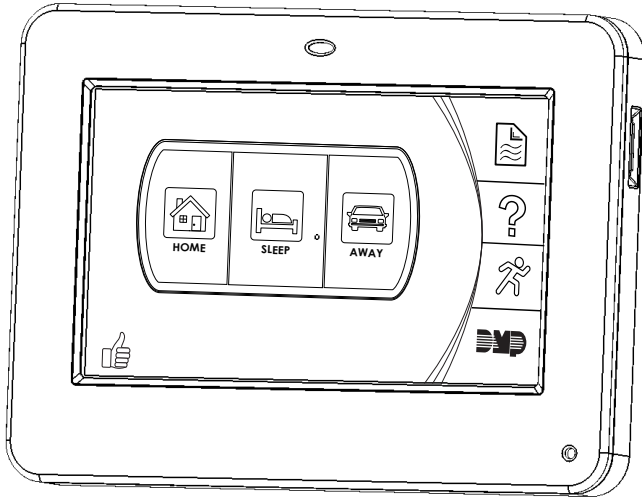


# INSTALLATION GUIDE

## Models 7860, 7863, 7870, 7873 Touch Screen LCD Keypads



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## DMP Keypad Features

The DMP Graphic Keypads offer flexible features and functionality in a stylish design choice.

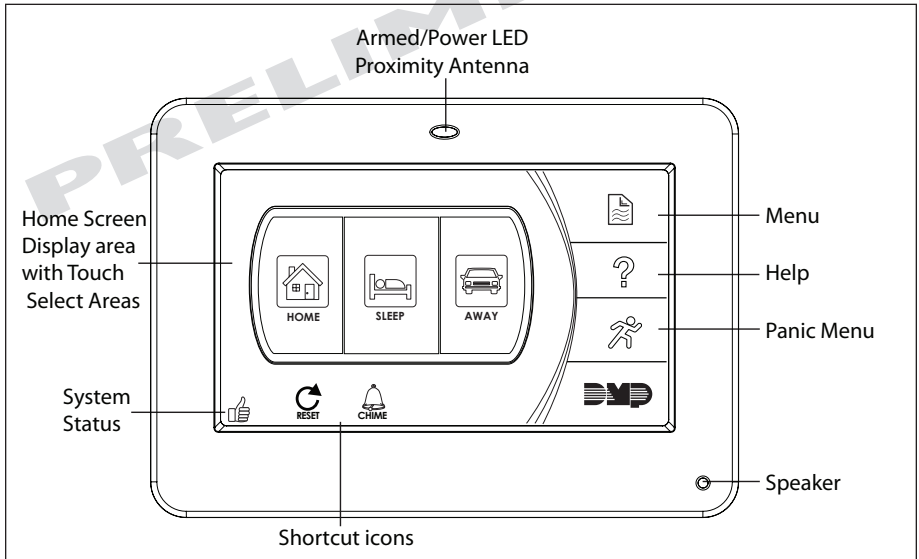
Each keypad provides:

- Custom home screen image
- Panic icons
- AC Power/Armed LED
- Full color touchscreen display
- Internal speaker
- Simple harness connection to 4-wire keypad bus
- Micro SD for scrolling picture display

The Models 7870 and 7873 keypads provide four fully programmable Class B, Style A, supervised, power limited protection zones you can program for a variety of burglary and access control applications.

The Model 7863 and 7873 keypads provide a built-in proximity card reader designed to read DMP/HID proximity credentials.

The Model 7873 keypad provides a door strike relay and allow Wiegand input from external card readers.



## Touchscreen Display

The 7800 Series have an integrated LCD with a touchscreen user interface. The display can be set up two different ways.

The 7800 Series can be set up to display a custom image for the home screen. See Home Screen section below. Or alternatively, the display can be programmed to turn off (blank screen) during periods when the keypad is not in use. See Backlighting Brightness under End-User Options.

## Home Screen

To display a custom image on the home screen, format a bitmap image to the specification outlined below. Once formatted, load the image onto a micro SD card and insert into the keypad before applying power.

### Image Specifications:

The 7800 Series keypad accepts bitmap images only for display. The image must be formatted as 272 pixels tall by 360 pixels wide or less.

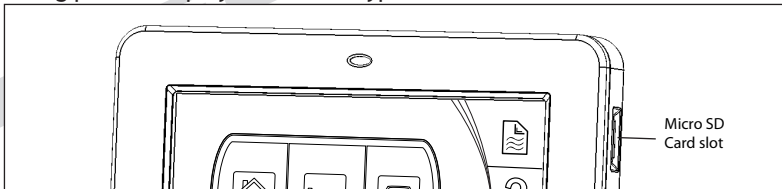
The name of the image must be set to custom.bmp for the keypad to recognize.

## Cleaning the Touchscreen Display

Clean the touchscreen using a water dampened soft lint-free cloth. Apply the water onto the cloth, do NOT apply directly onto the touchscreen. After cleaning, wipe the touchscreen dry with a dry soft lint-free cloth.

