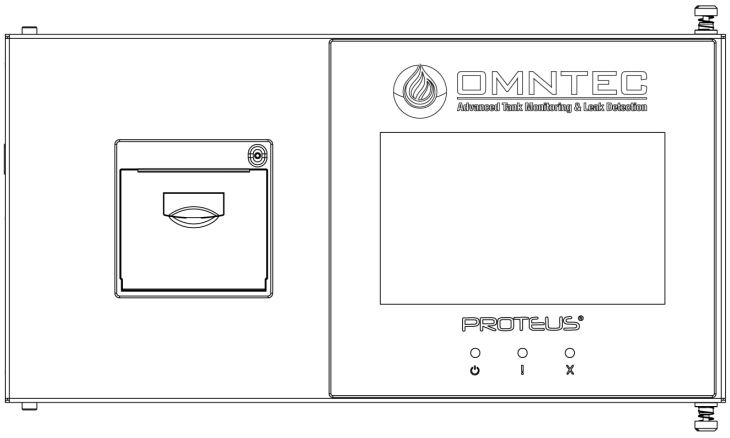
OMNTEC
Advanced Tank Monitoring & Leak Detection

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

OEL8000III-K | OEL8000III-X

SYSTEM OPERATING MANUAL



PROTEUS® Series
TANK GAUGING SYSTEM
GenIV

Revision 1.1

Document No. DI00009

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

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For PROTEUS® Thermal Paper Installation: Refer to document number DI00002

The above documents can be found at www.omntec.com/support/documents

1. MAIN MENU

SLEEP SCREEN: Based on the amount of BACK LIGHT TIMEOUT set, the screen will dim after the controller has been idle for the set time. Press anywhere on this screen to return to the active screen.

Figure 1.1

SYSTEM STATUS MENU: This menu is set as the factory-default screen; other home screen views are available (see UTILITIES > SETUP MENU > MISC. SETTINGS PAGE 2).

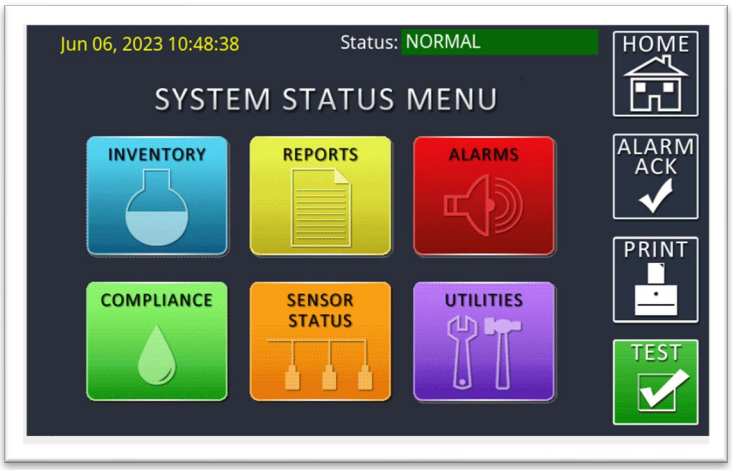


Figure 1.2

The MAIN MENU will allow you to navigate to the following submenus:

- INVENTORY
- REPORTS
- ALARMS
- COMPLIANCE
- SENSOR STATUS
- UTILITIES.

You can also acknowledge alarms, open the print menu, and perform a system test. (See Figure 1.2)

2. INVENTORY

The INVENTORY screen will show four tanks on each page. It will display the TANK NUMBER, PRODUCT TYPE, GALLON AMOUNT, and GROSS VOLUME PERCENTAGE.

Pressing  will allow the user to display the next set of four tanks*. (See Figure 2.1)

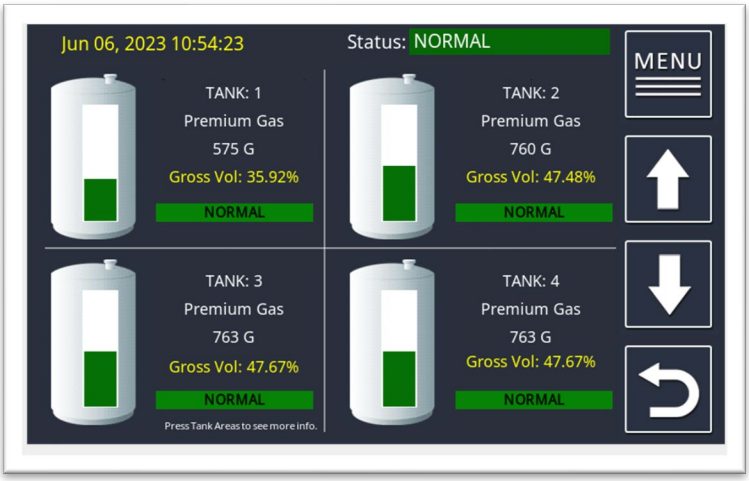


Figure 2.1

***A greater than 4-tank system requires an 8-channel probe card, or PROTEUS® X series controller.**

DETAILED VIEW: By pressing a specific tank, the controller will show you more information. Here, you can view GROSS VOLUME and PERCENTAGE, PRODUCT and WATER HEIGHT, PRODUCT and WATER VOLUME, TEMPERATURE COMPENSATED VOLUME (T.C.), and TEMPERATURE.

By pressing  and  , you can scroll between your available tanks. Additionally, listed is the TOTAL CAPACITY of the tanks. (See Figure 2.2)

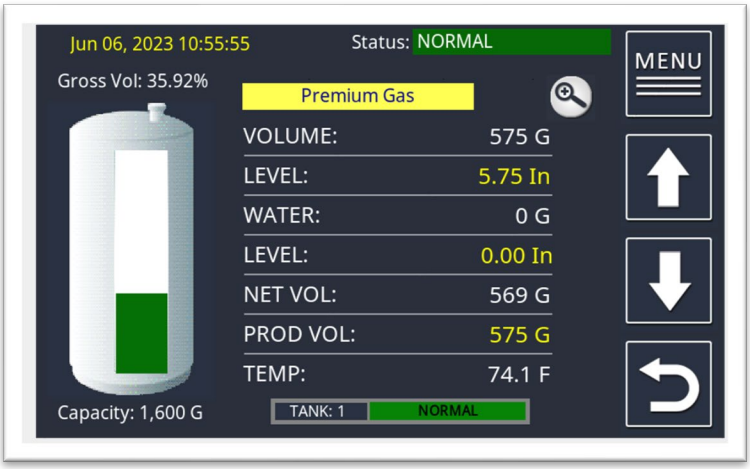


Figure 2.2

ZOOMED VIEW: If you press  , the controller will display GROSS VOLUME and PERCENTAGE, GROSS HEIGHT, and ULLAGE. You can change the ullage percentage, between 80 - 100%, from within the SETUP MENU. (See Figure 2.3)

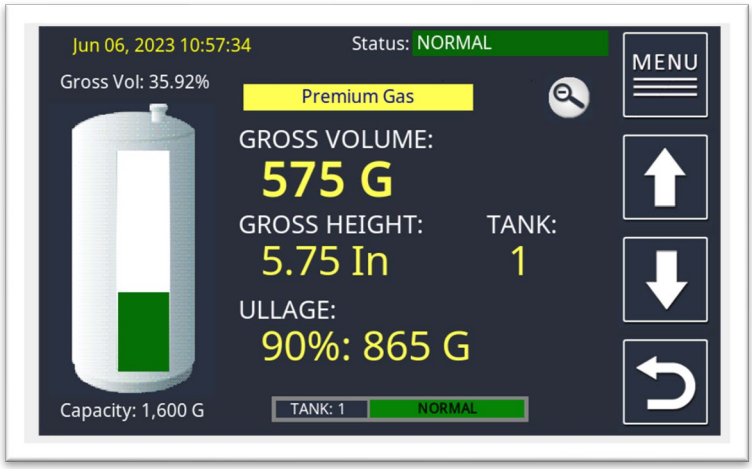


Figure 2.3

DELIVERY IN PROGRESS: A DELIVERY IN PROGRESS will display a small D icon next to the corresponding tank.

