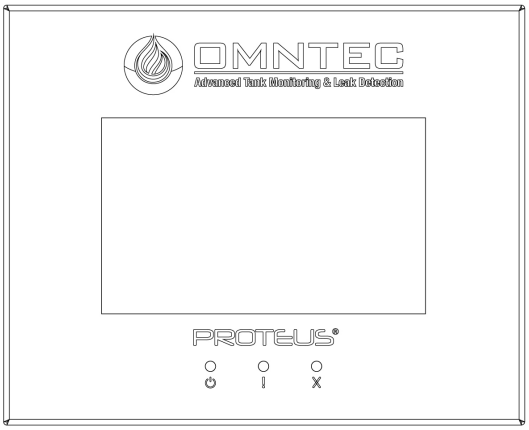
OMNTEC
Advanced Tank Monitoring & Leak Detection

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

PROTEUS® Mini-Me™

MMRD7 | MMRD7-SS Series

SYSTEM PROGRAMMING MANUAL



PROTEUS® Series
UNIVERSAL REMOTE DISPLAY

Revision 1.3

Document No. DOC00011

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

OMNTEC® Mfg., Inc. | 2420 Pond Road | Ronkonkoma | NY 11779 | (631) 981-2001 | OMNTEC@OMNTEC.com | www.OMNTEC.com

TABLE OF CONTENTS

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.

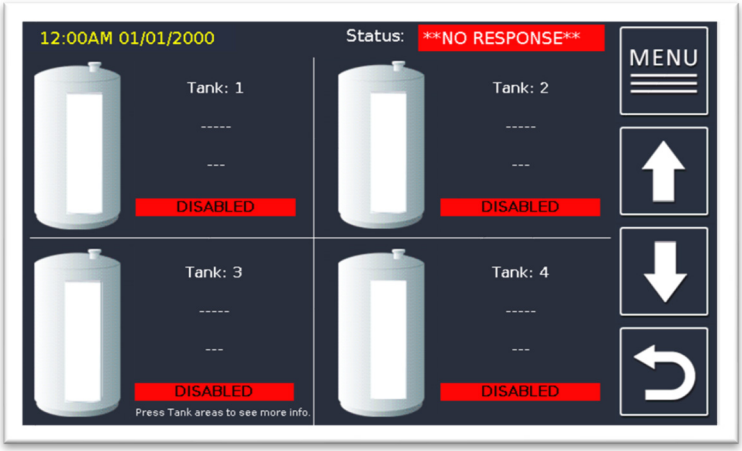


Figure 1.0

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 6: TRANSMISSION MODE (UNIT COMMUNICATIONS MODE) on page 5 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 on each individual tank from a multi-tank view to access more details of that specific, enabled tank.

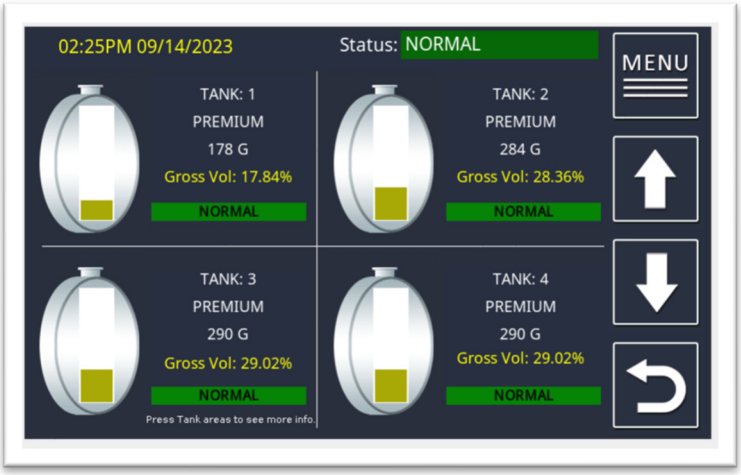


Figure 1.1

2. NAVIGATING TO SETUP

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

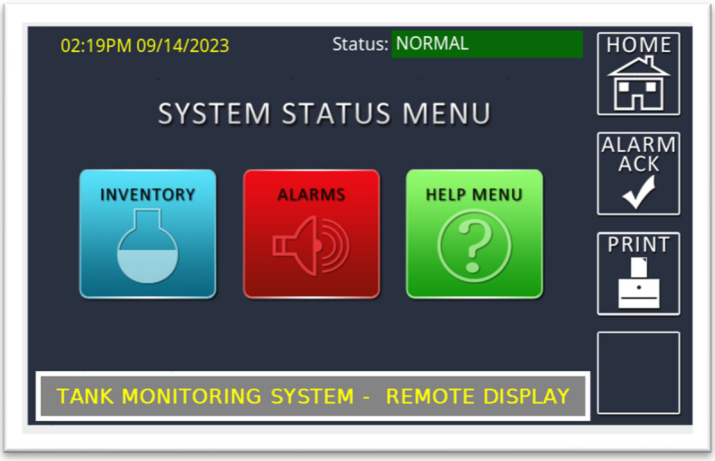


Figure 2.0

In **HELP MENU**, press **SETUP**.
(See Figure 2.1)

The default password is **000000** (six zeros).

