SHURE®

Microphone and Circuitry Products

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SHURE...a commitment to excellence

Shure microphones are singularly uniform. When you buy more than one, you automatically have a matched set—in sound, coloration, output level, frequency response, and pickup pattern. If you later buy another unit of the same model number, even in a different city (or in any of one hundred and fifty other countries in which Shure microphones are sold), it will be the performance twin of the original unit.

Let's consider the cable. Frequently, it can be a trouble spot so Shure gives it special attention. We anticipate the worst and test accordingly. We test samples from *every* production lot because we know the microphone will be dragged by the cable, and swung about by the cable. We also know that the cable will be stretched, stepped upon, tripped over, yanked, overflexed, and be generally misused and abused. Shure-developed flex and stretch testing equipment and procedures are state-of-the-art and have been adopted as industry standards by leading cable manufacturers.

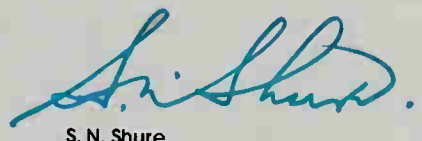
Thoroughbred quality throughout

Shure microphones are sometimes copied in appearance, but they are never duplicated in performance and reliability.

Shure has always published both frequency response curves and complete polar patterns for its microphones (we were the *first* to do so) together with detailed specifications that are scrupulously accurate, conservative, and accompanied by *all* necessary reference figures. This is not always the case with other manufacturers or assemblers who often do not have the sophisticated equipment required for thorough and trustworthy analysis. You know the performance to expect from your Shure microphone—and the performance you'll get. You can make valid comparisons between models. Most importantly, Shure microphones perform up to or beyond published specifications—without exception!

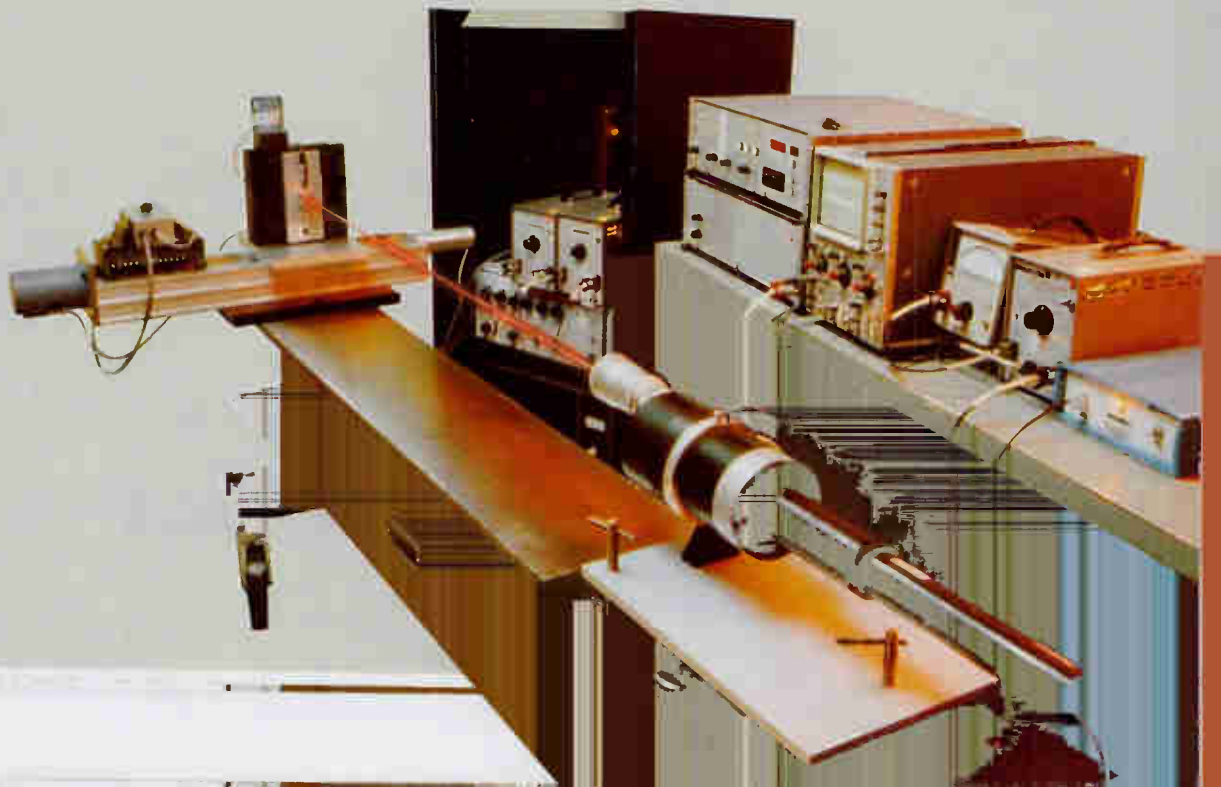
No Shure microphone was designed overnight. Nor was quality and uniformity achieved instantly. Take the heart of the microphone, the transducer, for instance. It takes a minimum of two years of intensive development, design, and engineering. It must then be manufactured using carefully selected and monitored materials, with precise tolerances and exact relationships among interdependent parts. It is built using sophisticated equipment under the guidance of experienced specialists, so that there is identical conformance to specifications from one unit to the next. When finally assembled, it must pass a battery of demanding tests to insure its ability to maintain this high level of performance under severe conditions.

Every Shure microphone goes through *all* these steps. Such attention to detail is rare, because it is costly. Yet, this is the *only* way to assure the quality of a finished product upon which you will be depending for many years to come. We *will not* take cost-cutting short cuts. We never have. We never will.



S. N. Shure
Chairman, Board of Directors

Ultra-precise laser measurements.



SHURE MICROPHONES: the sound you take for granted...because we don't

When a raging Cumberland River flooded Opryland U.S.A. many Shure microphones, as well as a large number of Shure amplifiers, mixers, and consoles, lay submerged in mucky water for days. When the waters receded, the sound technicians at Opryland washed the microphones and circuitry equipment with *very* hot, soapy water, rinsed them with hot water, blew out the water with compressed air, and submerged everything in a bath of LPS-1, a petroleum base de-wetting agent. Then, the equipment was kept under five 1000-watt studio lights day and night for three days at a temperature of 40.5°C (105°F). At the end of this ordeal, they worked!

Shure microphones have survived fires, car crashes, and earthquakes. Though scuffed up or burned externally, they still worked.

On-the-spot news teams daily cover fast-breaking stories under the worst possible conditions for their microphones—such as dense smoke and intense heat, rain, sleet, blowing debris, thundering shock waves of rocket launches, and unpredictable abuses by rioting crowds. From long experience, they know that their Shure microphones will work—and they do.

Professional vocalists depend upon their microphones much as musicians depend upon their instruments, but many don't hesitate to *throw* their Shure microphones across the stage and down on the floor—violently—as part of their live performances. They never give it a second thought. They know that Shure microphones shrug off abuse that would make others inoperative.

60 years of experience with microphones has taught us one thing: they are not always used under ideal conditions—far from it—so we develop, design, build, and test them for the worst conditions we can imagine.

We know they'll be called upon to function at humidity levels near 100%.

We know they'll be flung into equipment boxes after performances.

We know they'll be left in the direct rays of the midday sun for hours, awaiting important addresses by world-renowned dignitaries.

Speaking of dignitaries, every president since Herbert Hoover has used Shure microphones in situations as critical as war and peace announcements, as widely heard as inaugurations, and as important as news conferences. And yet, reliability and dependability are only part of the story.

Choice—not chance

Versatility in sound characteristics is another important Shure plus factor. There is no single "Shure Sound." Shure *tailors* the sound to the application.

For instance, if you are in public safety communications—a fireman, policeman, ambulance driver—you don't need, or want, high fidelity across the audible range. What you do need is highly intelligible sound in the speech range, coupled with exceptional reliability under the most adverse conditions. Shure's landmark pioneering with CONTROLLED MAGNETIC® microphone elements for use in gun turrets of battleships and inside tanks during World War II formed the basis of ongoing research and development in the highly specialized area of

speech intelligibility. That is one kind of "Shure Sound."

If you are a performer, your special needs are entirely different. As a vocalist, you may want the crisp sound that comes from the carefully placed presence peak of the Shure Unidyne or Unisphere dynamic series or the SM87 Condenser Microphone—another "Shure Sound."

As an instrumentalist, you may want the unaccentuated smoothness of the Shure SM59 Dynamic Microphone or SM98 Condenser Microphone.

Shure gives you a choice of sounds.

For the broadcaster, Shure's new field production (FP) products are a major breakthrough, specially designed for electronic newsgathering and electronic field production. The FP31 Mixer is a compact and portable microphone mixer that incorporates the features most requested by audio engineers, electronic news professionals, sportscasters, and film and video sound engineers.

If you're a sound installer, you may be interested in Shure's Automatic Microphone System. The AMS is a totally integrated system, consisting of complementary mixers and microphones that work together to solve the problems associated with multiple microphone installations. The system features direction-sensitive microphones that turn on automatically only when addressed within their own 120 degree "window of acceptance." Each microphone continuously analyzes its own local acoustic environment and automatically adjusts itself as noise levels change.

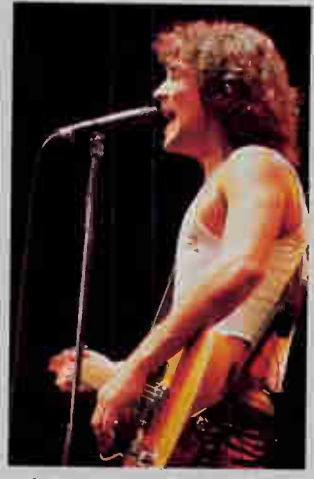
Shure also gives you the widest choice of other options, including polar patterns (cardioid, supercardioid, omnidirectional); configurations (hand-held, stand-mounted, surface-mounted, head-worn, gooseneck, lavalier, desk-top, boom-mounted); and a host of other features such as built-in windscreens, shock mounts, on-off switches, response modification switches, cables, and even case colors.

The first Shure catalog—dated 1932—was 2 pages. This one is 84 pages. No one person or installation needs every microphone in this catalog. But because of this wide selection—the broadest in the world—you will find the models that are right for you. Wherever you are using a microphone—on stage; in recording; in an auditorium, concert hall, or conference room; in a moving vehicle; on the ground, in the air, or on the sea; Shure offers you the broadest selection in the world. And to simplify selection, we offer suggestions for the most appropriate applications in the section where each microphone is individually described as well as easy-to-use charts on pages 6 and 7. If you have a special sound problem write our "Customer Services" department (or call 312/866-2553) and we'll call you back with an answer.

Shure took microphones out of the category of delicate instruments and made them practical, rugged tools for everything from a hard rock concert to an open-air symphonic concert.

If you are not a trained professional, Shure goes to great lengths to provide singular ease of use combined with rugged reliability.

The cardioid pickup pattern—first made practical by Shure in the late thirties—is very "forgiving" in the hands of an amateur. Shure found how to make this pattern symmetrical about the axis and uniform in response at all frequencies and in all planes, so the positioning of the microphone relative to the user is not critical. It's possible to move from side to side without causing audio chaos—such as extreme changes in volume or distracting changes in coloration. Feedback problems are minimized—even when an amateur is riding the gain.



In the hands of an experienced user, the same microphone has such uniform and predictable characteristics that it can be worked like a fine musical instrument—close to the mouth for accented proximity effect, farther away for smooth diminuendos... or it can be "aimed" at the subject of an impromptu, on-the-run news interview with assurance of clear, intelligible sound.

Shure microphones are built to take hard knocks and prolonged vibrations. Pack them in the trunk of a car with no special protection and drive dusty back roads in searing summer heat, or travel the length of the Alcan Highway in winter with assurance that they will perform when their time comes. In fact, you can drop them six feet onto a hardwood floor. (Shure does just that as a standard test...more about that and other tests on the inside back cover.)

MICROPHONE SPECIFICATIONS . . . and what they mean

The specifications provided for each Shure microphone in this catalog 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. By reviewing and comparing specifications, you will be able to select the proper Shure microphone that best meets your performance requirements.

Below is a sample listing of Shure microphone specifications—along with the frequency response and polar patterns—taken from the SM58 Because specifications are worded in technical terms,

Microphone Types:

Shure Microphones are classified by the principle of operation of the microphone cartridge, i.e., the method by which the microphone converts acoustical energy to electrical energy.


PROFESSIONAL PERFORMANCE/unidirectional dynamic microphone

SM58

specifications

SM58

Dynamic: In a dynamic microphone, a coil of wire, fastened to a diaphragm moves in a magnetic field in response to sound waves arriving at the diaphragm. This motion induces minute voltages in the coil. These voltages constitute the electrical output of the microphone.

Shure dynamic microphones are capable of response to the full range of audio frequencies and are designed for every use from studio recording to CB radio. These microphones are not only rugged, but also reliable, under all conditions of heat and humidity, indoors or out.

Ribbon: Similar to the dynamic, the ribbon microphone has a thin strip of metal foil that functions as both a diaphragm and one-turn coil. Electrical signals are induced in the ribbon as it moves through a magnetic field in response to sound waves.

Shure ribbon microphones are excellent for both voice and music, for indoor broadcast, recording and sound reinforcement. They provide superior sound fidelity and are quite rugged, except for their susceptibility to damage from fast-moving air currents. This limits them to indoor use.

Condenser: The diaphragm in a condenser microphone serves as one plate of a variable capacitor. Diaphragm motion due to sound waves varies the spacing between the capacitor plates, changing the capacitance and, through additional circuitry, generating minute voltage changes. This mode of operation requires an integral impedance-converting preamplifier and external power source.

Shure condenser microphones have earned the reputation of being among the most rugged and reliable condenser microphones in the industry. Their exceptional performance and features make them ideal for voice or music in applications where the highest quality sound is required.

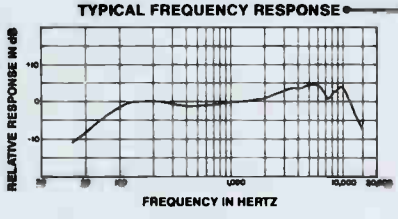
CONTROLLED MAGNETIC®: CONTROLLED MAGNETIC® microphones contain a diaphragm that moves an iron armature which conducts a magnetic field through a stationary coil to generate an electrical signal. Their frequency response is generally "tailored," excluding both very low and very high frequencies, to suit the requirements of voice communications systems.

Shure CONTROLLED MAGNETIC® microphones are ideal for radio communications and paging systems where reliable performance and modest price are prime considerations. They are extremely rugged, provide high output, and can be used under all conditions of heat and humidity, indoors and out.

Ceramic: In ceramic microphones, diaphragm movement is coupled to a ceramic element having piezoelectric properties—the ability to generate a voltage as a result of applied force. The stress on the ceramic element results in the generation of minute voltage variations between surfaces of the element. Shure ceramic microphones are good general-purpose types, with limited high-frequency response.

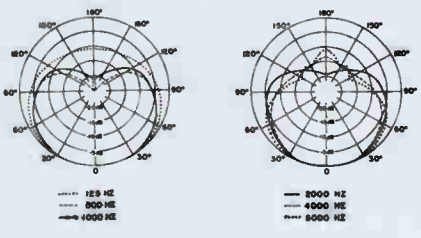
Carbon: Oldest of all microphones, the carbon microphone has a cylindrical cavity containing tiny carbon granules suspended between a conductive diaphragm and a conductive backplate. Sound waves striking the diaphragm compress the granules, varying their resistance to a current from a battery or external power source. The changing resistance modulates the current, resulting in an audio output voltage.

Shure carbon microphones have a tailored frequency response, making them ideal for use in communications systems. They are quite rugged, with high output, and can be used in virtually any environment.



Frequency Response Curve:

The frequency response curve shown for each Shure microphone provides an accurate picture of the microphone's range and response. The curve represents the output voltage, expressed in dB (decibels) versus frequency in hertz. Note that the frequency scale is truly logarithmic, the voltage scale is uniform, and the scales are in the proportion recommended by the Electronic Industries Association (EIA). Where important to proper usage of the microphone, Shure response curves show normal response, response at closer distances, and selectable response effect.



Polar Pattern Charts:

Polar patterns are a visual representation of a microphone's pickup pattern: unidirectional (cardioid); omnidirectional; bidirectional—see Page 5 for an explanation of the importance of directionality. Because directional characteristics may vary with frequency, Shure shows the pickup pattern at several frequencies—often as many as **six** frequencies.

Also, most Shure unidirectional and bidirectional microphones have pickup patterns that are uniform about their axes. For instance, imagine a perfectly round balloon—now, poke your finger into one side of it and push in hard . . . the resultant configuration closely represents the symmetrical pickup pattern of a cardioid microphone.

Ideally, this pattern should be broad at the front, uniform at all frequencies—with uniform sound quality at any point within the pattern, off-axis as well as on-axis. Otherwise, movements of the performer about the axis tend to distort the sound. Shure microphones come very close to reaching the ideal . . . their patterns are uniform with frequency and symmetrical about the axis.

their meanings may be misunderstood by the nonprofessional.

For this reason, we have provided a brief explanation of each of these terms in nontechnical language, to clarify their meaning and thereby better enable you to select the microphone most in line with your application requirements.

(Note: If additional specifications and technical description of a particular Shure microphone are required, write Shure Brothers, Attention: Customer Services, requesting the technical data sheet of that model. For a complete list of the Shure microphone and circuitry product data sheets and their corresponding "ordering number" please refer to page 83.)

Frequency Response:

This is the relative output of the microphone at all frequencies in the audio spectrum, specified in a range, such as 50 to 15,000 Hz (hertz). Because of the variety of microphone applications, the frequency response and range are usually "shaped" or "tailored" to some particular use. For instance, a musical instrument microphone is ideally "flat" across its full range, whereas a vocal microphone may have a "presence peak" in its voice-frequency area, so that the vocalist stands out from the instruments.

Similarly, microphones for musical instruments are "wide range" to capture the full output, including rich overtones and harmonics of the instruments. The frequency response of a communications microphone is carefully tailored to the voice-frequency spectrum to eliminate unwanted high- and low-frequency background noise.

Polar Pattern:

The relative sensitivity of a microphone to sounds arriving from different directions is collectively referred to as its polar or pickup pattern. A **non-directional** or **omnidirectional** microphone displays little variation in output voltage as a sound source moves around it. The **unidirectional** type of microphone is least sensitive to sounds originating at its rear, has reduced sensitivity to sounds from its sides, and is most sensitive to sounds from the front. The most common form of this microphone is the **cardioid** (heart-shaped) pattern, which has a null at its rear and is half as sensitive to sounds arriving from the sides as to sounds from the front. The **supercardioid** microphone is somewhat more directional, being about 40% as sensitive to sounds from the sides and rear as it is to sounds from the front. **Bidirectional** (figure-eight) microphones are equally sensitive to sounds from the front and rear, and least sensitive to sound from the sides. A special case of directionality is the **noise-canceling** microphone; in addition to being insensitive to sounds from the sides, it discriminates against distant sounds in favor of near sound sources.

Impedance Rating:

Selecting the proper microphone impedance versus the input impedance of a mixer, amplifier, or recorder is done to: (1) maximize the microphone output signal; (2) preserve the full frequency response; and (3) minimize pickup of unwanted signals. In general, for optimum performance, the **actual** equipment input impedance should be five to 10 times that of the microphone.

Microphone impedance is specified as a rating or rated number followed by the actual impedance in ohms. Common ratings are: 150 ohms (actual impedance may be from 75 to 300 ohms), 600 ohms (actual impedance from 300 to 1,200 ohms), 2,400 ohms (actual impedance from 1,200 to 4,800 ohms), and high impedance (actual impedance greater than 10,000 ohms).

High-impedance microphones have a higher signal voltage than low-impedance microphones, but are more susceptible to hum and buzz pickup and high-frequency loss in their cables. For this reason, high-impedance microphones are generally limited to cable lengths under 20 feet. For longer cable runs, low-impedance microphones will avoid these problems.

Output Level:

The output level (sensitivity) of a microphone is an expression of the voltage or power output for a given sound pressure. The **open circuit voltage** is an "unloaded" figure, that is, there is no voltage drop due to the measuring instrument. The output is specified in both volts and decibels (dB) for convenience. A typical open circuit voltage for a low-impedance microphone could read: −80 dB re 1V/microbar, or −80 dBV. This means that for a sound pressure of 1 microbar (74 dB SPL—the pressure produced by a normal speaking voice two or three feet away), the unloaded output voltage would be −80 dB with 0 dB equal to 1 volt. A less sensitive microphone would have a larger negative dB number (e.g., −82 dB), and a more sensitive microphone would have a smaller negative number (e.g., −78 dB).

In general, the open circuit voltage of high-impedance microphones is about 10 times (20 dB) greater than that of low-impedance microphones, and the impedance is about 100 times greater. The significantly lower impedance of low-impedance microphones enables the use of long cables without signal loss or change in frequency response.

Model: **SM58**
Frequency Response: .....50 to 15 000 Hz
Polar Pattern: .....Cardioid (unidirectional)
Impedance Rating: .....Dual 38/150 ohms
Output Level
Open Circuit Voltage: .....0 08 mV (−81 5 dB 0 dB = 1 V/μbar) 38 ohms
0 18 mV (−75 0 dB 0 dB = 1V/μbar) 150 ohms
Power Level: .....−56 0 dB 0 dB = 1mW/10 μbar
Cable: .....SM58 6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
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: .....162mm L × 51mm Dia (6⅜ x 2 in.)
Net Weight: .....298 grams (10½ oz)
Packaged Weight: .....1 14 kg (2 lb 8 oz)
Supplied Accessories: .....Swivel adapter connector locking kit vinyl storage bag

The **power level** is specified with a matched load, for instance, an actual 200-ohm microphone matched to an actual 200-ohm amplifier input impedance. A power level for this microphone might be: −60 dB re 1 mW/10 microbars. This means that the maximum power delivered is −60 dB with 0 dB equal to 1 milliwatt for a 10-microbar sound pressure (94 dB SPL). Note that the power output for a microphone with either low- or high-impedance would be about the same.

Hum Pickup/mOe:

Hum (60 Hz or its harmonics) from fluorescent lights, amplifiers, power cables, and other electromagnetic sources can be picked up by a microphone voice coil, transformer, or by an ungrounded or unshielded case. A humbucking coil greatly reduces pickup of magnetic hum, and careful attention to grounding and shielding in the design reduces hum pickup through the case.

Magnetic hum pickup is specified as sound pressure equivalent (expressed in dB SPL) from a 1-millioersted (mOe) hum field. For instance, a hum pickup of 17 dB equivalent SPL means that the microphone's hum output will be the same as from an acoustic source of 17 dB SPL: a soft whisper about 10 feet away. A 1-millioersted field roughly corresponds to the hum field found in a typical studio environment.

Cable:

Cables supplied with Shure low-impedance microphones are generally a two-conductor shielded, balanced line cable. The equipment end of these cables are usually equipped with a three-pin professional audio connector to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connectors, thus enabling the user to select the connector required to properly mate with the equipment.

Cables supplied with Shure high-impedance microphones are generally single conductor shielded. The equipment ends of these cables are generally equipped with a standard phone plug.

SELECTION GUIDE FOR SHURE PROFESSIONAL MICROPHONES

Omnidirectional

BRIGHT SOUND

SM61
hand-held

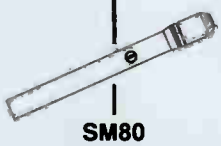
SM11
lavalier

NATURAL SOUND

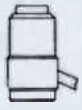
SM63
high output, small size

SM63L
high output long-reach handle

SM76
probe style



SM80
condenser



SM83
lavalier, condenser

SM90
low-profile

Unidirectional

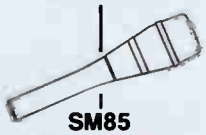
BRIGHT SOUND

POP FILTER

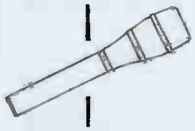
SM7
adjustable response

SM58
world standard

SM78
small size, lightweight,



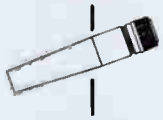
SM85
hand-held condenser



SM96
phantom battery condenser

PROBE STYLE

SM56
internal shock mount, stand mount



SM57
for voice or music

SM77
small size, lightweight,

SM94
phantom battery condenser

NATURAL SOUND

WIDE RANGE

SM62
small size

SM10A
head-worn, close-talking

WIDER RANGE

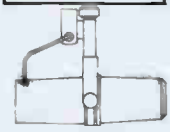
SM5B
boom mountable

SM48
smooth response

SM59
super shock mount

SM98
miniature instrument condenser

WIDEST RANGE



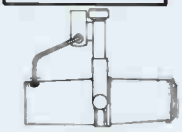
SM7
adjustable response

SM81
condenser

SM87
supercardioid condenser

SM91
low-profile

MELLOW SOUND

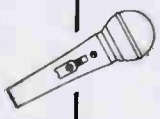
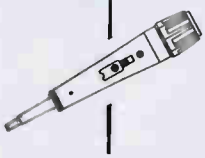
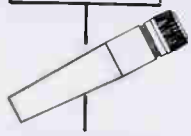
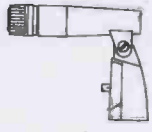


SM7
adjustable response

NOTE:
All microphones are Dynamic unless otherwise indicated.

SELECTION GUIDE FOR SHURE GENERAL PURPOSE MICROPHONES

Unidirectional

- **GOOD QUALITY**
  - **POP FILTER**
    - 
    - **588 Series** bright sound
  - **PROBE STYLE**
    - 
    - **515 Series** bright sound
- **BETTER QUALITY**
  - **PROBE STYLE**
    - 
    - **586 Series** bright sound
- **BEST QUALITY**
  - **POP FILTER**
    - 
    - **565 Series** bright sound
    - 
    - **SM62** natural sound
  - **PROBE STYLE**
    - 
    - **545 Series** bright sound
    - 
    - **545SH** integral stand mount
    - 
    - **SM59** natural sound
  - **SURFACE MOUNT**
    - 
    - **819** low-profile

Omnidirectional

- **GOOD QUALITY**
  - 
  - **575 Series** natural sound
- **BETTER QUALITY**
  - **POP FILTER**
    - 
    - **579SB** slim handle
  - **PROBE STYLE**
    - 
    - **571** miniature
- **BEST QUALITY**
  - **SURFACE MOUNT**
    - 
    - **809** low-profile
  - **LAVALIER**
    - 
    - **838** condenser

NOTE:
All microphones are Dynamic unless otherwise indicated.

ABOUT SHURE PROFESSIONAL STUDIO MICROPHONES

The microphones featured in this section were engineered specifically for professional use in broadcasting, recording, motion picture and highest quality sound reinforcement systems. You'll find a complete line of microphones, each with a distinctive sound or physical characteristic optimized for particular applications, voices, or effects. For outstanding performance in applications as diverse as radio and TV, studio recording, hotel and auditorium sound reinforcement, and legislative chambers, professionals choose, and use, Shure.

All professional studio microphones are made to strict quality control standards, ensuring consistent performance in each model series. All are finished in an extremely durable, non-glare finish that resists chipping and peeling. All are balanced, low impedance and are equipped with three-pin professional audio connectors.

In addition to the Professional Studio Microphones found in this section, you may wish to examine the microphones found in the rest of this catalog, particularly in the Professional Performance Microphones Section. (Page 20)

On-camera talent like the SM83 (Page 17) because its electronics provide for a dip in the mid-range, giving both male and female voices a smoother, more natural sound.

The Shure SM63L (Page 13). The hard-working microphone for the working press.

The Shure SM82 (Page 16) Cardioid Condenser Microphone. It's the only line-level microphone tough enough for the rigors of day to day remote ENG broadcast assignments.

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.

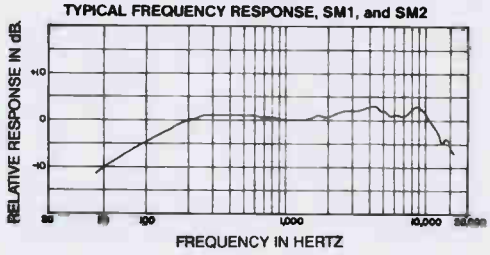
In addition to comfort, durability and performance, the SM1 and SM2 offer versatility—the cable is detachable allowing quick and easy cable changes for mono, stereo or split feed headphone functions.

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

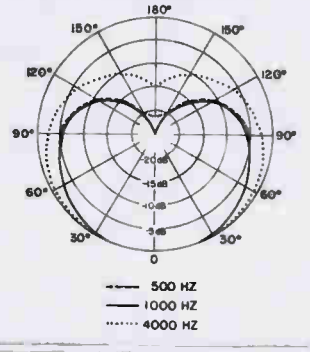
specifications

	SM1 and SM2
Models:	
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 = 1mW/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 FREQUENCY RESPONSE, SM1, and SM2



TYPICAL POLAR PATTERN



SM5B

Specifically designed to minimize boom microphone problems in television and motion picture sound stage and location recording. Also excellent for voice-over and radio D.J. use. A smooth, wide-range frequency response with moderate presence rise makes it especially suitable for vocal pickup as well as scoring assignments. The SM5B has a cardioid pickup pattern with exemplary off-axis uniformity, even at the extreme low end, giving minimal coloration and maximum rejection of unwanted sounds.

