



SHURE[®]

PROFESSIONAL PRODUCTS

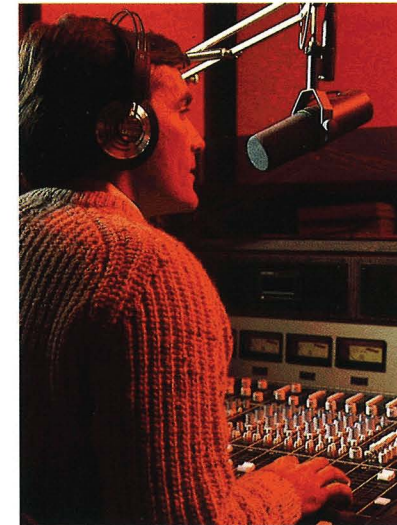
SHURE®

The Sound of the Professionals . . . Worldwide®



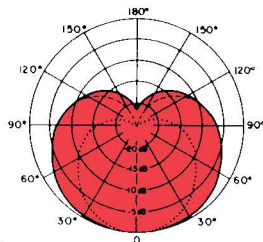
OVER 60 YEARS OF EXCELLENCE

The microphones and circuitry products in this catalog have been designed and built specifically for the most demanding professional applications. They are the very finest products from the world's broadest selection and best-selling line of microphones, and innovative circuitry products. They are made to withstand rigorous, day-in-day-out usage in (and outside) professional broadcasting and recording studios. Shure grew up with these industries. We work with practicing professional audio engineers in every step of a microphone's development, and we give them what they want. Shure microphone ruggedness and reliability is legendary—throughout the world—as is unwavering uniformity of performance. And, they are all field serviceable because of our worldwide availability of parts.



SPECIFICATIONS INTEGRITY

The specifications provided for each Shure microphone or circuitry product are not "laboratory standards" or theoretical figures developed in optimum acoustic environments. . . they are consistently accurate measurements of the performance you can expect from actual production models. If additional specifications and technical descriptions of any model are required write to Shure, Attention: Customer Service, requesting a technical data sheet for that model—see page 19 for Data Sheet numbers.



QUALITY CONTROL

Shure knows from experience that professional microphones and circuitry are not always used under ideal conditions—far from it—so we develop, design, build, and test for the worst possible conditions we can imagine. We subject them to extreme heat, cold, humidity, vibrations, salt sprays, alcohol, infrared, and much more. Then we drop them six feet onto a hardwood floor and they work!

BROAD SELECTION

Because professional requirements are diverse, Shure makes many types and varieties of microphones—some of them unique. Long recognized as the unquestioned leader in dynamic units, Shure now has set a new standard in singularly rugged and reliable condensers which will not "age," and will retain their original performance characteristics for the life of the unit. There is a Shure model for every application, from Lavalier to Shotgun. And, Shure circuitry products are the industry standards.





SM2 FP32



SM2



SM82



SM58 SM63L SM82



SM1 SM83

THE MOST DEPENDABLE LINK IN YOUR AUDIO CHAIN

Whether under the rigidly controlled schedules of a studio, or in the highly unpredictable conditions of on-the-spot news gathering, or the often improvised setup of a remote, the dependability, ruggedness, uniformity, intelligibility, and ease of field serviceability of Shure professional products are taken for granted by professional audio technicians. They know from experience that Shure products perform well when they're supposed to—when the "On-The-Air" or "Recording" red light goes on, and the program material must be heard without fail—and where there is no margin for error. They work!

CONTENTS

All products in this catalog are in alphanumeric order. Thus, SM58 follows SM57, SM87 follows SM85, FP16 follows FP12, etc.

MICROPHONES

Type & Application	Models	Pages
CONDENSERS		
Studio Unidirectional	SM81	6
Studio Omnidirectional	SM80	6
Line Level	SM82	7
Shotgun	SM89	9
Surface Mounted Unidirectional	SM91	10
Surface Mounted Omnidirectional	SM90	10
Supercardioid	SM87	8
General Purpose Unidirectional	SM85	8
Miniature	SM98	11
Lavalier	SM83, 838	7, 10
DYNAMICS		
Studio Unidirectional	SM7	2
Studio Omnidirectional	SM61, SM63, SM63L	4, 5
Headworn	SM1, SM2, SM10A, SM12A	2, 3
Probe Type	SM57, SM77	3, 5
Ball Type	SM58, SM78	4, 5
General Purpose	SM62	4

CIRCUITRY

AMPLIFIERS		
Mic to Line	FP11	15
Headphone Bridging	FP12	15
Distribution	FP16	15
MIXERS		
Field Production Mono	FP31	16
Field Production Stereo	FP32, FP42	16, 17
Industry Standards	M267, M268	18
PRE-AMPLIFIER		
Stereo	M64A	17

PHONO CARTRIDGES

Studio Units	SC35C, SC39 Series	19
--------------	--------------------	----

ACCESSORIES

Power Supply	PS1A	12
In Line Switch	A120S	12
Plug In Problem Solvers	A15 Series	12
Line Matching Transformer	A95, A97 Series	12
Windscreens		13
Stands		13
Mounts & Adapters		14
Cable Selector		14
Goosenecks		14

MISCELLANEOUS

Replacement Parts		19
Data Sheets		19
Applications Guides		20, 21

SM1 and SM2

Shure Models SM1 and SM2 are professional quality headsets that provide maximum comfort, durability and sound reproduction—designed for broadcasting applications. The SM1 (one ear cue) and SM2 (two ear cue) are loaded with deluxe features that make them an ideal choice for professional TV and Radio broadcasters, film and video production crews and other A/V professionals.

Headset features include: a patent boom mount for total flexibility in microphone positioning—the boom adjusts for left or right side use; an all metal boom that is less subject to damage; a rugged, double-braced all metal headband with leather-like covering; and large "pillow-soft" ear pads for maximum comfort as well as superior external noise isolation.



Microphone features include a precision cardioid polar pattern; and a specially tailored frequency response to insure accurate voice reproduction—with minimal or no equalization. The microphone's unidirectional pickup pattern, coupled with the boom mount's consistent mouth-to-microphone positioning, provide maximum voice isolation.

In addition to comfort, durability and performance, the SM1 and SM2 offer versatility—the cable is detachable allowing quick and easy cable changes for mono, stereo or split feed headphone functions.

The SM1 and SM2 are handsome in appearance with a matte chrome and black finish and are supplied with cable and windscreen.

SM7

The SM7, designed in conjunction with professional users, is among the finest studio professional dynamic microphones in use today. Its "smooth and silky" sound has made it extremely popular for voice-over recording in radio and television work. It is also an excellent microphone for use with either instruments or voice in multi-track recording situations.

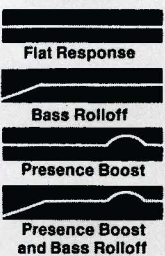
It features a wide-range, very smooth frequency response with graphic response-tailoring switches to permit the choice of four different microphone response curves: (1) flat response from 40 to 16,000 Hz; (2) midrange boost (presence peak) for enhanced speech or vocal intelligibility (+3 dB at 3,000 Hz); (3) low-frequency rolloff for natural close-up miking (-6 dB at 100 Hz); (4) combination response with both midrange boost and bass rolloff. The slide switches provide a visual indication of the response selected (as shown at right). The microphone is supplied with a switch cover plate to guard against accidental switching.

The SM7 has an accurate, symmetrical cardioid pickup pattern, uniform with frequency. It provides maximum rejection of unwanted background noise along with minimum coloration of off-axis sound.

The microphone is designed for boom or stand mounting. Mechanical noise is reduced by a Shure-patented air suspension integral shock mount; outdoor wind and moving boom noise as well as breath pop in close-up use are minimized by the integral foam windscreen; and electrical hum pickup is canceled by the built-in humbucking coil. A rigid metal case under the foam windscreen makes the SM7 extremely rugged. Exposed metal parts are non-glare dark gray enamel; foam is dark gray.

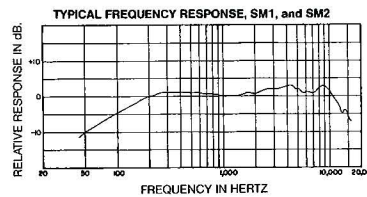


VISUAL RESPONSE TAILORING

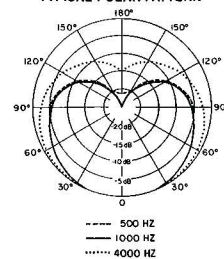


specifications

Models:	SM1 and SM2
Frequency Response:	Microphone: 50 to 15,000 Hz Receiver: 100 to 8,000 Hz
Polar Pattern:	Microphone: Cardioid (unidirectional)
Impedance:	Microphone: 150 ohms Receiver: 2,000 ohms at 1 kHz
Output Level:	Microphone: Open Circuit Voltage: -47.0 dB (4.5 mV) (0 dB = 1V/100 μbar) Power Level: -66.0 dB (0 dB = 1 mW/10 μbar) Receiver: 104.0 dB SPL with 1.4V at 1 kHz
Cable:	2m (6.5 ft) detachable, five conductor (two conductor shielded), with 6-pin threaded connector to mate with connector on headset
Net Weight:	SM1: 209 grams (7.4 oz) SM2: 290 grams (10.2 oz)

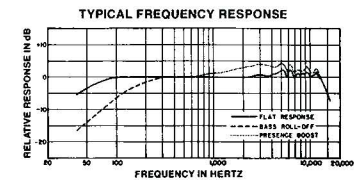


TYPICAL POLAR PATTERN

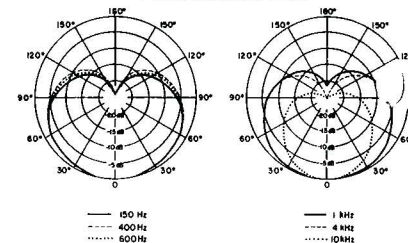


specifications

Model:	SM7
Frequency Response:	40 to 16,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage	0.11 mV (-79.0 dB, 0 dB = 1V/μbar)
Power Level:	-57.0 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/m0e:	13 dB SPL equivalent
Connector:	Three-pin professional audio
Dimensions:	148 mm H x 191 mm W x 96 mm Dia. (5-27/32 x 7-17/32 x 3-25/32 in.)
Net Weight:	764 grams (1 lb, 11 oz)
Supplied Accessories:	Switch cover plate, foam-lined storage/carrying case



TYPICAL POLAR PATTERNS



SM10A and SM12A

The hands-free operation drummers and keyboard players demand. Wherever you twist or turn, these adjustable headset dynamic microphones remain precisely at the distance and angle you set. The noise-reducing cartridge in the SM10A and SM12A gives you high output for punch in live vocal situations, and a crisp, clean, balanced midrange. In addition, these microphones reject background noise and minimize leakage from other sound sources on stage.

The SM10A and SM12A head-worn microphones are also designed for use in sports and newsgathering, interviewing,

and intercommunications systems, special event remote broadcasting, and computer interactive systems.

The microphone in each model is identical. They are unidirectional and close-talking, with a strong, professional sound quality voice response. Their lightweight, padded headphones eliminate user fatigue and an adjustable boom maintains proper mouth-to-microphone distance and position.

- SM10A-CN** Can be removed from headset for attachment to stereo headphones
- SM12A-CN** Features integral, adjustable carphone

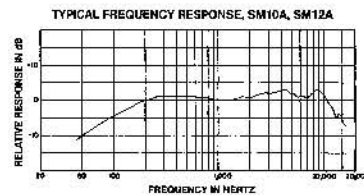


HERBIE HANCOCK

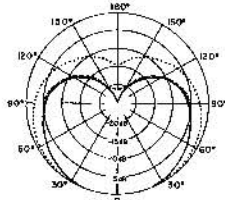
specifications

SM10A, SM12A

- Model:** SM10A, SM12A
- Frequency Response:** 50 to 15,000 Hz
- Polar Pattern:** Cardioid (unidirectional)
- Impedance Rating:** 150 ohms
- Output Level**
- Open Circuit Voltage:** 4.5 mV (-47.0 dB, 0 dB = 1V/100 μbar)
- Power Level:** -66.0 dB, 0 dB = 1 mW/10 μbar
- Hum Pickup/mOe:** 38.4 SPL equivalent
- Cable:** SM10A: Attached 1.5m (5 ft) two-conductor shielded with three-pin professional audio connector at equipment end. SM12A: Attached 1.5m (5 ft) four-conductor shielded with three-pin professional audio connector at equipment end; 762 mm (2.5 ft) two-conductor receiver cable attached to microphone connector.
- Dimensions:**
- Microphone:** 14 mm H x 15.9 mm Dia. (9/16 x 5/8 in.)
- Headset:** 203 mm L (8 in.)
- Weight:** SM10A: 78 grams (2.7 oz); SM12A: 84 grams (3 oz)
- Supplied Accessories:** Connector bell clips, foam windscreen, storage/carrying case. SM10A also supplied with headphone adapter plate



TYPICAL POLAR PATTERN SM10A, SM12A



— 500 HZ
- - - 1000 HZ
... 4000 HZ

SM57

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

The SM57 is widely used by touring sound companies and artists' staff sound engineers for instrumental pickup and remote record-

ing applications. The SM57's mid-range presence peak and good low-frequency response make it an ideal microphone for use with snare drums, toms, kick drums, wind instruments and electric guitars, as well as acoustic and electric pianos and other electronic keyboards. The SM57 is also an excellent choice for congas, bongos, and other miscellaneous percussion instruments. It is also recommended for both male and female background vocals.

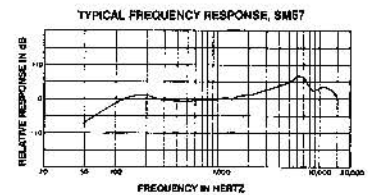
- SM57-CN** With C25F cable
- SM57-LC** Without cable



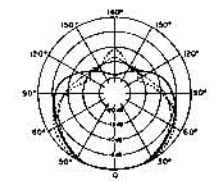
specifications

SM57

- Model:** SM57
- Frequency Response:** 40 to 15,000 Hz
- Polar Pattern:** Cardioid (unidirectional)
- Impedance Rating:** Dual: 38/150 ohms
- Output Level**
- Open Circuit Voltage:** 0.08 mV (-82.0 dB, 0 dB = 1V/μbar) 38 ohms; 0.17 mV (-75.5 dB, 0 dB = 1V/μbar) 150 ohms
- Power Level:** -56.5 dB, 0 dB = 1 mW/10 μbar
- Cable:** SM57-CN: 7.6m (25 ft) two-conductor shielded Triple Flex® with three-pin professional audio connector at microphone end and three-pin professional audio connector at equipment end
- Dimensions:** 157 mm L x 32 mm Dia. (6 1/8 x 1 1/4 in.)
- Net Weight:** 284 grams (10.07 oz)
- Supplied Accessories:** Swivel adapter, vinyl storage bag



TYPICAL POLAR PATTERN, SM57



— 2000 HZ
- - - 4000 HZ
... 8000 HZ

PROFESSIONAL PERFORMANCE/unidirectional dynamic microphone

SM58

The world-standard professional stage microphone, with the distinctive Shure upper mid-range presence peak for an intelligible, lively sound. A tough, handsome microphone that weighs less than 11 oz. ... the SM58 is often imitated in appearance, but never duplicated in performance, ruggedness, or reliability. It is still the unsurpassed first choice among rock, pop, R & B, country, gospel, and jazz vocalists.

The SM58 is preferred for its punch in live vocal applications ... especially where close miking is important. In addition to the slight presence rise in mid-frequencies, it has a fixed low-frequency rolloff to minimize the "boominess" usually accentuated by close pickup. A built-in spherical windscreens takes the pop out of close-up use, and minimizes breath and wind noise distortion. The uniform cardioid pickup pattern greatly reduces off-axis coloration and rejects background noise to permit higher amplifier gain before feedback.

The SM58 is world-renowned for its ability to withstand the kind of abuse that would destroy many other microphones, and is rugged enough to withstand a six-foot drop onto a hardwood floor with no adverse effects.

The distinctive shape perfectly fits the hand and the superior balance and weight distribution make the SM58 unusually comfortable in hand-held applications. The non-glare gray finish provides for exceptional on-camera appearance.

