PG-Flex^{Plus} Advanced Management Unit Technical Practice



Model	List	CLEI Code
AMU-912	1	VAC2Z7HL~~



Section SCP-AMU912-010-06H

REVISION HISTORY

Revision	Release Date	Revisions Made	
01	November 7, 2002	Initial Release	
02	January 6, 2003	Updated Product Support Information	
03	April 22, 2003	Updated Software Section	
04	August 6, 2003	Updated external alarms	
05	March 1, 2004	Updated DB-25 alarm information	
06	July 19, 2004	Updated Test Interface information	

Copyright © 2004 ADC Telecommunications, Inc. All Rights Reserved.

ADC and PG-Flex^{*Plus*} are registered trademarks of ADC Telecommunications, Inc. No right, license, or interest to such trademarks is granted hereunder, and you agree that you shall assert no such right, license, or interest with respect to such trademarks.

Other product names mentioned in this document are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

Information contained in this document is company private to ADC Telecommunications, Inc., and shall not be modified, used, copied, reproduced or disclosed in whole or in part without the written consent of ADC.

Contents herein are current as of the date of publication. ADC reserves the right to change specifications at any time without notice. Information furnished by ADC is believed to be accurate and reliable. In no event shall ADC be liable for any damages resulting from the loss of data, loss of use, or loss of profits and ADC further disclaims any and all liability for indirect, incidental, special, consequential or other similar damages. This disclaimer of liability applies to all products, publications and services during and after the warranty period.

USING THIS TECHNICAL PRACTICE

The following style conventions and terminology are used throughout this guide.

Element	Meaning	
Bold font	Text that you must input exactly as shown (e.g., type 1 for card 1), menu buttons (e.g., ACCEPT SHELF OPTIONS) or menu screen options (e.g., ALARMS screen) that you must select	
Italic font	Variables that you must determine before inputting the correct value (e.g., Password)	
Monospace font	References to screen prompts (e.g., Invalid PasswordTry Again:.)	

Reader Alert	Meaning	
	Alerts you to supplementary information	
	Alerts you to supplementary information that is essential to the completion of a task	
ATTENTION	Alerts you to possible equipment damage from electrostatic discharge	
CAUTION	Alerts you to possible data loss, service-affecting procedures, or other similar type problems	
WARNING	Alerts you that failure to take or avoid a specific action might result in hardware damage or loss of service	
DANGER	Alerts you that failure to take or avoid a specific action might result in personal harm	

INSPECTINGYOUR SHIPMENT

Upon receipt of the equipment:

- Unpack each container and visually inspect the contents for signs of damage. If the equipment has been damaged in transit, immediately report the extent of damage to the transportation company and to ADC. Order replacement equipment, if necessary.
- Check the packing list to ensure complete and accurate shipment of each listed item. If the shipment is short or irregular, contact ADC as described in Product Support on page 115. If you must store the equipment for a prolonged period, store the equipment in its original container.

Table of Contents

Revision History	i
Using this Technical Practice	ii
InspectingYour Shipment	ii
Overview	1
Description and Features	1
Local Area Network Interface	2
10Base-2	2
10Base-T	2
Test Access	2
Test Interface	3
Serial Management interfaces	5
Alarms	6
Alarm Types	7
External Environmental Alarm Contact Alarm Inputs/Outputs	7
Service Loss Alarm Reporting Via the TR-08 Derived Data Link	9
Specifications	10
Front Panel	11
Installation and Test	13
Installation	13
Install a AMU-912	13
Initialize and Power Up the AMU-912	13
ACO Pushbutton	13
Administration	14
Front Panel Craft Port to Terminal Connections	14
Front Panel Craft Port to Modem Connections	15
Backplane Craft Port to Terminal Connections	16
Backplane Craft Port to Modem Connections	17
CONNECTING OVER TELNET	19
TELNET Client	19
MS LAN	19
Isolated LAN	20
MSLAN Connection to Hub/Switch – Same Segment	21
MSLAN Connection to Router – Different Segment, Unrestricted Route	22
MSLAN Connection to Router – Different Segment, Restricted Route	24
Navigational Methods	26

Manual and Display Othersteins		
Menus and Display Structure		
Log On the AMU-912 28		
Main Menu Options		
MAIN — Shelf Summary		
MAIN — Test Access		
MAIN — Logout		
Network Menu Options		
NETWORK — MultiShelf Access		
NETWORK — Connection Summary 42		
NETWORK — Local Summary 43		
NETWORK — Inband Traffic Summary 44		
Select Menu Options		
SELECT — MUX 1 or MUX 2, COLU 1 Through COLU 16 47		
Alarm Menu Options		
ALARMS — Alarms Summary 49		
ALARMS — Alarm History		
ALARMS — Service Loss Alarm History 54		
ALARMS — Environmental Alarm History		
ALARMS — Relay Summary		
ALARMS — LED Summary		
ALARMS — Activate ACO		
Configuration Menu Options		
CONFIG — Shelf Options		
CONFIG — IP INFO		
CONFIG — SNMP GATEWAY INFO		
CONFIG — SNMP COMMUNITY INFO		
CONFIG — Password 81		
CONFIG — Alarm Types		
CONFIG — Service Loss Alarm Types		
CONFIG — Environmental Alarms Setup		
CONFIG — Environmental Alarm Types		
CONFIG — Date and Time		
CONFIG — Set Factory Defaults		
Software Download		
S/W DNLD— Start a Download 102		
Download Retry 106		

Software Download with Modem	107
Modem Connected to PC	107
Modem Connected to System	107
Error Messages	108
Information Menu Options	109
INFO — Inventory	110
INFO — Help	111
Acronyms	113
Product Support	115
Technical Support	115
Limited Warranty	115
Returns	115
FCC Class A Compliance	116
Modifications	116

List of Figures

Figure 1.	Typical System Configuration	1
Figure 2.	DC Resistive Signatures	4
Figure 3.	Alarm Processing	6
Figure 4.	ENV Alarm Input Pinouts	7
Figure 5.	AMU-912 Front Panel	11
Figure 6.	Front Panel Craft Port to Terminal Connections	14
Figure 7.	Front Panel Craft Port to Modem Connections	15
Figure 8.	Backplane Craft Port to Terminal Connections Using a Null Modem Cable	16
Figure 9.	Backplane Craft Port to Modem Connections	17
Figure 10.	Isolated LAN Model	20
Figure 11.	MSLAN Connection to Hub/Switch	21
Figure 12.	MSLAN Connection with Different Segment, Unrestricted Route Model	22
Figure 13.	MSLAN Connection with Different Segment, Restricted Route Model	24
Figure 14.	Terminal Menu and Display Structure	27

List of Tables

Table 1.	DC Resistive Signatures	3	
Table 2.	Environmental Alarm Input Definitions	8	
Table 3.	Alarm Relay Definitions		
Table 4.	DB-25 Alarm Cable Pinouts		
Table 5.	Service Loss Alarm Reporting	9	
Table 6.	Alarms Reported for each Different COLU Service Loss Alarm	9	
Table 7.	Specifications	10	
Table 8.	AMU-912 Front Panel LEDs	12	
Table 9.	AMU-912 Diagnostic Indicators	12	
Table 10.	Craft Port Configuration	17	
Table 11.	Modem Settings	18	
Table 12.	Example of Isolated LAN Connection	20	
Table 13.	Example of Connection to Hub/Switch – Same Segment	21	
Table 14.	Example of Connection to Router – Different Segment, Unrestricted Route	23	
Table 15.	Example of Connection to Router – Different Segment, Restricted Route	25	
Table 16.	Navigational Keystrokes	26	
Table 17.	Main Menu Options	30	
Table 18.	Shelf Summary	32	
Table 19.	Network Menu Options	38	
Table 20.	Alarm Menu Options	48	
Table 21.	Configuration Menu Options	64	
Table 22.	Shelf Options	70	
Table 23.	IP Information	74	
Table 24.	SNMP Gateway Information	78	
Table 25.	SNMP Community Information	80	
Table 26.	Alarm Types Reported	86	
Table 27.	Alarm Types	87	
Table 28.	Service Loss Alarm Types	90	
Table 29.	Environmental Alarm TR-08 Bit Positions	93	
Table 30.	Environmental Alarm Defaults	93	
Table 31.	Environmental Alarm Types	96	
Table 32.	Software Download Option	101	
Table 33.	PC Modem	107	
Table 34.	System Modem	107	
Table 35.	Error Messages	108	

Table 36.	Information Menu Options	109
Table 37.	Fault Isolation and Troubleshooting	112

OVERVIEW

The PG-Flex^{*PlusTM*} AMU-912 List 1 Management Unit provides the user interface into the Central Office Terminal (COT) Shelf. The AMU-912 allows you to provision, monitor, and test the CO Line Units and Multiplexers (MUXs) installed in the shelf.

DESCRIPTION AND FEATURES

The AMU-912 is interconnected through a serial bus to each CO Line Unit and MUX unit installed in the shelf. It provides the means for a user to provision, monitor, and test the units of the shelf (Figure 1).



Figure 1. Typical System Configuration

The AMU-912 has two independently operating RS-232 serial ports, one on the front panel and another on the shelf backplane. The AMU-912 has two Ethernet ports (one 10Base-2 and one 10Base-T). The 10Base-T interface allows the AMU-912 to be connected to the network to allow a user to manage the shelf via a telnet connection or Simple Network Management Protocol (SNMP) operations. The 10Base-2 interface allows multiple shelves to be connected together. This allows all the cascaded shelves to be managed from a single interface point. Up to 24 shelves can be connected together through the 10Base-2 connector on the shelf backplane. The AMU-912 provides two management user interfaces:

- VT-100 screens based user interface
- · SNMP/Element Management System (EMS) (Stargazer) user interface



SNMP Management Information Base (MIB) is available, if needed. For SNMP support, contact Technical Support on page 115.

You can provision, monitor, and test the system through any of the above interfaces.

The AMU-912 contains a nonvolatile database that stores provisioning data for all systems and MUX units in the shelf. It monitors the status of all system and MUX units and provides audible and visual alarms classified as major, minor, and critical.

It supports Mechanized Loop Testing (MLT) and 4TEL by providing a subset of the TA-909 resistive signatures. The AMU-912 provides a diode signature for the Integrated Digital Loop Carrier (IDLC) bypass pair test and a test jack for monitoring and testing a VF drop. The VF drop provides metallic access to any subscriber pair connected to the backplane or any integrated POTS channel by means of the MUX card.

LOCAL AREA NETWORK INTERFACE

The AMU-912 provides two Ethernet ports:

- one for intershelf communication using a 10Base-2
- one for a user interface using a 10Base-T Ethernet connection in accordance with IEEE standard 802.3

10Base-2

- · System uses COAX interconnects terminated with BNC connectors on the backplane of the shelf unit
- · Shelves are cascaded in a daisy-chain configuration
- 10Base-2 must be terminated on both ends with 50Ω terminations
- · Allows SNMP operations

10Base-T

- · Standard RJ-45 Ethernet connectivity
- · Allows the user to TELNET into the system
- Allows SNMP operations

TEST ACCESS

The AMU-912 test access function meets the following criteria:

- Audible for IDLC only
- Ringing signal for Universal Digital Loop Carrier (UDLC)
- Drop line can support up to 100 ft. line length
- Decodes the Loop Current Feed (LCF), Loop Current Feed Open (LCFO) and Ringing signaling states

TEST INTERFACE

The system supports MLT, 4TEL, screen initiated drop tests and integrated channel testing.

For MLT and 4TEL, the test unit performs tests specified in section 11.4 of TA-909 for fiber to the loop systems. Additionally, the test results are provided as DC resistive signatures as shown in Table 1 by the AMU-912 to the Test Tip and Test Ring terminals on the backplane.

Screen initiated drop testing is supported through the RS-232 Craft Port and TELNET interface. Test results as reported by the on-board test unit located in the RT are presented as pass/fail on the Craft interface. Test results are not provided as DC resistive signatures for a screen initiated drop test.

Test	Failure Condition	TR (k Ω)	TG, RG (k Ω)
RT Equipment Failure	RT detected, but no response from RT	17.8	90.9
Foreign Voltage on Drop	TG or RG > 10 Vrms TG or RG > 6 Vdc	27.8	90.9
All Tests OK	No failures detected	38.3	90.9
Ringer Test	REN > 5.0 or	48.3	90.9
	REN < 0.2		
Resistive Fault on Drop	TG, RG, or TR \geq 150 k Ω	58.0	90.9
Receiver Off-Hook	Phone is off-hook	68.0	90.9
Hazardous Potential on	TG or RG > 50 Vrms	78.5	90.9
Drop	TG or RG > 135 Vdc		
COT Shelf/RT Facility Failure	RT not detected	≥ 1,000	90.9

Table 1. DC Resistive Signatures

The resistive signatures on the AMU-912 are biased to -14 Vdc.

In support of MLT testing on the Universal system, the AMU-912 supplies 1kΩ from Tip to Ground in lieu of allowing the PGTC to be activated. For either MLT or 4TEL test systems, subscriber drop test results are provided as TA-909 DC resistive signatures as shown in Table 1 on page 3 by the AMU-912 to the Test Tip and Test Ring terminals on the backplane. These resistive signatures are routed to the channel under test tip and ring leads and finally passed to MLT for interpretation (Figure 2). When the test environment includes IMLT on a Class 5ESS switch, use of a PCU-796 conditioner unit is required for proper PGTC test result reporting.

In support of MLT testing on the Integrated system, the AMU-912 provides the diode/ 410Ω bypass integrity test signature as required by TR-08. Additionally, subscriber drop test results are provided as TA-909 DC resistive signatures as shown in Table 1 on page 3 by the AMU-912 to the Test Tip and Test Ring terminals on the backplane.



Figure 2. DC Resistive Signatures

SERIAL MANAGEMENT INTERFACES

An RS-232 serial interface is provided on the front of the AMU-912 and meets the following specifications:

- compliant with EIA-RS-232
- full duplex, serial, asynchronous format
- supports baud rate:
 - 1200
 - 2400
 - 4800
 - 9600
 - 19200
 - 38400
 - 57600
 - 115200
- · configured as DCE, supporting Transmit, Receive, DTR, and DSR signals
- 9-pin DB type connector

An RS-232 serial interface is provided on the shelf backplane and meets the following specifications:

- compliant with EIA-RS-232
- full duplex, serial, asynchronous format
- supports baud rate:
 - 1200
 - 2400
 - 4800
 - 9600
 - 19200
 - 38400
 - 57600
 - 115200
- · configured as DTE, supporting Transmit, Receive, DTR, and CD signals
- · 25-pin DB type connector

ALARMS

The AMU-912 communicates with each CO Line Unit and MUX in the shelf to provide a summary of active shelflevel alarms (Figure 3). The CO Line Unit and MUX units inform the AMU-912 of alarms becoming active and inactive. A summary of alarms for each unit is maintained on the AMU-912. Active shelf alarms are displayed by the front panel LEDs and through audible and visual relay contacts. These alarm indications are also obtainable through the Craft Interface. An ACO is provided to silence audible alarms. A shelf ID relay is provided to allow shelf fault isolation when more than one shelf system is located in a bay. The shelf ID relay is activated when any visual alarm is active in the shelf.

The AMU-912 can also accept external environmental alarms via the backplane DB-25 connector; however, the functionality of the DB-25 must be changed to ENV-ALARMS setting rather than the default setting of CRAFT-PORT (refer to CONFIG — Shelf Options on page 66). The DB-25 connector can function as a craft access port or operate as an external alarm input source.





ALARM TYPES

Any alarm may be set to the following severities:

- Critical CR
- Major MJ
- Minor MN
- · Not Alarmed NA
- · Not Reported NR



An alarm type set to NA will accumulate history counts and send an SNMP trap message, but will not activate an alarm LED or alarm relay. However, *Current* Status will show ACTIVE. An alarm set to NR will not be reported by the AMU-912.

EXTERNAL ENVIRONMENTAL ALARM CONTACT ALARM INPUTS/OUTPUTS

The AMU-912 allows the rear DB-25 connector to be provisioned as either a craft port (RS-232) or environmental alarm input (Figure 4). When the rear DB-25 is provisioned for environmental alarm inputs, the conductors operate as dry input contacts. An alarm is considered active when certain pins are pulled to +8 volts. There are a total of four Environmental Alarms: ENV1, ENV2, ENV3, and ENV4 (Table 2 on page 8). In addition to the Environmental Alarms being reported through screens, they are also reported through the Derived Data Link (DDL) of the TR08 Shelf A DS1. There are three shelf alarm relay settings: Standard, Telemetry and Environmental. The system activates different relays depending on Shelf Option configuration (Table 3 on page 8). Refer to Figure 4 and Table 4 on page 8 for proper wiring of customer supported DB-25 alarm cable.

When the AMU-912 is used in the Field Shelf, the rear craft port interface is not used for alarm inputs. Rather, the prewired Alarm cable will contain the Alarm inputs and outputs and will operate as dry contacts.



