TCP/IP Interface Module

Installation Guide

VEEDER-ROOT

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Please see next page, iii.

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

Figures

Introduction

General

This manual contains procedures to install a TCP/IP Interface Module into the following consoles:

- Veeder-Root TLS-3XX consoles
- Red Jacket ProPlus and ProMax consoles

If this is a new installation or if site preparation is necessary, refer to the console's Site Preparation and Installation manual, or contact your Veeder-Root representative for assistance.

TCP/IP Interface Requirements

Minimum system requirements for TCP/IP Interface Module operation are listed below:

- Console system software: Version 15 or higher - Version 21 or higher is recommended.
- Network connection to a PC requires a hub. Connecting to a hub requires a straight CAT 5 cable.
- **Direct connection to a laptop requires an ethernet crossover cable**.
- Connection to a LAN or WAN.
- Knowledge of networking.

TCP/IP Kits

- TLS-300/ProPlus console kit (P/N 330020-424):
  - TCP/IP module (P/N 331871-001)
  - #4-40 x 0.312" taptite screw - T-10 Torx drive (P/N 510500-414)
  - Installation Guide (P/N 577013-776)
- TLS-350/ProMax console kit (P/N 330020-425):
  - TCP/IP module (P/N 331870-001)
  - Wiring harness (P/N 330584-001)
  - Installation guide (P/N 577013-776)

Contractor Certification Requirements

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Warranty Registrations may only be submitted by selected Distributors.

Related Manuals

576013-623   TLS-3XX/ProPlus/ProMax Series System Setup manual

576013-879   TLS-3XX/ProPlus/ProMax Series consoles Site Prep and Installation Guide

Safety Precautions

The following safety symbols are used throughout this manual to alert you to important safety hazards and precautions

	EXPLOSIVE Fuels and their vapors are extremely explosive if ignited.		**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.		**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 Heed the adjacent instructions to avoid equipment damage or personal injury.		

⚠ WARNING	
	You are working with a device in which potentially lethal voltages may be present. **Death or injury may result if safety precautions are not followed.**
	1. **Read all instructions and warnings.**

TCP/IP Interface Module Installation

Installation of the TCP/IP Interface module consists of:

1. Verifying the module's configuration (Complete the checklist in Appendix A at this time),
2. Installing the module in the TLS-300 console (page 4) or the TLS-350 console (page 5),
3. Performing setup of the module in the TLS (page 7), and
4. Setting up the module's IP Address/Configuration using either Telnet (page 15) or a browser (page 20).

Verifying TCP/IP Interface Module Configuration

Key components of the TCP/IP Interface module are shown in Figure 1.

⚠ **IMPORTANT! Write down the ethernet address from the label on the back of the TCP/IP board. You will need to enter this number for the TCP/IP board's hardware address in the module's IP Address/ Configuration procedure later in this manual (also record the rev of the board as it may also be needed).**
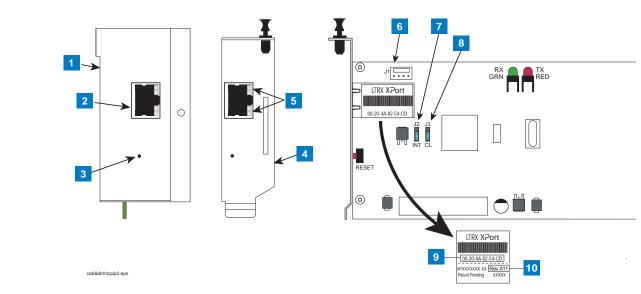
Figure 1. TCP/IP interface module component locations

Legend for numbered boxes in Figure 1

1. End plate for TLS-300/ProPlus console TCP/IP module.
2. RJ-45 Connector (typical both end plates)
3. Reset button access (typical both plates)
4. End plate for TLS-350/ProMax console TCP/IP module
5. Network connection/activity LEDs (typical both end plates)
6. J1 Connector
7. J2 Jumper - Interrupt
8. J3 Jumper - Chip Select
9. Write down the ethernet address from the label on the LTRX XPort module (in this example, 00-20-4A-82-54-CD). You will need this address for the TCP/IP module setup.
10. Also record the rev number (in this example A11). It may be needed for the TCP/IP module setup.

