INSTALLATION GUIDE



XR200—242-ZONE <u>COMMAND PROCESSOR™ PANEL</u>



Digital Monitoring Products

MODEL XR200 COMMAND PROCESSOR INSTALLATION GUIDE

FCC NOTICE

This equipment generates and uses radio frequency energy and, if not installed and used properly in strict accordance with the manufacturer's instructions, may cause interference with radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the installer is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the computer with respect to the receiver

Move the computer away from the receiver

Plug the compute into a different outlet so that computer and receiver are on different branch circuits

If necessary, the installer should consult the dealer or an experienced radio/television technician for additional suggestions. The installer may find the following booklet, prepared by the Federal Communications Commission, helpful:

"How to identify and Resolve Radio-TV Interference Problems."

This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402 Stock No. 004-000-00345-4

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Operating Instructions

Revisions to This Document

This section explains the changes that were made to this document during this revision. This section lists the date the change was made, the section number and section heading, and a quick summary of the change.

Date	Section Number and Heading (Quick Explanation of Changes
	 3.2 Wiring Diagram 13.2 Output Harness Wiring 16 Universal UL Burglary Specifications 17 UL 1023 Specifications 18 UL 1610 and 1076 Specifications 19 UL 1635 Specifications 20 UL 365 and 609 Specifications 20.8 Rothenbuhler Install 20.9 Cell Backup for Derived Chanel Burg 	Removed UL Burglary and Access Control text and information. Removed UL Burglary and Access Control text and information. Removed entire section. UL listing expired. Removed entire section. UL listing expired. Note: Subsequent section numbers revised. Diagram removed.
3/04	3.2 Wiring DiagramSection 6.825.7 Cellular Backup Installationfor Derived Channel Burglary	Added UL required text and information. Added keypad models 690F, 790F, and 693. Added/revised current draw information. Revised drawing and added STU connection text.
6/03	FCC Statement Entire Document 6.8 Standby Battery Calculations 10.3 Zone Response Time 11.1 Terminals 25-26 and 27-28	Adjusted to properly reflect Class A. Added SCS-1R references to the appropriate places. Current Draw on some products adjusted. Changed from 160 milliseconds to 167. EOL information clarified.
7/02	 4.1 Mounting the Enclosure 1.7 Enclosure Specifications 11.1 Terminals 25-26 and 27-28 23.7 Local Protective Signaling Systems 23.10 Fire Protective Signaling Systems with an iCOM™ 	Model 325 Transformer Bracket, Terminal Strip added to Figure 3. Information added about 349, 350, 350A Enclosures. Information added about Sensor Reset's affect on Zones 9 and 10. Information added requiring the 893 to be used in local commercial fire installations Section added with compliance information for the iCOM.
10/01	3.4 Accessory Devices4.3 Connecting Serial Devices6.8 XR200 Power Requirements11.2 Compatible 2-Wire Smokes	New DMP products added to the table. LX-Bus and keypad bus information added. 710F added to the Standby Battery Calculations chart. Chart updated to include smoke detectors that are compatible with the 725 zone expander and other 12 VDC smoke detectors.

Product Specifications

1.1 Power Supply

Transformer Input: 16.5 VAC 40 VA (Models 320 or 321) Standby Battery: 12 VDC 7.7Ah (40 VA charges 2 batteries; 56 VA and 100 VA charges up to 4 batteries) Auxiliary: 12 VDC output at 1 Amp Bell Output: 12 VDC at 1.5 Amp All circuits are inherent Power Limited except the red battery wire.

1.2 Communication

Built-in dialer communication to DMP Model SCS-1 and SCS-1R Receivers Built-in multiplex communication to DMP Model SCS-1 Receivers Built-in Contact ID communication to non-DMP receivers Built-in Modem IIe communication to non-DMP receivers Optional 893 or 893A Dual Phone Line Modules with phone line supervision Optional Host communication through Ethernet data networks Can operate as a local panel

1.3 Panel Zones

Eight 1k Ohm EOL burglary zones (zones 1 to 8)

Two 3.3k Ohm EOL Class B (Style A) powered zone with reset (zones 9 and 10)

1.4 Keypad Data Bus

You can connect up to eight of the following supervised keypads and expansion modules to the XR200 keypad data bus: Alphanumeric keypads, four and single zone expansion modules, and single zone detectors.

1.5 LX-Bus[™]

You can connect the following devices to the LX-Bus[™] provided by the DMP 462N, 462P, 462FM, 472, and 481 Interface Cards up to the maximum number of LX-Bus[™] addresses. See Accessory Devices in section 3.4.

- Four and single zone expansion modules
- Single zone detectors
- Relay output expansion modules
- Graphic annunciator modules

1.6 Outputs

The XR200 provides two SPDT relay outputs which require the installation of two Model 305 relays, each rated 1 Amp at 30 VDC resistive) power limited sources only. The XR200 also provides 8 auxiliary 12 VDC, 50mA resistive outputs. To use these outputs, you need one Model 430 Output Harness.

1.7 Enclosure Specifications

The XR200 is shipped in an enclosure with End-of-Line resistors, battery leads, User's Guide, and Programming Sheets.

Model 349 Enclosure (XR200M)	Dimensions: Color:	12.5" W x 11.5" H x 3.5" D - 8 lbs with panel Black (61), Gray (63), or Red (81)
	Construction:	20-gauge cold-rolled steel
Model 350A Enclosure (XR200A)	Dimensions:	17.5" W x 13.5" H x 3.75" D (enclosure only)
	Color:	Black (61), Gray (63), or Red (81)
	Construction:	Door: 16-gauge cold-rolled steel.
	Back and Side	s: 18-gauge cold-rolled steel
Model 350 Enclosure (XR200L)	Dimensions:	17.5" W x 13.5" H x 3.5" D - 10 lbs with panel
	Color:	Black (61), Gray (63), or Red (81)
	Construction:	18-gauge cold-rolled steel

Panel Features

2.1 Description

The DMP XR200 Command Processor™ Panel is a versatile 12 VDC, combined burglary and fire communicator panel with battery backup. The XR200 provides 8 on-board burglary zones and 2 on-board 12 VDC Class B powered zones. The powered zones have a reset capability to provide for 2-wire smoke detectors, relays, or other latching devices. The XR200 can communicate to one or two DMP SCS-1 Receivers using multiplex, host, or digital dialer; one or two to DMP SCS-1R using host or digital dialer; or to non-DMP receivers using the Contact ID and Modem IIe formats.



