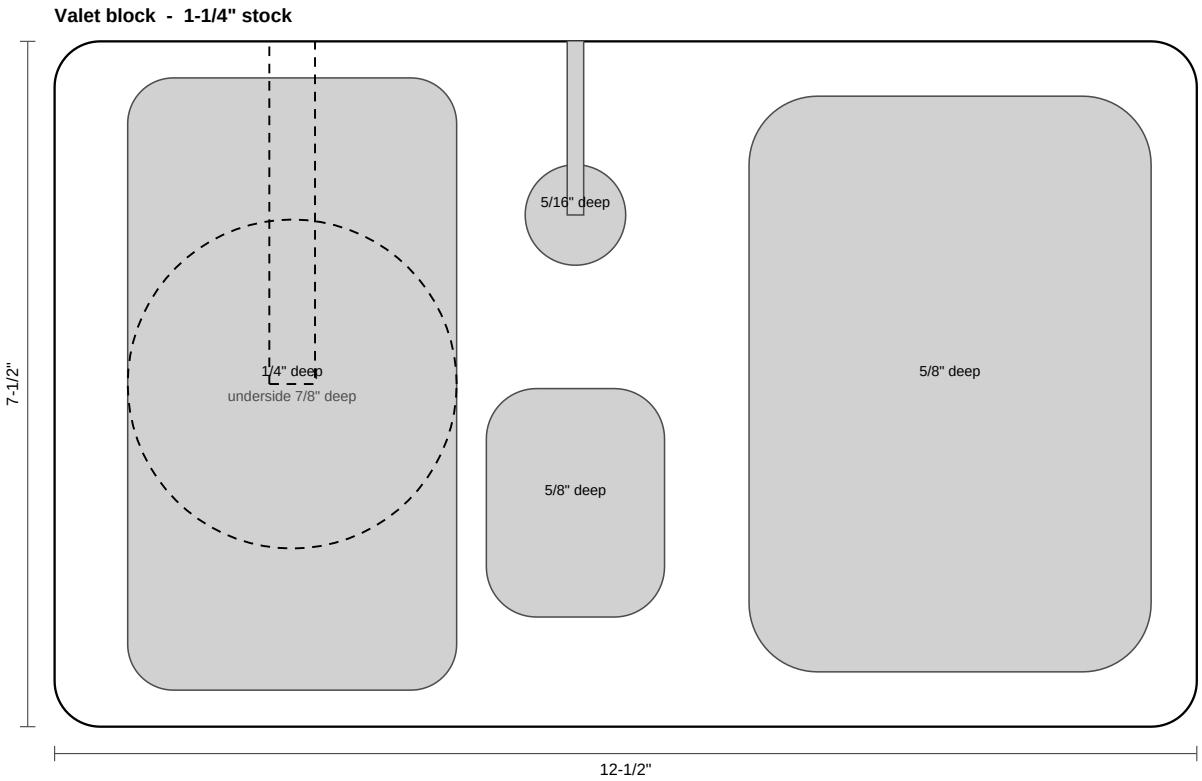
Charging Valet

Phone, watch, earbuds and a catch-all in one block, with a wireless charger hidden under the phone.



Machine & stock

CNC router, two setups. 1/4" end mill for the big pockets and profile; 1/8" end mill for the watch cable channel.

Top pockets: phone bed 1/4", watch charger and its cable channel 5/16", earbuds 5/8", catch-all 5/8".

Underside: 3.6" round pocket 7/8" deep for a Qi charging pad, leaving 1/8" of wood under the phone, plus a 1/2" cable channel out the back.

Hardware

A round Qi charging pad up to 3-1/2" across and no more than 3/4" thick, with a thin foam spacer to press it against the wood.

A watch charging puck. Measure yours: the pocket is 1.10" across and 5/16" deep, with a 0.18"-wide channel for its cable.

Cork sheet for the bottom.

Steps

1. Underside first while the blank is flat: run the underside file (it is mirrored, as seen from below), with the outline as a registration reference.

2. Flip the block, register on the same corner, and cut the top pockets, then the profile with tabs.

3. Before finishing, test the charger: put the pad in its pocket with the phone in the bed. If it won't charge, deepen the underside pocket so the skin is 3/32".

4. Ease the edges and finish with DuraGrain Hardwax Oil (0.0 g/L VOC Tung, Walnut & T1 Carnauba finish). Seat the pad with foam behind it and cover the underside with cork.

VCarve toolpaths (in this order)

Underside first: in VCarve Pro use a double-sided job and import the -underside file onto the bottom side; otherwise run it as its own job, aligned on REFERENCE_OUTLINE.

Pocket, layer POCKET_0.250: cut depth 0.250", 1/4" end mill. Select every vector on the layer together so islands are left standing.

Plan view, drawn at about 1:2.1. Grey = pocket (depth noted), dashed = underside pocket, light fill = through cut. Cut files are full size.

Charging Valet (continued)

Pocket, layer POCKET_0.312: cut depth 0.312", 1/8" end mill. Select every vector on the layer together so islands are left standing.

Pocket, layer POCKET_0.625: cut depth 0.625", 1/4" end mill. Select every vector on the layer together so islands are left standing.

Profile, Outside, layer PROFILE_OUTSIDE_1.250: cut depth 1.250" (through), 1/4" end mill, with tabs.

Files

dxf/charging-valet.dxf, dxf/charging-valet-valet-block-underside.dxf