



EXTERNAL ETHERNET OPTION

INSTALLATION AND USER GUIDE

VERSION 3.0
TDN 07103-00115C MAR 2009

CORPORATE HEADQUARTERS:

522 E. Railroad Street
Long Beach, MS 39560
Phone: (228) 868-1317
Fax: (228) 868-0437

COPYRIGHT NOTICE

© 2008 Triton. All Rights Reserved. TRITON is a registered trademark of Triton Delaware.

Document Updates

Mar 04 2009 Changed part number on pg 2-10 (03011-00623 to 03011-01493, part superceeded)

Contents

SECTION 1 - INTRODUCTION 1-1

- WHAT'S IN THIS ADDENDUM 1-2
- WHAT IS ETHERNET? 1-2
- EXTERNAL ETHERNET HARDWARE AND SOFTWARE FEATURES
(FOR MODEL 97XX/96XX/9100 ATMs) 1-3

SECTION 2 - INSTALLATION AND SETUP 2-1

- INTRODUCTION 2-2
- INSTALLING THE EXTERNAL ETHERNET AND CABLES (97XX MODELS) 2-2
- INSTALLING THE EXTERNAL ETHERNET AND CABLES (96XX MODELS) 2-6
- INSTALLING THE EXTERNAL ETHERNET AND CABLES (9100 MODEL) 2-10
- ETHERNET SETUP AND OPERATIONAL CHECK 2-18
- ETHERNET MODULE FRONT PANEL FEATURES 2-19
- ETHERNET MODULE REAR PANEL FEATURES 2-20

SECTION 3 - MANAGEMENT FUNCTIONS 3-1

- INTRODUCTION 3-2
- TCP/IP ADDRESSES 3-2
- COMMUNICATION TYPE 3-3**
- COMMUNICATION NUMBERS (HOST TCP/IP ADDRESS) 3-4
- TCP/IP CONFIGURATION 3-5
- TEST TCP/IP 3-6
- NETWORK SETTINGS 3-7
 - TERMINAL IP ADDRESS 3-7
 - SUBNET MASK 3-7
 - GATEWAY ADDRESS 3-7
 - CHIP VERSION 3-8
 - LISTENING PORT 3-8
 - MAC ADDRESS 3-8
 - TCP/IP TIMEOUT 3-8
- TRITON CONNECT (TCP/IP CONFIGURATION) 3-9**
- TRITON CONNECT HOST TCP/IP ADDRESSES 3-10
- TRITON CONNECT ALARM NUMBERS 3-11
- TRITON CONNECT TCP/IP CONFIGURATION 3-12
 - TERMINAL IP ADDRESS 3-12
 - LISTENING PORT 3-12

SECTION 1
INTRODUCTION

WHAT'S IN THIS GUIDE

This guide describes the setup and features offered by the External Ethernet option kits.

The contents are spread across the following sections:

Section 1 - Introduction. Summarizes the overall content of the document.

Section 2 - Installation and Setup. Describes step-by-step procedures to install and connect the External Ethernet hardware (Model 97XX, 96XX, and 9100 ATMs).

Section 3 - Management Functions. Explains how to configure the ATMs Management Functions to use the Ethernet option.

WHAT IS ETHERNET?

Ethernet is the most popular LAN technology in use today. The IEEE standard 802.3 defines the rules for configuring an Ethernet network. It is a 10 Mbps, CSMA/CD baseband network that runs over thin coax, thick coax, or twisted pair cable.

The External Ethernet option makes your terminal LAN (Local Area Network) or WAN (Wide Area Network) capable. The ATM functions that are normally performed via the dial-up telephone system, such as customer transactions and remote monitoring, can now be performed using existing in-house communications network. ATM transaction processing and hardware monitoring functions are performed across a shared network medium. Ethernet is popular because it strikes a good balance between speed, cost and ease of installation. These benefits, combined with wide acceptance in the computer marketplace and the ability to support virtually all popular network protocols, make the external Ethernet option an ideal networking solution for your 97XX, 96XX, and 9100 ATMs.

EXTERNAL ETHERNET HARDWARE AND SOFTWARE FEATURES FOR 97XX, 96XX, AND 9100 ATMs

The External Ethernet Option kit can be installed in all Model 97XX, 96XX, and 9100 ATMs. Each kit includes an easy-to-install hardware/cable assembly described in Section 2 of this guide.

The software included in the kit, allows either dial-up or local network interfacing to maximize your ATMs capabilities.

*** NOTE ***

Model 9100 ATMs also require a VISA® - approved upgrade kit (w/software specific) to operate TCP/IP communications protocol. Contact your sales representative to inquire about this option.

SPECIFICATIONS	
Dimensions	1 1/8" (H) X 2 3/4" (W) X 5 3/32" (L)
Operating Voltages	+ 5VDC / 600mA (peak)
Ethernet Connection	10Base-T (unshielded)
I/F Host Cable	RS-232 (9 pin) to RJ-45
Communications Protocol	TCP/IP



This Page Left Intentionally Blank

SECTION 2
INSTALLATION AND SETUP

SECTION 2 - INSTALLATION AND SETUP

INTRODUCTION

This section describes how to install the External Ethernet and associated hardware for 97XX, 96XX, and 9100 ATMs. The table below lists the accessories and other components included in the External Ethernet option kit for Model 97XX ATM.

PARTS AND TOOLS REQUIRED

TOOLS REQUIRED		
Flat or Phillips Screwdriver		
97XX EXTERNAL ETHERNET OPTION KIT P/N 06200-00027		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09110-00131	Module, External Ethernet	1
09120-00626	Cable Assy, RS-232 Ethernet I / F Host Cable	1
01080-00085	CAT-5 Cable, 10', RJ-45	1
02324-00007	Bumper, Adhesive	4
02617-00015	Grommet, Strain Relief	1
03072-00012	Cable Clip, Adhesive	3
03072-00015	6" TY Wrap	3
07103-00115C	Ethernet Installation and User Guide	1
-----	97XX TCP/IP Supported Software	1

INSTALLING THE EXTERNAL ETHERNET ASSEMBLY AND CABLES FOR MODEL 97XX ATMs

Follow these steps to install the Ethernet assembly and associated cables in your 97XX ATM:

1. Open the control panel hood. Turn the power switch on the power supply to the OFF (0) position.
2. Open the dispenser vault door and remove the accessory box. Remove the External Ethernet Option kit and parts supplied (kit may be sold separately).
3. Inspect the External Ethernet assembly and ensure the (4) bumper adhesives are affixed on the underside of the device (Figure 2-1).

SECTION 2 - INSTALLATION AND SETUP

NOTE: If not factory installed, follow Steps 4-6 to route and secure 10Base-T (CAT-5) cable to cabinet.

