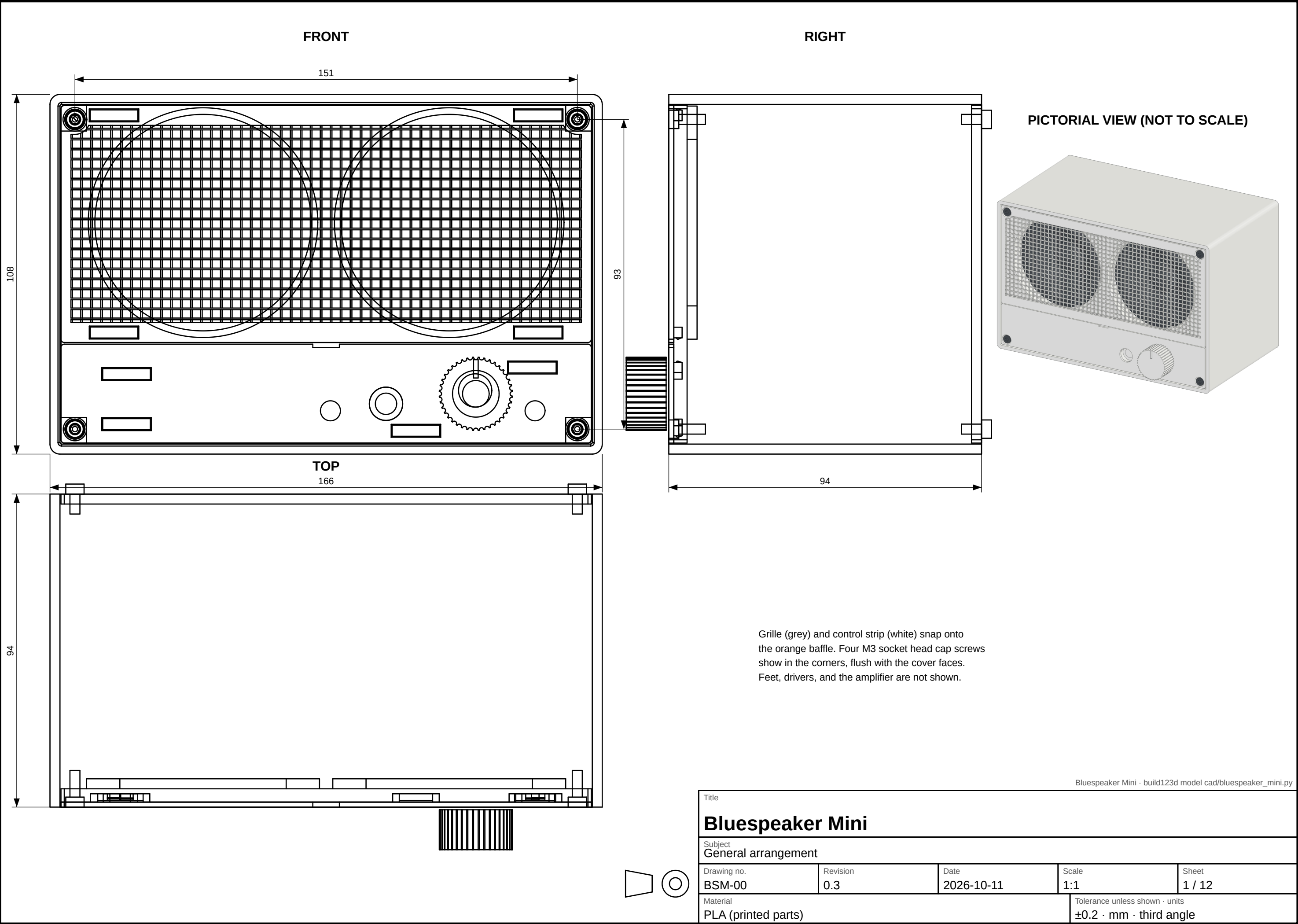
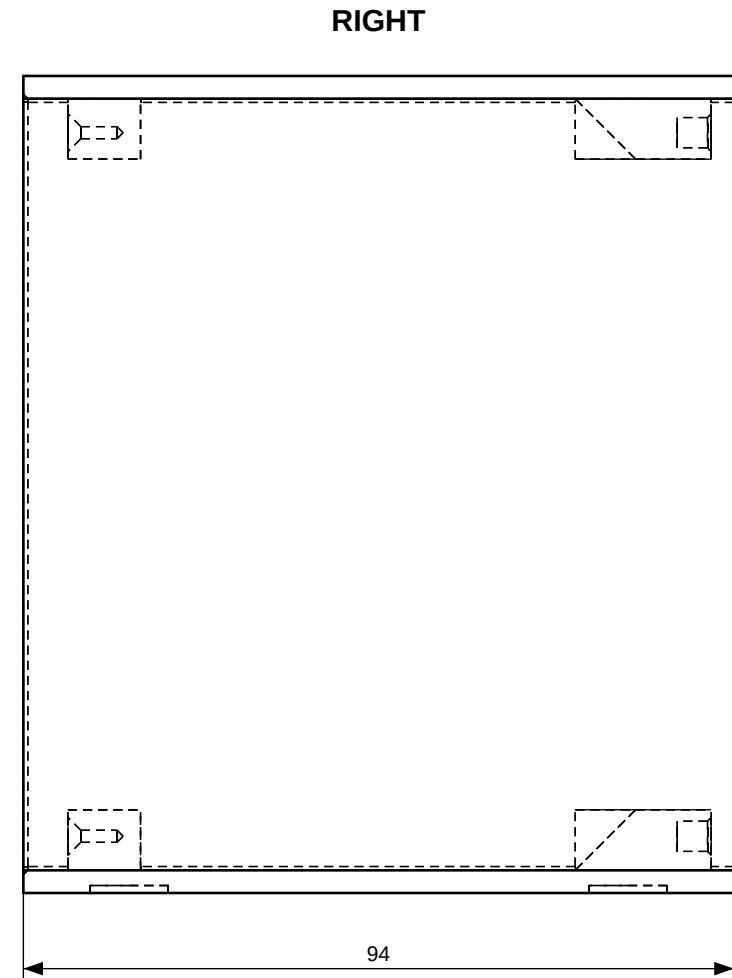
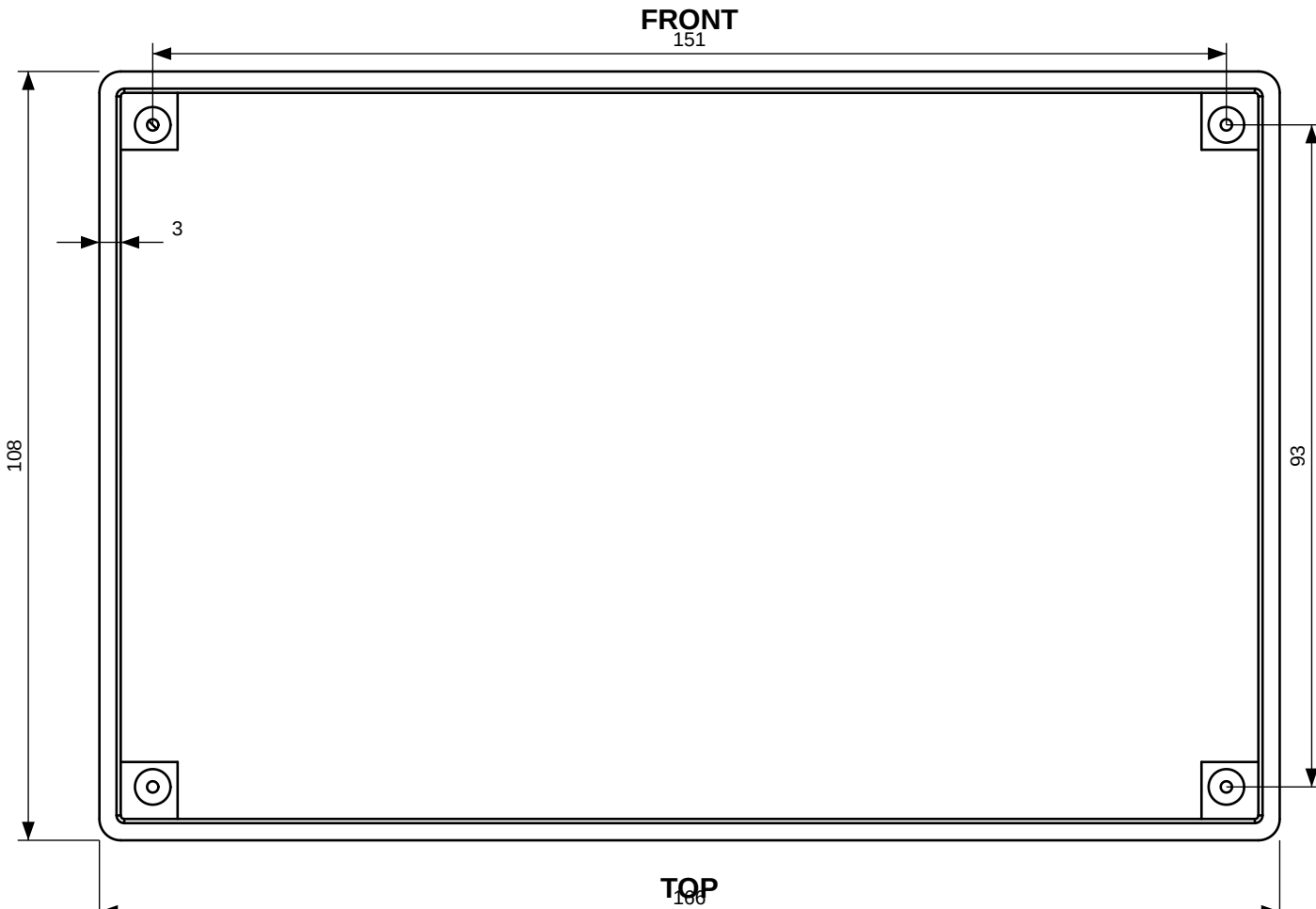


