Rhein Tech Laboratories, Inc.
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Client: Sequel Technologies, LLC
Model: STKP-LCD
Standard: FCC 15.231
FCC ID: V4X-LCDX01
Report #:   2008069

Appendix G: Manual

Please see the following pages.

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ST Express / ST8 Security Systems

Document Number: 550-00008 Rev. A

User Manual

Contents

System Overview

Congratulations on your ownership of an ST security system, which offers the latest in security protection technology. The ST system consists of a control panel, at least one keypad and various sensors that provide burglary and/or fire protection. In addition, your system may be programmed to send alarm and status messages to a central alarm monitoring station.

Control Panel

The control panel is the main processing unit for all system functions. It receives and responds to signals from sensors throughout the premises. For monitored systems, the control panel connects to the premises phone line or an optional Ethernet module for central station reporting.

Keypads

LCD Keypad

The 2-line x 16 character LCD keypad allows control and programming of the security system and displays system status messages.

Wireless Keyfob

The wireless keyfob allows users the ability to arm and disarm the system, turn lights on/off (if programmed), and activate a panic alarm. The keyfob includes a 5 year user-replaceable battery.

Zones/Sensors

The system includes various detection devices, which are identified by the security system as zones. Each zone has a type of detection sensor, which is installed throughout the premises to identify alarm conditions and communicate this information to the control panel. The sensors used in the system may include, but are not limited to, devices such as door/window sensors, smoke detectors, and motion sensors.

Door/Window Sensors

Door/Window sensors protect the perimeter of your home or business by alerting the control panel when a door or window is opened.

Smoke Detectors

Smoke and heat detectors protect the premises from fire conditions and remain active 24 hours per day regardless of the arming level of the system.

Motion Sensors

Motion sensors detect a person moving across the field of detection.

Modules

Optional modules may be included with your system to provide additional functionality.

Ethernet Interface Module

Your system may include an Ethernet Interface Module that provides Internet central station reporting, browser access, and email reporting to your PC or cell phone. In addition, a third-party adapter (such as D-Link DWL-G810) can be used to allow the system to have 802.11 Wi-Fi capabilities.

Remote Audio Module (Included with the ST Express)

The Remote Audio Module provides voice feedback for system conditions. If your system is monitored, the module gives the central station operator the ability to communicate with the occupants on the premises during an alarm. The operator can then determine the appropriate course of action and dispatch the proper assistance. Ask your installer if this feature is enabled.

External Transceiver Module (Included with the ST Express)

The External Transceiver Module provides bidirectional wireless communications to the system's wireless sensors.
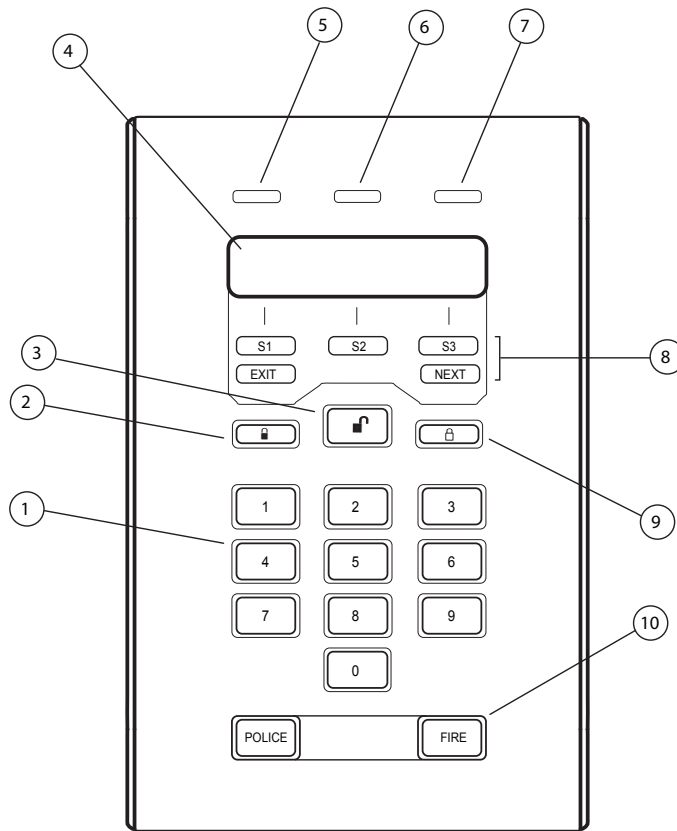
Keypad Layout

