OMNTEC
Advanced Tank Monitoring & Leak Detection

SYSTEM PROGRAMMING MANUAL

PART NO. OEL8000III-B, OEL8000III-K, & OEL8000III-X
SOFTWARE RELEASE 9.3
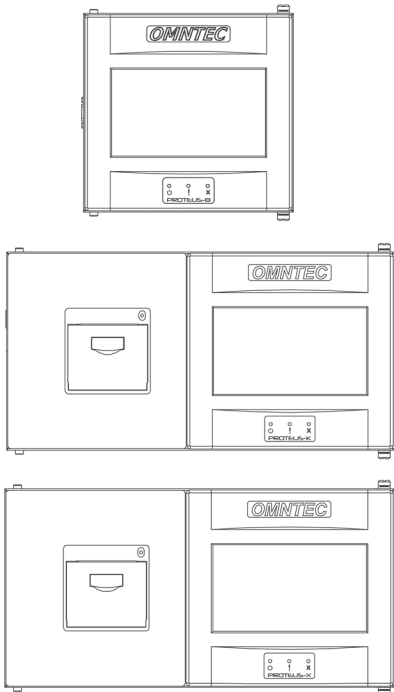
PROTEUS® Series
TANK GAUGING SYSTEM

Revision 1.2
Document No. DOC00007 rev1.2

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

Table of Contents

Section #   Page #

1. Navigating To Setup

Home Screen: The SETUP MENU is located under UTILITIES. (See Figure 1.1)

Note: Unless factory pre-programmed, Figure 1.1 is typically the factory-default Home Screen. To change the Home Screen: Go to Section 5, Miscellaneous Settings (page 2), or Figure 5.2.

Figure 1.1
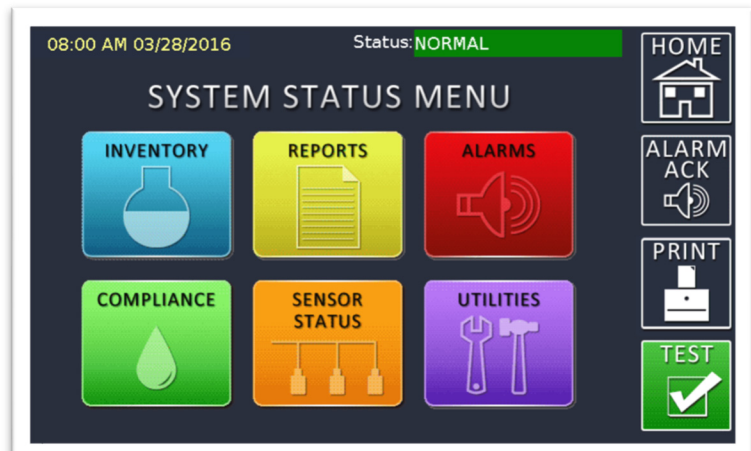
Utilities Screen: To enter setup, press SETUP MENU. (See Figure 1.2)

Figure 1.2
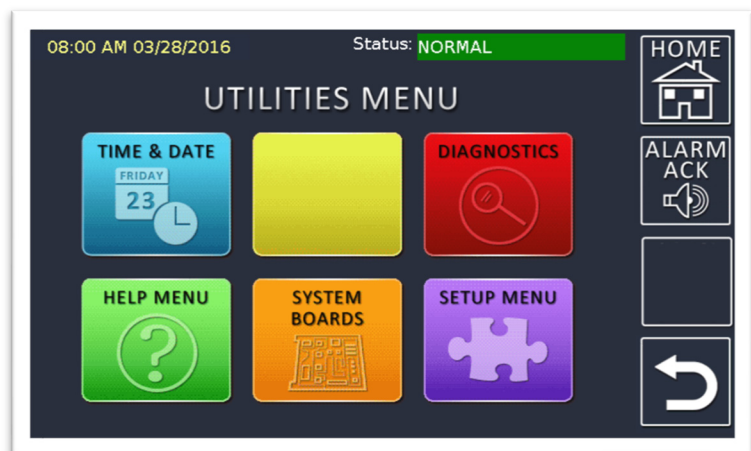
Enter Password: Enter the manufacturer's default password, **000000** (six zeros), when prompted by the unit to proceed to the SETUP MENU. (See Figure 1.3)

To change the password: Go to Section 5, Miscellaneous Settings.

Figure 1.3
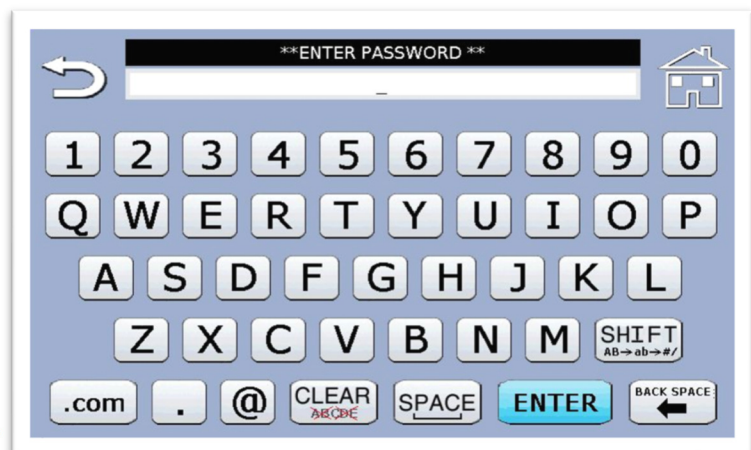
Setup Menu (Page 1):
Used to navigate to corresponding system setup options.
(See Figure 1.4)
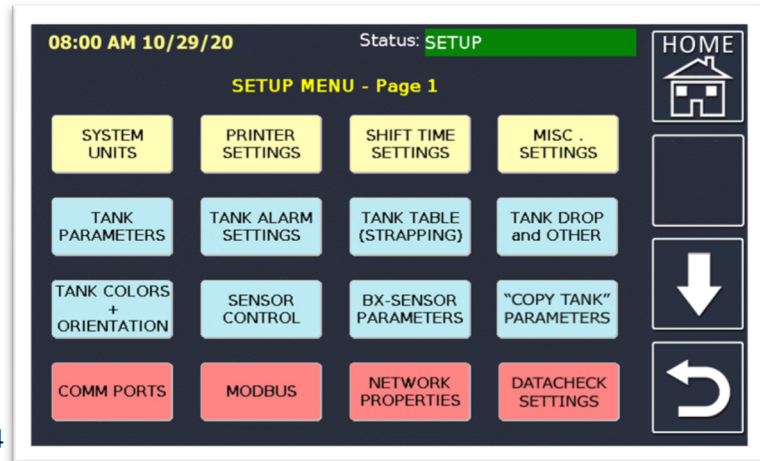
Figure 1.4

Setup Menu (Page 2):
Used to navigate to additional system setup options.
(See Figure 1.5)
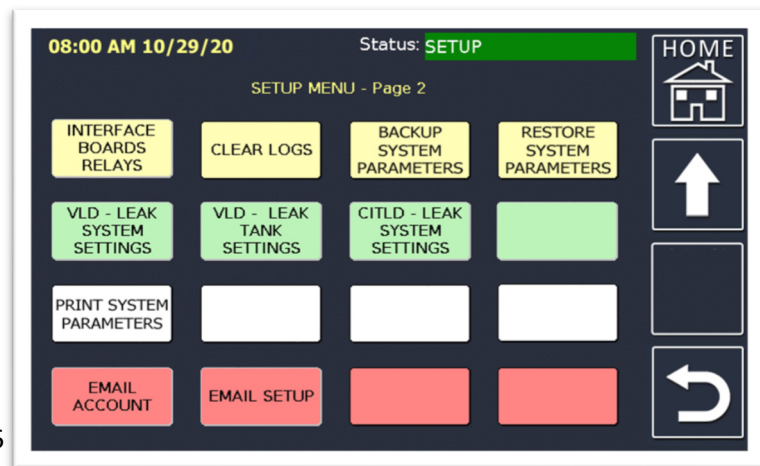
Figure 1.5

a) **Backup System Parameters:** Backs up the programming to the onboard SD card.
b) **Restore System Parameters:** Restores the programming from the onboard SD card to the Proteus® ATG.
c) **Print System Parameters:** Prints the entire system programming. Each prompt will have a confirmation message for "YES" or "NO."

