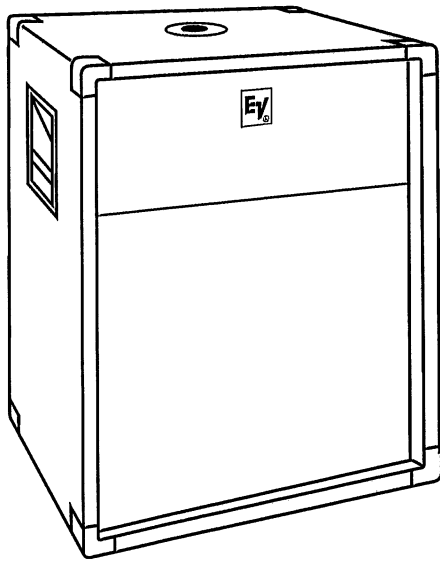


## T18

### Subwoofer

- DL18MT Manifold Technology™ woofer for reliable, extended low-frequency output
- Subwoofer for augmenting the low-frequency performance of EV stage systems
- Natural high-frequency roll-off
- 400-watt long-term power capacity
- Rugged, road-ready cabinet; metal grille; black carpet finish
- Neutrik Speakon® and 1/4-inch phone jack inputs
- 1<sup>3</sup>/<sub>8</sub>-inch stand mount in top allows use of satellite system



### Description

The Electro-Voice T18 is a 400-watt subwoofer loudspeaker system which combines the attributes of both horn-loaded and vented-box designs. It utilizes the unique SubScoop™ cabinet construction with a newly revised DL18MT woofer, as used in the Manifold Technology® concert systems. The design behaves like a horn over much of its range, but without the time delay and weight problems usually associated with conventional designs. Vented-box principles take over for the lowest octave and assist in producing exceptionally high levels of clean, punchy bass from a subcompact box.

### USE IN MULTIPLES

The T18 may be used in multiples to increase acoustic output. A 6-dB increase in maximum acoustic output occurs when two speaker systems are placed side by side and paralleled, yielding a 4-ohm load. For operation at very-low frequencies, the woofer cones "mutually couple," acting as one system with twice the effective cone area and power-handling capacity of a single system. Increasing the cone area doubles the efficiency, providing a 3-dB increase in sound pressure level. The doubled power capacity provides the potential for an additional 3-dB gain in maximum acoustic output. Mutual coupling occurs when the frequency is such that the center-to-center distance be-

ward compatibility with lower-powered systems. A parallel woofer can be connected using the other connector. Care must be taken not to abuse the amplifier by connecting impedances which are too low.

crossovers and amplifiers

To optimize performance, the T18 should be used in conjunction with an active crossover with a minimum slope of 12 dB per octave and a crossover frequency in the range of 100 to 250 Hz. Due to the high efficiency of the T18, less amplifier input is needed to achieve a given sound output level. The high power-handling capacity of the T18 permits the use of amplifiers with a rating of up to 800 watts rms into 8 ohms.

speaker protection

# T18 Subwoofer

T18 Subwoofer

factured by Electro-Voice.

## FREQUENCY RESPONSE

The T18's axial frequency response was measured in Electro-Voice's large anechoic chamber at a distance of 3 meters (10 feet) with a swept sine-wave input. Figure 1 has been averaged and corrected for 1 watt at 1 meter.

## ENCLOSURE CONSTRUCTION

Intended to be used as a portable speaker system, the T18 is ruggedly constructed of  $\frac{3}{4}$ -inch void-free plywood. All joints are dado cut, and the cabinet is finished with a densely-woven, abuse-resistant carpet that is both attractive and highly durable. A full-length steel grille protects the woofer from damage. Large, heavy-duty metal corner protectors, firmly secured rubber feet, and recessed handles complete the picture, ensuring that the T18 speaker system is ideally suited for a long and reliable life on the road.

## T18 CONNECTIONS

The T18 is equipped with two paralleled Neutrik Speakon® NL4MPR-V connectors, selected for their ability to reliably deliver to the speaker components the high currents delivered by high-wattage power amplifiers. An NL4FC mating connector is supplied. The NL4FC is a four-pin connector, and Figure 5 shows how the usual two-conductor speaker cable should be wired to pins 1+ and 1- of the connector. Two typical connectors at the power amplifier end of the cable are shown: banana and  $\frac{1}{4}$ -inch phone plugs. (The banana plug provides the more reliable connection.)

Note also that Neutrik Speakon® cables, connectors and wiring accessories are available from Pro Co Sound, Inc., and Whirlwind Music Distributors, Inc. To find your local Pro Co, Whirlwind or Neutrik dealer, contact:

### Pro Co Sound, Inc.

135 E. Kalamazoo Ave.  
Kalamazoo, MI 49007  
616/388-9675

### Whirlwind Music Distributors, Inc.

P.O. Box 1075

## Neutrik USA, Inc.

195-S3 Lehigh Ave.  
Lakewood, NJ 08701  
908/901-9488

## USE WITH SATELLITE SPEAKER SYSTEMS

The  $1\frac{3}{8}$ -in. stand mount in the top surface of the T18 can be used with any length of standard  $1\frac{3}{8}$ -in. tube. Care should be taken to ensure that the T18 is used on a flat and level surface. Electro-Voice strongly recommends that the top of the satellite speaker be no more than 8 feet (244 cm) above the ground and weigh no more than 75 pounds (34 kg). It is the responsibility of the user to ensure that the system is safe and stable. Do not use where the system can be easily knocked over.

