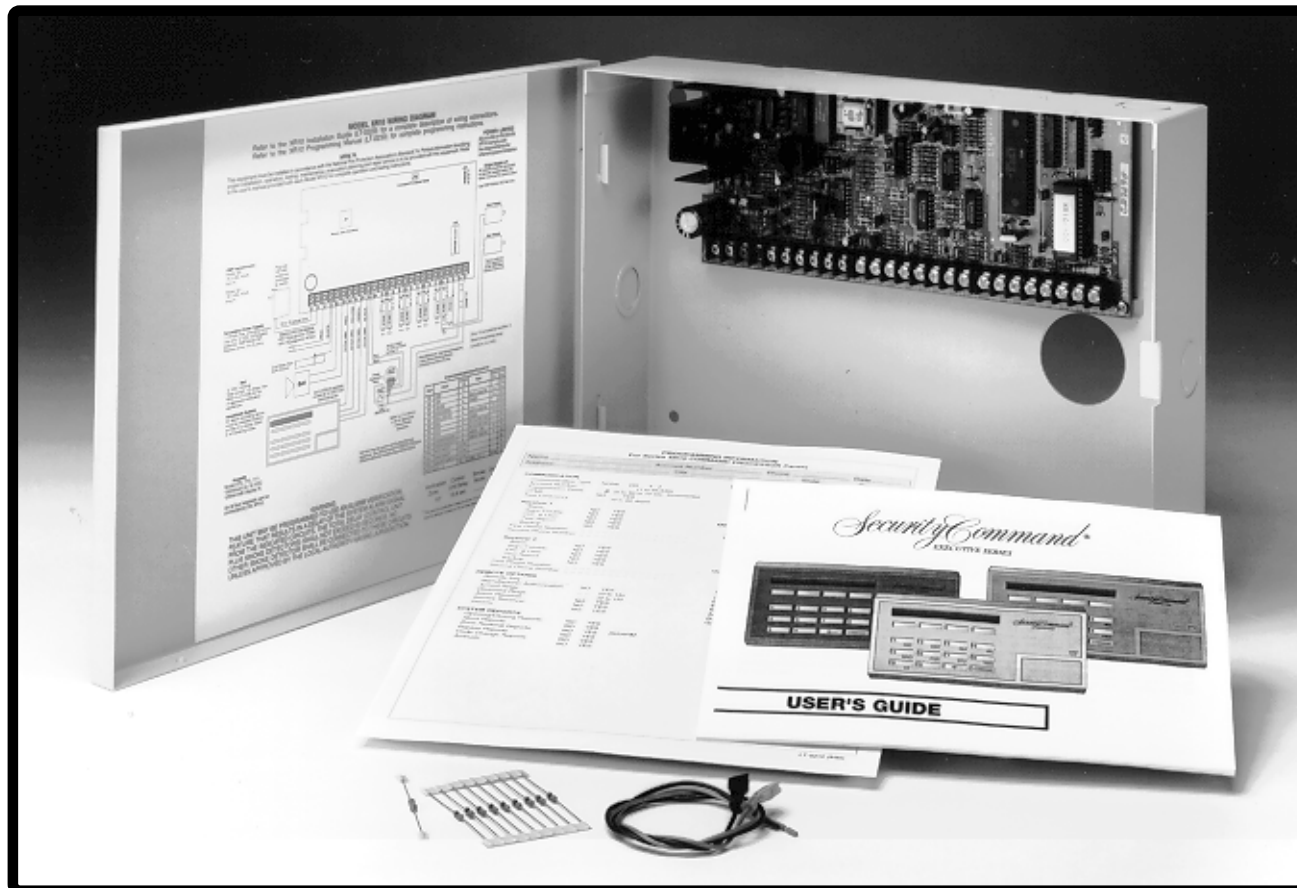


XR10/XR20 Command Processor Panels Installation Guide



10/26 Zone Burglary/Fire/Access Control Panels with Built-in Communicator



Digital Monitoring Products

2841 E. Industrial Drive Springfield, MO 65802-6310 800-641-4282

LT-0229 (5/97)

