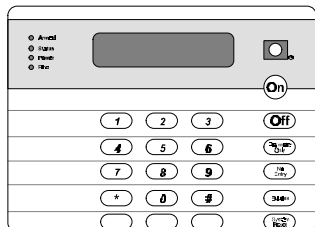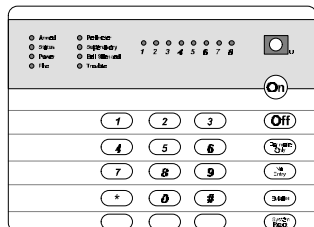# Installation Instructions
for the
DS7445 and DS7447 Control Stations

General Information

The DS7447 is a 4-wire Alpha-Numeric LCD keypad. The DS7445 is a 4-wire LED keypad. Both keypads may be used with the DS7460, DS7080i and DS7400Xi series of control/communicators and both support all system functions, including programming. The DS7447 is recommended for programming as visual confirmation is given for each programming entry.

DS7447   **DS7445**

Note: When used with the DS7400Xi, the DS7445 LEDs 1-8 represent the 8 hard-wired zones on the DS7400Xi control panels.

The keypads may be surface mounted, or mounted to standard single or double gang boxes, or 4 inch square boxes.
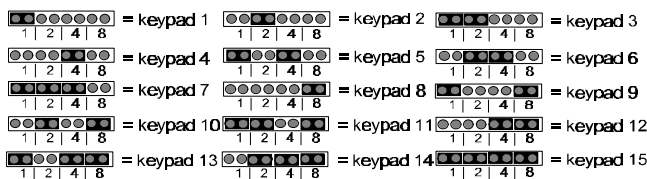The following is a chart of general wiring guidelines:

Wire Gauge	22 AWG (0.8 mm) minimum
Wire Type	no shield, 4-wire
Max. number of Keypads allowed per System	DS7060, DS7080i = 4 Max. DS7400,X,Xi Ver. 1 & 2 = 8 Max. DS7400Xi Ver. 3+ =15 Max.
Max. distance allowed between the Control and each Keypad	1,000 feet
Max. distance of Keypad Wiring per System	6,000 feet- DS7400 Series 4,000 feet- DS7060, DS7080i

Keypad Addresses

Note: Each keypad must have its address set with its address pins. The keypads must also be programmed at the control panel.
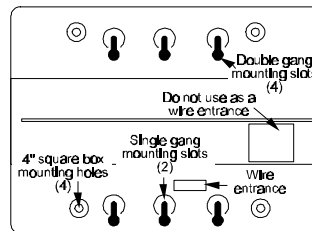
- Select the keypad address (1-15).
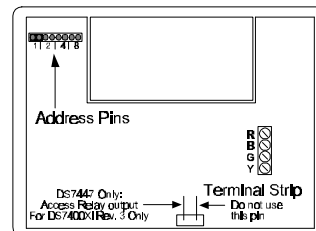 - Place the shorting jumpers over the address pins as shown below:

- Each keypad must have a different address.

Location

Ideally, one keypad should be located close to the primary entry/exit door of the premises, and must be within 1,000 feet of the control panel. Do not mount outdoors (see page 2 for Commercial Fire restrictions).

Keypad Base   **Rear View of PCB**

Mounting

The keypad should be mounted no higher than shoulder height of the shortest person using the system.

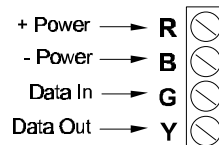- Remove the keypad's cover.
  Insert a small flat-head screwdriver in each slot at the bottom of the base. Press up, and pull the cover off.
- Surface Mounting:
  - Use the base as a template and mark the location of the mounting holes (use any holes).
  - Provide an opening in the mounting surface for the wiring.
  - Pre-start the mounting screws.
  - Do not secure the base at this point.
- Electrical Box Mounting:
  - See the diagram above to select the mounting holes.
  - Do not secure the base at this point.

Wiring

Be sure all wiring is unpowered before routing. Keypad wiring can not be shared with multiplex, options bus, telephone, or siren wiring.
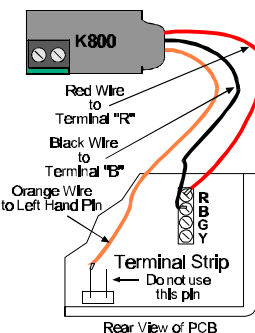
- Route wiring from the control panel to the keypads.
- **Note:** Up to 2 keypads may be placed along any single 1,000 foot run of 22 AWG (.8 mm) wire. Three keypads may be used on any single 1,000 foot run of 18 AWG (1 mm) wire.
- Bring the wiring through the Wire Entrance in the keypad's base.
- Secure the base.
- Connect the wiring to the keypad's terminal strip.
- Place the keypad cover onto the base.
  - While feeding the excess wiring out of the rear of the base, press the cover straight in until it latches on.

