SHURE®

# MODELS 515SA AND 515SB

## UNIDIRECTIONAL DYNAMIC MICROPHONES

### GENERAL

Model 515 Series UNIDYNE® B Microphones are cardioid (unidirectional) dynamic units that provide excellent reproduction of voice and music. Their unidirectional pickup pattern greatly reduces feedback problems, permitting operation closer than usual to loudspeakers without the annoying squeal or howl caused by feedback. Suppression of feedback, combined with their smooth sound, makes the UNIDYNE B Microphones ideal for use by small groups, instrumentalists, and vocalists in theaters, night clubs, schools, and churches.

The microphones are equipped with an On-Off switch with a lockplate for locking the switch On. A slip-in swivel adapter is supplied for convenience of either handheld or stand mounted use. The UNIDYNE B Series are available as high-impedance models, 515SA, or low-impedance models, 515SB, to match every sound system.

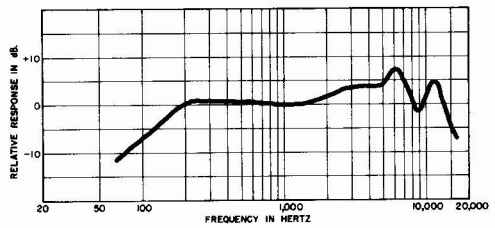
**Microphone Features:**

- Cardioid pickup pattern, symmetrical about axis and uniform at all frequencies for maximum feedback suppression
- Smooth frequency response, with presence peak, for optimum voice and speech intelligibility
- Built-in On-Off switch with provision for locking switch On
- Shock-mounted cartridge for quiet operation
- Adjustable swivel adapter permits aiming microphone to desired location stand mounted, or quick removal handheld
- Versatile and rugged—used handheld or stand mounted, indoors or outdoors, will provide years of trouble free, faithful performance

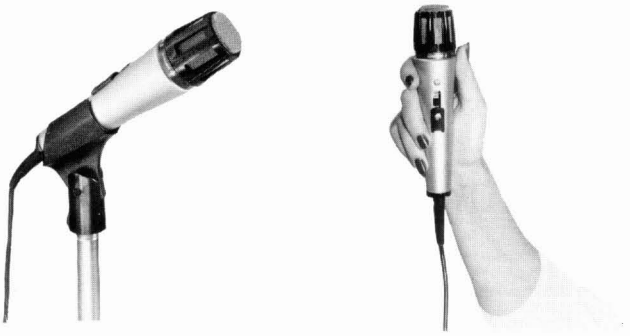
### SPECIFICATIONS

**Type**
Dynamic

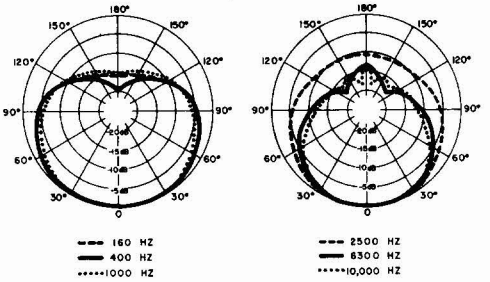
**Frequency Response**
80 to 13,000 Hz (See Figure 1)




TYPICAL FREQUENCY RESPONSE
**FIGURE 1**



**Polar Pattern**
Cardioid (unidirectional)—uniform with frequency, symmetrical about axis (See Figure 2)




TYPICAL DIRECTIONAL PATTERNS
**FIGURE 2**

**Impedance**
515SA—Microphone impedance is "High" for connection to high-impedance microphone inputs

515SB—Microphone rating impedance is 150 ohms (170 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms

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

| | 515SA | 515SB |
|---|---|---|
| Open Circuit Voltage* .... | −59.0 dB (1.1 mV) | −82.5 dB (.074 mV) |
| Power Level** ..... | | −61.0 dB |

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

**Phasing**
Positive pressure on the diaphragm produces positive voltage on the cable shield in Model 515SA, on the red cable lead in Model 515SB.