MODEL XR10/XR20 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

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Panel Specifications

1.1 Power supply

Transformer Input: 16.5 VAC 40VA (Models 320 wire-in or 321 plug-in)
 Standby Battery: 12 VDC 6.5Ah (40VA 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 Receivers
 Built-in 4-2 communication to non-DMP receivers.
 Built-in M2E (Radionics Modem IIe) communication to non-DMP receivers (XR20 only).
 Either panel can operate as a local system

1.3 Panel zones

Nine 1k Ω EOL burglary zones (zones 1 to 9)
 One 3.3k Ω EOL Class B powered fire zone with reset capability (zone 10)

1.4 Keypads

You can connect up to four of the following supervised keypads to the XR10/XR20 panels.

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

In addition, the following zone expanders can be added to the XR20 panel:

- Four and single point zone expanders
- Single point PIR and glassbreak detectors

When using the FA426 Wireless Receiver, the XR20 allows unsupervised devices to be added to address five.

1.5 Outputs

The XR10/XR20 panels provide four open collector outputs rated for 50mA each. See section 12.1. A Model 300 Wire Harness is required. Open collectors don't provide voltage but instead ground a positive voltage source.

1.6 Enclosure specifications

The XR10/XR20 ship in an enclosure with EOL resistors, battery leads, user's guide, and programming sheet.

Size:	12.5" W x 9.5" H x 2.75" D
Weight:	4 lbs
Color:	Gray or Black
Construction:	20 gauge cold rolled steel

Introduction

2.1 Description

The DMP XR10/XR20 Command Processors are powerful 12 VDC burglary and fire communicator panels with battery backup. The XR10/XR20 provide nine on-board burglary zones and one on-board 12 VDC Class B powered fire zone. The fire zone has a reset capability to provide for 2-wire smoke detectors, relays, or other latching devices. The XR10/XR20 can communicate to one or two DMP SCS-1 Receivers using SDLC digital dialer or 4-2 reporting formats. In addition, the XR20 can communicate using the Radionics Modem IIe format.

2.2 System configurations

The XR10/XR20 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 Bedrooms area. The Bedrooms area can include any protection devices the user wants disarmed during their sleeping hours and armed in the Away mode. In addition, the XR20 can operate as a four area system.

2.3 Before you begin

Before installing the XR10/XR20, 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:

- XR10 Programming Guide (LT-0230)
- XR20 Programming Guide (LT-0305)
- XR10 Security Command User's Guide (LT-0226)
- XR20 Security Command User's Guide (LT-0303)
- XR10 Program Information Sheet (LT-0212)
- XR20 Program Information Sheet (LT-0302)

2.4 About this guide

The information contained in this guide is organized into three sections: Table of Contents, Introduction, and Installation.

- The Table of Contents at the front of this guide lists all of the headings and subheadings used throughout each section. 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 XR10/XR20 system and diagrams some typical system configurations. This section gives descriptions of the panel, keypads, and accessory modules and provides details on how each of them operate together in the system.
- 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.

Caution notes

Throughout this guide you'll see caution notes containing information you need to know when installing the XR10/XR20 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 XR10/XR20 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.

2.5 How to use this guide

To locate information about the installation of the XR10/XR20, 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 can't 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 XR10/XR20 system is made up of an alarm panel with built in communicator, an enclosure, a 16.5 VAC transformer, and a 12 VDC 6.5 Ah battery. You can add up to four 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 section 6.6 in this guide when calculating power requirements. In addition, up to 16 points of zone expansion can be added to the XR20.

3.2 Wiring diagram

The XR10/XR20 system below shows some of the accessory devices you can connect for use in various applications. A complete description of each module follows. Zone expanders can be added to the XR20.

