



1. Open the camera app
2. Focus the camera on the QR code by gently tapping the code
3. Follow the instructions on the screen to view PDF file

RAS SERIES

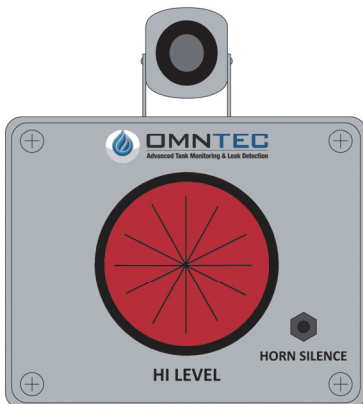
WIRING INSTRUCTIONS



REMOTE OVERFILL ANNUNCIATORS

Revision 1.4

Document No. DI00001



OMNTEC Mfg., Inc. has been certified
by DQS Inc. to ISO 9001:2015

This document refers to wiring OMNTEC® RAS-Series remote annunciators to either PROTEUS® OEL8000III-K or OEL8000III-X Series ATG controllers.

NOTE: Your PROTEUS controller will have an MCU board which may have either 5 or 3 onboard relays.

PROTEUS controllers, with 5 MCU relays, will have one, 10-pin, J16 connector at the top of the MCU board, above the 5 relays. J16 is imprinted on the MCU just below the connector. To the left of the J16 is an additional 4-pin, J17 connector. J17 is imprinted on the MCU just below this connector. (See Figure 1A; red rectangle)

If you have this PROTEUS 5-relay MCU controller, refer to section 1 wiring (page 3) within this document.

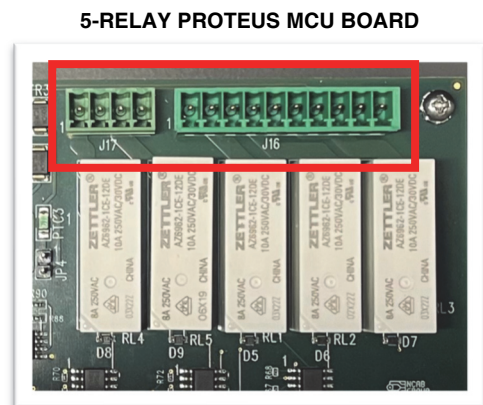


Figure 1A

Older PROTEUS controllers, with 3 MCU relays, will have one, 10-pin, J9 connector at the top of the MCU board, above the 3 relays. J9 is imprinted on the MCU just to the right of the connector. (See Figure 1B; red rectangle)

The 10-pin connector on all PROTEUS MCU boards, regardless of the J9 or J16 imprint, are the same connector.

If you have this PROTEUS 3-relay MCU controller, refer to section 2 wiring (page 7) within this document.

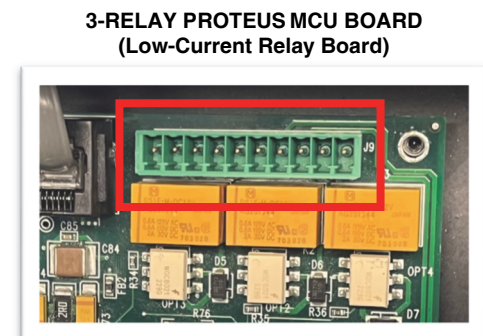


Figure 1B

Some PROTEUS controllers, with 3 MCU relays, will have one, 10-pin, J16 connector at the top of the MCU board, above the 3 relays. J16 is imprinted on the MCU just below the connector. (See Figure 1C; red rectangle)

There is also a J17 imprint on the MCU (to the left of the J16 connector) without the J17 connector.

If you have this PROTEUS 3-relay MCU controller, refer to section 2 wiring (page 7) within this document.

