# DL Console

# **Installation and Setup Manual**



## **Notice**

Veeder-Root makes no warranty of any kind with regard to this publication, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Veeder-Root shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this publication.

Veeder-Root reserves the right to change system options or features, or the information contained in this publication.

This publication contains proprietary information which is protected by copyright. All rights reserved. No part of this publication may be photocopied, reproduced, or translated to another language without the prior written consent of Veeder-Root.

Contact TLS Systems Technical Support for additional troubleshooting information at 800-323-1799.

#### **DAMAGE CLAIMS / LOST EQUIPMENT**

Thoroughly examine all components and units as soon as they are received. If any cartons are damaged or missing, write a complete and detailed description of the damage or shortage on the face of the freight bill. The carrier's agent must verify the inspection and sign the description. Refuse only the damaged product, not the entire shipment.

Veeder-Root must be notified of any damages and/or shortages within 30 days of receipt of the shipment, as stated in our Terms and Conditions.

#### **VEEDER-ROOT'S PREFERRED CARRIER**

- Contact Veeder-Root Customer Service at 800-873-3313 with the specific part numbers and quantities that were missing or received damaged.
- 2. Fax signed Bill of Lading (BOL) to Veeder-Root Customer Service at 800-234-5350.
- 3. Veeder-Root will file the claim with the carrier and replace the damaged/missing product at no charge to the customer. Customer Service will work with production facility to have the replacement product shipped as soon as possible.

#### **CUSTOMER'S PREFERRED CARRIER**

- 1. It is the customer's responsibility to file a claim with their carrier.
- Customer may submit a replacement purchase order. Customer is responsible for all charges and freight associated with replacement order. Customer Service will work with production facility to have the replacement product shipped as soon as possible.
- 3. If "lost" equipment is delivered at a later date and is not needed, Veeder-Root will allow a Return to Stock without a restocking fee.
- 4. Veeder-Root will NOT be responsible for any compensation when a customer chooses their own carrier.

#### **RETURN SHIPPING**

For the parts return procedure, please follow the appropriate instructions in the "General Returned Goods Policy" pages in the "Policies and Literature" section of the Veeder-Root North American Environmental Products price list. Veeder-Root will not accept any return product without a Return Goods Authorization (RGA) number clearly printed on the outside of the package.

	Introduc		
	Contra	ctor Certification Requirements	1
	Safety	Precautions	1
	Nation	al Electrical Code Compliance	2
		Power Wiring	
	Dimens	sions	3
	Compo	onent Locations	4
	Console	Specifications and Features	6
	Console	Installation	7
	Connect	ing AC Power Wiring to the DL	0
	Connect	ing AC Power Wiring to the DL	8
	Initial St	artup Procedure	9
		•	
	Configur	ring DL for Site Monitoring and Data Transmission	
	_	otocol DIM	10
	F	POS System Requirements and Limitations	10
	DL Site	e Connection and Initialization	10
Ciauraa			
Figures			
	Figure 1.	DL Console - Dimensions	3
	Figure 2.	Bottom Panel Communication Connectors	4
	Figure 3.	Component Locations with Cover Removed	4
	Figure 4.	Component Locations - Underside of Display Holder/CPU Board Assembly	5
	Figure 5.	Wiring AC Power to the DL Console	8
	Figure 6.	Configuring LAN	11
	Figure 7.	Local Area Connection 'X' Properties dialog box selections	11
	Figure 8.	Internet Protocol Version 4 (TCP/IPv4) Properties dialog box selections	
	Figure 9.	Ethernet Port Setup	14
	Figure 10.	Switching between Data Logger Applications	14
	Figure 11.	Serial Port Setup, SERIAL 1 - ATG	
	Figure 12.	Serial Port Setup, SERIAL 2- POS	
	Figure 13.	Entering ATG Command	16
	Figure 14.	Deleting ATG Command	16
	Figure 15.	TDIM Setup	17
	Figure 16.	Entering Host name	
	Figure 17.	Verifying DIM Communication	
	Figure 18.	Entering Date and Time	
	Figure 19.	Selecting System Units	
	Figure 20.	Switching to DL Setup	
	Figure 21.	Example Environmental Configuration Page Settings - Scenario 1	
	Figure 22.	Example Environmental Configuration Page Settings - Scenario 2	20
	Figure 23.	Example Environmental Configuration Page Settings - Scenario 3	
	Figure 24.	Example FMS ID Entry	
	Figure 25.	Inventory Command Results	
	Figure 26.	POS Protocol Type Query	

		POS Protocol Type Results	
Tables			
	Table 2. POS	onsole Specifications and Features	. 10

## Introduction

This manual assumes that you are installing the DL Console in a site predetermined to have a compatible tank gauge and point of sale system as well as connectivity to the Fuel Management Service. Among the topics covered are:

- Introduction and safety precautions
- Console dimensions and component locations
- Console specifications and features
- · Console installation
- Connecting AC power wiring to the console
- Initial startup procedure
- Configuring the DL for site monitoring and data transmission

#### **Contractor Certification Requirements**

Veeder-Root requires the following minimum training certifications for contractors who will install and setup the equipment discussed in this manual:

**Installer (Level 1) Certification:** Contractors holding valid Installer Certification are approved to perform wiring and conduit routing; equipment mounting; probe, sensor and carbon canister vapor polisher installation; wireless equipment installation; tank and line preparation; and line leak detector installation.

