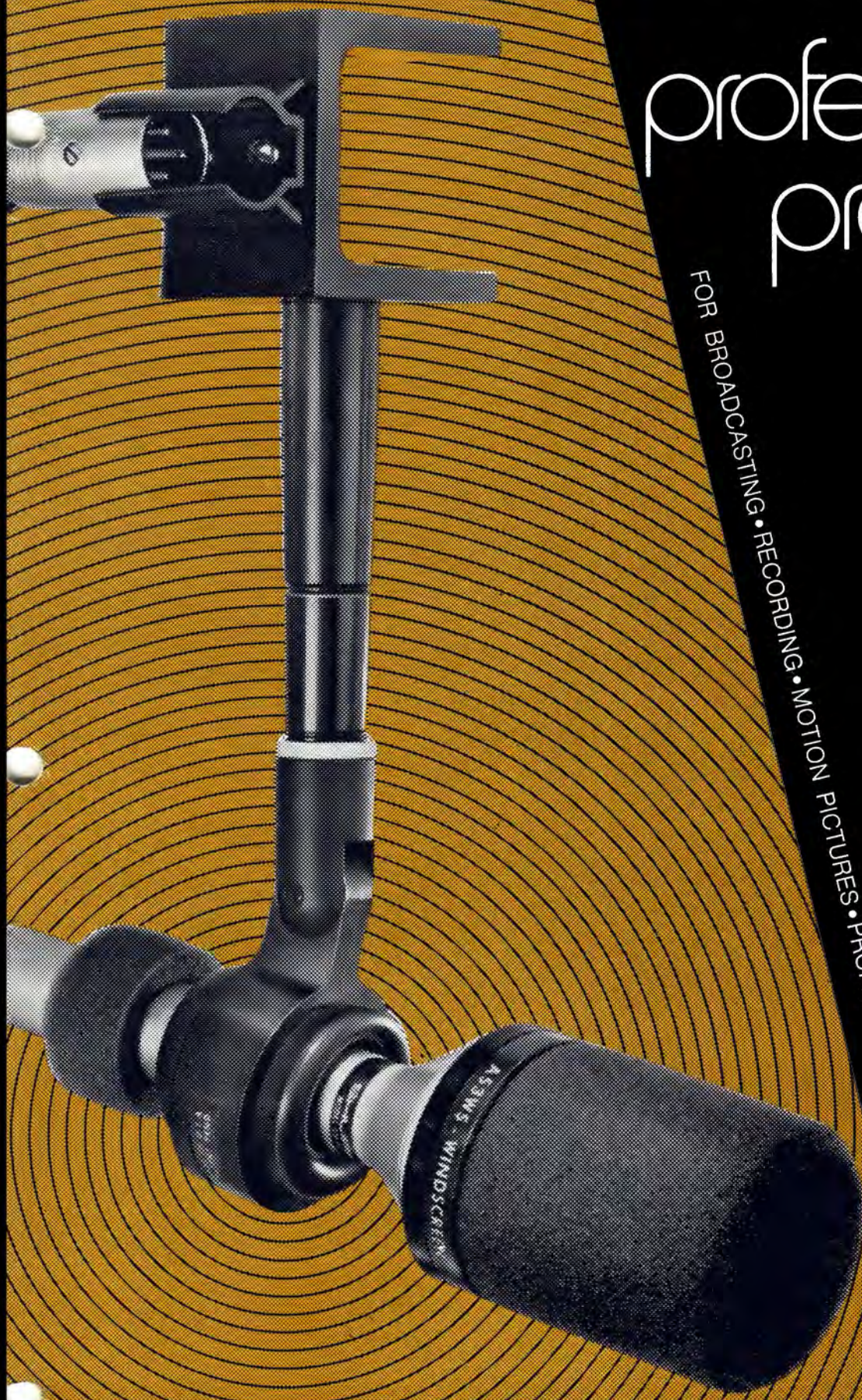


# professional products

FOR BROADCASTING • RECORDING • MOTION PICTURES • PROFESSIONAL SOUND REINFORCEMENT



MICROPHONES • COMPONENTS • CARTRIDGES • ACCESSORIES



SHURE

®



## IN THE HANDS OF TWO RECORDING MASTERS



When two of the most influential names in recording want to talk about recording microphones, we listen! Shown (above top) is Bones Howe, producer of the magnificent recordings featuring The 5th Dimension. Bones told us that he often uses the Shure SM53 without equalization. On the SM53, he added, "It has a much warmer quality on guitars and other stringed instruments . . . I noticed no handling noise from the SM53 when it was handheld . . . I recommend it for better sound quality in studio use, and as a great high-quality general purpose microphone for remote recordings."

Wally Heider (above bottom), master of the art of location recording, prefers the Shure SM54. He told us, "The loudest guys in the world, screaming into them, won't break them up . . . They sound good on any assignment . . . The front-to-back characteristics are excellent . . . Whenever I'm not locked into a performer's own pet microphone, I prefer to use the SM54."

## ALPHA AUDIO RICHMOND, VIRGINIA

When you own and operate the first 16-track professional recording studio in your entire state, you want to make sure that your sound equipment is of the highest quality, reliability, and versatility.

To the owners of Alpha Audio in Richmond, Virginia, this means that Shure products will be an integral part of the studio's electronic equipment. Nearly two-thirds of Alpha Audio's microphones are Shure products.

Even though Alpha Audio has four brands of microphones for performers to choose from, the Shure models are used the most, according to Nick Colleran, president of Alpha Audio.

"We have two SM50's that we use on bass drums," Colleran reports. "We have two SM53's for vocals, electric bass, flutes, and cello. We also have two SM56's and two SM57's for drums, electric guitars, and Leslie organ speakers, two SM76's for French horns and acoustical guitars, and an SM61 for snare drums, an SM5B below the piano and for singers with bad 'S' problems, plus two SM58's when control of high frequency is necessary."



In this unusual—in fact, extraordinary—quiet scene in one of Alpha Audio's studios, a Shure SM5B and SM53 Microphone await their next assignment, whether it be recording an intricate string ensemble or a thunderous rock group.

## Opryland U.S.A.

### AN ALL-AMERICAN SIGHT AND SOUND SPECTACULAR

Near Nashville, the beautiful Tennessee woods alive with foot-stompin' music and non-stop family fun in Opryland U.S.A. Here, you can hear any kind of American music you like—jazz, blues, folk, country, bluegrass, rock and contemporary—all for one admission price. And here, where quality sound is a necessity, you can find Shure microphones, and SR Vocal Master Sound Systems at work bringing the best in American music to the thousands of Opryland guests every day.

"There are many memories for us in the Ryman Auditorium," says E. W. (Bud) Wendell, general manager of the Opryland complex, "but the Opry deserves, and now has, its own home." The new house is the first facility specifically designed and built for the 51-year old show which, up to now, had switched studios four times.



In both design and function, the new Grand Ole Opry House is the centerpiece of the entire Opryland complex. So that everyone may hear as well as see their favorite Opry stars, the House has been equipped with one of the most advanced sound systems in the world . . . one in which Shure microphones play a vital part.

## THE WOLFMAN . . . A HOWLING SUCCESS STORY.



The hottest radio happening since multiplex! He's Wolfman Jack, a personality extraordinaire and an independent production company. From his home/studio in Beverly Hills, California, Wolfman Jack pre-records his widely syndicated daily radio show almost entirely with Shure audio componentry. For vocal pickup, the Wolfman uses two of the finest Shure studio microphones: the "workhorse" SM53 unidirectional dynamic and the smoother-voiced SM33 unidirectional ribbon. (His "outrigger" production console is a Shure M675 Broadcast Production Mixer used in conjunction with a Shure M67 Mixer.) A Shure M688 Stereo Mixer is used for stereo recording. Even in disc playback, Shure plays a vital role with a precision-engineered Shure M232 professional tone arm and SC35C Cartridge. Shure professional products doing their thing help the Wolfman do his thing.

## RECORDING IN ONE OF THE WORLD'S FINEST STUDIOS

Welcome to glamorous Hollywood, California, and to what many experts believe to be one of the finest, most luxurious, and most technically up-to-date recording studios—Herb Alpert and Jerry Moss' A & M Records. Shown is A & M's hyperactive "Studio B," where almost 90% of all A & M recording activity is centered. Standing ready are the Shure Microphones assigned to this studio's microphone bank. They include Shure SM57 unidirectional dynamics and Shure SM33 unidirectional ribbons, along with numerous other Shure "Professional" microphones (not shown).





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## ABOUT SHURE PROFESSIONAL PRODUCTS

The Shure products shown in this catalog were designed specifically for professional use in broadcasting, recording, motion pictures, and highest quality sound reinforcement applications. You'll find a complete line of microphones, audio control circuitry products, record playing components and accessories — each designed to help you do your job faster, easier, and with complete certainty of performance.

## SHURE SPECIFICATIONS

The specifications given for every Shure product are consistently and exactly accurate, and are checked repeatedly for accuracy through the Shure Master Quality Control Program — one of the most demanding and rigorous programs in the sound industry. The result is that the specifications listed for every product are precisely the specifications you can expect to be working with!

## INDIVIDUAL PERFORMANCE PROFILES

An individual microphone "Performance Profile" is listed for many of the microphones shown. It considers the specifications, performance characteristics, and applications of each microphone to give you a quick "performance read-out" on the features you need. These profiles were compiled by Shure engineers and can be used with the same confidence as the Shure specifications.

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## MODEL SM82 HAND-HELD LINE LEVEL UNIDIRECTIONAL CONDENSER

U.S. Patents D239,722  
and 4,000,370



Self-contained, unidirectional microphone with its own line level amplifier, peak limiter, and 9.8V battery. The SM82 is ideal for applications involving long cable runs, even using unshielded cables. Applications include parades, political events, golf tournaments, and other live remotes. Built-in peak limiter prevents overloading of microphone line amplifier or remote broadcast amplifier. Balanced solid state line level amplifiers can directly drive telephone lines or other line level inputs. Features rugged construction, built-in "pop" and wind filter, and automatic switchover from simplex to battery power. Includes A57D stand adapter and A82WS windscreen.

### OPTIONAL ACCESSORIES

MODEL A82BA: Battery Adapter,  
MODEL A82MA: Monitor Adapter.

### SPECIFICATIONS

Frequency Response: 40 to 15,000 Hz

Polar Pattern: Cardioid

Impedance: 250 ohms actual (designed for use with 600-ohm or greater loads)

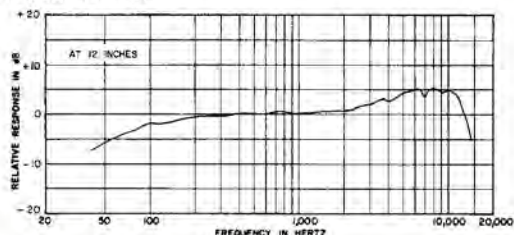
Output Level: 0 dBm for 94 dB SPL (0 dBm = 1 mW in 600 ohms)

Open Circuit Voltage: -19 dBV (0.11V for 74 dB SPL) (0 dB = 1 volt per microbar)

Dimensions and Weight: 301 mm (11-27/32 in.) long x 44.2 mm (1 3/4 in.) diam.; 406 grams (14.4 oz.).  
Handle diameter is 20.1 mm (25/32 in.)

Finish: Bronze vinyl enamel

Stand Thread: 5/8" -27



TYPICAL FREQUENCY RESPONSE

## MODEL SM11 MINIATURE LAVALIER



The rugged Shure SM11 is the world's smallest dynamic-element lavalier microphone. Though it's only about half the size of an ordinary microphone connector, the omnidirectional SM11 has professional sound quality that's ideal for broadcasting, motion pictures, and sound reinforcement. Acoustically matches most stand and desk microphones—its frequency response is specially shaped to give a flat, natural response when used in a lavalier position. Field serviceable, too! Supplied accessories include a lavalier cord assembly, a clip-on clasp and a tie-tack assembly, and a connector belt clip that prevents a performer from accidentally disconnecting the microphone from the lavalier or tie-tack.\*

### SPECIFICATIONS

Frequency Response: 50 to 15,000 Hz.

Impedance and Output Level: Microphone rating impedance is 150 ohms (200 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms. Power Level: -64 dB (0 dB = 1 milliwatt with 10 microbars).

## MODELS SM10 AND SM12 HEAD-WORN MICROPHONES



Two head-worn microphones for remote broadcasting. The SM12 (with receiver for on-the-field cuing) and the SM10 (without receiver) reduce annoying background sounds without masking close-up voice signals. The dynamic microphone pickup is unidirectional, so only the sounds you select are transmitted.\* The miniature windscreen blocks out wind noise and explosive breath sounds. Close-talking arrangement means a strong natural voice frequency response without background noise. Low impedance for extra-long cables (no batteries required, either). Includes snap-on connector clip for belt or shirt—no chance of long wires getting in the way! Adjustable microphone headset fits any head size. Weighs only 84 grams (3 oz.) in the SM12 model and 78 grams (2.7 oz.) in the SM10 model.

### SPECIFICATIONS

Frequency Response: 50 to 15,000 Hz.

Impedance and Output Level: Microphone rating impedance is 150 ohms (200 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms. Power Level: -66 dB (0 dB = 1 milliwatt with 10 microbars). Cable: Non-detachable, 1.5 m (5 ft.), four-conductor (SM12), two-conductor (SM10) shielded, plastic-jacketed; additional 0.3 m (12 in.), two-conductor receiver cable attached to microphone connector on SM12.

\*Optional A10CH Cough Button available for momentary "off".

