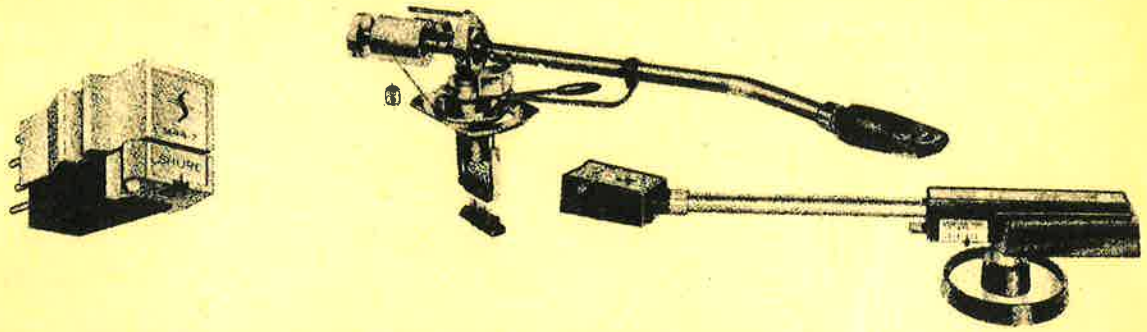
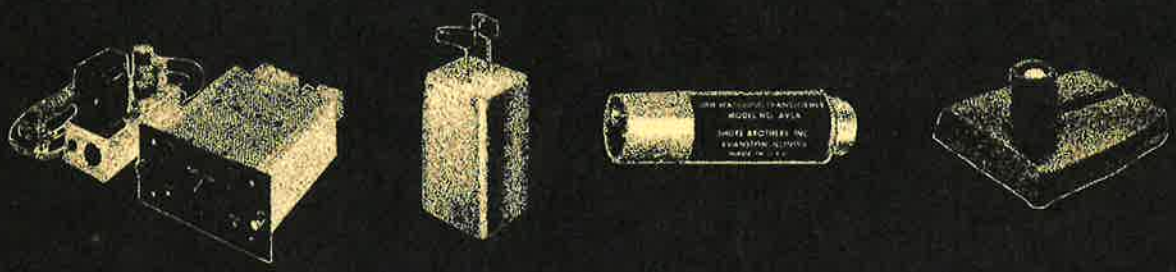
technical data for

SHURE

PROFESSIONAL PRODUCTS

MICROPHONES





For Your Information on other Shure Products

For further information contact: R. W. Carr, *Manager*
Professional Products Division
Shure Brothers, Incorporated
222 Hartrey Avenue, Evanston, Illinois
Phone: DA 8-9000

SHURE PROFESSIONAL PRODUCTS DATA

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General

The SM5A and SM5B have been painstakingly developed to uniquely satisfy the existing requirements for boom operation, and to provide a new degree of reproduction quality and flexibility of application in television and motion picture studio and location work. Features of their design and operation include:

- Directivity—cardioid, symmetrical about axis and exceptionally uniform with frequency. Minimizes sound coloration due to off axis pickup—such as from reverberation, reflections from floor or scenery, and performers accidentally "off-mike". Provides very effective rejection of background noise.
- Frequency response — wide range, especially tailored to provide natural dialogue or vocal music pickup with good presence, yet also suitable for scoring.
- Integral windscreen—very effective in outdoor locations and for fast boom swings.
- Mechanical suspension—two stage mechanical filter for any boom application. Suspension elements are internal to windscreen to prevent wind noise generation in the suspension assembly.
- Minimum electrical noise — absence of transformers or response correcting inductors prevents pickup of electrical noise. May be used in extreme hum fields.
- Perfectly balanced — excellent stability and minimum overswing.
- Ruggedness and dependability—under all operating conditions. Element and isolation assembly are protected by the outer windscreens and steel reinforcing rods.

Because of the unusual mechanical construction and performance characteristics, the SM5 may be used to advantage in many applications where boom operation is not practical—for example, with the accessory S33C Desk Mount for outdoor sports and other difficult remote pickups.

SPECIFICATIONS

Type: Dynamic

Frequency Response: 50 to 15,000 cps. (See Figure A)

Polar Pattern: Unidirectional. (See Figure B)

Impedance: Model SM5A — 50 ohms
Model SM5B — 150 ohms

Output Level: 1,000 cps Response

Model SM5A (50 ohm impedance)
Open circuit voltage ..... —84.0 db*(.063 mv)
Power level into 50 ohms ... —57.0 db**
EIA Microphone Rating
Gm (sensitivity) .....—150.0 db***

Model SM5B (150 ohms impedance)
Open circuit voltage ..... —79.5 db*(.103 mv)
Power level into 150 ohms . —57.0 db**
EIA Microphone Rating
Gm (sensitivity) .....—150.0 db***

(*) 0 db = 1 volt per microbar
(**) 0 db = 1 milliwatt with 10 microbars
(***) 0 db = EIA Standard SE-105/ August, 1949

Connector: Cannon XLR-3-42 receptacle mounted on microphone.

Finish: Textured dark gray enamel. Light and dark gray plastic foam windscreens.

Dimensions: See Figure C.

Other Mounting: A 5/8 —27 adaptor is supplied. Desk Mount available as accessory.

Net Weight: 1 pound, 15 ounces (879 grams)

Hum Level: —120 dbm with field of 1×10^{-3} gauss at 60 cps.

27A285 (6-65)

Printed in U.S.A.
Shure Patents Pending

REPLACEMENT PARTS:

The following replacement parts and accessories may be ordered through your authorized Shure Professional Microphone Distributor or from Shure Brothers, Incorporated.

Description	Shure Part No.
Cartridge Assembly	
a. Model SM5A	99A347
b. Model SM5B	99B347
Rubber Isolation Suspenders	66A94
Outer Windscreen Assembly	
a. Light gray	90A1043
b. Charcoal gray	90B1043
Cable Assembly (replacement)	70A2001
Accessory Desk Mount	S33C
Boom Adapter	31A936
5/8"-27 Stand Adapter	90A1071
External Shock Assembly	94A343

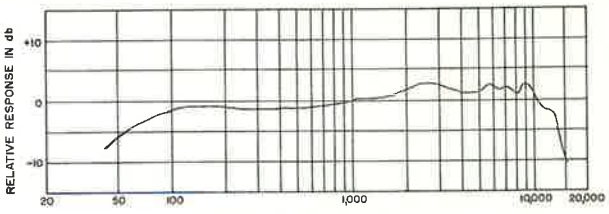
A. Instructions for removing Outer Windscreens:

1. With the fingers, gently push back (at the nameplate end) the plastic foam of the outer windscreen adjacent to the reinforcing rods extending into the outer windscreen. The rods can be easily felt. The round head screws will become visible.
2. Remove the four round head screws.
3. Slide the outer windscreen off the ring structure and reinforcing rods.

B. Instructions to install Outer Windscreens:

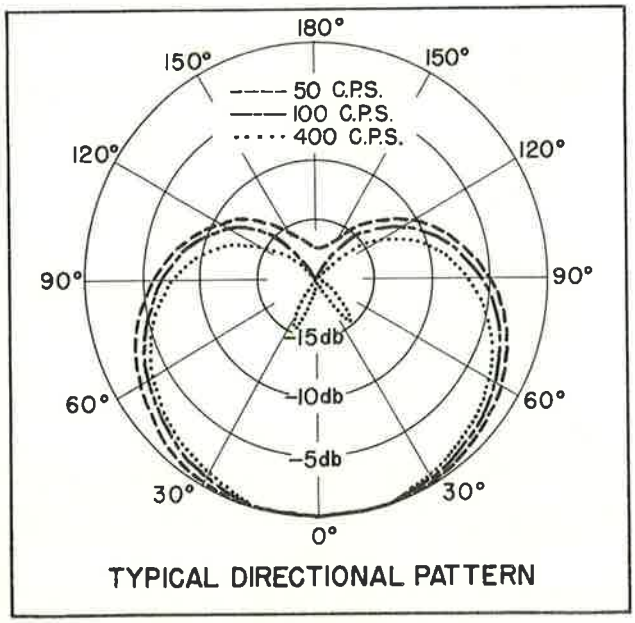
1. Insert the four round head screws into the holes provided in the metal plate at the end of the outer windscreen assembly.
2. Slide outer windscreen over the reinforcing rods toward the ring structure.
3. Tighten the four round head screws. Push back foam with fingers while tightening the screws.

Guarantee: Each SM5 Microphone is guaranteed to be free of defects in material and workmanship. Should this Microphone cease to operate properly within two years from the date of purchase, it will be repaired or replaced at no charge by Shure Brothers, Incorporated. (The finish and foam windscreens are excluded from this two-year service policy.)



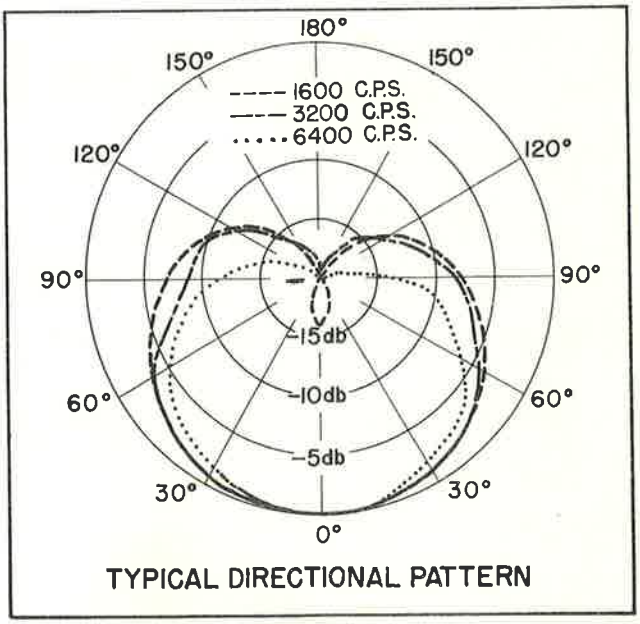
FREQUENCY RESPONSE

FIGURE A



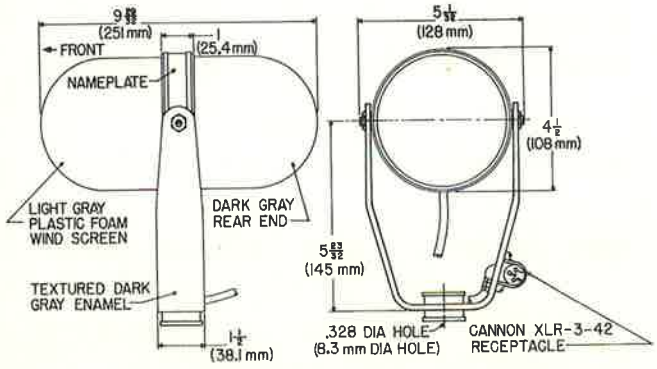
TYPICAL DIRECTIONAL PATTERN

FIGURE B



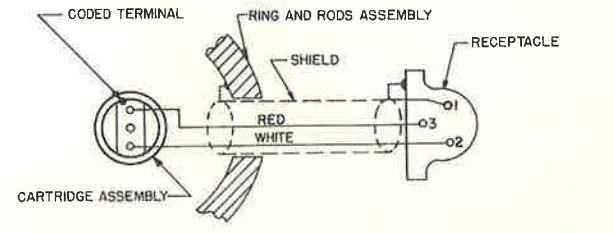
TYPICAL DIRECTIONAL PATTERN

FIGURE B



OVER-ALL DIMENSIONS

FIGURE C



POSITIVE PRESSURE PRODUCES POSITIVE VOLTAGE AT PIN 2 WITH RESPECT TO PIN 3

INTERNAL CONNECTIONS

FIGURE D

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

Model SM33

The Model SM33 is a compact and rugged unidirectional ribbon microphone combining wide range response and a Super-Cardioid directional pattern. This polar pattern is somewhat more directional than the conventional cardioid, providing excellent control of unwanted surrounding noise and reverberation. The performance characteristics are ideal for studio use in broadcasting and recording and for critical sound reinforcement applications.

The Model SM33 features:

- Unusually effective Super-Cardioid pickup characteristic minimizes effects of studio acoustics and background noise.
- Warm, smooth sound from wide frequency response range. Well suited to both voice and music.
- Low frequency response characteristic adjustable by means of a Response Selector Switch.
- Built-in shock mount for quiet operation.
- Rugged mechanical design and internal ribbon protection assure reliable operation under severe conditions of use.

SPECIFICATIONS

Type: Ribbon.

Frequency Response: 40 to 15,000 cps. Low Frequency Response Selector. See Figure A.

Polar Pattern: Super-Cardioid (Unidirectional) Response. See Figure D.

Impedance: Dual. Choice of 30-50 ohms or 150-250 ohms. (Connected for 150-250 ohms when shipped). See paragraph on impedance changing.

Output Level: 1,000 cps response

Model SM33 30-50 ohms
- Open circuit voltage ..... — 87.0 db* (0.049 mv)
- Power level ..... — 60.0 db**
- EIA Microphone Rating Gm (sensitivity) ..... —152.5 db***

Model SM33 150-250 ohms
- Open circuit voltage ..... — 81.0 db* (0.089 mv)
- Power level ..... — 58.5 db**
- EIA Microphone Rating Gm (sensitivity) ..... —152.5 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

Connector: Equipped with Cannon XL-3-12 type connector in microphone.

Cable: 20 foot (6.1 m.) 2-conductor shielded broadcast type with Cannon XLR-3-11-C connector attached.

Case: Die-cast zinc.

Finish: Textured light and dark gray enamel.

Swivel: Self adjusting lifetime swivel permits tilting the head 45° forward and 70° backward.

Shock Mount: Special live rubber vibration-isolation unit.

Stand Thread: 5/8" -27 thread.

Stand Couplers: Adapter for 1/2" pipe thread or 5/8" -24 thread available upon request at no extra charge.

Dimensions: See Figure C.

Net Weight less Cable: 1 pound 10 ounces (736 grams)

Shipping Weight: 3 1/4 pounds (1474 grams)

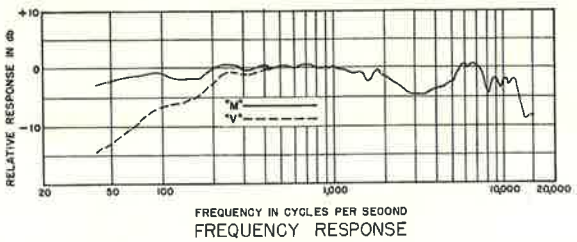
Instructions for changing to 30-50 ohm impedance: See Figures B and C.

1. Remove the set screw (#2-56) at the receptacle end of the microphone.
2. Pull out the 3-prong insert from the receptacle.
3. Disconect the BLACK lead from pin number 3.
4. Solder the BLUE lead to pin number 3.
5. Insulate end of the BLACK lead with tape.
6. Re-assemble insert into receptacle and tighten set screw.

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

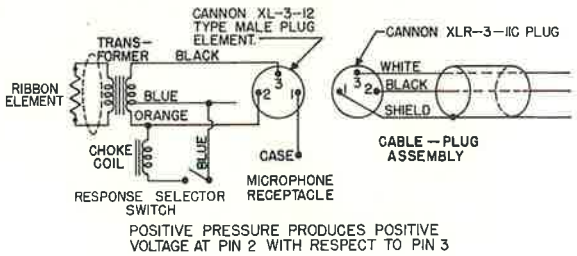
27A312 (5-65)

Printed in U.S.A.
U. S. Patent: D-178,018



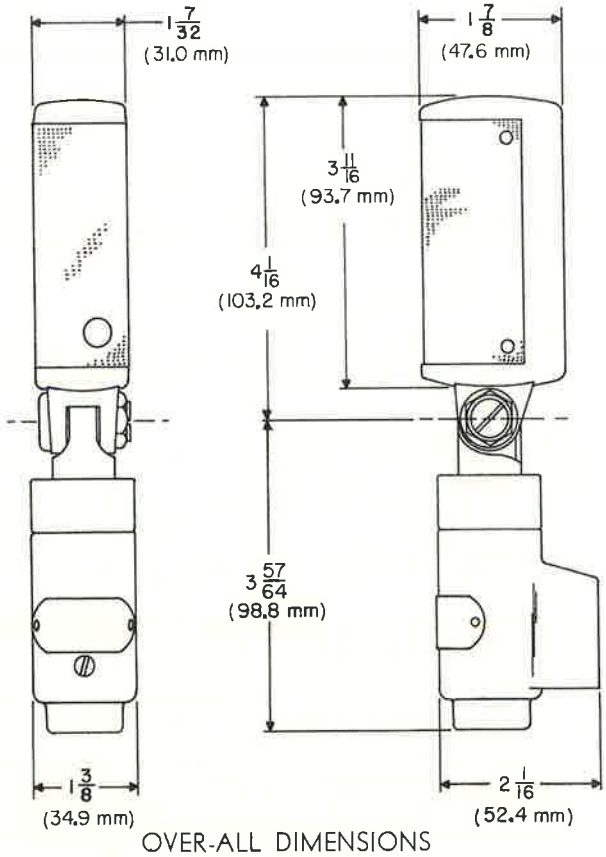
FREQUENCY RESPONSE

FIGURE A



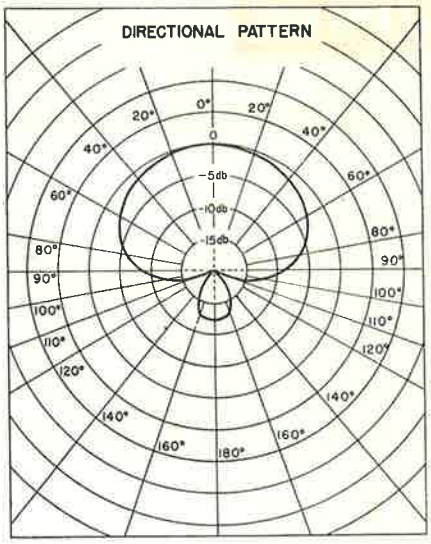
INTERNAL CONNECTIONS

FIGURE B



OVER-ALL DIMENSIONS

FIGURE C



POLAR PATTERN

FIGURE D

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model SM33 or equivalent. A moving ribbon type microphone with a frequency range of 40 to 15,000 cps, this unit shall have a unidirectional horizontal polar characteristic. The microphone shall have impedances of 30-50 ohms and 150-250 ohms. The microphone output shall be:

30-50 ohms impedance .....—60.0 db
(0 db = 1 milliwatt with 10 microbars)

150-250 ohms .....—58.5 db
(0 db = 1 milliwatt with 10 microbars)

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

30-50 ohms .....—152.5 db
150-250 ohms .....—152.5 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 5/8" -27 thread. The over-all dimensions shall be 7 61/64" (202.0 mm) in height, 1 3/8" (34.9 mm) in width, and 2 1/16" (52.4 mm) in depth.

SHURE PROFESSIONAL PRODUCTS DATA

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General: The Model SM50 is a rugged, omnidirectional microphone built to withstand the severest field use. It provides very natural and intelligible voice reproduction and unusual freedom from annoying wind and breath noises. Very comfortably handheld, or mounted in the slip-in stand adaptor, the SM50 is ideally suited to remote interviews, news and sports pickups, and a variety of field and studio applications.

This Microphone Features:

- Smooth, natural sounding response from 40 to 15,000 cps—slightly tailored for the utmost in intelligibility with an excellent feeling of presence.
- Highly effective built-in wind and breath filter —virtually eliminates wind noise, "blasting" and "pop".
- Comfortable size, lightweight, well balanced for handheld use.
- Rugged construction to provide completely dependable operation under all operating conditions.
- Versatility—equally at home in the field or studio—handheld, or on a stand.

SPECIFICATIONS

Type: Dynamic.

Frequency Response: 40 to 15,000 cps. (See Figure A)

Polar Pattern: Omnidirectional. (See Figure B)

Impedance: Dual. 30-50 ohms and 150-250 ohms (Connected for 150-250 ohms when shipped). See paragraph on impedance changing.

Output Level: 1,000 cps response.

Model SM50 30-50 ohms
- Open circuit voltage ..... — 85.0 db* (.053 mv)
- Power level ..... — 58.0 db**
- EIA Microphone Rating Gm (sensitivity) ..... —150 db***

Model SM50 150-250 ohms
- Open circuit voltage ..... — 79.0 db* (.111 mv)
- Power level ..... — 58.0 db**
- EIA Microphone Rating Gm (sensitivity) ..... —150 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

Cable: 20 foot (6.1 meter) two-conductor shielded Broadcast type with Cannon XLR-3-11C Connector.

Connector: Cannon XL-3-12 type in microphone.

Case: Aluminum and zinc die-cast.

Case Finish: Textured dark gray enamel.

Swivel Adapter: Positive action 90° swivel to mount microphone to stand on fixture with 5/8"-27 threads.

Dimensions: See Figure D.

Net Weight less Cable: 8 ounces (227 grams)

Shipping Weight: 2 pounds, 5 ounces (1049 grams)

Instructions for changing to 30-50 ohm impedance: See Figures C and D.

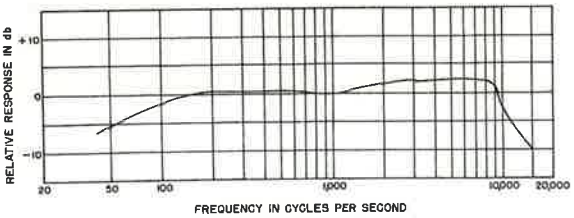
1. Remove male insert at the receptacle end of the microphone by turning the set screw in (counterclockwise)
2. Disconnect the RED lead from pin #3.
3. Solder the ORANGE lead to pin #3.
4. Insulate end of the RED lead with tape.
5. Re-assemble male insert into receptacle and seat set screw securely in place by turning out (clockwise).

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

27A316 (5-65)

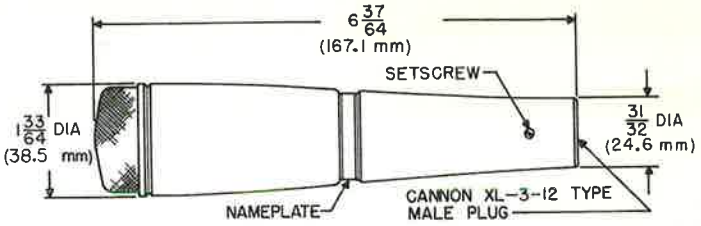
(OVER)

Printed in U.S.A.



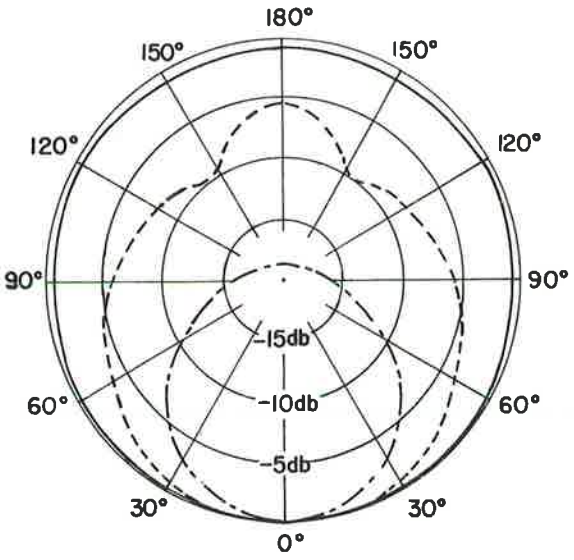
FREQUENCY RESPONSE

FIGURE A



OVER-ALL DIMENSIONS

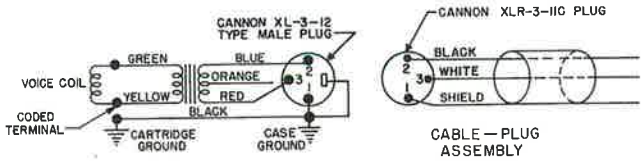
FIGURE D



——— 1,000 C.P.S.
— — — 5,000 C.P.S.
— · — · — 10,000 C.P.S.

POLAR PATTERN

FIGURE B



POSITIVE PRESSURE PRODUCES POSITIVE VOLTAGE AT PIN 2 WITH RESPECT TO PIN 3

INTERNAL CONNECTIONS

FIGURE C

ARCHITECT'S SPECIFICATION

The microphone shall be Shure Model SM50 or equivalent moving coil (dynamic) microphone with a frequency range of 40 to 15,000 cps. The unit shall have an omnidirectional polar characteristic. The microphone shall have available impedances of 30-50 ohms and 150-250 ohms. The microphone output shall be:

30-50 ohm impedance .....—58.0 db
(0 db = 1 milliwatt with 10 microbars)

150-250 ohms impedance .....—58.0 db
(0 db = 1 milliwatt with 10 microbars)

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

30-50 ohms .....—150 db
150-250 ohms .....—150 db
EIA Standard SE-105, August, 1949

The microphone shall be provided with a swivel adapter adjustable through 90° from vertical to horizontal and capable of being mounted on a stand having a 5/8" -27 thread. The microphone shall have a detachable 20 foot, two-conductor, shielded cable with a Cannon cable connector. The over-all dimensions shall be 6 37/64 (167.1 mm) in length, and 1 33/64 (38.5 mm) in diameter.

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General: The Model SM56 is a slender, moving coil (dynamic) microphone, built to provide wide range reproduction of music and voice and featuring an exceptionally uniform and effective unidirectional pickup pattern. The performance characteristics and unique construction make it ideal for studio and remote use in broadcasting, recording, motion picture, and critical sound reinforcement applications.

The Model SM56 features:

- Unusually effective cardioid pickup pattern minimizes effects of studio acoustics and background noise. Rear and side rejection uniform to very low frequencies and completely symmetrical about the axis.
- Bright, clean sound. Especially effective for announcing, narration and dialogue, vocal music, and rhythm pickups.
- Cartridge and microphone body separately shock mounted for quiet operation.
- Convenient impedance selection.
- An accessory switch adapter is furnished to serve in applications where an ON-OFF switch is necessary at the microphone.

