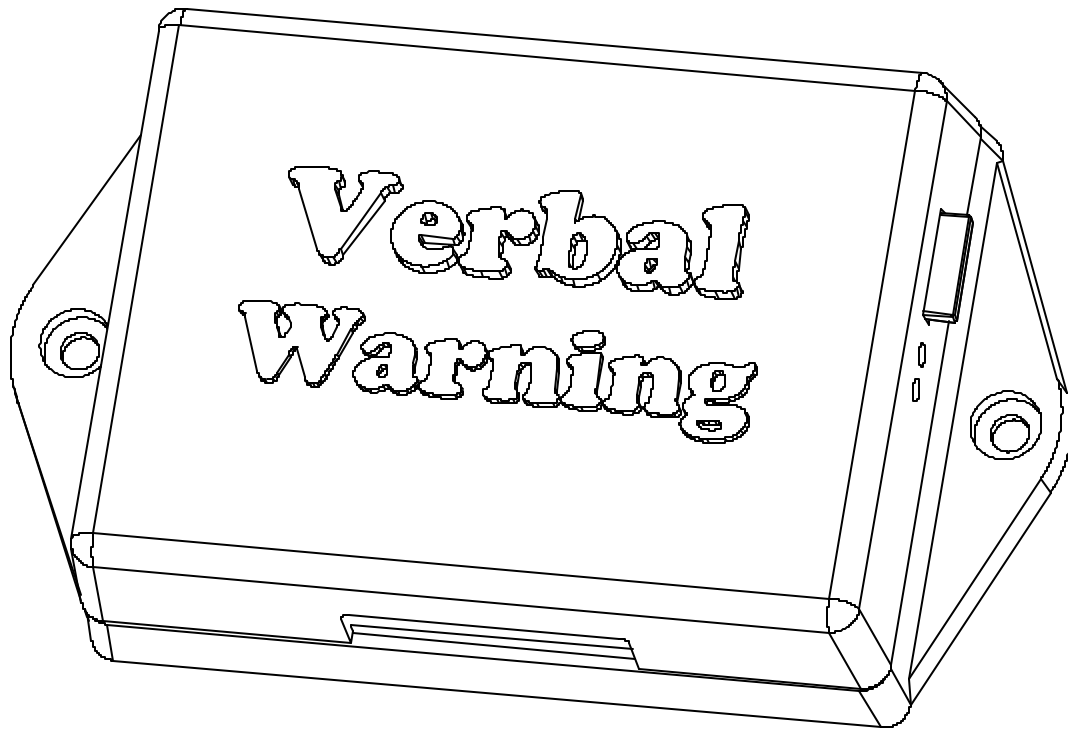


Verbal Warning^ä

Owner's Manual



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Introduction

Thank you for purchasing Verbal Warning. We believe that this product offers an innovative and inexpensive way to provide an extra measure of safety for your passengers. Unlike just lights and tones, the use of distinct, situation-appropriate messages has been shown to increase passenger awareness and understanding inside the vehicle and within the danger zones outside the vehicle.

In order to receive the maximum benefit from Verbal Warning, please review this manual thoroughly before installing and using.

Product Warranty

Robotics Technologies, Inc. (RTI) warrants this product to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. Its obligation under this warranty is limited to repairing or replacing at its own sole option any such defective products. To obtain service under this warranty, you must obtain a Return Material Authorization (RMA) number from RTI. Products must be returned to RTI with transportation charges prepaid and must be accompanied by a brief description of problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence or misapplication, or has been altered or modified in any way. This warranty applies only to the original purchaser.

Except as provided herein, RTI makes no warranties, express or implied, including warranties of merchantability and fitness for a particular purpose. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

Except as provided above, in no event will RTI be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of this product even if advised of the possibility of such damage. Specifically, RTI is not liable for any costs such as loss of profits or revenue, loss of equipment, costs of substitutes and claims by third parties or otherwise. This warranty gives you specific rights and you may also have other rights that vary from state to state.

Product Overview

Verbal Warning will sound up to fourteen verbal messages, depending upon the activation of six external signal inputs. The first two of these inputs are special, because they are configured to react in a specific sequence, reflecting the most common usage in school and transit buses. This operation is detailed below.

