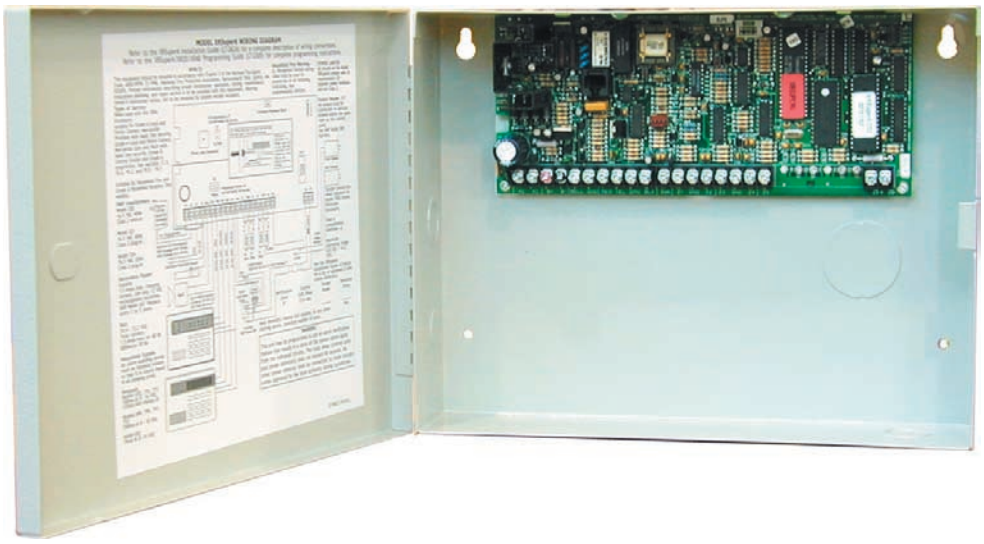
# INSTALLATION GUIDE



## XRSUPER6 / XR20 / XR40
## COMMAND PROCESSOR™ PANELS

Digital Monitoring Products

# MODEL XRSuper6/XR20/XR40
# 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 B 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

# 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 heading, and a quick summary of the change.

| Date | Section Number and Heading | Summary of Changes |
|---|---|---|
| 8/06 | 3.5 Wiring Diagram | Added SIA CP-01 information. |
| | 6.1 Battery Terminals 3 & 4 | Added figure and text to clarify use of battery harnesses and PTC. Note: Subsequent figure numbers changed. |
| | 6.7 Standby Battery Calculation | Removed obsolete products. |
| | 13.1 Telephone RJ Connector | Added figure to clarify phone jack wiring operation. |
| | 14.1 Reset Jumper J16 | Added figure to clarify and revised text. |
| | 23.1 through 23.9 | Added False Alarm Reduction features to meet SIA CP-01. **Note**: Subsequent section numbers changed. |
| | Listings and Approvals | Added SIA CP-01 certification. |
| 5/06 | 17.5 Wireless Arming Mode | Added Wireless operation information. |
| | 17.6 Wireless Tamper | Added Wireless operation information. |
| | 17.7 Wireless External Contact | Added Wireless operation information. |
| | 17.8 Wireless Supervision Time | Added Wireless operation information. |
| | 18.9 Wireless Arming Mode | Added Wireless operation information. |
| | 18.10 Wireless Tamper | Added Wireless operation information. |
| | 18.11 Wireless External contact | Added Wireless operation information. |
| | 18.12 Wireless Supervision Time | Added Wireless operation information. |
| | 21.3 Wireless External Contact | Added Wireless operation information. |
| | 21.4 Wireless External contact | Added Wireless operation information. |
| | 21.5 Wireless Fire Verification | Added Wireless operation information. |
| | 23.2 Common Keypad Displays | Revised table to reflect valid messages and their operation. |
| 2/06 | 16.5 Wireless External Contact | Added Wireless operation information. |
| | 16.6 Wireless Supervision Time | Added Wireless operation information. |
| 12/05 | 3.5 Wiring Diagram | Added Aqualite keypad models. |
| | 6.7 Standby Battery Calculation | Added Aqualite keypad models. |
| 9/05 | 3.5 Wiring Diagram | Added 7760 keypad. |
| | 6.7 Standby Battery Calculation | Added 7760 keypad. |
| 7/05 | 3.5 Wiring Diagram | Added Power Limited terminal information. |
| 6/05 | 3.5 Wiring Diagram | Added UL AA High Line Security information. |
| | 17.4 AA High Line Network Security | Added UL AA High Line Security information. |
| | 19.8 AA High Line Network Security | Added UL AA High Line Security Information. |
| | Listings and Approvals | Added UL AA High Line Security information. |
| 12/04 | Entire Document | Added 734 Module and Thinline keypads where applicable. |
| | 1.6 Enclosure Specifications | Added 341 and 342 Enclosure information. Removed 350 Enclosure information. |
| | 3.5 Wiring Diagram | Updated keypad listing. |
| | 4.1 Mounting the Enclosure | Added 341 and 342 Enclosure options. Removed 350 Enclosures option. |
| | 4.3 Installation Specifications | Updated wiring text. |
| | 6.7 Standby Battery Calculations | Revised current draw values, added Thinline keypads, added 734 Module, corrected Total multiplier value. |
| | Back Cover | Added Listings and Approvals |
| 3/04 | 1.6 Enclosure Specifications | Added 350 Enclosure information |
| | 3.5 Wiring Diagram | Added resistor part numbers and updated power supervision relay information. |
| | Sections 3.4 and 6.7 | Added keypad models 690F, 790F, and 693. Added/revised current draw information. |
| | 4.1 Mounting the Enclosure | Added 350 Enclosure as an option. |
| | 24.2 Installation for Derived Channel Burglary | Revised drawing and added STU connection text. |

# Panel Specifications

## 1.1 Power Supply

| | |
|---|---|
| Transformer Input: | Wire-in — 16.5 VAC 40 VA, Model 320 |
| | Plug-in — 16.5 VAC 40 VA, Model 321 |
| Standby Battery: | 12 VDC 7.0 Ah (40 VA transformer charges up to 2 batteries) |
| Auxiliary Output: | 12 VDC at 500mA |
| Bell Output: | 12 VDC at 1.5 Amps |
| Smoke Detector Output: | 12 VDC at 100mA |

All circuits inherent power limited

## 1.2 Communication

Built-in SDLC Digital Dialer communication to DMP Model SCS-1 and SCS-1R Receivers
Built-in 4-2 communication to non-DMP receivers
Built-in M2E (Radionics Modem IIe) communication to non-DMP receivers
Built-in CID (Contact ID) communication to non-DMP receivers
Any panel can operate as a local system.

## 1.3 Panel Zones

Nine 1k Ohm EOL burglary zones: zones 1 to 9 on XR20 and XR40 panels, and zones 1 to 5 on the XRSuper6.
One 3.3k Ohm EOL Class B powered fire zone with reset capability: zone 6 on the XRSuper6, and zone 10 on XR20 and XR40 panels.

## 1.4 Keypads

You can connect up to four supervised keypads to the XRSuper6/XR20 panels and eight supervised keypads on the XR40.

- 16 or 32-character alphanumeric keypads
- 10-zone LED keypads

In addition, the following zone expanders can be added to the XRSuper6/XR20/XR40 panels:

- One, four, eight and 16-zone expansion modules
- Single-zone PIR and glassbreak detectors
- One 738A Ademco Wireless interface for up to 32 points of zone expansion
- One FA426 Wireless receiver for up to 16 points of zone expansion (Two FA426 on the XR40)

When using the FA426 Wireless Receiver, you can add unsupervised devices to address five of the XRSuper6 and XR20.

## 1.5 Outputs

The XRSuper6/XR20/XR40 panels provide four open collector outputs rated for 50mA each. A Model 300 Output Harness is required. The open collector outputs provide the ground connection for a positive voltage source.

## 1.6 Enclosure Specifications

The XRSuper6/XR20/XR40 panel ships in an enclosure with EOL resistors, battery leads, user's guide, and programming sheet. All enclosures are constructed using 20-gauge cold rolled steel except where noted.

