



SHURE

**GENERAL CATALOG**  
MICROPHONES / HIGH FIDELITY PRODUCTS  
ELECTRONIC COMPONENTS

61

## **Shure—the Standard of Quality...“In Electronics Since 1925”**

Shure Brothers, Inc. is providing for today's critical requirements and will meet the exacting demands of the future. The world of electronics is at the threshold of a new era, and Shure planning envisions dramatic new products and revolutionary applications which will meet the challenge and fulfill the promise of tomorrow.

Since 1925 Shure Brothers, Inc., has made numerous significant contributions to the development of original acoustical-electronic products. In the future, as in the past, you can look to Shure for continued leadership in:

**Fine Studio and Public Address Microphones**

**Precision Magnetic Recording Heads**

**High Fidelity Phonograph Cartridges and Arms**

**Original Equipment and Replacement Phonograph Cartridges**

**“Industry-Standard” Communications Microphones**

**Handsets and Special-Purpose Microphones**



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Shure Brothers, Inc., is able to give you quality products because we continually strive to raise already critical standards to precision levels previously considered unattainable.

Some of the more important factors governing Shure quality are:

**\*RESEARCH AND DEVELOPMENT**—A continuing research program is devoted to the objective of developing new products with performance and design standards of a high order.

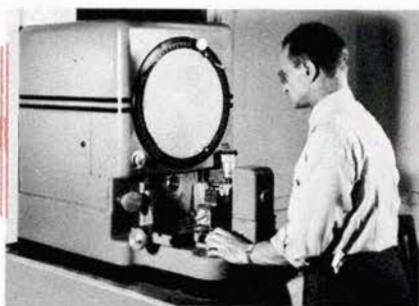
**\*ENGINEERING FACILITIES**—The most modern anechoic chambers and laboratory equipment, much of it unavailable commercially, have been designed and built by our own engineering laboratory staff.

**\*ADVANCED METHODS AND STANDARDS**—Special control techniques and devices enable us to improve the precision quality of customized assembly-line production.

**\*SCIENTIFIC PRODUCTION TECHNIQUES**—Special production facilities guarantee desired delivery of mass-produced components for original equipment.

**\*QUALITY CONTROL**—The continuous use of daily quality control techniques for incoming materials and for all phases of production results in uniform, high quality products.

Add up all of these factors and you have a time-proved formula for the quality performance and long-life operation of Shure products.



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# STUDIO MICROPHONES

## *Model "333"* STUDIO UNI-RON UNI-DIRECTIONAL RIBBON MICROPHONE \*

This quality microphone is designed for discriminating users with the most exacting professional requirements. The rugged "333" is highly recommended for motion-picture studios, TV studios, radio stations, professional recording, and all other uses where quality requirements are of the highest. The "333" is super-cardioid, uni-directional—reduces the pickup of random noise energy by 73%—prevents the pickup of moving props and scuffling feet. The "333" Studio features the patented, world-famous Shure "Uniphase" acoustical network system—a field-proved standard of quality.

## *Model "525"* STUDIO SLENDYNE OMNI-DIRECTIONAL DYNAMIC MICROPHONE \*

The Studio "525" is an exceptionally fine, slender microphone of broadcast quality. It is custom-built to provide high fidelity reproduction of voice and music. The microphone has complete versatility and reliability for indoor and outdoor use and may be used: (1) on a conventional floor or desk stand, (2) in the hand, and (3) with the lavalier cord and belt clip assembly. The use of high efficiency magnetic materials and specially designed magnetic circuits has made it possible to develop this small microphone and still achieve maximum operating efficiency. The microphone is ruggedly built to withstand hard usage and is unaffected by temperature and humidity variations.

## *Model "300"* STUDIO GRADIENT<sup>1</sup> BI-DIRECTIONAL RIBBON MICROPHONE \*

This professional quality multi-impedance microphone is widely used for tape recording, broadcast and highest quality Public Address use. The "300" has a specially designed anti-"PFF" filter screen—which eliminates pickup of distracting breath noises. It provides sound pickup at the front and rear of the microphone, but greatly reduces pickup at the sides. One of the outstanding features of the "300" is the fact that the microphone can be placed at a 73% greater distance from the performer than is possible with omni-directional microphones. It is ideal for highest-quality reproduction, especially wherever multi-person pickup is desired, yet background noise must be reduced.



\* Available in matched sets for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and 1½ db in frequency response.)

### "333" UNI-DIRECTIONAL RIBBON MICROPHONE

LIST PRICE: \$250.00  
TYPE: Ribbon  
FREQUENCY RESPONSE: 30 to 15,000cps production uniformity guaranteed to plus or minus  $2\frac{1}{2}$  db.  
OUTPUT LEVEL: 50 ohm impedance: -60 db  
150 ohm impedance: -59 db  
250 ohm impedance: -59 db  
(0 db = 1 milliwatt per 10 microbars)  
IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of 3 impedances—L-50 ohms, M-150 ohms, H-250 ohms.  
POLAR PATTERN: Super-Cardioid (Uni-directional) Response at rear down 12 to 20 db from front.  
MAGNETIC CIRCUIT: Uses Alnico V magnet  
CASE: Die cast zinc  
FINISH: Combination non-reflecting "Bronze-Tone" enamel case with beige aluminum grille.  
SWIVEL: New, improved, self-adjusting "positive action"

lifetime swivel. Permits tilting the head 45° forward and 70° backward, making it simple to aim the microphone at the source of sound.  
SHOCK MOUNT: Special vibration-isolation unit of live rubber construction.  
CABLE CONNECTOR: Cannon XL-3-11  
CABLE: 20 ft., 2-conductor shielded broadcast type  
STAND THREAD: Standard  $\frac{3}{8}$ "—27 thread  
STAND COUPLERS: Adapter for  $\frac{1}{2}$ " pipe thread or  $\frac{3}{8}$ "—24 thread available upon request at no extra charge.  
SWITCH: Voice-Music Switch to adjust frequency characteristic for optimum performance.  
DIMENSIONS:  $7\frac{3}{4}$ " high;  $1\frac{1}{4}$ " wide;  $1\frac{1}{8}$ " deep  
NET WEIGHT: (less cable):  $1\frac{1}{2}$  lb.; packaged weight  $4\frac{1}{4}$  lbs.  
OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer.

### "525" OMNI-DIRECTIONAL DYNAMIC MICROPHONE

LIST PRICE: \$200.00  
TYPE: Dynamic  
FREQUENCY RESPONSE: 40 to 15,000 cps, production uniformity guaranteed to plus or minus  $2\frac{1}{2}$  db.  
IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of three impedances—L-30-50 ohms, M-150 ohms, H-250 ohms.  
OUTPUT LEVEL: At 50, 150, 250 ohms: -61 db  
(0 db = 1 milliwatt per 10 microbars)  
POLAR PATTERN: Omni-directional  
MAGNETIC CIRCUIT: Uses Alnico V magnet  
CASE: Aluminum  
FINISH: Non-reflecting "Bronze Tone" enamel with beige grille.  
SWIVEL ADAPTER: Furnished with A25 swivel adapter.

It is a self-adjusting "positive action" lifetime swivel which permits the microphone to be tilted 90° from vertical to horizontal, making it simple to aim the microphone at the source of sound.  
CABLE CONNECTOR: Cannon XL-3-11  
CABLE: 20 ft., 2-conductor shielded broadcast type  
STAND THREAD: The Model A25 swivel adapter has a  $\frac{3}{8}$ "—27 thread  
STAND COUPLERS: Adapter for  $\frac{1}{2}$ " pipe thread or  $\frac{3}{8}$ "—24 thread are available upon request at no extra charge.  
DIMENSIONS:  $8\frac{1}{2}$ " high, 1" diameter  
NET WEIGHT: (less cable):  $\frac{1}{2}$  lb.; packaged weight  $3\frac{1}{2}$  lbs.  
FURNISHED ACCESSORIES: A28L Lavalier Assembly,  
OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer.

### "300" BI-DIRECTIONAL GRADIENT<sup>1</sup> MICROPHONE

LIST PRICE: \$150.00  
TYPE: Ribbon  
FREQUENCY RESPONSE: 40 to 15,000cps production uniformity guaranteed to plus or minus  $2\frac{1}{2}$  db.  
OUTPUT LEVEL: 30-50 ohms -59 db\*  
150-250 ohms -60 db\*  
High -57 db\*\*  
\* (0 db = 1 milliwatt per 10 microbars)  
\*\* (0 db = 1 volt per microbar)  
IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of three impedances—L-30-50 ohms, M-150-250 ohms, H-35,000 ohms.  
POLAR PATTERN: Bi-directional. Equally sensitive at front and rear. Response at sides down 15 to 20 db from front and rear responses.  
MAGNETIC CIRCUIT: Uses Alnico V magnet  
CASE: Die cast zinc  
FINISH: Non-reflecting "Bronze-Tone" enamel  
SWIVEL: New improved self-adjusting "positive action"

lifetime swivel permits tilting the head 45° forward and 90° backward so that the microphone can be aimed at the source of sound.  
SHOCK MOUNT: Special vibration-isolation unit of live rubber construction.  
CABLE CONNECTOR: Equipped with Cannon XL-3-11 connector.  
CABLE: 20 ft., 2-conductor shielded broadcast type  
STAND THREAD:  $\frac{3}{8}$ "—27 thread  
STAND COUPLERS: Adapter for  $\frac{1}{2}$ " pipe thread or  $\frac{3}{8}$ "—24 thread available upon request at no extra charge.  
SWITCH: Equipped with Voice-Music Switch to adjust frequency characteristic for optimum performance.  
DIMENSIONS: 6" high;  $1\frac{1}{8}$ " wide,  $2\frac{1}{8}$ " deep  
NET WEIGHT: (less cable): 1 lb.; packaged weight 4 lbs.  
OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer.

## GENERAL PURPOSE MICROPHONES



### Model "330" PROFESSIONAL UNI-RON\*

The striking-looking new 330 "UNI-RON" Microphone has been designed to meet the exacting requirements of professional tape recording and highest quality, indoor public-address systems. The "UNI-RON" is basically a member of the Shure Studio Microphone family, similar in appearance and performance to the Model "333". The "UNI-RON" has a super-cardioid pickup pattern—reduces the pickup of undesired random noise energy by 73%!

This rugged performer has been developed to achieve optimum operating performance—for those applications where highest quality is essential, yet cost is an important factor.



(Model 315S shown)

### Models "315" AND "315S" GRADIENT\*

This rugged high fidelity multi-impedance microphone is recommended for fine quality, general-purpose uses. The 315 will reproduce voice and music in a clear, natural-tone quality, which makes it ideal for use in auditoriums, night clubs, schools and churches. It is similar in features and design to the Studio Model 300. The 315 is used for those numerous public-address applications where its streamlined design and striking beauty lend dignity and prestige to any setting in which it is used. This gradient microphone is a favorite of professional performers and educators because it provides unusual freedom of motion on the platform—making it possible for the user to stand at a 73% greater distance from the microphone than is possible with omni-directional microphones.

## Deluxe Recording and Public-Address Microphones

### SPECIFICATIONS FOR MODEL 330

LIST PRICE: \$120.00

TYPE: Ribbon

FREQUENCY RESPONSE: 30 to 15,000 cps.

OUTPUT LEVEL: 50 ohm impedance —59 db\*  
150 ohm impedance —57 db\*  
250 ohm impedance —58 db\*

\*(0 db = 1 milliwatt per 10 microbars)

IMPEDANCE: Equipped with a Multi-Impedance Switch, furnishing a choice of 3 impedances—50 ohms, 150 ohms, 250 ohms

POLAR PATTERN: Super Cardioid (Uni-directional). Response at rear down 15 db from front.

MAGNETIC CIRCUIT: Ribbon Element—Alnico V magnet  
CASE: Die cast zinc.

FINISH: Satin chrome plate with natural anodized aluminum grille

SWIVEL: Self-adjusting "positive action" lifetime swivel. Permits tilting the head 45° forward and 70° backward, making it simple to aim the microphone at the source of the sound.

SHOCK MOUNT: Special vibration-isolation unit of live rubber construction.

CABLE CONNECTOR: Equipped with Cannon XL-3-11 Connector

CABLE: 20-ft., 2-conductor shielded broadcast type

STAND THREAD: Standard  $\frac{5}{8}$ "—27 thread

DIMENSIONS: 3 $\frac{1}{4}$ " high, 1 $\frac{1}{2}$ " wide, 1 $\frac{3}{8}$ " deep

NET WEIGHT: (less cable): 1 $\frac{1}{2}$  lb.; packaged weight 3 $\frac{1}{8}$  lbs.

OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer.

### SPECIFICATIONS FOR MODEL 315

LIST PRICES: Model 315 \$89.50, Model 315S (with switch) \$91.50

TYPE: Ribbon

FREQUENCY RESPONSE: 50 to 12,000 cps

OUTPUT LEVEL: L—30-50 ohm impedance —59.5 db\*  
M—150-250 ohm impedance —60 db\*  
H—High —57 db\*\*

\*(0 db = 1 milliwatt per 10 microbars)

\*\* (0db = 1 volt per microbar)

IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of 3 impedances: L-30-50 ohms, M-150-250 ohms, H-High.

POLAR PATTERN: Bi-directional. 66% reduction of pickup of undesired sound. Equally sensitive at front and back. Response at sides down 15 to 20 db from front and rear responses.

MAGNETIC CIRCUIT: Uses Alnico V magnet

CASE: Die cast zinc

FINISH: Satin chrome

SWIVEL: New self-adjusting swivel permits tilting the head through 90° so that the microphone can be aimed at the source of sound.

CABLE CONNECTOR: Equivalent to the Amphenol MC3M plug

CABLE: 18 ft., two conductor, shielded broadcast type

STAND THREAD: Standard  $\frac{5}{8}$ "—27 thread

DIMENSIONS: 6" high, 1 $\frac{1}{2}$ " wide, 1 $\frac{3}{8}$ " deep

NET WEIGHT: (less cable): 1 lb.; packaged weight 2 $\frac{1}{2}$  lbs.

OPTIONAL ACCESSORIES: Model S36A Desk Stand, Model A86A Cable-Type Transformer.

\* Available in matched sets for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and 1 $\frac{1}{2}$  db in frequency response.)