Figure 1: Typical XR200 System Configuration

2.2 Expansion Zones

Up to 232 additional zones are available on the XR200 using the remote zone capability of DMP Security Command keypads and zone expander modules. The panel's keypad data bus supports up to eight supervised device addresses with each address supporting up to four programmable expansion zones.

Up to 200 zones are available using the Model 460 Interface Adaptor, 462N, 462P, 462FM, 472, or 481 Interface Cards, and any combination of zone expansion modules and single zone LX-Bus™ detectors.

Note: Do not use shielded wire for LX-Bus or Keypad Bus circuits.

2.3 Relay Output Expansion

In addition to the 2 SPDT relays and 8 voltage outputs on the XR200, you can also connect up to 25 Model 716 Output Expansion modules to each LX-Bus. These modules can provide an additional 200 programmable SPDT relays. The XR200 provides 50 Output Schedules you can use for programming the 716 to perform a variety of annunciation and control functions. You can also assign the 716 outputs to any of the panel's Output Options such as Fire Alarm, Communication Fail, or Phone Trouble Outputs.

The LX-Bus[™] also supports the Model 717 Graphic Annunciator Module. Each 717 module supplies 20 switched ground outputs that follow the state of their assigned zones.

2.4 Partitions and Areas

The 20 reporting areas of the XR200 are divided into four separate partitions. Partition 1 provides up to eight individual reporting areas while partitions 2, 3, and 4 each provide up to four individual reporting areas. Keypads installed on the XR200 system are assigned to partitions allowing users to operate the functions of those areas.

2.5 Central Station Communication

You can program the XR200 panel for one of many communication formats:

- Local annunciation only
- Reporting to one or two DMP SCS-1 Receivers using multiplex, host, or digital dialer
- Reporting to one or two DMP SCS-1R Receivers using host or digital dialer

The panel can also communicate to non-DMP receivers using the Contact ID or Modem IIe communication formats. The XR200 connects at the premises to a standard RJ31X or RJ38X telephone jack. Use the DMP 893 or 893A Dual Phone Line Module when connecting the XR200 panel to two separate phone lines in fire or burglary applications.

2.6 Before you Begin

Before installing the XR200, we recommend you read through the entire contents of this guide. Familiarize yourself with the features of the panel and the key points to remember during the installation. Be sure to read and understand all of the caution statements printed in bold italics.

2.7 About this Guide

The information in this guide is organized into five sections:

- The Table of Contents at the front lists the headings and subheadings used throughout each section of the guide. To the right of each heading is the section number where the information can be found.
- The Introduction section gives you an overview of the various components that go into a XR200 system and provides diagrams of typical system configurations.
- The Installation section begins with mounting instructions for the enclosure and continues on to detail the operational characteristics of the XR200 panel.
- The Compliance section describes the various regulations the XR200 complies with, such as UL.
- The System Diagrams illustrate different ways to wire the XR200 to a variety of modules.

Caution notes

Throughout this guide you will see caution notes containing information you need to know when installing the XR200 panel. These cautions are written with a *bold*, *italicized* introductory clause followed by a detailed description of the caution. See the example shown below:



Always ground the panel before applying power to any devices: The XR200 must be properly grounded before connecting any devices or applying power to the panel. Proper grounding protects against Electrostatic Discharge (ESD) that can damage system components.

Whenever you see a caution note, make sure you completely read and understand its information. Failing to follow the caution note can cause damage to the equipment or improper operation of one or more components in the system.

2.8 How to Use This Guide

To locate information about the installation of the XR200, first go to the Table of Contents at the front of this guide. Find the subject heading that best describes the information you need and turn to the section number shown to the right of the heading.

The text that follows the heading has been written to provide as much information about the subject as possible. If you cannot find the information you need under that heading, try scanning through a few of the headings before and after and reading the text under those that sound similar.

System Components

3.1 Description

The DMP XR200 system is made up of an alarm panel with a built-in communicator, an enclosure, battery, one 16.5 VAC transformer, and a keypad. You can add up to eight supervised Security Command® keypads; wireless, network communications, and expansion interface cards; zone and output expander modules; and initiating and indicating circuit modules. You can also connect auxiliary devices to the panel's output relays to expand the basic system's control capability. Combined current requirements of additional modules may require an auxiliary power supply. Refer to section 6.8 in this guide when calculating power requirements.

3.2 Wiring Diagram

The XR200 system below shows some of the accessory modules you can connect for use in various applications. A brief description of each module follows in section 3.4.



Figure 2: XR200 Wiring Diagram

3.3 Lightning Protection

Metal Oxide Varistors and Transient Voltage Suppressors help protect against voltage surges on input and output circuits of the XR200. Additional surge protection is available by installing the DMP 370 or 370RJ Lightning Suppressors.