## Micro SD Card

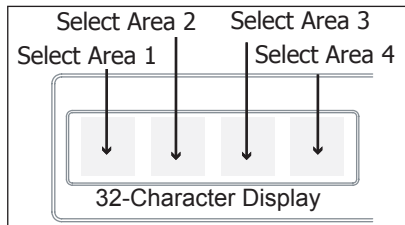
The 7800 Series keypads have a Micro SD card slot on the right edge of the keypad housing. This is used to load custom home screen image and for the end-user to have a scrolling picture display when the keypad is not in use.



## Select Areas

There are four Select Areas in the display. These Select Areas are one of the features that make the system so easy to operate. They allow you to make selections by touching the area over each key, icon, or other selection to operate the keypad.

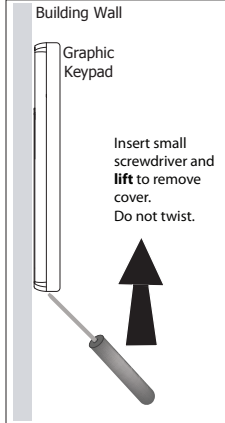
Warning: DO NOT use any sharp objects to operate the touchscreen such as a pen or pencil.



## Installing the Keypad

All DMP keypad housings are designed to easily install on any single-gang switch box, or a flat surface. Figure 1 shows the keypad housing base mounting hole locations.

### Remove the Cover



The keypad housing is made up of two parts: the cover, which contains the circuit board and components, and the base. Use the following steps and figures to separate the keypad cover and base.

1. Insert a flat screwdriver into one of the slots on the bottom of the keypad and gently lift the screwdriver handle toward you while pulling the halves apart. Repeat with the other slot.
2. Using your hands, gently separate the front from the base and set the cover and components aside.

### Harness Wiring

Figure 1 shows wiring harness assignments. Observe wire colors when connecting the red, yellow, green, and black wires to the keypad bus. Connect red to panel terminal 7, yellow to terminal 8, green to terminal 9, and black to panel terminal 10. Use 1k Ohm EOL resistors, DMP Model 311, on keypad zones 1 through 4.

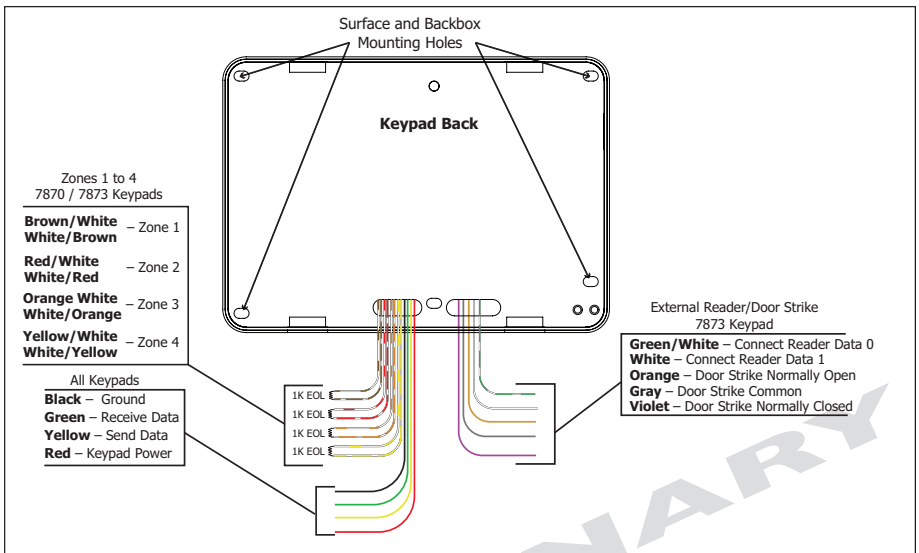
The 7860, and 7863 keypads are supplied with a 4-wire harness for panel keypad bus connection.

The 7870, and 7873 keypads are supplied with a 12-wire data bus/zone harness. Four wires connect to the keypad bus. The remaining eight wires are for the four zone inputs: two wires for each zone.

The 7873 keypad comes with one 5-wire output/reader harness.

### Additional Power Supply

If the current draw for all keypads exceeds the panel output, provide additional current by adding a Model 505-12 auxiliary power supply. Connect all keypad black ground wires to the power supply negative terminal. Run a jumper wire from the power supply negative terminal to the panel common ground terminal. Connect all keypad power (+12 VDC) wires to the power supply positive terminal. Do NOT connect the power supply positive terminal to any panel terminal. Refer to the 505-12 Power Supply Installation Guide (LT-0453).



**Figure 1: Keypad Back Showing Wiring Harness Assignments**

## Card Readers

When a proximity credential is presented to an internal or external reader, a beep tone is heard and the Power/Armed LED blinks. This provides both an audible and visual acknowledgement of the credential read.

### Internal Access Control Reader

The 7863, and 7873 keypads provide a built-in proximity card reader designed to read DMP/HID 1300 Series proximity credentials.

