



SHURE SM7d1B Vocal Microphone With Active Preamp Owner's Manual

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SHURE®

SHURE SM7d1B Vocal Microphone With Active Preamp



Product Information

Specifications

- **Type:** Dynamic (moving coil)
- **Frequency Response:** 50 to 20,000 Hz
- **Polar Pattern:** Cardioid
- **Output Impedance:**
 - **Preamp engaged:** 27 Ω
 - **Bypass mode:** 150 Ω
- **Recommended Load:** >1k Ω
- **Sensitivity (@ 1 kHz, open circuit voltage):** -59 dBV/Pa[1] (1.12 mV)
- **Hum Pickup (typical, at 60 Hz, equivalent SPL/mOe):** 11 dB
- **Preamplifier Equivalent Input Noise (A-weighted, typical):** -130 dBV
- **Polarity:** Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
- **Power Requirements (with preamp engaged):** 48 V DC [2] phantom power (IEC61938) 4.5 mA, maximum
- **Weight:** 0.764 kg (1.69 lbs)

Product Usage Instructions

Setting up the microphone

To set up the SM7dB vocal microphone with active preamp, follow these steps:

1. Attach the microphone to a microphone stand or boom arm using the included microphone mount.
2. Connect the XLR cable from the microphone to your audio interface or mixer.
3. If using the preamp, make sure to engage it by flipping the switch on the back of the microphone.
4. Ensure that phantom power is enabled on your audio interface or mixer if using the preamp.

Customizing the frequency response

The SM7dB microphone allows you to customize the frequency response. Follow these steps:

1. Locate the switches on the back of the microphone.
2. Switch 1: Adjusts the low-frequency response. Up position provides a boost, down position provides a cut.
3. Switch 2: Adjusts the presence boost. Up position provides a boost, down position provides a flat response.
4. Switch 3: Engages or bypasses the preamp. Up position engages the preamp, down position bypasses it.

Recording with the SM7dB

To achieve optimal recording results with the SM7dB, follow these tips:

- Position the microphone close to the sound source for increased proximity effect.
- Experiment with different positions and angles to find the desired sound.
- Use a pop filter to reduce plosive sounds in vocal recordings.
- Avoid placing the microphone near sources of electromagnetic interference.

SAFETY PRECAUTIONS

Before using this product, please read and save the enclosed warnings and safety instructions.

WARNING: Ignoring these warnings may cause severe injury or death as a result of incorrect operation.

- If water or other foreign objects enter the inside of the device, fire or electric shock may result.
- Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.

CAUTION: Ignoring these cautions may cause moderate injury or property damage as a result of incorrect operation.

- Never disassemble or modify the device, as failures may result.
- Do not subject to extreme force and do not pull on the cable or failures may result.
- Keep the microphone dry and avoid exposure to extreme temperatures and humidity.

General Description And Powering

General Description

The Shure SM7dB dynamic microphone has a smooth, flat, wide-range frequency response appropriate for

content creation, speech, music, and beyond. A builtin active preamplifier provides up to +28 dB of lownoise, flat, transparent gain while preserving frequency response for a clean, classic sound. The SM7dB's built-in preamp delivers the legendary sound of the SM7B, completely uncompromised and without the need for an inline preamplifier. The SM7dB back panel switches allow customized frequency response and the ability to adjust or bypass the preamp.

Powering the SM7dB Preamplifier

Important: The SM7dB requires +48 V phantom power to operate with the preamplifier engaged. It will operate in bypass mode without phantom power.

- To deliver audio directly to a computer, use an audio interface with an XLR input that provides +48 V phantom power, such as the Shure MVi or MVX2U, and turn phantom power on.
- When connecting to a mixer, use only balanced, microphone-level inputs with phantom power. Turn phantom power on for the channel your SM7dB is connected to.
- Depending on your interface or mixer, phantom power may be enabled through a switch, a button, or control software. Refer to the user guide for your interface or mixer to learn how to engage phantom power.

