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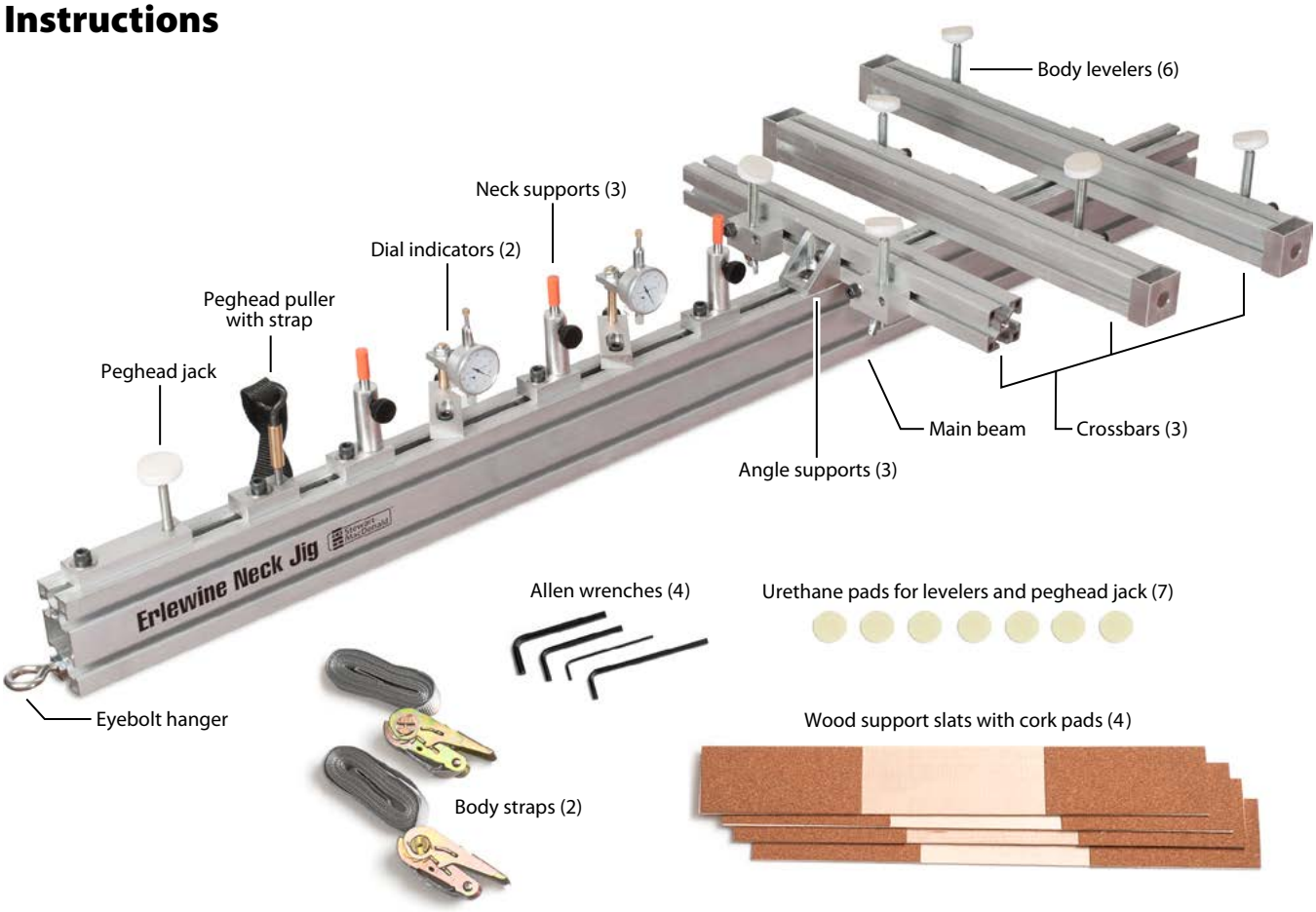
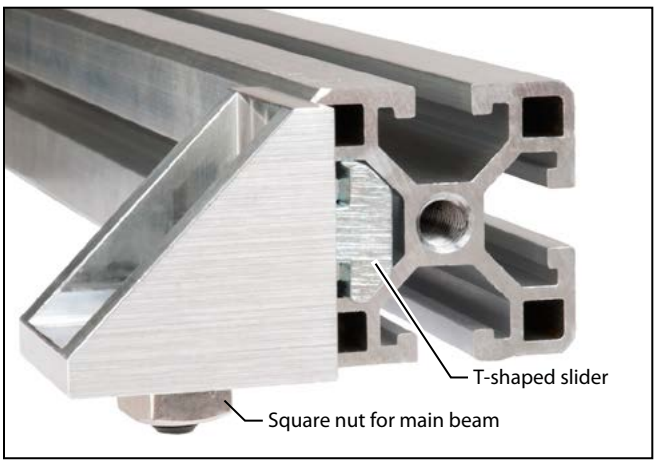
Erlewine Neck Jig

