal action (string height), neck relief and intonation throughout the entire neck.

Adjusting Strings Height:

String height is adjusted by the bridge saddle screws (use included Allen key). Since the fretboard has a radius, the heights of all strings should also match it. Thicker strings need more room for vibration without "buzzing" (touching frets) and must be set up higher than thinner strings. Low action allows easier fretting and faster playing. Recommended measurements for electric bass guitar with low action:

For the 1st String (the thinnest) – height at the 1st fret: 0.020" – 0.024" (0.5 – 0.6mm);
at the 12th fret: .094" – .1" (2.4 – 2.6mm).
For the4th String (the thickest) – height at the 1st fret: 0.022" – 0.025" (0.55 – 0.64mm);
at the 12th fret: .094" – .0110" (2.6 – 2.8mm).

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The height at the first fret can be adjusted by cutting deeper slots for strings at the nut. However, it needs a very precise job not to spoil the nut. If you are not sure that you can do it properly, stay with a factory pre-cut nut.

A higher string action makes the guitar harder to play, yet some musicians may prefer it.

Adjusting Neck Relief:

The truss rod compensates for string tension and allows adjusting the neck relief. You may need such adjustment due to changes of humidity and temperature (or if you switch strings to a different gauge). Lay a straight edge on the frets of a properly tuned guitar and measure the clearance at the 8th fret (alternatively you can put a capo on the first fret and press down 6th string at 16th fret – then the height of the string at the 8th fret will show you the clearance). Optimal relief for an electric guitar neck must be very small – around .014"- 024" (0.35 - 0.6mm). Turning the truss rod nut (with the included Allen key) clockwise will reduce neck relief and turning it counterclockwise will increase the relief. Be very careful with truss rod adjustments and never turn the nut more than ¼ of a turn at a time.

Adjusting Intonation:

The "speaking length" (or "working length") of each string can be adjusted by turning the saddle position adjustment screw. The best intonation can be achieved when the string fretted at the 12 fret sounds precisely an octave higher than the open string. If the fretted string sounds sharper you need to increase the working length of the string by moving the saddle away from the neck. If it sounds flat, you need to shorten the working length of the string by moving the saddle towards the neck. The alternative way to intonate your guitar is to compare a natural octave harmonic of the open string (you can get it by touching the string exactly above the 12th and picking it) to the pitch of the string fretted at the 12th fret and adjusting the saddle position so that they sound the same. This method is less accurate because the fretted string sounds a bit sharper due to the height of the string, and the higher the action, the sharper it gets.

Adjusting Pickup Height:

Before adjusting the pickup height, make sure that both the volume and tone controls on your bass are set to the full ("10") position. Get your amp set to a medium/low volume and all tone controls to the middle. You will get a better picture of the pickup's tone change during its height adjustment with a clear sound.

There is no universal "optimal" pickup height position in a setup – it depends on playing style and personal preferences of a bass player. Remember: bringing a pickup closer to the strings makes it sound brighter, but bringing it too close will make the magnetic field of the pickup interfere with
the vibration of a string which will, not only result in reduced sustain, but may also cause complex harmonics sound rather unpleasant. Moving a pickup too far from the strings will result in loss of its output signal and

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some higher frequencies. It's not necessary to maintain an even height of the pickup – you may find it more satisfactory sounding by setting it somewhat angled, depending on what you are looking for in the output sound.

There are a few mm of real usable range where you can find the pickup tone that you'll like the best.

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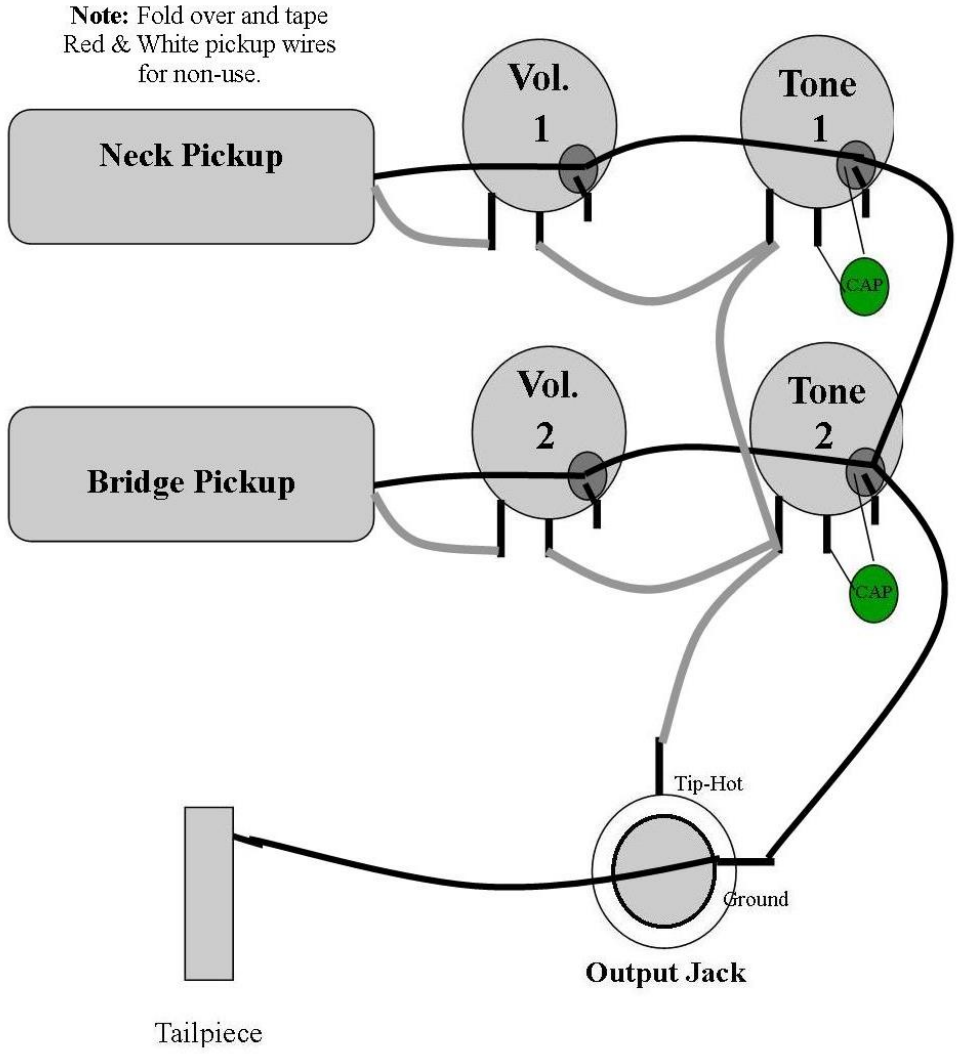
SRBK-15 Wiring Diagram



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