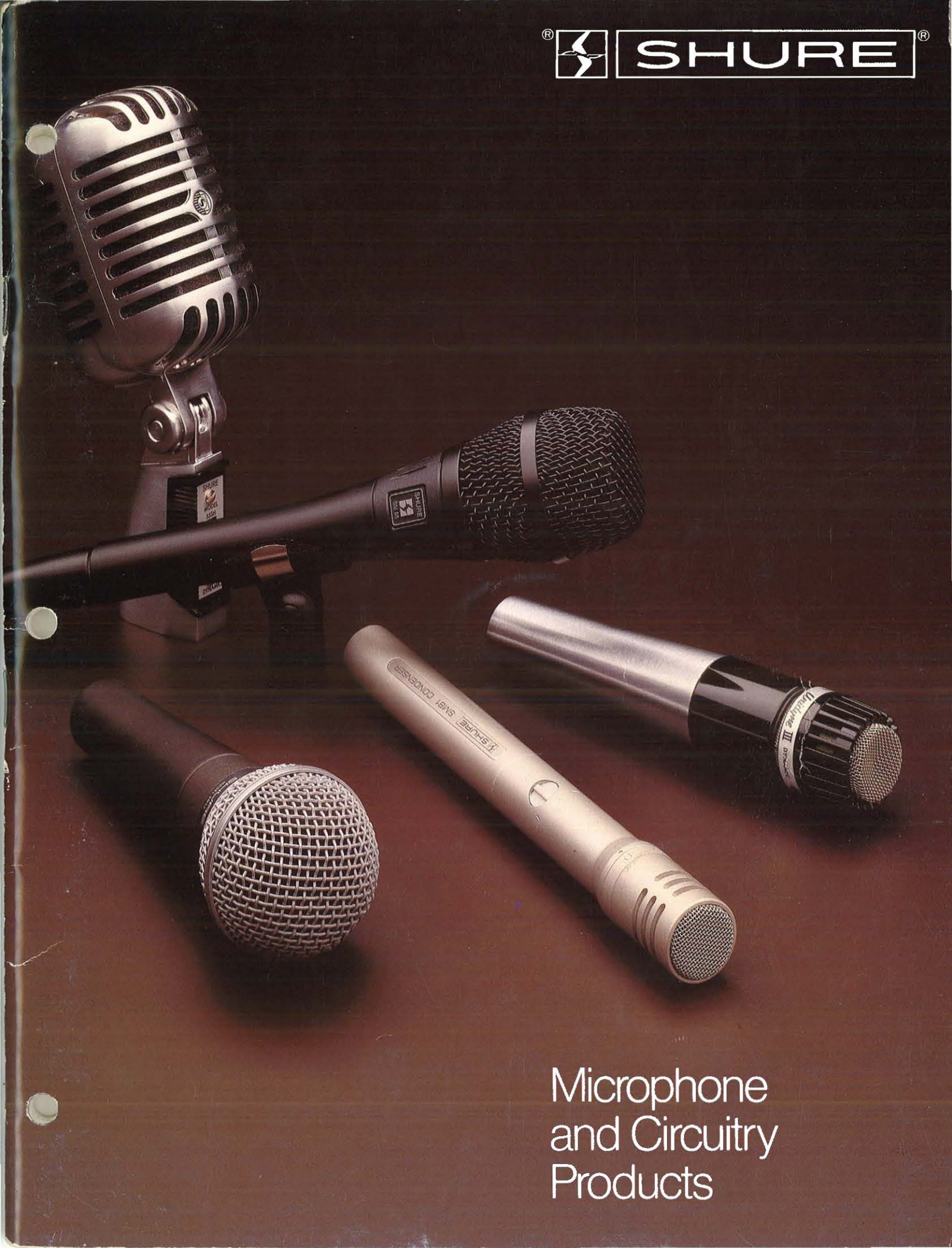
SHURE



Microphone and Circuitry Products

Table of Contents

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, over-flexed, 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.

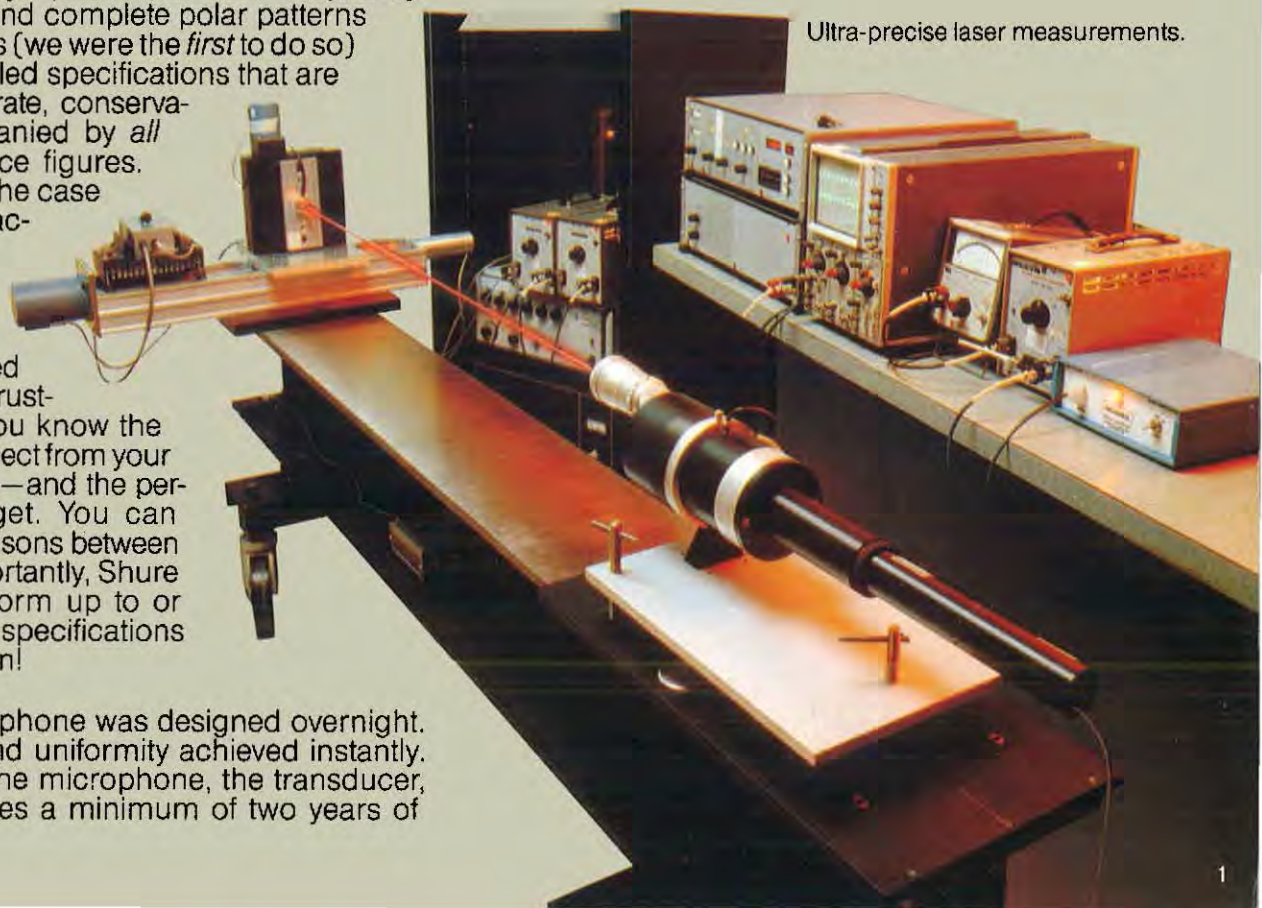
Thoroughbred quality throughout

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

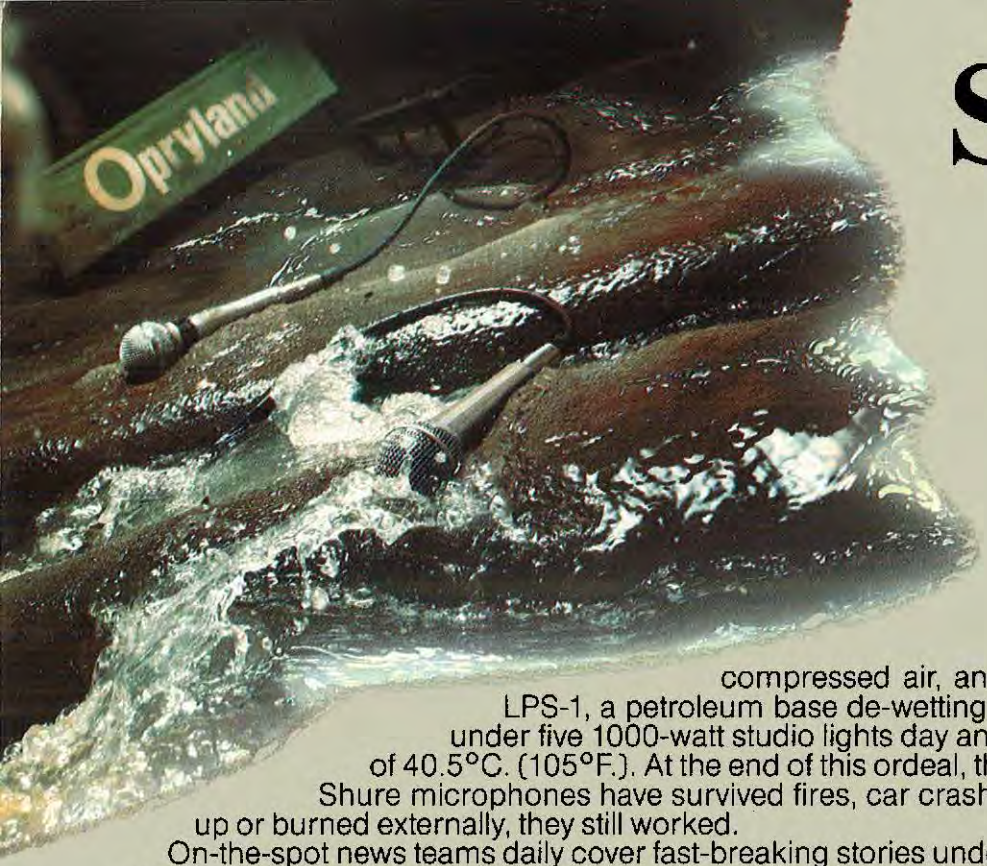
Shure has always published both frequency response curves and complete polar patterns for its microphones (we were the *first* to do so) together with detailed specifications that are scrupulously accurate, conservative, and accompanied by *all* necessary reference figures. This is not always the case 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.



Ultra-precise laser measurements.



Shure Micro
The sound you

In 1975, 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.

50 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.

phones:
can take for granted–because we don't

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 SM85 Condenser Microphone—another "Shure Sound."

As an instrumentalist, you may want the unaccentuated smoothness of the Shure SM59 Dynamic Microphone or SM81 Condenser Microphone.

Shure gives you a choice of sounds.

Shure also gives you the widest choice of other options, including polar patterns (cardioid, omnidirectional, bi-directional); configurations (hand-held, stand-mounted, 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 72 pages. There are over 150 microphones described in this catalog. No one person or installation needs them all. 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 meeting 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.)

Sophisticated computers probe new frontiers.

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 SM59. 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.

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.

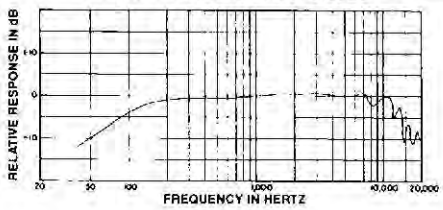
Shure CONTROLLED MAGNETIC® microphones are ideal for radio communications and paging systems where reliable performance and modest price are prime considerations. They are extremely rugged, provide high output, and can be used under all conditions of heat and humidity, indoors and out.

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.

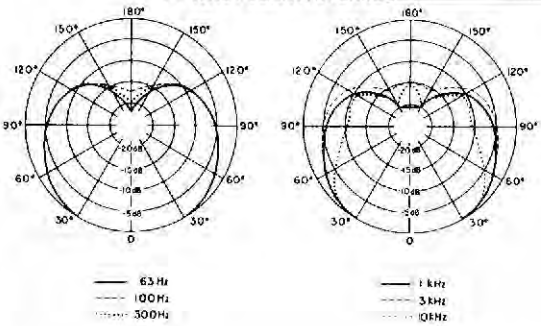
TYPICAL FREQUENCY RESPONSE



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.

TYPICAL POLAR PATTERNS



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 71.)

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: **SM59**
- **Frequency Response:** ..... 50 to 15,000 Hz
- **Polar Pattern:** ..... Cardioid (unidirectional)
- **Impedance Rating:** ..... 150 ohms
- **Output Level**
  - **Open Circuit Voltage:** ... 0.07 mV (−63.0 dB, 0 dB = 1V/μbar)
  - **Power Level:** ..... 61.0 dB, 0 dB = 1 mW/10 μbar
- **Hum Pickup/mOe:** ..... 12.5 dB SPL equivalent
- **Cable:** ..... 6.1m (20 ft) two-conductor shielded 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)
- **Packaged Weight:** ..... 1.62 kg (3 lb, 9 oz)
- **Supplied Accessories:** .... Windscreen, swivel adapter, foam-lined storage/carrying case
- **Optional Accessories:** .... See Page 59

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.

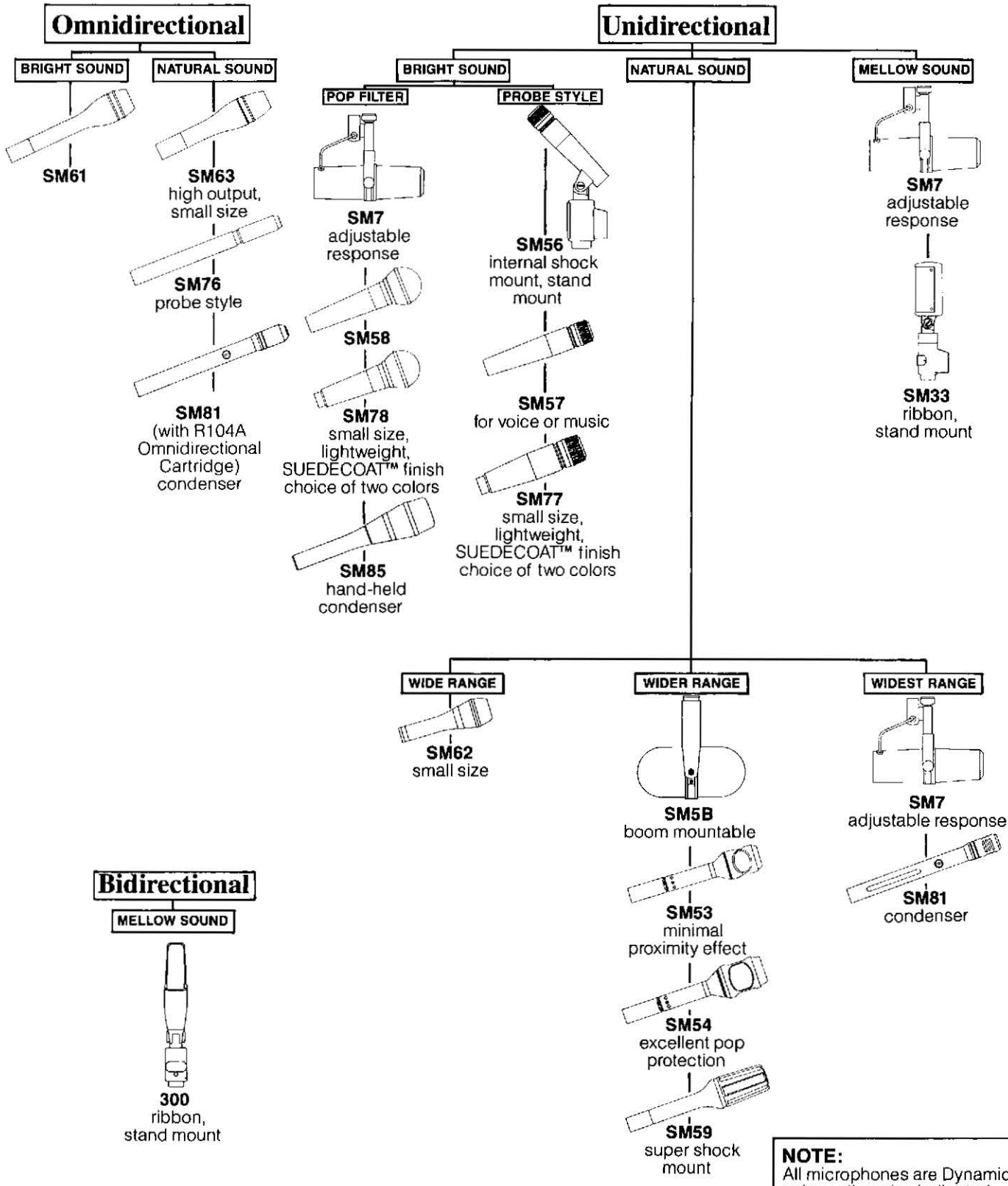
Cable:

Cables supplied with Shure low-impedance microphones are generally a two-conductor shielded, balanced line cable. The equipment end of these cables are either equipped with a three-pin professional audio connector to mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connectors or are bare leads, 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 either equipped with a standard phone plug or have no connector.

selection guide

FOR SHURE PROFESSIONAL MICROPHONES



NOTE:
All microphones are Dynamic unless otherwise indicated.

selection guide

FOR SHURE GENERAL PURPOSE MICROPHONES

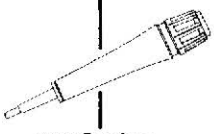
Unidirectional

GOOD QUALITY

POP FILTER

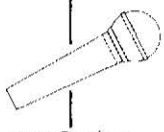
588 Series
bright sound

PROBE STYLE



515 Series
bright sound

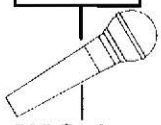
BETTER QUALITY



585 Series
available with volume control or on-off switch

BEST QUALITY

POP FILTER

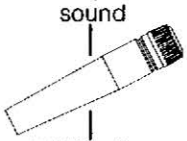


565 Series
bright sound

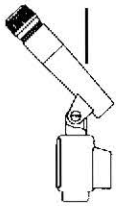
55SH
mellow sound

PROBE STYLE

330
ribbon, mellow sound



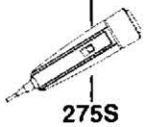
545 Series
bright sound



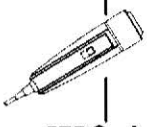
546
integral stand mount

Omnidirectional

GOOD QUALITY



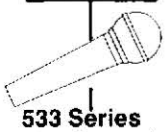
275S
ceramic



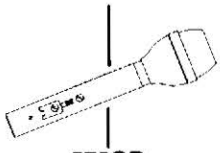
575 Series
natural sound

BETTER QUALITY

POP FILTER

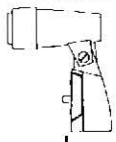


533 Series
natural sound



579SB
slim handle

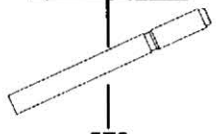
PROBE STYLE



540SH
adjustable response, integral stand mount

571
miniature

BEST QUALITY



578
natural sound

ABOUT SHURE PROFESSIONAL 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 that optimizes it for particular applications, voices, or effects. For outstanding performance in applications as diverse as live entertainment, radio and TV, studio recording, hotel and auditorium sound reinforcement and legislative chambers, professionals choose, and use, Shure.

1. All professional microphones are made to strict quality control standards, ensuring consistent performance in each model series. Shure's manufacturing specifications are so tight that, for instance, two SM58s, purchased at different places or different times, will perform like a matched pair.
2. All are finished in an extremely durable, non-glare finish that resists chipping and peeling and prevents on-stage glare...even under harsh lighting.
3. All are balanced low impedance and are equipped with three-pin professional audio connectors that are designed to mate with industry standard Cannon XL series, Switchcraft A3 (Q.G.) series or equivalent.

In addition to the Professional Microphones found in this section, professional users may wish to examine the microphones found in the rest of this catalog, particularly in the "Special Purpose Microphones" section.

You'll find information about the following microphones with professional applications as indicated in the chart below.

DESCRIPTION	MODEL(S)	PAGE
Line Level Condenser Microphone	SM82	40
Surface Mount Microphones	SM18 Series	41
Professional Lavalier Microphones	SM11, SM51	42
Instrument Pickup Microphones	SM17	44
Head-Worn Microphones	SM10A, SM12A, SM14A	44

President Ronald Reagan, First Lady Nancy and the Shure SM78EB at the inaugural.

The new Grand Ole Opry in Nashville TN has one of the most sophisticated sound systems in the world, and an important part of this system are Shure Microphones—like the Shure SM33 used on the Opry podium.

Vocal superstar Dolly Parton shares the stage with her Shure SM58.

David Hewitt, Director of Remote Recording for Record Plant Studios, N.Y.C.: "We count on Shure to make certain our remote facilities give dependably high performance. With the kind of custom-designed, state-of-the-art equipment we've got in our vans, we wouldn't settle for less-than-the-best microphone on stage."

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 new 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.

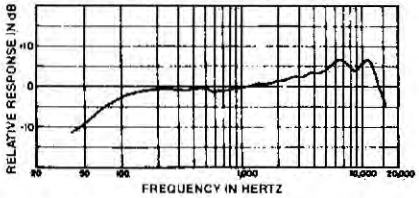
SM77EB Slim styling, ebony SUEDECOAT, without cable
SM77EB-CN Slim styling, ebony SUEDECOAT, with cable
SM77TN Slim styling, tan SUEDECOAT, without cable
SM77TN-CN Slim styling, tan SUEDECOAT, with cable

SM78EB Ball grille, ebony SUEDECOAT, without cable
SM78EB-CN Ball grille, ebony SUEDECOAT, with cable
SM78TN Ball grille, tan SUEDECOAT, without cable
SM78TN-CN Ball grille, tan SUEDECOAT, with cable

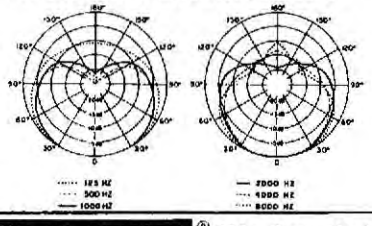
specifications

	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 = 1V/μbar)	0.11 mV (−79.0 dB, 0 dB = 1V/μbar)
Power Level:	−57.5 dB, 0 dB = 1 mW/10 μbar	57.5 dB, 0 dB = 1mW/10 μbar
Connector:	Three-pin professional audio	Three-pin professional audio
Cable (-CN Models only):	7.6m (25 ft) two-conductor shielded with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end	7.6m (25 ft) two-conductor shielded with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end
Dimensions:	140 mm L × 32 mm Dia. (5½ × 1¼ in.)	144 mm L × 51.1 mm Dia. (5 11/16 × 2 in.)
Net Weight:	168 grams (6 oz)	204 grams (7.2 oz)
Packaged Weight:	w/o cable: 879 grams (1 lb, 15 oz); with cable: 1.33 kg (2 lb, 15 oz)	w/o cable: 913 grams (2 lb); with cable: 1.36 kg (3 lb)
Supplied Accessories:	Swivel adapter, foam-lined storage/carrying case	Swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Page	See Page 59

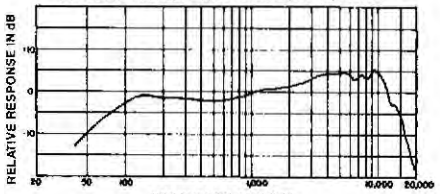
TYPICAL FREQUENCY RESPONSE, SM77



TYPICAL POLAR PATTERNS, SM77, SM78



TYPICAL FREQUENCY RESPONSE, SM78



professional

UNIDIRECTIONAL DYNAMIC MICROPHONE

SM58

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

The SM58 is preferred for its punch in live vocal applications ...especially where close miking is important. In addition to the slight presence rise in mid-frequencies, it has a fixed low-frequency rolloff to minimize the "boominess" usually 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. Supplied cable has three-socket connector at microphone end only.

