WeatherWarn Siren Interface

Model WWARN-2

May 28, 2016

Overview

The WeatherWarn Siren Interface facilitates the connection of a WeatherWarn computer system to a two-way radio system. The Interface provides the necessary components to transmit audio and receive and transmit DTMF for Whelen sirens. The Interface has the added capability to manually activate sirens from the front panel toggle switch. The following block diagram shows the functional connections.

Components

The WeatherWarn Siren Interface consists of the interface box, a 12 volt AC to DC adapter, USB cable and 3.5mm stereo audio cable.

Front Panel

When the Interface is receiving power, the Power LED is illuminated. The DTMF Led is illuminated when the interface receives or transmits DTMF. The Transmit Led is illuminated when the interface is transmitting audio or DTMF.

The Alert protected toggle switch is used to manually activate sirens. To manually activate the sirens, raise the protective switch cover and flip the toggle switch up. After activation, the protective cover can be closed. When the cover is closed, the toggle switch will automatically be switched off.

Note: When the toggle switch is flipped up, the sirens will be activated.

Rear Panel

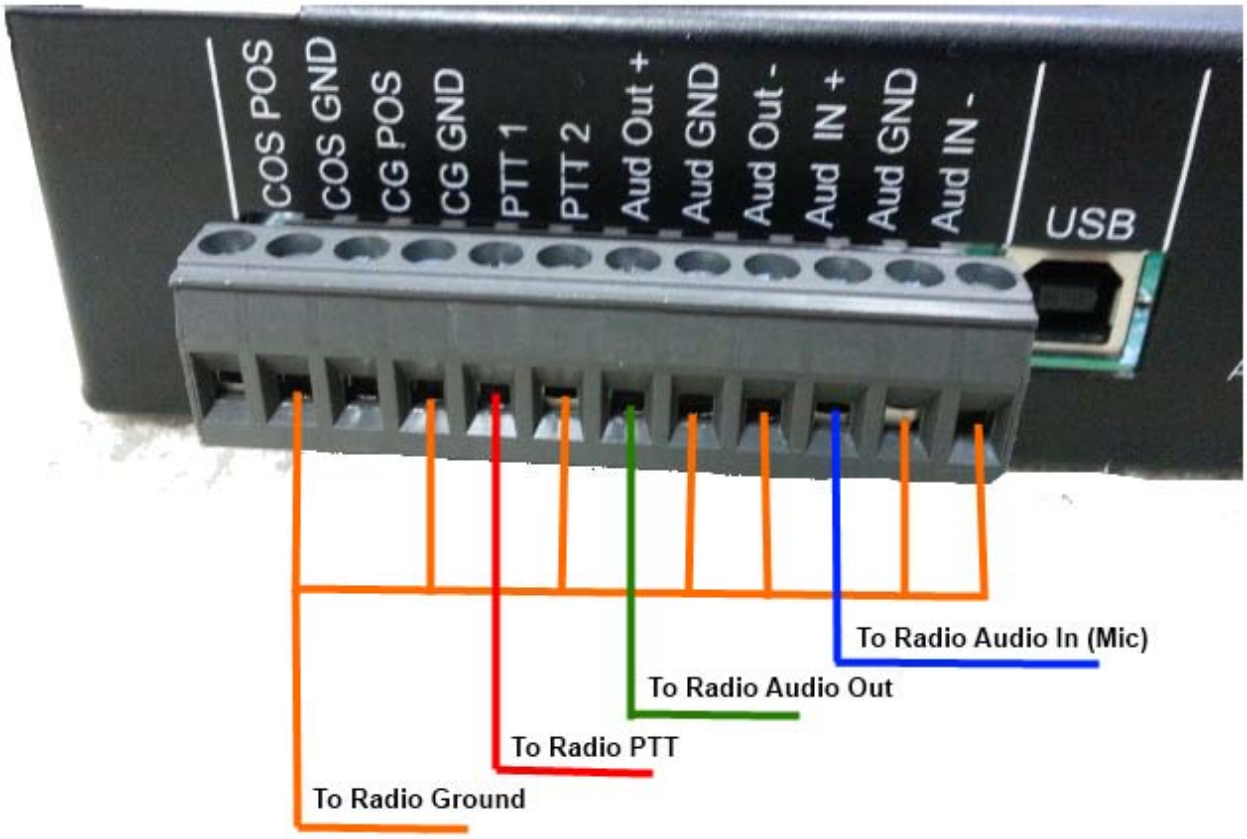
The rear panel contains the connections to the WeatherWarn computer and two-way radio. The 12 position and 4 position terminal strips are detachable to speed installation and replacement of the interface.