SM58-CN With C25f cable

SM58-LC Without cable

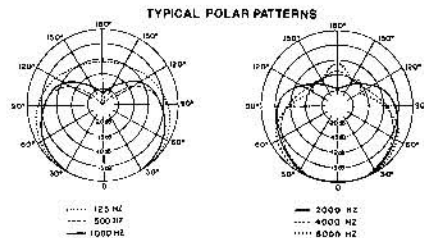
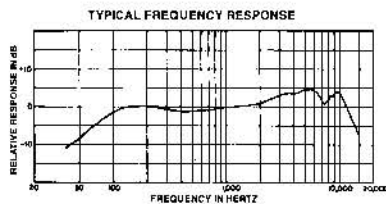


EDDIE RABBIT



specifications

- Model:** SM58
Frequency Response: 50 to 15,000 Hz
Polar Pattern: Cardioid (unidirectional)
Impedance Rating: 150 ohms
Output Level
Open Circuit Voltage: 0.09 mV (-82.0 dB, 0 dB = 1 V/ μ bar) 38 ohms
 0.17 mV (-75.5 dB, 0 dB = 1 V/ μ bar) 150 ohms
Power Level: -56.0 dB, 0 dB = 1 mW/10 μ bar
Cable: SM58-CN: 7.6m (25 ft) two-conductor shielded Triple-Flex[®] with three socket professional audio connector at microphone end and three-pin professional audio connector at equipment end
Dimensions: 162 mm L x 51 mm Dia. (6 3/8 x 2 in.)
Net Weight: 298 grams (10 1/2 oz)
Supplied Accessories: Swivel adapter, vinyl storage bag



PROFESSIONAL STUDIO/omnidirectional dynamic microphone

SM61

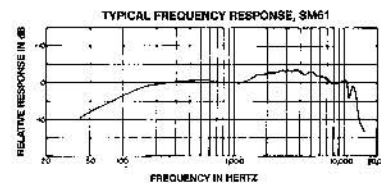
The SM61 is a lightweight microphone with a smooth, wide frequency response, plus a Shure-patented shock mounting system, an effective built-in "pop" screen, and a VERAFLEX[®] grille. It is well-suited for applications as diverse as remote broadcast interviews or sports coverage to onstage and television hand-held use. The SM61 is finished in champagne enamel and is supplied with a matching swivel adapter.

SM61-LC Without cable



specifications

- Model:** SM61
Frequency Response: 50 to 14,000 Hz
Polar Pattern: Omnidirectional
Impedance Rating: 150 ohms
Output Level
Open Circuit Voltage: 0.06 mV (-82.0 dB, 0 dB = 1 V/ μ bar)
Power Level: -60.5 dB, 0 dB = 1 mW/10 μ bar
Dimensions: 181 mm L x 40 mm Dia. (7 1/8 x 1 1/2 in.)
Net Weight: 147 grams (5.2 oz)
Supplied Accessories: Windscreens, swivel adapter, vinyl storage bag



GENERAL PURPOSE/unidirectional dynamic microphone

SM62

Don't let its small size fool you... Shure's SM62 is a big-limo performer in every way. Use it wherever a high-quality compact microphone is needed—on stage, in interviews, on podiums. Less than 5 inches long and weighing only 4 ounces, it's unobtrusive in both hand-held and stand-mounted use.

The SM62's flat, uncolored frequency response and uniform cardioid pickup pattern provide excellent performance as well as control of feedback and unwanted background noise. A carefully controlled low-frequency rolloff prevents the "boominess" associated with close miking. A rubber cartridge shock mount keeps handling noise low, and the integral windscreens minimize breath pop.

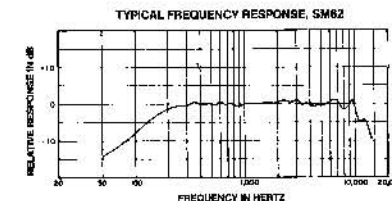
The SM62 is finished in beautiful, durable champagne enamel, and comes with matching swivel adapter.

SM62-LC Without cable



specifications

- Model:** SM62
Frequency Response: 100 to 10,000 Hz
Polar Pattern: Cardioid (unidirectional)
Impedance Rating: 150 ohms
Output Level
Open Circuit Voltage: 0.08 mV (-82.0 dB, 0 dB = 1 V/ μ bar)
Power Level: -60.5 dB, 0 dB = 1 mW/10 μ bar
Dimensions: 124 mm L x 38.1 mm Dia. (4 7/8 x 1 1/2 in.)
Net Weight: 113.4 grams (4 oz)
Supplied Accessories: Swivel adapter, vinyl storage bag



SM63 and SM63L

The SM63 is a small, elegant, rugged microphone with very high output — up to 8 dB higher than comparable omnidirectional microphones. Its low profile (so it won't obscure the performer's face) makes it the perfect choice for on-camera applications. Its design and light weight make it easy to hold and reduce performer fatigue, even when it's continuously handled throughout long studio sessions.

The SM63 is particularly well-suited to handheld vocal and electronic news gathering applications. The smooth, extended frequency response provides a clear, crisp sound and a low-frequency rolloff gives natural sounding pickup with the absence of any "boorness." The Shure-designed and patented mechano-pneumatic shock mount isolation system cuts handling noise to an unobtrusive level and an effect-tombucking coil rejects the strong magnetic fields found in broadcast situations and near-stage lighting.

The integral wind and pop filter is extremely effective for normal wind and breath pop noise; however, for adverse wind and pop conditions, the SM63 is furnished with an accessory dual-density, two-layer windscreen. The SM63 also features the Shure developed VERAFLEX® grille. This grille is nearly indestructible as it is impervious to rust, moisture and dents.

The SM63L is, in every way, the technological equal of the SM63. This model features an extra long, streamlined handle (90 mm [3½ inches] longer than the SM63), making it an exceptional choice for handheld interviewing and electronic news gathering assignments. The longer handle gives the reporter, interviewer or talk show host extra reach, while its superior balance enables the user to hold the microphone in a natural, relaxed position, reducing hand and arm fatigue.

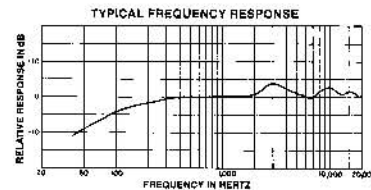
Both the SM63 and SM63L offer an innovative blend of handsome appearance and broadcast quality performance. They are beautifully finished in durable champagne enamel and are supplied with matching swivel adapter.

SM63-LC Without cable
SM63L-LC Same as SM63-LC but features 90 mm (3½ inch) longer handle; without cable

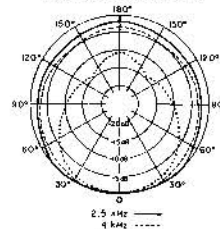


specifications

Model: **SM63 and SM63L**
Frequency Response: 50 to 20,000 Hz
Polar Pattern: Omnidirectional
Impedance Rating: 150 ohms
Output Level
Open Circuit Voltage: 0.16 mV (-76.0 dB, 0 dB = 1V/μbar)
Power Level: -56.5 dB, 0 dB = 1mW/10μbar
Hum Pickup/m00: 13 dB SPL equivalent
Connector: Three-pin professional audio
Dimensions: SM63: 145 mm L x 33 mm Dia. (5-11/16 x 1-1/4 in.)
 SM63L: 233 mm x 33 mm Dia. (9-3/16 x 1-1/4 in.)
Net Weight: SM63: 99 grams (3.5 oz)
 SM63L: 124 grams (4.3 oz)
Supplied Accessories: Swivel adapter



TYPICAL POLAR PATTERN



SM77 and SM78 The STARMAKER™ Series

The STARMAKER Series is made up of two small lightweight, extremely rugged microphones with a non-reflecting ebony finish.

The SM77 has slim styling, and is especially effective on instrument pickup where brilliant and defined sound is demanded. The SM78 has the added superior wind and pop protection of a spherical screen and grille, making it a "first choice" microphone for rock, pop, R & B, country, gospel, and jazz vocalists.

Both microphones have a fixed low-frequency rolloff plus a slight mid-frequency presence rise in their frequency response. This results in highly intelligible vocals as well as penetrating reproduction of rhythm and keyboard instruments.

In addition, the microphone's uniform cardioid pattern rejects background noise for maximum amplifier gain before feedback, and prevents coloration when performers are off-axis.

STARMAKER microphones are 28% lighter, on average, than similar stage microphones with absolutely no sacrifice in performance, ruggedness or reliability. This reduction in weight reduces performer fatigue in hand-held applications, and the small profile of the SM77 and SM78 won't obscure the performer's face.

The ebony vinyl finish has a great look, is easy to clean, and is durable enough to stand up to the toughest stage performance. In addition, the grilles of both microphones are treated with a Shure exclusive coating which never rusts or tarnishes.

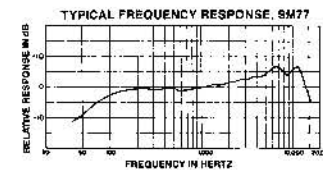
SM77EB-LC Slim styling, ebony finish, without cable



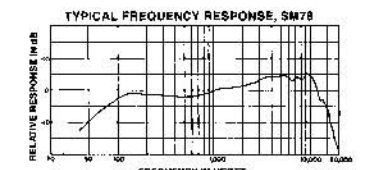
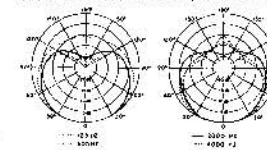
specifications

Model: **SM77**
Frequency Response: 50 to 15,000 Hz
Polar Pattern: Cardioid (unidirectional)
Impedance Rating: 150 ohms
Output Level
Open Circuit Voltage: 0.11 mV (-79.0 dB, 0 dB = 1V/μbar)
Power Level: -57.5 dB, 0 dB = 1mW/10μbar
Connector: Three-pin professional audio
Dimensions: 140 mm L x 32 mm Dia. (5½ x 1¼ in.)
Net Weight: 168 grams (6 oz)
Supplied Accessories: Swivel adapter, foam-padded bag

SM78
 50 to 15,000 Hz
 Cardioid (unidirectional)
 150 ohms
 0.11 mV (-79.0 dB, 0 dB = 1V/μbar)
 -57.5 dB, 0 dB = 1mW/10μbar
 Three-pin professional audio
 144 mm L x 51.1 mm Dia. (5½ x 2 in.)
 204 grams (7.2 oz)
 Swivel adapter, foam-padded bag



TYPICAL POLAR PATTERNS, SM77, SM78



SM81

A matchless standard in high-quality professional condenser microphones, the SM81 is a superb studio instrument that also meets the most demanding needs of location recording and sound reinforcement. Use it for instrument pickup on drums, acoustic guitars...even cathedral pipe organs, or as an overhead microphone for orchestras and choirs. And, the SM81 is the only high performance, professional-quality condenser microphone at a price affordable for home semi-pro recording studios.

Years of design research and operational testing have resulted in a microphone of optimum performance and dependability. Until the introduction of the SM81, condenser microphones commonly failed under field extremes of temperature, humidity or physical punishment. The SM81 not only survives these conditions, but maintains its standards of excellence despite the environment.

The extremely wide-range, flat frequency response of the SM81 means exceptionally accurate operation in recording, broadcast and sound reinforcement. And low-frequency response can be selected to match the application: choose either flat for ideal miking conditions, 6 dB/octave rolloff at 100 Hz to compensate for close-miking proximity effect, or 18 dB/octave cutoff at 80 Hz for reduction of low-frequency disturbances such as wind, air-moving equipment or stage traffic noise. The SM81 handles up to a whopping 135 dB maximum SPL without clipping, and has a built-in selectable 10 dB attenuator to allow operation at up to 145 dB SPL.

The SM81 also features a unique backplate structure designed to maximize signal-to-noise ratio and insure long-term charge stability. This high signal-to-noise ratio and a controlled directional pickup pattern offer outstanding "reach" (the ability to pick up distant sound while reducing unwanted noise) and discrimination (the rejection of unwanted sound or noise).

The SM81 exhibits unusually low total harmonic distortion below its clipping point—significantly below that of other professional condenser microphones. It's quiet, too; handling and stand-borne noise and internal electrical noise are minimal. And special shielding keeps RF susceptibility extremely low for elimination of hum and buzz.

Incredibly rugged and durable, the SM81 is capable of withstanding extreme physical abuse, while maintaining the high quality performance expected from a studio condenser microphone. The transducer and electronics housing are of heavy-wall steel construction and all internal components are rigidly supported for maximum strength. Rugged enough for road tours, the SM81 is designed to withstand 6-foot drops onto a hardwood floor without significant performance degradation or damage to the case. It's reliable over a temperature range of -20° to +160°F at relative humidity from 0 to 95%.

The SM81 can be simplex (phantom) powered from the Shure PS1 power supply, or any standard voltage (12 to 48 Vdc) available from most recording consoles. (For more information and specifications on the PS1 see the accessory section of this catalog.)

The SM81 has it all: performance...quality...reliability. In electronic, acoustic and mechanical design, it's truly the state-of-the-art.

SM80/Omnidirectional Condenser Microphone

The SM80 is an omnidirectional version of the SM81 designed for the most demanding professional applications in studio recording, broadcasting and sound reinforcement. It offers the same performance features, ruggedness and reliability that the SM81 is noted for.

- SM80-LC** Omnidirectional condenser microphone supplied without cable
- SM81-LC** Unidirectional condenser microphone supplied without cable
- R104** Unidirectional cartridge—permits instant changeover of SM80 to unidirectional microphone
- R104A** Omnidirectional cartridge—permits instant changeover of SM81 to omnidirectional microphone



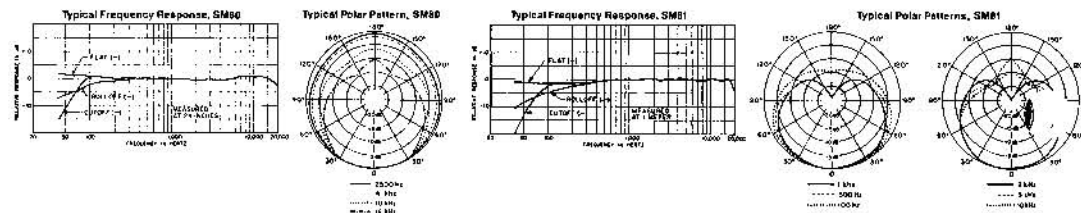
SM81 Puts it ALL together

- professional recording
- broadcast
- motion picture recording
- critical sound reinforcement

- **EXTREMELY WIDE-RANGE FLAT FREQUENCY RESPONSE**—for exceptionally accurate recording, broadcast, and critical sound reinforcement applications.
- **WIDE DYNAMIC RANGE**—low noise and high output clipping level characteristics.
- **QUIET**—low handling noise, low internal electrical noise.
- **PRECISE CARDIOID polar pattern** with the supplied cartridge, uniform with frequency and symmetrical about axis, to provide maximum rejection and minimum coloration of off-axis sounds
- **OMNIDIRECTIONAL CARTRIDGE AVAILABLE**—uniform sensitivity in all directions, instant changeover, fits own built-in attenuator.
- **SUPERIOR LOW DISTORTION** characteristics (right up to the overload point) over the entire audio spectrum for a wide range of load impedances.
- **VERY LOW RF SUSCEPTIBILITY.**
- **SELECTABLE LOW-FREQUENCY RESPONSE:** FLAT; 6 dB/octave rolloff at 100 Hz compensates for proximity effect; 18 dB/octave cutoff at 80 Hz reduces effects of low-frequency disturbances with minimal effect on wide-range program material.
- **10 dB ATTENUATOR** for operation at high sound pressure levels, up to 145 dB SPL—accessible without disassembly, lockable in either position.
- **FIELD-USABLE** over a wide range of temperature and humidity conditions.
- **DEPENDABLE DESIGN**—Temperature and humidity stabilized diaphragm configuration, unique backplate structure designed to maximize signal-to-noise ratio and insure long-term charge stability.
- **RUGGED CONSTRUCTION** for outstanding reliability.
- **WIDE-RANGE SIMPLEX POWERING** includes DIN 45 596 voltages of 12 and 48 Vdc. In addition, it will operate over a wide range of power supply impedances.

specifications

Model:	SM80	SM81
Frequency Response:	20 to 20,000 Hz	20 to 20,000 Hz
Polar Pattern:	Omnidirectional	Cardioid (unidirectional)
Impedance Rating:	150 ohms (minimum recommended load: 800 ohms)	150 ohms (minimum recommended load: 800 ohms)
Output Level		
Open Circuit Voltage:	0.56 mV (-65.0 dB, 0 dB = 1V/μbar)	0.56 mV (-65.0 dB, 0 dB = 1V/μbar)
Equivalent Power Level:	-40.5 dB (0 dB = 1 mW/10μbars)	-40.5 dB (0 dB = 1 mW/10μbars)
Clipping Level: (at 1,000 Hz):	800-ohm load: 4 dBV (0.63V) 150-ohm load: 15 dBV (0.18V)	800-ohm load: 4 dBV (0.63V) 150-ohm load: 15 dBV (0.18V)
Total Harmonic Distortion:	Less than 0.5% (132 dB SPL at 250 Hz into 800-ohm load)	Less than 0.5% (132 dB SPL at 250 Hz into 800-ohm load)
Maximum SPL:	147 dB with 800-ohm load (attenuator at 10) 139 dB with 150-ohm load (attenuator at 10)	146 dB with 800-ohm load (attenuator at 10) 138 dB with 150-ohm load (attenuator at 10)
Output Noise:	17 dB typical, A-weighted 20 dB typical, weighted per DIN 45 405	16 dB typical, A-weighted 19 dB typical, weighted per DIN 45 405
Hum Pickup/mO:	-4 dB SPL equivalent	-3 dB SPL equivalent
Connector:	Professional three-pin audio	Professional three-pin audio
Dimensions:	212 mm L x 23.5 mm Dia. (8 1/2 x 1 5/16 in.)	212 mm L x 23.5 mm Dia. (8 1/2 x 1 5/16 in.)
Net Weight:	230 grams (8 oz)	230 grams (8 oz)
Supplied Accessories:	A81G pop filter grille, A57 swivel adapter, 10 dB attenuator lock, foam-lined storage/carrying case	A81G pop filter grille, A57D swivel adapter, 10 dB attenuator lock, foam-lined storage/carrying case



SM82

A hand-held, self-contained, unidirectional condenser microphone with a built-in line level amplifier, peak limiter and battery. The exceptional performance and unique features of the SM82 make it an outstanding choice for on-the-spot broadcasting, sound reinforcement, and recording applications where a line level microphone with a built-in limiter is needed. It is also ideal for applications involving long cable runs (up to one mile without equalization) such as sporting events, parades, political rallies, and other live remotes.