Table 1: Functions of the LCD Keypad

1 - Number Pad	Used for entering PINs and system commands
2 - Arm All	Arms perimeter and interior burglary zones
3 - Disarm	Disarms the burglary portion of the system, and cancels alarms
4 - LCD Display	Displays system status, alarms, and user messages
5 - Armed Indicator	• If the Armed light is on, the system has been successfully armed in the ALL or PERIMETER mode • If the Armed light is flashing, the system has an active alarm condition
6 - Ready Indicator	• If the Ready light is on, the system is ready for arming • If the Ready light is flashing, the system is not ready to be armed (a zone is open)
7 -Trouble Indicator	If the Trouble light is on, the system has a trouble condition
8 - Function Keys	• S1, S2, S3 - Selects the menu item shown on the LCD above the key • Exit - Press to exit the current menu • Next - Press to proceed to the next item
9 - Arm Perimeter	Arms the perimeter burglary zones (i.e. exterior doors/windows). Interior burglary zones (i.e. motion detectors) are not armed, which allows movement within your residence without causing an alarm.
10 - Emergency Keys	These keys are used as Police and Fire panic keys. These keys may not be enabled in all systems (ask your installer).

User Command Summary

Action	LCD Keypad Command
System Operation	
Disarm to Off / Cancel an Alarm	⬛ + PIN Or Enter PIN
Arm Perimeter	🔓 + PIN (if prompted)
Arm All	🔒 + PIN (if prompted)
Arm with No Delay	🔓 Or 🔒 + PIN + <No Delay>
Arm with Latchkey	🔓 Or 🔒 + PIN + <Latchkey> + Enter Latchkey Time
Turn Chime On/Off	ON: NEXT + <Chime> + <On> OFF: NEXT + <Chime> + <Off>
Turn All Lights On/Off (ST8 Only)	ON: NEXT + <Lite> + <All> + <On> OFF: NEXT + <Lite> + <All> + <Off>
Turn Individual Lights On/Off (ST8 Only)	ON: NEXT + <Lite> + <Lite #> + Light # + <On> OFF: NEXT + <Lite> + <Lite #> + Light # + <Off>
Alarms	
Initiate a Police Alarm	Press and hold the POLICE button for two seconds
Initiate a Fire Alarm	Press and hold the FIRE button for two seconds
Initiate a Duress Alarm	Enter the four-digit Duress PIN to disarm the system
Programming	
Enter User Setup Menu	NEXT + NEXT + NEXT + <Setup> + User PIN
Add a User PIN	1. Enter User Setup menu. 2. With the display showing PINS TIME DATE, select <PINS>. 3. The display will show PINS TO EDIT: 01 4. Enter user number to add and select <Done>. (e.g. To add user 09, enter 09) 5. Enter new pin and select <Done>. To confirm, enter new pin again and press <Done> twice. **Note**: For security, existing PINs are never shown
Set the Time	1. Enter User Setup menu. 2. With the display showing PINS TIME DATE, select <Time>. 3. Enter the time (hh:mm). Select <AM> or <PM>. 4. Select <Done> to save and exit the menu.
Set the Date	1. Enter User Setup menu. 2. With the display showing PINS TIME DATE, select <Date>. 3. Enter month/day/year. 4. Select <Done> to save and exit the menu.
Connect for Remote Programming (only if requested by alarm dealer)	1. Enter User Setup menu. 2. NEXT + <Connect> + <Ans> (Answer phone) or <Dial> (Dial phone) or <EIM> (Ethernet)
Register for Remote Programming (only if requested by alarm dealer)	1. Enter User Setup menu. 2. NEXT + <Reg> + <EIM> (Ethernet) or <Dial> (phone) + <Cont> (Continue)
Testing and Maintenance	
Phone Test	NEXT + NEXT + <Test> + PIN + <Comm>
Walk (Sensor) Test	NEXT + NEXT + <Test> + PIN + <Walk>. To exit walk test, press <Done>.
Viewing the Event Buffer	NEXT + NEXT + <Log> + PIN + <Prev> (previous event) or <Next> (next event)
Review System Status	NEXT + <Stat> + <Zone> or <Sys>
Review Zone Status	NEXT + <Stat> + <Zone>
Review Alarm Memory	NEXT + <Stat> + <Memry>
Reset Hardwired Smoke Detectors	NEXT + NEXT + <Reset> + PIN + <Done>

Arming the System

Arming the Perimeter

When the system is armed using the Arm Perimeter method, the perimeter zones/sensors (e.g., exterior doors/windows) will be activated, but the interior zones/sensors (e.g., motion detectors) will not be activated. Use the Arm Perimeter method when you are staying home.