VLD TEST IN PROGRESS: A VLD TEST IN PROGRESS will display a small L icon next to the corresponding tank.
(See Figure 2.4)

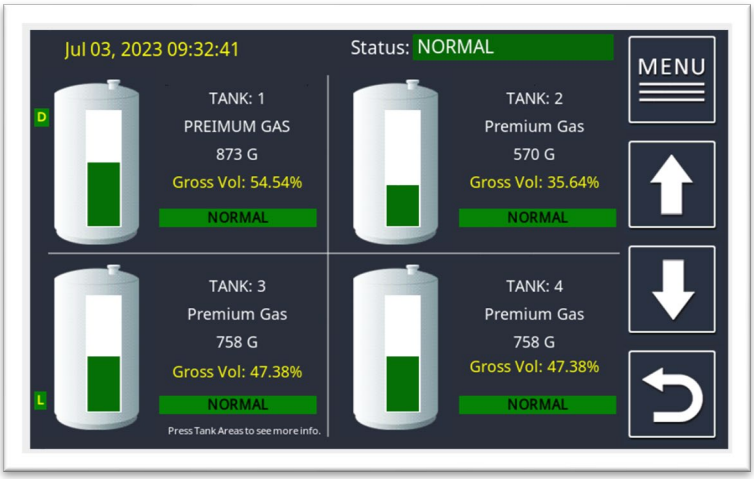


Figure 2.4

3. REPORTS

This is used to view different logs that are stored in the system.
(See Figure 3.1)

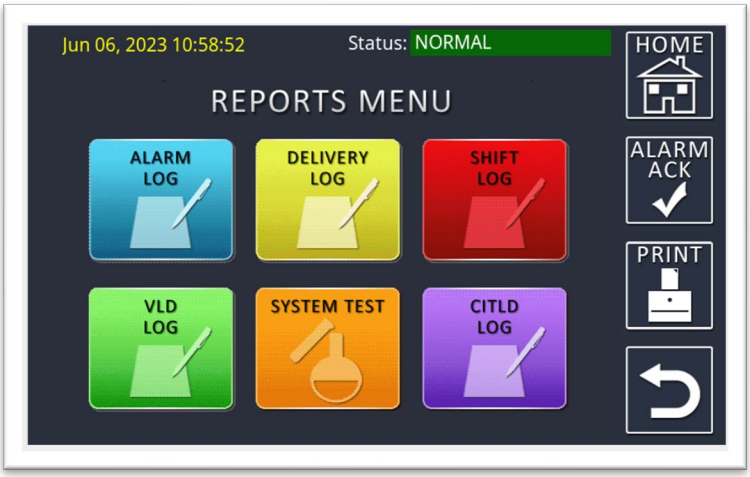


Figure 3.1

a) **ALARM LOG:** Displays the alarm history.
b) **DELIVERY LOG:** Displays the delivery results for each tank.
c) **SHIFT LOG:** Displays shift report data for each tank.
d) **VLD LOG:** Displays VLD (Volumetric Leak Detection) results for each tank.
e) **SYSTEM TEST:** Displays the current system test results without printing or checking relays.
f) **CITLD LOG:** Displays CITLD (Continuous In-Tank Leak Detection) results for each tank. CITLD is only available with controllers that upgraded with an optional CITLD-enabled code.

3.1 ALARM LOG

Brings you to the following page that allows you to select which probes and sensors you choose to view past alarms.
(See Figure 3.1.1)

Figure 3.1.1

a) **TANK/SENSOR NUMBER:** Drop down (ᵛ) selection option used to select different tanks and sensors. Defaulted to ALL. *Note: Only enabled tanks and sensors found are available*.

b) **USE DATE RANGE (check box):** When enabled, provides selectable START DATE and STOP DATE drop down (ᵛ) selection options for the selected tanks and sensors.

c) **SHOW LOGS:** After pressing SHOW LOGS, the following screen will appear and show the alarm reports.
(See Figure 3.1.2)

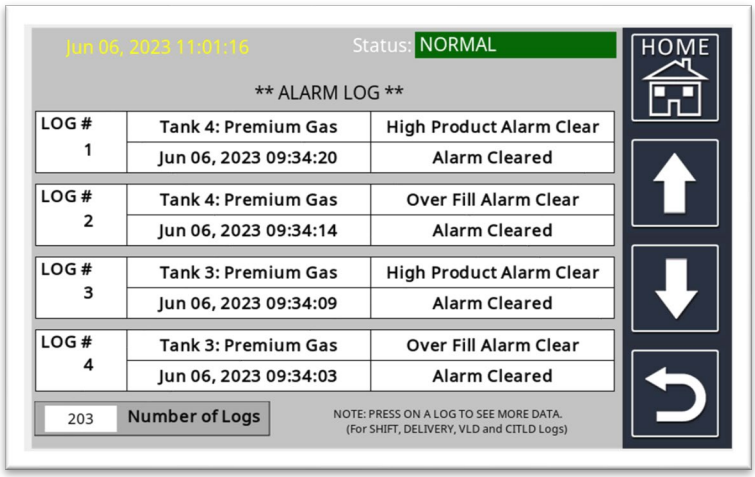


Figure 3.1.2

3.2 DELIVERY LOG

Brings you to the following page to select a specific tank in which to view delivery data.

(See Figure 3.2.1)

Figure 3.2.1

a) **TANK/SENSOR NUMBER:** Drop down (ᵛ) selection option used to select between enabled tanks to view their delivery data. Defaulted to ALL.

b) **USE DATE RANGE (check box):** When enabled, provides selectable START DATE and STOP DATE drop down (ᵛ) selection options for selected tanks.

c) **SHOW LOGS (yellow button):** After pressing, the following screen will appear and show the logs for the selected tank. (See Figure 3.2.2)

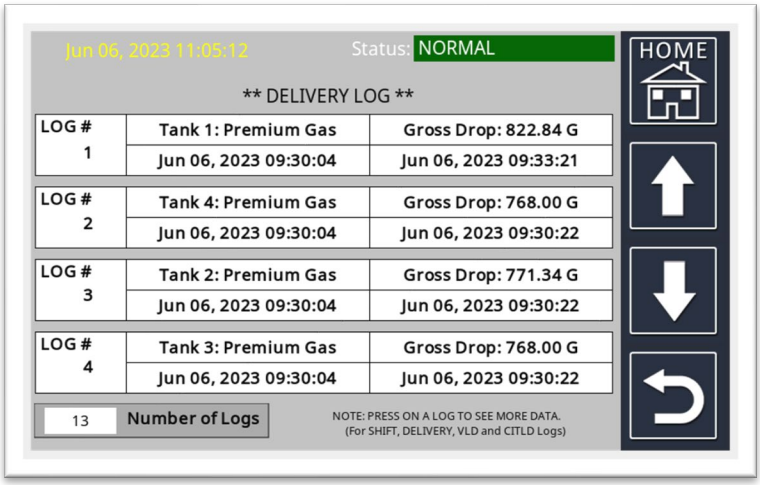


Figure 3.2.2

d) By pressing a specific log, you can display more detailed information.
(See Figure 3.2.3)

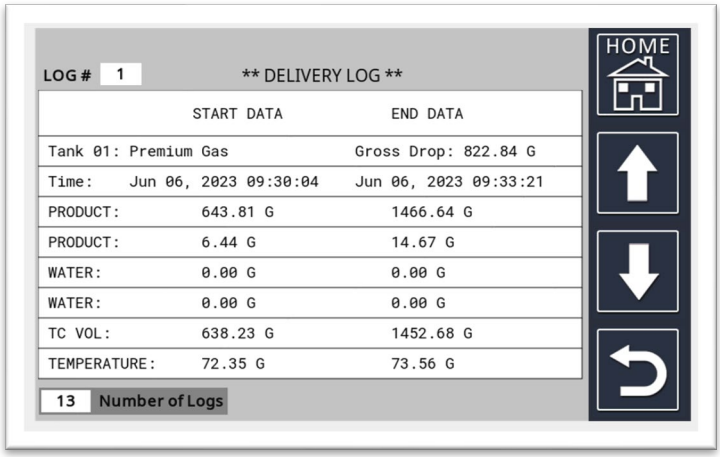


Figure 3.2.3

3.3 SHIFT LOG

Brings you to the following page to select a specific tank in which to view shift data for that tank.
(See Figure 3.3.1)

a) **TANK/SENSOR NUMBER:** Drop down (ᵛ) selection option used to toggle between enabled tanks to view shift data. Defaulted to ALL.
b) **USE DATE RANGE (check box)**: When enabled, provides selectable START DATE and STOP DATE drop down (ᵛ) selection options for selected tanks.
c) **SHOW LOGS (yellow button):** After pressing, the following screen will appear and show the logs for the selected tank.
(See Figure 3.3.2)

Figure 3.3.1

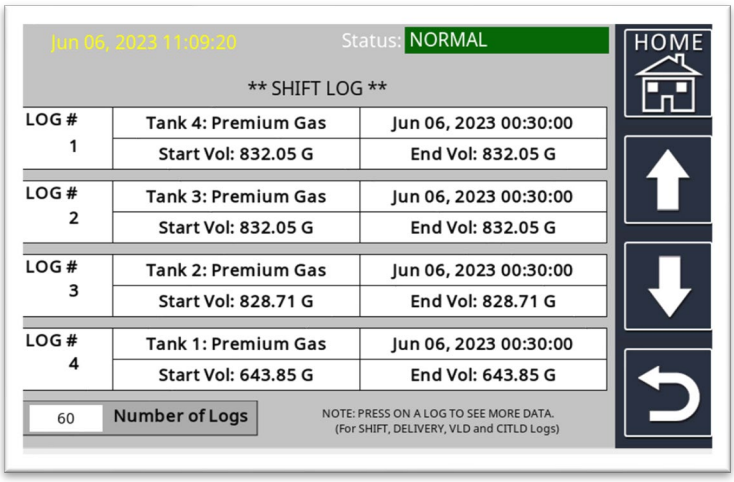


Figure 3.3.2

d) By pressing a specific log, you can display more detailed information. (See Figure 3.3.3)

