Model 135 Site Monitor

Model 135 Reference Document

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The Model 135

Introduction

The Model 135 remote site monitor is designed to help support personnel access maintenance ports of communication equipment from a remote location. It acts as a secure front end and implements automatic monitoring and reporting of temperature and electrical conditions in the equipment room.

The Model 135 is the successor to the Model 125. Designed in 1990, the Model 125 contained built-in VT-100 screens which provided real-time access to configuration and status information. It survived countless generations of personal computer operating systems.

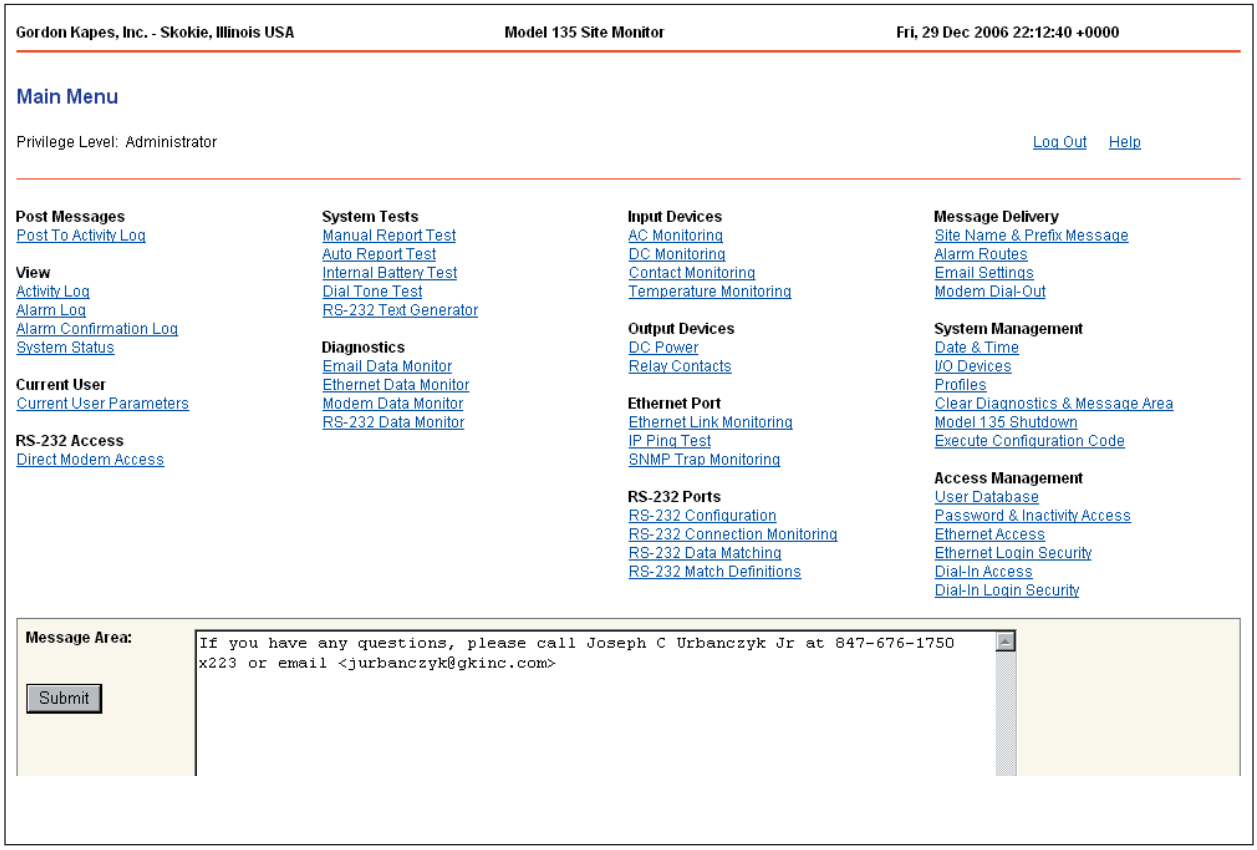
The Model 135 includes a 10/100 Mbps Ethernet port, six RS-232 ports with data rates up to 115 Kbps, telephone modem with data rates up to 33.6 Kbps (150 Kbps compressed), Caller ID, AC power monitoring, two DC inputs (–60 to +60 Volts), eight contact inputs, internal temperature monitoring, two relay contacts, two DC power outputs, and a real-time clock. Configuration data is maintained in flash memory. Software updates are uploaded through the Ethernet port and stored in flash memory. I/O devices are externally expandable through an I/O bus.

The unit is powered by an internal 12 Volt lead-acid battery and is charged by a universal 100-240 Vac power supply. Nominal time on battery power is eight hours. The battery charger includes a self test. If battery voltage falls below 10.00 Volts all functions except the real-time clock are shut off to protect the battery from deep discharge.

Alarm messages are sent by email through the Ethernet port, SMS format, and in text format through the dial-out telephone modem. Alarms can be triggered by combinations of time, input conditions, and data matches from RS-232 ports. Remote access to the RS-232 ports is through the Ethernet port or the telephone modem via TELNET. The RS-232 ports allow connection to legacy equipment in the equipment room.

Configuration screens are accessed through a web browser such as Internet Explorer, Netscape, or Mozilla Firefox. Users are required to enter a name and password to access the Model 135. Associated with each user name is a privilege level: Administrator, System, or Operator. Administrator is the highest level and can access all screens. System is an intermediate level and allows access to most screens except those affecting security. Operator is the lowest level and cannot configure system-wide parameters.

Main Menu


Gordon Kapes, Inc. - Skokie, Illinois USA
Model 135 Site Monitor
Fri, 29 Dec 2006 22:12:40 +0000
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Privilege Level: Administrator
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Dial-In Access
Dial-In Login Security
Message Area:
If you have any questions, please call Joseph C Urbanczyk Jr at 847-676-1750 x223 or email <jurbanczyk@gkinc.com>
Submit

Help for the Main Menu

RS-232 Port Access Using TELNET

Use TELNET to connect to the individual RS-232 ports. The user does not need to be on this screen to connect to the RS-232 ports, but for security reasons must be logged in through a web browser via HTTP. This can be done using the Ethernet port or the telephone modem. TELNET activity extends the inactivity logout time.

RS-232 Port 1 Name: RS-232 Port 1
RS-232 Port 2 Name: RS-232 Port 2
RS-232 Port 3 Name: RS-232 Port 3
RS-232 Port 4 Name: RS-232 Port 4
RS-232 Port 5 Name: RS-232 Port 5
RS-232 Port 6 Name: RS-232 Port 6

Modem Access via PPP

To connect via the telephone modem the user's computer must first start a dial-in network session using PPP (Point-to-Point Protocol). After that the user may start an FTP, HTTP, or TELNET session via the modem.

PPP Server IP Address: 192.168.0.135 is the default IP address that identifies the Model 135's internal modem when using point-to-point protocol. Use this address when starting an FTP, HTTP, or TELNET session via the modem.

Windows XP: To configure a PC for Dial-up Network Start-up click on Start, Settings, Network Connections, Dial-up Connection. This brings up the Connect Dial-up Connection window. Any User Name and Password are acceptable. Enter the phone number. Click *Dial*. When operating properly, a window displays the progress status: Dialing, Verifying user name and password, and then should disappear. After this point a resource such as TELNET may be used. *Example:* run telnet 192.168.0.135. The IP address must correspond to the PPP Server IP Address. To configure a PC for PPP click on Start, Settings, Network Connections, Dial-up Connection, Properties, Configure. Check Enable hardware flow control. Check Enable modem error control.

Windows 2000: To configure a PC for Dial-up Network Start-up click on Start, Settings, Network and Dial-up Connections, Make New Connection. Click button *Dial-up to the Internet*. Click button I *want to set up my Internet connection*. Click button *I connect through a phone line and a modem*. Select the modem to be used. Enter phone number to be dialed. Select advanced. Click button *PPP.* Any User Name and Password are acceptable. Enter Connection name (Dial-up Connection). When operating properly, a window displays the progress status: Dialing, Verifying user name and password, and then should disappear. After this point a resource such as TELNET may be used. *Example:* run telnet 192.168.0.135. The IP address must correspond to the PPP Server IP Address.

Help for File Transfer Using FTP

This screen explains how to download log and profile files from the Model 135 to the user's computer using FTP. Log files are sent in ASCII format with a carriage return and line feed separating each line. FTP can also upload profiles to the Model 135. Uploaded profiles are stored in FTP Profile. The FTP IP address is restricted to the last HTTP login. The Model 135 FTP resources are not usable through a firewall that blocks IP Port 20 or 21.

The downloadable files names are: actlog.txt, alarmlog.txt, saved.135, ftp.135, backup.135, and active.135.

Microsoft Command Line FTP: Start a session by clicking Run and entering FTP followed by the IP Address. The IP Address is in dot notation or is a domain name. Upon connection enter the Model 135 username. If a password is requested, enter the password. If login is successful use DIR to display a list of downloadable files. Use GET followed by a filename to download a file. Use PUT followed by a filename to upload a profile. Use QUIT to terminate the session.

Help for the Main Menu

Help for File Transfer Using FTP (continued)

Rhinosoft FTP Voyager: This is a commercial FTP program. Enter the IP Address (FTP Site), User Name (User ID), and Password on the FTP Site Profile Manager screen. Anonymous Login should not be checked. The PASV feature must be disabled on the Options/Connection screen. Then click *Connect*. A list of downloadable (from the Model 135) files is displayed on the right. A list of uploadable (to the Model 135) files is displayed on the left. Files are transferred by clicking on the filename.

GlobalScape Cute FTP: This is a commercial FTP program. The Model 135 username and password are entered on the Site Manager screen with the Login method set to normal. Then click *CONNECT*. A list of downloadable files is automatically displayed. Files are transferred by clicking on the filename and then clicking on the download or upload button. The PASV feature must be disabled by selecting PORT on the Tools/Global Options/Data Mode select box.

Microsoft Internet Explorer: Although this is a web browser it can also be used to download files using FTP. The Model 135 username and password are entered on the address bar as: ftp://username:password@ip-address

Help for Common Terms

The Model 135 screens share a number of common terms.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.
--- indicates that Configuration Mode is NOT CONFIGURED.
NORMAL indicates that Configuration Mode is DISABLED or ENABLED and the alarm thresholds are satisfied.
ALARM indicates that Configuration Mode is DISABLED or ENABLED and an alarm threshold has not been satisfied.
ALARM REPORTED indicates that Configuration Mode is ENABLED and an alarm threshold has not been satisfied. The Threshold Time has been satisfied, the alarm message has been posted in the alarm log, and possibly sent to an alarm routing group.

Alarm Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED.
--- indicates that Configuration Mode is NOT CONFIGURED.
DISABLED indicates that alarm reporting is disabled.
ENABLED indicates that alarm reporting is enabled.
SLEEP indicates that alarm reporting is temporarily suspended.
NOT DETECTED indicates that Configuration Mode is DISABLED or ENABLED and the physical I/O device is not detected on the auxiliary I/O bus.

Alarm Status Override: provides manual override of the Alarm Status. This selection is not stored in the Active Profile.
OFF does nothing.
FORCED ENABLE forces Alarm Status from SLEEP to ENABLED.
FORCED SLEEP forces Alarm Status from ENABLED to SLEEP.

Automatic Mode: DISABLED indicates that automatic testing is disabled. ENABLED indicates that automatic testing is enabled. In either case alarm reporting is enabled.

Configuration Mode:
NOT CONFIGURED indicates that some parameters have not been configured and alarm reporting is disabled.
DISABLED indicates that all parameters have been configured and that alarm reporting is disabled.
ENABLED indicates that all parameters have been configured and alarm reporting is enabled.
REMOVE DEVICE ID is a momentary operation that removes the device ID from being associated with this I/O configuration. Does not apply to devices that are INTERNAL.

Status: Similar to Alarm Status but pertains to an output device.

Help for the Main Menu

Abbreviations, Standards, and Terminology

Default Gateway: Local IP address that connects the local subnet to another network.

DNS: Domain Name System. Translates a domain name into an IP address. Uses IP port 53. (RFC 1034, 1035)

FTP: File Transfer Protocol. Sends files across a network. Uses IP ports 20 and 21. (RFC 959)

HTML: Hypertext Markup Language. ASCII script that creates screens when processed by a web browser.

HTTP: Hypertext Transfer Protocol. Sends HTML files across a network. Uses IP port 80. (RFC 2068)

IP: Internet Protocol. Layer 3 protocol used to transport TCP. (RFC 791, 919, 922)

IP Address: A 32-bit number (IPv4) containing the network ID. Expressed as four decimal numbers separated by dots (192.168.1.2).

ISP: Internet Service Provider. Local connection to internet backbone.

Ping: Basic computer network test tool to determine whether a particular host is operating properly. Uses Internet Control Message Protocol. There is no IP port number. (RFC 792)

PPP: Point-to-Point Protocol. Used by Model 135 to transport IP data over the telephone modem. (RFC 1661)

RFC: Request For Comments. Documents that define internet protocols. RFCs are available free of charge on the internet.

SMS: Short Message Service. Sends short text messages to mobile devices.

SMTP: Simple Mail Transport Protocol. Sends email messages across the internet. Uses IP port 25. (RFC 2821-2822)

SNMP: Simple Network Management Protocol. Receives trap messages on IP port 162. (RFC 1157, 1902-1908, 2570-2576)

SNTP: Simple Network Time Protocol. Receives time on IP port 123. (RFC 1769, 2030)

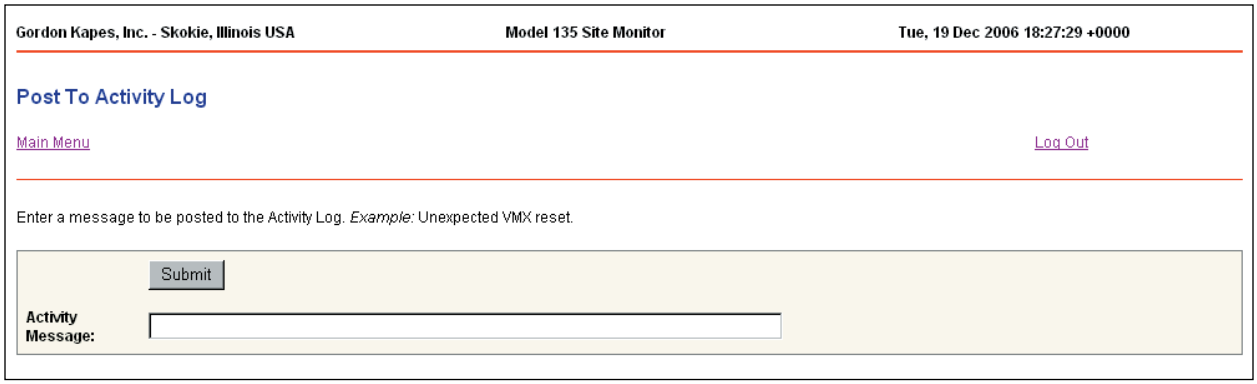
Subnet Mask: A 32-bit number with zeros in the local portion of the IP address (255.255.255.0). Addresses outside this range are sent to the default gateway.

TCP: Transmission Control Protocol. Used for reliable data stream service. (RFC 793)

TELNET: Implements a simple remote terminal using TCP. Uses IP port 23. (RFC 854)

UDP: User Datagram Protocol. Simple but not reliable datagram service. (RFC 768)

Post Messages—Post to Activity Log



Help for Post Messages—Post to Activity Log

There is no help for this screen.

View—Activity Log

Help for View—Activity Log

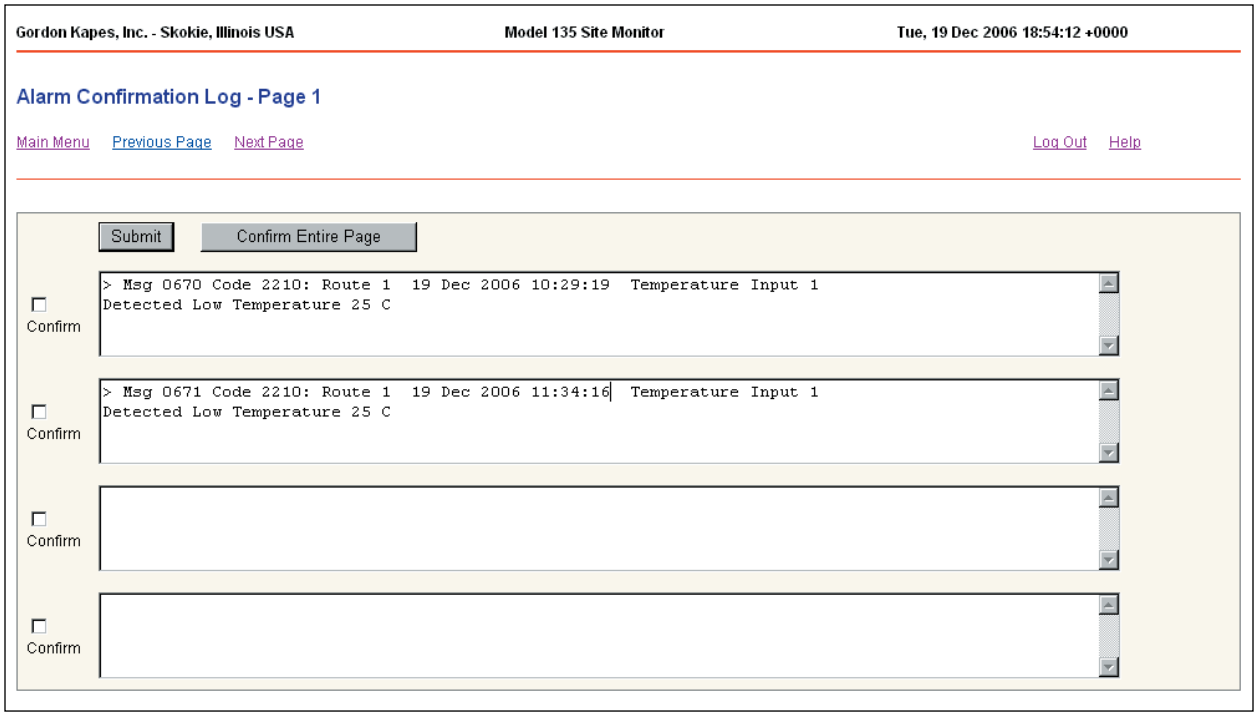
The Activity Log shows the latest system activity. This includes system startups, user logins, user logouts, configuration changes, email activity, and dial-out activity.

View—Alarm Log

Help for View—Alarm Log

The Alarm Log shows the latest alarms.

View—Alarm Configuration Log



Help for View—Alarm Confirmation Log

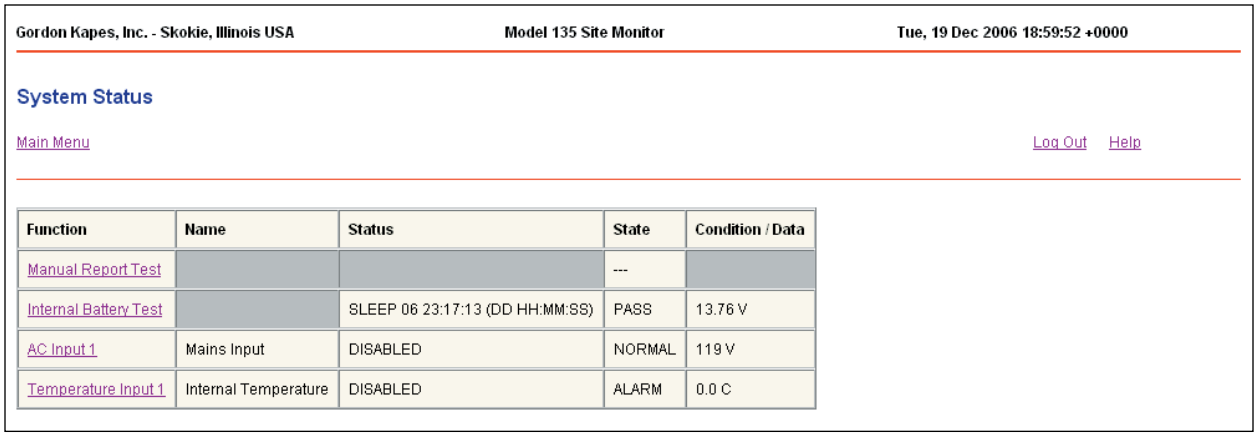
This screen shows alarm messages waiting to be confirmed. Alarms remain in the Alarm Confirmation Log until they are confirmed or all users have been notified and the final WAIT time has expired.

Submit: Click *Submit* to send changes to the system.

Confirm Entire Page: Similar to Submit but confirms all messages on this page whether selected or not.

Confirm: Select the alarm messages to be confirmed, then press *Submit*. Only one page at a time can be confirmed. This removes the message from the Alarm Confirmation Log and terminates sending the message to other users on the alarm route. All unconfirmed messages scroll up to fill the empty message.

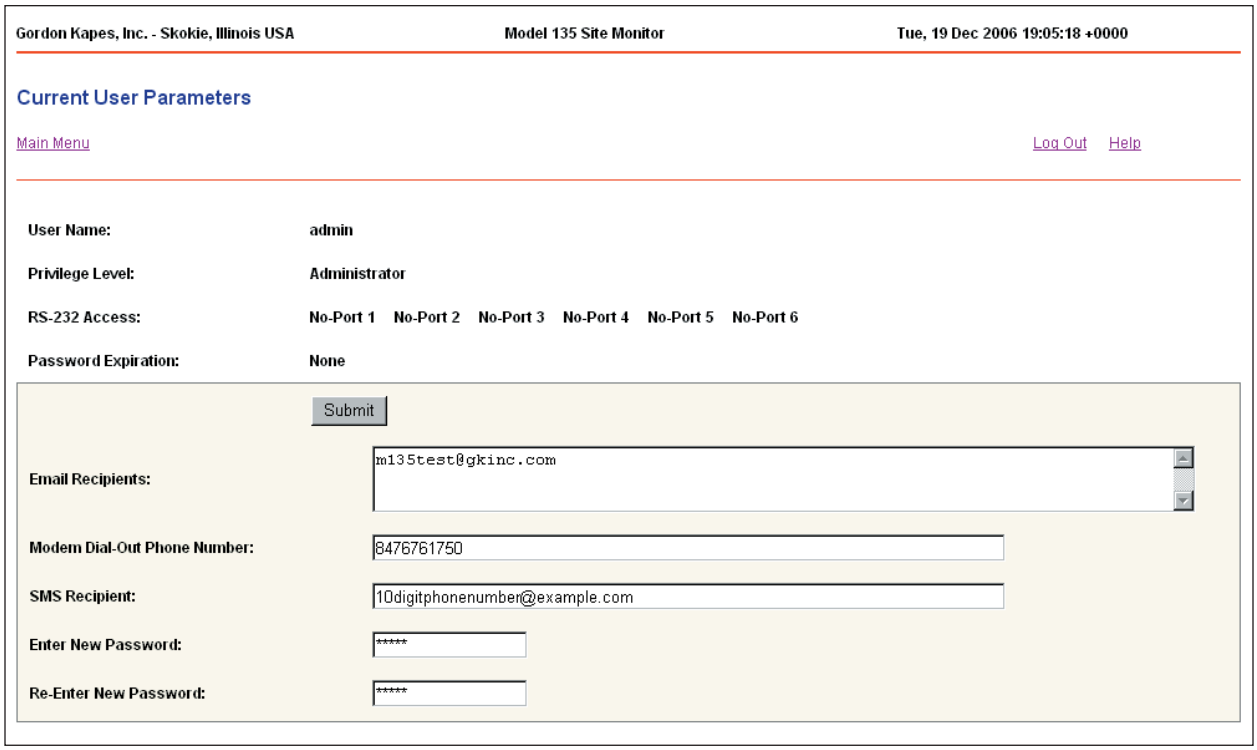
View—System Status



Help for View—System Status

The System Status screen provides an overview of Model 135 site activities. Only configured resources are displayed.

Current User—Current User Parameters



Help for Current User—Current User Parameters

This screen shows the current user profile. It also allows the current user to change some of the parameters. Clicking submit shows whether the new password was accepted.

User Name: Shows the name of the currently logged-in user.

Privilege Level: Shows Operator, System, or Administrator. Determines which menus the user can access.

RS-232 Access: Shows No or Yes. Shows which RS-232 ports the user can access.

Password Expiration: Shows the number of days until the current password expires, EXPIRED, or NONE. Entering a new password updates the number of days until expiration. If user-renewable password is enabled, the user may log in with an expired password but is immediately asked for a new password.

Submit: Click *Submit* to send changes to the system.

Email Recipients: Enter the email address or addresses where the user will receive alarm messages in SMTP format. *Example:* fred@example.com, “Barney” <barney@example.com>. Use a comma (,) or new line (Enter) to separate multiple recipients. This field is sent in quote angled-bracket format. *Example:* fred@example.com is sent as “user” <fred@example.com> where user is the name in the User Name field. “Barney” <barney@example.com> is sent exactly as shown.

Modem Dial-Out Phone Number: Enter the telephone number where the user will receive alarm messages in plain text format. Numbers only. No separator characters such as hyphens, periods, or spaces. Comma (,) causes a two-second dial pause (specified by modem register S8). W waits for dial tone for up to 50 seconds (USA - register S7) or two seconds (W-class - register S6). @ waits for silence for at least five seconds.

SMS Recipient: Enter the email address where the user will receive alarm messages in SMS format. *Example:* 9995551212@example.com. SMS is similar to email, but the site name, serial number, software version number, and prefix message are not sent.

