



OMNTEC
Advanced Tank Monitoring & Leak Detection

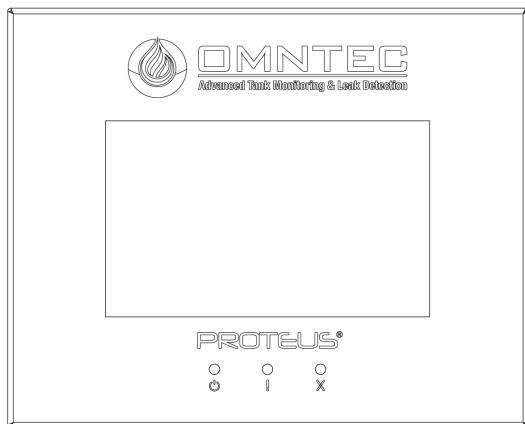


1. Open the camera app
2. Focus the camera on the QR code by gently tapping the code
3. Follow the instructions on the screen to view PDF file

M PROTEUS®
ini-ME™

MMRD7 | MMRD7-SS Series

SYSTEM PROGRAMMING MANUAL



PROTEUS® Series

UNIVERSAL REMOTE DISPLAY

Revision 1.5

Document No. DOC00011

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

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1. POWERING ON

For installation instructions, refer to document **DI00008** (Mini-Me™ installation manual), and **DI00007** (outdoor Mini-Me installation manual). Please refer to the proper document based on which model Mini-Me you have.

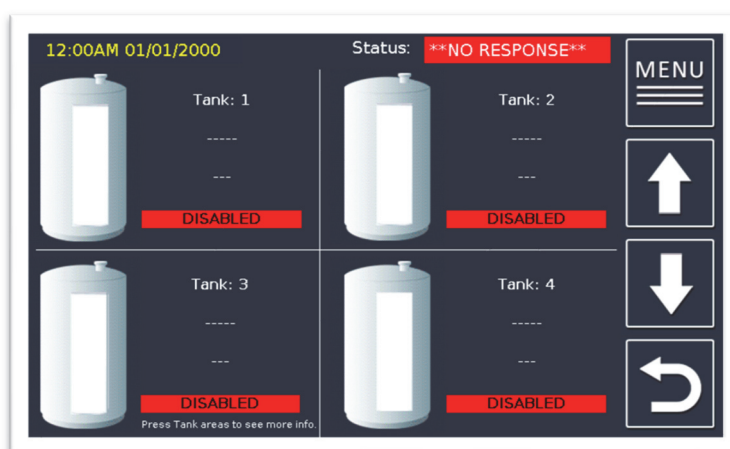


Figure 1.0

An appropriate communications connection is required to connect an MMRD7 (Mini-Me) to a PROTEUS® controller, or any other industry-standard ATG. PROTEUS communications can be either RS-232, RS-485, or Ethernet connections.

It is necessary to check the communications settings (e.g.: Baud Rate) of both devices to establish proper communications. The MMRD7 communication mode must be set to either **TRANSMITTER** or **RECEIVER** mode based on the function of the controller. See Section 8: TRANSMISSION MODE (UNIT COMMUNICATIONS MODE) on page 10 for more details.

When the MMRD7 is powered on and **not** connected to an ATG, the display will show incorrect time and date, a ****NO RESPONSE**** status, and disabled tanks. (See Figure 1.0)

After connecting and establishing communication to an ATG, the MMRD7 will update its information and mirror the ATG. (See Figure 1.1)

Note: You can press each individual tank from a multi-tank view to access more details of that specific and enabled tank.

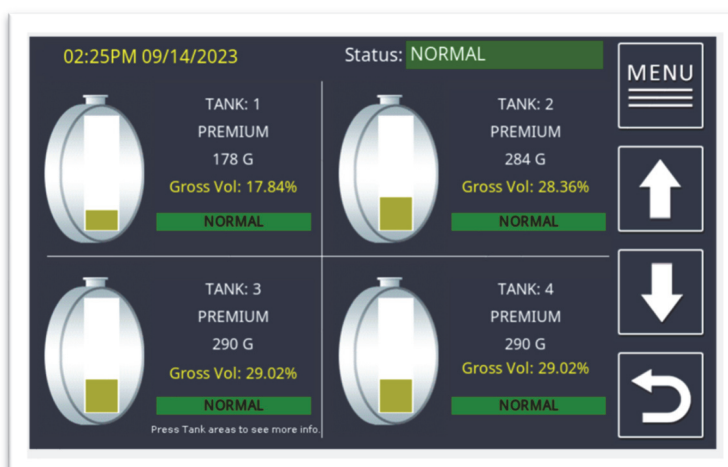


Figure 1.1

2. NAVIGATING TO SETUP

From the **SYSTEM STATUS MENU**, press the **HELP MENU** icon.
(See Figure 2.0)