**Model 340 Enclosure**

| | |
|---|---|
| Enclosure size: | 12.5" W x 9.5" H x 2.75" D |
| Color: | Gray (G) |

**Model 341 Enclosure**

| | |
|---|---|
| Enclosure size: | 12.75" W x 6.55" H x 2.9" D |
| Color: | Gray (G) |

**Model 350A Enclosure**

| | |
|---|---|
| Enclosure size: | 17.1" W x 13.2" H x 3.7" D |
| Color: | Gray (G) |
| Construction: | 18-gauge with 16-gauge door |

**Model 349 Enclosure**

| | |
|---|---|
| Enclosure size: | 12.5" W x 11.25" H x 3.5" D |
| Color: | Gray (G) or Red (R) |

**Model 342 Enclosure**

| | |
|---|---|
| Enclosure size: | 11" W x 5" H x 2.75" D |
| Color: | Gray (G) |

# Introduction

## 2.1 Description

The DMP XRSuper6/XR20/XR40 Command Processor™ panels are powerful 12 VDC burglary and fire communicator panels with battery backup. The XR20 and XR40 panels provide nine on-board burglary zones and one on-board 12 VDC Class B powered fire zone. The XRSuper6 provides five burglary zones and one fire zone. The fire zone has a reset capability to provide for 2-wire smoke detectors, relays, or other latching devices. The panels can communicate to one or two DMP SCS-1/SCS-1R Receivers using SDLC digital dialer, 4-2, or Contact ID (CID) reporting formats. In addition, the XRSuper6/XR20/XR40 can communicate using the Radionics Modem IIe format.

## 2.2 System Configurations

The panels can be programmed to operate as either an All/Perimeter system that provides one Perimeter area and one Interior area, or as a Home/Sleep/Away system that provides one Perimeter, one Interior, and one Bedroom area. The Bedroom area can include any protection devices the user wants disarmed during their sleeping hours and armed in the Away mode. In addition, the XR20/XR40 can operate as a four area system.

## 2.3 Before You Begin

Before installing the panel, 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. In addition to this installation guide, you should also read through and familiarize yourself with these other product documents:

- XRSuper6/XR20/XR40 Programming Guide (LT-0305)
- XRSuper6 Programming Sheet (LT-0621)
- XRSuper6 Security Command User's Guide (LT-0622)
- XR20 Program Information Sheet (LT-0302)
- XR20 Security Command User's Guide (LT-0303)
- XR40 Programming Sheet (LT-0493)
- XR40 Security Command User's Guide (LT-0494)

## 2.4 About this Guide

The information contained in this guide is organized into five sections:

- The **Table of Contents** at the front of this guide lists all of the headings and the page number where the information can be found.
- The **Introduction** section gives you an overview of the various components that go into a panel system and diagrams some typical system configurations.
- The **Installation** section begins with mounting instructions for the enclosure and takes you through the proper way to power up the panel prior to programming.
- The **Compliance** section lists various standards to which the panels comply.
- The **Wiring Diagram** section provides common system drawings for the panels.

### Caution notes

Throughout this guide you will see caution notes containing information you need to know when installing the panel. These cautions are indicated with a yield sign. 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. See the example shown below.

***Always ground the panel before applying power to any devices:*** The panel 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.

## 2.5 How to Use this Guide

To locate information about the installation of the panel, first go to the Table of Contents at the front of this guide. Find the subject heading that closely 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 system is made up of an alarm panel with built in communicator, an enclosure, a 16.5 VAC transformer, and a 12 VDC 7.0 Ah battery. You can add Security Command keypads to the system and can also connect auxiliary devices to the panel's open collector outputs to expand the basic system. Combined current requirements of additional modules may require an auxiliary power supply. Refer to the Standby Battery Power Calculation section in this guide when calculating power requirements. In addition, up to 32 points of zone expansion can be added to the XR40, and 16 points to the XR20 and XRSuper6.

## 3.2 Wiring Diagram

The system wiring diagram in Figure 1, on the following page, shows some of the accessory devices you can connect for use in various applications. A complete description of each module follows.

## 3.3 Lightning Protection

Metal Oxide Varistors and Transient Voltage Suppressors help protect against voltage surges on input and output circuits. A transorb is provided for the Smoke Detector Output Circuit (Terminal 11). This transient protection provides additional resistance to electrical surges such as lighting. Additional surge protection is available by installing the DMP 370 or 370RJ Lightning Suppressors.

## 3.4 Command Processor Accessories

You can connect any combination (up to four on XRSuper6 and XR20, and up to eight on XR40) of vacuum fluorescent, LCD, or LED keypads to the 4-wire keypad data bus provided by the panel on terminals 7, 8, 9, and 10. Also, you can connect Model 712-8 714, 715, 714-8, 714-16, 715-8, 715-16 Zone Expansion Modules to the keypad bus. Additionally, you can connect one Model 738A Ademco Interface Module or one Model FA426 Wireless Receiver to the keypad bus. You can connect one additional Model FA426 Wireless Receiver to the XR40 keypad bus.

## 3.5 XRSuper6/XR20/XR40 Wiring Diagram

**TYPES OF SERVICE**

When used with the 350A Enclosure: suitable for Grade A Local and Police Connect Mercantile Premises with basic line security, Grade A Local and Police Connect Mercantile Safe and Vault with basic line security, Grade B Central Station and Grade A proprietary. See sections 17.3, 18.6, 19.2, and 19.5 - 19.7.

Suitable for Household Fire and Grade A Household Burglary. Test weekly.

Suitable for Grade AA High Line Network Security. See sections 17.4 and 19.8.

**NFPA 72**

This equipment should be installed in accordance with Chapter 2 of the National Fire Alarm Code, ANSI/NFPA 72-1996, (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269). Printed information describing proper installation, operation, testing, maintenance, evacuation planning, and repair service is to be provided with this equipment. Warning: Owner's instruction notice, not to be removed by anyone except occupant.

The Class 2, Class 3, and power-limited fire alarm circuits are installed using CL#, CL3R, or CL3P, or substitute cable permitted by the National Electric code, ANSI/NFPA 70. The Class 2, Class 3, and power-limited fire alarm circuit conductors extedning beyond the cable jacket are separated a minimum of 1/4 in. or by nonconductive tubing or by a nonconductive barrier.

**HOUSEHOLD FIRE WIRING**

UL Recognized limited energy cable must be used for connection of all initiating, indicating, and supplementary devices.

**POWER LIMITED**

All circuits on the Model XRSuper6, XR20, and XR40 comply with the requirements for inherent power limitation and are Class 2.