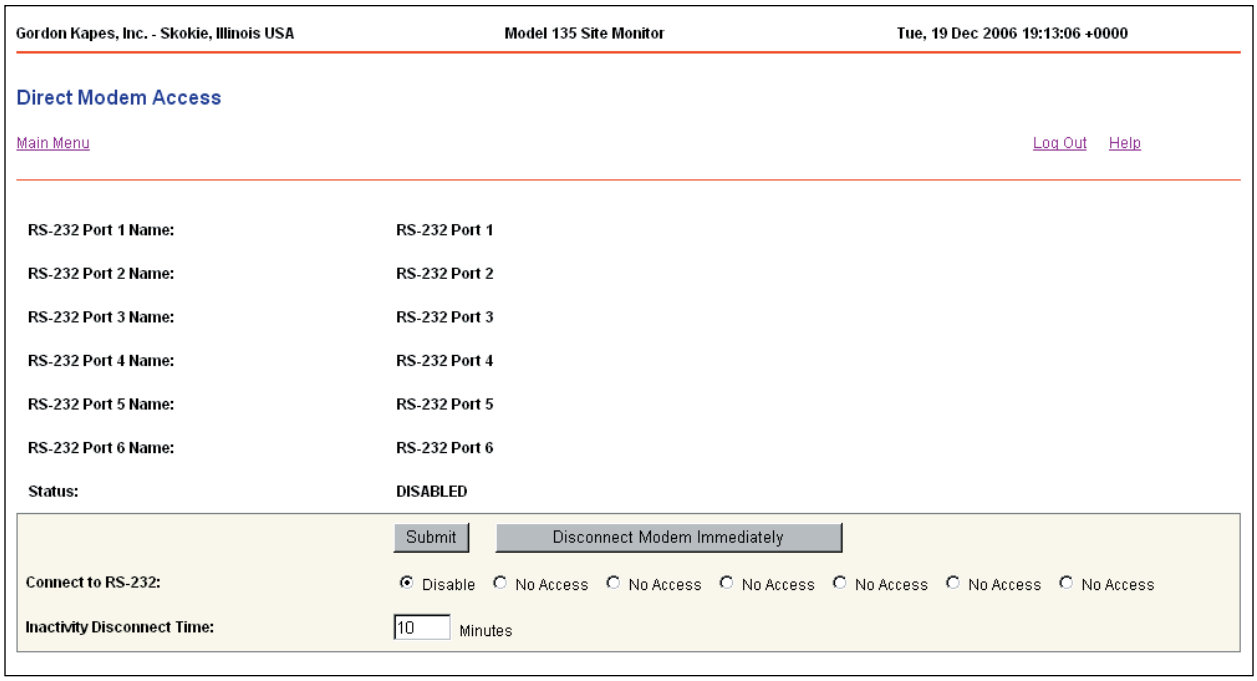
Current User—Current User Parameters

Help for Current User—Current User Parameters (continued)

Enter New Password: Enter new password up to 15 characters. All characters except quote (") and space are accepted. Case sensitive. Must meet the Minimum Password Length. A name and password are required to access the Model 135. Asterisks (*) are displayed as the new password is entered.

Re-Enter New Password: Confirm new password. Asterisks (*) are displayed as the new password is entered.

RS-232 Access—Direct Modem Access



Help for RS-232 Access—Direct Modem Access

This feature allows direct modem access to an RS-232 port. PPP access to the Model 135 is temporarily disabled. The direct modem access feature automatically ends if no modem access takes place within five minutes of the feature being enabled. Direct modem access can also take place within five minutes after the end of a direct modem access connection.

Note that the RS-232 Test Generator and RS-232 Match Data are still active during a direct modem access connection. The connection is disconnected when the remote end breaks the connection, the inactivity disconnect time expires, or immediate modem disconnect is invoked.

An asterisk (*) after a value indicates the factory default.

Status: Shows DISABLED, PORT *n* ACCESS ENABLED FOR *nn:nn* (MM:SS), or CONNECTED DIRECTLY TO PORT *n*. Indicates whether direct modem access is disabled, enabled, or connected.

DISABLED indicates that PPP will be invoked on the next dial-in access.

PORT *n* ACCESS ENABLED FOR *nn:nn* (MM:SS) indicates that direct modem access will be invoked on the next dial-in access and shows the time remaining to dial-in and connect to the indicated port.

CONNECTED DIRECTLY TO PORT *n* indicates that direct modem access is in effect and shows the connected port.

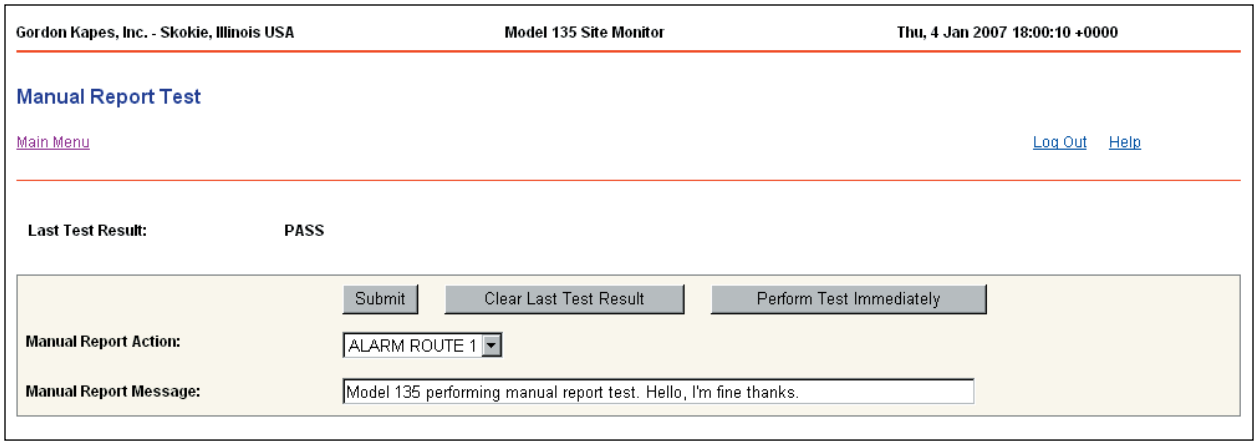
Submit: Click *Submit* to send changes to the system.

Disconnect Modem Immediately: Click to immediately disconnect the modem during Direct Modem Access.

Connect to RS-232: Select Disable* or Port 1 through Port 6. RS-232 Port indicates the port to be connected upon the next modem dial-in. No Access indicates the user does not have rights access to the port. This selection is not stored in the Active Profile.

Inactivity Disconnect Time: Enter 1 through 99 minutes. The Model 135 contains an inactivity timer that automatically disconnects the modem during Direct Modem Access when data to the Model 135 has been inactive for the selected time. Factory default is *10.*

System Tests—Manual Report Test



Help for System Tests—Manual Report Test

The Manual Report Test sends a message to the selected alarm route. Manual Report Test has priority over other messages waiting to be sent except for Auto Report Test which has the highest priority.

The test results are displayed in the Activity Log and on the System Status screen. You may also wish to confirm that the receiving location correctly received the test message.

If connected through the modem, proceeding with this test will cause the Model 135 to immediately disconnect.

An asterisk (*) after a value indicates the factory default.

Last Test Result: Shows ---, TEST IN PROGRESS, PASS, or FAIL.

Submit: Click *Submit* to send changes to the system.

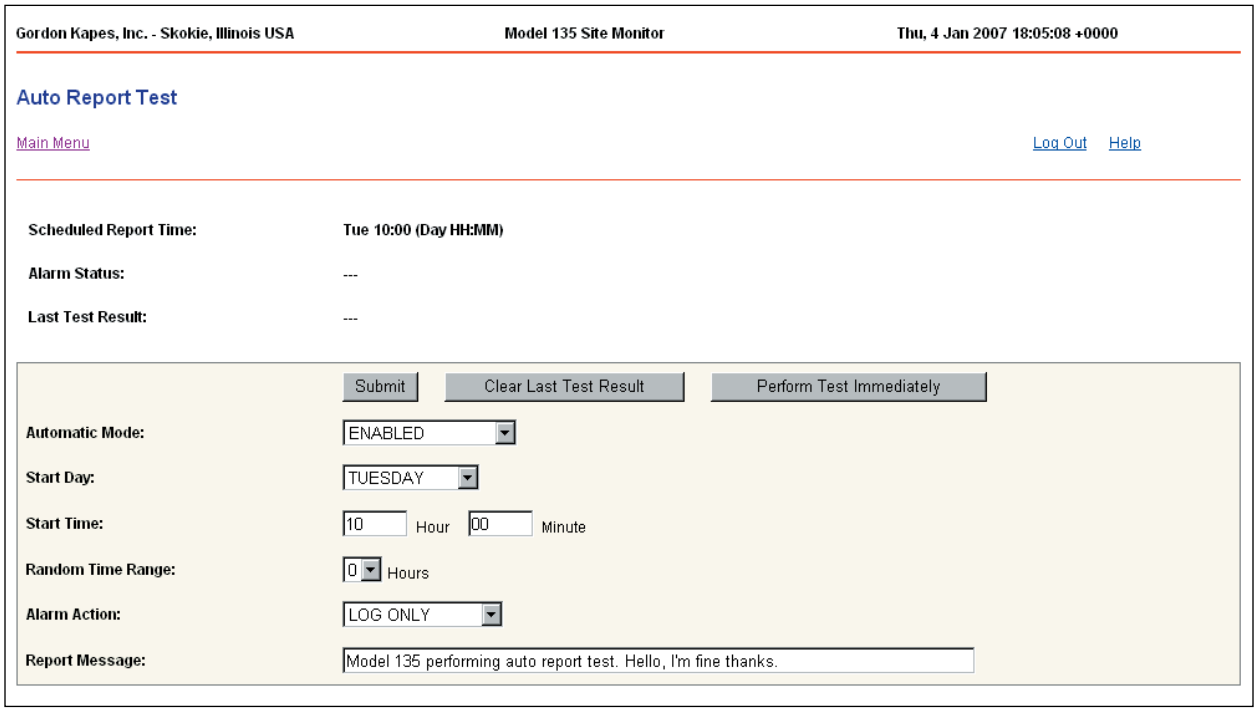
Clear Last Test Result: Click to reset last test result to ---.

Perform Test Immediately: Click to immediately perform a Manual Report Test.

Manual Report Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates the alarm routing group to be tested.

Manual Report Message: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *Model 135 performing manual report test. Hello, I'm fine thanks.*

System Tests—Auto Report Test



Help for System Tests—Auto Report Test

The Auto Report Test sends a message to let the receiving location know that the Model 135 is functioning. The actual report time can be randomized to reduce the chance that two or more Model 135s will call the same location at the same time. If the Model 135 is unable to send a report an error is logged in the Activity Log. Auto Report Test has priority over other alarm messages waiting to be sent.

An asterisk (*) after a value indicates the factory default.

Scheduled Report Time: Shows the day and time the automatic report will be sent. The Model 135 determines a randomized time using the start time and time range. This time is used for each daily or weekly automatic report. Randomization occurs whenever the time range is changed.

Alarm Status: Shows ---, ENABLED, or SLEEP. Shows the time until next test after SLEEP.

Last Test Result: Shows ---, TEST IN PROGRESS, PASS, or FAIL.

Submit: Click *Submit* to send changes to the system.

Clear Last Test Result: Click to reset last test result to ---.

Perform Test Immediately: Click to immediately perform an Auto Report Test. Assumes no modem activity, email, or dial-out alarm messages are pending. No test is performed if automatic mode is not configured.

Automatic Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Start Day: Select SUNDAY, MONDAY, TUESDAY*, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, or DAILY.

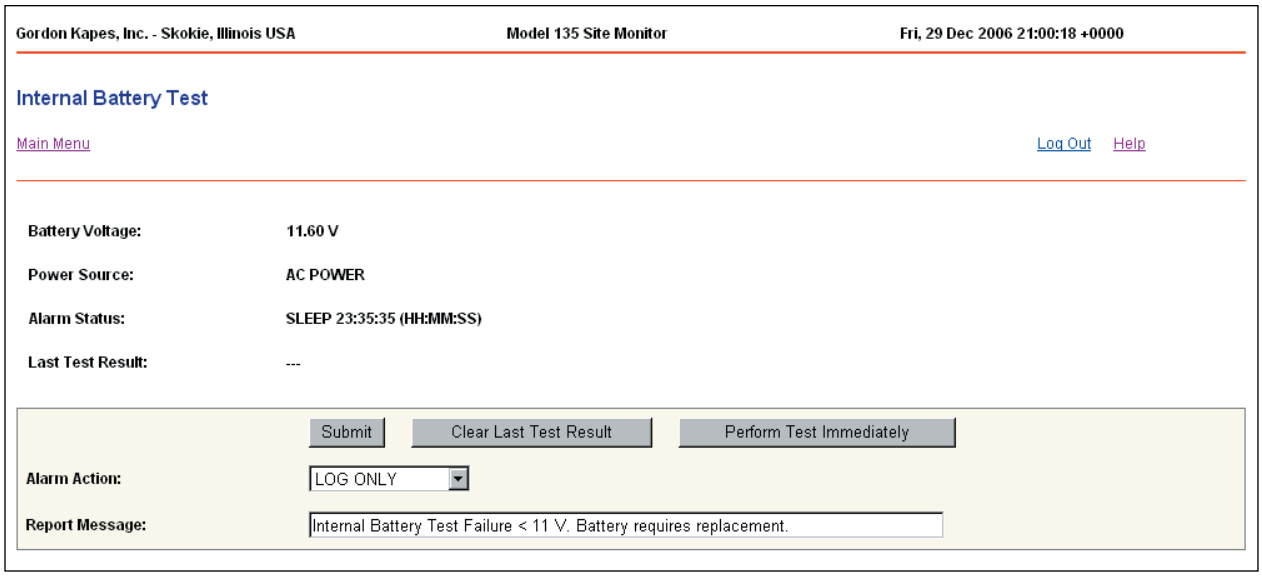
Start Time: Enter the starting time in hours and minutes. 24 hour format is used. Range is 00:00 to 23:59. Factory default is *10:00*.

Random Time Range: Select 0* to 6 hours.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Report Message: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *Model 135 performing auto report test. Hello, I'm fine thanks.*

System Tests—Internal Battery Test



Help for System Tests—Internal Battery Test

The Internal Battery Test reduces the battery charger voltage and places an additional load on the internal lead-acid battery. The test is successful if battery voltage remains above 11.00 Volts for 30 seconds. The test is stopped immediately if battery voltage falls below 11.00 Volts. A test automatically occurs after the Model 135 has been running on AC power for 24 hours and then repeats once per week.

An asterisk (*) after a value indicates the factory default.

Battery Voltage: Shows the current battery voltage.

Power Source: Shows AC POWER or BATTERY POWER.

Alarm Status: Shows ENABLED or SLEEP. Shows test time remaining after ENABLED and the time until next test after SLEEP.

Last Test Result: Shows ---, PASS, FAIL, TEST IN PROGRESS, or ABORT. ABORT indicates Perform Test Immediately could not be done because the Model 135 has not been running on AC power for 24 hours or longer.

Submit: Click *Submit* to send changes to the system.

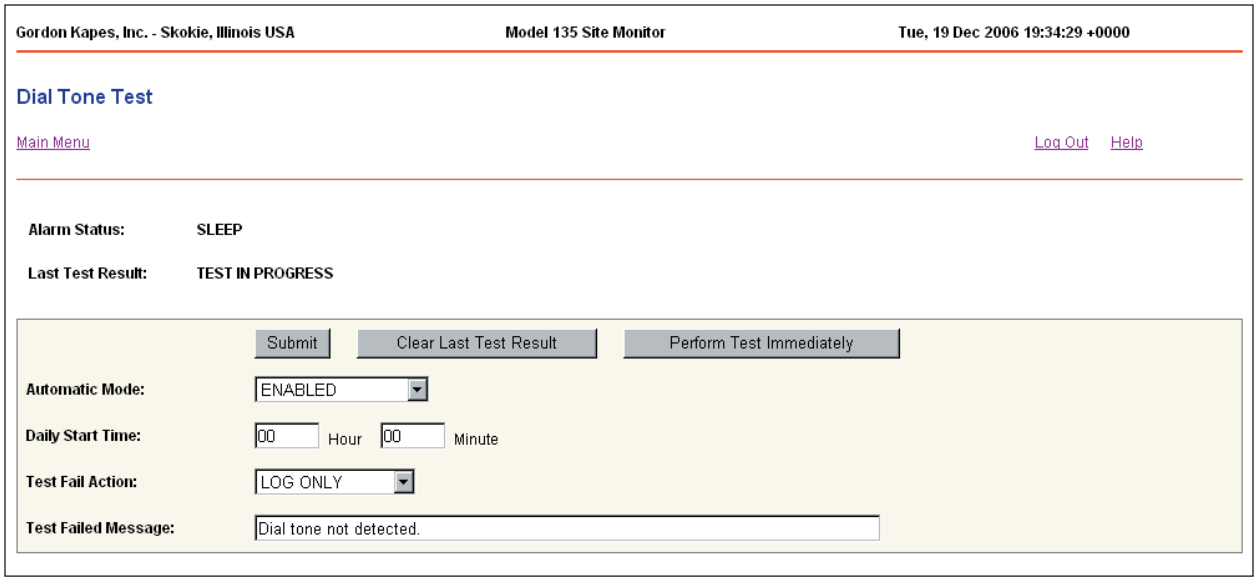
Clear Last Test Result: Click to reset last test result to ---. It also clears the Relay Contact and DC Power trigger source, when selected.

Perform Test Immediately: Click to immediately perform an Internal Battery Test. This can be done only after the Model 135 has been running on AC power for 24 hours or longer.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Only battery failures are reported. Indicates whether a failure is log only or is logged and sent to an alarm routing group.

Report Message: Enter text up to 79 characters. This will be posted to the Alarm Log when a low battery condition is detected. Factory default is *Internal Battery Test Failure < 11 V. Battery requires replacement.*

System Tests—Dial Tone Test



Help for System Tests—Dial Tone Test

This function tests the telephone line associated with the telephone modem for the presence of dial tone. The test takes less than one minute to perform. Test results are displayed on the System Status screen and posted to the Activity Log. Test failures are posted to the Alarm Log.

Performing this test will cause the Model 135 to disconnect (if connected via the telephone modem) and then test the telephone line.

The test can be done daily at the daily start time and one hour after AC power has been restored to the Model 135.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows ---, ENABLED, or SLEEP. Shows the time until next test after SLEEP.

Last Test Result: Shows ---, PASS, or FAIL.

Submit: Click *Submit* to send changes to the system.

Clear Last Test Result: Click to reset last test result to ---. It also clears the Relay Contact and DC Power trigger source when selected.

Perform Test Immediately: Click to immediately perform a Dial Tone Test. No test is performed if automatic mode is not configured.

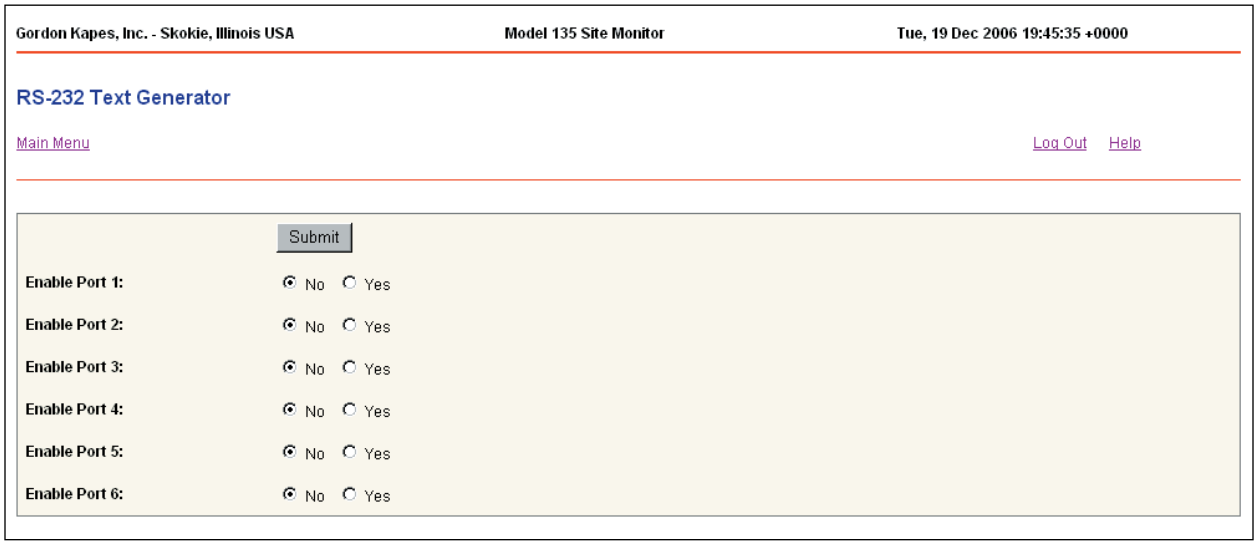
Automatic Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Daily Start Time: Enter the starting time in hours and minutes. 24 hour format is used. Range is 00:00 to 23:59. Factory default is *00:00*.

Test Fail Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether a test fail is log only or is logged and sent to an alarm routing group.

Test Failed Message: Enter text up to 79 characters. This will be posted to the Alarm Log when a test failure occurs. Factory default is *Dial tone not detected.*

System Tests—RS-232 Text Generator



Help for System Tests—RS-232 Text Generator

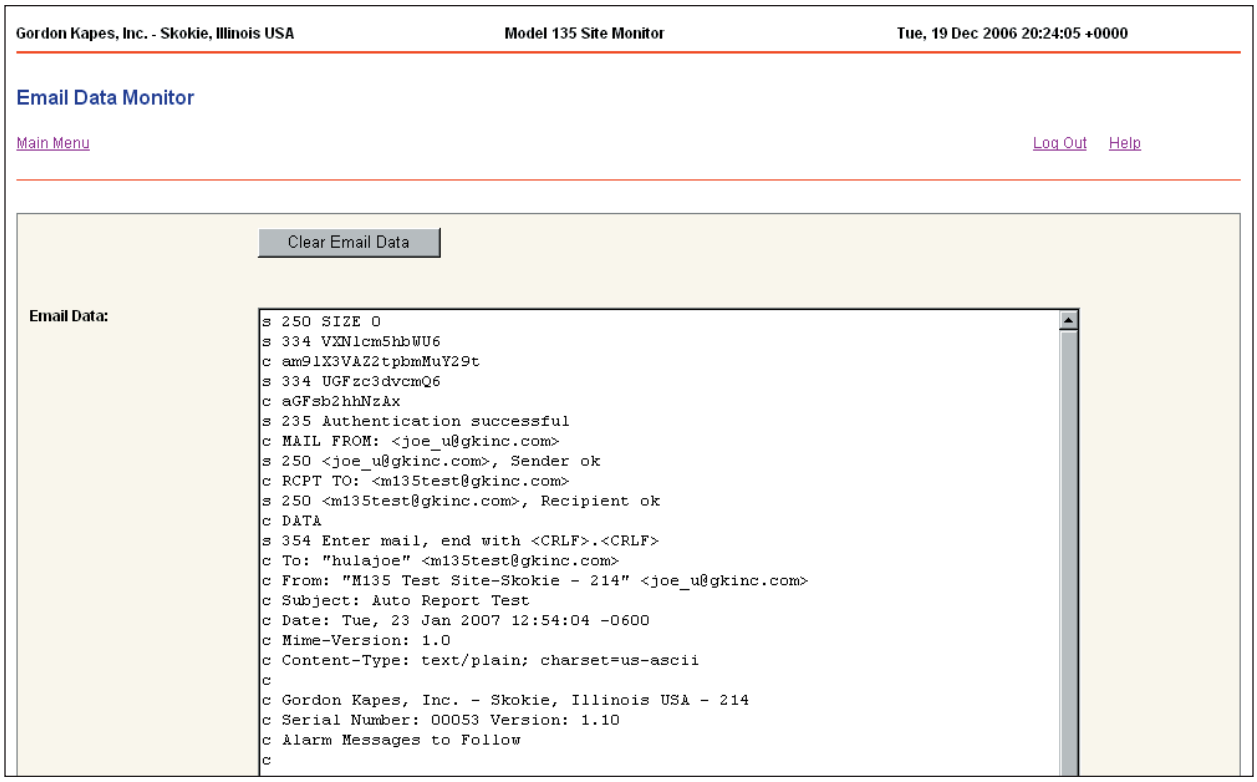
The RS-232 Text Generator sends ASCII text messages out the selected RS-232 ports. The message consists of a one to eleven digit long sequential number followed by “The quick brown fox jumped over the lazy dog’s tail.”

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Enable Port: Select No* or Yes. Yes sends a text message once a second to the selected RS-232 port. Upon system restart this is reset to No. This selection is not stored in the Active Profile.

Diagnostics—Email Data Monitor



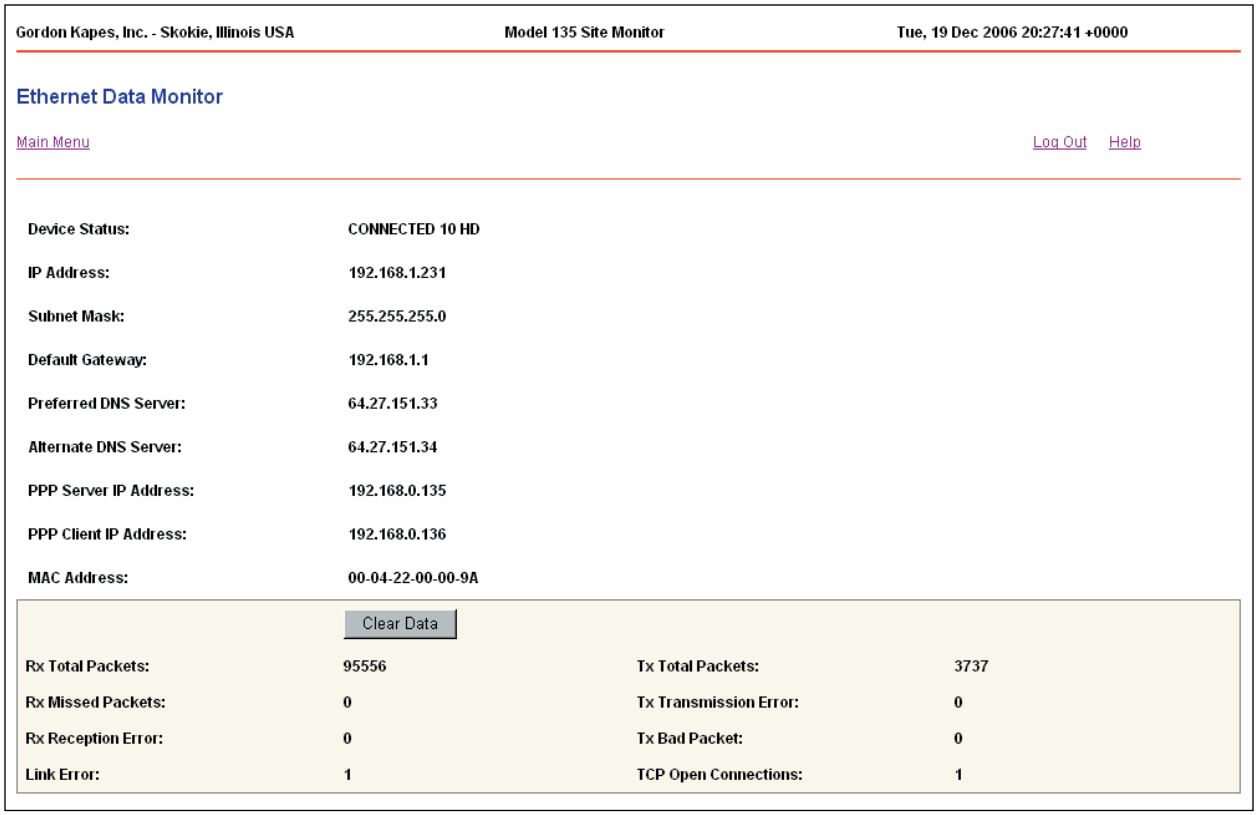
Help for Diagnostics—Email Data Monitor

The Email Data Monitor displays the data associated with the SMTP connection.