## GENERAL PURPOSE MICROPHONES

### OMNI-DIRECTIONAL DYNAMIC MICROPHONES

#### SPECIFICATIONS FOR MODEL 530

LIST PRICE: \$110.00

TYPE: Dynamic

FREQUENCY RESPONSE: 50 to 15,000 cps

OUTPUT LEVEL: L—50-250 ohm impedance —61 db (0 db = 1 milliwatt per 10 microbars)

H—High impedance —61 db (0 db = 1 volt per microbar)

IMPEDANCE: Equipped with a dual-impedance switch, furnishing a choice of 2 impedances—L-50-250, H-high.

POLAR PATTERN: Omni-directional

MAGNETIC CIRCUIT: Uses Alnico V magnet

CASE: Aluminum

FINISH: Black and gold anodized

SWIVEL ADAPTER: Furnished with A25 type swivel adapter. It is a self-adjusting "Positive Action" lifetime swivel which permits the microphone to be tilted through 90° from vertical to horizontal, making it simple to aim the microphone at the source of sound.

CABLE CONNECTOR: Cannon XL-3-11

CABLE: 20 ft. high quality, 2-conductor shielded broadcast type

STAND THREAD: With swivel adapter, standard  $\frac{5}{8}$ "—27 thread and may be mounted on any conventional desk, banquet or floor stand.

SWITCH: On-Off (normally closed)

DIMENSIONS:  $7\frac{1}{2}$ " high, 1" diameter

NET WEIGHT: (less cable):  $\frac{1}{2}$  lb.; packaged weight  $2\frac{3}{8}$  lbs.

FURNISHED ACCESSORIES: On-Off Switch, with Adapter Plate, A25B Swivel Adapter, and A28L Lavalier Assembly.

OPTIONAL ACCESSORIES: Model S33B Desk Stand, Model A86A Cable-Type Transformer.

#### SPECIFICATIONS FOR MODEL 535

LIST PRICE: \$72.50

TYPE: Dynamic

FREQUENCY RESPONSE: 60 to 13,500 cps

OUTPUT LEVEL: L—50-250 ohms impedance —61 db (0 db = 1 milliwatt per 10 microbars)

H—High impedance —61 db (0 db = 1 volt per microbar)

IMPEDANCE: Equipped with a dual-impedance switch, furnishing a choice of 2 impedances—L-50-250 ohms, H-high.

POLAR PATTERN: Omni-Directional

MAGNETIC CIRCUIT: Uses Alnico V magnet

CASE: Brass

FINISH: Satin chrome

SWIVEL ADAPTER: Furnished with Model A25 type Swivel Adapter. It is self-adjusting and permits the microphone to be tilted through 90° from vertical to horizontal, making it simple to aim the microphone at the source of sound.

CABLE CONNECTOR: Equivalent to Amphenol MC3M plug.

CABLE: 18 ft. 2-conductor shielded broadcast type

STAND THREAD: With swivel adapter, standard  $\frac{5}{8}$ "—27 thread, and may be mounted on any conventional desk, banquet or floor stand.

SWITCH: On-Off (normally closed)

DIMENSIONS:  $7\frac{1}{2}$ " high, 1" diameter

NET WEIGHT: (less cable):  $\frac{3}{4}$  lb.; packaged weight  $2\frac{5}{8}$  lbs.

FURNISHED ACCESSORIES: On-Off Switch Adapter plate, A25 type Swivel Adapter.

OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer and A28L Lavalier Assembly.



Model "530" BROADCAST SLENDYNE \*

The Slendynes are the most versatile fine quality probe microphones ever developed—*actually five microphones in one* because of their practical design and useful accessories. They can be used for indoor or outdoor applications in the following manner: (1) in the hand; (2) on a floor or desk stand; (3) hung around the neck on a lavalier cord and clip assembly; (4) "on-off" switch adapter; (5) "high and low" dual-impedance switch. The Slendynes are ideal for high quality public address, theater-stage sound systems and all recording applications where an omni-directional microphone is desirable. These microphones are ruggedly built to withstand hard usage, and are unaffected by temperature and humidity variations.



Model "535" SLENDYNE \*

\* Available in matched sets for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and  $1\frac{1}{2}$  db in frequency response.)

## GENERAL PURPOSE MICROPHONES



Model  
546  
Broadcast  
"UNIDYNE III"\*

*Unidyne III*

—smallest unidirectional dynamic microphones.  
Feature truly uniform cardioid pickup pattern.

Recommended for critical broadcast and theater-stage sound system operation, high quality public address and recording applications.

### SPECIFICATIONS FOR MODEL 546

LIST PRICE: \$135.00  
TYPE: Dynamic.  
FREQUENCY RESPONSE: 50-15,000 cps.  
OUTPUT LEVEL: —55 db (0 db = 1 milliwatt per 10 microbars)  
IMPEDANCE: Dual. Choice of 30-100ohms or 100-250 ohms.  
POLAR PATTERN: Cardioid. (Uniform with frequency, symmetrical about axis).  
MAGNETIC CIRCUIT: uses Alnico V magnet.  
CASE: Die cast zinc and "Armo-Dur".  
FINISH: Satin chrome and black.  
SWIVEL: New improved self-adjusting "positive action" lifetime swivel permits tilting of the head through 180° so that the microphone can be aimed at the source of sound.  
SHOCK MOUNT: Special vibration-isolation unit of live rubber construction.  
CABLE CONNECTOR: Equipped with Cannon XL-3-II connector.  
CABLE: 20 ft., 2-conductor shielded broadcast type.  
STAND THREAD: 5/8"-27 thread.  
DIMENSIONS (not including swivel): 11 5/64" diameter, 5 7/16" length  
NET WEIGHT (less cable): 1 lb., packaged weight 4 lbs.  
OPTIONAL ACCESSORIES: Model S33B Desk Stand. Model A86A Cable Type Transformer.



Model  
545S  
"UNIDYNE III"\*

### SPECIFICATIONS FOR MODEL 545S

LIST PRICE: \$89.95  
TYPE: Dynamic.  
FREQUENCY RESPONSE: 50-15,000 cps.  
OUTPUT LEVEL: Low: —57 db (0 db = 1 milliwatt per 10 microbars).  
High: —55 db (0 db = 1 volt per microbar).  
IMPEDANCE: Dual. Choice of 50-250 ohms or high.  
POLAR PATTERN: Cardioid. (Uniform with frequency, symmetrical about axis).  
MAGNETIC CIRCUIT: uses Alnico V magnet.  
CASE: Die cast zinc and "Armo-Dur".  
FINISH: Satin chrome and black.  
SWIVEL: New improved self-adjusting "positive action" lifetime swivel permits tilting of the head through 180° so that the microphone can be aimed at the source of sound.  
CABLE CONNECTOR: Equivalent to Amphenol MC4M plug.  
CABLE: 18 ft., 3-conductor shielded.  
STAND THREAD: 5/8"-27 thread.  
DIMENSIONS (not including swivel): 11 5/64" diameter, 5 1/16" length.  
NET WEIGHT (less cable): 3/4 lb., packaged weight 2 3/8 lbs.  
OPTIONAL ACCESSORIES: Model A86A Cable Type Transformer. Model S36A Desk Stand.



Model  
545  
"UNIDYNE III"\*

### SPECIFICATIONS FOR MODEL 545

LIST PRICE: \$85.00  
TYPE: Dynamic  
FREQUENCY RESPONSE: 50—15,000 cps.  
OUTPUT LEVEL: LOW: —57 db. (0 db = 1 milliwatt per 10 microbars)  
HIGH: —55 db. (0 db = 1 volt per microbar)  
IMPEDANCE: Dual. Choice of 50-250 ohms or high.  
POLAR PATTERN: Cardioid (Uniform with frequency, symmetrical about axis)  
MAGNETIC CIRCUIT: uses Alnico V magnet  
CASE: Die cast zinc and "Armo-Dur"  
FINISH: Satin chrome and black  
CABLE CONNECTOR: Equivalent to Amphenol MC4M plug.  
CABLE: 18 ft., 3 conductor shielded  
DIMENSIONS: Length 5 1/16"; Diameter 1 1/4"  
NET WEIGHT (less cable): 1/2 lb., packaged weight 2 1/8 lbs.  
FURNISHED ACCESSORIES: A25B swivel adapter.  
OPTIONAL ACCESSORIES: A86A Cable Type Transformer, S33B desk stands

\*Available in matched sets for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and 1 1/2 db in frequency response.)



## GENERAL PURPOSE MICROPHONES

### WORLD FAMOUS "UNIDYNE" MICROPHONES

#### SPECIFICATIONS FOR MODEL 55S

**LIST PRICE:** Model 55S \$83.00, Model 55SW (with switch) \$85.00  
**TYPE:** Dynamic  
**FREQUENCY RESPONSE:** 50 to 15,000 cps  
**OUTPUT LEVEL:** L—35-50 ohms —54 db  
(0 db=1 milliwatt per 10 microbars)  
M—150-250 ohms —55 db  
(0 db=1 milliwatt per 10 microbars)  
H—High —57 db (0 db=1 volt per microbar)  
**IMPEDANCE:** Equipped with a Multi-Impedance switch, furnishing a choice of 3 impedances—L-35-50 ohms, M-150-250 ohms, H-35,000 ohms.  
**POLAR PATTERN:** Ultra-Cardioid (uni-directional)  
Response at rear down 15 db from front.  
**MAGNETIC CIRCUIT:** Uses Alnico V Magnet  
**CASE:** Die cast zinc  
**FINISH:** Satin chrome  
**SWIVEL:** New improved self-adjusting "positive action" lifetime swivel permits tilting of the head through 80° so that the microphone can be aimed at the source of sound.  
**CABLE CONNECTOR:** Equivalent to Amphenol MC3M  
**CABLE:** 18 ft., 2-conductor, shielded broadcast type  
**STAND THREAD:** Standard  $\frac{3}{8}$ "—27 thread  
**DIMENSIONS:** 7 $\frac{7}{8}$ " high, 2 $\frac{3}{16}$ " wide, 3 $\frac{1}{16}$ " deep  
**NET WEIGHT:** (less cable): 1 $\frac{1}{8}$  lb; packaged weight 3 $\frac{1}{8}$  lbs.  
**OPTIONAL ACCESSORIES:** Model S36A Desk Stand, Model A86A Cable Type Transformer,

#### SPECIFICATIONS FOR MODEL 556S

**LIST PRICE:** \$135.00  
**TYPE:** Dynamic  
**FREQUENCY RESPONSE:** 40 to 15,000 cps.  
**OUTPUT LEVEL:** L—30-50 ohm impedance —54 db  
(0 db=1 milliwatt per 10 microbars)  
M—150-250 ohm impedance —55 db  
(0 db=1 milliwatt per 10 microbars)  
H—High —57 db (0 db=1 volt per microbar)  
**IMPEDANCE:** Equipped with a Multi-Impedance switch, furnishing a choice of 3 impedances—L-30-50 ohms, M-150-250 ohms, H-High.  
**POLAR PATTERN:** Ultra-Cardioid (Uni-directional)  
Response at rear down 15 db from front.  
**MAGNETIC CIRCUIT:** Uses Alnico V Magnet  
**CASE:** Die cast zinc  
**FINISH:** Satin chrome  
**SWIVEL:** New improved self-adjusting "positive action" lifetime swivel permits tilting of the head through 45° forward and 90° backward so that the microphone can be aimed at the source of sound.  
**SHOCK MOUNT:** Special vibration-isolation unit of live rubber construction.  
**CABLE CONNECTOR:** Equipped with Cannon XL-3-11 connector.  
**CABLE:** 20 ft., 2-conductor shielded broadcast type.  
**STAND THREAD:** Standard  $\frac{3}{8}$ "—27 thread  
**DIMENSIONS:** 7 $\frac{3}{4}$ " high, 2 $\frac{3}{16}$ " wide, 3 $\frac{1}{16}$ " deep  
**NET WEIGHT:** (less cable): 2 lbs., packaged weight 3 $\frac{1}{2}$  lbs.  
**OPTIONAL ACCESSORIES:** Model S33B Desk Stand, Model A86A Cable-Type Transformer.



#### Models 55S, 55SW AND 556S

##### UNI-DIRECTIONAL DYNAMIC MICROPHONES \*

For many years the Unidynes have been the most widely used microphones throughout the world. They are specified by leading sound engineers and requested by famed celebrities—for those important events where the faithfulness of sound reproduction is most critical. And now, "The Best is Even Better"—for the famed Unidynes are now 41% higher in output level! This means that the Unidynes are ideal for use with low-gain tape recorders and low-gain P. A. systems—in addition to their famed use with highest quality sound systems.

Models 55S and 55SW are highly recommended for fine quality public address, theater-stage sound systems, recording and remote broadcasting. They are also the field-proved standards for fixed-station use in the police, fire, transportation, forestry and commercial services.

Model 556S is specially designed to meet the high technical requirements of broadcast and television studios. It will endure the heavy punishment of daily use and abuse—will operate at optimum efficiency while conventional microphones are "out of service," due to their frequent need for maintenance and repair. It is held within close tolerances in frequency response and directivity. The Broadcast Unidyne is ideal for high quality station and remote broadcasting, public-address, theater-stage sound systems and recording applications. The 556S is provided with a vibration-isolation unit of live rubber construction. This specially designed shock-mount completely eliminates metal-to-metal contact between microphone and stand.

\* Available in matched sets for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and 1 $\frac{1}{2}$  db in frequency response.)

## GENERAL PURPOSE MICROPHONES



### Model 540S "SONODYNE II"

A compact, modernistic microphone with high output dynamic element at moderate cost. The "Sonodyne II" features *variable frequency response* which allows the user to tailor the microphone to the application—One of the most versatile microphones on the market!



(Model 51S shown)

### Models 51 and 51S "SONODYNE"

The "Sonodyne" is recommended for all general purposes including public address, wire and tape recording, and similar applications. It is used by bands, instrumentalists and recording artists because of its excellent reproduction of both voice and music. Because of its high output and multi-impedance features, tape recording enthusiasts have used the Sonodyne as an ideal good-quality, moderately-priced replacement for the conventional microphone supplied with tape recorders.

## THE SONODYNE" FAMILY

### SPECIFICATIONS FOR MODEL 540S

LIST PRICE: \$49.95

TYPE: Dynamic

FREQUENCY RESPONSE: 60 to 10,000 cps (Provisions for alternate response for voice intelligibility in paging and communications systems).

OUTPUT LEVEL: 50-250 ohm impedance: —57 db (0 db = 1 milliwatt per 10 micro bars)  
High impedance: —52.5 db (0 db = 1 volt per microbar)

IMPEDANCE: Dual. Choice of 50—250 ohms or high.