Cable and components supplied by customer.

Figure 4. ENV Alarm Input Pinouts

CAUTION Connections other than those shown in Figure 4 will damage the AMU-912 and will not be covered under the warranty.

Alarm Input Type	AMU-912 in CO Shelf (TR-08 Alarm Defaults)	AMU-912 in Field Shelf (TR-08 Alarm Defaults)		
ENV1	ENV1 (SYS1-PWRMISC)	AC Power Fail (SYS1-PWRMISC)		
ENV2	ENV2 (SYS2-PWRMISC)	Door Alarm (COM MN)		
ENV3	ENV3 (COM MN)	Fan Alarm (COM MN)		
ENV4	ENV4 (COM MJ)	MISC (COM MJ)		

Table 2. Environmental Alarm Input Definitions

Table 3. Alarm Relay Definitions

Standard	Telemetry	Environmental
System ID	Shelf ID	System ID
Critical - Visual	System - Major	Critical - Visual
Critical - Audible	System - Minor	Major - Visual
Major - Visual	Major - Visual	Minor - Visual
Major - Audible	Major - Audible	Environmental #1
Minor - Visual	Minor - Visual	Environmental #2
Minor - Audible	Minor - Audible	Environmental #3

Table 4. DB-25 Alarm Cable Pinouts

Environmental Alarm	Common	Normally Open
Alarm 1	2	8
Alarm 2	2	6
Alarm 3	2	15
Alarm 4	2	17

SERVICE LOSS ALARM REPORTING VIA THE TR-08 DERIVED DATA LINK

The AMU-912 provides a method for Service Loss Alarms to be reported to the Central Office switch or SLC-96 COT via the TR-08 Derived Data Link. The Service Loss Alarms occur when six or more POTS lines lose service. These alarms can be triggered by removal of line units, Loss of Signal (LOS) or Loss of Frame (LOF) of the High-bit-rate Digital Subscriber Line (HDSL)/Symmetric High-bit-rate Digital Subscriber Line (SHDSL), etc. When a Service Loss Alarm is detected, the AMU-912 will report a TR-08 Shelf A, B, C, or D Major or Minor alarm to the TR-08 shelf or switch. The type of alarm is determined by the CO Line Unit type that has the "Active" Service Loss Alarm (e.g., Shelf A, B, C, or D alarms are only reported against the FLL-814.) The severity and CO Line Unit location of the Service Loss Alarm will determine what TR-08 alarm is reported. Refer to Table 5 and Table 6.

Service Loss Alarm Severity	TR-08 DDL Alarm
CR	MJ Shelf A, B, C, or D
MJ	MJ Shelf A, B, C, or D
MN	MN Shelf Alarm
NR	No alarm reported via DDL
NA	No alarm reported via DDL

Table 5. Service Loss Alarm Reporting

Table 6. Alarms Reported for each Different COLU Service Loss Alarm

COLU Service Loss Alarm	TR-08 DDL Alarm
LU 1 & LU 2	System 1 Shelf A Alarm
LU 3 & LU 4	System 1 Shelf B Alarm
LU 5 & LU 6	System 1 Shelf C Alarm
LU 7 & LU 8	System 1 Shelf D Alarm
LU 9 & LU 10	System 2 Shelf A Alarm
LU 11 & LU 12	System 2 Shelf B Alarm
LU 13 & LU 14	System 2 Shelf C Alarm
LU 15 & LU 16	System 2 Shelf D Alarm

SPECIFICATIONS

Table 7 lists the specifications for the AMU-912.

Table 7. Specifications

Category	Item	Value	
Electrical	Input Voltage	-42.5 Vdc to -56.5 Vdc	
	Input Power	8 Watts (maximum), cooled by natural convection	
		0.50 Amp Fuse	
Environmental	Elevation	-200 ft. to 13,000 ft. -60 m to 4,000 m	
	Temperature	-40° F to +150° F -40° C to +65° C	
	Humidity	5% to 95% (non-condensing)	
Physical	Height	5.5 in. (14.0 cm.)	
	Width	1.1 in. (2.8 cm.)	
	Length	10.5 in. (26.7 cm.)	
	Weight	0.7 lbs. (0.3 kg.)	
Alarm Relays	Critical	Audible, Visual	
	Major	Audible, Visual	
	Minor	Audible, Visual	
	Shelf ID	Visual	
Alarm Relay	Contact Rating	0.3 A @ 125 Vac	
		0.3 A @ 110 Vdc	
		1.0 A @ 30 Vdc	
Alarm Cutoff	ACO pushbutton	N/A	
	ACO LED		
	Remote ACO capabilities		
Test/VF Drop	Connector	RJ-11	
RS-232	Connectors	DB-9 (female) – AMU-912 front panel	
		DB-25 (female) – shelf backplane	
10Base-T	Connector	RJ-45 – AMU-912 front panel	
10Base-2	Connector	BNC – shelf backplane	
Test System	TSTTIP	Wire-wrap pins – shelf backplane	
Interface	TSTRING		

FRONT PANEL

Figure 5 shows the AMU-912 front panel and Table 8 on page 12 lists the LEDs and LED status for the AMU-912. Table 9 on page 12 lists the LED indications for the AMU-912 diagnostic and maintenance modes.



Figure 5. AMU-912 Front Panel

LED	Color	State	Description
CRIT	Red	On	One (or more) Critical Alarm(s) active in shelf
		Off	No Critical alarms active
PWR	Green	On	AMU-912 is receiving power
		Flashing	One of the two battery feeds is not present
		Off	AMU-912 is not receiving power
MAJ	Red	On	One (or more) Major Alarm(s) active in shelf
		Off	No Major alarms active
MN	Yellow	On	One (or more) Minor Alarm(s) active in shelf
		Off	No Minor alarms active
ACTIVE	Green	Flashing	Ethernet activity
		Off	No Ethernet activity
СОМ	Green	On	Multishelf management is active
		Off	Multishelf management is not active
FAULT	Red	On	Replace the AMU-912
		Off	No fault detected
ACO	Yellow	On	ACO activated
		Off	ACO not activated

Table 8. AMU-912 Front Panel LEDs

Table 9. AMU-912 Diagnostic Indicators

LED State	Description	Action
PWR LED On, All other LEDs Flashing	AMU-912 is running in Boot Mode	Application software must be re- installed. Contact Product Support on page 115 for additional information.
PWR LED On, All other LEDs sequencing downward	Software download to AMU-912	Wait for download to complete and AMU-912 to re-start
FAULT On, All other LEDS Off	AMU-912 hardware failure	Replace AMU-912

INSTALLATION AND TEST



STATIC SENSITIVE DEVICE – DO NOT HANDLE ANY MATERIAL WITHOUT FIRST TAKING PROPER STATIC CONTROL PRECAUTIONS.



The AMU-912 must be installed in the slot labeled COMMON. Refer to the documentation accompanying the shelf for information on MUX and line unit numbering.

INSTALLATION

Install a AMU-912

Step	Action
1	Open the retaining latch at the front bottom of the card.
2	Insert the AMU-912 into the card guides for the slot marked COMMON.
3	Push the card back until it touches the backplane card-edge connector.
4	Engage the retaining latch to hold the card in place.

Initialize and Power Up the AMU-912

After power-up has occurred, all LEDs cycle in upward/downward pairs and then go off. The PWR LED remains on.



The Critical, Major, or Minor Alarm LEDs may turn on if any unit in the shelf is in an alarm condition. If alarm LEDs turn on, you can view detailed information through the MAIN-Shelf Summary screen and ALARM-Alarm Summary screen.

ACO PUSHBUTTON



The ACO can be wired for remote operation by connecting the backplane External ACO input wirewrap pin to Ground through a momentary contact, normally open pushbutton.

The ACO Reset pushbutton is also used to invoke a front panel LED test. To perform an LED test, press and hold the ACO pushbutton for five seconds, any active audible alarm relays are deactivated. This causes all LEDs to go on for 1 second, and then return to their previous state. If a new alarmed event is detected, the new alarm causes the audible relay for that alarm type to be reactivated. When all alarm conditions are cleared for the alarm types that have been silenced, the ACO LED goes off.

ADMINISTRATION

To use the craft interface to provision the AMU-912 or other cards installed in the shelf, you must connect a VT-100 compatible terminal or a personal computer with VT-100 terminal emulation software to the RS-232 interface of the AMU-912 front panel or shelf backplane. The VT-100 interface allows "real time" updating of information displayed on the screen. Through the craft interface screens, system administration functions such as alarm checking and clearing, configuration changes, performance monitoring, and testing can be performed.

FRONT PANEL CRAFT PORT TO TERMINAL CONNECTIONS

Connections between the RS-232 craft port of the AMU-912 and the craft terminal are shown in Figure 6.



Figure 6. Front Panel Craft Port to Terminal Connections

FRONT PANEL CRAFT PORT TO MODEM CONNECTIONS

When connecting the RS-232 port to a modem, a null modem cable should be used. Ensure that the modem's Carrier Detect (CD) and DTR functions are enabled. This allows the modem connection to terminate properly when the AMU-912 drops Data Set Ready (DSR) and the unit logs off after the modem drops CD. The following connections are required to make the modem work correctly (Figure 7).



Figure 7. Front Panel Craft Port to Modem Connections

BACKPLANE CRAFT PORT TO TERMINAL CONNECTIONS

Use a null modem cable to connect to a Data Terminal Equipment (DTE) device from the backplane connector. Figure 8 shows the wiring for the required null modem cable to a DB-9 and a DB-25 connector.



Figure 8. Backplane Craft Port to Terminal Connections Using a Null Modem Cable

BACKPLANE CRAFT PORT TO MODEM CONNECTIONS

The backplane DB-25 is a female connector wired as a DTE interface. Figure 9 shows the cable connections between the backplane connector and a Data Carrier Equipment (DCE) DB-25 connector.



Figure 9. Backplane Craft Port to Modem Connections

Refer to Table 10 to set up the VT-100 craft port connections and Table 11 on page 18 for VT-100 Modem settings.

Control	Setting	Supported	Default
Software Flow Control	XON/XOFF	Enabled	Enabled
Baud Rate		- 1200 - 2400 - 4800 - 9600 - 19200 - 38400 - 57600 - 115200	Autobaud
Asynchronous	Data Bits	8	8
Communication Parameters	Parity	None	None
	Stop Bits	1	1

Table 10. Craft Port Configuration

Control	Setting	Supported	
Hardware Flow Control		Off	
Software Flow Control	XON/XOFF	Enabled	
Baud Rate		1200	
		2400	
		4800	
		9600	
		19200	
		38400	
		57600	
		115200	
Asynchronous	Data Bits	8	
Communication Parameters	Parity	None	
	Stop Bits	1	

Table 11. Modem Settings

CONNECTING OVER TELNET

The AMU-912 supports up to three simultaneous TELNET connections. You can use either the SNMP or the Screens Interface to manage the AMU-912. The logical connection over TELNET provides the same functionality and interface as a locally connected craft port. However, only TELNET clients fully supporting the VT-100 emulation can adequately provide access to the Screens Interface. There exists a number of possible physical configurations to access one or more AMU-912s and each is described below.

TELNET Client

The AMU-912 supports all TELNET client application software complying with (RFC854) "The TELNET Protocol" standard. Additionally, TELNET client applications providing full support for the VT-100 standard may be used to remotely access the Screens and Screens MultiShelf interfaces. Known VT-100 compliant TELNET client applications are:

- ProComm Plus 3.x, 4.x
- Reflection X 7.x

Packages that do not provide the full VT-100 emulation have unpredictable display results. The AMU-912 TELNET Server supports the TELNET negotiation options:

- Suppress Go Ahead
- Will Echo

MS LAN

Accessibility of the Multishelf Local Area Network (MSLAN) is dependent upon its physical connections. An MSLAN can support from one to a maximum or 24 AMU-912s on a single segment. There are two different methods for connecting one or more AMU-912s to a MSLAN:

- The preferred/recommended method to connect an MSLAN consists of one or more shelves connected by means of 10Base-2 cabling and connectors on their respective backplanes. Each end of the daisy-chained LAN must be terminated using 50 Ω BNC-terminations.
- A second/alternative method to connect an MSLAN consists of one or more shelves connected to a network by means of 10Base-T cabling to the front panel of the AMU-912 in a star configuration. In this method, the 10Base-2 connections on the backplane must **NOT** be used.

To remotely connect with the MSLAN, at least one AMU-912 on the segment must have a 10Base-T connection to a user's network. With this type of connection, the AMU-912 must have a correctly configured IP Address and Subnet Mask. You can access these values from CONFIG — IP INFO on page 72. Both of these values must be correctly assigned for IP connectivity.

WARNING An MSLAN must NEVER be connected to a network via both 10Base-T and 10Base-2. The only recommended method for connecting the MSLAN to the user's network is via a 10Base-T connection.

Refer to the following four distinct topographies described in the following sections. These topographies can be created to allow or restrict remote access to an MSLAN.

Isolated LAN

The simplest topography of an MSLAN consists of "n" AMU-912s (where $1 \le n \le 24$), terminated on both ends of the 10Base-2 physical connection (Figure 10). The ability to TELNET to any AMU-912 on this segment requires that the host be connected to a target AMU-912 10Base-T front panel. An example of how this connection is configured is shown in Table 12.



Figure 10. Isolated LAN Model

Entity	IP Address	Subnet Mask	Gateway IP Address	Default Route	Default Route Mask	Results
Shelf A AMU-912	172.17.0.3	255.255.0.0	0.0.0.0	0.0.0.0	0.0.0.0	Defines that the AMU-912 exists on the 172.17.xxx.xxx network and responds only to requests originating from this network. Thus, the following clients may or may not communicate with the the target AMU-912.
TELNET Client 1	172.17.20.9	255.255.0.0				Able to communicate with target Shelf A AMU-912
TELNET Client 2	172.10.20.9	255.255.0.0				Unable to communicate with target Shelf A AMU-912
TELNET Client 3	172.17.0.12	255.0.0.0				Able to communicate with target Shelf A AMU-912

Table 12. Example of Isolated LAN Connection

MSLAN Connection to Hub/Switch – Same Segment

By connecting the MSLAN to a hub/switch, accessibility to the MSLAN expands to the virtual distance of the connected Local Area Network (LAN), Metropolitan Area Network (MAN) or Wide Area Network (WAN) (Figure 11 and Table 13). In this topography, clients attempting to connect by means of the TELNET protocol must have a configured IP Address and Subnet Mask matching that network defined by the target AMU-912.



Figure 11. MSLAN Connection to Hub/Switch

Entity	IP Address	Subnet Mask	Gateway IP Address	Default Route	Default Route Mask	Results
Shelf A AMU-912	172.17.0.3	255.255.0.0	0.0.0.0	0.0.0.0	0.0.0.0	Defines that the AMU-912 exists on the 172.17.xxx.xxx network and responds only to requests originating from this network. Thus, the following clients may or may not communicate with the the target AMU-912.
TELNET Client 1	172.17.20.9	255.255.0.0				Able to communicate with target Shelf A AMU-912
TELNET Client 2	172.10.20.9	255.255.0.0				Unable to communicate with target Shelf A AMU-912
TELNET Client 3	172.17.0.12	255.0.0.0				Able to communicate with target Shelf A AMU-912

MSLAN Connection to Router – Different Segment, Unrestricted Route

In the set-up illustrated in Figure 12, clients attempting to connect through the TELNET protocol must configure the AMU-912 to respond to packets not originating on the local segment (Table 14 on page 23). This is accomplished by configuring a gateway router to which the AMU-912 can direct its reply packets. You can access these values from the CONFIG — IP INFO on page 72. The gateway IP address must be accessible from the MSLAN, and the Default Route and Default Route Mask fields must have the value of 000.000.000.000.



Figure 12. MSLAN Connection with Different Segment, Unrestricted Route Model

Entity	IP Address	Subnet Mask	Gateway IP Address	Default Route	Default Route Mask	Results
Shelf A AMU-912	172.17.0.3	255.255.0.0	172.17.x.x	0.0.0.0	0.0.0.0	Defines that the AMU-912 exists on the 172.17.xxx.xxx network and responds only to requests originating from this network. Thus, the following clients may or may not communicate with the the target AMU-912.
TELNET Client 1	172.17.20.9	255.255.0.0	172.17.0.1			Able to communicate with target Shelf A AMU-912
TELNET Client 2	172.10.20.9	255.255.0.0	172.10.0.1			Able to communicate with target Shelf A AMU-912 (provided that 172.10.xxx.xxx is accessible by the gateway device)
TELNET Client 3	128.33.20.9	255.255.0.0	0.0.0.0			Unable to communicate with target Shelf A AMU-912 (provided that 128.33.xxx.xxx is not accessible by the gateway device)
						Since no gateway is specified, the client is not able to communicate unless connected to a Hub/Switch instead of a Router

Table 14. Example of Connection to Router – Different Segment, Unrestricted Route

MSLAN Connection to Router – Different Segment, Restricted Route

In the set-up shown in Figure 13, clients attempting to connect by means of the TELNET protocol must configure the AMU-912 to respond to packets not originating on the local segment but confine the accessibility of the MSLAN to a particular network (CONFIG — IP INFO on page 72). Refer to Table 15 on page 25.

