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MICROPHONES AND ELECTRONIC COMPONENTS

AREA CODE 312/866-2200 • CABLE: SHUREMICRO
TWX: 910-231-0048 TELEX: 72-4381

DATA SHEET

MODELS 401A and 401B MICROPHONES

CONTROLLED MAGNETIC® COMMUNICATIONS MICROPHONES

GENERAL

Model 401 Series hand-held communications microphones are compact size, CONTROLLED MAGNETIC® units designed for clear, crisp, natural voice response of high intelligibility.

Microphone Features:

- Frequency response from 200 to 4,000 Hz especially suitable for voice communications use
- Small, light and compact case, fits comfortably and firmly in the palm of the hand
- Extremely sturdy, high impact, ARMO-DUR® case, lighter and stronger than die-cast metal, comfortable to the touch in hot or cold weather
- Heavy-duty, long-life, push-to-talk switch
- Durable rubber-jacketed coil cable
- Rugged and dependable under all operating conditions

APPLICATIONS

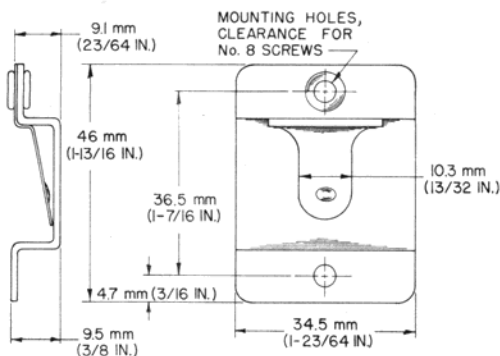
The Model 401 Series microphones are especially recommended for all types of outdoor-indoor communication activity: in mobile and fixed station use (as in police, fire, utility, forestry, and transportation services), and in commercial and industrial applications—including radiotelephone, amateur radio, and similar uses. The microphones are also suitable for indoor and outdoor public address.

Model 401A is a high-impedance microphone with high output level, making it suitable for connection to high-impedance amplifier inputs when cable lengths of 15.2m (50 ft) or less are needed.

Model 401B is a low-impedance microphone and is recommended when long cable lengths are required or under conditions where severe hum pickup may exist. The Model 401B may be connected directly to the input of a low-impedance amplifier, or a Shure Model A95 Series Line Matching Transformer may be used for connecting the Model 401B to the input of a high-impedance amplifier.

MOUNTING

A mounting bracket for permanent installation is supplied with each microphone. (See Figure 1)

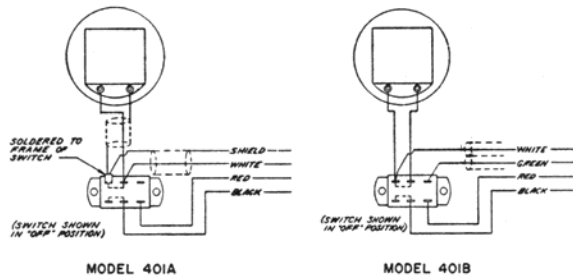


**MOUNTING BRACKET
FIGURE 1**



CONNECTIONS

The internal switch connections of Model 401A and 401B are shown in Figure 2.



INTERNAL CONNECTIONS

FIGURE 2

Model 401A is a high-impedance microphone with a three-conductor coiled-cord cable (one conductor shielded) and a double-pole double-throw switch to control the microphone circuit and an external relay or switching circuit. The WHITE lead is the "hot" conductor for connection to the microphone circuit; the shield is connected to the microphone circuit ground. The RED and BLACK leads control the relay or switching circuit.

Model 401B is a low-impedance microphone with a four-conductor coiled-cord cable (two conductors shielded) and a double-pole double-throw switch to control the microphone circuit and an external relay or switching circuit. The GREEN and WHITE leads are the "hot" conductors for balanced-line connection to the microphone circuit; the shield is connected to the microphone circuit ground. The RED and BLACK leads control the relay or switching circuit.

OPERATION

No special precautions beyond ordinary care are necessary in operation of the 401 Series Microphones. They will function very satisfactorily under all ordinary conditions of humidity, heat, and cold. Dropping the microphones or other severe mechanical shocks should be avoided.

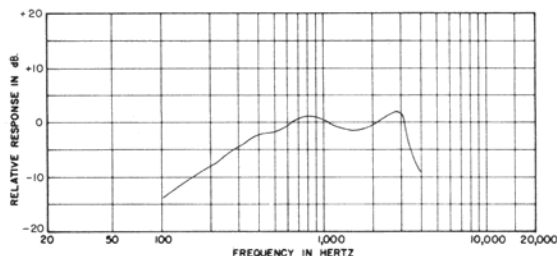
SPECIFICATIONS

Type

CONTROLLED MAGNETIC®

Frequency Response

200 to 4,000 Hz (see Figure 3)



TYPICAL FREQUENCY RESPONSE

FIGURE 3

Impedance (at 1,000 Hz)

401A—Microphone impedance is "High"

401B—Microphone rating impedance is 150 ohms (200 ohms actual)

Load Impedance Range

	MINIMUM	RECOMMENDED
401A	15 kilohms	100 kilohms
401B	150 ohms	1,000 ohms

Output Level (at 1,000 Hz)

	401A	401B
Open Circuit Voltage*	-11.5 dB (267 mV)	-29.5 dB (33.2 mV)
Power Level**		-48.5 dB

*0 dB = 1 volt per 100 microbars

**0 dB = 1 milliwatt per 10 microbars

Switch

Built-in, push-to-talk, double-pole double-throw, to control microphone circuit and relay circuit

Cable

401A—1.5m (5 ft) three-conductor, one conductor shielded, attached, coiled cable

401B—1.5m (5 ft) four-conductor, two conductors shielded, attached, coiled cable

Mounting Bracket

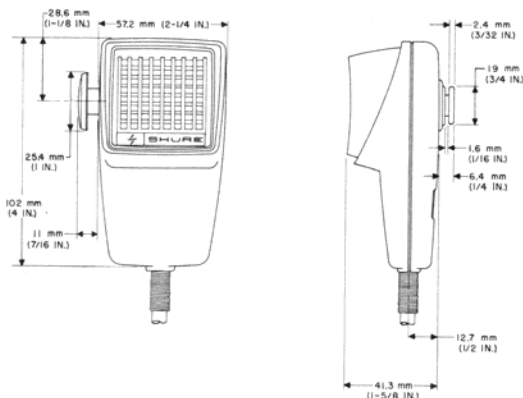
Supplied (see Figure 1)

Case

Blue, high impact ARMO-DUR®

Dimensions

See Figure 4



OVERALL DIMENSIONS

FIGURE 4

Net Weight

340 grams (12 oz)

Packaged Weight

510 grams (1 lb, 2 oz)

FURNISHED ACCESSORY

Mounting BracketRK6MB

OPTIONAL ACCESSORY

Line Matching TransformerA95 Series

REPLACEMENT PARTS

	401A	401B
Cartridge	R5D	R5E
Cable	C20C	C21C
On-Off Switch	RK28H	RK28H
Case Assembly	RK29C	RK29C
Switch Button	65A142B	65A142B

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.