

Computer Interface Card (CIC)

(Web-based monitoring SNMP card) SNMP-C03

User's Manual



34000179 Rev2

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NOTICE: This equipment has been tested and found to comply with the limits for a "Class A" digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

This digital apparatus does not exceed the "Class A" limits for radio noise emissions from digital apparatus set out in the Radio interference regulations of the Canadian Department of Communications.

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Conventions Used In This Guide

This guide uses these conventions:

Bold italic print, as shown in this example, indicates field names, menu items, or values in the Computer Interface Card (CIC) software agent.

Bold print, as shown in this example, indicates filenames, directories, or items that you must type exactly as they appear.

Italic print words or letters in braces { } indicate values that you must supply. For example: {drive}:\setup

Italic print words or letters in brackets < > indicate keys to press. If two keys are separated by a *+* plus symbol, then the first key should be pressed and held down while pressing the second key. For example: *<alt+enter>*.

<u>Note:</u> Notes contrast from the text to emphasize their importance.

Warning: These messages alert you to specific procedures or practices; serious consequences may result including injury if you disregard them.

Introduction

A UPS can be configured with either an internal or an external Computer Interface Card (CIC); this CIC is then connected to the network. The CIC contains a MIB agent. The agent communicates both solicited and unsolicited messages to the Network Management Station (NMS). Unsolicited messages are defined by the MIB and are built into the agent for critical items such as AC power failure and low battery detection. The agent recognizes these critical events and immediately forwards them to the Network Management Station. The network manager will immediately notice the alarm and the flashing icon of the CIC. By clicking on the icon, you will be able to see the alarm messages. If nobody is present, the Network Management Station will shutdown the programs, the OS server and eventually the UPS safely.

Your Computer Interface Card (CIC) monitors one UPS using a Network Management Station. The complete CARD package includes: Hardware, software, a UPS Management Information Base (MIB) and a User's Manual.

There are two ways the CIC can be installed: Figure 1- Internal or Figure 2- External.



Figure1- Internal CIC



Figure 2- External CIC

Computer Interface Card (CIC) Features

The Computer Interface Card (CIC) connects directly to your UPS. It runs an embedded Simple Network Management Protocol (SNMP) software agent. This agent responds to SNMP GETS and SETS and also forwards traps to designated recipients when critical conditions occur within the UPS, such as the UPS going on battery backup mode during a power failure.

The Computer Interface Card (CIC) features:

- Internet ready It supports both SNMP and HTTP protocols and user can use SNMP manager or Web browser to monitor the UPS through a network.
- Multiple OS support—As long as there is Network Management software present.
- Remote setup support— Once an IP address is assigned, the rest can be setup remotely through telnet commands.
- Easy USB port setup—In addition to regular serial port setup, this CIC also has a USB setup feature for the initial setup of this card. (Requires Windows 98 or higher)
- Remote monitoring—Monitors the status of one UPS from a remote workstation (Web browser or NMS).
- **Remote Control**—Turns the UPS off (or a battery test) when the NMS sends the proper command.
- NMS To Receive UPS Alarms—These traps (unsolicited messages) inform the user about the power condition of the connected UPS.
- Works with all major NMS on Ethernet—Computer Interface Card (CIC) works with the most widely used Network Management Systems: HP Open View, Sun NetManager, IBM NetView, and many more.
- **Remote Software upgrade support** The Computer Interface Card (CIC) supports Software upgrade through serial connection and TFTP server remotely.
- Ring On or Reset adapter (External adaptor only)
 With the external adaptor connected to a phone line: When the adaptor is on, two incoming rings will reset the adaptor.
 When the adaptor is off, two incoming rings will turn on the adaptor.

Computer Interface Card (CIC) Package

Internal CIC Package Contents

The contents of your package are:

\checkmark	Computer Interface Card (CIC)
\checkmark	USB Cable
\checkmark	DB9 Female to Female Serial Cable
\checkmark	3.5" Floppy Diskette
\checkmark	Two Retaining Screws

The 3.5" Floppy Diskette contains a UPS MIB file, USB device driver, USB setup software, TFTP Server files, and the User's Manual. Copy the MIB file to the appropriate NMS MIB directory for the UPS connected to your Computer Interface Card (CIC).

External CIC Package Contents

The external adaptor is used to connect the CIC to the UPS, when the UPS does not have an option slot. The contents of your package are:

\checkmark	External Adaptor Box
\checkmark	Power Adaptor
\checkmark	DB9 Male-to-Female Serial Cable
\checkmark	Computer Interface Card (CIC)
\checkmark	USB Cable
\checkmark	DB9 Female-to-Female Serial Cable
\checkmark	3.5" Floppy Diskette
\checkmark	Two Retaining Screws



Figure 1- Computer Interface Card (CIC)

Figure 1 shows the CIC's USB port, Serial port, Status LEDs and Ethernet port.

USB port – The USB port provides quicker setup compared to the serial setup process. The USB driver files and setup software are both included on the 3.5" floppy diskette. Users are encouraged to use USB setup (Requires Windows 98 or higher).

Serial port – The serial port on the front is designed for initial setup of the card. An RS232 serial cable is required for serial setup.

Status LEDs – Three LED indicators: The first LED (red) indicates power. The second LED (green) indicates connections, and it flashes when receiving or sending data. The third LED (yellow) indicates collisions of network packets.

Ethernet port—Computer Interface Card (CIC) provides an unshielded twisted pair or UTP (RJ-45) connector for 10Base-T networks. Once connected, it is possible to use the ARP command to set IP address through the network interface.

Installation

This section describes the installation of the Internal and External Computer Interface Card (CIC) when you connect it to the UPS.

Internal CIC

- 1. Turn off all the equipment that is plugged into the UPS.
- 2. Turn off the UPS and unplug the UPS's power cord from the AC outlet.
- 3. Remove the two retaining screws from the option slot's cover plate (rear panel of the UPS).
- 4. Remove the option slot's cover plate (rear panel of the UPS).
- 5. Insert the CIC into the option slot.
- 6. Install the two retaining screws (provided with the CIC package).
- 7. Now the CIC is ready to be Setup (see the appropriate Setup Procedure).

External CIC

- 1. Turn off all the equipment that is plugged into the UPS.
- 2. Turn off the UPS and unplug the UPS's power cord from the AC outlet.
- 3. Plug the power adaptor's connector into the connector, on the external adaptor box, labeled "Input".
- 4. Plug the DB9 Male to Female serial cable into the connector, on the external adaptor box, labeled "To UPS".
- 5. Plug the other end of the DB9 Male to Female serial cable into the Serial Port on the UPS (rear panel of the UPS).
- 6. Plug the power adaptor into one of the Battery Powered outlets of the UPS.
- 7. Insert the CIC into the option slot.
- 8. Install the two retaining screws (provided with the CIC package).
- 9. Now the CIC is ready to be setup (see the appropriate Setup Procedure).

Setup-Procedure

This section will guide you through the Setup Procedures of the Computer Interface Card (CIC).

NOTE: The minimum requirement to operate the Computer Interface Card (CIC) is to setup the IP Address.

There are four different ways to setup the CIC.

- 1. Setup the IP Address via the USB port (software included). Requires Windows 98 or higher.
- 2. Setup the IP Address via the Serial port using Hyper Terminal. Requires Hyper Terminal version 3.0 or higher.
- 3. Setup the IP Address via the Ethernet Port by using the ARP command (first time only), then use the Web Configuration to finish the setup.
- 4. Setup the IP Address via the Ethernet Port by using the ARP command (first time only), then use the Telnet Configuration to finish the setup.

Setup via the USB Port (Requires Windows 98 or higher)

NOTE: You must complete the appropriate Installation Procedure before proceeding with this Setup Procedure.

The following items must be obtained before attempting to setup the CIC: A valid IP Address, a USB Cable (provided), the USB Driver/USB setup file (enclosed diskette) and a PC with Windows 98 or higher.

- 1. Connect one end of the USB Cable to the USB Port on the computer.
- 2. Connect the other end of the USB Cable to the USB Port on the CIC.
- 3. Plug the UPS's power cord into the AC wall outlet.
- 4. Plug the computer's power cord into the UPS's output receptacles.
- 5. Turn on the UPS.
- 6. Turn the computer on and let it boot-up.
- 7. Insert the floppy diskette with the USB Driver/USB setup files into the appropriate drive.
- 8. Windows will display the following message (first time only):

New Hardware Found

USB Device

Windows has found new hardware and is locating the drivers for it.



8. The Hardware wizard will guide you through installing the USB Driver. Click Next.



9. The Hardware wizard will search for the best USB Driver. Click Next.



10. Check, Specify a location. Click Browse.



11. Open the appropriate 3.5" Floppy Drive. Open the USB folder. Open the Driver folder. Click OK.



12. Windows will search for the new USB Driver. Click Next.



13. Windows has found the USB Driver for the USB device. Click Next.



14. Windows has found the best Driver for this USB device. Click Next.

Add Net	w Hardware Wizard Windows driver file search for the device:	
ų Š	Copying Files Source: A:\USB\DRIVER\BulkUsb.sys Destination: C:\WINDOWS\SYSTEM32\DRIVERS\BULKUSB.sys 50%	er for this ; or click Next
	< <u>B</u> ack Next > [Cancel

15. Windows is copying the USB Driver files to your "C:" drive. Click Next.



16. Windows is finished installing the USB Driver. Click Finish.

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17. On the Desktop, right click "My Computer". Open Properties.



18. Open the Device Manager. Wait for approximately 30 seconds for the "Human Interface Device" to appear. Open the Human Interface Device. Click on "Usb-interface power device". Click OK.

