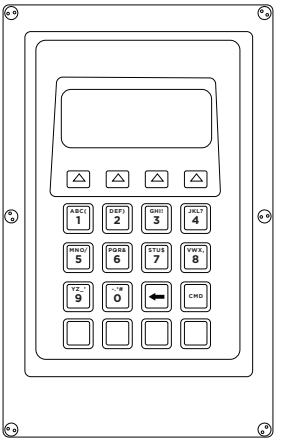
691 Keypad

INSTALLATION AND PROGRAMMING GUIDE



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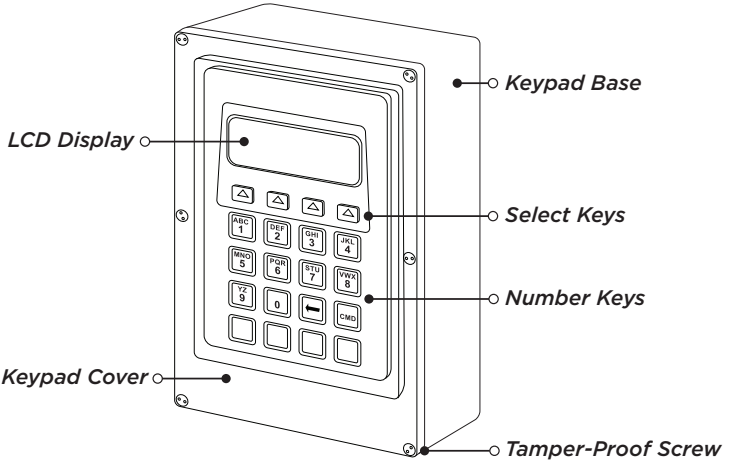

Figure 1: 691 Keypad

ABOUT THE 691 KEYPAD

The Model 691 is a weatherproof outdoor keypad mounted on an aluminum black powder coated box.

2-Button Panic Keys

Enable the Panic key function in the keypad user menu. See *Arm Panic Keys*.

The user must press and hold the two Select keys for two seconds until the keypad emits a beep. Then the panel sends the following zone alarm reports to the central station:

- Panic (left two Select keys)
- Emergency—non-medical (center two Select keys)
- Fire (right two Select keys)

Internal Speaker

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

External Sounder

The keypad provides a switched ground for an external sounder that turns on with the keypad on-board sounder. The sounder activates when the keypad switches to ground. The sounder silences when the keypad restores. Power-limited, maximum current of switched ground is 50 mA @ 30 VDC.

1. Connect the negative side of an external sounder to the violet wire on the keypad wiring harness.
2. Connect the positive side of the sounder to the positive side of a power source rated at 30 VDC or less.
3. Ground the negative side of the power source to the black wire of the keypad bus.

INSTALL THE KEYPAD

1 *Prepare the Base*

The keypad housing is made up of two parts: the base and the keypad cover, which contains the circuit board and keyboard components.

1. Determine the placement of the wire harness opening based on the mounting location.
2. Drill a hole 1/4" in diameter through the back of the base for the wiring harness.

2 *Mount and Wire the Keypad*

1. Feed the panel keypad bus wiring through the opening in the back of the base. Mount the base in the desired location using the mounting holes. Seal the wiring opening with a weatherproof sealant. See Figure 2.
2. Connect the panel keypad bus wiring to the keypad harness. Observe wire colors when connecting and do not use shielded wire.
   Figure 3 shows wiring harness assignments. Observe wire colors when connecting the red, yellow, green, and black wires to the keypad bus. The violet wire can be used for an external sounder. See *External Sounder*.
3. Plug the 5-wire harness connector onto the keypad connection.

Note: The keypad LCD display contrast level can be adjusted by inserting a screwdriver into the contrast hole on the upper left corner of the keypad PCB. See Figure 4. Turn the screwdriver to the left to lower the contrast and to the right to raise the contrast.

4. Place the front cover onto the base and line up the screw holes to the base. Secure the cover to the base with the included six tamper-proof screws using the tamper bit. See Figure 3.

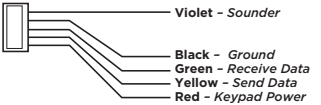

Figure 2: Wiring Harness

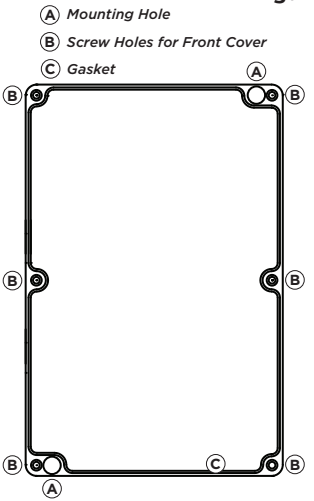

Figure 3: Inside Base View

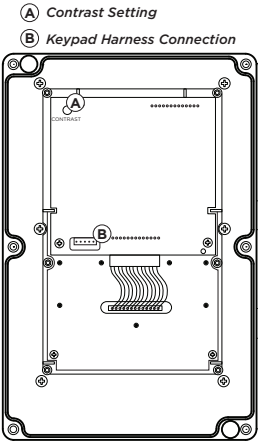

Figure 4: Keypad PCB

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.

On all keypads press and hold the Back Arrow (←) and Command (**CMD**) keys for two seconds to access User Options. The keypad display changes to **SET BRIGHTNESS**. Use the **CMD** key to display the next Option or press the Back Arrow to exit.

