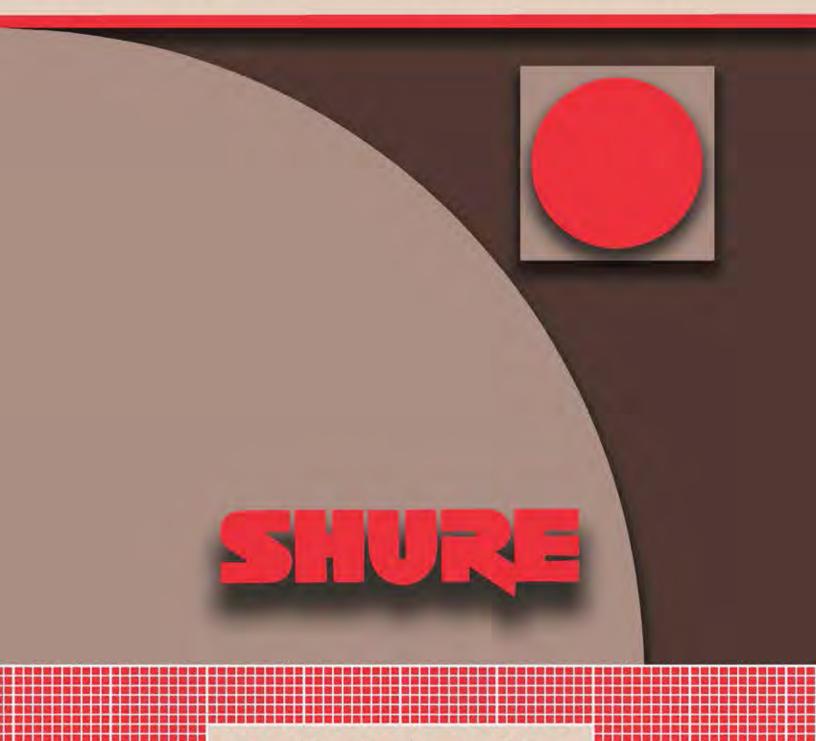
The Shure SM Professional Performance Microphones



Quality in the making



The Shure SM Professional Performance Series



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Microphones the professionals stand behind. Nowhere is the reliance on Shure quality more evident than in the world of entertainment. On stages everywhere, music legends like Mick Jagger, Judy Collins, Ronnie Milsap, Tina Turner, Eddie Rabbitt, Dolly Parton, Charles Aznavour, Billy Squier, Paul Anka, Dionne Warwick, Roger Daltrey and Peter Townsend insist on Shure microphones to make their performance stand out.

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

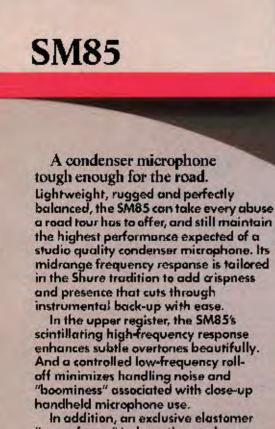
Worldwide.



QUALIT

A minimum of two years of intensive development, design and engineering go into the making of a new Shure microphone. Before any Shure microphone is sold, it must pass a battery of at least 20 environmental and performance tests that simulate and go beyond live usage situations.

Microphones are battered, vibrated and dropped to assure strength and long-life. They are drenched in 100% humidity to assure reliable internal connections. They are subjected to extreme electromagnetic and electrostatic fields to assure proper shielding from external noise, hum or stray radio frequency fields. And, they are subjected to temperature extremes



enhances subtle overtones beautifully.

"space frame" isolates the condenser element from virtually all mechanical vibration.