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19. Open Windows Explorer. Open the appropriate 3.5" Floppy Drive. Open the USB folder. Open USBSetup.exe. Note: The USB setup icon must be green before you can run the USB setup program.



20. The Power Device Configuration tool is loading.

Power Device Configuration Tool - [server]	
System F Device iSwitch IP Add System Subnet ISP Default Mail DMS Set Telnet Trap Receivers Telnet Operater Name : admin System Operater Password : ***** Telnet Config Password : *****	
IDE FARAMETET Fhone Number : Dial Prefix : Access Username : Access Password : ***** Dial-Out Interface : Disable Mail Parameter SMTP Server IP Address : 0.0.0.0	
Mail Address 1: (Empty) Mail Address 2: (Empty) Mail Address 3: (Empty) Mail Address 4: (Empty) Mail Address 5: (Empty)	
SNMP Parameter No. IP Address Community Accept	-
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21. This is the Power Device Configuration Tool screen. On the Toolbar open Configuration. Then open System.

Power Device Configuration Tool - [server	1	_BX
	System Parameter Configuration	
System Parameter IP Address : 0.0.0.0 Subnet Mask : 255.255.0 Default Route : 0.0.0.0 DNS Server : 0.0.0.0 Telnet Port : 23 System Operater Mame : admin System Operater Password : ***** Telnet Config Password : *****	Interface IP Address : 2.0.0.0.0 Subnet Mask : 255.255.255.0 Default Route : 0.0.0.0 DNS Server : 0.0.0.0	<u>*</u>
ISP Parameter Phone Number : Dial Frefix : Access Username : Access Password : **** Dial-Out Interface : Disable	Administrator Profile Username : admin Password : ***** Confirm : *****	
Mail Parameter SHTP Server 1P Address : 0.0.0.0 Mail Address 1 : (Empty) Mail Address 2 : (Empty) Mail Address 3 : (Empty) Mail Address 4 : (Empty) Mail Address 5 : (Empty) Mail Address 5 : (Empty)	Telnet Config Profile Listening Socket Port Number : 23 Access Password : +++++ Password Confirm : ++++++	1
SNMP Parameter No. IP Address Comm	OK Cancel	
(1) (Emp ty) (2) (Emp ty) For Help, press F1	ro 🖎 Exploring - Sc 🕅 Screens.doc 🖎 Exploring - USB	NUM Power De

22. This is the System Parameter Configuration screen fill in all the information: the IP Address (required), the Subnet Mask, the Default Route (Gateway) and the DNS Server. Use the Tab key to move from one field to the next field. Then click OK.

Rever Device Configuration Tool - [server]	
Device Configuration View Window Help	_ & ×
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Undate Restart System Jeanser 1 Adding 10,0,0,0 Subnet Mask : 255,255,0 DBS sizeret : 0,0,0,0 DBS sizeret : 23 System Operater Name : admin System Operater Name : admin System Operater Reasword : ***** Telnet Config Password : ***** Telnet Config Password : ***** Telnet Config Password : *****	*
Mail Parameter SMTP Server IP Address : 0.0.0.0	
Mail Address 1 : (Empty) Mail Address 2 : (Empty) Mail Address 3 : (Empty) Mail Address 4 : (Empty) Mail Address 5 : (Empty)	
SIMP Parameter No. IP Address Community Accept	
(1) (Empty) (2) (Empty)	•
Update all setting of specific Power Device. And Restart	NUM
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23. This is the Power Device Configuration Tool screen. After you have entered in all of the pertinent information, you have to <u>Update and Restart</u> to save all the information that was entered into the System Parameter Configuration screen. The Update and Restart icon (with the red arrow) is right beneath the "Device" drop down menu.

Power Device Configuration Tool - [server]	-8×
Device Configuration View Window Help	_ 5 ×
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System Parameter IP Address : 0.0.0.0 Submet Mask : 255.255.00 Default Route : 0.0.0.0 DBS Server : 0.0.0.0 Telnet Port : 23 System Operater Name : admin System Operater Password : ***** Telnet Config Password : ***** Dial Prefix : Access Username : Access Password : ***** Dial-Out Interface : Disable Mail Parameter SMTP Server IP Address : 0.0.0.0 Weil Address : 0.0.0.0	<u>^</u>
Mail Address 2 : (Empty) Mail Address 3 : (Empty) Mail Address 4 : (Empty) Mail Address 5 : (Empty)	
SNMP Parameter No. IP Address Community Accept	
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24. Enter the Supervisor Name and the Supervisor Password. The Default Supervisor Name and the Supervisor Password is **admin** (lower case). Then click OK.

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System Parameter IP Address : 0.0.0.0 Subnet Mask : 255.255.255.0 Default Route : 0.0.0.0 DBS Server : 0.0.0.0 Telnet Port : 23 System Operater Name : admin System Operater Name : admin System Operater Password : ***** Telnet Config Password : ***** Phone Number : Power Device Configuration Dial Prefix : : Access Username : : Access Password : :***** Dial-Out Interface : Disable Yes	<u> </u>
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25. This is the Power Device Configuration screen. Click <u>Y</u>es to Update the Power Device.

IcerPower Device Configuration Tool - [server] Device Configuration View Window Help	_ & ×
Device Conjugation View Window Help Image: Conjugation View Window Help Image: Conjugation View Image: Conjugation View System Parameter IP Address : 0.0.0.0 Submet Mask : 255.255.255.0 Default Route : 0.00.0 DBTS Server : 0.0.0.0 DBTS Server : 0.0.0.0 Telnet Port : 23	X
System Operater Name : admin System Operater Password : ***** Telnet Config Password : ***** ISP Parameter Phone Number : Dial Prefix : Access Password : ***** Dial-out Interface : Disable Mail Parameter SMTP Server IP Address : 0.0.0.0	
Mail Address 1: (Empty) Mail Address 3: (Empty) Mail Address 4: (Empty) Mail Address 5: (Empty) Mail Address 5: (Empty) SNIMP Parameter No. IP Address Community Accept	×
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26. This is the Device Parameter Transmitting screen. The Power Device is being Updated.

Power Device Configuration Tool - [server] Device Configuration View Window Help	_ & ×
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System Parameter IP Address : 0.0.0.0 Subnet Mask : 255.255.0 Default Route : 0.0.0.0 DNS Server : 0.0.0.0 Telnet Port : 23 System Operater Name : admin System Operater Password : ***** Telnet Config Password : ***** Dial Prefix : Access Username : Access Username : Access Password : ***** Dial-Out Interface : Disable	<u>*</u>
Instant Latantest SMTF Server IF Address : 0.0.0.0 Mail Address 1 : (Empty) Mail Address 2 : (Empty) Mail Address 3 : (Empty) Mail Address 4 : (Empty) Mail Address 5 : (Empty)	
SNMP Parameter No. IP Address Community (1) (Empty) (2) (Empty) For Help, press F1	
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27. The Power Device has been successfully updated. Click OK.

Configuration Tool - [servet]	_ 8 ×
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System Parameter IP Address : 0.0.0.0 Subnet Mask : 255.255.0 Default Route : 0.0.0.0 Telnet Port : 23 System Operater Name : admin System Operater Name : statistic configuration ISP Parameter Phone Number : Dial Prefix : Access Jessmond : ***** Dial-Out Interface : Disable Power Device Configuration Yes	×
Mail Parameter SHTF Server IF Address : 0.0.0.0 Mail Address 1 : (Empty) Mail Address 2 : (Empty) Mail Address 3 : (Empty) Mail Address 4 : (Empty) Mail Address 5 : (Empty)	
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- 28. The Power Device has to be Restarted. Click Yes.
- 29. The USB Setup Procedure is complete. The CIC is fully operational. Unplug the USB Cable from the CIC and from the computer. Plug the Ethernet Cable into the CIC and after about thirty seconds the Link LED will start blinking, now you can communicate with the CIC. The Ping command is supported at this time. Startup a Browser and type in the IP Address. The default password is **admin** (lower case). Go to the section in the User's Manual titled "Web-Based Configuration" it will guide you through the Web pages.

Setup via the Serial Port

NOTE: You must complete the appropriate Installation Procedure before proceeding with this Setup Procedure.

NOTE: When using Hyper Terminal use Version 3.0 or higher.

The following items must be obtained before attempting to setup the CIC: A valid IP Address, a DB9 female-to-female Serial Cable (provided). There are a wide variety of Terminal Emulation packages, but for the most part they should be very similar. The following setup procedure is using Hyper Terminal.

- 1. Connect one end of the DB9 female-to-female Cable to the Serial port on the computer.
- 2. Connect the other end of the DB9 female-to-female cable to the Serial port on the CIC.
- 3. Turn the computer on and let it boot-up.

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		New Office Document												
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4. From the Desktop open the Start menu. Pick Programs, Accessories, Communications and Hyper Terminal. Open Hyper Terminal (requires version 3.0 or higher).

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Back Forward	Jp Cut Copy	Paste Undo Delete	Properties Views	
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1 object(s) selected	24.0KB		🖳 My Computer	
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5. Open HYPERTRM.EXE.



6. Enter a name (UPS). Click OK.

Connect To 💦 🔀
🧞 ups
Enter details for the phone number that you want to dial:
Country code: United States of America (1)
Ar <u>e</u> a code: 972
Phone number:
Connect using: Direct to Com1
OK Cancel

7. Connect using the appropriate Com port. Click OK.

COM1 Properties	×
Port Settings	
Bits per second: 115200	
Data bits: 8	
Parity: None	
Stop bits: 1	
Elow control: None	
Advanced <u>R</u> estore Defaults	
OK Cancel Apply	

8. Configure the port settings. <u>B</u>its per second: "115200", <u>D</u>ata bits: "8", <u>P</u>arity: "None", <u>S</u>top bits: "1", <u>F</u>low control: "None". Click OK.