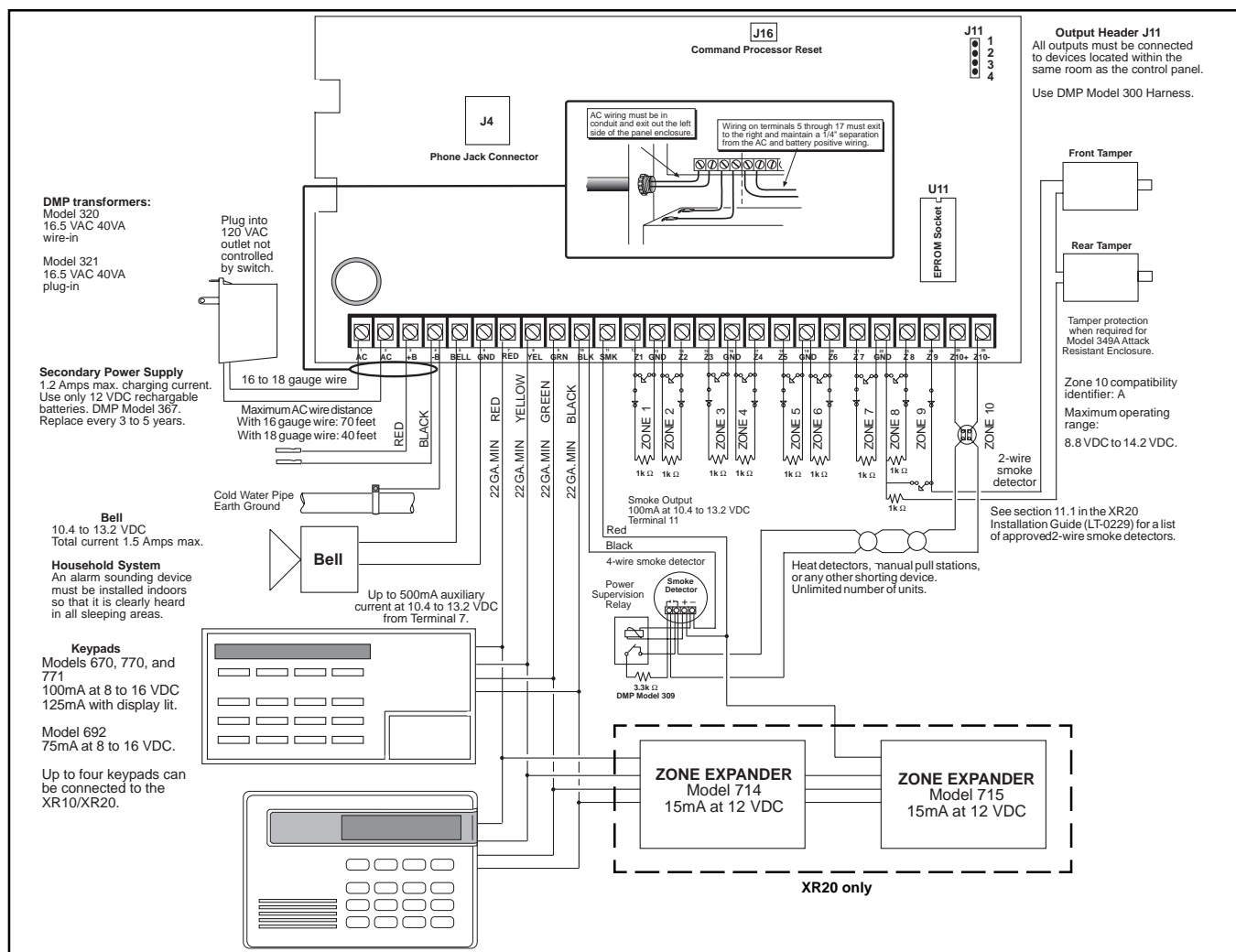


Figure 1: XR10/XR20 wiring diagram

3.3 Lightning protection

Metal Oxide Varistors and Transient Voltage Suppressors help protect against voltage surges on input and output circuits of the XR10. Additional surge protection is available by installing the DMP 370 or 370RJ Lightning Suppressors.

3.4 Security Command® keypads

You can connect any combination of up to four Model 670, 770, and 771 vacuum fluorescent, 690, 693, 790, 791, and 793 LCD, or 692 LED Security Command Keypads to the 4-wire keypad data bus provided by the panel on terminals 7, 8, 9, and 10. (**Note:** The XR10 does not support zone expansion on the keypad bus.)

Installation

4.1 Mounting the enclosure

The metal enclosure for the XR10/XR20 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 XR10/XR20 PC board when installing the enclosure.