**Note:** For listed access control applications, the keypad must be installed within the protected area.

### External Access Control Reader

To accept Wiegand data input from other external card readers, connect a 12 VDC external reader to the 7873 keypad. Connect the Red and Black power wires from the reader to the power wires from the panel. These connect in parallel with the keypad power wires. Connect the Reader (Data 1) wire to the White wire on the 5-wire keypad harness. Connect the Reader (Data 0) wire to the Green/White wire on the 5-wire keypad harness. See Figure 2.

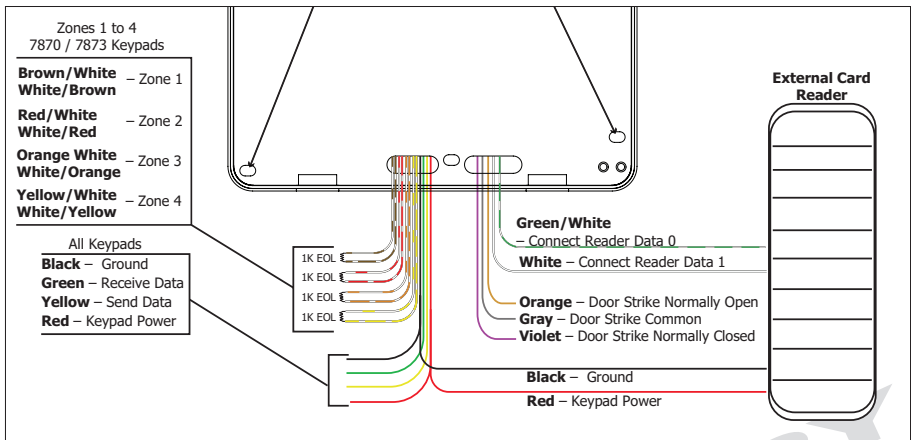


Figure 2: 12 VDC Reader Wiring

## Door Strike Relay Specifications

The 7873 keypad provides one internal programmable Form C single pole, double throw (SPDT) relay for controlling door strikes or magnetic locks. Three wires on the 5-wire harness, Violet (N/C), Gray (Com), and Orange (N/O), allow you to connect devices to the relay. The Form C relay draws up to 15mA of current and the contacts are rated for 1 Amp at 30 VDC maximum, resistive.

## Wiring the 333 Suppressor

One Model 333 Suppressor is included with the 7873 keypad. If the device being controlled by the relay is connected to the N/O and C wires, install the suppressor on the N/O and C wires. If the device is connected to the N/C and C wires, install the 333 on N/C and C wires. Refer to Figure 3.

## Door Strike Relay Operation

As soon as the user code sent from the reader is verified by the panel, the keypad door strike relay activates for 5 seconds. During this time, the access door connected to Zone 2 must be opened to start the programmed entry/exit timer and zone Soft-Shunt.

Note: The 5-second door strike is programmable in the panel when the keypad is used on an XR100/ XR500 Series panel. Refer to the XR100 Series Program Guide (LT-0896) or XR500 Series Program Guide (LT-0679).

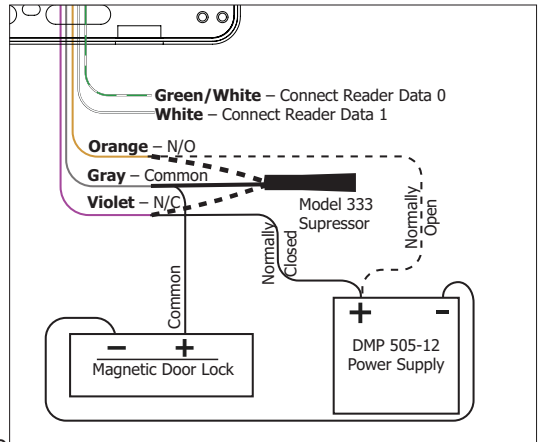


Figure 3: 5-wire Harness/Suppressor Installation

## Zone 2 Door Contact with Soft-Shunt™

If the door being released by the 7873 keypad is protected, you can provide a programmed shunt time by connecting its contact to Zone 2 (White/Red pair) on the keypad and enabling the Soft-Shunt feature. See ZONE 2 SHUNT later in this document. Door contacts may be N/C or N/O.

**Note:** The Door Strike time is programmable when the keypad is used on an XR100/ XR500 Series panel.

## Zone 3 Request to Exit

You can also connect a N/O PIR (or other motion sensing device) or a mechanical switch to Zone 3 (White/Orange pair) on the 7873 keypad to provide request to exit capability. See ZONE 3 EXIT later in this document. When Zone 3 shorts, the keypad relay activates for 5 seconds. During this time, the user can open the protected door to start the programmed Soft-Shunt entry/exit timer. If the door is not opened within 5 seconds, the relay restores to its locked state.

**Note:** A Zone 3 Request to Exit is inhibited for 3 seconds after the keypad reads a card and a door strike occurs. This is to allow area entry and pass under a REX PIR.