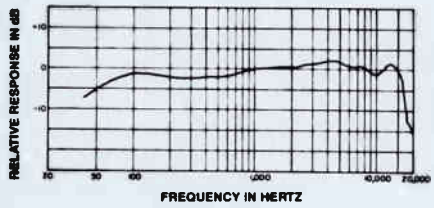
A highly effective integral windscreen completely surrounds the microphone suspension elements to provide maximum wind noise suppression with fast boom swings or in outdoor locations. A humbucking coil and a balanced circuit combined with an absence of transformers and response-correcting inductors make the SM5B highly resistant to electrical noise, even in extreme hum fields around studio or stage lighting.

The exposed metal parts of the microphone are finished in unobtrusive non-glare dark gray; the front windscreen is light gray open-cell foam; the rear is dark gray foam.

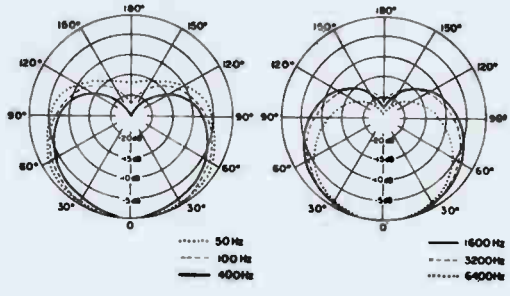
specifications

	SM5B
Model:	
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.11 mV (−79.5 dB, 0 dB = 1V/μbar)
Power Level:	−57.5 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/m0e:	24 dB SPL equivalent
Connector:	Three-pin professional audio
Dimensions:	208 mm H x 251 mm W x 128 mm Dia. (8-3/16 x 9-29/32 x 5-1/32 in.)
Net Weight:	964 grams (2 lb, 2 oz)
Supplied Accessories:	Stand adapter, boom adapter
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE, SM5B



TYPICAL POLAR PATTERNS, SM5B



SM7

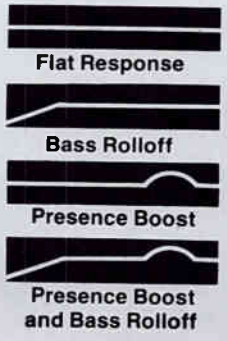
The SM7, designed in conjunction with professional users, is among the finest studio professional dynamic microphones in use today. Its "smooth and silky" sound has made it extremely popular for voice-over recording in radio and television work. It is also an excellent microphone for use with either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

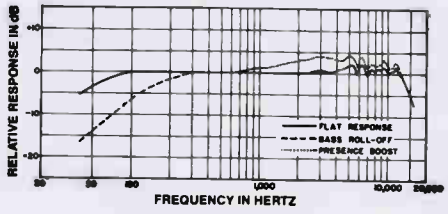
VISUAL RESPONSE TAILORING



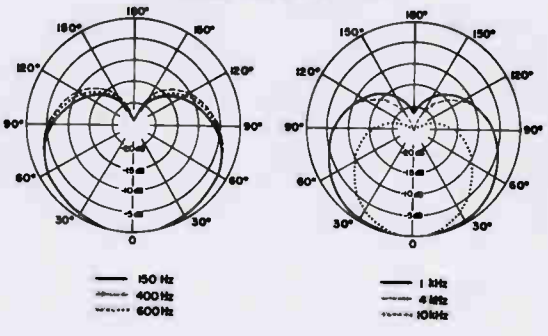
specifications

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
Optional Accessories: ..... See Pages 64-65

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



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.

SM76

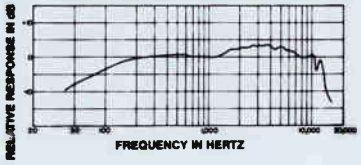
A slender microphone with an extremely wide, smooth frequency response, the SM76 is ideal for studio and remote use in television, radio, and professional recording, and is suitable for pickup of instruments as varied as a delicate acoustic guitar and a full-throated pipe organ. The inconspicuous dark gray enamelled steel case can be hand-held or used on a stand, indoors or out. Although lightweight, the SM76 is dependable and extremely rugged—it will continue to perform up to its original specifications even after long term rigorous use. Supplied cable has three-socket connector at microphone end only.

specifications

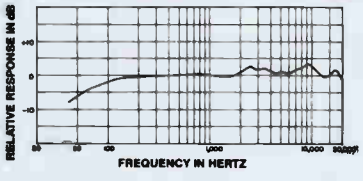
Model:	**SM61**
Frequency Response:	50 to 14,000 Hz
Polar Pattern:	Omnidirectional
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.08 mV (−82.0 dB, 0 dB = 1 V/μbar)
Power Level:	−60.5 dB, 0 dB = 1mW/10μbar
Dimensions:	181 mm L x 40 mm Dia. (7 1/8 x 1 17/32 in.)
Net Weight:	147 grams (5.2 oz)
Supplied Accessories:	Windscreen, swivel adapter, vinyl storage bag
Optional Accessories:	See Pages 64-65

Model:	**SM76**
Frequency Response:	45 to 20,000 Hz
Polar Pattern:	Omnidirectional
Impedance Rating:	Dual 38/150 ohms
Output Level	0.04 mV (−88.0 dB, 0 dB = 1 V/μbar) 38 ohms
Open Circuit Voltage:	0.08 mV (−81.5 dB, 0 dV = 1 V/μbar) 150 ohms
Power Level:	−61.0 dB, 0 dB = 1mW/10μbar
Cable:	6.1 m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	210 mm L x 19.8 mm Dia. (8 9/16 x 1 25/32 in.)
Net Weight:	198 grams (7 oz)
Supplied Accessories:	Swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE, SM61



TYPICAL FREQUENCY RESPONSE, SM76



SM63 and SM63L

The SM63 is a small, elegant, rugged microphone with very high output — up to 6 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 handheld 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 "boominess." The Shure-designed and patented mechano-pneumatic shock mount isolation system cuts handling noise to an unobtrusive level and an effective humbucking 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.

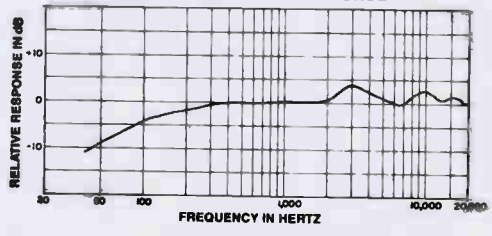
Both the SM63 and SM63L offer an innovative blend of handsome appearance and broadcast quality performance. They are beautifully finished in durable champagne enamel and are supplied with matching swivel adapter.

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

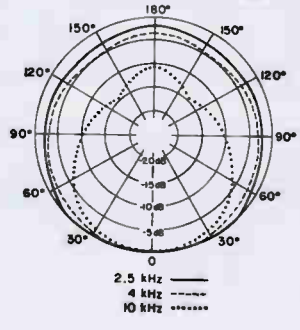
specifications

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 = 1 mW/10 μbar
Hum Pickup/m0e:	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
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERN



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 mininal. 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 wthout 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

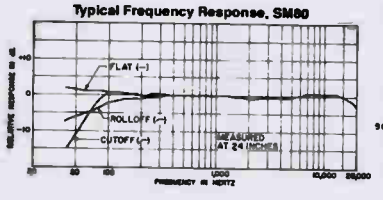
- professional recording
- broadcast
- motion picture recording
- critical sound reinforcement

- 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

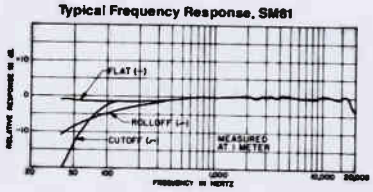
Model:	**SM80**	**SM81**
Frequency Response:	20 to 20,000 Hz	20 to 20,000 Hz
Polar Pattern:	Omnidirectional	Cardioid (unidirectional)
Impedance Rating:	150 ohms (minimum recommended load: 800 ohms)	150 ohms (minimum recommended load: 800 ohms)
Output Level		
Open Circuit Voltage:	0.56 mV (−65.0 dB, 0 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) 1t0-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% (131 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/m0e:	− 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-$^{11}/_{32}$ x $^{15}/_{16}$ in.)	212 mm L x 23.5 mm Dia (8-11/32 x 15/16 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
Optional Accessories:	See Pages 64-65	See Pages 64-65

Typical Frequency Response, SM80

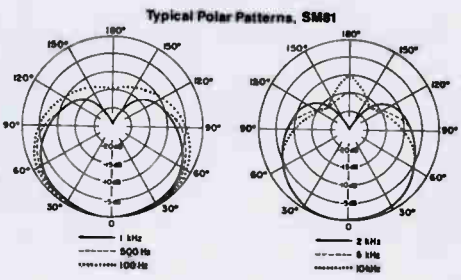


Typical Polar Pattern, SM80

Typical Frequency Response, SM81



Typical Polar Patterns, SM81



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 line 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 simplex-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.

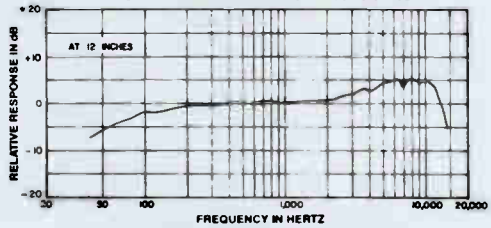
The SM82 features very low mechanical handling noise, rugged construction and reliable operation over a wide range of temperatures and humidity. The integral wind and pop filter is extremely effective for normal wind and breath pop noise and an accessory windscreen is supplied for protection against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

SM82-LC without cable

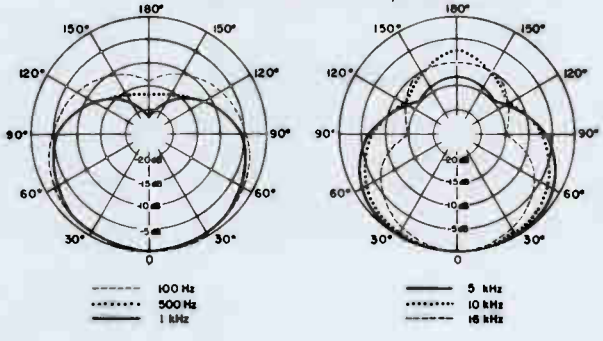
specifications

Model:	**SM82**
Frequency Response:	40 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance:	250 ohms (actual)
Output Level	
Open Circuit Voltage:	−19 dBV (0.11V) for 74 dB SPL (0 dBV = 1 volt)
Power Level:	0 dBm into 600 ohms for 94 dB SPL (0 dBm = 1 mW in 600 ohms)
Hum Sensitivity:	Less than −128 dBm in 1 millioersted field
Output Noise:	Equivalent to 35 dB SPL with weighting per DIN 45405
Power Supply	
Battery:	Type: 9.8V Mercury (Eveready E177 or equivalent) Current Drain: 8mA
Simplex:	Voltage: 15 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$^{27}/_{32}$ x 1$^{3}/_{4}$ in.)
Net Weight:	406 grams (14.4 oz) with battery
Supplied Accessories:	Windscreen, swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM82



TYPICAL POLAR PATTERNS, SM82



SM83

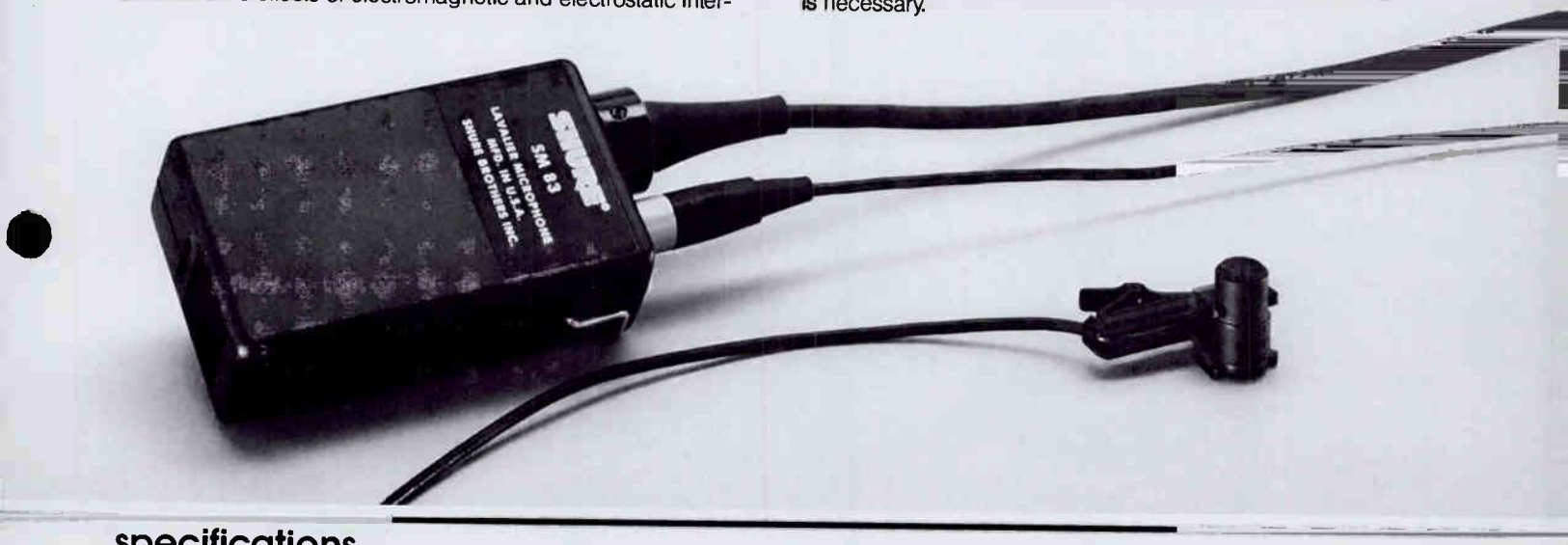
The SM83 has been specifically designed to provide superior quality sound reproduction in professional broadcasting, film, and related sound reinforcement applications. It features a wide-range frequency response, specially tailored to provide more natural sound. This response is achieved by an electronically 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 PS1 Power Supply) or virtually any microphone power supply providing 5 to 52 Vdc simplex voltage. And, the amplifier has extensive RF and hum shielding to reduce the effects of electromagnetic and electrostatic interference. 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

	SM83
Model:	
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/μbar)
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 (29/32 x 1 15/16 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 Simplex 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

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.

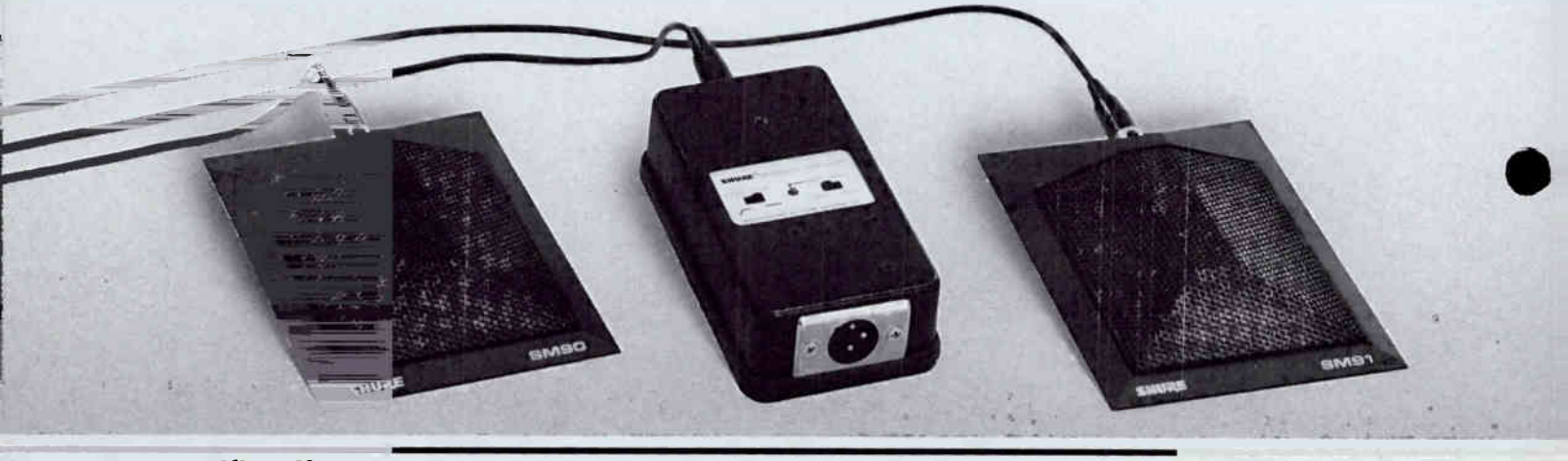
Because of its half-cardioid pattern, the SM91 discriminates against sounds originating from the rear, suiting the SM91 for conditions where an omnidirectional "pressure zone" type surface-mounted microphone would be unsuitable. In addition, the unidirectional pattern permits the microphone to operate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

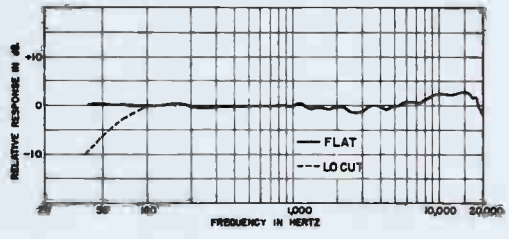
Both the SM90 and the SM91 are supplied with a low distortion preamplifier which powers the microphones either by batteries or phantom power. A low frequency cut-off switch allows tailoring the response of the SM90 or SM91 to suit the need.



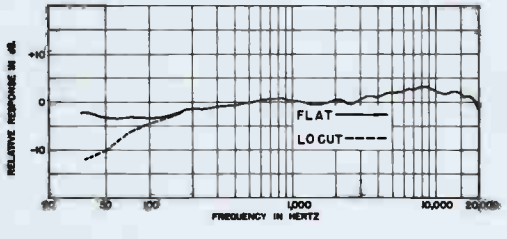
specifications

	SM90 and SM91
Models:	
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 (−66.0 dB, 0 dB = 1 V/μbar)
	SM91: 0.35 mV (−69.0 dB, 0 dB = 1 V/μbar)
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:	Battery: Two, 9 Vdc alkaline (approximately 300 hours continuous with fresh batteries) Simplex 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 (⅜ x 3¾ x 5³⁄₃₂ in.)
	Preamplifier: 27 mm H x 60.8 mm W x 112 mm D (1 ⁹⁄₁₆ x 2 ²⁵⁄₆₄ x 4 ²⁵⁄₆₄ in.)

TYPICAL FREQUENCY RESPONSE, SM90



TYPICAL FREQUENCY RESPONSE, SM91

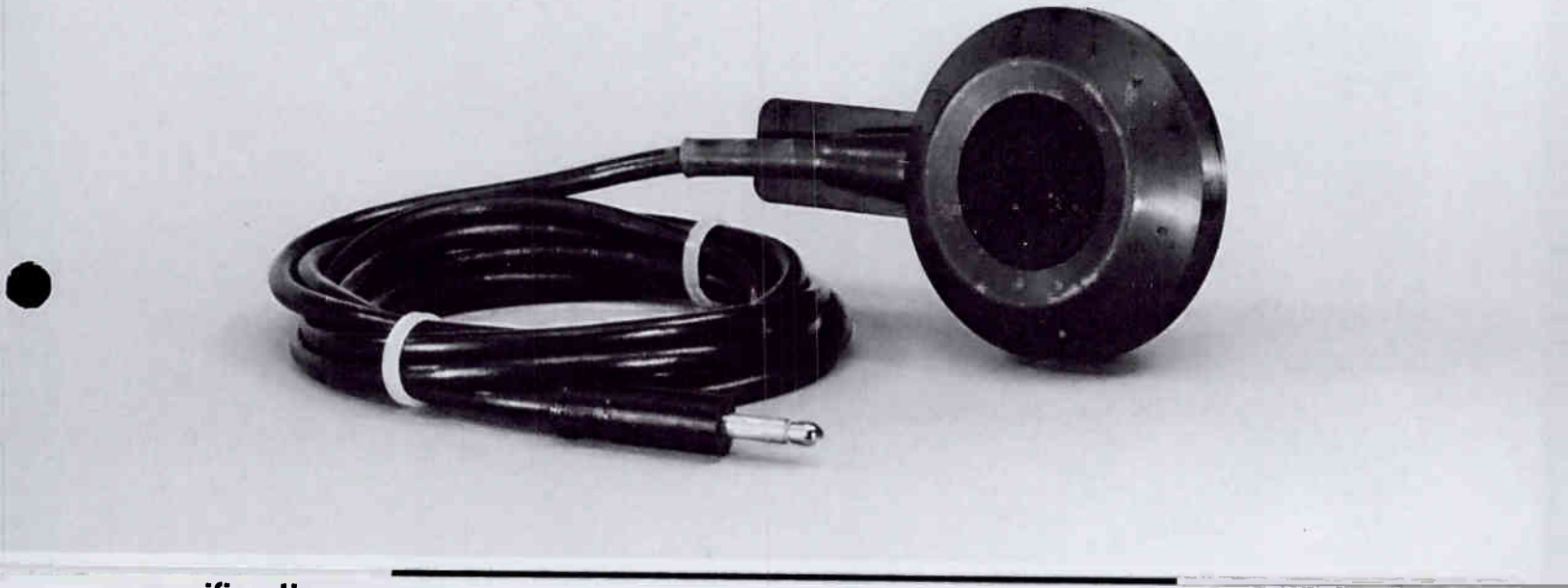


50AC

The 50AC is designed to acoustically couple tape-recorded information to a telephone handset transmitter. This is most useful in recorded interview broadcast applications when a tape recorder cannot be "hard-wired" to a telephone line. A simple strap assembly easily attaches and holds the 50AC in place on almost any telephone handset. Its rubber case seals the 50AC to the telephone, blocking out external sounds, thereby enhancing the intelligibility of the transmitted information. Depressing an integral lever breaks the seal and permits the operator to comment or add supplemental material without interrupting the tape or removing the 50AC from the handset.

The 50AC can also be used in real-time broadcast applications with a mixer that has a line-level output. In addition, the 50AC can be used as a tape recorder microphone; its frequency response approximates that of a telephone.

The 50AC consists of a dynamic transducer cartridge in a small, lightweight molded rubber and plastic case. The attached 1.5m (5 ft) cable terminates in a ⅛ in. "mini-plug" connector for attachment to the earphone or external speaker jack of most portable cassette recorders.



specifications

Model: **50AC**
Frequency Response: ..... 300 to 3,000 Hz
Impedance Rating
As Acoustic Coupler: ..... 200 ohms
As Microphone: ..... 150 ohms
Output Level
As Acoustic Coupler: ..... 119 dB SPL at 1 Vrms into 6 cc cavity
As Microphone
Open Circuit Voltage: ..... 0.22 mV (−73.0 dB, 0 dB = 1 V/μbar)
Power Level: ..... −52.0 dB, 0 dB = 1 mW/10 μbar
Cable: ..... 1.5m (5 ft) single-conductor, shielded, with "mini-plug" miniature phone plug
Dimensions: ..... 84 mm L x 27 mm H x 51 mm Dia. ($3^{5}/_{16}$ x $1^{1}/_{16}$ x 2 in.)
Net Weight: ..... 112 grams (3.95 oz)

Entertainers from every corner of the music world rely on Shure Professional Performance Microphones to complement their performance.

Dolly Parton

The Shure SM Professional Performance Series are microphones the professionals stand behind. Nowhere is reliance on Shure quality more evident than in the world of entertainment. On stages everywhere, music legends like Mick Jagger, Judy Collins, Ronnie Milsap, Tina Turner, Eddie Rabbitt, Dolly Parton, Charles Aznavour, Billy Squier, Paul Anka, Dionne Warwick, Roger Daltrey and Peter Townshend insist on Shure microphones.

Shure microphones continually perform up to tough standards because they are manufactured with an intense commitment to quality—using carefully selected and monitored materials that are assembled with the greatest degree of care and accuracy. The shock mount in Shure SM Professional Performance Microphones is made of three specially selected elastomers with damping characteristics that provide optimum handling noise reduction. Advanced pop filters are designed into every Shure SM Professional Performance Microphone to greatly reduce explosive wind and breath sounds—without altering the microphone's sound integrity. The diaphragms in all dynamic SM microphones are superior to those found in competitive brands, because they are specially laminated with strategically placed spokes and tangential grooves which stabilize the diaphragm, resulting in a minimal number of breakup modes and truer reproduction of the voice or instrument.

In this section, you'll find the complete line of Shure SM Professional Performance Microphones, each with a distinctive sound or physical characteristic. You'll also discover the superior quality and rugged reliability that have made these microphones The Sound of the Professionals . . . Worldwide.

Mick Jagger • Rolling Stones

Keith Knudsen

Dionne Warwick

SM17

The Shure Model SM17 is the first miniature microphone designed specifically for use on acoustic musical instruments. It is a quality dynamic microphone, superior to a direct contact pickup in its strong, natural, acoustically live sound, with excellent separation and remarkable freedom from overload and distortion—even at high sound levels. Yet, it is scarcely longer than a paperclip!

The SM17 may be attached to most instruments with no modifications. It is supplied with an expansion mount for violins, violas, or cellos; and a cushioned spring clip for acoustic guitars, string basses, or any other instrument with a convenient surface (as the bell of a brass instrument).

The SM17 case is made of aluminum for light weight and strength. The attached 3m (10 ft), small-diameter cable is extremely flexible, with a three-pin professional audio connector at the equipment end. Two cable clips for securing the cable to flat surfaces are supplied.

SM10A, SM12A and SM14A

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, SM12A and SM14A 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, SM12A and SM14A 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 earphone.
SM14A-CN Features two earphones with independent signal feeds.

HERBIE HANCOCK

specifications

	SM17	SM10A, SM12A, and SM14A
Frequency Response:	50 to 15,000 Hz	50 to 15,000 Hz
Polar Pattern:	Omnidirectional	Cardioid (unidirectional)
Impedance Rating:	150 ohms	150 ohms
Output Level		
Open Circuit Voltage:	0.06 mV (−85.0 dB, 0 dB = 1V/μbar)	4.5 mV (−47.0 dB, 0 dB = 1V/100 μbars)
Power Level:	−64.0 dB, 0 dB = 1 mW/10 μbar	−66.0 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/mOe:	35.3 dB SPL equivalent	38.4 SPL equivalent
Cable:	Attached 3m (10 ft), two-conductor shielded with three-pin professional audio connector at equipment end	SM10A: Attached 1.5m (5 ft) two-conductor shielded with three-pin professional audio connector at equipment end. SM12A, SM14A: 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. SM14A also furnished with 2.9m (9.5 ft) two-conductor cable attached to second receiver.
Dimensions:		
Microphone:	38.1 mm L x 14.7 mm Dia. (1½ x ⅝ in.)	14 mm H x 15.9 mm Dia. (⅝ x ⅝ in.)
Boom:		203 mm L (8 in.)
Net Weight:	7.8 grams (0.28 oz) less cable	SM10A: 78 grams (2.7 oz); SM12A: 84 grams (3 oz); SM14A: 103 grams (3.5 oz);
Supplied Accessories:	Expansion mount with three bushings, clip, cable clips	Connector belt clips, foam windscreen, storage/carrying case SM10A also supplied with headphone adapter plate
Optional Accessories:	See Pages 64-65	See Pages 64-65

SM48

The SM48 is a low-impedance, unidirectional dynamic vocal microphone equipped with its own specially designed Shure cartridge. Offering much of the performance and all of the durability of its legendary big brother the SM58, the SM48 is equally at home in live sound reinforcement (both music and speech), recording studios, remote pickups, and broadcasting environments.

The SM48 utilizes a new highly efficient cartridge shock mount, which reduces handling and stand noise dramatically (over 10 dB quieter than many competitive models). Also featured is an extremely smooth peak-free frequency response with a slight mid-range presence rise for the enhanced vocal intelligibility Shure is famous for. A built-in spherical windscreen takes the "pop" out of closeup vocal use, and minimizes breath and wind noise pickup. The uniform cardioid pickup pattern greatly reduces off-axis coloration and rejects background noise to permit higher sound system gain before feedback.

