



# Carefree Security

Access Controls

Specially Designed for Gate Operators, Overhead Doors,  
Specialty Doors & Electric Door Locking Devices

SINGLE OR UP TO 1000 PERSONAL CODE NUMBERS

**Installation and programming instructions**



**1051i**

**Owner's Manual**

## **MODEL 1051i**

Now standard with 2 Relays and automatic  
voltage detection from 10 to 30 volts AC or DC

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## **Introduction**

Carefree-Security self-contained keypads are fully sealed and are ideal for adverse environmental conditions. The electronics are encapsulated in epoxy, making the keypad impervious to moisture.

Carefree-Security keypads are a digital keyless entry system designed for access control applications. The keypad is housed in a metal powder coated enclosure that can be mounted to a pedestal or directly to a wall. The keypad is a heavy duty metal die cast keyboard. The keyboard has bright, easy to read graphics. Single, or up to 1000 entry codes from 2 to 6 digits in length, can be programmed.

The Blue LED serves as a Night Light and a Power On indicator and illuminates to a brighter state when any key is pressed. Three additional LED's indicate the status of the keypad system: The Yellow LED indicates that the keypad is in program mode or in a "lockout" condition. The Green LED indicates that access has been granted to Relay 1. The Red LED indicates that access has been granted to Relay 2. When entering your code number, an audible tone indicates that your input was received. If a wrong number is entered during programming, pressing the \* key will end programming.

### **IMPORTANT- PLEASE NOTE**

Please read all instructions before installing or programing this keypad. It is very important to apply and follow the procedures described herein. Your keypad represents a new generation of high quality, high reliability keypad technology that is simple to use and operate.

## FEATURES:

- Easily Programmable Keypad
- Up to 1000 Personal Code Numbers
- 2 to 6 digit entry code length
- Microprocessor based memory
- Lightning and Surge protection built in
- 4 LED status indicators
- Audio tone buzzer is shipped as a standard feature but not required. Units can be ordered without this feature
- Built in timer for remote exit door switch or fire access key switch
- Latching Relay to hold gates or doors open
- Rugged Heavy Duty Metal Housing
- Powered from a 10 Volt to 30 Volt AC or DC source
- Highly vandal resistant
- Fully sealed metal push button keyboard
- No code number loss with a power failure (EPROM MEMORY)
- Night Light illuminates brighter when any key is pressed
- Timed anti-pass back and keypad lockout