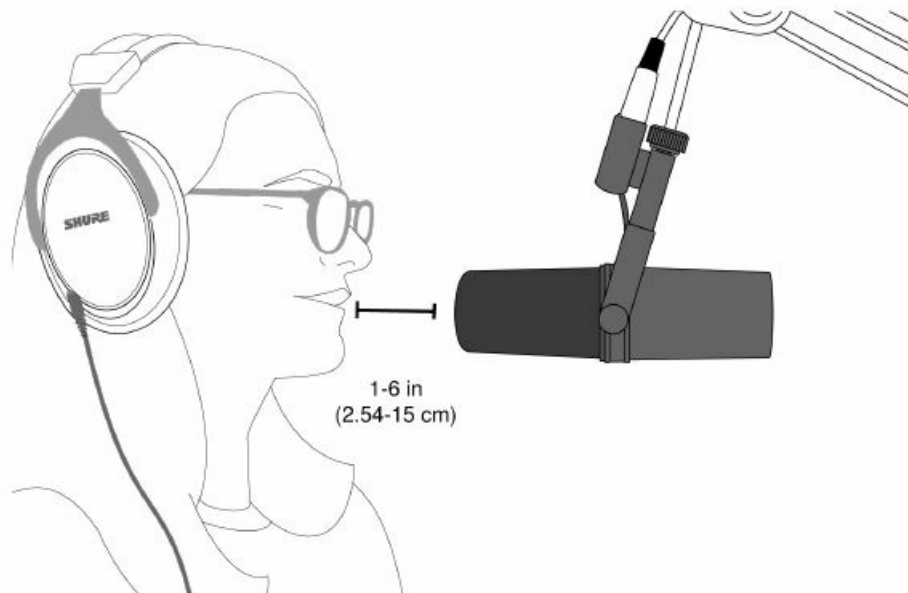
Preamplifier Best Practices

- The SM7dB features a builtin active preamplifier which provides up to +28 dB of lownoise, flat, transparent gain that optimizes audio performance.
- Adjust the gain level on the SM7dB before adjusting levels on your interface or mixer. This approach maximizes the signal-to-noise ratio for a cleaner, clearer sound.
- In podcast or quiet vocal applications, you are more likely to need the +28 dB setting, while louder talkers or singers may only need the +18 dB setting. For instrumental applications, you may find that the +18 dB or the bypass settings reach the ideal input levels.

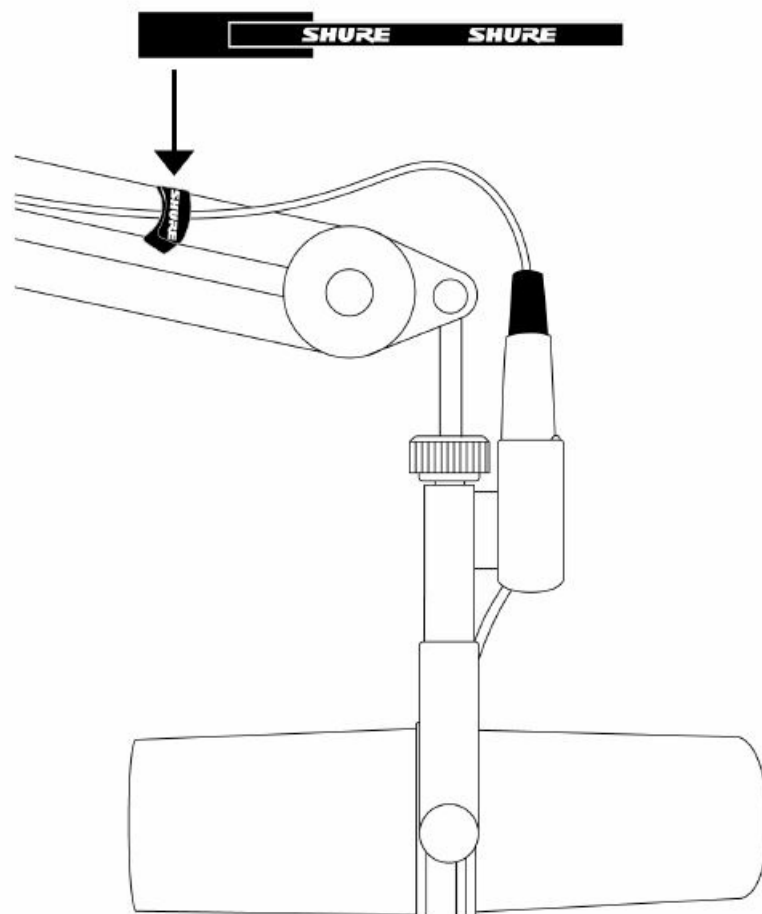
Using Variable Impedance Mic Preamplifiers

- Select the highest available impedance setting on the external preamp when using the built-in preamp.
- If you are using a low impedance setting to change the tonality for creative purposes, bypass the SM7dB's built-in preamp.
- Keeping the SM7dB preamp engaged with a low-impedance setting will not yield the same changes in tone.

Microphone Placement



- Speak directly into the mic, 1 to 6 inches (2.54 to 15 cm) away to block offaxis noise.
- For a warmer bass response, move closer to the microphone. For less bass, move the microphone away from you.



Velcro Cable Tie

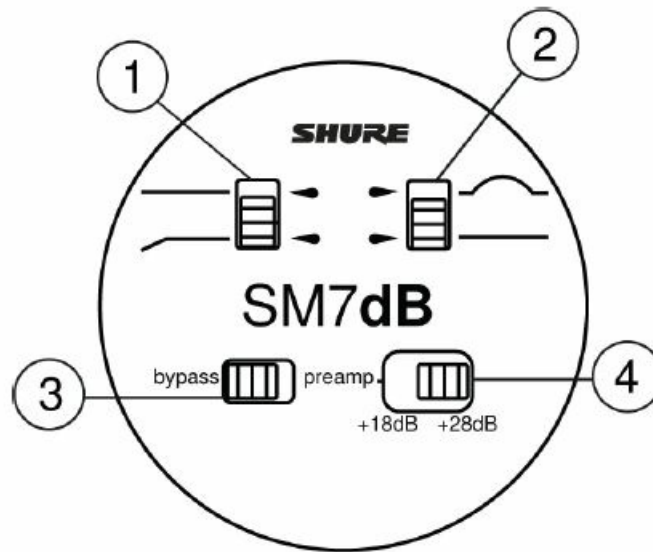
- Use the enclosed velcro tie to secure the cable.

Windscreen

- Use the standard windscreen for general voice and instrumental applications.