Instructions



How to assemble the Neck Jig



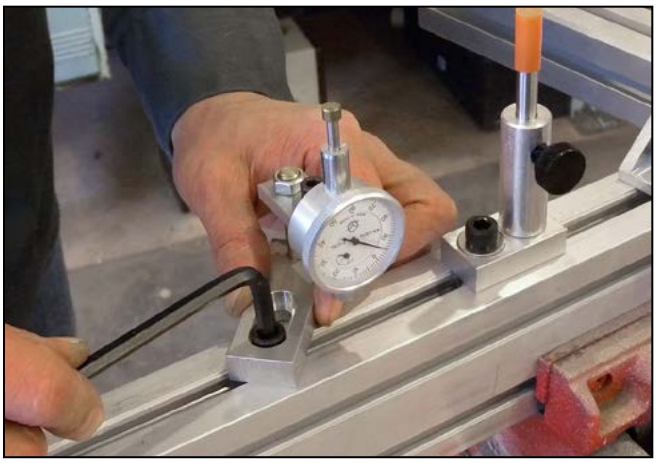
1. Install an angle support in each of the three crossbars. The T-shaped sliders fit the crossbars, and the square nuts are for mounting to the main beam. Two of the crossbars have etched centering scales, which should face upward.

2. Attach the crossbars to the main beam using the square nuts. The shortest bar provides support near the neck joint and should be installed first. The longest bar supports the tail end of the instrument and should be installed last.

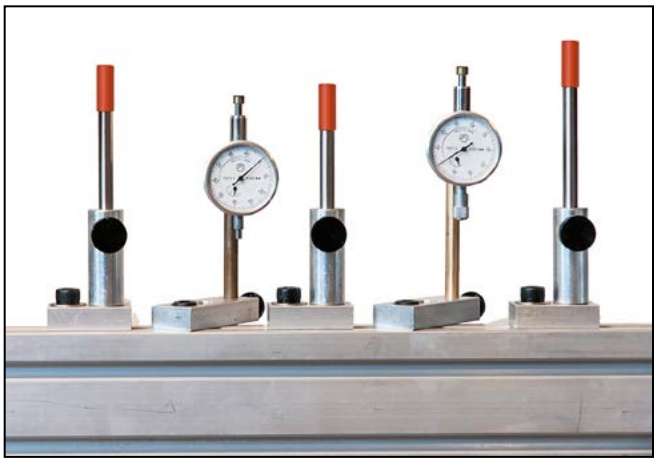
3. Install a neck support rod on the main beam. These three rods adjust vertically to support the instrument neck. The bottom end of the rods drop down into the slot in the main beam.

TIP: Sand the top of the plastic cap to create a smooth, flat surface for contacting the instrument neck.

4. Attach the two dial indicators to their supports.



5. Attach the first dial indicator to the main beam. The dial's mounting bracket is offset, allowing the height-adjustable rod to move in relation to the main beam.



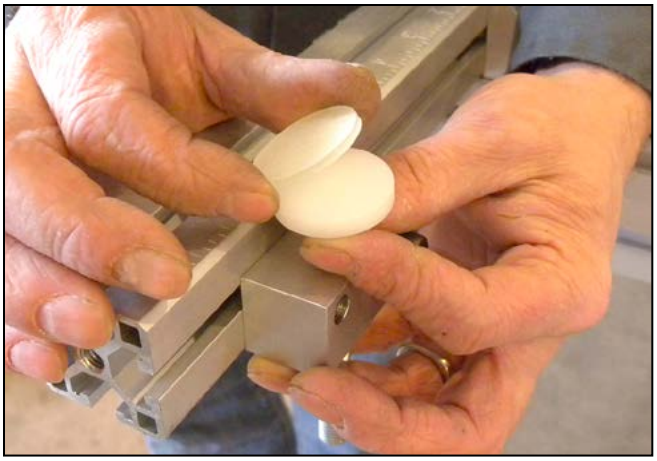
6. Install the two remaining neck support rods and the dial indicator.