SPECIFICATIONS

Type: Dynamic

Frequency Response: 50 to 15,000 cps (See Figure B)

Polar Pattern: Cardioid (Unidirectional) Response. Uniform with frequency, symmetrical about axis (See Figure D)

Impedance: Dual. Choice of 30-50 ohms "L" or 150-250 ohms "H", selected by impedance switch. (See "switch" below. Factory set to 150-250 ohms.)

Output Level: 1,000 cps response

Model SM56 30-50 ohms "L" position
- Open circuit voltage ..... —83.5 db* (.067 mv.)
- Power level ..... —56.0 db**
- EIA Microphone Rating
  - Gm (Sensitivity) .....—149.0 db***

Model SM56 150-250 ohms "H" position
- Open circuit voltage ..... —76.5 db* (.149 mv.)
- Power level ..... — 56.0 db**
- EIA Microphone Rating
  - Gm (Sensitivity) .....—148.0 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

Switch: Impedance selection switch with center position "Off". May be used with "tamper-proof" cover, or accessory (included) "ON-OFF" knob.

Swivel: New improved "positive action" lifetime swivel permits tilting of the head through 180°

Shock Mount: Special vibration-isolation unit of rubber construction

Cable: 20-foot (6.1 m) two-conductor shielded Broadcast type

Cable Connector: Cannon XLR-3-11C

Case: Die-cast and "Armo-Dur"

Case Finish: Textured Dark Gray Enamel

Stand Thread: Standard 5/8" -27 thread

Dimensions: See Figure C

Net Weight Less Cable: 1 pound 3 ounces (539 grams)

Shipping Weight: 2¾ pounds (1247 grams)

27A295 (6-65)

Printed in U.S.A.
U.S. Patent: D-190,864

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model SM56 or equivalent. A moving coil (dynamic) 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 —56 db
(0 db = 1 milliwatt with 10 microbars)

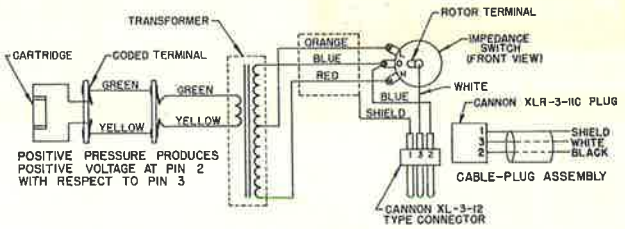
250 ohms impedance —56 db
(0 db = 1 milliwatt with 10 microbars)

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

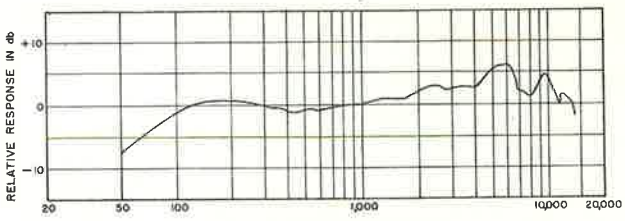
Low Impedance .....—149 db
Medium Impedance .....—148 db
EIA Standard SE-105 August 1949

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.

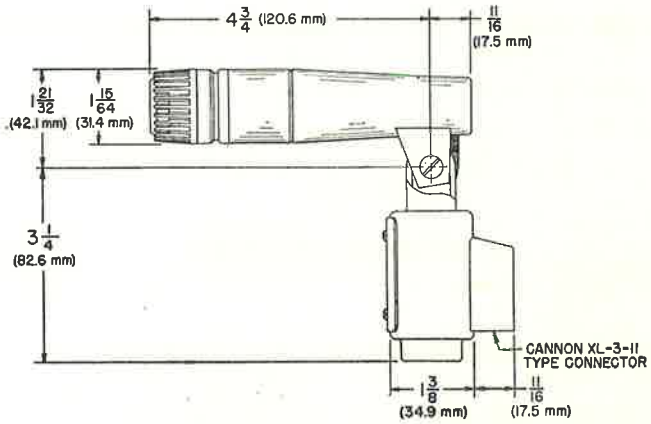


INTERNAL CONNECTIONS
FIGURE A



FREQUENCY RESPONSE

FIGURE B



OVER-ALL DIMENSIONS
FIGURE C

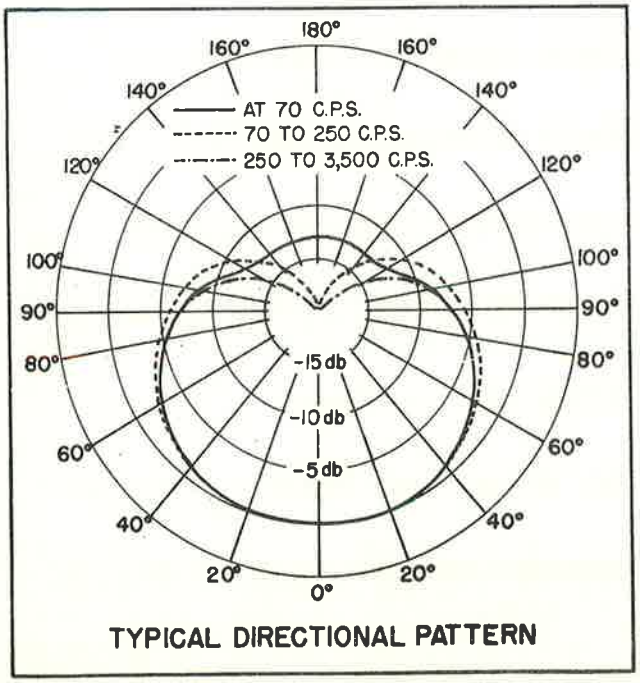


FIGURE D

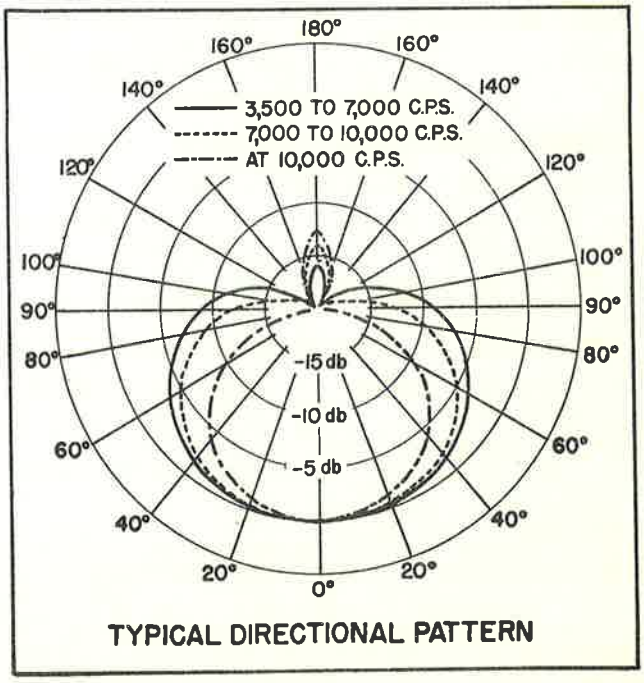


FIGURE D

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General: The Model SM57 is a slender dynamic microphone built to provide wide range reproduction of music and voice. It features an exceptionally uniform and effective unidirectional pickup pattern. The performance characteristics and unique construction make it ideal for both studio and remote use in broadcasting, recording, motion picture, and critical sound reinforcement applications. It is especially suitable for interview type use where "hand-a-bility" of the microphone is important.

The Model SM57 features:

- Unusually effective cardioid pick-up pattern minimizes effects of studio or location acoustics and background noise. Rear and side rejection uniform to very low frequencies and completely symmetrical about the axis.
- Bright, clean sound. Especially effective for announcing, narration and dialogue, vocal music, and rhythm pickups.
- Cartridge is shock mounted for quiet operation.
- Versatility—for use in the hand or on a stand—for use indoors or outdoors.
- The microphone is supplied with an adjustable swivel adapter which permits the microphone to be tilted through 90° from vertical to horizontal.

SPECIFICATIONS

Type: Dynamic

Frequency Response: 50 to 15,000 cps (See Figure B)

Polar Pattern: Cardioid pattern—rotationally symmetrical about microphone axis, uniform with frequency (See Figure D)

Impedance: Dual. 30-50 ohms and 150-250 ohms. (Connected for 150-250 ohms when shipped). See paragraph on impedance changing.

Output Level: 1,000 cps response

Model SM57 30-50 ohms "L" position

Open circuit voltage	—83.5 db* (.067 mv)
Power level	—56.0 db**
EIA Microphone Rating Gm (Sensitivity)	—149.0 db***

Model SM57 150-250 ohms "H" position

Open circuit voltage	—76.5 db* (.149 mv)
Power level	—56.0 db**
EIA Microphone Rating Gm (Sensitivity)	—148.0 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949.

Cable: 20 foot (6.1 m) two-conductor shielded Broadcast type with Cannon XLR-3-11C connector

Connector: Cannon XL-3-12 type in microphone

Case: Die-cast and "Armo-Dur"

Case Finish: Textured dark gray enamel

Swivel adapter: Positive action swivel to fit 5/8" -27 threads.

Dimensions: See Figure C

Net Weight less cable: 10 ounces (284 grams)

Instructions for changing to 30-50 ohm impedance: See Figures A and C

1. Remove the set screw (#2-56) at the receptacle end of the microphone.
2. Pull out the 3-prong insert from the receptacle.
3. Disconnect RED lead from pin number 3.
4. Solder the ORANGE lead to pin number 3.
5. Insulate end of the RED lead with tape.
6. Re-assemble insert into receptacle and tighten set screw.

27A308 (6-65)

(OVER)

Printed in U.S.A.
U.S. Patent: D-190,864

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

ARCHITECT'S SPECIFICATIONS

The microphone shall be Shure Model SM57 or equivalent. A moving coil microphone with a frequency range of 50 to 15,000 cps, this unit shall have a cardioid 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 have impedances of 30-50 ohms and 150-250 ohms. The microphone output shall be:

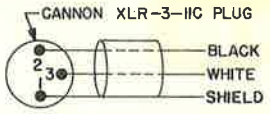
30-50 ohms impedance —56 db
(0 db = 1 milliwatt with 10 microbars)

150-250 ohms impedance —56 db
(0 db = 1 milliwatt with 10 microbars)

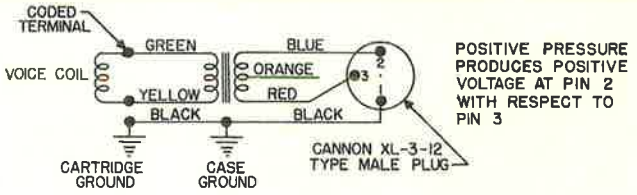
The microphone rating Gm (sensitivity) at 1,000 cps shall be within ± 3 db of the following levels:

30-50 ohms ..... —149 db
150-250 ohms ..... —148 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 detachable 20 foot, two-conductor shielded cable with a Cannon cable connector. The microphone swivel adapter will mount on a stand having a 5/8" -27 thread. The overall dimensions shall be 6-17/64 (159.1 mm) in length and 1 1/4 (31.75 mm) in diameter.

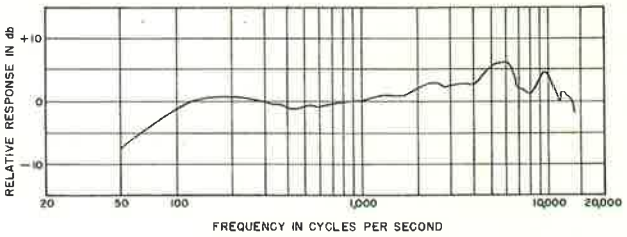


CABLE-PLUG ASSEMBLY



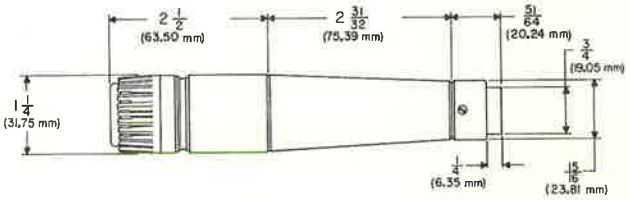
INTERNAL CONNECTIONS

FIGURE A



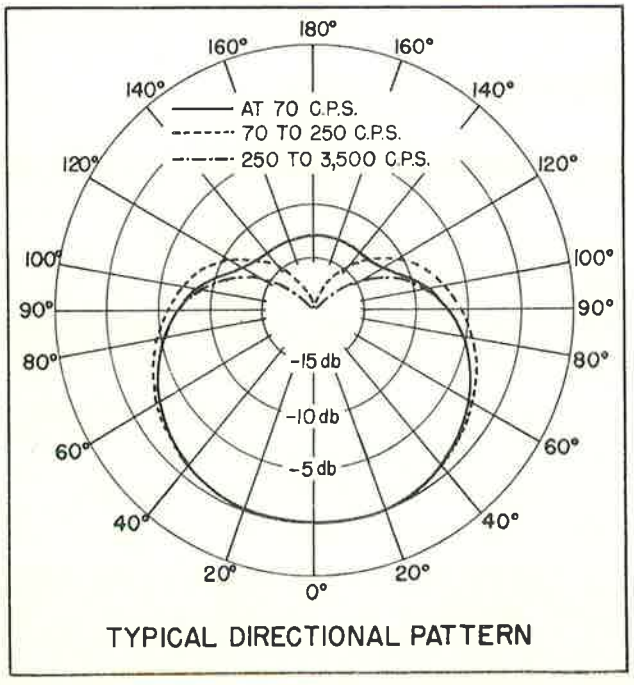
FREQUENCY RESPONSE

FIGURE B



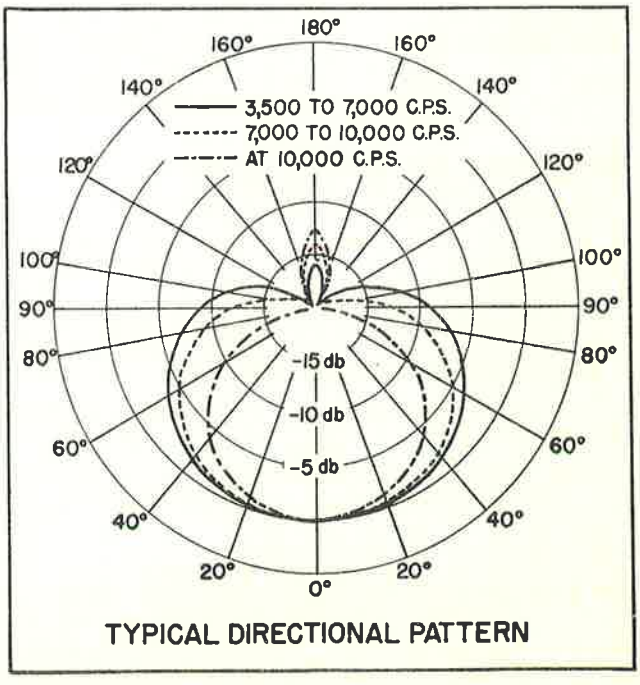
OVER-ALL DIMENSIONS

FIGURE C



TYPICAL DIRECTIONAL PATTERN

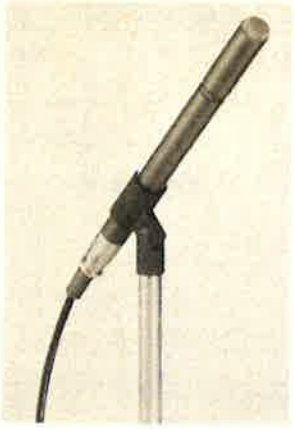
FIGURE D



TYPICAL DIRECTIONAL PATTERN

FIGURE D

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO



General: The Shure Model SM76 Dynamic Omnidirectional Microphone is designed specifically in size and performance for studio and remote use in TV, Radio, and Professional Recording. The microphone features:

- Extended smooth frequency response from 45 to 20,000 cps.
- Slender design, light weight.
- Versatility—for use in the hand or on a stand—for use indoors or outdoors.
- Dependability—under all operating conditions.
- Ruggedness—will operate for years without deviation from original standards.
- A Cannon XL-3-12 type connector in the microphone.

The Model SM76 meets the most exacting requirements for maximum quality and minimum size. The microphone is supplied with an adjustable swivel adapter, permitting the microphone to be tilted through 90° from vertical to horizontal.

SPECIFICATIONS

Type: Dynamic.

Frequency Response: 45 to 20,000 cps. See Figure A.

Polar Pattern: Omnidirectional. See Figure B.

Impedance: 50 and 150 ohms to permit proper match with any input from 30 through 250 ohms. (Connected for 150 ohms when shipped.) See paragraph on impedance changing.

Voltage Sensitivity: 1,000 cps Response.

Model SM76 (50 ohm impedance)
Open circuit voltage .....— 86.0 db*
Power level into 50 ohm .....— 60.0 db**
EIA Microphone Rating
Gm (sensitivity) .....—151.0 db***
Output level —0.050 millivolt per microbar

Model SM76 (150 ohm impedance)
Open circuit voltage .....— 80.5 db*
Power level into 150 ohms .....— 60.0 db**
EIA Microphone Rating
Gm (sensitivity) .....—152.0 db***
Output level—0.094 millivolt per microbar

(*) 0 db = 1 volt per microbar.
(**) 0 db = 1 milliwatt with 10 microbars.
(***) 0 db = EIA Standard SE-105 (August, 1949).

Cable: 20-foot (6.1 m.) 2-conductor shielded broadcast type with Cannon XLR-3-11C connector attached. (See Figure E)

Finish: Textured dark gray enamel.

Swivel Adapter: Positive action swivel to fit 5/8" -27 stand threads.

Dimensions: See Figure C.

Net Weight: (less cable) 7 ounces (198 grams).

Packaged Weight: 2 pounds 2 ounces (964 grams)

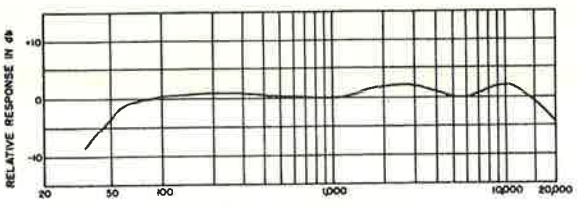
Instructions for changing to 50-ohm impedance: (See Figures C and D):

1. Remove male insert from receptacle end of microphone by first turning the set screw in (counter-clockwise).
2. Pull out the 3-prong insert from the receptacle.
3. Disconnect RED lead from Pin No. 2.
4. Solder the WHITE lead to Pin No. 2.
5. Insulate end of RED lead with tape.
6. Re-assemble insert into receptacle and tighten set screw by turning out (clockwise).

27A314 (3-65)

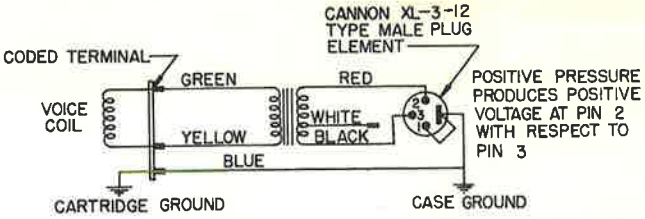
(OVER)

Printed in U.S.A.



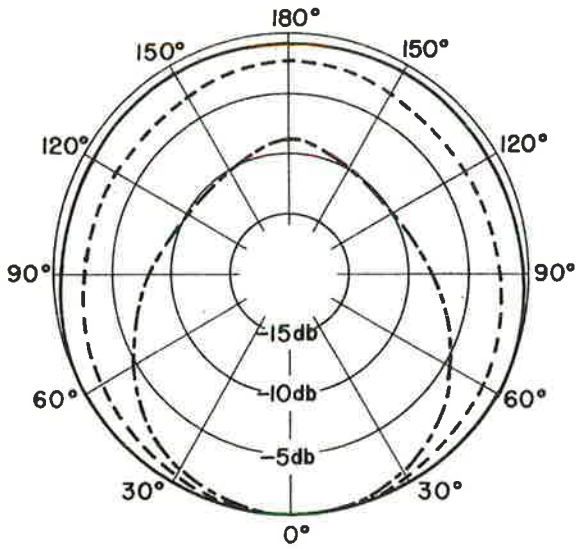
FREQUENCY RESPONSE

FIGURE A



INTERNAL CONNECTIONS

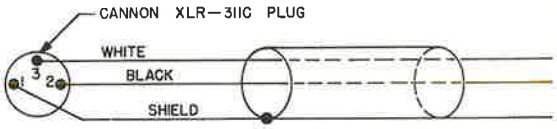
FIGURE D



——— 1,000 C.P.S.
– – – – – 4,000 C.P.S.
—·—·— 10,000 C.P.S.

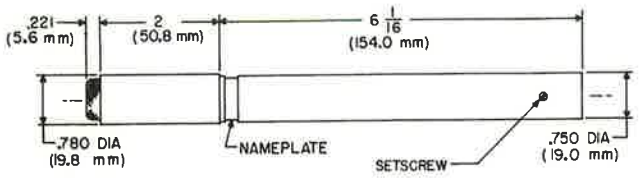
POLAR PATTERN

FIGURE B



CABLE-PLUG ASSEMBLY

FIGURE E



OVER-ALL DIMENSIONS

FIGURE C

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened for other than impedance change.

ARCHITECT'S SPECIFICATIONS

The microphone shall be the Shure Model SM76 or equivalent. The microphone shall be a moving coil (dynamic) type with a frequency range of 45 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 with 10 microbars)
150 ohm impedance .....—60 db
(0 db = 1 milliwatt with 10 microbars)

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

Low Impedance .....—151 db
Medium Impedance .....—152 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 20-foot (6.1 m) 2-conductor shielded cable having a Cannon XLR-3-11C connector attached. The microphone swivel adapter will mount on a stand having 5/8" -27 thread.

The over-all dimensions shall be 8-9/32" (210.4 mm) in length and 25/32" (19.8 mm) in diameter.

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

Model 300

The Model 300 is an unusually compact and rugged ribbon microphone. It combines wide range response and a bidirectional (cosine) pickup pattern. The "300" is an excellent choice for broadcast or recording studio and for critical sound reinforcement applications in which its symmetrical front and rear pickup with greatly reduced side pickup is useful. Ideal for applications such as "across the table" interviews or dialogue; stages with loudspeakers directly to the side or overhead; and combined pickup of facing instrumental groups in recording studios. The bidirectional pattern provides the same control of overall surrounding noise and reverberation as an equivalent cardioid microphone.

The Model 300 Features:

- Warm, smooth sound from wide range front and rear response. Low frequency characteristic adjustable by means of a Response Selector Switch.
- Bidirectional polar pattern, effective over wide frequency range.
- Built-in shock mount for quiet operation.
- Convenient impedance selection.
- Rugged mechanical design and ingenious internal ribbon protection assure reliable operation under severe conditions of use.

SPECIFICATIONS

Type: Ribbon

Frequency Response: 40 to 15,000 cps. (See Figure B)

Polar Pattern: Bidirectional. Equally sensitive at front and rear. Response at sides down 15 to 20 db from front and rear responses. (See Figure D)

Impedance: Equipped with multi-impedance switch furnishing choice of three impedances—"L"-30 to 50 ohms; "M"-150 to 250 ohms, "H"-High.

Output Level: 1,000 cps response

Model 300 30 to 50 ohms "L" position
- Open circuit voltage ..... —87.5 db* (.043 mv)
- Power level into 50 ohms ..... —60.5 db**
- EIA Microphone Rating Gm (Sensitivity) ..... —153.0 db***

Model 300 150 to 250 ohms "M" position
- Open circuit voltage ..... —79.5 db* (.105 mv)
- Power level into 250 ohms ... —59.0 db**
- EIA Microphone Rating Gm (Sensitivity) ..... —151.0 db**

Model 300 High Impedance "H" position
- Open circuit voltage ..... —57.5 db* (1.32 mv)
- Loaded with 100,000 ohms —60.0 db**
- EIA Microphone Rating Gm (Sensitivity) ..... —154.0 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949.

Case: Die-cast zinc

Finish: Textured dark gray enamel

Swivel: Self-adjusting 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 live-rubber vibration-isolation unit.

Connector: Equipped with Cannon XL -3-12 type connector in microphone

Cable: 20 foot (6.1 m) 2-conductor shielded broadcast type with Cannon XLR-3-11C connector attached

Stand Thread: 5/8" -27 thread

Stand Couplers: Adapters for 1/2" pipe thread or 5/8" -24 thread available upon request at no extra charge.

Response Selector: Two position switch to adjust low frequency characteristic for optimum performance, (See Figure B)

27A297 (12-64)

(OVER)

Printed in U.S.A.
U.S. Patent: D-171,055

Dimensions: See Figure C

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

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 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 impedance .....—60.5 db*

150-250 ohms impedance .....—59.0 db*

High impedance .....—57.5 db**

* (0 db = 1 milliwatt with 10 microbars)

** (0 db = 1 volt per microbar)

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

"L" Position of switch .....—153 db

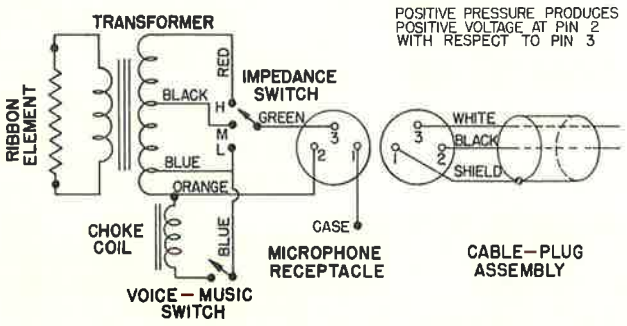
"M" Position of switch .....—151 db

"H" Position of switch.....—154 db

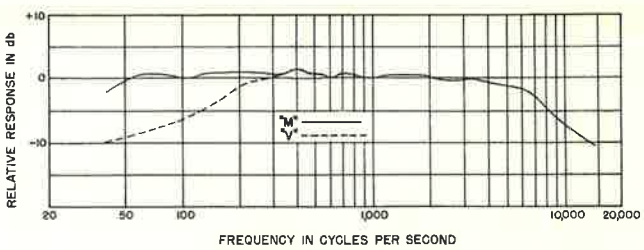
EIA Standard SE-105 August 1949

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.