## TECHNICAL NOTES:

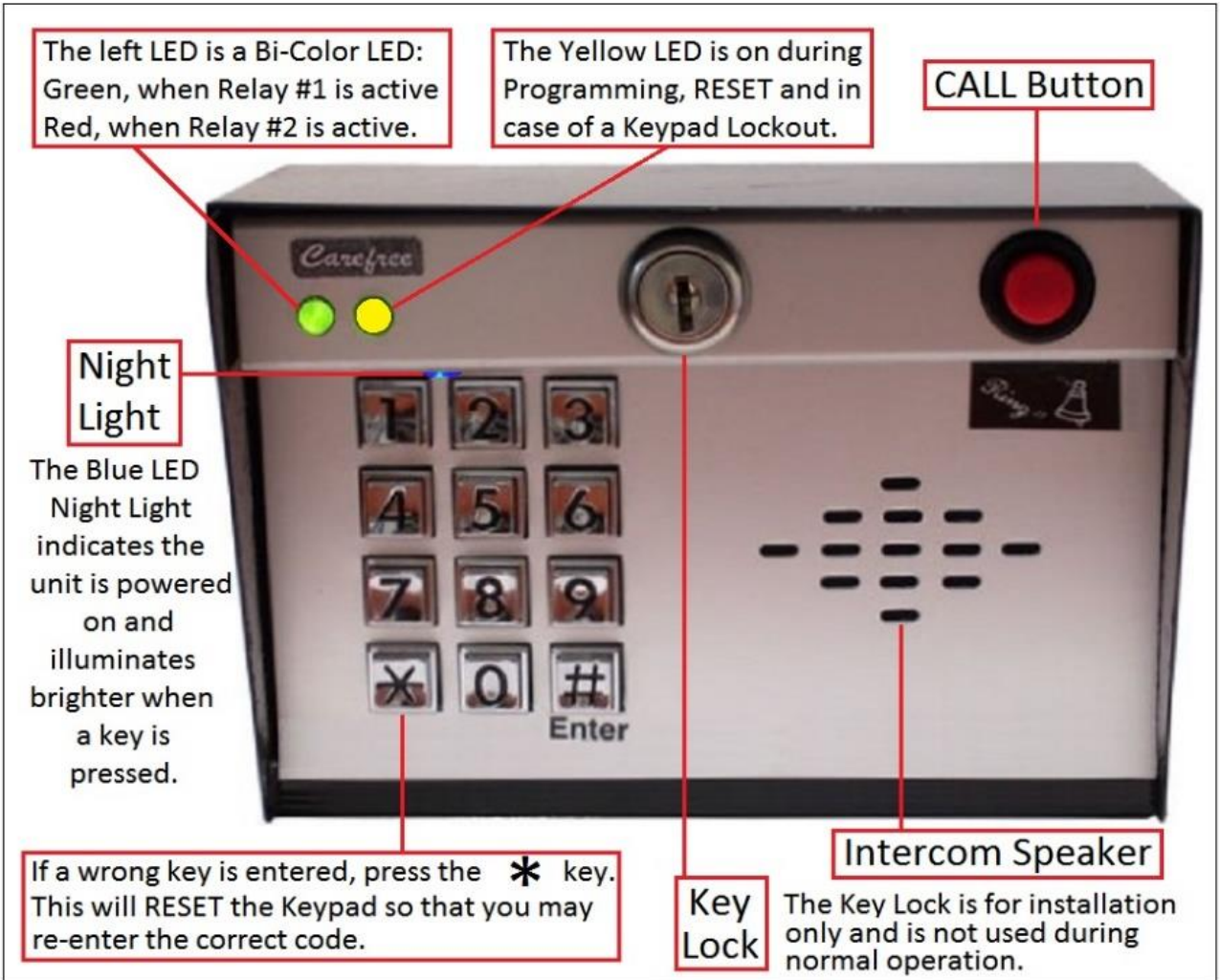
- The user of the keypad has up to 30 seconds to key in their entry code.
- All digits of the personal code number must be entered followed by the # key. If the # key is not pressed, with correct code entry, activation will be sent within ½ second after the last correct access code / digit is pressed.
- To avoid ESD (electrostatic discharge) interfering with the operation of the keypad, ground the housing.
- Lightning and Surge Protection is built into the keypad. However, if you install a keypad in an area where lightning can damage the keypad, make sure to install a Model 306, Lightning & Surge Protector for extra protection. There is no warranty if the keypad is damaged by lightning, static electricity or high voltage surges.
- The keypad automatically senses voltage from 10 to 30 volts AC or DC. Current draw is 10 mA typical and 150 mA max.
- Output of Relay 1 is Form C, 5 Amps. Output of Relay 2 is Form C, 1 Amp.
- The keypad has a built in timer for remote exit. A door exit switch can be wired from the keypad to a Normally Open push button exit switch or to a fire access key switch to provide “codeless” free exit or entry to authorized personnel.
- When pressing any number on the keypad it will activate the Night Light to a brighter state for the duration of entering your code numbers.
- The latching relay code (TOGGLE Mode) will hold gates or doors open.  
Too many incorrect code number entries will cause a lockout condition and the Yellow LED will blink six (6) times or more.
- This keypad has 10-30 volt, AC or DC, automatic detection. Typical access control voltages are 12 to 24 volts. Connecting directly to 110-120 volts single phase will damage the keypad and void the warranty. Make sure a step-down transformer is used with a secondary voltage of 10-30 volts.
- **When supplying DC power – Polarity Must Be Observed.**

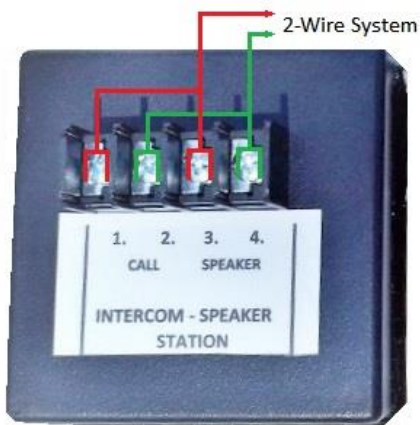
## Warning

All illustrations and operating instructions should be read before the unit is connected to power and operated. The installation and operating instructions should be retained for future reference. All operating and user instructions should be followed. The housing should be mounted to a wall or as recommended by the manufacturer. The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit. Regular testing by entering any valid Personal Code Numbers must be done to ensure proper operation. Make sure that all necessary requirements, such as the proper placing of operating, warning and safety signs are followed in accordance with all Local, State and Federal regulations to ensure the safety and well-being of all those within the area of operation of this unit. Install this unit only on a gate or door operator with an automatic force reverse action.

