

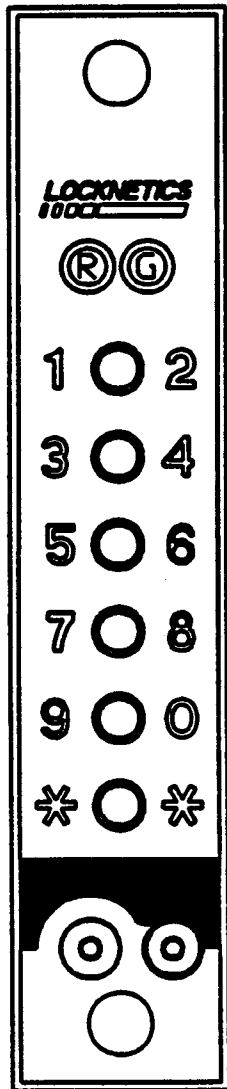
LOCKNETICS



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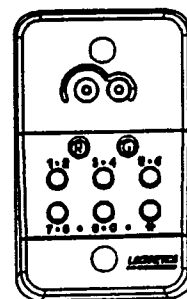
SMARTENTRY™

*Programmable
Keyless Entry
Access Control System*

CT150-KP

SYSTEM MANUAL AND PROGRAMMING GUIDE

with Advanced Programming Section



GENERAL DESCRIPTION

The CT150KP controller utilizes a microprocessor based controller to program access to an area secured by an electric locking device. Access is restricted to those individuals who possess a valid user code to release the lock. The keypad controller will accept up to 150 individual user codes and each code may be programmed with a variety of unique features. All programming is done directly from the keypad, only after a valid master code has been entered.

The "Basic Programming" section provides programming instructions found to be sufficient for most systems. The "Advanced Programming" section provides additional programming instructions to add features for more complex systems.

The CT150KP controller is equipped with three separate control relays to allow independent control of a variety of electrical equipment. The "Main" relay contacts typically control power to a locking device. The "Aux" relay contacts can be used to control another locking device, activate a doorbell or lamp, or control other electronic equipment. The "Alarm" relay contacts can be used to signal an alarm system whenever certain preprogrammed violations occur.

External equipment can be interfaced with the 770 system to provide other features:

<u>FEATURE</u>	<u>EXTERNAL EQUIPMENT REQUIRED</u>
Door Propped Open	Door Status Switch and alarm
Anti-Tailgate	Door Status Switch
Day/Night Mode	Programmable Clock/Timer
Request to Exit (REX)	Panic Bar Switch, Keyswitch, etc.
Delayed Egress	REX Device, Reset Switch & Alarm

An external power supply is required for the 770 Series system to operate. If the operating voltages of all other system components are identical, the same power supply can be used for the 770, electric locks, alarms and other devices. All current draws must be totaled to select the proper power supply capacity.

NOTE: Any electric device being controlled by the controller relays must be "spike" suppressed to prevent memory loss or damage to the microprocessor.

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DEFINITION OF TERMS**INFO PAGE**

