

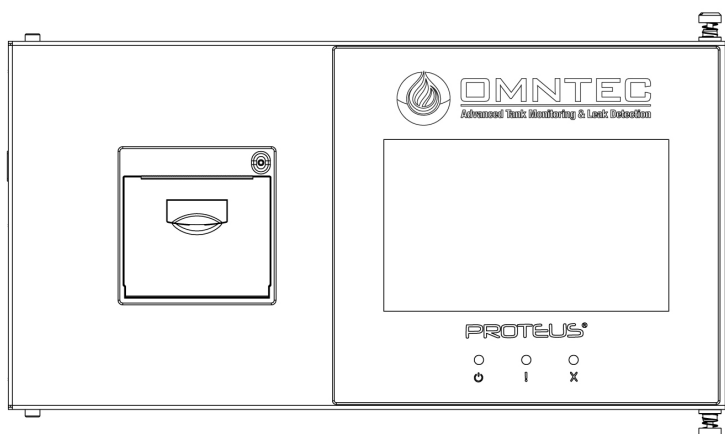


1. Open the camera app
2. Focus the camera on the QR code by gently tapping the code
3. Follow the instructions on the screen to view PDF file

OEL8000III-K/X

OPERATING MANUAL FOR MANIFOLDED TANKS

APPENDIX TO DOC00008



PROTEUS® Series TANK GAUGING SYSTEM Gen IV

Revision 1.1

Document No. DI00014

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

A manifolded tank is a setup where multiple tanks are connected through a shared piping system (a manifold), so they function as a single unit. Manifolded tanks increase capacity without the need of one huge tank, eliminate redundancy, and balance pressure or flow.

The PROTEUS® Gen IV (K or X model) automatic tank-gauging and leak-detection systems allows easy programming for manifolded tank applications via its 7-inch color touchscreen display. Manifolded inventory data and accurate manifolded deliveries are accomplished with this version of software on the PROTEUS controller:

Requirements:

- The PROTEUS controller must have an MCU firmware version of P1BV or later.
- Manifold boards for probes must have the following firmware:
 - 416_P2BB or later (XB-416 with manifold function).
 - 800_P2BB or later (XB-800 with manifold function).

To confirm the exact current firmware version of your PROTEUS controller via the display, go to SYSTEM STATUS MENU > UTILITIES > HELP MENU > VERSION NUMBERS.

IMPORTANT: For PROTEUS Gen IV systems with MCU and board firmware versions earlier than the requirements listed above, you must perform a firmware upgrade to access these manifolded tank features and functions. Refer to the PROTEUS Gen IV System Programming Manual (DOC00008) for updating the software. DOC00008 is found at www.omntec.com/support/documents.

Content subject to change without notice.

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Please note: The values in the images within this document are examples and may vary for your application.

1. SETUP MENU

Programming a PROTEUS Gen IV ATG for a manifolded tank application is done through the SETUP MENU.

From SYSTEM STATUS MENU > UTILITIES > SETUP MENU > PASSWORD (ENTER) >
See Figures 1.1, 1.2, and 1.3 respectively.

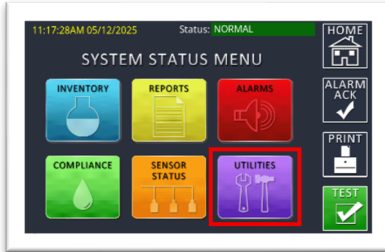


Figure 1.1



Figure 1.2



Figure 1.3

From SETUP MENU – PAGE 1, select TANK DROP AND OTHER.
See Figure 1.4.

On this page you will find manifolded tank options (red rectangle) for the current tank number you are viewing (purple rectangle).
See Figure 1.5.

PLEASE NOTE: Only tanks on the same XB-416 or XB-800 board can be manifolded together.

The MANIFOLDED YES/NO option field will confirm if the current TANK NUMBER you are viewing is part of a manifold or not. Select the checkbox(es) in the manifolded T(#) to set two or more tanks to manifold together with that tank. The ☒ in the T(#) checkbox will signify which tanks are manifolded together. If no tanks are manifolded to that tank you are viewing, a NO will appear in the MANIFOLDED field. If any tanks on that board are manifolded to that tank you are viewing, a YES will appear.