🍓 ups - HyperTerminal	
<u>File E</u> dit <u>V</u> iew <u>C</u> all <u>T</u> ransfe	er <u>H</u> elp
New Connection	
<u>O</u> pen	
<u>S</u> ave	
Save <u>A</u> s	
Page Setup	
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Properties	
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E <u>x</u> it Alt+F4	
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<u> </u>	
Displays the properties of the curr	ent session

9. On the Toolbar open the File menu, and then open Properties.

UPS Properties
Connect To Settings
Function, arrow, and ctrl keys act as Iterminal keys Iterminal keys
Backspace key sends © <u>C</u> trl+H C <u>D</u> el C Ctrl+ <u>H</u> , Space, Ctrl+H
Emulation:
Terminal <u>S</u> etup
Tel <u>n</u> et terminal VT100
Backscroll buffer lines: 500
E Beep three times when connecting or disconnecting
<u>A</u> SCII Setup
OK Cancel

- 10. Open the Settings Tab. Function, arrow and ctrl keys act as: <u>T</u>erminal Keys, Backspace key sends: <u>C</u>rtl+H, Emulation: VT100, Tel<u>n</u>et terminal: VT100, <u>B</u>ackscroll buffer lines: 500. Click OK.
- 11. Plug the UPS's power cord into the AC outlet and turn the UPS on.

Pile Edit View Call Transfer Help D 20 30 100 100 100 100 100 100 100 100 100	
High-speed UART initailized Loader Version 1.10 Watch dog enable Copy memory f0000 10000 Copy memory f0000 20000 10000 Copy memory f0000 40000 10000 Copy memory f0000 50000 10000 Copy memory f0000 50000 10000 Copy memory f0000 70000 10000 ready to run 10000000 Press '/' key within 5 seconds to enter console configuration.	K
Connected 0:00:27 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	1.

- 12. When the message "Press '/' key within 5 seconds to enter console configuration" appears press the forward slash key (/) within the 5 seconds or the CIC will time out and then you have to start over.
- 13. Next you will be asked for the User Password. The default password is **admin**. Enter the password, then hit enter.

Image: Solution of the second seco	∲p onfiguration	
Sys Information -> Network PPP Config. Mail Trap API Config. Device Device Control Administrator TelnetProfile Reset Save_Restart Exit Comment > Network <.	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set HT server, e-mail address Set trap receivers Set trap receivers Set device connect, iSwitch Device control Set internet administrator name and password Set telnet configuration port and password Reset configuration to default Save and Restart Exit and disconnection more>	
CTRL-W Move Up, CTRL-	Z Move Down, <enter> Select, <esc> Cancel Mode :]</esc></enter>	
Connected 0:00:33 VT100	115200 8-N-1 SCROLL CAPS NUM Capture Print echo	11.

14. Ctrl-Z moves the cursor down and Ctrl-W moves the cursor up. Pick Network, then hit enter.

Re Edit View Call Transfer Help	긔ㅗ
SNMP Server Console Configuration	1-
-> Boot Mode Set Boot Mode (1)Fix (2)BOOTP (3)DHCP IP Set IP address Gateway Set gateway address NetMask Set subnet mask DNS Set domain name server Speed/Duplex Set Speed/Duplex (1)Auto (2)10M (3)100M (4)Full (5)Half Commant > Boot Mode (CR)_	
CTRL-W Move Up, CTRL-Z Move Down, <enter> Select, <esc> Cancel Mode : ISTE:</esc></enter>	Ļ
Connected 0:01:58 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	

15. Pick IP, then hit enter. Enter in the IP Address (required), the Gateway Address, the Subnet Mask and the DNS. Hit the "Escape" key to return to the main menu.

Image: second system HyperTerminal File Edit View Call Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second system Image: second syst	ansfer Help	×
SNMP Server Co	nsole Configuration Set PPP connection type (1)ISP (2)PPP	^
Server IP Client IP Server Prof DialNumber Profile ActiveDial	Set PPP Server IP Set PPP Client IP ile Set PPP Server Account and password Set ISP dial no Set ISP dial no Set enable/disable dial-out interface	
Command > PPP	Туре <cr></cr>	
CTRL-W Move Up	, CTRL-Z Move Down, <enter> Select, <esc> Cancel Mode : ISEE</esc></enter>	•
Connected 0:02:34	VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	

16. Enter in the PPP Type, Server IP, Client IP, Server Profile, Dial number, the ISP account/password and the enable/disable dial-out interface (not required). Hit the "Escape" key to return to the main menu.

🗞 a - HyperTerminal	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>C</u> all <u>T</u> ransfer <u>H</u> elp	
SNMP Server Console Configuration	
-> SMTPServer Set SMTP Server Add Add a e-mail address Delete Delete a e-mail address	
SMTP Server :	
No. E-Mail Address	
(1) (Empty) (2) (Empty) (3) (Empty) (4) (Empty) (5) (Empty)	
CTRL-W Move Up, CTRL-Z Move Down, <enter> Select, <esc> Cancel Mode : I</esc></enter>	
Connected 0:01:58 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	

17. Arrow down to Mail and hit enter. Enter in the SMTP Server (not required). The user can add or delete email addresses. Hit the "Escape" key to return to the main menu.

E	a - Hy jile <u>E</u> dit	vperTerm : View (@ 3	inal Call I	ransfei	Help)							<u> </u>	
Γ	SNMI	P Serve	r Co	nso]	e Co	nfi	guratio	n						
l	-> f I	Add Delete				Add De 1e	a trap ete a ti	receive rap rece	r iver					
I		No.	I P	Add	ress			Communit	у	Accept	-			
		(1) (2) (3) (4)	0. 0. 0.	0. 0. 0.	0. 0. 0.	0 0 0	Public Public Public Public Public	C C C C		No No No				
		(6) (7) (8) (9)	0. 0. 0.	0. 0. 0.	0. 0. 0.	000	Public Public Public Public	6 6 6 6		No No No No				
	CTRI	(10) nand) 	Ø. Add ve Up	Ø. <cf< td=""><td>0. > RL-Z</td><td>0 </td><td>Public ve Down</td><td>c</td><td>> Selea</td><td>No t, (Esc)</td><td>- </td><td>1 Mode</td><td>: USER</td><td></td></cf<>	0. > RL-Z	0 	Public ve Down	c	> Selea	No t, (Esc)	- 	1 Mode	: USER	
_ C	onnected	10:03:10		VT10)0	1	15200 8-N-	1 SCRO	.L CAP	S NUM	Capture	Print echo		

18. Arrow down to Trap and hit enter. This screen allows the user to send Traps about the UPS to ten IP Addresses (not required). Also, you may determine the severity levels and what type of access, read only or read and write, to assign to a particular IP manager. Hit the "Escape" key to return to the main menu.

🇞 ups - HyperTerminal	
<u>File Edit View Call Iransfer H</u> elp	
SNMP Server Console Configuration	
Sys Information NetworkSet system information set IP, gateway, subnet mask, Boot Mode, Speed/duplex Set IPP Config. Set PPP Configuration MailSet SMTP server, e-mail address Trap Set trap receivers Set API Configuration DeviceAPI Config. Device ControlSet ENW Configuration Device control Administrator Set telnet configuration port and password Reset Reset configuration to default-> Save_Restart ExitSave And disconnection	
Command > Save_Restart <cr></cr>	
Response > Make sure you want to overwrite old setting file (y/n) ? y_	
CTRL-W Move Up, CTRL-Z Move Down, <enter> Select, <esc> Cancel Mode : JENER</esc></enter>	
Connected 0:06:10 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	

19. Once you have finished with the entire configuration, cursor down to Save_Restart and hit enter. Make sure you want to overwrite the old settings (y/n)? Hit the "y" key, then hit enter.

Image: system of the system Image: system	
Sys Information Network Set System information Network PPP Config. Mail Set SMTP server, e-mail address Trap API Config. Set API Configuration ENU Config. Set API Configuration ENU Config. Set ENU Configuration Device Control Device Control Device connect, iSwitch Device Control Device control Administrator Set internet administrator name and password TelnetProfile Set celnet configuration to default -> Save_Restart Exit Save_Restart Context Save_Restart Connection Command > Save_Restart <cr> Response > After reboot system, the new setting will active. Reboot (y/n)? y</cr>	-
CTRL-W Move Up, CTRL-Z Move Down, <enter> Select, <esc> Cancel Mode : ISB Connected 0:07:31 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo</esc></enter>	

- 20. After rebooting the system, the new settings will be activated. Reboot (y/n)? Hit the "y" key then hit enter. Once the system has rebooted, cursor down to Exit then hit enter.
- 21. The Serial Setup Procedure is complete. The CIC is fully operational. Unplug the DB9 female-to-female Serial Cable from the CIC and from the computer. Plug the Ethernet Cable into the CIC and after about thirty seconds the Link LED will start blinking, now you can communicate with the CIC. The Ping command is supported at this time. Startup a Browser and type in the IP Address. The default password is **admin** (lower case). Go to the section in the User's Manual titled "Web-Based Configuration" it will guide you through the Web pages.

Setup via the Ethernet Port

NOTE: You must complete the appropriate Installation Procedure before proceeding with this Setup Procedure.

The following items must be obtained before attempting to setup the CIC: A valid IP Address, a Computer on the network and an Ethernet cable connected to the network.

- 1. Connect the Ethernet cable to the CIC's Ethernet Port.
- 2. Turn the computer on and let it boot-up.
- 3. Plug the UPS's power cord into the AC outlet and turn the UPS on.
- 4. Wait for approximately thirty seconds for the Link LED to start blinking.



