PERS-4200 *Series*

PERSONAL
EMERGENCY
REPORTING
SYSTEM

UL LISTED

DX BY Linear

DX S BY Linear

INSTALLATION & OPERATION
INSTRUCTIONS

Linear®
Building On Innovation.

⚠ Important PERS Installation Warnings ⚠

✔ **Be sure and test the system weekly.** Instruct the end-user regarding the importance of periodically testing the system.

✔ **IMPORTANT** – For telephone connection, connect the "LINE" jack to the household telephone line wall jack, as described in the installation instructions. **The Console will not be able to report over the telephone if this connection is not made.**

✔ The Console must be connected to a Managed Facilities Voice Network (MFVN) that will remain in operation during local power outages.

✔ The Console must be located centrally in the installation area relative to where the personal emergency transmitter(s) will be carried and/or activated.

✔ Locating the Console adjacent to large metal objects may change or reduce the effective radio range of personal emergency transmitters used with the Console.

✔ Electrical interference can reduce the effective radio range of the Console. Do not operate any electrical appliances or electrical noise generating devices (fluorescent lamps, motors, etc.) near the Console.

✔ The Console should be kept free of dust and moisture.

✔ Do not use ammonia, benzene, thinner, or similar solvents, or abrasive powder to clean the housing of the Console or the emergency transmitter(s). Clean units by wiping with a damp, soft cloth.

✔ The Console should not be located where sunlight will shine direct on it.

✔ Avoid locating the Console in extremely hot or cold locations.

✔ **This electronic product and its backup battery are not to be thrown away with everyday waste.** It is your responsibility to dispose of electrical and electronics equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment (W.E.E.E.). The separate collection and recycling of your waste electrical and electronic equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, or your household waste disposal service, or the shop where you purchased the product.

Contents

1. Product Description

The PERS-4200 Console is a UL Listed supervised wireless emergency reporting product designed for personal emergency reporting applications. The table-top Console provides "pushbutton" emergency assistance to anyone who desires additional security and peace of mind.
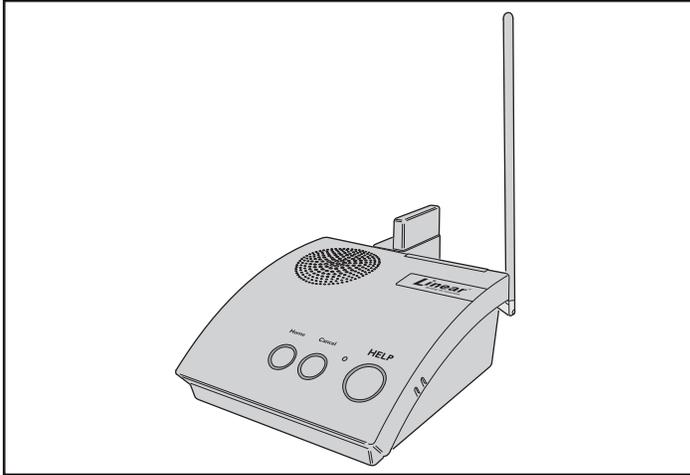
PERS-4200 Console

The Console receives signals from up to 16 Linear wireless transmitters (called "sensors"). Activating a transmitter causes the Console's digital communicator to send the appropriate alarm report to the central monitoring station via a standard land-line telephone connection or through the optional cellular wireless communications module. In addition to the Central Station report, voice prompts sound from the Console and multi-color indicator rings around the Console's buttons display status.

The emergency alarm can be triggered by the **HELP** button on the Console or with a wireless transmitter. The fire alarm can be triggered by wireless smoke detectors, and gas alerts can be triggered by wireless carbon monoxide detectors. Wireless transmitters can also be configured as activity timer reset devices to verify activity at the subscriber's location.

Voice Prompts

A built-in digital voice synthesizer can speak voice prompts in English, or Spanish to guide the user during operation, and guide the installer during programming.

✓ *NOTE: Check the Linear Web site for Console firmware upgrades that may support additional languages.*

Language specific Console button labels are supplied for alternate language use. For the visually impaired, a braille label is also supplied to identify the Console's buttons.

Power Supply

Powered by a low voltage plug-in power supply, the Console includes a rechargeable backup battery for operation during AC power outages.

Programming

The Console must be configured before use. Linear's RA4200 software configures the Console remotely through the standard telephone line, or locally through the Console's USB port, or through the optional cellular module via the Linear Voice Gateway. In addition, limited programming can be done remotely through the standard telephone line with a touch-tone telephone.

2. Operation Summary

A variety of Linear's DXS Format and DXT Format transmitters can be used with the Console.

✓ *NOTE: DXS Format transmitters are supervised, DXT Format transmitters are not supervised.*

Transmitters can be assigned to the following four functions:

Emergency

Portable, pendant, belt-clip, or wristband type transmitters and stationary transmitters are used for personal emergency applications. When an emergency transmitter is triggered, the Console announces the emergency alarm and an emergency report is sent to the Central Station. The emergency alarm can also be triggered by pressing the Console's **HELP** button.

Fire

The Model DXS-73 wireless photoelectric smoke alarm transmitter triggers the fire alarm. When the fire alarm is activated, the Console announces the fire alarm and a fire report is sent to the Central Station.

Carbon Monoxide (CO)

The Model DXS-80 wireless carbon monoxide detector triggers the CO alarm. When a carbon monoxide alarm is activated, the Console announces the gas alarm and a carbon monoxide report is sent to the Central Station.

Activity

Switch or motion triggered transmitters (Models DXS-31/DXS-32 and DXS-54) can be used for ensuring human activity. The DXS-54 motion detector will monitor room activity. The DXS-31 and DXS-32 transmitters can be wired to a pushbutton or switch for manual activity monitoring. As long as a signal is received from each activity sensor during a programmed activity time window, an alarm will **not** be triggered. 15 minutes before the programmed time expires, the **HOME** indicator will start blinking and the Console will announce every three minutes that the timer will run out soon. The activity timer can be reset with a signal from one of the activity transmitters or by pressing the **HOME** button on the Console. Failure to reset the activity timer within the programmed time period will trigger the Console's emergency alarm and send an inactivity report to the Central Station.

2.1 Console Alarm Priorities

Alarm Priorities by Type

Each type of alarm is assigned a priority. Higher priority alarms override lower priority alarms. Smoke alarms (on/off horn sound) have the highest priority, followed by carbon monoxide alarms (on/off buzz sound), emergency alarms (3 beeps sound), then other types of maintenance and reminder reports (various sounds).

EMERGENCY TRANSMITTERS

DXS-LRP   DXS-LRP-BK   DXS-LRC

DXS-LRW   DXS-65   DXS-31

ACTIVITY TRANSMITTERS

DXS-31   DXS-32   DXS-54

SMOKE

DXS-73

CARBON MONOXIDE

DXS-80

PERS-4200 CONSOLE

UP TO 16 TRANSMITTERS TOTAL CAN BE USED WITH EACH CONSOLE
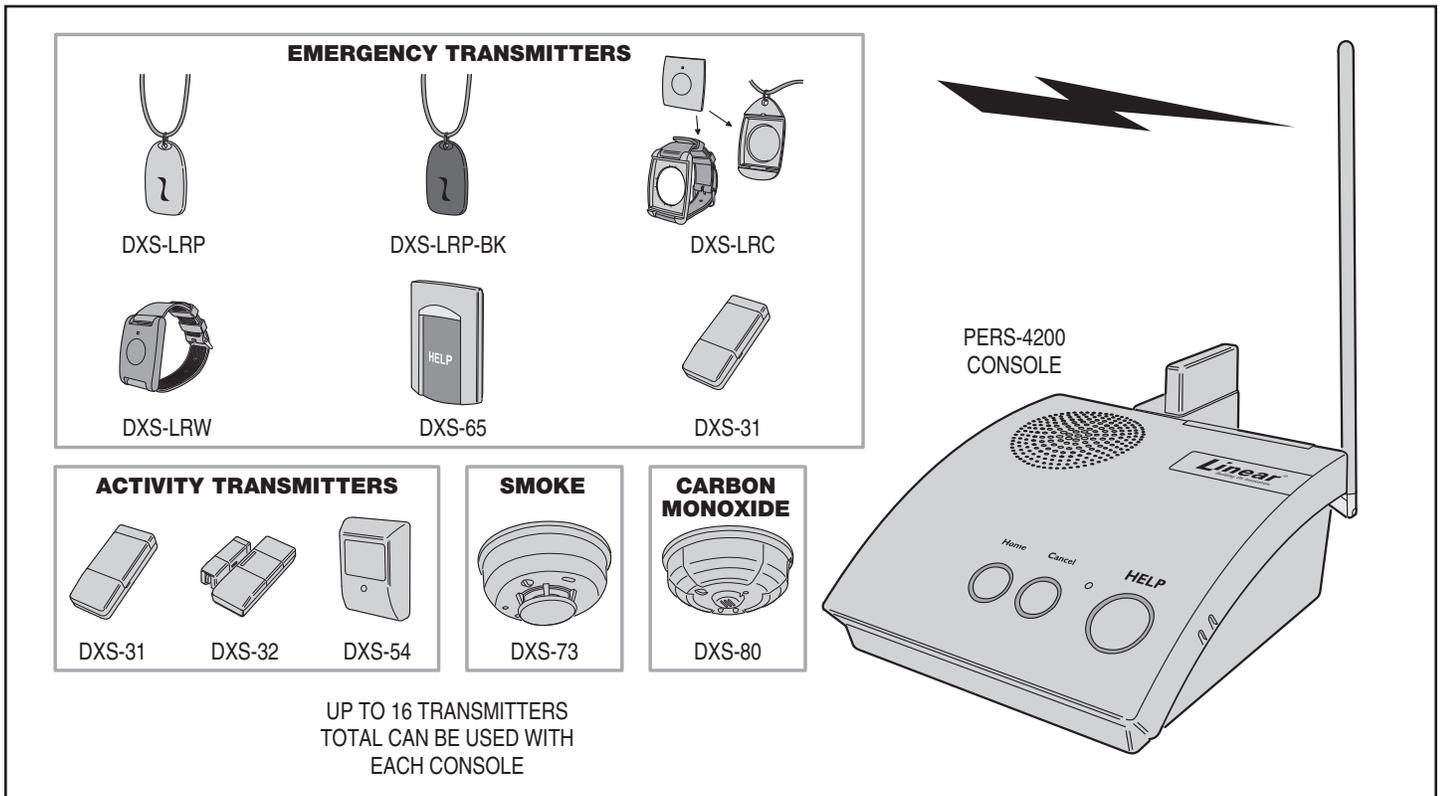
PERS-4200 Compatible Transmitters

2.2 Console Options

Cellular Interface Module

The Model UMTS-3G Cellular Interface Module provides 2-way over-the-air digital communications between the Console and the monitoring service. The cellular module can be used to replace the traditional land-line telephone connection for emergency reporting.

Remote Speaker/Microphone Module

The Model RSM-MODULE Remote Speaker/Microphone Module extends the usable range for 2-way audio communications with the monitoring service. The plug-in module and its remote speaker/microphone unit allow the monitoring service to talk and listen to the subscriber from an additional location in the installation that is remote from the Console.

Alternate Console Labels

For customizing the Console, an alternate set of button identification labels are provided. The labels describe the Console's buttons in French, or Spanish language, or in Braille characters. Apply the label required to the Console, above the buttons.

HOME Button Cover

For installations where the activity timer will not be used, a snap-on button cover is supplied to hide the **HOME** button.

✓ **NOTE: The HOME button cover cannot be easily removed once the cover is in place.**

OPTION MODULES PLUG INTO CONSOLE

CELLULAR TELEPHONE MODULE

REMOTE SPEAKER/MICROPHONE MODULE
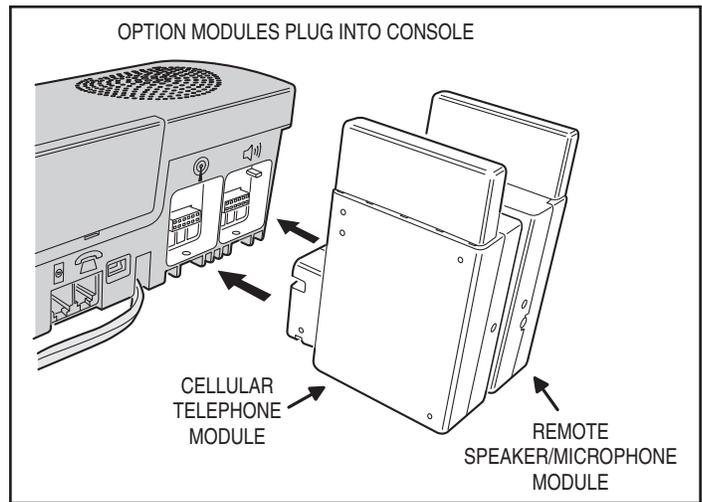
PERS-4200 Plug-in Option Modules

IF REQUIRED, APPLY BRAILLE, FRENCH, OR SPANISH LABEL TO CONSOLE

TO HIDE THE HOME BUTTON IF THE ACTIVITY TIMER IS NOT GOING TO BE USED, SNAP THE HOME BUTTON COVER INTO THE CONSOLE

TIP: INSTALL THE BUTTON COVER BY PRESSING THE SLOT EDGE IN FIRST, THEN SNAP THE TOP EDGE OF THE COVER DOWN

NOTCH IN THE BUTTON COVER LINES UP WITH NOTCH IN THE CONSOLE CASE
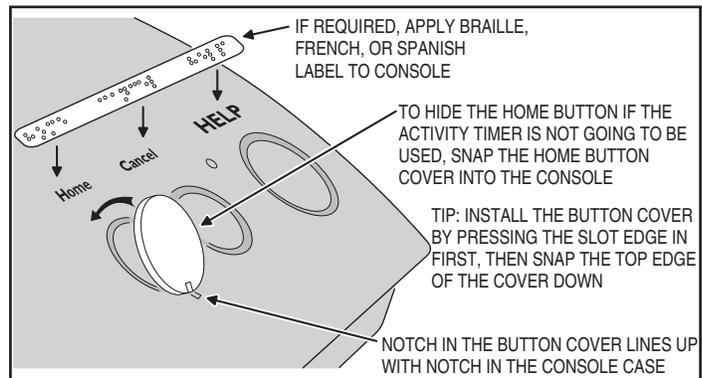
Alternate Console Labels and HOME Button Cover

ANTENNA

OPTION MODULE

SPEAKER

CONSOLE FRONT

HOME BUTTON

CANCEL BUTTON

MICROPHONE

HELP BUTTON

TEMPERATURE SENSOR

CONSOLE REAR

BATTERY DOOR

LINE IN JACK

PHONE OUT JACK

USB PROGRAMMING JACK

CELLULAR TELEPHONE MODULE SOCKET

REMOTE SPEAKER / MICROPHONE MODULE SOCKET

2-WAY AUDIO VOLUME

SPEAKER VOLUME

POWER OFF BUTTON

TEST BUTTON

CONSOLE BOTTOM
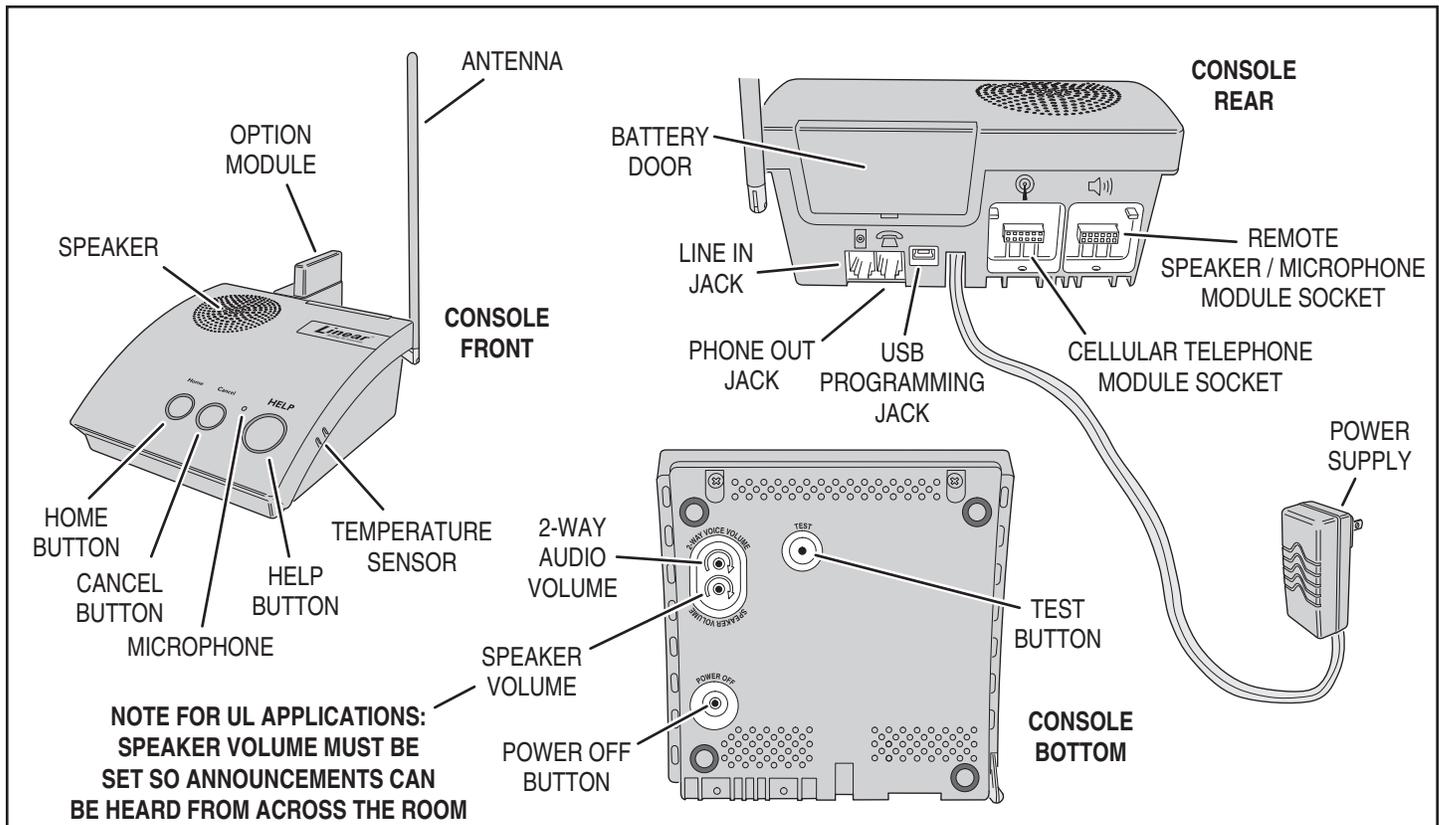
POWER SUPPLY

NOTE FOR UL APPLICATIONS: SPEAKER VOLUME MUST BE SET SO ANNOUNCEMENTS CAN BE HEARD FROM ACROSS THE ROOM

PERS-4200 Console Component Locations

3. Console Connections

3.1 Telephone Connections

NOTE: THIS CONNECTION IS OPTIONAL AND NOT REQUIRED

CONNECT THE HOUSE TELEPHONE TO THE PHONE OUT JACK

CONNECT THE LINE IN JACK TO THE TELEPHONE LINE WALL JACK

NOTE: THE LOCAL TELEPHONE OR ANY DEVICE CONNECTED TO THE CONSOLE'S PHONE JACK WILL BE DISCONNECTED FROM THE TELEPHONE LINE WHILE THE CONSOLE IS REPORTING TO THE CENTRAL STATION
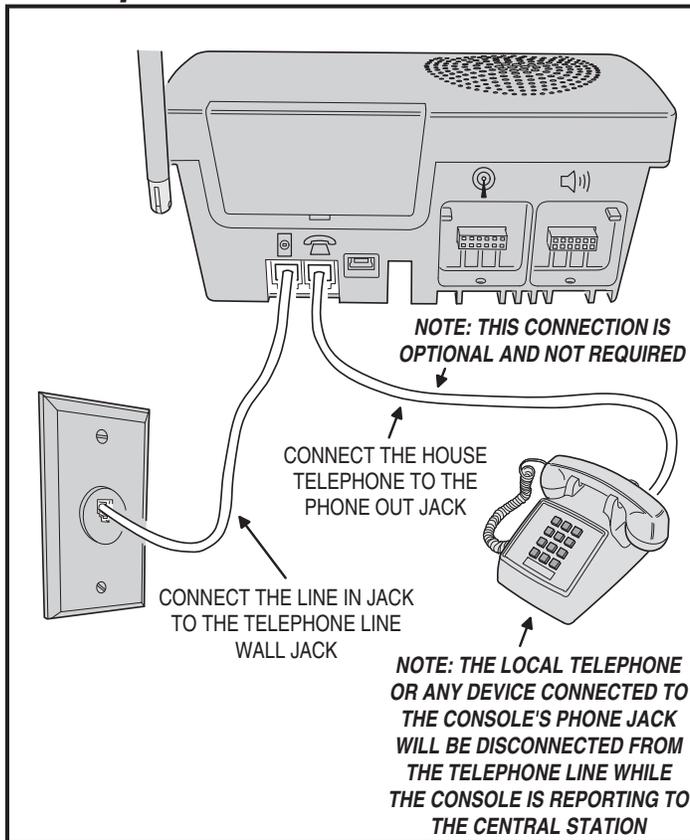
3.2 Option Module Installation