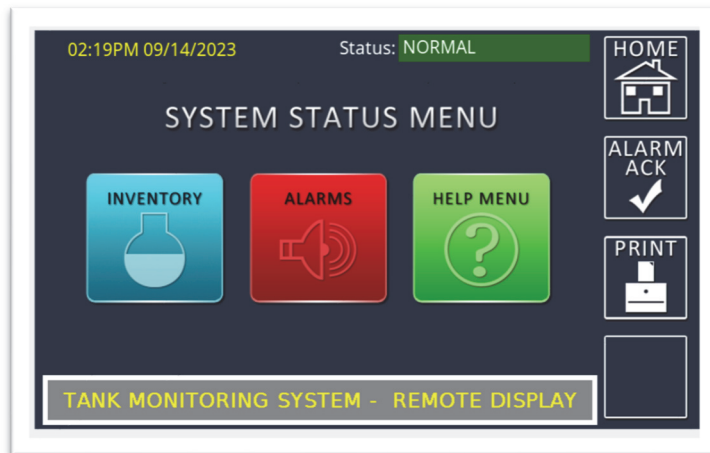


Figure 2.0

On the **HELP MENU** screen, press **SETUP**.
(See Figure 2.1)

You are prompted to enter a password. Depending on the date of the manufacture of your unit, the factory-default password is either **000000** (six zeros), or the **SYSID#** in the bottom-right (red rectangle) of the **HELP MENU**.

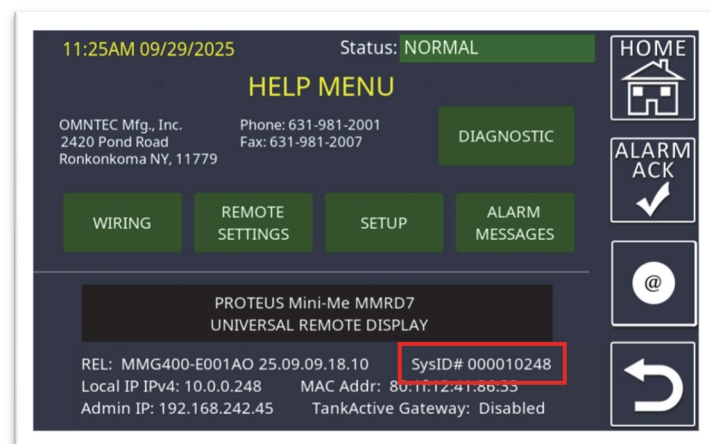


Figure 2.1

This **SYSID#** is the same as the serial number you will find on the label found behind the rear display shield inside the unit.

Note: OMNTEC highly recommends you change the factory-default password to a more-secure password.

2. NAVIGATING TO SETUP (cont'd)

Displayed is the **SYSTEM SETUP** menu with its different settings and functionality buttons.
(See Figure 2.2)

 Please note the **INFORMATION** icon ("i" in a circle) in the upper right. Pressing on this icon will bring you to **SYSTEM SETUP DESCRIPTIONS** (detailed in Section 3).