Impedance Rating: 150 ohms

Output Level:

Open Circuit Voltage: 74 dB (0.2 mV) (0 dB = 1V/µbor)

Hum Pickup/m0e: -7.5 dB equivalent SPL Clipping Level (at 1,000 Hz): 800 ohm lood: -- 1 d8V

(0.63V); 150 ohm lood: - 15 dBV (0.18V) Maximum SPL: 800 ohm lood: 142 dB; 150 ohm lood:

Output Noise: (equivalent sound pressure levels; measured with true rms voltmater) 29 dB typical, A-weighted, 32 d8 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

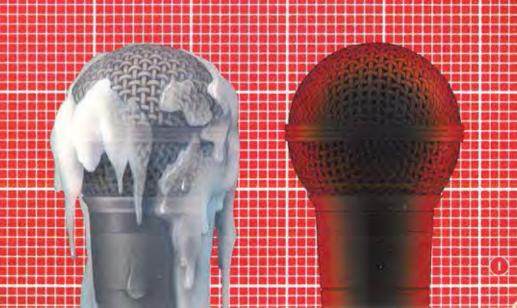
Optional Accessories: See Pages 6 and 7



from -50°F to 180°F to assure external appearance and durability

Shure microphones will continually perform up to your tough standards because they are manufactured with an intense commitment to quality-using carefully selected and manitored materials that are assembled with the greatest degree of care and accuracy.

Because of our ongoing commitment to quality and performance, Shure microphones and accessories have earned an unmatched reputation for on-stage ruggedness and reliability. This is why Shure products are used and respected the world over.





The world-standard professional

The Shure SMSB Dynamic Microphone is often imitated in appearance, but never duplicated in performance, ruggedness, or reliability. It remains the first choice among rack, pop, R&B, country, gospel

With its distinctive upper midrange presence peak, the SMS8 provides the clean, lively sound performers demand. The SM58 is preferred for its punch in live vocal applications—especially where close miking is important. It has an extremely effective presence rise in mid-frequencies, and a fixed low-frequency rolloff to minimize "boominess." An internal spherical windscreen lining the ball grille 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

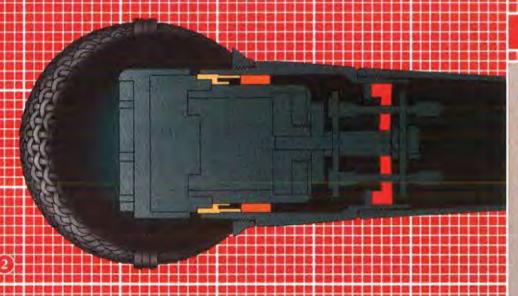
In addition, the superior balance makes the SMS8 a comfort to hold.

Impedance Rating: Oual: 38/150 phms

0.08 mV (+82.0 d8, 0 d8 = 1V/µbor) 38 ohms 0.17 mV (+75.5 d8, 0 d8 = 1V/µbor) 150 ohms Power Level: -56.5 dB, 0 dB = 1 mW/10 µbor

Supplied Accessories: Swivel adapter, connector locking kit, vinyl storage bag

Optional Accessories: See Pages 6 and 7



Holding down handling noise.

The shock mount in Shure SM Professional Performance Microphones is made of three specially selected elastomers with damping characteristics that provide optimum handling noise reduction. This attention to detail produces microphones that are lower in vibration sensitivity than most other microphones on the market.

SM56 and SM57

Presence and definition that rise to the occasion.

With their effective presence peaks, the SM56 and SM57 Dynamic Microphones reproduce the sound of drums, strings, and amplified instruments with dean, well-defined accuracy. In addition, the cardioid polar pattern of each microphone minimizes background noise and permits higher amplifier gain before feedback.

Both the SM56 and SM57 have a wide frequency response with a fixed base rall-off and midrange presence boost. These factors also make them exceptional vocal microphones. And the optional A2WS Windscreen is particularly effective in controlling breath and wind noise.

The SM57 can be handheld or stand mounted. The SM56 has a permanent stand mount with an effective vibration isolator shock mount in the attached swivel. Both microphones are finished in non-glare enamel.

