

# KE-325

## Keyless Entry® Access Control System



## Installation and Operations Manual

**XE** ESSEX  
ELECTRONICS  
INCORPORATED  
1-800-KEYLESS    [keyless.com](http://keyless.com)

# **ESSEX ELECTRONICS, INC.**

## ***KE-325 Series***

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### **Document Information**

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Revision B

This documentation is applicable to the KE-325 with Rev. B (or earlier) on the date code label. (Located on the control module circuit board). This documentation is also applicable to prior revisions except where noted.

### **Trademarks**

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# Table of Contents

<b>INTRODUCTION.....</b>	<b>3</b>
OVERVIEW.....	3
SYSTEM SPECIFICATIONS .....	3
INPUT REQUIREMENTS .....	4
OUTPUT CAPABILITIES .....	4
KEYPAD OPTIONS.....	5
<b>PREPARING FOR INSTALLATION .....</b>	<b>6</b>
SYSTEM COMPONENTS .....	6
<b>THE INSTALLATION PROCEDURE .....</b>	<b>7</b>
REQUIRED TOOLS .....	7
PREPARE THE KEYPAD FOR INSTALLATION.....	7
INSTALL THE WIRING CABLE .....	8
MOUNT THE KEYPAD.....	8
PREPARE THE DOOR FOR THE ELECTRIC STRIKE .....	8
INSTALLING THE CONTROL MODULE .....	9
CONNECTING THE LOCKING DEVICE.....	9
<b>SYSTEM HARDWARE SETUP .....</b>	<b>10</b>
REMOTE BY-PASS.....	10
ANTI-TAILGATING .....	10
TIME ZONE/RESTRICTED ACCESS INPUT .....	10
BATTERY BACKUP .....	11
<b>OVERVIEW OF SYSTEM PROGRAMMING .....</b>	<b>11</b>
NOTES TO REMEMBER WHEN PROGRAMMING.....	11
RESETTING THE SYSTEM .....	12
SYSTEM SETUP OVERVIEW.....	12
<b>PROGRAMMING SYSTEM SETUP .....</b>	<b>14</b>
<b>PROGRAMMING INDIVIDUAL USERS (ADD, MODIFY OR DELETE) .....</b>	<b>16</b>
<b>NORMAL OPERATION .....</b>	<b>19</b>
<b>TROUBLESHOOTING.....</b>	<b>20</b>
<b>REPAIRS AND WARRANTY .....</b>	<b>22</b>
<b>APPENDIX A – CIRCUIT BOARD LAYOUT .....</b>	<b>25</b>
<b>APPENDIX B- TYPICAL WIRING DIAGRAMS .....</b>	<b>26</b>
<b>APPENDIX C – USER PROGRAMMING FORM .....</b>	<b>27</b>

# Introduction

## Overview

The KE-325 is an easy to program, easy to use, stand-alone Keyless Entry® system with features suitable for a variety of access control requirements. Providing either a voltage output or dry contact closure, the KE-325 is designed to control any fail-safe or fail-secure electric locking device.

The KE-325 features one master code and 99 user codes. Two relay outputs are available to provide a variety of access control configurations including single door operation with an auxiliary output for a CCTV/Light Controller, a Gate/Garage Door controller or Doorbell activation. The KE-325 can be configured for two door operation.

## System Specifications

Input Requirements:	12 to 24V AC/DC
Standby Current Draw:	12V → 25mA 24V → 35mA
Outputs:	2 SPDT Relay contacts at 6 amps (120VAC) Voltage or Dry Contact Fail Safe or Fail Secure Relay Configuration
Programmable Output: (Door Open Time)	1 to 99 seconds Default → 5 seconds
Latching:	Off (Default), Manual (Toggle On/Off), Timed
# of User Codes:	100 Codes (1 Master, 99 User)
Code Length:	3 to 8 Digits
Default Master Code:	1-2-3
Tamper Alarm:	3 Incorrect Code Attempts
Access Code Protection:	Non-Volatile Memory
Keypad Operating Environment:	- 40° C to + 70° C (- 40° F to + 160° F) 100 % Relative Humidity
Keypad Dimensions:	
12-Pad 3x4	5 1/8" x 3 3/8" x 7/16"
Thinline 2x6	7 1/8" x 1 3/4" x 3/4"
Control Module Operating Environment:	- 40° C to + 49° C (- 40° C to + 120 ° F)
Control Module Dimensions:	6 3/4" x 7 3/4" x 1 5/8"

## ***Input Requirements***

The KE-325 accepts 12 to 24 volts AC/DC. An optional battery charging module and rechargeable Gel Cells are available to keep the system operational for up to 50 hours during a power interruption. System current draw (maximum):

Standby: 35mA

During Operation: 75mA

⊗**IMPORTANT:** The maximum current draw allowed is 1 amp. (3 amps with battery back-up for fail-secure applications only.) Check the specifications of your locking device. Make sure that the locking device and the KE-325 combined draw less than 1 amp. For locking devices that draw more current, a separate power supply is required. (See Typical Wiring Diagrams - Appendix B Page 26)

## ***Output Capabilities***

The KE-325 provides two SPDT dry contact relays (rated at 6 amps at 120 VAC).

Main Relay – The main relay is intended to activate either a Fail-Safe or a Fail Secure (Non Fail-Safe) electronic locking device. It may also be configured as a dry contact relay output to control a gate operator or garage door opener. The main relay is programmable from 01 to 99 seconds with optional timed or manual latching.

2<sup>nd</sup> Relay – Can be programmed for one of the following:

1. CCTV or Light Controller – First key press triggers a Timed Output (1 to 99 seconds).
2. Internal Alarm System – Detect Break-in, Door-ajar and Tamper.
3. External Alarm System – Shunt an external alarm system.
4. Auxiliary Output – Manual Control or Timed Output (1 to 99 seconds).
5. Second Door Operation – Users can be assigned to open a second door.
6. Doorbell – Press # at the Keypad to trigger a 1 second output for a doorbell (not included).