## Keypad Backlighting

The touchscreen illuminates at full brightness any time the display is touched. When the speaker is sounding, the backlight illuminates at one-half (1/2) brightness. During an alarm condition, the keyboard and logo turn Red. When all alarm conditions are cleared from the display, the keyboard, logo, and the user-selected brightness is restored.

## AC Power/Armed LED Operation

The LED indicates the Power and Armed status of the panel. Depending on the operation, the LED displays in Red or Blue as listed in the table.

Color and Activity	Operation
Blue Steady	Panel Disarmed, AC Power OK, Battery OK
Blue Blinking	Panel Disarmed, AC Power OK, Battery Fault
No Light	Panel Disarmed, AC Power Fault, Battery OK
Red Steady	Panel Armed, AC Power OK, Battery OK
Red/Blue Alternate	Panel Armed, AC Power OK, Battery Fault
Red Blinking	Panel Armed, AC Power Fault, Battery OK



## Panic Icons

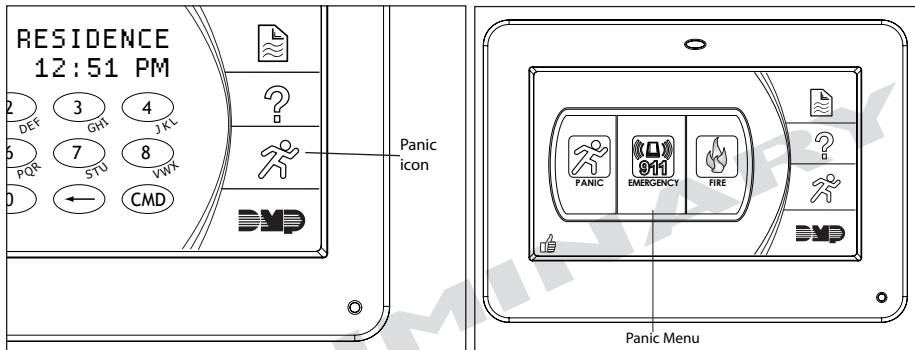
Optional Panic functions allow users to send Panic, Emergency, or Fire reports to the central station. You must enable the Panic function in Installer Options in order to use the Panic Icons. See Programming Keypad Options later in this document.

Touch the panic icon to bring up the panic menu. Press the panic menu icon for 2 seconds until a beep is heard. At the beep, the panel sends the following zone alarm reports to the central station:

**Panic** - Zone 19 + Device Address

**Emergency** - non-medical - Zone 29 + Device Address

**Fire** - Zone 39 + Device Address



Graphic Keypad Panic Icons

## Internal Speaker Operation

All keypads emit standard tones for key presses, entry delay, and system alerts. The speaker also provides distinct burglary, fire, zone monitor, and prewarn cadences. The keypads provide an alternate prewarn with alarm cadence that occurs when the status list displays a zone alarm.

## End-User Options

All keypads provide three keypad adjustments the end-user can make through a User Options Menu. The user can also view the keypad model number and address.

Press the Menu icon on the keypad display twice. The keypad displays the available options shown below.



### Backlighting Brightness

Set the backlight illumination and AC Power/Armed LED brightness level. In the touchscreen display below SET BRIGHTNESS, touch the left < to lower and the right > to raise the backlight brightness. If the brightness level is lowered, it reverts to maximum intensity whenever the glass is touched during normal operation. If the glass is not touched, and the speaker has not sounded for 30 seconds, the user-selected standby brightness level restores.



### Internal Speaker Tone

Set the keypad speaker tone. At the SET TONE display, use the left < to lower the tone and the right > to raise the tone.



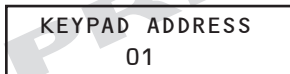
### Internal Volume Level

Set the keypad speaker volume level for key touches and entry delay tone conditions. During alarm and trouble conditions, the volume is always at maximum level. Use the left < to decrease the keypad volume and the right > to increase the volume.



### Model Number

The LCD displays the keypad model number and firmware version and date. The user cannot change this information.



### Keypad Address

The LCD displays the current keypad address. The user cannot change the keypad address.

## Keypad Options Menu

Keypad Options and Keypad Diagnostic menus to allow installing and service technicians to configure and test keypad operation.

### Access the Keypad Options Menu

Access the Keypad Options Menu through the User Options function. While in the End-User Option display, enter the code 3577 (INST) and press CMD.

The Keypad Options menu allows you to set the keypad address, select Supervised or Unsupervised mode, selectively enable the Panic keys, Shortcut icon display, Soft-Shunt, Request-to-Exit, and set entry card options.

Note: All programming options display on all keypads, however, actual operation for some programming options is restricted to the listed keypads.

## Programming Keypad Options

KPD KPD  
OPT DIAG STOP

CURRENT KEYPAD  
ADDRESS: 01

KEYPAD MODE:  
\*SUP UNSUP

ARM PANIC KEYS:  
\*PN \*EM \*FI

SYSTEM  
AREA A/P H/A HSA

CLOSING CODE  
NO YES

SHORTCUT KEY X:  
RESET

SHORTCUT KEY X:  
RST CHM CHK EXIT

SHORTCUT KEY X:  
NONE

### Keypad Options (KPD OPT)

To program keypad options, press KPD OPT.