OPTION MODULES PLUG INTO CONSOLE

CELLULAR TELEPHONE MODULE

REMOTE SPEAKER/MICROPHONE MODULE

CAUTION!
BE SURE CONSOLE POWER IS OFF BEFORE CONNECTING THE OPTION MODULES

BE SURE TO SECURE MODULES WITH SCREWS!
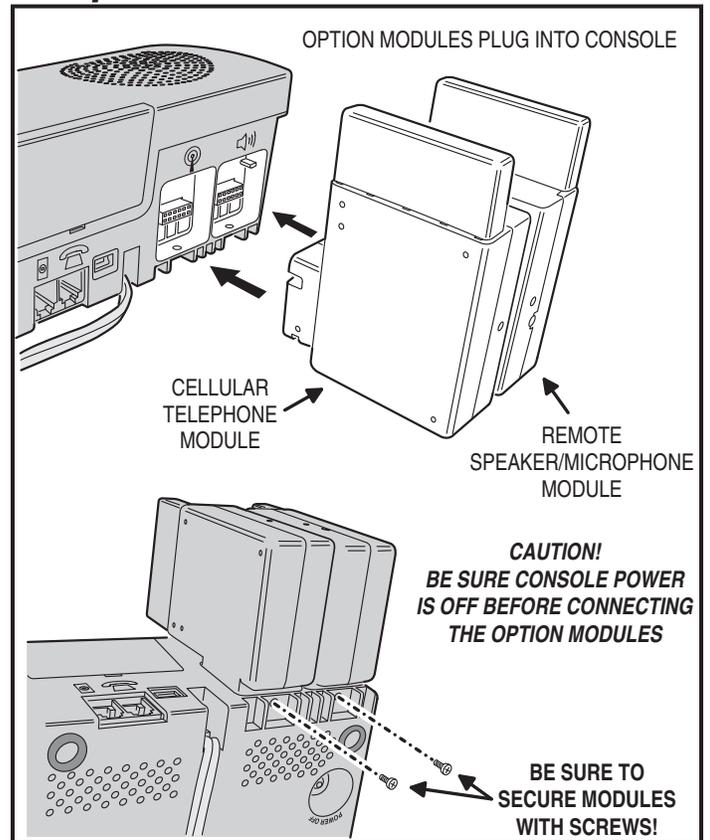
3.3 Power Supply Installation

NOTE: FOR DECORA STYLE OUTLETS, FLIP CLAMP OVER

ATTACH POWER SUPPLY CLAMP TO OUTLET WITH SCREW

SECURE POWER SUPPLY TO CLAMP WITH A ZIP-TIE

CAUTION: BE SURE THE OUTLET HAS 24-HOUR POWER AND IS NOT CONTROLLED BY A WALL SWITCH

3.4 Local Programming Connection

FOR LOCAL PROGRAMMING ONLY

INSERT MINI-USB PLUG INTO JACK ON REAR OF THE PERS-4200 CONSOLE

INSERT USB PLUG INTO PROGRAMMING COMPUTER USB PORT

5
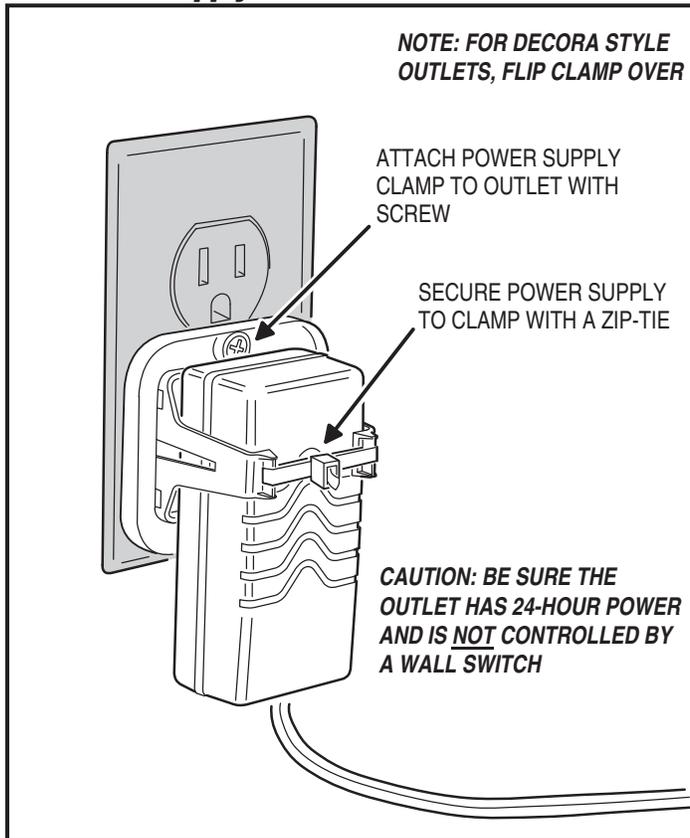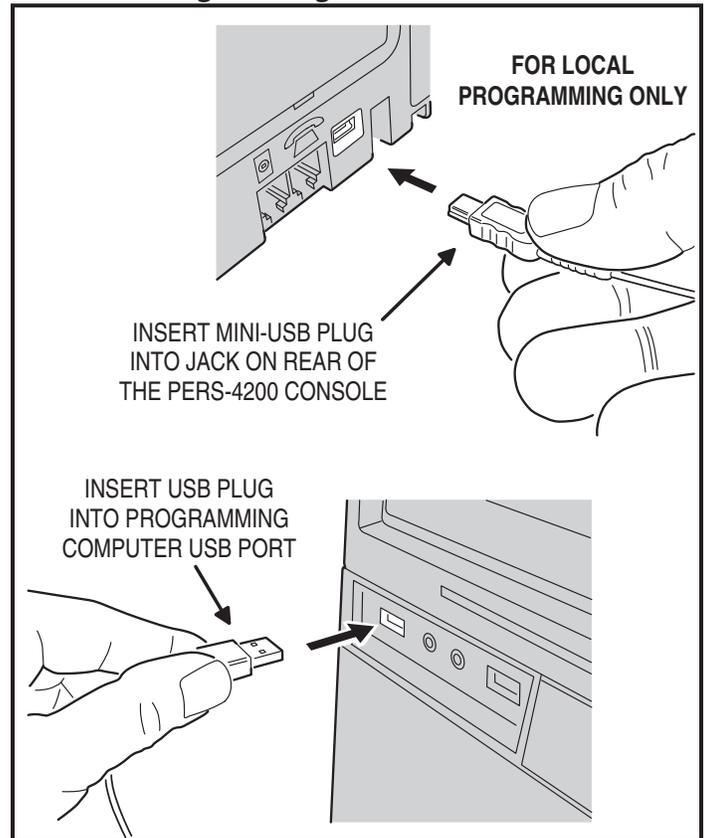
4. Console Modes & Features

The Console operates in several modes and has features that support both the provider and the subscriber.

4.1 Provider Modes

The Console has special modes of operation to aid the installer during setup and configuration.

Power Off Mode

Power Off Mode allows for out-of-service storage of the Console without discharging the backup battery.

Not-Ready Mode

For a Console to report, an account number, Central Station telephone number, and reporting format must be programmed. If these settings for PSTN reporting or IP reporting are incomplete, the Console will indicate Not-ready Mode.

Programming Mode

Programming Mode is used to setup and program the Console. It also can be used to retrieve the unit's event log data.

Test/Learn Mode

Test/Learn Mode is accessible using a recessed button on the bottom of the Console. This mode can be used to locally learn, test, or erase multiple transmitters. While in Test/Learn Mode, all normal operations of the Console are suspended.

4.2 Provider Features

Several features of the Console are designed to aid and support the system provider.

Event Log

The Console maintains a log of the 100 most recent system events. Each event is tagged with the date and time the event occurred. The log can be retrieved by the RA4200 software.

Upgradable Firmware

The PERS-4200 Console runs on internal software code called "firmware". The PERS-4200 Console uses two firmware resources, **system** firmware and **vocabulary** firmware. Firmware code stays stored in the Console's memory and can be upgraded using the RA4200 application when firmware updates become available.

The Device Firmware Upgrade utility (DfuSe) (included in the RA4200 application) can upgrade a Console and the optional UMTS-3G cellular module.

Multi-language Support

The Console supports two resident languages. The default languages are English and Spanish.

To use an alternate language, the vocabulary firmware file must be downloaded and installed in the Console's memory with the RA4200 upgrade utility.

Volume Controls

Two volume controls are provided to customize the sound levels of the Console for the installation.

Auto Supervision

Any of the Console's 16 sensor locations can be set to automatically detect status supervision signals from transmitters. This feature makes adding or replacing transmitters in field units easier.

Variable Supervision Time

The Console can be set to delay reporting missing transmitter status supervision signals until 12 or 24 hours, or 3, 7, 14, or 30 days. (Smoke and CO detectors are always set at 24 hours per UL.)

Transmitter Low Battery Double-Check

The Console can be programmed to report a sensor low battery after the first or second time a low battery signal is received from the sensor.

Received Signal Strength (RSS) Test

To assist in setup and troubleshooting, when a transmitter is activated while the Console is in Test Mode, the Console will measure and announce the received signal strength (RSS) of the transmitter.

Remote Transmitter Enrolling

To make field transmitter replacement easy, the transmitter's ID code can be remotely enrolled into the Console. The transmitter will be ready to operate with the Console without having to "learn" the transmitter in.

Selectable Emergency Siren

The emergency siren can be programmed for audible or silent to support different applications. (The smoke and CO siren are always active per UL.)

Selectable Trouble Annunciation

The annunciation for Console and sensor low battery or supervisory trouble can be audible or silent. (Trouble annunciation must be set to audible per UL).

Selectable AC Power & Phone Line Fail Annunciation

The annunciation for AC power failure and telephone line failure can be audible or silent. Audible annunciation can be set for only once, or once every hour.

NOTE: THESE RF RANGE REDUCTIONS ARE ONLY RECOMMENDATIONS OF POWER LOSS THROUGH THESE TYPES OF MATERIALS

WALLBOARD AND WOOD STUDS
90% - 100% OF FULL POWER

CONSTRUCTION MATERIALS WILL AFFECT RADIO RANGE

LIGHT CONCRETE OR BRICK
65% - 95% OF FULL POWER

CONCRETE WITH STEEL REINFORCEMENT OR METAL LATH AND PLASTER
10% - 70% OF FULL POWER

CENTRALLY LOCATE CONSOLE

CONSOLE LOCATION WILL AFFECT RADIO RANGE

RIGHT

TRANSMITTERS AT THE OTHER END OF THE HOUSE MIGHT BE TOO FAR AWAY

WRONG!

General Wireless Installation Tips

4.3 User Modes

The Console features three modes of operation for the user. Each mode changes the way the Console reacts or annunciates, depending on where the user is, or what time it is.

Home Mode

Home Mode is the standard mode of operation for the Console when the user is at home during the day. The Console will annunciate and report all alarms as programmed.

The **HOME** button lights green when the Console is in Home Mode.

Away Mode

Away Mode is for when the user is going to be off site, away from the Console. Portable emergency transmitter status reports are not monitored while the Console is in Away Mode. Activity monitoring is suspended during Away Mode. Console supervisory faults are always reported, but not annunciated, in Away Mode.

Pressing the **HOME** button for five seconds with switch the Console between Home Mode and Away Mode.

Night Mode

Night Mode is an option that will suspend all Console supervisory annunciations during a selected time period. This mode allows the user to sleep without interruptions from the Console about most non-emergency conditions. Activity monitoring and reminder messages can be used during Night Mode, but are normally not scheduled during that time. Console supervisory faults are always reported, but not annunciated, in Night Mode.

During the programmed time for Night Mode, pressing the **HOME** button for five seconds with switch the Console between Night Mode and Away Mode.

Emergency Reporting in any User Mode

In any of the three user modes, the Console is ready to report an emergency. Emergency signals can be received from wireless sensors or can be triggered from the Console's **HELP** button. The alarms are announced locally by type (emergency, fire, or carbon monoxide alarm) through the Console's speaker and are reported to Central Station.

The Console will sound the alarm for five minutes or until the report to the Central Station is complete (Console emergency siren is optional through programming).

As the alarm is being reported, the Console will announce:

☺ *"Emergency call being placed"*

If the connection to the Central Station is unsuccessful, the Console will repeat the announcement once during each 4-minute waiting period between call sets. Once the alarm is reported or all retry sequences have been exhausted, the Console will stop the annunciations and return indicators to normal.

If 2-way audio is enabled, after the report is completed the Console will announce:

☺ *"Emergency reported... Please stand by"*

The Console will start the 2-way audio session (if enabled).

If 2-way audio is not enabled, after the report is completed the Console will announce:

☺ *"Emergency reported"*

4.4 User Features

Several features of the Console are designed to aid the system user.

Activity Timer

The activity timer is a feature that requires the subscriber to press a button or activate a transmitter during one or two preset time windows to prevent an inactivity alarm from being reported.

The **HOME** indicator will blink during the activity timer window. When 15 minutes remain on the activity timer the Console will announce to the subscriber that the activity timer is running out. The subscriber must press the **HOME** button or trigger an activity transmitter to respond to the activity timer before it runs out, or an inactivity report will be sent.

Switching the Console's mode between Home or Night Mode and Away Mode will also reset the activity timer.

Smoke & CO Detection

For increased protection, wireless smoke and carbon monoxide detectors can be programmed into the Console and report these conditions to the Central Station. Smoke and CO sensors sound different Console announcements and send unique reporting codes.

Reminder Messages

Five pre-recorded reminder messages and an alarm sound can be programmed into the Console. The messages can be set to play once, daily, weekly, or monthly, at a set times and dates. The Console can also play a message to automatically remind the user to test the system.

Temperature Alarms

The Console contains a built-in sensor that constantly monitors the room temperature. The system can report and annunciate if the current room temperature measured is higher or lower than programmed temperature limits. A temperature restore report is sent when the room temperature returns between the high and low set points. As an option, temperature alerts can be programmed to be only active while the Console is in Home Mode.

Speakerphone Mode

The Console can be programmed to act as a hands-free speakerphone for incoming calls. If the user forgets to hang up, a timer will automatically disconnect the call.

The speakerphone mode can only be used on incoming calls and will not function when the Console is operating from backup battery power. **Attempting to answer while the Console is on backup power will cause an emergency alarm.**

✓ *NOTE: If the Console communication is only through an IP connection to the Central Station and it is not connected to a PSTN or MFVN telephone line, this feature will not function*

Remote User 2-Way Audio

Using a 4-digit password, the Console can be called from any telephone and the caller can talk and listen to the user through the Console's 2-way hands-free speakerphone either in voice-activated mode or manual switching mode.

✓ *NOTE: If the Console was configured with the "Answer Phone" option NOT selected, this feature will not function.*

✓ *NOTE: If the Console communication is only through an IP connection to the Central Station and it is not connected to a PSTN or MFVN telephone line, this feature will not function.*

Console Status Alert

The system continuously monitors the microprocessor that runs the Console's firmware code. If the microprocessor ever stops executing the firmware code, the Console will indicate the trouble condition by sounding a steady tone from the speaker. The tone will continue until the condition is corrected.

5. Using the Provider Modes

The Console features special modes of operation to aid the installer during setup and configuration.

5.1 Power Off Mode

Power Off Mode allows for out-of-service storage of the Console without discharging the backup battery. The Console is shipped from the factory in this mode.

To place the Console in Power Off Mode from any other mode, remove AC power, then press and hold the **POWER OFF** button on the bottom of the Console for three seconds.

The next time AC power is applied, the Console will enter the programmed operating mode.

5.2 Not-Ready Mode

For a Console to report, an account number, Central Station telephone number, and reporting format must be programmed. If any of these settings are incomplete, the Console will indicate Not-ready Mode.

If the Console assumes Not-ready Mode when AC power is applied, a 1-second beep will sound (and annunciate, if programmed) and the three indicators will blink green, orange, orange.

5.3 Programming Mode

Programming Mode is used to setup and program the Console. It also can be used to retrieve the unit's event log data.

Programming Mode can be accessed with RA4200 software on a PC locally through a direct USB connection, remotely through a telephone connection, remotely through cellular connection (if the optional UMTS-3G cellular module in installed), or with limited access through a telephone connection using just a touch-tone telephone.

✓ *NOTE: During AC power loss, local and remote programming with the RA4200 software is disabled unless the connection was already established at the time of power loss.*

When the Console is in Programming Mode, the three indicators will blink green, orange, red.

Programming Mode will exit automatically after 3 minutes of inactivity, or by pressing the **CANCEL** button.

While in Programming Mode, the Console is not operational and cannot receive or report alarms.

5.4 Test/Learn Mode

Test/Learn Mode is accessible using the **TEST** button on the Console. This mode can be used to locally learn, test, or erase transmitters.

To assist in setup and troubleshooting, when a transmitter is activated while the Console is in Test Mode, the Console will measure and announce the received signal strength (RSS) of the transmitter.

Enter Test/Learn Mode by pressing the recessed **TEST** button on the bottom of the Console. Test/Learn Mode will exit automatically after 3 minutes of inactivity, or by pressing the **CANCEL** button.

When the Console is in Test Mode, the **HOME** and **CANCEL** indicators will slowly blink green and orange.

**While in Test/Learn Mode, the Console is not operational and cannot receive or report alarms.**

✓ *NOTE: Transmitters can also be learned one at a time using the CANCEL button (see Section 12.2).*

① UNPLUG THE POWER SUPPLY
② PRESS THE POWER OFF BUTTON ON THE CONSOLE BOTTOM FOR 3 SECONDS
③ THE CONSOLE WILL ANNOUNCE POWER OFF AND THE INDICATORS WILL TURN OFF
"CONSOLE POWER OFF"

Power Off Mode

IF THE CONSOLE DOES NOT HAVE AN ACCOUNT NUMBER, CENTRAL STATION TELEPHONE NUMBER (OR IP REPORTING ADDRESS), OR REPORTING FORMAT PROGRAMMED, THE CONSOLE WILL INDICATE THAT IT IS NOT READY
"CONSOLE NOT READY... PLEASE CONFIGURE BEFORE USE"
CONSOLE WILL ANNOUNCE WHEN POWERED ON
ALL THREE INDICATORS WILL BLINK
GREEN
ORANGE
ORANGE

Not-Ready Mode

WHILE THE CONSOLE IS IN PROGRAMMING MODE, ALL THREE INDICATORS WILL BLINK
LOCAL PROGRAMMING CONNECTION
USB CABLE
PROGRAMMING PC
GREEN
ORANGE
RED
NOTE: THE SAME INDICATIONS OCCUR WHEN REMOTELY PROGRAMMING

Programming Mode

① PRESS AND RELEASE THE TEST BUTTON
② THE CONSOLE WILL ANNOUNCE TEST MODE, THEN THE FIRMWARE AND HARDWARE VERSIONS
③ ACTIVATE ALL SYSTEM SENSORS, THE CONSOLE WILL ANNOUNCE SENSOR TYPE, ZONE, AND SIGNAL STRENGTH
"TEST MODE... FIRMWARE VERSION x.x... HARDWARE VERSION x.x"
"EMERGENCY SENSOR... ZONE ONE... FULL SIGNAL "
HOME & CANCEL INDICATORS WILL BLINK
GREEN
ORANGE

Test/Learn Mode

6. Programming with RA4200

Linear's RA4200 software configures the PERS-4200 Console remotely or locally.

6.1   Software Description

The RA4200 software described in this manual supports the programming Linear's Model PERS-4200 Personal Emergency Reporting System. The software runs on an IBM PC or compatible computer.

What is the RA4200 Remote Access Software?

