

# MICROPHONES

SHURE

COMMUNICATIONS: MOBILE; BASE STATION  
DISPATCHING  
PAGING  
AMATEUR & CB

MORE SHURE MOBILE AND FIXED STATION MICROPHONES ARE  
USED IN PROFESSIONAL INSTALLATIONS THAN ALL OTHER  
MAKES COMBINED



**CONTROLLED MAGNETIC "404" SERIES  
... THE STANDARD OF THE INDUSTRY**

Without a doubt, the strongest and most practical close-talking microphone for ANY mobile application. It is the most widely used mobile microphone among police, taxicab and fleet truck operators. Exclusive ARMO-DUR™ case is comfortable to hold in hot or cold weather ... is immune to oil, grease, fumes, sun, salt, spray, rust and corrosion ... outstanding in its ability to withstand mechanical shocks and vibration. The rugged war-time proved, Shure-patented Controlled Magnetic cartridge has specially tailored response for high speech intelligibility. Lightweight ... easy to use ... fits snugly in the palm of the hand. "Million-cycle" leaf-type switch controls the microphone circuit and an external relay or switching circuit. Fully shielded against electric and magnetic fields. Only 3 1/16" high, 2 5/8" wide, 1 15/16" deep. Includes built-in "lifetime" hang-up button and mounting bracket. Semi-directional.

**Model 405T** (only) has a built-in transistorized amplifier for improvement-replacement of most carbon microphones. Does not require batteries or extra power supplies. Provides greater clarity, and freedom from aging (common to carbon microphones).



**SPECIFICATIONS**

| Model   | Frequency Response | Output Level   | Impedance                                     | Cable Type  | Switch Mic. Circ. | Relay Circ. | List Price |
|---------|--------------------|--|---|---|-------------------|-------------|------------|
| 404B    | 400-4,000 Hz       | -52.0 db (0 db = 1 milliwatt per 10 microbars) ; .21 millivolts/microbar | 150-250 Ohms                                  | 5 1/2 ft. coiled cord, copper, 4 conductor (2 shielded) | Open*             | Open        | \$33.00    |
| 404C    | 400-4,000 Hz       | -54.0 db (0 db = 1 volt per 100 microbars) ; 2.0 millivolts/microbar     | High (Recommended Load, 100,000 ohms or more) | 5 1/2 ft. coiled cord, copper, 3 conductor (1 shielded) | Closed**          | Open        | \$33.00    |
| 405T*** | 400-4,000 Hz       | -1 db loaded with 500 ohms (0 db = 1 volt per 100 microbars)             | 100-500 ohms (Carbon Circuit)                 | 5 ft. extended 4 conductor stranded ---coiled cord      | —                 | Open        | \$48.50    |

\*Provision for simple change to normally closed. \*\*Provision for simple change to normally open. \*\*\*Transistorized for direct replacement of carbon microphones.

**A DOZEN GOOD REASONS WHY THE 404 SERIES IS YOUR BEST BUY  
IN MOBILE COMMUNICATIONS MICROPHONES**

- 1. World Famous "Controlled Magnetic Cartridge"** — Field-proved throughout the world under extreme conditions of military and commercial use.
- 2. Corrosion Proof "Armo-Dur" Housing**—Immune to severe weather conditions. Unaffected by corrosive materials normally encountered or used: oils, grease, fumes, salt spray, etc.
- 3. High Impact "Armo-Dur" Housing** — Has high elasticity limits. Resists extreme mechanical shocks and retains original shape.
- 4. Constant Impact Strength**—Withstands mechanical shocks under varying conditions of temperature — with uniform impact resistance. (Varies only 25% in impact strength through a range running from -40° to 165° fahrenheit — as compared to a variance of 95% for standard die-cast housings.)
- 5. Eliminates Shock Hazard** — Special "Armo-Dur" housing is an insulator — eliminates electrical shock hazard.
- 6. Reduces Operator Fatigue** — Under actual operating conditions, the complete microphone (including plug and cable) weighs only 8

- oz., 42.9% less than similar die-cast microphones. The net weight of the microphone, plug, and cable is 12 oz., 33.3% less than similar die-cast microphones.
- 7. No Vibration Fatigue** — "Armo-Dur" eliminates shattering, breaking or cracking of housing often caused by continuous vibrations.
- 8. Color Permanence** — Color runs throughout the "Armo-Dur" housing. It is unaffected by handling, sun and corrosive fumes or materials which are normally encountered or used.
- 9. Low Thermal Conductivity**—Feels normal to the hand in extreme heat or cold.
- 10. "Life-Time" Hang-Up Button** — Unique shock mounting prevents button "pull out".
- 11. Fully Shielded** — A high permeability shield and the vacuum metalizing on "Armo-Dur" case provide effective shielding against electro-static and magnetic fields.
- 12. No Sacrifice of Quality For Price** — Rigid laboratory and field tests on every component insures long-life trouble-free service.