Advanced Programming:	Assists in adding a variety of features and functions to enhance and expand a system.	15-20
Alarm Relay:	A control relay that provides SPDT dry contacts. Activated when preprogrammed violations are detected. Will always activate for 30 seconds any time 20 wrong digits are entered.	7,15,23
Anti-Tailgate:	Provides an instant relock after door has been closed (overrides relock delay). Discourages an unauthorized person from entry following an authorized lock release. Door Status Switch required.	7,24
Auxiliary Relay:	A control relay that provides SPDT dry contacts. Can be activated when a valid user code is entered or REX input is detected. Can operate a locking device; or can be used to activate a door bell, light or CCTV System, or signal a guard that the keypad is in use.	7,15,16,23
Basic Programming:	Allows set-up of simple systems, i.e., programming new master code, adding and deleting user codes. "Timed" functions are left at factory settings. See "Default".	10 - 14
Day/Night Timer:	An external programmable timer wired to the controller. Allows some codes to work only during certain hours.	7,16,23,24
Default:	Indicates the factory settings of the following "timed" functions: Main Relay - 8-second activation. Aux Relay - Momentary activation by * key. Alarm Relay - 30-second activation by 20 wrong digits entry.	
Delayed Egress Mode:	The SMARTENTRY controller can be used as a delayed egress controller. When this feature is selected any REX input will active the delay egress cycle. The following features are also programmable.	6,20,23
Nuisance Delay:	The amount of time required for a REX input to be active before the egress delay cycle will start. (Adjustable 0-3 seconds)	
Reset:	The input signal required to reset the control relay and the alarm relay after the egress delay cycle is completed. (Select manual reset or auto-reset).	
Egress Delay:	The amount of time that passes before the control relay will be activated. (Select 15 or 30 seconds) The alarm relay is activated during this cycle.	
Door Prop Alarm:	Activates the alarm relay when the door is held open for a preset time after the relock delay. Alarm relay will remain activated for 30 seconds, then deactivate only if door is closed within that time. Door Status Switch required.	7,15,23,24
Door Prop Timer:	The preset length of time, a door can be held open after the relock delay before the alarm relay will activate. Adjustable from 0 - 255 seconds. Door Status Switch required.	19
Duress Alarm:	Activates the alarm relay when any key is pressed within 3 seconds after a valid user code has been entered. Alarm relay will remain activated until the relock delay ends.	15

DEFINITION OF TERMS**DEFINITION OF TERMS****INFO PAGE**

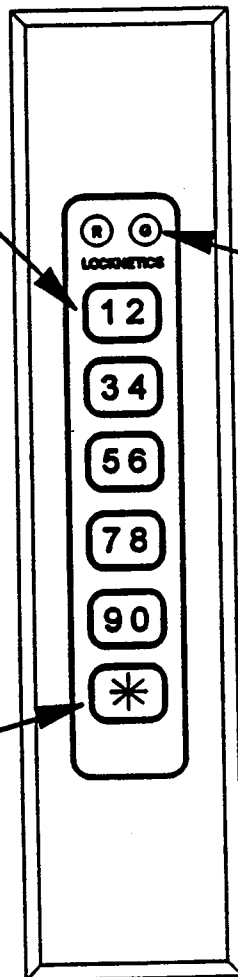
Forced Entry:	Activates the alarm relay whenever the door is opened without a valid user code or REX input. This feature is active whenever the door propped open feature is selected. Door status switch required.	15
Main Relay:	A control relay that provides DPDT dry contacts. Activated when a valid user code is entered, or a REX input is detected. It can control one or two locking devices.	7,16,23
Master Code:	5 to 8 digit code that allows access to programming functions only. Will not activate any control relays. The factory set master code is 9, 7, 5, 3, 1 and should be changed when programming your system.	9,10,11
Random Attempt Alarm:	Activates alarm relay whenever 20 wrong digits have been entered. (This feature is always active.)	
Relock Delay:	The length of time the main and/or aux control relays remain activated after a valid user code or REX input is entered.	16,19
REX Input:	"Request to Exit" input from a switch, button or other device, that will activate one or more of the control relays.	7,15,23
User Codes:	3 to 8 digit codes that will activate one or more of the control relays. Up to 20 individual codes may be programmed. The MX option provides up to 150 individual codes. One test code, 1-3-5-7-9, is factory set and must be changed when programming your system.	9,10,12-14,16-18
Toggle Mode: (Maintained Release)	Any user code can be programmed with this feature to activate the main and/or aux relay and hold it activated until any user code with this feature is re-entered.	16

The 770 Series Keyless Entry utilizes a six-button keypad graphically coded as shown.

Two digits per button offer a convenience for individual code development only, e.g., **12** is a single button only - not two unique codes.
Push only once.
(SEE FIG. 1)

The asterisk ***** key is primarily used for programming. It cannot be part of a code. In the factory set mode, when ***** is pressed as the first key entered, the aux. relay contacts will close for as long as the button is pressed. This feature can be used to ring a door bell or activate other external equipment.

