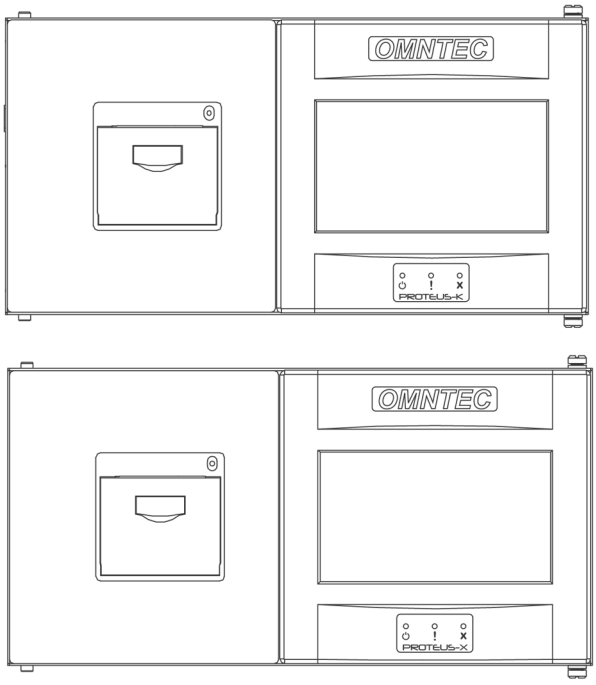
OMNTEC
Advanced Tank Monitoring & Leak Detection

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/X

WEB PAGE PROGRAMMING MANUAL

Software Release 4.0 to 8.3



PROTEUS® Series
TANK GAUGING SYSTEM

Revision 2315

Document No. DI00014 DI00015 DI00020-5

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

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Release Revisions & Updates

Release 8.3:

- **Web page updates (Relay Events, Inventory Page)**

Release 8:

- **Web setup fixed**
- **Programming system units**

Release 7:

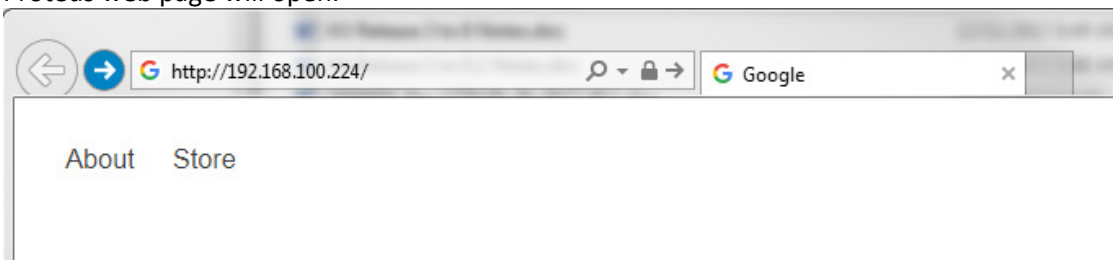
- **Shows SD card**
- **Date appears in reports**

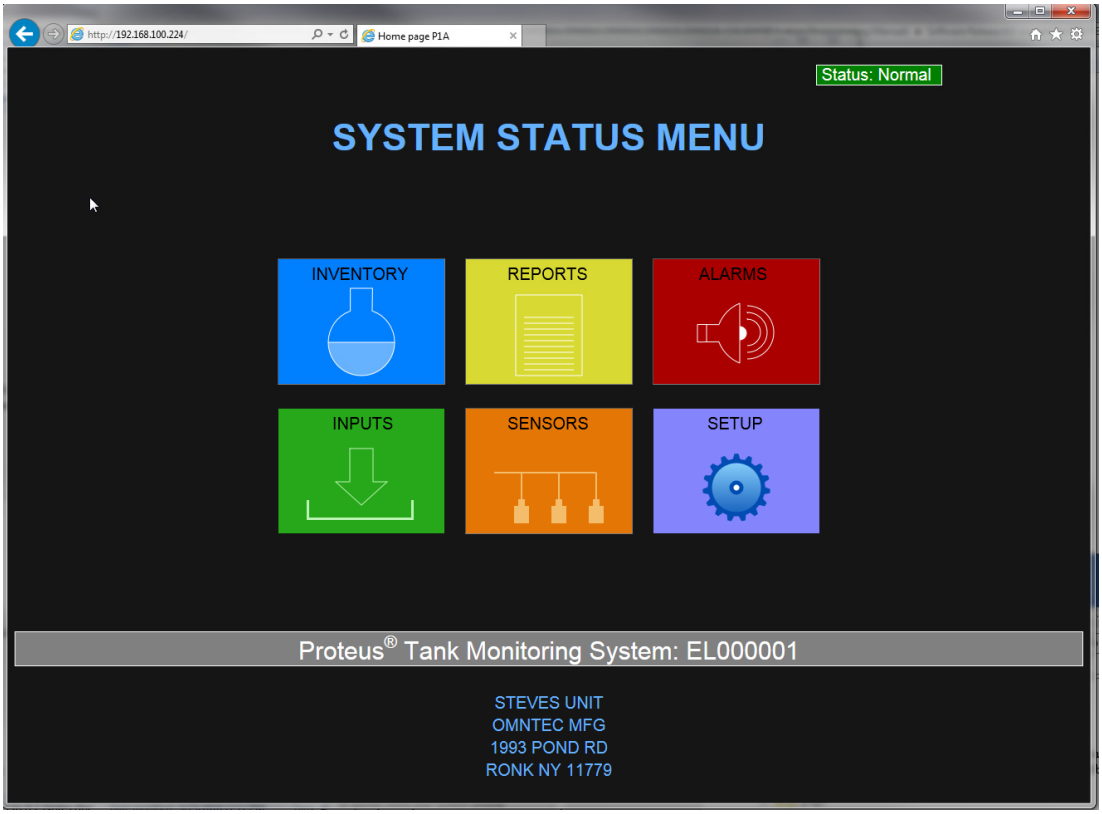
Release 4:

- **Inventory & alarms**

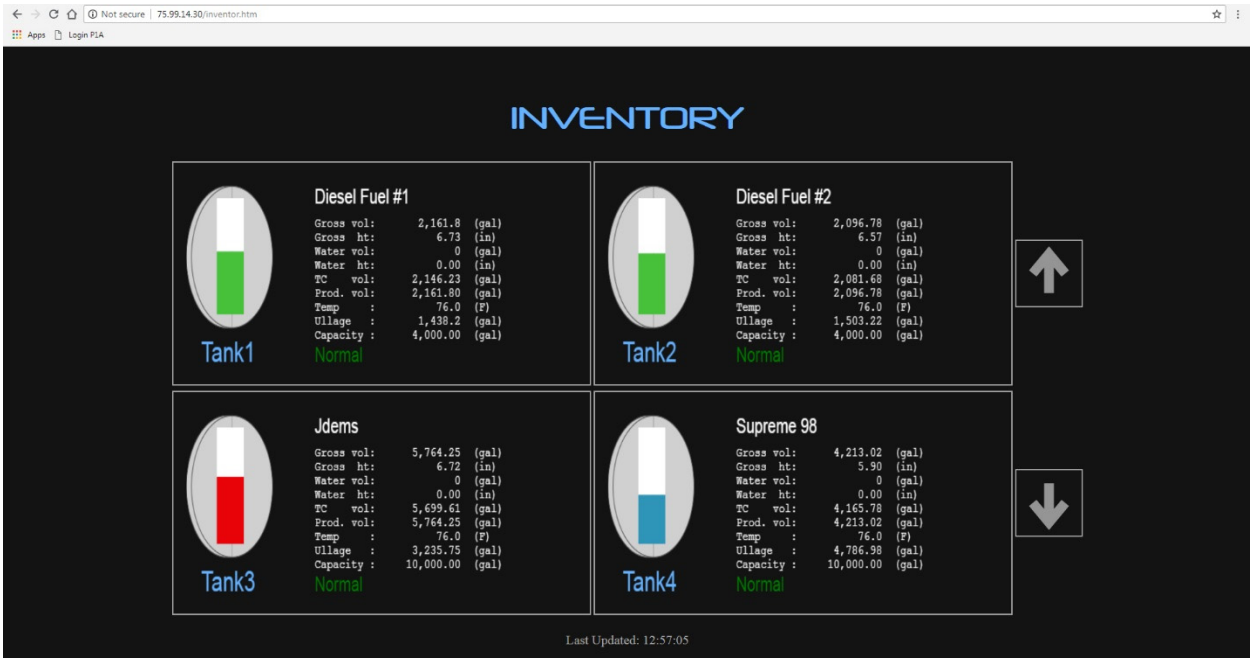
1. Connecting to the Web Page

In your web browser's URL address field (e.g., Internet Explorer, Chrome, Firefox, etc.) type in your controller's IP address. Press ENTER or the GO TO arrow (→) to the right of the URL field. The OMNTEC Proteus web page will open.



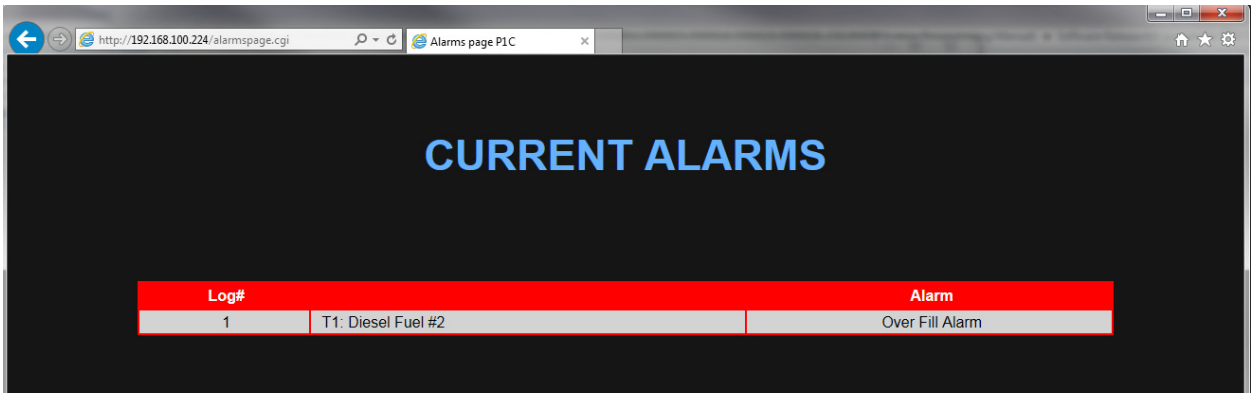


A. Press the **INVENTORY** button. This shows the ATG's inventory page.

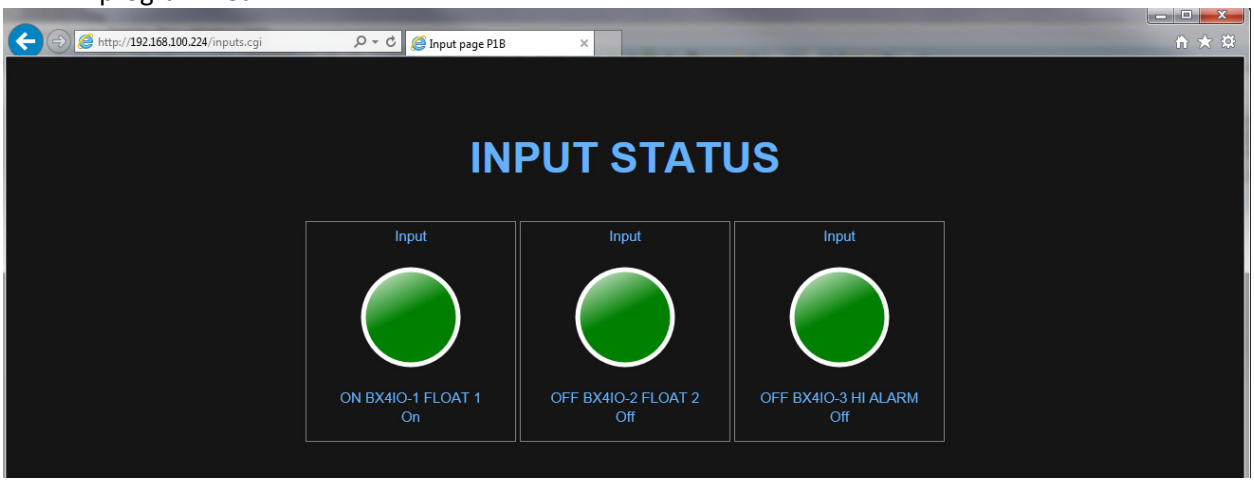


Press the **UP** (↑) or **DOWN** (↓) arrows (right side) to scroll through the tank numbers.