**HERE'S PROOF OF ITS RUGGEDNESS**

... dragged behind swiftly moving autos:

It is estimated that the Model 404 Microphone withstood over 35,000 separate shock-impacts during a 3.3 mile test drive at a speed ranging from 20 to 30 miles per hour. This is far greater punishment than would ever be required of a microphone in a lifetime of abnormally severe handling.

# COMMUNICATIONS MICROPHONES

## MODEL 414 SERIES RANGER II SMALL IN SIZE, FOR GREATER HANDABILITY

About half the size and weight of conventional mobile communications microphones, yet they perform as well as or better than the "big boys." More comfortable to hold—especially for smaller hands or when wearing heavy gloves. Only 8 oz., 2 $\frac{7}{8}$ " high, 2 $\frac{1}{16}$ " wide, 1 $\frac{3}{4}$ " deep. Ideal for miniaturized or portable communications systems. Saves space on crowded dashboards. Controlled Magnetic cartridge with specially tailored response for maximum intelligibility. Rugged, impact-resistant Armo-Dur case (see Page 2), DPST "million-cycle" switch controls microphone and relay switch circuits. Neoprene jacketed coil cord with Flex-Relief cable connection. With lifetime hang-up button and mounting bracket. U.S. Patent D203,187

**Model 414C** (only) has a built-in transistorized amplifier for improvement-replacement of most carbon microphones. Does not require batteries or extra power supplies. Provides greater clarity and freedom from aging (common to carbon microphones).



### SPECIFICATIONS

| Model | Frequency Response | Output Level   | Impedance                                    | Cable Type   | Switch Mic. Circ. | Relay Circ. | List Price |
|-------|--------------------|--|--|--|-------------------|-------------|------------|
| 414A  | 400-4,000 Hz       | -14.5 db (0 db = 1 volt per 100 microbars) 2.0 millivolts/microbar                         | High—Recommended load (100,000 ohms or more) | 5 $\frac{1}{2}$ ft. coiled cord, 3-cond., (one shielded) | Closed            | Open        | \$33.00    |
| 414B  | 400-4,000 Hz       | -52.5 db (0 db = 1 milliwatt per 10 microbars) .20 millivolts/microbar                     | 150-250 ohms                                 | 5 $\frac{1}{2}$ ft. coiled cord, 4-cond. (two shielded)  | Open              | Open        | \$33.00    |
| 414C  | 400-4,000 Hz       | -1.5 db or .85 volt using 6 volts d.c. and 500 ohm load. (0 db = 1 volt per 100 microbars) | 100-1000 ohms                                | 5 $\frac{1}{2}$ ft. 4-cond. coil cord                    | Open              | Open        | \$48.50    |



## MODELS 405K AND 418A CONTROLLED MAGNETIC MICROPHONES

Designed for clear, crisp, natural voice response of high intelligibility. The 405K and 418A Series Communication Hand Microphones are pressure-actuated units using the Shure developed balanced-armature Controlled Magnetic Cartridge.

**Model 405K**—High impedance (14,000 ohms). Output level, -14 db (0 db = 1 volt per 100 microbars). Direct replacement for General Electric models

EM10A1, EM10A2, EM10B2, EM10D, EM10E, EM25A, EM25E and for use with "Progress Line" mobile radio equipment. List Price: **\$37.50**

**Model 418A**—Medium impedance (1,500 ohms). Output level, -22.5 db (0 db = 1 volt per 100 microbars). Direct replacement for General Electric models EM18A, EM18B, EM18C, EM18D, and for use with "Transistorized Progress Line" Equipment (TPL). May be used with or without "Channel Guard." List Price: **\$37.50**

## MODEL 104 SERIES CARBON MICROPHONES



Featuring gray "Armo-Dur" high-impact, corrosion-proof cases. Used throughout the world for police, taxi, bus, truck and commercial two-way radio applications. They fit naturally and comfortably in the palm of the hand. Light, compact and rugged—with a reputation for long-life, trouble-free performance under severe operating conditions. Includes lifetime hang-up button and mounting bracket.

### SPECIFICATIONS

**Frequency Response:** 300 to 4,000 Hz, "tailored"

**Output Level:** 5 db below 1 volt for 100 microbar speech signal

**Impedance:** Recommended load — 50 to 100 ohms

**Cable:** Cadmium copper coiled cord

**Switch:** Model 104A — DPST normally open switch to control microphone and relay. Model 104B — SPST normally open relay switch (no microphone switch)

**Dimensions & Weight:** 3 $\frac{11}{16}$ " high, 2 $\frac{5}{8}$ " wide, 1 $\frac{15}{16}$ " deep; 18 oz.

**List Price:** Model 104A \$30.00; Model 104B \$30.00

## SHURE PROFESSIONAL MOBILE TELEPHONE HANDSET

### MODEL TH-100 TO UPGRADE YOUR MOBILE COMMUNICATIONS RIG



Ingenious, professional-quality handset improves industrial, commercial, CB and Ham transceiver performance. Incorporates Shure's famous, patented, combat-proved Controlled Magnetic microphone cartridge for maximum intelligibility in transmission. When receiving, handset rejects outside noises, improves reception quality, gives you increased privacy. And, when the handset is in its cradle, you hear in-

coming signals through your regular loudspeaker. "Million-Cycle" built-in handle switch controls transmitter circuits. Also, it is possible to incorporate a side-tone in the handset receiver when talking or transmitting. Rugged "Armo-Dur" case will take years of use and abuse. Can be used with any high quality transceiver.