3.4 Accessory Devices

Interface Adaptor and Interface Cards	
460 Interface Adaptor Card	Allows you to connect two or more expansion interface cards to the XR200 panel. The 461 is an expansion mother board that plugs into the J6 Interface Connector of the panel and is required when using two or more Interface Cards. Use combinations of Interface Cards for expanding zones, network interfacing, local printing, and connecting wireless devices. Requires Model 349, 350, or 350A Enclosure.
462N Network Interface Card	Allows you to connect the XR200 to any compatible data network and use its communication capability in place of standard dial out telephone lines. The 462N also provides an LX-Bus [™] for connecting zone and output expansion modules to the panel. The 462N is listed for Grade AA Burglary communication and supplementary signaling.
462P Printer Interface Card	Allows you to connect the XR200 to any compatible serial printer providing real-time event recording to the user. The 462P also provides an LX-Bus [™] for connecting zone and output expansion modules.
472 Inovonics 900 MHz Interface Card	Provides an interface between the Inovonics FA400-DMP Wireless Receiver and the XR200 panel. You can use any of the wireless equipment compatible with the FA400-DMP to construct a strictly wireless or combined wireless/hardwire system. Wireless functionality is listed for Household Fire and Burglary. The 472 also provides one LX-Bus [™] for connecting zone and output expansion modules.
481 Expansion Interface Card	Provides one LX-Bus for connecting up to 100 zone and output expansion modules.
Zone and Output Expansion Modules	
710/710F Bus Splitter/Repeater	Allows you to increase keypad or LX-Bus [™] wiring distance to 2500 feet. Model 710F is for 24 VDC applications.
711/711E Single Point Zone Expansion Modules	Provides one Class B zone for connecting burglary and non-powered fire devices.
712-8 Zone Expansion Modules	Provides Class B zones for connecting burglary devices.
714, 714-8, 714-16 Zone Expansion Modules	Provides Class B zones for connecting burglary and non-powered fire devices.
715, 715-8, 715-16 Zone Expansion Modules	Provides 12 VDC Class B powered zones for connecting smoke detectors, glassbreak detectors, and other 2- or 4-wire devices.
725 Zone Expansion Modules	Provides 24 VDC Class B powered zones for connecting smoke detectors, glassbreak detectors, and other 2- or 4-wire devices.
716 Output Expansion Modules	Provides four Form C relays (SPDT) and four switched grounds (open collector) for use in a variety of remote annunciation and control applications.
717 Graphic Annunciator Module	Provides 20 zone following annunciator outputs (open collector) for use in a variety of remote annunciation and control applications.
Indicating and Initiating Devices	•
865 Supervised Style Y or Z Notification Circuit Module	Provides up to 1.5 Amps of supervised alarm current when using the bell output of the XR200 panel and up to 5 Amps at 12 or 24 VDC when using a listed auxiliary power supply. The 865 can supervise 2-wire Style Y or W circuits or X circuits for ground faults, opens, shorts, and shorts with individual LED annunciation.
866 Notification Circuit Module	Provides up to 1.5 Amps of supervised alarm current using the bell output of the XR200 panel and up to 5 Amps at 12 or 24 VDC when using a listed auxiliary power supply. The 866 can supervise Style W circuits for opens and shorts.
867 Style W LX-Bus Notification Circuit Module	Provides up to 1.5 Amps of supervised alarm current using the bell output of the XR200 panel and up to 5 Amps at 12 or 24 VDC when using a listed auxiliary power supply. The 867 connects to the LX-Bus [™] of the XR200 panel and provides one 2-wire Style W notification circuit for ground fault, open, and short conditions. Individual Bell Relay addresses Bell Ring styles.
869 Dual Style D Initiating Module	Provides two Style D, 4-wire initiating zones for connecting waterflow switches and other non- powered fire and burglary devices.
Accessory Modules and Keypads	
893A Dual Phone Line Module	Allows you to supervise two standard phone lines connected to an XR200 panel. The 893A module monitors the main and backup phone lines for a sustained drop in voltage and alerts users when voltage drops below 3 VDC.
ePAD Virtual Keypads	Allows users to control the security system from any computer in the world using the Internet.
iCOM Internet Alarm Router	Allows the panel to send signals through the Internet/Ethernet.
iCOM-E High-Security Internet Alarm Router	Allows the panel to send encrypted signals through the Internet/Ethernet.
630F Remote Fire Command Center	Allows you control the panel from various remote locations. You may connect up to eight 630F Remote Fire Command Centers to the keypad bus on terminals 7, 8, 9, and 10.
Security Command LCD keypads	Allows you to control the panel from various remote locations. Connect up to eight supervised Model 690, 790, 791, or 793 Security Command® keypads to the keypad bus (terminals 7, 8, 9, and 10).

Installation

4.1 Mounting the Enclosure

The metal enclosure for the XR200 must be mounted in a secure, dry place to protect the panel from damage due to tampering or the elements. It is not necessary to remove the XR200 PC board when installing the enclosure. Below are the mounting hole locations for the Model 350A Enclosure.

Note: The mounting holes are the same for the 350 Enclosure as those shown below for the 350A Enclosure.



Figure 3: Model 350A Enclosure with Mounting Hole Locations

4.2 Mounting Keypads and Zone Expansion Modules

Security Command® keypads have removable covers that allow you to easily mount the keypad to a wall or other flat surface using the screw holes on each corner of the base. Before mounting the base, connect the keypad wire harness leads to the keypad cable from the panel and to any device wiring run to that location. Then attach the harness to the pin connector on the PC board, mount the base, and install the keypad cover making sure all of the keys extend through their respective holes.

For mounting keypads on solid walls, or for applications where conduit is required, use a DMP 775 or 776 keypad conduit backbox for 770 series keypads. To provide additional protection for the keypad against unauthorized access, install the 777 Plastic Keypad Cover that provides a clear 1/8" thick polycarbonate housing with locking mechanism. For the 790 series keypads, you can use the Model 695 1-1/2" deep or the Model 696 1/2" deep backboxes.

DMP zone expansion modules are contained in molded plastic housings with removable covers. The housing cover contains the module while the base provides you with two mounting holes for installing the unit to a wall, switch plate, or other surface.

4.3 Connecting Serial Devices

Several factors determine the performance characteristics of the DMP LX-Bus^M and keypad bus: the length of wire used, the number of devices connected, and the voltage at each device. When planning an LX-Bus^M and keypad bus installation, keep in mind the following four specifications:

- 1. You can install individual keypads on wire runs of up to 500 feet using 22-gauge wire or up to 1,000 feet using 18-gauge wire. To increase the wire length or add additional devices, a power supply is required.
- 2. Maximum distance for any one circuit (length of wire) is 2,500 feet regardless of the gauge of wire. This distance can be in the form of one long wire run or multiple branches with all wiring totaling no more than 2,500 feet.
- 3. Maximum number of devices per 2,500 feet circuit is 40. (Note: Each panel allows a specific number of supervised keypads. Additional keypads can be added in the unsupervised mode. Refer to the panel's installation guide for the specific number of supervised keypads that are allowed.)
- 4. Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2.0 VDC. If the voltage at any device is less than the required level, an auxiliary power supply should be added at the end of the circuit.

Refer to the 710 Installation Sheet (LT-0310) for more information. Also see the LX-Bus/Keypad Bus Wiring Application Note (LT-2031) for additional information.

Expansion Interface Cards (Models 462N, 462P, 462FM, 472, 481, and 482)

The LX-Bus provided on these cards requires only a 4-wire cable between the card and any devices connected to the bus. You can connect devices (zone or output expansion modules) together on the same cable or provide separate runs back to the cards. Up to 100 zones or relays are available on each LX-Bus.

Note: Do not use shielded wire when running an LX-Bus or keypad bus. Do not connect the 4 wires from the Interface Card harness to the panel terminals.

Primary Power Supply

5.1 AC Terminals 1 and 2

Connect the transformer wires to terminals 1 and 2 on the panel. Use no more than 70 ft. of 16 gauge or 40 ft. of 18 gauge wire between the transformer and the XR200.