- 4. Feed the 10Base-T cable from your LAN network connection through the cabinet base cable entry located lower right, back of cabinet (Figure 2-2).



Figure 2-1

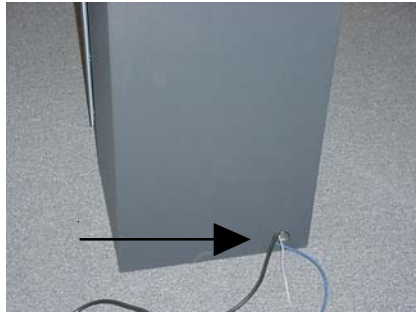


Figure 2-2

- 5. Locate the (3) adhesive clips and affix to the inside back wall. Feed the 10Base-T cable up through the cable clips and through the opening to the control panel. Cable is routed away from the AC power cable to minimize electromagnetic interference (Figure 2-3). You may have to remove the dispenser assembly for ease of cable installation.

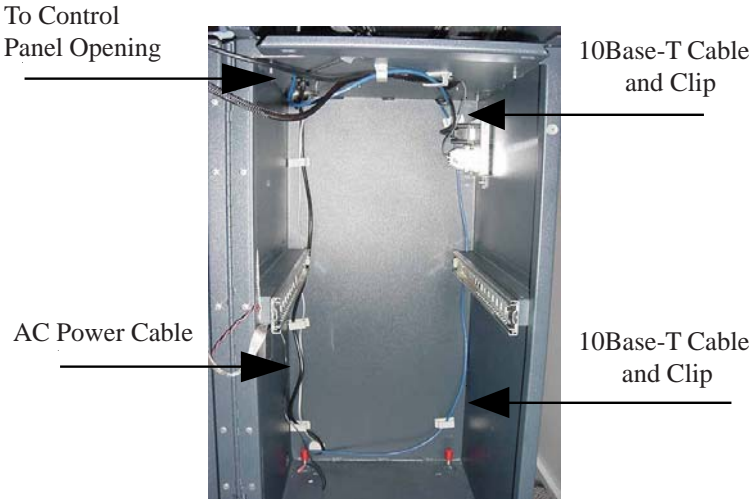


Figure 2-3

SECTION 2 - INSTALLATION AND SETUP

6. Locate the strain relief grommet, insert cable, and close grommet. Insert grommet into the opening shown in Figure 2-4. If you need to adjust the cable length, gently push/pull on cable to desired length.



Figure 2-4

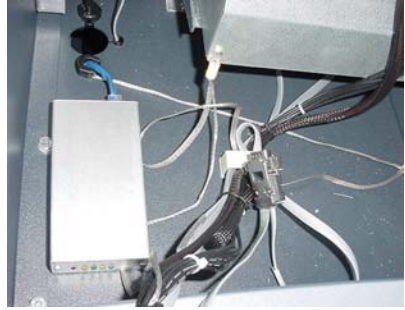


Figure 2-5

7. Connect the 10Base-T connector to the back of the External Ethernet assembly device (Figure 2-5). Locate the RS-232 I/F Host cable. Connect the 9-Pin connector end to the back of the External Ethernet assembly (depending on connector end, you may need a small flat or phillips screwdriver to secure). Place the Ethernet device in front of the grommet holding the 10Base-T cable (Figure 2-6).

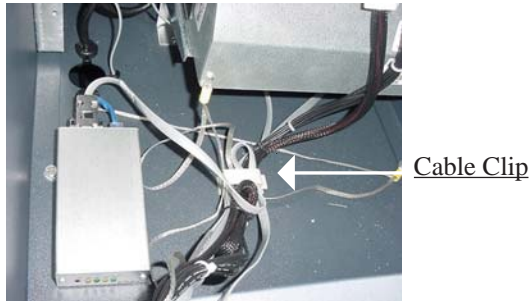


Figure 2-6

8. Connect the RJ-45 connector end of the RS-232 I/F Host Cable to **Port 2** of the Docking Board assembly (Figure 2-7).
9. Locate **J9** just above Port 2. The jumper should be on **Pins 2 and 3** to provide the necessary +5 VDC to the External Ethernet assembly device (Figures 2-7 and 2-8).
10. Secure the I/F Host cable through the cable clip located nearby and tie wrap remainder of cable to existing cable harness (Figure 2-6).

SECTION 2 - INSTALLATION AND SETUP

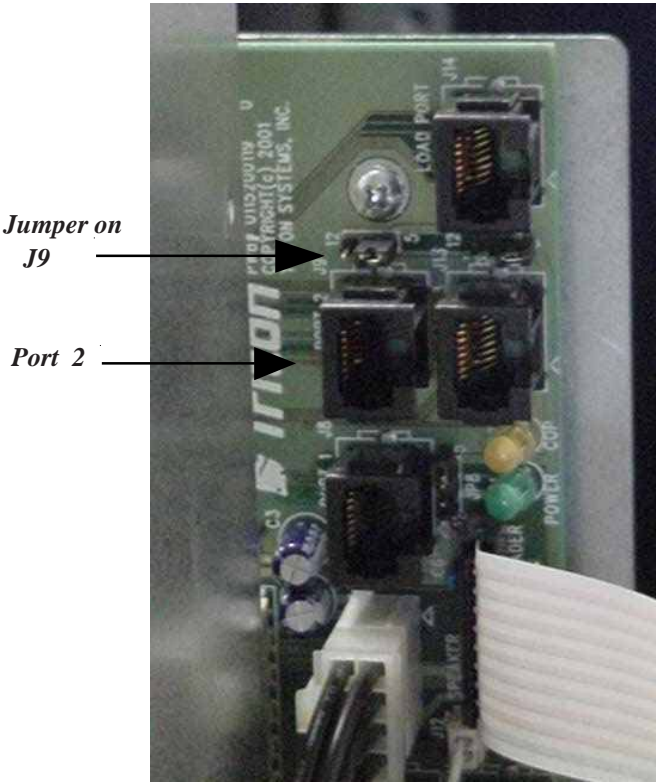


Figure 2-7. Docking Board assembly.

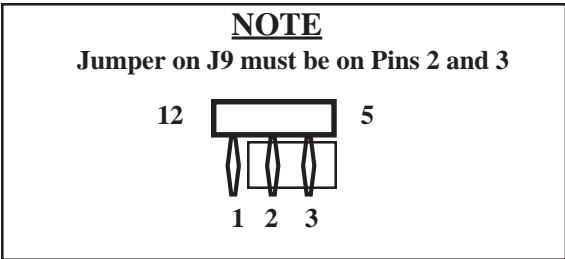


Figure 2-8. J9 Pin-outs.