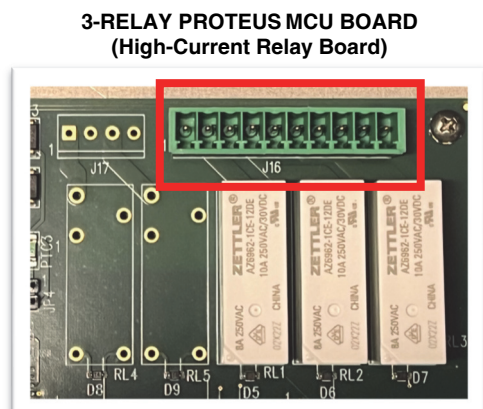


Figure 1C

SECTION 1 - RAS WIRING TO A PROTEUS® WITH A 5-RELAY MCU BOARD



IMPORTANT - Review programming of the ATG to ensure proper RAS remote annunciator functionality.

Refer to the PROTEUS System Programming Manual, **DOC00008**, (from www.omntec.com) regarding interface board & relay programming.

DO NOT INSTALL RAS SERIES REMOTE ANNUNCIATORS IN HAZARDOUS LOCATIONS.

1. IMPORTANT - Review Before Wiring Remote Annunciator

- Bring the remote annunciator cable into the remote annunciator via conduit.
- Make the wiring connections. See **1.2.2** and **1.2.1** for MCU J16 (10-pin) and J17 (4-pin) connectors. These connectors sit side-by-side at the top of the MCU board near the relays.
- Ground (GND) jumpers, as detailed in the document, must be installed or the RAS Series remote annunciator will not operate properly.**
- Wire descriptions in this document are based on the color coding used by the RAS remote annunciators. If you are using a cable with a different color code, refer to the notes you made when you spliced the annunciator wires to the cable wires.
- Ensure that the conduit connection is watertight.
- Please check the rules, regulations and laws of your local government if the tank(s) require its own independent light.**

2. Remote Annunciator Connections at the Controller

At a minimum, the optional remote annunciators (RAS Series) require #22 AWG, low-voltage, communication wire. Use part number **EC-6** (6-conductor cable) for RAS-1 (5-wire), and RAS-2 (6-wire) remote annunciators. Use part number **EC-12** (12-conductor cable) for RAS-3 (7-wire), and RAS-4 (8-wire) remote annunciators.

**MCU J17
4-Pin Connector Pinout**

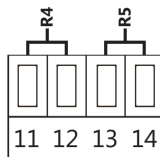


Figure 1.2.1

**MCU J16
10-Pin Connector Pinout**

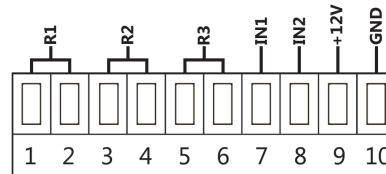


Figure 1.2.2

MCU J16 and J17 Connector Jumper Wiring when used with an RAS Remote Annunciator
(refer to **Figure 1.2.3** and **Table 1.2.1**)

IMPORTANT: Ground (GND) jumpers, as detailed in this document, must be installed or the RAS Series remote annunciator will not operate properly.

RAS-4 High-Level Alarm Wiring:

Individual RAS-4 wiring (see **Figure 1.2.3** and **Table 1.2.1**) for a 4-tank application. Additional wiring configurations on the following pages.

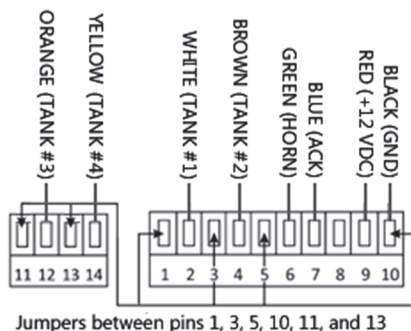


Figure 1.2.3

	MCU J16 Pin No.	Wire	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4	BROWN	LED for Tank #2
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		
	9	RED	12 VDC
	10	BLACK	Ground (GND)
	MCU J17 Pin No.	Wire	Designation
R4	11		Jumper to Ground (GND)
	12	ORANGE	LED for Tank #3
R5	13		Jumper to Ground (GND)
	14	YELLOW	LED for Tank #4