It is also used to clear a wrong entry during normal use.



The 770 Series Keyless Entry provides two LED's (Red & Green) for code entry confirmation, programming guidance and self diagnostics. The following symbols are used in this manual to indicate the condition of the LED's you will be observing.

SYM. INDICATES:

- (R) (G)** Flashing Red & Green (Alternating)
- (R)** Flashing Red
- (G)** Flashing Green
- (R)** Red ON or OFF (as noted)
- (G)** Green ON or OFF (as noted)

FIG.1 EXAMPLES OF CODE ENTRY

USER CODE:

1	3	5	7	9
PUSH	PUSH	PUSH	PUSH	PUSH
12	34	56	78	90
ONCE	ONCE	ONCE	ONCE	ONCE

PROGRAMMING CODE:

9
PUSH

ONCE

RESET

PUSHING SW2 BUTTON THREE TIMES WILL CLEAR THE CONTROLLER MEMORY OF ALL PROGRAMMED INFORMATION. MEMORY WILL RETURN TO FACTORY SET CONFIGURATION.

MAIN FUSE 3 AMP 3AG

INPUT POWER

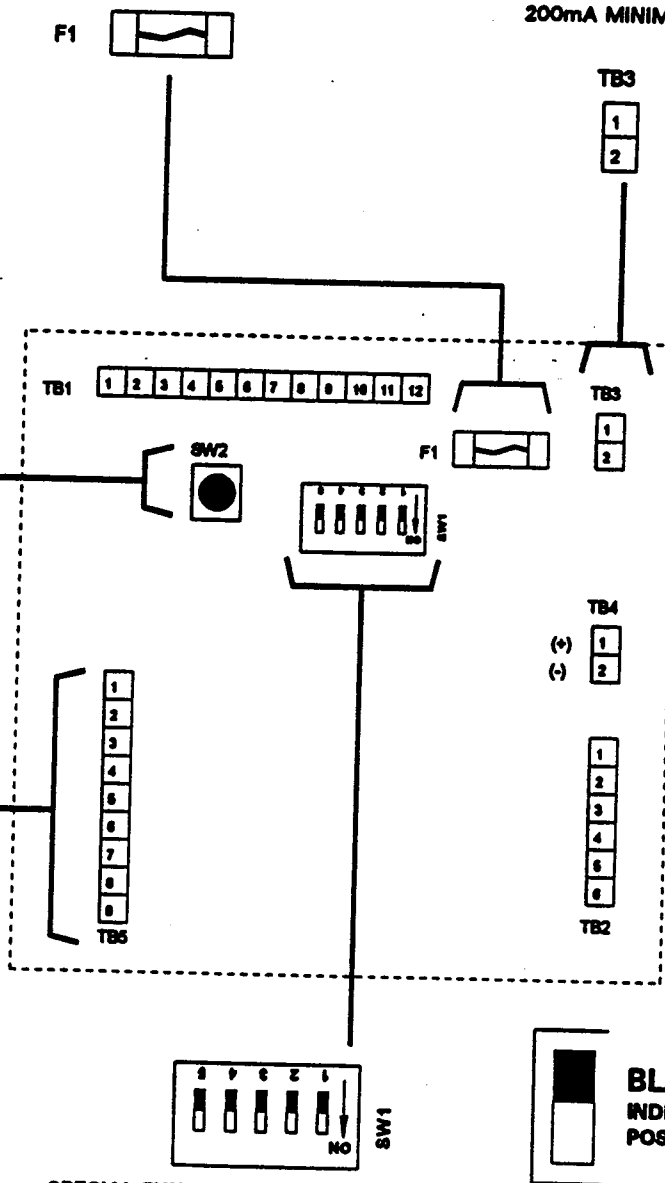
INPUT POWER TO OPERATE THE CONTROLLER 12 TO 24VAC / DC. 200mA MINIMUM.

KEYPAD INPUT

WIRE THE KEYPAD CABLE TO TB5 AS SHOWN. OBSERVE COLOR CODE.