### SM10 & SM12 PERFORMANCE PROFILE

BEST APPLICATIONS: Remote broadcast, news, sports or special events.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Protection	Wind/ Noise Rejection	Background Noise Rejection
Uni-directional	Smooth, Natural	Fair	Good to Excellent when properly positioned	Fair	Excellent
Proximity Effect	Humidity & Heat Resistance	Field Serviceability	Off-Axis Quality	Size	Ruggedness
Pronounced	Excellent	Fair	Good	Miniature	Excellent

### SM11 PERFORMANCE PROFILE

BEST APPLICATIONS: For broadcasting, motion pictures, and sound reinforcement situations where small size and inconspicuous appearance are necessary.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	Wind/ Noise Rejection	Humidity & Heat Resistance
Omnidirectional	Smooth, Natural, Optimized for Lavalier	Fair	Fair	Excellent
Field Serviceability	Off-Axis Quality	Size	Ruggedness	
Good	Good	Miniature	Excellent	

\*Optional A10CH Cough Button available for momentary "off".





U.S. Patents D233,669, 3,132,713, and 3,240,883



## SM7 UNIDIRECTIONAL DYNAMIC

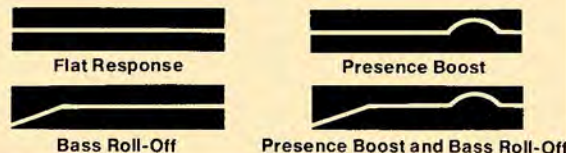
Designed in the field over a seven-year period to be the finest professional unidirectional dynamic microphone ever—field-proved in pre-market performance tests in major recording studios and scoring stages.

The SM7 features a wide-range, very smooth frequency response, with graphic response-tailoring switches that allow the user to select four different microphone response curves: (1) extremely flat response; (2) low-frequency roll-off; (3) mid-frequency boost; and (4) a combination of both low-frequency roll-off and mid-frequency boost (see right). The polar pattern of the SM7 is an example of the classical cardioid pattern. It is uniform with frequency and symmetrical about the axis to provide maximum rejection and minimum coloration of off-axis sound.

Outstanding noise reduction systems cut mechanical noises, breath "pop," wind, and electro-magnetic hum to insignificance. The SM7 uses a revolutionary "air suspension" integral shock mount that isolates mechanical and shock noise so effectively that mechanical noise pickup is reduced to negligible levels. "Add-on" filter devices are unnecessary—the SM7's integral foam wind/"pop" filter sharply reduces explosive breath sounds, even under the most difficult close-up conditions of vocals and narration.

The SM7 is yoke-mounted with a captive stand nut for trouble-free mounting and precise microphone positioning. Its integral swivel adapter fits a standard  $\frac{5}{8}$ "-27 thread. Ruggedly constructed aluminum and steel case affords excellent cartridge protection. Textured Dark Gray enamel finish with Dark Gray foam windscreen. A heavy gauge storage and carrying case is provided.

### VISUAL RESPONSE TAILORING



The SM7 features a unique response tailoring system that allows you to choose any of four response curves for optimum performance: (1) remarkably flat response from 40 to 16,000 Hz; (2) response boosted in mid-range frequencies for additional presence to emphasize voices or certain musical instruments; (3) response cut at low frequencies to produce a bass roll-off; and (4) combination response with both presence boost and bass roll-off. Dual slide switches control not only the response tailoring, but also provide a visual frequency response curve readout (see small illustrations above) which graphically shows the response settings of the microphone. (A switch cover plate that guards against accidental switching is supplied.)

### SPECIFICATIONS

Frequency Response: 40 to 16,000 Hz

Polar Pattern: Cardioid

Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

#### Output Level:

Open Circuit Voltage: -79 dB (0 dB = 1 volt per microbar), .112 mV per microbar

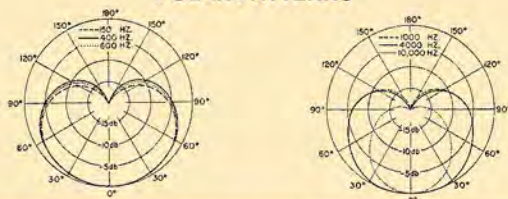
Power Level: -57 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 191 mm (7-17/32 in.) long x 148 mm (5-13/16 in.) high x 96 mm (3-25/32 in.) wide; 764 grams (1 lb., 11 oz.)

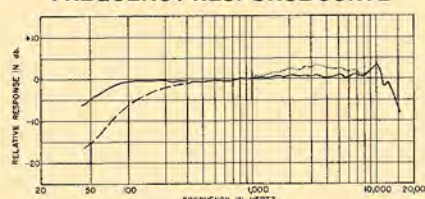
Finish: Textured non-glare, dark gray

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

### POLAR PATTERNS



### FREQUENCY RESPONSE CURVE



### SM7 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Vocal and instrumental pickup in recording studios and broadcasting operations, location recording, motion picture and televi-

sion scoring, television talk shows and news desks, radio announcing and production, narration, and wide-range equalized sound systems.

### SM7 PERFORMANCE PROFILE

Pickup Pattern	Sound Quality	Mech. Noise Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection	Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Cardioid	Very Wide Range, Flat Presence Boost and Low-End Cut Switches	Excellent	Excellent	Excellent	Excellent	Moderate	Excellent	Excellent	Excellent	Excellent





**SHURE**®

unidirectional dynamic microphones

## SM53 & SM54 UNIDIRECTIONAL DYNAMICS



U.S. Patent D218,315



The two most versatile studio-quality microphones in the Shure Professional Products line, combining superb response, excellent noise rejection, and outstanding adaptability to a wide variety of assignments in recording, broadcasting, and high quality sound reinforcement.

### SM53

The original functionally engineered studio microphone that handles more assignments in today's across-the-board programming. Delivers a smooth, wide-range, flat frequency response without strident peaks or false coloration. Its extremely broad front working angle holds tonal quality constant despite user movement—eliminates audio "holes" and "hot spots" when using multiple microphones. True cardioid polar pattern is uniform at all frequencies and in all planes, so off-axis reflections, reverberation and background noises can be controlled.

A very effective built-in shock mount effectively isolates cable, stand and handling noises normally associated with unidirectional microphones. The SM53 also features a built-in hum rejection system that cuts magnetic hum susceptibility by as much as 20 dB over other units—enables you to use it in distant-pickup applications and in high magnetic fields without hum pickup. Proximity effect has been minimized for uniform tonal quality without low frequency build-up. A built-in low-end roll-off switch allows the user to tailor low frequency response.

The SM53 is extremely rugged, and can even be dropped on its nose without cartridge damage. It is fully field-serviceable—cartridge, connector, front screen and roll-off switch can be replaced in minutes. Soft, neutral matte metallic finish is glare-free and ideally

suited for on-camera use. Supplied with 6.1 m (20 ft.), two-conductor shielded broadcast-type cable with FEMALE professional three-pin audio connector\* at microphone end, and Model A57D Swivel Adapter.

### SM54

The twin of the Shure SM53! It delivers all the natural response, noise control and extraordinary ruggedness of the SM53—but with an ultra-effective built-in "pop" and wind-blast filter that provides truly *exceptional* suppression of breath and wind noises.

The SM54 differs from the SM53 only in its slightly larger grille assembly—its look, performance and "feel" are identical. The grille assembly (Model A53G) is available separately to give the SM53 microphone the pop and wind protection of the SM54 (see page 19). It has no effect on microphone level and creates only minimal changes in response (in the 4 kHz region) and in directivity.

The SM54 can be used with all the custom accessories designed especially for increasing the versatility of the SM53—even the complete Boom Assembly. It has been extensively field-tested and proved effective in solving difficult pickup problems in studio and broadcast applications.

### SM53-CN and SM54-CN

Same as above models with cable also having a MALE professional three-pin audio connector\* at the equipment end.

**SM53/SM54 SYSTEM ACCESSORIES** See the complete line of custom accessories for the SM53 and SM54 microphones on page 19 of this catalog.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q, G) series, or equivalent connector.

Frequency Response: 70 to 16,000 Hz

Polar Pattern: Cardioid

Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

Output Level:

Open Circuit Voltage: -81 dB (0 dB = 1 volt per microbar), .09 mV per microbar

Power Level: -60 dB (0 dB = 1 mW per 10 microbars)

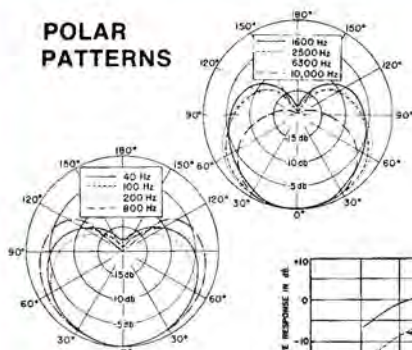
## SM53 & SM54 SPECIFICATIONS

Dimensions and Weight: SM53—182 mm (7-5/32 in.) long x 38 mm (1 1/2 in.) diameter; SM54—194 mm (7 7/8 in.) long x 44 mm (1 3/4 in.) diameter; 240 grams (8 1/2 oz.)

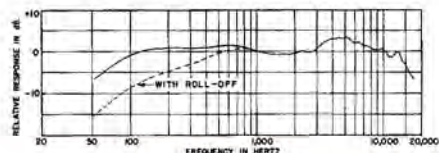
Finish: Non-glare matte metallic

Stand Thread: 5/8" - 27

## POLAR PATTERNS



## TYPICAL FREQUENCY RESPONSE CURVE



## SM53/SM54 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Broadcast and recording studio and location, overall orchestral, tight instrumental and vocal pickup, boom and fish pole use, and high quality sound reinforcement. Model SM54 is particularly well-suited to outdoor and close-talking assignments in which wind and breath noises must be controlled.

Model	Pickup Pattern	Sound Quality	Handling/ Mech. Noise Isolation	"Pop" Rejection	Wind Noise Rejection
SM53	Cardioid	Excellent, Wide-Range	Excellent*	Good	Good
SM54	Cardioid	Excellent, Wide-Range	Excellent*	Excellent	Good
	Background Noise Rejection	Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability
Good—Excellent	Minimal	Excellent	Excellent	Excellent	Excellent
Good—Excellent	Minimal	Excellent	Excellent	Excellent	Excellent

\*With A53M Isolation Mount, Good without.



## SM5B & SM5C UNIDIRECTIONAL DYNAMIC BOOM MICROPHONES



U.S. Patents 3,132,713 and 3,240,883

Specifically designed to minimize boom microphone problems in television and motion-picture sound stage and location recording. Painstakingly developed to provide extremely high reproduction quality and great flexibility of application.

The SM5 features a wide-range, smooth, natural response, especially tailored for dialogue and vocal pickup with excellent presence, yet well-suited to scoring assignments. Its pickup pattern is cardioid—symmetrical about the axis, and exceptionally uniform with frequency (even at the extreme low end). These characteristics afford outstanding rejection of unwanted sound, such as reverberation noise, floor or scenery reflections, performers accidentally "off-mike," and background noises such as air conditioner rumble. Also minimizes off-axis coloration.

A highly effective integral windscreen completely surrounds the SM5's suspension elements to prevent wind noise generated by the suspension assembly, and provide maximum wind noise suppression in outdoor locations and with fast boom swings.

Minimum electrical noise pickup—a hum-balancing circuit for all

cartridge elements (including filter) and an absence of transformers and response-correcting inductors gives the SM5 virtual immunity to electrical noise, even in extreme hum fields.

**SM5C ONLY:** The SM5C was designed especially for motion-picture work. It incorporates a 100 Hz-low cut filter in the cartridge assembly that eliminates low frequency transients resulting from rapid boom movement and wind. (While these transients frequently occur at sub-audible frequencies, they can overload the input stage of some recording channels and recorders to create momentary blocking or distortion.)

The SM5 is perfectly balanced and relatively light in weight for fast pans and fishpole use with maximum stability and minimum over-swing. Exceptionally rugged—cartridge assembly and isolation assembly are protected by outer foam windscreens and steel reinforcing rods.

May be used on accessory desk stands (such as Model S33P) for a wide variety of studio applications, outdoor sports, narration, and other problem applications.

### SPECIFICATIONS

Frequency Response: SM5B: 50 to 15,000 Hz  
SM5C: 70 to 15,000 Hz

Polar Pattern: Cardioid

Impedance: SM5B—Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms; SM5C—Rating is 38 ohms, suitable for microphone inputs rated at 19 to 75 ohms

Output Level:

Open Circuit Voltage: SM5B—79.5 dB (0 dB = 1 volt per microbar), .103 mV per microbar;

SM5C—84 dB (0 dB = 1 volt per microbar), .063 mV per microbar

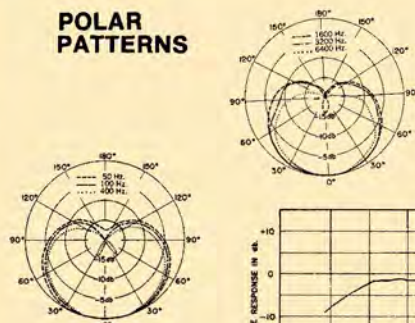
Power Level: —57 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 252 mm (9-29/32 in.) long x 199 mm (7-29/32 in.) high x 128 mm (5-1/32 in.) diameter; SM5B—964 grams (2 lb., 2 oz.); SM5C—907 grams (2 lb.)