Impedance Rating: Doal: 38/150 ohms

Output Level:

Open Circuit Voltage:

0.08 mV (-82.0 dB, 0 dB = 1V/µbar) 38 ohns 0.17 mV (-75.5 dB, 0 dB = 1V/µbar) 150 ohns Power Level: 55.5 dB, 0 dB = 1 mW/10 µbar

Supplied Accessories: SMS6: Connector lacking kit, vinyl storage bag: SMS7: Swivel adapter, connector looking kit, vinyl storage bag

Optional Accessories: See Pages 6 and 7



V

Materials that keep working under pressure.

At Shure's testing facility, SM Microphones must withstand at least 6 random drops from 6 feet onto a hardwood floor. This type of abuse would destroy many other microphones. Ruggedness and reliability are built into Shure microphones using critically selected and monitored materials including: extremely tough, diecasted zinc and machined aluminum housings, and TEFLON Seconted all-steel grilles.





SM77 and SM78

Microphones that say something about your sense of style. In a beautiful break from tradition, the SM77 and SM78 Dynamic Microphones combine beautiful styling with uncompromising sound. They feature Shure's exclusive non-reflecting, textured Suedecoat™ exterior. The finish assures a comfortable grip, never tarnishes, and is easy to clean. Choice of colors include ebony, tan and brown.

The microphones are also smaller and 28% lighter on average than their predecessors—making them less of a strain to hold during lengthy perfor-mances. And their small profiles won't obscure the performer's face.

To assure the finest sound, both micraphone styles have a fixed low frequency rolloff and an upper midrange presence peak in their frequency response. A uniform cardioid pattern rejects background noise for maximum amplifier gain before feedback, and prevents coloration when performers sing from an off-axis position. The SM78's built-in windscreen provides excellent "pop" protection. And the slim SM77 is especially effective on instrument pickup where crisp, clear sound is demanded.

Impedance Rating: 150 ohms

Output Level:

Open Circuit Voltage: 0.13 mV (-77.5 dB,

 $0 dB = 1V/\mu bor)$ Power Level: -57.5 dB, $0 dB = 1 mW/\mu bor$

Supplied Accessories: Swivel adapter, foam-lined storage/carrying case

Optional Accessories: See Pages 6 and 7



Polar Pattern: Co

Shure puts it together right. Shure has always assembled their micro-phones to last the test of time—to assure their great sound never varies. Where structural integrity must be maintained, cartridge parts are permanently press-fitted (Diagram: yellow, green, blue) instead of glued. Each grille is precision-brazed (Diagram: arange) at the mounting ring rather than spot welded or glued. And components are manufactured to precise tolerances assuring a perfect fit. There have never been cost-cutting shortcuts taken at Shure—and there never will be.



SM10A: Boom microphone only
SM12A: Microphone and single monitor earpiece
SM14A: Microphone and dual monitor earpieces
(shown)

Microphone Specifications
Typical Frequency Response: 50 to 15,000 Hz
Palar Pattern: Cardioid (unidirectional)
Impedance Rating: 150 ohms
Output Level;

Open Circuit Voltage: 4.5 mV (-47.0 dB, 0 dB = 1V/100 µbars)
Power Level: - 66.0 dB, 0 dB = 1 mW/10µbar
Hum PickupimOe: 38.4 dB equivalent SPL
Supplied Accessories: Connector belt alps, foam windscreen, storage/carrying case; SM10A also supplied with headphore adapter plate
Optional Accessories: See Pages 6 and 7

Earpiece Specifications
Typical Frequency Response: 70 to 12,000 Hz
Impedance Rating: 2,000 ohms at 1 kHz
Output Level: 105 dB SPL with 1.4V at 1 kHz

Picks up where other acoustic instrument microphones leave off.

Instrumentalists who like to move freely on stage will appreciate the Shure SM17. This high quality dynamic microphone offers a strong, natural, acoustically live sound. Even at high sound pressure levels, the SM17 remains remarkably free from overload and distortion.

