Tenayo TK-EG-ST1

E-Guitar KIT "Strat"-like: Facts & Manual

Text und Fotos von Michael Koch



At all: Electric guitars were built to play loud and hard!!! And finally acoustic guitars were much too faint to get through really within bigger ensembles or even orchestras. The first acceptable representative electric guitars were built by Adolph Rickenbacker and George Beauchamp at the beginning of the 30s in the last century. But the very first serial model with a semi hollow body was constructed and distributed by the US American company GIBSON around 1936. The still very famous and by now deceased "Les Paul" followed them up around 1941 with his first Solidbody version of the electric guitar. It was an instrument with a massive body and neck through construction which was able to diminish possible feedbacks the semi hollow body guitars produced very often quite well. From this time on the triumphal procession of the electric guitar couldn't have been stopped anymore. Only a few decades later the position of modern Rock- and Jazz-Guitarist should have been compared with the same star violinist had until this time in orchestras. Great musicians like Hendrix helped pushing the electric guitar for their final breakthrough in the mid of the 1960s. He was followed up by more and more other unforgettable guitar heroes and virtuous players like Eric Clapton (Cream), Jimmy Page (Led

Zeppelin), Angus Young (AC/DC), Eddie Van Halen (Van Halen), Robert Fripp (King Crimson), Alex Lifeson (Rush), Brian May (Queen), David Gilmour (Pink Floyd), Steve Howe (Yes), Ritchie Blackmore (Deep Purple), Steve Vai (Frank Zappa & Solo), Joe Satriani (Solo), Adrian Belew (David Bowie, Talking Heads, King Crimson), Vernon Reid (Living Colour) and much more... But we won't waste too much time with things like this because we'd like to assemble our own electric guitar. So spending only a little of our precious time for this I would carefully recommend...

We actually offer around **15** different electric-guitar and e-bass kits by *Tenayo* including nearly all popular shapes and models. A few of them we provide as left hand models too. But all kits are very easy to handle. Even assembling is possible and not very difficult for nonprofessional instrument builders of all levels.

Our TK-EG-ST1 is including the pre and well shaped massive body. All panels for the neck, pick-ups, potis, switch, bridge and the electric parts still exist. The neck with its Trussrod, fingerboard and even the frets are well pre handled. So all wooden parts included in the kit must be only fine sandpapered and finished. The three pickups (2 single-coils and 1 Humbucker), all potis (with knobs) and the 5-way toggle switch are pre assembled together with the white pick-guard on the guitars body. All electric wiring (except soldering on the output jack) is still done. Furthermore the set is including 6 guitar tuners (with their hexagonal head screws, ring washers, sleeves and wood small screws), 2 string guides, a cover (chrome and plastic) with 4 larger wood screws for fixing the neck, one output jack, the vibrato unit (incl. the bridge), three tremolo springs with retainer, to strap-holders (with screws and rubber ring washer), 6 standard guitar strings, two different hex keys and one standard guitar cable.



Tools and Materials which will be needed to assemble the *Tenayo* electric-guitar kit...

- A rasp, different files and sandpapers with variably granulation for a fine "rose"
- Different metal files
- A wood saw
- 1 block for sandpapering
- Wood glue
- Screw clamps or rubber ties
- Fill-in for wood repair
- 1 rubber-mallet or another hammer
- · Wood wedges, rubber stripes or a small scratchpad to prevent damage on screws while hammering
- A flat nose plier
- A lead pencil and a rubber eraser
- Different screwdrivers or a battery powered electric screwdriver
- 1 wood drill and a cutter
- A electric soldering iron and some tin for wiring the potis, PUs and the output jack
- Oil (in case the instrument shall be finished with that)
- Different lacquers and colors (if desired)
- Seersucker adhesive tape (to prevent stains while coloring)

First Steps...