## SERVICE

In the unlikely event the T18 requires service, the woofer can be replaced or serviced from the front. A service data sheet is available from Electro-Voice.

## POWER-HANDLING Test

Electro-Voice components and systems are manufactured to exacting standards, ensuring they will hold up, not only through the most rigorous of power tests, but also through continued use in arduous, real-life conditions. The EIA Loudspeaker Power Rating Full Range (ANSI/EIA RS-426-A 1980) uses a noise spectrum which mimics typical music and tests the thermal and mechanical capabilities of the components. Electro-Voice will support relevant additional standards as and when they become available. Extreme, in-house power tests, which push the performance boundaries of the woofers, are also performed and passed to ensure years of trouble-free service.

Specifically, the T18 passes ANSI/EIA RS-426-A 1980 with the following values:

$$R_{SR} = 6.9 \text{ ohms } (1.15 \times R_E)$$

$$P_{E(MAX)} = 400 \text{ watts}$$

$$\text{Test voltage} = 52.4 \text{ volts rms,}$$

$$104.8 \text{ volts peak}$$

The "peak" power-handling capacity of a woofer is determined by the peak test volt-

the equivalent of four times the "average" power-handling capacity, and is a peak that can be sustained for only a few milliseconds. However, this sort of short duration peak is very typical in speech and music. Provided the amplifier can reproduce the signal accurately, without clipping, the woofer will also perform accurately and reliably, even at these levels.

## Architects' And Engineers' Specifications

The loudspeaker shall be a horn-loaded type. The low frequencies shall be reproduced with a 400-watt (ANSI/EIA RS-426-A 1980) DL18MT 46-cm (18-in.) woofer. The system will reproduce the frequencies from 33 to 250 Hz. The system shall be capable of producing average sound levels in excess of 126 dB in the long term, and short-term peaks of 132 dB.

The enclosure shall be constructed of black, carpeted, multilayer plywood and have a metal grille which attaches with six screws. The dimensions shall be 83.3 cm (32.8 in.) tall, 63.0 cm (24.8 in.) wide and 60.9 cm (24.0 in.) deep. The system shall weigh 49.4 kg (109 lb). Neutrik Speakon® and  $\frac{1}{4}$ -inch jack connections shall be provided.

A  $1\frac{3}{8}$ -in. stand mount capable of supporting 75 pounds (34 kg) will be provided in the top surface of the T18 enclosure.

The loudspeaker system shall be the Electro-Voice T18 subwoofer.

## Limited Warranty

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior fin-

# T18 Subwoofer

T18 Subwoofer

uct data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to

or FAX 616/695-4743). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty

ited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. Electro-Voice active electronics associated with the speaker systems are guaranteed for three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

**For warranty repair** or service information, contact the service repair department at: 616/695-6831 or 800/685-2606.

rized service representatives together with proof of purchase of the product in the form

also have other rights which vary from state to state. **Electro-Voice Speakers and**

Support at 800/234-6831 or 616/695-6831, M-F 8:00 a.m. to 5:00 p.m. Eastern Stan-

**FIGURE 5—Two-Conductor Cable Configurations for T18 Subwoofer Using Neutrik Speakon® NL4FC Four-Pin Connector**

**Specifications**

Typical Axial Frequency Response (swept one-third-octave pink noise, anechoic environment, 4 volts at 10 feet, normalized for 1 watt/1meter; see Figure 1):

**Second Harmonic,**

100 Hz: -52 dB, 0.25%

**Third Harmonic,**

100 Hz: -44 dB, 0.63%

**Transducer Complement:**

DL18MCT

**Materials,**

**Enclosure:**

Black, carpet-covered 3/4-in. void-free plywood

**Grille:**

Black, carpet-covered 3/4-in. void-free plywood

**Low-Frequency 3-dB-Down Point:**

45 Hz

**Usable Low-Frequency Limit (10-dB-Down Point):**

33 Hz

**Half-Space Reference Efficiency:**

6.0%

**Long-Term Average Power-Handling Capacity per ANSI/EIA RS-426-A 1980 (see Power-Handling Capacity section):**

400 watts

**Maximum Woofer Acoustic Output:**

24 watts

**Sensitivity (SPL at 1 meter, 1 watt input, anechoic environment, band-limited pink noise signal, 50 to 200 Hz):**

99 dB-full space

(102 dB-1/2 space, 105 dB-1/4 space)

**Dispersion Angle Included by 6 dB**

**Box Tuning Frequency:**

38 Hz

**Recommended Crossover Frequency:**

250 Hz or below

**Recommended Crossover Slope:**

12 dB per octave

**Impedance,**

**Nominal:**

8 ohms

**Minimum:**

6.6 ohms

**Input Connectors:**

Two Neutrik Speakon® NL4MPR-V and two 1/4-in. phone jacks, all in parallel

**Supplied Accessory:**

Neutrik Speakon® NL4FC input cable connector

**Mounting:**

Enclosure Dimensions (see Figure 3),

**Height:**

83.3 cm (32.8 in.)

**Width:**

63.0 cm (24.8 in.)

**Depth:**

60.9 cm (24.0 in.)

**Shipping Dimensions,**

**Height:**

86.4 cm (34.0 in.)

**Width:**

65.5 cm (25.8 in.)

**Depth:**

65.5 cm (25.8 in.)

**Net Weight:**

49.4 kg (109 lb)

**Shipping Weight:**

54.0 kg (119 lb)