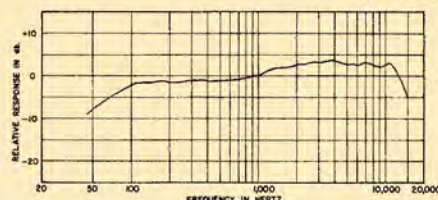
Finish: Textured non-glare gray; light/dark gray windscreens

Stand Thread: 5/8"-27 stand adapter and 5/16"-18 boom adapter included

### POLAR PATTERNS



### TYPICAL FREQUENCY RESPONSE CURVE



### SM5 PERFORMANCE PROFILE

BEST APPLICATIONS: Boom or stand use in television, motion-picture sound stages, narration, scoring and broadcast announcing.

Pickup Pattern	Sound Quality	Handling/Mech. Noise/Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection
Cardioid	Very Wide Range	Excellent	Excellent	Excellent	Excellent
Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis	
Moderate	Excellent	Good	Excellent	Excellent	



# SHURE® unidirectional dynamic microphones

## SM56 AND SM57 UNIDIRECTIONAL DYNAMICS



U.S. Patents D190,864;  
3,132,713 and 3,240,883

Models SM56 and SM57 feature unusually effective cardioid pickup patterns that are uniform at all frequencies and in all planes! The effects of studio acoustics and background noise are minimized and the bright, clean sound is ideal for announcing, dialogue and vocal music. Unusually effective for rhythm pickups because they do not overemphasize low frequencies — resulting in clean, beautifully defined sound from percussion instruments, piano and string basses. In addition, "boominess" associated with close-up pickup is well controlled.

### SM56 — STAND MOUNTED MODEL

Permanently mounted on positive-action swivel-shock mount that permits tilting of head through 135°. Includes accessory switch adapter to serve in applications where On-Off switch is necessary at the microphone.

### SM57—HAND OR STAND MODEL

Hand-held variation of SM56 (above). Includes slip-in stand adapter for instant attachment to stand.

### SM57-CN

Same as above model with cable also having a MALE professional three-pin audio connector\* at the equipment end.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.

### SPECIFICATIONS

Frequency Response: 40 to 15,000 Hz

Polar Pattern: Cardioid

Impedance: Ratings are 38 ohms and 150 ohms suitable for microphone inputs rated at 19 to 75 ohms and 75 to 300 ohms. SM56 impedance selected by impedance switch.

Output Level: Open Circuit Voltage: 38 ohms — -82 dB (0 dB = 1 volt per microbar), .079 mV per microbar; 150 ohms — -76 dB (0 dB = 1 volt per microbar), .157 mV per microbar  
Power Level: -57 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: SM56—156 mm (6 1/8 in.) long x 125 mm (4-29/32 in.) high x 34.9 mm (1 3/8 in.) wide, 1.01 kg (2 lb., 3 1/2 oz.); SM57—157 mm (6-3/16 in.) long x 32 mm (1 1/4 in.) diameter, 284 grams (10 oz.)

Finish: Textured non-glare dark gray

Stand Thread: 5/8" - 27

**Polar Patterns and Frequency Response: Same as Model SM58 at right.**

### SM56/SM57 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Broadcast studio and control room, recording studio, (particularly suited for rhythm and percussion instrumental recording) high quality sound reinforcement, high noise situations.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection
Cardioid	Bright, Articulate	Excellent*	Good**	Good**	Excellent
Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality	
Moderate	Excellent	Excellent	Good	Excellent	

\* With A55M Shock Mount; Good without

\*\* With A2WS Windscreen; Poor without

## SM58 SELF-WINDSCREENED UNIDIRECTIONAL DYNAMIC



U.S. Patents 3,132,713 and 3,240,883

Ideal for remote news, sports, interviews, and vocal recording, for studio work requiring bright, articulate sound with minimum background noise, or wherever the announcer or performer may need to work close to the microphone. Built-in spherical windscreen minimizes or eliminates explosive breath "pop." Wide response with slight presence rise for clean, bright, and natural sound. Unusually effective cardioid pickup pattern (uniform with frequency, symmetrical about axis) provides excellent control of unwanted sound. Minimizes "boominess" that is usually accented by close-up microphone use. Windscreen assembly readily removable in the field for cleaning or replacement. Cartridge suspended in rubber shock mount. Convenient size and weight for comfortable hand-held use. Slip-in stand adapter included.

### SM58-CN

Same as above model with cable also having a MALE professional three-pin audio connector\* at the equipment end.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.

### SPECIFICATIONS

Frequency Response: 50 to 15,000 Hz

Polar Patterns: Cardioid

Impedance: Ratings are 38 ohms and 150 ohms, suitable for microphone inputs rated at 19 to 75 ohms and 75 to 300 ohms

Output Level: Open Circuit Voltage: 38 ohms — -83 dB (0 dB = 1 volt per microbar), .070 mV per microbar; 150 ohms — -76 dB (0 dB = 1 volt per microbar), .157 mV per microbar

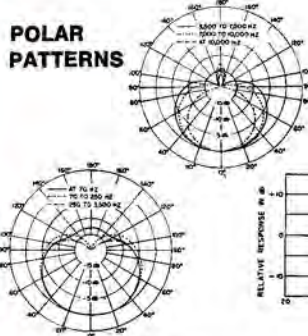
Power Level: 38 ohms — -57.5 dB; 150 ohms — -57 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 162 mm (6 3/8 in.) long x 51 mm (2 in.) diameter; 425 grams (15 oz.)

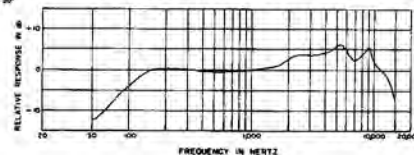
Finish: Textured non-glare dark gray

Stand Thread: 5/8" - 27

### POLAR PATTERNS



### TYPICAL FREQUENCY RESPONSE



### SM58 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Remote news, sports, and interviews, vocal music, high quality sound reinforcement, and broadcast control room and studio.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection
Cardioid	Bright, Articulate	Excellent*	Excellent	Good	Excellent
Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality	
Moderate	Excellent	Excellent	Excellent	Excellent	

\* With A55M Shock Mount; Good without



## MODEL SM33 SUPER CARDIOID RIBBON MICROPHONE



U.S. Patent D178,018

The ribbon element of the SM33 imparts a pleasantly warm characteristic to the speaking voice, a feature which is especially desirable for announcing and narration applications. The same warmth is also imparted to instrumental or vocal recordings. Because its polar pattern is somewhat more directional than a conventional cardioid, the SM33 provides superior separation in studio recording as well as control of unwanted surrounding noise. Smooth, wide range response. Unusually rugged. Two-position Selector Switch tailors bass frequency response. Self-adjusting lifetime swivel-shock mount permits tilting head 45° forward, 90° backward. The SM33 is very immune to mechanical noise, making it ideal for desk top or talk show applications. Cable entry from underside keeps the cable from protruding toward the TV cameras, and protects it against bumps and jolts.

### SPECIFICATIONS

Frequency Response: 40 to 15,000 Hz

Polar Pattern: Supercardioid

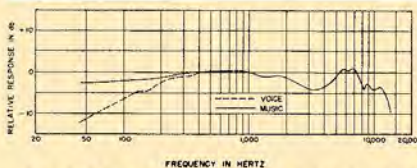
Impedance: Ratings are 38 ohms and 150 ohms, suitable for microphone inputs rated at 19 to 75 ohms and 75 to 300 ohms

Output Level: Open Circuit Voltage: 38 ohms— -85 dB (0 dB = 1 volt per microbar), .056 mV per microbar; 150 ohms— -76.5 dB (0 dB = 1 volt per microbar), .149 mV per microbar  
Power Level: -58 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 202 mm (7-61/64 in.) high x 34.9 mm (1 3/8 in.) wide x 52.4 mm (2-1/16 in.) deep; 736 grams (1 lb., 10 oz.)

Finish: Textured non-glare dark gray

Stand Thread: 5/8" - 27



TYPICAL FREQUENCY RESPONSE



POLAR PATTERN

### SM33 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Warm, rich, mellow sound in broadcast announcing and narration, and vocal or instrumental recording. Excellent desk microphone for talk shows.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection
Super-Cardioid	Warm mellow	Excellent	Fair	Fair	Good-Excellent
Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality	
Pronounced	Excellent	Good	Fair	Good	

## MODEL 300 BIDIRECTIONAL RIBBON MICROPHONE



U.S. Patent D171,055

Combines wide range response and a bidirectional pickup pattern: symmetrical front and rear pickup with greatly reduced side and overhead pickup provides same control of overall surrounding noise as an equivalent cardioid microphone. Warm, smooth sound. Ideal for applications such as across-the-table interviews or dialogue, combined pickup of facing instrumental groups, and stages with overhead loudspeakers. Two-position, low frequency Response Selector Switch for voice or music. Self-adjusting lifetime swivel-shock mount.

### SPECIFICATIONS

Frequency Response: 40 to 15,000 Hz

Polar Pattern: Bidirectional

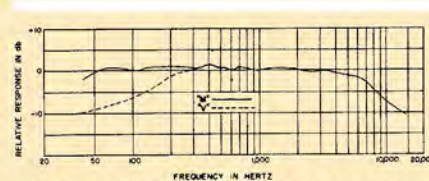
Impedance: Ratings are "L", 38 ohms for microphone inputs rated at 19 to 75 ohms; "M", 150 ohms for microphone inputs rated at 75 to 300 ohms; and "H", for high-impedance microphone inputs

Output Level: Open Circuit Voltage: "L"— -87.5 dB (0 dB = 1 volt per microbar), .043 mV per microbar; "M"— -79.5 dB (0 dB = 1 volt per microbar), .105 mV per microbar; "H"— -57.5 dB (0 dB = 1 volt per microbar), 1.32 mV per microbar  
Power Level: "L"— -60.5 dB; "M"— -59 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 234 mm (9-7/32 in.) high x 34.9 mm (1 3/8 in.) wide x 52.4 mm (2-1/16 in.) deep; 1.05 kg (2 lb., 5 oz.)

Finish: Textured dark gray enamel

Stand Thread: 5/8" - 27



TYPICAL FREQUENCY RESPONSE



POLAR PATTERN

### 300 PERFORMANCE PROFILE

**BEST APPLICATIONS:** Warm, mellow sound in "across the table" interview and talk show applications, or for studio vocal or musical recording in which a single microphone must pick up two facing sources.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection	Background Noise Rejection
Bidirectional	Warm, mellow	Excellent	Fair	Fair	Good
Proximity Effect	Gain Before Feedback	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality	
Pronounced	Good	Good	Fair	Fair	



## SM60 OMNIDIRECTIONAL DYNAMIC



U.S. Patent D209,515

This unusually versatile microphone is a unique combination of beauty, strength, performance and economy. It has smooth, natural, wide-range response for both voice and music. The SM60 is equally at home in the studio or for remote pickups, and is in wide use in situations as diverse as outdoor sporting events and studio production numbers. Built-in breath and pop filter minimizes breath and wind noise. Lustrous, non-glare finish and tailored-to-the-hand dimensions provide handsome on-camera appearance and superior handability. Specially reinforced machined-steel case front for exceptional ruggedness—can actually be dropped on its nose without damage to internal structure! Windscreen and front end quickly and easily removable for cleaning. Can be used on stand (stand adapter included) or instantly removed from stand for in-the-hand use.

### SPECIFICATIONS

Frequency Response: 45 to 15,000 Hz

Polar Pattern: Omnidirectional

Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

Output Level:

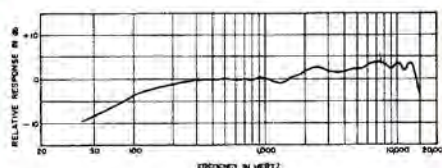
Open Circuit Voltage: -82 dB (0 dB = 1 volt per microbar), .079 mV per microbar

Power Level: -61 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 158 mm (6-7/32 in.) long x 31.7 mm (1 1/4 in.) diameter; 170 grams (6 oz.)

Finish: Non-glare matte metallic

Stand Thread: 5/8"-27



TYPICAL FREQUENCY RESPONSE

### SM60 PERFORMANCE PROFILE

BEST APPLICATIONS: Broadcast, news, sports, interviews and remotes, Vocal and instrumental recordings, Performers' hand microphone.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Excellent, Wide-Range Natural	Good	Good	Good
Background Noise Rejection	Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Not Applicable	None	Excellent	Excellent	Excellent

## MODEL SM61 LOW-NOISE HAND-HELD OMNIDIRECTIONAL DYNAMIC



U.S. Patent 3,653,625

Combines outstanding noise isolation with a small, lightweight, handsome design especially for hand-held applications in which mechanical shock, wind and cable noises must be controlled. A built-in shock mount reduces cable handling and mechanically induced noise to a negligible minimum. A super-effective "Blast Barrier" cuts wind, "pop" and other breath noises to extremely low levels. Smooth, wide-range frequency response (50 to 14,000 Hz), extremely natural, coloration-free sound. Very rugged—dropping the microphone directly on its nose will not affect performance. Remarkably versatile—an excellent choice for hand-held, "on-camera" TV applications, and such "traveling applications" as location recording, sports coverage and remote broadcasts, and for vocal and instrumental pickup assignments in the studio. Matte metallic finish for great on-camera appearance. Model A57D Swivel Adapter included.

### SM61-CN

Same as above model with cable also having a MALE professional three-pin audio connector\* at the equipment end.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.