5. From the Desktop open the Start menu. Pick Programs and then open the MS-DOS Prompt.



6. This is an example. At the MS-DOS Prompt type: arp –s 192.166.7.19 52-54-4c-19-ad-90. Then hit enter. The first string is the IP Address; the second string is the MAC Address (which can be found on the front of the CIC).



7. At the MS-DOS Prompt type: route add 192.166.7.19 210.67.4.155. Then hit enter. The first string is the IP Address and the second string is the Gateway Address.

NOTE: The PING Command is not supported at this time.

- 8. At the MS-DOS Prompt type exit. Then hit enter.
- 9. There are two options to finish setting up all of the parameters. Option #1 The Web-Based Configuration, Option #2 Telnet.
- 10. Option #1. Startup a Browser and type in the IP Address. The default name and password is **admin** (lower case). Go to the section in the User's Manual titled "Web-Based Configuration" it will guide you through the setup of all the parameters.
- 11. Option #2. Go to the section in the User's Manual titled "Telnet Configuration" it will guide you through the setup of all the parameters.

Telnet Configuration

This section will guide you through finishing the configuration of the Computer Interface Card (CIC) using Telnet.

NOTE: You must complete the appropriate Installation Procedure before proceeding with the Telnet Configuration.

NOTE: You must have given the CIC an IP Address.

The Ethernet cable is connected to the CIC and the UPS is on.



1. From the Desktop open the Start menu. Pick Programs and then open the MS-DOS Prompt.



- 2. This is an example. At the MS-DOS Prompt type telnet 192.166.7.19 (IP Address). Then hit enter.
- 3. Next you will be asked for the User Password. The default password is **admin**. Enter the password, then hit enter.

<u>Connect</u> <u>Edit</u> <u>T</u> erminal <u>H</u> elp	
SNMP Servi Preferences	uration
-> Sys In Networl	system information IP address, gateway address and subnet mask
PPP Config.	Set PPP Configuration
Mail	Set SMTP server, e-mail address
Trap	Set trap receivers
API Config.	Set API Configuration
Device	Set device connect, iSwitch
Device Control	Device control
Administrator	Set internet administrator name and password
TelnetProfile	Set telnet configuration port and password
Reset	Reset configuration to default
Save_Restart	Save and Restart
Exit	Exit and disconnection
Command > Sys Inform	nation <more></more>
ARROW KEY: 'UP/DOWN'	Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : USER

4. Pick Terminal, then open Preferences.

> Sys Information Network PPP Config. Mail	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set SMTP server, e-mail address
Trap API Config. Device Control Administrator TelnetProfile Reset Save_Restart Exit	Terminal Options Emulation Local Echo Emulation Binking Cursor VT-52 Binking Cursor VT-100/ANSI VT100 Arrows Eonts Buffer Size: 25
ommand > Sys Info	IFMALTON <mope></mope>

5. Check VT100 Arrows. You can leave the Block Cursor checked or you can uncheck the Block Cursor depending on your preference. Then click OK.

<u>Connect</u> <u>E</u> dit <u>Terminal</u> <u>H</u> elp SNMP Server Telnet Configuration						
-> Sys Information Network PPP Config. Mail Trap API Config. Device Control Administrator TelnetProfile Reset Save_Restart Exit	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set SMTP server, e-mail address Set trap receivers Set API Configuration Set device connect, iSwitch Device control Set internet administrator name and password Set telnet configuration port and password Reset configuration to default Save and Restart Exit and disconnection					
ARROW KEY: 'UP/DOWN' Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : USER						

6. Pick Network, then hit enter.

<u>Connect</u> <u>Edit</u> <u>Terminal</u> <u>H</u> elp SNMP Server Telnet (Configuration
Boot Mode -> IP Gateway NetMask DNS	Set Boot Mode (1)Fix (2)BOOTP (3)DHCP Set IP address Set gateway address Set subnet mask Set domain name server
Command > IP <cr></cr>	
ARROW KEY: 'UP/DOWN'	' Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : USER

7. Pick IP, then hit enter. Input your IP Address (required), Gateway Address, Subnet Mask and the DNS. Then hit the left arrow key to exit to the main menu.

<u>Connect</u> <u>E</u> dit <u>T</u> erminal <u>H</u> elp	
SNMP Server Telnet Co	nfiguration
Sys Information Network PPP Config. Mail Trap API Config. Device Device Control Administrator TelnetProfile Reset -> Save_Restart Exit	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set SMTP server, e-mail address Set trap receivers Set API Configuration Set device connect, iSwitch Device control Set internet administrator name and password Set telnet configuration port and password Reset configuration to default Save and Restart Exit and disconnection
Command > Save Resta	rt <cr></cr>
Response > Make sure	you want to overwrite old setting file (y/n) ? ∎
ARROW KEY: 'UP/DOWN'	Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : USER

8. Once you have finished with the entire configuration, arrow down to Save_Restart and hit enter. Make sure you want to overwrite the old settings (y/n)? Hit the "y" key, then hit enter.

Sys Information Network PPP Config. Mail Trap API Config. Device Device Control Administrator TelnetProfile Reset	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set SMTP server, e-mail address Set trap receivers Set API Configuration Set device connect, iSwitch Device control Set internet administrator name and password Set telnet configuration port and password Reset configuration to default
Exit	Exit and disconnection
<pre>Command > Save_Rest</pre>	art <cr></cr>
Response > After reb	oot system, the new setting will active. Reboot (y/n) ? 📕
ARROW KEY: 'UP/DOWN'	Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : USER

9. After rebooting the system, the new settings will be activated. Reboot (y/n)? Hit the "y" key then hit enter.

Connect Edd Lemmal Help SNMP Server Telnet C. Sys Information Network PPP Config. Mail Trap API Config. Device Device Control Administrator TelnetProfile	Set system information Set IP address, gateway address and subnet mask Set PPP Configuration Set SMTP server, e-mail address Set trap receivers Set API Configuration Set devic Telnet M Device cc Set inter Connection to host lost. Set telnet ort and password
Reset	Reset cor
-> Save_Restart	Save and OK ault
Exit	Exit and arsconnection
Command > Save_Rest.	art <cr></cr>
Message > Reboot sy:	stem
ARROW KEY: 'UP/DOWN'	Move cursor, 'RIGHT' Select, 'LEFT' Exit Mode : <mark>USER</mark>

10. The CIC has rebooted to activate the new settings. Click OK. Arrow down to exit then hit enter.



11. On the Toolbar pick Connect, then arrow down to exit and hit enter.



- 12. At the MS-DOS Prompt type exit, then hit enter.
- 13. The Telnet Configuration is complete. The CIC is fully operational. After about thirty seconds the Link LED will start blinking, now you can communicate with the CIC. The Ping command is supported at this time. Startup a Browser and type in the IP Address. The default password is **admin** (lower case). Go to the section in the User's Manual titled "Web-Based Configuration" it will guide you through the Web pages.

Web-Based Configuration

This section will guide you through the Web-Based-Configuration and the Web Pages of the Computer Interface Card (CIC).

<u>NOTE</u>: You must complete the appropriate Installation and Setup Procedures before proceeding with the Web-Based-Configuration.

The Ethernet cable is connected to the CIC and the UPS is on.

- 1. Startup a Web browser.
- 2. Type in your IP Address.
- 3. Next you will be asked for the User Name and Password. The default Name and Password is **admin**. Enter the password, then hit enter.

Π	Server	Sys. Information				<u> </u>
		<u>Network</u>		вл:.		
		PPP Configuration		IVII	nuteivian	
		<u>Date</u>			E 350	
		<u>Administrator</u>			E 750	
		Software Upgrade				
		Save & Restart				
		Logout		~ .		
	Client	UPS 💌		Syste	m information	
	LIPS	Meter		System Name	System Name	
	0, 0	Identification		System Contact	System Contact	
		<u>Configuration</u>		System Location	System Location	
		Input		Sustem Deparintian	Putan Description	
		<u>Output</u>		System Description		
		<u>Battery</u>		DHCP Name	52544C19048A	
		<u>Alarm</u>				
		<u>Control</u>			Save	
		Gen.Schedule				
		Spec.Schedule				
		<u>View Graphic</u>			Back	
		View Data Log	•			-

4. This is the screen where you can set the System Information parameters for the SNMP MIB2. After you have finished filling in all of the information, click Save.

Set Network		
IP Address	192.166.7.19	
Gateway Address	210.67.4.155	
Subnet Mask	255.255.255.0	
Domain Name Server		
Server ID	server	
TFTP Server IP Address		
TFTP File Name	device.bin	
SNMP Read Community		
SNMP Write Community	Jobiologiak	
BOOT Mode	FIX •	
Save		
Back		

5. This is the screen where you can set the Network parameters. After you have finished filling in all of the information, click Save.

	· · ·	
ччч-	Contidu	iration
	Conniga	adon

Enable PPP Function	1	
РРР Туре	PPP 💌	
ISP Configuration		
ISP Dial Number		
ISP Account		
ISP Password		
Modem Configuration		
Baudrate	115200	
Dial Prefix	Initialization String	
	ATL1	
Mail Configuration	1	
SMTP Server		
Returned Address		
Message Subject	ISP IP Address	
Email Address		
PPP Mode(Dial in) Cor	nfiguration	
PPP Server IP	169.254.1.1	
PPP Client IP	169.254.1.4	
PPP Administrator's Name	admin	
PPP Administrator's Password	Jobeok	
Save	Disconnect Now	
	Back	

6. The PPP connection is useful if it is not possible to make a direct network connection to the CIC. An external modem is needed to connect to the front serial port of the CIC.

<u>NOTE:</u> The user must complete one of the Setup Procedures and fill in all of the information in the PPP Configuration before the Dial-up Function will work.