Clear Email Data: Click to clear the email data area.

Email Data: Shows data sent to or received from the server. Data sent to the server begins with the letter c (client). Data received from the server begins with the letter s (server). The most common reason for email not working is incorrect outgoing server parameters.

Diagnostics—Ethernet Data Monitor



Help for Diagnostics—Ethernet Data Monitor

This screen displays a number of parameters related to the configuration of the Ethernet interface and the data carried on it. Most of the parameters are stored in flash memory and are not part of the Active Profile. They can be changed when the Model 135 is operating under the configuration code.

Device Status: Shows NOT CONNECTED, CONNECTED 10 HD, CONNECTED 10 FD, CONNECTED 100 HD, or CONNECTED 100 FD. 10 is 10 Mbps. 100 is 100 Mbps. HD is Half-Duplex. FD is Full-Duplex.

IP Address: Shows the Internet Protocol address assigned to this unit on the local subnet.

Subnet Mask: Shows the range of addresses permitted on the local subnet. Addresses outside this range go through the default gateway.

Default Gateway: Shows the default gateway IP address.

Preferred DNS Server: Shows the IP address of the preferred domain name server. Without it or the Alternate DNS Server the functions that use domain names will not work.

Alternate DNS Server: Shows the IP Address of an alternate domain name server.

PPP Server IP Address: Shows the IP address that identifies the Model 135's internal modem when using point-to-point protocol. Use this address when starting an FTP, HTTP, or TELNET session via the modem.

PPP Client IP Address: Shows the IP Address of the modem client on the PPP connection to the Model 135.

MAC Address: Shows the Media Access Control address, which is unique to this unit.

Clear Data: Click to clear the statistical information.

Rx Total Packets: Shows the total number of packets received.

Diagnostics—Ethernet Data Monitor

Help for Diagnostics—Ethernet Data Monitor (continued)

Tx Total Packets: Shows the total number of packets transmitted.

Rx Missed Packets: Shows the number of receive packets that were discarded because data was coming in too quickly.

Tx Transmission Error: Shows the number of transmit packets that weren't sent due to a transmission error.

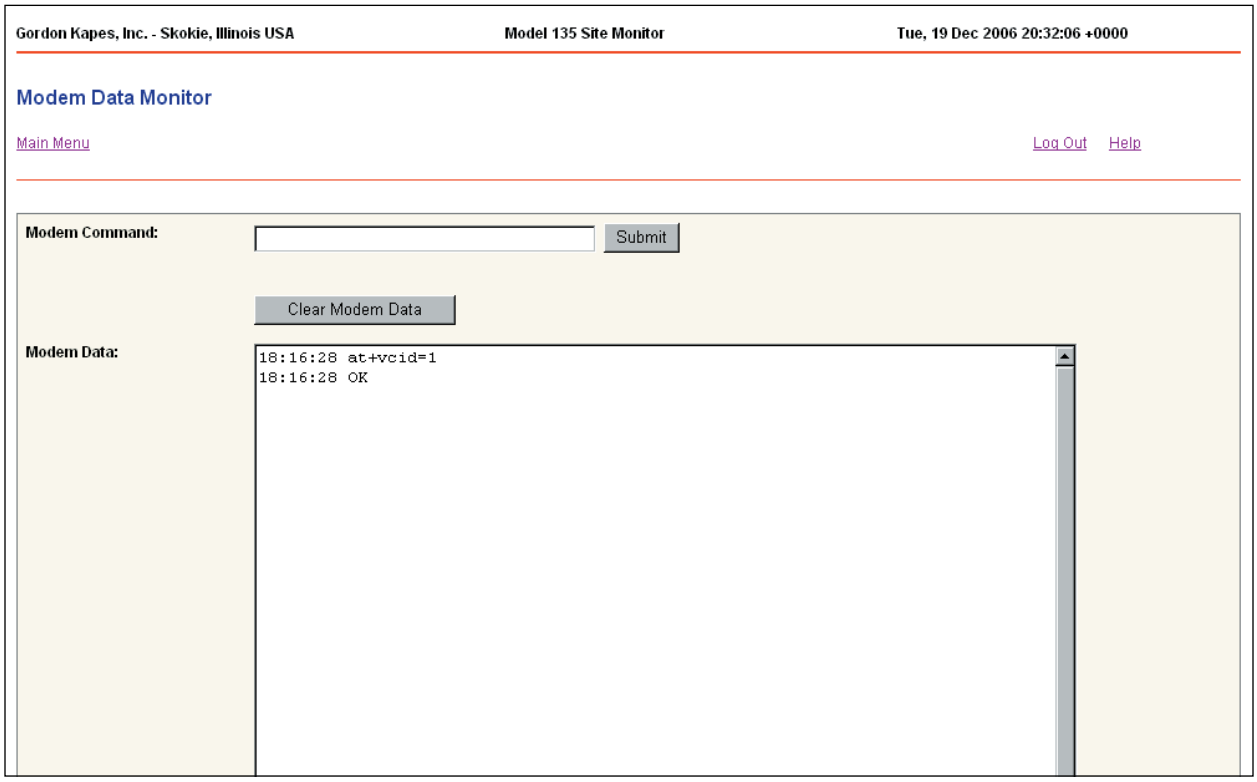
Rx Reception Error: Shows the number of received packets that were discarded due to a receive error.

Tx Bad Packet: Shows the number of transmit packets that weren't sent because they were malformed.

Link Error: Shows the number of times the data connection had been broken.

TCP Open Connections: Shows the number of TCP connections that are open at any given time.

Diagnostics—Modem Data Monitor



Help for Diagnostics—Modem Data Monitor

This screen shows the data flowing to and from the internal modem. It also allows commands to be sent to the modem.

An asterisk (*) after a value indicates the factory default.

Modem Command: Enter command to be sent to the internal modem then click *Submit*.
Example: at&v1 causes the internal modem to show the last connection statistics.

Clear Modem Data: Click to clear the Modem Data area.

Modem Data: Shows data sent to (lower case) and received from (UPPER CASE) the internal modem while off-line. Data is preceded by the time (HH:MM:SS).

Basic Commands:

at	Precedes all commands except +++
a	Answer
dt2	Dial DTMF 2
h0	Disconnect (hang up)
s7=50	Sets wait for carrier in seconds
s7?	Show wait for carrier in seconds
w2	Show CONNECT DCE speed (e.g. CONNECT 33600)
&d2	Loss of DTR causes modem to hang up (*)
+vcid=1	Enable caller ID
+++	Escape to on-line command mode

Diagnostics—Modem Data Monitor

Help for Diagnostics—Modem Data Monitor (continued)

Load or Save Profile:

&f0	Load factory defaults
&w0	Store current configuration in stored profile 0
&y0	Use stored profile 0 after a hard reset (*)
z0	Soft reset and load stored profile 0

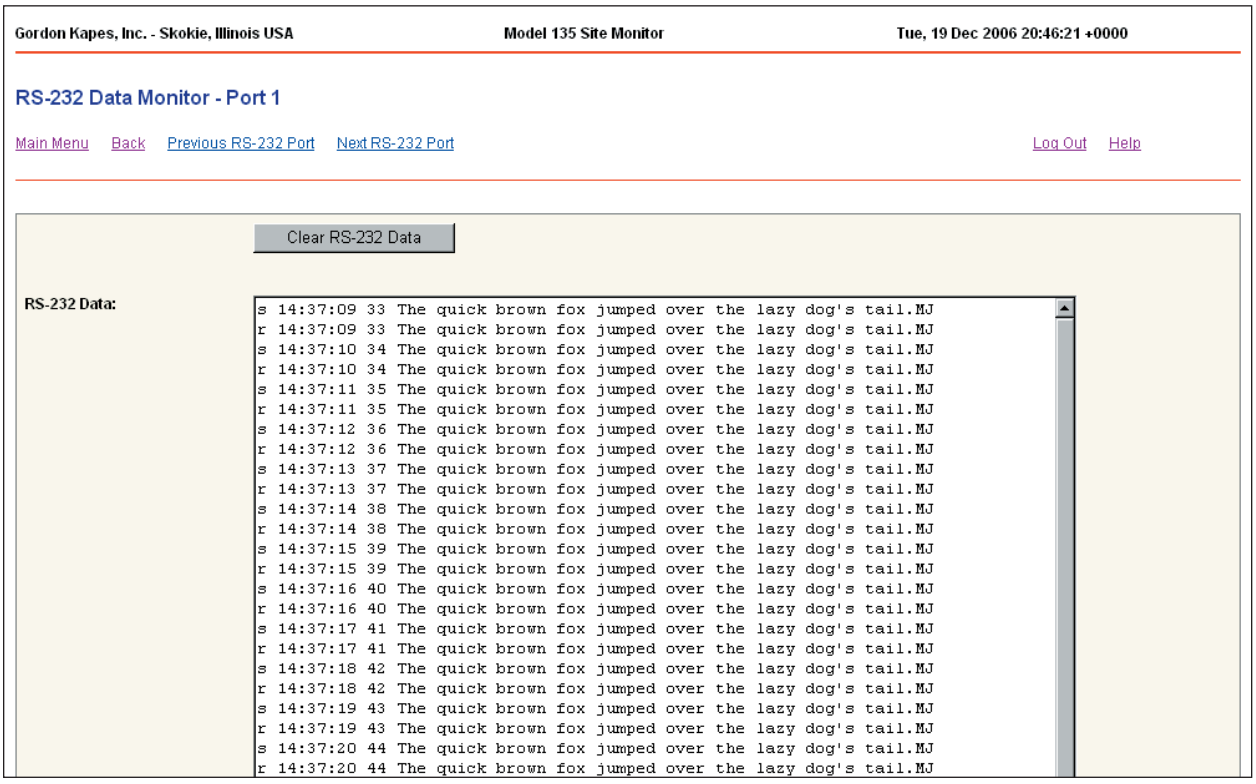
Country Codes:

+gci=b5	Set to US standards (*)
+gci=fd	Set to European standards
+gci?	Show country code
+gci=?	Show available country codes

Modem Status:

i4	Show modem OEM information
&v1	Show last connection statistics

Diagnostics—RS-232 Data Monitor



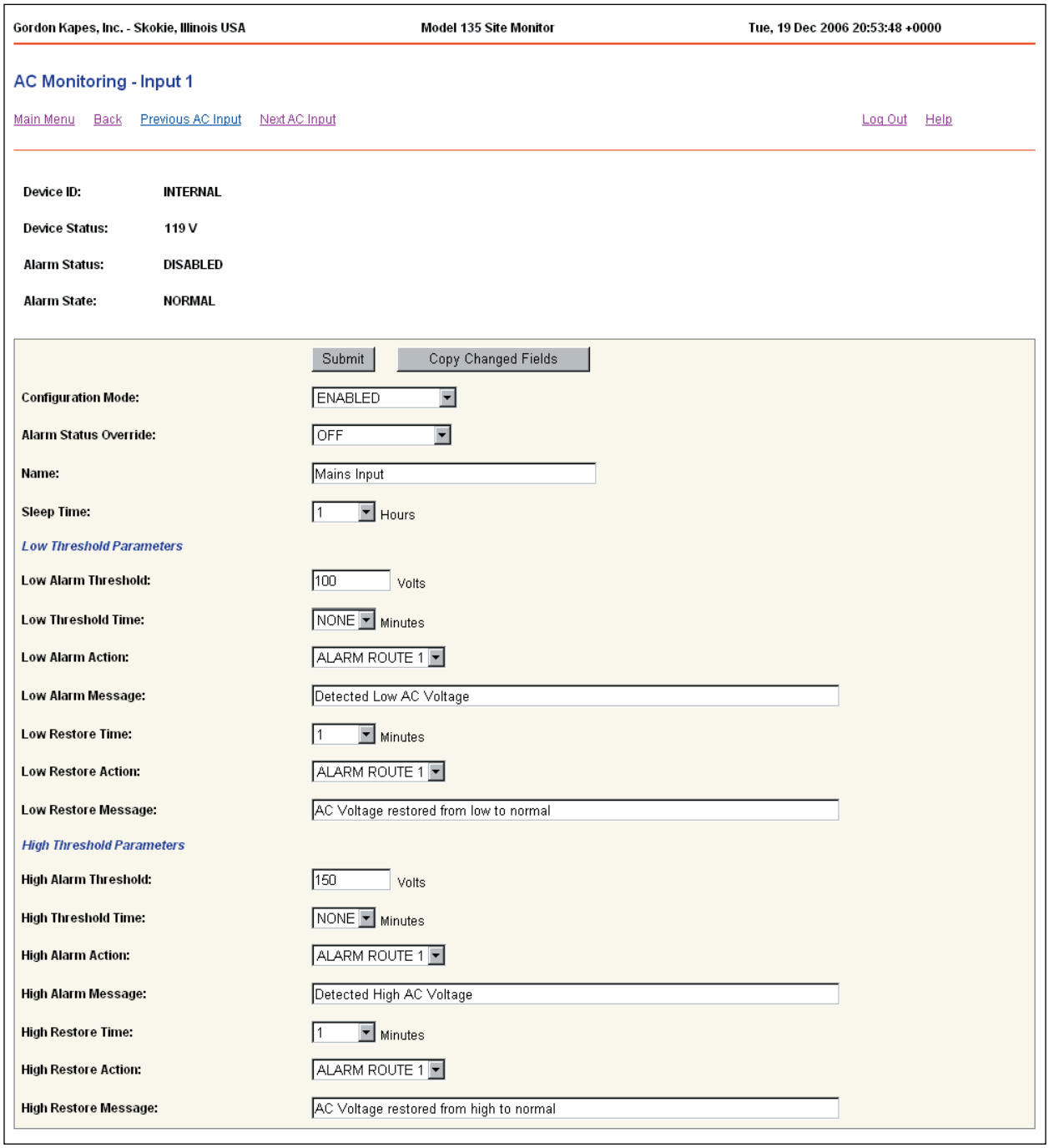
Help for Diagnostics—RS-232 Data Monitor

This screen shows the operation of the internal RS-232 ports. Control characters are made visible. *Example:* Carriage Return is shown as M, Line Feed is shown as J.

Clear RS-232 Data: Click to clear the RS-232 data area.

RS-232 Data: Shows data sent to and from the RS-232 port. Data sent to the RS-232 port begins with the letter s followed by the time (HH:MM:SS). Data received from the RS-232 port begins with the letter r followed by the time.

Input Devices—AC Monitoring



Help for Input Devices—AC Monitoring

AC Monitoring uses the I/O bus except for Input 1 which is INTERNAL. Alarm reporting is enabled when Configuration Mode is ENABLED. The process begins with Alarm Status ENABLED. If all thresholds are satisfied Alarm State is NORMAL. If a threshold is not satisfied Alarm State is ALARM. If Alarm State remains ALARM for the entire Threshold Time the Alarm State changes to ALARM REPORTED and Alarm Status changes to SLEEP. After the Sleep Time has expired and Alarm State remains NORMAL for the entire Restore Time the Alarm Status changes to ENABLED. The process then repeats.

Input Devices—AC Monitoring

Help for Input Devices—AC Monitoring (continued)

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows the unique number assigned to the device, INTERNAL, or ---.

Device Status: Shows the AC voltage or ---.

Alarm Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, ENABLED, or REMOVE DEVICE ID (only if device is not INTERNAL). Factory default for AC Input 1 is *DISABLED*.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *AC Input n* except for AC Input 1 which is *Mains Input*.

Sleep Time: Select NONE or 1* to 9 hours.

Low Threshold Parameters: The following parameters determine what will happen when the input value falls below a certain level.

Low Alarm Threshold: Enter a voltage between 0 and 300. Factory default is *100*.

Low Threshold Time: Select NONE* or 1 to 9 minutes.

Low Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Low Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Low Threshold Time has been met. The measured voltage follows the message. Factory default is *Detected Low AC Voltage*.

Low Restore Time: Select NONE or 1* to 9 minutes.

Low Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the low restore time has been met.

Low Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the low restore time has been met. The measured voltage follows the message. Factory default is *AC Voltage restored from low to normal*.

High Threshold Parameters: The following parameters determine what will happen when the input value rises above a certain level.

High Alarm Threshold: Enter a voltage between 0 and 300. Factory default is *150*.

High Threshold Time: Select NONE* or 1 to 9 minutes.

High Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

High Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the High Threshold Time has been met. The measured voltage follows the message. Factory default is *Detected High AC Voltage*.

Input Devices—AC Monitoring

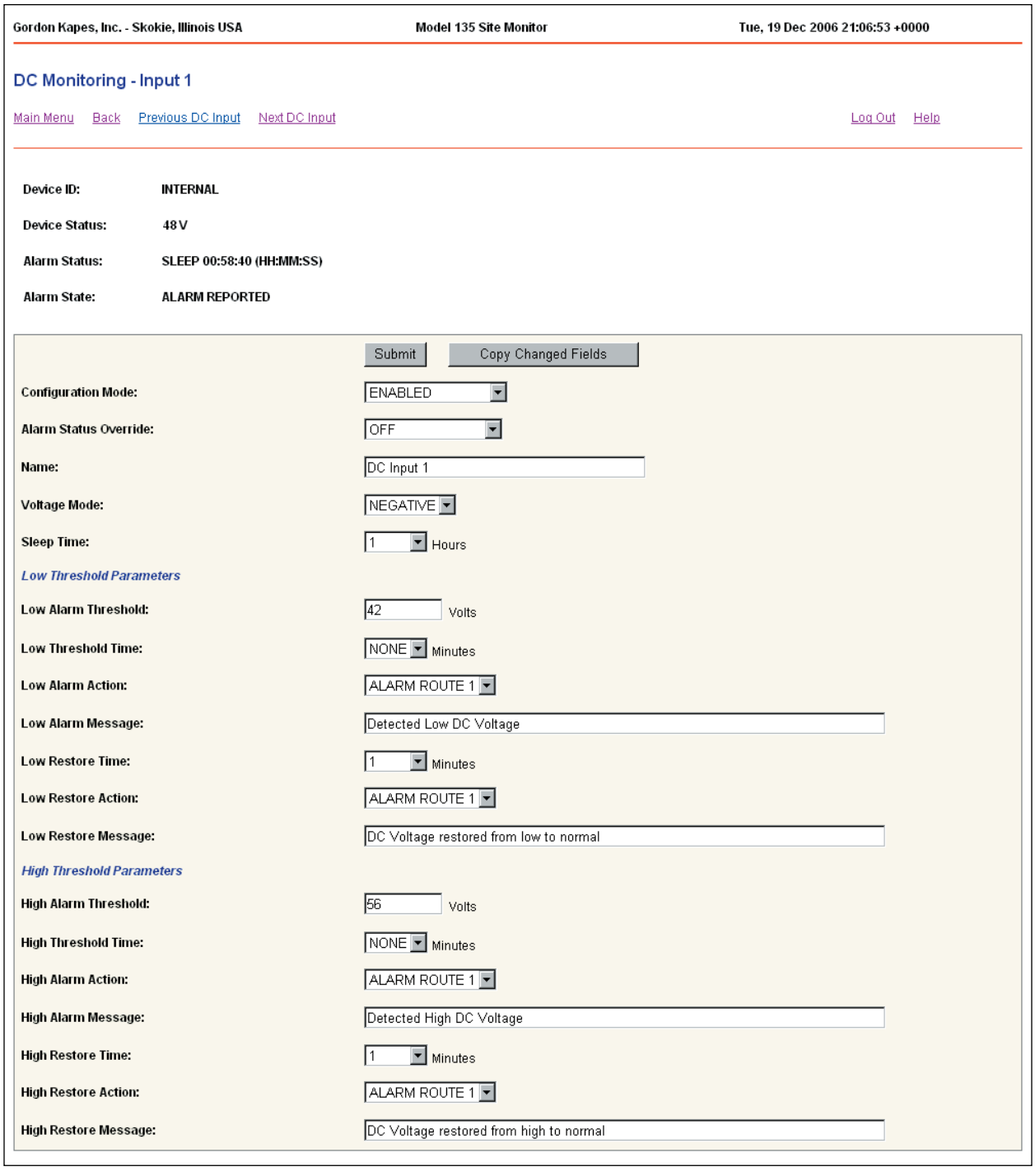
Help for Input Devices—AC Monitoring (continued)

High Restore Time: Select NONE or 1* to 9 minutes.

High Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the high restore time has been met.

High Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the high restore time has been met. The measured voltage follows the message. Factory default is *AC Voltage restored from high to normal*.

Input Devices—DC Monitoring



Help for Input Devices—DC Monitoring

DC Monitoring uses the I/O bus except for Inputs 1 and 2 which are INTERNAL. Alarm reporting is enabled when Configuration Mode is ENABLED. The process begins with Alarm Status ENABLED. If all thresholds are satisfied Alarm State is NORMAL. If a threshold is not satisfied Alarm State is ALARM. If Alarm State remains ALARM for the entire Threshold Time the Alarm State changes to ALARM REPORTED and Alarm Status changes to SLEEP. After the Sleep Time has expired and Alarm State remains NORMAL for the entire Restore Time the Alarm Status changes to ENABLED. The process then repeats.

Input Devices—DC Monitoring

Help for Input Devices—DC Monitoring (continued)

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows the unique number assigned to the device, INTERNAL, or ---.

Device Status: Shows the DC voltage or ---.

Alarm Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, ENABLED, or REMOVE DEVICE ID (only if device is not INTERNAL).

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *DC Input n*.

Voltage Mode: Select POSITIVE or NEGATIVE*. NEGATIVE inverts the meaning of Low and High Thresholds.

Sleep Time: Select NONE or 1* to 9 hours.

Low Threshold Parameters: The following parameters determine what will happen when the input value falls below a certain level.

Low Alarm Threshold: Enter a voltage between –60 and 60. Factory default is *10*.

Low Threshold Time: Select NONE* or 1 to 9 minutes.

Low Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Low Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Low Threshold Time has been met. The measured voltage follows the message. Factory default is *Detected Low DC Voltage*.

Low Restore Time: Select NONE or 1* to 9 minutes.

Low Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the low restore time has been met.

Low Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the low restore time has been met. The measured voltage follows the message. Factory default is *DC Voltage restored from low to normal*.

High Threshold Parameters: The following parameters determine what will happen when the input value rises above a certain level.

High Alarm Threshold: Enter a voltage between –60 and 60. Factory default is *13*.

High Threshold Time: Select NONE* or 1 to 9 minutes.

High Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

High Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the High Threshold Time has been met. The measured voltage follows the message. Factory default is *Detected High DC Voltage*.

Input Devices—DC Monitoring

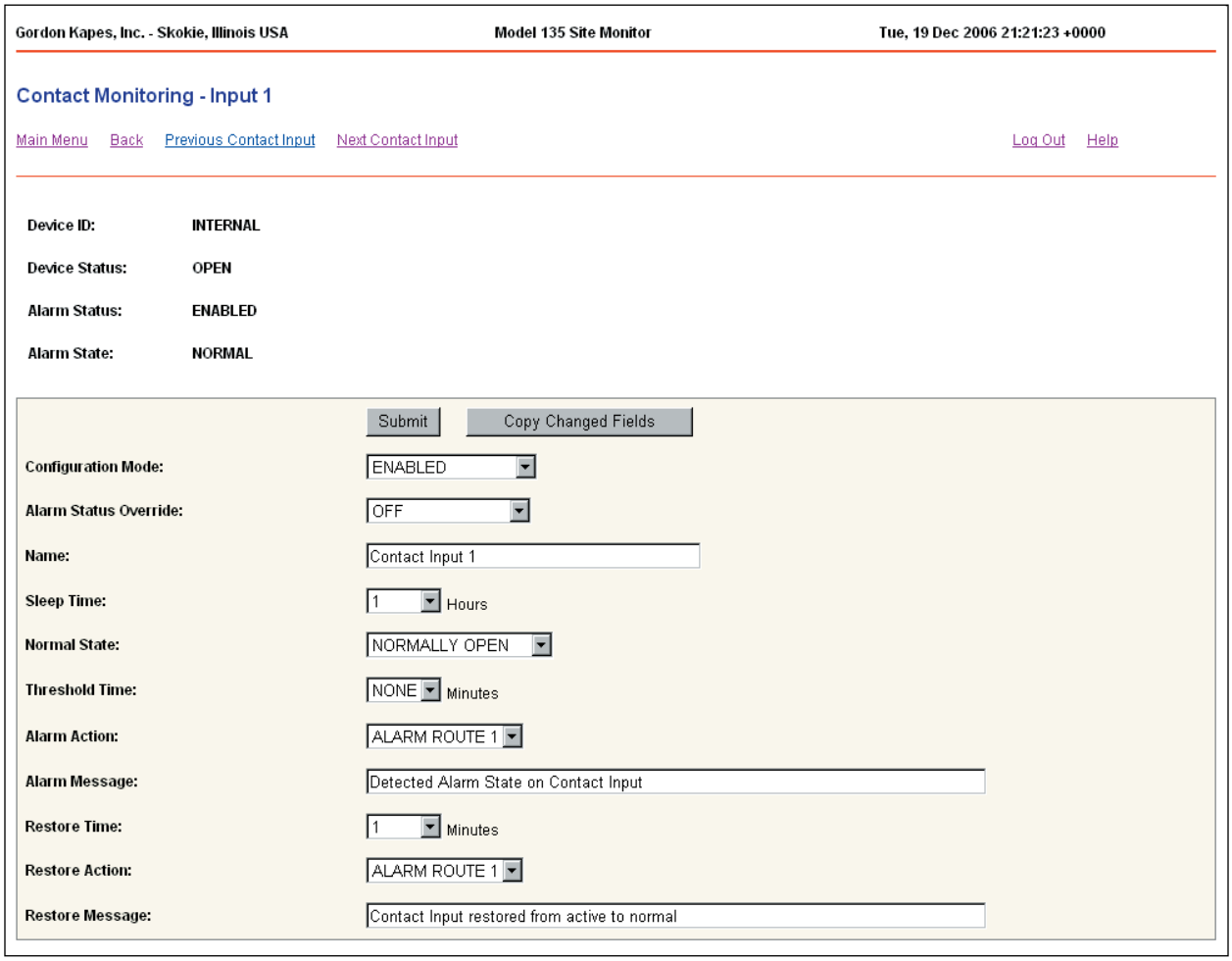
Help for Input Devices—DC Monitoring (continued)

High Restore Time: Select NONE or 1* to 9 minutes.

High Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the high restore time has been met.

High Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the high restore time has been met. The measured voltage follows the message. Factory default is *DC Voltage restored from high to normal*.

Input Devices—Contact Monitoring



Help for Input Devices—Contact Monitoring

All Contact Monitoring inputs are INTERNAL. Alarm reporting is enabled when Configuration Mode is ENABLED. The process begins with Alarm Status ENABLED. If Normal State is satisfied Alarm State is NORMAL. If Normal State is not satisfied Alarm State is ALARM. If Alarm State remains ALARM for the entire Threshold Time the Alarm State changes to ALARM REPORTED and Alarm Status changes to SLEEP. After the Sleep Time has expired and Alarm State remains NORMAL for the entire Restore Time the Alarm Status changes to ENABLED. The process then repeats.

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows INTERNAL.

Device Status: Shows OPEN or CLOSED.

Alarm Status: Shows ---, DISABLED, ENABLED, or SLEEP. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Input Devices—Contact Monitoring

Help for Input Devices—Contact Monitoring (continued)

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *Contact Input n*.

Sleep Time: Select NONE or 1* to 9 hours.

Normal State: Select NORMALLY OPEN* or NORMALLY CLOSED.

Threshold Time: Select NONE* or 1 to 9 minutes.

Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

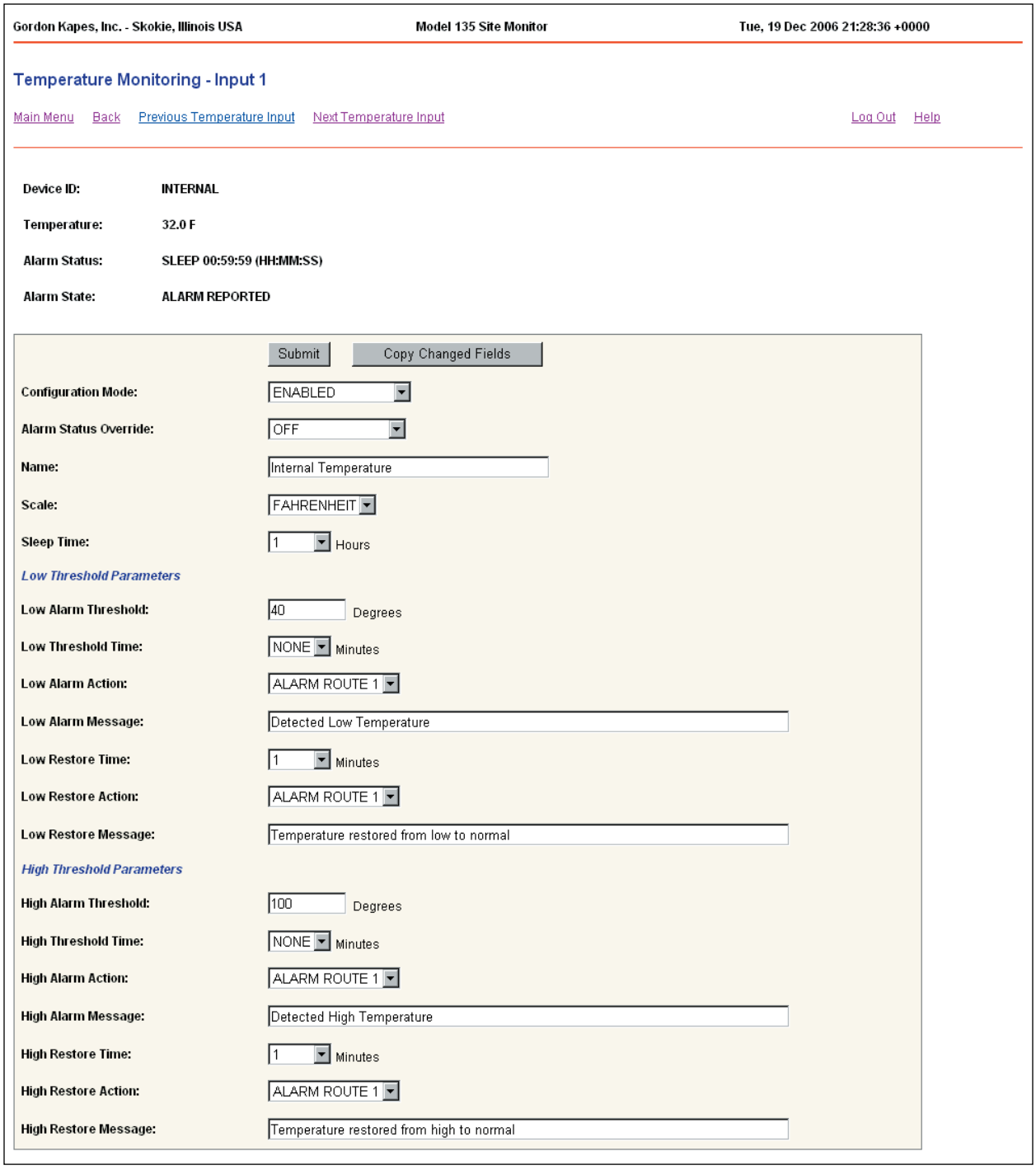
Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Threshold Time has been met. Factory default is *Detected Alarm State on Contact Input*.

Restore Time: Select NONE or 1* to 9 minutes.

Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the restore time has been met.

Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the restore time has been met. Factory default is *Contact Input restored from active to normal*.

Input Devices—Temperature Monitoring



Help for Input Devices—Temperature Monitoring

Temperature Monitoring uses the I/O bus except for Input 1 which is measuring the temperature inside the Model 135's enclosure. Alarm reporting is enabled when Configuration Mode is ENABLED. The process begins with Alarm Status ENABLED. If all thresholds are satisfied Alarm State is NORMAL. If a threshold is not satisfied Alarm State is ALARM. If Alarm State remains ALARM for the entire Threshold Time the Alarm State changes to ALARM REPORTED and Alarm Status changes to SLEEP. After the Sleep Time has expired and Alarm State remains NORMAL for the entire Restore Time the Alarm Status changes to ENABLED. The process then repeats.

Input Devices—Temperature Monitoring

Help for Input Devices—Temperature Monitoring (continued)

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows the unique number assigned to the device, INTERNAL, or ---.

Temperature: Shows the temperature or ---.

Alarm Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, ENABLED, or REMOVE DEVICE ID (only if device is not INTERNAL). Factory default for Temperature Input 1 is *DISABLED*.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *Temperature Input n* except for Temperature Input 1 which is *Internal Temperature*.

Scale: Select CELSIUS or FAHRENHEIT*.

Sleep Time: Select NONE or 1* to 9 hours.

Low Threshold Parameters: The following parameters determine what will happen when the input value falls below a certain level.

Low Alarm Threshold: Enter a temperature between –50 and 250. Factory default is *40*.

Low Threshold Time: Select NONE* or 1 to 9 minutes.

Low Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Low Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Low Threshold Time has been met. The measured temperature follows the message. Factory default is *Detected Low Temperature*.

Low Restore Time: Select NONE or 1* to 9 minutes.

Low Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the low restore time has been met.

Low Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the low restore time has been met. The measured temperature follows the message. Factory default is *Temperature restored from low to normal*.

High Threshold Parameters: The following parameters determine what will happen when the input value rises above a certain level.

High Alarm Threshold: Enter a temperature between –50 and 250. Factory default is *100*.

High Threshold Time: Select NONE* or 1 to 9 minutes.

High Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Input Devices—Temperature Monitoring

Help for Input Devices—Temperature Monitoring (continued)

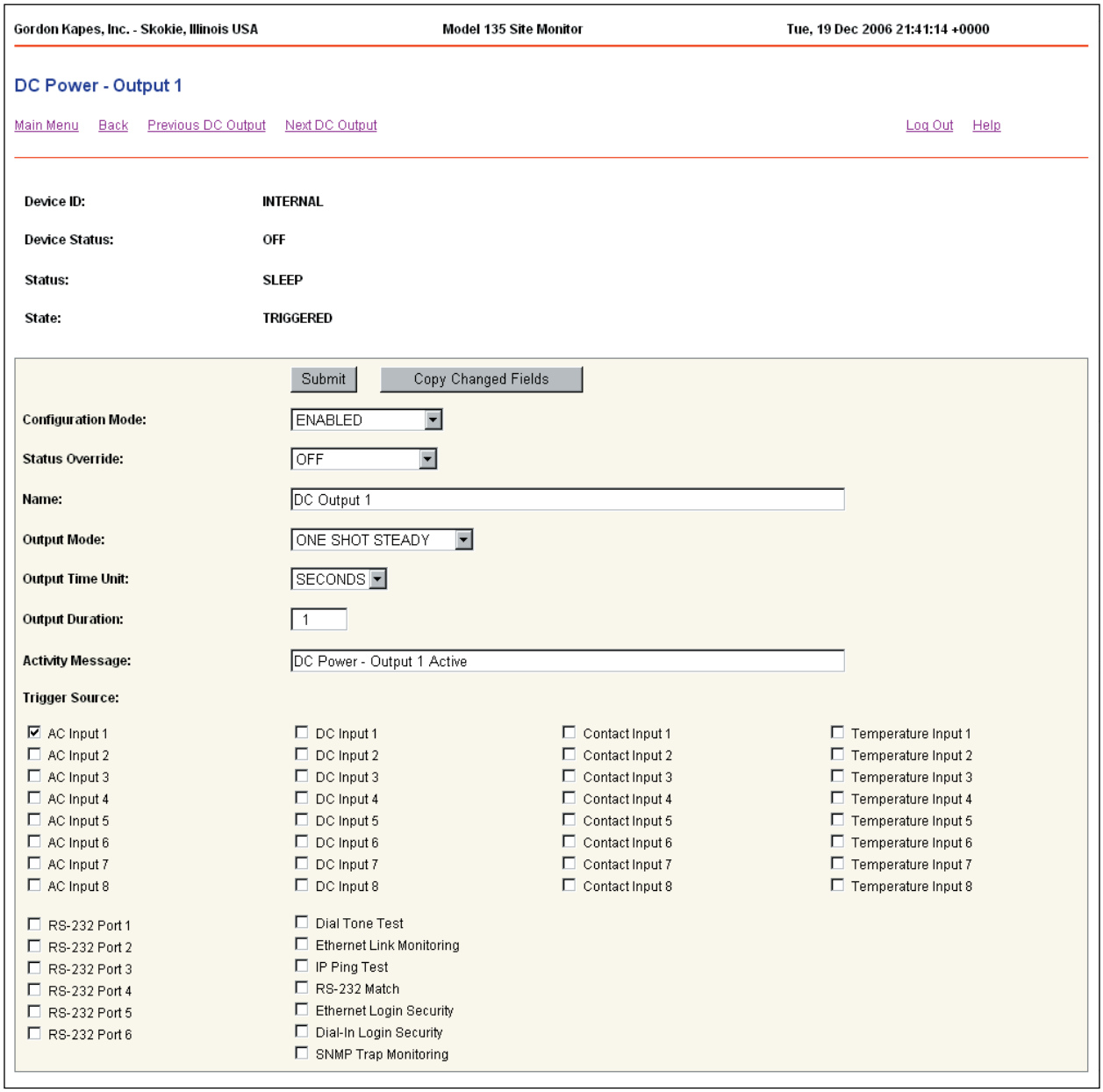
High Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the High Threshold Time has been met. Factory default is *Detected High Temperature.* The measured temperature follows the message.

High Restore Time: Select NONE or 1* to 9 minutes.

High Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the high restore time has been met.

High Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the high restore time has been met. The measured temperature follows the message. Factory default is *Temperature restored from high to normal*.

Output Devices—DC Power



Help for Output Devices—DC Power

The Model 135 provides two switched INTERNAL DC outputs. The output function allows manual or automatic activation for a pre-determined time interval. When status is set to NOT CONFIGURED or DISABLED, automatic or manual operation of the DC output function is not possible. When the status is set to ENABLED, one or more Model 135 functions can be selected to act as output trigger sources. One shot output mode automatically activates the output for the configured output duration. The trigger occurs each time an alarm message is posted by the selected function. The output is not re-triggerable. The output duration is not reset if another trigger occurs while the output is already active. The actual output voltage is between 10 and 15 Volts with 12 Volts nominal at 200 milliamperes when on AC power. On battery power the output voltage is 6 Volts at 200 milliamperes and 8 Volts at 100 milliamperes.

Output Devices—DC Power

Help for Output Devices—DC Power (continued)

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows INTERNAL.

Device Status: Shows ON, OFF, or ---.

Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED. Shows the output duration time remaining after SLEEP.

State: Shows ---, NORMAL, TRIGGERED, or FORCE ON.

--- indicates that Configuration Mode is NOT CONFIGURED.

NORMAL indicates that Configuration Mode is DISABLED or Configuration Mode is ENABLED and no trigger sources are active.

TRIGGERED indicates that Configuration Mode is ENABLED and at least one trigger source is active.

FORCE ON indicates that Configuration Mode is ENABLED and that Output Mode is ALWAYS ON. No trigger source is needed.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Activity Log. Factory default is *DC Output n*.

Output Mode: Select ONE SHOT STEADY*, ONE SHOT PULSATING, FOLLOW STEADY, FOLLOW PULSATING, and ALWAYS ON.

ONE SHOT STEADY turns on the output after the activity message is posted. The output remains on until the output duration has expired, then turns off. All trigger sources must be inactive before the output can be re-triggered.

ONE SHOT PULSATING toggles the output on and off after the activity message is posted. The toggle rate is one second on and one second off. Pulsating continues until the output duration has expired, and then turns off. All trigger sources must be inactive before the output can be re-triggered.

FOLLOW STEADY turns on the output after the activity message is posted. The output remains on until both the output duration has expired and all trigger sources are inactive.

FOLLOW PULSATING toggles the output on and off after the activity message is posted. The toggle rate is one second on and one second off. Pulsating continues until both the output duration has expired and all trigger sources are inactive.

ALWAYS ON keeps the output turned on providing the configuration mode is ENABLED.

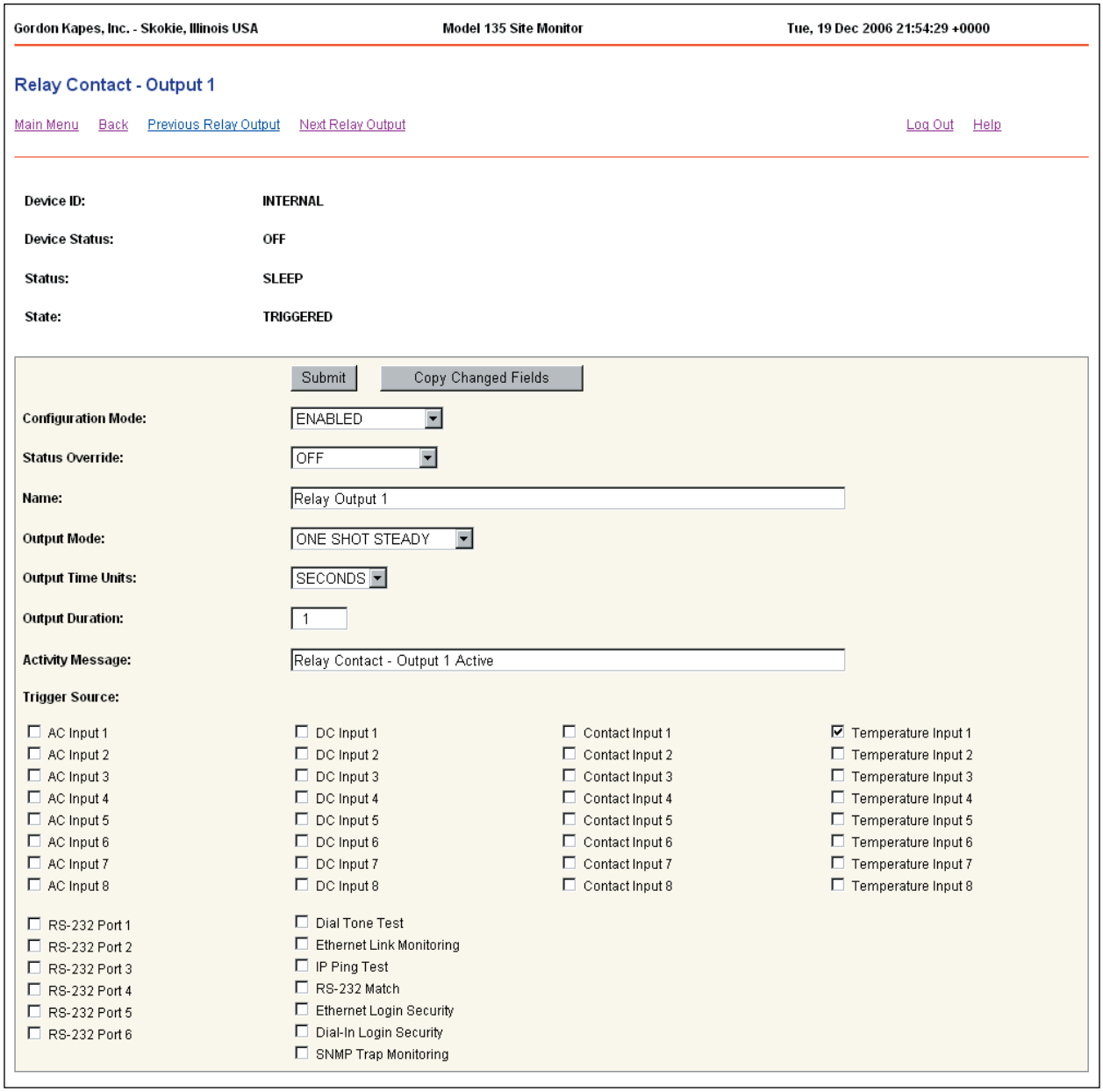
Output Time Unit: Select SECONDS*, MINUTES, or HOURS.

Output Duration: Enter 0 through 999. Factory default is *1*.

Activity Message: Enter text up to 79 characters. This will be posted to the Activity Log when the DC output enables. Factory default is *DC Power - Output n Active*.

Trigger Source: Check one or more sources that can trigger the DC output. The trigger occurs when the source's Configuration Mode is ENABLED and Alarm State is ALARM or ALARM REPORTED. For Automatic Mode sources the trigger occurs when Last Test Result is FAIL regardless of whether Automatic Mode is DISABLED or ENABLED. Factory default is none selected.

Output Devices—Relay Contacts



Help for Output Devices—Relay Contacts

Relay activation uses the I/O bus except for relays 1 and 2 which are INTERNAL. The output function allows manual or automatic activation for a pre-determined time interval. When status is set to NOT CONFIGURED or DISABLED, automatic or manual operation of the DC output function is not possible. When the status is set to ENABLED, one or more Model 135 functions can be selected to act as output trigger sources. One shot output mode automatically activates the output for the configured output duration. The trigger occurs each time an alarm message is posted by the selected function. The output is not re-triggerable. The output duration is not reset if another trigger occurs while the output is already active.

An asterisk (*) after a value indicates the factory default. Further details can be found in Help for Common Terms.

Device ID: Shows the unique number assigned to the device, INTERNAL, or ---.

Output Devices—Relay Contacts

Help for Output Devices—Relay Contacts (continued)

Device Status: Shows ON, OFF, or ---.

Status: Shows ---, DISABLED, ENABLED, SLEEP, or NOT DETECTED. Shows the output duration time remaining after SLEEP.

State: Shows ---, NORMAL, TRIGGERED, or FORCE ON.

--- indicates that Configuration Mode is NOT CONFIGURED.

NORMAL indicates that Configuration Mode is DISABLED or Configuration Mode is ENABLED and no trigger sources are active.

TRIGGERED indicates that Configuration Mode is ENABLED and at least one trigger source is active.

FORCE ON indicates that Configuration Mode is ENABLED and that Output Mode is ALWAYS ON. No trigger source is needed.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, ENABLED, or REMOVE DEVICE ID (only if device is not INTERNAL).

Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Activity Log. Factory default is *Relay Output n.*

Output Mode: Select ONE SHOT STEADY*, ONE SHOT PULSATING, FOLLOW STEADY, FOLLOW PULSATING, and ALWAYS ON.

ONE SHOT STEADY turns on the output after the activity message is posted. The output remains on until the output duration has expired, then turns off. All trigger sources must be inactive before the output can be re-triggered.

ONE SHOT PULSATING toggles the output on and off after the activity message is posted. The toggle rate is one second on and one second off. Pulsating continues until the output duration has expired, and then turns off. All trigger sources must be inactive before the output can be re-triggered.

FOLLOW STEADY turns on the output after the activity message is posted. The output remains on until both the output duration has expired and all trigger sources are inactive.

FOLLOW PULSATING toggles the output on and off after the activity message is posted. The toggle rate is one second on and one second off. Pulsating continues until both the output duration has expired and all trigger sources are inactive.

ALWAYS ON keeps the output turned on providing the configuration mode is ENABLED.

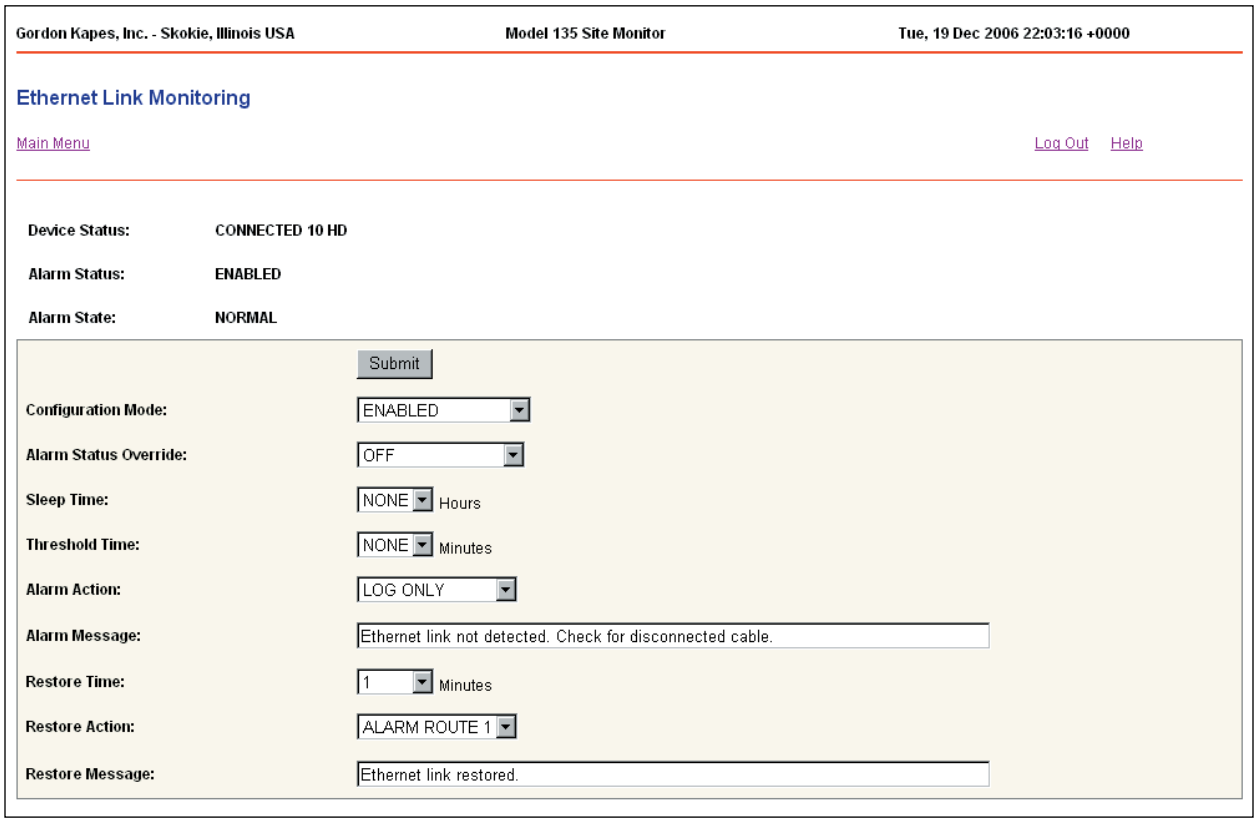
Output Time Units: Select SECONDS*, MINUTES, or HOURS.

Output Duration: Enter 0 through 999. Factory default is *1*.

Activity Message: Enter text up to 79 characters. This will be posted to the Activity Log when the relay output enables. Factory default is *Relay Contact - Output n Active*.

Trigger Source: Check one or more sources that can trigger the relay output. The trigger occurs when the source's Configuration Mode is ENABLED and Alarm State is ALARM or ALARM REPORTED. For Automatic Mode sources the trigger occurs when Last Test Result is FAIL regardless of whether Automatic Mode is DISABLED or ENABLED. Factory default is none selected.

Ethernet Port—Ethernet Link Monitoring



Help for Ethernet Port—Ethernet Link Monitoring

This screen configures parameters associated with monitoring of the Ethernet link.

An asterisk (*) after a value indicates the factory default.

Device Status: Shows NOT CONNECTED, CONNECTED 10 HD, CONNECTED 10 FD, CONNECTED 100 HD, or CONNECTED 100 FD. 10 is 10 Mbps. 100 is 100 Mbps. HD is Half-Duplex. FD is Full-Duplex.

Alarm Status: Shows ---, DISABLED, ENABLED, or SLEEP. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Sleep Time: Select NONE* or 1 to 9 hours.

Threshold Time: Select NONE* or 1 to 9 minutes.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Threshold Time has been met. Factory default is *Ethernet link not detected. Check for disconnected cable.*

Restore Time: Select NONE or 1* to 9 minutes.

