
PG-Flex^{Plus}

8 ADSL

Remote Line Unit

Technical Practice



Model	List	CLEI Code
ARL-942	1	VARHVGPG~~

REVISION HISTORY

Revision	Release Date	Revisions Made
01	November 7, 2002	Initial Release
02	January 6, 2003	Updated Product Support Information

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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., <i>Password</i>)
Monospace font	References to screen prompts (e.g., Invalid Password...Try Again:.)

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

INSPECTING YOUR 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 101](#). If you must store the equipment for a prolonged period, store the equipment in its original container.

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OVERVIEW

The PG-Flex^{Plus}™ ARL-942, L1 Asynchronous Transfer Mode (ATM) Remote Line Unit is an integral component of the Edge Access Network System. The ARL-942 is installed in the ARX-965 24-Channel Edge Remote Access Multiplexer (RAM) Remote Terminal Enclosure for Edge RAM applications. The Edge RAM extends Asynchronous Digital Subscriber Line (ADSL) services beyond the normal ADSL range by using Single-pair High-bit-rate Digital Subscriber Line (SHDSL) transport between the Central Office Terminal Shelf (COTS) and the RAM, then provides ADSL drops to the subscriber ([Figure 1 on page 2](#)). POTS splitters are used with the RAM to combine Plain Old Telephone Service (POTS) and ADSL on the same copper pair toward the subscriber.

DESCRIPTION

The Edge Remote Access Multiplexer (RAM) extends ADSL services beyond the normal ADSL range by using SHDSL transport between the COTS and the RAM, then provides ADSL drops to the subscriber (Figure 1). POTS Splitters are used with the RAM to combine POTS and ADSL on the same copper pair toward the subscriber.

Each line-powered ARL-942 RAM module accepts one SHDSL circuit and supports eight ADSL circuits. The RAM is line-powered via the SHDSL pair. Each system COTS supports up to 11 RAMs and can serve up to 256 ADSL subscribers.

ATM data is transported between the COTS and the ATM switch or DSLAM over a DS3 or multiple DS1 circuits. Equipment protection is provided through the ASU-945, which splits the DS3 signal between the two AMX-944 ATM/TDM Multiplexer Units. The AMX-943 ATM/TDM Multiplexer Unit can be used in place of the AMX-944s. When using the AMX-943, the ASU-935 should not be used. DS1's are wired directly to the COT Shelf backplane. Refer to the appropriate technical practice (AMX-944 or AMX-943) for more information.

The SHDSL circuits support ATM data from the ALU-935 Dual SHDSL Line Unit to the ARL-942 Line Unit. Analog POTS circuits are terminated on the ARX-965 and are provided over copper pair or DLC systems from the CO switch and are combined with the ADSL circuits originating from the ARL-942 in the ASU-940 POTS Splitter. The ASU-940 must be installed in the ARX-965 to provide ADSL and POTS services to the subscriber.

The Management Unit (MU) (PMU-712/AMU-912) provides shelf management, performance monitoring, alarm and test interface functions. The AMU-912 supports Simple Network Management Protocol (SNMP); however, the PMU-712 does not support it.

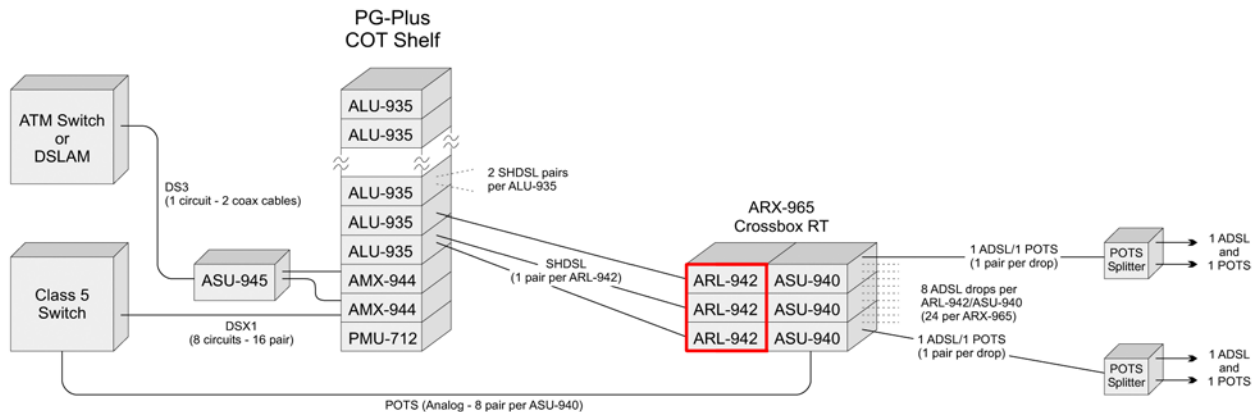


Figure 1. Edge RAM Architecture

Figure 2 shows the ARX-965 RT and the location of the ARL-942s and other cards in the RT Enclosure. The RT supports three ARL-942s, three ASU-940s and a AFU-960 Fan Unit. The AFU-960 is included with the RT and must be installed to ensure adequate cooling of the ARL-942s.

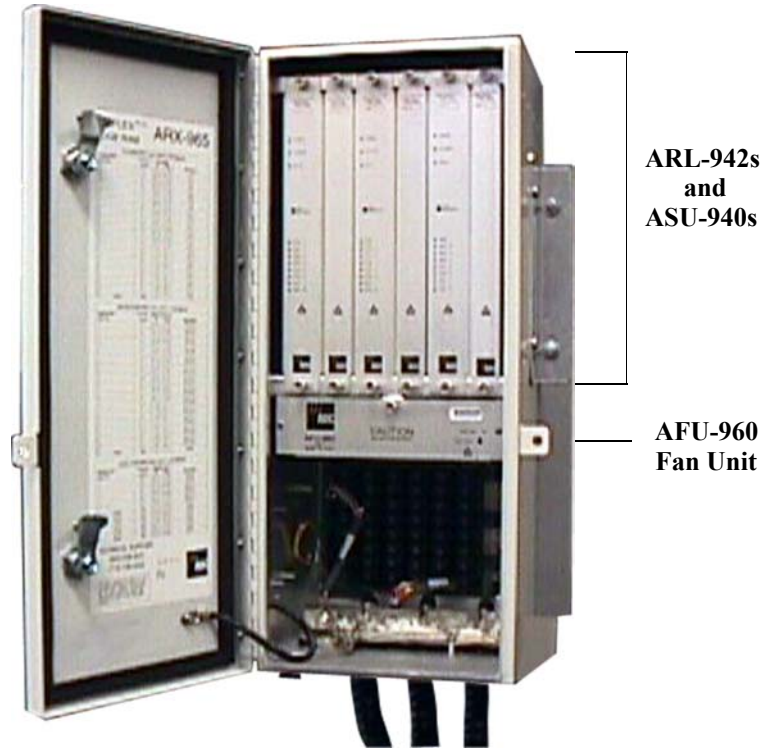


Figure 2. ARX-965 RT Enclosure

SPECIFICATIONS

Table 1 lists the specifications for the ARL-942.

Table 1. Specifications

Category	Item	Value
Electrical	Input Voltage	180 Vdc to 270 Vdc (± 130 Vdc)
	Input Power	Less than 12 W
G.SHDSL Performance	Line Rate	576 Kbps to 2056 Kbps (dependent on length)
	Line Reach	0 Kft to 12.5 Kft
ADSL Performance	Line Rate	32 Kbps to 8160 Kbps
	Line Reach	Up to 13,000 ft
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)
Compliance	NEBS	SR-3580 Level 3
	ESD	Per GR-1089-CORE
	Power Cross and Lightning Surge	Per GR-1089-CORE
	Human Safety	UL-1950 for Restricted Access
	Emissions Radiation and Immunity	GR-1089-CORE for Class A equipment
Physical	Height	10.5 in. (26.7 cm.)
	Width	2.0 in. (5.08 cm.)
	Depth	7.8 in. (19.8 cm.)
	Weight	1.0 lbs. (0.5 kg.)

POWER

Table 2 lists the power metrics of the ARL-942.

Table 2. Power Requirements

Category	Measurement
ARL-942 Input Power	8.2 W (no ADSL active)
	9.5 W (8 ADSL active)
	11 W (8 ADSL active with fan card running)
Power increase from 0 to 8	1.299 W

PERFORMANCE MONITORING AND ALARM HISTORY

An ARL-942 provides extensive real-time, nondisruptive monitoring of SHDSL transmission performance parameters. User selectable threshold settings for many of the performance monitoring measurements can be adjusted in the ARL-942 screen. These settings cause alarms to be activated at the designated setting. ADSL performance is monitored and some threshold settings can also be adjusted. The ART reports the raw ADSL statistics to the ARL-942 which accumulates and displays the information. Monitored parameters include the following:

- SHDSL- Rate, Noise Margin, Insertion Loss, Errored Second (ES), Unavailable Seconds (UAS)
- ADSL - Coding Type, Noise Margin, Rate, Attenuation, Interleave Delay, ES, Severely Errored Seconds (SES), UAS

ALARMS

An ARL-942 generates the listed alarms for fault conditions on the SHDSL transmission facility and at the application interface.

All SHDSL alarms are suppressed when unit is initially installed and powered up. When the SHDSL circuit is synchronized and the ARL-942 and RT margins have cleared, any outstanding alarms that had been suppressed are made active and reported to the Management Unit (based upon their provisioned types).

ADSL alarms are suppressed until the ADSL line synchronizes for the first time.



During alarm suppression, alarms are not reported to the Management Unit for generating user alarms. Only the alarm history is generated for ARL-942 screens that are in alarm.

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 be passed to the management unit for further alarm processing. However, *Current Status* will show ACTIVE. An alarm set to NR will not be reported by the system.

HISTORY

Current cumulative counts of the past 24 hours and historical data in the form of a 24-hour history (in 15-minute increments) and a 7-day history (in 24-hour increments) are available to assist you in identifying problem sources.

- SHDSL Interface: 24-Hour (15-minute intervals) and 7-Day (24-hour intervals) for ES and UAS
- Alarm: Time stamp of first and last occurrence, number of occurrences for all enabled alarms
- ADSL: 15 minute and 3-Day for ES, SES and UAS

FRONT PANEL

Figure 3 shows the ARL-942 front panel and Table 3 on page 8 describes the front panel LEDs.

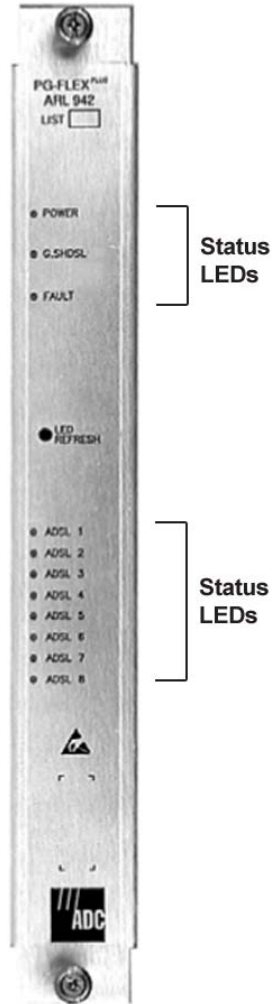


Figure 3. ARL-942 Front Panel

Table 3. ARL-942 Front Panel LEDs

LED	Color	State	Description
PWR	Green	On	ARL-942 is receiving power from the ALU-935
		Off	ARL-942 is not receiving power from the ALU-935
SHDSL	Green	On	SHDSL is in sync between the ARL-942 and the ALU-935
		Flashing (Fast)	SHDSL is in sync between the ARL-942 and the ALU-935, but the margin is below the threshold
		Flashing (Slow)	SHDSL is attempting to sync
		Off	SHDSL does not detect a signal from the ALU-935
FAULT	Red	On	An internal fault has been detected in the ARL-942
		Off	No internal fault has been detected in the ARL-942
ADSL # (# = 1 – 8)	Green	On	ADSL is in sync
		Flashing (Fast)	ADSL is in sync between the ARL-942 and the ALU-935 and the margin is below the threshold
		Flashing (Slow)	ADSL is idle or attempting to sync
		Off	LEDs are in power save mode. Press LED REFRESH to see status.

INSTALLATION AND TEST



Always treat the SHDSL pair as if it were live with high voltage present. Use caution when installing a SHDSL pair because voltages up to 270 Vdc may be present.



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

REQUIRED TOOLS AND TEST EQUIPMENT

No tools are required to install the ARL-942.

Install the ARL-942 from left to right leaving a space between each card for the ASU-940 (Figure 2 on page 3). The RT supports three ARL-942s and three ASU-940s. Refer to the cabling tables provided in the COTS documentation for slot and Telco cabling assignment.

INSTALLATION

Install a ARL-942

Step	Action
1	Loosen the thumbscrews on the front of the ARL-942.
2	Insert the ARL-942 into a vacant slot in the shelf that corresponds to the location of the wiring for the service being activated.
3	Tighten the thumbscrews to hold the card in place.

Table 3 on page 8 assumes the ARL-942 is installed and connected to a working SHDSL circuit originating from an ALU-935. The LED REFRESH button on the ARL-942 must be pressed to view the LED status. The ADSL LEDs automatically extinguish after two minutes.

INITIALIZE AND POWER UP THE ARL-942

After installing the ARL-942, the following events occur:

- All LEDs briefly blink on and then off, with the exception of the PWR LED that remains On.
- SHDSL LED blinks until it is fully synchronized (up to a few minutes), then remains On.
- All ADSL LEDs blink (until sync), then stays On for a few minutes, then extinguishes.
- Fault LED does not come On unless a fault is detected ([Table 22 on page 98](#)).
- Beyond this time, the LED REFRESH button must be pressed to view the ADSL LED status. These LEDs automatically extinguish after two minutes.

ADMINISTRATION

Refer to the proper Management Unit Technical Practice for detailed Administration instructions.

For example:

1. Provision your PC/Laptop running Windows HyperTerminal or PROCOMM, etc. to the following terminal settings:

8 data bits
1 stop bit
no parity
VT-100 emulation
9600 baud

2. Connect the DB-9 cable between the RS-232 port on the front of the Management Unit and the PC/Laptop serial port.
3. Press **ENTER** several times until the Main Menu appears.

NAVIGATIONAL METHODS

Table 4 shows the keys used to navigate through the menus and screens:

Table 4. Navigational Keystrokes

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
→ or CTRL - G	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
TAB	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.

CONFIGURATION, MAINTENANCE, AND TESTING

The following sections describe how to navigate the VT-100 screens to configure, check the status of, and maintain the ARL-942 system.

MENUS AND DISPLAY STRUCTURE

Figure 4 shows the menu structure of the terminal management system.

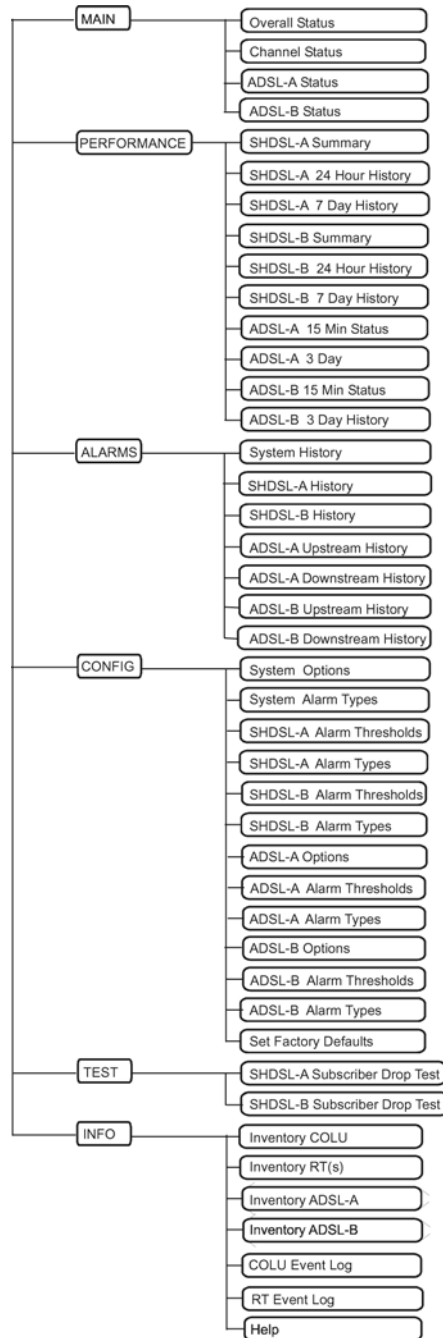


Figure 4. Terminal Menu and Display Structure

Log On The ARL-942 Through the Management Unit

This screen logs the user into the ARL-942 by going through the Management Unit (PMU-712/AMU-912). The example below shows how to log into the PMU-712.




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.

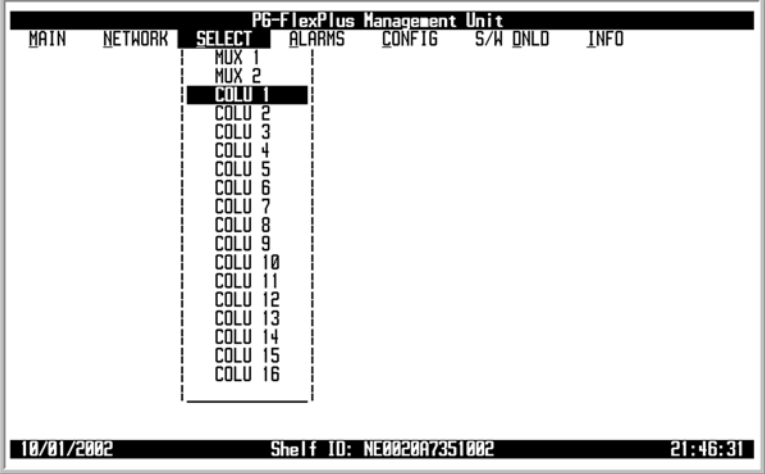

Log On The ARL-942 Through the Management Unit

Step	Action
1	<p>After connecting a VT-100 terminal to the PMU-712, press SPACEBAR several times to start the autobaud feature. The Login Password screen appears.</p> <div data-bbox="479 768 1239 1241" style="border: 1px solid gray; padding: 20px; text-align: center;"> </div>
2	<p>If an invalid <i>Password</i> is entered, the Login screen is redisplayed with the message <i>Invalid Password... Try Again:.</i></p> <div data-bbox="479 1360 1239 1833" style="border: 1px solid gray; padding: 20px; text-align: center;"> </div>

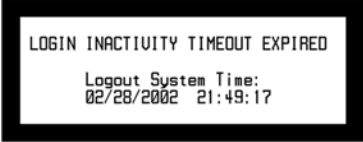
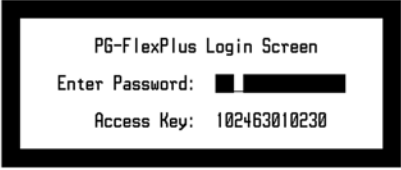
Log On The ARL-942 Through the Management Unit (Continued)

Step	Action
3	<p>Type the <i>Password</i>, then press ENTER. After a successful login, the system banner screen appears for a few seconds.</p> <div data-bbox="479 430 1239 905" style="border: 1px solid black; text-align: center; padding: 50px;"></div> <p>Then, the PMU-712 Main Menu screen appears.</p> <div data-bbox="479 978 1239 1453" style="border: 1px solid black; padding: 5px;"><pre>PG-FlexPlus Management Unit MAIN NETWORK SELECT ALARMS CONFIG S/W DNLD INFO 05/28/2002 Shelf ID: FIELD-SHELF 08:21:53</pre></div>

Log On The ARL-942 Through the Management Unit (Continued)

Step	Action
4	<p>At the Main Menu, choose SELECT. Press ↓ to choose appropriate <i>COLU#</i> (e.g., COLU 1).</p>  <p>The ARL-942 Main Menu appears.</p> 



Log On The ARL-942 Through the Management Unit (Continued)

Step	Action
5	<p>After 15 minutes of inactivity, the following menu appears.</p> <div data-bbox="479 401 1239 856" style="border: 1px solid gray; padding: 20px; text-align: center;"><p>LOGIN INACTIVITY TIMEOUT EXPIRED Logout System Time: 02/28/2002 21:49:17</p></div> <p>Press Esc. The Login screen reappears.</p> <div data-bbox="479 930 1239 1402" style="border: 1px solid gray; padding: 20px; text-align: center;"><p>PG-FlexPlus Login Screen Enter Password: <input type="password"/> Access Key: 102463010230</p></div> <p>Repeat Step 1, Step 3 and Step 4 to log in again.</p>

Logout of the ARL-942 through the Management Unit

This screen logs the user out of the ARL-942 by going through the PMU-712/AMU-912. The example below shows how to log out of the PMU-712.

