

21 PT 2500 SUB

SWETON®



21 PT 2500 SUB – BASS THAT DOMINATES THE DEEP END

Introducing the 21 PT 2500 SUB – a flagship-grade 21-inch subwoofer engineered to conquer massive venues with earth-shaking bass. Equipped with a massive 6-inch voice coil, ultra-strong magnet motor structure, and precision-optimized suspension, this subwoofer is purpose-built to handle 2500 watts AES power with authority and endurance.

Thanks to its BI factor of 39.29 N/A, large cone area ($S_d = 1698.23 \text{ cm}^2$) and robust Mms (460.2 g), the 21 PT 2500 SUB is full of power – ideal for live events, DJ use, roadshows, and outdoor functions.

Despite a higher F_s of 43 Hz, the sub is specifically optimized for Indian conditions where low-cut filters and real-world usage demand quick transient response and tight, punchy bass over ultra-low rumble. This makes it perfect for applications needing fast recovery and authoritative thump.

Enclosure Recommendations:

Enclosure Type	Volume (Litres)	Tuning Frequency (Hz)	Port Details	Application Use Case
Reflex (Vented)	180–220 L	38–42 Hz	Dual \varnothing 5"–6" x 8"–10" length	General PA, DJ, Live Sound
4th Order Bandpass	Front: 75–90 L (ported) Rear: 70–80 L (sealed)	Front port tuned to 45–50 Hz	Front: Slot or round port as per design	DJ subs, techno, dance music setups
6th Order Bandpass	Front: ~100 L (ported) Rear: ~90 L (ported)	Front: 55 Hz Rear: 38 Hz	Dual ports with calculated lengths	Roadshows, SPL competitions, aggressive bass

Recommended HF Pairing

Parameter	Recommendation
Power Rating	80–120 W AES
Sensitivity	108–110 dB SPL
Diaphragm Type	Titanium preferred
Exit Size	1.4" or 2" Compression Driver

Crossover Recommendations:

Component	Type	Frequency	Slope
Subwoofer	LPF	90–120 Hz	24 dB/oct
HF Driver	HPF	1.5–1.8 kHz	18 dB/oct

⊙ Optional: Use an active crossover or DSP with subsonic HPF @ 35 Hz to prevent unloading and thermal stress.

Application

- Roadshows & DJ systems
- Touring line-array stacks
- Outdoor public address
- Religious events and festivals
- Stadium or mela-ground setups

Why Choose 21 PT 2500 SUB?

- 6-inch Voice Coil for massive thermal handling and minimal compression
- BI of 39.29 N/A – Powerful motor for high control and punch
- Built for Indian conditions – Tuned F_s ensures faster punch, avoids flabby lows
- Rugged chassis & suspension ready for extreme gig duty

SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	545 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	2500 W
Program Power	5000 W
Sensitivity (1W/1m)	95 dB
Frequency Range	43-500 Hz
Magnet Material	Ferrite
Voice Coil Diameter	152 mm (6.0 in)
Winding Material	COPPER
Former Material	GLASS FIBRE
Winding Type	In/Out

Mounting Info

Overall Diameter	545 mm
Bolt Circle Diameter	525 mm
Baffle Cutout Diameter	497 mm
Depth	220 mm
Flange and Gasket Thickness	18.5 mm
Gross Weight	50.70 Kgs

Parameters

Resonant Frequency	Fs	43 Hz
DC Resistance	Re	6.0 Ω
Electrical Q	Qes	0.49
Mechanical Q	Qms	19.94
Total Q	Qts	0.48
Compliance Equivalent Volume	Vas	119.29 Ltrs
Peak Diaphragm Displacement Volume	Vd	1.36 Ltrs
Effective Surface Area of Cone	Sd	1698.23 cm ²
Reference Efficiency	η_0	1.92%
Moving Mass including air load	Mms	460.20 gms
Motor Strength	Bl	39.29 T-m
Voice Coil Inductance	Le	1.82 mH
Efficiency Bandwidth Product	EBP	88 Hz
Voice Coil Overhang	Xmax	± 13.75 mm

Recone Kit

Recone Kit Number	REC21PT2500SUB
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Z(f,x=0) Impedance