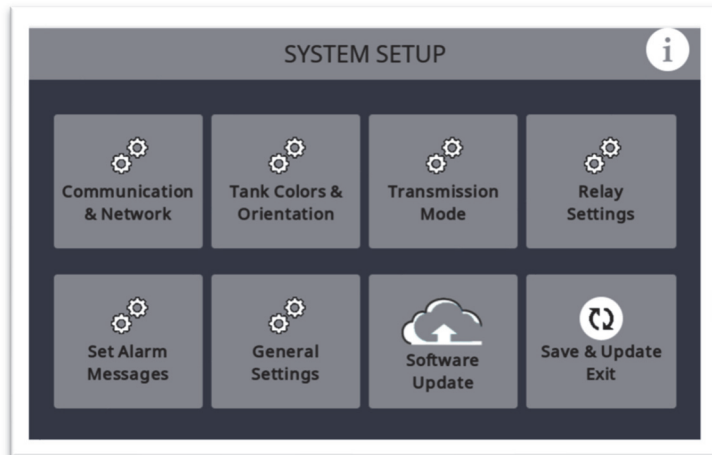


Figure 2.2

3. SYSTEM SETUP DESCRIPTIONS

 Pressing the **INFORMATION** icon button, ("i" in a circle) in the upper right of the **SYSTEM SETUP** page (Figure 2.2), will display and detail what each parameter will change within the **SYSTEM SETUP**. This serves as an in-console help feature. Use this info page as a guide to assist in programming these parameters.
(See Figure 3.0)

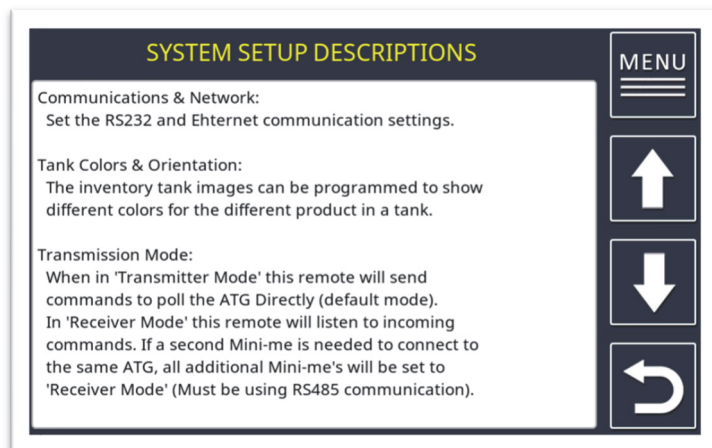


Figure 3.0

Pressing the up and down arrows will scroll through the list of **SYSTEM SETUP DESCRIPTIONS**.

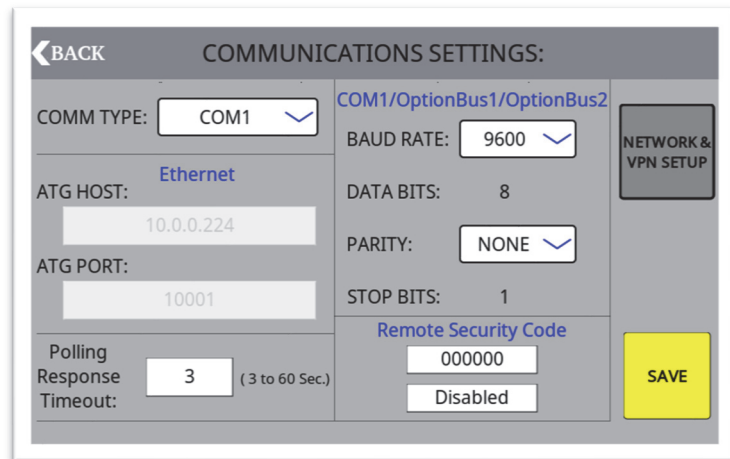
4. COMMUNICATION SETTINGS

To change the BAUD RATE and other communication settings, select **COMMUNICATION & NETWORK** from the **SYSTEM SETUP** menu.

(See Figure 2.2)

Use the dropdown arrows (▼) to change COMM TYPE, BAUD RATE, and PARITY. Match these to the main ATG. Here, you can also change other communications settings.

(See Figure 4.0)



COMMUNICATIONS SETTINGS:	
COMM TYPE: COM1 ▼	COM1/OptionBus1/OptionBus2
ATG HOST: Ethernet 10.0.0.224	BAUD RATE: 9600 ▼
ATG PORT: 10001	DATA BITS: 8
	PARITY: NONE ▼
	STOP BITS: 1
Polling Response Timeout: 3 (3 to 60 Sec.)	Remote Security Code 000000 Disabled
	SAVE

Figure 4.0

Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

Press the **NETWORK & VPN SETUP** button to advance to the **NETWORK SETTINGS** page.

