

Compass Rose Guitar Parametric Tilt Neck Instructions

There is a long tradition of “tilt neck” guitars going back at least as far as the 1820s when Johann Stauffer of Vienna (Christian Frederick Martin’s mentor) built then state-of-the-art guitars with what has become known as the clock key heel mechanism. Fast forward about 75 years, and you have the wonderful guitars made by the Howe-Orme company of Boston who used a system with a fixed hinge point at the heel cap of the guitar with two cross drilled hex bolts under the fingerboard which allowed the neck to be tilted for raising and lowering the action. Then in the 1930s, August Larson patented a further improvement of the neck tilting action which also permitted altering the distance from the neck heel face to the end of the body; this was the first fully parametric neck tilting arrangement as it permits not only the action to be quickly changed, but also the overall intonation to be adjusted by moving the neck in or out, shortening or lengthening the scale by just enough to compensate for different string gauges and action height.

Though our parametric neck joint was first inspired by the Howe-Orme system, it more closely resembles the Larson design. There is a 3/8” steel rod in the heel of the neck which is welded to the adjustable truss rod. The head of the action adjustment cap screw bears against this rod, and the tilt lock screw is threaded through it, and so these screws do not put any stress on the wood of the heel of the guitar.

To adjust the action on the Turner Compass Rose acoustic, first loosen the lock screw which is the Allen head set screw closest to the heel cap using a 3/32” Allen wrench. Then adjust the action to suit using a 5/32” Allen wrench with the larger cap screw just up from the lock screw. Turning the wrench clockwise will lower the action; turning the wrench counter-clockwise will raise the action. When you get the action where you want it, tighten the lock screw just snugly enough that the neck doesn’t move.

To adjust the overall intonation, loosen the strings slightly, and then turn the two hex bolts under the fingerboard with a small flat open end wrench. If the intonation is slightly flat, turn the bolts clockwise (as though you were looking at the bolt heads from guitar body view). Turn an equal amount to keep string alignment correct. This will shorten the scale length and bring the 12th fret harmonics in tune with the 12 fret note. Adjust, test, adjust, test until the intonation is dialed in.

You can also change the alignment of the strings on the fingerboard by adjusting only one of the hex head pivot bolts.

Removing the neck is also incredibly easy with the parametric neck; just remove the action adjustment cap screw and the neck comes right off, making it easy to do any maintenance work or even to ship the guitar in something smaller than a standard guitar case.

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