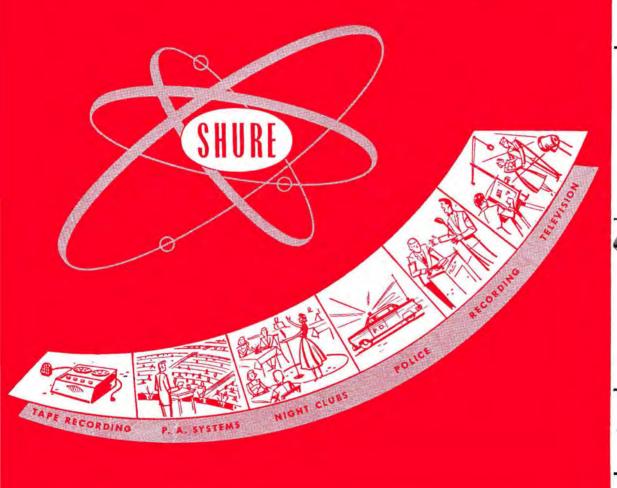
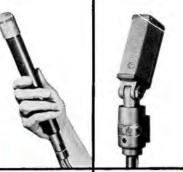
# SHURE GENERAL CATALOG No. 56 Microphones ~ Electronic Components

# The Nucleus of Superb Voice and Music Reproduction





































# SHURE

## STUDIO MICROPHONES



Model "333" Studio

### UNI-DIRECTIONAL RIBBON MICROPHONE

Here is the dependable "333," a truly fine and rugged microphone created for discriminating users with the most exacting professional requirements. Here, indeed, is a major advance in microphone development and design! This small, ultra-cardioid "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. Here is performance never before achieved in such a small and slender microphone! Here is ruggedness and reliability! Here is matchless beauty and striking design to appeal to users who demand the finest! The "333" is ultra-cardioid, uni-directional—reduces the pickup of random noise energy by 73%——prevents the pickup of moving props, scuffling feet and moving "dollies," so common when conventional broadcast microphones are used. Following are the features that make the "333" Studio so outstanding in performance, so dependable in operation: (1) patented, world-famous "Uniphase" system; (2) a true ultra-cardioid pickup pattern; (3) horn-loaded ribbon transducer provides extended smooth response, production uniformity guaranteed to plus or minus 2½ db, 30-15,000 c.p.s.; (4) multi-impedance switch; (5) voice-music switch; (6) anti-"Pff" filter screen; (7) Shure self-adjusting "lifetime" swivel; (8) high output; (9) sturdy, one-piece metal case; (10) vibration-isolation unit mounted in live rubber; (11) Cannon XL connector. All these important features, plus the striking design of the Studio "333," make it ideal for critical studio applications that call for the highest possible broadcast quality, small size and matchless beauty——plus the ability to withstand the rough work-a-day handling by the sound crew. The "333" has two-tone "Baked Bronze" non-reflecting finish. Head dimensions: Width, 1 1/8"; height, 3 9/16"; depth, 1 3/4".

IMPEDANCE TABLE	OUTPUT LEVEL
Low-50 ohms	60 db below 1 Milliwatt per 10 microbar signal
Medium-150 ohms	59 db below 1 Milliwatt per 10 microbar signal
High-Medium-250 ohms	per 10 microbal signal



Model S33
Broadcast
Desk Stand
For use with Models
300, 333, 525, 535
and 556S
List Price \$15.00

MODEL	LIST PRICE
"333"	\$250.00



Model "525" Studio

### OMNI-DIRECTIONAL DYNAMIC MICROPHONE

The new Studio "525" is an exceptionally fine probe microphone of broadcast quality. It features: (1) frequency response 40-15,000 c.p.s., production uniformity guaranteed to plus or minus 2½ db; (2) a moving-coil mounted in a highly efficient magnetic structure; "Alnico V" magnet; (3) multi-impedance switch; (4) high output; (5) long life "Duracoustic" diaphragm——specially designed to withstand moisture, heat, cold and physical shock. The "525" is furnished with a 20 ft., two-conductor, rubber-covered, shielded cable with Cannon XL-3-11 connector attached; swivel adapter; adjustable lavalier assembly (cord and clip), and a belt clip assembly. The "525" Studio has a non-reflecting "Baked Bronze" finish——which makes it blend into the background, giving the spotlight to the performer. Body diameter, 1"; length, 8 17/32".

IMPEDANCE TABLE	OUTPUT LEVEL
50 ohms	61 db below 1 Milliwatt
150 ohms	per 10 microbar signal
250 ohms	

Model 533 Broadcast Desk Stand List Price: \$15.00

MODEL	LIST PRICE
"525"	\$200.00

### BI-DIRECTIONAL GRADIENT' MICROPHONE

This rugged, high fidelity, multi-impedance microphone is widely used for television, radio broadcasting, professional recording and high-fidelity uses. The "300" reduces reverberation and the pickup of random noise by 66%. The "300" combines the best features of conventional velocity microphones with advanced acoustic design—including an anti-"PFF" filter screen. Its bi-directional polar pattern is effective over a broad frequency range. 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 omnidirectional microphones! The "300" has a non-reflecting "Baked Bronze" finish, so it blends into the background, gives the spotlight to the performer. The "300" has a readily accessible Voice-Music switch, vibration-isolation unit mounted in live rubber, and a multi-impedance switch, providing low medium and high impedance. Extended response, production uniformity guaranteed to plus or minus 2½ db, 40-15,000 c.p.s. Furnished with a 20-foot two-conductor, rubber-covered, shielded cable with Cannon XL-3-11 connector attached.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59 db below 1 Milliwatt per 10 microbar signal
M-150-250 ohms	60 db below 1 Milliwatt per 10 microbar signal
H-High	57 db below 1 volt per microbor

Model 533

Broadcast

Desk Stand

List Price: \$15.00

MODEL	LIST PRICE
"300"	\$150.00



Studio

## **GENERAL PURPOSE MICROPHONES**



#### OMNI-DIRECTIONAL DYNAMIC MICROPHONES

The new Slendyne 535 is the most versatile fine quality probe microphone ever developed — actually five microphones in one because of its practical design and useful accessories! The "535" is a moving-coil dynamic microphone built to provide wide range reproduction of music and voice. It can be used for indoor or outdoor applications in the following manner: (1) in the hand, (2) on a floor stand, (3) on a desk stand, (4) hung around the neck on a lavalier cord. Add to these factors an on-off switch adapter and a dual-impedance switch and you have the most completely versatile fine quality probe ever developed. Frequency response is 60 to 13,500 c.p.s..

