

## Tenayo TK-AG-1, 2, 3C, 4 and 5

# Acoustic Guitar Kits: Facts & Manual

Text and photos: Michael Koch

Western-, folk- or acoustic-guitars all have a slim neck similar to their electric relatives. Its tone creation is the result of their hollow sound- respectively resonance-carcass simply called the guitars body. The guitar model can be differed by its complying shape: Dreadnought, Triple-O, Jumbo and the possible Cutaway – which is used in the meantime on many discriminative shapes and forms too. Or it is used in context with an integrated pickup system - mostly Piezos with an equalizer block. In opposite to classic- or concert guitars, which have for standard a much wider fingerboard and are set up with Nylon strings, acoustic-guitars are equipped with steel-, nickel or brass strings. This is the reason why they have an adjustable Truss-Rod inside their neck too. Also the sound of an acoustic-, western- or folk-guitar is much more brilliant and is for sure more powerful than the comparative sound of a classic-guitar. Mostly they are played by the help of a pick. In country-, folk- or modern pop-music they are often played by finger pickings or special techniques like slapping and tapping too.

**Tenayo** offers actually 5 different acoustic-guitar kits with the classic Dreadnought shape. They individuate in because of the selection of different woods, the quality level of its wood or a possible Cutaway and of course their prices. But: all kits are very easy to assemble and the guitars can be framed by every nonprofessional hobby constructor too without causing any trouble.



**TK-AG-1:** The still pre composed body consists of laminated lime or so called basswood (ribs/side parts) and laminated maple for the top. Its neck (including the Trussrod inside) is made of lime/basswood too. The still assembled fingerboard consists of rosewood. All woods were pre shaped and pre handled and have to be finished only. Furthermore the kit is including 6 tuner vertebrae (with screws and sleeves), 6 guitar strings, the nut, bridge and saddle, 6 bridge pins, 1 water sticker (soundhole binding), 1 strap holder and various wood screws.

**TK-AG-2:** The still pre composed body consists of mahogany (ribs/side parts) and laminated spruce (guitar top). Its neck (including the Trussrod inside) is made of mahogany too. The still assembled fingerboard consists of rosewood. All woods were pre shaped and pre handled and have to be finished only. Furthermore the kit is including 6 tuner vertebrae (with screws and sleeves), 6 guitar strings, the nut, bridge and saddle, 6 bridge pins, 1 strap holder and various wood screws. The soundhole binding has been still worked in.



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**TK-AG-3C:** The still pre composed body consists of mahogany (ribs/side parts) and laminated spruce (guitar top) – with a flamed-maple print on its top. Its neck (including the Trussrod inside) is also made of mahogany. The still assembled fingerboard consists of rosewood. All woods were pre shaped and pre handled and have to be finished only. Furthermore the kit is including 6 tuner vertebras (with screws and sleeves), 6 guitar strings, the nut, bridge and saddle, 6 bridge pins, 1 water sticker (soundhole binding), 1 strap holder and various wood screws. Additionally a complete Piezo system with an equalizer block is included too.

**TK-AG-4:** The still pre composed body consists of mahogany (ribs/side parts) and massive spruce (guitar top). Its neck (including the Trussrod inside) is also made of mahogany. The still assembled fingerboard consists of rosewood. All woods were pre shaped and pre handled and have to be finished only. Furthermore the kit is including 6 tuner vertebras (with screws and sleeves), 6 guitar strings, the nut, bridge and saddle, 6 bridge pins, 1 strap holder and various wood screws. The soundhole binding has been still worked in.



**TK-AG-5:** The still pre composed body consists of rosewood (ribs/side parts) and massive spruce (guitar top). Its neck (including the Trussrod inside) is also made of mahogany. The still assembled fingerboard consists of rosewood. All woods were pre shaped and pre handled and have to be finished only. Furthermore the kit is including 6 tuner vertebras (with screws and sleeves), 6 guitar strings, the nut, bridge and saddle, 6 bridge pins, 1 strap holder and various wood screws. The Abalone soundhole binding has been still worked in.