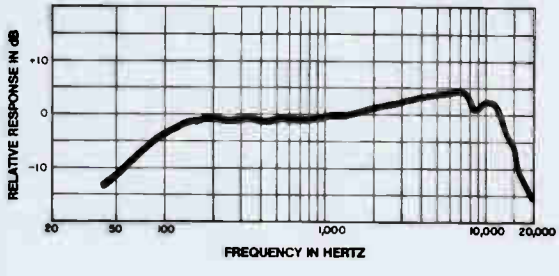
Traditional Shure quality has also been built into the SM48. Subjected to the same rigorous testing as all Shure SM microphones, the SM48 is a rugged, dependable, and consistent performer. In use, superior balance and weight distribution make the SM48 most comfortable in hand-held applications. The non-glare gray handle finish and satin chrome grille provide for a professional on-stage appearance.

SM48-LC Supplied without cable only

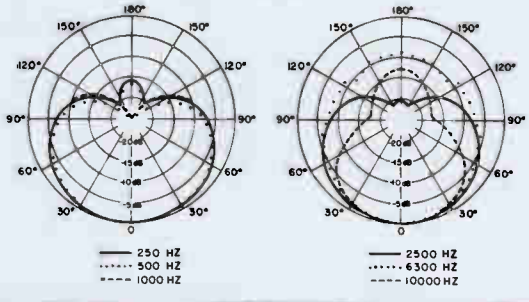
specifications

	SM48
Model:	
Frequency Response:	55 to 14,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms (for connection to microphone inputs rated at 19 to 300 ohms)
Output Level	
Open Circuit Voltage:	0.13 mV (−77.5 dB, 0 dB=1 V/μbar)
Power Level:	−59 dB, 0 dB=1 mW/10 μbar
Dimensions:	166 mm L x 54.2 mm Dia. (6 17/32 x 2 9/64 in.)
Net Weight:	370 grams (13.1 oz.)
Supplied Accessories:	Swivel adapter and zippered carrying bag.
Optional Accessories	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM48



TYPICAL POLAR PATTERNS



SM94

Musicians and recording engineers looking for a realistically-priced yet high-quality condenser microphone for instrument miking need look no further. Shure's SM94 is designed to meet their most stringent requirements.

The SM94 has the kind of performance, reliability, and engineering excellence built into the very finest, world-class studio condenser microphones, but at considerably lower cost. Its wide-range, smooth, flat frequency response (see chart below) has no presence boost or low-end rolloff, making it an ideal choice for live instrument miking or recording. It's equally at home in sound reinforcement systems and recording studios. And, with the addition of an optional windscreen (A3WS), the SM94 makes a fine microphone for vocalists.

The SM94's cardioid polar pattern is exceptionally smooth and uniform—at all frequencies. And it's the most noise-free condenser microphone available in its price range. That's because its improved elastomer "space frame" shock mount and Shure-quality circuitry design make it practically immune to handling noise, hum, and RF interference.

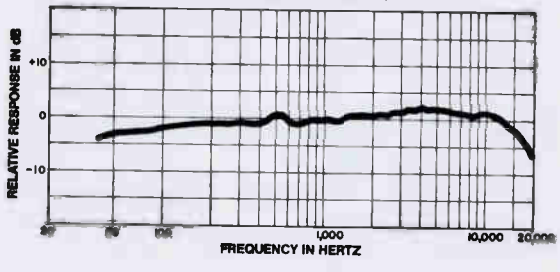
You can expect detailed, lifelike, low-distortion sound and condenser-quality transient reproduction from the SM94. It can be used at sound pressure levels up to 141 dB (800-ohm load) and may be powered by standard phantom power supplies or by an internal 1.5-volt AA battery. You'll also find the SM94 to be an exceptionally rugged and reliable microphone, usable over a wide range of temperature and humidity conditions. A swivel adapter and vinyl storage bag are included.

SM94-LC without cable

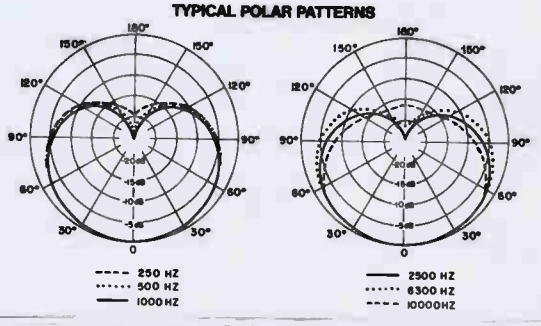
specifications

	SM94
Model:	
Frequency Response:	40 to 16,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms (recommended minimum load impedance: 800 ohms)
Output Level	
Open Circuit Voltage:	−69 dB (phantom), −70 dB (battery), (0.35 mV) (0 dB=1V per microbar)
Hum Pickup:	−3 dB equivalent SPL in a 1 millioerstad field (60 Hz)
Dimensions:	190.5 mm L X 27.7 mm Dia. (7½ X 1 3/32 in.)
Net Weight:	250 grams (8.8 oz.) less battery
Packaged Weight:	957 grams (2 lb. 1½ oz.)
Clipping Level (at 1,000 Hz, 800-ohm load):	−4 dBV (.63 V) (phantom) −23 dBV (71 mV) (battery)
Maximum SPL (800-ohm load):	141 dB (phantom), 123 dB (battery)
Output Noise:	(equivalent sound pressure levels): 22 dB typical, A-weighted 25 dB typical, weighted per DIN 45 405
Power Supply:	Voltage . . . 11 to 52 Vdc, positive pins 2 and 3 Current Drain . . . 1.0 mA to 1.2 mA
Battery Operation:	Type . . . 1.5V alkaline, AA size (NEDA 15A) Life . . . Up to 5,000 hours with fresh battery
Supplied Accessories:	Swivel adapter, carrying case. Cable not supplied.
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM94



TYPICAL POLAR PATTERNS



SM96

A superior value in condenser microphones, the affordable SM96 compares favorably with the most expensive vocal microphones on the market, at a price only slightly above that of "economy" condenser microphones. Every performance parameter of the SM96 has been fine-tuned to give the vocalist professional quality and features at an economical price. The unidirectional SM96 is ideal for live performance and recording, as well as general sound reinforcement systems . . . anywhere top-quality vocal sound is a must.

Soundmen and vocalists alike will find the SM96 extremely easy to work with. Its smooth, even frequency response has a slight presence rise and electronically generated low-frequency rolloff for maximum vocal sound clarity (see chart below). Users will also appreciate the SM96's built-in, multi-stage wind and pop filter and uniform cardioid polar pattern. Unlike many microphones, the SM96 has a polar pattern that doesn't "collapse" at higher frequencies—off-axis response stays uniform throughout the sound spectrum.

The microphone was human-engineered to feel right and balance comfortably in the hand. Voices sound good—with just the right amount of presence without creating sibilance problems, with very smooth response and tight cardioid pattern for minimal feedback due to aberrations, and very low off-axis leakage for excellent isolation of the individual performer.

The SM96's shock mounting is exceptional. Shure's exclusive elastomer "space frame" system, now better than ever, isolates the SM96's transducer element from the roughest handling. The SM96's quietness is enhanced by its outstanding circuitry design, very low RF and hum susceptibility, and low distortion output.

Versatility is another SM96 hallmark. Its wide dynamic range gives it the ability to take extremely high sound pressure levels without "breaking up." And the SM96 can be powered by virtually any phantom (simplex) power source, or by an internal 1.5-volt AA battery.

You'll also find traditional Shure ruggedness and reliability built right in. The SM96 has undergone Shure's most stringent quality assurance testing, and is built to last—from the transducer element and circuitry to the professional gray, non-reflective finish.

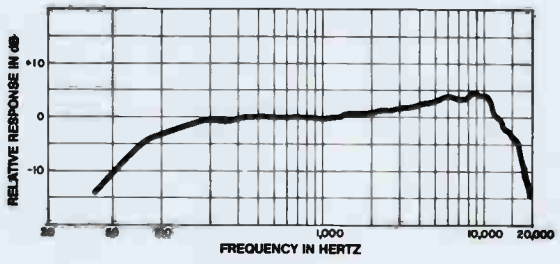
Each SM96 is supplied with a swivel adapter and a zippered vinyl storage bag.

SM96-LC without cable

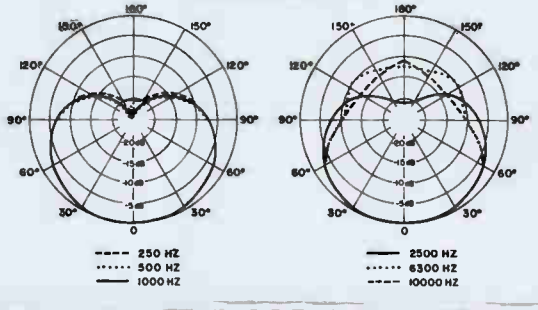
specifications

	SM96
Model:	
Frequency Response:	70 to 16,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms (recommended minimum load impedance: 800 ohms)
Output Level	
Open Circuit Voltage:	−74 dB (phantom), −75 dB (battery), (0.35 mV) (0 dB=1V per microbar)
Hum Pickup:	+2 dB equivalent SPL in a 1 millioerstad field (60 Hz)
Dimensions:	206.5 mm L X 48.8 mm Dia. (8⅛ X 1 15/16 in.)
Net Weight:	262 grams (9.2 oz.) less battery
Clipping Level	
(at 1,000 Hz, 800-ohm load):	−4 dBV (.63 V) (phantom) −23 dBV (71 mV) (battery)
Maximum SPL (800-ohm load):	146 dB (phantom), 128 dB (battery)
Output Noise:	(equivalent sound pressure levels): 27 dB typical, A-weighted 30 dB typical, weighted per DIN 45 405
Power Supply:	Voltage . . . 11 to 52 Vdc, positive pins 2 and 3 Current Drain . . . 1.0 mA to 1.2 mA
Battery Operation:	Type . . . 1.5V alkaline, AA size (NEDA 15A) Life . . . Up to 5,000 hours with fresh battery
Supplied Accessories:	Swivel adapter, carrying case. Cable not supplied.
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM96



TYPICAL POLAR PATTERNS



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 source 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.

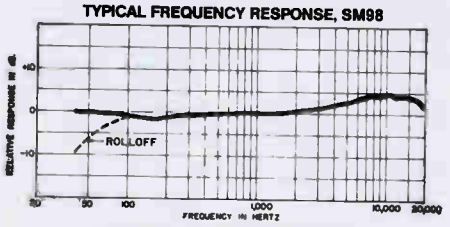
The SM98 incorporates a detachable cable which adds to the ease of set-up and tear-down. The preamp is powered by two standard 9-volt batteries or an 11 to 52 Vdc simplex (phantom) supply. It features a battery on/off switch and a 12 dB/octave low-end cut-off switch.

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.

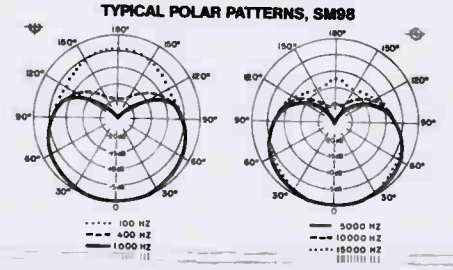
specifications

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/μbar)
Output Noise:	(equivalent sound pressure levels: measured with true rms voltmeter) 32 dB SPL, A-weighted 35 dB SPL, weighted per DIN 45 405
Maximum SPL:	(at 1,000 Hz) 153 dB with 800 ohm load
Hum Pickup:	−7 dB equivalent SPL in a 1 millioersted field (60 Hz)
Cable:	4.6 m (15 ft) two-conductor shielded, small diameter, interconnecting cable with 3-socket miniature Switchcraft Tini Q.G. 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 $^{15}/_{32}$ in.) Preamplifier: 112 mm H x 60.8 mm W x 27 mm D ($4^{25}/_{64}$ x $2^{25}/_{64}$ x $1^1/_{16}$ in.)
Net Weight:	Microphone: 12 grams (0.4 oz) less cable Preamplifier: 320 grams (11.3 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:	Windscreen, swivel adapter

TYPICAL FREQUENCY RESPONSE, SM98



TYPICAL POLAR PATTERNS, SM98



SM56

The SM56 is an ideal microphone for broadcast, recording, and sound reinforcement engineers. It provides superior reproduction of both voice and music, making it suitable for TV shows, motion pictures, recording sessions, political conventions and concerts.

This rugged, reliable microphone features a unique vibration-isolation shock mount in an attached swivel. This makes it the microphone of choice whenever floor vibrations and stand noise are a serious problem.

In addition to its quiet operation, the SM56 offers a closely controlled, exceptionally uniform polar pattern which minimizes background noise in all planes and permits higher gain before feedback. These features are of particular benefit to broadcast engineers working with live studio audiences.

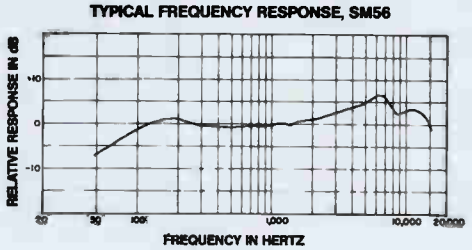
The SM56 is finished in non-glare dark gray enamel. Supplied cable has a three-socket connector at the microphone end.

SM56 Permanently stand mounted model.
Permits tilting of microphone through 135°.

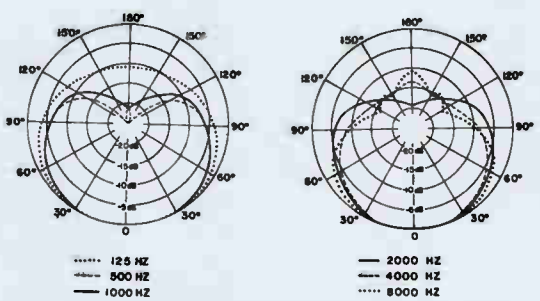
specifications

	SM56
Model:	
Frequency Response:	40 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	Dual: 38/150 ohms
Output Level	
Open Circuit Voltage:	0.08mV (−82.0 dB, 0 dB = 1V/μbar) 38 ohms 0.17mV (−75.5 dB, 0 dB = 1V/μbar) 150 ohms
Power Level:	−56.5 dB, 0 dB = 1 mW/10μbar
Cable:	6.1m (20 ft.) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	125 mm H x 121 mm W x 42.1 mm Dia. (4²⁹/₃₂ x 4¾ x 1¼ in.)
Net Weight:	1.01 kg (2 lb. 3½ oz.)
Supplied Accessories:	Vinyl storage bag
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM56



TYPICAL POLAR PATTERNS, SM56



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.

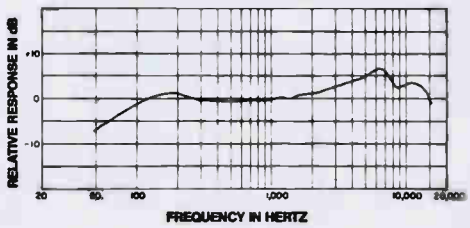
The SM57 is widely used by touring sound companies and artists' staff sound engineers for instrumental pickup and remote recording applications. The SM57's mid-range presence peak and good low-frequency response make it an ideal microphone for use with snare drums, toms, kick drums, wind instruments 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

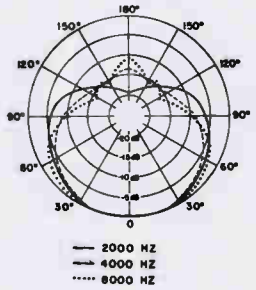
specifications

	SM57
Model:	
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/10μbar
Cable:	SM57-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:	157 mm L x 32 mm Dia. (6³/₁₆ x 1¼ in.)
Net Weight:	284 grams (10. oz)
Supplied Accessories:	Swivel adapter, vinyl storage bag
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM57



TYPICAL POLAR PATTERN, SM57



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 accented by close pickup. A built-in spherical windscreen 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.

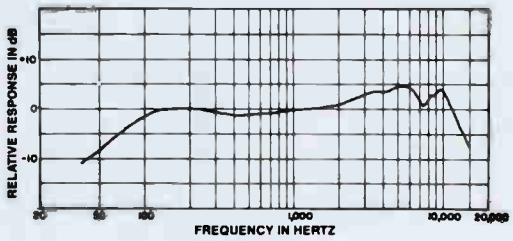
SM58-CN With C25F cable
SM58-LC Without cable

EDDIE RABBITT

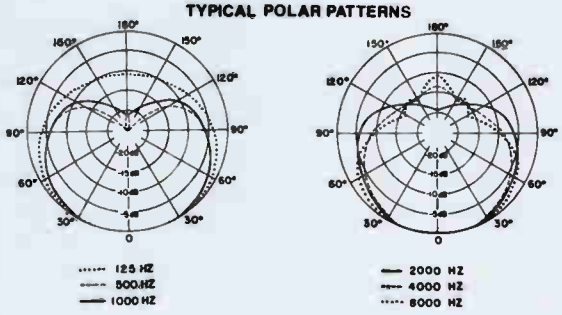
specifications

Model:	**SM58**
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.08 mV (−81.5 dB, 0 dB = 1 V/μbar) 38 ohms 0.18 mV (−75.0 dB, 0 dB = 1 V/μbar) 150 ohms
Power Level:	−56.0 dB, 0 dB = 1mW/10μbar
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. (6⅜ x 2 in.)
Net Weight:	298 grams (10½ oz)
Supplied Accessories:	Swivel adapter, vinyl storage bag
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



SM77 and SM78 The STARMAKER™ Series

The STARMAKER Series is made up of two very lightweight, extremely rugged microphones featuring Shure's exclusive SUEDECOAT™ non-reflecting, textured ebony or tan 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.

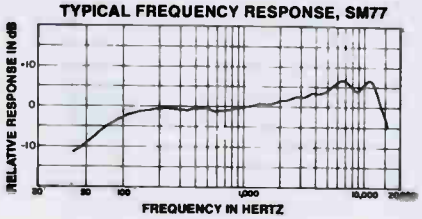
The SUEDECOAT finish has a great look, is pleasant to "feel," easy to clean and is durable enough to stand up to the toughest stage performance. In addition, the grilles of both microphones are treated with a Shure exclusive coating which never rusts or tarnishes.

SM77EB-LC Slim styling, ebony SUEDECOAT, without cable
SM78BR-LC Ball grille, brown SUEDECOAT, without cable
SM78TN-LC Ball grille, tan SUEDECOAT, without cable

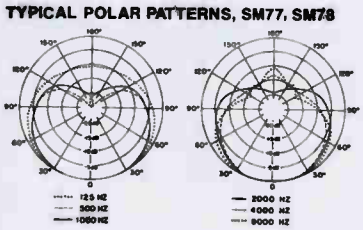
specifications

	SM77	SM78
Frequency Response:	50 to 15,000 Hz	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)	Cardioid (unidirectional)
Impedance Rating:	150 ohms	150 ohms
Output Level		
Open Circuit Voltage:	0.11 mV (−79.0 dB, 0 dB = 1 V/μbar)	0.11 mV (−79.0 dB, 0 dB = 1 V/μbar)
Power Level:	−57.5 dB, 0 dB = 1mW/10μbar	−57.5 dB, 0 dB = 1mW/10μbar
Connector:	Three-pin professional audio	Three-pin professional audio
Dimensions:	140 mm L x 32 mm Dia. (5½ x 1¼ in.)	144 mm L x 51.1 mm Dia. (5 11/16 x 2 in.)
Net Weight:	168 grams (6 oz)	204 grams (7.2 oz)
Supplied Accessories:	Swivel adapter, foam-lined storage/carrying case	Swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Pages 64-65	See Pages 64-65

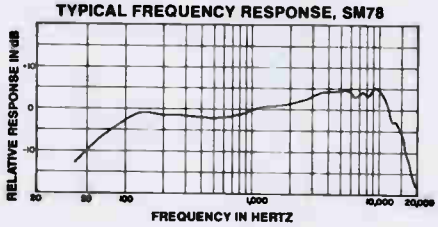
TYPICAL FREQUENCY RESPONSE, SM77



TYPICAL POLAR PATTERNS, SM77, SM78



TYPICAL FREQUENCY RESPONSE, SM78



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.

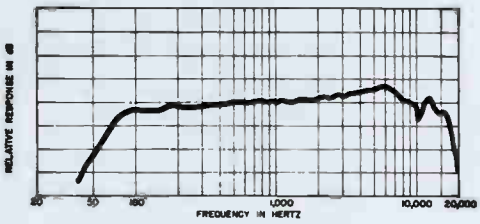
The non-glare, two-tone, steel gray finish and the sleek, handsome shape of the SM87 perfectly complement its outstanding performance capability. The result: a new standard in hand-held, vocal microphones.

The SM87 can be simplex (phantom) powered from the Shure PS1 power supplies, or any standard voltage (11 to 48 Vdc) available from most mixing consoles. (For more information and specifications on the PS1, see the accessory section of this catalog.)

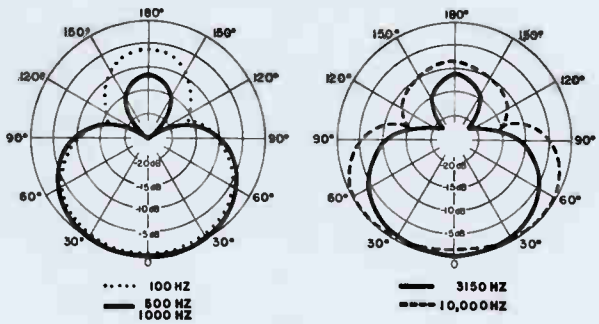
SM87-CN With C25E cable
SM87-LC Without cable

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 ... − 4dBV(0.63V) 150-ohm Load ... −15dBV (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
Simplex 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:	192mm L x 48.8mm Dia. (7⁹⁄₁₆ x 1 ¹⁵⁄₁₆ in.)
Net Weight:	180 grams (6.3 oz.)
Supplied Accessories:	Swivel adapter, vinyl storage bag
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, SM87



TYPICAL POLAR PATTERNS, SM87



SM87

The SM87's design is the result of months of testing and consultation with leading sound reinforcement professionals. During this development period, the microphone's frequency response and polar pattern were fine-tuned to meet the needs and standards of a number of top performing artists in the pop, rock, and country fields. The finished product has received enthusiastic acclaim from virtually all of the artists and sound engineers who have tried it. Below are just a few of the comments we have received.

"This new microphone is fantastic. I've never used a microphone that made me sound so much like me."
Melissa Manchester

"The SM87 has a beautiful, natural sound throughout the singer's range. *Its supercardioid pattern isolates the vocalist from the loud music on stage and it handles the humidity better than any other condenser I've used."*
Mark Hogue
Chief Sound Engineer for Melissa Manchester

"This is the vocal mic of the 80's. *It has a broad spectrum and an insatiable appetite for gain. Every location engineer could use an SM87 Condenser Mic."*
Jon Jaboolian
Stanal Sound

"It's my favorite mic. It gives me a warm, smooth, rich sound and I can get breathy when the song calls for it."
Lee Greenwood

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 windscreen 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.

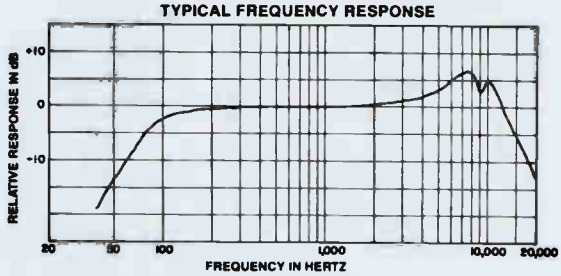
The SM85 can be simplex (phantom) powered from the Shure PS1 power supply or any standard voltage (12 to 48 Vdc) available from most recording consoles. (For more information and specifications on the PS1, see the accessory section of this catalog.)

SM85-CN With C25E cable
SM85-LC Without cable

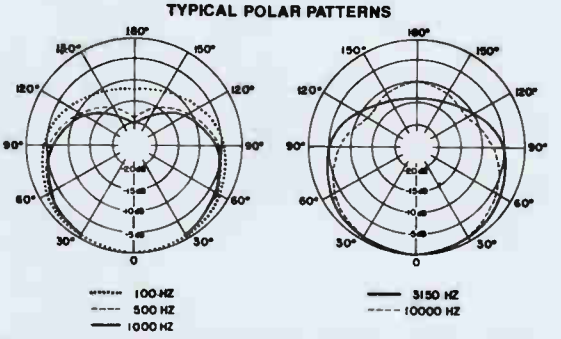
specifications

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 × 48.8 mm Dia. ($7^{9}/_{16} \times 1^{15}/_{16}$ 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 DIN 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
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



ABOUT SHURE GENERAL PURPOSE MICROPHONES

Shure General Purpose Microphones, shown in this section, comprise the largest group of microphones in the Shure line. They are available in a broad range of product features, performance characteristics and price ranges enabling users to select the Shure Microphones that best suit their performance requirements.

General Purpose Microphones are designed for a multiplicity of applications such as in auditoriums, stadiums, lounges, theme parks, meeting rooms, schools, churches . . . anywhere top quality performance for public address, sound reinforcement or recording is needed.

Featured in this section are the highly regarded Shure UNIDYNE® and UNISPHERE® Series of microphones. These models are preferred overwhelmingly by sound installers and microphone users throughout the world for their value, performance and reliability. There are more Shure UNIDYNE and UNISPHERE microphones used in sound reinforcement and public address than any other microphones.

SHURE MICROPHONE BRAND NAME GUIDE

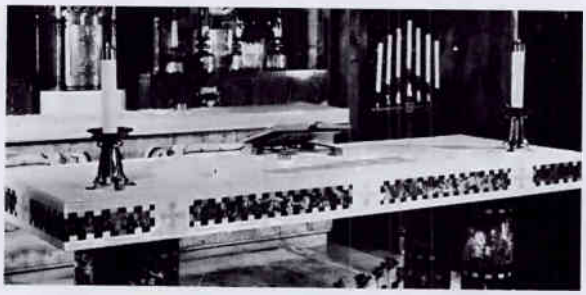
While all Shure General Purpose Microphones have model numbers, many of them are known best by their brand name. In order to help you identify the microphone you want, we have cross-indexed Shure's General Purpose Microphones with the brand names with which you may be more familiar.

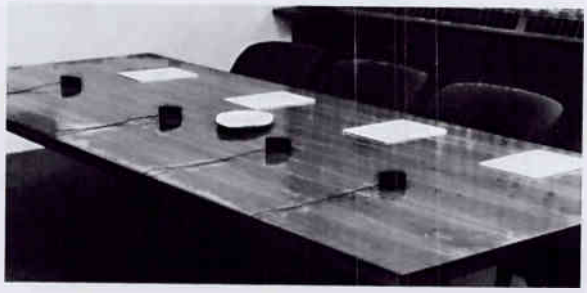
BRAND NAME	MODEL/SERIES NUMBER
OMNIDYNE	571
UNIDYNE® III	545 Series
UNIDYNE® B	515 Series
UNISPHERE® I	565 Series
UNISPHERE® A	586 Series
UNISPHERE® B	588 Series
VERSADYNE	575 Series
VOCAL SPHERE	579SB

SHURE MODEL NUMBER SUFFIX CODES

Below is a guide to the suffix lettering used for Shure General Purpose Microphones.

SUFFIX	DESCRIPTION
A or H	High Impedance
B or L	Low Impedance
C	Supplied cable has an MC1 connector and phone plug adapter at equipment end
CN	Supplied cable has three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end
G	Gooseneck – these models have threaded case to accommodate standard 5/8"-27 gooseneck
L	Lavalier – these models are supplied with lavalier assemblies
S	Switch





The SM18 Series surface-mounted, low-profile microphones (page 46) are designed to give excellent voice pickup while remaining virtually invisible. Available in white or brown foam enclosures. Perfect for meeting rooms, church altars, etc.

When sound installers are instructed to create the finest sound possible they select Shure Microphones. Perhaps nowhere in the world are Shure Microphones in more ornate surroundings than in the Town Hall in Barcelona, Spain.

Shure exclusive design features and performance characteristics make the SM59 (page 34) the perfect choice for courtrooms, legislative chambers, large meeting rooms, pulpits and other public address applications.

SM59

Performance...appearance...quiet operation—the hallmarks of a great microphone. The SM59 is widely used for distinguished TV studio productions...especially musical shows, where sound quality is a major consideration. Its wide, ultra-flat response is enhanced by a controlled low-frequency rolloff, providing a clean, natural sound for voice or instruments. In addition, the performer can control the amount of bass increase by moving toward or away from the microphone. The tightly controlled cardioid pickup pattern is virtually textbook-perfect, minimizing feedback and unwanted background noise. For vocal groups, on stage or in the studio, around podiums or pulpits, the SM59 is a superlative performer. It's superb for miking horns, drums, and vocalists.