Table 1.2.1

3. Remote Annunciator Wiring Configurations

Each LED corresponds to a specific tank number (1-4). If multiple remote annunciators are used, then adjust the tank numbers to reflect LED/tank relationship. For example, if four RAS-1 annunciators are being used, the LED wire (white) from one remote annunciator is designated to Tank #1. The other LED wires (white) from the second, third, and fourth annunciators are designated to Tank #2, #3, and #4. Keep a record indicating the connectivity between LEDs and tank numbers.

3.1. RAS-1 and RAS-1-NYS

A. Common High-Level Alarm Wiring (refer to Figure 1.3.1 and Table 1.3.1)

At Alarm Acknowledgement:

- Horn = Turns "OFF"
- Light = Stays "OFF"

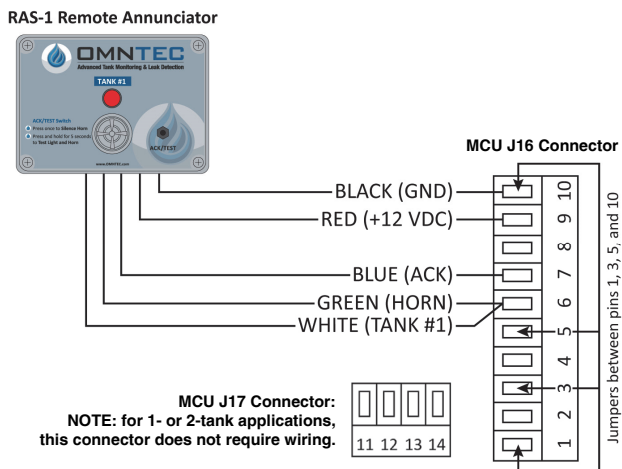


Figure 1.3.1

RAS-1 COMMON ALARM WIRING DIAGRAM			
	MCU J16 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2		Unused
R2	3		Jumper to Ground (GND)
	4		Unused
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
		WHITE	LED for Tank #1
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)
	MCU J17 Pin #	Wire Color	Designation
R4	11	N/A	N/A
	12	N/A	N/A
R5	13	N/A	N/A
	14	N/A	N/A

Table 1.3.1

B. Individual High-Level Alarm Wiring (refer to Figure 1.3.2 and Table 1.3.2)

At Alarm Acknowledgement:

- Horn = Turns "OFF"
- Light = Stays "ON"

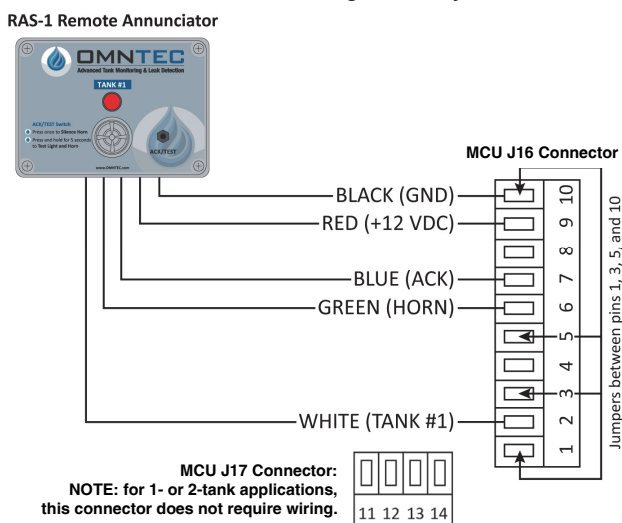


Figure 1.3.2

RAS-1 INDIVIDUAL ALARM WIRING DIAGRAM			
	MCU J16 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4		Unused
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
			Unused
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)
	MCU J17 Pin #	Wire Color	Designation
R4	11	N/A	N/A
	12	N/A	N/A
R5	13	N/A	N/A
	14	N/A	N/A