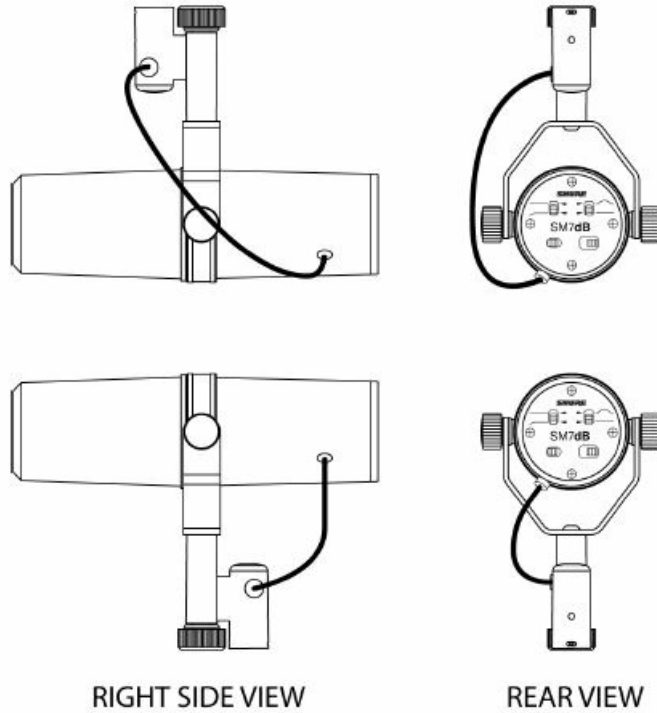
- When you speak, you may hear vocal pops from some consonant sounds (known as plosives).
- To prevent more plosive sounds and wind noise, you can use the larger A7WS windscreen.

Adjust Back Panel Switches



1. **Bass Rolloff Switch** To reduce the bass, push the top-left switch down. This can help lower background hum from A/C, HVAC, or traffic.
2. **Presence Boost** For a brighter sound in mid-range frequencies, push the top-right switch up. This can help improve vocal clarity.
3. **Bypass Switch** Push the bottom-left switch to the left to bypass the preamp and achieve the classic SM7B sound.
4. **Preamp Switch** To adjust the gain on the built-in preamp, push the bottom-right switch to the left for +18 dB and to the right for +28 dB.

Switching Microphone Orientation



Boom and Microphone Stand Mounting Configuration

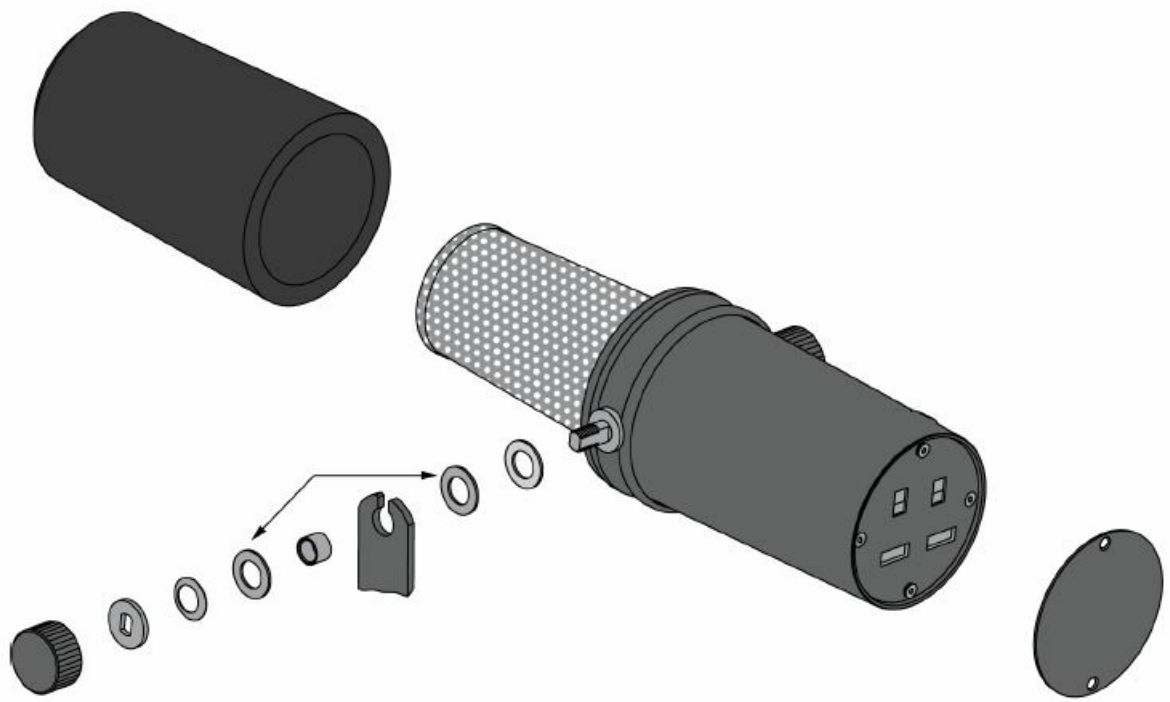
The SM7dB can be mounted on a boom arm or a stand. The default setup for the SM7dB is for a boom mount. To keep the rear panel facing upright when mounted on a stand, reconfigure the mounting assembly. To set up the SM7dB for a microphone stand:

1. Remove tightening nuts on the sides.
2. Remove the fitted washers, the lock washers, the outer brass washers, and the brass sleeves.
3. Slide the bracket off the microphone. Be careful not to lose the washers still on the microphone.
4. Invert and rotate the bracket. Slide it back onto the bolts over the brass and plastic washers still on the microphone.
 - The bracket should fit so the XLR connector faces the rear of the microphone and the Shure logo on the back of the microphone is right-side up.
5. Replace the brass sleeves. Be sure they are seated properly within the inner washers.
6. Replace the outer brass washers, the lock washers, and the fitted washers.
7. Replace the tightening nuts and tighten the microphone at the desired angle.