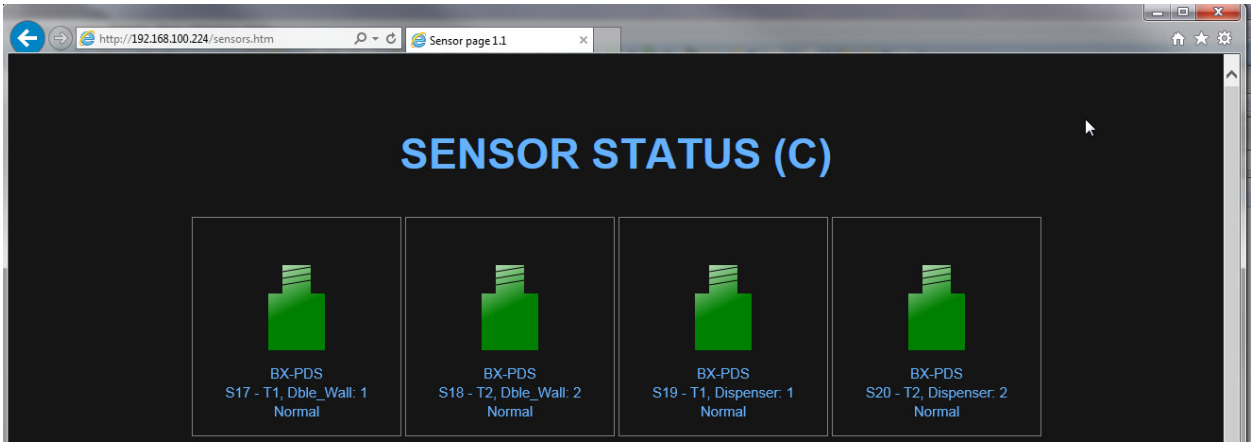
B. Press the **ALARMS** button. This shows the ATG's current alarms.



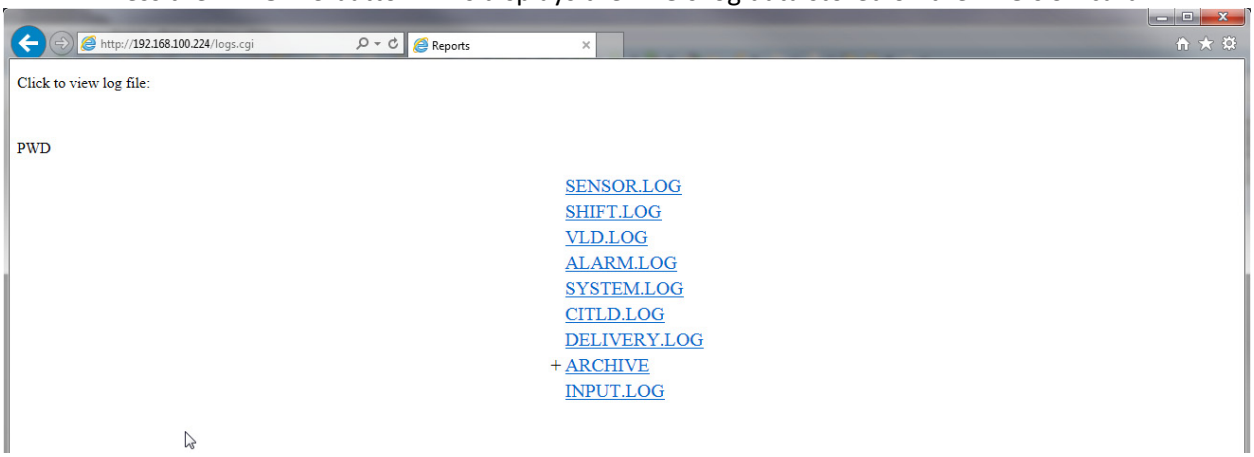
C. Press the **INPUTS** button. This shows the status of the ATG's inputs. Only inputs with mode set to "INPUT" and are enabled will appear. Input's ON or OFF messages will display as programmed.



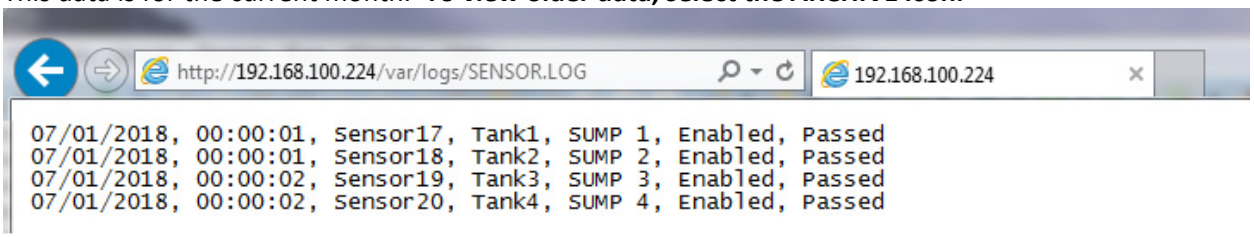
D. Press the **SENSORS** button. This shows the state of the ATG's currently connected sensors. Sensors in red are in an alarm state.



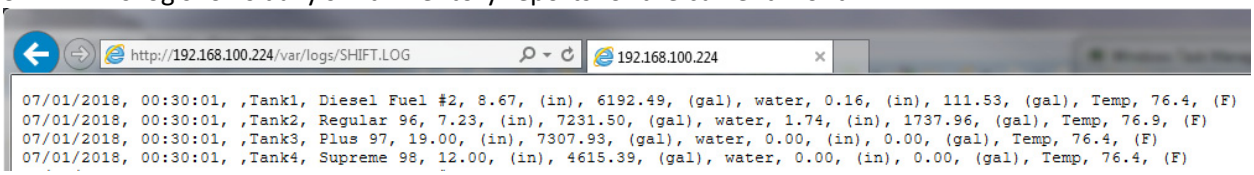
E. Press the **REPORTS** button. This displays the ATG's log data stored on the ATG's SD card.



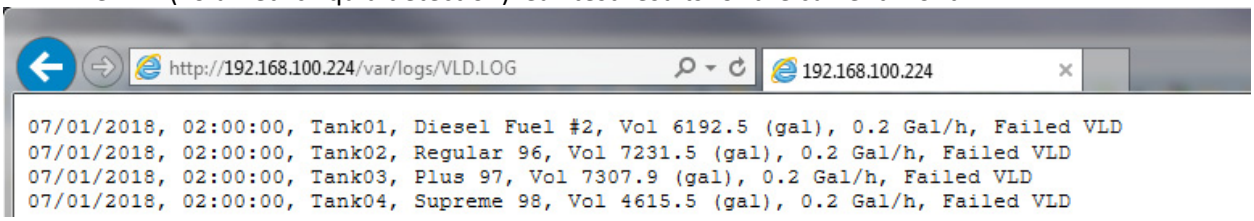
Press the **SENSOR.LOG** icon to view ATGs sensor log data (shows the daily sensor test data). This data is for the current month. **To view older data, select the ARCHIVE icon.**



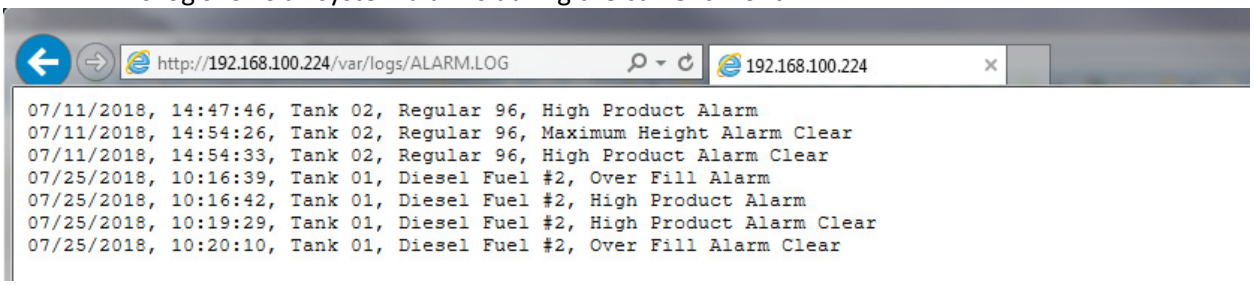
SHIFT: This log shows daily shift inventory reports for the current month.



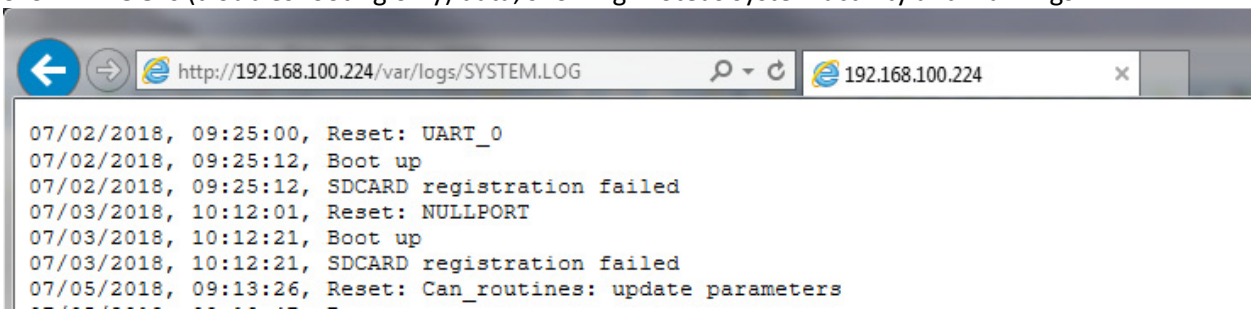
VLD: The VLD (**v**olumetric **l**iquid **d**etection) leak test results for the current month.