Installing the TCP/IP Interface Module in the Console
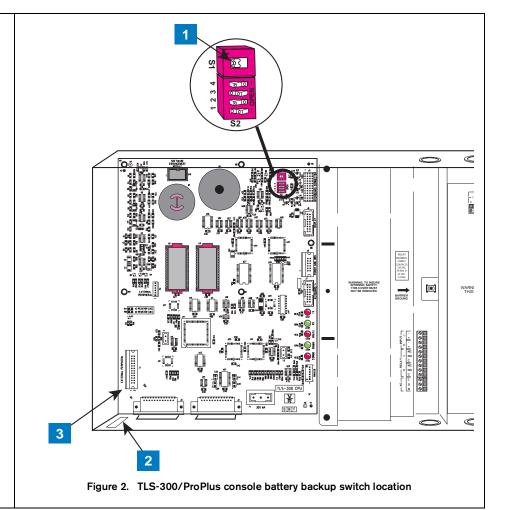
TLS-300/PROPLUS CONSOLES

1. Open the left door of the console (see Figure 2). Verify that the battery backup switch is in the On position, then turn Off power to the console.

2. Remove knockout blank from left bottom of console. Slide in the configured TCP/IP Interface Module until the motherboard connector is snugly seated and the left edge of the module's bracket is in the notch cutout in the left side of the console. Attach securing screw from kit (see Figure 3). Leave the console door open.
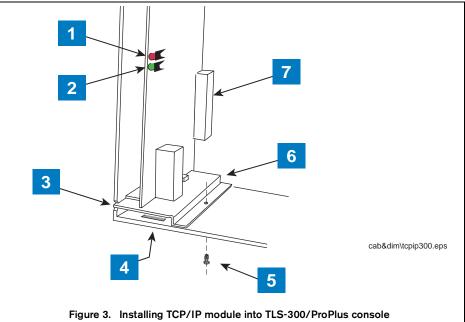
Legend for numbered boxes in Figure 2

1. Battery backup switch (S1) shown in 'On' position (to left)

2. Remove knockout blank to install TCP/IP module.

3. Connector for TCP/IP module

Figure 2.   TLS-300/ProPlus console battery backup switch location

Legend for numbered boxes in Figure 3

1. TX (red)
2. RX (green)
3. Bracket secured in notch
4. Remove blank in console base for access to module's plug-in connector
5. #4-40 x 0.312" taptite screw - T-10 Torx drive (P/N 510500-414)
6. Module bracket
7. Module plugs into male connector on motherboard

cab&dim\tcpip300.eps

**Figure 3. Installing TCP/IP module into TLS-300/ProPlus console**

TLS-350/PROMAX SERIES CONSOLES

1. Open the left door of the console. Verify that the battery backup switch (SW1) is in the 'On' position (see Figure 4), then turn off power to the console.

Legend for numbered box in Figure 4

1. Battery backup switch (S1) shown in 'On' position (up).

1 2 3 4
OPEN
SW2   SW1

cab&dim\tcpip2fig3.eps

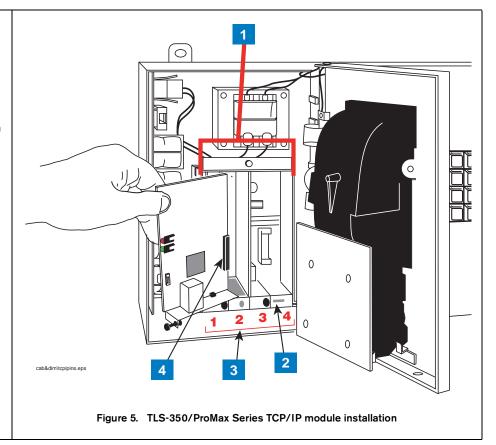**Figure 4. TLS-350/ProMax Series console battery backup switch location**

2. Installing the TCP/IP module in slots 1 - 3 (Preferred Location)

The TCP/IP module can be installed in any empty slot of the com bay card cage, but the module's default settings require that it be installed in slots 1 - 3.

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 (ref item 2 in Figure 5). Once the front tabs are broken, carefully move the loosened end of the plate up and down until the rear set of securing tabs break. Remove and discard the cover plate. Slide the module into the open slot until the motherboard connector is snugly seated. 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.

Legend for numbered boxes in Figure 5

1. Com bay card cage
2. Com slot cover plate
3. Module slots 1 - 4
4. 24-pin board connector on TCP/IP module

cab&dim\tcpipins.eps

Figure 5. TLS-350/ProMax Series TCP/IP module installation
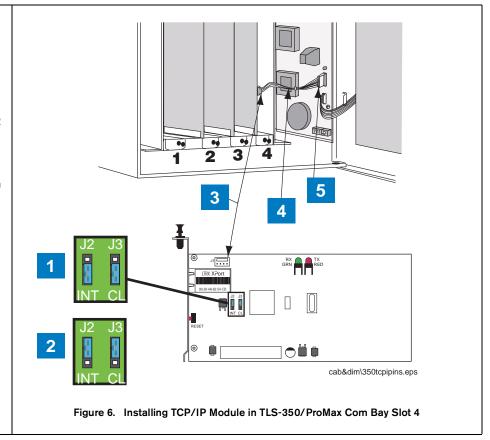
3. Installing the TCP/IP module in slot 4 (Alternate Location)