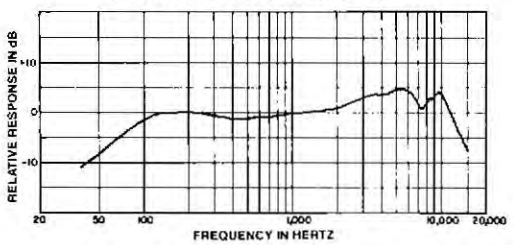
SM58-CN Same as Model SM58 but cable has a professional three-pin audio connector at the equipment end.

SM58-LC Same as SM58 but without cable

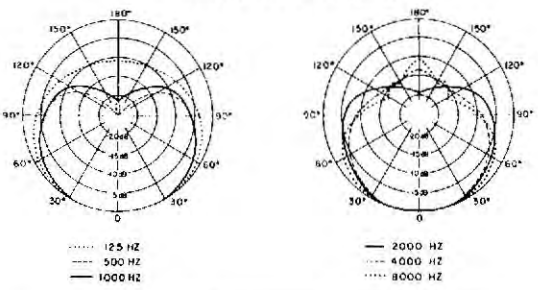
specifications

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: .....6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions: .....162 mm l. × 51 mm 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
Optional Accessories: .....See Page 59

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



professional
UNIDIRECTIONAL DYNAMIC MICROPHONES

SM56 and SM57

The SM56 and SM57 are frequently seen, *and heard*, on television entertainment programs, on the concert stage, at lectures, panel discussions, news conferences, and political conventions. The SM56 is a permanently stand-mounted model with an effective vibration isolator shock mount in the attached swivel. The SM57 can be hand-held or stand-mounted.

The outstanding performance and ruggedness of the SM56 and SM57 are identical. The presence boost of these microphones results in clean, beautifully defined drum, string, and amplified instrument reproduction. Their wide frequency response with a fixed bass rolloff and slight midrange presence boost also make them exceptional for intelligible voice pickup. The well-controlled cardioid polar pattern minimizes background noise in all planes and permits higher amplifier gain before feedback.

Both microphones are finished in non-glare dark gray enamel. The optional A2WS windscreen is particularly effective in controlling breath or wind noise on the SM57. Supplied cables have three-socket connector at microphone end only.

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

SM57 For hand-held or stand-mount applications.

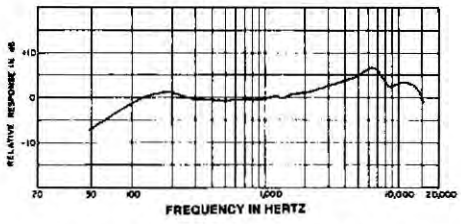
SM57-CN Same as SM57 but cable has a professional three-pin audio connector at the equipment end.

SM57-LC Same as SM57 but without cable

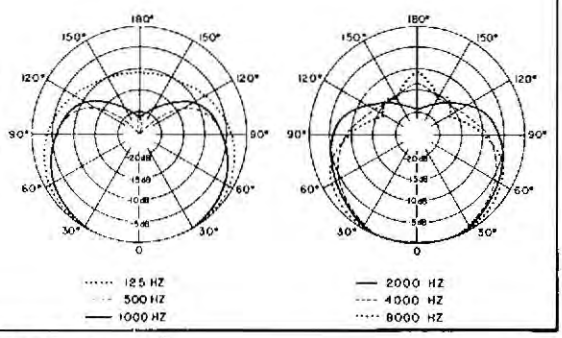
specifications

Models: ..... **SM56 and SM57**
Frequency Response: ..... 40 to 15,000 Hz
Polar Pattern: ..... Cardioid (unidirectional)
Impedance Rating: ..... Dual: 38/150 ohms
Output Level
Open Circuit Voltage: ..... 0.08 mV (−82.0 dB, 0 dB = 1V/μbar) 38 ohms
0.17 mV (−75.5 dB, 0 dB = 1V/μbar) 150 ohms
Power Level: ..... −56.5 dB, 0 dB = 1 mW/10 μbar
Cable: ..... 6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions: ..... SM56: 125 mm H x 121 mm W x 42.1 mm Dia. (4 $^{29}/_{32}$ x 4¾ x 1¼ in.)
SM57: 157 mm L x 32 mm Dia. (6 $^{3}/_{16}$ x 1¼ in.)
Net Weight: ..... SM56: 1.01 kg (2 lb, 3½ oz)
SM57: 284 grams (10 oz)
Packaged Weight: ..... SM56: 1.33 kg (2 lb. 15 oz)
SM57: 1.05 kg (2 lb. 10 oz)
Supplied Accessories: ..... SM56: Connector locking kit, vinyl storage bag
SM57: Swivel adapter, connector locking kit, vinyl storage bag
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE, SM56, SM57



TYPICAL POLAR PATTERNS, SM56, SM57



professional

UNIDIRECTIONAL DYNAMIC MICROPHONE

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.

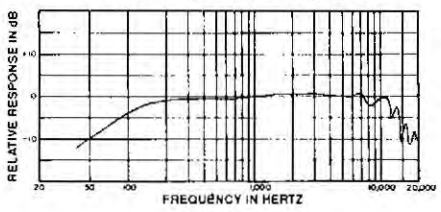
The revolutionary design of the SM59 makes this microphone virtually immune to extraneous noise. An extraordinarily efficient Shure-patented mechano-pneumatic shock mount shields the cartridge from rumble and other mechanically transmitted noise, whether on a stand or hand-held. An integral windscreen 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. Supplied cable has three-socket connector at microphone end and three-pin connector at equipment end.

SM59-LC Same as SM59 but without cable

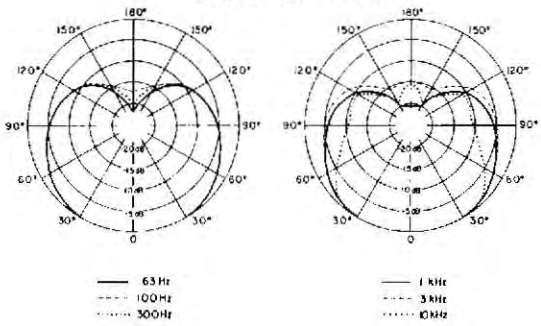
specifications

	SM59
Model:	
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:	6.1m (20 ft) two-conductor shielded 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)
Packaged Weight:	1.62 kg (3 lb, 9 oz)
Supplied Accessories:	Windscreen, swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Page 59

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



professional

UNIDIRECTIONAL DYNAMIC MICROPHONES

SM53 and SM54

Two versatile studio-quality microphones combine a smooth, wide-range, flat frequency response without strident peaks or false coloration—plus excellent noise rejection. They are highly recommended for use in recording, broadcasting, and high quality sound reinforcement.

Both microphones feature an additional acoustic port for improved low-frequency directional control which effectively reduces proximity effect (the increase in bass response when a microphone is used close-up). They also feature a broad front working angle that provides constant tone quality despite user movement. This insures uniform sound quality even when the performer-to-microphone position and distance varies throughout a performance.

The SM53 and SM54 can be hand-held, stand-mounted, or used in an overhead boom. The special internal shock mounting reduces susceptibility to mechanical noise, and an internal humbucking coil prevents interference from strong hum fields, even for distant pickup applications. Their cardioid polar response is uniform over a broad frequency range so off-axis reflections, reverberation, and background noises can be controlled. Further, low-frequency background noise can be suppressed by means of a switch-selectable bass rolloff. Both microphones provide extraordinary ruggedness and are finished in durable champagne enamel. Supplied cables have matching three-socket connectors at microphone end only.

SM53-CN Same as SM53 but cable has a professional three-pin audio connector at the equipment end.

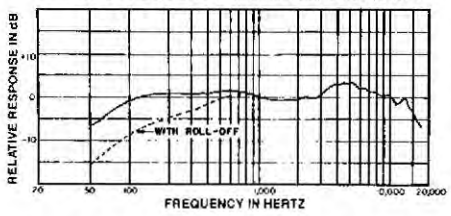
SM54 Same as SM53 but features an ultra-effective built-in "pop" and wind-blast filter that provides truly exceptional suppression of breath and wind noises. This grille assembly (A53G) is also available as an accessory for the SM53 (See page 52)

SM54-CN Same as SM54 but cable has a professional three-pin audio connector at the equipment end.

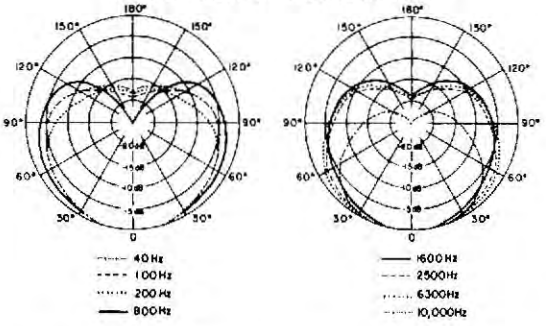
specifications

Models: ..... **SM53 and SM54**
Frequency Response: ..... 70 to 16,000 Hz
Polar Pattern: ..... Cardioid (unidirectional)
Impedance Rating: ..... 150 ohms
Output Level
Open Circuit Voltage: ..... 0.09 mV (−81.0 dB, 0 dB = 1V/μbar)
Power Level: ..... −60.0 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/m0e: ..... 13 dB SPL equivalent
Cable: ..... 6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions: ..... SM53: 182 mm L x 38 mm Dia. (7-5/32 x 1½ in.)
SM54: 194 mm L x 44 mm Dia. (7⅝ x 1¾ in.)
Net Weight: ..... 240 grams (8½ oz)
Packaged Weight: ..... 1.36 kg (3 lb)
Supplied Accessories: ..... Swivel adapter, foam-lined storage/carrying case
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE, SM53, SM54



TYPICAL POLAR PATTERNS SM53, SM54



professional

UNIDIRECTIONAL DYNAMIC MICROPHONES

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. Supplied cable has matching three-socket connector at microphone end only.

SM62-CN Same as SM62 but cable has a professional three-pin audio connector at the equipment end.

SM5B

Specifically designed to minimize boom microphone problems in television and motion picture sound stage and location recording. Also excellent on accessory desk stand for 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.

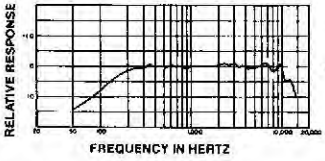
The exposed metal parts of the microphone are finished in unobtrusive non-glare dark gray; the front windscreen is light gray open-cell foam; the rear is dark gray foam.

specifications

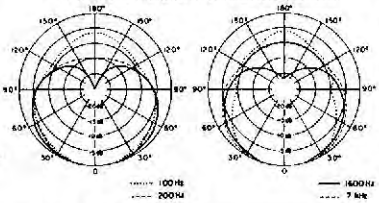
Model:	**SM62**
Frequency Response:	100 to 10,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	150 ohms
Output Level	
Open Circuit Voltage:	0.08 mV (−82.0 dB, 0 dB = 1V/μbar)
Power Level:	−60.5 dB, 0 dB = 1 mW/10 μbar
Cable:	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	124 mm L x 38.1 mm Dia. (4-29/32 x 1½ in.)
Net Weight:	113.4 grams (4 oz)
Packaged Weight:	968 grams (2 lb, 2 oz)
Supplied Accessories:	Swivel adapter, vinyl storage bag
Optional Accessories:	See Page 59

Model:	**SM5B**
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)
Packaged Weight:	1.98 kg (4 lb, 6 oz)
Supplied Accessories:	Stand adapter, boom adapter
Optional Accessories:	See Page 59

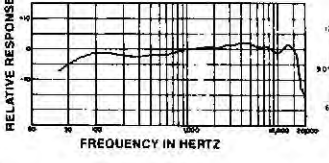
TYPICAL FREQUENCY RESPONSE, SM62



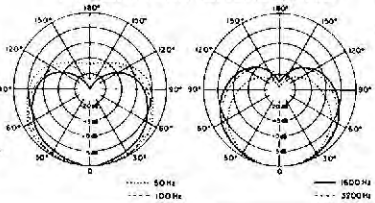
TYPICAL POLAR PATTERNS, SM62



TYPICAL FREQUENCY RESPONSE, SM5B



TYPICAL POLAR PATTERNS, SM5B



professional

UNIDIRECTIONAL DYNAMIC MICROPHONE

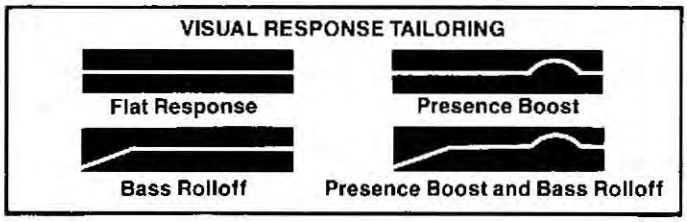
SM7

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.

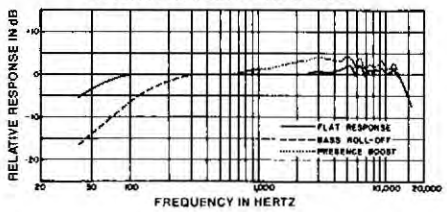
The microphone is designed for boom or stand mounting. Mechanical noise is reduced by a Shure-patented air suspension integral shock mount; outdoor wind and moving boom noise as well as breath pop in close-up use are minimized by the integral foam windscreen; and electrical hum pickup is canceled by 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.



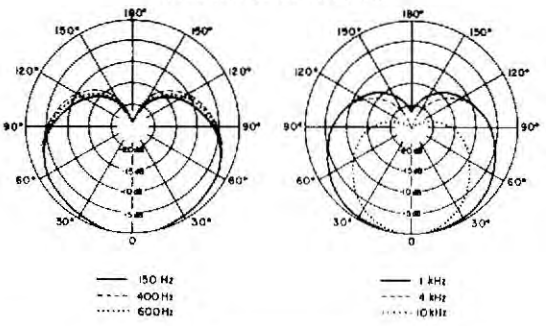
specifications

	SM7
Model:	
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)
Packaged Weight:	2.04 kg (4 lb, 8 oz)
Supplied Accessories:	Switch cover plate, foam-lined storage/carrying case
Optional Accessories:	See Page 59

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



professional
UNIDIRECTIONAL CONDENSER MICROPHONE

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 and PS1E2 power supplies, or any standard voltage (12 to 48 Vdc) available from most recording consoles. (For more information and specifications on the PS1 and PS1E2 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. Supplied cable has three-socket connector at microphone end and three-pin connector at equipment end.

New! R104A Omnidirectional Cartridge

The R104A Optional Accessory Omnidirectional Cartridge expands the versatility and applicability of the Shure SM81. It is designed for quick and easy interchange with the unidirectional cartridge supplied with the SM81.

The omnidirectional pickup pattern of the R104A Cartridge is uniformly sensitive to sounds from all directions. With the omnidirectional cartridge installed, the SM81 is an exceptional microphone for studio and recording.

The R104A offers the ruggedness and reliability that the SM81 is noted for, and it is finished with the same durable metallic vinyl paint. It is supplied with its own 10 dB attenuator. Both the R104A and the attenuator can be stored in the SM81 carrying case.

SM81 Puts it ALL together

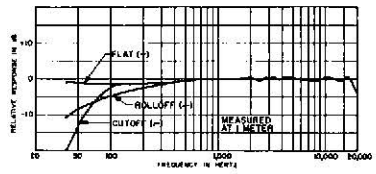
• professional recording
• broadcast
• motion picture recording
• critical sound reinforcement

- 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.

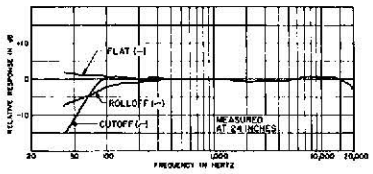
specifications

	SM81 (with Unidirectional Cartridge)	**SM81** (with R104A Omnidirectional Cartridge)
Frequency Response:	20 to 20,000 Hz	20 to 20,000 Hz
Polar Pattern:	Cardioid (unidirectional)	Omnidirectional
Impedance Rating:	150 ohms (minimum recommended load: 800 ohms)	150 ohms (minimum recommended load: 800 ohms)
Output Level		
Open Circuit Voltage:	0.63 mV (−64.0 dB, 0 dB = 1V/μbar)	0.56 mV (−65.0 dB, 0 dB − 1V/μbar)
Equivalent Power Level:	−40 5 dB (0 dB − 1 mW/10μbars)	−40.5 dB (0 dB = 1 mW/10μbars)
Clipping Level: (at 1,000 Hz):	800-ohm load: −4 dBV (0.63V) 150-ohm load: −15 dBV (0.18V)	800-ohm load: − 4 dBV (0.63V) 150-ohm load: −15 dBV (0.18V)
Total Harmonic Distortion:	Less than 0.5% (131 dB SPL at 250 Hz into 800-ohm load)	Less than 0.5% (132 dB SPL at 250 Hz into 800-ohm load)
Maximum SPL:	146 dB with 800-ohm load (attenuator at 10) 138 dB with 150-ohm load (attenuator at 10)	147 dB with 800-ohm load (attenuator at 10) 139 dB with 150-ohm load (attenuator at 10)
Hum Pickup/m0e:	3 dB SPL equivalent	−4 dB SPL equivalent
Connector:	Professional three-pin audio	Professional three-pin audio
Cable:	7.6m (25 ft) two-conductor shielded with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end	
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)
Packaged Weight:	1.5 kg (3 lb, 6 oz)	
Supplied Accessories:	A81G pop filter grille, A57D swivel adapter, 10 dB attenuator lock, foam-lined storage/carrying case	
Optional Accessories:	See Page 59	See Page 59

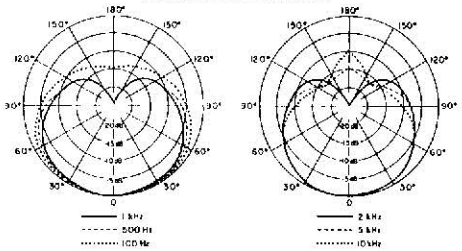
Typical Frequency Response, SM81 with Unidirectional Cartridge



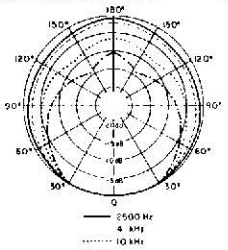
Typical Frequency Response, SM81 with R104A Omnidirectional Cartridge



Typical Polar Patterns, SM81 with Unidirectional Cartridge



Typical Polar Pattern, SM81 with R104A Omnidirectional Cartridge



professional

UNIDIRECTIONAL CONDENSER MICROPHONE

SM85

The SM85 is a lightweight, rugged condenser microphone designed for hand-held live 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 furnished.

The SM85 exhibits remarkably low distortion (right up to its over-load 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.

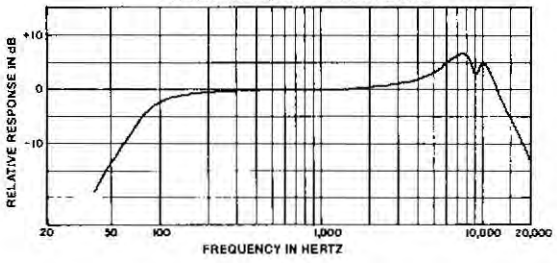
The SM85 can be simplex (phantom) powered from the Shure PS1 and PS1E2 power supplies, or any standard voltage (12 to 48 Vdc) available from most recording consoles. (For more information and specifications on the PS1 and PS1E2, see the accessory section of this catalog.)

SM85 without cable
SM85-CN with cable

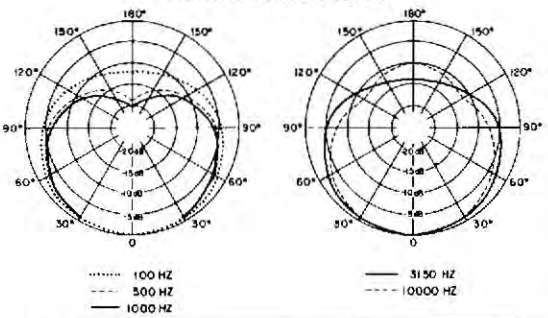
specifications

	SM85
Model:	
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)
Packaged Weight:	SM85: 887 grams (1 lb, 15 oz) SM85-CN: 1.47 kilograms (3 lb, 4 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:	Windscreen, swivel adapter, carrying case
Optional Accessories:	See page 59

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERNS



professional

UNIDIRECTIONAL RIBBON MICROPHONE AND BIDIRECTIONAL RIBBON MICROPHONE

SM33

The ribbon element of the SM33 imparts a pleasantly warm mellow characteristic to the speaking voice, a feature that is especially desirable for announcing, voice-over, and narration. It is particularly suitable to talk-show hosts, D.J.'s and panel discussions. A rotary switch selects low-frequency tailoring: either bass rolloff for natural voice pickup or flat low end for accurate instrument pickup.

Its supercardioid pickup pattern is somewhat narrower than the cardioid, making the microphone highly directional and providing superior rejection of undesirable background noise.

It is unusually rugged and can withstand treatment that would ruin other ribbon microphones. The SM33 is designed for desk or floor-stand mounting, with an effective vibration-isolator shock mount to resist mechanical noise. Dual low impedance. Inconspicuous non-glare dark gray finish for on-camera use. Supplied cable has three-socket connector at microphone end only.

300

The bidirectional polar pattern of the Model 300 allows it to pick up sound from the front and rear only, rejecting sound sources at the sides, top, or bottom. This makes it well suited for such indoor applications as across-the-table interviews or dialogue, combined studio pickup of facing instrumental or vocal groups, or stages with loudspeakers directly to the sides or overhead... anywhere the warmth of a ribbon and a bidirectional pickup pattern are required.

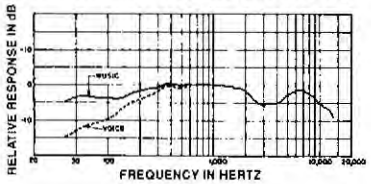
The Model 300 has a smooth, warm, wide-range frequency response. Switch-selectable low-frequency tailoring provides either bass rolloff for natural close-up voice pickup or flat low end for accurate instrument pickup.

It is a handsome, remarkably rugged ribbon microphone, with switch-selectable impedance and an attached vibration-isolator swivel mount. It is finished in durable, non-glare dark gray enamel to provide for inconspicuous on-camera pickup. Supplied cable has three-socket connector at microphone end only.

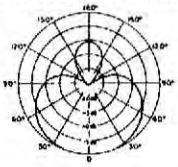
specifications

	SM33	300
Model:		
Frequency Response:	40 to 15,000 Hz	40 to 15,000 Hz
Polar Pattern:	Supercardioid (unidirectional)	Bidirectional
Impedance Rating:	Dual: 38 ohms/150 ohms	Multiple: 38 ohms (L); 150 ohms (M); High (H)
Output Level		
Open Circuit Voltage:	0.05 mV (−86 dB, 0 dB = 1V/μbar) 38 ohms 0.12 mV (−78 dB, 0 dB = 1V/μbar) 150 ohms	0.04 mV (−88.0 dB, 0 dB = 1V/μbar) L 0.11 mV (−79.5 dB, 0 dB = 1V/μbar) M 1.33 mV (−57.5 dB, 0 dB = 1V/μbar) H
Power Level:	−59 dB, 0 dB = 1 mW/10 μbar	−60.0 dB L; −59.5 dB M; 0 dB = 1 mW/10 μbars
Cable:	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	202 mm H × 31 mm W × 52.4 mm D (7$^{31}/_{32}$ × 1$^{7}/_{32}$ × 2$^{1}/_{16}$ in.)	234 mm H × 36.5 mm W × 52.4 mm D (9$^{7}/_{32}$ × 1$^{7}/_{16}$ × 2$^{1}/_{16}$ in.)
Net Weight:	736 grams (1 lb, 10 oz)	581 grams (1 lb, 4 oz)
Packaged Weight:	1.48 kg (3 lb, 4 oz)	1.28 kg (2 lb, 13 oz)
Optional Accessories:	See Page 59	See Page 58

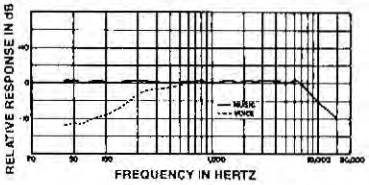
TYPICAL FREQUENCY RESPONSE, SM33



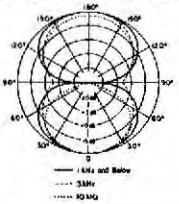
TYPICAL POLAR PATTERN, SM33



TYPICAL FREQUENCY RESPONSE, 300



TYPICAL POLAR PATTERN, 300



professional

OMNIDIRECTIONAL DYNAMIC MICROPHONE

SM63

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 hand-held throughout long studio sessions.