Signal Input Map

Input	Wire Color	Signal Level	Std. Trigger Source	Std. Message
1	Brown	+12VDC	Flasher Lights	Msg1
2	Red	+12VDC	Door Opened	Msg2
2	Red	Ground	Door Closed (After Door Opened First)	Msg3
3	Orange	+12VDC	User Switch	Msg4
4	Yellow	+12VDC	User Switch	Msg5
5	Green	+12VDC	User Switch	Msg6
6	Blue	+12VDC	User Switch	Msg7

Map of Standard Messages

Message	Inside Message	Outside Message
Msg1	Warning! The Bus is about to stop! Please be seated.	Warning! The Bus is approaching! Stand away from the curb.
Msg2	Warning! Watch your step.	Warning! Look to the driver for a signal to enter the bus.
Msg3	Warning! The Bus is about to move! Please be seated.	Warning! The Bus is about to move! Step away from the bus.
Msg4	Warning! Driver, check your bus for remaining passengers..	None, customizable
Msg5	None, customizable	None, customizable
Msg6	None, customizable	None, customizable
Msg7	None, customizable	None, customizable

These messages are already installed in **Verbal Warning™** when you receive it. There are also other messages in various languages and combinations available for download from our website, or you can create your own with our provided software (*see software manual*).

Installing and Wiring Verbal Warning

Verbal Warning is easy to install and wire. The low-profile, small-footprint enclosure can be installed just about anywhere in the vehicle, and the power requirements are modest. We have provided a **mounting template** for easy location of mounting holes (on back cover). **See the wiring diagram below:**



Connector	Function
1	Inside Speaker
2	Outside Speaker
3	Power & Signals

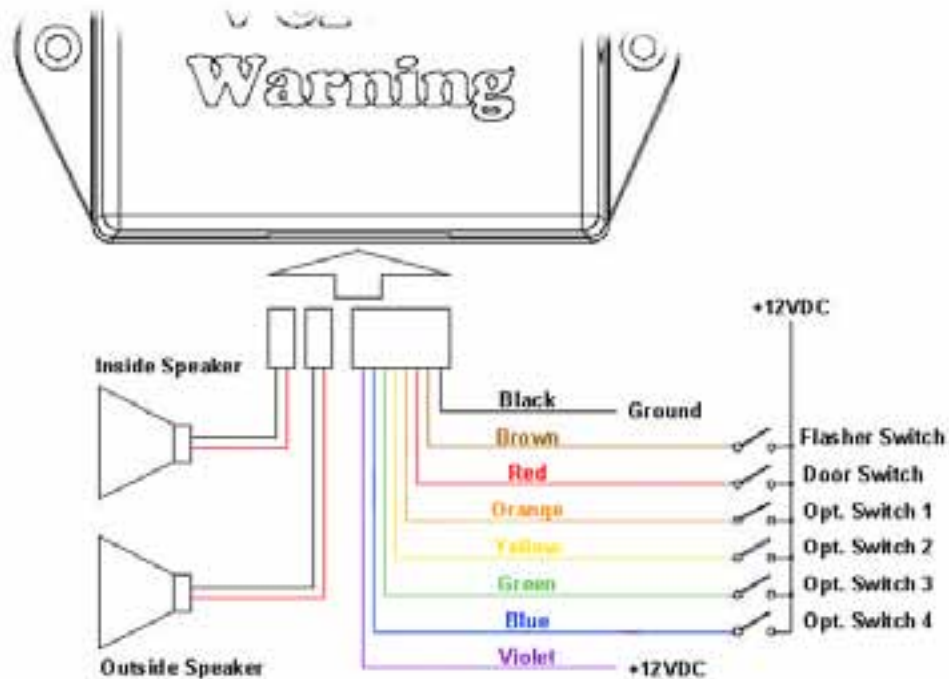
Connectors 1 & 2: Polarity is not important for installation

Connector 3 Detail:

Color	Violet	Blue	Green	Yellow	Orange	Red	Brown	Black
Function	+12VDC	Signal 6	Signal 5	Signal 4	Signal 3	Signal 2	Signal 1	Ground

A typical wiring application is shown on the next page.