If slots 1 - 3 are in use, or if you want to free up slots 1 - 3 for other modules, the TCP/IP module can be installed in slot 4. To use slot 4, you must move jumpers J2 and J3 on the module onto the 2 top pins, and connect the cable from the kit (P/N 330584-001) to connector J1 on the TCP/IP module and to connector J6 on the console's ECPU board (see Figure 6). **Note: if the TCP/IP module is installed in slot 4, the displayed slot number (X) will be 5.**

4. Verify that the RJ-45 plug in the module's bracket is accessible through the slot opening in the bottom of the console.

5. When you are finished, make sure any unused slots in the com cage have a blank end plate installed. Leave the console door open.

Legend for numbered boxes in Figure 6

1. J2/J3 jumper positions if installing TCP/IP module in slots 1-3 (default positions)
2. Move jumpers J2/J3 onto 2 top pins if installing TCP/IP module in slot 4
3. J1 connector
4. Interconnecting cable from the kit (P/N 330584-001)
5. J6 on ECPU board

Figure 6.   Installing TCP/IP Module in TLS-350/ProMax Com Bay Slot 4

TLS Console Setup of the TCP/IP Interface Module

1. Close and secure the console front door. Restore power to the console.

2. You will need to know what version software is installed in the console to properly setup the TCP/IP module. Press the front panel MODE key to access Diag Mode. Press FUNCTION key to access System Diagnostic:

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

Press the STEP key to view the software revision level:

> **SOFTWARE REVISION LEVEL**
> **VERSION XYY.XX**

Where YY equals the console's installed software. For example, if the version is 123.02, the software version is 23.

3. Press the front panel MODE key to access the Setup Mode. Press the FUNCTION key to access Communications Setup.

4. In Communications Setup, press STEP until you see Port Settings, then press ENTER to display the message::

> **COMM BOARD: X (Type)**
> **BAUD RATE: 1200**

If necessary, press the TANK/SENSOR key until you see the message above, where X = the slot number in which you installed the TCP/IP Interface Module, and Type = S-SAT or RS-232. **Note: for TLS-350/Pro-Max consoles only - if the TCP/IP module was installed in slot 4 of the Com Bay card cage, the displayed slot number (X) will be 5.**

5. Depending on displayed board type (S-SAT or RS-232) and the console's installed software revision level, select the com board setup parameters shown in Table 1, Table 2, or Table 3 as applicable.

Table 1. Com Setup Selections - S-SAT board type & V15 - V20 console software

Com Setup Parameter	Setting
Baud Rate	9600
Parity	NONE
Stop Bit	1 STOP
Data Length	8 DATA
RS-232 END OF MESSAGE	DISABLED

Table 2. Com Setup Selections - S-SAT board type & V21 & later console software

Com Setup Parameter	Setting
Baud Rate	9600
Parity	NONE
Stop Bit	1 STOP
Data Length	8 DATA
Code (security)	DISABLED
DTR NORMAL STATE	HIGH
RS-232 END OF MESSAGE	DISABLED

Table 3. Com Setup Selections - RS-232 board type and V15 & later console software

Com Setup Parameter	Setting
Baud Rate	9600
Parity	NONE
Stop Bit	1 STOP
Data Length	8 DATA
Code (security)	DISABLED
RS-232 END OF MESSAGE	DISABLED

Connect a PC or Laptop to the TCP/IP Interface Module

There are two ways you can connect a PC to the module:

• Over a network (LAN, WAN), or

• Directly

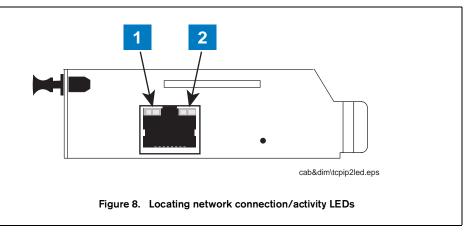## CONNECTING TO THE TCP/IP INTERFACE MODULE OVER A NETWORK

1. Connect the desktop or laptop to the TCP/IP Interface Module as shown in Figure 7. Insert the RJ-45 plug of the network CAT 5 cable into the RJ-45 connector in the end plate of the TCP/IP module.

