

US690

12-Inch Gooseneck, Dynamic Microphone

Description

The Electro-Voice US690, US690F and US690F-S are cardioid, shock-mounted, gooseneck-supported, dynamic microphones. These microphones utilize a revolutionary neodymium alloy to form the exclusive

N/DYM® magnet with four times the power potential of conventional microphone magnets. With a computer-optimized design, the N/DYM magnet structure is maximized in the US690 series to provide up to 6 dB more output sensitivity over conventional designs, while the more uniform magnetic field lowers distortion during peak sound pressure levels.

The exceptional sensitivity of the US690 series combined with the inherently low noise of a dynamic transducer ensures a superior signal-to-noise ratio. To further reduce noise, a highly effective humbucking coil is used to cancel hum from lighting and other sources.

A unique diaphragm design provides 50 percent more surface area than conventional designs and is reinforced to prevent “breakup.” The result is an extended high-frequency response with an open transparent sound quality that provides greater intelligibility for

today’s most demanding sound system.

The uniform cardioid polar pattern of the US690 series ensures superior gain-before-feedback in live applications at all frequencies—compared with other directional microphones with widely varying polar characteristics.

The US690 series are enclosed in a rugged Memreflex™ grille with Acoustifoam™ pop filter to virtually eliminate explosive breath sounds and wind noise. Coupled with a unique shock mount system which totally surrounds the microphone element, further reduces all forms of handling or mechanically induced noise, and makes the US690 series the microphones of choice when ruggedness and performance are essential.

Application

The model US690 gooseneck microphone was designed for use on lecterns as a high quality mixing console talkback microphone, or applications that require a plug-in gooseneck microphone.

The model US690F gooseneck microphone was designed to panel-mount in fixed installations where a high-performance, rugged, non-removable microphone is required. The microphone has a permanently attached, two-

conductor shielded cable, six feet long, to permit ease of installation.

The model US690F-S gooseneck microphone was designed to be surface-mounted in fixed installations where a high-performance, rugged, field-installable microphone is required. The microphone has a permanently attached, two-conductor, shielded cable, six feet long, to permit ease of installation.

Operation

The frequency response of the US690 series has been tailored for optimum performance where smooth, extended, highly intelligible sound character is required. The microphone output is balanced and low impedance.

The dynamic element of the US690 series will provide reliable operation in humidity and temperature extremes—adverse conditions that would render condenser microphones useless—for years of trouble-free operation.

Mounting Instructions for US690F

Select microphone location, taking care that there are no obstructions under panel which could be damaged; panel thickness may not exceed 1/2 inch. Drill a 3/4-in. hole at micro-

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phone location, drop cable through the hole and position the microphone assembly.

Secure assembly with included panel washer and retaining nut (see Figure 6). Attach connector. For correct wire placement for three-pin balanced or $\frac{1}{4}$ -in. phone plug balanced or unbalanced termination, see the wiring diagrams in Figure 5.

Mounting Instructions for US690F-S

Select microphone location, taking care that there are no obstructions under the surface if the cable is to be routed through the surface. The flange is slotted to provide the option for cable exit above the mounting surface. Attach the template provided to the surface at the mounting locations. Pilot drill the three holes for the flange. Now optionally drill the hole through in the center if the cable is to pass through the surface. Drop cable through the hole and position the microphone assembly. Secure assembly with user-supplied screws. Attach connector. For correct wire placement for three-pin balanced or $\frac{1}{4}$ -in. phone plug balanced or unbalanced termination, see the wiring diagrams in Figure 5.

Architects' And Engineers' Specifications

The gooseneck microphone shall be a cardioid, dynamic type with uniform frequency response from 60 Hz to 20,000 Hz. The diaphragm shall be of nonmetallic Acoustalloy®. The microphone output shall be balanced with an impedance of 150 ohms. Output level shall be -50 dB with 0 dB equalling 1mW/pascal. Dimensions shall be 52 mm (2.05 in.) in diameter and length of 421 mm (16.58 in.) for the US690, 418.6 mm (16.48 in.) for the US690F, and 402 mm (15.84 in.) for the US690F-S. The microphone shall include a 12-inch metal gooseneck and the following complementary parts and accessories: professional A3M-style terminating connector for the US690; $\frac{3}{4}$ -inch threaded panel mount and 1.8 m (6 ft) two-conductor shielded cable for the US690F; and metal mounting flange and 1.8 m (6 ft) two-conductor shielded cable for the US690F-S. The microphone shall be of metal construction with plastic engraved grille screen retainer. The microphone transducer shall be shock-

mounted within the grille-screen structure.

The Electro-Voice models US690, US690F and US690F-S are specified.

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 finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product 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 Electro-Voice Service or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice Service at 600 Cecil Street, Buchanan, MI 49107 (800/234-6831 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 gives

you specific legal rights, and you may also have other rights which vary from state to state.

Electro-Voice Wired Microphones are guaranteed against malfunction from any cause for two (2) years from the date of original purchase. In addition, the Limited Warranty for the acoustic system contained in these microphones shall apply for the life of the product, defined as a period of ten (10) years from the date that the manufacture of the specific microphone has been discontinued. Any and all active electronics incorporated in these microphones are guaranteed against malfunction due to defects in materials or workmanship for a period of three (3) years from the date of original purchase. The Limited Warranty does not extend to cables, cable connectors, or switches. 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.

For technical assistance, contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Standard Time.

Specifications subject to change without notice.