The Slendyne 535 is ideal for high quality public address, theater-stage sound systems, and all recording applications where an omni-directional microphone is desired. The microphone is ruggedly built to withstand hard usage, and is unaffected by temperature and humidity variations. The 20-foot, high quality, shielded, two-conductor cable is supplied with a microphone plug equivalent to the Amphenol 91-MC3M plug. The "535" meets the requirements for maximum quality and minimum size. It is finished in rich satin chrome. A self-adjusting swivel adapter is supplied with the microphone, and permits it to be tilted from 90° from vertical to horizontal, making it possible to tilt the microphone at the source of sound. Also includes lavalier cord and on-off switch adapter.

The "535" is specially recommended for "interview-type" use where the "hand-a-bility" is important. Of special interest to P.A. technicians and recording enthusiasts is the quick-disengaging feature that permits the microphone to be instantaneously removed from the stand swivel adapter, for use as a hand microphone during audience participation shows, interviews, and for home recording sessions. The Model 530 Slendyne is the deluxe broadcast Slendyne, finished in an attractive black and gold anodized finish. It has a frequency range of 50 to 15,000 c.p.s., and is furnished with a 20-foot, high quality, two-conductor shielded cable with a Cannon XL-3-11 cable connector. Furnished with swivel adaptor, deluxe lavalier cord and belt clip, on-off switch adaptor.

MODEL	IMPEDANCE TABLE	OUTPUT LEVEL
"535"	L—50-250 ohms	59 db below 1 Milliwatt per 10 microbar signal
	H—High	58 db below 1 volt per microbar
"530"	L—50-250 ohms	59 db below 1 Milliwatt per 10 microbar signal
	H—High	58 db below 1 volt per microbar

MODEL	LIST PRICE
"535"	\$70.00
"530"	\$110.00



Model "535" Slendyne



Model "530" Broadcast Slendyne

#### BI-DIRECTIONAL GRADIENT' MICROPHONE

This rugged high fidelity multi-impedance microphone is recommended for fine quality general purpose uses. It features a frequency response of 50 to 12,000 cps—will reproduce voice and music in a clear, natural tonal quality, which makes it ideal for use in auditoriums, night clubs, schools and churches. The "315" is similar in features and design to the Studio Model 300. It is ideal 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. Its bi-directional "Fig. 8" pickup pattern extends over a broad frequency range and it permits the sound system to be operated at a level almost 6 db higher than is possible with non-directional (omni-directional) microphones! The "315" picks up voices and music from front to back — is "dead" at the sides, reduces reverberation and the pickup of random noises by 66%. This feature means the "315" can be used in those critical installations where feedback makes it impossible or impracticable to use conventional microphones. It is "PFF"-proof — filters out the "PFF"-type noises often heard over conventional microphones. Here again is another fine quality Shure microphone made under scientific control conditions, which are your guarantee that it can be used month after month without deviation from its original standards. Dimensions: height 6"; width 1 7/16"; depth 1 3/32". The "315" is furnished with a 20-foot, high quality, two conductor, shielded cable, supplied with the equivalent of the Amphenol 91-MC3M plug.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59 db below 1 Milliwatt per 10 microbar signal
M-150-250 ohms	60 db below 1 Milliwatt per 10 microbar signal
H-High	57 db below 1 volt per microbar

MODEL	LIST PRICE
"315"	\$85.00



Model "315" Gradient



## GENERAL PURPOSE MICROPHONES



Model 55\$ "Small Unidyne"



Model 556S "Small Broadcast"

#### UNI-DIRECTIONAL DYNAMIC MICROPHONES

The small Unidynes are the largest selling microphones throughout the world—used consistently by famed celebrities for those important events where the faithfulness of sound reproduction is critical. A sturdy construction provides immunity of the moving-coil system to abnormal atmospheric conditions and severe mechanical shock. Model 55S is highly recommended for fine quality public address, theater-stage sound systems, recording and remote broadcasting. It is also the field-proved standard for fixed station use in the police, fire, transportation, forestry and commercial services. The smooth frequency response of the 55S ranges from 50 to 15,000 c.p.s. It is furnished with a 20-foot, high quality cable and plug assembly.

Model 556S is specially constructed and tested to meet the requirements of the broadcast and television studio, and is held within close tolerances in frequency response and directivity. It is a moving-coil type microphone with a frequency range of 40 to 15,000 c.p.s., production uniformity guaranteed to plus or minus 2½ db. The Broadcast Unidyne is ideal for high quality station and remote broadcasting, public address, theater-stage sound systems and recording applications. As a further precaution against mechanical vibration pickup, the 556S is provided with an additional isolation unit. This isolation unit is of live rubber construction in combination with the stand connector and a built-in high quality cable connector. The microphone is furnished with a 20-foot, high quality, shielded, 2-conductor cable with a Cannon microphone plug attached. Both the 55S and the 556S feature the world-renowned patented "Uniphase" network system.

į	IMPEDANCE TABLE	OUTPUT LEVEL
	L-35-50 ohms	59.4 db below I Milliwatt per 10 microbar signal
	M-150-250 ohms	60.1 db below I Milliwatt per 10 microbar signal
	H-High	60.5 db below 1 volt per microbar

MODEL	LIST PRICE
556\$	\$120.00
555	\$ 79.50

#### MULTI-IMPEDANCE HIGH OUTPUT DYNAMIC



Model "51" Sonodyne

The "Sonodyne" is ideal for all general purposes, including public address, wire and tape recording, and similar applications. It is widely used by bands, instrumentalists and professional recording artists because of its outstanding reproduction of both voice and music. Widespread usage by home users of tape recorders indicates that the Sonodyne is the ideal high-quality, moderately-priced replacement for the conventional microphone supplied with tape recorders. The wide range frequency response is 60 to 10,000 c.p.s. This rugged microphone is of the pressure type, with conventional semidirectional characteristics, and it may be used for close-talking without undue low frequency emphasis. The Sonodyne is a multi-impedance microphone, providing the versatility of three microphones in one for low, medium and high impedance. Has built in receptacle and a 15-foot, two-conductor shielded– cable with microphone plug attached. Satin chrome finish.

