

KIT-ES-45

Tools needed

Small Phillips screwdriver

2 gluing clamps

Good quality wood glue

Soldering iron and solder

Wrench 10 mm and 7 mm

Hammer

The semi-acoustic is for the more experienced kit builders. The set neck has a perfect fit, the maple body has a mahogany centre block, 5-ply purfling and ivoroid binding. This body is lightweight and has a perfect neck pocket so the neck and body make a perfect connection, ensuring maximum tone and sustain. A great neck shape makes this very comfortable to play. The frets are already installed and only need a light levelling and polishing.

The squared-off headstock leaves room for your imagination, you can form this to your own ideas and personalise your guitar. Some experience in handywork and some time and patience are the prerequisites that will yield a great guitar. Installing the electronics into a semi-acoustic can be a bit of a challenge. Please take your time. All the parts are included.

body : maple with a mahogany center block

neck : mahogany, set neck

fingerboard : pau ferro

bridge : T.O.M. chrome

pickups : 2 x humbucker, chrome

hardware : chrome

Wood

The base of each guitar is the wood construction. The neck pocket in our kits is perfect. There is no need to work the neck pocket other than maybe a simple sanding. The neck angle is fine and the neck can be glued in without a problem. Use proper wood glue and apply the glue inside the neck pocket and that part of the neck that will go into the pocket. Slide the neck into the pocket and fixate the neck and the body with two gluing clamps. Let dry for 24 hours. To prevent indentations, the body and neck should always be protected from the pressure of the gluing clamps. This surface protection can be done with thin pieces of wood of cork.

After tightening the gluing clamps, wash away the excess glue with a damp cloth. All glue residue will show and leave ugly spots during colouring and finishing, be accurate about this.

Shape the headstock to your liking. Use files or saws and sanding paper to make your headstock design neat and tidy. Make sure you remove all saw and sanding marks.

Sanding and finishing

When the glue has dried and your kit begins to look like a real guitar, you can prepare it to be lacquered. Sand the body and neck with 320 grit dry sanding paper. After this step, use masking tape to guard those parts that you don't want to colour/finish. Always follow the instructions on your finishing product, be it staining, spraying with aerosol cans or finishing in a spraying booth. After the body and neck have been finished in the colour and gloss of your choice, and you have polished your guitar to the desired result, it's time to install the hardware.

## Electronics

Installing the electronics. With the semi-acoustic, installing the electronics can be a bit of a challenge. All the soldering needs to be done before anything is installed into the body. To facilitate getting the output and potentiometers in place, please put a piece of rope or wire from the destined hole to the right potentiometer, switch or output. Tape the rope/wire to the body so it doesn't slip away and let the end come out the f-hole. Tie it to the potentiometer, switch or output. After soldering everything together, you can pull the rope/wire to fit the potentiometer etc. into its place.

First fit the earth wire from the harness of potentiometers to the studs. A hole is drilled from the electronic cavity to the stud of the tailpiece. After threading the wire to the cavity of the stud, install the stud to secure the cable. Installing the stud is done by tapping it gently with a hammer. Protect the stud by using a rubber hammer or inserting a piece of wood or rubber between the hammer and the stud.

Now start soldering.

Protect the body from soldering spatter and prepare to solder everything together outside the body. Install the pickups. The pickups are marked N and B. N is the neck pickup and B is the bridge pickup. Thread the cables through the drilled holes and out the f-holes. Use the schematics to properly make all the connections. The potentiometers with the capacitor attached are the tone potentiometers, the other two are the volume potentiometers. After you have finished soldering, check if everything works correctly before installing the parts into the body. Install all electronic parts and secure the potentiometers, output and selector switch so they will not cause unwanted resonance.

## Hardware

Install the machine heads. Don't forget the washers. Before drilling or punching a hole to secure the machine heads, please align the machine heads on the back, so it looks neat and tidy. Now fasten all screws and nuts. A loose washer or nut can cause unwanted resonance.

Installing the bridge and tailpiece. Tap the studs in with a hammer. Use protection so you don't damage the stud. Install the tailpiece and the bridge. Make sure the bridge is put on the correct way. The small indentation in the saddle is for the high e string, bigger indentation is for the low e string.

Put the strings on and start tuning the guitar.

Now the guitar needs a set up. Once tuned to pitch, check the neck curve and adjust to your preference with the trussrod key. Check the frets for level. If the frets are not level enough to your liking, level and polish the frets. Now adjust the string height so the guitar plays comfortably all over the neck and there is no string buzz.

Finish setting up with adjusting the intonation. Now you are ready. You have built your ES-45! Have fun playing it!