Note: SD card and printing abilities are available on Proteus® K and X ONLY

2. System Units

Site Units of Measurement:

The default unit settings are displayed using the imperial system. Press the unit you would like to change for the list of options. You may also change the date view between MM/DD/YYYY and YYYY-MM-DD.
(See Figure 2.1)
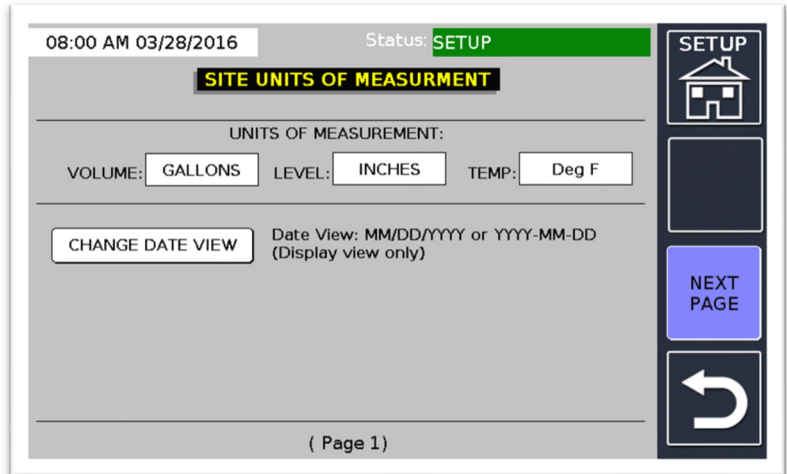
Figure 2.1

Set Units of Measurement:

Select units desired for volume, level, and temperature.
(See Figure 2.2)
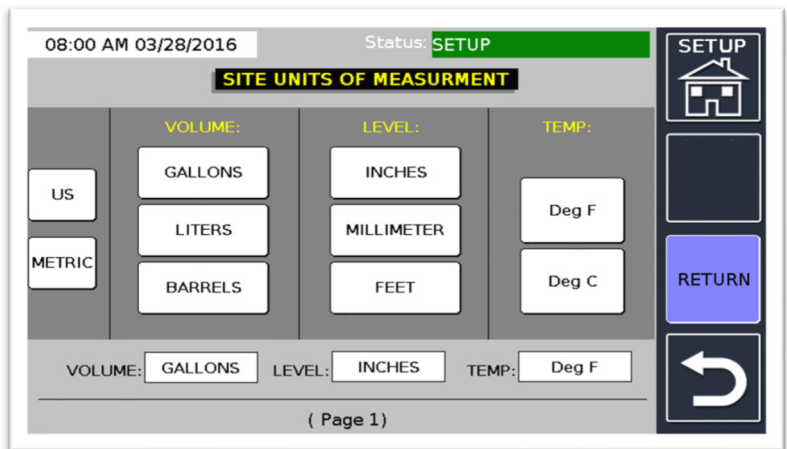
Figure 2.2

3. Printer Settings (Proteus® K and X ONLY)

Print Line Headers:
Information printed on the system status report header.
Printer Settings:
Selects onboard printer or network printer. Only one (radio button) printer selection can be made at a time.
(See Figure 3.1)

Figure 3.1

a) **Print Line Headers:** The headers are used to typically program site specific information that will print on the header of the system status report. Examples of the information entered here are site name, site address, site phone number, and manager's name.
b) **Printer Settings:** Selecting INTERNAL PRINTER will use the Proteus® onboard printer. Selecting TCP/IP PRINTER will use a printer linked to the same network as the Proteus® ATG. Put that (TCP/IP) printer's IP address and port number in the fields provided.
Note: Only one (radio button) printer selection can be made at a time.

4. Shift Time Settings

Shift Time Settings:

Setup for generating daily shift reports.

(See Figure 4.1)

Figure 4.1

a) **Number of Shifts:** Number of shift reports generated daily.
b) **Auto Print:** Will enable or disable an automatic printout at each shift's end time.
c) **Shift End Times:** End times for the number of shifts that were selected. If multiple shifts are selected, the end time of the last shift is the open time of the next shift.

5. Misc. Settings

Miscellaneous Settings:

Settings for remote horns and alarm, as well as auto print options for other settings. The SETUP MENU password can be changed here as well.
(See Figure 5.1)

Figure 5.1

a) **Remote Horn Timeout:** Amount of time the horn will sound before automatically silencing.
b) **Remote Horn Timeout Enable:** Used to enable or disable the horn timeout.
c) **Remote Re-alarm Time:** Amount of time before re-sounding the horn after it is silenced (remote horn settings for Proteus® K and X only).
d) **Ullage %:** The percent used to calculate ullage on printouts.
e) **Setup Password:** To change the password, press the white field. A keypad will appear. Enter a new password. When finished, press the SAVE button.
f) **Alarm Auto Printout:** Used to enable or disable an automatic printout of an Alarm report.
g) **Drop Auto Printout:** Used to enable or disable the automatic printout of a Drop report.
h) **Shift Auto Printout:** Used to enable or disable the automatic printout of a Shift report.
i) **VLD Auto-print:** Used to enable or disable the automatic printout of a VLD report.
j) **Interstitial Auto Print:** Used to enable or disable the automatic printout of an interstitial sensor report.

Printing features and options for Proteus® K and X only.

Miscellaneous Settings (page 2):
Additional settings to adjust Home Screen, and page change to delivery in progress.
(See Figure 5.2)

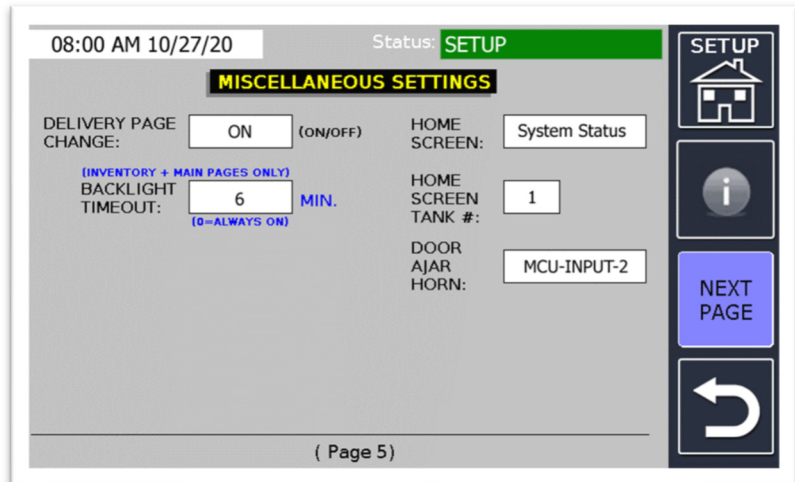Figure 5.2

a) **Delivery Page Change:** Automatically wakes up the display to show a tank with delivery in progress.
b) **Backlight Timeout:** Can be changed to dim the display between 1-255 minutes. Can also be set to zero which leaves the display always ON (Inventory and Homepage only).
c) **Home Screen:** Choose which page you would like to set as the Home Screen. Choose from SYSTEM STATUS, 4-TANK INVENTORY, SINGLE-TANK INVENTORY, SINGLE-TANK ZOOMED INVENTORY, or CLD (Containment Leak Detection) MODE. Note: you must have a Proteus® CLD system to operate the CLD Mode function.
d) **Home Screen Tank #:** If a single-tank inventory page is chosen, this will select which tank is shown.
e) **Door Ajar Horn:** New to Version 9, used for Proteus® ATG's in an enclosure. The system will chirp via the display horn if the enclosure door is left open and this feature is enabled. Options are OFF, MCU-INPUT-2, 4IO-INPUT 1, 4IO-INPUT 2, 4IO-INPUT 3, 4IO-INPUT 4, (if the system has an XB-4IO board). The input is where a magnetic switch (or equivalent) is connected within the enclosure.
f) **Information** ⓘ **("i" in circle) Icon:** This will display and explain what each parameter does within miscellaneous settings.