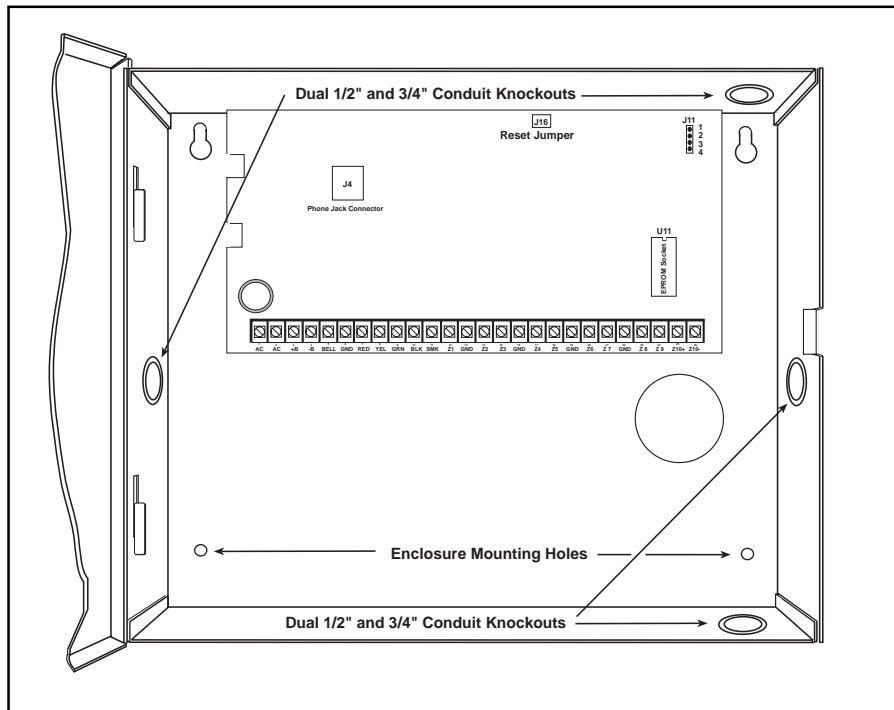


Figure 2: XR10/XR20 in standard enclosure

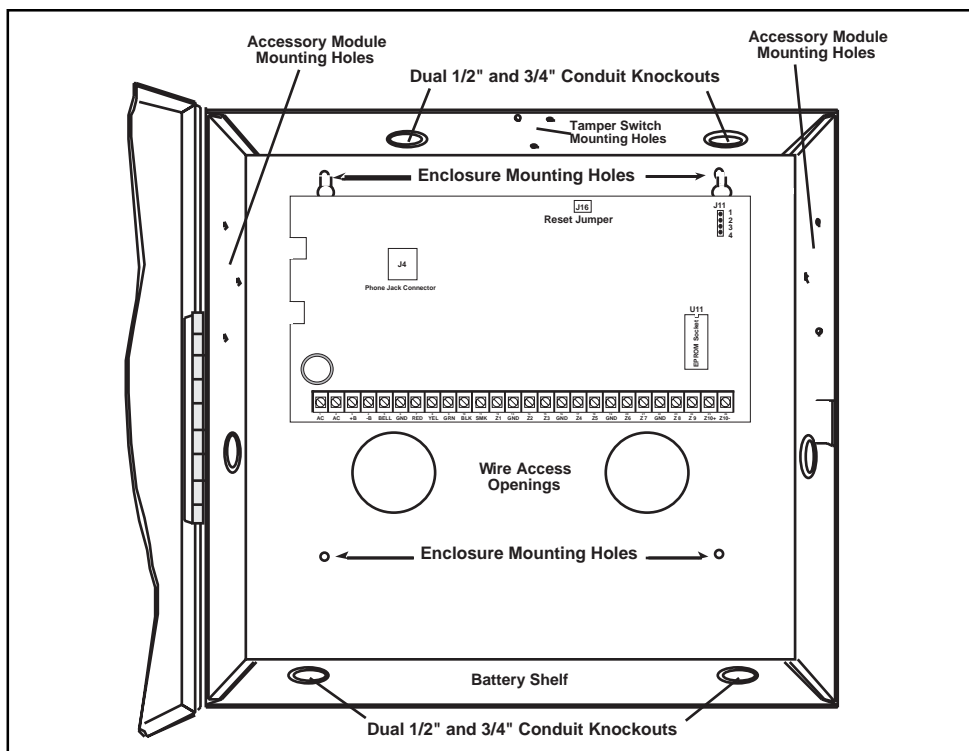


Figure 2A: XR10/XR20 in optional 349 Enclosure

4.2 Mounting keypads

Security Command keypads have removable covers that allow you to easily mount the base with keypad circuit board to a wall or other flat surface using the screw holes provided on each corner. Before mounting the base, connect the keypad wire harness leads to the 4-wire keypad data bus cable from the panel. Next, attach the keypad wire harness connector to the pin connector on the keypad circuit 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, 776, or 778 keypad conduit backbox.

4.3 Wiring keypads

Keypad data bus

The keypad data bus consists of a 4-wire cable that provides 12 VDC power, data in, data out, and a panel common. You can connect keypads in parallel on one 4-wire cable or provide a separate cable run back to the panel for each keypad. The maximum cable length for one keypad can be up to 500 feet using 22 gauge wire or up to 1000 feet using 18 gauge wire. Additional keypads installed on the same cable decrease the maximum distance at which they'll operate properly.

Refer to the wiring diagram in this guide for additional wiring information. See section 3.2.

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 XR10/XR20.

Always ground the panel before applying power to any devices: The XR10/XR20 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 XR10/XR20 is 16.5 VAC 40VA, which provides up to 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 XR10/XR20. 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 XR10/XR20 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 XR10 and XR20 panels can charge up to two batteries.

Use sealed lead-acid batteries only: Use the DMP Model 367, 12 VDC 6.5Ah 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 XR10/XR20 PANEL.

6.2 Earth ground

Terminal 4 of the XR10/XR20 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 the battery be replaced every 3 to 5 years under normal use.

6.4 Discharge/recharge

