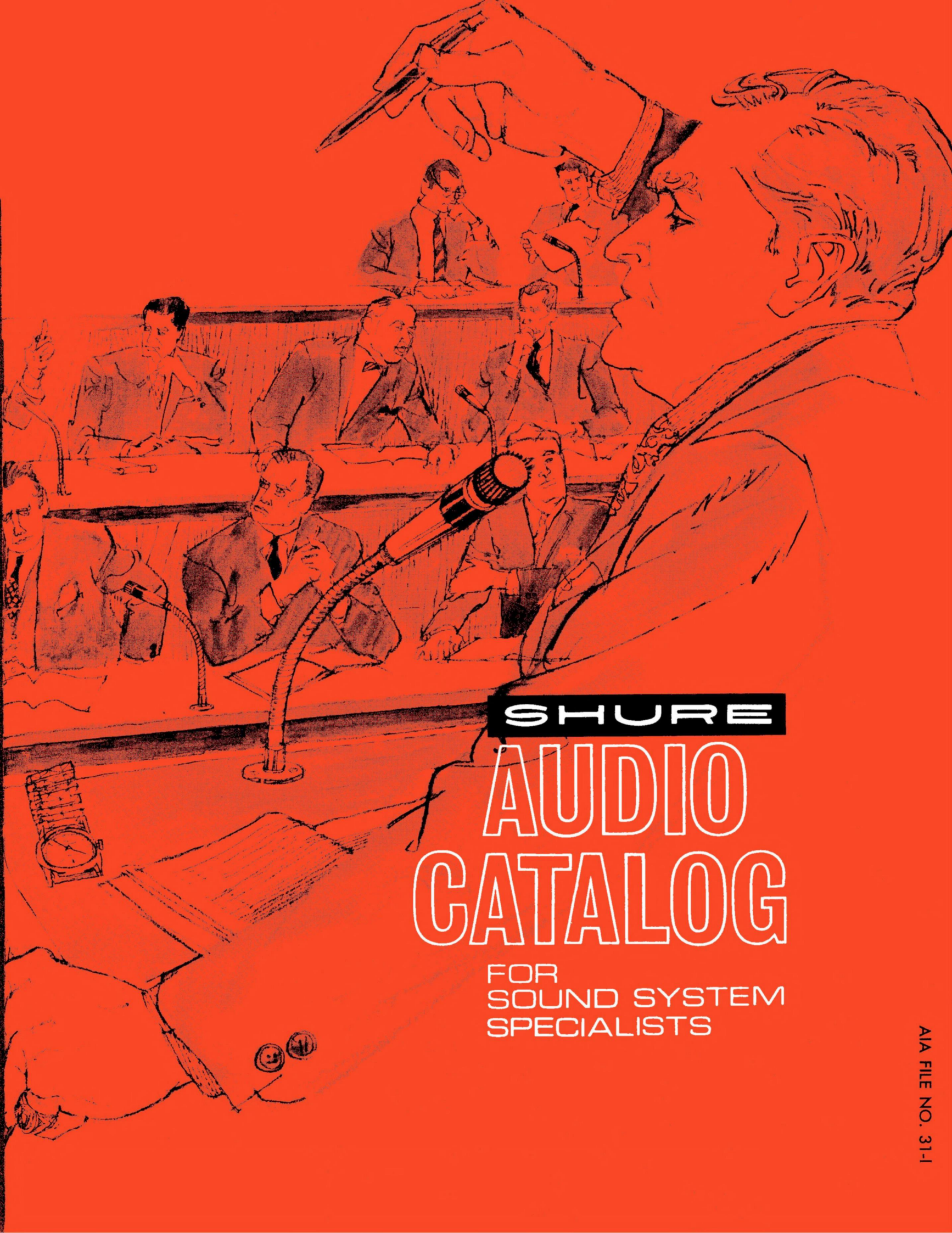




SHURE
AUDIO
CATALOG

FOR
SOUND SYSTEM
SPECIALISTS

A series of concentric circles in a reddish-brown color, centered on the left side of the page. The word "SHURE" is in a black box, and "MICROPHONES" is in large white letters. Below them, the phrase "world standard wherever sound quality is paramount" is written in a smaller, white, sans-serif font.

SHURE MICROPHONES

world standard
wherever
sound quality
is
paramount

ENGINEERING LEADERSHIP

For well over a quarter century, Shure has made numerous significant contributions to the art of developing and manufacturing acoustical-electrical products and transducers. Indeed, there are parts of the world where imitations and copies of Shure microphones are referred to as "Shure Type" microphones—a quality designation in itself. In fact, there are more Shure Unidyne microphones used in quality public address systems than any other microphone . . . it is truly the microphone that needs no name to be identified. In the field of communications Shure mobile and fixed-station microphones dominate to such a vast degree that they actually outnumber all other brand microphones combined. Many Shure contributions to the field of microphone design rank among the significant engineering "break-throughs." For instance:

"UNIPHASE" NETWORK—made possible the first, and still most effective, single element unidirectional microphone. Refinements over the years have been incorporated to permit more compact design and to apply the network to a number of Shure dynamic, ribbon, crystal and ceramic microphones.

"CONTROLLED MAGNETIC" MICROPHONE CARTRIDGES—the "work-horse" of World War II, now the quality standard in mobile communications. Provides high speech intelligibility, ruggedness and stability under prolonged, severe field operating conditions.

"ARMO-DUR" HOUSINGS—a revolutionary new plastic that actually outlasts steel and die-cast cases. Rust-proof, corrosion-free, chip-proof, practically unbreakable, always comfortable to the touch in hot or cold weather, no shock hazard. It is undeniably one of the most durable and practical materials ever used for hand-held microphones.

EFFECTIVE NOISE-CANCELLING MICROPHONES—the Shure SONO-BAR provides intelligible communications under severe noise conditions that previously made "readable" transmission impossible. Transmits the voice clearly even where ambient noise is so great the speaker cannot hear himself!

MINIATURE MICROPHONES—some no larger than a paperclip, yet giving excellent performance under extreme temperature and humidity conditions.

"DURACOUSTIC" NON-METALLIC DIAPHRAGMS—do away with all the problems caused by metal microphone diaphragms and the instability inherent in many non-metallic diaphragms. Shure's "Duracoustic" diaphragms provide optimum microphone performance combined with maximum dependability and consistency.

STYLING—Shure strives to design microphones so that they "look as good as they sound." Shure design, incorporating all necessary acoustical considerations and the ultimate in utility and convenience, is the result of constant awareness of current trends in industrial design and the constantly changing standards of microphone users and the requirements of different applications. Consequently, Shure microphones enhance the appearance of any setting and system in which they are used.

A decorative border made of a repeating wavy line pattern, resembling a stylized sound wave or a series of connected loops, framing the "SHURE GUARANTEE" section.

SHURE GUARANTEE

Every Shure microphone is guaranteed a full year against defects in materials and workmanship, covering every mechanical and electrical aspect of the unit. All Armo-Dur cases are unconditionally guaranteed against breakage.

SHURE SERVICE

Most Shure microphones have been designed for convenient replacement of the microphone element in the field. These microphone cartridges are found on page 36 of this catalog. Replacement coiled cords for hand-held communications microphones, are found on page 34. Additional service may be obtained through your Shure distributor or directly from the factory. Damaged microphones returned to the factory will be put into "like-new" operating condition, meeting the original performance characteristics, and returned. The service is extremely fast (usually within 48 hours) and costs are low. The fact is, Shure microphones are built to withstand severe operating conditions and seldom require servicing.

The prime purpose in the design of every Shure microphone is faithful sound reproduction.

All are painstakingly designed, developed, manufactured and tested for flawless performance coupled with longest possible trouble-free service. Regardless of price, they will perform according to specifications and will operate for years without deviation from their original standards.

SHURE SPECIFICATIONS AND WHAT THEY MEAN

Shure specifications are not "laboratory standards" or mere theoretical figures. They are accurate measurements of performance you can expect from actual production models. They are, insofar as is practical, complete and detailed, to enable you to specify Shure—knowing exactly the performance you will get in every important respect.

The example shown below is typical of *Shure Audio Specialist* specifications for the sound installer and P.A. system specialist.

In addition, on all appropriate Shure microphones, there is a "*Shure Architect's Specifications*" section to provide architects and their consultants a quick and easy reference for specifying "Shure or equivalent" in specifications and bids.

(Note: typical set of Shure Audio Specialist specs—for Model 545S—together with response curve and polar patterns is shown here. Following copy explains each point in the specs:)

TYPE: You may choose from six different type Shure microphones: ribbon, dynamic, "Controlled Magnetic," ceramic, crystal and carbon (see page 5 for detailed explanation of types).

FREQUENCY RESPONSE: Indicates the useful practical range. We suggest you refer to the frequency response diagram for a more specific representation of the particular microphone's capabilities.

OUTPUT LEVEL: Note that Shure includes a base reference level (for low impedance: 0 db = 1 milliwatt per 10 microbars; for high impedance: 0 db = 1 volt per microbar). In addition, output is expressed in millivolts per microbar (which specifies the actual voltage output for a given sound level).

IMPEDANCE: Impedances are shown as a guide to properly matching the microphone to the amplifier. Most generally impedances are classified as low (L) or high (H). The rated impedance or recommended loads are shown, including the resistance of the supplied cable. Longer cable runs with high impedance microphones will result in loss of about 3 db output for each additional 25 feet of cable added. Use low impedance units for long cable runs to eliminate this problem. Many Shure microphones are multi-impedance and can be set for high or low impedance use.

OPTIONAL ACCESSORIES: General information on other Shure products which will extend the usefulness and/or versatility of the microphone. Many units also list "Supplied Accessories" such as lavalier assemblies, switches, stands, etc.

FREQUENCY RESPONSE CURVE: The frequency response curve shown for each Shure microphone provides an accurate picture of the microphone's range and response. Note that the frequency scale is truly logarithmic, the voltage scale is uniform, and the scales are in the proportion recommended by the E.I.A. Where important, Shure charts show normal response, response at closer distances, and response off-axis. (Example: See pages 16-17 for the complete, useful data on the Unidyne III Series of microphones.)

DIRECTIONAL PATTERN CHARTS: These show the microphone's pick-up pattern [unidirectional (cardioid), omnidirectional, bidirectional—see the next page for detailed explanations of these functions]. Note particularly that because directional characteristics may be affected by frequency, Shure shows the pickup pattern at *many* frequencies—often as many as *six* frequencies.

LIST PRICE: \$89.95

TYPE: Dynamic

FREQUENCY RESPONSE: 50-15,000 cps.

OUTPUT LEVEL: Low: -57 db (0 db = 1 milliwatt per 10 microbars) .141 millivolts/microbar
High: -55 db (0 db = 1 volt per microbar) 1.760 millivolts/microbar

IMPEDANCE: Dual. Choice of 50-250 ohms or High

DIAPHRAGM: Shure Duracoustic

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

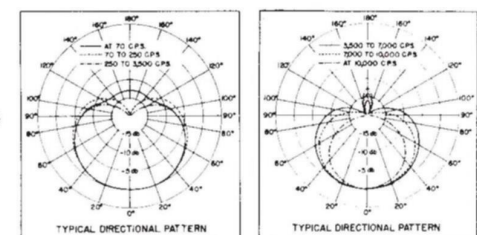
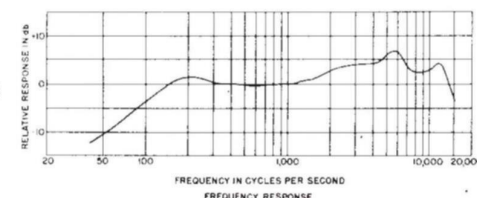
CABLE: 18 ft., 3-conductor shielded

STAND THREAD: 5/8"-27 thread

DIMENSIONS (not including swivel): 1 15/16" diameter, 5 7/16" 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 539A Vibration-Isolation Stand.



SELECTING THE CORRECT

SHURE

STEP I

PICK-UP PATTERNS



WHAT IT IS

These microphones pick up sound mainly from the front, while suppressing sound and noise coming from the back. The most generally useful unidirectional pick-up pattern is the CARDIOID (meaning "heart shaped"). This pattern will suppress rear sounds at least 70% while picking up front sound over a broad area. Sounds 120° to 180° off-axis are almost entirely suppressed.

In addition to the Cardioids (Models 546, 545, 545S, 544) other Shure unidirectional microphones are described as Super-Cardioid (Models 330, 333, 737A) or Ultra-Cardioid (Models 556S, 55S, 55SW). The pickup patterns of these microphones vary from the Cardioid. Check the polar pattern to determine the suitability to your application.