List Price \$49.50 Model "51"

Multi-Impedance Switch on Models "555", "5565", "51" "300", "315"



IMPEDANCE TABLE	OUTPUT LEVEL
	53.0 db below 1 Milliwatt for 10 microbar signal
M-150-250 ohms	52.5 db below 1 Milliwatt for 10 microbar signal
H-High	52.0 db below 1 volt per microbar

#### CABLE-TYPE TRANSFORMER



Model A86A

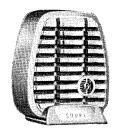
Model A86A is a high-quality, cable-type transformer which makes it convenient to run a long microphone line from a low impedance microphone to a high impedance amplifier. It is housed in a compact, sturdy and magnetically-shielded case. Connection terminals are easily accessible, and compression fittings crimp the microphone and amplifier inputs. The A86A matches 35-50 ohm and 150-250 ohm microphones to high impedance amplifier inputs. This type of system usually solves the problem of excessive high frequency loss and objectionable hum pickup when long lengths of microphone cable are necessary. The A86A offers additional versatility when used in conjunction with Shure Models 51, 55S, 556S, 300, 315, 333, 525, 530 and 535 Dynamic and Ribbon Microphones. And in addition to these the Model A86A may be used in specialized applications which require high impedance to low impedance circuit connections. The transformer is finished in an attractive two-tone gray and is furnished with a 2-foot cable. Frequency response: 20 to 20,000 c.p.s., plus or minus 1 db.

Model A86A List Price \$17.50

## CONTROLLED RELUCTANCE MICROPHONES



#### THE "HERCULES"



The "Hercules" is a hand-held unit, ideal for general purpose use in tropical countries and in all coastal areas where heat and humidity are a problem. The "510" provides the ruggedness, clear reproduction and high output for public address, communications and recording where high speech intelligibility is vital. It is recommended for Announcing; Mobile Public Ad-

dress Systems; Communications; Home Recording, and High Quality Intercommunication. The Hercules can be used either Indoors or Outdoors, fits snugly in the hand, sits firmly on a desk. High impedance. Frequency response 100 to 7000 c.p.s. Furnished with 7 ft. shielded cable. Green metallic finish. Diecast case. Furnished with stand adapter. Dimensions: 2 2/3" wide, 3 1/4" high, 1 1/2" thick. Model 510 Series designed to be used with S34B or S36A Desk Stands. (See page 8.)

MODEL	MODEL OUTPUT LEVEL		LIST PRICE
510C	52.5 db below 1 volt per microbar	нібн	\$17.00
510S (with switch)	52.5 db below 1 volt per microbar	HIGH	\$19.00

### "1-INCH" MICROPHONES





The MC Series of small microphones are specially designed for use in vacuum-tube devices, such as small, compact 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 Microphones are furnished with an impedance of 1000 ohms. They are rugged units immune to mechanical shock and to varying conditions of heat and humidity. Both the 1" circular unit, Model MC11, and the rectangular

unit, Model MC 20, are metal-cased for hum protection. They are highly recommended to engineers, technicians and "build-it-yourself" enthusiasts, because their small size and shape make them ideal for various types of custom-made devices. Model MC11 (Circular) Dimensions: diameter 1 1/64", thickness 25/64". List Price \$12.50. Model MC20 (Rectangular) Dimensions: width 10/16", thickness 5/16", length 15/16". List Price \$12.50. (Frequency response is 400 to 3000 c.p.s., output 71 db below 1 volt per microbar.)

#### THE "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 temperatures and humidity. It features: high output, good response, high impedance without the need of a transformer. The "Green Bullet" has a beautiful modern metallic green finish with a plated grille. Frequency response is 100 to 7000 c.p.s. Furnished with 7 ft. single-conductor shielded cable. High Impedance. 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. Model 520 series designed to be used with Shure Model S34B or S36A Desk Stands (See page 8.)

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520	52.5 db below 1 volt per microbar		
520B	51 db below 1 milli- wat per 10 microbars	150-250 ohms	\$21.00

#### THE "DISPATCHER"



MODEL 520SL

This new Controlled Reluctance unit is designed to handle the most severe field requirements of paging and dispatching systems. The unit is supplied with 7 feet of 2-conductor shielded cable, and is wired to operate both microphone and relay circuits. The "Dispatcher" is ideal for police, taxi-cab, railroad airport, bus, truck, and all emergency communications work where dependability is vital. Large grip-bar assures positive

(NOTE: Complete assembly furnished as illustrated.)

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
52051	52.5 db below 1 volt per microbar	High	\$42.50

#### THE "RANGER"

The new Shure "Ranger" is a new development of a similar magnetic unit originally housed in microphones used by the Armed Forces. The "Ranger" is especially recommended for those applications where long lines are used, and a rugged hand-held microphone is needed. It is ideal for outdoor public address (sports arenas, athletic fields), mobile communications, ham, audience participation shows, etc. The "Ranger" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand. Has heavy-duty double-pole, single-throw, leaf-type switch for push-to-talk operation. Phosphor-bronze blades and silver contacts for maximum operating life. Model 505B is furnished with 5 ft. four-conductor shielded cable. Frequency response is 100 to 9,000 c.p.s.

MODEL	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
505B	47.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	1 5/8 lbs.	RUDAY	\$32.00
505C	50.5 db below 1 volt per microbar	High	1 5/8 lbs.	RUDAX	\$32.00



## CRYSTAL MICROPHONES

### THE VERSATILE "SLIM-X" ALL-PURPOSE MICROPHONE

#### FOR:

- Low Cost P. A. Systems
- Home Recording
- Hams
- **General Purpose**



The new "777" Slim-X Microphones are rugged little microphones weighing only 6 ounces! 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 "walkaround" hand-held microphone.