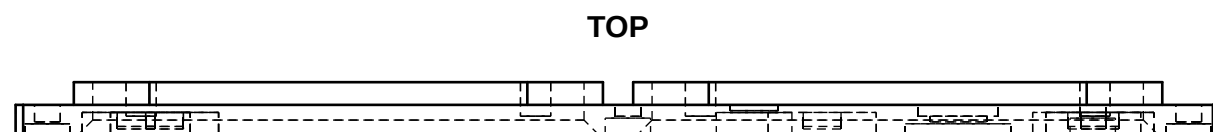
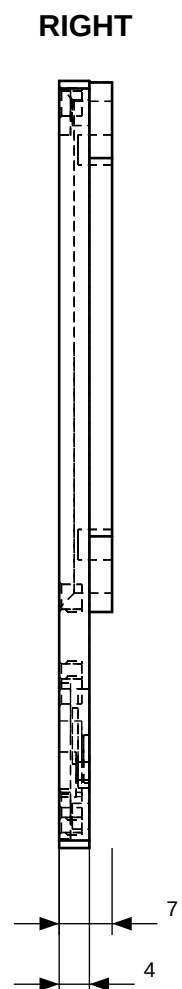




Print front opening down. Profile: PLA Shell 0.25.
Supports from the build plate below the four front posts only.
Front posts: pilot Ø1.6, drill Ø4.0 x 7 after the print, insert M3 x 3.
Rear posts: printed Ø4.0, 0.5 x 45° relief, 45° gussets.
Lead-in chamfer 0.6 x 45° inside the front opening.
Panel opening 160.0 x 102.0 (panels 159.4 x 101.4).