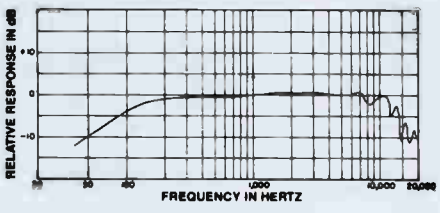
The revolutionary design of the SM59 makes this microphone virtually immune to extraneous noise. An extraordinarily efficient Shure-patented mechano-pneumatic shock mount shields the cartridge from rumble and other mechanically transmitted noise, whether on a stand or hand-held. An integral windscreen provides excellent pop protection, and a built-in humbucking coil minimizes hum due to nearby electromagnetic interference, even strong RF fields found near TV studios. These performance features make the SM59 an exceptional choice for permanent installations such as legislative chambers and court houses where minimum handling noise is essential. The slim profile and elegant champagne finish give the SM59 a distinctive sleek appearance. Although it weighs less than 8 ounces, this microphone is remarkably rugged.

SM59-CN With C25F cable
SM59-LC Without cable

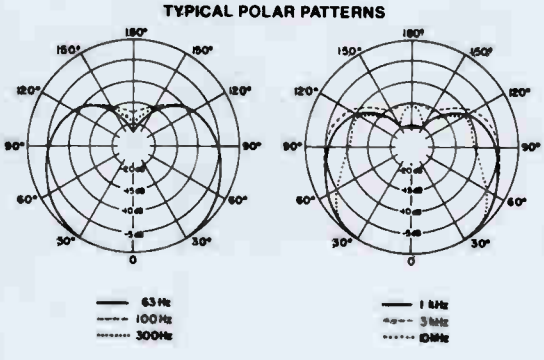
specifications

Model: **SM59**
Frequency Response: ..... 50 to 15,000 Hz
Polar Pattern: ..... Cardioid (unidirectional)
Impedance Rating: ..... 150 ohms
Output Level
Open Circuit Voltage: ..... 0.07 mV (−83.0 dB, 0 dB = 1V/μbar)
Power Level: ..... −61.0 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/m0e: ..... 12.5 dB SPL equivalent
Cable: ..... 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: ..... 197 mm L x 41.4 mm Dia. ($7^{25}/_{32}$ x $1^{5}/_{8}$ in.)
Net Weight: ..... 215 grams (7.6 oz)
Supplied Accessories: ..... Swivel adapter, foam-lined storage/carrying case
Optional Accessories: ..... See Pages 64-65

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



SM62

Don't let its small size fool you . . . Shure's SM62 is a big-time 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 windscreen minimizes breath pop.

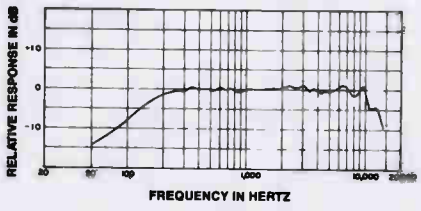
The SM62 is finished in beautiful, durable champagne enamel, and comes with matching swivel adapter.

SM62-LC Without cable

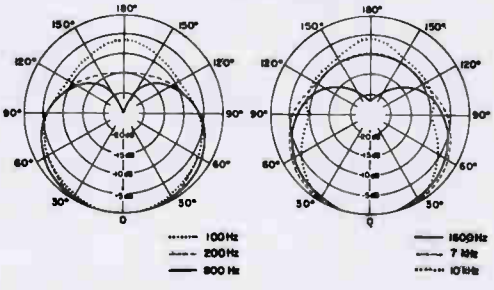
specifications

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 = 1V/μbar)
Power Level: ..... −60.5 dB, 0 dB = 1 mW/10 μbar
Dimensions: ..... 124 mm L x 38.1 mm Dia. (4-29/32 x 1½ in.)
Net Weight: ..... 113.4 grams (4 oz)
Supplied Accessories: ..... Swivel adapter, vinyl storage bag
Optional Accessories: ..... See Pages 64-65

TYPICAL FREQUENCY RESPONSE, SM62



TYPICAL POLAR PATTERNS, SM62



515 Series

The lowest cost UNIDYNE® microphones, the 515 Series, feature the uniform, symmetrical cardioid pickup pattern, feedback suppression, and high-quality performance characteristics that have made the UNIDYNE models world famous. These microphones are particularly suitable for sound reinforcement and recording of speech, vocals, and most instruments.

UNIDYNE B microphones have a wide-frequency response, shaped with a low-frequency rolloff and high-frequency presence boost for maximum intelligibility and clarity. In addition, an effective shock mount isolates the cartridge from unwanted handling or stand-transmitted mechanical noise.

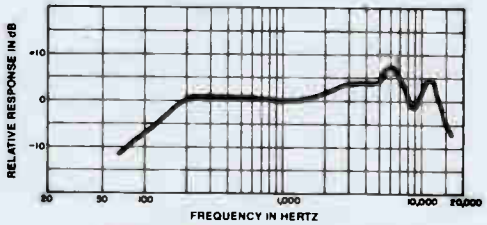
Each model in the 515 Series (except 515BG) is equipped with an on-off switch for control of the amplifier input at the performer's position. A lockplate is supplied with Models 515SA and 515SB. Model 515SA is high impedance, all other models are low impedance.

515SA High impedance; for hand-held or stand-mounted use
515SAC Same as 515SA, but cable has an MC1F connector and a phone plug adapter on equipment end
515SB Low impedance; for hand-held or stand-mounted use
515SBG, and **515SB-G18** Low impedance; for gooseneck applications
(see page 50)

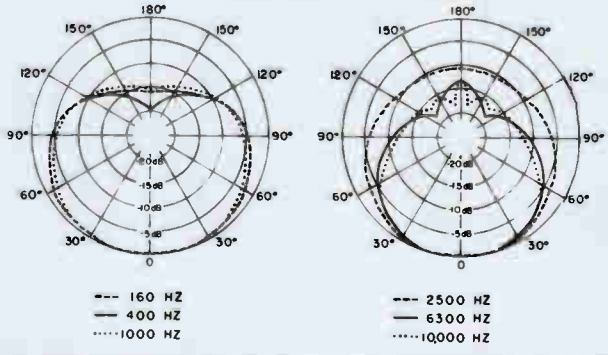
specifications

Model:	515 Series
Frequency Response:	80 to 13,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	515SA: High, 515BG, 515SB, 515SBG, 515SB-G18, 150 ohms
Output Level	
Open Circuit Voltage:	515SA, 1.12 mV (−59.0 dB, 0 dB = 1V/μbar) 515BG, 515SB, 515SBG, 515SB-G-18:0.08 mV (−82.0 dB, 0 dB = 1V/μbar)
Power Level:	−61.0 dB, 0 dB = 1mW/10μbar
Cable—Attached:	515SA: 4.6m (15 ft) single-conductor shielded; 515SB: 4.6m (15 ft) two-conductor shielded; 515SBG: 1.8m (70 in.) four-conductor, two-conductor shielded; 515SB-G18: 1.3m (51 in.) four-conductor, two-conductor shielded
Dimensions:	515SA, 515SB, 164 mm L x 37.5 mm Dia. ($6^{15}/_{32}$ x $1^{15}/_{32}$ in.). 515SBG: 159 mm L x 37.3 mm Dia. ($6^{1}/_{4}$ x $1^{15}/_{32}$ in.). 515SB-G18 (with gooseneck): 635 mm L x 37.3 mm Dia. (25 x $1^{15}/_{32}$ in.).
Net Weight:	515SA: 510 grams (1 lb, 2 oz), 515SB: 624 grams (1 lb, 6 oz), 515SBG: 425 grams (15 oz), 515SBG-G18 (with gooseneck): 1.02 kg (2 lb, 4 oz.)
Supplied Accessories:	515SA, 515SB: Swivel adapter, 515SB-G18; 457 mm (18 in.) gooseneck, mounting flange
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, 515 SERIES



TYPICAL POLAR PATTERNS, 515 SERIES



545 Series

Small and strikingly good-looking, the acoustic design of the UNIDYNE® III Series Microphones approaches the theoretical ideal for voice and music pickup. Their natural and remarkably faithful response makes them a favorite choice of singers and entertainers and excellent microphones for drum and instrument reproduction. The response extends from 50 to 15,000 Hz and is shaped for natural, clear and crisp pickup from voice and instruments.

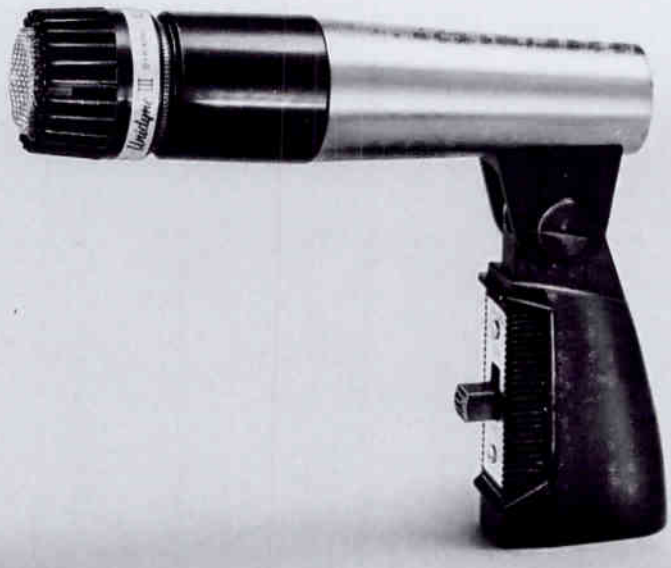
Their unusually effective and uniform cardioid polar pattern is particularly well-suited for applications where feedback or background noise are problems. In addition, a cartridge shock mount minimizes handling and stand-borne noise.

The high output of the 545 Series provides for excellent signal-to-noise ratio.

These microphones are lightweight for handling comfort, yet rugged enough to keep on working under punishing conditions. All models (except 545L) are dual impedance to match the variety of amplifiers found in the field.

The microphone connector is the popular three-pin professional audio connector and the supplied cable has three-socket connector at microphone end (except the 545L, which offers an attached cable).

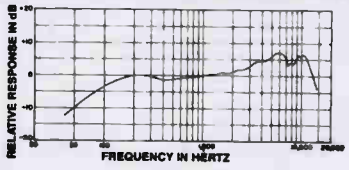
545D-LC Without switch; for hand-held or stand-mounted use
545SD-LC With an on-off switch; for hand-held or stand-mounted use
545SD-CN Same as 545SD-LC but with cable
545SH-LC With an on-off switch and built-in swivel mount; for stand mounting
545L Low impedance only; attached cable; for lavalier and gooseneck applications (see Pages 48 and 50)



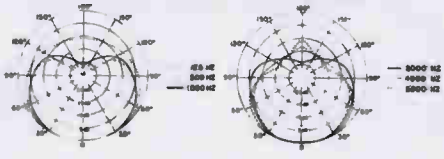
specifications

Model:	545 Series
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	Dual: 150 ohms/High
Output Level	
Open Circuit Voltage:	0.13 mV (−78.0 dB, 0 dB = 1V/μbar) 150 ohms 1.76 mV (−55.0 dB, 0 dB = 1V/μbar) High
Power Level:	−58.5 dB, 0 DB = 1mW/10μbar
Cable:	545SD-CN: 6.1m (20 ft.) rubber jacketed, detachable, with a 3 pin audio connector at the equipment end 545L: attached 6.1m (20 ft.) two-conductor shielded
Dimensions:	545D, 545SD: 157 mm L x 31.9 mm Dia. (6-3/16 x 1¼ in.); 545SH: 115 mm H x 31.8 mm W x 138 mm D (4-17/32 x 1¼ x 5-7/16 in.)
Net Weight:	545D, 545SD: 255 grams (9 oz); 545SH: 425 grams (15 oz)
Supplied Accessories:	545D, 545SD: swivel adapter, connector locking kit 545SH: switch lockplate
Optional Accessories:	See Pages 64 and 65

TYPICAL FREQUENCY RESPONSE, 545 SERIES



TYPICAL POLAR PATTERNS, 545 SERIES



565 Series

The UNISPHERE® I Model 565 Series Microphones are world-renowned for solving difficult acoustic problems in sound reinforcement, broadcast and recording. They are excellent reproducers of voice or music, and have extremely effective built-in spherical windscreens to permit close-up use without wind noise and breath popping. Their uniform cardioid pattern minimizes off-axis coloration, suppresses undesirable background noise, and permits higher gain before feedback. These features make them excellent in performance situations, particularly for hand-held use.

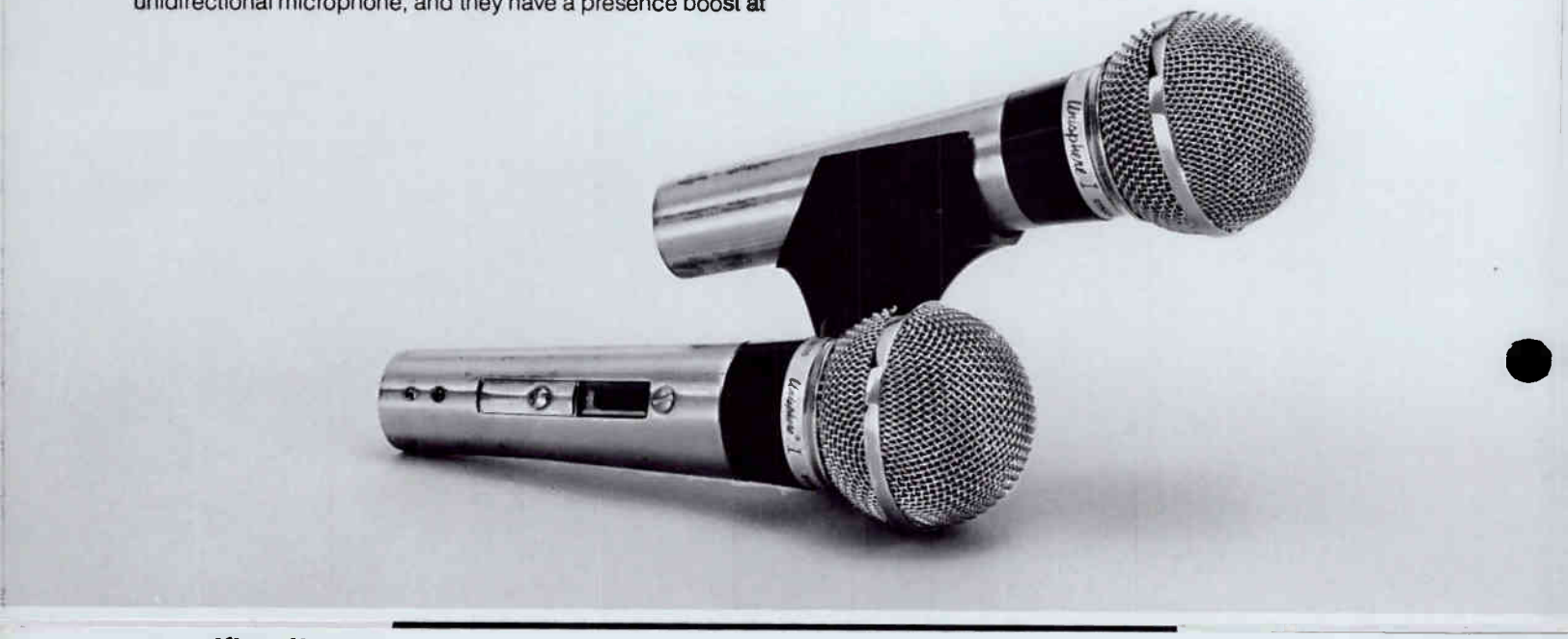
The microphones have high output for excellent signal-to-noise ratio after amplification. Their wide frequency response of 50 to 15,000 Hz is shaped with a low-frequency rolloff to prevent the "boominess" often associated with close-talking into a unidirectional microphone, and they have a presence boost at high frequencies for a bright, crisp sound which enhances the intelligibility of speech and vocals.

The 565 Series Microphones are dual impedance, with ratings of 150 ohms or "High," for connection to the wide variety of amplifiers in the field. The microphone connector is the popular three-pin professional audio connector. Supplied cable has three-socket connector at microphone end.

565D-LC With no switch so only the sound engineer controls the microphone at the console; for hand-held or stand-mounted use

565SD-CN Same as 565D-LC but with an on/off switch and 20 foot cable

565SD-LC Same as 565SD-CN but without cable



specifications

565 Series

Model:

Frequency Response: 50 to 15,000 Hz

Polar Pattern: Cardioid (unidirectional)

Impedance Rating: Dual: 150 ohms/High

Output Level

Open Circuit Voltage: 0.16mV (−76.0 dB, 0 dB = 1V/μ bar) 150 ohms
2.0mV (−54.0 dB, 0 dB = 1V/μ bar) High

Power Level: −56.0 dB, 0 dB = 1mW/10μbar

Cable: 565SD-CN: 6.1m (20 ft.) two-conductor shielded with professional three-pin audio connectors at both ends

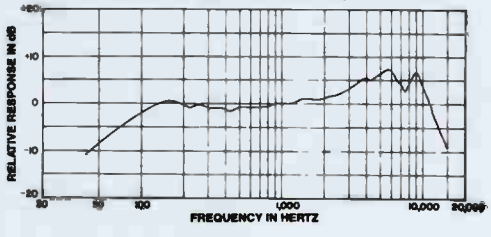
Dimensions: 162 mm L x 51 mm Dia. (6-23/64 x 2 in.)

Net Weight: 298 grams (10½ oz.)

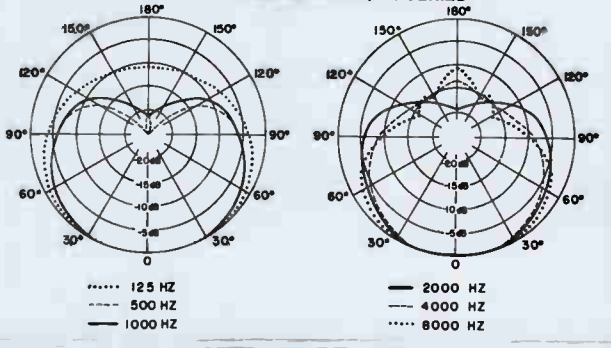
Supplied Accessory: Swivel adapter

Optional Accessories: See Pages 64-65

TYPICAL FREQUENCY RESPONSE, 565 SERIES



TYPICAL POLAR PATTERNS, 565 SERIES



586 Series

The UNISPHERE® A Model 586 Series are highly versatile microphones with a wide frequency response and unidirectional pickup pattern, particularly well-suited for sound reinforcement and recording. They feature a wire mesh windscreen and very effective filter that subdues wind noise in outdoor applications and provides excellent protection from breath "pop," enabling singers and speakers to perform close to the microphone. Handling and stand noise is reduced by means of an internal shock mount.

The microphones' effective cardioid polar pattern reduces feedback and echoing (boominess) even in proximity to loudspeakers. These microphones are equipped with an on-off switch with a supplied on-position lock. Their frequency response of 50 to 13,000 Hz is highly suitable for voice or music. A fixed low-frequency rolloff provides a natural-sounding closeup voice response, and a high-frequency presence boost produces a clear, crisp sound for enhanced intelligibility of speech and vocals.

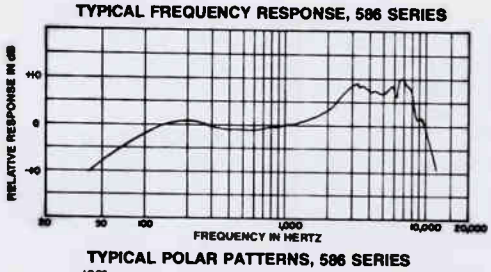
The 586 Microphones are available as either high impedance or low impedance. Both models are equally effective in hand-held or stand-mounted applications. The microphone connector is the popular three-pin professional audio connector that makes setup fast and simple.

586SA-C High impedance; supplied cable has professional three-pin audio connector at microphone end and ¼-inch phone plug at equipment end
586SA-LC High impedance; supplied without cable
586SB-CN Low impedance; supplied cable has professional three-pin audio connectors at both ends
586SB-LC Low impedance; supplied without cable

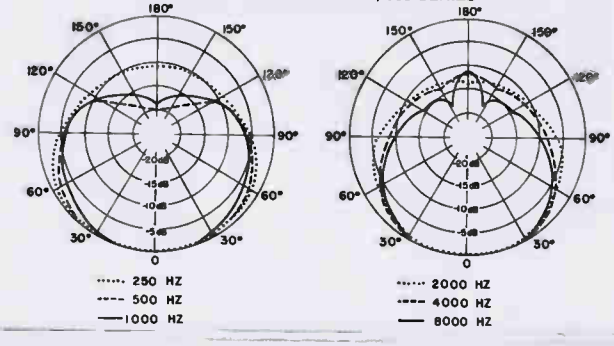
specifications

Model: ..... **586 Series**
Frequency Response: ..... 50 to 13,000 Hz
Polar Pattern: ..... Cardioid (undirectional)
Impedance Rating: ..... 586SA: High; 586SB: 150 ohms
Output Level
Open Circuit Voltage: ..... 586SA: 1.6 mV (−56.0 dB); 586SB: 0.11 mV (−79.5 dB), 0 dB = 1V/μbar
Power Level: ..... −59.5 dB, 0 dB = 1 mW/10 μbar
Cable: ..... 586SA-C: 6.1 m (20 ft) single-conductor shielded with professional three-pin audio connector at microphone end and ¼ inch phone plug at equipment end
586SB-CN: 6.1 m (20 ft) two-conductor shielded with professional three-pin audio connectors at both ends
Dimensions: ..... 167 mm L x 49.2 mm Dia. (6 19/32 x 1 15/16 in.)
Net Weight: ..... Less cable: 354 grams (12½ oz)
Supplied Accessory: ..... Swivel adapter
Optional Accessories: ..... See Pages 64-65

TYPICAL FREQUENCY RESPONSE, 586 SERIES



TYPICAL POLAR PATTERNS, 586 SERIES



588 Series

All the most desirable features in a unidirectional dynamic microphone at an economy price, that's the UNISPHERE® B Model 588 Series. A built-in windscreen mimimizes breath popping when used close-up and subdues wind noise when used outdoors. An on-off switch permits controlling the microphone at the performer's position. These microphones use the same three-pin professional audio connector found on professional studio microphones and consoles. A built-in locking plate permanently locks the microphone in the on position when the sound engineer wants to control the microphone at the console.

The 588 Series Microphones have a uniform cardioid polar pattern that reduces feedback even in acoustically difficult locations. Their frequency response is 80 to 13,000 Hz, suitable for sound reinforcement or recording of voice and most instruments. The response is shaped with a fixed bass rolloff to provide natural sounding close-up voice reproduction, and with a high-frequency presence boost to heighten intelligibility of speech and vocals. In addition, an effective shock mount isolates the cartridge from unwanted handling or stand-transmitted mechanical noise.

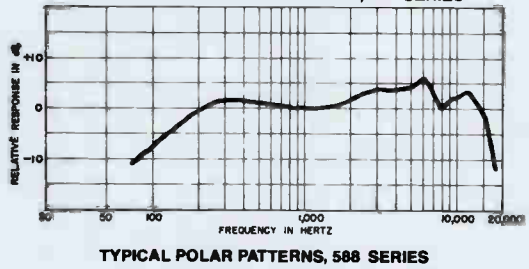
The microphones in the 588 Series are either high impedance or low impedance. All microphones in the series can be hand-held or stand-mounted. Supplied cable has three-socket connector at microphone end.

588SA-LC High impedance, with on-off switch
588SAC Same as 588SA-LC, with cable having a phone plug at equipment end
588SB-LC Low impedance, with on-off switch
588SB-CN Same as 588SB-LC, with cable having a professional three-pin audio connector at equipment end

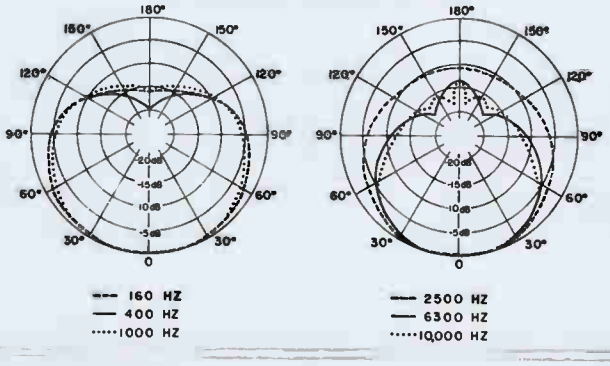
specifications

	588 Series
Model:	
Frequency Response:	80 to 13,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	588SA: High; 588SB: 150 ohms
Output Level	
Open Circuit Voltage:	588SA: 1.16mV (59.5 dB, 0 dB = 1V/μ bar) 588SB: 0.08mV (−82.0 dB, 0 dB = 1V/μ bar)
Power Level:	−60.5 dB, 0 dB = 1mW/10μbar
Cable:	588SB-CN: 6.1m (20 ft.) two-conductor shielded with professional three-pin audio connectors at both ends 588SAC: 6.1m (20 ft.) single conductor shielded with phone plug at equipment end
Dimensions:	164 mm L x 54 mm Dia. (6-15/32 x 2⅛ in.)
Net Weight:	340 grams (12 oz)
Supplied Accessory:	Swivel adapter
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE, 588 SERIES



TYPICAL POLAR PATTERNS, 588 SERIES



579SB

The VOCAL SPHERE Model 579SB Microphone is designed to provide very natural and intelligible voice reproduction with freedom from annoying wind and breath noises. This slim, neat-appearing microphone is a rugged unit built to withstand the severest field use. The performance, small size, and ruggedness make it an ideal choice for sound reinforcement, broadcast, theater-stage sound systems, meeting rooms, recording, and other field and studio applications.

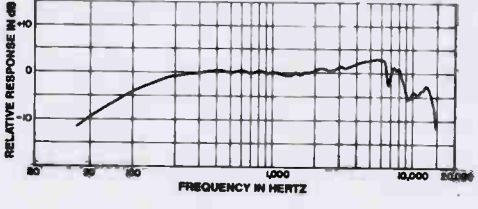
Many professional features are standard on the 579SB, including balanced-line low impedance configuration to permit unlimited cable lengths, and effective built-in wind and "pop" filter to reduce breath noise. It is equipped with a long-life on-off switch, with a lockplate to lock the switch on, and is equally effective as a hand-held or stand-mounted microphone.

579SB-LC Without cable

specifications

Model: **579SB**
Frequency Response: ..... 50 to 14,000 Hz
Polar Pattern: ..... Omnidirectional
Impedance Rating: ..... 150 ohms
Output Level
Open Circuit Voltage: ..... 0.13 mV (−78.0 dB, 0 dB = 1V/μbar)
Power Level: ..... −57.0 dB, 0 dB = 1 mW/10μbar
Dimensions: ..... 162 mm L x 39.7 mm Dia. (6⅜ x 1⁹⁄₁₆ in.)
Net Weight: ..... 156 grams (5½ oz.)
Supplied Accessory: ..... Swivel adapter
Optional Accessories: ..... See Pages 64-65

TYPICAL FREQUENCY RESPONSE, 579SB



571

The OMNIDYNE Model 571 is a studio-quality, miniature omnidirectional microphone. It features excellent voice reproduction characteristics including a smooth, peak-free frequency response of 50 to 10,000 Hz.

Recommended for applications in TV, motion picture, theaters, and sound reinforcement where a high-quality, inconspicuous microphone is required. It is remarkably rugged and reliable... even under adverse operating conditions.

The 571 is a low-impedance microphone suitable for hand-held or stand-mounted use, as well as suspended over-the-stage applications. The microphone is equipped with an attached cable.

575 Series

The VERSADYNE Model 575 Series Microphones offer excellent quality and performance at a very modest price. They feature a wide (40 to 15,000 Hz) frequency response and omnidirectional pickup characteristics that are excellent for both music and voice reproduction in taping and general sound reinforcement applications.

The 575 Series Microphones are ruggedly built to withstand rough usage and wide variations in temperature and humidity. Their small size and light weight make them suitable for a wide variety of applications: wall- or panel-mounted, on a desk or floor stand, for lavalier or hand-held use.

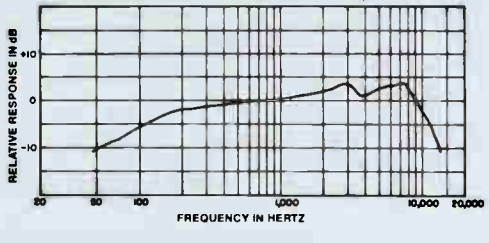
They are equipped with a built-in on-off switch and an attached cable.