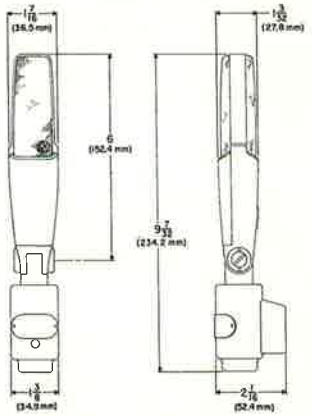
The microphone will mount on a stand having 5/8" -27 thread. The overall dimensions shall be 9-7/32" (234.2 mm) ± 1/4" (6.4 mm) in height, 1-7/16" (36.5 mm) ± 1/8" (3.2 mm) in width, and 1-3/32" (27.8 mm) ± 1/8" (3.2 mm) in depth.



INTERNAL CONNECTIONS
FIGURE A



FREQUENCY RESPONSE
FIGURE B



OVER-ALL DIMENSIONS
FIGURE C

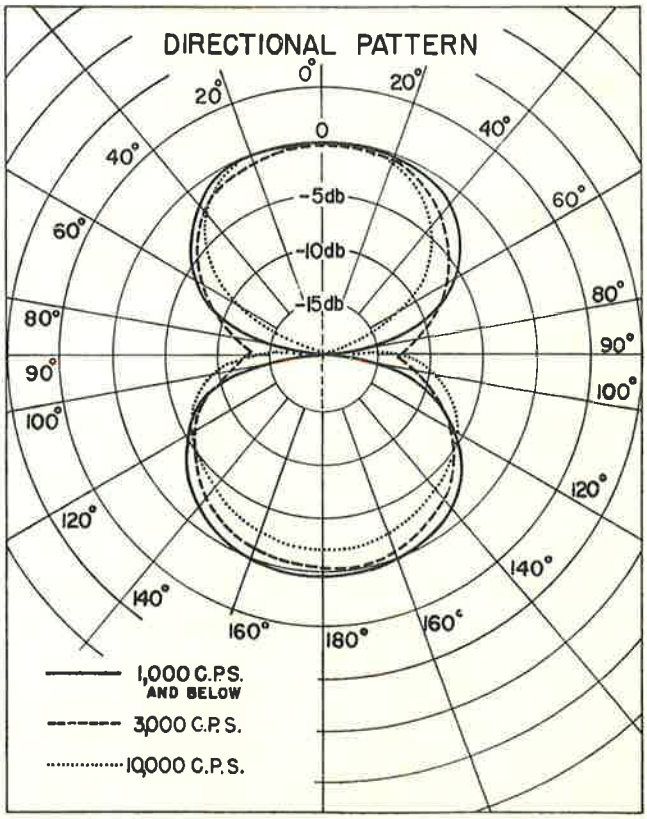


FIGURE D

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

MODEL 556S BROADCAST UNIDYNE II

General: Combining a highly effective unidirectional pattern and wide useful frequency range, the Shure Model 556S has become one of the world's most widely used microphones. The performance characteristics and unique construction make it ideal for both outdoor and indoor use in broadcasting, recording, public address and theatre-stage applications.

The Model 556S features:

- Cardioid directional characteristic especially adapted for optimum performance in adverse acoustic environments
- Cartridge and microphone body separately shock-mounted for quiet operation
- Convenient impedance selection
- Very rugged mechanical design for reliable operation under severe conditions of use

The self-tensioning swivel permits tilting through 45° forward and 80° backward.

SPECIFICATIONS

Type: Dynamic

Frequency Response: 40 to 15,000 cps. See Fig. B.

Polar Pattern: Cardioid (Unidirectional) Response at rear down 15 db from front. See Figure D

Impedance: Equipped with multi-impedance switch, furnishing a choice of 3 impedances: "L" for 30-50 ohms; "M" for 150-250 ohms; and "H" for high impedance.

Output Level: 1,000 cps response

Model 556S 30-50 ohm "L" position
- Open circuit voltage — 83.5 db*(0.067 mv)
- Power level into 50 ohm — 56.5 db**
- EIA Microphone Rating Gm (Sensitivity) —149.0 db***

Model 556S 150-250 ohms "M" position
- Open circuit voltage — 77.5 db*(0.13 mv)
- Power level into 250 ohm — 57.5 db**
- EIA Microphone Rating Gm (Sensitivity) —149.0 db***

Model 556S High Impedance "H" position
- Open circuit voltage — 56.0 db*(1.58 mv)
- Loaded with 100,00 ohm — 58.0 db**
- EIA Microphone Rating Gm (Sensitivity) —152.0 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt per 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

Architect's Specification: The microphone shall be Shure Model 556S or equivalent—a moving coil type microphone with a frequency range of 40 to 15,000 c.p.s. This unit shall have a Cardioid 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 adjusting the microphone rating impedance to 38 ohms, 150 ohms or 40,000 ohms. 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

E.I.A. Standard SE-105, August, 1949

The microphone shall be provided with a swivel adjustable from 45° forward to 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 Type cable connector capable of connection to a two-conductor shielded cable. The microphone shall mount on stand having 5/8"-27 thread. The overall dimensions shall be 7¾ (196.8 mm) ± ¼ (6.4 mm) inches in height, 2 3/16 (55.6 mm) ± ⅛ (3.2 mm) inches in width and 3 1/16 (77.8 mm) ± ⅛ (3.2 mm) inches in depth.

U. S. Patents: 2,237,298; 2,305,596, and 2,305,597.

27A272 (6-65)

(OVER)

Printed in U.S.A.

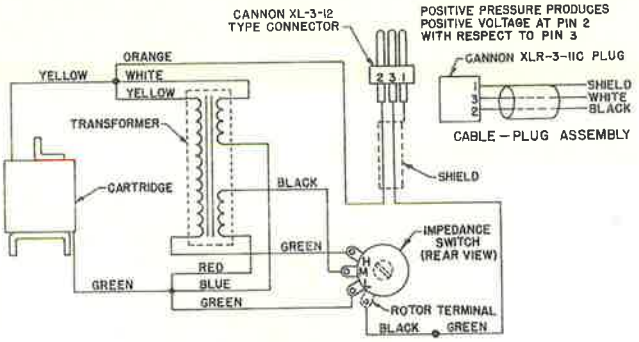


FIG. A.
INTERNAL CONNECTIONS

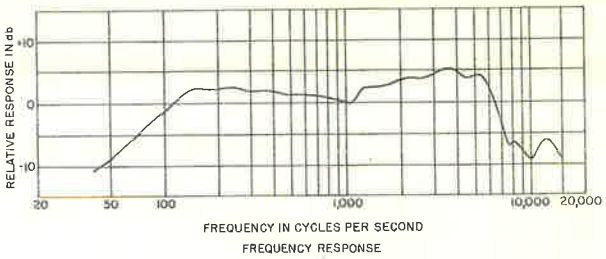


FIG. B.

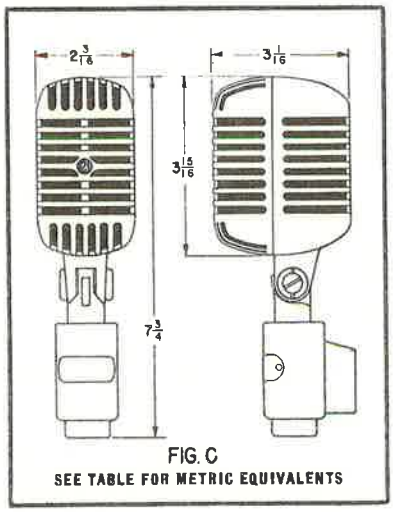
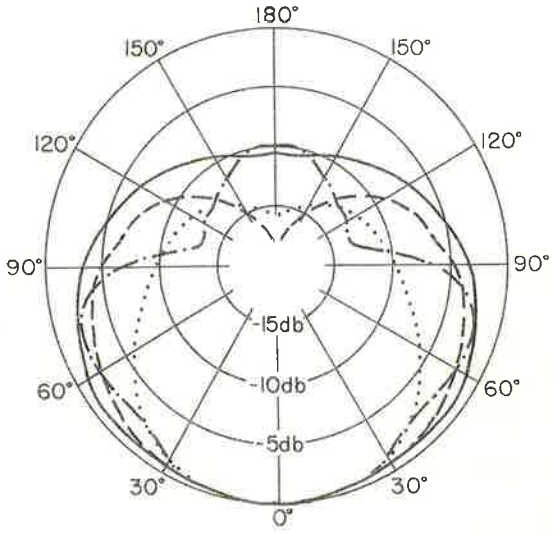


FIG. C
SEE TABLE FOR METRIC EQUIVALENTS

MODEL 556S	
Net Wt.	2 lb. (907 g)
Shipping Weight	3 1/2 lb. (1588 g)
Cable	20 ft. (6.1m) Two-Conductor
Height, Overall *	7 3/4" (196.8mm)
Height, Case *	3 15/16" (100.0mm)
Width *	2 3/16" (55.6mm)
Depth *	3 1/16" (77.8mm)
Case	Die-cast zinc
Finish	Satin Chrome
Stand Thread	Standard 5/8"-27 Thread
Cable Connector	Cannon XL-3-11 Type Connector
Shock Mount	Special vibration isolation unit of rubber construction
Swivel	Self-adjusting "Positive Action" swivel permitting tilting of head through 45° forward to 80° backward

*See Fig. C.



POLAR PATTERN
FIG. D.

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

The Shure Model 570 Dynamic Lavalier Microphone is a studio quality unit designed specifically in size and performance for use in TV and similar critical applications where a very small wearable microphone is required. The microphone features—

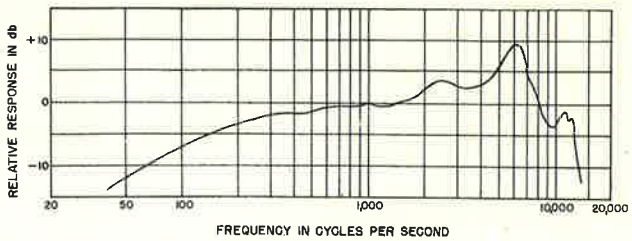
1. Response tailored for lavalier use
2. Small size, light weight, distinctive appearance
3. Low handling and clothing noise
4. Rapid attachment and secure adjustment
5. Ruggedness and dependability under all operating conditions

The Model 570 is ideal for moderators, panelists, announcers, singers, instrumentalists, public speakers, lecturers, instructors, and all applications which require a wearable unit. The microphone is equipped with a lavalier assembly to permit the microphone to be worn around the neck, and a belt clip assembly (Figure D) for the microphone cable permitting freedom of movement and full use of both hands.

The Exclusive Shure "Flex-Grip" lavalier assembly provided with this microphone is designed to keep the microphone firmly in place during use. Quick and easy engagement, adjustment, and removal of microphone, clip and cord is also afforded.

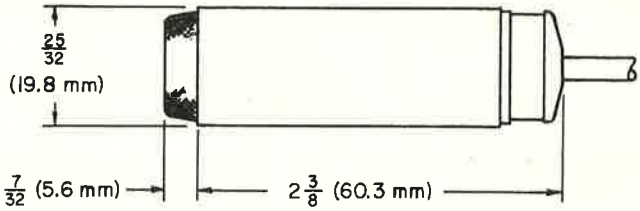
TO WEAR MICROPHONE: Slide microphone through large opening in "Flex-Grip" assembly (Figure D). Slip cord around neck and slide into slot on right side of "Flex-Grip" assembly. Engage shirt or blouse with clip and pull cord through slot until slack is taken up. If you wish, clip may be rotated for right or left side opening. Or, it may be removed by turning to vertical position and pulling straight out.

TO REMOVE MICROPHONE: Disengage clip. With microphone firmly in hand, pull end of cord on right side with right hand to remove from slot—a quick steady movement will release it quickly.



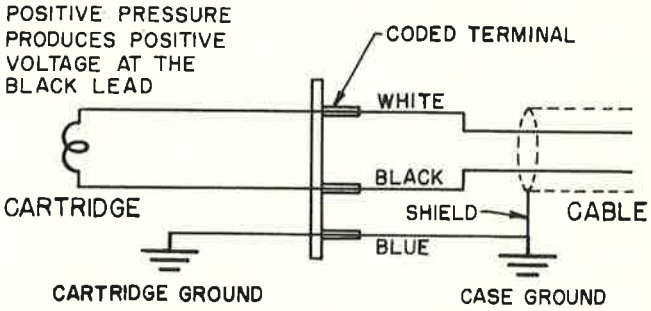
FREQUENCY RESPONSE

FIGURE A



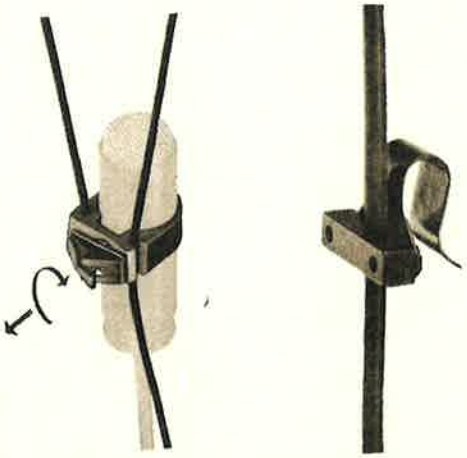
OVERALL DIMENSIONS

FIGURE B



INTERNAL CONNECTIONS

FIGURE C



LAVALIER ASSEMBLY AND BELT CLIP

FIGURE D

27A222 (6-65)

(OVER)

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Shure Patents Pending

SPECIFICATIONS:

TYPE: Dynamic

FREQUENCY RESPONSE: From 50 to 12,000 cps. Rising Characteristic to 6000 cps. See Figure A.

POLAR PATTERN: Omni-directional

IMPEDANCE: Properly matches any low impedance input from 50 to 250 ohms

VOLTAGE SENSITIVITY:

1000 cps response

Open circuit voltage level ..... — 81.5 db*
Power level ..... — 60 db**
EIA Microphone Rating
Gm (sensitivity) ..... —153 db***
Output level — 0.084 millivolt per microbar

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

CABLE: Non-detachable 30-foot, two-conductor shielded

CASE FINISH: Non-reflecting gray with stainless steel grille

DIMENSIONS: See Figure B

NET WEIGHT: (Less cable) 2 ounces (58 grams)

SHIPPING WEIGHT: 1½ Pounds (680 grams)

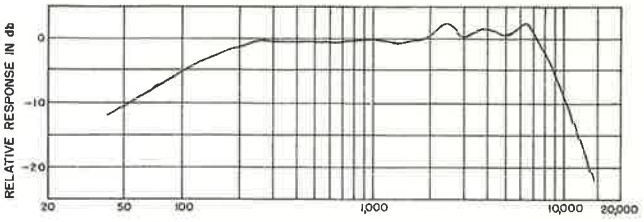
GUARANTEE: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

ARCHITECT'S SPECIFICATION: The microphone shall be the Shure Brothers, Inc. Model 570 Dynamic Lavalier Microphone or equivalent. The microphone shall be a moving-coil (dynamic) type microphone with a frequency range of 50 to 12,000 cps. The unit shall have an omnidirectional polar characteristic. The microphone shall be a single impedance microphone having a rating impedance of 150 ohms. The microphone rating Gm (sensitivity) at 1000 cps shall be with ± 3 db of —153 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 foot, two-conductor shielded cable. The overall dimensions shall be 2-19/32 inches (65.9 mm) in length and 25/32 inches (19.8 mm) in diameter.

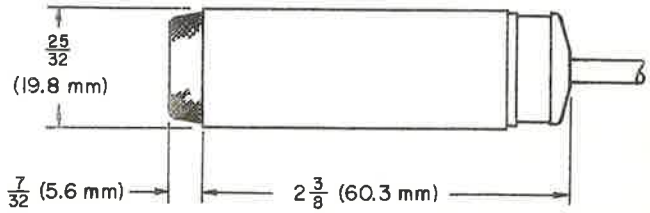
SHURE PROFESSIONAL PRODUCTS DATA

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO



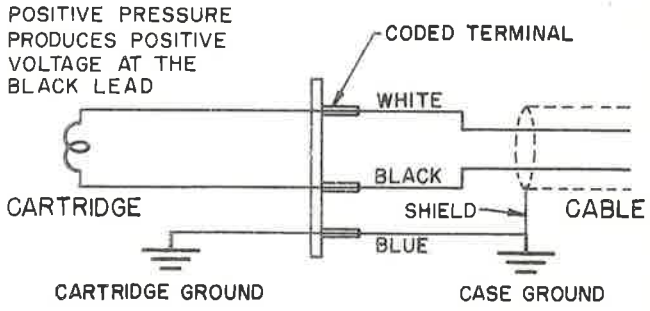
FREQUENCY RESPONSE

FIGURE A



OVERALL DIMENSIONS

FIGURE B



INTERNAL CONNECTIONS

FIGURE C

The Shure Model 571 is a Studio quality Microphone especially adapted for applications in which very small size and excellent voice characteristics are essential.

Features include:

- Smooth peak-free voice response
- Small size, lightweight
- Ruggedness and dependability
- Steel case for magnetic shielding

An adaptation of the popular Model 570 Lavalier Microphone, the small size and smooth response of the Model 571 are ideally suited for inconspicuous stand or hand-held use, concealment in a studio or shooting location, hanging over stage, and a variety of other broadcast, motion picture and theatrical applications.

The A57R Stand Adapter furnished with the microphone, provides a convenient means for attaching the microphone to any 5/8"-27 fixture.

The Model 571 may be used for lavalier applications, if desired, by use of the accessory A57L "Flex Grip" lavalier assembly.

SPECIFICATIONS

Type: Dynamic

Frequency Response: From 50 to 10,000 cps. See Figure A.

Polar Pattern: Omni-directional

Impedance: Properly matches any low impedance input from 50 to 250 ohms.

FIGURE D

27A293 (9-64)

(OVER)

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Shure Patents Pending

Output Level:

1000 cps response

Open Circuit voltage level ..— 81.5 db* (0.085 mv)

Power Level .....— 60.5 db**

EIA Microphone Rating
Gm (sensitivity) .....—153 db***

* 0 db = 1 volt per microbar

** 0 db = 1 milliwatt with 10 microbars

*** 0 db = EIA Standard SE-105, August 1949

Cable: Non-detachable 30 foot, two-conductor shielded

Case Finish: Non-reflecting gray with stainless steel grille

Dimensions: See Figure B

Net Weight: (Less cable) 2 ounces (58 grams)

Shipping Weight: 1½ Pounds (680 grams)

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

Architect's Specification: The microphone shall be the Shure Brothers, Inc. Model 571 Dynamic Microphone or equivalent. The microphone shall be a moving-coil (dynamic) type microphone with a frequency range of 50 to 10,000 cps. The unit shall have an omnidirectional polar characteristic. The microphone shall be a single impedance microphone having a rating impedance of 150 ohms. The microphone rating Gm (sensitivity) at 1000 cps shall be within ± 3 db of —153 db (EIA Standard SE-105, August 1949).

The microphone shall be provided with an A57R Stand Adapter for a convenient means of attaching the microphone to any ⅝"-27 fixture. The microphone shall be provided with 30 foot, two-conductor shielded cable. The overall dimensions shall be 2-19/32 inches (65.9 mm) in length and 25/32 inches (19.8 mm) in diameter.

SHURE PROFESSIONAL PRODUCTS DATA

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

The Shure Model 572G is a small studio quality microphone mounted on a slender flexible arm with a mounting flange attached.

Features include:

- Bright smooth voice response
- Small size and convenient mounting
- Ruggedness and dependability
- Unusually slender flexible arm construction for quiet, smooth action
- Steel case for magnetic shielding

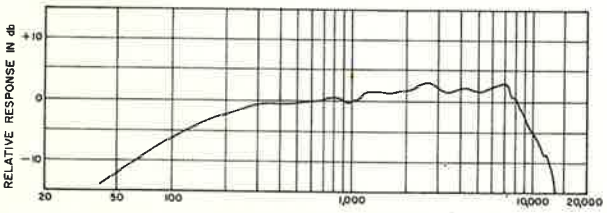
An adaptation of the popular Model 571 ¾" Dynamic Microphones, the 572G is ideally suited for studio and control room talk back or cuing systems, rostrums, language laboratories, paging, base station communications, and a wide variety of voice applications where a compact adjustable microphone installation with protected cabling is desired.

The Model 572G is especially suited for use wherever a customized installation with concealed cable is desired.

SPECIFICATIONS

Type: Dynamic

Frequency Response: From 50 to 10,000 cps
See Figure A



FREQUENCY RESPONSE

FIGURE A

Polar Pattern: Omnidirectional

Impedance: Properly matches any low impedance input from 50 to 250 ohms

Output Level: 1,000 cps response

Open Circuit voltage level.... —82.0 db*(.078 mv)

Power level ..... —61.0 db**

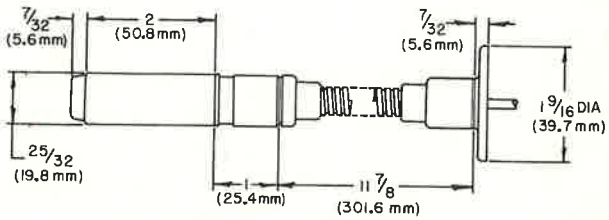
EIA Microphone Rating
Gm (sensitivity) .....—153.5 db***

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** 0 db = EIA Standard SE-105, August 1949

Cable: Non-detachable 5 foot, two-conductor shielded

Case Finish: Non-reflecting gray with stainless steel grille. Flexible arm and flange are chrome plated

Dimensions: See Figure B



OVER-ALL DIMENSIONS
FIGURE B

Net Weight: 12 ounces (341 grams)

Packaged Weight: 1 pound 2 ounces (510 grams)

ARCHITECT'S SPECIFICATION

The microphone shall be the Shure Brothers, Inc. Model 572G Dynamic Microphone or equivalent. The microphone shall be a moving coil (dynamic) type microphone with a frequency range of 50 to 10,000 cps. The unit shall have an omnidirectional polar characteristic. The microphone shall be a single impedance microphone having a rating impedance of 150 ohms. The microphone rating Gm (sensitivity) at 1,000 cps shall be within ± 3 db of —153.5 db (EIA Standard SE-105, August 1949).

27A298 (6-65)

(OVER)

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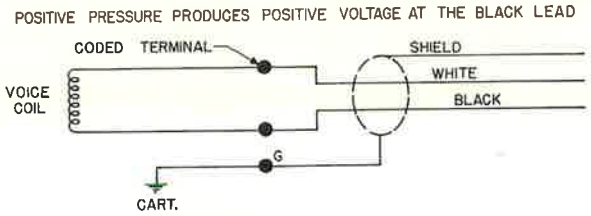

INTERNAL CONNECTIONS
FIGURE C

The microphone unit shall be mounted on a flexible arm having a mounting flange. The microphone shall have a 5 foot (1.5 m), two-conductor shielded cable. The over-all dimensions shall be 15-1/4" (389 mm) in length and 25/32" (19.8 mm) in diameter.

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General: The Shure Model 576 Dynamic, omnidirectional Microphone is a studio quality unit designed specifically in size and performance for use in TV, AM and FM broadcasting and professional recording. The microphone features:

1. Extended smooth frequency response from 40 to 20,000 cps
2. Slender design, light weight
3. Versatility—for use in the hand or on a stand—for use indoors or outdoors
4. Dependability—under all operating conditions
5. Ruggedness—will operate for years without deviation from original standards

The Model 576 meets the most exacting requirements for maximum quality and minimum size. The microphone is supplied with an adjustable swivel adapter, permitting the microphone to be tilted through 90° from vertical to horizontal.

SPECIFICATIONS

Type: Dynamic.

Frequency Response: 40 to 20,000 cps. See Figure A.

Polar Pattern: Omnidirectional. See Figure B.

Impedance: 50 and 150 ohms to permit proper match with any input from 30 through 250 ohms. (Connected for 150 ohms when shipped.) See paragraph on impedance changing.

Voltage Sensitivity: 1000 cps Response.

Model 576 (50 ohm impedance)
- Open circuit voltage ..... — 86.0 db*
- Power level into 50 ohm ..... — 60.0 db**
- EIA Microphone Rating Gm (sensitivity) ..... —151.0 db***
- Output level — 0.050 millivolt per microbar

Model 576 150 ohm impedance
- Open circuit voltage ..... — 80.5 db*
- Power level into 150 ohms ..... — 60.0 db**
- EIA Microphone Rating Gm (sensitivity) ..... —152.0 db***
- Output level — 0.094 millivolt per microbar

(*) odb = 1volt per microbar
(**) odb = 1 milliwatt with 10 microbars
(***) odb = EIA Standard SE-105/ August 1949

Cable: Non-detachable 25 foot (7.6m) 3-conductor shielded, rubber jacketed.

Finish: Non-reflecting gray with stainless steel grille.

Dimensions: See Figure C.

Net Weight: (less cable) 7 ounces (198 grams) 1 pound 12 ounces (794 grams) with 25 feet (7.6 meters) of cable

Packaged Weight: 2 pounds 7 ounces (1106 grams)

Swivel Adapter: Positive action swivel to fit 5/8"—27 stand threads.

Instructions for changing to 50 ohm impedance: See Figure D.

