

Centeron[®]
Alarm Console
Instruction Manual

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1.0 Introduction

This manual describes how to install, test, and service the Centeron® Alarm Console (hereafter referred to as the Console). The Console is part of the Centeron® Level Monitoring System, which includes the Console and Digital Two Channel Monitors (hereafter referred to as Monitors).

This guide does not include how to install, test, maintain or troubleshoot the Monitor. Refer to the monitor's instruction manual for its installation and maintenance.

The description herein is based on a standard installation. The Console is to be installed as fixed, permanently connected equipment. This means that the Console should be fastened to a support and electrically connected to its supply by a permanent connection which can be detached only by the use of a tool.

2.0 Product Overview

2.1 Description

The Console is a receiver that contains a local database of monitor information. The Console processes the information and indicates the monitor's status via LEDs and relay outputs. The user can configure the operation of the LEDs and relays by setting the Console's operating mode using the serial interface.

2.2 Operation

The Console receives data from a Monitor using RF transmissions. The Level Monitoring System utilizes spread spectrum technology for communication in the 902–928 MHz band in accordance with the Federal Communications Commission's (FCC) Rules.

The Console processes the data received from the Monitor and sets its LEDs and relays based on the data reported by the Monitor and the operating mode of the Console. The user must set up the Monitor in the Console's database before the Console will process the Monitor's data. Appendix A details the method for configuring Monitors in the Console's database and setting the operating mode of the Console.

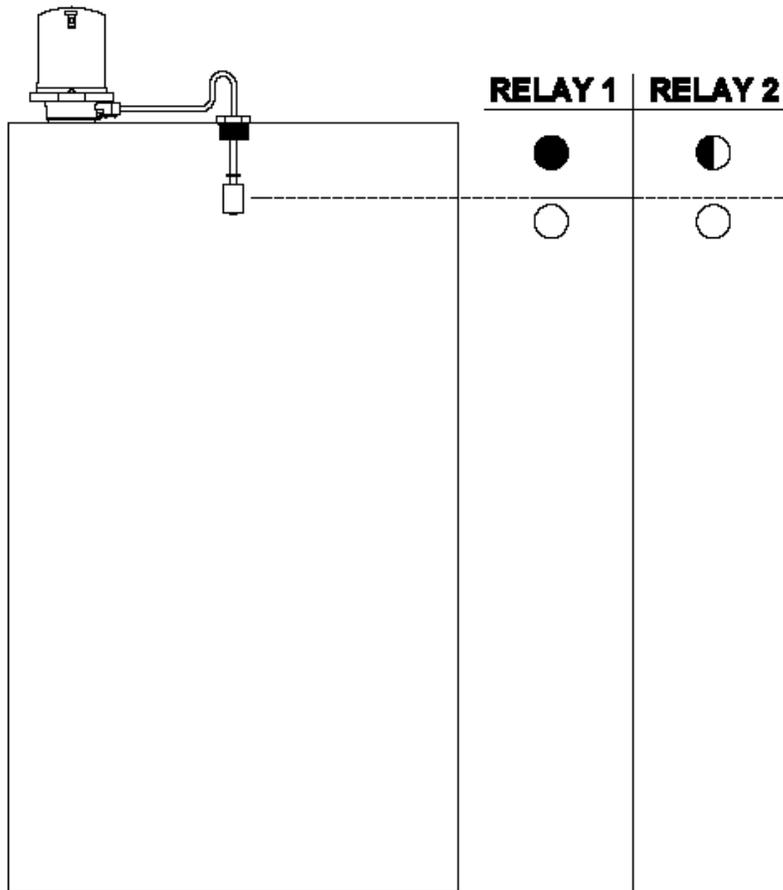
The following sections describe the four operating modes (Single High Alarm Mode, Dual High Alarm Mode, High-Low Alarm Mode, and Midrange Alarm Mode) and the relay and LED operations common to all of the modes.

The following descriptions assume a typical, normally open, switch configuration as sold with standard Monitors. Refer to the Monitor's manual for definitions of the transmitted levels. When the Monitor is configured for dual floats, the lower float is connected as the

Switch 1 input to the Monitor and the higher float is connected as Switch 2. When a single float device is used, the Monitor should be wired so that the inputs for Switch 1 and Switch 2 are both connected to the single switch mechanism.