Legend For Numbered Boxes In Figure 7

1. PC
2. Plugs into PC Ethernet card
3. Ethernet cable
4. Hub
5. Do not use uplink connector
6. Tank Gauge
7. Plugs into RJ45 connector in end plate of TCP/IP module
8. Ethernet cable

cab&dim\tcpipnc.eps

Figure 7. Network connection

2. Locate the 2 LEDs on the top edge of the RJ-45 connector on the module's end plate (see Figure 8).

Legend for numbered box in Figure 8

1. Network connection/ activity LEDs

cab&dim\tcpip2led.eps

Figure 8.   Locating network connection/activity LEDs

Depending on network connection speed, the left or right LED on the top edge of the RJ-45 connector should remain 'On' when a proper connection is made (ref. Table 4).

Table 4. Network Connection/Activity LED Codes (ref. view in Figure 8)

Left LED	Right LED	Meaning
Off	Off	No link
Off	Solid amber	100Base-T half-duplex link
Off	Blinking amber	100Base-T half-duplex; activity
Off	Solid green	100Base-T full-duplex link
Off	Blinking green	100Base-T full-duplex; activity
Solid amber	Off	10Base-T half-duplex link
Blinking amber	Off	10Base-T half-duplex; activity
Solid green	Off	10Base-T full-duplex; link
Blinking green	Off	10Base-T full-duplex; activity

After confirming a successful link between the PC and the TCP/IP module, proceed to the either the IP Address/ Configuration section using Telnet or using a browser as desired.

CONNECTING TO THE TCP/IP INTERFACE MODULE DIRECTLY

Connect the laptop to the TCP/IP Interface Module as shown in Figure 9. Insert the RJ-45 plug of the ethernet crossover cable into the RJ-45 connector in the end plate of the TCP/IP Interface Module. **Important! you must use an ethernet crossover cable.**

Legend For Numbered Boxes In Figure 9

1. Plugs into RJ45 Ethernet Adaptor in Laptop
2. Laptop
3. **You MUST use an Ethernet crossover cable!**
4. Plugs into RJ45 connector in end plate of TCP/IP module
5. Tank Gauge

consoles\tcpipdc.eps

Figure 9.   Direct connect using ethernet crossover cable

Locate the 2 LEDs on the top edge of the RJ-45 connector on the module's end plate (see Figure 8 on page 10).

Depending on the network card installed in the laptop, the left or right LEDs on the top edge of the RJ-45 connector should remain 'On' when a proper connection is made as shown in Table 4.

Before entering the TCP/IP Interface Module's IP Address enter a static IP Address in your connected laptop. IP Address setup procedures for both Windows 98 and 2000 are discussed in this section. Windows ME or XP icon or window labeling may be only slightly different. Please check those operating system's manuals to verify their method of locating the Local Area Connection status/properties dialog boxes and changing IP Addresses.

Setting Your PC's IP Address for Direct Connect (Windows 98)

1. Connect your laptop to the TCP/IP card as shown in Figure 9 above. Go to your laptop's Control Panel folder and doubleclick the 'Network' icon to display the Network screen (Figure 10)
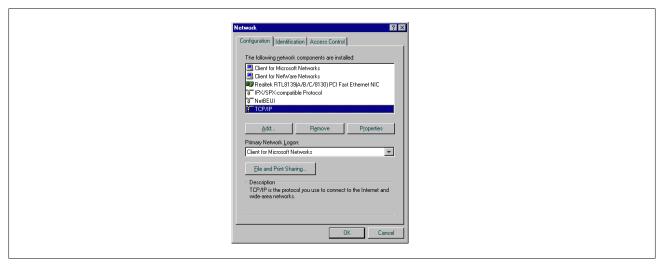
Figure 10.   Network Screen

2.   In the 'The following network components are installed.' window, highlight **TCP/IP** and then click the **Properties** button to display the TCP/IP Properties dialog box (Figure 11).
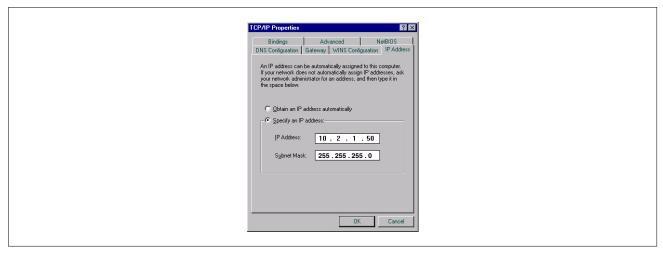

Figure 11.   TCP/IP Properties dialog box

3.   Click the **Use the following IP Address** radio button and enter an IP Address and Subnet mask for your laptop. You can use an IP address that is one digit off from the customer supplied IP Address you will assign to the console's TCP/IP Interface Module. For example, if the IP Address for the TCP/IP module is 10.2.1.51, you would enter 10.2.1.50 for the laptop's IP Address. You also need to enter a Subnet mask. Use the same Subnet mask that is shown in Figure 11 above (255.255.255.0).

