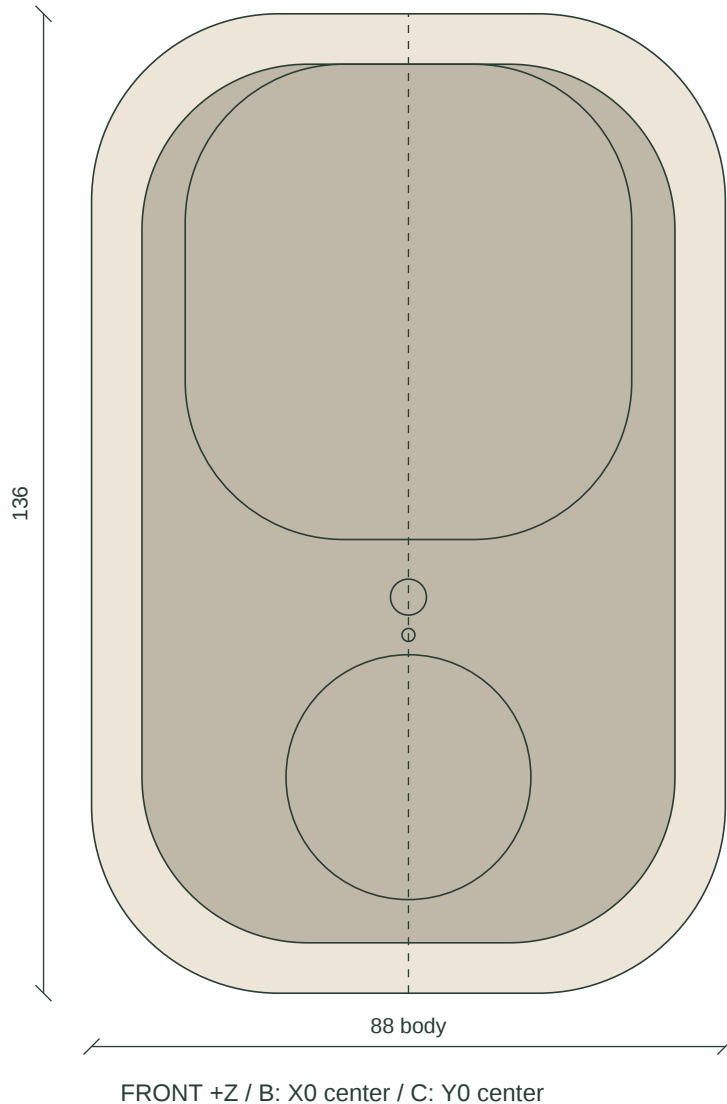


External datums and finished interfaces

WALKIE ONE 5.2 / R6 / mm / CAD substrate geometry unless marked FINISHED / 06 SEP 2026



A: uncoated front inner broad plane Z11.20; B: X0; C: Y0. Dimensions originate at body center. Positive Z faces front.

Body 88 x 136 x 27.2, R26 plan / R5 perimeter edge. Side keys extend total width to 89.16. Four body shells unchanged from R5.

Play 34 at(0,-38); indicator 5 at(0,-13); microphone 1.8 at(0,-18.25). Microphone edge gaps 1.85 to both adjacent visible features.

FINISHED play opening 34.60 +/-0.05; key 34.00 +/-0.04; opening coating <=0.015/side; center offset <=0.05. Per-side minimum 0.19.

