Harley Benton

Electric Guitar Kit CST-24

electric guitar kit

th•mann
MUSIC IS OUR PASSION

user manual

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1 Safety instructions

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are properly disposed of and are not in the reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the product. They could swallow the pieces and choke!

Never let children play unattended with the product.

CAUTION!

Risk of injury to the hands

When assembling and screwing the individual parts, pay attention to sharp edges on tools, screws and components.

2 Scope of delivery

Thank you for buying this guitar assembly kit. All wooden parts, hardware and electrical components are contained in this package.

The picture below shows the individual items included in the delivery.

The assembly is described in detail in the following sections.

3 Assembly instructions

Useful tools and materials

Provide the following tools and materials for the assembly of the guitar:

- Phillips screwdriver
- Rubber mallet
- Ring wrench
- Pliers / wire cutter
- Varnish and accessories
- Sandpaper

Body and neck should by all means be painted before assembly.

When applying spray lacquer or paint, you must wear a dust mask.

3.1 Painting body and neck

Painting the body

The solid wood of the guitar body is sealed and prepared for various types of lacquer coating. A wide variety of finishes can be procured from DIY, timber and automotive outlets in aerosol cans making finishing straightforward without requiring specialist skills.

The first step is to check the fit of the body to the neck joint. These components are machined from high-grade tonewoods to ensure optimum alignment. Since wood is a natural material, however, its shape changes slightly over time. If the fit is too tight, you can adjust it using a sharp chisel or sandpaper. Please remember that the additional lacquer coat will make the neck fit a little more tightly into the cutout.

Before coating the body, ensure that all surfaces are clean and free of dirt and dust. Carry out all painting operations in a well-ventilated, dust-free environment. Considered and careful working is a key factor for a qualitatively satisfactory result. It is highly recommended that you first try out the colour and technique on another piece of wood.

Paint the body edges first and let them dry. If the edges are dry, go on with front and back side. By layered, successive application you can achieve a uniform coating structure. If you notice surface irregularities, wait until the paint has dried completely and correct them with fine sandpaper (e.g. 800+) before proceeding to paint. For full coverage apply three or more layers.

Wait another two to three days to dry until the paint is fully cured. Polish or burnish the body until it meets your expectations. Take care not to buff too vigorously as this may remove the finish.

Neck finish

The guitar neck is sealed with a thin layer of matt lacquer before delivery and is ready to use. If you still want to treat the neck with coloured or clear lacquer, proceed as follows.

Carefully mask off the fingerboard and all frets before painting. Make sure that all surfaces are free of dust and dirt. Carry out all painting operations in a well-ventilated, dust-free environment.

For the neck, use a clear or slightly tinted wood paint of good quality. Start on the front and at the edges of the headstock. Apply a thin layer evenly, let it dry and repeat the process two or three times. If you notice surface irregularities, wait until the paint has dried completely and correct them with fine sandpaper (e.g. 800+) before proceeding to paint.

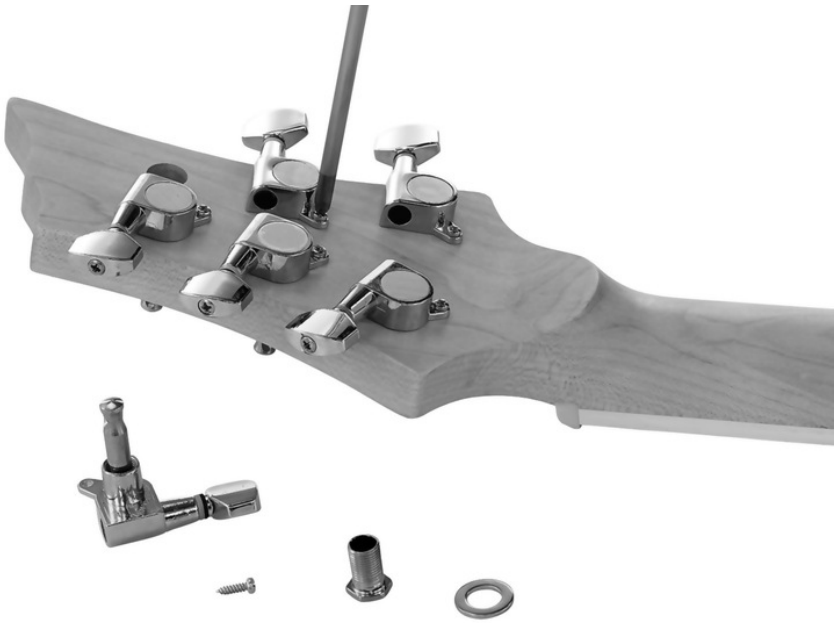
Once the headstock has dried, place the neck on the fingerboard and paint the back of the neck as described.

