Serial Comm Modules

Installation Guide

VEEDER-ROOT

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DAMAGE CLAIMS

1. Thoroughly examine all components and units as soon as they are received. If damaged, write a complete and detailed description of the damage on the face of the freight bill. The carrier's agent *must* verify the inspection and sign the description.

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For the parts return procedure, please follow the appropriate instructions in the "General Returned Goods Policy" and "Parts Return" pages in the "Policies and Literature" section of the Veeder-Root **North American Environmental Products** price list.

WARRANTY

Please see next page, iii.

Warranty

TLS-350R, TLS-350 PLUS, TLS-350J AND TLS-300I/C, AND TLS-2 MONITORING SYSTEMS.

We warrant that this product shall be free from defects in material and workmanship for a period of one (1) year from the date of installation or twenty-four (24 months) from the date of invoice, whichever occurs first. During the warranty period, we or our representative will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser. LAMPS AND FUSES ARE NOT COVERED UNDER WARRANTY.

We shall not be responsible for any expenses incurred by the user.

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications, and a Warranty Registration and Checkout Form has been filed with Veeder-Root by an authorized Veeder-Root Distributor. This warranty will not apply to any product which has been subjected to misuse, negligence, accidents, systems that are misapplied or are not installed per Veeder-Root specifications, modified or repaired by unauthorized persons, or damage related to acts of God.

If "Warranty" is purchased as part of the Fuel Management Service, Veeder-Root will maintain the equipment for the life of the contract in accordance with the written warranty provided with the equipment. A Veeder-Root Fuel Management Services Contractor shall have free site access during Customer's regular working hours to work on the equipment. Veeder-Root has no obligation to monitor federal, state or local laws, or modify the equipment based on developments or changes in such laws.

ILS-350 MONITORING SYSTEMS

We warrant that this product shall be free from defects in material and workmanship for a period of one (1) year from the date of installation or twenty-four (24) months from the date of invoice, whichever occurs first. During the first ninety (90) days, we or our representative will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser. After the first ninety (90) days of the warranty period, we will repair or replace the product if it is returned to us, transportation prepaid, within the warranty period and is determined by us to be defective. We will not be responsible for any shipping expenses incurred by the user. LAMPS AND FUSES ARE NOT COVERED UNDER WARRANTY.

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications, and a Warranty Registration and Checkout Form has been filed with Veeder-Root by an Authorized Veeder-Root Distributor. This warranty will not apply to any product which has been subjected to misuse, negligence, accidents, systems that are misapplied or are not installed per Veeder-Root specifications, modified or repaired by unauthorized persons, or damage related to acts of God.

MODULES, KITS, OTHER COMPONENTS (PARTS PURCHASED SEPARATE OF A COMPLETE CONSOLE).

We warrant that this product shall be free from defects in material and workmanship for a period of fifteen (15) months from date of invoice. We will repair or replace the product if the product is returned to us; transportation prepaid, within the warranty period, and is determined by us to be defective. This warranty will not apply to any product which has been subjected to misuse, negligence, accidents, systems that are misapplied or are not installed per Veeder-Root specifications, modified or repaired by unauthorized persons, or damage related to acts of God.

We shall not be responsible for any expenses incurred by the user.

Figures

Introduction

General

This manual provides instructions for installing Serial Comm Modules in Veeder-Root TLS-350 Consoles having an ECPU or ECPU2 board. This manual does not include procedures for installing WPLLD COMM, EDIM or CDIM Modules. For site prep or system setup of the Comm Module, refer to the related manuals below.

Related Manuals

576013-879 TLS-3XX Series Site Prep and Installation Guide
576013-623 TLS-3XX Series System Setup

Contractor Certification Requirements

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

Level 1 Contractors holding valid Level 1 Certification are approved to perform wiring and conduit routing, equipment mounting, probe and sensor installation, tank and line preparation, and line leak detector installation.

Level 2/3 Contractors holding valid Level 2 or 3 Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root Tank Monitoring Systems, including Line Leak Detection and associated accessories.

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.

	ELECTRICITY High voltage exists in, and is supplied to, the device. A potential shock hazard exists.		**TURN POWER OFF** Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.
	WARNING Heed the adjacent instructions to avoid equipment damage or personal 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.