### SPECIFICATIONS

**Frequency Response:** 200-3,000 Hz

**Output Level:** Transmitter -13.5 db (.22 volt) (0 db = 1 volt per 100 microbars)  
Receiver—Nominal output -0.5 db below 100 microbars

**Impedance:** Transmitter — High (Recommended load 100,000 ohms or more)  
Receiver — 125 ohms

**Cable:** 4-cond., one shielded on handset and cradle

**Switch:** Handset—Press-to-talk operates transmitter circuit and external control circuit  
Cradle—Leaf-switch transfers speaker output to handset and operates external control circuit

**Dimensions:** 8 $\frac{1}{4}$ " high, 2 $\frac{3}{8}$ " wide. Cradle is 3 $\frac{1}{4}$ " high, 3" wide, 2 $\frac{7}{8}$ " deep, 1 $\frac{1}{2}$  lbs.

**List Price:** \$58.00. Includes handset, hang-up cradle and interconnecting cables





**MODEL 488 "SONOBAR" . . .  
A MAJOR BREAKTHROUGH IN MICROPHONE DESIGN**

Stated by users to outperform and obsolete all others . . . its quality confirmed by extensive laboratory and field comparison tests! Provides highly intelligible speech communication where high volume background noise is found, such as airplanes, helicopters, motorcycles, trucks, fire engines, power boats, sporting events, drop forges, press-rooms, factories, canneries, mills, printing plants, etc. Incorporates the patented Shure Controlled Reluctance cartridge into a distance-discriminating microphone that effectively cancels background noise . . . gets the message through *EVEN WHEN THE SPEAKER CAN'T HEAR HIMSELF!* Correct placement for close-talk assured by convenient lipguard. Rugged, impact-resistant "Armo-Dur" case. Four versions available: 488A—high impedance; 488B—low impedance; and 488C and 488T—transistorized for direct replacement of carbon microphones (488T FAA Certified for Aircraft applications). All models equipped with coiled-cord and "million-cycle" push-to-talk, blade-type switches. With mounting bracket.

**SPECIFICATIONS**

| Model   | 488A<br>High Impedance  | 488B<br>Low Impedance  | 488C<br>Transistorized                                 | 488T<br>Transistorized Aircraft                                |
|---|---|--|--|--|
| Frequency Response                                | (SPECIALLY TAILORED FOR BEST INTELLIGIBILITY) 200 to 4,000 Hz.      |  |  |  |
| Output Level (0 db=1 volt per 100 microbar field) | .141 volts (-17 db)   | .014 volts (-37 db)  | 0.45 volts (-7 db) using 6 volts d.c. and 500 ohm load | 0.71 volts (-3 db using 12 volts and 500 ohm load)             |
| Impedance   | High: Recommended Load 100,000 ohms or more                         | 150-250 ohms   | Recommended Load 100 to 500 ohms                       | Recommended AC Load 100 to 800 ohms                            |
| Cable, 5½' extended                               | Three-conductor (One-conductor shielded) cadmium copper coiled cord | Four-conductor (Two-conductor shielded) cadmium copper coiled cord | Four-conductor cadmium copper coiled cord              | Three-conductor tinsel coiled cord with PJ 068 --plug attached |
| Switch Mic Circuit:<br>Relay Circuit:             | Normally closed*<br>Normally open                                   | Normally open**<br>Normally open                                   | Normally open<br>Normally open                         | Normally open<br>Normally open                                 |
| Dimensions and weight                             | 3¾" HIGH x 2¾" WIDE x 2½" DEEP; ¾ LB.                               |  |  |  |
| List Price  | \$57.50   | \$57.50  | \$62.50  | \$72.50  |

\*Provision for simple change to normally open  
\*\*Provision for simple change to normally closed



**MODEL 419 SERIES RANGER II  
COMPACT SIZE NOISE CANCELLING MICROPHONES**

Don't be misled by the small size—(about half that of a conventional mobile microphone) . . . This one gets the message through even when the background noise is so loud the operator can't hear himself! Stated by users to provide speech intelligibility superior to any other brand of so-called "noise cancelling" microphones. Specially tailored response for highest intelligibility—200 to 4000 Hz. Same size, cable, cable relief, switch and case as Ranger II (page 3) . . . only 7 oz. With lipguard to assure correct close-talking placement. Includes mounting bracket.