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## Tools and materials which will be required or which are useful to assemble the **Tenayo Classic-Guitar kit...**

- A rasp, file and different sandpapers for handling all wooden parts
- Professional glue for fixing the wooden parts
- Some cement to fill up possible spacing or to repair damages of the wood
- Some rubber ties to fix glued parts
- Screw clamps for fixing glued parts
- Some small wooden wedges to prevent damage while fixing them
- 1 small hammer or rubber mallet
- A wire cutter, flat nose pliers and a metal file
- Super power glue
- A tape measure
- Packthread for marking
- 1 lead pin and a rubber
- Some seersucker adhesive tape for marking and to prevent stains on the wood
- 1 Cutter
- 1 wood drill
- Some oil for the wood if the instrument shall be finished in this way
- Glossy laquer in different colors if desired

### First steps...

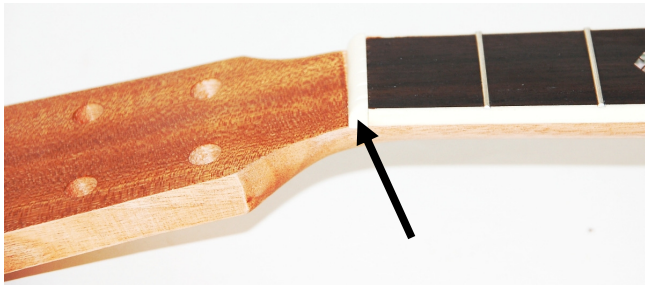
Initially the neck and body got to be connected together.

While doing this you should take care on having an absolutely straight seat of the neck. But the included three wooden dowels should make this step very easy to handle. The dowels have to be stuck and glued into the pre drilled holes (check the photo on the right). It is recommended to take a small rubber mallet or a hammer doing this in because of that they cannot put into it using for example only your thumb. Furthermore the guitar neck can be mounted onto its position. Please check the two photos below too. The neck-, rib and top-udiment has to be buttered with wood glue. And please do not save with that. Possible hangers can be removed with sandpapers later before finishing the guitar. The most important thing is that the neck and the fingerboard is sitting utterly at the ribs and the top of the guitar. There should be no spaces after gluing it. For more pressure while drying you can use some rubber ties\*. For better pressure the ties have to be bonded crossover around the glued parts. Drying time for the glue is for minimum 24 hours. Only now the ties can be unfixed again carefully.



*\*If you'd like to take screw clamps for fixing it is recommended putting some rubber pieces or slim wooden wedges in between the clamps and the wooden parts to prevent damage on the woods surface or for example the frets.*

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## Mounting on the nut and the bridge with its saddle...

Assembling the nut, on which the strings will be lead to the tuner vertebrae later, is very easy to do. It will be fixed in with some super glue at the rudiment between the fingerboard and the headstock (photo on the left). Thereby the skew side of the nut should show into direction of the headstocks end. But: In a few kits the nut

has been still glued in so there is nothing to do like this. Following the bridge shall be fixed on the body's top. Please check the two photos below. To glue this part you can take standard super power glue too. The underside has to be buttered equable with the glue. Don't safe with that. Potential hangers while pressing the bridge onto the top can be removed after drying (24 hours) by sandpapering.

### The most important thing is:

*Die distance between the nuts inner edge and the middle of the saddle (this is the white plastic bone over which the strings run later across the bridge) must be exactly the double of the distance between the nuts inner edge and the inner edge of the 12<sup>th</sup> fret. Please check the left photo too.*



*Furthermore the bridge must be placed exactly in the middle of the body's top so that the strings don't run aside the fingerboard later. Check the 2<sup>nd</sup> photo above on the right. At all: Before fixing the bridge you should survey the exact position of it - marking that with a lead pencil.*



Sequencing all the pre drilled holes on the surface of the bridge have to be drilled carefully and completely through the top (1<sup>st</sup> photo on the left side). The diameter of each hole should be not wider than 0,6mm to 0,7mm!!! If you use a wood drill with a bigger size it can occur that the bridge pins for

fixing the strings upside their ball ends (which have to be stuck into these holes) do not hold at all. After finishing that the saddle can be put into its slit on the bridges surface (2<sup>nd</sup> photo above). **Attention!!!** If you own a **TK-AG-3C** kit this step follows later and will be described in the next chapter. Because a hole for the Piezo cable has to be drilled into this slit too...