Please note: The values in the images within this document are examples and may vary for your application.

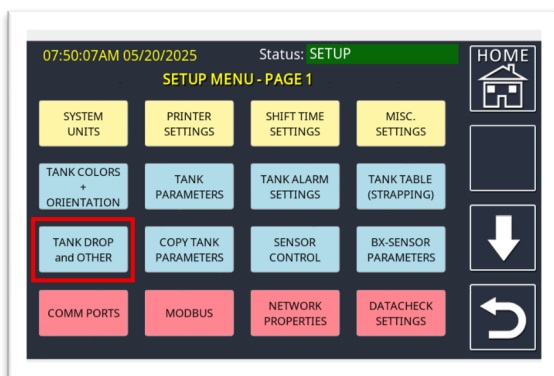


Figure 1.4

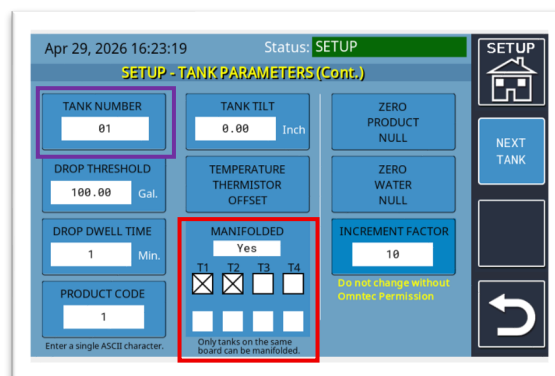


Figure 1.5

2. INVENTORY PAGES

From the MAIN MENU (Figure 1.1), select the blue INVENTORY icon. If the PROTEUS is programmed for a 4-TANK INVENTORY home screen, the following will appear.

See Figure 2.1.

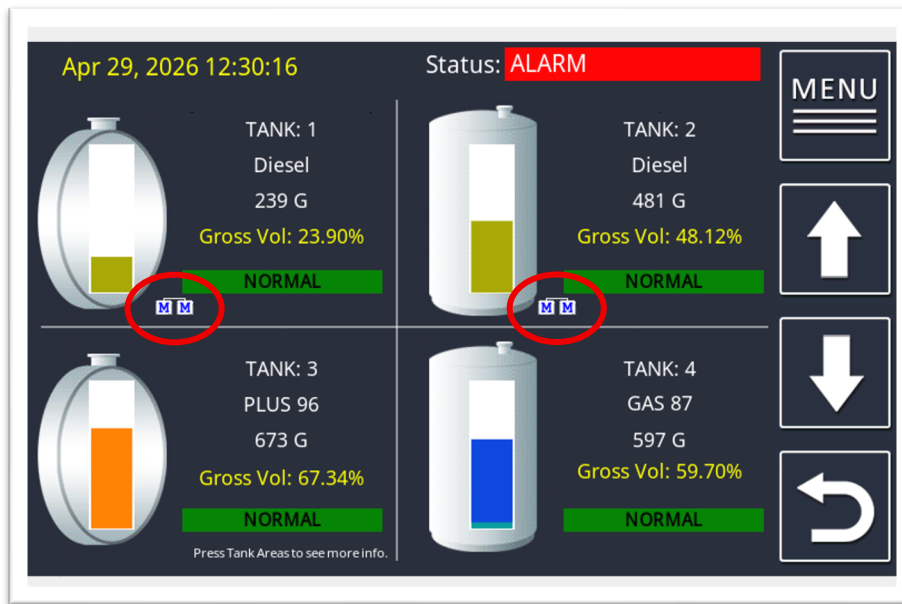


Figure 2.1

The **MM** symbol (red circles) represents those tanks that are simply manifolded. This does not mean that the tanks are manifolded with each other. If Tanks 1 and 2 are manifolded together, and Tanks 3 and 4 are manifolded together, they will all show the same **MM** symbol.

The SHOW MANIFOLD icon, within an individual tank view, will display which tanks are manifolded together. Select an individual tank to see the full inventory data. Press the SHOW MANIFOLD icon (red rectangle) to view the combined inventory data of all tanks manifolded to this tank.