**SPECIFICATIONS**

| Model | Frequency Response | Output Level  | Impedance                             | Cable Type                     | Switch Mic. Circ. | Relay Circ. | List Price |
|-------|--------------------|---|---------------------------------------|--------------------------------|-------------------|-------------|------------|
| 419A  | 200 to 4,000 Hz    | .12 volt (-18.5 db) (0 db=1 volt per 100 microbars) | High—recommended 100,000 ohms or more | 5½ ft. 3-cond., (one shielded) | Closed            | Open        | \$62.50    |
| 419B  | 200 to 4,000 Hz    | .014 volt (-37 db) (0 db=1 volt per 100 microbars)  | 150-200 ohms                          | 5½ ft. 4-cond., (two shielded) | Open              | Open        | \$62.50    |

# SHURE AMATEUR AND CB MICROPHONES

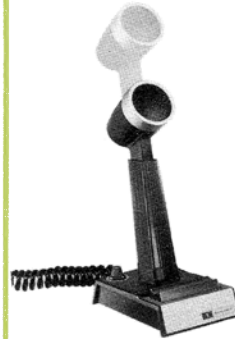


## MODEL 444 WITH ADJUSTABLE HEIGHT AND ARMO-DUR CASE

Specifically designed to meet the needs of amateur and commercial two-way radio operators. Specially tailored response with rising characteristic and sharp cut-off below 300 and above 3000 Hz insures highest "talk power." Ideal for single sideband transmissions. Rugged, reliable, more natural sounding Controlled Magnetic element has output equal to a crystal unit! Press-to-talk switch bar with optional locking feature provides ideal switching functions for both press-to-talk and VOX operation. Adjustable height stand. U.S. Patent D-198,850

### SPECIFICATIONS

**Frequency Response:** 300 to 3,000 Hz. **Output:** -53.0 db. (0 db=1 volt per microbar); 2.25 millivolts/microbar. **Impedance:** High. (Recommended load 100,000 ohms or more). **Case:** Gray "Armo-Dur." **Cable:** 7 ft. two-conductor shielded. **Switch:** Press-to-talk switch bar with optional locking feature to operate relay control and microphone muting circuits. Separate switch enables user to disable relay control circuit for VOX operation. **Dimensions and Weight:** 10 $\frac{3}{8}$ " high (adjustable), 4" wide, 5 $\frac{3}{4}$ " deep, 1 $\frac{1}{2}$  lbs. **List Price:** \$42.50.



## MODEL 444T TRANSISTORIZED WITH VARIABLE OUTPUT LEVEL

For AM, FM, or single sideband units. Features built-in two-transistor preamplifier with volume control to give variable high output. Self-contained battery operates up to 300 hours before replacement. Enables you to maintain maximum modulation. Same adjustable height case design as 444 (left).

### SPECIFICATIONS

**Frequency Response:** 200 to 6,000 Hz. **Output Level:** Adjustable from 2 mv to 45 mv for 1 microbar input. **Impedance:** Less than 1,000 ohms. **Battery Type:** Burgess 2U6 or equivalent included. **Cable:** Three-conductor (one conductor shielded), plastic jacketed coiled cord, 5-feet extended. **Switch:** Press-to-Talk switch. Locking or non-locking operation—to operate microphone circuit or external control circuit. Same size and weight as 444. Close circuit to talk and/or open circuit to talk. Relay or switching circuits can be selected by simply cutting designated wire on switch assembly. **List Price:** \$49.50.



## MODEL 440SL

Response characteristic similar to 444 microphone . . . tailored to meet the demands of radio communications; ideally suited for single sideband. Rising response characteristic with sharp cutoff below 300 and above 3,000 Hz eliminates the need for audio filters. Rugged, time-proved Controlled Magnetic element, with high output equalling that of a crystal unit. Ideal for use with all types of amateur transmitters.

### SPECIFICATIONS

**Frequency Response:** 300 to 3,000 Hz. **Output Level:** -52.5 db (0 db=1 volt per microbar); 2.38 millivolts/microbar. **Impedance:** High. **Cable:** 7 ft. 2-conductor shielded, with Amphenol MC3M type plug. Includes switch and desk stand as illustrated. **List:** \$47.50. **Model 440**—Basic microphone same as above but with 7 ft. single conductor shielded cable. Less switch, stand, connector. **List:** \$25.00. **A87K Vox Modification Kit**—Modifies 440 SL to obtain maximum flexibility between either VOX or push-to-talk operation. **List:** \$3.25.



## MODEL 275SK—"VERSAPLEX" CB IMPROVEMENT MICROPHONE

A Ceramic Microphone ideal for replacing an original equipment crystal or ceramic type CB microphone. Complete with wall or panel bracket for handy hanging, and coiled-cord. "Momentary" slide-to-talk switch activates relay circuit. Lightweight impact-resistant "Armo-Dur" case with black finish and anodized satin-finish cap. With stand adapter. U.S. Patent 196,919.