POLAR PATTERN: Omni-directional.

CASE: Die cast zinc and "Armo-Dur."

FINISH: Satin chrome and black.

SWIVEL: New improved self-adjusting "positive action" lifetime swivel permits tilting of the head through 150° so that the microphone can be aimed at the source of sound.

CABLE CONNECTOR: Equivalent to Amphenol MC3M.

CABLE: 15 ft., 2-conductor shielded.

STAND THREAD:  $\frac{5}{8}$ "—27 thread.

DIMENSIONS (not including swivel):  $1\frac{1}{2}$ " diameter  
 $3\frac{3}{8}$ " length.

NET WEIGHT (less cable):  $1\frac{3}{4}$  lbs., packaged weight  $3\frac{1}{8}$  lbs.

FURNISHED ACCESSORIES: Resonator plate and set-screw for changing response.

OPTIONAL ACCESSORIES: Model S36 A Desk Stand, Model A86A Cable Type Transformer.

### SPECIFICATIONS FOR MODEL 51 AND 51S

LIST PRICE: Model 51—\$49.50

Model 51S (with switch)—\$51.50

TYPE: Dynamic

FREQUENCY RESPONSE: 60 to 10,000 cps

OUTPUT LEVEL: L—35-50 ohm impedance —53 db\*  
M—150-250 ohm impedance —52.5 db\*  
H—High —52 db\*\*

\*0 db = 1 milliwatt per 10 micro bars

\*\*0 db = 1 volt per micro bar

IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of 3 impedances—L-35-50 ohms, M-150-250 ohms, H-High

POLAR PATTERN: Omni-directional

MAGNETIC CIRCUIT: Uses Alnico V magnet

CASE: Die cast zinc

FINISH: Satin chrome

SWIVEL: Lifetime swivel permits tilting the head 90° backward to horizontal position for omni-directional pickup.

CABLE CONNECTOR: Equivalent to Amphenol MC3M.

CABLE: 15 ft., 2-conductor shielded

STAND THREAD: Standard  $\frac{5}{8}$ "—27 thread

DIMENSIONS:  $5\frac{1}{16}$ " high  $3\frac{1}{8}$ " wide  $2\frac{1}{8}$ " deep

NET WEIGHT (less cable):  $1\frac{3}{4}$  lbs., packaged weight  $3\frac{1}{8}$  lbs.

OPTIONAL EQUIPMENT: Model S36 A Desk Stand, Model A86A Cable Type Transformer.



## VERSATILE CRYSTAL MICROPHONES



### Model 737A "MONOPLEX"

The "Monoplex" is the only Super-Cardioid Crystal Microphone made—far superior to any other crystal microphone. It is excellent for high-quality public address, communications, recording, and similar applications. The 737A operates under adverse conditions of background noise and reverberation—where a conventional microphone would be inadequate. Eliminates feedback problems and reduces pickup of random sound by 73%! Has moisture-proof "Metal Seal" crystal for long operating life.

#### SPECIFICATIONS FOR MODEL 737A

LIST PRICE: \$46.00

TYPE: Crystal—Moisture-proof "Metal Seal" crystal for long operating life.

FREQUENCY RESPONSE: 60 to 10,000 cps

OUTPUT LEVEL: —53 db\* (0 db=1 volt per microbar)

IMPEDANCE: High. Recommended load: 1 to 5 meg. ohms

POLAR PATTERN: Super Cardioid, for 73% reduction of pickup of random noise energy.

CASE: Die cast zinc

FINISH: Satin chrome

SWIVEL: Lifetime swivel permits tilting the head 90° backward to horizontal position for omni-directional pickup.

CABLE CONNECTOR: Equivalent to Amphenol MC3M

CABLE: 15 ft., single conductor, shielded

STAND THREAD: Standard  $\frac{5}{8}$ "—27 thread

DIMENSIONS: 4" high, 6 $\frac{3}{32}$ " high with connector, 3 $\frac{3}{32}$ " wide, 1 $\frac{5}{8}$ " deep.

NET WEIGHT: (less cable): 1 $\frac{1}{8}$  lb.; packaged weight 2 $\frac{1}{2}$  lbs.

OPTIONAL ACCESSORIES: Model S36A Desk Stands, Models A83B, A84B, A85C, A88A On-Off Switches

### Model 777 "SLIM-X"

The "777" Slim-X Microphones are rugged little microphones weighing only 6 ounces. They use a "Metal Seal" crystal for long operating life under adverse conditions of heat and humidity. They are designed for good-quality voice and music reproduction. Their versatility and "hand-ability" make them ideal for use by lecturers, announcers, instructors, and Hams; for

audience participation shows; carnivals; panel and quiz shows; and use with home-recorders. When mounted on either cradle or swivel, the "777" can be removed in a flash (no tools necessary)—simply by lifting it out of the holder. This makes it an ideal "walk-around" hand-held microphone. All models are furnished with a lavalier cord, for suspension of microphone around the neck.

#### SPECIFICATIONS FOR MODEL 777

LIST PRICE: Model 777—\$25.00 Includes A37L lavalier cord and molded stand adapter.

Model 777S—\$27.00 Includes A37L lavalier cord, "On-Off" switch and molded stand adapter.

Model 777A—\$33.00 Includes A37L lavalier cord, A25 Swivel stand adapter, S38 Desk Stand.

Model 777SA—\$35.00 Includes A37L lavalier cord, A25 Swivel stand adapter, S38 Desk Stand and "On-Off" switch.

TYPE: Crystal—moisture-proof "Metal Seal" for long operating life.

FREQUENCY RESPONSE: Smooth, peak free from 60 to 10,000 cps.

OUTPUT LEVEL: —62 db (0 db=1 volt per microbar)

POLAR PATTERN: Omni-directional

CASE: Die cast zinc

FINISH: Satin chrome

SWIVEL: Models 777A and 777SA are equipped with Model A25 swivel stand adapter. It has a self-adjusting "positive action" lifetime swivel which permits the microphone to be tilted 90° from vertical to horizontal.

CABLE CONNECTOR: Equipped with Amphenol MC1F plug for attaching cable to microphone.

CABLE: Detachable 7 ft., rubber-covered, single conductor shielded.

STAND THREAD: Standard  $\frac{5}{8}$ "—27 thread

SWITCHES: Models 777S and 777SA have a built-in switch to control the microphone circuit. The switch is of the press-to-talk locking or non-locking type.

DIMENSIONS: (Microphone only) 4 $\frac{1}{2}$ " high, 1" diameter.

NET WEIGHT: (Microphone only)  $\frac{3}{8}$  lb.; packaged weight  $\frac{3}{4}$  lb.

OPTIONAL ACCESSORIES: Model S38 Desk Stand, A25 type swivel Adapter.





STARLITE MICROPHONES  
MODELS 215 AND 715

## Models 215-715

These beautifully designed microphones are excellent for voice and music reproduction. Their extremely low price and good quality make them a "natural" for home recording, intercom systems and inexpensive public address systems. The "Starlite" microphones can be held in the hand, or used on a desk by simply releasing a "built-in", retractable stand which is an integral part of the back of the microphone case.

LIST PRICE: \$8.00

TYPE: Model 215—Ceramic, Model 715—Crystal

FREQUENCY RESPONSE: Model 215—50-8,000 cps, Model 715—50-10,000 cps

OUTPUT LEVEL: Model 215—56.5 db (0 db=1 volt per microbar), Model 715—50 db (0 db=1 volt per microbar)

IMPEDANCE: High—Recommended load impedance: 1 to 5 megohms

POLAR PATTERN: Semi-Directional

CASE: Impact Resistant Polystyrene

FINISH: Model 215—Black Front, gray back with light gray grille, Model 715—Gray front, black back with black grille

CABLE: Equipped with 5 ft., fabric-covered, single conductor shielded cable

STAND: Permanently connected retractable stand

DIMENSIONS: 3½" high, 2½" wide, 1½" deep

NET WEIGHT: 3½ oz.; packaged weight ½ lb.



MODEL 710  
"REX" MICROPHONE

## Model 710

Low price, rugged hand-held microphone, designed for high speech intelligibility. A natural for radio amateur rigs and low-cost public address systems. Has a broad base, complete with stand adapter for mounting on floor stand.

LIST PRICE: Model 710A \$12.00, Model 710S (with switch) \$14.00

TYPE: Crystal

FREQUENCY RESPONSE: 60 to 9,000 cps

OUTPUT LEVEL:—50 db (0 db=1 volt per microbar)

IMPEDANCE: High—Recommended load impedance: 1 to 5 megohms

POLAR PATTERN: Semi-directional

CASE: Die cast zinc

FINISH: Metallic burgundy red

CABLE: 7 ft. fabric covered, single-conductor shielded

STAND THREAD: Microphones are provided with a stand adapter having the Standard ⅝"—27 thread which fits the conventional floor stand

SWITCH: Model 710S has a built-in, press-to-talk switch

DIMENSIONS: 3½" high, 2½" wide, 1½" deep

OPTIONAL ACCESSORIES: Models S34B or S36A Desk Stands

NET WEIGHT: ⅝ lb.; packaged weight 1¼ lbs.



MODEL 707A  
MICROPHONE

## Model 707A

Ideal for low-cost public address systems, call systems, amateur phone transmitters and general purpose use. Features good-quality reproduction at low cost. Uses moisture-proofed Bimorph Rochelle Salt crystal, for long-life operation.

LIST PRICE: \$19.50

TYPE: Crystal

FREQUENCY RESPONSE: 30 to 7,000 cps

OUTPUT LEVEL:—50 db (0 db=1 volt per microbar)

IMPEDANCE: High—Recommended load impedance: 1 to 5 megohms

POLAR PATTERN: Semi-directional

CASE: Die cast zinc

FINISH: Iridescent gray case, satin chrome grille

CABLE: 7 ft., single-conductor shielded

STAND THREAD: Standard ⅝"—27 thread

DIMENSIONS: 3¼" high, 2½" diameter

OPTIONAL ACCESSORIES: Models S34B or S36A Desk Stands.

NET WEIGHT: ⅝ lb.; packaged weight 1¼ lbs.



## Model 510 "HERCULES"

The 510 is ideal for general purpose use in areas where heat and humidity are a problem. Provides ruggedness, clear reproduction and high output. Recommended for Announcing; Mobile Public Address Systems; Communications; Home Recording; and Intercom Systems. Fits snugly in the hand, or sits firmly on a desk.

**SPECIFICATIONS:** Model 510  
**LIST PRICE:** Model 510C \$17.00, Model 510S (with switch) \$19.00  
**TYPE:** Controlled Magnetic  
**FREQUENCY RESPONSE:** 100 to 7,000 cps  
**OUTPUT LEVEL:** —52.5 db (0 db=1 volt per microbar)  
**IMPEDANCE:** High. Recommended load 100,000 ohms or more  
**POLAR PATTERN:** Semi-directional  
**CASE:** Die cast zinc  
**FINISH:** Metallic green  
**CABLE:** 7 ft. single conductor, shielded  
**STAND THREAD:** Microphone provided with a stand adapter having a  $\frac{3}{8}$ "—27 thread which fits the conventional floor stand  
**SWITCH:** Model 510S has a built-in switch to control the microphone circuit. The switch is of the press-to-talk locking or non-locking type  
**DIMENSIONS:**  $3\frac{1}{2}$ " high,  $2\frac{1}{8}$ " wide,  $1\frac{1}{8}$ " deep  
**NET WEIGHT:**  $\frac{7}{8}$  lb.; packaged weight  $1\frac{1}{4}$  lbs.  
**OPTIONAL ACCESSORIES:** Models S34B or S36A Desk Stand

## Model 510SLB

Model 510 SLB is a complete assembly of a low impedance, Controlled Magnetic Microphone with switch and a desk stand. It is designed for mobile and fixed-station use in all types of communications, paging, and dispatching systems.

**SPECIFICATIONS:** Model 510SLB  
**LIST PRICE:** \$29.75  
**TYPE:** Controlled Magnetic  
**FREQUENCY RESPONSE:** 100 to 7,000 cps  
**OUTPUT LEVEL:** —51 db (0 db=1 milliwatt with 10 microbars)  
**IMPEDANCE:** 150-250 ohms

**POLAR PATTERN:** Semi-directional  
**CASE:** Die cast zinc  
**FINISH:** Metallic green  
**CABLE:** 7 ft., 2-conductor, shielded  
**SWITCH:** Built in, normally open, switch to control the microphone circuit. The switch is of the press-to-talk locking or non-locking type  
**DIMENSIONS:** With stand  $8\frac{7}{8}$ " high, 5" wide, 7" deep.  
**NET WEIGHT:** 2 lbs.; packaged weight  $2\frac{3}{4}$  lbs.  
**OPTIONAL ACCESSORIES:** Model A86A cable type transformer

## Model 520SL

and 520SLB "DISPATCHER"  
 The Model 520SL is especially recommended for mobile and fixed station use, and is also very suitable for public address, recording, call systems, radio telephone and amateur use, and similar applications. The Model 520SLB is especially recommended for those applications where low impedance microphones are to be used in parallel, balanced-line operation and where long cable lengths are required, or under conditions of severe hum disturbances.

**SPECIFICATIONS:**  
**LIST PRICE:** Model 520SL: \$45.00  
 Model 520SLB: \$49.25  
**TYPE:** Controlled Magnetic  
**FREQUENCY RESPONSE:** 100 to 9,000 cps  
**OUTPUT LEVEL:**  
 Model 520SL: —52.5 db (0 db=1 volt per microbar)  
 Model 520SLB: —51.0 db (0 db=1 milliwatt with 10 microbars)  
**IMPEDANCE:**  
 Model 520SL: High. Recommended load 100,000 ohms or more  
 Model 520SLB: 150-250 ohms  
**POLAR PATTERN:** Semi-directional  
**CASE:** Die cast zinc  
**FINISH:** Metallic green with satin chrome handle and grille  
**CABLE CONNECTOR:**  
 Model 520SL: Equivalent to Amphenol MC3M plug  
 Model 520SLB: Equivalent to Amphenol MC4M plug  
**CABLE:**  
 Model 520SL: 7 ft. high-quality 2 conductor shielded  
 Model 520SLB: 7 ft. high-quality 4 conductor (2 conductors shielded)

**SWITCH:** Equipped with grip-to-talk switch, similar to Shure A88A.  
 Model 520SL: DPST—normally closed—normally open  
 Model 520SLB: DPST—normally open—normally open  
**DIMENSIONS:** With stand  $9\frac{3}{8}$ " high, 5" wide, 7" deep  
**NET WEIGHT:** (less cable):  $2\frac{1}{4}$  lbs.; packaged weight  $3\frac{3}{8}$  lbs.  
**OPTIONAL ACCESSORIES:** Model A86A cable type transformer (for use only with Model 520SLB)

## Model 520

and 520B "GREEN BULLET"  
 The "Green Bullet" is designed to provide quality music and speech reproduction at moderate cost. It is practically immune to the effects of high temperature and humidity. The "Green Bullet" is highly recommended for those public address systems where low cost is a must, good reproduction is essential and ruggedness is a necessity.