The RA4200 Remote Access software is communications software that programs all features of Linear PERS-4200 Consoles. It sets the options for: Console alarm, audio, and sensors; communicator telephone numbers, call routing, formats, reporting codes, account numbers, and reminder messages and more. The RA4200 can also display the Console's event log.

The RA4200 software has a help file that can be accessed at any time by selecting "Contents" from the "Help" menu or by pressing the F1 key.

System Requirements
- IBM compatible personal computer with 2 GB RAM
- Windows XP, Windows Vista, or Windows 7 operating system
- ✓ **NOTE: Windows 64-bit operating systems may require "Windows XP Mode" download from Microsoft for "Panel Firmware Update (Dfuse)" to run properly. See http://www.microsoft.com/windows/virtual-pc/download.aspx**

- VGA monitor
- For remote telephone connection, a ITU v.22bis standard 2400 baud Modem
- For local connection, an available computer USB 2.0 port and a Type A to mini Type B USB cable.
- An Internet connection
- Hard disk drive with 50 MB available space for the software plus 18KB available space for each account template file

How does RA4200 connect to a Console?

RA4200 can connect to the Console two ways:
- Remote connection over the telephone line using the computer's modem.
- Local USB connection using a USB cable and the computer's USB port.

Once the connection is made, the Console will check if its remote access password matches the calling software's password. If the passwords match, access is granted.

### Do I have to be connected to a Console to make programming changes?

Since Remote Access knows the Console's programming structure, you can modify an account template without being connected to a Console. This means you can set all of the values for a specific Console configuration and then connect to a unit and send all of the values that you have set. This is referred to as off-line Console configuration.

How do I change Console settings while on-line?

While on-line with the Console, make any changes to the account template then send the data to change the Console.

Can I make a template with the typical settings for all of my accounts?

Programming "templates" can be created to speed up programming multiple Consoles. Common settings, such as the Central Station telephone number, communicator format, Console and communicator configurations which are shared by all of your accounts can be stored in a generic account template. That template file can be used as a basis for creating multiple customer account template files.

RA4200 Programming Software

9
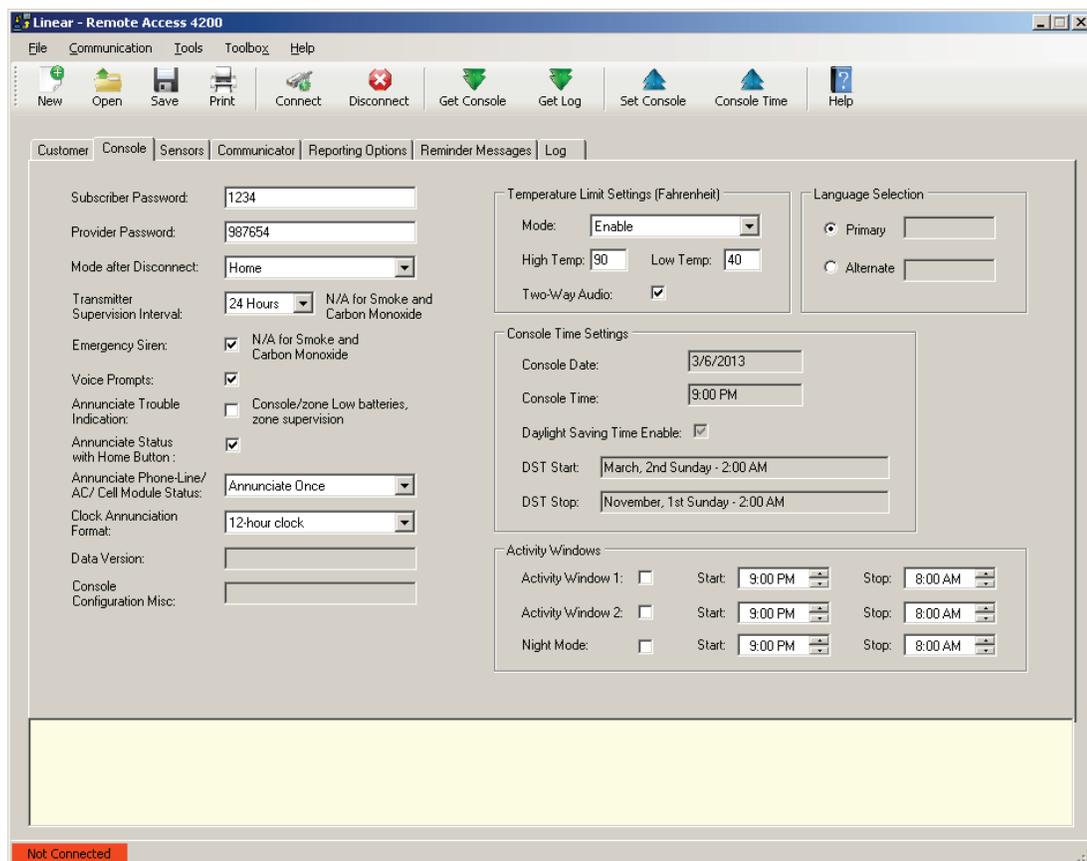
7. Programming Outline

Use the following programming outline to guide you through the steps required to set up the RA4200 software and program a PERS-4200 Console. Many of the programming options available in the RA4200 program can be left in their default settings, and do not need to be changed for most installations.

Setup RA4200 Software
- Install the software on your computer (Section 7).
- Test your computer's modem (if used) (Section 8).
- Start the RA4200 program (Section 9).

Customize an Account Template
- Open a new or existing account template (Section 10).
- Enter customer information (Section 10.1).
- Set the Console's password and operational options (Section 10.2).
- Enter any wireless sensor ID codes for sensors that won't be learned locally (Section 10.3).
- Select the Console's communication method and options for PSTN and/or IP reporting (Section 10.4).
- Choose the general communicator reporting options and assign any custom reporting codes (Section 10.5).
- Set the Reminder Message schedules (Section 10.6).

Program the Console with the Account Template
- Connect to the Console (Section 11.2).
- Set the Console's time and date (Section 11.3).
- Send the account template data to the Console (Section 11.3).

✱ *IMPORTANT! AFTER ANY PROGRAMMING CHANGES ARE MADE TO A CONSOLE, PERFORM THOROUGH TESTING TO VERIFY THAT THE CONSOLE OPERATES AS INTENDED.*

8. RA4200 Software Installation

The RA4200 remote access software is available on Linear's web site at this link:

www.linearcorp.com/downloads.php

The installation program will create a directory on your hard disk drive. Be sure that you have at least 50 megabytes free on the hard disk for the program and any account template files that you create.

To Install the Remote Access Program:
1. Download the RA4200 programming software installation package from the Linear Web site at the link shown above.
2. Extract the **RA4200Setup.ZIP** file to expand the files.
3. Browse to find the **SETUP.EXE** file. Double-click on **SETUP.EXE** and the installation program will start.
4. Click the Next button to install the Remote Access software. Follow the on-screen instructions as the setup program creates the directory and copies the program files onto your hard disk. The setup program will also install a virtual COM port driver to support a USB connection. If desired, select the check box to place a RA4200 Remote Access icon your desktop.

✓ *NOTE: If RA4200 already is on your system and you are performing a reinstallation, or an update, you will be prompted to modify, remove, or repair the RA4200 software.*

✓ *NOTE: IF RA4200 IS INSTALLED ON WINDOWS VISTA OR WINDOWS 7, RIGHT-CLICK ON THE DESKTOP ICON, SELECT PROPERTIES, SELECT THE COMPATIBILITY TAB, CHECK "RUN THIS PROGRAM IN COMPATIBILITY MODE", AND SELECT WINDOWS XP.*

To Remove the Remote Access Program:
1. Press **START**, **SETTINGS**, **CONTROL PANEL**. Double-click on **ADD/REMOVE PROGRAMS**.
2. Select Linear RA4200 and click **ADD/REMOVE** or **CHANGE/REMOVE** button depending on your Windows Operating system.

✓ *NOTE: Alternately, you can select UNINSTALL from the Linear RA4200 folder on the start menu.*

9. Testing the Modem

A modem is used when connecting to a Console remotely, over the telephone line. A modem *is not* required for local programming with a USB cable.

When using a modem, be sure that the computer is running correctly and that the modem is installed and working properly before you run the RA4200 Remote Access Program.

Use the following steps to test the modem and determine the computer's COM port number that it is connected to.

To Test the Modem in Windows XP

Windows Control Panel can be used to test the modem and determine what COM port the modem is connected to.

1. Press **START**, **SETTINGS**, **CONTROL PANEL**.

2. Double-click on **PHONE AND MODEM OPTIONS**.

3. Click on the **MODEMS** tab. The modem and the COM port used should be shown.

4. **Note the COM port number.** It's used when setting COM port in the RA4200 Send/Receive window (see Section 11.1).

5. Click **PROPERTIES** and select the **DIAGNOSTICS** tab.

6. Click **QUERY MODEM**. If the modem is connected and working properly, the Modem Information window will display detailed Command and Response modem information. If the modem is not working properly, Windows will notify you.
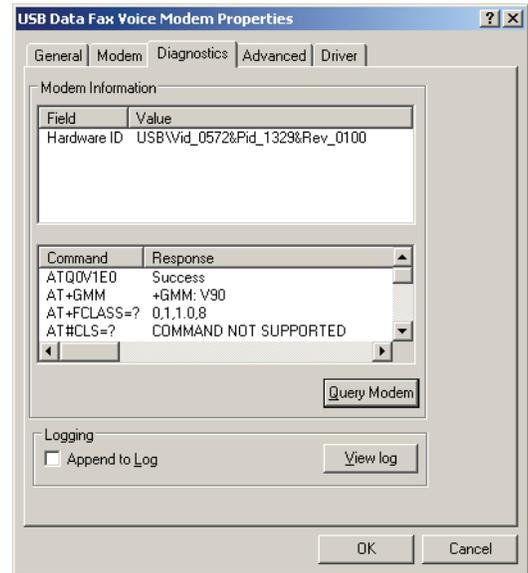
Windows XP Modem Test

11

10. RA4200 Software Overview

The RA4200 software is a Windows compatible program with menus and tabs to select various account fields to make selections and enter data.

10.1 Starting the Program

To Run the Program:

Double-click on the **RA4200** desktop icon or press **START**, point to **ALL PROGRAMS**, **Linear**, **RA4200** and click on **RA4200**.

The RA4200 program will launch, displaying the menu bar and icons, the Account Template with its seven tabs, a communications status window, and a connection status indicator at the bottom.

10.2 The Account Template Tabs

Seven tabs are available for the Account Template. Each tab displays major areas for programming and administrating a PERS-4200 Console installation.

The Account Template tabs function as follows:

Customer

Displays fill-in fields for details of the subscriber's information for the specific PERS-4200 installation. Fields include name, address, telephone numbers, customer ID#, and a large field for special notes regarding the subscriber.

Console

Displays fill-in fields for setting information and options for the specific PERS-4200 Console. General settings such as passwords, siren enable, voice prompts, voice language, temperature limits, activity timer and Night Mode time windows can be set. Several other Console options and settings are also available in this tab. The Console's time and date settings are displayed.

Sensors

Displays the 16 wireless sensor zones of the PERS-4200 Console. Each sensor zone displays its sensor ID number, sensor type, supervision option, two-way audio option, and the current sensor battery and supervision status.

Communicator

Displays Console connection options for public switched telephone network (PSTN) and internet protocol (IP) reporting. Typical PSTN settings are for the communicator's Central Station telephone numbers, account number, reporting format, audible dialing tones, and dialing format. Typical IP settings are for Central Station IP address and port numbers, IP account number, IP reporting format, voice gateway IP address and port numbers.

Reporting Options

Displays reporting options for the Console. Options for AC failure reporting, supervisory event reporting, mode switch reporting, automatic answer, automatic status report interval, speakerphone timer, two-way audio mode, dialing delay, and 4x2 reporting codes.

Reminder Messages

Displays the eight subscriber Reminder Message slots and their options. Also displays an option for setting the Reminder timeout interval and audio replay option. Each Reminder Message can be enabled, set for a type, and programmed to an activation schedule. An automatic system test reminder message can also be programmed.

Log

Displays the event log of the PERS-4200 Console. After the log is retrieved from the Console, this tab will show the system events with a time and date stamp in the order that they occurred.

RA4200 Customer Tab

10.3 The Menu Bar

The menu bar provides access to each of the programs sub-menus. The icons below the menu bar are used to open, save, and print subscriber Account Templates and perform various actions with the PERS-4200 Console.

Drop-down Menu Items and Icons

The sub-menus that can be accessed from the Menu Bar are:

File

NEW

Opens a blank Account Template. The common Console default values are already filled in.

OPEN

Loads a saved Account Template into the RA4200 workspace. Only one Account Template can be open at a time in the RA4200 workspace.

SAVE

Saves the open Account Template to the hard drive. A warning dialog will be displayed if the template will overwrite the existing file.

PRINT / PREVIEW

Opens the account information print preview window to allow printing of the active Account Template. Shows what will be printed on the screen with options to zoom in or print the document. Resulting printout is the entire content of the Account Template file and the Console's event log in text format.

EXIT

Closes the RA4200 program. If the Account Template has changed, you will be asked if you want to save it.

Communication

CONNECT

Opens the Send/Receive window. Uses the telephone number and password from the open template. Sets up and starts a modem or COM port (local with USB) connection.

DISCONNECT

Terminates the connection between the RA4200 program and the PERS-4200 Console.

GET CONSOLE

Retrieves the Account Template from the PERS-4200 Console that is currently connected to the RA4200 program.

GET LOG

Retrieves the Event Log from the PERS-4200 Console that is currently connected to the RA4200 program.

SET CONSOLE

Sends the Account Template from the RA4200 program to the PERS-4200 Console that is currently connected.

CONSOLE TIME

Opens the Set Time window. This function can be used to set the date and time or get the date and time of the Console currently connected to the program. Daylight saving time can be enabled or disabled, and the start and end weeks of daylight saving time can be adjusted.

Tools

CLEAR EVENT LOG

Deletes the logged events from the connected PERS-4200 Console.

TEST IP REPORTING

Sends a test IP message from the Console to the central station. Requires a modem or USB connection to the Console, and an Internet connection.

IMPORT OR EXPORT FILE VIEWER

For reading the content of an *.ra3 export file, or an *.ra5 import file.

EXPORT FILE TO VOICE GATEWAY

Creates an *.ra3 export file from the template that is currently open in the RA4200 and send it to the Linear Voice Gateway (LVG) server. This feature requires an internet connection. The LVG server supplies the file to Console via the Console's cellular module.

RETRIEVE IMPORT FILE FROM VOICE GATEWAY

Retrieves an *.ra5 import file from the Linear Voice Gateway (LVG) server. This feature requires an internet connection. The LVG server supplies the file to the PC for storage.

MERGE IMPORT (*.RA5 / *.RA6) or EXPORT (*.RA3) FILE

Merges data from an import file into the current open template in RA4200. Open the appropriate template (*.ra1) first before attempting a merge function. Data from an import file will overwrite current input fields in the opened template (be sure to save the template after merging). Merging an export file with the current open template in RA4200 is also allowed supported.

Toolbox

PANEL FIRMWARE UPDATE (DfuSe)

Opens the download tool which supports upgrading the system and vocabulary firmware of a PERS-4200 Console and the firmware of the UMTS-3G cellular module.

Help

CONTENTS

Opens the help Contents search window. Used for accessing the RA4200 program's built-in help file. Function key F1 also accesses the help file.

ABOUT RA4200

Displays the version number of the RA4200 software.

11.   Creating a Custom Account Template

Each PERS-4200 Console installation requires an Account Template. While many items are the same in different Consoles reporting to the same Central Station, some items (account number, customer information, & sensor information) are unique for each installation.

A custom Account Template is created by editing the default Account Template included with the RA4200 software. The customized template should then be saved with a unique name for the account and then sent to the PERS-4200 Console.

Account Template Management

Account templates that are created get stored on the programming PC or onto a server or cloud storage. These account template files should be named referencing the subscriber, customer ID number, or other identification that will make it easy to link each file with an installation.

Keep these files in a safe location. If a file is lost or deleted, it can be recreated by retrieving the programmed information from an already programmed Console, although the data on the Customer tab will be lost and have to be reentered.

11.1 Customer Tab

The customer tab displays fill-in fields for details of the subscriber's information for the specific PERS-4200 installation.

✓ *NOTE: All fields are optional and do not have to be filled in. This information is for PERS provider account reference and is not sent to the Console.*

Customer ID

Enter a unique identifier in the **CUSTOMER ID** fill-in field for the installation. (The Customer ID is different from the communicator's account number).

Customer Name

Enter the subscribers first, middle, and last name in the three fill-in fields.

Customer Address 1 & 2

Enter the subscribers primary street, city, state, and zip code in the four fill-in fields. Four additional fill-in fields are provided for a secondary address.

Telephone Numbers

Three fill-in fields for telephone numbers are provided. Enter the Console telephone number and up to two additional telephone numbers for the subscriber.

Notes

Enter any special or additional information about the subscriber in the **NOTES** fill-in field.

RA4200 Customer Tab

14
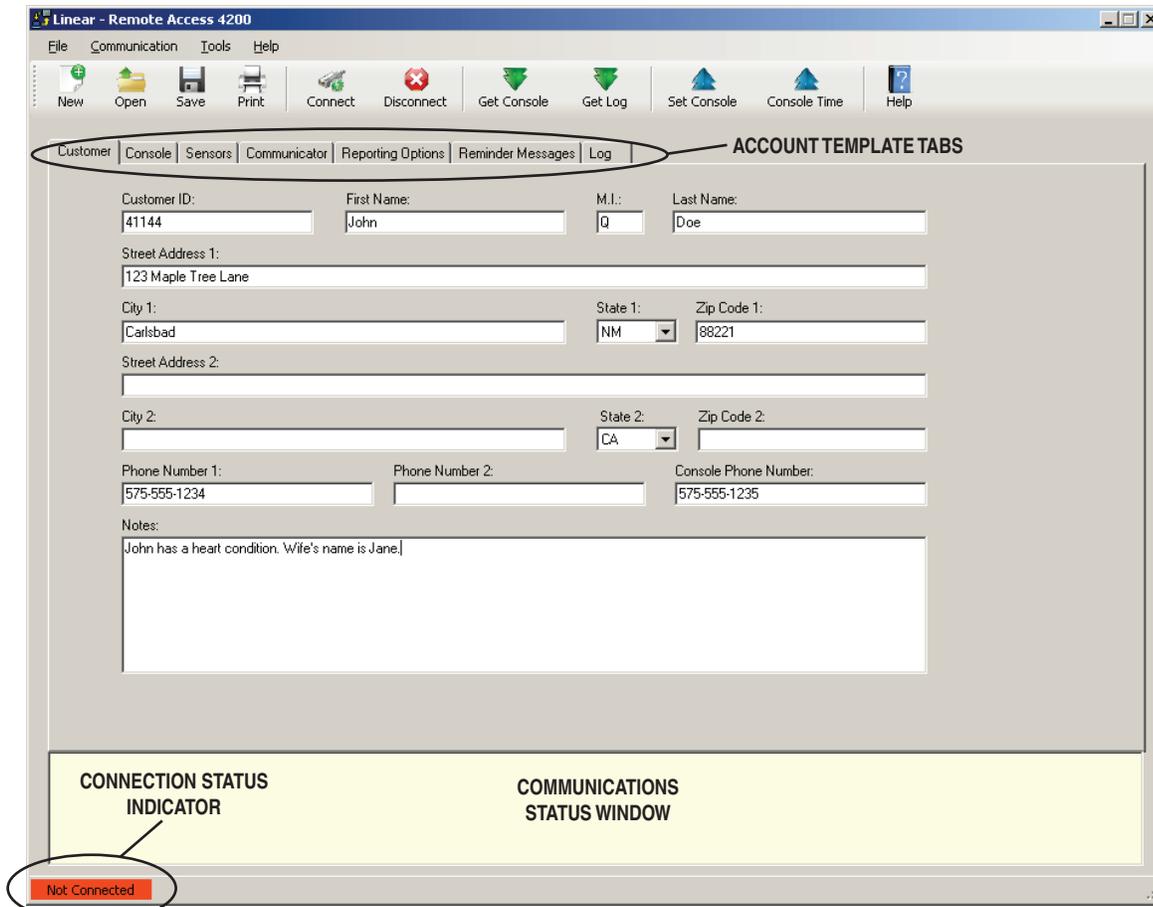
11.2 Console Tab

The Console tab displays fill-in fields for setting information and options for the specific PERS-4200 Console.

