

Assembly Instructions	
Siminoff "V" neck joint	
Rev: 3/15/09	Pt# DS

The *Siminoff* "V" joint provides for a simple and effective way to install a mandolin neck. Unlike the conventional "dovetail" joint, which is less forgiving when aligning the neck and headblock assembly, the "V" joint allows for some adjustment of the neck alignment during the gluing procedure. After gluing, the neck is anchored with two dowels, providing a strong dovetail-like connection.

**General information:**

Our "V" joint (Service #DS) includes the headblock with cap attached and V-slot cut, two dowels, and a V-shaped neck heel (Fig. 1).



(NOTE: Do not re-shape the flattened side of the neck heel unless you are changing its size to allow the neck to sit lower in the headblock.)

Fig. 1

**Rib Assembly Instructions:**

- 1) Ensure that the neck fits properly into the "V" joint in the headblock.
- 2) Follow the rim assembly instructions that came with your *Siminoff* Body Assembly fixture or download a free copy from our web site at: [http://www.siminoff.net/pages/siminoff\\_downloads.html](http://www.siminoff.net/pages/siminoff_downloads.html)
- 3) Assemble the entire rim and soundboard before you cut the neck slot opening into the S-shaped rim piece that goes around the headblock. When the glue is dry and the assembly is removed from the fixture, then cut/file/sand the rim piece flush to the "V" opening.



Fig. 2

**Neck attaching fixture:**

To facilitate the neck joining process, it is best to build a simple alignment fixture as shown in Fig. 2. The fixture is a plain board with a "surrogate bridge" (cradle) that is shaped to match the curved surface of the soundboard. Draw a centerline down the board and an outline of the neck's fretboard plane so that you know where to position the neck on the board. The centerline should extend to the end of the fixture so that you can check the alignment of the soundboard's centerseam at butt of the instrument.

The cradle is attached to the board so that it is aligned perpendicular to the centerline and sits on a line that runs between the centerpoints of the two *f*-holes. As such, the cradle acts as a fake bridge to hold the body at the correct height and orientation relative to the neck and fretboard plane.

The center of the cradle is 1/2" at its lowest point, and the cradle should be 10" wide so that the soundboard is automatically centered from left to right when placed on the cradle.

The height of the cradle and its alignment to the fretboard plane of the neck automatically ensure the correct neck pitch, centerline alignment, and proper bridge height (taking into consideration that the fretboard has not yet been installed). This ensures the correct 16° "string break angle" over the bridge.

Remove wood from the fixture to prevent the scroll portion of the soundboard from interfering with the fixture (see area circled in Fig. 2).



Fig. 3

### Installing the neck:

1) Clamp the neck to the fixture as shown in Fig. 3. Use a leather caul so you do not mark the neck. Mark a line on the sides of the neck where the headblock joins the neck (see arrow in Fig. 4). Place the backboard in its correct location and draw the neck nub onto the heel of the neck. Remove the neck from the fixture and do any filing and shaping necessary to the neck heel (Fig. 4). Re-check the relationship of the backboard to the neck heel.



Fig. 4

2) Clamp the neck to the fixture being sure to use a leather caul to protect the neck. Apply Titebond Cement® to the neck heel's sides and back up to the line drawn in step #1 above. Apply cement to the inside of the "V" joint.

3) Place the body onto the cradle and align the "V" joint and neck. Ensure that the body is pushed towards the peghead, against the neck heel, and that all parts are aligned.

4) Gently clamp the headblock to the board as shown in Fig. 3. (NOTE: Do not overtighten or you could crack open the headblock through the "V" joint.)

5) Use a Q-Tip® or similar swab to remove excess glue along the neck seam. Place the assembly aside to allow the cement to cure for 24 hours.

6) When the cement has cured, remove the body and neck assembly from the fixture, and sand the bottom of the neck heel flush to the bottom of the headblock.

7) Mark the location of the locking dowels on each side of the neck heel as shown in Fig. 5. With the holes drilled in these locations, the dowels will go through the bottom of the headblock and into the neck (they pass through the "V" on a bias). This provides for a secure lock between the neck and headblock.

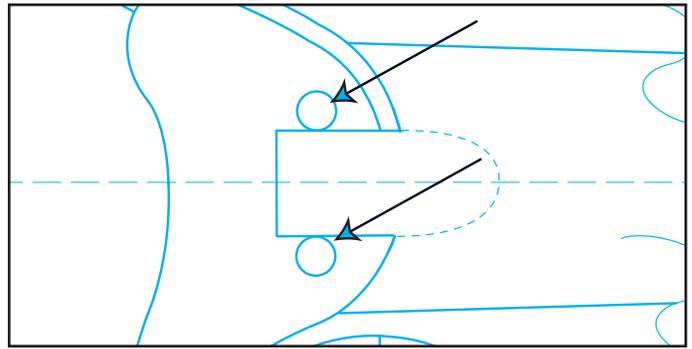


Fig. 5

8) Place the body assembly in a drill press (Fig. 6), with the neck's fretboard plane resting on the drill's table, and drill two holes the size of the dowels provided (5/16" dia.). Place some Titebond Cement in the holes and use a small stick or swab to smear the cement onto the walls of the holes. Place cement onto the dowels. Force the dowels in place using hand pressure or the aid of a large "C" clamp. **DO NOT** hammer the dowels in; the pressure against the cement could fracture the headblock.



Fig. 6

9) Install the fretboard extender and fretboard before you shape the small fillets (i.e., the exposed maple of the fretboard extender and of the headblock's cap).

10) The maple cap on top of the headblock should be sanded flush to the fretboard plane, and it should be sanded so that it is the same angle as the fretboard plane.

### H5 instruments:

The center of the cradle for H5 mandolas should be 17/32" - 9/16" high.

### F4 instruments:

The neck pitch on F4 mandolins is only 4° and typically requires a lower bridge height. For F4 soundboards, instead of using a cradle, the fretboard plane of the soundboard should be flush to the face of the fixture. This will ensure that the fretboard plane of the neck and fretboard plane of the soundboard are in alignment with each other.