# INSTALLATION

## Description

The DMP 690 and 790 Security Command LCD Keypads provide three 2-button Panic keys, an AC power LED, 32 character display, backlit keyboard with easy to read lettering, and an integral speaker. The 790 additionally provides four fully programmable Class B protection zones you can program for a variety of burglary and fire applications.

## Installing the keypad

The 690/790 keypads use the same plastic housing and are designed to easily install on any 4 square box, 3-gang switch box, 695 and 696 backbox, or flat surface. The diagram below shows the mounting hole locations on the base of the keypad housing.

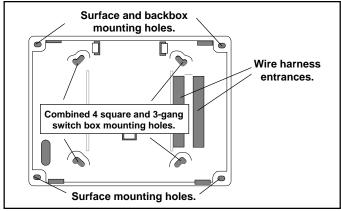
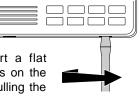


Figure 1: Base mounting locations

## **Removing the Base**

The keypad housing is made up of two parts: the *front*, which contains the circuit board and other components, and the



*base.* To remove the base, insert a flat screwdriver into one of the openings on the bottom and *gently twist* it while pulling the halves apart. Repeat with the other opening.

## **Harness Wiring**

The 690 keypad is supplied with a single 4-wire harness for connection to the panel's keypad data bus wiring. The harness color code is shown below:

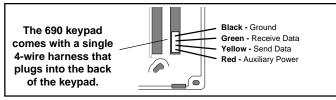
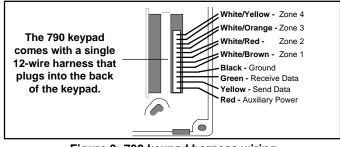


Figure 2: 690 keypad harness wiring

The 790 keypad is supplied with a single 12-wire harness. Four of the wires allow you to connect the keypad to the panel's keypad data bus wiring and the remaining eight are the four zone inputs. The harness color code is shown in Figure 3:

You can install individual keypads on wire runs of up to 500' using 22 gauge wire or up to 1,000' using 18 gauge wire.



## Figure 3: 790 keypad harness wiring

#### 2-Button Panic Keys

The Panic key function of the keypads allows users to send Panic, Emergency, or Fire reports to the central station. The user must press and hold the two SELECT keys for two seconds until a beep from the keypad is heard. At the beep, the panel sends an alarm report to the central station with the following zone numbers: 19 = Panic, 29 = non-medical Emergency, and 39 = Fire.

The Panic key function must be programmed if the Panic keys are to be used. See the back of



#### Figure 4: Panic key label placement

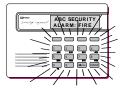
this page for programming instructions. Install the supplied icon label below the top row of Select keys.

## **Internal Speaker Operation**

The 690 and 790 keypad speaker emits standard tones for key presses, entry delay, and system alerts. When used with the XR200 Command Processor Panel, the speaker also provides distinct **burglary**, **fire**, **zone monitor**, and **prewarn** tones.

## **Keyboard Backlighting**

The keyboard on the 690/790 lights anytime a key is pressed or the speaker sounds. During an alarm condition, the keyboard also illuminates in **Red** to visually alert persons on-site. The Red backlighting is turned off when all areas in the system are



disarmed or when the Sensor Reset function is used.

The keypad backlighting dims to medium brightness whenever the speaker is on.

## **Power Requirements**

Both keypads operate on 8.0 to 16 VDC. The 690 draws up to 95mA in alarm or normal mode. The 790 draws up to 100mA in alarm or normal mode.

## End User Options

The 690/790 keypads provide three adjustments to the keypad that can be made by the end user. Below is a description the options and instructions on their operation.

To access the **User Options** portion of the keypad, press and hold the ARROW and COMMAND keys for two seconds. The keypad display changes to **SET BRIGHTNESS**.



#### **Backlighting brightness**

This option allows the user to set the brightness level of the keypad's Liquid Crystal Display (LCD), AC LED, and the Green keyboard backlighting.

**NOTE:** If the brightness level is lowered, it will temporarily revert back to maximum intensity whenever a key is pressed. If no keys have been pressed, and the speaker has not sounded for 30 seconds, the user selected brightness level is restored.

At the **SET BRIGHTNESS** display, use the left SELECT key to lower the keypad brightness. Use the right SELECT key to increase the brightness. Press COMMAND to go to **SET TONE**.