### Keypad Address

Set the keypad address from 01 to 05 with the XT30, XT50, XR100 and 01 to 16 with the XR500 Series. The default address is set at 01. To change the current address, touch the address display and enter the new address. It is not necessary to enter a leading zero for addresses 01 to 09.

### Keypad Type

Configure the keypad for either Supervised or Unsupervised operation. Keypads with zones connected to them must be supervised and cannot share an address with other keypads. Unsupervised keypads can operate together sharing the same address. Zones cannot be used on unsupervised keypads. To change the current setting, press the SUP or UNSUP. An asterisk appears next to the selected option. Note: Unsupervised addresses cannot be used when Device Fail Output has a programmed value other than zero.

### Arm Panic Keys

Use this option to configure the Panic Icons. To enable or disable a Panic Icon, touch the icon name: PN (Panic), EM (Emergency), and FI (Fire). Once the panic icon is enabled, an asterisk displays next to the description and the respective Panic icons display for the user. Refer to the Panic Icon Options section in this document.

### System Mode

Configure the keypad as the same system type selected in System Options panel programming. Select HSA when zones are assigned to Bedrooms for the Sleep area to be active.

### Closing Code

Configure the keypad for the same operation as selected in panel programming. When YES is selected, a code number is required for system arming. If NO is selected, a code number is not required for system arming. Default is NO.

### Shortcut Keys

Use these options to configure up to three shortcut icons to display at the bottom of the arming and panic screens. Key 1 default is RESET, Key 2 default is CHIME and Key 3 default is NONE.

RST (Reset)	Sensor (Fire) Reset on all systems
CHM (Chime)	Monitor on all systems
CHK (Checkin)	Check-in report on XT Series systems
EXIT (Easy Exit)	Easy Exit for XT Series Home/Away systems
NONE	No shortcut key displayed

ACTIVATE ZONE 2  
SHUNT: NO YES

ZONE 2 SOFTSHUNT  
TIME: 40

### Zone 2 Shunt (7873 only)

Select YES to enable the Soft-Shunt™ option on zone 2 as described earlier in this document. This zone provides the Soft-Shunt™ for door contacts. This zone must be programmed into the panel.

### Zone 2 Soft-Shunt Time (7873 only)

Enter the number of Soft-Shunt seconds to elapse before the Soft-Shunt timer expires. Range is from 20 to 250 seconds. Touch the display to enter the number of seconds. Once the door strike relay is activated, the user has 5 seconds to open the door connected to zone 2. The zone is then shunted for the programmed time or until the contact restores to normal. Ten seconds after the Soft-Shunt entry/exit time begins, the keypad beeps if the door is still open. If the door remains open when the timer expires a zone open/short is sent to the panel for Zone 2. The default is 40 seconds.

Figure 7 shows how the Soft-Shunt works using the default 40 second timer.

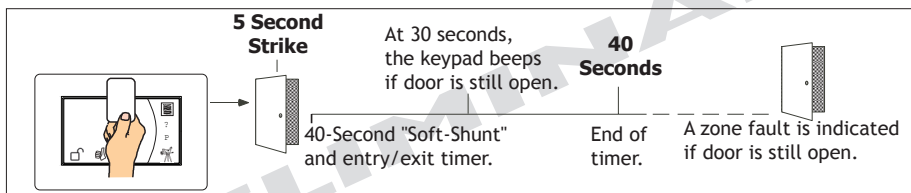


Figure 7: Door Strike Relay Operation Time Line

RELOCK ZONE 2  
FAULT: NO YES

### Relock on Zone 2 Fault? (7873 only)

Select NO to leave the relay on when Zone 2 faults to an open or short condition during Soft-Shunt. Select YES to turn the relay off when Zone 2 faults open or short during Soft-Shunt. The default is NO.

ACTIVATE ZONE 3  
EXIT: NO YES

### Zone 3 Exit (7873 only)

Select YES to enable the Request to Exit feature on zone 3. When zone 3 shorts, the keypad relay activates. During this time, the user can open the protected door to start the programmed Soft-Shunt entry/exit timer. If the door is not opened within the time programmed in the Zone 3 REX Strike Time, the relay restores the door to its locked state. No panel programming is required.

ZN 3 REX STRIKE  
TIME: 5

### Zone 3 REX Strike Time (7873 only)

Enter the number of REX seconds to elapse. Range is from 5 to 250 seconds. Touch the display to enter the number. The default is 5 seconds.

NO OF USER CODE  
DIGITS: 5

### Number of User Code Digits (7863, 7873 only)

The keypad recognizes user codes from four to ten digits in length. Touch the display to enter the user code digit length being used by the panel. Default is 5.