5. NETWORK SETTINGS

This screen is used to set up either static or dynamic (DHCP) IP and other relevant networking properties. (See Figure 5.0)

Figure 5.0

- a) **Obtain An IP Address Automatically (DHCP):** Pressing the square box to the left of this adds or removes an “X” checkmark, which toggles between static or dynamic (DHCP) IP address functionality.
- b) **IP Address:** Static IP address assigned to the PROTEUS controller.
- c) **Subnet Mask:** Subnet mask to match the existing network.
- d) **Default Gateway:** Default gateway to match the existing network.
- e) **Primary DNS:** The Primary Domain Name Server address.
- f) **Secondary DNS:** The Secondary Domain Name Server address.
- g) **Admin IP Address:** A unique address setting that is used to access the MMRD7 via its Ethernet network interface to perform certain set-up and administrative tasks. Do not modify unless it conflicts with the local area network settings. Contact OMNTEC if it is necessary to modify the ADMIN IP ADDRESS setting.
- h) **TankActive:** If this unit is being used to provide TankActive features, the TANKACTIVE GATEWAY option must be enabled as well as the VPN.

Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

Press the **VPN SETTINGS** icon button to advance to the **VPN SETTINGS** page.

6. VIRTUAL PRIVATE NETWORK (VPN) SETTINGS

Here, you can **ENABLE** or **DISABLE** the Virtual Private Network (VPN) feature.

The PROTEUS VPN is a secure, encrypted communication channel that is intended for use with OMNTEC Cloud-based services. In some cases, it may be used for OMNTEC tech support to remotely access the controller to assist in gathering data for troubleshooting. By factory default, VPN is disabled. The **TERMS OF SERVICE (ToS)** are displayed.

(See Figure 6.0).

Choose the **ENABLE** radio button to enable the VPN service. Choosing to enable this VPN service means you understand and agree with the displayed TERMS OF SERVICE (ToS).

When prompted, click **YES** to confirm you want to enable the VPN connection.

(See Figure 6.1)

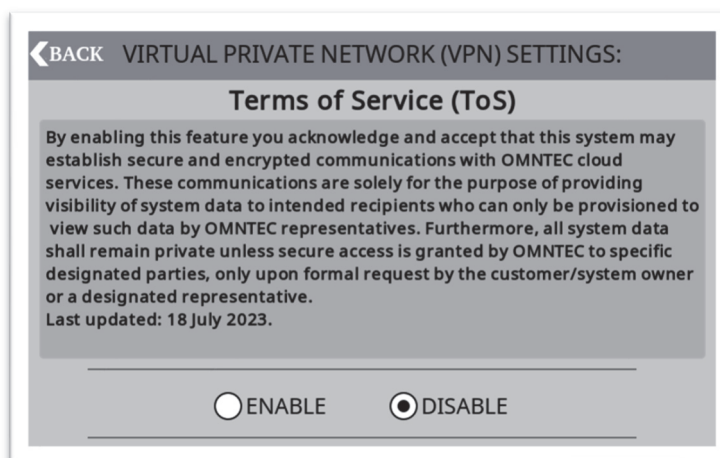


Figure 6.0

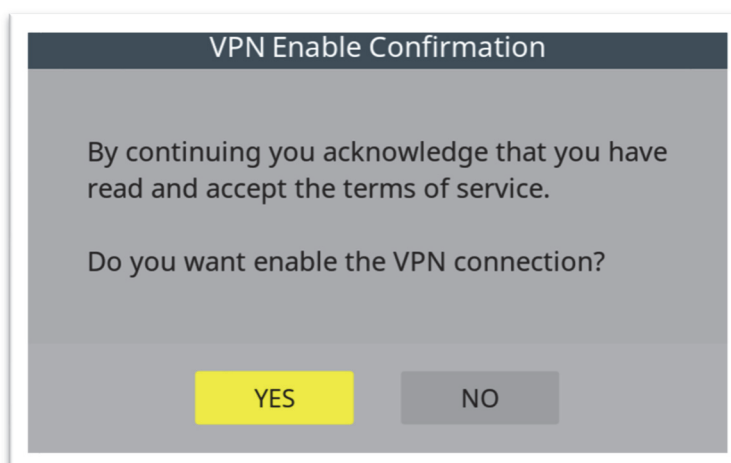


Figure 6.1

6. VIRTUAL PRIVATE NETWORK (VPN) SETTINGS (cont'd)

The VPN STATUS will confirm that VPN has been established.
(See Figure 6.2)

Choose the **DISABLE** radio button to disable the VPN. The VPN status will update to indicate that the VPN has stopped.