7. Attach the peghead puller and thread the strap through the eyebolt.

8. Install the peghead jack. The threaded leveler can swing to either side to support asymmetrical pegheads.

9. Attach two levelers to each beam.

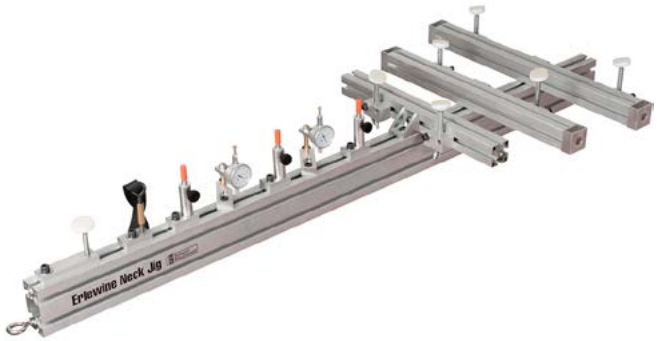
We have included urethane pads to cushion the levelers. Attach them to the swivel head levelers using super glue.

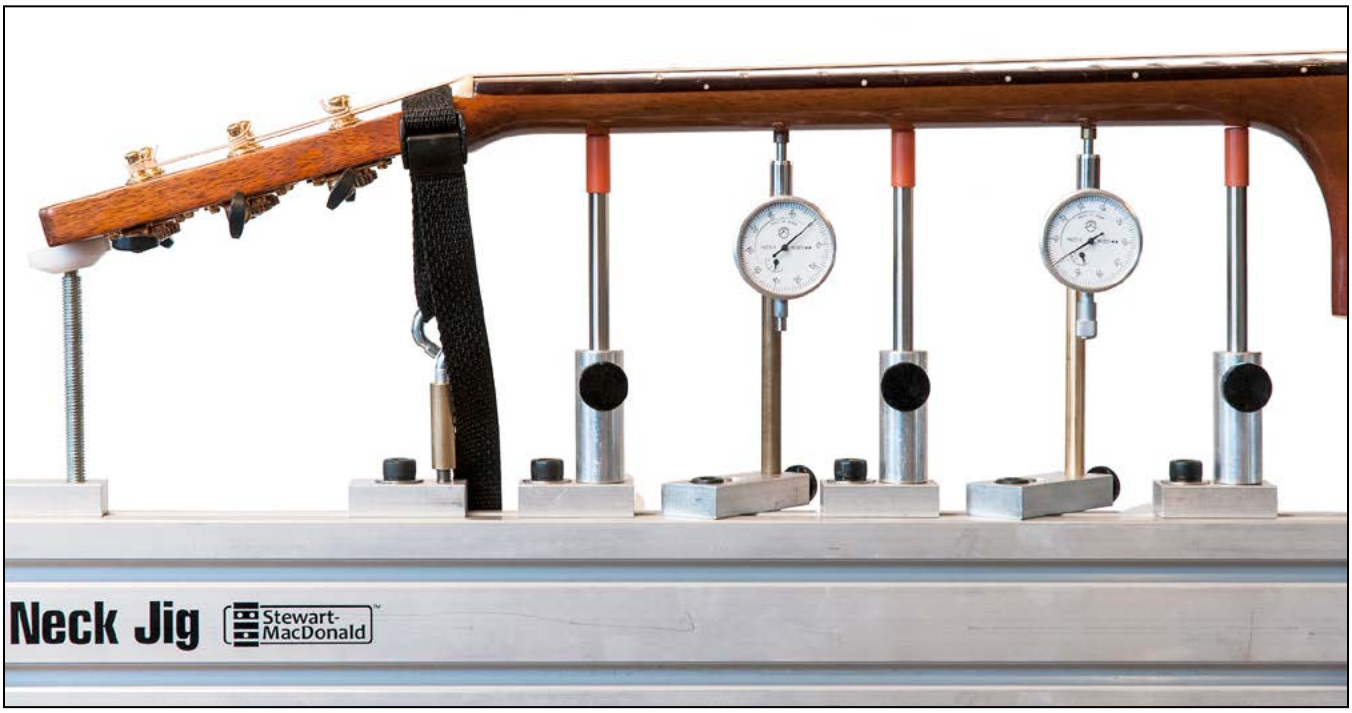


We have also included wooden slats which span the levelers, giving gentle support to any instrument strapped into the Jig. Self-adhesive cork pads are included, and may be cut to any size that suits your needs. Wrap these slats in clean paper before using them; this provides a smooth surface to protect instrument finishes under clamping pressure.

10. Install the eyebolt hanger in either end of the main beam for storing the Neck Jig.

Your assembled Neck Jig is ready for use!





Using the Neck Jig

The Erlewine Neck Jig is a string tension simulator. When the strings are removed, the Neck Jig holds the neck in the same curvature that existed under string tension.

This eliminates the problem of working on frets, then finding that everything has changed when you string the guitar back up to pitch. The result: fretwork without guesswork!

Quick overview

Jig the body Begin with strings on the guitar, tuned to pitch. It's not necessary to loosen the truss rod or adjust the neck at this point. Rest the guitar body on the adjustable-height levelers, and hold it firmly with the body straps while the neck remains free and untouched.