Wait another two to three days to dry until the paint is fully cured. Polish or burnish the neck until it meets your expectations. Take care not to buff too vigorously as this may remove the finish.

3.2 Mounting the machine head

Insert the four machine heads from the rear side of the headstock into the bores. Align the machine heads so that the tuning pegs are perpendicular to the top of the headstock.

Fix the machine heads as shown in the figure in this position hand-tight with the supplied screws.



Turn the neck and fasten all the machine heads finger-tight to the front of the headstock with the washers and nuts provided.

Tighten the nuts on the front with an appropriate spanner, then tighten the screws on the back firmly to fasten the tuners.

3.3 Mounting the guitar neck

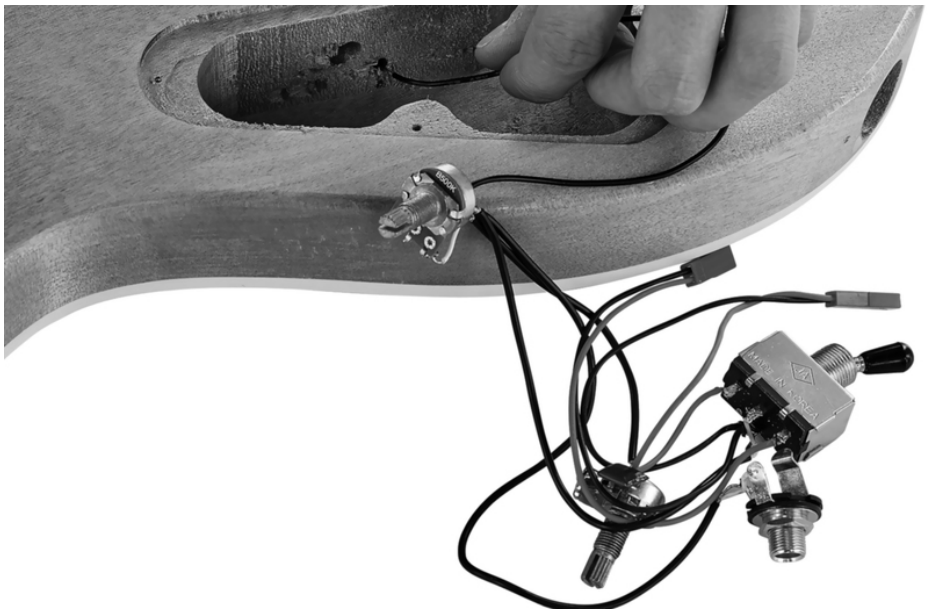
Place the body on a suitable working surface. Use a soft pad in order to avoid damage to the surface. Insert the neck into the neck cutout. If necessary, use a sharp chisel or sandpaper to adjust it. Be very careful when removing material. The neck should be tight and never have too much clearance in the cutout!

Turn the guitar over, position the mounting plate over the four screw holes on the back of the body and screw the two supplied long screws through the upper holes and the two supplied short screws through the lower holes in the mounting plate into the body and neck until the connection is firm.

