



SHURE

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

MICROPHONES AND ELECTRONIC COMPONENTS

AREA CODE 312/328-9000 • CABLE: SHUREMICRO

DATA SHEET

MODELS 315 AND 315S GRADIENT

## BIDIRECTIONAL RIBBON MICROPHONES

**General:** The Models 315 and 315S are compact and rugged ribbon microphones combining wide range response and a bidirectional pickup pattern. The bidirectional pattern reduces noise and reverberation providing the same control as an equivalent cardioid microphone. The Models 315 and 315S are ideal for high quality public address, theater stage sound systems, and recording applications. Due to the bidirectional polar pattern, they may be used for either single performer, a dialogue or group, solo or orchestra, and other individual or chorus applications.

**The Models 315 Gold and 315S Gold feature a gold finish. Specifications in other respects are the same as those for the standard models.**

The microphones feature:

- Wide range front and rear response.
- Bidirectional polar pattern, effective over wide frequency range.
- Convenient impedance selection.
- A strong detachable cable especially selected for good shielding from "hum" pickup.
- A self-adjusting swivel permits aiming microphone at source of sound.
- Rugged mechanical design with special ribbon protection.

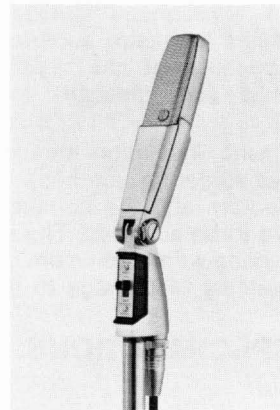
The Models 315 and 315S are multi-impedance for connecting into microphone inputs rated at 25 to 50 ohms, 150 to 250 ohms, or into high impedance microphone inputs.

The low impedances are 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 A95A Line Matching Transformer is available for coupling the low impedance line to the amplifier input.

### Impedance Selection

Selection of the various impedances is accomplished by removing a plate and changing the position of the switch at the rear of the microphone. The switch positions are marked "L" for low impedance (25-50 ohms), "M" for medium impedance (150-250 ohms), and "H" for high impedance (35,000 ohms).

**Guarantee:** This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor.



**Shipping Instructions:** Carefully repack the unit and return it prepaid to the factory. 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.

### ARCHITECT'S SPECIFICATIONS

The microphone shall be a Shure Model 315 (315S) or equivalent, a ribbon microphone with a frequency range of 50 to 12,000 Hz. This unit shall have a bidirectional polar characteristic. The cancellation at the sides shall be 15 to 20 db. The microphone shall be equipped with a three-position impedance change switch for adjusting the microphone rating impedance of 25-50 ohms, 150-250 ohms, or 35,000 ohms. The Model 315S shall have a built-in "On-Off" switch. The Model 315 shall have no switch.

The microphone output shall be:

L—25-50 ohm impedance	—62 db*
M—150-250 ohm impedance	—61 db*
H—High	—58.5 db**

\*0 db = 1 milliwatt per 10 microbars

\*\*0 db = 1 volt per microbar

The microphone rating Gm (sensitivity) at 1,000 Hz shall be within  $\pm 3$  db of the following levels.

"L" Position of switch	—155 db
"M" Position of switch	—152.5 db
"H" Position of switch	—155 db

EIA Standard Rating SE-105 August 1949

The microphone shall be provided with a swivel and it shall have a detachable cable connector capable of connection to a two-conductor shielded cable. The microphone will mount on a stand having  $\frac{5}{8}$ "-27 thread. The overall dimensions shall be 9-5/32" (232.5 mm)  $\pm \frac{1}{4}$ " in height 1-7/16" (36.6 mm)  $\pm \frac{1}{8}$ " in width and 1-3/32" (27.8 mm) in depth.

## OPTIONAL ACCESSORIES

Line Matching Transformer ..... A95A  
 Vibration-Isolation Stand ..... S39A  
 Desk Stand ..... S36A  
 Quick-Disconnect Isolation Unit ..... Model A47

## REPLACEMENT COMPONENTS

Cable and Plug Assembly ..... Model C55

**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.

## SPECIFICATIONS

### Type:

Ribbon

### Frequency Response:

50 to 12,000 Hz. See Figure B.

### Polar Pattern:

Bidirectional, equally sensitive at front and back. Response at sides down 15 to 20 db from front and rear responses. See Figure C.