WHERE TO USE IT

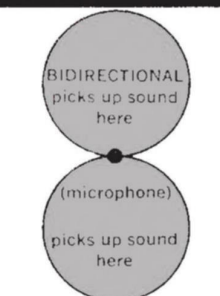
The most commonly applied solution to feedback problems. Greatly simplifies planning of sound installations. With the rear of the microphone rejecting sound, the microphone can be placed so that sound projecting from the loudspeaker cannot re-enter the microphone to generate feedback. Performers can work much further away from unidirectional microphones than with omnidirectional microphones.

Effectively suppresses audience noises, coughing, shuffling feet, etc. Ideal for fixed installation before an individual performer or a small group. Pickup of large group can be effected with multiple microphone installation.



These microphones pick up sound more-or-less evenly from all directions. In effect, they are nondirectional. They can be hand-held, stand-mounted, or worn around the neck. This type includes the greatest number of microphones, together with the widest price range and response characteristics.

Good for general applications where feedback or audience noise is no great problem. Extremely versatile. Practically all ultra-slim "probe" type microphones are omnidirectional units—they are ideal for "walk-around" and interview situations. (Note: Shure also makes unidirectional "probe" — the Model 545.) (See pages 16-17)



Pick up sound from front and back while suppressing sound from sides, top and bottom.

Ideally suited for use when two performers, or groups, are on opposite sides of a microphone. Allows the same freedom of movement as unidirectional microphones, while solving difficult feedback problems such as rooms with "hard" ceilings or where loudspeakers are mounted over or to the side of the microphone.

STEP II

FREQUENCY RESPONSE

The fidelity of reproduction afforded by the microphone depends on three factors of the frequency response:

1. Response Range. In general, the more extended the frequency response of the microphone is, the more faithful the reproduction will be.
2. Smoothness. A high fidelity microphone is made so that no conspicuous abrupt peaks or valleys of output occur at any frequency. This results in an essentially smooth frequency response curve.
3. Flatness. A flat frequency response curve is one showing output remaining at approximately the same level throughout the frequency range. This means that the microphone responds equally well at any frequency, an essential of high fidelity reproduction.

While the microphone with the widest range, smoothest and flattest frequency response curve will give the highest fidelity, it is not necessarily the best microphone for every application. [For example, a shaped (peaked) response is often devised to achieve added "presence" for microphones used in paging and communications systems.] Frequency response required for various applications is summarized below:

RESPONSE REQUIREMENTS

Use	Response Range	Response Character	Possible Microphones
Recording, broadcasting, highest quality public address for music and voice	50-15,000 cps	Flat Smooth	Ribbon Dynamic
High quality public address for voice and music	70-10,000 cps	Flat or slightly rising No prominent peaks	Ribbon Dynamic Some crystals or ceramics
Indoor paging systems and public-address systems for voice use	200-5,000 cps	Slightly rising No prominent peaks	above plus Some Controlled Magnetics
Outdoor paging systems or systems in noisy locations. Ham radio and professional mobile and fixed station communications. Maximum intelligibility required.	300-3,500 cps	Rising A peak in the 2000 to 3500 cps region is often desirable	Controlled Magnetic Dynamic Carbon Some Ceramics

MICROPHONE FOR THE APPLICATION

STEP III TYPES OF MICROPHONES

SHURE SERIES NO.	TYPE	WHAT IT IS	WHERE TO USE IT
100	CARBON	Very high output units recommended for mobile communications where intelligibility requires limited frequency response. Needs external power supply. Low impedance.	Mobile communications. Not recommended for public address. Very good over extremely wide temperature and humidity conditions, or where rough handling is encountered.
200	CERAMIC	Similar to crystal microphone in design but uses man-made ceramic element. Economical, superior to crystal for outdoor use. Unaffected by severe temperature and humidity changes. High impedance.	Wherever price is an important factor. Shure makes omnidirectional and unidirectional ceramic microphones—all are economical, rugged, attractively styled.
300	RIBBON	Virtually uniform frequency response. Definitely among the very best available. Fairly high priced. Extremely rugged for normal use indoors. Adjustable impedance.	Wherever quality of response is the first consideration in broadcasting, professional recording, or public address, look to Shure Ribbon microphones (unidirectional and bidirectional). Excellent for music. Not recommended for outdoor use.
400	CONTROLLED MAGNETIC	Balanced armature . . . rugged, stable, high output. Originally developed for the military to combine the advantages of the carbon and dynamic microphone . . . with none of the disadvantages—such as the need for external power supply in a carbon. Has the ability to directly supply any impedance, without transformer. Modestly priced, extremely dependable performance.	Highly recommended for the best possible performance in Mobile Communications—truly the Field-Proved Standard in Mobile Communications. Indoors, outdoors — wherever rugged performance must be coupled with modest price and suitable response. Ideal for paging, language labs, portable P.A. systems. Omnidirectional only.
500	DYNAMIC	Moving-coil microphone, available in a wide range of prices and types. The better dynamic units are among the very best microphones for frequency response. Smooth response (up to 20,000 cps).	The dependable unit where exceptional performance, ruggedness and reliability are required, such as broadcasting and better quality Public Address. Superior in frequency response to ceramic, crystal, carbon, and Controlled Magnetic units. Unidirectional, omnidirectional.
700	CRYSTAL	Excellent quality at a low price. Response is somewhat limited (normally about 10,000 cps maximum). Special sealed crystals used in Shure units mean you can use them where humidity is high or outdoors (except in direct sun over prolonged periods). High Impedance.	Crystal units are primarily used where price is a limiting factor. Very high in output.

STEP IV PRICE

While Shure microphones range in price from a few dollars to well over one hundred dollars, it is well to keep in mind that they are *the lowest cost single item* in the average P.A. system — and that their function is critical! In truth, the P.A. system can be no better than the microphone that originally converts the sound waves into electrical impulses. In general, unidirectional cardioid microphones are the most expensive (as a category); however, some fine quality omnidirectional and bidirectional microphones can cost as much as unidirectionals. Where economy is the major factor, we suggest that you look to crystal, ceramic or "Controlled Magnetic" units. Where quality is first and foremost, we recommend ribbons or dynamics.

SEE CHART AT BACK OF BOOKLET FOR DETAILED MICROPHONE APPLICATIONS.



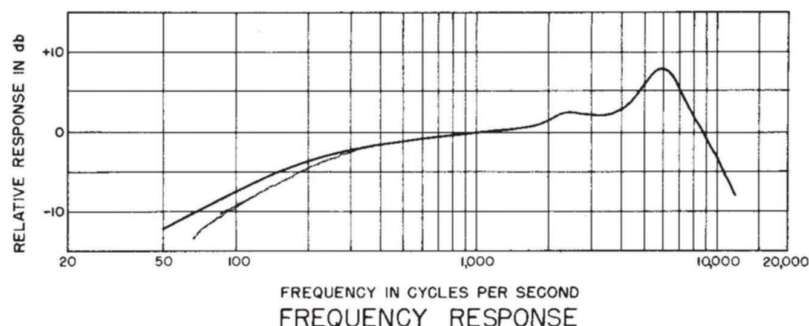
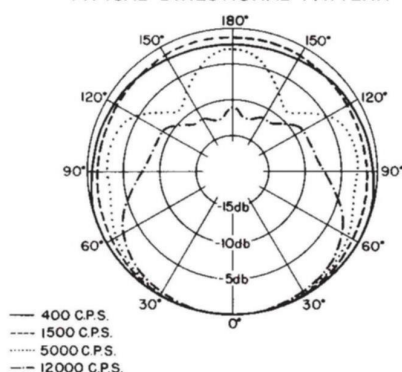
MODEL 570 LAVALIER MICROPHONE ($\frac{3}{4}$ " DIAMETER)

Miniature size Professional Quality dynamic microphone designed for lavalier use in television, for lectures, etc. Features special "shaped" response for superior lavalier performance. Reduces pickup of clothing and cable noise. Can be used on stand with Model A57S Swivel Adapter. Designed for inconspicuous use with "Flex-Grip" lavalier assembly—the most versatile available. "Flex-Grip" design holds microphone firmly, yet permits easy and quick removal. Lavalier clip opens right or left or can be removed. Lightweight, flexible 30 ft. microphone cable attached. Non-reflecting gray metal case with stainless steel grille.

Patent Pending

**FINEST PERFORMING DYNAMIC
LAVALIER MICROPHONE ---
REGARDLESS OF PRICE!**

TYPICAL DIRECTIONAL PATTERN



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$95.00
 ELEMENT TYPE: Dynamic
 FREQUENCY RESPONSE: 50-12,000 cps, shaped for optimum lavalier performance, with rising response to 6,000 cps
 OUTPUT: -59 db (0 db=1 milliwatt per 10 microbars); .095 millivolts/microbar
 IMPEDANCE: 150 ohms (to match all low impedance input, 50 to 250 ohms)
 DIAPHRAGM: Shure Duracoustic
 POLAR PATTERN: Omnidirectional
 MAGNETIC CIRCUIT: Uses Alnico V Magnet
 CASE FINISH: Non-reflecting gray
 CABLE: 30' two-conductor shielded
 DIMENSIONS: $\frac{3}{4}$ " diameter, $2\frac{1}{2}$ " overall length
 NET WEIGHT: 2 ounces (less cable)
 FURNISHED ACCESSORIES: Model A57L "Flex-Grip" lavalier cord, and belt clip for cable
 OPTIONAL ACCESSORIES: Model A57S Swivel Adapter, Model A86A Transformer

ARCHITECT'S SPECIFICATIONS

SHURE MODEL 570

The microphone shall be Shure Model 570 or equivalent. It shall be a moving coil type microphone with a frequency range of 50 to 12,000 cps specifically designed for lavalier use. The unit shall have an omnidirectional polar characteristic. The microphone shall be a single impedance microphone having a nominal impedance of 150 ohms. The microphone output shall be: -59 db (0 db=1 milliwatt per 10 microbars). The microphone rating Gm (sensitivity) at 1,000 cps shall be within ± 3 db of -152 db (EIA Standard SE-105, August 1949). The microphone shall be provided with a lavalier cord and clip assembly for use as a wearable microphone. The microphone shall be provided with a 30' two-conductor shielded cable. The overall dimensions shall be $2\frac{10}{32}$ " (65.9 mm) in length, $\frac{25}{32}$ " (19.8 mm) in diameter.

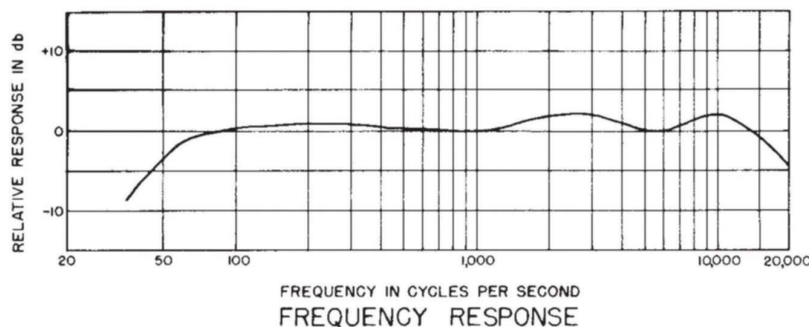
MODEL 576 OMNIDIRECTIONAL DYNAMIC MICROPHONE ($\frac{3}{4}$ " DIAMETER PROBE)

A new, superb, dynamic probe microphone designed for television and radio broadcasting and super-critical public address applications. Proved superior for ruggedness and performance under typical broadcasting conditions in advance field tests. Strikingly modern in ultra-slim $\frac{3}{4}$ -inch diameter that provides maximum view of performers for on-camera use. Features smooth, natural, wide-range response for authentic pickup of voice or music. Dual impedance, 50 and 150 ohms: change simply by moving pin jacks inside case. Comes complete with Model A57S slip-in swivel adapter that permits tilting the microphone 90° from vertical to horizontal. The 576 is an ideal hand-held microphone because of its unique "feel" and "balance" in the hand. Rugged steel case provides effective magnetic shielding as well as good looks. Finished in non-reflecting gray with stainless steel grille. Available in matched pairs for stereo, broadcasting and recording. (Matched to plus or minus 1 db in level and 1½ db in frequency response.)

