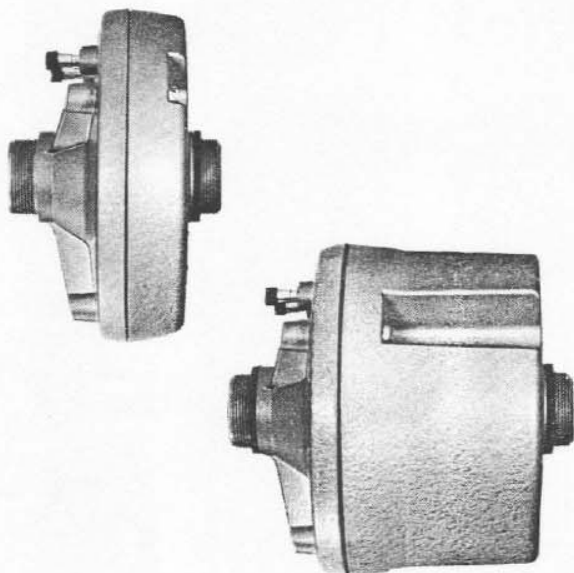




DESCRIPTION

The Electro-Voice 1829 series has been specifically created to meet the demand for high fidelity reproduction in public address installations. These 60-watt convertible drivers are capable of sustained operation at high power levels.

The 1829 series drivers are exceptionally versatile. Particularly effective when used with low distortion Electro-Voice exclusive CDP® projectors (AC100, FC100) in applications requiring professional quality sound projection, these drivers are efficient and economical for use in less demanding commercial applications where reentrant performance is permissible. In these situations, excellent results can be obtained when the 1829 series drivers are used with Electro-Voice reentrant projector models AR150, FR150, and HC400 and with the projectors manufactured by other companies. Conversion from reentrant operation to compound applications utilizing the Electro-Voice CDP projectors is made by removing the red cap and plastic damping plug from the threaded rear opening.

The entire voice coil and diaphragm assembly in the 1829 series drivers is held to absolute concentricity through exclusive E-V design and construction techniques utilizing automatic thermal compensation in voice coil assembly and the most advanced manufacturing processes. The rugged, weather-resistant phenolic diaphragm in these drivers is virtually indestructible in even the most stringent service. Diaphragm assemblies are easily replaceable without special tools or experience. The high precision die-cast housing is carefully weather sealed to ensure dependable performance in all weather conditions.

Convenience of installation is assured with push-type connectors, with polarity clearly marked. Voice coil impedance of the 1829 series is nominally 16 ohms. The Model 1829T includes an integral constant-voltage transformer for use with 70.7 systems. Wattage taps include 8, 15, 30 and 60 watts and are selected by moving a single wire behind the clear plastic panel on the rear of the driver. Impedances of these taps are 667 ohms, 333 ohms,

167 ohms, and 83 ohms. Introduction of the constant-voltage transformer results in virtually no insertion loss, while frequency response and power handling characteristics remain unchanged.

SPECIFICATIONS

Frequency Response:	1829 & 1829T	
Horn Type AR150	180 - 9000	
FR150	180 - 9000	
HC400	250 - 9000	
FC100	140 - 11000	
AC100	140 - 11000	
Power Handling:	1829 & 1829T	
Sine Wave, watts	40	
Program, watts	60	
Adjusted program, watts	80	
Sound Pressure Level:*	1829 & 1829T	
AR150	132	
FR150	126	
HC400	128	
FC100	128	
AC100	129	
Transformer Taps:	1829	1829T
	none	watts ohms
		60 83
		30 167
		15 333
		8 667
Terminal Polarity:	1829 & 1829T	
	T1 - positive	
	T2 - negative	
Thread Size:	1-3/8" - 18	
Finish:	Mesa Tan baked enamel	
Diameter:	5-5/16"	
Overall Length:	1829	1829T
	4-1/16"	5-15/16"
Weight:	7 lbs.	9 lbs. 11 oz.

*At 4' on axis with 1 cps sweep from 750 to 1250 cps at 60 watts.

INSTALLATION

Installation of the 1829 series driver can be quickly and easily made. For use with Electro-Voice Compound Diffraction Projectors, use the following procedure:

1. Remove the threaded caps from front and rear of the driver. Remove foam damping plug from rear opening.
2. Attach low-frequency (large horn) section of the Compound Diffraction Projector to the rear opening of this driver, the opening opposite the push terminals. Tighten by hand until the rubber gaskets are slightly compressed.
3. Attach small horn (high frequency) section to the front of driver as described above.

