

# 1824S

## Heavy Duty Driver



COMMERCIAL

### General Product Description

The 1824S is a heavy-duty driver designed for use in fixed or mobile siren warning systems incorporating PA horns.

The driver uses a rugged, weather-resistant phenolic diaphragm, 2-inch diameter voice coil with specially insulated copper wire, and a strontium ferrite magnet structure.

The entire voice coil and diaphragm assembly is held to absolute concentricity by use of specialized techniques in construction.

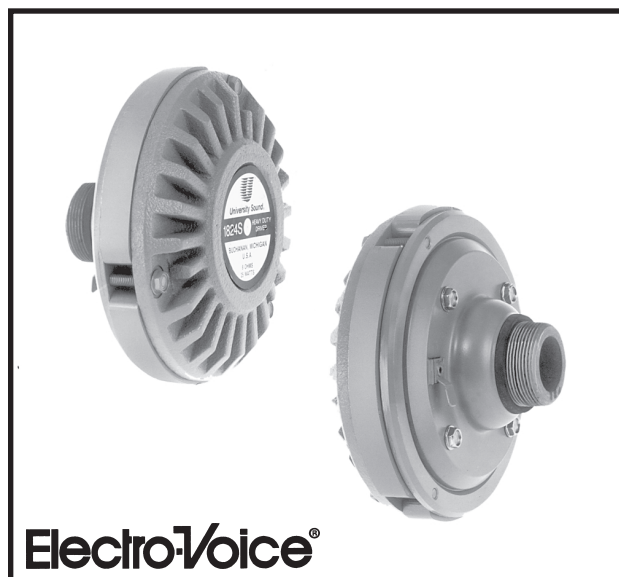
Automotive-type terminals are used, and mating connectors provided for making electrical connection to the 1824S.

### Architects' and Engineers' Specifications

The loudspeaker shall be of the compression-driver type having a rugged phenolic diaphragm and a high-temperature rated 2.0-inch diameter voice coil.

The loudspeaker shall exhibit essentially flat power response from 300 to 3,000 Hz with a smoothly rolled-off response beyond. Its sensitivity, when mounted on a University Sound Cobreflex III horn, will be 107 dB (1 W/1 m) with a 300 to 3,000 Hz pink noise signal applied.

The loudspeaker shall be capable of handling a 75 watt, 500 to 5,000 Hz pink noise signal with a 6 dB crest factor for a period of eight hours.



The loudspeaker shall have a diameter of 13.2 cm (5.2 in.) and a depth of 7.9 cm (3.1 in.). It shall have a 2.2 cm (0.9 in.) throat opening with a 1 3/8 inch-18 thread for mounting.

The loudspeaker shall be the 1824S which weighs no more than 2.9 kg (6.4 lb) and has a nominal impedance of 8 ohms.

### Specifications:

#### Frequency Response:

..... 300-3,000 Hz  $\pm$ 5 dB (see Figure 2)

#### Power Handling, 8 Hours, 6 dB Crest Factor:

..... 75 watts: (500-5,000 Hz pink noise)

**Impedance, Nominal:** ..... 8 ohms

Minimum: ..... 7 ohms (Cobreflex III horn)

**Sound Pressure Level at 1 Meter, 1 Watt Input Averaged, Pink Noise Band-Limited from 300-3,000 Hz:**

..... 107 dB (Cobreflex III horn)

#### Voice Coil Diameter:

..... 5.08 cm (2.0 in.)

#### Magnet Weight:

..... 0.6 kg (1.4 lb)

#### Magnet Material:

..... Strontium ferrite

#### Flux Density:

..... 1.25 Tesla

#### Construction:

Diecast front cover with thermal black finish

#### Mechanical Construction of Driver:

1-3/8"-18 x 7/8"- long thread for direct connection to PA or reentrant horns.

#### Dimensions,

Diameter: ..... 13.2 cm (5.2 in.)