$\frac{3}{4}$ " DIAMETER

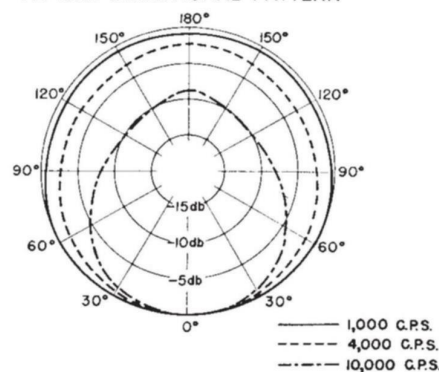
40% SMALLER DIAM.
60% SMALLER AREA

THAN POPULAR
OMNIDIRECTIONAL
DYNAMIC MICROPHONES



production uniformity guaranteed to within 2½ db

TYPICAL DIRECTIONAL PATTERN



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$175.00

ELEMENT TYPE: Dynamic

FREQUENCY RESPONSE: 40-20,000 cps

OUTPUT: 50 ohms —60 db (0 db=1 milliwatt per 10 microbars); .050 millivolts/microbar
150 ohms —60 db (0 db = 1 milliwatt per 10 microbars); .095 millivolts/microbar

POLAR PATTERN: Omnidirectional

IMPEDANCE: Dual — 50 and 150 ohms (to match all low impedance inputs, 50 to 250 ohms)

DIAPHRAGM: Shure Duracoustic

CASE FINISH: Non-reflecting gray

SWIVEL ADAPTER: Furnished with Model A57S Swivel Adapter having $\frac{5}{8}$ "-27 thread

CABLE: 25' three-conductor shielded broadcast cable

DIMENSIONS: $\frac{3}{4}$ " diameter, 8 $\frac{3}{8}$ " overall length

NET WEIGHT: 7 ounces (less cable)

OPTIONAL ACCESSORIES: Model S33B Desk Stand, Model A86A Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be the Shure Model 576 or equivalent. The microphone shall be a moving-coil type with a frequency range of 40 to 20,000 cps. The unit shall have an omnidirectional horizontal polar characteristic. The microphone shall have available impedances of 50 ohms and 150 ohms.

The microphone output shall be:

50 ohm impedance —60 db
(0 db = 1 milliwatt per 10 microbars)
150 ohm impedance —60 db
(0 db = 1 milliwatt per 10 microbars)

The microphone rating Gm (sensitivity) at 1,000 cps shall be within 2 db of the following levels:

"Lo" Impedance —154.0 db
"M" Impedance —154.0 db

EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel adapter adjustable through 90° from vertical to horizontal and a 25' (7.6 m) three-conductor shielded cable. The microphone swivel adapter will mount on a stand having a $\frac{5}{8}$ "-27 thread. The overall dimensions shall be 8 $\frac{13}{32}$ " (213.6 mm) in length and $2\frac{5}{32}$ " (19.8 mm) in diameter.

MODEL "333" SUPER-CARDIOID RIBBON MICROPHONE

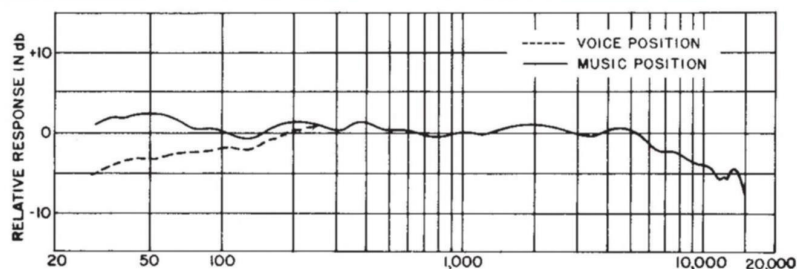
A wide range, compact ribbon microphone that is an outstanding performer with super-cardioid unidirectional pickup pattern. Smooth response from 30 to 15,000 cps makes it particularly suited to broadcast, recording, and for sound reinforcement of theatrical and musical performances. A rugged unit incorporating the famous Shure "Uniphase" acoustical network system to provide optimum rejection of unwanted sounds. Complete with "Positive Action" lifetime swivel and live rubber shock mounting. Voice-Music Switch to adjust low frequency characteristics, and multi-impedance switch. Compact design in non-reflecting bronze-tone case with beige aluminum grille. Available in matched pairs for stereo broadcasting and recording at no additional cost. (Matched to ± 1 db in level and $1\frac{1}{2}$ db in frequency response.)



U.S. Patent
D-178,018

SHURE RIBBON MICROPHONES

The characteristically wide-range response of the ribbon element has made it the most widely used type of microphone for broadcasting and professional recording. Shure engineers have designed remarkable ruggedness* into Shure ribbon microphones, making them an excellent choice for any indoor application where highest quality response is required. * Shure ribbon microphones actually have been used "to pound nails" and subjected to severe drop tests — without affecting the performance.



production uniformity guaranteed to within $2\frac{1}{2}$ db

AUDIO SPECIALIST'S SPECIFICATIONS

- LIST PRICE: \$250.00
- TYPE: Ribbon
- FREQUENCY RESPONSE: 30 to 15,000 cps
- OUTPUT LEVEL: 50 ohm impedance: -60 db; .049 millivolts/microbar. 150 ohm impedance: -59 db; .089 millivolts/microbar. 250 ohm impedance: -59 db; .111 millivolts/microbar (0 db=1 milliwatt per 10 microbars)
- IMPEDANCE: Equipped with a multi-impedance switch, furnishing a choice of three impedances—L-50 ohms, M-150 ohms, H-250 ohms
- POLAR PATTERN: Super-Cardioid (Unidirectional)
- 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: Equivalent to Cannon XLR-3-11
- CABLE: 20 ft., (6.1m) 2-conductor shielded broadcast type
- STAND THREAD: Standard $\frac{5}{8}$ "-27 thread
- STAND COUPLERS: Adapter for $\frac{1}{2}$ " pipe thread or $\frac{5}{8}$ "-24 thread available upon request at no extra charge
- SWITCH: Voice-Music Switch to adjust low frequency characteristic for optimum performance. (See Frequency Response Curve)
- DIMENSIONS: $7\frac{9}{32}$ " high; $1\frac{7}{32}$ " wide; $1\frac{1}{8}$ " deep
- NET WEIGHT (less cable): $1\frac{1}{2}$ lbs.; packaged weight $4\frac{1}{4}$ lbs.
- OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 333 or equivalent. A moving-ribbon type microphone with a frequency range of 30 to 15,000 cps, this unit shall have a unidirectional horizontal polar characteristic. The cancellation at the rear shall be in the order of 15 db. The microphone shall be equipped with a three-position impedance change switch for selecting the microphone impedance to 50 ohms, 150 ohms, or 250 ohms.

The microphone output shall be:
 50 ohm impedance -60 db;
 150 ohm impedance -59 db;
 250 ohm impedance -50 db;
 (0 db = 1 milliwatt per 10 microbars)

The microphone rating Gm (sensitivity) at 1000 cps shall be within 2 db of the following levels:

"L" Position of switch -153 db
 "M" Position of switch -153 db
 "H" Position of switch -151 db
 EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel adjustable from 45° forward and 70° backward. The microphone shall be equipped with a vibration-isolation unit in combination with the stand connector, and it shall have a detachable Cannon XLR-3-11 cable connector capable of connecting to a two-conductor shielded cable. The microphone will mount on a stand having $\frac{5}{8}$ "-27 thread. The overall dimension shall be $7\frac{9}{32}$ " (184.9 mm) $\pm \frac{1}{4}$ " (6.4 mm) in height, $1\frac{7}{32}$ " (31.0 mm) $\pm \frac{1}{8}$ " (3.2 mm) in width, and $1\frac{1}{8}$ " (47.6 mm) $\pm \frac{1}{8}$ " (3.2 mm) in depth.

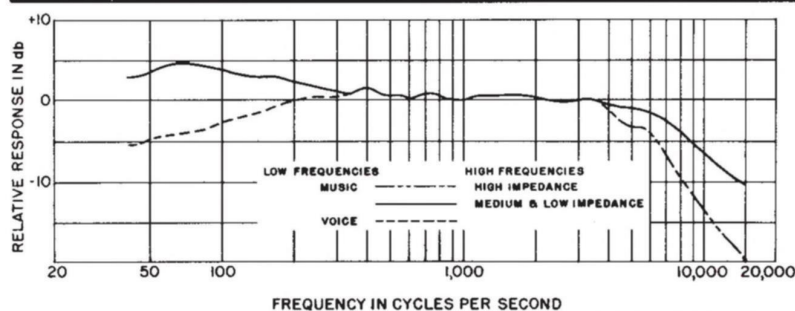
MODEL "300" GRADIENT¹ BIDIRECTIONAL MICROPHONE

A wide-range, quality ribbon microphone with bidirectional pickup pattern making it ideal for dialogs, interviews, and other applications where front and back pickup is desirable. Also a problem solver where side-located loudspeakers can cause feedback. Comes complete with multi-impedance switch, Voice-Music switch to adjust low frequency characteristics, self-adjusting, "Positive-Action" lifetime swivel and live-rubber shock-mount. Slim, modern design case is finished in non-reflecting "Bronze-Tone" enamel. Available in matched pairs for stereo broadcasting and recording at no additional cost. (Matched to ± 1 db in level and $1\frac{1}{2}$ db in frequency response.)

SHURE RIBBON MICROPHONES

The characteristically wide-range response of the ribbon element has made it the most widely used type of microphone for broadcasting and professional recording. Shure engineers have designed remarkable ruggedness* into Shure ribbon microphones, making them an excellent choice for any indoor application where highest quality response is required.

* Shure ribbon microphones actually have been used "to pound nails" and subjected to severe drop tests — without affecting the performance.



production uniformity guaranteed to within $2\frac{1}{2}$ db



U.S. Patent
D-171,055

MICROPHONES FOR CRITICAL APPLICATIONS

AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$150.00

TYPE: Ribbon

FREQUENCY RESPONSE: 40 to 15,000 cps

OUTPUT LEVEL: 30-50 ohms — 60 db*; .044 millivolts/microbar.
150-250 ohms — 59 db*; .100 millivolts/microbar. High — 57 db**;
1.410 millivolts/microbar

* (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, High

POLAR PATTERN: Bidirectional. 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 XLR-3-11 connector

CABLE: 20 ft. (6.1 m) 2-conductor shielded broadcast type

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

STAND COUPLERS: Adapters for $\frac{1}{2}$ " pipe thread or $\frac{5}{8}$ "-24 thread available upon request at no extra charge

SWITCH: Equipped with Voice-Music switch to adjust low frequency characteristic for optimum performance (See Frequency Response Curve)

DIMENSIONS: 6" high; $1\frac{7}{16}$ " wide, $2\frac{1}{16}$ " deep

NET WEIGHT (less cable): 1 lb.; packaged weight 4 lbs.

OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 300 or equivalent. A moving-ribbon type microphone with a frequency range of 40 to 15,000 cps, this unit shall have a bi-directional horizontal polar characteristic. The cancellation at the sides shall be 15 to 20 db. The microphone shall be equipped with a three-position impedance change switch for selecting the microphone rating impedance to 38 ohms, 150 ohms, or 40,000 ohms.

The microphone output shall be:

30-50 ohms — 60 db*

150-250 ohms — 59 db*

High — 57 db**

* (0 db = 1 milliwatt per 10 microbars)

** (0 db = 1 volt per microbar)

The microphone rating Gm (sensitivity) at 1000 cps shall be within 3 db of the following levels:

"L" Position of switch — 153 db

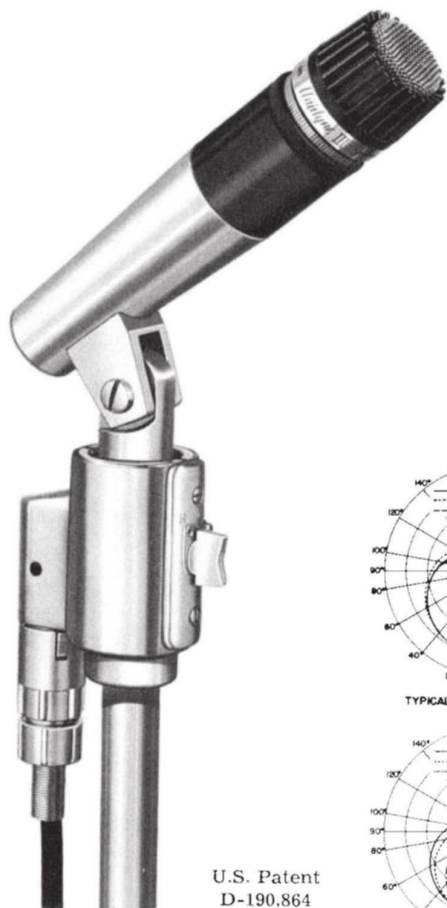
"M" Position of switch — 151 db

"H" Position of switch — 154 db

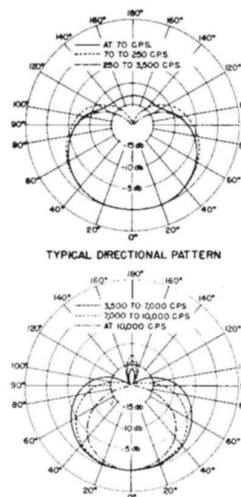
EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel adjustable from 45° forward and 90° backward. The microphone shall be equipped with a vibration-isolation unit in combination with the stand connector, and it shall have a detachable Cannon cable connector capable of connecting to a two-conductor shielded cable.