Table 1.3.2

3.2. RAS-2 High-Level Alarm Wiring (refer to Figure 1.3.3 and Table 1.3.3) *Same applies when using (2) RAS-1-NYS*

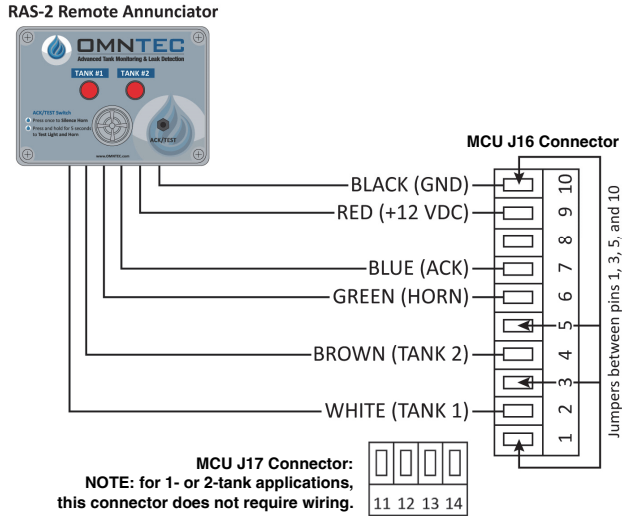


Figure 1.3.3

RAS-2 INDIVIDUAL ALARM WIRING DIAGRAM			
	MCU J16 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4	BROWN	LED for Tank #2
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
			Unused
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)
	MCU J17 Pin #	Wire Color	Designation
R4	11	N/A	N/A
	12	N/A	N/A
R5	13	N/A	N/A
	14	N/A	N/A

Table 1.3.3

3.3 RAS-3 High-Level Alarm Wiring (refer to Figure 1.3.4 and Table 1.3.4)

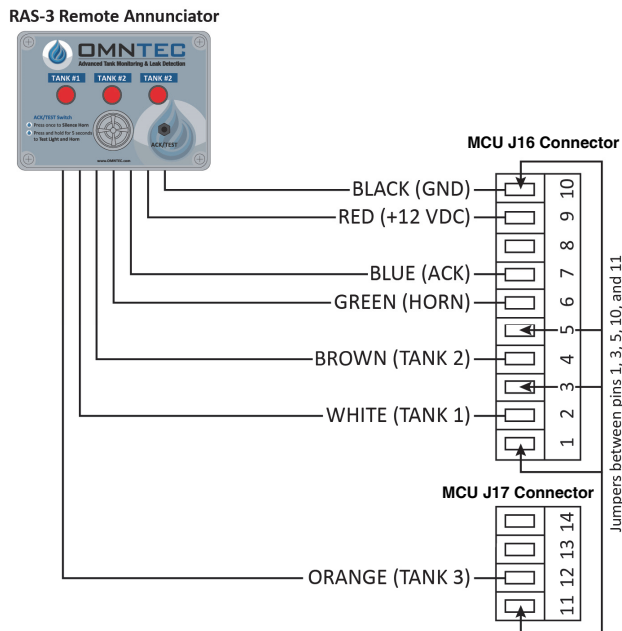


Figure 1.3.4

RAS-3 INDIVIDUAL ALARM WIRING DIAGRAM			
	MCU J16 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4	BROWN	LED for Tank #2
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
			Unused
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)
	MCU J17 Pin #	Wire Color	Designation
R4	11		Jumper to Ground (GND)
	12	ORANGE	LED for Tank #3
R5	13	N/A	N/A
	14	N/A	N/A