## Keypad Options

All Essex Keypads are designed to perform reliably in even the most extreme environmental conditions. Operating temperature can range from -40°C to +70°C (-40°F to 160°F). The KE-325 is compatible with any of the following Keypads:

Part Number *	Description
KP-34S	12-Pad 3x4 w/ Stainless Steel Bezel
KP-34B	12-Pad 3x4 w/ Brass-Finished Bezel
KP-34K	12-Pad 3x4 w/ Black Bezel
KP-26TS	Thinline 2x6 w/ Stainless Steel Overlay
KP-26TB	Thinline 2x6 w/ Brass Overlay
KP-26TI	Thinline 2x6 w/ Black Lexan® Illuminated Overlay
KP-26TR	Thinline 2x6 w/ Braille Overlay

\* Keypad Part Number is located on the back of the Keypad

### 12-Pad 3x4



5 1/8" x 3 3/8" x 7/16"  
(13 x 8.5 x 1.2 cm)

### Thinline 2x6



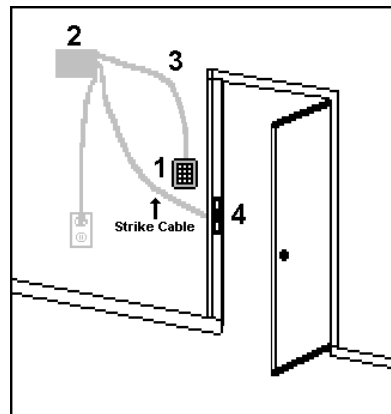
7 1/8" x 1 3/4" x 3/4"  
(18.1 x 4.4 x 1.8 cm)

# Preparing for Installation

## System Components

There are four primary components to be installed:

1. The Keypad should be mounted on the wall adjacent to the door. It should be on the same side as the door strike and about 4 feet above the floor.



**Typical Installation**

2. The Control Module should be mounted inside the building near a power source. Typically the control module is hidden in a false ceiling or closet. The control module must be located in an environmentally controlled area where the temperature remains between -40°C and +49°C (-40° F and 125° F.)
3. The Wiring Cable connects the keypad to the control module. It is important **not** to locate the cable adjacent to any wiring that carries line voltage. Included with the system is a 15-foot CL2 12 conductor jacketed wiring cable of which only 11 wires are used. If the Control Module must be located further than 15 feet from the Keypad, additional cable may be spliced. The maximum distance between the Keypad and the Control Module must **not** exceed 1,000 feet. For runs over 200 feet, 18 gauge wire should be used. Under 200 feet, 20 gauge is acceptable.
4. The Electric Strike/Other Locking Device(not included) connects to the KE-325's Main Relay output via a strike cable. (See Typical Wiring Diagrams - Appendix B Page 26)

# The Installation Procedure

## ***Required Tools***

You will need the following tools:

- Medium sized, Phillips head screwdriver
- 7/8" or 1" (25mm) drill bit
- 1/2" (16mm) drill bit
- 1/8" standard screwdriver
- 5/32" (4mm) drill bit (For 12-Pad 3x4)
- Drill
- 3/16" (6mm) drill bit (For Thinline 2x6)

## ***Prepare the Keypad for Installation***

There are different procedures for mounting each Keypad.

Locate the Keypad part number on the back of the Keypad and follow appropriate mounting instructions below. Keypad templates are included with each Keypad (except KP-34's) to assist with the installation.

### Mounting Instructions 12 Pad 3x4: KP-34S, KP-34B or KP-34K

The 3x4 keypad is designed to mount to a single gang switchbox or on a wall, pedestal or any flat surface of at least 3 ½ by 5 ¼". The composition of the mounting surface will determine the fastening method required. If mounting to a surface other than a switchbox:

1. Select a flat surface (3 ½" by 5 ¼") near the door where you wish to install the keypad.
2. Drill the large hole for the Keypad connector using a 7/8" (25mm) drill bit.
3. Place the connector on the back of the keypad in the large hole. Mark the keypad mounting holes.
4. Drill clearance holes in accordance with fastening method used. (If mounting to wood, drill small pilot holes and use #6 flat head wood screws provided. If mounting to metal, drill two 5/32" clearance holes for #6 flat head machine screws provided.)
5. Do **NOT** mount the keypad at this time.
6. Proceed to Install the Wiring Cable.


### Mounting Instructions Thinline 2x6: KP-26TS, KP-26TI, KP-26TB or KP-26TR

The Thinline 2x6 is designed for mullion mount applications. It can also be mounted on a wall, pedestal or any flat surface of at least 1 ¾" by 7". The composition of the mounting surface will determine the fastening method required:



1. Select a flat surface (1 ¾" by 7") near the door where you wish to install the keypad.
2. Using the Thinline template, mark location of holes.
3. Drill the large hole using a 7/8" or 1" (25mm) drill bit.
4. Place the connector on the back of the keypad in the large hole to verify that the mounting holes are aligned. Make adjustments if necessary.
5. Drill mounting holes in accordance with fastening method used. (If mounting to plaster, use the #8 wood screws and plastic anchors included with the Thinline.)
6. Do **NOT** mount the keypad at this time.
7. Proceed to Install the Wiring Cable.

### ***Install the Wiring Cable***

1. Drill a ½" hole in the inside wall or ceiling where you want the cable to come through.
2. Pull the cable through the hole so the connector end goes to the keypad. Route it so there is minimal cable at the keypad.  
 Note: Supplied with the system is a 12-conductor cable designed to connect the keypad to the control module. You will also need a three-conductor cable (not included) to connect the control module to the electric strike or other locking device.

