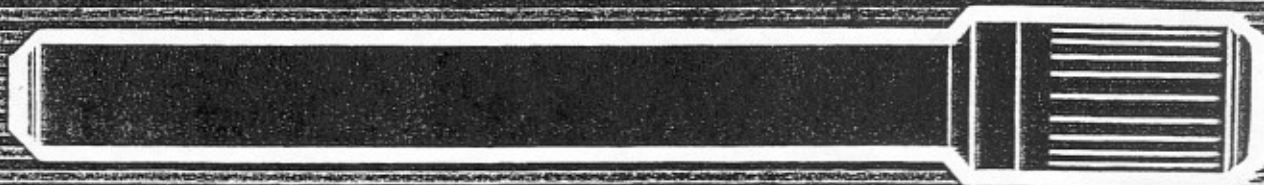


Bose® Power Microphone Owner's Guide



BOSE

BOSE
Better sound through research.

Corporation, The Mountain, Framingham, MA 01701 (617) 879-7330
Belgium, Canada, England, France, Germany, Greece, Ireland,
Italy, Netherlands, Spain, Switzerland, United States.

© Copyright 1986 Bose Corporation. All rights reserved. Covered by patent rights issued and/or pending. Acoustic Wave is a registered trademark of Bose Corporation.
Specifications and features subject to change without notice.

PN12857

Thank you for purchasing the Bose® Power Microphone (PM-1). The PM-1 is designed specifically for your AW-1 Acoustic Wave® music system. With it, you will be able to make high-quality live recordings of both music and voice. The PM-1/AW-1 combination can also be used as a portable public-address system.

You will find many occasions to use your PM-1 and Acoustic Wave® music system for family, entertainment and business including:

- recitals
- family events
- speeches
- baby's first words
- training tapes
- conversations with your children
- public announcements
- parties
- meetings
- musical and dramatic events

This owner's guide includes general operating instructions as well as some valuable tips to help you get the most out of your microphone and the AW-1. Please read it completely, and enjoy using your PM-1.

About Your Bose Power Microphone . . .

Compatibility

The Bose Power Microphone with its high level output is electronically matched to your Acoustic Wave® music system. Unlike low-level microphones which require a preamplifier, the PM-1 plugs *directly* into your AW-1 and is ready to use—with clear sound at any volume.

Note: The high-level output of the Bose Power Microphone may be too strong for the microphone inputs found on other recording equipment, causing distorted sound. If you use your PM-1 with another system, connect the microphone to the AUXILIARY IN or TAPE IN inputs instead.

Pickup Pattern

Different microphones "hear" (pick up sound) with different patterns. These patterns determine what each microphone "hears," along with the balance of foreground and background sound. The PM-1 picks up sound in a heart-shaped or cardioid pattern (**Figure 1**). It is *most* sensitive to sound directly in front, slightly *less* sensitive to sound to the right and left, and picks up relatively little sound from behind. This pickup pattern was selected for the PM-1 because it is best suited to all-purpose recording and amplification. It also makes the PM-1 less prone to feedback (the squealing caused by sound from the speakers entering the microphone). **Do not point the microphone directly at the AW-1.**

To get the best possible results with your PM-1, be sure to refer to the instructions in the "Positioning the Microphone" section later in

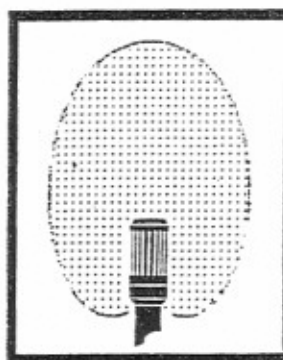


Figure 1

this guide.

Using Your Bose Power Microphone

Hooking Up to the AW-1

Insert the two plugs at the end of the microphone cord into the INPUT jacks on the back of the AW-1 (Figure 2). Be sure to press the INPUT button on the top of the AW-1 to the AUXiliary (down) position. If this button is not down, you will not hear the microphone. You are now ready to use the PM-1.

Note: With a single microphone, the AW-1 records monophonic sound. To record in stereo, you will need two Bose Power Microphones. Simply insert one plug from each microphone into an INPUT jack and let the second plug hang. Tape over the unused plugs to avoid accidental contact.

Inserting Batteries

To insert batteries, unscrew the head (top) of the microphone and insert the enclosed AA batteries (Figure 3). Replace the microphone head.

Batteries that come with your PM-1 are standard AA batteries with a necessary rubber ring on each to ensure proper fit. Be sure that the tip of the rubber ring doesn't slide over the outside of the batteries or jamming may occur. To replace the batteries, simply remove the rings and slide them onto the new batteries. If you plan on leaving your microphone unused for eight weeks or more, remove the batteries.

Turning the PM-1 On and Off

Power to the microphone is controlled by the OFF/VOICE/MUSIC switch. Because the PM-1 is battery operated, the switch should always be in the OFF position when the microphone is not in use.