Logout of the ARL-942 through the Management Unit

Step	Action
1	<p>CAUTION <i>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.</i></p> <p>At the ARL-942 Main Menu screen, press ESC to return to the PMU-712 Main Menu. The following screen appears.</p> 
2	<p>At the Main Menu screen, select MAIN. Press ↓ to choose Logout. The following screen appears.</p> 

Logout of the ARL-942 through the Management Unit (Continued)

Step	Action
3	<p>To logout of the system, press Y.</p> <div data-bbox="477 401 1239 873"></div> <p>The Login screen appears.</p> <div data-bbox="477 957 1239 1430"></div>

MAIN MENU OPTION

The Main Menu provides access to a summary of the overall status of the unit and a view of individual unit status. Refer to [Table 5](#) for sub-menu options and descriptions.



Table 5. Main Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
Overall Status (See Table 6 on page 21 for Overall Status)	Displays the operational status of the A and B SHDSL links		
Channel Status (See Table 7 on page 23 for Channel Status)	Displays the operational status of the SHDSL links and ADSL/POTS drops		
ADSL-A Status (See Table 8 on page 26 for ADSL Status)	Displays the operational status conditions of the ADSL-A connections for the Edge IAD		
ADSL-B Status (See Table 8 on page 26 for ADSL Status)	Displays the operational status conditions of the ADSL-B connections of the selected ADSL facility for the Edge RAM		

MAIN — Overall Status

This screen displays the operational status of the A and B SHDSL links. Refer to [Table 6 on page 21](#) for Overall Status information.

MAIN — Overall Status


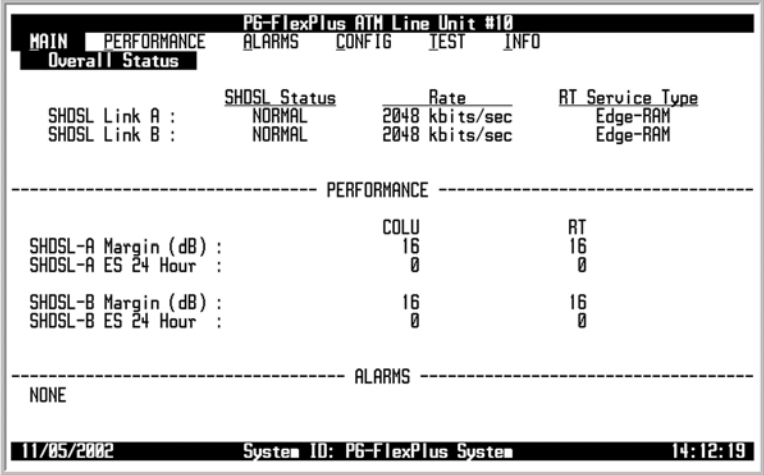
Step	Action
1	<p>At the Main Menu screen, select MAIN. Press ↓ to choose Overall Status. The following screen appears.</p> 
2	<p>Press ENTER. The following screen appears.</p> 
3	<p>Press ESC. The Main Menu screen reappears.</p>

Table 6. Overall Status

State	Description
SHDSL Status	
FRAMER SYNC	Part of the SHDSL startup process; chipset is working to sync the SHDSL framer
HANDSHAKE	Part of the SHDSL startup process; chipset is sending and receiving SHDSL capabilities before initiating the rate negotiation
LINK DOWN	RT is not powered and not in sync
NORMAL	Normal operation where the SHDSL link is synchronized between the ARL-942 and the CO
RATE ADAP	Part of the SHDSL startup process; chipset is optimizing performance for maximum data rate
STABILIZING	Part of the SHDSL startup process; remote end is still performing framer sync
STARTUP	Part of the SHDSL startup process; SHDSL link is acquiring synchronization
TRAINING	Part of the SHDSL startup process; chipset is analyzing communication abilities
Performance	
SHDSL-A ES (24 Hr.)	Count of Errored Seconds occurring on SHDSL Link A
SHDSL-A Margin (dB)	Current margin value on SHDLS Link A
SHDSL-B ES (24 Hr.)	Count of Errored Seconds occurring on SHDSL Link B
SHDSL-B Margin (dB)	Current margin value on SHDLS Link B
Alarms	
ADSL-A	ADSL alarm is active on port (1 through 8) of RT-A
ADSL-B	ADSL alarm is active on port (1 through 8) of RT-B
SHDSL-A	Summary of types of Active alarms of RT-A
SHDSL-B	Summary of types of Active alarms of RT-B
System	Summary of types of Active alarms. At least one system is active.

MAIN — Channel Status

This screen displays the operational status of the SHDSL links and ADSL/POTS drops. Refer to [Table 7 on page 23](#) for Channel Status information.

MAIN — Channel Status


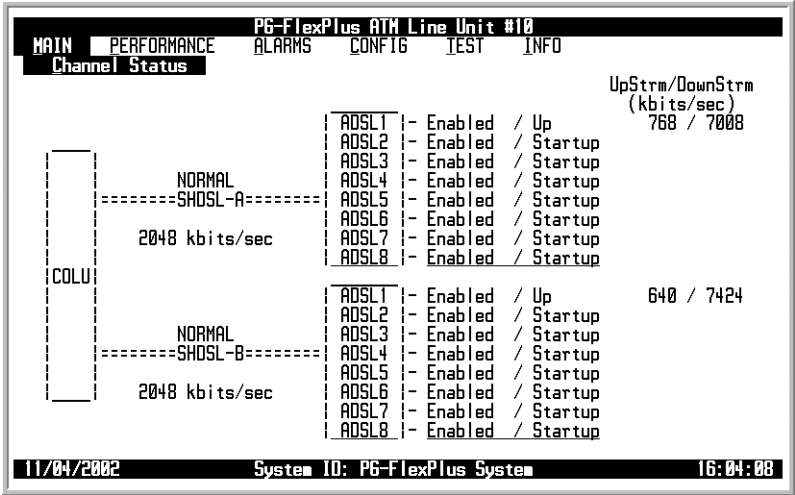
Step	Action
1	<p>At the Main Menu screen, select MAIN. Press ↓ to choose Channel Status. The following screen appears.</p>  <p>The screenshot shows a terminal window titled 'PG-FlexPlus ATM Line Unit #1'. The menu options are: MAIN (highlighted), PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. Under 'MAIN', the sub-options are: Overall Status, Channel Status (highlighted), ADSL-A Status, and ADSL-B Status. The bottom status bar shows the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and the time '19:21:03'.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the 'Channel Status' screen. It displays two sections for SHDSL-A and SHDSL-B. Each section shows a 'COLU' (column) status of 'NORMAL' and a speed of '2048 kbits/sec'. To the right, a list of ADSL links (ADSL1 through ADSL8) is shown with their status: 'Enabled / Up' for ADSL1 and 'Enabled / Startup' for ADSL2 through ADSL8. On the far right, 'UpStrm/DownStrm (kbits/sec)' values are shown: '768 / 7008' for SHDSL-A and '640 / 7424' for SHDSL-B. The bottom status bar shows the date '11/04/2002', 'System ID: PG-FlexPlus System', and the time '16:04:08'.</p>
3	<p>Press ESC. The Main Menu screen reappears.</p>


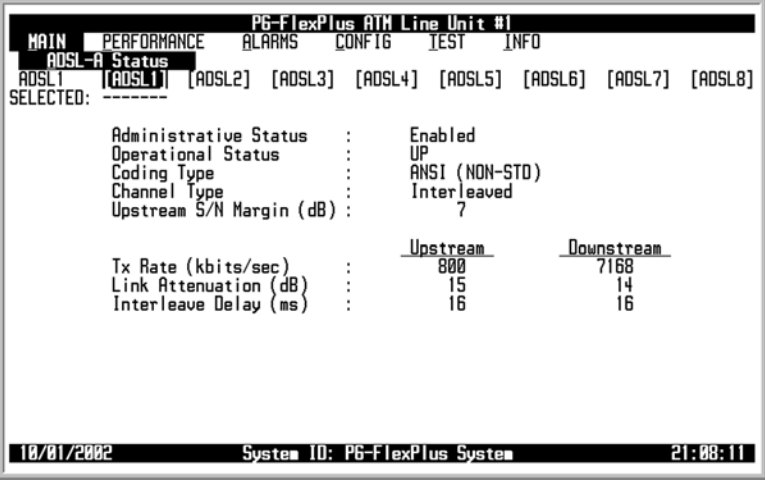
Table 7. Channel Status

State	Description
SHDSL Status	
Refer to Table 6 on page 21 .	
Channel Status	
ENABLED - UP	In sync - connected to modem and passing data
ENABLED - STARTUP	Trying to sync with modem
ENABLED - DOWN	Trying to sync with modem, but goes down while restarting
DISABLED - UP	In sync - connected to modem, but no data is passing through
DISABLED - STARTUP	Trying to sync with modem
DISABLED - DOWN	Trying to sync with modem, but goes down while restarting

MAIN — ADSL-A Status

This screen displays the operational status conditions of the ADSL-A connections for the Edge IAD. For documentation purposes, the ADSL-A status screens depict an IAD application. Refer to [Table 8 on page 26](#) for ADSL-A status.

MAIN — ADSL-A Status

Step	Action
1	<p>At the Main Menu screen, select MAIN. Press ↓ to choose ADSL-A Status. The following screen appears.</p>  <p>The screenshot shows a terminal window titled "PG-FlexPlus ATM Line Unit #1". The menu options are: MAIN (highlighted), PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. Under the MAIN menu, the options are: Overall Status, Channel Status, ADSL-A Status (highlighted), and ADSL-B Status. The status bar at the bottom shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 19:21:57.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the ADSL-A Status screen for facility ADSL1. It lists various parameters: Administrative Status (Enabled), Operational Status (UP), Coding Type (ANSI (NON-STD)), Channel Type (Interleaved), and Upstream S/N Margin (7). It also shows Tx Rate (800 kbps/sec), Link Attenuation (15 dB), and Interleave Delay (16 ms) for both Upstream and Downstream directions. The status bar at the bottom shows the date 10/01/2002, System ID: PG-FlexPlus System, and time 21:08:11.</p> <p>Select the appropriate ADSL facility (1-8) and press ENTER to view the screen.</p>
3	<p>Press ESC. The Main Menu screen reappears.</p>

MAIN — ADSL-B Status

This screen displays the operational status conditions of the ADSL-B connections of the selected ADSL facility for the Edge RAM. For documentation purposes, the ADSL-B status screens depict an RAM application. Refer to [Table 8 on page 26](#) for ADSL-B status.

MAIN — ADSL-B Status


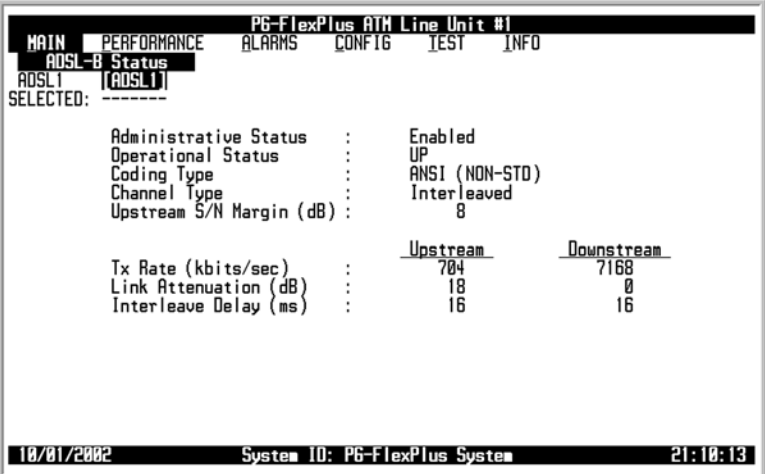
Step	Action
1	<p>At the Main Menu screen, select MAIN. Press ↓ to choose ADSL-B Status. The following screen appears.</p> 
2	<p>Press ENTER. The following screen appears.</p> 
3	<p>Press ESC. The Main Menu screen reappears.</p>

Table 8. ADSL-A and ADSL-B Status

State	Value	Description
ADSL Status (1-8)		
Administrative Port Status	Disabled, Enabled	Determines whether ADSL port should pass data or not. Data will not pass when port is disabled.
Operational Link Status	UP, DOWN, STARTUP	Indicates ADSL link status between ADSL port and Customer Premise Equipment (CPE) - usually ADSL modem
Coding Type	G.DMT, G.Lite, ANSI, ANSI (non-std.), N/A	Line coding type of the ADSL link. When link status is DOWN, coding type is N/A. When link status is up, coding type is actual type of connection.
Channel Type	Fast, Interleaved	Indicates whether interleave buffers are used on ADSL channels or not (thus indicating ADSL channel type)
Upstream S/N Margin (dB)	1-255	Upstream S/N ratio as determined by the ADSL port. Downstream S/N is determined by the CPE.
Tx Rate (kbits/sec)	32-1024 (Upstream) 32-8160 (Downstream)	Downstream and Upstream Transmit data rate reported by ADSL port
Link Attenuation (dB)	1-255 (Upstream) 1-255 (Downstream)	Measured signal loss between RT and CPE
Interleave Delay (ms)	1-255 (Upstream) 1-255 (Downstream)	Additional transmission delay due to the error correcting code of the ADSL channel

PERFORMANCE MENU OPTIONS

The Performance Menu provides access to SHDSL-A, SHDSL-B, ADSL-A and ADSL-B summary, history, and ADSL-A and ADSL-B status screens. Refer to [Table 9 on page 28](#) for sub-menu options and descriptions, parameters and valid values.

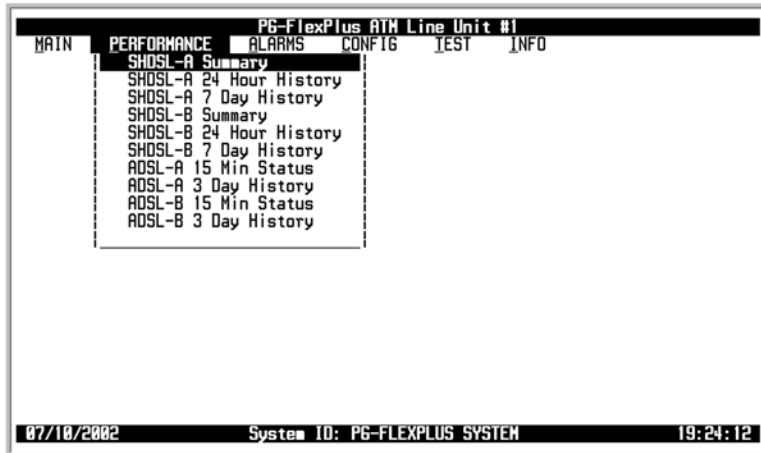


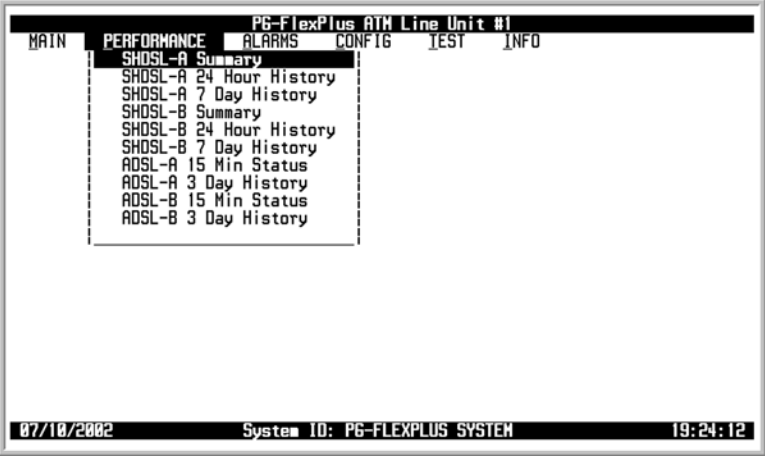
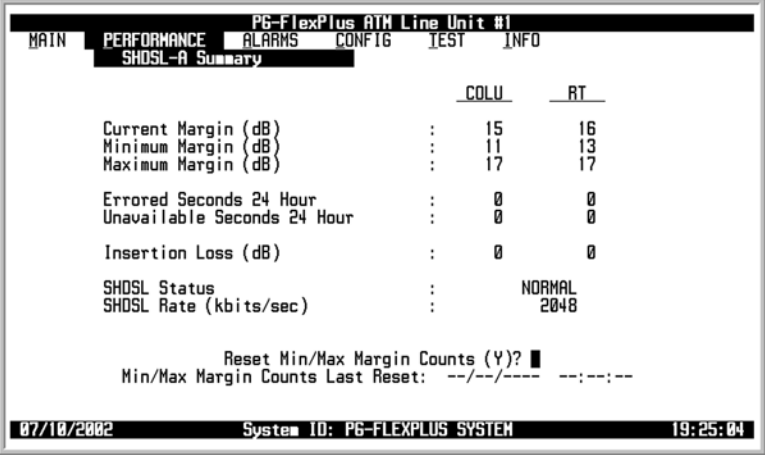
Table 9. Performance Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
SHDSL-A Summary (See Table 10 on page 31 for SHDSL Summary)	View a summary of the SHDSL-A or SHDSL-B performance in terms of the margin and ES counts	<ul style="list-style-type: none"> Reset Min/Max Margins (Y)? SHDSL Low/High margins will be reset. Continue (Y/N)? 	<ul style="list-style-type: none"> Y Y or N
SHDSL-B Summary (See Table 10 on page 31 for SHDSL Summary)			
SHDSL-A 24 Hour History	View the last 24 hours of SHDSL-A or SHDSL-B performance history in 15 minute intervals	SHDSL 24 Hour History will be cleared. Continue (Y/N)?	Y or N
SHDSL-B 24 Hour History			
SHDSL-A 7 Day History	View the last 7 days of SHDSL-A or SHDSL-B performance history, plus the current day's accumulated performance history in 24 hour intervals	<ul style="list-style-type: none"> Clear SHDSL 7 Day History (Y)? SHDSL 7 Day History will be cleared. Continue (Y/N)? 	<ul style="list-style-type: none"> Y Y or N
SHDSL-B 7 Day History			
ADSL-A 15 Min Status	View the current 15 minute performance statistics of the ADSL-A or ADSL-B link between the RT and Modem	ADSL15 Min Status will be cleared for ADSL _n (where n = 1-8). Continue (Y/N)?	Y or N
ADSL-B 15 Min Status			
ADSL-A 3 Day History	View last 3 days of performance statistics of the ADSL-A or ADSL-B link between the RT and Modem	ADSL 3 Day History will be cleared for ADSL _n (where n = 1-8). Continue (Y/N)?	Y or N
ADSL-B 3 Day History			

PERFORMANCE — SHDSL-A Summary

This screen displays a summary of the SHDSL-A performance in terms of the margin and ES counts. Use the option at the bottom of the screen to reset the minimum and maximum margin values for the selected SHDSL link. Refer to [Table 10 on page 31](#) for SHDSL Summaries.