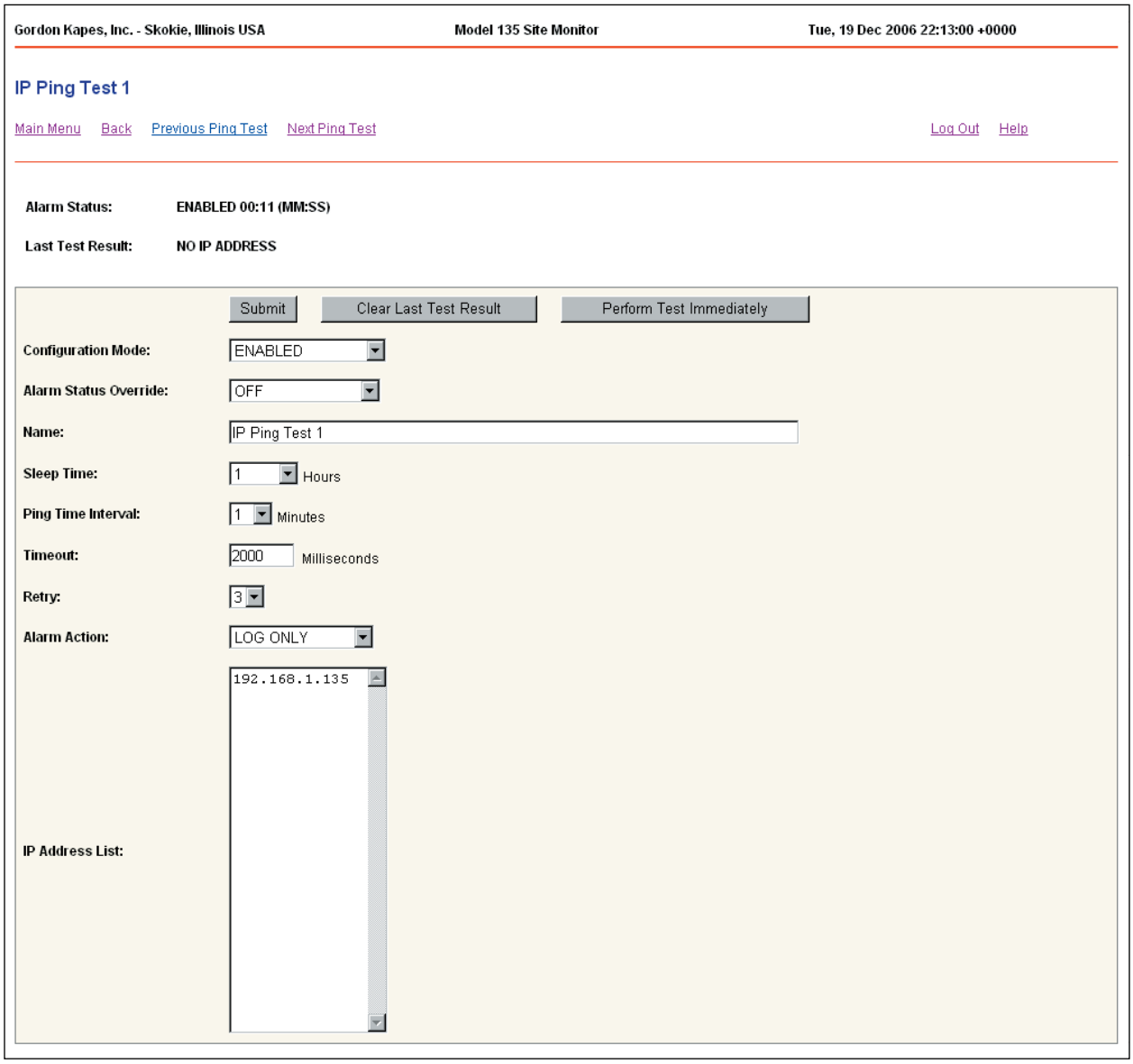
Ethernet Port—Ethernet Link Monitoring

Help for Ethernet Port—Ethernet Link Monitoring

Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the restore time has been met.

Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the restore time has been met. Factory default is *Ethernet link restored*.

Ethernet Port—IP Ping Test



Help for Ethernet Port—IP Ping Test

This function determines whether specific IP devices are accessible to the Model 135 by pinging their IP address. Alarm reporting is enabled when Configuration Mode is ENABLED. Failure to receive a ping response will initiate a retry. When the number of retries is exhausted a message is posted to the Alarm Log, an alarm is triggered, and the alarm status is changed to sleep. Pinging is accomplished through the Ethernet port.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows ---, ENABLED, or SLEEP. If the test passes, shows ENABLED followed by the remaining ping time interval. If the test fails, shows SLEEP followed by the remaining sleep time.

Last Test Result: Shows ---, TEST IN PROGRESS, PASS, FAIL, LINK DOWN, or NO IP ADDRESS. An alarm is reported when last test result is FAIL.

Submit: Click *Submit* to send changes to the system.

Ethernet Port—IP Ping Test

Help for Ethernet Port—IP Ping Test (continued)

Clear Last Test Result: Click to reset last test result to ---. It also clears the Relay Contact and DC Power trigger source, when selected.

Perform Test Immediately: Click to immediately perform an IP Ping Test. No test is performed if automatic mode is not configured.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be sent in alarm reports. Factory default is *IP Ping Test n*.

Sleep Time: Select NONE or 1* to 9 hours.

Ping Time Interval: Select 1* to 15 minutes. The time between passed tests.

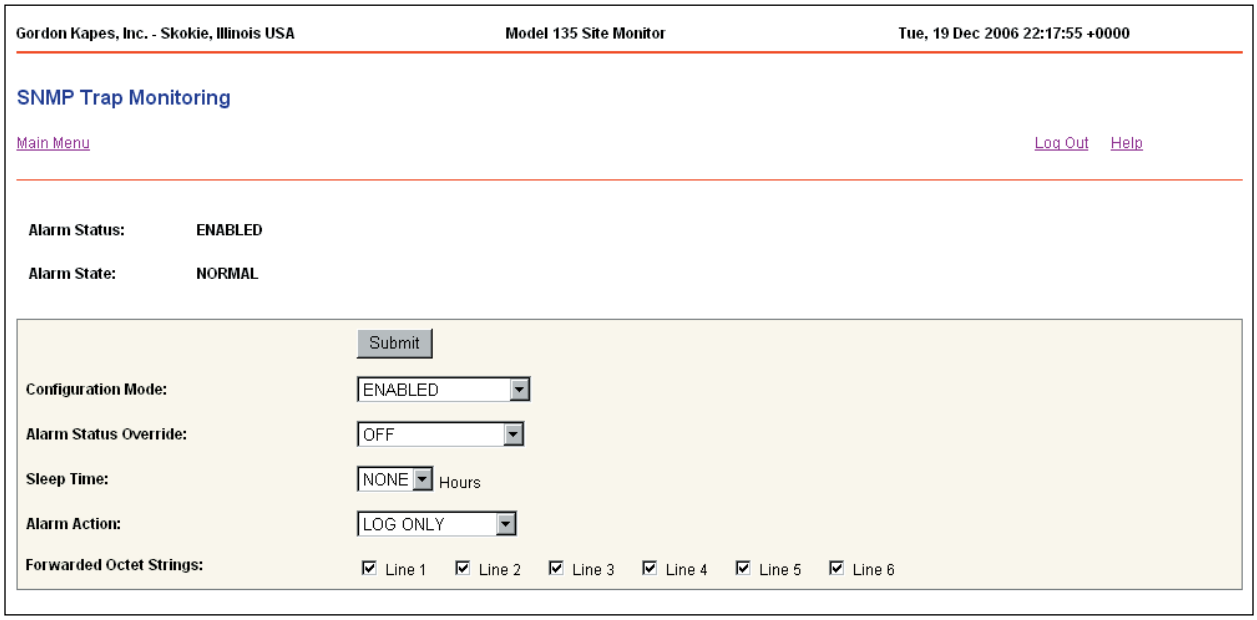
Timeout: Enter maximum number of milliseconds to receive ping response. This is also the time between retries. Factory default is *2000*.

Retry: Select 1 through 9. Retries occur only when a ping fails to receive a response. Factory default is *3*.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

IP Address List: Enter IP addresses to ping up to 20 addresses. Use Enter key as a separator.
Example: 192.168.1.107.

Ethernet Port—SNMP Trap Monitoring



Help for Ethernet Port—SNMP Trap Monitoring

This screen configures the SNMP Trap Monitoring function. Traps are received on IP port 162. SNMPv1 and SNMPv2 traps are supported.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows ---, DISABLED, ENABLED, or SLEEP. Shows the Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

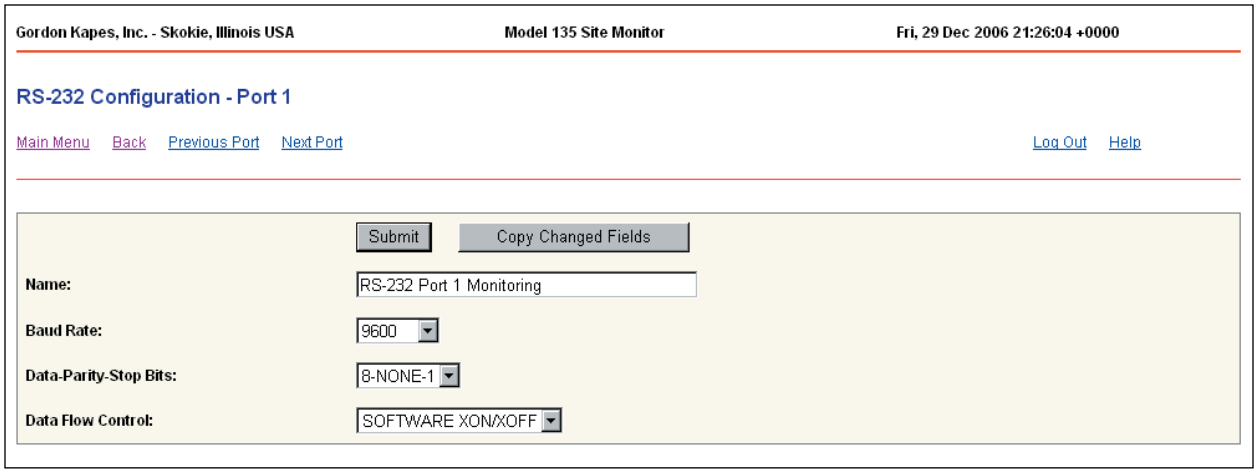
Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Sleep Time: Select NONE* or 1 to 9 hours. If NONE is selected the minimum sleep time is two seconds.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

Forwarded Octet Strings: Select the line numbers to be posted to the Alarm Log. Octet strings are human-readable text contained in SNMP messages. Factory default is all selected.

RS-232 Ports—RS-232 Configuration



Help for RS-232 Ports—RS-232 Configuration

There are six RS-232 ports. Each is configured independently with the exception that only four different baud rates may be selected. All use asynchronous communications with one start bit and one stop bit.

The RS-232 ports are connected using RJ45 jacks. Adapters to DB9 or DB25 connectors are required. Ports are always active even though RS-232 Connection Monitoring may not be.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies screen changes to the other screens starting from this index and higher. The name field is not copied.

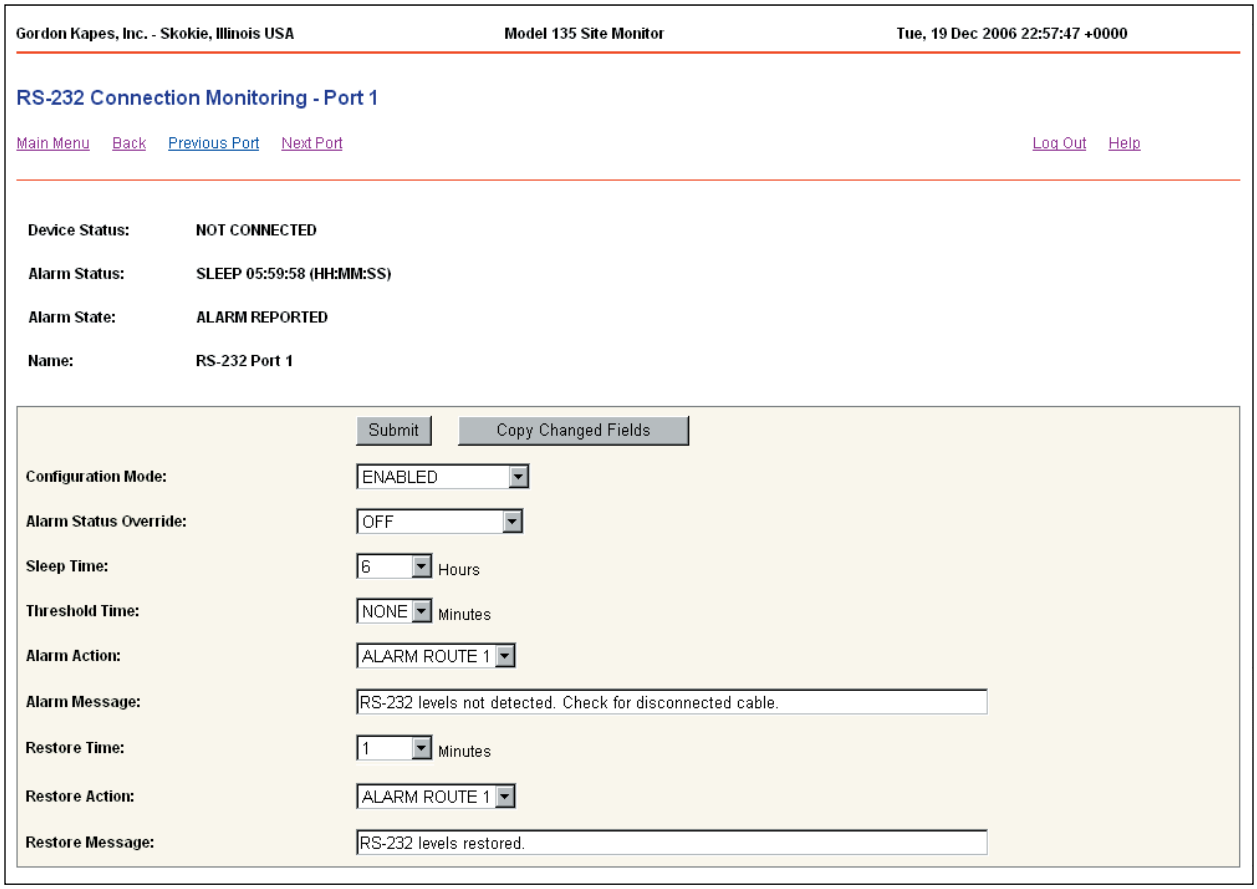
Name: Enter text up to 40 characters. This will be posted to the Alarm Log. Factory default is *RS-232 Port n Monitoring*.

Baud Rate: Select 300, 1200, 2400, 4800, 9600*, 19200, 38400, 57600, or 115200 bits-per-second. Only four different baud rates are allowed between the six ports. This selection cannot be changed if a fifth baud rate is attempted.

Data-Parity-Stop Bits: Select 8-NONE-1*, 7-EVEN-1, 7-ODD-1, 7-LOW-1, or 7-HIGH-1.

Data Flow Control: Select NONE or SOFTWARE XON/XOFF*. Software XON/XOFF allows reception of control-S to stop data transmission and control-Q to resume data transmission. A 256-byte buffer holds unsent data while transmission is stopped. Buffer overflow causes data transmission to resume and unsent data to be discarded.

RS-232 Ports—RS-232 Connection Monitoring



Help for RS-232 Ports—RS-232 Connection Monitoring

The RS-232 pins are monitored for signal levels above +3 Volts or below –3 Volts. An alarm is activated when the signal levels fall outside this range. The monitored pins on RS-232 Ports 1 through 4 are TxD and RTS. The monitored pin on RS-232 Ports 5 and 6 is TxD. The data LED turns on if a valid signal level is detected on TxD or RTS and flickers when data is sent or received, regardless of whether Configuration Mode is enabled.

An asterisk (*) after a value indicates the factory default.

Device Status: Shows CONNECTED or NOT CONNECTED.

Alarm Status: Shows ---, DISABLED, ENABLED, or SLEEP. Shows the Threshold Time remaining after ENABLED and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Name: Shows the name assigned to the port.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies screen changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Sleep Time: Select NONE or 1 to 9 hours. Factory default is 6.

Threshold Time: Select NONE* or 1 to 9 minutes.

RS-232 Ports—RS-232 Connection Monitoring

Help for RS-232 Ports—RS-232 Connection Monitoring (continued)

Alarm Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm routing group.

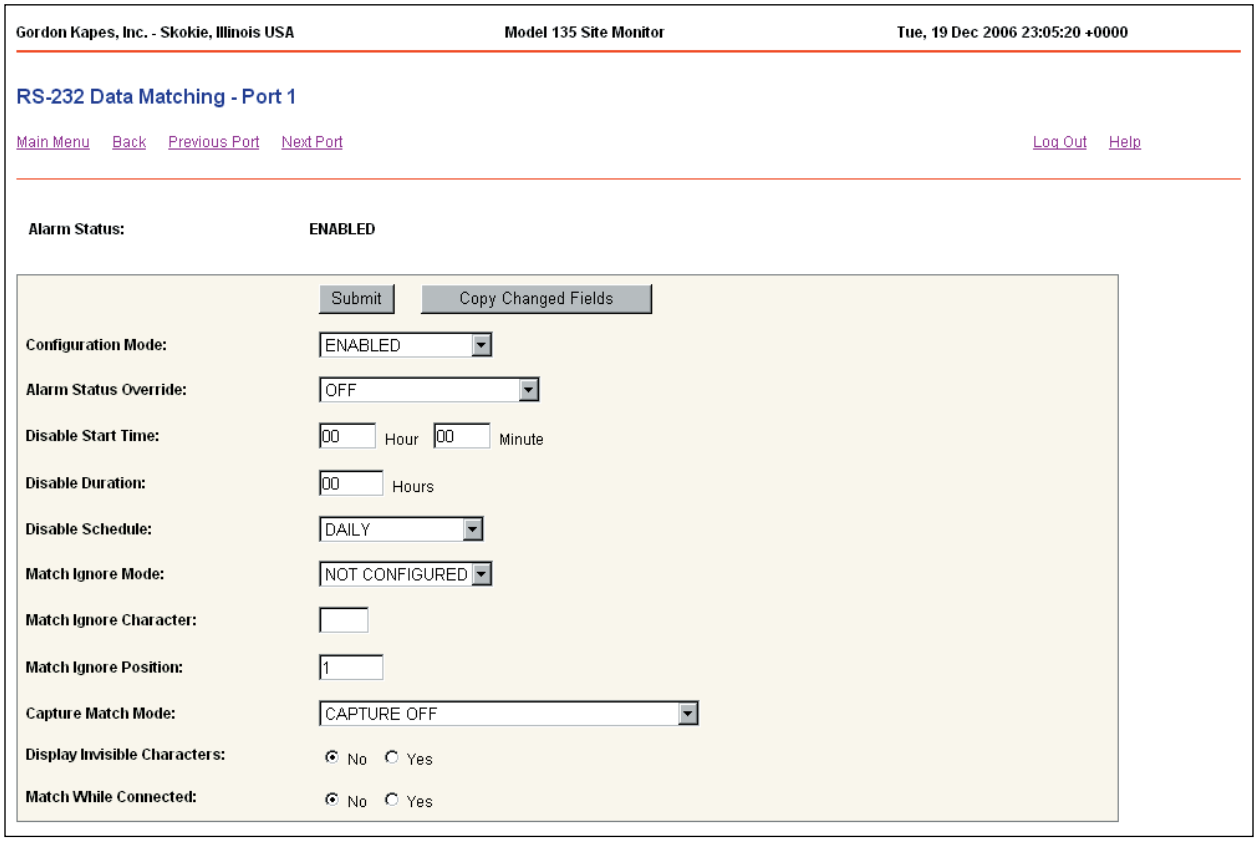
Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log when the Threshold Time has been met. Factory default is *RS-232 levels not detected. Check for disconnected cable.*

Restore Time: Select NONE or 1* to 9 minutes.

Restore Action: Select LOG ONLY, ALARM ROUTE 1*, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the restore action is log only or is logged and sent to an alarm routing group when the restore time has been met.

Restore Message: Enter text up to 79 characters. This is posted to the Alarm Log when the restore time has been met. Factory default is *RS-232 levels restored.*

RS-232 Ports—RS-232 Data Matching



Help for RS-232 Ports—RS-232 Data Matching

This screen allows incoming RS-232 data to initiate an alarm report. This screen works in conjunction with RS-232 Match Definitions.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows ---, DISABLED, ENABLED, or MATCH DISABLE. Shows the time remaining after MATCH DISABLE.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED. Data matching can be disabled for a specific time period on a daily or a Monday through Friday basis. This is accomplished by setting Configuration Mode to ENABLED and setting Disable Start Time to the start of the disable period. The Disable Duration is set to the number of hours that RS-232 Data Matching will be disabled. Disable Schedule can be set to either DAILY or MONDAY-FRIDAY.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE MATCH DISABLE. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Disable Start Time: Enter the time of day when data matching is to be automatically disabled. 24-hour format is used. Range is 00:00 to 23:59. Factory default is *00:00*.

Disable Duration: Enter duration in hours (00-24) after which data matching is automatically enabled. Factory default is *00*.

Disable Schedule: Select DAILY* or MONDAY-FRIDAY. Select the desired days of the week that data matching will be disabled.

RS-232 Ports—RS-232 Data Matching

Help for RS-232 Ports—RS-232 Data Matching (continued)

Match Ignore Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED. Allows matching to be ignored if a specific character at a specific position is detected.

Match Ignore Character: Enter the match ignore character. See Match Ignore Position for further information.

Match Ignore Position: Enter the position of the character to be matched. Range is 1 to 256. If both Match Ignore Character and Match Ignore Position are satisfied, this line is ignored from further matches until end of line is detected.

Capture Match Mode: Select CAPTURE OFF*, CAPTURE FROM MATCH START TO LINE END, CAPTURE FROM LINE START TO LINE END, CAPTURE FROM LINE START TO MATCH END. Allows the RS-232 data stream (message) associated with a match data to be stored as part of the alarm record.

In CAPTURE FROM MATCH START the system stores from the beginning of the match data.

In CAPTURE FROM LINE START the system stores from the first character following the carriage return (or line feed) preceding the match data.

In TO LINE END the system will end capture upon reaching carriage return, or line feed, or upon storing 132 characters, whichever comes first.

In TO MATCH END the system will end capture at the end of the match data.

Display Invisible Characters: Select No* or Yes. Yes allows control characters that are normally invisible to appear in the Alarm and Activity Log. This can be helpful for diagnosing problems and a nuisance during normal operation. Hex 1 (control-A) through hex 1F (control-_) is displayed as A through _. Hex 7F is displayed as z.

Match While Connected: Select No* or Yes. No performs matching only when the port is not connected to the Ethernet port or telephone modem. Yes allows matching to continue while connected.

RS-232 Ports—RS-232 Match Definitions

Gordon Kapes, Inc. - Skokie, Illinois USA | Model 135 Site Monitor | Mon, 5 Feb 2007 22:01:47 +0000

RS-232 Match Definitions

Main Menu | Log Out | Help

Match Definitions	Alarm Status	RS-232 Port	Match Data
Match Definition 1	ENABLED	1	The quick brown fox jumps over the lazy
Match Definition 2	---	---	---
Match Definition 3	---	---	---
Match Definition 4	---	---	---
Match Definition 5	---	---	---
Match Definition 6	---	---	---
Match Definition 7	---	---	---
Match Definition 8	---	---	---
Match Definition 9	---	---	---
Match Definition 10	---	---	---
Match Definition 11	---	---	---
Match Definition 12	---	---	---
Match Definition 13	---	---	---
Match Definition 14	---	---	---
Match Definition 15	---	---	---
Match Definition 16	---	---	---
Match Definition 17	---	---	---
Match Definition 18	---	---	---
Match Definition 19	---	---	---
Match Definition 20	---	---	---
Match Definition 21	---	---	---
Match Definition 22	---	---	---
Match Definition 23	---	---	---
Match Definition 24	---	---	---
Match Definition 25	---	---	---
Match Definition 26	---	---	---
Match Definition 27	---	---	---
Match Definition 28	---	---	---
Match Definition 29	---	---	---
Match Definition 30	---	---	---
Match Definition 31	---	---	---
Match Definition 32	---	---	---

RS-232 Ports—RS-232 Match Definitions

Help for RS-232 Ports—RS-232 Match Definitions

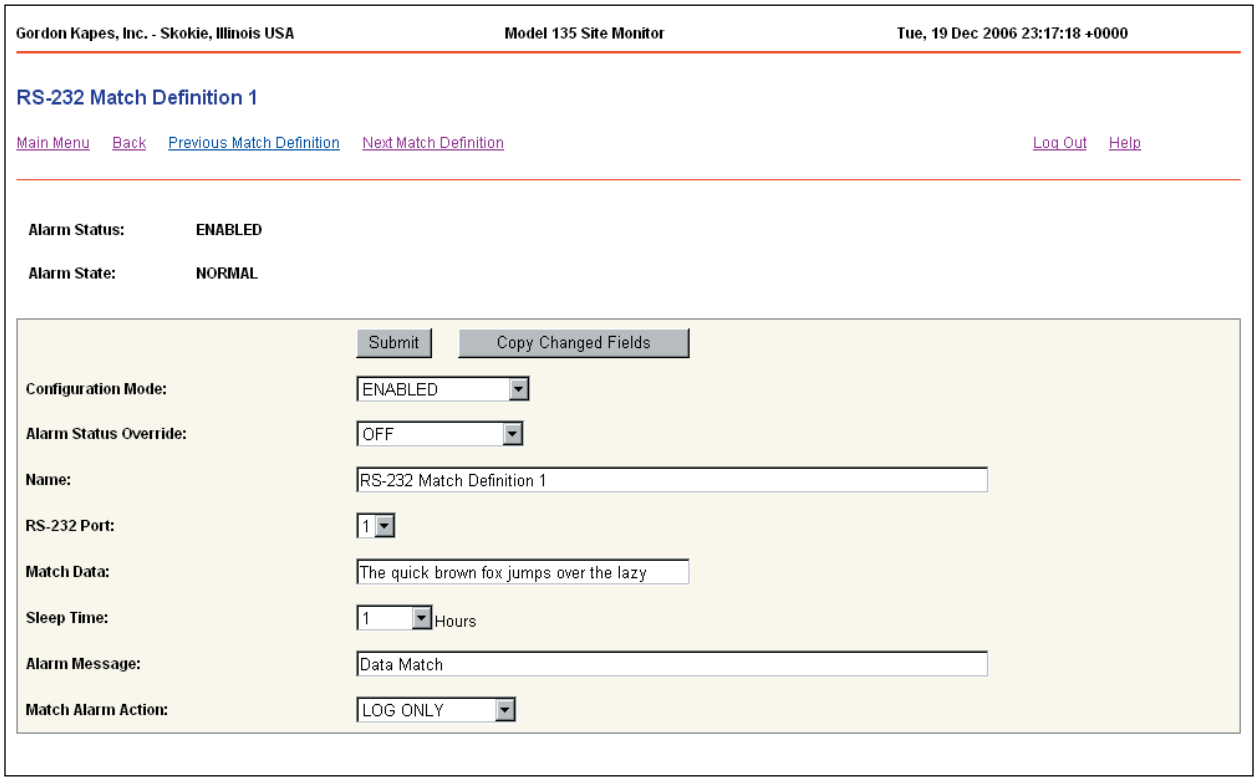
Match Definitions: Click on a match definition to review or change.

Alarm Status: Shows the alarm status for each match definition.

RS-232 Port: Shows the RS-232 port assigned to each match definition.

Match Word: Shows the actual match data.