Note: If the tightening nuts do not hold the microphone in place, you may need to re-position the brass sleeves and the washers.

Mounting Assembly

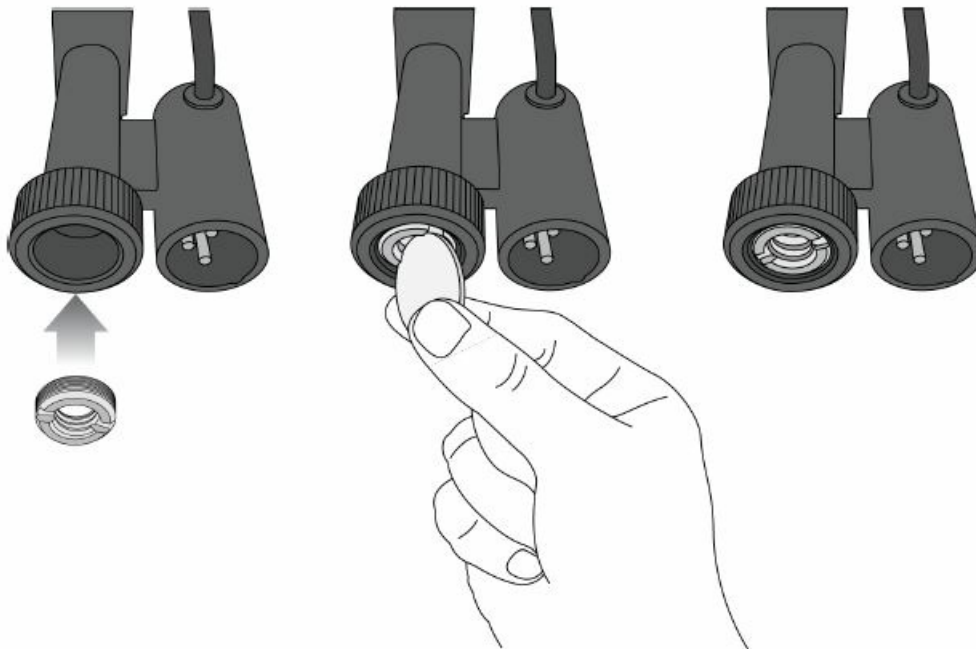
Mounting Assembly – Exploded View



Mounting Assembly - Exploded View

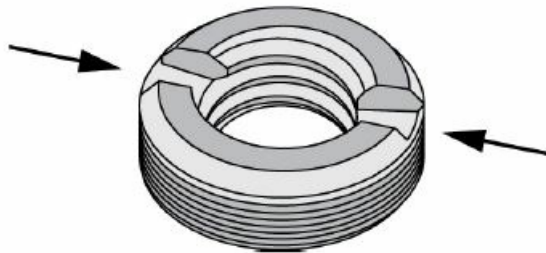
1. Tightening nut
2. Fitted washer
3. Lock washer
4. Brass washers
5. Brass sleeve
6. Mounting bracket
7. Plastic washer
8. Response switches
9. Switch cover
10. Windscreen

Install or Remove the Stand Adapter



- To mount the microphone on a 3/8 in. stand, insert the included brass stand adapter and tighten it with a coin or screwdriver.

Important



- Make sure that the slots on the adapter face outward.

Specifications

- Type
 - Dynamic (moving coil)
- Frequency Response
 - 50 to 20,000 Hz
- Polar Pattern
 - Cardioid

