

Zeitronix Audio-Visual Warning and Trigger Box ZAVT-1

Items included with your purchase

ZAVT-1 Box

ZAVT-1 Harness (2' length)

Installation instructions

The Audio Visual Warning and Trigger Box alarm is activated by Zeitronix Zt-2 Wideband AFR Meter. The audio alarm can be deactivated by adjusting the switch SW1 inside the box. The visual alarm and relay trigger are always active.

The Buzzer Box is capable of triggering an optional relay. If a relay is used, connect the ZAVT-1 WHITE wire ONLY to the negative side of the relay otherwise leave the WHITE wire unconnected and protected from accidental connection to any other signal.

WIRE CONNECTIONS

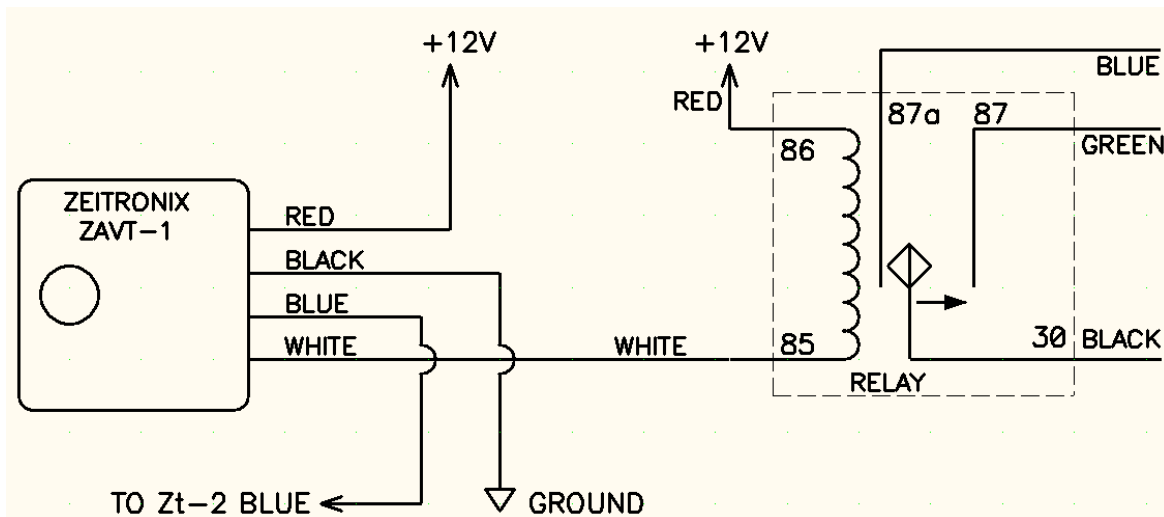
Buzzer Box Harness connects as follows:

| PIN # | ZAVT-1 WIRE COLOR | Connects to: | FUNCTION |
|-------|-------------------|--------------------------|------------------------|
| 1 | RED | Zt-2 RED | Switched +12V power |
| 2 | BLACK | Zt-2 BLACK | Ground |
| 3 | BLUE | Zt-2 WHITE/BLUE STRIPE | Input |
| 4 | WHITE | NEGATIVE SIDE OF A RELAY | Optional Relay Trigger |

OPTIONAL RELAY CONNECTION

The Zeitronix ZAVT-1 box is capable of triggering an optional relay at a preset warning level. Connect the ZAVT-1 WHITE wire ONLY to the negative side of the relay otherwise leave the WHITE wire unconnected and protected from accidental connection to any other signal.

Relay wire colors correspond to relays purchased at Zeitronix.



SOFTWARE SETUP

Open the Zeitronix Logging Software. Connect the Zt-2 Wideband AFR Meter into a PC COM port and power up the Zt-2. Make sure the log graphs are shown on the screen. Then open the Warnings and Triggers menu. The following warnings can be selected:

The Parameters can be selected as a Simple or Complex Warning.

A Simple Warning is set when any of selected parameters exceed preset warning level. Simple Warnings are independent from each other.

A Complex Warning is set when all selected parameters exceed preset warning level.