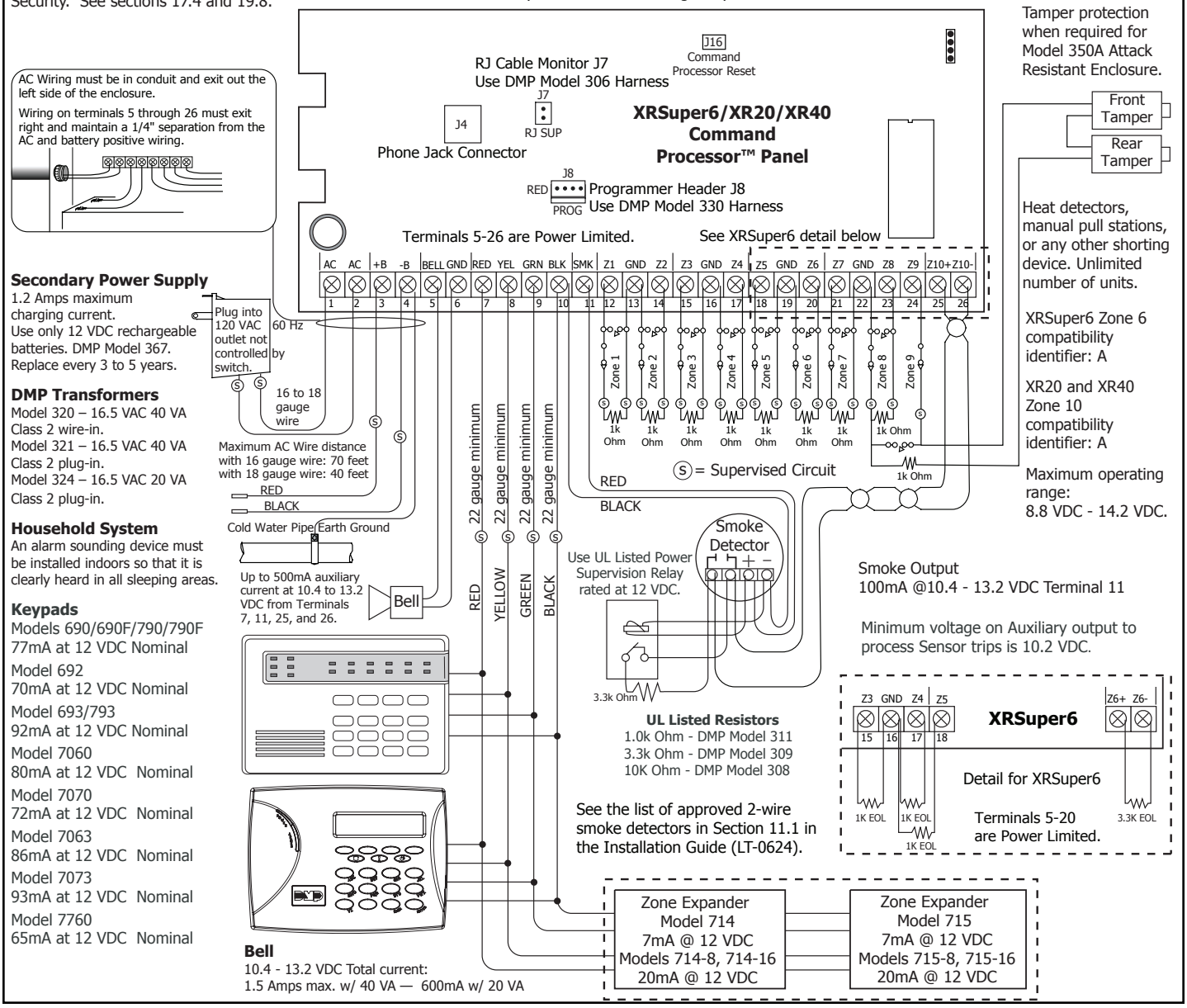



**Figure 1: System Wiring Diagram**

# Installation

## 4.1 Mounting the Enclosure

The metal enclosure 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 PCB when installing the enclosure. The PCB may be installed in the standard 340 enclosure or the optional 349 enclosure. The panels can also be installed in the 341 or 342 small enclosure. The XRSuper6, XR20, or XR40 panels may optionally be installed in the 350A Grade A enclosure.

**Note**: When using the Model 341 or 342 enclosure for UL Listed applications, use the Model 350, 349, 341, 342, or 352S enclosure for standby batteries.

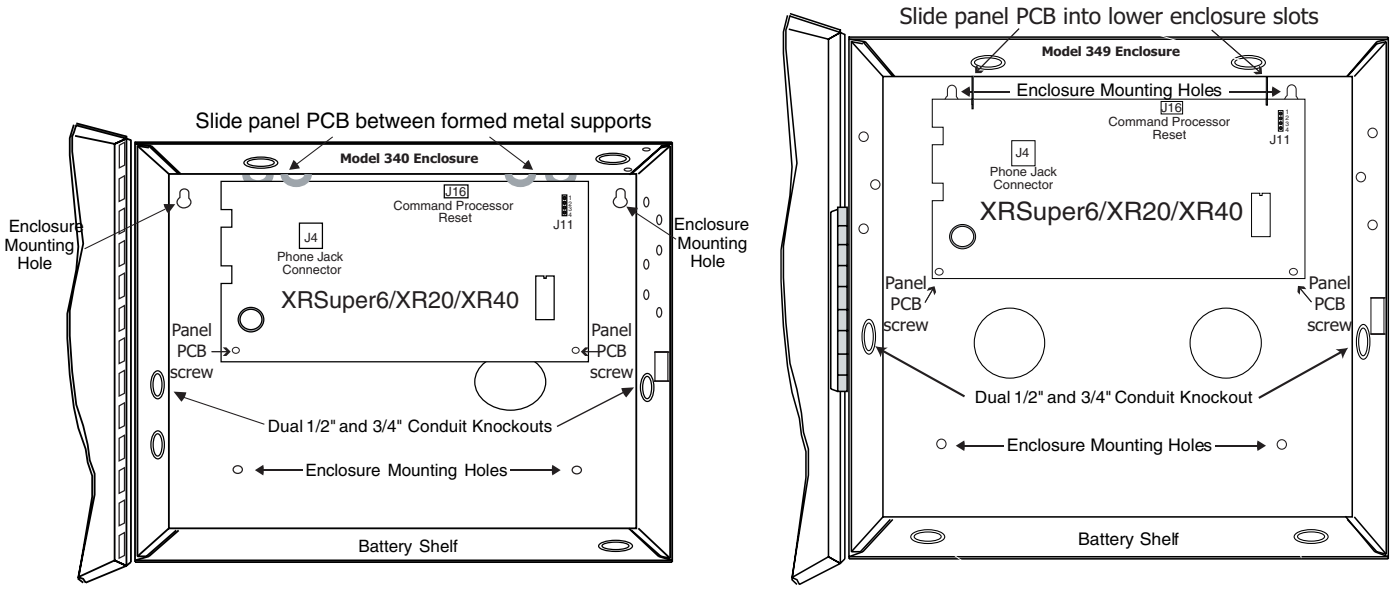



**Figure 2: Standard 340 Enclosure (left) or Optional 349 Enclosure (right)**

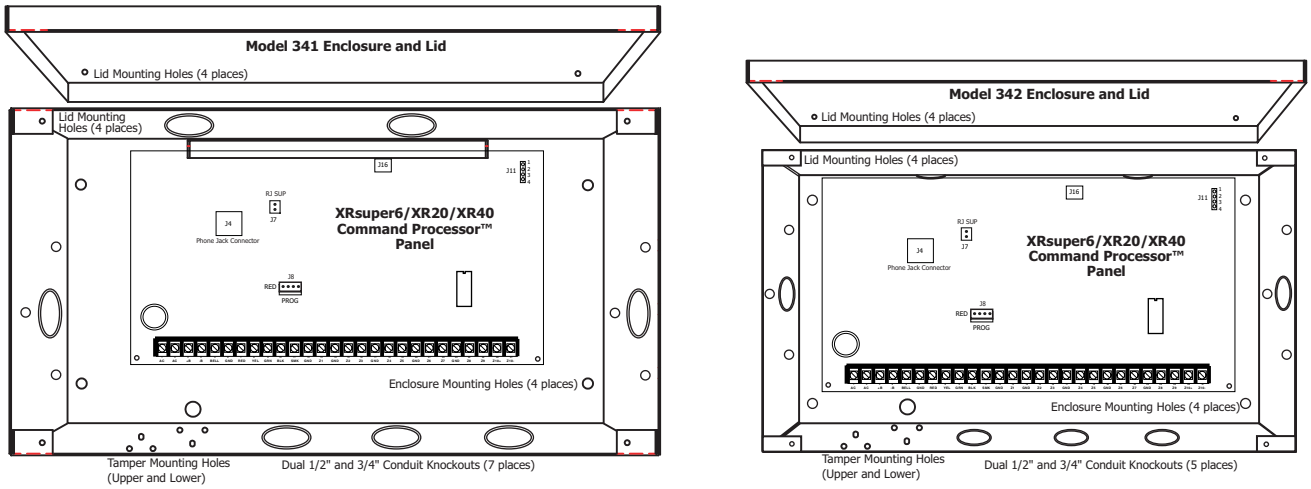



**Figure 3: Optional 341 (left) or 342 (right) Enclosure**

## 4.2 Mounting Keypads

DMP keypads have removable covers that allow you to easily mount the base to a wall or other flat surface using the screw holes provided on each corner.

For mounting keypads on solid walls, or for applications where conduit is required, use a DMP 695, 696, 775, or 776 keypad conduit backbox.

## 4.3 Installation Specifications

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

1. DMP recommends using 18 or 22-gauge **unshielded** wire for all keypad circuits. **Do not** use twisted pair or shielded wire for keypad bus data circuits. All 22-gauge wire must be connected to a power-limited circuit and jacket wrapped.
2. On keypad bus circuits, to maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 feet. When using 18-gauge wire do not exceed 1,000 feet. To increase the wire length or to add devices, install an additional power supply that is UL listed for Fire Protective Signaling, power limited, and regulated (12 VDC nominal) with battery backup.
   **Note:** Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode. Refer to the panel installation guide for the specific number of supervised keypads allowed.
3. Maximum distance for any one bus circuit (length of wire) is 2,500 feet regardless of the wire gauge. 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. As wire distance from the panel increases, DC voltage on the wire decreases.
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, add an auxiliary power supply at the end of the circuit. When voltage is too low, the devices cannot operate properly.

For additional information refer to the 710/710F Installation Sheet (LT-0310) and or the LX-Bus/Keypad Bus Wiring Application Note (LT-2031).

# 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 panel.

***Always ground the panel before applying power to any devices:*** The panel 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, in the Secondary Power Supply section.

## 5.2 Transformer Types

The transformer for the panel is 16.5 VAC 40 VA, which provides up to 1.5 Amps of bell output current, 500mA of auxiliary current, and 100mA of smoke detector output. You can use either the Model 320 wire-in or 321 plug-in transformer with the panel. The total current available is limited by the total battery standby requirements of the installation.

The transformer must be connected to a 120 VAC 60 Hz commercial power outlet that is not controlled by a wall switch. ***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 terminal 4 on the panel and to the negative terminal of the battery. The negative terminal connects to the enclosure ground internally through the panel circuit board. Connect the red battery lead to terminal 3 on the panel and to the positive terminal of the battery. Observe polarity when connecting the battery. The panel can charge up to two batteries.