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FIGURE 1
Frequency Response

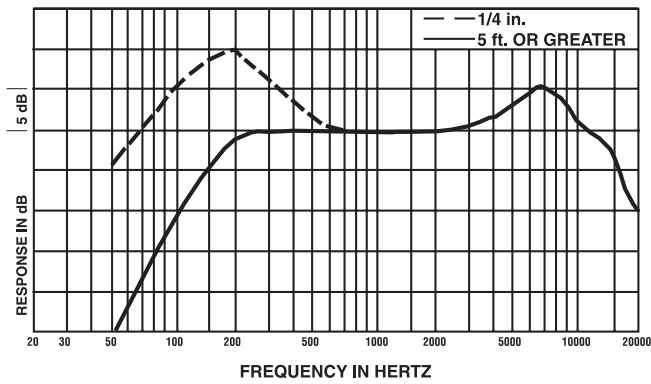


FIGURE 4
Phase

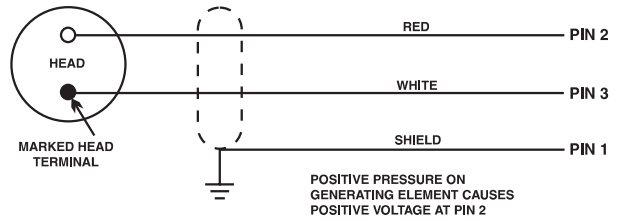


FIGURE 2
Dimensions

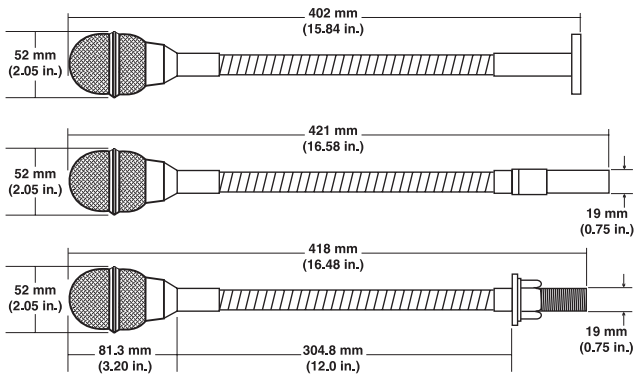


FIGURE 5
US690F Wiring Diagrams

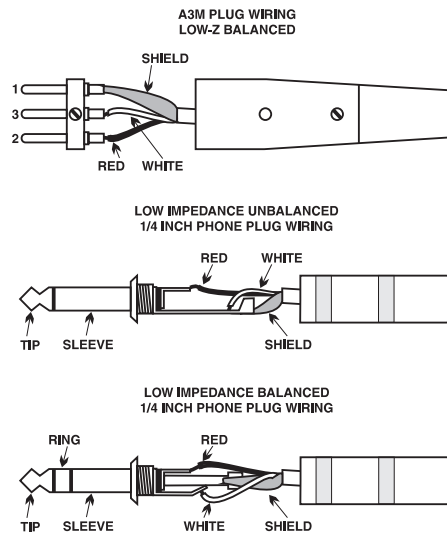


FIGURE 3
Polar Response

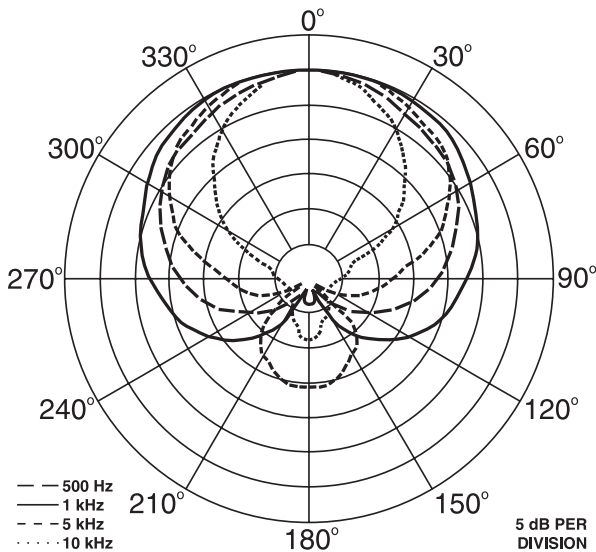
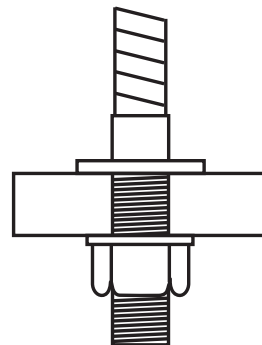


FIGURE 6
US690F Panel Mounting Detail



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Specifications

Generating Element:

Moving coil dynamic

Frequency Response, Close ($1/4$ -in. distance):

60-20,000 Hz

Far (5 ft or greater):

150-20,000 Hz

Polar Pattern:

Cardioid

Open Circuit Voltage:

3.1 mV/pascal at 1,000 Hz

Sensitivity:

-50 dB (0 dB = 1 mW/pascal)

Dynamic Range:

144 dB

Equivalent Output Noise:

14 dB (0 dB = .002 dyne/cm²)

Impedance:

150 ohms, balanced (Low-Z)

Color:

Black

Mounting,

US690: 3 pin male XLR

US690F: $3/4$ in. x 16 thread with $1 1/4$ -in. diameter flange

US690F-S: $5/8$ in. x 27 thread with $2 3/4$ -in. diameter steel flange

Cable,

US690: none

US690F: 1.8 m (6 ft.) two-conductor, shielded, black jacket

US690F-S: 1.8 m (6 ft.) two-conductor, shielded, black jacket

Dimensions,

Diameter:

52 mm (2.05 in.)

Length,

US690: 421 mm (16.58 in.)

US690F: 418 mm (16.48 in.)

US690F-S: 402 mm (15.84 in.)

Net Weight,

US690: 504 g (17.8 oz)

US690F: 522 g (18.4 oz)

US690F-S: 736 mm (25.9 oz)

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Electro-Voice®

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