

PHONE: 800-873-2872

FAX: 414-276-1533 WWW.ETGI.US

EMAIL: INFO@ETGI.US

INFRARED (IR) WIRELESS HEADPHONE KIT OPERATING MANUAL

VERSION: ETG-IRHPK-050112





Enforcement Technology Group, Inc. (ETGI)

400 N. Broadway, 4th Fl. Milwaukee, WI 53202

Phone: 414-276-4471 Fax: 414-276-1533

Email: info@etgi.us Visit: www.etgi.us

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COMPONENT LIST:

- •(4) Dual-cup Battery Powered, Wireless Infrared (IR) Monitoring Headphones**
- •(2) IR Headphone Transmitter Bases Hardwired to 3.5mm (1/8") "Audio Source Connection" Cable
- •(2) IR Headphone Transmitter Base Power Adapters
- •(2) 3.5mm (male) to RCA (female) "Y" Adapters
- •(2) 3.5mm (female) to 3.5mm (female) Couplers
- •(2) 12 ft. RCA Composite Audio Extension Cables
- •(2) 3.5mm (female) to 6.33mm (1/4") (male) Adapters

INTROUDUCTION/OVERVIEW:

The IR Headphone Transmitter Base is connected to an External Audio Source.

The Transmitter Base turns the sounds produced by the External Audio Source into a series of pulses. The pulses work like bits in a computer, digitally capturing the sound information. These pulses are then sent to the Transmitter Base's infrared (IR) light emitting diode (LED).

The LED is a device which produces light at a particular wavelength. The infrared LED produces long wavelength infrared light. It can not be seen with the naked eye, but works much like visible light. It can reflect off of mirrors, for example, and can be blocked by any objects in the way. Because of this, infrared headphones can only be used when they are within a line of sight of the transmitter.

The IR Monitoring Headphones are equipped with IR sensors (located on the ear-cups) that pick up the light with and turn it back into sound. The IR Monitoring Headphones have an infrared cell, which produces a pulse of electricity every time infrared light lands on it. The cell is designed to pick up the particular frequency of light produced by the Transmitter Base, so it is not disturbed or thrown off by other light. A small computer inside of the headphones takes these pulses of electricity and turns them into an audio signal. This audio signal is then amplified which become audible sound.

IR MONITORING HEADPHONE BATTERY INSTALLATION:

- 1. Remove the battery compartment cover located on the right ear-cup of the IR Monitoring Headphone.

 NOTE: A flathead screwdriver may be used to help detach the battery compartment cover from the headphone ear-cup.
- 2. Install (2) fresh/new AAA alkaline batteries into the battery compartment according to proper polarity (+/-). <u>NOTE:</u> When fresh/new AAA alkaline batteries are installed, the device can be powered on/used for approximately 25 hours.
- 3. Replace the battery compartment cover.

^{**}Requires (2) AAA Alkaline Batteries (not included).



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IR MONITORING HEADPHONE TRANSMITTER BASE SET-UP

Connecting the Transmitter Base to an External Power Supply:

- 1. Locate the "Power Adapter" provided with the IR Monitoring Headphone Kit.
- 2. Insert the pin end of the "*Power Adapter*" into the "DC 12V" power port located on the rear of the Transmitter Base.
- 3. Insert the plug end of the "Power Adapter" into an external power supply outlet.

Connecting the Transmitter Base to an External Audio Source:

The Transmitter Base can be connected to \underline{ANY} External Audio Source equipped with one of the following common audio output jacks: 3.5mm (1/8"), 6.33mm (1/4"), or RCA composite.

The connection between the Transmitter Base and External Audio Source is facilitated via the "Audio Source Connection" cable that is hardwired to the Transmitter Base.

The "Audio Source Connection" cable can be connected directly to an External Audio Source equipped with a $3.5 \, \text{mm} (1/8")$ audio output jack or indirectly to a $6.33 \, \text{mm} (1/4")$ or RCA composite audio output jacks via the provided adapters.

3.5mm (1/8") External Audio Source Connection:

1. Insert the Transmitter Base's "Audio Source Connection" cable directly into the External Audio Source's 3.5mm (1/8") audio output jack.

NOTE: The distance between the Transmitter Base and External Audio Source may be increased by using the "3.5mm Coupler" (provided) and longer length of "3.5mm Stereo Cable" (not provided).

6.33mm (1/4") External Audio Source Connection:

- 1. Insert the Transmitter Base's "Audio Source Connection" cable into the female end of the provided "3.5mm to 6.33mm Adapter."
- 2. Insert the male end of the "3.5mm to 6.33mm Adapter" into the External Audio Source's 6.33mm (1/4") audio output jack.

<u>NOTE:</u> The distance between the Transmitter Base and External Audio Source may be increased by using "3.5mm Coupler" (provided) and longer length of "3.5mm Stereo Cable" (not provided).

RCA Composite External Audio Source Connection:

- 1. Insert the Transmitter Base's "Audio Source Connection" cable into a female end of the "3.5mm Coupler" (provided).
- 2. Insert the 3.5mm male end of the provided "3.5mm to RCA Y Cable" into the other end of the "3.5mm Coupler."
- 3. Insert the RCA end(s) of the "3.5mm to RCA Y Cable" into the male ends of the "12 ft. RCA Composite Audio Extension Cable."
- 4. Insert the other males ends of the "12 ft. RCA Composite Audio Extension Cable" into the External Audio Source's RCA composite audio output jack(s).

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IR MONITORING HEADPHONE TRANSMITTER BASE SET-UP



3.5mm (1/8") Coupler (female)



3.5mm (female) to 6.33mm (1/4") (male) Adapter



3.5mm (male) to RCA (female)
"Y" Adapter



12 ft. RCA Composite
Audio Extension Cable

Transmitter Base Positioning:

For the best audio quality/performance it is strongly recommend that the Transmitted Base station is set on an elevated surface as this will help prevent the IR being emitted by the component from being blocked.

Please note that multiple Transmitter Bases may be used to help increase the coverage area of the IR emission.

Do <u>NOT</u> place the Transmitter Base in an area that is exposed to direct sunlight or strong light as this may interrupt the sound transmission.

If you use the IR Monitoring Headphones at too great a distance from the Transmitter Base, you may hear a hissing noise and if there is an object between the headphones and the transmitter, sound may be interrupted. These phenomena are inherent to infrared ray communication and do <u>NOT</u> mean there is a problem with the equipment itself.

Do <u>NOT</u> cover the IR sensors located on the earcups of the IR Monitoring Headphone with your hands or hair.

Approx. 3 m (118 ½ in.) Approx. 7 m (23 ft.) Approx. 3 m (118 ½ in.)

Infrared (IR) Emission from Transmitter
Illustration

OPERATIONS:

- 1. Power On the Transmitter Base by setting the component's "**POWER**" switch (located on rear) to the "**ON**" position.
- 2. Power On the IR Headphone by pressing the devices "**ON/OFF**" button (located on bottom of right earcup). **NOTE:** The component's red LED will turn on signaling that the device is on/receiving power.
- 3. Adjust the IR Headphone's "Volume Control" dial (located on bottom of left ear-cup) until desired listening volume level is achieved.