1. Insert Allen wrench (supplied) into hole at rear of case
2. Turn screw in (clockwise) three times minimum
3. Remove wrench
4. Remove end cap
5. Disconnect white lead from pin marked "M" and attach to pin marked "LO"
   CAUTION: When replacing the end cap, the leads should not obstruct the end of the tube passing through the terminal board.
6. Replace end cap. Align screw with hole in handle, and tighten screw with Allen wrench by turning screw OUT (counter clockwise).

27A226 (8-63)

(OVER)

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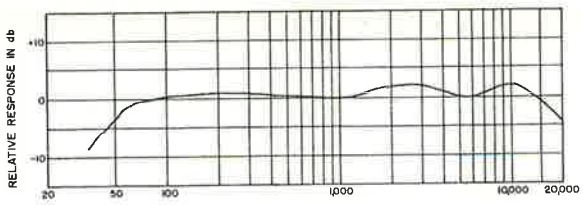
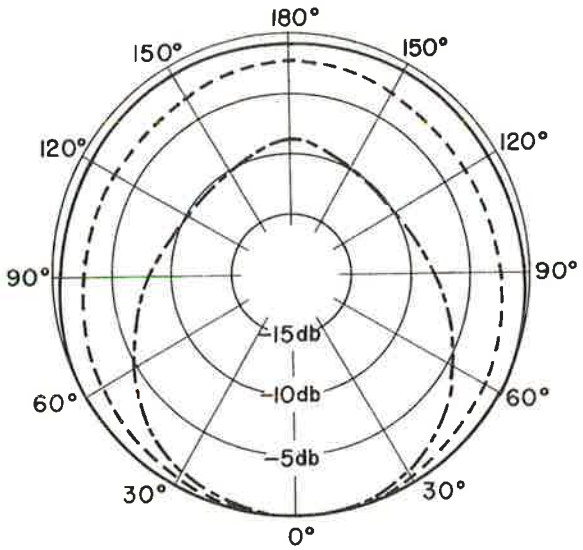


FREQUENCY RESPONSE

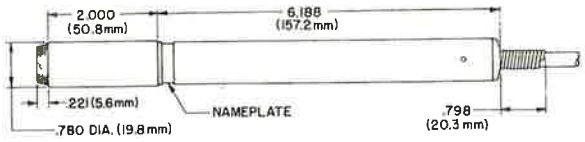
FIGURE A



——— 1,000 C.P.S.
– – – – – 4,000 C.P.S.
—·—·— 10,000 C.P.S.

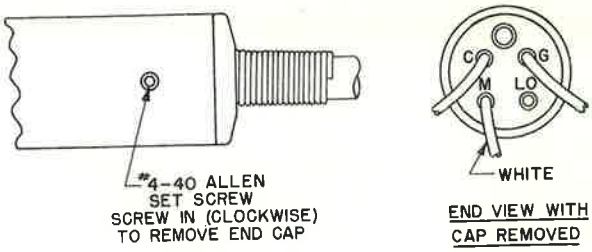
POLAR PATTERN

FIGURE B



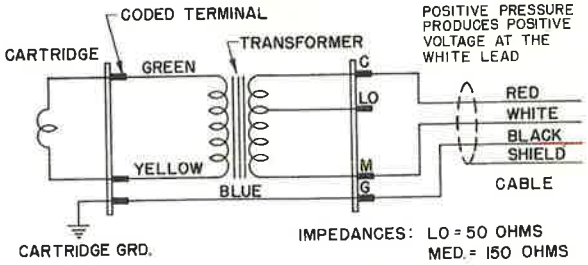
OVER-ALL DIMENSIONS

FIGURE C



IMPEDANCE CHANGING

FIGURE D



INTERNAL CONNECTIONS

FIGURE E

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened for other than impedance change.

Architect's Specification: The microphone shall be the Shure Model No. 576 or equivalent. The microphone shall be a moving-coil (dynamic) 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 rating Gm (sensitivity) at 1000 cps shall be within 2 db of the following levels.

"Lo" Impedance —151 db
"M" Impedance —152 db

The microphone shall be provided with a swivel adapter adjustable through 90° from vertical to horizontal and a 25 foot (7.6m) three-conductor shielded cable.

The microphone swivel adapter will mount on a stand having a 5/8"—27 thread. The overall dimensions shall be 8-13/32" (213.6 mm) in length and 25/32" (19.8 mm) in diameter.

The Sono-Bar REJECTS THE NOISE

THE MESSAGE GOES THROUGH

SHURE SONO-BAR NOISE CANCELLING MICROPHONE

COUNTLESS APPLICATIONS:

- MOBILE OR FIXED STATIONS
- AIRPLANES
- HELICOPTERS
- MOTORCYCLES
- TRUCKS
- DISASTER TRUCKS
- FIRE ENGINES
- POLICE CARS
- SPORTING EVENTS
- CONVENTION HALLS
- FOUNDRIES & FORGES
- POWER BOATS
- TELEPHONE SWITCHBOARD
- SWITCHING YARDS
- AMATEUR RADIO & CB

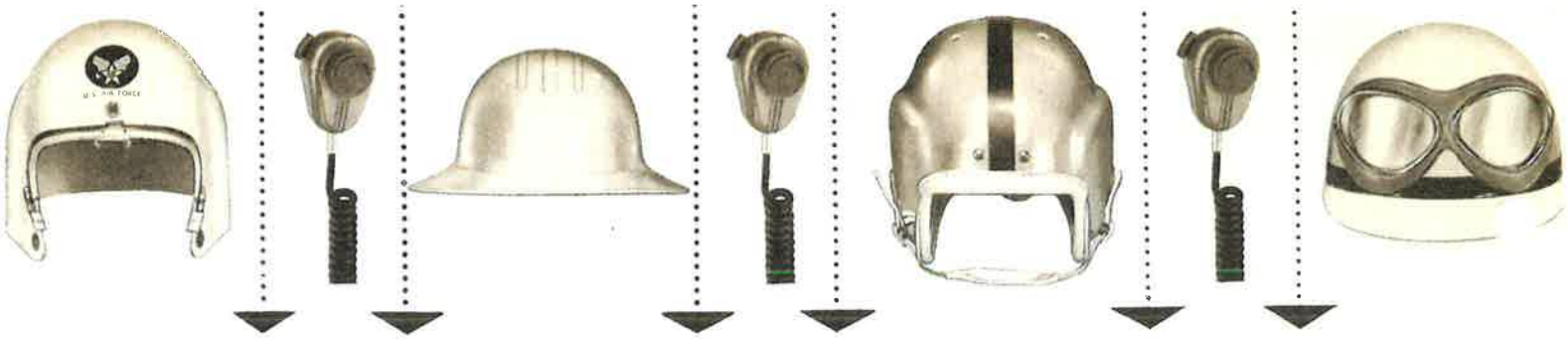
...ANYWHERE AMBIENT NOISE IS HIGH

OUTPERFORMS AND OBSOLETES ALL OTHER NOISE CANCELLING MICROPHONES

A significant breakthrough in microphone design! Extensive laboratory and field tests confirm the fact that the SONO-BAR gets the message through under background noise conditions that negate the performance of other noise cancelling microphones. Among the most rigorous tests was the use of Shure's SONO-BAR in Chicago radio station WGN's traffic-copter, where speech intelligibility was *dramatically improved* . . . over every other noise-cancelling microphone even with the use of audio filters, special circuitry, etc. In fact, without special filters or circuitry, the SONO-BAR transmits the voice with clarity, *even under conditions where the speaker couldn't hear himself over the background noise!*

The secret is Shure's patented Controlled Reluctance cartridge incorporated into a revolutionary distance discriminating microphone that *effectively* cancels background noise to permit transmission that would be unintelligible with any other microphone. Available in high impedance, low impedance, transistorized and aircraft versions.

see other side for complete specifications and features



wherever background noise is a communications problem

SHURE SONO-BAR noise cancelling microphone COMES THROUGH

SUPERIOR CONSTRUCTION THROUGHOUT

- Provides dependable performance under extreme conditions of heat, humidity, cold
- Close-talking type. Correct microphone placement is assured by convenient rubber lip guard that keeps it at proper distance from mouth
- "Armo-Dur" case impact-resistant, corrosion proof, stronger than die-cast metal
- Million-cycle, heavy-duty push-to-talk blade-type switch . . . proved reliable in rigid field and laboratory tests
- Superior coiled cord—won't kink, grow limp, crack or peel
- Complete with "lifetime" hang-up bracket
- No background "mike noise" of its own (such as carbon hiss)

A MODEL FOR EVERY NEED

Whatever the application, there's a model of the SONO-BAR that exactly fits your needs:

- Model 488A is high impedance
- Model 488B is low impedance
- Model 488C is transistorized for direct replacement of carbon microphones in mobile and fixed station use
- Model 488T (FAA certified) is transistorized for direct replacement of carbon microphones in aircraft. The 488T also has a special ultra-violet paint finish. (Replaces original equipment Models CM16TA and CM16TF.) FAA certified

SPECIFICATIONS

Model	488A High Impedance	488B Low Impedance	488C Transistorized	488T Transistorized Aircraft
List Price	$57.50	$57.50	$62.50	$72.50
Replacement for Model	CM16A High Impedance	CM16B Low Impedance	CM16T Transistorized	CM16TF and CM16TA*
Noise Discrimination	Far Superior to Standard Communication Microphones			
Frequency Response	(SPECIALLY TAILORED FOR BEST INTELLIGIBILITY) 200 to 4000 Cycles Per Second			
Type	Controlled Reluctance			
Output Level (0 db= 1 volt per 100 microbar field)	.125 Volts (—18 db)	.014 Volts (—37 db)	0.45 Volts (—7 db) using 6 volts and 500 ohm load	0.71 Volts (—3 db) using 12 volts and 500 ohm load
Impedance	High: Recommended Load 100,000 ohms or more	150-250 ohms	Recommended Load 500 ohms	Recommended AC Load 100 to 800 ohms
Cable	3 Conductor (1 conductor shielded) cadmium copper coiled cord (5½′ extended)	4 Conductor (2 conductor shielded) cadmium copper coiled cord (5½′ extended)	4 Conductor cadmium copper coiled cord (5½′ extended)	3 Conductor Tinsel coiled cord (5½′ extended) with PJ 068—plug attached*
Switch Mic Circuit Relay Circuit	Normally closed Normally open	Normally open Normally open	Normally open Normally open	Normally open Normally open
Case	GRAY HIGH IMPACT "ARMO-DUR" WITH PERFORATED STEEL GRILL AND RUBBER LIP GUARD			
Dimensions	3 11/16" high x 2⅜" wide x 2½" deep			
Weight	¾ lb.			
Accessories	MOUNTING BRACKET FOR PERMANENT PLACEMENT			

*Note: Model CM16TF has same specifications as Model 488T; Model CM16TA has same specifications as Model 488T except cable is 4-conductor cadmium copper coiled cord (5½′ extended), and less plug.

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SHURE

Shure Brothers, Inc. • 222 Hartrey Ave., Evanston, Illinois, USA • Phone DAvis 8-9000 • Chicago Phone SHeldrake 3-1600 • Cable Address SHUREMICRO

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SHURE MICROPHONES AND ELECTRONIC COMPONENTS

EVANSTON PHONE DA 8-9000 • CHICAGO PHONE SH 3-1600

DATA SHEET

MODEL 544 UNIDYNE III MICROPHONE

UNIDIRECTIONAL DYNAMIC — Dual Impedance

GENERAL: The Model 544 "Unidyne III" is a slender moving-coil microphone, designed specifically for use on a flexible or fixed mounting through which the cable may be completely concealed. It provides wide-range reproduction of music and voice and features an excellent directional pickup pattern. The unidirectional characteristic of the microphone provides highly satisfactory operation under adverse acoustic conditions. It permits placement of the microphone at a 75% greater distance from the performer than is possible with non-directional (omni-directional) microphones.

The smooth frequency response and attending faithful reproduction are largely due to a specially designed diaphragm attached to a sensitive coil suspended in a magnetic structure. The microphone is ruggedly built to withstand rough usage and is unaffected by temperature and humidity variations.

The case is modern in design with attractive streamlining and grille treatment. The Model 544 is small in size and is ideal for installations where it is desired to keep the microphone size to a minimum and still retain maximum operating efficiency.

The Model 544 has a 5/8"-27 thread which fits conventional goosenecks or other flexible or fixed mounting.

The Model 544-G6 is equipped with a 6" (152.4 mm) flexible gooseneck.

The Model 544-G12I is equipped with a 12" (304.8 mm) flexible gooseneck.

The Model 544-G18 is equipped with an 18" (457.2 mm) flexible gooseneck.

The latter three models (544-G6, 544-G12, 544-G18) are supplied with a flange for mounting the flexible gooseneck to a flat surface.

APPLICATION: The Model 544 microphone is designed for voice and music reproduction and is ideal for high quality public address, recording applications, theatre-stage sound systems, and language lab systems — wherever a customized installation with concealed cable is desired. The true unidirectional characteristics of the Model 544 provide an easy solution to the feedback problem in reverberant locations, facilitates orchestral placement and permits best utilization of space in small studios.

CONNECTIONS: The Model 544 "Unidyne III" Microphone is a dual-impedance microphone. It may be connected directly to a 50-250 ohm line or high impedance input. Selection of either impedance is accomplished by using the proper pin connection at the adapter plug.

The adapter at the end of the microphone contains a plug insert similar to the insert of an Amphenol 91-MC4M plug. The cable shield is connected to the #1 pin and adapter shell; the white conductor is connected to the #2 pin; the black conductor is connected to the #3 pin. For high impedance application use the white conductor as the "hot" and the shield as the ground.

The high impedance connection in the Model 544 Microphone may be used with any high gain amplifier with an input impedance of 100,000 ohms or more (See Figure A-3). To connect the amplifier plug to the shielded cable supplied with the microphone, connect the shield lead to the ground terminal of the amplifier plug, and connect the white lead to the "hot" terminal of the amplifier plug.

The maximum recommended length of cable between microphone and amplifier when used in the high impedance position is 25 feet (7.62 meters). Longer cable may be used with a loss of approximately 2db at 5000 c.p.s. for each additional 25 feet of (7.62 meters) of cable.

For low impedance application (50-250 ohms) the white and black are the "hot" conductors for balanced line connection. (See Figure A-1). In this case the white conductor must be removed from pin #2 of the adapter insert and soldered to pin #4 of the adapter insert. When the adapter insert is removed from the microphone, it is necessary to loosen the set screw in the adapter to prevent cable lead breakage as the adapter is loosened. After reassembling the adapter to the microphone, the set screw should tighten against the metal collar around the cable. This provides strain relief for the cable.

The low impedance connection is recommended where long cable lengths are required or under conditions of severe hum disturbance. The permissible cable length is practically unlimited, since neither response nor level is appreciably affected. For use with high impedance amplifiers, Shure Model A95A Line Matching Transformer is available for coupling the low impedance line to the amplifier input as shown in Figure A-2. The Shure Model A95A transformer permits coupling a 50-250 ohm line to the high impedance input.

The shield, chassis or amplifier ground should be securely connected to a water pipe or similar ground to prevent shock hazard during operation of amplifying system.

When used with amplifiers using the grid leak type of bias at the input tube, it may be desirable to use a .01 mfg. condenser between the microphone and the input grid circuit.

OPERATION: No special precaution beyond ordinary care is necessary in the operation of the Model 544 Microphone. It will operate efficiently and dependably in hot and cold climates. To retain the full strength of the highly efficient permanent magnet and to maintain alignment of the structure, dropping or other severe mechanical shocks should be avoided.

ACOUSTIC CONSIDERATIONS: The front response-frequency characteristic of the Model 544 is shown in Figure B. The smooth wide-range characteristic is excellent for high-quality reproduction of music and speech.

The polar characteristic resembles a cardioid. But, unlike most directional microphones, this polar characteristic is the same both in the horizontal and vertical planes. There is a wide useful pickup angle at the front of the microphone, while the response at the sides is down 6db from the front response. The rear response is down typically 15db to 20db. The Model 544 fulfills these requirements over a broad range of frequencies. (See Figure D).

The true unidirectional characteristic of the microphone should not be confused with the relatively slight directional effect at high frequencies which can be produced by baffle effects in the conventional pressure microphone.

The result of this true unidirectional characteristic is elimination of acoustic feedback at volume levels which would cause considerable feedback with conventional semidirectional or omnidirectional microphones. In practically all cases it is possible to increase loudspeaker levels when a Unidyne III is installed. By directing the dead side (rear) of the microphone towards the audience or other source of interfering sound, pickup can be concentrated on the desired source. Reverberation energy pickup is decreased approximately two-thirds. The microphone can be placed close to reflecting surfaces without objectional effects if the rear side of the microphone is toward the reflecting surface. This is particularly valuable in small broadcast studios. It is desirable to experiment with microphone placement and orientation in order to secure the greatest benefits from the unidirectional characteristic.

27A164 (5-65)

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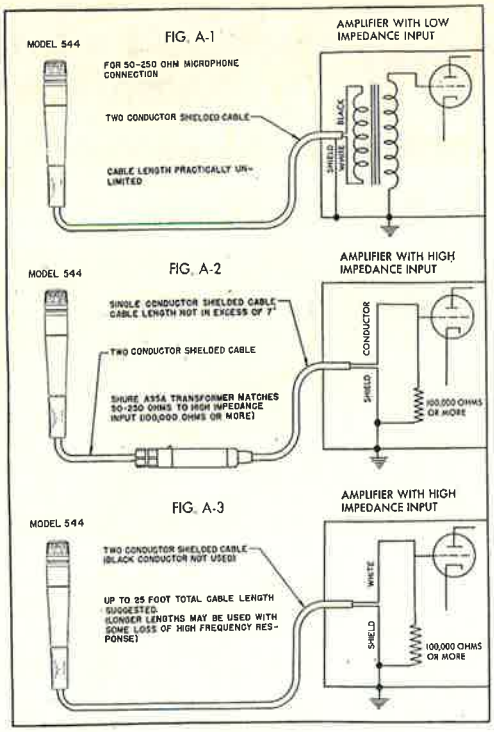
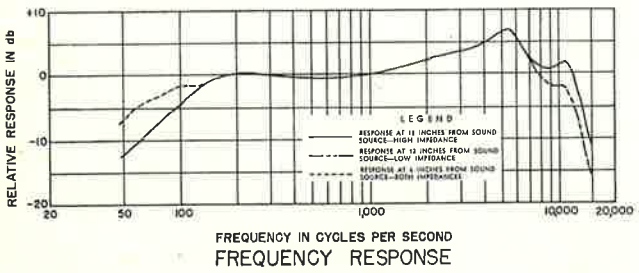


FIGURE A



FREQUENCY RESPONSE

FIGURE B

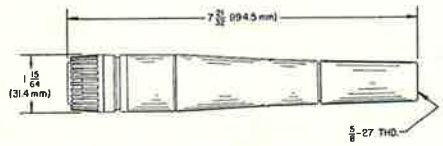
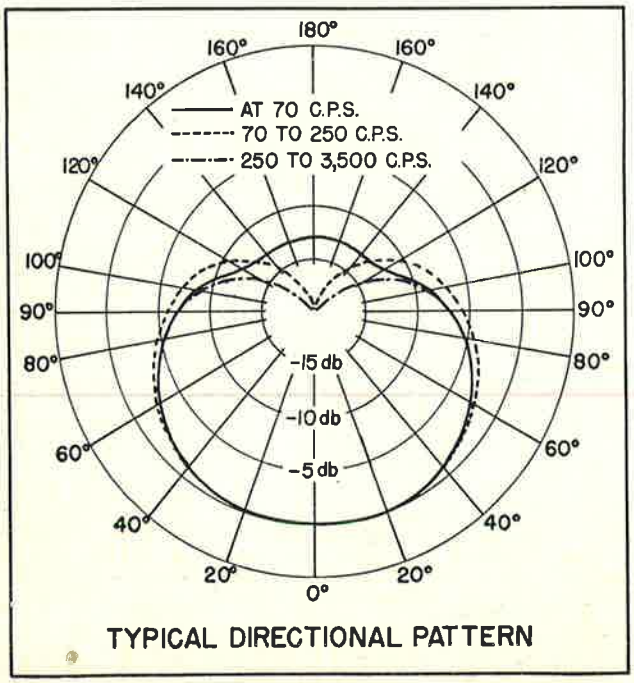


FIGURE C



TYPICAL DIRECTIONAL PATTERN

FIGURE D

SPECIFICATIONS:

1000 c.p.s. Response

Model 544 Low Impedance

Open circuit voltage level	— 78db* (.125 mv)
Loaded with 250 ohm	— 83db*
Power level into 250 ohm	— 57db**
RETMA Microphone Rating GM (Sensitivity)	—149db***

Model 544 High Impedance

Open Circuit voltage level	— 55db* (1.76 mv)
Loaded with 100,000 ohm	— 58db*
RETMA Microphone Rating GM (Sensitivity)	—151db***

(*) 0db = 1 volt per microbar.

(**) 0db = 1 milliwatt with 10 microbars.

(***) RETMA Standard SE-105, August 1949.

MODEL 544	
Net Wt. with Cable	0.8 Pound (343 S)
Cable	7 foot (2.13 meter) 2 Conductor Shielded
Dimensions	See Figure C
Finish	Chrome and Black

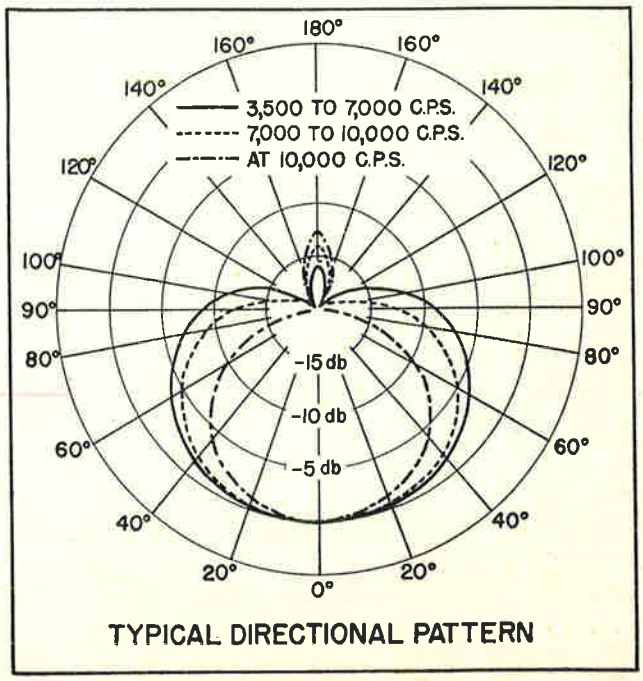
GUARANTEE: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

PATENT NOTICE: Manufactured under U.S. Patents 3,132,713 and D190,864.

ARCHITECT'S SPECIFICATIONS: The microphone shall be the Shure Model 544 or equivalent. The microphone shall be a moving coil type microphone with a frequency range of 50 to 15,000 c.p.s. This unit shall have a "cardioid" horizontal polar characteristic. 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 rating GM (sensitivity) at 1000 c.p.s. shall be within ± 3 db of the following levels.

Low Impedance	—149db
High Impedance	—151db

The microphone shall be provided with a fixed adapter having a 5/8"-27 thread. The overall dimension shall be 7-21/32" (194.5 mm) ± 1/32" in length and 1-15/64" (31.2 mm) ± 1/64" in diameter.



TYPICAL DIRECTIONAL PATTERN

FIGURE D

222 HARTREY AVE • EVANSTON, ILL • CABLE SHUREMICRO
SHURE MICROPHONES AND ELECTRONIC COMPONENTS
EVANSTON PHONE DA 8-9000 • CHICAGO PHONE SH 3-1600

DATA SHEET

MODEL 561 DYNAMIC MICROPHONE

OMNIDIRECTIONAL DYNAMIC MICROPHONE

General: The Shure Model 561 Dynamic Microphone is a low-impedance unit designed specifically as a high quality microphone for flexible gooseneck and general-purpose use. This microphone features smooth response, ruggedness, and ability to withstand abnormal moisture and temperature conditions.

The Model 561 is a rugged dynamic microphone with attached cable and standard $\frac{5}{8}$"-27 thread for direct mounting on flexible gooseneck or fixed pipe to conceal and protect cable. The microphone has excellent voice response for language lab systems, paging applications, and base-station communications. It is highly recommended for talk-back and cuing from professional control-room installations in TV, film, and recording studios. Low impedance permits unusually long cable lengths to be used without affecting response or level.

Connections: The Model 561 may be connected directly to a standard low or medium impedance input amplifier. (Fig. A-1). For use with high impedance amplifiers connect as shown in Fig. A-2.

Low impedance is recommended where long cable lengths are required or under conditions of severe hum disturbance. To achieve maximum freedom from hum disturbance and internal cable noise, a high quality, two-conductor shielded cable (such as supplied with the microphone) should be used. The permissible cable length is practically unlimited, since neither response nor level is appreciably affected. For use with a high impedance amplifier, the Shure Model A95A Line Matching Transformer is available for coupling the low impedance line to the amplifier input as shown in Fig. A-2. The transformer permits coupling a 50-250 ohm line to the high impedance input.

Specifications:

Frequency Response: 40 to 10,000 cps. Rising characteristic to 4500 cps. See Fig. C.