**Switch**
Built-in On-Off switch with lockplate. To lock switch in On position, remove screw on lockplate and turn lockplate 180°. Reassemble and tighten screw.

**Cartridge Shock Mount**
Internal rubber vibration-isolator

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SHURE®

222 HARTREY AVENUE, EVANSTON, ILLINOIS 60202-3696 U.S.A.


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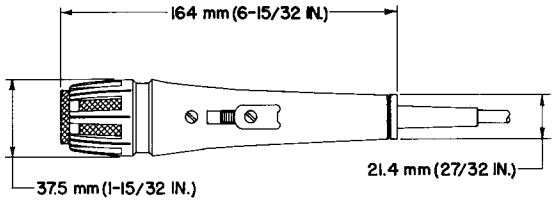
**Cable**
4.6m (15 ft) attached. 515SA: Single-conductor shielded; 515SAC: Single-conductor shielded with standard ¼ in. phone plug; 515SB: Two-conductor shielded

**Swivel Adapter**
Positive action, adjustable through 90° from vertical to horizontal, permits easy removal for handheld use, suitable for mounting on stand with 5/8"-27 thread

**Case**
Silver finish die casting with black ARMO-DUR® grille and stainless steel screen

**Dimensions**
See Figure 3




OVERALL DIMENSIONS
**FIGURE 3**

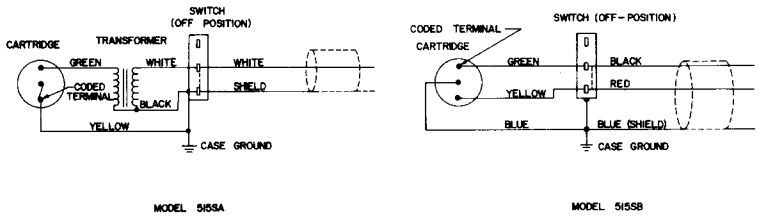
**Net Weight**
515SA – 454 grams (1 lb 2 oz)
515SB – 624 grams (1 lb 6 oz)

**Shipping Weight**
515SA – 680 grams (1 lb 8 oz)
515SB – 794 grams (1 lb 12 oz)

## PHASING

To test two microphones 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, the microphones are out of phase. All 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 at the equipment end of the cable, interchange the BLACK and RED cable leads where they are connected to the sound system. To change the phase in the 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**

## FURNISHED ACCESSORY

Swivel Adapter ..... A25B

## OPTIONAL ACCESSORIES

Line Matching Transformer ..... A95 Series
Windscreen ..... A1WS
Dual Mount ..... A26M
Desk Stand ..... S37A, S33B
Vibration-Isolation Stand ..... S39A
Quick Disconnect Adapter ..... A45

## REPLACEMENT PARTS

Cartridge ..... R15
Cable: 515SA ..... C62
515SAC ..... 90A2013
515SB ..... C63
Screen and Grille Assembly ..... RK54G
On-Off Switch ..... RK57S

## ARCHITECTS' SPECIFICATIONS

The microphone shall be Shure Model 515SA, 515SB, or equivalent. The microphone shall be a moving coil (dynamic) type with a frequency response of 80 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.

Model 515SA shall be high impedance for connection to high impedance microphone inputs.

Model 515SB shall be low impedance with a rated impedance of 150 ohms for connection to microphone inputs rated at 19 to 300 ohms.

The microphone output shall be:
515SA ..... –59.0 dB
(0 dB = 1 volt per microbar)
515SB ..... –61.0 dB
(0 dB = 1 milliwatt per 10 microbars)

The microphone shall be equipped with a built-in On-Off switch. The microphone 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. The microphone shall be equipped with a nondetachable 4.6m (15 ft) cable. The cable for Model 515SA shall be one-conductor shielded, for Model 515SB shall be two-conductor shielded.

The overall dimensions of the microphone shall be 164 mm (6-15/32 in.) in length and 37.5 mm (1-15/32 in.) in diameter.