2.2.1 Mode 0: Single High Alarm Mode

The Single High Alarm Mode is used when the Console is used with only single float Monitors. In this mode, the operation of Relay 1 and Relay 2 is shared between the three monitors. Figure 1 shows a graphical representation of this mode's operation. The relay and light operation for this mode are shown in Table 1. Lost monitor operation is shown in Table 2.



● = RELAY ACTIVE

◐ = RELAY ACTIVE WITH TIMEOUT
AND ACKNOWLEDGE.
(SEE SECT 2.2.5.1)

○ = RELAY INACTIVE

Figure 1: Single High Alarm Operation

Table 1: Single High Alarm Mode Relay and Light Operation

Monitor Report	Acknowledge Button	Relay 1	Relay 2	Tank's Integral Red Light
All Tanks Below Alarm	Not Pressed	Inactive	Inactive	Off
All Tanks Below Alarm	Pressed *	Inactive	Inactive	Off
Any Tank Above Alarm	Not Pressed	Active	Active **	On
Any Tank Above Alarm	Pressed	Active	Inactive	On
Any Tank Invalid Report	Pressed or Not Pressed	Active	Active	Slow Flash ***

* This places the Console into test mode.

** This relay setting will have a configurable timeout assigned to it.

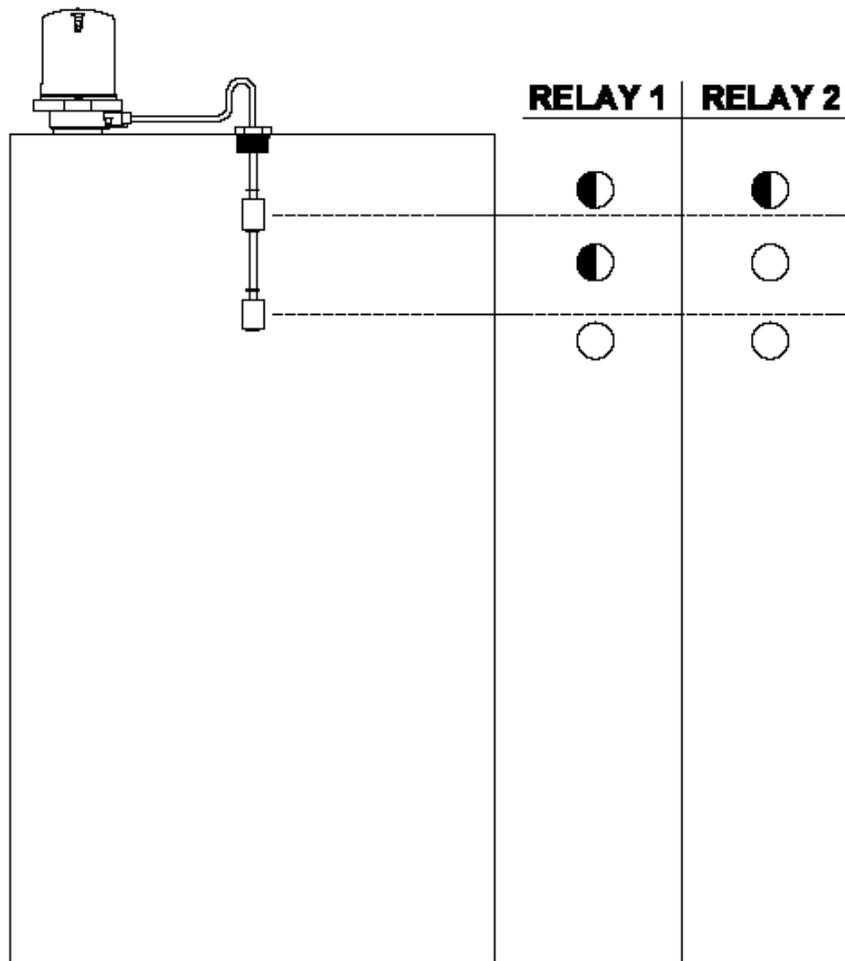
*** The light will be on for 4 seconds and off for ½ second and repeat. This state is caused by an incorrect monitor setup or system malfunction.

Table 2: Single High Alarm Lost Monitor Operation

Acknowledge Button	Relay 1	Relay 2	Yellow Light
Not Pressed	Active	Active	Solid On
Pressed	Inactive	Inactive	Solid On

2.2.2 Mode 1: Dual High Alarm Mode

The Dual High Alarm Mode is used when the Console is used with dual float Monitors. In this mode, the operation of Relay 1 and Relay 2 is shared between the three monitors. Figure 2 shows a graphical representation of this mode's operation. The relay and light operation for this mode are shown in Table 3. Lost monitor operation is shown in Table 4.