**SPECIFICATIONS:**  
**LIST PRICE:** Model 520 \$22.50  
 Model 520B \$22.50  
**TYPE:** Controlled Magnetic  
**FREQUENCY RESPONSE:** 100 to 9,000 cps  
**OUTPUT LEVEL:** Model 520: —52.5 db (0 db=1 volt per microbar)  
 Model 520B: —51.0 db (0 db=1 milliwatt with 10 microbars)  
**IMPEDANCE:** Model 520—High. Recommended load 100,000 ohms or more.  
 Model 520B: 150-250 ohms  
**POLAR PATTERN:** Semi-directional  
**CASE:** Die cast zinc  
**FINISH:** Metallic green with satin chrome grille  
**CABLE:** Model 520—7 ft., single conductor shielded  
 Model 520B—7 ft., 2 conductor shielded  
**STAND THREAD:** Standard  $\frac{3}{8}$ "—27 thread  
**DIMENSIONS:** Diameter  $2\frac{1}{2}$ ", overall length  $3\frac{1}{4}$ "  
**NET WEIGHT:** 1 lb. packaged weight;  $1\frac{3}{4}$  lbs.  
**OPTIONAL ACCESSORIES:** Models S34B or S36A Desk Stands, Model A86A cable type transformer (for use only with Model 520B)



# THE "Commando" SERIES



## "CONTROLLED MAGNETIC" GENERAL PURPOSE MICROPHONES

The Commando series represents a significant achievement in providing quality performance at nominal cost. These dramatic looking, rugged microphones can be used indoors or outdoors. Models 415 and 430 provide practical versatility of operation. They can be held in the hand, set on a floor stand or on a desk stand—can be inserted or withdrawn from the stand in a second, without the use of any tools! Coupled with this versatility of

usage, the Commandos provide excellent voice and music reproduction, making them ideal for general-purpose applications where both voice and music reproduction are of critical importance. Commandos can be used for tape recording in the home; theater-restaurant public address systems; lecturing; paging and dispatching systems; interview-type shows; outdoor public address systems for carnivals, picnics and special events.

## SPECIFICATIONS FOR "COMMANDO" MODELS 415, 420 AND 430

	415	420	430
List Price:	\$27.50	\$30.00	\$38.50
Type:	CONTROLLED MAGNETIC		
Frequency Response:	60 to 10,000 c.p.s.		
Impedance:	High	Equipped with readily changeable pin jacks (no soldering required) furnishing a choice of two impedances: H — High and L — 150 to 250	
Output Level:	High —52 db (0 db = 1 volt per microbar) Low —52 db (0 db = 1 milliwatt per 10 microbars)		
Polar Pattern:	OMNI-DIRECTIONAL		
Case:	Impact-resistant polystyrene and die cast zinc.	Impact-resistant polystyrene.	Impact-resistant polystyrene and die cast zinc.
Finish:	Non-reflecting gray and satin chrome.	Non-reflecting gray	Non-reflecting gray and satin chrome.
Cable:	7' non-detachable single conductor shielded	20' non-detachable, 2 conductor, shielded	15' 2 conductor shielded with Amphenol MC2M connector for attaching to microphone.
Switch:	None	None	Press-to-talk switch—normally closed
Dimensions:	Length 6½" Diameter of head 1¾" Diameter of handle ½"	Length 3½" Diameter 1¾"	Length 6¾" Diameter of head 1¾" Diameter of handle ½"
Net Weight:	½ lb.	¼ lb.	¾ lb. (less cable)
Packaged Weight:	1¾ lbs.	¾ lb.	2¼ lb.
Furnished Accessories:	Model A25B Self-adjusting Swivel Adapter with standard ¼"-27 stand thread permits microphone to be tilted through 90° arc from vertical to horizontal, making it simple to aim the microphone at the source of sound.	Lavalier Cord and clip assembly. Readily detachable for use of microphone as a hand-held type.	Switch locking plate for keeping switch in "on" position. Model A25B Self-adjusting Swivel Adapter with standard ¼"-27 stand thread permits microphone to be tilted through 90° arc from vertical to horizontal, making it simple to aim the microphone at the source of sound.
Optional Accessories:	Model S38B or S33B Desk Stand A34L Lavalier Assembly	Model A86A Cable Type Transformer	Model A86A Cable Type Transformer and Model S38B or S33B Desk Stand, A34L Lavalier Assembly.



## SPECIAL PURPOSE MICROPHONES

The "Ten-Four" features the high-impact "Armo-Dur" corrosion-proof case.

### CONTROLLED MAGNETIC "TEN-FOUR" SERIES

The Shure Controlled Magnetic "Ten-Four" is recommended for those applications where a rugged hand-held microphone is needed. It is ideal for outdoor public address (sports arenas, athletic fields, carnivals, etc.) and for mobile communications. The "Ten-Four" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand.

ATTENTION "HAMS"—You'll find the "TEN-FOUR" to be a choice microphone for all your mobile communications applications.



### SPECIFICATIONS

	404B	405B	405KB	404C	405C	405K
List Price	\$33.00	\$32.00	\$37.50	\$33.00	\$32.00	\$37.50
Type	CONTROLLED MAGNETIC					
Frequency Response	200 to 8,000 cps					
Output Level	-50 db (0 db=1 milliwatt per 10 microbars)			-50.5 db (0 db=1 volt per microbar)		
Impedance	150 to 250 ohms			High Recommended load 100,000 ohms or more.		
Polar Pattern	OMNI-DIRECTIONAL					
Case	High impact gray "Armo-Dur"					
Cable Length	5½ ft. Extended	5 ft.	5½ ft. Extended	5½ ft. Extended	5 ft.	5½ ft. Extended
Type	Copper	Copper	Tinsel	Copper	Copper	Tinsel
Description	4 Conductor (2 cond. shielded) Coiled Cord	4 Conductor (2 cond. shielded) Straight Cord	3 Conductor (1 cond. shielded) Coiled Cord (Amphenol MC4M plug attached)	3 Conductor (1 cond. shielded) Coiled Cord	3 Conductor (1 cond. shielded) Straight Cord	3 Conductor (1 cond. shielded) Coiled Cord (Amphenol MC4M plug attached)
Switch Mic. Circuit	Normally closed*	Normally closed	Normally open	Normally closed*	Normally closed	Normally open
Relay Circuit	Normally open	Normally open	Normally open	Normally open	Normally open	Normally open
	Leaf-type switches to control the mic. circuit and to control an external relay or switching circuit					
Dimensions	3 1/16" high, 2 3/8" wide, 1 9/16" deep					
Net Weight	5/16 lb.					
Packaged Weight	7/8 lb.					
Furnished Accessories	Mounting bracket for permanent placement with the associated equipment					
Optional Accessories	Model A86A cable type transformer					

\*PROVISIONS FOR SIMPLE CHANGE TO NORMALLY OPEN.

### Model 405T

#### "TEN-FOUR"

The perfect improvement-replacement for carbon microphones now used in mobile communications equipment. An outstanding feature incorporated in this unit is a TRANSISTOR AMPLIFIER, housed within the case. It is powered by the current available from the carbon microphone circuit. Does not require batteries or extra power-supplies. Provides remarkable speech clarity and is free from the aging common to carbon microphones used under conditions of vibration. Recommended for mobile communications where carbon microphones have been in use: police, bus, trucking, taxicab, etc., where high speech intelligibility and long operating life are essential.

#### SPECIFICATIONS

FOR MODEL 405T

LIST PRICE: \$48.50

TYPE: Controlled Magnetic (with TRANSISTOR AMPLIFIER)

FREQUENCY RESPONSE: 200 to 4,000 cps.

OUTPUT LEVEL: -1 db loaded with 500 ohms (0 db=1 milliwatt per 100 microbars)

POLAR PATTERN: Semi-Directional

CASE: High-impact gray "Armo-Dur"

CABLE: 5 ft. extended, 4-conductor stranded coiled cord, Model C15C.

SWITCH: Equipped with heavy-duty, push-to-talk switch. Controls external relay.

DIMENSIONS: 3 1/16" high, 2 3/8" wide, 1 9/16" deep.

NET WEIGHT: ¾ lb., packaged weight 7/8 lb.

### Model R5T

Model R5T is a conversion kit containing a controlled magnetic cartridge and transistor amplifier. It is designed to convert carbon microphones into improved controlled magnetic transistorized microphones. Conversion takes only a matter of minutes—and all that is necessary is a screwdriver, a long-nose plier and a soldering iron.

#### SPECIFICATIONS FOR MODEL R5T

LIST PRICE: \$25.00

TYPE: Controlled magnetic with transistor amplifier

FREQUENCY RESPONSE: 200 to 4,000 cps

OUTPUT LEVEL: -1 db loaded with 500 ohms (0 db=1 milliwatt per 100 microbars)

POLAR PATTERN: Omni-directional

... FOR AMATEUR RADIO COMMUNICATION

## Model 440-440SL MICROPHONES

The response characteristic of these microphones has been tailored to meet the demands of radio communications. These microphones are ideally suited for single-sideband broadcast. The rising response characteristic with sharp cutoff below 300 and above 3000 cps. eliminates the need for audio filters.

These units utilize a rugged, time-proven, controlled magnetic element, with high output equalling that of a crystal unit. The 440 and 440SL are ideal for use with all types of amateur transmitters.

### SPECIFICATIONS: MODEL 440 AND MODEL 440SL MICROPHONES

LIST PRICE: 440—\$25.00—440SL—\$47.50

TYPE: Controlled Magnetic.

FREQUENCY RESPONSE: 300 to 3000 cps.

OUTPUT LEVEL: —52.5 db (0 db=1 volt per microbar)

IMPEDANCE: High. Recommended Load 100,000 ohms or more.

POLAR PATTERN: Omni-directional.

CASE: Die-cast zinc.

FINISH: 440—Satin Chrome.

440SL—Satin Chrome with gray base.

CABLE CONNECTOR: 440SL—Equivalent to Amphenol MC3M plug.

CABLE: 440—7 ft., single conductor shielded.

440SL—7 ft., high quality 2-conductor shielded.

SWITCH: 440SL—Equipped with grip-to-talk switch, similar to Shure A88A.

STAND THREAD: 440—standard  $\frac{5}{8}$ "—27 thread.

DIMENSIONS: 440— $2\frac{13}{32}$ " diameter,  $3\frac{1}{4}$ " overall length.

440SL— $9\frac{3}{8}$ " high, 5" wide, 7" deep (with stand).

NET WEIGHT: 440—1 lb., Packaged weight  $1\frac{3}{4}$  lbs.

440SL— $2\frac{1}{4}$  lbs., Packaged weight  $3\frac{3}{8}$  lbs.

OPTIONAL ACCESSORIES: 440—Models S34B or S36A Desk Stands.

440SL—A87K Modification Kit\*

### \*A87K

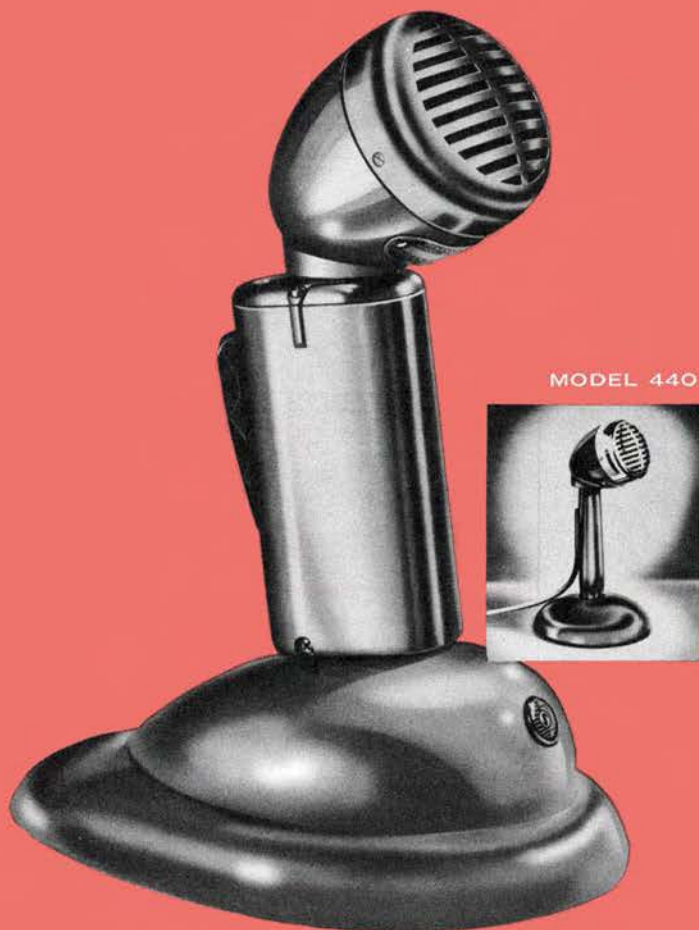
### MODIFICATION KIT

for use with

### SHURE MODEL 440SL MICROPHONE

The Shure A87K Kit will modify the 440SL microphone to obtain optimum flexibility between either VOX or push-to-talk operation.

LIST PRICE: \$3.25



MODEL 440

MODEL 440SL

#### SPECIAL NOTE:

For a mobile communications microphone embodying many of the outstanding features listed above, refer to the "Ten-Four", Model 404C microphone on page 15.



## SPECIAL PURPOSE MICROPHONES

...FOR LANGUAGE LABORATORIES

### Model 544 "UNIDYNE III" MICROPHONE

Ideal for high quality voice and music reproduction in circumstances where a uni-directional microphone with a flexible arm can best be utilized. Recommended for use as a master microphone for language laboratory applications.

Electrical specifications for the 544 are identical to those for the 545 "Unidyne III" microphone.

LIST PRICE: Model 544—\$80.00

Model 544-G6—\$83.00. Includes 6" flexible gooseneck and mounting flange.

