

KIT-TE-10 ELECTRIC GUITAR KIT Assembly Instructions

Please read these instructions carefully before beginning in order to have a complete overview of the project. There are six steps that you will follow to complete your Electric Guitar Kit.

1. Check and Identify Parts
2. Finishing the Body and Neck
3. Shaping the Headstock
4. Assembling the Body
5. Assembling the Neck
6. Setup

CHECK AND IDENTIFY PARTS

Following is the list of parts that are included with your kit. If parts are lost or run through the stump shredder during assembly you may order replacements from your local music shop or directly from us.

	Quantity	Description
A	1	Body
B	1	Neck
C	1	Rhythm Pickup
D	1	Pickguard
E	1	Bridge Assembly
F	1	Ground Wire
G	1	Control Plate
H	1	Output Jack
I	Set of 6	Tuning Machines
J	Set of 2	Strings Holders
K	1	Neck Plate
L	Set of 6	Springs
M	1	Cord
N	2	Strap Buttons

FINISHING THE BODY AND NECK

Although the overall tone and playing characteristics of the instrument will not be affected, a high quality finish is a real source of pride to the builder.

Both the neck and body of your Boston Electric Guitar Kit have been sealed, sanded and are ready for final finishing.

FINISHING THE BODY

First you will need to decide whether you would like a natural finish or a colored finish on the body. For a natural finish go directly to Clear Coat.

COLOR COAT

For the color coat your first stop is a shop that specializes in automotive products. The acrylic lacquer made by the automotive industry is particularly well suited to your needs. In addition to providing a full range of color choices, acrylic lacquer is extremely durable and resistant to cracking.

Choose your color from the many available shades (including metallic options) used for automobile touch up work. A spray can will make your job much easier and produce fine results. Hang the body as shown in Figure 1. Begin each spray stroke in the air on one side of the body and continue until you reach the air on the other side. Overlap each stroke by one half, and every other stroke spray crosswise, then length wise. This technique will provide an even color distribution.

Although lacquer dries quickly, and successive coats may be sprayed in a short period of time, attempts to spray too much in one coat can result in runs or bubbles in the finish. Spraying should not be attempted on excessively humid or rainy days.

One or two coats of color should be enough. It should not be necessary to sand between coats unless there are drips, runs or bug feet (!) to be leveled. All exposed surfaces should be dead level and have a nice satin gloss.

CLEAR COAT

The clear lacquer topcoat is also available at most auto parts store. If you have applied a color coat, it is advisable to select the same brand of clear lacquer to assure compatibility.

The clear coat is applied to the body using the same technique as described for the color coat. Two or three coats of clear should be adequate.

For best results the body finish should be allowed to harden for one week before the final rub out and polish.

Note: To avoid runs and drips, hold can 6-10 inches from surface. For best results follow directions on spray can.

CAUTION: Remember that spray paint is extremely flammable. Do not spray near open flames, heat or sparks. The area where you spray must be well ventilated while spraying and until all vapor is gone. Do not smoke! Do not breathe the vapor and keep doors and windows open during application and drying.

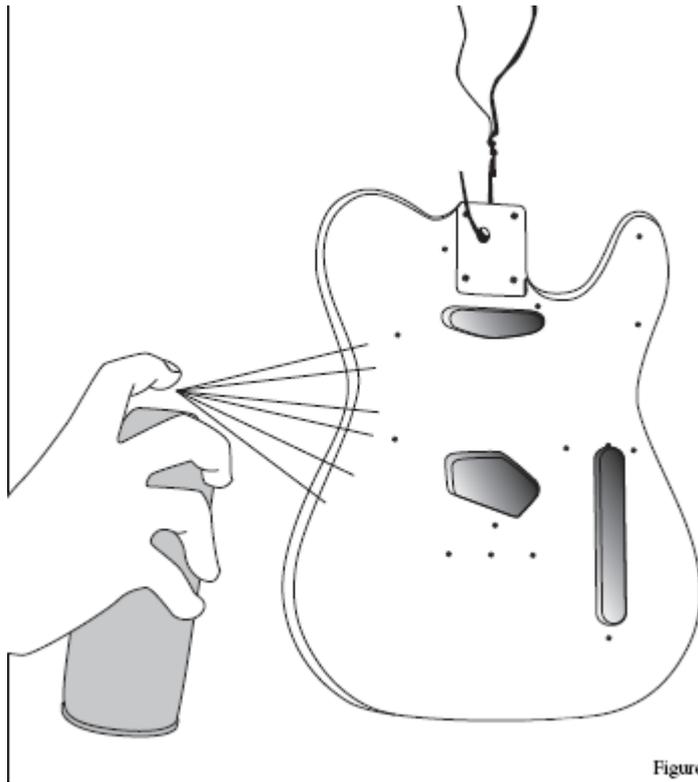


Figure 1

SHAPING THE HEADSTOCK

The peghead of the TE-10 has been left slightly oversize and here is a chance to express your individuality and make a guitar that is truly your own.