The XR10/XR20 battery charging circuit float charges at 13.9 VDC at a maximum current of 1.2 Amps using a 40VA 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 XR10/XR20 tests the battery once every hour when AC power is present. The test 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 XR10/XR20 power requirements

During AC power failure, the XR10/XR20 panel and all auxiliary devices connected to the XR10/XR20 draw their power from the battery. All devices must be taken into consideration when calculating the battery standby capacity. Below is a list of the power requirements of the XR10/XR20 panel. Add the additional current draw of Security Command 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.

XR10/XR20 STANDBY BATTERY POWER CALCULATIONS

	Standby Current	Alarm Current
XR10/XR20 Command Processor Panel	50mA _____ mA	50mA _____ mA
Active Zones 1-9	Qty _____ x 1.6mA _____ mA	Qty _____ x *2mA _____ mA
Active Zone 10	4mA _____ mA	30mA _____ mA
2-Wire Smokes	Qty _____ x .1mA _____ mA	Qty _____ x .1mA _____ mA
Bell Output		1500mA max. _____ mA
670, 770, and 771 Keypads	Qty _____ x 125mA _____ mA	Qty _____ x 125mA _____ mA
Annunciator (ON)		Qty _____ x 20mA _____ mA
690, 693, 790, 791, and 793 Keypads	Qty _____ x 100mA _____ mA	Qty _____ x 100mA _____ mA
Annunciator (ON)		Qty _____ x 20mA _____ mA
692 Keypads	Qty _____ x 30mA _____ mA	Qty _____ x 30mA _____ mA
Annunciator (ON)		Qty _____ x 10mA _____ mA
Auxiliary Powered Devices on Terminals 7 and 11 (Other than keypads)	_____ mA	_____ mA
	Total Standby _____ mA	Total Alarm _____ mA
* Based on 10% of active zones in alarm condition		
Total Standby _____ mA x number of standby hours needed _____ = _____ mA/hours <div style="text-align: right;"> Total Alarm + _____ mA/hours Total _____ mA/hours x .001 _____ = _____ A/hours required </div>		

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 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 XR10/XR20 panel are designated as the keypad data bus. In addition to keypads, the XR20 allows the connection of any combination of zone expanders, 5845LX Glassbreak Detectors, 6155LX PIRs, and DS775LX PIRs to the data bus up to the maximum of four devices.