Always ground the panel before applying power to any devices: The XR200 must be properly grounded before connecting any devices or applying power to the panel. Proper grounding protects against Electrostatic Discharge (ESD) that can damage system components. See Earth ground section 6.2.

5.2 Transformer Types

The standard transformer for the XR200 is the Model 321 (16.5 VAC 40 VA). Refer to the XR200 Wiring Diagram (LT-0204) on the panel enclosure door for a list of optional transformers that can be used with the panel. The Model 320 wire-in transformer is available when required by the AHJ.

The transformer must be connected to an unswitched 120 VAC 60 Hz electrical outlet with at least 350mA of available current. Never share the transformer output with any other equipment.

Secondary Power Supply

6.1 Battery Terminals 3 and 4

Connect the black battery lead to the negative terminal of the battery. The negative terminal connects to the enclosure ground internally through the XR200 circuit board. Connect the red battery lead to the positive terminal of the battery. Observe polarity when connecting the battery.

You can add a second battery in parallel using the DMP Model 318 Dual Battery Harness.



Use sealed lead-acid batteries only: Use the DMP Model 367, 12 VDC 7.0 Ah sealed lead-acid rechargeable battery. Batteries supplied by DMP or manufactured by Eagle Picher or Yuasa have been tested to ensure proper charging with DMP products.

GEL CELL BATTERIES CANNOT BE USED WITH THE XR200 PANEL.

6.2 Earth Ground

To provide proper transient suppression, terminal 4 of the XR200 panel must be connected to earth ground using 14 gauge or larger wire . DMP recommends connecting to a cold water pipe or ground rod only. Do not connect to an electrical ground or conduit, sprinkler or gas pipes, or to a telephone company ground.

6.3 Battery Only Restart

When powering up the XR200 panel without AC power, short across the CR7 leads to pull in the battery cutoff relay. The leads need a momentary short only. Once the relay has pulled in, the battery voltage holds it in that condition. If the XR200 panel is powered up with an AC transformer, the battery cutoff relay is pulled in automatically.

6.4 Replacement Period

DMP recommends the battery be replaced every 3 to 5 years under normal use.

6.5 Discharge/Recharge

The XR200 battery charging circuit float charges at 13.9 VDC at a maximum current of 1.2 Amps using a 40 VA transformer. The total current available is reduced by the combined auxiliary current draw from terminals 5, 6, and 24. The various battery voltage level conditions are listed below:

Battery Trouble:	Below 11.9 VDC
Battery Cutoff:	Below 10.2 VDC
Battery Restored:	Below 12.6 VDC

6.6 Battery Supervision

The XR200 tests the battery when AC power is present. The test is done every 3 minutes and lasts for 5 seconds. During the test, the panel places a load on the battery; if the battery's voltage falls below 11.9 VDC a low battery is detected. If AC power is not present, a low battery is detected any time the battery voltage falls below 11.9 VDC.

If a low battery is detected with AC power present, the test is repeated every 2 minutes until the battery charges above 12.6 VDC; the battery has restored voltage. If a weak battery is replaced with a fully charged battery, the restored battery will not be detected until the next 2 minute test is done.

6.7 Battery Cutoff

The panel disconnects the battery any time the voltage of the battery drops below 10.2 VDC. This prevents deep discharge damage to the battery.

6.8 XR200 Power Requirements

During AC power failure, the XR200 panel and all auxiliary devices connected to the XR200 draw their power from the battery. All devices must be taken into consideration when calculating the battery standby capacity. On the following page is a list of the power requirements of the XR200 panel. Add the additional current draw of Security Command® keypads, zone expansion modules, smoke detector output, and any other auxiliary devices used in the system for the total current required. The total is then multiplied by the number of standby hours required to arrive at the total ampere-hours required.