After dialing in the remote user must hang up after the third ring. Based on the information that the user puts into the PPP configuration, the CIC will automatically dial up to the designated ISP and send an email to the designated email address with the assigned IP address from the ISP. The user may browse and control the CIC with this dynamic IP address. When the user is ready to exit click the "Disconnect Now " button at the bottom of the screen.

Set Server Date & Time		
Server Date (MM/DD/YYYY) 01/26/2001 Server Time (HH:MM:SS) 09:58:53		
Save		
<u>Back</u>		

7. This is the screen where you set the Date and Time. After you have finished filling in the information, click Save.

Set Administrator		
Enable Security Login		
Administrator's Name admin		
Administrator's Password		
Re-Enter Password		
Save		
Back		

8. This is the screen where you can change the Administrator's Name and Password. After you have finished filling in the information, click Save.

<u>NOTE</u>: The Supervisor's name and password can be from 1 to 19 digits. The Supervisor's name and password is not limited to an alphanumeric character (i.e. a#1b\$2z%9).

<u>NOTE: Be sure to write down your Supervisor's name/password and keep it in a safe place. If the user forgets the name/password the CIC will have to be Flash Upgraded before the user can access the CIC.</u>

Software Upgrade		
Current Version	2002 Ver 1.00	
Device Connect Speed	9600	
TFTP Server IP address		
File Name	device.bin	
Do you want to continue with the software upgrade		
YES		
<u>Back</u>		

9. This is the screen where you can upgrade to the latest version of software. See the section on **Software Upgrade Procedure.**



10. When the configuration of the CIC is complete be sure to **Save & Restart** before exiting the program.



11. This screen allows the user to Logout. If, any changes were made be sure to <u>Save & Restart</u> before exiting the program.

Meter	
Input Voltage (V)	122.0
Output Voltage (V)	122.0
Estimated Charge (%)	100
Input Frequency (Hz)	60.0
Output Source	Normal
Output Load (%)	0
Output Power (W)	0
Battery Temperature (Celsius)	25
<u>Back</u>	

12. This screen informs the user the status of the UPS.

	ldentif	ication	
Manufacturer			MinuteMan
Model			E 750
Software Version			0.07B
Identification			Enterprise Series
	Back	Home	

13. This screen identifies the UPS and the Software version of the UPS.

Configuration		
Nominal Input Voltage (V)	113	
Nominal Input Frequency (Hz)	60.0	
Nominal Output Voltage (V)	113	
Nominal Output Frequency (Hz)	60.0	
Nominal Volt-Amp Rating	750	
Nominal Output Power (W)	450	
Nominal Low Battery Time (Min)	2	
Audible Alarm	Enabled	
Low Voltage Transfer Point	75	
Battery Installed Date (MM/DD/YYYY)	05/17/2000	
Nominal Battery Life (Day)	1826	
Shutdown Type	UPS output only	
Auto Restart	Automatic Restart	
Logging Configuration		
Set UPS Meter Refresh Interval		
Refresh Interval 20 seconds		
<u>Back</u> <u>Home</u>		

14. This is the screen where you can configure the Data Logging intervals and the refresh rate of the meter's screen. After you have finished filling in the information, click OK.

Input	
Input Line Bads	3
Input Num Lines	1
Input Frequency (Hz)	60.0
Input Voltage (V)	122.0
<u>Back</u> <u>Home</u>	

15. This screen displays the status of the input power to the UPS.

Output	
Output Source	Normal
Output Num Lines	1
Output Voltage (V)	122.0
Output Current (A)	3.1
Output Power (W)	372
Output Load (%)	82
<u>Back</u> <u>Home</u>	

16. This screen displays the status of the output power of the UPS.

Battery		
Battery Condition	Good	
Battery Status	ок	
Battery Charge	Floating	
Estimated Minutes	58	
Estimated Charge (%)	100	
Battery Voltage (V)	27.4	
Battery Temperature (Celsius)	25	
<u>Back</u> <u>Home</u>		

17. This screen displays the status of the Batteries in the UPS.

Alarm	
Alarm Input Bad	Normal
Alarm Overload	Not Overloaded
Alarm Output Off	Output ON
Alarm Charger Failure	Normal
Alarm General Fault	Normal
Alarm Shutdown Pending	No Shutdown Pending
Test Results Summary	Test Passed
Back Home	

18. This screen displays the Alarm state of the UPS.

UPS Control
Enable/Disable Auto Restart Startup After Delay Shutdown After Delay Cancel Shutdown Reboot With Duration
OK
<u>Back</u> <u>Home</u>

19. This screen allows the User to Control the shutdown and restarting of the UPS. The UPS Control screen, list the commands that can be executed manually. Then click OK.

Day	Action	Shutdown Time (HH:MM)	Restart Time (HH:MM)
MON	Disable 👻	00:00	00:00
TUE	Disable 👻	00:00	00:00
WED	Disable 👻	00:00	00:00
THU	Disable 👻	00:00	00:00
FRI	Disable 👻	00:00	00:00
SAT	Disable 👻	00:00	00:00
SUN	Disable 👻	00:00	00:00

20. This screen allows the User to schedule daily shutdowns and restarts of the UPS. Then click OK. The Computer Interface Card (CIC) will NOT issue the shutdown command to the connected UPS during AC Fail, UPS Battery Low, and UPS Fault conditions. It only notifies users or system administrator of the event. Network node management software like HP OpenView will need to be customized with certain thresholds whether or not to shutdown the Operating System.

	Set Specific Schedule				
		DATE	Shutdown Time	Pastart Time	
NO.	Action	(MM/DD/YYYY)	(HH:MM)	(HH:MM)	
1	Disable 💌	09/01/1998	00:00	00:00	
2	Disable 💌	09/01/1998	00:00	00:00	
3	Disable 💌	09/01/1998	00:00	00:00	
4	Disable 💌	09/01/1998	00:00	00:00	
5	Disable 💌	09/01/1998	00:00	00:00	
6	Disable 💌	09/01/1998	00:00	00:00	
7	Disable 💌	09/01/1998	00:00	00:00	
		0	K		
		<u>Back</u>	<u>Home</u>		

21. This screen allows the User to schedule daily, weekly, monthly and yearly shutdowns/restarts of the UPS. Then click OK. The Computer Interface Card (CIC) will NOT issue the shutdown command to the connected UPS during AC Fail, UPS Battery Low, and UPS Fault conditions. It only notifies users or system administrator of the event. Network node management software like HP OpenView will need to be customized with certain thresholds whether or not to shutdown the Operating System.



22. This is the View Graphic screen. This screen provides the user with a wide variety of information about the status of the UPS. The user can choose the data that they want displayed.

Ch	oose data to display				
Charge Genera Input E Output Overlo Shutdc AudiblA Battery Battery Battery Battery Battery Battery Battery Battery Battery Catcon Battery Catcon Battery Catcon Battery Catcon Battery Catcon Battery Catcon	E Failure Alarm al Fault Alarm 3d Alarm Off Alarm aded Alarm wen Pending Alarm e Alarm estart y Charge y Condition Installed Date y Status y Voltage ted Charge ted Kinutes lentification requency ine Bads lum Lines oltage D Transfer Point acturer al Battery Life	*			
	OK		Defaults	Cancel	

23. On the left hand side of the View Graphic screen, there are seven fields that display data. The user can change any one of these fields, to display the data that they choose, by clicking on one of the fields. Then this screen will appear. Once the selection has been made, click OK.

Choose data to display	Set Scales:	
Battery Voltage Estimated Charge Estimated Minutes Input Frequency Input Voltage Output Voltage	Min : 0.0 Set Threshold	Мах : 10.0
Output Power	Min	Color
	Threshold1 2.0	blue 🔽
	Threshold1 4.0	green 💌
	Threshold3 6.0	yellow 💌
	Threshold4 8.0	gray 💌
	Max	red
ОК	Defaults	Cancel

24. On the right hand side of the View Graphic screen, there are three bar graphs. The user can change any one of the Bar graphs, to display the data that they choose, by click on one of the bar graphs. Then this screen will appear. The user can pick any one of these topics from this screen to be displayed. Once the selection has been made, click OK.

View Data Log
Date From: (MM/DD/YYYY) Date To: (MM/DD/YYYY) 01/26/2001
OK Back <u>Home</u>

25. This is the View Data Log screen. The user inputs a start date and an end date to view data in the Data log. Then click OK.

NOTE: The user has to enable the Data log in the Configuration screen (see page 39).

View Event Log
Date From: (MM/DD/YYYY) Date To: (MM/DD/YYYY) Event Type:
OK Back Home

26. This is the View Event Log screen. The user inputs a start date and an end date to view an event in the Event log. Then click OK.

NOTE: The user has to enable the Event log in the Event Action screen (see page 46).

	Ev	ent Actio	n		
Event List					
	Alarm Batte Alarm On E Alarm Low Alarm Depl Alarm Tem Alarm Inpu	ery Bad Battery Battery eted Battery perature Bad t Bad		•	
Configure					
PAGER	BROADCAST	LOGGING	TRAP	MAIL	ISWITCH
	В	<u>ack Home</u>	2		

27. This is the Event Action screen. The user chooses an event from the Event List. Then the user chooses one of the five ways to configure the event (ISWITCH is used in conjunction with the RPM/UPS Interface Card).

		Pager	
Event:	Alarm On Battery		
Paging	Enable		
		Paging Message	
Alarm-Add			
Alarm-Rem	ove		
Pager Numl	ber		
		OK	
		Back Home	

28. This is the Pager Configuration screen. Connect an external modem to the RS232 port of the CIC. When the chosen Event happens, the CIC will page the number. After dialing in the remote user must hang up after the third ring. Based on the information that the user puts into the PPP configuration, the CIC will automatically dial up to the designated ISP and send an email to the designated email address with the assigned IP address from the ISP. The user may browse and control the CIC with this dynamic IP address. When the user is ready to exit click the "Disconnect Now" button at the bottom of the screen. The user must check the Paging Enable Box.

