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CTX 3030 Audio Options

The CTX 3030 has a number of audio options to hear target signals:

WM 10 Wireless Module*

Choose from three wireless audio options:

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- Use the built-in speaker on the WM 10
- Connect the supplied headphones to the ¼-inch socket on the WM 10 (100 ohm)
- Connect your own favourite headphones to the ¼-inch socket on the WM 10

CTX 3030 Detector Audio

Choose from four wired audio options:

- Use the built-in speaker on the detector
- Connect the supplied headphones to the ¼-inch socket on the Headphone Module (100 ohm)
- Connect your own favourite headphones to the ¼-inch socket on the Headphone Module
- Connect the waterproof headphones to the waterproof socket after removing the non-waterproof Headphone Module

This document provides more detail about these options and the technology used.

1/4-inch Headphone Module

1/4-inch headphone module

The 1/4-inch Headphone Module fits on to the back of the CTX 3030's control box. Note that it is not waterproof and should be removed if detecting in water.

The Headphone Module electrically connects the 1/4-inch headphone socket to the waterproof connector. There are no electronics in the Headphone Module.

The 1/4-inch socket is compatible with standard stereo or mono headphones. The wiring diagrams below illustrates how headphones must be wired to operate correctly with the Headphone Module (mute internal speaker).
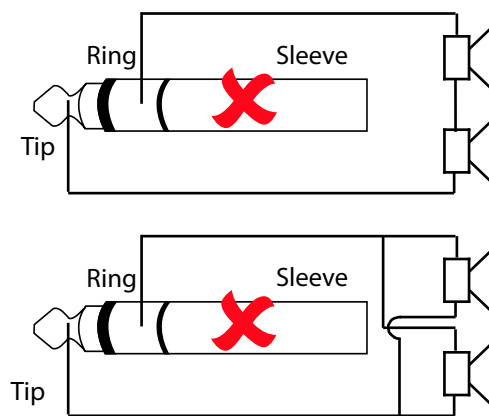
CTX 3030 1/4-inch Headphone Module socket wiring

Ring - audio (-)

Tip - audio (+)

Sleeve - headphone sense
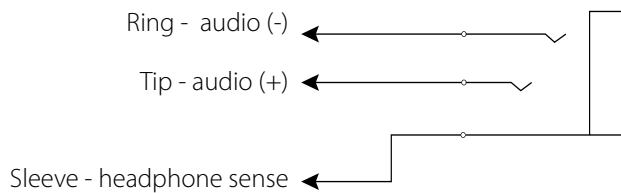
✔ **Correct headphone wiring**

Headphones will be sensed and the internal speaker will be turned off
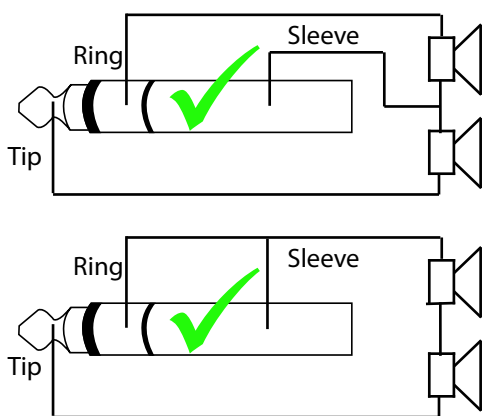
✘ **Incorrect headphone wiring**

Headphones will not be sensed and the internal speaker will not be turned off

Compatible headphone wiring is required to allow the CTX 3030's electronics detect the presence of the headphones and automatically mute the internal speaker. Therefore, headphones that do not have compatible wiring will not be detected by the CTX 3030's electronics. This may result in either the speaker not muting and/or the volume in the headphones being low.