Note: Prior to reconnecting your laptop to a network, you will need to select the **Obtain an IP address automatically** radio button as shown in Figure 11 above.

4.   You are now ready to enter the TCP/IP Interface Module's IP Address.

5.   Proceed to the IP Address/Configuration section using Telnet or using a browser as desired.

Setting Your Laptop's IP Address for Direct Connect (Windows 2000)

1. Connect your laptop to the TCP/IP module as shown in Figure 9 on page 11 above. Go to your laptop's Control Panel folder and doubleclick the 'Network and Dial-up Connections' icon.

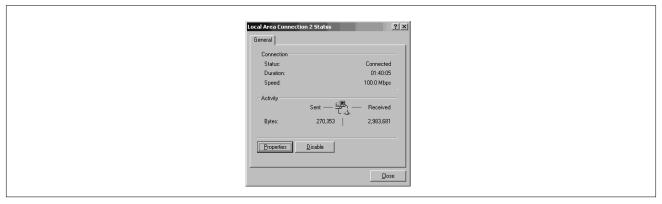2. Select **Local Area Connection** and the status screen displays (Figure 12).

Figure 12.   Local Area Connection Status Screen

3. Click the **Properties** button and the Local Area Connection Properties screen displays (Figure 13).
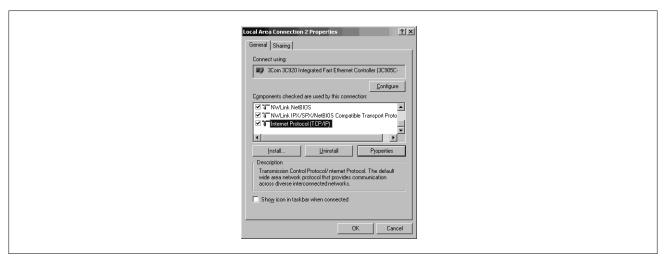

Figure 13.   Local Area Connection Properties Screen

4. In the 'connections or components used check list' window, highlight Internet Protocol (TCP/IP) and then click the **Properties** button to display the Internet Protocol TCP/IP Properties dialog box (Figure 14).
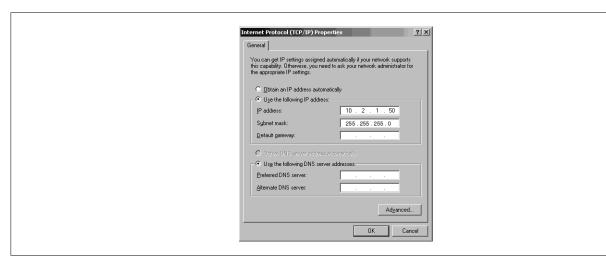
Figure 14.   Internet Protocol TCP/IP Properties dialog box

5. Click the **Use the following IP Address** radio button and enter an IP Address and Subnet mask for your laptop. You can use an IP address that is one digit off from the customer supplied IP Address you will assign to the console's TCP/IP Interface Module. For example, if the IP Address for the TCP/IP module is 10.2.1.51, you would enter 10.2.1.50 for the laptop's IP Address. You also need to enter a Subnet mask. Use the same Subnet mask that is in the example in Figure 14 above (255.255.255.0). Click OK to accept your entries.

    Note: Prior to reconnecting your laptop to a network, you will need to select the **Obtain an IP address automatically** radio button shown in Figure 14 above.

6. Proceed to the IP Address/Configuration section using Telnet or using a browser as desired.

TCP/IP Module IP Address/Configuration Using Telnet

Overview

Telnet and ARP are utilities available in Windows operating systems and are used in the TCP/IP addressing procedure:

Telnet - Telnet is a terminal emulation program for TCP/IP networks such as the Internet. The Telnet program runs on your computer and connects your PC to a server on the network. You can then enter commands through the Telnet program and they will be executed as if you were entering them directly on the server console. This enables you to control the server and communicate with other servers on the network.

ARP - ARP is a TCP/IP protocol used to convert an IP address into a physical address (called a DLC address), such as an Ethernet address. A host wishing to obtain a physical address broadcasts an ARP request onto the TCP/IP network. The host on the network that has the IP address in the request then replies with its physical hardware address. ARP will only work when the console and PC share the same subnet.