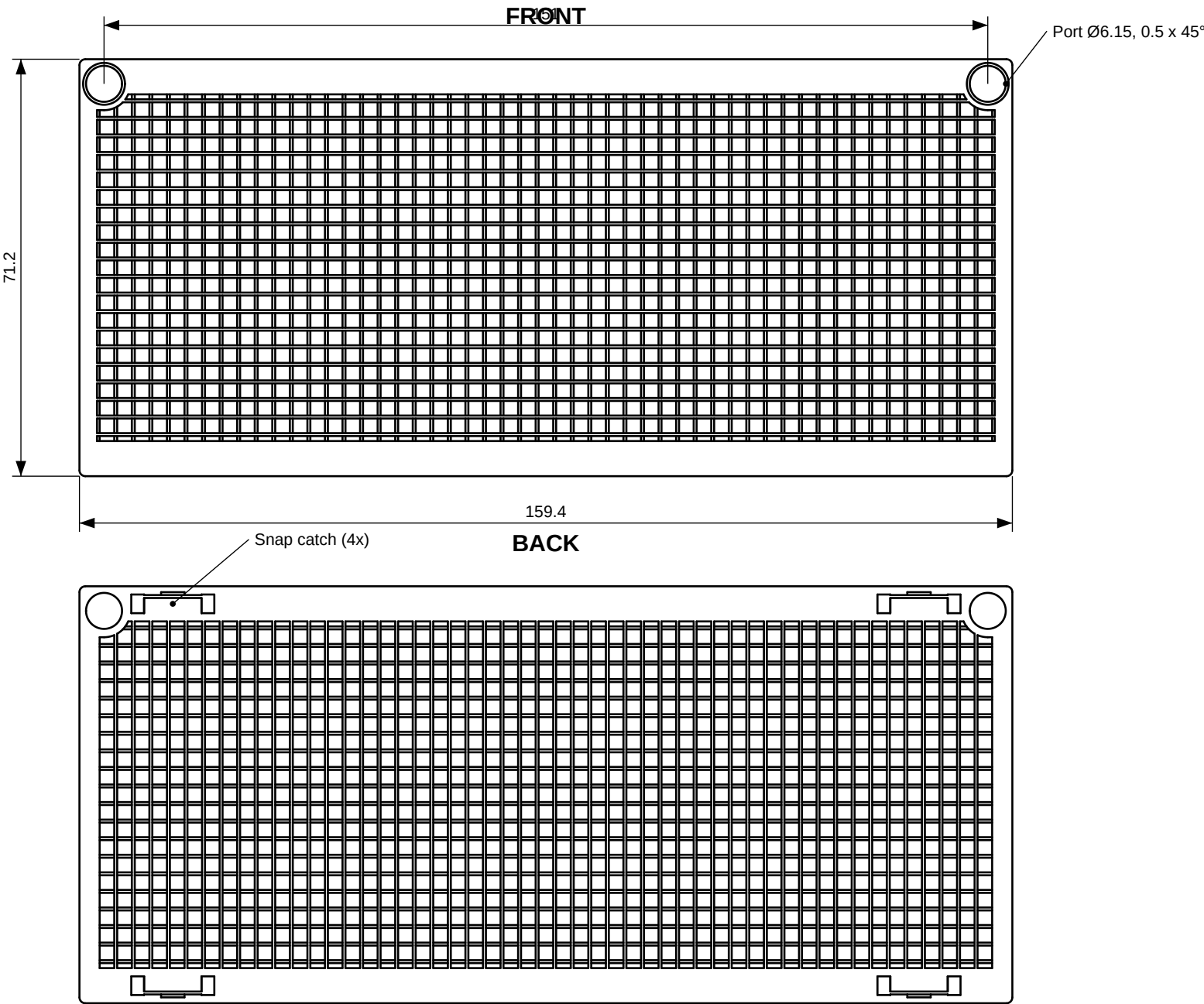
Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

Title				
Bluespeaker Mini				
Subject				
Sleeve				
Drawing no.	Revision	Date	Scale	Sheet
BSM-01	0.3	2026-10-11	1:1	2 / 12
Material			Tolerance unless shown · units	
PLA, grey			±0.2 · mm · third angle	

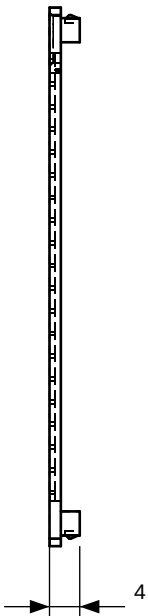


Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

Title				
Bluespeaker Mini				
Subject Front baffle				
Drawing no. BSM-02	Revision 0.3	Date 2026-10-11	Scale 1:1	Sheet 3 / 12
Material PLA, orange (shows through the grille)			Tolerance unless shown · units ±0.2 · mm · third angle	



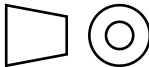
RIGHT



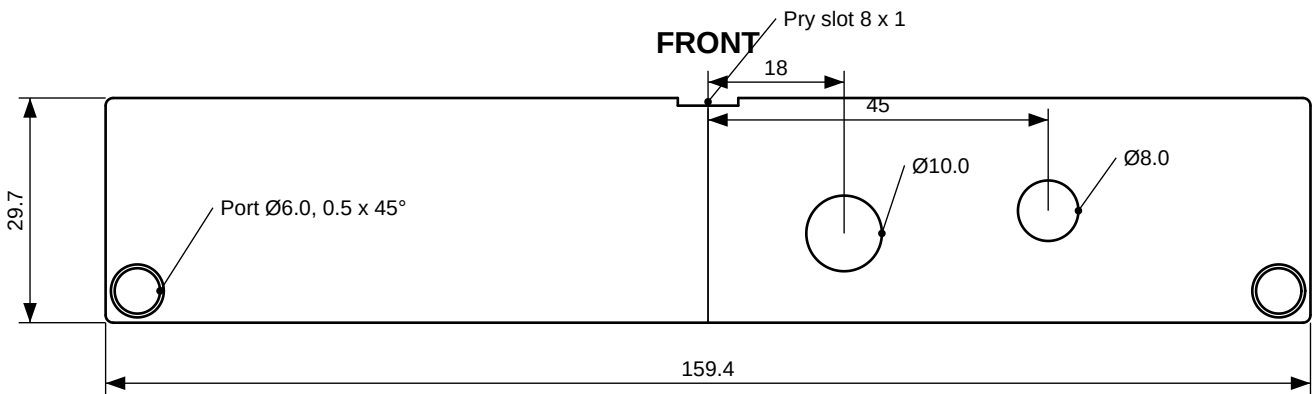
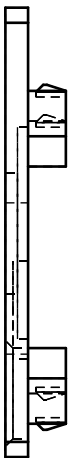
Print front face down. Profile: PLA Grille 0.25 (no expansion).
Ribs: one 0.5 line, 3.0 pitch, horizontal on layers 1-3, vertical on layers 4-6. About 69 % open.
Ports and catches carry the expansion in the model:
ports +0.075 per side, catch posts and bumps +0.095.
Snap catches: see BSM-09.