Only 1½" long, the 5M17 can be attached to most accustic instruments with no modifications. It is supplied with a cloth mounting adapter and expansion mount for violins, violas or cellas, and a cushioned spring dip for accustic guitars or string basses. Two clips for securing the cable to flat surfaces are also included.

Typical Frequency Response: 50 to 15,000 Hz Polar Pattern: Omnidirectional Impedance Rating: 150 ohms Output Level:

Open Circuit Voltage: 0.06 mV (-95.0 dB, 0 dB - 1V/µbar)

Power Level: --64.0 dB, 0 dB = 1 mW/10µbar Hum Pickup/m0e: 35.3 dB equivalent SPL

Supplied Accessories: Cloth mounting adapter, expansion mount with these bushings, instrument clip, cable clips

Optional Accessories: See Pages 6 and 7

STORY

Built to take your breath away.

Advanced pop filters are designed into every Shure SM Professional Performance Microphone to greatly reduce explosive wind and breath sounds—without altering the microphone's sound integrity. For example, the built-in pop filter on the SM85 (diagram) utilizes a sophisticated multi-stage construction. Here, alternating layers of foam and air work in perfect harmony to produce for better results than the fewer, thicker layers of foam used in competitive microphones. For more demanding applications, accessory windscreens are available.







Accessories

A61WS Series Windscreens

In addition to reducing pop and wind noise, these windscreens prevent onstage microphone mix-up. They are color coded and include a matching set of self-adhesive "color dots" so microphones, cable connectors and mixer volume controls can all be easily coded for quick visual identification.

Fits models SM58 and SM78

- 1. A61WS—Gray 2. A61WS-OR—Orange
- 3. A61WS-BL-Blue
- 4. A61W5-BK-Black
- 5. A61WS-RD-Red
- 6. A61WS-GN-Green
- 7. A61WS-BR-Brown
- 8. A61WS-WH-White
- 9. A61WS-YL-Yellow

Fits model SM85.

10. 49A57B-Black.

A2WS Series Windscreens

This rugged, high performance windscreen has an exclusive lock-on feature that keeps it firmly mounted. The windscreen effectively minimizes wind and explosive breath sounds in any location. Fits models SM57 and SM77.

- 11. A2WS-WH-White
- 12. A2W5-BK-Black
- 13. A2W5-Gray

Mounts and Adapters*

14. A25B: Swivel Adapter-Fits models SM57, SM58, SM77 and SM78. Black

15. A576: Swivel Adapter-Designed for use with model SM85. Black.

16. A53HM: "Shock-Stopper™" Isolation Mount/Swivel Adapter—Halfmount version-permits instant removal of microphone from mount on stage. Fits model SM85.

17. A55HM: "Shock-Stopper™" Isolation Mount/Swivel Adapter-Halfmount version-permits instant removal of microphone from mount on stage. Fits models SM57, SM58, SM77 and SM78.

18. A53M: "Shock-Stopper™" Isolation Mount/Swivel Adapter-A breakthrough in noise isolation. Reduces mechanical and vibration noise by more than 20 dB. Designed to fit mode! SM85.

19. A55M: "Shock-Stopper™" Isolation Mount/Swivel Adapter-Same as above—designed to fit models SM57, SM58, SM77 and SM78.

20. A45Z: Shure's unique "Z" bracket. Designed for easy placement in miking guitar amplifiers and speaker cabinets. Small, lightweight alternative to standard microphone stand and boom combination, Black,

*Standard %: -- 27 thread connectors



Toward a cleaner sound.

The diaphraam in all dynamic SM microphones is superior to those found in competitive brands. Shore's is specially laminated and has strategically placed spokes and tangential grooves. These factors stiffen and stabilize the diophragm so it won't vibrate uncontrollably on its own during a performance. This results in a truer reproduction of the voice or instrument.



