

**SHURE**

222 HARTREY AVE., EVANSTON, IL. 60204 U.S.A.

MICROPHONES AND ELECTRONIC COMPONENTS® AREA CODE 312/866-2200 • CABLE: SHUREMICRO
TWX: 910-231-0048 TELEX: 72-4381**DATA
SHEET****MODEL 544
UNIDYNE® III****UNIDIRECTIONAL DYNAMIC MICROPHONES****GENERAL**

The Model 544 Series UNIDYNE® III Microphones are slender dynamic microphones built to provide wide range reproduction of music and voice, and have an exceptionally uniform and effective unidirectional pickup pattern.

These microphones are particularly suitable for high quality theater-stage sound systems, recording, cathedrals and churches, and other critical public address systems such as those used in political conventions and legislatures, hotels, stadiums, and public auditoriums—wherever a customized installation with concealed cable is desired.

Microphone Features:

- Unusually effective cardioid pickup pattern that minimizes feedback (annoying loudspeaker "squeals") and prevents echoing (boominess) that sometimes occurs in partially-filled halls. Can be used closer to loudspeakers than usual without creating feedback problems
- Response especially effective for announcing, narration, vocal and instrumental music
- Cartridge shock mounted for quiet operation
- Equipped with gooseneck adapter and permanently attached cable especially selected for good shielding from "hum" pickup
- Dependability and ruggedness under all operating conditions
- Dual impedance for connection to microphone inputs rated at 19 to 300 ohms or to high-impedance microphone inputs

The Model 544 has a $\frac{5}{8}$ "-27 thread which fits conventional goosenecks or other flexible or fixed mounting.

VARIATIONS

Model 544-G6 is equipped with a 152 mm (6 in.) flexible gooseneck.

Model 544-G12 is equipped with a 304 mm (12 in.) flexible gooseneck.

Model 544-G18 is equipped with an 457 mm (18 in.) flexible gooseneck.

These three models (544-G6, 544-G12, 544-G18) are supplied with a flange for mounting the flexible goosenecks to a flat surface.

ARCHITECTS' SPECIFICATIONS

The microphone shall be the Shure Model 544 or equivalent. The microphone shall be a moving coil (dynamic) type with a frequency response of 50 to 15,000 Hz. The unit shall have a cardioid polar characteristic. The cancellation at the sides shall be approximately 6 dB, and the cancellation at the rear shall be 15 to 20 dB. The microphone shall be a dual-impedance microphone with a rated impedance of 150 ohms for connection to microphone inputs rated at 19 to 300 ohms and "High" for connection to high-impedance microphone inputs. The microphone output shall be:

- Low -57.0 dB
(0 dB = 1 milliwatt per 10 microbars)
- High -55.0 dB
(0 dB = 1 volt per microbar)



The microphone shall be provided with a fixed adapter with a 2.1m (7 ft) two-conductor shielded cable. The adapter shall have a $\frac{5}{8}$ "-27 thread suitable for mounting on conventional goosenecks or other flexible or fixed mounting.

The overall dimensions of the microphone shall be 195 mm (7-21/32 in.) in length and 31.8 mm (1 1/4 in.) in diameter.

IMPEDANCE SELECTION

Model 544 is shipped connected for high-impedance operation. To change to low impedance (see Figure 3 and 4):

1. Loosen the setscrew in the gooseneck adapter.
2. Unscrew the adapter from the microphone body and slide the adapter down the cable away from the microphone body. Make certain that the cable does not rotate with the adapter.
3. At the back of the four-pin insert, unsolder the WHITE lead from pin 2.
4. Solder the WHITE lead to pin 4.
5. Slide the adapter back up the cable and screw it to the microphone body. Make certain that the cable does not rotate with the adapter.
6. Tighten the setscrew against the metal collar around the cable. CAUTION—be certain that the setscrew will contact the metal collar rather than the cable jacket.

The low-impedance connection is recommended where long cable lengths are required or under conditions of severe hum disturbance. The permissible cable length is practically unlimited, since neither response nor level is appreciably affected. For use with high-impedance amplifiers, Shure Model A95 Series Line Matching Transformers are available for coupling the low-impedance line to the high-impedance input. The A95 Series Transformers are available with various input and output connectors.

CONNECTIONS

For connection (as shipped) to a high-impedance microphone input, the WHITE cable lead is the "hot" conductor; the shield is connected to the amplifier or chassis ground. The BLACK lead should be insulated at the equipment end of the cable.

For connection to a low-impedance input (after the change has been made at the four-pin insert for low-impedance operation), the WHITE and BLACK cable leads are the "hot" conductors; the shield is connected to the amplifier or chassis ground.