Connections

COS Positive	Carrier operated squelch positive connection from radio.
COS GND	Carrier operated squelch ground from radio.
CG Positive	Channel grant from radio.
CG GND	Channel grant from radio.
PTT 1	Push to talk positive connection from radio.
PTT 2	Push to talk ground connection from radio.
Audio Out +	Audio out positive connection to radio.
Audio Out GND	Audio out ground connection to radio.
Audio Out -	Audio out negative connection to radio.
Audio IN +	Audio in positive connection from radio.
Audio GND	Audio in ground connection from radio.
Audio IN –	Audio in negative connection from radio.
USB	USB connection to the WeatherWarn computer.
Audio In	Audio in from the WeatherWarn computer's sound card.
Audio Loop Out	Audio loop out to a second WeatherWarn interface.
Relay Out Common	Relay for external contact closure common connection.
Relay Out N.O.	Relay for external contact closure normally open connection.
Remote Alert In –	Remote alert switch negative connection.
Remote Alert In +	Remote alert switch positive connection.
12 Volt DC	External 12 volt DC connection.

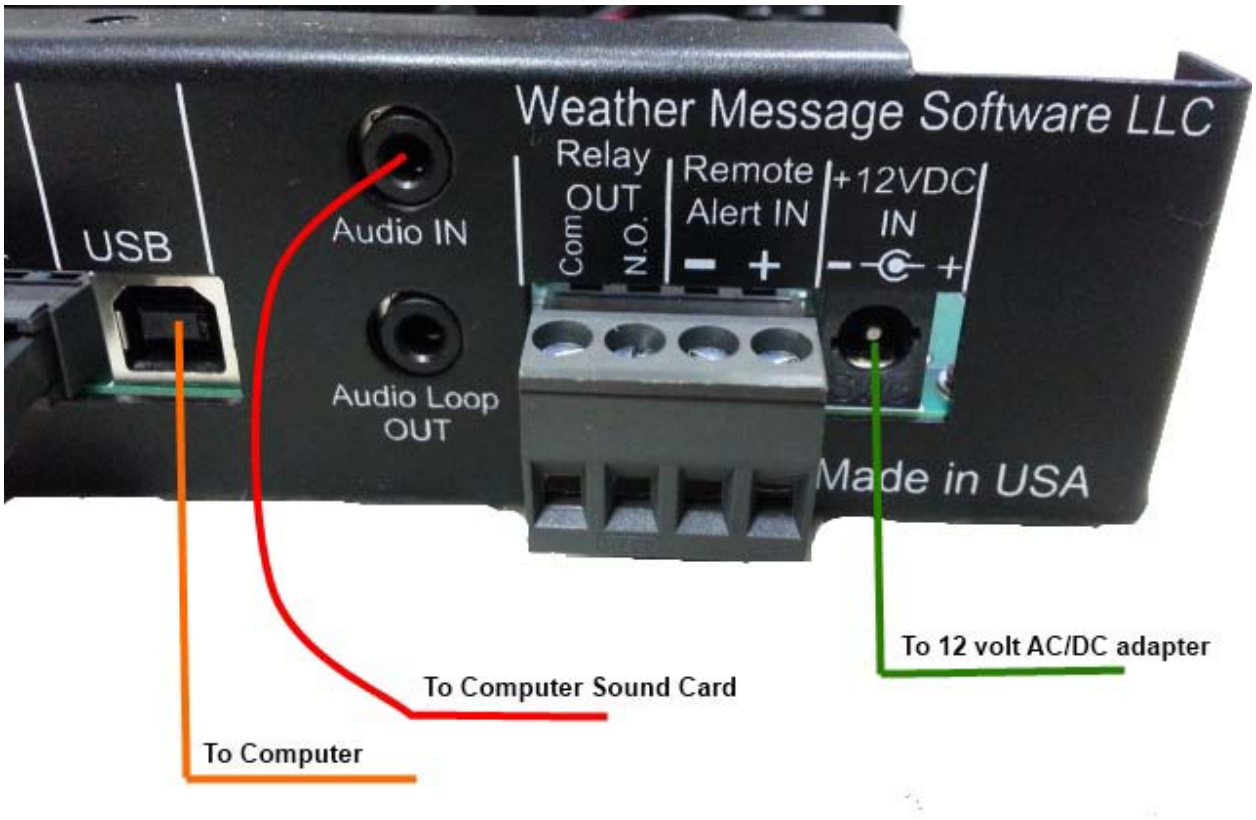
Installation

The following diagram shows typical connections to the two-way radio.



