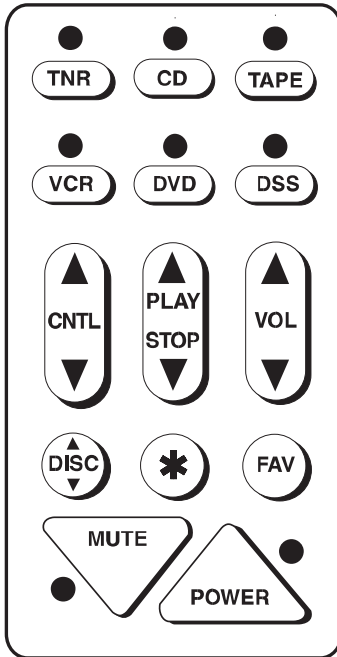


Z.100

INTELLIGENT IN-WALL KEYPAD INSTALLATION MANUAL



ELAN

H O M E S Y S T E M S TM

2428 Palumbo Dr. Lexington, KY 40509

Voice (859) 269-7760

Sales (877) BUY-ELAN (289-3526)

Tech Support (800) 622-ELAN (3526)

www.elanhomesystems.com

Introduction

ELAN's Z•100 is an intelligent, single-gang, Decora®-style, in-wall keypad designed to work with any and all ELAN multi-room controllers, as well as in stand-alone applications. Removable keycaps are available to allow custom-tailored setup for each unique installation. Optional accessories such as the Z•150 Direct-Access Companion Keypad, IR receivers, and the Z•025 Speaker Relay/Audio Detect Switching module make this the professionals choice for multi-room system control.

The Z•100 and Z•150 are intelligent 'learning' keypads that can be taught IR commands using VIA!®TOOLS setup software. Seven-step IR sequences are now possible on every key; thirteen-step IR sequences are available on certain keys.

Note: Please see the VIA!TOOLS Help file for information about programming Z•PADS and the **Z•150 Installation Manual** for IR receiver and Z•150 connections.

Installation

Rough-In Boxes

Z•100s mount in most 18 cu. in. single-gang plastic J-boxes.

Z•100/Z•150 combinations will mount in most 32 cu. in. boxes.

Note: Please verify the internal interior dimension requirements before specifying or installing J-boxes!

Use J-boxes with the following internal dimensions:

Z•100

2"W X 3"H

Z•100/Z•150

4"W X 3"H X 2.5"D

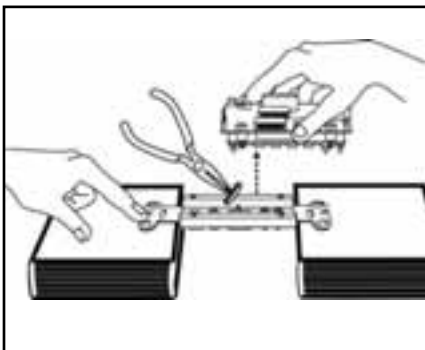
Keypads should be mounted at the same height as the light switches in the home. In order to avoid Electro-Magnetic Interference (EMI), do not mount keypads close to light dimmers. Leave at least one stud-bay open between keypads and dimmers (leave more space if multiple dimmers are present). Do not mount keypads outdoors! Corrosion will damage them. Also, when installing keypads with IR receivers, avoid installing them in areas that will receive direct sunlight. Sunlight can flood the IR receiver and make the system inoperative.

Custom Keycaps

Additional keycaps ship with the Z•100 in order to customize it to the homeowner's specifications.

Use the following method to change keycaps:

1. On a flat surface, place the keypad between 2 books so that the keycaps are not resting on the surface.
2. Using a Phillips-head screwdriver, fully loosen the four (4) screws that hold the keypad PC board assembly to the front plate. Do not remove the screws from the holes.
3. Holding down the front plate, carefully lift the keypad PC board assembly off of the front plate and set it aside. Be sure not to displace the four nylon spacers located between the two PC boards.
4. Using needle-nose pliers, remove the keycaps to be replaced.



- Carefully remove the replacement keycap from the keycap tree by bending DOWN, then twisting off. Use your fingernail to scrape off any excess plastic (flash).
- Place the replacement keycap in the appropriate opening in the front plate. **MAKE SURE THAT THE KEYCAP IS NOT UPSIDE-DOWN!**
- Repeat Steps 4-6 until all the desired keycaps have been replaced.
- Carefully place the keypad PC board assembly back on to the front plate, making sure that the keypad LEDs and the four screws line up properly with the front plate.
- Using a Phillips-head screw driver, hand tighten all four screws.
DO NOT MACHINE TIGHTEN!
- Make sure that all the keycaps are easy to press and are making contact with the micro-switch beneath them. Overtightening or excess flash on the side of the keycap may cause the keycap to stick.