### SPECIFICATIONS

Frequency Response: 50 to 14,000 Hz

Polar Pattern: Omnidirectional

Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

Output Level:

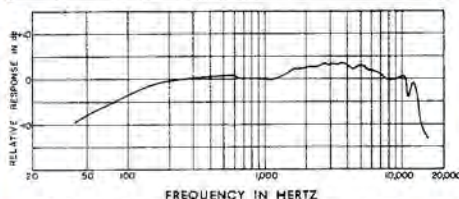
Open Circuit Voltage: -82 dB (0 dB = 1 volt per microbar), .079 mV per microbar

Power Level: -61 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 181 mm (7 1/8 in.) long x 40 mm (1-17/32 in.) diameter; 159 grams (5.6 oz.)

Finish: Non-glare matte metallic

Stand Thread: 5/8"-27



TYPICAL FREQUENCY RESPONSE

### SM61 PERFORMANCE PROFILE

BEST APPLICATIONS: Demanding broadcast and recording applications requiring a hand-held microphone with wide-range response and very low handling, cable and wind noise. It can also be used in sound reinforcement installations in which feedback is not a consideration.

Pickup Pattern	Sound Quality		Cable Noise Handling/ Mech. Noise Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Extremely Smooth Wide Range		Exceptional	Excellent	Excellent
Proximity Effect	Size	Humidity and Heat Resistance	Ruggedness	Field Serviceability	Off-Axis Quality
None	Small	Excellent	Excellent	Good	Excellent

## MODEL SM62 COMPACT UNIDIRECTIONAL DYNAMIC



Shure's tiny SM62 microphone does its own vanishing act — on podiums, in interviews, and on stage. Only 124 mm (4-29/32 in.) long, it fits conveniently into the palm of your hand. And it snaps into the SM62's swivel adapter with barely a sound. Don't let the small size of the SM62 fool you . . . its combination of flat, uncolored response and uniform cardioid pickup pattern provides excellent performance characteristics and minimizes feedback.

### SM62-CN:

Same as above model with cable also having a MALE professional three-pin audio connector\* at the equipment end.

### SPECIFICATIONS

Frequency Response: 100 to 10,000 Hz

Polar Pattern: Cardioid (unidirectional) response — uniform with frequency, symmetrical about axis

Microphone Rating Impedance: 150 ohms for connection to microphone inputs rated at 19 to 300 ohms

Output Level (at 1,000 Hz):

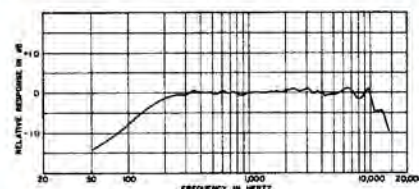
Open Circuit Voltage: . . . . -82 dB (.079 mV) (0 dB = 1 volt per microbar)

Power Level: . . . . . -60.5 dB (0 dB = 1 milliwatt with 10 microbars)

Dimensions: Length: 124 mm (4-29/32 in.); Grille: 38.1 mm (1 1/2 in.) DIA.; Handle: 20.1 mm (51/64 in.) DIA.

Net Weight: 113.4 grams (4 oz.) less cable

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.



TYPICAL FREQUENCY RESPONSE

### SM62 PERFORMANCE PROFILE

BEST APPLICATIONS: Ideal on podiums, in interviews, and on sets where an inconspicuous microphone is needed.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Protection	Wind/ Noise Rejection	Background Noise Rejection
Unidirectional	Smooth, Uncolored	Good	Excellent	Good	Excellent
Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality	Size	Ruggedness
Moderate	Excellent	Good	Good	Very small	Excellent



# omnidirectional dynamic microphones

## SM50 SELF-WINDSCREENED OMNIDIRECTIONAL DYNAMIC



Strikingly immune to and extremely effective in suppressing wind-noise and explosive breath sounds ("pop"), making it an ideal "work horse" microphone for remote interviews, news, sports, and a variety of field and studio applications. Built-in windscreen unscrews from microphone as a self-contained unit for easy cleaning or replacement. Response tailored for full-bodied, smooth, natural, and pleasing reproduction of speech and vocal music. Extremely rugged, yet surprisingly light. Compact and perfectly balanced for unusually comfortable handling. Shock-mounted cartridge. Supplied with slip-in stand adapter.

### SPECIFICATIONS

Frequency Response: 40 to 13,000 Hz

Polar Pattern: Omnidirectional

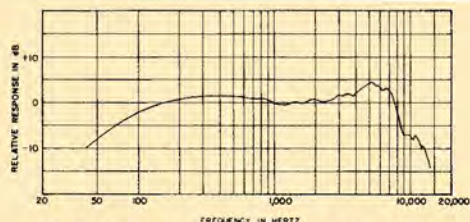
Impedance: Ratings are 38 ohms and 150 ohms, suitable for microphone inputs rated at 19 to 75 ohms and 75 to 300 ohms

Output Level: Open Circuit Voltage: 38 ohms— -86.5 dB (0 dB = 1 volt per microbar), .047 mV per microbar; 150 ohms— -80 dB (0 dB = 1 volt per microbar), .100 mV per microbar  
Power Level: -59 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 167 mm (6-19/32 in.) long x 38.9 mm (1-17/32 in.) diameter; 227 grams (8 oz.)

Finish: Textured dark gray enamel

Stand Thread: 5/8" - 27



**TYPICAL FREQUENCY RESPONSE**

**BEST APPLICATIONS:** Studio and remote broadcast, news, sports or special events. Any application in which wind or breath noise may be troublesome.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Excellent; Smooth and Natural	Fair	Excellent	Excellent
Background Noise Rejection	Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Not Applicable	None	Excellent	Excellent	Good

## MODEL SM76 3/4" DIAMETER OMNIDIRECTIONAL DYNAMIC



Extremely wide, peak-free, smooth response (45-20 kHz) together with slim styling makes this a microphone of unusual capability. It is recommended for exacting applications in which a very flat, wide-range microphone is required. Ideal for applications as divergent as delicate acoustic guitar and full-throated pipe organ. Inconspicuous, slender steel case may be hand-held or used on a stand, indoors or out (includes snap-in stand adapter). Dependable and extraordinarily rugged—will withstand severe use without deviation from original standards.

### SPECIFICATIONS

Frequency Response: 45 to 20,000 Hz

Polar Pattern: Omnidirectional

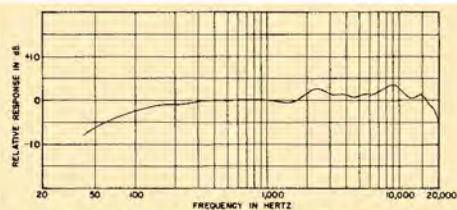
Impedance: Ratings are 38 ohms and 150 ohms, suitable for microphone inputs rated at 19 to 75 ohms and 75 to 300 ohms

Output Level: Open Circuit Voltage: 38 ohms— -86.5 dB (0 dB = 1 volt per microbar), .047 mV per microbar; 150 ohms— -81 dB (0 dB = 1 volt per microbar), .089 mV per microbar  
Power Level: 38 ohms— -59.5 dB; 150 ohms— -60.5 dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 210 mm (8-9/32 in.) long x 19.8 mm (25/32 in.) diameter; 198 grams (7 oz.)

Finish: Textured non-glare dark gray

Stand Thread: 5/8" - 27



**TYPICAL FREQUENCY RESPONSE**

**BEST APPLICATIONS:** Critical broadcast and recording applications (particularly liked for acoustic guitar, organ, piano and other difficult instruments), speech and vocal where minimum coloration is required.

Pickup Pattern	Sound Quality	Handling/ Mech. Noise/ Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Extremely Smooth Wide Range	Good	Excellent*	Excellent*
Background Noise Rejection	Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Not Applicable	None	Excellent	Good	Excellent

\* Excellent with A2WS windscreen; Good without.



FOR CONTROL ROOMS, CUING, TALKBACK, INTERCOM, AND NEWSROOM APPLICATIONS IN WHICH THE MICROPHONE IS PERMANENTLY MOUNTED.



A complete selection of general purpose microphones for mounting on goosenecks or other flexible or fixed mountings. Recommended for use in control rooms, cuing, talkback, intercom, newsroom, and other applications where a hands-free, permanently, or semi-permanently located microphone is called for. Models 545L and 561 available as head alone, while Models 515SB-G18 and 572G are complete with gooseneck and mounting flange. (Goosenecks available with side cable opening on special request.)

#### **MINIATURE — MODEL 572G**

Omnidirectional dynamic head with same performance characteristics as 19.1 mm ( $\frac{3}{4}$  in.) diameter Model 571 miniature dynamic microphone (Page 13). The head is about the same diameter as the gooseneck itself, creating a strikingly trim appearance. With special slim, and quiet, flexible 305 mm (12 in.) gooseneck, and mounting flange. With non-detachable, 1.5 m (5 ft.), two-conductor shielded cable. Low impedance; matches any input rated at 19 to 300 ohms.

#### **UNIDIRECTIONAL — MODEL 545L**

Superb cardioid pickup and excellent voice response for on-the-air and production use, or wherever suppression of background noise is desired, such as in news rooms, control rooms, and other noisy locations. Low frequency response characteristics minimize boominess. Designed primarily for lavalier use (with lavalier cord included), but can also be mounted on a flexible gooseneck. Low impedance; matches any input rated at 19 to 300 ohms. With attached 6.1 m (20 ft.), two-conductor shielded cable. Thread is  $\frac{5}{8}$ "-27 to fit conventional goosenecks.

#### **UNIDIRECTIONAL — MODEL 515SB-G18**

Versatile, economical unidirectional microphone for virtually any fixed-mount installation. True cardioid pickup characteristics, symmetrical about axis for ambient noise suppression. Frequency response from 80 to 13,000 Hz. Shock-mounted cartridge to cut mechanical and vibration noise. Permanently attached 475 mm (18 in.) gooseneck. Push-to-talk switch controls both microphone circuit and a relay or control circuit. Low impedance; matches any input rated at 19 to 300 ohms. With 1.3 m (51 in.) four-conductor cable, (two conductors shielded).

#### **UNIDIRECTIONAL — MODELS 515SBG and 515BG**

Model 515SBG is identical to Model 515SB-G18 above, except that gooseneck is not included. Model 515BG is identical to Model 515SB-G18 also, except gooseneck and switch are not included, and cable is two-conductor shielded. Both models have standard  $\frac{5}{8}$ "-27 thread to fit conventional goosenecks.

#### **STANDARD — MODEL 561**

Rugged, low-cost, omnidirectional dynamic microphone for permanent mounting. "Tamper-proof" head with set-screw provision for locking head to gooseneck or fitting. 40 to 10,000 Hz with rising response characteristic for crisp, intelligible speech. Low impedance; matches any input rated at 19 to 300 ohms. —56 dB (0 dB = 1 mW per 10 microbars) output.  $\frac{5}{8}$ "-27 thread connects to standard goosenecks or other flexible or fixed mountings. Head measures 67.1 mm (2-21/32 in.) x 34.9 mm (1 $\frac{3}{8}$  in.) diam. With 1.2 m (4 ft.), two-conductor shielded cable.



## MODEL SM51 DYNAMIC LAVALIER MICROPHONE



Especially designed for radio, TV, or motion-picture applications calling for a small wearable microphone; frequency response optimized for lavalier use—will match well, in sound, with stand or desk mounted units. Smooth exterior and recessed grille minimize clothing noise. Versatile, "Positive-Lock" lavalier holder goes on in an instant; provides simple, noiseless adjustment of microphone position. Non-detachable 9.1 m (30 ft.) two-conductor rubber cable is easily field replaceable without disturbing cartridge. Magnetic shielded steel case.

### SPECIFICATIONS

Frequency Response: 70 to 12,000 Hz with rising characteristic to 6,000 Hz

Polar Pattern: Omnidirectional

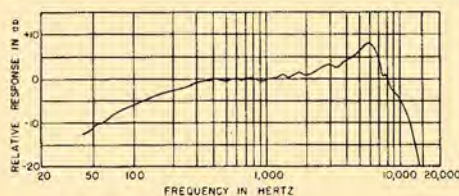
Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

Output Level:

Open Circuit Voltage:  $-81.5$  dB (0 dB = 1 volt per microbar), .084 mV per microbar  
Power Level:  $-60$  dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 62.7 mm (2-15/32 in.) long x 20.6 mm (13/16 in.) diameter; 58 grams (2 oz.)

Finish: Non-glare dark gray



### TYPICAL FREQUENCY RESPONSE

### SM51 PERFORMANCE PROFILE

BEST APPLICATIONS: Inconspicuous lavalier for use in TV, motion pictures, radio, and sound reinforcement.

Pickup Pattern	Sound Quality	Handling/Mech. Noise/Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Natural*	Good	Not Applicable	Good
Background Noise Rejection	Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Not Applicable	Not Applicable	Excellent	Good	Not Applicable

\* When used in lavalier position

## MODEL 571 MINIATURE DYNAMIC



A lavalier-size omnidirectional microphone with stand microphone response that is well suited to applications requiring a very small microphone. Excellent voice characteristics—smooth and peak-free. For inconspicuous stand or handheld use, concealment in a studio or shooting location, hanging over stage, documentaries, etc. Steel case for magnetic shielding. With non-detachable 9.1 m (30 ft.), two conductor shielded broadcast type cable. Includes stand adapter.