NOTE: The user must complete the PPP Configuration for the Pager Function to work.

	Broadcast		
Event :	Alarm On Battery		
 ✓ Broadcast Enable ✓ Broadcast Shutdown Message 			
OK			
	<u>Back Home</u>		

29. This is the Broadcast Configuration screen. When the chosen Event happens, the CIC will broadcast the message. The user will have to install the Message Capturing Program to be able to capture the broadcasted messages. The Message Capturing Program (UpsClient.exe) is located on the CD with the User's Manual. The program has to be on before it will capture the messages. The user can install the program on their desktop. NOTE: The user must check the appropriate broadcast box.

	Logging
Event :	Alarm On Battery
Event Log	ging Enable
	ОК
	<u>Back</u> <u>Home</u>

30. This is the Event Logging Configuration screen. When the chosen Event happens, the CIC will log the event in the Event Log (see View Event Log pg.45).

NOTE: The user must check the Event Logging Enable box.

	Trap					
Event :	Alarm On Battery					
🗷 Trap Ena	able					
Trap Rece	iver Configuration					
Accept	IP Address	Community				
		public				
		public				
		public				
		public				
		public				
		public				
		public				
		public				
		public				
		public				
	OK					
Back Home						

31. This is the Trap Configuration screen. This screen allows the user to send SNMP Traps about the UPS to ten IP Addresses (managers). Also, you may determine the severity levels and what type of access (read only or read and write) to assign to a particular IP manager.

NOTE: The user must check the Trap Enable box and the Accept box.

NOTE: An NMS is required to send and get the SNMP Traps.

Mail					
Event :	Alarm On Battery				
🗹 Mail Enable					
P	Mail Configuration				
DNS Server					
SMTP Server					
Returned Address					
Message Subject	Alarm Event				
Email Address					
	OK				
	<u>Back</u>				

32. This is the Email Configuration screen. This screen allows the user to send emails about the UPS to five different email addresses. Once all of the information is filled in, click OK. Be sure to <u>Save & Restart</u> before exiting the program.

NOTE: The user must check the Mail Enable box.

33. The Web-Based Configuration is complete. The CIC is fully operational. To completely finish the Setup and Configuration procedures the User must configure the NMS (see Configuring the NMS). Be sure to <u>Save & Restart</u> before exiting the program.

Software Upgrade Procedures

Software Upgrade via TFTP

The user can remotely and conveniently, Flash Upgraded the CIC card's Software via a TFTP Server. The following procedure will step the user through setting up the TFTP Server at the user's location and Flash upgrading the Software for the CIC.

🔯 Exploring - TFTP Flash Upgrade		_ 8 ×
<u>File Edit View Go Favorites Iools H</u> elp		
→ → ← ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Delete Properties Views	
Address 🗀 F:\Engineering ONLY\Software\CIC Upgr\TFTP Flash Upgrade		▼
Folders × Name	Size Type Modified	
CIC Upgr Flash Upgrade Software CIC USB Driver e-mail upgrade files Enterprise Flash Upgrade EPROM burner StartSine Flash Upgrade FRSIM burner StartSine Flash Upgrade Test Test Report Summary JL Documents inder consideration Jnpub Manuals VAV MTRX: VACT PPS /ACCT AT45 c	960 BIN File 7/31/02 2:30 PM 1KB DIZ File 9/22/00 7:47 PM 49KB Application 6/1/01 91/21/301 PM 26KB Help File 9/22/00 7:47 PM 4KB DIZ File 9/22/00 7:47 PM	

1. Create a folder (TFTP Software Upgrade). Copy the following files to the folder: 2002AT ver2.0.BIN (example), file_id.diz, tftp32.exe, tftp32.hlp, and Vendinfo.diz. The first file **.BIN** is the actual Software upgrade file, which is available for downloading from our web site. The last four files are on a 3.5" floppy disk included with the CIC package.

Evoloring - TETP Flash Upp	ahear					
<u>File Edit View Go Fav</u>	orites <u>L</u> ools <u>H</u> elp					(a)
↓ . → . 1			$\gamma \mid X$	Ĩ	iiii 🗸	
Back Forward U	p Cut Copy	Paste Un	ido Delete	Properties	Views	
Address 🗀 F:\Engineering ONL	Y\Software\CIC Upgr\TFTF	PFlash Upgrade				▼
Folders ×	Name		Size	Туре	Modified	
🗅 CIC Upgr 📃	菌 2002AT ver2.0.BIN		960	BIN File	7/31/02 2:30 PM	
🗄 🧰 Flash Upgrade Software	🖬 file_id.diz		1KB	DIZ File	9/22/00 7:47 PM	
🛨 🔂 TFTP Flash Upgrade	🏘 tftpd32.exe		49KB	Application	6/1/01 9:11 PM	
🗋 CIC USB Driver	🛷 tftpd32.hlp		26KB	Help File	9/22/00 7:47 PM	
🗋 e-mail upgrade files	🖻 Vendinfo.diz 👘	TETOD22 L.	nt. I		0 7:47 PM	
Enterprise Flash Upgrade		VETETED 32 Dy I	rn. Jounin			
EPROM burner		Base Directory	E:\Engineerin	a ONLYSoftw	are\CIC Lings\	
SIZING97 SETUP		2000 2 1000001	ji . serigineenn	g oner tookin	are to re opgin	
SmartSine Flash Upgrade		Server Address	216.87.151.17	75	•	
Test			,			
_ upstest						
Lest Heport Summary						
JL Documents						
under consideration						
Jinpub Manuais						
NAV		Current Action	Listening on	port 69		
		·····	3		1	
		ADOU	<u>s</u> ettir	ngs	Help	
	1					
PPS						
4T45						
c						

Open the tftp32.exe file. The above screen will open. This is the TFTP Server's IP address.
 NOTE: DO NOT close the tftp32.exe program until the Software Flash Upgrade is complete.

		▲			
POWER DEVICE MANAGEMENT			Minuteman		
Server Sys. Information Network PPP Configuration Date Administrator			E 750		
			Meter		
	Software Opgrade Save & Restart	Input Vo	oltage (V)	121.0	
	Logout	Output \	Voltage (V)	121.0	
Client	UPS 💌	Estimat	ed Charge (%)	100	
		Input Fre	equency (Hz)	60.0	
UPS	<u>Meter</u> Identification	Output S	Source	Normal	
	Configuration	Output L	Load (%)	0	
	Input	Output F	– Power (W)	0	

3. Open a Web browser and input the IP address of the CIC that is going to be Flash Upgraded. Once the Web page is open, select "Software Upgrade".

IOME - Microso	ft Internet Explorer provid Ph. Jounin	led by Minuteman	_
Base Directory Server Address	F:\Engineering ONLY\Softw 216.87.151.175	vare\CIC Upg\ avorites History	Mail Print Edit Discuss
			inuteman
Current Action	Listening on port 69		E 750
PPP C Date Admin Softwa	istrator	Sof	ware Upgrade
Save &	<u>Restart</u>	Current Version	2002AT 1.2.3
Logou	<u>t</u>	Device Connect Speed	9600
lient UPS		TFTP Server IP addres	5 216.87.151.175
DO Metro		File Name	2002AT ver2.0.bin
PS Meter	ication	Do you want to con	tinue with the software upgrade
	and the second sec		

4. Input the TFTP Server IP address and the Software Upgrade file name (.BIN), then click YES.

🛃 HOME - Microsoft Internet Explorer (rovided by Minutema	an			_ 8 ×
TFTPD32 by Ph. Jounin					٢
Base Directory F:\Engineering ONLY\	Software\CIC Upgr\	Favorites History	Mail Print	Edit Discuss	
Server Address 216.87.151.175	_				▼ @Go
Connection received from 216.87.151.231 Read request for file <2002AT ver2.0.bin>.	on port 32768 Mode octet	anet 🙋 SizeMyUps	🛃 Windows Upda	te 🖉 Yahoo	
Current Action Listening on port 69	Halp	tus of \$	Softwa	re Upgra	de
<u></u>		Status	DownLoad	d data	
PPP Configuration	Receive	d Bvtes	96768		
<u>Uate</u> <u>Administrator</u> <u>Software Upgrade</u> Save & Restart			<u>Back</u>		
Logout					
Client UPS 💌					
UPS Meter Identification					
Configuration					

5. The TFTP Server is Flash Upgrading the CIC to the new version of Software. The Software Upgrade takes approximately thirty-five minutes to complete.

6. The transferring of the Software Upgrade file is complete. Close the tftp32.exe program. Open "<u>Save & Restart</u>". The "Save & Restart" function must be performed to save all of the changes. The CIC is ready for normal operation.

Software Upgrade via Serial Port:

The following items must be obtained before attempting to upgrade the CIC: The Software upgrade file (contact Minuteman Tech Support), a DB9 female-to-female Serial Cable (provided). There are a wide variety of Terminal Emulation packages, but for the most part they should be very similar. The following upgrade procedure is using Hyper Terminal.

NOTE: When using Hyper Terminal use Version 3.0 or higher.

- 1. Go to the section titled "Setup via Serial Port" (page 17) and follow steps 1 through 10. Then proceed with step #2.
- 2. With the Hyper Terminal program still open, Plug the UPS's power cord into the AC outlet and turn the UPS on.