Connecting a Z•025

The Z•025 Speaker Relay/Audio Detect Switching Module is designed to add flexibility to the Z•100. The Z•025 plugs right onto the back of a Z•100 and can be configured to (1) automatically switch between system audio and local source audio, (2) manually switch between system and local audio, and (3) mute speakers in one part of a zone without muting other speakers in that zone. Please see the **Z•025 Installation Manual** for complete instructions on how to connect and configure a Z•025.

Wiring

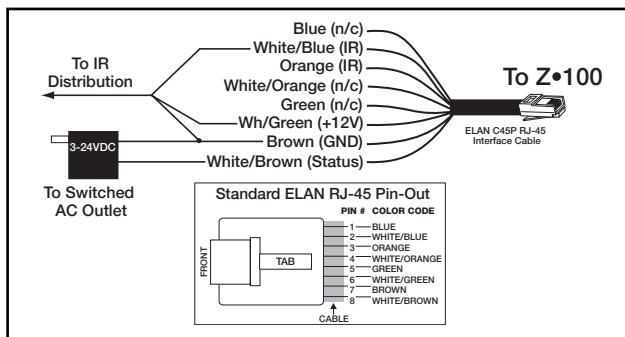
Run Cat-5 wire from the head-end location to each Z•100 location. Additional Cat-5 is NOT NEEDED if using a Z•150 companion keypad. ELAN recommends the use of C45P RJ-45 interface cables when installing keypads. The RJ-45 pinout for each ELAN multi-room controller is included in the manual for that particular product. Use of wire other than Cat-5 may produce undesired results (IR bandwidth can be narrowed or interference may occur).

Note: Maximum keypad wire run is 500 feet.

Please consult your ELAN multi-room controller Installation Manual for specific keypad connection details.

Stand-Alone RJ-45 Pinout

When installing a Z•100 in a system that does not contain an ELAN multi-room controller (stand-alone system), connect **IR** (Wh/Blue), **+12VDC** (Wh/Green), and **GND** (Brown) to an IR distribution block or +12 VDC power supply and IR emitters. If using the Status feature to detect system status, also connect **Status** (Wh/Brown) and **GND** (Brown) to a 3-24 VDC power supply to a switched AC outlet (such as a switched outlet on an A/V Receiver). The drawing below shows the RJ-45 color code and pinout for stand-alone applications.



Programming

Although all Z•PADS come pre-programmed with ELAN default codes, it is necessary to program them in order to achieve full functionality. IR commands must be downloaded to each keypad from VIA!®TOOLS setup software for each source that will be controlled. Functionality will vary, depending on the needs of the homeowner. Consult the table below for specific ELAN system commands.

Note: Please see VIA!TOOLS Help file for detailed information about programming Z•PADS.

System Commands

The following table shows each system-level button and the ELAN default commands that are associated with that button. Any button that is not listed in the table is a normal button and can be programmed with a single IR code or a seven-step sequence.

Note: Please see VIA!TOOLS Help file for information about programming Z•PADS.

| Z•100/150 BUTTON | FUNCTION |
|------------------|---|
| Source 1-6 | Selects Sources 1-6/Initiates Source-Select Sequence |
| OFF | Press once for Zone OFF. Press twice for System OFF. |
| MUTE | Zone MUTE ON/OFF toggle. |
| FAV | Source-Specific Sequence, one per source |
| PARTY | Global Sequence |
| * | Used to access secondary function for each button |
| *Source 1-6 | Selects sources 7-12/Initiates Source-Select Sequence |
| *VOLUME UP | Whole-House Music ON |
| *VOLUME DN | Whole-House Music OFF |
| *MUTE | Do-Not-Disturb ON/OFF toggle |
| *FAV | Global Sequence |
| *PARTY | Global Sequence |
| *1 (Z•150 Only) | Bass UP (Z, S12, and HD only) |
| *4 (Z•150 Only) | Bass DOWN (Z, S12, and HD only) |
| *2 (Z•150 Only) | Treble UP (Z, S12, and HD only) |
| *5 (Z•150 Only) | Treble DOWN (Z and HD only) |
| *3 (Z•150 Only) | Loudness Contour ON/OFF toggle (Z only) |
| *6 (Z•150 Only) | Spatial Enhancement ON/OFF toggle (Z only) |
| *0 (Z•150 Only) | EQ Flat (Z, S12, and HD only) |
| *7 (Z•150 Only) | Global Sequence |
| *8 (Z•150 Only) | Global Sequence |
| *9 (Z•150 Only) | Global Sequence |