***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 XRSuper6/XR20/XR40 PANEL.***

## 6.2 Earth Ground

Terminal 4 of the panel must be connected to earth ground using 14 gauge or larger wire to provide proper transient suppression. DMP recommends connecting to a metal cold water pipe or ground rod only. Do not connect to electrical conduit or a telephone company ground.

## 6.3 Replacement Period

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

## 6.4 Discharge/Recharge

The panel 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 7, 11, and 25. The various battery voltage levels are listed below:

| | | |
|---|---|---|
| Battery Trouble: | Below | 11.9 VDC |
| Battery Restored: | Above | 12.6 VDC |

## 6.5 Battery Supervision

The panel tests the battery once every hour when AC power is present. This test occurs 15 minutes past each hour and lasts for five seconds. A load is placed on the battery and if its voltage falls below 11.9 VDC a low battery is detected. If AC power has failed, 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 two minutes until the battery charges above 12.6 VDC; the battery restored voltage. If a faulty battery is replaced with a fully charged battery, the restored battery will not be detected until the next two-minute test is done.

## 6.6 XRSuper6/XR20/XR40 Power Requirements

During AC power failure, the panel and all auxiliary devices connected 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 panel. Add the additional current draw of DMP keypads, smoke detector output, and any other auxiliary devices used in the system for the total current required. The total is then multiplied by the total number of standby hours required to arrive at the total Ampere-hours required.

## 6.7 XRSuper6/XR20/XR40 Standby Battery Calculations

| Standby Battery Power Calculations | Standby Current | | | | | Alarm Current | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Command Processor Panel | Qty _____ | x | 50mA | _____mA | | | | 50mA | _____mA | |
| Active Zones 1-9 (1-5 on XRSuper6) | Qty _____ | x | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| Active Zone 10 (Zone 6 on XRSuper6) | Qty _____ | x | 4mA | _____ | | Qty _____ | x | 30mA | _____ | |
| 2-Wire Smoke Detectors | | | 0.1mA | _____ | | Qty _____ | x | 0.1mA | _____ | |
| Panel Bell Output | | | | | | 1500mA | x | Max. | _____ | |
| 690/690F Security Command Keypad | Qty _____ | x | 77mA | _____ | | Qty _____ | x | 84mA | _____ | |
| 692 Keypad | Qty _____ | x | 30mA | _____ | | Qty _____ | x | 70mA | _____ | |
| 693 Easy Entry Keypad | Qty _____ | x | 92mA | _____ | | Qty _____ | x | 120mA | _____ | |
| 790/790F Security Command Keypad | Qty _____ | x | 77mA | _____ | | Qty _____ | x | 84mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 793 Easy Entry Keypad | Qty _____ | x | 92mA | _____ | | Qty _____ | x | 120mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 770 Security Command Keypads | Qty _____ | x | 100mA | _____ | | Qty _____ | x | 100mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 7060 Thinline/7060A Aqualite Keypad | Qty _____ | x | 72mA | _____ | | Qty _____ | x | 87mA | _____ | |
| 7063 Thinline/7063A Aqualite Keypad | Qty _____ | x | 85mA | _____ | | Qty _____ | x | 100mA | _____ | |
| 7070 Thinline/7070A Aqualite Keypad | Qty _____ | x | 72mA | _____ | | Qty _____ | x | 87mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 7073 Thinline/7073A Aqualite Keypad | Qty _____ | x | 85mA | _____ | | Qty _____ | x | 100mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 7760 Clear Touch Keypad | Qty _____ | x | 72mA | _____ | | Qty _____ | x | 87mA | _____ | |
| 733 Wiegand Interface Module | Qty _____ | x | 30mA | _____ | | Qty _____ | x | 30mA | _____ | |
| Active Zones (EOL Installed) | | | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 734 Wiegand Interface Module | Qty _____ | x | 15mA | _____ | | Qty _____ | x | 15mA | _____ | |
| Active Zones (EOL Installed) | Qty _____ | x | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 736P POPIT Interface Module | Qty _____ | x | 25mA | _____ | | Qty _____ | x | 25mA | _____ | |
| Radionics Popex, POPITs, OctoPOPITs | Qty _____ | x | ___mA | _____ | | Qty _____ | x | ___mA | _____ | |
| 738A Ademco Wireless Interface Module | Qty _____ | x | 75mA | _____ | | Qty _____ | x | 75mA | _____ | |
| 708 Bus Extender Module (one pair) | Qty _____ | x | 20mA | _____ | | Qty _____ | x | 20mA | _____ | |
| 710 Bus Splitter/Repeater Module | Qty _____ | x | 30mA | _____ | | Qty _____ | x | 30mA | _____ | |
| 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 _____ | x | 17mA | _____ | | Qty _____ | x | 17mA | _____ | |
| Active Zones (EOL Installed) | Qty _____ | x | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 714-8, 714-16 Zone Expansion Module | Qty _____ | x | 20mA | _____ | | Qty _____ | x | 20mA | _____ | |
| Active Zones (EOL Installed) | Qty _____ | x | 1.6mA | _____ | | Qty _____ | x | *2mA | _____ | |
| 715 Zone Expansion Module | Qty _____ | x | 7mA | _____ | | Qty _____ | x | 7mA | _____ | |
| Active Zones (EOL Installed) | Qty _____ | x | 4mA | _____ | | Qty _____ | x | *30mA | _____ | |
| 2-Wire Smokes | Qty _____ | x | .1mA | _____ | | Qty _____ | x | .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 | _____ | |
| iCOM*SL* Network Alarm Communicator | Qty _____ | | 80mA | _____ | | Qty _____ | | 80mA | _____ | |
| FA426 16-Point Receiver | | | 47mA | _____ | | | | 47mA | _____ | |
| Aux. Powered Devices on Terminals 7 and 11 | | | | _____mA | | | | | | _____mA |
| Other than Keypads and Modules | | | | | | | | | | |

Total Standby _____mA  Total Alarm _____mA

Total Standby_____mA x number of Standby Hours needed _____ = _____mA-hours

Total Alarm _____mA _____mA-hours

\+ _____mA-hours

* Based on 10% of active zones in alarm condition.

Total X .001

= _____Amp-hrs Required

# Bell Output

## 7.1 Terminals 5 and 6

Nominal 12 VDC is supplied by terminal 5 on the panel to power alarm bells or horns. The output is rated for a maximum of 1.5 Amps with a 40 VA transformer. This output can be steady, pulsed, or Temporal Code 3 depending upon the Bell Action specified in Output Options programming. Terminal 6 is the ground reference for the bell circuit.

# Keypad Data Bus

## 8.1 Description

Terminals 7, 8, 9, and 10 of the panel are designated as the keypad data bus. In addition to keypads, the XRSuper6/XR20/XR40 allows the connection of any combination of zone expansion modules, 5845LX Glassbreak Detectors, and 6155LX PIRs, to the keypad bus up to the maximum of four devices. The XRSuper6 allows the connection of four zones on address one.

## 8.2 Terminal 7 - RED

Nominal 12 VDC is supplied at terminal 7 to power Security Command keypads and zone expanders. This is also where power for any auxiliary device is supplied. The ground reference for terminal 7 is terminal 10. The maximum output is rated at 500mA. All auxiliary devices totaled together must not exceed the panel's maximum current rating of 500mA.

## 8.3 Terminal 8 - YELLOW

Data receive from keypads and zone expanders.

## 8.4 Terminal 9 - GREEN

Data transmit to keypads and zone expanders.

## 8.5 Terminal 10 - BLACK

Terminal 10 is the ground reference for Security Command keypads, zone expanders, and any auxiliary devices being powered by terminals 7 and 11.

## 8.6 Programming Connection

A locking 4-pin header (J8) is provided to connect a keypad when using a DMP Model 330 Programming Cable. This provides a quick and easy connection for programming the panel.

## 8.7 Keypad Addressing

| Address | XRSuper6 Zone # | XR20 Zone # | XR40 Zone # |
|---|---|---|---|
| Panel Zones | 1-6 | 1-10 | 1-10 |
| 1 | 7-10 | 11-14 | 11-14 |
| 2 | 21-24 | 21-24 | 21-24 |
| 3 | 31-34 | 31-34 | 31-34 |
| 4 | 41-44 | 41-44 | 41-44 |
| 5 | * | * | 51-54 |
| 6 | N/A | N/A | 61-64 |
| 7 | N/A | N/A | 71-74 |
| 8 | N/A | N/A | 81-84 |

*** Note:** Address 5 can be used with unsupervised keypads. This allows all 16 zones to be used by Zone Expansion Modules, such as a 714-16.