SECTION 2 - INSTALLATION AND SETUP

INTRODUCTION

The table below lists the accessories and other components included in the External Ethernet option kit for Model 96XX ATM.

PARTS AND TOOLS REQUIRED

TOOLS REQUIRED		
Flat or Phillips Screwdriver		
96XX EXTERNAL ETHERNET OPTION KIT P/N 06200-00140		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09110-00131	Module, External Ethernet	1
09120-00626	Cable Assy, RS-232 Ethernet I / F Host Cable	1
01080-00085	CAT-5 Cable, 10', RJ-45	1
02324-00007	Bumper, Adhesive	4
02617-00015	Grommet, Strain Relief	1
03072-00012	Cable Clip, Adhesive	3
03072-00015	6" TY Wrap	3
07103-00115C	Ethernet Installation and User Guide	1
-----	96XX TCP/IP Supported Software	1

** IMPORTANT **

Before proceeding, there are components/modules that are required to operate the External Ethernet option. You must have the following:

- A. **SD04.00 EPROM** or higher installed in the Memory module.
- B. 1 Mbyte or greater **Memory Expansion** module.
- C. **Quad Port** module.

These items are **NOT** included in the External Ethernet option kit.

SECTION 2 - INSTALLATION AND SETUP

INSTALLING THE EXTERNAL ETHERNET ASSEMBLY AND CABLES FOR MODEL 96XX ATMs

Follow these steps to install the Ethernet assembly and associated cables in your 96XX ATM:

1. Open the control panel hood. Turn the power switch on the power supply to the OFF (0) position.
2. Inspect the External Ethernet assembly and ensure the (4) Bumper adhesives are affixed on the underside of the device (Figure 2-1).
3. Feed the 10Base-T cable from your LAN network connection through the cabinet base cable entry located lower left, back of cabinet (Figure 2-9).
4. Route the 10Base-T cable up the left back wall of the cabinet and use the top cable clips to hold in place. Exit cable up to control panel through access hole used for A/C power cord. Cable is routed away from the AC power cable to minimize electromagnetic interference (Figure 2-10). You may have to remove the dispenser assembly for ease of cable installation.

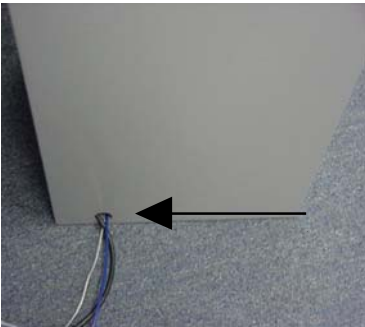


Figure 2-9

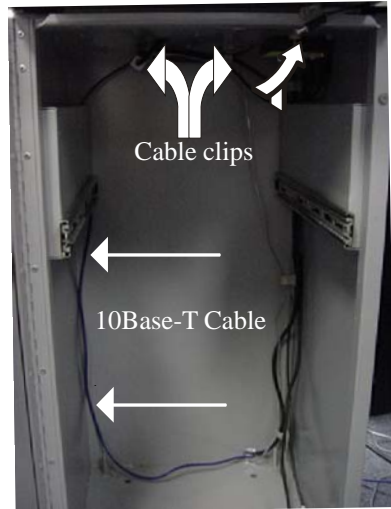


Figure 2-10

SECTION 2 - INSTALLATION AND SETUP

5. Connect the 10Base-T connector to the back of the External Ethernet assembly device. Locate the RS-232 I/F Host cable. Connect the 9-Pin connector end to the back of the External Ethernet assembly (depending on connector end, you may need a flat or phillips screwdriver to secure).
6. Place the Ethernet device on top of the card cage assembly (Figure 2-11). Secure the 10Base-T using existing cable clips or use the clips included in the kit (Figure 2-12).



Figure 2-11



Figure 2-12

7. Pull the Memory module from the card cage (SS-2) and verify the EPROM version is **04.00** or higher (Figure 2-13). If not, install the required upgraded EPROM following ESD precautions and correct orientation of the chip. Reinstall the Memory module after completion.



Figure 2-13. Memory module EPROM location.

8. The required **Memory Expansion** module will be installed in **slot 4** (SS-4) beneath the Modem/LCD module. Before installing, verify that the jumpers on **J1** and **J2** are connected on **Pins 1 and 2**. If not, move the jumpers to connect Pins 1 and 2 together (Figure 2-14). Install the Memory Expansion module.

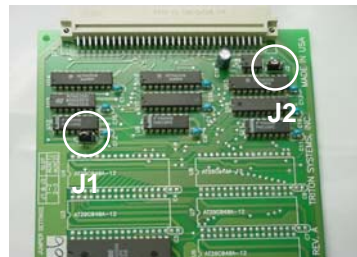
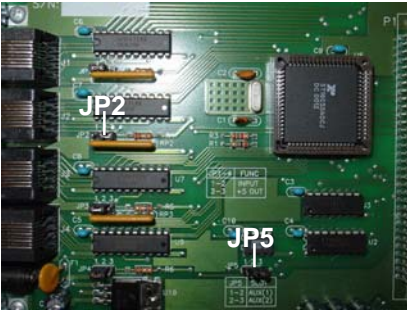


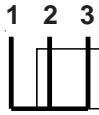
Figure 2-14. Memory Expansion module J1 and J2 jumper location (Pins 1 and 2).

SECTION 2 - INSTALLATION AND SETUP

9. The required **Quad Port** module will be installed in **slot 5** (SS-5) beneath the Memory Expansion module. Before installing, verify the jumpers on **JP2** are **connected for +5VDC** and **JP5 set to Auxilliary 2**. If not, move the jumpers to the correct pins. Figures 2-15 and 2-16 show the jumper locations depending on which version Quad Port module you have. Install the Quad Port module.

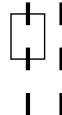
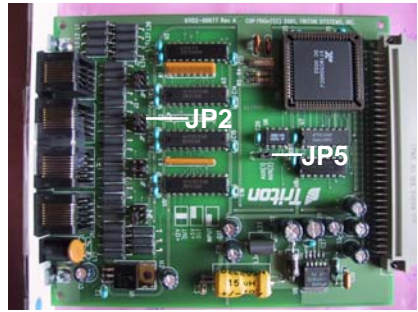


JP2

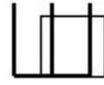


JP5

Figure 2-15. Quad Port module JP2 and JP5 jumper location.



JP2



JP5

Figure 2-16. Quad Port module JP2 and JP5 jumper location.

10. Route and connect the RJ-45 connector end of the RS-232 I/F Host Cable to **Serial 2** of the Quad Port module. (Figures 2-17 and 2-18)



Figure 2-17. RS-232 cable routed.