**ATG Technician (Level 2/3 or 4) Certification:** Contractors holding valid ATG Technician Certifications are approved to perform installation checkout, startup, programming and operations training, system tests, troubleshooting and servicing for all Veeder-Root Series Tank Monitoring Systems, including Line Leak Detection. In addition, Contractors with the following sub-certification designations are approved to perform installation checkout, startup, programming, system tests, troubleshooting, service techniques and operations training on the designated system.

- Wireless 2
- Tall Tank

Warranty Registrations may only be submitted by selected Distributors.

#### **Safety Precautions**

The following safety symbols may be used throughout this manual to alert you to important safety hazards and precautions.

#### **EXPLOSIVE**



Fuels and their vapors are extremely explosive if ignited.

#### FLAMMABLE



Fuels and their vapors are extremely flamma-

# **F**

#### **ELECTRICITY**

High voltage exists in, and is supplied to, the device. A potential shock hazard exists.



#### **TURN ELECTICAL POWER OFF**

Live power to a device creates a potential shock hazard. Turn Off electrical power to the device and associated accessories when servicing the unit.



#### WARNING

Heed the adjacent instructions to avoid damage to equipment, property, environment or personal injury.



#### **WEAR EYE PROTECTION**

Wear eye protection when working with pressurized fuel lines or epoxy sealant to avoid possible eye injury.



#### **GLOVES**

Wear gloves to protect hands from irritation or injury.



#### **INJURY**

Careless or improper handling of materials can result in bodily injury.



#### **READ ALL RELATED MANUALS**

Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.



#### STATIC SENSITIVE COMPONENTS

Wear grounded anti-static wrist strap before handling the printed circuit boards and mounted components.

## **A WARNING**





FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD CAUSE DAMAGE TO PROPERTY, ENVIRONMENT, RESULTING IN SERIOUS INJURY OR DEATH.

Explosive vapors or flammable liquids could be present near locations where fuels are stored or being dispensed.

For use with intrinsically safe devices in Class I, Group D and Class I, Zone 0, Group IIA hazardous locations when installed in accordance with the installation manual and applicable Control Drawing.

This console is not explosion proof. Do not install this console in a volatile, combustible, or explosive atmosphere.

An explosion or fire resulting in serious injury or death, property loss and equipment damage could occur if the console is installed in a volatile, combustible or explosive atmosphere (Class I, Division 1 or 2) or (Group IIA, Zone 0).

## **National Electrical Code Compliance**

The following information is for general reference and is not intended to replace recommended National Electric Code (NEC) procedures. It is important for the installer to understand that electrical equipment and wiring located in Class I, Division 1 and 2 installations shall comply with the latest appropriate Articles found in the National Electric Code (NFPA 70) and the Code for Motor Fuel Dispensing Facilities and Repair Garages, (NFPA 30A).

#### **POWER WIRING**

Wires carrying 120 or 240 Vac from the power panel to the console should be #14 AWG (or larger) copper wire for line, neutral and chassis ground (3). Use one 4 sq. mm (#10 AWG) minimum wire for barrier ground.

**Introduction** Dimensions

## **Dimensions**

Figure 1 illustrates the DL Console's dimensions.

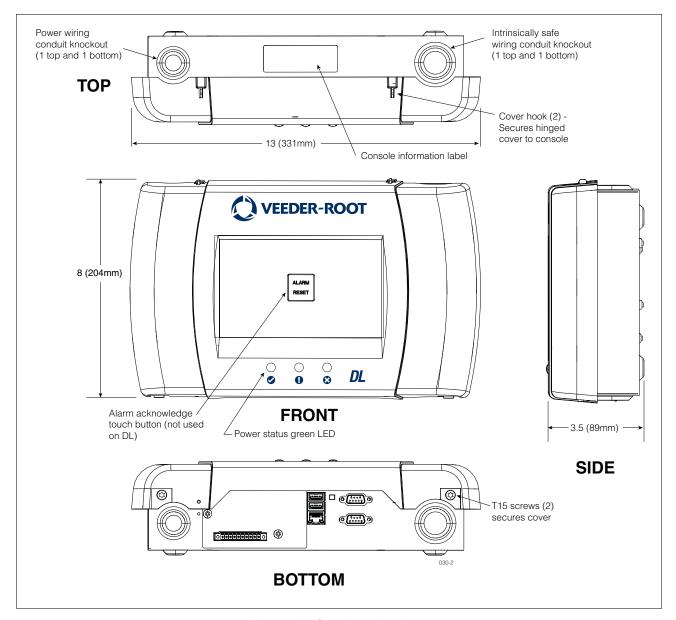


Figure 1. DL Console - Dimensions

Introduction Component Locations

## **Component Locations**

Figure 2 illustrates the communication ports of the DL console. Figure 3 shows component locations and console mounting holes with cover removed.