First, decide on the shape of the headstock that you would like to use and draw the outline on the top surface of the peghead. Note Some headstock shapes are protected by trademark restrictions and we do not recommend that you use them.

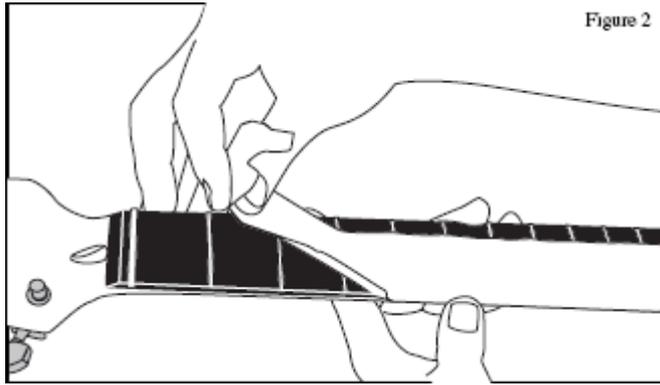
Using a bandsaw or simple coping saw, cut out the shape of your headstock

A half round file should be used to level the contoured edge of the peghead. Finally, the edge should be sanded smooth with fine #400 sandpaper.

NECK (PART B)

Before application of finish, the fingerboard should be masked off to prevent finish from adhering to the fretted surface (see Figure 3). A screw can be inserted temporarily in one of the four holes at the heel which will later be used for attaching the neck to the body. Secure a wire or cord to that screw so that the neck can be hung during spraying.

The neck is traditionally finished clear and the clear lacquer that you used for the body is recommended. Spray all exposed surfaces including the face of the headstock evenly. The neck of your Boston Guitar has been sealed so it should not be necessary to sand between coats unless runs, orange peel or drips appear. Use the same procedure that you followed on the body – again, two or three coats should do the job. Final rub out and polishing takes place about one week later when the lacquer has cured.



FINAL RUBBING AND POLISHING

After allowing the clear, lacquered surfaces to dry and harden for at least one week, sand lightly with non-loading #400 sandpaper. During sanding be sure to place a firm material behind the sandpaper. A large rubber eraser works fine. The eraser is flexible enough to sand the gradual curves but is stiff enough to prevent the sharper edges (of the headstock, for example) from being rounded off. Be sure to sand with the grain of the wood.

All sanded surfaces should now be a bit dull, indicating that the finish is flat and level. Now repeat the sanding process with very fine #600 sandpaper using water and a small amount of dishwashing detergent as a lubricant. This will remove any sanding marks left by the previous step and leave all surfaces a dull gloss.

The finish may now be rubbed out using a medium grade automotive rubbing compound (Dupont White Polishing Compound is a fine choice). The compound should be used sparingly with fairly good pressure at first — as a high gloss develops, pressure should be diminished. An extra fine grade of polishing compound (such as Mirror Glaze H-7) may be used to get that final bit of gloss. If instructions have been followed you should now have a professional quality finish. You can protect your work with a light wax — Martin Guitar Polish is a good choice.