### SPECIFICATIONS

**Frequency Response:** 40 to 10,000 Hz, free from undesirable peaks. **Output Level:** -59.5 db (0 db = 1 volt per microbar); 1.05 millivolts/microbar. **Impedance:** High—recommended load  $\frac{1}{2}$  to 5 megohms. **Cable:** Coiled Cord extends to 5 feet. 3 Conductors, one shielded. **Finish:** Black Armo-Dur body with satin anodized cap and grille. **Dimensions and Weight:** 4 $\frac{3}{4}$ " long x 1 $\frac{1}{3}$ " diam. 6 oz. **List Price:** \$16.50.



## MODEL 206

### Low Cost Ceramic Replacement Microphone

Designed to provide excellent performance at low cost. Switching circuitry makes it a universal replacement in all communications equipment utilizing ceramic microphones.

### SPECIFICATIONS

**Frequency Response:** 200 to 4,000 Hz. **Output:** -53 db (0 db = 1 volt per microbar). **Impedance:** High. (Recommended load 1 to 5 megohms.) **Cable:** Coiled cord extends to 5 feet, 3-conductors, 1 shielded. **Case:** Gray high impact plastic. **Dimensions:** 3 $\frac{1}{2}$ " high x 2 $\frac{1}{4}$ " wide x 1 $\frac{1}{2}$ " deep. **List Price:** \$15.00.

## CERAMIC NOISE-REDUCING AND LOW COST PALM MICROPHONES

Loaded with features—yet priced unusually low. "Shaped" voice response is patterned after professional mobile and SSB amateur response curves . . . assures maximum intelligibility. Professional design and construction. Long-life push-to-talk switch. Rugged "Armo-Dur" plastic case; shock-, shatter-, corrosion-, rust-, and weather-proof. Coiled-cord won't kink. "Lifetime" hang-up bracket. Choice of ceramic (Model 201, or noise reducing Model 202) or Controlled Magnetic (Model 401A and 401B) elements. (Model 401B recommended for parallel balanced line operation where long cable lengths are required.) (Model 202 effectively reduces background noise for use in mobile commercial 2-way radio, ham and CB rigs.) U.S. Patent D194,749.



### SPECIFICATIONS

|                              | MODEL 202   | MODEL 201  | MODEL 401A  | MODEL 401B  |
|------------------------------|---|--|---|---|
| <b>Type</b>                  | CERAMIC   |  | CONTROLLED MAGNETIC   |   |
| <b>Frequency Response</b>    | 200 TO 4,000 Hz FREE FROM UNDESIRABLE PEAKS                       |  |   |   |
| <b>Output Level</b>          | -50.5 db (0 db=1 volt/microbar); 2.93 millivolts/microbar         | -55.5 db (0 db=1 volt per microbar); 1.680 millivolts/microbar | -51 db (0 db=1 volt per microbar); 2.81 millivolts/microbar | -49 db (0 db=1 milliwatt per 10 microbars); .31 millivolts/microbar |
| <b>Impedance</b>             | High—Recommended load impedance; 1 to 5 megohms                   |  | High — Recommended load impedance; 100,000 ohms or more     | Low — Recommended load impedance; 150-250 ohms                      |
| <b>Polar Pattern</b>         | Special Noise Reducing  |  | OMNIDIRECTIONAL   |   |
| <b>Dimensions and Weight</b> | 4" HIGH x 2 $\frac{3}{4}$ " WIDE x 1 $\frac{1}{8}$ " DEEP. 10 OZ. |  |   |   |
| <b>List Price</b>            | \$20.00   | \$18.00  | \$22.00   | \$22.00   |

NEW

Adjustable  
Height!

**"Uni-Com" Model 522  
Noise-Suppressing  
Unidirectional  
Dynamic  
Microphone**

Unidirectional pickup pattern suppresses unwanted background noise — the type of noise generated by other dispatchers working nearby, ventilating equipment, or office machines in the same area. It also suppresses feedback in public-address paging applications. Long-life finger-tip control bar (locking and non-locking action) actuates microphone circuit and external relay circuit. Adjustable height from 9¾" to 12½" overall. Sturdy, high impact Armo-Dur™ base and case. High or Low impedance selector switch.

## SPECIFICATIONS

**Frequency Response:** 60 to 11,000 Hz.

**Output:** High Impedance: -56.5 db (0 db = 1 volt per microbar); 1.48 millivolts/microbar. Low Impedance: -57 db (0 db = 1 milliwatt per 10 microbars); .105 millivolts/microbar.

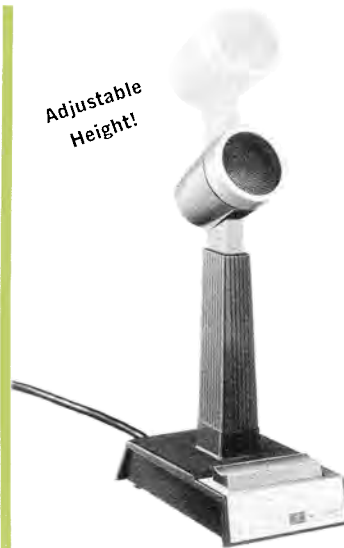
**Impedance:** Dual. Switch for 25 to 200 ohms, or high.

