18 PT 1800 SUB

SWETON®

18 PT 1800 SUB – High Power Subwoofer for Punchy Bass Delivery

The 18 PT 1800 SUB is an 18-inch high-output subwoofer engineered for extreme low-frequency performance. With a massive 130 mm voice coil and a rated AES power handling of 1800 watts, this subwoofer is built for aggressive performance, particularly in large-scale PA systems, outdoor events, DJ setups, and touring-grade enclosures.

Despite its relatively higher Fs of 49 Hz, the 18 PT 1800 SUB delivers exceptional low-end owing to its very high motor strength (Bl = 32.64 N/A) and a huge Xmax of ±10.2 mm. The slightly higher resonance frequency enhances transient response and punch, making it especially suitable for mid-low focused applications such as bandpass cabinets, hybrid subs, and compact vented enclosures tuned to 45–50 Hz.

This driver features a large Sd of 1176.28 cm^2 and an extremely efficient motor structure with Bl^2/Re = 193.85, providing tight control over cone motion and low distortion levels (Dtotal ~7.6%). It uses a rugged suspension with Cms = 0.03 mm/N and Rms = 5.14 kg/s, ensuring excellent linearity under high excursion demands. The thermal endurance is remarkable, with a ΔTv of just 24 K, and thermal time constant of 49.6s, making it suitable for long hours of high-power operation.

Recommended Enclosure Designs:

Type	Volume (Net)	Tuning (Fb/ Chamber)	Port Specs / Notes
Vented (Reflex)	140–160 L	45–48 Hz	Dual ports 5" dia × 160 mm length
4th Order Bandpass	100 L + 60 L	Front: 75 Hz, Rear: 42 Hz	High SPL design with tuning peak boost
6th Order Bandpass	90 L + 50 L	55 Hz + 45 Hz	For very high output, tuned for punch

☑ This driver works extremely well in bandpass enclosures, thanks to its high motor strength and compliance control, making both 4th and 6th order bandpass viable with proper vent tuning.

Recommended HF Pairing (When Used in 2-Way Systems)

Parameter	Recommendation
HF Driver Power	100–120W AES
Diaphragm Type	Titanium or Polyimide (for warmth)
Exit Size	1.4" Compression Driver
Sensitivity Match	108–110 dB SPL preferred
Use Case	For 3-way system pairing above 1.2 kHz

Note: HF is usually not paired directly with a subwoofer, but this recommendation applies if it is used in a hybrid low-mid system.

Crossover Recommendations:

Driver	High Pass (HPF)	Low Pass (LPF)	Slope
18 PT 1800 SUB	35–40 Hz (24 dB/ oct)	90–120 Hz (24 dB/ oct)	LR or BW
HF (if used)	1.4–1.6 kHz (HPF)	–	12–18 dB/oct

For use in subwoofer roles, HPF is essential to avoid over-excursion below box tuning frequency.

Ideal Applications:

- Large-scale touring and concert sound systems
- DJ and festival-grade subwoofer cabinets
- Bandpass loaded sub enclosures
- Outdoor public address systems
- Stage side fills and hybrid LF cabinets

Why Choose 18 PT 1800 SUB?

- Massive 130 mm voice coil enables high thermal capacity and stability under stress
- Powerful motor (Bl = 32.64 N/A) ensures low distortion and tight low-end control
- Excellent for bandpass applications where punch, efficiency, and peak SPL matter
- Higher Fs (49 Hz) provides better transient response and optimized performance in higher-tuned boxes (perfect for Indian bass preferences)
- Proven through Klippel nonlinear and thermal analysis, ensuring reliability

18 PT 1800 SUB

SWETON®

SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	464 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	1800 W
Program Power	3600 W
Sensitivity (1W/1m)	94 dB
Frequency Range	49-1500 Hz
Magnet Material	Ferrite
Voice Coil Diameter	130 mm (5.12 in)
Winding Material	COPPER
Former Material	GLASS FIBRE
Winding Type	In/Out

Mounting Info

Overall Diameter	464 mm
Bolt Circle Diameter	445 mm
Baffle Cutout Diameter	422 mm
Depth	198 mm
Flange and Gasket Thickness	17 mm
Gross Weight	25.14 Kgs

Parameters

Resonant Frequency	Fs	49 Hz
DC Resistance	Re	5.5 Ω
Electrical Q	Qes	0.48
Mechanical Q	Qms	18.01
Total Q	Qts	0.47
Compliance Equivalent Volume	Vas	67.43 Ltrs
Peak Diaphragm Displacement Volume	Vd	2.40 Ltrs
Effective Surface Area of Cone	Sd	1176.28 cm^2
Reference Efficiency	ηo	1.65%
Moving Mass including air load	Mms	297.40 gms
Motor Strength	Bl	32.64 T-m
Voice Coil Inductance	Le	1.28 mH
Efficiency Bandwith Product	EBP	102 Hz
Voice Coil Overhang	Xmax	±10.2 mm

Recone Kit

Recone Kit Number	REC18PT1800SUB

18 PT 1800 SUB

SWETON®

Z(f,x=0) Impedance