The SM63 is particularly well-suited to hand-held 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.

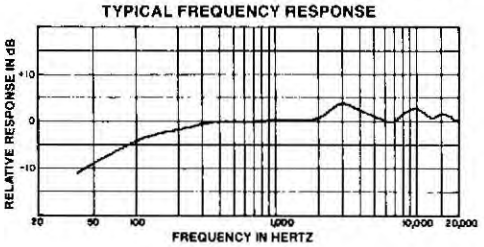
The integral wind and pop filter is extremely effective for normal wind and breath pop noise; however, for adverse wind and pop conditions, the SM63 is furnished with an accessory dual-density, two-layer windscreen. The SM63 also features the Shure developed VERAFLEX® grille. This grille is nearly indestructible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

The SM63 is an innovative blending of small size, handsome appearance and broadcast-quality performance. It is beautifully finished in durable champagne enamel and is supplied with matching swivel adapter. Supplied cable has matching three-socket connector at microphone end and three-pin connector at equipment end.

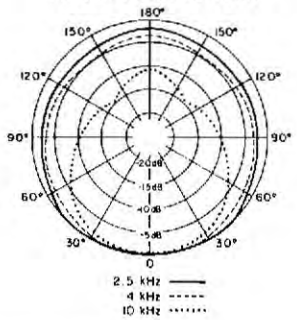
specifications

Model: **SM63**
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/mOe: ..... 13 dB SPL equivalent
Cable: ..... 7.6m (25 ft) two-conductor shielded with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end.
Dimensions: ..... 145 mm L x 33 mm Dia. (5-11/16 x 1-1/4 in.)
Net Weight: ..... 99 grams (3.5 oz)
Packaged Weight: ..... 0.9 kg (2 lb)
Supplied Accessories: ..... Windscreen, swivel adapter, vinyl storage bag
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE



TYPICAL POLAR PATTERN



professional

OMNIDIRECTIONAL DYNAMIC MICROPHONES

SM60

The SM60 is equally at home in the studio or for remote pickups. It is in wide use at outdoor sporting events and in studio production numbers.

It has smooth, wide-range response for natural voice and music pickup, a built-in breath and pop filter to minimize breath and wind noise, and an extremely strong, machined steel case front. This versatile microphone combines good looks, light weight, strength, performance and economy. The SM60 is finished in champagne enamel and supplied with a matching swivel adapter. Supplied cable has three-socket connector at microphone end only.

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 on-stage and television hand-held use. The SM61 is finished in champagne enamel and is supplied with a matching swivel adapter. Supplied cable has three-socket connector at microphone end only.

SM61-CN Same as SM61 but cable has a professional three-pin audio connector at the equipment end.

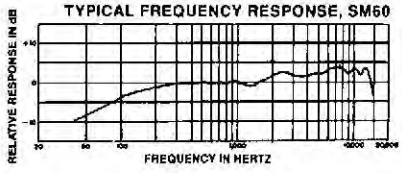
SM76

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.

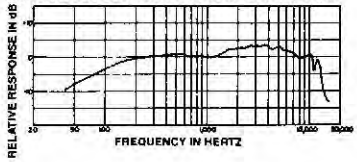
specifications

Model:	SM60	SM61	SM76
Frequency Response:	45 to 15,000 Hz	50 to 14,000 Hz	45 to 20,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional	Omnidirectional
Impedance Rating:	150 ohms	150 ohms	Dual: 38/150 ohms
Output Level Open Circuit Voltage: Power Level:	0.08 mV (−82.0 dB, 0 dB = 1V/μbar) −61.0 dB, 0 dB=1mV/μbar	0.08 mV (−82.0 dB, 0 dB = 1V/μbar) −60.5 dB, 0 dB = 1 mW/10 μbar	0.04 mV (−88.0 dB, 0 dB=1V/μbar) 38 ohms 0.08 mV (−81.5 dB, 0 dB=1V/μbar) 150 ohms −61.0 dB, 0 dB=1 mW/10 μbar
Hum Pickup/mOe:	27 dB SPL equivalent		
Cable:	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	158 mm L × 31.7 mm Dia. (6-7/32 × 1-1/4 in.)	181 mm L x 40 mm Dia. (7⅛ x 1⁹⁄₃₂ in.)	210 mm L×19.8 mm Dia. (8-9/16×25/32 in.)
Net Weight:	170 grams (6 oz)	147 grams (5.2 oz)	198 grams (7 oz)
Packaged Weight:	907 grams (2 lb)	907 grams (2 lb)	964 grams (2 lb, 2 oz)
Supplied Accessories:	Swivel adapter	Windscreen, swivel adapter, vinyl storage bag	Swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Page 59	See Page 59	See Page 59

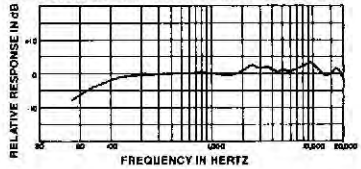
TYPICAL FREQUENCY RESPONSE, SM60



TYPICAL FREQUENCY RESPONSE, SM61



TYPICAL FREQUENCY RESPONSE, SM76



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, 578
SONODYNE®	540SH
SPHER-O-DYNE®	533 Series
UNIDYNE® II	55SH
UNIDYNE® III	545 Series, 546
UNIDYNE® B	515 Series
UNI-RON®	330
UNISPHERE® I	565 Series
UNISPHERE® A	585 Series
UNISPHERE® B	588 Series
VERSADYNE	575 Series
VOCAL SPHERE	579SB

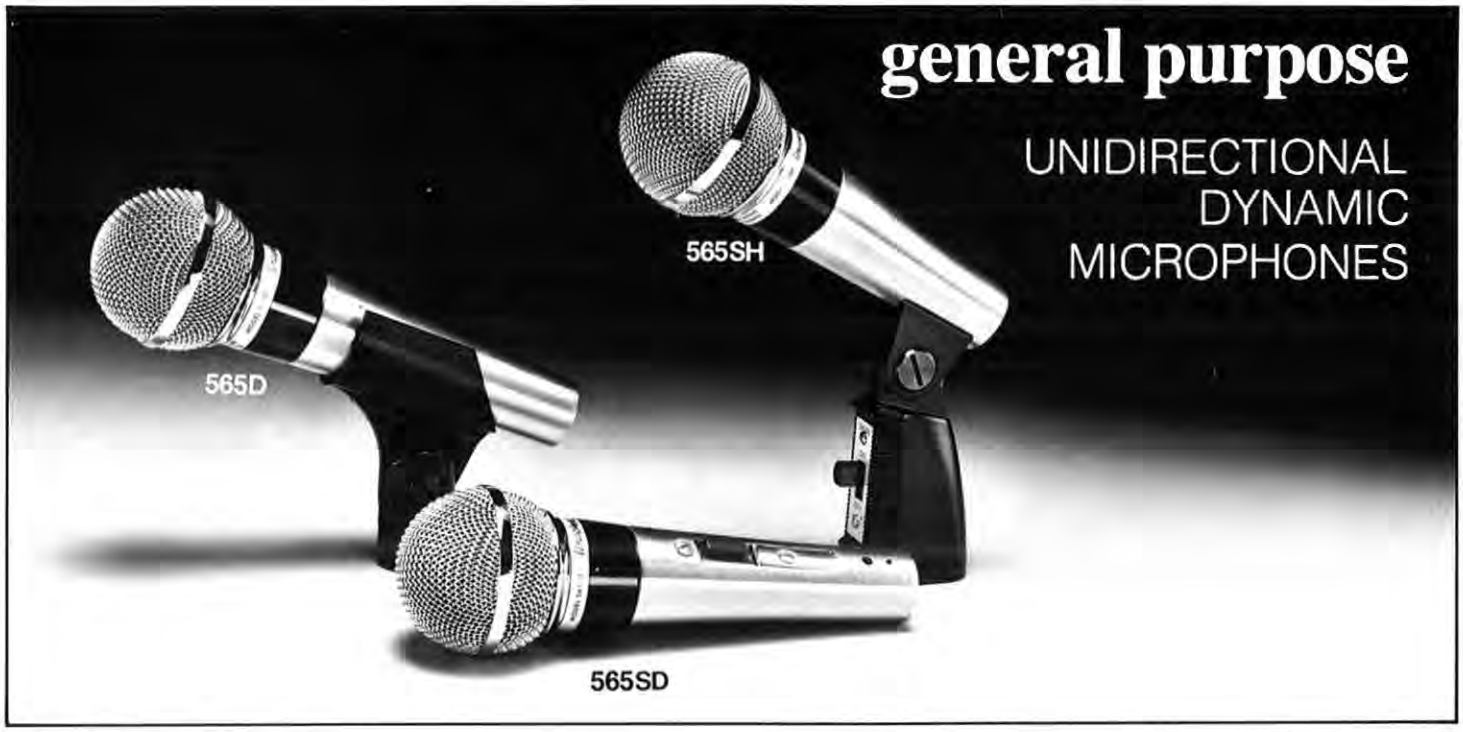
SHURE MODEL NUMBER SUFFIX CODES

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

SUFFIX	DESCRIPTION
A	High Impedance
B	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
V	Volume Control

Entertainers from every corner of the music world rely on Shure microphones to complement their performance

1—Marilyn McCoo and Billy Davis, Jr.
2—Wolfman Jack
3—Russell Hitchcock, of Air Supply
4—George Jones
5—Sha Na Na



general purpose

UNIDIRECTIONAL DYNAMIC MICROPHONES

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

565SD With an on-off switch to control the microphone at the performer's position; for hand-held or stand-mounted use

565SD-CN Same as 565SD but 6.1m (20 ft) cable has a professional three-pin audio connector at the equipment end

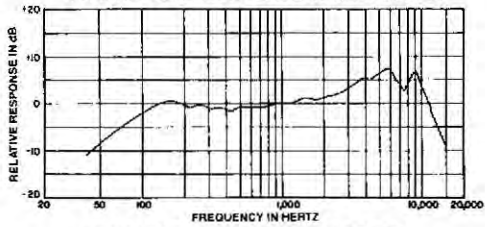
565SD-LC Same as 565SD but without cable

565SH With an on-off switch and built-in swivel mount; for stand-mounted use

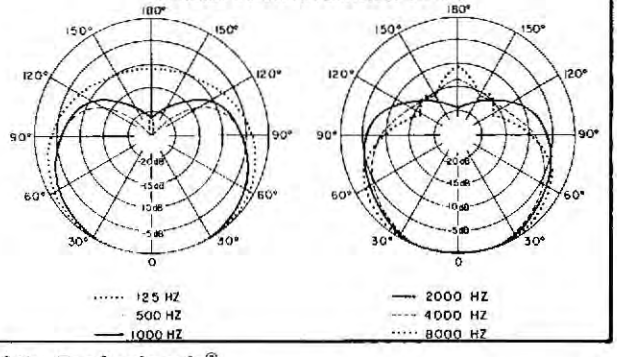
specifications

Model:	**565 Series**
Frequency Response:	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)
Impedance Rating:	Dual: 150 ohms/High
Output Level	
Open Circuit Voltage:	0.14mV (−77.0 dB, 0 dB = 1V/μbar) 150 ohms 1.88mV (−54.5 dB, 0 dB = 1V/μbar) High
Power Level:	−57.0 dB, 0 dB = 1mW/10μbar
Cable:	4.6m (15 ft) two-conductor with three-socket professional audio connector at microphone end
Dimensions:	565D, 565SD: 162 mm L x 51 mm Dia. (6-23/64 x 2 in.); 565SH: 124 mm H x 51 mm W x 157 mm D (4-29/32 x 2 x 6-3/16 in.)
Net Weight:	565D, 565SD: 298 grams (10½ oz); 565SH: 454 grams (1 lb)
Packaged Weight:	565D, 565SD: 0.97 kg (2 lb, 2 oz), 565SH: 1.07 kg (2 lb, 6 oz)
Supplied Accessories:	565D, 565SD: swivel adapter, connector locking kit; 565SH: switch lockplate
Optional Accessories:	See Page 58

TYPICAL FREQUENCY RESPONSE, 565 SERIES



TYPICAL POLAR PATTERNS, 565 SERIES



general purpose

UNIDIRECTIONAL DYNAMIC MICROPHONES

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.

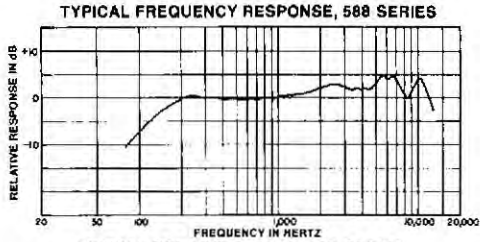
The microphones in the 588 Series are either high impedance or low impedance. All microphones in the series can be hand-held or stand-mounted. Supplied cable has three-socket connector at microphone end.

588SA High impedance, with on-off switch
588SAC Same as 588SA, but cable has an MC1F connector and a phone plug adapter at equipment end
588SB Low impedance, with on-off switch
588SB-CN Same as 588SB, but cable has a professional three-pin audio connector at equipment end of 6.1m (20 ft) cable
588SB-LC Same as 588SB but without cable

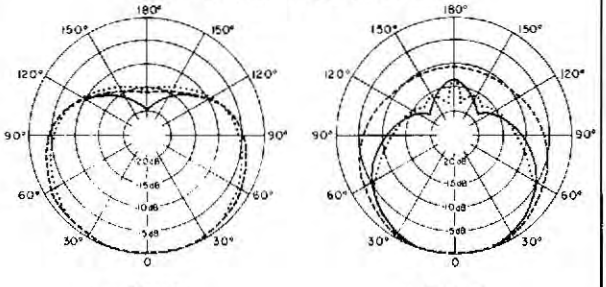
specifications

Model: ..... **588 Series**
Frequency Response: ..... 80 to 13,000 Hz
Polar Pattern: ..... Cardioid (unidirectional)
Impedance Rating: ..... 588SA: High; 588SB: 150 ohms
Output Level
Open Circuit Voltage ..... 588SA: 1.11 mV (−59.0 dB, 0 dB = 1V/μbar)
588SB: 0.08 mV (−82.0 dB, 0 dB = 1V/μbar)
Power Level: ..... −60.5 dB, 0 dB = 1 mW/10 μbar
Cable: ..... 588SA: 4.6m (15 ft) single-conductor shielded with three-socket professional audio connector at microphone end
588SB: 4.6m (15 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions: ..... 164 mm L x 54 mm Dia. (6-15/32 x 2⅛ in.)
Net Weight: ..... 340 grams (12 oz)
Packaged Weight: ..... 794 grams (1 lb, 12 oz)
Supplied Accessories: ..... Swivel adapter
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE, 588 SERIES



TYPICAL POLAR PATTERNS, 588 SERIES



general purpose

UNIDIRECTIONAL DYNAMIC MICROPHONES

585 Series

The UNISPHERE® A Model 585 Series are highly versatile microphones with a wide frequency response and a unidirectional pickup pattern, particularly well-suited for sound reinforcement and recording. A built-in spherical windscreen helps to minimize breath popping when the microphone is used close to the performer's mouth and subdues wind noise in outdoor locations. Handling and stand noise is reduced by means of a shock-mounted cartridge.

The microphones' effective cardioid polar pattern permits higher amplifier gain before feedback, even in reverberant surroundings.

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 close-up voice response, and a high-frequency presence boost produces a clear, crisp sound for enhanced intelligibility of speech and vocals.

The 585 Series Microphones are available as either high impedance or low impedance. They are equipped either with an on-off switch or with an ingenious volume control that effectively turns off the microphone at the minimum position, permitting the performer to control what the audience hears.

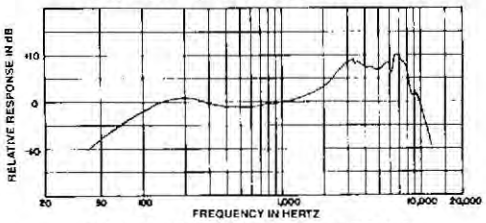
All microphones in the series can be hand-held or stand-mounted. Supplied cable has MC1F (585SA and 585SAV) or MC2M (585SB and 585SBV) connectors at microphone end.

585SA High impedance, with on-off switch
585SAC Same as 585SA, but cable has an MC1F connector and a phone plug adapter on equipment end
585SAV High impedance, with volume control
585SAVC Same as 585SAV, but cable has an MC1F connector and a phone plug adapter on equipment end
585SB Low impedance, with on-off switch
585SBV Low impedance, with volume control

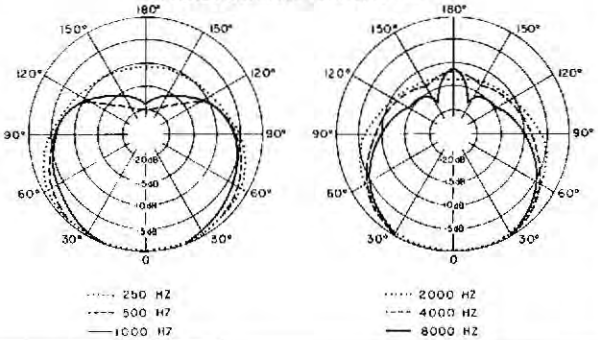
specifications

Model: ..... **585 Series**
Frequency Response: ..... 50 to 13,000 Hz
Polar Pattern: ..... Cardioid (unidirectional)
Impedance Rating: ..... 585SA, 585SAV: High; 585SB, 585SBV: 150 ohms
Output Level
Open Circuit Voltage: ..... 585SA: 1.41 mV (−57.0 dB), 585SAV: 1.0 mV (−60 dB)
585SB: 0.09 mV (−80.5 dB), 585SBV: 0.08 mV (−81.5 dB)
0 dB = 1V/μbar
Power Level: ..... −59.0 dB, 0 dB = 1 mW/10 μbar
Cable: ..... 585SA, 585SAV: 4.6m (15 ft) one-conductor shielded with Amphenol type MC1F connector at microphone end
585SB, 585SBV: 4.6m (15 ft) two-conductor shielded with Amphenol type MC2M connector at microphone end
Dimensions: ..... 171 mm L x 52.4 mm Dia. (6¾ x 2-1/16 in.)
Net Weight: ..... 354 grams (12½ oz)
Packaged Weight: ..... 851 grams (1 lb, 14 oz)
Supplied Accessories: ..... Swivel adapter
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE, 585 SERIES



TYPICAL POLAR PATTERNS, 585 SERIES



general purpose

UNIDIRECTIONAL DYNAMIC MICROPHONES

545 Series and 546

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 and Model 546 provides for excellent signal-to-noise ratio.

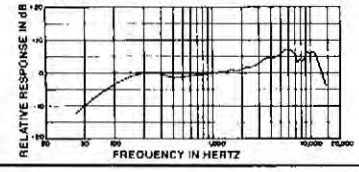
These microphones are lightweight for handling comfort, yet rugged enough to keep on working under punishing conditions. All models (except 545L) are dual impedance to match the variety of amplifiers found in the field. The microphone connector is the popular three-pin professional audio connector and the supplied cable has three-socket connector at microphone end (except the 545L, which offers an attached cable).

545D Without switch; for hand-held or stand-mounted use
545SD With an on-off switch; for hand-held or stand-mounted use
545SD-CN Same as 545SD but cable has a professional three-pin audio connector at the equipment end of the 6.1m (20 ft) cable
545SD-LC Same as 545SD but without cable
545SH With an on-off switch and built-in swivel mount; for stand mounting
546 Dual low impedance with covered impedance-selecting switch; attached swivel with special shock mount, for stand mounting
545L Low impedance only; attached cable; for lavalier and gooseneck applications (see Pages 43 and 45)

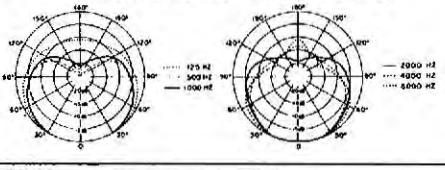
specifications

Model:	545 Series	546
Frequency Response:	50 to 15,000 Hz	50 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)	Cardioid (unidirectional)
Impedance Rating:	Dual: 150 ohms/High	Dual: 38 ohms (L)/150 ohms (H)
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	0.07 mV (−83.5 dB, 0 dB = 1V/μbar) L 0.16 mV (−76.0 dB, 0 dB = 1V/μbar) H
Power Level:	−58.5 dB, 0 dB = 1mW/10μbar	−57.5 dB, 0 dB = 1 mW/10 μbar
Cable:	545D, 545SD, 545SH: 4.6m (15 ft) two-conductor shielded with three-socket professional audio connector at microphone end 545L: attached 6.1m (20 ft) two-conductor shielded	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
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.)	125 mm H x 34.9 mm W x 138 mm D (4-29/32 x 1⅜ x 5-7/16 in.)
Net Weight:	545D, 545SD: 255 grams (9 oz); 545SH: 425 grams (15 oz)	510 grams (1 lb, 2 oz)
Packaged Weight:	545D, 545SD: 914 grams (2 lb, ¼ oz) 545SH: 1.07 kg (2 lb, 6 oz)	1.13 kg (2 lb, 8 oz)
Supplied Accessories:	545D, 545SD: swivel adapter, connector locking kit 545SH: switch lockplate	
Optional Accessosries:	See Page 58	See Page 58

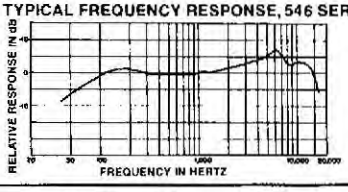
TYPICAL FREQUENCY RESPONSE, 545 SERIES



TYPICAL POLAR PATTERNS, 545 SERIES



TYPICAL FREQUENCY RESPONSE, 546 SERIES



general purpose

UNIDIRECTIONAL DYNAMIC MICROPHONES

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.

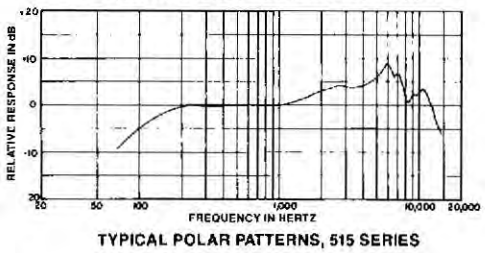
Each model in the 515 Series (except 515BG) is equipped with an on-off switch for control of the amplifier input at the performer's position. A lockplate is supplied with Models 515SA and 515SB. Model 515SA is high impedance; all other models are low impedance.