Figure 2-18. RJ-45 connected to Serial 2 of Quad Port module.

SECTION 2 - INSTALLATION AND SETUP

INTRODUCTION

Follow these steps to install the Ethernet assembly and associated cables in your 9100 ATM. The table below lists the accessories and other components included in the 9100 External Ethernet option kit.

PARTS AND TOOLS REQUIRED

TOOLS REQUIRED		
- Small Flat-tip Screwdriver - 1/4" and 11/32" Nut Drivers - Phillips-head Screwdriver - Small Diagonal Cutters		
9100 EXTERNAL ETHERNET OPTION KIT P/N 06200-00135		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09110-00131	Module, External Ethernet	1
09100-00132	PCB Assy, External Ethernet Adapter	1
03011-01493	Main Board Housing w/Ethernet Option	1
03011-00577	Bracket, External Ethernet Option	1
09120-00232	Cable Assy, RS-232 Ethernet I / F Host	1
01080-00085	CAT-5 Cable, 10', RJ-45	1
03072-00013	Ty Wrap ((Red)	2
03072-00015	Ty Wrap (Black)	2
02054-00047	Screw, Phillips Pan Head #8-32 - 3/4"	1
02054-00121	Screw, Phillips Flat Head #8-32 - 1"	1
02301-00024	Hex Nuts, #8-32	2
03072-00029	Cable Clips, Adhesive	2
07103-00115C	Ethernet Installation and User Guide	1
-----	* 9100 TCP/IP Supported Software (Mono)	1
-----	* 9100 TCP/IP Supported Software (Color)	1
* Software dependent on display type (Color/Monochrome)		

SECTION 2 - INSTALLATION AND SETUP

INSTALLING THE EXTERNAL ETHERNET ASSEMBLY AND CABLES FOR MODEL 9100 ATMs

Follow these steps to install/connect the Ethernet assembly and associated cables in your 9100 ATM:

NOTE

If your unit was configured and shipped TCP/IP ready, the only installation will be connecting the RJ-45 connector-end of the CAT-5 cable to your LAN connector. The cable is located in the dispenser vault area. Route the cable through one of the cable entry holes located in the lower left, back of cabinet to your LAN connection.

1. Open the control panel hood. Turn the power switch on the power supply to the OFF (0) position.
2. Open the dispenser vault door and remove the accessory box.
3. Feed the CAT-5 cable from your LAN network connection through one of the cabinet base cable entry holes (Figure 2-19A).
4. Feed the CAT-5 cable up through the cable clips and through the opening to the control panel (Figures 2-19a and -19b). Cable is routed away from the AC power cable to minimize electromagnetic interference. You may have to remove the dispenser assembly for ease of cable installation. Cable end will be connected in later steps (Figure 2-19c).

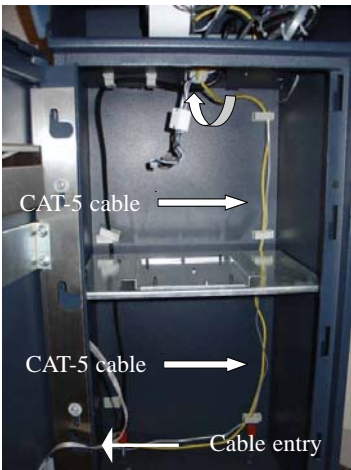


Figure 2-19a

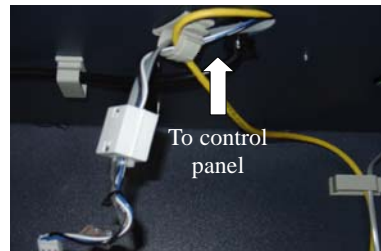


Figure 2-19b



Figure 2-19c

SECTION 2 - INSTALLATION AND SETUP

5. Locate the main board assembly shown in Figure 2-20. Disconnect all the cables/wires located on each side of this assembly. Detach the black cable harness from the 2 clips secured on the Main board panel.



Figure 2-20. Cables/harness disconnected.

6. Remove the three (3) Phillip-head screws that secure the Main board assembly to the control panel (Figures 2-21a, -21b, and -21c). Set screws aside. **Note: There is a ground wire attached under the screw for the L-bracket.**



Figure 2-21a



Figure 2-21b



Figure 2-21c

7. Remove the Main board assembly from the control panel and place on a flat surface. Remove the other Phillips-head screw that secures the L-bracket to the side panel (Figure 2-21c). Set the L-bracket and screw aside. This will be reattached later.

SECTION 2 - INSTALLATION AND SETUP

8. Remove the top and bottom screws from the Main board assembly using either a flat-tip screwdriver or 1/4" nut driver (Figure 2-22a and -22b). Set screws aside.



Figure 2-22a. Top screw location.



Figure 2-22b. Bottom screw location.

9. The following steps involve separating the Main board housing. The housing for the Main board is actually two (2) panels that fit together.
 - A. Place the Main board assembly on one end. Holding the housing assembly as shown in Figures 2-23a and -23b, **gently** apply pressure outward on the green circuit board connectors until the panels start to separate.
 - B. Repeat the procedure on the other end of the assembly. Once panels have started to separate, work the sides alternately until the 2 panels are completely separate. **Caution: Avoid handling the small contrast adjust component at top of circuit board.**
 - C. Place the panel that has the two (2) adhesive clips attached aside. This part will be replaced with the Main board housing panel included in the kit (panel that has the small cutout).
 - D. Place the other panel (one with main circuit board attached) on a flat surface.



Figure 2-23a. Housing separation.
Avoid contrast adjust!



Figure 2-23b. Housing separation.

SECTION 2 - INSTALLATION AND SETUP

10. Using the diagonal cutters, cut the Ty wrap that secures the modem module as shown in Figure 2-24. Discard the Ty wrap. Remove the modem module by unseating from its pin holders. Figure 2-25 shows modem module removed.



Figure 2-24. Cut Ty wrap.



Figure 2-25. Modem removed.

11. Two (2) screws need to be removed and replaced. Reference Figure 2-26. Remove the screw holding the Ty wrap clip and replace with the #8-32 - 1" Phillips flat head screw. Ty wrap clip remains on board. Second, remove the next screw and replace with the #8-32 - 3/4" Phillips pan head screw. Screws will protrude on backside of the panel (Figure 2-27).

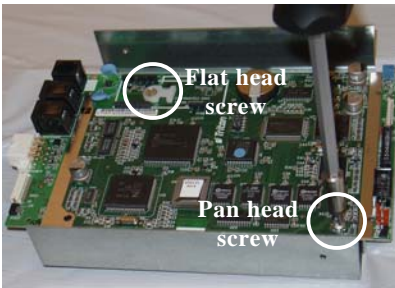


Figure 2-26. Screw locations.