If this problem is encountered with a third party accessory set of headphones a 1/4-inch mono to stereo adaptor will allow the headphones to work with the Headphone Module. This is because the mono socket will connect the 'ring' to the 'sleeve'.
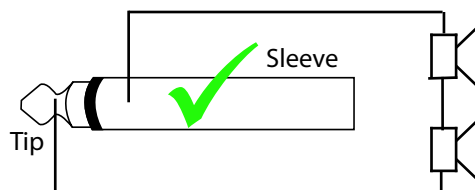
1/4-inch mono to stereo adaptor

The following wiring diagrams show how headphones with a mono plug should be wired for both parallel and series configurations. Mono plugs work because the 'ring' and 'sleeve' are connected and allow the detector's electronics to detect the presence of the plug.
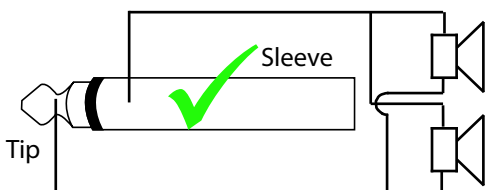
Correct mono plug wiring - speakers in parallel

Correct mono plug wiring - speakers in series

The CTX 3030 wired headphone output will work with headphones that have an impedance of 16 to 600 ohms.

Waterproof connector cap

Waterproof headphones connector

The waterproof headphones connector is an eight pin socket at the back of the CTX 3030's control box. It is used to provide audio signals to the waterproof headphones and the Headphone Module.

If the CTX 3030 is being used without the Headphone Module connected, use the small screw cap that is stored in the Headphone Module to protect the waterproof socket from dirt and sand.

Waterproof headphones protector cap in the in the Headphone Module

Waterproof connector pinouts

Pin 2 - audio (+) - tip

Pin 3 - audio (-) - ring

Pin 4 - headphone sense - sleeve
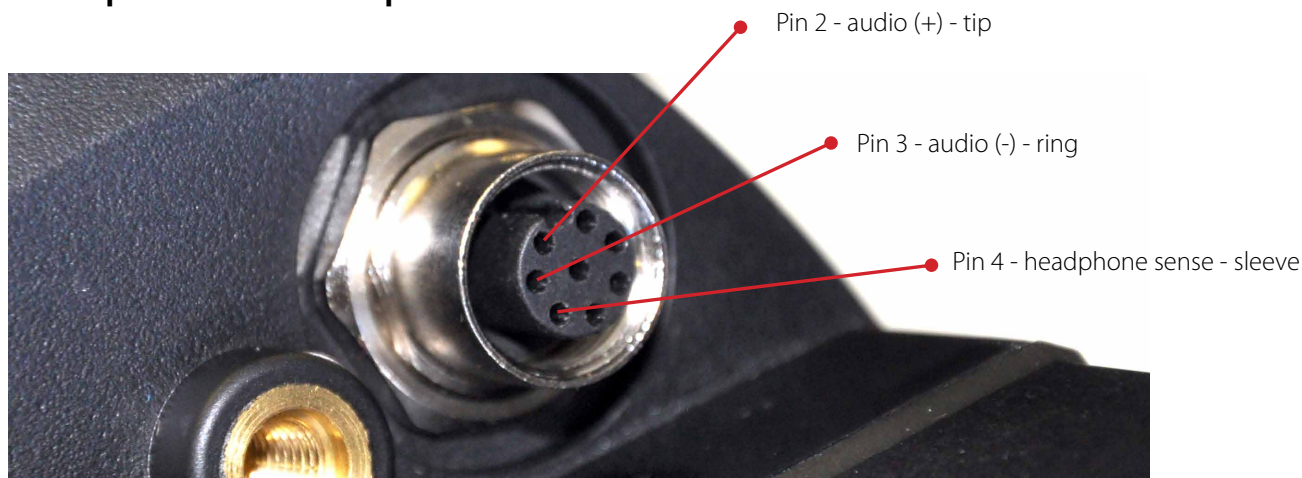
WM 10 Wireless Audio Module

The WM 10 Wireless Audio Module allows a user to be free of cables that normally tether them to the detector.

There are two audio options with the Wireless Module; use the internal speaker or the 1/4-inch headphone socket.

The headphone socket on the WM 10 will work with either the supplied Koss headphones or third party headphones. Note that the headphone socket uses an internal mechanical switch, rather than electronically sensing headphones, so the Wireless Module is compatible with a wider range of third party headphones than the Headphone Module.