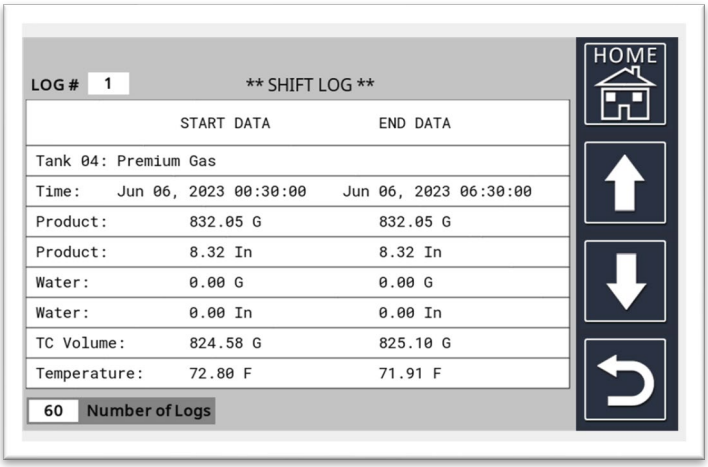


Figure 3.3.3

3.4 VLD (VOLUMETRIC LEAK DETECTION) LOG

Brings you to the following page to select a specific tank in which to view VLD results. VLD is a 4-hour test that you cannot disrupt. It evaluates for leaks in underground storage tanks. (See Figure 3.4.1)

a) **TANK/SENSOR NUMBER:** Drop down (ᵛ) selection option used to select between enabled tanks to view VLD results. Defaulted to ALL.

b) **USE DATE RANGE (check box):** When enabled, provides selectable START DATE and STOP DATE drop down (ᵛ) selection options for selected tanks.

c) **SHOW LOGS (yellow button):** After pressing, the following screen will appear and show logs for the selected tank. (See Figure 3.4.2)

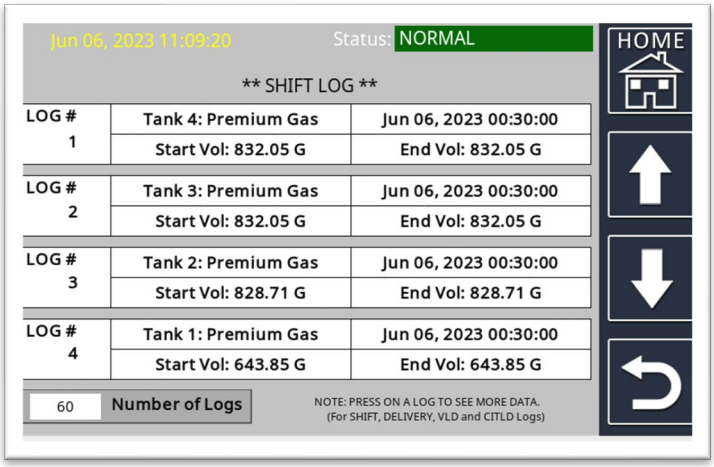


Figure 3.4.1

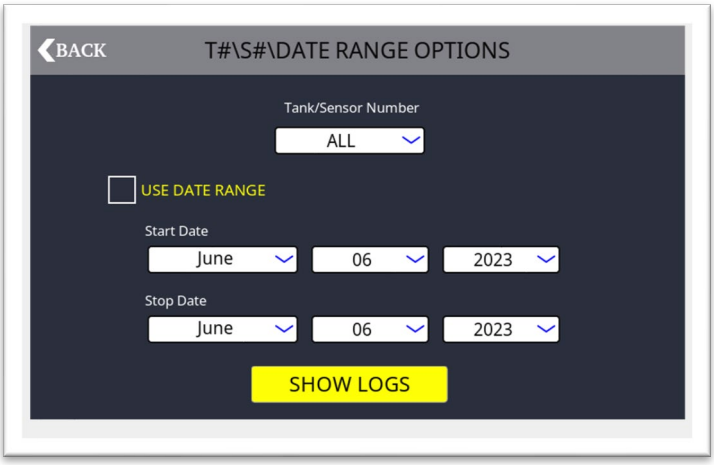


Figure 3.4.2

d) By pressing a specific log, you can display more detailed information. (See Figure 3.4.3)

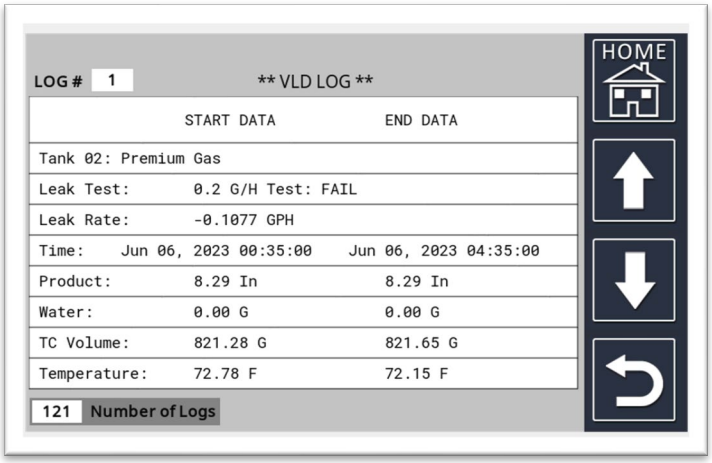


Figure 3.4.3

3.5 SYSTEM TEST

This allows you to run a system test of each board in the controller, enabled tanks, and sensors. (See Figure 3.5.1)

a) Use the UP and DOWN arrows to scroll through the completed test results.

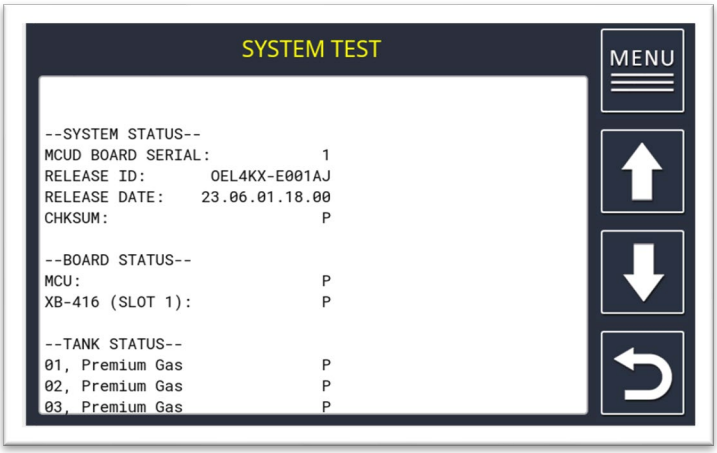


Figure 3.5.1

3.6 CITLD (Continuous In-Tank Leak Detection) LOG

Brings you to the following page to select a specific tank in which to view CITLD results. CITLD is a monthly test to check for leaks in underground storage tanks for sites that cannot shut down for a VLD test.
(See Figure 3.6.1)

a) **TANK/SENSOR NUMBER:** Drop down (ᵛ) selection option used to select between enabled tanks to view CITLD results. Defaulted to ALL.
b) **USE DATE RANGE (check box):** When enabled, provides selectable START DATE and STOP DATE drop down (ᵛ) selection options for selected tanks.
c) **SHOW LOGS (yellow button):** After pressing, the following screen will appear and show logs for the selected tank. (See Figure 3.6.2)
d) Selecting a specific report will display more detailed information about each CITLD test. (See Figure 3.6.3)