- Configure a gateway router to which the AMU-912 can direct its reply packets. The gateway IP address must be
 accessible from the MSLAN.
- Configure the Default Route and Default Route Mask fields to the values of the external Network to which accessibility is granted.



Figure 13. MSLAN Connection with Different Segment, Restricted Route Model
Entity	IP Address	Subnet Mask	Gateway IP Address	Default Route	Default Route Mask	Results
Shelf A AMU-912	172.17.0.3	255.255.0.0	172.17.0.1	172.2.0.0 255.2	255.255.0.0	Defines that the AMU-912 exists on the 172.17.xxx.xxx network and responds only to requests originating from this network or from networks accessible through the gateway. The addition of a Specified Default Route and Default Route Mask limits the accessibility of remote connections as follows below.
TELNET Client 1	172.17.0.10	255.255.0.0	172.17.0.1			Host IP network of 172.17.xxx.xxx matches the AMU-912's network of 172.17.xxx.xxx and is accessible
TELNET Client 2	172.2.0.11	255.255.0.0	172.2.0.1			The Host IP network of 172.2.xxx.xxx does NOT match the AMU-912's network of 172.17.xxx.xxx; however, it does match the Default Route and is accessible.
TELNET Client 3	172.5.0.12	255.255.0.0	172.5.0.1			The Host IP network of 172.5.xxx.xxx does NOT match the AMU-912's network of 172.17.xxx.xxx or the Default Route and is NOT accessible.

Table 15. Example of Connection to Router – Different Segment, Restricted Route

NAVIGATIONAL METHODS

Table 16 shows the keys used to navigate through the menus and screens.

Table	16.	Navigational	Kevstrokes

Keypress	Effect on Menu	Effect on Screen
ENTER	Moves to sub-menu or screen selected	Confirms changes
← or CTRL-F	Moves left across Main Menu	Moves the cursor left
	Moves right across Main Menu	Moves the cursor to the right
↑ or CTRL-T	Moves up the sub-menu selection	Moves the cursor up
↓ or CTRL -V	Moves down the sub-menu selection	Moves the cursor down
ТАВ	No effect	Moves to the next field
SPACEBAR	No effect	Cycle through the field options
ESC	Moves up a menu level. From the Main Menu, the Logout screen is displayed.	Returns to Main Menu without accepting changes. The banner briefly appears and then the Main Menu bar displays.
CTRL -R	Returns to the Main Menu. The banner briefly appears and then the Main Menu bar displays.	Returns to Main Menu without accepting changes
A - Z keys	Selects an underlined or highlighted menu item	A screen entry is made



Some screens illustrated in this document may be slightly different than what may appear on the craft interface terminal. These differences are related to individual software installations.

In the software section, COLU refers to CO Line Unit.

PROVISIONING, TESTING AND MAINTENANCE

The following sections describe how to navigate the VT-100 screens to configure, check the status and maintain the AMU-912 system. All configurable options are set to factory defaults to minimize field provisioning. This system does not require any provisioning for normal operation. Use the Craft terminal to verify system performance and to customize the units to your requirements.

MENUS AND DISPLAY STRUCTURE

Figure 14 shows the menu structure of the terminal management system.



Figure 14. Terminal Menu and Display Structure

Log On the AMU-912

This screen logs the user into the system.



The factory-default password is **password#1**.

If the password has been changed and the new password is not known, contact ADC Technical Support while at the terminal. Technical Support will provide a temporary password based on the Access Key number displayed on the Logon screen.

Log On the AMU-912

Step	Action			
1	Press SPACEBAR several times to activate the Autobaud feature. When the Login screen displays, type the <i>Password</i> , then press ENTER .			
	PG-FlexPlus Login Screen Enter Password: ■ Access Key: 052872232642			
2	If an invalid Password is entered, the Login screen is redisplayed with the message Invalid PasswordTry Again:.Type the Password, then press ENTER.			
	PG-FlexPlus Login Screen Invalid Password Try Again: Access Key: 102463010230			

Log On the AMU-912 (Continued)

Step	Action				
3	After a successful login, the welcome banner screen appears for a few seconds.				
	PG-FlexPlus				
	Then the AMU-912 Main Menu screen appears.				
	PG-FlexPlus Management Unit NAIN NETHORK SELECT BLARMS CONFIG S/H DNLD INFO Test Access Logout				
	09/26/2002 Shelf ID: NE0020A7351002 01:31:17				

MAIN MENU OPTIONS

The Main Menu provides access to other sub-menus to check shelf summary information, test access screens, and log out of the system. Refer to Table 17 for sub-menu options and descriptions, parameters and valid values.

	P6-FlexPlus	Management Unit	
MAIN NETWORK	<u>Select</u> <u>A</u> larms	<u>C</u> ONFIG S/W <u>D</u> N	LD <u>I</u> NFO
Test Access			
Logout			
	I		
09/26/2002	Shelf ID:	NE0020A7351002	01:31:17

Table 17. Main Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
Shelf Summary	Shelf Summary (shelf unit types and alarm status)		
Test Access	Allows you to perform test access on individual channels in the shelf Channel Unit cards	DS1 Number Channel Number Test Access Is Currently Active On Channel # Of DS1 # Of MUX#/COLU#. Would You Like To End Test Access On MUX1 (Y/N)?	1 – 8 1 – 24 Y or N
Logout	Log out of the current system session	Current Session will be Logged Out. Continue (Y/N)?:	Y or N

MAIN — Shelf Summary

This screen displays the status (shelf unit types and alarm status) of the system. Refer to Table 18 on page 32 for Shelf Summary information.



Step	Action
1	At the Main Menu screen, select MAIN . Press U to choose Shelf Summary . The following screen appears.
	PG-FlexPlus Management Unit HAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Shelf Summary Test Access Logout Logout Logout Info Logout Statistics Statistics Statistics Statistics Statistics Boundary Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Boundary Statistics Statistics Statistics Statistics Statistics Statistics Boundary Statistics Statistics Statistics Statistics Statistics Statistics Boundary Statistics Statistics Statistics Statistics Statistics
2	Press ENTER. The following screen appears.
	P6-FlexPlus Advanced Management Unit HAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO SHELF UNIT TYPES SHELF UNIT TYPES SLOT UNIT TYPE MUX1 ANX-943 ANX-943 S NOT EQUIPPED MUX1 ANX-943 ANX-943 S NOT EQUIPPED MUX2 ANX-943 ANX-943 S NOT EQUIPPED NOT EQUIPPED 1 NOT EQUIPPED 14 NOT EQUIPPED 16 I-SERVICE UNKNOHN ALU-935 9 NOT EQUIPPED 10 NOT EQUIPPED 16
	MAJOR: MINOR
	[* = ACTIVE ALARM]
	03/24/2003 Shelf ID: NE0020A7351001 13:39:04
3	Press Esc . The Main Menu screen reappears.

Table 18. Shelf Summary

Entity	Description			
Shelf Unit Types				
SLOT	Slot identifier name or number			
UNIT TYPE	Identifier for card type or not equipped note			
Shelf Current Alarms				
CRITICAL	Summary of Critical alarms for each shelf slot			
MAJOR	Summary of Major alarms for each shelf slot			
MINOR	Summary of Minor alarms for each shelf slot			

MAIN — Test Access

This screen allows you to perform test access on individual channels in the shelf Channel Unit cards.



Step	Action
1	At the Main Menu screen, select MAIN. Press U to choose Test Access. The following screen appears.
	PG-FlexPlus Management Unit HAIN NETHORK SELECT BLARMS CONFIG S/H DNLD INFO Lest Access Logout P9/26/2002 Shelf 10: NE002007351002 01:32:25
2	Press ENTER The following screen appears
	PS-F JexPlus Management Unit HBIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Test Access Select A MUX for Integrated Test Access or Select a COLU for Universal Test Access: MUXI MUX2 COLU-1 COLU-2 COLU-1 COLU-2 COLU-3 COLU-4 COLU-5 COLU-7 COLU-4 COLU-5 COLU-10 COLU-12 COLU-10 COLU-12 COLU-13 COLU-15 COLU-16 89/26/2002 Shelf 10: NE002007351002 01:33:10
	Highlight the applicable entity (MUX1 , MUX 2 , COLU1 through COLU16) per your system configuration. As an example, we have chosen MUX1.

MAIN — Test Access (Continued)

Step	Action				
3	Enter the applicable DS1 Number (1-8) and Channel Number (1-24).				
	PG-FlexPlus Management Unit MAIN <u>NETHORK SELECT A</u> LARMS <u>C</u> ONFIG S/H <u>D</u> NLD <u>I</u> NFO Test <u>Access</u>				
	MUXI Has Been Chosen For Test Access. MUX1 Supports Test Access On Any Channel Mithin It's 8 DS1 Lines As Long As The Channel is Not Part Of A Multi-Channel Service Such As ISDN.				
	To Start Test Access, Type In The Correct Test Access Information Then Select The "ENABLE TEST ACCESS" Field And Press Enter.				
	Enter The DS1 Number: 01 Enter The Channel Number: 08				
	ENABLE TEST ACCESS				
	09/26/2002 Shelf ID: NE0020A7351002 01:42:10				
	Select ENABLE TEST ACCESS and press ENTER.				
4	To start the test, press ENTER from the flashing Test Access On Channel # of DS1 # of MUX#/ COLU# Has Started. Hit <cr> To Resume Screens prompt.</cr>				
	PG-FlexPlus Hanagerent Unit HAIN NETWORK SELECT ALARMS CONFIG S/W DNLD INFO Test Access				
	MUX1 Has Been Chosen For Test Access. MUX1 Supports Test Access On Any Channel Mithin It's 8 DS1 Lines As Long As The Channel is Not Part Of A Multi-Channel Service Such As ISDN.				
	To Start Test Access, Type In The Correct Test Access Information Then Select The "ENABLE TEST ACCESS" Field And Press Enter.				
	Enter The DS1 Number:				
	ENABLE TEST ACCESS				
	Test Access On Channel 8 Of DS1 1 Of MUX1 Has Started. Hit <cr> To Resume Screens.</cr>				
	09/26/2002 Shelf IO: NE0020A7351002 01:42:44				
	If you do not want to start the test, press ESC .				

MAIN — Test Access (0	Continued)
-----------------------	------------

Step	Action
5	To end test access on selected entity (MUX#/COLU#), at the Main Menu screen, select MAIN. Press to choose Test Access again. Type Y from the Test Access Is Currently Active On Channel # Of DS1 # Of MUX#/COLU#. Would You Like To End Test Access On MUX#/ COLU# (Y/N)? prompt.
	PG-FlexPlus Management Unit HAIN NETHORK SELECT ALARMS CONFIG S/H ONLO INFO Test Access
	Test Access Is Currently Active On Channel 8 Of DS1 1 Of MUX1. Hould You Like To End Test Access On MUX1 (Y/N)? ∎
	09/26/2002 Shelf 1D: NE0020A7351002 01:43:20
	Then press ENTER. The Main Menu screen will reappear.
	PG-FlexPlus Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/H ONLD INFO Test Access
	Test Access Connection Has Been Disconnected. Hit <cr> To Resume Screens.</cr>
	09/26/2002 Shelf ID: NE0020A7351002 01:43:41
	To let the test continue to run, type N from the Test Access Is Currently Active On Channel # Of DS1 # Of MUX#/COLU#. Would You Like To End Test Access On MUX#/COLU# (Y/N)? prompt. The Main Menu screen reappears.

MAIN — Logout

This screen logs the user out of the system.

MAIN — Logout

Step	Action
1	CAUTION If you must leave your VT-100 terminal unattended for any length of time, log off until you are ready to resume work. This prevents unauthorized persons from inadvertently changing any of your operating parameters and causing a possible loss of service.
	At the Main Menu screen, select MAIN. Press J to choose Logout. The following screen appears.
	09/26/2002 Shelf ID: NE002007351002 01:44:05
2	Press ENTER. The following screen appears.
	PG-FlexPlus Management Unit HAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Logout Current Session will be Logged Out. Continue (Y/N)?
	09/26/2002 Shelf ID: NE002007351002 01:44:28

MAIN — Logout (Continued)

Step	Action	
Step 3	Action Press Y. The Login screen appears. P6-FlexPlus Login Screen Enter Password: Access Key: 052872232642	

NETWORK MENU OPTIONS

The Network Menu provides access to all available and connected AMU-912s on the 10Base-2 Local Area Network (LAN). Refer to Table 19 for sub-menu options and descriptions.

MAIN	HeitHURK SEL HuitiShelf Connection Local Summa Inband Tra	6-FlexPlus Adva ECT ALARMS Access Summary Iny fic Summary	nced Venage CONFIG	erent Unit S/H <u>O</u> NLD	INFO
03/24	/2003	Shelf ID:	NE0020A7351	881	13:40:30

Table 19. Network Menu Options

Sub-Menu Options	Sub-Menu Descriptions
MultiShelf Access	View all accessible Management Units (AMU-912s/PMU-712s) existing on the 10Base-2 LAN
Connection Summary	View all incoming MultiShelf connections (maximum of 3)
Local Summary	View the Local Card Summary for the AMU-912 (includes card identification information, port session locations and states, and alarm activity)
Inband Traffic Summary	View frame counts for inband traffic on individual network DS1 ports

NETWORK — MultiShelf Access

This screen displays a list of all accessible Management Units (AMU-912s and PMU-712s) existing on the 10Base-2 LAN.

NETWORK — MultiShelf Access

Step	Action	
1	At the Main Menu screen, select NETWORK . Press U to choose MultiShelf Access screen appears.	. The following
	PG-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO MultiShelf Access Connection Summary Local Summary Local Summary Local Summary Inband Traffic Summary Inband Traffic Summary 03/24/2003 Shelf 10: NE002087351801 13:49:30	

Step Action 2 Press **ENTER**. The following screen appears. PG-FlexPlus Managere NETHORK SELECT ALARMS CONFIG MultiShelf Access ent Unit S S/W <u>D</u>NLD MAIN INFO MULTISHELF ACCESS SUMMARY TARGET MAC SUMMARY CAR TARGET ID BILLS-LAB-BENCH BILLS-RACK-TOP EDGE-SYSTEM NE002007350007 NE0020073507C5 NE002007351001 NE002007351003 TAC-INTEGRATED-1 TAC-INTEGRATED-1 TAC-INTEGRATED-1 TAC-INTEGRATED-1 ADDRESS 0020A7350531 type Pmu Pmu Pmu INFO DISPLAY BUTTON 0020A7350025 0020A7350BAB 0020A7350BAB 0020A73500A7 PMU PMU 0020A73507C5 0020A7351001 0020A7351003 0020A7351003 0020A7350B42 AMU amu Pmu PMU 0020A7350B77 TAC-UNIVERSAL-1 09/26/2002 Shelf ID: NE0020A7351002 01:48:06 To view the MultiShelf Card Summary, select the AMU-912 or PMU-712 you want to view by selecting the associated **DISPLAY** option. The following screen type appears. PG-FlexPlus Manage_er T <u>A</u>LARMS <u>C</u>ONFIG ent Unit 5 S/W_DNLD MAIN <u>Nethork s</u>elect INFO MULTISHELF CARD SUMMARY Card Type IEEE MAC_Address PMU 0x0020a7350531 BILLS-LAB-BENCH Target ID Active Inbound Sessions Active Outbound Sessions Front Port in Session ō Yes Rear Port in Session Telnet Sessions Active Critical Alarm Active No No Major Alarm Active Minor Alarm Active No Yes IP Address Not Configured Heartbeat Timeout (secs) : 55 CONNECT PREVIOUS SCREEN 09/26/2002 Shelf ID: NE0020A7351002 01:49:14 To return to the previous screen, select **PREVIOUS SCREEN** and press **ENTER**. To connect to another AMU-912 or PMU-712, select **CONNECT** from either of the above two screens. You will see the Welcome Banner screen for a few seconds, then you are connected to the card (AMU-912 or PMU-712) that you chose.

NETWORK — MultiShelf Access (Continued)





NETWORK — Connection Summary

This screen displays all incoming MultiShelf connections (maximum of three). MultiShelf screens support a series of outbound connections with up to 24 remote AMU-912s and/or PMU-712s while maintaining up to three simultaneous inbound connections.