Polar Pattern: Omni-directional

Impedance: 150 to 250 ohm

Voltage Sensitivity:

1000 cps response
Open circuit voltage level .....— 77 db* (0.141 mv)
Loaded with 200 ohms .....— 83 db*
Power level into 200 ohm .....— 56 db**
EIA Microphone Rating
Gm (sensitivity) .....—149 db***

* Odb = 1 volt per microbar
** Odb = 1 milliwatt with 10 microbars
*** EIA = Standard SE-105, August 1949

Cable: 4 foot (1.2 meter), 2 conductor shielded

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

Finish: Silver and black with stainless steel grille

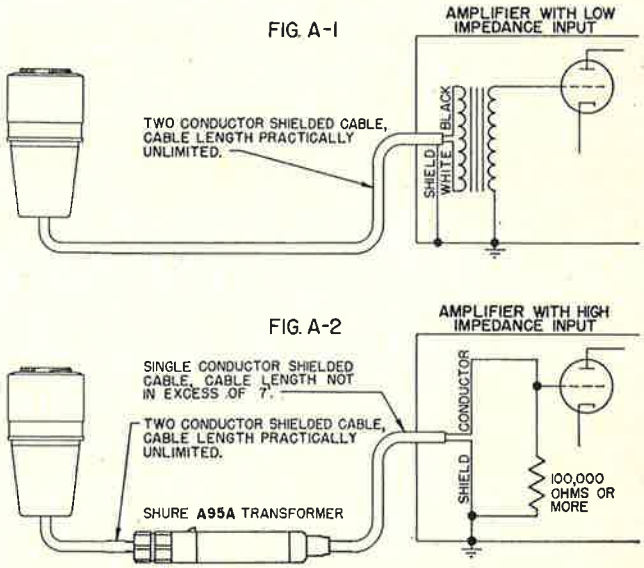


FIGURE A

CONNECTIONS

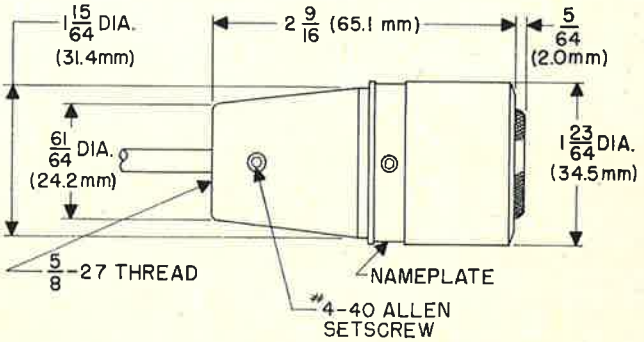


FIGURE B

OVERALL DIMENSIONS

27A242 (5-65)

(OVER)

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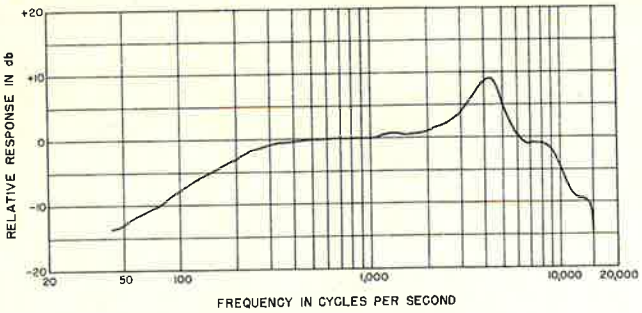


FREQUENCY RESPONSE

FIGURE C

Overall dimensions: See Fig. B

Net weight: 5 ounces (142 grams)

Packaged weight: 9 ounces (255 grams)

Operation: No special precautions beyond ordinary care are necessary in operation of the Model 561 Microphone. It will operate efficiently and dependably under all normal conditions in hot or cold climates. To retain the full strength of the highly efficient permanent magnet and to maintain alignment of the structure, dropping or other severe mechanical shocks should be avoided.

A #4 Allen wrench is provided for tightening the #4-40 Allen setscrew (see Fig. B) to securely lock the Model 561 to a flexible gooseneck, fixed pipe, or stand.

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

Architect's Specification: The microphone shall be a Shure Model 561 or equivalent—a moving-coil (dynamic) type microphone with a frequency range of 40 to 10,000 cps. The unit shall have an omni-directional characteristic. The microphone shall be a low impedance microphone with a rated impedance of 150 ohms.

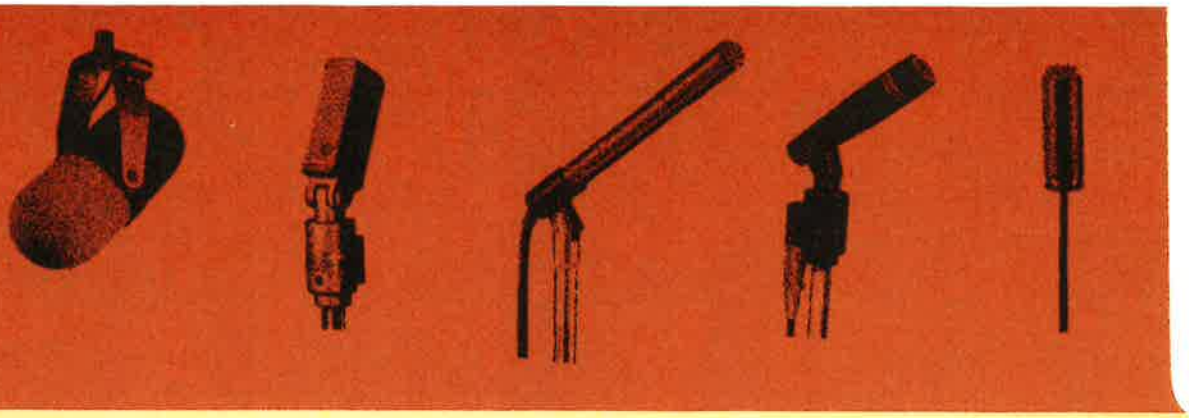
The microphone rating Gm (sensitivity) at 1000 cps shall be within ± 3db of —149db (EIA Standard SE-105, August 1949).

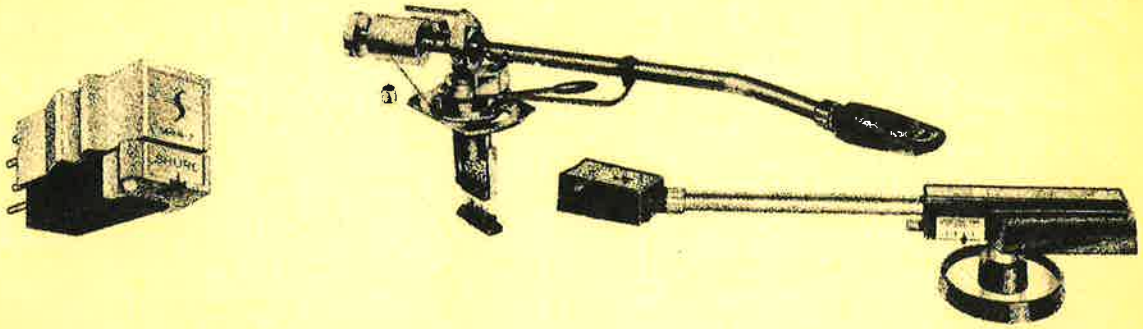
The microphone shall be provided with a $\frac{5}{8}$"-27 thread. The microphone shall be provided with 4 foot (1.2 meter) two conductor shielded cable. The overall dimensions shall be $2\frac{41}{64}$ inches (67.1 mm) in length and $1\frac{23}{64}$ inches (34.5 mm) in diameter.

technical data for

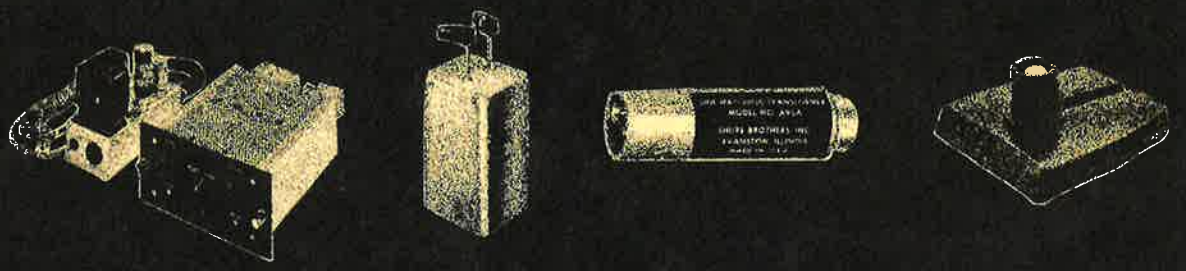
SHURE

PROFESSIONAL PRODUCTS





DISC REPRODUCERS



For Your Information on other Shure Products

For further information contact: R. W. Carr, *Manager*
Professional Products Division
Shure Brothers, Incorporated
222 Hartrey Avenue, Evanston, Illinois
Phone: DA 8-9000

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DATA SHEET

PHONOGRAPH CARTRIDGES MODELS M44-5 and M44-7 15° DYNETIC®

DYNETIC® PHONOGRAPH CARTRIDGES

SPECIFICATIONS:

FREQUENCY RESPONSE: From 20 to 20,000 cps

OUTPUT VOLTAGE: (1,000 cps at 5 cm/sec)
M44-5: 7 millivolts per channel
M44-7: 11 millivolts per channel

CHANNEL SEPARATION: More than 25 db at 1,000 cps

RECOMMENDED LOAD IMPEDANCE: 47,000 ohms (per channel)

***STYLUS REPLACEMENT:** For Model M44-5: Stylus Model N44-5; Radius .0005" (.013 mm) diamond; Grip color—Red

For Model M44-7: Stylus Model N44-7; Radius .0007" (.018 mm) diamond; Grip color—White

COMPLIANCE (Vertical, Horizontal):
M44-5 25.0 x 10^{-6} cm per dyne
M44-7 20.0 x 10^{-6} cm per dyne

TRACKING: M44-5: ¾ gram to 1½ grams
M44-7: 1½ grams to 3 grams

STYLUS: "No Scratch" Retractile Feature

INDUCTANCE: 720 millihenries

D.C. RESISTANCE: 630 ohms

TERMINALS: 4 terminals

MOUNTING: Standard ½" (12.7 mm) mounting center

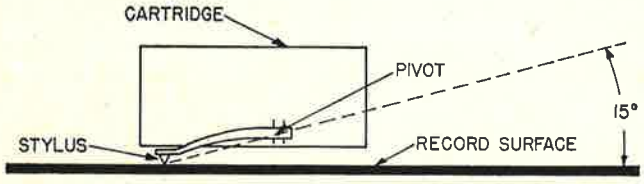
WEIGHT: 7 grams

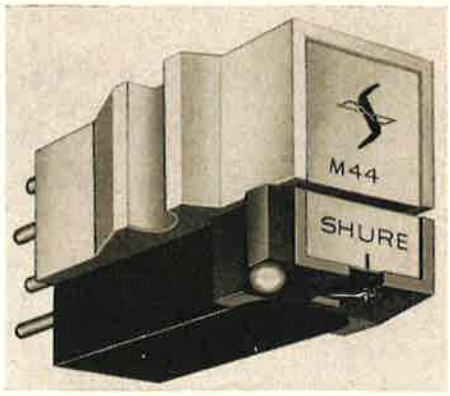
***ACCESSORY STYLI:** The N44-3 Stylus (Radius: 0025", .064 mm, diamond grip color: green) may be used to reproduce the standard 78 rpm records. The N44-1 Stylus (Radius: .001", .026 mm, diamond; grip color: blue) may be used to reproduce older monophonic long play 33⅓ rpm records. In either of the preceding cases, the amplifier should be set to "Monaural" or "A + B." The N44-3 and N44-1 are designed for tracking forces of 1.5 to 3.0 grams.

GENERAL: The M44 Series of Dynetic phonograph cartridges has been developed for use in all high fidelity applications. It has been designed to connect into magnetic and constant velocity inputs.

Major recording companies have begun to use the 15° effective cutting angle and it is the proposed EIA and RIAA standard in America and DIN and CCIR in Europe.

The M44 Series has been specifically designed to complement the 15° effective cutting angle now being used in newest recordings. It also serves to significantly improve the sound obtained from older discs. The cartridge geometry is as shown below.





The M44 is completely compatible. It will play stereo discs stereophonically, monaural discs monaurally, and stereo discs monaurally, without excessive wear and distortion. The M44 utilizes the moving magnet principle and features high needle compliance, low needle talk, low tracking force, wide range frequency response, improved shielding for maximum reduction of hum pickup, exceptional ease in changing stylus assembly, and no magnetic attraction to steel turntables.

MOUNTING: The M44 Dynetic Cartridge has standard ½" (12.7 mm) mounting centers. Hardware is supplied with each cartridge for mounting purposes. In some tone arms and plug-in shells, the cartridge sits so deep that the stylus cannot be conveniently replaced. For these applications, spacers are provided to insure adequate clearance for stylus removal.

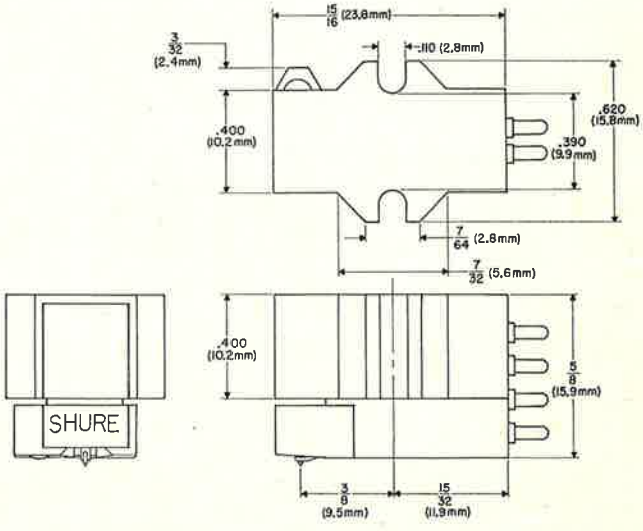


FIGURE 1
DIMENSIONAL DRAWING

27A309 (5-65)

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SHURE-SME MOUNTING INSTRUCTIONS:

To mount the M44 in the Shure-SME or the SME Precision Pickup Arm, Model 3009 and 3012, refer to the paragraphs on Cartridge Installation and Balancing in the Instruction Manual supplied with the pickup arms.

NOTE: In the older pickup arm models (not having the rider weight in two halves or the end cap with forward adjustment), one or two small weights as supplied with the plug-in shell must be added between the cartridge and shell to properly balance the Shure-SME or SME Arm.

GARRARD LAB 80 AND A70 MOUNTING INSTRUCTIONS:

The Garrard Lab 80 and A70 Pickup Head Shells have special British threads. In order to mount the Shure M44 Cartridge, use the two special brass screws **and** tubular aluminum spacers supplied with the cartridge. Put one tubular spacer between each screw head and the cartridge body.

OPERATION: The recommended needle forces for optimum results are listed under "Specifications." Forces greater than the indicated "maximum" should not be used. The M44 should be installed in any arm especially designed for low tracking forces and having low friction at all bearing surfaces.

All N44 Series Styli incorporate a new retractible design that prevents audible record-scratch or stylus damage. When excessive force is exacted on the stylus, it momentarily retracts and a soft plastic bumper comes in contact with the record. This bumper is incorporated into the stylus finger-grip and is pre-set and adjusted at the factory to accommodate the minute differences beween styli. Do not attempt to re-adjust or in any way tamper with this precise adjustment.

CONNECTIONS: The Model M44 Cartridge utilizes a 4-terminal arrangement for connections having a separate ground terminal for each channel. (See Figure 2).

For Stereo reproduction terminal "R" and its ground terminal "RG" represent the right channel (outside groove wall). Terminal "L" and its ground terminal "LG" represent the left channel (inside groove wall).

NOTE: Before making any connections, refer to the arm or changer instructions to properly identify the right and left channel arm leads. **CAUTION:** Do not make any solder connections directly to the cartridge terminals, nor to the terminal pin jacks while they are attached to the cartridge terminals. Solder the leads to the pin jacks **before** slipping them over the terminals. If hum is experienced when cartridge is installed in a metal head shell, removal of the ground tab from the right ground terminal will probably correct the condition. (See Figure 2).

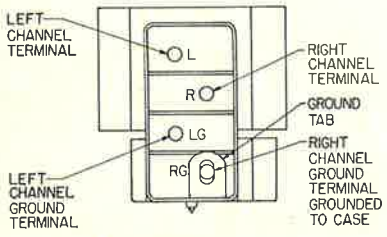

FIGURE 2
TERMINAL DIAGRAM

4-LEAD STEREO CONNECTION: To use a 4-lead arrangement, connect the "hot" lead of the right channel to terminal "R" and the shield or ground lead of the right channel to terminal "RG". Connect the "hot" lead of the left channel to terminal "L" and the shield or ground lead of the left channel to "LG". To prevent "ground loops and hums", no common connection should be used at the cartridge terminals.

3-LEAD STEREO CONNECTION: When a 3-lead stereo input system is used, the "RG" and "LG" ground terminals must be connected together. To do this, simply slide one of the brass "double loop" wire connectors over those terminals, and then push the common ground lead pin jack onto either the "RG" or "LG" terminal pin. The right and left channel leads are connected in the same manner described in the preceding paragraph.

MONAURAL CONNECTION: If only single channel reproduction is required, slip one of the brass double-loop wire connectors provided over the "R" and "L" terminals, and slip the other over the "RG" and "LG" terminals. Then attach the one "hot" lead to either the "R" or "L" pin terminal, and attach the ground lead to either the "RG" or the "LG" pin terminal.

SPECIAL NOTE: The Dynetic stylus assembly used in these cartridges is the most critical component. To maintain the original performance standards of your cartridge, be certain that any replacement stylus you buy bears the following certification on the package: "This Dynetic stylus is precision manufactured by Shure Brothers, Inc."

Avoid inferior imitations. They will seriously degrade the performance of our cartridge. All genuine "Dynetic" styli are manufactured by Shure Brothers, Inc.

The stylus assembly, when installed in the cartridge, is practically immune to damage during normal usage. However, care should be taken to avoid bending or distorting the stylus assembly when it is installed or removed.

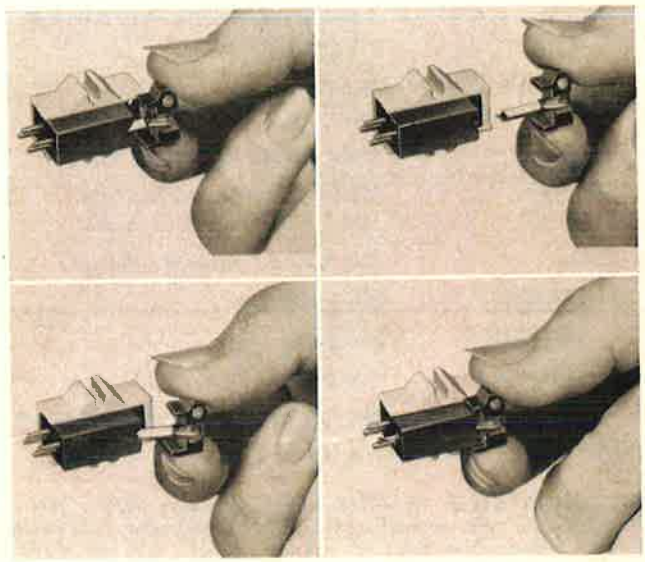

FIGURE 3

STYLUS REPLACEMENT — REMPLACER L'AIGUILLE
REEMPLAZO DE LA AGUJA — ERSATZ-ABTASTSTIFT-EINSCHUB

Stylus replacement is very simple and fast. To replace—grasp molded housing of stylus between thumb and forefinger. Gently withdraw stylus by pulling forward out of cartridge. Grasp replacement stylus between thumb and forefinger and insert into stylus socket. Press stylus into socket until the molded housing of the stylus mates with the cartridge case. Care must be taken not to allow the finger to slip off the molded housing of the stylus, resulting in damage to the stylus tip or shank.

GUARANTEE

The M44 Stereo Dynetic Cartridge is guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from factory, provided all instructions are complied with fully. The Guarantee does not cover stylus wear, nor does it cover damage to the stylus assembly from abuse or mishandling.

PATENT NOTICE: Manufactured under U.S. Patents 3,055,988; 3,077,521; and 3,077,522. Other patents pending.

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DATA SHEET

MODEL M44C 15° DYNETIC® PHONOGRAPH CARTRIDGE

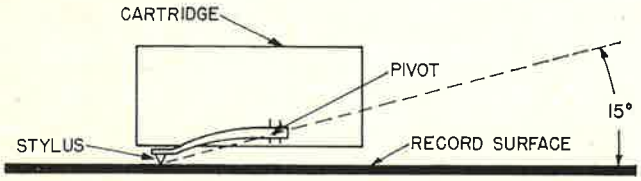
DYNETIC® PHONOGRAPH CARTRIDGE

Specifications:

Frequency Response:	From 20 to 20,000
Output Voltage:	9.3 millivolts per channel at 1,000 cps at 5 cm/sec
Channel Separation:	More than 25 db at 1,000 cps
Channel Balance:	Within 3 db of each other
Recommended Load Impedance:	47,000 ohms (per channel)
Stylus Replacement:	Model Number N44C; Radius: .0007" (.018 mm) diamond; Stylus grip color: Light Blue
Compliance: Vertical / Horizontal	7.5×10^{-6} cm/dyne
Tracking Force:	3.0 to 5.0 grams
Inductance:	720 millihenries
D.C. Resistance:	630 ohms
Terminals:	4 terminals (See Figure 2)
Mounting:	Standard ½" (12.7 mm) mounting center
Weight:	Net weight: 7 grams

General: The Model M44C Dynetic Phonograph Cartridge has been developed for use in all high fidelity applications requiring 3 to 5 gram tracking forces—such as certain record changers. It has been designed to connect into magnetic and constant velocity inputs.

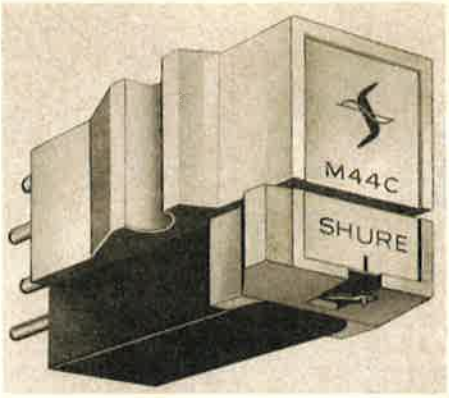
Recently, highly technical papers have been published in the leading audio journals to the effect that a hitherto "hidden" source of distortion has finally been identified. It was stated that the difference in the effective angles between the record cutting mechanism's chisel point and the angle of the ball point playback stylus led to an annoying, discernible and measurable distortion. A matching of the vertical tracking angle of the playback stylus to the effective angle at which the record has been cut will eliminate this distortion. In effect, this is the kind of cartridge geometry they proposed:



Major recording companies have now begun to use the 15° effective cutting angle and it is the proposed E. I. A. standard (similar in practice and effect to the adoption of the RIAA equalization curve.

The M44 Series of Stereo Dynetic Phono Cartridges has been specifically designed to complement the 15° effective cutting angle now being used on the newest recordings. It also serves to significantly improve the sound obtained from older discs.

The M44C is completely compatible. It will play Stereo Discs Stereophonically, Monaural Discs Monaurally, and Stereo Discs Monaurally without excessive wear and distortion.



The Model M44C utilizes the Moving Magnet principle and features:

- High needle compliance
- Low needle talk
- Low tracking force
- Wide range frequency response
- Improved shielding for maximum reduction of hum pickup
- Exceptional ease in changing stylus assembly
- No magnetic attraction to steel turntables

Mounting: The M44C Dynetic Cartridge has standard ½" (12.7 mm) mounting centers (See Figure 1.) Hardware is supplied with each cartridge for mounting purposes.

In some tone arms and plug-in shells, the cartridge sits so deep that the stylus cannot be conveniently replaced. For these applications, spacers are provided to insure adequate clearance for stylus removal.

Garrard Lab 80and A70 — M44C Mounting Instructions:

The Garrard Lab 80 and A70 Pickup Head Shells have special British threads. In order to mount the Shure M44C Cartridge, use the two special brass screws **and** tubular aluminum spacers supplied with the cartridge. Put one tubular spacer between each screw head and the cartridge body.

Operation: The recommended needle forces for optimum results are listed under "Specifications." Forces greater than the indicated "maximum" should not be used. The M44C should be installed in any arm especially designed for low tracking forces and having low friction at all bearing surfaces.

Connections: The Model M44C Cartridge utilizes a 4-terminal arrangement for connections having a separate ground terminal for each channel. (See Figure 2)

For Stereo reproduction terminal "R" and its ground terminal "RG" represent the right channel (outside groove wall). Terminal "L" and its ground terminal "LG" represent the left channel (inside groove wall).

If hum is experienced when cartridge is installed in a metal head shell, removal of the ground tab from the right ground terminal will probably correct the condition (See Figure 2).

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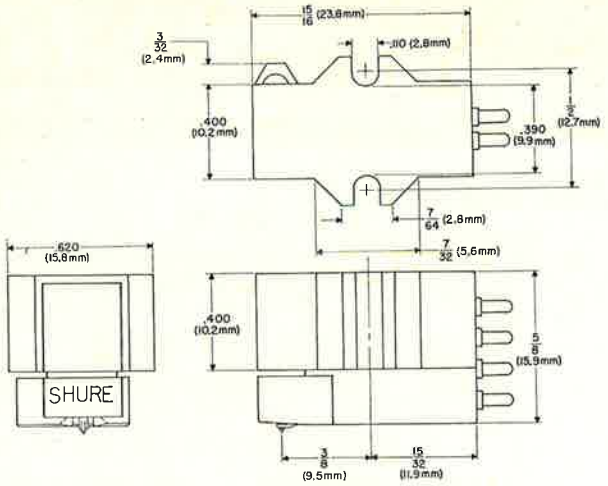


FIGURE 1
DIMENSIONAL DRAWING

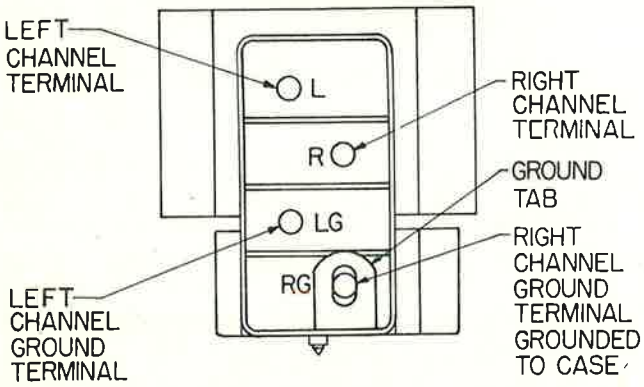


FIGURE 2
TERMINAL DIAGRAM

4-LEAD STEREO CONNECTION: To use a 4-lead arrangement, connect each section of the cartridge to its preamplifier input jack. To prevent "ground loops" and hum, no common connection should be used at the cartridge terminals.