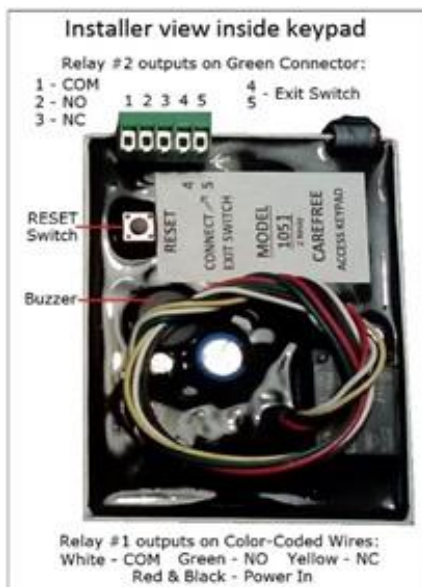


Please refer to your Gate or Door Operating Manual for correct wiring of this keypad to your equipment.





For connection to a 2-Wire System:  
Jumper 1 to 3 and 2 to 4



## Operating Parameters

<b>Input Voltage</b>	10 to 30 Volts AC or DC
<b>Current Draw</b>	
Standby	10 mA @ 12 VDC
Relay Active	100 mA @ 12 VDC
<b>Relay Outputs</b>	
Relay 1	5A @ 28 VDC FORM C COM - NO - NC
Relay 2	1A @ 28 VDC FORM C COM - NO - NC
<b>Remote Timed Exit Switch</b>	NO Switch via pins 4 & 5 on the Green Connector
<b>Temp Rating</b>	-20° F to +140° F -29° C to +60° C -40° F (-40° C) with Optional Built-In Heater

## Programming Instructions

After each programming step you must wait for the Yellow LED to finish blinking. You can abort programming at any time by Pressing the \* key. The Yellow LED will turn off. If an invalid code number is entered or access is denied, the keypad security lockout timer is activated and the Yellow LED will blink 6 times; you must wait for the Yellow LED to stop blinking before re-entering the correct code number.

### To Program a Single Personal Code Number, or up to 1,000 Personal Code Numbers:

- Step 1:** Enter your programming number or the factory programming number 1, 2, 3, 4, 5, 6 and Press the \* Key. The Yellow LED will turn on.
- Step 2:** Enter your new personal code numbers from two (2) to six (6) digits and Press the # key. The Yellow LED will blink one (1) time
- Step 3:** Enter the Relay Activation Time Code from the chart below. Upon each successful code entry, the Yellow LED will blink two (2) times.

Relay 1 – Outputs on Color-Coded wires (see Page 4)	Relay 2 – Outputs on Green Connector (see Page 4)
Entering 2 # will activate Relay 1 for ½ second	Entering 3 # will activate Relay 2 for 1 second
Entering 4 # will activate Relay 1 for 1 second	Entering 5 # will activate Relay 2 for 4 seconds
Entering 6 # will activate Relay 1 for 3 seconds	Entering 7 # will activate Relay 2 for 6 seconds
Entering 8 # will activate Relay 1 for 5 seconds	Entering 9 # will activate Relay 2 for 10 seconds
Entering 10 # will activate Relay 1 for 7 seconds	Entering 11 # will activate Relay 2 for 15 seconds
Entering 12 # will activate Relay 1 for 15 seconds	Entering 13 # will activate Relay 2 for 60 seconds
Entering 14 # will activate Relay 1 for 30 seconds	Entering 15 # will activate Relay 2 for 120 seconds
Entering 16 # will TOGGLE Relay 1 (Latching Mode)	Entering 17 # will TOGGLE Relay 2 (Latching Mode)

- Step 4:** When all personal code numbers have been entered, Press the \* key to exit programming. The Yellow LED will turn off. To enter multiple code numbers, repeat Steps 2 and 3 before continuing on to Step 4. The keypad will search its memory for available space and automatically store the new code number entered. If, when Entering Step 3, a new personal code number is entered and the Yellow LED blinks fast followed by two (2) slow blinks, this means that the code number has already been entered into the keypad memory. You will need to enter a different code number.

#### Notes:

- A Relay Activation Time Code is REQUIRED during the initial programming of a code. If unsure, set Relay 1 to 4 # (1 second) and Relay 2 to 3 # (1 second).
- Note that these codes are Relay Specific. The same code cannot be used for both relays.

**RECORD YOUR NEW PERSONAL CODE NUMBERS ON THE LAST PAGE OF THIS MANUAL IN THE PERSONAL CODE NUMBER CHART**

### **Example to program a single code number:**

Press 1, 2, 3, 4, 5, 6 and the \* key. The Yellow LED will turn on.

Enter your code number - a two (2) to six (6) digit number, then Press the # key.

The Yellow LED will blink one (1) time.

Press 4 # for Relay 1. The Yellow LED will blink two (2) times.

Press the \* key. The Yellow LED will turn off.