PERFORMANCE — SHDSL-A Summary

Step	Action
1	<p>At the Main Menu screen, select PERFORMANCE. Press ↓ to choose SHDSL-A Summary. The following screen appears.</p> 
2	<p>Press ENTER. The following screen appears.</p>  <p>The following actions can be taken:</p> <ol style="list-style-type: none"> To clear the minimum and maximum margins, press Y and continue with this procedure. To exit the SHDSL-A Summary, press ESC.

PERFORMANCE — SHDSL-A Summary (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to reset the margins, press Y. The following events occur:</p> <ul style="list-style-type: none"> • minimum and maximum margins are set to the current margins • Last Cleared time and date fields are updated <div data-bbox="479 520 1239 972" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Summary COLU RT Current Margin (dB) : 15 15 Minimum Margin (dB) : 11 13 Maximum Margin (dB) : 17 17 Errored Seconds 24 Hour : 0 0 Unavailable Seconds 24 Hour : 0 0 Insertion Loss (dB) : 0 0 SHDSL Status : NORMAL SHDSL Rate (kbits/sec) : 2048 SHDSL Low/High Margins Will Be Reset. Continue (Y/N)? █ Min/Max Margin Counts Last Reset: --/--/---- --:--:-- 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 19:25:31 </pre> </div> <div data-bbox="479 1035 1239 1486" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Summary COLU RT Current Margin (dB) : 14 16 Minimum Margin (dB) : 14 15 Maximum Margin (dB) : 15 16 Errored Seconds 24 Hour : 0 0 Unavailable Seconds 24 Hour : 0 0 Insertion Loss (dB) : 0 0 SHDSL Status : NORMAL SHDSL Rate (kbits/sec) : 2048 Reset Min/Max Margin Counts (Y)? █ Min/Max Margin Counts Last Reset: 07/10/2002 19:25:57 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 19:26:00 </pre> </div> <p>b. To retain the existing minimum and maximum margins, press N.</p>
4	<p>Press ESC. The Main Menu screen reappears.</p>

Table 10. SHDSL-A and SHDSL-B Summary

State	Description
Current Margin (dB)*	Signal to noise decibel margin
Minimum Margin (dB)*	Minimum decibel value for the SHDSL link
Maximum Margin (dB)*	Maximum decibel value for the SHDSL link
Errored Seconds 24 Hour	SHDSL (ES) counts since the last 24 hour reset
Unavailable Seconds 24 Hour	SHDSL (UAS) counts since the last 24 hour reset
Insertion Loss	Measured signal loss between the COLU and RT
SHDSL Status	Refer to Table 6 on page 21
SHDSL Rate (kbits/sec)	Transmit and receive data rate
* e.g., 0 dB is a predicted BER equal to 10^{-7} ; 6 dB is a predicted BER equal to 10^{-10}	

PERFORMANCE — SHDSL-A 24 Hour History

This screen displays the last 24 hours of SHDSL-A performance history in 15 minute intervals. The performance history data displayed includes ES and UAS counts and the status of these counts.



If there is an active 15-minute ES or UAS alarm, this alarm becomes inactive when the 24-hour performance history is cleared and reactivates once the threshold has been crossed.

PERFORMANCE — SHDSL-A 24 Hour History

Step	Action
1	<p>At the Main Menu screen, select PERFORMANCE. Press ↓ to choose SHDSL-A 24 Hour History. The following screen appears.</p> <div data-bbox="477 720 1239 1171" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Summary SHDSL-A 24 Hour History SHDSL-A 7 Day History SHDSL-B Summary SHDSL-B 24 Hour History SHDSL-B 7 Day History ADSL-A 15 Min Status ADSL-A 3 Day History ADSL-B 15 Min Status ADSL-B 3 Day History 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 19:26:27 </pre> </div>

PERFORMANCE — SHDSL-A 24 Hour History (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="479 415 1239 865" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A 24 Hour History Time ES COLU UAS ES RT UAS 19:15 0-PAR 0-PAR 0-PAR 0-PAR 0-PAR 19:00 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 18:45 0-COM 0-COM 0-COM 0-COM 0-COM 18:30 0-COM 0-COM 0-COM 0-COM 0-COM 18:15 0-COM 0-COM 0-COM 0-COM 0-COM 18:00 0-COM 0-COM 0-COM 0-COM 0-COM 17:45 0-COM 0-COM 0-COM 0-COM 0-COM 17:30 0-COM 0-COM 0-COM 0-COM 0-COM 17:15 0-COM 0-COM 0-COM 0-COM 0-COM 17:00 0-COM 0-COM 0-COM 0-COM 0-COM COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Page History Backward Page History Forward Clear History SHDSL 24 Hour History Last Cleared: --/--/---- --:--:-- 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 19:27:05 </pre> </div> <p>Fifteen minute intervals are displayed in the <i>Time</i> Field. For example, the time interval marked 19:00 contains information for 19:00 to 19:15. The status of the count is shown as:</p> <ul style="list-style-type: none"> • ADJ (Adjusted): Time or date has been changed or the history cleared on the system during this interval • COM (Complete): Data is saved in the history register for this interval • PAR (Partial): Data is being collected for this interval • UNA (Unavailable): Data has not been collected for this interval or has been reset during a previous time interval

PERFORMANCE — SHDSL-A 24 Hour History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To scroll through all 15-minute intervals, select the Page History Forward or Page History Backward button and press ENTER.</p> <p>b. To clear the SHDSL 24 Hour History, select the Clear History button and press ENTER. From the SHDSL 24 HOUR HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt, the following actions can be taken:</p> <ul style="list-style-type: none"> • To clear the SHDSL 24 Hour History, press Y. The following events occur: <ol style="list-style-type: none"> 1. counts are set to zero and labeled UNA 2. current interval is labeled as ADJ 3. Last Cleared time and date fields are updated
4	<p>Press ESC. The Main Menu screen reappears.</p>

PG-FlexPlus ATM Line Unit #1						
MAIN		PERFORMANCE	ALARMS	CONFIG	TEST	INFO
SHDSL-A 24 Hour History						
Time	COLU		RT			
	ES	UAS	ES	UAS		
19:15	0-PAR	0-PAR	0-PAR	0-PAR		
19:00	0-ADJ	0-ADJ	0-ADJ	0-ADJ		
18:45	0-COM	0-COM	0-COM	0-COM		
18:30	0-COM	0-COM	0-COM	0-COM		
18:15	0-COM	0-COM	0-COM	0-COM		
18:00	0-COM	0-COM	0-COM	0-COM		
17:45	0-COM	0-COM	0-COM	0-COM		
17:30	0-COM	0-COM	0-COM	0-COM		
17:15	0-COM	0-COM	0-COM	0-COM		
17:00	0-COM	0-COM	0-COM	0-COM		

COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable

Page History Backward Page History Forward **Clear History**

SHDSL 24 Hour History Will Be Cleared. Continue (Y/N)? **Y**

07/10/2002 System ID: PG-FLEXPLUS SYSTEM 19:27:33

PG-FlexPlus ATM Line Unit #1						
MAIN		PERFORMANCE	ALARMS	CONFIG	TEST	INFO
SHDSL-A 24 Hour History						
Time	COLU		RT			
	ES	UAS	ES	UAS		
19:15	0-ADJ	0-ADJ	0-ADJ	0-ADJ		
19:00	0-UNA	0-UNA	0-UNA	0-UNA		
18:45	0-UNA	0-UNA	0-UNA	0-UNA		
18:30	0-UNA	0-UNA	0-UNA	0-UNA		
18:15	0-UNA	0-UNA	0-UNA	0-UNA		
18:00	0-UNA	0-UNA	0-UNA	0-UNA		
17:45	0-UNA	0-UNA	0-UNA	0-UNA		
17:30	0-UNA	0-UNA	0-UNA	0-UNA		
17:15	0-UNA	0-UNA	0-UNA	0-UNA		
17:00	0-UNA	0-UNA	0-UNA	0-UNA		

COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable

Page History Backward Page History Forward **Clear History**

SHDSL 24 Hour History Last Cleared: 07/10/2002 19:27:59

07/10/2002 System ID: PG-FLEXPLUS SYSTEM 19:28:01


PERFORMANCE — SHDSL-A 7 Day History

This screen displays the last seven days of performance history, plus the current day's accumulated performance history in 24-hour intervals. The performance history data information displayed includes ES counts, UAS counts, and the status of the counts.



If there is an active 1-day ES or UAS alarm, this alarm becomes inactive when the 24-hour performance history is cleared and reactivates once the threshold has been crossed.

PERFORMANCE — SHDSL-A 7 Day History

Step	Action
1	<p>At the Main Menu screen, select PERFORMANCE. Press  to choose SHDSL-A 7 Day History. The following screen appears.</p> <div data-bbox="479 751 1239 1203" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Summary SHDSL-A 24 Hour History SHDSL-A 7 Day History SHDSL-B Summary SHDSL-B 24 Hour History SHDSL-B 7 Day History ADSL-A 15 Min Status ADSL-A 3 Day History ADSL-B 15 Min Status ADSL-B 3 Day History 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 19:30:46 </pre> </div>

PERFORMANCE — SHDSL-A 7 Day History (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="479 409 1242 861" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A 7 Day History Date COLU RT ES UAS ES UAS 07/10 0-ADJ 0-ADJ 0-ADJ 0-ADJ 07/09 0-COM 0-COM 0-COM 0-COM 07/08 0-COM 0-COM 0-COM 0-COM 07/07 0-COM 0-COM 0-COM 0-COM 07/06 0-ADJ 0-ADJ 0-ADJ 0-ADJ 07/05 0-UNA 0-UNA 0-UNA 0-UNA 07/04 0-UNA 0-UNA 0-UNA 0-UNA 07/03 0-UNA 0-UNA 0-UNA 0-UNA COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear SHDSL 7 Day History (Y)? █ SHDSL 7 Day History Last Cleared: --/--/---- --:--:-- 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 20:00:41 </pre> </div> <p>The current day performance information shows the performance since the previous midnight. At midnight of every day, the current day performance history is moved to the previous day's history and the current day performance information is cleared. The status of the count is shown as:</p> <ul style="list-style-type: none"> • ADJ (Adjusted): Time or date has been changed or the history cleared on the system during this interval • COM (Complete): Data is saved in the history register for this interval • PAR (Partial): Data is being collected for this interval • UNA (Unavailable): Data has not been collected for this interval or has been reset during a previous time interval <p>The following actions can be taken:</p> <ol style="list-style-type: none"> a. To clear the SHDSL 7 Day History, press Y at the Clear SHDSL 7 Day History (Y)? prompt. b. To retain the existing SHDSL 7 Day History, press N.

PERFORMANCE — SHDSL-A 7 Day History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to clear the SHDSL 7 Day History, press Y at the SHDSL 7 Day History will Be Cleared. Continue (Y/N)? prompt. The following actions can be taken:</p> <ul style="list-style-type: none"> • The following events occur: <ol style="list-style-type: none"> 1. counts are set to zero and labeled UNA 2. current interval is labeled as ADJ 3. Last Cleared time and date fields are updated <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A 7 Day History Date ES COLU UAS ES RT UAS 07/10 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 07/09 0-COM 0-COM 0-COM 0-COM 0-COM 07/08 0-COM 0-COM 0-COM 0-COM 0-COM 07/07 0-COM 0-COM 0-COM 0-COM 0-COM 07/06 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 07/05 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/04 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/03 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable SHDSL 7 Day History Will Be Cleared. Continue (Y/N)? █ SHDSL 7 Day History Last Cleared: --/--/---- --:--:-- 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 20:01:25 </pre> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A 7 Day History Date ES COLU UAS ES RT UAS 07/10 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 07/09 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/08 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/07 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/06 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/05 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/04 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 07/03 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear SHDSL 7 Day History (Y)? █ SHDSL 7 Day History Last Cleared: 07/10/2002 20:01:51 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 20:01:54 </pre> </div> <p>b. To retain the existing HDSL 7 Day History, press N.</p>
4	<p>Press Esc. The Main Menu screen reappears.</p>

PERFORMANCE — ADSL-A 15 Minute Status

This screen displays the current 15 minute performance statistics of the ADSL link between the RT and Modem. This information includes ES, SES and UAS counts and the validity of the values for the Edge IAD ADSL facility or selected Edge RAM ADSL facility.



If there are active alarms associated with the current ADSL-A 15 minute status information, those alarms become inactive when the ADSL-A 15-Min status performance history is cleared and reactivates once the threshold has been crossed.

PERFORMANCE — ADSL-A 15 Minute Status

Step	Action
1	<p>At the Main Menu screen, select PERFORMANCE. Press ↓ to choose ADSL-A 15 Min Status. The following screen appears.</p> <div data-bbox="477 772 1240 1226" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ----- SHDSL-A Summary SHDSL-A 24 Hour History SHDSL-A 7 Day History SHDSL-B Summary SHDSL-B 24 Hour History SHDSL-B 7 Day History ADSL-A 15 Min Status ADSL-A 3 Day History ADSL-B 15 Min Status ADSL-B 3 Day History ----- 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 20:33:06 </pre> </div>

PERFORMANCE — ADSL-A 15 Minute Status (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="479 394 1239 869" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 15 Min Status ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Time ES Upstream Downstream ES SES UAS ES SES UAS 21:15 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 15 Min ADSL 15 Min Status Last Cleared For ADSL1: 10/01/2002 21:16:04 10/01/2002 System ID: PG-FlexPlus System 21:16:31 </pre> </div> <p>The screen displays the current 15 minute performance statistics of the ADSL link between the RT and Modem. The status of the count is as shown:</p> <ul style="list-style-type: none"> • ADJ (Adjusted): Time or date has been changed or the history cleared on the system during this interval • COM (Complete): Data is saved in the history register for this interval • PAR (Partial): Data is being collected for this interval • UNA (Unavailable): Data has not been collected for this interval or has been reset during a previous time interval <p>The following actions can be taken:</p> <ol style="list-style-type: none"> a. To clear the ADSL 15 Minute status, select Clear ADSL 15 Min button. b. To retain the existing ADSL 15 Min Status, press ESC.

PERFORMANCE — ADSL-A 15 Minute Status (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to clear the ADSL 15 Min Status, press Y at the ADSL 15 Min Status Will Be Cleared for ADSL1. Continue (Y/N)? prompt. The following actions can be taken:</p> <ul style="list-style-type: none"> • The following events occur: <ol style="list-style-type: none"> 1. counts are set to zero and labeled UNA 2. current interval is labeled as ADJ 3. Last Cleared time and date fields are updated <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 15 Min Status ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Time ES SES UAS ES SES UAS 21:15 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 15 Min ADSL 15 Min Status Will Be Cleared For ADSL1. Continue (Y/N)? █ 10/01/2002 System ID: PG-FlexPlus System 21:16:54 </pre> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 15 Min Status ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Time ES SES UAS ES SES UAS 21:15 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 15 Min ADSL 15 Min Status Last Cleared For ADSL1: 10/01/2002 21:18:17 10/01/2002 System ID: PG-FlexPlus System 21:18:19 </pre> </div> <p>b. To retain the existing ADSL 15 Min Status, press N.</p>
4	<p>Press Esc. The Main Menu screen reappears.</p>



If there are active alarms associated with the current 24-hour performance history information, those alarms become inactive when the 24-hour performance history is cleared.


PERFORMANCE — ADSL-A 3 Day History

This screen displays the last 3 days of performance statistics of the ADSL link between the RT and Modem. This information includes ES, SES and UAS counts and the validity of the values for the Edge IAD ADSL facility or selected Edge RAM ADSL facility.



If there are active alarms associated with the current ADSL-A 3 day history information, those alarms become inactive when the ADSL-A 3 day history status performance history is cleared and reactivates once the threshold has been crossed.

PERFORMANCE — ADSL-A 3 Day History

Step	Action
1	<p>At the Main Menu screen, select PERFORMANCE. Press  to choose ADSL-A 3 Day History. The following screen appears.</p> <div data-bbox="479 762 1239 1213" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ----- SHDSL-A Summary SHDSL-A 24 Hour History SHDSL-A 7 Day History SHDSL-B Summary SHDSL-B 24 Hour History SHDSL-B 7 Day History ADSL-A 15 Min Status ADSL-A 3 Day History ADSL-B 15 Min Status ADSL-B 3 Day History </pre> </div>

PERFORMANCE — ADSL-A 3 Day History (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="477 394 1239 869" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 3 Day History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Date ES Upstream UAS ES Downstream UAS SES 10/01 0-PAR 0-PAR 0-PAR 0-PAR 0-PAR 0-PAR 09/30 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM 09/29 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM 09/28 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 3 Day History ADSL 3 Day History Last Cleared For ADSL1: 01/01/1970 04:02:18 10/01/2002 System ID: PG-FlexPlus System 21:19:12 </pre> </div> <p>The current day performance information shows the performance since the previous midnight. At midnight of every day, the current day performance history is moved to the previous day's history and the current day performance information is cleared. The status of the count is shown as:</p> <ul style="list-style-type: none"> • ADJ (Adjusted): Time or date has been changed or the history cleared on the system during this interval • COM (Complete): Data is saved in the history register for this interval • PAR (Partial): Data is being collected for this interval • UNA (Unavailable): Data has not been collected for this interval or has been reset during a previous time interval <p>The following actions can be taken:</p> <ol style="list-style-type: none"> a. To clear the ADSL 3 Day status, select Clear ADSL 3 Day History button. b. To retain the existing ADSL 3 Day History, press ESC.

PERFORMANCE — ADSL-A 3 Day History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to clear the ADSL 3 Day History, press Y at the ADSL 3 Day History will Be Cleared for ADSL1. Continue (Y/N)? prompt. The following actions can be taken:</p> <ul style="list-style-type: none"> The following events occur: <ol style="list-style-type: none"> counts are set to zero and labeled UNA current interval is labeled as ADJ Last Cleared time and date fields are updated <div data-bbox="479 609 1242 1081" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 3 Day History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Date ES Upstream Downstream SES UAS SES UAS 10/01 0-PAR 0-PAR 0-PAR 0-PAR 0-PAR 0-PAR 09/30 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM 09/29 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM 09/28 0-COM 0-COM 0-COM 0-COM 0-COM 0-COM COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 3 Day History ADSL 3 Day History Will Be Cleared For ADSL1. Continue (Y/N)? █ 10/01/2002 System ID: PG-FlexPlus System 21:19:59 </pre> </div> <div data-bbox="479 1113 1242 1585" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A 3 Day History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Date ES Upstream Downstream SES UAS SES UAS 10/01 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 0-ADJ 09/30 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 09/29 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 09/28 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA 0-UNA COM = Complete, PAR = Partial, ADJ = Adjusted, UNA = Unavailable Clear ADSL 3 Day History ADSL 3 Day History Last Cleared For ADSL1: 10/01/2002 21:20:21 10/01/2002 System ID: PG-FlexPlus System 21:20:21 </pre> </div> <p>b. To retain the existing ADSL 3 Day History, press N.</p>
4	<p>Press Esc. The Main Menu screen reappears.</p>

PERFORMANCE — SHDSL-B Summary

PERFORMANCE — SHDSL-B 24 Hour History

PERFORMANCE — SHDSL-B 7 Day History

PERFORMANCE — ADSL-B 15 Minute Status

PERFORMANCE — ADSL-B 3 Day History

Please refer to PERFORMANCE — SHDSL-A and ADSL-A performance screens since they operate identically.