Initially neck and body of the guitar has to be put together!! Thereby you have to take care on the correct seat of the neck. It has to be absolutely straight later on. Please check the photos below too! But this should not be a problem in because of the pre shaping and the room which has been made for the necks rudiment. If the rudiment does not fit into its place exactly take some sandpapers or a file – don't try to put the neck into its place by force. This construction will be fixed by using the chrome neck plate cover (in between the black plastic washer) and the 4 big wood screws – as shown on the photos below. If gaps occur in between the parts after doing that you can now fill them up with some fill

in for wood repair. But by getting in the neck correctly this should be no matter at all. Now you can handle the **headstocks design** (if desired) – giving it a new shape. Before cutting the wood with a saw take a lead pencil to make some trials first for your like. A rubber eraser can be a great help by correcting your most desired artful design until perfection.







Sandpapering and finishing your guitar...

Please check if there are no spaces ore damages in the wood which has to be repaired potentially. If all these things have been done all wooden parts of the instrument should be handled with different sandpapers (down to the finest granulation) until you're satisfied or the guitar "feels like a child's bum". If there are any frets which feel sharp at their edges last improvements can now be done with a flat and fine metal-file. Yet all wooden parts can be oiled or colored with different lacquers. Oiling can be done with a standard vegetable or olive oil. You only need a primitive cotton flap. But oiling should be repeated a few times within days to get a good effect. Possibly you have to use fine sandpapers again between these processes. If lacquering is wanted you should check for professional (like literature or so) help in front of doing that. But please take care on all parts which shall not be lacquered at all. To prevent stains on the fretboard or other parts you can use seersucker adhesive tape for bonding them in front of doing the coloring so you can finish the guitar part by part. It is recommended too removing the pick-guard of the guitar before beginning with the work on the finish.

Assembling of the tuners...

Yet the tuners can be put into the complying predrilled holes on the guitars headstock. Doing that is very simple and well shown on the photos. All 6 tuners have to be fixed with its head sleeve on the upside and with two little wood screws on the back of the headstock. The sleeve has to be hammered in using a wooden wedge ore something similar avoiding damage on the material. It is recommended too to pre drill all holes for the little wood screws. The back part of each mechanic is a very good template marking the focus points onto the surface of the headstocks back.



Re-assembling of the pick-guard...

Now the white pick-guard has to be put on the top of the body again – fixing it with the complying wood screws it was attached before finishing the guitars body. The two black cables (please check the two photos below) have to be lead to its channel to the output jack – while the white (or yellow) cable has to be lead to the vibrato unit panel. Later on it has to be braced (soldered) on the retainer for the three vibrato springs for ground. Before you fix the pick-guard at all please take care on to avoid having cables in between the bodies top and the guard itself. Possibly you got to push some cables back into the panel first. Also the face guard should seat on absolute flat. Yet you can get in all the screws fixing the pick guard in its right place.





Setting up the vibrato unit...

First the so called vibrato unit (check out the pic on the left below) has to be laid into its provided panel because before



fixing it the scale has to be checked. This means that the distance between the nut and the saddles (preferred in a middle position and the place where the strings run over later) has to be exactly the double of the distance between the nut and the inner edge of the 12th fret. Later the three saddles for the higher strings have to be moved slightly into direction of the neck - and the other three into the opposite direction. This is in relation to the gauge of each string. But since the 6 holes for fixing the bridge are pre drilled this shall be no problem

at all fixing

the bridge on its right place. So adjusting the saddles can follow on later after the set up and tuning of the strings. To bring on the retainer for the vibrato springs the guitar has to be turned onto its backside. Then you can fix it with the two bigger wood screws in its right place in the complying panel. Please check the first photo on the right. After fixing it the three springs can be connected to the



vibrato unit by hooking them in. Take care and don't get the two screws too much into the wood. This is important for adjusting the whole thing later on after the guitar got stringed and tuned.

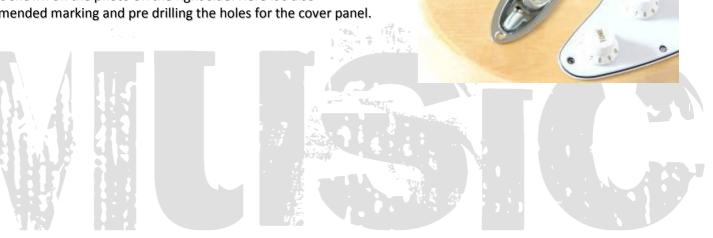
Assembling and soldering the output jack...