### ***Mount the Keypad***

1. Attach the wiring connector to the Keypad.
2. Attach the Keypad to the wall.
3. Do **NOT** attach the Keypad labels until the system is tested.


### ***Prepare the Door for the Electric Strike***

Follow these instructions only if you are using an electric strike to unlock the door. If you are using the main relay to activate a garage door, automatic gate, etc., skip this section. The new electric strike should be checked to verify compatibility with existing door hardware prior to installation.


1. Remove existing strike.
2. Follow directions included with the strike for preparing the doorjamb.
3. Do **NOT** mount the strike at this time.

## ***Installing the Control Module***

1. Connect the Wiring Cable to Terminal Strip "A" following the color sequence on the circuit board. (See Appendix A – Page 25)

 Note: If the wiring cable has been cut shorter than 15 feet, the tan wire will become exposed. The tan wire is **NOT** used with the KE-325.

2. For AC Input: Connect 12 to 24 Volts AC to Terminal Strip "B" to screws marked "12-24V AC IN".

 Note: If using an Essex external AC Adaptor, connect BLUE and BROWN to the 12-24V input screws. Connect GREEN to the "EARTH" screw on Terminal Strip "A". Plug adapter into a grounded (three terminal) receptacle.

For DC Input: Connect 12 to 24 Volts DC to Terminal Strip "B" to screws marked "DC IN/OUT". Make sure the polarity is correct.

⊗ **IMPORTANT:** The "EARTH" screw terminal on Terminal Strip "A" should be connected to a true earth ground for proper system protection and operation.

## ***Connecting the Locking Device***

Connect the electric locking device to Terminal Strip "B" as outlined in the Typical Wiring Diagram (Appendix B – Page 26). Any 3 conductor, 22 gauge wire can be used to connect the Control Module to the Locking Device. Included with each system are two MOV's (metal oxide varistor). The function of the MOV is to absorb any inductive kickback from the locking device, protecting the circuit board. The MOV's have been installed under the relay contact screws and can be left there for normal "FAIL SECURE" lock operation. For "FAIL SAFE" locks, move one leg from the "N.O." screw to the "N.C." screw. **If possible, install the MOV closer to the electric lock.** If switching voltages higher than 36V, remove the MOV. To provide proper grounding, connect the 3<sup>rd</sup> wire from the body of the locking device to the "EARTH" screw on Terminal "A"


# System Hardware Setup

## ***Remote By-Pass***

In some cases, it may be necessary to control the door from a remote area such as a security station or reception desk. The KE-325 provides for a Remote By-Pass (Exit Switch) or Keypad override. This can be accomplished by connecting a normally open switch to the “REMOTE” and “GROUND” screw terminals on the circuit board (See Appendix A – Page 25). When the Remote By-Pass switch is depressed, the contact bypasses the Keypad and activates the main relay. The relay is activated for the same time length as the programmed Door Open Time (See Programming System Setup for Door Open Time – Page 14).

## ***Anti-Tailgating***

Some security applications require stricter door monitoring. Anti-tailgating can be accomplished by installing a normally closed door monitor switch to the “DOOR MONITOR” and “GROUND” screw terminals on the circuit board (See Appendix A – Page 25). This switch may be the output of a latch monitor switch, a monitor maglock or an alarm switch that senses door movement. When this switch opens, it will relock the door.


 Note: If a door monitor switch is **NOT** used, you must jump the “MONITOR” screw terminals with the factory installed wire.)

## ***Time Zone/Restricted Access Input***

The Time Zone input requires a normally open switch connected to the “CLOCK” and “GROUND” screw terminals. When an external time clock or manual key switch provides a contact closure, only users given “24 hour Access” may enter at any time. All other users can be locked out during specific times. “24 hour Access” is a User Authorization that can be assigned to certain users when they are programmed into the system. (See Programming Individual Users – Page 16)

## **Battery Backup**

Although battery backup is **NOT** required for User Code retention, you may wish to connect an optional Essex battery charging module (part no. BC-01) and rechargeable Gel Cells to the KE-325 to provide operation during a power interruption.

 Note: Although the system will operate on DC input, DC will not charge the batteries for backup. If you require battery back up, make sure your input is AC. Rechargeable batteries must be used for back up.

## **Overview of System Programming**

### ***Notes to Remember When Programming***

1. Knowledge of the Master Code is required to program System Setup. Knowledge of the Master Code or an authorized User Code is required to program Users.
2. Each User/User Code is programmed into one of the 99 User ID's (or User Locations). A User Programming Form is included or refer to Appendix C (see page27).
3. User Codes can vary in length from 3 to 8 digits.
4. The # or \* key cannot be used as part of a User Code.
5. The system does not allow you to program duplicate codes.
6. The “#” key is used as an “Enter” key in programming and normal operation.
7. The “\* \*” command is used to complete a programming sequence or to reset the system back to normal operation. If you are distracted or interrupted, while in the programming mode or in normal operation, enter \* \* to reset the system back to normal operation. Depending on the level of programming, you may need to enter \* \* several times until neither LED is flashing.

<u>Key/Feedback</u>	<u>Description</u>
*	Enter Programming
* *	Clear/Reset or Complete and Exit Programming
#	“Enter” Key
Double Beep	Entry accepted and more data needed
Triple Beep	Completion of Programming Step
Long Steady Beep	Error


## ***Resetting the System***

In certain cases you may want to erase all programmed user codes and restore system defaults. To perform this procedure, locate the control module, remove the cover and press the “RESET” switch and the “PROGRAM” switch simultaneously for at least 3 seconds. The keypad will beep rapidly 5 times indicating the memory has been cleared.

**Important:** This procedure completely erases the memory and restores system defaults!!! Once the memory is cleared, all programmed Users (codes) are erased!!!

