

# Operating Instructions

## Personal FM Receiver Models R16 and R16M



### **Model PFM R16:**

The R16 Receiver features a removeable, Plug Mount Microphone to pick up nearby sounds. Other types of accessory microphones or extension cords can be plugged into the MIC jack as well. The PFM R16 operates on a 9V battery.

### **Model PFM R16M:**

The R16M Receiver features an internal microphone to pick up nearby sounds. External microphones cannot be plugged into the R16M. The PFM R16M operates on a 9V battery.

### **Model R16-72E6:**

The R16-72E6 features a removeable, Plug Mount Microphone to pick up nearby sounds. Other types of accessory microphones or extension cords can be plugged into the MIC jack as well. The R16-72E6 includes an internal 6V rechargeable battery for extended operating time.

R16 receivers feature dual volume controls that allow separate adjustment of a received FM signal and the environmental microphone signal. By adjusting the two controls, any desired mixture of FM and environmental microphone sound can be selected. The environmental microphone helps the listener hear their own voice or nearby conversations more easily and can be turned down when background noise is troublesome.

### **Using the R16/R16M/R16-72E6:**

**Step 1:** If you have a 9V Receiver, insert a 9 Volt alkaline battery into the battery compartment. Make sure the positive and negative contacts are properly oriented. Do not force the battery in the wrong way. A BAT 003 rechargeable battery may also be used. The earphone jack doubles as a charging jack for use with the BAT 005 Charger. The R16-72E6 has a 6V battery pack that must be charged with the BAT 005 Charger before using. See the Battery Care section for more information.

**Step 2:** If you have a model R16 with external microphone, make sure the microphone is plugged into the "MIC" jack on top of the Receiver. The R16M does not have a microphone jack, the mic is internal.

**Step 3:** Plug an earphone or headphone into the "EAR/CHG" jack on top of the receiver.

**Step 4:** Turn the "ON/FM" knob (tall knob) clockwise just until it clicks to turn the receiver on. The red indicator will glow to show the receiver is on. While listening with the earphone, slowly turn the "MIC" knob (short knob) clockwise to adjust the microphone volume to a comfortable level.

**Step 5:** Turn the MIC volume fully down (counterclockwise). Now use your PERSONAL FM or PERSONAL PA Transmitter to provide an FM signal. Turn the transmitter on and have a helper speak into the transmitter microphone. Slowly turn the FM volume up on the Receiver. You should be able to hear the FM signal.

*Note: the receiver must be on the same channel as the transmitter.*

Adjust the FM and MIC levels for the balance of sounds you want to hear. Generally, you will want the FM volume set higher than the MIC volume. Turn the MIC volume up when you want to hear nearby sounds. Turn the MIC volume down when you are not listening to nearby sounds to reduce background noises. When the FM volume is turned all the way down, the receiver can be used as a personal amplifier. When the MIC volume is turned all the way down, the receiver functions as an FM receiver only. Remember to turn the receiver off when it is not in use or when charging.

## Using the R16 with a Hearing Aid:

Plug the optional NKL 001 Neckloop into the EAR jack instead of an earphone. The Neckloop creates a magnetic signal that can be picked up by a hearing aid equipped with a T-Coil. Turn the hearing aid switch to the "T" position and adjust the hearing aid and receiver volume controls for the best level.

## Battery Information for Receivers:

Use only an alkaline 9 Volt disposable battery (BAT 006) or a 7-cell rechargeable 9 Volt battery (BAT 003) with the PFM R16/R16M. The BAT 003 rechargeable battery must be used with a BAT 004, BAT 005, or CHG 1269A Charger. Other batteries and chargers are NOT recommended. *Do not mix rechargeable batteries and chargers from different manufacturers. Poor battery life or failure can result.*

In normal use, an alkaline battery such as the Eveready 522 will provide about 17 hours of use. If the sound becomes weak or distorted, replace the battery. The indicator light may still be on, even with a battery that is weak. Do not leave dead batteries in the receivers.

## Rechargeable Batteries:

For the 9V R16, we recommend only the 7-cell, 8.4 Volt types (Williams BAT 003). A fully-charged BAT 003 will provide about 5 hours of use per charge. The battery may be recharged without removing it from the receiver. The R16-72E6 has a built-in 6V rechargeable battery pack (BAT 021) that will operate for approximately 15 hours per charge. The BAT 021 Battery Pack can be replaced when it no longer holds a charge.

The BAT 005 Single Charger is used with 6V and 9V receivers and has a cord that plugs into the receiver "EAR" jack to charge the battery. It takes about 14 hours to fully charge the battery. If the BAT 005 Single Charger is used, the receiver can be left charging continuously when not in use. The optional CHG 1269A Multiple Charger can charge 12 receivers simultaneously through the receiver "EAR" jacks. The receiver should always be turned OFF while charging.

DO NOT ATTEMPT TO RECHARGE DISPOSABLE BATTERIES!

AVOID SHORTING THE PLUS AND MINUS BATTERY TERMINALS TOGETHER WITH METAL OBJECTS. BATTERY DAMAGE AND BURNS CAN RESULT!

DO NOT MIX RECHARGEABLE BATTERIES AND CHARGERS FROM DIFFERENT MANUFACTURERS.

## Receiver Tone Controls:

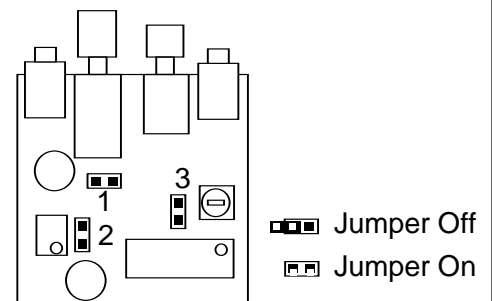
The R16 and R16M have internal adjustments to cut low frequency sounds and to boost high frequency sounds. The adjustments are made by moving jumpers inside the receiver.

- (1) To open the Receiver, first flip open the battery compartment door. The back of the receiver opens like a book - pull up and out on the battery door to open the back.
- (2) Look at the receiver layout guide below to identify the jumpers. Don't "adjust" anything but the jumpers!
- (3) The jumpers are moved by lifting them straight up. Placing the jumper across both posts sets it in the ON position. Placing the jumper on only one of the posts sets it in the OFF position. Each jumper has the effect shown in the chart below. The jumpers can be used individually or combined to alter the frequency response of the receiver. For example, using Jumpers 2 and 3 in the ON position provides 12dB of boost at 8kHz. The jumpers affect both the FM and environmental microphone signal. Receivers are sent from the factory with Jumper 1 on and Jumpers 2 and 3 off.

**Jumper 1:** Low Frequency Boost (-10 dB at 100 Hz)  
when jumper is on.  
( -25dB at 100Hz when jumper is off)

**Jumper 2:** High Frequency Boost (+6dB at 8kHz)  
when jumper is on.

**Jumper 3:** High Frequency Boost (+6dB at 8kHz)  
when jumper is on.



R16 Layout Guide - Tone Controls