TECHNICAL INFORMATION: Smooth frequency response-60 to 10,000 c.p.s.; Moisture-proof "Metal Seal" crystal for long operating life; high impedance; 7 ft. single-conductor cable, disconnect type. Dimensions: (Microphone only) Length, 41/2"; Diameter, 1". Finish: Rich satin chrome overall.



In the Hand

Note: All Models are furnished with Lavalier Cord, for suspension of microphone around neck.

#### "SLIM-X" ASSEMBLIES

MODEL 777A includes 777 Microphone; A-25 Swivel Adaptor; S-38 Desk Stand; Lavalier Cord. Model: 777A List Price: \$31.00

MODEL 777SA includes 777S Microphone; A-25 Swivel Adaptor; S-38 Desk Stand; Lavalier Cord. List Price: \$33.00

Model: 777SA

#### **ACCESSORIES FOR "777"**

MODEL S-38 STAND is a heavy die-cast base. Includes metal screw machine stud for connecting microphone adaptor to stand base.

Model: S-38

List Price: \$3.50

MODEL A-25 SWIVEL ADAPTOR features a long-life, high-quality swivel connector. Is lined with a long-life nylon sleeve—for noise-free and scratch-free insertion and removal of microphone. Model: A-25 List Price: \$5.50

Model	Output	List Price
777	62db below 1 volt per microbar	23.00*
777A		31.00
<b>7775</b> With Switch		25.00*
<b>7775A</b> With Switch		33.00

\*{Price includes cradle





Fig. B

Fig. C





Fig. E

#### "MONOPLEX" (Fig. A)

The only Super-Cardioid Crystal Microphone made—far superior to conventional Crystal Microphones! 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 practically useless! Reduces pickup of random sound by 73%! Moisture-proof "Metal Seal" crystal for long operating life. Case pivots at rear, can be pointed toward desired sound or upwards for horizontal plane pickup. Has 15 ft. shielded cable. Rich satin chrome finish. High impedance.

MODEL	OUTPUT	LIST PRICE
737A	54.0 db below 1 volt per microbar	\$46.00

#### THE "REX" (Fig. B)

Its low price makes this hand-held microphone a natural for "Hams" and low-cost public address system. A rugged unit designed for high speech intelligibility. Saves extra costs, as it needs no desk stand! Has a broad base, complete with stand adapter for mounting on floor stand. Sits firmly on a table top without tipping over. Die cast case. Frequency response 60 to 9,000 c.p.s. 5 ft. shielded cable. Beautiful Bergundy-red metallic finish. Only  $2\frac{2}{3}$ " wide,  $3\frac{1}{4}$ " high,  $1\frac{1}{8}$ " thick. High impedance.

MODEL	ОИТРИТ	LIST PRICE
710A	50 db below I volt per microbar	\$1 <b>2</b> .00
7105 (with switch)	50 db below 1 volt per microbar	\$14.00

#### MODEL 707A (Fig. C)

Ideal for low-cost P.A. systems, amateur 'phone transmitters and similar applications. Good-quality performance at low cost. Has typical semi-directional pickup. Has 7 ft. shielded cable. High impedance. Pearl Gray case with rich satin chrome finish on front grille. Diameter

Model 707A designed to be used with Shure Model S34B or S36A Desk Stands (see page 8).

MODEL	OUTPUT	LIST PRICE
707A	51.0 db below 1 volt per microbar	\$18.00

#### LAPEL MICROPHONE (Fig. D)

Specially designed unit widely used by lecturers, instructors, speakers, etc. High speech intelligibility. Response from 40 to 6,000 c.p.s. 17/8" diameter. Has lapel clip. 20-foot shielded single-conductor cable. High impedance.

MOI	DEL	OUTPUT	LIST PRICE
76	В	57 db below 1 volt per microbar	\$29.00

#### STRATOLINER (Fig. E.)

An expensive-looking crystal microphone at moderate cost. Wide-range response for good reproduction of either voice or music. Placed horizontally, the 708A is semi-directional; used vertically it becomes non-directional. Swivel permits 90° tilting of microphone. 7 ft. shielded cable and plug assembly. High impedance. Pearl Gray finish.

MODEL	OUTPUT	LIST PRICE
708A	51.0 db below 1 volt per microbar	\$31.00

NOTE: Models 737A, 710 Series 707A, 708A are designed to be used with Model S34B or S36A Desk Stands. (See page 8.)

## COMMUNICATIONS MICROPHONES



#### "100" SERIES CARBON MICROPHONES



Used around the world for police, taxi, bus, truck and commercial applications—more than all other makes combined! Rugged unit with clear, crisp voice response and high output. Heavy duty switch for push-to-talk performance. Furnished with bracket for wall mounting, plus coiled-cord cable. Adopted as standard microphone for G.E., Link, Motorola, R.C.A. and others for 2-way radio communications equipment. The "100" Series are communications-type microphones using pressure-actuated diaphragmtype carbon cartridges designed especially for efficient reproduction of speech. They are provided with a bracket for permanent placement in portable or mobile equipment. The microphones fit naturally and comfortably in the palm of the hand. They are light and compact, take minimum space in portable equipment. Output level: 5 db below 1 volt for 100 microbar speech signal.



REPLACEMENT CHART		WODEL	CABLE	SWITCH ARRANGEMENT	LIST PRICE
MANUFACTURERS REPLACEMENT MODELS  CB10, CB10B, CB10C, CB10D, CB15C, CB15D, CB15D, CB15D, CB15D, CB15C, CB15		101C	Standard Coiled Cord 11" retracted; 5' extended	Two Wire Relay Switch on normally open (No microphone switch)	\$30.00
		101E	Tinsel Coiled Cord 11" re- tracted; 5" extended with Amphenol MC4M Connector		\$33.00
CB10E	101E	102C	Standard Coiled Cord 11" retracted; 5' extended	Relay normally open	\$30.00
CB12, CB12A, CB12C, CB12D,	CB12, CB12A, CB12C, CB12D, 102C		Tinsel Coiled Cord 11" re- tracted: 5' extended with	Microphone switch nor- maly open.	\$33.00
CB12E	102E	102E	spade lugs		
CB15F	103	103	Standard Coiled Cord 11" retracted; 5' extended with Amphenol MC4M Connector	Two Wire Relay Switch normally open (No microphone switch)	\$31.00

#### "510" MICROPHONE ASSEMBLY

A Controlled Reluctance Microphone and Desk Stand Assembly—ideal for fixed-station used in all types of communications work. Has a built-in switch for controlling both the microphone circuit and an external relay or control circuit. Replacement for Mfrs. Model No. CR84.