- = RELAY ACTIVE
- ◐ = RELAY ACTIVE WITH TIMEOUT AND ACKNOWLEDGE.
(SEE SECT 2.2.5.1)
- = RELAY INACTIVE

Figure 2: Dual High Alarm Operation

Table 3: Dual High Alarm Relay and Light Operation

Monitor Report	Acknowledge Button	Relay 1	Relay 2	Integral Red Light
All Tanks Below Alarms	Not Pressed	Inactive	Inactive	Off
All Tanks Below Alarms	Pressed *	Inactive	Inactive	Off
Any Tank Above High Alarm	Not Pressed	Active **	Inactive	Flash ***
Any Tank Above High Alarm	Pressed	Inactive	Inactive	Flash ***
Any Tank Above High-High Alarm	Not Pressed	Active **	Active **	On
Any Tank Above High-High Alarm	Pressed	Inactive	Inactive	On
Any Tank Stuck Float	Pressed or Not Pressed	Active	Active	Slow Flash ****

* This places the Console into test mode.

** This relay setting will have a configurable timeout assigned to it.

*** The red light will repeat a cycle of being on for ½ second, turning off for ½ second, and repeating.

**** The red light will be on for 4 seconds and off for ½ second and repeat. This state is caused by an incorrect monitor setup or system malfunction.

Table 4: Dual High Alarm Lost Monitor Operation

Acknowledge Button	Relay 1	Relay 2	Yellow Light
Not Pressed	Active	Active	Solid On
Pressed	Inactive	Inactive	Solid On

2.2.3 Mode 2: High-Low Alarm Mode

The High-Low Alarm Mode is used when the Console is used with up to two dual float Monitors. In this mode, the operation of Relay 1 is tied to Tank 1's monitor and the operation of Relay 2 is tied to Tank 2's monitor. Figure 3 shows a graphical representation of this mode's operation. The relay and light operation for this mode are shown in Table 5. Lost monitor operation is shown in Table 6.