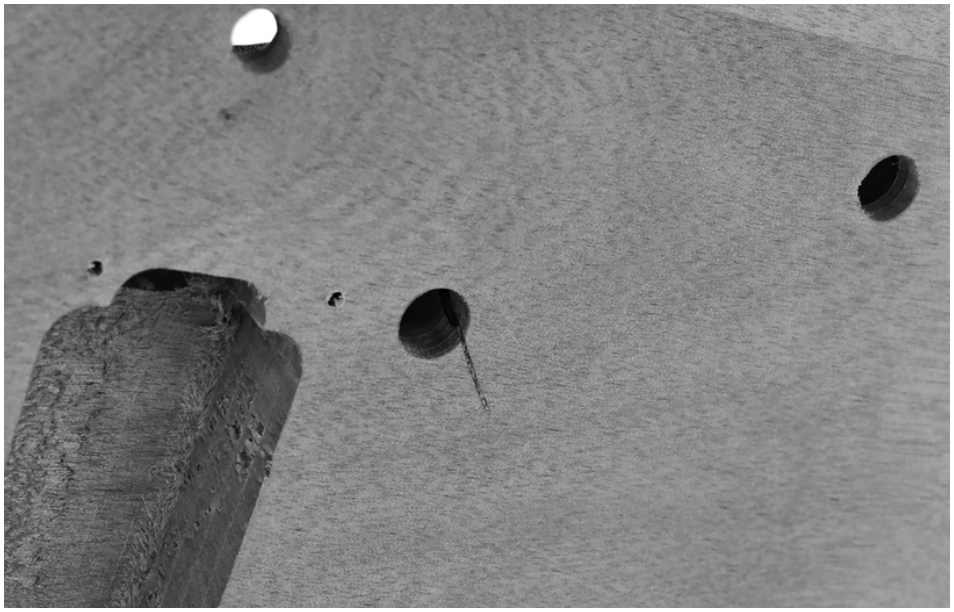
3.4 Wiring pots, pick-ups and switch

The pickups, potentiometer and jack socket are wired using connectors.

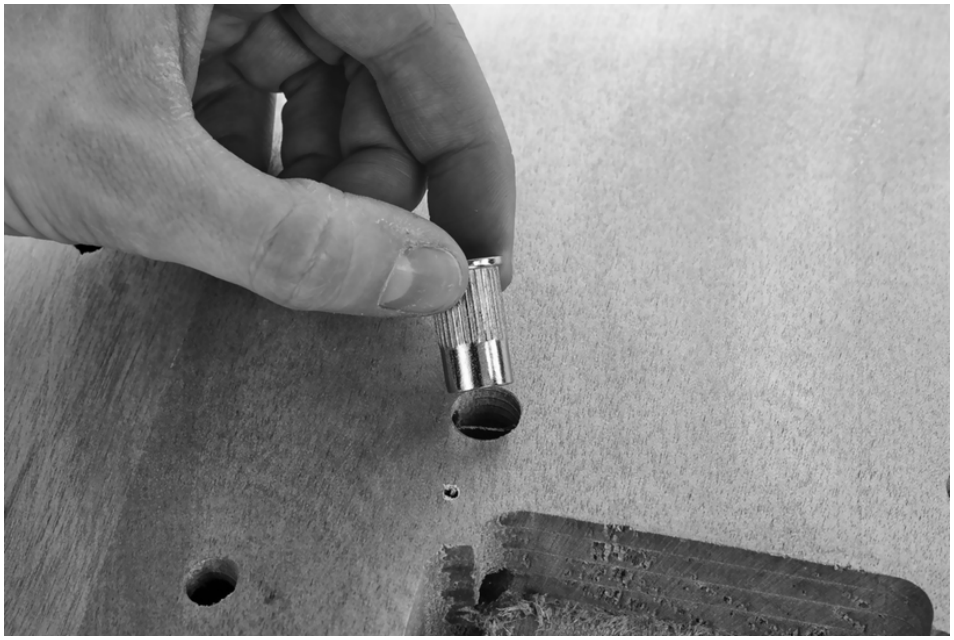
Thread the cable for the string earthing (after stripping the insulation, and without the connector) through the channel from the opening in the back into the hole to fasten the tailpiece.