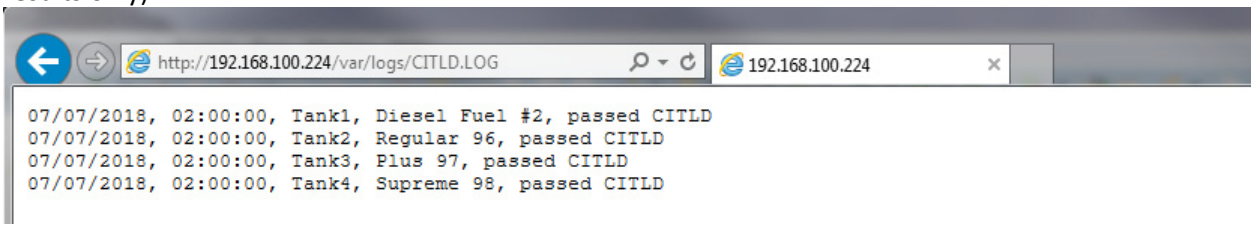
ALARM: This log shows all system alarms during the current month.



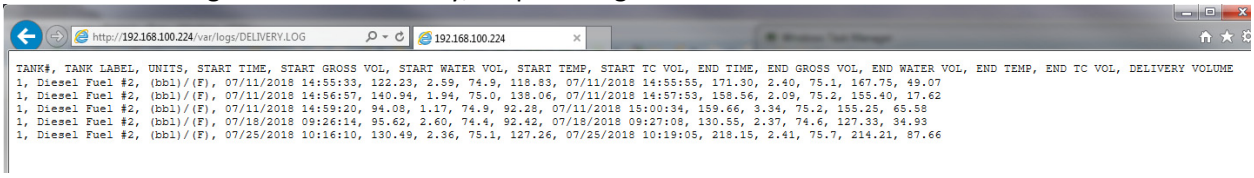
SYSTEM.LOG is (troubleshooting only) data, showing Proteus system activity and warnings.



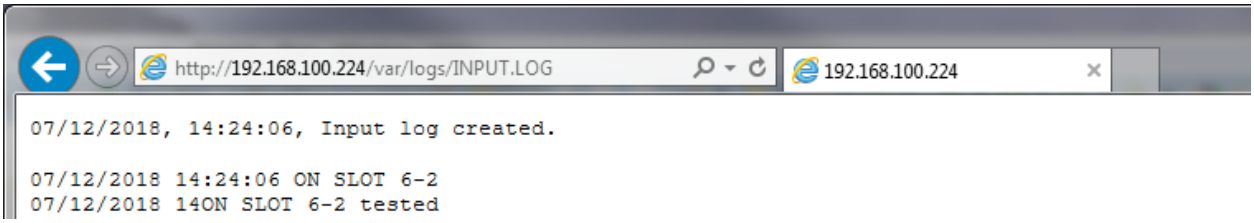
CITLD: This log shows **C**ontinuous **I**n-**T**ank **L**eak **D**etection test results for the current month (passed results only).



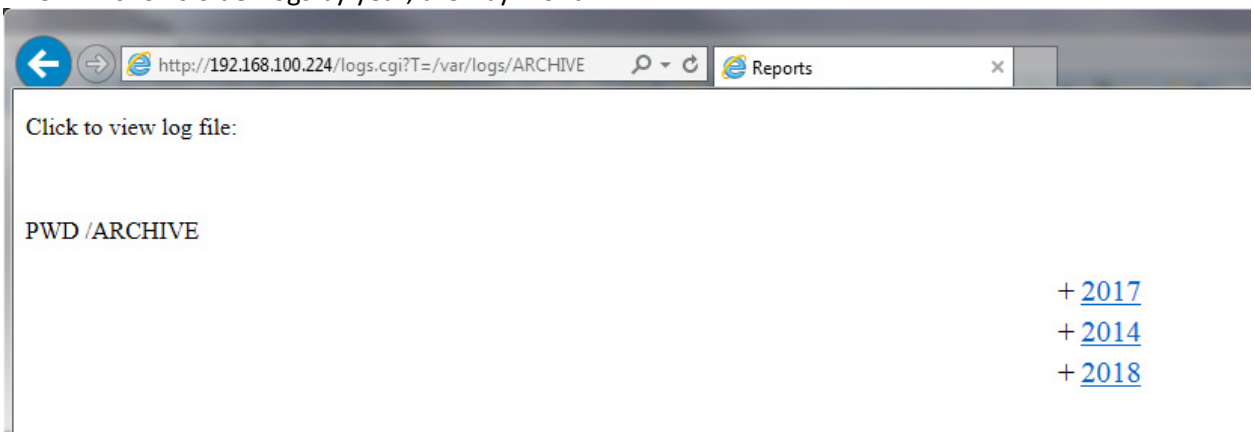
DELIVERY: This log shows tank delivery/drop readings for the current month.

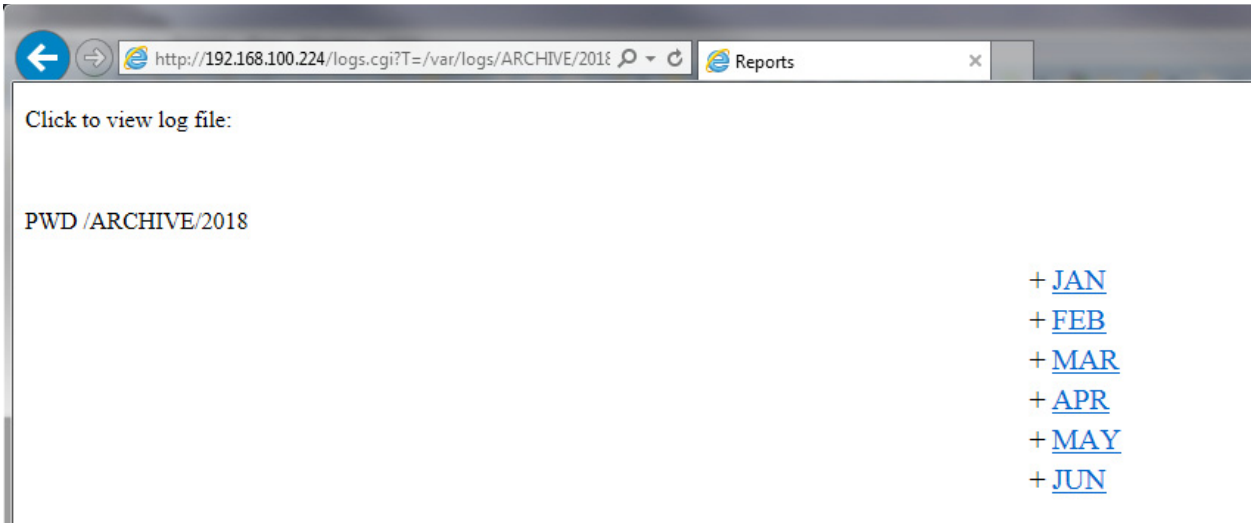


INPUT: This log shows input events for any input that is programmed to **LOG INPUT** in the "Input Mode" selection.



ARCHIVE shows older logs by year, then by month.

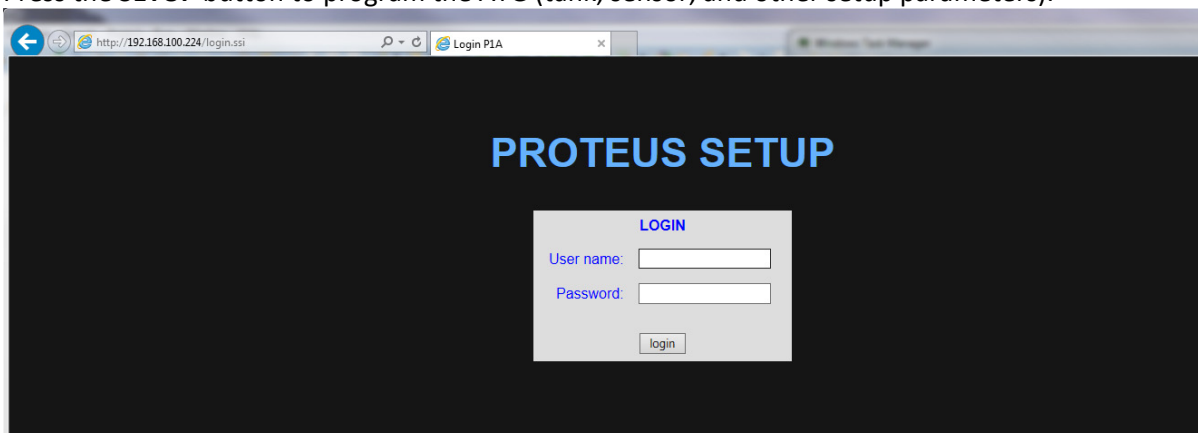




F. Press the **SETUP** button to program the Proteus ATG.

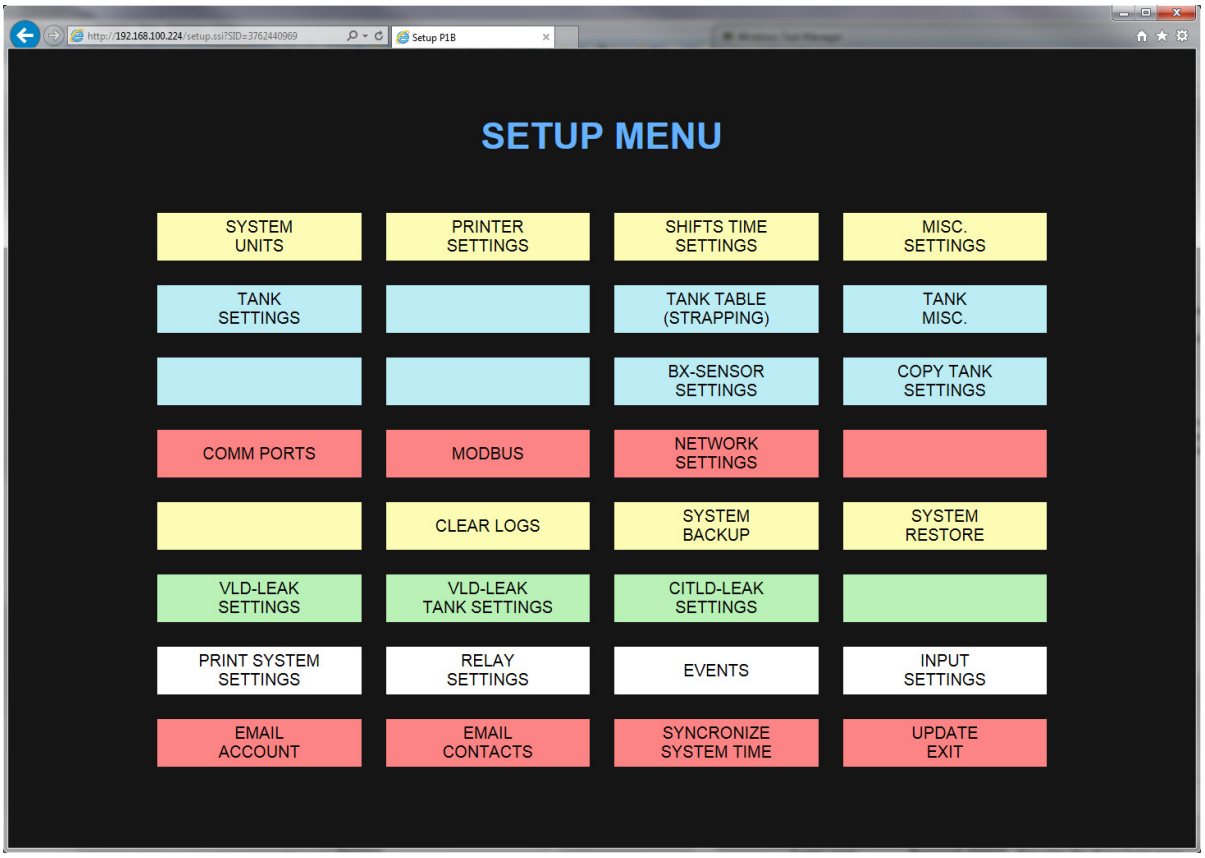
2. System Setup Menu and Features Settings

Press the **SETUP** button to program the ATG (tank, sensor, and other setup parameters).