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
515BG, 515SBG, and 515SB-G18 Low impedance; for gooseneck applications (see page 45)

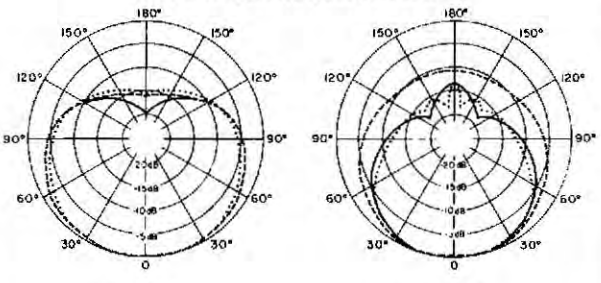
specifications

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 = 1 mW/10 μbar
Cable—Attached:	515SA: 4.6m (15 ft) single-conductor shielded; 515SB: 4.6m (15 ft) two-conductor shielded; 515BG: 1.8m (70 in.) 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 × 37.5 mm Dia. (6 15/32 × 1 15/32 in.); 515BG, 515SBG: 159 mm L × 37.3 mm Dia. (6¼ × 1 15/32 in.); 515SB-G18 (with gooseneck): 635 mm L × 37.3 mm Dia. (25 × 1 15/32 in.)
Net Weight:	515SA: 510 grams (1 lb, 2 oz), 515SB: 624 grams (1 lb, 6 oz); 515BG, 515SBG: 425 grams (15 oz); 515SB-G18 (with gooseneck): 1.02 kg (2 lb, 4 oz)
Packaged Weight:	515SA: 680 grams (1 lb, 8 oz), 515SB: 794 grams (1 lb, 12 oz); 515BG, 515SBG: 567 grams (1 lb, 4 oz); 515SB-G18: 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 Page 58

TYPICAL FREQUENCY RESPONSE, 515 SERIES



TYPICAL POLAR PATTERNS, 515 SERIES



general purpose

UNIDIRECTIONAL
DYNAMIC
AND
UNIDIRECTIONAL
RIBBON
MICROPHONE

55SH

Classic appearance combined with modern acoustics. The UNIDYNE® II Model 55SH is an excellent microphone for sound reinforcement and recording as well as for on-camera use in motion pictures or publicity situations where an instantly recognizable microphone is necessary.

The 55SH features a smooth, flat frequency response that conveys a mellow quality to voice and minimizes "bassiness" and sibilance. Its uniform cardioid polar pattern is well-suited for optimum performance in adverse acoustic environments. The microphone is mounted on a self-tensioning, adjustable swivel and the cartridge is shock-mounted for quiet operation.

The 55SH is dual impedance and is equipped with a lockable on-off switch. The microphone connector is the popular three-pin professional audio connector. Supplied cable has three-socket audio connector at microphone end.

330

The UNI-RON® Model 330 is recommended for motion picture, TV, radio, and professional recording studios...applications where the highest sound quality is a requirement. The ribbon transducer provides an extended, smooth frequency response of 30 to 15,000 Hz.

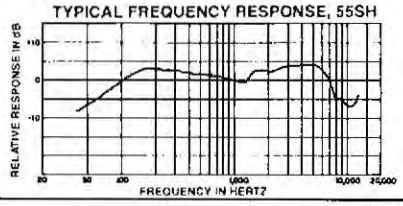
This microphone has a true supercardioid unidirectional pickup pattern which fights feedback problems and greatly reduces the pickup of random noise. In addition, a vibration-isolation unit makes the 330 nearly immune to stand-transmitted noise.

The Model 330 is mounted on a lifetime swivel and is equipped with a convenient multi-impedance switch. Supplied cable has three-socket audio connector at microphone end.

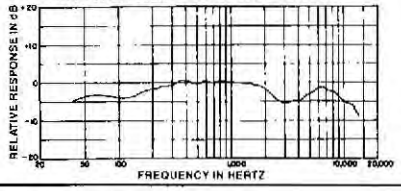
specifications

	55SH	330
Models:		
Frequency Response:	50 to 12,000 Hz	30 to 15,000 Hz
Polar Pattern:	Cardioid (unidirectional)	Supercardioid (unidirectional)
Impedance Rating:	Dual: 150 ohms/High	Multiple: 50 ohms; 150 ohms; 250 ohms
Output Level		
Open Circuit Voltage:	0.13 mV (−77.5 dB) 150 ohms 1.67 mV (−55.5 dB) High (0 dB = 1V/μbar)	0.06 mV (−84.5 dB) 50 ohms 0.11 mV (−79 dB) 150 ohms 0.14 mV (−77 dB) 250 ohms
Power Level:	−55.5 dB, 0 dB = 1 mW/10 μbar	−59 dB, 0 dB = 1 mW/10 μbar
Cable:	4.6m (15 ft) two-conductor shielded with three-socket professional audio connector at microphone end	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	188 mm H x 55.6 mm W x 77.8 mm D (7-3/32 x 2-3/16 x 3-1/16 in.)	185 mm H x 31 mm W x 52.4 mm D (7-9/32 x 1-7/32 x 2-1/16 in)
Net Weight:	736 grams (1 lb, 10 oz)	681 grams (1 lb, 8 oz)
Packaged Weight:	1.4 kg (3 lb, 2 oz)	1.48 kg (3 lb, 4 oz)
Supplied Accessories:	Switch lockplate	
Optional Accessories:	See Page 58	See Page 58

TYPICAL FREQUENCY RESPONSE, 55SH



TYPICAL FREQUENCY RESPONSE, 330



general purpose

OMNIDIRECTIONAL DYNAMIC MICROPHONES

533 Series

The SPHER-O-DYNE® Model 533 Series Microphones are dynamic omnidirectional microphones with a spherical grille. The units provide wide-range reproduction of music and voice, making them ideal for general purpose use in public-address, theater-stage sound systems, and tape recording applications where feedback isn't a problem. Their convenient size and light weight are particularly well-suited to rock and other performing groups. They are also recommended for interview applications where the spherical pickup pattern of the microphone is important.

The built-in pop filter is ideal for close-up use, minimizing explosive breath sounds. Good reproduction of voice and music is provided by the wide, flat, frequency response from 40 to 11,000 Hz.

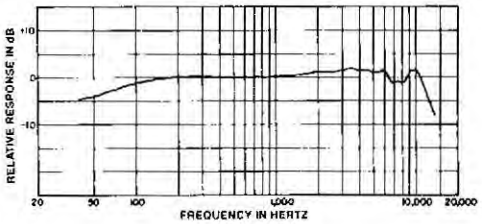
The microphones are equipped with an on-off switch, and a lockplate is supplied for occasions when it is desirable to lock the microphone on. The 533 Series are available in either high-impedance or low-impedance models. They operate equally well as hand-held or stand-mounted units. Supplied cable has MC1F (533SA and 533SAC) or MC2M (533SB) connector at microphone end.

533SA High impedance
533SAC Same as 533SA, but cable has an MC1F connector and a phone plug adapter on equipment end
533SB Low impedance

specifications

Model: ..... **533 Series**
Frequency Response: ..... 40 to 11,000 Hz
Polar Pattern: ..... Omnidirectional
Impedance Rating: ..... 533SA: High; 533SB: 150 ohms
Output Level
Open Circuit Voltage: ..... 533SA: 1.77 mV (−55.0 dB, 0 dB = 1V/μbar)
533SB: 0.14 mV (−77.0 dB, 0 dB = 1V/μbar)
Power Level: ..... −56.0 dB = 1 mW/10 μbar
Cable: ..... 533SA: 4.6m (15 ft) single-conductor shielded with Amphenol type MC1F connector at microphone end
533SB: 4.6m (15 ft) two-conductor shielded with Amphenol type MC2M at microphone end
Dimensions: ..... 168 mm L x 52.4 mm Dia. (6-19/32 x 2-1/16 in.)
Net Weight: ..... 312 grams (11 oz)
Packaged Weight: ..... 768 grams (1 lb, 11 oz)
Supplied Accessories: ..... Swivel adapter
Optional Accessories: ..... See Page 58

TYPICAL FREQUENCY RESPONSE, 533 SERIES



general purpose

OMNIDIRECTIONAL DYNAMIC MICROPHONES

578

The OMNIDYNE Model 578 Microphone is ideal for high quality sound reinforcement, theater-stage sound systems, broadcast and recording applications. It is also recommended for hand-held interview use.

Its smooth, flat response from 50 to 15,000 Hz is suitable for accurate pickup of musical instruments as well as speech and vocals. A rugged steel case and stainless steel grille ensure dependability under the heaviest use, indoors and out. The 578 can be hand-held or stand-mounted, is equipped with a locking on-off switch, is dual impedance to match the wide variety of amplifiers found in the field, and is equipped with an attached cable.

579SB

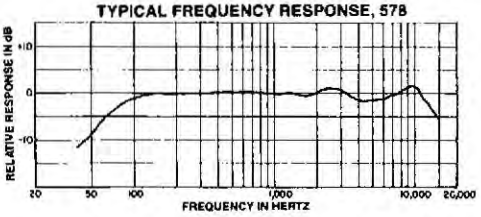
The VOCAL SPHERE Model 579SB Microphone is designed to provide very natural and intelligible voice reproduction with freedom from annoying wind and breath noises. This slim, neat-appearing microphone is a rugged unit built to withstand the severest field use. The performance, small size, and ruggedness 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. Supplied cable has three-socket connector at microphone end.

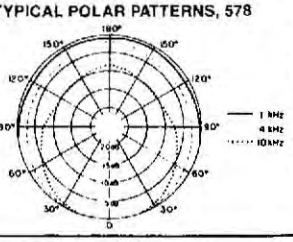
specifications

	578	579SB
Model:		
Frequency Response:	50 to 15,000 Hz	50 to 14,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional
Impedance Rating:	Dual: 150 ohms/High	150 ohms
Output Level		
Open Circuit Voltage:	0.1 mV (−80.0 dB, 0 dB = 1V/μbar) 150 ohms 1.12 mV (−59.0 dB, 0 dB = 1V/μbar) High	0.13 mV (−78.0 dB, 0 dB = 1V/μbar)
Power Level:	−60.0 dB, 0 dB = 1 mW/10 μbar	−57.0 dB, 0 dB = 1 mW/10 μbar
Cable:	Attached 4.6m (15 ft) three-conductor shielded	6.1m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end
Dimensions:	188 mm L x 20 mm Dia. ($7^{13}/_{32}$ x $^{25}/_{32}$ in.)	162 mm L x 39.7 mm Dia. ($6^{3}/_{8}$ x $1^{9}/_{16}$ in.)
Net Weight:	454 grams (1 lb)	156 grams (5½ oz)
Packaged Weight:	768 grams (1 lb, 11 oz)	737 grams (1 lb, 10 oz)
Supplied Accessories:	Swivel adapter	Swivel adapter
Optional Accessories:	See Page 59	See Page 59

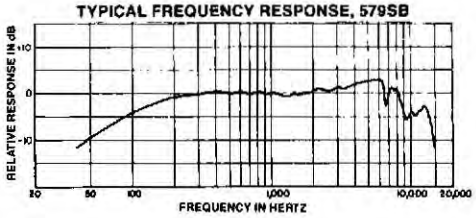
TYPICAL FREQUENCY RESPONSE, 578



TYPICAL POLAR PATTERNS, 578



TYPICAL FREQUENCY RESPONSE, 579SB



general purpose

OMNIDIRECTIONAL DYNAMIC MICROPHONES

540SH

The SONODYNE® II Model 540SH is a compact, versatile, moderately priced omnidirectional microphone with a high output dynamic element. It features a wide range, adjustable frequency response that enables the user to tailor the response to the applications. The supplied response is excellent for sound reinforcement or recording, or the user can change the response to tailor it for extra clear and intelligible paging or speech communication.

The 540SH is dual impedance to match the wide variety of amplifiers likely to be encountered in the field. Designed for stand mounting, it has a long-life on-off switch (along with a lockplate to lock the switch on) built into the integral swivel assembly. Supplied cable has three-socket connector at microphone end.

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.

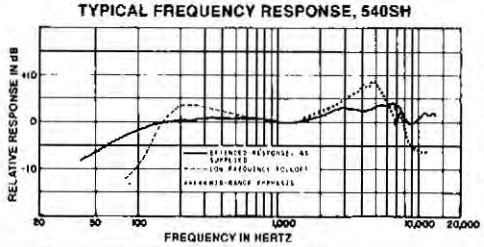
Recommended for applications in TV, motion picture, theaters, and sound reinforcement where a high-quality, inconspicuous microphone is required. It is remarkably rugged and reliable... even under adverse operating conditions.

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.

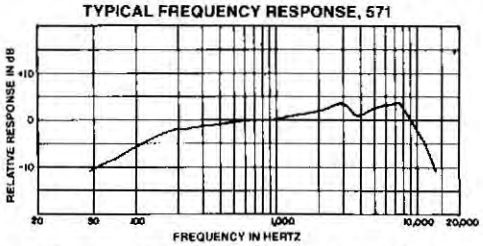
specifications

Model:	540SH	571
Frequency Response:	50 to 13,000 Hz	50 to 10,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional
Impedance Rating:	Dual: 150 ohms/High	150 ohms
Output Level		
Open Circuit Voltage:	0.11 mV (−79.0 dB, 0 dB = 1V/μbar) 150 ohms 1.78 mV (−55.0 dB, 0 dB = 1V/μbar) High	0.08 mV (−81.5 dB, 0 dB = 1V/μbar)
Power Level:	−58.5 dB, 0 dB = 1 mW/10 μbar	−60.5 dB, 0 dB = 1 mW/10 μbar
Cable	4.6m (15 ft) two-conductor shielded with three-socket professional audio connector at microphone end	Attached 9.1m (30 ft) two-conductor shielded
Dimensions:	123 mm H × 42.1 mm W × 102 mm D (4 27/32 × 1 21/32 × 4 in.)	66 mm L × 20.1 mm Dia. (2 19/32 × 25/32 in.)
Net Weight:	425 grams (15 oz)	58 grams (2 oz)
Packaged Weight:	1.07 kg (2 lb, 6 oz)	680 grams (1 lb, 8 oz)
Supplied Accessory:	Resonator plate, spacer, switch lockplate	Swivel Adapter
Optional Accessories:	See Page 58	See Page 59

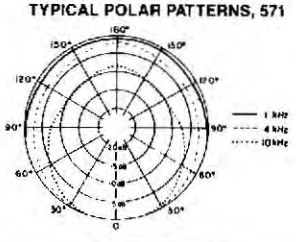
TYPICAL FREQUENCY RESPONSE, 540SH



TYPICAL FREQUENCY RESPONSE, 571



TYPICAL POLAR PATTERNS, 571



general purpose

OMNIDIRECTIONAL DYNAMIC MICROPHONES AND OMNIDIRECTIONAL CERAMIC MICROPHONE

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

275S

The Model 275S is a low-cost, ceramic-element microphone offering a good response suitable for recording fixed or mobile public address systems, call systems and other applications requiring a good quality, economical, omnidirectional microphone. This rugged unit is ideally suited for use under adverse climatic conditions.

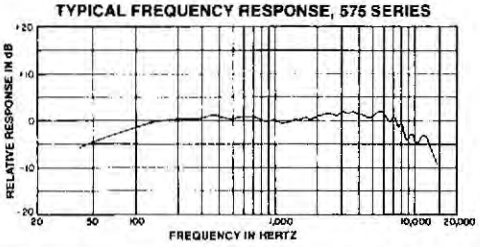
Model 275S is high impedance and is equipped with a built-in on-off switch and an attached cable. Styling is identical to Model 575S.

specifications

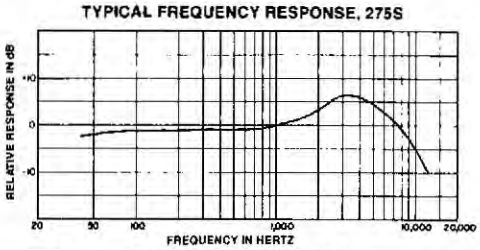
Models **575S, 575SB, 275S**

Frequency Response: ..... 575S, 575SB: 40 to 15,000 Hz; 275S: 40 to 12,000 Hz
Polar Pattern: ..... Omnidirectional
Impedance Rating: ..... 575S, 275S: High; 575SB: 150 ohms
Output Level
Open Circuit Voltage: ..... 575S: 1.57 mV (−56.0 dB); 575SB: 0.11 mV (−79.0 dB); 275S: 1.05 mV (−59.5 dB) (0 db = 1V/μbar)
Power Level: ..... 575S, 575SB: −58.0 dB, 0 dB = 1 mW/10 μbar
Cable—Attached: ..... 2.1m (7 ft) single-conductor shielded
Dimensions: ..... 121 mm L x 34.1 mm Dia. (4¾ x 1-11/32 in.)
Net Weight: ..... 575S, 575SB: 220 grams (7¾ oz); 275S: 198 grams (7 oz)
Packaged Weight: ..... 575S, 575SB: 482 grams (1 lb, 1 oz); 275S: 454 grams (1 lb)
Supplied Accessories: ..... Stand adapter, lavalier assembly
Optional Accessories: ..... See Page 59

TYPICAL FREQUENCY RESPONSE, 575 SERIES



TYPICAL FREQUENCY RESPONSE, 275S



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. Included are mobile and fixed-station microphones for paging, dispatching, police and fire services, public address, radiotelephone, transportation services, theme parks, ship-to-shore, and aircraft, as well as citizens band and amateur radio. With a wide selection of product features, performance characteristics and prices, there is a Shure microphone available to meet virtually every requirement in communications installations.

Shure microphones have been the overwhelming choice of communications users all over the world for over 30 years. In prestigious communications systems more Shure microphones are used than any other brand. And in police, fire and other public safety applications, where reliability is critical, more Shure mobile microphones are used than all other brands combined.

For information on other Shure microphones with communications applications, please refer to the pages indicated below.

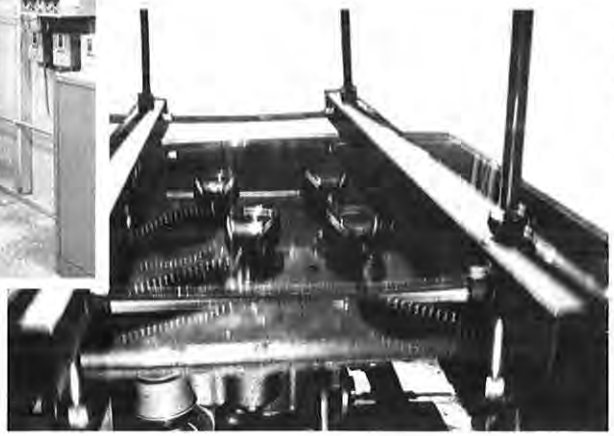
AMATEUR RADIO MICROPHONE SELECTION GUIDE

To improve on-air intelligibility we suggest the following Shure Microphones for amateur radio applications:

	Mobile Application	Fixed-Station Application
AM/SSB	414A* 407A* 577A**	444D 526T Series II
FM	414B* 507B* 577B**	444D 526T Series II

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

Exclusive Three-Way Flex Tester—This Shure designed story-and-a-half tall microphone cable tester, dishes out more abuse than the average microphone gets in a lifetime. It s-t-r-e-t-c-h-e-s the cable to full length, then simultaneously turns and rocks it.



3-D Shake Tester—Every Shure mobile communications microphone is designed to withstand hours in our brutal 3-D Shake Tester—simulating years of driving over rough, bumpy roads.

To obtain accurate frequency response and output measurements on "close-talk" communications microphones, Shure engineers use "Oscar" in the Research and Development Lab.

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

communications

PAGING BASE STATION MICROPHONES

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

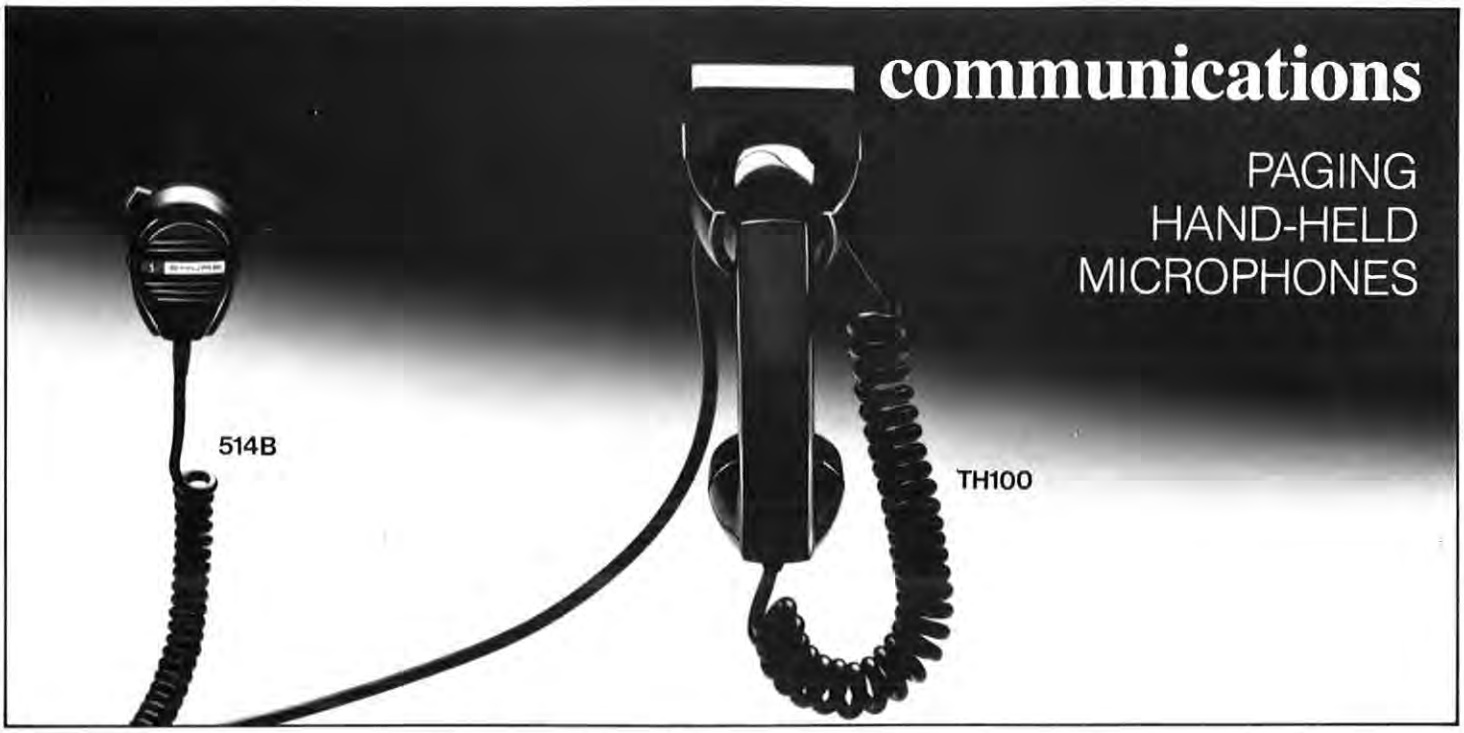
This is a dynamic microphone with a unidirectional pickup pattern that suppresses unwanted background noise, such as generated by other dispatchers working nearby, ventilating equipment, or office machines in the same area. It also suppresses feedback in public address applications.

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-DURO® 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 MAGNECTIC®	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)
Packaged Weight:	1020 grams (2 lb. 4 oz)	1020 grams (2 lb. 4 oz)



communications

PAGING HAND-HELD MICROPHONES

514B

Model 514B is a handsome, omnidirectional microphone, designed specifically for use in deluxe paging systems in stores, restaurants, transportation terminals, and hospitals. It combines high intelligibility with an extended low-frequency response that gives paging messages an unusually smooth, natural sound. The 514B is unparalleled for ruggedness and dependability. The sturdy, high-impact ARMO-DUR® case resists chips, dents, rust and peeling, and the "Million-Cycle" grip-to-talk switch, which activates both microphone and external relay circuits, can withstand constant use and rigorous operating conditions. The cable is connected for balanced low-impedance operation designed for paging systems where long cable runs are encountered.