**Cable:** 7 ft., four-conductor (two-conductor shielded).

**Switch:** Press-to-Talk bar with optional locking feature. Switch actuates microphone circuit and an external relay or control circuit. Microphone circuit is normally shorted in high impedance and normally opened in low impedance position.

**Dimensions and Weight:** 12¼" high (adjustable), 4" wide, 5¾" deep; 1½ lbs.

**List Price:** \$62.50.

Adjustable  
Height!

**The "Dispatcher"  
Model 450 Made of  
Rugged "Armo-Dur"™—  
Won't Crack, Peel, Rust  
or Dent**

Superior voice intelligibility is combined with a modern design which blends in beautifully with any decor. But good looks are only half the story. Integrated case design, made of two-tone gray Armo-Dur, features telescoping height adjustment for maximum convenience. Built-in push-to-talk fingertip switch bar in the base (locking or non-locking) actuates the microphone circuit and an external relay or control circuit . . . optional features provide every desired switching option. Rugged. Controlled Magnetic element with switch for low or high impedance. Ideal wherever the microphone is visible to the public.

## SPECIFICATIONS

**Frequency Response:** 100 to 10,000 Hz.

**Output:** High impedance -54.0 db (0 db = 1 volt per microbar); 2.00 millivolts/microbar. Low impedance -53.0 db (0 db = 1 milliwatt per 10 microbars); .225 millivolts/microbar.

**Impedance:** Dual. Switch for 50 to 250 ohms, or high (100,000 ohms or higher load impedance).

**Cable:** 7 ft., four-conductor (two-conductor shielded).

**Switch:** Press-to-talk switch bar with optional locking feature. Operates independent microphone and relay circuits. Relay portion of switch normally open. Microphone portion of switch normally open or normally closed as required.

**Dimensions and Weight:** 10¾" high (adjustable) 4" wide, 5¾" deep; 1½ lbs.

**List Price:** \$49.50.

## UNIDYNE III DYNAMIC MICROPHONE: WORLD'S FINEST BASE-STATION MICROPHONE



Exceptionally fine microphone with a unidirectional pick-up pattern that approaches the theoretical ideal. Unsurpassed in situations where background noise is a factor. Controls feedback in areas where loudspeakers are close by. Can be placed up to 75% further from the operator than ordinary omnidirectional microphones. Model 545S has a built-in on-off switch and positive action lifetime swivel that permits tilting of head. Model 545 can be removed from desk stand for hand-held operation.

## SPECIFICATIONS

**Frequency Response:** 50-15,000 Hz.

**Output Level:** Low: -57 db (0 db = 1 milliwatt per 10 microbars); .141 millivolts/microbar. High: -55 db (0 db = 1 volt per microbar); 1.760 millivolts/microbar.

**Impedance:** Dual. Choice of 50-250 ohms or High.

**Polar Pattern:** Cardioid. (Uniform with frequency, symmetrical about axis.)

**Cable:** 15 ft., three-conductor shielded with Amphenol MC4M type plug. Stand Thread 5/8"-27 Thread.

**Dimensions and Weight:** 1½¼" diameter, 5½¼" length; 14 oz.

**List Price:** Model 545S (with switch) \$89.95 Model 545 (without switch) \$85.00.



# DISPATCHING MICROPHONES



## COMMANDO CONTROLLED MAGNETIC PAGING MICROPHONE MODEL 430SL

Comes complete with swivel adapter and desk stand . . . and is easily removable for use as a hand-held microphone! Special "momentary" press-to-talk, locking or non-locking, switch on the microphone controls both the microphone circuit and the external relay or control circuit. Smooth and uniform broad frequency response (60 to 10,000 Hz) is free from undesirable peaks. For indoor or outdoor use. . . the rugged Controlled Magnetic cartridge is immune to the effects of temperature and humidity. Modern "flare" design in satin chrome and black.

### SPECIFICATIONS

**Frequency Response:** 60 to 10,000 Hz.

**Output Level:** Low impedance —52 db (0 db = 1 milliwatt per 10 microbars); .225 millivolts/microbar. High impedance: —52 db (0 db = 1 volt per microbar); 2.510 millivolts/microbar.

**Impedance:** Dual—Easily converted from High to Low.

**Polar Pattern:** Omnidirectional.

**Cable:** Non-detachable 15 ft., three-conductor, one-conductor shielded.

**Switch:** Million cycle press-to-talk locking or non-locking type to control both microphone and external relay or control circuit.