3-LEAD STEREO CONNECTION: When a 3-lead stereo input system is used, the common lead should be connected to both of the ground terminals at the cartridge. No other common ground connection should exist. A "double loop" pin jack is provided to make a convenient connection between the two ground terminals—simply slide the loop ends onto the ground terminals. This connecton should be made before connecting the regular terminal jacks to the cartridge. Connect ground pin jack to either terminal.

MONAURAL CONNECTION: For single channel reproduction of Monaural or Stereo recordings, connect the "hot" lead to both "R" and "L" terminals and connect the ground or shield lead to both of the ground terminals marked "RG" and "LG". Double loop pin jacks are provided to make convenient connections between the "R" and "L" terminals and between the two ground terminals. These connections should be made before connecting the regular terminal jacks to the cartridge.

Caution: Do not make solder connections to cartridge terminals. Make all solder connections to terminal jacks provided before slipping them over the terminals.

Special Note: The Dynetic stylus assembly used in these cartridges is the most critical component. To maintain the original performance standards of your cartridge, be certain that any replacement stylus you buy bears the following certification on the package: "This Dynetic stylus is precision manufactured by Shure Brothers, Inc."

Avoid inferior imitations. They will seriously degrade the performance of your cartridge. All genuine "Dynetic" styli are manufactured by Shure Brothers, Inc.

The stylus assembly, when installed in the cartridge, is practically immune to damage during normal usage. However, care should be taken to avoid bending or distorting the stylus assembly when it is installed or removed.

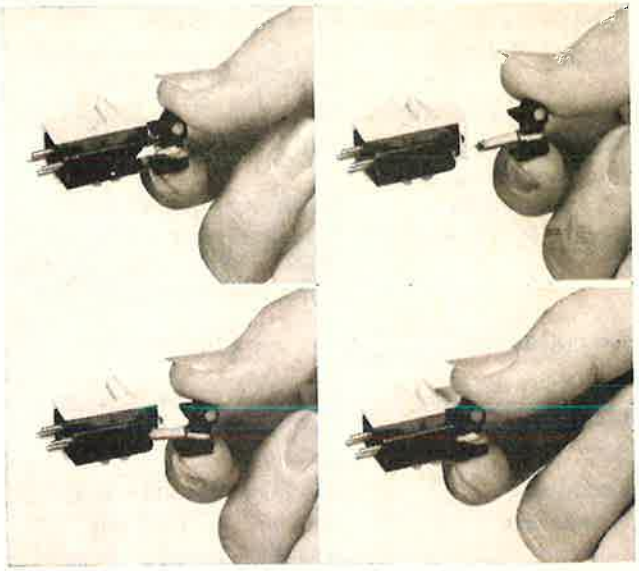


FIGURE 3
STYLUS REPLACEMENT

Stylus replacement is very simple and fast. To replace —grasp molded housing of stylus between thumb and forefinger. Gently withdraw stylus by pulling forward out of cartridge. Grasp replacement stylus between thumb and forefinger and insert into stylus socket. Press stylus into socket until the molded housing of the stylus mates with the cartridge case. Care must be taken not to allow the finger to slip off the molded housing of the stylus, resulting in damage to the stylus tip or shank.

Guarantee

The M44C Stereo Dynetic Cartridge is guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from the factory, provided all instructions are complied with fully. The Guarantee does not cover stylus wear, nor does it cover damage to the stylus assembly from abuse or mishandling.

Service Protection—Accidental Damage

Shure Dynetic Styli will withstand long, continued usage. However, if the stylus assembly should be damaged due to accidental mishandling, and the diamond tip is still intact, the stylus assembly may be returned to the factory for servicing and testing to original performance standards at a nominal service charge of $5.50. (Please enclose a check for the service charge with the returned assembly.)

Return Stylus to:

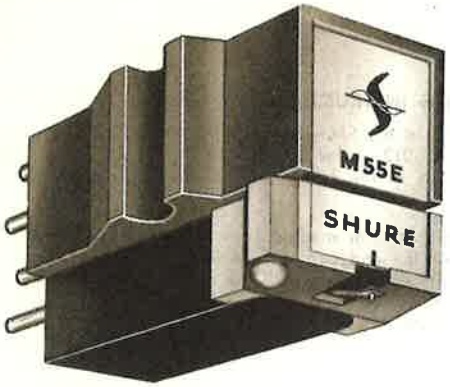
Service Department
SHURE BROTHERS, INC.
222 HARTREY AVENUE
EVANSTON, ILLINOIS (60204)

Patent Notice: Manufactured under U. S. Patents 3,055,988, 3,077,521, and 3,077,522. Other patents pending.

SHURE

15° STEREO DYNETIC® PHONOGRAPH CARTRIDGE WITH ELLIPTICAL STYLUS — M55E

222 HARTREY AVENUE, EVANSTON, ILLINOIS (60204) U.S.A. • CABLE: SHUREMICRO

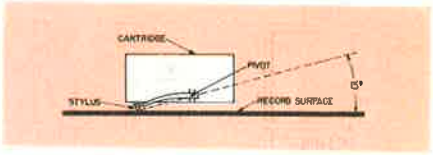


The Model M55E Dynetic Phonograph Cartridge has been developed for use in all high fidelity applications with tone arms specifically designed to track at low tracking pressures. It connects into magnetic and constant velocity inputs.

The most significant difference between the M55E and all other cartridges is its astonishing freedom from distortion, which results in a gratifying purity of sound. This has been accomplished in two ways — by matching the vertical tracking angle of the playback stylus to the effective angle at which the record has been cut, and by using an elliptical stylus.

THE M55E IS A 15° CARTRIDGE

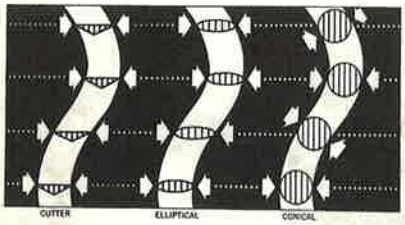
Major recording companies have now begun using the 15° effective cutting angle, which is the proposed standard of the RIAA and EIA in America, and DIN and CCIR in Europe. The cartridge geometry used in the 15° M55E is illustrated to the right.



ELLIPTICAL STYLUS MINIMIZES TRACING DISTORTION

The elliptical shape of the stylus further reduces distortion because it is able to trace faithfully the cutting of the grooves in the same way the wedge-shaped cutting stylus did when the record was made. In contrast to this, you will note in the illustration that a "standard" conical-shaped needle does not trace the same path as that taken by the cutter, giving rise to phase modulation or tracing distortion.

The elliptical stylus also significantly reduces another problem in playback called "pinch effect." As experienced audiophiles know, the record grooves vary in width with the degree of modulation. An ordinary sperical/conical stylus riding the upper portion of the groove walls tends to drop where the groove gets wider, and to rise as the groove narrows. This up-and-down motion creates a second harmonic distortion because stereo styli and cartridges respond to vertical as well as horizontal movement.



Because the radii of the sides of the Shure elliptical stylus that come into contact with the side walls of the groove are so small, and the frontal plane radius is wide enough to span the groove, this unwanted "pinch effect" and resulting distortion are effectively minimized.

A NOTE ABOUT DISTORTION MEASUREMENTS:

No internationally accepted standards exist for measuring IM and harmonic distortion. Hence, as a means of comparing one cartridge against another, published distortion measurements are meaningless. Based upon our comparative tests, the 15° tracking angle dramatically reduces distortion due to vertical tracking error to as little as 10% of even that of our previous low distortion models. The ELLIPTICAL stylus of the M55E further reduces distortion to an inaudible amount even on the most complex and heavily modulated passages. **To our knowledge, no other cartridge manufacturer has achieved lower distortion.**

ADDITIONAL FEATURES:

The M55E is completely compatible. It will play stereo discs stereophonically, monaural discs monaurally, and stereo discs monaurally, without excessive wear and distortion. It also serves to improve significantly the sound obtained from older discs. The M55E utilizes the moving magnet principle and features high needle compliance, low needle talk, low tracking force, wide range frequency response, improved shielding for maximum reduction of hum pickup, exceptional ease in changing stylus assembly, and no magnetic attraction to steel turntables.

SPECIFICATIONS

M55E Dynetic Phonograph Cartridge

TRACKING ANGLE:	15 degrees
FREQUENCY RESPONSE:	From 20 to 20,000 cps
OUTPUT VOLTAGE:	6.6 millivolts per channel at 1,000 cps at 5 cm/sec.
CHANNEL SEPARATION:	Nominally over 25 db at 1,000 cps 20 db at 10,000 cps, 15 db at 20,000 cps
CHANNEL BALANCE:	Within 2 db of each other
RECOMMENDED LOAD IMPEDANCE:	47,000 ohm (per channel)
STYLUS:	ELLIPTICALLY SHAPED DIAMOND TIP .0007 inch (17.8 microns) frontal radius .0002 inch (5 microns) side contact radii
COMPLIANCE: Vertical, Horizontal	25.0 x 10^{-6} cm/dyne at 26.7° C.
RETRACTILE STYLUS:	When excessive forces are applied to the stylus, it momentarily retracts, and a soft plastic bumper comes in contact with the record.
TRACKING FORCE:	¾ gram to 1½ grams (The lowest tracking force can only be realized if used in fine arms with virtually no vertical or horizontal friction, such as the Shure-SME Arm.)
STYLUS REPLACEMENT:	Model N55E Stylus Grip Color: Yellow
DISTORTION:	See "A Note About Distortion Measurements"
INDUCTANCE:	720 millihenries
D.C. RESISTANCE:	630 ohms
TERMINALS:	4 terminals, with loop pin for 3 terminal connections
MOUNTING:	Standard ½" (12.7 mm) mounting center
WEIGHT:	7 grams

GUARANTEE

The M55E Stereo Dynetic Cartridge is guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from the factory, provided all instructions are complied with fully. The Guarantee does not cover stylus wear, nor does it cover damage to the stylus assembly from abuse or mishandling.

PATENT NOTICE: Manufactured under U. S. Patents 3,055,988, 3,077,521, and 3,077,522. Other patents pending.

27A277, AL-103 (12-64)

Printed in U.S.A.

HOW TO INSTALL THE M55E

MOUNTING: The M55E Dynetic Cartridge has standard ½" (12.7mm) mounting centers (See Figure 1). Hardware is supplied with each cartridge for mounting purposes.

Before mounting the cartridge, remove the stylus (See Figure 3). Replace after cartridge has been mounted in arm. In some tone arms and plug-in shells, the cartridge sits so deep that the stylus cannot be conveniently replaced. For these applications, install with spacers provided between cartridge and shell to insure adequate clearance for stylus removal.

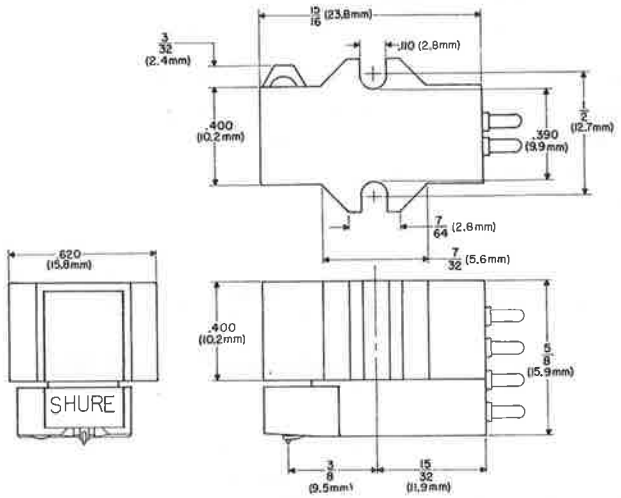


FIGURE 1
DIMENSIONAL DRAWING

CONNECTIONS: The Model M55E Cartridge utilizes a 4-terminal arrangement for connections having a separate ground terminal for each channel. (See Figure 2)

For Stereo reproduction terminal "R" and its ground terminal "RG" represent the right channel (outside groove wall). Terminal "L" and its ground terminal "LG" represent the left channel (inside groove wall).

If hum is experienced when cartridge is installed in a metal head, removal of the ground tab from the right ground terminal will probably correct the condition. (See Fig. 2)

NOTE: Before making any connections, refer to the arm or changer instructions to properly identify the right and left channel arm leads. **CAUTION:** Do not make any solder connections directly to the cartridge terminals, nor to the terminal pin jacks while they are attached to the cartridge terminals. Solder the leads to the pin jacks **before** slipping them over the terminals.

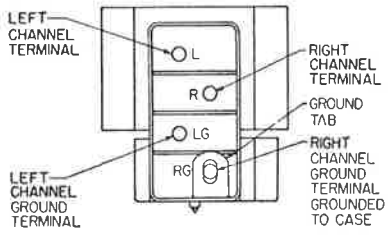


FIGURE 2
TERMINAL DIAGRAM

4-LEAD STEREO CONNECTION: To use a 4-lead arrangement, connect the "hot" lead of the right channel to terminal "R" and the shield or ground lead of the right channel to terminal "RG". Connect the "hot" lead of the left channel to terminal "L" and the shield or ground lead of the left channel to "LG". To prevent "ground loops and hum, no common connection should be used at the cartridge terminals.

3-LEAD STEREO CONNECTION: When a 3-lead stereo input system is used, the "RG" and "LG" ground terminals must be connected together. To do this, simply slide one of the brass "double loop" wire connectors over those terminals, and then push the common ground lead pin jack onto either the "RG" or "LG" terminal pin. The right and left channel leads are connected in the same manner described in the preceding paragraph.

MONAURAL CONNECTION: If only single channel reproduction is required, slip one of the brass double-loop wire connectors provided over the "R" and "L" terminals, and slip the other over the "RG" and "LG" terminals. Then attach the one "hot" lead to either the "R" or "L" pin terminal, and attach the ground lead to either the "RG" or the "LG" pin terminal.

SHURE-SME MOUNTING INSTRUCTIONS:

To mount the M55E in the Shure-SME or the SME Precision Pickup Arm, Model 3009 and 3012, refer to the paragraphs on Cartridge Installation and Balancing in the Instruction Manual supplied with the pickup arms.

NOTE: In the older pickup arm models (not having the rider weight in two halves or the end cap with forward adjustment), one or two small weights as supplied with the cartridge must be added between the cartridge and shell to properly balance the Shure-SME or SME Arm.

GARRARD LAB 80 AND A70 MOUNTING INSTRUCTIONS:

The Garrard Lab 80 and A70 Pickup Head Shells have special British threads. In order to mount the Shure M55E Cartridge, use the two special brass screws **and** tubular aluminum spacers supplied with the cartridge. Put one tubular spacer between each screw head and the cartridge body.

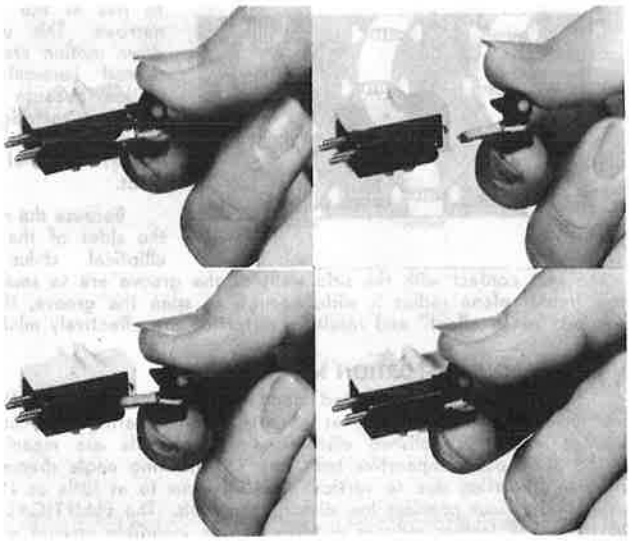


FIGURE 3

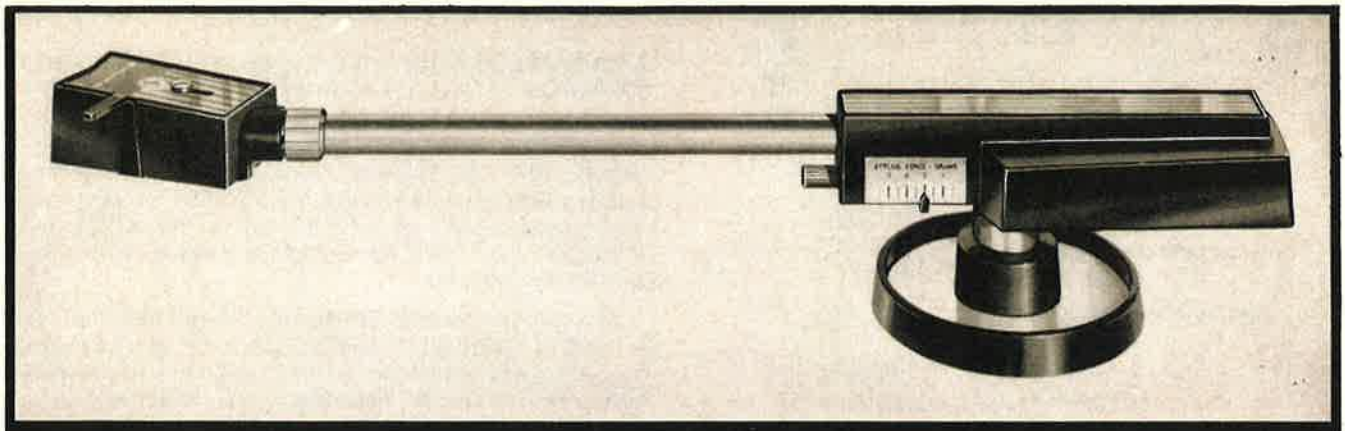
STYLUS REPLACEMENT — REMPLACER L'AIGUILLE
REEMPLAZO DE LA AGUJA — ERSATZ-ABTASTSTIFT-EINSCHUB

Stylus replacement is very simple and fast. To replace — grasp molded housing of stylus between thumb and forefinger. Gently withdraw stylus by pulling forward out of cartridge. Grasp replacement stylus between thumb and forefinger and insert into stylus socket. Press stylus into socket until the molded housing of the stylus touches the cartridge case. Care must be taken not to allow the finger to slip off the molded housing of the stylus, resulting in damage to the stylus tip or shank.

222 HARTREY AVE • EVANSTON, ILL • CABLE SHUREMICRO
SHURE MICROPHONES AND ELECTRONIC COMPONENTS
EVANSTON PHONE DA 8-9000 • CHICAGO PHONE SH 3-1600

DATA SHEET

MODEL M232
MODEL M236
PROFESSIONAL TONE ARM



Professional TONE ARM

. . . for use with quality high fidelity phono cartridges-monophonic or stereo.

Specifications:

Dimensions	MODEL M232		MODEL M236	
	Inches	mm	Inches	mm
Overall Length	12 1/16	322.3	14½	368.3
Base Diameter	2 1/16	68.3	2 1/16	68.3
Range of Heigth of Adjustment	Up to 2¼	57.2	Up to 2¼	57.2
Arm Pivot to Turntable Center	8¼	209.6	10 19/64	261.5
Weight	1 lb. (453.6 gr.)		1⅛ lbs. (510.3 gr.)	

General: Models M232 and M236 "Professional" Stereo Tone Arms reflect the high quality and scientific design needed for superior reproduction of monophonic and stereophonic phonograph records. The Model M236 is recommended for studio and professional use and is capable of playing records up to 16" (40 cm) in diameter. The Model M232 is similar to Model M236, but is intended for use with equipment where space is limited. It is designed to play records up to 12" (30 cm) in diamter.

The Models M232 and M236 "Professional" Stereo Tone Arms permit the use of lower tracking forces for which the latest cartridges are designed. The tone arms can be precision balanced and are so designed that a highly accurate adjustment of the tracking force can be made visually.

Other Features:

A. All cartridges can be adjusted for correct "overhang" to insure optimum tracking.

B. The arm can be completely installed from the top side of the motorboard.

C. The plug-in head is rigidly locked in place, but very easily removed when necessary.

D. Precision ball bearings are used throughout on all pivot surfaces.

E. A plug-in cable is supplied for convenient connections to the preamplifier.

Cartridge Installation: The Models M232 and M236 Stereo Tone Arms have been designed to provide superior performance with Shure Cartridges and to permit maximum performance from other types and makes. Figure A shows a typical installation using the Shure M7D Stereo Custom Dynetic phonograph cartridge.

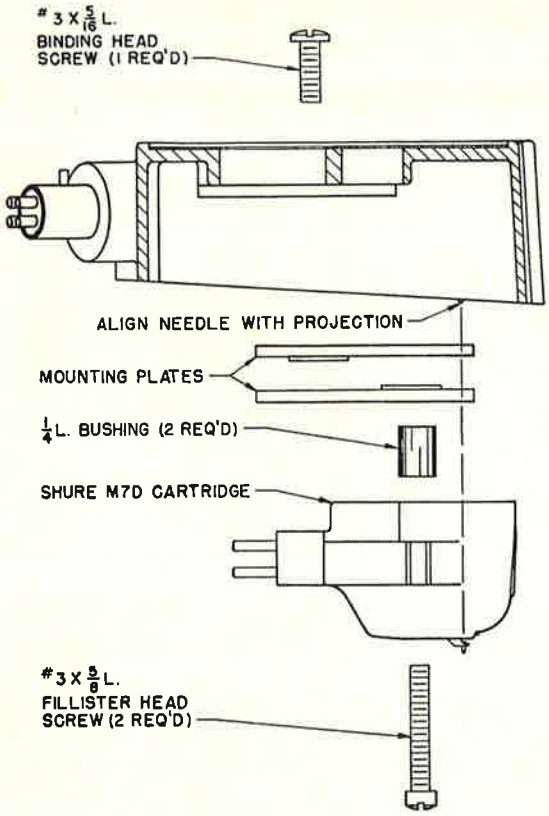
All screws, nuts, and washers indicated are American Standards.

The following steps are recommended in installing a cartridge.

1. Remove the plug-in head by loosening the knurled lock nut. See Figure B.
2. Assemble spacers and mounting plates to the cartridge.

27A151 (8-65)

Printed in U.S.A.
Made in U.S.A.



3. Slip pin-jacks onto cartridge terminals. (See electrical connections). Mount cartridge assembly into the plug-in head using the #3x$\frac{5}{16}$" machine screw.

4. Slide cartridge assembly to align the needle tip even with the small projections on the underneath side head. This alignment insures maximum tracking effectiveness.

Hardware Included in Package:

1 Washer #5
2 Hex Nut #5
3 Washer #8.
3 Hex Nut #8-32.
1 S.S.B.H.M. Screw #3x$\frac{5}{16}$".
3 Flat Hd. Mach. Screw #8x1$\frac{1}{4}$".
2 Fil. Hd. Mach. Screw #3x$\frac{3}{8}$" (Short).
2 Fil. Hd. Mach. Screw #3x$\frac{5}{8}$" (Long).
1 Nut #3-48.
3 Flat Hd. Wood Screw #8x$\frac{3}{4}$" L.
1 Set Screw (Assembled in Base).
2 Spacer (High).
2 Spacer (Low).
2 Slide.
1 Disc.
1 Cable.

Arm Installation: The Models M232 and M236 "Professional" Stereo Tone Arms are designed to be completely installed from the top of the motorboard. The arms may be mounted in any convenient place on the motorboard. For optimum tracking angle the arm is mounted with the needle tip (or projection on tone arm head) passing .597 inches (15.2 mm) for the M232 and .705 inches (17.9 mm) for the M236 beyond the center pin of the turntable.

To facilitate correct installation, the printed box may be used to locate the mounting hole for the pivot post. The semi-perforated holes in the template are carefully positioned for proper mounting. An additional hole is provided in the top of the box to insure that the pencil or scriber will be perpendicular to the mounting base.

The following steps are recommended in installing the Models M232 and M236, "Professional" Tone Arms. See Figure B.

1. Carefully force proper template hole over the turntable center. Using the turntable center as a pivot point, swing the template to locate the center of the mounting hole.
2. Drill $\frac{11}{16}$" (17.5 mm) diameter hole at the spot selected.
3. Locate the base accurately over the $\frac{11}{16}$" (17.5 mm) hole and mark the location of the three mounting holes. If the motorboard is made of wood, drill three starting holes for the wood screws. If the motorboard is made of metal, drill three through holes approximately $\frac{3}{16}$" (4.8mm) in diameter.
4. Fasten the base securely, using wood screws or machine screws, nuts and washers provided. Place aluminum disc in recess in base.
5. Plug in tone arm head holding cartridge.
6. Mount the tone arm by inserting the pivot post through the center of the mounting base. Tighten set screw in mounting base to hold the arm approximately at the correct height.
7. Install arm rest.
   NOTE: The arm rest is designed for adjustable height and consists of an arm rest assembly, a base, two #5 hex nuts and a washer. (See Figure D.)
   A. Locate and drill the mounting hole for the arm rest.
   B. Assemble one #5 hex nut to the arm rest assembly. Locate nut about half way up the threaded rod.
   C. Insert arm rest assembly into the base and seat the hex nut in the cavity provided.
   D. Place arm rest assembly and base through the mounting hole and fasten loosely in place using the #5 washer and the other #5 hex nut.