🍓 b - HyperTerminal						<u>- </u>
$\underline{F} ile \underline{E} dit \underline{V} iew \underline{C} all \underline{T} ransfer$	<u>H</u> elp					
	P					
High-speed UART init Check u-dram Enter loader AMD Flash found in s Polling part for Det Checking current fla -upgr_	ailized socket vice IDfound a ash statusflas	un Am29F800B sh is [Ready]				
Connected 0:00:44 VT100) 115200 8-N-1	SCROLL CAPS	NUM	Capture	Print echo	

3. Once the message "Check u-dram" appears hit the "c" key. Then at the cursor type "upgr" for cards with MAC Addresses beginning with "52" and "upall" for cards with MAC Addresses beginning with "00", then hit enter. Once the user hits enter, you have approximately thirty seconds to complete the next four steps.

🍓 b - HyperTerminal		
<u>File Edit View Call Transfer H</u>	lp	
Send File High-speed UA Check u-dram. Enter loader. AMD Flash fou Polling part Checking current flash-upgr Upgrade Code and Homep Erasing sector 0 IR Erasing sector 1 IR Erasing sector 3 IR Erasing sector 4	ext tFile <u>printer</u> ound an Am29F800B statusflash is [Ready] age data? ady] ady] ady] ady] ady] ady]	
Sends a file to the remote system		

4. Go to the tool bar and select \underline{T} ransfer. Open \underline{S} end File.

🗞 b - HyperTerminal	_O×
<u>File Edit View Call Transfer Help</u>	
Check u-dram Enter loader AMD Flash found in content Polling part for De Checking current fl Upgrade Code and Hot Erasing sector 0 Erasing sector 1 Erasing sector 2 Erasing sector 3 Erasing sector 5 Erasing sector 6 Erasing sector 7 Erasing sector 0 Erasing s	
Connected 0:00:45 VT100 115200 8-N-1 SCROLL CAPS NUM Capture Print echo	1

5. Select "X modem" under Protocol.

🎨 b - HyperTerminal			
<u>File Edit View Call Transfer</u>	Help		
DB 🖉 🔊 🔊 🕞	r an		
Check u-dram			
Enter loader	1		
Polling part for De	🙀 Send File	? ×	
Checking current fl	Select File to Send	2 1	
-upgr Illugrade Code and Hou	Select The to Sella		
Erasing sector 0	Look in: 🛃 3½ Floppy (A:)	▼ 🖻 🧭 😁 📰	
Erasing sector 1			
Erasing sector 2	file_id.diz	Vendinfo.diz	
Erasing sector 4	RS232 Serial Port Console Upgrade.doc		
Erasing sector 5	🛤 test.bin		
Erasing sector 6	TFTP update procedure.doc		
Erasing sector 8	🔖 tftpd32.exe		
Erasing sector 9	🔗 tftpd32.hlp		
Erasing sector a			
Erasing sector c	I I I I I I I I I I I I I I I I I I I	F	
Erasing sector d			
Wait 25 seconds for	File <u>n</u> ame: test.bin	<u>O</u> pen	
-			
l <u> </u>	Files of type: All Files (*.*)	Cancel	<u>▼</u>
Connected 0:00:25 VT100			1.

6. Click Browse. Look in the location where the Software upgrade file is located. Select the File <u>n</u>ame: ".bin" and click open.

◆ b - HyperTerminal Eile Edit View Call Iransfer H □ □ □ ③ □ <td< th=""><th>elp a</th><th></th><th></th><th></th><th></th><th></th></td<>	elp a					
Check u-dram Enter loader AMD Flash found in Polling part for De Checking current fl -upgr Upgrade Code and Ho Erasing sector 9 Erasing sector 2 Erasing sector 2 Erasing sector 3 Erasing sector 5 Erasing sector 5 Erasing sector 7 Erasing sector 8 Erasing sector 9 Erasing sector 9 Erasing sector 4 Erasing sector 4 Erasing sector 5 Erasing sector 8 Erasing sector 4 Erasing s	Send File Solder: A:\ Folder: A:\ Folder: A:\ Protocol: Xmodem eady1 eady1 eady1 eady1 eady1 eady1 ost to select	<u>S</u> end upgrade f		? × rowse Cancel		
Connected 0:00:41 VT100	115200 8-N-1	SCROLL	CAPS NUM	Capture	Print echo	

7. Click Send.

8 b - HyperTerminal File Edit <u>V</u> iew <u>C</u> all <u>T</u> ransfer	Xmodem fil	e send for	ь			
	Sending:	A:\test.bin				
Check u-dram Enter loader AMD Flash found in s	- Packet:	4051	Error checking:	CRC		
Polling part for Dev Checking current fla -upgr	Retries:	0	Total retries:	0]	
Upgrade Code and Hor Erasing sector 0 Erasing sector 1 Frasing sector 2	Last error:				1	
Erasing sector 3 Erasing sector 4 Erasing sector 5	File:				505k of 960K	
Erasing sector 6 Erasing sector 7 Erasing sector 8	Elapsed:	00:03:51	Remaining:	00:03:28	Throughput: 2238 cp	s
Erasing sector 9 Erasing sector a Erasing sector b Erasing sector c					Cancel <u>c</u> ps/bp	is literation
Erasing sector d[neagy] Erasing sector e[Ready] Wait 25 seconds for host to select upgrade file						
Connected 0:05:23 VT100	1152	.00 8-N-1	SCROLL CAP	S NUM	Capture Print echo]

8. The Software upgrade will take approximately eight minutes to complete.

🗞 b - HyperTerminal	
<u>File E</u> dit <u>V</u> iew <u>C</u> all <u>I</u> ransfer <u>H</u> elp	
	1
Enter loader AMD Flash found in socket Polling part for Device IDfound an Am29F800B Checking current flash statusflash is [Ready] -upgr Upgrade Code and Homepage data? Erasing sector 0[Ready] Erasing sector 1[Ready] Erasing sector 2[Ready] Erasing sector 3[Ready] Erasing sector 5[Ready] Erasing sector 5[Ready] Erasing sector 7[Ready] Erasing sector 8[Ready] Erasing sector 9[Ready] Erasing sector 9[Ready] Erasing sector 0[Ready] Erasing sec	
Connected 0:08:56 VT100 115200 8:N-1 SCROLL CAPS NUM Capture Print echo	

9. The Software upgrade is complete.

<u>NOTE</u>: The user has to reconfigure all of the settings after the Software upgrade is complete, because all of the user's settings will default to the original factory default settings.

Configuring the NMS

To complete the Computer Interface Card (CIC) installation and configuration process, you must compile the necessary MIBs to configure the NMS.

Most NMS with a MIB compiler can manage the Computer Interface Card (CIC) adapter. For instructions on how to compile MIBs for the most popular NMS—HP's OpenView Network Node Manager, and SunConnect's SunNet Manager; see the corresponding heading below.

General Network Management Stations

Follow these general procedures to configure an NMS:

- 1. Compile the device MIBs.
- 2. Add the Computer Interface Card (CIC) object to the Management Map.
- 3. Ping the Computer Interface Card (CIC).

HP OpenView Network Node Manager for HP-UX

Compile the Device MIB

- 1. Copy the UPS MIB file from the TAR formatted diskette into the subdirectory /usr/OV/snmp_mibs.
- 2. From the main menu, select Options
- 3. Load/Unload *MIBs: SNMP...*
- 4. Select Load.
- 5. Select the MIB file copied earlier.
- 6. Select OK.

Add the Computer Interface Card (CIC) Object to the Management Map

- 1. Select the submap then Edit: Add Object.
- 2. Select the group computer.
- 3. With the middle (or opposite) mouse button, drag the generic symbol subclass device to the submap.
- 4. Enter a name for the object in the Selection and Label fields of the Add Object box.
- 5. Highlight *IP Map* from *Object Attributes* group.
- 6. Select Set Object Attributes button.
- 7. Enter Host name and IP address of Computer Interface Card (CIC) adapter.
- 8. Enter *OK*.
- 9. Enter **OK** at Add Object menu.
- 10. Enter OK at Add Object:palette.

Poll the Device OIDs

- 1. From the main menu, select *Monitor: MIB* values then *Browse MIB: SNMP*.
- 2. Move around the MIBs to view the UPS device information.

Set the Device OIDs

- 1. From the main menu, select *Monitor: MIB* values then *Browse MIB: SNMP*.
- 2. Select a MIB variable you want to alter by clicking on it.
- 3. Enter the new value then click on Set.
- 4. Click on Start Query to view the changes.

Ping the Computer Interface Card (CIC)

- 1. Change active Window to Shell.
- 2. Type ping <IP address> and press <enter>.

Access the UPS MIB variables

Keep in mind that all parameters may not be supported by every UPS system. The following list is an example of some of the parameters. Be sure to review the MIB file contained on the floppy disk.

The Battery status

upsBattery.upsBatteryStatus.0 : batteryNormal upsBattery.upsEstimatedMinutesRemaining.0 : 0 upsBattery.upsEstimatedChargeRemaining

The Input/Output status

upsInput.upsInputTable.upsInputEntry.upsInputFrequency. upsInput.upsInputTable.upsInputEntry.upsInputVoltage upsOutput.upsOutputSource upsOutput.upsOutputTable.upsOutputEntry.upsOutputVoltage

UPS Control and configuration

upsTest.upsTestResultsSummary.0 : donePass upsControl.upsShutdownType.0: system upsControl.upsShutdownAfterDelay.0: -1 upsControl.upsStartupAfterDelav.0: -1 upsControl.upsRebootWithDuration.0: -1 upsControl.upsAutoRestart.0 : on upsConfig.upsConfigInputVoltage.0: 120 upsConfig.upsConfigInputFreq.0:600 upsConfig.upsConfigOutputVoltage.0:120 upsConfig.upsConfigOutputFreq.0:600 upsConfig.upsConfigOutputVA.0:700 upsConfig.upsConfigOutputPower.0:450 upsConfig.upsConfigLowBattTime.0:2 upsConfig.upsConfigAudibleStatus.0: enabled upsConfig.upsConfigLowVoltageTransferPoint.0:92 upsConfig.upsConfigHighVoltageTransferPoint.0: 145

UPS Identifications

upsIdent.upsIdentManufacturer upsIdent.upsIdentModel upsIdent.upsIdentUPSSoftwareVersion upsIdent.upsIdentAgentSoftwareVersion upsIdent.upsIdentName



This section discusses: Communities, Gateways, IP Addresses, and Subnet masking.