Tilt to playing position With the guitar strapped in, turn the Neck Jig 90 degrees into the same position as when it's being played.

Adjust the neck In the playing position with the strings tuned to pitch, adjust the neck for the work you plan to do. This usually means straightening the neck.

Zero out the dials Bring the dial indicators into contact with the straightened neck, and set the dials to zero. Now, any change in the neck will be evident in these dials, causing them to deviate from zero.

Return to horizontal and remove the strings Tilt the Jig back into the horizontal working position and remove the strings. The neck will backbow from the release of string tension and the pull of the truss rod.

Simulate string tension Use the peghead jack and the peghead puller, lifting and pulling to recreate string tension. This forces the neck back into position as you see the dial indicators read zero again.

Support the neck Now raise the neck support rods, bringing them into firm contact with the back of the neck. These supports keep the neck from flexing during leveling.

Consider replacing the nut: Most refret jobs require a new nut. It's easier to level the frets, or the fretboard, when the guitar's nut is out of the way. If you're planning to replace the nut, remove when you take the strings off.

Jigging a guitar, step-by-step

1. Hold the guitar over the jig to determine where to position the neck supports and body levelers (photo, left). Move the support rods, crossbars and levelers roughly into position.

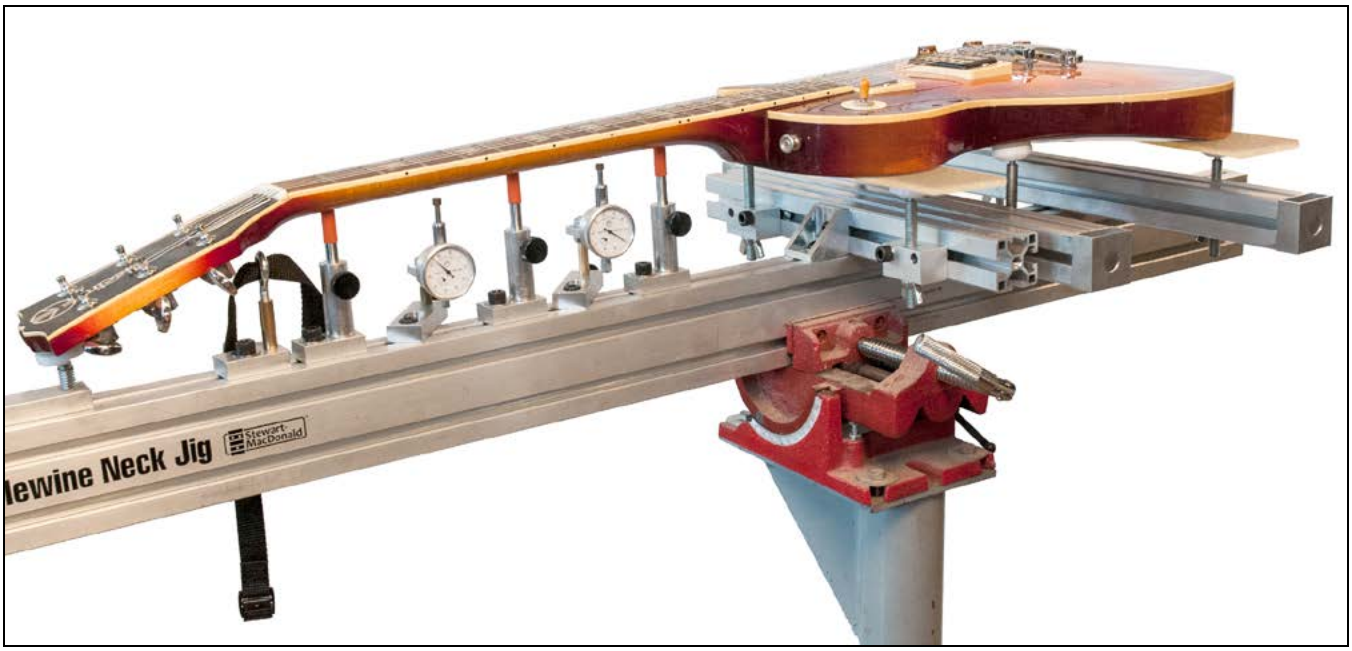
2. Using the wooden support slats is optional (see below). Position them now so that they span the levelers.