6. Tank Parameters

Setup-Tank Parameters:

Various parameters that are needed to obtain proper and accurate functionality.
(See Figure 6.1)

Figure 6.1

a) **Tank Number:** Selects a tank for setup.
b) **Product Type:** Product type label (up to 17 characters).
c) **Product Null:** Amount subtracted from the gauging probe product level measurement to match the actual product level measurement (enter product height from stick reading).
d) **Water Null:** Amount subtracted from the gauging probe water level measurement to match the actual water level measurement (enter water height from stick reading).
e) **Enable/Disable:** Enable or disable the corresponding tank.
f) **Tank Capacity:** Total volume of the tank (obtained from the manufacturer's tank chart).
g) **Tank Diameter:** Height of the tank (highest point on the manufacturer's tank chart).
h) **Probe Length:** Overall probe length (in inches). From the CAT No. on the head of the probe, the last three numbers following the *L* (see Figure 6.2; blue rectangle).
i) **Wire Speed:** Factory-defined wire speed. Obtained from the probe label on the head of the probe following *WS:* (see Figure 6.2; pink rectangle).
j) **Volume Correction:** Brings you to the Volume Correction page where you can choose from COEFFICIENT THERMAL EXPANSION, API GRAVITY, RELATIVE DENSITY or DENSITY. (See next page for additional Volume Correction details).
k) **Probe Type:** Shows how many temperature thermistors are in the probe. This is obtained from the CAT No. on the head of the probe (see Figure 6.2; green square). *R1* or *T1*; enter 1. *R5*; enter 5. If using a "redhead" probe; enter 4.
l) **Volume Offset:** Amount added to the volume reading for further calibration.

Enter corresponding values in each box. Press the NEXT PAGE icon to continue programming the alarm parameters on that same tank. Note: Figure 6.2 (red square) represents the number of floats on that probe. *F1* = one float, *F2* = two floats.

Figure 6.2

Volume Correction (cont. from 6j):
After selecting volume correction, you can select which correction method you will use.
(See Figure 6.3).

Figure 6.3

Select the Correction Method button and set either the COEFFICIENT THERMAL EXPANSION, API GRAVITY, RELATIVE DENSITY, or DENSITY option fields (middle column). Use the data format shown (right column) to input to the Coeff., Gravity or Density field (top right column). Thermal coefficient of expansion x 10-5 (obtained from thermal coefficient table (ex. Gasoline = 70, Diesel = 45, etc.).

You may also remove the water volume from the temperature compensated measurement by pressing the check box (this will show as net volume) in the bottom left column.

7. Tank Alarm Settings

Tank Alarms and Set Points:
The parameters used to control how the alarms will function. (See Figure 7.1)

Figure 7.1

a) **Tank Number:** Selects a tank for setup.
b) **High Product:** Percentage of volume that will trigger a high-level alarm (max 95%).
c) **Overfill:** Percentage of volume that will trigger an overfill alarm, set for the same percentage as High Product. Triggers during delivery in progress (value input of 101 will disable).
d) **High Warning:** Percentage of volume that will trigger a high-warning level.
e) **Low Product:** Percentage of volume that will trigger a low-level alarm (minimum of 1 percent; cannot be set to zero).
f) **Delivery Needed:** Percentage of volume that will trigger a delivery-needed alarm (value input of 0 will disable).
g) **High Water:** The water level that will trigger a high-water alarm.
h) **Sudden Loss:** The amount of increase/decrease needed during a VLD test to trigger a sudden-loss alarm.
i) **Probe Temp High:** Temperature needed to activate probe high-temp alarm.
j) **Probe Temp Low:** Temperature needed to activate probe low-temp alarm.

Enter corresponding values on each box then press the NEXT PAGE icon to continue programming the strapping chart for the same tank.

8. Tank Table (Strapping)

Tank Chart Points:

Used to create the chart for each tank.
(See Figure 8.1)

Figure 8.1

a) **Tank Number:** Selects a tank for setup.
b) **Chart Increment:** Used to calculate how many chart points are used for the chart. Divide the tank diameter by the chart increment to get the number of chart points. Enter the correct volume for each level given in the tank chart. It is recommended to input at least 20 chart increment points for accuracy, based on that specific tank manufacturer's tank chart. Linear tanks can use 2-increment points.

Press the NEXT PAGE icon to continue programming parameters for the same tank.

9. Tank Drop and Other

Setup Tank Parameters:

Information needed to provide more accurate inventory and delivery data.

(See Figure 9.1)

Figure 9.1

a) **Tank Number:** Selects a tank for setup.
b) **Drop Threshold:** The volume amount needed to initiate a delivery in progress.
c) **Drop Dwell Time:** Time delayed after a drop is completed before generating the drop report.
d) **Product Code:** User number that identifies the product.
e) **Temperature Thermistors Offset:**
   Used to offset temperatures for the gauging probe. The number of TEMP OFFSET (1 or 5) is determined by the probe type.
   (See Figure 9.2)

Figure 9.2

f) **Zero Product Null:** Resets the product null to the factory default value of 1.
g) **Zero Water Null:** Resets the water null to the factory default value of 1.57.
h) **Increment Factor:** Requires a password. This is used to change the probe sensitivity. Only change after consulting with OMNTEC.

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i) **Tank Tilt:** Number obtained by the tank tilt formula to further calibrate probe levels. (See Figure 9.3)
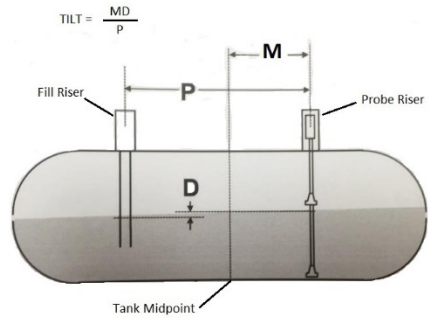
$$TILT = \frac{MD}{P}$$

Figure 9.3

P= The center of the fill riser opening to the center of the probe riser opening.
M= The distance of the center of the probe riser opening to the center of the tank.
D= The difference in gross liquid level between the fill opening and the riser opening (fill – probe).

Note: Not required if the location of the MTG probe is in the center of the tank or if the tank is level.

10. Tank Colors and Orientation

Setup Tank View:
Used to control display settings for each tank.
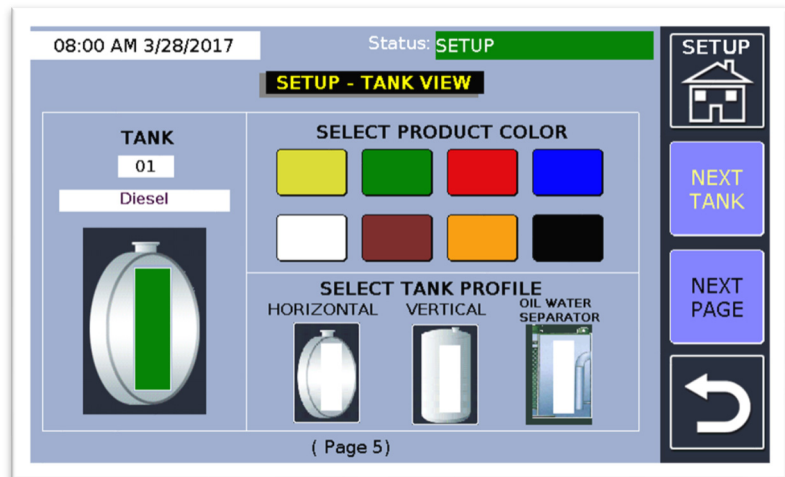(See Figure 10.1)

Figure 10.1

a) **Select Product Color:** Choose a color to visually distinguish the display contents of each tank.
b) **Select Tank Profile:** Choose the visual tank orientation profile (Horizontal or Vertical), or Oil Water Separator.