#### Internal speaker tone

This option allows the user to set the tone of the keypad's internal speaker. At the **SET TONE** display, use the top left SELECT key to make the tone lower. Use the right SELECT key to make the tone higher. Press COMMAND to go to **SET VOLUME LEVEL**.

#### Volume level

This option allows the user to set the volume level of the keypad's internal speaker for normal operation. During alarm, trouble, and prewarn conditions, the volume is always at maximum level.

At **SET VOLUME LEVEL**, use the left SELECT key to lower the keypad volume. Use the right SELECT key to raise the volume.

Press the ARROW key to exit the **User Options** function. After the volume is set, the keypad model number is displayed.

#### **Installer Options**

The 690 and 790 keypads also contain an **Options** and **Diagnostic** program that allows you to configure and test the keypad operation.

#### How to get in

You can only access the **Installer Options** function through the User Options function. After holding down the ARROW and COMMAND keys for two seconds and getting the **SET BRIGHTNESS** display, enter the code 3577 (INST) and press COMMAND. The display now changes to **KPD OPT** (keypad options) **KPD DIAG** (keypad diagnostics) and **STOP**.

## **Keypad Options (KPD OPT)**

This option allows you to:

- · set the keypad address
- · select supervised or unsupervised mode
- · change the keypad display message
- individually enable the 2-button Panic keys

To enter, press the left SELECT key under **KPD OPT**. The display changes to **CURRENT KEYPAD ADDRESS:** # #.

#### Set the keypad address

You can set the keypad address from 00 to 16. The factory default address is set at 01. To change the current address, press any SELECT key to delete the old address and then press the appropriate number keys on the keyboard. It's not necessary to enter a leading zero for addresses 01 to 09.

#### Select Supervised or Unsupervised Mode

You can configure the keypad for either supervised or unsupervised operation. Supervised keypads cannot share addresses with other keypads. Unsupervised keypads *can* operate with other unsupervised keypads sharing the same address. Zones cannot be used on unsupervised keypads. To change the current setting, press the SELECT key under **SUP** or **UNSUP**. An asterisk appears next to the selected option.

#### Change the Default Keypad Message

You can enter a custom message of up to 16 characters that appears on the top line of the keypad display whenever that line is not being used for any other purpose. Press any SELECT key to clear the current display and use the data entry keys to enter a new custom display. See the Command Processor<sup>™</sup> programming guide for instructions on entering alpha characters.

#### Arm the 2-button Panic Keys

This option allows you to enable or disable the top row of SELECT keys as 2-button Panic keys. To enable or disable a Panic, press the SELECT key under the appropriate display: **PN** (Panic), **EM** (Emergency), and **FI** (Fire). Once the panic is enabled, an asterisk appears next to the description. Refer to the **2-Button Panic Keys** section on the front of this document.

#### Zone 2 Soft-Shunt™

This option is intended for DMP 693, 791, and 793 Easy Entry<sup>™</sup> Keypads. Leave the option set to NO.

#### Zone 3 Request to Exit

This option is intended for DMP 693, 791, and 793 Easy Entry<sup>™</sup> Keypads. Leave the option set to NO.

#### **4-Digit Entry Cards**

This option is intended for DMP 693, 791, and 793 Easy Entry<sup>™</sup> Keypads. Leave the option set to NO.

#### **Keypad Diagnostics (KPD DIAG)**

This option allows you to:

- · check the display segments
- check the keyboard backlighting
- · test individual keys

Press the SELECT key under **KPD DIAG**. The keypad lights all segments of the display and illuminates the keyboard in Green. A few seconds later the keypad turns off the display and illuminates the keyboard in Red. The keypad then alternates between these two states for approximately two minutes.

Press COMMAND at any time to continue. The display changes to **PRESS KEY TO TEST**. This option allows you to test each key on the keyboard to ensure it's operating properly. Press and hold each key for about two seconds. The number of the key being held appears in the display. Verify it's the correct number before testing the next key.

#### **Zone test** (790 keypad only)

This option allows the keypad to display the current electrical status of the 790 keypad's four protection zones. The status is shown as either **OPEN**, **SHRT**, or **OKAY**.

#### **INPUT WIEGAND**

This option works on DMP Model 693, 791, and 793 Easy Entry<sup>™</sup> Keypads only.

## **Exiting the Installer Options**

When done, press the COMMAND key once to return to the Installer Options screen. Press the SELECT key under **STOP** to exit the Installer Options function.