



PD75T

High Efficiency 75 Watt Compression Driver

Applications

Atlas Sound Model PD75T is a versatile, 75 Watt, high power, compression driver designed for use in conjunction with Atlas Sound large format horns (Models CJ-46, BIA-100, DR Series, and CD Series) or other similar equipment. This driver provides maximum efficiency and extended heavy-duty performance. Model PD75T offers quality and durability to assure optimum penetration and excellent intelligibility in professional and commercial audio systems where increased sound projection and frequency response are demanded. The PD75T driver will provide powerful audio or signal reproduction with superior wide-range fidelity.

This unit is ideal for commercial sound, signaling, and public-address systems in applications such as manufacturing, recreation, and sports facilities, exhibit halls, commercial centers, shipping, and transportation terminals, malls, storage areas, and warehouses, etc.

General Description

Model PD75T is a fully environment-resistant 75 Watt driver for indoor or outdoor applications and is recommended for use in expansive and/or high ambient sound-level areas. This model features a sound chamber, phasing plug, magnetic-structure components machined to optimum tolerances, 2" voice coil and offers a plane wave frequency response of 100Hz – 3.7kHz (+5dB).

This unit, which is comprised of a transformer with 16Ω bypass, will meet a variety of applications. The PD75T provides screw-type terminals for matching direct to the 16Ω voice coil impedance and a built-in varnish impregnated, multi-tap 70.7 volt line-matching transformer. Corrosion-resistant terminal connections are protected by a transparent, impact-resistant plastic cover.

The PD75T is terminated in a standard 1/8"-18 thread male couplings for use with screw-on horns, or with Atlas Sound Model YDA-TH adapters for bolt-on large format horns. Diaphragms are replaceable with appropriate equipment. A replacement diaphragm, model PD75TDIA, is available.

Internal components are enclosed within a protective die-cast and polycarbonate injection moulded housing and finished in grey baked epoxy.



PD75T

Features

- Outstanding Sound Reproduction and Power Handling For Signaling, Music, and Public Address Systems
- Extended Frequency Response Range For Optimum Intelligibility
- 75 Watt Power Rating
- Environment-Resistant Construction For Indoor/Outdoor Use
- Offered with Transformer and 16Ω Tap

Specifications

Power Rating	75 Watts
Plane Wave Freq. Resp.	100Hz – 3.7kHz (±5dB)
SPL 1mW PWT	116dB Avg. 300Hz – 3kHz (±3dB)
Impedance	16, 67, 133, 267, 533, 1100, & 2100Ω
Transformer Taps	2.36, 4.7, 9.4, 19, 38, & 75 Watts
Voice Coil Diameter	2" (50.8mm)
Height	7 1/8" (181mm)
Diameter	6 3/16" (157mm)
Weight	8.2lbs (3.72kg)

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IMPORTANT

To determine the proper capacitor to limit low frequency reproduction, find the low frequency cutoff for the horn projector you are using with the Atlas Sound PD75T driver. Locate this figure on the chart below in the left hand vertical column. Next, using the tap value you are using in Watts from the top horizontal column, follow down to find the recommended capacitor value.

Use non-polarized electrolytic capacitors rated at 150VDC or greater, wired in series with the positive lead of the speaker line, one per driver.

For 16Ω operation, remove the factory installed jumper and connect positive speaker line to 16Ω terminal.

Note: When non-standard values are indicated, use closest smaller value.

Capacitor Selection Chart

Impedance	67Ω	133Ω	267Ω	533Ω	1066Ω	2133Ω	16Ω	
Tap	75 Watts	38 Watts	19 Watts	9.4 Watts	4.7 Watts	2.3 Watts	16Ω	
Horn Low Frequency Cutoff	150 Hz	15.8 uF	8.0 uF	4.0 uF	2.0 uF	1.0 uF	0.5 uF	66.3 uF
	200 Hz	11.9 uF	6.0 uF	3.0 uF	1.49 uF	0.75 uF	0.37 uF	49.7 uF
	250 Hz	9.5 uF	4.8 uF	2.4 uF	1.19 uF	0.60 uF	0.30 uF	39.8 uF
	300 Hz	7.9 uF	4.0 uF	2.0 uF	1.00 uF	0.50 uF	0.25 uF	33.2 uF
	350 Hz	6.8 uF	3.4 uF	1.7 uF	0.85 uF	0.427 uF	0.213 uF	28.4 uF
	400 Hz	5.9 uF	3.0 uF	1.5 uF	0.75 uF	0.373 uF	0.187 uF	24.9 uF
	500 Hz	4.8 uF	2.4 uF	1.2 uF	0.60 uF	0.299 uF	0.149 uF	19.9 uF
	650 Hz	3.7 uF	1.8 uF	0.9 uF	0.46 uF	0.230 uF	0.115 uF	15.3 uF
	800 Hz	3.0 uF	1.5 uF	0.75 uF	0.37 uF	0.187 uF	0.093 uF	12.4 uF
	1000 Hz	2.4 uF	1.2 uF	0.60 uF	0.30 uF	0.149 uF	0.075 uF	9.9 uF
	1200 Hz	2.0 uF	1.0 uF	0.50 uF	0.25 uF	0.124 uF	0.062 uF	8.3 uF
	1600 Hz	1.5 uF	0.7 uF	0.37 uF	0.19 uF	0.093 uF	0.047 uF	6.2 uF

All Capacitor Values Above in uF (Microfarads). Use Non-Polarized Electrolytic Capacitors Rated at 150 VDC or Greater Connected in Series with Positive Speaker Input. Note: When Non-Standard Values are Indicated, Use the Closest Smaller Standard Value.