IMPORTANT: The Proteus® is now programmable for oil/water separator (OWS) applications. When choosing Oil Water Separator, the tank alarm points will change to HIGH-HIGH OIL, HIGH OIL, HIGH LIQUID, LOW LIQUID, and LOW WATER alarms.
(See Figure 10.2)

If you have a Proteus® OWS system, please refer to our Proteus® Oil/Water Separator Programming & Installation supplement for additional programming and installation details (**document DI00014 DI00015 DI00018 DI00020 DI00026-7**).
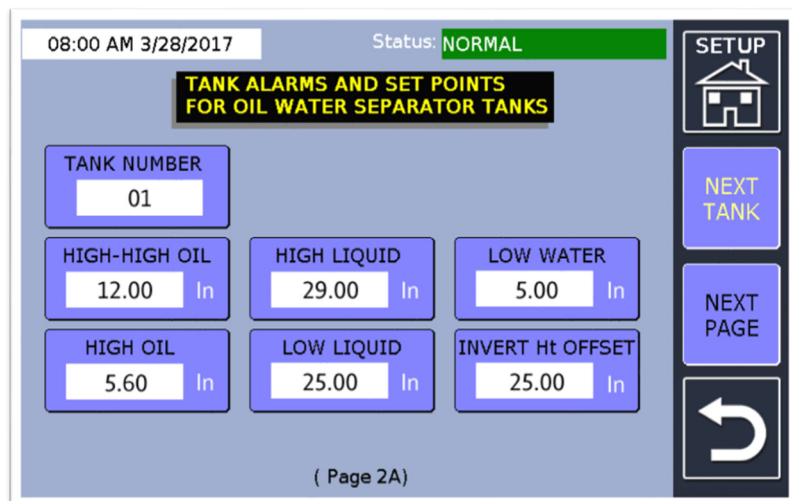

Figure 10.2

11. Copy Tank Parameters

Copy Tank Parameters and Data:
Used to copy the full set of tank parameters from one tank to another tank. However, you must still program unique parameters for each tank such as product type and probe wire speed where applicable. (See Figure 11.1).
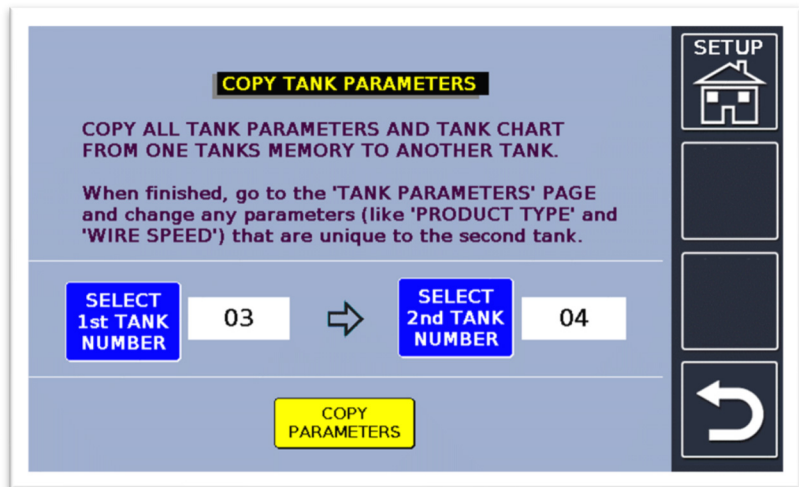
Figure 11.1

12. BX-Sensor Control

Sensor Control:

This page is used to delete or add BX-Sensors. When replacing a sensor, it is recommended to *first* delete the old sensor before wiring the new sensor so when you add the new sensor it will take the same sensor assignment place of the old sensor. This is helpful when keeping relay events from being reprogrammed.
(See Figure 12.1)

Figure 12.1
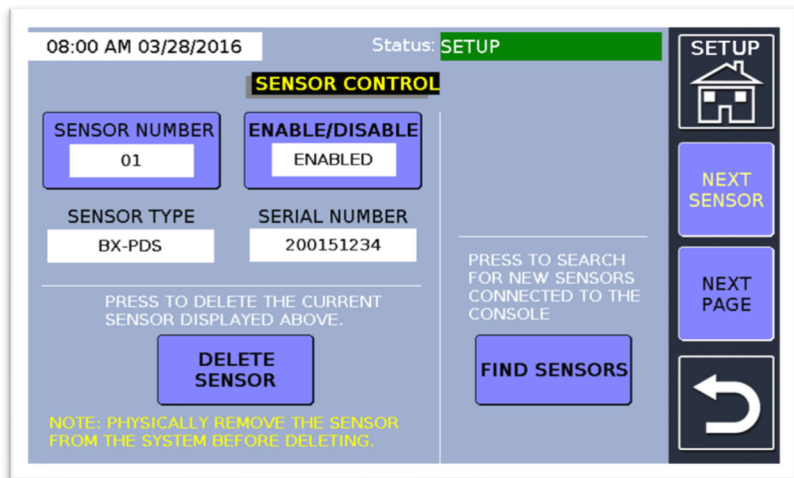
Deleting/Replacing a Sensor:

    a) Turn off the Proteus® and physically disconnect the (old) sensor from the unit.
    b) Turn on the unit and go to SETUP.
    c) Go into SENSOR CONTROL and choose which sensor to delete.
    d) Exit SETUP; the system will reboot and save the new changes.

Adding a Sensor:

    a) Turn off the Proteus® and connect the (new) sensor to the unit.
    b) Turn on the unit.
    c) From the SETUP MENU, go into SENSOR CONTROL and select the FIND SENSORS button, then PRESS TO FIND NEW SENSORS (see Figure 12.2). This will allow the system to install a new sensor. It may be necessary to repeat this step for systems with multiple new sensors.

Figure 12.2
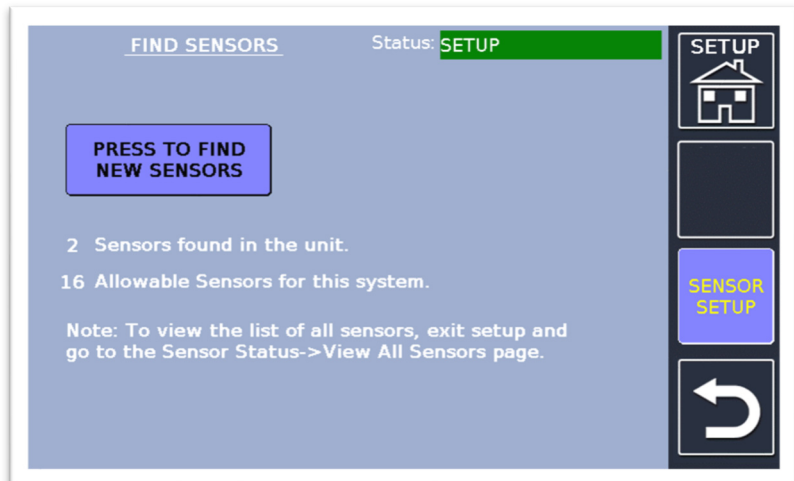
When the system confirms (or finds) the new sensor, exit SETUP and allow the system to reboot and save these new changes.
NOTE: as of Version 9, the system will not auto-find newly installed sensors upon boot-up, a function available in earlier versions.

    d) From the SETUP MENU, go into BX-SENSOR PARAMETERS to set the sensor's labels.