⚠ WARNING

This product contains high voltage connections. Improper installation may result in serious injury or death.

Electrical shock resulting in serious injury or death may result if power is On during module installation.

Observe the following precautions:

1. Turn Off power to the console before opening console door.
2. Read and follow all instructions in this manual, including all safety warnings.
3. For use with peripheral devices which are UL listed, have an EIA RS232C (or RS422A) communication protocol and are not installed over a hazardous location.
4. Substitution of components may impair intrinsic safety.

Installation Requirements

Requirements for RS-232 Connections

Any peripheral equipment connected to an RS-232 serial port must meet the following criteria:

- Peripheral equipment must be UL Listed.

- The equipment must have an EIA standard RS-232C or RS-232D Comm protocol.

- The equipment must NOT be installed over or in a hazardous location.

- RS-232 Cable runs longer than 50 feet could result in data errors and component damage.

- RS-232 Cable runs greater than 50 feet are not warranted for proper operation regardless of module type. For RS-232 communications greater than 50 feet, Veeder-Root recommends the use of short haul modems.

Sitefax Module Criteria

- SiteFax Modem Comm Module: A standard phone cable (RJ-11 cable) connected to an analog or outside phone line will be required for installation (not included). The SiteFax Module is not compatible with digital telephone switching exchanges (digital PBX).

- Never install telephone wiring during a lightning storm. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

- Each SiteFax Module meets the following:

  For connection to telephone equipment subject to local regulations.

  Maximum short circuit current: 0 amps

  Maximum open circuit voltage: 0 volts

  The SiteFax Module does not generate any power on the phone line connection.

Comm Modules That Can Be Installed In Slots 1, 2, or 3

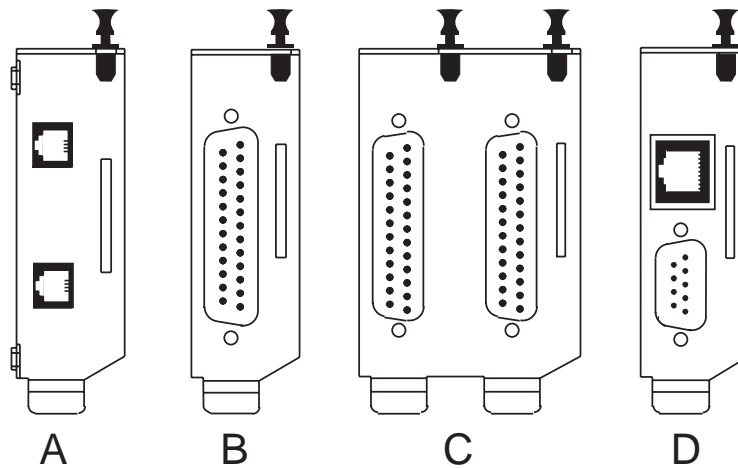| In Console P/N	End Plate Type (See Figure 1)	Spare P/N	ID Resistor	Connector Type	Single-Port Module Description
330149-002	A	847490-326	40.2 K	RJ-11 (2)	SiteFax 300/1200/2400 Baud Modem & 2400/4800/7200/9600 Baud Fax (Connect phone line to either connector)
330148-001	C	847490-303	15 K	DB-25 (2)	Serial Port with Auxiliary Port (DB-25) for daisy chaining one or more consoles
329362-001	B	847490-301	15 K	DB-25	RS-232 Serial Port, general purpose
330000-001	B	847490-304	33 K	DB-25	Remote Printer
330546-001	B	847490-307	267 K	DB-25	SiteLink, (Not intended for general purpose applications)
329362-003	B	847490-328	332 K	DB-25	Satellite, Amoco Applications
329362-004	B	847490-329	475 K	DB-25	Satellite, Shell Applications
329362-005	B	847490-316	402K	DB-25	Maintenance Tracker (Installs only in consoles with an ECPU2 board, a NVMEM203 board, and Version 27 or later software.)

consoles\connectors.eps

A   B   C   D

Figure 1. Comm Module End Plate Types

Comm Modules That Can Be Installed In Slot 4

Before installing the dual-port module in slot 4 of the Comm bay, connect the 4-pin connector (of the included wiring harness) to J4 on the Module. After the module is installed, connect the 8-pin connector of the harness to J6 on the ECPU/ECPU2 board (refer to Figure 2 on page 6). Two dual-port modules can be installed in slots 3 and 4 by using a double dual-port wiring harness (P/N 332609-001).