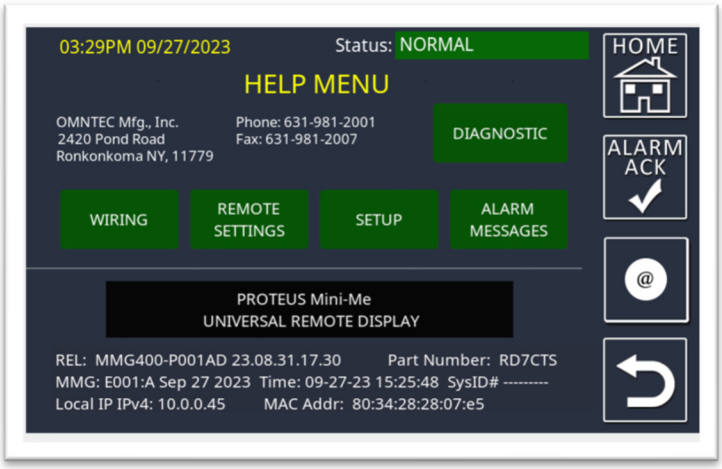


Figure 2.1

The **SYSTEM SETUP MENU**, and its different settings and functionality buttons, is displayed.
(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).

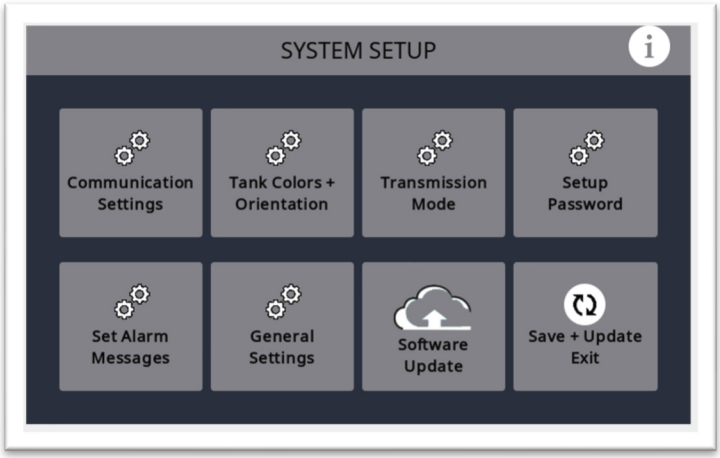


Figure 2.2

3. CHANGING PARAMETERS

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**. You can change most parameters to the user’s preference. Use this info page as a guide to program these parameters.
(See Figure 3.0)

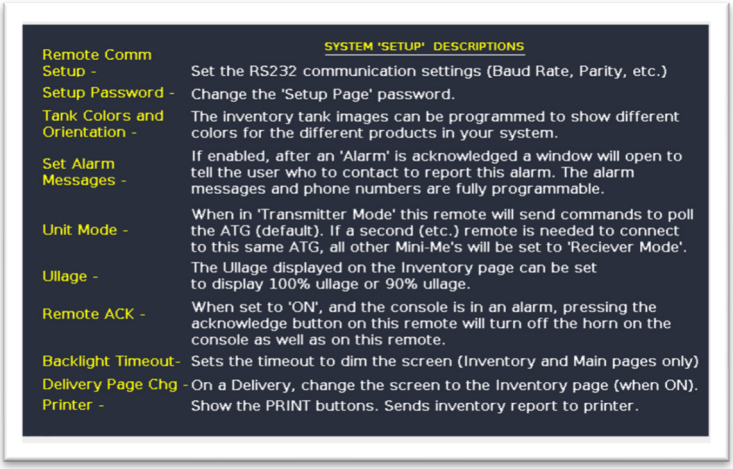


Figure 3.0

4. COMMUNICATION SETTINGS

To change the BAUD RATE and other communication settings, select **COMMUNICATION SETTINGS** 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)