Its balanced line level output permits the SM82 to drive telephone lines or other lines level inputs directly—without a separate remote amplifier, and using unshielded cable. A built-in limiter begins operating at 100 dB SPL, preventing overload of the

microphone line amplifier or remote broadcast amplifier. The SM82 operates from an internal 9.8V battery, or it can be phantom-powered over a 15V to 50V range—it automatically switches to battery power should the simplex power source fail. A unique connector-switch turns the microphone on when a cable is connected.

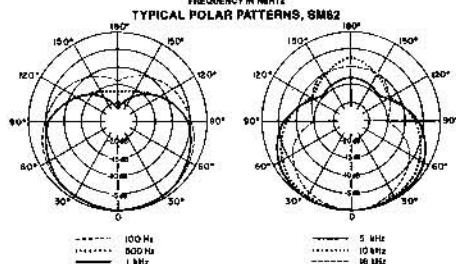
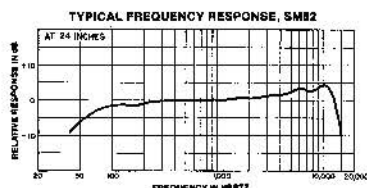
The SM82 features very low mechanical handling noise, rugged construction and reliable operation over a wide range of temperatures and humidity. The integral wind and pop filter is extremely effective for normal wind and breath pop noise and an accessory windscreen is supplied for protection against adverse wind and pop conditions.

SM82-LC Without cable



specifications

- Model:** SM82
- Frequency Response:** 40 to 15,000 Hz
- Polar Pattern:** Cardioid (unidirectional)
- Impedance:** 250 ohms (actual)
- Output Level**
Open Circuit Voltage: -23 dBV (0.11V) for 74 dB SPL (0 dBV = 1 volt)
- Power Output:** -4 dBm into 600 ohms for 94 dB SPL (0 dBm = 1 mW in 600 ohms)
- Hum Sensitivity:** Less than -125 dBm in 1 millioersted field
- Output Noise:** Equivalent to 37.5 dB SPL with weighting per DIN 45 405
- Power Supply**
Battery: Type 9.8V Mercury (max. Duracell TR177 or equivalent) Current Drain 8 mA
 Voltage 20 to 50 Vdc, positive pins 2 and 3 Current Drain 16 mA
- Connector:** Three-pin professional audio connector with built-in on-off switch
- Dimensions:** 301 mm L x 44.2 mm Dia. (11 7/8 x 1 3/4 in.)
- Net Weight:** 406 grams (14.4 oz) with battery
- Supplied Accessories:** Windscreen, swivel adapter



SM83

The SM83 has been specifically designed to provide superior quality sound reproduction in professional broadcasting, film, and related sound reinforcement applications. It features a wide-range frequency response, specially tailored to provide more natural sound. This response is achieved by an electronically created dip at 730 Hz to overcome the chest resonance phenomenon, and by an acoustically generated high-frequency boost above 3 kHz resulting in a cleaner, more pleasing sound than other lavalier mics. In addition, a 12 dB per octave rolloff below 100 Hz helps reduce room noise and other undesirable low-frequency signals.

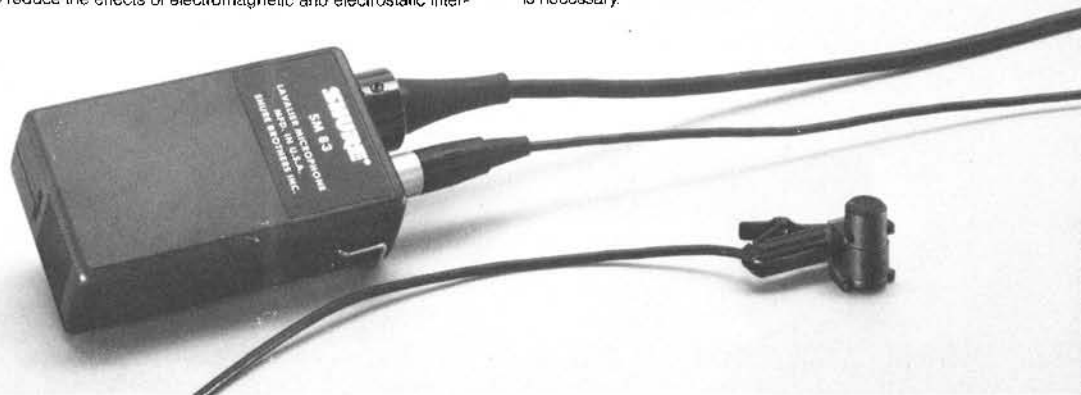
The Shure-developed amplifier supplied with the SM83 is compact, lightweight and can easily clip onto a belt or fit into a pocket. It is powered by a standard, readily available nine-volt battery or by simplex power from an external source (such as Shure M267 and M268 Mixers or PS1A Power Supply) or virtually any microphone power supply providing 5 to 52 Vdc phantom voltage. And, the amplifier has extensive RF and hum shielding to reduce the effects of electromagnetic and electrostatic inter-

ference. The microphone and cable are easily detached from the amplifier for easy storage.

To minimize cable visibility, the SM83's cord exits from the side and can be easily hidden behind a tie, blouse or shirt. This unique design feature combined with the microphone's innovative mounting hardware, small size and non-reflective black finish provide for an inconspicuous on-camera appearance.

The SM83 is supplied with a versatile system of hardware that permits a wide variety of unobtrusive mounting techniques. Three mounting means are provided: a single-mount tie bar; a dual-mount tie bar (for mounting two microphones simultaneously); and two multi-purpose mounting blocks which may be connected to a lanyard, or sewn, pinned or taped onto clothing. Also supplied is an acoustic windscreen for outdoor use.

The SM83 is extremely rugged and offers outstanding reliability. In addition, it is field-serviceable. The cartridge assembly is accessible by simply unscrewing the microphone cap. Cable replacement requires only a screwdriver, no soldering is necessary.



specifications

- Model:** SM83
- Frequency Response:** 80 to 20,000 Hz
- Polar Pattern:** Omnidirectional
- Impedance Rating:** 150 ohms
- Output Level**
Open Circuit Voltage: 0.35 mV (-69.0 dB, 0 dB = 1V_{rms}/bar)
- Output Noise:** (equivalent sound pressure levels; measured with true rms voltmeter)
 22 dB typical, A-weighted
 28 dB typical, weighted per DIN 45 405
- Hum Pickup:** -10.0 dB equivalent SPL in a 1 millioersted field (60 Hz)
- Cables:** Microphone: 3m (10 ft), two-conductor, shielded with miniature 3-pin connector
 Amplifier: 3m (10 ft), two-conductor, shielded, TRIPLE-FLEX[®] with 3-pin professional audio connector

- Dimensions:** Microphone: 19.6 mm L x 11.2 mm Dia. (3/4 x 7/16 in.)
 Amplifier: 23.1 mm H x 49.0 mm W x 94.8 mm D (9/16 x 1 9/16 x 3 3/4 in.)
- Net Weight:** Microphone: 45 grams (1.58 oz)
 Amplifier: 270 grams (9.45 oz) incl. battery
- Power:** Battery: 9 Vdc (transistor radio type, alkaline recommended) approximately 1600 hours continuous use with fresh battery
 Phantom Voltage: 5 to 52 Vdc; 0.33 mA current drain
- Supplied Accessories:** Single-mount tie bar, dual-mount tie bar, two multi-purpose mounting blocks, windscreen, storage/carrying bag

SM85

The SM85 is a lightweight, rugged condenser microphone designed for hand-held live or television vocal applications. It is capable of withstanding the physical abuse inherent in on-the-road use, yet maintains the highest quality performance expected of a studio condenser microphone. It is ideal for the most demanding live sound reinforcement applications as well as broadcasting and studio recording requirements.

The frequency response of the SM85 is tailored to enhance the performance of the artist throughout the sound spectrum. A controlled low-frequency rolloff minimizes the handling noise and "boominess" sometimes associated with close-up hand-held microphone use. Its response in the mid-range is tailored in the Shure tradition to add "crispness" and presence through carefully placed accentuation in the critical vocal frequencies, giving the artist's voice a clear, sharply defined sound that sets it apart from instrumental back-up. In the upper register, the SM85's clean, clear scintillating high frequencies delineate subtle overtones and enhance high-frequency timbre.

The SM85 is constructed with a lightweight, yet extremely tough aluminum case and a TEFLON®-coated all-steel grille. An exclusive elastomer "space-frame" isolates and cushions the condenser element from virtually all mechanical vibration. The integral wind and multi-stage pop filters eliminate ordinary wind and breath pop noise. For more demanding applications, an accessory windscreens is available.

The SM85 exhibits remarkably low distortion (right up to its overload point) over the entire audio spectrum... considerably less than other more expensive condenser microphones. Special shielding techniques eliminate magnetic and RF interference resulting from studio lights and broadcast equipment.

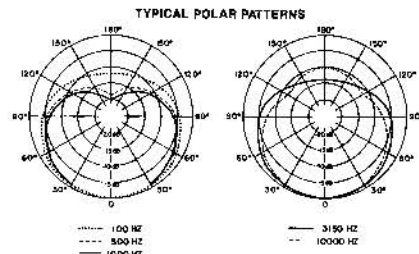
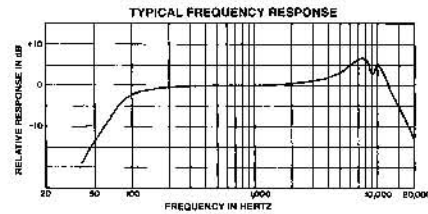
The SM85 can be phantom-powered from the Shure PS1A power supply or any standard voltage (12 to 48 Vdc) available from most recording consoles.

SM85-LC Without cable



specifications

- Model:** SM85
- Frequency Response:** 50 to 15,000 Hz
- Polar Pattern:** Cardioid (unidirectional) response
- Impedance Rating:** 150 ohms (recommended minimum load impedance: 800 ohms)
- Output Level**
- Open Circuit Voltage: -74 dB (0.2 mV) (0 dB = 1V/μbar)
 - Hum Pickup/mOe: -7.5 dB SPL equivalent
- Cable (Model SM85-CN):** 7.6m (25 ft), two-conductor, shielded, TRIPLE-FLEX® with three-pin and three-socket professional audio connectors (microphone connector finish is black)
- Dimensions:** 192 mm L x 48.8 mm Dia. (7 7/8 x 1 9/16 in.)
- Net Weight:** 180 grams (6.3 oz)
- Clipping Level (at 1,000 Hz):** 800-ohm load: -4 dBV (0.63V)
150-ohm load: -15 dBV (0.18V)
- Maximum SPL:** 142 dB with 800-ohm load
134 dB with 150-ohm load
- Output Noise:** (equivalent sound pressure levels; measured with true rms voltmeter)
29 dB typical, A-weighted
32 dB typical, weighted per IEC 45 405
- Power Supply:** Voltage: 11 to 52 Vdc, positive pins 2 and 3
Current Drain: 1.0 mA to 1.2 mA
- Supplied Accessories:** Swivel adapter, carrying case



SM87

The SM87 is a studio-quality supercardioid condenser vocal microphone with Shure's legendary ruggedness and dependability. An innovative new cartridge element features a highly directional supercardioid polar pattern, which rejects unwanted sound bleed and allows a surprising amount of gain before feedback. This enables the SM87 to perform flawlessly, even in high gain, multiple-monitor situations.

The extremely smooth and accurate response characteristics of the SM87 offers soundmen new flexibility at the mixing board. Its vocal contoured response permits quick, easy equalization (many engineers think it needs no equalization). The SM87 provides extremely accurate voice reproduction across the entire frequency spectrum by making optimum use of proximity effect. The performer has better control of low-frequency sound, from the warm intimacy of close miking to the natural sounds of normal-to-distant miking.

In addition, the SM87 performs with extremely low distortion and low susceptibility to RF and electromagnetic interference.

The SM87 features an exclusive Shure elastomer "space frame" shock mount, which isolates the capsule from virtually all hand-held and mechanical vibrations. An effective built-in multi-stage filter minimizes pop and wind noise.

The SM87 will withstand years of use (and abuse) because it's "tough tested" to meet Shure's worldwide reputation for ruggedness and reliability. What's more, the SM87 far exceeds normal specs for resistance to extremes of temperature and humidity, making it an ideal choice for indoor or outdoor use, in any weather condition.

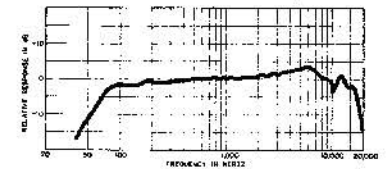
The non-glare, two-tone, steel gray finish and the sleek, handsome shape of the SM87 perfectly complement its outstanding performance capability. The result: a new standard in hand-held, vocal microphones.

The SM87 can be phantom-powered from the Shure PS1A power supplies, or any standard voltage (11 to 48 Vdc) available from most mixing consoles. (For more information and locations on the PS1A see the accessory section of this catalog.)

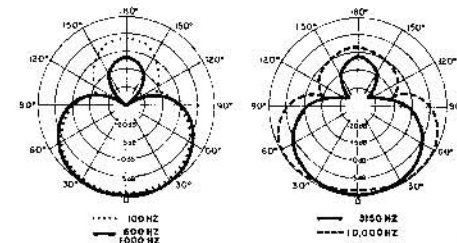
SM87-LC Without cable

- Model:** SM87
- Frequency Response:** 50 to 15,000 Hz
- Polar Pattern:** Supercardioid
- Impedance Rating:** 150 ohms (recommended minimum load impedance: 800 ohms)
- Output Level**
- Open Circuit Voltage: -74 dB (0.2 mV) (0 dB = 1V/μbar)
 - Hum Pickup/mOe: -7.5 dB SPL equivalent
- Clipping Level (at 1,000 Hz):** 800-ohm Load: -4 dBV (0.63V)
150-ohm Load: -15 dBV (0.18V)
- Maximum SPL:** 142 dB with 800-ohm load
134 dB with 150-ohm load
- Output Noise:** (equivalent sound pressure levels; measured with true rms voltmeter)
29 dB typical, A-weighted
32 dB typical, weighted per DIN 45 405
- Phantom Power:** Voltage: 11 to 52 Vdc, positive pins 2 and 3
Current Drain: 1.0 mA to 1.2 mA
- Cable (Model SM87-CN):** 7.6 (25 ft), two-conductor shielded, TRIPLE-FLEX® with three-pin and three-socket professional audio connectors (microphone connector finish is black)
- Dimensions:** 192 mm L x 48.8 mm Dia. (7 7/8 x 1 9/16 in.)
- Net Weight:** 180 grams (6.3 oz)
- Supplied Accessories:** Swivel adapter, vinyl storage bag

TYPICAL FREQUENCY RESPONSE, SM87



TYPICAL POLAR PATTERNS, SM87



SM89

Incorporating a truly innovative design, the SM89 was built to fulfill the rigid requirements set down by professional production crews around the world. Designed especially for location film and TV production, theatre sound reinforcement, and spot news coverage, the SM89 features a unique capsule design as well as Shure's exclusive Accu-Port™ interference tube system. The SM89's highly directional polar pattern and fine-tuned frequency response will discriminate at a distance in favor of desired dialogue or effects and against ambient noise, and will accurately pickup sound without excessive on- or off-axis coloration.

The SM89 is the first professional shotgun microphone to overcome the problem of off-axis coloration. Early shotgun microphone designs showed an overall lack of off-axis frequency response control. This meant that as you got farther off-axis from these microphones, the level not only dropped (as it should have) but the frequency response varied considerably, producing an unnatural sound. Shure engineers devoted themselves to finding a means of controlling the pickup pattern and its off-axis characteristics. Through the development of Shure's Accu-Port™ design, a microphone whose level drops smoothly and without colorations as you get off axis was created—the SM89.

The SM89's fine off-axis response means that production crews no longer need to make inconvenient compensations (such as special microphone positioning) for offensive off-axis

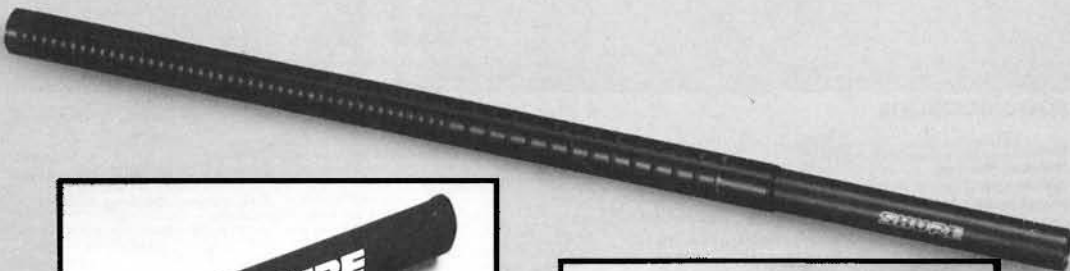
coloration. Additionally, the SM89 is more forgiving of aiming inconsistencies; even at 30 degrees off axis, dialogue is reproduced clearly.