Model 544-G12—\$83.75. Includes 12" flexible gooseneck and mounting flange.

Model 544-G18—\$85.00. Includes 18" flexible gooseneck and mounting flange.

CABLE: 7 ft., 3 conductor, non-detachable, shielded.

NET WEIGHT (Mic. and cable):  $\frac{5}{8}$  lb., packaged weight  $2\frac{1}{8}$  lbs.

FURNISHED ACCESSORIES: Gooseneck adapter.

OPTIONAL ACCESSORIES: A86A cable type transformer, S33B desk stand, A25B swivel adapter.

### Model 425 "COMMANDO" MICROPHONE

Designed for faithful voice and music reproduction. Ideal for recording on tape, wire or disc, fixed or mobile public address systems, language laboratory systems, intercommunications systems, amateur communications and similar uses where a flexible arm is required. The 425 is rugged, and recommended for use where high quality is desired at low cost.

Electrical specifications for the 425 are identical to those for the 420 "Commando" microphone.

LIST PRICE: Model 425—\$30.00

Model 425-G6—\$33.00. Includes 6" flexible gooseneck and mounting flange.

Model 425-G12—\$33.75. Includes 12" flexible gooseneck and mounting flange.

Model 425-G18—\$35.00. Includes 18" flexible gooseneck and mounting flange.

CASE: Impact resistant polystyrene—brass.

FINISH: Bright Chrome and non-reflecting gray.

CABLE: 7 ft., 2-conductor, non-detachable, shielded.

DIMENSIONS: Length  $3\frac{11}{16}$ ", diameter  $1\frac{3}{4}$ ".

NET WEIGHT (Mic. and cable):  $\frac{1}{4}$  lb., packaged weight  $\frac{3}{4}$  lb.

OPTIONAL ACCESSORIES: Model A86A Cable Type Transformer.

Model A25B Swivel Adapter. Model S38B desk stand.

### 410, 410S, 710G, 710GS MICROPHONES

Good quality, low-cost, controlled magnetic and crystal microphones providing concealed-cable gooseneck mounting. Gray and chrome finish blends with any associated equipment.

Electrical specifications for the 410 and 410S are identical to those for the 510C and 510S microphones; 710G and 710GS have specifications identical to those for the 710 and 710S microphones.

LIST PRICE: Model 410—\$19.00

Model 410S (with switch)—\$21.00

Model 710G—\$14.00

Model 710GS (with switch)—\$16.00

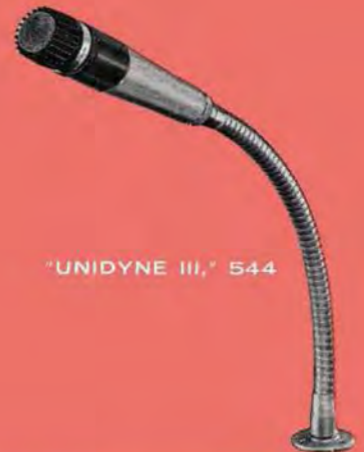
CASE: Die cast zinc.

FINISH: Gray and chrome.

CABLE: 7 ft., fabric-covered, single conductor shielded.

DIMENSIONS:  $4\frac{3}{32}$ " high,  $2\frac{11}{16}$ " wide,  $1\frac{1}{16}$ " deep.

NET WEIGHT: 410 and 410S— $\frac{7}{8}$  lb., packaged weight  $1\frac{1}{4}$  lbs. 710G and 710GS— $\frac{3}{8}$  lb., packaged weight  $1\frac{1}{8}$  lbs.



"UNIDYNE III," 544



"COMMANDO" 425



410, 410S  
710G, 710GS



# SPECIAL PURPOSE MICROPHONES

## MICROPHONE REPLACEMENT CARTRIDGES



## SPECIAL PURPOSE MICROPHONES

### SOUND LEVEL MICROPHONE MODEL 98B99

Custom-made non-directional crystal microphone designed for scientific and industrial sound measurement work—and for those special applications that involve frequency response determinations, production testing, ambient noise levels, reverberation measurements, etc. Protected from humidity by "Humi-Seal" foil wrap. Features uniform frequency response; high sensitivity; high acoustical impedance; freedom from electrostatic and electromagnetic induction.

Model 98B99 List Price \$110.00

**SPECIFICATIONS FOR MODEL 98B99**  
LIST PRICE: \$110.00  
TYPE: Crystal  
FREQUENCY RESPONSE: 30-15,000 cps  
OUTPUT LEVEL: -58 db (0 db = 1 volt per microbar)  
POLAR PATTERN: Omni-directional  
CASE: Brass screw machine.  
FINISH: Satin chrome  
CABLE CONNECTOR: Cannon XL-3-11  
DIMENSIONS: 1 3/8" diameter, 2 3/4" long. NET WEIGHT: 3.8 oz.

### VIBRATION PICKUPS MODEL 61B, MODEL 61C

Used for locating and measuring vibration; checking surface smoothness and for the solution of a wide variety of scientific and industrial problems. No external moving parts. The 61B has a triple moisture-sealed Grafoil Bimorph Crystal element. The 61C has a Barium Titanate Ceramic element. The units may be fastened to an object or used with the furnished extension rod for point-to-point tests.

Model 61B List Price: \$ 97.50  
Model 61C List Price: \$125.00

**SPECIFICATIONS:**  
TYPE: 61B—Crystal  
61C—Ceramic  
FREQUENCY RESPONSE: Low frequency response dependent on the terminal resistance employed.  
INTERNAL IMPEDANCE: 61B—Equivalent to .005 microfarad capacitor. Recommended Load: 1/2 to 5 megohms. 61C—Equivalent to .010 microfarad capacitor. Recommended Load: 1/2 to 5 megohms.  
CASE: Die-cast aluminum.

FINISH: 61B—Baked black enamel.  
61C—Aluminum and black wrinkle.

CABLE: 61B—Equipped with 7 ft. single conductor rubber-jacketed shielded cable.

61C—Equipped with 7 ft. detachable single conductor plastic-jacketed shielded cable.

ACCESSORIES FURNISHED: Complete set of adapters including 8" extension rod, ball-tip, point-tip and mounting bracket.

### SMALL CONTROLLED MAGNETIC MICROPHONES

The MC Series of small microphones are specially designed for use in vacuum-tube devices, such as small, compact hearing-aids, amplifiers, transmitters, dictating equipment—wherever size and weight are important factors. They also are highly recommended for use in small transistor-type devices. The MC series are metal cased for hum protection. They are rugged units, immune to mechanical shock, and to varying conditions of heat and humidity. The MC Series of microphones have also proven to be extremely useful in concealed microphone applications.

MC11-J (Circular) List Price: \$12.50  
MC20A-J (Rectangular) List Price: \$14.00  
MC30-J (Rectangular) List Price: \$20.00

### SPECIFICATIONS FOR MODELS MC11, MC20A and MC30

TYPE: Controlled Magnetic  
FREQUENCY RESPONSE: MC11—400 to 3,000 cps, MC20A—400 to 4,500 cps, MC30—400 to 3,500 cps  
OUTPUT LEVEL: MC11—71 db (0 db = 1 volt per microbar), MC20A—73 db (0 db = 1 volt per microbar), MC30—76 db (0 db = 1 volt per microbar)  
IMPEDANCE: MC11—1,000 ohms, MC20A—2,000 ohms, MC30—1,850 ohms  
CASE: Brass  
FINISH: Cadmium plated  
TERMINALS: MC11—Eyclet Solder Type, MC20A—1 1/2" flexible lead type, MC30—Eyclet solder terminals  
DIMENSIONS: MC11 (circular) 1 1/4" diameter, 25/64" thick, MC20A (rectangular) 1 1/8" wide, 1 1/16" long, 3/16" thick, MC30 (rectangular) .5" wide, .5" long, .265" thick

NET WEIGHT: MC11—12 1/2 grams, MC20A—9.6 grams, MC30—3.7 grams

## MICROPHONE REPLACEMENT CARTRIDGES

### CARBON

#### MODEL R10

Rugged microphone cartridge replacement for "CB", "100", and "120" Series Carbon Microphones. Furnished with necessary mounting hardware and complete installation instructions.

Model R10 List Price \$8.50

#### MODEL 99A149

Model 99A149 is the replacement cartridge for cartridges used in microphone models: CB20, CB21, CB50 and 115.  
Model 99A149 List Price \$8.50

### CRYSTAL

#### MODEL R7

Model R7 Crystal Microphone. Available for service installation as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A Series, and other microphones of similar design. High output—48 db below 1 volt per microbar. Supplied with rubber mounting rings and installation instructions.  
Model R7 List Price \$8.25

#### MODEL 99A186

The Model 99A186 replacement cartridge assembly for the 777 Series Slim-X Microphones. Crystal element metal-sealed for long life under adverse conditions of heat and humidity. Requires only one solder connection.  
Model 99A186 List Price \$10.00

### CONTROLLED MAGNETIC

#### MODEL R5

Direct replacement for cartridges used in the following Shure microphone models: 510C, 510MD, 510S, 520, 520SL, 505C, 505K, 405C and 405K. Also ideal for replacement of crystal cartridges in Shure cases of the Model 707A and 708A Series, where heat and humidity are a problem. Supplied with rubber mounting ring.  
Model R5 List Price \$11.00

#### MODEL R5B

Model R5B is the replacement cartridge for cartridges used in microphone models 505B, 505T, 405B, 405T, 510SLB, 520SLB and 520B. Model R5B is physically identical to Model R5; but low impedance (150 to 250 ohms). Can be used in any R5 applications which require a low impedance cartridge.  
Model R5B List Price \$11.00

#### MODEL R4M

The Model R4M controlled magnetic cartridge assembly is the direct replacement cartridge for use in the models 430, 425, 420 and 415 Shure "Commando" microphones.  
Model R4M List Price \$15.00

## CARBON COMMUNICATIONS MICROPHONES

The "Ten-Four" features the high-impact "Armo-Dur" corrosion-proof case.



### Model 100 SERIES

Used around the world for police, taxi, bus, truck and commercial applications—more than all other makes combined! Adopted as standard microphone for G.E., Motorola, R.C.A. and others for

2-way radio communications equipment. The "100 Series" Microphones are provided with a bracket for permanent placement in portable or mobile equipment. They fit naturally and comfortably in the palm of the hand. They are light, compact and rugged units—with a reputation for long-life performance under "rough and tumble" operating conditions.

	104A Suggested replacement for: 102C, 102E	104B 101C, 101E, 103	101C	101E	Die-Cast 102C	102E	103
List Price:	\$30.00	\$30.00	\$30.00	\$33.00	\$30.00	\$33.00	\$31.00
Type:	Carbon	Carbon	Carbon	Carbon	Carbon	Carbon	Carbon
Frequency Response:	300 to 4,000 c.p.s.						
Output Level:	5 db below 1 volt for 100 microbar speech signal						
Impedance:	Recommended load: 50 to 100 ohms						
Polar Pattern:	Omni-directional						
Case:	High-Impact "Armo-Dur"		Die Cast Zinc				
Finish:	Gray		Blue Gray—Wrinkle Finish				
Cable:	Copper coiled cord with trimmed and tinned leads			Tinsel coil cord with Amphenol MC4M Plug	Copper coil cord with trimmed and tinned leads	Tinsel coil cord with spade lugs	Copper coil cord with Amphenol MC4M Plug
Switch:	Heavy duty push-to-talk switch						
	DPST normally open switch to control microphone & relay	SPST normally open relay switch (no microphone switch)			DPST normally open switch to control microphone and relay.		SPST normally open relay switch (no microphone switch)
Dimensions:	3 3/4" high, 2 3/4" wide, 1 1/4" deep			3 3/4" high, 2 3/4" wide, 2 1/2" deep			
Net Weight:	5/8 lb.			1 lb.			
Packaged Weight:	1 lb.			1 3/4 lb.			

### Coiled Cord Sets

Coiled Cord replacement for Shure "100" and "CB" Series Microphones.

Model	List Price	Type	Conductors	Termination	Usage
C10C	\$12.00	Tinsel	3 conductor, 1 conductor shielded	Trimmed and tinned leads and Amphenol MC4M plug	With General Electric EM10A and Shure 505K Microphones (Die cast zinc case).
C11C	\$12.00	Tinsel	3 conductor, 1 conductor shielded	Trimmed and tinned leads and Amphenol MC4M plug	With General Electric EM10A-2 and Shure 405K and 405KB Microphones ("Armo-Dur" case).
C12C	\$9.75	Copper	3 conductor, 1 conductor shielded	Trimmed and tinned leads	With Shure 404C
C14C	\$10.00	Copper	4 conductor, 2 conductor shielded	Trimmed and tinned leads	With Shure 404B
C15C	\$6.25	Copper	4 conductor, unshielded	Trimmed and tinned leads	With 405T, 505T, "CB" and "100" Series Microphones.
C16C	\$9.50	Tinsel	4 conductor, unshielded	Trimmed and tinned leads and Amphenol MC4M plug	With General Electric equipment.
C17C	\$7.75	Tinsel	4 conductor, unshielded	Trimmed and tinned leads with spade lugs	With Motorola equipment.
C18C	\$9.50	Copper	4 conductor, unshielded	Trimmed and tinned leads and Amphenol MC4M plug	With Motorola equipment.
C19C	\$9.50	Tinsel	4 conductor, unshielded	Trimmed and tinned leads and Amphenol MC4M plug	With Motorola equipment.

### Model 115 MICROPHONE

Designed for use with small portable and mobile transmitters. Only 2" in diameter and 1 1/2" thick. Has same operating characteristics as "100 Series" Carbon Microphones. Replacement for Mfgs. Model Nos. CB20, CB21.