ALARM MENU OPTIONS

The Alarm Menu reports System, SHDSL, and ADSL related alarmed events. These alarms will be reported to the Management Unit if configured with an alarm severity of critical, major or minor. Refer to [Table 11 on page 46](#) for sub-menu options and descriptions, parameters and valid values.



A description of the Alarm types reported is provided in [Table 14 on page 66](#).

```
PG-FlexPlus ATM Line Unit #1
MAIN PERFORMANCE ALARMS CONFIG TEST INFO
System History
SHDSL-A History
SHDSL-B History
ADSL-A Upstream History
ADSL-A Downstream History
ADSL-B Upstream History
ADSL-B Downstream History

07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:22:00
```

Table 11. Alarm Menu Options

Sub-Menu Options	Sub-Menu Descriptions	Selectable Parameter Options	Valid Values
System History (See Table 15 on page 66 for System Alarms)	View the alarm type, current status, counts and the first and last occurrences	<ul style="list-style-type: none"> • Clear System Alarm History (Y)? • System Alarm History Will Be Cleared. Continue (Y/N)? 	<ul style="list-style-type: none"> • Y • Y or N
SHDSL-A History (See Table 17 on page 72 for SHDSL Alarm Types)	View the alarm type, current status, counts and the first and last occurrences	<ul style="list-style-type: none"> • Clear SHDSL Alarm History (Y)? • SHDSL Alarm History Will Be Cleared. Continue (Y/N)? 	<ul style="list-style-type: none"> • Y • Y or N
SHDSL-B History (See Table 17 on page 72 for SHDSL Alarm Types)			
ADSL-A Upstream History (See Table 20 on page 81 for ADSL Alarms)	View the alarm type, current status, counts and the first and last occurrences	ADSL Alarm History Will Be Cleared for ADSL _n (where <i>n</i> = 1-8). Continue (Y/N)?	Y or N
ADSL-B Upstream History See Table 20 on page 81 for ADSL Alarms)			
ADSL-A Downstream History See Table 20 on page 81 for ADSL Alarms)	View the alarm type, current status, counts and the first and last occurrences	ADSL Alarm History Will Be Cleared for ADSL _n (where <i>n</i> = 1-8). Continue (Y/N)?	Y or N
ADSL-B Downstream History See Table 20 on page 81 for ADSL Alarms)			

ALARMS — System History

This screen displays the alarm type, current status, counts and the first and last occurrences. The alarms and default values are defined in [Table 15 on page 66](#).




Under the *Current* alarm column, if the word ACTIVE displays, the alarm is currently active. If the status OK displays, the alarm is not present. If the word SUPPRESSED displays, the alarm is active but suppressed.



Clearing the system alarm history does not clear the current alarms. If there is an active alarm, then the count is set to 1 and the value in the LAST Cleared date and time field is set to the FIRST date and time field.

ALARMS — System History

Step	Action
1	<p>At the Main Menu screen, select ALARMS. Press  to choose System History. The following screen appears.</p> <div data-bbox="477 837 1240 1293" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System History SHDSL-A History SHDSL-B History ADSL-A Upstream History ADSL-A Downstream History ADSL-B Upstream History ADSL-B Downstream History 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:22:00 </pre> </div>

ALARMS — System History (Continued)

Step	Action
2	<p>The following actions can be taken:</p> <p>a. To clear the System Alarm History, press Y at the Clear System Alarm History (Y)? prompt. Press ENTER. The following screen appears.</p> <div data-bbox="479 478 1239 928" data-label="Image"> </div> <p>The date and time of the last clearance of the history displays at the bottom of the screen. The current information shows real-time updates.</p> <p>The alarm information displayed indicates:</p> <p>Alarm Types:</p> <ul style="list-style-type: none"> • 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 Condition not reported by system <p>Alarm States:</p> <ul style="list-style-type: none"> • * Designates active alarm <p>b. To retain the existing System Alarm History, press ESC.</p>

ALARMS — System History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to clear the history of all alarms, press Y at the SYSTEM ALARM HISTORY WILL BE CLEARED. CONTINUE (Y/N)? prompt, the following actions can be taken:</p> <p>The following events occur:</p> <ul style="list-style-type: none"> • counts are set to zero • Last Cleared time and date fields are updated <div data-bbox="479 583 1239 1037" data-label="Code-Block"> <pre> PG-FlexPlus ATM Line Unit # MAIN PERFORMANCE ALARMS CONFIG TEST INFO System History ALARMS TYPE CURRENT COUNT FIRST LAST COLU-RT A Mismatch MN OK 0 --/-- --:-- --:-- No RT A S/W MN OK 0 --/-- --:-- --:-- COLU-RT B Mismatch MN OK 0 --/-- --:-- --:-- No RT B S/W MN OK 0 --/-- --:-- --:-- EEPROM Failure MN OK 0 --/-- --:-- --:-- MUX Payload Error MN OK 0 --/-- --:-- --:-- System Alarm History Will Be Cleared. Continue (Y/N)? █ System Alarm History Last Cleared: --/--/---- --:--:-- 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:23:48 </pre> </div> <div data-bbox="479 1094 1239 1547" data-label="Code-Block"> <pre> PG-FlexPlus ATM Line Unit # MAIN PERFORMANCE ALARMS CONFIG TEST INFO System History ALARMS TYPE CURRENT COUNT FIRST LAST COLU-RT A Mismatch MN OK 0 --/-- --:-- --:-- No RT A S/W MN OK 0 --/-- --:-- --:-- COLU-RT B Mismatch MN OK 0 --/-- --:-- --:-- No RT B S/W MN OK 0 --/-- --:-- --:-- EEPROM Failure MN OK 0 --/-- --:-- --:-- MUX Payload Error MN OK 0 --/-- --:-- --:-- Clear System Alarm History (Y)? █ System Alarm History Last Cleared: 07/10/2002 21:24:16 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:24:18 </pre> </div>
4	<p>Press ESC. The Main Menu screen reappears.</p>

ALARMS — SHDSL-A History

This screen displays the alarm type, current status, counts and the first and last occurrences. Refer to [Table 17 on page 72](#) for SHDSL Alarms.




Under the *Current* alarm column, if the word ACTIVE displays, the alarm is currently active. If the status OK displays, the alarm is not present. If the word SUPPRESSED displays, the alarm is active but suppressed.



Clearing the system alarm history does not clear the current alarms. If there is an active alarm, then the count is set to 1 and the value in the LAST Cleared date and time field is set to the FIRST date and time field.

ALARMS — SHDSL-A History

Step	Action
1	<p>At the Main Menu screen, select ALARMS. Press  to choose SHDSL-A History. The following screen appears.</p> <div data-bbox="477 850 1239 1304" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System History SHDSL-A History SHDSL-B History ADSL-A Upstream History ADSL-A Downstream History ADSL-B Upstream History ADSL-B Downstream History 07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:24:42 </pre> </div>

ALARMS — SHDSL-A History (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="479 409 1242 861" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A History ALARMS TYPE CURRENT COUNT FIRST LAST COLU SHDSL LOSW MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL Low Margin NA OK 0 --/-- --:-- --:-- COLU SHDSL Low Bandwidth MN OK 0 --/-- --:-- --:-- COLU SHDSL Payload Sync MN OK 0 --/-- --:-- --:-- COLU Power Feed Open MN OK 0 --/-- --:-- --:-- COLU Power Feed Short MN OK 0 --/-- --:-- --:-- COLU Power Ground Fault MN OK 0 --/-- --:-- --:-- RT SHDSL LOSW MN OK 0 --/-- --:-- --:-- RT SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL Low Margin NA OK 0 --/-- --:-- --:-- Clear SHDSL Alarm History (Y)? █ Last Cleared: --/-- --:-- 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:25:16 </pre> </div> <p>The following actions can be taken:</p> <ol style="list-style-type: none"> a. To clear the SHDSL-A History, press Y at the Clear SHDSL Alarm History (Y)? prompt. b. To retain the SHDSL-A History, press Esc.

ALARMS — SHDSL-A History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To verify you want to clear the SHDSL-A History, press Y at the SHDSL Alarm History Will Be Cleared. Continue (Y/N)? prompt. The following events occur:</p> <ol style="list-style-type: none"> 1. counts are set to zero 2. Last Cleared time and date fields are updated <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A History ALARMS TYPE CURRENT COUNT FIRST LAST COLU SHDSL LOSH MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL Low Margin NA OK 0 --/-- --:-- --:-- COLU SHDSL Low Bandwidth MN OK 0 --/-- --:-- --:-- COLU SHDSL Payload Sync MN OK 0 --/-- --:-- --:-- COLU Power Feed Open MN OK 0 --/-- --:-- --:-- COLU Power Feed Short MN OK 0 --/-- --:-- --:-- COLU Power Ground Fault MN OK 0 --/-- --:-- --:-- RT SHDSL LOSH MN OK 0 --/-- --:-- --:-- RT SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL Low Margin NA OK 0 --/-- --:-- --:-- Clear SHDSL Alarm History (Y)? Last Cleared: --/-- --:-- SHDSL Alarm History Will Be Cleared. Continue (Y/N)? 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:25:43 </pre> </div> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A History ALARMS TYPE CURRENT COUNT FIRST LAST COLU SHDSL LOSH MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- COLU SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- COLU SHDSL Low Margin NA OK 0 --/-- --:-- --:-- COLU SHDSL Low Bandwidth MN OK 0 --/-- --:-- --:-- COLU SHDSL Payload Sync MN OK 0 --/-- --:-- --:-- COLU Power Feed Open MN OK 0 --/-- --:-- --:-- COLU Power Feed Short MN OK 0 --/-- --:-- --:-- COLU Power Ground Fault MN OK 0 --/-- --:-- --:-- RT SHDSL LOSH MN OK 0 --/-- --:-- --:-- RT SHDSL ES 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL ES 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 15 Min MN OK 0 --/-- --:-- --:-- RT SHDSL UAS 24 Hour MN OK 0 --/-- --:-- --:-- RT SHDSL Low Margin NA OK 0 --/-- --:-- --:-- Clear SHDSL Alarm History (Y)? Last Cleared: 07/10/2002 21:26:02 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:26:05 </pre> </div> <p>b. To retain the existing SHDSL-A history, press N.</p>
4	<p>Press ESC. The Main Menu screen reappears.</p>

ALARMS — ADSL-A Upstream History

This screen displays the alarm type, current status, counts and the first and last occurrences. Refer to [Table 20 on page 81](#) for ADSL Alarms.


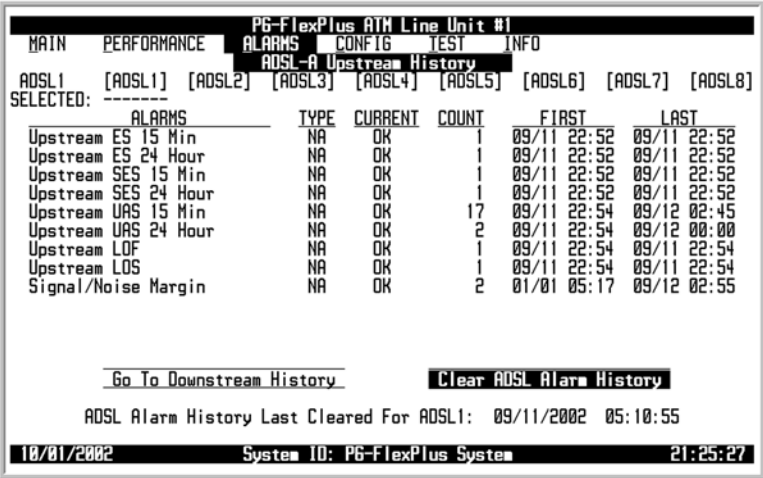


Under the *Current* alarm column, if the word ACTIVE displays, the alarm is currently active. If the status OK displays, the alarm is not present. If the word SUPPRESSED displays, the alarm is active but suppressed.



Clearing the system alarm history does not clear the current alarms. If there is an active alarm, then the count is set to 1 and the value in the LAST Cleared date and time field is set to the FIRST date and time field.

ALARMS — ADSL-A Upstream History

Step	Action
1	<p>At the Main Menu screen, select ALARMS. Press ↓ to choose ADSL-A Upstream History. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System History SHDSL-A History SHDSL-B History ADSL-A Upstream History ADSL-A Downstream History ADSL-B Upstream History ADSL-B Downstream History 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:29:10 </pre>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Upstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Upstream ES 15 Min NA OK 1 09/11 22:52 09/11 22:52 Upstream ES 24 Hour NA OK 1 09/11 22:52 09/11 22:52 Upstream SES 15 Min NA OK 1 09/11 22:52 09/11 22:52 Upstream SES 24 Hour NA OK 1 09/11 22:52 09/11 22:52 Upstream URS 15 Min NA OK 17 09/11 22:54 09/12 02:45 Upstream URS 24 Hour NA OK 2 09/11 22:54 09/12 00:00 Upstream LOF NA OK 1 09/11 22:54 09/11 22:54 Upstream LOS NA OK 1 09/11 22:54 09/11 22:54 Signal/Noise Margin NA OK 2 01/01 05:17 09/12 02:55 Go To Downstream History Clear ADSL Alarm History ADSL Alarm History Last Cleared For ADSL1: 09/11/2002 05:10:55 10/01/2002 System ID: PG-FlexPlus System 21:25:27 </pre>

ALARMS — ADSL-A Upstream History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ul style="list-style-type: none"> a. To view downstream history, select the Go To Downstream History button, then press ENTER. b. To clear ADSL alarm history, select the Clear ADSL Alarm History button, then press ENTER. From the ADSL Alarm history Will Be Cleared for ADSL1. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> • To clear the ADSL-A upstream alarm history, press Y. The following events occur: <ol style="list-style-type: none"> 1. counts are set to zero 2. Last Cleared time and date fields are updated <div data-bbox="479 661 1237 1136" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Upstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Upstream ES 15 Min NA OK 1 09/11 22:52 09/11 22:52 Upstream ES 24 Hour NA OK 1 09/11 22:52 09/11 22:52 Upstream SES 15 Min NA OK 1 09/11 22:52 09/11 22:52 Upstream SES 24 Hour NA OK 1 09/11 22:52 09/11 22:52 Upstream UAS 15 Min NA OK 17 09/11 22:54 09/12 02:45 Upstream UAS 24 Hour NA OK 2 09/11 22:54 09/12 00:00 Upstream LOF NA OK 1 09/11 22:54 09/11 22:54 Upstream LOS NA OK 1 09/11 22:54 09/11 22:54 Signal/Noise Margin NA OK 2 01/01 05:17 09/12 02:55 Go To Downstream History Clear ADSL Alarm History ADSL Alarm History Will Be Cleared For ADSL1. Continue (Y/N)? Y 10/01/2002 System ID: PG-FlexPlus System 21:26:14 </pre> </div> <div data-bbox="479 1171 1237 1646" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Upstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Upstream ES 15 Min NA OK 0 --/-- --/-- --/-- --/-- Upstream ES 24 Hour NA OK 0 --/-- --/-- --/-- --/-- Upstream SES 15 Min NA OK 0 --/-- --/-- --/-- --/-- Upstream SES 24 Hour NA OK 0 --/-- --/-- --/-- --/-- Upstream UAS 15 Min NA OK 0 --/-- --/-- --/-- --/-- Upstream UAS 24 Hour NA OK 0 --/-- --/-- --/-- --/-- Upstream LOF NA OK 0 --/-- --/-- --/-- --/-- Upstream LOS NA OK 0 --/-- --/-- --/-- --/-- Signal/Noise Margin NA OK 0 --/-- --/-- --/-- --/-- Go To Downstream History Clear ADSL Alarm History ADSL Alarm History Last Cleared For ADSL1: 10/01/2002 21:26:34 10/01/2002 System ID: PG-FlexPlus System 21:26:37 </pre> </div> <ul style="list-style-type: none"> • To retain the existing ADSL-A upstream alarm history, press N.
4	<p>Press ESC. The Main Menu screen reappears.</p>

ALARMS — ADSL-A Downstream History

This screen displays the alarm type, current status, counts and the first and last occurrences. Refer to [Table 20 on page 81](#) for ADSL Alarms.




Under the *Current* alarm column, if the word ACTIVE displays, the alarm is currently active. If the status OK displays, the alarm is not present. If the word SUPPRESSED displays, the alarm is active but suppressed.



Clearing the system alarm history does not clear the current alarms. If there is an active alarm, then the count is set to 1 and the value in the LAST Cleared date and time field is set to the FIRST date and time field.

ALARMS — ADSL-A Downstream History

Step	Action
1	<p>At the Main Menu screen, select ALARMS. Press  to choose ADSL-A Downstream History. The following screen appears.</p> <div data-bbox="477 852 1239 1304" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ----- System History SHDSL-A History SHDSL-B History ADSL-A Upstream History ADSL-A Downstream History ADSL-B Upstream History ADSL-B Downstream History 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:32:46 </pre> </div>

ALARMS — ADSL-A Downstream History (Continued)

Step	Action
2	<p>Press ENTER. The following screen appears.</p> <div data-bbox="477 407 1240 884" style="border: 1px solid black; padding: 5px;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Downstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Downstream ES 15 Min NA OK 0 --/-- --/-- Downstream ES 24 Hour NA OK 0 --/-- --/-- Downstream SES 15 Min NA OK 0 --/-- --/-- Downstream SES 24 Hour NA OK 0 --/-- --/-- Downstream UAS 15 Min NA OK 0 --/-- --/-- Downstream UAS 24 Hour NA OK 0 --/-- --/-- Downstream LOF NA OK 0 --/-- --/-- Downstream LOS NA OK 0 --/-- --/-- Go To Upstream History Clear ADSL Alarm History ADSL Alarm History Last Cleared For ADSL1: 10/01/2002 21:26:34 10/01/2002 System ID: PG-FlexPlus System 21:28:04 </pre> </div>

ALARMS — ADSL-A Downstream History (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To view downstream history, select the Go To Upstream History button, then press ENTER.</p> <p>b. To clear ADSL alarm history, select the Clear ADSL Alarm History button, then press ENTER. From the ADSL Alarm history Will Be Cleared for ADSL1. Continue (Y/N)? prompt, the following actions can be taken:</p> <ul style="list-style-type: none"> To clear the ADSL-A downstream alarm history, press Y. The following events occur: <ol style="list-style-type: none"> counts are set to zero Last Cleared time and date fields are updated <div data-bbox="480 667 1239 1140" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Downstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Downstream ES 15 Min NA OK 0 --/-- --/-- Downstream ES 24 Hour NA OK 0 --/-- --/-- Downstream SES 15 Min NA OK 0 --/-- --/-- Downstream SES 24 Hour NA OK 0 --/-- --/-- Downstream URS 15 Min NA OK 0 --/-- --/-- Downstream URS 24 Hour NA OK 0 --/-- --/-- Downstream LOF NA OK 0 --/-- --/-- Downstream LOS NA OK 0 --/-- --/-- Go To Upstream History Clear ADSL Alarm History ADSL Alarm History Will Be Cleared For ADSL1. Continue (Y/N)? 10/01/2002 System ID: PG-FlexPlus System 21:28:34 </pre> </div> <div data-bbox="480 1186 1239 1659" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Downstream History ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ALARMS TYPE CURRENT COUNT FIRST LAST Downstream ES 15 Min NA OK 0 --/-- --/-- Downstream ES 24 Hour NA OK 0 --/-- --/-- Downstream SES 15 Min NA OK 0 --/-- --/-- Downstream SES 24 Hour NA OK 0 --/-- --/-- Downstream URS 15 Min NA OK 0 --/-- --/-- Downstream URS 24 Hour NA OK 0 --/-- --/-- Downstream LOF NA OK 0 --/-- --/-- Downstream LOS NA OK 0 --/-- --/-- Go To Upstream History Clear ADSL Alarm History ADSL Alarm History Last Cleared For ADSL1: 10/01/2002 21:28:59 10/01/2002 System ID: PG-FlexPlus System 21:29:01 </pre> </div>
4	<p>Press ESC. The Main Menu screen reappears.</p>

ALARMS — SHDSL-B History**ALARMS — ADSL-B Upstream History****ALARMS — ADSL-B Downstream History**

Please refer to ALARM — SHDSL-A and ADSL-A alarm screens since they operate identically.