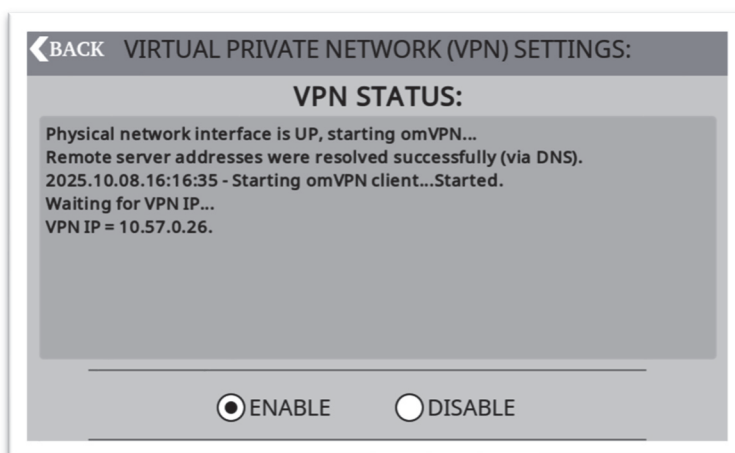


Figure 6.2

Note: Pressing the **BACK** button will return you to the **NETWORK SETTINGS** page. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

7. CHANGING TANK COLORS + ORIENTATION

From the **SYSTEM SETUP** menu, select **TANK COLORS + ORIENTATION** to choose different colors to display for each tank. You may also choose to view the tank profile as horizontal or vertical.
(See Figure 7.0)

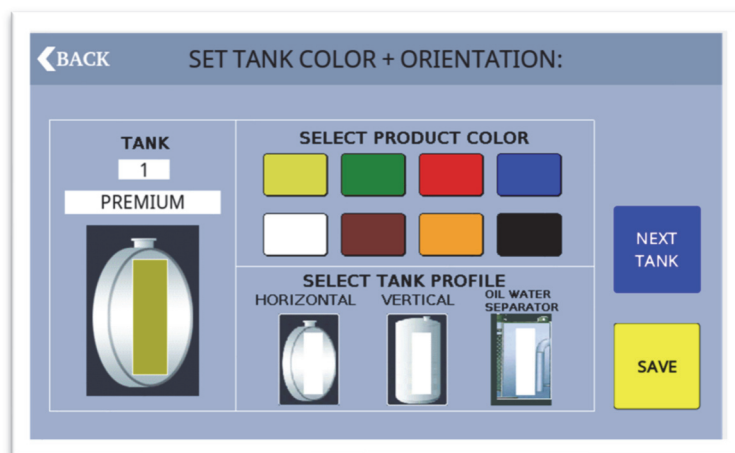


Figure 7.0

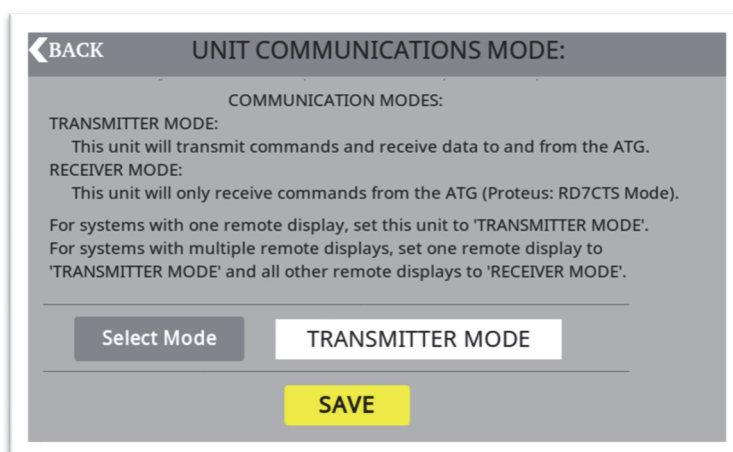
Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

8. TRANSMISSION MODE (UNIT COMMUNICATIONS MODE)

TRANSMITTER MODE allows the MMRD7 to poll. It will transmit commands and receive data to and from the ATG.