## ***System Setup Overview***

The Master Code: Knowledge of the Master Code is the highest privilege granted to a user of the KE-325 system. There is only one Master Code, which is used to gain access to all programming areas including System Setup. Typically only the facilities manager or security director should have access to this code. The default Master Code, “1-2-3”, can be used for initial programming but should be changed to a unique 3 to 8 digit code. The Master Code is reprogrammed through system setup.

 **Note:** If you forget the Master Code, locate the control module and remove the cover. Locate and press the “PROGRAM” switch for at least 1 second. You will hear a double beep at the keypad. Proceed to System Setup, Step 3 to change the Master Code (page 14).

Door Open Time: The Door Open Time refers to the length of time the door will remain unlocked following the entry of a valid User Code. Although the default is set for 5 seconds, this setting can be changed to any value between 01 and 99 seconds. (See Programming System Setup – Page 14).


Latching: There are three options for latching the door open or closed for extended periods of time. Latching Authorization is determined when programming each User.

1. Off – Set as the default, this prevents **any** latching at all.
2. Manual – This allows any authorized user to manually latch the door open (unlocked) or closed (locked) indefinitely. If the KE-325 is set to Manual, latching is activated by entering “1#” following entry of an authorized user code. Entering “0#” following an

authorized code will deactivate latching.

3. **Timed** – This allows any authorized user to latch the door open for a predetermined number of hours at which point the door will automatically latch closed. Entering “1#” following entry of an authorized code will activate timed latching. Entering “0#” following entry of an authorized code will deactivate timed latching.

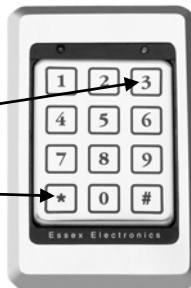
2<sup>nd</sup> Relay: The KE-325's 2<sup>nd</sup> Relay can be configured as one of the following:

1. Controller for a CCTV/External Light – By default, the 2<sup>nd</sup> Relay is configured to activate at the first touch of the Keypad and remain ON for a 30 second time interval after the last keypad touch.
2. Controlling Internal Alarm – The 2<sup>nd</sup> Relay can be used to monitor and report events such as break-in, door ajar and tamper. In order to detect these occurrences, you will need to install a door monitor switch or latch monitor switch. (See Anti-tailgating – Page 10)
3. Controlling an Auxiliary Device – The 2<sup>nd</sup> Relay can be configured to provide a momentary output for 01 to 99 seconds or a manual ON/OFF output. If the 2<sup>nd</sup> Relay is configured to control an auxiliary device, entering “3#” following entry of an authorized User Code activates the 2nd Relay. Entering “2#” following entry of an authorized code will deactivate the 2<sup>nd</sup> Relay.
4. Second Door Operation – The 2<sup>nd</sup> Relay can be configured to control a second door. It is important to note that if the 2<sup>nd</sup> Relay is configured to control a second door, each User can be given the authorization to open door 1 or door 2, but not both. If you have Users who require access to both doors, it will be necessary to assign them two different codes.
5. Activate a Doorbell – The 2<sup>nd</sup> Relay can be used to trigger a 1 second output to activate a doorbell (not included with the KE-325). If the 2<sup>nd</sup> Relay is configured for doorbell, simply entering “#” will activate the relay.  
 **Note:** Do not precede the “#” with any other keystrokes.



# Programming System Setup

The KE-325 System Setup can only be modified if you know the Master Code. When the system is initially setup, the default system settings should be reviewed prior to other programming.



1. Enter \* 3
2. Enter the Master Code followed by #  
Example: \* 3 123 #  
This opens programming and causes ⇒

Red LED	Green LED
Slow Flash	Solid

3. Proceed to one of the following options which requires programming:

## **To Change the Master Code (Default: 1,2,3)**

Keypad Status after Step Completion

- a) Enter 1#
- b) Enter the New Master Code followed by #
- c) Return to Step 3 or enter \* \* to exit programming.

Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
b)	Triple	Slow Flash	Solid

Note: If you forget the Master Code, locate the control module. (The control module is typically installed in a secured area within 15' of the keypad.) Remove the cover, locate and press the "PROGRAM" switch on the circuit board for 1 second (see page 25). This will take you to Step 3 of Programming System Setup. Once you press the program switch, you have 1 minute to begin the program sequence.

## **Setting the Door Open Time (Default: 5 Seconds)**

- a) Enter 2 #
- b) Enter the desired Door Open Time in two digits (01 to 99 seconds), followed by #

Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
b)	Triple	Slow Flash	Solid

Example: 2 # 1 5 # ⇒ Set a 15 second Door Open Time

- c) Return to Step 3 or enter \* \* to exit programming.

## **Setting Latching Option (Default: Off)**

- a) Enter 3 #
- b) Select desired latching option  
Off ⇒ Enter 00, followed by #

Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
b)	Triple	Slow Flash	Solid

Manual ⇒ Enter 99, followed by #

Timed ⇒ Enter the desired time interval in hours (01 to 98), followed by #

Example: 3 # 0 8 # ⇒ Set timed latching for 8 hours.

- c) Return to Step 3 or enter \* \* to exit programming.