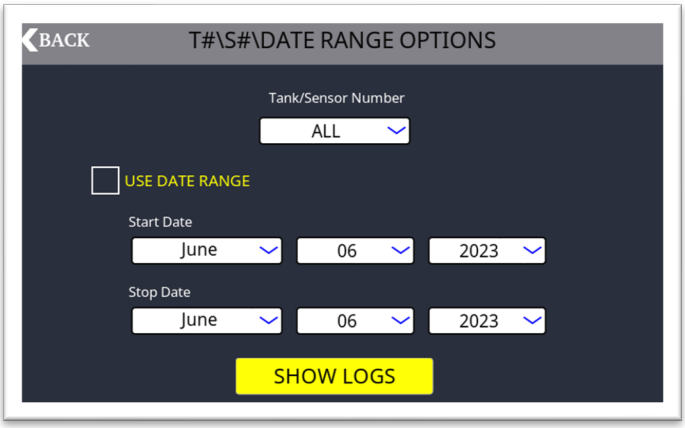


Figure 3.6.1

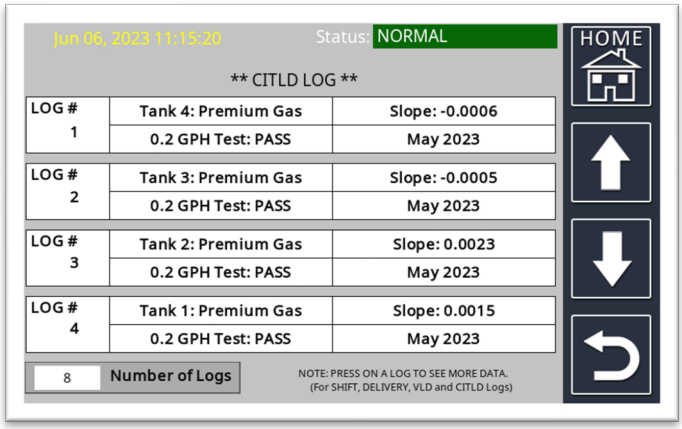


Figure 3.6.2

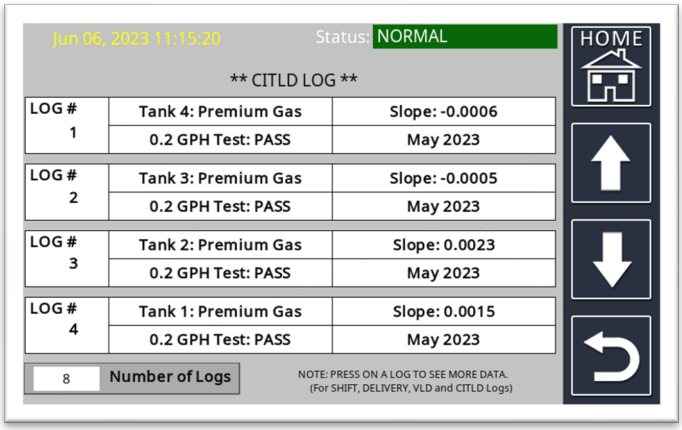


Figure 3.6.3

4. ALARMS

When an alarm condition occurs, the alarm will display on the screen with a red flashing box and a description of the alarm within the box.
(See Figure 4.1)

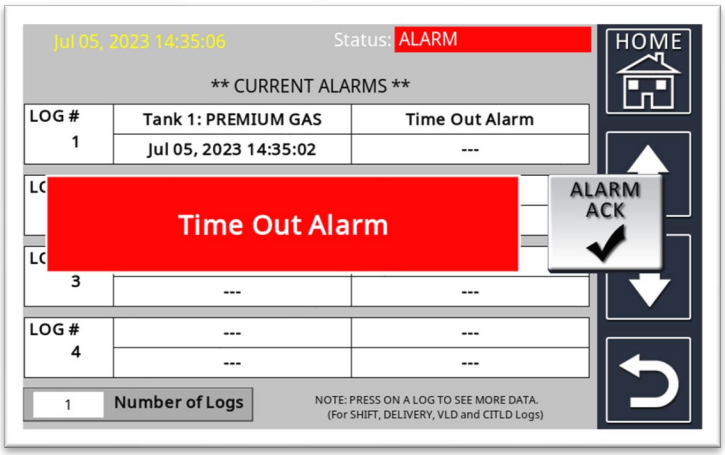


Figure 4.1

The display will alternate to a white flashing box showing the device location of the alarm.
(See Figure 4.2)

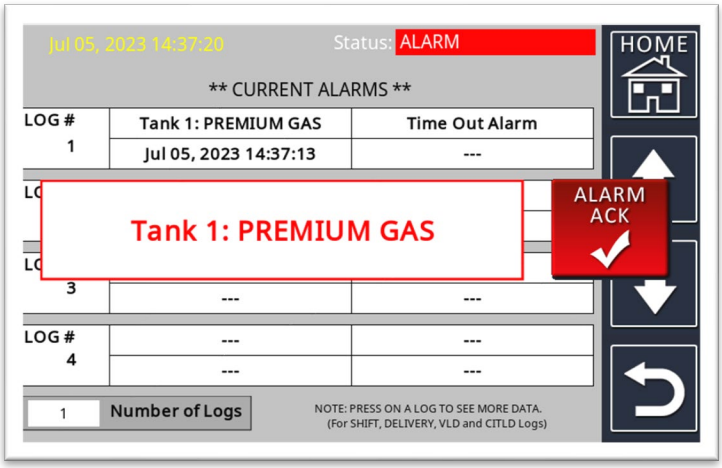


Figure 4.2

The controller will also sound an audible horn. The ALARM ACK button will acknowledge the alarm and display the current alarms log.
(Figure 4.3)

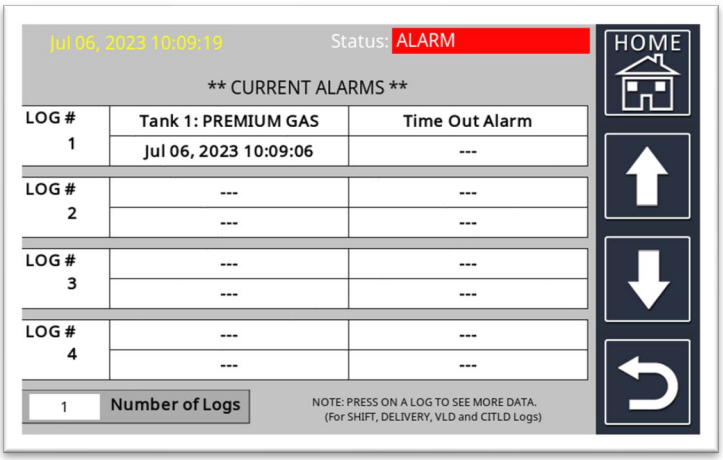


Figure 4.3

5. COMPLIANCE

Here, you can view COMPLIANCE REPORTS (VLD and CITLD results, perform a system test, and view leak sensor status). (See Figure 5.1)

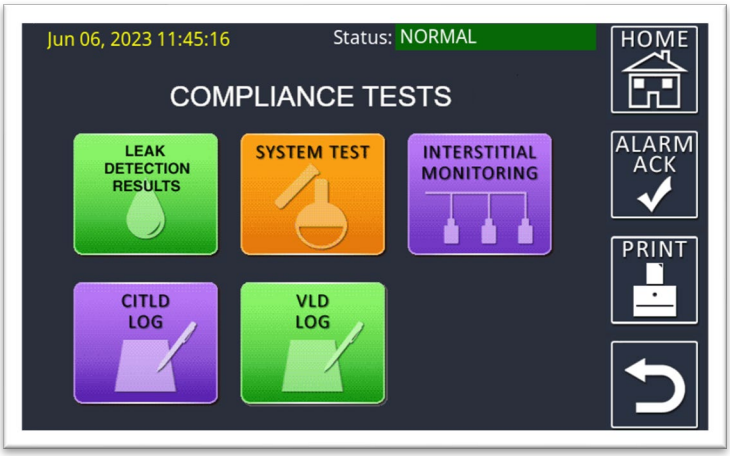


Figure 5.1

LEAK DETECTION RESULTS: Displays the monthly CITLD or VLD results for all enabled tanks.
(See Figure 5.2)

SYSTEM TEST: As described in Section 3.5, this will perform a SYSTEM TEST.

- Use the UP and DOWN arrows to scroll through the completed test results.

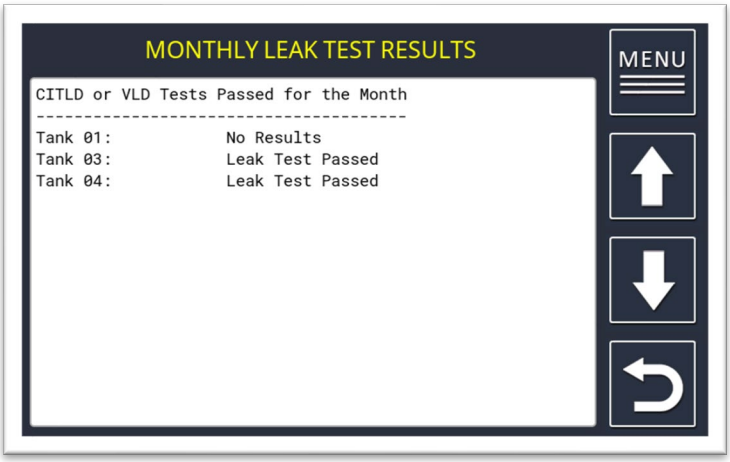


Figure 5.2

INTERSTITIAL MONITORING: Used to view the status of all interstitial sensors associated with the system.
(See Figure 5.3)

CITLD LOG: As described in Section 3.6, this will allow CITLD log selection.

VLD LOG: As described in Section 3.4, this will allow VLD log selection.