# Smoke and Glassbreak Detector Output

## 9.1 Terminal 11

Nominal 12 VDC at 100mA maximum (shared by terminal 25) is supplied at terminal 11 to power 4-wire smoke detectors or other auxiliary powered devices. This output can be turned off by the user for 5 seconds using the Sensor Reset option in the User Menu. Terminal 10 is the ground reference for terminal 11.

# Burglary Zones

## 10.1 Description

On XR20/XR40 panels, terminals 12 to 24 are the nine burglary zones. For programming purposes, the zone numbers are 1 to 9. The zone configurations on terminals 12 to 24 are described below. The XRSuper6 terminals 12 to 18 are the five burglary zones with terminal 16 providing the ground for zone 5 (terminal 18).

| Terminal | Function | Terminal | Function |
|---|---|---|---|
| 12 | Zone 1 voltage sensing | 19 | Ground for zones 5 & 6 |
| 13 | Ground for zones 1 & 2 | 20 | Zone 6 voltage sensing |
| 14 | Zone 2 voltage sensing | 21 | Zone 7 voltage sensing |
| 15 | Zone 3 voltage sensing | 22 | Ground for zones 7, 8, & 9 |
| 16 | Ground for zones 3 & 4 (& 5 on XRSuper6) | 23 | Zone 8 voltage sensing |
| 17 | Zone 4 voltage sensing | 24 | Zone 9 voltage sensing |
| 18 | Zone 5 voltage sensing | | |

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

## 10.2 Operational Parameters

Each burglary protection zone detects three conditions: open, normal, and short.

The parameters for each are listed below:

| Condition | Resistance on zone | Voltage on right terminal |
|---|---|---|
| Open | over 1300 ohms | over 2.0 VDC |
| Normal | 600 to 1300 ohms | 1.2 to 2.0 VDC |
| Short | under 600 ohms | under 1.2 VDC |

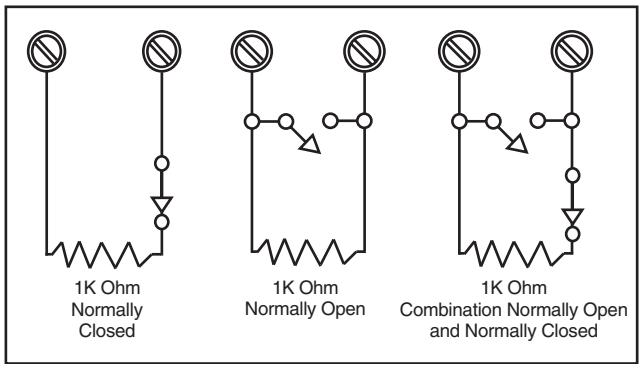



**Figure 4: Protection Zone Contact Wiring**

## 10.3 Zone Response Time

A condition must be present on a zone for 500 milliseconds before it is detected by the panel. Ensure detection devices used on the protection zones are rated for use with this delay.

## 10.4 Keyswitch Arming Zone

You can use a momentary keyswitch on a zone programmed as an Arming type for use in arming and disarming the system without a code.

# Powered Zone for 2-Wire Smoke Detectors

## 11.1 Terminals 25 and 26

A resettable 2-wire Class B powered zone is provided on terminals 25 (positive) and 26 (negative) of the panel. For programming purposes, the zone number is 10 on the XR20/XR40 and zone 6 on the XRSuper6. The zone uses a Model 309, 3.3k Ohm EOL resistor (provided with the panel) and has an operating range of 8.8 to 14.2 VDC.

The UL compatibility identifier is: A.

Caution: Sensor reset on zone 10 (zone 6 on the XRSuper6) will drop power to devices on this zone, causing the panel to sense an open condition on all zone types other than Fire, Fire Verify, and Supervisory. Whenever non-Fire and non-Supervisory zone types are used on zone 10, make the appropriate adjustments to the zone's Armed Action to prevent false alarms from occurring.

| Manufacturer | Model | Detector ID | Base | Base ID | Panel Model | # of Detectors | Zone Expansion Modules |
|---|---|---|---|---|---|---|---|
| Detection Systems | DS250, DS250TH | B | MB2W, MB2WL | A | XR20/XR40 | 10 | 715, 715-8, 715-16, 725 |
| Detection Systems | DS250HD | B | MB2W, MB2WL | A | XR20/XR40 | 10 | 715, 715-8, 715-16 |
| Detection Systems | DS282, DS282TH | B | | | XR20/XR40 | 10 | 715, 715-8, 715-16, 725 |
| DMP/Hochiki | SLK-835 | HD-5 | HSB-200, HSB-200N | HB-55 | XRSuper6/ XR20/XR40 | 7 | 715, 715-8, 715-16 |
| DMP/Hochiki | SLR-835 | HD-3 | NS6-100 | HB-55 | XRSuper6/ XR20/XR40 | 7 | 715, 715-8, 715-16, 725 |
| DMP/Hochiki | SLR-835B | HD-6 | | | XRSuper6/ XR20/XR40 | 7 | 715, 715-8, 715-16, 725 |
| Sentrol/ESL | 429AT, 521B, 521BXT | S09A | | | XR20/XR40 | 12 | 715, 715-8, 715-16 |
| System Sensor | 1100, 1400 | STD | | | XR20/XR40 | 10 | 715 |
| System Sensor | 1151, 2151 | STD | B110PL, B401 | | XR20/XR40 | 10/10 | 715, 725 |
| System Sensor | 1451, 2451TH | STD | B401, B401B | | XR20/XR40 | 10 | 715 |
| System Sensor | 1451DH | STD | DH400 | | XR20/XR40 | 10 | 715 |
| System Sensor | 2100, 2100T | STD | | | XR20/XR40 | 10 | 715 |
| System Sensor | 2100S, 2100TS | A | | | XR20/XR40 | 12 | 725 |
| System Sensor | 2400, 2400AT, 2400AIT, 2400TH | STD | | | XR20/XR40 | 10 | 715 |
| System Sensor | 2451 | STD | B401, B401B, DH400 | | XR20/XR40 | 10 | 715 |

## 11.2 Wiring Zone 10 on XR20/XR40

The end-of-line resistor for zone 9 must not be accidentally connected to the positive terminal of zone 10 as shown below.

When zone 9 is incorrectly connected to zone 10, a false alarm may occur on zone 2 of the panel when the panel picks up the telephone line to communicate to the receiver.

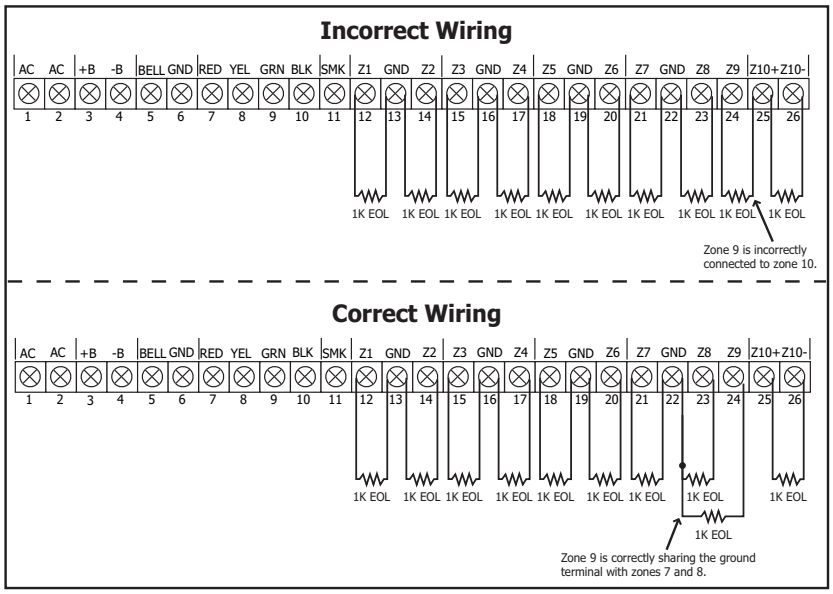



**Figure 5: Zone 9 and 10 End-of-Line Resistor Placement**

# Annunciator Outputs

## 12.1 Description

The four annunciator outputs can be programmed to indicate the activity of the panel's zones or conditions occurring on the system. Annunciator outputs do not provide a voltage but instead switch-to-ground voltage from another source. The outputs can respond to any of the conditions listed below:

1) Activation by zone condition: Steady, Pulse, Momentary, or Follower
2) Manually from the keypad
3) Communication failure
4) Armed area annunciation
5) Fire Alarm or Fire Trouble
6) Ambush alarm
7) Exit and Entry timers
8) System Ready
9) Ground start activation
10) Cellular Backup
11) Late to Close

## 12.2 Harness Wiring

The open collector outputs are accessible by installing the DMP 300 Harness on the 4-pin header labeled J11. The output locations are shown below. For UL applications, devices connected to the outputs must be located within the same room as the panel.

| Output | Color | Wire | Output | Color | Wire |
|---|---|---|---|---|---|
| 1 | Red | 1 | 3 | Green | 3 |
| 2 | Yellow | 2 | 4 | Black | 4 |

## 12.3 Model 860 Relay Module

Connect a Model 860 Relay Module to the panel to provide relays for the annunciator outputs that can be used for electrical isolation between the alarm panel and other systems or for switching voltage to control various functions. The module includes one relay and provides three additional sockets for expansion of up to four relays. Power is supplied to the relay coils from the panel keypad bus. The 860 mounts inside the panel enclosure using the 3-hole mounting configuration. Plastic standoffs are provided with the module for ease of installation. A 4-wire harness is also provided that connects the Model 860 to the DMP panel.