NETWORK — Connection Summary

Step	Action
1	At the Main Menu screen, select NETWORK . Press U to choose Connection Summary . The following screen appears.
	MAIN NETHURK SELECT ALARMS CONFIG S/N DNLD INFO MultiShelf Access Connection Suffery Local Summary Inband Traffic Summary
	83/24/2883 Shelf LD: NE8828H7351881 13:43:55
	If there is no information in the Connection Summary, the above screen displays a flashing message at the bottom of the screen: Connection Table Empty. **Hit <cr> to Continue**. Press ENTER. The Main Menu screen reappears.</cr>
2	Press ENTER. The following screen appears.
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Connection Surrary MULTISHELF CONNECTION LOG
	Driginating MAC Address : 0020A7351001 Driginating Target ID : NE0020A7351001 Connection Start Time : 02:17:58
	Originating MAC Address : Originating Target ID : Connection Start Time :
	Originating MAC Address : Originating Target ID : Connection Start Time :
	09/26/2002 Shelf ID: NE002007351002 02:22:37
3	Press ESC . The Main Menu screen reappears.

NETWORK — Local Summary

This screen displays local card summary for the AMU-912, including card identification information, port session locations and states, and alarm activity.

NETWORK — Local Summary

Step	Action
1	At the Main Menu screen, select NETWORK . Press U to choose Local Summary . The following screen appears.
	PE-FlexPlus Rdvanced Hanagement Unit MAIN NETWORK SELECT ALARMS CONFIG S/H ONLD INFO MultiShelf Access Connection Summary Local Surmary Inband Traffic Summary Shelf 10: NEG82087351001 13:44:34
2	Press ENTER. The following screen appears.
	PE-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/N DNLD INFO Local Summary MULTISHELF LOCAL CARD SUMMARY Card Type AMU IEEE MAC Address BAND DE BANDARY Card Type AMU IEEE MAC Address BANDARY Address INE002007351002 Address INO Address INO Address INO Address INO Address IT2.17.254.60
3	Press Esc. The Main Menu screen reappears.

NETWORK — Inband Traffic Summary

This screen displays frame counts for inband traffic on individual network DS1 ports.

NETWORK — Inband Traffic Summary



Step	Action
3	The following actions can be taken:
	• To clear the inband traffic counts, press Y at the ALL INBAND TRAFFIC COUNTS WILL BE CLEARED. CONTINUE (Y/N)? prompt. All inband traffic counts are cleared.
	PG-FlexPlus Advanced Manage⊥ent Unit MAIN <u>NETHORK SELECT ALARMS C</u> ONFIG S/W <u>D</u> NLD <u>I</u> NFO Inband Traffic Su≣ary
	Inband Channel Summary
	MUX-A: ACTIVE MUX-B: ACTIVE
	Uplink Tratfic Summary Network Total Ingress Total Egress Ports Frame Counts Frame Counts
	DS1-1 Ø 1273 DS1-2 Ø 1273 DS1-3 Ø 1273 DS1-4 Ø 1273 DS1-5 Ø 1273 DS1-5 Ø 1273 DS1-5 Ø 1273 DS1-5 Ø 1273 DS1-6 935185 938028 DS1-7 Ø 1273
	DS1-8 0 1273 ALL INBAND TRAFFIC COUNTS WILL BE CLEARED. CONTINUE (Y/N)? ■
	03/24/2003 Shelf ID: NE002087351001 13:50:56
	PG-FlexPlus Advanced Management Unit MAIN <u>NETHDAK SELECT ALARMS C</u> ONFIG S/H <u>D</u> NLD <u>I</u> NFO Inband Traffic Summary
	Inband Channel Summary
	MUX-A: ACTIVE MUX-B: ACTIVE
	Uplink Iraffic Summary Network Total Ingress Total Egress Ports Frame Counts Frame Counts
	DS1-1 0 0 DS1-2 0 0 DS1-3 0 0 DS1-4 0 0 DS1-4 0 0 DS1-5 0 0
	DS1-6 9 9 DS1-7 Ø Ø DS1-8 Ø Ø
	CLEAR INBAND TRAFFIC COUNTS (Y)?
	03/24/2003 Shelf ID: NE002007351001 13:51:26
	 To retain the existing inband traffic counts, press N.
4	Press Esc . The Main Menu screen reappears.

NETWORK — Inband Traffic Summary (Continued)

SELECT MENU OPTIONS

The Select Menu allows you to select any of the cards (MUX 1 or MUX 2, COLU 1 through COLU 16) installed in the shelf.

MAIN	<u>N</u> ethork	PG-F SELECT HUX 1 HUX 2 COLU 1 COLU 2 COLU 3 COLU 4 COLU 5 COLU 5 COLU 5 COLU 5 COLU 7 COLU 7 COLU 10 COLU 10 COLU 11 COLU 13 COLU 13 COLU 14 COLU 15 COLU 16	IexPlus Alarms	Venere ent CONFIG	Unit S/H DNLD	<u>I</u> NFD	
09/26/200	2	sh	elf ID:	NE0020A7351	1002		02:05:51

SELECT — MUX 1 or MUX 2, COLU 1 Through COLU 16

This screen allows you to select any of the cards (MUX 1 or MUX 2, COLU 1 through COLU 16) installed in the shelf.

SELECT — MUX 1 or MUX 2, COLU 1 Through COLU 16

Step	Action
1	At the Main Menu screen, choose SELECT . Press U to choose MUX 1 (or the appropriate choice per your system configuration). The following screen appears.
	PE-FiexPlus Management Unit MAIN NETHORK SELECT PLARMS CONFIG S/H DNLD INFO MUX 2 00LU 1 00LU 2 00LU 3 00LU 4 00LU 4 00LU 4 00LU 4 00LU 4 00LU 8 00LU 8 00LU 10 00LU 10 00LU 10 00LU 11 00LU 11 00LU 12 00LU 14 00LU 15 00LU 16 00LU 15 00LU 15 00LU 16 00LU 16 <t< th=""></t<>
2	Press ENTER. The following screen type appears.
	PE-F lexPlus CO RHX Unit #1 HRIN PERFORMANCE BLARMS CONFIG IEST INFO BE-F lexPlus CO RHX Unit #1 BE-F lexPlue Co RHX Unit #1 INFO BE-F lexPlue Co RHX Unit #1 INFO </th
3	Press Esc (repeatedly, if needed) until the AMU-912 Main Menu screen reappears
2	

ALARM MENU OPTIONS

The Alarm Menu provides access to the alarm status and system related alarm events. Refer to Table 20 for sub-menu options and descriptions, parameters and valid values.

|--|

Table 20. Alarm Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Selectable Parameter Options	Valid Values
Alarm Summary	View the AMU-912, MUXs, and COLUs critical, major and minor alarms	 Clear Shelf Alarm History (Y)? Shelf Alarm History Will Be Cleared. Continue (Y/N)? 	• Y • Y or N
Alarm History	View the AMU-912 alarm status	 Clear AMU Alarm History (Y)? AMU Alarm History Will Be Cleared. Continue (Y/N)? 	• Y • Y or N
Service Loss Alarm History	View the service loss alarm status for all COLUs in the shelf	Service Loss Alarm History will be cleared. Continue (Y/N)?	Y or N
Environmental Alarm History	View the status of environmental alarmed events	 Clear Environmental Alarm History (Y)? Environmental Alarm History Will Be Cleared. Continue (Y/N)? 	• Y • Y or N
Relay Summary	View the system relay summary		
LED Summary	View the summary of the LED activity		
Activate ACO	Activate the AMU-912 Alarm Cutoff feature	ACO Will Be Activated. Continue (Y/N)?	Y or N

ALARMS — Alarms Summary

This screen displays the AMU-912, MUXs and COLUs critical, major, and minor alarms.

ALARMS — Alarms Summary

Step		Action		
1	At the Main Menu screen, sele appears.	screen, select ALARMS. Press J to choose Alarms Summary. The following screen		
	MAIN NE	P6-FlexPlus Hanagerent Unit HURK SELECT ALARKS CONFIG S/H DNLD INFO Alarm History Alarm History Service Loss Alarm History Environmental Alarm History Relay Summary LEO Summary Activate ACO Shelf 10: NE002007351002 02:09:04		

ALARMS — A	larms Summary	(Continued)
------------	---------------	-------------

Step		Action	
2	Press ENTER. The follo	Press ENTER. The following screen appears.	
	To clear the shelf alarm history, press Y at the CLEAR SHELF ALARM HISTORY (Y)? prompt.		
	PG-FlexPlus Advanced Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARHS CONFIG S/H ONLO I</u> NFO Alarm Summary		
	CRITICAL: NONE		
		MAJOR: NONE	
		MINOR: NONE	
	 C	SHELF ALARM SUMMARY AMU MUX1 MUX2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 RITICAL:	
		MAJOR: H H	
		MINDR: H H H [A = ACTIVE ALARM: H = ALARM HISTORY]	
		CLEAR SHELF ALARN HISTORY (Y)? ■ SHELF ALARN HISTORY LAST CLEARED://	
	83/	24/2803 Shelf ID: NE0020A7351001 13:47:40	
	If you want to retain the shelf alarm history, press ESC . The Main Menu screen reappears.		
	The alarm information displayed indicates: Alarm Types:		
	CRITICAL	Critical alarm is present	
	• MAJOR	Major alarm is present	
	MINOR	Minor alarm is present	
	NOT ALARMED Condition is active, but has no severity		
	NOT REPORTED Alarm States:	Condition not reported by system	
	• A	Designates active alarm	
	• H	Designates history alarm	

ALARMS — A	Alarms	Summary	(Continued)
------------	--------	---------	-------------

Step	Action		
3	To verify you want to clear the shelf alarm history, press Y at the SHELF ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt.		
	PG-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/W ONLO INFO Alarm Summary		
	CRITICAL: NONE		
	MAJOR: NONE		
	MINOR: NONE		
	MAJOR: H H		
	MINOR: H H H [A = ACTIVE ALARM: H = ALARM HISTORY]		
	SHELF ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? ■ SHELF ALARM HISTORY LAST CLEARED://:		
	03/24/2003 Shelf ID: NE0020A7351001 13:48:35		
	PG-FlexPlus Advanced Management Unit		
	MAIN <u>N</u> ETWORK <u>S</u> ELECT <u>ALARMS</u> <u>CONFIG</u> <u>S/H DNLD</u> <u>I</u> NFO Alarm Sunnary		
	CRITICAL: NONE		
	MAJOR: NONE		
	MINOR: NONE		
	MAJOR:		
	MINOR: $[0 - 0, 0, 0] \in [0, 0]$		
	SHELF ALARM HISTORY LAST CLEARED: 03/24/2003 13:49:00		
	03/24/2003 Shelf ID: NE002007351001 13:49:02		
	If you want to retain the shelf alarm history, press N, then press ESC. The Main Menu screen reappears.		
4	Press Esc . The Main Menu screen reappears.		

ALARMS — Alarm History

This screen displays the AMU-912 alarm status. Information includes a count of the number of times each alarm occurred, the time and date of the first and last occurrence, the provisioned alarm type, and the current status.

ALARMS — Alarm History

Step	Action		
1	At the Main Menu screen, select ALARMS . Press U to choose Alarm History . The following screen appears.		
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARKS CONFIG S/H DNLD INFO Alarm Summary Bergice Loss Alarm History Environmental Alarm History Belay Summary LED Summary Activate ACO		
	09/26/2002 Shelf 1D: NE0020A7351002 02:23:35		
2	Press ENTER. The following screen appears.		
	To clear the AMU-912 alarm history, press Y at the CLEAR AMU ALARM HISTORY (Y)? prompt.		
	PG-FlexPlus Management Unit MAIN <u>N</u> ETWORK <u>S</u> ELECT <u>ALARMS CONFIG S/H DNLD I</u> NFO Alar∎ History		
	ALARMS TYPE CURRENT COUNT FIRST LAST Power A Missing (MISPWRA) MJ OK 0 / / / /		
	CLEAR AMU ALARM HISTORY (Y)? ■ AMU ALARM HISTORY LAST CLEARED://: 0972672002 Shelf ID: NE002007351002 02:24:08		
	If you want to retain the AMU-912 alarm history, press ESC . The Main Menu screen reappears.		
	The status <i>OK</i> displays in the <i>Current</i> column when the alarm is not present. The status <i>Active</i> displays when an alarm is present (see Table 27 on page 87 for Alarm Types). A description of the Alarm types reported is provided in Table 26 on page 86.		

ALARMS — Alarm	History	(Continued)
----------------	---------	-------------

Step	Action	
3	To verify you want to clear the AMU-912 alarm history, press Y at the AMU ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt. The following events occur:	
	AMU-912 alarm history counts are set to zero	
	 time and date that the registers were last cleared are updated 	
	P6-FlexPlus Management Unit	
	MHIN MEINURK SELECI ILIANS CONFIG 5/N DALU INFU Alar History	
	ALARMSTYPECURRENTCOUNTFIRSTLASTPower A Missing(MISPWRA)NJOK0/	
	AMU ALARM HISTORY HILL BE CLEARED. CONTINUE (Y/N)? ■	
	09/26/2002 Shelf ID: NE002007351002 02:24:29	
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLD</u> INFO Alar∎ History	
	ALARMS TYPE CURRENT COUNT FIRST LAST Power A Missing (MISPWRA) MJ OK 0 /	
	CLEAR AMU ALARM HISTORY (Y)?	
	AMU ALARM HISTORY LAST CLEARED: 09/26/2002 02:24:47	
	if you want to retain the AMU-912 alarm history, press N , then press ESC . The Main Menu screen reappears.	
	Clearing the alarm history does not clear any alarm that is currently active in the system. If there is an active alarm, the count is set to 1 and the value in the LAST date and time field is set to the FIRST date and time field.	
4	Press Esc . The Main Menu screen reappears.	

ALARMS — Service Loss Alarm History

This screen displays the service loss alarm status for all COLUs in the shelf. Information includes a count of the number of times each alarm occurred, the time and date of the first and last occurrence, the provisioned alarm type, and the current status.

ALARMS — Service Loss Alarm History

Step	Action		
1	At the Main Menu screen, select ALARMS . Press U to choose Service Loss Alarm History . The following screen appears.		
	PG-FlexPlus Management Unit <u>ALARMS</u> <u>CONFIG</u> S/H <u>DNLO</u> <u>INFO</u> Alarm <u>History</u> <u>Service Loss Alarm History</u> Environmental Alarm <u>History</u> <u>Relay Summary</u> <u>LED Summary</u> <u>Activate <u>A</u>CO</u>		
	09/26/2002 Shelf ID: NE0020A7351002 02:25:34		
2	Press ENTER. The following screen appears.		
	To view other page(s), select View Other Page button, then press ENTER .		
	To clear the service loss alarm history, select Clear Service Loss Alarm History button, then press ENTER .		
	P6-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARHS</u> <u>CONFIG</u> S/H <u>DNLD</u> <u>I</u> NFO <u>Serv</u> ice Loss Alar∎ History		
	ALARMSTYPECURRENTCOUNTFIRSTLASTCOLU 1Service Loss(SERULOSS)MJOK0////COLU 2Service Loss(SERULOSS)MJOK0//////COLU 3Service Loss(SERULOSS)MJOK0// </th		
	View other Page		
	Clear Service Loss Alar- History SERVICE LOSS ALARM HISTORY LAST CLEARED://::		
	09/26/2002 Shelf ID: NE0020A7351002 02:26:25		
	The status <i>OK</i> displays in the <i>Current</i> column when the alarm is not present. The status <i>Active</i> displays when an alarm is present (see Table 28 on page 90 for Service Loss Alarm Types). A description of the Alarm types reported is provided in Table 26 on page 86.		

Step	Action		
3	To verify you want to clear the service loss alarm history, press Y at the SERVICE LOSS ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt. The following events occur:		
	COLU alarm history counts are set to zero		
	 time and date that the registers were last cleared are updated 		
	P6-FlexPlus Management Unit		
	MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARHS</u> <u>CONFIG</u> S/H <u>D</u> NLD <u>I</u> NFO Service Loss Alar∎ History		
	ALARMS TYPE CURRENT COUNT FIRST LAST COLU 1 Service Loss (SERULOSS) MJ OK 0 /		
	Uiew other Page		
	Clear Service Loss Alare History SERVICE LOSS ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)?		
	SERVICE LOSS ALARM HISTORY LAST CLEARED://: 89/26/2802 Shelf II: NE002007351002 02:26:46		
	PG-FlexPlus Management Unit MAIN <u>N</u> ETWORK <u>SELECT</u> ALARMS <u>CONFIG</u> S/H DNLD <u>I</u> NFO Service Loss Alar∎ History		
	ALARMS TYPE CURRENT COUNT FIRST LAST COLU 1 Service Loss (SERULOSS) MJ OK 0 /		
	Uiew other Page Clear Service Loss Alarm History SERVICE LOSS ALARM HISTORY LAST CLEARED: 09/26/2002 02:27:17		
	09/26/2002 Shelf ID: NE002007351002 02:27:19		
	If you want to retain the existing alarm history, press N , then press ESC . The Main Menu screen reappears.		
	Clearing the alarm history does not clear any alarm that is currently active in the system. If there is an active alarm, the count is set to 1 and the value in the LAST date and time field is set to the FIRST date and time field.		
4	Press Esc . The Main Menu screen reappears.		