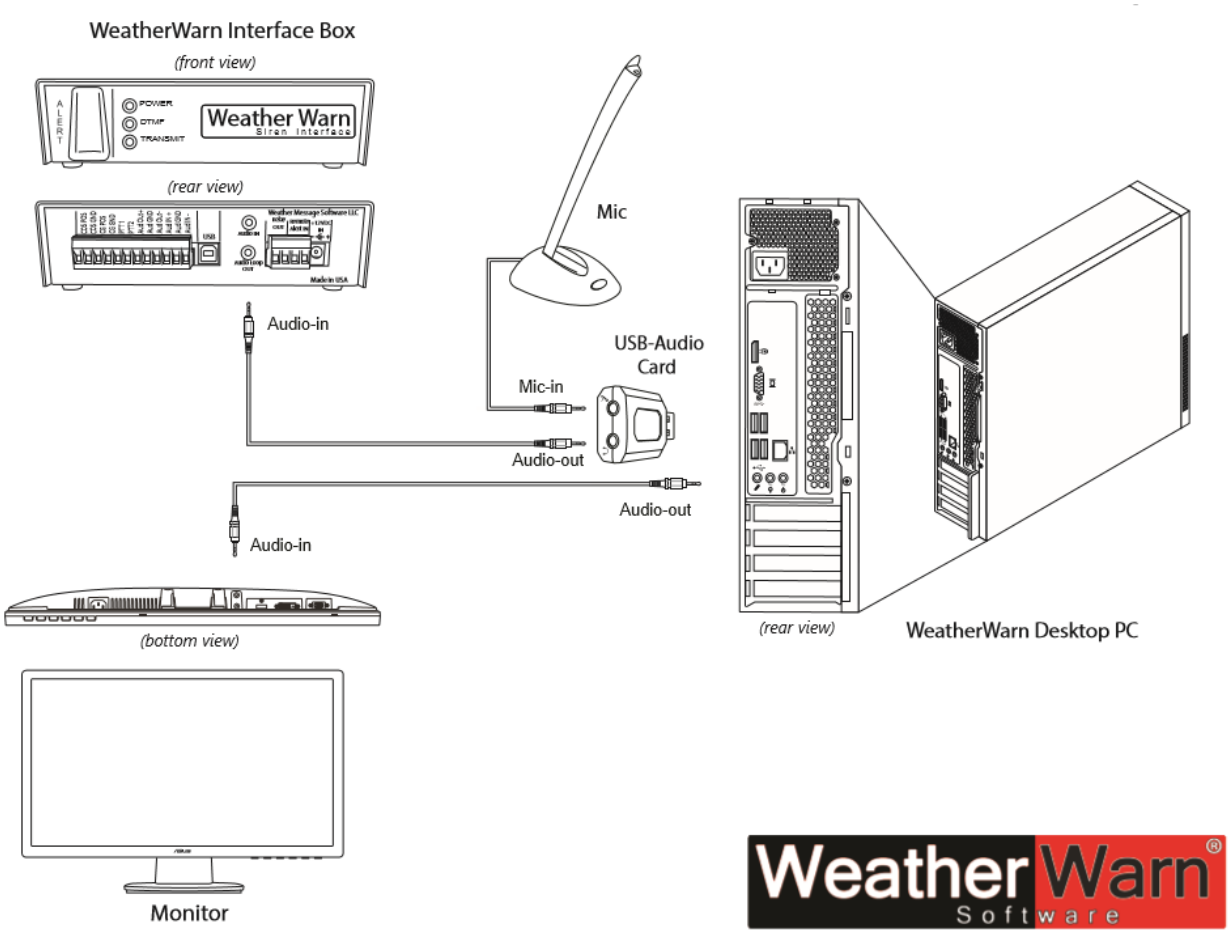
Note: Shielded cable should be used for the connections between the interface and two-way radio.

