

# WIR 100 Listening System Instructions

## Model WIR TX4 Transmitter, WIR RX4 Receiver

### Overview

Thank you for purchasing the WIR 100 Listening System from Williams Sound Corp. Anyone needing auditory assistance to overcome background noise, reverberation, or distance from the sound source can benefit from the WIR 100.

You can use the WIR 100 for listening to the TV or other audio equipment, or for hearing assistance in conference rooms. You can also use your RX4 Receiver in most facilities which have an infrared transmitter operating on 95 kHz, such as theaters, cinemas, or churches.

**If at anytime you have problems with the system, don't hesitate to call us toll-free at 1-800-843-3544.**

### System Components

The WIR 100 Listening System includes the following elements.

1. TX4 Transmitter
  - 110 VAC to 12 VDC Adaptor
  - TV Microphone (MIC 059)
  - RCA Plug Adapter (2)
2. RX4 Receiver
  - (2) AAA Rechargeable Batteries (BAT 022)

### Operating Instructions

#### 1. Connect the Transmitter's Power Supply

Plug the 110 VAC to 12 VDC Adaptor cord into the "DC 12V" input jack on the back of the TX4 Transmitter (Figure 1). Then plug the Adaptor into a 110 VAC outlet. The red "auto power" indicator will light momentarily. This red "auto power" indicator will only stay lit once a proper audio signal is connected.

Figure 1: TX4 Transmitter (Rear View)

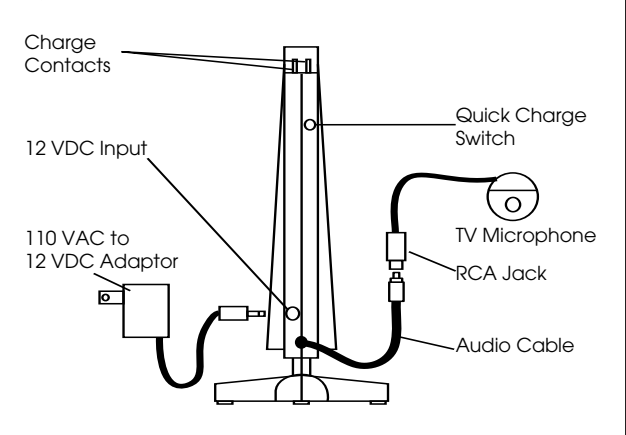


Figure 2: TX4 Transmitter (Front View)

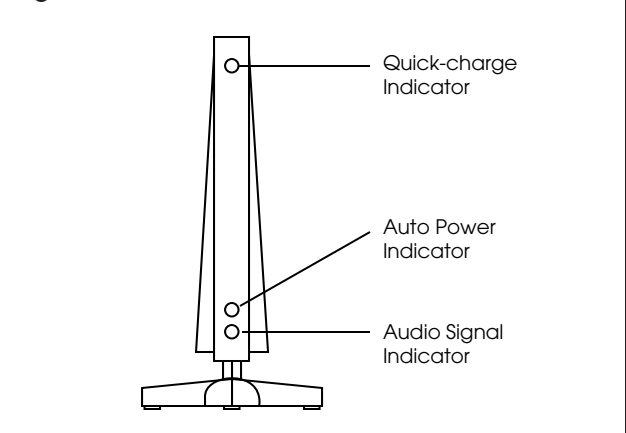
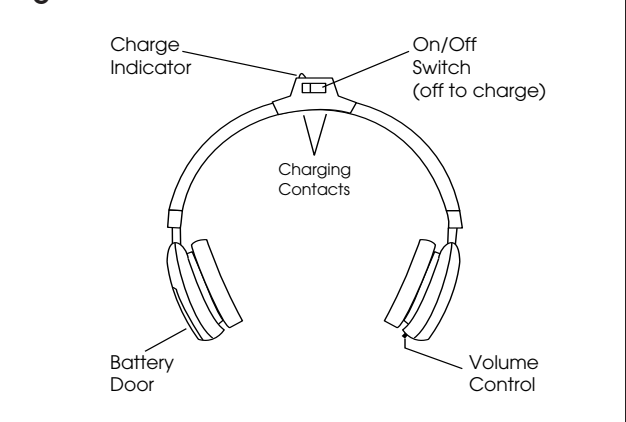
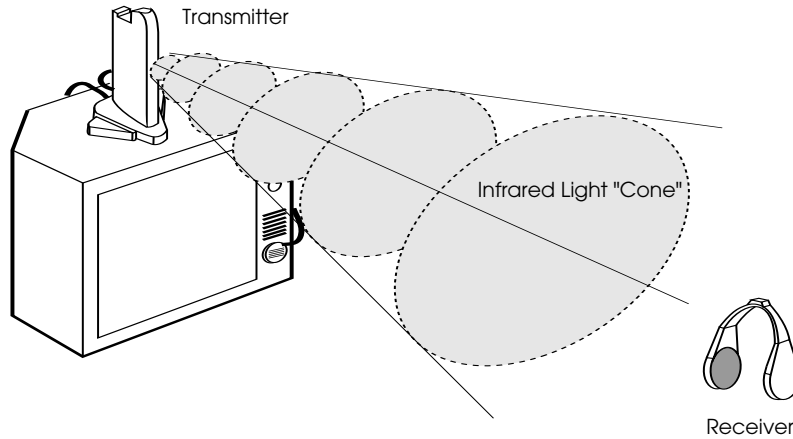