In our actual kit you should have a thicker black cable with two different colors – mostly black and white (or blank). Check out the photo on the left. Sometimes you only have two different single cables like described sometime before. Each kit can differ a little. Important is only that most of the time the white (blank) one is for ground and shall be soldered on the inner ring contact of the output jack while the black one is the hot contact got to be connected to the outer rim. It is really not stupid

trying it out now if it's working at all before fixing the output jack with its plate on the instruments

body as shown on the photo on the right side. Here it's also recommended marking and pre drilling the holes for the cover panel.



Fixing the strap holders...

Simply check out the three photos below where the two pins have to be placed. **Even here it's applied:** marking, pre drilling and after that fixing both with their screws using the rubber ring washer in between.





Putting on the strings and fixing the string guides...



Usually it is not wrong starting with the most thinly string - that's the "e" or so called 1st string. Each string has a ball-end and a sharp end. Get this through the holes at the backside of the vibrato unit; lead it up and out of

the saddle (and over it) into direction of the headstock.

Now each string got to be winded up with its complying tuner respectively the tuners machine head by rotating them into the opposite direction than your body took place - two or three times until it's fixed reasonably. The two string guides (photo above) have to be set up between the $\mathbf{1}^{\text{st}}$ and the $\mathbf{2}^{\text{nd}}$ string and between the $\mathbf{4}^{\text{th}}$ and the $\mathbf{3}^{\text{rd}}$ and the $\mathbf{4}^{\text{th}}$ string. This can be seen very well on the two photos on the right side. Check it out...



Fixing the back cover of the vibrato unit...



This cover has to be adjusted very well in its place (second photo on the left) so that you can put in strings later on while changing them - without unfixing the plate again. The holes have to be drilled - and at all the cover is the best way having a fine template to mark them!! After drilling the plate has to be fixed with its wood screws. No problem at all I think.

Adjusting the neck with its truss rod...

Every guitar is including a truss rod inside its neck. The approach to that is at the headstock top above the nut and the necks rudiment. Please check out the photo on the right. The truss can be adjusted with the complying hex screw which is included in the kit. Tighten the screw (most of the time by rotating it clockwise) of the truss is resulting in getting the neck more straight. If you loosen the screw (most of the time by rotating it to the left) the neck is getting concave. If the neck get too skew by weather-related or other influences it is recommended asking a professional guitar craftsman. Smaller correcting can be easily done by you.



String action adjustment...

This is (proverbial) a matter of taste. Some guitarists prefer a very low string action (the speed section) others like a higher string action possibly in because of their extraordinary picking technique (the older blue grass generation...) which is for perhaps not to handle by beginners. But in every case the saddles on the bridge have to be adjusted in a way that the strings don't rattle on the higher frets while doing chords at the 5th fret or so. In relationship to lighter or heavier string-gauges they have to be lift a little up or down.

As an average value the following string action will be recommended:

	1. String	6. String
1. Fret	0,5 mm -0,8 mm	0,8 mm - 1,0 mm
12. Fret	2,5 mm - 3,0 mm	3,0 mm - 3,5 mm

Tuning of the guitar/the tremolo:



For beginners or relatively inexperienced guitar players the standard tuning in **E** (6th), **A** (5th), **D** (4th), **G** (3rd), **b** (2nd), **e** (1st) is well recommended. If you are not able to identify each single note by hearing © please use a standard tuner. Concluding the arm of the vibrato unit has to be screwed in (photo on the left). That's an easy job I think...

So get a move on – and have a lot of fun while playing your first home-made electric guitar by TENAYO!!!

PS.: The original and full colored version of this fine manual can be requested via info@mm-wo.de ...



Attention!!! "All Electric equipment can usually not be disposed with your household refuse!! This guitar kit is including parts which do not belong into domestic waste too!!! All these parts have to be brought to your local collecting point or recycling depot. Our WEEE-**Registration-Number** is **DE 57445331.**