RECEIVER MODE will only receive data from the ATG controller.
(See Figure 8.0)

By default, the MMRD7 unit is in Transmitter Mode, the ATG is in Remote Mode (TLS350-compatible).



Single MMRD7 / Single ATG:

Figure 8.0

Communication Port	ATG Comm Setting *	MMRD7 Transmission Mode	ATG Manufacturers
RS-232	Remote	Transmitter	All
RS-485	Remote	Transmitter	All
RS-485	RD7CTS	Receiver	PROTEUS only
Ethernet (TCP/IP)	Remote	Transmitter	All

*ATG Comm Settings listed above refer to the PROTEUS ATG controller. Other manufacturers' controllers may differ.

Multiple MMRD7 / Single ATG:

When multiple MMRD7 units are connected via RS-485 or an RS-232-422 extender, the farthest MMRD7, from the ATG, is set for **TRANSMITTER** and each additional MMRD7, in between, is set for **RECEIVER**. If the ATG controller is a PROTEUS using RS-485 in RD7CTS Mode, all the MMRD7 remotes can be in Receiver Mode.

Note: For any changes made to this page, you must press the SAVE button. Pressing the SAVE button will return you to the SYSTEM SETUP menu.

9. RELAY SETTINGS

From the **SYSTEM SETUP** menu (see Figure 2.2), select **RELAY SETTINGS**. This page allows you to program relay functions by tank number. Relays 1 to 4 are used for alarm lights for the selected tank's high-level and timeout alarms. Relay 5 will turn on only the horn for all tank's high-level and timeout alarms. The remote annunciator's acknowledge button will turn off Relay 5 (horn). (See Figure 7.0)

Relay 1	Relay 2	Relay 3	Relay 4	Relay 5
TANK 1	TANK 2	TANK 3	TANK 4	HORN
Change Tank Num. for Relay 1	Change Tank Num. for Relay 2	Change Tank Num. for Relay 3	Change Tank Num. for Relay 4	

FAILSAFE

FAIL-SAFE MODE

SAVE RELAY TANK SETTINGS

Figure 7.0

Note: For any changes made to this page, press the **SAVE RELAY TANK SETTINGS** button for the changes to take effect. Relay settings are only available on Versions MMG400-P001AF and higher, listed at the bottom of the **HELP MENU** (see Figure 2.1).

10. SET ALARM MESSAGES

From the **SYSTEM SETUP** menu, select the **SET ALARM MESSAGES** button. This allows you to set custom messages for the different alarms that are received. (See Figure 10.0)

Pressing on a specific alarm field will bring up a QWERTY keypad for data entry.

Tank Alarms

CALL: Service Dept

Sensor Alarms

CALL: Service Dept

All Other Alarms

CALL: Service Dept

SAVE

FEATURE ENABLE/DISABLE: DISABLED ENABLED

Figure 10.0

Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

11. GENERAL SETTINGS (GENERAL SETUP)

Selecting the **GENERAL SETTINGS** button from the **SYSTEM SETUP** menu (Figure 2.2), will bring you to the **GENERAL SETUP** screen. (See Figure 11.0)

GENERAL SETUP features are:

- SETTINGS PAGE 1
- SETUP PASSWORD
- BACKLIGHT SETTINGS

Note: The second button is *deliberately vacant for future use*.