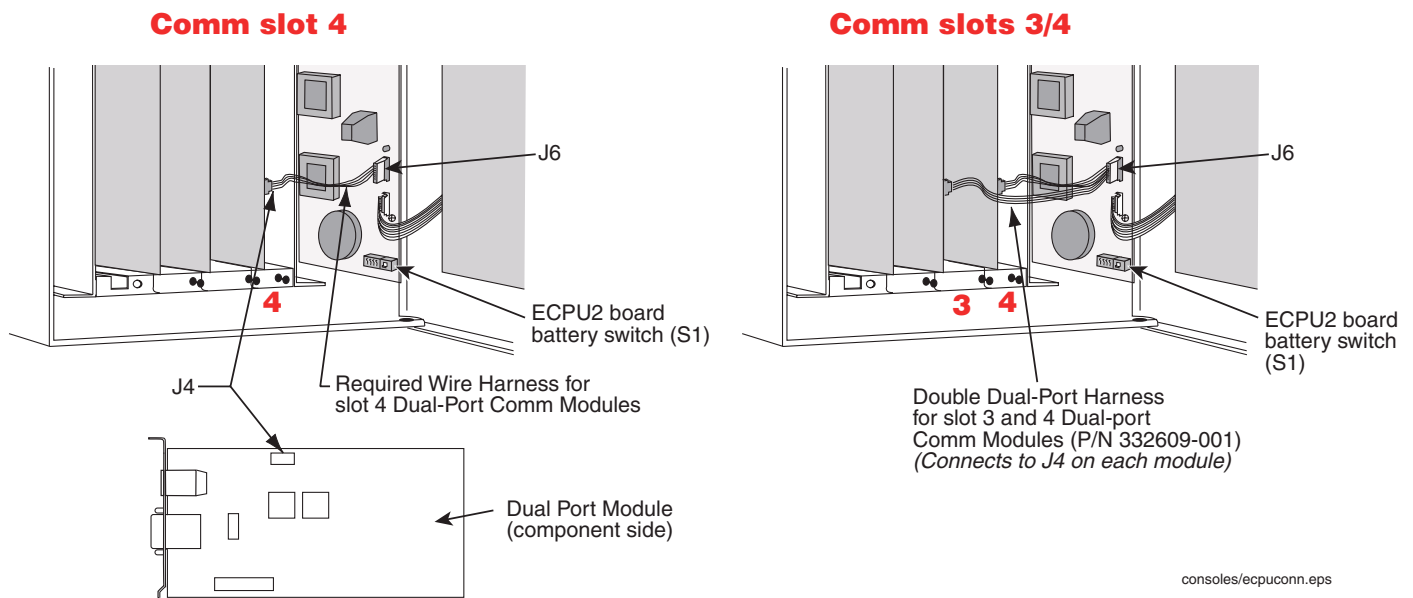| In Console P/N	End Plate Type (See Figure 1)	Spare P/N	ID Resistor	Connector Type	Dual-Port Module Description
330586-011	D	847490-321	27.4 K	RJ-45	Remote Display (Remote Display must be connected).
			15 K	DB-9	Serial Port for consoles requiring more than 3 Comm modules.
330586-001	D	847490-311	68.1 K	RJ-45	Not intended for general purpose applications.
			15 K	DB-9	Serial Port for consoles without a remote display requiring more than 3 Comm modules.
330586-015	D	847490-330	68.1 K	RJ-45	Not intended for general purpose applications.
			332 K	DB-9	Satellite, Amoco Applications. Settings: 9600, 8, N, 1
330586-016	D	847490-331	68.1 K	RJ-45	Not intended for general purpose applications.
			475 K	DB-9	Satellite, Shell Applications. Settings: 2400, 8, N, 1
331944-001	D	847490-315	82.5 K	RJ-45	This multiport module provides serial communications at service stations running In-Station Diagnostics that require a RS-485 port. Multiport modules require that the console be equipped with an ECPU2 board, a NVMEM203 memory module and software version 24 or higher.
			15 K	DB-9	Serial port for consoles requiring more than 3 Comm modules.
330586-017	D	847490-317	15 K	RJ-45	Serial port for general TLS use.
			402 K	DB-9	Serial port for Maintenance Tracker. Maintenance Tracker modules require that the console be equipped with an ECPU2 board, a NVMEM203 memory module and software version 27 or higher.