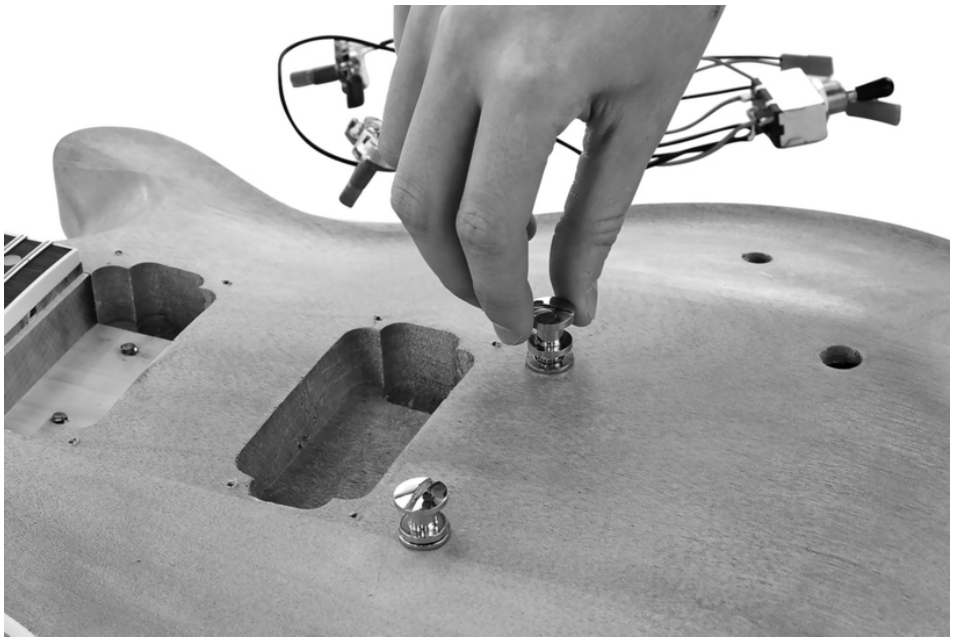
Pull the cable far enough out of the hole that there will be sufficient contact with the metallic surface when the tailpiece is installed. Earthing the strings reduces noise (humming).



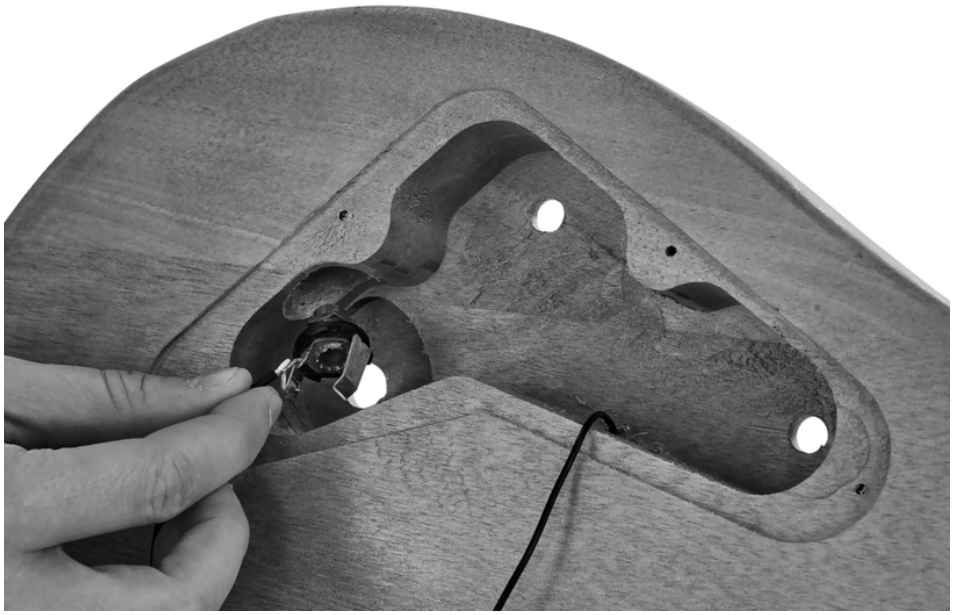
Using a rubber mallet, hammer the mounting bolts of the tailpiece into the body as shown. Make sure there is sufficient contact between the stripped end of the grounding cable and the tailpiece bolt.