13. BX-Sensor Parameters

Sensor Parameters:

Parameters used to define the sensor type, location, and labeling. (See Figure 13.1)

Figure 13.1

a) **Sensor Number:** Sensor number assigned by the system; selects a sensor for setup.
b) **Sensor Type:** Sensor Type assigned by the system based upon serial number.
c) **Location:** User-selectable to describe where the sensor is located.
d) **Location #:** If more than one sensor is present in the same location and tank number then you may set a location number to differentiate between both sensors.
e) **Enable/Disable:** Shows if the selected sensor is enabled or disabled.
f) **Serial Number:** Serial number that is programmed into each sensor.
g) **Tank #:** The tank number assigned to this sensor for labeling purposes.
h) **Print Status On Shift Report:** Enables/Disables sensor status for a shift report.

Additional Sensor Parameters (right column):

For BX-TC-1 temperature sensors, designed to monitor temperatures ranging from -58°F to 302°F (-50°C to 150°C) with an accuracy of ±2°F. (See Figure 13.2)

Figure 13.2

a) **Temp – High:** Temperature above this value will create a High-Temperature alarm.
b) **Temp – Low:** Temperature below this value will create a Low-Temperature alarm.
c) **Temp Offset:** Temperature offset if needed.

Note: Temp-High, Temp-Low, and Temp Offset are for BX-TC-1 only.

14. Comm Ports

Comm Port Settings:

Used to program the settings for onboard RS-232 or RS-485 ports. (See Figure 14.1)

Figure 14.1

a) **Comm Port:** Selects between RS-232 and RS-485 port settings (RS-485 available on Proteus® K and X only). Click on the arrow-down icon ▼ to toggle between RS-232 and RS-485.
b) **Baud Rate:** Selections available are 1200, 2400, 4800, 9600, 19200, 38400, or 57600 baud.
c) **Data Bits:** Selections available are 8 or 7.
d) **Parity:** Selections available are NONE, ODD, and EVEN.
e) **Stop Bits:** Selections available are 1 or 2.
f) **Comm Type**:
   • For RS-232 Comm Type, the options are REMOTE (OMNTEC PC, Mini-Me, or industry-standard protocol) and MODBUS.
   • For RS-485 Comm Type (click on the COMM PORT arrow-down icon ▼), the options are REMOTE, MODBUS, RD-625, or RD7CTS (Mini-Me).
g) **Remote Security Code:** Enabled/Disabled for Ethernet ports to allow data protection. Must enter security code before industry standard command but after "control a" (example â000000i20100). **Not currently used via RS-232.**
h) **Setup Modbus:** Navigates to Modbus settings page as shown in the next section.
i) **Save:** Must be pressed for any changes to take effect.

15. Modbus

Modbus Settings:
Used to program the settings for Modbus.
(See Figure 15.1)

Figure 15.1

a) **Modbus Address:** Unique Modbus slave address.
b) **Register Offset:** Holding register offset, typically set to 0 or 40001.
c) **Enable Code:** An enable code is required from OMNTEC to run this optional feature.
d) **Reverse Mode:** When enabled, reverses the high and low registers for certain PLCs or computer software that accepts a different Modbus format.
e) **Communication Setup:** This will navigate to Comm Ports setup from the previous section.
f) **Print Modbus Map:** Prints the current register range for enabled probes and sensors.

16. Network Properties (Proteus® K and X ONLY)

Network Protocol Properties:
Used to setup either a static or dynamic IP address by toggling the check mark box in OBTAIN AN IP ADDRESS AUTOMATICALLY.
(See Figure 16.1)

Figure 16.1

a) **IP Address:** IP address assigned to the Proteus®.
b) **Subnet Mask:** Subnet Mask to match the existing network.
c) **Default Gateway:** Default Gateway to match the existing network.
d) **Preferred DNS:** Primary Domain Name Server address.
e) **Alternate DNS:** Secondary Domain Name Server address.
f) **MAC Address:** Each Proteus® is programmed with a unique MAC address.
g) **Telnet Ports:** The default telnet ports are set to 502 for Modbus TCP and 4001, 8001, and 10001 for Remote. Modbus allows for Modbus communication. It can also be set for Modbus RTU. Remote mode allows for compatible industry-standard commands. These can be changed for user preference.

17. DataCheck™

Allows the user to program Datacheck™ wireless transmitter settings, if applicable to your specific system.
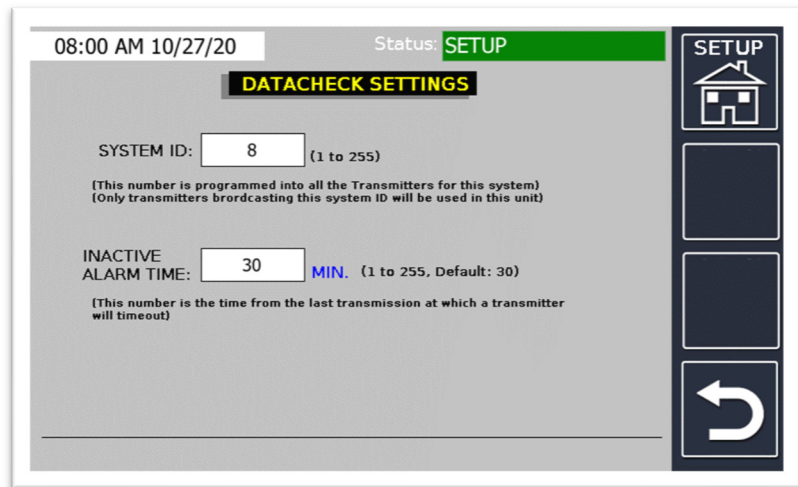(See Figure 17.1)

Figure 17.1

a) **System ID:** This number value is programmed into all the transmitters for this system. Only transmitters broadcasting this system ID will be used in this unit (1 to 255).

b) **Inactive Alarm Time:** This number value is the time from the last transmission at which the transmitter will time out (1 to 255; the default is 30).

18. Interface Boards and Relays (Proteus® K and X ONLY)

Interface Boards Relays:
Depending on which unit you have; more boards may be displayed. Press the MCU EVENTS RELAY / EMAIL icon in the top left corner to configure the onboard relays. Press each red relay board to program 8-channel boards (if applicable).
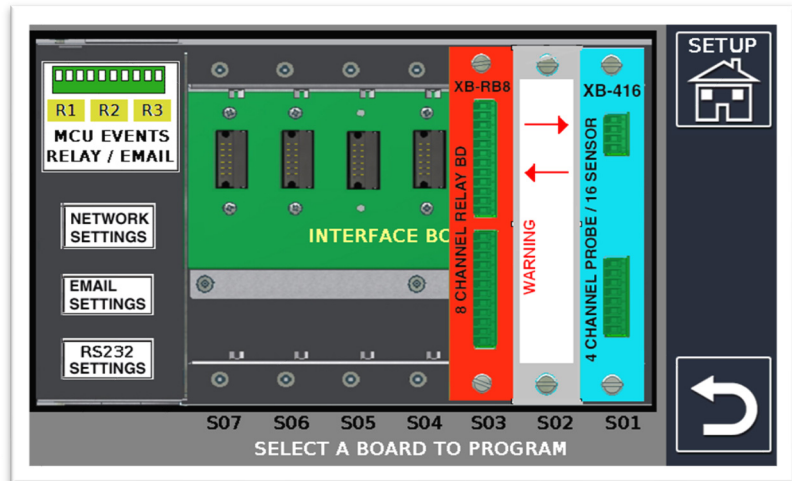(See Figure 18.1)

Figure 18.1

Program Relay Events:
Used to select which events (ex. High Level) will trigger the relays.