Comm slot 4   **Comm slots 3/4**

Figure 2.   Dual Port Module Wiring Harnesses

Comm Module Installation

INSTALLING A NEW COMM MODULE IN AN EMPTY SLOT, OR REPLACING MODULES WITH THE SAME PART NUMBER

1. Open the left-hand door of the console by unscrewing the left-top and left-bottom torx screws.

2. To retain current system setup, be sure that the Battery Backup switch is set to "ON".

3. Turn console power Off.

4. To install the new Comm module, first remove the cover plate from an open slot in the communication compartment.

    If your console has a snap connector which secures the cover plate in the card cage, pull it out and lift out the cover plate.

    If your console has "knockout" cover plates, open the printer door and insert a flat blade screw driver in the slot provided in the front of the cover plate you are removing and twist it to break the front set of metal securing tabs (see Figure 3). Once the front tabs are broken, carefully rock the loosened end of the plate until the rear set of securing tabs break. Remove and discard the cover plate.

5. To replace an identical Comm module with another, remove and label any attached connectors to the module's end plate (underneath the console), pull out on the fastener in the module's end plate until it unsnaps and remove the Comm module.

6. Slide the new or replacement Comm module into the open slot (see Figure 3 on page 7) until the 24-pin female connector on the rear edge of the board seats in the 24-pin male connector on the motherboard. Do not apply excessive force when installing the module. With your thumb, push in the black retaining fastener on the end plate until it snaps into the hole in the card cage.
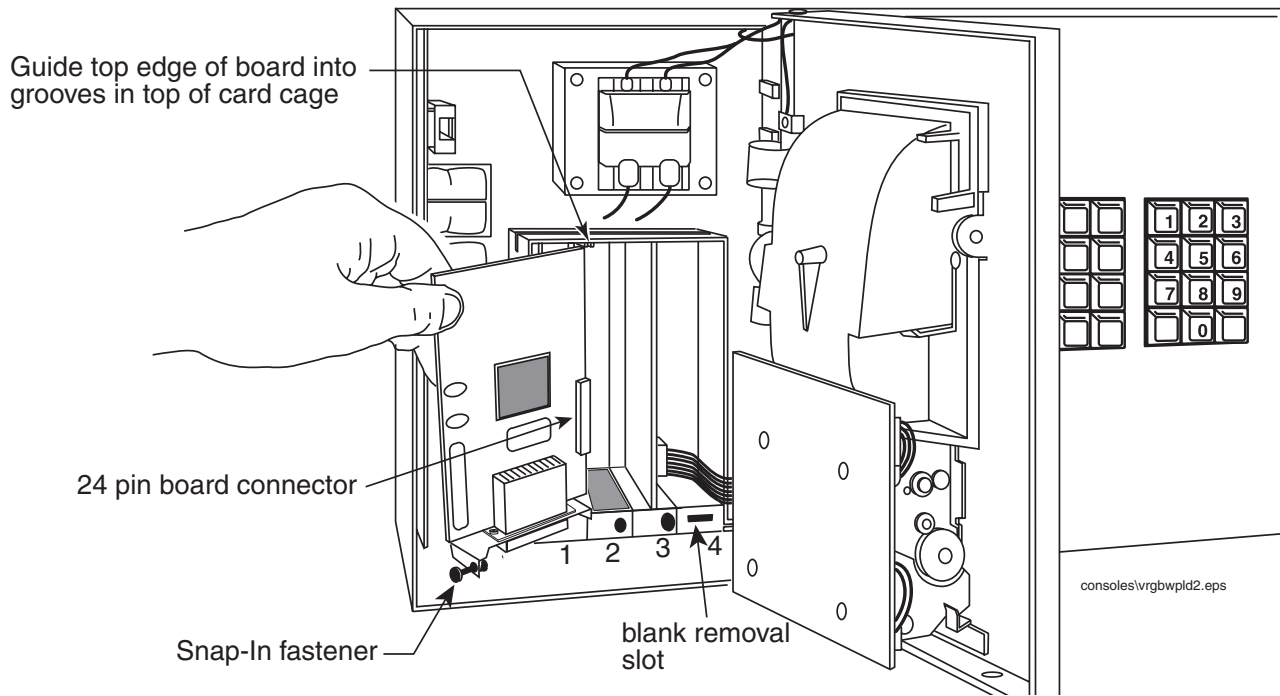
Figure 3. Comm Module Installation