RS-232 Ports—RS-232 Match Definitions



Help for RS-232 Ports—RS-232 Match Definitions

This screen configures RS-232 data for data matching. This screen works in conjunction with RS-232 Data Matching.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows ---, DISABLED, ENABLED, MATCH DISABLE, or SLEEP. Shows the time remaining after MATCH DISABLE and Sleep Time remaining after SLEEP.

Alarm State: Shows ---, NORMAL, ALARM, or ALARM REPORTED.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The name field is not copied.

Configuration Mode: Select NOT CONFIGURED*, DISABLED, or ENABLED.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Name: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *RS-232 Match Definition n.*

RS-232 Port: Select 1*, 2, 3, 4, 5, or 6. Indicates the RS-232 port that will be monitored for this match data.

RS-232 Ports—RS-232 Match Definitions

Help for RS-232 Ports—RS-232 Match Definitions (continued)

Match Data: Match data may contain as many as 39 characters including upper- and lower-case letters, numbers, punctuation, and spaces. ~ is the lead-in character for flexible matching.

~? matches any character in this position. *Example:* AB~?45 matches ABC45.

~# matches any digit (0-9) in this position. *Example:* ABC~#~# matches ABC00 through ABC99.

~~ matches ~. *Example:* AB~~45 matches AB~45.

~^ matches the next control character. *Example:* ~^G matches bell, ~^J matches line feed, ~^M matches carriage return.

~! does not match the next character. *Example:* AB~!?45 does not match AB?45.

~[???] matches a series of characters. Square-brackets ([ ]) are required. The number of characters is limited only by the line length. *Example:* ~[?????] matches ABC45.

~[###] matches a series of digits (0-9). Square-brackets ([ ]) are required. The number of digits is limited only by the line length. *Example:* ~[???##] matches ABC45.

~[min-max] matches a range of numbers. Square-brackets ([ ]) and hyphen (-) are required. Min and max may contain only digits 0 through 9. The number of digits is limited only by the line length but min and max must contain the same number of digits. *Example:* ABC~[11-99] matches ABC11 through ABC99.

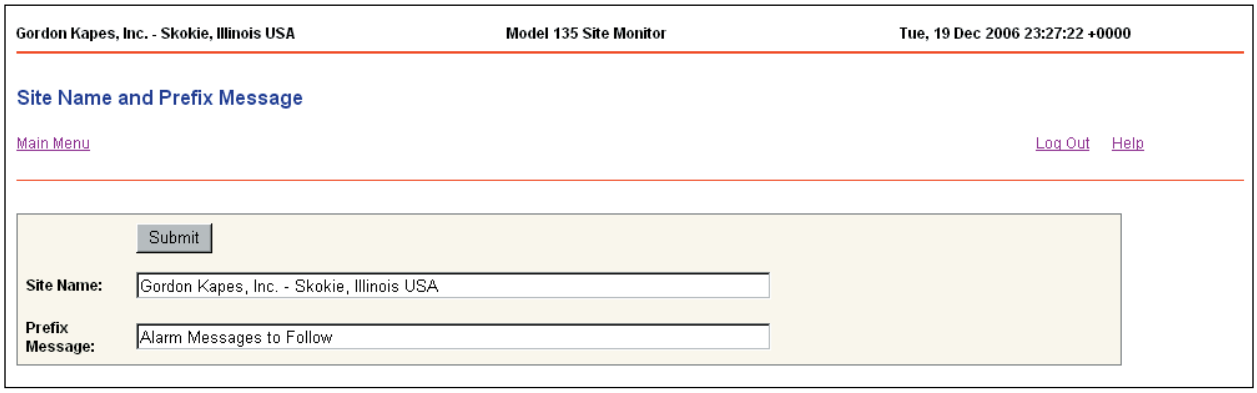
Flexible matching may be repeated but may not be nested.

Sleep Time: Select NONE or 1* to 9 Hours. If NONE is selected the minimum sleep time is two seconds.

Alarm Message: Enter text up to 79 characters. This will be posted to the Alarm Log. Factory default is *Data Match*.

Match Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the match is posted only to the Alarm Log or posted to the Alarm Log and sent to an alarm routing group.

Message Delivery—Site Name & Prefix Message



Help for Message Delivery—Site Name & Prefix Message

The site name, serial number, software version number, and prefix message are sent at the start of all alarm reports.

Example:
Gordon Kapes, Inc. - Skokie, Illinois USA
Serial Number: 00154 Version: 1.nn
Alarm Messages to Follow

Submit: Click *Submit* to send changes to the system.

Site Name: The site name is displayed on all screens and sent in the alarm report. Factory default is *Gordon Kapes, Inc. - Skokie, Illinois USA.*

Prefix Message: The prefix message is sent after the serial number in the alarm reports. Factory default is *Alarm Messages to Follow*.

Message Delivery—Alarm Routes

Gordon Kapes, Inc. - Skokie, Illinois USA | Model 135 Site Monitor | Mon, 5 Feb 2007 22:08:10 +0000

Alarm Route 1

Main Menu | Back | Previous Alarm Route | Next Alarm Route | User Database | Log Out | Help

Route List	Alarm User	Alarm Type	Alarm Confirmation	Route Status
Route 1.1	1 - admin	EMAIL/SMS	CONTINUE	No recipient specified
Route 1.2	3 - operator	MODEM TEXT	CONTINUE	No phone number specified
Route 1.3				
Route 1.4				
Route 1.5				
Route 1.6				
Route 1.7				
Route 1.8				
Route 1.9				
Route 1.10				
Route 1.11				
Route 1.12				
Route 1.13				
Route 1.14				
Route 1.15				
Route 1.16				
Route 1.17				
Route 1.18				
Route 1.19				
Route 1.20				
Route 1.21				
Route 1.22				
Route 1.23				
Route 1.24				
Route 1.25				
Route 1.26				
Route 1.27				
Route 1.28				
Route 1.29				
Route 1.30				
Route 1.31				
Route 1.32				

Message Delivery—Alarm Routes

Help for Message Delivery—Alarm Routes

The alarm route contains a list of users to be notified when an alarm action is triggered. User IDs are listed in the order of notification. Alarm action specifies which alarm route is taken and is defined by the function triggering the event. Alarm routing screens make it easier to test alarm notification and reduce confusion by displaying the user number and name.

Route List: Click on a route list to review or change.

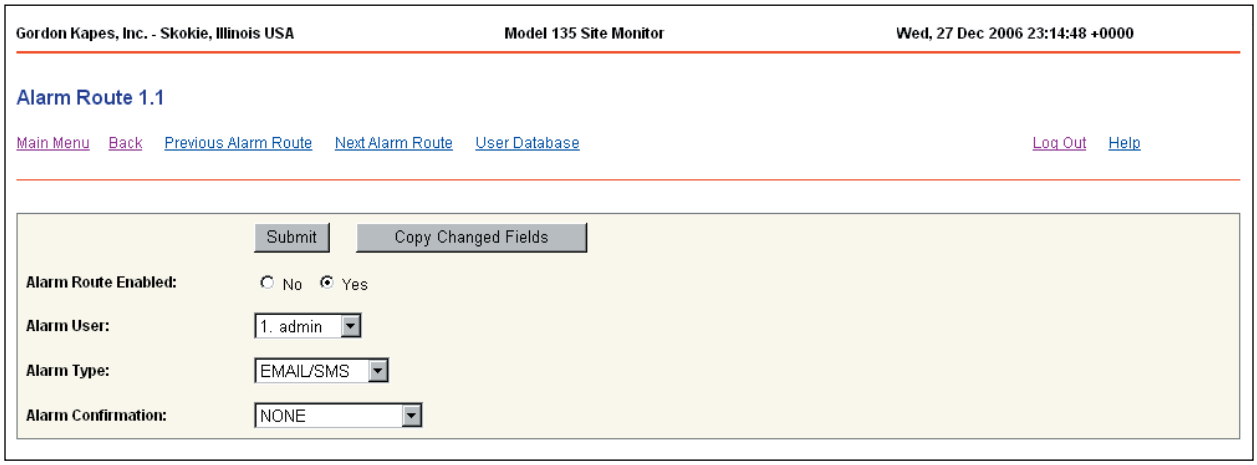
Alarm User: Shows the user to be notified. User name is shown for clarification. Users may appear more than once, but only one message is sent for each alarm type.

Alarm Type: Shows EMAIL/SMS or MODEM TEXT.

Alarm Confirmation: Shows CONTINUE or WAIT followed by time.

Route Status: Shows OK or reason why user will not be notified.

Message Delivery—Alarm Routes



Help for Message Delivery—Alarm Routes

This screen routes an alarm message to a specific user.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher.

Alarm Route Enabled: Select No or Yes. No disables the alarm route. Factory default is *Yes* for Alarm Route 1, *No* for all other alarm routes.

Alarm User: Select the user to be notified. User name is shown for clarification. Users may appear more than once, but only one message is sent for each alarm type.

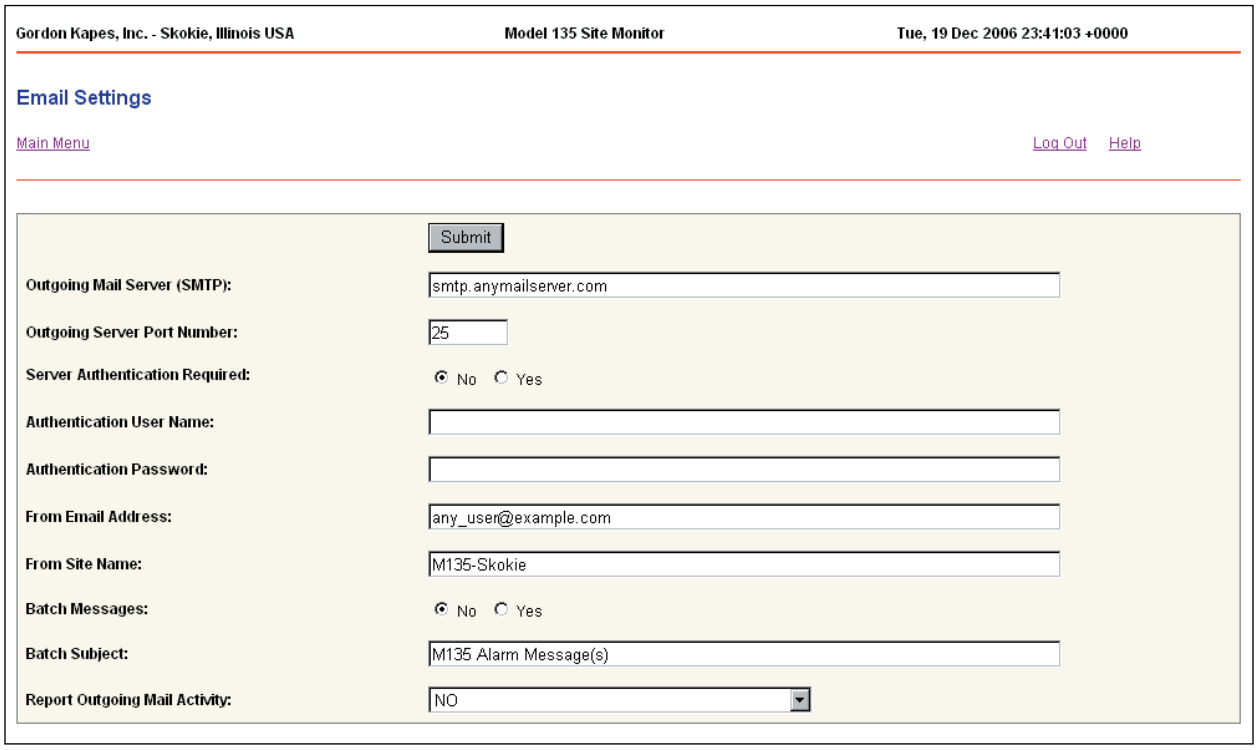
Alarm Type: Select EMAIL/SMS* or MODEM TEXT. Indicates how the alarm message is sent. The recipient's address is configured in the user's profile. EMAIL/SMS is sent using SMTP via the Ethernet port. MODEM TEXT is sent via the telephone modem.

Alarm Confirmation: Select NONE*, WAIT 1 MINUTE, WAIT 15 MINUTES, WAIT 30 MINUTES, WAIT 1 HOUR, WAIT 2 HOURS, WAIT 4 HOURS, WAIT 8 HOURS, WAIT 12 HOURS, and WAIT 24 HOURS.

NONE sends the alarm message and continues with the next enabled sub-route in the alarm routing group.

WAIT sends the alarm message, waits the selected time, then proceeds with the next enabled sub-route in the alarm routing group. It also puts the alarm in the Alarm Confirmation Log. If any user confirms the alarm on the Alarm Confirmation Log, no further sub-routes are notified. Alarms remain on the Alarm Confirmation Log until they are confirmed or all users have been notified and the final WAIT time has expired.

Message Delivery—Email Settings



Help for Message Delivery—Email Settings

This screen configures email parameters. Authentication is supported per RFC 2554. Currently the Model 135 supports the LOGIN authentication method.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Outgoing Mail Server (SMTP): Enter the domain name or IP address of the outgoing SMTP mail server. Without a server address email will not work. Factory default is a blank field.

Outgoing Server Port Number: Enter outgoing SMTP server port number up to 5 digits. Factory default port is *25*.

Server Authentication Required: Select No* or Yes. Yes indicates an Authentication Name and Password are required fields.

Authentication User Name: Enter the outgoing SMTP server authentication user name, if required, up to 79 characters. Factory default is a blank field.

Authentication Password: Enter the outgoing SMTP server authentication password, if required, up to 79 characters. Password characters are displayed using *.

From Email Address: Enter the email address up to 79 characters to be sent to the outgoing SMTP mail server identifying where the mail came from. Without it the outgoing mail server will reject mail. Do not surround this field with angled-brackets. The Model 135 will do that for you. Factory default is *any_user@example.com.*

From Site Name: Enter text up to 79 characters to be sent to the remote incoming mail client (POP) identifying where the mail came from. Do not surround this field with quotes. The Model 135 will do that for you. This field and the From Email Address are sent in quote angled-bracket format.
Example: “M135-Skokie” <any_user@example.com>. Factory default is *M135-Skokie*.

Message Delivery—Email Settings

Help for Message Delivery—Email Settings (continued)

Batch Messages: Select No* or Yes. No indicates the Model 135 sends one alarm per message. The email subject field sends the resource name that caused the alarm. Yes indicates the Model 135 sends the current alarm message plus other alarm messages that are currently pending.

Batch Subject: Enter text up to 79 characters to be sent in the email subject field when email is configured for batch messages. Factory default is *M135 Alarm Message(s).*

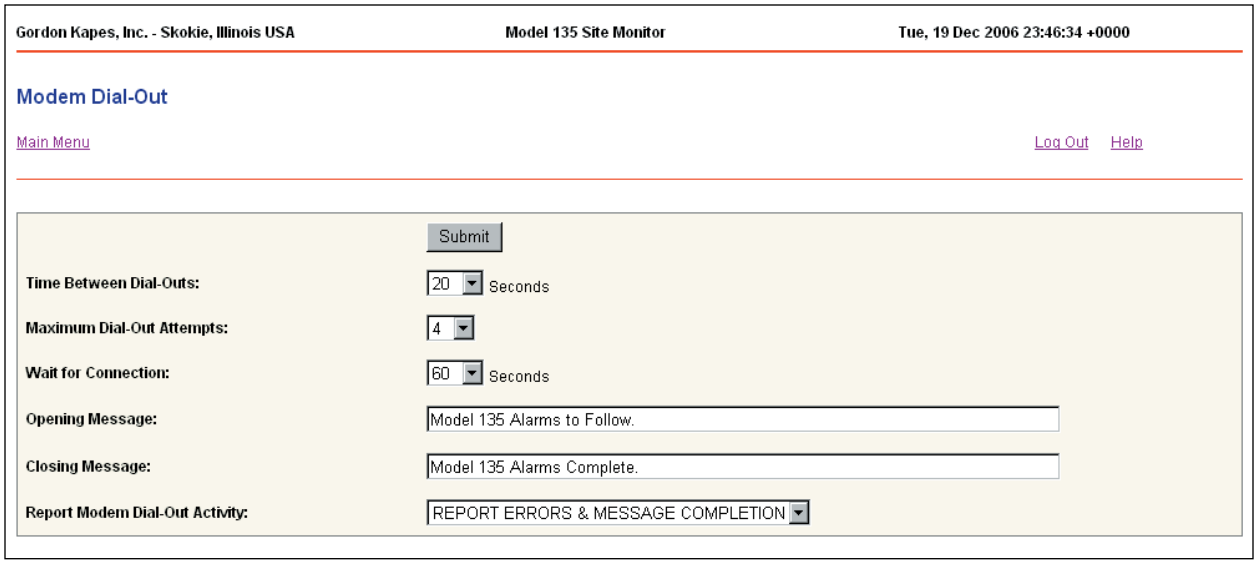
Report Outgoing Mail Activity: Select NO*, REPORT ERRORS, REPORT MESSAGE COMPLETION, or REPORT ERRORS & MESSAGE COMPLETION. This selection posts status messages to the Activity Log.

A typical email message contains the site name, serial number, software version number, prefix message, and alarm message. It is sent as follows:

Gordon Kapes, Inc. - Skokie, Illinois USA
Serial Number: 00001 Version: 1.00
Alarm Messages to Follow

> Msg 4549 Code 2260: Route 1 21-Jul-2006 11:47:58 Contact Input 1
Detected Alarm State on Contact Input

Message Delivery—Modem Dial-Out



Help for Message Delivery—Modem Dial-Out

This screen configures parameters used to send modem text messages. Because dial-out is relatively slow, messages are always sent out in batch format. See the Email Settings help screen for a description of batch messages.

Submit: Click *Submit* to send changes to the system.

Time Between Dial-Outs: Select 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100 seconds. This is the time between the end of a call and when the next dial-out can occur. This gives incoming calls a chance to get connected. Factory default is *20*.

Maximum Dial-Out Attempts: Select 1 to 10. This is the number of times the modem will attempt to contact a user for each text message. Failure may be due to lack of dial tone. Factory default is *4*.

Wait for Connection: Select 30, 45, 60, 75, 90, 105, or 120 seconds. This is the maximum time the telephone modem will wait for a carrier before determining that the connection has failed. Factory default is *60*.

Opening Message: Sent before the dial-out alarm message. This field is not sent for email (SMTP) messages. Factory default is a blank field.

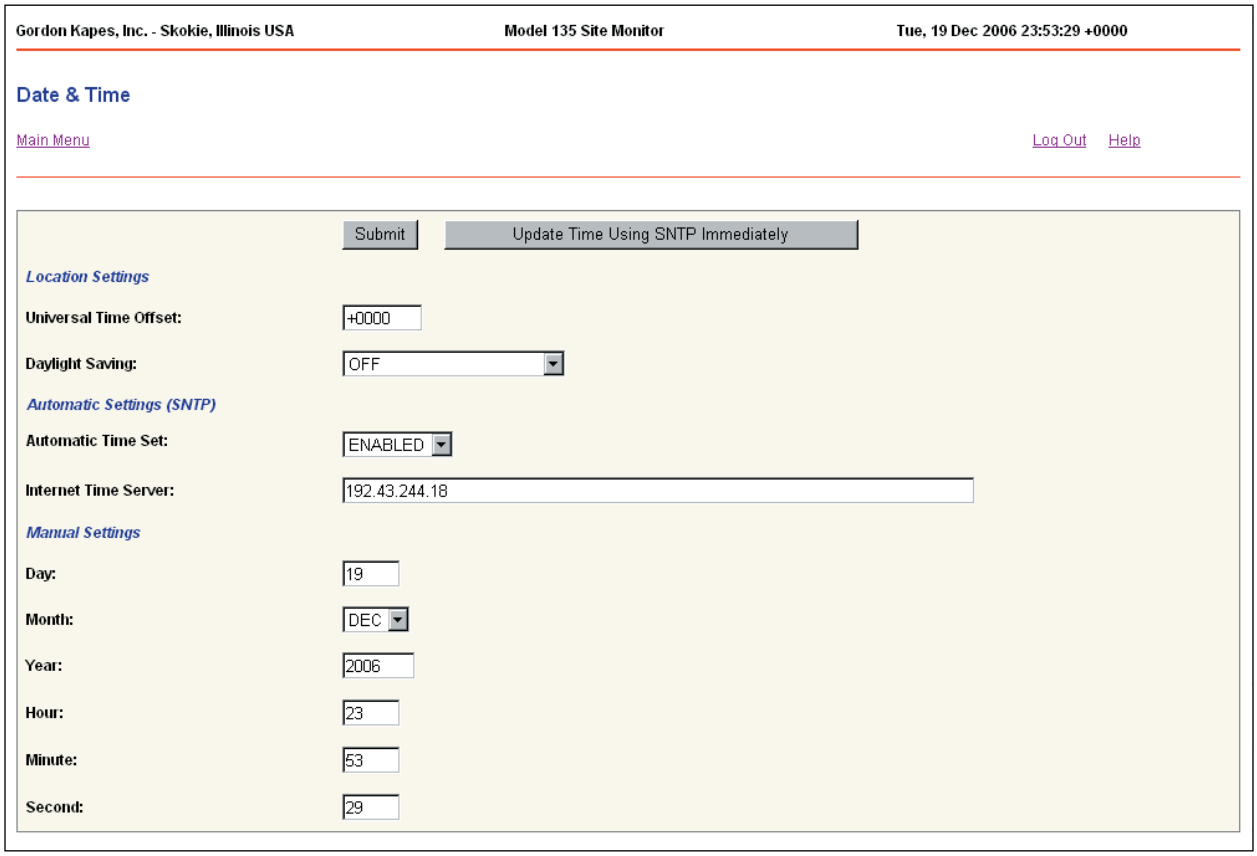
Closing Message: Sent after the dial-out alarm message. This field is not sent for email (SMTP) messages. Factory default is a blank field.

The following special characters may be inserted in the Opening and Closing Message fields:
%Wn inserts a pause of n seconds, where n=1-9.
^? inserts a control character, where ?= A-Z,[,\,],^ and _.
For example: ^L=Form Feed, ^M=Carriage Return, ^J=Line Feed, ^[=ESC.

Report Modem Dial-Out Activity: Select NO*, REPORT ERRORS, REPORT MESSAGE COMPLETION, or REPORT ERRORS & MESSAGE COMPLETION. This selection posts status messages to the Activity Log.

The Standard Dial-Out Sequence is:
1. Dial the modem phone number.
2. Establish modem carrier.
3. Send Site Identification and Serial Number.
4. Send Opening Message.
5. Send Alarm Messages that caused the dial-out.
6. Send Closing Message.
7. Disconnect the modem.

System Management—Date & Time



Help for System Management—Date & Time

Time is maintained by a real-time clock which is battery powered during AC power outages. A healthy battery will maintain accurate time for several years.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Update Time Using SNTP Immediately: Click to immediately perform an SNTP update.

Universal Time Offset: Enter the difference between Coordinated Universal Time (UTC) and local time in hours and minutes. Range is –1200 to +1400. RFC2822 recommends time zones use numeric offsets instead of names. *Examples:* Eastern –0500, Central –0600, Mountain –0700, Pacific –0800, Greenwich Mean +0000. Factory default is *+0000*.

Daylight Saving: Select whether to add one hour to standard time.

OFF* makes no adjustment to standard time.

MANUAL ON always adds one hour to standard time.

AUTO–NORTH AMERICA begins at 2 a.m. on the first Sunday in April and ends at 2 a.m. on the last Sunday in October.

AUTO–EUROPE begins at 1 a.m. GMT on the last Sunday in March and ends at 1 a.m. GMT on the last Sunday in October.

AUTO–USA 2007 begins at 2 a.m. on the second Sunday of March and ends at 2 a.m. the first Sunday of November.

System Management—Date & Time

Help for System Management—Date & Time (continued)

Automatic Time Set: Select DISABLED or ENABLED*. This indicates whether the Model 135's real-time clock will be updated by the Internet Time Server. If enabled, updates occur 30 seconds after Model 135 startup and then once per week.

Internet Time Server: Enter the domain name or IP address of the Internet Time Server. Factory default is *192.43.244.18* (time.nist.gov).

Day: Enter a day between 1 and 31. This selection is not stored in the Active Profile.

Month: Select a month between JAN and DEC. This selection is not stored in the Active Profile.

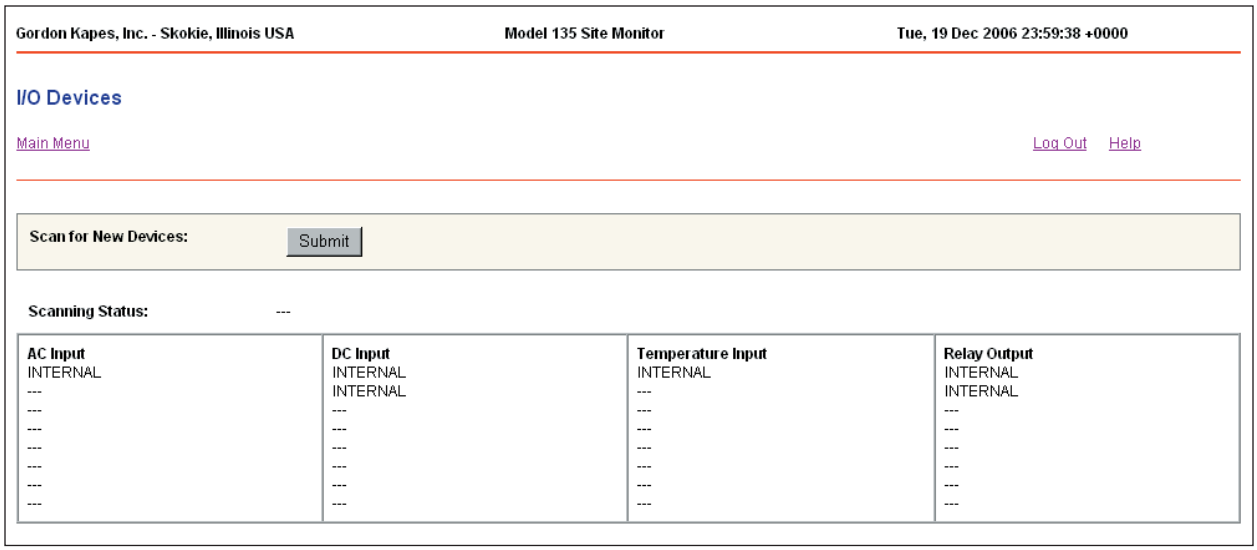
Year: Enter a year between 2000 and 2099. This selection is not stored in the Active Profile.

Hour: Enter an hour between 00 and 23. This selection is not stored in the Active Profile.

Minute: Enter a minute between 00 and 59. This selection is not stored in the Active Profile.

Second: Enter a second between 00 and 59. This selection is not stored in the Active Profile.