Architect & Engineer Specifications

Compression driver unit shall be Atlas Sound Model PD75T or approved equal. Unit shall have a full range power capacity of 75 Watts above the low frequency cutoff of the associated projector horn.

Rated frequency response shall be 300Hz – 3kHz (±3dB) measured on a plane wave tube at 1mW. Unit shall have a ceramic magnet and each driver shall have a 1mW sound pressure output capability level of 116dB (avg) 300Hz – 3kHz (±3dB). Low frequency limit at full power shall be 300Hz. Compression driver shall have a 2" diameter 16Ω voice coil constructed of cloth-based molded phenolic.

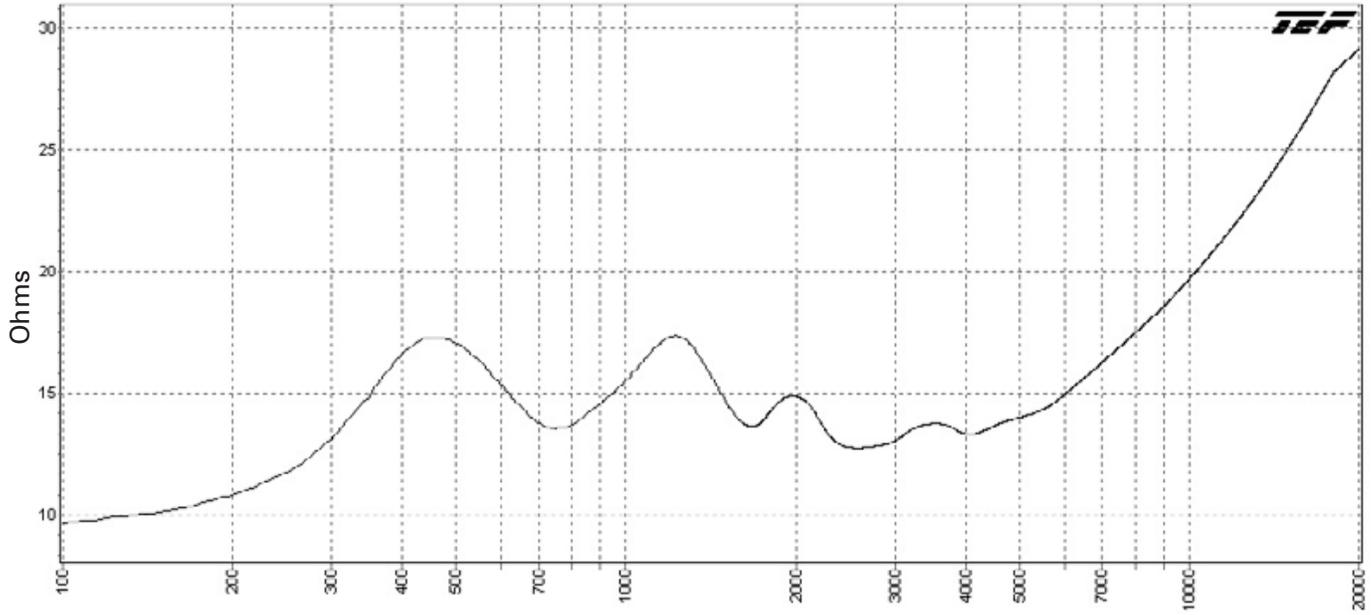
Driver with enclosed terminal shall be capable of standard indoor/outdoor use and be fully environment resistant. The units shall terminate in the industry standard 1½"-18 thread pattern and a .707" inch throat.

Diaphragm shall be field-replaceable and shall be high-temperature molded phenolic with a roll-type, flex-point suspension.

Model PD75T shall have a nominal impedance of 16Ω, and shall be equipped with a 70.7V transformer having power taps of 2.3, 4.7, 9.4, 19, 38, and 75 Watts.