Backlighting Brightness

Set the keypad LCD Display brightness level. Use the left Select key to lower the brightness and the right Select key to raise the brightness. If the brightness level is lowered, it reverts to maximum intensity whenever a key is pressed. If no keys are pressed, and the speaker has not sounded for 30 seconds, the user-selected brightness level restores.

Internal Speaker Tone

Set the keypad internal speaker tone. At the **SET TONE** display, use the left Select key to lower the tone and the right Select key to raise the tone.

Internal Volume Level

Set the keypad internal speaker volume for key presses and entry delay tone conditions. During alarm and trouble conditions, the volume is always at maximum level. Use the left Select key to decrease the volume and the right Select key 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.

TYPE IN THE KEYPAD

Entering Alpha Characters

To enter an alpha character, press the key that has the desired letter written below it. The keypad display shows the number on that key. To change the number to a letter, press the top row Select key that corresponds to the letter location under the key. For example, if you press key number 1, the letters for that key are A, B, and C. Press the first Select key for A, the second Select key for B, the third Select key for C, and fourth Select key for special characters. See Figure 5.

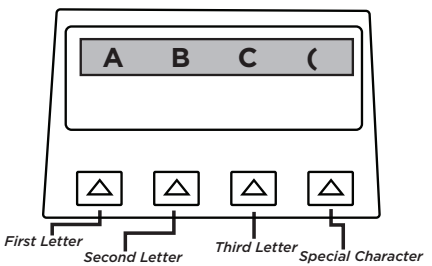

Figure 5: Alpha Characters

Entering Non-Alphanumeric Characters

Each key also has a special, non-alpha character. These characters are not shown on the keypad. Enter a space by pressing 9 then the third Select key.

The following non-alpha characters are available: **( ) ! ? / & $,** (**space**) **'** starting with the left bracket on the 1 digit key to the blank space and apostrophe on the 9 digit key. Use the 0 digit key to enter **- . * #** (dash, period, asterisk, or number sign). See Figure 6.

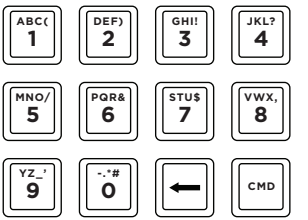

Figure 6: Non-Alpha Characters

INSTALLER OPTIONS MENU

Accessing Installer Options

Access the Installer Options Menu through the User Options function. Hold down the Back Arrow and **CMD** keys for two seconds to display **SET BRIGHTNESS**. Enter the code **3577** (INST) and press **CMD**. The display changes to **KPD OPT** (keypad options), **KPD DIAG** (keypad diagnostics), and **STOP**.

The Keypad Options menu allows you to set options for keypad operation.

Note: All programming options display on all keypads, but only the programming options listed below are applicable and operational. Press the **CMD** to advance past any option that does not apply.

Keypad Options

KPD KPD	
OPT DIAG	STOP

CURRENT KEYPAD	
ADDRESS:	01

Keypad Options

To program keypad options, press the left Select key under **KPD OPT**.

Keypad Address

Set the keypad address from **01** to **08** with the XT30/XT50 or XR150 Series and **01** to **16** with the XR550 Series. The factory default address is set at **01**. To change the current address, press any Select key and enter the new address. It is not necessary to enter a leading zero for addresses 01 to 09.

KEYPAD MODE:
*SUP UNSUP

Keypad Mode

Configure the keypad for either Supervised or Unsupervised operation. Keypads with zones connected to them must be supervised and 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.

Note: Unsupervised addresses cannot be used when Device Fail Output has a programmed value other than zero.

CURRENT KEYPAD
ADDRESS: 01

Default Keypad Message

Enter a custom message of up to 16 characters to appear on the keypad display top line whenever that line is not used for any other purpose. Press any Select key to clear thecurrent message and enter a new custom display.

ARM PANIC KEYS:
*PN *EM *FI

Arm Panic Keys

Use this option to configure the top row 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 displays next to the description.

Keypad Diagnostics

If necessary, refer to *Access the Installer Menu* earlier in this document.

KPD KPD	
OPT DIAG	STOP

Keypad Diagnostics

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. 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 to ensure it is operating properly. Press and hold each key for about two seconds. The key number being held appears in the display. Verify the correct number displays before testing the next key.

Exit the Installer Options

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

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).

KEYPAD BUS WIRING SPECIFICATIONS

- DMP recommends using 18 or 22-gauge unshielded wire for all keypad and AX-Bus/LX-Bus circuits. Do not use twisted pair or shielded wire for AX-Bus/LX-Bus and Keypad Bus data circuits. All 22-gauge wire must be connected to a power-limited circuit and jacket wrapped.
- On Keypad Bus circuits, to maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 ft. When using 18-gauge wire do not exceed 1,000 ft. To increase the wire length or to add devices, install an additional power supply that is listed for Fire Protective Signaling, power limited, and regulated (12/24 VDC nominal) with battery backup.

  Note: Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode.
- Maximum distance for any one bus circuit (length of wire) is 2,500 ft 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 ft. As wire distance from the panel increases, DC voltage on the wire decreases. Maximum number of AX-Bus/LX-Bus devices per 2,500 ft circuit is 40.
- Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2 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 panel's Installation Guide or the 710 Installation Sheet (LT-0310). Also see the LX-Bus/Keypad Bus Wiring Application Note (LT-2031).

PRODUCT SPECIFICATIONS

Operating Voltage	12 VDC
Dimensions	5.76 W x 8.76 H x 2.75 D in 14.63 W x 22.25 H x 6.99 D cm

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.

Information furnished is believed to be accurate and reliable.
This information is subject to change without notice.