### SPECIFICATIONS

Frequency Response: 50 to 15,000 Hz

Polar Pattern: Omnidirectional

Impedance: Rating is 150 ohms, suitable for microphone inputs rated at 19 to 300 ohms

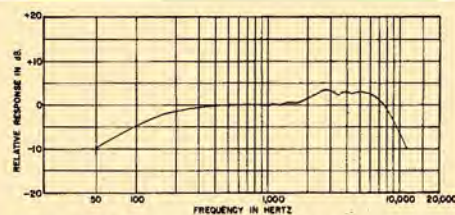
Output Level:

Open Circuit Voltage:  $-83$  dB (0 dB = 1 volt per microbar), .070 mV per microbar  
Power Level:  $-62$  dB (0 dB = 1 mW per 10 microbars)

Dimensions and Weight: 66 mm (2-19/32 in.) long x 19.1 mm (3/4 in.) diameter; 58 grams (2 oz.)

Finish: Textured non-glare dark gray

Stand Thread:  $\frac{5}{16}$ " - 27



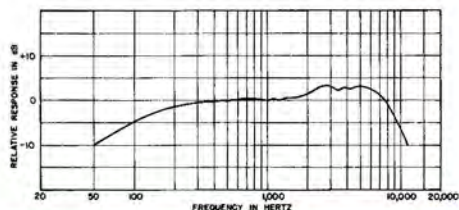
### TYPICAL FREQUENCY RESPONSE

### MODEL 571 PERFORMANCE PROFILE

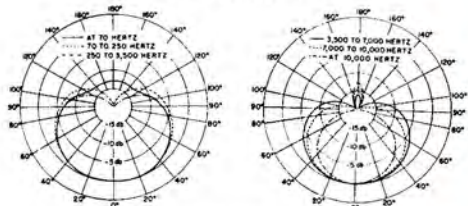
BEST APPLICATIONS: Inconspicuous hand-held or mounted use for broadcast interview or talk shows, and concealment uses in location studio, film and TV recording.

Pickup Pattern	Sound Quality	Handling/Mech. Noise/Isolation	"Pop" Rejection	Wind Noise Rejection
Omnidirectional	Smooth, Peak-Free	Good	Good	Good
Background Noise Rejection	Proximity Effect	Humidity and Heat Resistance	Field Serviceability	Off-Axis Quality
Not Applicable	None	Excellent	Good	Excellent

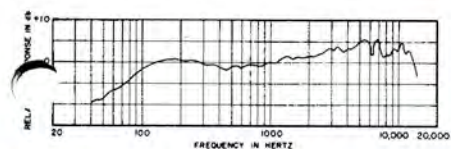
## MODEL 572G TYPICAL FREQUENCY RESPONSE



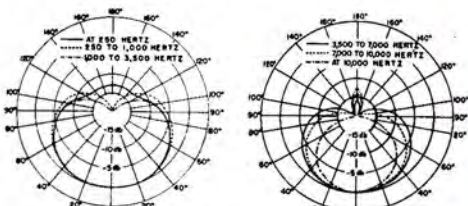
## MODEL 545L POLAR PATTERNS



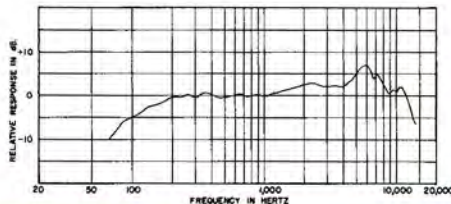
## TYPICAL FREQUENCY RESPONSE



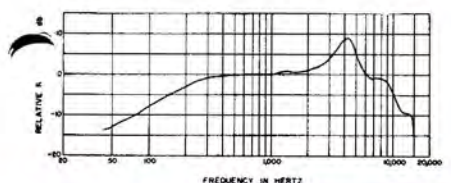
## MODEL 515SB-G18 POLAR PATTERNS



## TYPICAL FREQUENCY RESPONSE



## MODEL 561 TYPICAL FREQUENCY RESPONSE





## SE30 GATED COMPRESSOR/MIXER



The SE30 Gated Compressor/Mixer is the first and only component for professional users that combines a mixer with 600 ohm line output (for remote or studio applications) with a high-quality "hands-free" gain riding compressor in a single, portable unit. Makes output control in remote pickups, talk shows, recording, program line compression and professional sound reinforcement smoother, surer and more trouble-free than it's ever been before.

### "HANDS-FREE" GAIN RIDING

The SE30 provides a 40 dB compression range—adjustable to varying input requirements, with a compression ratio of approximately 15 to 1. Once set, the SE30 rides gain automatically, increasing or decreasing the system gain to maintain a constant output level. It gives the engineer in the studio or field freedom from tedious and sometimes erratic "gain riding." And, because compression is properly achieved in the mixer itself, the signal-to-noise ratio is optimized for better telephone line transmission on remotes. In studio applications, it allows maximum modulation level without overloading other components, which in turn means a cleaner signal and higher program quality. The SE30's variable response rate control allows the proper time constant to be selected for the type of program material involved: fast for voice applications such as sporting events; medium to slow for musical program sources.

### GATED MEMORY MINIMIZES "PUMPING"

A unique *Gated Memory circuit* solves the "pumping" problem normally associated with an audio compressor by noting when the desired signal (such as voice or music) is not present, and putting a "hold" on the compression level at that point. This eliminates the crowd noise build-up when the announcer stops talking during a

sporting event, or the rush of record noise immediately following the finish of the recorded material. However, as soon as the desired program material returns, the "hold" is released and the compressor goes back into action.

### ENGINEERED FOR MAXIMUM EFFICIENCY AND EASE OF USE

The SE30 offers maximum compatibility with all types of associated professional equipment, especially field equipment widely used in news, sports and special events remote coverage (such as sound film cameras, and tape and cassette recorders).

Rugged—modular construction and tough, epoxy-glass P.C. boards give it stamina to survive the roughing-up encountered in frequent remote assignments.

Wide range of input and output options (microphone, line and high level auxiliary) equip it for almost any professional application.

Loaded with useful features, such as: feedback-type gain controls that automatically increase the input clipping level as the individual gain controls are turned down; a built-in low-distortion 1 kHz tone oscillator; three-function VU meter; stereo parallel jack, human-engineered "tactile-design" control knobs; self-contained battery and ac power supply, with automatic switchover to battery in case of ac failure; auxiliary meter light source for battery operation; removable ac line cord; disable switches for compressor and Gated Memory that convert the SE30 to a high quality linear mixer; and impressive performance specifications, with extremely low distortion, noise and RF susceptibility.

WRITE TO "SHURE MARKETING SERVICES" FOR COMPLETE TECHNICAL DESCRIPTION AND SPECIFICATIONS.

Model SE 30: 108 - 132 volts ac, 50/60 Hz.

Model SE30-2E: 108 - 132/216 - 264 volts ac, 50/60 Hz.

### SE30 CUSTOM ACCESSORIES



**MODEL A100A  
CARRYING HANDLE  
ASSEMBLY**

Dual-function assembly serves as a convenient carrying handle (when positioned over the front panel of the SE30) or as a tilt stand that gives greater visibility and easier operation (when positioned under the SE30). Locking knurled knobs on each end give fast, positive positioning. Rubber feet provide an extra cushion and non-slip grip on smooth surfaces when the A100A is used in tilt stand position.

**MODEL A30A  
CARRYING CASE**



(See page 21 for description)



**RACK A100B  
RACK PANEL**

Equips the SE30 for mounting in a standard audio rack panel. Brackets mount securely on each side of the SE30 to extend overall width to 19" for mounting. With brackets in place, overall height is only 3½". The front panel of the SE30 is flush with the front of the rack when mounting is complete.



## M67 PROFESSIONAL MICROPHONE MIXER



A compact, lightweight and economical microphone mixer/remote amplifier specifically designed for studio and remote broadcasting, recording and sound reinforcement. Provides four low-impedance balanced microphone inputs, one input convertible to a line input. The excellent performance and versatility of the M67 makes it ideal for use as a complete, compact console for studio, remote, or original installation use — and as an "add-on" mixer for expanding existing facilities and providing additional microphone inputs with tape recorders and VTR's. Can be combined with Model M675 (right) to provide a complete, small size, professional quality broadcast console — with cueable magnetic phono and line inputs. Built-in tone oscillator provides calibration signal.

The M67 features line and microphone level outputs; an illuminated VU meter calibrated for +4 and +10 dbm out; extremely low noise and RF susceptibility; wide, flat frequency response; two-level headphone monitor jack. Ac or battery operation (see accessory battery pack on page 21). Noiseless automatic switchover to battery if ac line fails.

**Model M67.** For 108-132 Volts ac, 50/60 Hz.

**Model M67-2E.** For 216-264 Volts ac, 50/60 Hz with Three-Conductor Cable.

### SPECIFICATIONS

**Frequency Response:**  $\pm 2$  dB from 30-20,000 Hz

**Gain:** 91 dB max., 150 ohm microphone into 600 ohm line output

**Noise:** -129 dBV maximum equivalent input noise, 300 to 20,000 Hz, at full gain

**Hum and Noise:** -125 dBV maximum equivalent input hum and noise, 20 to 20,000 Hz, at full gain

**Distortion:** Under 1% from 20 to 20,000 Hz at +10 dBm output, (0.5% typical)

**Inputs:** Four low-impedance microphones; one convertible to line, bridging or 600 ohms

**Outputs and Levels:** +18 dBm max., 600 ohm line; -44 dBV max., microphone; two level headphone jack, suitable for 600 to 2,000 ohm phones

**Size and Weight:** 289 mm (11 3/8 in.) x 191 mm (7 1/2 in.) x 63.5 mm (2 1/2 in.); 2.0 kg (4 lbs., 7 oz.)

**Operating Temperature:** -18° to 57° C (0° to 135° F)

## MODEL M675 BROADCAST PRODUCTION MASTER



A totally new approach to broadcast systems flexibility. The M675 was designed for use with the Shure M67 Series Microphone Mixers, the Shure M63 Series Audio Master®, or the SE30 Gated Compressor/Mixer to provide a complete, small size, professional quality broadcast console — with cueable magnetic phono and line inputs.

Use the M675 with a Shure M67 as a production studio console with four microphone inputs, plus four line inputs (two switchable for magnetic phono), cuing and monitoring; as a complete audio console for both in-studio and remote assignments; as a complete CATV or CCTV (audio) console; or as a stand-by console. With the Shure M63 Audio Master® (Page 16), the M675 may be used for high level, equalized tape duplication and transfer. Or use it with the SE30 for its "hands free" gain riding compressor.

Extremely low in noise and RF susceptibility, with wide frequency response. Four inputs, each with its own individual gain control and its own switchable "Cue" mode: two line inputs are convertible to magnetic phono inputs (RIAA equalization) through front-panel slide switches, and the other two line inputs are switchable between high impedance bridging and 600 ohm terminating line inputs. Four monitoring facilities: (1) an internal speaker built into the front panel for cue and program monitor (automatic program ducking when any channel is placed in the "Cue" position); (2) a rear-panel eight-ohm speaker output jack with the same material as the internal speaker, and with provision for external muting; (3) a front-panel headphone jack that provides an automatic muting of the internal (or external) speaker output for headphone cuing and monitoring; and (4) a rear-panel headphone jack which monitors program material only.

Brackets for stacking with either the M67 or M63 are included.

A built-in battery compartment holds six 9V batteries for powering both the M67 and M675. The M67 ac power supply serves as an alternate power source.

WRITE TO "SHURE MARKETING SERVICES" FOR COMPLETE TECHNICAL DESCRIPTION AND SPECIFICATIONS

## MODEL M625 VOICEGATE®



Voice-activated microphone gain controller with response-shaped voice-frequency sensor. Blocks unwanted background noise. Adjustable to keep microphone On up to 45 seconds during conversation pauses. Professional three-pin audio connectors: Female input and Male output, designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series or equivalent connectors. Designed especially for multi-microphone systems.

**Model M625.** For 108-132 Vac, 50/60 Hz, and can also be powered by a 9- and 30-volt external dc source.

**Model M625AM** is a "modular" unit which takes its power from the M625. (One M625 can power three M625 AM units for a total of four gain controls.)

**Model M625-2E.** For 108-132 Vac or 216-264 Vac, 50/60 Hz with three-conductor cable.



## MODEL M63 AUDIO MASTER®



Economical total control of audio response. Can be used in production and transfer studios to equalize sound systems, correct room acoustics, produce special sound effects, reduce stand or stage noise, and for tape recording and duplication. Has two high-level inputs and five output provisions for the greatest response control and flexibility.

Effective, continuously variable high-pass and low-pass 6 dB-per-octave filters, plus separate bass and treble (boost and cut) controls, can be combined for virtually unlimited response characteristics.

Output VU meter. Five outputs: high impedance high level, high impedance mic level, low impedance mic level, 600-ohm balanced line, and headphone. Two high-level high impedance inputs controlled by single volume control accept signal from virtually any high level source.

Model M63 Audio Master®. For 108-132 Volts ac, 50/60 Hz.

Model M63-2E Audio Master®. For 220-260 Volts ac, 50/60 Hz.

### SPECIFICATIONS

Frequency Response:  $\pm 2$  dB 20-20,000 Hz (controls flat)

Gain: Line out. 38.5 dB (600 ohm load)

Aux. out. 39.0 dB (47 kilohm load)

High Impedance Mic out.  $-1.0$  dB (33 kilohm load)

Low Impedance Mic out.  $-21.0$  dB (150 ohm load)

Tone Controls: Bass  $+14$ ,  $-19$  dB at 100 Hz

Treble  $+16$ ,  $-19$  dB at 10 kHz

Filters: High Cut and Low Cut 6 dB per octave, continuously variable  $-3$  dB points

Noise Output: (Line with 600 ohm load): 68 dB below  $+8$  dBm 20-20,000 Hz

Distortion: Under 1% THD at  $+8$  dBm output

Output:  $+18$  dBm max. 600 ohm load

Size and Weight: 289 mm (11 $\frac{3}{8}$  in.) x 152 mm (6 in.) x 63.5 mm (2 $\frac{1}{2}$  in.); 1.42 kg (3 lbs., 2 oz.)