Model 510MD List Price: \$42.50



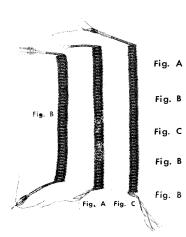
#### CARBON PACK MICROPHONES

Designed for use with small portable and mobile transmitters. Only 2" in diameter and  $1V_2$ " thick. Has 3-conductor coiled cord, metal spring strain relief, and Push-to-Talk switch. Has same operating characteristics as "100 Series" Carbon Microphones. Replacement for Mfrs. Model Nos. CB20, CB21.

Model 115 List Price: \$31.00

#### **COILED CORD SETS**

List Price: \$9.50



#### COILED CORD SETS

	COILED CORD JE	
Used in "CB" and '	'100'' Series Micropl	nmed and tinned leads. hones. List Price: \$6.25
General Electric equi	pment.	Connector for use with  List Price: \$9.50
equipment.		for use in Motorola List Price: \$7.75
Standard Coiled Cor with Motorola equip Model: CIBC		AC4M Connector for use List Price: \$7.75
Tinsel Coiled Cord with Motorola equip Model: C19C	with Amphenol Mo	C4M Connector for use

Coiled Cord replacements for Shure "100" and "CB" Series Microphones vary from model to model. For specific models see

MODEL	CABLE	MODEL	CABLE
CB10 CB10B CB10D CB10F CB12 CB12A CB12A CB12C CB12D CB12E CB12F CB15 CB15	C15C C15C C15C C15C C15C C15C C15C C15C	CB15C CB15D CB15F 101A 101B 101C 101E 102A 102B 102C 102E 103	C15C C18C C15C C15C C15C C15C C15C C15C



## MICROPHONE REPLACEMENT CARTRIDGES

#### CARBON—CRYSTAL—CONTROLLED—RELUCTANCE CARTRIDGES

Rugged microphone cartridge replacement for "CB", "100", and "120" Series Carbon Microphones. Furnished with necessary mounting hardware and complete installation instructions. Direct replacement for the cartridge used in the Models 101A, 101B, 101C, 102A, 102B, 102C, 120, CB10, CB10B, CB10C, CB10E, CB11, CB11B, CB12, CB12A, CB12B, CB12C, CB12D, CB12E, CB14, CB13A, CB15, CB15B, CB15C, CB15D, CB15F, CB162, 91A27 carbon microphones.

Model R10 List Price \$8.50

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

Model 99A149 List Price \$8.50



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. Cartridge supplied with rubber mounting rings and installation instructions.

Model R7 List Price \$8.25

#### SLIM-X CARTRIDGE

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 RELUCTANCE MODEL RS

Direct replacement for cartridges used in the following Shure microphone models: 510C, 510MD, 510S, 520, 520SL and 505C. 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 99C86 is the replacement cartridge for cartridges used in microphone models 505B and 520B. Model 99C86 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 99C86

List Price \$11.00

Model R10



Model R7



Model 99A186



Model R5



Model A88A

#### SWITCHES AND ACCESSORIES

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

Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Ideal for Police, Taxi-Cab, 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

#### CABLE-TYPE TRANSFORMER

Model A86A is a high quality, cable-type transformer. ideal for matching low-impedance microphone lines to high-impedance amplifier inputs (matches 35-50 and 150-250 ohm microphones to high impedance). 2-foot cable. (For further details, see page 4.)

Model A86A

List Price \$17.50

#### MODERN DESK STAND

Model S36A Streamlined Desk Mount fits all Shure connector-type microphones. Adapter provided for mounting other type microphones. Ideal for use with A88A switch. The S36A is designed for use with all Shure microphones except the 505 Series, 100 Series and 768 Microphones. It is ideal for use with any of the Shure switches listed on this page.

Model S36A List Price \$6.50

#### 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. These switches cannot be used with those Shure microphones which are shockmounted: (300; 333; 556 Series.)

Model A838. Rotary-type "On-Off" switch. When "turned on," it stays on until turned off.

Model A83B List Price \$9.00

Model A848. Momentary Press-to-Talk "On-Off" switch. Press—it's on, release—it's off.

Model A84B List Price \$9.00

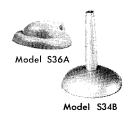
Model A85C. Momentary Press-to-Talk Relay-Type switch same as above, but has extra contacts to provide for relay operation.

Model A85C List Price \$11.50

#### TAKE-APART STAND

Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle.

Model S34B List Price \$3.50



Model A838



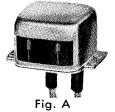
Model A85C



Model A84B

# MAGNETIC TAPE and WIRE RECORDING HEADS

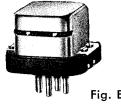












RECORD-PLAY8ACK-ERASE

Fig. B RECORD-PLAYBACK

Fig. C RECORD-PLAYBACK

Fig. D ERASE

RECORD-PLAYBACK-ERASE

### **MAGNETIC TAPE RECORDING HEADS**

### TYPICAL OPERATING DATA

MODEL	81	<b>5</b> (FIC	G. A)	815H	(FIG. A)	816	(FIG. B)	817	(FIG. C)	TE	<b>2</b> (FG.	D)
Recording Speed	3.75" per sec. 7.5"		7.5′′	3.75" per sec.		3.75" per sec.		3.75" per sec.		3.75" per sec.		c.
Bias & Erase Freq.	25KC	DC	50KC	25KC	DC	25KC	DC	25KC	DC .	25KC	50KC	DC
Std.* Recording Level	.05 ma	.095 ma	.05 ma	.03 ma	.056 ma	.03 mo	.07 mo	.06 ma	.1 <b>7</b> 5 ma			
Operating Bias Current	1.25 ma	.35 ma	1.5 ma	.72 ma	.24 ma	.80 ma	.26 ma	3.6 ma	.42 ma	_		
Erase** Current	30 ma	25 ma	35 ma	30 ma	25 ma				_	30 ma	35 ma	25 ma
Impedance Erase Coil	750 ohm at 25KC	12 ohm	1300 ohm at 50 KC	750 ohm at 25KC	12 ohm					750 ohm at 25KC	1300 ohm at 50KC	12 ohm
Impedance Recording Coil	1450 ohm at 1000 cps	180 ohm	1450 ohm at 1000 cps	at	556 ohm	5500 ohm at 1000 cps	556 ohm	1860 ohm at 1000 cps	180 ohm			

<sup>\*</sup>Determined in accordance with RTMA Standard REC.-134 August 1949.
\*\*Erase current chosen for 50 db Erasure of Saturated 400 C.P.S. Recording.