1. Close any open protected doors and windows.
2. Press the ARM PERIM 🔓 key. Enter a valid user PIN if prompted.
3. The keypad displays the amount of seconds until the system is armed. Optionally, you may select <NoDelay> or <LatchKey>*. If neither is selected, the system will proceed with the exit delay.
4. At the end of the exit delay, all perimeter doors and windows are armed.

* The Latchkey option will only be presented if it is enabled (Ask your installer.)

Arming All

When the system is armed using the Arm All method, all zones/sensors will be activated and will cause an alarm when tripped. Use the Arm All method when no one will be staying on the premises.

1. Close any open protected doors and windows.
2. Press the ARM ALL 🔒 key. Enter a valid user PIN if prompted.
3. The keypad displays the amount of seconds until the system is armed. Optionally, you may select <NoDelay> or <LatchKey>*. If neither is selected, the system will proceed with the exit delay.
4. At the end of the exit delay, all zones/sensors are armed.

* The Latchkey option will only be presented if it is enabled (Ask your installer.)

No Delay

The system can be armed with no delay by selecting <NoDelay> during the exit delay. This method provides greater security while you are on the premises and do not require an exit/entry delay time.

Latchkey Feature

If this option is enabled, the system will present an option to specify a latchkey time when arming. If you select this option and enter a time, the system will send a report if someone, such as a child, does not arrive home and disarm the system by the designated time. A report will be sent to a central monitoring station and/or emailed depending on system configuration.

To set the latchkey time:

1. Arm the system by pressing ARM ALL or ARM PERI and entering your user PIN.
2. Select <Latchkey> and enter the latchkey time.

Bypassing Sensors

If the system is armed with open zones, the system will prompt you to bypass the zones. A bypassed zone will be unprotected and will not cause an alarm while your system is armed.

To bypass zones:

1. Arm the system using the Arm All or Arm Perimeter method.
2. The system will identify the open zones, display the exit countdown, and emit an alternating exit tone.
3. Select <Bypass> to bypass the open zones or <Cancel> to cancel the arming sequence. If neither is selected, the system will automatically bypass the open zones and arm at the end of the exit delay. The bypassed zones will not be activated with the rest of the system.

Disarming the System

Disarming the system deactivates all armed zones except for 24-hour zones such as smoke detectors. Regardless of which method you use to arm your system, the disarming sequence is always the same.

Using an LCD Keypad:

1. Enter through a door programmed with an entry delay.
2. Press the DISARM key and enter a user PIN or simply enter a user PIN directly.
3. The system will disarm.

Using a Wireless Keyfob:

1. Press the DISARM 🔓 button to disarm the system.
2. Two tones will emit from the interior sounders.

Wireless Keyfob Operation

Your system may include a wireless keyfob, which can be used to control the system as follows:

To arm/disarm the system:

- Press the ARM PERIM 🔒 button to arm the system to the Arm Perimeter level.
- Press the ARM ALL 🔒 button to arm the system to the Arm All level.
- Press the DISARM 🔓 button to disarm the system.

To activate a panic alarm:

- Press and hold the ARM ALL 🔒 and ARM PERIMETER 🔒 buttons simultaneously for three seconds.

To turn lights on/off (optional modules must be installed):

- Press the LIGHTS 💡 button.

Phone Control

Your system may be configured to allow access from an on-site (ST8 only) or off-site touch-tone phone. When accessing the system, use the phone's keypad to enter commands. You can arm/disarm, check system status, or perform optional features such as turn lights on/off, or enable an audio session. (Ask your installer if these features are available.)

On-site phone control (ST8 only):

1. Pick up a phone and enter the "Begin Session" command (default: *741).
2. The system will prompt you to enter a PIN number. Enter any valid user PIN number.
3. The system will prompt you to enter a command. Refer to Table 2 for the complete list of user commands.
4. When finished, enter the "End Session" command (default: # #) or hang up the phone.