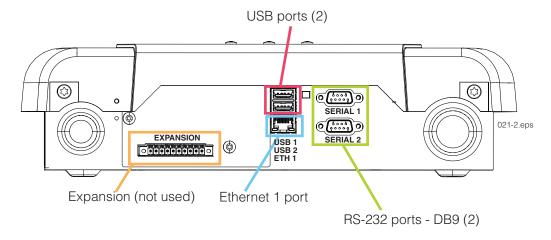


Figure 2. Bottom Panel Communication Connectors

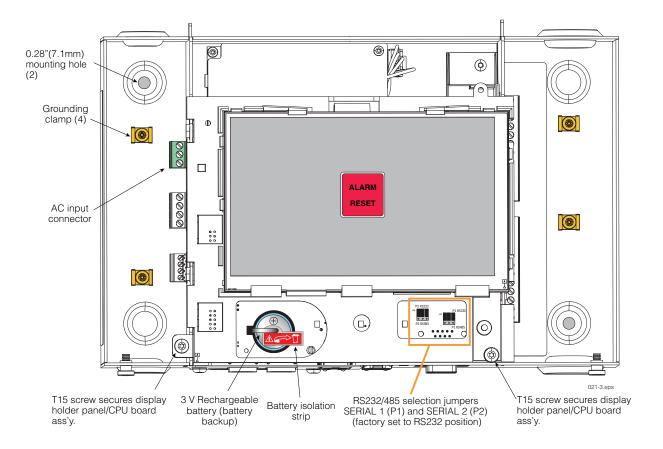


Figure 3. Component Locations with Cover Removed

Introduction Component Locations

Figure 4 shows component locations on underside of display holder panel/CPU board assembly. To remove this assembly, remove the two T15 screws securing the assembly, slide the assembly up as far as it will go and lift the assembly out. Disconnect the attached ribbon cable and wire cable to completely remove the assembly.



If necessary to remove the CPU board assembly to replace the SD card or iButton, avoid touching other electronic components on the underside of the CPU board as static electricity may damage them. Wear grounding strap when handling CPU board.

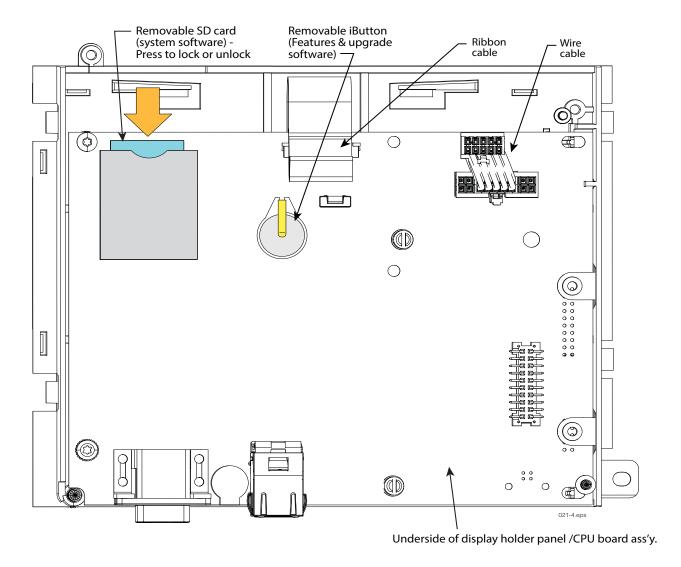


Figure 4. Component Locations - Underside of Display Holder/CPU Board Assembly

## **Console Specifications and Features**

The DL console specifications and features are shown in Table 1.

**Table 1. DL Console Specifications and Features** 

Feature	Description					
Front panel Indicators	3 LED status indicators - The Power (Check) green LED is on when applications are running, flashing when applications are starting, and off when no apps running/no power to DL. The Warning (!) yellow LED is flashing when a warning condition is active. The Red (X) LED is on when an alarm is active.					
Input Power	Universal AC power supply:100 to 249Vac, 50/60Hz, 2A maximum					
RS-232 Ports	2 optically isolated serial ports standard, labeled SERIAL 1 supporting full handshaking, and SERIAL 2.  The RS-232 D-connector is a panel mount, 9-pin female type, wired in a Data Terminal Equipment (DTE) configuration. The system does not require or activate any handshake signals.					
	RS-232 signals are wired to the female D-connectors as follows:  SERIAL 1  6 7 8 9					
	Pin Signal Pin Signal  1 Data Carrier Detect 6 Data Set Ready 2 Received Data 7 Request to Send 3 Transmitted Data 8 Clear to Send 4 Data Terminal Ready 9 Ring Indicator 5 Signal Ground  SERIAL 2					
	Pin Signal Pin Signal  1 6 2 Received Data 7 3 Transmitted Data 8 4 9 5 Signal Ground					
USB Ports	2 powered USB ports labeled USB 1 and USB 2					
Ethernet 1 Port	10/100 Ethernet port, TCP/IP, labeled <b>ETH1</b>					

## **Console Installation**

Select an indoor mounting location where you have access to the POS and ATG for connection to the DL. The console must be protected from severe vibration, extremes in temperature and humidity, rain, and other conditions that could harm computerized electronic equipment. The console's operating temperature range is 32 to 104°F (0 to 40°C), and its storage temperature range is -40 to +162°F (-40 to +74°C).

The mounting surface should be strong enough to support the console's weight of 4 pounds (1.81kg). You should also consider wall space for routing the power wiring conduit and communication cables that must be connected to the console.

To mount the console, remove the two T15 screws in the bottom of the cover (see Figure 1). As you lift up the bottom of the cover it pivots on two tabs that project from the top of the console's chassis into slots in the top of the cover. Lift the cover off the chassis tabs and set it aside. Notice the two 0.28" (7.1mm) diameter mounting holes in the base of the chassis at the left top and right bottom corners (see Figure 3). Locate the chassis on the wall in the desired mounting location, mark the hole locations, drill appropriate pilot holes; and using 1/4-inch (6mm) maximum fasteners (customer supplied), attach the chassis to the mounting surface.