GRN	1
BLU	2
VIO	3
YEL	4
ORN	5
PNK & GRY	6
RED	7
WHT	8
BLK	9

TB5



SPECIAL FUNCTION SWITCHES
FACTORY SETTINGS SHOWN.
CHANGE ONLY AS INSTRUCTED
FOR SPECIAL FUNCTIONS.

DELAYED EGRESS ONLY
MOVE #1 TO "ON" ONLY FOR
DELAYED EGRESS SYSTEM
(NORMAL SETTING IS FOR
INSTANT EGRESS BY REX INPUT.)

BLACK
INDICATES SWITCH
POSITION

MAIN RELAY

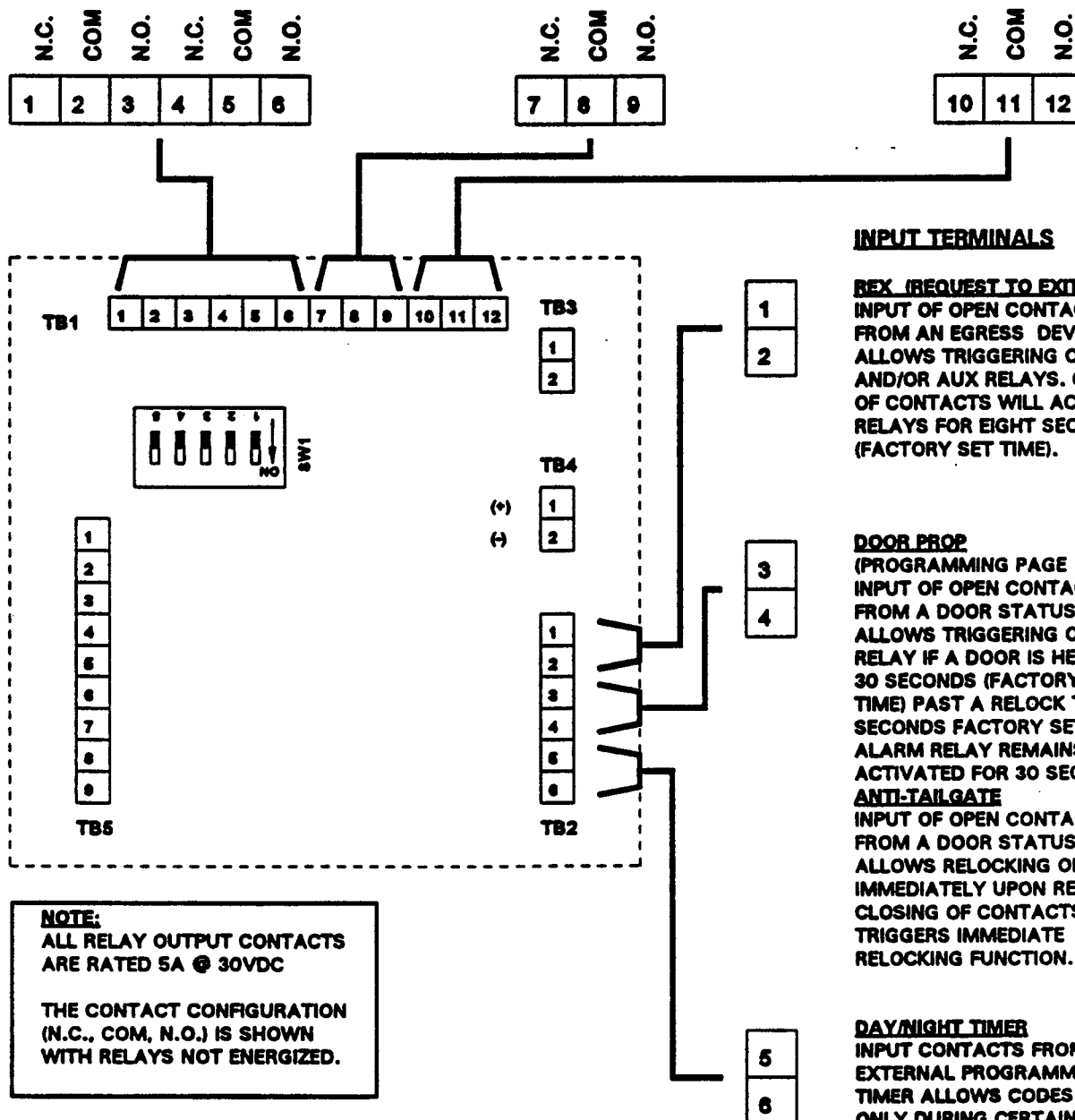
TWO SETS OF OUTPUT CONTACTS TO CONTROL LOCKING DEVICES. THESE MAY ALSO BE USED TO SHUNT ALARM SYSTEM CONTACTS. CONTACTS CHANGE STATE WHEN A VALID CODE IS ENTERED AT KEYPAD OR A REX CONTACT CLOSING AT TB2-1&2. THE CONTACTS REMAIN CHANGED FOR EIGHT SECONDS.