Off-Site Phone Control (Ring-Hang-Ring Method):

1. Call the protected premises from an off-site phone.
2. Let the phone ring once and hang up.
3. Wait at least 10 seconds (but no more than 40 seconds) and call the premises again.
4. The system will answer the phone and prompt you to enter a PIN number. Enter a valid user PIN number.
5. The system will prompt you to enter a command. Refer to Table 2 for the complete list of user commands.
6. When finished, enter the "End Session" command (default = # #) or hang up the phone.

Off-Site Phone Control (Ring Count Method):

1. Call the protected premises from an off-site phone.
2. The system will answer the phone after a specified number of total rings (default = 10). Use this method if no answering service exists on the line.
3. Proceed with steps 4 - 6 above.

Table 2: Touch-Tone Phone Commands

Phone Command	Function
1	Arm Perimeter
2	Arm All
3	Disarm
44	Current system status (active alarms, current arming level, open zones)
51	Turn on output or X10 lamp module
53	Turn off output or X10 lamp module
00	List basic system commands
01	List advanced system commands
81	Set voice response to high volume
83	Set voice response to normal volume
99	Reset: Clear active alarm conditions, reset smoke power, and restore the system to the previous arming level.
##	End Session
*741	Begin Session
#4	Switch to two-way voice mode. Allows you to listen-in or speak to occupants at the premises. (Ask your installer if this feature is available.)
###***###	Generate and report a system panic alarm (ST8 on-premises only)

Note: During phone operation, the incoming phone line is inoperable.

Note: After 3 incorrect PIN attempts, the system will disconnect the phone session.

Note: The system will answer the phone after a specified number of total rings (default = 10). Use this method if no answering service exists on the line.

Note: The session can be manually ended by the user with the end session command (# #). The system will time-out and hang up if no command is received for 30 seconds.

Entry and Exit Delay

Exit Delay

After arming your system, the system will allow you time to leave through a designated exit door without setting off an alarm. Exit delay begins immediately after an arming command and applies to all methods of arming (unless No Delay is selected). A steady beep will sound throughout the duration of the exit delay with fast beeps during the last 10 seconds.

Entry Delay

Upon re-entry through a designated entrance door, the system will allow you time to disarm the system. If the system is not disarmed before the expiration of the entry delay time, an alarm will occur. The keypad will beep during the entry delay period.

Chime Mode

Your system can be set to alert you to the opening of a door or window by using Chime mode. When activated, the LCD keypad and interior sirens emit a tone whenever a protected perimeter door or window is opened. Chime mode can be activated only when the system is disarmed.

To turn Chime on/off:

- Press NEXT + <Chime> + <On> or <Off>

X10 Lights (ST8 Only)

The optional PSC-04 Module allows the system to control lights in your home that are plugged into X10 lamp modules. Ask your installer if this feature is enabled with your system. Lights controlled by your system can be turned on and off manually as follows:

To turn lights on/off:

1. Press NEXT + <Lite> + <All>
2. Select <Off> to turn lights off, or select <On> to turn lights on.
3. Press EXIT to exit the Light Menu.

To turn individual lights on/off:

1. NEXT + <Lite> + <Lite #>
2. Enter the light number (ID) of the light you wish to control and select <Off> or <On>.
3. Press EXIT to exit the Light menu.

Checking the Status

Checking the status of your system allows you to view the overall condition of your system including the current arming level, open zones, bypassed zones, low battery conditions, power failures, and other trouble conditions. For a complete list of trouble conditions please refer to Table 5 in the *Trouble Conditions* section of this manual.

Viewing the status

1. Press the NEXT key. The keypad will display STAT CHIME LITE.
2. Select <Stat>. The keypad will display ZONE SYS MEMRY.
3. Select <Sys>. The system's current status will be displayed.

Viewing open zones

If zones are open, the LCD keypad will automatically display "Not Ready to Arm" along with a list of open zones. Open zones may also be manually viewed as follows:

1. Press the NEXT key. The keypad will display STAT CHIME LITE.
2. Select <Stat>. The keypad will display ZONE SYS MEMRY.
3. Select <ZONE>. The keypad will display a list of any/all open zones.

Viewing Alarm Memory

You can view alarms that have occurred during the previous arming sequence by viewing the alarm memory.

To view alarm memory:

1. Press the NEXT key. The keypad will display STAT CHIME LITE.
2. Select <Stat>. The keypad will display ZONE SYS MEMRY.
3. Select <MEMRY>. The keypad will display a list of any/all alarms that occurred during the previous arming sequence.