Table 1.3.4

3.4 RAS-4 High-Level Alarm Wiring (refer to Figure 1.2.3 and 1.2.1; page 3)

3.5. Multiple Remote Annunciators

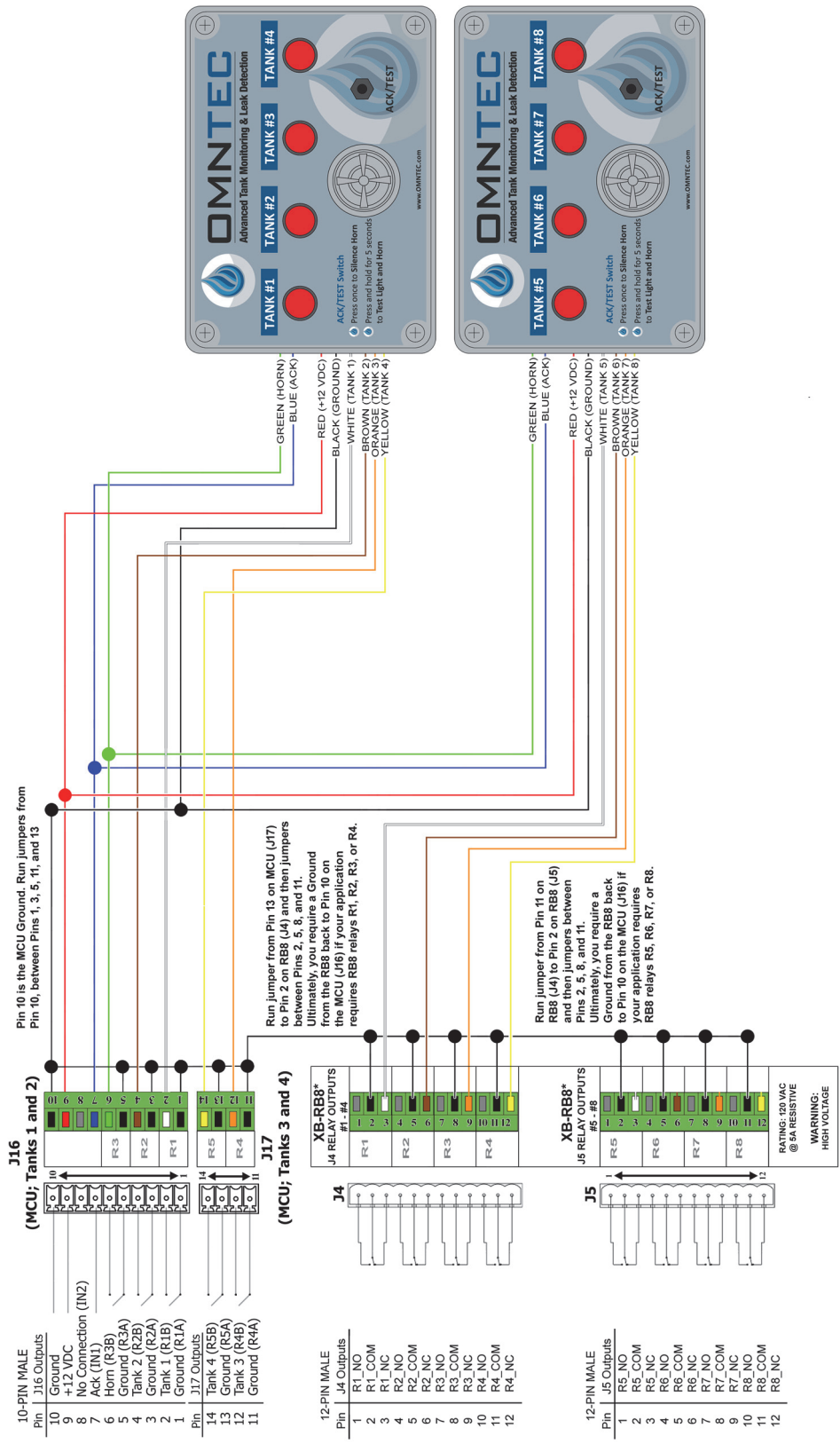


Figure 1.3.5

SECTION 2 - RAS WIRING TO A PROTEUS® WITH A 3-RELAY MCU BOARD



IMPORTANT - Review programming of the ATG to ensure proper RAS remote annunciator functionality.

