

Tilting stand for BSIDE A1 multimeter + phone ball mount

Marco Nicolosi

VIEW IN BROWSER

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Summary

Tilting stand for BSIDE A1 multimeter, clicks every 20°, adjustable height, swappable phone mount.

Hobby & Makers > Tools

Tags: stand workshop multimeter phoneholder ballmount telescopic tilting bside

I made this stand to keep my BSIDE A1 multimeter always visible and comfortable to read when I take measurements, because of the slightly unusual shape of this meter. I also wanted to use it every day, not only with the multimeter: the top part can be swapped for a phone mount that uses the ball of a common car phone holder (suction cup type).

The probe plugs of the BSIDE A1 come out of the bottom, so the cradle keeps the bottom at least 40 mm above the table at every angle and the cables move freely. The cradle floor is tilted by about 10 degrees, so the meter rests well and does not slide.

How it works. The cradle holds the multimeter (116.5 x 41.7 x 24.3 mm) and has two notches for the probe plugs. A hinge plate screws to the back of the cradle with 4 M4 screws into brass inserts. The hinge has V-shaped

ridges and clicks every 20 degrees (20, 40, 60, 80): loosen the wing nut, turn, tighten. The height is adjusted with a column that slides in the sleeve of the base (0.4 mm gap per side, 25 mm travel) and is locked by a screw knob. The base is a stable 110 x 115 mm plate.

Phone mount (optional). It replaces the cradle: same 4 insert holes and a 16.91 mm ball, to be used with a car phone holder. If you print two hinge plates, one for the multimeter and one for the phone, you only need to unscrew the wing nut to swap the top part.

Before the big parts I printed and tested small pieces: the insert hole (5.3 mm), the column in the sleeve and the hinge detents. The new hinge teeth are sharp: move the hinge a few times to wear it in. The 3MF and the STL files are already oriented for printing.

SHOPPING LIST (non-printed parts)

- 5 brass M4 heat-set inserts (outer 5.45-5.50 mm, length 6 mm): 4 in the cradle and 1 in the base. 4 more if you print the phone mount.
- 4 x M4x8 mm screws (M4x10 also works) to fix the hinge plate.
- 1 x M4x30 mm hex-head bolt (wrench 6.78 mm) with 1 x M4 wing nut for the hinge.
- 1 x M4x15 mm round cross-head screw (head 6.12 mm), glued in the knob to lock the height.
- Cyanoacrylate glue and a soldering iron to heat the inserts.
- Phone mount only: an old car phone holder with suction cup, whose ball socket you reuse (ball 16.91 mm).

Model files



base_piastra_manicotto.stl

Base plate with sleeve for the column (0.4 mm gap) and 1 insert hole for the knob.



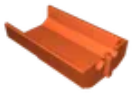
colonna.stl

Sliding column with hinge fork, 25 mm travel. Hex pocket 7.7 mm for the M4x30 bolt head.



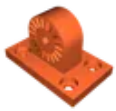
manopola_blocco_altezza.stl

Height-lock knob. Glue an M4x15 round cross-head screw in the round pocket (6.72 mm).



culla_con_rinforzo.stl

Multimeter cradle with back block, 4 M4 insert holes (5.3 mm), floor tilted 10°.



piastra_snodo.stl

Hinge plate, 20° detents, 4 holes for M4x8 screws. Print 2 to swap tops fast.



attacco_cellulare_sfera.stl

Phone mount with 16.91 mm ball, 4 insert holes (5.3 mm). Replaces the cradle.

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