## **Connecting AC Power Wiring to the DL**

Check the Input Power Rating on the label affixed to the underside of the DL console to verify input power requirements.

## **A WARNING**





The DL console contains high voltages which can be lethal. It is also connected to low power devices that must be kept intrinsically safe.

- 1. Turn power off at the circuit breaker. Do not connect the console AC power supply wires at the breaker until all devices are installed.
- 2. Attach conduit from the power panel to the DL's Power Area knockouts only.

  Connecting power wires to a live circuit can cause electrical shock that may result in





Routing conduit for power wires into the intrinsically safe compartment can result in fire or explosion resulting in serious injury or death.

- 1. Pull four wires between the power panel and the console; three #14 AWG or larger color-coded wires for AC line (hot), AC neutral and chassis ground.
- 2. Connect the input 120 or 240 Vac power wires as shown in Figure 5.

serious injury or death.

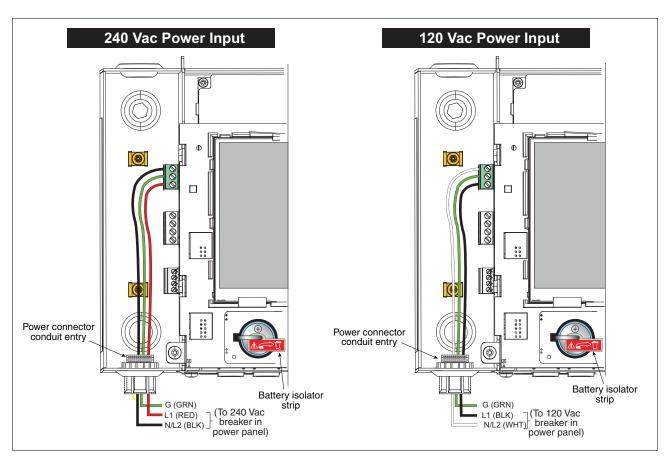


Figure 5. Wiring AC Power to the DL Console

## **Initial Startup Procedure**

Once the communication devices, etc., are connected to the console, remove and discard the backup battery isolator strip (see Figure 5).

Replace the front cover. Attach a label to the breaker feeding the console. This allows others to know how to disconnect power to the console when servicing the system. Communicate to facility personnel which breaker feeds the console.

Switch the dedicated circuit breaker ON to apply power to the console.

## **Configuring DL for Site Monitoring and Data Transmission**

#### **BIR Protocol DIM**

#### POS SYSTEM REQUIREMENTS AND LIMITATIONS

For sites using the DL DIM, the Point of Sales (POS) system must conform to established Veeder-Root protocol and allow the DL to collect the metered sales data necessary for it to perform its Business Inventory Reconciliation (BIR) and Wet Stock Management (WSM) tasks. This protocol is separate and distinct from the inventory protocol commonly used by POS and other systems to collect inventory data from Veeder-Root TLS consoles.

The following POS systems are known to have implemented the Veeder-Root protocol and thus support BIR protocol DIM (Dispenser Interface Module).

Forecourt Controller	Protocol Name	TLS-350R	TLS-450
Allied	Station Site Controller (SSC)	Х	Х
Gilbarco	T-4 (Australia)	×	
PEC	8850	×	
POSTEC	RCC	Х	
Wayne	Marketer 2000 (Sweden)	Х	

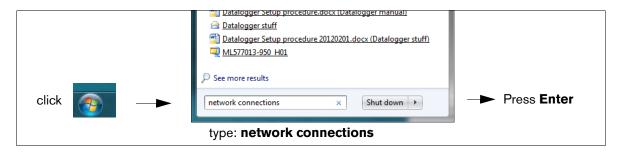
Table 2. POS Systems Using V-R Protocol\*

#### **DL Site Connection and Initialization**

After you are connected the DL to the appropriate site equipment follow the steps below to setup the DL.

NOTE: You must wait at least 5 minutes after powering on the DL before starting this procedure.

- 1. Using an ethernet crossover cable, connect a laptop PC to the ethernet port ETH 1 on the DL (see Figure 2).
- 2. You must configure the laptop's wired integrated Local Area Network by clicking on the Windows Globe in the lower right of the task bar, and typing in network connections in the 'Search programs and files' field and then pressing Enter (see below):



3. NOTE: The screen shots contained in this manual are for reference purposes only. The actual settings and data shown in the following examples are dependent on the laptop or PC operating system used to configure this hardware.

<sup>\*</sup>When the proper hardware/software combinations are used.

In the Network Connections screen, double click on the wired (not wireless) integrated Local Area Connection. In the example below (Figure 6), you would double-click Local Area Connection 2.