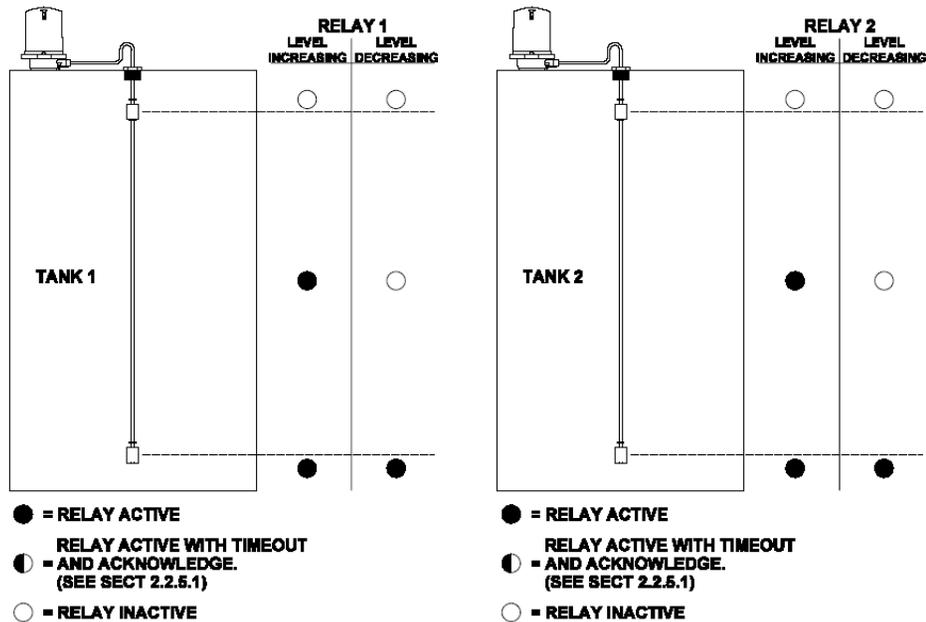


Figure 3: High-Low Alarm Operation

Table 5: High-Low Alarm Relay and Light Operation

Tank Level	Previous Monitor Level	Acknowledge Button	Tank's Relay	Integral Red Light
Below Bottom Float	Any	Not Pressed	Active	Off
Below Bottom Float	Any	Pressed *	Inactive	Cycle Lights *
Between Bottom & Top Float	Below Bottom Float	Not Pressed	Active	Flash **
Between Bottom & Top Float	Below Bottom Float	Pressed *	Inactive	Cycle Lights *
Between Bottom & Top Float	Above Top Float	Not Pressed	Inactive	Flash **
Between Bottom & Top Float	Above Top Float	Pressed *	Inactive	Cycle Lights *
Above Top Float	Any	Not Pressed	Inactive	On
Above Top Float	Any	Pressed *	Inactive	Cycle Lights *
Top Float Up, Bottom Float Down	Any	Not Pressed	Inactive	Slow Flash ***
Top Float Up, Bottom Float Down	Any	Pressed *	Inactive	Cycle Lights *

* Pressing the Acknowledge Button once inactivates **both** relays and cycles all of the Alarm Console lights. Pressing the Acknowledge Button again returns the relays to their previous states and all lights to their previous state.

** The red light will repeat a cycle of being on for ½ second, turning off for ½ second, and repeating.

*** The red light will be on for 4 seconds and off for ½ second and repeat. This state is caused by an incorrect monitor setup or system malfunction.

Table 6: High-Low Alarm Lost Monitor Operation

Monitor Lost	Relay 1	Relay 2	Tank's Yellow Light
Tank 1	Inactive	Unchanged	Solid On
Tank 2	Unchanged	Inactive	Solid On

2.2.4 Mode 3: Midrange Alarm Mode

The Midrange Alarm Mode is used when the Console is used with up to three dual float Monitors. In this mode, the operation of the relays is shared between the three monitors. Figure 4 shows a graphical representation of this mode's operation. The relay and light operation for this mode are shown in Table 7. Lost monitor operation is shown in Table 8.

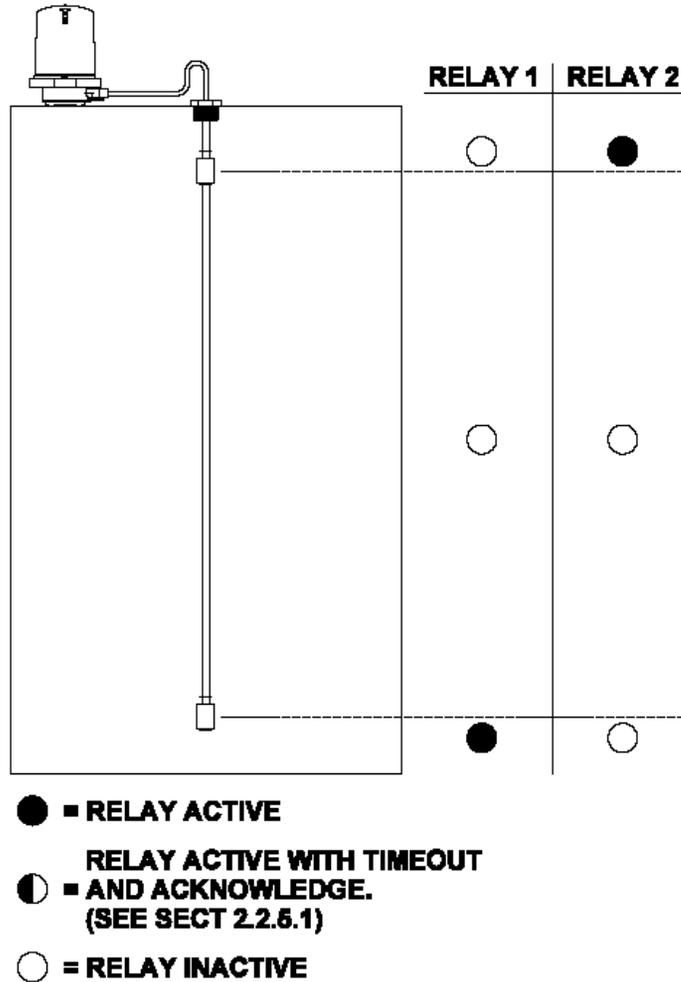


Figure 4: Midrange Alarm (Dual Float) Operation

Table 7: Midrange Alarm (Dual Float) Relay and Light Operation

Tank Level	Acknowledge Button	Relay 1	Relay 2	Integral Red Light
Below Bottom Float	Not Pressed	Active	Inactive	Flash *
Below Bottom Float	Pressed	Inactive	Inactive	Flash *
Between Bottom & Top Float	Not Pressed	Inactive	Inactive	Off
Between Bottom & Top Float	Pressed	Inactive	Inactive	Off
Above Top Float	Not Pressed	Inactive	Active	On
Above Top Float	Pressed	Inactive	Inactive	On
Top Float Up, Bottom Float Down	Pressed or Not Pressed	Active	Active	Slow Flash **

* The red light will repeat a cycle of being on for ½ second, turning off for ½ second, and repeating.