ALARMS — Service Loss Alarm History (Continued)

ALARMS — Environmental Alarm History

This screen displays the status of environmental alarmed events. Information includes a count of the number of times each alarm occurred, the time and date of the first and last occurrence, the provisioned alarm type, and the current status.

ALARMS —	 Environmental 	Alarm	History
----------	-----------------------------------	-------	---------

Step	Action
1	At the Main Menu screen, select ALARMS . Press U to choose Environmental Alarm History . The following screen appears.
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARKS CONFIG S/H DNLD INFO Alarm History Service Loss Alarm History Relay Summary LED Summary Activate ACO
	09/26/2002 Shelf ID: NE002007351002 02:33:31
2	Press ENTER. The following screen appears.
	To clear the environmental alarm history, press Y at the CLEAR ENVIRONMNENTAL ALARM HISTORY (Y) ? prompt.
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARMS CONFIG S/H DNLD I</u> NFO Environmental Alarm History
	ALARMSTYPECURRENTCOUNTFIRSTLASTEnvironmental Alarm 1(ENU1)MNOK0/Environmental Alarm 2(ENU2)MNOK0/Environmental Alarm 3(ENU3)MNOK0/Environmental Alarm 4(ENU4)MNOK0/
	CLEAR ENUIRONMENT ALARM HISTORY (Y)? ■ ENUIRONMENT ALARM HISTORY LAST CLEARED://::
	09/26/2002 Shelf 1D: NE0020A7351002 02:34:04
	If you want to retain the environmental alarm history, press ESC. The Main Menu screen reappears.
	The status <i>OK</i> displays in the <i>Current</i> column when the alarm is not present. The status <i>Active</i> displays when an alarm is present (see Table 31 on page 96 for Environmental Alarm Types). A description of the Alarm types reported is provided in Table 26 on page 86.

Step	Action
3	To verify you want to clear the environmental alarm history, press Y at the ENVIRONMENTAL ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt. The following events occur:
	 environmental alarm history counts are set to zero
	time and date that the registers were last cleared are updated
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARMS CONFIG S/H DNLD I</u> NFO Environmental Alarm History
	ALARMS TYPE CURRENT COUNT FIRST LAST Environmental Alarm 1 (ENU1) MN OK 0 /
	ENVIRONMENT ALARM HISTORY HILL BE CLEARED. CONTINUE (Y/N)? ■ ENVIRONMENT ALARM HISTORY LAST CLEARED://::
	09/26/2002 Shelf ID: NE002007351002 02:34:27
	P6-FlexPlus Hanagement Unit
	MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>ALARHS CONFIG S/H DNLD I</u> NFO Environmental Alar= History
	ALARMS TYPE CURRENT COUNT FIRST LAST Environmental Alarm 1 (ENU1) MN DK 0 /
	CLEAR ENVIRONMENT ALARM HISTORY (Y)? ■ ENVIRONMENT ALARM HISTORY LAST CLEARED: 09/26/2002 02:34:46
	09/26/2002 Shelf ID: NE002007351002 02:34:48
	If you want to retain the existing environmental alarm history, press N , then press ESC . The Main Menu screen reappears.
	Clearing the alarm history does not clear any alarm that is currently active in the system. If there is an active alarm, the count is set to 1 and the value in the LAST date and time field is set to the FIRST date and time field.
4	Press Esc . The Main Menu screen reappears.

ALARMS — Environmental Alarm History (Continued)

ALARMS — Relay Summary

This screen displays the system relay summary.

ALARMS — Relay Summary

Step	Action
1	At the Main Menu screen, select ALARMS . Press U to choose Relay Summary . The following screen appears.
	PG-FlexPlus Management Unit MAIN NETWORK SELECT ALLERNS CONFIG S/A DNLD INFO Alarm History Service Loss Alarm History Environmental Alarm History LEO Summary Activate ACO
	89/26/2002 Shelf 10: NE002007351002 02:35:13
2	Press ENTER. The following screen appears.
	P6-FlexPlus Advanced Management Unit MAIN <u>N</u> ETWORK <u>S</u> ELECT <u>ALARMS CONFIG S/H DNLO I</u> NFO Relay Summary
	Critical Visual: INACTIVE Environmental 3: INACTIVE
	Major Visual: INACTIVE Environmental 2: INACTIVE
	Minor Visual: INACTIVE Environmental 1: INACTIVE
	System: INACTIVE
	03/24/2003 Shelf ID: NE0020A7351001 13:54:14
	The alarm information displayed indicates:
	ACTIVE Relay is activated
	INACTIVE Relay is not activated

ALARMS — Relay Summary (Continued)

Step	Action
3	Press Esc . The Main Menu screen reappears.

ALARMS — LED Summary

This screen displays the summary of the LED activity.

ALARMS — LED Summary


ALARMS — Activate ACO

This screen allows you to activate the AMU-912 Alarm Cutoff feature.

ALARMS — Activate ACO

Step	Action				
1	At the Main Menu screen, select ALARMS . Press J to choose Activate ACO . The following screen appears.				
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARKS CONFIG S/H DNLD INFO Alarm Summary Alarm History Sergice Loss Alarm History Environmental Alarm History LED Summary Activate ADD Activate ADD Activa				

ALARMS — Activate ACO (Continued)

Step	Action				
2	Press ENTER. The following screen appears.				
	To activate the ACO, press y at the ACO WILL BE ACTIVATED (Y)? prompt.				
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Activate ACO				
	ACO WILL BE ACTIVATED. CONTINUE (Y/N)?				
	0972672002 Shelf ID: NE002007351002 02:44:23				
	Press ENTER. The Main Menu appears.				
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>SELECT ALARMS CONFIG S/H DNLD I</u> NFO Activate ACO				
	ACO HAS BEEN ACTIVATED. HIT <cr> TO RESUME SCREENS.</cr>				
	09/26/2002 Shelf ID: NE002007351002 02:44:46				
	To refrain from activating the ACO, press N.				

CONFIGURATION MENU OPTIONS

The Configuration Menu provides access to system provisioning and setting all options to factory defaults, etc. Refer to Table 21 on page 64 for sub-menu options and descriptions, parameters and valid values.

		PG-F1e	xPlus Advanced Management Unit	
	NETHORK	SELECT	ALARMS CONFIG Shelf Options IP Info SMMP Gateway Info SMMP Community Info Password Alarm Types Service Loss Alarm Types Environmental Alarm Setup Environmental Alarm Types Date and Time Set Factory Defaults	
03/24/2	003		Shelf ID: NE0020A7351001	13:57:10

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
Shelf Options	Set shelf options	Shelf Options will be changed. Continue (Y/N)?	Y or N
(T <mark>able 22 on page</mark> 70 for Shelf Options)			
IP Info (See Table 23 on page 74)	Change the AMU-912's IP Address	AMU IP Info will be changed. If the AMU IP info is changed, the AMU will be reset. Continue (Y/N)?	Y or N
SNMP Gateway Info (See Table 24 on	Enables/Disables SNMP trap forwarding from the MSLAN to an external network	SNMP Gateway Option will be changed. Continue (Y/N)?	Y or N
SNMP Community Info	Changes Community Access Privileges		
page 80)			
Password	Personal identifier for security reasons	 Enter Old Password and Press Return Enter New Password and Press Return 	 6 to 10 characters Embedded spaces not allowed
		Enter Password Again and Press Return	 Case insensitive and must contain at least 1 alpha character (i.e., A - Z), 1 numeric character (i.e., 1 - 9), and 1 special character (i.e., \$ or #)
		 This Password will be permanently changed. Continue (Y/N)? 	• Y or N
Alarm Types (See Table 27 on page 87)	Provision AMU-912 alarm types	AMU Alarm Types will be changed. Continue (Y/N)?	Y or N
Service Loss Alarm Types (See Table 28 on page 90)	Provision service alarm types	Service Loss Alarm Types will be changed. Continue (Y/N)?	Y or N
Environmental Alarms Setup (See Table 29 on page 93)	Provision TR-08 data link alarm types for each environmental alarm	Environmental Alarm Settings will be changed. Continue (Y/N)?	Y or N

Table 21. Configuration Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
Environmental Alarm Types	Provision the environmental alarm	Environmental Alarm Types will be changed. Continue (Y/N)?	Y or N
(See Table 31 on page 96)	types		
Date and Time	Set system date and	Month	 January – December
	time	• Day	• 1 – 31
		• Year	 2002 (accepts any 4-number year between 2000-2069)
		• Hour	• 00 – 24
		Minute	• 0 – 59
		Seconds	• 0 – 59
Set Factory Defaults	Reset the provisionable items to the original factory settings	 Configuration data will be set to factory defaults (This May Be Service Affecting!) Continue (Y/N)? 	• Y or N
		 Configuration data has been set to factory defaults. Press ESC to continue: 	• ESC

CONFIG — Shelf Options

The Shelf Options screen allows provisioning of system features. Refer to Table 22 on page 70 for Shelf Options.

CONFIG — Shelf Options

Step	Action			
1	At the Main Menu screen, select CONFIG . Press U to choose Shelf Options . The following screen appears.			
	PE-FlexPlus Advanced Management Unit MAIN NETHORK SELECT BLARMS CONFIG SYM DIA INIP Shelf Options I I Info SWMP Community Info SWMP Community Info Password Alarm Types Service Loss Alarm Types Environmental Alarm Types Date and Time Set Eactory Defaults Set Eactory Defaults			
	03/24/2003 Shelf ID: NE0020A7351001 13:57:10			
2	Press ENTER. The following screen appears. To change a field value, press SPACEBAR to toggle to the desired value, or press U or 1 to move to the next option.			
	PG-FlexPlus Hanagesent Unit MAIN NETWORK SELECT ALARMS CONFIG S/H DNLD INFO Shelf Options Functionality of the ACO/INHIBIT Pin: INHIBIT (ACO. INHIBIT) PG-FlexPlus Shelf ID: NE0020A7351002 (20 CHARS MAX) DB25 Setting: CRAFT-PORT (CRAFT-PORT. ENU-ALARMS) Allow Automatic Provisioning of AMU Options when Plugged into a Field Shelf: ENABLED (ENABLED, DISABLED)			
	ACCEPT SHELF OPTIONS SHOW MORE SHELF OPTIONS			
	10/02/2002 Shelf ID: NE002007351002 21:13:32			
	To save the shelf options, select the ACCEPT SHELF OPTIONS button, then press ENTER.			

CONFIG — Shelf Options (Continued)

Step	Action				
3	From the SHELF OPTIONS WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:				
	 To save the shelf options, press Y. All current values are set to desired values. 				
	PG=FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Shelf Options Shelf Options Shelf Options Shelf Options Shelf Options Functionality of the ACO/INHIBIT Pin: INHIBIT (ACO, INHIBIT) PG-FlexPlus Shelf ID: NE0020A7351002 (20 CHARS MAX) DB25 Setting: CRAFT-PORT (CRAFT-PORT, ENU-ALARMS) Allow Automatic Provisioning of AMU Options when Plugged into a Field Shelf: ENABLED (ENABLED, DISABLED)				
	ACCEPT SHELF OPTIONS SHOW MORE SHELF OPTIONS				
	SHELF OPTIONS WILL BE CHANGED. CONTINUE (Y/N)? ■				
	18/02/2002 Shelf ID: NE0020A7351002 21:14:43				
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Shelf Options Functionality of the ACD/INHIBIT Pin: INHIBIT (ACD, INHIBIT) PG-FlexPlus Shelf ID: NE0020A7351002 (20 CHARS MAX) DB25 Setting: CRAFT-PORT (CRAFT-PORT, ENV-ALARMS) Allow Automatic Provisioning of AMU (ENABLED) (ENABLED) ALCEPT SHELF OPTIONS SHOW MORE SHELF OPTIONS SHELF OPTIONS HAVE BEEN CHANGED.				
	10/02/2002 Shelf ID: NE0020A7351002 21:15:06				
	 To retain the existing values, press N. 				

CONFIG — Shelf Options (Continued)

Step	Action			
4	To view the rest of the shelf options, select the SHOW MORE SHELF OPTIONS button.			
	PEFIEXPlus Managerent Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFD Shelf Options Shelf Options Shelf Options Functionality of the ACO/INHIBIT Pin: INHIBIT (ACO, INHIBIT) P6-FlexPlus Shelf ID: NE0020A7351002 (20 CHARS (AXX) DB25 Setting: CRAFT-PORT (CRAFT-PORT, ENV-ALARMS) Allow Automatic Provisioning of AMU Options When Plugged Shelf Shelf ENGRL ENGRL DISOR DISOR DISOR			
5	To change the field value, press SPACEBAR to toggle to the desired value.			
	PG-FlexPlus Managerent Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Shelf Options Shelf Options Shelf Shelf Notes Shelf Alarm Relay Setting: STANDARD (STANDARD, TELEMETRY, ENVIRONMENTAL) [STANDARD = SYSTEM ID, UIS CR, UIS MJ, UIS MN, AUD CR, AUD MJ, AUD MN] SYSTEM ID, SI MJ, UIS MJ, UIS MN, SI MN, AUD MJ, AUD MN] [ENVIRONMENTAL = SYSTEM ID, UIS CR, UIS MJ, UIS MN, ENU 1, ENU 2, ENU 3]			
	ACCEPT SHELF OPTIONSSHOW MORE SHELF OPTIONS			
	09/26/2002 Shelf ID: NE0020A7351002 02:49:51			
	To save the shelf option, select the ACCEPT SHELF OPTIONS button, then press ENTER.			

CONFIG -	- Shelf	Options	(Continued)
----------	---------	----------------	-------------

Step	Action					
6	From the SHELF OPTIONS WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:					
	 To save the shelf option, press Y. The current value is set to the desired value. 					
	PG-FlexPlus Management Unit					
	Shelf Alarm Relay Setting: <u>STANDARD</u> (STANDARD, TELEMETRY, ENVIRONMENTAL)					
	TELEMENTRY = SYSTEM ID, SI MJ, UIS MJ, UIS MN, SI MN, AUD MJ, AUD MN [ENUIRONMENTAL = SYSTEM ID, UIS CR, UIS MJ, UIS MN, ENU 1, ENU 2, ENU 3]					
	ACCEPT SHELF OPTIONSSHOW MORE SHELF OPTIONS					
	SHELF OPTIONS WILL BE CHANGED. CONTINUE (Y/N)? ■					
	09/26/2002 Shelf ID: NE0020A7351002 02:54:13					
	PG-FlexPlus Hanagenent Unit MAIN <u>N</u> ETWORK <u>SELECT ALARMS</u> CONFIG S/H DNLD INFO Shelf Dotions					
	Shelf Alarm Relay Setting:					
	[STANDARD = SYSTEM ID. UIS CR. UIS MJ. UIS MN. AUD CR. AUD MJ. AUD MN] [TELEMETRY = SYSTEM ID. SI MJ. UIS MJ. UIS MN. SI MN. AUD MJ. AUD MN]					
	[ENVIRONMENTAL = SYSTEM ID, VIS CR, VIS MJ, VIS MN, ENV 1, ENV 2, ENV 3]					
	ACCEPT SHELF OPTIONSSHOW MORE SHELF OPTIONS					
	SHELF OPTIONS HAVE BEEN CHANGED.					
	89/26/2082 Shelf ID: NE0820A7351882 82:54:48					
	To retain the existing value, press N.					
7	Press Esc . The Main Menu screen reappears.					

System Options	Value	Description	Default	
Functionality of the ACO/Inhibit Pin	ACO	To silence all audible alarms, place a ground on this pin on the shelf backplane.	INHIBIT	
	INHIBIT	When a subscriber drop test is running, this pin on the shelf backplane will be grounded.		
PG-Flex ^{Plus} Shelf ID	Up to 24 characters maximum - Can contain letters, digits or hyphens	Visible at the bottom of the screen	"NE" followed by the MAC address (e.g., NE0020A7351002)	
DB25 Setting	CRAFT-PORT	Rear DB-25 connector is setup to act as a craft port	CRAFT-PORT (This setting is	
	ENV-ALARMS	Rear DB-25 connector is setup to provide EXT environmental alarm inputs	automatically set to ENV-ALARMS when the AMU-912 is plugged into a field shelf and the automatic field shelf provisioning option is set to ENABLED.)	
Allow Automatic Provisioning of AMU Options Plugged into a Field Shelf	ENABLED	Allows automatic provisioning when the AMU-912 is plugged into a field shelf. When enabled, the setting for Environmental Alarm TR-08 Data Link Reporting Environmental Alarm 2 is set to COM-MN, DB25 Setting is set to ENV- ALARMS, and Shelf Alarm Relay Setting is set to ENVIRONMENTAL when the AMU-912 is plugged into a field shelf. The setting will be set back to the normal default if the AMU-912 is subsequently plugged back into a normal shelf.	ENABLED	
	DISABLED	No automatic provisioning occurs when an AMU-912 is plugged into a field shelf		

Table 22. Shelf Options

System Options	Value	Description	Default
Shelf Alarm Relay Setting	STANDARD	Alarm relay terminations on the shelf backplane support the following alarms: System ID Critical - Visual Critical - Audible Major - Visual Major - Audible Minor - Visual Minor - Audible	STANDARD (This setting is automatically set to ENVIRONMENTAL when the AMU-912 is plugged into a field shelf and the automatic field shelf provisioning option is set to ENABLED.)
	TELEMETRY	Alarm relay terminations on the shelf backplane support the following alarms: Shelf ID System - Major System - Minor Major - Visual Major - Audible Minor - Visual Minor - Audible	
	ENVIRONMENTAL	Alarm relay terminations on the shelf backplane support the following alarms: System ID Critical - Visual Major - Visual Minor - Visual Environmental #1 Environmental #2 Environmental #3	

CONFIG — IP INFO

The IP information screen allows you to change the AMU-912's IP Address. Refer to Table 23 on page 74 for IP Information.