TH100

The TH100 is an omnidirectional CONTROLLED MAGNETIC® communications handset specifically designed for industrial radio communications uses in applications such as ship-to-shore, police, safety, forestry, amateur radio, Citizens Band, and paging systems. It features high reliability and excellent voice intelligibility. When not in use and the handset is hanging in the cradle, an automatic switch permits an external loudspeaker to function. When the handset is lifted from the cradle, the loudspeaker signal is transferred to the handset. Control of the transmitter circuits is operated by the push-to-talk handset switch. The handset and hang-up cradle are made of virtually indestructible ARMO-DUR®

specifications

Model:	**514B**
Type:	Dynamic
Frequency Response:	100 to 6,000 Hz
Load Impedance (Ohms):	
Minimum	75
Recommended	300
Output Level	
Volts/100 microbars:	15 mV (−36.5 dB)
Switch Circuits:	
Mic:	Normally open
Relay:	Normally open
Cable:	1.5m (5 ft), coiled, four-conductor, two-shielded
Dimensions:	72.2 mm H x 54.4 mm W x 39.7 mm D (2-27/32 x 2-1/16 x 1-9/16 in.)
Net Weight:	200 grams (7 oz.)
Packaged Weight:	372 grams (13 oz)

Model:	**TH100**
Type	CONTROLLED MAGNETIC®
Frequency Response:	200 to 3,000 Hz
Impedance:	
Microphone:	High
Receiver:	125 Ohms
Load Impedance (microphone):	15k minimum; 100k recommended
Output Level:	Microphone: 0.21V (−13.5 dB, 0 dB = 1 volt per 100 microbars) Receiver: 103.5 dB SPL (nominal output, 6 c.c. coupler, 0.354V)
Cable:	1.2m (4 ft), four-conductor, one-shielded, coil cord on handset; 1.2m (4 ft), four-conductor, one-shielded on hang-up cradle
Dimensions:	
Handset:	211 mm H x 61.1 mm W x 68.3 mm D (8-5/16 x 2-13/32 x 2-11/16 in.)
Hang-up Cradle:	83.3 mm H x 78.6 mm W x 72.2 mm D (3-9/32 x 3-3/32 x 2-27/32 in.)
Net Weight:	581 grams (1 lb. 4½ oz)
Packaged Weight:	851 grams (1 lb. 14 oz)

communications

MOBILE MICROPHONES

104C, 404B, 404C, 405K, and 418A

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

488T

Model 488T is a noise-cancelling, transistorized microphone which provides 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 is designed to match carbon microphone type input circuitry. The 488T incorporates a CONTROLLED MAGNETIC® cartridge and a "Million-Cycle" switch in a rugged, lightweight, ARMO-DUR® case.

414A, 414B and 524C, Ranger 2 Series

The 414 Series of CONTROLLED MAGNETIC® and the 524C dynamic transistorized omnidirectional microphones are about half the size and weight of conventional microphones, yet perform as well or better. Exceptionally rugged units, recommended for critical outdoor-indoor communications in mobile and fixed-station use, as well as in radiotelephone, amateur radio, and miniaturized or portable communications systems. Cases are of high-impact ARMO-DUR® switches are "Million-Cycle."

419A and 419B, Ranger 2 Series

These small, exceptionally effective and rugged noise-cancelling microphones provide highly intelligible speech communication in mobile and fixed-station use where high volume background noise is found, such as airplanes, trucks, sporting events, engine rooms, etc. The noise-cancelling CONTROLLED MAGNETIC® cartridges permit clear transmission even when the operator cannot hear himself talking. Their ARMO-DUR® case and "Million-Cycle" switch insure reliability and extraordinary durability.

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
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**
414A	CONTROLLED MAGNETIC®	200 to 5,000 Hz	15k	100k	0.27V (−11.5 dB*)	Closed	Open	1.8m (6 ft), coiled, 3-conductor, 1-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
418A	CONTROLLED MAGNETIC®	200 to 4,000 Hz	1.5k	10k	75 mV (−22.5 dB*)	Open	Open	1.8m (6 ft), coiled, 4-conductor, 1-shielded***
419A	CONTROLLED MAGNETIC®	200 to 4,000 Hz	15k	100k	0.12V (−18.5 dB*)	Closed	Open	1.5m (5 ft), coiled, 3-conductor, 1-shielded
419B	CONTROLLED MAGNETIC®	200 to 4,000 Hz	200	1k	9.4 mV (−40.5 dB*)	Open	Open	1.5m (5 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
524C	Dynamic, transistor amplified †	300 to 5,000 Hz	250	2.2k	0.63V (−4.0 dB*)	Open	Open	1.5m (5 ft), coiled, 4-conductor

*0 dB = 1 Volt per 100 microbars †Requires external power source **w/Amphenol MC4M type plug (offset keying) ***w/Components 6601-M6 type plug

communications

MOBILE MICROPHONES

507B, 407A, 407B

Ruggedness, reliability and top performance in new modular-design microphones that disassemble quickly and make every part accessible—permit easier in-the-field maintenance. Two-tone gray ARMO-DUR® cases are lightweight, immune to shock, and unaffected by oil, sun, salt spray, acids, rust or corrosion. TRIPLE-FLEX® cable provides three-to-four-times longer flex life than previously available coiled cords. Small, easy-to-handle design, with rugged dynamic and CONTROLLED MAGNETIC® elements for excellent voice intelligibility. Hum-shielded and insulated against shock. Model 507B features extended low and high frequency response, especially suitable for mobile FM transmitters.

577A, 577B, 577C

The 577 Series of noise-cancelling microphones shut out background noise, permitting clear, crisp transmission, even where the noise level is so great that the operator cannot hear himself talking. They represent a significant improvement over most microphones having anti-noise features. These high-quality, dynamic microphones are small size, lightweight and extremely reliable. They feature Shure's exclusive ARMO-DUR® case, "Million-Cycle" switch, and TRIPLE-FLEX® cable, and their modular construction greatly simplifies field service. The 577C has a transistor amplifier for direct replacement of carbon microphones.

201, 202, 401A, 401B

These microphones provide excellent performance at a low 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 and the 201 and 202 have a high-output ceramic cartridge. Model 202 is a noise-cancelling microphone.

Model	Type	Frequency Response	Load Impedance (ohms) Minimum	Load Impedance (ohms) Recommended	Output Level (Volts/100 microbars)	Switch Circuits Mic	Switch Circuits Relay	Cable
201	Ceramic	200 to 4,000 Hz	1M	5M	0.25V (−12.0 dB*)	Closed	Open	1.7m (5½ ft), coiled, 3-conductor, 1-shielded
202	Ceramic, Noise-Cancelling	200 to 4,000 Hz	1M	5M	0.19V (−14.5 dB*)	Closed	Open	1.7m (5½ ft), coiled, 3-conductor, 1-shielded
401A	CONTROLLED MAGNETIC®	200 to 4,000 Hz	15k	100k	0.27V (−11.5 dB*)	Closed	Open	1.5m (5 ft), coiled, 3-conductor, 1-shielded
401B	CONTROLLED MAGNETIC®	200 to 4,000 Hz	150	1k	33 mV (−29.5 dB*)	Open	Open	1.5m (5 ft), coiled, 4-conductor, 2-shielded
407A	CONTROLLED MAGNETIC®	300 to 4,000 Hz	15k	100k	0.21V (−13.5 dB*)	Closed(a)	Open	1.8m (6 ft), coiled, 3-conductor, 1-shielded
407B	CONTROLLED MAGNETIC®	300 to 4,000 Hz	200	1k	22 mV (−33.0 dB*)	Open(b)	Open	1.8m (6 ft), coiled, 4-conductor, 2-shielded
507B	Dynamic	100 to 5,000 Hz	200	1k	11 mV (−39.0 dB*)	Open(b)	Open	1.8m (6 ft), coiled, 4-conductor, 2-shielded
577A	Dynamic	100 to 5,000 Hz	50k	100k	67 mV (−23.5 dB*)	Closed(a)	Open	1.8m (6 ft), coiled, 3-conductor, 1-shielded
577B	Dynamic	100 to 5,000 Hz	175	1k	5 mV (−46.0 dB*)	Open(b)	Open	1.8m (6 ft), coiled, 4-conductor, 2-shielded
577C	Dynamic transistor amplified†	100 to 5,000 Hz	250	2.2k	0.45V (−7.0 dB*)	Open	Open	1.8m (6 ft), coiled, 4-conductor

*0 dB = 1 volt per 100 microbars **Requires external power source (a) Simple change to normally open (b) Simple change to normally closed

communications

AMATEUR RADIO FIXED STATION MICROPHONES

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 ⅜ x 4¼ x 5⅞ in.)
Net Weight:	784 grams (1 lb, 12 oz)	920 grams (2 lb)
Packaged Weight:	1.07 kilograms (2 lb, 6 oz)	1.2 kilograms (2 lb, 11 oz)

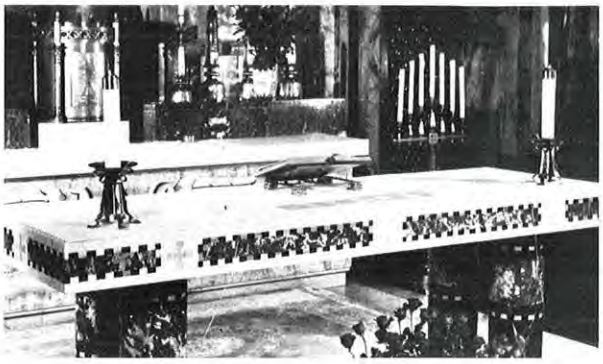
OPTIONAL CONVERSIONS: To increase the versatility of the 444D, two optional modifications are available:

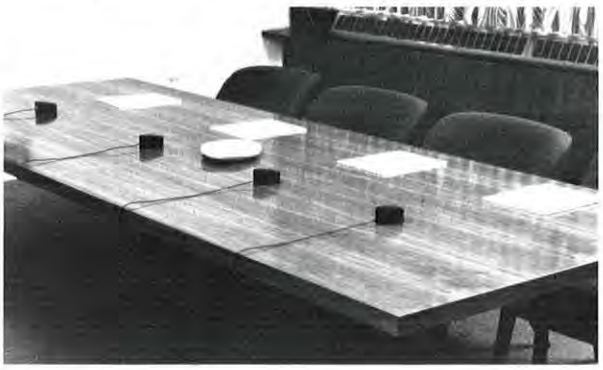
a 2.1m (7 ft) straight cable 90BR2600
a Split-bar Transmit/Monitor switch conversion kit..RK199S

ABOUT SHURE SPECIAL PURPOSE MICROPHONES

Professionals look to Shure Special Purpose Microphones when the need arises for a unit to perform a very specific function, or when they are looking for optimum performance under unique or adverse circumstances. Shure Special Purpose Microphones give you traditional Shure reliability and performance, but are tailored to the very specific job they must do.

Below are "in use" photographs of some of the Shure Special Purpose Microphones featured in this section.





SM18 Series (page 41)
Surface-Mounted Lo-Profile Microphones
Designed to give excellent voice pickup while remaining virtually invisible. Available in white or brown foam enclosures. Perfect for meeting rooms, church altars, etc.

HF52 (page 47)
Mobile Voice Pickup System
For hands-free radio operation in police, taxi, or any other radio-dispatched vehicle.

SM10A (page 44)
Head-Worn Microphone
Designed for use in sports, news gathering, and special event remote broadcasts. The SM10A also provides excellent performance as a vocal microphone for drummers and keyboard players.

SM17 (page 44)
Musical Instrument Microphone
Designed specifically for use on acoustic instruments. Provides excellent sound reproduction when used on violins, violas, cellos, acoustic guitars, or string basses.

50AC (page 47)
Telephone Acoustic Coupler
Acoustically couples tape-recorded information to a telephone handset transmitter. Most useful in recorded interview broadcast applications when a tape recorder cannot be "hard-wired" to a telephone line.

special purpose

LINE LEVEL CONDENSER MICROPHONE

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.

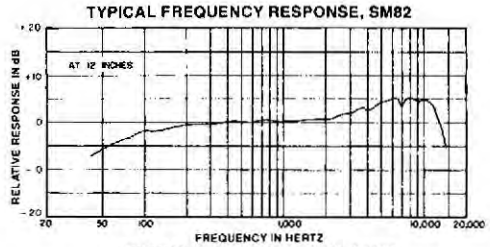
Its balanced line level output permits the SM82 to drive telephone lines or other line level inputs directly—without a separate remote amplifier and using unshielded cable. A built-in limiter begins operating at 100 dB SPL, preventing overload of the microphone line amplifier or remote broadcast amplifier. 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. Optional accessories include a monitor adapter (A82MA) for microphone output monitoring and "talkback" during off-the-air periods, and a battery adapter (A82BA) that permits the use of other batteries. For more information on these accessories see page 57.

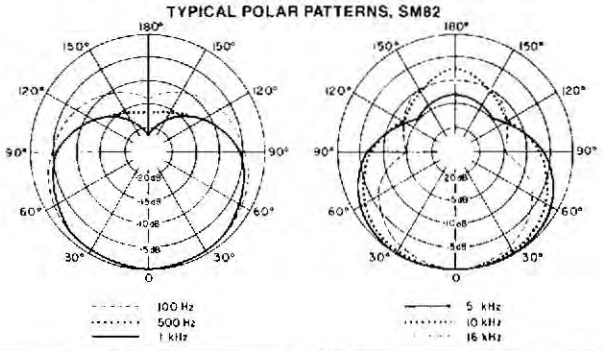
specifications

	SM82
Model:	
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: 2.5 mA to 8 mA
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. (11⅞ x 1¾ in.)
Net Weight:	406 grams (14.4 oz) with battery
Packaged Weight:	834 grams (1 lb. 13 oz)
Supplied Accessories:	Windscreen, swivel adapter, foam-lined storage/carrying case
Optional Accessories:	See Page 59

TYPICAL FREQUENCY RESPONSE, SM82



TYPICAL POLAR PATTERNS, SM82



special purpose

SURFACE-MOUNTED MICROPHONES

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.

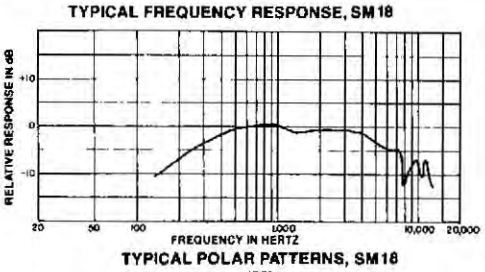
The SM18 Series Microphones offer a unique solution to the problem of sound pickup near a hard surface such as a desk, tabletop, lectern or altar. The microphone is mounted in the foam enclosure at an angle that places the cartridge about ⅛ in. from the hard surface. This minimizes the influence of sound 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 Brown foam enclosure, 2.7m (9 ft) attached brown cable with three-pin right-angle professional audio connector.
SM18B-50 Brown foam enclosure, 15m (50 ft) attached brown cable without connector.
SM18W White foam enclosure, 2.7m (9 ft) attached white cable with three-pin right-angle professional audio connector.
SM18W-50 White foam enclosure, 15m (50 ft) attached white cable without connector.

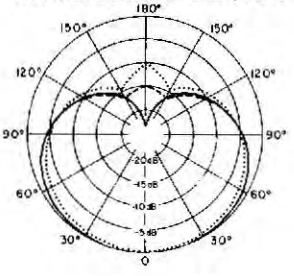
specifications

	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, SM18W:	Attached 2.7m (9 ft) two-conductor shielded small diameter cable with three-pin right angle 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 × 89 mm W × 47.6 mm D (1¾ × 3½ × 1⅞ in.) (foam enclosure)
Net Weight:	110 grams (3.9 oz)
Packaged Weight:	338 grams (12 oz)

TYPICAL FREQUENCY RESPONSE, SM18

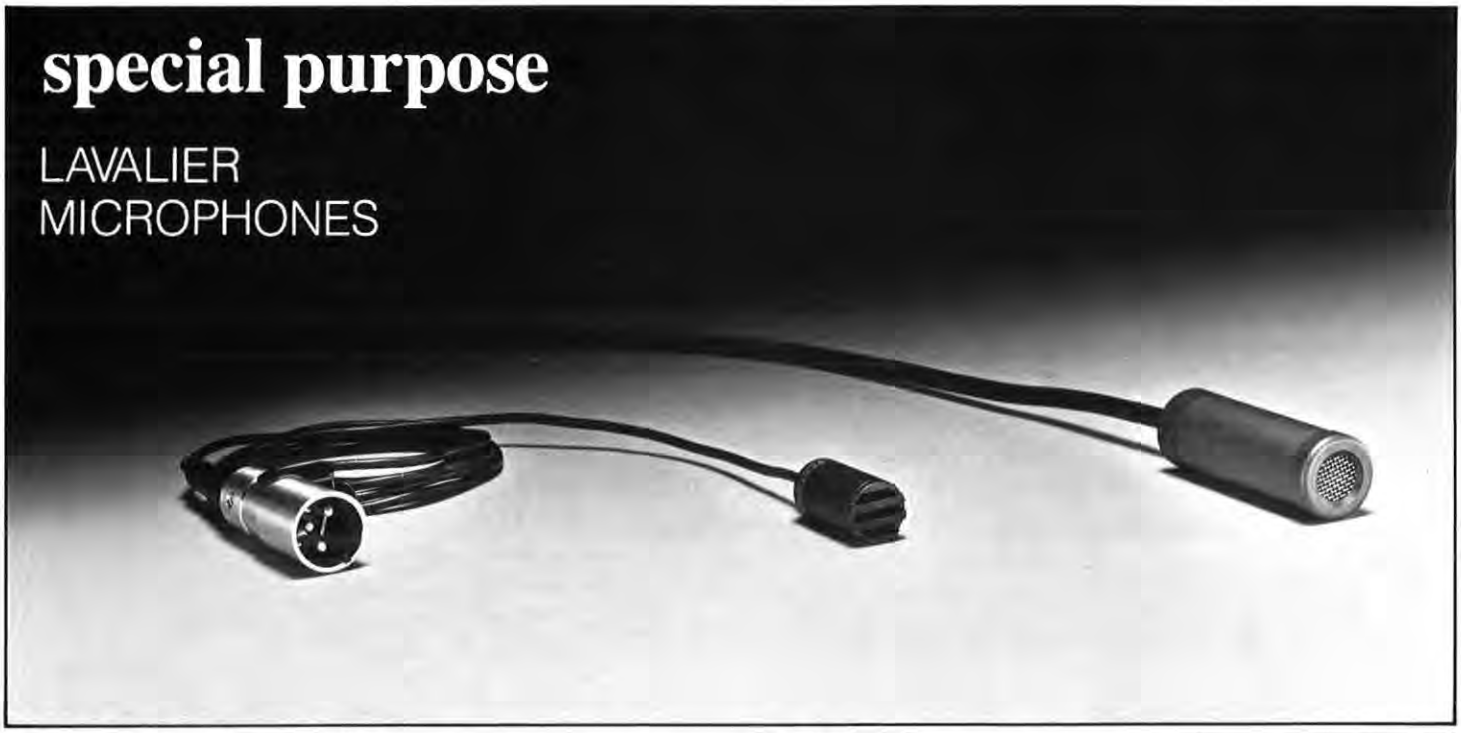


TYPICAL POLAR PATTERNS, SM18



special purpose

LAVALIER MICROPHONES



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 three mounting options: a lavalier cord assembly, tie bar, and tie tack. In addition, a special clip secures the cable connector to the performer's belt or clothing.

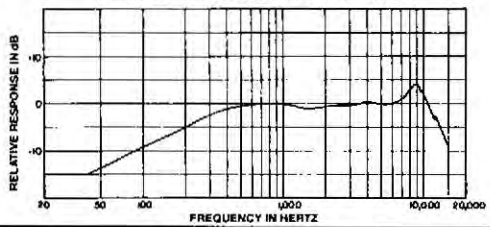
SM51

The SM51 is designed for use in radio, TV and motion picture applications—anywhere a small, wearable, professional-quality microphone is required. Its lavalier-optimized frequency response matches the sound of most hand-held or stand-mounted microphones. Although small and lightweight, the SM51 is ruggedly constructed—its steel case provides both strength and excellent magnetic shielding. Smooth exterior surfaces and a recessed grille minimize clothing noise. The SM51 is supplied with a "Positive-Lock" lavalier holder for simple, noiseless adjustment and firm grip; a belt clip to relieve cable weight, absorb sudden tugs on the cable, and minimize cable noise; and an attached 9.1m (30 ft) two-conductor, shielded cable.

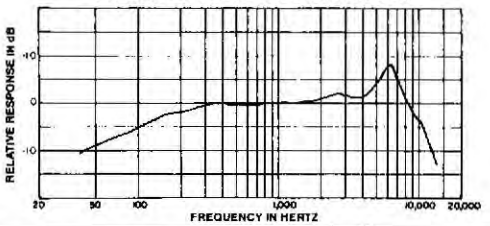
specifications

	SM11	SM51
Model:		
Frequency Response:	50 to 15,000 Hz	70 to 12,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional
Impedance Rating:	150 ohms	150 ohms
Output Level		
Open Circuit Voltage:	0.06 mV (−85.0 dB, 0 dB = 1V/μbar)	0.08 mV (−81.5 dB, 0 dB = 1V/μbar)
Power Level:	−64.0 dB, 0 dB = 1mW/10 μbar	−60.5 dB, 0 dB = 1 mW/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	9.1m (30 ft), two-conductor, shielded, attached
Dimensions:	38.1 mm L × 14.7 mm Dia. (1½ in. x 9/16 in.)	62.7 mm L × 20.6 mm Dia. (2 13/32 in. x 13/16 in.)
Net Weight:	7.8 grams (0.28 oz) less cable	58 grams (2 oz)
Packaged Weight:	340 grams (12 oz)	780 grams (1 lb, 11½ oz)
Supplied Accessories:	Lavalier assembly, tie bar assembly, tie tack assembly, belt clip	Lavalier assembly, belt clip
Optional Accessories:	See Page 59	See Page 59

TYPICAL FREQUENCY RESPONSE, SM11



TYPICAL FREQUENCY RESPONSE, SM51



special purpose

LAVALIER MICROPHONES

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

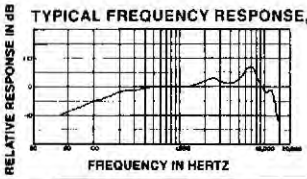
One of the most versatile microphones available: in addition to being worn as a lavalier unit, the 545L can be hand-held, mounted on a floor or desk stand, or affixed to a flexible gooseneck. It has a wide-range frequency response for voice and music reproduction, a unidirectional pickup pattern to reject 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.

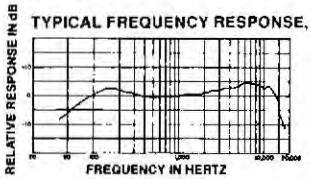
560

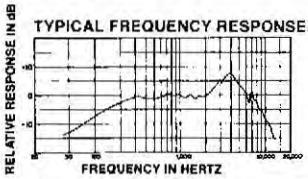
Professional lavalier microphone features at a modest price. The 560 is a dual-impedance, dynamic unit with a tailored frequency response that makes it an excellent choice for lecturers, performers, and clergymen. In addition to lavalier use, the 560 can be used as a hand-held or desk stand unit. Impedance 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

Model:	570, 570S	545L	560
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)	0.11mV (−79.5 dB, 0 dB = 1V/μbar)	0.13 mV (78.0 dB) 150 ohms; 1.41 mV (−57.0 dB) High (0 dB= 1V/μbar) −56.0 dB, 0 dB= 1 mW/10μbar
Power Level:	−60.0 dB, 0 dB = 1mW/10 μbar	−57.5 dB, 0 dB = 1mW/10 μbar	
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 × 31.8 mm Dia. (5⅛ in. × 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 Page 58	See Page 58	See Page 58







special purpose

MUSICAL INSTRUMENT AND HEAD-WORN MICROPHONES

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

An excellent solution to the problem of hands-free, close-talking, vocal pickup. The SM10A, SM12A and SM14A head-worn microphones are designed for use in sports and newsgathering, interviewing, and intercommunications systems, special event remote broadcasting, and computer interactive systems. The SM10A and SM12A also provide excellent performance as vocal microphones for drummers and keyboard players.