Depth: ..... 7.9 cm (3.1 in.)

#### Net Weight:

..... 2.9 kg (6.4 lb)

#### Shipping Weight:

..... 3.2 kg (7.0 lb)

#### Recommended Horns:

Cobreflex IIB Cobreflex III

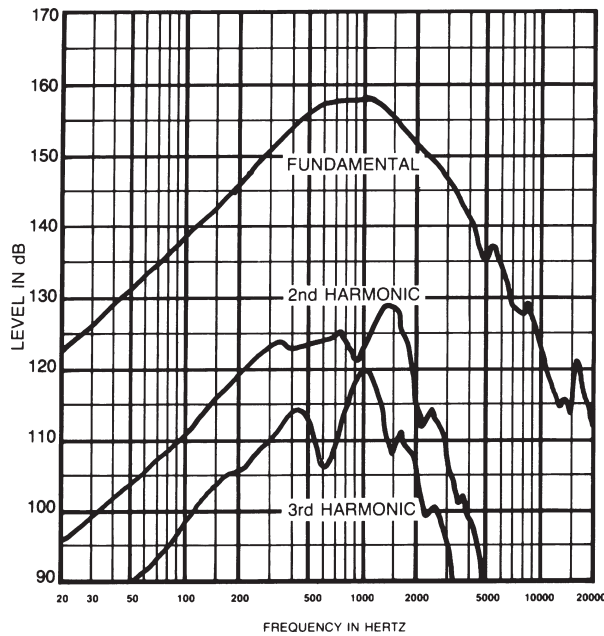
## Installation

Remove the plastic cap from the threaded throat of the driver and screw driver into the horn until firmly seated.

Install the horn/driver assembly in intended location, referring to the instructions provided with horn.

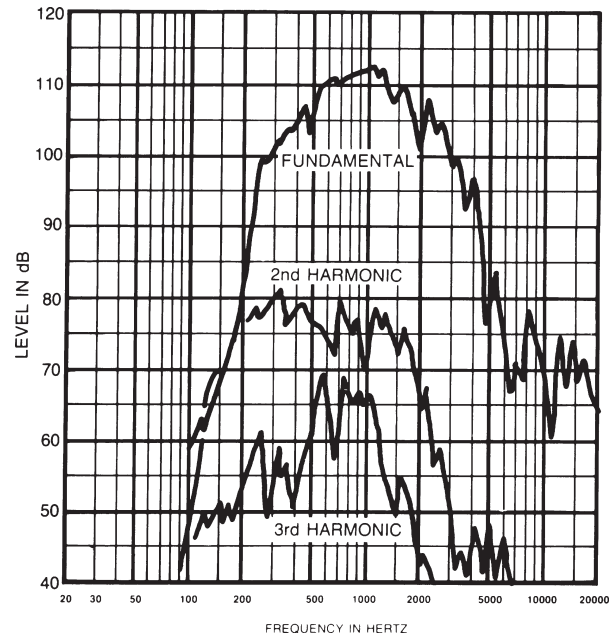
A rear driver bolt is provided for attachment. Do not use a longer size than the one supplied.

Attach mating terminals to lead wire and connect to driver terminals or solder lead wire directly to the driver terminals.



