

15 PT 1000 MB [4.0]

SWETON®



The **SWETON 15 PT 1000 MB [4.0]** is a high-output 15-inch pro speaker built for the low-mid engine room of two-way tops and three-way mid-bass cabinets. A 881 cm² diaphragm, a Bl $\approx$ 25.2 N/A motor and a light 167 g moving assembly give it 1.79% reference efficiency — 96 dB at 1 W/1 m, — the highest sensitivity in its size class in the SWETON range. With 1000 W AES and Fs $\approx$ 52.8 Hz it delivers the articulate 60–1500 Hz punch that vocal-forward touring systems live on.

How it performs:

- IPassband authority from 60–1500 Hz – the vocal-weight and kick-body region – so tops stay intelligible at distance.
- Qts $\approx$ 0.46 with EBP 111 Hz places it squarely in vented territory; 55–85 L tuned 50–57 Hz is the sweet spot.
- Cone travel peaks at only $\approx$ 5.9 mm of the $\pm$ 9 mm Xmax at full 1000 W AES in a 62 L / 55 Hz box –

thermally limited, not excursion limited, so it stays linear all night.

- Le 1.21 mH and a well-damped upper roll-off allow a clean 1.2–1.6 kHz LR24 handover to a 1.4" or 2" compression driver.
- Impedance minimum stays above $\approx$ 5.4 Ω across the passband – an easy, stable 8 Ω load.

Applications

- **Two-Way Tops:** LF/low-mid section of 15"+1.4" and 15"+2" full-range boxes for live sound and DJ.
- **Three-Way Mid-Bass:** 60–800 Hz mid-bass section above 18" or 21" subwoofers.
- **Stage Monitors & Wedges:** high sensitivity with controlled excursion for high gain-before-feedback.
- **Mobile DJ & Roadshow Tops:** efficient enough to play loud on modest amplifier power.

Why Choose the 15 PT 1000 (8 Ω)?

1. **Highest Efficiency in Class:** 1.79% reference efficiency (94.5 dB, 1 W/1 m) – more SPL per watt than any comparable 15" in the range.
2. **Light 167 g Moving Mass:** fast transient recovery that keeps kick and snare edges intact.
3. **Excursion Headroom to Spare:** only $\approx$ 66% of Xmax is used at rated AES power in the recommended alignment.
4. **8 Ω Versatility:** pair two drivers for a 4 Ω cabinet, or run four per channel in distributed installs.
5. **Klippel + CLIO Tested:** T/S parameters measured on a Klippel Analyzer with laser; response verified on CLIO.

Use case	Enclosure (net, after driver/port)	Tuning (Fb)	Crossover (HPF / LPF)	Suggested EQ (parametric)	Notes	DSP Protection (based on AES 1000 W, 8 Ω)
Compact Two-Way Top (15" + HF horn)	55–62 L vented	55–57 Hz	HPF 50–55 Hz BW24; LPF 1.2–1.6 kHz LR24	–1.5 dB @ 250–350 Hz, Q $\approx$ 1.2 (tame baffle bloom); +1 dB @ 90–110 Hz, Q $\approx$ 1.0	–3 dB $\approx$ 53 Hz. Port area $\geq$ 260 cm ² ; peak port velocity $\approx$ 17 m/s at AES. Peak travel 5.9 of 9 mm.	• RMS Limiter Voltage: 89.4 V RMS • Peak Limiter Voltage: $\approx$ 1.4 $\times$ 89.4 = 125 V peak • Attack/Release: 10–20 ms attack, 100–150 ms release for RMS; 1–3 ms attack, 20–40 ms release for peak.
Full-Range Reflex (single cab, wider LF)	75–85 L vented	50–52 Hz	HPF 45–48 Hz BW24; LPF 1.2–1.5 kHz LR24	–2 dB @ 300–400 Hz, Q $\approx$ 1.2; +1 dB @ 60–75 Hz, Q $\approx$ 0.8	–3 dB $\approx$ 47–49 Hz — best standalone response. Port area $\geq$ 300 cm ² . Peak travel 6.9–7.1 mm.	
Mid-Bass / Kick Bin (3-way, over subs)	65–70 L vented	58–60 Hz	HPF 60–70 Hz BW24; LPF 700–900 Hz LR24	–2 dB @ 350–450 Hz, Q $\approx$ 1.2	$\approx$ 128 dB at 80–100 Hz on AES power. Handling <60 Hz to the sub frees excursion and headroom. Port $\geq$ 280 cm ² .	
Stage Monitor / Wedge (compact)	45–50 L vented	58–60 Hz	HPF 55–60 Hz BW24; LPF 1.5–1.8 kHz LR24	–3 dB @ 200–300 Hz, Q $\approx$ 1.4 (offset floor coupling); notch as needed for gain-before-feedback	–3 dB $\approx$ 57–59 Hz. Small and light. Port area $\geq$ 215–230 cm ² .	

SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	392 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	1000 W
Program Power	2000 W
Sensitivity (1W/1m)	96 dB
Frequency Range	45-4000 Hz
Magnet Material	Ferrite
Voice Coil Diameter	99.3 mm
Winding Material	Copper
Former Material	Glass Fibre
Winding Type	Outside

Mounting Info

Overall Diameter	392 mm
Bolt Circle Diameter	376 mm
Baffle Cutout Diameter	360 mm
Depth	160 mm
Flange and Gasket Thickness	18.5 mm
Gross Weight	13.60 Kgs

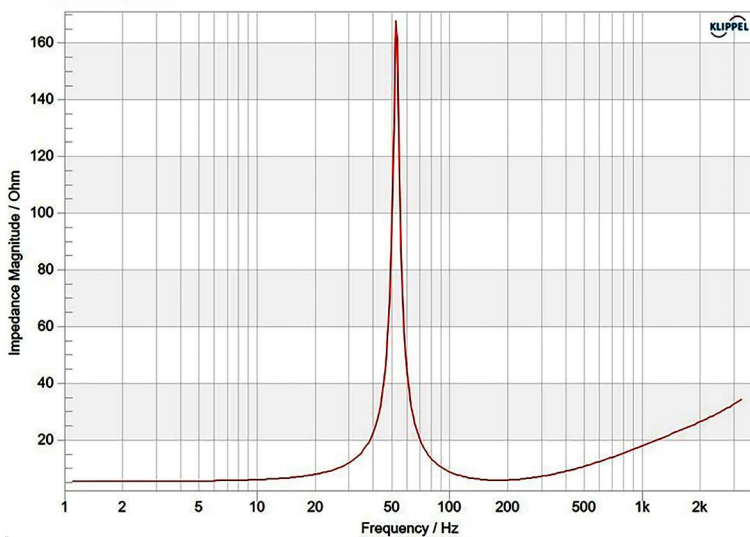
Parameters

Resonant Frequency	Fs	52.8 Hz
DC Resistance	Re	5.44 Ω
Electrical Q	Qes	0.475
Mechanical Q	Qms	14.54
Total Q	Qts	0.460
Compliance Equivalent Volume	Vas	59.92 Ltrs
Peak Diaphragm Displacement Volume	Vd	0.79 Ltrs
Effective Surface Area of Cone	Sd	881.41 cm ²
Reference Efficiency	η_0	1.79%
Moving Mass including air load	Mms	166.77 gms
Motor Strength	Bl	25.19 T-m
Voice Coil Inductance	Le	1.21 mH
Efficiency Bandwidth Product	EBP	111 Hz
Voice Coil Overhang	Xmax	± 9.00 mm

Recone Kit

Recone Kit Number	REC15PT10008E
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Magnitude of Electrical Impedance $Z(f)$



On-Axis Frequency Response (CLIO)