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

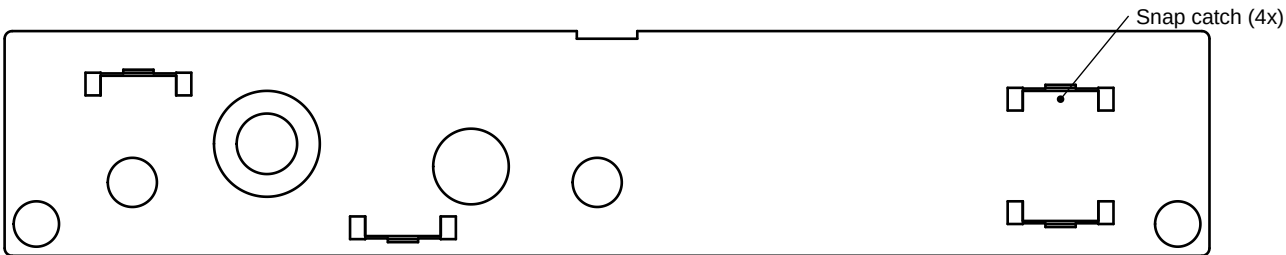
Title				
Bluespeaker Mini				
Subject				
Front grille (lattice)				
Drawing no.	Revision	Date	Scale	Sheet
BSM-03	0.3	2026-10-11	1:1	4 / 12
Material			Tolerance unless shown · units	
PLA, grey			±0.2 · mm · third angle	



RIGHT (2:1)



BACK



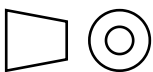
TOP

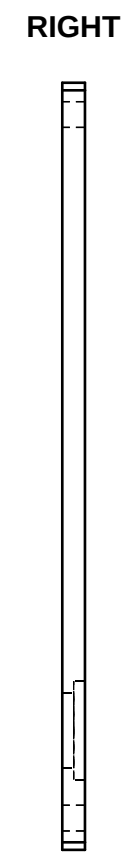
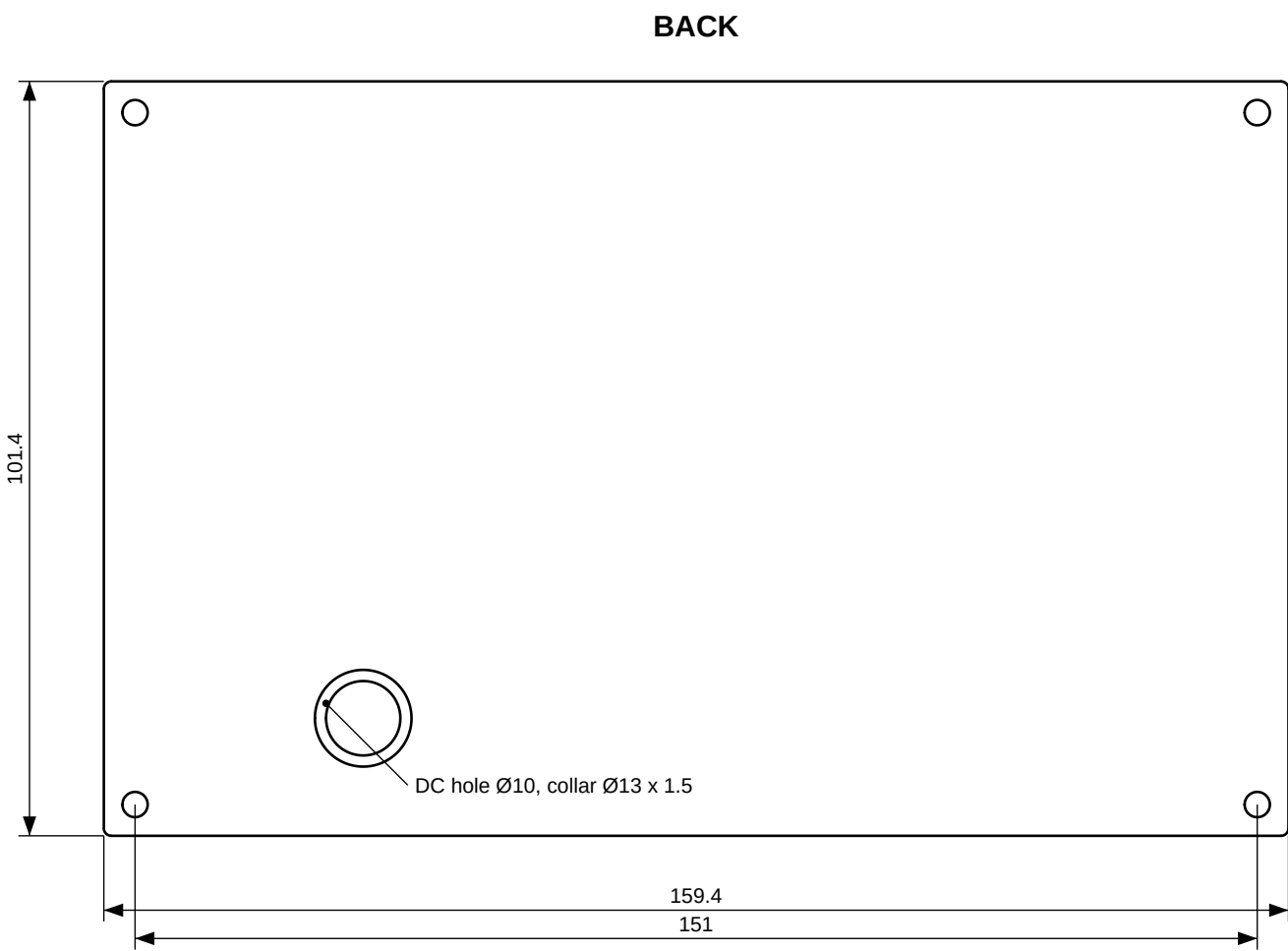


Print front face down. Profile: PLA Parts 0.25. Colour white.
Snap beam modelled 0.31: with 0.095 expansion it prints one 0.5 line.
Back: two pockets Ø6.5 x 1.0 for the tray screw heads.
Snap catches: see BSM-09.