The following diagram shows the remaining connections.



Note: The Alert switch can be placed at a remote location by using a single pole toggle switch connected to the Alert In terminals.

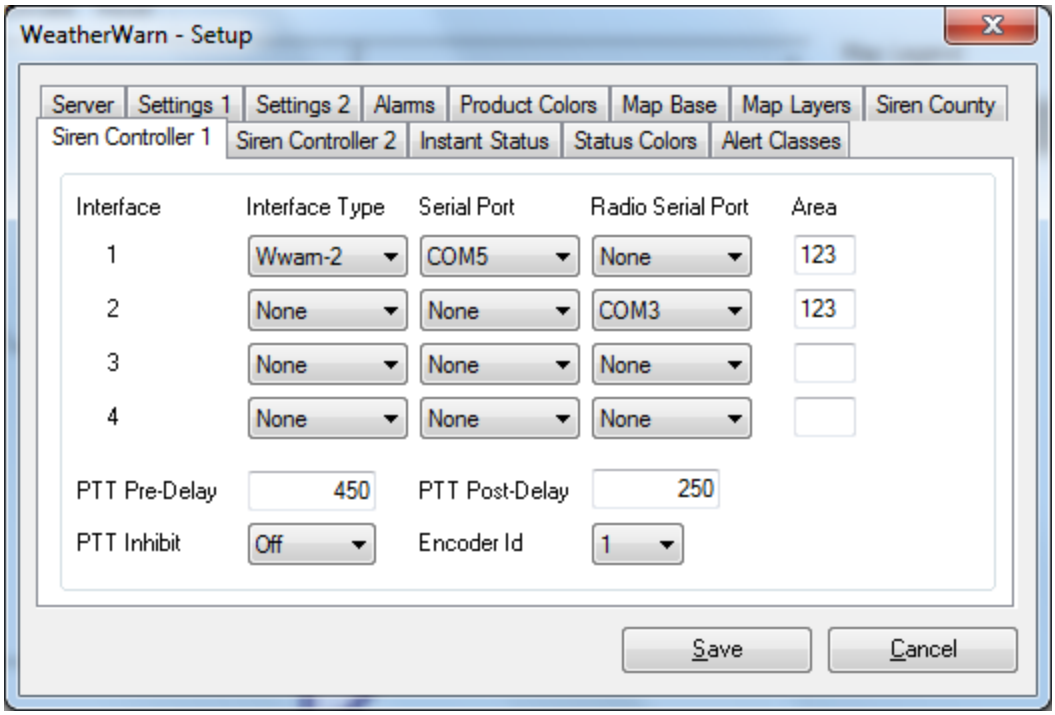
Audio Connections



WeatherWarn Setup

Before audio adjustments can be performed, the interface needs to be configured in WeatherWarn. Power up the Interface and plug the USB connector into the WeatherWarn computer. The WeatherWarn computer should recognize that you have plugged in a new device. It will access the Internet and download the driver software. The Interface will be assigned a new serial communications (COM) port.

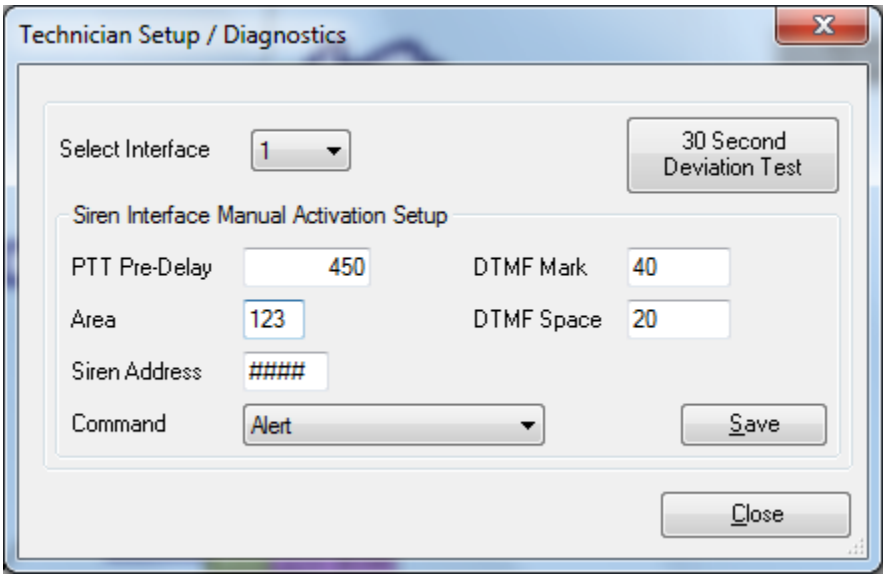
Start WeatherWarn, Click File, then Setup. Click the Siren Controller 1 tab. Change the Interface Type for Interface 1 to WWarn-2. Select the serial port assigned to the interface. Leave the Radio Serial port set to None. Enter the Area Code assigned to the sirens. Click Save.