Output Impedance

Preamp engaged	27 Ω
Bypass mode	150 Ω

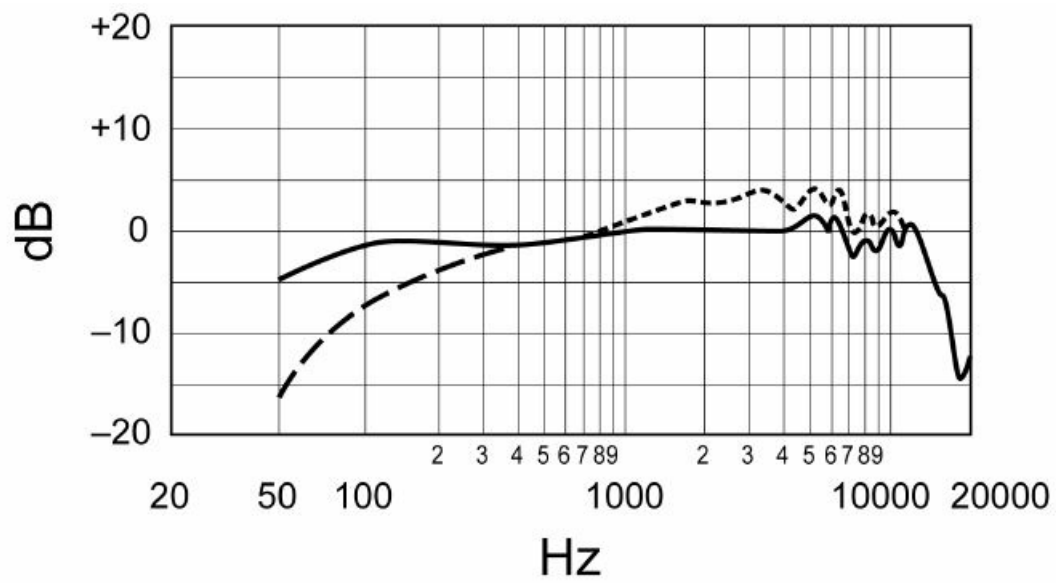
- Recommended Load
 - $>1\text{k } \Omega$

Sensitivity

Flat response bypass mode	59 dBV/Pa[1] (1.12 mV)
Flat response +18 preamp engaged	-41 dBV/Pa[1] (8.91 mV)
Flat response +28 preamp engaged	-31 dBV/Pa[1] (28.2 mV)

- Hum Pickup
 - (typical, at 60 Hz, equivalent SPL/mOe)
 - 11 dB
- Preamplifier Equivalent Input Noise
 - (A-weighted, typical)
 - -130 dBV
- Polarity
 - Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3
- Power Requirements
 - (with preamp engaged)
 - 48 V DC [2] phantom power (IEC-61938) 4.5 mA, maximum
- Weight
 - 0.837 kg (1.875 lbs)
- Housing
 - Black enamel aluminum and steel case with black foam windscreen
 1. 1 Pa=94 dB SPL
 2. All specifications measured with a 48 Vdc phantom power supply. The microphone operates at lower voltages, but with slightly decreased headroom and sensitivity.

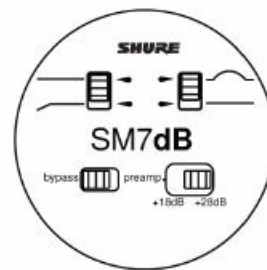
Typical Frequency Response



Flat Response

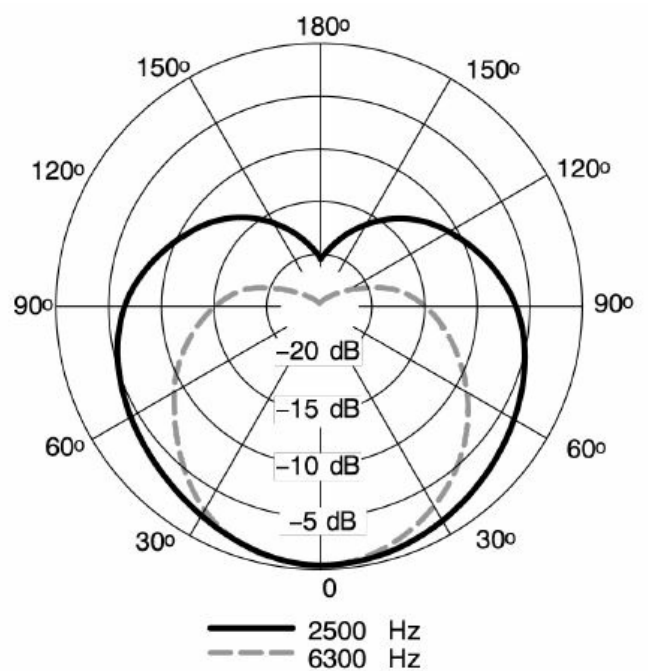
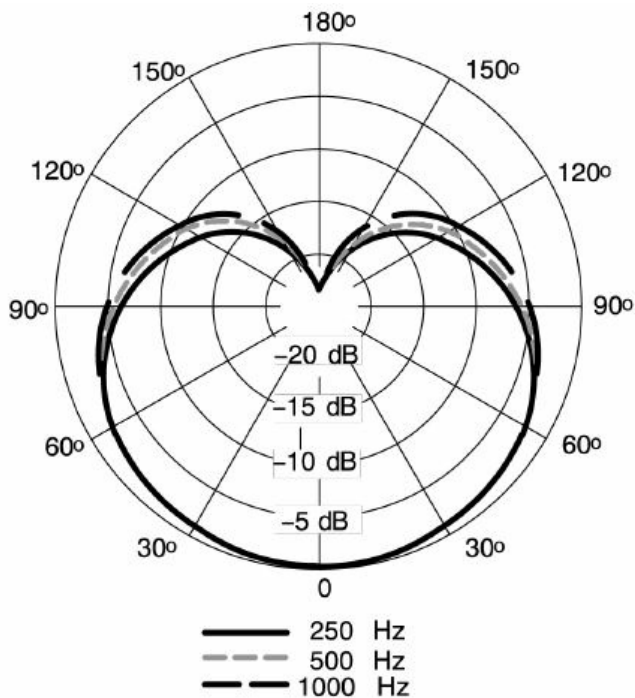