Program Relay/Input Modes:
Used to select the mode of each relay (LIGHT, HORN, or RELAY) and input.
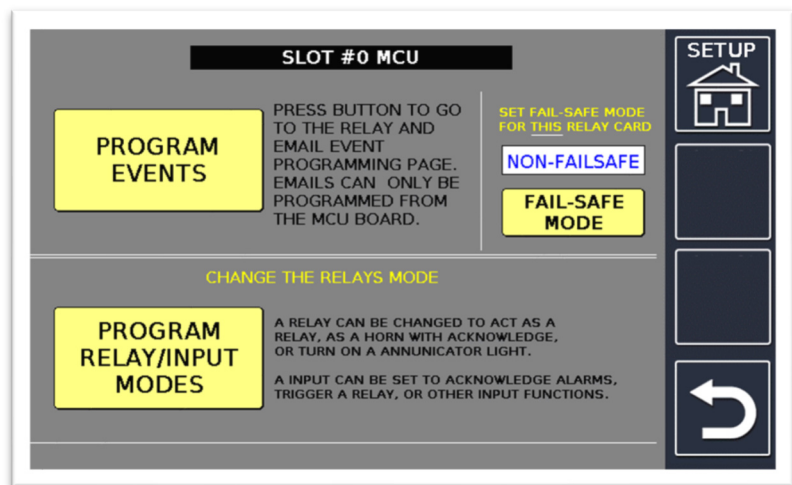(See Figure 18.2)

Figure 18.2

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Program Relay Events

Figure 18.3

There are a total of 30 events that can be programmed for the onboard MCU relays. To program an event, press on the event you would like to program and navigate to the event programming page.
(See Figure 18.3)

The figure below can be used as a visual aid to gain an understanding of where each alarm point is typically located.
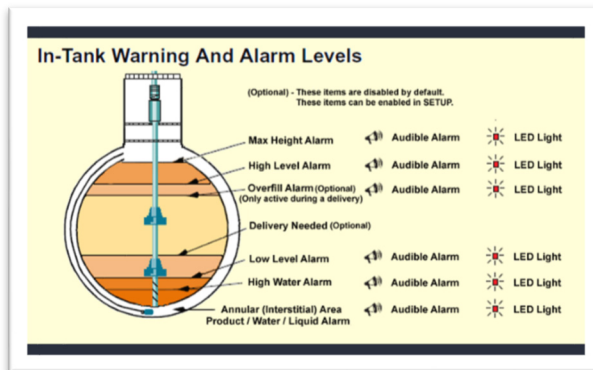(See Figure 18.5)

Figure 18.5

Note: Overfill alarm is only active during a delivery in progress.
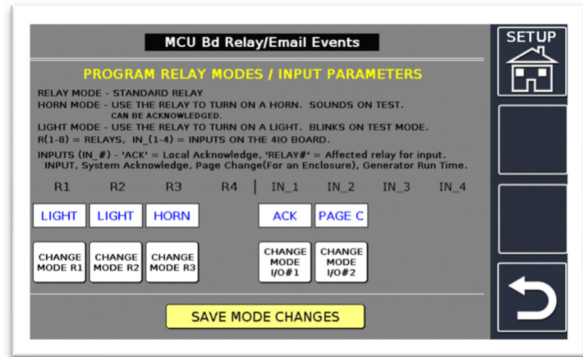
Program Relay Modes

Figure 18.4

Relay Modes: Each relay can be programmed to operate in one of three modes: RELAY mode, LIGHT mode, and HORN mode; a description of each mode is shown on the screenshot above.

Input Modes: Both inputs can be programmed for different functions such as LOCAL ACKNOWLEDGE, PAGE CHANGE, COUNTER, etc.
See document **DI00014 DI00015 DI00020-2** for specific input mode functions.

Setting the relay modes, as shown above, will allow an RAS-2 to work properly when connected to the MCU'S onboard relays. R1 will act as the light for Tank 1, R2 will act as the light for Tank 2, and R3 will act as the general horn. Input 1 will act as the local acknowledge.
(See Figure 18.4).

The XB-RB8 board can have up to 100 programmed events. It is programmed the same way as the MCU but has a total of eight relays instead of three. However, horn acknowledge must be wired to the MCU if using a RAS series remote.

a) **Tank #:** Press this icon to select a tank event to enable the relay. Each time the **Tank #** icon is selected, the tank number is advanced up to how many tanks are available.

b) **Sensor #:** Press this icon to select a sensor event to enable the relay. Each time the **Sensor #** icon is selected, the sensor number is advanced up to how many sensors are enabled.
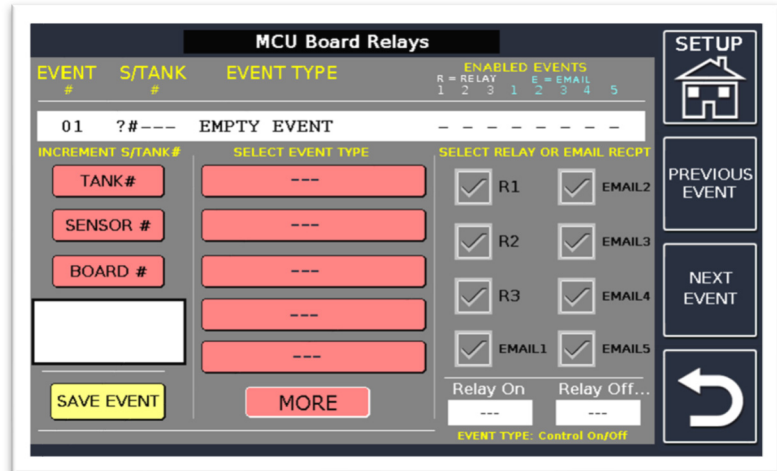(See Figure 18.6)

Figure 18.6

c) **Board #:** Press this icon to select a system board to enable the relay.
d) **Select Event Type:** The event type is selected from the center of the page, press MORE for additional event options.
e) **Select Relay and/or Email Recipient**: The R1, R2, & R3 checkboxes will determine which relays are enabled by the event. The checkboxes EMAIL1, EMAIL2, EMAIL3, EMAIL4 and EMAIL5 will determine which email will receive the alarm notices.
f) **Relay On:** Turns on relay at programmed set point.
g) **Relay Off:** Turns off relay at programmed set point.
h) **Save Event:** Save selections before going to the next event or exiting screen.
i) **Next Event:** Used to scroll to the next event.
j) **Previous Event:** Used to scroll to the previous event.

Here is an example of the setup for a tank-one-of-two scenario and how the relay events are configured if the three on-board MCU relays are configured for use with an RAS-2.

