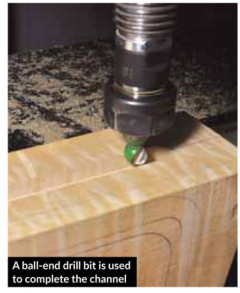

Finishing off the hole with a hand drill

4 I finish the drilling with a hand drill, so that the hole reaches exactly 134.5mm. I cannot reach this depth with the drill press; if I could purchase a longer bit, I would skip this step.


Making a channel in the maple block

5 For the next stage I use an overhead router. A hand-held one can also be used, or a table version with the router mounted underneath. I use a half-inch, square-end router bit, and it is essential to use a fence as well, to centre the cut of the bit.

I make two passes to router a 9.5mm groove in the top of the maple block: the first at a depth of 5mm and the second for the remaining 4.5mm.


A ball-end drill bit is used to complete the channel

6 I change the router bit to a half-inch ball-end, before making a final pass that brings the depth of the channel to 13.3mm. (This allows space for a 1.5mm maple fillet, as shown in step 10.)


A long chisel is used for squaring the hole

7 I square the back of the long hole to fit the D-shaped cross-section of the beam. For this I use a long chisel with a width of 8mm, made from a jointer knife.


The beam ready to be cut to length

8 The beam is manufactured extra long, so I cut it to the length of the neck behind the nut. I like it to be visible in the pegbox, though it can be hidden just beyond the fingerboard by machining a shorter channel. I use a rotary disc to cut it to length, at an angle which matches that of my pegbox. I wear a mask for this stage because of the carbon-fibre dust produced.


Checking the turn with a wooden template

9 I finish making the 90-degree turn in the block, using a wooden template to make sure the curve will fit the beam exactly. Then I use a gouge and finally a small rasp to fit the beam. I also put a nylon string under the beam, ahead of the turn (visible in step 10), which allows me to lift it during the fitting. ▹