ALARM RELAY

OUTPUT CONTACTS ARE USED TO TRIGGER AN EXTERNAL ALARM. CONTACTS CHANGE STATE FOR 30 SECONDS ANYTIME 20 WRONG DIGITS ARE ENTERED. (TWO ADDITIONAL FEATURES CAN BE ADDED - SEE PAGE 18)

AUX RELAY

IN THE FACTORY SET MODE THE OUTPUT CONTACTS MAY BE USED TO ACTIVATE A DOOR BELL. CONTACTS CHANGE STATE WHEN THE ☐ KEY IS PRESSED AS THE FIRST KEY. THE CONTACTS REMAIN CHANGED AS LONG AS THE KEY IS PRESSED. (THIS FUNCTION CAN BE CHANGED TO ONE OF TWO OTHER FEATURES - SEE PAGE 18)



INPUT TERMINALS

REX (REQUEST TO EXIT)

INPUT OF OPEN CONTACTS FROM AN EGRESS DEVICE ALLOWS TRIGGERING OF MAIN AND/OR AUX RELAYS. CLOSING OF CONTACTS WILL ACTIVATE RELAYS FOR EIGHT SECONDS (FACTORY SET TIME).

DOOR PROP

(PROGRAMMING PAGE 15)
INPUT OF OPEN CONTACTS FROM A DOOR STATUS SWITCH ALLOWS TRIGGERING OF ALARM RELAY IF A DOOR IS HELD OPEN 30 SECONDS (FACTORY SET TIME) PAST A RELOCK TIME (8 SECONDS FACTORY SET). ALARM RELAY REMAINS ACTIVATED FOR 30 SECONDS.

ANTI-TAILGATE

INPUT OF OPEN CONTACTS FROM A DOOR STATUS SWITCH ALLOWS RELOCKING OF DOOR IMMEDIATELY UPON RECLOSING. CLOSING OF CONTACTS TRIGGERS IMMEDIATE RELOCKING FUNCTION.

DAY/NIGHT TIMER

INPUT CONTACTS FROM AN EXTERNAL PROGRAMMABLE TIMER ALLOWS CODES TO WORK ONLY DURING CERTAIN TIMES OF DAY.