Figure 3: RX4 Receiver



**Figure 4: Infrared Light Pattern**



## 2. Connect the Transmitter to the Audio Source

For best operation, the Audio Cable can be connected directly to your VCR or TV's audio output. As a second choice, the TX4 Audio Cable can also be connected to an earphone/headphone jack. (Use the plug adapters supplied if necessary.)

If you have difficulty finding the direct audio output on your TV, consult its operating instructions.

If your TV has no direct audio output or earphone/headphone jack, use the MIC 059 TV Microphone supplied. Plug the TV Mic into the Audio Cable as shown in Figure 1. The microphone has a self-adhesive clip that can be attached near the loudspeaker of your TV. (See Figure 5.)

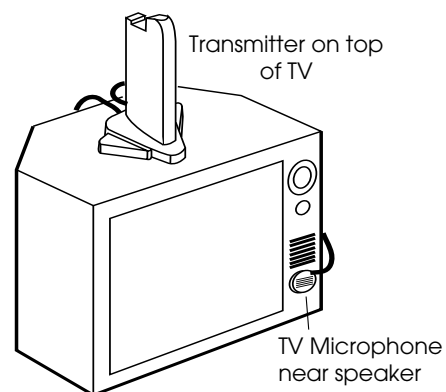
The TX4 Transmitter features an Automatic Level Control to adjust for different audio signal levels and to maintain a comfortable listening level. When a proper audio signal is present, the "Audio Signal" indicator will flash coincidentally with the audio signal. The red "Auto Power" indicator will light constantly when enough audio signal is present. If the audio signal is removed, the "Auto Power" indicator will turn OFF after approximately 4 minutes and will remain off until an audio signal is reconnected.

## 3. Set Up The Transmitter

Ideally, the TX4 Transmitter should be at ear-level height or above. The infrared light pattern is cone-shaped as it leaves the Transmitter, as shown in Figure 4. The best reception is inside the cone. Sunlight can cause infrared interference in the form of a buzz, hiss, or static. Thus, the system cannot be used outdoors and may not work properly inside if a lot of direct sunlight is present. Closing drapes or blinds will help if sunlight is a problem.

Any number of Receivers may be used with the TX4 Transmitter, but use only one Transmitter in a room at the same time. Otherwise, interference will occur.

**Figure 5: TX4 Transmitter On TV**



#### 4. Charging The Receiver Batteries

Load the two AAA Ni-Cad rechargeable batteries into the RX4 Receiver. Be careful not to bend the plastic tabs when you replace the battery door.

The RX4 Receiver must be charged before it can be used for the first time. For charging, set the receiver on top of the transmitter so that:

- a) the RX4's ON/OFF switch is pointed toward the back of the transmitter, and
- b) the charging pins on the TX4 engage the charging contact holes in the receiver. (See Figure 3.)

**Make sure the Receiver Power Switch is turned OFF while charging. (Figure 3.)**

The Charging Indicator on the Receiver should light. (See Figure 3.) If it doesn't, make sure the Transmitter power is connected and the charging contact pins are properly engaged. The Receiver trickle charges whenever it is placed on the Transmitter / Charger Stand.

Press the Quick Charge Switch on the TX4 (See Figure 1.) The Quick Charge Indicator on the Transmitter will light.

In the Quick Charge mode, the batteries will charge fully in about 6 hours. A fully-charged battery will provide approximately 6 hours of continuous Receiver operation.

Disposable AAA Alkaline batteries can be used in the Receiver, but the Receiver should not be placed on the charging stand.