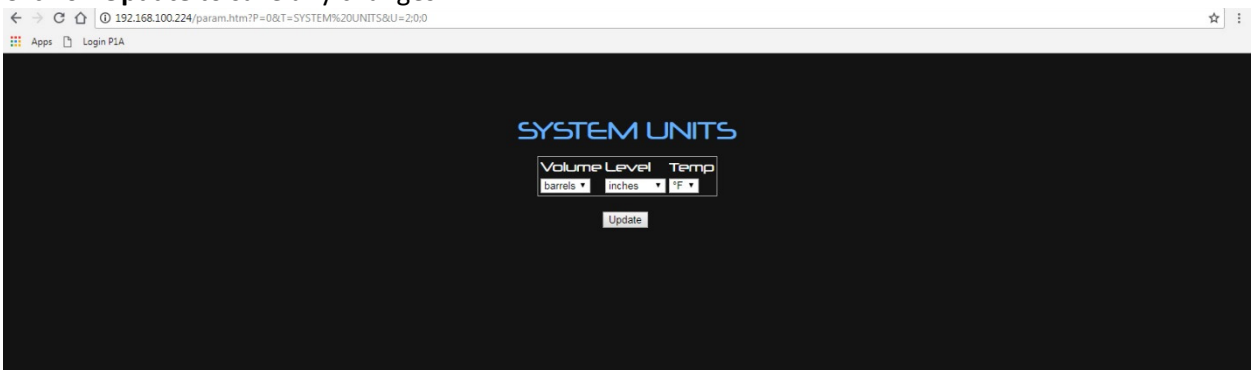


LOGIN

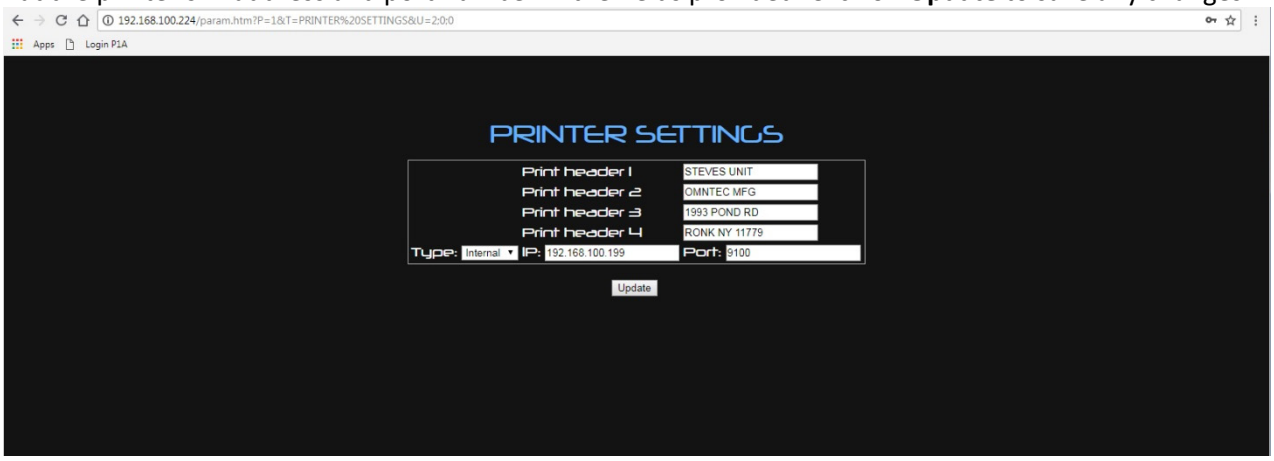
a) Type in **admin** for the user name.
b) Type in the ATG's password (the same password used to enter setup on the Proteus ATG).
c) Press the login button to access the corresponding system setup options.



Press the **SYSTEM UNITS** button. This displays the system's site units of measurements (US or metric). The current unit settings are displayed. Press the unit you would like to change for the list of options. Click on **Update** to save any changes.



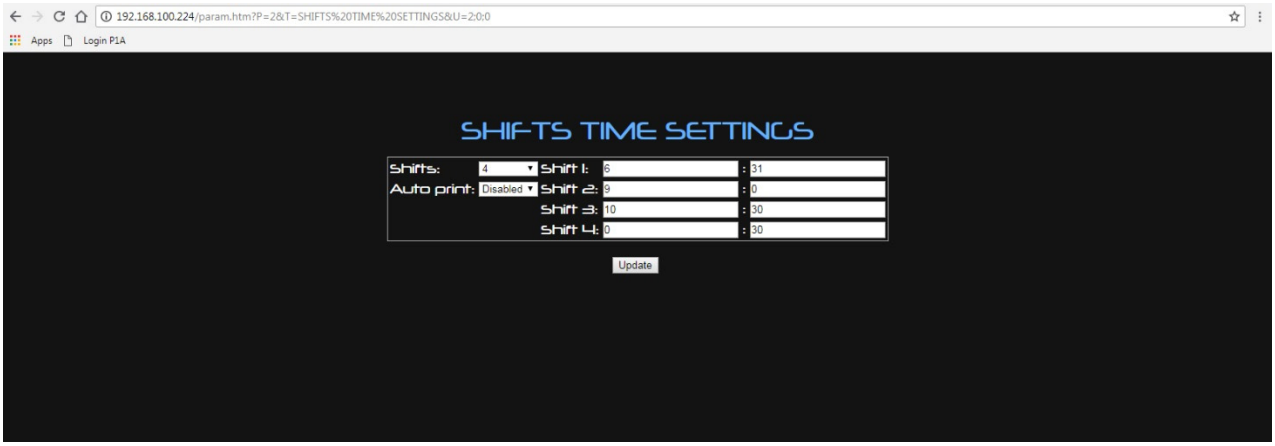
Press the **PRINTER SETTINGS** button. This displays the print header fields for print outs.
Print Line Headers: Information printed on the system status report header.
The headers are used to program site specific information that will print on the header of the system status report. Examples of the information to be entered here would be site name, site address, site phone number, and manager's name.
Printer Settings: Selects on-board printer or network printer. Selecting **internal printer** will use the Proteus printer; selecting **TCP/IP printer** will use printer linked to the same network as the Proteus ATG. Put the printer's IP address and port number in the fields provided. Click on **Update** to save any changes.



Press the **SHIFTS TIME SETTINGS** button. This displays the shifts settings for generating daily shift reports. This includes:

a) **Number of Shifts:** Number of shift reports to be generated daily.
b) **Auto Print:** Will enable or disable an automatic printout at each shift end time.
c) **Shift Open Time:** The time that starts the first shift.
d) **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 will also be the shift open time.

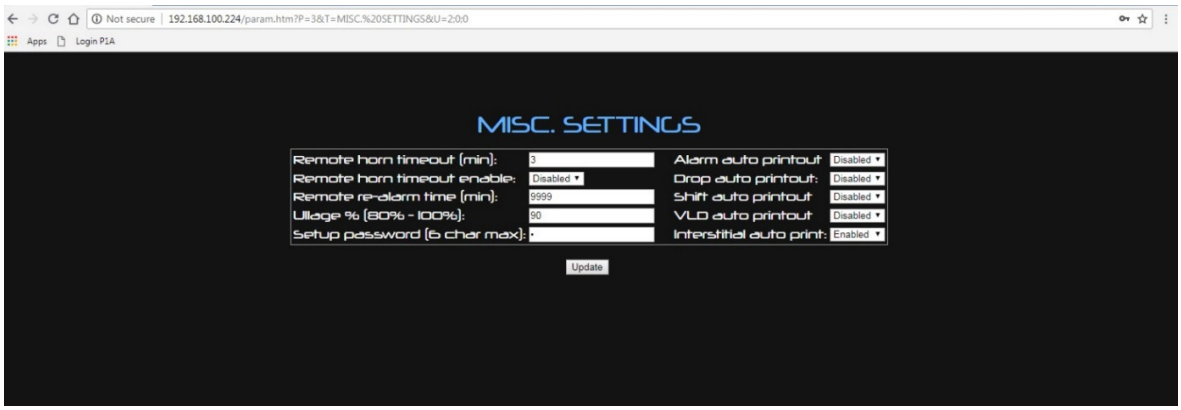
Click on **Update** to save any changes.



Press the **MISC. SETTINGS** button. This displays miscellaneous settings for remote horns and alarm, as well as auto print options for other settings. SETUP MENU password can be changed here as well.

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 Alarm ACK Timeout**: Amount of time before re-sounding the horn after it is silenced **(Remote horn settings for Proteus K & X only)**.
d) **Ullage %:** The percent used to calculate ullage on printouts.
e) **Setup Password:** To change the password press the box and enter new password. When finished press the save button.
f) **Alarm Auto Printout:** Used to enable or disable an automatic printout of Alarm report.
g) **Drop Auto Printout:** Used to enable or disable the automatic printout of Drop report.
h) **Shift Auto Printout:** Used to enable or disable the automatic printout of Shift report.
i) **VLD Auto-print:** Used to enable or disable the automatic printout of VLD report.
j) **Interstitial Auto Print:** Used to enable or disable the automatic printout of an interstitial sensor report **(Printing for Proteus K & X only)**.

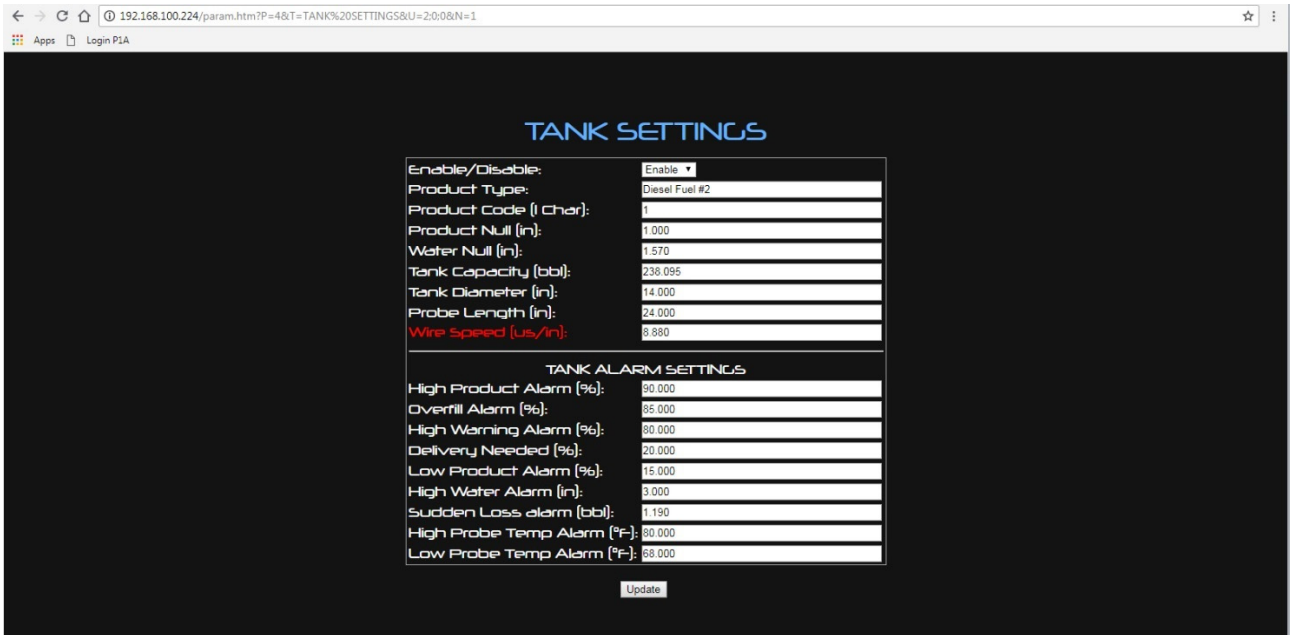
Click on **Update** to save any changes.