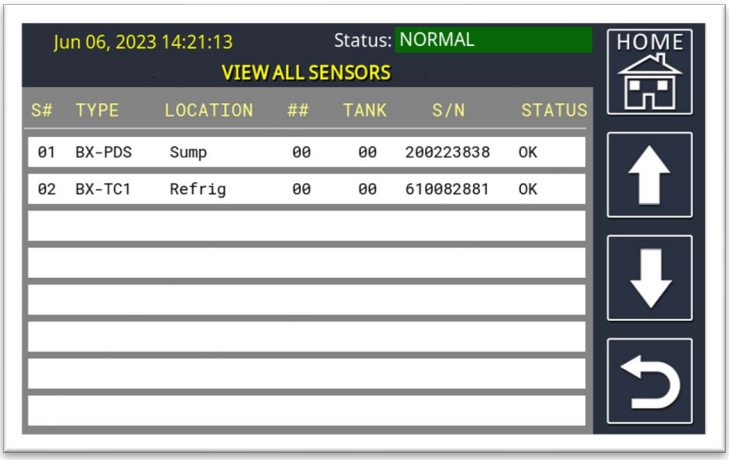
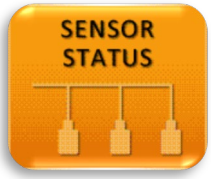


Figure 5.3

6. SENSOR STATUS



Here, view leak sensor status. Choose between viewing all sensors, just temperature sensors, or viewing FillCheck sensor diagnostics.
(See Figure 6.1)

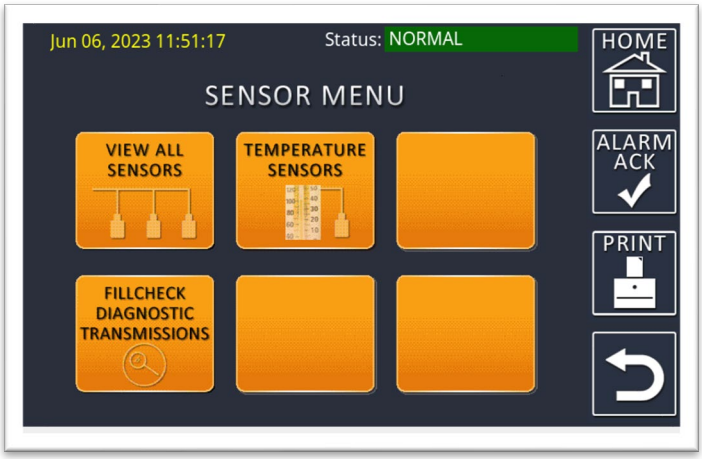
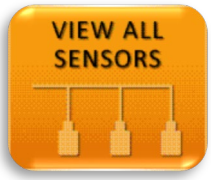
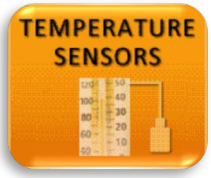


Figure 6.1



VIEW ALL SENSORS: Used to view all BX-Series (Bright Eyes) sensors and their status. This does not show the actual temperature for temperature sensors.
(See Figure 5.3; previous page)



TEMPERATURE SENSORS: Used to view temperature sensors (BX-TC-1) and their status. Also shows the actual temperature for each temperature sensor.
(See Figure 6.2)

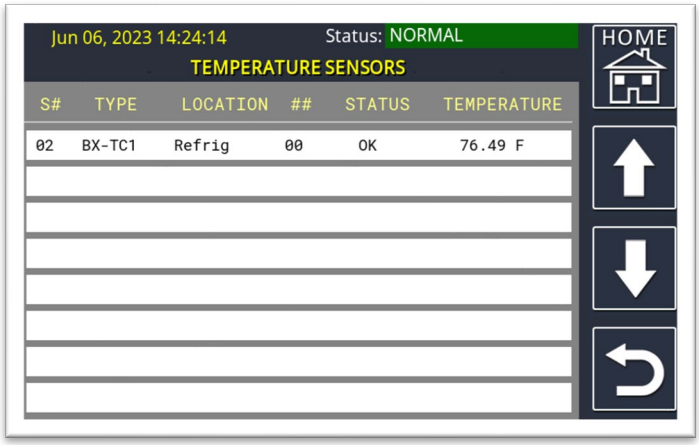


Figure 6.2

FILLCHECK DIAGNOSTIC TRANSMISSIONS: Used to display wireless transmissions on FillCheck sensors associated with this system.
(See Figure 6.3)

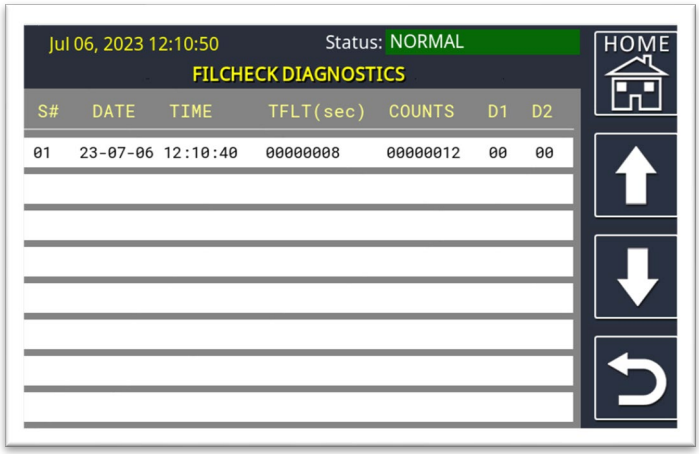


Figure 6.3

7. UTILITIES

Used to access TIME & DATE, DIAGNOSTICS, HELP MENU, SYSTEM BOARDS, and SETUP.
(See Figure 7.1)

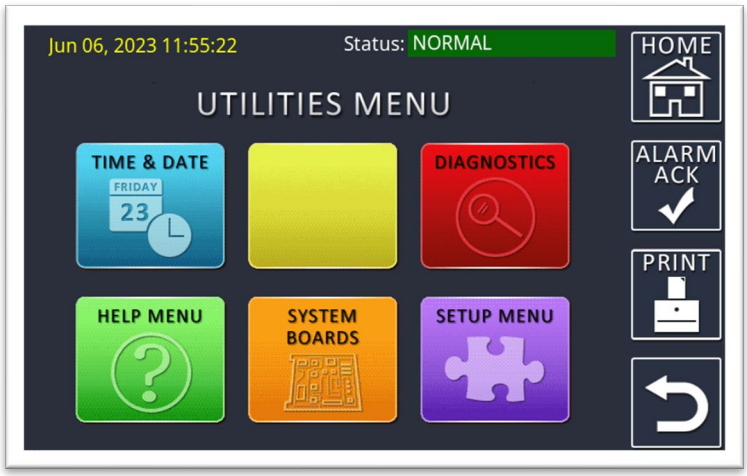


Figure 7.1

a) **TIME & DATE:** Used to set the current time and date.
b) **DIAGNOSTICS:** Opens a diagnostic input screen, helpful for troubleshooting with OMNTEC Technical Support.
c) **HELP MENU:** Offers wiring diagrams and helpful information about the controller.
d) **SYSTEM BOARDS:** Shows the system boards and their status.
e) **SETUP MENU:** A password is required to enter Setup by authorized personnel (see Programming Manual **DOC00008** at www.omntec.com/support/documents for more details on SETUP MENU features).

7.1 TIME & DATE

Used to set the current time and date.
(See Figure 7.1.1)

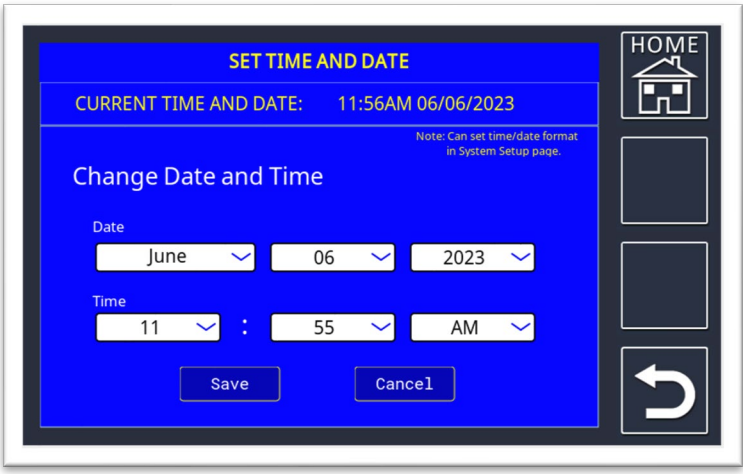


Figure 7.1.1

Each field provides drop down (˅) selection options. MONTH, DATE, YEAR as well as HOUR, MINUTE, AM/PM/24-hour.
(See Figure 7.1.2)

Note: The TIME/DATE FORMAT, displayed at the top of each screen, is set in the SETUP MENU (page 2).

Press the SAVE button to save any changes made to this screen.