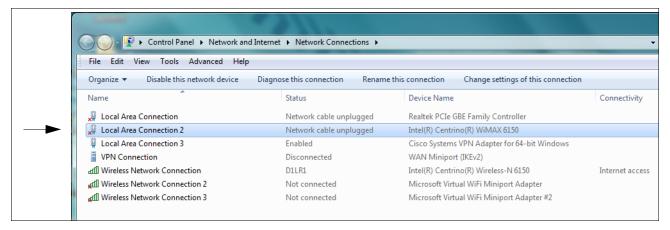


Figure 6. Configuring LAN

4. When the selected Local Area Connection Properties dialog box opens make the selection shown in Figure 7.

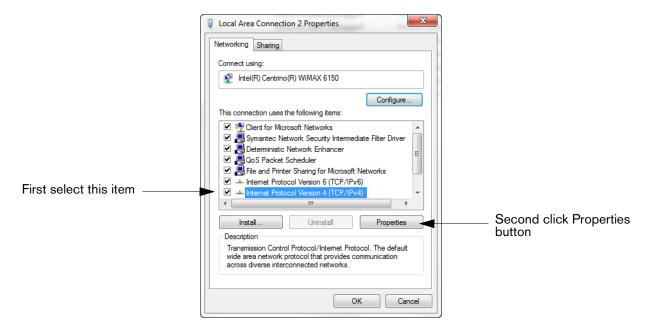


Figure 7. Local Area Connection 'X' Properties dialog box selections

5. When the Internet Protocol Version 4 (TCP/IPv4) Properties dialog box opens make the selections shown in Figure 8.

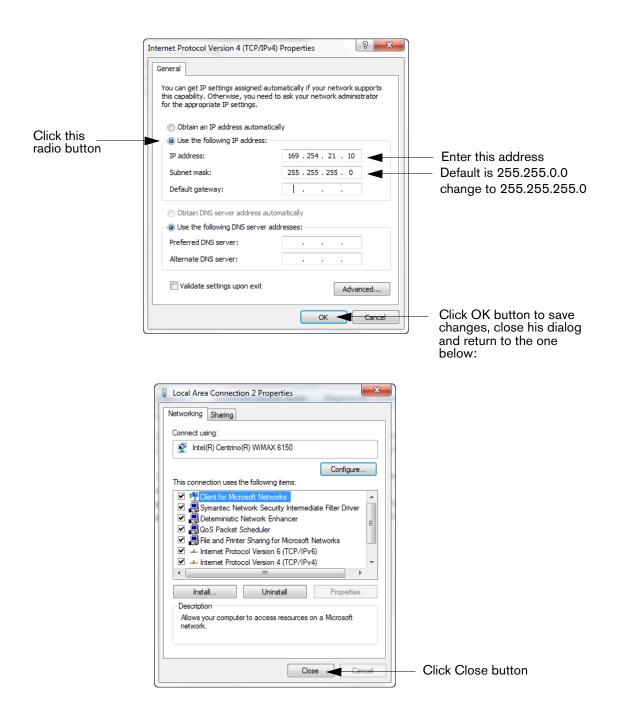


Figure 8. Internet Protocol Version 4 (TCP/IPv4) Properties dialog box selections

Alarm Filtering

DIM Communica-

tions

Ping
Traceroute
DB Backup
DB Restore

Download New

Version

Activate/Revert
Upgrade Fea-

Diagnostics

Software Mainte-

nance

Diag. use only

Step 14.

Diag. use only

6. On the laptop, open an internet browser and enter the IP address **https://169.254.21.12/GeneralSetup** in the browser's address bar. When the login page displays, enter 'quest' for both User name and Password.

NOTE: The DL simultaneously runs two applications; one programs the general communication protocols (GeneralSetup), and the other programs how the DL gathers its information (DLSetup). Pressing the blue arrow at the top middle of the screen will toggle you between the two programs (see Figure 9). After entering selections/changes to fields on any page, click the Save button to save your entries, or Cancel to discard them. Programming screens used to setup the DL are listed in Table 3.

**GeneralSetup** See **DLSetup** See **Application Pages Application Pages** Example **Example** Ethernet Port Setup Step 7. Communication Step 18. Serial Port Setup FMS Identification Step 8. Step 19. System Setup Communication **CDIM Setup** Diag. use only ATG Commands Step 13. Setup **TDIM Setup** Step 12. **DIM Commands** Step 13. Site Id Server Diag. use only **FMS** Heartbeat Step 22. Setup Hostname Step 13. ATG Step 20. Communication Testing POS Date and Time Step 15. Step 21. System Setup DIM Units Step 16. Diag. use only

**Table 3. DL User Interface Screens** 

7. On the "Communication Setup" page (see Figure 9), click on "Ethernet Port Setup" (1) and select the Device type "ETH 1" (2) from the drop-down menu. In the IP Address Type field (3):

If the site is using a static IP address, select "Static IP"; and enter the IP address assigned by your network administrator. Once this is complete, click the "Save" button to keep these settings (see example in Figure 9).

If the site is using a dynamic IP address, select "Dynamic IP" (the remaining parameters will auto-fill once the DL is reconnected to the site network). Click "Save" (4) to accept your entries.

NOTE: If you receive an error message after clicking "Save", click "OK" and refresh the page.