575S high impedance
575SB low impedance

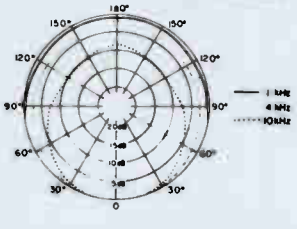
specifications

	571	575 Series
Frequency Response:	50 to 10,000 Hz	40 to 15,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional
Impedance Rating:	150 ohms	575S, High; 575SB: 150 ohms
Output Level		
Open Circuit Voltage:	0.08 mV (−81.5 dB, 0 dB = 1V/μbar)	575S: 1.57mV (−56.0 dB); 575SB: 0.11mV (−79.0 dB)
Power Level:	−60.5 dB, 0 dB = 1 mW/10 μbar	−58.0 dB, 0 dB = 1mW/10 μbar
Cable—Attached:	Attached 9.1m (30 ft) two-conductor shielded	2.1m (7 ft) single-conductor shielded
Dimensions:	66 mm L x 20.1 mm Dia. ($2^{19}/_{32}$ x $^{25}/_{32}$ in.)	121mm L x 34.1mm Dia. ($4^{3}/_{4}$ x $1^{11}/_{32}$ in.)
Net Weight:	58 grams (2 oz)	220 grams ($7^{3}/_{4}$ oz); 275S: 198 grams (7 oz)
Supplied Accessories:	Swivel Adapter	Stand adapter, lavalier assembly
Optional Accessories:	See Pages 64 and 65	See Pages 64 and 65

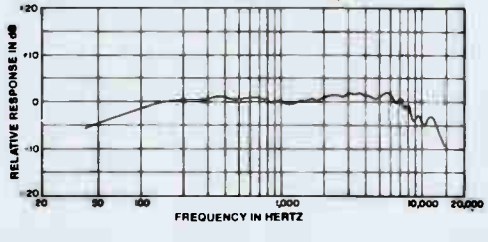
TYPICAL FREQUENCY RESPONSE, 571



TYPICAL POLAR PATTERNS, 571



TYPICAL FREQUENCY RESPONSE, 575 SERIES



512

The Shure Model 512 is a new specially designed headset combining an efficient "open air" headphone with a unidirectional, close-talking dynamic microphone. The 512 offers many of the high quality features of the well-known Shure SM12A at a more economical price. The headset design allows hands-free operation without user fatigue—it is light weight, durable, and extremely comfortable. The tightly controlled frequency response and pickup pattern of the 512 microphone reduces unwanted background noise, permitting its use in noisy environments. The receiver response is tailored to enhance voice intelligibility.

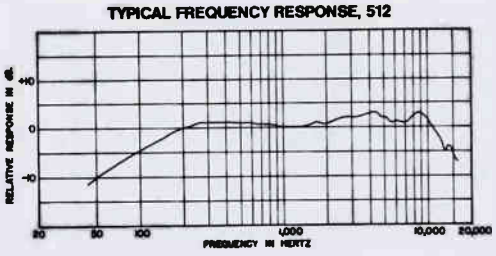
The 512 is an excellent choice for drummers and keyboard players because it allows freedom of movement while the adjustable boom maintains proper mouth-to-microphone distance. Other applications include sports and news announcing, communications systems, and special events remote broadcasting.

The 512 is supplied complete with cable, connectors, foam pop filter, and cable clip to secure the cable to clothing, keeping it out of the way and reducing cable noise.

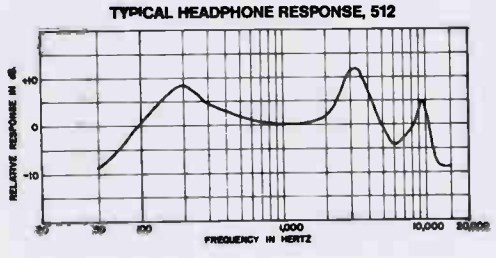
specifications

Model:	**512**
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms (microphone) 8 ohms (headphones)
Output Level (microphone)	
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
Output level (headphones):	94 dB SPL at ear with 1 mW input
Hum Pickup/mOe:	38.4 SPL equivalent
Cable:	2.1m (7 ft) attached cables: one two-conductor shielded with black 3-pin XLR connector (microphone) and one single-conductor shielded with two-circuit phone plug (receiver)
Dimensions:	Microphone: 14 mm H x 15.9 mm Dia. ($^9/_{16}$ x $^5/_8$ in.) Boom: 203 mm L (8 in.)
Net Weight:	186 grams (6.5 oz) including cables and connectors
Supplied Accessories:	foam windscreen/pop filter, cable clip
Optional Accessories:	See Pages 64 and 65

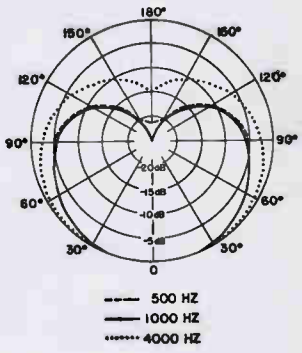
TYPICAL FREQUENCY RESPONSE, 512



TYPICAL HEADPHONE RESPONSE, 512



TYPICAL POLAR PATTERN, 512



520D

The legendary 520D CONTROLLED MAGNETIC® "Green Bullet" microphone is world-renowned for delivering the "downhome" sound that has made it so popular with harmonica players. It features a controlled low-end frequency response which reduces "bassiness" and delivers the "gritty" sound and response harmonica players want. Its size, weight and styling make it an exceptional choice for performers who want freedom to move about the stage—and still be heard.

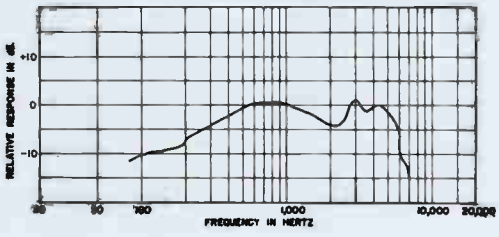
The microphone can be cupped in the hands, used on a stand, stand with boom, or gooseneck-mounted to suit the needs of the individual performer. The 520D can be connected as supplied to high or unbalanced low-impedance microphone inputs, or it can be connected to balanced low-impedance inputs after a simple internal modification. The 520D includes a sturdy die-cast metal case and grille, and a reliable permanently-attached two-conductor shielded cable.

Blues harmonica player, ***Sugar Blue,*** *winner 1984 Grammy Award/ Best Traditional Blues Album, using the legendary Shure 520D "Green Bullet."*

specifications

Model:	**520D**	
Type:	CONTROLLED MAGNETIC®	
Frequency Response:	100 to 5,000 Hz	
Polar Pattern:	Omnidirectional	
Load Impedance (ohms):	Low	High
Minimum:	150	15 kilohms
Recommended:	1,000	100 kilohms
Output Level:	Low	High
Open Circuit Voltage*	0.22 mV (−73.0 dB)	1.6 mV (−56.0 dB)
Power Level**	−51.0 dB	
	*0 dB = 1 volt per microbar **0 dB = 1 milliwatt per 10 microbars	
Cable:	6.1m (20 ft) two-conductor shielded (no connector)	
Dimensions:	62.7 mm diameter, 82.6 mm long ($2^{15}/_{32}$ in. x $3^{1}/_{4}$ in.)	
Net Weight:	630 grams (22 oz)	

TYPICAL FREQUENCY RESPONSE, 520D



809 and 819

Shure Models 809 and 819 are superior quality, electret condenser microphones specially designed for surface-mounted applications in churches, schools, conference rooms and theaters. The 809 features a hemispherical pickup pattern (omnidirectional in the hemisphere above the mounting surface) and the 819 features a half-cardioid directional pattern (cardioid in the hemisphere above the mounting surface.)

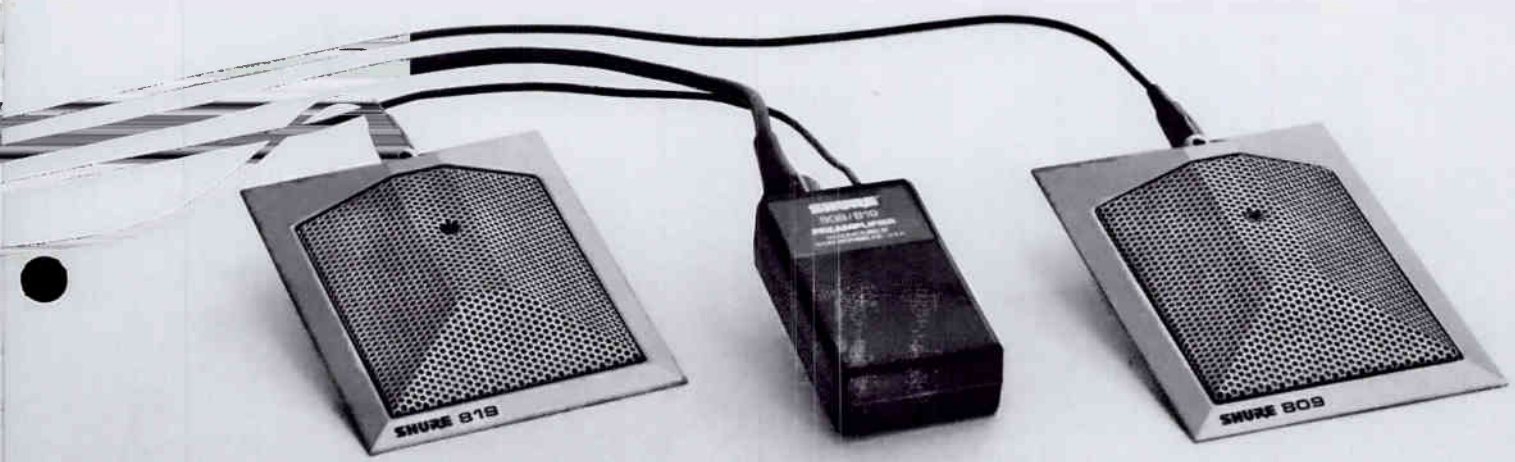
Both models are attractive, rugged, low-profile units, modest in cost. They are suitable for general-purpose sound reinforcement, recording, miking of musical instruments, and budget-minded film and video production applications.

The optimized design of these microphones includes a new miniature condenser cartridge developed at Shure. The result is high output and faithful sound reproduction over the audio frequency range. Both models provide low distortion and high signal-to-noise ratio for distinguished performance even under difficult acoustic conditions.

Because of its half-cardioid pattern, the 819 discriminates against sounds originating from the rear, suiting it for conditions where an omnidirectional "pressure zone" type surface-mounted microphone would be unsuitable. The unidirectionality of the 819 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. No physically isolating barriers are required and directionality is maintained to low frequencies.

For those cases where an omnidirectional microphone is preferred or necessary, the 809 is also available. Mounted in the same housing as the 819, and using the same electronics pack, the 809 offers 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 or noise pickup are not a concern.

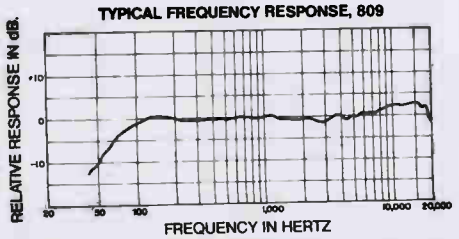
Features of models 809 and 819 include: a wide, flat frequency response; low susceptibility to RFI, electrostatic and electromagnetic hum; rugged construction of microphone and electronics for outstanding reliability; and a detachable cable at the microphone. The electronics module features a built-in, low-end rolloff and is phantom or battery powered. Both microphones are platinum beige finished for handsome appearance. A durable vinyl zipper bag is provided for storage of the microphone and electronics module.



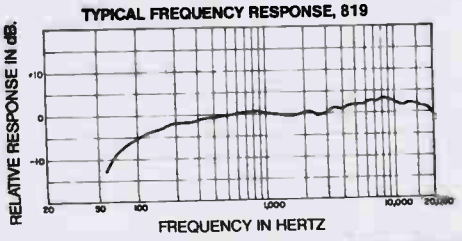
specifications

	809	819
Model:		
Frequency Response:	50 to 20,000 Hz	60 to 20,000 Hz
Polar Pattern:	Omnidirectional in hemisphere above mounting surface	Half-cardioid (cardioid in hemisphere above mounting surface.)
Impedance Rating:	600 ohms (minimum recommended load: 800 ohms)	600 ohms (minimum recommended load: 800 ohms)
Output Level Open Circuit Voltage:	0.4 mV (−68.0 dB, 0 dB=1V/μbar)	0.28 mV (−71.0 dB, 0 dB=1V/μbar)
Output Noise:	21 dB SPL, A-weighted 26 dB SPL, weighted per DIN 45 405	24 dB SPL, A-weighted 29 dB SPL, weighted per DIN 45 405
Maximum SPL:	127 dB with 800-ohm load 132 dB with 2000-ohm load	130 dB with 800-ohm load 135 dB with 2000-ohm load
Power:	Battery: One 9 Vdc alkaline (approximately 2500 hours continuous operation with fresh battery) Simplex voltage: 11 to 52 Vdc 0.2 mA current drain	
Cable:	One 7.6M (25 ft.) two-conductor shielded, small diameter, interconnecting cable with 3-socket miniature Switchcraft connector to mate with microphone output connector; and one 3m (10 ft) two-conductor shielded, with 3-pin professional audio connector (electronics output)	
Dimensions:	Microphone: 15.2 mm H x 95.3 mm W x 129 mm D (5/8 x 3 3/4 x 5 3/32 in.) Electronics Module: 23.1 mm H x 49 mm W x 84.1 mm D (29/32 x 1 15/16 x 3 5/16 in.)	

TYPICAL FREQUENCY RESPONSE, 809



TYPICAL FREQUENCY RESPONSE, 819



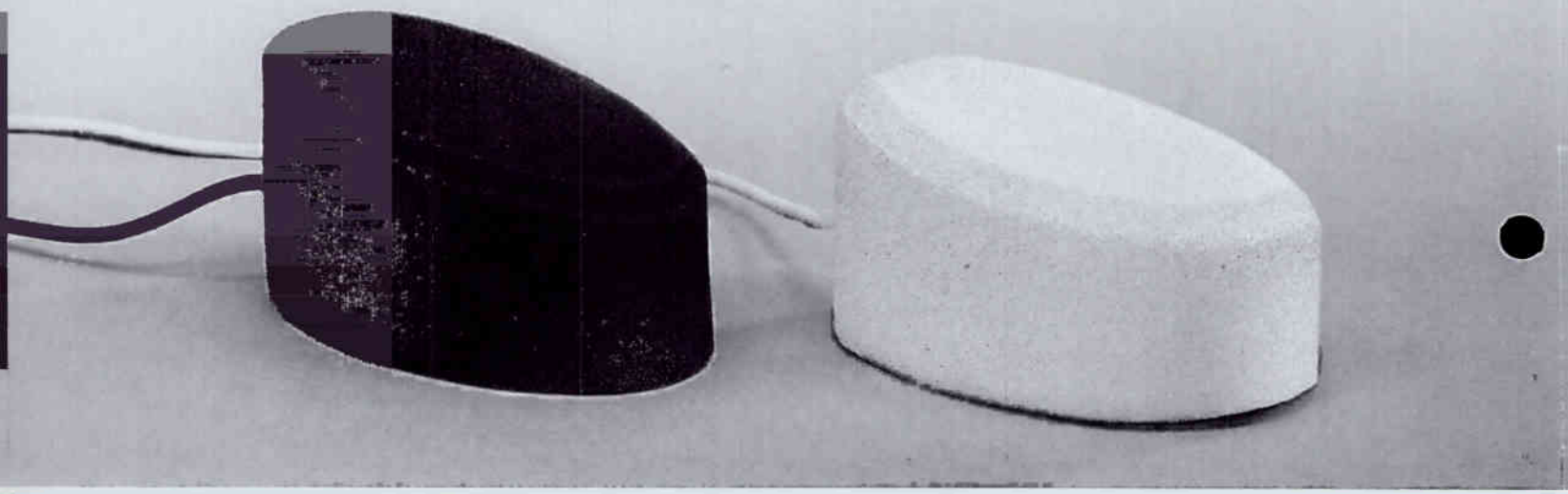
SM18 Series

The SM18's are high-quality dynamic microphones with color-coordinated foam enclosures and matching cables. The palm-size microphones "disappear" by blending into their surroundings in conference rooms, auditoriums, and churches. The physical and acoustic characteristics of these microphones make them ideal for use on altars or on conference tables where ordinary stand-mounted microphones might be visually distracting. The White SM18W is virtually unnoticeable on a white marble or linen-covered altar, while the Brown SM18B blends into a brown wood-finished surface.

Small as they are, the sound quality and intelligibility of the SM18 Series Microphones are outstanding. Their carefully tailored voice-range frequency response minimizes low frequency boominess and rolls off high frequencies above 10 kHz, thus minimizing pickup of spurious noise from undesirable sources such as rustling papers.

The SM18 Series Microphones offer a unique solution to the problem of sound pickup near a hard surface such as a desk, tabletop, lectern or altar. The microphone is mounted in the foam enclosure at an angle that places the cartridge about ⅛ in. from the hard surface. This minimizes the influence of sound reflections from the hard surface, thereby eliminating the uneven frequency and "hollow" sound which reduces intelligibility. In addition, as the reflected and direct sound waves are combined, the microphone output is increased by about 6 dB.

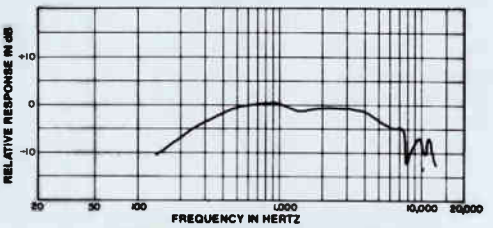
SM18B-CN Brown foam enclosure, 2.7m (9 ft) attached brown cable with three-pin professional audio connector.
SM18B-50 Brown foam enclosure, 15m (50 ft) attached brown cable without connector.
SM18W-CN White foam enclosure, 2.7m (9 ft) attached white cable with three-pin professional audio connector.
SM18W-50 White foam enclosure, 15m (50 ft) attached white cable without connector.



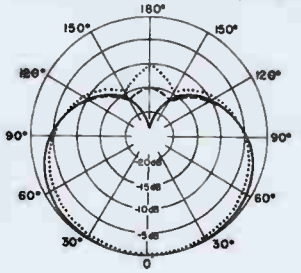
specifications

	SM18 Series
Model:	
Frequency Response:	150 to 10,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.18 mV (−75.0 dB, 0 dB = 1V/μbar)
Power Level:	−53.0 dB, 0 dB = 1 mW/10 μbar
Cable: SM18B-CN, SM18W-CN	Attached 2.7m (9 ft) two-conductor shielded small diameter cable with three-pin professional audio connector at equipment end; SM18B-50, SM18W-50: Attached 15m (50 ft) two-conductor shielded small diameter cable
Dimensions:	44.5 mm H x 89 mm W x 47.6 mm D (1¾ x 3½ x 1⅞ in.) (foam enclosure)
Net Weight:	110 grams (3.9 oz)

TYPICAL FREQUENCY RESPONSE, SM18



TYPICAL POLAR PATTERNS, SM18



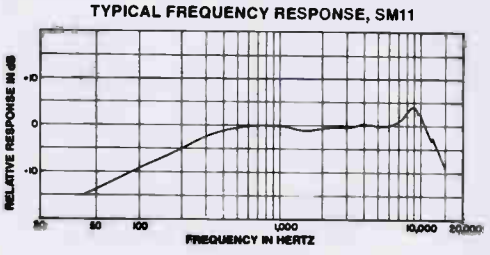
SM11

Tiny, rugged, with wide-range frequency response—the SM11 is the world's smallest dynamic element lavalier microphone! Less than half the size of a standard microphone connector, it is ideal for on-camera TV and motion picture applications. It has a smooth, natural sound quality that's optimized for lavalier use. Its dynamic cartridge and aluminum case are amazingly rugged and reliable, with excellent humidity and heat resistance. All this and full field serviceability! The SM11 comes with two mounting options: a tie bar, and tie tack. In addition, a special clip secures the cable connector to the performer's belt or clothing.

specifications

	SM11
Model:	
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Omnidirectional
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.06mV (−85.0 dB, 0 dB = 1V/μbar)
Power Level:	−64.0 dB, 0 dB = 1mW/10 μbar
Hum Pickup/mOe:	35.3 dB SPL equivalent
Cable:	Attached 1.2m (48 in.) two-conductor shielded with three-pin professional audio connector
Dimensions:	38.1 mm L x 14.7 mm Dia. (1½ in. x 9/16 in.)
Net Weight:	7.8 grams (0.28 oz) less cable
Supplied Accessories:	Tie bar assembly, tie tack assembly, belt clip
Optional Accessories:	See Pages 64-65

TYPICAL FREQUENCY RESPONSE, SM11



570 Series

Excellent, studio-quality lavalier microphones designed for broadcast and sound reinforcement assignments and for use by lecturers, moderators, panelists, clergy, or wherever an inconspicuous, wearable unit is indicated. Special "shaped" response provides superior lavalier performance and reduced clothing and cable noise pickup. Included are the exclusive "Flex-Grip" rapid attachment/adjustment lavalier assembly, a belt clip to secure the cable, and a 9.1m (30 ft) attached, small-diameter cable.

570 Without on-off switch
570S With on-off switch

545L

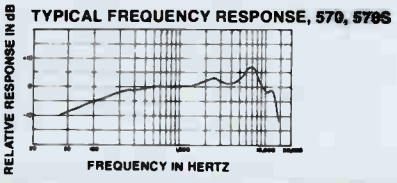
One of the most versatile microphones available: in addition to being worn as a lavalier unit, the 545L can be hand-held, mounted on a floor or desk stand, or affixed to a flexible gooseneck. It has a wide-range frequency response for voice and music reproduction, a unidirectional pickup pattern to reject unwanted nearby sound sources, and a low-impedance output for unlimited cable lengths. Rugged shock-mounted cartridge keeps clothing and cable noise to a minimum. Supplied with easily attached lavalier assembly, belt clip, and attached 6.1m (20 ft), small-diameter cable.

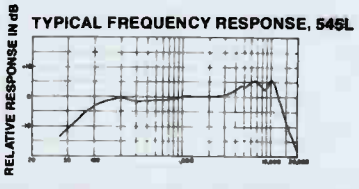
560

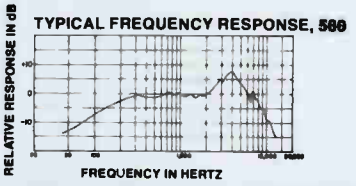
Professional lavalier microphone features at a modest price. The 560 is a dual-impedance, dynamic unit with a tailored frequency response that makes it an excellent choice for lecturers, performers, and clergymen. In addition to lavalier use, the 560 can be used as a hand-held or desk stand unit. Impedance can be changed quickly and easily by a simple internal adjustment. The compact, lightweight case is made of high-strength aluminum, finished in black satin, with a stainless steel grille. The supplied lavalier assembly provides convenient attachment and adjustment by the user. A very flexible, small diameter, 5.5m (18 ft) cable is attached.

specifications

	570 Series	545L	560
Model:			
Frequency Response:	50 to 12,000 Hz	50 to 15,000 Hz	40 to 10,000 Hz
Polar Pattern:	Omnidirectional	Unidirectional	Omnidirectional
Impedance Rating:	150 ohms	150 ohms	Dual: 150 ohms/High
Output Level			
Open Circuit Voltage:	0.08mV (−81.5 dB, 0 dB = 1V/μbar)	0.13mV (−77.5 dB, 0 dB = 1V/μbar)	0.13 mV (−78.0 dB) 150 ohms; 1.41 mV (−57.0 dB) High (0 dB= 1V/μbar)
Power Level:	−60.0 dB, 0 dB = 1mW/10 μbar	−57.5 dB, 0 dB = 1mW/10μbar	−56.0 dB, 0 dB= 1 mW/10μbar
Cable:	Attached, 9.1m (30 ft), two-conductor, shielded, small diameter	Attached, 6.1m (20 ft), two-conductor, shielded, small diameter	Attached, 5.5m (18 ft), two-conductor, shielded
Dimensions:	570, 66 mm L × 20.1 mm Dia (2 19/32 in. × 25/32 in.), 570S: 112 mm L × 20.1 mm Dia (4 13/32 in. × 25/32 in.)	130 mm L x 31.8mm Dia. (5⅛ in. x 1¼ in.)	99 mm L × 35 mm Dia. (3 29/32 in × 1⅜ in.)
Net Weight:	570, 58 grams (2 oz); 570S: 113 grams (4 oz)	354 grams (12½ oz)	284 grams (10 oz)
Packaged Weight:	570: 482 grams (1 lb, 1 oz); 570S: 567 grams (1 lb, 4 oz)	567 grams (1 lb, 4 oz)	454 grams (16 oz)
Supplied Accessories:	Lavalier assembly, belt clip	Lavalier assembly, belt clip	Lavalier assembly
Optional Accessories:	See Pages 64-65	See Pages 64-65	See Pages 64-65







838

The Shure 838 is a miniature, lavalier 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 lavalier 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 lavalier 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 = 1V/μbar)

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)

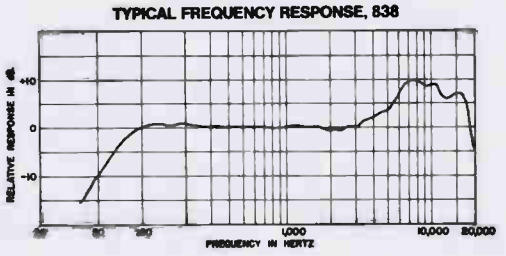
Cables: ..... Microphone: 1.5 m (5 ft) attached, two-conductor shielded
Power Supply: 3m (10 ft) attached, two-conductor, shielded TRIPLE FLEX® with 3-pin professional audio connector.

Dimensions: ..... Microphone: 19.6 mm L x 11.2 mm Dia. (3/4 x 7/16 in.)
Power Supply: 23.1 mm H x 49.0 mm W x 94.8 mm D (29/32 x 1-15/16 x 3-3/4 in.)

Net Weight: .. Microphone: 6 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

TYPICAL FREQUENCY RESPONSE, 838



515SBG, 515SB-G18, 545L, 561, 562, and 572G

Shure makes a complete line of gooseneck mountable microphones to meet virtually every requirement in gooseneck applications. These microphones offer exceptional performance and features for many different purposes such as sound reinforcement and recording; in TV or radio newsrooms; on podiums; for control room talkback; or for communications or paging. They are ideal wherever fixed permanent or semi-permanent installations are required.

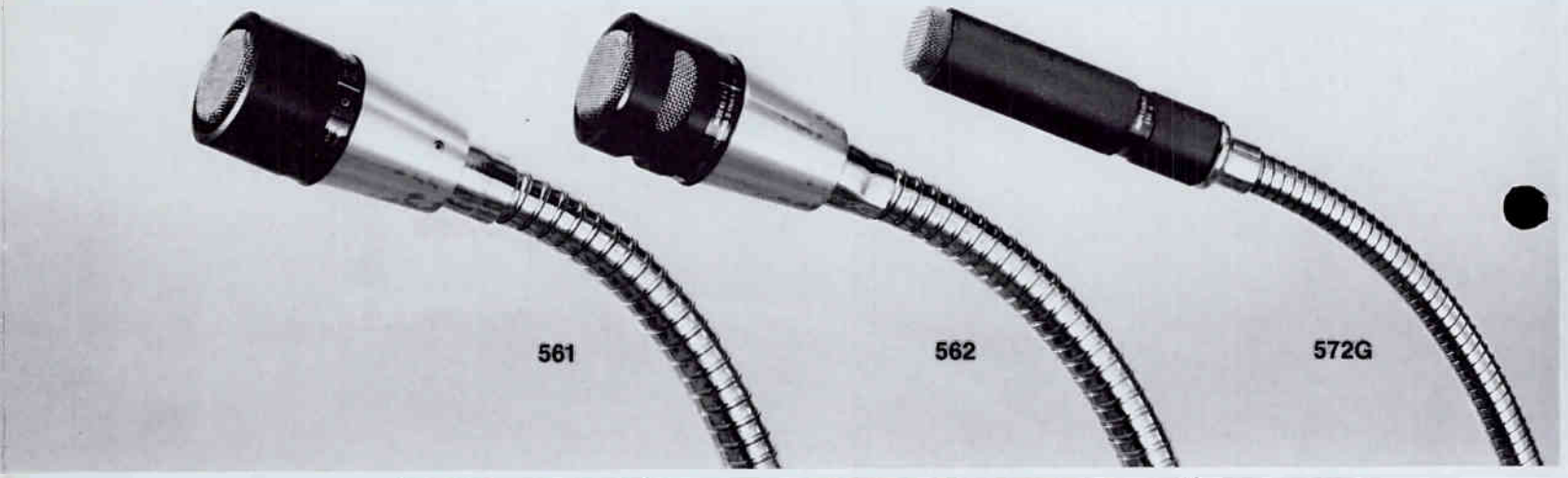
Shure gooseneck microphones are available in unidirectional, omnidirectional, or noise-canceling types. Frequency responses range from the very wide 545L (50 Hz to 15 kHz) to the very narrow, noise-canceling 562 (100 Hz to 6 kHz). The 515SBG and 515SB-G18 feature PTT momentary switches for those applications that require push-to-talk operation. The very small, inconspicuous, omnidirectional 572G is supplied with a small diameter gooseneck and is highly suited for voice applications.