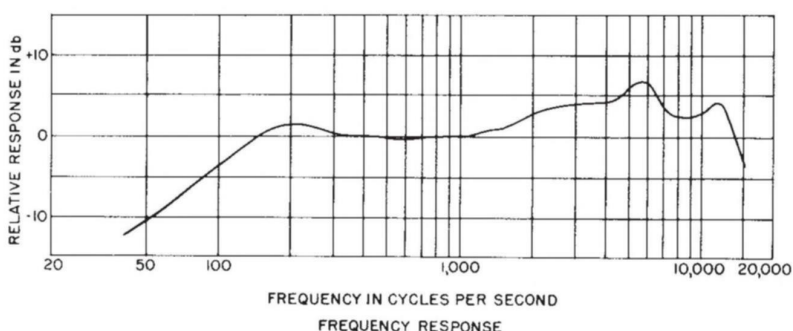
The microphone will mount on a stand having $\frac{5}{8}$ "-27 thread. The overall dimensions shall be $9\frac{7}{32}$ " (234.2 mm) $\pm \frac{1}{4}$ " (6.4 mm) in height, $1\frac{7}{16}$ " (36.5 mm) $\pm \frac{1}{8}$ " (3.2 mm) in width, and $1\frac{3}{32}$ " (27.8 mm) $\pm \frac{1}{8}$ " (3.2 mm) in depth.



U.S. Patent
D-190,864



NOTE: Directional patterns show polar response at six frequencies.



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$135.00
 TYPE: Dynamic
 FREQUENCY RESPONSE: 50-15,000 cps
 OUTPUT LEVEL: 50 ohms: -55 db (0 db=1 milliwatt per 10 microbars); .079 millivolts/microbars
 250 ohms: -55 db (0 db=1 milliwatt per 10 microbars); .176 millivolts/microbars
 IMPEDANCE: Dual. Choice of 50 or 150 ohms. (To match all low impedance inputs, 50 to 250 ohms.)
 DIAPHRAGM: Shure "Duracoustic"
 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
 SWITCH: Impedance selection switch with center position "Off"
 CABLE CONNECTOR: Equipped with Cannon XL-3-11 connector
 CABLE: 20', (6.1 m) two-conductor shielded broadcast type
 STAND THREAD: 5/8"-27 thread
 DIMENSIONS: (Swivel not included) 1 15/64" (31.2 mm) diameter, 5 7/16" (138.1 mm) length
 NET WEIGHT (Less cable): 1 lb., packaged weight 3 5/8 lbs.
 OPTIONAL ACCESSORIES: Model S33B Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 546 or equivalent. A moving coil type microphone with a frequency range of 50 to 15,000 cps, this unit shall have a cardioid polar characteristic. The cancellation at the sides shall be approximately 6 db and the cancellation at the rear shall be 15 to 20 db. The microphone shall be equipped with a three-position impedance "Off" switch for adjusting the microphone rating impedance to 38 ohms-150 ohms.

The microphone output shall be:

50 ohms impedance - 55 db
 (0 db = 1 milliwatt per 10 microbars)
 250 ohms impedance - 55 db
 (0 db = 1 milliwatt per 10 microbars)

The microphone rating Gm (sensitivity) at 1,000 cps shall be within ± 3 db of the following levels:

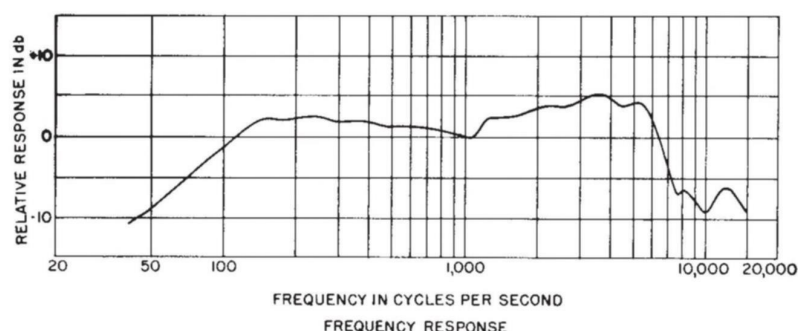
Low Impedance -147 db
 Medium Impedance -146 db
 EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel adjustable through 180°. The microphone shall be equipped with a vibration-isolation unit in combination with the stand connector and it shall have a detachable Cannon cable connector. The microphone will mount on a stand having 5/8"-27 thread.

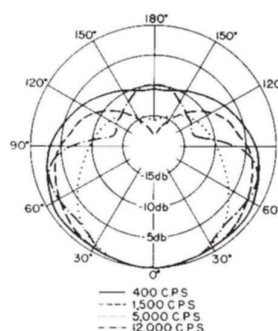
The overall dimensions shall be 8" (203.2 mm) in height, 1 3/8" (34.9 mm) in width, and 2 1/16" (52.5 mm) in depth.

MODEL 556S BROADCAST UNIDYNE II MICROPHONE

The world's most famous microphone because of its wide popularity and universal acceptance. Incorporates all the refinements in appearance and features dictated by many years of experience in a wide variety of applications. Ultra-cardioid, unidirectional characteristic, achieved through the patented Shure "Uniphase" network, provides effective rear rejection to eliminate feedback problems. Extremely rugged construction and resistance to wind and breath noises make the Model 556S outstanding for outdoor applications as well as most indoor broadcasting, recording, and high quality public-address, theatre-stage sound systems. Impedance switch permits selection of low, medium, or high impedance. A classic of microphone design, finished in satin chrome and mounted on lifetime swivel and live-rubber shock mount. Available in matched pairs for stereo broadcasting and recording at no additional cost. (Matched to plus or minus 1 db in level and 1½ db in frequency response.)



TYPICAL DIRECTIONAL PATTERN



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$135.00

TYPE: Dynamic

FREQUENCY RESPONSE: 40 to 15,000 cps

OUTPUT LEVEL: L—30-50 ohm impedance —56 db
(0 db = 1 milliwatt per 10 microbars); .063 millivolts/microbar
M—150-250 ohm impedance —57 db

(0 db = 1 milliwatt per 10 microbars); .125 millivolts/microbar
H—High —56 db (0 db = 1 volt per microbar); 1.410 millivolts/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 (Unidirectional) 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 80° 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. (6.1 m), 2-conductor shielded broadcast type

STAND THREAD: Standard ⅝"-27 thread

DIMENSIONS: 7¼" high, 2⅜" wide, 3⅛" deep

NET WEIGHT (less cable): 2 lbs., packaged weight 3½ lbs.

OPTIONAL ACCESSORIES: Model S33B Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 556S or equivalent. A moving-coil type microphone with a frequency range of 40 to 15,000 cps, this unit shall have an "Ultra-Cardioid" horizontal polar characteristic. The cancellation at the sides shall be approximately 6 db and the cancellation at the rear shall be in the order of 15 db. The microphone shall be equipped with a three-position impedance change switch for selecting the microphone rating impedance to 38 ohms, 150 ohms, or 40,000 ohms.

The microphone output shall be:

"L"—30-50 ohm impedance —56 db

(0 db = 1 milliwatt per 10 microbars)

"M"—150-250 ohm impedance —57 db

(0 db = 1 milliwatt per 10 microbars)

"H"—High —56 db

(0 db = 1 volt per microbar)

The microphone rating Gm (sensitivity) at 1000 cps shall be within ±3 db of the following levels:

"L" Position of switch —149 db

"M" Position of switch —149 db

"H" Position of switch —152 db

EIA Standard SE-105 August 1949

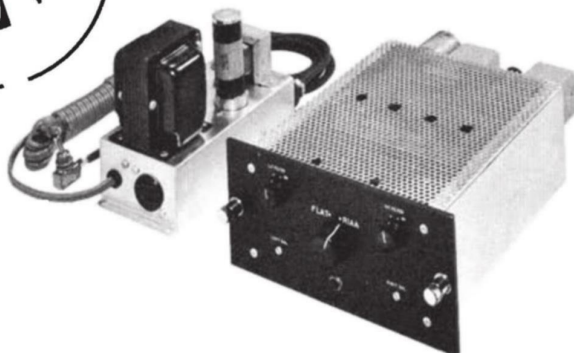
The microphone shall be provided with a swivel adjustable from 45° forward and 80° backward. The microphone shall be equipped with a vibration-isolation unit in combination with the stand connector, and it shall have a detachable Cannon cable connector capable of connection to a two-conductor shielded cable. The microphone will mount on stand having ⅝"-27 thread. The overall dimensions shall be 7¼" (196.8 mm) ±¼" (6.4 mm) in height, 2⅜" (55.6 mm) ±⅛" (3.2 mm) in width, and 3⅛" (77.8 mm) ±⅛" (3.2 mm) in depth.

MODEL SE-1 STEREO TRANSCRIPTION PREAMPLIFIER

Designed especially for stereo broadcasting, recording studio and mastering room playback and related applications where the highest quality of disc reproduction is required. The Model SE-1 provides precise RIAA equalization from magnetic phono re-

producers at line levels. It features separate high and low frequency response trimmers on each channel and includes a flat position for calibration checks and special applications. Its performance meets the most critical standards with exceptionally low distortion, noise level and susceptibility to stray RF fields.

NEW



SPECIFICATIONS

PROFESSIONAL USER NET PRICE: \$295.00

GAIN: .0012 volt input produces a minimum output of +4 dbm
OUTPUT: +4 to +8 dbm nominal at 600 or 150 ohms (Strapped to users choice)

INPUT: 47,000 ohms to properly match most magnetic reproducers

FREQUENCY RESPONSE: ± 1 db from RIAA or flat characteristic: 30-15,000 cps

DISTORTION: Less than 1% at +15 dbm

HUM AND NOISE: -64 db at +4 dbm output

CHANNEL SEPARATION: Greater than 37 db at 10 KC

ADJUSTMENTS: Separate level controls, high and low frequency trimmers, rumble filter (45 cps) and hiss filter (7 KC)

POWER SUPPLY: Separate, with pigtail line switch

DIMENSIONS: Preamplifier requires 3 3/8" x 7" opening with 11" rear clearance

Power Supply mounting dimensions 3 1/2" x 6" x 11"

PHYSIOLOGICAL SOUND TRANSDUCERS SP-5 Series

Models SP-5 and SP-5S are Stethoscope Pickups incorporating a Controlled Magnetic Transducer to detect sound vibrations in human and animal tissue. They are useful in general science, physiology, and biology laboratories, as well as for medical and veterinary clinical applications. They are ideally suited for the study of human heart sounds because they incorporate the following features:

Frequency response independent of applied pressure

Velocity sensitive to compensate for sound losses through the body

Low electrical impedance and high sensitivity

Low ambient acoustic sensitivity in desired frequency range

Available in two versions: for hand held use, Model SP-5; and for hands-free applications with adjustable web strap, Model

SP-5S. These units may be used with standard medical phonocardiograph equipment, inexpensive "electronic stethoscopes," or with high quality components in an assembled system. The output may be presented in a number of ways—such as by loudspeakers, earphones, oscilloscopes, graph recorders, and may be preserved on magnetic tape with a standard tape recorder. It is an ideal transducer to "upgrade" any existing system.