Note: Only one event type can be selected for each event number. However, multiple relays can be triggered for each event number as shown.
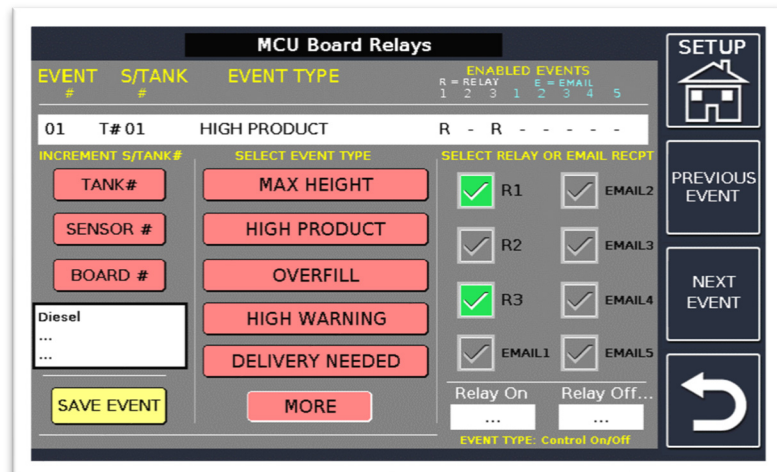(See Figure 18.7)

Figure 18.7

19. Clear Logs

Data Logs Page:
From this menu it is possible to individually clear each log from the unit memory. Useful after the site is commissioned to clear out test data.
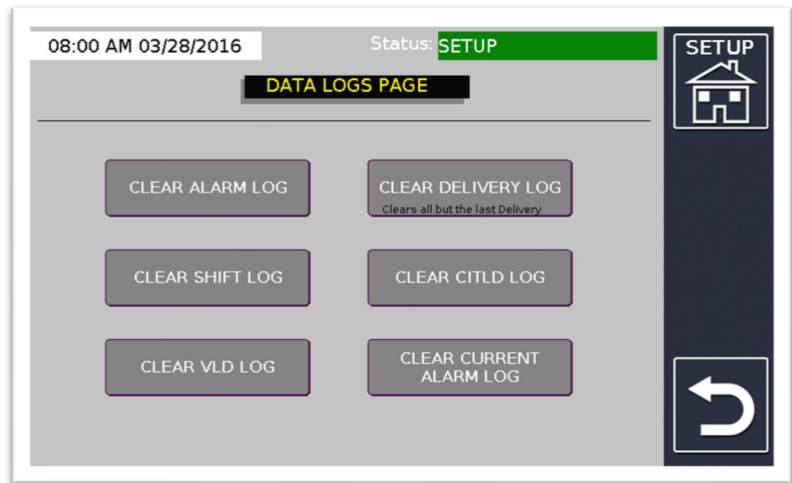(See Figure 19.1)

Figure 19.1

a) **Clear Alarm Log:** Clears all alarms in log.
b) **Clear Shift Log:** Clears all shifts.
c) **Clear VLD Log:** Clears all VLD data from log.
d) **Clear Delivery Log:** Clears all previous deliveries but keeps the latest delivery saved.
e) **Clear CITLD Log:** Clears all CITLD data log.
f) **Clear Current Alarm Log:** Clears the current alarm screen.

20. VLD – Leak System Settings

Tank Volumetric Leak Detection:
This feature is used for setting a specific time interval for running a VLD test. It can automatically run every day, once a week, or once a month at a specific time of the day. (See Figure 20.1)

Figure 20.1

a) **Test Level:** Choose which type of VLD test you would like to run.
b) **Test Time:** Total time the test will run with a minimum of four hours.
c) **Dwell Time:** Product must remain constant for a minimum of 30 minutes before running a test (no delivery or dispensing).
d) **Enable/Disable:** Enable the VLD test feature. Must also enable VLD test for each tank.

IMPORTANT!
Remember that the VLD test time is (a minimum of) 4 hours long, plus the dwell time (minimum 30 minutes), therefore the minimum time for running a VLD test is 4.5 hours. During this time, the product level must remain constant. If you have a delivery or dispense product before a VLD test, you must wait at least 4-8 hours (dependent on tank size) before the start of the test.

21. VLD – Leak Tank Settings

Tank Volumetric Leak Detection:
This page is used to control the desired testing frequency for each tank.
(See Figure 21.1)

Figure 21.1

a) **Tank Number:** Assign which tanks need to run testing.
b) **Test Start Time:** The time at which the VLD test should start.
c) **Set Interval:** You must choose MONTHLY, WEEKLY or DAILY to run VLD test for that specific tank. Otherwise, choose the DISABLED option.
d) **Set Date:** What date in the month should the test run (dependent on the interval selected).
e) **Set Day:** What day of the week should the test run (dependent on the interval selected).

22. CITLD – Leak System Settings

Continuous In-Tank Leak Detection:
This allows a leak test to run in a tank that is in continuous use. Requires 20-minute time intervals to determine if the tank has a leak and will generate a monthly report.
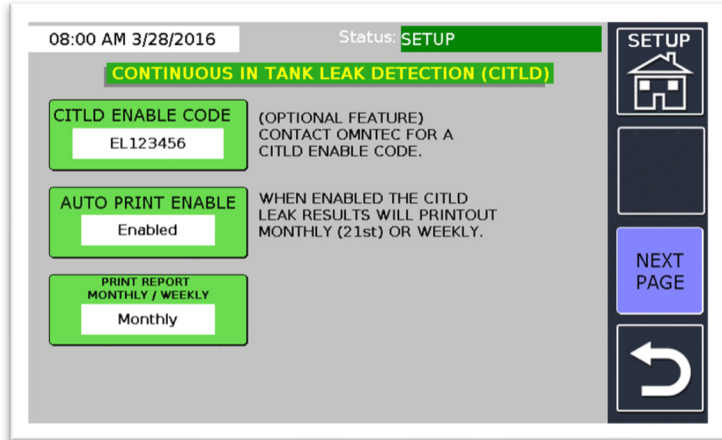(See Figure 22.1)

Figure 22.1

a) **CITLD Enable Code:** An enable code is required from OMNTEC to run this optional feature.
b) **Auto Print Enable:** Enables the unit to print out the CITLD results automatically.
c) **Print Report Monthly/Weekly:** Allows the user to change between printing a monthly or weekly report for CITLD.

23. Email Account (Proteus® K and X ONLY)

Email Properties:
Setup page for enrolling in automatic email updates.
(See Figure 23.1)

Figure 23.1

a) **User Name:** Login name used for sending email.
b) **Password:** Password for the above User Name.
c) **Sender Name:** Name of email originator.
d) **Sender Email Address:** Address of the email originator. Appears on the email together with the controller's "EL" (serial) number.
e) **Mail Server Address:** IP address of the mail server or the mail server domain name.
f) **Mail Server Port:** Default is 25, can be changed to match site's mail server port.
g) **Server Requires Authentication:** (check with the Network Administrator)

24. Email Setup (Proteus® K and X ONLY)

Email Properties – User Addresses and Events:

Allows the user to send email and text message reports to email addresses or mobile numbers programmed, up to a maximum of five entries.
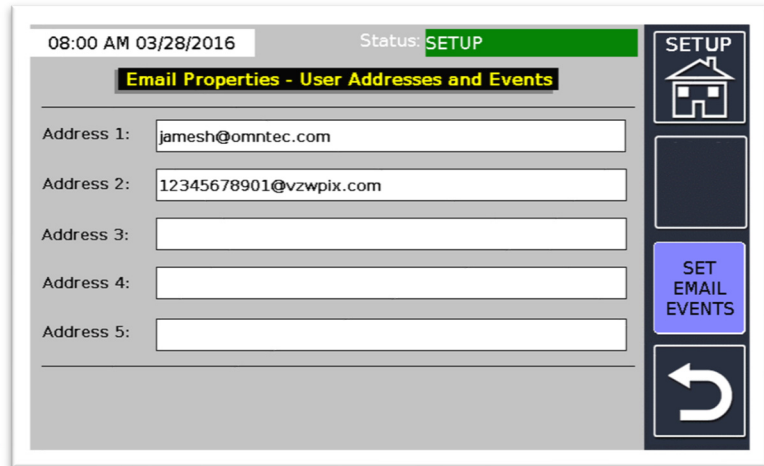
(See Figure 24.1)

Figure 24.1

a) **Address # (1 through 5):** This shows the email address or mobile number of the recipient.
b) **Delivery (Drop) Reports:** If enabled, a Delivery/Drop Report will be sent to an assigned email or mobile number.
c) **Current Status Report:** If enabled, the Current Status Report will be sent to the assigned email address or mobile number after every shift.
d) **Alarms:** If enabled, a report will be sent to the assigned email address or mobile number every time there is an alarm. Another option is to choose individual "alarm events".
e) **Email Properties – User Addresses and Events:**
   Allows user to send email and text message reports to specific email addresses or mobile numbers, up to a maximum of five entries.
   (See Figure 24.1)

Figure 24.2

25. Diagnostics

Diagnostics:
Found in the Utilities Menu and can be used to perform various tests.