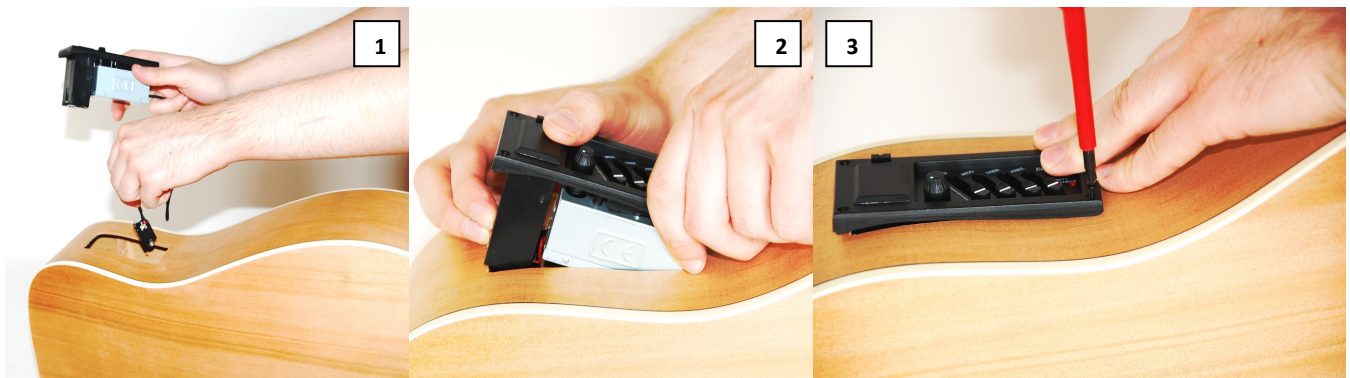
## Installing the Piezo system and the EQ block of the **TK-AG-3C** kit...

*(It is advisable, to install the complete electronic and the Piezo not before all work inclusive the finishing of the instrument has been done. So please check the following chapter in front too.)*

**At first** you should drill a 3 to 4mm hole into the saddle slit and through the body's top. The optimal position for the hole is in the right corner of the saddle slit. Please check also the photos below. Later the cable (photo 2 and 3) of the Piezo bone must be lead through that hole underneath the top (in direction to the soundhole) and has to be connected with the EQ-Blocks input jack (photo 4). In front of that step it is recommended installing the EQ-Block too.

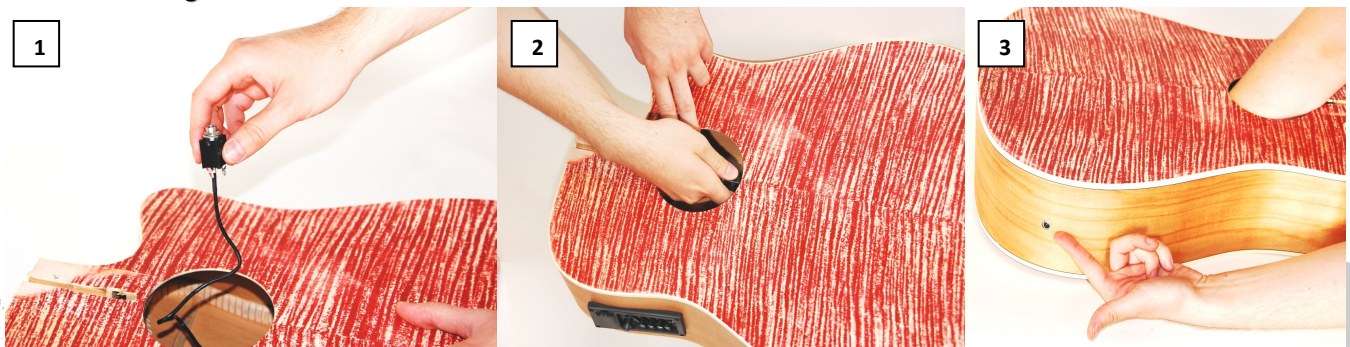
**Now the block with the equalizer can be put into the still pre sawed hole at the upside of the ribs...**

How to handle that is shown at its best (and in correct order) on the following three photos below. The EQ can be fixed with the 4 wood screws which are included in the kit (photo 3).