The on-axis frequency response of the SM89 is very smooth and extended (60-20,000 Hz). A slight presence rise adds clarity and intelligibility to speech reproduction. A low frequency rolloff switch selects either 60 Hz or 160 Hz for optimum response, depending on the environment in which the microphone is being used. Low frequency rolloff allows the minimum pickup of wind, mechanical vibration, ambient noise and rumble without affecting voice frequencies.

The SM89 is made of machined, aircraft-grade aluminum for maximum resiliency and durability. It is also extremely lightweight; only 195 grams at the optimum length of 20.6 inches. Weight becomes a significant consideration in applications when a fishpole boom must be held for long periods of time.

The SM89 features a built-in windscreen for "pop" reduction in close-up interview use, and it incorporates a two-piece design for ease of storage and field servicing. And for convenience, the SM89 operates over a wide phantom voltage range (11-52V).

The SM89 comes complete with foam windscreen and rugged, hardshell nylon carrying case. As an optional accessory item for the SM89, Shure has made available the A89SM Shock Mount for use when exceptional freedom from mechanically transmitted noise is required. Three different thread sizes allow the A89SM/SM89 combination to be attached to a boom, fishpole, microphone stand, or almost any fitting likely to be found in professional use.



SM89 with Windscreen and Carrying Case

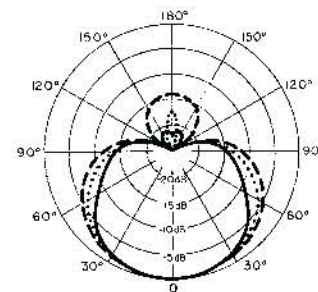


A89SM Shock Mount Accessory

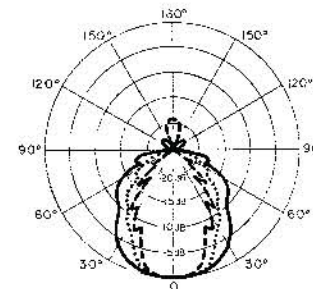
specifications

- Model:** SM89
- Frequency Response:** 60 to 20,000 Hz
- Polar Pattern:** Hypercardioid at low frequencies, lobar at frequencies above 1 kHz
- Impedance Rating:** 150 ohms rated (100 ohms actual). Minimum recommended load: 800 ohms
- Output Level**
Open Circuit Voltage: -52dB(2.5mV)
- Clipping Level:** (at 1,000 Hz, less than 0.5% THD)
800-ohm load: -1 dBV (0.89 V)
150-ohm load: -12 dBV (0.25 V)
- Signal-to-Noise Ratio:** 79 dB re 94 dB SPL
- Maximum SPL:** 800-ohm load: 126 dB SPL
150-ohm load: 118 dB SPL
- Output Noise:** 15 dB SPL typical, A-weighted
19 dB SPL, typical, C-weighted
- Hum Pickup/m0e:** Less than 2 dB equivalent SPL
- Power Requirement:** Phantom voltage: 11 to 52 Vdc; 2 mA current drain
- Connector:** Professional three-pin audio
- Dimensions:** 524 mm L x 20 mm Dia. (20% x 2 1/2 in.)
- Net Weight:** 195 grams (6.9 ounces)
- Supplied Accessories:** Carrying Case and Foam Windscreen
- Optional Accessories:** A89SM Shock Mount

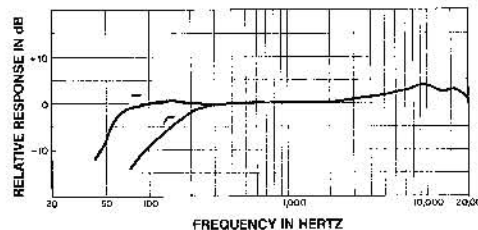
TYPICAL POLAR PATTERNS



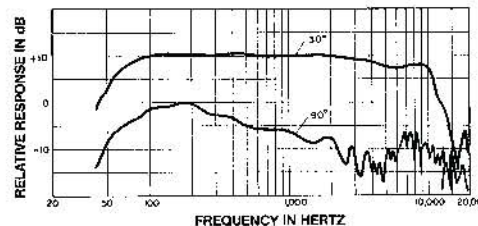
--- 250 HZ
..... 500 HZ
—— 1000 HZ



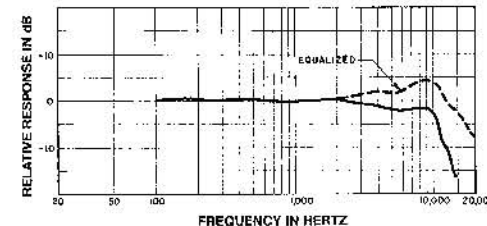
—— 2500 HZ
..... 6300 HZ
--- 10000 HZ



TYPICAL ON-AXIS FREQUENCY RESPONSE



COMPARISON OF 30° and 90° OFF-AXIS RESPONSE OF SM89 (shown at 1.8m [6ft])



TYPICAL SM89 RESPONSE, 30° OFF-AXIS

PROFESSIONAL STUDIO/unidirectional and omnidirectional surface-mount microphones

SM90 and SM91

The SM91 is a surface-mounted, permanently biased condenser microphone with a half-cardioid directional pattern (cardioid in the hemisphere above the mounting surface). It is designed for broadcast and recording as well as installations in meeting rooms, courtrooms, legislative chambers, churches, and stages... anywhere high performance surface-mounted microphones are employed.

Because of its half-cardioid pattern, the SM91 discriminates against sounds originating from the rear, suiting the SM91 for conditions where an omnidirectional "pressure zone" type surface-mounted microphone would be unsuitable. In addition, the unidirectional pattern permits the microphone to operate with much less reverberant pickup and muddiness than omnidirectional models.

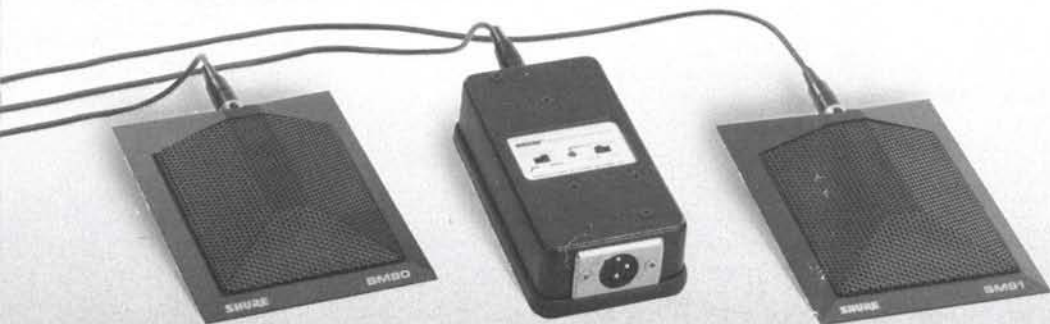
The unidirectionality of the SM91 can be a great benefit when it is desirable to isolate a particular vocalist, instrument or group from the rest of an ensemble being recorded. It can also be used for individual instrument pickup such as mounted inside the lid of a grand piano or on the floor next to a bass drum. And because of the

cardioid pickup pattern, no physically isolating barriers are required and directionality is maintained to low frequencies.

The SM91 includes a totally new microphone element developed at Shure. The result is high output, notably accurate sound reproduction over the entire audio frequency range, and off-axis performance comparable to the finest unidirectional microphones.

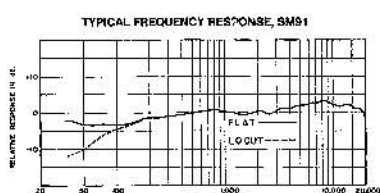
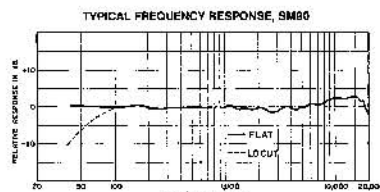
For those cases where an omnidirectional microphone is preferred or necessary, the SM90 omnidirectional surface-mounted microphone is also available. Mounted in the same housing as the SM91, and using the same electronics pack, the SM90 offers all the esthetic values of the SM91, and all the operational characteristics of an omnidirectional microphone, such as smooth pickup in a 360° pattern allowing a single microphone to be used for a group pickup or where feedback is not a concern.

Both the SM90 and the SM91 are supplied with a low distortion preamplifier which powers the microphones either by batteries or phantom power. A low frequency cut-off switch allows tailoring the response of the SM90 or SM91 to suit the need.



specifications

Models:	SM90 and SM91
Frequency Response:	20 to 20,000 Hz at 30° incidence to infinite surface
Polar Pattern:	SM90: Omnidirectional in hemisphere above mounting surface SM91: Half-cardioid (cardioid in hemisphere above mounting surface)
Impedance Rating:	150 ohms (minimum recommended load: 800 ohms)
Output Level	
Open Circuit Voltage:	SM90: 0.5 mV (-61.0 dB, 0 dB = 1 V _{rms} /bar) SM91: 0.35 mV (-69.0 dB, 0 dB = 1 V _{rms} /bar)
Output Noise:	SM90: 20 dB SPL, A-weighted 23 dB SPL, weighted per DIN 45 405 SM91: 23 dB SPL, A-weighted 26 dB SPL, weighted per DIN 45 405
Maximum SPL:	SM90: 141 dB at 800-ohm load SM91: 144 dB at 800-ohm load
Power:	Batteries: Two, 9 Vdc alkaline (approximately 300 hours continuous with fresh batteries) Phantom voltage: 11 to 52 Vdc, 1.8 mA current drain
Cable:	7.6m (25 ft) two-conductor shielded, small diameter, interconnecting cable with 3-socket miniature Switchcraft connector on each end to mate with microphone output connector and preamplifier input connector
Dimensions:	Microphone: 15.2 mm H x 95.3 mm W x 129 mm D (5/8 x 3 7/8 x 5 1/8 in.) Preamplifier: 27 mm H x 60.8 mm W x 112 mm D (1 1/8 x 2 3/8 x 4 3/8 in.)



GENERAL PURPOSE/lavallier microphone

838

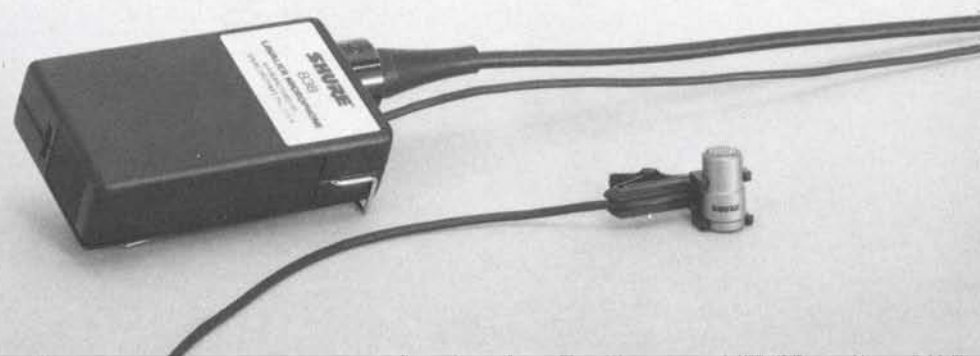
The Shure 838 is a miniature, lavallier condenser microphone, ideal for sound reinforcement applications where high quality is required and where cost is a consideration. The 838 is extremely rugged and reliable and offers outstanding performance. Its wide frequency response, low distortion and low RF susceptibility make it an exceptional microphone for use in churches, schools, hotels and budget-minded broadcast, film and video productions, or for miking musical instruments.

The 838 features a specially tailored frequency response designed to provide more natural sound when the microphone is chest-worn. This response is achieved by an acoustically generated high-frequency boost for a flatter response in the lavallier position. In addition, a 12 dB/octave rolloff below 100 Hz helps reduce room noise and other undesirable low-frequency signals.

To minimize cable visibility, the 838's cable emerges from

the side, rather than the bottom, of the microphone housing. This arrangement makes the thin, strong microphone cable even more unobtrusive by eliminating the distracting cable loop visible below most lavallier microphones. Other features include: a universal tie bar that allows the 838 to be mounted in four different positions—offering total flexibility to the wearer or when miking acoustic musical instruments; a field-replaceable cartridge that is easily detached from the cable without unsoldering; and an attached power supply which uses a standard 9-volt battery and can be pocketed or clipped to a belt or waistband.

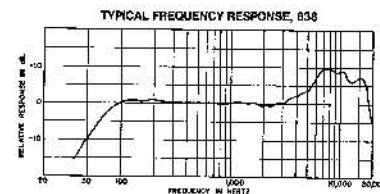
The 838 is finished in an attractive platinum beige color and the microphone and electronics assembly may be stored in the supplied durable vinyl zipper bag. An acoustic windscreen for outdoor use is also supplied.



specifications

Model:	838
Frequency Response:	80 to 20,000 Hz
Polar Pattern:	Omnidirectional
Impedance Rating:	600 ohms
Output Level	
Open Circuit Voltage:	0.22 mV (-73.0 dB, 0 dB = 1 V _{rms} /bar)
Output Noise:	(equivalent sound pressure levels; measured with true rms voltmeter) 26 dB typical, A-weighted 32 dB typical, weighted per DIN 45 405
Maximum SPL:	137 dB with 2000-ohm load 132 dB with 800-ohm load
Hum Pickup:	2.0 dB equivalent SPL in a 1 millioersted field (60 Hz)
Cables:	Microphone: 1.5 m (5 ft) attached, two-conductor shielded Power Supply: 3m (10 ft) attached, two-conductor, shielded TRIPLE FLEX™ with 3-pin professional audio connector.
Dimensions:	Microphone: 19.6 mm L x 11.2 mm Dia. (3/4 x 7/16 in.) Power Supply: 23.1 mm H x 19.0 mm W x 94.8 mm D (2 3/8 x 1-15/16 x 3-3/4 in.)

Net Weight:	Microphone: 8 grams (0.21 oz) Power Supply: 271 grams (9.49 oz) including battery and cables
Power:	Battery: 9 Vdc (type 1604A, alkaline recommended); 0.2 mA current drain; approximately 2500 hours continuous use with fresh alkaline battery. Mechanically protected against reverse voltage application



SM98

The Shure SM98 is a professional-quality, miniature unidirectional condenser microphone that combines the convenience and adaptability of small size with outstanding performance capabilities. The advantages and features of the SM98 make it an ideal choice for many acoustic instrument or amplified instrument miking situations—especially drums. The SM98 utilizes a high performance, low-noise, low-distortion preamp, allowing it to be used for close miking of drums, brass instruments, amplifiers and other high SPL sources without danger of overload problems. It features a wide, extremely smooth frequency response for accurate, faithful reproduction of acoustic instruments. Attributed to its small size, the SM98 also boasts a nearly perfect cardioid polar pattern at all frequencies for superior isolation.

The SM98 is an excellent choice for sound reinforcement applications where an extremely small, professional-quality unidirectional microphone is required—such as theater podium, altar and lectern applications.

The SM98 incorporates a detachable cable which adds to the ease of set-up and tear-down. The preamp is powered by two standard 9-volt batteries or an 11 to 52 Vdc simplex (phantom) supply. It features a battery on/off switch and a 12 dB/octave low-end cut-off switch.

Included with the SM98 is a unique swivel adapter which allows the miniature microphone to be used with all standard mic stands, booms and goosenecks. Both microphone and preamp are finished in matte black for a professional appearance. All components fit into a black, hinged storage box with polyurethane inserts for secure storage.

The SM98 is an excellent choice for sound reinforcement applications where an extremely small, professional-quality unidirectional microphone is required—such as theater podium, altar and lectern applications.