Note: Do not use the REFRESH TANK ORDER FOR NEW BOARDS, DIAGNOSTIC PASSWORD KEYPAD, or STATUS BYTES (new to Version 9.3) features unless instructed by OMNTEC Technical Support.
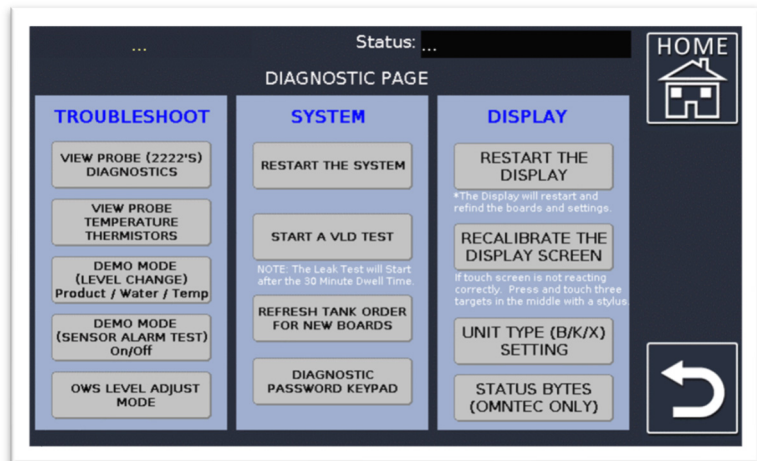(See Figure 25.1)

Figure 25.1

a) **Restart The System:** Resets the entire system as if power cycling.
b) **Restart The Display:** Resets the display and re-finds system boards.
c) **Recalibrate The Display Screen:** Brings up a white screen and crosshair targets in which user must press the center of each crosshair target for proper calibration.
d) **OWS Level Adjust Mode:** For aligning the current water level to the height of the invert pipe (on the Inventory page tank level image). See the OWS programming and installation document (**document DI00014 DI00015 DI00018 DI00020 DI00026-7**).
e) **Refresh Tank Order For New Boards:** Do not use unless instructed by OMNTEC Technical Support.
f) **Diagnostic Password Keypad:** Do not use unless instructed by OMNTEC Technical Support.
g) **Status Bytes (new to Version 9.3):** Do not use unless instructed by OMNTEC Technical Support.

View Probe (2222's) Diagnostics:
Shows the probe(s) connectivity with the Proteus® ATG. All 2's indicates a probe is functioning normally. If any other variation is displayed, check the wiring or probe floats.
New to Version 9; the PROBE DIAGNOSTICS page will also show any wireless tanks (as well as wired) associated with the system at the same time.
(See Figure 25.2)

Figure 25.2

If no wireless boards are associated with the system, you will not see the wireless headers.
(See Figure 25.3)

Call OMNTEC Technical Support if further assistance is required.

Figure 25.3

View Probe Temperature Thermistors:
Allows the user to view raw temperature data as the Proteus® ATG receives it from the MTG probe.
(See Figure 25.4)

Figure 25.4

Demo Mode (Level Change):
Allows the user to simulate tank movement by changing the product and water volumes. This feature can also be used to raise and lower the temperature.
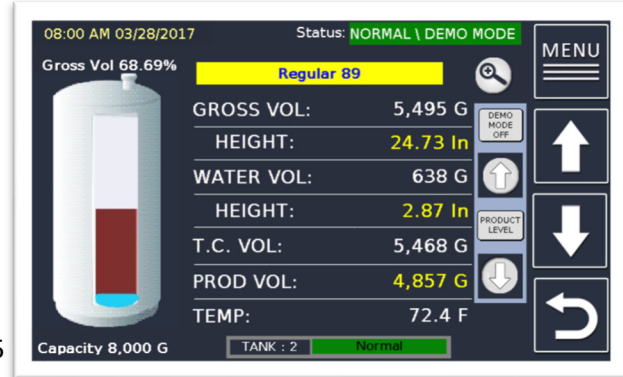(See Figure 25.5)

Figure 25.5

Demo Mode (Sensor Alarm Test):
Allows the user to test each sensor alarm condition so that you can also test relay events. Pressing each alarm will show that condition for the chosen sensor. Return to this page by pressing SENSOR STATUS, then VIEW ALL SENSORS.
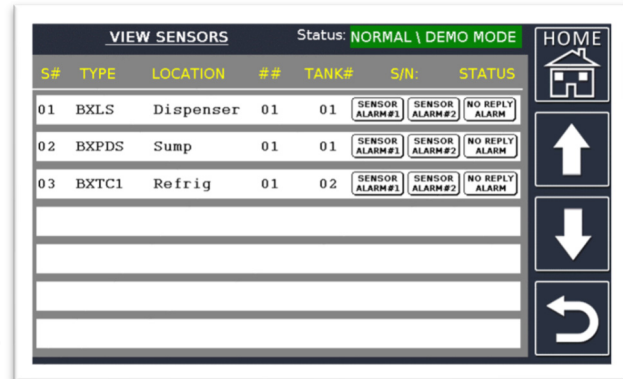(See Figure 25.6)

Figure 25.6

Press DEMO MODE again, in DIAGNOSTICS, to deactivate or it will stay active for 15 minutes at which time the controller will exit demo mode automatically.
Note: The (STATUS) NO REPLY ALARM button (Figure 25.6) is only available in Versions 9.1 and earlier.

Refresh Tank Order for New Boards:
Will reset the boards installed (typically on X models) to the current slot number that it is in. Useful when replacing a board and it does not find its proper tank number (resets the system).

Start a VLD Test:
A user can force a tank to perform a VLD test once START is pressed. The test will wait for the user-programmed dwell time in VLD SETTINGS (Section 18) before beginning a test.
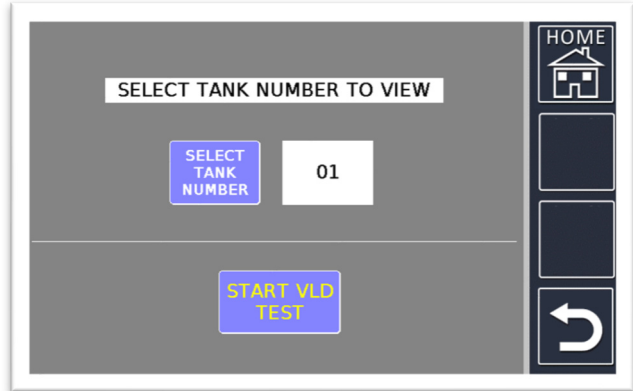(See Figure 25.7)

Figure 25.7

Unit Type:
This feature is used to change the unit type. This is useful if the display is ever replaced and does not show the correct unit type.
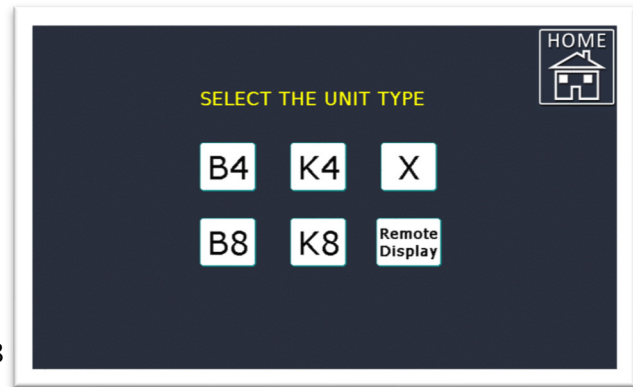(See Figure 25. 8)

Figure 25.8