CONFIGURATION MENU OPTIONS

The Configuration Menu provides access to system provisioning and setting all options to factory defaults, etc. Refer to [Table 12](#) for sub-menu options and descriptions, parameters and valid values.



Table 12. Configuration Menu Options


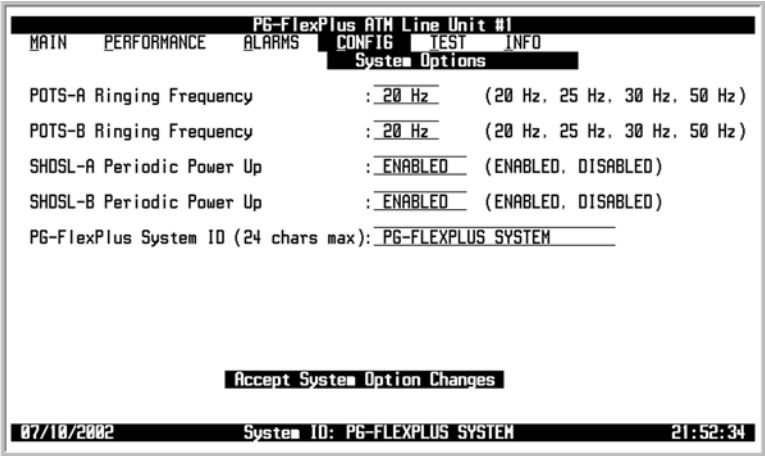
Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
System Options (See Table 13 on page 63 for System Options)	Set system options	System Options will be changed. Continue (Y/N)?	Y or N
System Alarm Types (See Table 15 on page 66 for System Alarms)	Provision alarm types of all system alarms associated with the SHDSL circuit and ADSL path	System Alarm Types will be Changed. Continue (Y/N)?	Y or N
SHDSL-A Alarm Thresholds (See Table 16 on page 69 for SHDSL Alarm Thresholds)	Provision threshold crossing values for the 15-minute and 24-hour ES, UAS counts and low margin value for SHDSL-A and SHDSL-B ARTs	SHDSL Alarm Thresholds will be Changed. Continue (Y/N)?	Y or N
SHDSL-B Alarm Thresholds (See Table 16 on page 69 for SHDSL Alarm Thresholds)			
SHDSL-A Alarm Types (See Table 17 on page 72 for SHDSL Alarm Types)	Provision alarm types for all SHDSL-A and SHDSL-B alarm severity types	SHDSL Alarm Types will be Changed. Continue (Y/N)?	Y or N
SHDSL-B Alarm Types (See Table 17 on page 72 for SHDSL Alarm Types)			

Sub-Menu Options	Sub-Menu Descriptions	Parameters	Valid Values
ADSL-A Options (See Table 18 on page 75 for ADSL Options)	Provision the ADSL-A and ADSL-B parameters	ADSL Options will be changed for ADSL n (where $n = 1-8$). Continue (Y/N)?	Y or N
ADSL-B Options (See Table 18 on page 75 for ADSL Options)			
ADSL-A Alarm Thresholds (See Table 19 on page 78 for ADSL Alarm Thresholds)	Provision threshold crossing values for the 15 minute and 24 hour ES, SES, and UAS counts for the ADSL ARTs	ADSL Alarm Thresholds will be changed for ADSL n (where $n = 1-8$). Continue (Y/N)?	Y or N
ADSL-B Alarm Thresholds (See Table 19 on page 78 for ADSL Alarm Thresholds)			
ADSL-A Alarm Types (See Table 20 on page 81 for ADSL Alarm Types)	Provision alarm types for all ADSL-A and ADSL-B alarms for the ADSL ARTs	ADSL Alarm Types will be Changed for ADSL n (where $n = 1-8$). Continue (Y/N)?	Y or N
ADSL-B Alarm Types (See Table 20 on page 81 for Channel ADSL Alarm Types)			
Set Factory Defaults	Reset the provisionable items to the original factory settings	<ul style="list-style-type: none"> • Configuration data will be set to factory defaults Continue (Y/N)? • Configuration data has been set to factory defaults. Press ESC to continue: 	<ul style="list-style-type: none"> • Y or N • ESC

CONFIG — System Options

The System Options screen allows provisioning of Ringing Frequency, SHDSL periodic power up, and System ID. Refer to [Table 13 on page 63](#) for system options.

CONFIG — System Options

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose System Options. The following screen appears.</p> 
2	<p>Press ENTER. The following screen appears.</p> 

CONFIG — System Options (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change a field value, press SPACEBAR to toggle to the desired value, or press ↓ or ↑ to move to the next option. To save the shelf options, select the Accept System Option Changes button, then press ENTER. From the SHELF OPTIONS WILL BE CHANGED. CONTINUE (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the shelf options, press Y. The following events occur: <ul style="list-style-type: none"> all current values are set to desired values <div data-bbox="479 625 1239 1077" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options POTS-A Ringing Frequency : 20 Hz (20 Hz, 25 Hz, 30 Hz, 50 Hz) POTS-B Ringing Frequency : 20 Hz (20 Hz, 25 Hz, 30 Hz, 50 Hz) SHDSL-A Periodic Power Up : ENABLED (ENABLED, DISABLED) SHDSL-B Periodic Power Up : ENABLED (ENABLED, DISABLED) PG-FlexPlus System ID (24 chars max): PG-FLEXPLUS SYSTEM Accept System Option Changes System Options Will Be Changed. Continue (Y/N)? █ 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:52:57 </pre> </div> <div data-bbox="479 1115 1239 1566" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options POTS-A Ringing Frequency : 20 Hz (20 Hz, 25 Hz, 30 Hz, 50 Hz) POTS-B Ringing Frequency : 20 Hz (20 Hz, 25 Hz, 30 Hz, 50 Hz) SHDSL-A Periodic Power Up : ENABLED (ENABLED, DISABLED) SHDSL-B Periodic Power Up : ENABLED (ENABLED, DISABLED) PG-FlexPlus System ID (24 chars max): PG-FLEXPLUS SYSTEM Accept System Option Changes System Options Have Been Changed. 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:53:19 </pre> </div> <ul style="list-style-type: none"> To retain the existing shelf options on the Shelf Options screen, press N.
4	<p>Press Esc. The Main Menu screen reappears.</p>


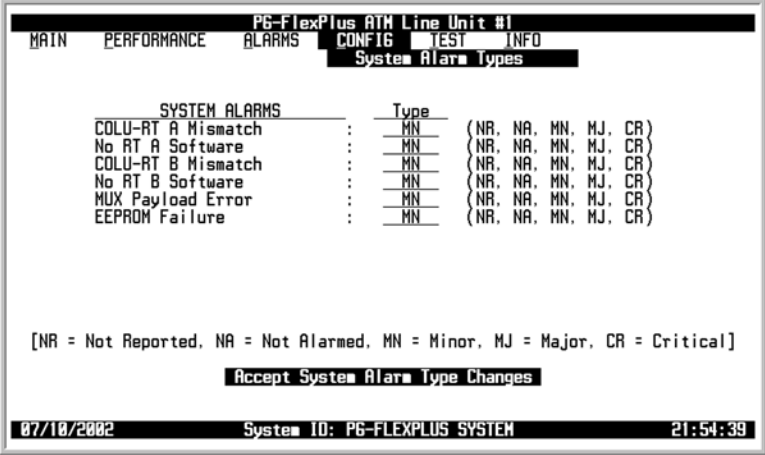
Table 13. System Options

System Options	Value	Description	Default
POTS (A and B) Ringing Frequency	20 Hz, 25 Hz, 30 Hz, 50 Hz	Ringling frequency sent from the RT to the subscriber	20 Hz
SHDSL A Periodic Power Up	Enabled, Disabled	When Enabled, the system periodically attempts to power-up the RT	Enabled
SHDSL B Periodic Power Up			
PG-FlexPlus System ID	Any printable character (including space) is valid	Configurable identification string for system. This string can be up to 24 characters. Because the System ID is visible at every COLU screen, it is easy to know what COLU screens are displayed. There are no special rules for changing the System ID.	PG-FLEXPLUS SYSTEM

CONFIG — System Alarm Type

The System Alarm Types screen allows provisioning of all system line alarms associated with the SHDSL circuit and ADSL path. Table 15 on page 66 shows the system alarm type fields, values, descriptions and default settings.

CONFIG — System Alarm Type

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose System Alarm Types. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options System Alarm Types SHDSL-A Alarm Thrshlds SHDSL-A Alarm Types SHDSL-B Alarm Thrshlds SHDSL-B Alarm Types ADSL-A Options ADSL-A Alarm Thrshlds ADSL-A Alarm Types ADSL-B Options ADSL-B Alarm Thrshlds ADSL-B Alarm Types Set Factory Defaults 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:53:44 </pre>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Alarm Types SYSTEM ALARMS : Type COLU-RT A Mismatch : MN (NR, NA, MN, MJ, CR) No RT A Software : MN (NR, NA, MN, MJ, CR) COLU-RT B Mismatch : MN (NR, NA, MN, MJ, CR) No RT B Software : MN (NR, NA, MN, MJ, CR) MUX Payload Error : MN (NR, NA, MN, MJ, CR) EEPROM Failure : MN (NR, NA, MN, MJ, CR) [NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical] Accept System Alarm Type Changes 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:54:39 </pre>

CONFIG — System Alarm Type (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the field value, press SPACEBAR to toggle to the desired value, or press ↓ or ↑ to move to the next option. To save the system alarm type changes, select the Accept System Alarm Type Changes button, then press ENTER. From the System alarm Types Will Be Changed. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the system alarm type changes, press Y. The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values
4	<p>Press ESC. The Main Menu screen reappears.</p>

```

PG-FlexPlus ATM Line Unit #1
MAIN PERFORMANCE ALARMS CONFIG TEST INFO
System Alarm Types

SYSTEM ALARMS
COLU-RT A Mismatch : MN (NR, NA, MN, MJ, CR)
No RT A Software : MN (NR, NA, MN, MJ, CR)
COLU-RT B Mismatch : MN (NR, NA, MN, MJ, CR)
No RT B Software : MN (NR, NA, MN, MJ, CR)
MUX Payload Error : MN (NR, NA, MN, MJ, CR)
EEPROM Failure : MN (NR, NA, MN, MJ, CR)

[NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical]

Accept System Alarm Type Changes
System Alarm Types Will Be Changed. Continue (Y/N)? █

07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:55:04
    
```

```

PG-FlexPlus ATM Line Unit #1
MAIN PERFORMANCE ALARMS CONFIG TEST INFO
System Alarm Types

SYSTEM ALARMS
COLU-RT A Mismatch : MN (NR, NA, MN, MJ, CR)
No RT A Software : MN (NR, NA, MN, MJ, CR)
COLU-RT B Mismatch : MN (NR, NA, MN, MJ, CR)
No RT B Software : MN (NR, NA, MN, MJ, CR)
MUX Payload Error : MN (NR, NA, MN, MJ, CR)
EEPROM Failure : MN (NR, NA, MN, MJ, CR)

[NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical]

Accept System Alarm Type Changes
System Alarm Types Have Been Changed.

07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:55:34
    
```

Table 14. Alarm Types Reported

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


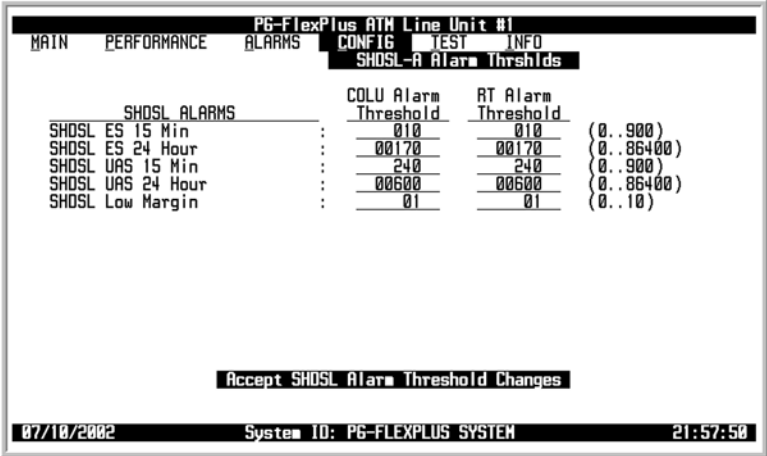
Table 15. System Alarms Types

Alarm	Value	Description	Default
COLU-RT A Mismatch	CR, MJ, MN, NA, NR	Incompatible RT A unit has been installed	MN
No RT A software	CR, MJ, MN, NA, NR	RT A has no application software and is awaiting software download	MN
COLU RT B Mismatch	CR, MJ, MN, NA, NR	Incompatible RT B unit has been installed	MN
No RT B software	CR, MJ, MN, NA, NR	RT B has no application software and is awaiting software download	MN
MUX Payload Error	CR, MJ, MN, NA, NR	Parity error detected between MUX and COLU. An alarm is generated and all circuits are placed in a trunk-conditioned state.	MN
EEPROM Failure	CR, MJ, MN, NA, NR	EEPROM (nonvolatile memory) has failed	MN

CONFIG — SHDSL-A Alarm Thresholds

This screen allows provisioning of all threshold crossing values for the 15 minute and 24-hour ES, UAS counts and low margin value for the SHDSL-A ARTs. [Table 16 on page 69](#) shows the SHDSL-A Alarm Threshold fields, values, descriptions and default settings.

CONFIG — SHDSL-A Alarm Thresholds

Step	Action																								
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose SHDSL-A Alarm Thresholds. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following menu items: MAIN, PERFORMANCE, ALARMS, CONFIG (highlighted), TEST, INFO. Under CONFIG, the following options are listed: System Options, System Alarm Types, SHDSL-A Alarm Thrshlds (highlighted), SHDSL-A Alarm Types, SHDSL-B Alarm Thrshlds, SHDSL-B Alarm Types, ADSL-A Options, ADSL-A Alarm Thrshlds, ADSL-A Alarm Types, ADSL-B Options, ADSL-B Alarm Thrshlds, ADSL-B Alarm Types, and Set Factory Defaults. The status bar at the bottom shows '07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:56:05'.</p>																								
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the 'SHDSL-A Alarm Thrshlds' configuration screen. It displays a table of thresholds:</p> <table border="1" data-bbox="516 1276 1156 1402"> <thead> <tr> <th>SHDSL ALARMS</th> <th>COLU Alarm Threshold</th> <th>AT Alarm Threshold</th> <th></th> </tr> </thead> <tbody> <tr> <td>SHDSL ES 15 Min</td> <td>010</td> <td>010</td> <td>(0.900)</td> </tr> <tr> <td>SHDSL ES 24 Hour</td> <td>00170</td> <td>00170</td> <td>(0.86400)</td> </tr> <tr> <td>SHDSL UAS 15 Min</td> <td>240</td> <td>240</td> <td>(0.900)</td> </tr> <tr> <td>SHDSL UAS 24 Hour</td> <td>00600</td> <td>00600</td> <td>(0.86400)</td> </tr> <tr> <td>SHDSL Low Margin</td> <td>01</td> <td>01</td> <td>(0.10)</td> </tr> </tbody> </table> <p>Below the table, there is a prompt: Accept SHDSL Alarm Threshold Changes. The status bar at the bottom shows '07/10/2002 System 10: PG-FLEXPLUS SYSTEM 21:57:50'.</p>	SHDSL ALARMS	COLU Alarm Threshold	AT Alarm Threshold		SHDSL ES 15 Min	010	010	(0.900)	SHDSL ES 24 Hour	00170	00170	(0.86400)	SHDSL UAS 15 Min	240	240	(0.900)	SHDSL UAS 24 Hour	00600	00600	(0.86400)	SHDSL Low Margin	01	01	(0.10)
SHDSL ALARMS	COLU Alarm Threshold	AT Alarm Threshold																							
SHDSL ES 15 Min	010	010	(0.900)																						
SHDSL ES 24 Hour	00170	00170	(0.86400)																						
SHDSL UAS 15 Min	240	240	(0.900)																						
SHDSL UAS 24 Hour	00600	00600	(0.86400)																						
SHDSL Low Margin	01	01	(0.10)																						

CONFIG — SHDSL-A Alarm Thresholds (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the threshold value, press ↓ or ↑ to go to the appropriate SHDSL Alarm Threshold. Then type the appropriate numbers on the keypad for each field. To save the SHDSL Alarm Threshold changes, select the Accept SHDSL Alarm Threshold Changes button, then press ENTER. From the SHDSL Alarm Thresholds Will Be Changed. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the SHDSL Alarm Threshold changes, press Y. The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values <div data-bbox="477 653 1239 1104" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Alarm Thrshlds SHDSL ALARMS COLU Alarm AT Alarm Threshold Threshold SHDSL ES 15 Min : 010 010 (0.900) SHDSL ES 24 Hour : 00170 00170 (0.86400) SHDSL UAS 15 Min : 240 240 (0.900) SHDSL UAS 24 Hour : 00600 00600 (0.86400) SHDSL Low Margin : 01 01 (0.10) Accept SHDSL Alarm Threshold Changes SHDSL Alarm Thresholds Will Be Changed. Continue (Y/N)? █ 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:58:50 </pre> </div> <div data-bbox="477 1161 1239 1612" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO SHDSL-A Alarm Thrshlds SHDSL ALARMS COLU Alarm AT Alarm Threshold Threshold SHDSL ES 15 Min : 010 010 (0.900) SHDSL ES 24 Hour : 00170 00170 (0.86400) SHDSL UAS 15 Min : 240 240 (0.900) SHDSL UAS 24 Hour : 00600 00600 (0.86400) SHDSL Low Margin : 01 01 (0.10) Accept SHDSL Alarm Threshold Changes SHDSL Alarm Thresholds Have Been Changed. 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 21:59:11 </pre> </div> <ul style="list-style-type: none"> To retain the existing SHDSL Alarm Thresholds, press N.
4	<p>Press ESC. The Main Menu screen reappears.</p>