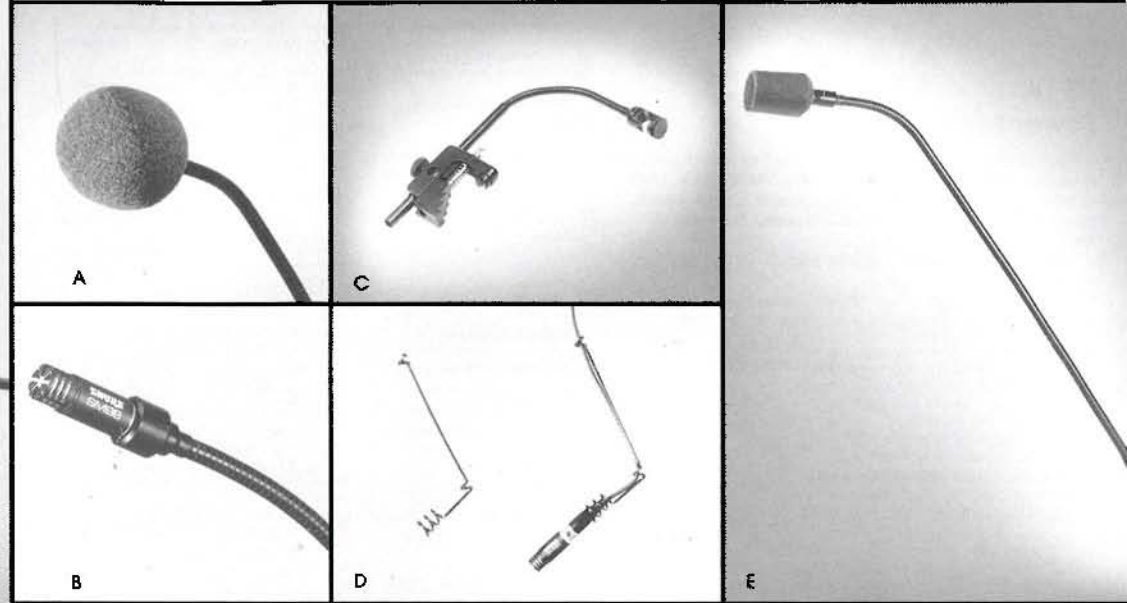
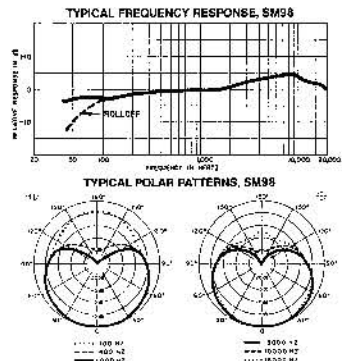


specifications

Model:	SM98
Frequency Response:	40 to 20,000 Hz
Polar Pattern:	Unidirectional (cardioid)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.13 mV / 78.0 dB, 0 dB = 1V _{rms} (equivalent sound pressure levels; measured with true rms voltmeter)
Output Noise:	32 dB SPL, A-weighted 35 dB SPL, weighted per DIN 45 405
Maximum SPL:	94 (1,000 Hz) 153 dB with 800 ohm load
Hum Pickup:	-7 dB equivalent SPL in a 1 microtesla field (60 Hz)
Cable:	4.6 m (15 ft) two conductor shielded, small diameter, interconnecting cable with 3-socket miniature Switchcraft Tini Q.C. connector on each end to mate with microphone output connector and pre-amplifier input connector
Dimensions:	Microphone: 31.8 mm L x 11.9 mm Dia. (1 1/4 x 3/2 in.) Pre-amplifier: 112 mm H x 60.8 mm W x 27 mm D (4 29/64 x 2 29/64 x 1 1/16 in.)
Net Weight:	Microphone: 12 grams (0.4 oz) less cable Pre-amplifier: 320 grams (11 3/8 oz) with batteries

Power: Battery: Two 9-Vdc alkaline, approximately 300 hours continuous use with fresh battery.
Simplex (Phantom) Voltage: 11 to 52 Vdc; 1.8 mA current drain

Supplied Accessories: Windscreens, swivel adapter



A,B-A98PF Pop Filter Kit

Serves the dual function of reducing breath noises and protecting the SM98 against theft with a locking collar (the pop filter and locking collar may be used together or independently).

D-A98HA Hanging Adapter

Permits hanging an SM98 at a nearly-ideal 45-degree downward angle. It's especially useful for miking choirs and vocal groups. All you need is a complete SM98 and the A98HA for excellent positioning.

C-A98MK Drum Mount Kit

A product percussionists have been clamoring for! The A98MK lets a drummer mount an SM98 on virtually any drum rim and position the microphone to suit his particular sound. The A98MK's flexible gooseneck and adjustable height and angle make it perfect for any drummer's miking concept. It will adjust to any position and stay there! Finished in matte black for professional appearance.

E-A98-G18 18-Inch Gooseneck

The A98-G18 mounts just like a standard gooseneck—no wiring is required. It features a sleek, rigid gooseneck center and attractive matte black finish. Makes the SM98 an excellent choice for meeting rooms, podiums, pulpits... anywhere a top quality, unobtrusive gooseneck microphone is required.

HIGH PERFORMANCE AND VERSATILITY...
THE NEW SM98 HARDWARE BRINGS IT ALL TOGETHER!



PS1A Power Supply

Shure Model PS1A is an ac power supply that provides phantom power for one or two Shure SM80, SM81, SM82, SM85, SM87 or other condenser microphones. It contains a power switch, power-on indicator, two input and two output professional audio connectors.

The PS1A is designed to operate from 90 to 132 Vac, 50/60 Hz, or 180 to 264 Vac, 50/Hz.

The PS1A is listed by Underwriters' Laboratories, Inc. and is listed by Canadian Standards Association as Certified.

Model Features:

- Phantom power for one or two SM80, and SM81, SM82, SM85, SM87 or similar condenser microphones.
- Low noise, hum and RF susceptibility.
- Short-circuit-proof operation.
- Handles both microphone and line level signals.
- Operates over wide ac voltage range.
- Three-pin professional audio connectors.
- Lightweight.
- Rugged construction.

specifications

Type:	All transistor power supply
Open Circuit Supply Voltage:	21.5±1.5 Vdc, regulated
Supply Voltage Polarity:	Positive (+) on microphone input connector pins (2 and 3; negative (-) on pin 1 and case)
Typical Supply Operating Conditions (each channel):	20V 1.5 mA (with Shure Model SM81 or SM85); 15V at 8mA (with Shure Model SM82)
Power Supply Resistors:	1.69k±1% (two per channel)
Frequency Response:	+ 0/-0.2 dB, 20 to 20,000 Hz (with SM81, SM82, or SM85 microphone and 1k load)
Maximum Operating Level:	Greater than + 24 dBm
Short Circuit Supply Current:	25 mA each channel (pins 2 and 3 to pin 1)
Hum and Noise:	(20 Hz to 20 kHz, unweighted): Common Mode: - 90 dBV max. Differential Mode: - 115 dBV max.
Noise:	(300 Hz to 20kHz, unweighted): Common Mode: - 100 dBV max. Differential Mode: - 115 dBV max.
Crosstalk:	-115 dB or less
Phasing:	Corresponding pins of all connectors are in phase
Operating Voltage:	90 to 132 Vac or 180 to 264 Vac (switch-selectable), 50/60 Hz ac only
Temperature Range:	Operating: - 7° to 57°C (20° to 135°F) Storage: - 29° to 71°C (- 20° to 160°F)
Connectors:	Professional audio three-pin (OUTPUT) and three-socket (MICROPHONE)
Dimensions:	72 mm H x 156 mm W x 150 mm D (2 7/8 in. x 6 1/8 in. x 5 7/8 in.)
Weight:	1.25 kg (2 lb, 12 oz)
Construction:	Aluminum chassis with steel cover, finished in gray enamel
Certifications:	Listed by Underwriters' Laboratories, Inc., listed by Canadian Standards Association as Certified



A120S

The A120S Accessory In-Line Switch can be used to add an On/Off, Push-To-Talk, Cough Button, or Transmitter-Relay Keying function to a microphone or other device rated at up to 3 amps ac (0.5 Adc) 125V, non-inductive load. The switch has gold-plated contacts for reliable performance even in low-current circuits. The switch is a double-pole double-throw type for maximum versatility. Its pushbutton combines with a rotary knob to provide either spring-return momentary or locking action.

The unit is supplied with a crimp-on strain relief for 6.4 mm (0.25-in.) diameter cable and with a flex relief for either large or small diameter cables. The permanently attached belt clip can be rotated on the case to any of four positions for the most convenience in use.



A15 Series "Plug-In" Microphone Attenuators, Equalizers and Adapters

Solve acoustic and electrical problems without time-consuming rewiring. Shure "in-line," low-impedance microphone attenuators, equalizers, and adapters plug in to give instant modifications of response and performance in microphones and sound systems. Only 114 mm (4 1/2 in.) long x 19 mm (3/4 in.) dia., with color-coded nameplates for quick identification. Units are intended to be driven from 150 ohm, low level source except for: A15LA—up to 50,000 ohms and + 24 dBm; A15PRS—any balanced impedance, any level. Three-socket input and three-pin output professional audio connectors. *

A15AS Switchable Microphone Attenuator: Prevents preamp overload in applications where very strong signals are applied to a microphone input. Inserts a 15, 20, or 25 dB loss. Optimized for use with simplex-powered condenser microphone or other low-impedance microphone.

A15BT Bridging Transformer: Matches balanced or unbalanced devices of different impedances. (33 kilohm primary, and 600 or 7,500 ohm secondary.)

A15HP High Pass Filter: Provides a low frequency cutoff to reduce unwanted low-frequency noises.

A15LA Line Input Adapter: Converts balanced low-impedance microphone input to bridging line level input.

A15LP Low Pass Filter: Provides a high frequency cutoff to reduce objectionable high-frequency noises.

A15PA Presence Adapter: Adds "presence" to vocals or instruments in recording, broadcasting, and PA applications.

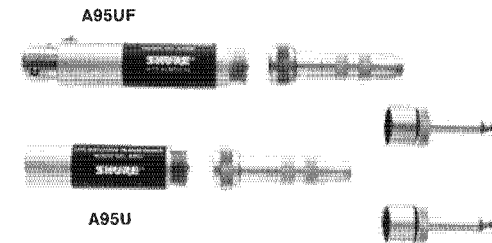
A15PRS Switchable Phase Reverser: Instant switch selection of normal or reversed phase of a balanced line without modification of equipment.

A15RS Response Shaper: Provides sibilance filtering in recording, broadcasting, and PA applications.

A15TG Tone Generator: Produces a continuous 700 Hz balanced signal capable of driving low-impedance balanced lines, and is extremely useful in setting up and troubleshooting audio equipment. Plugs into microphone input to enable engineer to check levels, connections, mixer inputs, cables and speakers. Permits one person to do the work of two. Powered by a miniature mercury battery.

Special Note: Only the A15AS and A15PRS are recommended between phantom powered condenser microphone systems and their power supplies.

*A15PRS and A15PA are symmetrical and can be used in either direction.

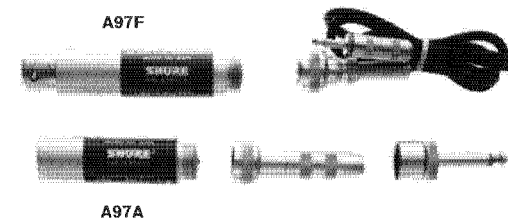


A95 Series Low-Impedance to High-Impedance Line Matching Transformers

High-quality transformers that make it possible to connect a low-impedance (38 or 150 ohm) microphone to a high-impedance amplifier input or vice versa. Solve problems of excessive high-frequency loss and objectionable hum when long cable lengths are used.

A95U: Low-impedance connector—three-pin professional audio connector. High-impedance connector—Amphenol MC1M type connector with mating standard 1/4 in. phone jack and phone plug.

A95UF: Low-impedance connector—three-socket professional audio connector. High-impedance connector—Amphenol MC1M type connector with mating standard 1/4 in. phone jack and phone plug.

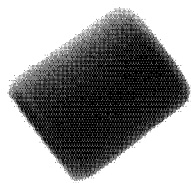


A97A and A97F Low-Impedance to Medium-Impedance Line Matching Transformers

High quality transformers designed to properly match low-impedance (150 ohm to 600 ohm) microphone outputs to medium-impedance (1 kilohm to 10 kilohm) inputs, such as those frequently used in cassette recorders. Mating connectors for both sides are supplied with the transformer.

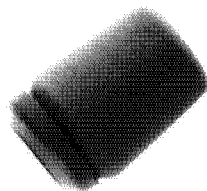
A97A Low-impedance connector—three-pin professional audio connector. Medium-impedance connector—Amphenol MC1M type connector. With mating standard 1/4 in. phone jack and phone plug.

A97F Low-impedance connector—three-socket professional audio connector. Medium-impedance connector—Amphenol MC1M type connector with mating short cable, terminated by a 3.5mm (9/64 in.) diameter miniature phone plug.



A1WS

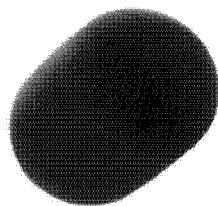
Gray foam windscreen, controls wind noise and "pop" for the Shure 515 Series Microphones.



A2WS Series

High performance rugged wind screens with metal collar for snug fit. Effectively minimizes wind noise in outdoor locations and controls explosive breath sounds in any location. For 545, SM57 and SM77 Microphones.

A2WS Gray
A2WS-BK Black



A81WS

Unique heavy-duty windscreen, specially designed for the SM80 and SM81. Special dual-density construction overcomes even high wind noise without significantly affecting frequency response. Two distinctly different layers of material are used, each with complementary acoustical properties. Gray foam.

A58WS Series

"Color-Charged" Windscreens

Ends microphone mix-ups when soundmen color-code these eight windscreen rainbow colors with control knobs, connectors, and mic cables. Windscreens fit SM61 and SM62 Series Microphones and all Shure "ball-type" microphones for greater protection from wind noise and "pop."

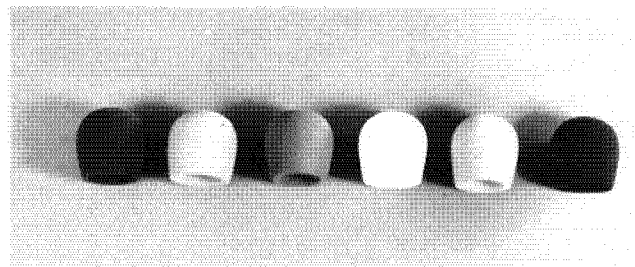
A58WS Gray	A58WS-BR Brown	A58WS-RD Red
A58WS-BK Black	A58WS-GN Green	A58WS-WH White
A58WS-BL Blue	A58WS-OR Orange	A58WS-YL Yellow



A81G
Pop Filter Grille

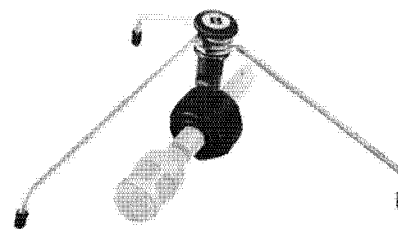
Increases the versatility of the SM80 and SM81 by permitting their use in windy conditions with minimal pickup of rushing sounds produced by wind. By attenuating breath popping sounds it allows the SM80 and SM81 to be used in close-talking applications.

The grille fastens securely to the microphone and can be used with the standard unidirectional cartridge or the R104A Omnidirectional Cartridge.



BB-44*
Baby Boom

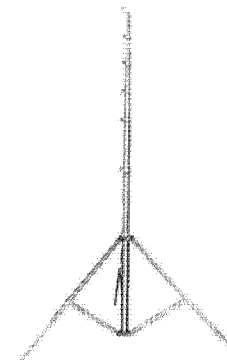
A 787 mm (31 in.) chrome-plated, adjustable boom arm. Fits Model MS-10C Floor Stand (below). Single positive-action triangular knob to control motion and position. Tapered 1.36 kg (3 lb) counterweight. Use for keyboard, drum vocals and instrument pickup.



S55P Low-Profile
Microphone Stands

A breakthrough in "distant" miking technique. Holds microphone just a fraction of an inch above the floor for better sound quality in "footlight" type distant pickup recording or sound 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 in.).

S55P For Models 545D, SM57, and SM77.

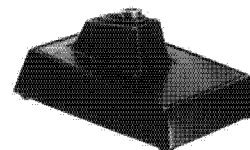


S15*
Tripod Floor Stand

Extra-tall, rugged, and stable... yet portable and lightweight. Tripod legs provide an excellent base, even when the stand is fully extended. Stand may be used at any height between 1.07m (3½ ft) and 4.27m (14 ft). Five telescoping sections. Convenient vinyl bag and cable strain relief included. Ideal for stereo orchestra and choir pickup with a pair of SM81 Microphones.

MS-10C*
Floor Stand

Quickly and easily adjusts from 0.9m (35 in.) to 1.6m (64 in.) high. Positive ring lock maintains desired height. Circular, 254 mm (10 in.), cast iron, 4.54 kg (10 lb) base.



S37A*
Desk Stand

Modern, low profile design. Non-reflective, textured gray finish. Stable 681 gram (1 lb, 6 oz) base. Base size: 73 mm H x 116 mm W x 165 mm D (2¾ x 4-9/16 x 6½ in.).



S39A*
Vibration
Isolation Stand

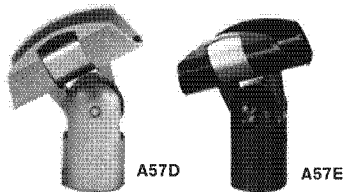
Isolates microphone from even extreme mechanical vibration. For tables, desks, podiums, etc. Heavy-duty "non-fatigue" foam rubber internal isolation element. Low silhouette. Black high-impact, non-glare plastic housing. Weight: 691 grams (1 lb, 8 oz). Base size: 44.5 mm H x 133 mm W x 184 mm D (1¾ x 5¼ x 7¼ in.).

*Standard 5/8"-27 thread accepts all Shure microphones with permanent mount connectors and all Shure microphone mounts and swivel adapters.



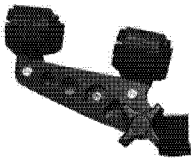
A25B* and A25C*
Swivel Adapters

A25B Black. Designed for use with SM57, SM58, SM77, and SM78 Microphones.
A25C Black. Designed for use with SM94 and SM96 microphones.



A57 Series*
Swivel Adapters

A57D Champagne. Designed for use with Models SM61, SM62, SM63, SM80, SM81, and SM82.
A57E Black. Designed for use with Models SM85, and SM87.