Port Number - This setting represents the source port number in TCP connections. It is the number that identifies the channel for remotely initiating connections. The range of permissable port numbers is 1 - 65535, except for the following reserved port numbers:

Reserved Port Numbers
1 - 1024
9999
14000-14009
30704
30718

NOTE: Do not use any of the reserved port numbers on any version of the TCP/IP board.

NOTE: In addition to the IP address configuration instructions provided in this manual, it may also be possible to use the Lantronix device installer found in the Lantronix website (*www.lantronix.com*) to configure your TCP/IP module's IP address.

Entering the TCP/IP Interface Module's IP Address

With the PC connected to the TCP/IP Interface Module as discussed in the previous secton, perform the steps below.

1. At the DOS command prompt type (the spaces between words and letters in all entries must be entered as shown or the address will not be successfully assigned):

   ```
   arp -s y.y.y.y 00-20-4a-xx-xx-xx
   ```

   (where y.y.y.y is the IP address of the TCP/IP module (see your network administrator) and 00-20-4A-xx-xx-xx is the number from the label on the back of your TCP/IP module [see Figure 1 on page 3]).

   Press Enter.

   The module's IP address is added to the ARP table and the screen will return to the DOS command prompt. Type ARP -A at the DOS command prompt and press Enter to view the contents of the ARP table and verify the presence of the TCP/IP Interface Module's IP Address.

2. At the DOS command prompt type:

   ```
   telnet y.y.y.y 1
   ```

Press Enter.

The following message will appear:

```
Connecting to y.y.y.y...could not open a connection to host on port 1. Con-
nect failed or could not open connection to Y.Y.Y.Y.
```

Press OK to close the pop up screen. Close the Telnet screen. The screen will then display the DOS command prompt.

3. At the DOS command prompt type:

```
telnet y.y.y.y 9999
```

Press Enter as soon as the Telnet screen appears, press Enter again (NOTE: Telnet screen will timeout if you do not press Enter within approximately 4 seconds after the Telnet screen appears).

The Telnet Setup menu will appear on the screen (see Figure 15). Enter the required TCP/IP Interface Module's configuration settings shown in Table 5 if your console has software versions 15 - 20, or enter the settings in Table 7 if your console has software versions 21 and later.

Note: to accept a setting already in the Telnet Setup menu, press Enter to accept the value and skip to the next selection.

4. After completing the TCP/IP Interface Module's configuration, connect the module to the customer's network.

NOTE: Make changes to server configuration and channel 1 configuration only!

Press 9 and Enter to save settings and exit Telnet. A Telnet screen will pop up a warning of lost connection. Press OK and continue.
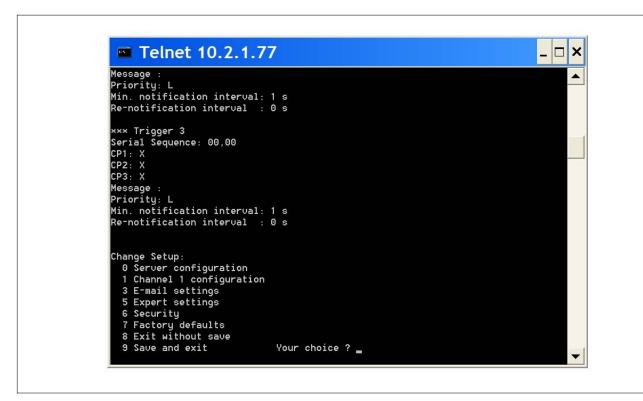

Figure 15. Telnet Setup Menu

NOTE: depending on your Telnet configuration, it may be possible to scroll up on the above window and see additional settings.

Table 5. Telnet Setup Menu Settings (Consoles with V15 - 20 Software)

Menu Selection	Setting
BASIC PARAMETERS - to access, select Change Setup option 0, press Enter	
IP Address (of console)	(get from your network administrator)
Gateway	(get from your network administrator)
Netmask's number of bits for host part	(get from your network administrator, or get from Table 6)
Telnet config password	(N)
CHANNEL 1 - to access, select Change Setup option 1, press Enter	
Baud rate	9600
I/F Mode	4C
Flow	00
Port	10001
Connect Mode	C4 (incoming net connection - accept unconditional; startup - manual connection)
Remote IP Adr	IP address of the computer the console will call on dialout. Example: 010.002.001.059[1]
(Remote) port	port of the remote computer
Disconn Mode	80 (with DTR drop)
Flush Mode	00
Disconn Time (mm:ss)	01:30 (Note: to enter Disconn time, first enter minutes press Enter, then enter seconds and press Enter)
Sendchar1	00
Sendchar2	00

[1] When setting up the console to dial out, enter CXXX for receiver phone number - where xxx is the last set of digits in the Remote IP Address set in Channel 1 of the Telnet Setup menu. For example, if you have a remote IP address of 010.002.001.059, you would enter C059.