**Dimensions:** (Microphone only) 6¾" x 1¾" diameter at head, 1¾" diameter at handle; 1 lb.

**List Price:** \$49.95.



## The "Dispatcher" Models 520SL & 520SLB Controlled Magnetic Microphone Assemblies

Models 520SL (high impedance) and 520SLB (low impedance) combine microphone; grip-to-talk, slide-to-lock switch; and desk stand—a complete assembly. A time honored favorite among dispatchers because of their dependability. The rugged assembly is immune to effects of temperature and humidity. Designed for base-station use in police, fire, utility, forestry and transportation services, as well as paging and call systems. Highly intelligible Controlled Magnetic element with 100-9,000 Hz response. Die-cast zinc case finished in metallic green with satin chrome handle and grille. 9¾" high, 5" wide x 7" deep. 2¼ lbs.

**Model 520SL** equipped with grip-to-talk switch SPDT—normally closed—normally open, and a 7 ft. 2-conductor shielded cable, with a cable connector equivalent to Amphenol MC3M plug.

**Model 520SLB** has grip-to-talk switch DPST—normally open—normally open, and a 7 ft. 4-conductor (2 conductors shielded) cable with a cable connector equivalent to Amphenol MC4M plug.

### SPECIFICATIONS

| Model  | Output Level   | Impedance                                    | List Price |
|--------|--|--|------------|
| 520SL  | —52.5 db (0 db=1 volt per microbar); 2.38 millivolts/microbar          | High (recommended load 100,000 ohms or more) | \$45.00    |
| 520SLB | —51.0 db (0 db=1 milliwatt per 10 microbars); .281 millivolts/microbar | 150-250 ohms                                 | \$49.25    |

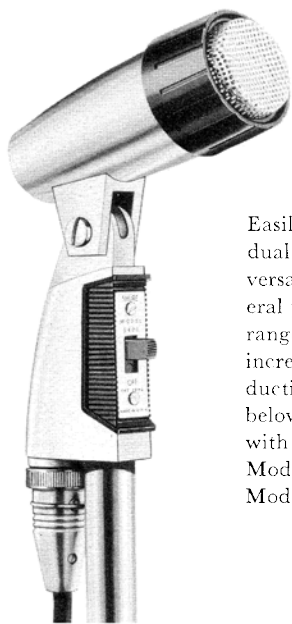


## The "Green Bullet" Models 520 and 520B

Head assembly only, similar to 520SL and 520SLB (above). 100-9000 Hz response. Metallic green with satin chrome grille. Includes 7' shielded cable (Model 520, single conductor shielded—Model 520B two conductors shielded).

### SPECIFICATIONS

| MODEL | OUTPUT LEVEL   | IMPEDANCE                                    | LIST PRICE |
|-------|--|--|------------|
| 520   | —52.5 db (0 db=1 volt per microbar); 2.38 millivolts/microbar        | High (recommended load 100,000 ohms or more) | \$22.50    |
| 520B  | —51 db (0 db=1 milliwatt per 10 microbars); .281 millivolts/microbar | 150-250 ohms                                 | \$22.50    |



## SONODYNE II DYNAMIC MICROPHONE WITH ADJUSTABLE FREQUENCY RESPONSE

Easily adjustable frequency response and dual impedance make this one of the most versatile and problem solving of all general purpose microphones. Normally wide-range response can be adjusted to provide increased voice intelligibility and/or reduction of unwanted low frequency noise below 400 Hz. Die cast satin chrome case with impact resistant black Armo-Dur cap. Model 540S is supplied with on-off switch; Model 540 is supplied without switch.

### SPECIFICATIONS

**Frequency Response:** 50 to 13,000 Hz. Provisions for alternate response: rapid roll-off above 6,000 Hz and/or below 400 Hz.

**Output Level:** 50-250 ohm impedance: —56.0 db (0 db = 1 milliwatt per 10 microbars); .149 millivolts/microbar. High impedance: —53.5 db (0 db = 1 volt per microbar); 2.13 millivolts/microbar.

**Impedance:** Dual. Choice of 50-250 ohms or high.

**Polar Pattern:** Omnidirectional.

**Swivel:** Self-adjusting "Positive Action" lifetime swivel permits tilting of the head so that the microphone can be pointed at the source of sound.

