

Ferrite Magnet Die-cast Chassis Driver



Features

- 4.5" Very Large Format Voice Coil
- 6800 Watts Peak Power Handling
- Active Balanced Cooling
- Ferrite Magnetics
- Square Wire Inside/Outside Coil Design
- Double Spider Suspension
- Integrated Demodulation Rings
- Die Cast Aluminum Chassis

Applications

The SD18-1700EL is a high output low frequency transducer. The 18 inch (457mm) diameter piston will produce extremely high sound pressure levels at very low frequencies and is ideal for high level deep bass and sub woofer response in both live sound and recorded music venues. The operating range is 30Hz to 200Hz. The transducer uses high energy ferrite magnetics to achieve a very high acoustic output to weight ratio.

The SD18-1700EL employs a very large 4.5 inch (114.4mm) diameter voice coil that provides an AES rated 1700 watts of continuous power handling and a full 6800 watts of peak rated power handling when sufficient amplifier headroom is available. It is recommended that the transducer be loaded into a properly designed vented enclosure and that active high order high pass filtering be employed if extremely high power levels are expected at low frequencies. The SD18-1700EL utilizes P Audio's Auto Balanced Cooling (ABC) technology to not only improve transducer power handling and reliability but to also increase power compression performance by carefully balancing and directing airflow to critical areas.

The voice coil design is an "inside/outside" geometry with P Audio's square wire technology to improve conversion efficiency and provide a very large cross-sectional area for superior cooling.

System linearity is achieved by employing magnetic flux demodulation devices in the structure to increase fidelity and sonic accuracy. The system suspension has been designed specifically for high linear displacement and extended low frequency response. The double spider design insures very high displacement and linear response while maintaining excellent control.

The transducer chassis is a die cast aluminum design that insures a very high degree of structural integrity.

Specifications

General Specifications

Nominal diameter	
Power rating	1700 W <i>(AES)</i>
Nominal impedance	8Ω
Sensitivity	98 dB
Frequency range	30-200 Hz
Chassis type	Cast aluminum
Magnet type	Ferrite
Magnet weight	3.17 kg/111.8 oz
Voice coil diameter	114.4 mm/4.5 in
Coil material	SV-SQ
Former material	Glass fiber
Cone material	Paper
Surround material	Cloth
Suspension	
X-max	4.8 mm/0.19 in
Gap depth	
Voice coil winding width	24.7 mm/0.64 in
Net Weight	14.2 kg/31.3 lb
Packing Dimension WxDxH	
Shipping Weight	16.0 kg/35.3 lb
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Small Signal Parameters

Re	5.2Ω
Fs	42 Hz
Mms	307.7 g/10.85 oz
Mmd	283.0 g/9.98 oz
Qms	11.10
	0.63
Qts	0.59
Vas	
BI	25.91 Tm
Cms	4.7e-03 m/N
Rms	7.32 Ns/m
Le (at 1kHz)	1.02 mH
Sd	1225 cm2