Refer to the PROTEUS System Programming Manual, DOC00007, (from www.omntec.com) regarding interface board & relay programming.

DO NOT INSTALL RAS SERIES REMOTE ANNUNCIATORS IN HAZARDOUS LOCATIONS.

1. Important - Review Before Wiring Remote Annunciator

- Bring the remote annunciator cable into the remote annunciator via conduit.
- Make the wiring connections. (See **Figure 2.2.1** and **2.2.2** for MCU J9 connector)
- NOTE: Ground (GND) jumpers, as detailed in this document, must be installed or the RAS Series remote annunciator will not operate properly.**
- Wire descriptions are based on the color coding used by the annunciators. If you are using a cable with a different color code, refer to the notes you made when you spliced the annunciator wires to the cable wires.
- Ensure that the conduit connection is watertight.
- Please check the rules, regulations and laws of your local government if the tank(s) require its own independent light.**

2. Remote Annunciator Connections at the Controller

At a minimum, the optional Remote Annunciators (RAS Series) require #22 AWG low-voltage communication wire. Use part number EC-6 (6-conductor cable) for RAS-1 (5-wire) and RAS-2 (6-wire) remote annunciators.

MCU J9 Connector Pinout

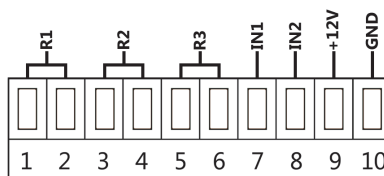


Figure 2.2.1

MCU J9 Connector Jumper Wiring when used with an RAS Remote Annunciator

(refer to **Figure 2.2.2** and **Table 2.2.1**, Individual RAS-1 Wiring shown, additional wiring configurations on following pages)

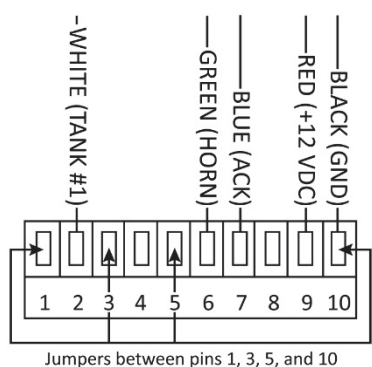


Figure 2.2.2

	MCU J9 Pin No.	Wire	Designation
R1	1		Jumper to Ground (GND)
	2		
R2	3		Jumper to Ground (GND)
	4		
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		
	9	RED	12 VDC
	10	BLACK	Ground (GND)

Table 2.2.1

3. Remote Annunciator Wiring Configurations

Each LED corresponds to a specific tank number (1-2). If multiple remote annunciators are used, then adjust the tank numbers to reflect LED/tank relationship. For example, if two RAS-1 annunciators are being used, the LED wire (white) from one remote annunciator is designated to Tank #1 and the other LED wire (white) from the second annunciator is designated to Tank #2. Keep a record indicating the connectivity between LEDs and tank numbers.

3.1. RAS-1 and RAS-1-NYS

A. Common High-Level Alarm Wiring (refer to Figure 2.3.1 and Table 2.3.1)

At Alarm Acknowledgement:

- Horn = Turns "OFF"
- Light = Stays "OFF"