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 totalled 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.

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 Menu Option. Terminal 10 is the ground reference for terminal 11.

Burglary Zones

10.1 Description

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.

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	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 flowing through the 1k Ω End Of Line resistor to 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

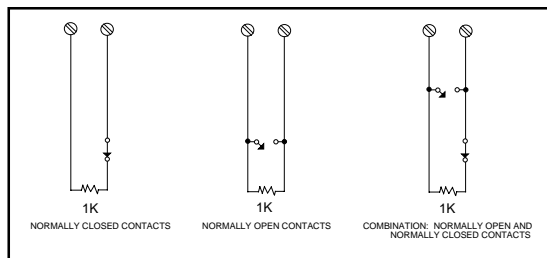


Figure 3: Protection zone contact wiring

10.3 Zone response time

A condition must be present on a zone for 500 milliseconds before it's detected by the XR10/XR20 panel. Ensure detection devices used on the protection zones are rated for use with this delay.

10.4 Keyswitch arming zone

Momentary keyswitches

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.

How it works

When the Arming zone is placed into a **shorted** condition from a **normal** condition, the panel **disarms** any areas that are armed. If all areas are disarmed, the panel **arms** all areas.

If the Arming zone changes from normal to open while any area is armed, an alarm is indicated. If all areas are disarmed, only a trouble is indicated.

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. The zone uses a Model 309, 3.3k Ω EOL resistor (provided with the panel) and has an operating range of 8.8 to 14.2 VDC.

Power is dropped from zone 10 any time a Sensor Reset is performed on the panel. 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.

The UL compatibility identifier is: **A**.

Manufacturer	Model	Detector I D	Base	Base I D	# of Detectors
Detection Systems	DS282	B	None	N/A	10
Detection Systems	DS282TH	B	None	N/A	10
Detection Systems	DS250	B	MB2W	A	10
Detection Systems	DS250TH	B	MB2W, MB2WL	A	10
Detection Systems	DS250HD	B	MB2W, MB2WL	A	10
Sentrol/ESL	429AT	S09A	None	N/A	12
DMP/Hochiki	SLK-835	HD-5	HSB-200, HSB-200N	HB-55	7
DMP/Hochiki	SLK-835H	HD-5	HSB-200, HSB-200N	HB-55	7
Hochiki	SLK-12	HD-4	HSB-12-1, HSB-12-1N	HB-80	20

Figure 4: Compatible 2-wire smoke detectors

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 Security Command keypad
- 3) Communication failure
- 4) Armed area annunciation
- 5) Fire Alarm or Fire Trouble
- 7) Ambush alarm
- 8) Exit and Entry timers
- 9) System Ready
- 10) Ground start activation

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:

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

Devices connected to the outputs must be located within the same room as the XR10/XR20 panel.

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.

13.2 FCC registration

The Model XR10/XR20 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 of:

- 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 XR10/XR20 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 XR10/XR20 Programming Guide for complete programming information.

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 of the XR10/XR20. 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'll 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 XR10/XR20 panel 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 option must be programmed as YES for all UL burglary applications. See section 5.5 of the XR10 Programming Guide (LT-0230) and XR20 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 be installed to allow detection of the same event. Cross zoning 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 Security Receiver, Sur-Gard 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 section 7.2 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

16.2 Entry delay

The maximum entry delay used must not be more than 45 seconds. See section 6.4 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

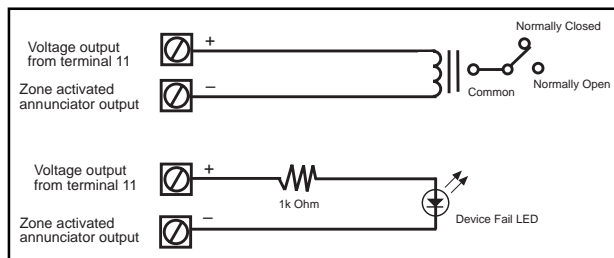
16.3 Exit delay

The maximum exit delay used must not be more than 60 seconds. See section 6.5 of the XR10 Programming Guide (LT-0230) and XR20 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 XR10/XR20 panel). See section 7.5C of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

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



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 section 5.2 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

17.2 Automatic bell test

This option must be programmed as YES. See section 7.3 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

17.3 Proprietary dialer

The Model XR10/XR20 provides Grade A proprietary service when configured as a digital dialer.