## Programming System Setup (continued)

### Configuring 2<sup>nd</sup> Relay (Default: CCTV 30 Sec) Keypad Status after Step Completion

- a) Enter 4 #  
b) Select one of the following:  
CCTV/External Light

Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
I.	Double	Slow Flash	Fast Flash
II.	Triple	Slow Flash	Solid

- I. Enter 1 #  
II. Enter the desired  
On Time in two digits  
(01 - 99 seconds),  
followed by #

#### Internal Alarm

- I. Enter 2 #  
II. Enter the desired Door Ajar Time in two digits (01-99 seconds),  
followed by #

#### Auxiliary Device

- I. Enter 3 #  
II. Enter the momentary output time in two digits (01-99 seconds),  
followed by #  
-- or --  
Enter 0 0 to set the auxiliary device for Manual Operation (ON/OFF),  
followed by #

#### Second Door

- I. Enter 4 #  
II. Enter the desired Door Open Time in two digits(01-99 seconds),  
followed by #  
III. Select the desired latching method:  
Off ⇒ Enter 00, followed by #  
Manual ⇒ Enter 99, followed by #  
Timed ⇒ Enter the desired time interval in hours (01 to 98),  
followed by #

#### Doorbell

- I. Enter 5 #

Examples: 4 # 1 # 1 5 # ⇒ Set CCTV/Light Option for 15 seconds  
4 # 2 # 1 0 # ⇒ Set Internal Alarm with a 10 second Door Ajar Time  
4 # 3 # 0 0 # ⇒ Set Auxiliary Device with Manual Operation  
4 # 4 # 0 5 # 9 9 # ⇒ Set Second Door w/5 second Door Open  
Time and Manual Latching

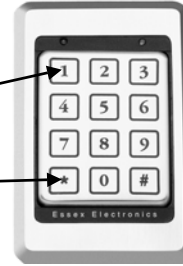
- c) Return to Step 3 or enter \*\* to exit programming.  
4. Enter \*\* to complete the sequence and reset the system to normal operation.





# Programming Individual Users

Authorized users (master code or any user authorized to program) can program users directly from the keypad. Each Individual User can be assigned various authorizations. Review System Setup before programming individual users.



1. Enter \* 1
2. Enter the Master Code (or a User Code who is authorized to program), followed by #

Example: \* 1 123 #

This opens programming and causes ⇨

Red LED	Green LED
Slow Flash	Solid

3. Proceed to any of the following which requires programming:

## Adding a New User

Keypad Status after Step Completion				
Step	Beep	Red LED	Green LED	
a)	Double	Slow Flash	Slow Flash	
b)	Double	Slow Flash	Fast Flash	
c)	Double	Slow Flash	Fast Flash	
d)	Double	Slow Flash	Fast Flash	
e)	Triple	Slow Flash	Slow Flash	

- a) Enter 1#
- b) Enter the User ID in two digits (01 to 99), followed by #
- c) Enter the User Code/PIN (3 - 8 digits), followed by #
- d) Enter the desired User Authorization, followed by #  
(repeat for additional authorizations or skip to Step e for no authorizations)
  - 1# ⇨ Latching Authorization
  - 2# ⇨ Program or Delete Users Authorization
  - 3# ⇨ Auxiliary Device Authorization (see notes)
  - 4# ⇨ Second Door Authorization (see notes)
  - 5# ⇨ 24 Hour Access (see notes)
- e) Once all desired User Authorizations have been assigned, enter # to complete programming for this User.
- f) To program an additional User, return to Step b.
- g) If no more Users are to be added, enter \* \* and return to Step 3 or if you have completed all User Programming, enter \* \* a second time to complete programming sequence and reset system to normal operation.

## Notes on Adding New Users:

- "Auxiliary Device" or "Second Door" authorization depends on configuration of Relay #2. See System setup – Page 15.
- If Relay #2 is configured for "Second Door" operation and a user is given Second Door Authorization, their User Code will activate Relay #2, not the Main Relay.
- "24 Hour Access" requires an external time clock or keyswitch. This allows you to restrict access to Users who are not assigned "24 Hour Access". See Time Zone/Restricted Access Input in System Hardware Setup – Page 10.

## Programming Individual Users (continued)

Keypad Status after Step Completion

### Modify a User by User ID

- | Step | Beep   | Red LED    | Green LED  |
|------|--------|------------|------------|
| a)   | Double | Slow Flash | Slow Flash |
| b)   | Double | Slow Flash | Fast Flash |
| c)   | Double | Slow Flash | Fast Flash |
| d)   | Double | Slow Flash | Fast Flash |
| e)   | Triple | Slow Flash | Slow Flash |
- a) Enter 2#
- b) Enter the User ID (01 to 99) for the User you wish to modify, followed by #
- c) To change this User's Code:  
Enter the New User Code, followed by #
- d) To change this User's Authorizations: Enter the desired User Authorization, followed by # (repeat for additional authorizations or skip to Step e for no authorizations)
- 1# ⇒ Latching Authorization  
2# ⇒ Program or Delete Users Authorization  
3# ⇒ Aux Device Authorization  
4# ⇒ Second Door Authorization  
5# ⇒ 24 Hour Access
- e) Enter # to complete programming for this User.
- f) To modify an additional User, return to Step b.
- g) If no more Users are to be modified, enter \* \* and return to Step 3 or if you have completed all User Programming, enter \* \* a second time to complete programming sequence and reset system to normal operation.

### Modify a User by User Code

- | Step | Beep   | Red LED    | Green LED  |
|------|--------|------------|------------|
| a)   | Double | Slow Flash | Slow Flash |
| b)   | Double | Slow Flash | Fast Flash |
| c)   | Double | Slow Flash | Fast Flash |
| d)   | Double | Slow Flash | Fast Flash |
| e)   | Triple | Slow Flash | Slow Flash |
- a) Enter 3#
- b) Enter the User Code for the User you wish to modify, followed by #
- c) To change this User's Code:  
Enter the New User Code, followed by #
- d) To change this User's Authorizations: Enter the desired User Authorization, followed by # (repeat for additional authorizations or skip to step e for no authorizations)
- 1# ⇒ Latching  
2# ⇒ Program or Delete Users  
3# ⇒ Aux Device  
4# ⇒ Second Door  
5# ⇒ 24 Hour Access
- e) Enter # to complete programming for this User.
- f) To modify an additional User, return to step b.
- g) If no more Users are to be modified, enter \* \* and return to Step 3.  
If you have completed all User Programming, enter \* \* a second time to complete programming sequence and reset system to normal operation.