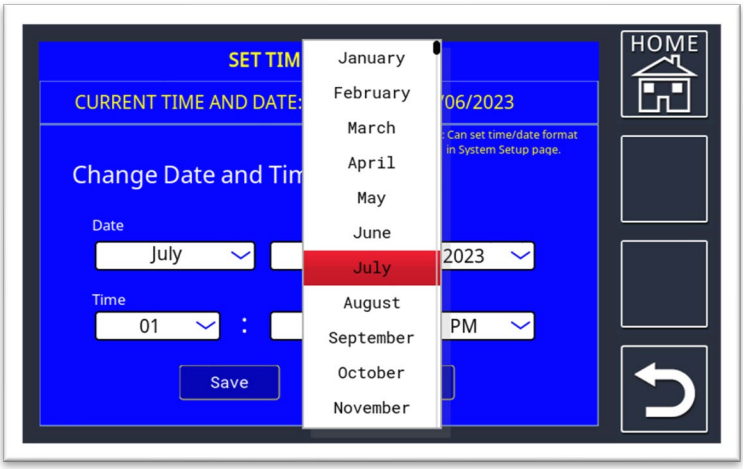


Figure 7.1.2

7.2 HELP MENU

Used to view REMOTE DISPLAY info, PROBE and SENSOR INFO, PROBE/SENSOR WIRING diagrams, ALARM INFO, REMOTE SETTINGS, VERSION NUMBERS (current firmware), SYSTEM 'STATUS', FUNCTIONALITY MODE, SYSTEM BUS ALARMS, REMOTE WIRING, and CITLD, MODBUS, SD CARD status, as well as the unit SERIAL (EL) NUMBER.
(See Figure 7.2.1)

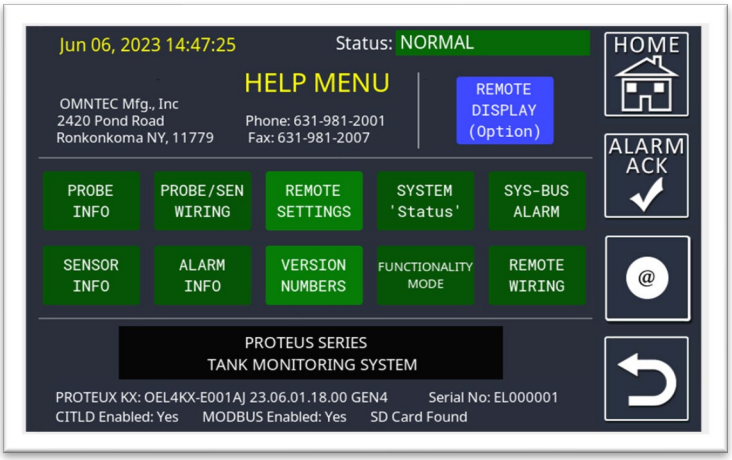


Figure 7.2.1

Shows the proper assembly order of an MTG probe and gives the operating specifications.
(See Figure 7.2.2)

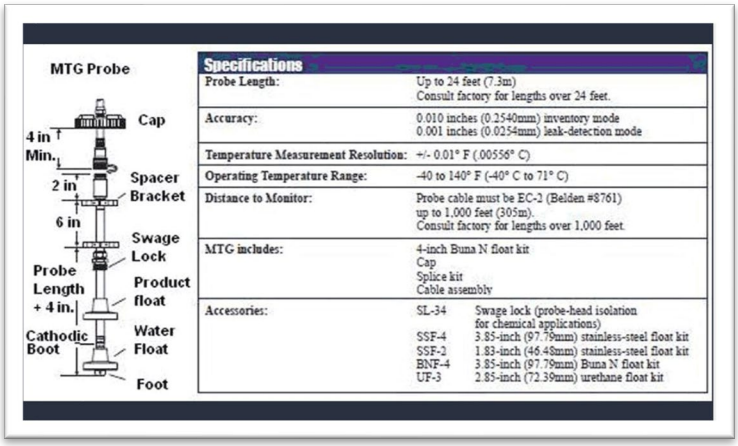


Figure 7.2.2

Displays how to add and delete BX sensors from the system. It also gives a list of compatible sensors and where they would be placed in the tank field.
(See Figure 7.2.3)

Figure 7.2.3

PROBE/SEN WIRING

Displays how to properly wire probes and sensors in the intrinsically-safe area of the PROTEUS® panel.
(See Figure 7.2.4)

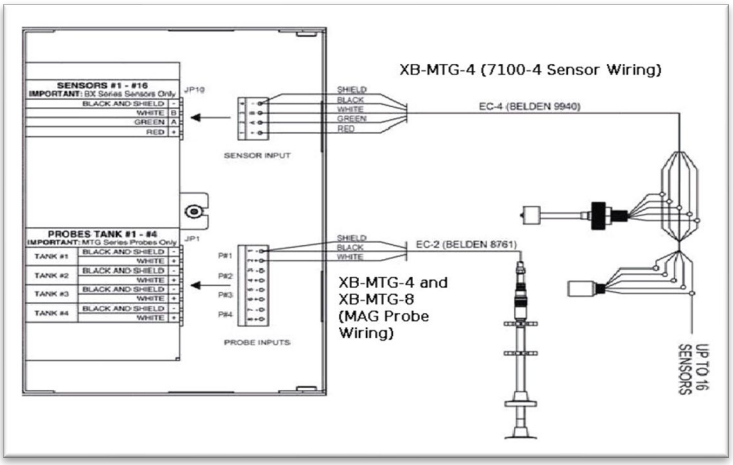


Figure 7.2.4

ALARM INFO

Illustrates and details where the alarm points are in the tank. Only the enabled alarm points will be used.
(See Figure 7.2.5)

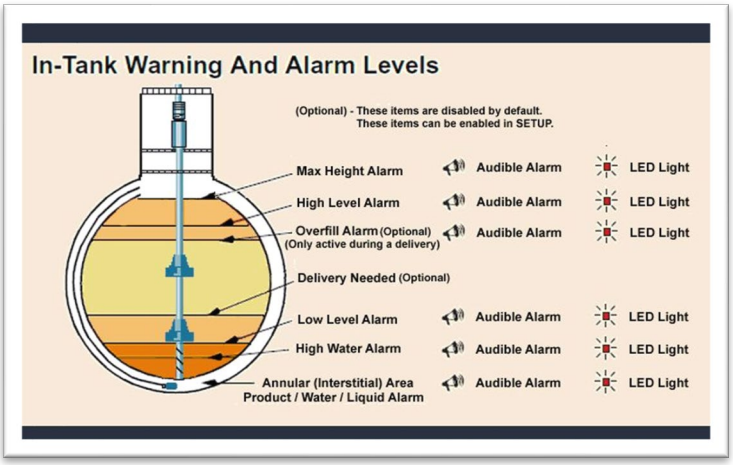


Figure 7.2.5

REMOTE SETTINGS

Displays the current settings for the COM1, OPTION BUS 1 and OPTION BUS 2, IP ADDRESS, TELNET PORT AND PROTOCOL and MODBUS ADDRESS.
(See Figure 7.2.6)

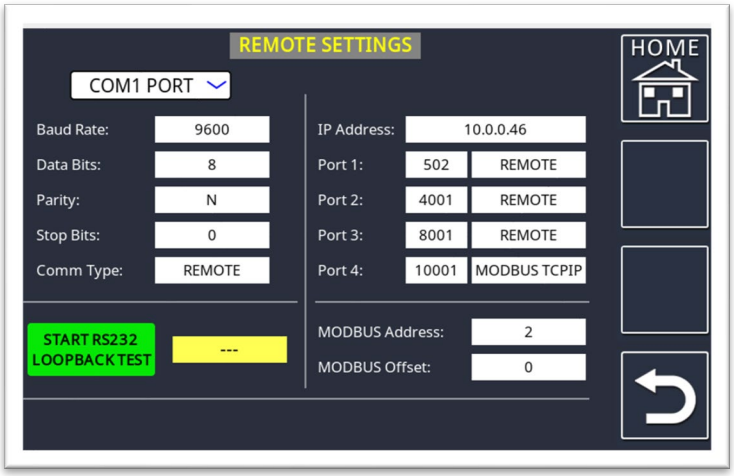


Figure 7.2.6

VERSION NUMBERS

Lists the system boards and the current firmware version installed on each board.
(See Figure 7.2.7)