System Management—I/O Devices



Help for System Management—I/O Devices

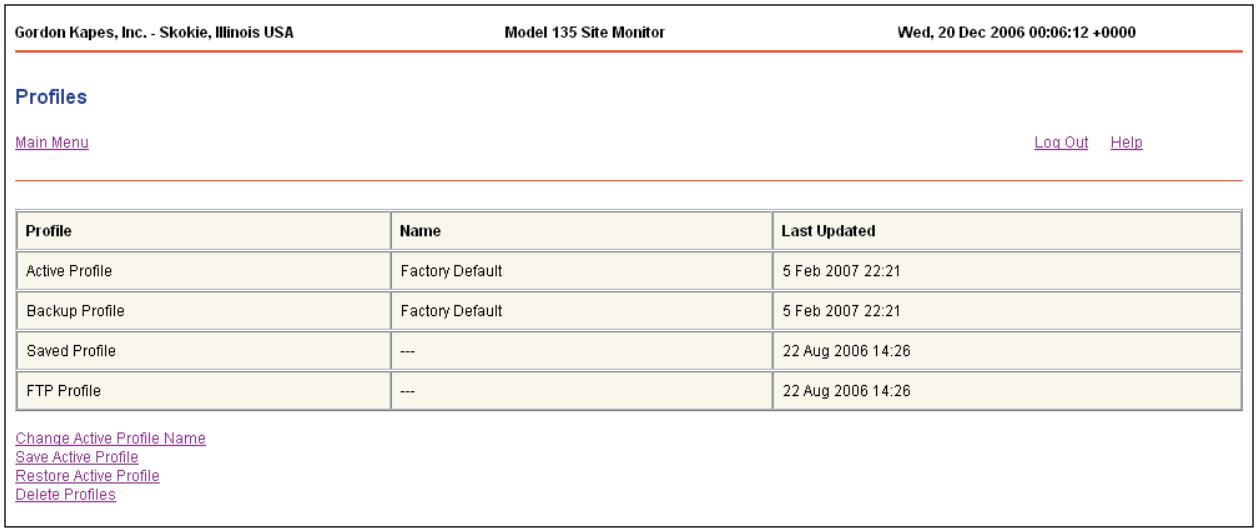
This screen shows the assignment of I/O Device IDs. The auxiliary I/O bus should be terminated at the far end with a 100 ohm resistor between the data connection and ground.

Scan for New Devices: Click *Submit* to scan for new I/O Device IDs. This can take up to one minute.

Scanning Status: Shows --- or *I/O Scanning in Progress - Click Browser Refresh to Update Screen*.

AC Input, DC Input, Temperature Input, Relay Output: Shows a list of Device IDs and INTERNAL. Hyperlinks indicate a Device ID is not assigned to an I/O Configuration. *Example:* 0000-0013-DEF9-28. Click on a hyperlinked Device ID to access the corresponding Assign I/O Device screen. INTERNAL devices are contained within the Model 135. They are automatically assigned and cannot be changed.

System Management—Profiles



Help for System Management—Profiles

This screen shows the profile names and last updated time for each profile.

Profile: There are four profiles.

Active Profile contains the profile in use by the Model 135. It is stored in battery-backed RAM.

Backup Profile is a copy of the Active Profile. It is automatically stored in flash memory upon user logout. The Backup Profile is loaded into the Active Profile upon system restart if the Active Profile is corrupted or has been cleared.

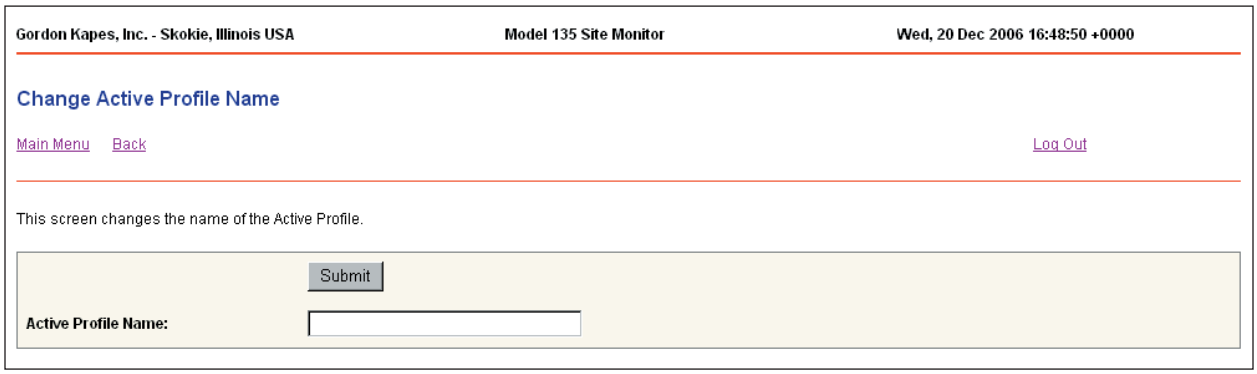
Saved Profile is manually stored in flash memory.

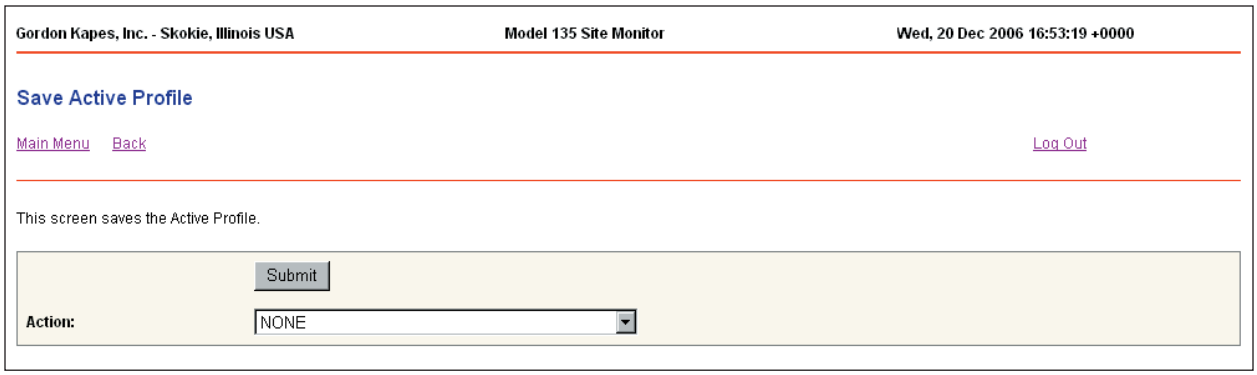
FTP Profile is where FTP saves files sent to the Model 135. It is stored in flash memory.

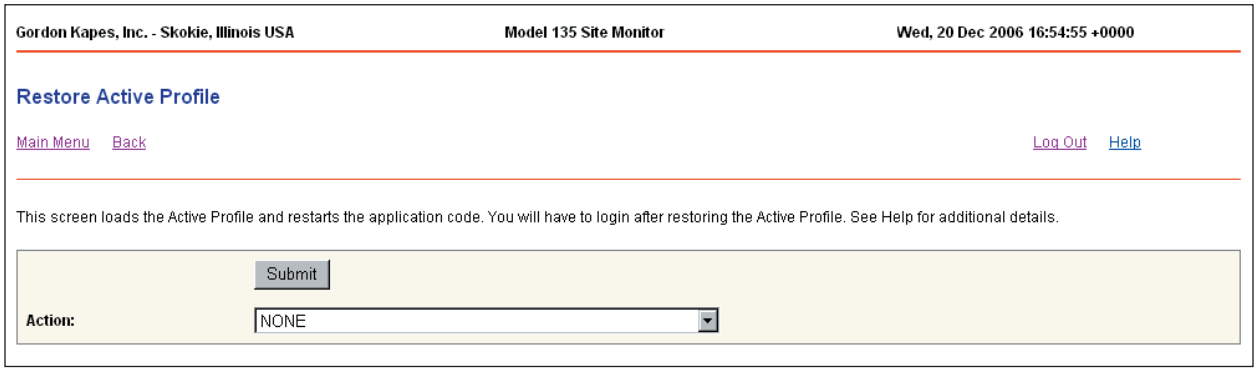
Name: Shows the name assigned to the profile. --- is displayed when no name has been assigned. Empty is displayed when no profile has been saved.

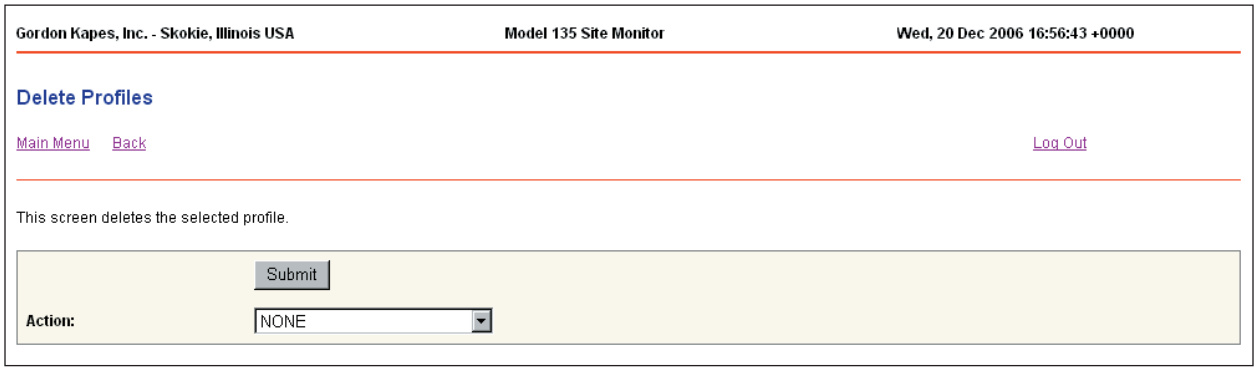
Last Updated: Shows the last date and time the profile was updated or --- when no profile has been saved.

System Management—Profiles





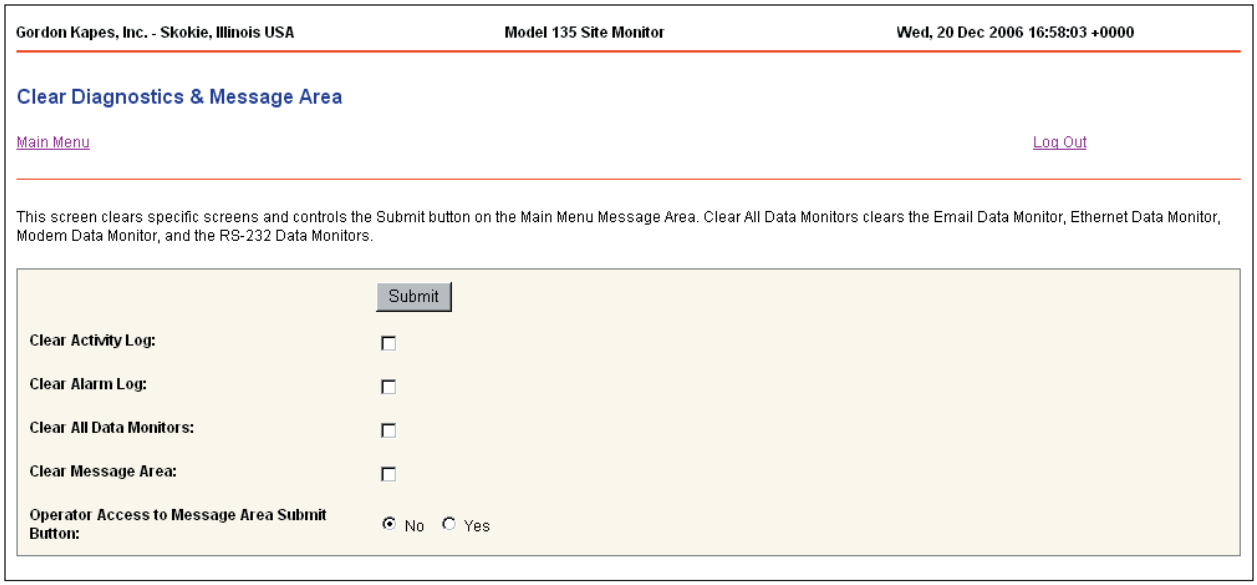




Help for System Management—Profiles

There is no help for these screens.

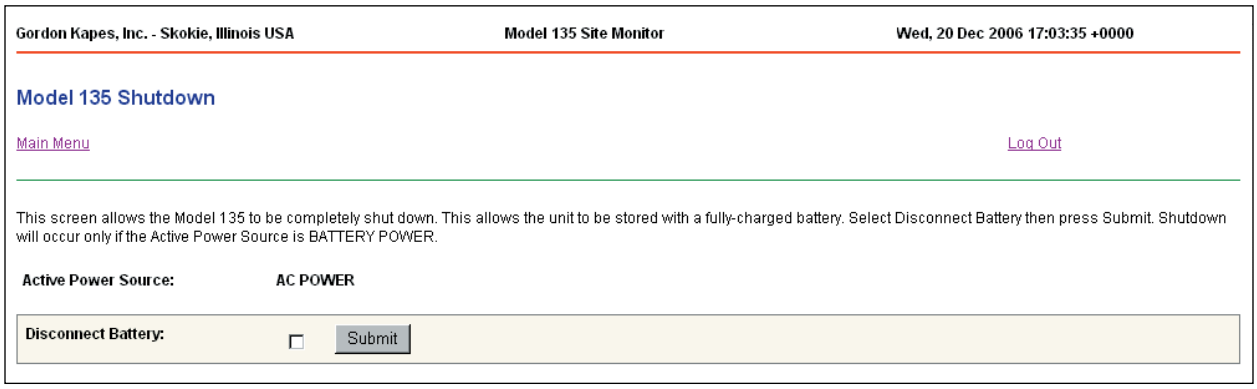
System Management—Clear Diagnostics & Message Area



Help for System Management—Clear Diagnostics & Message Area

There is no help for this screen.

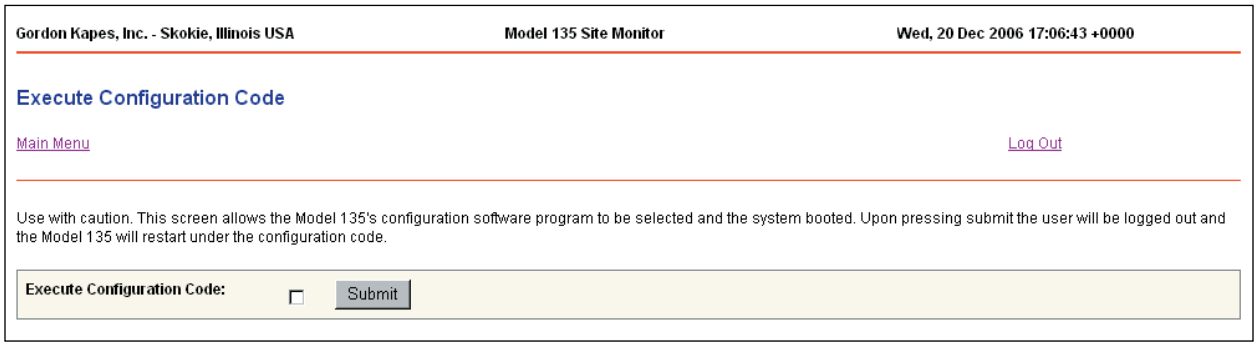
System Management—Model 135 Shutdown



Help for System Management—Model 135 Shutdown

There is no help for this screen.

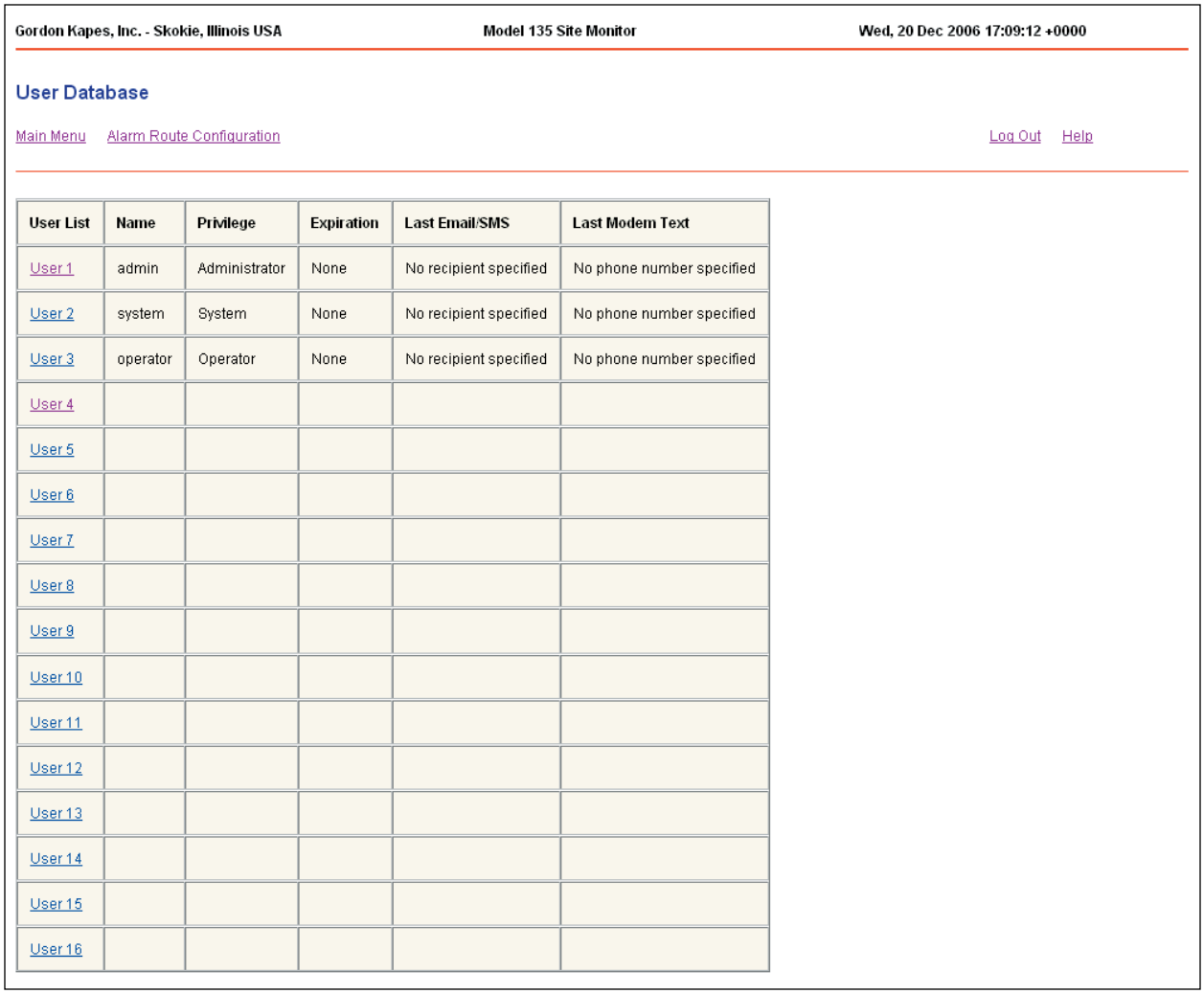
System Management—Execute Configuration Code



Help for System Management—Execute Configuration Code

There is no help for this screen.

Access Management—User Database



User List	Name	Privilege	Expiration	Last Email/SMS	Last Modem Text
User 1	admin	Administrator	None	No recipient specified	No phone number specified
User 2	system	System	None	No recipient specified	No phone number specified
User 3	operator	Operator	None	No recipient specified	No phone number specified
User 4					
User 5					
User 6					
User 7					
User 8					
User 9					
User 10					
User 11					
User 12					
User 13					
User 14					
User 15					
User 16					

Help for Access Management—User Database

This screen shows user parameters.

User List: Click on a user list to review or change.

Name: Shows the user name.

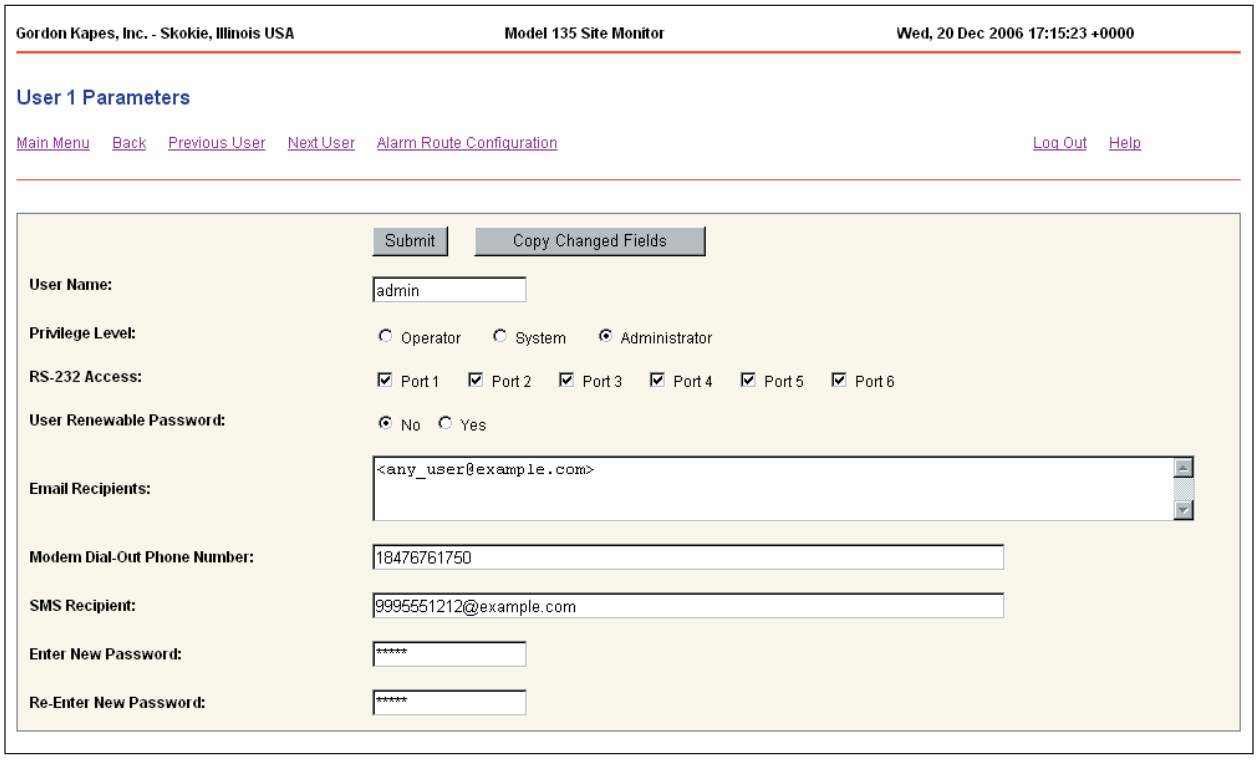
Privilege: Shows Operator, System, or Administrator. Determines which menus the user has access to.

Expiration: Shows Expired, None, or the number of days until the current password expires.

Last Email/SMS: Shows blank, Failed, Pending, Sent followed by date and time, or No recipient specified. Indicates the status of the last message sent via email or SMS.

Last Modem Text: Shows blank, Failed, Pending, Sent followed by date and time, No phone number specified, or No modem. Indicates the status of the last message sent via the telephone modem.

Access Management—User Parameters



Help for Access Management—User Parameters

This screen configures user parameters. Clicking submit shows whether the new password was accepted.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Copy Changed Fields: Similar to Submit but also copies changes to the other screens starting from this index and higher. The user name field is not copied.

User Name: Enter user name up to 15 characters or blank to delete the user. All characters except quote (“) and space are accepted. Case sensitive. A name and password are required to access the Model 135. User 1 cannot be deleted.

Privilege Level: Select Operator, System, or Administrator. User 1 is always Administrator.

RS-232 Access: Select which RS-232 ports the user is allowed to access. Factory default is none selected.

User Renewable Password: Select No* or Yes. No does not allow the user to login after the password has expired. Yes allows the user to login after the password has expired using their old password and be prompted to enter a new password. User 1 is always renewable.

Email Recipients: Enter the email address or addresses where the user will receive alarm messages in SMTP format. *Example:* fred@example.com, “Barney” <barney@example.com>. Use a comma (,) or new line (Enter) to separate multiple recipients. This field is sent in quote angled-bracket format. *Example:* fred@example.com is sent as “user” <fred@example.com> where user is the name in the User Name field. “Barney” <barney@example.com> is sent exactly as shown.

Modem Dial-Out Phone Number: Enter the telephone number where the user will receive alarm messages in plain text format. Numbers only. No separator characters such as hyphens, periods, or spaces. Comma (,) causes a two second dial pause (specified by modem register S8). W waits for dial tone for up to 50 seconds (USA - register S7) or two seconds (W-class - register S6). @ waits for silence for at least five seconds.

Access Management—User Parameters

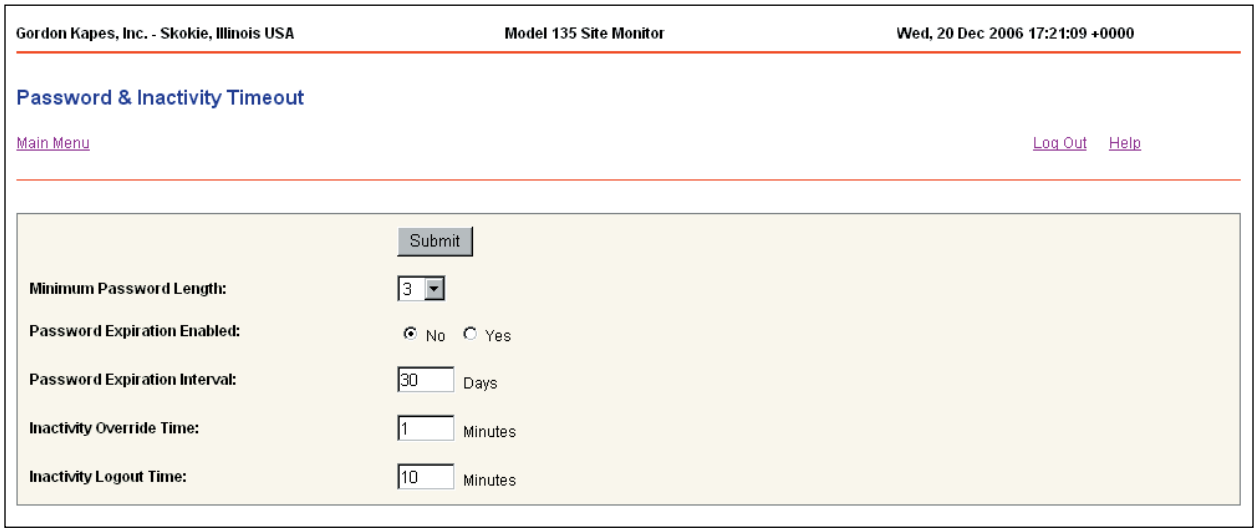
Help for Access Management—User Parameters (continued)

SMS Recipient: Enter the email address where the user will receive alarm messages in SMS format. *Example:* 9995551212@example.com. SMS is similar to email, but the site name, serial number, software version number, and prefix message are not sent.