For an XR100/XR500 Area System, use 4 to 10 digits (typically 5). For all other systems and panels, use 4 digits.

Any selection above 5 digits requires entry of the custom card definitions with custom site and user code positions for the Wiegand string.

When searching the bit string for the user code, the digits are identified and read from left to right.

ALL?: NO YES  
DELAY: 2

### Arming/Disarming Wait Time (7873 only)

Select the number of seconds (1-9) the keypad should wait when an area system displays ALL? NO YES during arming/disarming or a HOME/SLEEP/AWAY system waits during arming only. If NO or YES, or HOME, SLEEP, or AWAY is not manually selected before the delay expires, the keypad automatically selects the YES or the AWAY key. Enter zero (0) to disable this feature. The delay also occurs when any credential is presented for arming the HOME/SLEEP/AWAY system.

CARD OPTIONS  
DMP CUSTOM

### Card Options (7863, 7873 only)

Select DMP to indicate the reader sends a 26-bit DMP data string. Select CUSTOM if using a non-DMP credential. To select CUSTOM touch the right side of the keypad display. Default is DMP.

## Custom Card Definitions

WIEGAND CODE  
LENGTH: 26

### Wiegand Code Length (7863, 7873 only)

When using a custom credential, enter the total number of bits to be received in Wiegand code including parity bits. Touch the display to enter a number between 0-255 to equal the number of bits. Default is 26 bits.

Typically, an access card contains data bits for a site code, a user code, and start/stop/parity bits. The starting position location and code length must be determined and programmed into the keypad.

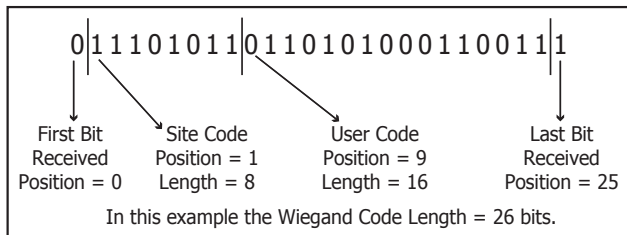


Figure 8: Data Stream Bit Location Example

SITE CODE POSITION:	1
------------------------	---

**Site Code Position (7863, 7873 only)**

Enter the site code start position in the data string. Touch the display to enter a number between 0-255. Default is 1.

SITE CODE LENGTH:	8
----------------------	---

**Site Code Length (7863, 7873 only)**

Enter the number of characters the site code contains. Touch the display to enter a number between 1-16. Default is 8.

USER CODE POSITION:	9
------------------------	---

**User Code Position (7863, 7873 only)**

Define the User Code start bit position. Touch the display to enter a number between 0-255. Default is 9.

USER CODE LENGTH:	16
----------------------	----

**User Code Length (7863, 7873 only)**

Define the number of User Code bits. Touch the display to enter a custom number. Custom numbers can only be a number between 16-32. Press CMD to save the entry. The default is the DMP value of 16.

REQUIRE SITE CODE:	NO YES
-----------------------	--------

**Require Site Code (7863, 7873 only)**

Touch YES to use a site code and press CMD to view the site code entry display. Default is NO.

In addition to User Code verification, door access is only granted when any one site code programmed at the SITE CODES entry option matches the site code received in the Wiegand string. You can program up to eight three-digit site codes.

Note: A card with a site code greater than three digits cannot be used. Use only cards with three-digit site codes.

SITE CODES 1-4
> > > >

**Site Codes 1-4 (7863, 7873 only)**

Enter site codes 1-4 (left to right separated by > sign). Touch the > sign to add, delete, or change the site code and press CMD. Site code range is 0-999. Press the CMD key to display SITE CODES 5-8.

SITE CODES 5-8
> > > >

**Site Codes 5-8 (7863, 7873 only)**

Enter site codes 5-8 (left to right separated by > sign). Press the Select key below the > sign to add, delete, or change the site code and press COMMAND. Site code range is 0-999.

DEGRADED MODE RELAY ALWAYS OFF
-----------------------------------

**Degraded Mode (7863, 7873 only)**

This option defines the relay action when communication with the panel has not occurred for five seconds. Touch the display to display CHOOSE ACTION. The default is Relay Always Off.

CHOOSE ACTION
OFF SITE ANY ON

Choose the Degraded Mode Action required. Select OFF (Relay Always Off) – The relay does not turn on when any Wiegand string is received. Off does not affect any REX operation.

Select SITE (Accept Site Code) – Door access is granted when the Wiegand site code string received matches any site code programmed at SITE CODE ENTRY. For details refer back to the REQUIRE SITE CODE option.

Select ANY (Any Wiegand Read) – Door access is granted when any Wiegand string is received.

Select ON (Relay Always On) – The relay is always on.

CHOOSE ACTION
LAST

Select LAST (Keep Last State) – The relay remains in the same state and does not change when communication is lost.

After choosing the action, DEGRADED MODE and the newly defined action display, programming is complete.

### Accessing Keypad Diagnostics

If necessary, refer to Access the Keypad Options Menu earlier in this document.