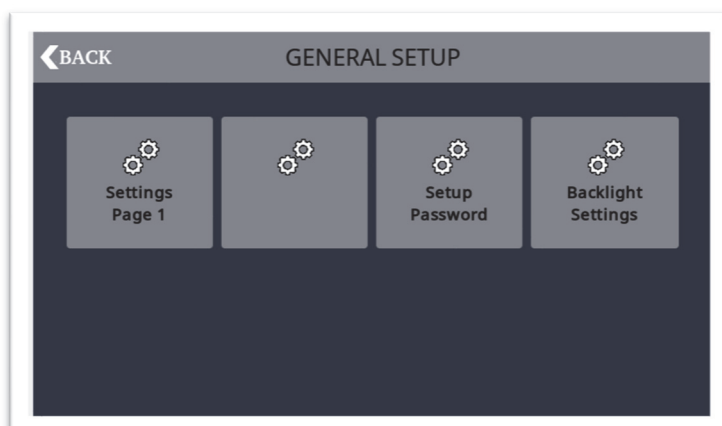


Figure 11.0

12. GENERAL SETTINGS PAGE 1

This screen allows you to set various options on the MMRD7.

This includes:

- ULLAGE PERCENT
- REMOTE ACK
- DELIVERY PAGE CHANGE
- HOME SCREEN
- HOME SCREEN TANK #
- PRINTER ENABLE

(See Figure 12.0)

Figure 12.0

- Ullage Percent:** The percentage used to calculate ullage on the Zoom (magnified) Inventory page; see below (d). Value should match ullage percentage of the ATG.
- Remote ACK:** When toggled on, acknowledges the alarm at the ATG via the MMRD7.
- Delivery Page Change:** When set to ON, it will automatically wake up the MMRD7 display to show a tank with delivery in progress. OFF will disable this feature.
- Home Screen:** The dropdown (▼) toggles between Home Screen bottom-view options. View options are SYSTEM STATUS, 4-TANK INVENTORY, 1-TANK INVENTORY, and ZOOM (magnified) INVENTORY.
- Home Screen Tank #:** If 1-Tank Inventory is chosen from the Home Screen dropdown, this entry value will define which tank to display on the MMRD7 Home Screen.
- Printer Enable:** Enables a local printer (if connected).

Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

13. SETUP PASSWORD

The **SETUP PASSWORD** button brings up a keypad that allows you to change the factory-default password. Depending on the date of the manufacture of your unit, the factory-default password is either **000000** (six zeros), or the **SYSID#** in the bottom-right of the **HELP MENU** (see Figure 2.1).

Here, you can use both alpha and numeric characters. (See Figure 13.0)



Figure 13.0

Note: OMNTEC highly recommends you change the factory-default password to a more-secure password.

14. BACKLIGHT SETTINGS

Backlight Timeout: You can change to dim the MMRD7's display, from 1 to 255 minutes. You can also set this to zero, which leaves the display always ON (Inventory and Homepage only). (See Figure 14.0)

Note: Setting a lower brightness level will prolong the life of the display.

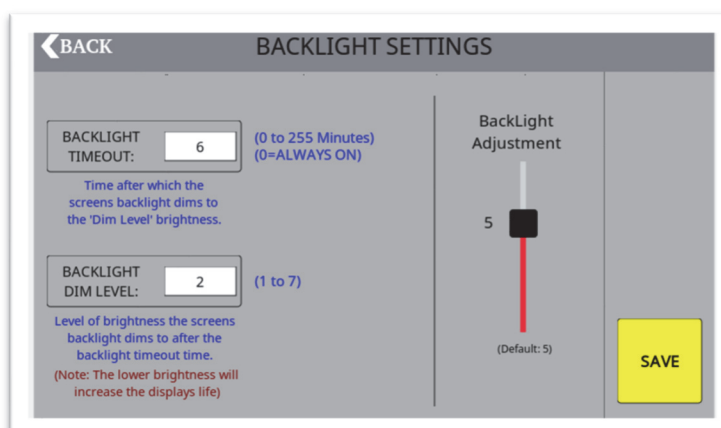


Figure 14.0

Backlight Dim Level: Level of brightness that the screen's backlight will dim to after the timeout. Brightness level values range from 1 to 7 (default is 1).

Backlight Adjustment: A scroll bar graphic that will allow you to adjust the level of the screen brightness. The default is 5 (for indoor models) and 7 (for outdoor models).

Note: For any changes made to this page, press the **SAVE** button for the changes to take effect. Pressing the **SAVE** button will return you to the **SYSTEM SETUP** menu.