Enter New Password: Enter new password up to 15 characters. All characters except quote (") and space are accepted. Case sensitive. Must meet the Minimum Password Length. A name and password are required to access the Model 135. Asterisks (*) are displayed as the new password is entered.

Re-Enter New Password: Confirm new password. Asterisks (*) are displayed as the new password is entered.

Access Management—Password & Inactivity Timeout



Help for Access Management—Password & Inactivity Timeout

This screen configures password and inactivity timeout parameters.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Minimum Password Length: Select 3* through 15. Indicates the minimum number of password digits that are acceptable when entering a new password.

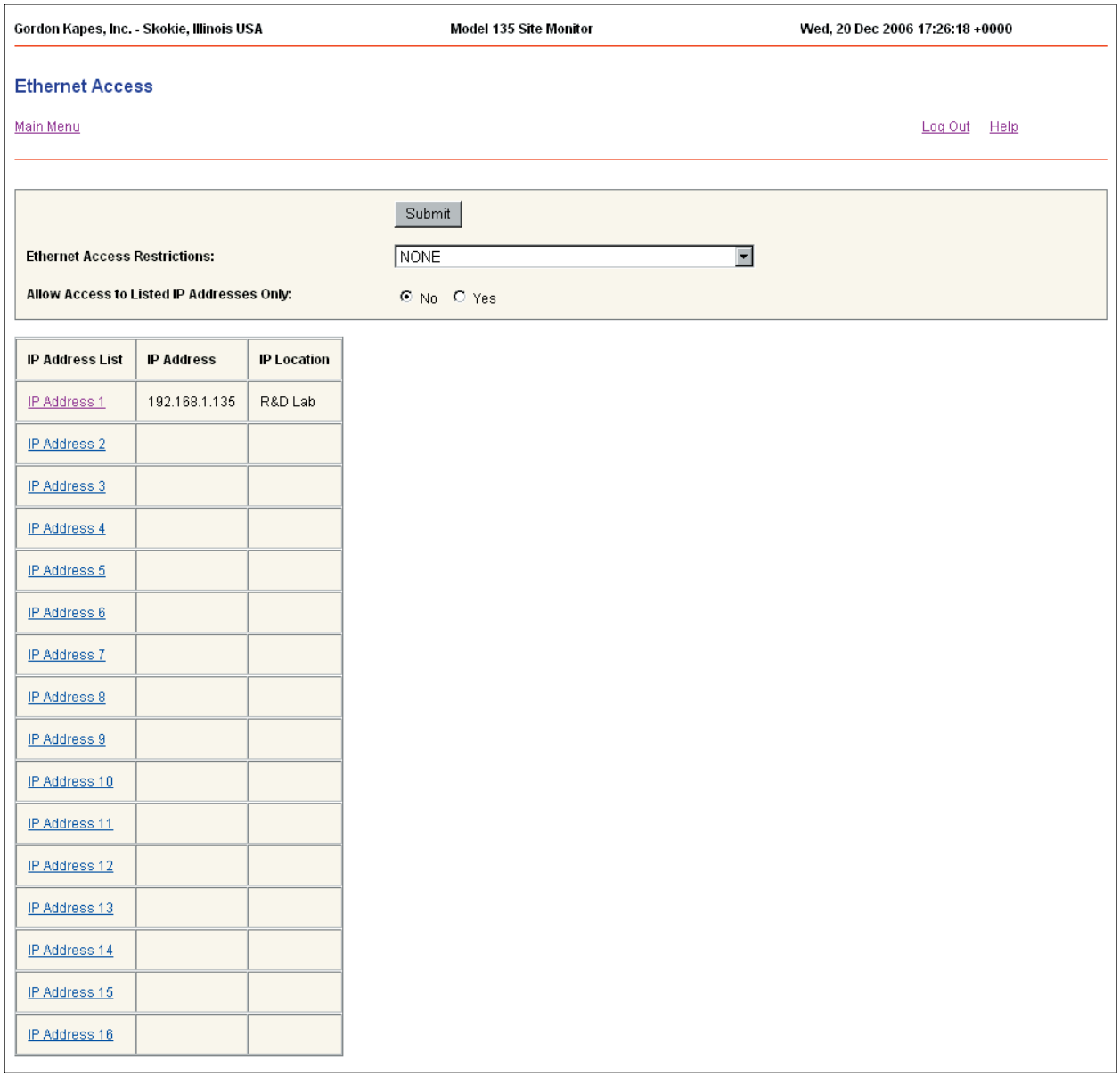
Password Expiration Enabled: Select No* or Yes. No indicates that passwords never expire. Yes enables the password expiration time for each user. What happens after the password expires is determined by User Renewable Password on the User Database screen.

Password Expiration Interval: Enter 1 to 99 days. Changing the user password establishes a new password expiration interval. Applicable only when Password Expiration Enabled is Yes. Factory default is *30*.

Inactivity Override Time: Enter 1* through 99 minutes. The Model 135 contains an inactivity timer that allows the user to override the logged-in user after the HTML screens or TELNET connection have been inactive for the selected time. The user that is trying to login is notified through an HTML screen that the Model 135 is in use by another user and asks *Do You Wish to Log Out the Current User?* Only one user may be logged-in at a time. This time applies only when connected through the Ethernet port. A user connected through the telephone modem can override the logged-in user immediately.

Inactivity Logout Time: Enter 1 through 99 minutes. The Model 135 contains an inactivity timer that automatically logs out the user when the HTML screens or TELNET connection have been inactive for the selected time. If connected through the telephone modem, the modem is disconnected. Factory default is *10*.

Access Management—Ethernet Access



Help for Access Management—Ethernet Access

This screen allows Ethernet access restrictions based on the user privilege level and the source IP address. Restricted activity is not logged to the Model 135.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Ethernet Access Restrictions: This selection restricts access through the Ethernet port. It does not affect access through the telephone modem. This selection can be changed only when connected through the telephone modem.

NONE* does not restrict Ethernet access.

NO ACCESS TO ADMIN SCREENS gives the user access only to operator and system screens.

NO ACCESS TO SYSTEM & ADMIN SCREENS gives the user access only to operator screens and does not allow configurable fields to be changed including password fields.

Access Management—Ethernet Access

Help for Access Management—Ethernet Access (continued)

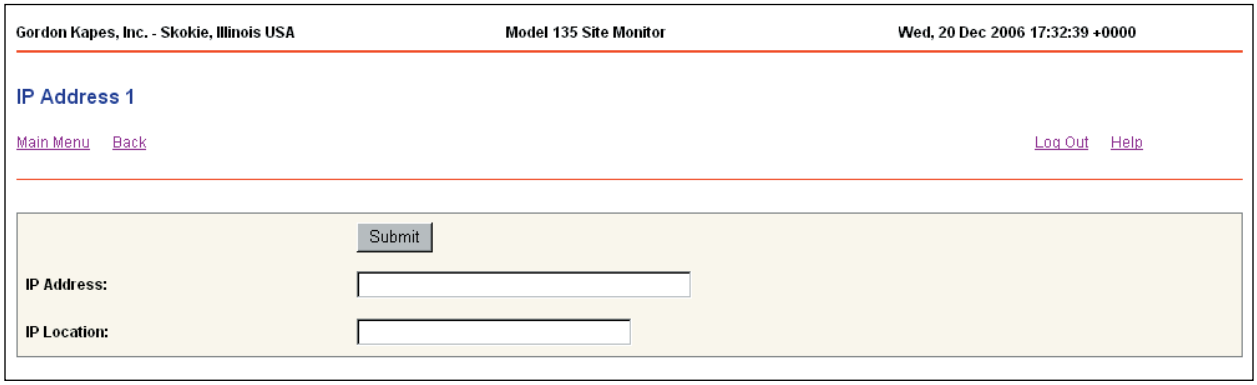
Allow Access to Listed IP Addresses Only: Select No* or Yes. Yes denies Ethernet access to source IP addresses not on the IP Address List. To prevent users from locking themselves out, this selection can be changed only when connected through the telephone modem or connected through an address on the IP Address List.

IP Address List: Click on an IP address to be configured.

IP Address: Shows specific IP addresses that can access the Model 135. Square-bracket notation [nnn-nnn] indicates an address range.

IP Location: Shows the location to be posted to the Activity Log when a user logs in from this IP address. This is always posted whether Allow Access to Listed IP Addresses Only is enabled or not.

Access Management—IP Address



Help for Access Management—IP Address

This screen shows an IP address that is allowed to access the system.

Submit: Click *Submit* to send changes to the system.

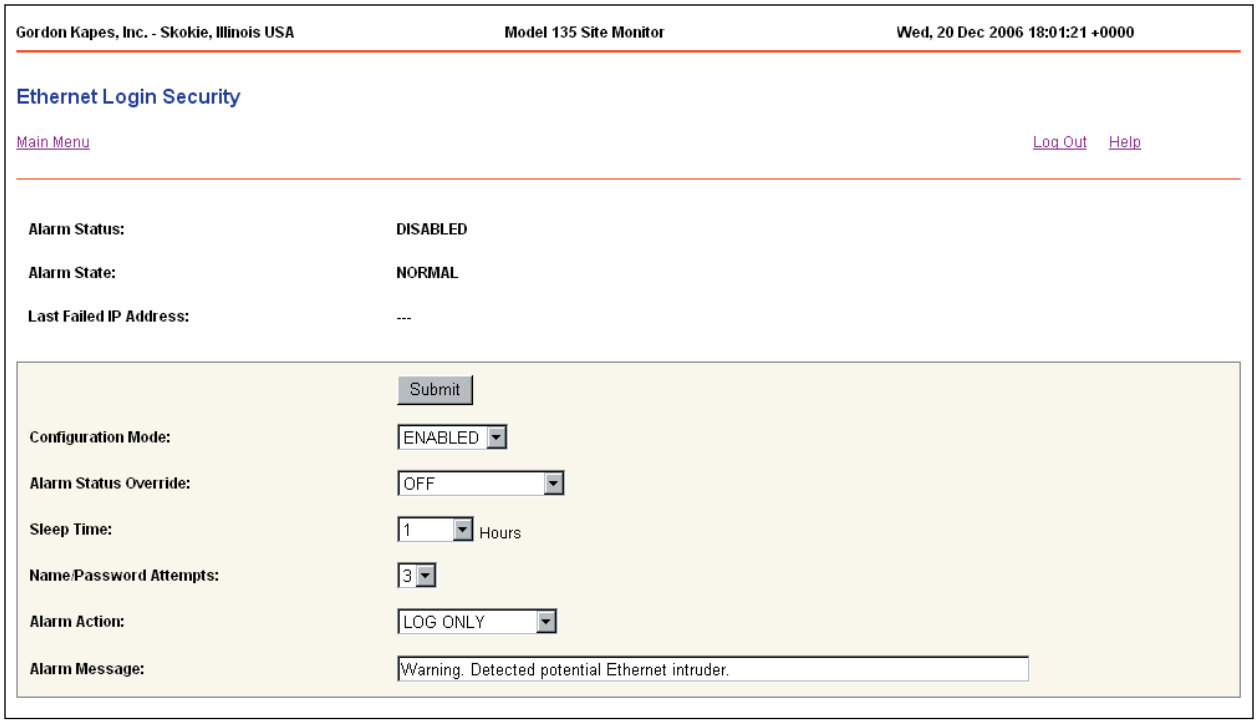
IP Address: Enter an IP address up to 31 characters that is allowed to access the Model 135. Use dot notation (255.255.255.255).

Square-bracket notation [nnn-nnn] may be used for address ranges. *Example:* 255.255.255.[0-127] accepts IP addresses between 255.255.255.0 through 255.255.255.127.

To prevent users from locking themselves out, this selection can be changed only when connected through the telephone modem or connected through an address that is on the IP address list.

IP Location: Enter a location up to 31 characters to be posted to the Activity Log when a user logs in from this IP address. This is always posted whether Allow Access to Listed IP Addresses Only is enabled or not.

Access Management—Ethernet Login Security



Help for Access Management—Ethernet Login Security

This screen configures alarm reporting based on consecutive failed name/password attempts via Ethernet access from the same source IP address.

An asterisk (*) after a value indicates the factory default.

Submit: Click *Submit* to send changes to the system.

Alarm Status: Shows DISABLED, ENABLED, or SLEEP. Shows the Sleep Time remaining after SLEEP. Password violations are reported only when alarm status is enabled.

Alarm State: Shows NORMAL, ALARM, or ALARM REPORTED. ALARM is caused by changing override alarm status. ALARM REPORTED is caused by an actual alarm.

Last Failed IP Address: Shows --- or the last source IP address that exceeded the number of Name/Password Attempts. Indicative of web crawlers trying to browse the system and not necessarily malicious.

Configuration Mode: Select DISABLED* or ENABLED. Provides alarm reporting after the selected number of name-password violations has been exceeded from the same source IP address.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

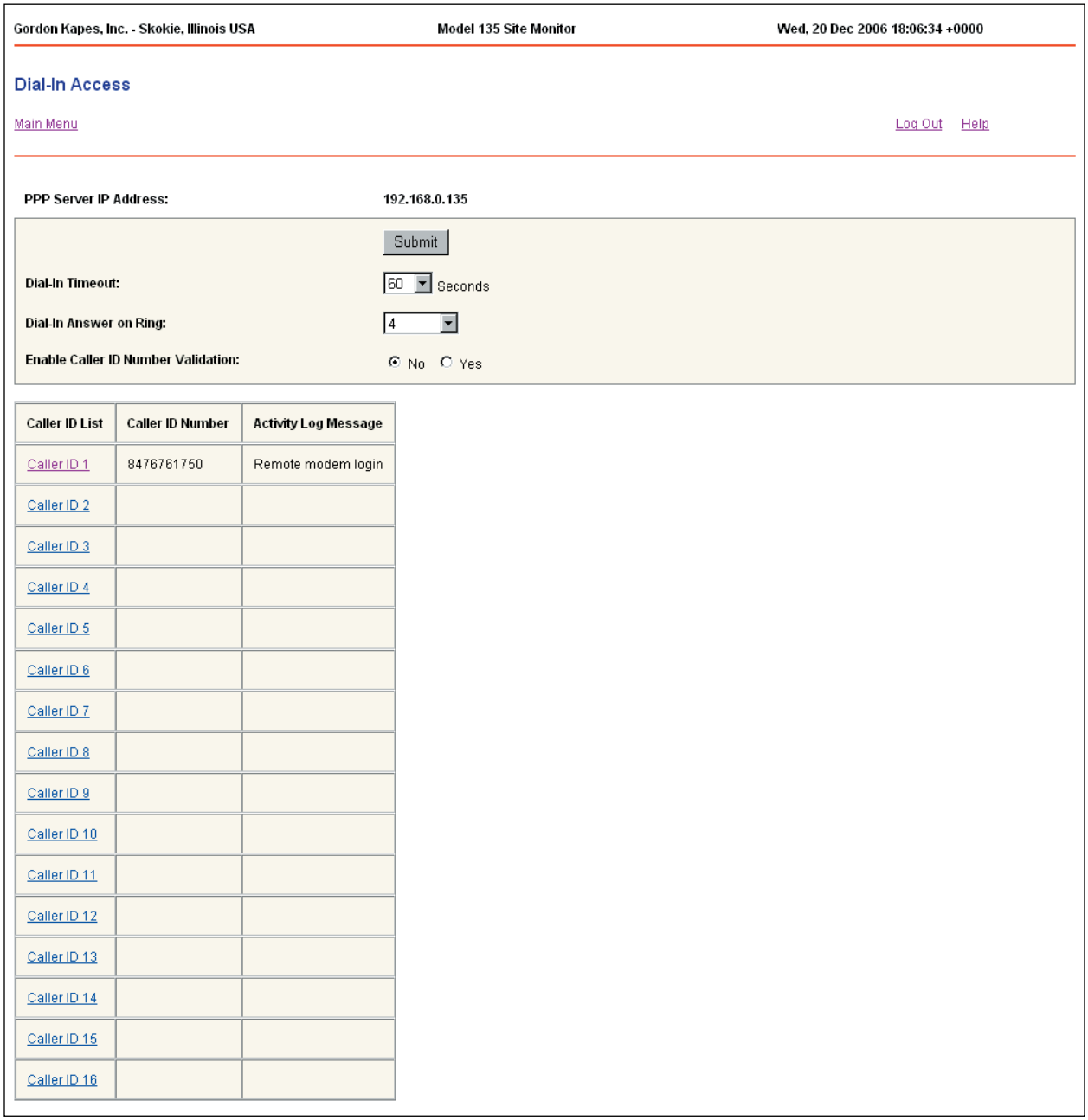
Sleep Time: Select NONE or 1* to 9 hours. If NONE is selected the minimum sleep time is one minute. Sleep time only affects alarm reporting. It does not prevent the user from logging in.

Name/Password Attempts: Select 1 through 9. Determines the number of consecutive failed name/password attempts. Attempts beyond this number are locked out for one minute and generate an alarm. Note that the Internet Explorer browser displays *Protected Screen* after every third failed attempt. This counts as a fourth attempt and clicking on the address bar to connect to the Model 135 counts as a fifth attempt. Factory default is *3*.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm group.

Alarm Message: Enter text up to 79 characters. Factory default is *Warning. Detected potential Ethernet intruder.*

Access Management—Dial-In Access



Help for Access Management—Dial-In Access

This screen configures dial-in access parameters and can restrict modem access based on incoming Caller IDs. Caller ID is also known as CID, CLI, CLIP, and CLID. Restricted activity is not logged to the Model 135. Note that the Model 135 does not authenticate the PPP name/password and that any name/password can be used when setting up the dial-up connection. After the PPP connection is established the user must login via HTTP or the modem will disconnect.

An asterisk (*) after a value indicates the factory default.

PPP Server IP Address: Shows the IP address that identifies the Model 135's internal modem when using point-to-point protocol. Use this address when starting an FTP, HTTP, or TELNET session via the modem. It is stored in flash memory and is not part of the Active Profile. It can be changed only through the configuration code.

Access Management—Dial-In Access

Help for Access Management—Dial-In Access (continued)

Submit: Click *Submit* to send changes to the system.

Dial-In Timeout: Select 30, 45, 60*, 90, or 120 seconds. Determines the amount of time the user has to login before the modem disconnects.

Dial-In Answer on Ring: Select NEVER or 2 through 9. Determines the number of times the telephone line alerts before the modem will answer. A minimum of two rings is required for Caller ID. Factory default is *4*.

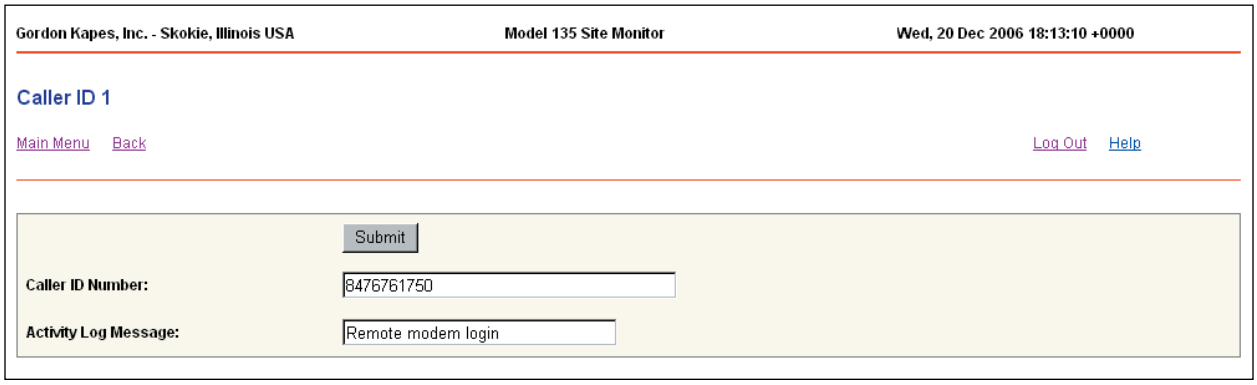
Enable Caller ID Number Validation: Select No* or Yes. Yes enables Caller ID number validation. The originating phone number must match one of the numbers on the Caller ID list. All other sources will not be answered. To prevent the user from locking themselves out this selection can be changed when connected through the Ethernet port or via telephone modem when connected from a phone number that is on the Caller ID list.

Caller ID List: Click on the caller ID to be configured.

Caller ID Number: Phone number allowed to access the Model 135. N and square-bracket notation [nnn-nnn] indicate a number range.

Activity Log Message: Message to be sent to the Activity Log when Caller ID number is detected.

Access Management—Caller ID



Help for Access Management—Caller ID

This screen allows dial-in access from specified telephone numbers.

Submit: Click *Submit* to send changes to the system.

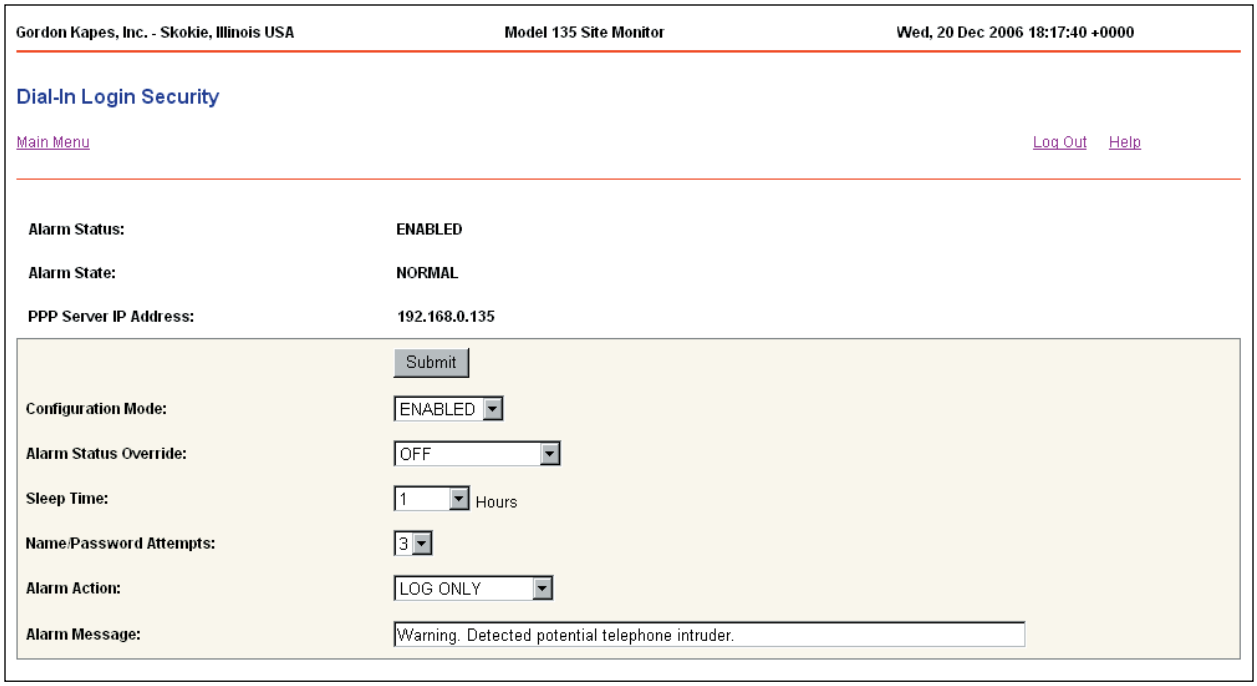
Caller ID Number: Enter a telephone number up to 31 characters that is allowed to access the Model 135. Do not enter separator characters such as hyphens, periods, or spaces. N and [are the lead-in characters for flexible matching. See below. To prevent the user from locking themselves out, this selection can be changed only when connected through the Ethernet port, when connected through a phone number that does not match this selection, or connected when Caller ID verification is disabled.

N matches any digit (0-9) in this position. *Example:* 555121N matches 5551210 through 5551219.

[min-max] matches a range of numbers. Square-brackets ([ ]) and hyphen (-) are required. Min and max may contain only digits 0 through 9. The number of digits is limited only by the line length, but min and max must contain the same number of digits. *Example:* 55512[11-99] matches 5551211 through 5551299.

Activity Log Message: Enter a message up to 31 characters to be sent to the Activity Log when Caller ID number is detected.

Access Management—Dial-In Login Security



Help for Access Management—Dial-In Login Security

This screen configures alarm reporting based on consecutive failed name-password attempts via the dial-in modem.

An asterisk (*) after a value indicates the factory default.

Alarm Status: Shows DISABLED, ENABLED, or SLEEP. Shows the Sleep Time remaining after SLEEP. Password violations are reported only when alarm status is enabled.

Alarm State: Shows NORMAL, ALARM, or ALARM REPORTED. ALARM is caused by changing override alarm status. ALARM REPORTED is caused by an actual alarm.

PPP Server IP Address: Shows the IP address that identifies the Model 135's internal modem when using point-to-point protocol. Use this address when starting an FTP, HTTP, or TELNET session via the modem. It is stored in flash memory and is not part of the Active Profile. It can be changed only through the configuration code.

Submit: Click *Submit* to send changes to the system.

Configuration Mode: Select DISABLED* or ENABLED. ENABLED enables alarm reporting after the selected number of name-password violations has been exceeded via the dial-in modem.

Alarm Status Override: Select OFF*, FORCE ENABLED, or FORCE SLEEP. Provides manual override of the alarm status. This selection is not stored in the Active Profile.

Sleep Time: Select NONE or 1* to 9 hours. If NONE is selected the minimum sleep time is one minute. Sleep time only affects alarm reporting. It does not prevent the user from logging in.

Name/Password Attempts: Select 1 through 9. Determines the number of consecutive failed name/password attempts. Attempts beyond this number are locked out for one minute and generate an alarm. Note that the Internet Explorer browser displays *Protected Screen* after every third failed attempt. This counts as a fourth attempt and clicking on the address bar to connect to the Model 135 counts as a fifth attempt. Factory default is *3*.

Alarm Action: Select LOG ONLY*, ALARM ROUTE 1, ALARM ROUTE 2, or ALARM ROUTE 3. Indicates whether the alarm is log only or is logged and sent to an alarm group.

Access Management—Dial-In Login Security

Help for Access Management—Dial-In Login Security

Alarm Message: Enter text up to 79 characters. Factory default is *Warning. Detected potential telephone intruder.*