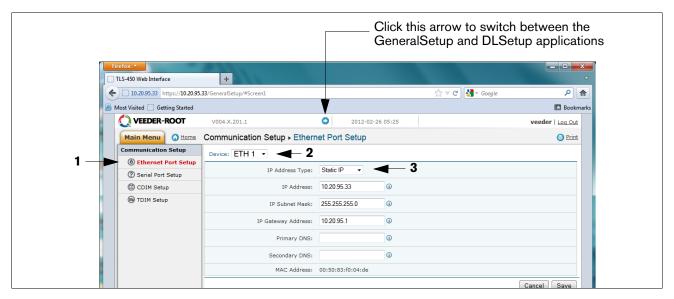


Figure 9. Ethernet Port Setup

8. On the "Communication Setup" page, select "Serial Port" setup and for "Device" select "SERIAL 1" (see Figure 10).

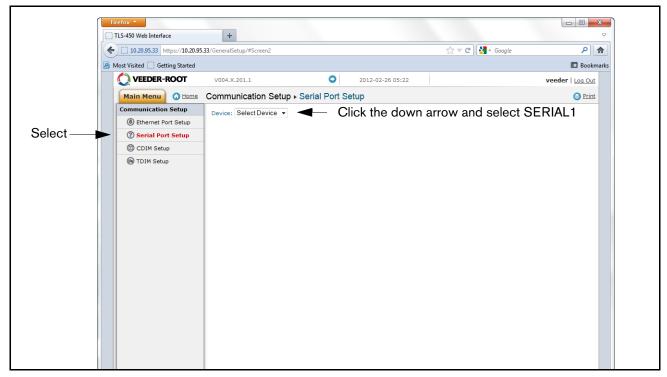


Figure 10. Switching between Data Logger Applications

9. Use this port (SERIAL 1) for the connection to the ATG, and enter "ATG" for the Label. Set the correct communications parameters for the ATG using the drop down menus. For HandShaking, select "No Hand Shaking". Click the "Save" button to keep these settings (see example in Figure 11).

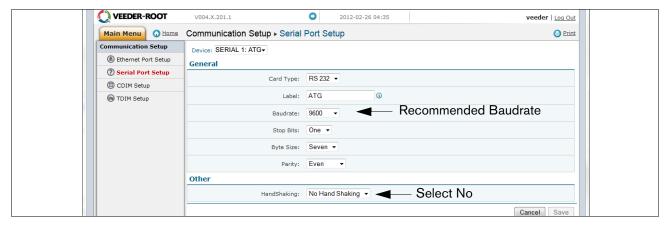


Figure 11. Serial Port Setup, SERIAL 1 - ATG

10. Still on the Serial Port Setup page, in the "Device" field, select "SERIAL 2". Use this connector for the connection to the POS, and enter "POS" for the Label. Set the correct communications parameters for the POS using the drop down menus. For HandShaking, select "No Hand Shaking". Click the "Save" button to keep these settings (see example in Figure 12).

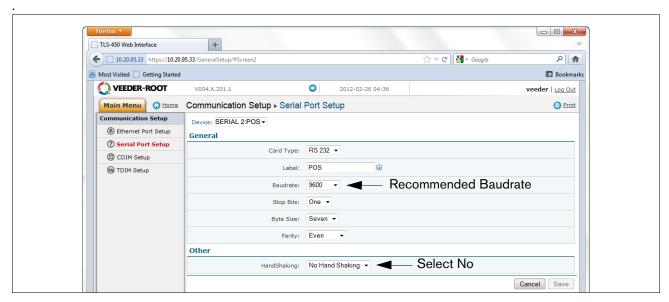


Figure 12. Serial Port Setup, SERIAL 2- POS

11. If the DL is not connected to the POS, perform this step. If the DL is connected to the POS, skip to step 12.

Go to the "DLSetup" application by clicking on white arrow in blue circle top center of screen (see Figure 10), and under "System Setup", click on "ATG Commands (1 in Figure 13)". Then click on the "+ Add New Command" text at top right of screen (2 in figure). When the Add Command dialog box appears enter the command "i@C300", add the Description "DIM\_EVENTS", set the Repeat Interval to "60" (3 in figure) and click Save (4 in figure).

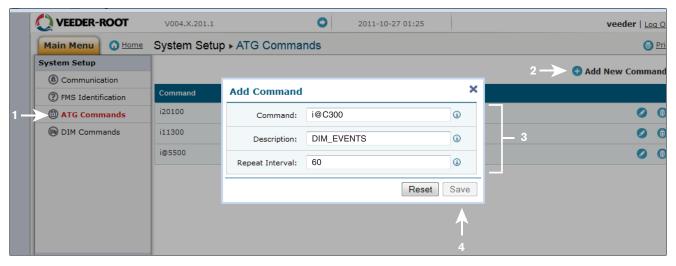


Figure 13. Entering ATG Command

Click on the DIM Command page and then click on the trash can icon on the right end of the i@C300 command line to delete the i@C300 command (see Figure 14). Jump back to the "GeneralSetup" application by clicking on arrow top center of screen.

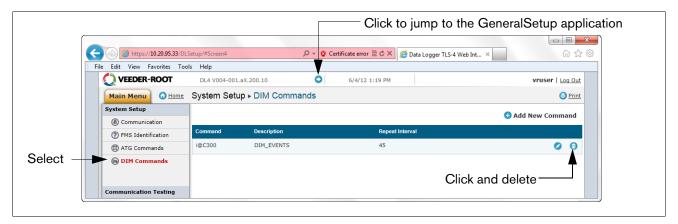


Figure 14. Deleting ATG Command

#### 12. If the DL is connected to the POS, perform this step

Select "TDIM" set-up. Select "TDIM (ETH1)" from the drop-down menu. On the "TDIM Enable" drop down, select "TRUE" and type in a label (maximum of 20 characters). Then select the DIM protocol being used and click "Save". Accept the default Listen Port (unless there is a conflict with another device) and select the desired units (see example in Figure 15). Once this is complete, click on "Save" to keep these settings.