Subscriber Password

Enter a new 4-digit subscriber password for the Console. This is the password that the subscriber can use to call the Console from a remote telephone and access user features. The factory default is 1-2-3-4.

Provider Password

Enter a new 6-digit provider password for the Console. This is the password that allows the PERS provider to locally or remotely connect to a Console and access programming. The factory default is 9-8-7-6-5-4.

Mode After Disconnect

Select the mode the Console will assume after programming when the Console disconnects:

- **Home** — The Console will assume Home Mode after disconnect (default).
- **Away** — The Console will assume Away Mode after disconnect.

Transmission Supervision Interval

Supervised transmitters can send recurring status signals to the Console. This option sets the length of time required before the Console will recognize that a sensor's status reports have **not** been received.

✓ *NOTE: This setting does not affect supervision timing for smoke and carbon monoxide detectors. These types of sensors are always set by the Console to require reception of a status signal at least once every 24 hours.*

Select one of the six options for the supervision interval: 12 hours, 24 hours (default), 3, 7, 14, or 30 days. **This setting effects all non-smoke and CO supervised sensors programmed into the Console that have status supervision enabled.**

✓ *NOTE FOR UL APPLICATIONS: UL requires the Transmitter Supervision Interval option to be set to 24 hours.*

Emergency Siren

The Console contains an emergency siren that can sound for five minutes when an emergency alarm is triggered, or until the report to the monitoring service is complete. The default for the siren is enabled. Optionally the siren can be disabled by un-checking this option box.

✓ *NOTE: This setting does not affect emergency alarms from smoke and carbon monoxide detectors. These types of sensors always trigger the emergency siren regardless of this setting.*

Voice Prompts

The Console contains a voice synthesizer that can announce system alarms and status. The default for the voice prompts is enabled. Optionally, the voice prompts can be disabled by un-checking this option box.

RA4200 Console Tab

Annunciate Trouble Indication

With this option box checked, the Console will announce three system trouble conditions if they occur: Console low battery, sensor low battery, and no sensor status. Sensor troubles type are announced followed by the sensor zone number. The default is to *not* annunciate these conditions.

✓ *NOTE FOR UL APPLICATIONS: UL requires the Annunciation Trouble Indication option to be enabled (option box checked).*

Annunciate Status with Home Button

A short press of the **HOME** button will cause the Console to announce the Console's time, current mode, and any trouble conditions. The default for status annunciations is enabled. Optionally, status annunciations can be disabled by un-checking this option box.

Annunciate Phone-Line/AC Status

If the telephone line is disconnected, or the AC power to the Console fails, the Console can annunciate these conditions. These annunciations will clear when the condition is corrected.

The default sets these types of annunciations to **ANNUNCIATE ONCE**. Alternately, use the this option to select **OFF** or **ANNUNCIATE EVERY HOUR**. Regardless of this setting, the Console records the condition in the event log and can report AC power failure to the monitoring service (if AC reporting is enabled).

✓ *NOTE: To prevent disturbing the subscriber, these annunciations will be suppressed while the Console is in Night Mode*

Clock Annunciation Format

Both 12-hour (AM/PM) and 24-hour ("military") time formats are supported in time announcements for Console status and reminder messages.

The default sets the time annunciations to **12-HOUR CLOCK** format. Alternately, use the this option to select **24-HOUR CLOCK** format.

Data version

Displays the version number of the Console's data for factory use and troubleshooting.

Console Configuration Misc.

Displays configuration numbers of the Console for factory use and troubleshooting.

Temperature Limit Settings

The Console contains a built-in sensor that constantly monitors the room temperature. The system can report and annunciate if the current room temperature measured is higher or lower than programmed temperature limits.

The Console will announce the high or low temperature alert every minute until the room temperature is within the programmed acceptable limits.

The temperature limit alert is enabled by default. Select **DISABLE** to turn off this feature or select **ENABLE HOME MODE ONLY** to sound and report temperature alerts only while the Console is in Home Mode.

The default set-point for the low-temp alert is 40°F (4.4°C).

The default set-point for the high-temp alert is 90°F (32.2°C).

To change the temperature set-points, enter new values (in Fahrenheit) into the **HIGH TEMP** and/or **LOW TEMP** fill-in fields.

A **TWO-WAY AUDIO** check box is available to select if a temperature alert starts a 2-way audio session with the monitoring station. The check box is selected by default. Alternately, un-check this box to inhibit 2-way audio after a temperature alert.

Language Selection

The Console can annunciate voice prompts in English or Spanish to guide the user during operation, and guide the installer during programming.

The two resident languages in the Console are English (EN) and Spanish (ES). Choose the active language for the Console using the radio buttons in the Language Selection area.

To use a different language, the language vocabulary file must first be downloaded and installed in the Console's firmware (See Section 15.2).

Console Time Settings

The Console contains a built-in clock and calendar, and supports automatic daylight saving time adjustment. The Console's current time and date setting and the daylight saving information is displayed on the Console tab or the RA4200 software.

To change these settings, use the **CONSOLE TIME** function on the **COMMUNICATION** menu (or press the **CONSOLE TIME** icon on the toolbar ribbon). See Section 11.3.

✓ *NOTE: If the UMTS-3G cellular module is installed, the Console's time will be set automatically over the air by the network.*

Activity Windows

The activity timer is a feature that requires the subscriber to press the Console's **HOME** button or activate a activity reset transmitter during one or two preset time windows to *prevent* an inactivity alarm from being reported.

Two activity time windows can be set. Each time window can be enabled or disabled, and has a start and stop time.

- To enable **Activity Window 1** and/or **Activity Window 2**, check the enable box next to the start and stop times.
- Set the start time for the activity window.
- Set the stop time for the activity window.

Night Mode

Night Mode is an option that will suspend all Console supervisory and reminder annunciations during the Night Mode time window. This mode allows the user to sleep without interruptions from the Console about non-emergency conditions.

- To enable the **Night Mode** time window, check the enable box next to the start and stop times.
- Set the start time for Night Mode.
- Set the stop time for Night Mode.

11.3 Sensors Tab

The Sensors tab displays fill-in fields for setting information regarding the wireless sensors programmed into the Console. Sensor status indicators also display the current condition of the sensor.

Up to 16 wireless sensors can be used with each PERS-4200 Console. The transmitter's ID number is printed on a removable tag attached to the unit's lanyard.


TRANSMITTER'S ID NUMBER IS PRINTED ON TAG

TX ID:0006731
DXS-LRP
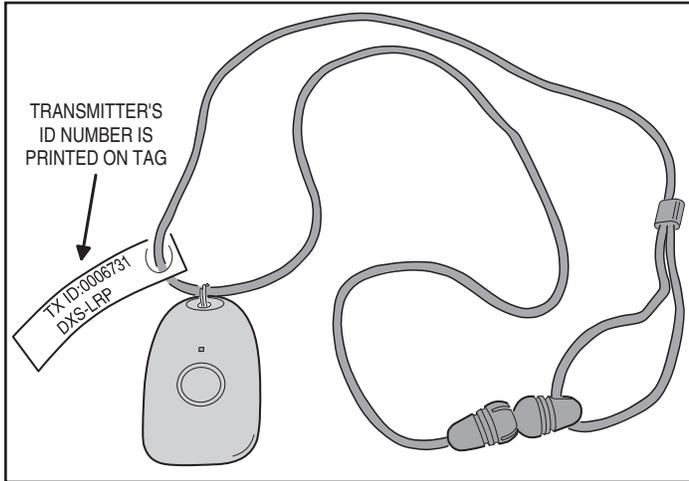
Transmitter ID Tag

Low Battery Report Options

Supervised wireless sensors send low battery signals when they detect that their battery is low. When a low battery signal is received from a wireless sensor, two options are available to control when the Console reports a low sensor battery.

- **Option 1** - When a low battery signal is received from a sensor, the Console will immediately report a low battery.
- **Option 2** - When a low battery signal is received from a sensor, the Console will wait for another low battery signal from the same sensor within a 24 hour period before reporting a low battery.

✓ *NOTE: In Night Mode, the low battery annunciations are suppressed, but Console reporting is not.*

Select **Option 1** or **Option 2** for the Console. This setting will affect all wireless sensors used with the Console.
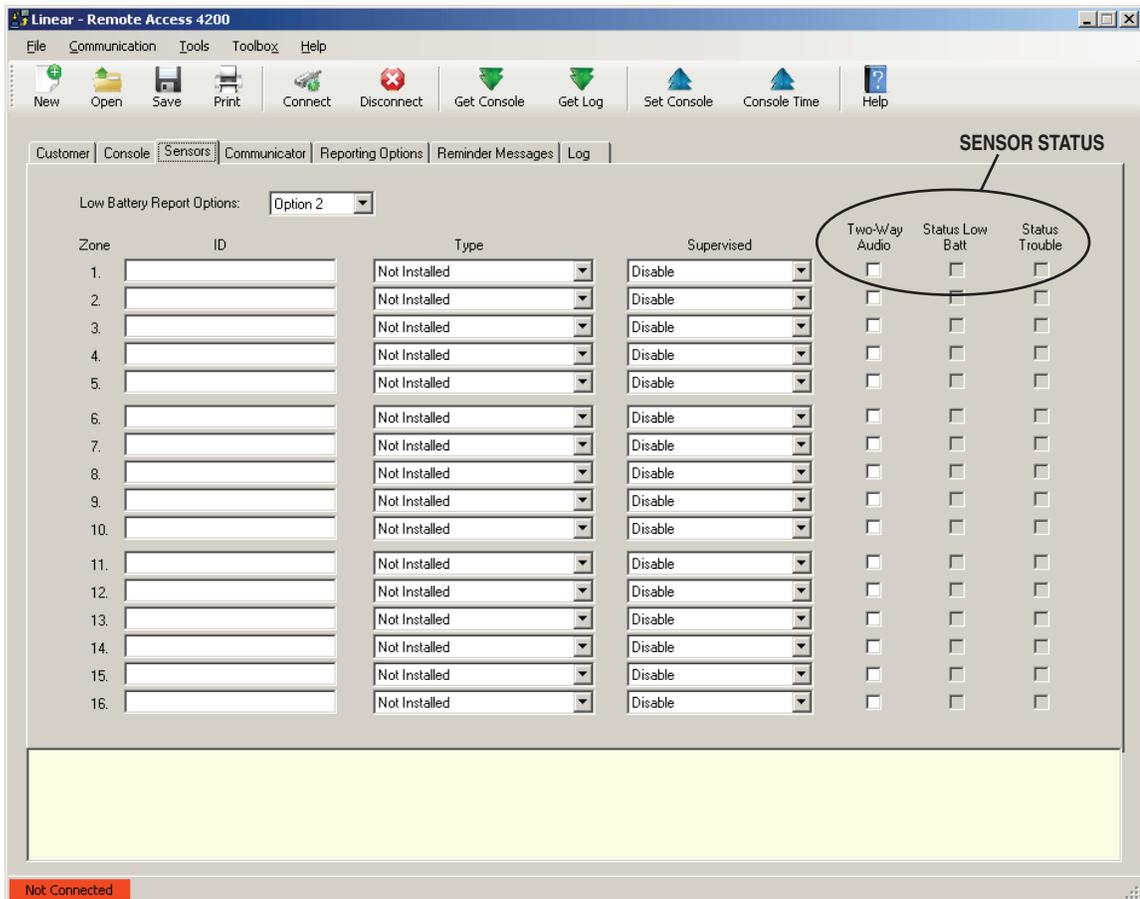
RA4200 Sensors Tab

Sensor Zones

Each of the Console's 16 wireless sensor zones has individual setup options. All the options are set on the Sensors tab.

ID

Each wireless transmitter is coded with a unique ID number at the factory. If the transmitter has been locally "learned" by the Console, the ID number will appear in the ID field.

Alternately, transmitters can be enrolled remotely into the Console by entering the transmitter's ID number into the ID field. This feature is typically used when sending pre-enrolled replacement transmitters to the subscriber. When the subscriber receives the transmitter, it will be pre-programmed into the Console and ready for use.

Type

Each sensor zone can be set to one of four sensor types, or set as Not Installed. When a wireless transmitter is locally "learned" by the Console, the sensor type will be automatically recognized and set by the Console. When a transmitter is enrolled remotely from the Console, the sensor type must be set manually.

The sensor types selections available are:

- **Not Installed** - For sensor zones that are unused.
- **Fire** - For smoke detector sensors.
- **Activity Reset** - For sensors used to reset the Activity Timer.
- **Emergency** - For sensors used to trigger the emergency alarm.
- **Carbon Monoxide** - For CO detector sensors.

Supervised

Supervised transmitters send recurring status signals to the Console. Any of the Console's 16 sensor zone locations can be set to automatically detect status supervision signals from transmitters. This feature makes adding or replacing transmitters in field units easier.

- Select **AUTO DETECT** for a sensor zone to automatically detect if a wireless transmitter is sending status signals. Once the Console detects status signals from a transmitter, it will expect to regularly receive those signals or the Console will report that the transmitter is missing. The transmitter supervision interval required for the Console to report missing status transmissions is programmed in the Console tab.
- Select **DISABLE** to set a sensor zone as a non-supervised zone which will not require status reports from a wireless transmitter.

Sensor Status Indicators

On the Sensors tab, each of the Console's 16 wireless sensors display the sensor's operational status and if two-way audio is enabled for the sensor's zone.

Two-way Audio Status

A **TWO-WAY AUDIO** check box is provided to select if the sensor will start a two-way audio session after an alarm is triggered. Check this box to enable two-way audio for this sensor.

If two-way audio has been globally disabled on the Reporting Options tab, the **TWO-WAY AUDIO** check box will be grayed out, but still show if it's checked or not.

Low Battery Status

If a wireless sensor sends a low battery signal to the Console, when the Console's data is read into the RA4200, the **STATUS LOW BATT** check box will be checked for that sensor's zone.

Supervision Status

If the Console fails to receive a status signal from a supervised wireless transmitter before the programmed time for **TRANSMITTER SUPERVISION INTERVAL** on the Console tab expires, the Console will indicate trouble and blink the **CANCEL** indicator.

When the Console's data is read into the RA4200, the **STATUS TROUBLE** check box will be checked for that sensor's zone.

11.4 Communicator Tab

The Communicator tab displays fill-in fields for setting information regarding the Console's communication method and options for PSTN and IP reporting.

Communicator Fallback

The Console's communicator can report to the Central Station through the Public Switched Telephone Network (PSTN) or through Cellular IP reporting (if the UMTS-3G optional module installed).

✓ **NOTE: The PERS-4200 can report to a Central Station over phone service provided by a Managed Facilities-based Voice Network (MFVN) carriers via the RJ11 phone jack, per NFPA 72 2010, section 3.3.141.**

The communicator fallback option selects the reporting path the Console will use. Option boxes are grayed out for the reporting path that is **not** selected.

The default is for dial-up PSTN reporting only. Select the option that is supported by the Central Station. Two options are available:

- PSTN reporting only
- Cellular IP reporting only

When the communicator fallback option is selected, the 2-way audio setting will automatically adjust for the reporting method chosen (PSTN or IP reporting).

PSTN Dialing Sequence

The Console will make multiple attempts to make a connection with the Central Station. Each telephone number can be called up to 25 times.

The communicator performs this dialing sequence to make a connection:

1. Call the primary telephone number to attempt to make a connection. If no handshake tone is detected from the Central Station, retry the primary telephone number up to five consecutive times.

2. Call the secondary telephone number (if a secondary telephone number is used) to attempt to make a connection. If no handshake tone is detected from the Central Station, retry the secondary telephone number up to five consecutive times.

3. Stop dialing and wait four minutes.

4. Repeat steps 1, 2, and 3 up to five times.

After all dialing attempts, if a connection to the Central Station is not made, the sequence repeats using the backup reporting path.

When all retries are exhausted, the report buffer and Console indications are reset to normal; annunciations will cease and trouble memory and latched zones will return to normal. New events will cause a new attempt to contact the Central Station.

RA4200 Communicator Tab

Public Switched Telephone Network (PSTN) Reporting

Settings for dial-up reporting using the telephone network are set in this area.

Account Number

The account number can be up to 10 digits long. **The last four digits of the account number will be used as the communicator's account number for 4x2 and CID format reports to the monitoring service.**

❋ *IMPORTANT! THE ACCOUNT NUMBER FIELD IS REQUIRED.*

- SurGard System III - compatible SIA requires a 10-digit number
- PSTN/SIA requires a 6-digit number
- PSTN/CID and 4 by 2 requires a 4-digit number.

Enter the account number for the specific Console.

Reporting Format

Three Central Station PSTN reporting formats are available.

- Contact ID (CID)
- SIA
- 4 by 2

Contact ID is the default format. Select one of the other formats as required by the Central Station.

Dialing Format

The default dialing format is DTMF tone dialing. If the telephone system that the Console will be connected to does not support DTMF tone dialing, select pulse dialing.

Dialing Tones Audible

By default dialing tones do not sound from the Console's speaker. This option is typically used for troubleshooting telephone issues.

Check this option box to have the Console speaker active during dialing.

Primary Telephone Number

The primary telephone number is the number that will be dialed first in the dialing sequence. The number can be up to 20 digits including commas that each add a one second pause.

❋ *IMPORTANT! THE PRIMARY TELEPHONE NUMBER FIELD IS REQUIRED.*

Secondary Telephone Number

The secondary telephone number is the number that will be dialed second in the dialing sequence if the primary number is unsuccessful. The number can be up to 20 digits including commas that each add a one second pause.

Split Reporting

The Console can report supervisory events to a supervisory telephone number if split reporting is enabled. Split reporting is disabled by default.

When split reporting is enabled, reports for alarm events, reminder message timeouts, activity window expirations, and 2-way audio calls are made to the primary and secondary phone numbers.

Reports of home/away mode, Console trouble conditions, sensor trouble conditions, and Automatic Status reports are made separately to the supervisory phone number only.

Supervisory Telephone Number

The supervisory telephone number is the number that will be dialed to report supervisory events if split reporting is enabled. The number can be up to 20 digits including commas that each add a one second pause.

Internet Protocol (IP) Reporting

The PERS-4200 Console can be configured to communicate over-the-air (OTA) using the optional add-on Model UMTS-3G Cellular Module. The Module supports over-the-air data reporting for the PERS Console using 3G and voice communications through the carrier's cellular telephone network.

The settings for IP reporting using the cellular module are set in this area.

IP Account Number

The FIBRO IP reporting protocol allows up to 10 digits in the account number. PERS truncates the left-most digits of the account number to fit the reporting format used. The cellular module adds left-most zeroes as necessary for IP reporting. Enter the account number used for SurGard IP reporting for the specific Console.

DNIS / Line

DNIS is used by the Central station to help identify accounts. This allows there to be multiple panels sending SIA/Contact ID events using account 1234 for example. The DNIS may be transmitted to the automation software/printer to ID account 1234 as belonging to dealer X (DNIS 00001) and the other account 1234 as belong to dealer Y (DNIS of 00002). If it is not used it should be sent as all 0's and it will not allow the SIA/Contact ID account numbers to be extended.

FIBRO Heartbeat

Enter the time (in seconds) required by the Central Station receiver for the FIBRO heartbeat. Default is 7200 seconds.

Linear Voice Gateway Management Timer

Enter the time (in minutes) for the periodic management connection to the voice gateway, used for over-the-air configuration update and firmware download.

SIM ID

Displays the Subscriber Identity Module ID being used in the cellular module.

Central Station IP Address

The area is for entering the Central Station's primary and secondary IP address', local port, and remote port numbers for the server that will be receiving alarm reports from the Console. Enter the values required by the server.

Voice Gateway

The area is for entering the Central Station's voice gateway IP address for the Linear Voice Gateway that will be handling voice-over-IP (VOIP) communications from the Console during 2-way audio mode. Refer to the Linear Voice Gateway instructions and settings for details.

IP Reporting Format

Three Central Station IP reporting formats are available.

- Surgard System III-compatible SIA
- Surgard System III-compatible CID18 Extended
- Surgard System III-compatible CID58 Extended

SURGARD SYSTEM III-COMPATIBLE CID18 EXTENDED is the default format. Select one of the other formats if required by the Central Station.

Cellular Network ID

Used to connect to a specific network. This specifies the numeric network identifier, which is made from the Mobile Country Code (MCC) and Mobile Network Code (MNC).

IP Service

The cellular service data network name string. For example: wap.cingular or m2m.com.attz.

LEMI Ports

This area displays the name and firmware revision number of any option modules connected to the Console.

11.5 Reporting Options Tab

The Reporting Options tab displays fill-in fields for setting information regarding the Consoles' general communicator reporting options and includes a 4 x 2 section for assigning custom 4 x 2 reporting codes if desired.