GETTING READY

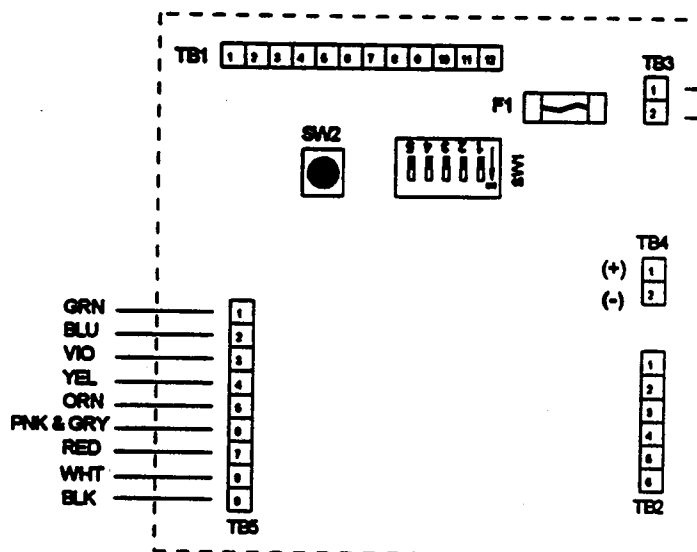
1. Review the manual to familiarize yourself with the features of the CT150KP controller.
2. Establish and record the desired format for your system.
 - Select your system master code (5 to 8 digits).
 - Select up to 150 user codes (3 to 8 digits) for your system and note any unique features for each code.
 - Record your system configuration information.
3. The SMARTENTRY™ SYSTEM may be tested and programmed prior to installation by powering the unit at a workbench, or after installation and full system hook-up.

BEFORE TESTING AND PROGRAMMING THE FOLLOWING MUST BE COMPLETED

HOW TO START

4. Hook up the keypad cable to Controller TB5. Double check that the correct color wire is connected to the proper terminal numbers.
5. Input power must be wired to Controller TB3. Input power may be from 12V to 24V, AC or DC. When using DC, polarity need not be observed at hook-up.

STEP 4
WIRE KEYPAD
CABLE TO TB5
AS SHOWN.
OBSERVE COLOR
CODE.



STEP 5
INPUT POWER
TO OPERATE
THE CONTROLLER.
12 TO 24V AC or DC

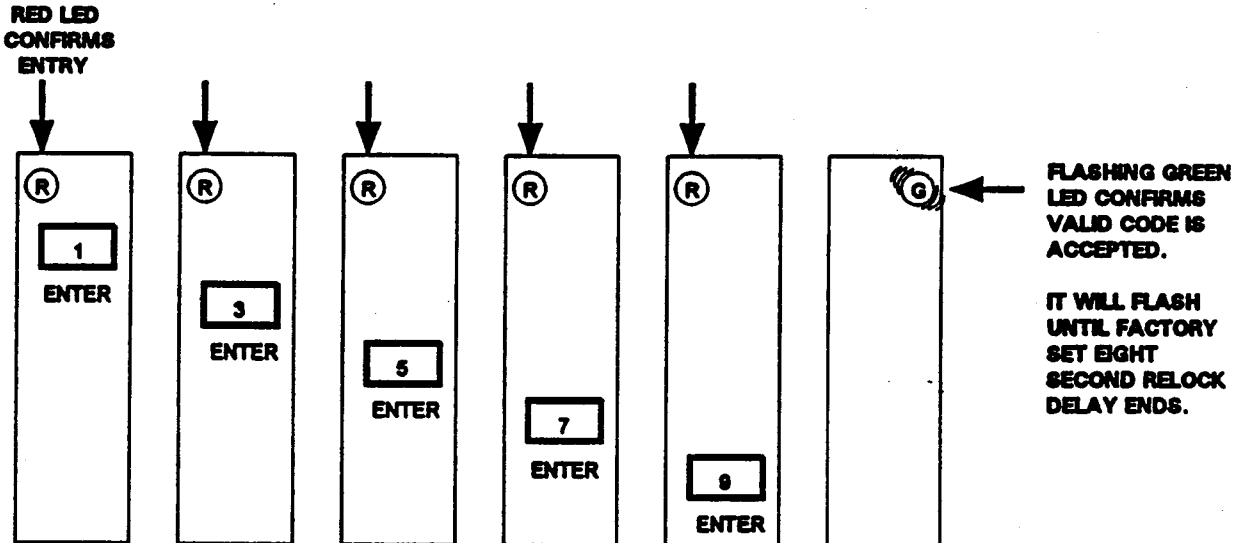
6. The SMARTENTRY™ SYSTEM may now be tested. Proceed to "SYSTEM TEST", Page 9.