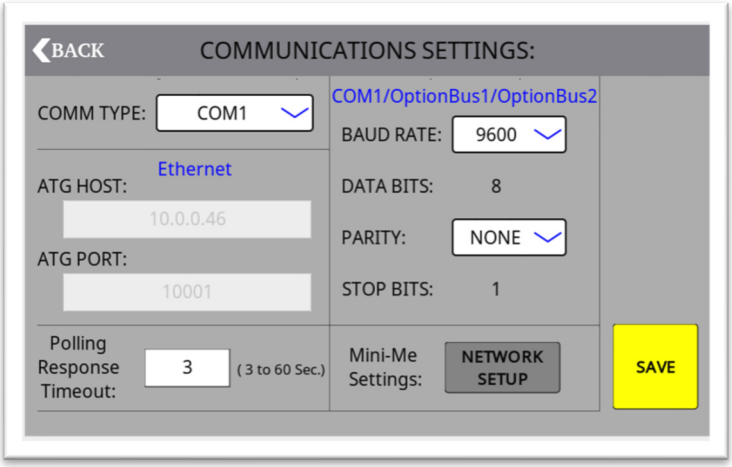


Figure 4.0

Note: For any changes made to this page, press the SAVE button for the changes to take effect.

5. CHANGING TANK COLORS + ORIENTATION

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 5.0)

Note: For any changes made to this page, press the SAVE button for the changes to take effect.

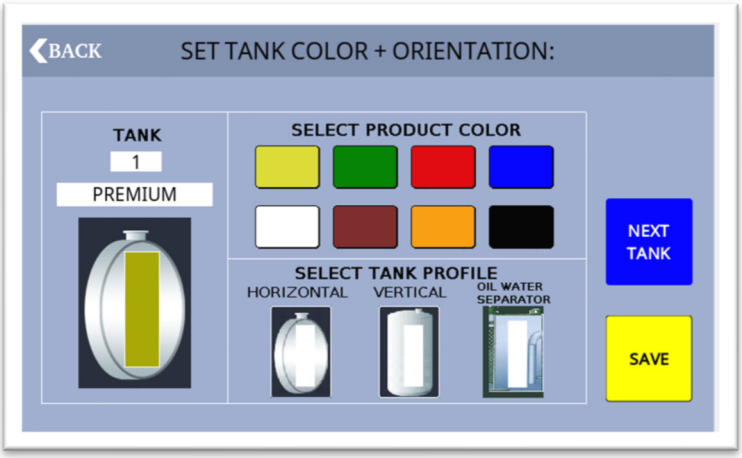


Figure 5.0

6. 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 6.0)

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

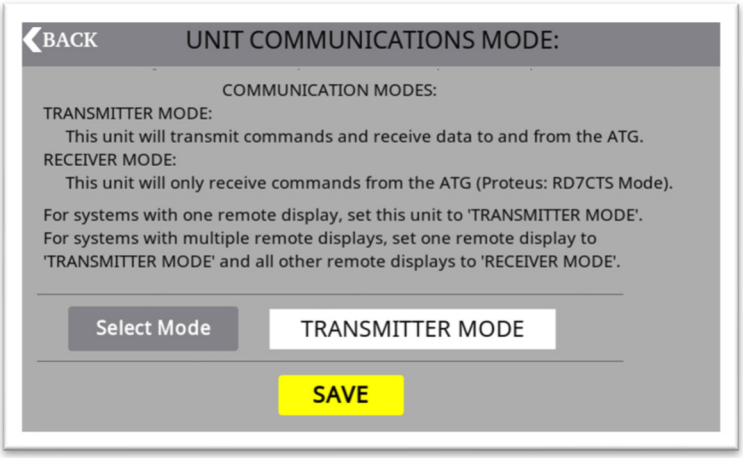


Figure 6.0

Single MMRD7 / Single ATG:

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.

7. SETUP PASSWORD

The **SETUP PASSWORD** button allows you to change the factory-default password of **000000** (six zeros). Here, you can use both alpha and numeric characters.
(See Figure 7.0)

Figure 7.0

8. SET ALARM MESSAGES

The **SET ALARM MESSAGES** button allows you to set custom messages for the different alarms that are received.
(See Figure 8.0)

Note: For any changes made to this page, press the SAVE button for the changes to take effect.