Viewing the Event Buffer

System events, such as alarms, are recorded in the event buffer. The event buffer displays a list of the events that have occurred on your system.

To view the event buffer:

• Press NEXT + NEXT + <Log> + User PIN + <Prev> (previous event) or <Next> (next event).

Email Notification

The optional Ethernet Internet Module allows the system to send various system event reports to your email address. The installer can program any email address to receive emails for the following conditions:

• Fire alarms / Intrusion alarms
• Zone restorals
• System troubles
• Zone troubles
• Arming events
• Latchkey events

Alarm Conditions

Fire Alarms

If smoke and fire sensors are a part of your system, they will be active 24 hours a day regardless of the arming level. For monitored systems, the control panel calls the monitoring station for proper dispatch.

Resetting Hardwired Smoke Detectors (ST8 only):
After a hardwired smoke detector has been in alarm, it requires that it be reset using the following procedure:
• Press Next + Next + <Reset> + Enter PIN + <Done>

Police Alarms

If door/window sensors, motion sensor, and glass break detectors are a part of your system, they will be active when the system is armed using the Arm All method. Exterior sensors (e.g., exterior doors/windows) will be active using the Arm Perimeter method, but interior sensors (e.g., motion detectors) will not be active in this level. In the event of a police alarm, the sirens and LCD keypad will respond as detailed in Table 3 and the alarm will be reported to the monitoring station if your system is monitored

Activating a Panic Alarm from an LCD Keypad

Your LCD keypad may include two emergency keys that can activate Fire or Police panic alarms. A panic alarm can be activated at any time, regardless of the current arming level. For monitored systems, the control panel calls the monitoring station for proper dispatch.

Fire Panic Alarm
To activate a Fire panic alarm, press and hold the Fire button for two seconds.

Police Panic Alarm
To activate a Police panic alarm, press and hold the Police button for two seconds.

Activating Alarms from your Wireless Keyfob

In addition to arming and disarming the system, your wireless keyfob can be used to activate a Police alarm.

To activate a Police panic alarm from a wireless keyfob:

• Press and hold the Arm All 🔒 and Arm Perimeter 🔓 buttons simultaneously for three seconds.

Duress Alarm

A Duress alarm is generated when you use the Duress PIN (provided by the installer) to disarm the system. When used, the system will disarm normally and will silently notify the monitoring station of a duress situation. Talk to your security service provider about this option.

To activate a Duress Alarm:

• Enter the four-digit duress PIN. Your system appears to disarm normally. However, a silent signal is sent to your monitoring station that you are in danger.

Siren Time-out

Sirens will "time-out" (shut down) after sounding for a certain length of time. The default siren time-out is 10 minutes. This means that after an alarm has been activated, the sirens will stop emitting sound after 10 minutes. The alarm is still active after the sirens time-out and will remain active until you disarm the system.

Dialer Delay

Dialer delay is an option programmed by your installer that provides time to abort an accidental alarm and prevent it from reporting to the monitoring station. The default dialer delay is 30 seconds, but can be increased up to 45 seconds (consult with your installer). After an alarm has been activated, you have 30 seconds (default) to disarm the alarm to prevent it from calling the monitoring station. The LCD keypad will display "Alarm Aborted" if you successfully cancel the alarm and prevent it from being reported. If you don't disarm in time to abort the report, follow the procedures discussed with your installer to prevent a false dispatch.

System Alarm Responses

When an alarm condition occurs, the keypad displays the type of alarm (e.g., Intrusion Alarm) and the description of the zone(s) that caused the alarm. It remains displayed until it is cleared by disarming the system. In the event of an alarm, the sirens and LCD keypads will respond as detailed in Table 3 and the alarm will be reported to the central monitoring station if the system is monitored