INSTALLATION

Standby Battery Power Calculations		Stan	dby Curre	nt		Ala	rm Current	
XR200 Control Panel	Qty	X	80mA _	mA			80mA	mA
Relay Outputs 1-2 (ON)	Qty		30mA _		Qty	X	30mA	
Voltage Outputs 3-10 (ON)	Qty	X	5mA _		Qty	X	5mA	
Active Zones 1-8	Qty		1.6mA		Qty		*2mA	
Active Zones 9-10	Qty	x	4mA		Qty	х	30mA	
2-Wire Smoke Detectors	Qty		0.1mA _		Qty		0.1mA	
Panel Bell Output			_				1500mA	mA
893/893A Dual Phone Line Module	Qty	х	30mA		Qty	х	50mA	
460 Interface Adaptor Card	~~/	^	7mA _		2.7	^	7mA	
462N Network Interface Card	Qty	х	50mA _		Qty	v	50mA	
462P Printer Interface Card			50mA				50mA	
	Qty Qty	X	50mA		Qty	X	50mA 85mA	
472 Inovonics 900MHz Interface Card			85mA _		Qty	X	85mA	
481 Expansion Interface Card	Qty	X	15mA _		Qty	X	15mA	
485 Enhanced Access Control Expansion Card			45mA _				45mA	
865 Style y or Z Notification Module	Qty		26mA _		Qty		85mA	
866 Style W Notification Module	Qty	X	45mA _		Qty	X	75mA	
867 LX-Bus Style W Notification Module	Qty	X	30mA _		Qty	X	85mA	
630F Remote Fire Command Center	Qty	х	60mA _		Qty	Х	92mA	
690/690F Security Command Keypad	Qty		77mA		Qty		84mA	
Annunciator (ON)	~~~	X			²⁰ /	^	20mA	
790/790F Security Command Keypad	Otv	v	77mA _		Qty	v	84mA	
	Qty	X			Qty	X	84mA	
Active Zones (EOL Installed)			1.6mA _			X	*2mA	
Annunciator (ON)			100 4				20mA	
791 Easy Entry Keypad	Qty	X	100mA _		Qty	X	100mA	
Active Zones (EOL Installed)			1.6mA _		Qty	X	*2mA	
Annunciator (ON)							20mA	
693/793 Easy Entry Keypad	Qty	X	92mA _		Qty		120mA	
Active Zones (EOL Installed)			1.6mA _		Qty	X	*2mA	
Annunciator (ON)							20mA	
770, 771 Security Command Keypads	Qty	х	100mA _		Qty	Х	100mA	
Active Zones (EOL Installed)	Qty	x	1.6mA _		Qty		*2mA	
Annunciator (ON)					··· /		20mA	
733 Wiegand Interface Module	Qty	x	30mA _		Qty	X	30mA	
Active Zones (EOL Installed)	Qty	X	1.6mA _		Qty	^ Y	*2mA	
Annunciator (ON)	20	^	1.01177 _		Qty		20mA	
736P POPIT Interface Module	054	v	25mA _			^	20mA	
Radionics Popex, POPITs, OctoPOPITs	Qty		ZJIIA _		Qty	X	25mA	
	Qty	X	IIIA		Qty Qty	X	mA	
738A Ademco Wireless Interface Module	Qty		75mA _		Qty	X	75MA	
710 Bus Splitter/Repeater Module	Qty	X	30mA _		Qty	X	30mA	
710F Fire Bus Splitter/Repeater Module	Qty		40mA _		Qty		40mA	
711, 771E, 714 Zone Expansion Modules	Qty	X	7mA _		Qty	X	7mA	
Active Zones (EOL Installed)	Qty	X	1.6mA		Qty	X	*2mA	
712-8 Zone Expansion Module	Qty		17mA _		Qty	Х	17mA	
Active Zones (EOL Installed)	Qty	x	1.6mA		Qty Qty	х	*2mA	
714-8, 714-16 Zone Expansion Module	Qty		20mA _		Qty	X	20mA	
Active Zones (EOL Installed)	Qty		1.6mA _		Qty	X	*2mA	
715 Zone Expansion Module	Qty	^ Y	7mA _		Qty	^ X	7mA	
Active Zones (EOL Installed)			4mA			^ ^	*30mA	
	Qty		4mA _		Qty		1mA	
2-Wire Smokes	Qty		.1mA _		Qty		.1mA	
715-8, 715-16 Zone Expansion Modules	Qty	X	20mA _		Qty	X	20mA	
Active Zones (EOL Installed)			4mA _				*30mA	
2-Wire Smokes			.1mA _				.1mA	
716 Output Expansion Module	Qty	X	7mA _		Qty		7mA 28mA	
Active Form C Relays					Qty		28mA	
717 Graphic Annunciator Module	Qty	X	10mA _		Qty	X	10mA	
Annunciator Outputs					Qty	X	1mA	
521LX, 521LXT, SLRLX Smoke Detectors	Qty	х	8.8mA		Qty	х	*28mA	
iCOM, iCOM-E Internet Alarm Routers							78.1mA	
Aux. Powered Devices on Terminals 7 and 11				mA				mA
Other than Keypads and LX-Bus Modules			-					
*Based on 10% of active zones in alarm								
Based on 10% of active zones in alarm		. .				-		
Total Chanadhan ann Ann -		lota	I Standby _	ma			otal Alarm	mA
Total StandbymA x numb	er of Stan	aby Hou	rs needed _	=		mA-ho		
Cannot exceed 7.7Ah with one Model 367 Battery		To	otal Alarm _	mA +		mA-ho		
Cannot exceed 15.4Ah with two Model 367 Batteries				Total		mA-ho	ours	
Cannot Exceed 23.1Ah with three Model 367 Batteries					X .000			
Cannot exceed 30.8Ah with four Model 367 Batteries					=	Am	p-hrs Red	quired

Bell Output

7.1 Terminals 5 and 6

Terminal 5 supplies positive 12 VDC to power alarm bells or horns. The output is rated for a maximum output of 1.5 Amps. This output can be steady or pulsed depending upon the Bell Action specified in Output Options. Terminal 6 is the ground reference for the bell circuit.

Keypad Data Bus

8.1 Description

Terminals 7, 8, 9, and 10 of the XR200 panel are for the keypad data bus. You can connect up to eight supervised keypads and an unlimited number of unsupervised keypads to the XR200. In addition to Security Command keypads, you can also connect any combination of zone expansion modules, 5845LX Glassbreak detectors and 6155LX PIRs to the data bus. Refer to the device's Installation sheet for the maximum number of devices on one keypad or LX-Bus[™].

Note: Do not use shielded wire for LX-Bus/Keypad Bus circuits.

8.2 Terminal 7 - RED

This terminal supplies positive 12 VDC to power Security Command® keypads and zone expansion modules. Terminal 7 also supplies power for any auxiliary device. The ground reference for terminal 7 is terminal 10 with the maximum output rated at 1 Amp.

The output current is shared with the smoke detector output on terminal 11 and Zones 9 and 10. All devices totalled together must not exceed the panel's maximum current rating of 1 Amp.

8.3 Terminal 8 - YELLOW

Terminal 8 receives data from keypads and zone expansion modules. It cannot be used for any other purpose.

8.4 Terminal 9 - GREEN

Terminal 9 transmits data to keypads and zone expansion modules. It cannot be used for any other purpose.

8.5 Terminal 10 - BLACK

Terminal 10 is the ground reference for Security Command keypads, zone expansion modules, and any auxiliary devices being powered by terminal 7.

Smoke and Glassbreak Detector Output

9.1 Terminals 11 and 12

Terminal 11 supplies positive 12 VDC to power 4-wire smoke detectors and other powered devices. This output can be turned off by the user for 5 seconds using the Sensor Reset User Menu option to allow latched devices to reset. Terminal 12 is the ground reference for terminal 11.

9.2 Current Rating

The Output current from terminal 11 is shared with terminals 7, 26, and 28. The total current draw of all devices powered from the panel must be included with terminal 11 calculations and must not exceed the maximum output rating of 1 Amp.

Protection Zones

10.1 Terminals 13–24

Zones 1 to 8 (terminals 13 to 24) on the XR200 panel are all grounded burglary zones. For programming purposes, the zone numbers are 1 through 8. Terminals 13 to 24 provide connection as listed below.

Terminal	Function
13	Zone 1 voltage sensing
14	Ground for Zones 1 & 2
15	Zone 2 voltage sensing
16	Zone 3 voltage sensing
17	Ground for Zones 3 & 4
18	Zone 4 voltage sensing



Terminal	Function
19	Zone 5 voltage sensing
20	Ground for Zones 5 & 6
21	Zone 6 voltage sensing
22	Zone 7 voltage sensing
23	Ground for Zones 7 & 8
24	Zone 8 voltage sensing

The voltage sensing terminal measures the voltage through a 1k Ohm End-of-Line resistor to ground. Dry contact sensing devices can be used in series (normally-closed) or in parallel (normally-open) with any of the burglary protection zones.