**Cable:** 15 ft. two-conductor shielded with an Amphenol MC3M type connector.

**Stand Thread:** ⅝"-27 thread.

**Dimensions and Weight:** (not including swivel) 1⅝" diameter, 3⅝" length, 1 lb.

**List Price:** Model 540S (with switch) \$49.95; Model 540 (without switch) \$47.95.

# SHURE MICROPHONE ACCESSORIES AND REPLACEMENT PARTS

## REPLACEMENT COILED CORDS

| MODEL NO. | FOR USE WITH  | LIST PRICE |
|-----------|---|------------|
| C10C      | Tinsel with Amphenol MC4M Connector (3-conductor shielded) for G. E. EM10A and Shure 505K, 505KB.....   | \$12.00    |
| C11C      | Tinsel with Amphenol MC4M Plug for G. E. EM10A2, EM10B2, EM25A, EM25E, and Shure 405K, 405KB.....   | 12.00      |
| C12C      | Copper for Models 404C, 488A.....   | 9.75       |
| C14C      | Copper for Models 404B, 488B.....   | 10.00      |
| C15C      | Copper for Models 101A, 101B, 101C, 102A, 102B, 102C, 104A, 104B, 405T, 488C, CB10, CB10B, CB10D, CB10F, CB12, CB12A, CB12C, CB12D, CB12M, CB12W, CB15, CB15B, CB15C, CB15D, CB26, TU341, TU342, TU352..... | 6.25       |
| C16C      | Tinsel with Amphenol MC4M Connector for Model 101E, CB10E, CB50.....  | 9.50       |
| C17C      | Copper with Spade Lugs for Models CB12E, CB12T, MS12.....   | 7.75       |
| C18C      | Copper with Amphenol MC4M Connector for use with Motorola Equipment.....  | 9.50       |
| C19C      | Tinsel with Amphenol MC4M Connector for Models, 103, CB15F.....   | 9.50       |
| C20C      | Copper for Models 201, 401A.....  | 7.00       |
| C21C      | Copper for Model 401B.....  | 7.75       |
| C22C      | Tinsel with PJ068 Plug for Model 488T.....  | 15.00      |
| C23C      | Copper for Model 275SK.....   | 6.00       |
| C24C      | Copper for Models 414A, 419A.....   | 9.75       |
| C25C      | Copper for Models 414B, 419B.....   | 10.00      |
| C26C      | Copper for Model 414C.....  | 8.35       |
| C27C      | Tinsel for Models 418A, EM18D.....  | 13.00      |
| C28C      | Tinsel Shield, copper conductors—for G. E. Models EM18A, EM18B, EM18C.....  | 13.00      |

## REPLACEMENT MICROPHONE CARTRIDGES

Supplied with necessary hardware, instructions, etc.

| MODEL NO. | FOR USE WITH                   | LIST PRICE |
|-----------|--------------------------------|------------|
| R4M       | 415, 420, 425, 430, 430SL..... | \$15.00    |
| R5        | 520SL, 520, 440SL.....         | 11.00      |
| R5B       | 520SLB, 520B, 510SLB.....      | 11.00      |
| R5C       | 418A.....                      | 11.00      |
| R5D       | 405K, TH100.....               | 11.00      |
| R5E       | 401B, 404B, 405T.....          | 11.00      |
| R5F       | 401A, 404C.....                | 11.00      |
| R10       | 104A, 104B.....                | 8.50       |
| R14A      | 414A.....                      | 11.00      |
| R14B      | 414B.....                      | 11.00      |
| R14C      | 414C.....                      | 25.00      |
| R19A      | 419A.....                      | 17.50      |
| R19B      | 419B.....                      | 17.50      |
| R45       | 545S, 545.....                 | 37.50      |
| R50       | 540S, 540.....                 | 15.00      |
| R88A      | 488A.....                      | 17.50      |
| R88B      | 488B, 488C.....                | 17.50      |
| R88T      | 488T.....                      | 17.50      |

NOTE: For Complete Shure Microphone Cartridge Replacement Catalog Write for AL188 Microphone Cartridge Replacement Guide.



### SOLDERLESS CONNECTIONS CRIMPING PLIER KIT

This specially designed kit eliminates difficulties in repairing tinsel coiled cords. Includes unique crimping pliers, 75 solderless clips, 20 plastic tubes and a length of lead wire. Connection is made with one insulation-piercing clip crimped around the tinsel conductor and bare copper lead. Takes only seconds.

**KIT TK-1** .....List Price: **\$12.50**

**KIT TK-1-TW** Contains 100 solderless clips and 100 ft. of lead wire. List Price: **\$6.50**



### "GRIP-TO-TALK" SLIDE-TO-LOCK" SWITCH

Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Can be used with any Shure connector-type crystal, dynamic and carbon microphones of any impedance.

**Model A88A** .....List Price: **\$12.50**



### LINE TRANSFORMER

A high-quality, cable-type transformer which makes it possible to connect a low impedance microphone (35-50 ohm and 150-250 ohm) to a high impedance amplifier. Only 2½" long x ¾" diam. Solves the problem of excessive high frequency loss and hum when long lengths of microphone cable are necessary. May also be used in applications requiring high impedance to low impedance circuit connections. Cannon XL-3-11 input and Amphenol MC1F output plugs installed. Response: 20-20,000 Hz ± 1 db.

**Model A95A** .....List Price: **\$17.50**

### RK SERIES REPLACEMENT KITS

In addition to replacement cables and cartridges, Shure has other replacement parts available in our RK Series Kits which cover the following models: 104A, 104B, 404B, 404C, 405K, 405T, 414A, 414B, 414C, 418A, 419A, 419B, 488A, 488B, 488C, and 488T.

To obtain a parts breakdown of these, please send for data sheet no. 27A273.

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