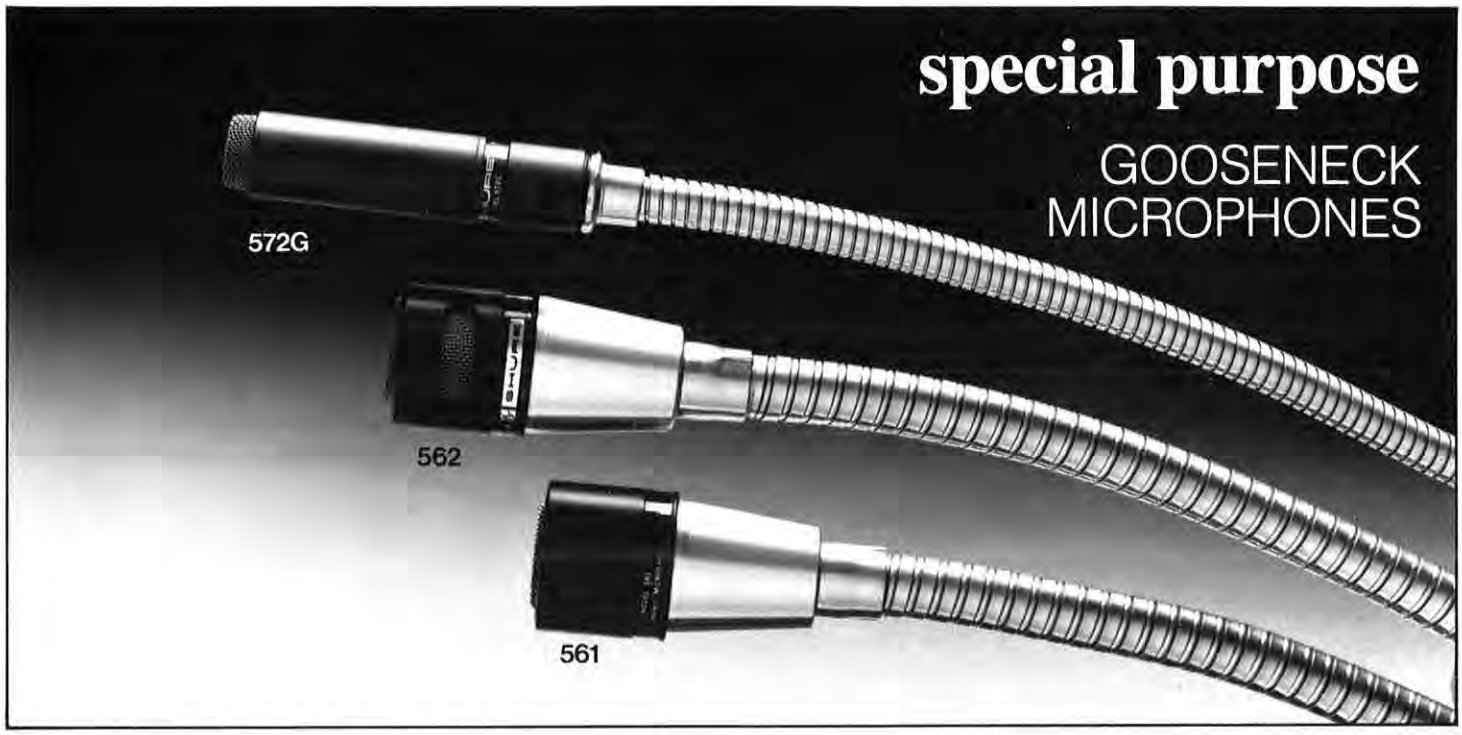
The microphone in each model is identical. They are noise-canceling, unidirectional and close-talking, with a strong, professional sound quality voice response completely free from background noise and "pop." In addition, the supplied miniature windscreens block out wind noise in outdoor use.

Their lightweight, padded headbands eliminate user fatigue. An adjustable boom maintains proper mouth-to-microphone distance.

SM10A Can be removed from headset for attachment to stereo headphones
SM12A Features integral, adjustable earphone
SM14A Features two earphones with independent signal feeds

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 × 14.7 mm Dia. (1½ × 9/16 in.)	14 mm H × 15.9 mm Dia. (9/16 × 5/8 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);
Packaged Weight:	908 grams (2 lb)	SM10A: 754 grams (1 lb, 10 oz); SM12A: 797 grams (1 lb, 12 oz); SM14A: 890 grams (1 lb, 15 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 Page 59	See Page 59



special purpose
GOOSENECK MICROPHONES

515BG, 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.

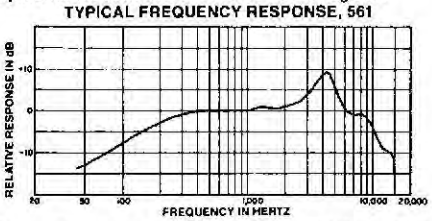
Model	Type	Frequency Response	Switch	Gooseneck
515BG	Unidirectional	80 Hz to 13 kHz	None	Not supplied*
515SBG	Unidirectional	80 Hz to 13 kHz	PTT Momentary	Not supplied*
515SB-G18	Unidirectional	80 Hz to 13 kHz	PTT Momentary	Supplied 18 in. with mounting flange
545L	Unidirectional	50 Hz to 15 kHz	None	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 56

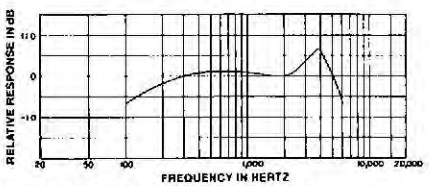
specifications

	561	**562**	**572G**
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. (2 21/32 × 1 3/8 in.)	67 mm L × 34.6 mm Dia. (2 5/8 × 1 3/8 in.)	81.8 mm L × 19.8 mm Dia. (3 7/32 × 25/32 in.) Microphone only: 389 mm L × 39.7 mm Dia. (15 5/16 × 1 9/16 in.) Total including gooseneck and mounting flange
Net Weight:	142 grams (5 oz)	128 grams (4½ oz)	340 grams (12 oz)
Packaged Weight:	255 grams (9 oz)	241 grams (8½ oz)	567 grams (1 lb, 4 oz)
Supplied Accessories:	No. 4 Allen wrench	No. 4 Allen wrench	
Optional Accessories:	See Page 58	See Page 58	See Page 58

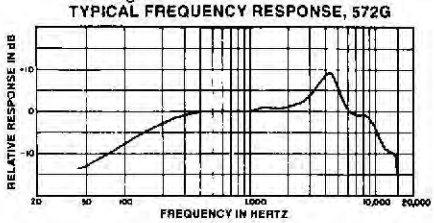
TYPICAL FREQUENCY RESPONSE, 561



TYPICAL FREQUENCY RESPONSE, 562



TYPICAL FREQUENCY RESPONSE, 572G



For specifications on 515 Series Gooseneck Microphones see page 27; for 545L see page 43.

special purpose

TAPING AND ANALYZER MICROPHONES

516EQ

The 516EQ E-QUALIDYNE® unidirectional, dynamic microphone is designed to improve the quality of home tape recordings by providing the recordist with the ability to make selective changes in frequency response without the need for elaborate audio equipment. Four built-in notch filter switches in the handle let the user tailor the sound for virtually any desired effect.

Flick one switch (or two) to eliminate feedback...flick another switch to remove the muddy sound of a bass drum or acoustic guitar...use another switch to add sizzle to the voices. In all, there are 16 response variations possible.

The 516EQ is low-impedance with a three-pin professional audio connector. It is furnished with two cables to provide instant plug-in attachment to the majority of cassette and reel-to-reel tape recorders. The 4.6m (15 ft) cable has a ¼ in. phone plug on the recorder end and the 0.9m (3 ft) adapter cable has an ⅛ in. mini-plug on the recorder end.

516EQ-PR Two "matched" 516EQ Microphones for stereo recording

ES615

Shure's ES615 is an omnidirectional, dynamic microphone, specifically designed for use in conjunction with equalization analyzers for room or system equalization. The slender, lightweight probe configuration offers minimum sound field disturbance, and the microphone's broad, flat frequency response with controlled low-frequency rolloff is tailored specifically for use in pink noise-excited octave and one-third octave analyzer systems.

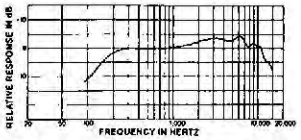
The ES615's low-impedance operation permits long-cable instrumentation use without excessive high-frequency loss or hum pickup. An optional line matching transformer (A95 Series) converts the ES615 for use with high-impedance inputs.

The ES615 is rugged and dependable. It will provide years of normal use without deviating from original standards, and it doesn't require special handling usually associated with instrumentation microphones. The microphone has a satin-chrome steel case and stainless steel grille. Supplied with 6m (20 ft) cable with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end.

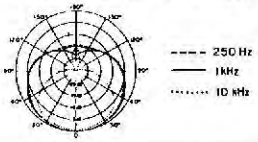
specifications

	516EQ	ES615
Model:		
Frequency Response:	50 to 15,000 Hz	30 to 20,000 Hz
Polar Pattern:	Cardioid (unidirectional)	Omnidirectional
Impedance Rating:	150 ohms	38 ohms
Output Level		
Open Circuit Voltage:	0.09 mV (−81.0 dB, 0 dB = 1V/μbar)	0.042 mV (−87.5 dB, 0 dB = 1V/μbar)
Power Level:	−59.0 dB, 0 dB = 1 mW/10 μbar	−60.5 dB, 0 dB = 1 mW/10 μbar
Hum Pickup/mOe:		35.3 dB SPL equivalent
Cable:	4.6m (15 ft) single-conductor shielded with three-socket professional audio connector on microphone end and phone plug on equipment end. 910 mm (36 in.) single-conductor shielded adapter cable with phone jack and 9/64 in. mini-plug connectors	6m (20 ft) two-conductor shielded with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end
Dimensions:	159.5 mm L × 35.7 mm Dia. (6 9/32 × 1 13/32 in.)	152.4 mm L × 20.1 mm Dia. (6 × 25/32 in.)
Net Weight:	268 grams (9½ oz) less cables	218 grams (8 oz)
Packaged Weight:	516EQ: 1 kg (2 lb, 4 oz) 516EQ-PR: 1.9 kg (4 lb, 2 oz)	984 grams (2lb, 3 oz)
Supplied Accessories:	Foam windscreen, swivel adapter, storage/carrying case	Swivel adapter
Optional Accessories:	See Page 58	See Page 59

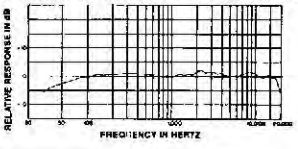
TYPICAL FREQUENCY RESPONSE, 516EQ



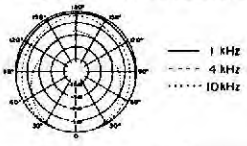
TYPICAL POLAR PATTERNS, 516EQ



TYPICAL FREQUENCY RESPONSE, ES615



TYPICAL POLAR PATTERNS, ES615



special purpose

MOBILE VOICE PICKUP SYSTEM AND TELEPHONE ACOUSTIC COUPLER

HF52

The HF52 mobile voice pickup system is designed for hands-free radio operation in police, taxi, or any other radio-dispatched vehicle. It consists of three units:

An omnidirectional microphone which mounts on the sun visor or steering column provides for uniform sound pickup from almost any location in the vehicle. In addition, it has a special communications frequency response for maximum intelligibility.

A floor- or firewall-mounted amplifier which operates from any standard 12-volt auto battery (negative ground) and is adjustable to compensate for microphone-to-operator distance and transmitter sensitivity. Suitable for use with most mobile transmitter inputs (not CB) designed for dynamic, CONTROLLED MAGNETIC®, carbon or transistorized microphones.

A weatherproof footswitch to key the mobile transmitter.

The system is virtually unaffected by RF fields and power supply fluctuations and noise, and it's operable over a wide temperature and humidity range.

The HF52 is supplied with two microphone mounting options and installation hardware.

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.

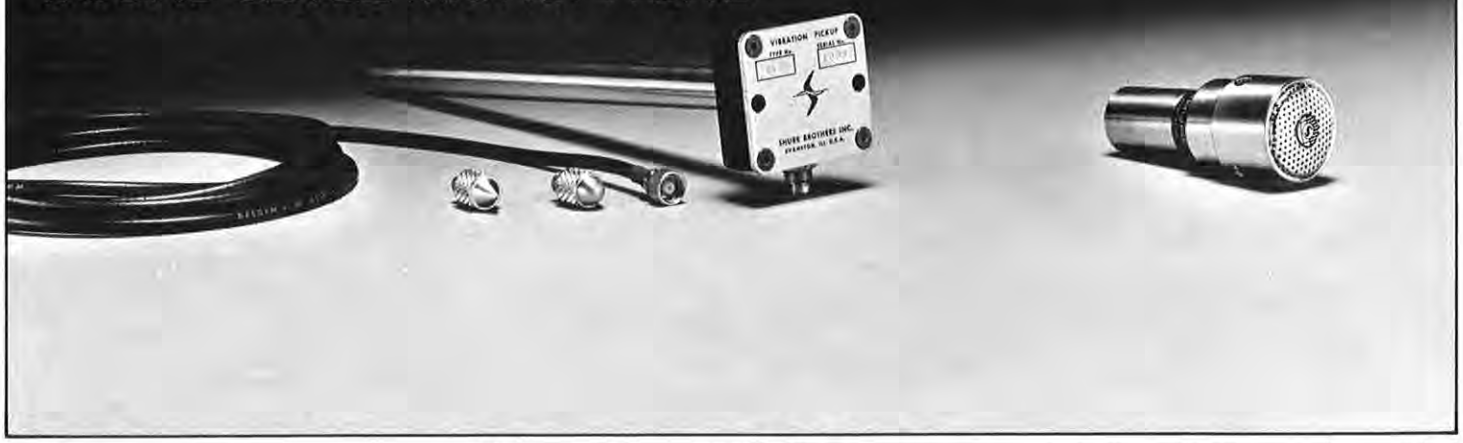
specifications

Model:	HF52
Frequency Response:	200 to 5,000 Hz
Output Level	
Open Circuit Voltage:	Variable, −43 to −21 dB (0 dB = 1 volt per microbar)
Amplifier	
Voltage Gain (at 1,000 Hz):	Adjustable, 38 to 59 dB
Output Clipping Level:	1V min. (100-ohm output termination)
Recommended Load Impedance:	100 ohms min.
Output Impedance:	Less than 10 ohms
Total Harmonic Distortion:	3% max. at 500 mV output (at 1,000 Hz)
Operating Voltage:	+ 10.0 to + 15.9 Vdc, negative ground
Microphone Cable:	Attached 1.8m (70 in.) two-conductor shielded
Microphone Dimensions:	49.2 mm L x 20.8 mm Dia. ($1^{15}/_{16}$ x $^{13}/_{16}$ in.)
Amplifier Dimensions:	46 mm H x 92.9 mm W x 118 mm D ($1^{13}/_{16}$ x $3^{21}/_{32}$ x $4^{21}/_{32}$ in.)
Footswitch Dimensions:	33.3 mm H × 63.5 mm W x 73 mm D ($1^{5}/_{16}$ x 2½ x 2⅞ in.)
Net Weight:	835 grams (1 lb, 13 oz)
Packaged Weight:	1.13 kg (2 lb, 7½ oz)

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)
Packaged Weight:	200 grams (7 oz)

special purpose

VIBRATION PICKUP AND SOUND LEVEL MICROPHONE



61CP

The 61CP is a piezoelectric transducer designed for vibration measurement and analysis in industrial and research applications. It is a general purpose, high sensitivity unit, used for locating and measuring periodic vibration. However, since the unit also responds to aperiodic vibrations, it can be used for such diverse applications as stress and strain analysis, shock mount selection, protection system pickup, animal activity monitoring, leak and wear-point detection, surface smoothness measurement, and rotational system balancing.

Throughout the linear range of the 61CP, the output voltage is proportional to vibration-caused acceleration and flat up to approximately 1,000 Hz. The upper frequency response limit is about 3,400 Hz.

The 61CP can be mounted with screws or with a supplied mounting bracket. In addition, it can be hand-held using the supplied ball-tip, point-tip and extension rod. The 2.1m (7 ft) miniature, single-conductor, shielded cable has an Amphenol type 27-19 connector which mates with the Amphenol type 27-21 connector on the 61CP.

98A108A

The 98A108A, a lightweight, omnidirectional, ceramic microphone, is designed for scientific and industrial sound measurement. It is useful for applications involving sound level determinations, production testing, ambient noise levels, and reverberation measurements.

The 98A108A features uniform frequency response, high sensitivity, low distortion, and freedom from electrostatic and electromagnetic interference. The unit is operable at very high sound pressure levels, and is resistant to extremes in temperature and humidity. The 98A108A is a high-impedance device, and has a three-pin professional audio connector. Minimum load impedance is 3.5 megohms; 100 megohms is recommended.

Each 98A108A is supplied with an individual frequency response curve.

specifications

Model:	**61CP**
Type:	Piezoelectric (lead zirconate)
Linear Frequency Range:	10 to 1,000 Hz
Resonance Frequency:	3,200 Hz ± 15%
Impedance:	9,600 picofarads
Recommended Load Impedance:	Greater than 0.5 megohms as determined by requirements for low-frequency rolloff
Typical Output	
On Axis:	75 mV/g ± 2 dB (individually calibrated)
Off Axis:	Less than 7% of on-axis output
Dynamic Range (minimum):	100g
Charge Sensitivity:	730 picocoulombs/g
Acoustic Pickup (maximum):	0.03 mV/microbar at 1,000 Hz
Environmental	
Operating Temperature:	−40° to 82°C (−40° to 180°F)
Humidity:	0 to 100% RH with no damage, not immersible
Cable:	2.1m (7 ft) single-conductor shielded, small diameter, coaxial, with Amphenol type 27-21 connector at the equipment end
Dimensions:	14.7 mm H × 42.1 mm W × 46.4 mm D (9/16 in. × 1 21/32 in. × 1 13/64 in.)
Net Weight (less cable):	45 grams (1.6 oz)
Packaged Weight:	454 grams (1 lb)

Model:	**98A108A**
Type:	Ceramic
Frequency Response:	20 to 13,000 Hz
Polar Pattern:	Omnidirectional
Impedance:	460 picofarads
Load Impedance Range:	3.5 megohms minimum; 100 megohms recommended
Output Level	
Open Circuit Voltage:	1.41 mV (−57.0 dB, 0 dB = 1V/μbar)
Distortion:	1% or less THD at 150 dB SPL
Environmental	
Operating Temperature:	−50° to +70°C (−58° to +158°F)
Humidity:	Withstands 1,000 hours at 25°C, 95 to 100% RH without deterioration
Vibration Sensitivity:	18 mV/g typical
Sound Pressure Extremes:	Greater than 160 dB SPL momentary; 150 dB SPL continuous
Connector:	Three-pin professional audio
Dimensions:	67.8 mm L × 28.6 mm Dia. (2 43/64 × 1 1/8 in.)
Net Weight:	108 grams (3.8 oz)
Packaged Weight:	184 grams (6.5 oz)

special purpose

MINIATURE MICROPHONES AND MICROPHONE CARTRIDGES

MC11J AND MC30J

These miniature CONTROLLED MAGNETIC® microphones are specially designed for use in small, compact electronic devices —wherever space is critical and reliability is essential. These models are ideally suited for use with amplifiers, transmitters, dictating equipment, hearing aids, and all equipment where small size and light weight are very important to the application.

The MC Series Microphones are rugged units, resistant to wide variations of heat and humidity. Their stability is assured by the same proven design principle used in Shure microphones for military, mobile communication, dictating, and recording applications.

Models MC11J and MC30J have a built-in MUMETAL shield for use under difficult hum conditions. Both models have excellent sensitivity in the frequency range most important for voice transmission.

R103 and R6

Shure manufactures a complete line of microphone replacement cartridges, many of which can also be used in custom communications systems. Two representative cartridges are:

Model R103 An omnidirectional dynamic (moving coil) unit, recommended for all types of indoor or outdoor, fixed or mobile, public address systems, call systems, and similar applications. The cartridge is low impedance, so it's ideal for use with long cable lengths or under conditions of severe hum disturbance. When enclosed with an acoustic rear cavity, the R103 has a smooth, extended frequency range of 100 to 6,000 Hz, providing highly intelligible voice response. It is small, only 43.4 mm (1²³/₃₂ in.) in diameter and 18.6 mm (⁴⁷/₆₄ in.) thick, and offers the ruggedness and durability of the best Shure communications microphones.

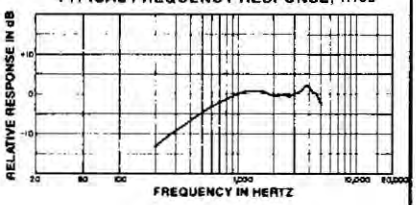
Model R6 A lightweight, transistorized, dynamic cartridge designed specifically for mobile communications applications. It can also be used to replace carbon microphone cartridges, resulting in improved operation, highly intelligible voice reproduction, and the maintenance of a high level of ruggedness and dependability. The cartridge measures only 44.4 mm (1¾ in.) in diameter by 26.2 mm (1³/₃₂ in.) thick. It is highly resistant to moisture and temperature extremes. Its positive dc voltage is normally supplied by the associated radio or electronic equipment.

Please contact Shure Brothers, Communication Microphones Department, regarding your microphone element needs. We probably have a unit in stock that meets your performance parameters.

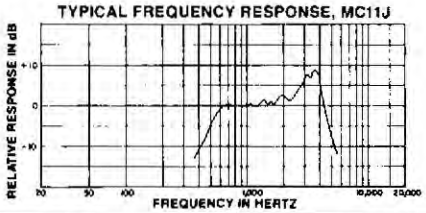
specifications

	MC11J	MC30J
Model:	MC11J	MC30J
Frequency Response:	400 to 4,000 Hz	400 to 4,000 Hz
Polar Pattern:	Omnidirectional	Omnidirectional
Impedance:	900 ohms (actual)	1950 ohms (actual)
Load Impedance Range		
Minimum:	200 ohms	200 ohms
Recommended:	10,000 ohms or higher	10,000 ohms or higher
Output Level		
Open Circuit Voltage:	0.20 mV (−74.0 dB, 0 dB = 1V/μbar)	0.11 mV (−79.0 dB, 0 dB = 1V/μbar)
Power Level:	−60.0 dB, 0 dB = 1 mW/10 μbar	−68.0 dB, 0 dB = 1mW/10 μbar
Dimensions:	11.5 mm thick × 26 mm Dia. (⁷/₁₆ × 1¹/₃₂ in.)	12.7 mm H × 13.1 mm W × 6.7 mm D (½ in × ³³/₆₄ × ¹⁷/₆₄)
Net Weight:	13 grams (0.46 oz.)	3.5 grams (0.12 oz.)

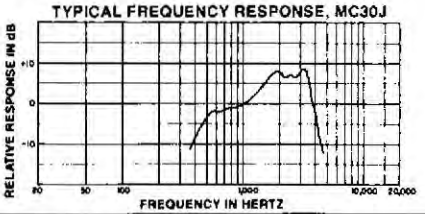
TYPICAL FREQUENCY RESPONSE, R103



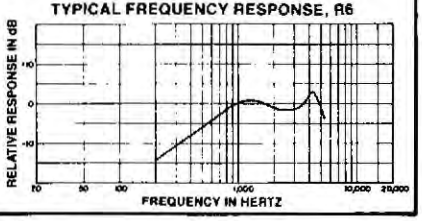
TYPICAL FREQUENCY RESPONSE, MC11J



TYPICAL FREQUENCY RESPONSE, MC30J



TYPICAL FREQUENCY RESPONSE, R6



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 58 and 59 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.