Typical Wiring Application

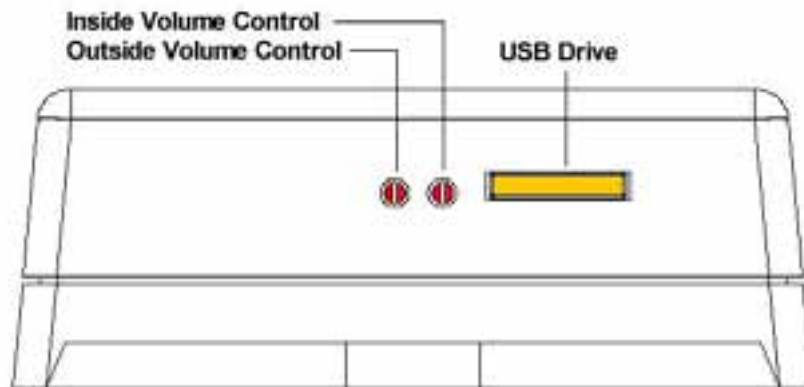


Notes:

- You must provide a fuse for the +12VDC supply at no greater than 3A.
- Either speaker or both may be connected, depending upon your requirements and model.
- In all cases but one, messages will be activated upon the application of +12VDC to a signal input. The **single exception** to this is the **Red** wire (Pin 3), whereby a message will be sounded when there is an application of +12VDC, then a *different* message will be sounded upon the removal of +12VDC (the opening and closing of the door). This automates the door open/close sequence without user intervention.
- This wiring diagram is an example only, and may be varied to accommodate your individual requirements.

Controlling The Volume

Typically, the volume inside the bus will need to be set lower than the volume outside the bus. Below is a diagram that shows the location of the volume controls, and the location of the USB Drive (which contains the message files).



The volume controls are the multi-turn type and require a small (jeweler's) screwdriver to adjust. The multi-turn controls provide greater precision in adjustment, as well as better stability in maintaining their settings in the high-vibration automotive environment.

Make sure that the USB Drive is fully inserted and well-seated into the unit to ensure reliable operation.

Changing Verbal Warning Messages

Although the standard messages included with your unit will suffice for most installations, **Verbal Warning** was designed to be easily user-customizable. All messages are contained in a tiny, standard USB drive that plugs into the side of the unit. If you should ever want to install different messages, simply unplug the USB drive from the unit, and plug it into your laptop or desktop computer's USB port. The USB drive should appear as another lettered drive on your system. Navigate to that drive and simply replace each message on the USB drive with one of your own messages of the same name by copying your selected messages. When finished, just plug the USB drive back into Verbal Warning, and you're ready to operate!

As mentioned previously, additional messages are available for download from our website at: www.roboticstech.com.

Note: **Verbal Warning** messages observe a specific naming convention that allows the unit to recognize and sound the messages. For example, the message that will be sounded when **Input 1** is activated has a file name of: "**MSG1.MP3**". This sequence continues up to "**MSG7.MP3**". See the earlier table "**Map of Standard Messages**" for details.

Input	Plays Message
1	MSG1.MP3
2	MSG2.MP3 (ON) MSG3.MP3 (OFF)
3	MSG4.MP3
4	MSG5.MP3
5	MSG6.MP3
6	MSG7.MP3

The total length of messages is limited only by the size of the USB drive. **Verbal Warning** comes standard with a 256MB drive, which is capable of about 1-1/2 hours of messages—more than adequate for all but the most exotic applications.

Verbal Warning Specifications

Dimensions	5.625" L x 3.375" W x 1.25" H
Operating Voltage/Current	10 - 14 VDC @ < 2 Amps During Message
Quiescent Current	< 8 milliamperes (No Message Being Played)
Audio Channels	2 Mono / 1 Stereo
Audio Power	Total 40 Watts: 20 W x 2 Channels
THD	< 10% @ 20W/Channel into 8 Ω
Inputs	6 Inputs, each with > 10 ⁸ Ω impedance
Message Memory	USB Memory Drive, 256MB Standard
Message Capacity	1-1/2 Hours with standard USB Drive
Message Format	MP3
Message Bitrate	Variable. Standard 48 Kilobytes/Second

Note: Although **Verbal Warning** has a message capacity of 1-1/2 hours with the standard USB Drive, significantly more message time can be achieved by purchasing USB Drives of more capacity. These are readily available at most major department- and technology-stores.