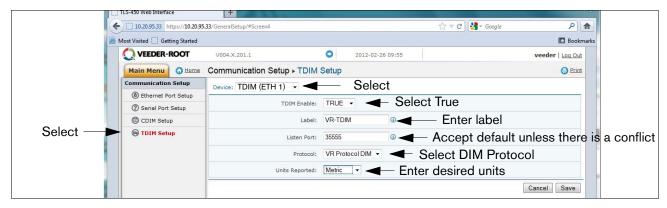


Figure 15. TDIM Setup

13. Select the "System Setup" page and type in the Host name and then click the "Save" button (see example in Figure 16). It is recommended that you use the network name assigned by the network administrator or some other name that identifies the location. While on this page click the Diagnostic Page link (bottom Left).

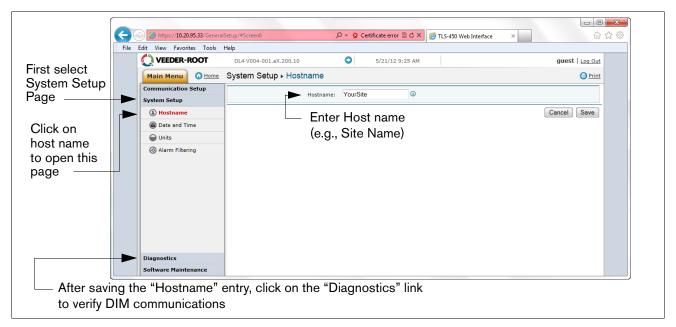


Figure 16. Entering Host name

14. In the "Diagnostics" page (lower left in above figure), click on "DIM Communications" to verify that the DIM communications are successfully being recorded by the DL. Any transactions occurring after the DL was configured will be shown on the screen (see example in Figure 17).

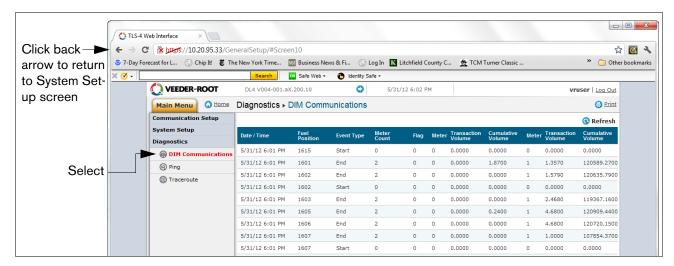


Figure 17. Verifying DIM Communication

15. From the System Setup menu, select Date and Time link to access the current date/time entry screen (see example in Figure 18).

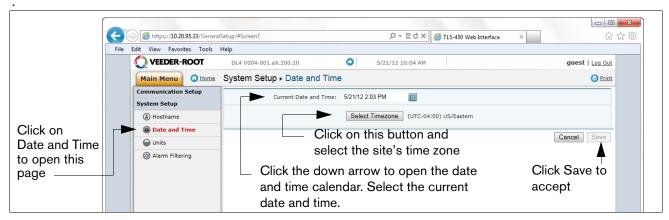


Figure 18. Entering Date and Time

16. From the System Setup menu, click on the Units page(1), select the desired units (2), click Save (3) (see example in Figure 19).



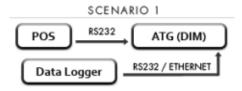
Figure 19. Selecting System Units

17. Click on arrow icon to switch to DLSetup application (see Figure 20).

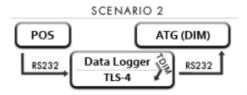


Figure 20. Switching to DL Setup

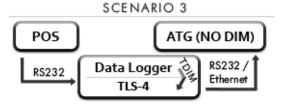
- 18. On the DL Setup "Communication" page, under "Environment Configuration" there are three possible configurations:
  - Scenario 1 POS connects to ATG (w/DIM), DL polls for transactions and inventory from ATG.



• Scenario 2 - POS connects to DL and passes transactions through to ATG (w/DIM).



• Scenario 3 - POS connects to DL (w/DIM), but transactions do not pass through to ATG (w/o DIM)..



Based on the ATG type at the site and whether it has an available RS232 port, determine which Scenario will be used. To simplify the installation, it is preferable to use Scenario 1 whenever the ATG has a spare RS232 port available.

**Scenario 1** - make the selections shown below if the POS is connected to the ATG, and the ATG is providing the DIM function and the DL is connected to a spare RS232 port on the ATG (see example in Figure 21). NOTE: VR Protocol is pre-selected and cannot be changed (currently it is the only supported protocol).

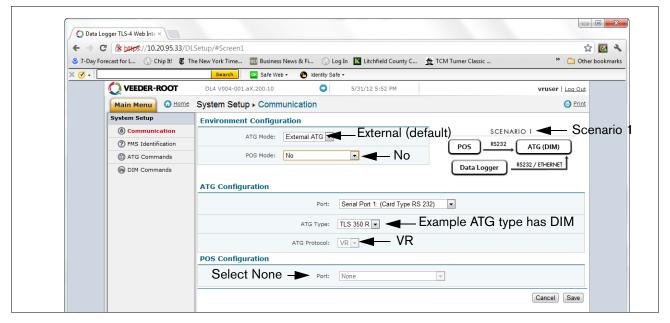


Figure 21. Example Environmental Configuration Page Settings - Scenario 1

**Scenario 2** - Make the selections shown below if the DL is connected between the POS and the ATG, and the ATG is providing the DIM function, and select applicable ATG (see example in Figure 22). NOTE: VR Protocol is pre-selected and cannot be changed (currently it is the only supported protocol).

