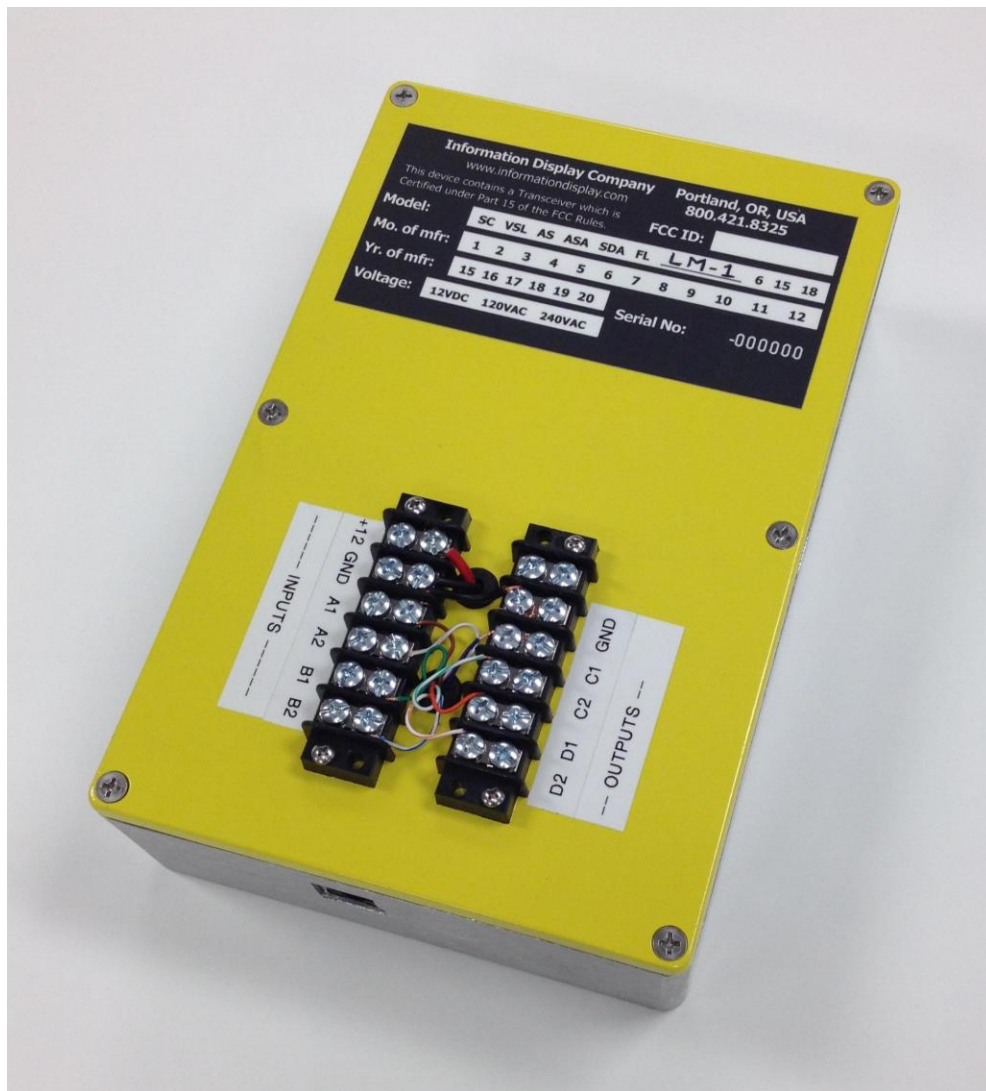


Information Display Company DC-WW Wrong Way Controller User Manual



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Table of Contents

DC-WW Logic Module Overview	2
Functions	3
Connections	3
Programming	4
Specifications	7
Support	7

Logic Module Overview

The DC-WW controller is designed to manage the logic in a double-beam or double-loop wrong-way detection system, and provide trigger outputs for other products or modules used to advise and alert a traffic management center of a wrong-way vehicle. The timing of the two inputs, called “A” and “B”, correspond to vehicles entering pre-defined areas defined by the input sensor, which may consist of a radar or microwave transceiver or traffic detection loops or other devices.

The controller accepts two contact-closure inputs and provides two contact-closure outputs, with the outputs conforming to an internal algorithm with user-set timing parameters to process the input signals.

The controller is programmed via a web page internal to the controller which is accessed via an external Ethernet port.