Anytime the IP Address is changed, the AMU-912 will perform a warm reset.

Step	Action	
1	At the Main Menu screen, select CONFIG . Press U to choose IP Info. The following screen appears.	
	PG-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Shelf Options IP Info SMMP Gateway Info SMMP Community Info SMMP Gateway Info SMMP Gateway Info SMMP Community Info SMMP Gateway Info SMMP Community Info SMMP Gateway Info Second Alarm Types Service Loss Alarm Types Service Loss Alarm Setup Environmental Alarms Setup Environmental Alarm Types Date and Time Set Eactory Defaults Set Eactory Defaults Set Eactory Defaults	
	03/24/2003 Shelf ID: NE0020A7351001 13:58:59	
2	Press ENTER . The following screen appears. To change a field value, press TAB to toggle to the desired value, or press J or ↑ to move to the next option. Type the desired values.	
	PG-FlexPlus Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/H DNLD INFO IP Info	
	AMU IP ADDRESS : <u>172</u> . <u>017</u> . <u>254</u> . <u>060</u> AMU SUBNET MASK · 255 <u>255</u> <u>000</u>	
	GATEWAY IP ADDRESS : 172 . 017 . 000 . 001	
	DEFAULT ROUTE : 000 . 000 . 000	
	HULLEY I' UHHINDES	
	09/26/2002 Shelf ID: NE0020A7351002 02:57:40	
	To save the shelf options, select the ACCEPT IP CHANGES button, then press ENTER.	

CONFIG — IP INFO (Continued)

Step	Action
3	 From the AMU IP INFO WILL BE CHANGED. IF THE AMU IP INFO IS CHANGED, THE AMU WILL BE RESET. CONTINUE (Y/N)? prompt, the following actions can be taken: To change the IP Info and reset the AMU-912, press Y. All current values are set to desired values.
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO IP Info
	AMU IP ADDRESS : 172 017 254 060 AMU SUBNET MASK : 255 255 000 000 GATEMAY IP ADDRESS : 172 017 000 001 DEFAULT ROUTE : 000 000 000 000 DEFAULT ROUTE MASK : 000 000 000
	ACCEPT 1P CHANGES
	AMU IP INFO WILL BE CHANGED. IF THE AMU IP INFO IS CHANGED. THE AMU WILL BE RESET. CONTINUE (Y/N)? ■
	09/26/2002 Shelf ID: NE0020A7351002 02:58:08
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO IP Info
	AMU IP ADDRESS : 172 . 017 . 254 . 060 AMU SUBNET MASK : 255 . 255 . 000 . 000
	GATEWAY IP ADDRESS : <u>172</u> . <u>017</u> . <u>000</u> . <u>001</u> DEFAULT ROUTE : <u>000</u> . <u>000</u> . <u>000</u>
	DEFAULT ROUTE MASK : 000 . 000 . 000
	ACCEPT IP CHANGES
	AMU IP INFO HAS NOT BEEN CHANGED.
	09/26/2002 Shelf ID: NE0020A7351002 02:58:29
	 To retain the existing values, press N.
4	Press Esc . The Main Menu screen reappears.

Table 23. IP Information

Address	Description
AMU IP Address	Unique 4-byte address
AMU Subnet Mask	Subnet mask assigned to the LAN
Gateway IP Address (Optional)	Unique 4-byte address of the gateway/router/bridge
Default Route (Optional)	Network address assigned to the external LAN
Default Route Mask (Optional)	Subnet Mask assigned to the external LAN

CONFIG — SNMP GATEWAY INFO

If you enable gateway functionality, it is configured as a manageable SNMP node and it receives trap notification from all AMUs on its network then forwards traps to the IP Address that is configured as a trap recipient. If you disable gateway functionality, the AMU is not a manageable node via SNMP and will not forward trap notifications. Refer to Table 24 on page 78 for SNMP Gateway Information



This procedure shows how to enable gateway functionality. Once the gateway is enabled, it works the same way to disable the gateway functionality.

Step	Action
1	At the Main Menu screen, select CONFIG . Press U to choose SNMP Gateway Info . The following screen appears.
	PB-FlexPlus Rdvanced Management Unit MAIN NETHORK SELECT BLARMS CONFIG S/A DNLD INFD MAIN NETHORK SELECT BLARMS CONFIG S/A DNLD INFD Shelf Options IP Info IP Info SNUP Community Info SNUP Community Info Rassword Rainm Types Barm Types Service Loss Alarm Types Environmental Alarm Setup Environmental Alarm Types Date and Time Date and Time Set Eactory Defaults Set Eactory Defaults 14:00:20

CONFIG — SNMP GATEWAY INFO

CONFIG — SNMP GATEWAY INFO (Continued)

Step	Action	
2	Press ENTER. The following screen appears.	
	To enable gateway functionality, press ENTER.	
	PG-FlexPlus Advanced Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/H DNLD INFO SNMP Gateway Info	
	Gateway Functionality is DISABLED. ENABLE GATEWAY FUNCTIONALITY	
	03/24/2003 Shelf ID: NE0020A7351001 14:18:42	
	To leave gateway disabled, press ESC . The Main Menu screen reappears.	



Step	Action
3	The following actions can be taken:
	• To enable gateway functionality, press Y at the SNMP GATEWAY OPTION WILL BE CHANGED. CONTINUE (Y/N)? prompt.
	PE-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H ONLO INFO SNMP Gateway Info
	Gateway Functionality is DISABLED. ENABLE GATEWAY FUNCTIONALITY
	SNMP GATEWAY OPTION WILL BE CHANGED. CONTINUE (Y/N)?
	03/24/2003 Shelf ID: NE0020A7351001 14:19:06
	PG-FlexPlus Advanced Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARHS <u>CONFLO S/A DNLO INFO</u> SNMP Gateway Info
	Gateway Functionality is DISABLED. ENABLE GATEWRY FUNCTIONALITY
	SNMP GATEWRY OPTION HAS BEEN CHANGED.
	03/24/2003 Shelf ID: NE0020A7351001 14:19:26
	 To leave gateway disabled, press N.
4	Press Esc . The Main Menu screen reappears.

Gateway	Description	Default
ENABLE	Configured as a manageable SNMP node and receives trap notification from all AMUs on its network then forwards traps to the IP Address that is configured as a trap recipient	DISABLE
DISABLE	AMU is not a manageable node via SNMP and will not forward trap notifications	

CONFIG — SNMP COMMUNITY INFO

The SNMP information screen allows you to change the Community Access Privileges. Once the changes are made, they will be applied in the Multishelf SNMP Communities. The AMU-912 community strings must match the Element Manager. Refer to Table 25 on page 80 for SNMP Community Information.

CONFIG — SNMP COMMUNITY INFO

Step	Action	
1	At the Main Menu screen, select CONFIG . Press J to choose SNMP Community Info . The following screen appears.	
	PG-FI exPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG SAVE NULD INFO Shelf Options IP Info Shelf Options IP Info Shelf Options IP Info SHMP Bateway Info Password IP Info Shelf Options IP Info SHMP Consumity Info Password IP Info IP Info IP Info Saverd IP Info Saverd IP Info IP Info Saverd IP Info Saverd IP Info Password IP Info Saverd IP Info Saverd IP Info Saverd IP Info Password IP Info Password IP Info Saverd IP Info Password IP Info Saverd IP Info Password IP Info Saverd IP Info Saverd IP Info Saverd IP Info Saverd IP Info Saverd IP Info IP Info IP Info If Info IP Info IP Info IP Info If Info IP Info IP I	
2	Press ENTER. The following screen appears. To change a field value, press ↓ or ↑ to move to the correct option. Type the desired values.	
	MAIN NETHORK SELECT BLARMS CONFIG S74 ONLO INFO EDIT SNMP Info INFO SNMP Info EDIT SNMP COMMUNITIES EDIT Info READ-ONLY public Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info Info <	
3	Press Esc . The Main Menu screen reappears.	

Communities	Description	Default
Read-Only	SNMP community string for read-only privileges	adcpublic
Read/Write	SNMP community string for read/write privileges	adcprivate

Table 25. SNMP Community Information

CONFIG — Password

This screen allows you to change the Password for security reasons. Refer to Table 21 on page 64 for valid values.

CONFIG — Password

Step	Action
1	At the Main Menu screen, select CONFIG . Press J to choose Password . The following screen appears.
	PE-FlexPlus Rdvanced Management Unit MAIN NETHORK SELECT BLARKS CONFIG S/H DND INFO Shelf Options IP Info IP Info IP Info IP Info IP Info SNMP Bateway Info SNMP Community Info SNMP Community Info Reserved Reserved Reserved Alarm Types Service Loss Alarm Types Environmental Alarms Setup Environmental Alarm Types Date and Time Date and Time Set Eactory Defaults Set Eactory Defaults 14:22:35
2	Press ENTER. The following screen appears.
	PG=FlexPlus Management Unit DMRIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Password NDTE!! Passwords must be 6 to 10 characters in length. Embedded spaces are not allowed in passwords. Passwords are case insensitive and must contain at least 1 alpha character (i.e. 'A', 'Z'), 1 numeric character (i.e. '1', '9'), and 1 special character (i.e. \$', '#'). Enter Old Password And Press Return: ************************************

CONFIG — Password (Continued)

Step	Action			
3	Enter the current (old) <i>Password</i> (System Default is password#1). For security reasons, the system echoes the password with *. Press ENTER . The following screen appears.			
	PG=FlexPlos Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO NOTE!! Passwords must be 6 to 10 characters in length. Embedded spaces are not allowed in passwords. Passwords are case insensitive and must contain at least 1 alpha character (i.e. 'A', 'Z'), 1 numeric character (i.e. '1', '3'), and 1 special character (i.e. \$', '#'). Enter Old Password And Press Return: Enter New Password And Press Return: Enter New Password And Press Return: Enter 10: NE002007351002 03:34:08			
4	Enter the new Password. Press ENTER. The following screen appears.			
	PG-FlexPlus Hanage ent Unit CONFIG MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFO Password NDTE!! Passwords must be 6 to 10 characters in length. Embedded spaces are not allowed in passwords. Passwords are case insensitive and must contain at least 1 alpha character (i.e. A'. '2'). 1 numeric character (i.e. '1'. '3'). and 1 special character (i.e. '\$'.'#'). Enter DId Password And Press Return: Enter New Password And Press Return: Enternet Enter Password Again And Press Return: Enternet Enter Password Again And Press Return: Enternet Bitter Password Again And Press Return: Enternet Enter Password Again And Press Return: Enternet Bitter Password Again And Press Return: Enternet Enter Password Again And Press Return: Enternet			

CONFIG — Password (Continued)

Step	Action			
5	Enter the new Password again. Press ENTER. The following screen appears.			
	P6-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG</u> S/H <u>DNLD</u> <u>INFO</u> Password			
	NOTE!! Passwords must be 6 to 10 characters in length. Embedded spaces are not allowed in passwords. Passwords are case insensitive and must contain at least 1 alpha character (i.e. 'A', 'Z'). 1 numeric character (i.e. '1', '3'), and 1 special character (i.e. '\$', '#').			
	Enter Old Password And Press Return:			
	Enter New Password And Press Return:			
	Enter Password Again And Press Return:			
	The Password will be permanently changed. Continue (Y/N)?			
	09/26/2002 Shelf ID: NE0020A7351002 03:35:02			
6	The following actions can be taken:			
	a. From The Password will be permanently changed. Continue (Y/N)? prompt, the following actions can be taken:			
	 To accept the new password, press Y. 			
	P6-FlexPlus Manage∎ent Unit MAIN NETWORK SELECT ALARMS CONFIG S/W DNLD INFO Password			
	NOTE!! Passwords must be 6 to 10 characters in length. Embedded spaces are not allowed in passwords. Passwords are case insensitive and must contain at least 1 alpha character (i.e. 'A', Z'), 1 numeric character (i.e. '1', '3'), and 1 special character (i.e. '\$','#').			
	Enter Old Password And Press Return:			
	Enter New Password And Press Return:			
	Enter Password Again And Press Return:			
	Password has been permanently changed. Hit <cr> to resume screens.</cr>			
	09/26/2002 Shelf ID: NE0020A7351002 03:35:24			
	 To retain the existing password, press N. 			
7	Press Esc. The Main Menu screen reappears.			

CONFIG — Alarm Types

The alarm types screen allows provisioning of AMU-912 alarm types. Table 27 on page 87 shows the alarm fields, values, descriptions and default settings. Table 26 on page 86 provides a description of the Alarm types reported.

CONFIG — Alarm Types

Step	Action			
1	At the Main Menu screen, select CONFIG . Press J to choose Alarm Types . The following screen appears.			
	P6-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARKS CONFLE S/A DNLD JNFD Shelf Options IP Info Shelf Options IP Info Shelf Options IP Info SNMP Bateway Info SNMP Community Info Passuord Riara Types Service Loss Alarm Types Service Loss Alarm Types Environmental Alarm Types Date and Time Date Set Factory Defaults 82/24/2003 Shelf ID: NE002067351001 14:23:16			
2	Press ENTER . The following screen appears.			
	09/26/2002 Shelf ID: NE002007351002 03:37:42			

Step	Action				
3	The following actions can be taken:				
	a. To change the field value, press SPACEBAR to toggle to the desired value, or press I or 1 to move to the next option.				
	b. To save the alarm type changes, select the ACCEPT ALARM TYPE CHANGES button, then press ENTER. From the AMU ALARM TYPE CHANGES WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:				
	 To save the alarm type changes, press Y. All current values are set to desired values. 				
	<u>P6-FiexPlus</u> Hanage∎ent Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS CONFIG S/H DNLD INFO Rlar∎ Types				
	AMU ALARMS TYPE Power A Missing (MISPWRA): MJ (NA. NR, MN. MJ. CR) Power B Missing (MISPWRB): MJ (NA. NR, MN. MJ. CR) EEPROM Failure (BKUPMEMP): MM (NA. NR, MN, MJ. CR) Invalid MAC Address (INUMAC): MN (NA. NR, MN, MJ. CR) Duplicate MAC Address (DUPMAC): MN (NA. NR, MN, MJ. CR)				
	[NA = Not Alarmed, NR = Not Reported, MN = Minor, MJ = Major, CR = Critical]				
	ACCEPT ALARM TYPE CHANGES				
	AMU ALARM TYPES WILL BE CHANGED. CONTINUE (Y/N)? ■				
	09/26/2002 Shelf ID: NE0020A7351002 03:40:00				
	PG-FlexPlus Manage∎ent Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG</u> S/H <u>DNLO INFO</u> Alar∎ Types				
	AMU ALARMS TYPE Power A Missing (MISPWRA): MJ (NA, NR, MN, MJ, CR) Power B Missing (MISPWRB): MJ (NA, NR, MN, MJ, CR) EEPROM Failure (BKUPMEMP): MN (NA, NR, MN, MJ, CR) Invalid MAC Address (INUMAC): MN (NA, NR, MN, MJ, CR) Duplicate MAC Address (DUPMAC): MN (NA, NR, MN, MJ, CR)				
	[NA = Not Alarmed, NR = Not Reported, MN = Minor, MJ = Major, CR = Critical]				
	ACCEPT ALARH TYPE CHANGES				
	AMU ALARM SETTINGS HAVE BEEN CHANGED.				
	09/26/2002 Shelf ID: NE0020A7351002 03:40:35				
	 To retain the existing alarm types, press N. 				
4	Press Esc. The Main Menu screen reappears.				

CONFIG — Alarm Types (Continued)

Settings	Alarm LED Lit	Main Shelf Summary	History Updated	SNMP Trap
CR – Critical	Yes	Yes	Yes	Yes
MJ – Major	Yes	Yes	Yes	Yes
MN – Minor	Yes	Yes	Yes	Yes
NA – Not Alarmed	No	No	Yes	Yes
NR – Not Reported	No	No	No	No

Table 26. Alarm Types Reported

Alarm	Value	Description	Default
Power A Missing	CR, MJ, MN, NA, NR	AMU-912 has detected missing "A" -48 V battery	MJ
Power B Missing	CR, MJ, MN, NA, NR	AMU-912 has detected missing "B" -48 V battery	MJ
EEPROM Failure	CR, MJ, MN, NA, NR	Non-volatile database is corrupt	MN
Invalid MAC Address	CR, MJ, MN, NA, NR	AMU-912 has an invalid MAC address	MN
Duplicate MAC Address	CR, MJ, MN, NA, NR	AMU-912 has the same MAC address as another AMU-912 connected to the 10BASE-2 backplane network	MN

Table 27. Alarm Types

CONFIG — Service Loss Alarm Types

The service loss alarm types screen allows service alarm types to be provisioned. Table 28 on page 90 shows the service loss alarm fields, values, descriptions and default settings. Table 26 on page 86 provides a description of the alarm types reported.