SPECIFICATIONS

Model SP-5 List Price: \$162.50

Model SP-5S List Price: \$180.84

TYPE: Controlled Magnetic, direct coupled

FREQUENCY RESPONSE: Smooth from below 10 cps to 1000 cps with velocity characteristic

ELECTRICAL IMPEDANCE: Nominal 230 ohms at 100 cps

OUTPUT: Approximately 0.2 mv for adult normal heart

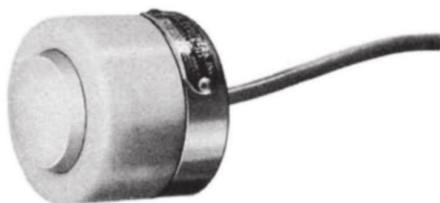
CABLE: Two-conductor shielded, 10 foot (3.0 m) with trimmed conductor

FINISH: Anodized aluminum and white inert plastic

MOUNTING: SP-5—Hand held. 1.12" x 1.5" diameter (28.7 mm x 38.1 mm diameter). SP-5S—3/4" x 1/16" open strap slot. 1.3" x 1.5" Diameter (33.0 mm x 38.1 mm Diameter)

WEIGHT: SP-5—86 grams, SP-5S 110 grams

NEW



VIBRATION PICKUPS

Used for locating and measuring vibration as well as detection of sudden motion. Can be used for a wide variety of applications such as:

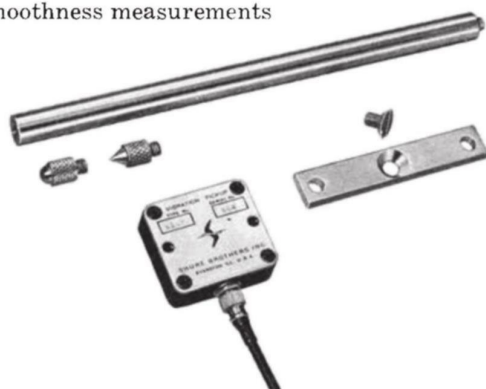
Pickup for protection systems Balancing rotating systems

Monitoring of animal activity Selecting shock mountings

Analysis for stress and strain

Detection of leaks and wear points

Surface smoothness measurements



Model 61B, Model 61CP

The Model 61B has a triple moisture sealed Grafoil Bimorph Crystal element. The 61CP has a Lead Zirconate Titanate (PZT) element. The units may be fastened to an object or used with the furnished extension rod for point-to-point tests.

SPECIFICATIONS

61B—Crystal List Price: \$ 97.50

61CP—Ceramic List Price: \$125.00

FREQUENCY RESPONSE: 3 KC resonance

INTERNAL IMPEDANCE: 61B—Equivalent to .005 microfarad capacitor. Recommended Load: 1/2 to 5 megohms.

61P—Equivalent to .010 microfarad capacitor. Recommended Load: 1/2 to 5 megohms.

CASE: Die-cast aluminum, black finish

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

Recognizing that the quality of reproduction a sound system provides is absolutely limited by the quality of sound put into it by the microphone, Shure, for over a quarter century, has provided the highest quality microphones for public-address use. Shure microphones have consistently been selected by sound engineers and audio specialists for installations where quality of reproduction or difficult acoustics required a superior microphone. Whether a microphone is selected for installation in a theater, nightclub, auditorium, music hall, school, church, meeting hall, gymnasium, legislative or judicial chamber, or any other indoor or outdoor application, one of the many Shure microphones can provide the ideal solution at a reasonable cost. Shure microphones are rugged—may be depended upon to deliver consistent performance for years without deviation from their original standards. Shure microphone accessories also provide additional versatility and practical value when used with Shure microphones. The following pages contain information on Shure products designed to give the utmost performance for public-address use. Also included are famous Shure microphones for mobile and fixed-station communications, paging and special applications.

SHURE

FIRST IN PUBLIC-ADDRESS SOUND REINFORCEMENT SYSTEMS



MODEL 330 SUPER CARDIOID UNIRON MICROPHONE

High-quality microphone performance for on-stage, recording and broadcast use. Smooth, wide-range response worthy of top name performers. Super-cardioid unidirectional pickup pattern to solve difficult feedback problems. Equally at home in a concert hall or night club stage, it has become the accepted standard in the finest theater-restaurant, hotels and supper clubs. Also outstanding for sound reinforcement in theaters of all types including such difficult sound problems as found in tent theaters "in-the-round." Compact, distinctive, modern design with satin chrome finish and anodized aluminum grille. Available in matched pairs for stereo broadcasting and recording at no additional cost. (Matched to plus or minus 1 db in level and 1½ db in frequency response.)



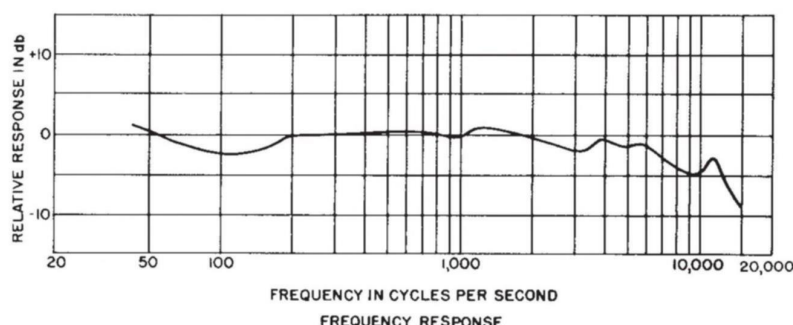
U.S. Patent
D-178,018



SHURE RIBBON MICROPHONES

The characteristically wide-range response of the ribbon element has made it the most widely used type of microphone for broadcasting and professional recording. Shure engineers have designed remarkable ruggedness* into Shure ribbon microphones, making them an excellent choice for any indoor application where highest quality response is required.

* Shure ribbon microphones actually have been used "to pound nails" and subjected to severe drop tests — without affecting the performance.



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$120.00

TYPE: Ribbon

FREQUENCY RESPONSE: 30 to 15,000 cps

OUTPUT LEVEL: 50 ohm impedance — 59 db*; .049 millivolts/microbar, 150 ohm impedance — 57 db*; .089 millivolts/microbar, 250 ohm impedance — 58 db*; .111 millivolts/microbar

* (0 db=1 milliwatt per 10 microbars)

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

POLAR PATTERN: Super-cardioid (Unidirectional)

MAGNETIC CIRCUIT: Use 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., two-conductor shielded broadcast type

STAND THREAD: Standard ⅝"-27 thread

DIMENSIONS: 3⅛" high, 1⅞" wide, 1⅞" deep

NET WEIGHT (less cable): 1½ lb.; packaged weight 3⅞ lbs.

OPTIONAL ACCESSORIES: Model S33 Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A45 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be a Shure Model 330 or equivalent. A moving ribbon type microphone with a frequency range of 30 to 15,000 cps. The unit shall have a super cardioid unidirectional polar characteristic. The microphone shall be equipped with a three-position impedance change switch for adjusting the microphone impedance to 50 ohms, 150 ohms, or 250 ohms.

The microphone output shall be:

50 ohm impedance — 59 db*

150 ohm impedance — 57 db*

250 ohm impedance — 58 db*

* (0 db=1 milliwatt per 10 microbars)

The microphone rating Gm (sensitivity) at 1000 cps shall be within ±2 db of the following levels:

50 ohm Position of switch — 152 db

150 ohm Position of switch — 152 db

250 ohm Position of switch — 150 db

EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel adjustable from 45° forward and 70° backward. The microphone shall be equipped with a vibration-isolation unit in combination with the stand connector, and it shall have a detachable Cannon cable connector capable of connecting to a two-conductor shielded cable.

The microphone will mount on a stand having a ⅝"-27 thread. The overall dimensions shall be 7⅞" (184.9 mm) ±¼" in height, 1⅞" (31.0 mm) ±⅛" in width, and 1⅞" (47.6 mm) ±⅛" in depth.

MODELS 315 AND 315S GRADIENT¹ BIDIRECTIONAL MICROPHONES

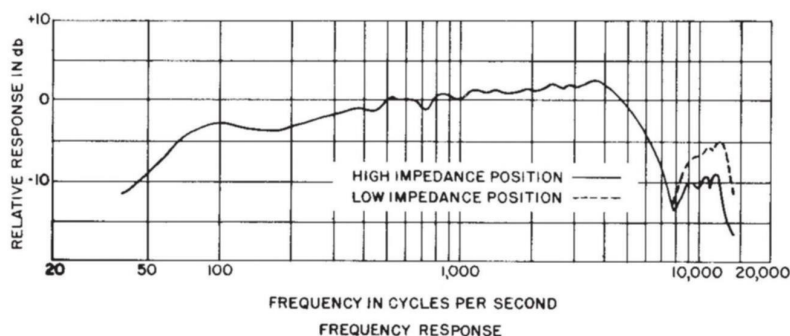
The "Figure 8" pickup pattern of this unit makes it ideal for dialogues, interviews, and other group pickup applications where front and back pickup is desirable. It is also a problem solver in public-address systems where loudspeakers located at the side of the microphone tend to cause feedback problems. Comes complete with multi-impedance switch and lifetime swivel for tilting the microphone toward the source of sound.

Model 315S includes "On-Off" switch; Model 315 is without switch. Slim modern design case has smart satin chrome finish. Available in matched pairs for stereo recording at no additional cost. (Matched to plus or minus 1 db in level and 1½ db in frequency response.)

SHURE RIBBON MICROPHONES

The characteristically wide-range response of the ribbon element has made it the most widely used type of microphone for broadcasting and professional recording. Shure engineers have designed remarkable ruggedness* into Shure ribbon microphones, making them an excellent choice for any indoor application where highest quality response is required.

* Shure ribbon microphones actually have been used "to pound nails" and subjected to severe drop tests — without affecting the performance.



U.S. Patent
D-171,055

AUDIO SPECIALIST'S SPECIFICATIONS

- LIST PRICE:** 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*; .044 millivolts/microbar. M—150-250 ohm impedance —60 db*; .100 millivolts/microbar. H—High —57 db**; 1.410 millivolts/microbar
* (0 db = 1 milliwatt per 10 microbars)
** (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:** Bidirectional, 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 ⅝"-27 thread
- DIMENSIONS:** 6" high, 1⅞" wide, 1⅜" deep
- NET WEIGHT (less cable):** 1 lb.; packaged weight 2½ lbs.
- OPTIONAL ACCESSORIES:** Model S36A Desk Stand, Model A86A Cable-Type Transformer, Model S39A Vibration-Isolation Stand, Model A47 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be a Shure Model 315 (315S) or equivalent, a ribbon microphone with a frequency range of 50 to 12,000 cps. This unit shall have a bidirectional polar characteristic. The cancellation at the sides shall be 15 to 20 db. The microphone shall be equipped with a three-position impedance change switch for adjusting the microphone rating impedance to 38 ohms, 150 ohms, or 40,000 ohms. The Model 315S shall have a built-in "On-Off" switch. The Model 315 shall have no switch.

The microphone output shall be:

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

The microphone rating Gm (sensitivity) at 1000 cps shall be within ±3 db of the following levels:

- "L" Position of switch —155 db
"M" Position of switch —153 db
"H" Position of switch —155 db
EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel and it shall have a detachable cable connector capable of connection to a two-conductor shielded cable. The microphone will mount on a stand having ⅝"-27 thread. The overall dimensions shall be 9⅝" (224.6 mm) ± ¼" in height, 1⅞" (36.5 mm) ± ⅛" in width, and 1⅜" (27.8 mm) in depth.

problem-solving **UNIDYNE III** series . . . the only cardioid microphones

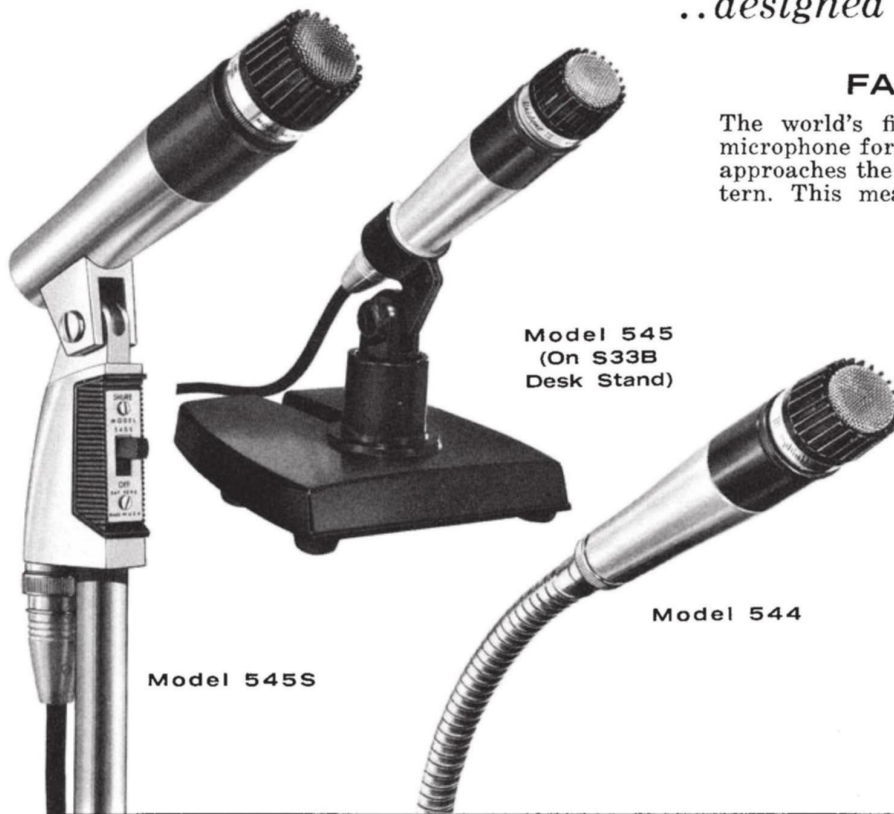
..designed for critical applications where

FAMOUS UNIDYNE III

The world's finest moderately priced dynamic cardioid microphone for public-address system use. The Unidyne III approaches the theoretical ideal of the cardioid pickup pattern. This means completely uniform pickup about the axis at all frequencies—in all planes.