There are two ON positions, VOICE and MUSIC.

Music: Use this position when recording or amplifying music. In this position, the microphone is adjusted for the wide tonal range of music and will record all audible frequencies. (Recording music in the VOICE position will result in a somewhat less full sound.)

Voice: Use this position when recording or amplifying voices. In this position, the microphone is adjusted for the tonal qualities of the human voice. (Voice that is recorded in the MUSIC position will be overly full or bassy.)

Note: When recording voice and musical instruments simultaneously (as in a music group), place the switch in the MUSIC position. If a speaker or singer in the group is holding the microphone less than 12 inches away from his or her mouth, use the VOICE position instead. In either case, experiment before recording.

Adjusting the Sound

The VOLUME, TREBLE, and BASS controls on the AW-1 can be used to adjust the sound that you hear through the speakers when using the microphone. The volume and tone of the recording is adjusted automatically by the AW-1 and is not influenced by these controls.

Note: Sound being recorded will also be heard simultaneously over the speakers. If you do not wish to listen while you are recording, simply slide the AW-1 VOLUME control to "0." This will also avoid the possibility of squealing or feedback.

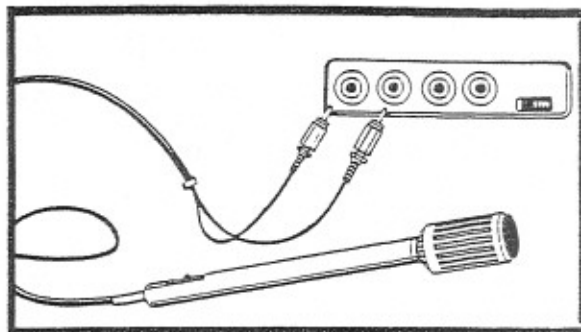


Figure 2

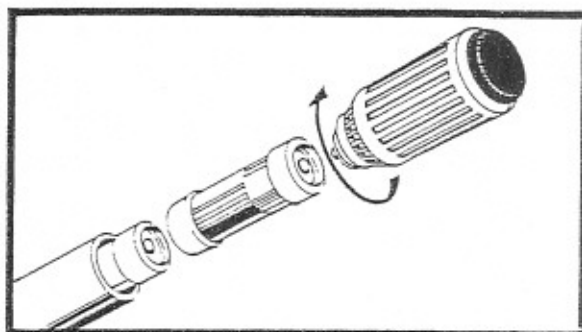


Figure 3

Pop Filter and Microphone Stand

Your PM-1 comes with a foam pop filter to reduce wind noise and the vocal pops that can happen when any microphone is used at a very close distance. To use the pop filter, gently slide it over the microphone head (Figure 4). The filter may be left on permanently.

To use the accompanying stand, rest the microphone along the cut-out portion (Figure 4). Avoid placing the stand on vibrating surfaces (such as a stage floor or piano), as the vibrations may be picked up by the microphone.

Positioning the Microphone

Because the PM-1 is most sensitive to sound coming directly toward it, it should always be positioned horizontally, pointed directly at the source of sound.

Figures 5-8 illustrate proper placement of the PM-1 in a variety of uses. Remember that the closer the microphone is to the subject, the more focused the sound becomes; when the microphone is further back, the sound will be more reverberant. In all cases, experiment before making a final recording.

Note: When amplifying and recording sound at the same time, be sure the microphone is placed at least three feet behind the AW-1 to avoid the possibility of squealing or feedback.

Caring for Your Bose Power Microphone

- Always remember to turn the OFF/VOICE/MUSIC switch to the OFF position when not using the microphone.
- Store the PM-1 in its box when not in use.
- Do not drop the PM-1.
- DO NOT PLACE THE PM-1 IN WATER: DAMAGE COULD OCCUR.
- If the PM-1 is to be unused for 8 weeks or more, remove the batteries.

Having Difficulty?

If you are not getting any sound from your PM-1 or are experiencing faint volume, humming or buzzing:

1. Make sure both plugs are fully inserted into the AW-1 input jacks.
2. Check that the AW-1 INPUT button is in the AUXiliary (down) position.
3. Make sure the OFF/VOICE/MUSIC control is either in the VOICE or MUSIC position.
4. Check the AW-1 volume control position.
5. Check your batteries.
6. Make sure the microphone head is tightened.

If you have checked all of the above and are still having difficulty, contact your Bose representative.