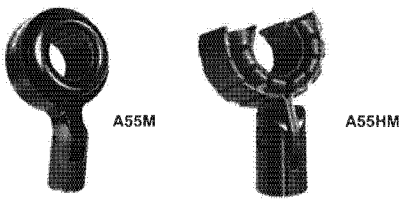
A89SM
Shock Mount

For use with the SM89 or other shotguns. 3 thread sizes mount on virtually any professional fitting. Assymetrical for use with microphones with differing centers of gravity. Positive locking knob. Black matte.



CO-1*
Stand Adapter

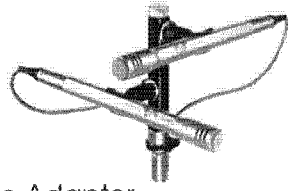
Black. Screw-type clamp for mounting second microphone on floor stand or for mounting a microphone directly to a desk or table. Adjustable 360° swivel aids horizontal positioning.



A53M*, A53HM*, A55M* and A55HM*
Shock-Stopper™ Isolation Mounts

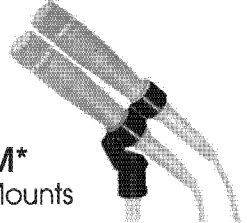
Black. A breakthrough in noise isolation. Reduces mechanical and vibration noises by more than 20dB. For desk, floor stand and fishpole use. Not recommended for microphones with on-off switches on the handle.

A53M Designed for use with Models SM61, SM62, SM63, SM80, SM81, SM82, SM85, and SM87.
A53HM Half-mount version of A53M. Permits instant removal of microphone from mount on stage.
A55M Designed for use with Models SM57, SM58, SM77, and SM78.
A55HM Half-mount version of A55M. Permits instant removal of microphone from mount on stage.



A27M*
Stereo Microphone Adapter

Black. Permits mounting two microphones on one stand such as MS-10C or S15. Either microphone can be independently swiveled in a full circle facilitating numerous microphone angles for stereo pickup systems, such as X-Y, ORTF, NOS, MS, and others. Standard 3/8"-27 thread. Accepts all Shure microphone mounts and swivel adapters.



A25M* and A26M*
Dual Microphone Mounts

Black. Ideal for mounting microphones feeding separate systems or when one microphone is needed as a back-up, such as on a speaker's rostrum.
A25M Designed for use with SM57 and SM77 Microphones.
A26M Designed for use with microphones listed above when using A2WS Windscreen and with SM58 and SM78 Series Microphones.

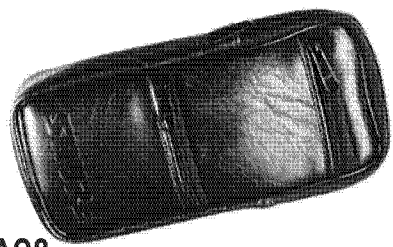
*Standard 3/8"-27 thread connectors.



Goosenecks

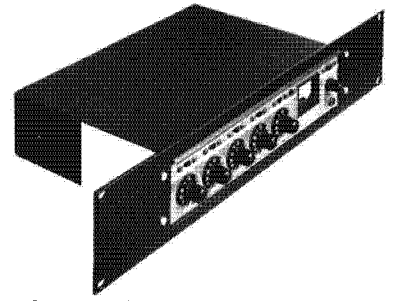
High-quality, flexible goosenecks. "Silent-type" design limits mechanically induced noises. All models have standard 3/8"-27 threads at base.

- G6A** 152 mm (6 in.) flexible gooseneck with side vent
- G12** 305 mm (12 in.) flexible gooseneck
- G12-CN** 305 mm (12 in.) flexible gooseneck with three-socket professional audio connector
- G18** 457 mm (18 in.) flexible gooseneck
- G18A** 457 mm (18 in.) flexible gooseneck with side vent
- G18-CN** 457 mm (18 in.) flexible gooseneck with three-socket professional audio connector
- 90B1120A** 305 mm (12 in.) small diameter, lightweight gooseneck for lightweight microphones
- A12 Mounting Flange** With standard 3/8"-27 external thread



26A08
Microphone Bag

Originally designed for Shure's SM83 lavalier condenser microphone and its accessories, the 26A08 offers more than protection. In addition to its padded and zippered main compartment, it has two more separately zippered compartments for accessories. Constructed of durable black vinyl, the bag measures approximately 9 1/16 inches by 4 1/2 inches by 2 inches. A heavy-duty loop permits attachment to a belt, or "piggybacking" on other equipment straps.



Rack Panels

Equips Shure audio components for rack mounting in standard 19 in. x 3 1/2 in. (89 mm x 483 mm) audio equipment racks.

- A16R** For use with FP16 and FP42. Black Finish.
- A268R** For use with M267 and M268 Series components. Black Finish.

Cable Selector Chart

Model	Microphone Connector	Equipment Connector	Cable Jacket	Cable Length	Cable Conductors
C15A	3-Socket	1/4" Phone Plug	Hi-Flex	15 ft (4.6m)	1
C20B	3-Socket	1/4" Phone Plug	Hi-Flex	20 ft (6.1m)	1
C20H*	3-Socket	3-Pin	Heavy Gauge	20 ft (6.1m)	2
C25B	3-Socket Black	3-Pin	Heavy Gauge	25 ft (7.6m)	2
C25E	3-Socket Black	3-Pin	TRIPLE-FLEX®	25 ft (7.6m)	2
C25F	3-Socket	3-Pin	TRIPLE-FLEX®	25 ft (7.6m)	2
C25J**	3-Socket	3-Pin	Hi-Flex	25 ft (7.6m)	2

*Also available without connector with stripped and tinned leads (C20D)

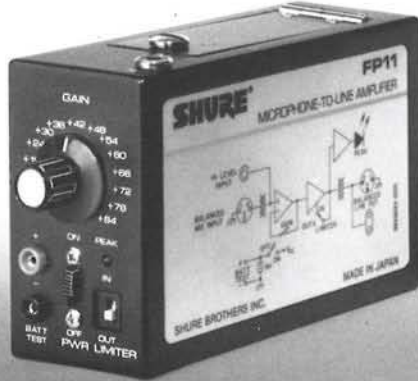
**Also available in 50 (15m) and 100 (30m) ft. lengths (C50J and C100J)

FP11

The FP11 is a portable, 1-input, 1-output microphone-to-line level amplifier designed for field production applications including electronic news gathering (ENG), electronic field production (EFP), and on-location film production. It is ideal for use where long lines must be driven at higher than microphone or aux levels. It can also be used to interface between equipment requiring different signal levels.

The FP11 provides up to 84 dB of gain so that microphone and auxiliary level devices can be boosted to line level. The gain is controlled by a 15-position, precision stepped rotary switch providing accurate gain indication and ease of resetting. Each step provides a 6 dB gain change.

The balanced, locking XLR input and output provide for excellent rejection of hum and RF interference. A switchable peak limiter prevents output overload distortion. Additional features include a peak/limiter LED indicator, aux level mini-phone jack, balanced line-level binding post output, and a removable belt clip. The FP11 is powered by one standard 9V battery.



FP12

The FP12 is a 1-input, 2-output headphone bridging amplifier designed to provide headphone feeds from any type of audio input. Unlike other headphone amplifiers that unbalance and "terminate" the input signal, the FP12 may be operated in-line. The signal is greatly amplified to drive headphones while leaving the "looped through" input signal undisturbed. The FP12 can be used for a wide variety of applications such as multiple headphone feeds, audio line troubleshooting, extra power for existing headphone circuits, a two-station intercom system, or a means of practicing electronic instruments through headphones.

The FP12 features two XLR in/out connectors and two 1/4-inch in/out jacks. In addition, two pairs of headphone outputs are provided, each consisting of one stereo 1/4-inch phone jack and one stereo 3.5 mm mini-phone jack. Other features include a Mic/Line input switch, Hi Z/Lo Z headphones switch, headphone level control, and removable belt clip. The FP12 is powered by one standard 9V battery.



FP16

Shure Model FP16 is a 1-input, 6-output, compact, self-contained audio distribution amplifier for routing multiple audio feeds without sacrificing signal clarity. The FP16 is the first portable distribution amplifier specially designed for field production use and offers features and performance rarely found in other distribution amplifiers. The intelligent design, reliable components and meticulous construction of the FP16 combined with its portability, flexibility, and durability make it the optimum choice for radio and TV broadcasts, ENG vans, live sound reinforcement, microphone splitting, and telecommunications and production facilities.

The FP16 features a wide-range audio frequency response and extremely low noise, hum and distortion. Its input and outputs

are transformer-coupled for superlative isolation and common-mode signal handling. Phantom power is available at the input for use with condenser microphones; and all 6 outputs, as well as the input, are individually switchable to mic-or-line level. In addition, the FP16 features link input and output jacks for interconnecting several FP16's or adding external signal processing equipment such as equalizers, compressors or limiters.

Other features include: ruggedness and reliable operation over wide temperature and humidity extremes; light weight and compactness for portable/location use or rack-mountable (with accessory rack mount kit) for studio installations; powered by AC or built-in battery pack; recessed, screwdriver-adjustable gain controls; and power, normal, and overload LED indicators.



specifications

FP11
Model:..... FP11
Frequency Response:..... 20 to 20,000 Hz, +1, -3 dB
Voltage Gain at 1,000 Hz:..... Low-impedance microphone input: +84 dB
 High-level input: +63 dB
Equivalent Input Noise:..... -129 dBV
Distortion:..... Under 0.5% THD from 40 to 20,000 Hz
 at +15 dBm
Input Clipping Level:..... -20 dBV
Output Clipping Level:..... +18 dBm
Limiter:..... Threshold: +12 dBm
Power:..... 9V alkaline battery; provides approximately
 25 hours of continuous operation
Overall Dimensions:..... 80.9 mm x 150 mm x 55.5 mm
 (3 1/8 x 5 7/8 x 2 1/8 in.)
Weight:..... 521 grams (1 lb 2 oz)

FP12
Model:..... FP12
Frequency Response:..... 40 to 15,000 Hz, +1, -3 dB
Voltage Gain at 1,000 Hz:..... Lo-Z: 70 dB (Mic), 20 dB (Line)
 Hi-Z: 96 dB (Mic), 46 dB (Line)
Equivalent Input Noise:..... -118 dBV
Distortion:..... Under 1% THD from 40 to 15,000 Hz
Input Clipping Level:..... Microphone: -14 dBV
 Line: +35 dBV
Output Clipping Level:..... Low-impedance: -2.5 dBV
 High-impedance: +23 dBV
Power:..... 9V alkaline battery; provides approximately
 25 hours of continuous operation
Overall Dimensions:..... 80.9 mm x 150 mm x 55.5 mm
 (3 1/8 x 5 7/8 x 2 1/8 in.)
Net Weight:..... 501 grams (1 lb 2 1/2 oz)

specifications

FP16
Model:..... FP16
Frequency Response:..... ±2 dB from 30 to 20,000 Hz
Voltage Gain:..... (+3 dB at 1 kHz)
INPUT

INPUT	Line	Microphone	Link
Microphone	90 dB	40 dB	70 dB
Line	40 dB	-10 dB	20 dB
Link	20 dB	-30 dB	-

Noise:..... Equivalent input noise: -129 dBV
 Equivalent input hum and noise: -127 dBV
 Output noise: -90 dBV
 Output hum and noise: -75 dBV
Distortion:..... Under 0.40% THD from 30 to 20,000 Hz at +15 dBm
 output

Input Clipping Level:..... Microphone: 62 to 6 dBV
 Line: -12 to +44 dBV
 Link: +8 dBV
Output Clipping Level:..... Microphone: -33 dBV
 Line: +17 dBV
Phantom Power:..... 30 Vdc nominat, 3.3k series resistance
Operating Voltage:..... AC: 120 or 240 Vac, 50/60 Hz
 DC: Supplied by three internal 9-volt batteries
 (approximately 20 hours continuous use)
Dimensions:..... 82.5 mm H x 315 mm W x 235 mm D (3 1/8 in. x
 12 3/8 in. x 9 3/8 in.)
Net Weight:..... 2.75 kg (6 lbs. 1 oz.)

FP31

A compact, portable microphone mixer specially designed for electronic news gathering (ENG) and electronic field production (EFP) use, including film, video, and remote broadcast applications. Measuring just 6%³/₁₆" x 5%¹/₁₆" x 1%¹/₁₆", the FP31 incorporates the features most requested by audio engineers, electronic news professionals, sportscasters, and film and video sound engineers.

The FP31 provides a wide, flat-frequency response, low distortion, and up to +18 dBm output (up to +22 dBm with 18 Vdc supply). The unit features extremely low internal noise and switchable low-cut filters for each input that effectively reject low-frequency handling and wind noise.

Three XLR connector inputs and two outputs are provided, each switchable for either microphone- or line-level operation. A master level control sets the output level. Incorporated in the FP31 is a built-in slate microphone for voice announcements and emergency field use. The microphone is controlled by a pushbutton that also activates a timed (one second) low-frequency slate tone.

Additional features include a flashing LED to remind you the mixer is on, professional quality VU meter, timed meter lamp, peak LED overload/limiter indicator, adjustable limiter, tone oscillator, and stereo headphone mini- and ¼" jacks. The headphone outputs can be used as additional unbalanced line feeds for connection to tape recorders, power amplifiers, or to the Shure 50AC Acoustic Coupler.

The FP31's versatility is enhanced by switchable phantom (simplex) or A-B power at each input for use with condenser microphones, a tape out mini-jack for connection to a cassette recorder, a coaxial battery jack permitting optional connection to external battery or power supplies, and a battery compartment that accommodates three standard 9V batteries. Batteries can be tested without program interruption.

Supplied with the FP31 is a removable shoulder strap and a rugged carrying case which allows easy access to every mixer function and lets you piggyback the mixer on your VTR or other equipment.



specifications

Model: FP31
Frequency Response: +2 dB from 30 to 20,000 Hz
Voltage Gain: Outputs terminated: line 600 ohms, microphone 150 ohms, headphone 200 ohms

Input	Line	Microphone	Tape
Microphone	90 dB	40 dB	68 dB
Line	40 dB	-10 dB	18 dB

Noise: Equivalent input noise; less than -129 dBV
Distortion: Under 0.25% THD from 50 to 20,000 Hz at +4 dBm output
Input Clipping Level: Microphone: -47 dBV to -17 dBV
 Line: +3 to +33 dBV
Output Clipping Level: Microphone: -34 dBV
 Line: +18 dBm
 Tape: -6 dBV
 Phone: +4 dBV

Limiter: Threshold: +14 dBm (adjustable to other levels)
 Recovery Time: 500 msec typical
 Lights 6 dB below clipping or at onset of limiter action
Peak Indicator: Lights 6 dB below clipping or at onset of limiter action
VU Meter: Calibrated for +4 dBm into 600 ohms at 0 VU; adjustable to other standards
Slate Microphone: Omnidirectional electret condenser with AGC
Power: **Mixer and Phantom Power:** Supplied by two internal 9V alkaline batteries or external 11 to 18 Vdc supply (8 hour life, typical)
Phantom Power: 11 to 18 Vdc nominal through 620 Ω
A-B Power: Supplied by additional 9V alkaline battery
Dimensions: 48.3 mm H x 160 mm W x 135 mm D (1% x 6% x 5%¹/₁₆ in.)
Net Weight: 1 kg (2 lb, 3 oz)
Supplied Accessories: Removable shoulder strap, carrying case

FP32

Professional users asked for it, and Shure delivered! Shure's FP32 Stereo Mixer definitely answers the demand for a reliable, rugged, compact stereo audio mixer. Electronic news gatherers and field production specialists agree: the FP32 handles their stringent demands with the utmost aplomb.

The FP32 shares many design characteristics with Shure's spectacularly successful mono FP31 Mixer. Like the FP31, the FP32 is packed with features. These include two transformer-coupled outputs (one for each stereo channel) and three inputs, each switchable for low impedance microphone or line level operation. In addition to an individual level control, each input channel has a center-detented stereo pan pot for true stereo mixing capability. The FP32's stereo capability is further enhanced by a concentric clutched stereo master gain control.

Field users will appreciate the FP32's built-in slate microphone and slate tone—exceedingly popular features that help identify take locations. There's also a built-in tone oscillator for level checks

or line tests, and built-in phantom (simplex) and A-B(T) power for condenser microphones. You'll also find a "phantom" jack on the FP32, permitting use of an external microphone power supply (up to 48 Vdc).

There's much more in this extremely compact package: mini- and ¼-inch stereo headphone jacks with level control, monitor input for monitoring from VTR, built-in limiter with adjustable threshold, high-quality dual VU meters with lamp and battery check function, 12 Vdc external power jack, stereo aux level tape outputs, and a carrying case that has earned plaudits for its well-thought-out design.