This laboratory test provides a visual representation of the air motion which occurs as a result of breath "pop." It is one of the many application tests used by Shure engineers in determining the optimum size and density of a microphone windscreen.

An A53M Microphone Isolation Mount being tested for its effectiveness in reducing mechanical and vibration noises.

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 S53P and S55P...breakthroughs in distant miking technique.

Professional entertainers and their soundmen rely on Shure microphones and accessories to meet the demanding requirements of a "live" performance.

1 Billy "Crash" Craddock
2 Tammy Wynette
3 Maynard Ferguson

microphone accessories

PROBLEM SOLVERS

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.

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.

A97A

Low-Impedance to Medium-Impedance Line Matching Transformer

High-quality transformer 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. Low-impedance connector—three-pin professional audio connector. Medium-impedance connector—Amphenol MC1M type connector.

microphone accessories

WINDSCREENS

A2WS Series

High performance rugged windscreens with exclusive lock-on provision. Effectively minimizes wind noise in outdoor locations and controls explosive breath sounds in any location. For 545, 546, 570, 571, 572G, 578, ES615, SM56, SM57, SM76, and SM77 Series Microphones.

A2WS Gray
A2WS-BK Black
A2WS-WH White

A53WS

Front and rear windscreens sharply reduce wind and air gust noise outdoors, and permit rapid and abrupt boom movement indoors. Gives extra "pop" protection for ultra-close-talking applications. Fits Model SM53. Gray foam.

A53G
"Pop" and Wind Filter

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

A59WS Series
"Color-Charged" Windscreens

Prevent confusion by color-coding windscreens and control console knobs, connectors, mic cables—each windscreen comes with a matching self-adhesive "color dot." Controls wind noise and "pop." Fits Model SM59.

A59WS-BK Black
A59WS-BL Blue
A59WS-BR Brown
A59WS-GN Green
A59WS-RD Red
A59WS-WH White
A59WS-YL Yellow

A61WS Series
"Color-Changed" Windscreens

Ends microphone mix-ups when soundmen color-code these eight windscreen rainbow colors with control knobs, connectors, and mic cables (matching set of self-adhesive "color dots" included). Windscreens fit 515, SM61, and SM62 Series Microphones and all Shure "ball-type" microphones for greater protection from wind noise and "pop."

A61WS Gray
A61WS-BK Black
A61WS-BL Blue
A61WS-BR Brown
A61WS-GN Green
A61WS-OR Orange
A61WS-RD Red
A61WS-WH White
A61WS-YL Yellow

A81G
Pop Filter Grille

Increases the versatility of the SM81 by permitting its use in windy conditions with minimal pickup of rushing sounds produced by wind. By attenuating breath popping sounds it allows the 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.

A81WS

Unique heavy-duty windscreen, specially designed for the 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.

Replacement Windscreens

For the model numbers of direct replacement windscreens originally supplied with Shure Microphones, refer to pages 58 and 59.

microphone accessories

FLOOR AND DESK STANDS

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.

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.

S53P & 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.).

S53P For Models SM53, SM54, SM60, SM61, SM62, SM63, and SM81.
S55P For Models 545D, SM57, and SM77.

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
S33P Gray

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.)

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.)

S40A
Desk Stand

Similar to S37A Stand with push-to-talk switch included. Fits permanent-mount microphones with ⅝"-27 thread connectors. Includes provisions for optional "in use" light. Shielded 2.1m (7 ft), four-conductor cable may be wired to any standard microphone connector.

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

microphone accessories

MOUNTS AND ADAPTERS

A25B*
Swivel Adapter

Black. Designed for use with 515, 516EQ, 533, 545, 560, 565, 585, 588, SM57, SM58, SM77, and SM78 Series Microphones.

A57 Series*
Swivel Adapters

A57D Champagne. Designed for use with Models 578, 579SB, ES615, SM53, SM54, SM59, SM60, SM61, SM62, SM63, SM81, and SM82.
A57E Black. Designed for use with Models 570, 571, SM51, SM76, and SM85.

A75A*
Stand Adapter

Black. Designed for use with 275 and 575 Series Microphones. Holds microphone at a fixed 40° tilted angle upward.

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.

A53M* and A55M*
Isolation Mounts

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

A53M Designed for use with Models ES615, SM53, SM54, SM59, SM60, SM61, SM62, SM63, SM76, SM81, SM82, and SM85.
A55M Designed for use with Models 545D, 565D, SM57, SM58, SM77, and SM78.

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 A2WS Windscreen and with 515, 533, 565, 585, 588, SM58, and SM78 Series Microphones.

* Standard ⅝"-27 thread connectors.

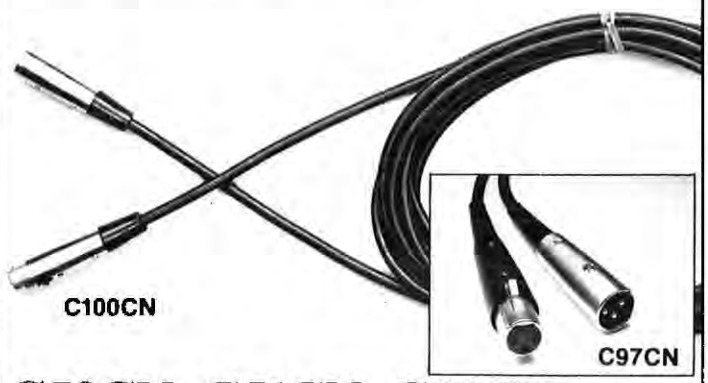
A45 Series and A47
Quick Disconnect Isolation Units

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

A45 Satin Aluminum finish. Designed for use with Models 300, 330, 546, SM33, and SM56.
A45B Same as A45, except with Black finish.
A47 Satin Aluminum finish. Designed for use with Models 55SH, 540SH, 545SH, and 565SH.

microphone accessories

CABLES, COUGH BUTTON AND BOOM EXTENSION PIPE



C50CN, C51CN, C52CN, C53CN, C97CN, and C100CN

Broadcast quality, two-conductor shielded microphone cable. Prewired with three-socket professional audio connector at microphone end and three-pin professional audio connector at equipment end. C51CN, C52CN, C53CN, and C97CN are smaller diameter, super-tough TRIPLE-FLEX® cable.

C50CN 6.1m (20 ft), Black cable; Chrome connector
C51CN 7.6m (25 ft), Gray cable; Chrome connector
C52CN 15.2m (50 ft), Gray cable; Chrome connector
C53CN 30.4m (100 ft), Gray cable; Chrome connector
C97CN 7.6m (25 ft), Black cable; Black connector
C100CN 7.6m (25 ft), Black cable; Black connector

CA95P
Cable With Built-In Transformer

Designed specifically for use with high-impedance inputs. Impedance matching transformer is permanently built into the equipment end of a black, 7.6m (25 ft) heavy-duty, two-conductor shielded, low-impedance cable. This permits connection of low-impedance microphones to high-impedance amplifier inputs. Prewired with three-socket professional audio connector (black) at microphone end and ¼ in. phone plug at equipment end.

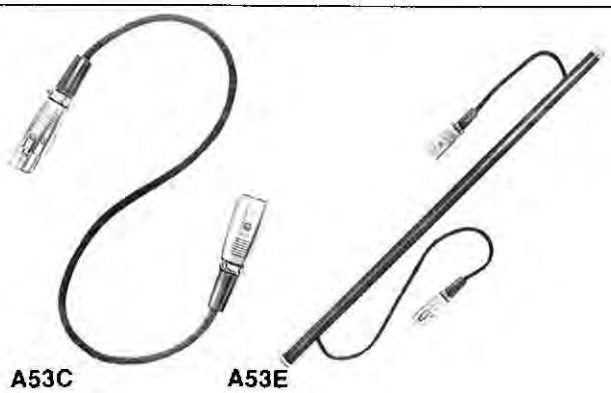
CA95P 7.6m (25 ft),Black cable; Integral transformer

A10CH
Cough Button

A switch, cable and connector accessory designed to provide the user of a Shure Model SM10A, SM12A, SM14A Head-Worn Microphone or of any Shure microphone with the capability for momentarily shorting the microphone circuit when the switch button is depressed, preventing undesirable sounds from reaching the audience. The A10CH can be used with low-impedance, balanced-line microphones—head-worn or lavalier—which contain a professional three-pin audio connector.

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

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



A53C and A53E
Isolation Cable and Boom Extension Pipe

A53C Isolates and minimizes vibration and mechanical noises induced or transmitted by cable when using A53M or A55M Isolation Mounts. Three-pin-and -socket professional audio connectors. Assembly is 457 mm (18 in.) long.

A53E Rugged 508 mm (20 in.) boom extension pipe with A53C Isolation Cable pre-installed. Provides the same noise isolation as the A53C Cable, while it lowers the microphone 508 mm (20 in.) below boom to reduce shadows and lighting problems.

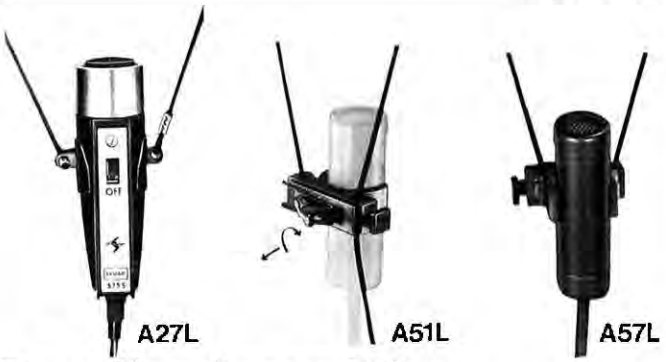
microphone accessories

MISCELLANEOUS

GOOSENECKS

High-quality, flexible goosenecks. "Silent-type" design limits mechanically induced noises. All models have standard ⅝"-27 threads at base.

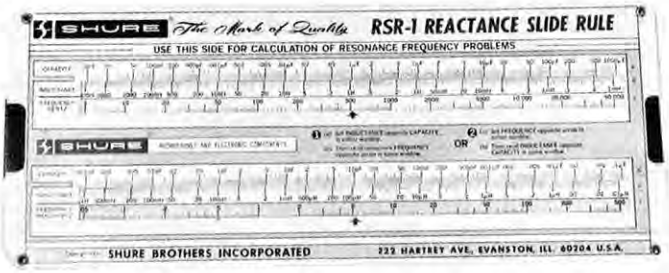
G6A 152 mm (6 in.) flexible gooseneck with side vent
G12 305 mm (12 in.) flexible gooseneck
G12A 305 mm (12 in.) flexible gooseneck with side vent
G12-CN 305 mm (12 in.) flexible gooseneck with three-socket professional audio connector
G18 457 mm (18 in.) flexible gooseneck
G18A 457 mm (18 in.) flexible 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 ⅝"-27 external thread



Lavalier Assemblies

Six 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.

A27L Metal. Fits Models 275S, 575S, and 575SB.
A34L Metal. Fits Model 560.
A51L Plastic. Fits Models 570, 570S, 571, and SM51.
A54L Plastic. Fits Model 545L.
A57L Rubber. Fits Models 570, 570S, and SM51.



RSR-1

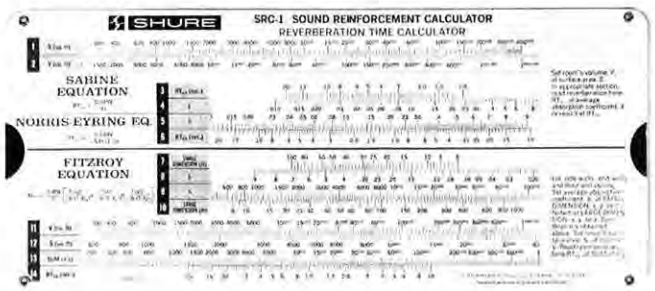
Reactance Slide Rule

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

26A04

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.)



SRC-1

Sound Reinforcement Calculator

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

microphone accessories

POWER SUPPLIES, MONITOR ADAPTER, AND BATTERY ADAPTER

PS1 and PS1E2
Power Supplies

The Shure Models PS1 and PS1E2 are ac power supplies that provide simplex (phantom) power for one or two Shure SM81, SM82, SM85, or other condenser microphones. They contain a power switch, power-on indicator, two input and two output professional audio connectors.

The PS1 and PS1E2 are identical except that the PS1 is designed to operate from 90 to 132 Vac, 50/60 Hz, and the PS1E2 operates from 90 to 125 Vac or 180 to 250 Vac, 50/60 Hz (switch-selectable). In addition to the voltage selector switch and ac fuse, the PS1E2 is supplied with a detachable ac line cord (without power plug).

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

Model Features:

- Simplex power for one or two SM81, SM82, SM85 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.

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 20 kHz, unweighted):
Common Mode ..... 90 dBV max.
Differential Mode ..... −115 dBV max.
Noise: ..... (300 Hz to 20 kHz, 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: ..... PS1—90 to 132 Vac, 50/60 Hz ac only; PS1E2—90 to 125 or 180 to 250 Vac, 50/60 Hz ac only; Power consumption—3 watts max.
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 (PS1 only).

A82MA
Monitor Adapter

A cable and connector assembly designed to provide the user of a Shure Model SM82 Line Level Unidirectional Microphone with a capability for monitoring the microphone output. A 500- to 2000-ohm headset is required (such as the Telex EMY-2 or EMW-2 "Earset"). The A82MA can also be used on a "talkback" circuit, permitting the microphone user to communicate with the audio console or mixer operator during off-the-air periods.

The A82MA consists of a 2.1m (7 ft), TRIPLE-FLEX® heavy-duty, two-conductor shielded cable with three-socket professional audio connectors at microphone end and three-pin professional audio connector at equipment end. Mounted in the side of the microphone connector is a "micro-plug" jack (.097 in. diameter) for use with the headset. Internal circuitry provides shorting protection, dc blocking, and protection against acoustic shock from line transients. A matching insulated micro-plug for installation on the headset is supplied.

The A82MA is designed to withstand voltages normally encountered on telephone lines. If used with a dialed-up telephone line, it is recommended that a voice coupler (Western Electric Type 30B or equivalent) be used to protect the user from any possible shock hazards, and to comply with telephone company tariff regulations.

The A82MA can also be connected to the Shure Model 50AC Acoustic Coupler, eliminating the need to "hard-wire" to the telephone line. The 50AC is held in place over the transmitter of a telephone handset by a rubber strap. The A82MA weighs 164 grams (5.7 oz).

A82BA
Battery Adapter

The Shure Model A82BA Battery Adapter is an accessory for the Shure Model SM82 Line Level Unidirectional Microphone that enables the user to substitute other batteries (cells) for the battery normally used. The A82BA uses seven 1.4-volt mercury batteries to replace a 9.8-volt mercury battery.

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**
55SH	C59	R55		—	—	—	A47	**55SH**
61CP	94A254	—	—	—	—			**61CP**
98A108A				—	—	—		**98A108A**
104C	C15C	R10A	—	—	—			**104C**
201	C20C	R3	—	—	—			**201**
202	C20C	99D404			—	—		**202**
275S	70A144	99A405	53A420A	S33**	A75A*		A27L*	**275S**
300	C50	R30		S33**	—	—	A45†	**300**
330	C65	90A425	—	S33**		—	A45†	**330**
401A	C20C	R5D	—	—	—			**401A**
401B	C21C	R5E		—	—	—		**401B**
404B	C14C	R5E	—	—	—	—		**404B**
404C	C12C	R5F		—	—	—		**404C**
405K	C11C	R5D	—	—	—			**405K**
407A	70A3088	99AN556	—	—	—			**407A**
407B	70A4107	99AL556	—	—		—		**407B**
414A	C24C	R14A	—	—	—			**414A**
414B	C25C	R14B	—	—		—		**414B**
418A	C27C	R5C	—	—	—			**418A**
419A	C24C	90A1756	—	—	—	—		**419A**
419B	C25C	R19B	—			—		**419B**
444D	70A549	R111	90F1060	—	—	—	90BR2600, RK199S	**444D**
450	70A494	R44D	90A1060	—		—		**450**
488T	C22C	R88T		—	—	—		**488T**
507B	70A4110	R50			—			**507B**
514B	C25C	R103	—	—	—			**514B**
515BG	70A2045	R15	RK54G	S33**	A25B	A61WS	A26M, ④	**515BG**
515SA	C62	R15	RK54G	S33**	A25B*	A61WS	A26M	**515SA**
515SAC	90A2013	R15	RK54G	S33**	A25B*	A61WS	A26M	**515SAC**
515SB	C63	R15	RK54G	S33**	A25B*	A61WS	A26M	**515SB**
515SBG	70A4063	R15	RK54G	S33**	A25B	A61WS	A26M, ④	**515SBG**
515SB-G18	70A4063	R15	RK54G	—		A61WS	G18*	**515SB-G18**
516EQ	90D1608	R97	RK54G	S33**	A25B*	A61WS-WH*		**516EQ**
516EQ-PR	90D1608	R97	RK54G	S33**	A25B*	A61WS-WH*		**516EQ-PR**
522	70A494	R89	90A1358	—		—		**522**
524C	70A4013	R95		—	—	—		**524C**
526T Series II	70A544	R96	90D1844	—				**526T Series II**
533SA	C58	R33	RS33	S33**	A25B*	A61WS	A26M	**533SA**
533SAC	C58P	R33	RS33	S33**	A25B*	A61WS	A26M	**533SAC**
533SB	C57	R33	RS33	S33**	A25B*	A61WS	A26M	**533SB**
540SH	C59	R50			—	—	A47	**540SH**
545D	C59	R45	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**545D**
545L	C71	R45L		S33**	A25B	A2WS	A10CH, A25M††, A54L*, ④	**545L**
545SD	C59	R45	—	S33**	A25B*	A2WS	A25M††	**545SD**
545SD-CN	C50CN	R45	—	S33**	A25B*	A2WS	A25M††	**545SD-CN**
545SH	C59	R45	—		—	A2WS	A47	**545SH**
546	C65	R46	—	S33**	—	A2WS	A45†	**546**
560	70A285	R50	—	S33**	A25B	—	A10CH, A34L*	**560**
561	70A292	R50	RK85G		—	—	④	**561**
562	70A292	R90	RK183G	—	—	A61WS	④	**562**
565D	C59	R65	RS65	S33**	A25B	A61WS	A26M, A55M	**565D**
565SD	C59	R65	RS65	S33**	A25B	A61WS	A26M	**565SD**
565SD-CN	C50CN	R65	RS65	S33**	A25B	A61WS	A26M	**565SD-CN**
565SH	C59	R65	RS65		—	—	A47	**565SH**
570	C76	R70	RK91G	S33**	A57E	A2WS	A10CH, A57L*	**570**
570S	C77	R70	RK91G	S33**	A57E	A2WS	A10CH, A57L*	**570S**
571	70A287	90F995	RK91G	S33**	A57E*	A2WS		**571**
572G	70A299	90F995	—		—	A2WS	90B1120A	**572G**

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 A2WS, A59WS 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.

† A45 Aluminum Finish, A45B-Black Finish.

†† With A2WS Windscreen, use A26M.

††† PS1-for 90 to 132 Vac, PS1E2-for 90 to 125 Vac or 180 to 250 Vac.

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.
575S	—	R50	—	S33**	A75A*	—	A27L*	**575S**
575SB		R50	—	S33**	A75A*	—	A27L*	**575SB**
577A	—	R98A	—	—	—	—	—	**577A**
577B	C89	R98B	—	—	—	—	—	**577B**
577C	—	R98C	—	—	—	—	—	**577C**
578	—	R78	RK127G	S33**	A57D*	A2WS		**578**
579SB	C50	R50	RK161G	S33**	A57D*	A61WS	—	**579SB**
585SA	C58	R85	RS85	S33**	A25B*	A61WS	A26M	**585SA**
585SAC	C58P	R85	RS85	S33**	A25B*	A61WS	A26M	**585SAC**
585SAV	C58	R85	RS85	S33**	A25B*	A61WS	A26M	**585SAV**
585SAVC	C58P	R85	RS85	S33**	A25B*	A61WS	A26M	**585SAVC**
585SB	C57	R85	RS85	S33**	A25B*	A61WS	A26M	**585SB**
585SBV	C57	R85	RS85	S33**	A25B*	A61WS	A26M	**585SBV**
588SA	C83	R8	RK82G	S33**	A25B*	A61WS	A26M	**588SA**
588SAC	C83P	R8	RK82G	S33**	A25B*	A61WS	A26M	**588SAC**
588SB	C59	R8	RK82G	S33**	A25B*	A61WS	A26M	**588SB**
588SB-CN	C50CN	R8	RK82G	S33**	A25B*	A61WS	A26M	**588SB-CN**
ES615	C52CN	90C994	—	S33**	A57D*	A2WS	A53C, A53M	**ES615**
HF52	90A2573	99A367				—	—	**HF52**
SM5B	70A2001	99B347	—	S33**	—	—	A53E	**SM5B**
SM7	—	R13	RK154G	S33**	—	—	A53E	**SM7**
SM10A	—	R93				RK184WS	A10CH	**SM10A**
SM11	C91	R99	—	—	—	—	A10CH	**SM11**
SM12A	—	R93				RK184WS	A10CH	**SM12A**
SM14A	—	R93	—	—	—	RK184WS	A10CH	**SM14A**
SM17	90B2505	R99	—	—	—	—	—	**SM17**
SM18B	C92	R105	—	—	—	—	—	**SM18B**
SM18B-50	C95	R105	—	—	—	—	—	**SM18B-50**
SM18W	C93	R105			—	—	—	**SM18W**
SM18W-50	C96	R105	—	—	—	—	—	**SM18W-50**
SM33	C50	90A425	—	S33**	—	—	A45†	**SM33**
SM51	70A2007	R52	—	S33**	A57D	—	A10CH, A51L*	**SM51**
SM53	C50	R53	RK101G	S33**	A57D*	A53WS	A53C, A53E, A53G, A53M, S53P	**SM53**
SM53-CN	C50CN	R53	RK101G	S33**	A57D*	A53WS	A53C, A53E, A53G, A53M, S53P	**SM53-CN**
SM54	C50	R53	A53G	S33**	A57D*		A53C, A53E, A53M, S53P	**SM54**
SM54-CN	C50CN	R53	A53G	S33**	A57D*	—	A53C, A53E, A53M, S53P	**SM54-CN**
SM56	C50	R57	—	S33**	—	A2WS	A45†	**SM56**
SM57	C50	R57	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM57**
SM57-CN	C50CN	R57	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM57-CN**
SM58	C50	R59	RK143G	S33**	A25B*	A61WS	A26M, A55M	**SM58**
SM58-CN	C50CN	R59	RK143G	S33**	A25B*	A61WS	A26M, A55M	**SM58-CN**
SM59	C50CN	R100	RK192G	S33**	A57D*	A59WS	A53M	**SM59**
SM60	C50	R60		S33**	A57D*	—	A53M, S53P	**SM60**
SM61	C50	R61	RK164G	S33**	A57D*	A61WS*	A53M, S53P	**SM61**
SM61-CN	C50CN	R61	RK164G	S33**	A57D*	A61WS*	A53M, S53P	**SM61-CN**
SM62	90B2159	R62	RK176G	S33**	A57D*	A61WS	A53M, S53P	**SM62**
SM62-CN	90A2454	R62	RK176G	S33**	A57D*	A61WS	A53M, S53P	**SM62-CN**
SM63-CN	C94CN	R106	—	S33**	A57D	49A55*	A53M, S53P	**SM63-CN**
SM76	C50	R76	—	S33**	A57E*	A2WS	A53M	**SM76**
SM77EB	—	R107	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM77EB**
SM77EB-CN	C97CN	R107	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM77EB-CN**
SM77TN	—	R108		S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM77TN**
SM77TN-CN	C97CN	R108	—	S33**	A25B*	A2WS	A25M††, A55M, S55P	**SM77TN-CN**
SM78EB	—	R109	RK210G	S33**	A25B*	A61WS	A26M, A55M	**SM78EB**
SM78EB-CN	C97CN	R109	RK210G	S33**	A25B*	A61WS	A26M, A55M	**SM78EB-CN**
SM78TN	—	R110	RK211G	S33**	A25B*	A61WS	A26M, A55M	**SM78TN**
SM78TN-CN	C97CN	R110	RK211G	S33**	A25B*	A61WS	A26M, A55M	**SM78TN-CN**
SM81	C51CN	R104	—	S33**	A57D*	A81G* 49A41	A53C, A53M, A81WS, PS1†††, R104A, S53P	**SM81**
SM82	C50	R82	RK174G	S33**	A57D*	A82WS*	50AC, A82BA, A82MA, PS1†††	**SM82**
SM85	C97CN	R112	RK214G	S33**	A57E*	49A57B*	A53M, PS1†††	**SM85**
TH100	—	R5D						**TH100**

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 A2WS, A59WS 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.