Warning about acoustic guitars: Before jigging an acoustic, think about the guitar body's internal construction. The body must be supported under the strong kerfed joint where the back meets the sides, not at the unsupported areas of the back.

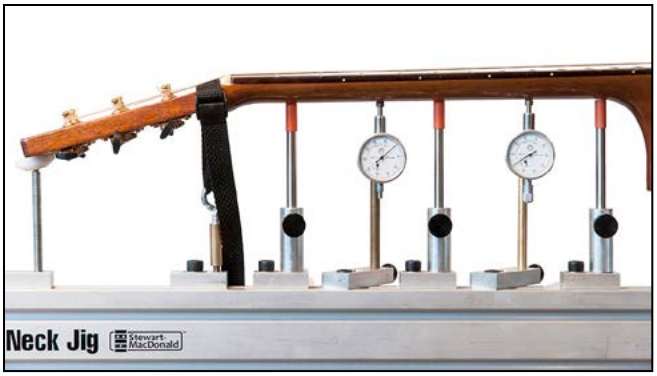
Some acoustic guitars, such as Martin dreadnoughts, will jig safely with the just body levelers supporting them directly under the edge joint, but most won't. We recommend spanning the levelers with wooden slats for all acoustics.

The adhesive-backed cork supplied for the slats is useful padding, but wrap the slats in clean paper to have a smooth, non-reactive surface for contacting finishes under pressure.

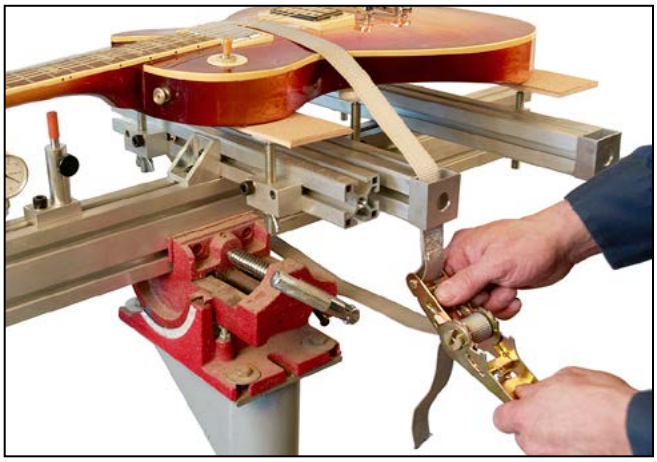
Center the body strap over the guitar's waist and tighten it just enough to hold the body firmly.



3. Gently set the guitar on the body levelers (and paper-wrapped slats, if you're using them). A sandbag or padded weight placed on the guitar body is a helpful temporary weight to keep the guitar from moving as you position the body on levelers and center the neck over the support rods. Adjust the height of the levelers so that the fingerboard is approximately parallel with the main beam. The lower you can set the levelers the better — for solid, stable support.