**Relay Contact Rating:** 1 Amp at 30 VDC

# Telephone RJ Connector

## 13.1 Description

Connect the panel to the public telephone network by installing a DMP 356 RJ Cable between the panel's J4 connector and the RJ31X or RJ38X phone jack.

A two pin header labeled RJ SUP (J7) is provided to allow monitoring of the telephone cable connected between the panel and a RJ38X jack (pins 2 and 7 jumpered). Attach a DMP Model 306 Harness between J7 and any available zone. The pins of J7 are connected via the telephone cable to 2 and 7 of the RJ38X jack. The RJ38X jack provides a jumper between pins 2 and 7 which completes the circuit.

When the zone is programmed for a Supervisory type (SV) and the telephone cable is removed, the keypad displays the zone in trouble and produces a steady tone.

## 13.2 FCC Registration

The panel complies with FCC part 68 and is registered with the FCC.

Registration number: CCKUSA - 18660 - AL - R

Ringer Equivalence: 1.1B

## 13.3 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

## 13.4 Ground Start

To configure the panel for ground start operation, you must install the appropriate ground start module and program one of the panel's available annunciator outputs for Ground Start operation. Refer to the panel Programming Guide for complete programming information. This option must not be selected on a UL listed system.

# Reset Jumpers J16

## 14.1 Description

There are two reset jumpers located at the top right of the panel's circuit board labeled RESET. Momentarily shorting these jumpers allows you to reset the microprocessor. Resetting the panel allows you to enter the panel's internal programmer.

To reset the panel when first installing the system, place the blade of a slotted screwdriver across the two reset jumpers after applying power to the panel.

To reset the panel while the system is operational (for example, prior to reprogramming), you can short the jumpers without powering down the system.

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

# Universal UL Burglary Specifications

## 15.1 Introduction

The programming and installation specifications contained in this section must be completed when installing the XRSuper6/XR20/XR40 in accordance with any of the UL burglary standards. Additional specifications may be required by a particular standard.

## 15.2 Wiring

All wiring must be in accordance with NEC, ANSI/NFPA 70, UL 681, and UL 611 for all burglary installations.

## 15.3 Police Station Phone Numbers

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.

## 15.4 Bypass Reports

The bypass reports must be programmed as YES for all UL burglary applications. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 15.5 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.

## 15.6 Cross-Zoning

Zones used for cross zoning must detect the same event and shall not conflict with UL 681 or 1641.

## 15.7 Ground Start

Ground Start phone lines must not be used for UL listed systems.

## 15.8 UL Listed Receivers

UL has verified operation with the DMP SCS-1 and SCS-1R Security Receivers, Sur-Gard MLR2-E, SG-HLR2-DG, FBII CP220PB, Osborne-Hoffman Quick-Alert, and Radionics D6500 receivers.

# UL 1023 Specifications

Household Burglar-Alarm System Units

## 16.1 Bell Cutoff

The bell cutoff time cannot be less than five minutes. See the Programming Guide (LT-0305).

## 16.2 Entry Delay

The maximum entry delay used must not be more than 45 seconds. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 16.3 Exit Delay

The maximum exit delay used must not be more than 60 seconds. See the Programming Guide (LT-0305).

## 16.4 Zone Expansion on 4-Wire Bus

When expansion zones are used, the keypad and zone expander 4-wire bus must be limited to three feet in length unless an external communication fail indicator is added. A 12 VDC relay may be wired as a communication fail indicator. To install, connect the negative side of the indicator to one of the panel's annunciator outputs and the positive side to the smoke power (terminal 11 of the panel). See the XRSuper6, XR20, XR40 Programming Guide (LT-0305).

In addition to the wiring described above, a 24-hour zone must be programmed to activate the appropriate annunciator output.

### 16.5 Wireless External Contact

When used, the External Contact of 1101, 1102, or 1103 must be programmed Normally Closed. See the XRSuper6, XR20, XR40 Programming Guide (LT-0305).

### 16.6 Wireless Supervision Time

The Zone Information Supervision Time must be a maximum of 60 minutes. See the XRSuper6, XR20, XR40 Programming Guide (LT-0305).

## UL 1610 and 1076 Specifications

Central-Station and Proprietary Burglar-Alarm Units

### 17.1 Opening/Closing Reports

The Opening/Closing Reports option must be programmed as YES. See the Programming Guide (LT-0305).

### 17.2 Automatic Bell Test

This option must be programmed as YES. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

### 17.3 Proprietary Dialer

The Model XRSuper6/XR20/XR40 provides Grade A proprietary service when configured as a digital dialer.

### 17.4 AA High Line Network Security

UL AA High Line Security is provided when configured as a NET system using an XRSuper6, XR20, or XR40 panel with an iCOM*SL*™ Network Alarm Router. The NET Check-in time must be set from 01 to 06 minutes. When a dialer is required for 06 minute check-in time, an attack resistant enclosure (DMP Model 350A) is required. When the check-in time is set to a number less than 200 seconds (1, 2, or 3 minutes), an attack resistant enclosure is not required. See the Communication section of the XRSuper6, XR20, XR40 Programming Guide (LT-0305).

### 17.5 Wireless Arming Mode

The System Options Mode for arming must be programmed as Area or All/Perimeter (A/P). See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

### 17.6 Wireless Tamper

The Zone Information Disarmed Open Message to Transmit must be programmed Trouble (T). See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

### 17.7 Wireless External Contact

When used, the External Contact of 1101, 1102, or 1103 must be programmed Normally Closed. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

### 17.8 Wireless Supervision Time

Set the Zone Information Supervision Time to 60 minutes maximum. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

# UL 365 And 609 Specifications

Police Station Connected and Local Burglar Alarm Units and Systems

## 18.1 Entry Delay

The maximum entry delay must not exceed 60 seconds with the Model 350A Grade A housing. See LT-0305.

## 18.2 Grade A Bell

A Grade A local audible signal appliance must be used.

## 18.3 Bell Cutoff

The bell cutoff time cannot be less than 15 minutes. See the Programming Guide (LT-0305).

## 18.4 Automatic Bell Test

The Automatic Bell Test option must be programmed as YES. See the Programming Guide (LT-0305).

## 18.5 Grade A Mercantile

For Grade A Mercantile and Police Station Connect operation the XRSuper6/XR20/XR40 panel and all standby batteries must be mounted in a Grade A attack resistant housing (DMP Model 350A).

## 18.6 Mercantile Safe and Vault

When the DMP Model 350A housing is used, the panel provides operation as a mercantile safe and vault alarm. Bell Supervision and wiring must be in accordance with UL 681. If the panel is mounted outside the safe or vault, tamper protection and the Sentrol Model 5402 or Potter EVD listed vibration detectors should be used. The XRSuper6/XR20/XR40 does not provide operation as a Bank Safe and vault alarm.

## 18.7 Line Security for Police Connect

Basic line security is provided when the Model XRSuper6/XR20/XR40 is configured as a dialer system.

## 18.8 AA High Line Network Security

UL AA High Line Security is provided when configured as a NET system using an XRSuper6, XR20, or XR40 panel with an iCOM*SL*™ Network Alarm Router. The NET Check-in time must be set from 01 to 06 minutes. When a dialer is required for 06 minute check-in time, an attack resistant enclosure (DMP Model 350A) is required. When the check-in time is set to a number less than 200 seconds (1, 2, or 3 minutes), an attack resistant enclosure is not required. See the Communication section of the XRSuper6, XR20, XR40 Programming Guide (LT-0305).

## 18.9 Wireless Arming Mode

The System Options Mode for arming must be programmed as Area or All/Perimeter (A/P). See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 18.10 Wireless Tamper

The Zone Information Disarmed Open Message to Transmit must be programmed Trouble (T). See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 18.11 Wireless External Contact

When used, the External Contact of 1101, 1102, or 1103 must be programmed Normally Closed. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 18.12 Wireless Supervision Time

Set the Zone Information Supervision Time to 60 minutes maximum. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

# UL 1635 Specifications

Digital Burglar Alarm Communicator System Units

## 19.1 Digital Dialer Telephone Number

Both programmed telephone numbers must begin with a D or P. See the Programming Guide (LT-0305).

