

UNIDIRECTIONAL DYNAMIC MICROPHONE

GENERAL

The Model 589S UNIDYNE® C Microphone is a dual-impedance unidirectional dynamic microphone. A special "pop" filter built into the Model 589S protects against explosive breath sounds. Ideal weight balance with a slim lower case, plus an effective mechanical shock mount to reduce handling noise make this microphone especially suitable for hand-held applications. The small case size and sleek appearance make this microphone excellent for stage use. The Model 589S is particularly suitable for use in theaters, night-clubs, auditoriums, schools, churches, indoors or outdoors, and any place where feedback, background sounds or reverberant room noise is a problem. The 589S microphone will minimize feedback (the annoying loudspeaker "squeal" caused by amplified sounds re-entering the microphone). The suppression of feedback, combined with a smooth response, makes this microphone particularly good for use with orchestras, small combos, and singers.

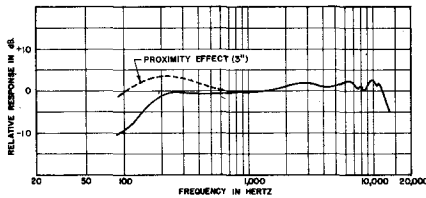
Microphone Features:

- A wire-mesh screen with a special built-in filter that provides protection from "pop" (explosive breath sounds) enables singers to perform close to the microphone without the annoying "p" and "th" breath sounds.
- An adjustable swivel adapter that enables the microphone to be aimed in the desired direction. Allows quick removal for hand-held use.
- A strong, detachable cable especially selected for its excellent shielding properties.
- A built-in On-Off switch with lockplate to lock switch in On position.
- A replaceable microphone cartridge, simple to change in the field.
- Convenient, solderless choice of high or low impedance.

SPECIFICATIONS

Type
 Dynamic

Frequency Response
 90 to 13,000 Hz (see Figure 1)



TYPICAL FREQUENCY RESPONSE
FIGURE 1

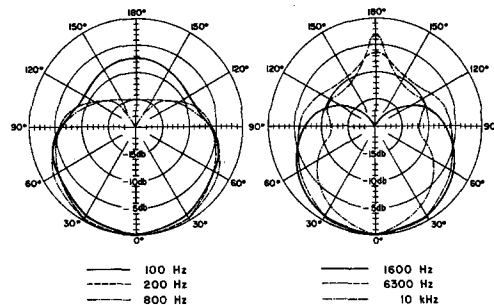
Polar Pattern

Cardioid (unidirectional) pattern. Effective rejection of sound at rear of the microphone while front pick-up characteristics are uniform about the axis (see Figure 2).

Impedance

Dual. Low: Microphone rating impedance is 150 ohms (160 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms.

High: Microphone impedance is "High" for connection to high-impedance microphone inputs. Wired for low impedance as supplied.



TYPICAL POLAR PATTERNS
FIGURE 2

Output Level (at 1000 Hz)

	IMPEDANCE	
	Low	High
Open Circuit Voltage*	-83.0 dB (.071 mV)	-60.5 dB (.94 mV)
Power Level**	-61.0 dB	

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

Hum Sensitivity (in 1 millioersted field)

Low Impedance, 32.5 dB equivalent SPL
 High Impedance, 41.5 dB equivalent SPL

Switch

Built-in On-Off switch with lockplate furnished. Microphone is shipped with lockplate installed. To lock switch in On position, loosen screw on lockplate and turn lockplate 180°. Tighten screw.