ASSEMBLING THE BODY

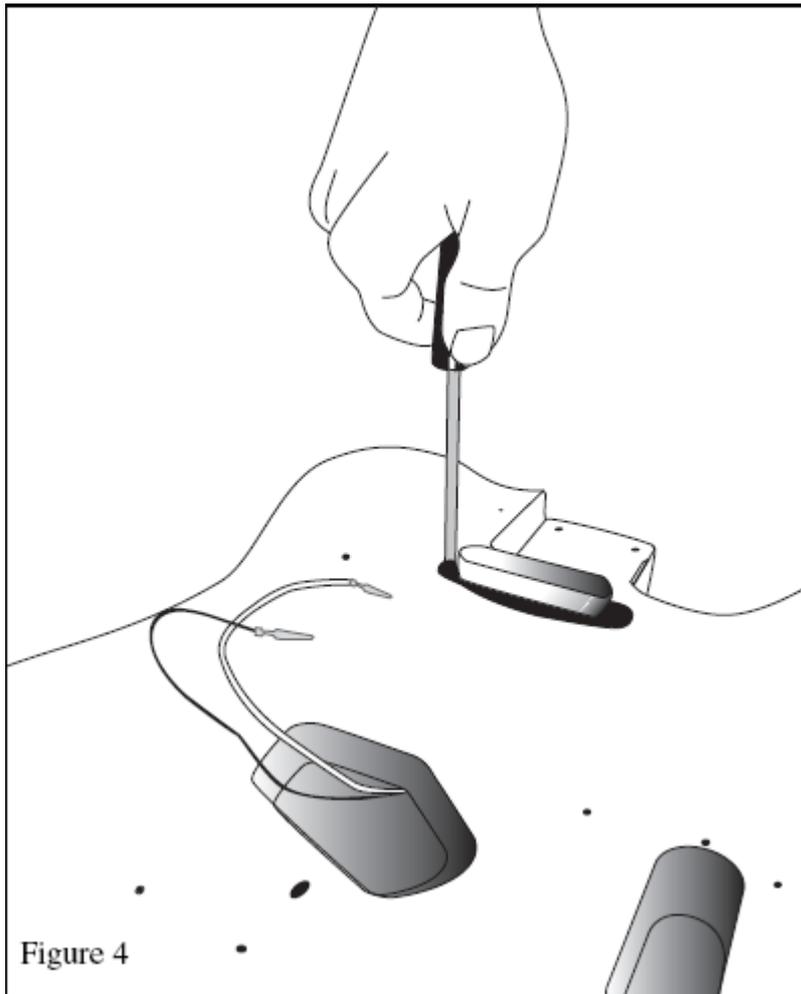
1. RHYTHM PICKUP (PART C)

The cavity for the rhythm pickup is located on the upper part of the body closest to the neck pocket. As you look into the cavity you will notice that a 14" hole has been drilled that connects the cavity for the rhythm pickup to the cavity below that will house the lead pickup.

Run the black & white wires attached to the rhythm pickup into the 14" hole from the rhythm pickup cavity to the main pickup cavity (see Figure 3). Use two 3/4" screws to attach the rhythm pickup.

2. PICKGUARD (PART D)

Attach the pickguard to the body using the eight 1/2" screws provided.



3. BRIDGE ASSEMBLY (PART E)

First, let's clean up the main pickup cavity by running the black and white wires through the 1/4" hole into the control plate cavity.

Run the blue ground wire (Part F) through the small hole in the top of the body below the main pickup area. When it emerges in the main pickup cavity push it through the hole in the side wall into the control plate cavity. Notice that the blue wire is formed into a loop will be wound around the center screw that will be used to attach the bridge assembly. This will ground the circuit.

There are two wires attached to the lead pickup assembly. One is red and the other is yellow. These wires will also be run through the hole from the lead pickup cavity to the control plate cavity.

Attach the bridge assembly to the body using three 1" screws. Install the center screw first, carefully wrapping the exposed end of the ground wire around it.

Control Plate (Part G)

The cavity for the control plate should now look like a spaghetti factory with five wires hanging out! This wiring is color coded to match the wiring on the control plate itself.

Slide a piece of shrink tubing on each wire and connect black to black, white to white, red to red etc. Carefully slide the shrink tube over the connection and heat the tubing with a match to permanently seal the connection.

At the end of the green wire you will see the output jack. Push the output jack and its wire through the 7/8" hole that has been drilled between the cavity and the edge of the body.

Attach the output jack plate (Part H) to the output jack using the washer and nut provided. Screw the output jack plate to the body with two 1/2" screws.

Carefully stuff all of the "spaghetti" into the control plate cavity and attach the control plate to the body with two 1/2" screws.

ASSEMBLING THE NECK

TUNERS (PART J)

Push the six bushing into the holes in the face of the headstock, then attach the 6 tuners using the 12 screws provided.