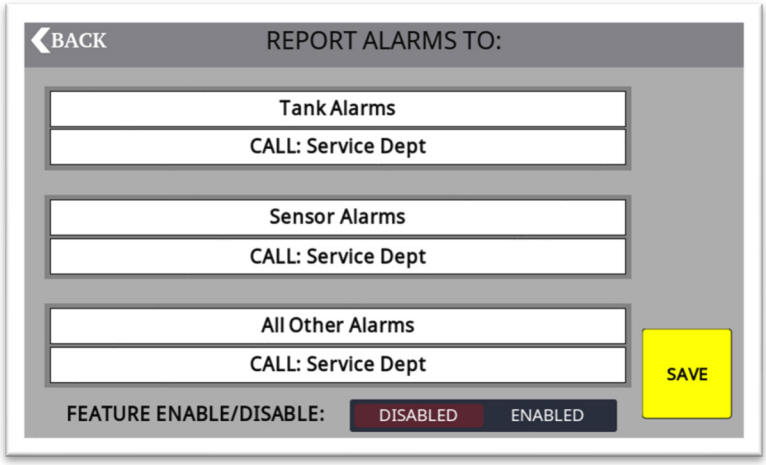


Figure 8.0

Pressing on a specific alarm box will bring up a QWERTY keypad for data entry.
(See Figure 8.1)

Figure 8.1

9. GENERAL SETTINGS

The **GENERAL SETTINGS** button, from the **SYSTEM SETUP** menu (Figure 2.2), will bring you to the **GENERAL SETUP** screen. (See Figure 9.0)

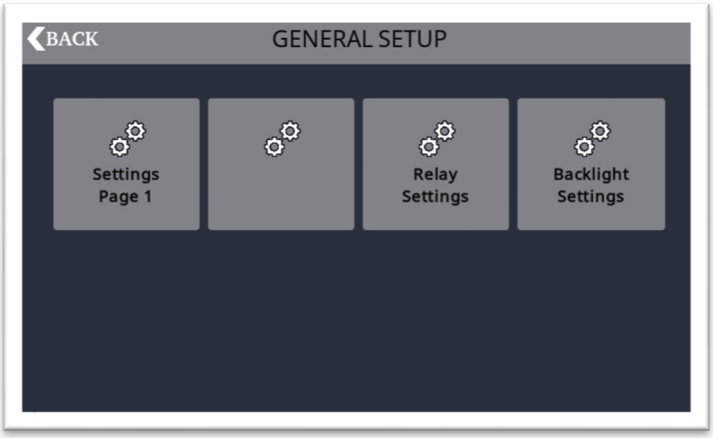


Figure 9.0

GENERAL SETUP features are:

- SETTINGS PAGE 1
- RELAY SETTINGS
- BACKLIGHT SETTINGS

Note: The second button (from the left) is deliberately vacant for future use.

GENERAL SETTINGS PAGE 1: 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 9.1)

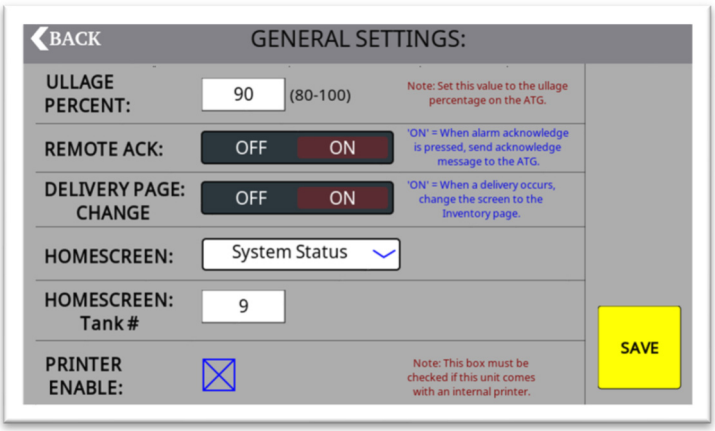


Figure 9.1

a) **Ullage Percent:** The percentage used to calculate ullage on the Zoom (magnified) Inventory page; see below (d). Value should match the ullage percentage on the ATG.
b) **Remote ACK:** Toggled on, acknowledges the alarm at the ATG via the MMRD7.
c) **Delivery Page Change:** When set to ON, will automatically wake up the MMRD7 display to show a tank with delivery in progress. OFF will disable this feature.
d) **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.
e) **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.
f) **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.