Table 3: System response for alarms

Alarm Type	Siren Response		LCD Keypad Display
	Keypads & Interior Sirens	Exterior Sirens	
Fire Alarm	Temporal 3	Temporal 3	Fire Alarm, Zone #, Zone Description
Police Alarm	Sweeping Tone	Sweeping Tone	Intrusion Alarm, Zone #, Zone Description
Auxiliary Alarm	Sweeping Tone	(Silent)	Auxiliary Alarm, Zone #, Zone Description
Duress Alarm	(Silent)	(Silent)	(No alarm is indicated)
Waterflow Alarm	Temporal 3	Temporal 3	Waterflow Alarm, Zone #, Zone Description
Supervisory Alarm	Chirping Tone	(Silent)	Supervisory Alarm, Zone #, Zone Description
Gas Alarm	Temporal 3	Temporal 3	Gas Alarm, Zone #, Zone Description
Water Alarm	Chirping Tone	(Silent)	Water Alarm, Zone #, Zone Description
Freeze Alarm	Chirping Tone	(Silent)	Freeze Alarm, Zone #, Zone Description
Tamper Alarm	Chirping Tone	(Silent)	Tamper Alarm, Zone #, Zone Description
Notes: Sweeping Tone: Starts at 880 Hz and sweeps to approximately 1970 Hz in one second, then repeats. Temporal 3: Three 500 ms tones of 1760 Hz separated by 500 mS, then 1.5 second silence before repeat. Chirping Tone: Five 125 ms tones of 1760 Hz separated by 125 ms, repeat 3 times then 5 seconds of silence before cycle repeats.			

User Setup Mode

The user-programming mode lets you program or view the following system settings:

- User PINs
- Time and Date
- Remote Programming Options
- System Version Information

Entering User Setup Mode

To enter User Setup Mode from an LCD keypad	Keypad Display
1. Make sure the system is disarmed. Press NEXT until the keypad displays the following:	Program Options Setup Prog
2. Select <Setup> and you will be prompted to enter a user PIN (default PIN = 1234).	PIN Required: Enter PIN
User Setup Mode Shortcut: NEXT + NEXT + NEXT + <Setup> + USER PIN	

User PINs

The system allows you to program up to 24 user PINs. The PINs are identified as user numbers 01-24.

To Add a User PIN:

1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. The keypad will display PINS TIME DATE. Select <PINS>.
3. The display will show PINS TO EDIT: 01

Note: After five incorrect PIN number entries, the system will implement a strike-out feature which will ignore keypad input for 30 seconds.

4. Enter the 2-digit user number (01-24) for the user you are adding and press <Go>. For example, to add user 09, enter 09.
5. Enter new PIN and press <Go>. Confirm by pressing <Go>.

To Delete a User PIN:

1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. The keypad will display PINS TIME DATE. Select <PINS>.
3. The display will show PINS TO EDIT: 01
4. Enter the 2-digit user number (01-24) for the user you are deleting and press <Go>.
5. Enter 0000 and press <Go> to delete the PIN. Confirm by pressing <Go>.

Setting the Time and Date

The installer programs the time and date at the time of installation; however, you can change it if necessary.

To set the system time:
1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. With the display showing PINS TIME DATE, select <Time>.
3. Enter the time (hh:mm). Select <AM> or <PM>.
4. Press <Done> to save and exit the menu.

To set the system date:
1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. Enter user setup menu.
3. With the display showing PINS TIME DATE, select <Date>.
4. Enter month/day/year.
5. Press <Done> to save and exit the menu.

Connecting to the Remote Service Tool (RST)

Although information can be programmed by using the LCD Keypad, some information may also be programmed remotely from the RST. If remote programming is needed, discuss the following connection options with your installation company.

To initiate an upload/download session from the panel:
1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. Press NEXT and the display will show "Remote Program."
3. Select <Connect> + <Ans> (Answer phone) or <Dial> (Dial phone) or <EIM> (Ethernet).
4. The system will communicate with the RST using the connection method you selected.

To register for the RST:
1. Enter user setup mode (NEXT + NEXT + NEXT + <Setup> + User PIN).
2. Press NEXT and the display will show "Remote Program."
3. Select <Regis.> + <EIM> (Ethernet) or <Dialer> (Dial phone).
4. The system will register with the RST using the connection method you selected.

Testing the System

Your security system is designed to be as maintenance-free as possible. However, it is recommended to test your system periodically to make sure that your system is working properly.

This section describes how to perform the following test procedures:

- Walk Test: Checks that the system responds to zone faults
- Communication Test: Checks that the phone connection to the central station is working properly
- Sensor Batteries

Test Command Summary

Action	Keypad Command
Phone Test	NEXT + NEXT + \<Test> + PIN + \<Comm>
Walk (Sensor) Test	NEXT + NEXT + \<Test> + PIN + \<Walk>. To exit walk test press \<Done>.
Viewing the Event Buffer	NEXT + NEXT + \<Log> + PIN + \<Prev> (previous event) or \<Next> (next event).
Review System Status	NEXT + \<Stat> + \<Zone> or \<System>
Review Alarm Memory	NEXT + \<Stat> + \<Memry>

Walk Test

The system contains a walk test mode that allows you to activate any zone/sensor and verify its correct operation without causing an alarm.