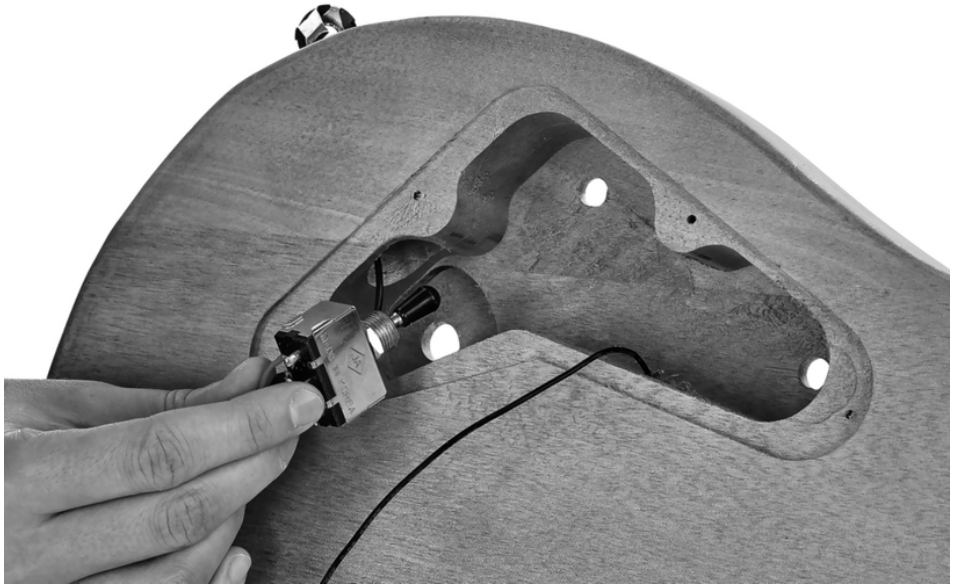
Screw the tailpiece mounting bolts into the bracket.



Lead the output socket from the back of the body through the hole provided on the body edge.



Insert the switch into the recess provided at the back.



Insert the pots into the back slots as shown in the following illustrations.

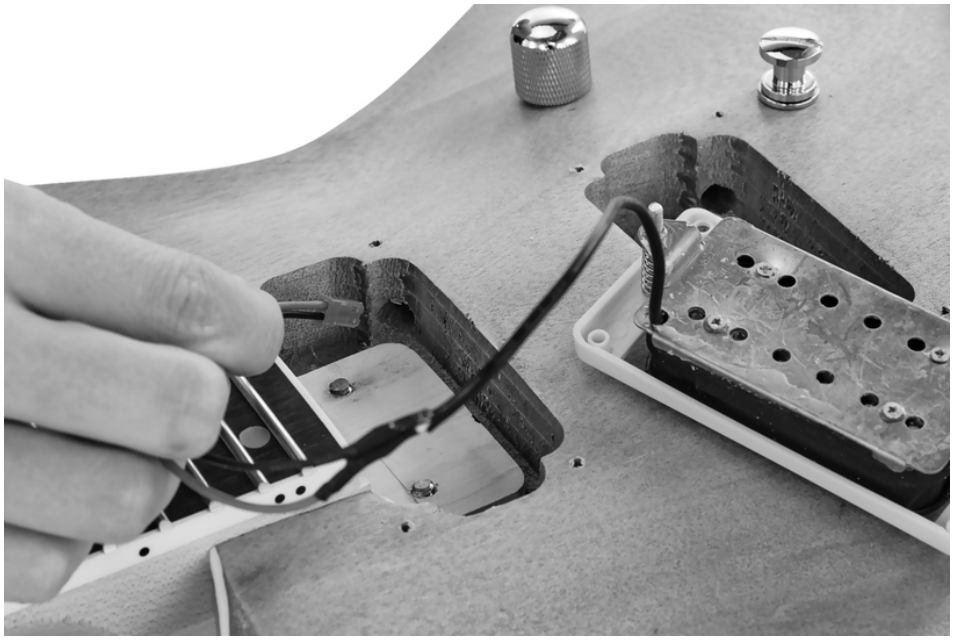
Turn the guitar over and fix the pots and switch with the supplied washers and nuts on the front of the body.

Press the pot knobs on the pins of the two pots.