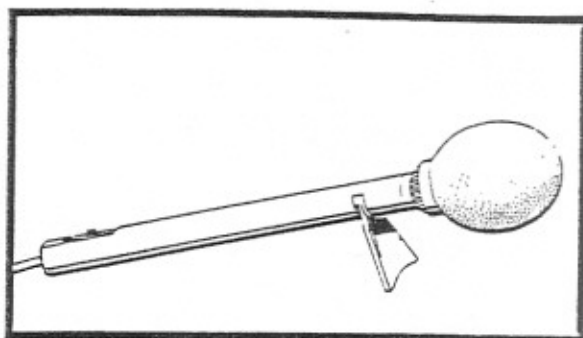
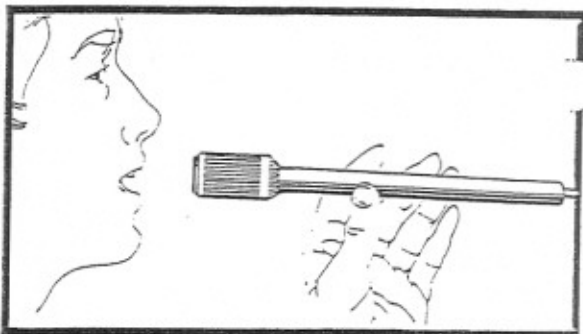
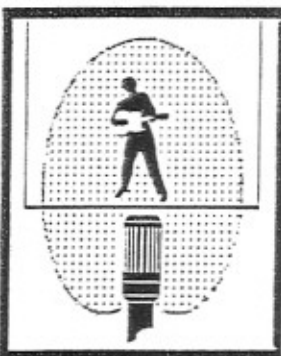


Figure 4



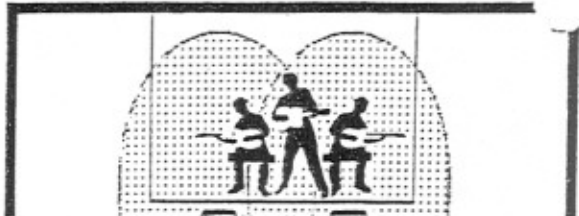
RECORDING VOICE—Figure 5

Position the PM-1 four to eight inches from the speaker's or singer's mouth, as shown.



EVENT—SINGLE MICROPHONE—Figure 6

Center the PM-1 in front of the area being recorded, pointing forward and on level with the sound source.



Technical Specifications

Acoustic

Sensitivity:
94 dB sound pressure level
(SPL) at 1 kHz produces 80 mV
Frequency response:
80 Hz to 15 kHz \pm 5 dB
Switchable: 6 dB/octave rolloff
below 200 Hz
Response pattern:
Cardioid
Maximum sound pressure level
(SPL) before clipping:
105 dB SPL

Electrical

Output impedance:
10K ohms
Maximum output:
.5 V RMS
Equivalent noise level:
Less than 40 dBA SPL
Battery life:
600 hours, minimum

Mechanical

Weight: 8.5 oz.
Length: 10"
Diameter: 1.2"

Limited one year warranty:

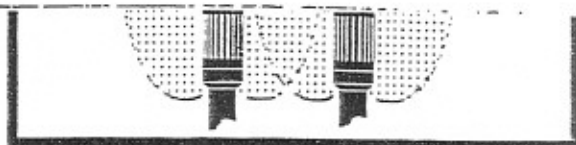
Bose Corporation warrants this unit to be free from defects in materials and workmanship for a period of one year from the original date of purchase. During that period, Bose will remedy all such defects without charge for parts or labor, upon return of the unit together with a **copy of your original sales receipt** to Bose Corporation or your nearest Bose Authorized Service Center. This warranty does not extend to damages resulting from improper installation, misuse, neglect or abuse, or to exterior appearance.

In no event shall Bose be liable for incidental or consequential damages.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

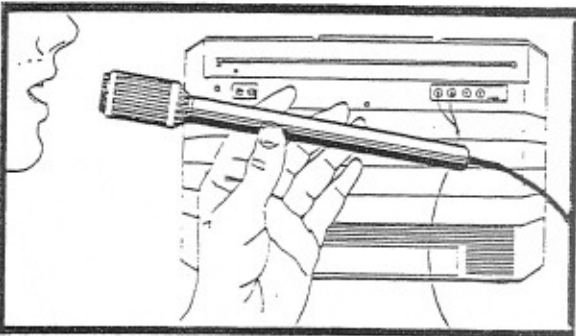
Should this unit fail within the warranty period, contact your Bose representative for return authorization or call 1-800-743-6942.

The foregoing warranty applies only to products sold within the United States of America, its territories and possessions, and to sales at overseas military post exchanges.



EVENT—TWO MICROPHONES—Figure 7

Place one microphone $\frac{1}{4}$ of the way in from the left side of the area being recorded and the second microphone $\frac{1}{4}$ of the way in from the right side, as shown. Be sure to face both microphones forward and level with the sound source.



AS PUBLIC ADDRESS SYSTEM—Figure 8

Place the microphone at least three feet *behind* the AW-1 to avoid the possibility of screeching or feedback.

Eliminating Feedback. If you should experience any feedback while using your PM-1:

- Reduce the volume of the AW-1.
- Move the microphone further away and behind the unit.