Shure engineers put all these features, professional performance, and outstanding reliability into a package smaller than a cigar box. No wonder the FP32 is the compact stereo mixer of choice in the burgeoning field production industry.



specifications

Model: FP32
Frequency Response: -1, -3 dB from 50 to 15,000 Hz
Voltage Gain:

Input	Line	Microphone	Tape	Phone
Microphone	90 dB	40 dB	68 dB	95 dB
Line	40 dB	-10 dB	18 dB	45 dB
Monitor	-	-	-	12 dB

Noise: Equivalent input noise; less than -125 dBV
Distortion: Under 0.25% THD from 50 to 15,000 Hz at +4 dBm output
Input Clipping Level: Microphone: -47 dBV to -15 dBV
 Line: +5 to +35 dBV
 Monitor: +35 dBV
Output Clipping Level: Microphone: -32 dBV
 Line: +18 dBm
 Tape: -6 dBV
 Phone: +5 dBV
Limiter: Threshold: +14 dBm (adjustable to other levels)
 Recovery Time: 500 msec typical
Peak Indicator: Lights 6 dB below clipping or at onset of limiter action
VU Meters: Calibrated for +4 dBm into 600 ohms at 0 VU; adjustable to other standards

Slate Microphone: Omnidirectional electret condenser with AGC
Power
Mixer and Phantom Power: Supplied by two internal 9V alkaline batteries (6 hour life, typical) or external 11 to 18 Vdc supply
External Phantom Power: 12 Vdc; overrides internal phantom supply when external voltage source is connected
A-B Power Supply: Supplied by additional internal 9V standard alkaline battery
Dimensions: 59 mm H x 184 mm W x 153 mm D (2% x 7% x 6 in.)
Net Weight: 1.13 kg (2.5 lb)
Supplied Accessories: Removable shoulder strap, carrying case
 *Can be modified for 48 Vdc if desired

FP42

Field production technicians suffering from audio headaches can rejoice. Shure has a cure in the FP42—an extraordinarily reliable, compact, feature-packed stereo audio mixer. The FP42 follows in the illustrious footsteps of Shure's classic, industry-standard M267, combining Shure ruggedness with all the convenient features that make the M267 so popular—plus full stereo capability!

The FP42 handles remote mixing jobs with its two outputs (one for each stereo channel) and four balanced inputs, each switchable for line or mic level operation. Each input channel also has a low-frequency rolloff switch and a center-detented stereo pan pot for convenient stereo mixing. There's also a concentric clutched stereo master level control and a pull-pot cueing feature that permits cueing or checking each input via headphones.

Like the M267, the FP42 can be battery or AC-operated. Minimum 1/4-inch stereo headphone jacks with level control are included,

and the dual VU meters may be calibrated for +4 and +8 dBm with a range switch. And there's much more: built-in stereo peak limiters with LED indicators, battery check function (with no program interruption), phantom power for condenser microphone operation, a tone oscillator for line tests and level checks, a direct mix bus for stacking units—everything a remote broadcast professional needs in a portable mixer.

The FP42 is a true professional unit, designed to provide extremely low noise, distortion, and RF susceptibility. Its wide, flat frequency response and extreme ruggedness make it ideal for the most demanding applications. And it's compact enough to be used anywhere.

Put Shure quality together with functional features, and you've got a mixer designed with professionals in mind. Simply stated, the FP42 is the finest portable stereo mixer available.



specifications

Model: FP42

Frequency Response: ±2dB from 30 to 20,000 Hz

Voltage Gain:

Input	Output				
	Line	Microphone	Mix Bus	Phones	Phones (Cue)
Low-impedance microphone	90 dB	40 dB	25 dB	100 dB	100 dB
Line	40 dB	10 dB	-25 dB	50 dB	50 dB
Mix Bus	55 dB	5 dB	-	62 dB	65 dB

Noise: Equivalent input noise: less than -129 dBV
Distortion: Under 0.4% THD from 30 to 20,000 Hz at +15 dBm output; under 0.5% TH distortion up to +15 dBm output level

Input Clipping Level: Microphone: -35 dBV to -5 dBV
 Line: +15 dBV to +45 dBV
 Mix Bus: 0 dBV

Output Clipping Level: Microphone: -33 dBV
 Line: +17 dBV

Limiter: Threshold: +8 to +14 dBm, adjustable
 Attack Time: 3 msec typical
 Recovery Time: 500 msec typical

Peak Indicator: Lights 7 dB below 5% THD clipping point or at limiter threshold. Separate indicator for each output

Phantom Power: 30 Vdc nominal
Operating Voltage: AC operation: 120/240 Vac ± 10%, 50/60 Hz, internally selectable

Battery Operation: Built-in battery compartment uses three readily available 9V alkaline batteries; provides approximately 8 hours of continuous operation

Certification: UL listed and CSA listed as Certified

Dimensions: 79.5 mm H x 310 mm W x 235 mm D (3 1/8 x 12 1/2 x 9 3/16 in.)

Net Weight: 2.95 kg (6 lb, 8 oz)

M64A

The M64A is a compact, professional stereo preamplifier which solves a variety of preamplification and equalization problems. A three-position slide switch selects different equalization depending on the desired application.

In the Phono position, the M64A provides standard RIAA equalization. Using the M64A in this mode, magnetic phono cartridges can operate into auxiliary level inputs, inputs without RIAA equalization or ceramic phono cartridge inputs. A balanced line output can be obtained using a Shure A95U Impedance Matching Transformer.

In the Tape position, playback heads on tape recorders are provided with NAB equalization.

In the Flat position, the M64A can be used as a microphone preamplifier or a low-gain buffer amplifier where long cable lengths are necessary.

All input and output connectors are standard phono jacks. In addition, the M64A can be powered by an external 24-36 Vdc power source.



specifications

Model: M64A

Frequency Response: Flat: ±2 dB from 20 to 20,000 Hz
 Phono: ±2 dB from 40 to 15,000 Hz (Standard RIAA curve)
 Tape: ±2 dB from 50 to 15,000 Hz (7 1/2 ips NAB curve)

Voltage Gain: At 1,000 Hz through 680 ohms, 47K output termination

Equalization Switch Position	High Level Output	Low Level Output
Flat	27.5 dB	4.0 dB
Phono	34.5 dB	11.0 dB
Tape	37.0 dB	13.5 dB

Noise: Flat: Better than 64 dB below 10 mV input from 20 to 20,000 Hz
 Phono: Better than 71 dB below 10 mV input from 20 to 20,000 Hz

Distortion: Under 1% THD for an output of 2V at 1,000 Hz in Phono, Tape or Flat positions
Clipping Level: Minimum input clipping levels at 1,000 Hz
 Flat: 250 mV
 Phono: 100 mV
 Tape: 80 mV

Channel Separation: 60 dB min. at 1,000 Hz
Channel Balance: Within 2 dB at 1,000 Hz
Operating Voltage: 120 or 240 Vac, 50/60 Hz (switch-selectable)

Dimensions: UL listed
 65 mm H x 144 mm W x 104 mm D (2 5/8 x 5 3/4 x 4 1/8 in.)

Net Weight: 986 g (1 lb, 12 oz)

M267

The Shure M267 compact, lightweight professional microphone mixer offers performance and capabilities never before available in a modestly priced professional mixer. It was designed to fill the specific needs of broadcasters in both studio and remote applications, recording studios and sound reinforcement. Its outstanding performance and versatility also make it an exceptional choice for use in public address systems and as a studio quality "add-on" mixer for expanding existing facilities.

The M267 is the industry standard mixer, because of its outstanding features and performance... features such as peak program limiter—eliminates overload distortion by monitoring program levels and power supply level; phantom power—switchable 30 Vdc on all microphone inputs to power condenser microphones; built-in battery pack—switches silently to battery power if ac fails; LED peak indicator—indicates onset of limiting or when program levels approach overload; headphone level

control—adjusts monitor volume; automatic muting circuit—prevents annoying clicks and thumps when unit is turned on or off; active gain controls—provide lower noise, greater dynamic range and automatic input attenuation; electronic power supply regulation—for trouble-free performance on low or high ac line voltage; transformer balanced inputs and outputs; mix bus; VU meter; low cut filters; and low RFI and line noise susceptibility.

In addition, it has gold-contact Mic/Line switches—on each XLR input and output; battery check function—does not interrupt program; and front panel headphone jack and gold-contact tone oscillator switch; wide, flat frequency response; extremely low distortion; and high output.

The M267 has proved its ruggedness and reliability in thousands of installations. It is the top-selling mixer in the industry.

It can be mounted in standard audio equipment racks with the addition of a Shure A268R Rack Panel.



specifications

Model: M267
Frequency Response: ±2 dB from 30 to 20,000 Hz
Voltage Gain: Outputs terminated: line 600 ohms, microphone 150 ohms, mix bus 3.3 kilohms, headphone 200 ohms, tip-sleeve, ring-sleeve

Input	Output		
	Line	Microphone	Mix Bus
Low-impedance microphone	81 dB	41 dB	24 dB
Line	40 dB	-9 dB	-27 dB
Mix bus	46 dB	-5 dB	-

Noise: Equivalent input noise: -128.5 dBV
 Equivalent input hum and noise: -126 dBV
Distortion: Under 0.35% THD from 30 to 20,000 Hz at +15 dBm output; under 0.5% IM distortion up to +15 dBm output level
Input Clipping Level: Microphone: -32 dBV to -5 dBV (depending on input control setting)
 Line: +20 dBV
 Mix bus: +7 dBV
Output Clipping Level: Microphone: -34 dBV
 Line: +18 dBm

Limiter: Threshold: +15 dBm (line output level; adjustable from -4 to +18 dBm)
 Attack Time: 2 msec typical
 Recovery Time: 500 msec typical
Peak Indicator: Lights 6 dB below clipping or at onset of limiter action
Phantom Power: 30 Vdc open-circuit, 3.3 kilohms series resistance, input switches in MIC position only
Operating Voltage: 120 or 240 volts, 50/60 Hz, internally switchable
Battery Operation: Built-in battery compartment uses three readily available 9V alkaline batteries; provides approximately 20 hours of continuous operation
Certification: UL Listed and CSA listed as Certified
Dimensions: 75.1 mm H x 309 mm W x 229 mm D (2 7/8" x 12 1/2" x 9 in.)
Net Weight: 2.3 kg (5 lb, 2 oz)

M268

The M268 is a compact, lightweight, five-channel microphone mixer that offers significant improvements in design, performance and versatility over other value-priced mixers. It is ideal for public address and paging in hotels, schools, community centers, and hospitals, as well as an excellent add-on mixer for expanding current equipment. It is also an excellent mixer for use by the serious tape recording enthusiast.

Its features include: mix bus—for simple mixer interconnections; phantom (simplex) power—switchable 30 Vdc on all low-impedance microphone inputs to power condenser microphones; automatic muting circuit—prevents annoying clicks and thumps when the unit is turned on or off; active gain controls—provide lower noise, greater dynamic range and automatic input attenuation, and electronic power supply regulation—improved performance on low or high ac line voltage. In addition, when used with the optional accessory battery power supply (A268B), the M268 switches automatically and silently to battery power if the ac fails.

It has very low distortion—typically less than 0.2%; excellent gain and dynamic range; low hum and noise; and high output. Also, the M268 has four transformer-coupled low-impedance balanced line microphone inputs and four high-impedance phone jack inputs. Both high- and low-impedance microphones can be used at the same time.

The M268 also has a high level auxiliary input—suitable for tape recorder, tuner and accessories; individual volume controls; a master volume control; and the ruggedness and reliability for which Shure mixers are recognized worldwide.

The M268 makes an ideal add-on mixer to the M267 Mixer. The two models are matched in performance and styling, and the mix bus gives the user nine inputs plus the peak indicator and metered output of the M267—no loss of inputs on either mixer.

It can be mounted in standard audio equipment racks with addition of the Shure A268R Rack Panel.



specifications

Model: M268
Frequency Response: ±3 dB from 40 to 20,000 Hz
Voltage Gain: Outputs terminated: mic 150 ohms/33 kilohms, aux 47 kilohms, mix bus 3.3 kilohms

Input	Output			
	Lo Z Mic	Hi Z Mic	Aux Out	Mix Bus
Low-impedance microphone	30 dB	54 dB	79 dB	23 dB
High-impedance microphone	7 dB	31 dB	36 dB	0 dB
Aux in	-14 dB	10 dB	34 dB	21 dB
Mix bus	-6 dB	18 dB	42 dB	-

Noise: Equivalent input noise: -128 dBV
 Equivalent input hum and noise: -125 dBV
Distortion: Under 0.2% THD from 40 to 20,000 Hz at 18 dBV output
Input Clipping Level (minimum): Low-impedance microphone: -32 to -5 dBV
 High-impedance microphone: -10 to 18 dBV
 Aux: 14 to 30 dBV
 Mix bus: 8 dBV
 *Depending on control setting.

Output Clipping Level (minimum): Low-impedance microphone: -20 dBV (100 mV)
 High-impedance microphone: 4.5 dBV (1.7V)
 Aux: 18 dBV (7.9V)
 Mix bus: -8 dBV (0.4V)
Phantom Power: 30 Vdc open-circuit, 3.3 kilohms series resistance
Operating Voltage: 105-125 volts, 50/60Hz
 *Can be rewired for 210-250 Vac operation
Certification: UL Listed and CSA listed as Certified
Dimensions: 75.1 mm H x 309 mm W x 229 mm D (2 7/8" x 12 1/2" x 9 in.)
Net Weight: 1.8 kg (4 lb, 1 oz.)

PROFESSIONAL PHONOGRAPH CARTRIDGES

The SC39 Series

The SC39 Series Phonograph Cartridges were specially designed for use in broadcasting, recording, discos, libraries, and other demanding professional applications. These cartridges offer true high fidelity performance, providing clean, undistorted playback even of the toughest-to-track, hottest recordings.

A Shure-designed bearing assembly and telescoped shank structure help the SC39 Series Cartridges achieve exceptional trackability. The response of the SC39EJ and SC39B is extremely flat through the upper mid-range with a smooth rolloff at the highest frequencies to minimize many sources of high-frequency "splatter" in broadcast applications.

This series of professional cartridges is specially engineered for backcuing. An internal support wire and special elastomer bearing insure stable and accurate backcuing without groove jumping. These cartridges feature Shure's patented SIDE-GUARD Stylus Protection System. This unique deflection assembly prevents the most common causes of stylus damage by withdrawing the entire stylus shank and tip safely into the stylus housing before it can be bent by sideways thrust from contact with a record or turntable edge.

The stylus tip of the SC39 Cartridges is MĀSAR™ polished. This is an exclusive Shure process which reduces surface noise and retards record wear. MĀSAR™ polishing gives superlative results on 45 rpm records made from reprocessed standard vinyl or polystyrene, as well as on lacquer masters.

SC39EJ 1½ to 3 grams; Biradial (Elliptical) stylus
SC39B 1½ to 3 grams; Spherical stylus



The SC35C

The SC35C is designed for use on the heaviest and most rugged broadcast tone arms which require a tracking force of 4 to 5 grams. The stylus assembly of the SC35C is rigid enough to withstand the punishment of continuous backcuing, yet compliant enough to offer excellent mid- and high-frequency reproduction. The SC35C has been specifically designed for broadcast studio applications where a closely controlled frequency response and a rugged stylus assembly are required. The blue-colored stylus grip has a cutaway for improved visibility of the iridescent orange-colored stylus tip for accurate set-down in cuing operations. A heavy-duty cartridge shield serves to minimize stray electromagnetic hum pickup. The Model SC35C will mount in virtually all professional and studio tone arms.

specifications

Model Number	Stylus Configuration	Tracking Force Range (grams)	Trackability (cm/sec.) Peak Recorded Velocity			Trackability Measured at	Frequency Response	Channel Separation	Replacement Stylus Model Number
			400 Hz	1,000 Hz	10,000 Hz				
SC39EJ	Biradial (Elliptical)	1½-3g	30	40	35	2g	20 to 20,000 Hz	20 dB at 1 kHz	SS39EJ
SC39B	Spherical	1½-3g	30	40	35	2g	20 to 20,000 Hz	20 dB at 1 kHz	SS39B
SC35C	Spherical	4-5g	14	27	20	4g	20 to 20,000 Hz	20 dB at 1 kHz	SS35C

REPLACEMENT PARTS AND ACCESSORIES/selection guide

Microphone Model No.	Cable	Cartridge	Screen Grille Assembly	Swivel Adapter 1	Wind Screen 2	Miscellaneous
SM1, SM2 SM7	C108 C25F	R93 (MIC) 99A673	—	—	RK184WS* 90A2089	RK246, RK247 90A1742 (Carrying Case), 53A1884 (Coverplate) A120S
SM10A/12A	—	R93 (MIC) R94 (RCVR)	—	—	RK184WS*	A25M, A55M, A55HM
SM57	C25J C25F	R57	RK244G	A25B*	A2WS	A25M, A55M, A55HM
SM58	C25J C25F	R59	RK143G	A25B*	A58WS	A26M, A55M, A55HM
SM61 SM62 SM63, SM63L	C25F C25F C25F	R61 90A3007 R106 (SM63) 90A2902 (SM63L)	RK164G — —	A57D A57D* A57D*	A61WS-BR A61WS-BR RK229WS	A53M, A53HM A53M, A53HM A53M, A53HM
SM77EB	C25E	R107 (SUEDE) R140 (VINYL)	—	A25B*	A2WSA	A26M, A55M, A55HM
SM78EB	C25E	R109 (SUEDE) R141 (VINYL)	RK210G	A25B*	A58WS	A26M, A55M, A55HM
SM80 SM81	C25F C25F	R104A R104	— —	A57D* A57D*	A81G* A81G*	A81WS, PS1A, A53M, A53HM, R104 A27M, A53M, A55HM, A81WS, PS1A**, R104A
SM82 SM83 SM85	C25F C106 C25E	99A671 R127 R112	90BU2600 — RK214G	A57D* — A57E*	49A37A* — RK242WS* A85WS	50AC, PS1A** RK239MB, RKC240SB, RK241DB A53M, A53HM, PS1A**
SM87 SM89 SM90 SM91 SM98	C25E C25E C107 C107 C107	R128 R144 R130 R129 R134	RK243G — — — —	A57E* A57E — — —	A85WS RK257WS — — —	A53M, A53HM, PS1A** A89SM — — A98G18, A98HA, A98MK, A98PF

1. All Shure swivel adapters fit MS-10C and S15 Microphone Stands and A27M Stereo Adapter.
 2. A2WS available in charcoal or black; A58WS windscreens are available in assorted colors.

