

Geared Machine Specifications

Siminoff's product line-up of geared machines represents one of the most complete selections available today. The following information will provide you with the necessary specifications for our mandolin and mandola tuning machines along with helpful tips for installation. Our machines feature Gotoh gears, and Gotoh's innovative Delrin bearing assembly between the posts and backstrap for smooth turning.

Note: Actual shaft lengths may vary slightly depending on how tightly knobs are tightened to the shafts. Since abalone and pearl buttons are hand burnished, their exact diameters may vary slightly.

Closest replica of original Loar machines available!

F5 mandolin, H5 mandola - Loar machines
Part #: 301LG (gold), 301LN (nickel)
Knobs: hand-burnished mother of pearl*
Tuning direction: counterclockwise to tighten (standard)
Post spacing: 29/32" (.906" / 23mm)
Gear ratio: 16:1
Gear screws: flat head, slotted, black oxide
Backstrap screws: round head, slotted
Knob screws: round head, slotted w/washers
Knob shaft: flatted two sides, .108"x.145"
Gear positioning: worm below round gear
Backstrap decoration: engraved
Bushings: custom eyelet-size head

* available knobs: abalone

F5, H5 (bass set shown)

F5 mandolin, H5 mandola
Part #: 301G (gold), 301N (nickel)
Knobs: pearlized plastic*
Tuning direction: counterclockwise to tighten (standard)
Post spacing: 29/32" (.906" / 23mm)
Gear ratio: 16:1
Post screws: Philips
Backstrap screws: Philips
Knob screws: Philips
Knob shaft: flatted two sides, .108"x.145"
Gear positioning: worm below round gear
Backstrap decoration: engraved

* available knobs: mother-of-pearl, abalone, ivoroid, black ivoroid.

F5, H5 (bass set shown)

F5 mandolin, H5 mandola - INVERTED
Part #: 303G (gold), 303N (nickel)
Knobs: pearlized plastic*
Tuning direction: counterclockwise to tighten (standard)
Post spacing: 29/32" (.906" / 23mm)
Gear ratio: 16:1
Post screws: Philips
Backstrap screws: Philips
Knob screws: Philips
Knob shaft: flatted two sides, .108"x.145"
Gear positioning: worm above round gear
Backstrap decoration: engraved
Note: post holes must be drilled 1/2" lower than std.

* available knobs: mother-of-pearl, abalone, ivoroid, black ivoroid.

F5, H5 inverted (bass set shown)

F4 mandolin

Part #: 302G (gold), 302N (nickel)

Knobs: pearlized plastic*

Tuning direction: counterclockwise to tighten (standard)

Post spacing: 29/32" (.906" / 23mm)

Gear ratio: 16:1

Post screws: Philips

Backstrap screws: Philips

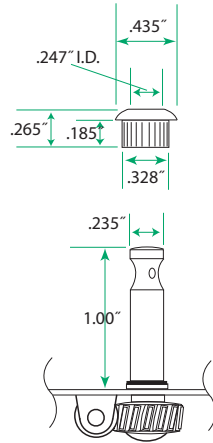
Knob screws: Philips

Knob shaft: flatted two sides, .108"x.145"

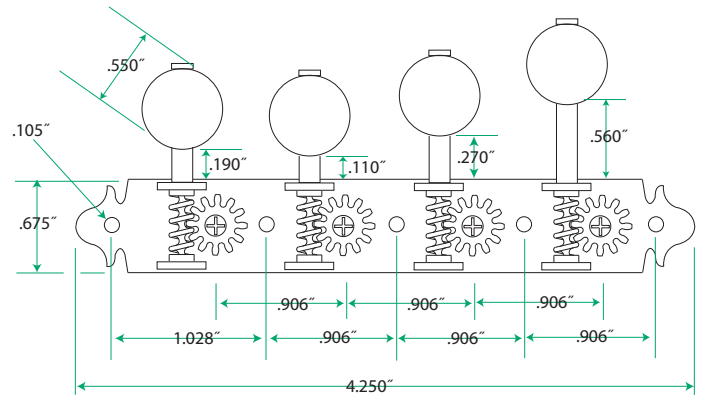
Gear positioning: worm below round gear

Backstrap decoration: engraved

* available knobs: mother-of-pearl, abalone, ivoroid, black ivoroid.



