

# SHURE®

## GENERAL

The Model 55SH is a rugged microphone built to provide wide-range reproduction of music and voice. The microphone's cardioid (unidirectional) characteristic permits very satisfactory operation under adverse acoustic conditions where omnidirectional microphones may not function properly. Because sound pickup from the rear of the microphone is minimal, the Model 55SH can be used closer to loudspeakers than usual without creating feedback problems.

The microphone is a dual-impedance unit, designed for connection to microphone inputs rated at 19 to 300 ohms or high impedance. Impedance selection is solderless.

The Model 55SH has an On-Off switch supplied on the attached self-tensioning swivel designed for mounting on a stand with a 5/8"-27 thread.

The microphone is ideal for high-quality public address or theater-stage sound systems, as well as for broadcasting, recording, and other sound applications where a stand-mounted microphone is desirable.

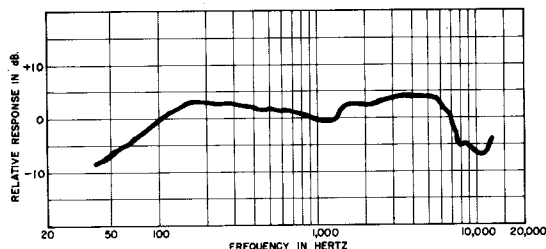
### Microphone Features:

- An effective cardioid directional characteristic especially suited for optimum performance in adverse acoustic environments
- Frequency response effective for vocal and instrumental music, announcing, and narration
- Shock-mounted cartridge for quiet operation
- Rugged mechanical design for reliability under rigorous conditions
- Dual impedance for versatility, solderless impedance selection for convenience
- Self-tensioning swivel mount, permits tilting through 45° forward and 80° backward
- Strong detachable cable especially selected for good shielding from hum pickup

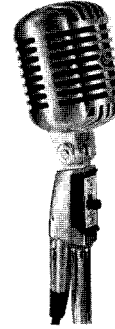
## SPECIFICATIONS

**Type**  
Dynamic

**Frequency Response**  
50 to 12,000 Hz (see Figure 1)

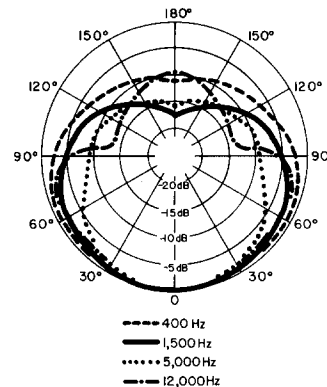


TYPICAL FREQUENCY RESPONSE  
FIGURE 1



### Polar Pattern

Cardioid (Unidirectional)—uniform with frequency, symmetrical about axis. See Figure 2.



TYPICAL POLAR PATTERNS  
FIGURE 2

### Impedance

Dual. Microphone rating impedance is 150 ohms (160 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms and "high" for connection to high-impedance microphone inputs.

Wired for low impedance as supplied. To change impedance, see section on Impedance Selection and Connections.

### Output Level (at 1,000 Hz)

	Low	High
Open Circuit Voltage*	-76.5 dB (0.15 mV)	-55.5 dB (1.67 mV)
Power Level**	-54.5 dB	

\*0 dB = 1 volt per microbar  
\*\*0 dB = 1 milliwatt per 10 microbars

### Phasing

Positive pressure on the diaphragm produces positive voltage on pin 2 when connected for low impedance, on pin 1 when connected for high impedance. See Figure 4.

UNIDIRECTIONAL DYNAMIC MICROPHONE

MODEL 55SH

SHURE®

## Switch

Built-in On-Off switch, integral part of swivel mount

## Cable

4.6m (15 ft) two-conductor shielded, detachable, with professional three-socket audio connector\* on microphone end

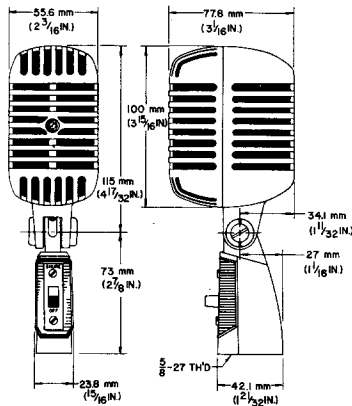
\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector

## Case

Chrome-plated die casting

## Dimensions

See Figure 3



OVERALL DIMENSIONS  
FIGURE 3

## Net Weight (less cable)

736 grams (1 5/8 lb)

## Packaged Weight

1.4 kilograms (3 1/8 lb)

## IMPEDANCE SELECTION

The Model 55SH is supplied connected for low-impedance operation. 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 by long cables. Shure Model A95 Series Line Matching transformers are available for use when a low-impedance microphone line is desirable but the associated amplifier has a high-impedance input. These transformers provide a proper impedance match between a 19 to 300 ohm microphone line and a high-impedance input and are available with various input and output connectors.

To change the Model 55SH to high impedance, proceed as follows.

1. Remove the two screws that hold the switch.
2. Gently pull the switch and its plastic housing forward out of the swivel, taking care not to break any leads.

3. With a long-nose pliers, lift upward and disconnect the 2-terminal black plastic impedance selection socket from the back of pin 3 of the audio connector. Take care not to break leads while performing this operation.
4. With the long-nose pliers, replace the impedance selection socket with pin 3 of the audio connector inserted in socket terminal "H". Press the plastic socket firmly in place.
5. Reassemble the switch housing, switch, and switchplate in the swivel, taking care not to pinch any leads.
6. Fasten securely with the two previously removed screws.

## CONNECTIONS

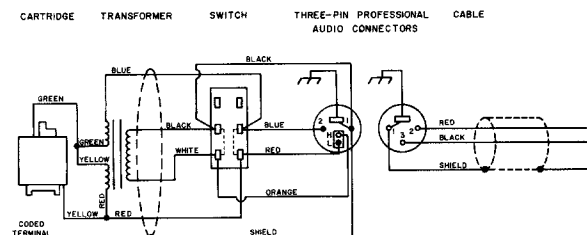
When using the microphone in low-impedance, the BLACK and RED cable leads are the "hot" conductors for balanced-line connections; the shield is connected to the chassis or amplifier ground.

When using the microphone in high impedance, the BLACK cable lead is the "hot" conductor; the shield is connected to the chassis or amplifier ground. The RED cable lead should be insulated.

## 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, either the microphones or their cables (low impedance only) are 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 A15PRS Phase Reverser or interchange the wires connected to pins 2 and 3 of the connector. To change the phase of a microphone, the microphone cartridge leads must be interchanged (see Figure 4). This should be performed by your dealer, the Shure Factory Service Department, or other qualified service personnel.



INTERNAL CONNECTIONS  
FIGURE 4

### ARCHITECTS' SPECIFICATIONS

The microphone shall be a moving coil (dynamic) type with a frequency response of 50 to 12,000 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 dB. The microphone shall be dual impedance 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. Impedance change shall be solderless at the microphone connector.

The microphone output shall be:

- Low Impedance ..... -54.5 dB  
(0 dB = 1 milliwatt per 10 microbars)
- High Impedance ..... -55.5 dB  
(0 dB = 1 volt per microbar)

The microphone shall be provided with a swivel mount with an integral On-Off switch and shall be suitable for mounting on a stand having a 5/8"-27 thread. The microphone shall also be provided with a detachable 4.6m (15 ft) two-conductor shielded cable with a professional three-socket audio connector\* at the microphone end. The overall dimensions of the microphone shall be 188 mm (7-13/32 in.) in height, 55.6 mm (2-3/16 in.) in width and 77.8 mm (3-1/16 in.) in depth.

The microphone shall be Shure Model 55SH or equivalent.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector

### FURNISHED ACCESSORIES

Lockplate .....90NR1371

### OPTIONAL ACCESSORIES

Line Matching Transformer ..... A95 Series  
Desk Stand ..... S33B, S37A, S39A  
Quick Disconnect Adapter ..... A45

### REPLACEMENT PARTS

Cartridge ..... R55  
On-Off Switch ..... RK32S  
Cable and Plug ..... C59  
Plug Element ..... RK169P

### 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, have it insured, and return it prepaid to:

Shure Brothers Incorporated  
Attention: Service Department  
222 Hartrey Avenue  
Evanston, Illinois 60204

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.