Report AC Fail

The default **REPORT AC FAIL** setting enables AC power failure and restore reports with a random delay of up to one hour. Alternately, the Console can be set to report AC power status without the random delay, or be disabled.

Three options are available for AC failure reporting.

- The **DISABLE** setting will inhibit AC failure reporting.
- The **ENABLE** setting will report when the Console has been without AC power for five minutes. A restore report will be sent five minutes after AC power is restored.
- The **ENABLE (RANDOM DELAY UP TO 1 HOUR)** settings functions the same as the **ENABLE** setting, except that any reports will occur at a random time up to one hour from the event. This option can reduce collisions of Central Station traffic caused by a wide-spread power outage.

When the AC power status changes, after the five minute wait period, the Console will announce:

☺ *"Console power failure"*

— OR —

☺ *"Console power restored"*

Report Supervisory Events

The default is to report supervisory events to the Central Station. The events will be reported to the primary/secondary telephone number unless split reporting is enabled, which would cause the reports to go to the supervisory telephone number.

Un-check the **REPORT SUPERVISORY EVENTS** option box to disable reporting supervisory events.

Mode Switch Reporting

The Console can report to the Central Station when the Console is switched between Home Mode and Away Mode.

The default **MODE SWITCH REPORTING** setting does not report mode changes to the Central Station. To report mode changes, check this option box.

Answer Phone

The default enables ring detection on the telephone line connected to the Console. This setting must be on to support the remote RA4200 telephone programming, remote limited touch-tone telephone programming, and Speakerphone Mode.

If these features are not required or used, ring detection can be disabled by un-checking the **ANSWER PHONE** check box.

RA4200 Reporting Options Tab

Automatic Status Reports

Automatic status reports of all pending supervisory conditions can be sent to the Central Station at a daily, weekly or monthly schedule until the supervisory condition is cleared or corrected. If split reporting is enabled, the automatic status report will be sent to the supervisory number only.

The automatic status report consists of a periodic test report, followed operating mode report (Home Mode and Away Mode only) and any supervisory conditions. Supervisory conditions that are covered by the automatic status report include AC fail, Console low battery, missed sensor supervision, and sensor low battery for all sensors learned in to the Console.

✓ NOTE: Supervisory events are reported by automatic status report regardless of the global REPORT SUPERVISORY EVENTS setting on the Reporting Options tab. Also, AC power loss events are reported by automatic status report regardless of the global REPORT AC FAIL setting on the Reporting Options tab.

The default **MODE** setting for automatic status reports is disabled. To have the Console send automatic status reports, select one of the three **MODE** options:

- Daily
- Weekly
- Monthly

✓ NOTE FOR UL APPLICATIONS: UL requires the Automatic Status Report Mode option be set to DAILY.

For each option, set the time for the automatic test report to occur in the **TIME** area.

The **DAY** area selects the day of week or day of month for the weekly and monthly automatic status reports.

Extended Event Log

The Console's event log always records system alarm (Group 1) events. Additional events are categorized as Group 2 and Group 3 events.

The default adds **GROUP 2** and **GROUP 3** events to the Console's log:

Group 2
- Console mode changes (off, home, away, night)
- Activity sensor activations
- Inactivity alarm window expiration
- Reminder message timeout expiration

Group 3
- Remote access (RA4200) sessions
- Console supervisory events (AC power, low battery, phone trouble)
- Sensor supervisory events (supervision, low battery)

Speaker Phone Timer

The Console can be programmed to act as a hands-free speakerphone for incoming calls. If the user forgets to hang up, a timer will automatically disconnect the call.

The default disables Speakerphone Mode. To use the speakerphone option, select 15, 30, or 60 minutes for the speakerphone automatic disconnect timer.

Refer to the PERS-4200 User's Guide for remote call-in speakerphone operation instructions.

Two-way Audio Mode

The Console supports 2-way audio communications with the subscriber through the Console's speaker and microphone.

The default sets all Console sensors to have 2-way audio enabled. 2-way audio can be enabled or disabled for individual sensors using the check boxes on the Sensors tab.

If 2-way audio activation is selected for an emergency sensor, after the monitoring service operator acknowledges the communicators report, the Console will stop its siren (if enabled) and switch to the selected audio mode for 90 seconds if:

- Two-way audio mode is selected (listen-only, two-way manual, or two-way auto) in the RA4200 Reporting Options menu

— AND —

- The zone where an alarm is being reported is enabled for two-way audio.

Temperature Alarms have a separate setting to enable 2-way audio for those types of alarms.

All other alarms or events are controlled solely by the global 2-way audio setting in the Reporting Options menu and will go into 2-way audio if that option is enabled.

There are four choices for 2-way audio:

- **Disable (Globally)** — Console will not report as an audio account to the Central Station. No audio monitoring will occur.
- **Two-Way Auto** (default setting for PSTN reporting) — The Console automatically switches between listen and talk depending on which party is talking. The operator can still switch from listen to talk manually by pressing "1", or switch from talk to listen by pressing "3" on a telephone connected to the line (with increased volume). Pressing "8" returns to two-way auto. Pressing "9" disconnects the call. Press any key but "9" to extend the time 90 seconds.
- **Two-Way Manual** (default setting for IP reporting) — The operator will be able to hear sound from the Console and will be able to talk through the Console's speaker. The operator can switch from listen to talk by pressing "1", or switch from talk to listen by pressing "3" on a telephone connected to the line. Pressing "9" disconnects the call (press any key but "9" to extend the time 90 seconds).
- **Listen Only** — The operator will be able to hear sound from the Console's microphone, but will **not** be able to talk through the Console's speaker. Pressing "9" on a telephone connected to the line disconnects the call (press any key but "9" to extend the time 90 seconds).

Dialing Delay

To help reduce false alarms reported to the Central Station, a delay of 15 seconds can be entered for PSTN or IP reporting. During this delay time, the subscriber can press the **CANCEL** button to cancel the alarm reporting to the Central Station. After the delay, once the call is initiated and the receiver handshake tone is detected (with PSTN reporting), or the IP packet is sent (with IP reporting), the report cannot be cancelled.

The default setting for dialing delay is OFF.

4 x 2 Alarm Codes

The 4 x 2 reporting format uses four digits for the account number and two digits for the alarm code.

The Console defaults for 4 x 2 reporting assigns alarm codes 11-26 to Console zones 1-16, trouble codes 41-56 to Console zones 1-16, and 16 other general alarm codes.

Any of the default 4 x 2 alarm codes can be modified as necessary. Enter the new 2-digit code in the 4 x 2 area.

11.6 Reminder Messages Tab

The PERS-4200 Console has a real-time clock calendar (RTCC) function that can be set to the correct time and date, and then accessed to schedule events and actions by the Console, including a scheduled reminder message feature. Five pre-recorded reminder messages are provided for this function and are included as part of each installed language library. There are nine programmable message time slots to use to set the reminder message types and schedule times.

�֍ *IMPORTANT! THE CONSOLE'S TIME AND DATE MUST BE SET PRIOR TO USING THE REMINDER MESSAGE FEATURE.*

All reminder messages (including alarm and system test reminder) are enabled only in Home Mode and Night Mode. They are disabled when in Away Mode.

The PERS provider can schedule events for these reminder messages as a one-time reminder, or as a recurring daily, weekly, or monthly event. When the programmed event time is reached, the scheduled reminder message is announced and if enabled, repeats once every three minutes unless silenced by pressing the **CANCEL** button. When the **CANCEL** button is pressed to silence the announcement, the Console will sound a reminder chime.

A 15 or 30-minute timeout interval can be programmed as a setting for all reminder messages. If the reminder is not acknowledged prior to expiration of the timeout interval, a missed reminder event report can be sent to the Central Station (if reporting of missed reminder messages is enabled).

If multiple reminder messages are scheduled at the same time or in the same timeout interval, they will all be announced sequentially and at the same three minute intervals, based on the first message annunciated. Pressing the **CANCEL** button cancels **all** of the reminder messages within the same timeout interval.

Reminder Settings

The reminder settings globally affect all nine programmable reminder message time slots.

Report Missed Reminder

The Console will provide voice prompts during the 15 or 30 minutes prior to message reminder window expiring (set by programming).

Upon expiration of message reminder window the following will occur if the **REPORT MISSED REMINDER** check box is checked.

1. The Console will activate and send an reminder message timeout report to the Central Station. If the missed reminder is a system test reminder, an automatic test report will be sent with status of the system. 2-way audio will not be initiated.

2. Upon receipt and processing of the alarm transmission, a 2-way audio session will begin (if enabled).

To enable missed reminder message reporting, check the **REPORT MISSED REMINDER** check box.

Audio Replay During Timeout

The factory default will replay the reminder message every three minutes until the message is acknowledged or times out.

To suppress replaying the reminder messages, un-check the **AUDIO REPLAY DURING TIMEOUT** check box.
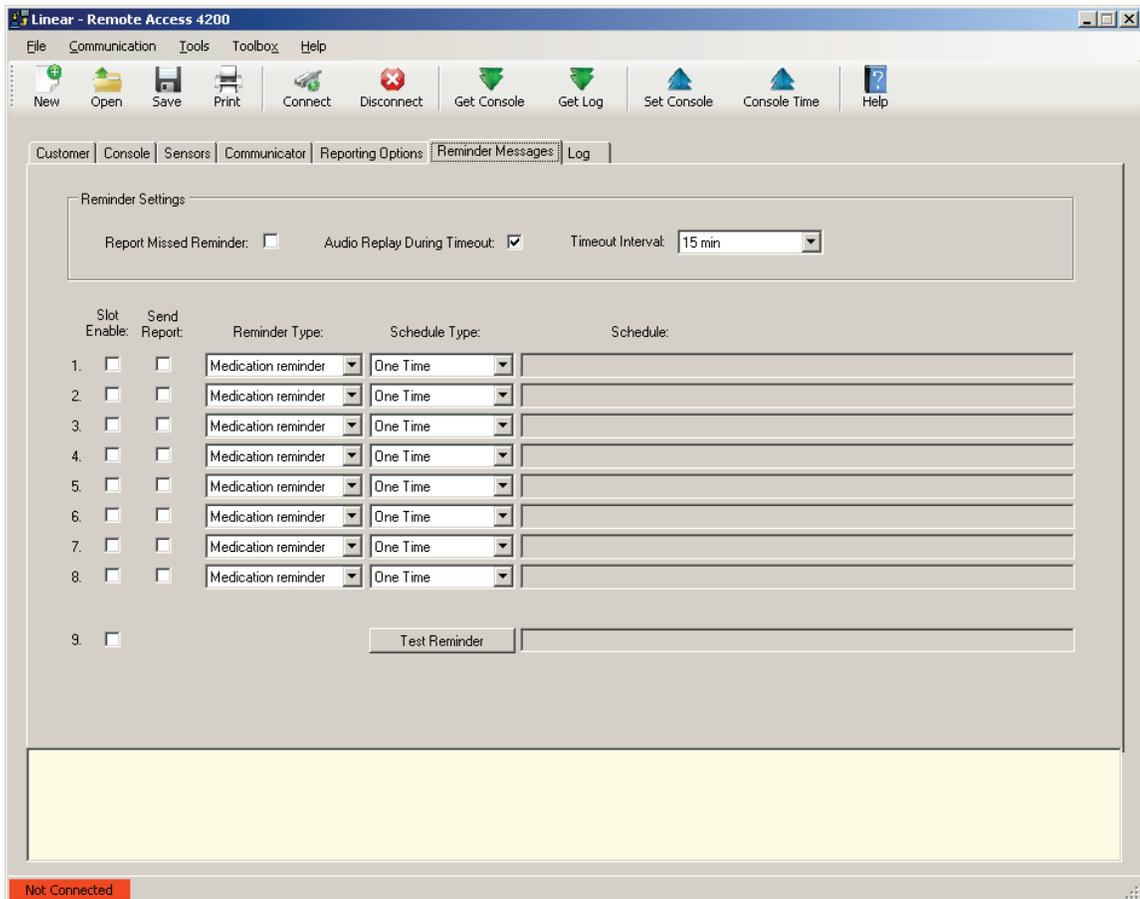
RA4200 Reminder Messages Tab

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Timeout Interval

A 15 or 30-minute timeout interval can be programmed as a setting for all reminder messages. If the reminder message is not acknowledged prior to expiration of the timeout interval, a missed reminder event report can be sent to the Central Station if reporting of missed reminder messages is enabled.

The factory default sets the reminder message timeout to 15 minutes. Alternately, 30 minutes can be selected for the **TIMEOUT INTERVAL**.

Reminder Time Slot Settings

There are eight standard reminder message time slots that can be programmed and one time slot for the system test reminder. Each time slot has options that can be set.

Slot Enable

SLOT ENABLE check boxes are displayed for each of the nine reminder message time slots. Checking a **SLOT ENABLE** check box will enable the reminder message that is programmed in that time slot.

A reminder message that's already programmed can be temporarily disabled by un-checking this check box without loosing the reminder message settings.

Send Report

SEND REPORT check boxes are displayed for each of the eight standard reminder message time slots. Checking a **SEND REPORT** check box for a reminder message time slot will cause the Console to report a non-acknowledged reminder message to the Central Station.

✓ **NOTE: For any time slot to report, the global setting for missed reminder reports must be enabled in the Reminder Settings area.**

Reminder Type

Four types of reminder messages are available:

- Medication reminder
- Ride reminder
- Appointment reminder
- Alarm

Select the desired type of reminder message for the time slot. When the selection is made, the Schedule Type dialog box will display.

Schedule Type

Viewing or changing the reminder type or schedule type will display the Schedule Type dialog box. This area is for selecting the dates and times that a reminder message will sound.

A reminder message can be scheduled for **ONE TIME**, **DAILY**, **WEEKLY**, or **MONTHLY** with the Schedule Type selection.

Once a schedule is set, it will be displayed in the **SCHEDULE** area.

| One Time Reminder Schedule | Daily Reminder Schedule | Weekly Reminder Schedule | Monthly Reminder Schedule |

RA4200 Schedule Types

Test Reminder

A test reminder message is provided for prompting the subscriber to perform a system test. They will be prompted to activate their emergency transmitter or press the **HELP** button on the Console. Either activation will send a test report to the Central Station.

✳ *IMPORTANT: IF USING THE TEST REMINDER MESSAGE FEATURE, TWO-WAY AUDIO SHOULD BE ENABLED SO THAT THE CENTRAL STATION CAN ACKNOWLEDGE THE TEST WITH THE SUBSCRIBER.*

When the programmed system test time occurs, a reminder chime sounds and the Console announces:

☺ *"Attention... It is time to test your personal emergency system... Please press your personal help button"*

✓ *NOTE: The test announcement will repeat every three minutes regardless of the AUDIO REPLAY DURING TIMEOUT reminder message setting.*

When the subscriber activates their emergency transmitter or presses the **HELP** button, the Console will send a test report to the Central Station, then start a two-way audio session. The Central Station operator typically acknowledges the test report with the subscriber using two-way audio, then disconnects.

If the subscriber does not activate a transmitter or press the **HELP** button *before* the reminder timeout interval has been reached, an automatic test report will be sent to the Central Station.

✓ *NOTE: If the system test reminder times out and an automatic status report is sent, a two-way audio session will NOT be started, even if two-way audio is enabled.*

Creating or Editing Reminder Messages

Use the following steps to setup a reminder message. Different options will be displayed depending on the type of message.

1. Choose a reminder message type.
2. Select One Time, Daily, Weekly, or Monthly for the Schedule Type.
3. Select the date(s) and time(s) that the reminder message will sound.
4. For ride or appointment messages, select the time for the ride or appointment to announce during the message.
5. Check the **SLOT ENABLE** check box to enable the reminder message time slot. The schedule displayed for the time slot will be grayed until it is enabled.
6. Check the **SEND REPORT** check box to have the Console send a report if this reminder message is *not* acknowledged. (Global missed reminder reports must be enabled also.)

WHEN A TEST REMINDER MESSAGE OCCURS...

"ATTENTION... IT IS TIME TO TEST YOUR PERSONAL EMERGENCY SYSTEM.... PLEASE PRESS YOUR PERSONAL HELP BUTTON"

THE CONSOLE ANNOUNCES

THE SUBSCRIBER ACTIVATES A PORTABLE TRANSMITTER

- OR -

THE SUBSCRIBER PRESSES THE **HELP** BUTTON

THE CONSOLE WILL SEND A TEST MESSAGE TO THE CENTRAL STATION
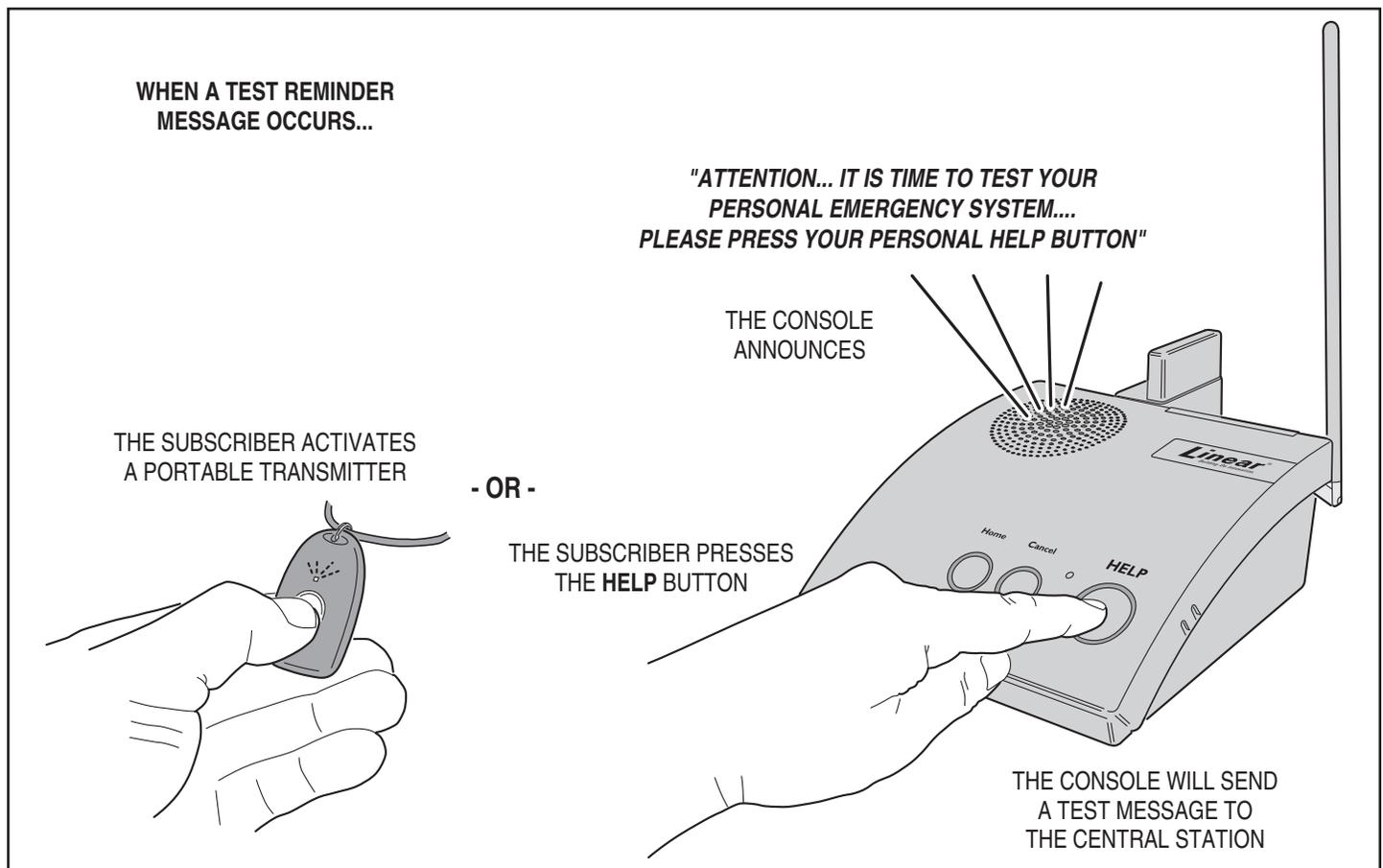
Acknowledging a System Test Reminder Message

12.   Console Communication

The RA4200 software connects to the PERS-4200 Console using the Send/Receive window. A Console must be connected to the RA4200 before any data can be sent to, or received from it.

12.1 Send/Receive Window

The Send/Receive window sets up and starts a modem (remote) or COM port (local with USB) connection to a Console. Press the **CONNECT** button to display the Send/Receive window.