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

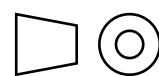
Title				
Bluespeaker Mini				
Subject				
Control strip				
Drawing no.	Revision	Date	Scale	Sheet
BSM-04	0.3	2026-10-11	1:1	5 / 12
Material			Tolerance unless shown · units	
PLA, white			±0.2 · mm · third angle	



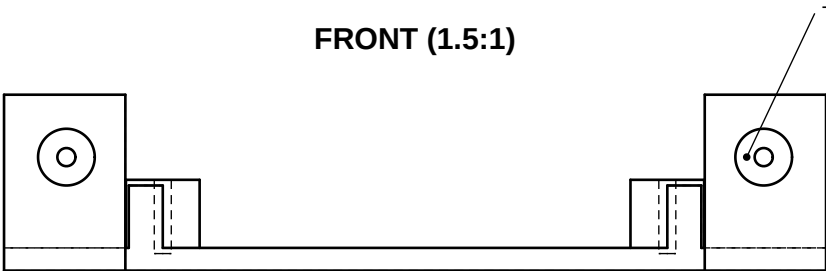
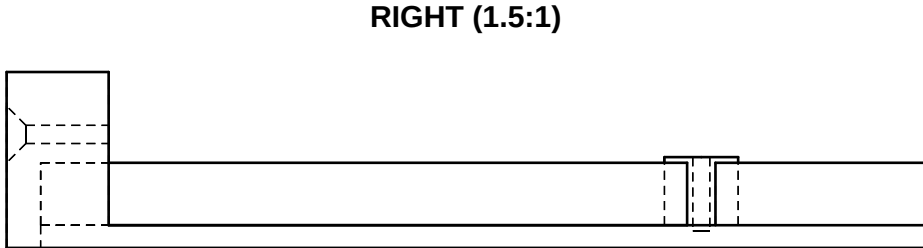
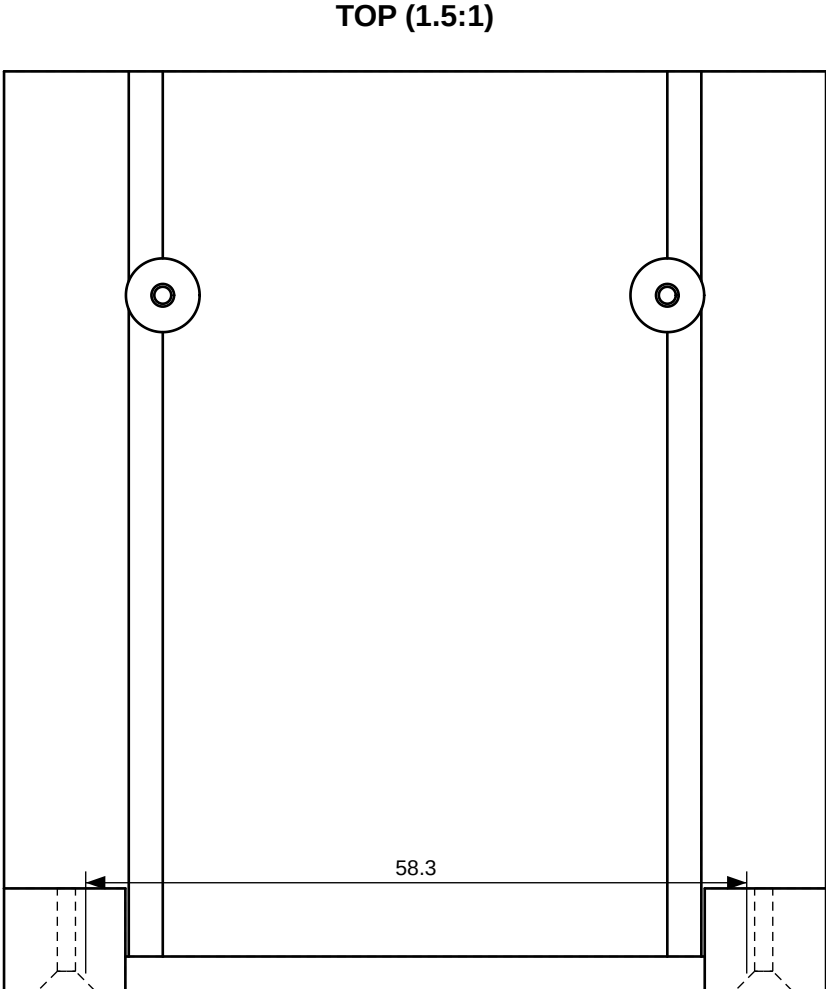


Print outer face down. Profile: PLA Parts 0.25.
Four Ø3.4 clearance holes for M3 x 6 socket head cap screws.
No counterbore: the heads sit on the panel.