All models are low impedance, are furnished with an attached cable, and have standard 5/8"-27 threads.

The chart below will aid in selecting the right Shure gooseneck microphone for your application.

Model	Type	Frequency Response	Switch	Gooseneck
515SBG	Unidirectional	80 Hz to 13 kHz	PTT Momentary	Not supplied*
515SB-G18	Unidirectional	80 Hz to 13 kHz	PTT Momentary	Supplied 18 in. with mounting flange
545L	Unidirectional	50 Hz to 15 kHz	None	Not supplied*
561	Omnidirectional	40 Hz to 10 kHz	None	Not supplied*
562	Noise-Canceling	100 Hz to 6 kHz	None	Not supplied*
572G	Omnidirectional	50 Hz to 10 kHz	None	Supplied 12 in. with mounting flange

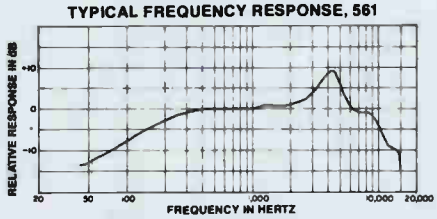
*For accessory goosenecks, see page 62



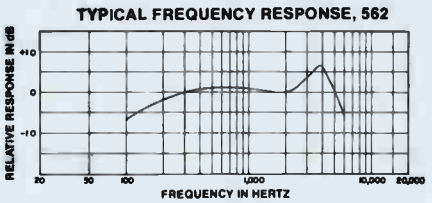
specifications

	561	**562**	**572G**
Model:			
Frequency Response:	40 to 10,000 Hz	100 to 6,000 Hz	50 to 10,000 Hz
Polar Pattern:	Omnidirectional	Unidirectional noise-canceling	Omnidirectional
Impedance Rating:	150 ohms	150 ohms	150 ohms
Output Level			
Open Circuit Voltage:	0.13 mV (−77.5 dB, 0 dB = 1V/μbar)	0.06 mV (−84.0 dB, 0 dB = 1V/μbar)	0.08 mV (−82.0 dB, 0 dB = 1V/μbar)
Power Level:	−56.0 dB, 0 dB = 1 mW/10 μbar	−62.0 dB, 0 dB = 1 mW/10 μbar	−61.0 dB, 0 dB = 1 mW/10 μbar
Cable—Attached:	1.2m (4 ft) two-conductor shielded	1.2m (4 ft) two-conductor shielded	1.5m (5 ft) two-conductor shielded
Dimensions:	67.1 mm L × 34.5 mm Dia. (2²¹/₃₂ × 1⅜ in.)	67 mm L × 34.6 mm Dia. (2⅝ × 1⅜ in.)	81.8 mm L × 19.8 mm Dia. (3⁷/₃₂ × ²⁵/₃₂ in.) Microphone only; 389 mm L × 39.7 mm Dia. (15⁵/₁₆ × 1⁹/₁₆ in.) Total including gooseneck and mounting flange
Net Weight:	142 grams (5 oz)	128 grams (4½ oz)	340 grams (12 oz)
Supplied Accessories:	No. 4 Allen wrench	No. 4 Allen wrench	
Optional Accessories:	See Pages 64-65	See Pages 64-65	See Pages 64-65

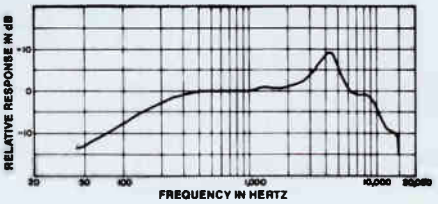
TYPICAL FREQUENCY RESPONSE, 561



TYPICAL FREQUENCY RESPONSE, 562



TYPICAL FREQUENCY RESPONSE, 572G



For specifications on 515 Series Gooseneck Microphones see page 36, for 545L see page 37.

ABOUT SHURE COMMUNICATIONS MICROPHONES

The following section features the Shure line of communications microphones, the "field standard" microphones in commercial, public safety and amateur applications. Shure microphones have been the overwhelming choice of communications users all over the world for 30 years. As the leader in the development and manufacture of a wide variety of microphones, Shure's communications line covers virtually every requirement in communications installations.

With a wide selection of product features, performance characteristics and prices, more Shure microphones are used in prestigious communications applications than any other brand, and in police, fire and other public safety applications where reliability is critical, Shure mobile microphones are the preferred choice over the other brands.

In applications as diverse as dispatching, public address, transportation services, ship-to-shore, and aircraft, as well as citizens band and amateur radio, the Shure communications microphone line has a model that fits your specific equipment and application needs.

Amateur Radio Microphone Selection Guide
To improve on-air intelligibility we suggest the following Shure Microphones for amateur radio applications:

	Mobile Application	Fixed-Station Application
AM/SSB	414A* 404C*	444D 526T Series II
FM	414B* 527B* 577B**	444D 526T Series II

*General recommendation: Consult equipment instruction manual for correct microphone impedance.
**Noise-canceling.

Over 90% of all Voice Recognition Systems in use today use a Shure Microphone

The Shure name on the back of your mobile communications microphone is your assurance of proven quality, reliability and performance.

104C, 404B, 404C, 405K

These "world standard" omnidirectional microphones provide high speech intelligibility and are used extensively in police, taxi, bus, sports, industrial and commercial applications. They are unusually rugged and heavy duty—for use in the most demanding outdoor and indoor installations. They fit comfortably in the palm of the hand and their "Million-Cycle" switch, virtually indestructible ARMO-DUR® case and extra-durable neoprene cable have given them a reputation for trouble-free performance under severe operating conditions.

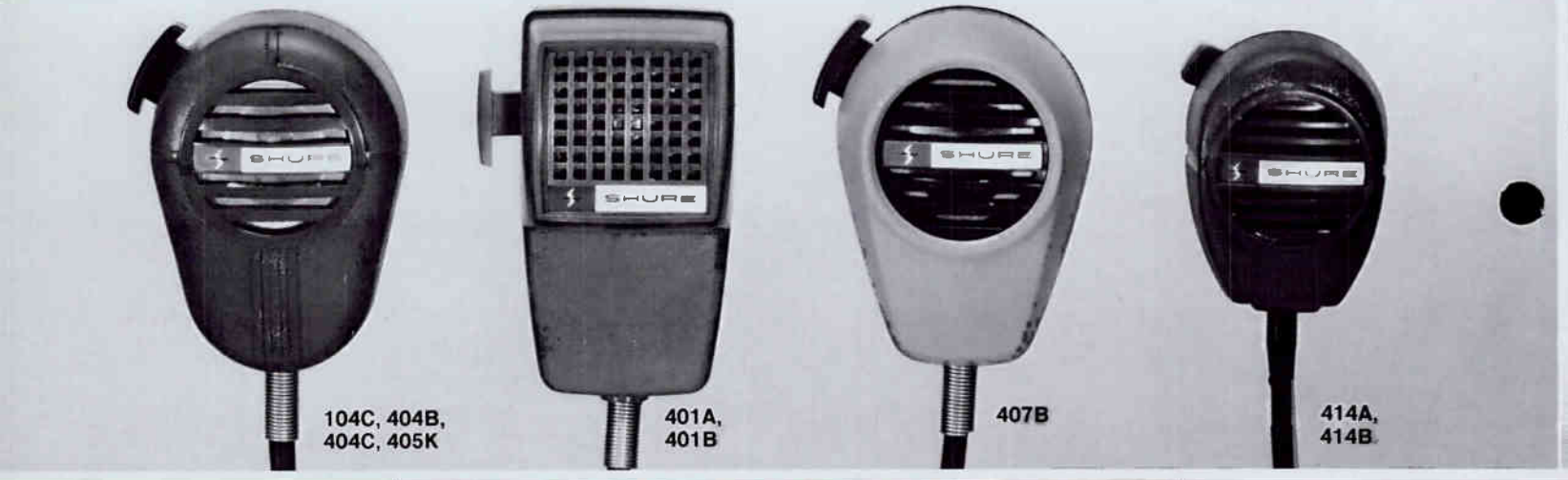
414A, 414B, 514B

The 514B dynamic, omnidirectional microphone and the 414 Series CONTROLLED MAGNETIC,® omnidirectional microphones are about half the size and weight of conventional microphones, yet perform as well or better. These models are unparalleled for ruggedness and dependability. The 514B is designed specifically for use in paging systems. The 414A and 414B are recommended for critical outdoor/indoor communications in mobile and fixed station use.

Each model features the "Million-Cycle" switch and durable neoprene cable. The high impact ARMO-DUR® case of the 514B is black and the 414 Series is grey.

407B, 527B, 527C

These models are examples of ruggedness, reliability and top performance in efficient, modular-designed microphones that disassemble quickly and make every part accessible—permitting easier in-the-field maintenance. The ARMO-DUR cases are lightweight, immune to shock, and unaffected by oil, sun, salt, spray, acids, rust or corrosion. Neoprene cables provide extra durability and longer flex life. Small, easy-to-handle design is hum shielded and insulated against shock. Model 407B features a rugged CONTROLLED MAGNETIC® element. Models 527B and 527C feature a dynamic element with extended frequency response, especially suitable for mobile FM transmitters. The transistor amplifier in the 527C is designed to match carbon-microphone-type input circuitry. The 407 is grey and the 527B and 527C are black.



specifications

Model	Type	Frequency Response	Load Impedance (ohms) Minimum	Load Impedance (ohms) Recommended	Output Level (Volts/100 microbars)	Switch Circuits Mic	Switch Circuits Relay	Cable
104C	Carbon†	300 to 4,000 Hz	50	100	0.56V (−5.0 dB*)	Open	Open	1.8m (6 ft.), coiled, 4-conductor
401A	CONTROLLED MAGNETIC®	200 to 4,000 Hz	150k	100k	0.27V (−11.5 dB*)	Closed	Open	1.8m (6 ft.), coiled, 4-conductor, 2-shielded
401B	CONTROLLED MAGNETIC®	200 to 4,000 Hz	200	1k	33 mV (−29.5 dB*)	Open	Open	1.8m (6 ft.), coiled, 4-conductor, 1-shielded
404B	CONTROLLED MAGNETIC®	200 to 4,000 Hz	150	1k	22 mV (−33.0 dB*)	Open	Open	1.5m (5 ft.), coiled, 4-conductor, 2-shielded
404C	CONTROLLED MAGNETIC®	200 to 4,000 Hz	15k	100k	0.21V (−13.5 dB*)	Closed	Open	1.5m (5 ft.), coiled, 3-conductor, 1-shielded
405K	CONTROLLED MAGNETIC®	200 to 4,000 Hz	15k	100k	0.20V (−14.0 dB*)	Open	Open	1.8m (6 ft.), coiled, 3-conductor, 1-shielded**
407B	CONTROLLED MAGNETIC®	300 to 4,000 Hz	200	1k	22 mV (−13.5 dB*)	Open(a)	Open	1.8m (6 ft.), coiled, 4-conductor, 2-shielded

*0 dB = 1 volt per 100 microbars **w/Amphenol MC4M type plug (offset keying) †Requires external power source (a) Simple change to normally closed

401A, 401B

These microphones provide excellent performance at an economical cost. They are designed for clear, crisp voice response of high intelligibility. Each features a heavy-duty push-to-talk switch and extremely sturdy, high-impact ARMO-DUR® case. They are recommended for all types of outdoor and indoor communication activity, in mobile and fixed-station use. They are ideal replacement microphones in all communications equipment. The 401 Series are CONTROLLED MAGNETIC® units with quality neoprene cables.

488T

Model 488T is a noise-cancelling, transistorized microphone for highly intelligible speech communications under all types of noise conditions. It is specifically designed for use in commercial and private aircraft, and is FAA-certified for aircraft applications. The transistor amplifier matches carbon-microphone-type input circuitry. The 488T incorporates a CONTROLLED MAGNETIC® cartridge and a "Million-Cycle" switch in a rugged, lightweight ARMO-DUR® case and neoprene cable.

577B

The 577B low-impedance, dynamic, noise-cancelling microphone shuts out background noise, permitting clear, crisp transmission, even where the noise level is so great that the operator cannot hear himself talking. It represents a significant improvement over most microphones having anti-noise features. This high-quality, dynamic microphone is small size, lightweight and extremely reliable. It features Shure's exclusive ARMO-DUR® case, "Million-Cycle" switch, and neoprene cable, and its modular construction greatly simplifies field service.

specifications

Model	Type	Frequency Response	Load Impedance (ohms) Minimum	Load Impedance (ohms) Recommended	Output Level (Volts/100 microbars)	Switch Circuits Mic	Switch Circuits Relay	Cable
414A	CONTROLLED MAGNETIC®	200 to 5,000 Hz	15k	100k	.27V (−11.5 dB*)	Closed	Open	1.8m (6 ft.), coiled, 4-conductor-2 shielded
414B	CONTROLLED MAGNETIC®	200 to 5,000 Hz	150	1k	28 mV (−31.0 dB*)	Open	Open	1.8m (6 ft.), coiled, 4-conductor, 2-shielded
488T	CONTROLLED MAGNETIC® transistor amplified†	200 to 4,000 Hz	100	2.2k	0.56V (−5.0 dB*)	Open	Open	1.7m (5½ ft.), coiled, 3-conductor, w/PJ-068 2-ckt. phone plug
514B	Dynamic	100 to 6,000 Hz	75	300	15 mV (−36.5 dB*)	Open	Open	1.5m (5 ft.), coiled, 4-conductor, 2-shielded
527B	Dynamic	200 to 5,000 Hz	200	1k	15 mV (−36.5 dB*)	Open	Open	1.7m (5½ ft.), coiled, 4-conductor, 2-shielded
527C	Dynamic transistor amplified†	200 to 5,000 Hz	250	2.2k	0.45V (−7.0 dB*)***	Open	Open	1.7m (5½ ft.), coiled, 4-conductor
577B	Dynamic	100 to 5,000 Hz	175	1k	5 mV (−46.0 dB*)	Open(a)	Open	1.8m (6 ft.), coiled, 4-conductor, 2-shielded

*0 dB = 1 volt per 100 microbars ***with 500 ohm and 10 volt source †Requires external power source (a) Simple change to normally closed

450

The Model 450 is a rugged, omnidirectional microphone designed especially for radio communications, paging, and dispatching systems. It has a CONTROLLED MAGNETIC® cartridge for high speech intelligibility, exceptional reliability, high output level, and smooth response. The microphone features switchable high and low impedance and telescoping height adjustment over a 63.5 mm (2½ in.) range, plus a case of rugged gray ARMO-DUR,® which won't crack, peel, rust, or dent. A "Million-Cycle" push-to-talk switch activates both microphone and relay circuits, and a locking feature locks the microphone on. The cable is connected for balanced low-impedance operation designed for paging systems where long cable runs are encountered.

522

This is a dynamic microphone with a unidirectional pickup pattern that suppresses unwanted background noise, such as generated by other dispatchers working nearby, ventilating equipment, or office machines in the same area. It also suppresses feedback in public address applications.

A fingertip control bar (locking and non-locking action) actuates the microphone circuit and normally open external relay circuit, and is equipped with a long-life "Million-Cycle" switch to satisfy the rigorous requirements of communications and paging.

The 522 features switchable high and low impedance, an adjustable stand that raises or lowers the microphone to the most comfortable talking position (63.5 mm, 2½ in. range), and a sturdy, high impact ARMO-DUR® case. The cable is connected for balanced low-impedance operation designed for paging systems where long cable runs are encountered.

specifications

Model:	450	522
Type:	CONTROLLED MAGNETIC®	Dynamic
Frequency Response:	100 to 10,000 Hz	60 to 11,000 Hz
Load Impedance (ohms):		
Minimum	150/15k	75/15k
Recommended	1k/100k	300/100k
Output Level Volts/microbar:	0.28 mV (−71.0 dB) (Low) 2.2 mV (−53.0 dB) (High) (0 dB = 1 volt per microbar)	0.09 mV (−80.5 dB) (Low) 1.3 mV (−58.0 dB) (High) (0.dB = 1 volt per microbar)
Switch Circuits:		
Mic:	Normally open in low impedance; closed in high	Normally closed
Relay:	Normally open	Normally open
Cable:	2.1m (7 ft), four-conductor, two-shielded	2.1m (7 ft), four-conductor, two-shielded
Dimensions:	236 mm H x 101 mm W x 144 mm D (9-9/16 x 3-63/64 x 15-11/16 in.)	248 mm H x 102 mm W x 144 mm D (9¾ x 4 x 5-11/16 in.)
Net Weight:	736 grams (1 lb, 10 oz)	736 grams (1 lb, 10 oz)

OPTIONAL CONVERSIONS: To increase the versatility of the 450, two optional modifications are available:

a 2.1m (7 ft) straight cable 90BR2600
a Split-bar Transit/Monitor switch conversion kit RK199S

444D

Model 444D offers a multitude of features designed for the serious ham enthusiast, including the Shure-designed, high-output CONTROLLED MAGNETIC® cartridge for unmatched performance characteristics and a tailored response for maximum voice intelligibility.

Other features include: dual impedance with an impedance selector switch for convenient changeover; a Normal/VOX slide switch; telescoping height adjustment; continuous RF shielding from microphone base to metalized case; sturdy, high-impact ARMO-DUR® case; "Million-Cycle" switch with press-to-talk, momentary or locking switch bar; and a coiled cable.

The cable leads and switch are arranged for immediate hookup to transmitters with either isolated or grounded switching. Each 444D is supplied with an Amateur Radio Wiring Guide which provides easy-to-understand instructions for connection to most amateur radio equipment. In addition, purchasers of the 444D can receive a free individually printed nameplate with their station's call letters.

526T Series II

A transistorized preamplifier gives the Model 526T Series II maximum versatility in fixed station operation. It can be used to replace ceramic or dynamic, high- or low-impedance microphones supplied as original equipment...or to turn a mobile FM unit into an indoor fixed station. The dynamic element provides clean, crisp, undistorted transmission and the frequency response is tailored with a rising response characteristic ideal for SSB and FM communications. It's the perfect match for almost any transceiver made, from 500 ohms and up.

An adjustable volume control cuts through QRM and provides optimum transmitter modulation and maximum intelligibility. The "Million-Cycle" press-to-talk switch provides trouble-free momentary or locking operation and an electronic or relay switching circuit enables hookup of speech processors, an antenna relay, on-the-air lights, etc. The case is of virtually indestructible ARMO-DUR® and is fully shielded for low hum pickup and minimum susceptibility to RF interference.

The switch and six-wire coiled cable are arranged for immediate hookup to practically every transceiver input. A wiring guide is supplied with each unit to further simplify installation.

specifications

	444D	526T Series II
Model:		
Type:	CONTROLLED MAGNETIC®	Dynamic, transistor amplified (requires 9 volt battery)
Frequency Response:	200 to 6,000 Hz	200 to 6,000 Hz
Load Impedance (Ohms):		
Minimum	200/15k	500
Recommended	1k/100k	15k or higher
Output Level Volts/microbar:	0.30 mV (−70.5 dB) (Low) 2.4 mV (−52.5 dB) (High) (0 dB = 1 volt per microbar)	0.63 to 14 mV (−64.0 to −37.0 dB) (0 dB = 1 volt per microbar)
Switch Circuits:		
Mic:	Normally open	Normally open
Relay:	Normally open	SPDT and SPST
Cable:	2.1m (7 ft), coiled, three-conductor, one-shielded	2.1m (7 ft), coiled, five-conductor, one-shielded
Dimensions:	236 mm H x 101 mm W x 236 mm D (9-19/64 x 3-63/64 x 5-11/16 in.)	264 mm H x 108 mm W x 149 mm D (10 3/8 x 4 1/4 x 5 7/8 in.)
Net Weight:	784 grams (1 lb, 12 oz)	920 grams (2 lb)

OPTIONAL CONVERSIONS: To increase the versatility of the 444D, two optional modifications are available:

a 2.1m (7 ft) straight cable 90BR2600
a Split-bar Transmit/Monitor switch conversion kit..RK199S

ABOUT SHURE MICROPHONE ACCESSORIES

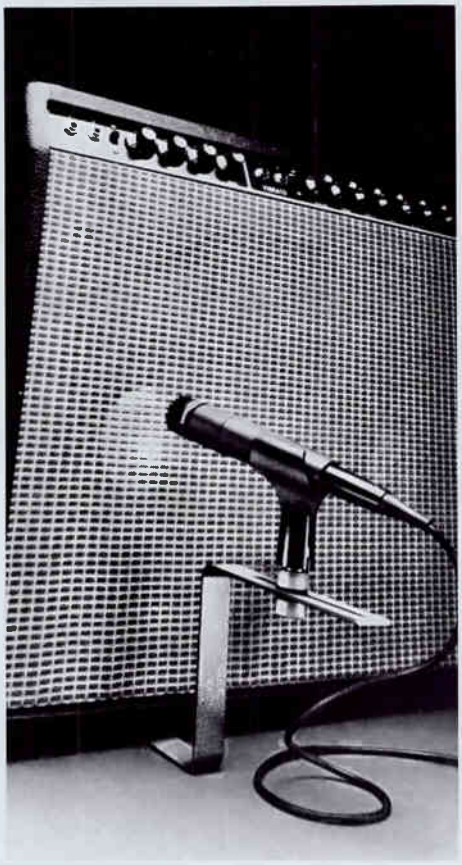
Special needs and problems that arise in the field require special solutions. Shure recognizes these needs, and has designed a complete line of microphone accessories to meet them. They extend the versatility of Shure microphones and allow them to be used in situations where problems might otherwise occur.

All accessories featured in this section are designed specifically for use with Shure microphones to insure optimum compatibility and maximum performance. And, as with all Shure products, microphone accessories must survive rigorous testing which simulates years of heavy service...and still perform up to their original specifications.

REPLACEMENT PARTS AND ACCESSORIES SELECTION GUIDE

Determining the correct replacement part or accessory model number for a given Shure microphone is easy with the Replacement Parts and Accessories Selection Guide located on pages 64 and 65 of this catalog. Simply locate the microphone model number in the left column of the chart...then read across, under the appropriate heading, until you find the model number of the part or accessory you require.

Shure engineers studied the action of reflected sound waves and their effects on sound quality in distant-pickup applications, and developed the first microphone stands designed especially for eliminating the "hollow" sound that results when conventional stands are used. The Shure S55P—a breakthrough in distant miking technique.



Z-bracket (Page 61)

Designed for easy placement in miking guitar amplifiers and speaker cabinets. Small, lightweight alternative to standard microphone stand and boom combination.

Shock-Stoppers (Page 60)

Microphone mounts that significantly reduce mechanical and vibration noises. Available in half-mount or full circle versions.

Problem Solvers (Page 57)

An accessory line designed to solve the most common microphone problems including input overload, low or high frequency noise, lack of presence, and excessive sibilance.

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 (4½ in.) long x 19 mm (¾ 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 (simplex) powered condenser microphone systems and their power supplies.

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

A95UF

A95U

A95 Series

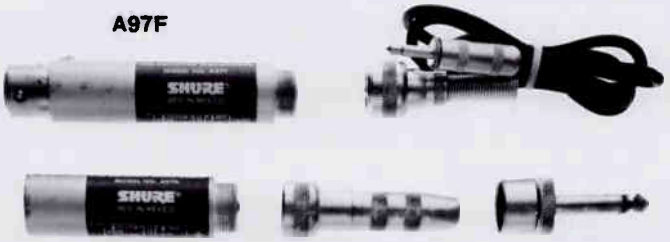
Low-Impedance to High-Impedance Line Matching Transformers

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 ¼ 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 ¼ in. phone jack and phone plug.

A97F



A97A

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 ¼ 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.

A2WSA Series

High performance rugged windscreens with molded rubber collar for snug fit. Effectively minimizes wind noise in outdoor locations and controls explosive breath sounds in any location. For 545, SM56, SM57 and SM77 Series Microphones.

A2WSA Gray
A2WSA-BK Black

A81WS

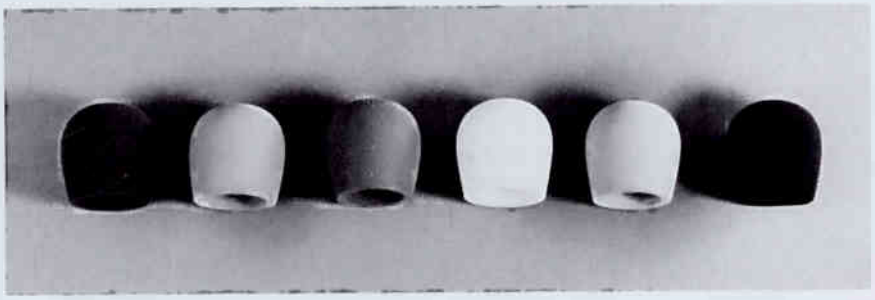
Unique heavy-duty windscreen, specially designed for the SM80 and SM81. Special dual-density construction overcomes even high wind noise without significantly affecting frequency response. Two distinctly different layers of material are used, each with complementary acoustical properties. Gray foam.

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



Replacement Windscreens

For the model numbers of direct replacement windscreens originally supplied with Shure Microphones, refer to pages 64 and 65.

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.

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.

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.

S33 Series*
Desk Stands

Low silhouette, ideal for TV use. Heavy, 1.14 kg (2 lb,8 oz) for rock-steady support. Base size: 68 mm H x 136 mm W x 152 mm D (2-11/16 x 5⅜ x 6 in.).

S33B Black

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 (2⅞ 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 ⅝"-27 thread accepts all Shure microphones with permanent mount connectors and all Shure microphone mounts and swivel adapters.


A25B

A25B* and A25C*
Swivel Adapters

A25B Black. Designed for use with 515, 545, 560, 565, 586, 588, SM57, SM58, SM77, and SM78 Series Microphones.
A25C Black. Designed for use with SM94 and SM96 microphones.


A57D A57E

A57 Series*
Swivel Adapters

A57D Champagne. Designed for use with Models 578, 579SB, SM59, SM61, SM62, SM63, SM80, SM81, and SM82.
A57E Black. Designed for use with Models 570, 571, SM51, SM76, SM85, and SM87.

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. Ideal for vocalists who also play a guitar and need two microphones.


A55M A55HM

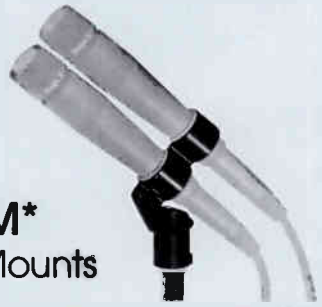
A53M,* A53HM,* A55M* and A55HM*
Shock-Stopper™ Isolation Mounts

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 SM59, SM61, SM62, SM63, SM76, 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 545D, 565D, 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 ⅝"-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 545, SM57, and SM77 Series Microphones.
A26M Designed for use with microphones listed above when using A2WSA Windscreen and with 515, 565, 586, 588, SM58, and SM78 Series Microphones.

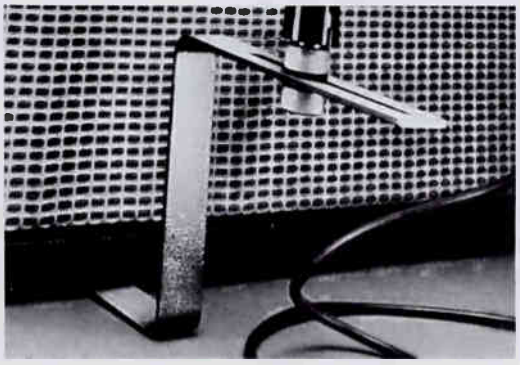
*Standard ⅝"-27 thread connectors.

Microphone Cable Selection Chart:

The cables listed in this chart represent just some of the many cables available from Shure. These cables are high durability and shielded for use with low or high impedance microphones.

Model	Microphone Connector	Equipment Connector	Cable Jacket	Cable Length	Cable Conductors
C15A	3-Socket	¼" Phone Plug	Hi-Flex	15 ft (4.6m)	1
C20A	3-Socket	¼" 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
C25G	3-Socket Black Low Impedance	High Impedance Matching Transformer ¼" Phone Plug	Heavy Gauge Rubber	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)



A45Z
Z-Bracket

Small, lightweight alternative to standard microphone stand and boom combination. Can be positioned on top or underneath any speaker cabinet or guitar amplifier. An adjustable mic clip adaptor allows versatility in speaker-to-mic placement and angular position for optimum tonal response. Black.

Goosenecks

High-quality, flexible goosenecks. "Silent-type" design limits mechanically induced noises. All models have standard 5/8"-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 5/8"-27 external thread

Lavalier Assemblies

Three different professional quality lavalier assemblies designed to fit Shure Lavalier Microphones. "Positive-lock" design holds the microphone securely, yet allows easy, noiseless adjustment of microphone position. Snaps on and off in an instant.