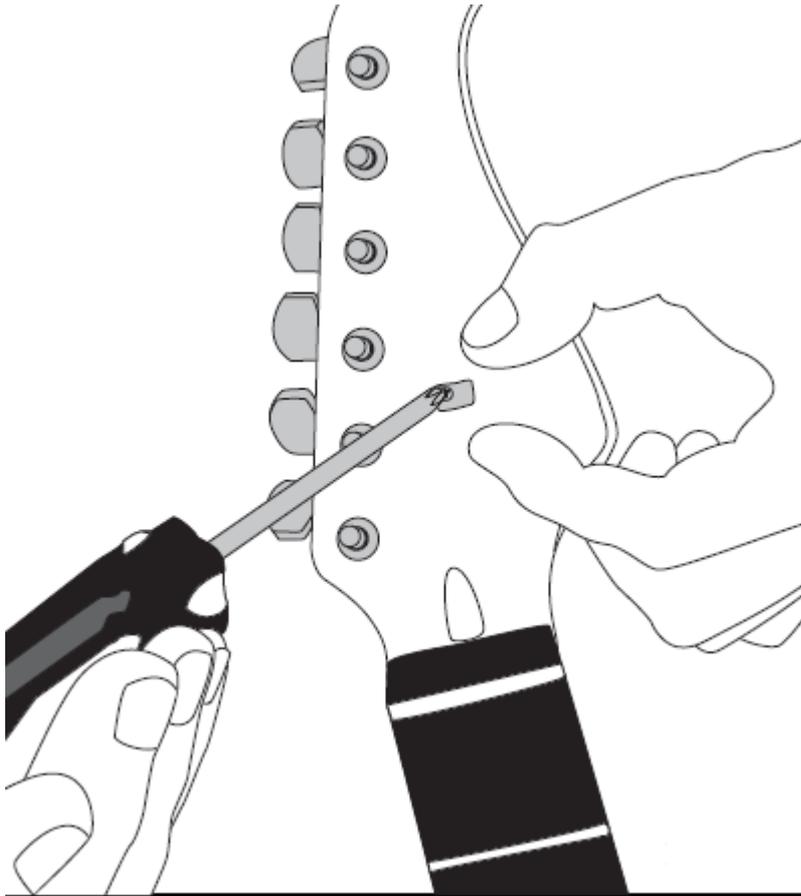
STRING TREE (PART K)

The string tree is now attached to the peghead (see Figure 4). Locate the small hole in the face of the peghead about 3 inches above the string nut. Slip the string notches onto the screw followed by the round cylindrical spacer.

The string tree pulls the first and second strings of the guitar downward. That downward pressure will keep the strings from popping out of the nut slots while you are playing.

NECK/BODY ATTACHMENT

We will now attach the neck to the body using the four large screws. The neck plate acts as a large washer and covers the locator hole on the back of the body.



SET UP

Put on the strings and tune to pitch.

1. TRUSS ROD ADJUSTMENT

The adjustable truss rod in the neck of your Guitar has been shop adjusted and should not require any change. If the neck should develop a dip or hollow spot over time it can be removed by tightening the truss rod adjustment nut that protrudes from the base of the headstock just above the nut.

A 'back bow' or 'hog-back' can be removed by loosening the nut. Great care should be taken with truss rod adjustments where as little as 1/4 of a turn can vastly alter the shape of a neck. A broken truss rod of course means a costly replacement.

2. STRING ACTION

The string action refers to the height of the strings above the frets. If the action is too low, the strings will buzz on the frets. If it is too high the guitar will be difficult to play.

3. ACTION AT THE NUT

Setting the string action that is right for you starts at the string nut. The slots at the string nut should already be close to perfection but you might want to make some adjustment.

Here's how to do it!

Push the sixth string down between second and third fret. The space between the top of the first fret and the bottom of the string should be about .006" or just about the thickness of the paper that these instructions are written on. If the gap is wider than .006" you should deepen the slot with a small needle file until it is correct. DO NOT FILE TOO DEEP! If the slot is too deep you can fill the slots with a mixture of white plastic sanding dust and crazy glue and then re-shape the slot.

Repeat this same procedure for the other 5 strings. The action at the nut is either right or wrong; it is not a matter of personal preference.

Now let's adjust the height of the strings over the 12th fret. Minor adjustments in the string action can be made by raising or lowering the individual saddles on the tremolo bridge with the small hex key that has been provided with your Guitar Kit. Following is a chart to assist you.

This action adjustment is a matter of personal preference. There should be a gradual increase in height from the first to the sixth string.

STRING HEIGHT AT THE 12TH FRET		
	First String	Sixth String
Low Action	1/32"	1/16"
Medium Action	1/16"	3/32"
High Action	3/32"	1/8"

Action can also be adjusted by changing the angle of the neck. This can be done by inserting small shims between the neck and the body to increase or decrease the neck angle.

4. INTONATION

The saddles on the tremolo bridge can be adjusted to compensate for the pitch modification that occurs when the string is stretched as it is fretted. This adjustment is made by tightening or loosening the set screws at the rear of the tremolo bridge.

Start by tuning your guitar and sounding a harmonic chime directly above the twelfth fret on the sixth string. Now fret the sixth string at the twelfth fret and compare that pitch to the harmonic. If the fretted note is higher than the harmonic pitch tighten the set screw to lengthen the string. If the fretted note is lower than the harmonic, loosen the set screw to shorten the string length. When the harmonic and the fretted note sound the same note, the saddle is at the correct position. Repeat this procedure for the other five strings.

5. PICKUP HEIGHT

Each single coil pickup is adjustable on the bass and treble sides. Finding the best combination of tone and volume will require some experimentation. A good place to start is to adjust the pickup height so that the first string is about 1/8" over the pickup pole and the sixth string is about 3/6" over its pole.