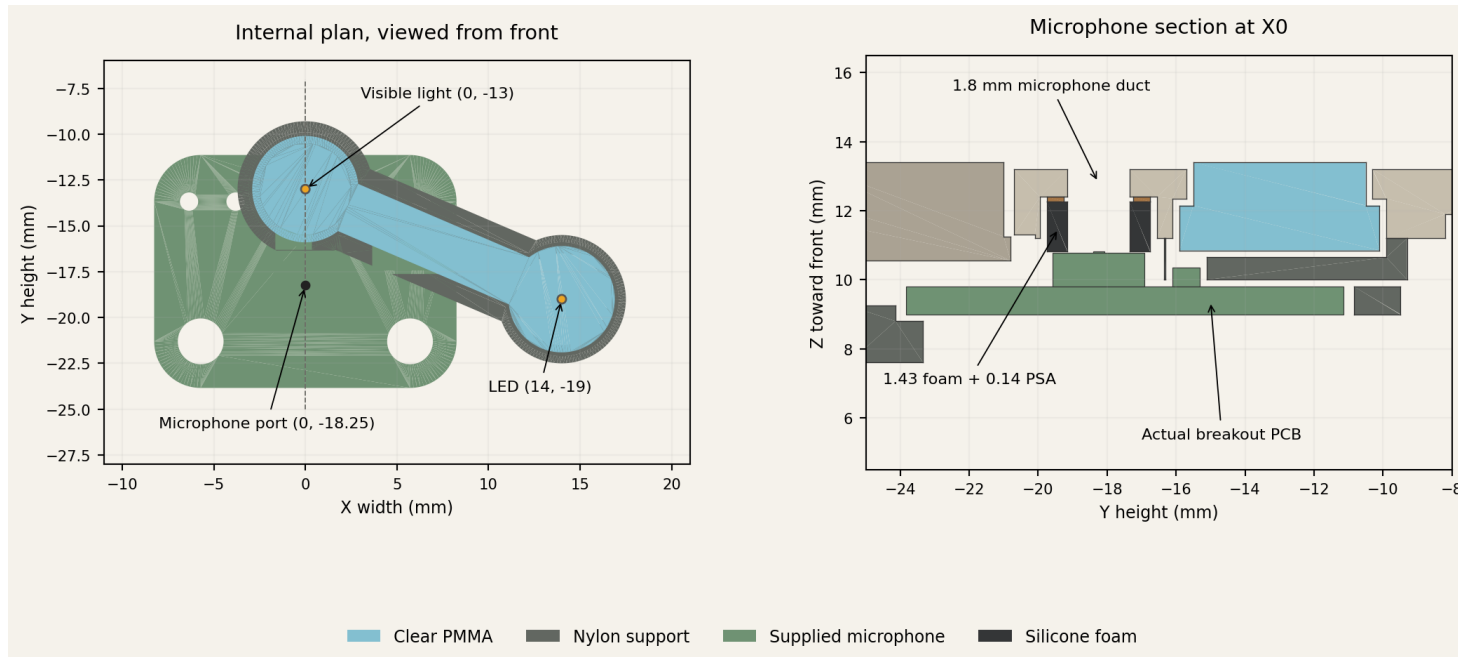
FINISHED grille opening-minus-face seam 0.16..0.34/side, target 0.25. Center within 0.025 after bonding. Face proud 0.22..0.38 relative to coated center.

FINISHED bumper proud 0.25..0.45 over rigid center; no local lip or flash >0.05. Closure gap 0.22..0.38; adjacent side step <=0.10.

PTT Y10 height 58; volumeY30 andY5 height 19. USBY-32.139, Z-4.740: 15Y x 10Z passage; 17Y x 12Z mouth.

Optical guide and microphone sealing section

WALKIE ONE 5.2 / R6 / mm / CAD substrate geometry unless marked FINISHED / 06 SEP 2026



GUIDE: flat underside Z10.85; bridge 2.8 wide x 1.3 thick; end pads 5.8 diameter. Plan center span 15.2315. Visible output 5 diameter at (0, -13), top Z13.40. Retaining shell pocket roof Z12.35; guide shoulder Z12.15 -> 0.20 clearance.

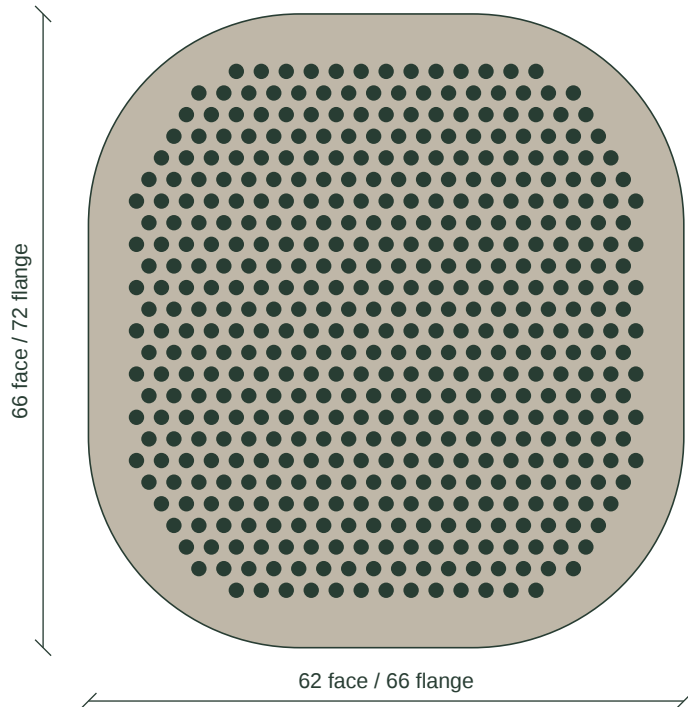
LED: unchanged WP154A4SUREQBFZGW rigidly lowered 0.75 to base Z2.15; nominal top 10.75. Gauge actual optical gap 0.05..0.20, nominal 0.10. Upper carrier support Z10.65. Two 0.25-free foam pads 0.20 installed; pads are off optical inlet.