Shock Mount

Internal rubber vibration-isolator

Cable

4.6m (15 ft) two-conductor shielded, rubber-jacketed, with professional three-pin audio connector* (female) on microphone end

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

Swivel Adapter

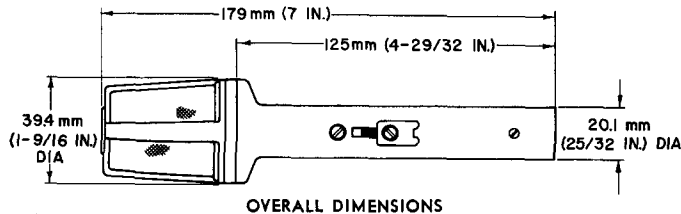
Snap-in positive-action, adjustable from 0° to 90°, with standard 5/8"-27 thread

Case

Die casting with durable silver metallic painted finish and stainless steel wire mesh grille

Dimensions

See Figure 3



OVERALL DIMENSIONS

FIGURE 3

Net Weight

340 grams (12 oz), less cable

Packaged Weight

770 grams (1 lb, 11 oz)

OPERATION

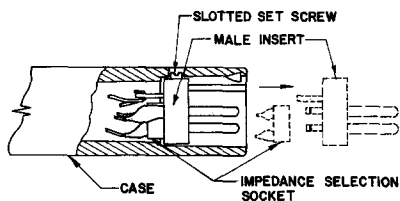
Model 589S is a dual-impedance microphone for connection to a 19 to 300 ohm rated input or to a high-impedance input. The microphone is shipped from the factory connected for low-impedance operation.

The low-impedance connection (as shipped) 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.

Impedance Selection

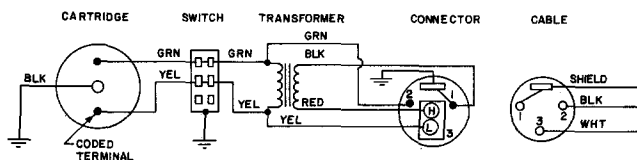
Model 589S is shipped connected for low-impedance operation. To change to high-impedance operation (see Figures 4 and 5):

1. Remove male insert at receptacle end of microphone by turning the slotted setscrew in (counterclockwise) and carefully withdrawing the male insert from the case.



IMPEDANCE SELECTION — RECEPTACLE END OF MICROPHONE

FIGURE 4



POSITIVE PRESSURE PRODUCES POSITIVE VOLTAGE ON PIN 2,
LOW IMPEDANCE; ON PIN 1, HIGH IMPEDANCE.

INTERNAL CONNECTIONS

FIGURE 5

2. Disconnect impedance selection socket from rear of male insert.
3. Reconnect impedance selection socket in the reverse position so that pin 3 of the male insert is inserted in socket terminal "H".
4. Reassemble male insert into microphone and seat setscrew securely by turning out (clockwise).

CONNECTIONS

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

When using the microphone in high impedance, the WHITE cable lead is the "hot" conductor for connection to a high-impedance amplifier input; the shield is connected to the chassis or amplifier ground. The

BLACK cable lead should be insulated at the equipment end when not used.

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 A15PR 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 5). This should be performed by your dealer, the Shure Factory Service Department, or other qualified service personnel.

ARCHITECTS' SPECIFICATIONS

The microphone shall be a Shure Model 589S or equivalent. The microphone shall be a moving coil (dynamic) type with a frequency response of 90 to 13,000 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 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.

The microphone output shall be:

Low	-61.0 dB
		(0 dB = 1 milliwatt per 10 microbars)
High	-60.5 dB
		(0 dB = 1 volt per microbar)

The Model 589S shall be provided with a swivel adapter which will mount on a stand having a 9/16"-27 thread and it shall be adjustable through 90° from vertical to horizontal. The microphone shall be equipped with a built-in On-Off switch and a two-conductor shielded cable having a professional three-pin female audio connector on the microphone end. The overall dimensions of the microphone shall be 179 mm (7 in.) in length and 39.4 mm (1-9/16 in.) in diameter.

FURNISHED ACCESSORY

Swivel Adapter A57D

OPTIONAL ACCESSORIES

Line Matching Transformer A95 Series
Desk Stand S33B, S37A, S39A, or S40A

REPLACEMENT PARTS

Cartridge Assembly R91
Transformer 90A2114*
Grille Assembly RK179G
Case Assembly RK178C
Switch RK89S*
Plug Element RK169P*
Cable C59

*Included in Case Assembly RK178C.

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.