9. GENERAL SETTINGS (cont'd)

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 9.2)

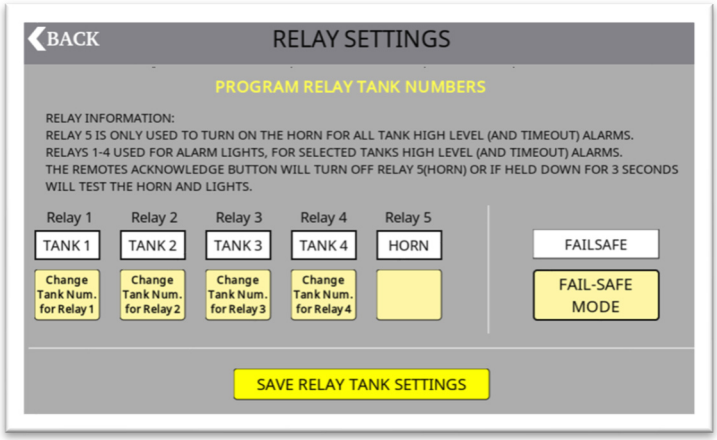


Figure 9.2

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.

BACKLIGHT SETTINGS:
Backlight Timeout: This 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 9.3)

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

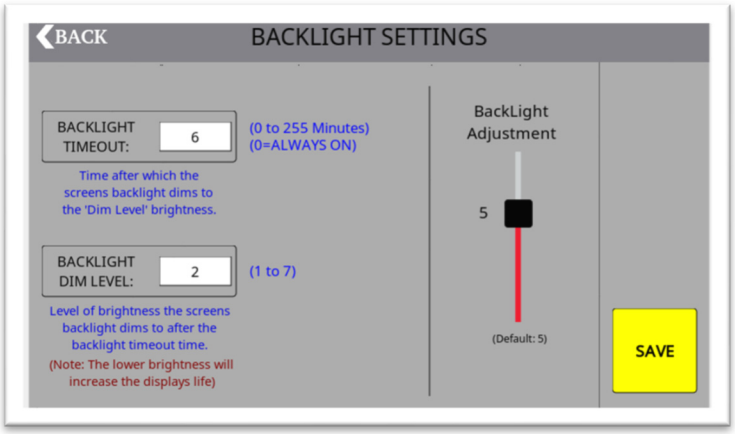


Figure 9.3

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.

10. 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)

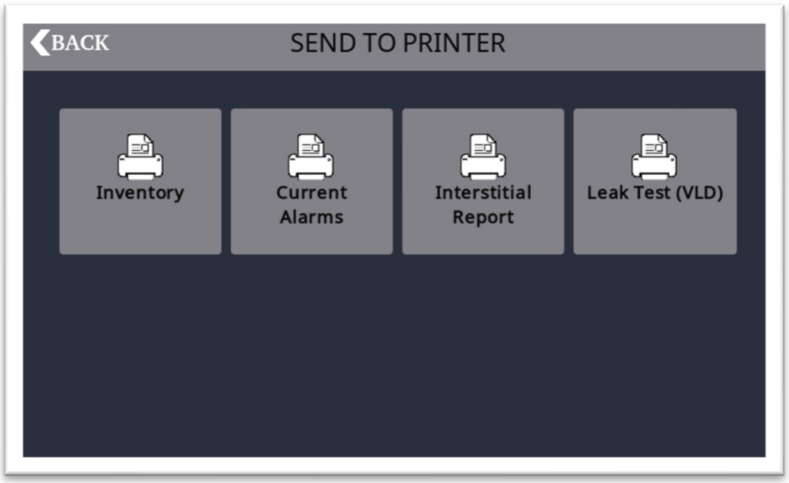


Figure 10.0

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.

11. 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 11.0)

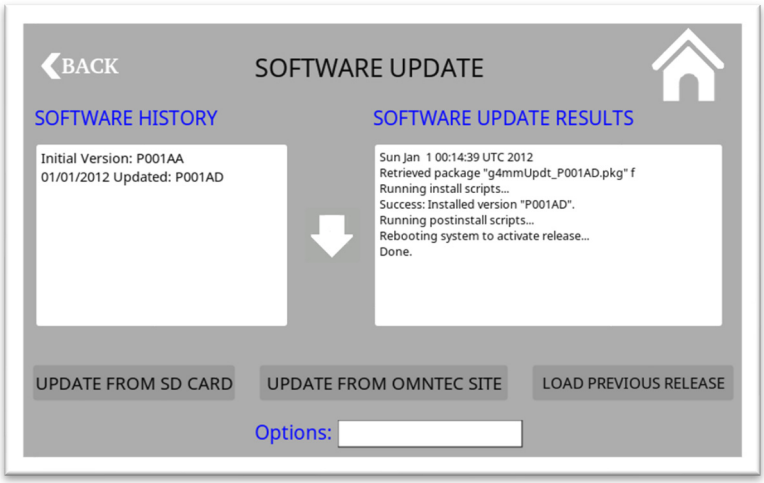


Figure 11.0

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.
   NOTE: The microSD card must first contain the firmware upgrade, accessible from ***proteusupdates.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.***