📖 Notes on Modifying Users: Once you have begun to modify a User, previously programmed authorizations are deleted for this User.

## Programming Individual Users (continued) Keypad Status after Step Completion

### Deleting a User by User ID

- a) Enter 4 #
- b) Enter the User ID to be deleted (01 - 99), followed by #
- c) To delete an additional User, return to Step b
- d) If no more Users are to be deleted, enter \* \* and return to Step 3  
If you have completed all User Programming, enter \* \* a second time to complete programming sequence and reset system to normal operation.


Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
b)	Triple	Slow Flash	Slow Flash

### Deleting a User by User Code

- a) Enter 5 #
- b) Enter the User Code to be deleted, followed by #
- c) To delete an additional User, return to Step b
- d) If no more Users are to be deleted, enter \* \* and return to Step 3  
If you have completed all User Programming, enter \* \* a second time to complete programming sequence and reset system to normal operation.

Step	Beep	Red LED	Green LED
a)	Double	Slow Flash	Slow Flash
b)	Triple	Slow Flash	Slow Flash

4. Enter \* \* to complete programming sequence and reset the system to normal operation.

 General Notes on Programming Individual Users: Once an authorized user completes steps 1 & 2 to open the memory, any combination of adding, modifying or deleting Users can be performed without having to re-enter Steps 1 & 2 each time. However, if more than 20 seconds elapse between each step during programming, the system will reset and you will have to start from Step 1.

## Normal Operation

On the Keypad, a solid green LED indicates that the door is unlocked. A solid red LED indicates that the door is locked. If the door is locked, Individual Users may gain access by entering a valid User Code followed by #.

Depending on how the KE-325's System Options are configured, User Commands are used to operate Manual Latching and the 2<sup>nd</sup> Relay. The User Commands are trailing digits entered after an authorized user code. The ability to use these Commands depends on authorizations assigned to each User (see Programming Individual Users – Page 16).

- a) Enter the Master Code or an Authorized User Code, followed by #
- b) As the Main Relay activates, the green LED will flash for 5 seconds (with each key press). While the green LED is flashing, enter one (or more) of the following User Commands:

<b>Latching (Main Relay &amp; Relay #2 as Second Door)</b>	<b>Relay #2 set as Aux. Device</b>
0 # ⇒ to Latch the Door Closed	2 # ⇒ to Turn Relay #2 OFF
1 # ⇒ to Latch the Door Open	3 # ⇒ to Turn Relay #2 ON

# Troubleshooting

These are a few troubleshooting suggestions to help assist with any problems you may experience. If the problem continues or is not answered here, please call Essex technical support at 1-800 KEYLESS → (800) 539-5377. You can also visit Essex on the web at [keyless.com](http://keyless.com) or send request via email to [support@keyless.com](mailto:support@keyless.com).

## **I Changed the code, but the old code still unlocks the door**

Remember there are a total of 100 Codes (1 Master, 99 User Codes) for the KE-325. Make sure you changed the desired code. It is recommended you Delete the User by User Code (see page 18), then program the new user code.

## **The Keypad beeps but the door does not unlock**

If the Keypad beeps but an authorized code does not unlock the door, there is an easy test to check the wiring hookup to the primary locking device (the device connected to the Main Relay). On the circuit board, locate the 4 screw terminal block on the bottom of the board. Momentarily short the “GROUND” and “REMOTE” screws. This will activate the output (same as if you enter a valid programmed code at the Keypad). If this test does not activate the lock, you may have wired the lock incorrectly to the KE-325 (see Typical Wiring Diagrams – page 26). If this test does activate the output (you should hear the relay click and the locking device should unlock), then the problem may be one of the following:

Programming - If the unit has just been installed, the problem is most likely with programming the user codes. Review Programming of Individual Users again remembering to complete the entire programming sequence.

Code Loss - (Existing installations) There are typically two reasons for code loss, static or inductive kickback. There is no way to determine if the system has been affected by either of these, however, you can reprogram the system codes as described in User Code Programming. It is very important the system is properly grounded and the MOV has been installed, otherwise static and code loss may be an ongoing problem.

**The Door opens with the first press on the Keypad**

If the unit has just been installed, make sure your locking device is connected to the Main Relay – NC1 or NO1 (see Typical Wiring Diagrams – page 26).

**Keypad is completely dead**

Interrupted Power - First check your power supply to see that power has not been cut off. Using a voltmeter, check the incoming voltage on terminal strip "B" (12-24V AC IN or DC IN/OUT). If the voltage reads low, the electric locking device may be drawing too much current. To test, remove the wires to the device and recheck the voltage. If the voltage now reads normal, check the current draw of the locking device and make sure it falls within the system specifications (see Input Requirements – Page 4).

Blown Fuse - Check the fuse on the circuit board. The purpose is to protect the power supply and circuitry. If your locking device is drawing too much current or there is a short, the fuse will blow. Replace with a 2 amp slo blo only. A spare fuse is provided in the spare parts kit. Although the fuse may appear intact, it is best to check with a voltmeter.

**Keypad beeps all by itself**

Constant Beeping - If the beep is consistently every 5 seconds, put a .1 $\mu$ f 16v (or higher) ceramic capacitor across wires 3 & 10 (black, violet) on terminal strip "A".

Random Beeping - Check for bad circuit ground going to the keypad. Is the black wire from the wiring cable securely fastened to screw #3 on Terminal strip "A"? Check for bent pins on the back of the keypad. Also check EARTH ground.

## Repairs and Warranty

Should it be necessary for a component or a system to be returned for repair, it must be accompanied with an RA# (Return Authorization Number) issued by the factory. Please call 1-800-KEYLESS (800-539-5377) to obtain an RA#. All returns must be sent to the factory freight prepaid. Collect shipments will not be accepted at any time. Standard turnaround time is ten (10) working days from the date of receipt. All repairs will be returned UPS Ground (or equivalent). Any other shipping requests or instructions will be at the customer's expense.