15. SEND TO PRINTER OPTION

From the **SYSTEM STATUS** menu, press the **PRINT** icon on the right of the screen.
(See Figure 2.0)

The **SEND TO PRINTER** menu will display.
(See Figure 10.0)

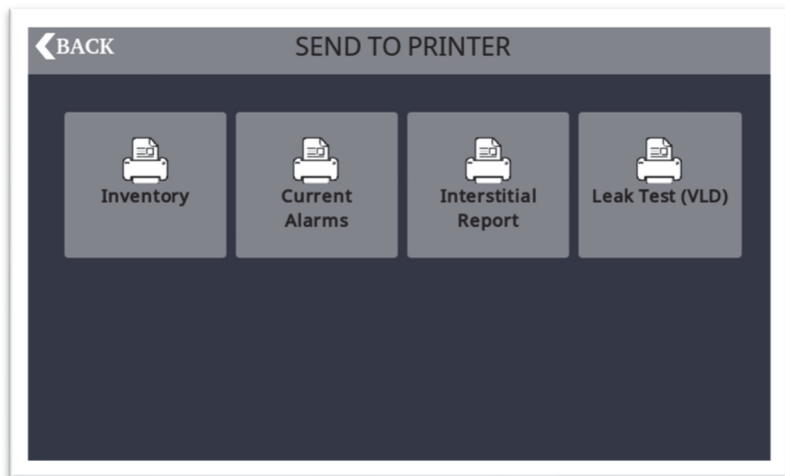


Figure 10.0

If your MMRD7 is equipped with a printer, you can print INVENTORY, CURRENT ALARMS, INTERSTITIAL REPORT, and LEAK TEST (VLD) logs and reports at the touch of a button.

***Note: The INTERSTITIAL REPORT and LEAK TEST (VLD) icons (Figure 10.0) are only available on Versions MMG400-P001AF and higher, listed at the bottom of the HELP MENU.
(See Figure 2.1)***

16. SOFTWARE UPDATE

The MMRD7 can perform a software update, when required, by pressing the **SOFTWARE UPDATE** button from the **SYSTEM SETUP** menu. (See Figure 2.2)

This feature provides a scrollable view of firmware history and firmware update results.

(See Figure 16.0)

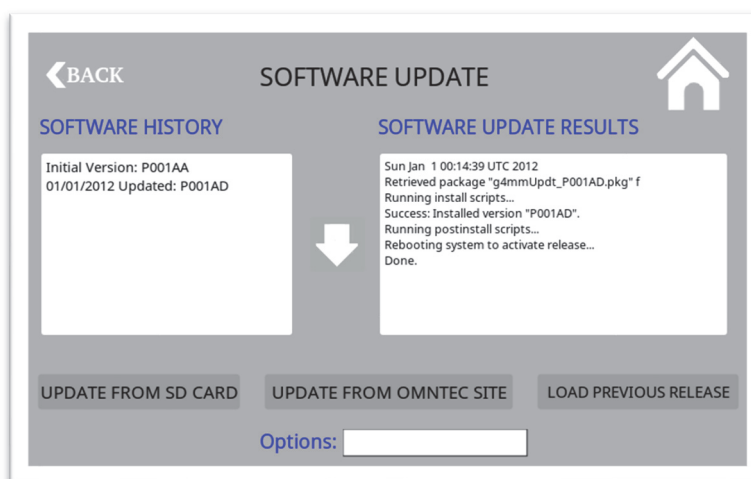


Figure 16.0

- a) **UPDATE FROM SD CARD:** This method performs a firmware update from a microSD card installed into the unit's onboard microSD card reader when Internet access to the MMRD7 is not available. ***The maximum size capacity of the microSD card should not exceed 32 GB.***
NOTE: The microSD card must first contain the firmware upgrade, accessible from mmupdates.omntec.com, prior to being at the site without Internet. See [document 500183](#) (PROCEDURE 2; page 4 of document 500183) from www.omntec.com for more details on doing these steps.
- b) **UPDATE FROM OMNTEC SITE (recommended method):** This method performs a firmware update directly to the MMRD7 from OMNTEC's website. Internet access to the MMRD7 is required. If Internet access is not available, refer to the previous step (a), **UPDATE FROM SD CARD.**
- c) **LOAD PREVIOUS RELEASE:** Reverts to the previous firmware version stored in the system's memory.
- d) **OPTIONS:** Enables additional firmware options. ***For OMNTEC use only.***