See Figure 2.2.

Manifolded data is the combined inventory data for all the tanks that are manifolded together (green rectangle). Press the PRINT icon (blue rectangle) to print the inventory data for the separate tanks and the combined totals. See Figure 2.3.

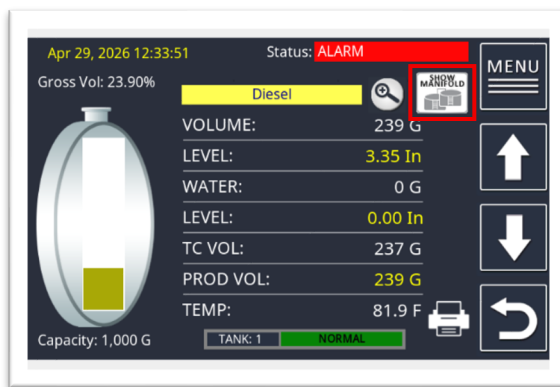


Figure 2.2

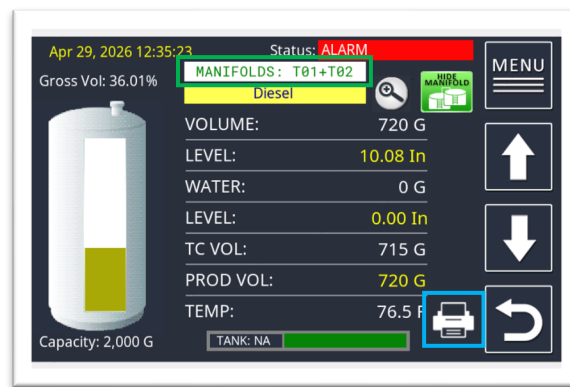


Figure 2.3

3. REPORTS DATA

Automatic printouts for DELIVERIES, INVENTORIES, and SHIFTS will show manifold totals. MANIFOLDED DELIVERY LOG data and MANIFOLDED INVENTORY printouts are performed via the system printer. The PRINT icon is found on the SYSTEM STATUS MENU or UTILITIES MENU page. The SEND TO PRINTER screen will appear.

See Figures 3.1, 3.2, and 3.3 respectively; **red rectangles**.

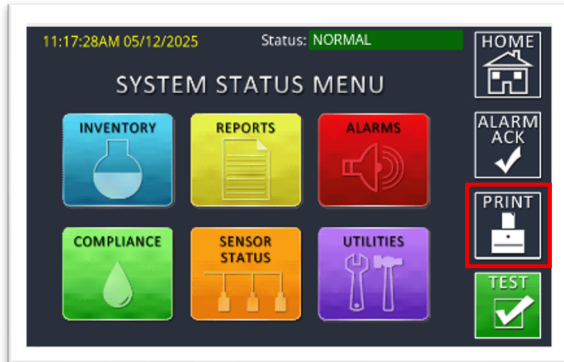


Figure 3.1

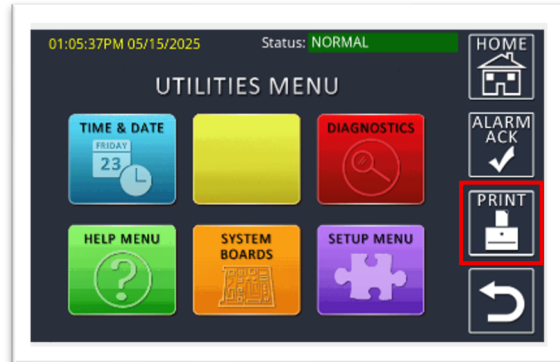


Figure 3.2

The SEND TO PRINTER screen will appear.

Please note: On the SEND TO PRINTER screen, press the right-side arrow twice to scroll horizontally to additional SEND TO PRINTER options. The MANIFOLDED VOLUME and DELIVERY LOG icons will appear.
Please note: The normal SHIFT print button will show the shift's manifolded data.

See Figure 3.3; **red squares**.

After choosing from tank number, sensor number, logs and date range options, press PRINT LOGS.
 See Figure 3.4.