Bass Rolloff

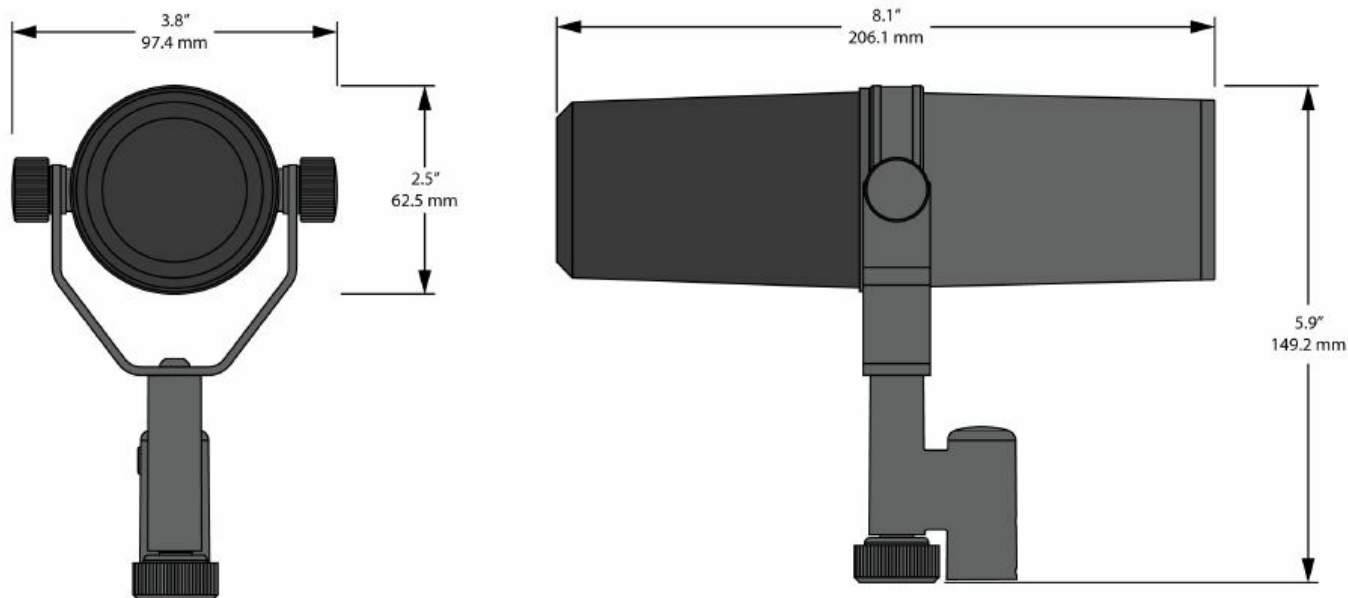


Presence Boost

Typical Polar Pattern



Overall Dimensions



Accessories

Furnished Accessories

Black Foam Windscreen	RK345B
Large Black Foam Windscreen for SM7, also see RK345	A7WS
5/8" to 3/8" Thread Adapter	31A1856

Replacement Parts

Cartridge for SM7dB	RPM106B
Black Windscreen for SM7dB	RK345B
Nut and Washers for SM7dB Yoke Mount	RPM604B

Certifications

CE Notice

- Hereby, Shure Incorporated declares that this product with CE Marking has been determined to be in compliance with European Union requirements.
- The full text of the EU declaration of conformity is available at the following site:
<https://www.shure.com/enEU/support/declarations-of-conformity>.

UKCA Notice

- Hereby, Shure Incorporated declares that this product with UKCA Marking has been determined to be in compliance with UKCA requirements.

- The full text of the UK declaration of conformity is available at the following site:

<https://www.shure.com/enGB/support/declarations-of-conformity>.

Waste Electrical and Electronic Equipment (WEEE) Directive

In the European Union and the United Kingdom, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. Please consider the environment, electric products and packaging are part of regional recycling schemes and do not belong to regular household waste.

Registration, Evaluation, Authorization of Chemicals (REACH) Directive

REACH (Registration, Evaluation, Authorization of Chemicals) is the European Union (EU) and the United Kingdom (UK) chemical substances regulatory framework. Information on substances of very high concern contained in Shure products in a concentration above 0.1% weight over weight (w/w) is available upon request.

SM7dB DYNAMIC VOCAL MICROPHONE WITH BUILT-IN PREAMP

OVERVIEW

The SM7dB is a cardioid dynamic microphone with a Shure-designed built-in preamp providing up to +28 dB of low-noise, flat, transparent gain ideal for lower-output interfaces and simplified audio chains. Delivers warm and smooth audio for vocal and studio applications. Preamp bypass switch, adjustable bass roll-off and presence boost, electromagnetic hum shielding, internal shock mounting, and external windscreen ensure clear and consistent audio reproduction.