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py



Title				
Bluespeaker Mini				
Subject				
Rear panel				
Drawing no.	Revision	Date	Scale	Sheet
BSM-05	0.3	2026-10-11	1:1	6 / 12
Material			Tolerance unless shown · units	
PLA, grey			±0.2 · mm · third angle	

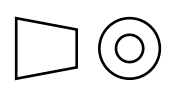


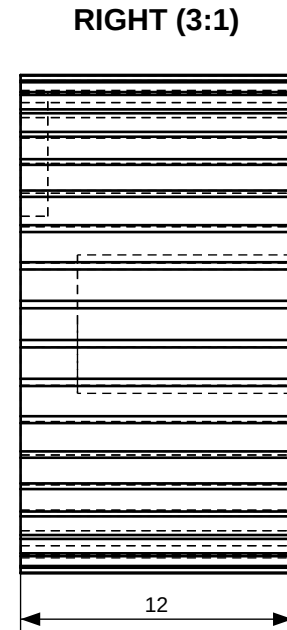
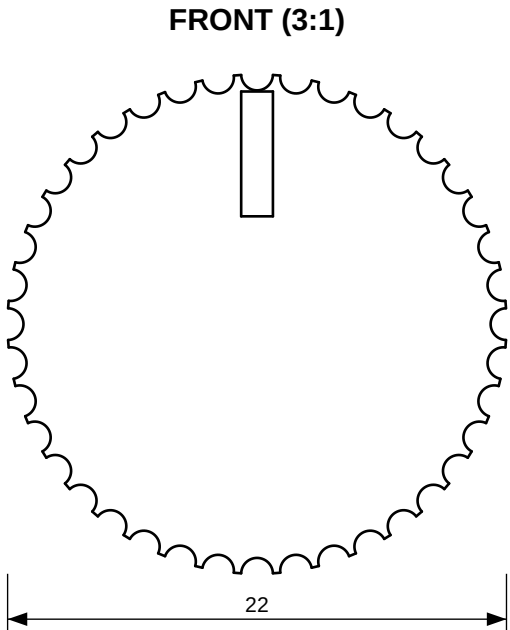
Tab hole: pilot Ø1.6, drill Ø4.0, insert M3 x 3

Print flat. Profile: PLA Parts 0.25.
Rails carry the ZK-502C board 8.0 above the sleeve floor.
The two tabs screw to the baffle back (M3 x 8).

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

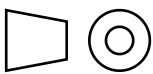
Title				
Bluespeaker Mini				
Subject				
Amplifier tray				
Drawing no.	Revision	Date	Scale	Sheet
BSM-06	0.3	2026-10-11	1:1	7 / 12
Material			Tolerance unless shown · units	
PLA, grey			±0.2 · mm · third angle	





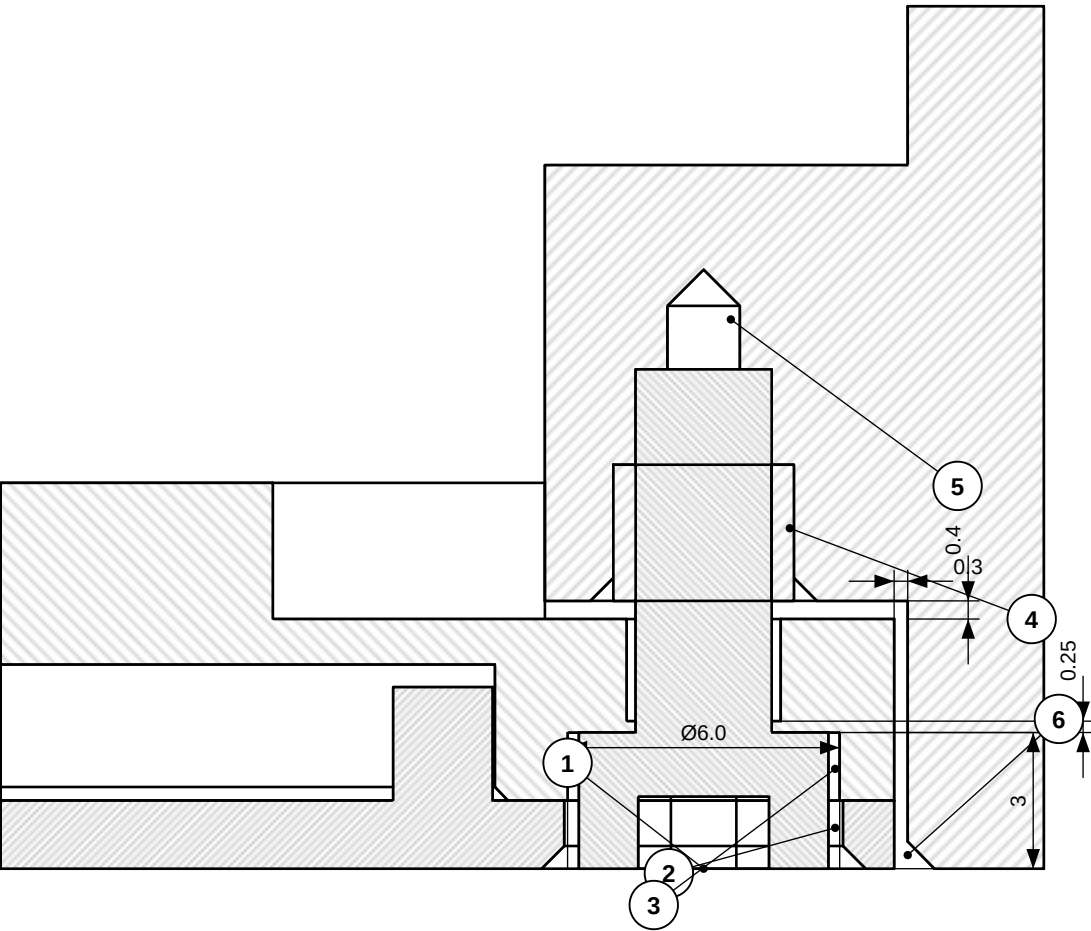
Print front face up. Profile: PLA Parts 0.25. Colour orange.
Bore $\varnothing 6.1 \times 9.5$ for the volume control shaft (check the shaft type).
Glue the white knob mark ($1.4 \times 1.2 \times 5.5$) into the groove.