** The red light will be on for 4 seconds and off for ½ second and repeat. This state is caused by an incorrect monitor setup or system malfunction.

Table 8: Midrange Alarm Lost Monitor Operation

Lost Monitor	Relay 1	Relay 2	Integral Yellow Light
Any	Unchanged	Unchanged	Solid On

2.2.5 Common Relay and Light Operation

2.2.5.1 Configurable Relay Timeout

The user will be able to configure a timeout for active relays using the serial interface. The timeout options are: no timeout, 1 minute, 2 minutes, 4 minutes, and 8 minutes. The default timeout is a 2 minute timeout. The actual timeout will be the selected timeout plus up to one (1) minute. For example, selecting a 1 minute timeout will cause the relay to be active for not less than one, but not more than one minute and 59 seconds before the relay times out.

2.2.5.2 Low Battery Indication

When a Monitor reports a low battery, the corresponding yellow tank light will flash continuously. The only way to stop the flashing is for the Console to receive a message from the Monitor that doesn't have a low battery indication.

2.3 Environmental Specifications

The following environmental specifications should be observed when installing the Controller:

- Temperature Range: -40°C to +60°C
- Designed for indoor or outdoor use.
- The NEMA 4X housing is designed to protect the controller circuit board.
- Chemical Exposure: The Console is housed in a NEMA 4X housing.

2.4 Certifications

This equipment complies with Part 15 of the FCC Rules. On the enclosure of this equipment is a label that contains, among other information, the FCC registration number.

2.4.1 FCC Notice—Radio Frequency Communications

The Console generates and uses radio frequency energy. If not installed and used in accordance with the manufacturer's instructions, it may cause interference to radio and television reception. The Controller Board has been tested and found to comply with the specifications in Part 15 of Radiators and FCC Rules for Class B Computing Devices.

CAUTION: Robertshaw Industrial Products does not support field changes or modifications to any of the Centeron® Level Monitoring System equipment unless they are specifically covered in this manual. All adjustments must be made at the factory under the specific guidelines set forth in our manufacturing processes. Any modification to the equipment will void the manufacturer's warranty and could void the user's authority to operate the equipment and render the equipment in violation of FCC Part 15, Subpart C, 15.247.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.4.2 Canada

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

2.4.3 Safety and Regulatory

The Console complies with UL 61010B-1 Electrical Measuring and Test Equipment; Part 1.

3.0 Installation

3.1 RF Site Guidelines

The Console may only be installed vertically with the writing on the front panel upright. The following guidelines will ensure the optimal RF link between the Monitor and the Console.

- Direct line of sight between the Monitor and Console will provide optimum radio reception.
- The Monitor and Console can communicate at distances up to one mile under optimum line-of-sight conditions.
- When obstructions such as walls, buildings, and vehicles exist between the Monitor and Console the distance between these units should be limited to less than 500 feet.
- Multiple obstructions (such as two or more walls or a tank and a wall) between the Monitor and Console should be avoided, if possible.
- Electrically conductive objects such as metal buildings, concrete reinforcement rods, tanks, silos, and vehicles reflect radio signals. This reflection can be either an advantage or disadvantage to good radio reception at a particular installation site:
 1. Metal objects between the Monitor and Console may reflect and scatter RF energy and reduce radio signal strength at the Console.
 2. Metal objects behind the Monitor or Console may increase the radio signal strength at the Console by reflecting radio signals toward the Console.

- Even small metal objects such as tank vents or toolboxes between the Monitor and Console can significantly reduce radio signal strength if they are within a few feet of the Monitor or Console. These objects can reflect radio signals and cause a RF “shadow” which may prevent radio signals from reaching the Console.
- Objects which are not electrically conductive such as wooden or fiberglass buildings, non reinforced masonry, trees, plastic, and glass have less effect on radio signals than metal objects.
- Windows and wooden doors can provide radio signals access into otherwise closed metal buildings. However, “low-E” window glass may have a thin metallic coating which can reflect radio signals.
- Strong electromagnetic fields such as those found in close proximity to power lines, large electric motors, generators, electric fences, and transmitter antennas may interfere with the radio signals received by the Console.
- The Console should be mounted as high as is reasonably possible to improve its ability to receive radio signals.
- Warning: For maximum Monitor reception, mount the Monitor within 500 feet of the Console, avoid mounting Monitor inside a fully closed metal building, and avoid close proximity to large electrical equipment.