Account

The Account area has two settings. The telephone number field and the password field will be automatically filled in with the Console's telephone number from the open account template. The telephone number and password fields can also be manually filled in.

Modem Connection

The area is used setting up and connecting with a computer modem over the telephone line.

The **SETUP CONNECTION** button displays the general, diagnostic, and advanced Windows modem properties screens. The Query Modem button on the Diagnostics tab is a good way to test that the modem is working properly.

The **CALL** button starts the modem calling sequence.

COM Port Connection

The COM Port Connection area has a selection for the COM port to use for the USB connection to the Console and a button to start the connection.
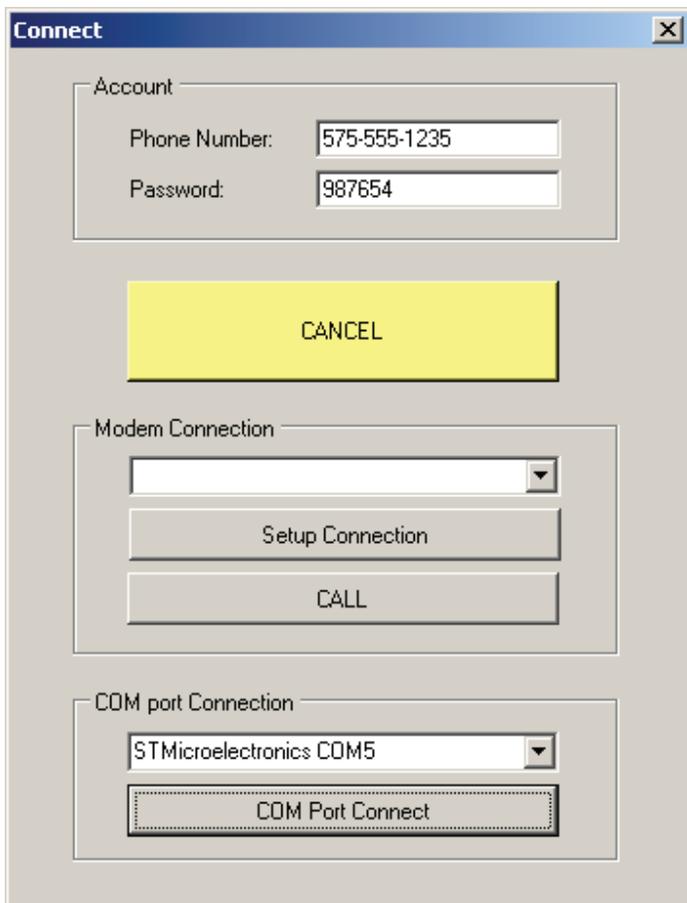
RA4200 Send/Receive Window

12.2 Connecting to a Console

Telephone Modem Remote Connection

Use the following steps to remotely connect to a powered Console using a telephone modem:

1. Open the Account Template created for the specific subscriber and Console installation. The Console's telephone number and password will be acquired from the template.

2. Press the **CONNECT** button to display the Send/Receive window.

3. Verify that the desired telephone modem is displayed for the connection.

4. Press **CALL** to start the calling sequence. The progress is displayed in the RA4200 connection status area.

5. The modem will place a call to the Console, wait a few rings, then hang up. This readies the Console to answer a call. The modem will call the Console again, the Console will answer and negotiate a connection with the modem. The RA4200 will send the password to the Console, if the passwords match, remote access will be granted.

6. When the connection is made, the green **CONNECTED** indicator will display at the bottom of the RA4200 window.

7. When finished, press **DISCONNECT** to disconnect with the Console. The red **NOT CONNECTED** indicator will display at the bottom of the RA4200 window.

✓ **NOTE: If the telephone line that the Console is connected to has automatic telephone answering equipment that answers the line in three rings or less, the Console may not be able to be remotely accessed.**

COM Port USB Local Connection

During local USB programming, the Console will remain functional. Use the following steps to directly connect to a Console using a USB cable:

1. Apply power to the Console.

2. Connect the Console to the programming computer with a Type A to mini Type B USB cable.

3. Press the **CONNECT** button to display the Send/Receive window.

4. In the COM port Connection area, select the COM port that the Console is connected to. Look for the port labeled STMicroelectronics.

5. Press COM Port Connect to connect to the Console. The progress is displayed in the RA4200 connection status area.

6. When the connection is made, the green **CONNECTED** indicator will display at the bottom of the RA4200 window.

7. When finished, press **DISCONNECT** to disconnect with the Console. The red **NOT CONNECTED** indicator will display at the bottom of the RA4200 window.
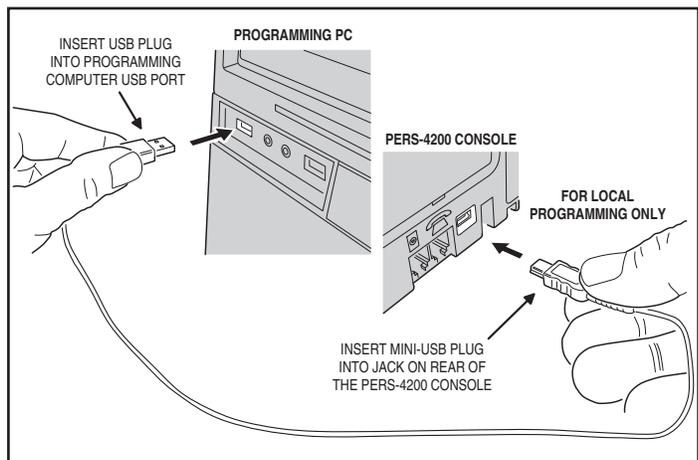
USB Programming Connection

12.3 Sending and Receiving Console Data

Once the Console is connected to the RA4200 software, data can be exchanged in either direction.

Console Time and Date

The Console's clock and calendar will maintain the current time & date.

✳ *IMPORTANT! THE CONSOLE'S TIME AND DATE MUST BE SET PRIOR TO USE TO SUPPORT THE EVENT LOGGING AND REMINDER MESSAGE FEATURES.*

✓ *NOTE: If the Console is using IP reporting, the Console's data and time are automatically set by the cellular network.*

If the Console's clock or calendar needs setting or changing, use these steps.

1. Connect to the Console. The green **CONNECTED** indicator will display at the bottom of the RA4200 window.

2. Press **CONSOLE TIME**. The SetTime window will display.

3. To check a Console's clock and calendar, press **GET TIME**. The current settings will be displayed in the SetTime window.

— OR —

4. Enter the new time and date. If daylight saving time is enabled, verify the start and stop dates. Press **SET TIME** to update the Console's date and time.

5. Press **DONE** to close the SetTime window.

First Time Programming for New Consoles

When a Console is new or un-programmed it will announce:

☺ *"Console not ready... please configure before use"*

The Console must be programmed with an account number, a Central Station phone number and a corresponding PSTN or IP reporting format. If one or more of these required parameters is missing the Console will not operate.

Use the following steps when programming a new Console:

1. Open the Account Template created for the specific subscriber and Console installation.

2. Connect to the Console. The green **CONNECTED** indicator will display at the bottom of the RA4200 window.

3. Press **CONSOLE TIME**. The SetTime window will display. If not correct, enter the correct time and date. If daylight saving time is enabled, verify the start and stop dates. Press **SET TIME** to update the Console's date and time. Press **DONE**.

4. Press **SET CONSOLE**. The template will be sent to the Console.

5. Press **DISCONNECT** to disconnect from the Console. The red **NOT CONNECTED** indicator will display at the bottom of the RA4200 window.

Existing Console Programming

Connecting to a Console with existing programming can be managed two ways:

- Method 1: Make the changes to an Account Template off-line first, before connecting to the Console, then connect to the Console and send it the template.
- Method 2: Open an Account Template, connect to the Console, then retrieve the data from the Console into the template.

The first method is preferred when all programming for a Console has been made (and is being stored) by the RA4200 software. This method will keep all the PERS provider's Consoles synchronized with the RA4200 Account Template files.

The second method is useful if programming changes have been made to a Console through remote touch-tone telephone programming. Those changes can be retrieved into an Account Template, updating the template. Be sure to save the template after updating it.

Use the following steps when programming an existing Console:

1. Open the Account Template created for the specific subscriber and Console installation. (When using Method 1, make any changes required.)

2. Connect to the Console. The green **CONNECTED** indicator will display at the bottom of the RA4200 window.

3. Method 1 - Press **SET CONSOLE**. The template will be sent to the Console.

— OR —

4. Method 2 - Press **GET CONSOLE**. The Console's data will be sent to the template. Press **SAVE** and select an Account Template file name.

✓ *NOTE: The data in the open template will be overwritten with the data from the Console.*

5. Press **DISCONNECT** to disconnect from the Console. The red **NOT CONNECTED** indicator will display at the bottom of the RA4200 window.

12.4 Limited Remote Telephone Programming

Some basic configuration areas of the PERS-4200 Console can be programmed by a remote telephone phone call. The programming is limited to Reporting Format, Primary Phone Number, Account Number settings.

✓ *NOTE: If the telephone line that the Console is connected to has automatic telephone answering equipment that answers the line in three rings or less, the Console may not be able to be remotely accessed*

In this remote programming mode, the Console remains fully functional and will continue to annunciate and report alarms as they occur, except for the few seconds when configuration memory is being updated at the conclusion of a RA4200 programming session. Prior to the configuration update, the Console will continue to use its previously stored settings for normal operation. If the remote programming connection is the same as the Console's reporting connection, the Console will terminate the remote access session to report an alarm.

This remote programming mode times out after four minutes of inactivity or by pressing the **CANCEL** button on the Console.

Connecting with the Console

Use the following procedure to connect with a Console with a touch-tone telephone:

1. Dial the number of the telephone line that the Console is connected to, allow it to ring three times, then hang up

2. Wait 10 to 30 seconds, then call the Console a second time.

3. When the Console answers, a tone will sound for 8 seconds.

4. When the tone ends, enter the PERS Provider Password (default 987654) followed by the ⌗ key.

5. The Console will announce over the telephone:

   ☺ *"Main menu"*

   ☺ *"Press one to review or change report format"*

   ☺ *"Press two to review or change primary phone number"*

   ☺ *"Press three to review or change account number"*

   ☺ *"Press nine to hang up"*

6. Select the number of the programming option.

7. Press ⌗ key at any time to return to main menu.

Option 1 - Reporting Format

When ① is pressed, the Console will announce over the telephone:

☺ *"Report format is <reporting format>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current format and return to the Remote Programming Main Menu, or press the ✳ key to return to select a different report format.

When ✳ is pressed, the Console will announce over the telephone:

☺ *"Press one for contact id"*

☺ *"Press two for SIA"*

☺ *"Press three for four by two"*

☺ *"Press nine to hang up"*

☺ *"Press zero for main menu"*

If selecting a new format, the Console will announce over the telephone:

☺ *"Report format is <reporting format>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current format and return to the Remote Programming Main Menu.

✓ *NOTE: The default reporting format is Contact ID.*

Option 2 - Primary Telephone Number

When ② is pressed, the Console will announce over the telephone:

☺ *"Primary phone number is <primary phone number>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current telephone number and return to the Remote Programming Main Menu, or press the ✳ key to enter a different telephone number.

The primary telephone number can be up to 20 digits long, including delay characters. If more than 20 digits are entered, only the first 20 digits will be accepted.

✓ *NOTE: To place a delay at any location in the telephone number, press the ✳ key. A 1-second delay will be inserted for each press of the ✳ key. When the primary phone number is annunciated for review, each 1-second delay will be identified by the word "PAUSE."*

When ✳ is pressed, the Console will announce over the telephone:

☺ *"Enter primary phone number followed by pound"*

Enter the new primary telephone number and press the ⌗ key, the Console will announce:

☺ *"Primary phone number is <primary phone number>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current change and return to the Remote Programming Main Menu.

Option 3 - Account Number

When ③ is pressed, the Console will announce over the telephone:

☺ *"Account number is <account number>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current account number and return to the Remote Programming Main Menu, or press the ✳ key to enter a different account number.

The account number can be up to 10 digits long. PSTN/SIA requires a 6-digit number and PSTN/CID and 4x2 require a 4-digit number. The Console will left-truncate or left-pad the account number with zeros as required for the reporting format and interface.

When ✳ is pressed, the Console will announce over the telephone:

☺ *"Enter account number followed by pound"*

Enter the new account number and press the ⌗ key, the Console will announce:

☺ *"Account number is <account number>... press pound to accept or press star to change"*

Press the ⌗ key to accept the current change and return to the Remote Programming Main Menu.

If more than 10 digits are entered, only the first 10 digits will be accepted.

✓ *NOTE: The default account number is none.*

13.   Sensor Learn/Test Mode

Wireless transmitters are called "sensors" in the PERS vocabulary. In Learn/Test Mode the Console can learn new sensors, test sensors, and erase all sensors.

✓ *NOTE: While in Learn/Test Mode, all normal operations of PERS-4200 Console are suspended. No alarms or reports are made in this mode.*

To exit this mode, press and release the **CANCEL** button. The Console will exit Learn/Test Mode automatically after three minutes of no activity (including RF activity from a learned sensor, which will extend Learn/Test Mode for an additional 3 minutes).

13.1 Learning Sensors

The Console can "learn" up to 16 sensors. Use the following steps to locally learn sensors into the Console:

1. Press and release the **TEST** button (located recessed on the bottom of the Console). The Console will announce:
   - ☺ *"Test Mode, firmware version [number]... hardware version [number]".*

2. Press and release the **TEST** button again. The Console will announce:
   - ☺ *"Ready to learn sensor... Zone [number]".*

3. Activate the sensor to learn. The Console will announce:
   - ☺ *"[Fire, Activity, Emergency, or Carbon Monoxide] sensor learned".*

4. The Console will announce the next available zone number:
   - ☺ *"Ready to learn sensor... Zone [number]".*

To advance to the next available zone without learning a sensor, press the **TEST** button. Zones already programmed with a sensor are skipped.

5. Repeat Step 3 for each additional sensor (up to 16 total). When all zone locations are full, the Console will announce:
   - ☺ *"Zones full"*

After Zone 16 has been skipped or learned, if there are any available zones remaining, the learn sequence will advance to the first available skipped zone and allow learning another sensor. The learn sequence will cycle through any available/skipped zones until either all zones are programmed, or Learn/Test Mode is exited.

✓ *NOTE: To exit Learn/Test Mode at any time, press the CANCEL button.*

TEST BUTTON

BOTTOM OF PERS-4200 CONSOLE
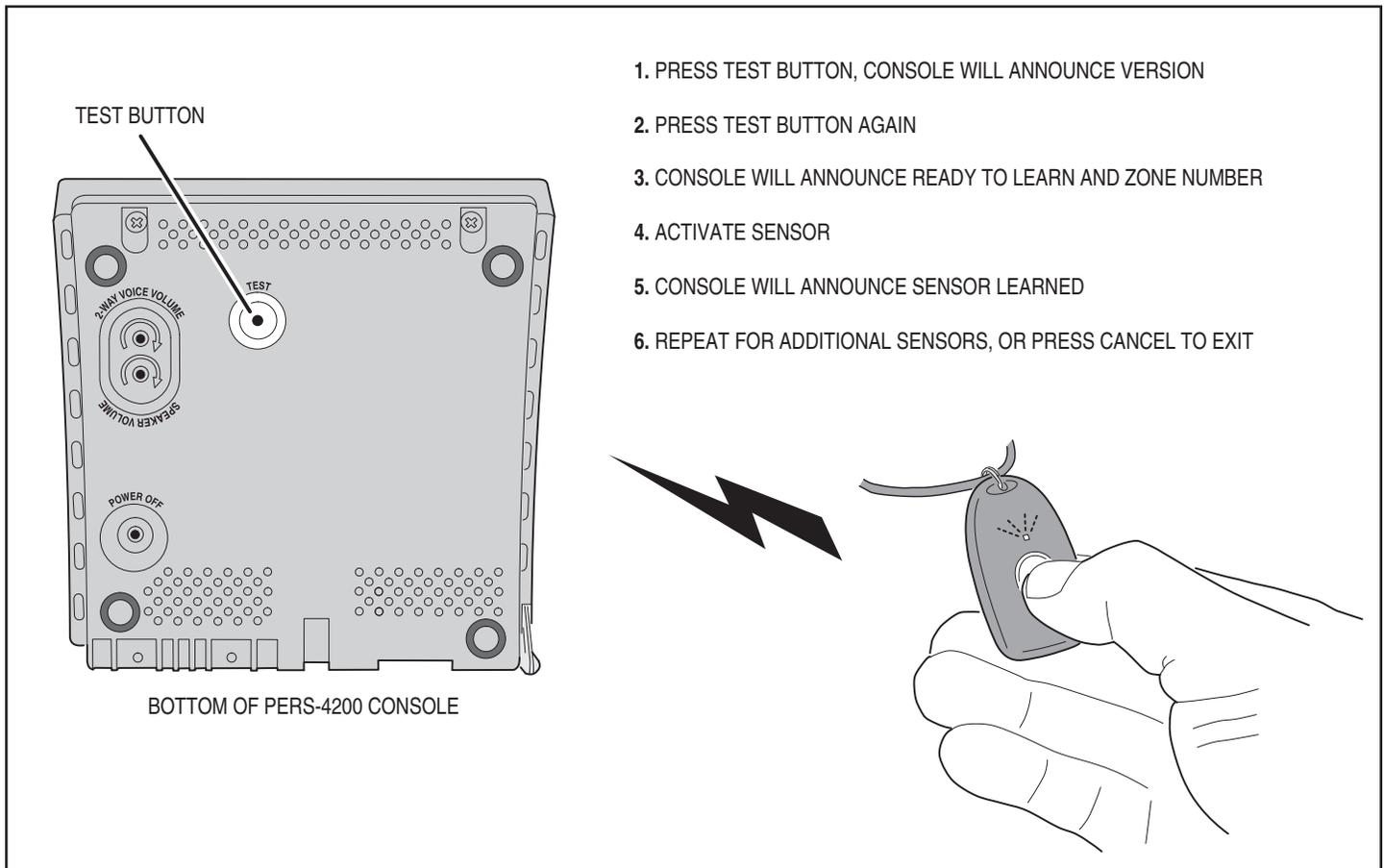
1. PRESS TEST BUTTON, CONSOLE WILL ANNOUNCE VERSION

2. PRESS TEST BUTTON AGAIN

3. CONSOLE WILL ANNOUNCE READY TO LEARN AND ZONE NUMBER

4. ACTIVATE SENSOR

5. CONSOLE WILL ANNOUNCE SENSOR LEARNED

6. REPEAT FOR ADDITIONAL SENSORS, OR PRESS CANCEL TO EXIT

Learning Multiple Sensors

13.2 Learning a Single Sensor

Learn Sensor Mode may also be entered by pressing and holding the **CANCEL** button for five seconds. The Console will announce:

☺ *"Ready to learn sensor... Zone [number]".*

Activate the sensor to learn. The Console will announce:

☺ *"[Fire, Activity, Emergency, or Carbon Monoxide] sensor learned".*

The Console will exit Learn Sensor Mode after learning one sensor. To exit without learning a sensor, press the **CANCEL** button.

13.3 Erasing All Sensors

To erase **ALL** sensors, press and hold **TEST** button for five seconds. The Console will announce:

☺ *"Zones reset"*

All learned sensors are erased by this operation. The Console will then go to normal operation and announce:

☺ *"Console ready"*

✓ *NOTE: Any pending alarms or events for an erased zone will be cleared.*

13.4 Testing Sensors

Each sensor learned into the Console should be tested. When a sensor is tested, the Console will announce the type of sensor, the zone number, and the RF signal level.

✱ *IMPORTANT! AFTER CONSOLE INSTALLATION, PORTABLE SENSORS SHOULD BE TESTED IN VARIOUS PLACES ON-LOCATION TO DETERMINE THE EFFECTIVE RADIO RANGE OF THE SYSTEM.*

Use the following steps to test each system sensor.

1. Press and release the **TEST** button (located recessed on the bottom of the Console). The Console will announce:

   ☺ *"Test Mode... firmware version [number]... hardware version [number]".*

2. Activate each sensor to test. For each sensor, the Console will announce:

   ☺ *"[Fire, Activity, Emergency, or Carbon Monoxide] sensor... zone [number]... [full or low] signal".*

   If the sensor tested has a low battery, the Console will announce:

   ☺ *"Sensor low battery... zone [number]"*

3. When finished, press **CANCEL** to exit Test Mode (Test Mode will automatically exit after three minutes of inactivity).