A51L Plastic. Fits Models 570, 570S, 571, and SM51.
A54L Plastic. Fits Model 545L.
A57L Rubber. Fits Models 570, 570S, and SM51.

26A10
Microphone Accessory Bag

Practical, multiple purpose bag provides protection of microphones from the elements and offers convenient storage of accessories. Made of handsome black vinyl with double-stitched seams for durability. Nylon zipper is impervious to rust. Dimensions: 114 mm H x 267 mm W (4½ x 10½ in.)

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 5/16 inches by 4½ inches by 2 inches. A heavy-duty loop permits attachment to a belt, or "piggybacking" on other equipment straps.

PS1
Power Supply

Shure Model PS1 is an ac power supply that provides (phantom) simplex 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 PS1 is designed to operate from 90 to 132 Vac, 50/60 Hz.

The PS1 is Listed by Underwriters' Laboratories, Inc. and is listed by Canadian Standards Association as Certified.

Model Features:

- Simplex 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 silicon 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 at 1.1 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 20kHz, 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, 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:	60.3 mm H x 152 mm W x 175 mm D (2⅜ in. x 6 in. x 6⅞ 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.

REPLACEMENT PARTS AND ACCESSORIES/selection guide

Microphone Model No.	Cable	Cartridge	Screen Grille Assembly	Desk Stand ①	Swivel Adapter ②	Wind Screen ③	Miscellaneous	Microphone Model No.
50AC	–	–	–	–	–	–	–	**50AC**
104C	C15C	R10A	–	–	–	–	–	**104C**
401A	C20C	R5D	–	–	–	–	–	**401A**
401B	70A481	R5E	–	–	–	–	–	**401B**
404B	C14C	R5E	–	–	–	–	–	**404B**
404C	C12C	R5F	–	–	–	–	–	**404C**
405K	C11C	R5D	–	–	–	–	–	**405K**
407B	70A4107	99AL556	–	–	–	–	–	**407B**
414A	94A347A	R14A	–	–	–	–	–	**414A**
414B	C25C	R14B	–	–	–	–	–	**414B**
444D	70A549	R111	90F1060	–	–	–	90BR2600, RK199S	**444D**
450	70A494	R44D	90A1060	–	–	–	–	**450**
488T	C22C	R88T	–	–	–	–	–	**488T**
512	–	R93	–	–	–	49A64A	A120S, R143	**512**
514B	C25C	R103	–	–	–	–	–	**514B**
515SA	C62	R15	RK54G	S33**	A25B*	A58WS	A26M	**515SA**
515SAC	90A2013	R15	RK54G	S33**	A25B*	A58WS	A26M	**515SAC**
515SB	C63	R15	RK54G	S33**	A25B*	A58WS	A26M	**515SB**
515SBG	70A4063	R15	RK54G	S33**	A25B	A58WS	A26M, ④	**515SBG**
515SB-G18	70A4063	R15	RK54G	–	–	A58WS	G18*	**515SB-G18**
520D	70A2047	R44D	–	–	–	–	G18, A12	**520D**
522	70A494	R89	90A1358	–	–	–	–	**522**
526T Series II	70A544	R96	90D1844	–	–	–	–	**526T Series II**
527B	70A410	R131	–	–	–	–	–	**527B**
527C	70A410	R132	–	–	–	–	–	**527C**
545D	C59	R45	–	S33**	A25B*	A2WSA	A25M†, A55M, S55P	**545D**
545L	70A2004	R45L	–	S33**	A25B	A2WSA	A25M††, A54L*, ④	**545L**
545SD	C59	R45	–	S33**	A25B*	A2WSA	A25M†	**545SD**
545SD-CN	C20H	R45	–	S33**	A25B*	A2WSA	A25M†	**545SD-CN**
545SH	C59	R45	–	–	–	A2WSA	–	**545SH**
560	70A285	R50	–	S33**	A25B	–	94A256*	**560**
561	70A292	R50	RK85G	–	–	–	④	**561**
562	70A292	R90	RK183G	–	–	A58WS	④	**562**
565D	C59	R65	RS65	S33**	A25B	A58WS	A26M, A56M	**565D**
565SD	C59	R65	RS65	S33**	A25B	A58WS	A26M	**565SD**
565SD-CN	C20H	R65	RS65	S33**	A25B	A58WS	A26M	**565SD-CN**
570	C76	R70	RK91G	S33**	A57D	A2WSA	A120S, A57L*	**570**
570S	70A295	R70	RK91G	S33**	A57D	A2WSA	A120S, A57L*	**570S**
571	70A287	90F995	RK91G	S33**	A57E*	A2WSA	–	**571**
572G	70A299	90F995	–	–	–	A2WSA	90B1120A	**572G**
575S	95B625	R50	–	S33**	65A280A	–	94A27A	**575S**
575SB	–	R50	–	S33**	–	–	–	**575SB**
577B	C89	R98B	–	–	–	–	–	**577B**
579SB	C20D	R50	RK161G	S33**	A57D*	A58WS	–	**579SB**
586SA-C	C20A	R115	RK216G	S33**	A25B*	A58WS	A26M	**586SA-C**
586SB-CN	C20H	R115	RK216G	S33**	A25B*	A58WS	A26M	**586SB-CN**

① S37A Desk Stand and S39A Vibration-Isolation Stand accommodate all Shure swivel adapters.
② All Shure swivel adapters fit MS-10C and S15 Microphone Stands and A27M Stereo Adapter.
③ A58WS Windscreens are available in an assortment of colors.
④ For use with any Shure Gooseneck.

–Indicates accessory cannot be used with product.
*Furnished Accessory.
**S33B-Black Finish, S33P-Gray Finish.
†With A2WSA Windscreen, use A26M.
††PS1–for 90 to 132 Vac.

Microphone Model No.	Cable	Cartridge	Screen Grille Assembly	Desk Stand ①	Swivel Adapter ②	Wind Screen ③	Miscellaneous	Microphone Model No.
588SA	C83	R8	RK82G	S33**	A25B*	A58WS	A26M	**588SA**
588SAC	C83	R8	RK82G	S33**	A25B*	A58WS	A26M	**588SAC**
588SB	C59	R8	RK82G	S33**	A25B*	A58WS	A26M	**588SB**
588SB-CN	C20H	R8	RK82G	S33**	A25B*	A58WS	A26M	**588SB-CN**
809	–	R130	–	–	–	–	–	**809**
819	–	R129	–	–	–	–	–	**819**
838	–	R133	–	–	–	RK242WS	A120S	**838**
SM1	C108	R93	–	–	–	RK184WS	A120S, R135, RK246, RK247	**SM1**
SM2	C108	R93	–	–	–	RK184WS	A120S, R135, RK246	**SM2**
SM5B	70A2001	99B347	–	S33**	–	–	–	**SM5B**
SM7	–	–	–	S33**	–	–	A53E	**SM7**
SM10A	–	R93	–	–	–	RK184WS*	A120S	**SM10A**
SM11	C91	R99	–	–	–	–	A120S	**SM11**
SM12A	–	R93	–	–	–	RK184WS*	A120S	**SM12A**
SM14A	–	R93	–	–	–	RK184WS*	A120S	**SM14A**
SM17	90B2505	R99	–	–	–	–	–	**SM17**
SM18B	90B3111	–	–	–	–	–	–	**SM18B**
SM18B-50	70B2046	–	–	–	–	–	–	**SM18B-50**
SM18W	90A3111	–	–	–	–	–	–	**SM18W**
SM18W-50	70A2046	–	–	–	–	–	–	**SM18W-50**
SM48	–	R136	RK248G	S37A	A25B	A58WS	–	**SM48**
SM56	C20D	R57	RK244G	S33**	–	A2WSA	–	**SM56**
SM57-CN	C20H	R57	RK244G	S33**	A25B*	A2WSA	A25M††, A55M, S55P	**SM57-CN**
SM58	C20D	R59	RK143G	S33**	A25B*	A58WS	A26M, A55M	**SM58**
SM58-CN	C20H	R59	RK143G	S33**	A25B*	A58WS	A26M, A55M	**SM58-CN**
SM59	C20H	R100	90A2429	S33**	A57D*	A59WS	A53M	**SM59**
SM61	C20D	R61	RK164G	S33**	A57D*	A61WS*	A53M	**SM61**
SM61-CN	C20H	R61	RK164G	S33**	A57D*	A58WS*	A53M	**SM61-CN**
SM62	90B2159	R62	RK176G	S33**	A57D*	A58WS	A53M	**SM62**
SM62-CN	90A2454	R62	RK176G	S33**	A57D*	A58WS	A53M	**SM62-CN**
SM63-CN	C94CN	90A2902	–	S33**	A57D*	49A55*	A53M	**SM63-CN**
SM63L-CN	C25F	90B2902	–	S33**	A57D*	RK229WS*	–	**SM63L-CN**
SM76	C20D	–	–	S33**	A57E*	A2WSA	A53M	**SM76**
SM77EB-CN	C25E	R107	–	S33**	A25B*	A2WSA	A25M†, A55M, S55P	**SM77EB-CN**
SM77TN-CN	C25E	R108	–	S33**	A25B*	A2WSA	A25M†, A55M, S55P	**SM77TN-CN**
SM78EB-CN	C25E	R109	RK210G	S33**	A25B*	A58WS	A26M, A55M	**SM78EB-CN**
SM78TN-CN	C25E	R110	RK211G	S33**	A25B*	A58WS	A26M, A55M	**SM78TN-CN**
SM80-CN	C25F	R104A	–	S33**	A57D*	A81G*	A81WS, PS1	**SM80-CN**
SM81	C25E	R104	–	S33**	A57D*	A81G*	A53M, A81WS, PS1††, R104A	**SM81**
SM82	C20D	99F671	RK174G	S33**	A57D*	49A37A*	50AC, PS1††	**SM82**
SM83-CN	C106	R127	–	–	–	RK242WS*	A120S	**SM83-CN**
SM85-CN	C25E	R112	RK214G	S33**	A57E*	49A57B*	A53M, PS1††	**SM85**
SM87-CN	C25E	R128	RK243G	S33**	A57E*	A85WS	A53M, PS1††	**SM87-CN**
SM90	C107	R130	–	–	–	–	–	**SM90**
SM91	C107	R129	–	–	–	–	–	**SM91**
SM94	–	R138	RK249G	–	A25C	A3WS	90B3901, PS1, A53HM	**SM94**
SM96	–	R137	RK243G	–	A25C	A85WS	90A3901, PS1, A53HM	**SM96**
SM98	C107	R134	–	–	RK245	49A66	–	**SM98**

① S37A Desk Stand and S39A Vibration-Isolation Stand accommodate all Shure swivel adapters.
② All Shure swivel adapters fit MS-10C and S15 Microphone Stands and A27M Stereo Adapter.
③ A58WS and A61WS Windscreens are available in an assortment of colors.
④ For use with any Shure Gooseneck.

–Indicates accessory cannot be used with product.
*Furnished Accessory.
**S33B-Black Finish, S33P-Gray Finish.
†With A2WSA Windscreen, use A26M.
††PS1–for 90 to 132 Vac.

ABOUT SHURE CIRCUITRY PRODUCTS

Throughout its history, Shure has taken a pioneering role in the design and manufacture of circuitry products. Today, when professionals need reliable, portable, high-quality, economical audio mixers for critical applications, they naturally turn to Shure for unquestioned dependability and performance.

Each of the Shure circuitry products featured in this section is small in size, simple to operate, and modest in cost, yet they can handle virtually any assignment in which multiple microphones or other audio sources must be controlled. They are ideal for practical, efficient, economical audio control in studio, broadcasting, public address, sound reinforcement, and recording applications.

Dollar for dollar, Shure circuitry products provide more features and performance than competitive brands on the market. They are designed from the ground up to be rugged, reliable, and cost effective. The audio quality is the best to be found in professional mixers. Shure's years of experience in the audio circuitry field, combined with their knowledge of what the user needs, assure you of a product that fits the use to a "T". Broadcasters and sound engineers alike have come to rely on Shure for the best in mixers. Whether your needs are for a basic PA mixer, an ENG unit for the on-the-go news crews, or the most completely automatic mixer available, Shure has a mixer to do the job for you.

Professional considerations are always foremost in the design of Shure circuitry products. In addition to reliable performance, Shure products provide the value, flexibility, and features that professionals require. Only the highest quality XLR connectors and VU meters are featured in Shure circuitry products. Most Shure mixers are switchable for microphone or line-level operation, have built-in phantom supplies for use with condenser microphones, and have the input-output flexibility to handle an extremely wide range of audio control applications. Plus, Shure circuitry products include a host of convenience features that make users' lives easier.

The Shure "M" Series, the "FP" Series, and the "AMS" System are all leaders in their fields. Designed *by* engineers *for* engineers, they are recognized worldwide for their value, versatility, quality, and reliability.

Shure is Breaking Sound Barriers.

CIRCUITRY ACCESSORIES

On page 80 of this section you will find a complete line of accessories designed to make handling, installation, and use of Shure circuitry products easier and more trouble-free.

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 input, 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 ¼-inch in/out jacks. In addition, two pairs of headphone outputs are provided, each consisting of one stereo ¼-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.

specifications

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 3/16 x 5 29/32 x 2 3/16 in.)
Net Weight:	521 grams (1 lb 2 oz)

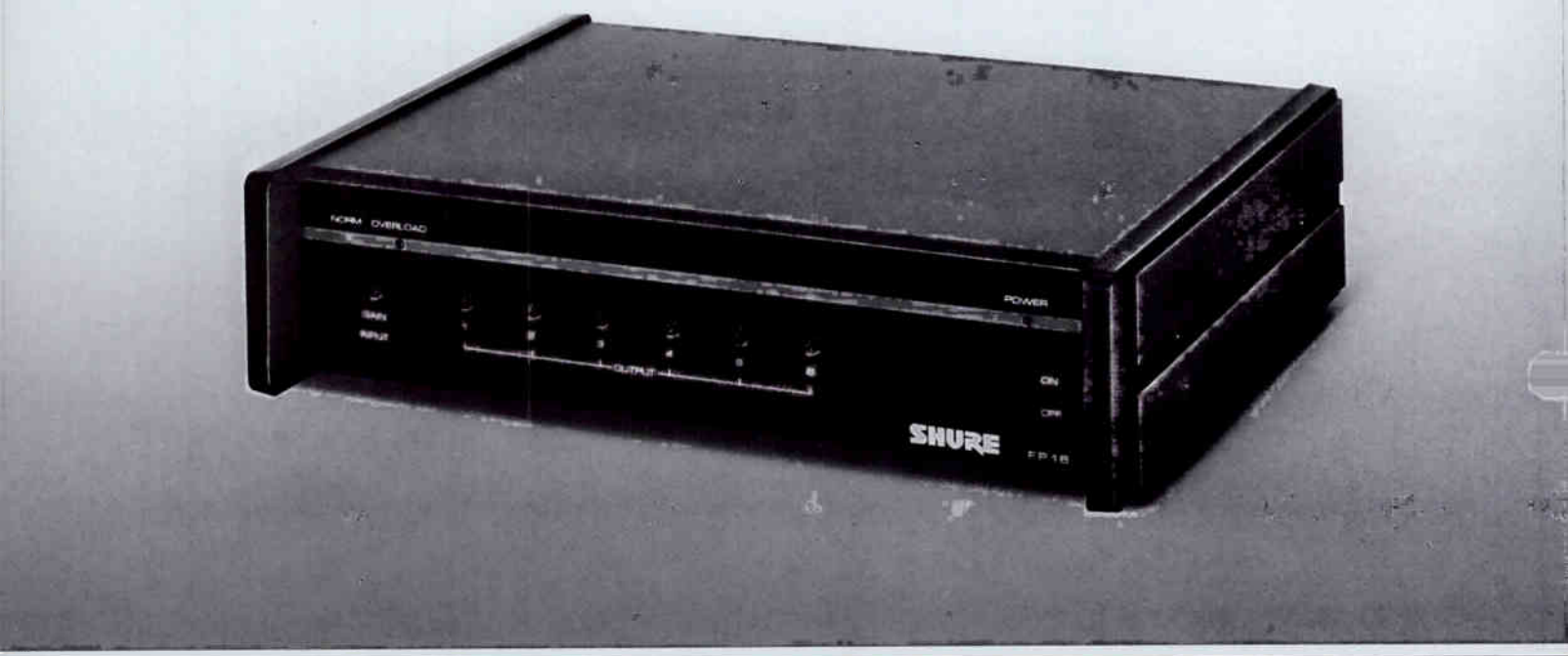
Model:	**FP12**
Frequency Reponse:	40 to 15,000 Hz, +1, −3 dB
Voltage Gain at 1,000 Hz:	Lo-Z: 70 dB (Mic), 20 dB (Line) Hi-Z: 96 dB (Mic), 46 dB (Line)
Equivalent Input Noise:	−118 dBV
Distortion:	Under 1% THD from 40 to 15,000 Hz
Input Clipping Level:	Microphone: −14 dBV Line: +35 dBV
Output Clipping 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 3/16 x 5 11/16 x 2 3/16 in.)
Net Weight:	501 grams (1 lb 2½ oz)

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

Model: FP16

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

Voltage Gain: (±3 dB at 1 kHz)

INPUT	OUTPUT 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 nominal, 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 (3¼ in. x 12 13/32 in. x 9¼ 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 5/16" x 5 5/16" x 1 7/8", the FP31 incorporates the features most requested by audio engineers, electronic news professionals, sportscasters, and film and video sound engineers.

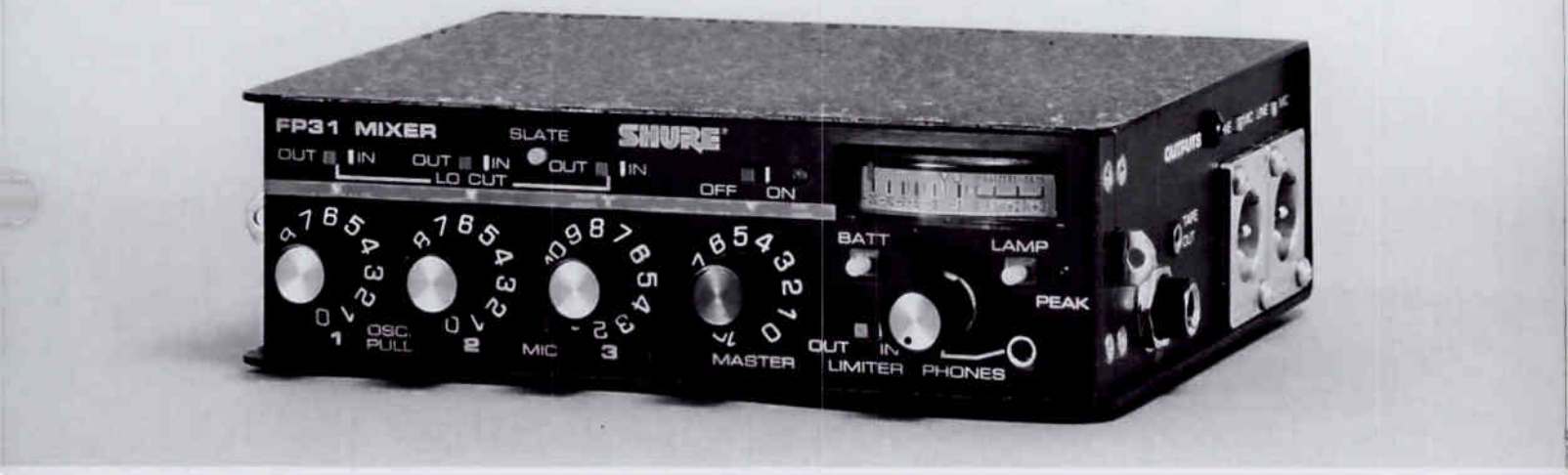
The FP31 provides a wide, flat frequency response, low distortion, and up to +18 dBm output (up to +22 dBm with 18 Vdc supply). The unit features extremely low internal noise and switchable low-cut filters for each input that effectively reject low-frequency handling and wind noise.

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 simplex (phantom) 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	Output		
	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

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

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 (8 hour life, typical)

Power:

Mixer and Simplex Power: .... Supplied by two internal 9V alkaline batteries or external 11 to 18 Vdc supply

Simplex Power: ..... 11 to 18 Vdc nominal through 620Ω

A-B Power: ..... Supplied by additional 9V alkaline battery

Dimensions: ..... 48.3 mm H x 160 mm W x 135 mm D (1 7/8 x 6 5/16 x 5 5/16 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 definitively 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	Output 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: −45 dBV to −15 dBV
Line: +5 to +35
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 (2⁵⁄₁₆ x 7¼ 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

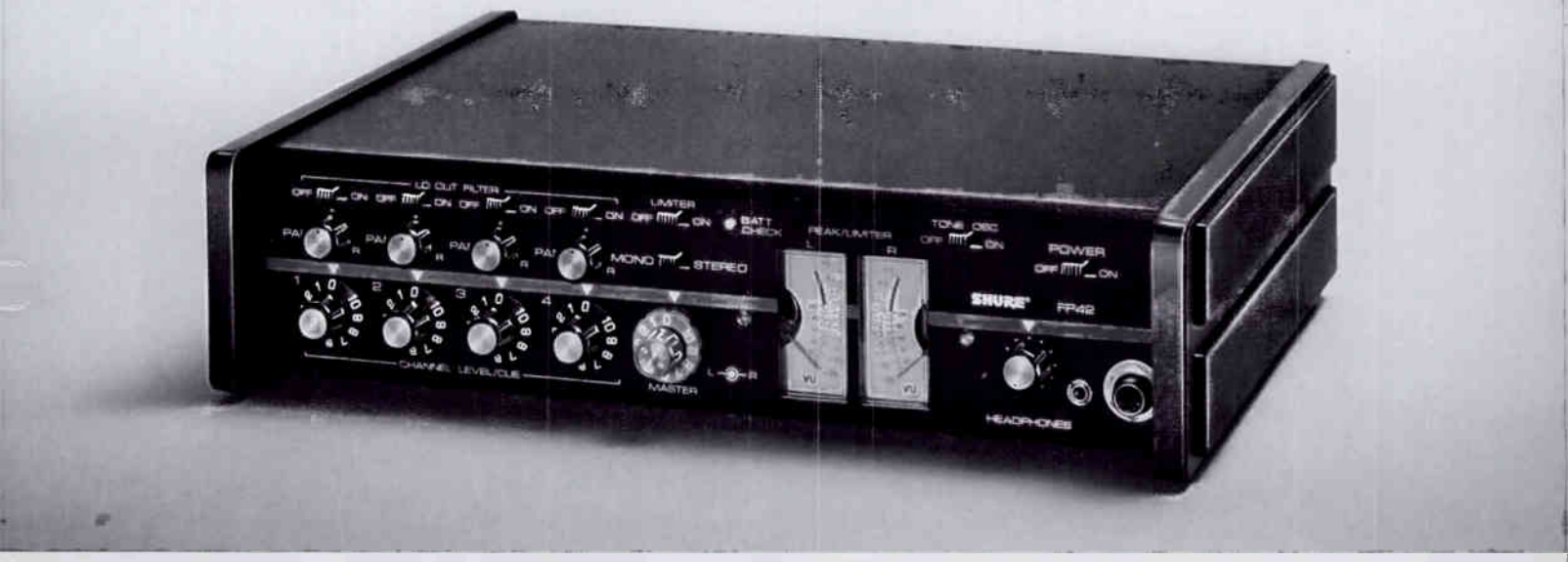
Field production technicians suffering from audio headaches can rejoice. Shure has a cure in the FP42—an extraordinarily reliable, compact, feature-packed stereo audio mixer. The FP42 follows in the illustrious footsteps of Shure's classic, industry-standard M267, combining Shure ruggedness with all 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. Mini- and 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% IM 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
DC operation: 27 Vdc @ 30 mA idle current

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: ..... 69 mm H x 309 mm W x 229 mm D

Net Weight: ..... 2.95 kg (6 lb, 8 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 more of 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 has all the features that made the Shure M67 the *industry standard* mixer, plus additional features and performance improvements that promise to make *it* the new *industry standard.* Features new to the M267 include: peak program limiter—*eliminates overload distortion by monitoring program levels and power supply level;* simplex (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;* gold contact headphone amp/line switch—*Amplifier position for high level monitoring or Line position for talkback;* 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;* and electronic power supply regulation—*improved performance on low or high ac line voltage.*

Improvements over the M67 include: Gold contact Mic/Line switches—*on each XLR input and output,* battery check function—*does not interrupt program;* more headphone power; lower distortion and noise; and front panel headphone jack and gold contact tone oscillator switch.

The M267 has the same ruggedness and reliability that made the M67 the top-selling mixer in the industry. It also includes all of these M67 features: transformer balanced inputs and outputs; mix bus; VU meter; low cut filters; low RFI and line noise susceptibility.

With the addition of two brackets (RKC169), the M267 will fit into an M67 rack panel, or it may be mounted in the accessory panel (A268R).

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	92 dB	42 dB	25 dB
Line	40 dB	−10 dB	−27 dB
Mix bus	46 dB	− 4 dB	—

Noise: ..... Equivalent input noise: −129.5 dBV
Equivalent input hum and noise: −127 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: −38 dBV

Output Clipping Level: ..... Microphone: −32 dBV
Line: +18 dBm

Limiter: ..... Threshold: + 15 dBm (line output level; adjustable from −4 to +18 dBm)
Attack Time: 3 msec typical
Recovery Time: 500 msec typical

Peak Indicator: ..... Lights 6 dB below clipping or at onset of limiter action

Simplex 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: ..... 75.3 mm H x 309 mm W x 227 mm D (2⁹⁄₃₂ x 12⁵⁄₃₂ 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 including the Shure M68. 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.

Features new to the M268 include: mix bus—*for simple mixer interconnection;* simplex (phantom) 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.

Improvements over the M68 include: a dramatic reduction in distortion—*typically less than 0.1%*; substantial increases in gain and dynamic range; lower hum and noise; and higher 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 includes all these M68 features: 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.

With the addition of two brackets (RKC169), the M268 will fit into an M68 rack panel, or, it may be mounted in the accessory panel (A268R).

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	78 dB	24 dB
High-impedance microphone	7 dB	31 dB	55 dB	1 dB
Aux in	−15 dB	9 dB	33 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 (1.7 V)
Aux: 17 dBV (7.1V)
Mix bus: − 8 dBV (0.4V)

Simplex 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: .....75.3 mm H × 309 mm W × 227 mm D
(2 31/32 × 12 5/32 × 9 in.)

Net Weight: .....1.9 kg (4 lb, 2 oz)

M64

The M64 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 M64 provides standard RIAA equalization. Using the M64 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 M64 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 M64 can be powered by an external 24-36 Vdc power source such as Shure's A67B Battery Power Supply.

specifications

Model: **M64**

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 (7½ 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: ..... 50 dB min. at 1,000 Hz

Channel Balance: ..... Within 2 dB at 1,000 Hz

Operating Voltage ..... 108 to 132 volts, 50/60 Hz

Certification: ..... UL Listed

Dimensions: ..... 67.1 mm H x 142 mm W x 114 mm D ($2\text{-}^{41}/_{64}$ x $5\text{-}^{19}/_{32}$ x 4-½ in.)

Net Weight: ..... 794g (1 lb, 12 oz)

M67

A compact, lightweight and economical microphone mixer/remote amplifier specifically designed for professional use in remote broadcasting, studio recording, sound reinforcement, and as an "add-on" mixer for expanding existing facilities and providing additional microphone inputs for audio and video tape recorders. The M67 features a wide, flat frequency response, with extremely low distortion up to +18 dBm output, and low noise and RF susceptibility.

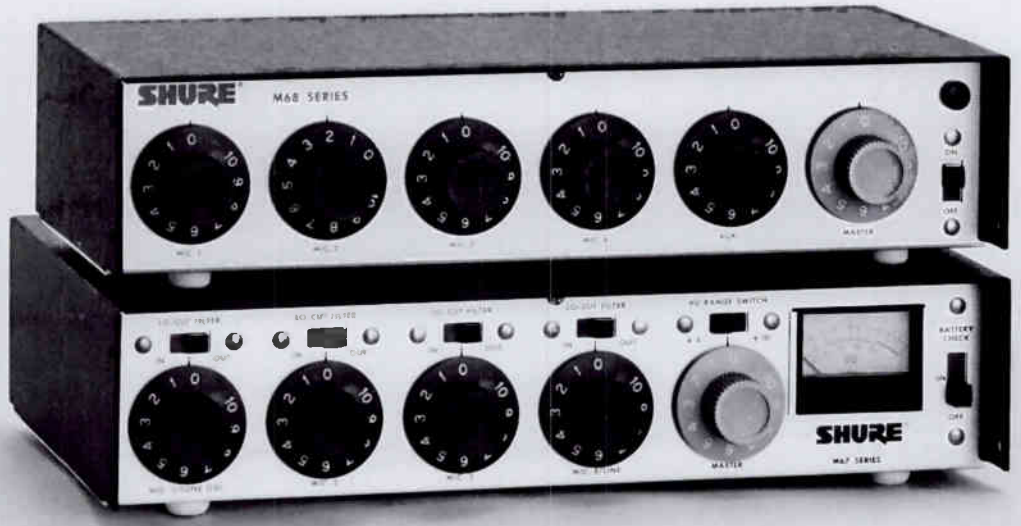
Four low-impedance, balanced microphone inputs (one convertible to line level) are provided, with the line-level switchable for 600-ohm termination or bridging. Each input has a switchable lo-cut filter. The illuminated VU meter is calibrated for +4 and +10 dBm output, with a convenient range switch. Equipped with a headphone jack for monitoring and a mix bus jack for "stacking" mixers. Battery operation (with optional accessory A67B) permits automatic switchover if the ac power fails. A battery check switch monitors battery condition.