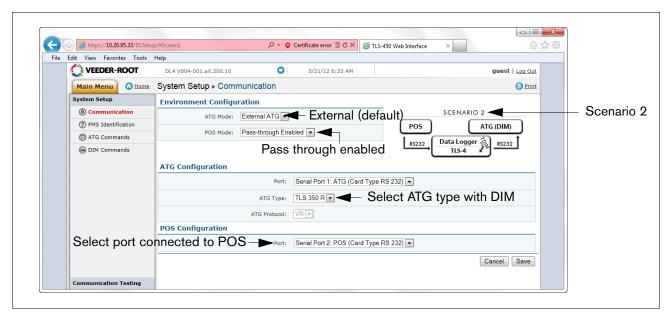


Figure 22. Example Environmental Configuration Page Settings - Scenario 2

**Scenario 3** - Make the selections shown below if the DL is providing the DIM function. Verify that the connections between the POS, DL and ATG are consistent with the scenario illustration shown on the upper right-hand side of the screen. Note: the illustration requires a few seconds to update after you make a change to the screen selections (see example settings in Figure 23).Note: TDIM setup in GeneralSetup must be completed first (ref. Step 12).

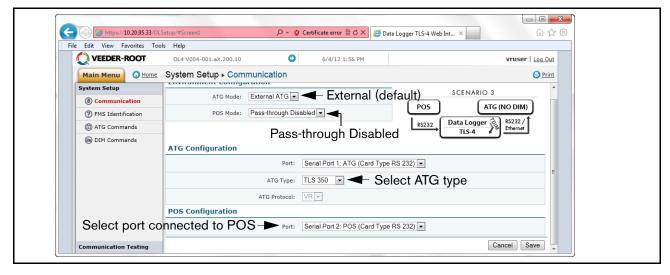


Figure 23. Example Environmental Configuration Page Settings - Scenario 3

Under "ATG Configuration", select the port that is connected to the ATG on the "Port" drop down menu. Then select the "ATG type" that the DL is connected to from the drop down menu. ATG Protocol current only allows "VR" so this selection cannot be changed. Under "POS Configuration", select the port that is connected to the POS on the "Port" drop down menu. Once you have completed these selections for the installation scenario, click the "Save" button to keep these settings.

19. Select the "FMS Identification" screen and enter the six-digit FMS site identification number. Then click on the "Save" button (see Figure 24).



Figure 24. Example FMS ID Entry

20. Wait at least 30 seconds from the completion of the previous step to allow for the system to re-initialize with the new settings. Then click on the "Communication Testing" link at the lower left bottom of the System Setup column (see above figure), then click on "ATG". Click on the "Inventory" button, which will enter the command

"I20100". After several seconds, a response should appear providing the current inventory data from the ATG. If no response is received, there is a problem either in the setup parameters or the physical connection to the ATG.

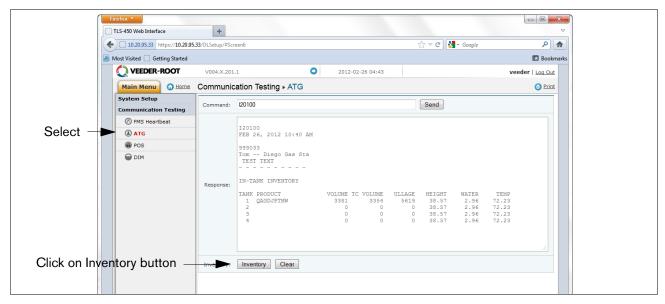


Figure 25. Inventory Command Results

21. If the DL is connected in the Pass-Thru mode (Scenario 2) and is accepting commands from the POS and passing them through to the ATG, click on "POS" to detect the POS protocol. Click the "START" button next to "Auto Detect Protocol" and wait for the Protocol Type to appear (see example in Figure 26.



Figure 26. POS Protocol Type Query

Verify that this is the correct protocol that was entered in the DIM setup in Step 12. Then click on the "Stop" button (see example in Figure 27).



Figure 27. POS Protocol Type Results

22. The DL should now be configured to collect inventory and transactional data, which will be periodically retrieved by FMS. To verify connectivity with FMS, reconnect the DL to the network or cell modem. Go to the "DLSetup" application's Communication Testing screen, click on "FMS Heartbeat", then click on the "Send Heartbeat" button (see Figure 28). Wait for the "Response" text to indicate PASS or FAIL. A PASS confirms that the DL is successfully communicating with FMS. A FAIL indicates that the connection has failed and you will need to contact FMS or the network administrator for troubleshooting assistance.

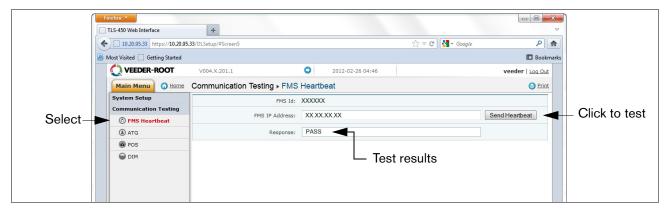


Figure 28. FMS Heartbeat Screen



IMPORTANT! Connectivity between the DL and FMS must be verified prior to completing the installation.

23. Return your laptop PC to the network settings originally set prior to the changes you made in Step 5.