Press the **TANK SETTINGS** button. Click on a specific tank listed in your system. Here you will input your tank parameters and tank settings as well as enabling/disabling each tank; various parameters that are needed to obtain proper and accurate functionality.

a) **Product Type:** Product type label (up to 17 characters).
b) **Product Null:** Amount subtracted from gauging probe product level measurement to match actual product level measurement (Enter product height from stick reading).
c) **Water Null:** Amount subtracted from gauging probe water level measurement to match actual water level measurement (Enter water height from stick reading).
d) **Enable/Disable:** Enable or disable the corresponding tank.
e) **Tank Capacity:** Total volume of tank (obtained from tank chart).
f) **Tank Diameter:** Height of tank (highest point on tank chart).
g) **Probe Length:** Overall probe length (last 3 digits from CAT # on the head of the probe).
h) **Wire Speed:** Factory defined wire speed (obtained from probe label).
i) **High Product:** Percentage of volume that will trigger a high/high level alarm (max 95%).
j) **Overfill:** Percentage of volume that will trigger an overfill alarm, set for the same percentage as High Product. Triggers during delivery in progress (101 disabled).
k) **High Warning:** Percentage of volume that will trigger a high warning level.
l) **Low Product:** Percentage of volume that will trigger a low/low level alarm.
m) **Delivery Needed:** Percentage of volume that will trigger a delivery needed alarm (0 disabled).
n) **High Water:** The water level that will trigger a high-water alarm.
o) **Sudden Loss:** Rate of increase/decrease needed during a VLD test to trigger a sudden loss alarm.
p) **Probe Temp High:** Temperature needed to activate probe high temp alarm.
q) **Probe Temp Low:** Temperature needed to activate probe low temp alarm.

Click on **Update** to save any changes.



Press the **TANK TABLE (STRAPPING)** button. Click on a specific tank listed in your system. Here you will input your tank chart increments and settings used to create the chart for each tank.

a) **Tank Number:** Selects a tank for setup.
b) **Chart Increment:** Used to create how many points will be entered into the tank chart. Divides the tank diameter equally by this number. Enter the correct volume for the levels given.

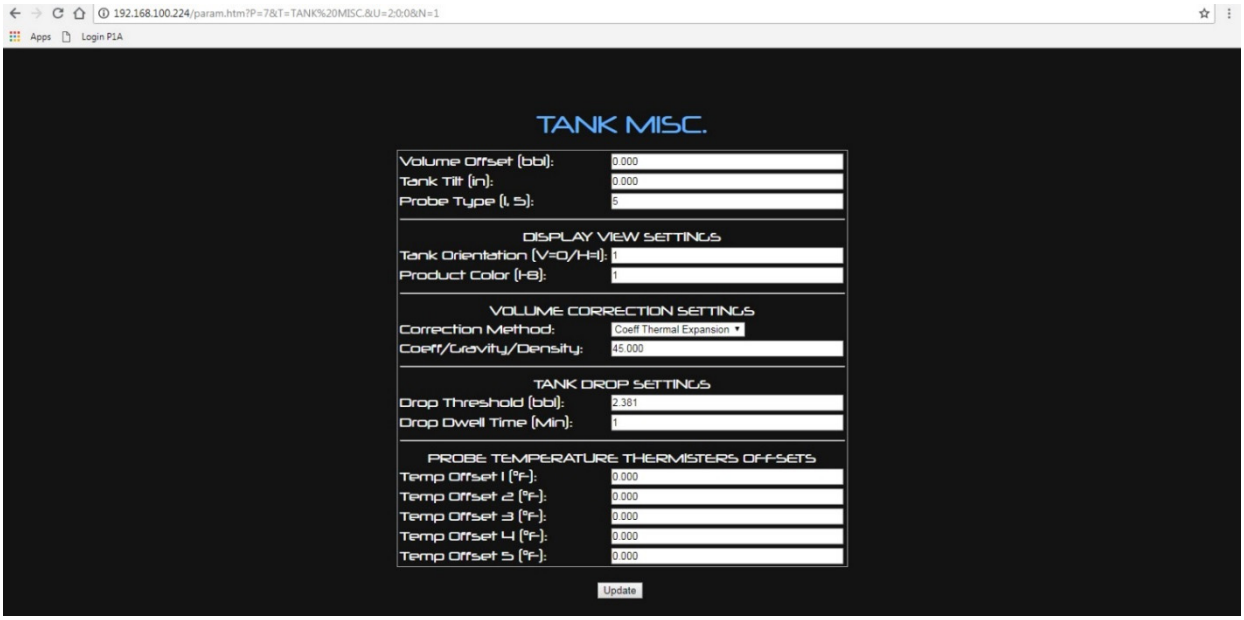
Click on **Update** to save any changes.

Press the **TANK MISC.** button. Click on a specific tank listed in your system to input information needed to provide more accurate inventory and delivery data.

a) **Volume Correction:** Thermal coefficient of expansion x 10-5 (obtained from thermal coefficient table; enter only most significant digits, eg., Gasoline = 70, Diesel = 45).
b) **Probe Type:** Shows how many temperature thermistors are in the probe. (Obtained from CAT# on the head of the probe). **If using a "redhead" probe, enter 4.**
c) **Volume Offset:** Amount added to volume reading for further calibration.
d) **Drop Threshold:** The volume amount needed to initiate a delivery in progress.
e) **Drop Dwell Time:** Time delayed after a drop is completed before generating the drop report.
f) **Product Code:** User number that identifies the product.
g) **Temperature Thermistors Offset:** Used to offset temperatures for gauging probe.
h) **Tank Tilt:** Number obtained by the tank tilt formula to further calibrate probe levels.

P = The center of fill riser opening to the center of probe riser opening.
M = The distance of the center of probe riser opening to the center of the tank.
D = The difference in gross liquid level between fill opening and riser opening (fill – probe).
Note: Not required if MTG probe is located in the center of the tank or if the tank is level.

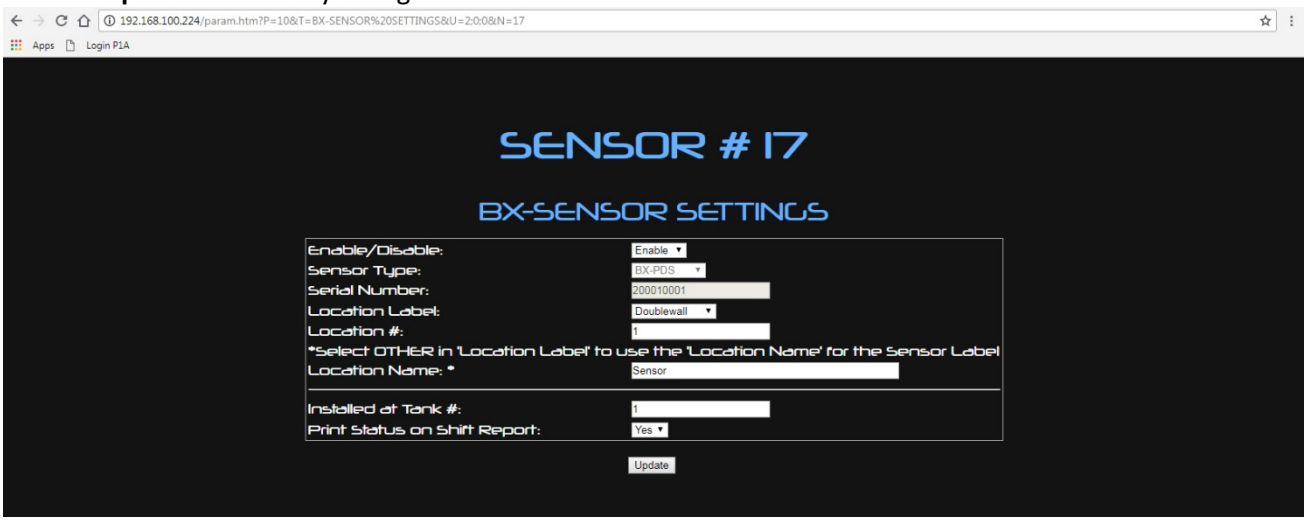
Click on **Update** to save any changes.



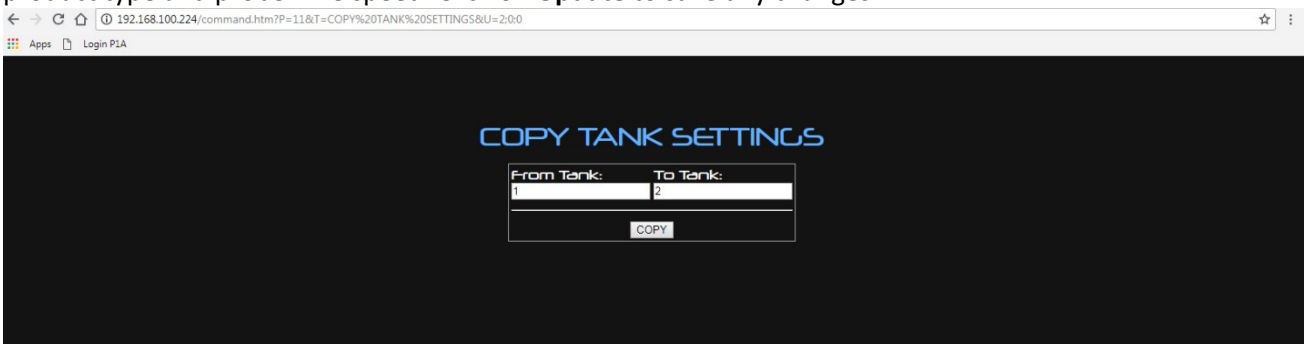
Press the **BX-SENSOR SETTINGS** button. Click on a specific BX-Sensor listed in your system. This page is used to adjust parameters used to define the sensor type, location, and labeling.

a) **Sensor Number:** Sensor number assigned by system, selects a sensor for setup.
b) **Sensor Type:** Sensor Type assigned by 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 # then you may have 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 on 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 shift report.

Click on **Update** to save any changes.