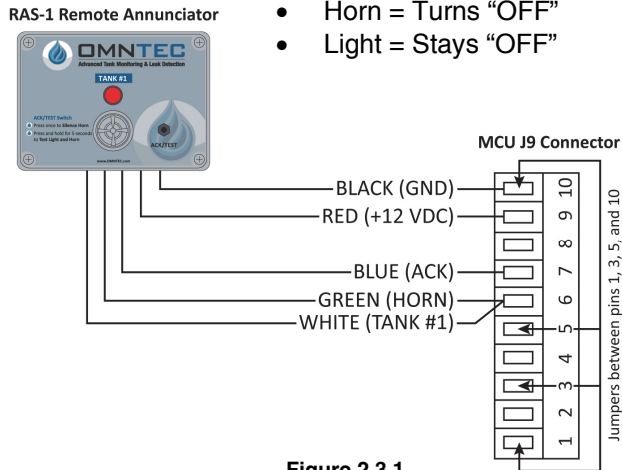


Figure 2.3.1

RAS-1 COMMON ALARM WIRING DIAGRAM			
	MCU J9 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2		Unused
R2	3		Jumper to Ground (GND)
	4		Unused
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
		WHITE	LED for Tank #1
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)

Table 2.3.1

B. Individual High-Level Alarm Wiring (refer to Figure 2.3.2 and Table 2.3.2)

At Alarm Acknowledgement:

- Horn = Turns "OFF"
- Light = Stays "ON"

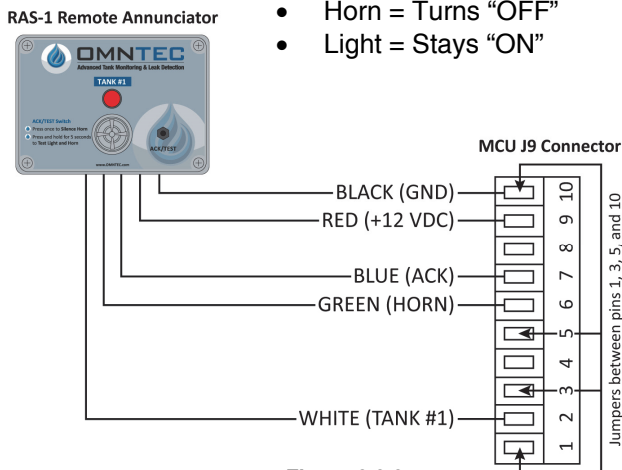


Figure 2.3.2

RAS-1 INDIVIDUAL ALARM WIRING DIAGRAM			
	MCU J9 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4		Unused
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)

Table 2.3.2

3.2. RAS-2 High-Level Alarm Wiring (refer to Figure and Table 2.3.3) *Same applies when using (2) RAS-1-NYS*

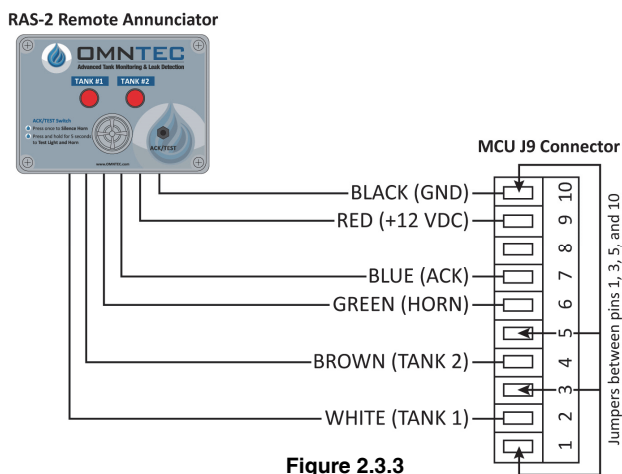


Figure 2.3.3

RAS-2 INDIVIDUAL ALARM WIRING DIAGRAM			
	MCU J9 Pin #	Wire Color	Designation
R1	1		Jumper to Ground (GND)
	2	WHITE	LED for Tank #1
R2	3		Jumper to Ground (GND)
	4	BROWN	LED for Tank #2
R3	5		Jumper to Ground (GND)
	6	GREEN	Horn Alarm
	7	BLUE	Horn Silence (Acknowledge) Switch
	8		UNUSED
	9	RED	+12 VDC
	10	BLACK	Ground (GND)