Figure 2-27. Protruding screws.

12. Slip one of the **red** Ty wraps included through the clip (Figure 2-28, insert) but **Do Not** secure at this time. Install the External Ethernet Adapter in the pin holders previously used for the modem module. Ensure placement of adapter is correct and pins are seated in holders (Figure 2-28). Secure Ty wrap around adapter.



Figure 2-28. Install Ethernet adapter.

SECTION 2 - INSTALLATION AND SETUP

13. Install the Main board housing (panel with small cutout) over the back panel (Figure 2-29). Ensure the cutout aligns with the RJ-45 connector on the Ethernet adapter. Secure Main board assembly with screws removed in step 8.
14. Reinstall the L-bracket that was removed from replaced panel (Figure 2-30).



Figure 2-29. Install Main board housing w/Ethernet adapter cutout.

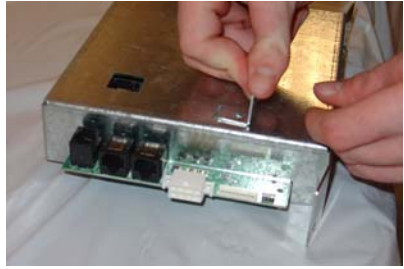


Figure 2-30. Install L-bracket.

15. Place the Ethernet bracket over the external Ethernet assembly shown in Figure 2-31.
16. Mount the bracket (w/external Ethernet assembly, Figure 2-32) over the screws protruding on back side of Main board assembly shown in Figure 2-27. Secure bracket with the two (2) #8-32 hex nuts provided. After assembly is secured, stand Main board assembly up. Figure 2-33 shows correct position of external Ethernet connections as viewed from side.



Figure 2-31. Mount external Ethernet bracket.



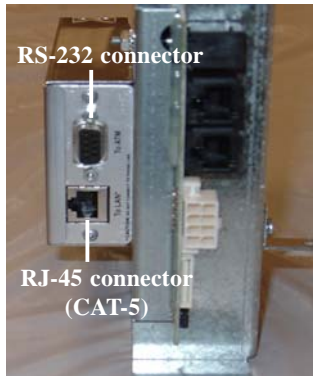
Figure 2-32. Install Ethernet assembly and bracket to mounting screws.

**** IMPORTANT ****

Before securing bracket, ensure External Ethernet assembly is positioned correctly. "TRITON" logo on front face plate is towards back housing panel.

SECTION 2 - INSTALLATION AND SETUP

Figure 2-33. External Ethernet mounted (side view).



17. Affix the two (2) adhesive cable clips provided to the Main board housing panel (one with small cutout). Clips should be located toward edge and near top of enclosure (Figure 2-34). **Do not cover any part of cutout with the RJ-45 connection.**



Figure 2-34. Affix cable clips.

18. Before reinstalling the Main board assembly, connect the nine (9) - pin connector of the provided RS-232 Ethernet host cable to the port on the external Ethernet assembly identified as “To ATM”. Secure using a small flat-tip screwdriver (Figure 2-35).
19. Reinstall the Main board assembly and all cable connections.
20. Connect the RJ-45 end of RS-232 host cable to the RJ-45 connector of the Ethernet adapter located on the Main board assembly (Figure 2-36).



Figure 2-35. (RS-232) 9-pin connection.

SECTION 2 - INSTALLATION AND SETUP

21. Connect the RJ-45 connector end of the CAT-5 cable, previously routed in steps 3 and 4, to the port on the external Ethernet assembly identified as “To LAN” (Figure 2-37).
22. Secure CAT-5 and RS-232 host cables with remaining Ty wrap to existing cable harness. If room allows, you may be able to secure cables in existing cable clip located in Figure 2-37.



Figure 2-36. (RS-232) RJ-45 connection.



Figure 2-37. External Ethernet cables routed and connected.

SECTION 2 - INSTALLATION AND SETUP

ETHERNET SETUP AND OPERATIONAL CHECK

1. If not already accomplished, install Ethernet terminal software.

NOTE (For Model 96XX)

The upgraded EPROM, Memory Expansion module and Quad Port module must be configured and installed. The EPROM must be erased prior to downloading TCP/IP software. DO NOT load an update file over current Triton Standard software running the machine.

2. Coordinate with your LAN service provider to obtain the necessary operating parameters for your Ethernet setup (Host TCP/IP Address, Terminal IP Address, SubNet Mask Value, Gateway Address, Listening Port Value, and associated Port #'s).

NOTE

If you will be using an Ethernet-enabled version of Triton Connect (version 3.2 or higher) to manage the terminal, be sure to obtain the appropriate Triton Connect Host TCP/IP Address, Alarm TCP/IP Address, Terminal IP Address, Listening Port Values, and associated Port #'s from the operator of the Triton Connect Host Computer.

3. Once the Ethernet TCP/IP device is installed, power-up the ATM, and initialization of the device begins. The following indications should sequentially appear:
 - a. The **PWR** (*Red LED*) will illuminate indicating +5VDC is present.
 - b. The **RCV-ATM** (*Green LED*) will flash. If the **LNK** (*Green LED*) is on, it will blink once after the **RCV-ATM** LED flashes.
 - c. The **RCV-ATM** LED will glow dim for a second. The **ACT** (*Amber LED*), **LNK**, and **RCV-LAN** (*Amber LED*) will not blink or be illuminated while the **RCV-ATM** LED is dim.
 - d. **RCV-LAN** LED will illuminate and the **LNK** LED will illuminate if the network hardware is functional. The **ACT** LED may blink.
 - e. **RCV-LAN** will extinguish once the reset is completed.
 - f. The **RCV-ATM** LED will blink a few times indicating that the terminal is reinitializing the TCP/IP device.

SECTION 2 - INSTALLATION AND SETUP

ETHERNET MODULE FRONT PANEL FEATURES

The information below summarizes the functions of the Ethernet module front panel indicators. Refer to Figure 2-38 which shows the various front panel features of the Ethernet module.

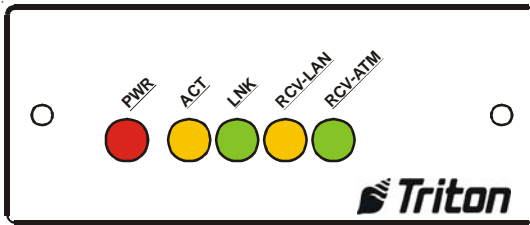


Fig. 2-38. Ethernet module front panel features.