3.2 Handling Guidelines

The Console should be handled with care. The electronics inside of the enclosure are static sensitive. Do not handle the electronics outside of their enclosure without proper static precautions.

3.3 Mounting

3.3.1 Site Selection

Select an area for mounting with an available power supply in the same physical area. Follow the RF site guidelines outlined in Section 3.1. Choose a mounting location in accordance with good instrument practice, avoiding extremes of temperature, humidity, and vibration.

3.3.2 Mounting

The Console must be rigidly mounted to a support in a fixed location. When mounted, the writing on the cover of the Console should be upright. All directions (top, bottom, left, right) are with reference to this orientation. The Console should be mounted using four (4) #8 panhead screws in the enclosure’s mounting holes.

The Console does not require a minimum spacing for ventilation around it. However, proper spacing may be required to allow easy access to and use of the disconnecting device described in the wiring section.

3.3.3 Wiring

Before wiring, unscrew the front cover from the enclosure. Disconnect the cables connecting the front cover electronics to the Supply/Relay Board. Store the cover assembly in a safe place during wiring.

All wiring must conform to the NEC and any applicable state and local codes. All wiring connections are labeled on the Supply/Relay Board. The requirements for wiring to the Supply/Relay connectors are given in Table 9.

Table 9: Supply/Relay Board Connector Requirements

Connector Designators	Wire Requirements	Tightening Torque
TB1, TB2, TB3	12 AWG, maximum, rated for 80 °C, minimum	9 in-lbs
TB4	14 AWG, rated for 80 °C, minimum	5 in-lbs

Wiring for power (hot, neutral, and earth ground) should be routed through conduit into the bottom right hole in the enclosure. The installer must install an external switch or circuit breaker to provide a means to disconnect the Console from power. The external switch or circuit breaker must be marked as the disconnecting device for the Console and its installation must conform to all applicable codes. A fast acting 200 mA 5x20 mm fuse is used on the Supply/Relay Board. The power connections are labeled on the Supply/Relay Board at TB1 and are described in Table 10.

Table 10: Console Power Connections

Board Marking	Connection	Description
HOT	AC Hot / Line	95 – 120 VAC, 60 Hz, 12 VA
NEU	AC Neutral	
	Protective Conductor	Protective Conductor Terminal

Wiring for relays should be routed through conduit in the bottom left hole in the enclosure. The circuit maximum ratings for each relay are 240 VAC and 5 Amps. The connections for the relays are given in Table 11.

Table 11: Console Relay Connections

Application	Terminal Block	Board Marking	Connection
Relay 1	TB3	COM	Common
Relay 1	TB3	NO	Normally Open
Relay 1	TB3	NC	Normally Closed
Relay 2	TB2	COM	Common
Relay 2	TB2	NO	Normally Open
Relay 2	TB2	NC	Normally Closed

If an external Acknowledge Button is used, it should be routed to the hole in the left side of the enclosure using conduit. The switch should be normally open (NO), momentary action, and connected to TB4 on the Supply/Relay Board.

After completing the wiring, take the cover assembly and reconnect the cables from the Supply/Relay Board. Make sure that the cover assembly is oriented so that the tank status lights can be seen through the overlay.

If the Activation step is not going to be done now, button up the box per the step 8 of Activation.

3.4 Activation

Following installation, the Console can be activated by following these steps:

1. Disconnect power from the Console by using the external disconnect device.
2. Unscrew the cover from the enclosure (if not previously done). Be careful not to damage any of the wiring connecting the PCBs that are mounted on the inside of the cover to the Supply/Relay Board in the base of the enclosure. The PCBs mounted to the inside of the cover are the Display Board (mounted closer to the cover) and the Controller Board.
3. Connect a serial interface cable (Robertshaw p/n 086640A0001) between the 5-pin serial interface connector on the Controller Board and a laptop. See Appendix A regarding the use of the serial interface to configure the Console.
4. Apply power to the Console using the external disconnect device. The Console's built-in lights should cycle on and off. The Power Light should turn on after the cycle completes. After the Power Light is on, the unit will turn on all yellow lights and the number of red lights corresponding to the Console's mode. Refer to Table 12 to determine the Console's mode from the red lights. The red and yellow lights will be turned off after five seconds. Then the Console will set its relays and lights based on its monitor data and mode of operation.