- 1. A15PRS: Switchable Phase Reverser-Instant switch selection of normal or reversed phase of a balanced line without modification of equipment.
- 2. 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.
- 3. A15LA: Line Input Adapter-Converts balanced low impedance microphone input to bridging line level input.
- 4. A15TG: Tone Generator-Extremely useful in setting up and troubleshooting audio equipment.

Produces a continuous 700 Hz balanced signal capable of driving low impedance balanced lines.

5. A95UF: Low to high impedance

matching transformer. Three-socket professional audio connector.

6. A97A: Low to medium impedance matching transformer.

7. A95U: Low to high impedance matching transformer. Three-pin professional audio connector.

8. PS1 Power Supply: Provides simplex power for condenser micro-phones. The PS1E2 (not shown) oper-ates from 90 to 125 Vac or 180 to 250 Vac (switch selectable).

Audio Connection Microphone Cable Selection Chart

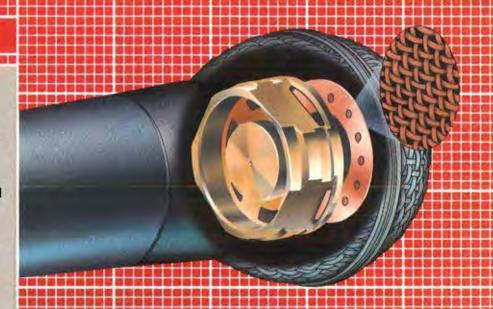
MODEL	MICROPHONE CONNECTOR	EQUIPMENT CONNECTOR	CABLE JACKET	CABLE LENGTH
C25B	3-Socket Black	3-Pin Chrame	Heavy Gauge Rubber	25 ft. (7.6m)
C25E	3-Socket Block	3-Pin Chrome	TRIPLE-FLEX®	25 ft. (7.6m)
C25F*	3-Socket Chrome	3-Pin Chrome	TRIPLE-FLEX®	25 ft. (7.6m)
C20H**	3-Socket Chrome	3-Pin Chrome	Heavy Gauge Neoprene	20 ft. (6.1m)
C25G	3-Socket Black Low Impedance	High Impedance Matching Transformer 1/4" Phone Plug	Heavy Gauge Rubber	25 ft. (7.6m)

Also available in 50 (15m) and 100 (30m) ft. lengths. (C50F and C100F)

Also available without connector with stripped and tinned leads. (C280)

Sound uniformity-

from one microphone to the next. To assure uniform response from one microphone to the next, precise tuning is required. In unidirectional microphones, for example, the size, location and acoustic resistance of the rear entry resistance ports (enlarged) control the sound coloration, output level, frequency response and pickup pattern of the microphane. All Shure cartridges are checked and adjusted within predesigned tolerances to prevent the variances that occur in other brands.





Understanding microphone terms and specifications.

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.

(Note: If additional specifications and technical description of a particular Shure microphone are required, write Shure Brothers Inc., Attention: Customer Services, requesting the technical data sheet of that model.)

Dynamic: In a dynamic microphone, a coil of wire fastened to a diaphragm is suspended in a magnetic field. The diaphragm moves in response to sound waves arriving at its surface. This motion induces minute voltages in the coil, due to its relative movement within the magnetic field. These voltages constitute the electrical output of the microphone.

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 thus, through an integral impedance converting preamplifier generates minute voltage changes. This mode of operation requires an external power source.

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 "tailared" to some particular use. For example, a vocal microphone may have a "presence peak" in its voice-frequency range, so that the vocalist stands out from the instruments. A vocal microphone ideally has a controlled low frequency rollaff to balance any "proximity effect" due to close placement.

Microphones for musical instruments are ideally "flot" and "wide range" to capture the full output, including rich overtones and harmonics of the instruments.



Frequency Response Curve: The frequency response curve shown for each Shure microphone provides an accurate picture of the microphone's frequency range and response. The curve represents the output valtage versus frequency (in hertz). Note that the frequency scale is logarithmic, the voltage scale is in d8 (decibels).