## 19.2 Entry Delay

The maximum entry delay used must not be more than 60 seconds. See the Programming Guide (LT-0305).

## 19.3 Exit Delay

The maximum exit delay used must not be more than 60 seconds. See the Programming Guide (LT-0305).

## 19.4 Test Frequency

The Test Frequency option must be programmed to send a report once every 24 hours. See LT-0305.

## 19.5 Automatic Bell Test

This option must be programmed as YES. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 19.6 Grade B Central Station

Grade B Central Station service can be provided under UL 1635 by adding a Grade A local audible signal appliance and placing the XRSuper6/XR20/XR40 panel and all standby batteries into the Model 350A Grade A Attack Resistant Housing.

# Universal UL And NFPA Fire Alarm Specifications

## 20.1 Introduction

The programming and installation specifications contained in this section must be completed when installing the Model XRSuper6/XR20/XR40 in accordance with any of the UL or NFPA fire standards. Additional specifications may be required by a particular standard.

## 20.2 Wiring

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

## 20.3 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.

## 20.4 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.

## 20.5 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 the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 20.6 Fire zone programming

Fire zones must be programmed to activate a trouble on open conditions and an alarm on short conditions. The swinger bypass function must not be used on any fire zones. See the Programming Guide (LT-0305).

## 20.7 Ground Start

Ground Start phone lines must not be used for UL listed systems.

## 20.8 UL Listed Receivers

UL has verified operation with the DMP SCS-1/SCS-1R Security Receiver, Sur-Gard MLR2-E, SG-HLR2-DG, FBII CP220PB, Osborne-Hoffman Quick-Alert, and Radionics D6500 receivers.

# UL 985 NFPA 72 (Chapter 2) Specifications

Household Fire Warning System Units

## 21.1 Bell output definition

The bell output of the Model XRSuper6/XR20/XR40 must be programmed to operate steady on burglary alarms and pulsed on fire alarms. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 21.2 Indicating Circuit Supervision

The DMP Models 865 and 866 Notification Circuit Module must be used on the bell circuit for detection of shorts and grounds.

## 21.3 Wireless External Contact

When used, the External Contact of 1101, 1102, or 1103 must be programmed Normally Closed. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 21.4 Wireless Supervision Time

The Zone Information Supervision Time must be 3 minutes. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

## 21.5 Wireless Fire Verification

When used, the Model 1161 and 1162 wireless smoke detectors must not be programmed as Fire Verification (FV) zone type. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

# California State Fire Marshal Specifications

## 22.1 Bell Output Definition

The bell output of the Model XRSuper6/XR20/XR40 must be programmed to operate steady on burglary alarms and temporal on fire alarms. See the XRSuper6/XR20/XR40 Programming Guide (LT-0305).

# Troubleshooting

## 23.1 Troubleshooting Section

This section of the Installation Guide provides troubleshooting information for use when installing or servicing an XRSuper6/XR20/XR40 system.

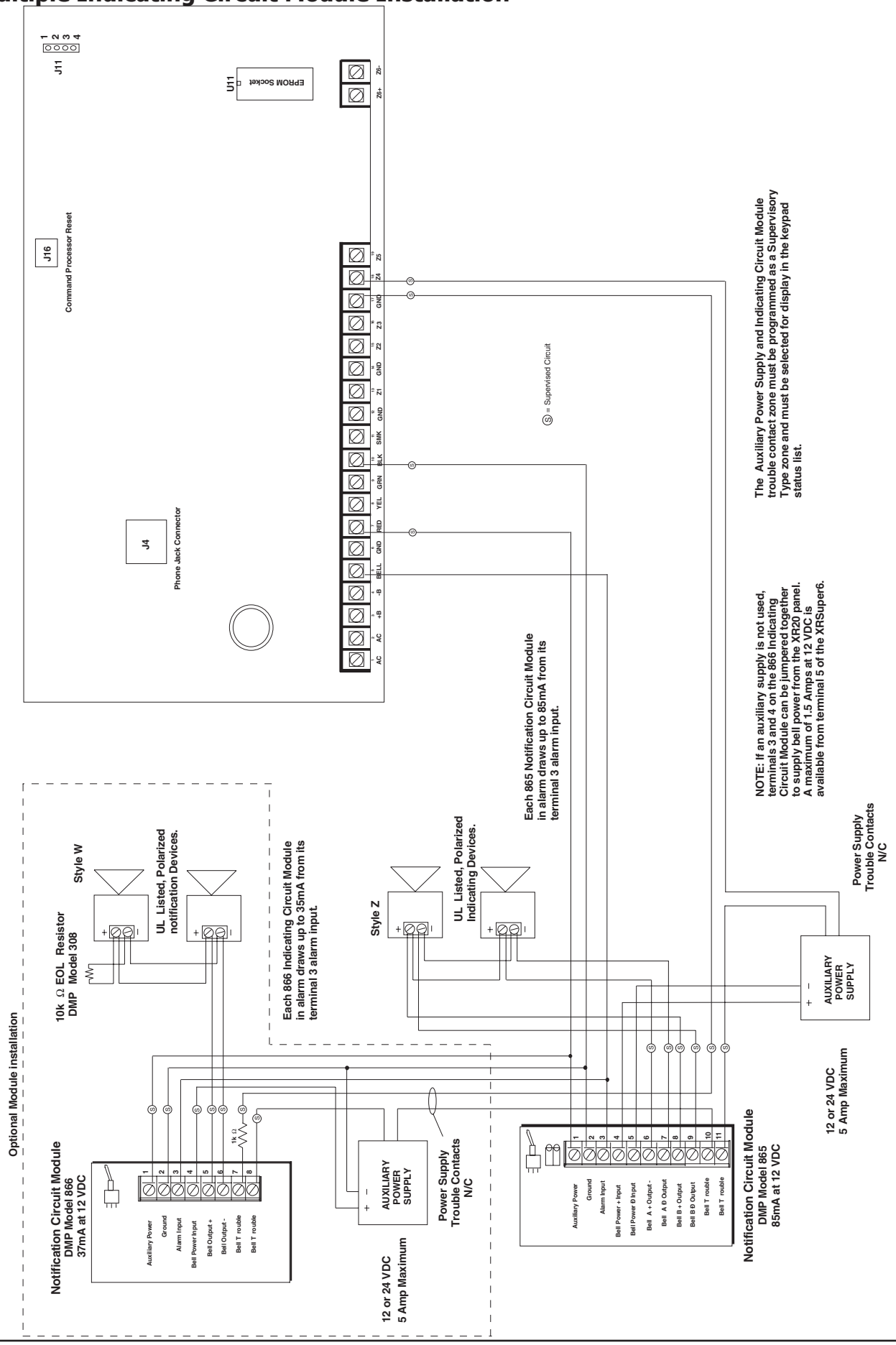
| Problem | Possible Cause | Possible Solutions |
|---|---|---|
| Keypad displays "SERVICE REQUIRED" | J16 Jumper is installed. | Remove the J16 reset jumper. |
| | Open or short on the green data wire to the keypad. | Check for broken or shorted wires between the panel and the keypad. |
| | Bad keypad or zone expander. | Replace with a new or repaired keypad or zone expander. |
| Keypad display is not functional. When a key is pressed, only a short beep is emitted. | Open or short on the yellow data wire to the keypad. | Check for broken or shorted wires between the panel and the keypad. |
| | Bad keypad or zone expander. | Replace with a new or repaired keypad or zone expander. |
| Keypad beeps when keys are pressed, but will not allow the user to arm or disarm, or enter the User Menu. | Two or more keypads are assigned to the same address. | Set each keypad on the system to a unique address. |