FEATURES



SM7dB
Dynamic vocal microphone
with built-in preamp



SM7dB
Back

- Built-in active preamp providing either +18dB or +28dB of extra gain delivers levels suitable for any interface.
- Flat, wide-range frequency response for exceptionally clean and natural reproduction of both music and speech.
- Preamp bypass switch to revert to original SM7B performance.
- Bass roll-off and mid-range emphasis (presence boost) EQ switch controls.
- Superior rejection of electromagnetic hum, optimized for shielding against broadband interference emitted by computer monitors.
- Internal “air suspension” shock isolation virtually eliminates mechanical noise transmission.
- Highly effective pop filter eliminates need for any add-on protection against explosive breath sounds, even for close- up vocals or narration.
- Yoke mounting with captive stand nut for easy mounting and dismounting provides precise control of microphone position.
- Classic cardioid polar pattern, uniform with frequency and symmetrical about axis, to provide maximum rejection and minimum coloration of off-axis sound.
- Rugged construction and excellent cartridge protection for outstanding reliability.

SPECIFICATIONS

Type	Dynamic (moving coil)
Polar Pattern	Cardioid
Frequency Response	50 Hz to 20 kHz
Output Impedance	150 Ω in Bypass Mode 27 Ω in Preamp Mode
Sensitivity (at 1 kHz, open circuit voltage) [1] 1 Pa=94 dB SPL	-59 dBV/Pa[1] (1.12 mV) Flat Response Bypass Mode -41 dBV/Pa[1] (1.12 mV) Flat Response +18 Preamp Mode -31 dBV/Pa[1] (1.12 mV) Flat Response +28 Preamp Mode
Polarity relative to Pin 3	Positive pressure on diaphragm produces positive voltage on Pin 2
Net Weight	837 g (1.875 lbs)
Housing	Black enamel aluminum and steel case with black foam windscreen

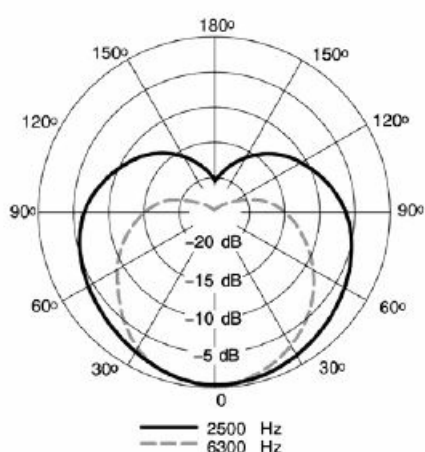
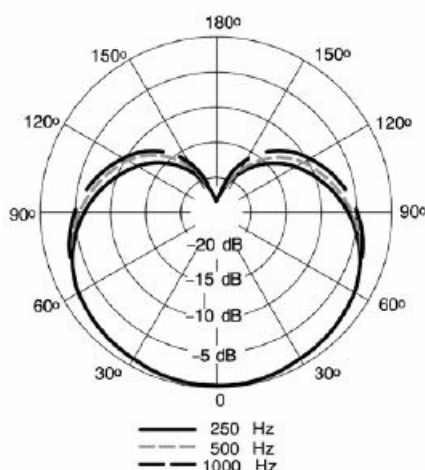
AVAILABLE MODELS

SM7dB	Includes foam windscreens & 3/8" thread adapter
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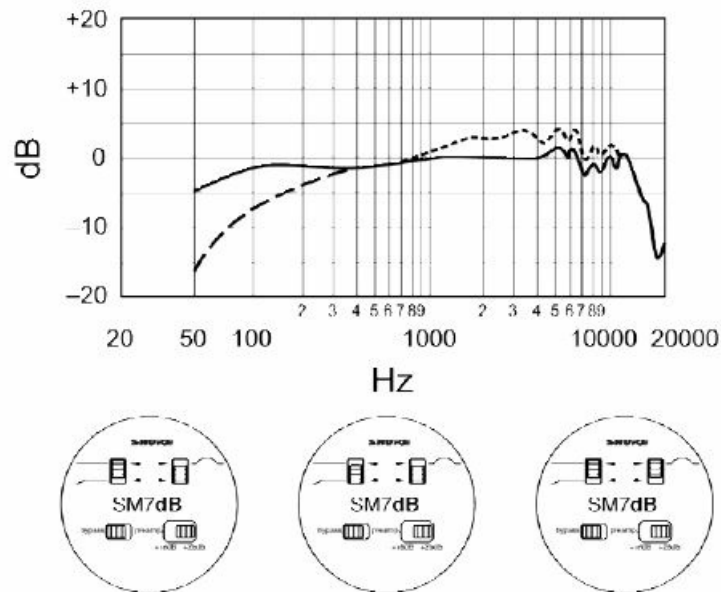
OPTIONAL ACCESSORIES AND REPLACEMENT PARTS

RK345B	Black Close-Talk Windscreen
A7WS	Black Large Close-Talk Windscreen
RPM106B	Internal Microphone Cartridge
RPM604B	Yoke Nut & Washer Replacement Kit

POLAR PATTERN



FREQUENCY RESPONSE



WARRANTY INFORMATION

Shure Incorporated ("Shure") hereby warrants to the original consumer purchaser only that, except as otherwise specified below, this product will be free in nonnal use of any defects in materials and workmanship for a period of two (2) years from the consumer's original date of purchase directly from Shure or from a Shure-authorized reseller.

Al'ly rechargeable batteries contained In or packaged with this product are so warranted for a period of one (1) year from the consumer's original date of purchase. However, rechargeable batteries are consumable and their capacity will be reduced over time based on temperature, amount ol time in storage, charging cycles, and other factors; hence reduction in battery capacity does not constitute a defect in material or workmanship.