CONFIG — Service Loss Alarm Types

Step	Action			
1	At the Main Menu screen, select CONFIG . Press J to choose Service Loss Alarm Types . The following screen appears.			
	PG-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLO INFO Shelf Options IP Info SHMP Gateway Info SHMP Community Info Password Alarm Types Service Loss Alarm Types Environmental Alarm Setup Environmental Alarm Types Date and Time Set Factory Defaults 14:24:83			
2	Press ENTER. The following screen appears.			
	PG-FlexPlus Management Unit MAIN <u>N</u> ETWORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLD INFO</u> Service Loss Alarm Types			
	NOTE: Provision the even numbered slot for dual slotted cards.			
	TYPE TYPE COLU 1 Service Loss : MJ COLU 3 Service Loss : MJ COLU 4 Service Loss : MJ COLU 5 Service Loss : MJ COLU 7 Service Loss : MJ COLU 7 Service Loss : MJ COLU 8 Service Loss : MJ COLU 9 Service Loss : MJ COLU 10 Service Loss : MJ COLU 11 Service Loss : MJ COLU 13 Service Loss : MJ COLU 15 Service Loss : MJ COLU 15 Service Loss : MJ COLU 16 Service Loss : MJ <td colspan<="" th=""></td>			
	09/26/2002 Shelf ID: NE0020A7351002 03:42:11			

Step	Action			
3	The following actions can be taken:			
	a. To change the field value, press SPACEBAR to toggle to the desired value, or press U or T to move to the next option.			
	b. To save the service loss alarm type changes, select the ACCEPT SERVICE LOSS ALARM TYPE CHANGES button, then press ENTER. From the SERVICE LOSS ALARM TYPE CHANGES WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:			
	 To save the service loss alarm type changes, press Y. All current values are set to desired values. 			
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>SELECT ALARMS</u> CONFIG S/H DNLD INFO Service Loss Alarm Types			
	NOTE: Provision the even numbered slot for dual slotted cards.			
	TYPE TYPE COLU 1 Service Loss : MJ COLU 2 Service Loss : MJ COLU 3 Service Loss : MJ COLU 4 Service Loss : MJ COLU 5 Service Loss : MJ COLU 6 Service Loss : MJ COLU 7 Service Loss : MJ COLU 8 Service Loss : MJ COLU 9 Service Loss : MJ COLU 10 Service Loss : MJ COLU 9 Service Loss : MJ COLU 10 Service Loss : MJ COLU 11 Service Loss : MJ COLU 12 Service Loss : MJ COLU 13 Service Loss : MJ COLU 14 Service Loss : MJ COLU 15 Service Loss : MJ COLU 16 Service Loss : MJ			
	[NA = Not Alarmed, NR = Not Reported, MN = Minor, MJ = Major, CR = Critical]			
	ACCEPT SERVICE LOSS ALARM TYPE CHANGES			
	SERVICE LOSS ALARM TYPES WILL BE CHANGED. CONTINUE (Y/N)? ■			
	09/26/2002 Shelf 1D: NE0020A7351002 03:43:47			
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLO INFO</u> Service Loss Alarm Types			
	NOTE: Provision the even numbered slot for dual slotted cards.			
	IPEIPECDLU 1 Service Loss :MJCOLU 2 Service Loss :MJCDLU 3 Service Loss :MJCOLU 4 Service Loss :MJCDLU 5 Service Loss :MJCOLU 6 Service Loss :MJCDLU 7 Service Loss :MJCOLU 8 Service Loss :MJCDLU 9 Service Loss :MJCOLU 10 Service Loss :MJCDLU 9 Service Loss :MJCOLU 10 Service Loss :MJCDLU 11 Service Loss :MJCOLU 12 Service Loss :MJCDLU 13 Service Loss :MJCOLU 14 Service Loss :MJCDLU 15 Service Loss :MJCOLU 16 Service Loss :MJCDLU 15 Service Loss :MJCOLU 16 Service Loss :MJ			
	[NA = Not Alarmed, NR = Not Reported, MN = Minor, MJ = Major, CR = Critical]			
	ACCEPT SERVICE LOSS ALARM TYPE CHANGES			
	SERVICE LUSS HEHRM SETTINGS HAVE BEEN CHANGED.			
	09/26/2002 Shelf ID: NE0020A7351002 03:44:12			
	 To retain the existing service loss alarm types, press N. 			
4	Press Esc. The Main Menu screen reappears.			

CONFIG — Service Loss Alarm Types (Continued)

Alarms	Value	Description	Default
Service Loss COLU n (where $n = 1 - 16$)	CR, MJ, MN, NA, NR	Service to an RT serviced by a COLU has been lost	MJ

Table 28. Service Loss Alarm Types

CONFIG — Environmental Alarms Setup

This screen allows TR-08 data link alarm types to be provisioned for each environmental alarm. Table 29 on page 93 shows the environmental alarm setup fields, values, descriptions and default settings.

CONFIG — Environmental Alarms Setup



Step	Action			
3	The following actions can be taken:			
	a. To change the field value, press SPACEBAR to toggle to the desired value, or press I or to move to the next option.			
	b. To save the environmental alarm type changes, select the ACCEPT ENVIRONMENTAL ALARM TYPE CHANGES button, then press ENTER. From the ENVIRONMENTAL ALARM TYPE CHANGES WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:			
	• To save the environmental alarm type changes, press Y . All current values are set to desired values.			
	PG-FlexPlus Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/H DNLD INFO Environmental Alarms Setup			
	<u>ENVIRONMENTAL ALARMS SETUP</u> <u>TR-08 DATA LINK ALARM</u> Environmental Alarm 1 (ENV1): <u>SYSI-PHRMISC</u> Environmental Alarm 2 (ENV2): <u>SYS2-PHRMISC</u> Environmental Alarm 3 (ENV3): <u>COM-MN</u> Environmental Alarm 4 (ENV4): <u>COM-MJ</u>			
	ACCEPT ENVIRONMENTAL ALARM SETUP CHANGES			
	ENVIRUNMENTAL ALARM SETUP WILL BE CHANGED. CONTINUE (Y/N)?			
	PG-FlexPlus Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/W DNLD INFO Environmental Alarms Setup			
	ENVIRONMENTAL ALARMS SETUP TR-08 DATA LINK ALARM Environmental Alarm 1 (ENVI): <u>SYS1-PHRMISC</u> Environmental Alarm 2 (ENV2): <u>SYS2-PHRMISC</u> Environmental Alarm 3 (ENV3): <u>COM-MN</u> Environmental Alarm 4 (ENV4): <u>COM-MJ</u>			
	ACCEPT ENVIRONMENTAL ALARM SETUP CHANGES			
	ENVIRONMENTAL ALARM SETTINGS HAVE BEEN CHANGED.			
	09/26/2002 Shelf ID: NE0020A7351002 03:59:27			
	 To retain the existing environmental alarm types, press N. 			
4	Press Esc. The Main Menu screen reappears.			

CONFIG — Environmental Alarms Setup (Continued)

Each environmental alarm can be sent via specific bit locations in the datalink. Refer to Table 29 for a list of possible alarm bit values. Refer to Table 30 for alarm defaults.

Value	Description		
NOT REPORTED	Not reported		
SYS1-PWRMISC	Reported via the system 1 PWR/MISC bit		
SYS1-MN	Reported via the system 1 MN bit		
SYS1-MJ	Reported via the system 1 MJ bit		
SYS2-PWRMISC*	Reported via the system 2 PWR/MISC bit		
SYS2-MN*	Reported via the system 2 MN bit		
SYS2-MJ*	Reported via the system 2 MJ bit		
COM-PWRMISC*	Reported via the system 1 and system 2 PWR/MISC bit		
COM-MN*	Reported via the system 1 and system 2 MN bit		
COM-MJ* Reported via the system 1 and system 2 MJ bit			
* DS1 5 (System 2 SHELF A) must be up and operating in TR-08 mode for these alarms to work correctly.			

Table 29. Environmental Alarm TR-08 Bit Positions

Table 30. Environmental Alarm Defaults

Alarms	Default	
Environmental #1	SYS1-PWRMISC	
Environmental #2	SYS2-PWRMISC*	
Environmental #3	COM-MN	
Environmental #4 COM-MJ		
* Defaults to COM-MN in Field Shelf		

CONFIG — Environmental Alarm Types

The environmental alarm types screen allows the environmental alarm types to be provisioned. Table 31 on page 96 shows the environmental alarm type fields, values, descriptions and default settings. Table 26 on page 86 provides a description of the Alarm types reported.

CONFIG — Environmental Alarm Types

Step	Action				
1	At the Main Menu screen, select CONFIG . Press U to choose Environmental Alarm Types . The following screen appears.				
	PG=FlexPlus Advanced Managerent Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFD IP Info IP Info IP Info IP Info IP Info IP Info SNMP Gateway Info Sword Rlarm Types Service Loss Alarm Types Environmental Alarms Setup Environmental Alarms Setup Environmental Alarms Set Eactory Defaults Im Info Ø3/24/2003 Shelf 10: NE002087351001 14:26:22				
2	Press ENTER. The following screen appears.				
	PG-FlexPlus Management Unit MAIN <u>N</u> ETWORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLD INFO Environmental Alarm Types</u>				
	ENUIRONMENTAL ALARMS Environmental Alarm 1 (ENU1): <u>MN</u> (NA, NR, MN, MJ, CR) Environmental Alarm 2 (ENU2): <u>MN</u> (NA, NR, MN, MJ, CR) Environmental Alarm 3 (ENU3): <u>MN</u> (NA, NR, MN, MJ, CR) Environmental Alarm 4 (ENU4): <u>MN</u> (NA, NR, MN, MJ, CR) Environmental Alarm 4 (ENU4): <u>MN</u> (NA, NR, MN, MJ, CR) [NA = Not Alarmed, NR = Not Reported. MN = Minor, MJ = Major, CR = Critical]				
	ACCEPT ENVIRONMENTAL ALARM TYPE CHANGES				
	09/26/2002 Shelf ID: NE0020A7351002 04:01:53				

Step	Action					
3	The following actions can be taken:					
	a. To change the field value, press SPACEBAR to toggle to the desired value, or press I or 1 to move to the next option.					
	b. To save the service loss alarm type changes, select the ACCEPT ENVIRONMENTAL ALARM TYPE CHANGES button, then press ENTER. From the ENVIRONMENTAL ALARM TYPE CHANGES WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken:					
	• To save the service loss alarm type changes, press Y. All current values are set to desired values.					
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLD INFO</u> Environmental Alarm Types					
	ENUIRONMENTAL ALARMS Environmental Alarm 1 (ENUI): <u>MM</u> (NA. NR, MN. MJ. CR) Environmental Alarm 2 (ENU2): <u>MN</u> (NA. NR, MN. MJ. CR) Environmental Alarm 3 (ENU3): <u>MN</u> (NA. NR, MN. MJ. CR) Environmental Alarm 4 (ENU4): <u>MN</u> (NR, NR, MN, MJ. CR)					
	[NA = Not Alarmed, NR = Not Reported. MN = Minor. MJ = Major. CR = Critical]					
	ACCEPT ENVIRONMENTAL ALARM TYPE CHANGES					
	ENVIRONMENTAL ALARM TYPES WILL BE CHANGED. CONTINUE (Y/N)? ■					
	09/26/2002 Shelf ID: NE0020A7351002 04:02:17					
	MAIN <u>N</u> ETHORK <u>SELECT</u> <u>A</u> LARMS <u>CONFIG</u> S/H <u>DNLD</u> <u>INFO</u> Environmental Alarm Types					
	ENUIRONMENTAL ALARMS Environmental Alarm 1 (ENU1): <u>MN</u> (NA. NR, MN. MJ. CR) Environmental Alarm 2 (ENU2): <u>MN</u> (NA. NR, MN. MJ. CR) Environmental Alarm 3 (ENU3): <u>MN</u> (NA. NR, MN. MJ. CR) Environmental Alarm 4 (ENU4): <u>MN</u> (NR, NR, MN, MJ. CR)					
	[NA = Not Alarmed, NR = Not Reported. MN = Minor. MJ = Major. CR = Critical]					
	ACCEPT ENVIRONMENTAL ALARM TYPE CHANGES					
	ENVIRONMENTAL ALARM TYPES HAVE BEEN CHANGED.					
	09/26/2002 Shelf ID: NE0020A7351002 04:02:46					
	 To retain the existing environmental alarm types, press N. 					
4	Press Esc. The Main Menu screen reappears.					

CONFIG — Environmental Alarm Types (Continued)

	· · · · · · · · · · · · · · · · · · ·				
Alarms	Value	Description	Default		
Environmental Alarm <i>n</i> (where <i>n</i> = 1 – 4)	CR, MJ, MN, NA, NR	Severity of Environmental Alarm that is active	MN		

Table 31. Environmental Alarm Types
CONFIG — Date and Time

This screen allows you to set the system date and time. Refer to Table 21 on page 64 for valid values.

CONFIG — Date and Time

Step	Action			
1	At the Main Menu screen, select CONFIG . Press U to choose Date and Time . The following screen appears.			
	PE-FlexPlus Rdvanced Managerent Unit MAIN NETHORK SELECT BLARMS CONFIG S/H DALD INFO MAIN NETHORK SELECT BLARMS CONFIG S/H DALD INFO Shelf Date Advanced Managerent Unit Info Info Info SNMP Gateway Info SNMP Gateway Info SNMP Community Info SNMP Gateway Info Baseword Alarm Types Service Loss Alarm Types Service Loss Alarm Setup Environmental Alarm Types Date and find Set Factory Defaults Set Factory Defaults 03/24/2803 Shelf ID: NE002007351001 14:27:28			
2	Press ENTER. The following screen appears.			
	Day: 26			
	Year: <u>2002</u>			
	Hour: 04			
	Minute: <u>04</u>			
	ACCEPT DATE & TIME BACK TO MAIN MENU			
	09/26/2002 Shelf ID: NE002007351002 04:04:10			
3	Press J and ↑ to scroll through the list of parameters to change. a. To change the Month, press J to reach the Month field. Press the SPACEBAR until you reach the appropriate month.			
	be changed. Then type the appropriate numbers on the keypad for each field.			

CONFIG — Date and Time (Continued)

Step	Action			
4	Once all appropriate fields are completed, the following actions can be taken:			
	a. To accept the date and time, select the ACCEPT DATE & TIME button, then press ENTER.			
	b. To accept the time only, select the ACCEPT TIME ONLY button, then press ENTER.			
	c. To go back to the Main Menu, select the BACK TO MAIN SCREEN button, then press ENTER.			
	d. To accept the date only, select the ACCEPT DATE ONLY button, then press ENTER .			
5	Press ESC . The Main Menu screen reappears.			

CONFIG — Set Factory Defaults

This screen resets the configuration data back to the original factory default setting.

CONFIG — Set Factory Defaults

Step	Action				
1	the Main Menu screen, select CONFIG . Press U to choose Set Factory Defaults . The following creen appears.				
	PG-FlexPlus Advanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Shelf Options IP Info Shelf Options IP Info Shelf Options IP Info SNMP Bateway Info SNMP Community Info Passuord Alarm Types Service Loss Alarm Types Service Loss Alarm Types Date and Time Date and Time Set Factory Defaults 83/24/2003 Shelf ID: NERBER07251001 14-28:22				
2	Press ENTER. The following screen appears.				
	PG-FlexPlus Hanagenent Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS <u>CONFIG S/H DNLD INFO</u> Set <u>Factory Defaults</u>				
	CONFIGURATION DATA WILL BE SET TO FACTORY DEFAULTS. CONTINUE (Y/N)? ∎				
	09/26/2002 Shelf ID: NE002087351002 03:57:26				

CONFIG — Set Factor	y Defaults	(Continued)
---------------------	------------	-------------

Step	Action		
3	The following actions can be taken:		
	a. To reset the system options back to the original factor default settings, press ENTER. From the CONFIGURATION DATA WILL BE SET TO FACTORY DEFAULTS (THIS MAY BE SERVICE AFFECTING!) CONTINUE (Y/N)? prompt, the following actions can be taken:		
	 To save the Factory Default changes, press Y. The following events occur: 		
	 – all current values are reset to the factory default values 		
	PG-FlexPlus Management Unit MAIN <u>N</u> ETHORK <u>S</u> ELECT <u>A</u> LARMS CONFIG S/H <u>DNLD</u> INFO Set Eactory Defaults		
	CONFIGURATION DATA HAS BEEN SET TO FACTORY DEFAULTS. PLEASE WAIT FOR THE AMU TO RESET. THE AMU MUST RESET FOR THE NEW IP SETTINGS TO TAKE EFFECT.		
	B9/26/2002 Shelf 10: NE002087351002 03:51:29 To retain the existing configuration data, press N.		
4	Press Esc . The Main Menu screen reappears.		