† A45-Aluminum Finish, A45B-Black Finish.

†† With A2WS Windscreen, use A26M.

††† PS1-for 90 to 132 Vac, PS1E2-for 90 to 125 Vac or 180 to 250 Vac.

ABOUT SHURE CIRCUITRY PRODUCTS

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. All units are built with the input-output flexibility that equips them for an extremely wide variety of audio control applications ...and by stacking or combining various Shure components, the user can get exactly the audio control needed for virtually any applications.

For years, Shure portable microphone mixers have been the standard in the broadcast industry, as well as the most popular moderately-priced units in general use. They are recognized worldwide for their value, versatility, quality and reliability. And with the introduction of two new models, the M267 and M268, Shure continues to lead the way in the portable mixer field.

CIRCUITRY ACCESSORIES
On pages 67 and 68 of this section you'll find a complete line of accessories designed to make handling, installation, and use of Shure circuitry products easier and more trouble-free.

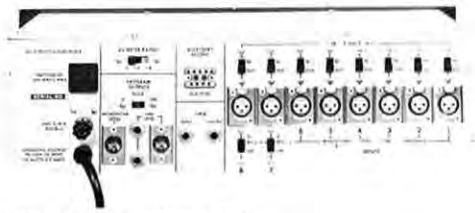
INFORMATION ON SHURE LOUDSPEAKERS
For information on the Shure line of professional loudspeakers, write to Shure Brothers Inc., Attention: Customer Services Department.

Below are photographs of the back panels of the circuitry products featured in this section.

SE30 Gated Compressor Mixer (page 61)

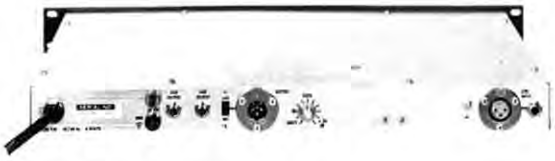
M68FC Mixer (page 64)

M267 Mixer (page 62)



SR109 Mixer with Limiter (page 65)

M268 Mixer (page 63)



SR107 Audio Equalizer (page 66)

M67 Mixer (page 64)

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circuitry products

GATED COMPRESSOR/MIXER

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.

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

specifications

Models: ..... **SE30 and SE30-2E**

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

circuitry products

MICROPHONE MIXER

M267

Shure's new 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 ampl/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 new brackets (RKC169), the M267 will fit into an M67 rack panel, or it may be mounted in the new accessory panel (A268R).

M267 105-125 volts ac, 50/60 Hz.
M267E 210-250 volts ac, 50/60 Hz. **Available in Winter, 1982.**

specifications

Models: ..... **M267 and M267E**

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; adapts automatically to power supply variations)
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: ..... M267: 105-125 volts, 50/60 Hz
M267E: 210-250 volts, 50/60 Hz
(can be rewired for 105-125 volts)

Battery Operation: ..... Built-in battery compartment uses three readily available 9 V alkaline batteries; provides approximately 20 hours of continuous operation

Certification: ..... M267: UL Listed and CSA listed as Certified

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

Net Weight: ..... 2.3 kg (5 lb, 2 oz)

circuitry products

MICROPHONE MIXER

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 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.

The M268 also includes all these M68 features: four transformer balanced microphone inputs—*with individual gold contact switches for selection of low or high impedance;* 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 new brackets (RKC169), the M268 will fit into an M68 rack panel, or, it may be mounted in the new accessory panel (A268R).

M268 105-125 volts ac, 50/60 Hz.
M268E 210-250 volts ac, 50/60 Hz. **Available in Winter, 1982.**

specifications

Models: ..... **M268 and M268E**

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, 8V 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: 8dBV (0.4V)

Simplex Power: ..... 30 Vdc open-circuit, 3.3 kilohms series resistance

Operating Voltage: ..... M268: 105-125 volts, 50/60 Hz
M268E: 210-250 volts, 50/60 Hz
(can be rewired for 105-125 volts)

Certification: ..... M268: UL Listed and CSA listed as Certified

Dimensions: ..... 75.3 mm H × 309 mm W × 227 mm D
(2 11/32 × 12 3/32 × 9 in.)

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

circuitry products

MICROPHONE MIXERS

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.

M67 108 to 132 volts ac, 50/60 Hz.
M67-2E 216 to 264 volts ac, 50/60 Hz.

M68

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, to another M68, or to a power console such as Shure's Model 700.

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 108 to 132 volts ac, 50/60 Hz, three-pin inputs.
M68FC 108 to 132 volts ac, 50/60 Hz, three-socket inputs.
M68FCE 105 to 130 or 210 to 260 volts ac, three-socket inputs.

specifications

M67 and M67-2E

Models: .....

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

Voltage Gain: ..... At 1,000 Hz

Input	Output	
	Line	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: .....M67: 108 to 132 volts, 50/60 Hz
M67-2E: 216 to 264 volts, 50/60 Hz

Certification: .....M67: 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, and M68 FCE

±3 dB from 40 to 20,000 Hz

At 1,000 Hz

Input	Output		
	Lo Z Mic	Hi Z Mic	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
105 to 130 or 210 to 260 volts, 50/60 Hz

M68 and M68FC: 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)

circuitry products

PROFESSIONAL MIXER

SR109

Only 5¼ in. high, the SR109 mixer-preamplifier is loaded with features that broadcasters and professional sound operators have asked for. Designed for rack- or case-mounting, it is the perfect complement to a high-quality sound reinforcement system. Up to eight low-impedance microphones can be mixed, with individual high- and low-frequency equalization. Channels 7 and 8 are switchable to microphone- or line-level sources. In addition, each input has a switchable 15 dB attenuator, and a feedback-type volume control that raises the clipping level and reduces circuit noise as the gain is reduced. An adjustable peak limiter with an LED indicator prevents output overload, and a peak-responding LED indicates output clipping level when the limiter is off.

The SR109 has two program outputs: a 600-ohm balanced, +18 dBm line level, and a low-impedance, balanced, microphone-level output. The program output also has a rotary master level control, and a ballistically correct, illuminated VU meter calibrated for 0, +4, or +8 dBm. Dual link jacks provide for connection of external equipment such as equalizers, compressors, or additional mixers, and a switch permits phase reversal of both line- and microphone-level program outputs. A transformer-coupled 8-ohm headphone output with separate level control is provided for monitoring, and a built-in 1 kHz tone oscillator facilitates checkout synchronization of all meters in the system.

The regulated power supply operates over an extremely wide range of voltages, permitting the SR109 to be used in many areas where voltage extremes and fluctuations are encountered, and with extremely long extension cables without performance degradation. A switched ac receptacle (SR109 only) provides for connection of accessory equipment drawing up to 500 watts.

SR109 90 to 132 volts ac, 50/60 Hz.
SR109-2E 90 to 132 or 180 to 250 volts ac, 50/60 Hz.

specifications

Models: ..... **SR109 and SR109-2E**

Frequency Response: .....±3 dB from 20 to 20,000 Hz

Input Sensitivity: .....0.1 mV max. for +4 dBm program output

Voltage Gain:

Input	Output: Line	Output: Microphone
Low impedance microphone	87 dB	37 dB
Line	37 dB	−13 dB

Noise: .....Equivalent input noise: −128 dBV
Equivalent input hum and noise: −125 dBV

Signal-to-Noise Ratio: .....(20 Hz–20 kHz) Typically 83 dB

Distortion: .....Under 1% THD from 30 to 20,000 Hz at +12 dBm output

Input Attenuation: .....0, 15 dB (switch-selected)

Low-Frequency Equalization: ..±13 dB at 100 Hz

High-Frequency Equalization: .±12 dB at 10 kHz

Limiter: .....Threshold (adjustable): Typically −20 to +20 dBm (at LINE LEVEL output)
Range: Approximately 30 dB

VU Meter Calibration: .....0, +4, +8 dBm, switch-selectable

Operating Voltage: .....SR109: 90-132 volts, 50/60 Hz.
SR109-2E: 90-132 or 180-250 volts, 50/60 Hz.

Certification: .....SR109: UL Listed and CSA listed as Certified

Dimensions: .....133 mm H x 483 mm W x 232 mm D (5¼ x 19 x 9⅛ in.)

Net Weight: .....7.7 kg (17 lb)

circuitry products

AUDIO EQUALIZER

SR107

Only 1¾ in. of rack space is needed for this versatile, active audio-frequency equalizer which is designed to adjust tonal balance on an octave-by-octave basis in sound system applications. The SR107 is used in live performances for feedback control or for improving the sound quality, and in prerecorded performances for playback equalization by correcting for equipment response and/or room acoustics. Equipment response correction includes eliminating such problems as transducer incompatibility, low-frequency overload (rumble), tape hiss, and disc surface noise. The SR107 is a balanced line-level input and output device, designed for installation between the audio console or mixer and the power amplifier in a sound system. Output is +18 dBm with a 600-ohm load.

Ten octave-band, minimum-phase, combining-type filters, are each adjustable over a ±15 dB boost or cut range, on IEC octave centers over the frequency range of 31 Hz to 16 kHz. The equalized output level is adjustable over a ±15 dB range, and overall gain of up to 20 dB may be introduced to compensate for low-level signals. A peak-responding LED indicator shows approaching overload by lighting approximately 3 dB before the onset of output clipping. A bypass switch provides for disconnecting the equalizer circuitry to allow equalized and unequalized comparisons. Two parallel-wired bridging inputs are supplied: three-socket balanced and balanced phone jack. Outputs are: three-pin balanced line-level (switchable to low-impedance microphone level), balanced or unbalanced line-level phone jack, and aux output jack.

specifications

Models: ..... **SR107 and SR107-2E**

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

Voltage Gain: ..... GAIN Control at UNITY: 0 dB LINE INPUT to LINE OUTPUT
GAIN Control at +20 dB: +20 dB LINE INPUT to LINE OUTPUT
LEVEL Control: ± 15 dB

Signal-to-Noise Ratio: ..... (20 to 20,000 Hz) Typically 99 dB at maximum output

Distortion:
Intermodulation: ..... 0.25% max. at 12.2 dBm
Harmonic: ..... 1% max. total harmonic distortion at 12.2 dBm

Clipping Level (30 Hz–20 kHz):
Input: ..... +18 dBm minimum (+15.8 dBV, 6.2V) GAIN Control at UNITY
−2 dBm minimum (−4.2 dBV, 0.62V) GAIN Control at +20 dB

Output: ..... +18 dBm minimum (+15.8 dBV, 6.2V) at LINE OUTPUT
−10.2 dBV minimum (0.31V) at AUX OUTPUT
−34.2 dBV minimum (19.5 mV) at MIC OUTPUT

Overload Indicator: ..... Illuminates 3 dB ±1.5 dB before output clipping occurs

Input Impedance: ..... 70 kilohms actual, balanced bridging

Output Impedance:
MIC OUTPUT: ..... Balanced (for use with 25- to 600-ohm inputs)
LINE OUTPUT: ..... 115 ohms actual, balanced (for use with 600-ohm lines)
AUX OUTPUT: ..... 630 ohms actual, unbalanced (for use with auxiliary circuits of 600 ohms or more impedance)

Equalization Filters:
Center frequencies: ..... Octave spaced from 31 to 16,000 Hz
Characteristics: ..... 15.5 dB boost or attenuation at center frequency

Operating Voltage: ..... SR107: 108-132 volts, 50/60 Hz
SR107-2E: 105-125 volts or 210-250 volts, 50/60 Hz

Certification: ..... SR107: UL Listed and CSA listed as Certified

Dimensions: ..... 44.4 mm H x 483 mm W x 218 mm D (1¾ x 19 x 8⁹⁄₁₆ in.)

Net Weight: ..... 3.5 kg (7 lb. 12 oz)

circuitry products

AUDIO MASTER®

M63

The M63 provides versatile and economical control of audio response and a line-level amplifier in a compact, lightweight package. It may be used to equalize sound systems and to correct room acoustics in auditoriums, clubs, gymnasiums, and meeting rooms; to produce special sound effects; to reduce stand or stage noise; and to improve tape recording and duplication in production and transfer studios. It is an ideal low-cost equalizer and line amplifier for use in conjunction with an M68 Mixer.

The M63 features continuously variable high- and low-pass 6 dB per octave filters, plus separate bass and treble controls, for flexible control of response characteristics. The "hinge" effect of the bass and treble controls and the "slope" effect of the high and low filters can be combined for a frequency response curve "tailored" to the individual room.

Two high-level, high-impedance inputs accept signals from mixers, tape recorders, or tuners. A master volume control adjusts both inputs simultaneously. The M63 line-level amplifier provides up to +18 dBm output. Four outputs are provided: microphone level (high- or balanced low-impedance); 600-ohm balanced line level; high impedance, aux level; and headphone jack for monitoring. The M63 also contains a VU meter (calibrated for 600-ohm line termination) with a two-range sensitivity switch.

specifications

Model: **M63**

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

Voltage Gain:
- **Line Output:** ..... 38.5 dB
- **Aux Output:** ..... 39.0 dB
- **Hi-Imp Mic Output:** ..... −1.0 dB
- **Lo-Imp Mic Output:** ..... −21.0 dB

Tone Controls:
- **Bass:** ..... +14, −19 dB at 100 Hz Typical
- **Treble:** ..... +16, −19 dB at 10 kHz Typical

Filters: ..... Hi-Cut and Lo-Cut 6 dB per octave, continuously variable −3 dB point

Noise Output (line with 600-ohm load)
- **Volume Control min:** ..... 76 dB below +8 dBm, 20 to 20,000 Hz; 81 dB below +8 dBm, 300 to 20,000 Hz
- **Volume Control max. (4.7 kilohms source):** ..... 68 dB below +8 dBm, 20 to 20,000 HZ; 71 dB below +8 dBm, 300 to 20,000 HZ

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

Clipping Level: ..... +18 dBm (600-ohm load)

Inputs: ..... Two, mixing, Impedance 50 kilohms nominal

Outputs: ..... 600-ohm line: Balanced and floating
Aux Hi-Imp: Unbalanced
Mic Hi-Imp: Unbalanced
Mic Lo-Imp: Balanced
Headphone: for 600- to 2,000-ohm headphones

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

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

Dimensions: ..... 69.9 mm H × 289 mm W × 155 mm D (2¾ × 11⅜ × 6 in.)

Net Weight: ..... 1.4 kg (3 lb, 2 oz)

circuitry products

FEEDBACK CONTROLLER

M610

When the M610 Feedback Controller is included in a sound system, its special set of filters and rolloff switches smooths out the peaks in the system's frequency response, so that system gain can be increased to significantly higher levels before reaching the feedback threshold. The operator can "tune" the sound system to the room acoustics, quickly and easily. Use for a single microphone, or to tune the output of a mixer—connect it in a single microphone line (low- or high-impedance), or to the aux output of a mixer such as the M68. The M610 offers the basic advantages of room/system equalization—without the high costs of elaborate, complex, highly specialized equalization equipment.

The M610 has eight resonant dip filters, each controlled by a linear-motion potentiometer. Each filter, unlike highly selective "notch" or single-frequency filters, acts on a band of frequencies around its center frequency, so that attenuation is smooth and complete. These filters function across the audio spectrum, with center frequencies at 63, 125, 250, 500, 1,000, 2,000, 4,000, and 8,000 Hz. Each is infinitely variable from 0 attenuation (flat) to a maximum cut of 12 dB. "High end" (above 8 kHz) and "low end" (below 63 Hz) rolloff switches are provided to control response outside the range of the filters.

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

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

specifications

Models: ..... **M610 and M610-2E**

Frequency Response: .....(No. filters activated) +2 dB from 40 to 20,000 Hz

Voltage Gain: ..... At 1,000 Hz

Bypass Mode:

Input	Output Lo Z Mic	Output Hi Z Mic	Output Aux
Low impedance microphone	– 0.5 dB	24.0 dB	47.0 dB
High impedance microphone	–24.0 dB	0.5 dB	23.5 dB
Aux	48.0 dB	23.5 dB	0.5 dB

Filter Mode: .....(Filter Level control maximum):

Input	Output Lo Z Mic	Output Hi Z Mic	Output Aux
Low impedance microphone	24.5 dB	49.0 dB	72.0 dB
High impedance microphone	1.0 dB	25.5 dB	48.5 dB
Aux	23.0 dB	1.5 dB	24.5 dB

Noise: .....Equivalent input noise: 125 dBV
Equivalent input hum and noise 123 dBV

Aux Output Clipping Level, (minimum): .....5 volts

Input Clipping Levels, (minimum): .....Lo-Z Mic: 30 mV
Hi-Z Mic 450 mV

Distortion: .....Under 0.5% THD at 1,000 Hz, 1V output

Operating Voltage: .....M610: 108-132 volts, 50/60 Hz
M610-2E: 108-132 or 216-264 volts, 50/60 Hz

Certification: .....M610 only: UL Listed and CSA listed as Certified

Dimensions: .....62.7 mm H × 303 mm W × 177 mm D (2 5/32 × 11 15/16 × 6 31/32 in.)

Net Weight: .....1.8 kg (3 lb. 15 oz)

circuitry accessories

CARRYING CASES, RACK PANELS, AND STACKING KIT

AC60
Attaché Carrying Case

Handsome, slimline vinyl covered attaché-type carrying case. Compartmented and foam-lined with space for any of the M63, M67, M68, or M610 Series components and as many as four microphones, cables, adapters, and other accessories. Dimensions: 85.7 mm H x 467 mm W x 295 mm D (3⅜ x 18⅜ x 11⅝ in.)

A30A

A105A

A30A and A105A
Carrying Cases

Sturdy, weather-resistant cases designed to provide protection to Shure audio components during travel and portable use. Both front and back panels are hinged and completely removable for ease of access to controls and connections. Both the A30A and A105A are covered in heavy-duty, fabric-backed, black vinyl and feature a heavy-duty handle.

A30A Provides 3½ in. x 19 in. (89 mm x 483 mm) of rack-mounting area. Accommodates units up to 285 mm (11¼ in.) in depth below the mounting surface. May be used with one M63, M67, M68 or M610 (with A68R Rack Panel), one M267 or M268 (with A268R Rack Panel), one SE30 (with A100B Rack Panel), or two SR107's. Dimensions: 381 mm H x 515 mm W x 143 mm D (15 x 20⁵⁄₁₆ x 5⅝ in.)

A105A Provides 7 in. x 19 in. (178 mm x 483 mm) of rack-mounting area. Accommodates units up to 210 mm (8¼ in.) in depth below the mounting surface. May be used to create a portable "custom" stack of Shure audio components. For use with Shure M63, M67, M68, and M610 Series components (with A68R Rack Panel), M267 and M268 (with A268R Rack Panel), SE30 (with A100B Rack Panel), SR107, and SR109. Dimensions: 533 mm H x 232 mm W x 311 mm D (21 x 9³⁄₆₄ x 12¼ in.)

A68R

A100B

A268R

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.

A68R For use with the M63, M67, M68, and M610 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.

A68S
Stacking Kit

Enables you to conveniently interconnect and stack two Shure audio components. Kit includes two support brackets and a phono-to-phono, interconnecting cable for connecting two M67's or M68's; or an M63 or M610 to an M68.

circuitry accessories

HANDLE/TILT STAND, SECURITY PANELS, PANEL LAMP, BATTERY POWER SUPPLIES AND MICROPHONE PREAMPLIFIER

A100A
Handle/Tilt Stand for SE30

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

A68L and A107A
Security Panels

Steel panels that fasten to Shure audio components to prevent tampering of the controls once they have been set.

A68L For use with the M63, M67, M68 and M610 Series components. Includes small padlock and two keys.

A107A For use with the SR107, fastens with rack-mounting screws.

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 (not supplied) and draws its power from the console. Flexible neck affords variable positioning.

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 M63, M67, M68, M610 Series components. May be used with the M67 as either the sole power source or as a standby safely during ac operation, providing automatic noiseless switchover in case of ac failure. The automatic switchover feature is not recommended for use with the M63, M68, or M610 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.

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 M63, M68 and M610.

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, description 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 Ave., Evanston, IL 60204. When ordering, please list both product model number and data sheet ordering number.

Microphones

Model/Series	Data Sheet Ordering Number
50AC	27A1301
55SH	27A1476
61CP	27A255
98A108A	27A1533
104C	27A1149
201	27A196
202	27A267
275S	27A189
300	27A297
330	27A115
401 Series	27A198
404 Series	27A179
405K	27A359
407 Series	27A972
414 Series	27A287
418A	27A359
419 Series	27A306
444D	27A1618
450	27A246
488T	27A1343
507B	27A1170
514B	27A1387
515BG	27A1494
515SA & 515SB	27A1487
515SBG & 515SB-G18	27A1489
516EQ, 516EQ-PR	27A1275
522	27A687
524C	27A1136
526T Series II	27A1468
533SA & 533SB	27A332
540SH	27A1555
545D	27A1290
545L	27A352
545SD	27A1290
545SH	27A1557
546	27A176
560	27A213
561	27A242
562	27A1063
565D & 565SD	27A1188
565SH	27A1558
570	27A222
570S	27A281
571	27A1165
572G	27A298
575 Series	27A193
577A & 577B	27A1128
577C	27A1135
578	27A1180
579SB	27A1595
585SA & 585SB	27A379
585SAV & 585SBV	27A466
588SA & 588SB	27A853
ES615	27A1357
HF52	27A1332
MC11J	27A136
MC30J	27A136
R6	27A617
R103	27A1393
R104A	27A1679
SM5B	27A959
SM7	27A990
SM10A	27A1646
SM11	27A1471
SM12A	27A1647
SM14A	27A1648
SM17	27A1381
SM18 Series	27A1469
SM33	27A1544
SM51	27A372
SM53 and SM54	27A1545
SM56	27A295
SM57	27A1109
SM58	27A1491
SM59	27A1543
SM60	27A1118
SM61	27A1421
SM62	27A1002
SM63	27A1479
SM76	27A1547
SM77 Series	27A1553
SM78 Series	27A1591
SM81	27A1548
SM82	27A1103
SM85	27A1666
TH100	27A333

Circuitry Products

Model/Series	Data Sheet Ordering Number
M63	27A909
M67	27A1098
M68	27A872
M267	27A8008
M268	27A8011
M610	27A1050
SE30	27A1334
SR107	27A1089
SR109	27A1413

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Microphones

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Microphone Accessories

Circuitry

Circuitry Accessories

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.

Shure microphones do something great for all these great voices

1 Mick Jagger of The Rolling Stones
2 Paul Anka
3 Peter Townshend of The Who
4 Crystal Gayle
5 Dionne Warwick
6 Robert Plant of Led Zeppelin
7 Eddie Rabbitt
8 Rod Stewart
9 Ian Anderson of Jethro Tull
10 Charles Aznavour
11 Marie Osmond
12 Brian Wilson of The Beach Boys

SHURE®

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