When used with all other types of horns, the threaded plastic cap and plastic foam plug on the rear of the driver should be left on and firmly hand tightened. The front opening of the driver should be screwed into the full-range horn until the rubber gasket is depressed.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The drivers shall have a uniform response of (B) when mounted in (A) horn. The sound pressure level at 4 feet on axis with a 1 cps sweep from 750 to 1250 cycles per second at 60 watts shall be (C). The power handling capacity shall be 60 watts of program material. The nominal voice coil impedance shall be 16 ohms. (Include transformer data for 1829T only.) The transformer shall have taps marked in watts for 70.7 volt line operation. Taps shall be 60, 30, 15, and 8 watts and 83, 167, 333, and 667 ohms respectively. Insertion loss of the transformer shall not exceed .75 db.

Driver shall be of the convertible compound type having two separate sound openings. The front opening shall be suitable for frequencies above 1000 cps when coupled to the high-frequency section of a compound horn or for full-range when coupled to any other type of horn. The rear sound opening shall be suitable for frequencies below 1000 cps when coupled to the low-frequency section of a compound horn. Rear sound opening shall have a threaded cap and plastic damping plug. Dual concentric centering of the diaphragm assembly shall be provided and field replacement shall be possible without special tools. Diaphragm shall be linen base molded phenolic and voice coil shall be two inches in diameter.

The driver shall be die-cast zinc and shall be completely weatherproof. The spring-loaded terminals shall be phased. The diameter of the driver shall be 5-5/16 inches and the length 4-1/16 inches. (1829T length-6-3/8 inches) Net weight shall be 7 pounds. (1829T weight-9 lbs., 11 oz.) Finish shall be Mesa tan baked enamel. The Electro-Voice model (D) is specified.

LOW FREQUENCY DRIVER PROTECTION

When frequencies below the low-frequency cut-off for the horn assembly are fed to the driver, excessive current may be drawn by the driver. For protection of driver, amplifier, and transformer

(if driver with built-in transformer is used), capacitor(s) in series with driver or transformer primary are recommended. The following table indicates recommended values. The values shown are for 200 cycles per second. Values for other frequencies can be determined by using the formula:

$$C = C_{200} \left(\frac{200}{f} \right)$$

C_{200} = Values shown in the following table

f = New Frequency

For drivers without transformers:

16 ohms driver, 50 wv - 50 mf

Series capacitors for 200 cps and below -- driver protection:

70 volt lines

Power	Impedance	Capacitance
60 w	83	10 mf
30 w	166	5 mf
15 w	333	2 mf
8 w	625	1 mf

150 v. DC or 150 v. non-polarized electrolytic, or 2 150 v. DC electrolytics of 2 times required value in series, back to back, for 70 volt lines.

A	B	C	D
AR150	180 - 9000	132 db	1829
FR150	180 - 9000	126 db	
HC400	250 - 9000	128 db	1829T
FC100	140 - 11000	128 db	
AC100	140 - 11000	129 db	

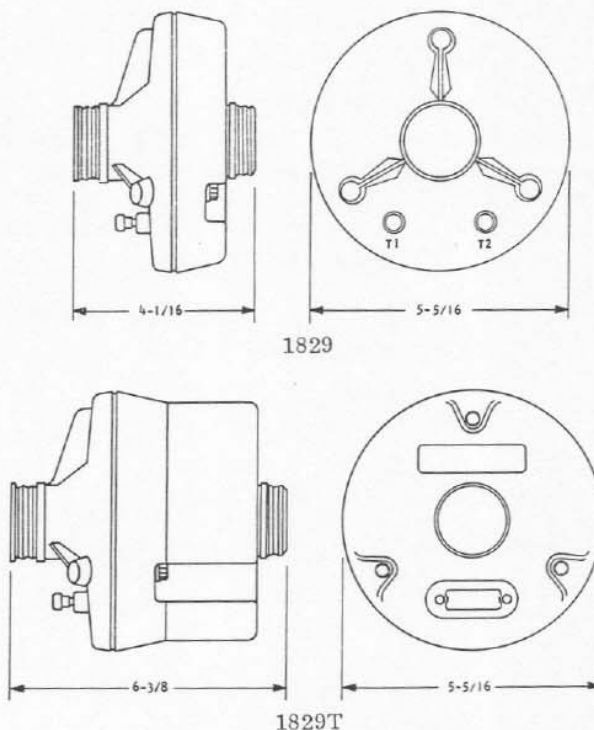


Figure 1 - Dimensions