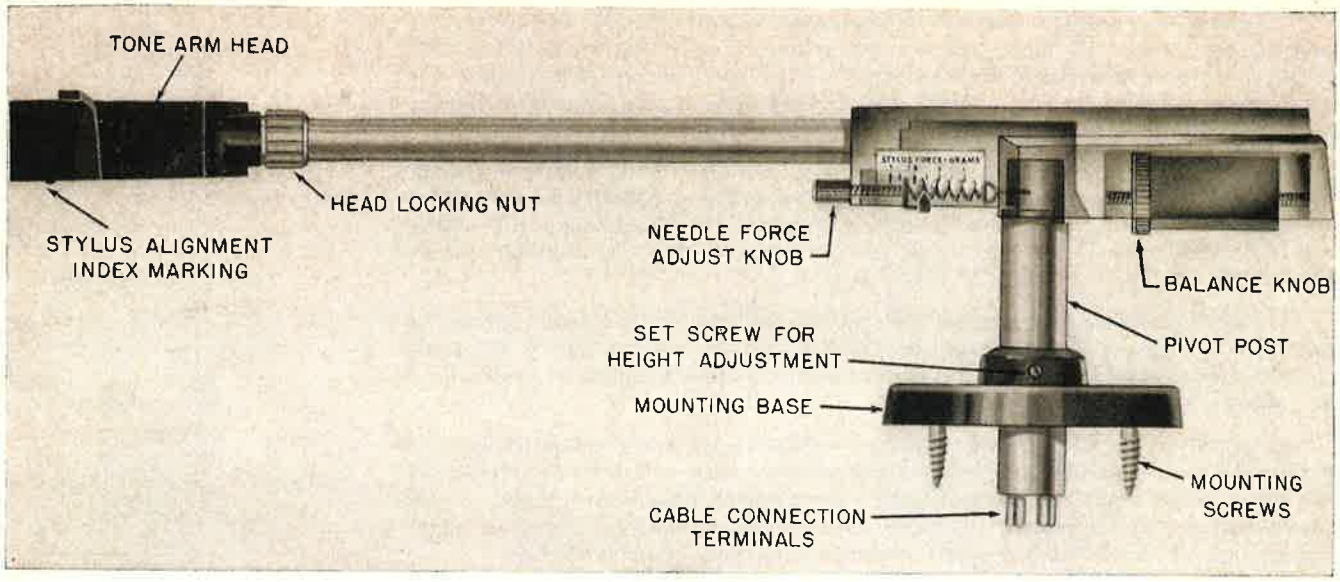


FIGURE B

E. Adjust the height of the arm rest by rotating the arm rest assembly. Tighten hex nut, with washer, to lock arm rest to desired height.

8. Balance the tone arm. The tone arm head with cartridge installed must be in place during this operation.
   A. Pull the needle force adjustment knob forward and slip downward until the knob is completely disengaged from its recess in order to relieve spring tension.
   B. Adjust balance knob with the arm in a horizontal position. The arm should remain parallel to the turntable with no tendency for the tone arm head to move upward or downward.
   C. Slip needle force adjust knob back into its recess and turn needle force adjust knob to the tracking pressure recommended for the specific cartridge installed in the tone arm head.
   D. After balancing the tone arm, the balancing knob should not be disturbed or the carefully calibrated stylus force gauge will be inaccurate.

   NOTE: The tone arm should be rebalanced in accordance with the above steps if the tone arm head or cartridge is changed.

Caution: Make certain turntable is not revolving before proceeding with steps 9 and 10.

9. Swing arm over entire playing area to check if the lateral stops are in the right position. If the arm will not swing over the entire playing surface, loosen set screw in the base and rotate pivot post until a full record can be played without the arm hitting a stop. The stops are used to prevent complete rotation of the arm.

10. Loosen set screw in the base and adjust height of the tone arm until the tubular part of the arm is parallel to the record surface when the stylus of the cartridge is resting on the record surface. Tighten set screw in the mounting base.

Electrical Connections: The leads in the tone arm are terminated in a four pin terminal board at the

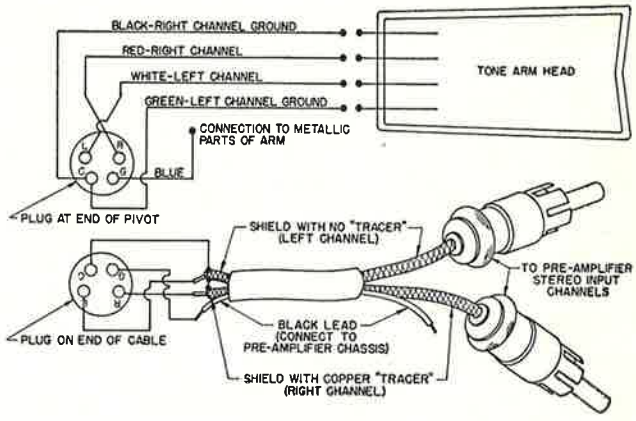


FIGURE C

end of the pivot post. A cable and plug assembly is supplied to be plugged into the end of the pivot post. This eliminates the need for mounting a separate terminal strip. Figure C shows the internal wiring of the phono arm and of the cable and plug assembly.

For Stereo reproduction, the white lead (at the tone arm head) and its ground connection green lead—represent the left channel. The red lead and its ground connection—black lead—represent the right channel.

At the pivot post, the white lead is connected to pin L; the red lead is connected to pin R; the green and black leads are connected to pin C. The metal parts of the arm are connected to pin G.

The cable and plug assembly (as supplied) is especially designed to connect the Models M232 and M236 Stereo "Professional" Tone Arms. The cable is a 4 foot (1.2m), low capacity, two conductor shielded cable with a third unshielded lead beneath the jacket. The molded plugs for connecting the cable to the amplifier are coded "R" for right channel and "L" for left channel.

The shielded conductor with the copper tracer should be connected to the right channel (plug coded "R") input of the pre-amplifier. The shielded conductor with NO tracer in the shield should be connected to the left channel (plug coded "L") input of the pre-amplifier. The unshielded black lead of the cable is used to connect the metal parts of the tone arm to the pre-amplifier chassis and turntable ground.

For Monaural reproduction using a monaural cartridge with a monaural system, use either the right channel pair of leads (red and black) or the left channel pair of leads (white and green). The unused leads should be insulated and placed out of the way. The metal parts of the arm should be connected to the pre-amplifier chassis and turntable ground.

For Monaural reproduction using a monaural cartridge with a stereo system, the red and white leads (at the tone arm head) should be connected to the "hot" terminal of the monaural cartridge and the green and black leads should be connected to the "ground" terminal of the cartridge.

For reproduction of stereo or monaural records using a stereo cartridge into a monaural system, connect the stereo cartridge into tone arm head as per previous instructions. See "Electrical Connections"; then connect both phono plugs to the input of the monaural amplifier. This can be easily accomplished by use of an audio Y connector which connects two inputs together for a single input amplifier.

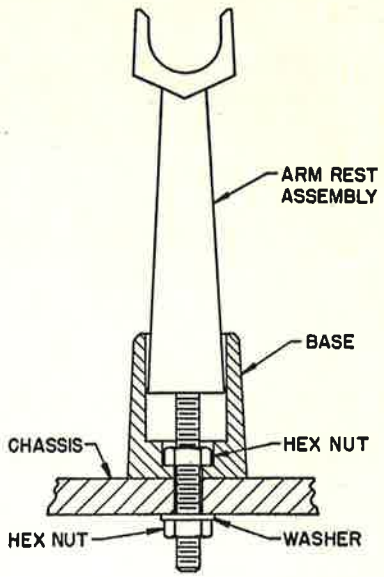


FIGURE D

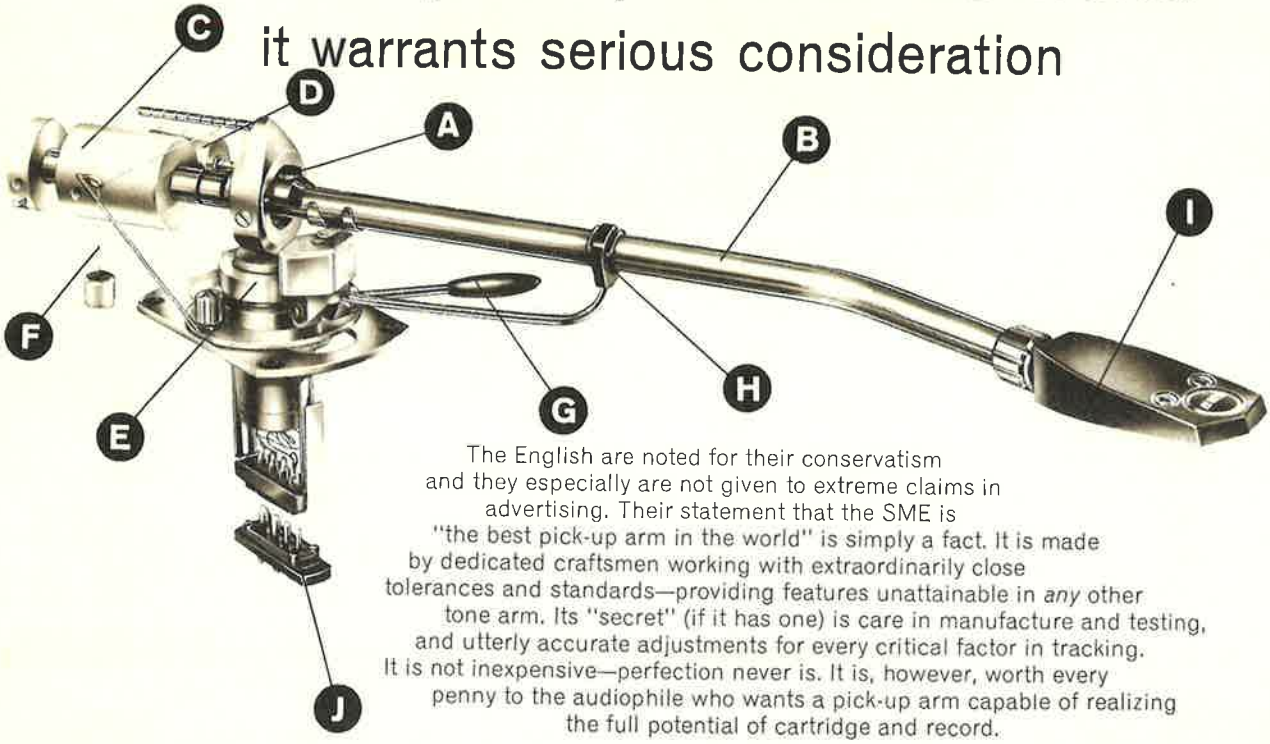
Guarantee: Each Stereo Tone Arm is guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from the factory, provided all instructions are complied with fully.

Patent Notice: Manufactured under U.S. Patent D189,144.

when the British say

"the best pick-up arm in the world"

it warrants serious consideration



The English are noted for their conservatism and they especially are not given to extreme claims in advertising. Their statement that the SME is "the best pick-up arm in the world" is simply a fact. It is made by dedicated craftsmen working with extraordinarily close tolerances and standards—providing features unattainable in *any* other tone arm. Its "secret" (if it has one) is care in manufacture and testing, and utterly accurate adjustments for every critical factor in tracking. It is not inexpensive—perfection never is. It is, however, worth every penny to the audiophile who wants a pick-up arm capable of realizing the full potential of cartridge and record.

SHURE SME DESIGN FEATURES

A. Virtually frictionless knife-edge bearings. Pivot friction is less than 20 milligrams, horizontal and vertical!

B. Wood-lined stainless steel tube arm. Resonances are outside recorded range, of small amplitude, and damped.

C. Unique weight system statically balances arm longitudinally AND laterally.

D. Rider weight adjusts tracking force from ¼ to 5 grams, adjustable for ¼ or ½ gm. increments, as accurate as a fine stylus pressure gauge.

E. Sliding base offers alignment adjustment through 1 inch. Height is adjustable through ¾ inch. Fulfills optimum requirements of length, offset, overhang when adjusted with alignment protractor included.

F. "Anti-skating" bias adjuster counteracts tendency of the arm to move toward record center and "favor" inner groove.

G. Hydraulic lever-operated set-down for "slow-motion" feather-light lowering onto any part of the recording.

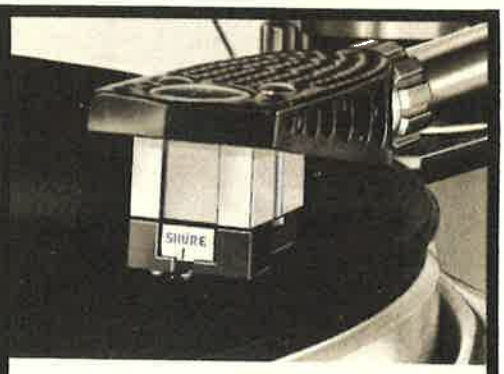
H. Nylon-jaw arm rest with stainless steel locking link.

I. International standard 4-pin socket. Cartridge shells fitted with detachable pillars and mounting screws at standard ½ inch spacing.

J. Output socket and plug provides a rigid junction eliminating influence on free tone-arm movement. Plug-in Cable Assembly included for quick, solderless hook-up.

PRICES: Includes one shell, arm, template, alignment protractor, hardware, cable and plug assembly.

MODEL 3009	for 12" recordings	$100.50
MODEL 3012	for 16" recordings	$110.50
ADDITIONAL STANDARD SHELL	Model A30H	$5.50
MODEL S2W/12	Ultra-lightweight shell for Shure-SME 3012 Arm. With counterweight	$8.75
MODEL S2W/9	Ultra-lightweight shell for Shure-SME 3009 Arm. With counterweight	$8.75
MODEL S2	Separate extra ultra-lightweight shell. (Companion counterweight not furnished)	$6.00
Pre-Cut Mounting Boards for installation on Thorens TD-124 & TD-121 Turntables		
Model A30M	for Mounting Model 3012	$15.00
Model A39M	for Mounting Model 3009	$15.00



perfect companions!

The Shure V-15 Cartridge in ultra-light shell used with the Shure-SME Tone Arm! Exclusive Bi-Radial elliptical stylus and 15° vertical tracking angle give the V-15 unparalleled performance. Ultra-light shell for Shure-SME permits most effective tracking at minimum forces. Super-light, rugged alloy head has 120 perforations — weighs just 6 grams. Shipped with companion balance weight to match both Shure-SME Pick-Up Arms.

Model V-15 . . . . . $62.50

SHURE SME series 2 pick-up arm

SHURE BROTHERS, INC., 222 HARTREY AVE., EVANSTON, ILLINOIS

HOBSON'S CHOICE?
NEVER AGAIN!

If, in 1631, you went to rent a horse from Thomas Hobson at Cambridge, England, you took the horse that stood next to the door. And no other. Period. Hence, Hobson's Choice means No Choice.

And, as recently as 1961, if you went to buy a true high fidelity stereo phono cartridge, you bought the Shure M3D Stereo Dynetic. Just as the critics and musicians did. It was acknowledged as the ONLY choice for the critical listener.

Since then, Shure has developed several models of their Stereo Dynetic cartridges—each designed for optimum performance in specific kinds of systems, each designed for a specific kind of *porte-monnaie*.

We trust this brief recitation of the significant features covering the various members of the Shure cartridge family will help guide you to the best choice for you.

THE CARTRIDGE	ITS FUNCTION, ITS FEATURES...	IS YOUR BEST SELECTION
 V-15	The ultimate! 15° tracking and Bi-Radial Elliptical stylus reduces Tracing (pinch effect), IM and Harmonic Distortion to unprecedented lows. Scratch-proof. Extraordinary quality control throughout. Literally handmade and individually tested. In a class by itself for reproducing music from mono as well as stereo discs.	If your tone arm tracks at 1½ grams or less (either with manual or automatic turntable)—and if you want the very best, regardless of price, this is without question *your* cartridge. It is designed for the purist . . . the perfectionist whose entire system *must* be composed of the finest equipment in *every* category. Shure's finest cartridge. $62.50.
 M55E	Designed to give professional performance! Elliptical diamond stylus and new 15° vertical tracking angle provide freedom from distortion. Low Mass. Scratch-proof. Similar to V-15, except that it is made under standard quality control conditions.	If you seek outstanding performance and your tonearm will track at forces of ¾ to 1½ grams, the M55E will satisfy—beautifully. Will actually improve the sound from your high fidelity system! (Unless you're using the V-15, Shure's finest cartridge.) A special value at $35.50.
 M44	A premium quality cartridge at a modest price. 15° tracking angle conforms to the 15° RIAA and EIA proposed standard cutting angle recently adopted by most recording companies. IM and Harmonic distortion are remarkably low . . . cross-talk between channels is negated in critical low and mid-frequency ranges.	If you track between ¾ and 1½ grams, the M44-5 with .0005" stylus represents a best-buy investment. If you track between 1½ and 3 grams, the M44-7 is for you . . . particularly if you have a great number of older records. Both have "scratch-proof" retractile stylus. M44-5, $21.95. M44-7, $19.95.
M7/N21D 	A top-rated cartridge featuring the highly compliant N21D tubular stylus. Noted for its sweet, "singing" quality throughout the audible spectrum and especially its singular recreation of clean mid-range sounds (where most of the music really "happens".) Budget-priced, too.	For 2 to 2½ gram tracking. Especially fine if your present set-up sounds "muddy." It is truly an outstanding buy. (Also, if you own regular M7D, you can upgrade it for higher compliance and lighter tracking by installing an N21D stylus, $12.50.) M7/N21D cartridge, $17.95.
 M99	A unique Stereo-Dynetic cartridge head shell assembly for Garrard and Miracord automatic turntable owners. The cartridge "floats" on counterbalancing springs . . . makes the stylus scratch-proof . . . ends tone arm "bounce."	If floor vibration is a problem. Saves your records. Models for Garrard Laboratory Type "A", AT-6, AT-60 and Model 50 automatic turntables and Miracord Model 10 or 10H turntables. Including head shell, .0007" diamond stylus, $24.75.
 M3D	A best-seller with extremely musical and transparent sound at rock-bottom price. Tracks at pressures as high as 6 grams, as low as 3 grams. The original famous Shure Dynetic Cartridge.	If cost is the dominant factor. Lowest price of any Shure Stereo Dynetic cartridge . . . with almost universal application. Can be used with any changer. Very rugged. M3D, $15.75.

SHURE Stereo Dynetic®

HIGH FIDELITY PHONO CARTRIDGES . . . WORLD STANDARD WHEREVER SOUND QUALITY IS PARAMOUNT

Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Illinois

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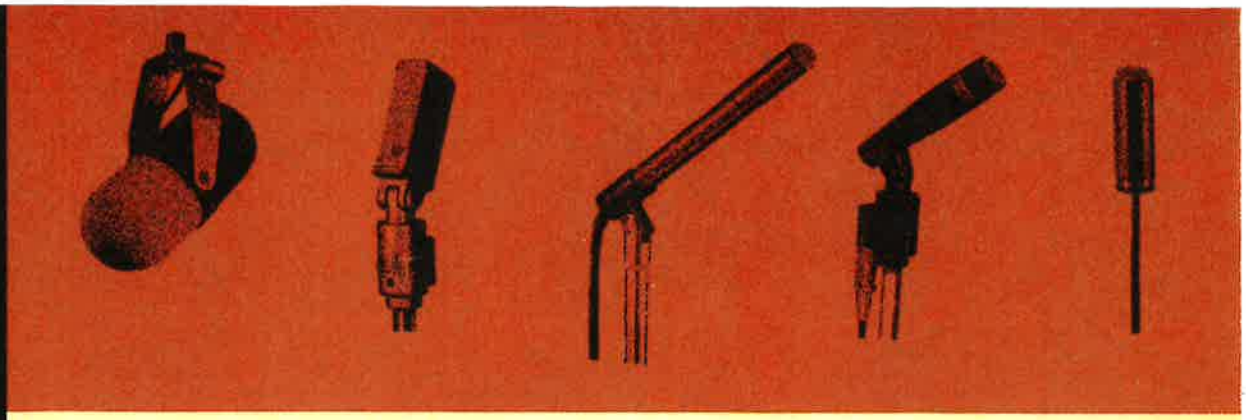
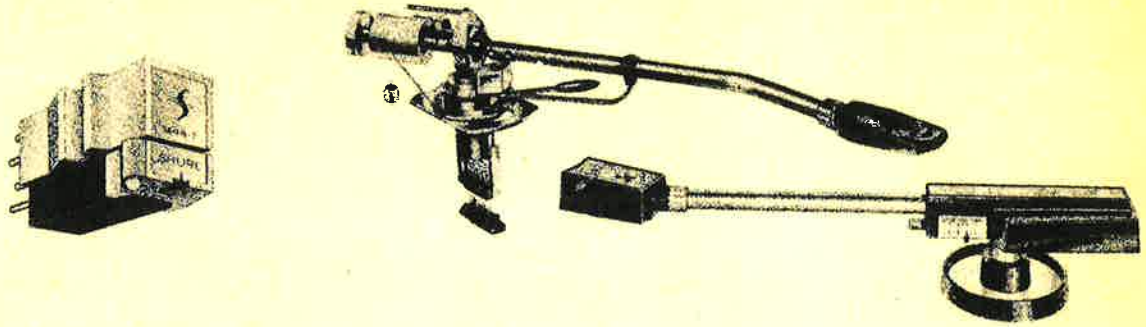
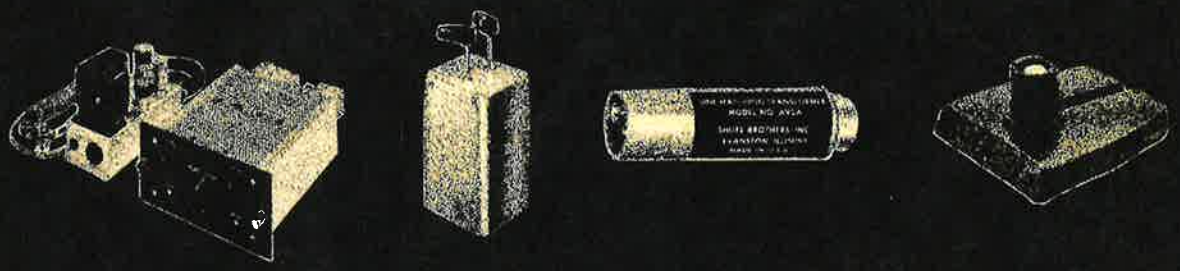
technical data for

SHURE

PROFESSIONAL PRODUCTS







SPECIAL PRODUCTS

For Your Information on other Shure Products

For further information contact: R. W. Carr, *Manager*
Professional Products Division
Shure Brothers, Incorporated
222 Hartrey Avenue, Evanston, Illinois
Phone: DA 8-9000

SHURE PROFESSIONAL PRODUCTS DATA

222 HARTREY AVENUE, EVANSTON, ILLINOIS / AREA CODE 312 / 328-9000 / CABLE: SHUREMICRO

General: The SE1 two channel transcription preamplifier is designed for use with magnetic reproducers in professional application of recording, film studios, television and broadcast stations. It is a high gain, low noise level preamplifier designed to operate into a 600 ohm buss at +4 or +8 DBM and equalized for magnetic reproducers. The power output capabilities are such that when operating at a +4 dbm level, there is more than a 12 db power reserve for instantaneous peaks. (The harmonic distortion at 1000 cps is less than 1% at +18 dbm). Clipping starts at approximately +20 dbm.

SPECIFICATIONS

Gain: .0012 volt input produces a minimum output of +4 dbm

Frequency Response: +1 db from 30 to 15,000 cps within specified characteristic, ie, RIAA, or Flat.

Trimmer controls are provided for both low and high frequency adjustment. These controls are located at about the center of the chassis.

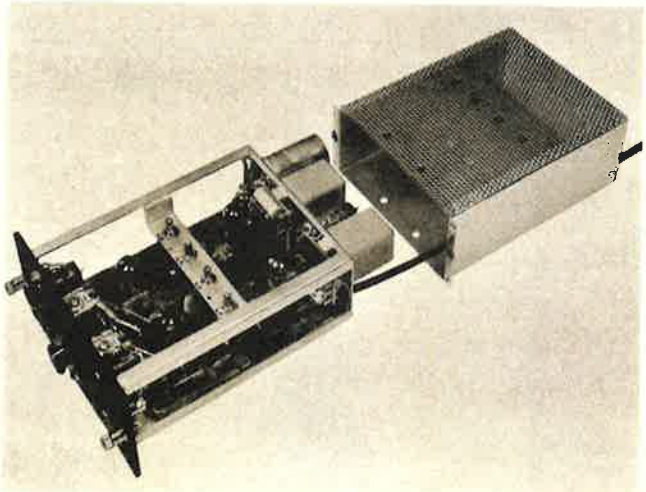
Separate H. F. trimmers are also provided for adjustment of the RIAA response characteristic. These controls are located immediately behind the front panel.

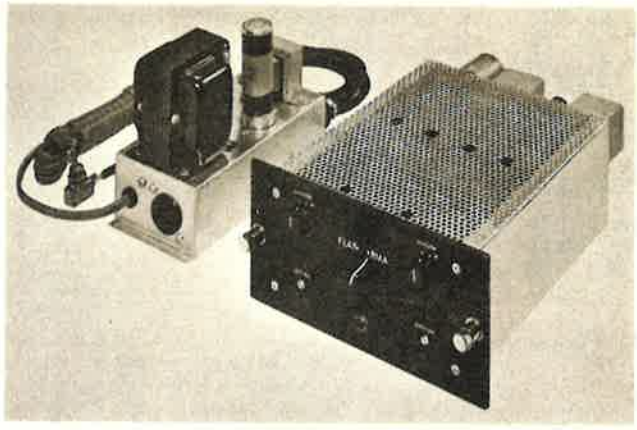
A rumble filter switch (45 CPS Hi Pass) is designated on the front panel as "LF Filter on". A high frequency filter switch (7 KC lo pass) is designated on the front panel as "HF filter on".