Figure 4: Protection Zone Wiring

10.2 Operational parameters

Each protection zone detects three conditions: open, normal, and short. The voltage and resistance parameters for each condition are listed below:

Condition	Resistance on zone
Open	over 1300 ohms
Normal	600 to 1300 ohms
Short	under 600 ohms

Voltage on positive terminal over 2.0 VDC 1.2 to 2.0 VDC under 1.2 VDC

10.3 Zone response time

A condition must be present on a zone for 500 milliseconds before it is detected by the XR200 panel. Ensure detection devices used on the protection zones are rated for use with this delay. The zones can also be programmed for a fast response delay of 167 milliseconds.

10.4 Keyswitch arming zone

Using a keyswitch on an Arming type zone allows you to arm and disarm selected areas without having to enter a user code. For more information refer to the XR200 Programming Guide, LT-0196.

Powered Zones for 2-Wire Smoke Detectors

11.1 Terminals 25–26 and 27–28

Two resettable Class B (Style A) 2-wire powered zones are provided on terminals 25 through 28 on the panel. For programming purposes the zone numbers are 9 and 10. The UL compatibility identifier for the zones is A.

11.2 Zone Information

When using 725 Zone Expansion modules, use UL Listed 6.8k Ohm EOL resistors. The UL compatibility identifier for the zones using 725 Zone expansion modules is B. When using 715 Zone Expansion modules, use UL Listed 3.3k Ohm EOL resistors (Model 309). When using all other zone expansion modules, use UL Listed 1.0k Ohm EOL resistors (Model 310). The UL compatibility identifier for the zones is A.

Do not mix detectors from different manufacturers on the same zone.

Caution: Performing a Sensor Reset will momentarily drop power to the devices on Zones 9 and 10. The panel will view these zones 10 as "Open" while the power is dropped.

INSTALLATION 11.2 Compatible 2-Wire Smoke Detector Chart Detector Manufacturer Model Base Base DC **# of** ID ID Voltage **Detectors** Range (12V/24V)**Detection Systems** DS230, DS230F B/A MB2W, MB2WL А 8.5-33 10 В MB2W, MB2WL **Detection Systems** DS250, DS250TH А 8.5-33 10/12 DS250HD В MB2W, MB2WL 8.5-33 **Detection Systems** А 10 **Detection Systems** DS260 B/A MB2W, MB2WL А 8.5-33 17 **Detection Systems** DS282, DS282TH В 8.5-33 10/12HSB-200, HSB-HB-7 DMP/Hochiki SLK-835 HD-5 8-35 200N 55 DMP/Hochiki SLR-835 HD-3 NS6-100 HB-8-35 7/14 55 DMP/Hochiki SLR-835B HD-6 8-35 7/14 Hochiki 8-35 SLR-835B-2 HD-6 14 Hochiki SLR-24, SLR-24H HD-3 NS4-220 HB-3 15-33 15 Hochiki SIJ-24, DCD-190, DCD-HD-3 NS4-220 HB-3 15-33 15 135 Hochiki SLR-24, SLR-24H HD-3 NS6-220 HB-3 15-33 15 Hochiki SIJ-24 NS6-220 HB-3 20 HD-3 15-33 Hochiki DCD-190, DCD-135 HD-3 NS6-220 HB-3 15-33 16 Sentrol/ESL 429AT, 521B, 521BXT 6.5-20 S09A 12 Sentrol/ESL S10A 429C, 429CT, 521B/BXT 8.5-33 12 Sentrol/ESL 429CRT, 429CST, S11A 8.5-33 12 429CSST, 521CRXT Sentrol/ESL 711U, 712U, 713-5U, S10A 701E, 70-1U, S00 8.5-33 12 713-6U, 721U, 721UT 702E, 702U 12 Sentrol/ESL 7310, 7230 701E, 701U, S00 S11A 8.5-33

STD

STD

STD

STD

STD

А

STD

STD

А

Figure 5: Compatible 2-Wire Smoke Detectors

702E, 702U, 702RE, 702RU

B110PL, B401

B401, B401B

DH400

B401, B401B,

DH400

8.5-33

8.5-33

8.5-33

8.5-33

8.5-33

8.5-35

8.5-33

8.5-35

8.5-35

10

10/10

10

10

10

12

10

10

10

System Sensor

1100, 1400

1151, 2151

1451, 2451TH

1451DH

2100, 2100T

2100S, 2100TS

2400, 2400AT, 2400AIT,

2400TH

2451

DH100P

Zone

Expansion

Modules

725

715, 715-8,

715-16, 725

715, 715-8,

715-16

725 715, 715-8,

715-16, 725

715, 715-8,

715-16

715, 715-8,

715-16, 725

715, 715-8, 715-16, 725

725

725

725

725

725

725

715, 715-8,

715-16

725

725

725

725

715

715, 725

715

715

715

725

715

715

725

Dry Contact Relay Outputs

12.1 Description

The XR200 panel provides two auxiliary SPDT relays when equipped with two DMP Model 305 relays in sockets K6 (Output 1) and K7 (Output 2) and a Model 430 Output Harness. Each relay provides one single pole, double throw (SPDT) set of contacts that can be operated by any of the functions listed below:

- 1) Activation by zone condition
 - Steady Pulsing Momentary Follow
- Activation by 24-hour 7-day schedule
 One on and one off time a day for each relay
- 3) Manual activation from the Security Command keypad menu
- 4) Communication failure
- 5) Armed area annunciation
- 6) Fire Alarm or Fire Trouble
- 7) Other system conditions. See the XR200 Programming Guide.

12.2 Contact Rating

The Model 305 relay contacts are rated for 1 Amp at 30 VDC resistive. You can connect auxiliary power to the common terminal of Relay Output 1 by installing the gray harness wire to terminal 7.

12.3 Output Harness Wiring

The relay contacts are accessible by installing the DMP 430 Output Harness on the 15-pin header labeled J2. The contact locations on the wire harness are shown below:

Contact	Color
Output 1 normally closed	Violet
Output 1 common	Gray
Output 1 normally open	Orange
Output 2 normally closed	Violet
Output 2 common	Gray
Output 2 normally open	Orange

The relay contacts must be connected to devices located within the same room as the XR200 panel.

12 VDC Voltage Outputs 3 to 10

13.1 Description

The XR200 also provides eight 12 VDC, 50mA resistive voltage outputs on J2 to power external relays or other devices. The voltage outputs are operated from the same functions as Outputs 1 and 2. See section 12.1.