This completes the basic setup in WeatherWarn. See the WeatherWarn manual for additional information on the settings for the siren controller.

WeatherWarn Tech Setup

WeatherWarn has a technician setup screen that is used to configure the Interface. In WeatherWarn, click File and Tech Setup. The following screen is displayed.

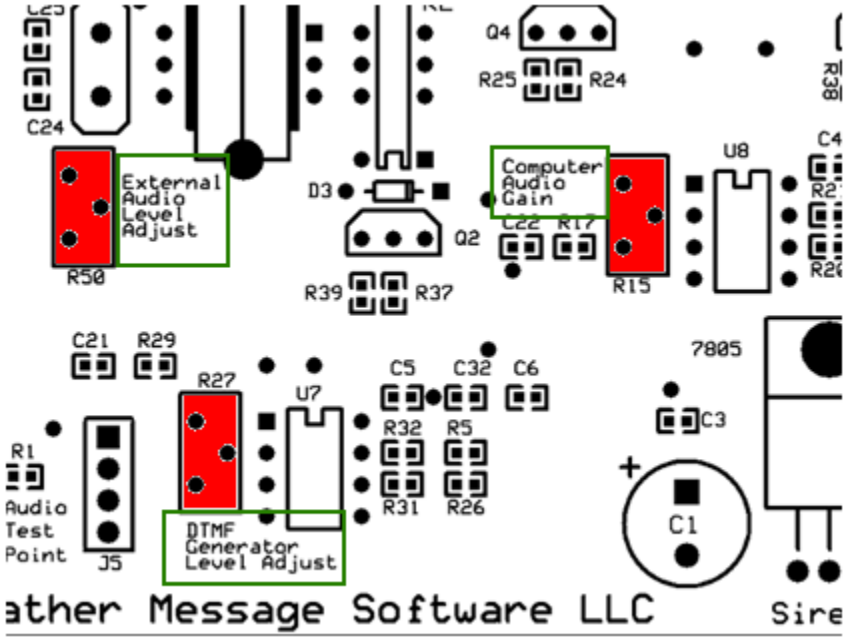


The 30 Second Deviation Test is used to transmit a test tone for deviation adjustment. See the Internal Adjustment section for internal adjustments in the Interface.

The Siren Interface Manual Activation Setup is used to program the Alert toggle switch in the Interface. Enter the appropriate settings and click Save. The manual activation settings will be downloaded into the Interface box. These settings are stored in the Interface's flash memory and are retained when the power is removed.

Internal Adjustments

After the interface has been installed, the audio levels should be adjusted. Remove the cover from the Interface. There are three audio adjustment points, External Audio, Computer Audio, and DTMF Generator.



The External Audio Adjustment controls the level of the received audio from the two-way radio.

The Computer Audio Gain controls the level of the audio received from the computer sound card to the two-way radio.

The DMTF Generator Level controls the level of the audio sent to the two-way radio.

The 30 second deviation test can be used to adjust the DTMF Generator Level. The DTMF level should be set to approximately 1.75 kHz on a narrow band channel.

Specifications

Power – 12 to 15 Volts DC at 500mA maximum

Audio Input – 600 ohms, transformer balanced – minimum -29 dBm, maximum +1 dBm

Audio Output – 600 ohms, transformer balanced – maximum 2 volts peak to peak.

Computer Audio Input – 8 ohms stereo.

COS / CG Input – 3 to 15 VDC.

PTT - Relay normally open, 200 VDC, 2 amp maximum.

External Relay – Relay normally open, 200 VDC, 2 amp maximum.

USB – USB 2.0 specifications presented as a standard communications port.

Operating Temperature - -35 to 70 degrees Celsius.

Size – 6.75" L x 7.0" W x 1.75" H