4. Arrange the neck support rods and dials along the neck, centering the neck over the support rods. Position one support rod near the curve of the heel and another approximately under the first fret. Once they're in position, tighten the cross bars, levelers, and neck supports.



5. Now you're ready to strap down the guitar body. This will pull the guitar downward, so first lower the neck support rods out of the way so they won't mar the neck.

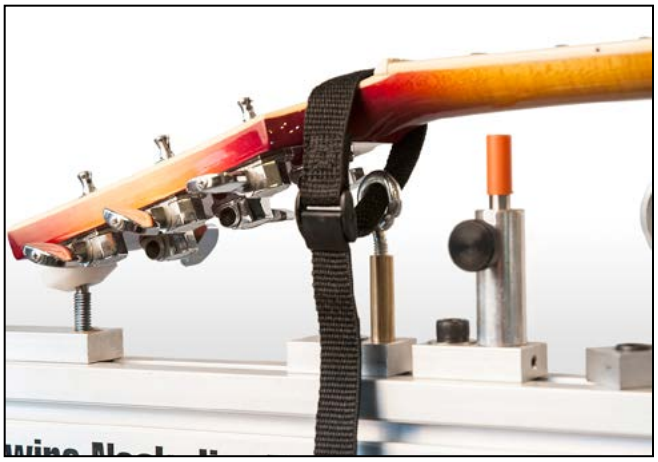
Place the body strap across the guitar's waist, pass it under the beam, and thread it through the slotted hub of the ratchet. The ratchet opens toward you, with the strap connection at the top. The ratchet can be positioned above or below the jig. Close the ratchet and snug the strap loosely.

Protect the guitar's finish with pieces of felt or paper where the strap contacts the corners of the instrument.

Add the second strap over the body's lower bout if needed.

Caution: Before tightening the body straps, lower the neck support rods. Tighten the hold-down strap gradually until the guitar body is snug on the levelers. Sometimes a guitar will require two straps in order to secure it on the levelers.

7. Set each dial to zero by turning the indicator's outer ring. Turn the dial to zero, then turn it past zero by two full rotations before arriving at zero again. These extra rotations give the dial room to move and adjust on either side of zero as you adjust the neck. The thumbscrew locks the outer ring.

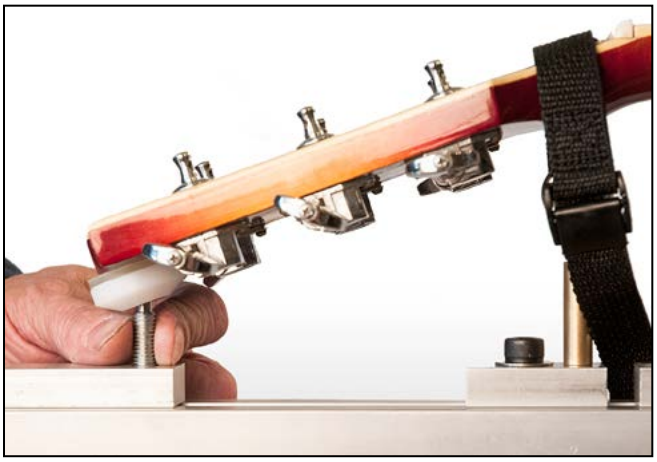


6. With the guitar tuned to pitch, move the Neck Jig onto its side (the playing position). Adjust the neck for fret leveling or dressing; the truss rod should create backbow when tightened and create relief when loosened. You want the neck to be straight for fret work.

8. Return the Neck Jig to the horizontal working position and remove the guitar's strings. Adjust the peghead jack until it fits loosely between the beam and the end of the peghead. Install the peghead pull-down strap allowing a small amount of slack.

9. The neck will backbow with the strings removed, and the dial settings will no longer read zero. In our case, the dial nearest the nut has compressed .031" (left photo) and the dial nearest the body has compressed .008" (right photo). These are typical readings.

11. When the neck is re-zeroed to your satisfaction, slide the neck supports up against the back of the neck. These rods keep the neck from flexing while you level the frets or the fretboard.