(The advantages of this uniformity of pickup are demonstrated in the chart on the facing page.) Remarkably faithful reproduction of the human voice makes the Unidyne III a superior choice for public-address applications. Low frequency characteristics of the Unidyne III eliminate boominess, and make it a favorite for pickup of drums and bass instruments. Striking black and satin chrome finish in compact modern design makes the Unidyne III a stylish addition to any platform. Model 545 is suitable for handheld and/or stand use with Model A25 Swivel Adapter included. Model 545S is mounted on lifetime swivel and includes on-off switch. Model 544 is furnished with cable attached and is designed for gooseneck mountings.

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



Model 545
(On S33B
Desk Stand)

Model 544

Model 545S

AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: Model 545S \$89.95, Model 545 \$85.00, 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.

TYPE: Dynamic

FREQUENCY RESPONSE: 50-15,000 cps

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

IMPEDANCE: Dual. Choice of 50-250 ohms or High

DIAPHRAGM: Shure Duracoustic

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: Models 545S and 545: Equivalent to Amphenol MC4M plug. (Model 544 has attached cable)

CABLE: Models 545S and 545: 18 ft., three-conductor shielded
Model 544: 7 ft., three-conductor shielded

STAND THREAD: ⅝"-27 thread

DIMENSIONS (not including swivel): 1⅝" diameter, 5⅞" length

NET WEIGHT: Model 545S, ¾ lb., Model 545, ½ lb., Model 544, ⅝ lb. Packaged weight, Model 545S, 2⅜ lbs., Model 545, 2½ lbs.

OPTIONAL ACCESSORIES: Model A86A Cable-Type Transformer; Model S39A Vibration-Isolation Stand; Model S36A Desk Stand for Model 545S; Model S33B Desk Stand for Model 545; Model A47 Quick-Disconnect Isolation Unit for Model 545S; Model A45 Quick-Disconnect Isolation Unit for Model 545

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 545, (545S), (544) or equivalent. A moving coil type microphone with a frequency range of 50 to 15,000 cps, this unit shall have a Cardioid polar characteristic. The cancellation at the sides shall be approximately 6 db and the cancellation at the rear shall be 15 to 20 db. The microphone shall be a dual-impedance microphone having rating impedance of 150 ohms and 40,000 ohms.

The microphone output shall be:

Low: -57 db (0 db = 1 milliwatt per 10 microbars)

High: -55 db (0 db = 1 volt per microbar)

The microphone rating Gm (sensitivity) at 1000 cps shall be within 3 db of the following levels:

Low impedance -149 db

High impedance -151 db

EIA Standard SE-105 August 1949

For Model 545:

The Model 545 Microphone shall be provided with a swivel adapter adjustable through 90° from vertical to horizontal and a receptacle equivalent to the Amphenol 91-MC4F capable of connecting to a three-conductor shielded cable plug. The microphone swivel adapter will mount on a stand having ⅝"-27 thread. The overall dimension shall be 5⅞" (147.6 mm) ± ⅛" in length and 1⅝" (31.4 mm) ± ⅛" in diameter.

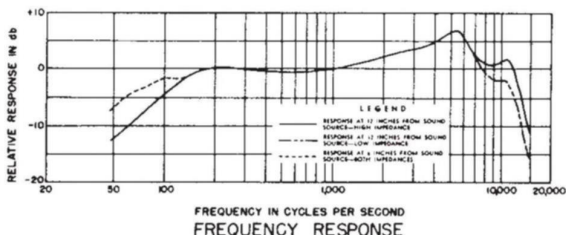
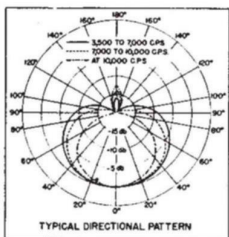
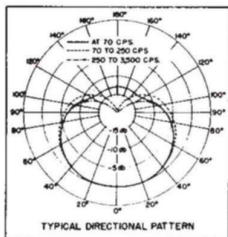
For Model 545S:

The Model 545S Microphone shall be provided with a swivel, a built-in on-off switch and a receptacle equivalent to the Amphenol 91-MC4F capable of connecting to a 3-conductor shielded cable plug. The microphone shall mount on a stand having ⅝"-27 thread. The overall dimension shall be 7⅞" (200.8 mm) ± ⅛" in length, 1⅞" (42.1 mm) in depth and 1⅝" (31.4 mm) ± ⅛" in diameter.

For Model 544:

The Model 544 Microphone shall be provided with a fixed adapter having a ⅝"-27 thread. The overall dimension shall be 7⅞" (194.5 mm) ± ⅛" in length and 1⅝" (31.2 mm) ± ⅛" in diameter.

with pickup symmetrical about axis at all frequencies . . . in all planes
sound system problems seem insurmountable



Model 545S Unidyne III

The world's finest moderately priced dynamic cardioid microphone for general purpose and public address system use. In addition to its outstanding pickup characteristics, the Unidyne III is designed throughout for superior reproduction with utmost convenience and distinguished appearance:

- Smallest of the unidirectional microphones
- Built-in "On-Off" switch
- Improved swivel permits tilting of head through 180° so microphone can be "aimed" at the source of sound

Imagine a perfectly round balloon—now, poke your finger into one side of it and push in hard . . . the resultant configuration represents the ideal symmetrical pickup pattern of a cardioid microphone. Ideally, this pattern should be broad at the front, uniform at all frequencies—with uniform sound quality at any point within the pattern, off-axis as well as on-axis. Otherwise,

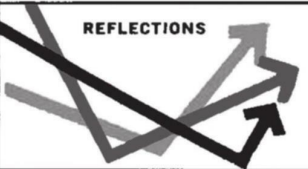
even slight movements of the performer about the axis tend to distort the sound. And, unless the pattern is symmetrical, it is prey to feedback—creating floor and ceiling reflected sound waves. The Unidyne III comes closest of any popular P.A. microphone in reaching the ideal . . . its pattern is totally symmetrical (there is no hidden top or bottom bulge) . . . in fact, it is truly cardioid at frequencies as low as 70 cps!

What to Look For:

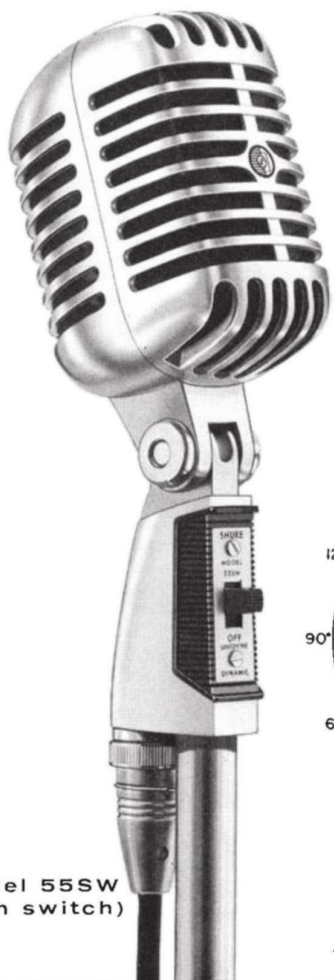
Study the pickup pattern of the Unidyne III. Note its relative uniformity at ALL frequencies. Compare this to the patterns of other microphones which become sharply less directional as frequency drops until at very low frequencies, they become omnidirectional.

Note that the Unidyne III on-axis (solid line) and off-axis (dotted line) response is virtually the same. Note also the smoothness of response. The controlled roll-off at the low end prevents "boomy" sound. Test for pickup pattern symmetry yourself—rotate the Unidyne III while talking into it from various off-axis angles (45°, 90°, etc.). You will note that the volume and tonal quality of the microphone remain constant about the axis.

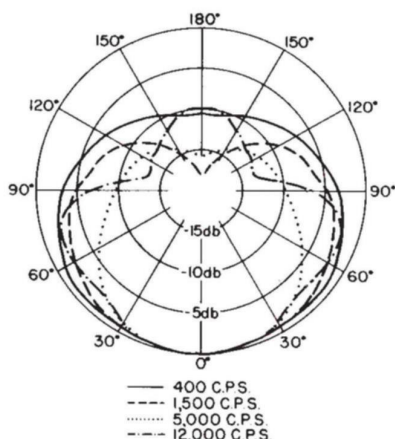
These common microphone problems can be solved only with the Unidyne III

PROBLEMS CAUSED BY INEFFICIENT REJECTION OF UNWANTED SOUNDS BY THE MICROPHONE			
SITUATION	PROBLEM	CAUSES	SOLUTION
	REFLECTIONS Feedback occurs where a so-called "cardioid" microphone is used and the speakers are placed to the rear of the microphone. A common occurrence in churches, auditoriums, and meeting rooms.	Sound bounces off hard surfaces on the walls, floor and ceiling, in and around the audience area and the microphone used is not effective in rejecting these sounds at all frequencies, and in all planes about its axis.	The Unidyne III eliminates this problem because of effective rejection of sound at the rear of the microphone with uniformity at all frequencies. Sounds bouncing off the floor or other reflective surfaces that reach the rear of the Unidyne III are rejected.
	COLUMN LOUDSPEAKERS Unexplained feedback. Column loudspeakers are used to distribute sound more evenly to the audience in churches and auditoriums.	While column speakers direct the sound toward the audience, they also have side and rear sound lobes which may reach the microphone. Feedback occurs when the rear and side sound lobes of the speakers coincide with the rear and side lobes of a so-called "cardioid" microphone.	The Unidyne III solves this problem because it has no rear or side lobes. Thus it rejects the side and rear lobes of the sound column speakers.
	REVERBERANT BOOM A disturbing, echoing effect of low frequency sound often found in churches, large auditoriums, and arenas.	The particular "cardioid" microphone used fails to retain its unidirectional characteristics with low frequencies. In addition, its front response tends to accent low frequencies of the desired sounds. These factors result in pickup and reinforcement of the low frequency reverberation and boominess characteristic of many halls.	Using the Unidyne III Microphone will solve the problem because it maintains a uniform pattern of sound rejection in all frequencies, even as low as 70 cps. The frequency response also has a controlled roll-off of the low end. This prevents reinforcement of the low frequency reverberation and diminishes the effect of a boomy hall.
PROBLEMS CAUSED BY THE MICROPHONE'S INEFFECTIVENESS IN PICKING UP THE DESIRED SOUND			
	GROUP COVERAGE WITH ONE MICROPHONE A single microphone does not provide uniform coverage of a group. This is commonly experienced with choral groups, quartets, instrumental combos, and speaker panels.	The particular "cardioid" microphone used lacks a uniform pickup pattern, so that persons in different positions within the general pickup area of the microphone are heard with varying tonal quality and volume.	The Unidyne III affords uniform pickup of the group with a resulting consistency in volume and sound quality among the members of the group.
	USING MULTIPLE MICROPHONES Variation in the pickup level and tonal quality exists throughout the broad area to be covered. This may occur in stage pickup of musical and dramatic productions, panels and audience participation events.	The pickup pattern of the microphones used is too narrow, causing "holes" and "hot spots". The off-axis frequency response of the microphones also varies.	The Unidyne III permits a smoothness in pickup as the true cardioid pattern gives broad coverage with uniformity throughout the coverage area. This eliminates "holes", "hot spots", and the variations in sound quality and permits blending many microphones with ease.
	DISTANT PICKUP Too much background noise or feedback results when working with microphone at desired distance from sound source.	So-called "cardioid" and particularly long range microphones being used are less directional with lower frequencies. In addition, they have lobes or hot spots that pick up sound at the rear, resulting in the background noise or feedback problem.	Use the Unidyne III to gain relatively long range with effective rejection of sound at all frequencies at the rear of the microphone.