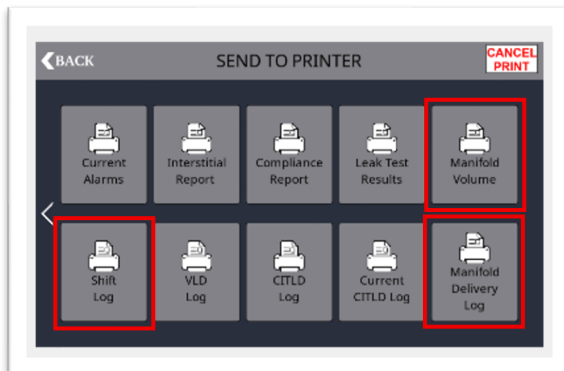


Figure 3.3

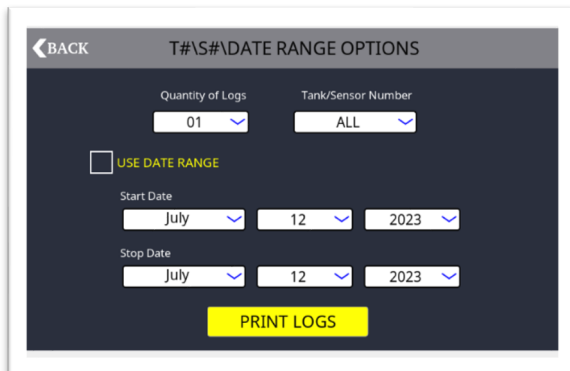
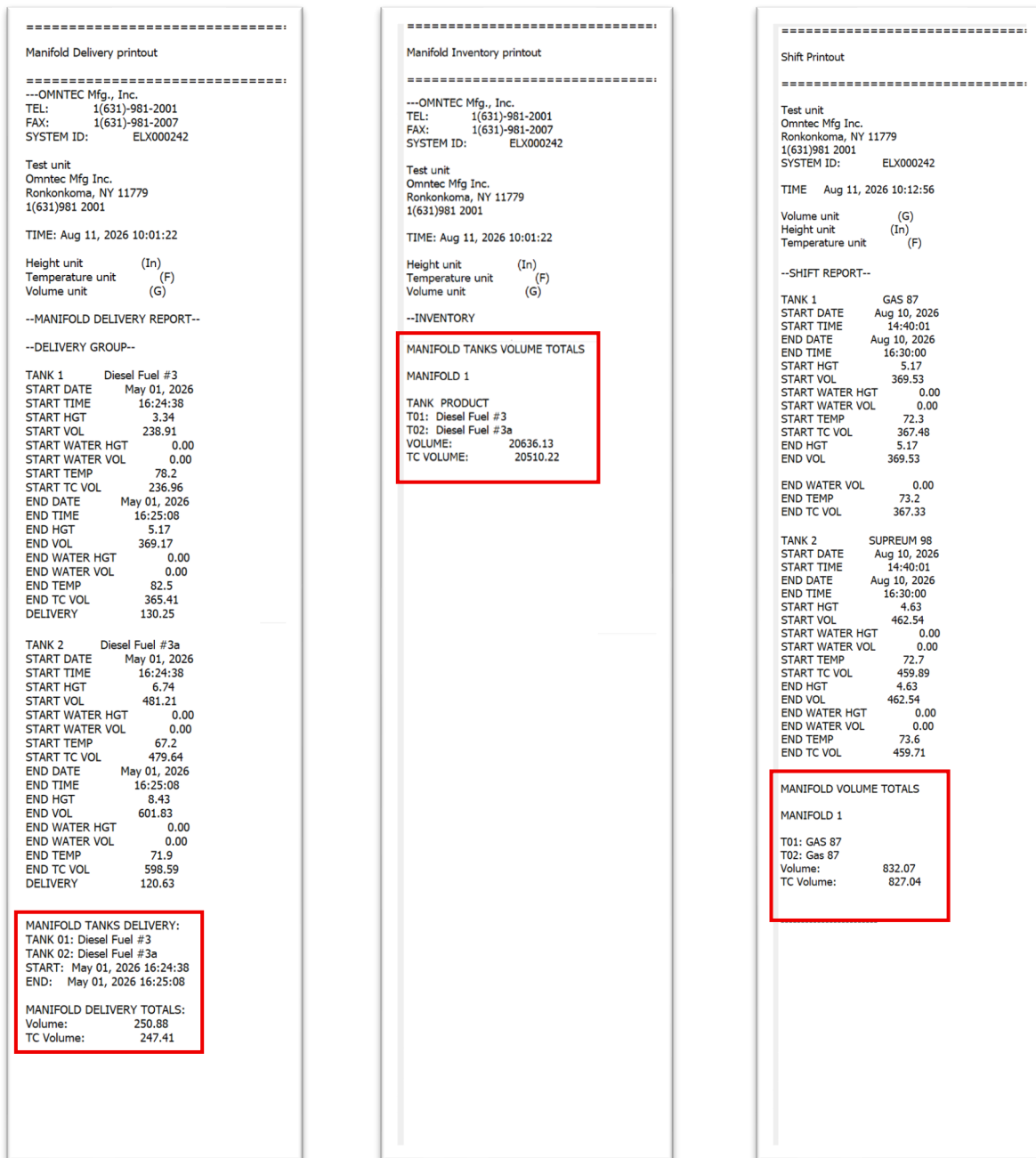