Table 2.3.3

3.3. RAS-3 and Up High-Level Alarm Wiring (refer to Figure 2.3.4) *Same applies when using (2) RAS-1-NYS*

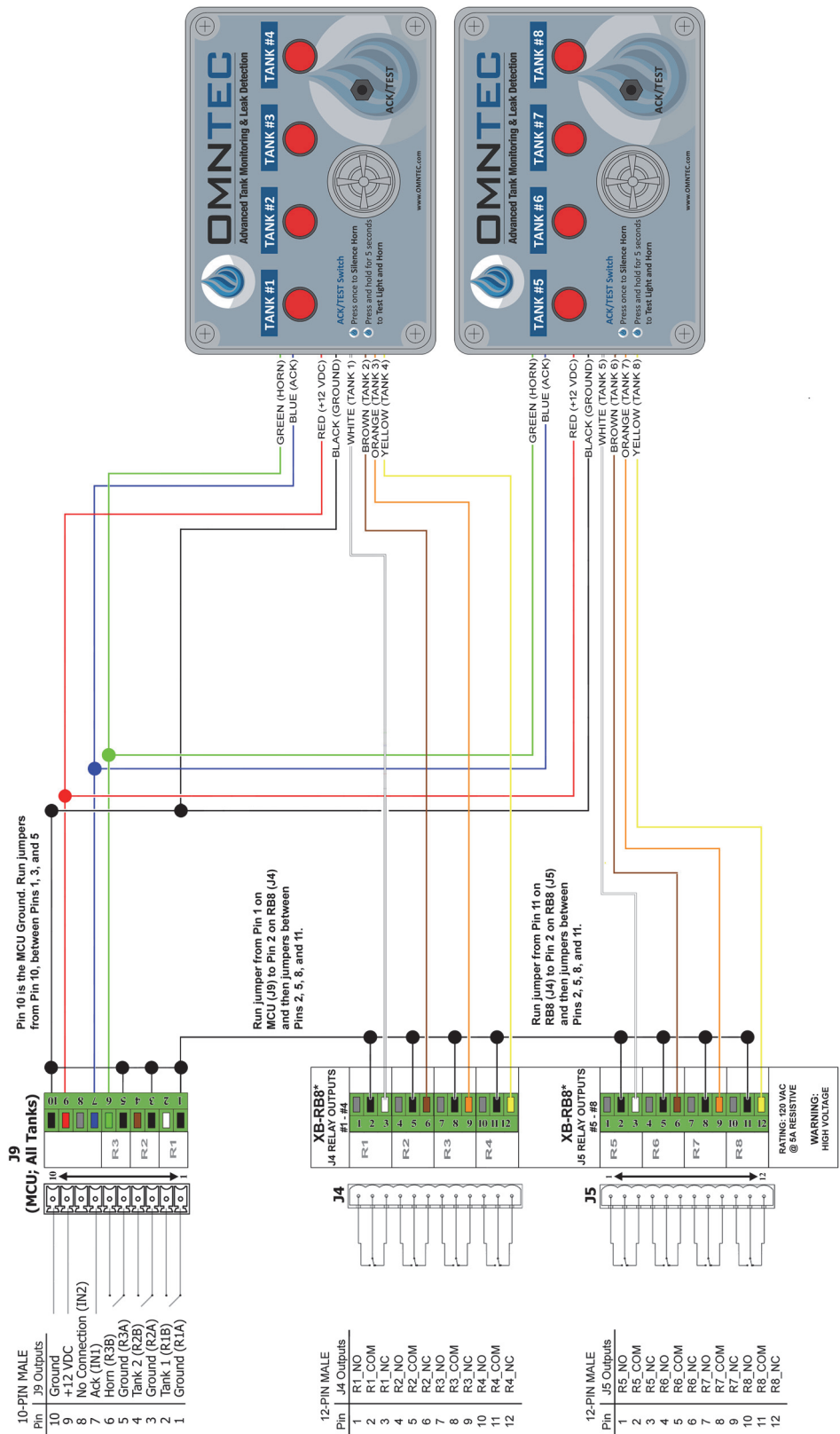


Figure 2.3.4