*Furnished accessory
 **PS1A—for 90 to 132 Vac. or 180 to 264 Vac.

DATA SHEET/reference guide

There is a product data sheet available for every microphone and circuitry product Shure manufactures. These provide information such as detailed specifications, technical descriptions, product features, impedance change instructions, optional conversions, circuit diagrams, wiring considerations, descriptions of controls, connectors and indicators, as well as a list of optional accessories and replacement parts.

Multiple language versions of the data sheets are available for many of the products. These include French, Spanish, and

German on one sheet.

Many of these data sheets also include a "Shure Architect's Specifications" section to provide a quick and easy reference for specifying "Shure or equivalent" in specifications and bids. Forward your request for Shure Data Sheets to Shure Brothers Inc., Attention: Customer Services, 222 Hartrey Avenue, Evanston, IL 60202-3696, U.S.A. When ordering, please list both product model number and Data Sheet Ordering Number.

Microphones

Model/Series	Date Sheet Ordering Number	
	English Language	Multiple Languages
838	27A2096	
SM1	27A2184	
SM2	27A2183	
SM7	27A990	27A1891
SM10A	27A2191	27A2190
SM12A	27A2194	
SM57	27A2103	27A2104
SM58	27A2108	27A2109
SM61	27A2157	
SM62	27A2117	
SM63 & SM63L	27A2158	27A1888
SM77	27A2234	27A1738

Microphones

Model/Series	Date Sheet Ordering Number	
	English Language	Multiple Languages
SM78	27A2002	27A1739
SM80	27A1743	
SM81	27A1770	27A1892
SM82	27A1103	27A1893
SM83	27A1928	
SM85	27A1992	27A1875
SM87	27A2089	27A2098
SM89	27A2272	27A2273
SM90	27A2162	27A2087
SM91	27A2161	27A2078
SM98	27A2173	27A2253

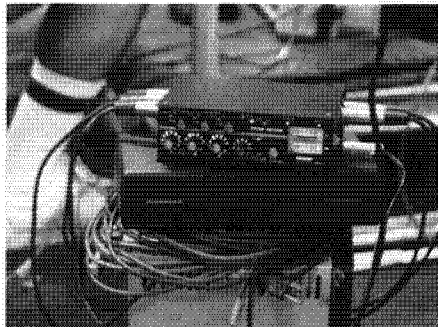
Circuitry Products

Model/Series	Date Sheet Ordering Number	
	English Language	Multiple Languages
FP11	27A8071	
FP12	27A8072	
FP16	27A8082	
FP31	27A8080	27A8107
FP32	27A8084	27A8108
FP42	27A2215	
M64A	27A8086	
M267	27A8077	
M268	27A8092	

Phonograph Cartridges

Model/Series	Date Sheet Ordering Number	
	English Language	Multiple Languages
SC35C	27A2082	
SC39B	27A2251	
SC39EJ	27A2251	

FOR STUDIO AND REMOTE RECORDING APPLICATIONS



Piano, Strings, and Vocal Applications

1. **Piano:**
 - SM7:** Minimum off-axis coloration provides accurate reproduction; smooth, silky sound.
 - SM80:** Omni version of SM81; use when the room acoustics are an important part of the overall piano sound e.g., classical recording.
 - SM81:** Studio cardioid condenser, with extremely wide dynamic range captures the subtle expressions of the pianist; use with A27M adapter for X-Y stereo micing.
 - SM90:** Omni version of SM91; permits creative use of room ambience in recording.
 - SM91:** Mount two on the underside of a grand or baby grand piano lid to give a smooth, full bodied sound, while offering good rejection of monitoring systems and other instruments in the studio.
 - SM98:** Miniature unidirectional condenser microphone: size permits wide mounting flexibility. Extremely smooth frequency response gives precise, natural sound, good rejection.
2. **Acoustic Guitar:**
 - SM81:** Low-frequency response switch controls proximity effect, thus allowing natural sound with close up placement.
 - SM83:** Mounted on edge of sound hole with tie bar for close in, live sound.
 - SM98:** May be stand mounted or mounted directly on edge of sound hole. Use low-end rolloff switch on preamp to compensate for proximity effect.
3. **String Bass:**
 - SM7:** Frequency tailoring switches alter bass and mid-range response to enhance the sound of different basses.
 - SM17:** Internal placement guarantees maximum separation in live sessions or other

situations where leakage is a problem.

SM91: Placed on floor close to bass for rich sound where isolation is not a problem.

4. **Violins, Violas, Cellos:**
 - SM7:** Designed for boom use; provides a smooth, silky string sound.
 - SM81:** Extremely flat response from 20 Hz to 20 kHz assures precise reproduction of the complex harmonic structure of strings.
 - SM83:** Mounted on tail piece behind bridge for close in, live sound.
5. **Vocals:**
 - SM7:** A versatile microphone for a variety of vocal characteristics. Especially useful for controlling sibilant voices.
 - SM58:** Excellent choice for live recording when signal must be split to feed PA and recording board.
 - SM85:** Crisp, condenser sound in a lightweight, rugged package makes this unit extremely useful for on-stage remote recording. Low frequency rolloff controls proximity effect and lowers handling noise.
 - SM87:** Well controlled supercardioid vocal response where a condenser sound is desired and maximum isolation is required.
6. **Group Ensembles:**
 - SM57:** Presence peak increases intelligibility of lyrics.
 - SM81:** Well controlled polar pattern (uniform with frequency) and excellent signal-to-noise ratio provide outstanding "reach" for choral pickup.
 - SM90:** Mount on Plexiglass and position at front of ensemble. Will provide good coverage, room ambience.
 - SM98:** Unobtrusive on a stand or hung from the ceiling.

Amplified Instrument, Horn, and Vibraphone Applications

1. **Electric Guitar/Electric Piano:**
 - SM57:** Midrange presence peak gives any guitar amp extra punch.
2. **Leslie Speaker System:**
 - SM7:** Integral, "Zeppelin" type windscreen, moderate presence peak frequency response and effective windscreen, moderate presence peak frequency response and effective windscreen are a must for bottom-end Leslie application.
3. **Room Ambience/Studio Acoustics:**
 - SM80:** Uniform omnidirectional polar pattern

provides an accurate reproduction of room acoustics, especially useful in mixdown.

SM90: Captures natural ambience when placed on large boundary surface such as table or floor.

4. **Woodwinds (Saxophone, Oboe, Clarinet, Flute, etc.):**
 - SM7:** An excellent choice for all woodwinds; use response shaping switches to enhance different instruments.
 - SM81:** For capturing the complex transients associated with flutes, saxophones, clarinets, or any woodwinds.
 - SM98:** Small size permits extremely close micing for effects. Proximity effect can be controlled with low-end rolloff switch on preamp.
5. **Brass (Trumpets, Trombones, etc.):**
 - SM7:** Smooth frequency response creates a silky sound for all brass.
 - SM57:** Presence peak brightens up a dull horn; great for flugelhorn.
 - SM59:** Flat frequency response is excellent for trumpet.
6. **Vibes:**
 - SM7:** Dynamic alternative to the SM81 with similar off-axis response. Includes integral shock mount and windscreen for boom use, both indoor and outdoor.
 - SM81:** Minimum off-axis coloration makes this unit a natural for overhead pickup of instrument. Use two SM81's in conjunction with A27M stereo adapter for realistic stereo image.

Drum Applications

1. **Kick Drum:**
 - SM7:** Exceptional flat response down to 40 Hz. Capable of handling the high sound pressure levels developed in a kick drum.
 - SM57:** Experimental placement with different distances from rear ("beater") head produces a variety of bass drum sounds.
 - SM91:** Low-profile fits in or in front of kick drum. Capable of handling the high sound pressure levels developed in a kick drum.
 - SM98:** Small size permits experimentation in placement. Easily withstands high sound pressure levels.
2. **Snare:**
 - SM57:** The recording standard for the snare drum. Its proximity effect and presence boost are ideal for this application.

SM81: Use in conjunction with A81G for pop screen for an exceptional condenser snare sound. 10dB attenuator prevents overload distortion.

SM98: Provides natural, precise sound, flexibility in placement.

3. **Hi Hat:**
 - SM81:** Use in conjunction with A81G for maximum sensitivity with minimal wind blast from hi hat.
 - SM85:** Boost in upper midrange adds crispness.
 - SM98:** Wide frequency response provides full, natural hi hat sound.
4. **Overhead:**
 - SM81:** The professional's choice for overhead micing. Uniform polar response and superior sensitivity make it a natural for this application. Use two SM81's with an A27M adapter for stereo micing.
 - SM98:** Provides clarity, accuracy, mounting flexibility.
5. **Mounted Tom-Toms:**
 - SM57:** The standard tom-tom microphone in many studios.
 - SM83:** Placing the microphone within the tom-tom produces excellent results.
 - SM85:** Crisp response and controlled proximity effect give tom-toms that extra punch.
 - SM81:** Small size and flat response offer an unbeatable combination. Use with A98MK for mounting to drums.
6. **Floor Tom:**
 - SM7:** Exceptional low-frequency response enhances a well-tuned floor tom.
 - SM57:** Presence peak and good low frequency response deliver an excellent drum head sound while retaining sound low end.
 - SM98:** Low-end rolloff switch on preamp permits close micing without excessive boominess.

FOR BROADCAST APPLICATIONS



Microphones

- 1. Announce/Voice—Over Booth Microphones:**
1st Choice—SM7: Smooth, warm sound; frequency tailoring switches to accommodate different voices.
- 2. Overhead Boom Microphones:**
1st Choice—SM89: Shotgun Microphone for long distance pickup. Good off-axis control and natural on-axis sound for booms, fishpoles, and hand held.
2nd Choice—SM81: Extremely sensitive with wide cardioid pattern for boom use. Low frequency rolloff switch to eliminate mechanical boom noise.
- 3. Hand-held Interview Microphones:**
1st Choice—SM63L: 6dB Hotter output than most microphones. Built in shock mount and hum bucking coil. Long handle for that extra reach.
- 4. Lavalier Microphones:**
1st Choice—SM83: Wide-range frequency response, especially tailored for Lavalier use. Supplied with a wide variety of mounting hardware and a self contained pre amp.
2nd Choice—SM11: Dynamic element. No battery or power supply required. A variety of mounting hardware supplied.
- 5. Desk Stand Microphones:**
1st Choice—SM63: Omnidirectional pattern provides broad pickup pattern; small size makes microphone inconspicuous "on camera."
- 6. Hand-held Entertainer Microphones:**
1st Choice—SM58: The industry standard for vocalists; rising frequency response emphasizes intelligibility.
2nd Choice—SM85: Bright, crisp sound; excellent shock mount virtually eliminates handling noise.
- 7. Stand-Mount Instrumental Microphones:**
1st Choice—SM81: Recording studio quality;

three-position low frequency switch controls unwanted rumble and noise.

2nd Choice—SM57: Bright, clean sound; excellent off-axis rejection of noise and unwanted sounds.

8. Head-Worn Microphones:

1st Choice—SM2: Close talking dynamic microphone. Dual, high impedance earphones for good isolation from surrounding noise. Lightweight.

2nd Choice—SM1: As above, but with one high impedance earphone. Lightweight.

9. Line-Level Microphone:

SM82: A complete remote unit with built-in limiter; can drive and hold a dialed-up telephone line; powered by internal battery or phantom power; output is 4 dBm into 600 ohms for 94 dB of sound pressure level.

Circuitry

1. News and Sports Remotes: Mixers.

Mono—FP31: Small size and lightweight; mic and line level inputs and outputs; built-in limiter, slate tone and slate mic; internal battery pack or external 12 VDC powering.
Stereo—FP32: As above, but stereo output, with pan-pots on each input.

2. Production and Editing Rooms: Mixers.

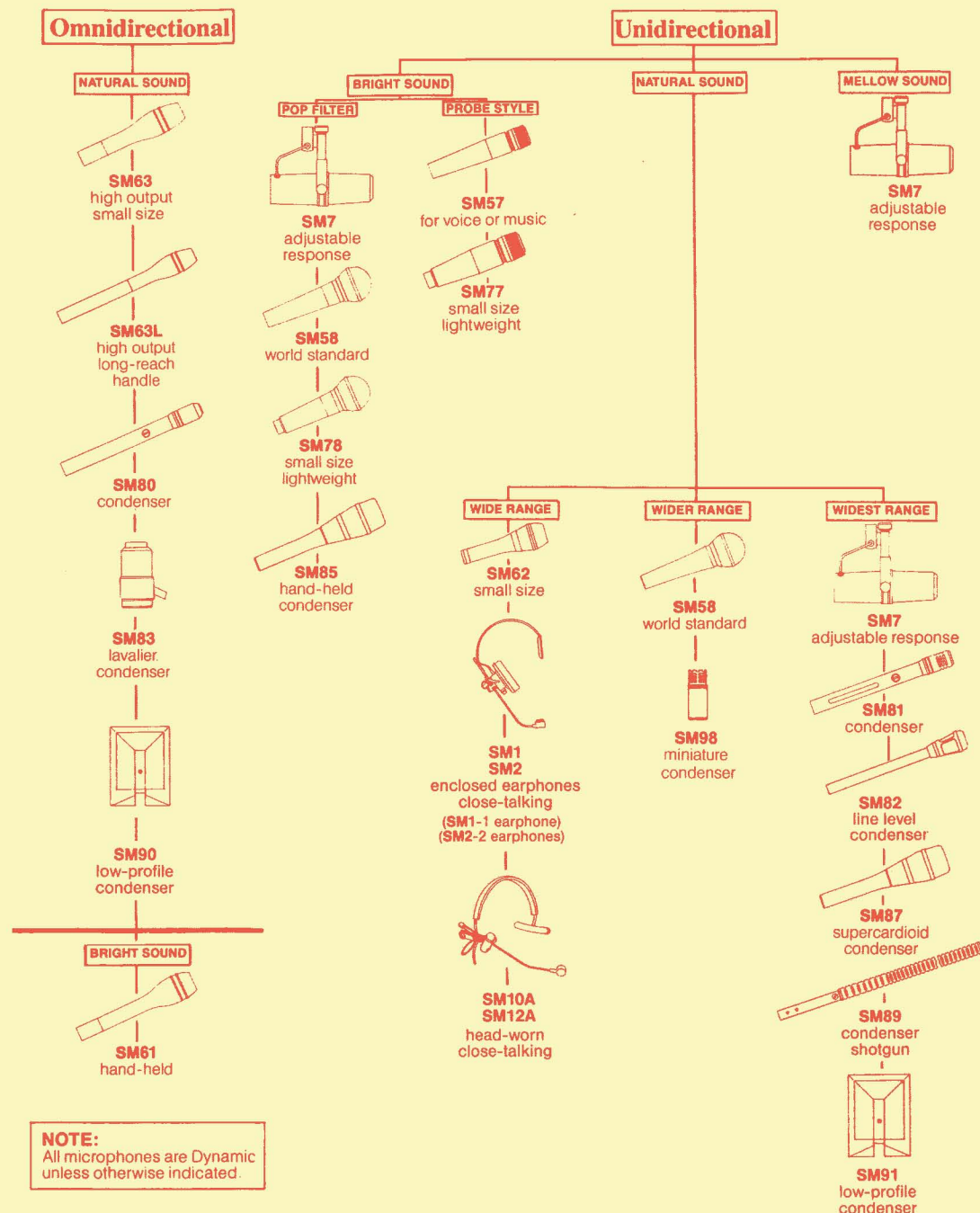
Mono—M267: Allows convenient mixing of line and microphone level signals; active gain controls keep noise and distortion at a minimum.
Stereo—FP42: As above, but stereo, with pan-pots and monitor/cue on each input.

3. Problem Solvers:

FP11—Mic-to-Line Level Amplifier. Turns any low impedance microphone into a line level device. Battery powered, 15 step gain setting with limiter.

FP12—Headphone Amplifier. Monitors mic or line level signals through headphones; does not load the line; volume control; battery powered; will drive low or high impedance headphones.

FP16—Distribution Amplifier. Six mic or line level outputs from a single mic or line level input. All transformer balanced ins and outs. AC or battery power. For press feeds, IFB or signal distribution.





SHURE[®]

Shure Brothers Inc.
 222 Hartrey Avenue
 Evanston, Illinois 60202-3696 U.S.A.
 Phones: International (312) 866-2587; U.S.A. (312) 866-2553
 Telex: 4330191 Fax: (312) 866-2279
THE SOUND OF THE PROFESSIONALS...WORLDWIDE[®]