MIC SEAL: roof 12.40 | PSA 12.26..12.40 (0.14) | foam 10.83..12.26 (1.43) | microphone acoustic face 10.83. Total installed 1.57. Free foam 2.00 +/- 0.10. Foam outline 4x 3, R0.4; bore 1.8; PSA bore 2.0.

LOCAL ROOFS: guide 0.85, microphone 0.80 substrate. Preserve these minima during sanding; back the roofs in a nest. Pin-gauge bores and measure depth with non-marring probe. See F03 for temporary placement; remove it before microphone installation.

Grille, backing and complete-process coupons

WALKIE ONE 5.2 / R6 / mm / CAD substrate geometry unless marked FINISHED / 06 SEP 2026



473 preserved face apertures, diameter 1.60 +/-0.05, 2.60 hex pitch, 1.00 nominal web. Finished open bore 1.49..1.65 with <=0.03 coating per bore wall; edge break 0.05..0.10.

49 sampled locations encounter hidden nylon sealing land; 424 pass a 1.4 mm probe from 11.1..13.6. This is a geometry screen only. Do not ream blind/backed apertures through the sealing land.

Face substrate Z11.90..13.50, nominal 1.60. Rear flange Z10.90..11.90. Mesh pocket 57.1x 61.1, R19.55, Z11.75..11.90. Porous mesh 57x 61, R19.5, Z11.78..11.88; its solid CAD is only a bounding envelope.

P1 satin front topcoat; P2 matte black hidden floors below Z12.45. Mask original gasket underside Z11.60 and all flange bond lands. Mesh and black treatment must be sampled with the actual speaker/support.

F01: actual 36x 30 crop centered at original X16, Y47; includes curved edge and actual raised seal/flange. F04: 30x 20x 1.6 witness. Print same orientation, finish complete recipe, inspect all bores at 10x and by backlighting.

Front pattern is unchanged; diagram is vector geometry from original pitch.

MOUNT: pocket 66.4x 72.4 around flange 66x 72 gives 0.20 nominal per side. Fit with 0.10..0.20 controlled cured flange bond, 0.5 setback from active holes. Bond/cradle tabs must be inspected for access before closing the shell.

Play stack calibration and rear screw section

WALKIE ONE 5.2 / R6 / mm / CAD substrate geometry unless marked FINISHED / 06 SEP 2026

SEAT: nominal Z3.50; key-tip Z8.20; finished differential 4.70 +/-0.025. Freeplayg 0.10..0.14 measured after coating and adhesive cure. Switch height 4.30 +/-0.20; select paired shims 0.025..0.525.

s = key-tip Z - seat Z - measured switch height - g. Nominal 0.28 is a calibration example. Match pair within 0.01; seat flatness <=0.03; shim widths 1.0, length 9.8. No adhesive under bearing area unless counted.

Raw stop 0.75; contactC measured from rest. TrialT=C+0.03 and verify 0.02..0.04 post-contact. RequiredT0.32..0.68. Ring selection 0.05..0.525 covers required 0.07..0.43. Nominal ring 0.30 givesT0.45.

CAUTION: post-contact trial is not an Omron overtravel rating. Record force/displacement and positive release at center and 8 edge locations before endurance or repeat fabrication.

SCREW: four seatsX +/-34, Y-44/+46. Original 90 deg coneD5.00 at rearZ-13.20 toD2.80 atZ-12.10. AccuDIN965Z headD4.4..4.7; select 4.65..4.70.40..60 um surface coating gives 0.19..0.24 visible recess.