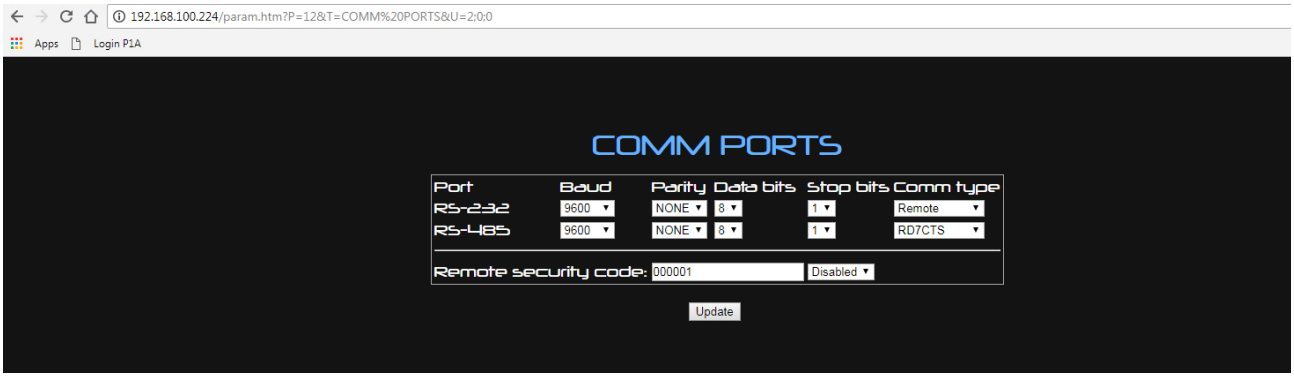
Press the **COPY TANK SETTINGS** button. This page is used to copy the full set of tank parameters from one tank to another tank. You must still however program unique parameters for each tank such as product type and probe wire speed. Click on **Update** to save any changes.



Press the **COMM PORTS** button. Here you can input program settings for on-board RS-232 or RS-485 ports.

a) **Comm Port:** Selects between RS-232 and RS-485 port settings (**RS-485 for Proteus K & X only)**.
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 1 or 2.
f) **Comm Type:** 4 Selections available: Remote (OMNTEC PC, Mini-Me with RS-232, or industry standard protocol), Modbus, RD-625, or RD7CTS (Mini-Me with RS-485).
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.

Click on **Update** to save any changes.



Press the **MODBUS** button. Here you can enable and setup MODBUS with an OMNTEC-purchased enable code.

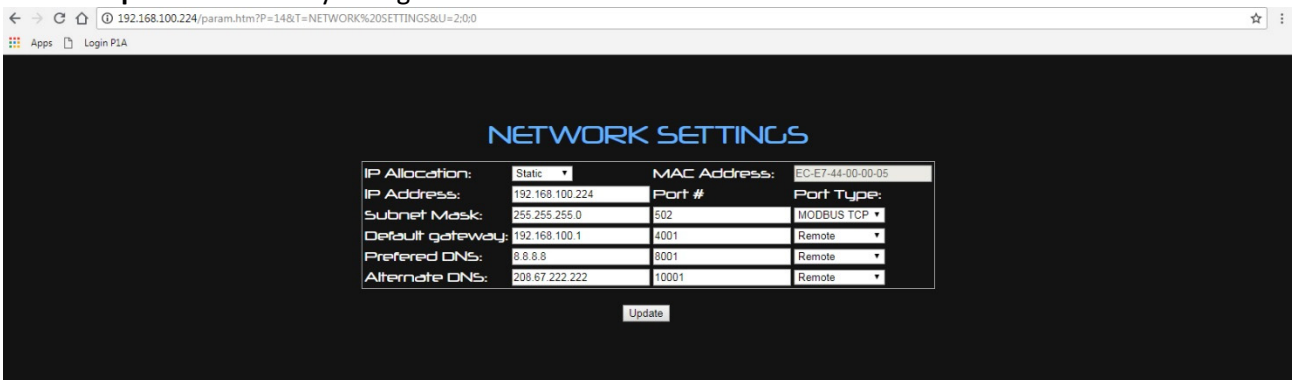
a) **Modbus Address:** Unique Modbus Slave Address.
b) **Register Offset:** Holding register offset, typically set to 0 or 40001.
c) **Enable Code:** Need an enable code from OMNTEC to run this optional feature.
d) **Reverse Mode:** When enabled, reverses high and low registers for certain PLCs or computer software that accepts a different Modbus format.

Click on **Update** to save any changes.

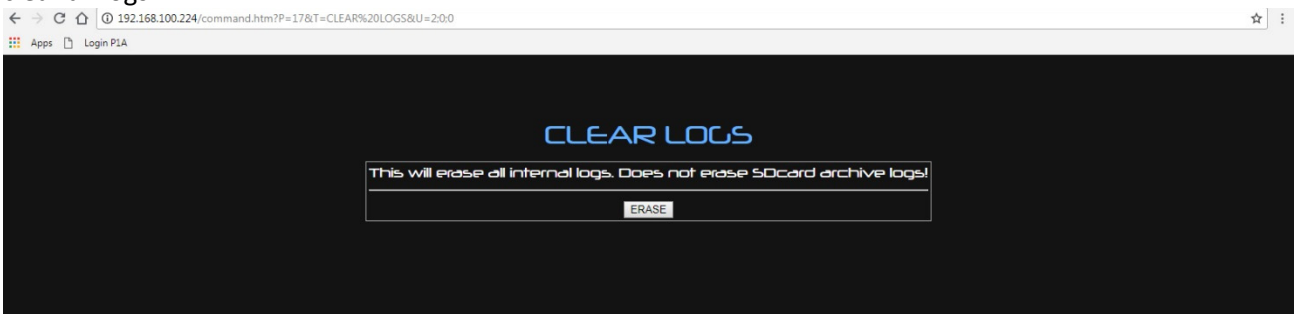
Press the **NETWORK SETTINGS** button. Used to setup either a static or dynamic IP address by toggling "obtaining address automatically."

a) **IP Address:** IP address assigned to the Proteus.
b) **Subnet Mask:** Subnet Mask to match existing network.
c) **Default Gateway:** Default Gateway to match 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, can also be set for Modbus RTU. Remote mode allows for compatible industry standard commands. These can be changed for user preference.

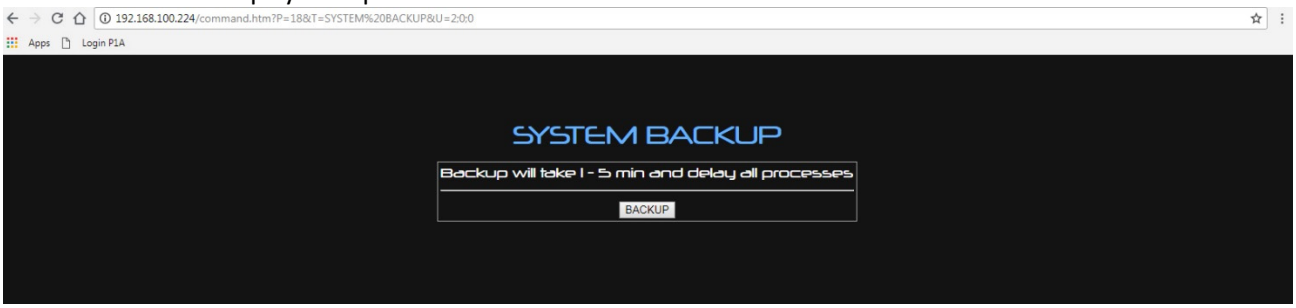
Click on **Update** to save any changes.



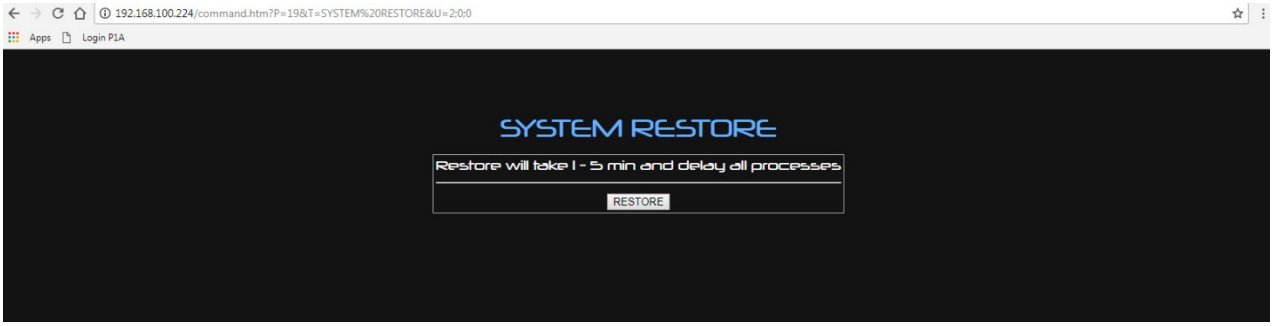
Press the **CLEAR LOGS** button. From this page it is possible to clear the logs from the unit memory. Useful after site commission to clear out test data (does not erase SD card log data). Click on **ERASE** to clear all logs.



Press the **SYSTEM BACKUP** button. Backs up the System Parameter Settings to the internal SD card. Click on **BACKUP** to backup system parameter data.



Press the **SYSTEM RESTORE** button. Restores from the System Parameter Settings internal SD card. Click on **RESTORE** to load the latest system parameter data. **NOTE: THIS WILL OVER-WRITE ALL CURRENT SYSTEM SETTINGS.**

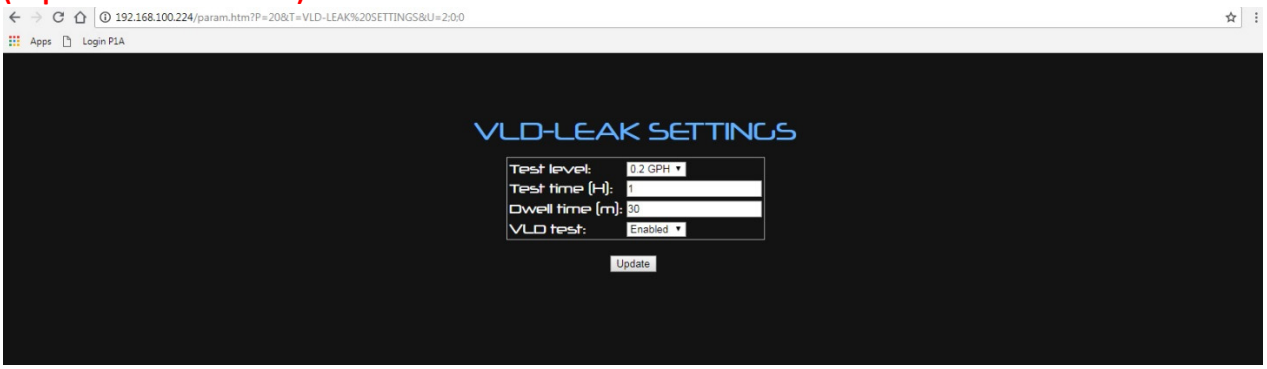


Press the **VLD-LEAK SETTINGS** button. Tank **V**olumetric **L**eak **D**etection: This feature is used for setting a specific time interval for running the VLD test. It can be run automatically every day, once a week, or once a month at a specific time of the day.

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.
d) **Enable/Disable:** Enable the VLD test feature. Must also enable VLD test for each tank.

Click on **Update** to save any changes.