Table 12: Console Modes and Red Lights at Power Up

Mode	Tank 1 Red Light	Tank 2 Red Light	Tank 3 Red Light
Single High Alarm	OFF	OFF	OFF
Dual High Alarm	ON	OFF	OFF
High-Low Alarm	ON	ON	OFF
Midrange Alarm	ON	ON	ON

5. Refer to Appendix A to set up Monitors in the Console's monitor database, choose the Console's mode, and set relay timeouts. **NOTE: The Console will not process Monitor data unless the Monitor is set up in the Console's database.**
6. Once all configuration from step 5 is complete, remove the serial interface cable. Put the appropriate Console Mode Key label on the side of the Console.
7. Disconnect power from the Console using the external disconnect device.
8. Carefully place all wiring inside the enclosure so that screwing the box shut won't damage it. Screw the cover back onto the enclosure.
9. Apply power to the Console using the external disconnect device. Verify that the Console is in the correct operating mode per step 4.
10. Strike each Monitor. If it is set up in the Console, the Power Light will flash for each received transmission. If the Power Light does not flash, refer to the Troubleshooting section of this manual.

The Console is now ready to receive Monitor transmissions. Refer to the Monitor Instruction Manual for installation of a Monitor.

4.0 Troubleshooting

If the Console is not operating properly, locate the solution below:

Issue	Resolution
Console's Power Light doesn't flash when a Monitor is struck.	Verify Monitor is in the Console's database using the serial interface. Refer to the Activation section of this manual to verify and set up the Monitor as needed.
All Console lights are off.	Verify that the external deactivation device (switch or circuit breaker) is set to supply power to the Console. Disconnect power from the Console using the external deactivation device. Remove the Console's cover. Verify that power is wired correctly to the Supply/Relay Board.
Relays and lights don't operate as expected.	Cycle power to the Console. Verify that the mode indicated by the red lights (see Table 12) matches the desired mode. If not, change the mode using the serial interface. Verify that the wiring is not reversed at either the Console terminals or at the external device.

5.0 Warranty and Service

5.1 Warranty

Seller warrants title and that products sold to Buyer shall be free from defects in material and workmanship and shall conform to specifications for a period of one (1) year from purchase date for complete units and parts and subassemblies. Warranties on goods sold but not manufactured by the seller are expressly limited to the terms of warranties of the manufacturer of such goods.

Seller makes no representation or warranty of any kind, express or implied, as to merchantability, fitness for particular purpose or any other matter. Upon receipt of definite shipping instructions, Buyer shall return, transportation prepaid, all defective material, or material not conforming to specifications, to Seller, after inspection by Seller, or at Seller's election, subject to inspection by Seller. Material returned by Buyer must be returned in same condition as when received by Buyer. Defective material, or material

not conforming to specifications, so returned shall be replaced or repaired by Seller and returned, freight prepaid, without any additional charge, or in lieu of such replacement or repair, Seller, may, at Seller's option, refund the purchase price applicable to such material. Seller agrees to pay return freight charges not exceeding the lowest rail or truck rate which would apply from the original destination on all defective material, or material not meeting specifications. However, Seller shall not be obligated for such charges when material returned proves to be free from defect and to meet specifications. Material which proves to be free from defect and to meet specifications shall be held by Seller for shipping instructions and Buyer shall furnish such instructions promptly upon request. Seller's liability shall be limited solely to the replacement or repair or to refunding the purchase price applicable to the defective material or material not meeting specifications. Seller shall not be liable for any consequential damages nor any loss, damages or expenses directly or indirectly arising from the use of the material.

5.2 Unit Disposal

The U.S. Environmental Protection Agency regulates the disposal of waste products in the United States. The EPA Regulations are listed in the "Code of Federal Regulations," CFR40, entitled "Protection of Environment." Individual states and local communities also may establish regulations covering the disposal of waste products. These may be more stringent than the federal regulations and may cover the disposal of household waste, which is not included in the federal regulation. Thus, state and local agencies should be contacted for their disposal guidelines.

