Center line

Make pickup cavity
5/8" (15mm) deep

"Harmonics line" (see text)

Trace outline from pickup baseplate

Add 1/32" (0.8mm) for cavity outline

The pre-drilled pickup cavity

Removing the remaining material with a chisel

Pre-drilling the control cavity

Cleaning up the cavity

Connecting the control cavity with the pickup cavity

Fitting the electronics

Cutting the pickup cavity

The only space available for mounting the pickup is the area between the end of the fretboard and the bridge. Lap steel guitars sound best when the pickup is placed close to the bridge as this gives a brighter sound. You can determine the best position by ear. String up the guitar and try to find points of rich harmonics. You probably know that one point with distinct harmonics is the halfway point on the scale. When you gently tap a finger on a string at the 12th fret and then pluck that string, you'll hear the harmonics right away. Now do the same closer to the bridge. It is more difficult to produce and hear the harmonics there, but if you try at different locations on the bass (sixth) string, you will be successful. Note any occurrences of harmonics with a pencil mark directly on the blank. I discovered harmonics $9^{31}/_{64}$" (241mm) from the 12th fret on all three bass strings.

Remove the strings and mark a "harmonics line" across the plank. Then position the pickup so that the centers of its polepieces are exactly above this line. Also center the pickup on the plank, then lightly trace its outline on the wood. Add $1/_{32}$" (0.8mm) on all sides and draw the pickup cavity shape.

Cut most of the cavity with a $3/_4$"(20mm)-diameter Forstner drill bit, drilling to a depth of $5/_8$" (15mm). Remove the remaining material with 1"(24mm) and $1/_2$"(12mm)-wide chisels.

Cutting the control cavity

The control cavity is made on the side of the blank (see drawing below and pictures on following pages). Predrill a 30mm-deep and 60mm-long cavity with a 1"(25mm) Forstner drill bit and finish with a 1"(24mm)-wide chisel. Finally, use a $1/_4$"(6mm) bit for drilling a channel to connect the pickup cavity with the control cavity.

2-3/8" (60mm)

Pickup cavity

1-3/8" (35mm)

1" (25mm)

Center line

Drill 1-3/16" (30mm) deep