Recording Medium-Minnesota Mining & Mfg. Co., Tape Na. 111 5RBA1. Pressure Pad Force (Area - .025 sq. in.) Two Ounces.

RECORDING HEAD DIMENSIONS									
Models 815, 815H (Fig. A) Width 1.240" Depth 1.031" Height .695"	Model 816 (Fig. B) Width 1.240" Depth 1.031" Height .695'								
Model 817 (Fig. C) Width .552" Depth .830" Height .765"	Model TE2 (Fig. D) Width .516" Depth .830" Height .715"								

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

WODEL	ILLUSTR.	LIST PR.	DESCRIPTION	OPERATING DATA
812	Fig. E	17.00	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	Fig. B	12.00	Upper track recording. High impedance record-playback coil.	See 816
817	Fig. C	9.00	.093" record track width. Low impedance record-playback coil.	See 817
TR5B	Fig. A	17.00	Upper track recording with 14-inch completely insulated leads. Cinch Plug attached.	See 815*
TR5N	Not Illustr.	16.00	Special Shield. Special Leads. Special Plug.	See 815*
TR6	Fig. B	12.00	Lower track recording. Low impedance record-playback coil.	Not shown
TR6G	Fig. B	12.00	Lower track recording. High impedance record-playback coil.	See 816*
TR6H	Fig. B	12.00	Upper track recording. Low impedance record-playback coil.	Not shown
TR16	Fig. C	9.00	.093" record track width. High impedance record-playback coil.	Not shown
TR14	Not Illustr.	9.00	Narrow track (.014"). Low impedance record-playback coil.	Not shown
TR26	Fig. C	11.00	.093" record track width (1/4 mil gap). High impedance record-playback coil.	Not shown
TE2	Fig. D	7.00	Erase head.	See TE2
TE10	Not Illustr.	7.00	Erase head.	Not shown

<sup>\*</sup>Operating data only. 815 does not replace. \*\*Operating data only. 816 does not replace.

NOTE: For replacement information on specific tape recorder models using Shure magnetic recording heads, send for new free Shure replacement booklet.



### CRYSTAL and CERAMIC PICKUP CARTRIDGES





Fig. B



Fig. C



Fig. D



Fig. E









Fig. J



Fig. K



Fig. L





Fig. N





Fig. P

#### FINE GROOVE CARTRIDGES FOR 331/3, 45 RPM RECORDS

MODEL NO.	ILLUSTRA- TION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
W21F*	Fig. B	Crystal	\$7.75	1.5V	6 grams	10,000 c.p.s.	41/2 grams	A63MG
W31AR	Fig. A	Crystal	6.50	2.1V	7 grams	7,500 c.p.s.	51/2 grams	A53MG
WC31AR	Fig. A	Ceramic	6.50	.87٧	7 grams	7,500 c.p.s.	51/2 grams	A53MG
W53MG	Fig. F	Crystal	8.50	1.3V	6 grams	8,500 c.p.s.	12 grams	A64MG
WC20#	Fig. C	Ceramic	9.50	.58∨	21/2-3 grams	12,000 c.p.s.	21/4 grams	A20S

#### TURNOVER CARTRIDGES FOR 331/3, 45, AND 78 RPM RECORDS

MODEL NO.	ILLUSTRA- TION	TYPE	LIST PRICE		TPUT VEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHU NEEI NC	OLE
				MG	STD.				MG	STD.
WC10§	Fig. H	Ceramic	\$9.50	.78٧	1.0V	7 grams	12,000 c.p.s.	7 grams	A10	0S
WC10D§	Fig. H	Ceramic	34.00	.78٧	1.0V	7 grams	12,000 c.p.s.	7 grams	A10	DS
W22A	Fig. D	Crystal	10.50	1.2V	1.4V	8 grams	10,000 c.p.s.	41/2 grams	A65MG	A61A
W22AB	Fig. D	Crystal	9.50	1.2V	1.4V	8 grams	10,000 c.p.s.	41/2 grams	A65MG	A62A
W22AB-T	Fig. E	Crystal	10.00	1.2V	1.4V	8 grams	10,000 c.p.s.	121/2 grams	A65MG	A62A
WC24	Fig. F	Ceramic	\$8.75	0.6V	0.6V	8 grams	7,000 c.p.s.	4½ grams	A53MG	A52A
WC24-T	Fig. G	Ceramic	9.25	0.6V	0.6V	8 grams	7,000 c.p.s.	121/2 grams	A53MG	A52A
w9b	Fig. J	Crystal	9.50	3.5V	5V.	11 grams	10,000 c.p.s.	7 grams	AS	>
WC25	Fig. K	Ceramic	9.50	.65V	.7٧	8 grams	7,000 c.p.s.	6 grams	A65MG	A61A
W72†§	Fig. L	Crystal	8.50	3 V	4V	10-15 grams	5,000 c.p.s.	7 grams	A69A	A70A

#### ALL PURPOSE SINGLE NEEDLE CARTRIDGES FOR 331/3, 45, 78 RPM RECORDS

MODEL NO.	ILLUSTRA- TION	TYPE	LIST PRICE		TPUT √EL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
				MG	STD.				
W26A	Fig. B	Crystal	\$8.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A67U
W26B	Fig. B	Crystal	7.50	.87V	1.0٧	8 grams	8,000 c.p.s.	4½ grams	A66U
W36B	Fig. A	Crystal	6.50	2.3V	2.5V	9 grams	7,000 c.p.s.	51/2 grams	A56U
WC38	Fig. A	Ceramic	6.50	.9٧	.92V	9 grams	10,000 c.p.s.	51/2 grams	A58U
W66B	Fig. O	Crystal	7.00	2.0V	2.3V	8 grams	4,500 c.p.s.	12 grams	A66U
W70	Fig. P	Crystal	4.95	3.0V	3.8V	10-15 grams	5,000 c.p.s.	16 grams	A77U