At the factory's discretion, warranty repairs will include repair or replacement, update and testing. Returns and repairs out of the warranty period or in warranty with damage not covered under warranty shall be subject to a repair charge. All non-warranty repair freight charges are paid for by the customer. Non-warranty repair charges are returned COD. (Factory Authorized Distributors are subject to standard terms).

A return authorization number may be obtained by calling Essex Electronics Incorporated at (800) 539-5377.

Returns should be sent freight prepaid to:

ESSEX ELECTRONICS, INC.  
1130 Mark Avenue  
Carpinteria, CA 93013-2918  
Attn.: RA# \_\_\_\_\_

## **5 YEAR LIMITED WARRANTY**

*Effective Date 3/17/03*

Essex Electronics, Incorporated warrants that at the time of original purchase from Essex Electronics, Incorporated, the KEYLESS ENTRY® Coded Access System or KTP Series keypad will be free from defects in workmanship and material, but that the Buyer's remedies under this Warranty shall be limited to the following, running from the date of purchase:

5 Years – Full Warranty Limited to repair or replacement at Seller's election.

This warranty shall apply only if Buyer gives Essex Electronics, Incorporated written notice of the defect, at the address listed below, within five years of the date of sale. No warranty shall extend to any replacement furnished under this warranty beyond the unexpired portion of original part warranty given on the original part or system, which has been replaced. Essex Electronics, Incorporated's liability and Buyer's remedy under this warranty is limited to the repair or replacement at Seller's election of the KEYLESS ENTRY® Coded Access System or KTP Series keypad, or parts thereof, returned to Essex Electronics, Incorporated at Buyer's expense and shown to Essex Electronics, Incorporated's reasonable satisfaction to have been defective.

This express warranty extends only to the original retail or wholesale Buyer and the original place of installation. It does not apply if the KEYLESS ENTRY® Coded Access System or KTP Series keypad, or parts thereof, is installed in violation of the applicable codes or ordinances, or is not installed in accordance with our instructions, is damaged by lightning or Act of God, or is misused, damaged by accident, altered or disconnected. In no event shall Essex Electronics, Incorporated be liable for any damage to persons, property or area surrounding the installation site caused by any malfunction of the KEYLESS ENTRY® Coded Access System or KTP Series keypad.

Each replacement KEYLESS ENTRY® Coded Access System or KTP Series keypad or replacement part to be furnished under this warranty shall be provided for at our factory listed below. We will not pay, nor be responsible for, shipping, transportation or delivery charges, or other cost of removal of a defective KEYLESS ENTRY® Coded Access System or KTP Series keypad or installation of a replacement KEYLESS ENTRY® Coded Access System or KTP Series keypad. The original of any system replaced under this warranty shall become our property, and as such will, at our request, be returned to our factory with transportation charges replaced by the Buyer.

Essex Electronics, Incorporated reserves the right to discontinue a product for any reason, without notice, at any time. If a product that has been discontinued proves defective, within the terms expressed in this Limited Warranty, a substitute product may be provided at the Seller's election, as a replacement for the original discontinued product.

Notice of any defect must be sent to Essex Electronics, Incorporated, 1130 Mark Avenue, Carpinteria, California, 93013, USA and must include the date code of the unit, description of the defect and factory assigned Return Authorization #.



Upon receipt of such notification, Essex Electronics, Incorporated will determine whether to repair or replace. We also reserve the right to have our representative make any inspection or repairs, or furnish replacements.

#### **DISCLAIMER OF WARRANTIES: LIMITATION OF BUYER'S REMEDIES**

EXCEPT FOR THE REPAIR OR REPLACEMENT AT SELLER'S OPTION WHICH IS EXPRESSLY SET FORTH ABOVE, ESSEX ELECTRONICS, INCORPORATED EXTENDS NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, AND DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR SUITABILITY FOR PURPOSE FOR WHICH SOLD, WITH RESPECT TO THE KEYLESS ENTRY CODED ACCESS SYSTEM OR KTP SERIES KEYPAD. EXCEPT FOR THE LIMITED REPAIR OR REPLACEMENT SPECIFIED ABOVE, UNDER NO CIRCUMSTANCES WILL ESSEX ELECTRONICS, INCORPORATED BE LIABLE TO BUYER UNDER OR IN CONNECTION WITH ANY MANUFACTURE OR SALE OF THE KEYLESS ENTRY® CODED ACCESS SYSTEM OR KTP SERIES KEYPAD UNDER ANY TORT, NEGLIGENCE, STRICT LIABILITY, CONTRACT OR OTHER LEGAL OR EQUITABLE THEORY, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR BUYER'S COST OF EFFECTING INSURANCE COVERAGE.