At its sole option, Shure will repair or replace the defective product and promptly return it to you. In order for this warranty to be valid, the consumer must, at the time the product is returned, provide proof of purchase in the form of the original purchase receipt directly from Shure or from a Shure-authorized reseller. If Shure elects to replace the defective product, then Shure reserves the right to replace the defective product with another product of the same model or a model of at least comparable quality and features in Shure's sole determination. If you believe this product is defective within the warranty period, carefully repack the unit, insure it and return it with pmof of purchase, postage prepaid, to Shure Incorporated, Attention: Service Department, at the address below.

Outside of the United States, return the product to your dealer or Au1horized Service Center. Addresses are listed on www.Shure.com or can be obtained by contacting Shure at the address listed below. This warranty is not transferable. This warranty does not apply in cases of abuse or misuse of the product, use contrary to Shure's instruction, ordinary wear and tear, an act of God, negligent use, purchase from a party other than Shure or a Shure-authorized reseller, unauthorized repair, or modification of the product.

ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED TO THE EXTENT PERMITTED UNDER APPLICABLE LAWS AND, TO THE EXTENT NOT PERMITTED, ARE HEREBY LIMITED TO THE DURATION AND TERMS OF THIS WARRANTY. SHURE ALSO HEREBY DISCLAIMS ALL LIABILITY FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from stale to state. This warranty does not restrict the rights of the consumer mandated under applicable laws.

THIS WARRANTY SUPERSEDES ALL OTHER WARRANTIES THAT ARE ASSOCIATED OR INCLUDED WITH THIS PRODUCT, EXCEPT THAT ANY SOFTWARE CONTAINED IN OR PACKAGED WITH THIS PRODUCT IS EXCLUDED FROM THIS WARRANTY AND INSTEAD SHALL BE COVERED BY THE WARRANTY, IF ANY, PROVIDED IN SHURE'S END USER LICENSE AGREEMENT ACCOMPANYING SUCH SOFTWARE.

FOR ORIGINAL PURCHASES IN AUSTRALIA ONLY

LIMITED WARRANTY AGAINST DEFECTS

Shure Incorporated ("Shure") hereby warrants to the original consumer purchaser in Australia only that, except as otherwise specified below, this product will be free in normal use of any defects in materials and workmanship for a period of two (2) years from the consumer's original date of purchase directly from Shure or from a Shure-authorized reseller. Any rechargeable batteries contained in or packaged with this product are so warranted for a period of one (1) year from the consumer's original date of purchase. However, rechargeable batteries are consumable and their capacity will be reduced over time based on temperature, amount of time in storage, charging cycles, and other factors; hence reduction in battery capacity does not constitute a defect in material or workmanship.

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Outside of the United States, return the product to your dealer or Authorized Service Center. Addresses are listed on www.Shure.com or can be obtained by contacting Shure at the address listed below. This warranty is not transferable. This warranty does not apply in cases of abuse or misuse of the product, use contrary to Shure's instruction, ordinary wear and tear, an act of God, negligent use, purchase from a party other than Shure or a Shure-authorized reseller, unauthorized repair, or modification of the product.

ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED TO THE EXTENT PERMITTED UNDER APPLICABLE LAWS AND, TO THE EXTENT NOT PERMITTED, ARE HEREBY LIMITED TO THE EXTENT PERMITTED TO THE DURATION AND TERMS OF THIS WARRANTY. SHURE ALSO HEREBY DISCLAIMS ALL LIABILITY FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES FOR ANY PURCHASER ACQUIRING THIS PRODUCT, EXCEPT THAT THIS DOES NOT CONSTITUTE A DISCLAIMER OF RIGHTS GUARANTEED TO ANY "CONSUMER" UNDER THE AUSTRALIAN CONSUMER LAW.

This warranty gives purchasers of this product in Australia specific legal rights which are in addition to the rights and remedies of consumers under the Australian Consumer Law, which cannot be excluded or limited. If you are a "consumer" under the Australian Consumer Law, you are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

THIS WARRANTY SUPERSEDES ALL OTHER WARRANTIES THAT ARE ASSOCIATED OR INCLUDED WITH THIS PRODUCT, EXCEPT THAT ANY SOFTWARE CONTAINED IN OR PACKAGED WITH THIS PRODUCT IS EXCLUDED FROM THIS WARRANTY AND INSTEAD SHALL BE COVERED BY THE WARRANTY, IF ANY, PROVIDED IN SHURE'S END USER LICENSE AGREEMENT ACCOMPANYING SUCH SOFTWARE.

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SM7d1B Vocal Microphone With Active Preamp, SM7d1B, Vocal Microphone With Active Prea
mp, Microphone With Active Preamp, Active Preamp

References

- [les.io](#)
- [Shure: Microphones, Wireless microphones, in-ear monitoring, earphones, headphones](#)
- [Documentation Finder - Shure Europe](#)
- [Shure: Microphones, Wireless microphones, in-ear monitoring, earphones, headphones](#)
- [Shure: Microphones, Wireless microphones, in-ear monitoring, earphones, headphones](#)
- [Shure: Microphones, Wireless microphones, in-ear monitoring, earphones, headphones](#)
- [Documentation Finder - Shure United Kingdom](#)
- [User Manual](#)