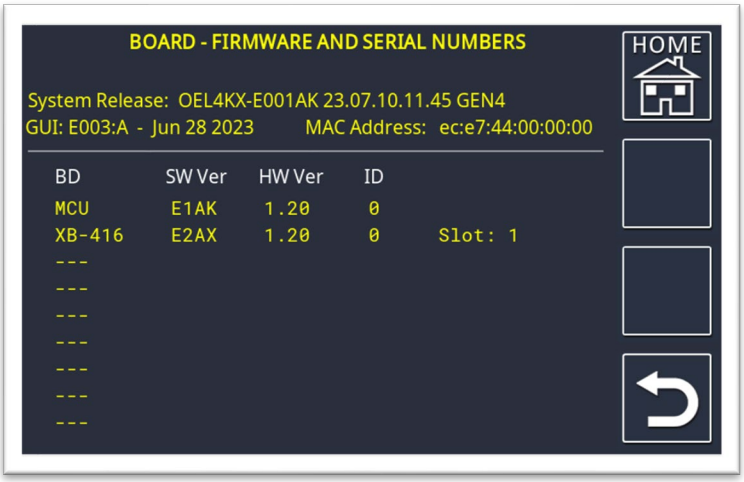


Figure 7.2.7

SYSTEM 'Status'

Scrollable description detailing what each of the status icons mean that appear at the top of the screen.
(See Figure 7.2.8)

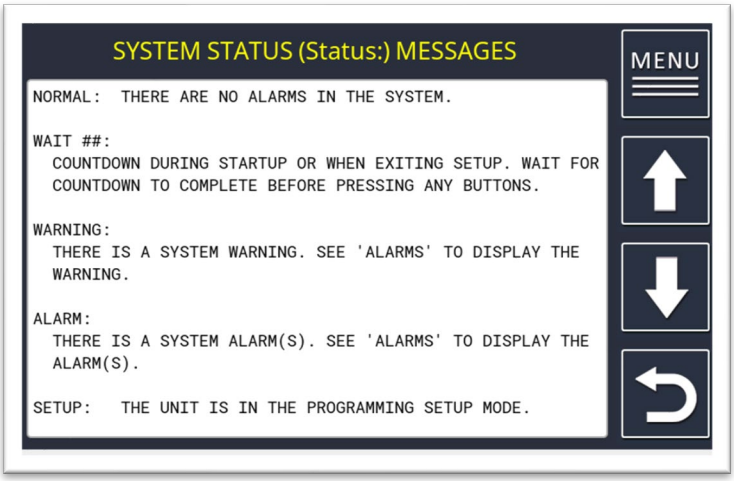


Figure 7.2.8

FUNCTIONALITY MODE

Scrollable description detailing the probe and sensor functional tests that can be performed from the DIAGNOSTICS menu.
(See Figure 7.2.9)

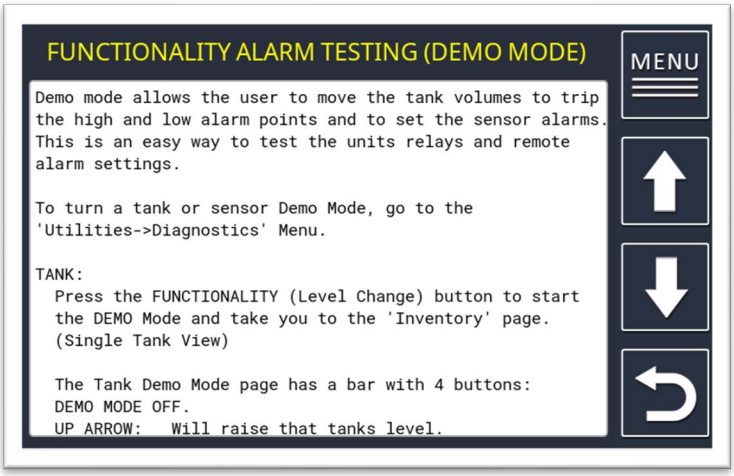


Figure 7.2.9

SYS-BUS ALARM

Scrollable description detailing corrective actions to perform in the case of a system bus alarm.
(See Figure 7.2.10)

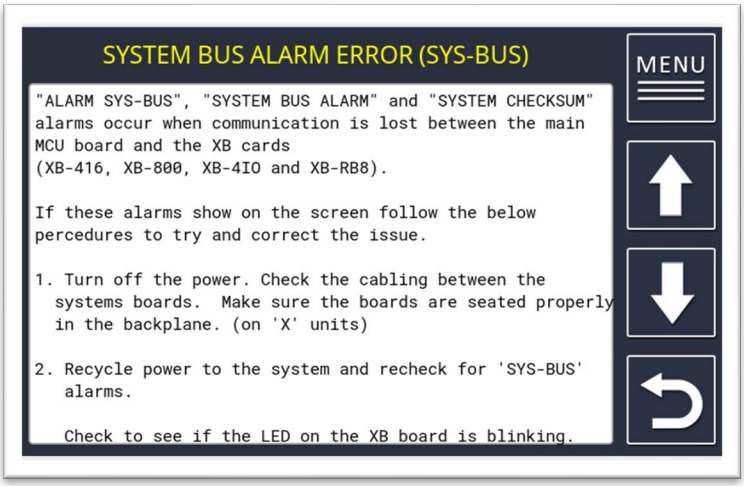


Figure 7.2.10

REMOTE WIRING

Illustrates a typical connection diagram of a Mini-Me (RD7CTS) to a PROTEUS® controller.
(See Figure 7.2.11)

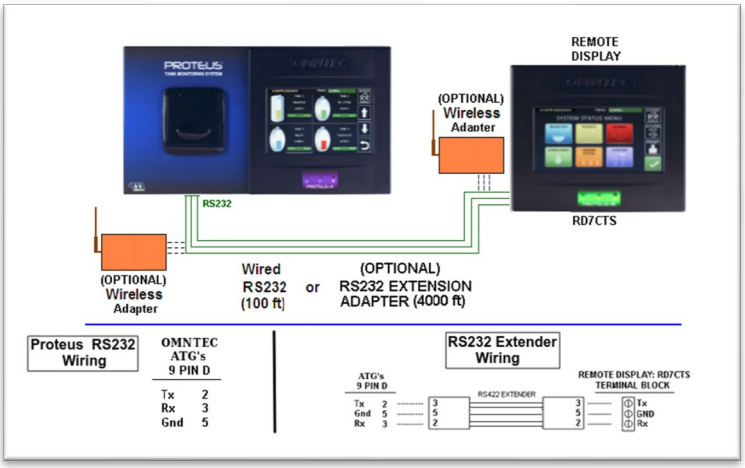


Figure 7.2.11

REMOTE DISPLAY (Option)

Shows information about the Mini-Me (RD7CTS) remote display for PROTEUS® series controllers. The Mini-Me can also connect to any industry-standard ATG. This is an optional remote and may be added after the initial installation.
(See Figure 7.2.12)

Figure 7.2.12

The ABOUT icon, found on the right-side margin of the HELP MENU. Describes the basic features of the PROTEUS® K and PROTEUS® X controllers.
(See Figure 7.2.13)

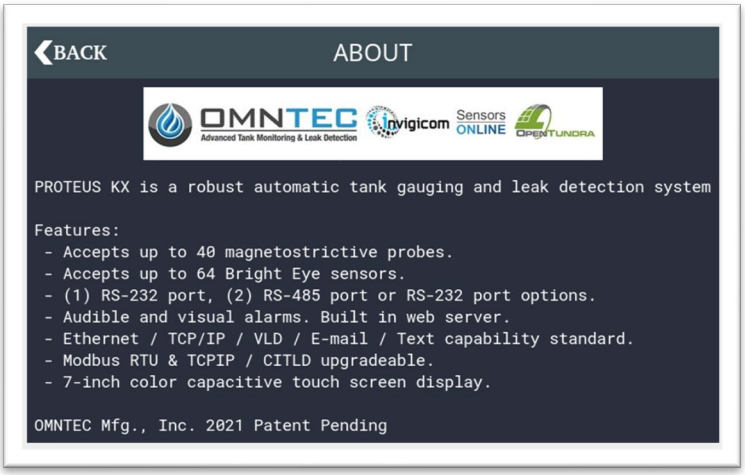


Figure 7.2.13

7.3 SYSTEM BOARDS

Shows the system boards and lists their serial numbers, status, and current slot number, based on the model number and number of boards installed.
(See Figure 7.3.1)

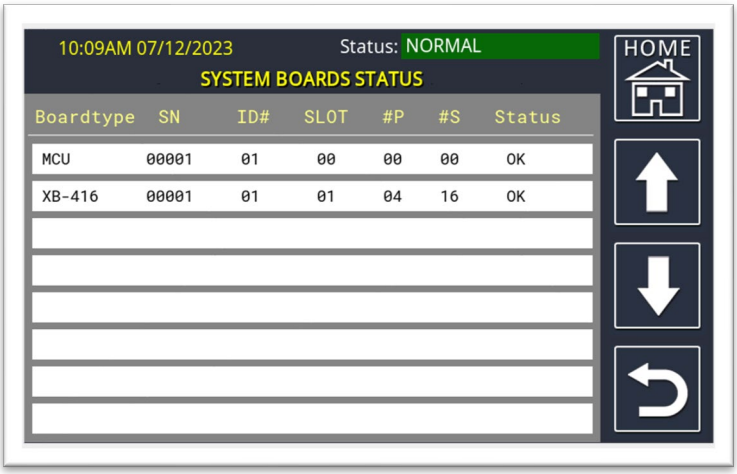


Figure 7.3.1

Boards you may find installed are:

- MCU
- XB-416
- XB-800
- XB-RB8 (PROTEUS® X; also listed for XC-R8 with a PROTEUS® K)
- XB-4IO
- XB-416DC
- XB-800DC

7.4 SETUP

Used to enter the SETUP MENU. Accessed by OMNTEC Authorized Service Contractors (ASC), or if instructed by OMNTEC Technical Support.
(See Figure 7.4.1)

Figure 7.4.1

8. PRINT

Brings up a submenu with different items to print. From here you can print the status of INVENTORY, SYSTEM TEST, CURRENT ALARMS, INTERSTITIAL REPORT, COMPLIANCE REPORT, and the history of ALARM LOG, DELIVERY LOG, SHIFT LOG, VLD LOG, and CITLD LOG.
(See Figure 8.1)

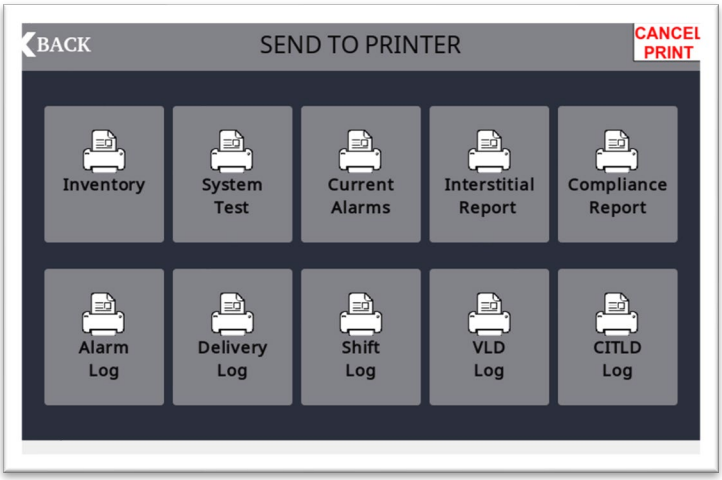


Figure 8.1

Selecting INVENTORY, SYSTEM TEST, CURRENT ALARMS, INTERSTITIAL REPORT, or COMPLIANCE SETUP will prepare the data before it prints, which may require 6 minutes or more to complete.
(See Figure 8.2)

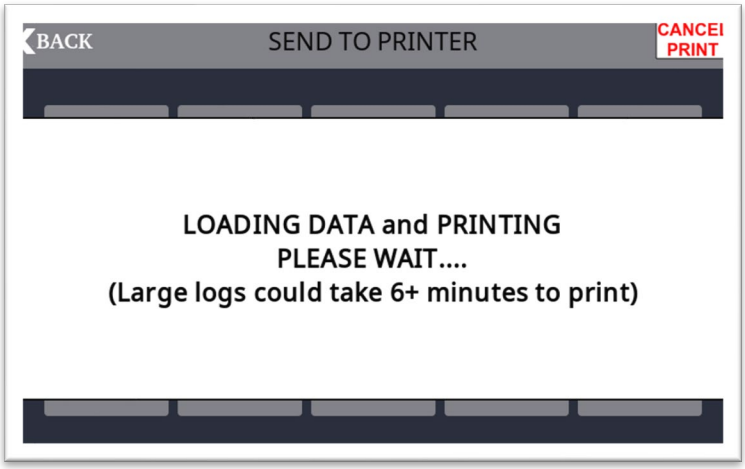


Figure 8.2

Selecting ALARM LOG, DELIVERY LOG, SHIFT LOG, VLD LOG, or CITLD LOG will provide Tank/Sensor/Date Range selections (like Report options) before preparing the data for printout, which may require up to 6 minutes or more to complete.
(See Figure 8.3)

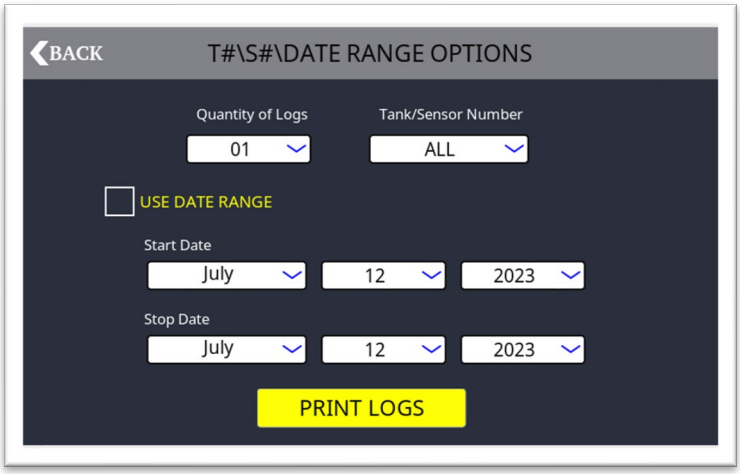


Figure 8.3

9. TEST

Pressing the green TEST button, in the lower right corner of the SYSTEM STATUS MENU, performs a system test on all internal boards, MTG probes, and sensors. The TEST toggles the MCU relays to verify the operation of the controller's LEDs and horns, and any connected remote annunciator. The results will be displayed on the monthly leak tests for VLD and/or CITLD in a scrollable window along with the Site Information, System ID, and date of the test. The user may keep these for their records. (See Figures 9.1, 9.2, and 9.3)

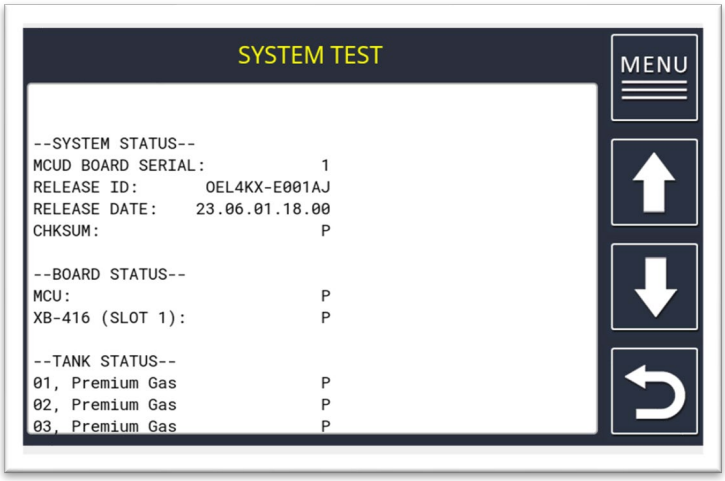


Figure 9.1

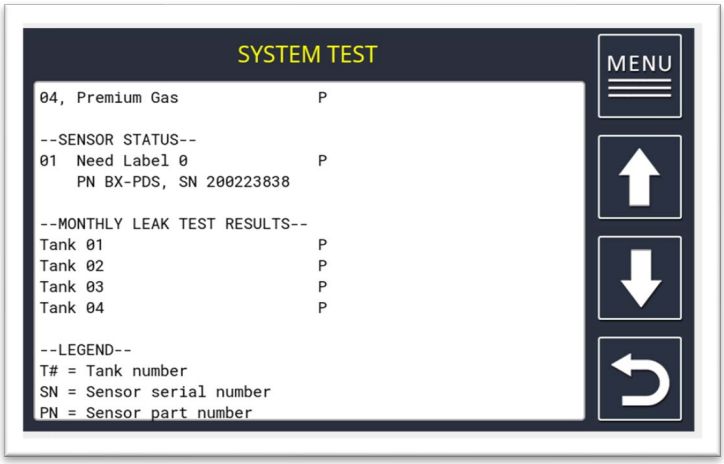


Figure 9.2

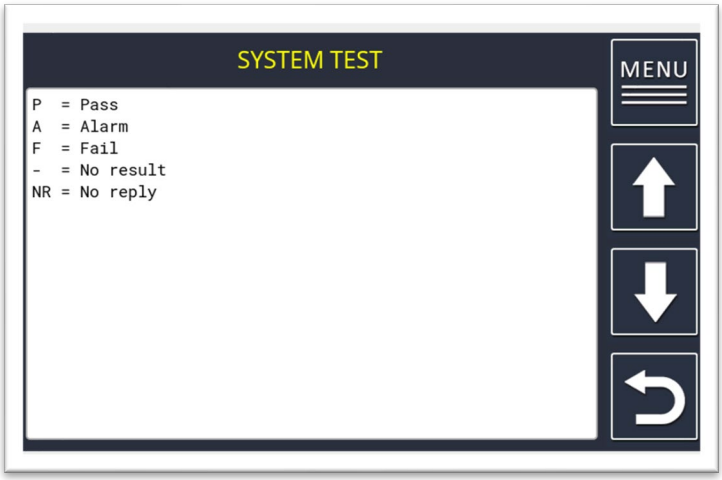


Figure 9.3