Access Relay Option (DS7400Xi Rev. 3 Only)

- **Note:** The K800 Access Relay does not fit inside the keypad case. It is recommended that a **non-metallic** electrical box be mounted behind the keypad for the relay.
- Run the three wires from the K800 through the rear cover wiring opening on the keypad. Wire as shown.

- **Note:** The Access Relay Option pin on the keypad can current sink 12 volts at 6 mA for other types of relays.

Volume Control
The keypad sounder volume can be adjusted using the [1] and [4] keys along with the [*] key.
- Hold the [*] key while pressing the [1] key to increase the volume.
- Hold the [*] key while pressing the [4] key to decrease the volume.

Note: This only affects the keypad sounder. It will NOT affect the alarm sounders/bells.

LCD Backlight Control (DS7447 only)
- Hold the [*] key while pressing the [3] key to increase the brightness.
- Hold the [*] key while pressing the [6] key to decrease the brightness.

Note: After the Keypad Sounder Volume or Backlight has been adjusted, you must arm then disarm the system once to store this information in the control panel. If power is disconnected before you arm the system, the settings will be lost.
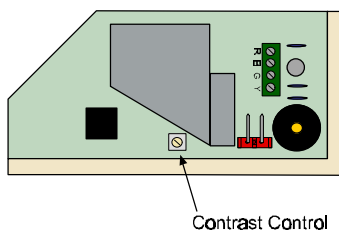
Contrast Control
- The keypad contrast can be increased by turning the contrast control clockwise. To decrease the contrast, turn the contrast control counterclockwise.

Special Emergency Key Labeling
(**Do NOT label if unprogrammed**)
If labeling, the unmarked key in the lower left corner of the keypad MUST be labeled as the FIRE key because of its programming values pre-set in the control panel. The unmarked center key should be labeled as the Special Emergency key. The unmarked right key should be labeled as the Panic key.
- See the graphics below:

Commercial Fire Applications (DS7400Xi Controls Only)
- Single Keypad Use in Commercial Fire Systems:
  The keypad must be used on the keypad bus and mounted to the front of the control enclosure OR if within the same room as the control equipment, with the wire run in conduit (or equivalently protected against mechanical injury) within 20 feet of the control equipment. The keypad must be assigned as keypad address 1.

- Multiple Keypad Use in Commercial Fire Systems:
  One keypad only must be used on the options bus and assigned as keypad address 11-14. The keypad must be mounted to the front of the control enclosure OR if within the same room as the control equipment, with the wire run in conduit (or equivalently protected against mechanical injury) within 20 feet of the control equipment.
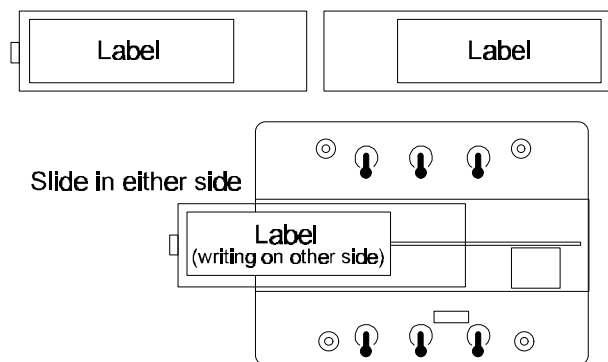
Note: Keypad 15 is not available on Commercial Fire Systems as option bus address 15 is used for the DS7420i module.

Note: On the 7400xi Rev. 3+, a maximum of 11 keypads may be used in Commercial Fire mode. One on the option bus and up to 10 on the keypad bus.

- Keypads 1-10 should be connected to the keypad bus and may be placed as needed (within the wiring limits). One of these keypads must be assigned as keypad address 1.

Instruction Label and Slide
An instruction label is provided and needs to be placed onto the pull-out slide. The slide may be installed to pull from the left or the right (slide it into rear of base). Be careful when installing the label; place it as close to the pull-tab as possible.

In Case of Trouble
See the following chart:

Keypad Notification	Possible Causes
DS7445 Continuous keypad sounder	• The yellow and green wires have been disconnected.
DS7447 Continuous keypad sounder PLUS "System Fault" display	• The keypad has not been programmed properly at the control panel. • The control panel has malfunctioned. Replace the control panel.
DS7445 Continuous keypad sounder	• A keypad's address has not been set with its address pins.
DS7447 Continuous keypad sounder PLUS "Not Programmed. See Instal Guide" display	
DS7445 3 beep error tone on all keypads	• Two or more keypads have the same address. • DS7400 Series only: DS7430 Mux module not installed on main board correctly. Check pin alignment.
DS7447 3 beep error tone on all keypads PLUS "Entry Error. Please try again." display	• DS7400 Series only: Keypad and another device on the option bus have the same address.