SECURITY - to access, select Change Setup option 6, press Enter

Telnet setup is	enabled
TFTP download is	enabled
Port 77FEh is	enabled
Web Server is	enabled
Enhanced password is	disabled

SAVE AND EXIT - after making the above selections, select Change Setup option 9, press Enter

Table 6. Netmasks / # Bits for Host Part

Netmask	No. Bits for Host Part
255.0.0.0	24
255.255.0.0	16
255.255.255.0	8

Table 7. Telnet Setup Menu Settings (Consoles with V21 and Later Software)

Menu Selection	Setting
BASIC PARAMETERS - to access, select Change Setup option 0, press Enter	
IP Address (of console)	(get from your network administrator)
Gateway	(get from your network administrator)
Netmask's number of bits for host part	(get from your network administrator, or get from Table 6)
Telnet config password	(N)
CHANNEL 1 - to access, select Change Setup option 1, press Enter	
Baud rate	9600
I/F Mode	4C
Flow	02
Port	10001
Connect Mode	C4 (incoming net connection - accept unconditional; startup - manual connection)
Remote IP Adr	IP address of the computer the console will call on dialout. Example: 010.002.001.059[1]
(Remote) port	port of the remote computer
Disconn Mode	80 (with DTR drop)
Flush Mode	00
Disconn Time (mm:ss)	01:30 (Note: to enter Disconn time, first enter minutes press Enter, then enter seconds and press Enter)
Sendchar1	00
Sendchar2	00

[1] When setting up the console to dial out, enter CXXX for receiver phone number - where xxx is the last set of digits in the Remote IP Address set in Channel 1 of the Telnet Setup menu. For example, if you have a remote IP address of 010.002.001.059, you would enter C059.

SECURITY - to access, select Change Setup option 6, press Enter	
Telnet setup is	enabled
TFTP download is	enabled
Port 77FEh is	enabled
Web Server is	enabled
Enhanced password is	disabled

SAVE AND EXIT - after making the above selections, select Change Setup option 9, press Enter

5. After saving your Telnet menu setup settings for the TCP/IP Interface Module made in either Table 5 or Table 7 above as required, you can now communicate with the console in one of five ways:

    - Telnet Session

      At the DOS command prompt type:

      ```
      Telnet y.y.y.y 10001
      ```

      (where y.y.y.y is the IP address of the TCP/IP Interface Module and 10001 is the port number. Make sure you enter spaces as shown).

    - Inform (version 2.0 or later)

      See Inform's online help for setup instructions using a TCP/IP connection.

    - ProCom's Telnet interface - see this software's instructions.

    - Windows Terminal application.

    - Using customer's own application.

AFTER NETWORK SETUP OF THE TCP/IP MODULE

When using an ethernet crossover cable to configure the TCP/IP Interface Module, and programming is completed, connect the console to the network.

TCP/IP Module IP Address/Configuration Using a Browser

NOTE: This procedure is not necessary if you completed the configuration using the Telnet method discussed in the previous section.

Procedure

After your TCP/IP Interface Module **has an IP address**, you can log into it using a standard Web browser **with Java enabled**.

1. Type the TCP/IP Interface Module's IP address into the Web browser's URL (Address/Location) field (see Figure 16).

   Once you have connected to the TCP/IP Interface Module, you will see the Lantronix Web Manager interface (see Figure 17).
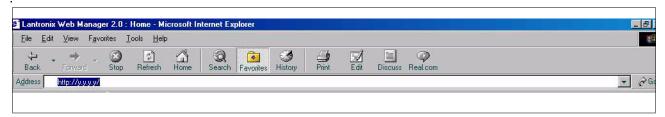
.

Figure 16.   Web Browser Login

Figure 17. Web Manager Interface

2. Make the following changes to the default selections in the interface. Confirm/select the settings shown in Table 8. When you are finished, click the UPDATE SETTINGS button to save changes and exit the browser.