**Following the output jack (6,3mm) can be installed (from the in- to the outside of the body) into the pre drilled hole at the downside of the ribs...**

This step requires some skills und underarms which are not too thick - because the output jack has to be lead through the hole at the upside of the ribs, underneath the top (inside the body) and through the output hole (photo 3). So it is better pressuring the jack with your hand from the inside against the rib while fixing it with its nut and the ring washer at the outside.



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## Last works, fine sandpapering and the finish...

Yet the whole instrument should be sandpapered with different graining (to the finest) until you get a satisfying result or the acoustic-guitar feels like a "child's bum"\*. If you have finished with that all wooden parts of the instrument can now be oiled, colored or still lacquered. For oiling you can use a usual in the trade plant or olive oil. Or you can use special oil for handling woods. This can be done with a usual cotton flap. But this step should be repeated a few times and within days – to get a good effect. Before lacquering or coloring the guitar you should ask someone professional. Literature is recommended too. Parts (like the fingerboard or the bridge) which shall not be stained with lacquer or color have to be masked off with seersucker adhesive tape.

## The soundhole binding...

Some of our kits do include a water sticker for decorating the soundhole. This is very easy. You only have to put the whole sticker into hand warm water. The rather motive can now be carefully unfixed from its paper and put around the soundhole (photo on the right). Please keep care that the sticker cannot be removed after drying without damaging it. So you should take attention on a correct seat too. If you finish your instrument with clear lacquer the sticker can be covered with that without having trouble. As still said in the chapter before, you should read some literature about that or you better talk with a professional guy in front of doing this.



## Installing the tuner vertebras...

If the finish of the guitar has been done and everything has been dried you can start installing the hardware. First we begin mounting on the tuners. How to proceed with that is well shown at the following photos. All tuners have to be fixed with their sleeves, the nuts and wood screws at the back of the headstock (photo 4). But: please keep your attention on that the loops of all tuner vertebras have to show 45° into the mid of the headstocks back.



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## Putting on the strings, the tuning and fixing of the strap-holder...

Are you ready? And really all works have been finished but your guitar doesn't want to sound at all? OK. Perhaps we shall proceed with getting the guitar strung - or not? Let us begin with the 1<sup>st</sup> string – that's a high e. Then



we should go on with the 2<sup>nd</sup> (b), the 3<sup>rd</sup> (G), the 4<sup>th</sup> (D), 5<sup>th</sup> (A) up to the 6<sup>th</sup> and thickest string, that's the deeper E. You only got to put the ball ends into the drilled holes on the bridge and fixing them with the bridge pins using your thumb to put them in. You can check that on the photo on the left too. The upper sharp end of the strings have to be put onto the holes of the tuners and winded up by rotating the tuners heads into the direction of the headstocks end (E, A, D) respectively into direction of the guitars body (G, b, e). In fact the strings shall be

now all tuned from the deepest string up to the highest and for standard in **E, A, D, G, b, e**. If you are not able to manage that by hearing you should use a customary in the trade electric tuner.

Last of all and optionally you can fix the strap holder in the middle of the ribs at the downside of the guitars body (photo on the right) with the included wood screw - putting in between the rubber ring washer. But most of the acoustic guitar players play while seating on a chair... ((-: So you don't need to do that really. But if wanted take your lead pencil to mark the position in front of drilling a hole or so.



***Take care and have a lot of fun with your first self-made acoustic-guitar by **Tenayo!!!*****

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