5.3 Service and Technical Support

If you experience trouble with this equipment, please contact **Robertshaw Industrial Products Technical Support at (865) 981-3118, Monday through Friday, EST 8:00 a.m. to 5:00 p.m.**

This unit is to be serviced by certified service personnel only.

Appendix A: Serial Interface and Software Upgrades

The Console provides a serial interface for basic test and configuration utilities.

A.1 Standard Serial Interface Usage

The standard serial interface usage is described in Robertshaw Serial Interface Cable Instruction Manual (p/n 040019A0001).

IMPORTANT: If your Serial Interface Cable has a “TOP” label, orient the cable so that the “TOP” label faces toward the power connections located inside the box!

A.2 Serial Interface Command Structure

Other than the general help command (“?”), all serial commands follow the same general format. To read a parameter, the user must enter the command and hit <ENTER>. For example, entering

```
> MI <ENTER>
```

would display tank 1’s monitor ID. To write a parameter, the user must enter the command followed by the equal sign and the value to be assigned. For example, entering

```
> MI=SM00001 <ENTER>
```

would set tank 1’s monitor ID to SM00001. After setting a parameter, the Console will reply with the new parameter setting. If the user attempts to set a parameter outside of its range, the Console won’t change the parameter.

IMPORTANT: The Console will NOT recognize a monitor unless its monitor ID has been assigned to a tank using the serial interface!

A.2.1 General Help Command

The general help command is called by entering a question mark. The Console will respond with a listing of the other command groupings. A typical display using ? is shown below.

```
> ?
```

```
I0 - HW/SW
```

```
I1 - Tank 1
```

```
I2 - Tank 2
```

```
I3 - Tank 3
```

```
I4 - System
```

A.2.2 HW/SW Information Group (I0)

The hardware/firmware group provides information regarding the configuration and version of the hardware and firmware. A typical display using I0 is shown below.

```
> I0
* - HW/SW
12/11
```

A.2.3 Tank Information Groups (I1, I2, and I3)

These groups provide information regarding the configuration of each tank. A typical display using I1 is shown below.

```
> I1
* - Tank 1
M1= *000000 0
L1=0100
```

NOTE: If **NO** monitor is assigned to a tank, the monitor ID (Mx) **MUST** begin with the * character.

A.2.4 System Information Group (I4)

The system information group provides information and tools regarding the operation of the Console. A typical display using I4 is shown below.

```
> I4
* - System
MM=>Get Monit.Msg
Set Console Mode (SM)
0 = Single High Alarm
1 = Dual High Alarm
2 = High-Low Alarm
3 = Midrange Alarm
SM=0
Set Timeout (ST)
0 = Active Relays don't timeout
1 = Active relays timeout after 1 minute
2 = Active relays timeout after 2 minutes
4 = Active relays timeout after 4 minutes
8 = Active relays timeout after 8 minutes
ST=2
```

A.2.5 Serial Interface Commands

Table A-1 provides a description of all of the serial interface commands.

Table A-1: Serial Interface Commands

Command	Description	Read/Write	Format (Example)
?	General help Lists all command groups	R	?
I0	Display hardware/firmware info	R	I0
I1, I2, I3	Display tank setup info	R	I1, I2, or I3
M1, M2, M3	Monitor ID & present state Reading displays ID followed by state Writing assigns a monitor to a tank. NOTE: User MUST assign monitor ID before Console will recognize a monitor. NOTE: To unassign a monitor from a tank, the first character in the monitor ID must be a * (see example in Format column).	R / W	M1 (read) M2 = SM00001 (write) M3 = *000000 (write)
L1, L2, L3	Lost Monitor Time (in minutes) Console will report this monitor as missing if it hasn't received a new transmission after this amount of time. The lost monitor time should ALWAYS be set at least 1.5 or 2 times longer than the transmit interval of the monitor.	R / W	L2 (read) L3 = 45 (write) 45 minute lost monitor time
R1, R2, R3	Relay Configuration Relay settings based on the state reported by the monitor	R / W	R1 (read) R2 = S0wwS1xxS2yyS3zz
MM	Get message directly from RF receiver	R	MM
SM	Set Console Mode	R / W	SM (read) SM=1 (write) Set Console to Dual High Alarm Mode
ST	Set relay timeout	R / W	ST (read) ST=1 (write) 1 minute relay timeout



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www.Centeron.net

The product described within contains RF technology licensed through Axonn Corp.
under the following patents: 5,067,136 5,095,493 5,457,713