Indicators

- 1.) **POWER.** When this indicator is lit (*Red LED*), the Ethernet module control electronics have +5 VDC applied. If this fails to light or flickers briefly, inspect:
(97XX) - RS-232 cable connections and/or the jumper on J9 (Docking board assembly).
(96XX) - jumper on JP2 of the Quad Port module. Jumper **MUST** be on Pins 2 and 3 for the correct operating voltage (+5 VDC)
(9100) - connectivity of the External Ethernet adapter. Ensure assembly is seated fully and pins are not bent/broke or out of pin holder.
- 2.) **ACT.** When this indicator is blinking (*Amber LED*), the Ethernet module is active on the network.
- 3.) **LNK.** When this indicator is lit (*Green LED*), the Ethernet module has successfully contacted and established a continuous communications link with network TCP/IP Ethernet hardware.
- 4.) **RCV-LAN.** When this indicator is blinking (*Amber LED*), data is being received from the network host.
- 5.) **RCV-ATM.** When this indicator is blinking (*Green LED*), data is being transmitted and received from the ATM's Central Processing Unit (CPU).

SECTION 2 - INSTALLATION AND SETUP

ETHERNET MODULE REAR PANEL FEATURES

The information below summarizes the functions of the Ethernet module rear panel connectors. Refer to Figure 2-39 which shows the rear panel features of the Ethernet module.

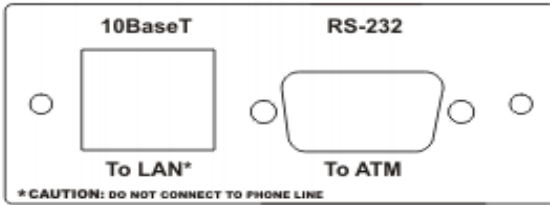


Fig. 2-39. Ethernet Module Rear Panel Features.

Connectors

- 1.) **10 Base T.** This jack provides connectivity to the Ethernet network. The connectors for Ethernet networks are called "RJ-45" connectors. These are modular connectors, just like the ones used for telephones, but with 8 pins on them. The cable (supplied) from your network jack connects to this port. **DO NOT** connect your phone line to this port.
- 2.) **RS-232.** This jack provides a serial communications interface between the Ethernet module and the Docking Board PCB assembly (97XX) , the Quad Port module (96XX), or the Main board assembly (9100).

SECTION 3
MANAGEMENT FUNCTIONS

INTRODUCTION

This section will discuss the TCP/IP Ethernet-specific Management Functions. The Ethernet hardware should be installed according to the directions provided in Section 2, Installation and Setup.

The software release for the Model 9100, 97XX, and 96XX ATMs adds TCP/IP support. *Note: Model 9100 ATM auto detects the communication type installed and is used for both the terminal and Triton Connect. 97XX and 96XX ATMs may select a different communication type for Triton Connect.*

TCP/IP ADDRESSES

The Ethernet-equipped ATM communicates using Transmission Control Protocol (TCP) and Internet Protocol (IP), allowing it to send and receive information in the form of small packets of digital data. In order to configure the ATM to correctly access the host network using this protocol, IP addresses must be entered into the appropriate ATM setup functions. The Addresses are the **HOST TCP/IP**, **TERMINAL IP**, **SUBNET MASK**, **GATEWAY**, and **LISTENING PORT**.

The addresses are attached to the data packet that is being sent; the **HOST TCP/IP** address allows the data packet to be routed through the TCP/IP Ethernet network, ultimately to be received and processed by the host server on the network. The **TERMINAL IP** address identifies the ATM as the source of the data packet, and is used by the host server to return acknowledgements, transaction approvals, or other data to the ATM. Alongside the addresses, each port requires a **SUBNET MASK**. This part of the IP address distinguishes other machines on the same LAN from machines in other departments or elsewhere in the world. For direct access to networks beyond the current one, each machine must be told the IP addresses of the router (or **GATEWAY**) that connects the local network with the wider world. The **LISTENING PORT** value identifies the data being sent to that specific machine. The **MAC ADDRESS** is assigned from the iChip manufacturer. The **CHIP VERSION** indicates the chip family, software version, and boot block revision in the Ethernet device only. **TCP/IP TIMEOUT** is the time that the terminal will wait from the message to be sent to the host and the time it takes for the host to respond.

If Triton Connect ATM monitoring software is being used, the applicable IP addresses for the Triton Connect host computer and Alarm Monitoring feature must also be entered.

The descriptions on the following pages will cover how to access the appropriate functions and initially enter the IP addresses and any other TCP/IP Ethernet operating parameters or diagnostics.

If parameters are not entered or incorrect, **ERROR CODE 236 - FAILED TO MAKE A CONNECTION TO A TCP/IP HOST**, may appear after setup. Check your parameters and verify settings with your host Network Administrator.

COMMUNICATION TYPE

ACCESS INSTRUCTIONS:

1. From the **MAIN MENU** screen, select **CONFIGURE PROCESSORS**.
2. From the **CONFIGURE PROCESSORS** screen, select option (1), (2), (3), or (4).

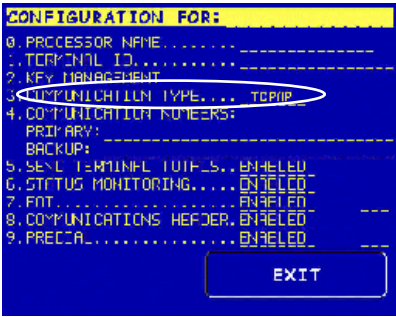
Important
Option (1) MUST be configured. It is the default processor for standard ATM transactions.

3. From the **CONFIGURATION FOR:** menu screen, select option (3).

DESCRIPTION:

The **COMMUNICATION Type** function allows user to toggle between the communication type the terminal is using. You can select either Dialup or **TCP/IP**. **The External Ethernet option must be installed to select.**

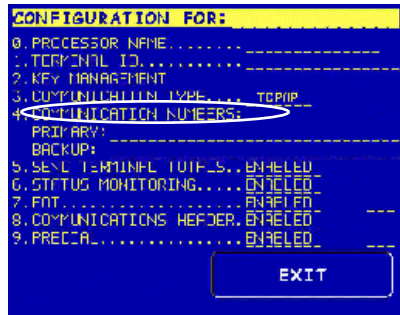
Note: (Model 9100 ATMs)
This function detects the communication type installed and WILL NOT allow user to change (toggle). It also sets the communication type for Triton Connect



COMMUNICATION NUMBERS (HOST TCP/IP ADDRESSES)

ACCESS INSTRUCTIONS:

1. From the **MAIN MENU** screen, select **CONFIGURE PROCESSORS**.
2. From the **CONFIGURE PROCESSORS** screen, select option **(1)**, **(2)**, **(3)**, or **(4)**.
3. From the **CONFIGURATION FOR:** menu screen, select option **(4)**.