## MODEL M610 FEEDBACK CONTROLLER



The Shure M610 Feedback Controller marks the beginning of a new era in sound reinforcement. When the M610 is included in the sound system, its special set of filters and roll-off switches are used to smooth out the peaks and valleys in the system's frequency response, so that the system gain may be increased to significantly higher levels before reaching the feedback threshold! The user is able to "tune" the sound system according to the special acoustics of the room to maximize output and minimize feedback. The M610 gives you the basic advantages of room/system equalization—but without the high costs involved in elaborate, complex, highly specialized equalization equipment.

The M610 Feedback Controller uses eight resonant dip filters, each controlled by a linear-motion potentiometer. Each of these filters, unlike highly selective "notch" or single-frequency filters, acts on a band of frequencies around its center frequency, so that attenuation is smooth and complete. These filters function in the most critical portion of the audio spectrum, with center frequencies of 63, 125, 250, 500, 1,000, 2,000, 4,000 and 8,000 Hz. Each is infinitely variable from "0 attenuation" (flat) to a maximum cut of 12 dB. The M610 also features "high end" (above 8 kHz) and "low end" (below 63 Hz) roll-off switches to control response outside the range of these filters.

Front-panel volume control allows the user to conveniently increase the overall gain of the system to a level even higher than original level. The M610 may be used to improve sound quality and increase intelligibility by filtering out "problem frequencies" that cause oscillating ("ringing"), boominess and other disruptive resonances in acoustically difficult rooms, and to equalize program material and monitor speakers in studio and broadcast operations.

Model M610: 108-132 volts ac, 50/60 Hz.

Model M610-2E: 108-132/216-264 volts ac, 50/60 Hz.

WRITE TO "SHURE MARKETING SERVICES" FOR COMPLETE TECHNICAL DESCRIPTION AND SPECIFICATIONS.



## M64 SERIES STEREO PREAMPLIFIERS



Low-cost, versatile, compact, low distortion and low noise stereo preamplifiers that provide gain, equalization, and choice of output impedances and levels. Can be used in a broad variety of preamplification and equalization applications: as a high-quality, low-cost magnetic phono preamplifier in broadcast applications; to provide 7½ IPS NAB equalization for tape decks containing no electronics; to give non-equalized amplification wherever a boost in microphone output level is required. When used in conjunction with the A95 Series In-Line Transformers, an output of approximately -20 dBm is available.

Three switch-selected equalization positions: RIAA for magnetic stereo cartridges; FLAT for high-impedance microphones or for use as buffer amplifier; NAB for tape head equalization. Built-in power supply (M64 operates on line voltages of 108-132V, 50/60 Hz; M64-2E operates on 216-264V, 50/60 Hz). M64 and M64-2E may be operated from 24 to 36 V dc battery power supply (such as Shure A67B Power Supply). Minimum of 50 dB isolation between channels. All silicon transistor circuit for ultra-quiet operation and complete freedom from microphonics. High level, high impedance outputs; or low level, low impedance unbalanced outputs. Attractive, small case with provisions for permanent installation.

**M64 Stereo Preamplifier.** For 108-132 volts ac, 50/60 Hz.

**M64-2E Stereo Preamplifier.** For 216-264 volts ac, 50/60 Hz.

### SPECIFICATIONS

<b>Input Impedance:</b>	50,000 ohms and 350 pF for all functions
<b>Output Impedance:</b>	High level, high impedance: minimum recommended load 22,000 ohms. Low level, low impedance: 600 ohms unbalanced
<b>Frequency Response:</b>	Flat — $\pm 2$ dB from 20 Hz to 20,000 Hz Phono — $\pm 2$ dB of the standard RIAA Curve from 40 Hz to 15,000 Hz Tape — $\pm 2$ dB of the 7½ IPS NAB Curve from 50 Hz to 15,000 Hz
<b>Gain at 1 kHz:</b>	— To a high level, high impedance output Phono 34.5 dB Tape 37.0 dB Flat 27.5 dB — To a low level, low impedance output 23.5 dB lower than high level output
<b>Distortion:</b>	Under 1% total harmonic distortion for an output of 2 volts at 1,000 Hz in phono, flat and tape positions.
<b>Hum and Noise:</b>	Phono — Better than 71 dB below 10 mV input, from 20-20,000 Hz Flat — Better than 64 dB below 10 mV input, from 20-20,000 Hz
<b>Channel Separation:</b>	50 dB or better at 1,000 Hz
<b>Channel Balance:</b>	Channels matched to within 2 dB at 1,000 Hz
<b>Dimensions:</b>	143 mm (5½ in.) wide x 60.3 mm (2¾ in.) high x 114 mm (4½ in.) deep
<b>Weight:</b>	794 grams (1¾ lbs.)

## MODEL SE22 SOLID STATE STEREO TRANSCRIPTION PREAMPLIFIER



A self-contained, high level, equalized stereo preamplifier specifically designed for highest quality disc reproduction in broadcasting and recording studios. Precise RIAA/NAB equalization. Noise and RF susceptibility are extremely low. Full line output capability. Under 0.5% distortion at +20 dBm! Individual high and low frequency equalization trimmers on each channel. Individual channel level controls. Excellent channel separation permits use as two separate monophonic channels.

### SPECIFICATIONS

<b>Frequency Response:</b>	$\pm 1$ dB from 30 to 15,000 Hz (RIAA/NAB disc playback characteristic)
<b>Gain:</b>	54 dB, adjustable
<b>Distortion:</b>	Less than 0.5% THD at +20 dBm from 30 to 20,000 Hz
<b>Channel Separation:</b>	Minimum 50 dB at 1 kHz and 10 kHz
<b>Hum and Noise:</b>	At least 60 dB below +6 dBm output
<b>Input Impedance:</b>	47,000 ohms
<b>Output Impedance:</b>	For 600 or 150 ohm balanced line. Approximately 80 ohms, actual
<b>Operating Temperature:</b>	Within 0.5 dB of all specifications at -7 to 57° C (20 to 135° F).
<b>Operating Voltage:</b>	120 volts $\pm 10\%$ at 50/60 Hz 240 volts $\pm 10\%$ at 50/60 Hz
<b>Dimensions:</b>	195 mm (7-11/16 in.) wide x 95.3 mm (3¾ in.) high x 232 mm (9¼ in.) deep
<b>Weight:</b>	2.57 g (5 lbs., 14 oz.)



## A15 SERIES PLUG-IN MICROPHONE ATTENUATORS, EQUALIZERS AND ADAPTERS



114 mm (4½ in.) long x 19 mm (¾ in.) diameter

Solve sound problems without time-consuming rewiring! Shure "In-Line" microphone attenuators, equalizers and adapters are perfect for quick corrections and modifications in response and performance of microphones and sound systems. They plug in and unplug in seconds to give you instant modifications! The cost of Shure Plug-In Problem Solvers is so low that you can afford to keep them handy for all installations and applications.

### SPECIFICATIONS

**Connectors:** Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent

**Input:** Female\*

**Output:** Male\*

**Pin Connections:** Balanced, input and output, Pin 2 and 3 "hot," Pin 1 shield and case.

### Impedance

**Source:** Units are intended to be driven from 150 ohm, low level source except for: A15LA—up to 10,000 ohms and +24 dBm; A15PR—any balanced impedance, any level.

**Termination:** When terminated with impedances other than 150 ohms (25 to 1,000 ohms), the effect on response characteristics is small.

**Case Material:** Steel with professional gray finish

**Dimensions:** 114 mm (4½ in.) long x 19 mm (¾ in.) diameter

**SPECIAL NOTE:** The use of in-line devices is not recommended with phantom (simplex) powered condenser microphone systems.

\* A15A, A15PR and A15PA are symmetrical and can be used in either direction.

**A15A MICROPHONE ATTENUATOR** (Yellow Nameplate) Prevents input overload. Ideal in applications where very strong signals are applied to a microphone input, as in feeding high level vocal or instrumental signals into microphone mixers, consoles or recorders. The Model A15A has an insertion loss of 15 dB and an input and output impedance of 150 ohms. It is symmetrical, so it can be used in either direction.

**A15LA LINE INPUT ADAPTER** (Blue Nameplate) Converts balanced low impedance microphone input to line level input. Provides a simple means of using existing microphone level inputs for high level signals. It has a balanced bridging input (100,000 ohms). Attenuation is 50 dB.

**A15HP HIGH PASS FILTER** (Gray Nameplate) Provides a low-frequency cut-off to reduce all types of unwanted low-frequency mechanical noises, such as boom, stand, or floor rumble; or electrical hum; or environmental sounds such as crowd noise, wind sounds, air conditioner rumble. Can also be used as an equalizer to create special effects. Slope is 12 dB per octave, down 3 dB at 100 Hz with 150 ohm load. One kHz loss is 0.5 dB maximum.

**A15LP LOW PASS FILTER** (Green Nameplate) Provides high-frequency cut-off to reduce effects of objectionable high-frequency noises. Useful for suppressing sibilance. Excellent for minimizing difficult "hiss," jingling, crinkling, whistling sounds. Can also be used as an equalizer to create special effects. Slope is 12 dB per octave, down 4 dB at 8 kHz with 150 ohm load. One kHz loss is approximately 0.5 dB.

**A15PA PRESENCE ADAPTER** (Orange Nameplate) Adds controlled vocal or instrumental "presence" in recording and broadcast applications. Adds extra brilliance to sound systems. Improves voice range intelligibility. Provides a moderate response rise of 4 dB in the 3 to 5 kHz region. Loss at 500 Hz is 6 dB with 150 ohm output load. It is symmetrical, so it can be used in either direction.

**A15RS RESPONSE SHAPER** (Black Nameplate) Provides excellent sibilance filtering in broadcasting and recording applications. It may also be used to flatten response in microphones which exhibit a rising characteristic in the 6 kHz region. It provides a 4 dB dip in response in the 6 kHz region. One kHz loss is approximately 2 dB (150 ohm output load).

**A15BT BRIDGING TRANSFORMER** (Brown Nameplate) Balanced unit that matches balanced or unbalanced devices of different impedances. (33 kilohm primary, and 600 or 7,500 ohm secondary.)

**A15TG TONE GENERATOR** (white nameplate) Produces a continuous 700 Hz signal capable of driving low impedance balanced lines, and is extremely useful in setting up and trouble-shooting audio equipment. Plugs into microphone input to enable engineer to check levels, connections, mixer inputs, cables, and speakers. Permits one man to do the work of two. Powered by a miniature mercury battery.

**A15PR PHASE REVERSER** (red nameplate) Reverses the phase of a balanced line without modification of equipment.

## A95 SERIES LINE TRANSFORMERS



High quality transformers that make it possible to connect low-impedance lines to high-impedance inputs (19 to 75 ohms or 75 to 300 ohms), or vice versa. The transformers are completely reversible and are supplied with a variety of connectors, making them suitable for most line-matching requirements. They solve problems of excessive high-frequency loss and objectionable hum when long cables are needed with high-impedance microphones. (All units are 19 mm (¾ in.) in diameter.)

**Model A95U:** Low-impedance side—Professional three-pin Male audio connector\*

High-impedance side—Amphenol MC1M type connector with mating standard ¼ in. phone jack and phone plug



**Model A95UF:** Low-impedance side—Professional three-pin Female audio connector\*

High-impedance side—Amphenol MC1M type connector with mating standard ¼ in. phone jack and phone plug



**Model A95D:** Low-impedance side—Professional three-pin Male audio connector\*

High-impedance side—Standard ¼ in. phone jack



**Model A95FD:** Low-impedance side—Professional three-pin Female audio connector\*

High-impedance side—Standard ¼ in. phone jack



**Model A95P:** Low-impedance side—Professional three-pin Male audio connector\*

High-impedance side—Standard ¼ in. phone plug



**Model A95FP:** Low-impedance side—Professional three-pin Female audio connector\*

High-impedance side—Standard ¼ in. phone plug



**A97A LINE MATCHING TRANSFORMER** High quality transformer designed to match 150 ohm or 600 ohm microphone lines to medium impedance (1 to 10 kilohm) inputs, such as frequently used in cassette recorders. Low-impedance side (150 or 600 ohms) has a professional three-pin male audio connector; high-impedance side has an MC1M type connector. Mating connectors for both sides are supplied with the transformer.

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.



## SM53 SYSTEM ACCESSORIES



### A53M ISOLATION MOUNT

A breakthrough in noise isolation. Reduces mechanical and vibration noises by more than 20 dB. For desk, floor stand and fish pole use. 5/8"-27 Female thread with 180° swivel action. Size: 88.9 mm (3 1/2 in.) h x 38.1 mm (1 1/2 in.) d x 47.6 mm (1 7/8 in.) dia.

U.S. Patent 3,653,625



### A53B BOOM MOUNT ASSEMBLY

A complete assembly that provides excellent support, control and noise isolation. Small size minimizes shadows, makes it ideal for either large or small booms. Mounts easily on booms, and permits quick microphone removal. Includes Model A53M Isolation Mount and Model A53C Isolation Cable. (Model A53WS Windscreen should be used when very fast boom movements or outdoor applications are expected.) Length: 222 mm (8 3/4 in.).