Figure 3.4

The printout that generates from the MANIFOLDED DELIVERY LOG will show manifolded inventory data for the separate tanks **and** the combined totals (red rectangles).
See Figures 3.5 A-C.



Figures 3.5 A-C

You can also view the data via the display through REPORTS > DELIVERY LOG PAGE (red rectangles). See Figures 3.6 and 3.7 respectively.

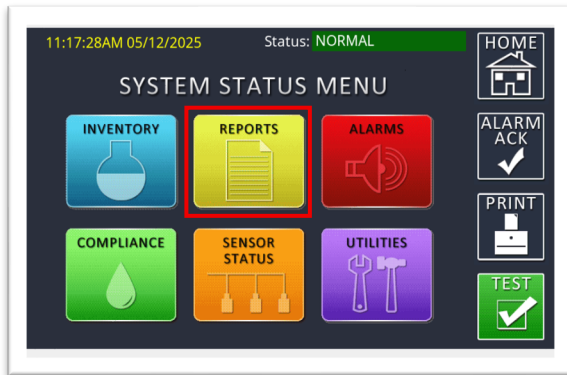


Figure 3.6



Figure 3.7

Select a delivery to view. Press on the delivery (red rectangle) to view more detailed data. See Figures 3.8.

Press on the SHOW MANIFOLD  icon to view the manifolded delivery total data from the DELIVERY LOG. See Figure 3.9.

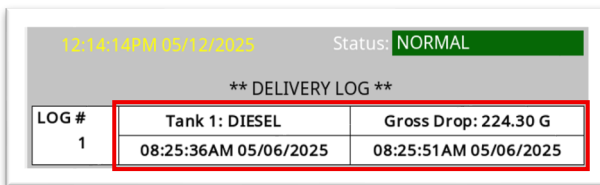


Figure 3.8

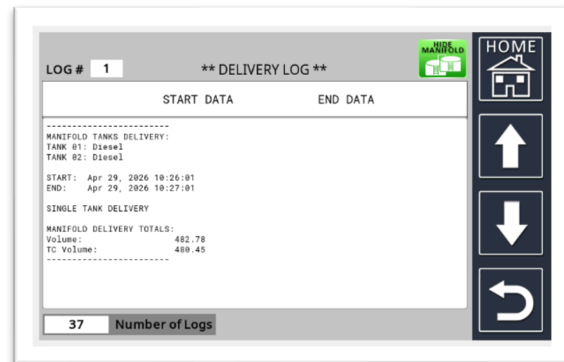


Figure 3.9

4. REMOTE COMMANDS

New OMNTEC PROTEUS TLS350/450 Compatible commands for manifold tanks:

I21C00, I/i21D, s/I/i612

**** 21C Only 00 used ****

Function Code: 21C

Function Type: In-Tank Most Recent Delivery Report with Manifoldd Results

Command Format:

Display: <SOH>I21C00

Computer: NA

Typical Response Message, Display Format:

<SOH>

I21C00

JAN 22, 2026 4:46 PM

Header Line 1

Header Line 2

Header Line 3

Header Line 4

LAST DELIVERY REPORT

T 1: Diesel

INCREASE	DATE / TIME	VOLUME	TC-VOLUME	WATER	TEMP	HEIGHT
END:	Feb 17, 2026 08:29:00	326.22	323.41	0.00	79.1	4.57
START:	Feb 17, 2026 08:28:16	195.48	194.47	0.00	71.5	2.74
AMOUNT:		130.74	128.95			

T 2: Diesel

INCREASE	DATE / TIME	VOLUME	TC-VOLUME	WATER	TEMP	HEIGHT
END:	Feb 17, 2026 08:29:00	296.47	295.39	0.00	68.1	4.15
START:	Feb 17, 2026 08:28:16	213.52	212.65	0.00	69.1	2.99
AMOUNT:		82.95	82.74			

MANIFOLD TANKS DELIVERY:

TANK 01: Diesel

TANK 02: Diesel

START: Feb 17, 2026 08:28:16

END: Feb 17, 2026 08:29:00

MANIFOLD DELIVERY TOTALS:

Volume: 213.69

TC Volume: 211.68

<ETX>

Function Code: 21D

Function Type: In-Tank Current Siphon Manifolded Total Volumes

Command Format:

Display: <SOH>I21DTT

Computer: <SOH>i21DTT

Typical Response Message, Display Format:

<SOH>

I21D00

JAN 22, 2026 4:46 PM

Header Line 1

Header Line 2

Header Line 3

Header Line 4

SIPHON MANIFOLDED TANKS INVENTORY TOTALS

Volume unit (G)

MANIFOLD 1

TANK PRODUCT

T01: Diesel

T02: Diesel

VOLUME: 408.04

TC VOLUME: 405.41

MANIFOLD 2

TANK PRODUCT

T03: PLUS 96

T04: PLUS 96

VOLUME: 920.02

TC VOLUME: 917.32

<ETX>

Typical Response Message, Computer Format:

<SOH>i21DTTYMMDDHHmmNNaabbbccvvvvvvVVVVVVVV...

NNaabbbccvvvvvvVVVVVVVV&&CCCC<ETX>

Notes:

1. YYMMDDHHmm - Current Date and Time
2. TT - Tank Number (Decimal, 00=all)
3. NN - Number of tanks in siphon group (Hex)
4. aabbbcc - Tank ID numbers(hex))
5. vvvvvvvv - Total manifolded Volume (IEEE ASCII hex)
6. VVVVVVVV - Total manifolded TC Volume (IEEE ASCII hex)
7. && - Data Termination Flag
8. CCCC - Message Checksum

Function Code: 612

Function Type: Set Tank SIPHON Manifoldd Partners

Note: Can only manifold tanks that are on the same XB-416 or XB-800 board.

Command Format:

Display: NA

Computer: <SOH>s612TTtt...<CR>

Inquire:

<SOH>i612TT

<SOH>i612TT

Typical Response Message, Display Format:

<SOH>

I61200

NOV 17, 2025 09:15 AM

TANK MANIFOLDED PARTNERS

TANK	PRODUCT LABEL	MANIFOLDED
------	---------------	------------

1	Diesel	1,2,
2	Diesel	1,2,
3	Plus 97	NONE
4	Supreme 98	NONE

<ETX>

Typical Response Message, Computer Format:

<SOH>i612TTYMMDDHHmmTTNNtt...

TTNNtt&&CCCC<ETX>

Notes:

1. YYMMDDHHmm - Current Date and Time
2. TT - Number of the first tank to be manifolded. 00=clear all manifolds.
3. NN - Number of tanks that are manifolded together. 00=clear manifold.
4. tt - Tank numbers of other tanks to be manifolded to first tank
5. && - Data Termination Flag
6. CCCC - Message Checksum

Typical Command Message, Computer Format:

<SOH>s6120102

Manifold tanks 1 and 2 together.

<SOH>s612010203 or <SOH>s61201020103

Manifold tanks 1, 2 and 3 together.

<SOH>s6120100

Clear tank 1 from any Manifolds.

<SOH>s6120000

Clear all Manifolded tanks.