7. Connect the appropriate cable(s) to the new or replacement Comm module's end plate connector(s). If you are adding a Dual-Port Comm Module, connect the wiring harness to J4 on the Dual Comm Module board and to J6 on the ECPU/ECPU2 board (see Figure 2 on page 6).

8. When you are finished, be sure any unused slots in the comm cage have a blank end plate installed.

9. Turn console power On.

10. After the console has warm booted, you can now setup a new board following the appropriate System Setup procedure.

SWAPPING COMM MODULES WITH DIFFERENT PART NUMBERS

1. If your console has a printer, press the front panel MODE key until you see the display below:

> **SYSTEM SETUP**
> **PRESS <STEP> TO CONTINUE**

As a precaution, press the console PRINT key to printout a Setup Data Report. This report contains a record of all setup values entered into this console. After printing the setup report, press MODE until you return to the operating mode's main screen:

> **MMM DD, YYYY HH:MM:SS XM**
> **ALL FUNCTIONS NORMAL**

2. Run the Archive Utility (back up to E^2) procedure.

3. Open the left-hand door of the console by unscrewing the top-left and bottom-left torx screws.

4. Set the Battery Backup switch to the "OFF" position.

5. Switch console power Off.

6. Remove and label any attached connectors from the existing Comm Module's end plate (underneath the console) that will be reused by the replacement Comm Module. If you are removing a Dual-Port Comm Module, disconnect the wiring harness from J4 on the dual-port module and from J6 on the ECPU/ECPU2 board (see Figure 2 on page 6). Pull on the fastener in the modules end plate until it unsnaps, then remove the Comm module.

7. Slide the new Comm module into the open slot (see Figure 3 on page 7) until the 24-pin female connector on the rear edge of the board seats in the 24-pin male connector on the motherboard. Do not apply excessive force when installing the module. With your thumb, push in the black retaining fastener on the end plate until it snaps into the hole in the card cage.

8. Connect the appropriate cable(s) to the new Comm Module's end plate connector(s). If you are swapping dual-port Comm modules, reconnect the wiring harness to J4 on the dual-port Comm module board and to J6 on the ECPU/ECPU2 board (see Figure 2 on page 6).

9. When you are finished, be sure any unused slots in the Comm bay have a blank end plate installed.

10. Power-up the console. The console front panel display will cycle through the following screens:

> **CLEARING ALL RAM**

> **SYSTEM SELF TEST**

> **WORKING**
> **************************************

This messsage only appears if a SiteFax or SiteLink module is installed

> **SYSTEM STARTUP COMPLETE**

> **MMM DD, YYYY HH:MM:SS XM**
> **RESTORE SETUP DATA?** ———— **Select YES**

At this point the ALARM audible beeper and front panel light will begin turning on and off, and the printer will printout:

> ****** SYSTEM RESET ******
> **MMM DD, YYYY HH:MM XM**

and the front panel display will read:

> **MMM DD, YYYY HH:MM XM**
> **BATTERY IS OFF**

11. Press the ALARM/TEST key to silence the audible alarm. Slide the Battery Backup switch (S1 or SW1) to the ON position. After a few seconds, the alarm light will go out and the front panel display will read:

> **MMM DD, YYYY HH:MM XM**
> **ALL FUNCTIONS NORMAL**

12. You can now setup the new board(s) following the appropriate System Setup procedure.

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