12 PA 300 MB

SWETON®



12 PA 300 MB – 12” 300W Mid Bass Driver

“Crafted for Clear, Punchy Mid bass in Demanding Environments”

12 PA 300 MB is a precision-engineered 12-inch mid bass speaker featuring a 3-inch high-temperature voice coil and an optimized motor structure. Designed using advanced Klippel analysis, this driver offers a robust 300W AES power handling with minimal distortion, even under thermal and mechanical stress.

With a resonant frequency (Fs) of 55 Hz and a Qts of 0.33, the 12 PA 300 MB is tuned for high-impact mid bass reproduction. The Bl product of 17.72 N/A and moving mass (Mms) of 64.4g indicate excellent motor control and transient response

The frequency response curve shows a usable and flat output from ~60 Hz to 3.5 kHz, peaking in the critical vocal and punch zone, making it ideal for PA, vocals, and live band reinforcement.

Recommended Enclosure Designs:

Type	Volume (Net)	Port Details	Tuning Frequency
Vented (Bass Reflex)	45 – 55 L	4" (100mm) dia×160mm long port	~55 Hz
Sealed	25 – 35 L	Not required	Natural roll-off

For tight punch, go for sealed. For deeper extension and loud output, go for vented.

Recommended HF Driver Pairing:

Parameter	Recommendation
Power Handling	80 – 120 Watts AES
Diaphragm Type	Titanium for crispness
Exit Size	1" or 1.4" Compression driver
Sensitivity	105–110 dB SPL

Crossover Recommendations

Type	Frequency	Slope
LPF for 12 PA 300 MB	2.8 – 3.2 kHz	12 or 18 dB/oct
HPF for HF Driver	1.5 – 1.8 kHz	12 or 18 dB/oct

Maintain a small overlap or use time alignment for phase coherence.

Applications:

- Professional PA Systems
- Midbass for 2-way or 3-way systems
- Floor monitors and wedges
- Stage side-fills and DJ setups
- Portable systems for speech and vocals

Why Choose 12 PA 300 MB?

- Klippel-optimized linear and thermal performance
- Low distortion and high force factor for clean mid
- Stiff suspension and low Qts for vented enclosure efficiency
- High output with excellent transient attack
- Balanced tone – punchy lows with vocal clarity

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SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	314 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	300 W
Program Power	600 W
Sensitivity (1W/1m)	95 dB
Frequency Range	60-3500 Hz
Magnet Material	Ferrite
Voice Coil Diameter	76.2 mm (3 in)
Winding Material	COPPER
Former Material	GLASS FIBER
Winding Type	Outside

Mounting Info

Overall Diameter	314 mm
Bolt Circle Diameter	296 mm
Baffle Cutout Diameter	282 mm
Depth	137 mm
Flange and Gasket Thickness	15 mm
Gross Weight	7.85 Kgs

Parameters

Resonant Frequency	Fs	55 Hz
DC Resistance	Re	4.8 Ω
Electrical Q	Qes	0.34
Mechanical Q	Qms	12.08
Total Q	Qts	0.33
Compliance Equivalent Volume	Vas	47 Ltrs
Peak Diaphragm Displacement Volume	Vd	0.16 Ltrs
Effective Surface Area of Cone	Sd	510.7 cm^2
Reference Efficiency	ηo	2.23%
Moving Mass including air load	Mms	64.40 gms
Motor Strength	Bl	17.72 T-m
Voice Coil Inductance	Le	0.44 mH
Efficiency Bandwith Product	EBP	162 Hz
Voice Coil Overhang	Xmax	±3.30 mm

Recone Kit

Recone Kit Number	REC12PA300MB

Z(f,x=0) Impedance