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py



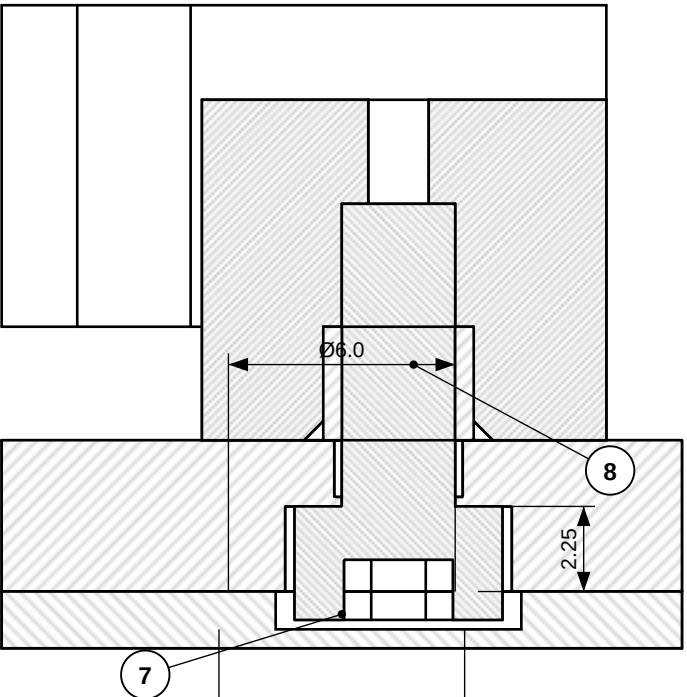
Title				
Bluespeaker Mini				
Subject				
Knob				
Drawing no.	Revision	Date	Scale	Sheet
BSM-07	0.3	2026-10-11	1:1	8 / 12
Material			Tolerance unless shown · units	
PLA, orange			$\pm 0.2 \cdot \text{mm} \cdot \text{third angle}$	

SECTION A-A (Z = 100.5, seen from above) 6:1



- 1 M3 x 8 socket head cap screw, head flush with the grille face
2 Grille port Ø6.15 (Ø6.0 + 0.075 per side), 0.5 x 45° chamfer
3 Baffle counterbore Ø6.0 x 1.5, membrane 0.25: drill Ø3.4
4 Insert M3 x 3 (short), in the sleeve front post
5 Pilot Ø1.6 with 45° tip: drill Ø4.0 x 7
6 Sleeve lead-in chamfer 0.6 x 45°; panel fit gap 0.3

SECTION E-E (Z = 13.0) 5:1

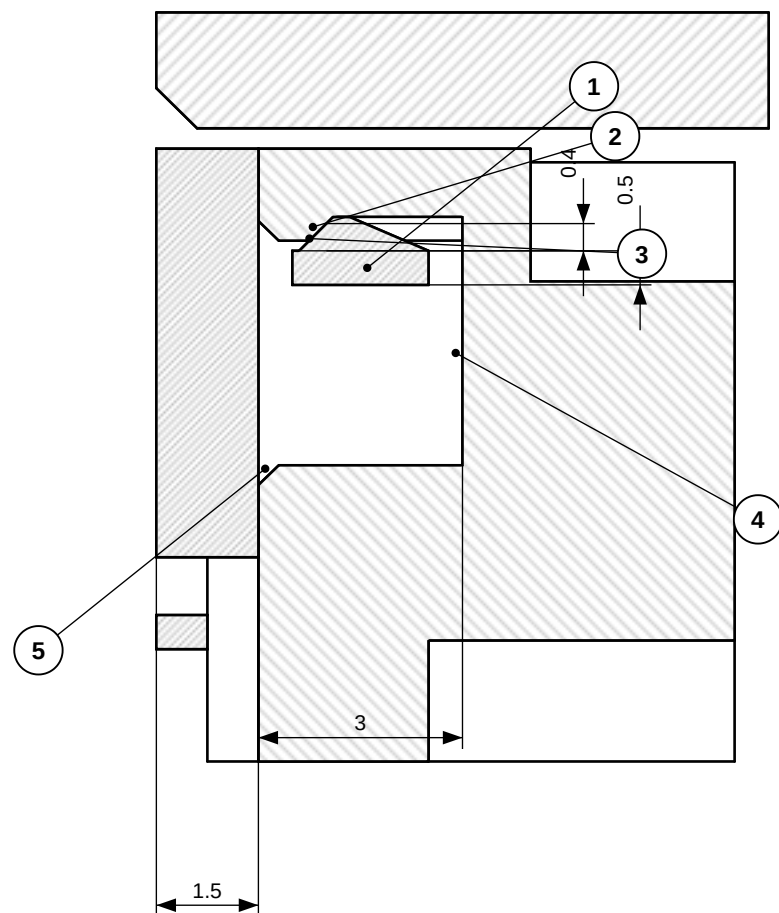


- 7 Strip pocket Ø6.5 x 1.0 covers the tray screw head
(head 0.75 in front of the baffle, 0.25 clear)
8 Tray tab: pilot Ø1.6, drill Ø4.0 through, insert M3 x 3
Counterbore Ø6.0 x 2.25, membrane 0.25

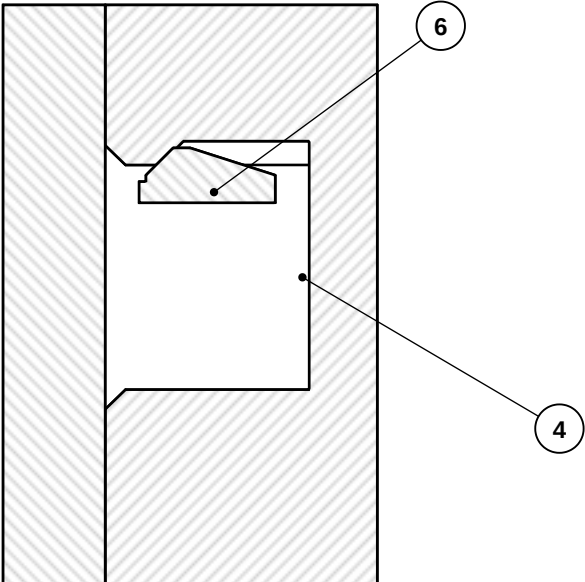
Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

Title				
Bluespeaker Mini				
Subject				
Joint details: front corner and tray screws				
Drawing no.	Revision	Date	Scale	Sheet
BSM-08	0.3	2026-10-11	6:1, 5:1	9 / 12
Material			Tolerance unless shown · units	
PLA			±0.2 · mm · third angle	

SECTION B-B grille catch (X = 63.75) 9:1



SECTION F-F strip catch (X = 62.0) 9:1



- 1 Beam: one 0.5 line, 10 long, 2.0 high; bridges 0.5 above the cover back. Flexes in the cover plane.
2 Bump 0.4 (grille +0.095 comp): 45° catch face, flat 0.25, 18° lead-in
3 Lip at the pocket mouth: 45°, 0.05 preload on the bump (pulls the cover flat)
4 Pocket 3.0 deep, 3.3 wide, floor is a bridge. Posts 0.15 clear per side (locate the cover)
5 Mouth lead-in 0.3 x 45° (takes the elephant foot)
6 Strip beam modelled 0.31: the Parts profile expansion (0.095) prints one 0.5 line

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

Title

Bluespeaker Mini

Subject

Joint details: snap catches

Drawing no.