### S53P LOW-PROFILE MICROPHONE STAND

A breakthrough in distance miking technique. The S53P holds the SM53 microphone just a fraction of an inch above the floor for better sound quality in "foot-candle" type distant pick-up recording or reinforcement of choral, orchestral or ensemble musical events or dramatic presentations. Minimizes the "hollow sound" by eliminating phase cancellation caused by floor reflections. Provides very effective mechanical noise isolation. Height: 121 mm (4-25/32").



### A53E BOOM EXTENSION PIPE

Rugged 508 mm (20 in.) boom extension pipe with A53C Isolation Cable pre-installed. Provides the same noise isolation as the A53C Cable, while it lowers the microphone 508 mm (20 in.) below boom to reduce shadows and lighting problems.



### A53C ISOLATION CABLE

Isolates and minimizes vibration and mechanical noises induced or transmitted by cable when using A53M Isolation Mount. Assembly is 457 mm (18 in.) long.



### A53G "POP" WIND FILTER

Adapts the SM53 for close-talking and outdoor assignments by adding outstanding "pop" and wind filtering. Mounts in seconds—unscrew the grille assembly of the SM53 and screw on the A53G. Identical in finish and appearance to SM53 grille assembly, except slightly larger. Does not affect microphone level, creates only minimal change in response (in 4 kHz region) and in directivity. It is also the replacement grille for SM54.



### A53WS WINDSCREEN

Front and rear windscreens sharply reduce wind and air gusts outdoors, and permit rapid and abrupt boom movement indoors. Gives extra "pop" protection for ultra close-talking applications.

## MICROPHONE ACCESSORIES



### C50CN EXTENSION CABLE

A 6.1 m (20 ft.), two-conductor shielded microphone cable pre-wired with Male and Female professional three pin audio connectors, designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent.

### C51CN, C52CN, C53CN EXTENSION CABLES

Broadcast-quality, super-tough TRIPLE-FLEX® two-conductor shielded, small diameter microphone cables with locking Male and Female professional three-pin audio connectors\*. Available in three most desired cable lengths.

Model C51CN	7.6 m ( 25 ft.)
Model C52CN	15.2 m ( 50 ft.)
Model C53CN	30.4 m (100 ft.)

### MODEL A10CH COUGH BUTTON

A switch, cable and connector accessory designed to provide the user of a Shure Model SM10 or SM12 Head-Worn Microphone or of a Model SM11 Lavalier Microphone with a capability for momentarily shorting the microphone circuit when the switch button is depressed; preventing undesirable sounds from reaching the audience. The A10CH may also be used with low-impedance, balanced-line microphones—head-worn, lavalier, hand-held or stand-mounted—which contain a male professional three-pin audio connector\*.

Not recommended for use with condenser microphones that are externally powered via the microphone cable.

The A10CH consists of a 4.6 m (15 ft.), heavy-duty, two-conductor, shielded cable with male and female professional three-pin audio connector\*. Mounted in the side of the female microphone connector is a momentary-action push-button switch which controls the microphone output circuit. The A10CH weighs 500 grams (17.6 oz.).

\*Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series or equivalent connector.



### A55M ISOLATION

Reduces mechanical and vibration noises by more than 20 dB. For use with SM50, SM57 and SM58 microphones. Size: 95.2 mm (3 3/4 in.) h x 38.1 mm (1 1/2 in.) d x 50.8 mm (2 in.) dia.



### A2WS WINDSCREEN

A high performance, rugged windscreen with exclusive lock-on provision that prevents accidental removal or loss. Effectively controls wind noise and explosive breath sounds ("pop"). Neutral gray. Handsome, finished appearance. Fits Shure models SM56, SM57, 544, SM76, 571 and 572G professional microphones.



### A61WS WINDSCREEN

Effective control of wind and breath noises for all Shure "ball-type" microphones, such as Model SM58. Easy, "slip-on" attachment. (Gray only.)

### A61WS COLORED WINDSCREENS

Color-charged windscreens are attractive on-stage, practical off-stage. Soundmen can color-code mixer channels with microphones to avoid mixups. True Blue (BL), Well Red (RD), Mean Green (GN), Screaming Yellow (YL), Florida Orange (OR), Sound Brown (BR), Black (BK), and White (WH) windscreens fit all Shure "ball-type" microphones.



## MICROPHONE STANDS, LAVALIERS & OTHER ACCESSORIES



### S33 SERIES STANDS

Low silhouette ideal for TV use. Heavy, 1½ kg (2½ lbs.) for rock-steady support of any microphone having standard ⅝"-27 thread. Unique quick microphone removal provisions. Model S33B has Black satin finish; Model S33P has textured non-glare dark Gray finish to match Shure "SM" series microphones. Base size: 33.0 mm (1-5/16 in.) h x 137 mm (5½ in.) w x 152 mm (6 in.) d.



### S39A VIBRATION ISOLATION STAND

Isolates microphone from even extreme mechanical vibration. For tables, desks, podiums, etc. Designed for use with any Shure microphone or swivel adapter assembly. Heavy-duty "non-fatigue" foam rubber internal isolation element. Low-silhouette, Black high-impact, non-glare plastic housing. Base size: 44.5 mm (1¾ in.) h x 133 mm (5¼ in.) w x 184 mm (7¼ in.) d.



### S55P LOW-PROFILE MICROPHONE STAND FOR DISTANT MICROPHONE PICKUP.

A breakthrough in microphone placement technique. Minimizes the "hollow sound" caused by floor reflections usually associated with distant microphone pick-up techniques. Holds the microphone just a fraction of an inch above the floor for better sound quality in "footlight" type placement for recording or sound reinforcement of choral, orchestral or ensemble musical events and dramatic presentations. Effectively isolates mechanical noises. For Shure SM57 and other Shure tapered-handle microphones. (Not recommended for microphones with On-Off switches in the handle.) Height: 121 mm (4-25/32 in.).

## MICROPHONE MOUNTS & ADAPTERS



### QUICK-DISCONNECT ISOLATION UNITS

Designed for use with microphones normally mounted on desk or floor stands but which are periodically removed from stand for hand-held or carry-around use. The molded rubber insert isolates the microphone from mechanical vibration.

**Model A45** Designed both for microphones incorporating an isolation assembly such as Model SM56 and for microphones using an A25B Swivel Adapter such as model SM50, SM57 and SM58. For use with standard ⅝"-27 microphone stands. Satin Aluminum finish.

**Model A45B** Same as A45, but Black finish.



### SWIVEL ADAPTER

**Model A25B** To be used with Models SM50, SM57, and SM58 microphones. For use with standard ⅝"-27 desk or floor stand.



### SWIVEL ADAPTER

**A57D Swivel Adapter** Snap-in Swivel Adapter for Model SM53 and other 19mm (¾ in.) diameter microphones. Provides snap-in operation. For use with standard ⅝"-27 desk or floor stand.



### A51L LAVALIER ASSEMBLY

Designed especially for the Shure SM51 microphone. "Positive-lock" design holds microphone securely, yet allows easy, noiseless adjustment of microphone position.

### A57L LAVALIER ASSEMBLY

Same as above, but designed for the Shure Model 571 microphone.



## GOOSENECKS & DUAL MOUNTS



### GOOSENECKS

High quality flexible goosenecks in 152 mm (6 in.), 305 mm (12 in.) and 457 mm (18 in.) lengths. "Silent-type" design limits mechanically induced noises.

Model G6A 152 mm (6 in.) flexible gooseneck (side vent).

Model G12A 305 mm (12 in.) flexible gooseneck (side vent).

Model G18A 457 mm (18 in.) flexible gooseneck (side vent).

Model G12 305 mm (12 in.) flexible gooseneck.

Model G18 457 mm (18 in.) flexible gooseneck.

Model G12-CN 305 mm (12 in.) flexible gooseneck with Female professional three-pin audio connector\*.

Model G18-CN 457 mm (18 in.) flexible gooseneck with Female professional three-pin audio connector\*.

Model A12 Mounting Flange.

\* Designed to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connector.



### DUAL MICROPHONE MOUNTS

Designed for mounting two microphones, one above the other. Minimal visual obstruction, minimal disturbance of directional characteristics or frequency response of microphones feeding the same mixer. Ideal for mounting microphones feeding separate systems, or when one microphone is needed as a spare, such as on speakers' rostrums.

Model A25M Designed for use with Shure Models SM50 and SM57.

Model A26M Designed for use with "ball-type" Model SM58, and for the Model SM57 when used with A2WS Accessory Windscreen.

## SHURE COMPONENT ACCESSORIES



**AC60 ATTACHE CARRYING CASE** Handsome slim-line vinyl leath-ette attache case holds mixer, microphones, cables. 85.7 mm (3 3/8 in.) x 467 mm (18 3/4 in.) x 295 mm (11 3/4 in.). Fits M63, M610, M67 and M675 series components.

**A30A CARRYING CASE** Serves as a convenient carrying case for all "M" line mixers, SE30 Gated Compressor/Mixer, and M625 Voicegate®. (see page 14 for photo.)



**A68S STACKING KIT** Brackets for vertical stacking of two or more M63, M67 or M610 series components. Includes A68SC cable below.



**A68H HANDLE/TILT STAND** Serves as a handy carrying handle, or provides a locking tilt for 20° for greater control visibility and ease of operation. Fits M67 Series Mixers, M675 Broadcast Production Master, M63 Audio Master® and M610 Feedback Controller.



**A68R RACK PANEL KIT** Standard 19 in. x 3 1/2 in. (483 mm x 88.9 mm) audio equipment rack panel for use with the M63, M67, M675 series, and M610 components. Textured non-glare dark gray finish. Also available with aluminum finish (Model A68R-AL), and in black finish (Model A68R-BL).

**A68SC INTERCONNECTING CABLE** Phono plug to phono plug cable for mix bus to mix bus connection when stacking the M67 Series mixers. (Not shown)



**A67B BATTERY POWER SUPPLY** 27 volts dc battery designed to power M63 or M67 components. May also be used with the M67 as either the sole power source or as a stand-by power source during ac operation, providing automatic, noiseless switchover in case of ac failure.

**A68M MICROPHONE PREAMPLIFIER** Adapts the "Auxiliary Input" of any Shure audio control component to accept high impedance or low impedance microphone signals or balanced line level input.



## MODEL SC35C PROFESSIONAL STUDIO PHONO CARTRIDGE



The first phono cartridge designed specifically for broadcast studio applications—actually improves on-the-air playback quality of all recorded material, including stereo and monophonic LP's, 45's, and matrix four-channel. The SC35C uses an entirely new stylus assembly that is rigid enough to withstand the punishment of continuous back-cuing, yet compliant enough to offer excellent mid- and high-frequency reproduction. Engineered for engineers—cutaway stylus grip design and special "band alignment point," a Brilliant Orange dot on the stylus tip that increases tip visibility and makes record band location "missproof." Frequency response is extremely flat ( $\pm 1$  dB) up to 15,000 Hz, with a smooth roll-off up to 20,000 Hz to minimize high frequency "splatter" in FM broadcasts caused by high frequency pre-emphasis. Model SS35C Spherical Stylus is the replacement stylus.

### SPECIFICATIONS

Trackability at 4 grams tracking force (in cm/sec peak recorded velocity) using a Shure/SME arm:

- 14 cm/sec at 400 Hz
- 27 cm/sec at 1,000 Hz
- 33 cm/sec at 5,000 Hz
- 20 cm/sec at 10,000 Hz

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation (Minimum): 20 dB at 1,000 Hz

Tracking Force: 4 to 5 grams

## MODEL SS78E ELLIPTICAL STYLUS ASSEMBLY For 78 rpm RECORDS



Use with SC35C Professional Cartridge to improve sound reproduction and minimize surface noise from classic 78 rpm recordings. Ideal for one-of-a-kind 78's where minimum record wear and maximum fidelity of reproduction are essential.

### SPECIFICATIONS

Trackability at 4 grams tracking force using a Shure/SME arm: 14 cm/sec peak recorded velocity at 400 Hz

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 3.5 mV typical at 1,000 Hz at 5 cm/sec peak recorded velocity (Monophonic)

Tracking Force: 4 to 5 grams

## M44 SERIES PHONO CARTRIDGES — A BROADCAST STANDARD



With their unusual combination of excellent performance, ruggedness, and inexpensive price, the Shure Standard Series cartridges are the most widely used pickups in stereo and stereo compatible monophonic broadcasting.

They feature exceptionally good sound, unusual uniformity and stand up best under hard usage. Wide choice of models, including spherical or elliptical styli; light or heavy tracking; special 78 rpm stylus is available.

**M44C:** 18 microns (.0007 in.) spherical stylus, 3 to 5 grams tracking. Intended for older, heavier broadcast arms, or to allow a heavier feel with lighter arms. The M44C is ideally suited to "combo" operations, and is the lowest cost cartridge in the Standard Series.

**M44-7:** Similar to the M44C, but with a lower tracking force range of 1½ to 3 grams. The lighter tracking force minimizes record wear, and is recommended for arms permitting less than 3 grams tracking force, and when heaviest feel is not required.

**M44E:** Similar to the other Standard Series cartridges, but features a Biradial (Elliptical) stylus to minimize tracing distortion, especially in inner grooves. The moderate tracking force range of 1¾ to 4 grams permits proper operation in many existing arms.

A range of interchangeable styli is offered, including the N44-3 for 78 rpm recordings. All N44 Series styli may be interchanged in any M44 Standard Series cartridge.

