

**UNIDIRECTIONAL DYNAMIC MICROPHONES**

**GENERAL**

The Model 545 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.

The 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.

**Microphone Features:**

- Unusually effective cardioid pickup pattern that eliminates feedback (annoying loudspeaker "squeals") and prevents echoing (boominess) that sometimes occurs in partially-filled halls. Can also 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
- A strong detachable cable especially selected for good shielding from "hum" pickup
- Dependability and ruggedness under all operating conditions

The Model 545 Series Microphones are dual impedance for connection to microphone inputs rated at 19 to 300 ohms or to high-impedance microphone inputs.

**ARCHITECTS' SPECIFICATIONS**

The microphone shall be the Shure Model 545 (545S) or equivalent. The microphone shall be a dynamic (moving coil) type microphone 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 Impedance ..... - 57 dB  
(0 dB = 1 milliwatt per 10 microbars)
- High Impedance ..... - 55 dB  
(0 dB = 1 volt per microbar)

The microphone (Model 545) shall be provided with a swivel adapter, adjustable through 90° from vertical to horizontal, and suitable for mounting on a stand having a 5/8"-27 thread. It shall be provided with a detachable 4.6m (15 ft) three-conductor shielded cable with a four-pin male audio connector (equivalent to the Amphenol MC4M connector) at the microphone end. The overall dimensions of the microphone shall be 148 mm (5-13/16 in.) in length and 31.8 mm (1¼ in.) in diameter.



The microphone (Model 545S) shall be provided with a swivel, and a built-in On-Off switch. It shall also be provided with a detachable 4.6m (15 ft) three-conductor shielded cable with a four-pin male audio connector (equivalent to the Amphenol MC4M connector) at the microphone end. The overall dimensions of the microphone shall be 122.2 mm (4-13/16 in.) in height, 31.8 mm (1¼ in.) in width and 148 mm (5-13/16 in.) in depth.

**IMPEDANCE SELECTION**

Either high- or low-impedance operation of these microphones is selected by the leads chosen for connection at the equipment end of the microphone cable. For high impedance, the RED lead is the "hot" conductor; the shield is connected to the amplifier or chassis ground. For balanced-line low impedance, the BLACK and WHITE leads are the "hot" conductors; the shield is connected to the amplifier or chassis ground. For unbalanced low impedance, the WHITE lead is the "hot" conductor with the BLACK lead and shield connected together to the amplifier or chassis ground. Any leads not being used for a particular connection should be insulated at the equipment end of the cable.

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, the Shure Model A95 Series Line Matching Transformers are available for coupling a low-impedance line to the amplifier input. The Model A95 Series transformers permit coupling a 19-300 ohm microphone line to a high-impedance input.

**Important:** Shure Microphone Cables are selected after exhaustive tests to insure superior performance in microphones because of low capacities, superior shielding properties and unusually long life under severe use.

Cables with plastic insulation should not be subjected to excessive soldering-iron heat. Carefully clean and tin the conductors and the connections to which the conductors are to be soldered. The soldering operation can then be done with a minimum of heat, thereby avoiding any possibility of damage to the cable.