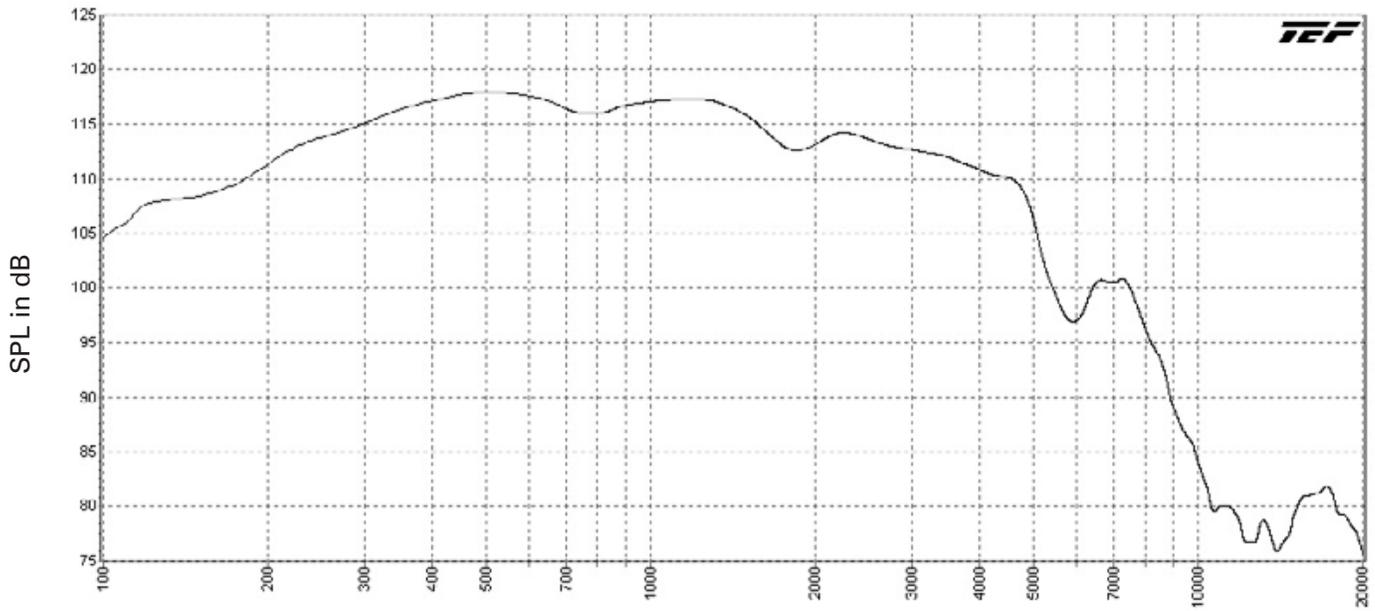
Impedance and power taps shall be clearly identified and referenced on screw-terminal board.

PD75T Impedance



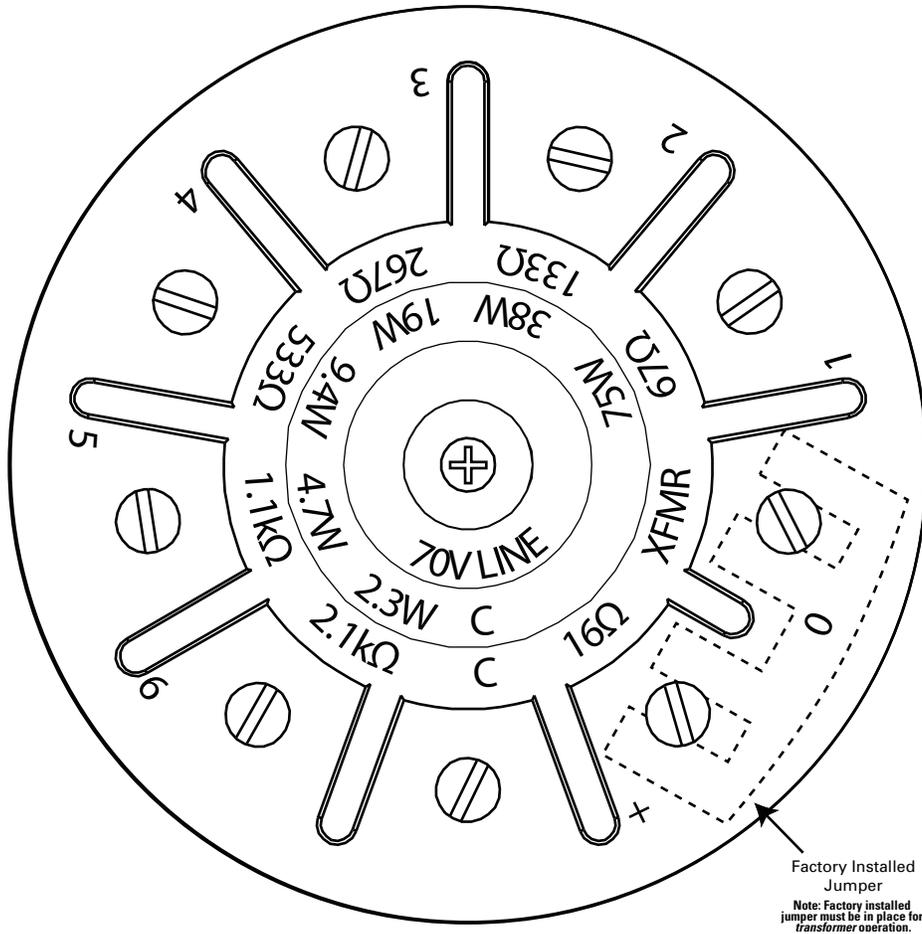
Frequency (Hz) Octave Smoothing = 30.0%

PD75T Sensitivity



Frequency (Hz)

Terminal Block Illustration



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