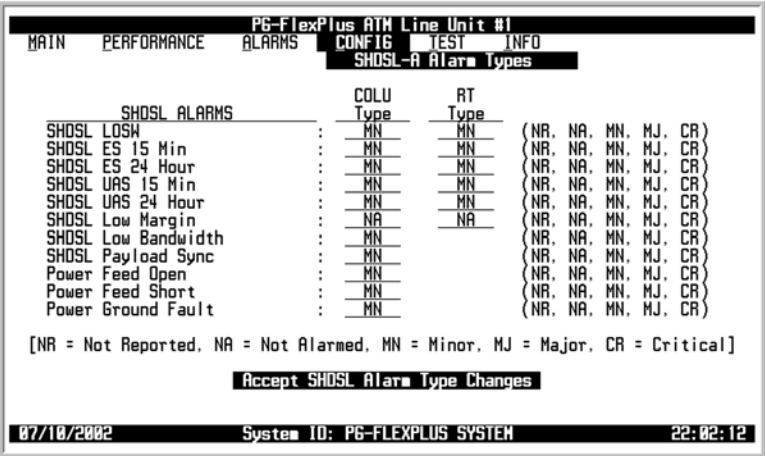
Table 16. SHDSL-A and SHDSL-B Alarm Thresholds

Alarms	Value	Description	COLU Alarm Threshold Default	RT Alarm Threshold Default
SHDSL ES 15 MIN	0 to 900	Threshold value for the SHDSL 15 minute interval ES alarm	10	10
SHDSL ES 24 HOUR	0 to 86,400	Threshold value for the SHDSL 24 hour interval ES alarm	170	170
SHDSL UAS 15 MIN	0 to 900	Threshold value for the SHDSL 15 minute interval UAS alarm	240	240
SHDSL UAS 24 HR	0 to 86,400	Threshold value for the SHDSL 24 hour interval UAS alarm	600	600
SHDSL LOW MARGIN	0 to 10	Threshold value at which alarm is set active if margin drops equal to or less than this number	01	01

CONFIG — SHDSL-A Alarm Types

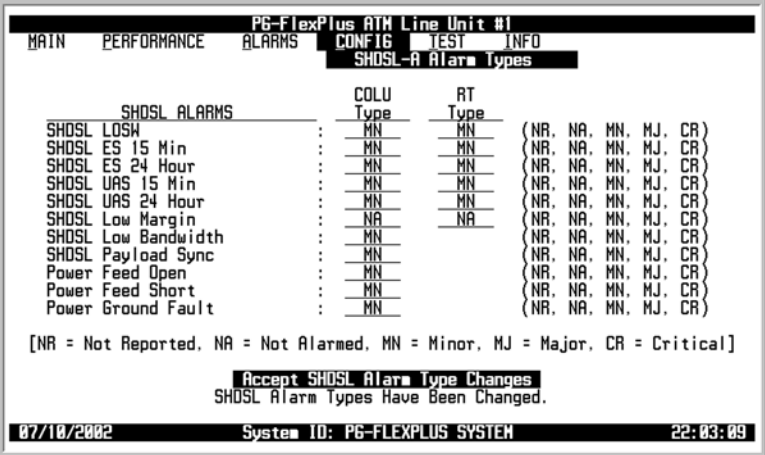
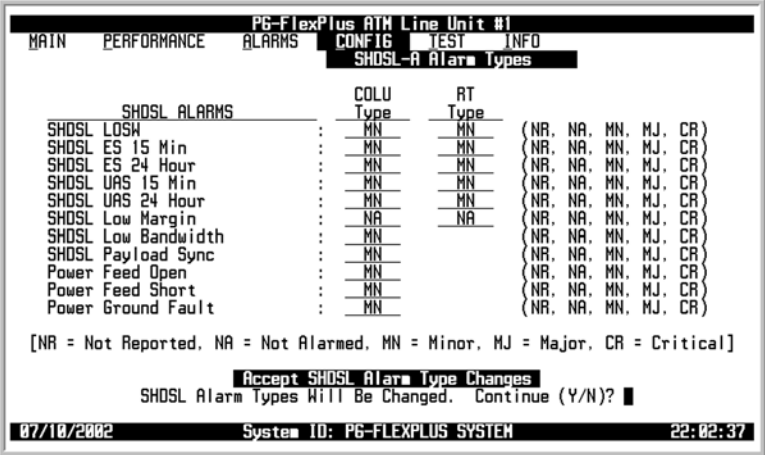
This screen allows provisioning of all SHDSL-A alarm severity types. Table 17 on page 72 lists the SHDSL-A Alarm Type fields, values, descriptions and default settings.

CONFIG — SHDSL-A Alarm Types

Step	Action																																																
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose SHDSL-A Alarm Types. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following menu items: MAIN, PERFORMANCE, ALARMS, CONFIG (selected), TEST, INFO. Under CONFIG, the following options are listed: System Options, System Alarm Types, SHDSL-A Alarm Thrshlds, SHDSL-A Alarm Types (highlighted), SHDSL-B Alarm Thrshlds, SHDSL-B Alarm Types, ADSL-A Options, ADSL-A Alarm Thrshlds, ADSL-A Alarm Types, ADSL-B Options, ADSL-B Alarm Thrshlds, ADSL-B Alarm Types, and Set Factory Defaults. The status bar at the bottom shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 21:59:45.</p>																																																
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the configuration screen for SHDSL-A Alarm Types. It features a table with columns for 'SHDSL ALARMS', 'COLU Type', and 'RT Type'. The table lists various alarm types and their corresponding severity levels. Below the table, there is a legend: [NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical]. At the bottom of the screen, there is a button labeled 'Accept SHDSL Alarm Type Changes'. The status bar at the bottom shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 22:02:12.</p> <table border="1" data-bbox="516 1234 1185 1470"> <thead> <tr> <th>SHDSL ALARMS</th> <th>COLU Type</th> <th>RT Type</th> <th></th> </tr> </thead> <tbody> <tr> <td>SHDSL LOSS</td> <td>: MN</td> <td>MN</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL ES 15 Min</td> <td>: MN</td> <td>MN</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL ES 24 Hour</td> <td>: MN</td> <td>MN</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL UAS 15 Min</td> <td>: MN</td> <td>MN</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL UAS 24 Hour</td> <td>: MN</td> <td>MN</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL Low Margin</td> <td>: NA</td> <td>NA</td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL Low Bandwidth</td> <td>: MN</td> <td></td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>SHDSL Payload Sync</td> <td>: MN</td> <td></td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>Power Feed Open</td> <td>: MN</td> <td></td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>Power Feed Short</td> <td>: MN</td> <td></td> <td>(NR, NA, MN, MJ, CR)</td> </tr> <tr> <td>Power Ground Fault</td> <td>: MN</td> <td></td> <td>(NR, NA, MN, MJ, CR)</td> </tr> </tbody> </table>	SHDSL ALARMS	COLU Type	RT Type		SHDSL LOSS	: MN	MN	(NR, NA, MN, MJ, CR)	SHDSL ES 15 Min	: MN	MN	(NR, NA, MN, MJ, CR)	SHDSL ES 24 Hour	: MN	MN	(NR, NA, MN, MJ, CR)	SHDSL UAS 15 Min	: MN	MN	(NR, NA, MN, MJ, CR)	SHDSL UAS 24 Hour	: MN	MN	(NR, NA, MN, MJ, CR)	SHDSL Low Margin	: NA	NA	(NR, NA, MN, MJ, CR)	SHDSL Low Bandwidth	: MN		(NR, NA, MN, MJ, CR)	SHDSL Payload Sync	: MN		(NR, NA, MN, MJ, CR)	Power Feed Open	: MN		(NR, NA, MN, MJ, CR)	Power Feed Short	: MN		(NR, NA, MN, MJ, CR)	Power Ground Fault	: MN		(NR, NA, MN, MJ, CR)
SHDSL ALARMS	COLU Type	RT Type																																															
SHDSL LOSS	: MN	MN	(NR, NA, MN, MJ, CR)																																														
SHDSL ES 15 Min	: MN	MN	(NR, NA, MN, MJ, CR)																																														
SHDSL ES 24 Hour	: MN	MN	(NR, NA, MN, MJ, CR)																																														
SHDSL UAS 15 Min	: MN	MN	(NR, NA, MN, MJ, CR)																																														
SHDSL UAS 24 Hour	: MN	MN	(NR, NA, MN, MJ, CR)																																														
SHDSL Low Margin	: NA	NA	(NR, NA, MN, MJ, CR)																																														
SHDSL Low Bandwidth	: MN		(NR, NA, MN, MJ, CR)																																														
SHDSL Payload Sync	: MN		(NR, NA, MN, MJ, CR)																																														
Power Feed Open	: MN		(NR, NA, MN, MJ, CR)																																														
Power Feed Short	: MN		(NR, NA, MN, MJ, CR)																																														
Power Ground Fault	: MN		(NR, NA, MN, MJ, CR)																																														

CONFIG — SHDSL-A Alarm Types (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the field value, press SPACEBAR to toggle to the desired value, or press ↓ or ↑ to move to the next option. To save the SHDSL Alarm Type changes, select the Accept SHDSL Alarm Type Changes button, then press ENTER. From the SHDSL Alarm Types Will Be Changed. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the SHDSL Alarm Types changes, press Y. The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values
4	<p>Press ESC. The Main Menu screen reappears.</p>



- To retain the existing SHDSL Alarm Types, press **N**.

Table 17. SHDSL-A and SHDSL-B Alarm Types

SHDSL Alarms	Value	Description	COLU Type Default	RT Type Default
SHDSL LOSW(1)	CR, MJ, MN, NA, NR	SHDSL link has lost synchronization	MN	MN
SHDSL ES 15 Min(2)	CR, MJ, MN, NA, NR	Active if the 15 minute ES count equals or exceeds the threshold in the current 15 minute interval	MN	MN
SHDSL ES 24 Hour(2)	CR, MJ, MN, NA, NR	Active if the count equals or exceeds the threshold in the current 24 hour interval	MN	MN
SHDSL UAS 15 Min(3)	CR, MJ, MN, NA, NR	Active if the count equals or exceeds the threshold in the current 15 minute interval	MN	MN
SHDSL UAS 24 Hour(3)	CR, MJ, MN, NA, NR	Active if the count equals or exceeds the threshold in the current 24 hour interval	MN	MN
SHDSL Low Margin	CR, MJ, MN, NA, NR	Active if the margin equals or drops below the threshold	NA	NA
SHDSL Low Bandwidth	CR, MJ, MN, NA, NR	Active if the SHDSL bandwidth is not sufficient to support the services provided by the RT	MN	
SHDSL Payload Sync	CR, MJ, MN, NA, NR	Active if there is a problem detected in the SHDSL overhead channel	MN	
Power Feed Open	CR, MJ, MN, NA, NR	Open circuit detected on the SHDSL span	MN	
Power Feed Short	CR, MJ, MN, NA, NR	Short circuit detected on the SHDSL span	MN	
Power Ground Fault	CR, MJ, MN, NA, NR	Ground fault condition detected on the SHDSL span	MN	

(1) SHDSL LOSW: A condition that generally indicates the loop is down, thus data cannot be transmitted. The ARL-942 uses this parameter to derive UAS performance statistics.


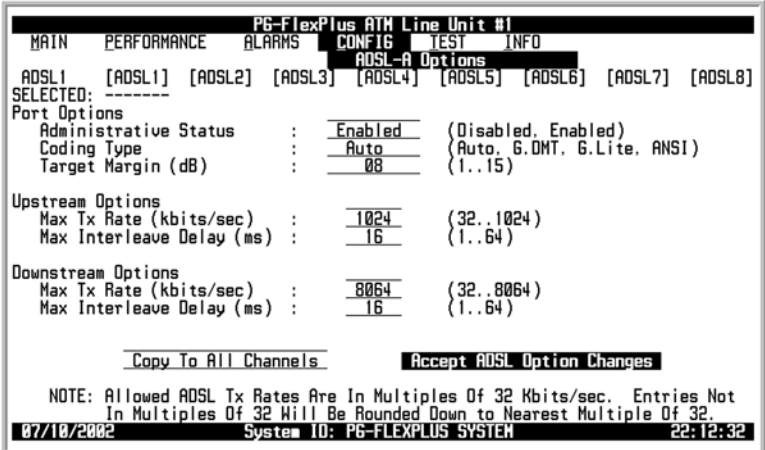
(2) SHDSL ES: Intervals during which at least one CRC is detected at the incoming SHDSL port.

(3) SHDSL UAS: An interval of 1 second during which a loop is down.

CONFIG — ADSL-A Options

This screen allows provisioning of ADSL-A parameters. Table 18 on page 75 lists the ADSL-A Option fields, values, descriptions and default settings.

CONFIG — ADSL-A Options

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose ADSL-A Options. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options System Alarm Types SHDSL-A Alarm Thrshlds SHDSL-A Alarm Types SHDSL-B Alarm Thrshlds SHDSL-B Alarm Types ADSL-A Options ADSL-A Alarm Thrshlds ADSL-A Alarm Types ADSL-B Options ADSL-B Alarm Thrshlds ADSL-B Alarm Types Set Factory Defaults 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:09:48 </pre>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the ADSL-A Options configuration screen with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Options ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Port Options Administrative Status : Enabled (Disabled, Enabled) Coding Type : Auto (Auto, G.DMT, G.Lite, ANSI) Target Margin (dB) : 08 (1..15) Upstream Options Max Tx Rate (kbits/sec) : 1024 (32..1024) Max Interleave Delay (ms) : 16 (1..64) Downstream Options Max Tx Rate (kbits/sec) : 8064 (32..8064) Max Interleave Delay (ms) : 16 (1..64) Copy To All Channels Accept ADSL Option Changes NOTE: Allowed ADSL Tx Rates Are In Multiples Of 32 Kbits/sec. Entries Not In Multiples Of 32 Will Be Rounded Down To Nearest Multiple Of 32. 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:12:32 </pre> <p>Select the appropriate ADSL facility (1-8) and press ENTER to view the screen. In IAD Mode, only ADSL1 is available.</p>

CONFIG — ADSL-A Options (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the field value, press SPACEBAR to toggle to the desired value, or press ↓ or ↑ to move to the next option. To save the ADSL-A Option changes, select the Accept ADSL Option Changes button, then press ENTER. From the ADSL Options Will Be Changed. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the ADSL-A Option changes, press Y. The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values <div data-bbox="479 646 1239 1096" data-label="Code-Block"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Options ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Port Options Administrative Status : Enabled (Disabled, Enabled) Coding Type : Auto (Auto, G.DMT, G.Lite, ANSI) Target Margin (dB) : 08 (1..15) Upstream Options Max Tx Rate (kbits/sec) : 1024 (32..1024) Max Interleave Delay (ms) : 16 (1..64) Downstream Options Max Tx Rate (kbits/sec) : 8064 (32..8064) Max Interleave Delay (ms) : 16 (1..64) Copy To All Channels Accept ADSL Option Changes ADSL Options Will Be Changed For ADSL1. Continue (Y/N)? █ 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:12:59 </pre> </div> <div data-bbox="479 1140 1239 1589" data-label="Code-Block"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Options ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- Port Options Administrative Status : Enabled (Disabled, Enabled) Coding Type : Auto (Auto, G.DMT, G.Lite, ANSI) Target Margin (dB) : 08 (1..15) Upstream Options Max Tx Rate (kbits/sec) : 1024 (32..1024) Max Interleave Delay (ms) : 16 (1..64) Downstream Options Max Tx Rate (kbits/sec) : 8064 (32..8064) Max Interleave Delay (ms) : 16 (1..64) Copy To All Channels Accept ADSL Option Changes ADSL Options Have Been Changed For ADSL1. 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:13:21 </pre> </div>



Table 18. ADSL-A and ASDL-B Options

System Options	Value	Description	Default
Port Options			
Administrative Status	Disabled, Enabled	Physical status of DSL port	Enabled
Coding Type	Auto, G.DMT, G.Lite, ANSI	Line coding type	Auto
Target Margin (dB)	1 – 15	Signal to Noise Ratio. 0 dB represents operation at a 10^{-7} bit error rate.	8 dB
*Upstream Options			
Max Tx Rate (kbits/sec)	32 – 1024	Upstream transmit data rate	1024 kbits/sec
Max Interleave Delay (ms)	1 – 64	Forward error correction transmission delay of the interleaved path	16 ms
*Downstream Options			
Max Tx Rate (kbits/sec)	32 – 8064	Downstream transmit data rate	8064 kbits/sec
Max Interleave Delay (ms)	1 – 64	Forward error correction transmission delay of the interleaved path	16 ms
*These are the maximum values and will change based on the coding type selected. Transmit and receive rates include payload and overhead.			

CONFIG —ADSL-A Alarm Thresholds

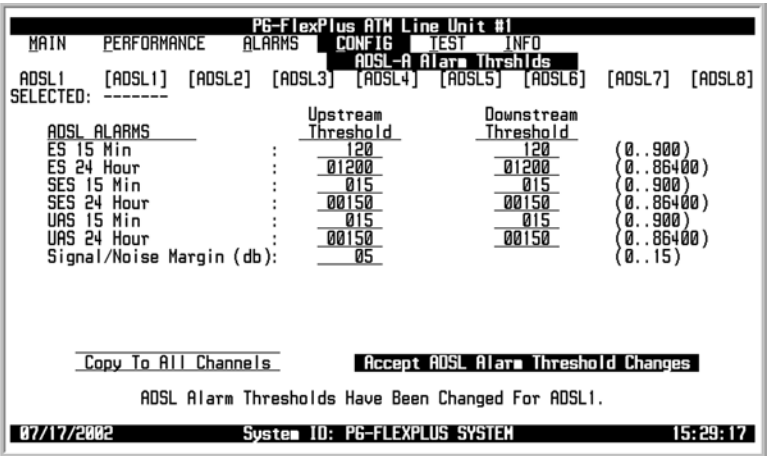
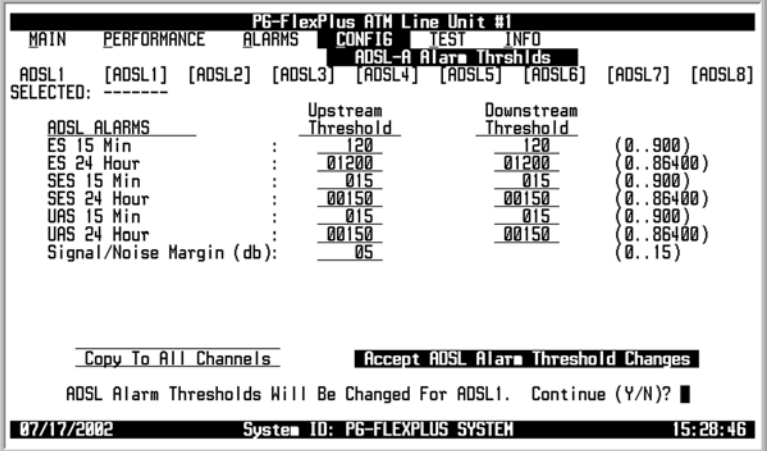
This screen allows the provisioning of ADSL-A alarm thresholds. The fields on this screen are measured hourly and daily. [Table 19 on page 78](#) lists the ADSL-A Alarm Threshold fields, values, descriptions and default settings.