When connecting any devices to outputs 3 to 10, subtract the current draw of the device from the panel's available auxiliary power.

13.2 Output Harness Wiring

The voltage outputs are accessible by installing the DMP 430 Harness on the 15-pin header labeled J2. The output locations are shown below:

Output	Color	Output	Color	Output	Color
3	White/Orange	6	White/Blue	9	White
4	White/Yellow	7	White/Violet	10	White/Black
5	White/Green	8	White/Gray	Ground	Black

Devices connected to the outputs must be located within the same room as the XR200 panel.

Telephone RJ Connector

14.1 Description

Connect the panel to the public telephone network by installing a DMP 356 RJ Cable between the panel's J3 connector and the RJ31X or RJ38X phone jack. Set the 3-pin headers labeled J11 and J12 on the XR200 to DD for digital dialer, Contact ID, or Modem IIe operation or MPX for multiplex operation.



Figure 7: Phone Jack Wiring

14.2 FCC registration

The Model XR200 complies with FCC part 68 and is registered with the FCC.

Registration number: CCKUSA-18660-AL-R / Ringer Equivalence: 1.1B

14.3 Notification

Registered terminal equipment must not be repaired by the user. In case of trouble, the device must be immediately unplugged from the telephone jack. The factory warranty provides for repairs. Registered terminal equipment may not be used on party lines or in connection with coin telephones. Notification must be given to the telephone company with the following information:

- a. The particular line(s) the service is connected to
- b. The FCC registration number
- c. The ringer equivalence
- d. The make, model, and serial number of the device

14.4 Ground Start

For ground start operation, install a DMP Model 305 Relay into socket K4. Ground start phones cannot be used on commercial or residential fire applications.

14.5 Answering Machine Bypass

For answering machine bypass capability, install a DMP Model 305 Relay into socket K2 according to the Wiring Diagram in this guide. See section 3.2. The bypass function operates by detecting the frequency of the tone sent to the premises by the Remote Link computer. Tones emitted by fax machines or other devices are ignored by the panel. When the correct frequency tone is detected, the panel picks up the phone line and establishes communication with the calling computer.

Reset and Tamper Headers

15.1 J16 Reset Header

The reset header is located just above the terminal strip on the right side of the circuit board and is used to reset the microprocessor of the XR200. To reset the panel when first installing the system, install the reset jumper before applying power to the panel. After connecting the AC and battery, remove the reset jumper.

To reset the panel while the system is operational (for example, prior to reprogramming), install the reset jumper without powering down the system. Remove the reset jumper after one or two seconds.

After resetting the panel, you must begin programming within 30 minutes. If you wait longer than 30 minutes, you will have to reset the panel again.



Figure X: XR200 Panel Showing Reset and Tamper Header Positions

15.2 J4 Tamper Header

The J4 header is for use with the optional DMP 306 Tamper Harness. The harness connects to one or more tamper switches mounted inside the panel enclosure to supervise against unauthorized opening or removal of the enclosure. Refer to the wiring diagram on the enclosure door for correct tamper switch wiring.

How the tamper works

If the enclosure is opened or removed while one or more of the system's areas are armed, a panel tamper alarm is indicated. If all areas are disarmed, a panel tamper trouble is indicated.

Universal UL And NFPA Fire Alarm Specifications

16.1 Introduction

The programming and installation specifications contained in this section must be completed when installing the Model XR200 in accordance with any of the UL or NFPA fire standards. Additional specifications may be required by a particular standard.

16.2 Wiring

All wiring must be in accordance with NEC, ANSI/NFPA 70.

16.3 Transformer

A wire-in transformer should be used. Use the 16.5 VAC 40 VA DMP Model 320. The transformer must be mounted within 20 feet of the panel connected by conduit.

16.4 End-of-Line Resistor

The DMP Model 310 1K Ohm EOL resistor should be used on all 1K Ohm EOL fire zones.

16.5 System Trouble Display

The Status List Display must include at least one keypad that displays system monitor troubles. See section 10.3 of the XR200 Programming Guide (LT-0196).

16.6 Fire Display

The Status List Display must include at least one keypad that displays troubles and alarms on fire type zones. See section 10.4 of the XR200 Programming Guide (LT-0196).

16.7 Police Station Phone Number

The digital dialer telephone number programmed for communication must not be a police station phone number, unless that phone number is specifically provided for that purpose.

16.8 System Maintenance

Proper installation and regular maintenance by the installing alarm company and frequent testing by the end user is essential to ensure continuous satisfactory operation of any alarm system. Offering a maintenance program and acquainting the user with the correct procedure for use and testing of the system is also the responsibility of the installing alarm company.

16.9 Audible Alarm

Fire Type zones should be programmed to activate an audible alarm. The Bell Action for Fire Type zones should not be programmed as "N". See section 8.4.1 in the XR200 Programming Guide (LT-0196).

16.10 Fire Zone Programming

If a retard delay is used on a waterflow zone, it cannot exceed 90 seconds and any retard delay in the waterflow initiating devices must be subtracted from the 90 seconds allowed. See sections 13.4 and 13.17 in the XR200 Programming Guide (LT-0196). The retard delay should not be used on a zone with smoke detectors.

16.11 Style D Zones

If required, the DMP 869 Dual Style D Initiating Module provides for connection of two Style D zones to the Model XR200. See the 869 Installation Guide (LT-0186) and section 25.4 of this guide for wiring information.

16.12 Video Option

The Video option must be selected as NO when any fire protection is connected to the XR200. See section 7.9 in the XR200 Programming Guide (LT-0196).

16.13 UL Listed Receivers

UL has verified operation with the DMP SCS-1 or SCS-1R (DD, HST), Sur-Gard SG-HLR2-DG (CID, M2E), FBII CP220PB (CID), Osborne-Hoffman Quick-Alert (CID, M2E), and Radionics D6500 (M2E) receivers.

UL 985 NFPA 72 (Chapter 2) Specifications

Household Fire Warning System Units

17.1 Bell Output Definition

The Bell Output of the Model XR200 must be programmed to operate steady on burglary alarms and pulsed or temporal on fire alarms. See sections 8.4.1 and 8.4.2 of the XR200 Programming Guide (LT-0196).

UL 864 NFPA 72 (Chapter 9) Specifications

Control Units for Fire-Protective Signaling Systems

18.1 Zone Restoral Reports

The Restoral Reports option must be selected as Yes or Disarm. See section 6.3 in the XR200 Programming Guide (LT-0196).