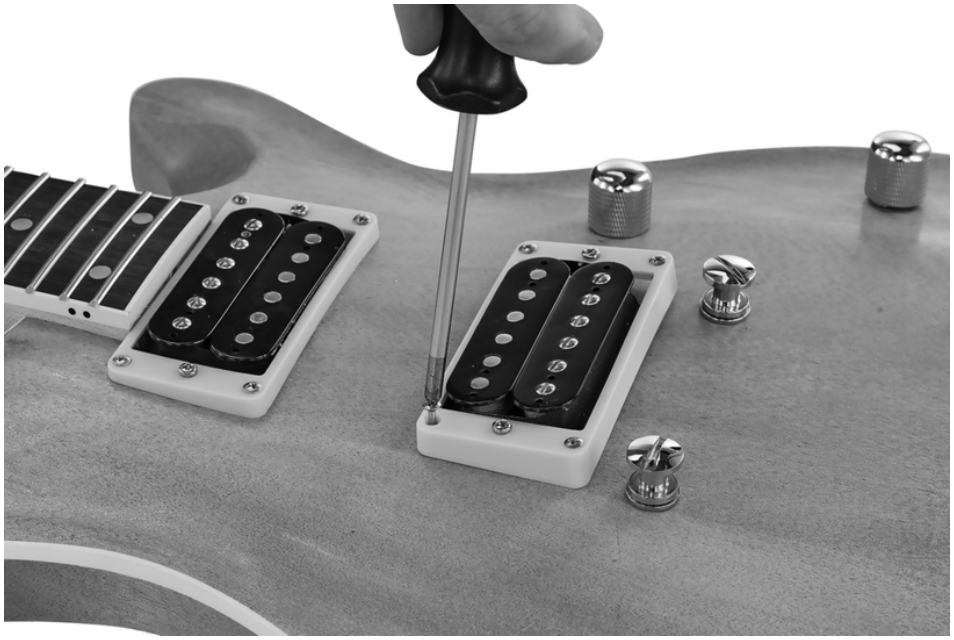
Insert the holder for the output socket and check the projection of the socket. This must protrude so far over the bracket to the outside that it can be sufficiently tightened with the supplied nut and then only slightly protrudes. If necessary, correct the protrusion by turning the counter nut inside accordingly.

Then screw the holder of the output socket to the body with the screws provided.

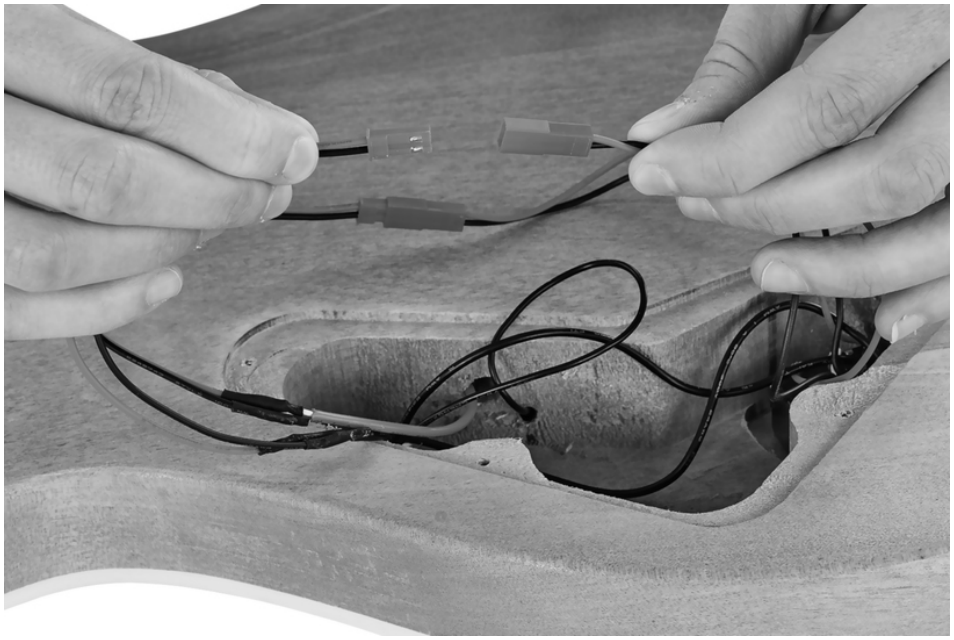
Lead the pick-up cables through the channels from the front recesses into the rear slot. The neck pickup is somewhat flatter and is inserted into the opening nearer the neck of the guitar. Insert the somewhat taller bridge pickup into the opening closer to the bridge.



Turn the guitar over and attach the pick-ups to the front recesses with the supplied screws.



Turn the guitar over and connect the pick-up connectors to the pots.



Then screw the plastic plate to cover the recess for the pots and the switch with the screws provided in the pre-drilled holes on the back of the body.