TESTING WITH FACTORY SET CODES

1. Once "HOW TO START" is completed, you may test the system.

First start by entering the factory set user code **1 3 5 7 9**

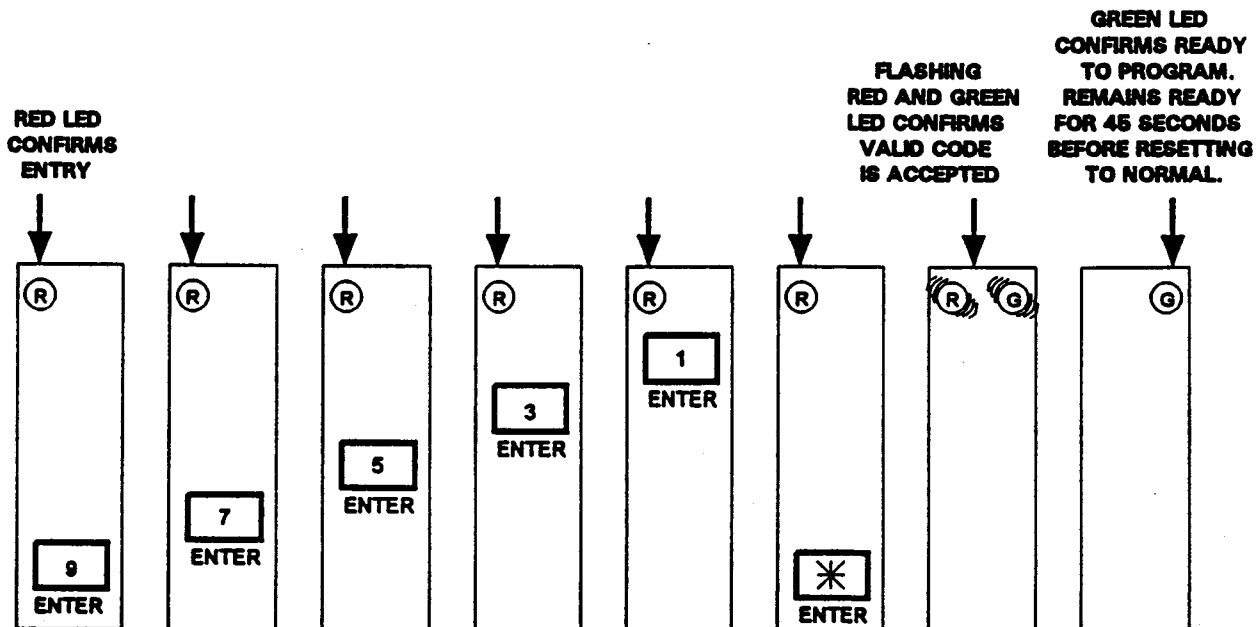
NOTE: If each key entry is not made within 5 seconds of the last entry, the unit will reset.



If the code does not operate as stated, push controller switch SW2 three (3) times to reset system to factory codes and repeat the above sequence. There should not be more than 5 seconds between key entries.

2. Next you may test the factory set master code. The master code will give you access to all programming functions.

Enter factory set master code **9 7 5 3 1** and ***** to signal a programming process is underway.



3. Once testing is completed you are ready to program the system to meet your specific needs.

Congratulations!

You have successfully tested your new Locknetics CT150KP controller.

Now you may program the system to meet your specific needs.

STEP 1

Select your own system master code:

--	--	--	--	--	--	--	--

Your master code may be five to eight digits long. The longer the code, the more secure the system.

STEP 2

Select your own system user code(s):

User codes may be three to eight digits long. The longer the code, the more secure the system. However, longer codes may be more difficult for the user to remember. A five-digit code is a suggested compromise.

How many individual user codes do you want to assign?

ONE CODE SYSTEM

All system users have the same code.

ASSIGNED CODE

--	--	--	--	--	--	--	--

MULTIPLE CODES

Each user or groups of users have separate codes.

Up to 150 separate codes may be assigned.

You may use a separate worksheet to record your assignments.