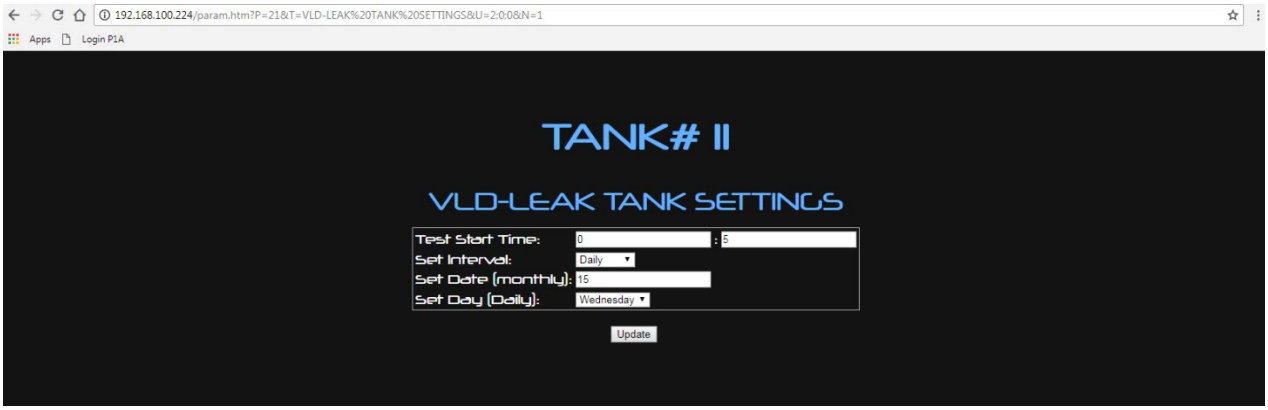
IMPORTANT!
Remember that the VLD test time is 4 hours long plus the dwell time. During this time the product level must remain constant. If you have a delivery before a VLD test, you must wait at least 4-8 hours (dependent on tank size) before the start of the test.



Press the **VLD-LEAK TANK SETTINGS** button. This page is used to control the desired testing frequency for each tank.

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:** Must choose Monthly, Weekly or Daily to be able to run VLD test for that particular tank. Otherwise, leave on Disabled option.
d) **Set Date:** What date in the month should the test run.
e) **Set Day:** What day of the week should the test run.

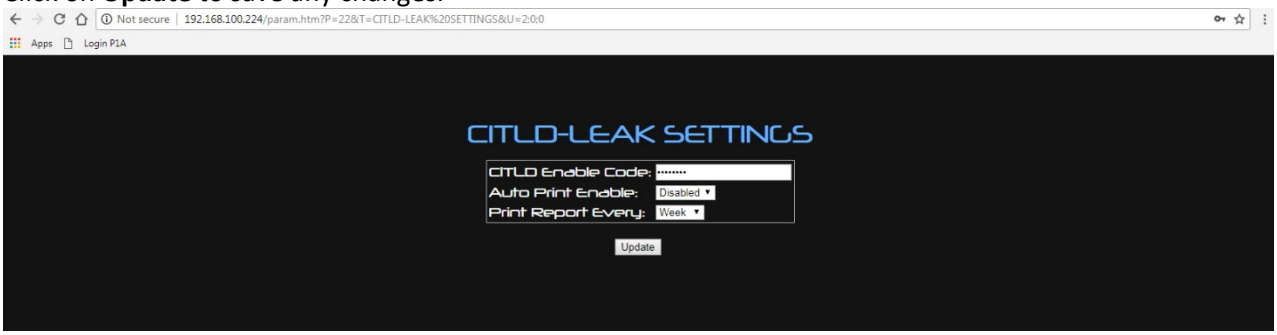
Click on **Update** to save any changes.



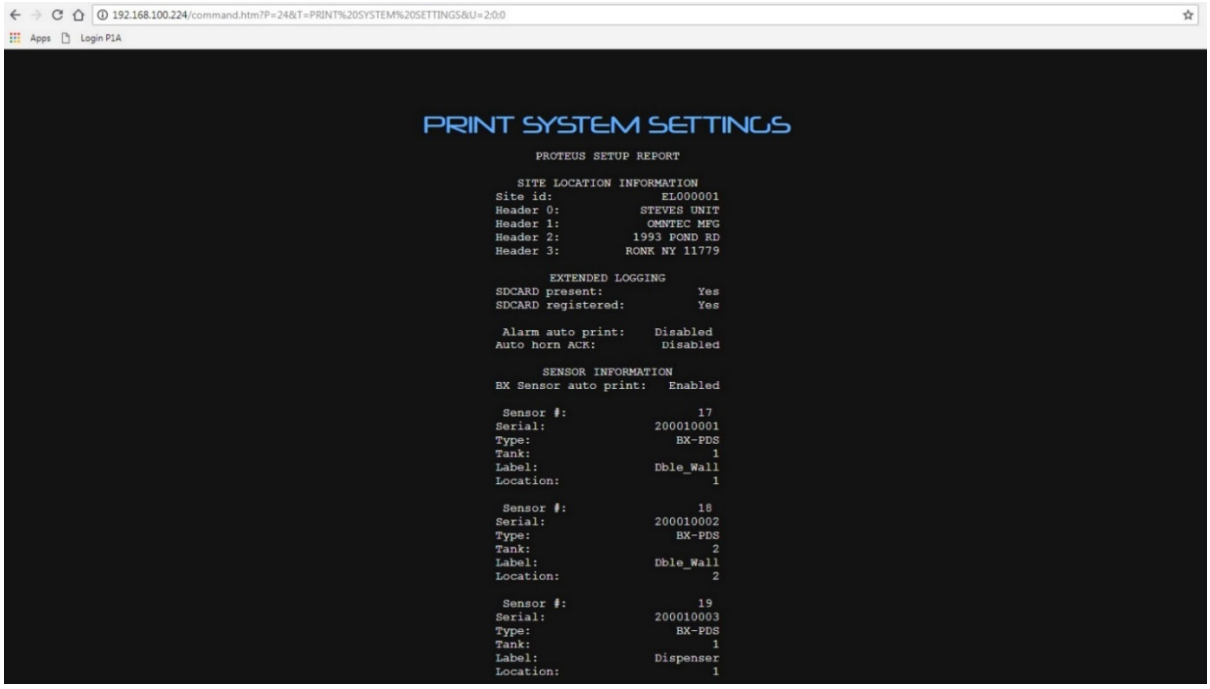
Press the **CITLD-LEAK SETTINGS** button. **C**ontinuous **I**n-**T**ank **L**eak **D**etection: Allows a leak test to be run in a tank that is in continuous use. Takes 20-minute time intervals to determine if the tank has a leak and will generate a monthly report.

a) **CITLD Enable Code**: Need an enable code from OMNTEC to run this optional feature.
b) **Auto Print Enable**: Enables the unit to print out the CITLD results automatically (at the end of the month).
c) **Print Report Monthly/Weekly**: Allows the user to change between printing a monthly or weekly "current status" report for CITLD. This report informs if you have achieved a Pass for each tank to that point in time.

Click on **Update** to save any changes.



Press the **PRINT SYSTEM SETTINGS** button. This does a print-out of your system settings.

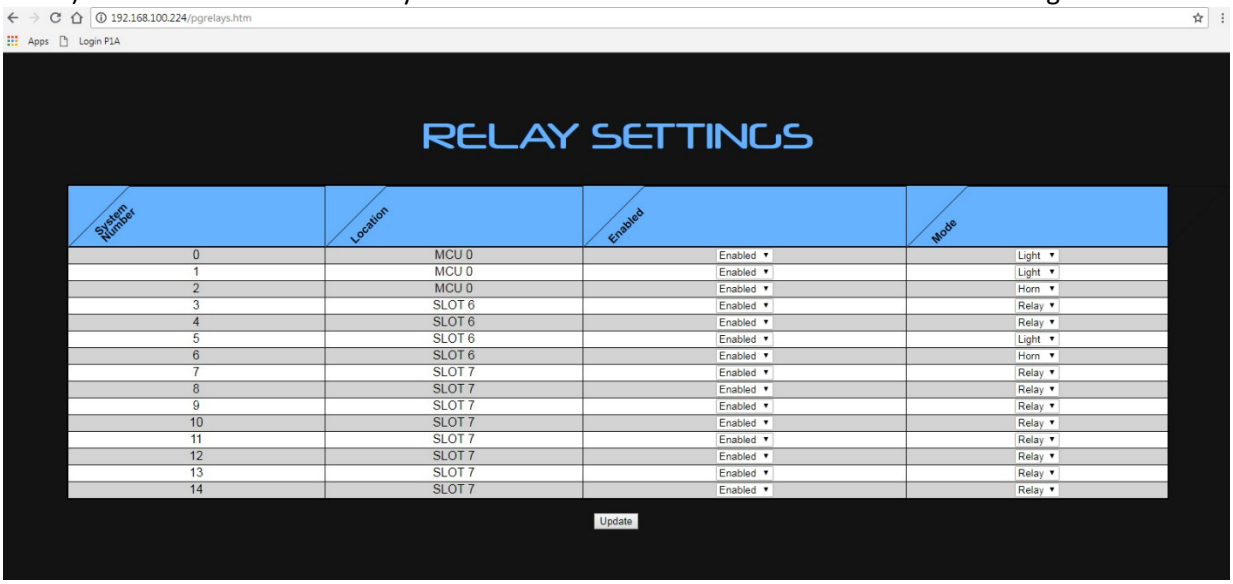


Press the **RELAY SETTINGS** button.

Program Relay Modes:

Relay Modes: Each relay can be programmed to operate in one of three modes: Relay mode, light mode, and horn mode:

a) Relay Mode: Standard relay
b) Light Mode: Use the relay to turn on a light. Blinks on test mode.
c) Horn Mode: Use the relay to turn on a horn. Sounds on test. Can be acknowledged.



Press the **EVENTS** button.

Program Relay Events: Used to select which events (ex. High Level) will trigger the relays. There is a total of 30 events that can be programmed for the on-board MCU relays. To program an event, press on the event you would like to program and navigate to the event programming page.

The XB-RB8 and the XB-4IO boards can each have up to 100 programmed events. They are programmed the same way as the MCU but the XB-RB8 has a total of 8 relays instead of 3; the XB-4IO has 4 relays. However, horn acknowledge must be wired to the MCU if using a RAS series remote since the relay board does not have any inputs. Click on **Update** to save any changes.