#### 5. Using the RX4 Receiver

Make sure your TV or Audio Source is turned ON. Turn the receiver's Power Switch to ON. Place the headset on your head and locate the

Volume Control Wheel. (See Figure 3.) The headband size can be adjusted by pulling or pushing on each earpiece. Adjust the headset volume to a comfortable level.

**The infrared receiver "eye" is located on top of the headset. Do not cover it up or you will lose reception.**

**Be sure to turn the Receiver OFF when it is not in use.**

#### In Case of Difficulty

If the system does not seem to be functioning:

1. Make sure that your television is plugged in and turned on.
2. Make sure that the TX4 Transmitter is plugged in and correctly connected to the TV or VCR's audio output.
3. If you're using the TV Mic and not getting a signal, try turning the TV volume up slightly. Also, try positioning the TV Mic directly over the TV speaker.
4. Make sure that the RX4 Receiver has working batteries.
5. Make sure you are not covering the RX4's infrared "eye". Remove any objects obstructing the line between the TX4 Transmitter and the RX4 Receiver.
6. If you've installed the TX4 Transmitter other than on top of the TV, make sure that its front panel is facing the RX4 Receiver.
7. If the system still does not function, call Williams Sound Corporation at 1-800-843-3544.

#### Warranty

The WIR 100 Listening System carries a one year parts and labor warranty on the TX4 Transmitter and RX4 Receiver. The TV microphone, rechargeable batteries, adaptors, and Power Adaptor carry a 90 day warranty. Be sure to fill out and mail the Warranty Card to register your serial number and warranty.

**!! WARNING !!  
DO NOT ATTEMPT TO RECHARGE  
DISPOSABLE BATTERIES!**

The batteries may heat up and burst, causing possible injury and damage to the equipment.

# WIR 100 Listening System Specifications

## Infrared Transmitter, Model WIR TX4

Power Input:	12 VDC from 115 VAC, 60 Hz, 200 mA Class II wall transformer (UL-Listed) center is negative, shield is positive on DC connector
Size and Weight:	12 cm W x 23 cm H x 11.5 cm D (5" x 9.5" x 4.5"), 287 g (10.1 oz.)
Case Material and Color:	Plastic, textured grey
Subcarrier Frequency:	95 kHz FM
Compatibility:	Compatible with all 95 kHz ISO systems (including Sennheiser)
Audio Level Indicator:	LED flasher indicates correct audio level
Microphone Input:	MIC 059 TV Mic has RCA jack which connects to the TX4 audio input RCA plug
Auxiliary Audio Input:	RCA plug, 10 k $\Omega$ impedance
AGC Threshold:	25 mV at 1 kHz, 10 Vrms max. input level
Frequency Response:	50 Hz to 12 kHz, +/- 3 dB
Distortion:	1% Max. THD
AGC Compression Range:	30 dB

## WIR RX4 Headset Receiver Specifications:

Weight:	154 g (5.4 oz) with batteries
Earpad Size:	6.5 cm (2.5") Diameter, foam cushions, adjustable headband,
Material and Color:	ABS plastic, Textured Gray
Battery Type:	2 - AAA Ni-Cad Rechargeable
Battery Life:	6 hrs/charge
Modulation Frequency:	95 kHz FM, 50 $\mu$ S de-emphasis
Signal to Noise Ratio:	45 dB at 4m
Controls:	On/Off slide switch, volume control wheel
Acoustic Output:	120 dB MAX SSPL90, 115 dB HF AVG SSPL90 with 2 cc coupler

## WIR RX3 Lavalier Receiver (Optional) Specifications:

Size and Weight:	9.2 cm L x 6 cm W x 2.2 cm H (3.62" x 2.36" x 0.86") 90 g (3.2 oz) with battery
Material and Color:	Polypropylene, Gray
Battery Type:	9 Volt, Eveready 216, Eveready 522, or BAT 003 Ni-Cad 7-cell rechargeable
Battery Life:	15 hrs with Eveready 216, 35 hrs with Eveready 522, 6 hrs/charge with BAT 003
Charging Jack:	Earphone jack is used for charging
Modulation Frequency:	95 kHz FM, 50 $\mu$ S de-emphasis
Signal to Noise Ratio:	50 dB at 4 m
Controls:	Combination volume/On-Off wheel
Audio Output:	3.5 mm mono mini phone jack, 250 mW into 16 $\Omega$
Acoustic Output:	130 dB MAX SSPL90, 110 dB HF AVG SSPL90 with EAR 013, 2 cc coupler

The RX3 Receiver can be used with a Neckloop TeleCoil Coupler (NKL 001) to magnetically couple into a hearing aid that has a telephone pick-up coil. The RX4 does not have a Neckloop jack.