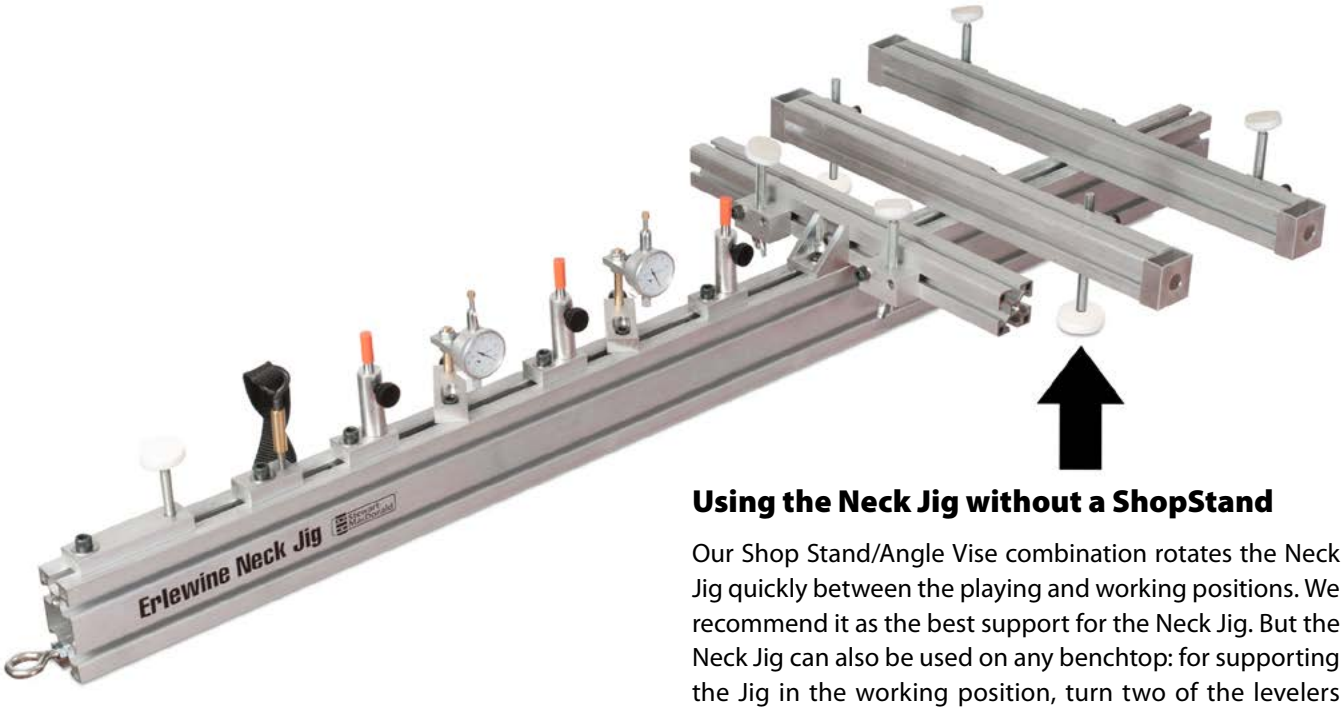
10. Slowly raise the peghead jack until the dials read zero again. If the rear dial is off, tighten down the peghead strap until zeroed. Go back and forth between these adjustments, until both dials remain as close to zero as possible.

Depending on the neck, you may not always get perfect zeros. If the peghead jack and pull-down strap don't zero the dials to your satisfaction, use your straightedge as a guide while forcing the neck into the same configuration you saw when in the playing position.

12. Here a fret leveler is used to level the tops of the frets. Whether you're doing a complete refret, or a fret-dress job, once the frets have been leveled you can remove it from the Neck Jig to finish the details at your workbench.

The guitar can remain in the Neck Jig throughout an entire fret job if you're pressing in frets, but don't hammer on the frets over the support rods and dial indicators — the hammer blows can cause support rods to dent the back of the neck.

Even when you hammer over the body extension, put cushioning material between the neck and the support rods to prevent damage.



Using the Neck Jig without a ShopStand

Our Shop Stand/Angle Vise combination rotates the Neck Jig quickly between the playing and working positions. We recommend it as the best support for the Neck Jig. But the Neck Jig can also be used on any benchtop: for supporting the Jig in the working position, turn two of the levelers downward to become stabilizing feet (above).

To rotate the Neck Jig into the playing position on a benchtop, place two wooden blocks under the main beam. Use two bar clamps to hold the Jig and blocks to the bench. The guitar body is suspended off the end of the bench.