18.2 Power Fail Delay

The Power Fail Delay option must be selected as 6 hours. See section 7.6 of the XR200 Programming Guide (LT-0196).

18.3 Sprinkler Supervisory

Any zone used for sprinkler supervisory must be programmed with "SPRINKLR XXX" as the zone name. The last three characters in the zone name may be assigned a number to identify the zone. The Model 893 Dual Phone Line Module must be used on all sprinkler supervisory systems.

18.4 DACT Systems

Two phone lines must be used. The two phone lines cannot be ground start or party lines. The 893 Dual Phone Line Module is used to provide connection of two phone lines to the system. The 2ND Phone Line communication option must be selected as YES. See section 3.3 of the XR200 Programming Guide (LT-0196).

Two different phone numbers must be programmed for digital communication. See sections 3.17 and 3.18 of the XR200 Programming Guide (LT-0196). The Test Time option must be programmed so that the XR200 sends a report every 24 hours. See sections 3.8 to 3.10 of the XR200 Programming Guide (LT-0196).

Additionally, you can use the 462N Network Interface Card and the HST (Host) Communication type for supplementary communication over digital data networks.

18.5 Type 2 and Type 3 Central Station Service

Type 2 and Type 3 Central Station Service can be provided by using MPX communication to the DMP SCS-1 Receiver system. See section 3.2 of the XR200 Programming Guide (LT-0196).

18.6 Type 1 Central Station Service

Type 1 Central Station Service can be provided by using MPX as the main communication and digital dialer as backup. The 893 Dual Phone Line Module is used to provide connection of the MPX and dialer lines. See section 3.2 of the XR200 Programming Guide (LT-0196). If Type 1 Central Station service is provided, the Test Time option must be programmed to send a report every 24 hours. See sections 3.8 to 3.10 of the XR200 Programming Guide (LT-0196).

With both Type 1 and Type 2 Central Station service, the total number of panels assigned to a standard MPX receiving line of the SCS-1 Receiver System must not exceed 90. This may be increased to 180 by setting the SNRM option to NO in the SCS-1 Receiver system. This is to allow any signal from a XR200 to be transmitted to the receiver within 90 seconds.

COMPLIANCE

18.7 Local Protective Signaling Systems

The DMP Model 865, 866, or 867 Notification Circuit Module must be used on the bell circuit for detection of shorts and grounds. See sections 25.1 to 25.3 for wiring diagrams. Model 770 series keypads that are used to display troubles for local fire alarm systems must be installed within a DMP Model 777 Keypad Protector. Model 790 series keypads that are used to display troubles for local fire alarm systems communication must be installed within a DMP Model 777 with 777S 1.0" spacer. Any burglary or other off premises communication must be done with the Model 893 Dual Phone Line Module. For local commercial fire installations, the 893 is required.

18.8 Proprietary Protective Signaling Systems

The total number of panels assigned to one MPX receiving line of the DMP SCS-1 Receiver system must not exceed 90. This may be increased to 180 by setting the SNRM option to NO in the SCS-1 Receiver system. This is to allow any report from a XR200 to be sent to the receiver within 90 seconds.

18.9 Remote Station Protective Signaling Systems

You must provide 60 hours of standby battery. Up to four 12 VDC, 6.5 Ah batteries may be used. See section 6.6 for standby battery calculations. Two Radionics Model D127 Reversing Relay Modules provide two reversing polarity telephone connections. See section 25.5 and the D127 Installation Instruction sheet for wiring details. A DMP Model 893 is used to provide two line dialer communication or Type 1 Multiplex communication.

18.10 Fire Protective Signaling Systems with an iCOM™

The XR200 Command Processor[™] Panel must be programmed as described below for Fire Protective Signaling Systems using an iCOM[™] Internet Alarm Router for communication.

- UL AA must be programmed as NO
- SUB CODE must be programmed as YES
- CHECKIN must be programmed as 1
- RETRY TIME must be programmed as 1
- FAIL TIME must be programmed as 1
- NET TRBL must be programmed as YES

Refer to the iCOM™ Internet Alarm Router Installation Sheet (LT-0587) for more information.

California State Fire Marshal Specifications

19.1 Bell Output Definition

The Bell Output of the XR200 panel must be programmed to operate steady on burglary alarms and pulsed, temporal, or California School Code on fire alarms. See sections 8.4.1 and 8.4.2 of the XR200 Programming Guide (LT-0196).

Wiring Diagrams





WIRING DIAGRAMS

20.2 Multiple Notification Circuit Module Installation



Digital Monitoring Products 20

20.3 Multiple Notification Circuit Modules for Zoned Annunciation



WIRING DIAGRAMS

20.4 Dual Style D Zone Module Installation



20.5 Remote Station Reversing Relay Connection



WIRING DIAGRAMS

20.6 Supervised Remote Relay Connection





Operating Instructions for Model XR200 Panels

NORMAL STANDBY CONDITION

When the system is in the normal standby condition, the keypad shows either the time of day or a blank display.

ALARM CONDITION

When the system is in an alarm condition, the keypad display shows the violated zone name(s) followed by an alarm display.

ALARM SILENCE

To silence the alarm while the bell or siren is sounding, enter your code number and press the COMMAND key. This silences the alarm but does *not* cancel any alarm reports to the central station.

RESETTING DETECTORS

To reset a smoke or other detector, enter the User Menu by pressing the COMMAND key until **MENU? NO YES** appears in the display. Press the top row key under **YES**. The display shows **ENTER CODE:** -. Enter your code number and press COMMAND. The keypad display now shows **ALARM SILENCE?**. Press the COMMAND key until **SENSOR RESET?** appears in the display. Press any top row key.

TROUBLE CONDITION

When a device is in a trouble condition, the keypad tones and displays the zone or device name followed by **TRBL**. Press any top row key to silence.

SYSTEM TESTING

You should test the security system periodically to ensure proper operation. You can do this through a function in the User Menu. After entering the User Menu, press the COMMAND key until **SYSTEM TEST**? displays. Press any top row key. The system bell, battery, and communication to the central station receiver system is then tested.

ALARM SERVICE

If service is required for this system, please contact:

Company _____

Address _____

Telephone _____

The operating instructions above should be attached to the front, or framed and located adjacent to, the panel or a Security Command keypad with an alphanumeric display.





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