M68, M68FC

The M68 is a practical, efficient and economical way to increase the usefulness and flexibility of audio-visual, paging, sound reinforcement and tape recording systems requiring multiple microphone inputs. The M68 can also be used to provide additional microphone inputs to another mixer such as the M67 or to another M68.

Each of four microphone-level inputs has its own switch for selection of low-impedance (balanced or unbalanced) or high-impedance (unbalanced) microphones, and a high-level auxiliary input is suitable for inputs from tape recorders, tuners, or other sources. The M68 has two outputs: one is a microphone-level output (low- or high-impedance, switch-selectable) for connection to a sound system amplifier or tape recorder input. The other is a high-impedance, high-level output to feed any power amplifier or tape recorder requiring a 0.5 to 2V input signal. The M68 can also be powered by an external power source such as the A67B.

M68: Three-pin inputs.
M68FC: Three-socket inputs.



specifications

M67

Models: M67

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

Voltage Gain: At 1,000 Hz

Input	Output: Line	Output: Microphone
Low impedance microphone	91 dB	31 dB
Line, bridging	41 dB	−19 dB
Line, terminating	35 dB	−25 dB

Noise: Equivalent input noise −129 dBV
Equivalent input hum and noise: −125 dBV

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

Input Clipping Level (minimum): Low impedance microphone: −30 dBV
Line, bridging: Greater than +22 dBV
Line, terminated: Greater than +24 dBm

Output Clipping Levels (minimum): Microphone: 6 mV, −44 dBV
Line: +18 dBm

Operating Voltage: 108 to 132 volts, 50/60 Hz

Certification: UL Listed and CSA listed as Certified

Dimensions: 69.9 mm H × 289 mm W × 190 mm D (2¾ × 11⅜ × 7½ in.)

Net Weight: 2.18 kg (4 lb, 13 oz)

M68, M68FC

±3 dB from 40 to 20,000 Hz

At 1,000 Hz

Input	Output: Lo Z Mic	Output: Hi Z Mic	Output: Aux
Low impedance microphone	6 dB	30 dB	57 dB
High impedance microphone	−16 dB	8 dB	35 dB
Aux	−38 dB	−14 dB	13 dB

Equivalent input noise: −123 dBV
Output hum and noise: 70 dB below rated output

Under 1% THD, 2.0 volt level

Low impedance microphone: −30 dBV
High impedance microphone: −7 dBV

Low impedance microphone: 60 mV, −24 dBV
High impedance microphone: 850 mV, −1 dBV
Aux: 4 volts, +2 dBV

108 to 132 volts, 50/60 Hz

UL Listed and CSA listed as Certified

69.9 mm H × 289 mm W × 133 mm D (2¾ × 11⅜ × 5¼ in.)

1.8 kg (4 lb)

SE30

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

The SE30 provides a 40 dB compression range—adjustable to varying input requirements, with a compression ratio of approximately 10 to 1. Once set, the SE30 rides gain automatically, increasing or decreasing the system gain to maintain a constant output level. Because compression is properly achieved in the mixer itself, the signal-to-noise ratio is optimized for better telephone line transmission on remotes. In studio applications, it allows maximum modulation level without overloading other components. The SE30's variable response rate control allows the proper time constant to be selected for the type of program material involved; fast for voice applications such as sporting events; medium to slow for musical program sources.

A unique *Gated Memory circuit* solves the "pumping" problem normally associated with an audio compressor by noting when the desired signal (such as voice or music) is not present, and putting a "hold" on the compression level at that point. For example, this eliminates the crowd noise build-up when the announcer stops talking during a sporting event. As soon as the desired program material returns, the "hold" is released and the compressor goes back into action.

Loaded with useful features, such as: wide range of input and output options, microphone, line and high level auxiliary; feedback-type gain controls that automatically increase the input clipping level as the individual gain controls are turned down; a built-in low-distortion 1 kHz tone oscillator; three-function VU meter; stereo parallel jack; self-contained battery and ac power supply, with automatic switchover to battery in case of ac failure; auxiliary meter light source for battery operation; removable ac line cord; disable switches for compressor and Gated Memory; and extremely low distortion, noise and RF susceptibility.

specifications

Model: **SE30**

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

Voltage Gain: ..... Below compression threshold, output terminated. Line 600 ohms, Microphone 150 ohms, Aux 47 kilohms.

Input	Output		
	Line	Microphone	Aux
Low impedance microphone	105 dB	55 dB	85 dB
Line or Aux	57 dB	7 dB	37 dB

Noise (maximum): ..... Equivalent input noise: −129.5 dBV
Equivalent input hum and noise: −126 dBV

Distortion: ..... Below compression threshold, under 0.5% THD from 30 to 20,000 Hz at +15 dBm output

Compression Ratio: ..... 8:1 minimum from 10 to 20 dB compression
5:1 minimum from 10 to 30 dB compression

Compression Threshold: ..... Microphone: −96 dBV at maximum input gain
Line: −48 dBV at maximum input gain

Attack and Recovery Time: ..... 100 milliseconds to 8 seconds.

Gated Memory: ..... In "hold" condition, less than 20 dB gain recovery after one minute.

Input Clipping Level: ..... Microphone: −38 dBV to −10 dBV
Line or Aux. +10 dBV to +38 dBV

Output Clipping Level (minimum): ..... Microphone −34 dBV, 20 mV
Line +18 dBm, 6.2V
Aux. −4 dBV, 0 63V

Mix Bus: ..... Impedance 3 9 kilohms

Operating Voltage: ..... 108-132 volts, 50/60 Hz

Battery Operation: ..... Estimated 80 hours at 4 hrs. use per day. Six 9-volt Eveready type 222 or 216 or equivalent. One heavy-duty 1.5-volt "D" size cell.

Certification: ..... UL Listed and CSA listed as Certified

Dimensions: ..... 88.9 mm H x 381 mm W x 254 mm D (3½ x 15 x 10 in.)

Net Weight: ..... 4.5 kg (9 lb, 13½ oz)

AMS/automatic microphone system

The Shure AMS is a trouble-free automatic microphone system used in critical applications throughout the world. The AMS is a dedicated, totally integrated system consisting of a complementary mixer and microphones that work together to solve even the most aggravating problems associated with multiple microphone installations. Shure has combined unique microphone, mixer, and logic technology into a system where the microphones and mixer actually operate as one to provide the clearest, smoothest, most reliable automatic sound performance in the industry. The excellent performance, versatility, and ease of operation make the AMS an ideal choice for use in multiple microphone public-address and recording systems such as conference rooms, legislatures, churches, courtrooms, broadcast studios, and panel discussions.

Smart Microphones—the newest angle on sound sensitivity.

The AMS features direction-sensitive microphones that turn on automatically only when addressed within their own 120° "window of acceptance." In addition, each microphone continuously samples its own local acoustic environment, and compensates for changing room audio conditions... automatically.

Because the AMS operates as an integrated system, it solves many of the problems associated with multiple microphone installations, such as boomy or muddy sound, insufficient sound level because of feedback, and operator errors. It also solves problems encountered with other automatic mixers, such as complicated setup adjustments, unreliable turn-on, and choppy sound.

Logic terminals on each AMS input offer unprecedented flexibility for advancing the system's capabilities. For example, when connected to the Shure AMS 880 Video Switcher Interface, the AMS will control commercially available video switchers, causing video cameras to "track" microphone turn-on.

A system that works together to produce outstanding sound performance.

Advanced microphone, mixer, and logic technology enable the AMS to turn on to the sound source quickly, quietly, and automatically—and turn off with a smooth whisper. From beginning to end—no clicks, pops, noise "pumping," or missed syllables. And, when more than one microphone is actuated simultaneously, the system provides automatic gain compensation to prevent the annoying problem of feedback.

Reliability—on location.

Churches. Shure's AMS microphones turn on and off smoothly and quietly—greatly reducing muddy sound and feedback.

Courtrooms. A direct output on each channel easily connects to a multi-track tape recorder to provide a word-for-word account of the proceedings.

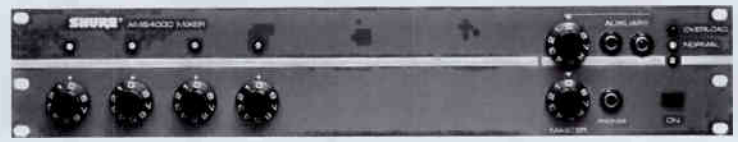
Meetings and Conferences. The optional filibuster mode prevents interruptions by allowing no more than one microphone to be on at any time.

Security. When an intruder's sounds activate an AMS microphone, a television camera can automatically switch on to visually monitor the trespassed area.

Broadcasting. Accurate mixing is guaranteed during fast-paced news and talk shows.

IMPORTANT

Shure AMS Mixers are designed for use only with Shure AMS condenser microphones. Conventional condenser or other microphones will not operate properly with AMS mixers.



AMS4000 and AMS8000 Mixers

The AMS8000 (eight channel mixer) and AMS4000 (four channel mixer) provide the same performance quality, ease of operation and flexibility. The AMS4000 is expandable up to eight channels and for large gatherings AMS mixers can easily be combined to effectively control over 200 individual microphones.

AMS880 Video Switcher Interface

The AMS880 is a microcomputer-controlled unit that actuates the remote-control input of a commercially available video switcher in response to the action of an automatic microphone mixer such as the Shure AMS4000 or AMS8000. This enables video cameras covering individual microphones to be activated, causing the video presentation to smoothly follow the audio discourse.

AMS28 Lavalier Microphone

Worn around the neck, giving the wearer mobility for slide shows and chalk talks.

AMS24 Gooseneck Microphone

Designed for mounting to surfaces such as conference table, desk, or lectern. Comes complete with black, miniature 18-inch gooseneck and mounting flange.

AMS 22 Low-Profile Microphone

Sleek, modern design with a look so unintimidating, even a first-time speaker won't shy away from it.

AMS26 Probe Microphone

Perfect for lectern or stand use.

AMS4000 & AMS8000 Mixers

Output Level:

INPUT	OUTPUT Line	Mic	Aux	Direct	Phones	Input Clipping Level at 1 kHz
Microphone Input (72 dB SPL in)	+15.8 dBV (+18 dBm)	−34 dBV	+17 dBV	−56 dBV	−4 dBV	128 dB SPL
Aux Input (−22 dBV in)	+15.8 dBV	−34 dBV	+17 dBV	—	−4 dBV	+7 to + 20 dBV*

*Depending on Aux control setting.

Frequency Response:
Aux Input to Outputs: 30 to 20,000 Hz ± 2 dB
Mic Input to Outputs: 70 to 20,000 Hz ± 2 dB
(controlled low-frequency rolloff below 50 Hz)

Outputs:

OUTPUT	IMPEDANCE Designed for Use With	Actual (Internal)	OUTPUT Clipping Level
Mic	150Ω balanced lines	1Ω	−34 dBV
Line	600Ω balanced lines	150Ω	+15.8 dBV (+18 dBm)
Aux	10k or greater	2.2k	+17 dBV
Direct	10-50K unbalanced mic circuit	900Ω	0 dBV
Phones	200Ω	2.2k to tip 2.2k to ring	−4 dBV

Equivalent Input Noise:
27 dB SPL A-weighted, with AMS26 Probe Microphone

Distortion:
THD 0.35% or less, 30 to 20,000 Hz at + 15 dBm output
IMD 0.5% or less up to + 15 dBm output

Gating:
Attack Time: 4 msec
Hold Time: 0.5 or 1.0 sec (switchable)
Decay Time 0.3 sec after Hold interval

Off-Attenuation:
Fixed: − 15 dB Variable: − ∞ to − 8.5 dB
(Single mixer; attenuation increases as additional mixers are linked)

Operating Voltage:
105-132 Vac, 50/60 Hz, 20W. Can be rewired for 210-264 Vac, 50/60 Hz, 20W.

Dimensions:
Height: 89 mm (3½ in)
Width: 483 mm (19 in)
Depth: 298 mm (11¾ in)

Weight:
AMS8000: 6.6 kg (14 lb 8 oz)
AMS4000: 5.8 kg (12 lb 13 oz)
AMS8000 (pkgd): 7.8 kg (17 lb 4 oz)
AMS4000 (pkgd): 7.1 kg (15 lb 9 oz)

Certifications: Listed by Underwriters Laboratories, Inc.; listed by Canadian Standard Association as Certified

AMS Microphones

	AMS22	AMS 24 & AMS26	AMS28
Model		Condenser (electret bias)	Condenser (electret bias)
Type:	Condenser (electret bias)	Cardioid	Cardioid
Polar Pattern:	Hemi-Cardioid	Microphone turns on for sound within 60° (typical) of front axis	Microphone turns on for sound within 60° (typical) of front axis
Acceptance Angle:	Microphone turns on for sounds within 60° (typical) of front axis	AMS 24: −56 dB typical AMS 26: −54 dB typical (0 dB = 1 V/μbar) at AMS mixer Direct Output	−54 dB typical (0 dB - 1 V/μbar) at AMS mixer Direct Output
Output Level: (Open circuit voltage at 1 kHz)	−47 dB typical (0 dB = 1 V/μbar) at AMS mixer Direct Output	AMS26: Three-pin professional audio	Three-pin professional audio
Connector:	Three-pin professional audio	AMS24: Attached 6.1 m (20 ft) two-conductor shielded with tinned leads AMS 26: Uses standard microphone cable (not supplied)	Attached, 6.1 m (20 ft) two-conductor shielded
Cable:	Attached, 6.1 m (20 ft) two-conductor shielded	AMS24: 518 mm L (including gooseneck) x 35.9 mm Dia. (at top) ($20^{13}/_{32}$ L x $1^{13}/_{32}$ in. Dia.) (Gooseneck 11.1 mm Dia. $^{7}/_{16}$ in Dia.) AMS26: 144 mm L x 35.9 mm Dia. ($5^{21}/_{32}$ x $1^{13}/_{32}$ in.)	64.1 mm L x 20.1 mm Dia ($2^{1}/_{2}$ x $^{13}/_{16}$ in.)
Dimensions:	31.8 mm H x 88.9 mm W x 76.2 mm D ($1^{1}/_{4}$ x $3^{1}/_{2}$ x 3 in.)		
Net Weight:	174 grams (6.1 oz)	AMS24: 178 grams (6.2 oz) AMS26: 127 grams (4.4 oz)	155 grams (5.5 oz)
Supplied Accessories:		AMS24: Mounting flange: windscreen AMS26: windscreen and swivel adapter	Lavalier assembly

AMS880 Video Switcher Interface

Inputs:
Eight, plus ground, TTL logic level

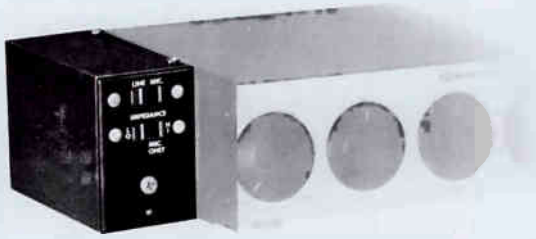
Outputs:
Eight, plus common, FET optically isolated; not connected to input ground

Power:
External power transformer: 120 VAC + 10%, 60 Hz, 6W

Dimensions:
44.5 mm H x 483 mm W x 127 mm D
(1¾ x 19 x 5 in.)

A16R, A68R, A68R-BL, A100B, and A268R Rack Panels

Equips Shure audio components for rack-mounting in standard 19 in. x 3½ in. (89 mm x 483 mm) audio equipment racks.
A16R For use with FP16 and FP42. Black finish.
A68R For use with the M67 and M68 Series components. Dark gray/brown finish.
A68R-BL Same as A68R, except black finish (matching the case of Shure audio components).
A100B For use with the SE30. Black finish.
A268R For use with M267 and M268 Series components. Black finish.
RKC169 Accessory brackets for mounting M267 or M268 in an A68R Rack Panel.



A68M Microphone Preamplifier

Designed to provide a balanced line input or additional microphone input channel to Shure audio components. Mounts to the left side of the "master" component and is powered from this component's power jacks. The Input Selector Switches have positions for matching the input to either a balanced line, a low-impedance balanced microphone, or a high-impedance unbalanced microphone. The Aux Output is terminated in a shielded cable with phono plug for connection to the Shure audio component. For use with the M68 series.

A67B and A268B Battery Power Supplies

Designed to power the Shure M-Line Series of audio components to full rated output. Eliminates the need for 120 Vac power.
A67B For use with M67 and M68 Series components. May be used with the M67 as either the sole power source or as a standby safety during ac operation, providing automatic noiseless switchover in case of ac failure. The automatic switchover feature is not recommended for use with the M68, as some battery drain may occur at line voltages less than 120 Vac. Uses three standard 9V transistor batteries.
A268B For use with the M268 Mixer. Features automatic, noiseless switchover in case of ac failure. Uses three standard 9V transistor batteries.

A101B Panel Lamp

A small, low-intensity light unit to illuminate audio console controls in dimly lit areas. Attaches with screw-down connector to Amphenol 80-PC2F receptacle and draws its power from the console. Flexible neck affords variable positioning.

The V15 Type V-MR

The critically acclaimed V15 Type V-MR is considered by many audio authorities to be the finest cartridge available today. The technological breakthrough of the Micro-Ridge Tip offers the ultimate in low distortion sound reproduction through its highly accurate tracing ability. Coupled with the incredible trackability of the revolutionary new high stiffness, low mass Beryllium MICROWALL/Be™ Stylus Shank, it represents the pinnacle of state-of-the-art cartridge technology.

The V15 Type V-MR features Shure's exclusive Dynamic Stabilizer which functions like a miniature shock absorber to compensate for record warps that result in groove skipping, cartridge bottoming, and signal wow. The stabilizer's conductive fibers also simultaneously discharge static electricity from the record surface and sweep microscopic dust out of the record groove.

Also featured is the unique SIDE-GUARD Stylus Protection System which protects the stylus from damage by guiding it into a protected area in the stylus housing when it is accidentally bumped against a record or the edge of the turntable platter.

Designed for the standard ½" mount tone arm, the V15 Type V-MR brings together important new construction features, performance capabilities, and high technology instrumentation.

specifications

Model Number	Stylus Configuration	Tracking Force Range (grams)	Trackability (cm/sec.) Peak Recorded Velocity 400 Hz	1,000 Hz	10,000 Hz	Trackability Measured at	Frequency Response	Channel Separation	Replacement Stylus Model Number
V15 Type V-MR	Micro-Ridge	1g Optimum	30	46	60	1g	10 to 25,000 Hz	25 dB at 1 kHz	VN5MR

A few quotes from around the world:

"Shure has presented a new type of MM cartridge with remarkable frequency response. Its sound is bright and soft, natural, and musical. Its dignified response of high and mid is provided with clearness and luxuriance, and reproduces the sound that reminds one of the word 'Tenga', a Japanese word to mean its elegance and gracefulness."

Masao Niyamoto
Radio Gijutsu (Japan)

*

"Shure's most recent version of its top model, the V15 Type V-MR... strikes this listener as perhaps the most musical-sounding cartridge ever made."

Hans Fantel
The New York Times

*

Stereo Review

"As with our tests of the original V15 Type V, we find it difficult to avoid superlatives when discussing the new MR version."

"Most important, the V-MR sounds as good as it measures, with a notable lack of coloration and distortion."

High Fidelity

"Tracking ability is the best we have ever measured. In fact, the lab reports that the Type V-MR tracks better at ½ gram than do many other cartridges at a full gram or more."

"We were hardly surprised to find that the V-15 Type V-MR is a sterling performer in the listening room as well. Its sound is smooth and uncolored, with unsurpassed clarity and freedom from distortion. Stereo imaging is both convincing and stable. And as far as tracking is concerned, we couldn't find anything that it wouldn't. In short, Shure has made one of the world's best cartridges even better without making it unduly expensive (at least by current standards). We therefore have no doubt that it will find legions of enthusiastic admirers."

*

Stereophile

"A safer bet by far is the Shure V15V-MR."

"There's a wonderful bloom around the music, and it's natural, not hyped."

"The V-MR is the *only* cartridge I have heard that produces the sound of a piano to my satisfaction—it captures the music between, around, and above the notes. Tonal balance is excellent, as it was with the original Type V. Imaging is about as good as I have heard from even moving-coils."

Best Stereo Compo '84 (Japan)

"The V15 V-MR is one of the rare cartridges that has stepped into the world of music. It's a real professional that beats any other."

*

Disk Report (Japan)

"Its tone of high quality is far superior to others."

*

Son Magazine (France)

"After conducting all listening tests and checking all figures, it is (again!) the SHURE V15 V-MR that wins all the votes and indisputably takes the first place when comparing outstanding definition, solid neutrality, and fine wide stereophonic image. This consistently amazing product has further improved in aeration and accuracy in all registers. It is also gratifying proof that, as regards cartridges, listening tests and measurement figures can still correlate."

*

Nouvelle Revue du Son (France)

"The trackability test definitely places this cartridge ahead of all other competitors, including the latest generations of Japanese cartridges."

"As regards distortion, the V15 V-MR reaches results never before obtained. We hardly reached 0.3%, whereas 1.5% is a value often accepted, even on high-end models."

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 substandard 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 irradiant 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 400 Hz	1,000 Hz	10,000 Hz	Trackability Measured at	Frequency Response	Channel Separation	Replacement Stylus Model Number
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

There is a product data sheet available for every microphone and circuitry product Shure manufactures. They 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.

Many of these data sheets also include a "Shure Architect's Specifications" section to provide the sound installer, contractor, architect or their consultants 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. When ordering, please list both product model number and data sheet ordering number.

Microphones

Model/Series	Data Sheet Ordering Number
50AC	27A1301
104C	27A1149
401 Series	27A198
404 Series	27A179
405K	27A359
407B	27A972
414 Series	27A287
444D	27A2187
450	27A246
488T	27A1343
512	27A8073
514B	27A1387
515SA & 515SB	27A2052
515SBG & 515SB-G18	27A1861
520D	27A2101
522	27A687
526T Series II	27A1468
527B	27A2083
527C	27A2084
545D	27A2237
545L	27A2060
545SD	27A2237
545SH	27A2240
560	27A213
561	27A2057
562	27A2053
565D & 565SD	27A2113
565SH	27A1843
570	27A2056
570S	27A2054
571	27A2055
572G	27A2061
575 Series	27A2058
579SB	27A2239
586 Series	27A2127

Microphones

Model/Series	Data Sheet Ordering Number
588SA & 588SB	27A1845
809	27A2097
819	27A2094
838	27A2096
R104A	27A1679
SM1	27A2184
SM2	27A2183
SM5B	27A959
SM7	27A990
SM10A	27A2034
SM11	27A2138
SM12A	27A2194
SM14A	27A2035
SM17	27A1996
SM18 Series	27A1802
SM48	27A2210
SM56	27A2115
SM57	27A2103
SM58	27A2108
SM59	27A2156
SM61	27A2157
SM62	27A2117
SM63 & SM63L	27A2158
SM76	27A2107
SM77 Series	27A2003
SM78 Series	27A2002
SM80	27A1743
SM81	27A1770
SM82	27A1103
SM83	27A1928
SM85	27A1992
SM87	27A2089
SM90	27A2162
SM91	27A2161
SM94	27A2170
SM96	27A2167
SM98	27A2173

Circuitry Products

Model/Series	Data Sheet Ordering Number
AMS22	27A1793
AMS24	27A2065
AMS26	27A1793
AMS28	27A1914
AMS880	27A8076
AMS4000	27A8040
AMS8000	27A8040
FP11	27A8071
FP12	27A8072
FP16	27A8082
FP31	27A8080
FP32	27A8084
FP42	27A2215
M64	27A2076
M67	27A1098
M68	27A872
M267	27A8077
M268	27A8038
SE30	27A8025

Phonograph Cartridges

Model/Series	Data Sheet Ordering Number
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SC39B	27A1377
SC39EJ	27A1377
V15 Type V-MR	27A1909

INDEX

SHURE... quality is our first consideration

During the second world war, microphone testing for durability and reliability was forced upon manufacturers building for government contracts. When this was no longer required, most companies stopped. Shure did not. In fact, we made the tests progressively tougher and the standards even higher.

Shure has a staff of specialists whose sole function is to uncover any weaknesses BEFORE Shure microphones are put into quantity production. They work with such test facilities, equipment, and instrumentation as Environmental Test Chambers, Helmholz Magnetic Coils which generate controlled magnetic fields that induce electrical hums, and Vibration Exciters.

Microphones are fried at temperatures up to 85°C. (185°F.)—often for entire days; frozen down to −46°C. (−50°F.) for half-hour periods *during* the heat test; shaken from side-to-side, back-and-forth, and up-and-down, simultaneously and violently; subjected to steamy humidities—up to 100% at room temperature, and 93% at 38°C. (100°F.); subjected to ultraviolet rays, salt sprays, alcohol, sand, and water.

Then, for good measure, we drop them repeatedly 2 meters (6 ft.) onto hardwood floors! That is our *standard* test procedure. All during production, units chosen at random are put through these same tests. Failure of any *one* microphone brings production to a halt until the original design requirements are again met. Knowing all this puts special burdens on Shure design engineers. That they consistently succeed in designing better products is the result of Shure's incomparable experience in applying ingenious and unique solutions to knotty microphone design problems.

Shure makes more brand name microphones than any other company in the world. We have been told by our customers that this is a reflection of user-satisfaction with the quality and reliability of our products coupled with an outstanding reputation for credibility. We make no unverifiable claims. We do not publish exaggerated or misleading data.

Shure has been in the business of supplying microphones longer than any other manufacturer. We've learned a lot about what it takes to design and make a microphone that works well. Our development and engineering groups draw upon a unique "bank" of microphone design background and experience. They regularly publish significant technical papers on microphone design and use in prestigious audio journals. Many of these papers are available at no charge by writing to Shure. Our engineers have been granted patents covering many significant aspects of microphone design. They virtually "wrote the book" on the subject of modern microphones.

Our reputation rides on every Shure microphone

There is probably no country in the world where Shure microphones are not used and respected. Shure's worldwide reputation for quality is built on the twin foundations of engineered performance and of manufactured reliability. Our emphasis is on *maintaining* these high standards.

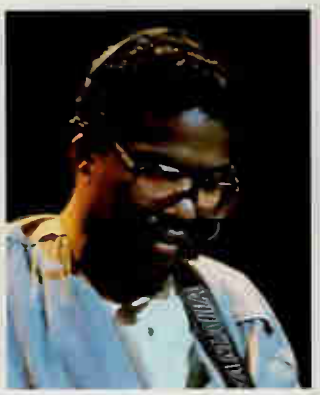
Shure's reputation for quality is the result of the dedication of *everyone* at Shure. They are encouraged to question established methods so that we can continue to provide the very best value for you. We've been told that ours is the largest staff of quality assurance *specialists* of any microphone manufacturer. But, in a larger sense, quality assurance is everybody's job at Shure. All of our people care about what happens to the products they make—before and after these products leave the factory. And, we stand behind what we make with the industry's largest international distribution and service network.

To the purchasers of the millions of microphones bearing the name Shure during the past years and to those now buying their first Shure microphone, we can assure you that we continue to follow the philosophy and policies that keep Shure microphones working dependably year after year after year.

Quality is our first consideration.

Great performers rely on the great performance of Shure Microphones

Lita Ford



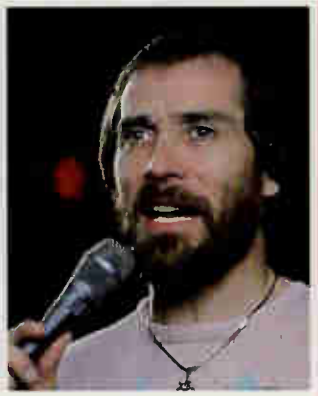
Herbie Hancock

Tina Turner

Mick Jagger

Randy Owen
of Alabama

Russell Hitchcock
of Air Supply



Lee Greenwood

Melissa Manchester

Roger Daltrey

Peter Townshend

Billy Squier

Ricky Skaggs

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AL700E Printed in U.S.A. (10/85)