LIST PRICE: \$31.00

CASE: Aluminum

FINISH: Blue Gray Wrinkle

CABLE: 3 conductor, standard coiled cord, 11" retracted, 5 ft. extended

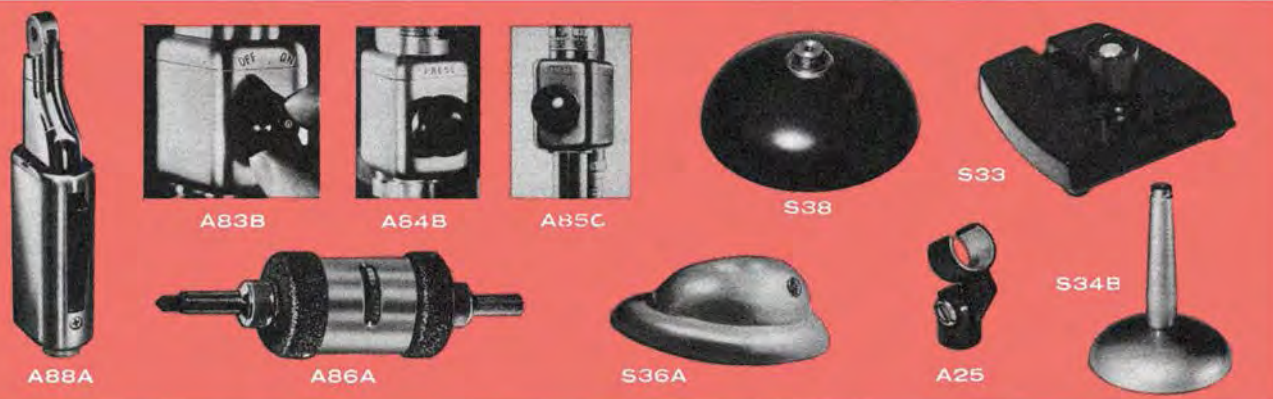
SWITCH: Equipped with a heavy-duty, push-to-talk switch

DIMENSIONS: 2" in diameter, 1 1/2" thick

NET WEIGHT: 12 oz., packaged weight 1 lb., 8 oz.



## MICROPHONE ACCESSORIES



### MICROPHONE SWITCHES

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

Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Ideal for Police, Taxicab, Railroad, Airport, Bus Truck, and all emergency communications work. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure S36A Desk Stand. Rich satin chrome finish.

MODEL A88A

LIST PRICE \$12.50

#### ON-OFF PRESS-TO-TALK SWITCHES

Quickly attached to any cable-connector type Shure microphone. These are plug-in units which require only a screwdriver to install. Suitable for use with the following Shure microphones: Models 55, 55A, 55B, 55C, 55S, 51, 315, 737A and 708A.

Model A83B. Rotary-type "On-Off" switch, microphone shorted in "off" position. When "turned on," it stays on until turned off.

MODEL A83B

LIST PRICE \$11.00

Model A84B. Momentary Press-to-Talk "On-Off" switch, microphone shorted in "off" position. Press—it's on, release—it's off.

MODEL A84B

LIST PRICE \$11.00

Model A85C. Momentary Press-to-Talk Relay control switch, normally open. Microphone circuit not switched.

MODEL A85C

LIST PRICE \$11.50

### CABLE-TYPE TRANSFORMER

Model A86A is a high-quality, cable-type transformer which makes it convenient to run a long microphone line from a low impedance microphone to a high impedance amplifier. Connection terminals are easily accessible, and compression fittings crimp the microphone and amplifier inputs. The A86A matches 35-50 ohm and 150-250 ohm microphones to high impedance amplifier inputs. Solves the problem of excessive high frequency loss and objectionable hum pickup when long lengths of microphone cable are necessary.

#### SPECIFICATIONS FOR MODEL A86A

LIST PRICE: \$17.50

FREQUENCY RESPONSE: 20 to 20,000 cps plus or minus 1 db

IMPEDANCE: Matches 35-50 ohm and 150-250 ohm microphones to high impedance amplifier input

CASE: Compact, sturdy and magnetically shielded steel

FINISH: Two-tone gray

CABLE: 2 ft.

DIMENSIONS: 2 7/8" long, 1 5/8" diameter

NET WEIGHT: 3/4 lb., packaged weight 1 lb.

### DESK STANDS

#### TAKE-APART STAND

Model S34B. Handy low-cost gray stand for desk or hand use. One twist of wood handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base. Suitable for use with models 510, 520, 707A and 710.

MODEL S34B

LIST PRICE \$4.50

#### BROADCAST DESK STAND

Model S33. Baked Bronze Finish. For use with Models 300, 333, 525 and 535.

LIST PRICE \$15.00

MODEL S33B—Same as S33—in black finish. For use with Model 330, 530, 544, 545, 546, 556S, 415, 425 and 430.

LIST PRICE \$15.00

#### MODERN DESK STAND

Model S36A. Streamlined gray Desk Mount fits all Shure connector-type microphones including 51, 51S, 55S, 315, 315S, 540S and 737A. Accommodates A25-type swivel adapter. Metal handle adapter provided for mounting models 440, 510, 520, 710 and 707A. Ideal for use with the Shure switches listed on this page.

MODEL S36A

LIST PRICE \$6.50

#### SPECIAL STAND

This stand is a heavy die-cast base. Metal screw machine stud connects microphone adapter to stand base.

Model S38 (Bronze) for use with 777 Series microphones.

Model S38B (Black) for use with "Commando" microphone Models 415 and 430.

MODELS S38 AND S38B

LIST PRICE \$4.50

### SWIVEL ADAPTER

Model A25 (Bronze). To be used with model 525, 535 and 777 series microphones—For use with standard desk or floor stand.

Model A25B (Black). To be used with models 530, 415, 425, 430 and 545 microphones—For use with standard desk or floor stand.

MODELS A25 AND A25B

LIST PRICE \$5.50

### LAVALIER ASSEMBLY

Model A28L. For use with Slendyne Model 525, 530 and 535.

MODEL A28L

LIST PRICE \$4.50

Model A34L. For use with Commando Models 415, 420 and 430.

MODEL A34L

LIST PRICE \$3.50

Model A37L. For use with Slim-x 777 series.

MODEL A37L

LIST PRICE \$1.00



# CRYSTAL and CERAMIC PICKUP CARTRIDGES

## "Twin-Lever" Cartridges For 33 $\frac{1}{3}$ , 45 And 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.	NEEDLE LIST PRICE
WC20 #	Fig. C	Ceramic	\$ 9.50	.58V	2 $\frac{1}{2}$ -3 grams	12,000 cps	2 $\frac{1}{2}$ grams	A20S	\$ 3.50
W21F*	Fig. B	Crystal	8.90	1.5V	6 grams	10,000 cps	4 $\frac{1}{2}$ grams	A63MG	1.50
W31AR	Fig. A	Crystal	7.50	2.1V	7 grams	7,500 cps	5 $\frac{1}{2}$ grams	A53MG	1.50

## Fine Groove Cartridges For 33 $\frac{1}{3}$ , 45 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.	NEEDLE LIST PRICE
WC6\$	Fig. H	Ceramic	\$14.50	MG.	STD.	4-6 grams	15,000 cps	7 grams	A6S	\$ 5.95
				.5V	.7V					
WC6TM* Top Mount.	Fig. R	Ceramic	14.50	.5V	.7V	4-6 grams	15,000 cps	7 grams	A6S	5.95
W9 †	Fig. J	Crystal	9.50	3.5V	5.0V	11 grams	10,000 cps	7 grams	A9	3.50
WC10\$	Fig. H	Ceramic	9.50	.78V	1.0V	7 grams	12,000 cps	7 grams	A10S	3.50
WC10D\$	Fig. H	Ceramic	34.00	.78V	1.0V	7 grams	12,000 cps	7 grams	A10DS	28.00

## Turnover Cartridges For 33 $\frac{1}{3}$ , 45, And 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.		NEEDLE LIST PRICE
				MG.	STD.				MG.	STD.	
W22	Fig. D	Crystal	\$ 9.50	1.2V	1.4V	8 grams	10,000 cps	4½ grams	A65MG	A61A	\$ 2.50
W22-T	Fig. E	Crystal	10.00	1.2V	1.4V	8 grams	10,000 cps	12½ grams	A65MG	A61A	2.50
WC24	Fig. F	Ceramic	8.75	0.6V	0.6V	8 grams	7,000 cps	4½ grams	A53MG	A52A	1.50
WC24-T	Fig. G	Ceramic	9.25	0.6V	0.6V	8 grams	7,000 cps	12½ grams	A53MG	A52A	1.50
WC25	Fig. K	Ceramic	9.50	.65V	.7V	8 grams	7,000 cps	6 grams	A65MG	A61A	2.50
W72†\$	Fig. L	Crystal	8.50	3V	4V	10-15 grams	5,000 cps	7 grams	A69A	A70A	2.50

## All Purpose Single Needle Cartridges For 33 $\frac{1}{3}$ , 45, 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.	NEEDLE LIST PRICE
				MG.	STD.					
W26	Fig. B	Crystal	\$ 6.50	.87V	1.0V	8 grams	8,000 cps	4½ grams	A67U	\$ 2.50
WC38	Fig. A	Ceramic	7.50	.9V	.92V	9 grams	10,000 cps	5½ grams	A58U	1.50
W66B	Fig. O	Crystal	7.00	2.0V	2.3V	8 grams	4,500 cps	12 grams	A66U	1.50
W70	Fig. P	Crystal	4.95	3.0V	3.8V	10-15 grams	5,000 cps	16 grams	A77U	1.50

## Standard Cartridges For 78 RPM Records

MODEL NO.	ILLUS-TRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WEIGHT	SHURE NEEDLE NO.	NEEDLE LIST PRICE
W56N**	Fig. N	Crystal	\$10.00	4.3V	1 oz.	10,000 cps	12 grams	A68D	\$ 3.50
W68†	Fig. O	Crystal	7.50	1.6V	1 oz.	4,500 cps	Dual Wt. 25 grams or 12 grams	A62A	1.50
W78‡	Fig. M	Crystal	5.55	4.0V or 2.0V	1 oz.	6,000 cps	Dual Wt. 25 grams or 12 grams	None	None

\*With .453Mount for Oak Changer.

\*\*Cutter-Cartridge for Wilcox Goy "Recordette." Equipped with bifurcated needle.

†Dual-Weight Cartridge. With weight-slug, net weight 25 grams. Without weight-slug, net weight 12 grams.

‡Dual-Weight Cartridge. Has same weight as Model W68, with same net weight differential. In addition, Model W78 has capacitor, furnished as accessory. Without capacitor, output is 4.0 volts. With capacitor, output is 2.0 volts.

§Not a turnover type. Needles are set into tracking position by ingenious "Twin Lever" needle shift system.

#For Columbia 16 $\frac{3}{4}$  Highway Hi-Fi Records.

bModel W9 has Capacitor furnished as accessory. Without Capacitor output is as shown above. With Capacitor output is 1.7 volts for

33 $\frac{1}{3}$ , 45 RPM; 2.5 volts for 78 RPM.

†\$Model W72 has a slip-on Capacitor furnished as an accessory. With the Capacitor, output is 2 volts for 78 RPM, 1.5 volts for 33 $\frac{1}{3}$

45 RPM. Without the Capacitor, output is 4 volts for 78 RPM, 3 volts for 33 $\frac{1}{3}$ , 45 RPM.

\* Top mounting for Magnavox cartridge replacement.



Fig. A



Fig. B



Fig. C



Fig. D



Fig. E



Fig. F



Fig. G



Fig. H



Fig. I



Fig. J



Fig. K



Fig. L



Fig. M



Fig. N



Fig. O



Fig. P

# MAGNETIC RECORDING HEADS



Fig. A  
Record-  
Playback-  
Erase



Fig. B  
Record-  
Playback  
Also Erase



Fig. C  
Record-  
Playback



Fig. D  
Stereo Playback  
Monaural Record-  
Erase



Fig. E  
Erase  
Only



Fig. F  
Stereo  
Record-  
Playback

## TECHNICAL DATA—MAGNETIC TAPE AND WIRE RECORDING HEADS

Model	Recording Speed	Bias & Erase Frequency	Std. Recording Level	Operating Bias Current	Erase* Current	Impedance Erase Coil	Impedance Record-Playback Coil
815 (Fig. A)	3.75" per sec 7.5 " per sec 3.75" per sec	25KC 50KC DC	.05 ma .05 ma .095 ma	1.25 ma 1.5 ma .35 ma	27 ma 30 ma 25 ma	750 ohm at 25KC 1300 ohm at 50KC 12 ohm	1450 ohm at 1000 cps 1450 ohm at 1000 cps 180 ohm
815H (Fig. A)	3.75" per sec 3.75" per sec	25KC DC	.03 ma .056 ma	.72 ma .24 ma	27 ma 25 ma	750 ohm at 25KC 12 ohm	5800 ohm at 1000 cps 556 ohm
816	3.75" per sec 3.75" per sec	25KC DC	.03 ma .07 ma	.80 ma .26 ma			5500 ohm at 1000 cps 556 ohm
817 (Fig. B)	3.75" per sec 3.75" per sec	25KC DC	.06 ma .175 ma	3.6 ma .42 ma			1860 ohm at 1000 cps 180 ohm
TE11C-J	7.5 " per sec 7.5 " per sec 7.5 " per sec	50KC 75KC 100KC			25 ma 26 ma 26 ma	1700 ohm at 50KC 2250 ohm at 75KC 2670 ohm at 100KC	
TE28-J (Fig. E)	3.75" per sec 3.75" per sec 3.75" per sec	50KC 75KC 100KC			10.5 ma 11.5 ma 12.5 ma	1500 ohm at 50KC 1825 ohm at 75KC 1975 ohm at 100KC	
TK41-J (Fig. D) Upper Channel Lower Channel Erase	7.5 " per sec 7.5 " per sec 7.5 " per sec	65KC 65KC 65KC	.08 ma	1.25 ma			1150 ohm at 1000 cps 3300 ohm at 1000 cps
TR21C-J (Fig. C)	7.5 " per sec	75KC	.040 ma	1.0 ma			4000 ohm at 1000 cps
TR40-J	7.5 " per sec	75KC	.05 ma	.6 ma			4000 ohm at 1000 cps
TR54-J (Fig. F)	3.75" per sec 7.5 " per sec	75KC	.04 ma	.38 ma			2600 ohm at 1000 cps

\*Erase current chosen for 50 db Erasure of Saturated 400 C.P.S. Recording.

Recording Medium—Minnesota Mining & Mfg. Co., Tape No. 111  
Pressure Pad Force (Area—.025 sq. in.) Two ounces.