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 valtage 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. Hypercardioid microphones are somewhat more directional, being about 40% as sensitive to sounds from the sides and rear as 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



Polar Pattern Charts: Polar patterns are a visual representation of a microphone's pickup pattern. Because directional characteristics may vary with frequency, Shure shows the pickup pattern at several frequencies—often as many as six frequencies.

ideally, a unidirectional polar pattern (refer to diagram) should be broad at the front,



SELECTING A Q U A

Testing the shock mount.

The next time you're comparing microphones, test the superior performance characteristics of Shure microphones. While holding an amplified Shure microphone, tap its handle lightly with your finger. Then place the Shure microphone in its stand, and tap the stand in the same manner. In both cases, Shure's sophisticated shock mount will reduce excessive thumping noises heard over the speaker. Do the same with another microphone in the store. Be sure the vocal level of both microphones is the same. You'll hear the quiet difference of the Shure product first hand.

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 color or distart the tonal characteristic. Shure microphones come very close to reaching the ideal...their patterns are uniform with frequency and symmetrical about

An omnidirectional polar pattern picks up sound equally from all directions.

Impedance Rating: Select the proper microphone impedance for the input impedance of a mixer, amplifier, or recorder to: (1) maximize the microphone output signal, (2) preserve the full frequency response, and (3) provent distortion caused by overloading the mixer input. In general, for optimum performance, the actual equipment input impedance should be at least five to ten times that of the microphone.

Microphone impedance is specified as a standard rating in ohms. Common ratings are: 150 ahms (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 chms).

High impedance microphones have a higher signal voltage than low impedance microphanes, 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 langer cable runs, low impedance microphones will avoid these problems.

Output Level: The output level (sensitivity) of a microphone is an expression of the valtage or power output for a given sound pressure. The open circuit voltage is an "unloaded" figure. Essentially, the input impedance of the measuring equipment does not effect the output of the microphone. 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 IV/ microbar, or .1 mV (millivolts). 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 valt. 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 lass or change in frequency response.

The power level is specified with a matched load, for instance, an actual 200ohm 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 milliwat for a 10microbar sound pressure (94 dB SPL). Note that the power output for the same microphone cartridge with either low or high impedance rating 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 or transformer. 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 autput will be the same as from an acoustic source of 17 dB SPL; a soft whisper about 10 feet away. A I millioersted field roughly carresponds to the hum field found in a typical studio environment.

Cable: Cables supplied with Shure low impedance microphones are generally two-conductor shielded balanced lines. The equipment end of these cables are supplied with either a three-pin professional audio connector, or bare leads. Bare leads enable the user to select a connector required to properly interface with specific 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 1/4" phone plug or bare leads.

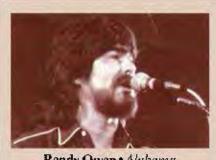
MICROPHONE

Testing the pop filter.

"Pop" is an explosive breath sound noticeable in vocal applications where "P", "B", and "T" sounds occur. Try this simple test the next time you're in a micraphone store. Adjust two microphones for the same loudness. Speaking into one amplified microphone at a time, say the words, "Peter Piper Picked a Peck of Pickled Peppers." Be sure to maintain the same mouth to grille distance for each microphone you test. You'll be able to hear how effectively Shure's pop filters diminish this effect, compared to other microphones.



Shure Microphones bring out greatness



Randy Owen · Alubama



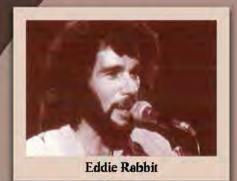
Mick Jagger • Rolling Stones



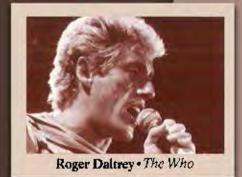
Keith Knudsen · Doobie Brothers



Ronnie Milsap









Billy Squier





THE SOUND OF THE PROFESSIONALS ... WORLDWIDE