There are 14 frequency channels available to select from within the detector. Change channels if there is interference, or if you are detecting near someone else using a WM 10. Ensure that you are each using a different channel.

The WM 10 is powered by an internal Li-ion battery and is recharged via a mini USB connector.

WM 10 Wireless Audio Module

The CTX 3030 wired headphone output will work with headphones that have an impedance of 16 to 600 ohms.

Wi-Stream Technology

Wi-Stream wireless technology is used to communicate between the CTX 3030 and the WM 10 Wireless Audio Module. This new technology has been developed especially for the CTX 3030 to provide no perceivable delay (less than 10 ms). This is important for detector users as lags in the audio response make it difficult to locate and pinpoint targets.

Wi-Stream does not transmit audio data, like other technologies (e.g. Bluetooth). Instead packets of data are sent to the WM 10 and then converted to an audio signal within the WM 10. This increases the speed of signals and greatly reduces the effects of electrical noise.
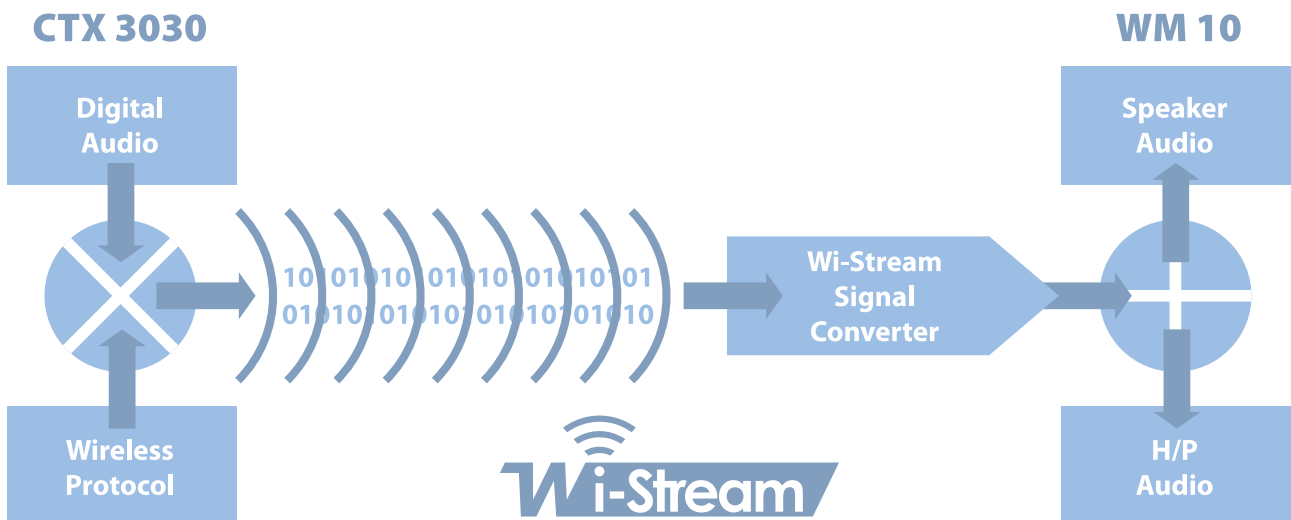
The Wi-Stream radio signal is transmitted from the control panel . Therefore, if the control panel is submerged underwater the radio signal will be blocked by the water and no target signals will be produced from the WM 10.

Wi-Stream Specifications

Frequency: 2.4 GHz ISM band (same band as Bluetooth)

Power: <2 mW - transmit from both detector control panel and WM 10

Channels: 14

Connection type: Point-to-point - only one WM 10 can be paired with the detector at a time

Wireless compliance standards: ETSI EN 300 440-1: V1.6.1 (2010-08) Electromagnetic Compatibility with Radio Spectrum Matters and ETSI EN 300 440-2: V1.3.1 (2008-11) Electromagnetic Compatibility with Radio Spectrum Matters