EXAMPLE

In an example below a warning will be activated if the EGT exceeds temperature of 920C **OR** if the Input1 is lower than 3.4V. Also, a warning will be activated if the AFR mixture will be leaner than 12.8 AFR **AND** at the same time the boost level exceeds 23 PSI. The alarm is kept for additional duration of 4 seconds to cool the engine down.

Warnings

Disabled warning conditions:

| Parameter | Condition | Value |
|--------------|-----------|----------|
| TPS | >= | 40 % |
| RPM | >= | 8533 RPM |
| Rich Mixture | < | 9.6 AFR |
| Input1 High | >= | 5.00 V |
| | | |
| | | |
| | | |
| | | |

Simple Warnings:

(Any triggered condition will cause a warning)

| Parameter | Condition | Value |
|------------|-----------|--------|
| EGT | >= | 920 C |
| Input1 Low | < | 3.40 V |
| | | |
| | | |
| | | |
| | | |

Complex Warning:

(All conditions must be triggered to cause a warning)

| Parameter | Condition | Value | |
|--------------|-----------|----------|-----|
| Boost | >= | 23.0 PSI | AND |
| Lean Mixture | >= | 12.8 AFR | |
| | | | |
| | | | |
| | | | |
| | | | |

Add to Simple

Add to Complex

Remove Selected

Remove Selected

Setup Conditions:

Item: Lean Mixture

Condition: >= (is greater than or equal to)

Value: 12.8 AFR

Alarm Properties:

Additional Alarm Duration: 4 (seconds)

☐ Do not apply to plot warnings (flashing plots)

OK

Cancel

Any other warning combinations and warning values can be set using the ZDL software. The alarms are saved in the Zt-2 flash memory and kept after disconnecting a PC laptop or disrupting power.

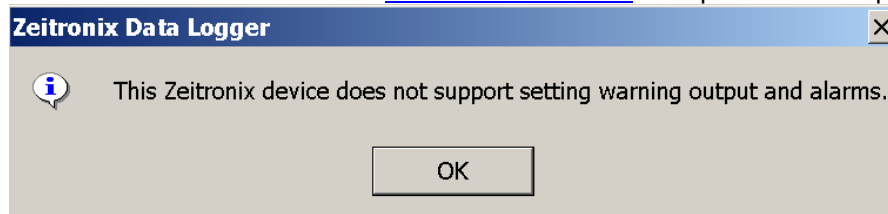
AUDIO ALARM DEACTIVATION

The audio alarm can be deactivated by adjusting the switch SW1 inside the box. The visual alarm and relay trigger are always active. Open the ZAVT-1 by removing two screws. Using a small tip object (a tooth pick works well) move both sliders of the switch SW1 away from ON position. The audio alarm is deactivated. To activate the audio alarm move both sliders of the switch SW1 back to ON position.



COMPATIBILITY

ZAVT-1 is compatible with the Zt-2 Wideband AFR Meter REV 9 or higher. Zt-2s purchased after May 9 2006 are compatible and support Simple Warnings. The Zt-2s REV 11 or higher purchased after Aug 28 2006 support both Simple and Complex Warnings. The Zt-2s rev 12 purchased after Jan 22 2007 support User low warning and alarm duration. You can check the Zt-2 compatibility by accessing Alarms window in the Zeitronix Logging Software Version 2.0.9. Open the Zeitronix Logging Software. Connect the Zt-2 Wideband AFR Meter into a PC COM port and power up the Zt-2. Make sure the log graphs are shown on the screen. Open the Warnings and Triggers menu. The following message is displayed if an incompatible Zt-2 AFR Meter is detected. Contact sales@zeitronix.com for a possible Zt-2 upgrade.



The Zt-2 rev 9 and 10 utilize USER input (blue wire) as a warning output. The Zt-2 rev 11 and higher are equipped with an independent warning output (white wire with a blue stripe).

Warning!

For automotive use only.
This product is for off road use only.
Never place the ZAVT-1 in a place, which obstructs the view. Never tune the car while driving.
To be used with Zeitronix Zt-2 Wideband AFR Meter only.
Tune your engine responsibly. Zeitronix Inc. is not responsible for any damages.