

# L869

## 800MM(30 in) LOW FREQUENCY TRANSDUCER

### Specifications

Nominal Diameter	800 mm	30 in
Rated Impedance	8 ohms	
Power Capacity <sup>1</sup>	600 W Continuous program power	
	Add 2nd Line "300 W Continuous Pink Noise Power"	
Sensitivity <sup>2</sup>	100 dB SPL, 1W, 1M	
Frequency Range	18 Hz-2 kHz	
Highest Recommended Crossover Frequency	200 Hz	
Recommended Enclosure Volume	600 + L	21 + ft <sup>3</sup>
Effective Piston Diameter	715 mm	28.2 in
Maximum Excursion	17 mm	0.67 in
Minimum Impedance	7 ohms	
Voice Coil Diameter	100 mm	4 in
Voice Coil Winding Depth	13 mm	0.51 in
Voice Coil Material	Edgewound Copper Ribbon	
Voice Coil Former Material	FRP	
Magnetic Gap Depth	9 mm	0.35 in
Magnet Weight	2.0 kg	4.4 lb
Magnet Material	Ferrite	
Flux Density	1.1 T	11,000 gauss
Total Flux	3.12 x 10 <sup>-3</sup> wb, 312000 Maxwell	
BL Factor	21.6 T-m	
Effective Moving Mass	0.385 kg	
Positive voltage on red terminal gives forward diaphragm motion.		

### Mounting Data

Overall Diameter	800 mm	31.5 in
Bolt Circle Diameter	700 mm	30.3 in
Baffle Cutout Diameter		
Front Mount	750 mm	29.5 in
Rear Mount	730 mm	28.7 in
Depth	291 mm	11.5 in
Net Weight	20.5 kg	45.1 lb
Shipping Weight	37 kg	81.4 lb

### Thiele-Small Parameters

Fs	18 Hz	
Re	6.8 ohms	
Qts	0.45	
Qms	6.1	
Qes	0.49	
Vas	6700 L	237 ft <sup>3</sup>
Sd	0.4 m <sup>2</sup>	620 in <sup>2</sup>
Xmas	4 mm	0.157 in
Vd	1600 cm <sup>3</sup>	97.6 in <sup>3</sup>
Ref eff (half space)	6%	
Pe (max)	300 W	

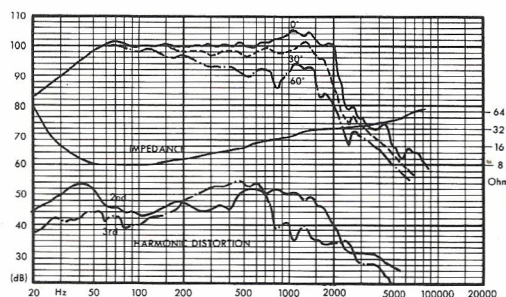
<sup>1</sup> Continuous program power is defined as 3 dB greater than continuous pink noise power and is a conservative expression of the transducer's ability to handle music program material.

<sup>2</sup> The sensitivity rating of Fostex transducers is based upon a signal swept over the frequency range as specified above.

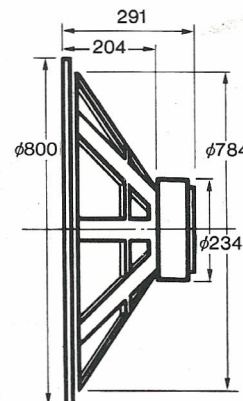
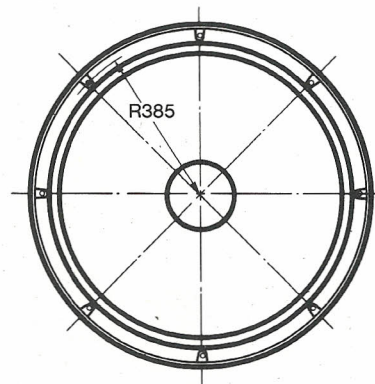
## ARCHITECTURAL SPECIFICATIONS

The low frequency transducer shall have a nominal diameter of 800 mm(30 in), an overall depth not greater than 291 mm(11.5 in), and a weight of at least 28 kg (61.6 lb). The magnet assembly shall utilize a ferrite magnet weighing(4.4 lb) and shall incorporate a large heat sink assembly to reduce operating temperature. In addition, a copper shorting ring shall encircle the pole piece to reduce flux modulation. The voice coil shall be 100mm(4 in) in diameter and shall be wound with copper ribbon wire on a non-flammable v.c. material, FRP, operating in a magnetic field of not less than 1.1 T(11,000 gauss). The voice coil assembly shall be supported with a double spider suspension system. The frame shall be of cast aluminium to resist deformation and to allow precise manufacturing tolerances. Performance specifications of a typical production unit shall be as follows: power rating, 300 watts continuous pink noise; measured sensitivity [SPL at 1m (3.3 ft) with 1 W input] shall be at least 100 dB on axis; half-space reference efficiency shall be at least 6%; usable response shall be 15 Hz to 2kHz; nominal impedance shall be 8 ohms.

The low frequency transducer shall be the Fostex MODEL L869.



The frequency response and distortion curves are measured in accordance with JIS standard C5531 with the transducer mounted in a sealed 650L (23 ft<sup>3</sup>) enclosure located in a free-field environment. Measuring distance is 1 meter and input power is 1 watt. The impedance curve is measured with the loudspeaker un baffled, located in a free-field environment.



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