Table 8. TCP/IP Interface Module Settings

Description	Channel 1

SERIAL PORT SETTINGS

Description	Channel 1
Serial Protocol	RS232
Speed	9600
Character Size	8
Parity	None
Stop Bit	1
Flow Control	NONE [for consoles w/ software versions 15-20] CTS/RTS [for consoles w/ software versions 21 & up]

CONNECT MODE SETTINGS

Description	Channel 1
UDP Datagram Mode	Disable
UDP Datagram Type	None
Incoming Connection	Accept Unconditional
Response	Nothing (quiet)
Startup	Manual Connection

DEDICATED CONNECTION

Description	Channel 1
Remote IP Address	0.0.0.0
Remote Port	0
Local Port	10001

FLUSH MODE INPUT BUFFER (LINE TO NETWORK)

Description	Channel 1
On Active Connection	Disabled
On Passive Connection	Disabled
At Time of Disconnect	Disabled

FLUSH MODE OUTPUT BUFFER (NETWORK TO LINE)

Description	Channel 1
On Active Connection	Disabled
On Passive Connection	Disabled
At Time of Disconnect	Disabled

PACKING ALGORITHM

Description	Channel 1
Packing Algorithm	Disabled
Idle Time	Pack Algorithm Disabled!
Trailing Characters	Pack Algorithm Disabled!

Table 8. TCP/IP Interface Module Settings

Description	Channel 1
Send Immediate After Send Char	Disable
Send Char Define 2-Byte Sequence	Disable
Send Characters 01	Not Set
Send Characters 02	Not Set

ADDITIONAL SETTINGS

Disconnect Mode	with DTR Drop
Check For Ctrl-D To Disconnect	Disable
Port Password	Disabled
Telnet Mode	Disabled
Inactivity Timeout	Enabled
Inactivity Timer	1:30
Port Password	

AFTER NETWORK SETUP OF THE TCP/IP MODULE

When using an ethernet crossover cable to configure the TCP/IP Interface Module, and programming is completed, connect the console to the network.

Appendix A - TCP/IP Configuration Check List

These checklists are intended to be used in conjunction with the instructions in the TCP/IP Installation manual and with relevant setup instructions in the TLS-3XX System Setup manual.

TCP/IP Card IP Address/Configuration Check List

☐ 1. What version of TLS software currently installed?_____

Note: If Version 15 to 20 use Telnet Setup Channel 1, Flow setting = 00, If Version 21 or higher use Flow setting = 02 (ref. Table 5 on page 17, or Table 7 on page 18 as appropriate).

☐ 2. What Communications slot is available?_____

Note: Slot 4 requires interconnect cable and jumper change (ref. Step 3. on Page 6).

☐ 3. What is the MAC Address that is on the TLC/IP card?_____ (example: 00-20-4a-4c-83-7d)

☐ 4. What is the IP Address that is to be assigned to the TCP/IP card?_____(example: 10.2.12.17)

Note: Customer IT department or Internet provider must provide IP Address; (_STATIC ADDRESS ONLY_).

☐ 5. What is the Gateway Address that is to be assigned to the TCP/IP card?_____(example: 10.2.12.1)

Note: Customer IT department or Internet provider must provide Gateway (Server, Router) Address.

☐ 6. Assign Netmask of 255.255.255.0 _unless_ otherwise specified by Customer Network Administrator.

Note: Customer IT department or Internet provider must provide Netmask number of bits for Host part (see Table 6).

☐ 7. What is the Remote IP Address that is assigned to the TCP/IP card?_____(example: 10.2.1.156)

Note: If TCP/IP card is required to call out TLS Alarms, you must program the REMOTE IP Address in Telnet Setup Channel 1 (ref. Table 5 on page 17, or Table 7 on page 18 as appropriate).

☐ 8. What is the Remote Port Number that is to be assigned to the TCP/IP card?_____(example: 20001).

Note: For FMS locations always assign remote port 8100, otherwise contact Customer IT department or Internet provider for Remote Port Number.

☐ 9. Before proceeding please ensure that you have the correct TCP/IP settings and cables for your laptop as per the instructions in this manual.

☐ 10. After completing steps 1 - 9 above, install TCP/IP card.

Note: If TCP/IP card is to be installed in a previously used communications slot, a cold start to the TLS console will be required.

☐ 11. After installing and configuring the TCP/IP card, verify that you can retrieve TLS Inventory through a Telnet session. Example for TLS Inventory:

c:\>TELNET 10.2.11.17 10001

<CTRL A>200

TCP/IP TLS Setup Check List

☐   1. Verify that the TLS Communication settings agree with those of the TCP/IP card (e.g., 9600 bps, None parity, 8 data length, 1 stop bit).

Note: Reference TLS-3XX System Setup manual (Communication Setup) for details.

☐   2. To ensure the TLS can call out alarms, verify that Receiver Setup is complete and alarms are assigned to the proper receiver. Reference TLS-3XX System Setup manual (Phone Directory Setup) for details.

Note: When programming the RCVR PHONE number, enter the letter C and then the last three digits of the assigned REMOTE IP address (refer to Step 7 in the Installation Check List above).

VEEDER-ROOT