### Microphone Rating Impedance:

Equipped with multi-impedance switch, furnishing a choice of 3 impedances: "L" for connections into microphone inputs rated at 25 to 50 ohms; "M" for connections into microphone inputs rated at 150 to 250 ohms; and "H" for connections into high impedance microphone inputs.

### Output Level:

1,000 Hz. response

Models 315 and 315S "L" Position

Open Circuit Voltage Level. — 89 db\* (0.044 mv)

Loaded with 50 ohms. .... — 94 db\*

Power Level into 50 ohms. — 62 db\*\*

E.I.A. Microphone Rating

Gm (Sensitivity) ..... —155 db\*\*\*

Models 315 and 315S "M" Position

Open Circuit Voltage Level. — 81 db\* (0.100 mv)

Loaded with 250 ohms. .... — 86 db\*

Power Level into 250 ohms. — 61 db\*\*

E.I.A. Microphone Rating

Gm (Sensitivity) ..... —152 db\*\*\*

Models 315 and 315S "H" Position

Open Circuit Voltage Level. — 59 db\*

Loaded with 100,000 ohms. — 61 db\*

E.I.A. Microphone Rating

Gm (Sensitivity) ..... —155 db\*\*\*

\*0 db = 1 Volt per Microbar

\*\*0 db = 1 Milliwatt with 10 Microbars

\*\*\*E.I.A. Standard SE-105, August 1949.

### Cable:

15 foot (4.6 m) two-conductor shielded with Amphe-nol MC3M type microphone plug on the microphone end.

### Case:

Chrome-plated die cast.

### Dimensions:

See Figure D.

### Switch:

Model 315 None

Model 315S Built-in "ON-OFF" switch to control microphone circuit. The switch is an integral part of the receptacle assembly and is a slide-to-talk locking type switch.

### Net Weight (Less Cable):

1 pound (454 grams)

### Packaged Weight:

3¼ pounds (1,474 grams)

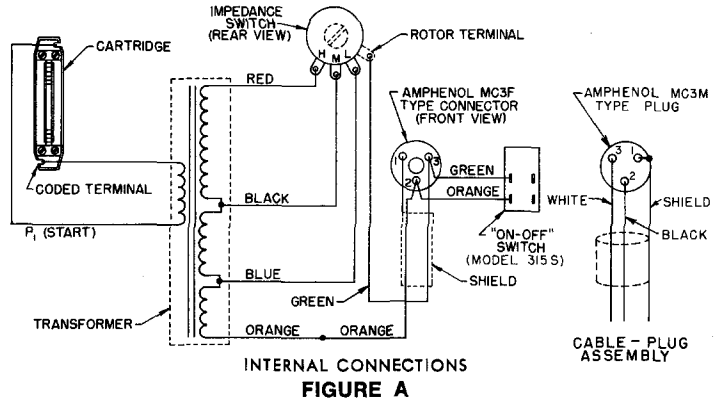


FIGURE A

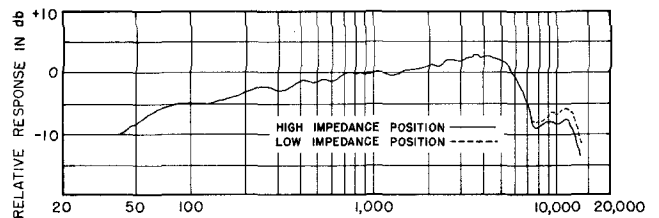


FIGURE B

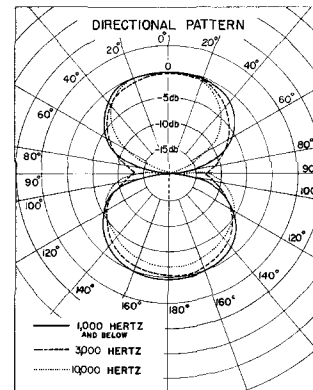


FIGURE C

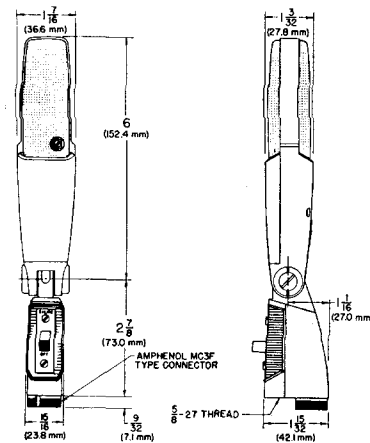


FIGURE D