#### STANDARD CARTRIDGES FOR 78 RPM RECORDS

MODEL NO.	ILLUSTRA- TION	ТҮРЕ	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
W23B	Fig. B	Crystal	\$7.75	1.17	6 grams	8,000 c.p.s.	4½ grams	A62A
WC33B	Fig. A	Ceramic	6.50	.92V	9 grams	7,000 c.p.s.	51/2 grams	A52A
W68†	Fig. O	Crystal	7.50	1.6V	l oz.	4,500 c.p.s.	Dual Weight 25 grams or 12 grams	A62A
W78‡	Fig. M	Crystal	5.55	4.0V or 2.0V	l oz.	6,000 c.p.s.	Dual Weight 25 grams or 12 grams	None
W56N**	Fig. N	Crystal	8.50	4.3V	1 oz.	10,000 c.p.s.	12 grams	A68D
W58HS***	Fig. M	Humi-Seal Crystal	6.55	1.6V	l oz.	6,000 c.p.s.	25 grams	None
W60HS***	Fig. O	Humi-Seal Crystal	8.50	1.8V	l oz.	4,500 c.p.s.	25 grams	A62A

\*With .453 Mount for Oak Changer.

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

\*\*\*"Humi-Seal" Metal Wrapped Rochelle Salt Crystal ideal for Tropical Areas.

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

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

§Not a turnover type. Needles are set into tracking position by ingenious "Twin Lever" needle shift system, #For Columbia 16 2/3 RPM Highway Hi-Fi Records.

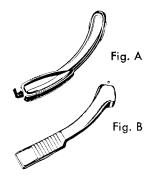
BModel W9 has Capacitor furnished as accessory. Without Capacitor output is as shown above. With Capacitor output it 1.7 volts for 33 1/3, 45 RPM; 2.5 volts for 78 RPM.

\*\*EMOdel 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 1/3, 45 RPM. Without the Capacitor, output is 4 volts for 78 RPM, 3 volts for 33 1/3, 45 RPM. Without the Capacitor, output is 4 volts for 78 RPM, 3 volts for 33 1/3, 45 RPM.

NOTE: For replacement information, write for free Replacement Manual No. RM-56.

## PHONO PICKUPS • NEEDLES • REPLACEMENT KITS





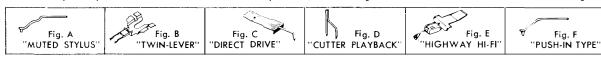
#### PHONOGRAPH PICKUPS

MODEL	SPEED	ILLUSTRA- TION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHU NEED NUM	LE	
92H	78	Fig. B	\$5.50	3.5V		l oz.	5000 c.p.s.	W <b>7</b> 8	Nor	None	
99DV	RPM	Fig. A	8.50	4.0Vor2.0V		11/8 oz.	6000 c.p.s.	W78	None		
	331/3			MG	STD.				MG	STD.	
901D	45	Fig. A	\$16.25	1.2٧	1.4٧	7 grams	10,000 c.p.s.	W22AB-T	A65MG	A62A	
	78			MG	STD.						
92U	RPM	Fig. B	\$9.75	2.0V	2.3V	8 grams	4500 c.p.s.	W66B	A66	U	

#### PHONOGRAPH PICKUP NEEDLES

MODEL	ILLUSTRA- TION	DESCRIPTION	LIST PRICE	MODEL	ILLUSTRA- TION	DESCRIPTION	LIST PRICE
A9††	Fig. B	Std. and MG Sapphire†	\$3.50	A63MG	Fig. A	MG Osmium	\$1.50
A105	Fig. B	Std. and MG Sapphire †	3.50	A64MG*		MG Osmium	2.00
A 10DS	Fig. B	MG Diamond, Std. Sapphire†	28.00	A65MG	Fig. A	MG Sapphire†	2.50
A 20 S	Fig. E	.0003 (3/10 mil) Sapphire†	3.50	A66U	Fig. A	All Purpose Osmium Unipoint	1.50
A 52A	Fig. C	Std. Osmium	1,50	A67U	Fig. A	All Purpose Sapphire Unipoint†	2.50
A53MG	Fig. C	MG Osmium	1.50	A68D	Fig. D	Osm. Playback Needle—Stelite Cutting Stylus	2.50
A 56U**	Fig. C	Ali Purpose Osmium Unipoint	1.50	A69A	Fig. F	MG Sapphire†	2.50
A58U***	Fig. C	All Purpose Osmium Unipoint	1,50	A70A	Fig. F	Std. Sapphire†	2.50
A61A	Fig. A	Std. Sapphire†	2.50	A77U		All Purpose Osmium Unipoint	1.50
A62A	Fig. A	Std. Osmium	1.50				

<sup>\*\*</sup>Standard Bent Shaft Needle Not Illustrated. \*\*Used in Cartridge Models PC10 and WC36B \*\*\*Used in Models PC12 and WC38 †High-quality commercial-type synthesized sapphire specially designed for long operating life. \*Standard Straight Shaft Needle Not Illustrated. ††Cannot be replaced by A105 or N4 series needles. Crystal and Ceramic Cartridges manufactured under Shure Patents and Patents Pending.



#### RK-54 REPLACEMENT KIT-3 CARTRIDGES REPLACE 192!

The RK-54 is beyond all doubt the most popular replacement kit on the market. Proof? Simply this—Servicemen, Service Dealers and Distributors alike broke all previous cartridge kit sales records during the past year with the RK-54. Thinkofit—3 cartridges

(Models W22AB, W26B, W78) replace 192. This is "broadest coverage for lowest investment".