CONFIG —ADSL-A Alarm Thresholds

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose ADSL-A Alarm Thresholds. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options System Alarm Types SHDSL-A Alarm Thrshlds SHDSL-A Alarm Types SHDSL-B Alarm Thrshlds SHDSL-B Alarm Types ADSL-A Options ADSL-A Alarm Thrshlds ADSL-A Alarm Types ADSL-B Options ADSL-B Alarm Thrshlds ADSL-B Alarm Types Set Factory Defaults 07/17/2002 System ID: PG-FLEXPLUS SYSTEM 15:26:52 </pre>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Alarm Thrshlds ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ADSL_ALARMS Upstream Downstream Threshold Threshold ES 15 Min : 120 120 (0..900) ES 24 Hour : 01200 01200 (0..86400) SES 15 Min : 015 015 (0..900) SES 24 Hour : 00150 00150 (0..86400) UAS 15 Min : 015 015 (0..900) UAS 24 Hour : 00150 00150 (0..86400) Signal/Noise Margin (db): 05 (0..15) Copy To All Channels Accept ADSL Alarm Threshold Changes 07/17/2002 System ID: PG-FLEXPLUS SYSTEM 15:28:11 </pre> <p>Select the appropriate ADSL facility (1-8) and press ENTER to view the screen.</p>

CONFIG —ADSL-A Alarm Thresholds (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the threshold value, press ↓ or ↑ to go to the appropriate ADSL-A Alarm Threshold. Then type the appropriate numbers on the keypad for each field. To save the ADSL-A Alarm Threshold changes, select the Accept ADSL Alarm Threshold Changes button, then press ENTER. From the ADSL Alarm Thresholds Will Be Changed For ADSL1. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the ADSL-A Alarm Threshold changes, press Y. The following events occur: <ul style="list-style-type: none"> all current values are set to desired values
4	<p>Press ESC. The Main Menu screen reappears.</p>



- To retain the existing ADSL-A Alarm Thresholds, press **N**.


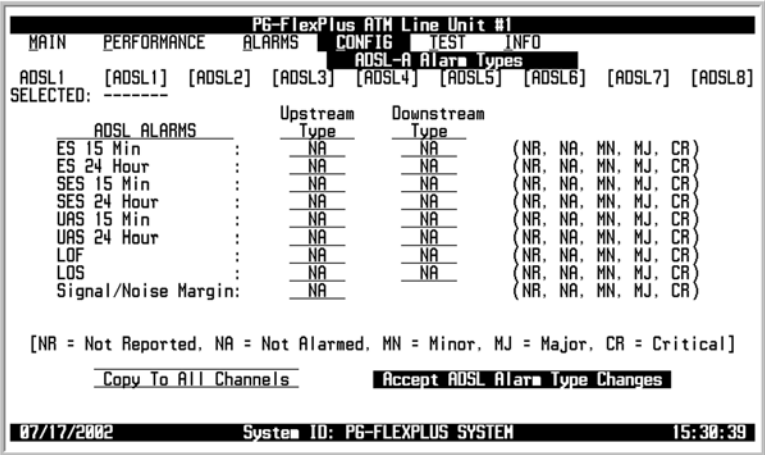
Table 19. ADSL Alarm Thresholds

Alarms	Value	Description	Upstream Threshold Default	Downstream Threshold Default
ES 15 Min	0 – 900	Possible threshold values	120	120
ES 24 Hour	0 – 86,400	Possible threshold values	1200	1200
SES 15 Min	0 – 900	Possible threshold values	15	15
SES 24 Hour	0 – 86,400	Possible threshold values	150	150
UAS 15 Min	0 – 900	Possible threshold values	15	15
UAS 24 Hour	0 – 86,400	Possible threshold values	150	150
Signal/Noise Margin (dB)	0 – 15	Possible threshold values	5	

CONFIG — ADSL-A Alarm Types

This screen allows provisioning for all ADSL-A alarms for the ADSL RTs. Table 20 on page 81 lists the ADSL Alarm Type fields, values, descriptions and default settings.

CONFIG — ADSL-A Alarm Types

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose ADSL-A Alarm Types. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO System Options System Alarm Types SHDSL-A Alarm Thrshlds SHDSL-A Alarm Types SHDSL-B Alarm Thrshlds SHDSL-B Alarm Types ADSL-A Options ADSL-A Alarm Thrshlds ADSL-A Alarm Types ADSL-B Options ADSL-B Alarm Thrshlds ADSL-B Alarm Types Set Factory Defaults 07/17/2002 System ID: PG-FLEXPLUS SYSTEM 15:29:50 </pre>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following content:</p> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO ADSL-A Alarm Types ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8] SELECTED: ----- ADSL ALARMS Upstream Downstream Type Type ES 15 Min : NA NA (NR, NA, MN, MJ, CR) ES 24 Hour : NA NA (NR, NA, MN, MJ, CR) SES 15 Min : NA NA (NR, NA, MN, MJ, CR) SES 24 Hour : NA NA (NR, NA, MN, MJ, CR) URS 15 Min : NA NA (NR, NA, MN, MJ, CR) URS 24 Hour : NA NA (NR, NA, MN, MJ, CR) LOF : NA NA (NR, NA, MN, MJ, CR) LOS : NA NA (NR, NA, MN, MJ, CR) Signal/Noise Margin: NA NA (NR, NA, MN, MJ, CR) [NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical] Copy To All Channels Accept ADSL Alarm Type Changes 07/17/2002 System ID: PG-FLEXPLUS SYSTEM 15:30:39 </pre> <p>Select the appropriate ADSL facility (1-8) and press ENTER to view the screen.</p>

CONFIG — ADSL-A Alarm Types (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <ol style="list-style-type: none"> To change the field value, press SPACEBAR to toggle to the desired value, or press ↓ or ↑ to move to the next option. To copy values to all channels, select the Copy to All Channels button, then press ENTER. To save the ADSL-A Alarm Type changes, select the Accept ADSL Alarm Type Changes button, then press ENTER. From the ADSL Alarm Types Will Be Changed. Continue (Y/N)? prompt, the following actions can be taken: <ul style="list-style-type: none"> To save the ADSL-A Alarm Types changes, press Y. The following events occur: <ul style="list-style-type: none"> all current values are set to desired values
4	<p>Press ESC. The Main Menu screen reappears.</p>

```

PG-FlexPlus ATM Line Unit #1
MAIN PERFORMANCE ALARMS CONFIG TEST INFO
ADSL-A Alarm Types
ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8]
SELECTED: -----

ADSL ALARMS          Upstream   Downstream
Type                 Type
ES 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
ES 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
SES 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
SES 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
URS 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
URS 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
LOF                   :      NA      NA      (NR, NA, MN, MJ, CR)
LOS                   :      NA      NA      (NR, NA, MN, MJ, CR)
Signal/Noise Margin:      NA      NA      (NR, NA, MN, MJ, CR)

[NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical]

Copy To All Channels      Accept ADSL Alarm Type Changes
ADSL Alarm Types Will Be Changed For ADSL1. Continue (Y/N)?
07/17/2002                System ID: PG-FLEXPLUS SYSTEM                15:31:13
    
```

```

PG-FlexPlus ATM Line Unit #1
MAIN PERFORMANCE ALARMS CONFIG TEST INFO
ADSL-A Alarm Types
ADSL1 [ADSL1] [ADSL2] [ADSL3] [ADSL4] [ADSL5] [ADSL6] [ADSL7] [ADSL8]
SELECTED: -----

ADSL ALARMS          Upstream   Downstream
Type                 Type
ES 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
ES 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
SES 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
SES 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
URS 15 Min           :      NA      NA      (NR, NA, MN, MJ, CR)
URS 24 Hour           :      NA      NA      (NR, NA, MN, MJ, CR)
LOF                   :      NA      NA      (NR, NA, MN, MJ, CR)
LOS                   :      NA      NA      (NR, NA, MN, MJ, CR)
Signal/Noise Margin:      NA      NA      (NR, NA, MN, MJ, CR)

[NR = Not Reported, NA = Not Alarmed, MN = Minor, MJ = Major, CR = Critical]

Copy To All Channels      Accept ADSL Alarm Type Changes
ADSL Alarm Types Have Been Changed For ADSL1.
07/17/2002                System ID: PG-FLEXPLUS SYSTEM                15:31:48
    
```

- To retain the existing ADSL-A Alarm Types, press **N**.



Table 20. ADSL-A and ADSL-B Alarm Types

ADSL Alarm	Type	Description	Upstream Type Default	Downstream Type Default
ES 15 Min	CR, MJ, MN, NA, NR	15 minute ES count in the up or downstream direction has exceeded this threshold	NA	NA
ES 24 Hour	CR, MJ, MN, NA, NR	ES 24 Hour count in the up or downstream direction has exceeded this threshold	NA	NA
SES 15 Min	CR, MJ, MN, NA, NR	SES 15 Minute ES count in the up or downstream direction has exceeded this threshold	NA	NA
SES 24 Hour	CR, MJ, MN, NA, NR	SES 24 Hour count in the up or downstream direction has exceeded this threshold	NA	NA
UAS 15 Min	CR, MJ, MN, NA, NR	UAS 15 Minute count in the up or downstream direction has exceeded this threshold	NA	NA
UAS 24 Hour	CR, MJ, MN, NA, NR	UAS 24 Hour count in the up or downstream direction has exceeded this threshold	NA	NA
LOF	CR, MJ, MN, NA, NR	Loss of ADSL Framing	NA	NA
LOS	CR, MJ, MN, NA, NR	Loss of ADSL Signal	NA	NA
Signal/Noise Margin	CR, MJ, MN, NA, NR	Signal/Noise Margin in the upstream direction	NA	

CONFIG — Set Factory Defaults

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

CONFIG — Set Factory Defaults

Step	Action
1	<p>At the Main Menu screen, select CONFIG. Press ↓ to choose Set Factory Defaults. The following screen appears.</p>  <p>The screenshot shows a terminal window with a menu structure. At the top, it says 'PG-FlexPlus ATM Line Unit #1'. Below that are several menu options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The 'CONFIG' option is selected, and a sub-menu is displayed with the following items: System Options, System Alarm Types, SHDSL-A Alarm Thrshlds, SHDSL-A Alarm Types, SHDSL-B Alarm Thrshlds, SHDSL-B Alarm Types, ADSL-A Options, ADSL-A Alarm Thrshlds, ADSL-A Alarm Types, ADSL-B Options, ADSL-B Alarm Thrshlds, ADSL-B Alarm Types, and 'Set Factory Defaults' which is highlighted with a black bar. At the bottom of the terminal window, it shows the date '07/10/2002', 'System 10: PG-FLEXPLUS SYSTEM', and the time '22:20:59'.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the following text: 'Configuration Data Will Be Set To Factory Defaults.' followed by 'Continue (Y/N)? █'. At the bottom of the terminal window, it shows the date '07/10/2002', 'System 10: PG-FLEXPLUS SYSTEM', and the time '22:21:26'.</p> <p>CAUTION <i>Setting to Factory Defaults may cause a loss of service.</i></p>

CONFIG — Set Factory Defaults (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>To reset the system options back to the original factor default settings, press ENTER. From the Configuration Data Will Be Set To Factory Defaults. Continue (Y/N)? prompt, the following actions can be taken:</p> <ul style="list-style-type: none"> • To save the Factory Default changes, press Y. The following events occur: <ul style="list-style-type: none"> – all current values are reset to the factory default values <div data-bbox="477 604 1240 1058" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO Set Factory Defaults Configuration Data Has Been Set To Factory Defaults. Press <ENTER> To Resume Screens. 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:21:58 </pre> </div> <ul style="list-style-type: none"> • To retain the existing configuration data, press N.
4	<p>Press ESC. The Main Menu screen reappears.</p>

CONFIG — SHDSL-B Alarm Thresholds

CONFIG — SHDSL-B Alarm Types

CONFIG — ADSL-B Options

CONFIG — ADSL-B Alarm Thresholds

CONFIG — ADSL-B Alarm Types

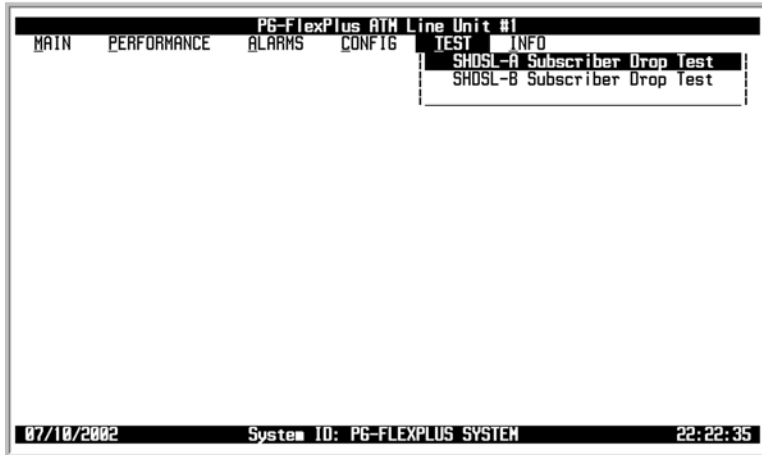
Please refer to CONFIG — SHDSL-A and ADSL-A configuration screens since they operate identically.

TEST MENU OPTIONS

The Test Menu provides access to the SHDSL Subscriber Drop Test Facility.




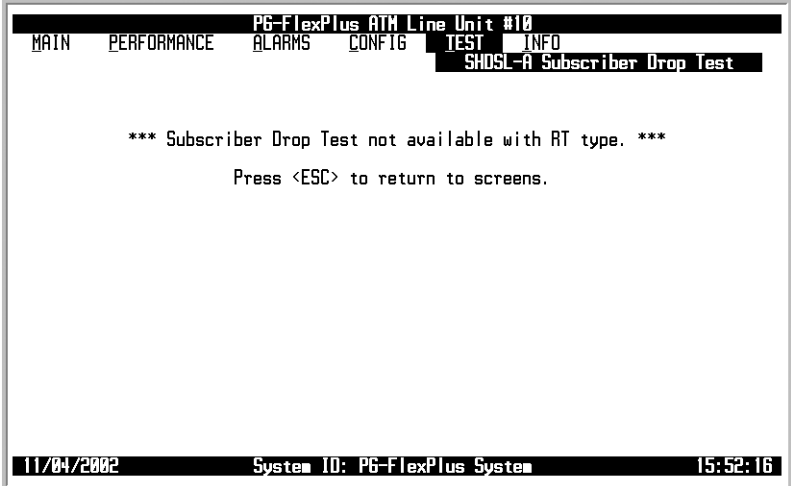
RAM applications do not have this testing capability.



TEST — SHDSL-A Subscriber Drop Test

Drop tests are not available on the ARL-942.

TEST — SHDSL-A Subscriber Drop Test

Step	Action
1	<p>At the Main Menu screen, select TEST. Press ↓ to choose SHDSL-A Subscriber Drop Test. The following screen appears.</p>  <p>The screenshot shows a terminal window with a menu at the top: 'PG-FlexPlus ATM Line Unit #1'. Below this are several menu items: 'MAIN', 'PERFORMANCE', 'ALARMS', 'CONFIG', 'TEST', and 'INFO'. The 'TEST' item is highlighted, and a sub-menu is displayed to its right, listing 'SHDSL-A Subscriber Drop Test' and 'SHDSL-B Subscriber Drop Test'. At the bottom of the terminal, the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and time '22:22:35' are visible.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows a terminal window with the same menu at the top. The 'TEST' item is highlighted, and the sub-menu shows 'SHDSL-A Subscriber Drop Test' selected. The main area of the terminal displays the following text: '*** Subscriber Drop Test not available with AT type. ***' followed by 'Press <ESC> to return to screens.' At the bottom, the date '11/04/2002', 'System ID: PG-FlexPlus System', and time '15:52:16' are visible.</p>
3	<p>Press ESC. The Main Menu screen reappears.</p>

TEST — SHDSL-B Subscriber Drop Test

Please refer to TEST — SHDSL-A test screen since it operates identically.

INFORMATION MENU OPTIONS

The Information Menu provides technical information about the system. Refer to [Table 21](#) for sub-menu options and descriptions.


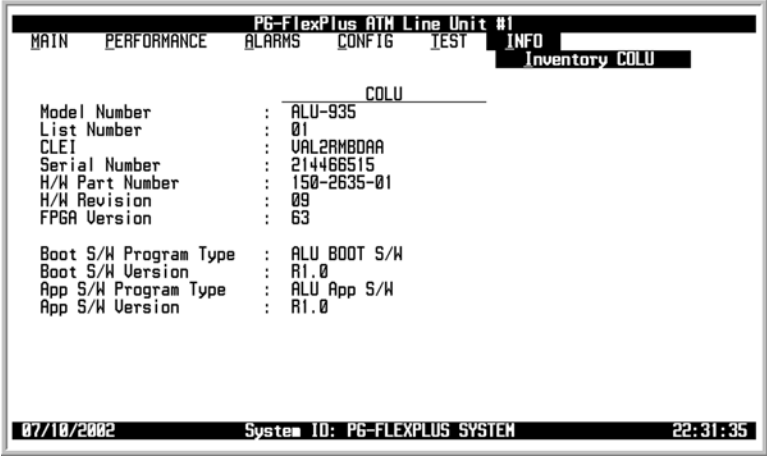


Table 21. Information Menu Options

Sub-Menu Options	Sub-Menu Descriptions
Inventory COLU	Displays product identification information, manufacturing data, software and hardware revisions for COLU
Inventory RT(s)	Displays product identification information, manufacturing data, software and hardware revisions for RTs
Inventory ADSL-A	Display manufacturing information on ATU-R and ATU-C units (if coded by manufacturer)
Inventory ADSL-B	Display manufacturing information on ATU-R and ATU-C units (if coded by manufacturer)
COLU Event Log	Displays technical information about the ARL-942
RT Event Log	Displays information on events that occurred for the RT, but are not Alarmed events
Help	Provides information on using the system screens and menus


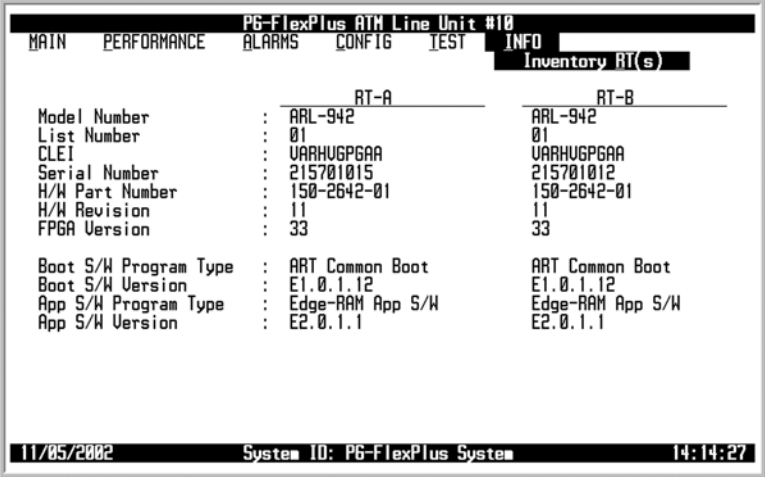
INFO — Inventory COLU

This screen displays product identification information, manufacturing data, software and hardware revisions for COLU.