UL 1635 SPECIFICATIONS**Digital Burglar Alarm Communicator System Units****18.1 Digital Dialer telephone number**

Both programmed telephone numbers must begin with a D or P. See sections 3.17 and 3.18 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

18.2 Entry delay

The maximum entry delay used must not be more than 60 seconds. See section 6.4 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

18.3 Exit delay

The maximum exit delay used must not be more than 60 seconds. See section 6.5 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

18.4 Test frequency

The Test Frequency option must be programmed so that the XR10 sends a report once every 24 hours. See section 3.6 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

18.5 Automatic bell test

This option must be programmed as YES. See section 7.3 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

18.6 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 Model XR10/XR20 panel into the Model 349A Grade A Attack Resistant Housing.

UL 365 and 609 SPECIFICATIONS**Police Station Connected and Local Burglar Alarm Units and Systems****19.1 Entry delay**

The maximum entry delay used must not be more than 60 seconds when using the Model 349A Grade A housing. See section 6.4 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

19.2 Grade A bell

A Grade A local audible signal appliance must be used.

19.3 Bell cutoff

The bell cutoff time cannot be less than 15 minutes. See section 7.2 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

19.4 Automatic bell test

The Automatic Bell Test option must be programmed as YES. See section 7.3 of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

19.5 Grade A Mercantile

For Grade A Mercantile and Police Station Connect operation the Model XR10/XR20 must be mounted in a Grade A attack resistant housing, (DMP Model 349A).

19.6 Mercantile Safe and Vault

When the DMP Model 349A housing is used, the XR10/XR20 provides operation as a mercantile safe and vault alarm. Bell Supervision and wiring must be in accordance with UL 681. If the Model XR10/XR20 is mounted outside the safe or vault, tamper protection and the Sentrol Model 5402 or Potter EVD listed vibration detectors should be used. The XR10/XR20 does not provide operation as a Bank Safe and vault alarm.

19.7 Line security for Police Connect

Basic line security is provided when the Model XR10/XR20 is configured as a dialer system.

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 XR10/XR20 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 section 7.4A in the XR10 Programming Guide (LT-0230) and XR20 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 section 8.8 in the XR10 Programming Guide (LT-0230) and XR20 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 Security Receiver, Sur-Gard 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 XR10/XR20 must be programmed to operate steady on burglary alarms and pulsed on fire alarms. See sections 7.4A and 7.4B of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

CALIFORNIA STATE FIRE MARSHAL SPECIFICATIONS

22.1 Bell output definition

The bell output of the Model XR10/XR20 must be programmed to operate steady on burglary alarms and pulsed on fire alarms. See sections 7.4A and 7.4B of the XR10 Programming Guide (LT-0230) and XR20 Programming Guide (LT-0305).

Troubleshooting Section

23.1 Description

This section of the XR10/XR20 Installation Guide provides troubleshooting information for use when installing or servicing an XR10/XR20 system.

Problem	Possible Cause	Solution
Security Command keypads display " SERVICE REQUIRED"	J16 reset jumper is installed. Open or short on the green data wire to the keypad. Bad keypad or zone expander.	Remove the J16 reset jumper. Check for broken or shorted wires between the keypad and panel. 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 condition on the yellow data wire. Bad keypad or zone expander.	Check for broken or shorted wires. Replace with a new or repaired keypad or zone expander.
Keypad beeps when keys are pressed but won't allow the user to arm or enter the User Menu.	Two or more keypads are assigned to the same address.	Set each keypad to a different address to match the Device Setup programming.
Keypad displays PHONE LINE 1 TROUBLE.	No jumper installed on phone jack terminals 2 and 7.	Install a jumper across terminals 2 and 7 on the phone jack.