- An audible tone will occur with each tested sensor in walk test, with a display to provide additional feedback.
- As each wireless sensor is added to the scrolling list of tested sensors, the signal strength will be shown on the LCD display as 1-10. A higher value indicates a stronger signal level. A minimum level of five is recommended.

To initiate a walk test:

NOTE: Wireless motion detectors will detect motion only if they have not detected motion during the previous 3 minutes (conserves battery life).

1. Make sure the system is disarmed.
2. Press NEXT + NEXT and the keypad will display LOG TEST RESET.
3. Select \<Test> and enter a user PIN. The display will show WALK COMM.
4. Select \<Walk> and the keypad will display "Walk Test Active."
5. Test all sensors using the procedure described in Table 4.
6. When testing each sensor the system responds with a tone from the LCD keypad. As each wireless sensor is added to the scrolling list of tested sensors, the signal strength will be included on the display (wireless sensors only).
7. Exit walk test mode by pressing \<Done>.

Table 4: Testing Sensors

Device	Test Procedure
Door/window sensor	Open the door or window.
Smoke detector	Press and hold the test button for 10 seconds
Motion detector	Avoid the motion detector for three minutes, then walk in front it.
Wireless Keyfob	Press any button on the Keyfob

Dialer Test

Perform a dialer test to check the phone communication between the panel and the central station.

1. Make sure the system is disarmed.
2. Press NEXT + NEXT and the keypad will display LOG TEST RESET.
3. Select <Test> and enter the user PIN. The display will show WALK COMM.
4. Select <Comm> and the keypad will display "Comm Test Sent."
5. Upon a successful communication the keypad will display "Test Succeeded."
6. Exit by pressing <Done>.

Wireless Sensor Batteries

Each wireless sensor in your system is powered by at least one 3-volt lithium battery, which provides years of operation. Actual battery life depends on the environment in which the sensor is installed, the number of sensor activations, and the specific type of sensor. If a low battery condition occurs in a wireless sensor, the keypad displays "Low Battery" along with the zone number. If the wireless sensor is a smoke detector, the detector emits a single beep approximately every 60 seconds.

Trouble Conditions

Your system automatically tests signals from wireless sensors, AC power, system and device batteries, and the phone line. When a problem is detected, a trouble message displays on the LCD keypad (see Table 5) and an audible notification emits from the keypad and interior sounders. If your system is monitored, the trouble condition will be reported to the central monitoring station.

Table 5: System response for trouble conditions

Trouble Condition	Description	Voice Response	LCD Keypad Display
Disarming Overdue	A system armed in Latchkey mode was not disarmed by the specified time.	"Disarming is overdue"	Disarming Overdue
Low Backup Battery	The 12 VDC backup battery to the control panel has failed its periodic test.	"Low backup battery"	Low Backup Battery
AC failure	The primary AC power to the control panel has failed.	"AC failure"	AC failure
Bus Device Failure	Communication has been lost to an ST bus device.	"Device XX failure"	Failed Device XX
RF Jam Failure	A radio signal is interfering with wireless device operation.	"RF jammed"	RF jammed
Transceiver Failure	Communication between the control panel and the EXT has failed.	"Transceiver failure"	Transceiver Failure
Fire Output Failure	A wiring fault exists on the fire output	"Fire output failure"	Fire Output Failure
Phone Trouble	The monitored phone line voltage is too low	"Phone trouble"	Phone Trouble
Network Trouble	No Ethernet connection is detected on the EIM	"Network trouble"	Network Trouble
Phone Communication Failure	A report to be sent by phone could not be transmitted and was lost.	"Phone communication failure"	Phone Comm Failure
Network Communication Failure	A report to be sent by Ethernet could not be transmitted and was lost.	"Network communication failure"	Network Comm Failure
Zone Trouble	There is a wiring fault with zone 1 in fire mode.	"Zone XX trouble"	XX: Zone Trouble
Supervision Failure	No wireless communication was received from the indicated sensor during the specified supervision interval.	"Zone XX supervision failure"	XX: Supervision Fail
Sensor Low Battery	A battery in a transmitter is low.	"Zone XX battery trouble"	XX: Low Battery
Sensor Tamper	A transmitter case has been opened.	"Zone XX tamper"	XX: Zone Tamper

XX = Zone/Device Number

Silencing Trouble Beeps

When system trouble conditions are detected, the system will provide audible tones every 30 seconds. The audible tone can be silenced by viewing system status. The trouble beeps will be silenced for 24 hours, unless another new trouble occurs in the meantime.