To operate the gate or door, enter your code number and Press the # key.

The Green LED will turn on for 1 second.

### **To remove or delete a single personal code number:**

**Step 1:** To delete a code number, enter your program number or the factory program number 1, 2, 3, 4, 5, 6 and Press the \* key. The Yellow LED will turn on.

**Step 2:** Enter the personal code number to be deleted and Press the # key. The Yellow LED will blink one (1) time.

**Step 3:** Press 20 # and the keypad will search its memory to delete the code number that you entered. When complete, the Yellow LED will blink three (3) times.

**Step 4:** Press the \* key. The Yellow LED will turn off.

To delete multiple code numbers repeat steps 2 and 3 before continuing on to Step 4.

### **Erasing all personal code numbers:**

**\*\*\*Warning: Performing this command will remove all personal code numbers from the memory.**

**Step 1:** Enter your program number or the factory program number 1, 2, 3, 4, 5, 6 and

Press the \* key. The Yellow LED will turn on.

**Step 2:** Press 00 # The Yellow LED will blink one (1) time.

**Step 3:** Press 00099 # to erase the memory. This may take up to 10 seconds.

When complete, the Yellow LED will blink two (2) times.

**Step 4:** Press the \* key. The Yellow LED will turn off.

### **Change factory programming code (1, 2, 3, 4, 5, 6) to a new programming code:**

For security reasons you should change the factory program number 1, 2, 3, 4, 5, 6 to a new program number from 2 to 6 digits. Or you can use the factory program number 1, 2, 3, 4, 5, 6 (not recommended) to enter into a programming mode.

Your new program number or factory program number allows you to enter into a programming mode only.

To program a new program number, follow the next 4 steps below. Write the new program number in the space provided below. Remember, after you have programmed your new program number 1, 2, 3, 4, 5, 6 will no longer work.

**Step 1:** Enter factory program number 1, 2, 3, 4, 5, 6 and Press the \* key. The Yellow LED will turn on.

**Step 2:** Enter your new program number from 2 to 6 digits and Press the # key. The Yellow LED will blink one (1) time.

**Step 3:** Press 22 # The Yellow LED will blink two (2) times.

**Step 4:** Press the \* key The Yellow LED will turn off.

**Write your new program number here:** \_\_\_\_\_

**Keep This In A Safe Place**

## Protect the keypad from lightning & power surges:

If you install a keypad that is in an area where lightning can damage a keypad, make sure the keypad metal housing is grounded. Install a Model 306 Lighting & Surge Protector. There is no warranty if the keypad is damaged due to lightning static electricity or high voltage power surges. The Model 306 will help to protect the electronics in the keypad and is very easy to install. Do not ground the housing to the fence, fence post or pedestal. Ground the keypad metal housing to an electrical ground (operator) or install a ground rod.

## Model 306 - Lightning and Surge Protector



Instantaneous Response Time / 600 Watts @ 39 Volts / 15kV 60 Amp Surge Suppression  
Installs inside the keypad metal housing

**Troubleshooting:** If Lightning or a High Voltage Surge strikes the keypad the microprocessor may go into a self-protect mode causing one or more of the following conditions:

The Yellow LED may stay on. The Green LED may stay on (relay latched)

The buzzer may not produce an audible tone. Some of the keys on the keypad may or may not work and/or the keypad may not function at all.

To reset the keypad, disconnect the power to the keypad and wait at least two (2) minutes, then re-connect the power to the keypad and enter your code number. If the keypad still does not work, then a high voltage surge has damaged the microprocessor. Return the keypad to Carefree-Security for evaluation.

## Two (2) Year Limited Warranty

This Carefree-Security product is warranted against defects in material and workmanship for up to two (2) years from the date of shipment. Warranty expiration date is tied into the serial number which is wrapped around the internal box on the product, removal of this label will void the warranty. Carefree-Security, Inc., at its option either repairs or replaces defective products that have been returned to Carefree-Security, Inc., with freight prepaid back to customer when shipped to Carefree-Security within the warranty period.

The foregoing warranty shall not apply to defects resulting from abuse, misuse, accident, alteration, neglect, normal wear and tear, lightning and high voltage surges and acts of God or unauthorized repair or installation. Carefree-Security, Inc., has the right of final determination as to the existence and cause of the defect.

THE WARRANTY SET FORTH IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN, ORAL OR EXPRESSED WILL BE VALID. CAREFREE-SECURITY, INC., SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The remedies provided herein are Buyer's sole and exclusive remedies. In no event shall Carefree-Security, Inc., be liable for direct, indirect, special, incidental or consequential damages, (including loss of property, revenue, profit, cost of removal, installation or reinstallation) whether based on contract, tort or any other legal theory.