KPD KPD
OPT DIAG STOP

#### Keypad Diagnostics (KPD DIAG)

The Keypad Diagnostic option allows you to check the display segments, keyboard backlighting and test individual keys. Press the Select key under KPD DIAG. The keypad lights all display segments and illuminates the keyboard in Red. In approximately one second the display backlighting changes to Green. The keypad alternates between these two states for approximately two minutes. Press CMD at any time to begin testing individual keys.

PRESS KEY TO
TEST

#### Test Individual Keys

The display changes to PRESS KEY TO TEST. This option tests each key on the keyboard and the shortcut icons to ensure proper operation. Touch and hold each key for about two seconds. The key number being held appears in the display. Verify the correct number is displaying before testing the next key.

Z1 OPEN Z2 OPEN
Z3 OPEN Z4 OPEN

#### Zone Test (7870, 7873 only)

This option allows the keypads to display the current electrical status of the four protection zones. The status is shown as OPEN, SHRT, or OKAY.

Note: The Zone Test displays on other keypads, but is not operational.

**Input Wiegand (7863, 7873 only)**

This option tests the internal and external reader input from proximity credentials. The display shows OKAY each time a good proximity read is received.

**Exiting the Installer Options**

When done, press the CMD key once to return to the Installer Options screen. Select STOP to exit the Installer Options function.

**Additional Programming**

The 7863 and 7873 keypads allow users to present a proximity credential to the built-in proximity reader. Users can also manually enter their user code into the keypad. The keypad verifies the user code and its authority with the panel. Additionally, the 7873 keypad activates the on-board Form C relay releasing a door strike or magnetic lock. To provide added flexibility, the 7873 Keypads allow connection of an external Wiegand output compatible reader.

**Programming Cards into the System**

This programming feature operates on 7863 and 7873 keypads only. Access the User Menu by touching the Menu icon, the CMD until MENU NO YES displays.

From the User Menu, select USER CODES. Choose ADD. At the ENTER CODE: - display, present the credential to the reader. The keypad works by reading the 4 to 10-digit user code from the data sent by the access control reader. For more information, refer to Entry Cards in the programming section of this document and the panel User's Guide section on adding, deleting, and changing user codes.

**Proximity Credentials Compatibility**

DMP Keypads with internal proximity readers are compatible with most standard 125Khz Prox credentials available from HID and all DMP proximity credentials. DMP Keypads are not compatible with iClass or other non-HID credentials. There are custom and non-standard credentials from HID that are not compatible with DMP proximity keypads. If you are using HID cards that have not been purchased directly from DMP, it is recommended to thoroughly test the application fully before installation. DMP does not guarantee compatibility with credentials not purchased from DMP.

**User's Guide**

This User's Guide covers 7860, 7863, 7870, and 7873 keypads and contains three different sections: Keypad Arming and Disarming, Keypad Door Strike, and Keypad Entry Delay. All of the examples displayed assume that CLOSING CODE is YES in panel programming.

Note: Figures 9 through 12 show the user presenting their card to the keypad. When an external reader is connected to a 7873 keypad, the user presents their card to the reader rather than to the keypad.



## Keypad Arming and Disarming

### Area system Arming and Disarming

Touch the lock icon and select the arming/disarming option. The keypad displays ENTER CODE: -. Present your card to the reader. Once validated by the system, all areas assigned to your code arm or disarm automatically and the 7873 keypad Door Strike relay activates.

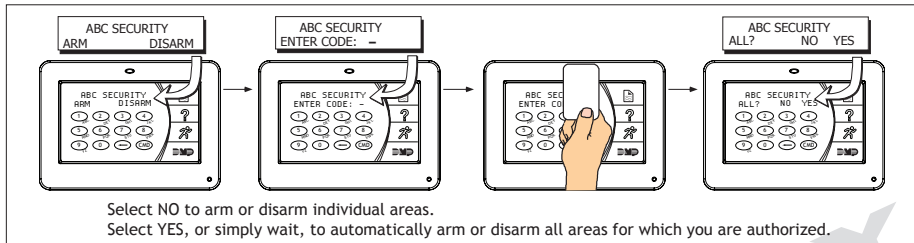


Figure 9: Area Arming and Disarming

### All/Perimeter System Arming and Disarming

Present your card to the reader, the keypad displays DISARM or PERIM ALL when arming. Select the desired option. The keypad displays ENTER CODE: -. Present your card to the reader. Once validated by the system, the selected areas arm or disarm automatically. On 7873 keypads, the Door Strike relay then activates.