DESCRIPTION:

The **COMMUNICATION Numbers** function allows entry of the host processors primary and backup (if needed) phone numbers or the **Host TCP/IP Addresses** if running TCP/IP communications type.

The **HOST TCP/IP ADDRESSES** are provided by your host Network Administrator. The first part of the address consists of a sequence of four groups of numbers. Each group can be up to three digits long, and each group is separated by a period (dot character), as in this example: **123.3.01.99**. The second part of the address is a **Port Number**, consisting of five (5) digits or less, separated from the first part by a comma (','), as in this example: **123.3.01.99,23353**.

Follow these steps to initially enter or change the **PRIMARY HOST TCP/IP ADDRESS:**

1. Select which host address you want to enter/change (Primary/Backup).
2. Enter the first group of numbers in the IP Address using the main keypad keys.
3. Enter a 'dot' character by pressing the <CONTROL> key, then the <0> key TWICE to select the period', then the <RIGHT ARROW> key to lock it in.
4. Repeat Steps 2 and 3 for the second and third group of numbers in the IP Address.
5. Enter the fourth group of numbers in the IP Address.
6. Enter the comma (",") character by pressing the <CONTROL> key, then the <0> key ONCE to select the comma. Press the <RIGHT ARROW> key to lock it in.
7. Enter the Port Number. Select <ENTER> to save the HOST/IP Address entry, or <CANCEL> to discard the changes. Repeat steps for BACKUP ADDRESS entry.

TCP/IP CONFIGURATION

ACCESS INSTRUCTIONS:

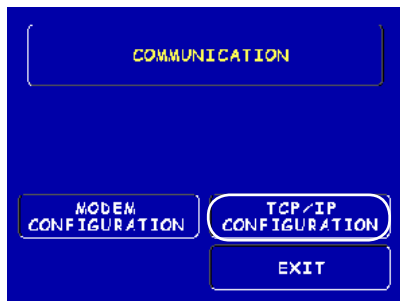
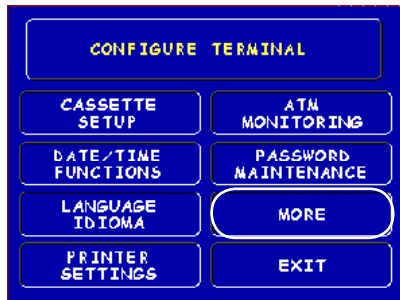
1. From the **MAIN MENU** screen, select **CONFIGURE TERMINAL**.
2. From the **CONFIGURE TERMINAL** screen, select **MORE**.
3. From the **MORE** screen, select **COMMUNICATION**.
4. From the **COMMUNICATION** screen, select **TCP/IP CONFIGURATION**.

DESCRIPTION:

The **TCP/IP CONFIGURATION** option allows access to setup parameters that control communication between the ATM and the Host Network. It also allows testing of the External Ethernet device.

The following parameters are accessed through this function and described on the following pages:

1. **Test TCP/IP**
2. **Network Settings**



TEST TCP/IP

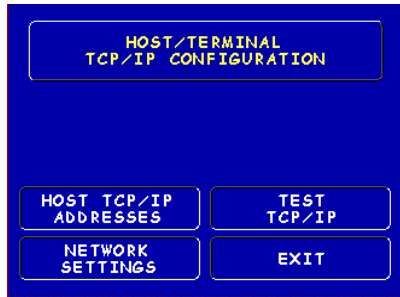
DESCRIPTION:

This option allows testing of the **TCP/IP** device. When selected, the Ethernet PCB assembly initializes and resets the configuration hardware imbedded in the device. If test is successful, a “Tested OK” will be displayed.

ERROR CONDITION:

If the test fails, an error message will be displayed. Check the cable connections from the External Ethernet device to the Docking board assembly, Quad Port module, or Main board if applicable. Possible problems could be no or incorrect voltage to unit, IF/Host cable, Main board, or Ethernet PCB assembly.

Error Code 237 may appear during operation. This code means there is a TCP/IP failure.



NETWORK SETTINGS

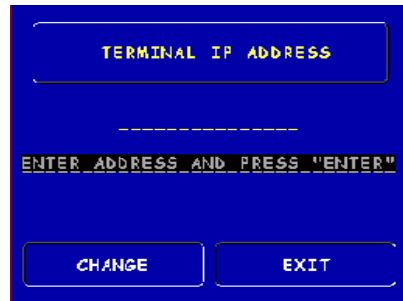
Description:

The **Network Settings** parameters are provided by your host Network Administrator. The **Terminal IP Address**, **Subnet Mask**, and **Gateway Address** consist of a sequence of four groups of numbers. Each group can be up to three digits long and each group is separated by a period (dot character), as in this example: **123.3.01.99**

Follow these steps to initially enter or change the **Terminal IP Address**, **Subnet Mask**, and **Gateway Address**:

1. Select <CHANGE> to blank the current entry, if necessary.
2. Enter the first group of numbers in the Address/Value using the main keypad keys.
3. Enter a 'dot' character by pressing the <CONTROL> key, then the <0> key TWICE to select the period', then the <RIGHT ARROW> key to lock it in.
4. Repeat Steps 2 and 3 for the second and third group of numbers for the Address/Value.
5. Enter the fourth group of numbers for the Address/Value.
6. Select <ENTER> to save the Address/Value entry, or <CANCEL> to discard the changes.

The **CHIP VERSION** and **MAC ADDRESS** are reference parameters ONLY - no configuring is done. The Chip Version is the software version running on the ATM and the MAC Address is hard-coded from the Ethernet device.



NETWORK SETTINGS

DESCRIPTION:

The **LISTENING PORT** and **TCP/IP TIMEOUT** values are provided by the host Network Administrator.

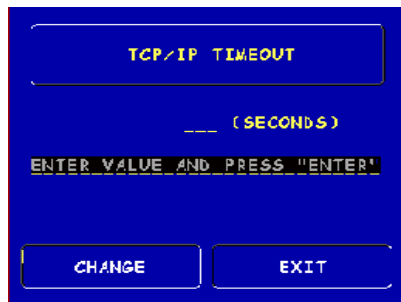
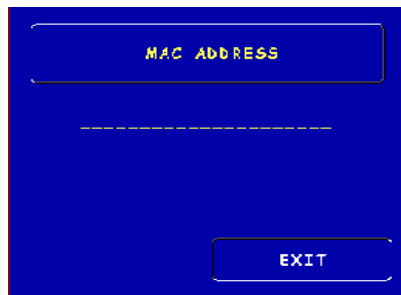
The **CHIP VERSION** and **MAC ADDRESS** are reference parameters **ONLY** - no configuring is done. The Chip Version is the software version running on the ATM and the MAC Address is hard-coded from the Ethernet device.