SOFTWARE DOWNLOAD

This screen allows you to download new software to the AMU-912, COLU, MUXs and RT cards from the PC. Refer to Table 32 for sub-menu option and description, parameters and valid values.

	MAIN	<u>N</u> etwork	PG <u>s</u> elect	FlexPlus M <u>A</u> LARMS	anageren <u>C</u> ONFIG	t Unit S/H_DNLD Start A	<u>I</u> NFO Down I oad	
ŀ	09/26/2	802		Ghelf ID: N	E0020A73	51002		04:06:01

Table 32. Software Download Option

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
Software Download	Allows you to download new software to the AMU-912, COLU, MUXs and RT cards from the PC	AMU Chosen for Software Download. Please Confirm (Y/N)?	Y or N

S/W DNLD— Start a Download

This screen allows you to download new software to the AMU-912, COLU, MUXs and RT cards from the PC. Refer to Table 9 on page 12 for download status information provided by AMU-912 LEDs.



This procedure covers a serial software download. If you want to download software through file transfer protocol (ftp) or trivial file transfer protocol (ftp – only initiated through an SNMP interface), please follow the onscreens instructions.

CAUTION

Before attempting a software download to an RT, make sure all units are synchronized (the High-bit-rate Digital Subscriber Line (HDSL) status is Normal).

If you are downloading new software to both the COLU and RT, download the new software to the RT first. Otherwise, you may not be able to communicate with the RT.

Performing a software download to a COLU, MUX or an RT interrupts service to all the lines served by the unit.

Verify the compatibility of the software before downloading. Release notes supplied with the diskette provides system compatibility information.

S/W DNLD— Start a Download

Step	Action			
1	Connect a PC running a terminal emulator program to the AMU-912 RS-232 craft port. The terminal emulator program must emulate a VT-100 terminal, and support XMODEM program uploads. Downloading to the AMU-912 uses the same settings as the terminal, thus downloads can be done faster if the AMU-912 to PC link is operating at the highest baud rate supported by both devices. If the terminal emulator has the ability to support "relaxed" XMODEM protocol timing, also select this option. At the Main Menu screen, select S/W DNLD . Press U to choose Start A Download . The following screen appears.			
	P6-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/A DNLD INFO Start A Download 1 1 1 1 1 B9/26/2002 Shelf 10: NE0020A7351002 04:06:01			

S/W DNLD— Start a Download (Continued)

Step	Action					
2	Press ENTER. The following screen appears.					
	PG-FlexPlus Management Unit MAIN NETHORK SELECT ALARMS CONFIG S.A. DNLD INFO Start A Download CAUTION: System Units are Out Of Service during software download. Select P6-FlexPlus Unit for Software Download: MUX1 MUX2					
	09/26/2002 Shelf ID: NE002007351002 04:13:18					
	Software download works the same way for the MUXs, RTs, and COLUs. This example shows software download to the AMU-912 card.					
3	To download software to the AMU-912, press \mathbf{Y} at the AMU Chosen For Software Download. Please Confirm (Y/N)? prompt.					
	An RT download may take up to several minutes to prepare for a software download.					
	If you do not want to download software to the AMU-912 card, press N. Then press Esc and the Main Menu reappears.					

S/W DNLD— Start a Download (Continued)

Step	Action			
4	A message is displayed that informs you the system is ready and the applicable steps to follow to continue the software download.			
	System is Ready to Begin Software Download of the AMU. To Perform Download. Use FTP to Transfer the File to the PG-FlexPlus Over the TCP/IP Connection. For More Information, Please Refer to the Software Download Sections of the PG-FlexPlus Documentation.			
5	Instruct the terminal emulator to begin an XMODEM download.			
	The file to be downloaded from the terminal to the AMU-912 has a .DWN extension and a prefix that identifies the card to which it should be downloaded. For example, if a AMU-912 was the target card, the file name would be similar to AMUAPPL.DWN, indicating that AMU-912 Application Code is to be transferred. Most terminal emulators indicate the progress of the download until completion. The AMU-912 provides a visual indication of download activity from the terminal to the AMU-912 by alternately blinking each of the front panel LEDs, except for the PWR LED. Do not interrupt the download process, unplug the system units or the cable connecting the VT-100 terminal to the system unit. Upon completion, the AMU-912 displays a message of success or failure of the download. If the download failed, see Download Retry on page 106 and Table 35 on page 108 for further instructions.			

Step	Action
6	If the download is unsuccessful or the ESC is pressed several times, a message is displayed indicating a failure.
	At the Press Any Key To Continue prompt, press ENTER. The ADC banner is displayed briefly, then the Main Menu is displayed. Repeat this procedure again.

S/W DNLD— Start a Download (Continued)

DOWNLOAD RETRY

If a download failure occurs, the AMU-912 may remain in boot mode. The AMU-912 indicates this by flashing all front panel LEDs with the exception of the PWR LED. An AMU-912 in boot mode is unable to process system alarms.

If you are unable to prepare for the download in a timely fashion (two minutes or less), an error message displays indicating a time-out has occurred.



If the AMU-912 fails to download, you can continue to retry until a successful download is achieved. If a failure occurs on a AMU-912 and no response is received to subsequent download attempts, remove and then reinsert the AMU-912 into the shelf and retry the download. Refer to Table 35 on page 108 for error messages.

SOFTWARE DOWNLOAD WITH MODEM

To perform software downloads of the system software through a modem connection, you may need to make some changes to the modem's configuration settings. The settings at the modem connected to the system unit are slightly different than the settings required at the modem connected to the PC used for the download. The following tables identify the functional characteristics required at each modem.

If you are using a modem that is not Hayes compatible, refer to the modem manufacturer's documentation for command codes required to implement the stated functional characteristics.

Modem Connected to PC

For a modem connected to a PC, use the settings in Table 33.

Item	Functional Characteristic	Hayes Command String
1	Enable Flow Control	AT&F2
2	Disable TX Flow Control	AT&H0
3	Disable RX Flow Control	AT&I0
4	Disable Data Compression	AT&K0
5	Normal Mode (Error Control Disabled)	AT&M0

Table 33. PC Modem

Modem Connected to System

For a modem connected to the system, use the settings in Table 34.

Table 34. System Modem

Item	Functional Characteristic	Hayes Command String
1	Enable Flow Control	AT&F2
2	Disable TX Flow Control	AT&H0
3	Disable RX Flow Control	AT&I0
4	Disable Data Compression	AT&K0
5	Normal Mode (Error Control Disabled)	AT&M0
6	No Command Echo	ATE0
7	Quiet (No Result Codes)	ATQ1

ERROR MESSAGES

Table 35 defines potential download error messages.

Table 35. Error Messages

Message	Description		
Download Failed. Bad X-Modem Data Received.	A number of factors can cause this error to occur, such as a cable pulled during download or user cancellation. Basically, a generic error indicating a failure to complete the download occurred somewhere between the AMU-912 and the terminal emulator.		
Download Failed.	A number of factors can cause this error to occur. Retry downloading.		
General Failure.			
Download Timeout.	The user did not instruct the terminal emulator to begin an upload within two minutes of the AMU-912 indicating that it was ready for the download to begin.		
X-Modem Session Never Started By Craft Terminal.			
Download Failed.	A number of factors can cause this error to occur. Retry downloading.		
Unknown Failure.			
Download Failed.	Displayed in situations where the terminal program began sending data,		
X-Modem Timeout Occurred During Download.	but for some reason the AMU-912 has stopped receiving data. If possible, verify that the terminal emulator is functioning correctly.		
Download Failed.	The file selected for download was the wrong file for the card selected or		
Invalid File For This Card.	the file has been corrupted.		
Download Failed.	The file selected for download was the wrong file for the card selected or		
Invalid Memory Boundaries For File Type.	the file has been corrupted.		
Download Failed.	The file selected for download was the wrong file for the card selected or		
Incorrect Download File Selected. Need To Download Boot Code.	the file has been corrupted.		
Download Failed.	The file selected for download was the wrong file for the card selected or		
Incorrect Download File Selected. Need To Download Application Code.	the file has been corrupted.		
Download Failed.	The user manually stopped the downloading while the downloading		
XMODEM Session Stopped By The User.	session was in process.		

INFORMATION MENU OPTIONS

The Information Menu provides technical information about the system. Refer to Table 36 for sub-menu options and descriptions.

MAIN	<u>N</u> ethork	P6 <u>S</u> elect	-FlexPlus <u>A</u> LARMS	iana <u>ge en t</u> <u>C</u> ONFIG	Unit S/W <u>D</u> NLD	INFO Inventory Help
09/26/20	902		Shelf ID: 1	NE0020A7351	002	04:04:32

Table 36. Information Menu Options

Sub-Menu Options	Sub-Menu Descriptions
Inventory	Displays product identification information, manufacturing data, software versions and the hardware revisions for the AMU-912
Help	Provides information on using the system screens and menus

INFO — Inventory

This screen displays product identification information, manufacturing data, software versions and the hardware revisions for the AMU-912.

Step	Action		
1	At the Main Menu screen, select INFO. Press J to choose Inventory. The following screen appears.		
	PG-FlexPlus Managerent Unit MAIN NETHORK SELECT ALARMS CONFIG S/H INFO Inventory Help Help		
2	Press ENTER The following screen appears		
	Node Littler, the collecting policies PO-FIEXPlue Rdvanced Management Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLD INFD Main NETHORK SELECT ALARMS CONFIG S/H DNLD INFD Model Number : ANU-912 Inventory List Number : 01 CLET : VAC227HLAR Serial Number : 150-2612-01 H/H Part Number : 150-2612-01 H/H Ravision : 08 IEEE MARC Rddress : 002007351001 FPGA Uersion : 59 Boot <s h<="" td=""> Program Type : Boot S/H Program Type : Rpp S/H Version : E2.0.1.8 B3/224/2803 Shelf 10: NE002007351001 14:29:49</s>		
3	Press Esc. The Main Menu screen reappears.		

INFO — Help

This screen provides information on using the system screens and menus.

Step	Action			
1	At the Main Menu screen, select INFO. Press J to choose Help. The following screen appears.			
	PG-FlexPlus Menagerent Unit MAIN NETHORK SELECT ALARMS CONFIG S/H DNLO Inventory Inventory Help Help Help Help Help Help 09/26/2002 Shelf 10: NE002007351002 04:05:16			
2	Press ENTER. The following screen appears.			
	PG-FlexPlus Management Unit MAIN <u>NETHORK SELECT ALARMS CONFIG S7H DNLD INFO</u> Help			
	Menu Operating Instructions:			
	KeypressEffect on MenuEffect on ScreenENTERMoves to submenu or screenConfirms changesLEFT ARROW/CTRL-FMoves LEFT across main menuMoves the cursor LEFTNOVES UP a submenuMoves Steet ecursor RIGHTUP ARROW/CTRL-UMoves UP a submenuMoves the cursor DWNDOWN ARROW/CTRL-UMoves ODWN a submenuMoves the cursor DOWNTABNo effectToggles between columnsSPACENo effectCycles through choicesESCAPEMoves up a menu levelReturns to Main MenuCTRL-RReturns to Main MenuReturns to Main MenuB9/265/2002Shelf 10: NE00200735100204:05:36			
3	Press Esc . The Main Menu screen reappears.			

FAULT ISOLATION AND TROUBLESHOOTING

Table 37 provides fault isolation and troubleshooting procedures for the AMU-912.

LED	State	Probable Cause	Solution
PWR	Off	No input power	 Verify fuses on bay fuse panel
		AMU-912 power fuse blown	 Check input power on the shelf battery terminations
		AMU-912 processor stopped	
			 Remove and re-insert AMU-912
			Replace the AMU-912
	Flashing	One of the two CO battery feeds is not present	 Verify fuses on bay fuse panel
			 Check input power on the shelf battery terminations
			Remove and re-insert AMU-912
			 From the Main Menu (Alarms sub-menu), verify no alarms exist on the AMU-912
			Replace the AMU-912
	On	ОК	
FAULT	On	Problem with the AMU-912	Replace the AMU-912
	Off	ОК	
CRIT	On	Alarm on the shelf	From the Main Menu (Alarms sub-menu),
MJ MN			view the alarms and clear the indicated trouble
	Off	ОК	
ACO	On	ACO function has been activated while an alarm exists on the shelf	LED extinguishes when the alarm is cleared
	Off	ОК	

ACRONYMS

Α

ACO – Alarm Cut-Off **AWG** – American Wire Gauge

С

CD – Carrier Defect
CEV – Controlled Environment Vault
CO – Central Office
COLU – Central Office Line Unit
COT – Central Office Terminal
CR – Critical

D

- DCE Data Carrier Equipment
 DDL Derived Data Link
 DS0 Digital Signal Level 0
 DS1 Digital Signal Level 1
 DSL Digital Subscriber Line
- DSR Data Set Ready
- **DTE** Data Terminal Equipment
- DTR Data Terminal Ready

Е

- **EMS** Element Management System **ES** – Errored Seconds
- **ESD** Electrostatic Discharge

F

FCC – Federal Communications Commission

G

GND-Ground

Η

HDSL – High-bit-rate Digital Subscriber Line

r.

- IDLC Integrated Digital Loop Carrier
- ISDN Integrated Services Digital Network

L

- LAN Local Area Network
- LCF Loop Current Feed
- LCFO Loop Current Feed Open
- **LED** Light Emitting Diode
- LOF Loss of Frame
- LOS Loss of Signal

Μ

MAN – Metropolitan Area Network
MIB – Management Information Base
MJ – Major
MLT – Mechanized Loop Testing
MN – Minor
MSLAN – Multishelf Local Area Network
MUX – Multiplexer

Ν

NA – Not Alarmed
 NEBS – Network Equipment Building System
 NR – Not Reported

Ρ

PGTC – Pair Gain Test Controller **POTS** – Plain Old Telephone Service

R

RD – Receive Data
 RFC854 – Request for Comment 854 TELNET Protocol Standard for TL1
 RINGGRD – Ring Ground
 RMA – Return Material Authorization
 RT – RemoteTerminal

S

SES – Severely Errored Seconds
SHDSL – Symmetric High-bit-rate Digital Subscriber Line
SNMP – Simple Network Management Protocol
SYNC – Synchronization

Т

TD – Transmit Data

U

UAS – Unavailable Seconds

UDLC – Universal Digital Loop Carrier

W

WAN - Wide Area Network

Х

xDU – Doubler Unit

PRODUCT SUPPORT

TECHNICAL SUPPORT

Technical Assistance is available 24 hours a day, 7 days a week by the contacting Customer Service Engineering group at:

Telephone:800.366.3891
The 800 telephone support line is toll-free in the U.S. and Canada.Email:wsd_support@adc.comKnowledge
Base:www.adc.com/Knowledge_Base/index.jsp

Web: www.adc.com

LIMITED WARRANTY

Product warranty is determined by your service agreement. Refer to the ADC Warranty/Software Handbook for additional information, or contact your sales representative or Customer Service for details.

RETURNS

To return equipment to ADC:

- Locate the number of the purchase order under which the equipment was purchased. To obtain a return authorization number, you need to provide the original purchase order number to ADC's Return Material Authorization (RMA) Department.
- 2. Call or write ADC's RMA Department to ask for an RMA number and any additional instructions. Use the telephone number, fax number or email address listed below:
 - Telephone: 800.366.3891
 - Email Address: repair.return@adc.com
- 3. Include the following information, in writing, along with the equipment you are returning:
 - · Company name and address
 - Contact name and telephone number
 - · Shipping address to which ADC should return the repaired equipment
 - Original purchase order number
 - Description of the equipment that includes the model and part number of each unit being returned, as well as the number of units that you are returning.
 - Reason for the return. For example:
 - The equipment needs an ECO/ECN upgrade.
 - The equipment is defective.



If the equipment is defective, please tell us what you observed just before the equipment malfunctioned. Be as detailed in your description as possible.

If there is any other reason for returning the equipment, please let us know so we can determine how best to help you.

4. Pack the equipment in a shipping carton.

5. Write ADC's address and the RMA Number you received from the RMA Department clearly on the outside of the carton.



All shipments are to be returned prepaid. ADC will not accept any collect shipments.

FCC CLASS A COMPLIANCE

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 harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the use will be required to correct the interference at his own expense.

MODIFICATIONS

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by ADC voids the user's warranty.

All wiring external to the product(s) should follow the provisions of the current edition of the National Electrical Code.

World Headquarters:

ADC Telecommunications, Inc. PO Box 1101 Minneapolis, Minnesota USA 55440-1101

For Technical Assistance:

800.366.3891



1298975