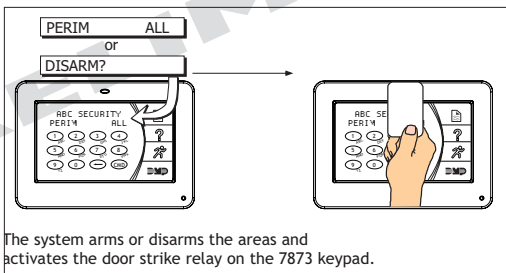


Figure 10: All Perimeter Arming and Disarming

### Home/Away System Arming and Disarming

Present your card to the reader. If the system is armed, once the card is validated, all areas are disarmed and the keypad displays ALL SYSTEM OFF. If the system is disarmed when you present your card, once the card is validated, HOME SLEEP AWAY displays. Manually select HOME, SLEEP, AWAY or after a short time-out, all areas automatically arm in the AWAY mode.

## Keypad Door Strike

### Area and All/Perimeter Door Strike

From the Status List, present your card to the reader. Once the system validates the card, the Door Strike relay activates. Home/Away systems only activate the 7873 Door Strike relay when arming and disarming.

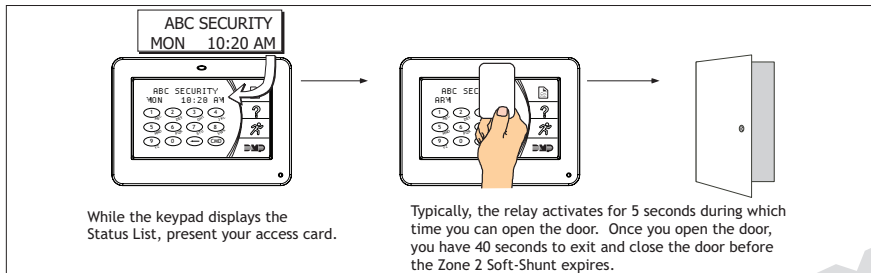


Figure 11: Present Access Card

## Keypad Entry Delay

### All Systems

Once the entry delay starts, the keypad sounds an entry tone and displays ENTER CODE: - . Present your card to the reader. Once validated, the system disarms all areas accessible by you and activates the 7873 Door Strike relay. Area systems provide a delay to allow selected areas only to be disarmed.

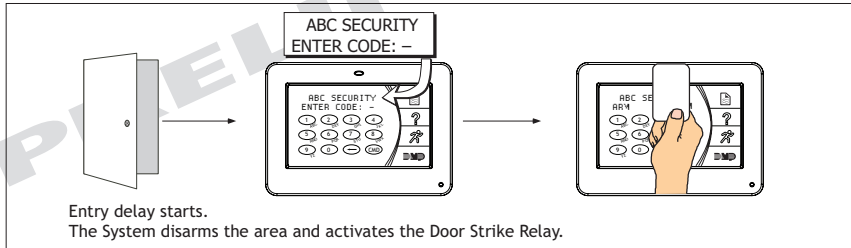


Figure 12: Entry Delay

## FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Wiring Specifications for Keypad Bus

When planning a keypad bus installation, keep in mind the following specifications:

1. DMP recommends using 18 or 22-gauge unshielded wire for all keypad and LX-Bus circuits. Do Not use twisted pair or shielded wire for LX-Bus and keypad bus data 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. Install an additional power supply to increase the wire length or add devices.
2. Maximum distance for any one 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.
3. Maximum number of devices per 2,500 feet circuit is 40. 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.
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.

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

## Keypad Specifications

MODEL	NORMAL/ STANDBY CURRENT	ALARM CURRENT	FOUR ZONES	INTERNAL PROX READER	WIEGAND INPUT	INTERNAL DOOR STRIKE RELAY
7860	184mA	211mA				
7863	184mA	211mA		X		
7870	184mA + 1.6mA per active zone	211mA + 2mA per active zone	X			
7873	184mA + 1.6mA per active zone	211mA + 2mA per active zone	X	X	X	X

## Specifications

Operating Voltage	12 VDC
Dimensions	7" W x 5.25" H x 0.5" D

## Compatibility

All keypads are compatible with all DMP panels.

## Listings and Approvals

FCC Part 15 RFID Reader FCC ID: CCKPC0131

Industry Canada ID: 5251A-PC0131

Underwriters Laboratories (UL) Listed

ANSI/UL 365	Police Connected Burglar
ANSI/UL 609	Local Burglar
ANSI/UL 1023	Household Burglar
ANSI/UL 1076	Proprietary Burglar
ANSI/UL 1610	Central Station Burglar
ANSI/UL 1635	Digital Burglar
ANSI/UL 985	Household Fire Warning
ANSI/UL 864	Fire Protective Signaling (7870/7873 only)

## Accessories

Keypad Wiring Harness

313-4 4-wire harness

313-5 5-wire harness

313-12 12-wire harness

Proximity Credentials

1306P Prox Patch™

1306PW Prox Patch™ 26-Bit

1326 HID ProxCard II® Card

1386 HID ISOProx II® Card

1346 HID ProxKey II® Access Device

Proximity Readers for 7873 keypads

PP-6005B ProxPoint® Plus	30mA Standby	75mA Peak
MP-5365 MiniProx™	20mA Standby	110mA Peak
PR-5455 ProxPro II®	25mA Standby	125mA Peak
TL-5395 Thinline™ II®	20mA Standby	115mA Peak