## 23.2 Common Keypad Displays

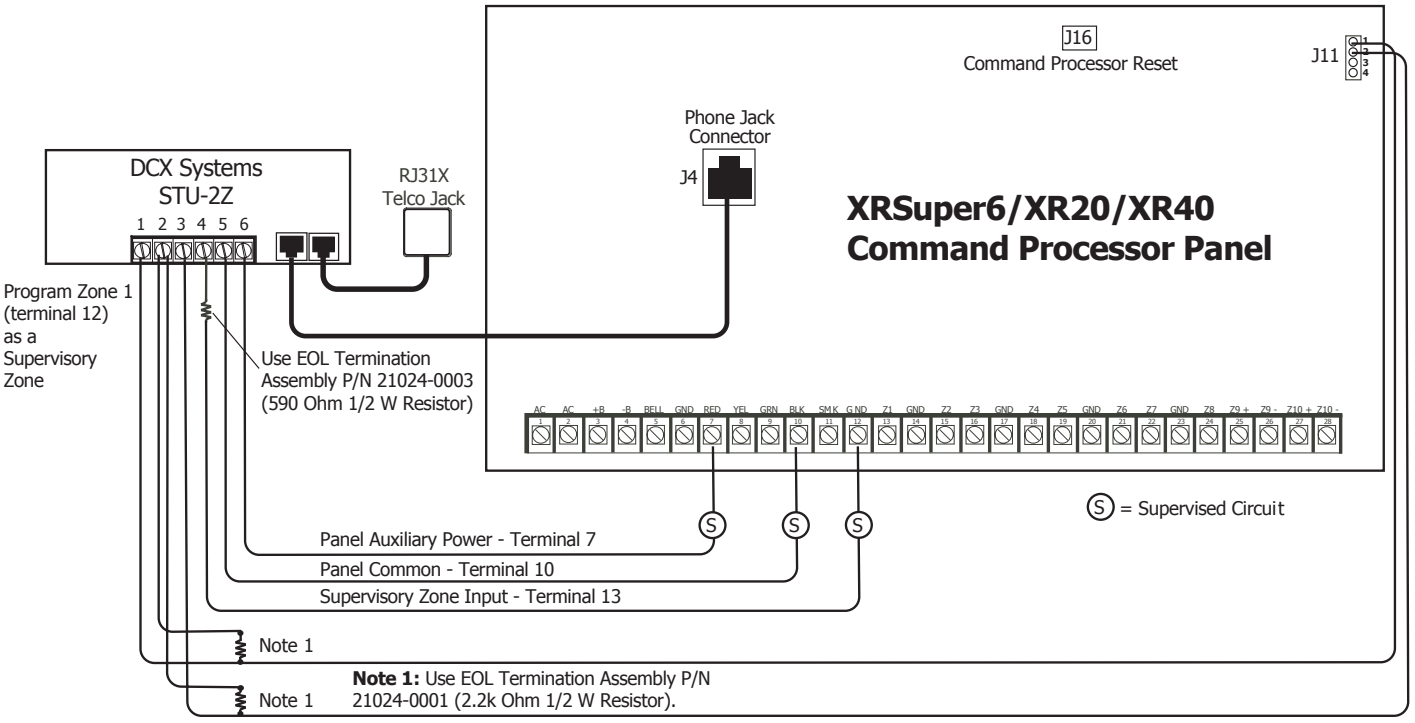
Listed below are several keypad messages you may see on the display. Follow the instructions in the Possible Solutions column to correct the problem.

| Message | Tone at Keypad | Meaning | Possible Solutions |
|---|---|---|---|
| INVALID CODE | No | The user code you have entered is not recognized by the system. | Check the user code and try again. |
| CLOSING TIME (XR20/XR40 Only) | Yes | The schedule has expired but the area has not been armed. | Users still on the premises need to arm the system or extend the schedule to a later time. |
| LATE TO CLOSE (XR20/XR40 Only) | Yes | The system was not armed at its scheduled closing time. | Users still on the premises need to arm the system or extend the schedule to a later time. |
| SYSTEM BUSY | No | The system is performing another task with a higher priority. | Wait a few moments for the system to complete the task. Make sure the J16 jumper is not on the panel. If the message displays for a long period of time, the processor could be locked up. |
| NON-POLLED ADDRESS | 770 Keypad only | Remote programming is in progress or the keypad address is not programmed correctly. | Adjust keypad address to the appropriate number for the panel type. |
| TRANSMIT FAIL | Yes | The panel has attempted to communicate with the central station 10 times and has not succeeded. | Verify your communication type, account number, and phone number. Make sure the telephone line is connected and working properly. |
| ENTER CODE (When entering Programming) | No | A lockout code has been programmed for the panel. | Enter the lockout code. |
| MAN NUMBER | No | A service man number has been assigned using Remote Link. | Enter your Service Man Code to obtain access to the panel. |

## 24.1 Multiple Indicating Circuit Module Installation



## 24.2 Installation for Derived Channel Burglary




**INTERFACING STU-2Z/STU-4Z TO THE XRSuper6/XR20/XR40 PANELS**

The STU-2Z or STU-4Z may only be used in conjunction with telephone systems that support DCX Systems Derived Channel multiplex network. The STU-2Z or STU-4Z can only be installed in a DMP Model 350 enclosure.

**Burglary**

The STU-2Z and STU-4Z are cross listed with the XRSuper6/XR20/XR50 panels as an accessory for Grade AA Central Station Burglar Alarm. For Grade AA, the following conditions must be met:

- The panel must be installed and programmed to meet Grade A burglary alarm system requirements.
- The panel must be installed and programmed for reporting all alarm conditions through the integral DACT to the same central station that monitors the STU-2Z or STU-4Z.
- The STU-2Z or STU-4Z must be mounted in the panel enclosure and wired according to Section 32.4 above.
- Once installed, the central station must enable 2-minute off-hook polling of the STU-2Z or STU-4Z.

**Supplementary Reporting (for Commercial Burglar Alarm Applications)**

The two zones of the STU-2Z or the four zones of the STU-4Z may be used for supplementary reporting by meeting the following requirements.

1. Program Relay Output #1 for all alarm conditions that are required to report alarm on Zone 1 of the STU-2Z or STU-4Z.
2. Program Relay Output #2 for all alarm conditions that are required to report alarm on Zone 2 of the STU-2Z or STU-4Z.
3. Wire the normally-open terminals of Relay Output #1 to Terminal 1 of the STU-2Z or STU-4Z.
4. Wire the common terminal of Relay Output #1 to Terminal 2 of the STU-2Z or STU-4Z.
5. Wire the normally-open terminal of Relay Output #2 to Terminal 3 of the STU-2Z or STU-4Z.
6. Wire the common terminal of Relay Output #2 to Terminal 2 of the STU-2Z or STU-4Z.

**Commercial Fire**

When the XRSuper6/XR20/XR40 panel is used as a Central Station Alarm Commercial Fire System with one telephone line, in conjunction with DCX Systems STU-2Z or STU-4Z, the following conditions must be met:

- The panel must be installed and programmed to meet commercial fire (reporting) systems requirements.
- The panel must be installed and programmed for reporting all alarm conditions and trouble conditions to the same central station that monitors the STU-2Z or STU-4Z.
- The STU-2Z or STU-4Z must be mounted in the panel enclosure and wired according to Section 32.4 above.
- Once installed, the central station must enable 2-minute off-hook polling of the STU-2Z or STU-4Z.

**Installing the STU-2Z/STU-4Z into the DMP Model 350 Enclosure**

The STU board is mounted in the left side of the DMP Model 350 enclosure by slipping the optional corner mounting bracket over the edge of the enclosure. Use DCX Part # 27074-002 (2Z) or Part # 27078-001 (4Z). Connect the STU power wires and telco cables to the panel terminals and RJ31X as shown in Section 24.2 above.

# OPERATING INSTRUCTIONS MODEL XRSuper6/XR20/XR40 PANELS

When using Model 692 LED Keypad, please refer to 692 User Guide (LT-0275)

### NORMAL STANDBY CONDITION

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

### ALARM CONDITION

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

### ARMING THE SYSTEM

Press the COMMAND key until arming options appear. Press Select key under the arming option desired, then enter your user code.

### DISARMING THE SYSTEM

All/Perimeter and Home/Sleep/Away Systems: Enter your user code. If the system is in alarm the keypad will display DISARM SILENCE. Press the Select key under DISARM.

Area Systems: Enter your user code. If the system is in alarm the keypad will display DISARM SILENCE. Press the Select key under DISARM.

Important: Disarming during an alarm sends an Abort report to the central station if your system is programmed to send Abort reports! Be sure you want the alarm message cancelled before disarming during an alarm.

### ALARM SILENCE

To silence the alarm while the bell or siren is sounding, enter your code number, press the COMMAND key, and press the Select key under SILENCE. This silences the alarm but does not cancel any alarm reports to the central station. Silencing an alarm while the bell is sounding sends an Abort report to the central station if your system is programmed to send Abort reports.

### 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 SENSOR RESET? 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 to test the system bell, battery, and communication to the central station receiver.

### 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 keypad with an alphanumeric display.**

## Listings and Approvals

Underwriters Laboratories (UL) Listed

| | |
|---|---|
| UL 365 | Police Connected Burglar |
| UL 609 | Local Burglar |
| UL 1023 | Household Burglar |
| UL 1076 | Proprietary Burglar |
| UL 1610 | Central Station Burglar |
| UL 985 | Household Fire Warning |

UL High Line Security with Model iCOM*SL*

California State Fire Marshal (CSFM)

FCC Part 15

FCC Part 68 Registration ID CCKUSA-18660-AL-R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