## RECORDING HEAD DIMENSIONS

Models 815 815H (Fig. A) & 816 Width 1.240" Depth 1.031" Height .695"	Model TR21C-J (Fig. C) Width .600" Depth .821" Height .775"	Model TE11C-J Width .365" Depth .641" Height .468"
Model 817 (Fig. B) Width .552" Depth .830" Height .765"	Model TR40-J Width .633" Depth .875" Height .469"	Model TE28-J (Fig. E) Width .300" Depth .480" Height .560"
	Model TR54-J (Fig. F) Width .570" Depth .625" Height .570"	

## NUMERICAL LIST OF SHURE TAPE HEADS USED IN ORIGINAL EQUIPMENT

Model	ILLUSTR.	LIST PR.	DESCRIPTION	OPERATING DATA
812	Not Shown	\$20.00	Wire Recording Head.	Not Shown
815	Fig. A	15.00	Upper track recording. Low impedance record-playback coil.	See 815
815H	Fig. A	15.00	Upper track recording. High impedance record-playback coil.	See 815H
816	Not Shown	12.00	Upper track recording. High impedance record-playback coil.	See 816
817	Fig. B	9.00	.093" record track width. Low impedance record-playback coil.	See 817
TE11C-J	Not Shown	12.00	Erase head .132" erase track width.	See TE11C-J
TE28-J	Fig. E	12.00	Erase head .061" erase track width.	See TE28-J
TK41-J	Fig. D	57.50	Stereo Head Kit to convert magnetic tape recorder to stereophonic playback and monaural recording. For Revere Models T-10, T-11, TR-20, T-700, T-7000, TR-800, TR-8000, T-900, TR-1000, T-1100, TR-1200, T-70,000. For Wollensak Model T-1500.	See TK41-J
TR5B-J	Fig. A	17.00	Upper track recording with 14-inch completely insulated leads. Cinch plug attached.	See 815*
TR5N-J	Fig. A	16.00	Special Shield. Special Leads. Special Plug.	See 815*
TR5Z-2J	Fig. A	18.50	Upper track recording. High impedance record-playback coil.	See 815H
TR6-J	Not Shown	12.00	Lower track recording. Low impedance record-playback coil.	Not Shown
TR16-J	Fig. B	9.00	.093" record track width. High impedance record-playback coil.	Not Shown
TR21C-J	Fig. C	14.00	.093" record track width. Record-playback coil.	See TR21C-J
TR26-J	Fig. B	11.00	.093" record track width (1/4 mil gap). High impedance record-playback coil.	Not Shown
TR40-J	Not Shown	35.00	2 track stereophonic record/playback head. .074" width (0.2 mil gap).	See TR40-J
TR54-J	Fig. F	35.00	4 track stereophonic record/playback head. .040" width (0.1 mil gap).	See TR54-J

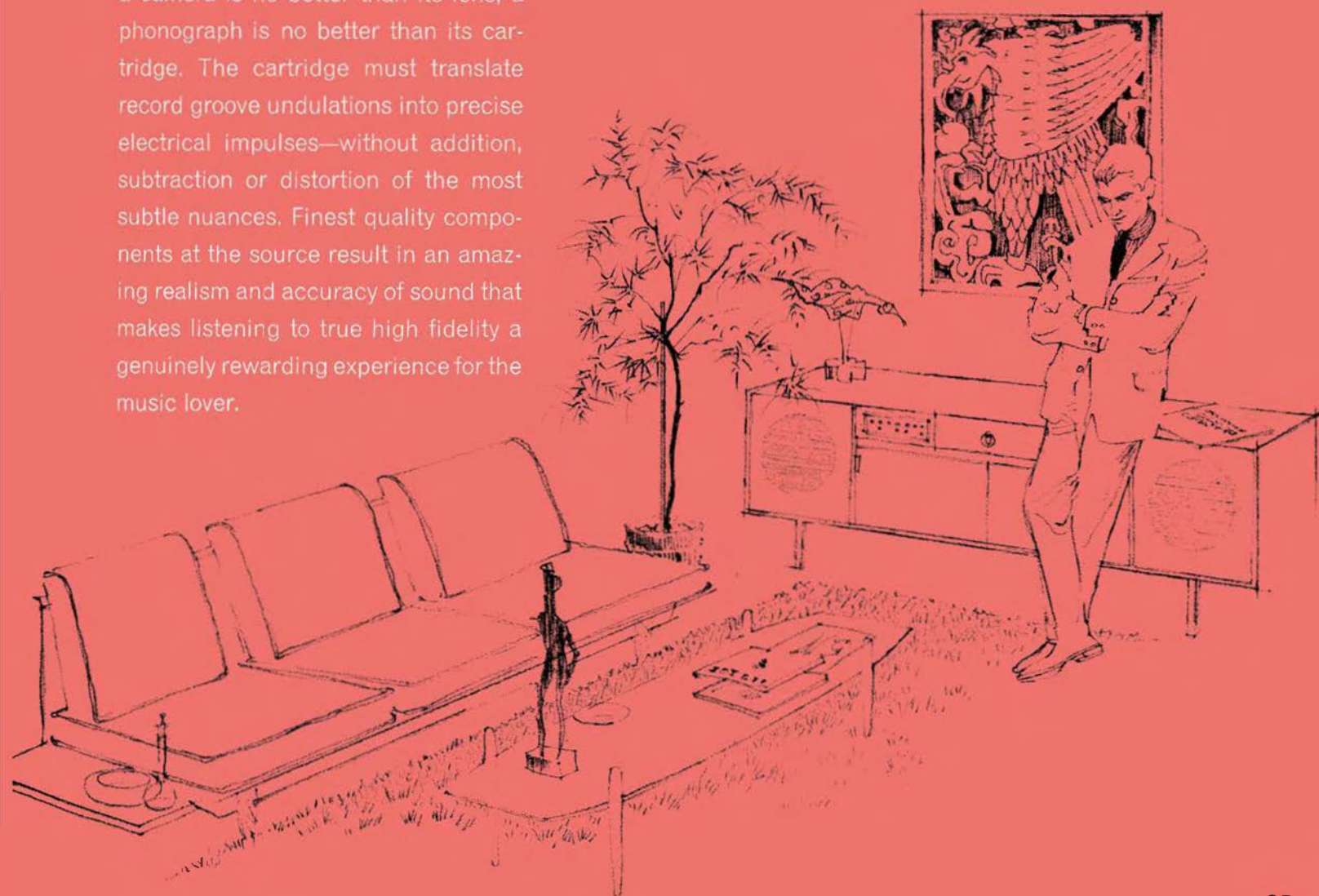
\*Operating data only. 815 does not replace



*Shure*  
*high-fidelity*  
*stereo products*

## THE ALL-IMPORTANT SOURCE OF SOUND

True high fidelity sound re-creation, begins at the *source* of sound. Just as a camera is no better than its lens, a phonograph is no better than its cartridge. The cartridge must translate record groove undulations into precise electrical impulses—without addition, subtraction or distortion of the most subtle nuances. Finest quality components at the source result in an amazing realism and accuracy of sound that makes listening to true high fidelity a genuinely rewarding experience for the music lover.



## SPECIALIZED STEREO PRODUCTS



### STEREO LINE PREAMPLIFIER

High quality, low noise, stereo line pre-amplifier providing additional gain for use with magnetic stereo phono cartridges and microphones. Provides flat output response from 30 to 80,000 cps  $\pm 1$  db. Low output impedance permits use of longer cable lengths (up to 50 feet) without loss of gain or deterioration in response when used with magnetic phono cartridges, microphones, etc.

#### SPECIFICATIONS FOR MODEL M60

Net Price: \$19.95

Gain: 17 db or 7 to 1 (5 mv. input gives 35 mv. output). Circuit change information provided to give one-third and two-thirds output.

Impedance: Input—47,000 ohms.—Output—5,000 ohms.

Hum & Noise: Nominal 64 db below rated output.

Dimensions:  $5\frac{1}{8}'' \times 2\frac{1}{8}'' \times 3\frac{3}{8}''$ .

Net Weight: 2 lbs.

### STEREO CONVERSION PREAMPLIFIER

Provides equalization with amplification for conversion of ceramic inputs to magnetic inputs. Gives smoother, more natural sound. As an added feature, 60 db of amplification without equalization is also provided. Permits the use of a magnetic cartridge with "package" consoles supplied with a ceramic cartridge. Also provides pre-amplification and equalization functions for other inputs (phono, tape, microphone).

#### SPECIFICATIONS FOR MODEL M65

Net Price: \$24.00

Gain: Phono: 44 db (5 mv input produces .76 v. output)

Special: 45 db (5 mv input produces .88 v. output)

Tape: 40 db (5 mv input produces .50 v. output)

Microphone: 63 db (2 mv input produces 2.8 v. output)

Frequency Response:  $\pm 1.5$  db of each function's nominal characteristic from 25 cps to 15,000 cps.

Equalization: Phono: RIAA equalization (with additional treble boost of approximately 3 db at 10,000 cps to complement the high frequency characteristic of most magnetic cartridges). Special: A Shure-developed magnetic phono equalization circuit for use with high impedance amplifiers normally used with ceramic phono cartridges.

Tape: NARTB equalization.

Microphone: Flat response.  $\pm 3$  db from 20 to 12,000 cps.

Input Impedance: 47,000 ohms (all functions).

Output Impedance: Low output impedance (less than 5000 ohms at 10,000 cps for phono, special and tape functions).

Channel Separation: 40 db.

Channel Balance:  $\pm 1$  db at 1000 cps.

Hum-Noise: 50 db below rated output.

Overall Dimensions: Length  $6\frac{1}{8}''$ ; Width  $3\frac{1}{8}''$ ; Height  $3\frac{1}{4}''$ .

Net Weight: 1 lb. 14 oz.

### BROADCAST STEREO EQUALIZER

Compensates output of stereo and monophonic magnetic cartridges for flat, RIAA and roll-off responses, when used with inputs designed for low impedance microphones.

#### SPECIFICATIONS FOR MODEL M66

Net Price: \$60.00

Frequency Response Deviation (with all Shure Stereo Cartridges): 30 to 20,000 cps  $\pm 1$  db.

30 DB Channel Separation: 30 to 20,000 cps.

Low Output Impedance: 250 ohms. Provision for 125 & 500 ohms.

Circuit: 9-terminal network—3-terminal input, 4-terminal balanced output with two convenient Shield terminals for unbalanced output.

Insertion Loss: Approximately 28 db. (varies with frequency and impedance.)

Furnished Accessories: Supplied with escutcheon, mounting bolts, L-shaped mounting bracket, and long control shafts for mounting through varying panel thicknesses up to  $1\frac{1}{2}$  inches.

Dimensions:  $7\frac{1}{8}'' \times 3\frac{1}{2}'' \times 3''$  overall.

$5\frac{1}{2}'' \times 3\frac{1}{2}'' \times 3''$  excluding control shafts.

Net Weight:  $1\frac{4}{10}$  lbs.

### MODEL M3LS STEREO CARTRIDGE

The M3LS Stereo Cartridge is an individually selected and tested laboratory standard M3D Stereo Professional Dynetic Phono Cartridge. Each M3LS, its corresponding box, individual response curve and specifications are serially numbered. The M3LS is especially suited for: (1) Laboratory measurements. (2) Cross-checking & calibration of associated high fidelity components. (3) Checking master recordings. Each cartridge carries a 3-year guarantee (not including needle wear or damage to needle from abuse or mishandling.)

#### SPECIFICATIONS FOR MODEL M3LS

Net Price: Model M3LS—\$75.00

Model M3LS Replacement Stylus—\$25.00 (NOTE: M3LS must be returned to Shure factory for installation of replacement stylus. At this time, new calibration curve and specifications will be issued as part of replacement stylus charge).

Channel Separation: 23 db minimum at 1 KC.; 15 db minimum at 10 KC.

Channel to Channel Balance: 1.5 db maximum (1 KC on monoaural record).

Frequency Response: 30 to 15,000 cps  $\pm 2$  db.

Output Voltage: 5.0 mv  $\pm 2$  db per channel at 1,000 cps.

Recommended Load Impedance: 47,000 ohms.

Compliance:  $4.4 \times 10^{-6}$  centimeters per dyne minimum;  $7.3 \times 10^{-6}$  centimeters per dyne maximum at 80°F.

Tracking Force: 3 to 4 grams.

Inductance: 420 millihenrys.

DC Resistance: 280 ohms.

Terminals: 4 terminals. Adaptable to 3 terminal arms.

Mounting Standard  $\frac{1}{2}''$  centers.

Stylus: .0007" diamond stylus.



# HIGH FIDELITY PHONOGRAPH CARTRIDGES

Painstakingly tested, proved, perfected—these superb Shure Stereo Dynetic moving-magnet cartridges are designed specifically to satisfy the critical ear of the most discriminating music lover... the most exacting audiophile. They separate disc stereo sound channels

with incisive clarity. They are singularly smooth throughout the normally audible spectrum... and they are superior to other separate stereo cartridges in the re-creation of clean lows, true-to-performance mid-ranges and brilliant highs. Completely compatible!

The M8D Standard Stereo Dynetic is designed for dependable use in record changers. It features clear, hum-free reproduction and trouble-free operation at low cost.

## SPECIFICATIONS:

Channel Separation: More than 20db at 1000 cps.

Frequency Response: 30 to 15,000 cps.

Output Voltage: 5 mv per channel at 1000 cps.

Recommended Load Impedance: 47,000 ohms.

Compliance: Vertical, Lateral  $3.0 \times 10^{-4}$  centimeters per dyne.

Tracking Force: 5 to 8 grams.

Inductance: 420 millihenrys.

D. C. Resistance: 280 ohms.

Terminals: 4 terminals. Adaptable to 3 terminal arms.

MOUNTING: Standard  $\frac{1}{2}$ " and  $\frac{1}{8}$ " centers.

STYLUS: .0007" diamond stylus.

Model M8D Standard Stereo Dynetic cartridge ... including .0007" diamond stylus.

Audiophile Net: \$16.50

Model N8D Stereo Stylus assembly for M8D, including .0007" diamond.

Audiophile Net: \$8.25



Model M8D  
STANDARD  
STEREO DYNETIC

The M7D Stereo Custom Dynetic is designed for the economy-conscious consumer who wants a quality Stereo Phono Cartridge at moderate cost.

## SPECIFICATIONS:

Channel Separation: More than 20db at 1000 cps.

Frequency Response: 20 to 15,000 cps.

Output Voltage: 5 mv per channel at 1000 cps.

Recommended Load Impedance: 47,000 ohms.

Compliance: Vertical, Lateral  $3.5 \times 10^{-4}$  centimeters per dyne.

Tracking Force: 4 to 7 grams.

Inductance: 420 millihenrys.

D. C. Resistance: 280 ohms.

Terminals: 4 terminals. Adaptable to 3 terminal arms.

MOUNTING: Standard  $\frac{1}{2}$ " and  $\frac{1}{8}$ " centers.

STYLUS: .0007" diamond stylus.