F4 (bass set shown)



A-1 through A5 mandolin

Part #: 304G (gold), 304N (nickel)

Knobs: pearlized plastic*

Tuning direction: clockwise to tighten (reverse of standard)

Post spacing: 29/32" (.906" / 23mm)

Gear ratio: 16:1

Post screws: Philips

Backstrap screws: Philips

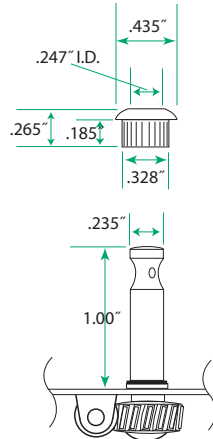
Knob screws: Philips

Knob shaft: flatted two sides, .108"x.145"

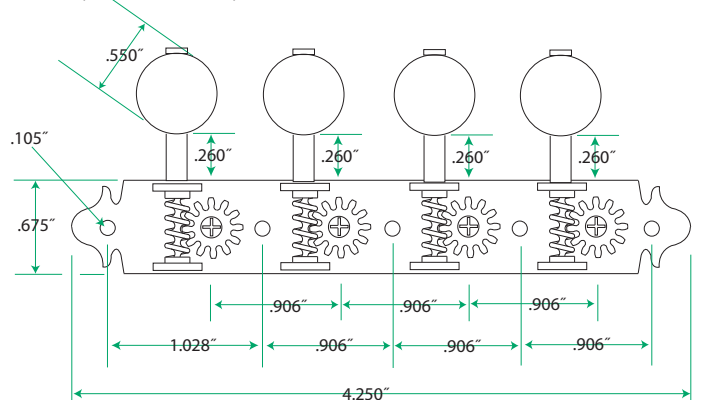
Gear positioning: worm below round gear

Backstrap decoration: engraved

* available knobs: mother-of-pearl, abalone, ivoroid, black ivoroid.



A1-A5 (bass set shown)



A1 through A5 mandolin INVERTED*

Part #: 304G (gold), 304N (nickel)

Knobs: pearlized plastic**

Tuning direction: counterclockwise to tighten (standard)

Post spacing: 29/32" (.906" / 23mm)

Gear ratio: 16:1

Post screws: Philips

Backstrap screws: Philips

Knob screws: Philips

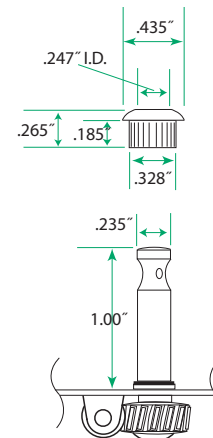
Knob shaft: flatted two sides, .108"x.145"

Gear positioning: worm above round gear

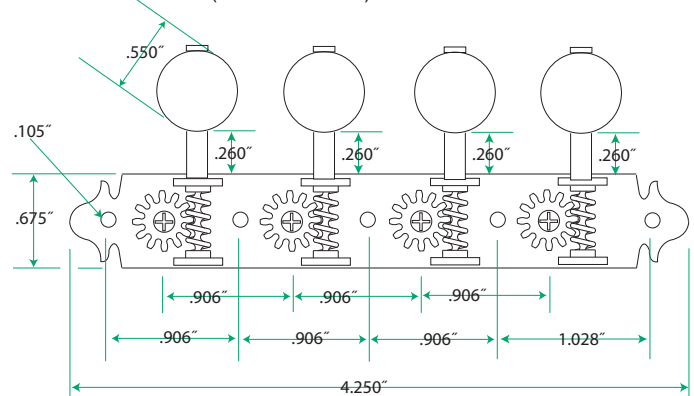
Backstrap decoration: engraved

* Rotate the #304 machines to invert them.

** available knobs: mother-of-pearl, abalone, ivoroid, black ivoroid.



A1-A5 inverted (bass set shown)



Installation tips for smooth-turning machines:

1. Use a drill guide such as our #1100, 1101 or 1102 steel guide and drill post holes from the FRONT of the peghead (with back of peghead on drill press table). Since the peghead of F5/H5 instruments are tapered, drilling from the front will ensure that the posts are perpendicular to the back of the peghead and to the backstrap.

2. Use a 1/4" drill bit to make the initial holes. Install the machines and drill guide holes for the backstrap (wood) screws. Install all backstrap screws (this locates the posts to be concentric with the holes after the holes are enlarged in the next step). Remove the machines and use a 21/64" drill bit and drill all the way through the original 1/4" peg holes. A 21/64" bit is the correct size for the bushings assuming that there will be the addition of lacquer or finish in the bushing holes. Drilling all the way through ensures that the posts only bear against the bushings and the backstrap and do not rub against the peghead wood. This ensures smooth non-slip turning of the posts.

3. After the instrument is finished, use a #11 X-Acto blade - held at a 45° angle - to remove finish from the corner edge of the bushing holes. This ensures that the bushing will not press against finish and cause it to craze or crack when the bushings are pressed in place.

4. Use a dowel in your drill press (with the drill OFF) to PRESS the bushings in place being sure to stop when the lip of the bushing is just about to make contact with the finished surface of the peghead. Do not force the bushings into the peghead face or the finish might craze or crack. DO NOT HAMMER the bushings in.

5. Test fitting the bushings (so you can play the instrument in the white) will require you to carefully PRESS out the bushings before finishing. Prepare a piece of wood with a 27/64" hole in it that will fit around the bushing and against the peghead wood to act as a support as you press out the bushings. This will help prevent peghead wood from chipping or being pushed out with the bushing.