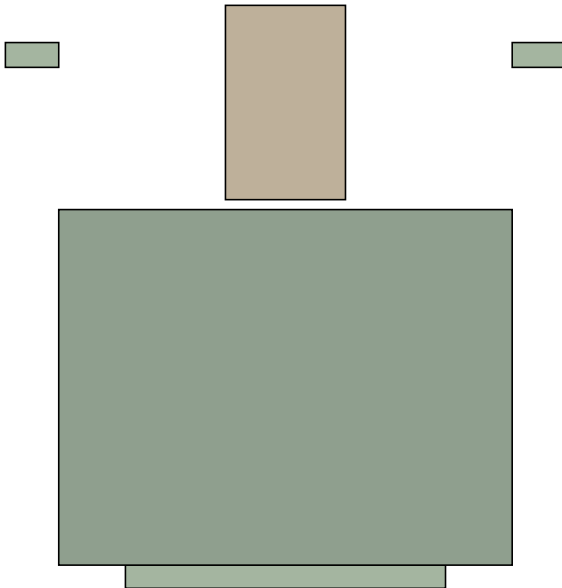
F05: 20x 20x 3 cover coupon; D2.8 through, 90 deg cone 5.0 top. Pair with representative tapped PA boss. Start 0.03 Nm in 0.01 steps; inspect finish/seat/thread. Release torque only from measured seating and strip results; <=50% minimum measured strip torque.

PET seat pair: 0.28 example

Switch: actual H = 4.30 example

Key tip Z8.20 / freeplay 0.12

Stop ring 0.30 / travel 0.45 example



Illustrative stack / numbers control / selected PET stock

Fixtures, cable access and dimensional budgets

WALKIE ONE 5.2 / R6 / mm / CAD substrate geometry unless marked FINISHED / 06 SEP 2026

F02 PMMA nest: 30x 18x 5, R2. One-mm-deep, open-top pocket for the flat guide underside, end pads and bridge supported. Machine POM/aluminum; finish pocket to actual guide with 0.05..0.10 lateral clearance. Not a casting mold.

F03 mic locator: 10x 14x 2, R1 plate, seated against external rigid faceZ13.20.5.10 mm indicator locating pin at(0,-13); 1.60 mm mic mandrel at(0,-18.25), extends toZ10.80. Pins polished, no sharp tip. Use with guide and board absent. 3D print for fit; final POM body with smooth reamed/machined pins.

F06 selected cable gauge: 6.5Z x 12.5Y, R1, 30 mm alongX from 29.83. Selected cable supplier cross-section 6x 12, with 0.25 added per side. Gauge clears tub/rear/bumpers digitally. It is not a cable tip model; verify actual 14.17 mm recess reach and neck transition in both orientations.

F07 stop ring outline: 17.8 squareR1.9 outside; 12.8 squareR1.1 inside. F08/F09 microphone foam/PSA outlines 4x 3 R0.4 with 1.8/2.0 bores. Use supplied exact DXFs and measured stock; do not print installed envelopes as foam.

FINISHED PLAY RADIAL BUDGET: $(34.55 - 34.04)/2 - 0.015$ coating -0.05 position $=0.190$ minimum. Max clearance $(34.65 - 33.96)/2 + 0.05 = 0.395$ if both parts fall at opposite extremes; inspect uniformity around 360 deg.

GRILLE PER-SIDE BUDGET: nominal 0.30 -0.05 size stack -0.06 edge coating -0.025 location $=0.165$ minimum; maximum $0.30+0.05-0.04+0.025=0.335$. Gauge assembled reveal 0.16..0.34. Finish faces and edges separately; mask lands.

MIC COMPRESSION BUDGET: total 1.50..1.64; tape 0.12..0.16; freefoam 1.90..2.10 $\rightarrow 20.0..36.2\%$. Seat and free-stock measurement determine actual compression. This is a conditional tolerance calculation, not material capability.

SPEAKER/CELL BUDGET: 0.50 -0.15 speaker edge -0.20 cell edge -0.15 placement $=0.00$. No allowance remains for leads, tabs, tape folds or swelling. Actual harness and cell supplier review remain mandatory before a functional complete article.