Model M7D Custom Stereo Dynetic cartridge ... including .0007" diamond stylus.

Audiophile Net: \$24.00

Model N7D Stereo Stylus assembly for M7D, including .0007" diamond.

Audiophile Net: \$12.00



Model M7D  
CUSTOM  
STEREO DYNETIC

The M3D Stereo Professional Dynetic is the premium stereo phono cartridge. It reflects quality control of a high order, based on critical tolerances in all performance characteristics.

## SPECIFICATIONS:

Channel Separation: More than 20db at 1000 cps.

Frequency Response: 20 to 15,000 cps ( $\pm 3$  db).

Output Voltage: 5 mv per channel at 1000 cps.

Recommended Load Impedance: 47,000 ohms.

Compliance: Vertical, Lateral  $4.0 \times 10^{-4}$  centimeters per dyne.

Tracking Force: 3 to 6 grams.

Inductance: 420 millihenrys.

D. C. Resistance: 280 ohms.

Terminals: 4 terminals. Adaptable to 3 terminal arms.

MOUNTING: Standard  $\frac{1}{2}$ " centers.

STYLUS: .0007" diamond stylus.

Model M3D Professional Stereo Dynetic cartridge ... including .0007" diamond stylus.

Audiophile Net: \$45.00

Model N3D Stereo Stylus assembly for M3D, including .0007" diamond.

Audiophile Net: \$22.50



Model M3D  
PROFESSIONAL  
STEREO DYNETIC

For those who prefer monophonic cartridges with monophonic records, Shure offers the outstanding Model M5D Professional Dynetic.

## SPECIFICATIONS:

Frequency Response: 20 to 20,000 cps.

Sensitivity: Output at 1,000 cycles—21 millivolts for 10 cms/sec.

Recommended Load Impedance: 27,000 ohms.

Compliance:  $3 \times 10^{-4}$  centimeters per dyne.

Tracking Force: 2 to 6 grams.

Inductance: 350 millihenrys.

D. C. Resistance: 440 ohms.

Model M5D—has .001" diamond for use with micro-groove records, 33 $\frac{1}{3}$ , 45 r.p.m.

Model M6S—has .0027" sapphire for use with standard records, 78 r.p.m.

Model M5D Monophonic Professional Dynetic Phono Cartridge for L.P. records including N5D .001" diamond stylus. Audiophile Net: \$27.50

Model M6S Monophonic Professional Dynetic Phono Cartridge for 78 rpm records including N6S .0027" sapphire stylus.

Audiophile Net: \$15.00

Model N5D Monophonic Professional Dynetic stylus with .001" diamond tip.

Audiophile Net: \$16.50

Model N6S Monophonic Professional Dynetic stylus with .0027" sapphire tip.

Audiophile Net: \$5.00



Model M5D  
MONOPHONIC DYNETIC

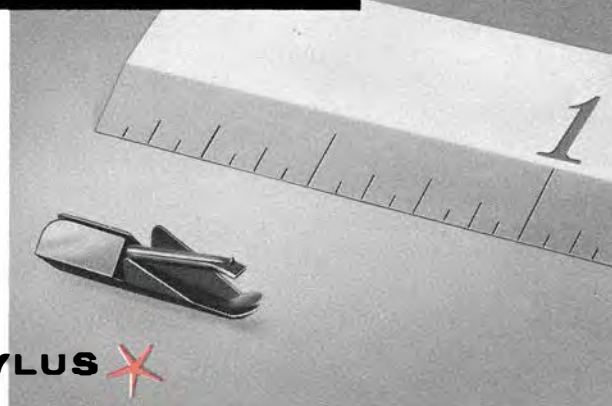
## NEW HIGH FIDELITY PHONO CARTRIDGES

...for Utmost Performance  
in superior high fidelity systems

### NEW SHURE STEREO DYNETIC PHONO CARTRIDGES

featuring

### THE INCREDIBLY COMPLIANT N21D TUBULAR, DIAMOND STYLUS



To meet the overwhelming demand for a separate stereo cartridge that will enable tracking at extremely low pressures (2-2½ grams), Shure announces these worthy additions to the incomparable family of Stereo Dynetics.



MODEL M7D WITH  
N21D TUBULAR STYLUS

#### SPECIFICATIONS:

Channel Separation: More than 20db at 1000 cps.  
Frequency Response: 20 to 20,000 cps.  
Output Voltage: 4 mv per channel at 1000cps.  
Recommended Load Impedance: 47,000 ohms.  
Compliance: Vertical, Lateral 9.0 x 10<sup>-6</sup> centimeters per dyne.  
Tracking Force: 2 grams optimum. Forces greater than 2½ grams should not be used.  
Inductance: 420 millihenrys.

D. C. Resistance: 280 ohms.

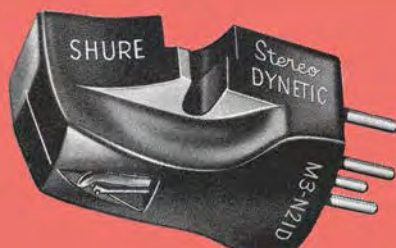
Terminals: 4 terminals. Adaptable to 3 terminal arms.

MOUNTING: Standard ½" and ⅜" centers.

STYLUS: .0007" diamond stylus.

Model M7D Custom Stereo Dynetic cartridge ... including Model N21D, .0007" diamond stylus. Audiophile Net: \$36.75

Model N21D Stereo Stylus assembly for M7D, including .0007" diamond. Audiophile Net: \$24.75



MODEL M3D WITH  
N21D TUBULAR STYLUS

#### SPECIFICATIONS:

Channel Separation: More than 20db at 1000 cps.  
Frequency Response: 20 to 20,000 cps (±2½ db)  
Output Voltage: 4 mv per channel at 1000cps.  
Recommended Load Impedance: 47,000 ohms.  
Compliance: Vertical, Lateral 9.0 x 10<sup>-6</sup> centimeters per dyne.  
Tracking Force: 2 grams optimum. Forces greater than 2½ grams should not be used.

Inductance: 420 millihenrys.

D. C. Resistance: 280 ohms.

Terminals: 4 terminals. Adaptable to 3 terminal arms.

MOUNTING: Standard ½" centers.

STYLUS: .0007" diamond stylus.

Model M3D Professional Stereo Dynetic cartridge ... including Model N21D, .0007" diamond stylus. Audiophile Net: \$47.25

Model N21D Stereo Stylus assembly for M3D, including .0007" diamond. Audiophile Net: \$24.75

**CAUTION:** These cartridges are to be used only in manual tone arms and record changer arms capable of tracking at two grams pressure. For those applications calling for tracking forces in

excess of 2½ grams, you should select either the Shure M3D, M7D or M8D cartridge (see page 25).

Since a stereo cartridge is only as good as the tone arm which houses it, Shure offers the *premium-quality Professional Tone Arm (M232 & M236)* with either of the above cartridges installed. This perfect "marriage" of separate tone arm and cartridge insures *top quality at reasonable cost.*

#### Audiophile Net

- Model M232 Professional Tone Arm with an M7D Cartridge and N21D Tubular Stylus installed.....\$66.70
- Model M236 Professional Tone Arm with an M7D Cartridge and N21D Tubular Stylus installed.....\$68.70
- Model M232 Professional Tone Arm with an M3D Cartridge and N21D Tubular Stylus installed.....\$77.20
- Model M236 Professional Tone Arm with an M3D Cartridge and N21D Tubular Stylus installed.....\$79.20

THE ABOVE MODELS ARE PRE-BALANCED . . . ALSO PRE-SET FOR TRACKING AT TWO GRAMS PRESSURE, THE CORRECT TRACKING FORCE FOR OPTIMUM PERFORMANCE.



# SHURE PROFESSIONAL TONE ARM

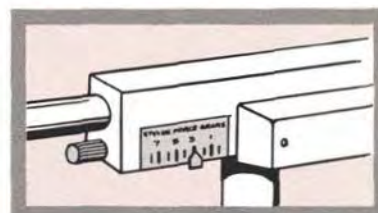


Combines more important features  
than any other independent tone arm.

## *Professional* TONE ARM

The Shure M232 and M236 Professional Tone arm is a premium-quality independent tone arm that accepts practically all cartridges (Stereo and Monophonic) and permits their maximum potential performance characteristics to be utilized. Features precision ball bearings at all pivot points, plug-in head with positive-alignment lock, variable height adjustment. Pays for itself in reduced record wear and damage. Ingeniously simple and unprecedented combination of adjustments give instant, positive, VISUAL control over balance (without altering overall arm length), tracking force (0—8 grams), and overhang. Floats the needle over the record . . . smoothly—without “drag”—without “skip”—without unnecessary (and ruinous) force. Furnished with cable having plug on each end to simplify and speed up installation (eliminates soldering).

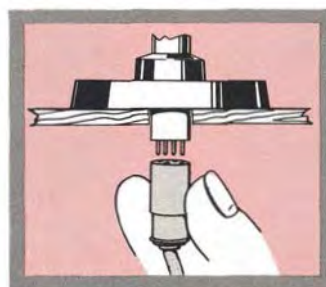
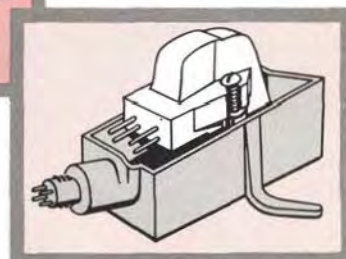
Direct-Reading Tracking Force  
Scale Adjustment



Adjustable Counter-Balance



Plug-in Head Accepts  
Most Cartridges



Cable-Plug Assembly  
Eliminates Soldering

### SPECIFICATIONS: MODELS M232 - M236 PROFESSIONAL TONE ARMS

NET PRICE: TONE ARM M232, for 12" records.....	\$29.95
TONE ARM M236, for 16" records.....	\$31.95
Model A23H Extra Plug-In Head.....	\$ 2.40
FURNISHED ACCESSORIES: Arm rest, mounting template, mounting hardware, 4 ft. cable assembly.	
DIMENSIONS: M232—12 $\frac{1}{8}$ " long	
M236—14 $\frac{1}{2}$ " long	
NET WEIGHT: M232	M236
1 lb.	1 $\frac{1}{8}$ lbs.

the incomparable

**SHURE**  
**STUDIO**

*Stereo Dynamic*

INTEGRATED TONE ARM AND CARTRIDGE

...cannot scratch records

**... for critical broadcast and recording applications**

The overwhelming first choice of perfectionists who appreciate the full importance of "integrated" tone-arm and cartridge to optimum stereo performance. *Tracks at incredibly light 1½-2½ grams—with unparalleled fidelity . . . absolutely minimizes record wear, and CANNOT scratch records!* We urge you to make listening tests of this unit before buying any stereo cartridge or arm—you'll hear the difference.

The Studio Stereo Dynamic has a special advantage for those music lovers who like to "index." The cartridge stylus is placed far in front, making it extremely easy for you to position the stylus on the exact spot of the record you want to play.

Still another feature of the Studio Stereo Dynamic is the fact that the stylus can be changed in the home—without tools—within ten seconds.



**AUDIOPHILE TECHNICAL INFORMATION**

SPECIFICATIONS	STEREOPHONIC M216; M212	MONOPHONIC M16; M12
Tracking Force	1½-2½ grams	1-2 grams
Frequency Response	20-20,000 cps $\pm$ 2½ db	20-20,000 $\pm$ 2 db
Channel Separation	over 20 db at 1000 cps	*
Sensitivity: Output at 1000 cps	4.5 mv per channel (On Westrex /4 Test Record)	14 mv for 10 cms/sec
Recommended load impedance	47,000 ohms	10,000 ohms
Compliance: (Vertical,* Lateral)	9 x 10 <sup>-6</sup> cms/dyne	8 x 10 <sup>-6</sup> cms/dyne
Inductance	400 millihenrys	130 millihenrys
D.C. Resistance	600 ohms	180 ohms
Needle tip Mass	1.3 milligrams	1.25 milligrams
Stylus	.0007" diamond	.0007" diamond

\*applies to stereo units only

DIMENSIONS	Model M216 Model M16	Model M212 Model M12
Over-all length:	14¾"	11¾"
Stylus tip to center of arm base:	11"	8½"
Arm base diameter:	2"	2"
Range of height adjustment:	1¾"	1½"
Arm pivot to turntable center:	10½½"	8¾"
Net weight (arm and cartridge):	11.1 oz.	10.6 oz.

**CATALOG NUMBERS, PRICES**

**MONOPHONIC UNITS**

Model M16—Monophonic Studio Dynamic for records up to 16" including M1 cartridge with .0007" Diamond Stylus. Audiophile Net: \$79.50

Model M12—Monophonic Studio Dynamic for records up to 12" including M1 cartridge with .0007" Diamond Stylus. Audiophile Net: \$79.50

Model M1—Monophonic Studio Dynamic Cartridge for LP records with .0007" Diamond Stylus. Audiophile Net: \$42.00

Model M2—Monophonic Studio Dynamic Cartridge for 78 rpm records with .0027" Diamond Stylus. Audiophile Net: \$42.00

Model N1—Replacement Monophonic Studio Dynamic Stylus with .0007" Diamond tip. Audiophile Net: \$21.00

Model N2—Replacement Monophonic Studio Dynamic Stylus with .0027" Diamond tip. Audiophile Net: \$21.00

Model A29R—Adapter Plate for use with Model M12 or M212 for mounting purposes with the Rek-O-Kut turntable. Audiophile Net: \$2.40

**STEREOPHONIC UNITS**

Model M216—Studio Stereo Dynamic for records up to 16" including M21 cartridge with .0007" Diamond Stylus. Audiophile Net: \$89.50

Model M212—Studio Stereo Dynamic for records up to 12" including M21 cartridge with .0007" Diamond Stylus. Audiophile Net: \$89.50

Model M21—Studio Stereo Dynamic Cartridge with .0007" Diamond Stylus. Audiophile Net: \$49.50

Model N21D—Replacement Stereophonic stylus assembly for Model M21, M216, M212; .0007" Diamond tip. Audiophile Net: \$24.75

Model A30C—Stereo Cable Assembly for connecting M212 or M216 to preamplifier and amplifiers. Assures maximum performance and greatest ease of installation. Audiophile Net: \$1.95

**SHURE BROTHERS, INC. • 222 HARTREY AVENUE • EVANSTON, ILLINOIS, U. S. A.**

Phone: DAVis 8-9000 • Chicago Phone: SHeldrake 3-1600 • Cable Address: SHUREMICRO

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