To silence trouble beeps:

1. Perform a system status check (NEXT + <Stat> + <Sys>).
2. The system will provide a full status report.
3. Trouble beeps will be silenced for 24 hours, unless another new trouble occurs in the meantime.

FCC Notices

FCC Compliance Statement

Changes or modifications not expressly approved by Sequel Technologies could void your authority to operate this equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Re-orient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

ACTA Part 68

This equipment complies with Part 68 of the FCC Rules. Located on this equipment is a label that contains, among other information, the FCC registration number and the ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.
FCC Part 68 Registration No.   XXXXXX-XXXXX-XX-X
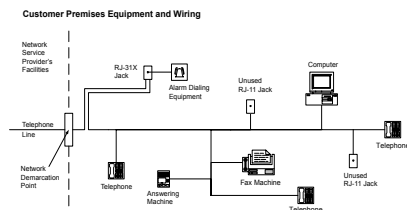REN: 0.XX

Ringer Equivalence Number (REN)

The REN is used to determine the maximum number of devices that may be connected to your telephone line. Excessive RENs on a telephone line may result in devices not ringing in response to an incoming call. In most areas, the sum of all device RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Telephone Connection Requirements

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements as adopted by ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compliant modular jack that is also compliant. See the Installation Instructions for details.

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ31X jack that is electrically in series and ahead of all other equipment attached to the same telephone line. Proper installation is depicted in the following diagram.

If you have any questions concerning these instructions, consult your local telephone company or a qualified installer about installing an RJ31X jack and alarm dialing equipment for you.

Additional Information

If this equipment causes harm to the telephone network, the telephone company may temporarily disconnect your service. If possible, you will be notified in advance. When advance notice is not practical, you will be notified as soon as possible.You will also be advised of your right to file a complaint with the FCC. The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this equipment, please contact the company that installed the equipment for service and/or repair information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or you are sure that the equipment is not malfunctioning. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs Contact the state public utility commission, public service commission or corporation commission for information.

Canada Notice

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local

telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

For your protection, make sure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the LNs of all the devices does not exceed 100. Load Number: .1 *The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.* IC: XXXX XXXXXXXX

Industrie Canada

"AVIS: - L´étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme a certaines normes de protection, d´exploitation et de sécurité des réseaux de télécommunications. Le ministère n´assure toutefois pas que le matériel fonctionnera a la satisfaction de l´utilisateur.

Avant d´installer ce matériel, l´utilisateur doit s´assurer qu´il est permis de le raccorder aux installations de l´enterprise locale de télécommunication. Le matériel doit également etre installé en suivant une méthod acceptée de raccordement. Dans certains cas, les fils intérieurs de l´enterprise utilisés pour un service individuel a ligne unique peuvent etre prolongés au moyen d´un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L´abonné ne doit pas oublier qu´il est possible que la conformité aux conditions énoncées ci-dessus n´empechent pas le dégradation du service dans certaines situations. Actuellement, les enterprises de télécommunication ne permettent pas que l´on raccorde leur matériel a des jacks d´abonné, sauf dans les cas précis prévus pas
les tarrifs particuliers de ces enterprises.

Les réparations de matériel homologué doivent etre effectuées pas un centre d´entretien canadien autorisé désigné par le fournisseur. La compagne de télécommunications peut demander a l´utilisateur de débrancher un appareil a la suite de réparations ou de modifications effectuées par l´utilisateur ou a cause de mauvais fonctionnement.

Pour sa propre protection, l´utilisateur doit s´assurer que tous les fils de mise a la terre de la source d´énergie électrique, des lignes téléphoniques et des canalisations d´´eau métalliques, s´il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissment. - L´utilisateur ne doit pas tenter de faire ces raccordements lui-meme; il doit avoir recours a un service d´inspection des installations électriques, ou a electricien, selon le cas".

AVIS : L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.