"EMERGENCY SENSOR.... ZONE ONE... FULL SIGNAL"

PERS-4200 CONSOLE IN TEST MODE

PRESS TEST BUTTON TO ENTER TEST MODE

BOTTOM OF PERS-4200 CONSOLE

TEST ALL SENSORS PROGRAMMED INTO THE CONSOLE

IMPORTANT! TEST SENSORS FROM VARIOUS LOCATIONS IN THE INSTALLATION TO VERIFY THE EFFECTIVE RADIO RANGE
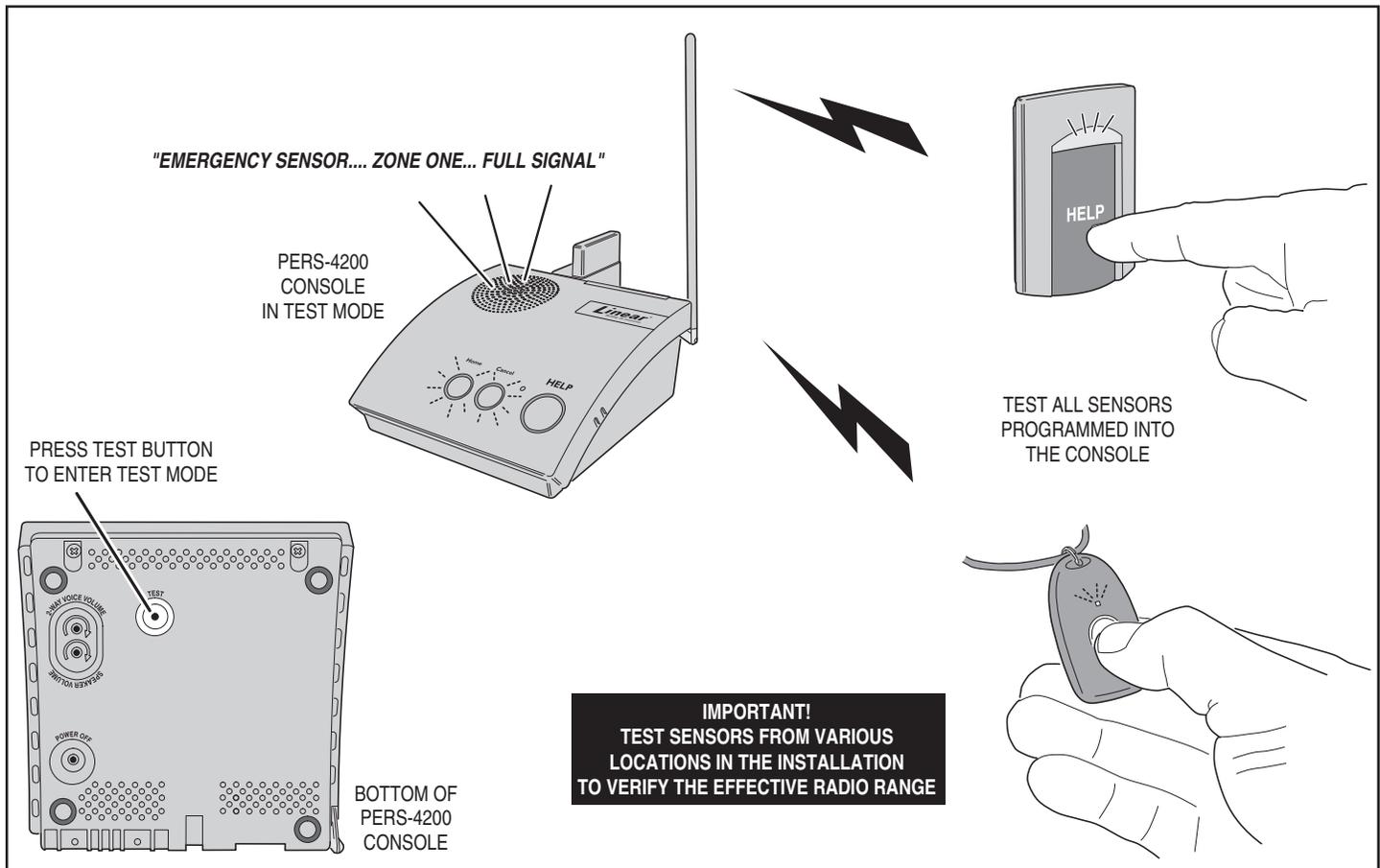
Testing System Sensors

14. Event Log

The Console will log system events in its memory they occur. The log can be retrieved by the RA4200 software. Each event is tagged with the date and time that the event was recorded. The log contains the most recent 100 Console events.

Three standard reporting groups are supported:

Group 1 logging always occurs; all events related to alarms are logged:

- Sensor alarms (emergency, fire, CO)
- Temperature alarms
- **HELP** button alarms
- 2-way voice sessions
- Alarm reset/cancel
- Central Station reports, attempts, retries and failures
- All button presses

Group 2 logging is optional; when enabled, mode changes, activity monitoring, and reminder message expiration events are logged:

- Console mode changes (off, home, away, night)
- Activity sensor activations
- Inactivity alarm window expiration
- Reminder message timeout expiration

Group 3 logging is optional; when enabled, supervisory trouble and remote access events are logged:

- Remote access (RA4200) sessions
- Console supervisory events (AC power, low battery, phone trouble)
- Sensor supervisory events (supervision, low battery)

✓ **NOTE: Extended event logging options for Group 2 and Group 3 events are selectable on the REPORTING OPTIONS tab.**

14.1 Retrieving the Event Log

Use the following steps to retrieve a Console's event log:

1. Connect to the Console with the RA4200 application.
2. Press the **GET LOG** icon (also available under **COMMUNICATIONS** on the menu bar).
3. After the log is retrieved, it will be displayed on the **LOG** tab. Use the scroll bar to view the entire log. The most recent event is indicated in the log.
4. Disconnect from the Console.

14.2 Printing the Event Log

The contents of the log can be printed with the account summary using the RA4200 **PRINT / PREVIEW** command.

14.3 Clearing the Event Log

In case the Console is going to be moved, re-configured, or used in a different installation, the event log can be cleared from the Console's memory. To clear the log:

1. Connect to the Console with the RA4200 application.
2. Select **CLEAR EVENT LOG** from the RA4200 **TOOLS** menu.
3. Disconnect from the Console.
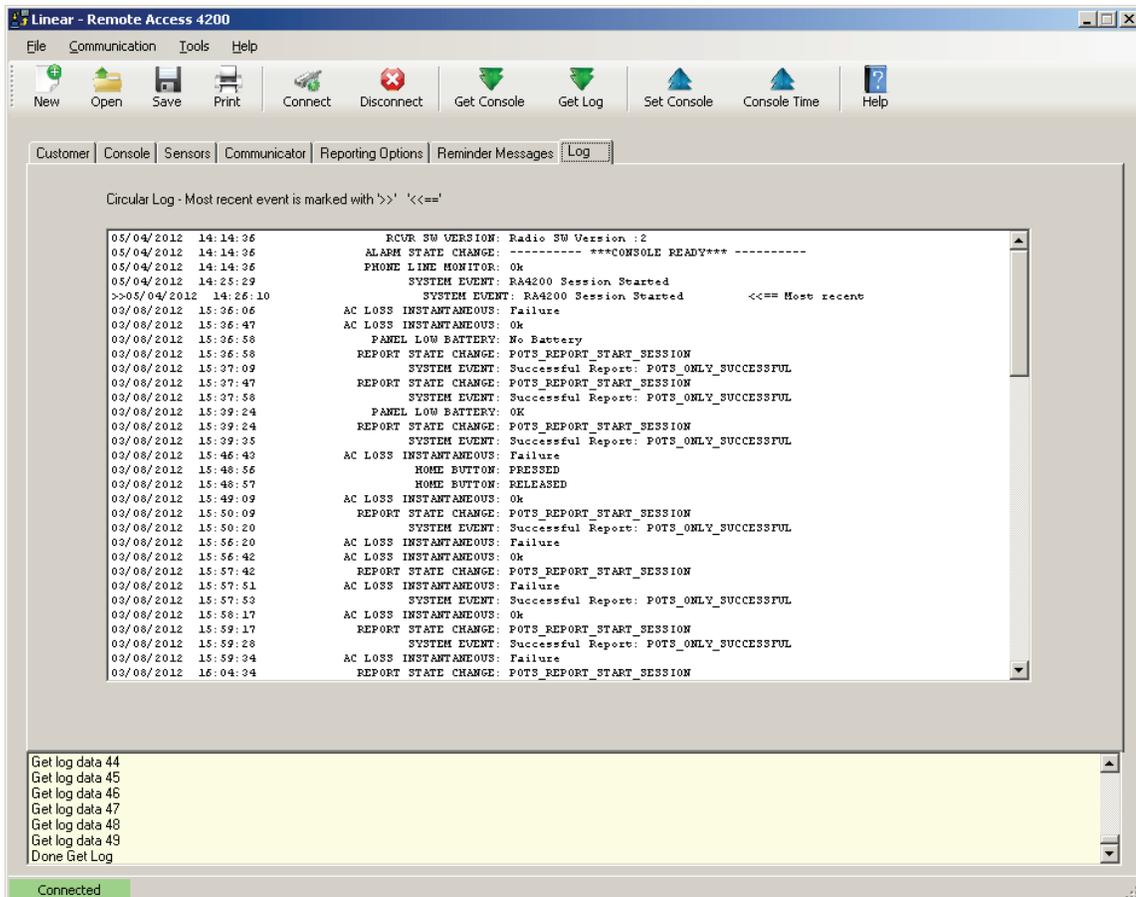
RA4200 Console Event Log

15. Printing or Exporting a Template

For hardcopy records, an account template can be sent to a local printer connected to the PC running the RA4200 Remote Access software.

The **PRINT / PREVIEW** tool also allows exporting an account template to an Excel .XLS file or an Adobe .PDF file.

Use the following steps to print out or export an account template:

1. Open an account template in the RA4200 software. (Only one template can be open at a time.)

2. From the **FILE** menu select **PRINT / PREVIEW** or on the toolbar, click the **PRINT** icon.

3. The Account Information print preview window will be displayed. The preview shows the account template contents detailed on separate pages. The page that's currently displayed and the zoom level can be selected using the page navigation icons in the window.

4. To print the account template,7 select the printer icon. The Windows print dialog box will appear, select any options, then click **PRINT**.

5. To export the account template, select the disc icon and choose Excel or Acrobat (PDF) file. Choose the file destination and click **SAVE**.

PRINT BUTTON

EXPORT BUTTON
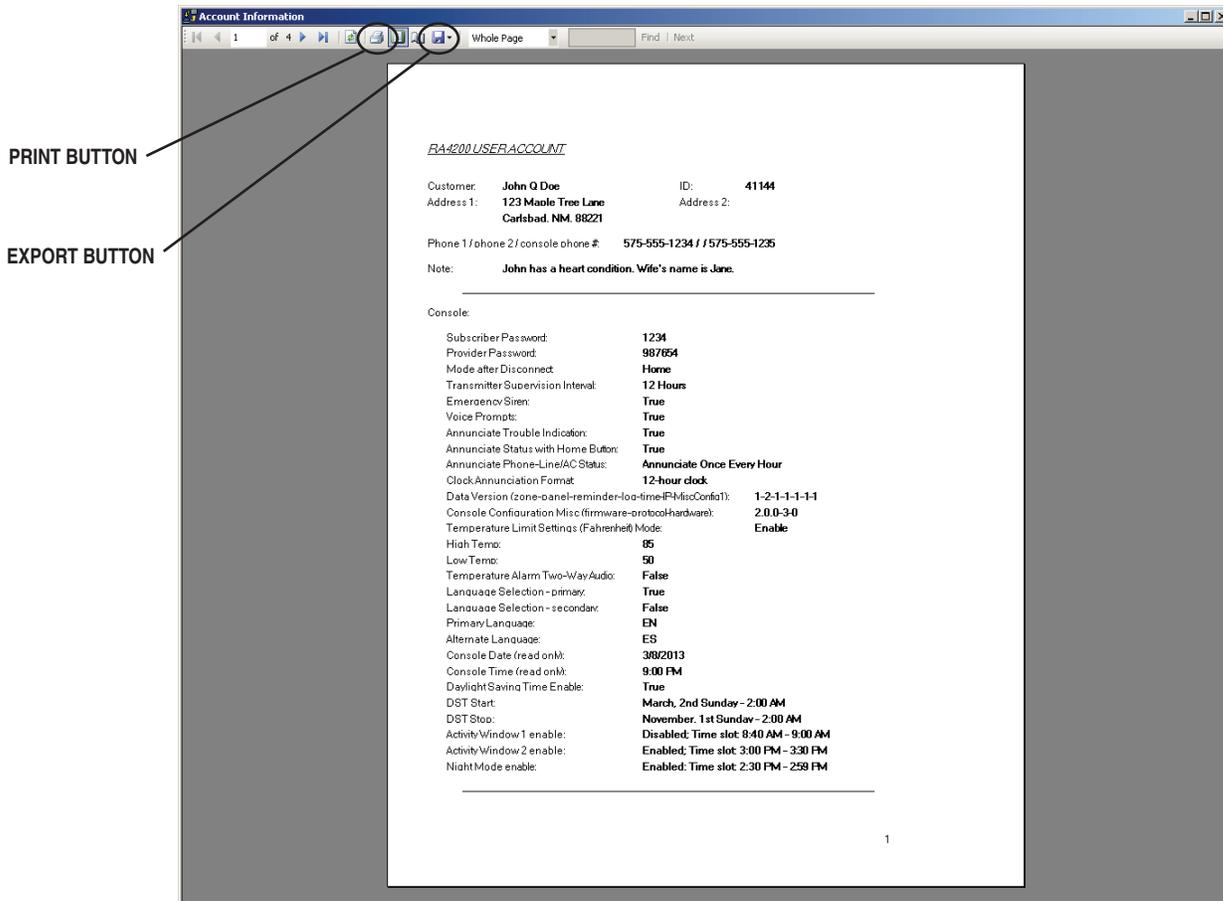
Print Preview Window

16.   Updating Console Firmware

The PERS-4200 Console runs on internal software code called "firmware". Firmware code stays stored in the Console's memory and can be upgraded using the RA4200 application when firmware updates become available.

The PERS-4200 Console uses two firmware resources, system firmware and vocabulary firmware. The UMTS-3G cellular module also has device firmware. There is a Device Firmware Upgrade utility (DfuSe) included in the RA4200 application.

When new firmware is released, it will be available on Linear's Web site on the software download page at:

www.linearcorp.com/downloads.php

16.1 System Firmware Update Utility Instructions
Use these steps to upgrade a Console's **system** firmware:

1. Download the system firmware from Linear's Web site and store the file(s) in a location on the programming PC.

2. Place the PERS-4200 in Power Off Mode by removing AC Power from the Console, and then press and hold the **POWER OFF** button until the Console announces: *"Console power off"*, then release the **POWER OFF** button.

3. Place the PERS-4200 into DfuSe mode by pressing and holding the **POWER OFF** button while applying AC Power. The **HOME**, **CANCEL**, and **HELP** indicators will blink.

❊ *IMPORTANT: Once the Console is in DfuSe mode, do not power off the Console during a firmware upgrade.*

4. Open the RA4200 application and *BEFORE* connecting the USB cable to the Console, from the RA4200 **TOOLS** menu, select **Panel Firmware Update (DfuSe)**.

5. Connect the Console to the programming PC with a USB cable. If the Console is in DfuSe mode and properly connected to the USB port, the device '**STM Device in FDU Mode**' should display in the "**Available DFU and compatible HID Devices**" area.

6. Click **CHOOSE...** and select the **system** firmware file to download from the location it was saved on the PC. After selecting, "**File correctly loaded.**" should appear at the bottom of the DfuSe window.

7. In the "**Select Target(s):**" area select Target Id "**00 Internal Flash**"

8. When all settings are correct, click **UPGRADE**.

9. A DfuSeDemo pop-up dialog will always appear with a device warning. Ignore this warning and click **YES**.

10. The status bar will indicate the status of the upgrade. First phase will be erase, then download, then verify.

11. Click **LEAVE DFU MODE**. The RA4200 will disconnect the Console and the Console will reset.

12. Click **QUIT** to exit the DfuSe utility.

13. Configure the Console with the RA4200 as required.

✓ *NOTE: Should any problems happen during the upgrade phase (i.e. wrong file selected and downloaded into a Console), this procedure can be repeated to retry the upgrade again.*

16.2 Firmware Update Utility Instructions
Use these steps to upgrade a **Console's vocabulary** firmware or the **UMTS-3G cellular module's** firmware:

1. Download the firmware from Linear's Web site and store the file(s) in a location on the programming PC.

2. Place the PERS-4200 in Power Off Mode by removing AC Power from the Console, and then press and hold the **POWER OFF** button until the Console announces: *"Console power off"*, then release the **POWER OFF** button.

3. Place the PERS-4200 into DfuSe mode by pressing and holding the **POWER OFF** button while applying AC Power. The **HOME**, **CANCEL**, and **HELP** indicators will blink.

❊ *IMPORTANT: Once the Console is in DfuSe mode, do not power off the Console during a firmware upgrade.*

4. Open the RA4200 application and *BEFORE* connecting the USB cable to the Console, from the RA4200 **TOOLS** menu, select **Panel Firmware Update (DfuSe)**.

5. Connect the Console to the programming PC with a USB cable. If the Console is in DfuSe mode and properly connected to the USB port, the device '**STM Device in FDU Mode**' should display in the "**Available DFU and compatible HID Devices**" area.

6. Click **CHOOSE...** and select the **vocabulary** firmware file or **cellular module** firmware file to download from the location it was saved on the PC. After selecting, "**File correctly loaded.**" should appear at the bottom of the DfuSe window.