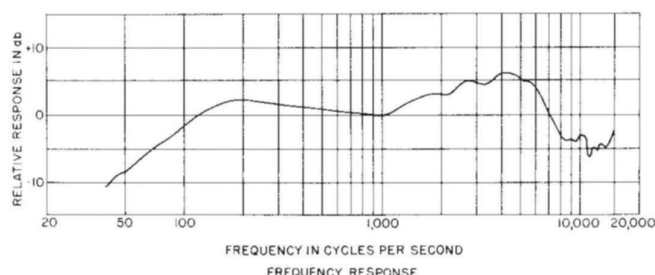
FAMED 55 SERIES UNIDYNE II UNIDIRECTIONAL DYNAMIC MICROPHONE



Model 55SW
(with switch)



TYPICAL DIRECTIONAL PATTERN



AUDIO SPECIALIST'S SPECIFICATIONS

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 —55 db (0 db=1 milliwatt per 10 microbars); .063 millivolts/microbar. M—150-250 ohms —56 db (0 db=1 milliwatt per 10 microbars); .125 millivolts/microbar. H—High —57 db (0 db=1 volt per microbar); 1.410 millivolts/microbar

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

POLAR PATTERN: Ultra-Cardioid (unidirectional). 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 or 80° backward so that the microphone can be aimed at the source of sound

CABLE CONNECTOR: Equivalent to Amphenol MC3M

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

STAND THREAD: Standard 5/8"-27 thread

DIMENSIONS: 7 3/8" (187.3 mm) high, 2 3/16" (55.6 mm) wide, 3 1/16" (77.8 mm) deep

NET WEIGHT (less cable): 1 5/8 lbs.; packaged weight 3 1/4 lbs.

OPTIONAL ACCESSORIES: Model S36A Desk Stand, Model A86A Cable Type Transformer, Model S39A Vibration-Isolation Stand, Model A47 Quick-Disconnect Isolation Unit

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model 55S (55SW) or equivalent. A moving coil type microphone with a frequency range of 50 to 15,000 cps, this unit shall have an "Ultra-Cardioid" polar characteristic. The cancellation at the sides shall be approximately 6 db and the cancellation at the rear shall be in the order of 15 db. The microphone shall be equipped with a three-position impedance change switch for adjusting the microphone rating impedance to 38 ohms, 150 ohms or 40,000 ohms. The Model 55SW shall have a built in "On-Off" switch. The Model 55S shall have no "On-Off" switch.

The microphone output shall be:

- L—35-50 ohms —55 db
(0 db = 1 milliwatt per 10 microbars)
- M—150-250 ohms —56 db
(0 db = 1 milliwatt per 10 microbars)
- H—High —57 db
(0 db = 1 volt per microbar)

The microphone rating Gm (sensitivity) at 1000 cps shall be within 3 db of the following levels:

- "L" Position of switch —149 db
- "M" Position of switch —150 db
- "H" Position of switch —153 db

EIA Standard SE-105 August 1949

The microphone shall be provided with a swivel and it shall have a detachable cable connector capable of connection to a two-conductor shielded cable. The microphone will mount on stand having 5/8"-27 thread. The overall dimensions shall be 7 3/8" (187.3 mm) ± 1/4" in height, 2 3/16" (55.6 mm) ± 1/8" in width, and 3 1/16" (77.8 mm) ± 1/8" in depth.

MODEL 245 UNIPLEX UNIDIRECTIONAL CERAMIC MICROPHONE

Even a budget sound system can have a true unidirectional microphone with the Uniphase, incorporating the same "Uniphase" system found in higher priced Shure Unidirectional microphones. Its wide useful pickup angle at the front and effective elimination of pickup at the rear provides the ideal solution to feedback problems in low cost public address systems. Good voice reproduction for home recording and paging applications. Reliable, rugged ceramic cartridge performs at temperatures from -40° to $+170^{\circ}$ F. Available in four models, all with metal, die-cast case. Lightweight and versatile, it can be used as a hand-held or stand-mounted unit in Models 245S (with switch) and 245 (without switch). Model 245G is supplied with cable attached for gooseneck mounting.

AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: Model 245 \$35.00. Includes A25B swivel-stand adapter and removable cable. Model 245S \$37.00. Includes "On-Off" switch. A25B Swivel-Stand Adapter and removable cable. Model 245G \$30.00. Gooseneck mounting version of 245 with fixed cable, no swivel-stand adapter. Model 245GS \$32.00. Gooseneck mounting version of 245S with "On-Off" switch, fixed cable, no swivel-stand adapter

TYPE: Ceramic

FREQUENCY RESPONSE: 50 to 7,000 cps

OUTPUT LEVEL: -59 db (0 db = 1 volt per microbar); 1.100 millivolts/microbar

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

POLAR PATTERN: Cardioid (unidirectional)

CASE: Die-cast zinc

CABLE AND CONNECTORS: Models 245 and 245S provided with 15' (4.6 m) single-conductor shielded cable with a plug (equivalent of Amphenol MC1F) for attaching cable to microphone. Models 245G and 245GS: 7' (2.1 m) single-conductor shielded cables attached to microphone

SWITCHES: Models 245S and 245GS have built-in "On-Off" switch

STAND THREAD: Models 245 and 245S provided with Model A25B swivel adapter with $\frac{5}{8}$ "-27 thread for use with S38B Desk Stand, or any convenient desk or floor stand. Models 245G and 245GS are especially designed for use with flexible goosenecks having a $\frac{5}{8}$ "-27 thread or for customized installation where a concealed cable is desired

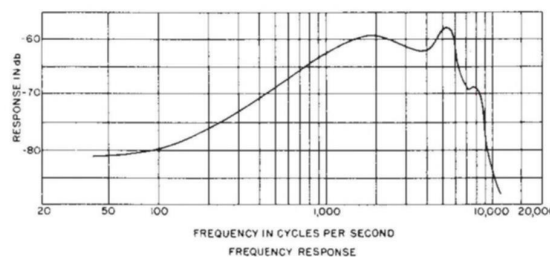
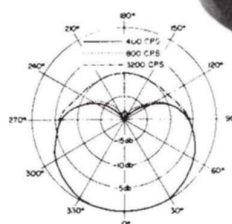
DIMENSIONS (Microphone only): $4\frac{23}{32}$ " (119.9 mm) high, $1\frac{1}{8}$ " (28.6 mm) diameter

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

OPTIONAL ACCESSORIES: Model S38B Microphone Stand



TYPICAL
DIRECTIONAL
PATTERN



UNIDIRECTIONAL CERAMIC
MICROPHONE

MODEL 737A MONOPLEX SUPER-CARDIOID CRYSTAL MICROPHONE

The Monoplex incorporates a high output, long-life "Metal-Seal" crystal cartridge in the famed Shure patented "Uniphase" acoustical network. The "737A" is the only Super-Cardioid crystal microphone available. An excellent choice for "economy" public address systems or home recording. Unidirectional characteristics of maximum reduction of sound at the rear of the microphone and large usable pickup areas at the front help to solve feedback problems.

AUDIO SPECIALIST'S SPECIFICATIONS

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); 2.510 millivolts/microbar

IMPEDANCE: High. Recommended load: 1 to 5 megohms

POLAR PATTERN: Super-Cardioid

CASE: Die-cast zinc

FINISH: Satin chrome

SWIVEL: Lifetime swivel permits tilting the head 90° backward to horizontal position for omnidirectional pickup

CABLE CONNECTOR: Equivalent to Amphenol MC3M

CABLE: 15', single-conductor shielded

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

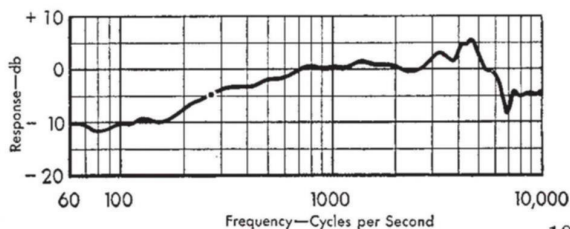
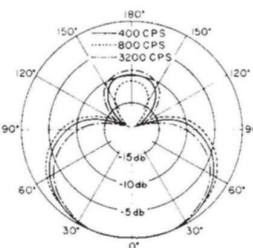
DIMENSIONS: 4" (78.6 mm) high, $6\frac{1}{4}$ " (155.6 mm) high with connector, $3\frac{3}{32}$ " (78.6 mm) wide, $3\frac{7}{32}$ " (81.8 mm) deep with connector

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

OPTIONAL ACCESSORIES: Model S36A Desk Stand, Models A83B, A84B, A85C, A88A "On-Off" Switches, Model S39A Vibration-Isolation Stand, Model A47 Quick-Disconnect Isolation Unit



TYPICAL
DIRECTIONAL
PATTERN



UNIDIRECTIONAL
CRYSTAL MICROPHONE

MODEL 405T TRANSISTORIZED MICROPHONE

Transistor amplifier provides perfect improvement-replacement for carbon microphones now used in mobile communications equipment. 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.

AUDIO SPECIALIST'S SPECIFICATIONS

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: Semidirectional

CASE: High-impact gray "Armo-Dur"

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

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

DIMENSIONS: $3\frac{1}{16}$ " high, $2\frac{5}{8}$ " wide, $1\frac{49}{64}$ " deep

NET WEIGHT: $\frac{5}{8}$ lb., packaged weight: $\frac{7}{8}$ lb.

MODEL 100 SERIES CARBON MICROPHONES

Now featuring "Armo-Dur" high impact, corrosion-proof units. Used around the world for police, taxi, bus, track and commercial applications—more than all other makes combined! Adopted as standard microphone for professional two-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.



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: Model 104A—\$30.00; Model 104B—\$30.00

TYPE: Carbon

FREQUENCY RESPONSE: 300 to 4,000 cps
(Tailored voice response)

OUTPUT LEVEL: 5 db below 1 volt for 100 microbar speech signal

IMPEDANCE: Recommended load—50 to 100 ohms

POLAR PATTERN: Omnidirectional

CASE: High-Impact "Armo-Dur"

FINISH: Gray

CABLE: Cadmium copper coiled cord with trimmed and tinned leads

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

DIMENSIONS: $3\frac{1}{16}$ " high, $2\frac{5}{8}$ " wide, $1\frac{49}{64}$ " deep

NET WEIGHT: $\frac{5}{8}$ lb.

PACKAGED WEIGHT: 1 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.

AUDIO SPECIALIST'S SPECIFICATIONS

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: Omnidirectional

MODEL 115 MICROPHONE

Designed for use with small portable and mobile transmitters. Only 2" in diameter and $1\frac{1}{2}$ " thick. Operating characteristics similar to "100 Series" carbon microphones. Replacement for mfgs. Model Nos. CB20, CB21.



AUDIO SPECIALIST'S SPECIFICATIONS

LIST PRICE: \$31.00

CASE: Aluminum

FINISH: Blue gray wrinkle

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

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

DIMENSIONS: 2" in diameter, $1\frac{1}{2}$ " thick

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

**MODEL 201/401 LOW COST
PALM MICROPHONES****FOR CB, AMATEUR, FIXED
STATION OR MOBILE USES**

Loaded with features—yet priced unusually low. “Shaped” voice response is patterned after professional mobile and SSB amateur response curves... assures maximum intelligibility. Professional design and construction—perform as good as they look. Long-life slide-switch, guaranteed full year. Virtually indestructible “Armo-Dur” wonder plastic case: shock-, shatter-, corrosion-, rust-, and weather-proof. Superior coiled cord won't kink, crack, peel. “Lifetime” hang-up bracket for positive snap-in, easy snap out. Choice of ceramic (model 201) or controlled magnetic (model 401A and 401B) elements. 401B is especially recommended for parallel balanced line operation such as public address, paging or where long cable lengths are required.

U.S. Patent D 194,749

MODEL 275SK “VERSAPLEX”**CITIZEN'S BAND
IMPROVEMENT MICROPHONE**

Citizen's Band broadcasters will find this new ceramic unit ideal for replacing original equipment crystal or ceramic type microphone. Comes complete with wall or panel bracket for handy mounting and coiled cord. “Momentary” push-to-talk switch activates relay circuit. Smooth response from ceramic cartridge that is resistant to extremes of temperature and humidity. Lightweight impact-resistant “Armo-Dur” case is handsomely styled with black finish and anodized satin-finish cap.

Patents Pending

SPECIFICATIONS

LIST PRICE: Model 201—\$18.00. Model 401A—\$22.00.