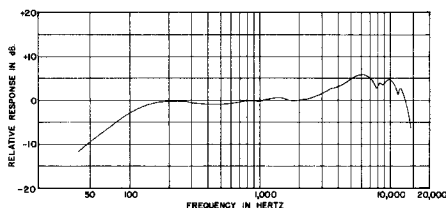
SPECIFICATIONS

Type

Dynamic

Frequency Response

50 to 15,000 Hz (See Figure 1)



TYPICAL FREQUENCY RESPONSE

FIGURE 1

Polar Pattern

Cardioid (unidirectional) pattern — Effective rejection of sound at the rear of the microphone is uniform at all frequencies, while front pickup characteristics are uniform about the axis. (See Figure 2)

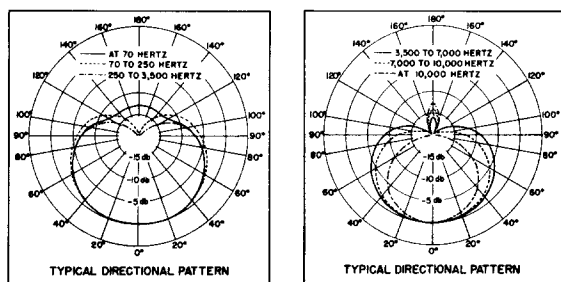
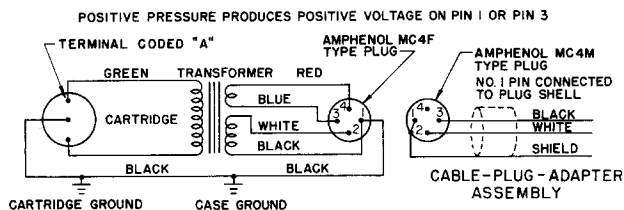


FIGURE 2

Impedance

Dual. Microphone rating impedance is 150 ohms (245 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms and "High" for connection to high-impedance microphone inputs. (See sections on Impedance Selection and Connections.) Shipped connected for high-impedance operation.



INTERNAL CONNECTIONS

FIGURE 3

Output Level (at 1,000 Hz)

Low Impedance

Open Circuit Voltage - 78.0 dB* (.125 mV)

Power Level - 57.0 dB**

High Impedance

Open Circuit Voltage - 55.0 dB* (1.76 mV)

*0 dB = 1 volt per microbar

**0 dB = 1 milliwatt per 10 microbars

Cable

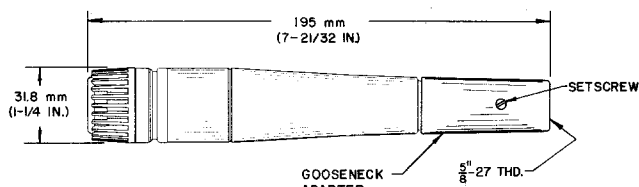
2.1m (7 ft) two-conductor shielded with Amphenol type MC4M adapter insert on the microphone end

Case

Chrome-plated die casting with ARMO-DUR® grille and stainless steel screen

Dimensions

See Figure 4



OVERALL DIMENSIONS

FIGURE 4

Net Weight

396 grams (14 oz)

PHASING

To test two microphones and/or their cables for proper phasing, connect them to an amplifier and talk or sing into them while holding them three or four inches apart. The sound from the speakers should be the same when talking into either microphone or directly between them if they are in phase with each other. If the sound drops drastically, or if a dead spot is found when talking between the two microphones, one of them or its cable (low impedance only) is out of phase. All cables and microphones should be tested in this manner to insure that they are in phase with each other.

To change the phase of a low-impedance microphone cable, either use a Shure A15PR Phase Reverser or interchange the wires connected to pins 4 and 3 of the connector. To change the phase of a microphone, the microphone cartridge leads must be interchanged (see Figure 3). This should be performed by your dealer, the Shure Factory Service Department, or other qualified service personnel.

OPTIONAL ACCESSORIES

Line Matching Transformer	A95 Series
Windscreen Assembly	A2WS
Gooseneck, 152 mm (6 in.)	G6
Gooseneck, 304 mm (12 in.)	G12
Gooseneck, 457 mm (18 in.)	G18
Gooseneck Flange	A12

REPLACEMENT PARTS

Dynamic Cartridge	R45
Cable Assembly	C86

GUARANTEE

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

SHIPPING INSTRUCTIONS

Carefully repack the unit and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
1501 West Shure Drive
Arlington Heights, Illinois 60004

If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.