### M44 SERIES CARTRIDGES

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M44-7	N44-7	Medium 1½-3 grams	Spherical	18 microns (.0007 in.)
M44C	N44C	Heavy 3-5 grams	Spherical	18 microns (.0007 in.)
M44E	N44E	Medium 1¾-4 grams	Biradial (Elliptical)	10 microns x 18 microns (.0004 in. x .0007 in.)
	N44-3	Medium 1½-3 grams	Spherical	63 microns (.0025 in.)

### SPECIFICATIONS

Frequency Response: From 20 to 20,000 Hz

Output Voltage: At 1,000 Hz at 5 cm/sec peak recorded velocity

Model M44-7, 9.5 millivolts per channel

Model M44C, 9.5 millivolts per channel

Model M44E, 9.5 millivolts per channel

Channel Separation (Minimum): 20 dB at 1,000 Hz

## M95ED DELUXE HIGH TRACKABILITY CARTRIDGE



**Second only to one! The Shure M95ED combines several of the high-performance design features of the Shure V-15 Type III with a radically new internal electromagnetic structure to deliver exceptional trackability and total performance surpassed only by the Type III.**

The M95ED incorporates a new, thinner, uninterrupted pole piece developed by Shure design engineers to optimize electromagnetic characteristics—especially at higher frequencies. As a result, magnetic losses have been minimized, and frequency response remains essentially flat across the entire frequency range. Dynamic range is significantly extended.

With its nude-mounted, biradial elliptical stylus tip, the M95ED has very low effective stylus tip mass. This provides higher trackability to maintain perfect groove contact through the "hottest," most heavily modulated passages encountered on modern recordings—all at extremely light tracking forces that cut record wear and increase stylus tip life. Its exceptional trackability makes the M95ED an outstanding choice for use in four-channel encoded (matrix) systems.

### SPECIFICATIONS

Trackability at 1 gram tracking force (in cm/sec peak recorded velocity) using a Shure/SME Arm:

- 24 cm/sec at 400 Hz
- 33 cm/sec at 1,000 Hz
- 28 cm/sec at 5,000 Hz
- 19 cm/sec at 10,000 Hz

Tracking Force: ¾ to 1½ grams

Frequency Response: 20 to 20,000 Hz

Channel Separation: Minimum 25 dB at 1,000 Hz

Channel Balance: Output from each channel within 2 dB

Stylus: N95ED Biradial elliptical nude diamond tip

17.8 microns (.0007 inch) frontal radius

5 microns (.0002 inch) side contact radii

25 microns (.0010 inch) wide between record contact points

Stylus: N95-3 Spherical for monophonic 78 rpm recordings—

63 microns (.0025 inch) stylus tip radius



## SUPER-TRACK "PLUS" CARTRIDGES

### •• THE INCOMPARABLE V-15 TYPE III



A singular achievement in phono cartridge design – and the worthy successor to the world-acclaimed V-15 Type II Improved. A totally new laminated magnetic core structure and an exquisitely designed stylus assembly which reduces effective stylus tip mass by 25% produced these significantly improved performance characteristics: (1) higher-than-ever trackability at forces that are lower than ever ( $\frac{3}{4}$  to  $1\frac{1}{4}$  grams); (2) an astonishingly flat frequency response with no noticeable emphasis or de-emphasis at any frequency; (3) an extended dynamic range even beyond that of the V-15 Type II Improved; and (4) all without a reduction in output level.

The V-15 Type III is painstakingly quality-controlled for a uniformity of response and performance previously unavailable in cartridges at any price. Tracks difficult "hot" passages cut at highest velocities, including harpichords, cymbals, sibilant vocal sounds, and orchestral bells at a true,  $\frac{3}{4}$  gram to  $1\frac{1}{4}$  grams tracking force.

Eliminates break-up and FM over-modulation due to tracking distortion. Its sound is absolutely neutral and coloration-free. An outstanding playback component for fine quality FM broadcasting and recording studios.

**Model V-15 Type III Super-Track "Plus" cartridge.** Biradial (Elliptical) stylus.

**Model VN35E Biradial (Elliptical) Stylus** is the replacement stylus.

**Model V-15 III-G Super-Track "Plus" cartridge.** Spherical stylus.

**Model VN3-G Spherical Stylus** is the replacement stylus.

**Model VN78E Biradial (Elliptical) Stylus.** Designed specifically for playing 78 rpm monophonic records with either V-15 Type III or V-15 III-G.  $1\frac{1}{2}$  to 3 grams tracking force range.

## SPECIFICATIONS

Trackability at 1 gram (in cm/sec peak recorded velocity) using a Shure/SME arm (Reference — Shure TTR-103 Laboratory Test Record):

26 cm/sec at 400 Hz; 38 cm/sec at 1,000 Hz

35 cm/sec at 5,000 Hz; 26 cm/sec at 10,000 Hz

Frequency Response: 10 to 25,000 Hz

Output Voltage: 3.5 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity. Output from each channel within 2 dB.

Channel Separation (Minimum): 25 dB at 1,000 Hz; 15 dB at 10,000 Hz

Tracking Force:  $\frac{3}{4}$  to  $1\frac{1}{4}$  grams

**NOTE:** To realize the full performance capability of the Shure V-15 Type III, it must be used in tone arms specifically designed for proper tracking at less than  $1\frac{1}{4}$  grams. The Shure SME Series II Improved tone arm is recommended.

## NOTE:

ALL SHURE CARTRIDGES LISTED ON THIS PAGE ARE COMPATIBLE WITH ALL FOUR-CHANNEL MATRIX SYSTEMS

## DELUXE SERIES



### MODEL M91ED HI-TRACK CARTRIDGE

**With Nude-Mounted Diamond Stylus Tip** Optimized design parameters in the stylus assembly give the M91ED superb high frequency trackability and overall performance. Nude-mounted diamond stylus tip for reduced stylus tip mass. Smooth peak-free response makes a definite improvement in sound quality, particularly in FM and FM Stereo operations. Model N91ED Biradial (Elliptical) Stylus is the replacement stylus.

## SPECIFICATIONS

Trackability at 1 gram tracking force (in cm/sec peak recorded velocity) using a Shure/SME arm:

22 cm/sec at 400 Hz; 33 cm/sec at 1,000 Hz

28 cm/sec at 5,000 Hz; 19 cm/sec at 10,000 Hz

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation (Minimum): 25 dB at 1,000 Hz

Tracking Force:  $\frac{3}{4}$  to  $1\frac{1}{2}$  grams

## CUSTOM SERIES



### MODELS M91E & M75EJ TYPE 2 HI-TRACK CARTRIDGES

Excellent trackability in the  $\frac{3}{4}$  to 3 gram tracking force range—yet at relatively modest costs. Both are well suited for "high fidelity" FM operations, and both feature a retractile-design stylus that helps prevent record damage during back-cuing.

**Model M91E** trackability at 1 gram (in cm/sec peak recorded velocity): 20 cm/sec at 400 Hz; 28 cm/sec at 1,000 Hz; 25 cm/sec at 5,000 Hz; 18 cm/sec at 10,000 Hz. Tracking force range:  $\frac{3}{4}$  to  $1\frac{1}{2}$  grams.

**Model N91E Biradial (Elliptical) Stylus** is the replacement stylus.

**Model M75EJ Type 2** trackability at 2 grams (in cm/sec peak recorded velocity): 28 cm/sec at 400 Hz; 35 cm/sec at 1,000 Hz; 30 cm/sec at 5,000 Hz; 20 cm/sec at 10,000 Hz. Tracking force range:  $1\frac{1}{2}$  to 3 grams.

**Model N75EJ Type 2 Biradial (Elliptical) Stylus** is the replacement stylus.

## EXTRA-DURABILITY SERIES



### MODEL M93E HI-TRACK CARTRIDGE

For moderate trackability in the  $1\frac{1}{2}$  to 3 gram tracking force range. Very rugged and well-designed for back-cuing and robust operation. Trackability at 2 grams (in cm/sec peak recorded velocity): 18 cm/sec at 400 Hz; 25 cm/sec at 1,000 Hz; 24 cm/sec at 5,000 Hz; 14 cm/sec at 10,000 Hz.

**Model N93E Biradial (Elliptical) Stylus** is the replacement stylus.

### MODELS M75-6S & M75CS HI-TRACK CARTRIDGES

**Model M75-6S** is identical in performance to the Model M93E above, but uses a spherical stylus. **Model M75CS** also uses a spherical stylus, and reaches the performance levels of Models M93E at 3 to 5 grams tracking force. The M75-6S reaches this performance level at  $1\frac{1}{2}$  to 3 grams tracking force.

**Model N75-6 Spherical Stylus** is the replacement stylus for Model M75-6S.

**Model N75C Spherical Stylus** is the replacement stylus for Model M75CS.

## STYLI FOR 78 RPM RECORDS

**MODEL N75-3** Fits any of the M75 Series cartridges, or V-15 Type II Series. Spherical tip with 63 micron (.0025 in.) radius.  $1\frac{1}{2}$  to 3 grams tracking force.

**MODEL N91-3** Fits any of the M91 and M93 Series cartridges. Spherical tip with 63 micron (.0025 in.) radius,  $1\frac{1}{2}$  to 3 grams tracking force.



**SME SERIES II IMPROVED**  
**"THE BEST PICKUP ARM IN THE WORLD"**



The ultimate in independent tone arms—now redesigned for significantly superior performance. The Shure-SME Series II Improved combines the flawless craftsmanship and unmatched precision of its predecessor (the SME Series II) with design improvements that reduce tone arm/cartridge system mass and friction to significantly lower levels.

Ultra-low friction pivot points, with high-precision, protected ball and knife-edge bearings; arm deflects either vertically or horizontally with less than .020 gram force applied at stylus tip. Very low overall mass, with heavier elements positioned near the arm fulcrum. Low distortion geometry.

Precisely accurate adjustments for every factor related to perfect tracking, including height, overhang, length, tracking force and bias (anti-skating). Allows positive tracking force adjustment in 1/4-gram increments from 0 to 1 1/2 grams, and accepts all light-tracking cartridges weighing four to nine grams.

Recommended for use with all Shure high trackability cartridges tracking at up to 1 1/2 grams, and, when teamed with the Super-Track "Plus" V-15 Type III, the result is a tone arm/cartridge system that is, quite simply, unsurpassed for precision record playback. Highly recommended for "high fidelity" FM broadcasting applications in which quality requirements are uncompromisingly high. Model 3009 Series II Improved features a non-removable shell for lower mass. For applications in which frequent cartridge changes are expected, the Model 3009/S2 with removable shell is available.

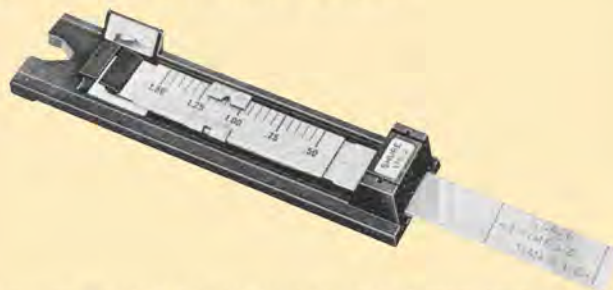
**Note:** SME tone arms are distributed by Shure only in the U.S. and Canada.

**SHURE PROFESSIONAL TONE ARM**



High quality, rugged, simple arm for tracking at 1 1/2 grams or higher. Full range of adjustments for static and dynamic balance, cartridge overhang, arm height, etc. Direct reading tracking force scale. Twist-to-lock head accommodates any stereo or mono cartridge. A real "work-horse" that takes abuse. Simple mounting through a single hole from the top of the table; plug-in cable. Model M232 is for 12" turntables; Model M236 for 16" turntables.

**SFG-2 STYLUS FORCE GAUGE**



Low-cost, precision stylus force gauge permits measurement of tracking force and allows precise resetting of stylus force to maintain optimum trackability and sharply reduce wear on records and stylus tip. Especially valuable when cartridges are replaced. Accuracy to within 1/10th of a gram in 1/2 to 1 1/2 gram primary operating range; extended range to 3 grams. The SFG-2 uses friction-free, stainless steel pivot points and easy-to-read reference bars in a permanently accurate "balance" system — no springs to weaken or wear out. Special tilted mirror reflects reference bar positions for effortless, accurate reading. Force measurement is made with the tone arm in actual playing position.



**TTR-103 CARTRIDGE TEST RECORD**

A technical recording for use with lab instrumentation to measure cartridge trackability at high- (10.8 kHz), mid- (1 kHz) and low-frequency (400 Hz) levels. 45 rpm.

**TTR-109 CARTRIDGE TEST RECORD**

Designed to measure channel separation and level at 1 kHz. Lab instrumentation required. 33-1/3 rpm.

**TTR-110 CARTRIDGE TEST RECORD**

The successor to Shure's internationally famous TTR-101 (the original Audio Obstacle Course recording), revised for even more sensitive trackability tests. Designed for subjective listening appraisal of phono cartridge performance through sound quality and character. Uses individual instruments and orchestral passages cut at increasing recorded velocities. Complete instructions and "listening guidelines" included. 33-1/3 rpm.

**MODEL SRC-1 SOUND REINFORCEMENT CALCULATOR**

Provides a convenient means for calculating (1) room reverberation time and acoustic absorption coefficients; (2) microphone output voltage and sensitivity ratings; (3) attenuation pad resistance values. Sixteen-page instruction brochure included.

**MODEL RSR-1 REACTANCE SLIDE RULE**

Simplifies calculation of resonance frequency, capacitive reactance, inductive reactance, Coil "Q" and dissipation factor problems. Instructions and example problems included.