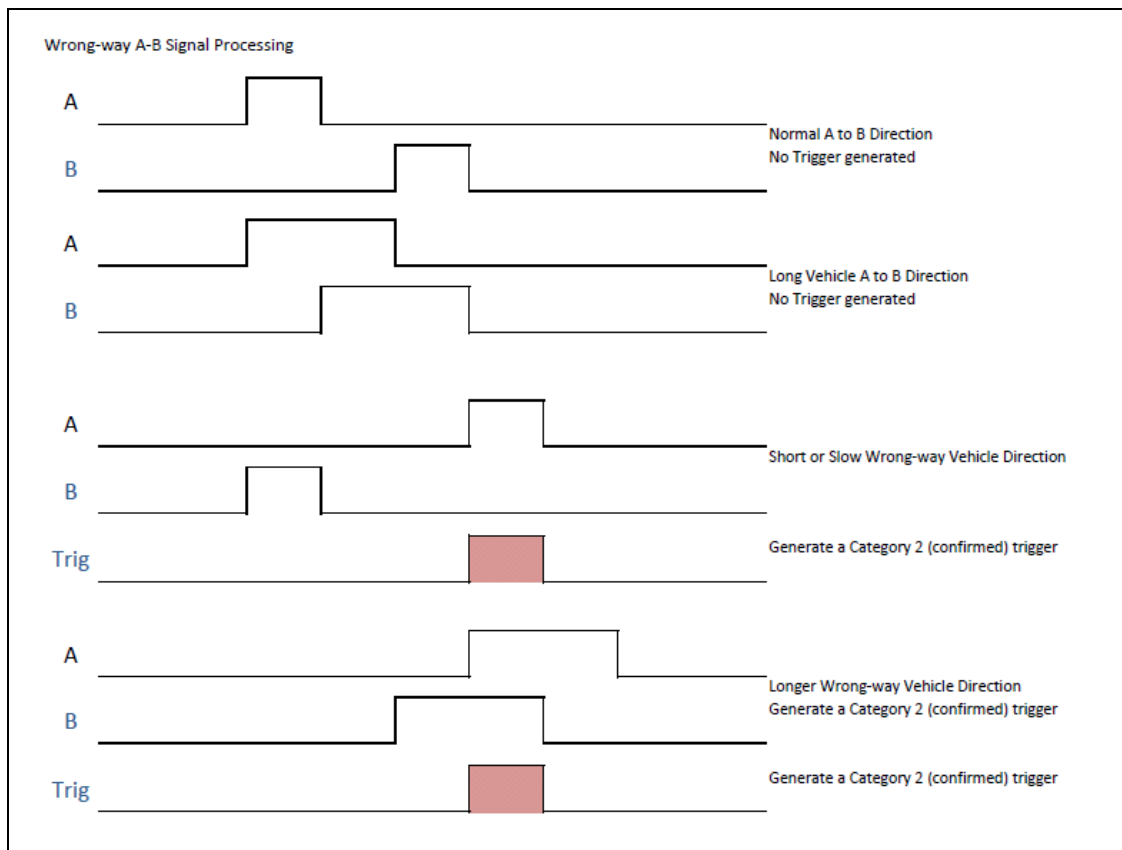


Figure 1 – Generation of Output Signals

Functions

1. Allows user entry of processing parameters to detect a B-before-A event occurrence, including:
 - a. Number of seconds of "no input detected" before watching for a "B" event; default to 10 sec.
 - b. Number of seconds after a "B" event to watch for an "A" event; default to 10 sec.
 - c. Number of seconds to hold the trigger output C active; default to 500 milliseconds.
 - d. Number of seconds to hold the trigger output D active; default to 500 milliseconds.
2. Allows the user to specify the IP address and port number of a network time server, which is checked at power-up and at regular intervals.
3. Provides for device name and location fields in the webpage.
4. Stores the last ten trigger events with date/time stamp.
5. Allows network update of firmware.

Connections

Front-panel screw-type connections are provided for power, input signals, and output signals:

Internal Color Code	Function			Function	Internal Color Code
Red	+12V DC	⊗	⊗	N/C	None
Blk	Ground	⊗	⊗	Ground	Blk
Brn	A1 Input	⊗	⊗	C1 Output	Blu
Brn/Wht	A2 Input	⊗	⊗	C2 Output	Grn/Wht
Grn	B1 Input	⊗	⊗	D1 Output	Org
Blu/Wht	B2 Input	⊗	⊗	D2 Output	Org/Wht

The inputs and outputs are to be contact closures.

The power requirement is 12VDC 200mA maximum.

There is an internal inline fuse to protect against reverse polarity power connection.

Programming

Apply power and access the main programming page by connecting an ethernet cable between the RJ-45 connector on the bottom panel of the DC-WW and a notebook computer. With an internet browser, navigate to the URL indicated on the DC-WW (default is 192.168.1.1:80) and the main programming page will appear.

Entry of the controller parameters is done on this page.

Pulse Parameters



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LM-1 Logic Module
Firmware Version 1.1.0

[Firmware Update Page](#)

B wait period, seconds. This event triggers Level 1.

Max B to A Delay, seconds. This event following Level 1 triggers Level 2.

C Pulse Width Out, msec.:

D Pulse Width Out, msec.:

B wait period, seconds.

This is the delay time to wait for a “no inputs received” before the “B” input is recognized. The default is 10 seconds. Set this parameter as appropriate for the site. Both “A” and “B” inputs must be false for this period of time.

Max. B to A delay, seconds.

This is the maximum time to wait after a “B” input for an “A” input. Set as appropriate for the site. If a “B” input is received and no “A” input is received after this time, the algorithm resets and waits for a “B” input again. A Level 1 trigger is generated (unconfirmed wrong-way) which can be used to produce an output (see following section).

C pulse width out, milliseconds.

This is to set the width of the output trigger signal on the “C” output.

Default is ½ second.

D pulse width out, milliseconds.

This is to set the width of the output trigger signal on the “D” output.

Default is ½ second.

Output Associations

Both “C” and “D” outputs can be activated with Level 1 triggers, Level 2 triggers, or both. Set the boxes to 1 or 0 for the desired behavior.

Enter 0 or 1: Activate C on Level 1 <input type="text" value="0"/> Activate D on Level 1 <input type="text" value="0"/> Activate C on Level 2 <input type="text" value="0"/> Activate D on Level 2 <input type="text" value="0"/>

NTP Server IP

Set this parameter to the network address of the NTP time server you wish to use. The default port is set to 123. Use of a time server is optional.

NTP Server IP: Uses port 123 by default <input type="text" value="192.168.1.43"/>
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Firmware Update and Upload Buttons



The Firmware Update button takes you to the firmware update instructions and download page. This function is only used for updating controller firmware and not for changing and loading parameter settings.



The UPLOAD button is used to upload new settings from the configuration page to the LC-1 Controller.

Specifications

Power Requirement	12VDC, 0.100A max, reverse polarity protected
Fuse	DIN 25V 0.250A, internal
Operating Temperature	-30° C to +50° C
Size	8.75" x 5.75" x 2.6" maximum
Weight	2.5 pounds maximum

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