Rain Master TW-PROG

Decoder Field Programmer

The field programmer is used to read and assign port addresses and valve drive on one, two, and four valve decoders.

Programming Mode Select

Change the selected mode between address and drive power modes. Programmer defaults to address mode.

1. Depress the READ and PROGRAM buttons together for 3 seconds to switch between the address and valve drive modes.
    a. If in address mode a number is displayed (001-255).
    b. If in valve drive mode, drive 1 (dr1) through drive 3 (dr3) is displayed. Drive 1 is the default value.

Address Mode

Use the address mode to assign valve number addresses to a decoder. Addresses are assigned sequentially or individually by decoder port number; i.e., Dual = 2 ports and Quad = 4 ports.

Read Address Function

This function is used to show the current addresses of a connected decoder. **Only one decoder can be programmed at a time**.

1. Connect the red and black wires of the decoder to the output leads.

2. Press the READ button.

    a. Before releasing the READ button use the +/- buttons to select the desired port to read (1-4).

3. Observe the results on the screen.

    a. SUCCESS LED will light if the read was successful.

    b. The display will show the assigned address or the selected port for 2 seconds followed by the decoder type (1,2, or 4 valves) and version for 2 seconds.

Program Address Function

This is used to program a single decoder with a sequential set of addresses or by port number (1-4). **Only one decoder can be programmed at a time**.

1. Connect the red and black wires of the decoder to the output leads.

2. Select the desired address to assign by using the +/- buttons.

3. Press the PROGRAM button.

    a. Before releasing the PROGRAM button use the +/- buttons to select which port to assign the address (ALL, 1, 2, 3, or 4). If ALL is selected all ports will be address with sequential addresses.

4. Observe the results on the screen.

    a. SUCCESS LED will light if the program was successful.

    b. The display will show the selected ports newly assigned address for 2 seconds followed by the decoder type (1, 2, or 4 valves) and version for 2 seconds.

Button and Light Definitions in Address Mode

Read button	Reads the address assigned to the attached decoder.
Program button	Program the displayed address to the attached decoder.
+ / -	Selects the desired address used to program decoder.
	If holding down the READ button, adjusts the port to read.
	If holding down the PROGRAM button, adjusts the port to be addressed.
Power button	Power the programmer on and off. The programmer will auto power off after one minute of no use.
Busy LED	On when reading or programming a decoder.
Success LED	On when a read or program of the attached decoder is successful.

Drive Mode

The default value for all decoders is "**dr1**", more than sufficient for most solenoids. Some solenoids may require additional drive power to operate. Higher drive values will consume more power from the two-wire.
Only use higher drive values when necessary.

If solenoids are not opening properly, use the drive mode to assign the level of drive power the decoder will use to drive all connected valve solenoids. The first port of the decoder must be assigned an address other than 000 (null address) in order to assign the drive level.

Read Function

This function is used to show the drive value assigned to the connected decoder. Only one decoder can be read at a time.

4. Connect the red and black wires of the decoder to the output leads.

5. Press the READ button.

6. Observe the results on the screen.

    a. SUCCESS LED will light if the read was successful.

    b. The display will show the assigned drive value (dr1 (.2amps), dr2 (.25amp), or dr3 (.3amp) for 2 seconds followed by the decoder type (1,2, or 4 valves) and version for 2 seconds.

Dec 2009

Write Function

This is used to program a new valve drive value to the attached decoder. Only one decoder can be programmed at a time.

5. Connect the red and black wires of the decoder to the output leads.

6. Select the desired address to assign by using the +/- buttons.

7. Press the PROGRAM button.

8. Observe the results on the screen.

    a. SUCCESS LED will light if the program was successful.

    b. The display will show the assigned drive value (dr1, dr2, or dr3) for 2 seconds followed by the decoder type (1,2, or 4 valves) and version for 2 seconds.

Button and Light Definitions in Drive Mode

Read button	Reads the drive assigned to the attached decoder.
Program button	Program the displayed drive to the attached decoder.
+ / -	In drive mode, selects the desired drive used to program decoder.
Power button	Power the programmer on and off. The programmer will auto power off after one minute.
Busy LED	On when reading or programming a decoder.
Success LED	On when a read or program of the attached decoder is successful.

Display Definitions

Er1	Programming or read failed. Be sure to leave the decoder attached until the BUSY LED is off and try again.
	User tried to read a port that does not exist on the on the connected decoder (example: trying to read port 3 of a two valve decoder).
Er2	No decoder found. Check the connection to the decoder. Be sure the polarity is correct.
Er3	Over current detected. Be sure the black and red leads are not touching each other. If there is an over current the programmer will auto power off to conserve power.
Er4	Can not read or write drive power because the attached decoders first port address equals 000. Assign the decoder an address other than 255 and then try again.

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