3.5 Mounting tailpiece and strap pins

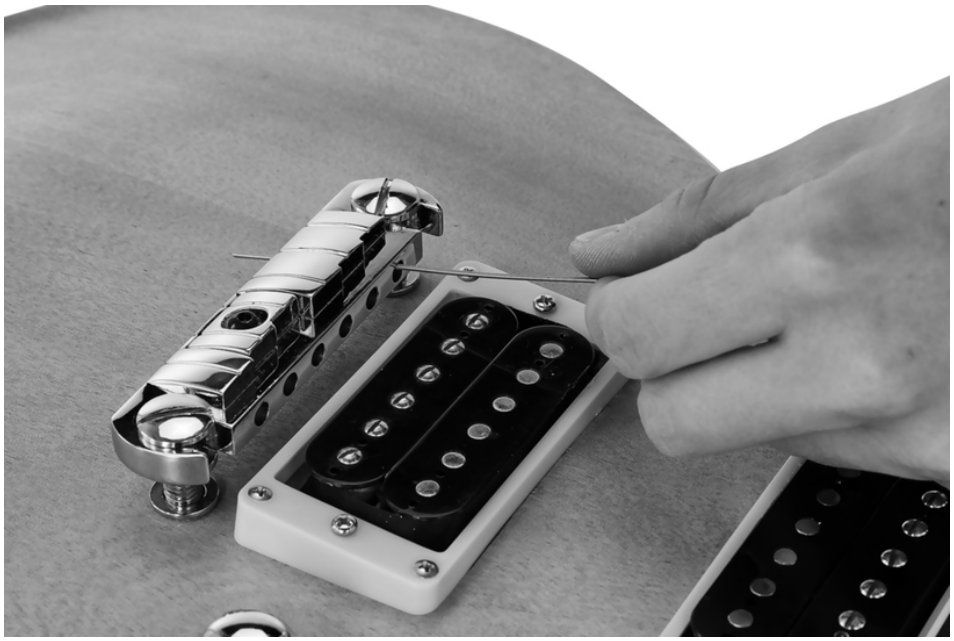
Screw the strap pins into the pre-drilled holes in the body as shown using the supplied screws.

Slide the tailpiece onto the mounting bolts as shown. The tailpiece is still loose and is only fixed when stringing the guitar.

3.6 Strings, neck relief and string action

Stringing

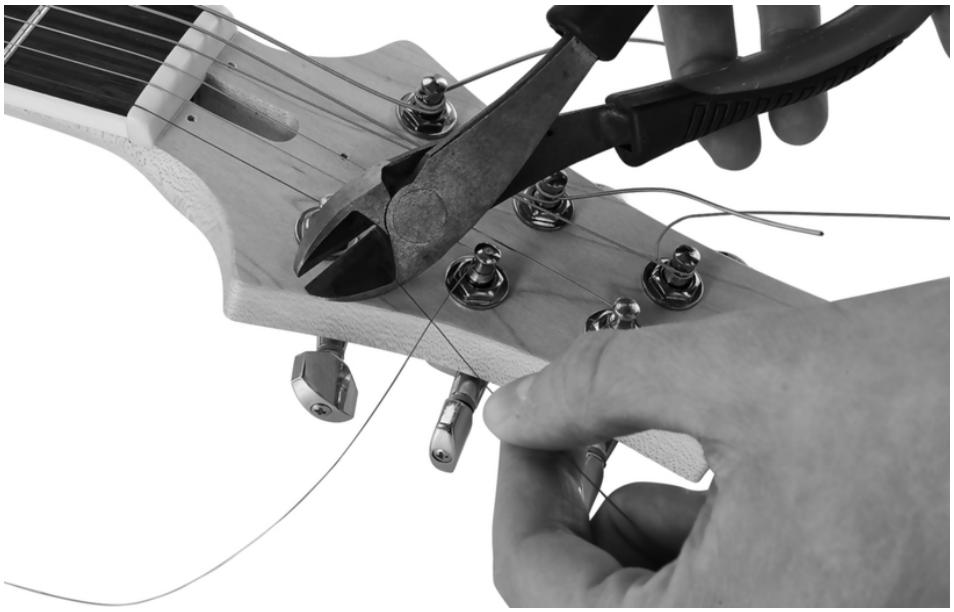
Thread the strings on the tailpiece as shown.



Tighten the strings around the tailpiece as shown and thread the strings into the holes in the tuners. Wrap the end of the string a few times around the peg and first hand-tighten each string. Make sure that the individual strings are in the correct nut position.