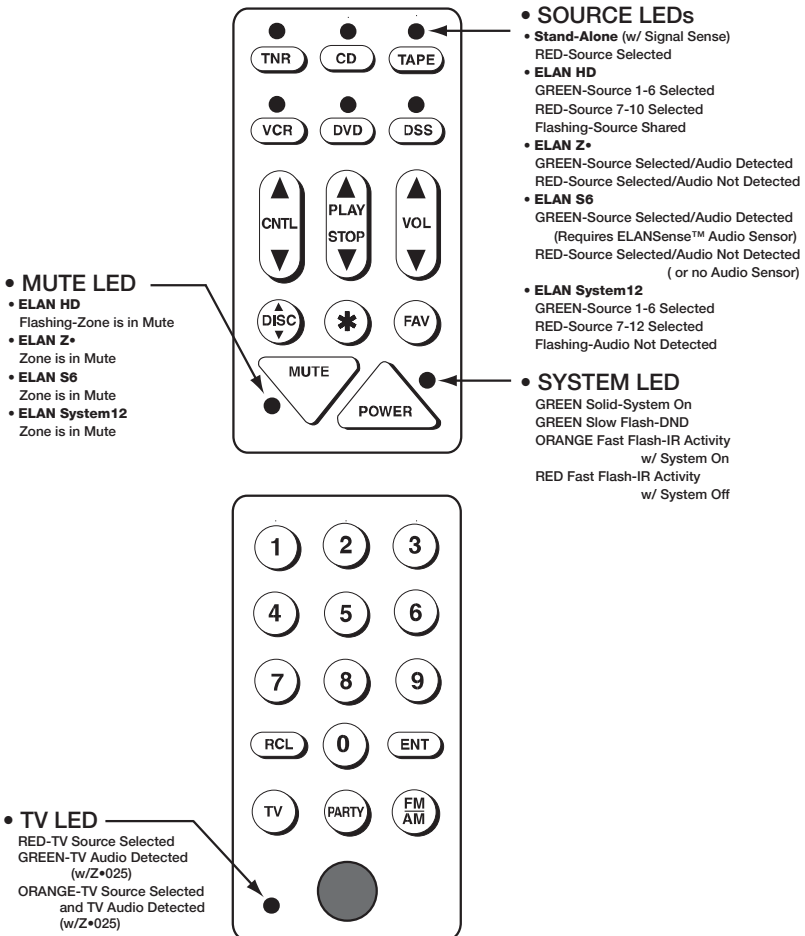
Status LEDs

Each keypad has multi-colored LEDs that indicate various conditions of system status. The LEDs behave somewhat differently depending on what type of system (S12, Stand-Alone, etc.) is being controlled. Status LEDs are a function of VIA!TOOLS programming and dipswitch settings. A keypad will not show correct status indications if the dipswitches are in the wrong position. The diagram below shows the Status LED behavior for each system type. Please see **Dipswitch Settings** on p. 5.

The system types include:

- **Stand-Alone** (w/ Signal Sense)
- **Stand-Alone** (w/out Signal Sense)
- **ELAN HD**
- **ELAN Z•**
- **ELAN S6**
- **ELAN System12**

Note: Please see VIA!TOOLS Help file for detailed information about programming Z•PADS.



Dipswitch Settings

Each possible application has specific Z•100 dipswitch settings that will allow the LEDs on the front of the keypad to display various status activities. The table below is placed here for convenience and shows the dipswitch setting for each system type.

| Application | Dipswitch Setting | Application | Dipswitch Setting |
|---|--------------------|------------------|--------------------|
| Stand-Alone +12V Signal Sense Disabled | DN, DN, DN, DN | Z•System Zone 7 | UP, DN, DN, DN |
| Stand-Alone +12V Signal Sense Enabled | DN, DN, DN, UP | Z•System Zone 8 | UP, DN, DN, UP |
| Z•System/S6 Zone 1 | DN, DN, UP, DN | Z•System Zone 9 | UP, DN, UP, DN |
| Z•System/S6 Zone 2 | DN, DN, UP, UP | Z•System Zone 10 | UP, DN, UP, UP |
| Z•System/S6 Zone 3 | DN, UP, DN, DN | Z•System Zone 11 | UP, UP, DN, DN |
| Z•System/S6 Zone 4 | DN, UP, DN, UP | Z•System Zone 12 | UP, UP, DN, UP |
| Z•System/S6 Zone 5 | DN, UP, UP, DN | HD System | UP, UP, UP, UP |
| Z•System/S6 Zone 6 | DN, UP, UP, UP | System12 | UP, UP, UP, DN |

Limited Warranty

ELAN HOME SYSTEMS, L.L.C (ELAN) warrants the Z•100 keypad to be free from defects in materials and workmanship for two (2) years from date of purchase. If within the warranty period purchaser discovers such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the items at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an authorized ELAN installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or any other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform and be limited to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, or other expenses which may be incurred in connection with repair or replacement. Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FORGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To ensure that consumers obtain quality pre-sale and after-sale support and service, ELAN Home Systems products are sold exclusively through authorized dealers. ELAN products are not sold online. The warranties on ELAN products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your ELAN reseller is authorized, please call ELAN Home Systems at (859) 269-7760.