The **TCP/IP TIMEOUT** is defaulted to 120 seconds, but may be increased or decreased depending on response time. Maximum timeout value is 999 seconds.

The **LISTENING PORT** value consists of five (5) digits or less.

Follow the steps below to initially enter or change the **LISTENING PORT**:

1. Select <CHANGE> to blank the current entry, if necessary.
2. Enter the Port Number. Select <ENTER> to save the **LISTENING PORT** entry, or <CANCEL> to discard the changes.



**TRITON CONNECT
TCP/IP CONFIGURATION**

ACCESS INSTRUCTIONS:

1. From the **MAIN MENU** screen, select **CONFIGURE TERMINAL**.
2. From the **CONFIGURE TERMINAL** screen, select **ATM MONITORING**.
3. From the **ATM MONITORING** screen, select **TRITON CONNECT**.
4. From the **TRITON CONNECT** screen, select **TCP/IP CONFIGURATION**.

Important
If using, turn Triton Connect <ON> after entering the Configuration parameters.

DESCRIPTION:

The **TRITON CONNECT** function allows the terminal operator to set up parameters that control **DIAL-UP** and **TCP/IP** communications between the ATM and Triton Connect PC-based software to remotely manage your Triton Systems ATMs. The following **TCP/IP** parameters are accessed through this function and described on the following pages:

1. **Host Numbers**
2. **Alarm Numbers**
3. **TCP/IP Configuration**

Note: Comms Type Option
You **must** have the External Ethernet device installed to select (toggle) TCP/IP in the “Comms Type”.
For **Model 9100 ATMs**, this function detects the communication type installed (Dialup or TCP/IP) and **will not** allow user to change (toggle).



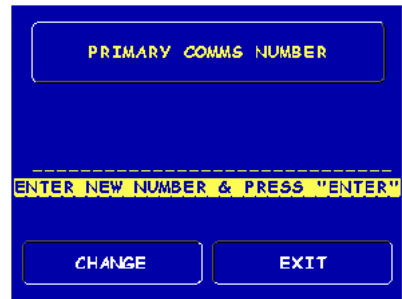
TRITON CONNECT HOST NUMBERS

DESCRIPTION:

The **HOST NUMBERS** are provided by your Processor/Host Network Administrator. If you are using **TCP/IP** as your communication type, you will need to enter **Host TCP/IP Addresses**. The first part of the address consists of a sequence of four groups of numbers. Each group can be up to three digits long, and each group is separated by a period (dot character), as in this example: **123.3.01.99** The second part of the address is a **Port Number**, consisting of four (4) digits or less, separated from the first part by a comma (“,”) character, as in this example: **123.3.01.99,9043**.

Follow these steps to initially enter or change the **PRIMARY HOST NUMBER (ADDRESS)**:

1. Select <CHANGE> to blank the current entry, if necessary.
2. Enter the first group of numbers in the TCP/IP Address using the main keypad keys.
3. Enter a ‘dot’ character by pressing the <CONTROL> key, then the <0> key TWICE to select the period’, then the <RIGHT ARROW> key to lock it in.
4. Repeat Steps 2 and 3 for the second and third group of numbers in the TCP/IP Address.
5. Enter the fourth group of numbers in the TCP/IP Address.
6. Enter the comma (“,”) character by pressing the <CONTROL> key, then the <0> key ONCE to select the comma. Press the <RIGHT ARROW> key to lock it in.
7. Enter the Port Number. Select <ENTER> to save the Primary TCP/IP Address entry, or <CANCEL> to discard the changes. Repeat steps for BACKUP TCP/IP ADDRESS entry.



TRITON CONNECT ALARM NUMBERS

DESCRIPTION:

The **ALARM NUMBERS** are provided by your Processor/Host Network Administrator. If you are using **TCP/IP** as your communication type, you will need to enter **Alarm TCP/IP Addresses**. The first part of the address consists of a sequence of four groups of numbers. Each group can be up to three digits long, and each group is separated by a period (dot character), as in this example: **123.3.01.99** The second part of the address is a Port Number, consisting of four (**4**) digits or less, separated from the first part by a comma (“,”) character, as in this example: **123.3.01.99,9043**.

Follow these steps to initially enter or change the **PRIMARY ALARM NUMBERS (ADDRESS)**:

1. Select <CHANGE> to blank the current entry, if necessary.
2. Enter the first group of numbers in the TCP/IP Address using the main keypad keys.
3. Enter a ‘dot’ character by pressing the <CONTROL> key, then the <0> key TWICE to select the period’, then the <RIGHT ARROW> key to lock it in.
4. Repeat Steps 2 and 3 for the second and third group of numbers in the TCP/IP Address.
5. Enter the fourth group of numbers in the TCP/IP Address.
6. Enter the comma (“,”) character by pressing the <CONTROL> key, then the <0> key ONCE to select the comma. Press the <RIGHT ARROW> key to lock it in.
7. Enter the Port Number. Select <ENTER> to save the Primary ALARM TCP/IP Address entry, or <CANCEL> to discard the changes. Repeat steps for BACKUP ALARM TCP/IP ADDRESS entry.



TRITON CONNECT TCP/IP CONFIGURATION

DESCRIPTION:

The **TERMINAL IP** and **LISTENING PORT**

ADDRESSES are provided by your Host Network Administrator. The Terminal Address

consists of a sequence of four groups of numbers. Each group can be up to three digits long, and each group is separated by a period (dot character), as in this example: **123.3.01.99**

The Listening Port value consists of five (5) digits or less.

Follow these steps to initially enter or change the **TERMINAL IP ADDRESS** and **LISTENING PORT** value (Terminal IP Address steps 1-5):

1. Select <CHANGE> to blank the current entry, if necessary.
2. Enter the first group of numbers in the IP Address using the main keypad keys.
3. Enter a 'dot' character by pressing the <CONTROL> key, then the <0> key TWICE to select the period', then the <RIGHT ARROW> key to lock it in.
4. Repeat Steps 2 and 3 for the second and third group of numbers in the IP Address.
5. Enter the fourth group of numbers in the IP Address. Select <ENTER> to save the TERMINAL IP Address entry, or <CANCEL> to discard the changes.
6. (LISTENING PORT) Select CHANGE to blank the current entry, if necessary.
7. (LISTENING PORT) Enter the Listening Port Number. Select <ENTER> to save the LISTENING PORT Address entry, or <CANCEL> to discard the changes.