EVENT Num	Location	EVENT Info	R1	R2	R3	R4 E1	R5 E2	R6 E3	R7 E4	R8 E5
E0	MCU 0	01 T#01 HIGH LIQUID ALARM			x					
E1	MCU 0	02 T#04 LOW PRODUCT POINT		x						
E2	MCU 0	03 T#04 HIGH PRODUCT POINT	x							
E3	MCU 0	04 T#01 HIGH PRODUCT ALARM	x							
E4	MCU 0									
E5	MCU 0									
E6	MCU 0									
E7	MCU 0									
E8	MCU 0									
E9	MCU 0									
E10	MCU 0									
E11	MCU 0									
E12	MCU 0									
E13	MCU 0									
E14	MCU 0									
E15	MCU 0									
E16	MCU 0									
E17	MCU 0									
E18	MCU 0									
E19	MCU 0									
E20	MCU 0									
E21	MCU 0									
E22	MCU 0									
E23	MCU 0									
E24	MCU 0									
E25	MCU 0									
E26	MCU 0									
E27	MCU 0									
E28	MCU 0									
E29	MCU 0									
E30	SLOT 6	01 Float Probe	x							

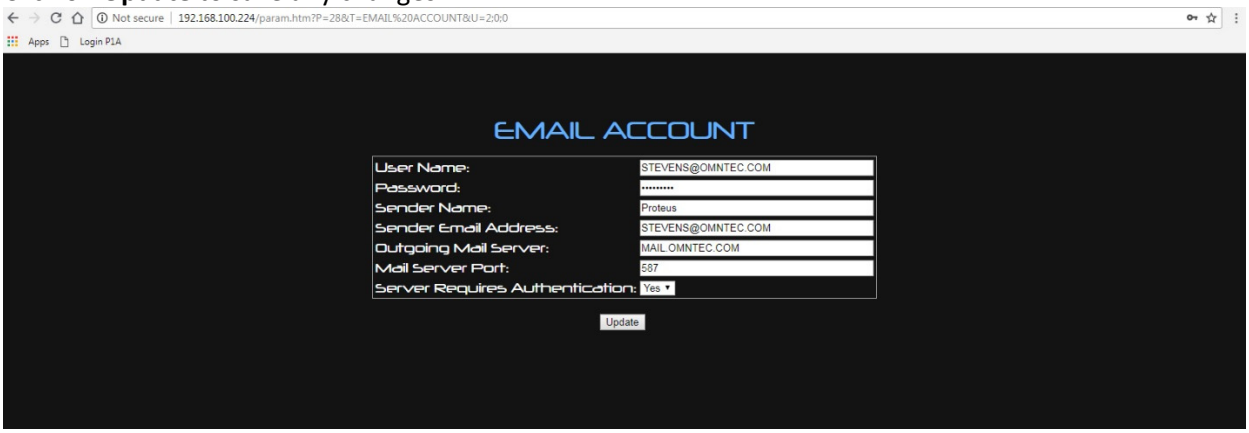
INPUT SETTINGS button.

Does not function on MCU versions MCU-P2AK and earlier. More details are forthcoming.

Press the **EMAIL ACCOUNT** button. Setup page for enrolling in automatic email updates.

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" 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 Network Administrator).

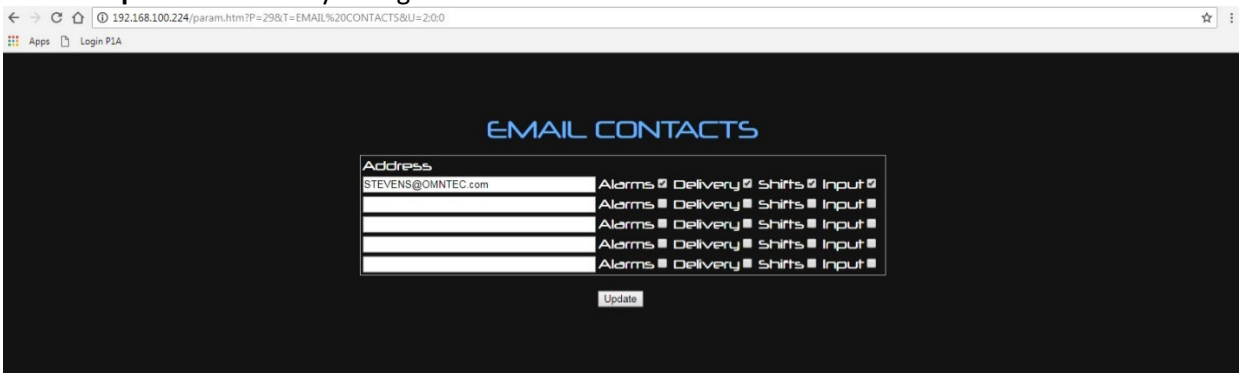
Click on **Update** to save any changes.



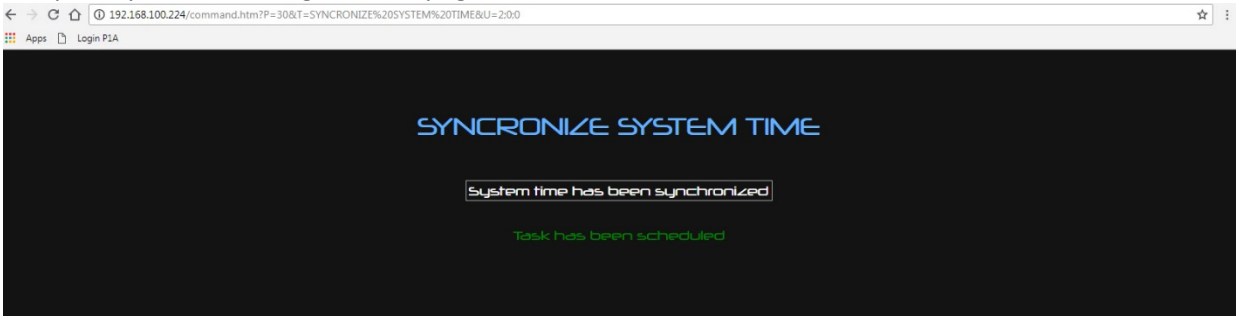
Press the **EMAIL CONTACTS** button. Allows user to send email and text message reports to program addresses or mobile numbers, up to a maximum of five entries.

a) **Address:** This field shows the address or number of the recipient.
b) **Alarms:** If enabled, a report will be sent to the assigned address or number every time there is an alarm. Other option is to choose individual "alarm events".
c) **Delivery (Drop) Reports:** If enabled, Delivery/drop report will be sent to assigned email or number.
d) **Shifts Report:** If enabled, current status report will be sent to the assigned address after every shift.
e) **Input Events:** If enabled, a report will be sent for each input that because active that has "email on input" checked.

Click on **Update** to save any changes.



Press the **SYNCHRONIZE** button. This will synchronize the time on the Proteus to the time on the computer you are viewing the web page from.



To access the web page, the Proteus ATG must be connected to a network and programmed for the network using a static IP address or DNS address.

3. Navigating to Setup (Proteus ATG GUI)

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

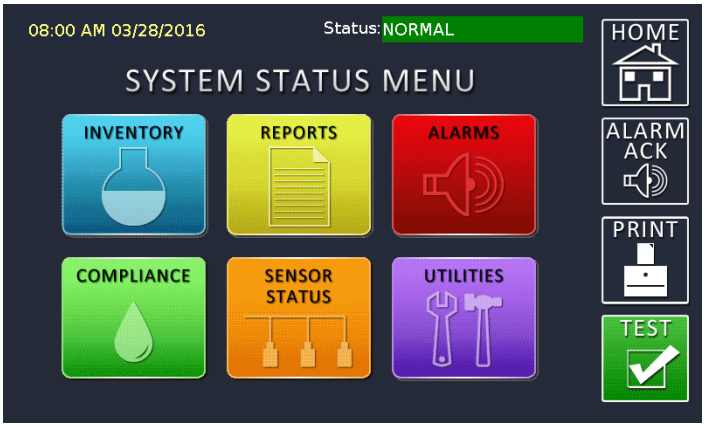


Figure 1.1

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

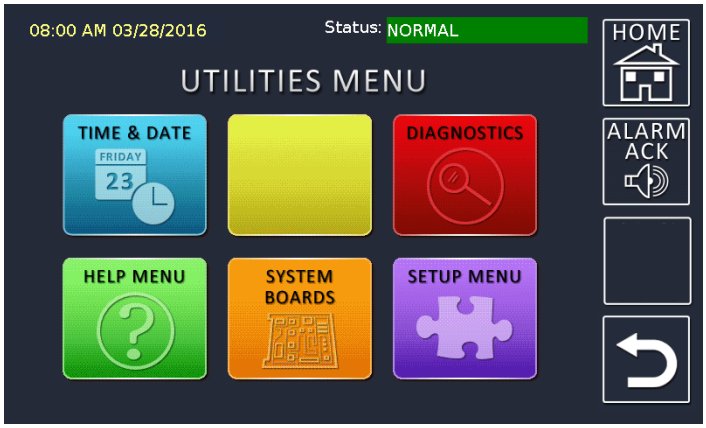


Figure 1.2

Enter Password: Enter the manufacturer's default password "**000000**" 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.

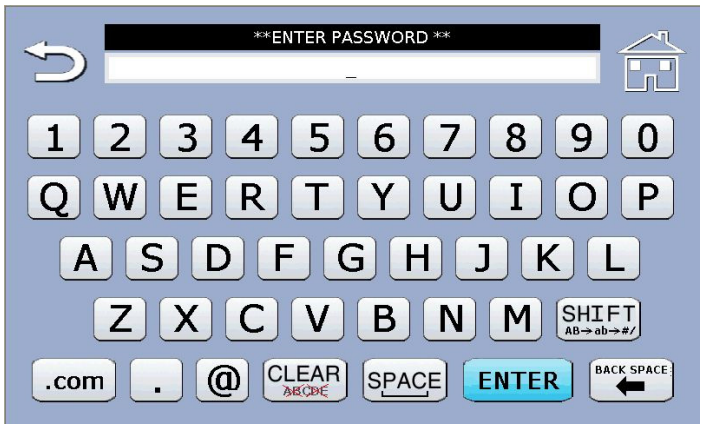


Figure 1.3

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

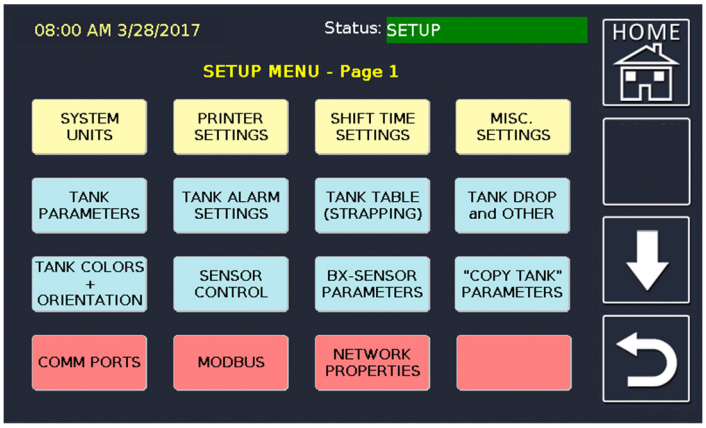


Figure 1.4

4. Network Properties (Proteus ATG GUI; Proteus K & X)

Network Protocol Properties: Used to setup either a static or dynamic IP address by toggling "obtaining address automatically." (See Figure 16.1)

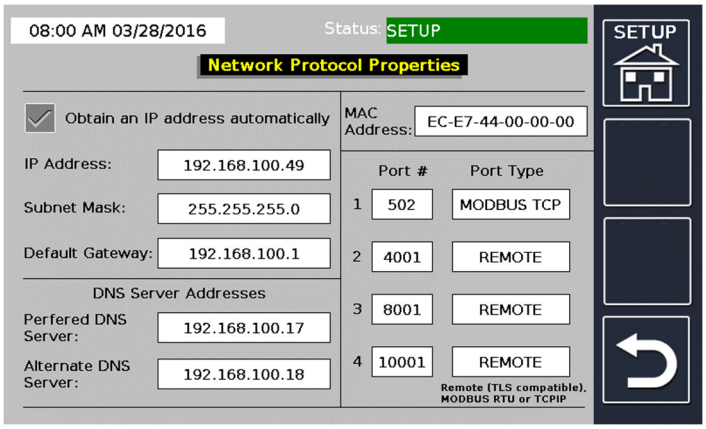


Figure 16.1

a) **IP Address:** IP address assigned to the Proteus.
b) **Subnet Mask:** Subnet Mask to match existing network.
c) **Default Gateway:** Default Gateway to match 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.