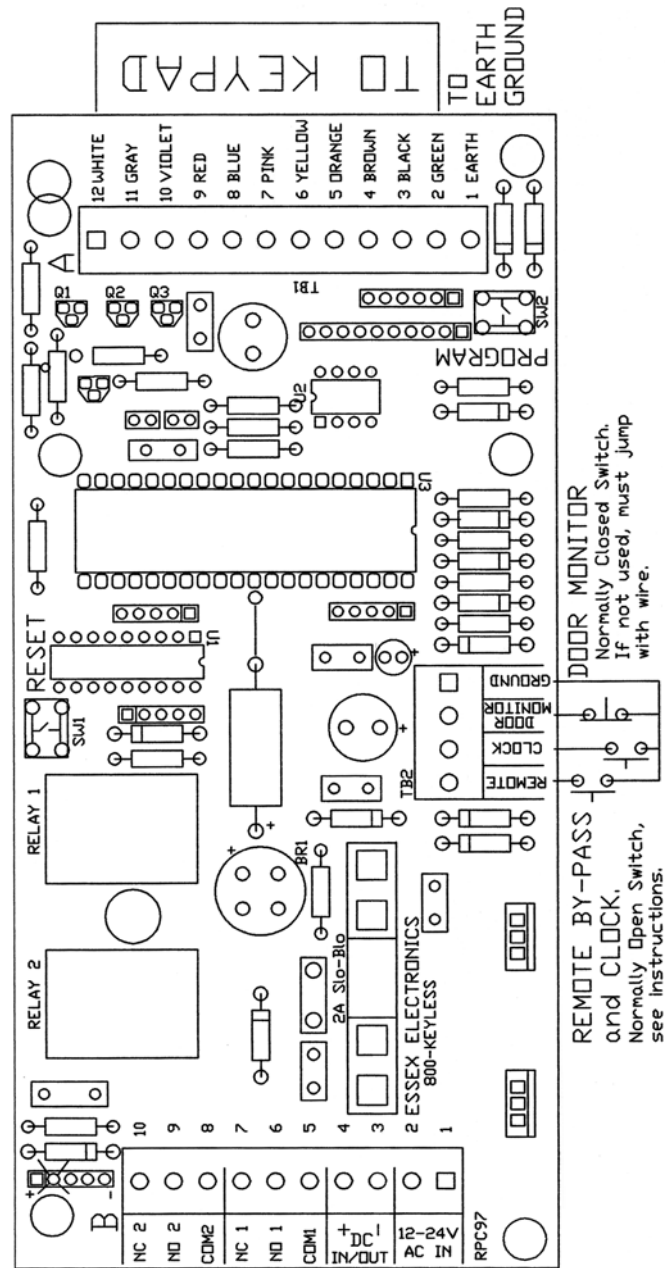
THE FOREGOING LIMITED WARRANTY EXPRESSED HEREIN CONSTITUTES THE SOLE AND ENTIRE WARRANTY WITH RESPECT TO THE KEYLESS ENTRY® CODED ACCESS SYSTEM OR KTP SERIES KEYPAD AND IS IN PLACE OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

THIS WARRANTY MAY NOT BE EXPANDED OR EXTENDED BY ANY ORAL REPRESENTATION, WRITTEN SALES INFORMATION, ADVERTISING, DRAWINGS OR OTHERWISE. ESSEX ELECTRONICS, INCORPORATED IS NOT RESPONSIBLE HEREUNDER FOR INCIDENTAL DAMAGE TO PERSON OR PROPERTY, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES OF THE BUYER SHALL BE LIMITED TO THOSE PROVIDED IN THIS LIMITED WARRANTY TO THE EXCLUSION OF ANY AND ALL OTHER REMEDIES, INCLUDING, WITHOUT LIMITATION, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This Limited Warranty shall be governed by and interpreted in accordance with the California Uniform Commercial Code and by the procedural laws of the State of California. Any lawsuit or other action which arises out of, relates to, or is in connection with the manufacture or sale of the KEYLESS ENTRY® CODED ACCESS SYSTEM OR KTP SERIES KEYPAD shall be governed by California law, and the venue for any such action shall be the Superior Court of the State of California in and for Santa Barbara County, California.

This warranty excludes elevator and vehicle Keyless Entry Access Control Systems. A separate warranty applies to Keyless Entry systems manufactured for these applications.

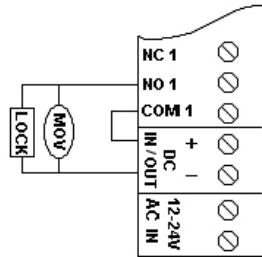
# Appendix A – Circuit Board Layout



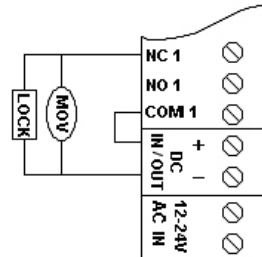
# Appendix B- Typical Wiring Diagrams

Note: Some low current strikes or relays will cause relay chatter due to inductive kickback. Attach MOV across strike or relay to eliminate chatter.

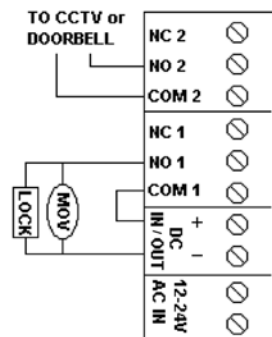
**Fail Secure Lock  
Controlled by KE-325**



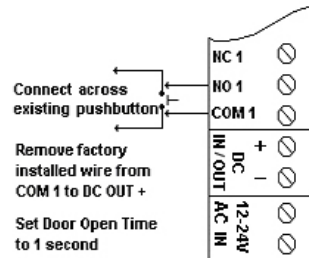
**Fail Safe Lock  
Controlled by KE-325**



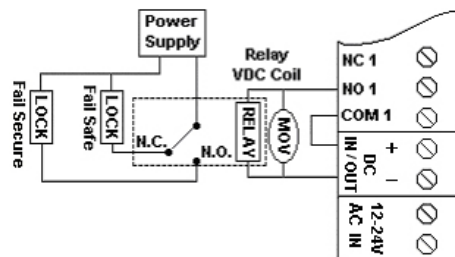
**CCTV/DOORBELL and  
Fail Secure Lock  
Controlled by KE-325**



**Garage Door or  
Gate Drive  
Controlled by KE-325**



**Fail Safe or Fail Secure Lock Controlled by KE-325  
And Powered by External Power Supply**



## Appendix C – User Programming Form

[illegible]

**Note:** For more than 25 Users, make copies of this form or download from the Technical section of [www.keyless.com](http://www.keyless.com)