Model 401B—\$22.00

TYPE: Model 201—Ceramic. Models 401A-401B—Controlled Magnetic
FREQUENCY RESPONSE: 200 to 4000 cps. free from undesirable peaks

OUTPUT LEVEL: Model 201— -55.5 db (0 db=1 volt per microbar); 1.680 millivolts/microbar. Model 401A— -49 db (0 db=1 volt per microbar); 3.500 millivolts/microbar. Model 401B— -48 db (0 db=1 milliwatt per 10 microbars); .390 millivolts/microbar

IMPEDANCE: Model 201—High—Recommended load impedance; 1 to 5 megohms. Model 401A—High—Recommended load impedance; 100,000 ohms or more. Model 401B—Low—Recommended load impedance; 150-250 ohms

CASE: Blue High-Impact “Armo-Dur”

POLAR PATTERN: Omnidirectional

CABLE LENGTH: Coiled Cord extends to 5 ft.

CABLE DESCRIPTION: Models 201-401A—Three-Conductor, One-Conductor Shielded. Model 401B—Four-Conductor, Two-Conductors shielded.

SWITCH: Push-to-talk, non-locking

DIMENSION: 4" high x 2 3/4" Wide x 1 1/2" Deep

NET WEIGHT: Model 201—10 oz. Model 401A—12 oz. Model 401B 12 oz.

FURNISHED ACCESSORIES: Mounting Bracket for Permanent Placement (with associated equipment)

SPECIFICATIONS FOR MODEL 275SK

LIST PRICE: \$16.50

TYPE: Ceramic

FREQUENCY RESPONSE: 40 to 10,000 cps. free from undesirable peaks

OUTPUT LEVEL: 59.5 db below 1 Volt per Microbar; 1.05 millivolts/microbar

POLAR PATTERN: Omnidirectional

IMPEDANCE: High—recommended load 1/2 to 5 Megohms

CABLE: Coiled Cord extends to 5 feet. Three Conductors, one shielded
FINISH: Black high impact plastic body with satin anodized cap and grille

DIMENSION: 4 3/4" long x 1 1/2" diameter

SWITCH: Momentary Slide-to-talk, non-locking type.

FURNISHED ACCESSORIES: Stand adapter with standard 5/8"-27 thread, lavalier assembly (lavalier bracket becomes wall bracket when cord is removed)

OPTIONAL ACCESSORIES: S38 B Desk Stand

NET WEIGHT: 6 oz.

COILED CORD SETS—Coiled Cord replacements for Shure 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	Cadmium-Copper	3 conductor, 1 conductor shielded	Trimmed and tinned leads	With Shure 404C, 488A
C14C	\$10.00	Cadmium-Copper	4 conductor, 2 conductor shielded	Trimmed and tinned leads	With Shure 404B, 488B
C15C	\$ 6.25	Cadmium-Copper	4 conductor, unshielded	Trimmed and tinned leads	With Shure 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	Cadmium-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
C20C	\$ 7.00	Cadmium-Copper	3 conductor, 1 conductor shielded	Trimmed and tinned leads	With Shure 201, 401A
C21C	\$ 7.75	Cadmium-Copper	4 conductor, 2 shielded	Trimmed and tinned leads	With Shure 401B
C22C	\$15.00	Tinsel	3 conductor	PJ-068 plug attached	With Shure 488T
C23C	\$ 6.00	Cadmium-Copper	3 conductor, 1 shielded	Trimmed and tinned leads	With Shure 275SK

NEW



MODEL S39A VIBRATION-ISOLATION STAND

Ideal for use on table, desk, in the footlight area of a stage, for remote broadcasting (particularly for sporting events), conference tables, panels, and for all applications where vibration is a problem. The S39A provides maximum isolation from extreme mechanical vibration by its capacity to absorb mechanical shock as a sponge absorbs water. The Model S39A Stand is designed for all Shure microphones and Swivel Adapter assemblies. An extension adapter is furnished to increase the height of certain microphones for cable connector clearance. Made of durable black crackle finish plastic with heavy duty foam rubber isolation.

NET WEIGHT: 2½ lbs., Packaged Weight, 2½ lbs.

LIST PRICE: \$25.00

DESK STANDS

S38 ROUND STAND

This stand is a heavy die-cast base. Metal screw machine stud connects microphone adapter to stand base. NET WEIGHT: ½ lb., Packaged weight, 1 lb.

MODEL S38. (Bronze) for use with 245, 777 Series microphones.

for use with Models 275S, 275SK,



MODEL S38B. (Black) for use with Models 275S, 275SK, 415, 430, 575S, 575SB.

MODELS S38 and 38B.

LIST PRICE: \$4.50

S34B 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.

NET WEIGHT: ½ lb. Packaged weight, ¾ lb.

LIST PRICE: \$4.50



S36A "TEARDROP" DESK STAND

MODEL S36A. Streamlined gray desk mount fits all Shure connector-type microphones including 51, 51S, 55S, 55SW, 315, 315S, 540S, 545S, 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 page 36.

NET WEIGHT: 1 lb., packaged weight, 1½ lbs.

LIST PRICE: \$6.50



S33 MODERN DESK STAND

MODEL S33. Baked bronze finish. For use with Models 300, 333, 525, and 535.

NET WEIGHT: 2½ lbs., Packaged weight, 3 lbs.

LIST PRICE: \$15.00



MODEL S33B. Same as S33—in black finish. For use with Models 330, 530, 544, 545, 546, 556S, 576, 578, 415, and 430.

LIST PRICE: \$15.00

SWIVEL ADAPTERS

MODEL A25. (Bronze) To be used with Model 245, 525, 535 and 777 Series microphones—For use with standard desk or floor stand.

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



LIST PRICE: \$5.50



MODEL A57S Slip-in Swivel Adapter for Model 576, 578 and 570 ¾" diameter Dynamic Microphones—For use with standard desk or floor stand.

MODEL A57S.

LIST PRICE: \$5.50

QUICK DISCONNECT MICROPHONE ISOLATION UNITS

Designed for use with microphones normally mounted on desk or floor stands but which must be periodically removed from stand for hand held or carry-around use. In addition, because of a molded rubber insert, the adapters effectively isolate the microphones from mechanical vibration, shocks and noises carried to the microphone through the desk or floor stand. Quick disconnect operation is instant, easy and silent. Made of aluminum and anodized for beauty and long wear despite frequent handling.

Model A45 is designed for microphones incorporating an isolation assembly such as the Shure Models 556, 330 and 546. It also can be used with microphones mounted on Shure A25 Swivel Adapter.

Model A47 is designed for microphones with connectors such as Shure Models 55S, 51, 545S, 540S, 737A or nearly all microphones with a standard ⅝"-27 thread.

SPECIFICATIONS FOR MODELS A45-47

LIST PRICE: Model A45—\$12.00. Model A47—\$12.00

DIMENSIONS: Model A45—3½" high x 1⅞" diam. assembled. Model A47—5½" high x 1⅞" diam. assembled.

WEIGHT ADDED TO HAND HELD MICROPHONE: Model A45—2.3 oz. Model A47—3.6 oz.

NET WEIGHT: Model A45—3.3 oz. Model A47—4.6 oz.

Model A45



Model A47



SHURE MICROPHONES

AT A GLANCE



THERE'S A SHURE MICROPHONE FOR EVERY USE— EVERY BUDGET

Additional literature on specific microphones is available directly from Shure Brothers, Inc., or may be obtained from your local Sound Consultant, P.A. System Dealer, or Sound Installer.

KEY:	A ⁺ A }	Recommended
	B	Good
	C	Budget Choice
	X	Not recommended for technical reasons

These are recommendations for each specific application listed at left of chart. Look for the application (or the closest one listed) for which you are selecting a microphone, then make your selection.

NOTES:

- (1) Various Models Available: Basic Model Listed
- (2) Low (30-50 ohms) — Medium (150-250 ohms) — High Impedance
- (3) "L"—50 ohms; "M"—150 ohms; "H"—250 ohms
- (4) Special "Shaped" response—See complete catalog listing for explanation

	UNIDIRECTIONAL							BIDIRECTIONAL		
										
TYPE:	RIBBON	RIBBON	DYNAMIC	DYNAMIC	DYNAMIC	DYNAMIC	CRYSTAL	CERAMIC	RIBBON	RIBBON
SHURE MODEL:	333 Uni-Ron	330 Uni-Ron	546 Unidyne III	556S Unidyne II	545 (545S) ⁽¹⁾ Unidyne III	55S (55SW) Unidyne II	737A Monoplex	245 (245S) Uniplex	300 Gradient ¹	315 (315S) Gradient ¹
LIST PRICE	\$250.00	\$120.00	\$135.00	\$135.00	545-\$85.00 545S-\$89.95	55S-\$83.00 55SW-\$85.00	\$46.00	245-\$35.00 245S-\$37.00	\$150.00	315-\$89.50 315S-\$91.50
SPECIAL FEATURES:	Shock-Mounted	Shock-Mounted	Shock-Mounted	Shock-Mounted	545-Probe 545S-Switch & Swivel	55SW-Switch	Low Cost	245 S-Switch	Shock-Mounted	315S-Switch
IMPEDANCE:	Triple ⁽³⁾	Triple ⁽³⁾	Dual ⁽³⁰⁻¹⁰⁰⁻¹⁰⁰⁻²⁵⁰⁾	Triple ⁽²⁾	Dual (L&H)	Triple ⁽²⁾	High	High	Triple ⁽²⁾	Triple ⁽²⁾
FREQUENCY RESPONSE (CPS):	30-15,000	30-15,000	50-15,000	40-15,000	50-15,000	50-15,000	60-10,000	50-7000	40-15,000	40-15,000
PUBLIC ADDRESS SOUND REINFORCEMENT SYSTEMS:										
Auditorium and Theatre	A+	A+	A+	A	A+	A	C	C	A+	A
Outdoor Sound Systems	X	X	A+	A+	A	A	X	C	X	X
Night Club	A+	A+	A+	A+	A	A	C		A+	A
Concert Stage	A+	A+	A	A	B	B	C		A	B
Hotel Meeting Room	A	A	A+	A+	A+	A	B	C	A	A
Church Pulpit	A+	A+	A+	A+	A	A	C		A+	A
Paging and Dispatching					A	A	B	A		
Low Cost P.A. Systems							A+	A+		
RECORDING and BROADCASTING:										
Broadcasting	A+	A+	A+	A	B	B			A	B
Studio Recording	A+	A+	A	A	A	B			A	B
Conference, Speech & Drama Recording	A+	A+	A+	A+	A+	A+	B	C	A+	A
Hobby and Home Recording (Music)	A+	A+	A+	A+	A+	A+	B		A	B
COMMUNICATIONS:										
Amateur Base Station					A	A	A	A		
Amateur Mobile										
Dispatcher—Base Station					A+	A	B	A		
Emergency—Police, Fire, & Civil Defense					A+*	A*	X			
SPECIAL APPLICATIONS:										
Language Laboratories					A+ ^(Model 544)	A		B ^(Model 245G)		
Lavalier Microphones (worn on person)										
* Specifically recommended for Official Civilian Defense Applications.										

OMNIDIRECTIONAL

SPECIAL PURPOSE MICROPHONES

[illegible]

CONTENTS

SERVICE AND GUARANTEES	page 2
SPECIFICATIONS — WHAT THEY MEAN	page 3
SELECTING THE CORRECT SHURE MICROPHONE FOR THE APPLICATION	page 4-5
MICROPHONES FOR CRITICAL APPLICATIONS	page 6-11
SPECIAL PROFESSIONAL AUDIO PRODUCTS	page 12
PUBLIC ADDRESS MICROPHONES	page 13-28
UNIDIRECTIONAL RIBBONS	page 14
BIDIRECTIONAL RIBBONS	page 15
UNIDIRECTIONAL DYNAMICS	page 16-18
UNIDIRECTIONAL CRYSTAL	page 19
UNIDIRECTIONAL CERAMIC	page 19
OMNIDIRECTIONAL DYNAMIC	page 20-24
OMNIDIRECTIONAL CONTROLLED MAGNETIC	page 25-26
OMNIDIRECTIONAL CRYSTAL	page 27-28
OMNIDIRECTIONAL CERAMIC	page 28
PAGING AND BASE-STATION MICROPHONES	pages 26, 29
AMATEUR RADIO MICROPHONES	page 30
NOISE-CANCELLING MICROPHONES	page 31
MOBILE COMMUNICATIONS MICROPHONES	page 32-34
MICROPHONE STANDS, ACCESSORIES, REPLACEMENT PARTS	page 34-37
SOUND LEVEL MICROPHONE	page 37
MINIATURE MICROPHONES	page 38
APPLICATIONS CHART	inside back cover

SHURE

SHURE BROTHERS, INC.

222 Hartrey Avenue, Evanston, Illinois, 60202, USA

PHONE DAVIS 8-9000

CHICAGO PHONE SHeldrake 3-1600

CABLE ADDRESS: Shuremicro



Scans:

<https://archive.org/>