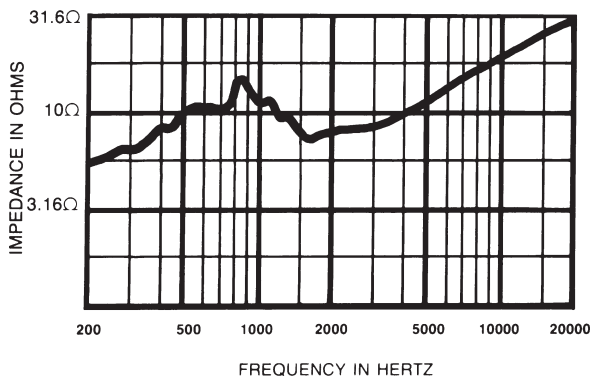
**Figure 1.**

**Distortion Response - Plane Wave Tube (1 inch)  
(7.5 watt input)**



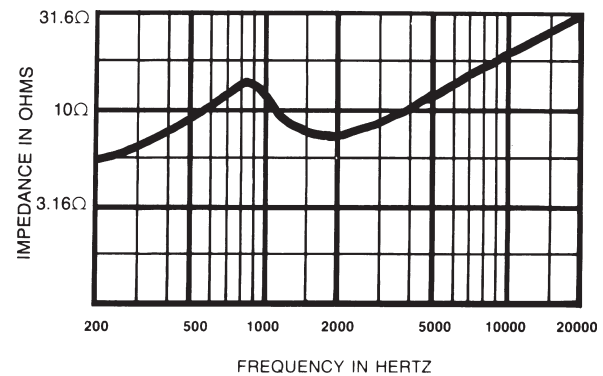
**Figure 2.**

**Distortion Response - Cobreflex III Horn  
(1 watt / 1 meter)**



**Figure 3.**

**Impedance Response - Plane Wave Tube  
(1 inch)**



**Figure 4.**

**Impedance Response - Cobreflex III Horn**

USA 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-884-4051, FAX: 952-884-0043  
 Canada 705 Progress Avenue, Unit 46, Scarborough, Ontario, Canada, M1H2X1, Phone: 416-431-4975, 800-881-1685, FAX: 416-431-4588  
 Switzerland Kellenstrasse 11, CH-2563 IPSACH, Switzerland, Phone: 41/32-331-6833, FAX: 41/32-331-1221  
 Germany Hirschberger Ring 45, D94315, Straubing, Germany, Phone: 49 9421-706 392, FAX: 49 9421-706 287  
 France Parc de Courcerin, Alle Lech Walesa, Lognes, 77185 Marne La Vallee, France, Phone: 33/1-6480-0090, FAX: 33/1-6480-4538  
 Australia Unit 23, Block C, Slough Business Park, Slough Avenue, Silverwater, N.S.W. 2128, Australia, Phone: 61/2-9648-3455, FAX: 61/2-9648-5585  
 Hong Kong Unit E & F, 21/F, Luk Hop Industrial Bldg., 8 Luk Hop St., San PO Kong, Kowloon, Hong Kong, Phone: 852-2351-3628, FAX: 852-2351-3329  
 Japan 2-5-60 Izumi, Suginami-ku, Tokyo, Japan 168, Phone: 81-3-3325-7900, FAX: 81-3-3325-7789  
 Singapore 3015A Ubi Rd 1, 05-10, Kampong Ubi Industrial Estate, Singapore 408705, Phone: 65-746-8760, FAX: 65-746-1206  
 Mexico Av. Parque Chapultepec #66-201, Col. El. Parque Edo. Mex. 53390, Phone: (52) 5358-5434, FAX: (52) 5358-5588  
 UK 4, The Willows Centre, Willow Lane, Mitcham, Surrey CR4 4NX, UK, Phone: 44 181 640 9600, FAX: 44 181 646 7084  
 Africa, Mid-East 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7424, FAX: 952-887-9212  
 Latin America 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7491, FAX: 952-887-9212

**www.electrovoice.com • Telex Communications, Inc. • www.telex.com**

© Telex Communications, Inc. 02/2001  
 Part Number 38109-850 Rev A



**Electro-Voice®**

U.S.A. and Canada only.  
 For customer orders, contact the Customer Service department at  
 800/392-3497 Fax: 800/955-6831  
 For warranty repair or service information, contact the Service  
 Repair department at 800/685-2606  
 For technical assistance, contact Technical Support at 1(866)78 AUDIO  
 Please refer to the Engineering Data Sheet for warranty information.  
 Specifications subject to change without notice.