BSM-09

Revision

0.3

Date

2026-10-11

Scale

9:1

Sheet

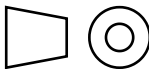
10 / 12

Material

PLA

Tolerance unless shown · units

±0.2 · mm · third angle



The diagram shows an orthographic projection of a mechanical part with the following features and dimensions:

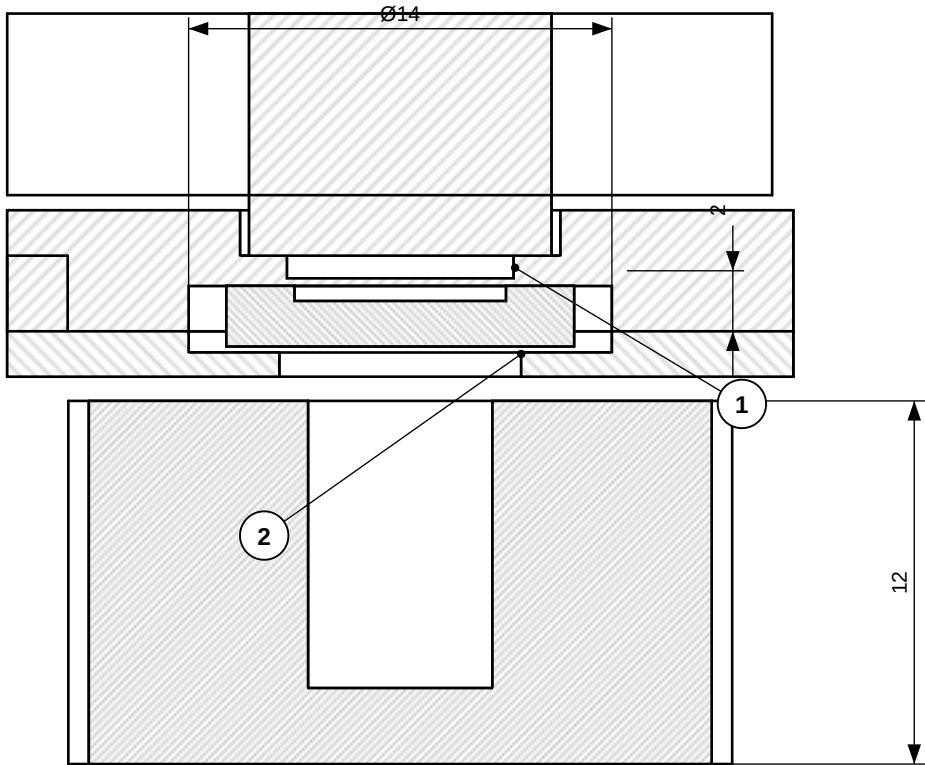
- Dimensions:**
 - 8 at 45° (top view, horizontal distance from the left edge to the start of the vertical section)
 - 10 (top view, horizontal distance from the vertical section to the right edge)
- Feature Callouts:**
 - 1: Points to a vertical slot in the top view.
 - 2: Points to a horizontal slot in the front view.
 - 3: Points to a 45-degree chamfer in the front view.
 - 4: Points to the bottom edge of the part in the top view.

- Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

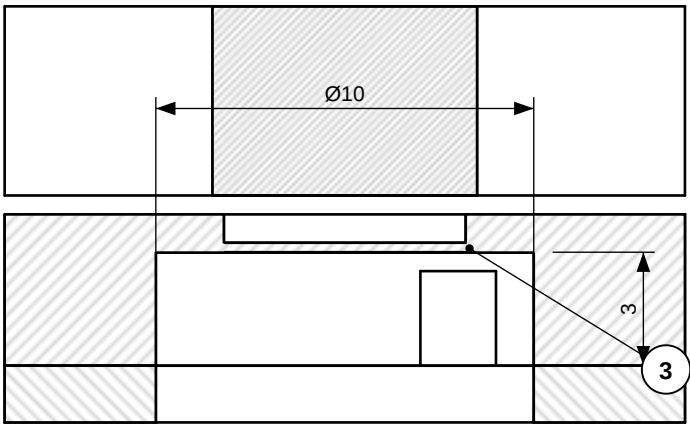
Title				
Bluespeaker Mini				
Subject				
Joint details: rear post and driver mount				
Drawing no.	Revision	Date	Scale	Sheet
BSM-10	0.3	2026-10-11	4.5:1	11 / 12
Material			Tolerance unless shown · units	
PLA			±0.2 · mm · third angle	



SECTION J-J volume control (Z = 18.1) 4:1



SECTION K-K AUX socket (Z = 15.1) 5:1



- 1 Membrane 0.25 at the floor of the Ø14 x 1.5 nut recess: cut out to Ø7.5
2 Strip hole Ø8.0; knob Ø22 x 12 with 0.8 gap to the strip
3 Membrane 0.25 at the floor of the Ø10 x 3 collar counterbore: cut out to Ø6.4
The ZK-502C positions come from photos. Measure the board before production.

Bluespeaker Mini · build123d model cad/bluespeaker_mini.py

Title				
Bluespeaker Mini				
Subject				
Joint details: volume control and AUX socket				
Drawing no.	Revision	Date	Scale	Sheet
BSM-11	0.3	2026-10-11	4:1, 5:1	12 / 12
Material			Tolerance unless shown · units	
PLA			±0.2 · mm · third angle	