Output: The output is furnished at 600 ohms or 150 ohms depending on customer requirement. (A change to either impedance can be accomplished by re-wiring the transformer output connections). The preamplifier normally is designed to operate at a buss level of +4 dbm which is most common in professional applications.

Distortion: The harmonic distortion from 50 to 10,000 cps is under 1% at +15 dbm.

Hum & Noise: The noise level is 64 db below +4 dbm output with the gain adjusted for an input level of 4.5 millivolts. (Shure M-21 cartridge, 5 cm/sec at 1000 cps).





Input Impedance: 47,000 ohms.

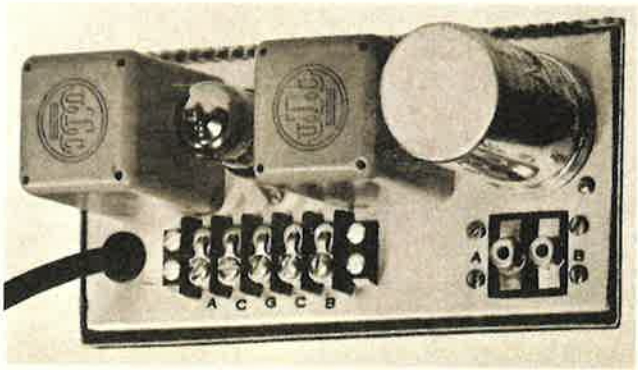
Balance Adjustment: Two level adjustment controls (Left and Right Balance) are provided on the front panel.

Channel Separation: Better than 37 db at 10,000 cps in RIAA position.

Tubes: 4—ECC83 (7025); 1—12AY7; 1—12X4 Rectifier.

Mechanical: The Equalizer requires an opening of 7 inches in length and 3⅜ inches in height and must have a minimum of 11 inches clearance behind the front panel. The power supply can be conveniently located within the limitation of a 2½ foot cable and requires minimum mounting dimensions of 3½ inches wide and 6 inches high by 11 inches long. The "ON-OFF" switch is attached to the power supply plug with a cable 3½ feet long and is suitable for mounting through a standard ½ inch panel mounting hole.

Guarantee: The SE-1 Stereo Transcription Preamplifier is guaranteed to be free from electrical and mechanical defects for a period of one year on components and 90 days on vacuum tubes from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, it is essential that you carefully repack the unit and return it to the factory for repair. Our guarantee is voided if the basic unit has been subjected to unreasonably rough handling or abuse.



27A303

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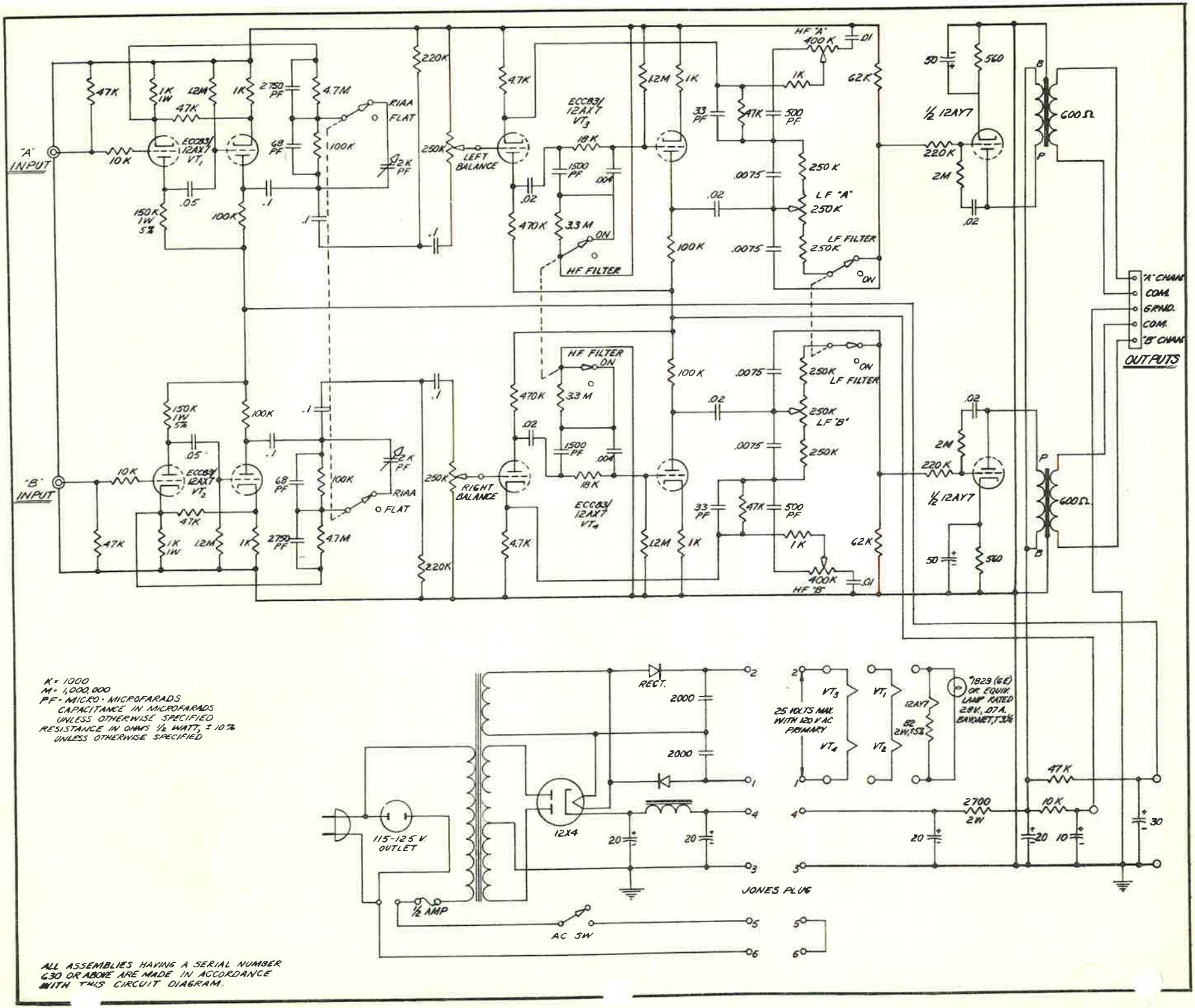
"A" INPUT
"B" INPUT
ECC83/ 12AX7 VT1
ECC83/ 12AX7 VT2
ECC83/ 12AX7 VT3
ECC83/ 12AX7 VT4
RIAA FLAT
LEFT BALANCE
RIGHT BALANCE
HF FILTER
LF "A"
LF "B"
LF FILTER
HF "A"
HF "B"
1/2 12AY7
"A" CHAN.
COM.
GRND.
COM.
"B" CHAN.
OUTPUTS
600 Ω
RECT.
12X4
115-125 V. OUTLET
1/2 AMP
AC SW
JONES PLUG
25 VOLTS MAX. WITH 120 V AC PRIMARY
#1829 (GE) OR EQUIV. LAMP RATED 2.8 V., .07 A. BAYONET, T 3/4
K = 1000
M = 1,000,000
PF - MICRO - MICROFARADS
CAPACITANCE IN MICROFARADS UNLESS OTHERWISE SPECIFIED
RESISTANCE IN OHMS 1/2 WATT, ± 10% UNLESS OTHERWISE SPECIFIED
ALL ASSEMBLIES HAVING A SERIAL NUMBER 630 OR ABOVE ARE MADE IN ACCORDANCE WITH THIS CIRCUIT DIAGRAM.

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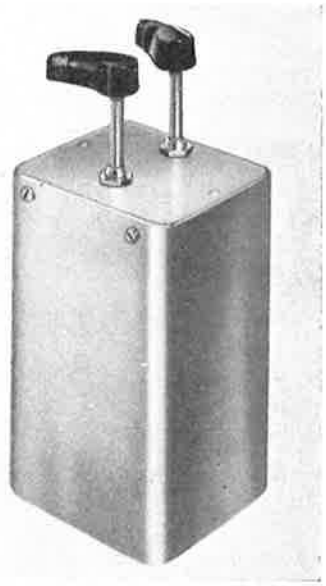
DATA SHEET

MODEL M66
Broadcast
Stereo Equalizer

BROADCAST STEREO EQUALIZER

GENERAL: The M66 Broadcast Stereo Equalizer compensates the recorded frequency to a choice of three playback characteristics—the standard RIAA, the flat, and a roll-off.

The M66 Equalizer, also, matches the impedance of the cartridge to the low impedance of the line transformer giving the advantage of no high frequency losses and minimum insertion loss.



SPECIFICATIONS:

Circuit: A 3 terminal two channel input with a common shield ground and a 4 terminal two channel output. See Figure A for circuit diagram.

Frequency Response Characteristic: The equalizer design is based on the Shure M3D and M7D Stereo Dynetic Cartridges having an average inductance of 365 millihenries and a DC resistance of 330 ohms. A three position switch selects different compensations. The M66 Equalizer matches and complements the frequency response within ± 1db from 30 c.p.s. to 20,000 c.p.s. in each of the following three switch position response characteristics. (See Fig. B)

Flat—For flat playback of recordings made without high frequency pre-emphasis.
RIAA—Standard RIAA curve.
Roll-Off—For standard recordings to reduce abnormal surface noise.

The M66 Broadcast Stereo Equalizer can also be used with high impedance stereo cartridges (around 500 millihenries) and will compensate the frequency response as shown in Figures B and C within ± 1db from 30 c.p.s. to 20,000 c.p.s. but with the overall output level down 3db. The M66 Equalizer can, also, be used with low impedance monaural cartridges (around 175 millihenries) and will compensate the frequency response as shown within ± 2db from 50 c.p.s. to 20,000 c.p.s. but with an increase in the overall output level of 1 db.

Output Impedance: The M66 Stereo Equalizer has three output impedances available. The unit is supplied wired for a 250 ohm output. 150 ohm and 500 ohm output impedances are available by a simple one wire change on a convenient terminal board located inside the shield can.

Channel Separation: Better than 30db over the entire range from 30 c.p.s. to 20,000 c.p.s.

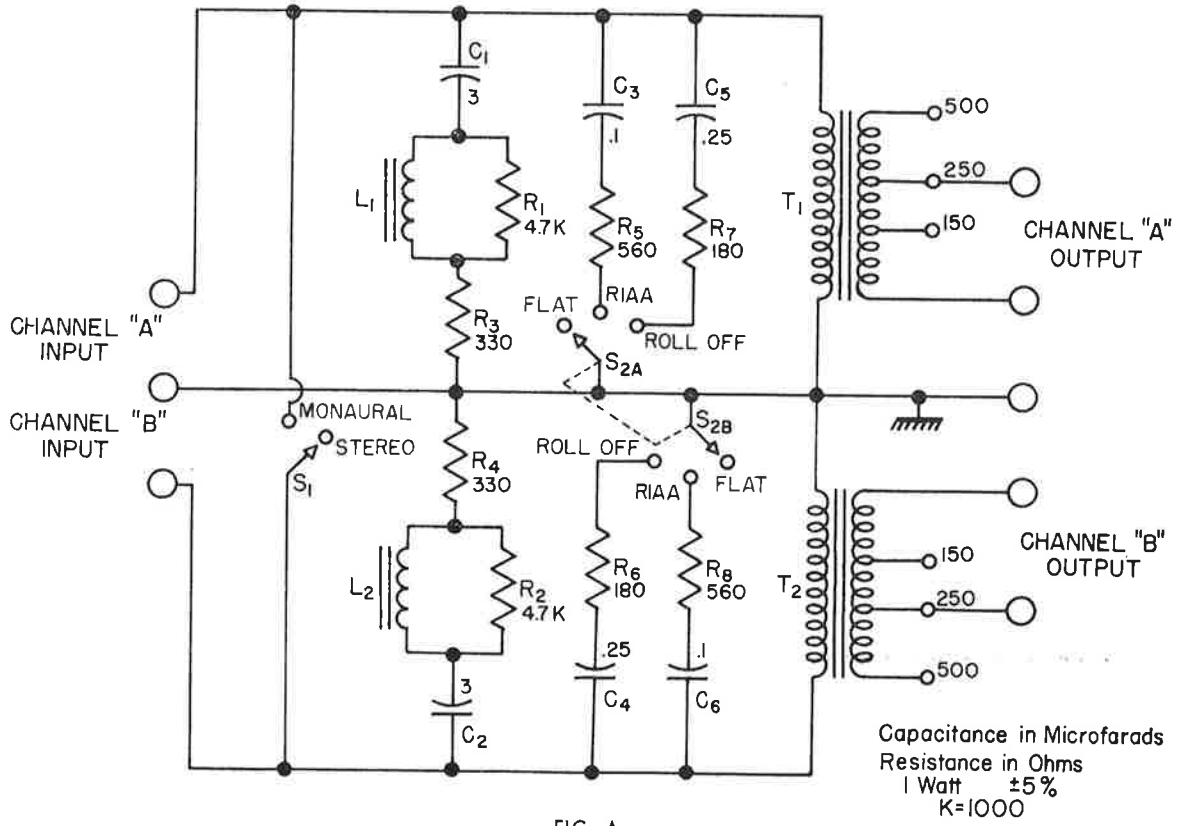


FIG. A

27A153 (4-60)

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Output Level: Approximately —67dbm using Shure M3D or M7D Stereo Dynetic Cartridge from the RCA Test Record No. 12-5-71A. (Output measured with 250 ohm output impedance.)

Insertion Loss: 28db measured with conditions as outlined in "output level."--The insertion loss may vary with different output load impedances.

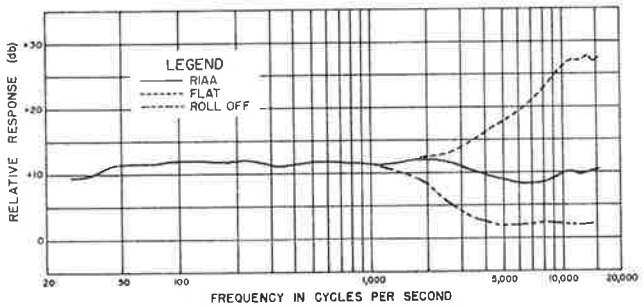
Hum Shielding: The M66 Equalizer is enclosed in an especially designed steel case for maximum shielding.

Physical Size: The Equalizer case is 3½" wide, 3" high, and 5⅛" deep. The panel plate is 5" wide and $\frac{3}{16}$" high.

INSTALLATION: The Model M66 Broadcast Stereo Equalizer is designed to be mounted on a control panel with the switch shafts coming through the panel or to be mounted on a bracket, (supplied), for permanent installation where the switch shafts need not be accessible.

The following steps are recommended for mounting to a control panel.

1. Using the panel plate of the Equalizer as a template, locate and mark the 2 mounting screw clearance holes and the 2 switch shaft clearance holes.
2. Drill 3/16 diameter holes to clear the mounting screws and 25/64 diameter holes to clear switch shafts.
3. Mount equalizer case and panel plate to the panel using the #8-32 machine screws. In this case, use the angle bracket as a spacer between the equalizer case and the panel. This allows clearance for the switch mounting nuts.
4. Cut switch shafts to proper length and install switch knobs.



COMPENSATED FREQUENCY RESPONSE

FIG. B

CONNECTIONS: The Model M66 Equalizer is designed for use with a balanced line output or with an unbalanced line output.

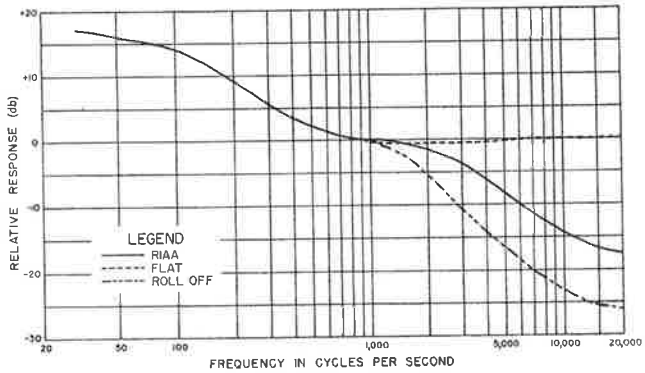
For a balanced line output connection, the "high" side of the line should be connected to the terminal marked + and the "low" side of the line should be connected to the adjacent "out" terminal (not coded). The shield or ground should be connected to the terminal marked GND.

For an unbalanced line output connection, the "high" side of the line should be connected to the OUT terminal marked + and the ground side of the line should be connected to both the adjacent OUT terminal and the GND terminal. If a separate shield is used, this may, also, be connected to the GND terminal.

The two channel input (terminals marked IN) has a common ground, as indicated on the terminal board.

In the "MONO" switch position, the two channel inputs are shorted together for monaural operation.

GUARANTEE: This Shure Broadcast Stereo Equalizer is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, it is essential that you carefully repack the unit and return it to the factory for repair. Our guarantee is voided if the basic assembly has been subjected to unreasonably rough handling.



FREQUENCY RESPONSE

FIG. C

SHURE *The Mark of Quality*

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DATA SHEET

A95A LINE MATCHING TRANSFORMER

LINE MATCHING TRANSFORMER

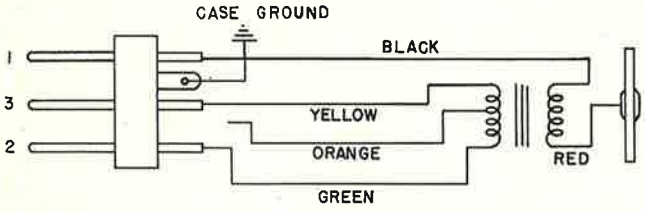
General: Model A95A is a high quality transformer which makes it feasible to run a microphone line from a low impedance microphone to a high impedance amplifier. This type of connection usually solves the problem of excessive high frequency loss and objectionable hum pickup when long lengths of microphone cable are necessary. The transformer can also be used to match high impedance microphones to low impedance inputs.

Model A95A matches 35-50 ohm and 150-250 ohm microphones to high impedance inputs and offers additional versatility when used in conjunction with Shure Dynamic, Ribbon, and Magnetic microphones.

The A95A Transformer is built into a compact, sturdy magnetic shield case, and is provided with mating input and output plugs for convenience in making connections.

Connections:

The internal connections of the A95A Matching Transformer are shown in Figure A.



CIRCUIT DIAGRAM

FIGURE A

For convenience in connecting the transformer, a plug of the Cannon XL-3-11 type is supplied for the input connection. Connect the two "hot" conductors of a balanced microphone line to pins 2 and 3; connect the shield to pin 1. For microphones with a separate shield and ground lead, connect both to pin 1.

An Amphenol MC1F Plug is supplied for the output connection from the transformer. Connect the "hot" terminal of the amplifier to the center of the plug, and connect the ground or shield from the amplifier chassis to the shell of the plug. To prevent excessive high frequency loss, a cable length of five feet or less is recommended at the output of the A95A Transformer.

Impedance Selection:

The Model A95A is supplied wired for 150-250 ohm microphone line. For use with 35-50 ohm line proceed as follows:

1. Remove male insert at input end of A95A transformer by turning screw in. (counterclockwise).
2. Remove yellow lead from pin No. 3 and insulate bare wire of yellow lead with insulator from orange lead.
3. Solder orange lead to pin No. 3.
4. Re-assemble male insert into transformer housing and seat screw securely in place by turning out. (clockwise).

SPECIFICATIONS

Frequency Response:	20 to 20,000 cps
Input Impedance:	35-50 ohms and 150-250 ohms
Output Impedance:	High
Case:	Full magnetic shield Steel with Gray enamel
Case Diameter:	3/4" (19.1 mm.)
Length:	2 1/2" (63.5 mm)
Net Weight:	2 1/2 ounces (71 grams)
Packaged Weight:	8 1/2 ounces (241 grams)

Guarantee: Each transformer is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, return the transformer to the factory for repair.

27A271 (4-65)

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MICROPHONE STANDS AND ACCESSORIES

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 vibrations by its capacity to absorb mechanical shock. 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. Housing is textured black high impact plastic. Net Weight: 2⅛ lbs.

Model S33 Stands

Modern design, heavy (2½ lbs.) stand gives solid base for every professional microphone having standard ⅝" -27 thread. Low silhouette ideal for television use. Models S33B and S33P have screw that locks microphone to stand or can be omitted to offer unique quick-removal feature.

Model S33B — Black Satin finish for general use
Model S33P — Textured Charcoal finish to match Shure SM Series microphones
Model S33C — With special mounting hardware for Model SM5 Boom Microphone

A25B

A57S

Swivel Stand Adapters

Model A25B — Stand Adapter for Model SM 57 and other Shure 1" mounting diameter probe microphones. Tapped for ⅝" -27 stands. Lifetime locking swivel provides for tilting microphone 90° toward the source of sound.

Model A57S — Stand Adapter for use with Shure ¾" diameter microphones, Models 576 and 570S. Tapped for ⅝" -27 stands. Lifetime locking swivel provides for tilting microphone 90° toward the source of sound.

Model A57B — Similar to A57S, but designed for use with Models 571 and 570.

Model A57C — Similar to A57S, but designed for use with Model SM76.

"Flex-Grip" Lavalier Assembly

Model A57L — For use with Shure microphones, Models 570, 570S, and 571. Adapter for mounting ⅝" -27 microphones and accessories to stands using ½" pipe thread available upon request at no charge.

For information on replacement microphone cartridges and cables for Shure Microphones or any other Service problem, write

Service Department
SHURE BROTHERS, INCORPORATED
222 Hartrey Avenue
Evanston, Illinois

AL242 (3-65)

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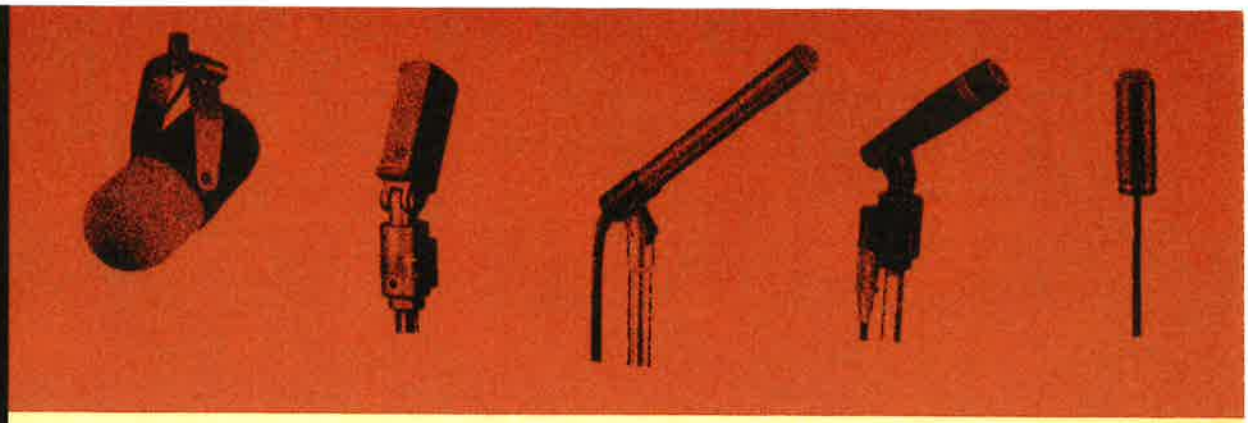

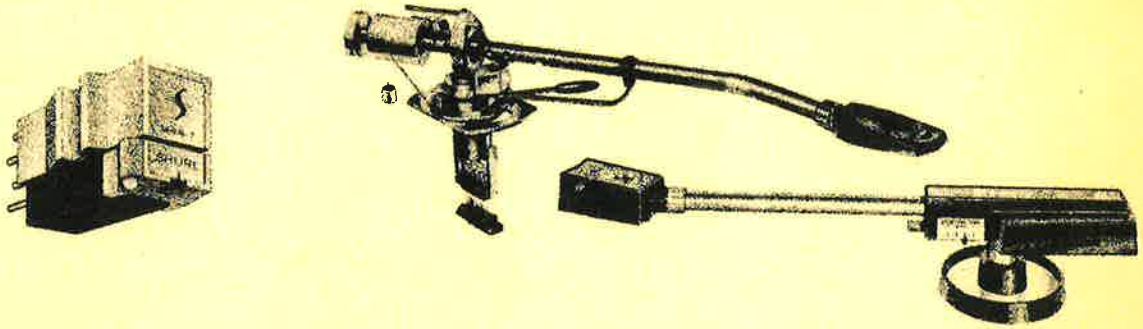

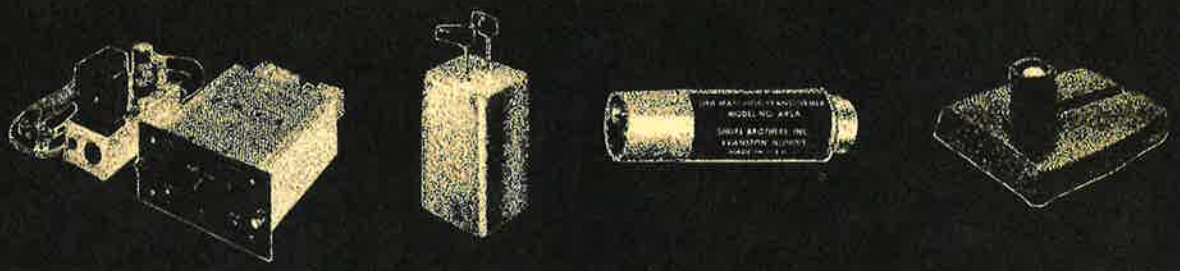

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GENERAL CATALOG

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