Then tune all the strings in sequence to the correct pitch. You can use a tuner or a pitch pipe as a reference. Note that the string tension will drop a little and the guitar needs to be retuned several times until the strings stay in tune.

Shorten the protruding ends of the strings with a wire cutter.



Adjusting neck relief

The neck is equipped with a steel truss rod, with which the neck relief can be adjusted individually to the playing habits.

After tuning the strings, check the relief by pressing on the low E string at the first and twelfth fret. The closer the string is to the fingerboard at the sixth fret, the more noise (buzz) will be audible when the guitar is played.

Adjust the neck relief using an appropriate Allen key as follows:

- Turn the truss bar clockwise to increase tension. The neck will become straighter, even convex in extreme cases. The string will be closer to the fingerboard, is easier to fret, but will buzz more during playing.
- Turn the truss rod counter-clockwise to decrease the tension. The neck yields more to the string tension and accordingly curves concave. The string moves away from the fingerboard, is a bit harder to grip, but causes less to no background noise when playing.

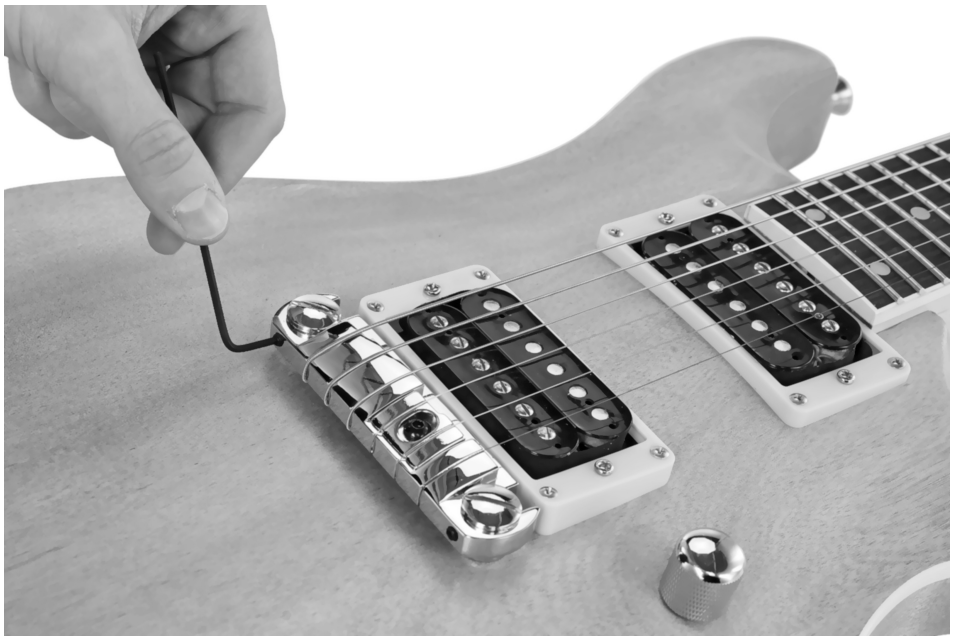
Adjust the truss rod by about a quarter turn per setting, tune all strings to the correct pitch after each adjustment, and check the neck relief again after some time. Repeat this process until the desired neck relief is reached.

Screw the cover for the truss bar onto the header headstock.

Adjusting the position of the strings

When the neck has the desired curvature, tighten the tailpiece as shown.

Use the two Allen screws on the tailpiece to adjust the strings action according to your playing habits, using the hexagon wrench provided. Again, the lower the string action, the easier the strings are to grip, but cause slight background noise when playing the guitar.



After adjusting string position, you can check the octaves of the guitar and readjust if necessary. Tune all the strings to the correct pitch, gently touch the first string right above the twelfth fret and then pick the string. The resulting overtone (harmonic in the 12th fret) must be the same pitch as the picked string at the 12th fret. If the pitch of the two notes is different, move the bridge piece forward for this string (tone too low) or back (tone too high). Listen to the pitch of the two notes and make incremental changes until the two notes match. Alternatively, you can also adjust the octave clarity with an instrument tuner. In this case, the pitch of the tone at the 12th fret must be the same as the unfretted string, but one octave higher.

4 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

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