7. Check the "**Verify after download**" check box. In the "**Select Target(s):**" area select Target Id "**02 SPI Flash**"

8. When all settings are correct, click **UPGRADE**.

9. A DfuSeDemo pop-up dialog will always appear with a device warning. Ignore this warning and click **YES**.

10. The status bar will indicate the status of the upgrade. First phase will be erase, then download, then verify.

11. Click **LEAVE DFU MODE**. The RA4200 will disconnect the Console and the Console will reset.

12. Click **QUIT** to exit the DfuSe utility.

13. Configure the Console with the RA4200 as required.

✓ *NOTE: Should any problems happen during the upgrade phase (i.e. wrong file selected and downloaded into a Console), this procedure can be repeated to retry the upgrade again.*
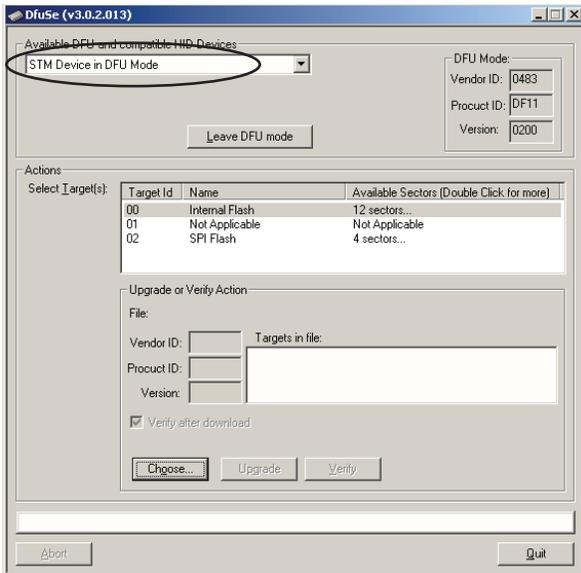
DfuSe Utility Connected to Console
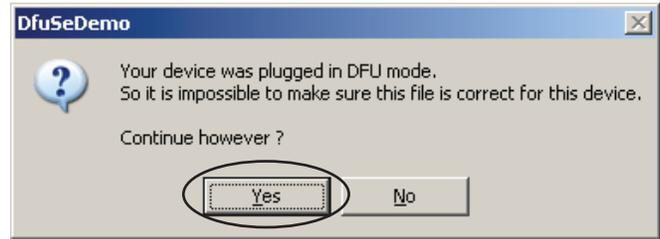
DfuSe Device Warning
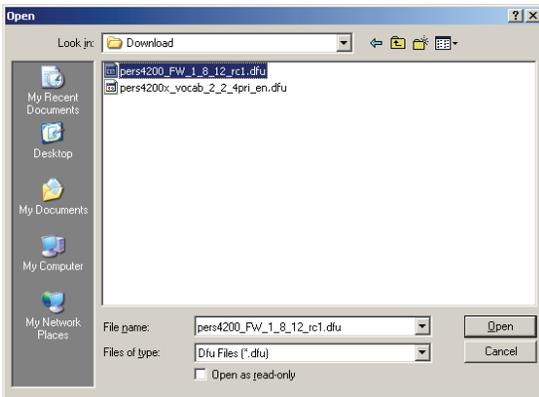
Firmware File Selection
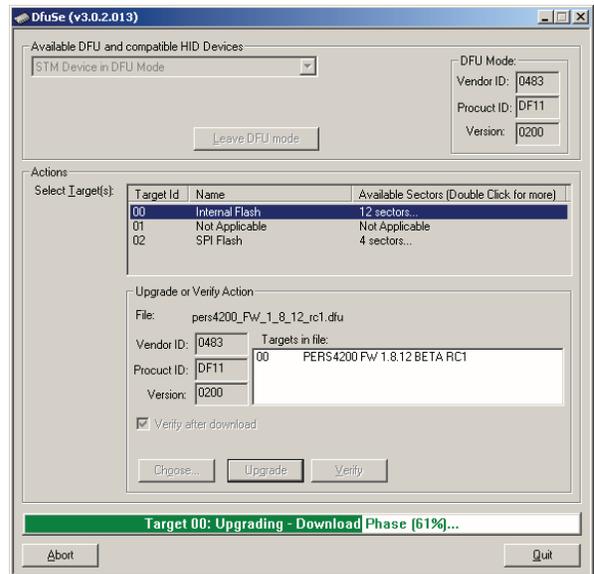
Upgrading in Process
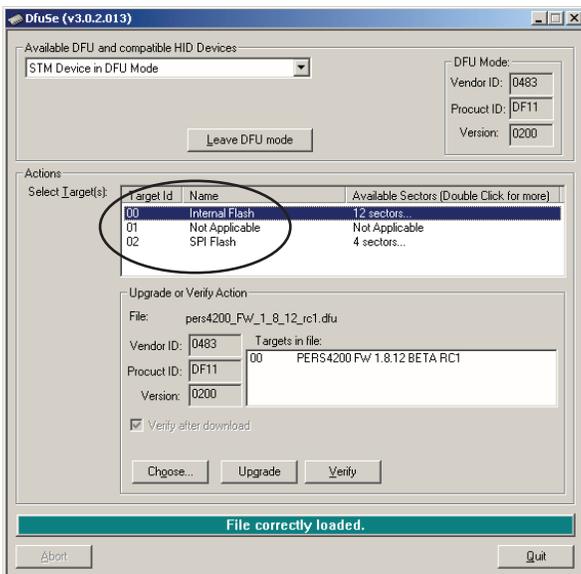
Verify and Target ID Selection
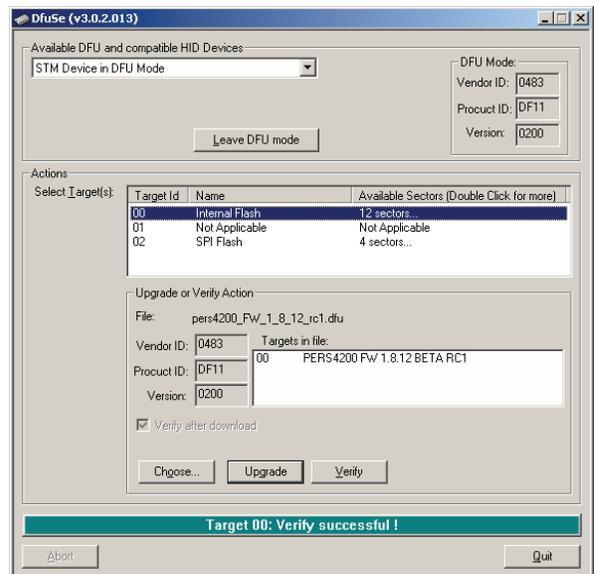
Upgrade Complete

17.   Appendix A - Reporting Codes

EVENT DESCRIPTION	REPORTING CODE			
	CID		4 X 2	SIA
	Group	Partition (Ext)		
CONSOLE EMERGENCY ALARM	1100	00	69	QA
ALARM CANCEL (ABORT)	1406	00	70	AB
CONSOLE LOW BATTERY	1302	00	73	YT
CONSOLE BATTERY RESTORE	3302	00	71	YR
CONSOLE SUPERVISORY (RECEIVER BOARD TROUBLE)	1381	00	40	MS
CONSOLE SUPERVISORY RESTORE	3381	00	40	MJ
LOSS OF AC POWER	1301	00	72	AT
AC POWER RESTORE	3301	00	94	AR
HOME MODE (ACTIVITY MONITOR ON) [1]	1372	00	91	UR
AWAY MODE (ACTIVITY MONITOR OFF) [1]	1371	00	92	UB
INACTIVITY ALARM (NO ACTIVITY)	1102	00	90	NA
AUTOMATIC STATUS (AUTOMATIC TEST)	602	00	93	RP
AUTOMATIC STATUS (TEST OFF NORMAL)	608	00	95	RY
REMINDER MESSAGE TIME OUT [1]	1356	00	96	MI
HIGH TEMP ALARM (HEAT)	1158	00	74	KA
HIGH TEMP RESTORE	3158	00	75	KR
LOW TEMP ALARM (FREEZE)	1159	00	76	ZA
LOW TEMP RESTORE	3159	00	77	ZR
FIRE (SMOKE) ALARM	1111	XX [2]	10 + SENSOR #	FA
FIRE (SMOKE) LOW BATTERY [1]	1384	XX [2]	40 + SENSOR #	FT
FIRE (SMOKE) SUPERVISORY	1200	XX [2]	40 + SENSOR #	FS
FIRE (SMOKE) SUPERVISORY RESTORE	3200	XX [2]	40 + SENSOR #	FQ
CO ALARM (GAS)	1162	XX [2]	10 + SENSOR #	GA
CO LOW BATTERY	1384	XX [2]	40 + SENSOR #	GT
CO SUPERVISORY	1381	XX [2]	40 + SENSOR #	GS
CO SUPERVISORY RESTORE	3200	XX [2]	40 + SENSOR #	GQ
EMERGENCY ALARM (PERSONAL/MEDICAL)	1101	XX [2]	10 + SENSOR #	MA
EMERGENCY LOW BATTERY	1384	XX [2]	40 + SENSOR #	MT
EMERGENCY SUPERVISORY	1381	XX [2]	40 + SENSOR #	MS
EMERGENCY SUPERVISORY RESTORE	3381	XX [2]	40 + SENSOR #	MJ
TWO WAY AUDIO REQUEST	606	00	N/A [3]	L90

Reporting Code Notes:

- 1 Optional report depending on programming.
- 2 The CID Group/Partition # (Ext) code is the zone number that the alarm or event is reported against. Console and non-zone-specific alarms/events are reported using CID group/partition #00
- 3 The 4x2 format does not have a two-way audio request code. The call must be established manually.

18. Appendix B - Mode Table

	CONSOLE OPERATING MODE								
	HOME MODE			AWAY MODE (Overrides Night Mode)			NIGHT MODE		
SYSTEM EVENT	Reports to Central Station	Voice Announcement	Starts 2-Way Audio	Reports to Central Station	Voice Announcement	Starts 2-Way Audio	Reports to Central Station	Voice Announcement	Starts 2-Way Audio
Fire & CO Alarms	✓ Yes	✓ Yes	~ If Enabled [6]	✓ Yes	✓ Yes	~ If Enabled [6]	✓ Yes	✓ Yes	~ If Enabled [6]
Fire & CO Supervisory Timeout [2]	✓ Yes	~ If Enabled [8]	N/A	✓ Yes	✗ No	N/A	✓ Yes	✗ No	N/A
Fire & CO Sensor Low Battery [2]	✓ Yes	~ If Enabled [8]	N/A	✓ Yes	✗ No	N/A	✓ Yes	✗ No	N/A
Console (HELP button) Alarm	✓ Yes	✓ Yes	~ If Enabled	✓ Yes	✓ Yes	~ If Enabled	✓ Yes	✓ Yes	~ If Enabled
Emergency Sensor Alarm	✓ Yes	✓ Yes	~ If Enabled [6]	✓ Yes	✓ Yes	~ If Enabled [6]	✓ Yes	✓ Yes	~ If Enabled [6]
Emergency Sensor Supervisory Timeout [2]	~ If Enabled	~ If Enabled [8]	N/A	✗ No [1]	✗ No [1]	N/A	~ If Enabled	✗ No	✗ No
Emergency Sensor Low Battery [2]	✓ Yes	~ If Enabled [8]	N/A	✓ Yes	✗ No [1]	N/A	✓ Yes	✗ No	N/A
Console Trouble [2] & [5]	✓ Yes	~ If Enabled [8] & [9]	N/A	✓ Yes	✗ No	N/A	✓ Yes	✗ No	N/A
Communication Status (telephone/cell)	✗ No	✓ Yes	N/A	✗ No	✓ Yes	N/A	✗ No	✗ No	N/A
Module Status	N/A	✓ Yes	N/A	N/A	✗ No	N/A	N/A	✗ No	N/A
Activity Monitor	✓ Yes	✓ Yes	~ If Enabled [7]	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	~ If Enabled [7]
Temperature Alarms	~ If Enabled [4]	~ If Enabled [4]	~ If Enabled [4]	~ If Enabled [3]	~ If Enabled [3]	~ If Enabled [3]	~ If Enabled [3]	~ If Enabled [3]	~ If Enabled [3]
Missed Reminder Messages	✓ Yes [11]	✓ Yes	~ If Enabled	✗ No	✗ No	✗ No	✓ Yes [11]	✓ Yes	~ If Enabled
Entering Mode	✓ Yes	From Away Mode Only [10]	N/A	✓ Yes	✓ Yes	N/A	From Away Mode Only	From Away Mode Only	N/A

Mode Table Notes:

- [1] Setting the Console in Away Mode clears all supervisory events for emergency sensors only. Supervisory timers for Smoke detectors, CO detectors, and activity monitor sensors are not affected; switching to Home or Away Mode constitutes activity.

- [2] Supervisory events are reported by automatic status reports regardless of the global REPORT SUPERVISORY EVENTS setting. Also, AC power loss events are reported by automatic status reports regardless of the global REPORT AC FAIL setting. Both settings are on the Reporting Options tab.

- [3] If ENABLE HOME MODE ONLY is selected for TEMPERATURE LIMIT SETTINGS on the Console tab, temperature alarms will not occur in this mode. Select ENABLE to allow temperature alarms in this mode.

- [4] Either ENABLE or ENABLE HOME MODE ONLY needs to be selected on the Console tab for TEMPERATURE LIMIT SETTINGS to allow temperature alarms.

- [5] Console supervisory faults are always reported, but not annunciated in Away Mode and Night Mode.

- [6] To start a two-way audio session after a report is triggered by an emergency alarm sensor, two-way audio must be globally enabled in TWO-WAY AUDIO MODE on the Reporting Options tab and enabled for the sensor's zone with the TWO-WAY AUDIO check box on the Sensors tab.

- [7] For activity sensors, two-way audio is enabled globally in TWO-WAY AUDIO MODE on the Reporting Options tab regardless of the activity sensor's zone setting with the TWO-WAY AUDIO check box on the Sensors tab.

- [8] To enable Console/sensor zone low battery and sensor zone supervision annunciations, ANNUNCIATE TROUBLE INDICATION must be selected on the Console tab.

- [9] To announce telephone line and AC power status, ANNUNCIATE PHONE-LINE/AC STATUS must be selected on the Console tab.

- [10] The Console will only announce Home Mode when manually switched from Away Mode using the HOME button.

- [11] To report missed reminder messages, the global REPORT MISSED REMINDER option must be selected on the Reminder Messages tab and the reminder message slot must have the SEND REPORT option selected.

19.   Appendix C - Communications Status Window Table

Below are possible messages that may appear in the communications status window when RA4200 is connected to a PERS-4200 Console.

Opening Port COM30
> Initializing Com Port
> Sending password
> Login Success
> Get status data
> Console Type:
>> Standard Console
>> Protocol Ver: 5
>> Hardware Ver: 0
>> Firmware Ver: 2.4.0
> Data Version (zone-panel-reminder-log-time-IP-MiscConfig1): -1-3-1-3-1-2-2
> Console (PSTN) Account Number: 007152
>> Console AC: Good
>> Console Battery: Good
>> Console Mode: Home
> Sensor Low Battery:
> Sensor Supervision Trouble:
> Done Get Status

'CONNECT' (no EXP. MODULES):
> Opening Port COM30
> Initializing Com Port
> Sending password
> Login Success
> Get status data
> Console Type: Standard Console
>> Protocol Ver: 5
>> Hardware Ver: 0
>> Firmware Ver: 2.4.0
> Data Version (zone-panel-reminder-log-time-IP-MiscConfig1): -1-3-1-3-1-2-2
> Console (PSTN) Account Number: 007152
>> Console AC: Good
>> Console Battery: Good
>> Console Mode: Home
> Sensor Low Battery:
> Sensor Supervision Trouble:
> Done Get Status

'GET CONSOLE':
> Get time data
> Get zone data
> Get console data
> Get reminder data
> Get IP configuration
> Cellular Signal Strength (dBm): 0
> Get IP status data
> Cellular Status:
> Cellular Network:
> Cellular Roaming:
> Get status data
> Console Type: Standard Console
>> Protocol Ver: 5
>> Hardware Ver: 0
>> Firmware Ver: 2.4.0
> Data Version (zone-panel-reminder-log-time-IP-MiscConfig1): -1-3-1-3-1-2-2
> Console (PSTN) Account Number: 007152
>> Console AC: Good
>> Console Battery: Good
>> Console Mode: Home
> Sensor Low Battery:
> Sensor Supervision Trouble:
> Get Misc Config 1
> Done Get Console

'GET CONSOLE' (CELL MODULE PRESENT):
> Opening Port COM30
> Initializing Com Port
> Sending password
> Login Success
> Get status data
> Console Type: Standard Console
>> Protocol Ver: 5
>> Hardware Ver: 0
>> Firmware Ver: 2.4.0
> Data Version (zone-panel-reminder-log-time-IP-MiscConfig1): -1-3-1-3-1-2-2
> Console (PSTN) Account Number: 007152
>> Console AC: Good
>> Console Battery: Low
>> Console Mode: Home
> Sensor Low Battery:
> Sensor Supervision Trouble: -1-2
> Done Get Status
> Get time data
> Get zone data
> Get console data
> Get reminder data
> Get IP configuration
> Cellular Signal Strength (dBm): -91
> Get IP status data
> Cellular Status: ---
> Cellular Network: AT&T
> Cellular Roaming: ---
> Get status data
> Console Type: xxxxxx Console
>> Protocol Ver: 5
>> Hardware Ver: 0
>> Firmware Ver: 2.4.0
> Data Version (zone-panel-reminder-log-time-IP-MiscConfig1): -1-3-1-3-1-2-2
> Console (PSTN) Account Number: 007152
>> Console AC: Good
>> Console Battery: Low
>> Console Mode: Home
> Sensor Low Battery:
> Sensor Supervision Trouble: -1-2
> Get Misc Config 1
> Done Get Console

'SET CONSOLE':
> Set zone data
> Set console data
> Set IP Configuration
> Set reminder data
> Set Misc Config 1
> Done Set Console

'GET LOG':
> Get log data

'SAVE':
> Saving C:\Linear\RA4200\Accounts\Account1.ra1

'DISCONNECT':
> Terminate call
> Hanging up / Closing session
> Terminating... Please wait a few seconds.
> Wait Done.

'OPEN':
> Opening C:\Linear\RA4200\Accounts\Account1.ra1

Tools->Clear Event Log:
> Done Clearing Log

Tools->Test IP Reporting
> Test IP reporting request sent

Tools-> File functions (when operation is cancelled):
> SSH file transfer cancelled.

Tools -> Export file to Voice Gateway
> SSH file transfer error.
>> or
> SSH export file transfer success.

Tools -> Retrieve Import file from Voice Gateway
> SSH file transfer error.
>> or
> SSH import file transfer success.

Tools->Merge Import
> No merging error.
>> or
> Merging errors encountered.

20. Specifications

CODING FORMATS

DX CODE 24-BIT A1D PPM	1,048,567 Codes
DXS CODE 24-BIT A1D PPM	1,048,567 Codes

POWER REQUIREMENTS

PRIMARY SUPPLY	Plug-in Switching Power Supply
	Input: 120 VAC 60 Hz
	Output: 14 VDC 1.7 Amps Maximum
BACKUP SUPPLY	7.2 Volt 2 Amp/Hour Ni-Mh Battery
BACKUP OPERATION DURATION	24 Hours Minimum
BATTERY LIFE EXPECTED	3 Years

RF CHARACTERISTICS

RECEIVER TYPE	Dual-diversity Superheterodyne
RF SENSITIVITY	-105 dBm Typical
RADIO FREQUENCY	315 Mhz
MAXIMUM RANGE	1000 Feet Line-of-sight (Tested with DXS-LRC transmitter)

COMMUNICATOR

DIAL-UP COMMUNICATOR FORMATS	4 x 2,
	ADEMCO Contact ID
	SIA
	UL Tested with SURGARD
	SGMLRG-DG
	Central Station Receiver
PSTN DIALING	Tone or Pulse
DIALING / IP REPORTING DELAY	0 or 15 Seconds
IP REPORTING FORMATS	Surgard System III-compatible SIA
	Surgard System III-compatible CID18 Extended
	Surgard System III-compatible CID58 Extended
REMOTE PROGRAMMING PASSWORD	6 Digits
REMOTE COMMUNICATIONS PASSWORD	4 Digits
ACCOUNT NUMBER LENGTH	SurGard FIBRO IP (SIA) 10-digits
	PSTN/SIA 6-digits
	PSTN/CID and 4 by 2 4-digits.
PRIMARY TELEPHONE NUMBER	20 Digits
SECONDARY TELEPHONE NUMBER	20 Digits
SUPERVISORY TELEPHONE NUMBER	20 Digits
CONSOLE STATUS REPORT	Optional 1, 7 or 30 Day Report
IP ADDRESSING	IPv4 Addressing Only

CONSOLE

OPERATING TEMPERATURE	32°-120° F (0-49° C)
ACTIVITY TIMER PERIOD	Two Programmable Time Windows
PSTN REPORTING AUDIO	Listen-only, 2-way Manual, 2-way Voice Activated (duplex) Speakerphone
IP REPORTING AUDIO	Listen-only or 2-way Manual
SIZE	6.25" W x 2.85" H x 6.25" D (9.6" H with antenna up)

REGULATORY

CONSOLE	Designed to conform to:
	UL 1635 Digital Alarm Communicator
	UL 1637, Home Healthcare Signaling Device
	Smoke Signaling Accessory File S2499 / UL217
	National Fire Protection Association (NFPA 72)
	ROHS
POWER SUPPLY	CSA, ETL, FCC, Efficiency Level 4
EMISSIONS	FCC Part 15 & Part 68, Industry Canada

21.   Regulatory Information

This device complies with Industry Canada and Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates 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.

- Reorient 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

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- *Les changements ou modifications non approuvés expressément par la partie responsable de la conformité pourrait annuler l'autorité de l'utilisateur à faire fonctionner l'équipement*

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

- *Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

The antenna used for the transmitter must be installed to provide a separation distance of at least 7.87 inches (20 cm) from all persons, and must not be co-located or operating in conjunction with any other antenna or transmitter other than those supplied with the PERS-4200 console.

- *L'antenne de l'émetteur doit être installé à une distance d'au moins 7,87 pouces (20 cm) de toutes les personnes, et ne doit pas être placé ou utilisé en conjonction avec toute autre antenne ou tout autre émetteur autres que ceux fournis avec la console PERS-4200.*

22.   Linear Limited Warranty

This Linear product is warranted against defects in material and workmanship for twelve (12) months. **This warranty extends only to wholesale customers** who buy direct from Linear or through Linear's normal distribution channels. **Linear does not warrant this product to consumers.** Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any. **There are no obligations or liabilities on the part of Linear LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation.** All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until the warranty expires. **This Linear LLC Warranty is in lieu of all other warranties express or implied.**

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

IMPORTANT WIRELESS INFORMATION

Linear radio controls provide a reliable communications link and fill an important need in portable wireless signaling. However, there are some limitations which must be observed.

- For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 15 devices. As such, they have limited transmitter power and therefore limited range.
- A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.
- Changes or modifications to the device may void FCC compliance.
- Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
- A general knowledge of radio and its vagaries should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.

23.   Index

23. Index

Linear®

Building On Innovation.