Step	Action
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose Inventory COLU. The following screen appears.</p>  <p>The screenshot shows a terminal window titled "PG-FlexPlus ATM Line Unit #1". The menu options are: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The "INFO" option is highlighted, and a sub-menu is displayed with the following options: Inventory COLU (highlighted), Inventory RT(s), Inventory ADSL-A, Inventory ADSL-B, COLU Event Log, RT Event Logs, and Help. At the bottom of the screen, it displays "07/10/2002", "System ID: PG-FLEXPLUS SYSTEM", and "22:31:07".</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the "Inventory COLU" screen. At the top, the menu options are: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The "INFO" option is highlighted, and the "Inventory COLU" option is also highlighted. Below this, the following information is displayed:</p> <pre> COLU Model Number : ALU-935 List Number : 01 CLEI : UAL2RMBDAA Serial Number : 214466515 H/W Part Number : 150-2635-01 H/W Revision : 09 FPGA Version : 63 Boot S/W Program Type : ALU BOOT S/W Boot S/W Version : R1.0 App S/W Program Type : ALU App S/W App S/W Version : R1.0 </pre> <p>At the bottom of the screen, it displays "07/10/2002", "System ID: PG-FLEXPLUS SYSTEM", and "22:31:35".</p>
3	<p>Press ESC. The Main Menu screen reappears.</p>


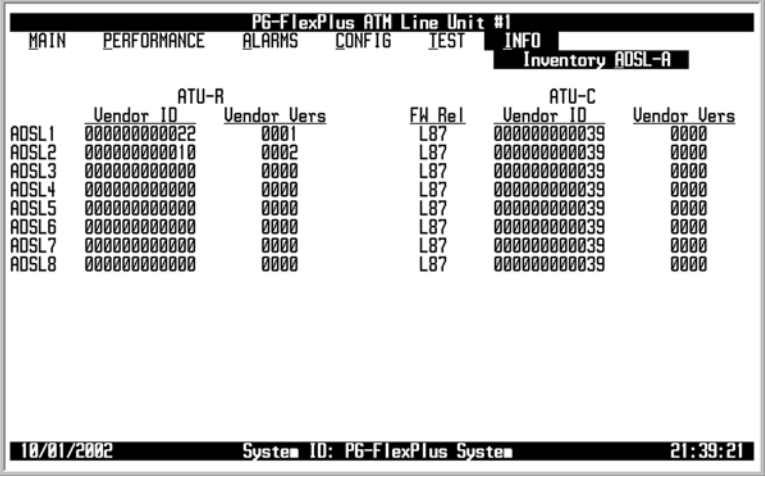
INFO — Inventory RT(s)

This screen displays product identification information, manufacturing data, software and hardware revisions for the RTs.

Step	Action
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose Inventory RT(s). The following screen appears.</p> 
2	<p>Press ENTER. The following screen appears.</p> 
3	<p>Press ESC. The Main Menu screen reappears.</p>

INFO — Inventory ADSL-A

This screen displays manufacturer information on ATU-R and ATU-C units (if coded by manufacturer).

Step	Action																																																		
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose Inventory ADSL-A. The following screen appears.</p>  <p>The screenshot shows a terminal window with the title 'PG-FlexPlus ATM Line Unit #1'. The main menu options are MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The INFO sub-menu is open, showing options: Inventory COLU, Inventory RT(s), Inventory ADSL-A, Inventory ADSL-B, COLU Event Log, RT Event Logs, and Help. The status bar at the bottom shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 22:33:09.</p>																																																		
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the 'Inventory ADSL-A' screen. It displays a table with columns for ATU-R and ATU-C units. The ATU-R section has columns for Vendor ID and Vendor Vers. The ATU-C section has columns for FW Rel, Vendor ID, and Vendor Vers. The data is as follows:</p> <table border="1"> <thead> <tr> <th colspan="2">ATU-R</th> <th colspan="3">ATU-C</th> </tr> <tr> <th>Vendor ID</th> <th>Vendor Vers</th> <th>FW Rel</th> <th>Vendor ID</th> <th>Vendor Vers</th> </tr> </thead> <tbody> <tr> <td>ADSL1 00000000022</td> <td>0001</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL2 00000000010</td> <td>0002</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL3 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL4 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL5 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL6 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL7 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> <tr> <td>ADSL8 00000000000</td> <td>0000</td> <td>L87</td> <td>00000000039</td> <td>0000</td> </tr> </tbody> </table> <p>The status bar at the bottom shows the date 10/01/2002, System ID: PG-FlexPlus System, and time 21:39:21.</p>	ATU-R		ATU-C			Vendor ID	Vendor Vers	FW Rel	Vendor ID	Vendor Vers	ADSL1 00000000022	0001	L87	00000000039	0000	ADSL2 00000000010	0002	L87	00000000039	0000	ADSL3 00000000000	0000	L87	00000000039	0000	ADSL4 00000000000	0000	L87	00000000039	0000	ADSL5 00000000000	0000	L87	00000000039	0000	ADSL6 00000000000	0000	L87	00000000039	0000	ADSL7 00000000000	0000	L87	00000000039	0000	ADSL8 00000000000	0000	L87	00000000039	0000
ATU-R		ATU-C																																																	
Vendor ID	Vendor Vers	FW Rel	Vendor ID	Vendor Vers																																															
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ADSL2 00000000010	0002	L87	00000000039	0000																																															
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ADSL5 00000000000	0000	L87	00000000039	0000																																															
ADSL6 00000000000	0000	L87	00000000039	0000																																															
ADSL7 00000000000	0000	L87	00000000039	0000																																															
ADSL8 00000000000	0000	L87	00000000039	0000																																															
3	<p>Press ESC. The Main Menu screen reappears.</p>																																																		

INFO — Inventory ADSL-B


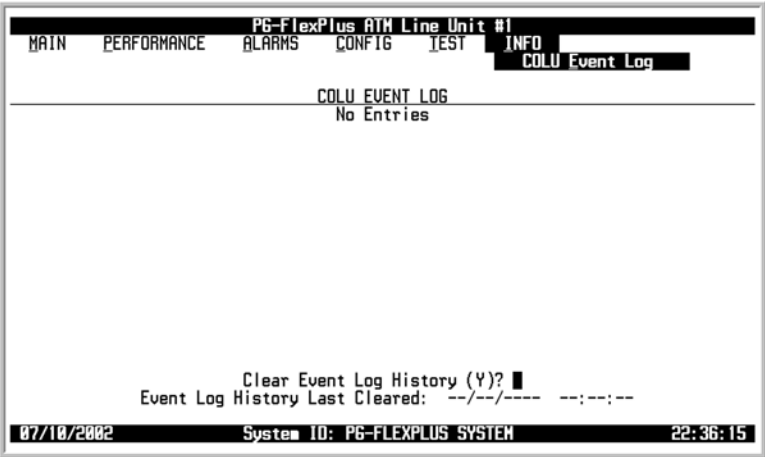
Please refer to INFO —Inventory ADSL-B information screen since it operates identically.

INFO — COLU Event Log

This screen displays information on events that occurred in the ALU-935. The events are alarmed as follows:

- MEMVER: A provisioning database conversion occurred when a software download occurred. MEMVER is information only. This event is cleared if you reset the ALU-935; however, it is not required. No customer action is required.
- MEMCHK: The provisioning factory defaults were restored due to a corrupt database. MEMCHK is information only. To clear the MEMCHK alarm, go CONFIG — Set Factory Defaults and accept the prompt. No customer action is required.

INFO — COLU Event Log

Step	Action
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose COLU Event Log. The following screen appears.</p>  <p>The screenshot shows a terminal window with a menu. At the top, it says 'PG-FlexPlus ATM Line Unit #1'. Below that are several menu options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The INFO option is highlighted. A sub-menu is displayed next to INFO, listing: Inventory COLU, Inventory RT(s), Inventory ADSL-A, Inventory ADSL-B, COLU Event Log (which is highlighted), RT Event Logs, and Help. At the bottom of the terminal, it shows the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and the time '22:35:49'.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the 'COLU EVENT LOG' screen. At the top, it says 'PG-FlexPlus ATM Line Unit #1'. Below that are menu options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The INFO option is highlighted, and a sub-menu is displayed next to it, listing: COLU Event Log (which is highlighted). Below the menu, it says 'COLU EVENT LOG' and 'No Entries'. At the bottom of the terminal, it shows the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and the time '22:36:15'. There is also a prompt 'Clear Event Log History (Y)?' and 'Event Log History Last Cleared: --/--/---- --:--:--'.</p> <p>a. To clear the Event Log History, press Y at the Clear Event Log History (Y)? prompt. b. To retain the existing Event Log History, press ESC.</p>

INFO — COLU Event Log (Continued)



Step	Action
3	<p>The following actions can be taken:</p> <p>a. To confirm that you want to clear the Event Log History, press Y at the Event Log History Will Be Cleared. Continue (Y/N)? prompt.</p> <ul style="list-style-type: none"> The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values <div data-bbox="479 548 1239 999" data-label="Image"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO COLU Event Log ----- COLU EVENT LOG No Entries Event Log History Will Be Cleared. Continue (Y/N)? Event Log History Last Cleared: --/--/---- --:--:-- 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:36:42 </pre> </div> <div data-bbox="479 1058 1239 1509" data-label="Image"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO COLU Event Log ----- COLU EVENT LOG No Entries Clear Event Log History (Y)? Event Log History Last Cleared: 07/10/2002 22:37:06 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:37:07 </pre> </div> <p>b. To retain the existing Event Log History, press N.</p>

INFO — RT Event Log

This screen displays information on events that occurred within the RT. The events are alarmed as follows:

- MEMVER: A provisioning database conversion occurred when a software download occurred. MEMVER is information only. This event is cleared if you reset the ARL-942; however, it is not required. No customer action is required.
- MEMCHK: The provisioning factory defaults were restored due to a corrupt database. MEMCHK is information only. To clear the MEMCHK alarm, go CONFIG — Set Factory Defaults and accept the prompt. No customer action is required

INFO — RT Event Log


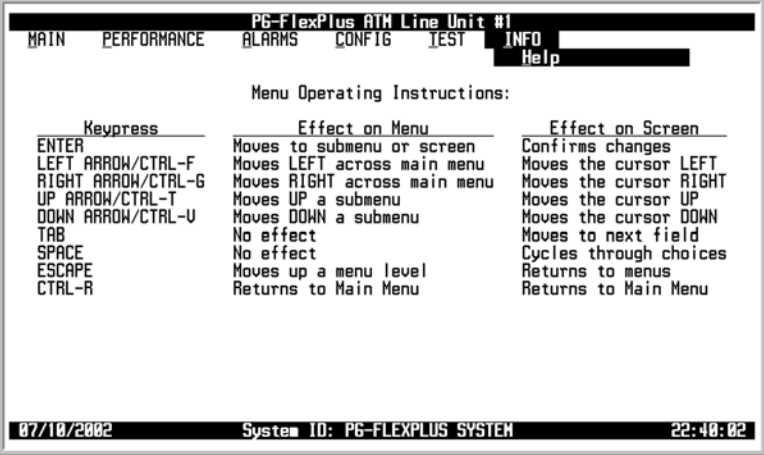
Step	Action
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose RT Event Logs. The following screen appears.</p>  <p>The screenshot shows a terminal window with a menu. At the top, it says 'PG-FlexPlus ATM Line Unit #1'. Below that are several menu options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The 'INFO' option is highlighted, and a sub-menu is displayed to its right with the following items: Inventory COLU, Inventory RT(s), Inventory ADSL-A, Inventory ADSL-B, COLU Event Log, RT Event Logs (which is highlighted), and Help. At the bottom of the terminal window, it shows the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and the time '22:37:39'.</p>
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the 'RT Event Logs' screen. At the top, it says 'PG-FlexPlus ATM Line Unit #1'. Below that are menu options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The 'INFO' option is highlighted, and a sub-menu is displayed to its right with the following items: RT Event Logs (which is highlighted). Below the menu, there are two sections: 'RT-A EVENT LOG' and 'RT-B EVENT LOG', both of which display 'No Entries'. At the bottom of the terminal window, it shows the date '07/10/2002', 'System ID: PG-FLEXPLUS SYSTEM', and the time '22:38:14'. There is also a prompt 'Clear Event Log History (Y)?' and 'Event Log History Last Cleared: 07/10/2002 22:37:06'.</p> <p>a. To clear the Event Log History, press Y at the Clear Event Log History (Y)? prompt. b. To retain the existing Event Log History, press ESC.</p>

INFO — RT Event Log (Continued)

Step	Action
3	<p>The following actions can be taken:</p> <p>a. To confirm that you want to clear the Event Log History, press Y at the Event Log History Will Be Cleared. Continue (Y/N)? prompt.</p> <ul style="list-style-type: none"> The following events occur: <ul style="list-style-type: none"> – all current values are set to desired values <div data-bbox="479 548 1239 999" data-label="Image"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO RT Event Logs RT-A EVENT LOG No Entries RT-B EVENT LOG No Entries Event Log History Will Be Cleared. Continue (Y/N)? Y Event Log History Last Cleared: 07/10/2002 22:37:06 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:38:43 </pre> </div> <div data-bbox="479 1058 1239 1509" data-label="Image"> <pre> PG-FlexPlus ATM Line Unit #1 MAIN PERFORMANCE ALARMS CONFIG TEST INFO RT Event Logs RT-A EVENT LOG No Entries RT-B EVENT LOG No Entries Clear Event Log History (Y)? Y Event Log History Last Cleared: 07/10/2002 22:39:10 07/10/2002 System ID: PG-FLEXPLUS SYSTEM 22:39:11 </pre> </div>
	<p>b. To retain the existing Event Log History, press N.</p>

INFO — Help

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

Step	Action																														
1	<p>At the Main Menu screen, select INFO. Press ↓ to choose Help. The following screen appears.</p>  <p>The screenshot shows a terminal window titled "PG-FlexPlus ATM Line Unit #1". The main menu has options: MAIN, PERFORMANCE, ALARMS, CONFIG, TEST, and INFO. The INFO option is highlighted. A sub-menu is displayed to the right of INFO, listing: Inventory COLU, Inventory AT(s), Inventory ADSL-A, Inventory ADSL-B, COLU Event Log, AT Event Logs, and Help. The Help option is highlighted. At the bottom of the screen, it shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 22:39:40.</p>																														
2	<p>Press ENTER. The following screen appears.</p>  <p>The screenshot shows the same terminal window as above, but now the 'Help' option in the sub-menu is highlighted. Below the sub-menu, the text "Menu Operating Instructions:" is displayed, followed by a table of keypresses and their effects.</p> <table border="1" data-bbox="511 1171 1209 1354"> <thead> <tr> <th>Keypress</th> <th>Effect on Menu</th> <th>Effect on Screen</th> </tr> </thead> <tbody> <tr> <td>ENTER</td> <td>Moves to submenu or screen</td> <td>Confirms changes</td> </tr> <tr> <td>LEFT ARROW/CTRL-F</td> <td>Moves LEFT across main menu</td> <td>Moves the cursor LEFT</td> </tr> <tr> <td>RIGHT ARROW/CTRL-G</td> <td>Moves RIGHT across main menu</td> <td>Moves the cursor RIGHT</td> </tr> <tr> <td>UP ARROW/CTRL-T</td> <td>Moves UP a submenu</td> <td>Moves the cursor UP</td> </tr> <tr> <td>DOWN ARROW/CTRL-U</td> <td>Moves DOWN a submenu</td> <td>Moves the cursor DOWN</td> </tr> <tr> <td>TAB</td> <td>No effect</td> <td>Moves to next field</td> </tr> <tr> <td>SPACE</td> <td>No effect</td> <td>Cycles through choices</td> </tr> <tr> <td>ESCAPE</td> <td>Moves up a menu level</td> <td>Returns to menus</td> </tr> <tr> <td>CTRL-R</td> <td>Returns to Main Menu</td> <td>Returns to Main Menu</td> </tr> </tbody> </table> <p>At the bottom of the screen, it shows the date 07/10/2002, System ID: PG-FLEXPLUS SYSTEM, and time 22:40:02.</p>	Keypress	Effect on Menu	Effect on Screen	ENTER	Moves to submenu or screen	Confirms changes	LEFT ARROW/CTRL-F	Moves LEFT across main menu	Moves the cursor LEFT	RIGHT ARROW/CTRL-G	Moves RIGHT across main menu	Moves the cursor RIGHT	UP ARROW/CTRL-T	Moves UP a submenu	Moves the cursor UP	DOWN ARROW/CTRL-U	Moves DOWN a submenu	Moves the cursor DOWN	TAB	No effect	Moves to next field	SPACE	No effect	Cycles through choices	ESCAPE	Moves up a menu level	Returns to menus	CTRL-R	Returns to Main Menu	Returns to Main Menu
Keypress	Effect on Menu	Effect on Screen																													
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DOWN ARROW/CTRL-U	Moves DOWN a submenu	Moves the cursor DOWN																													
TAB	No effect	Moves to next field																													
SPACE	No effect	Cycles through choices																													
ESCAPE	Moves up a menu level	Returns to menus																													
CTRL-R	Returns to Main Menu	Returns to Main Menu																													
3	<p>Press Esc. The Main Menu screen reappears.</p>																														

TROUBLESHOOTING AND FAULT ISOLATION

Table 22 provides troubleshooting and fault isolation for the ARL-942.

Table 22. ARL-942 Troubleshooting and Fault Isolation

LED	Color	State	Probable Cause	Solution
PWR	Green	On	OK	
		Off	ARL-942 is not receiving power from the ALU-935	Verify the ALU-935 is installed in the COTS and it is operating correctly. Check SHDSL loop faults such as shorts or grounds. Verify loop length is not exceeded.
SHDSL	Green	On	OK	
		Flashing (Fast)	SHDSL is in sync between the ARL-942 and the ALU-935, but the margin is below the threshold	Check the SHDSL loop for faults such as high resistance shorts or grounds or bridged taps. Verify loop length is not exceeded.
		Flashing (Slow)	SHDSL is attempting to sync	Check the SHDSL loop for faults such as high resistance shorts or grounds or bridged taps. Verify loop length is not exceeded.
		Off	SHDSL does not detect a signal from the ALU-935	Check the SHDSL loop for faults such as high resistance shorts or grounds. Verify loop length is not exceeded. Verify the COLU is installed and functioning.
FAULT	Red	On	An internal fault has been detected in the ARL-942	Replace the ARL-942
		Off	OK	
ADSL # (# = 1 – 8)	Green	On	OK	
		Flashing (Fast)	ADSL is in sync between the ARL-942 and the ALU-935 and the margin is below the threshold	Check the ADSL loop for faults such as high resistance shorts or grounds or bridged taps. Verify loop length is not exceeded.
		Flashing (Slow)	ADSL is attempting to sync	Check the ADSL loop for faults such as high resistance shorts or grounds or bridged taps. Verify loop length is not exceeded.
		Off	There is a problem with the ADSL loop, an ADSL modem is not detected, or the LEDs have timed out.	Press the FRESH LED button on the ARL-942. Check the ADSL loop faults such as shorts or grounds. Verify loop length is not exceeded.

ACRONYMS

A

ADSL – Asynchronous Digital Subscriber Line

ATM – Asynchronous Transfer Mode

AWG – American Wire Gauge

C

CO – Central Office

COLU – Central Office Line Unit

COTS – Central Office Terminal Shelf

CPE – Customer Premises Equipment

D

DDL – Derived Data Link

DLC – Digital Loop Carrier

DS0 – Digital Signal Level 0

DS1 – Digital Signal Level 1

DS3 – Digital Signal Level 3

DSL – Digital Subscriber Line

E

ES – Errored Seconds

I

IDLC – Integrated Digital Loop Carrier

L

LED – Light Emitting Diode

M

MLT – Mechanized Loop Testing

MU – Management Unit

MUX – Multiplexer

N

NEBS – Network Equipment Building System

NID – Network Interface Device

P

PMU – Management Unit

POTS – Plain Old Telephone Service

R

RAM – Remote Access Multiplexer

RMA – Return Material Authorization

RT – Remote Terminal

S**SES** – Severely Errored Seconds**SHDSL** – Single-pair High-bit-rate Digital Subscriber Line**SNMP** – Simple Network Management Protocol**SYNC** – Synchronization**T****TDM** – Time Divisioned Multiplexer**V****VF** –Voice Frequency

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.com

Knowledge Base: http://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:

1. 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: rma@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 and return to:

ADC DSL Systems, Inc.
14352 Franklin Ave.
Tustin, CA 92780-7013

Attention: **RMA (Number)**



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.
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Minnetonka, Minnesota USA 55343

For Technical Assistance:

800.366.3891



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