Communities

A community is a string of printable ASCII characters that identifies a user group with the same access privileges. For example, a common community name is "public."

For security purposes, the SNMP agent validates requests before responding. The agent can be configured so that only trap managers that are members of a community can send requests and receive responses from a particular community. This prevents unauthorized managers from viewing or changing the configuration of a device.

Gateways

Gateway, also referred to as a router, is any computer with two or more network adapters connecting to different physical networks. Gateways allow for transmission of IP packets among networks on an Internet.

IP Addresses

Every device on an Internet must be assigned a unique IP (Internet Protocol) address. An IP address is a 32-bit value comprised of a network ID and a host ID. The network ID identifies the logical network to which a particular device belongs. The host ID identifies the particular device within the logical network. IP addresses distinguish devices on an Internet from one another so that IP packets are properly transmitted.

IP addresses appear in dotted decimal (rather than in binary) notation. Dotted decimal notation divides the 32-bit value into four 8-bit groups, or octets, and separates each octet with a period. For example, 199.217.132.1 is an IP address in dotted decimal notation.

To accommodate networks of different sizes, the IP address has three divisions—Classes A for large, B for medium, and C for small. The difference among the network classes is the number of octets reserved for the network ID and the number of octets reserved for the host ID.

Class	Value of First Octet	Network ID	Host ID	Number of Hosts
Α	1-126	First octet	Last three octets	16,387,064
В	128-191	First two octets	Last two octets	64,516
С	192-223	First three octets	Last octet	254

Any value between 0 and 255 is valid as a host ID octet except for those values the InterNIC reserves for other purposes.

Value	Purpose
0, 255	Subnet masking
127	Loopback testing and interprocess communication on local devices
224-254	IGMP multicast and other special protocols

Subnetting and Subnet Masks

Subnetting divides a network address into sub-network addresses to accommodate more than one physical network on a logical network.

For example: A Class B company has 100 LANs (Local Area Networks) with 100 to 200 nodes on each LAN. To classify the nodes by its LANs on one main network, this company segments the network address into 100 sub-network addresses. If the Class B network address is 150.1.x.x, the address can be segmented further from 150.1.1.x through 150.1.100.x.

A subnet mask is a 32-bit value that distinguishes the network ID from the host ID for different sub-networks on the same logical network. Like IP addresses, subnet masks consist of four octets in dotted decimal notation. You can use subnet masks to route and filter the transmission of IP packets among your sub-networks. The value "255" is assigned to octets that belong to the network ID, and the value "0" is assigned to octets that belong to the host ID.

For the example above, if you want all the devices on the sub-networks to receive each other's IP packets, set the subnet mask to 255.255.0.0. If you want the devices on a single sub-network only to receive IP packets from other devices on its own sub-network, set the subnet mask to 255.255.255.0 for the devices on that sub-network.

Subnet Mask	Routing and Filtering
0.0.0.0	IP packets are transmitted to all devices.
255.0.0.0	IP packets are only transmitted to devices that are IP that's first octet matches the sender's IP address's first octet.
255.255.0.0	IP packets are only transmitted to devices that are IP that's first two octets match the sender's IP address's first two octets.
255.255.255.0	IP packets are only transmitted to devices that are IP that's first three octets match the sender's IP address's first three octets.

Troubleshooting

Problem:	The TES (Terminal Emulation Software) does not display anything.					
Solution:	Make sure the TES's communication parameters are correct. They should be 115200-baud rate, no parity, 8-data bits, and 1 stop bit. The cable is a null serial cable.					
Problem:	The NMS cannot ping the Computer Interface Card (CIC).					
Solution:	Make sure the network connection to the Computer Interface Card (CIC) is good.					
Solution:	Make sure the cable is in good condition.					
Solution:	Make sure to set the Community String. Name the community with any lowercase name. A UPS monitors a designated community.					
Solution:	Make sure to set the Manager Table.					
Solution:	Make sure the Gateway is correct.					
Solution:	Make sure to Save and Restart after the Setup Procedure.					
Problem:	The internal CIC will not communicate and the LEDs are not illuminated.					
Solution:	Make sure the UPS is turned ON.					
Solution:	Make sure this is not a scheduled shutdown.					
Problem: Solution: Solution: Solution: Solution:	The external CIC will not communicate and the LEDs are not illuminated. Make sure the UPS is turned ON. Make sure that the external power adaptor is plugged into the UPS. The power adaptor could be bad. Contact Tech Support. Make sure this is not a scheduled shutdown.					
Problem: Solution:	The CIC will not communicate and all of the LEDs are ON. There has been a collision of the packets. The CIC needs to be reset. Turn the UPS off and unplug the UPS's power cord from the AC outlet. Wait until all the LEDs on the CIC go off, then plug the UPS's power cord back into the AC outlet and turn the UPS ON.					
Problem:	The user cannot change from one Web Page to the next.					
Solution:	There has been a collision of the packets. The CIC needs to be reset. Turn the CIC off and wait for approximately one minute, then turn the CIC back ON.					
Problem:	I forgot my Supervisor's name/password.					
Solution:	The CIC will have to be Flash Upgraded.					

Glossary The Glossary section defines the terms used in the Computer Interface Card (CIC) -MP environment.

Agent	Implemented SNMP applications in network elements (hosts). Agents perform the network
Agent	management's functions as requested by the network administrator from an NMS.
Dry Closure Input	Non-powered contact type inputs—switch, relay contact, open-collector.
Dry Closure Output	Form C dry-contact outputs, which are common, normally open, or normally closed.
Ethernet	Local Area Network technology, originally developed by the Xerox Corporation, can link up to
	1,024 nodes in a bus network. Ethernet provides raw data transfer in a rate of 10 megabits/sec.
	with actual throughputs in 2 to 3 megabits/sec. using a baseband (single-channel)
	communication technique. Ethernet uses carrier sense multiple access collision detection
	(CSMA/CD) that prevents network failures when two devices attempt to access the network at
	the same time. LAN hardware manufactures use Ethernet protocol; their products may not be
Ostavau	compatible.
Gateway	A computer that attaches to a number of networks and routes packets between them. The
ID	Internet Protocol—The TCP/IP standard protocol defines the IP datagram as the unit of
IF	information passed across a network
IP Address	Internet Protocol Address—A 32-bit address assigned to bosts participating in a TCP/IP
	network. The IP address consists of network and host portions. It is assigned to an
	interconnection of a host to a physical network.
MAC	Medium Access Control—The network layer between the physical and the data link layers.
	Specifically, the physical (hardware) address exists in this layer.
MIB	Management Information Base—The database, i.e., set of variables maintained by a gateway
	running SNMP.
NC	Normally Closed — Refers to a contact switch that is normally closed.
NIC	Network Interface Controller—The hardware interface to the physical connection to the network.
NMS	Network Management Station
NO	Normally Open—Refers to a contact switch that is normally open.
OID	Object Identifier—The variables defined in a MIB.
Personality	The current device specific software uploaded to the Computer Interface Card (CIC).
Router	A computer that manages traffic between different network segments or different network
	topologies. It directs the destination IP address. The network media can be different, but the
	nigner-level protocols must be the same.
K9-232	A specification for serial communication between data communication equipment and
SNMP	Simple Network Management Protocol—A standard protocol used to monitor IP bosts
SINIVIE	networks, and gateways. SNMP defines a set of simple operations that can be performed on the
	OIDs of the MIBs managed by the monitored Agents. It employs the UDP/IP transport layer to
	move its object between the Agents and the NMS.
Sub-Agent	A software module that manages specific MIB sub-groups for an Agent. They communicate with
_	the Agent using a SMUX (multiplexer).
TCP/IP	Transmission Control Protocol/Internet Protocol—A protocol suite used by more than 15 million
	users with a UNIX association and widely used to link computers of different kinds.
TES	Terminal Emulation Software—Communications program to transform a personal computer into
	a terminal for the purpose of data communications.
TFTP Server	<i>Trivial File Transfer Protocol Server</i> —A host to provide services according to TFTP; a TCP/IP
	standard protocol for file transfer with minimal capability and overhead depending on UDP for its
ואסטון/ום	User Deterrem Protocol/Internet ProtocolA TCD/ID standard protocol. It applies transfer of
UUF/IF	information between applications running on different best. It is referred to as an upreliable
	connectionless datagram delivery service
UPS	Uninterruptible Power Supply—A device that supplies power to your system with rechargeable
	batteries if there is an AC power failure.

Obtaining Technical Assistance

For Technical Support on the Web, please visit the Or visit our online Discussion Forum at w	Support section of our Web site ww.minutemanups.com
In order to diagnose the problem you are having, our technicians need the Installation Site:	e following information from you.
Company Name:	
Address:	
City:State:ZIP code:	
Contact Person's Name:	
Phone Number:	
If you are a consultant,	
Consultant Name:	
Phone Number:Fax Number:	
Computer System:	
Operating System and version:	
System Manufacturer:	
System Model Number:	
NMS name and revision number:	
UPS:	
Model Name/Number:	
Serial Number:	
Type of CIC (internal or external):	
What are the symptoms?	

Technical Support

Please have the information listed above ready when you contact us. You can reach us by calling:

Phone: 1-972-446-7363

Fax: 1-972-446-9011

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