#### Technical Data for Models W22AB, W26B, W78

MODEL NO.	TYPE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.		
W22AB	Crystal	MG 1.2V	STD. 1.4 V	8 grams	10,000 c.p.s.	4½ grams	MG A65MG	STD. A62A	
W26B	Crystal	MG .87V	STD. 1.0 V	8 grams	8,000 c.p.s.	4½ grams	A66U		
W78*	Crystal	4.0V o	r 2.0V	l oz.	6,000 c.p.s.	Dual- Weight	none		

\*Dual-Weight, Dual-Volt Cartridge. With weight-slug, net weight is 25 grams. Without weight-slug, net weight is 12 grams. In addition Model W78 has capacitor, furnished as accessory. Without capacitor, output is 4.0 volts. With capacitor, output is 2.0 volts.

#### RK-56 REPLACEMENT KIT-3 CARTRIDGES REPLACE 217!

#### Technical Data for Models WC10, W70, W72

MODEL NO.	TYPE	OUTPUT LEVEL		MIN.	RESPONSE	NET WT.	SHURE NEEDLE	
140.		MG	78	FORCE	10	VV 1.	NO	•
WC10	Ceramic	.78٧	1.0∨	7 grams	12,000 c.p.s.	7 grams	A 10	)S
W70	Crystal	3.0∨	3.8V	10-15 grams	5,000 c.p.s.	16 grams	non	e
W72	Crystal	3V o	r 4V*	10-15 grams	5,000 c.p.s.	7.5 grams	MG A69 <b>A</b>	78 A <b>7</b> 0A

<sup>\*</sup>Model W72 has a slip-on capacitor furnished os an occessory. With the capacitor, output is 2 volts for 78 RPM, 1.5 volts for 33 ½, 45 RPM. Without the capacitor, output is 4 volts for 78 RPM, 3 volts for 33 ½, 45 RPM.



model used by experts and amateurs alike to make conventional phonographs play better than new. Other two models are the popular W70 and the new model, W72.



# **High Fidelity** Systems



## ... A New Experience in Listening Pleasure!

Here is an important development in the history of high fidelity reproduction—a three-speed ceramic cartridge which is specially designed to enhance the quality of all the popular high fidelity equipment in use today. It brings a new dimension to tone quality... reproduces all instruments sharply and clearly... yet there is a subtle softness that records the original voice and music with a naturalness that will surprise and delight the most critical listeners. The "Music Lovers" Cartridge provides freedom from the induced hum and the magnetic "drag" prevalent with conventional high fidelity cartridges.

The "Music Lovers" Cartridge is equipped for mechanical interchangeability with magnetic pickups, and for direct connection to magnetic inputs of amplifiers not yet provided with constant displacement inputs, thus allowing the full advantages of compensation circuits.

A special feature of the "Music Lovers" Cartridge is the "twin-lever" needle shift transport—a unique device that provides lower mass and individual needle compliance for superior response—eliminates needle interaction.

The "Music Lovers" needle can be replaced quickly without tools in a matter of seconds—while it is in the tone arm—even blindfolded—with no danger of transposing the 3-mil and 1-mil tips.

Investigate the "Music Lovers" Cartridge, for here is a high-fidelity cartridge which is in a class by itself. Being free of cartridge induced hum and magnetic "drag" it provides a pureness of tone that gives you concert half realism in the home!

#### Technical Data and General Information about the "Music Lovers" Cartridge

#### **Response Frequency Characteristics:**

A smooth response from 30 to 15,000 c.p.s. with a gradual "roll off" between 10,000 and 15,000 c.p.s. designed to ideally meet the exacting requirements of typical high fidelity reproduction. Equipped with network for connection to magnetic amplifier inputs.

#### **Output Voltage:**

Without network-0.4 volts at 1000 c.p.s. With network-25 millivolts at 1000 c.p.s.

#### **Recommended Load Impedance:**

Input network (supplied with cartridge) is designed work into all magnetic preamplifiers with input impedance of 22,000 ohms to 1.0 megohm.

#### Compliance:

A high lateral compliance of 1.5 x 10-6cm/dyne helps reduce record wear and allows the pickup to track and reproduce the full low frequency range at all speeds.

#### Tracking Force:

5 to 8 grams for all types of records.

#### **Cartridge Capacitance:**

525 mmfd.

#### Cartridge Weight:

Approximately 14 grams—with network—which is equivalent to the most popular magnetic cartridaes.

MUSIC LOVERS CARTRIDG	ES	MUSIC LOVERS NEEDLES			
Model ML44 (SS) (with .001 and .003 Sapphire needles)	List Price \$13.95	N4 (SS) (with .001 and .003 Sapphire tips)	List Price \$5,95		
Model ML44 (DS) (with .001 Diamond and .003 Sapphire needles)	List Price \$38.95	N4 (DS) (with .001 Diamond and .003 Sapphire tips)	List Price \$31.00		
Model ML44 (DD) (with .001 and .003 Diamond needles)	List Price \$57.90	N4 (DD) (with .001 and .003 Diamond tips)	List Price \$49.95		

the SHURE "Twin Lever



## Finest Replacement Cartridge Ever Developed!

#### Improves the Quality of all Conventional Home Phonographs!

We make these strong claims: the "Twin-Lever" is the finest ceramic replacement cartridge ever developed! It sets a new high, leaving all other replacement cartridges far behind its brilliant level of tone superiority . individual needle compliance for superior 78 rpm and microgroove response . . . unique needle shift design . . . amazingly simple needle replacement.

The "Twin-Lever" offers you maximum replacement coverage with minimum investment because it handles the replacement for practically all 3-speed phonos using plastic-cased cartridges. New business and greater profits can be yours—because this "Twin-Lever" cartridge costs only \$9.50 list—yet it can make conventional 3-speed phonos sound better than when they were new!

Replaces 157 3-speed, plastic-cased, ceramic and crystal, turnover and single needle cartridges!

MODEL WC10 List Price \$9.50 (including two synthesized sapphire-tipped needles)

MODEL WC10D List Price \$34.00 (including a 1-mil diamond-tipped needle and a 3-mil synthesized sapphire-tipped needle)



SHURE SHURE BROTHERS, INC.

222 Hartrey Avenue Evanston, Illinois Cable Address: SHUREMICRO