USER OR GROUP NAME

ASSIGNED CODE

#1 _____

--	--	--	--	--	--	--	--

#2 _____

--	--	--	--	--	--	--	--

#3 _____

--	--	--	--	--	--	--	--

#4 _____

--	--	--	--	--	--	--	--

NOTE: Be careful not to duplicate a code. Since each pair of digits is only one key, a 1 and a 2 are the same key. Therefore,

1	3	5	7	9
---	---	---	---	---


 and

2	4	6	8	0
---	---	---	---	---

 are duplicate codes.

LET'S TRY YOUR PROGRAM

Do not be concerned with programming - you cannot damage the product, or get "stuck" in the process, by programming errors.

- Once in the programming mode, any inactivity for 45 seconds will return the system to its normal condition. Simply start programming over again.
- The green LED will stay on during the programming mode. After each  entry, you should get the alternating red and green LED's.
- Should you lose your place, make an error or forget what you have already programmed - simply press controller button SW2 three times to return to the original factory set code.
- Self-diagnostics are built-in. The LED's will help you determine the nature of an error. See page 21, for "Error Codes".

BASIC PROGRAMMING FORMULA'S

TO CHANGE USER CODE

MASTER CODE  1  OLD CODE  NEW CODE 

TO ADD USER CODE(S)

MASTER CODE  3  NEW CODE  

TO DELETE USER CODE(S)

MASTER CODE  5  OLD CODE  

TO CHANGE MASTER CODE

MASTER CODE  7  NEW MASTER CODE  NEW MASTER CODE 

Your first step should be to change the factory set master code to your own system master code.

TO CHANGE FACTORY MASTER CODE

The factory set master code is **9 7 5 3 1**

ENTER

OLD MASTER CODE 

7




NEW MASTER CODE 

NEW MASTER CODE 

OBSERVE

 ALTERNATING ON

 ALTERNATING ON

 ALTERNATING ON

 ALTERNATING LED'S OFF

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM ACCEPTED
ENTER NEW CODE

WAIT
NEW CODE
ACCEPTED-VERIFY BY
RE-ENTERING

WAIT
NEW MASTER CODE
IS PROGRAMMED

Next you may want to add a user code as shown in the: **TO ADD A USER CODE** section, or multiple user codes as shown in **TO ADD MULTIPLE USER CODES**. You will now be using your new master code to gain access to the programming mode.

TO ADD A USER CODE

ENTER

MASTER CODE



3



NEW USER CODE



OBSERVE



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON



LED'S OFF

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM
ACCEPTED-ENTER
NEW USER CODE

WAIT
NEW USER CODE
ACCEPTED

NEW USER CODE IS
PROGRAMMED

TO ADD MULTIPLE USER CODES

ENTER

MASTER CODE



3



NEW USER CODE



NEW USER CODE



OBSERVE



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM
ACCEPTED-ENTER
NEW USER CODE

WAIT
NEW USER CODE
ACCEPTED-ENTER
NEXT NEW USER
CODE

WAIT
NEW USER CODE
ACCEPTED-ENTER
NEXT NEW USER
CODE

YOU MAY CONTINUE ENTERING UP TO 150 USER CODES



(ENDS PROGRAMMING)



LED'S OFF

NEW USER CODES
ARE PROGRAMMED

The following programming steps, TO CHANGE A USER CODE, TO DELETE A USER CODE, and TO DELETE MULTIPLE USER CODES will allow you to change or delete user codes you have programmed.

TO CHANGE A USER CODE

ENTER

MASTER CODE



1



OLD USER CODE



NEW USER CODE



OBSERVE



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING



LED'S OFF

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM
ACCEPTED-ENTER
OLD USER CODE TO
BE CHANGED

WAIT
OLD USER CODE
ACCEPTED-ENTER
NEW USER CODE

WAIT

NEW USER CODE
IS PROGRAMMED

You will want to delete the factory set user code, **13579** .

TO DELETE A USER CODE

ENTER

MASTER CODE



5



USER CODE



OBSERVE



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON



LED'S OFF

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM
ACCEPTED-ENTER
USER CODE TO BE
DELETED

WAIT
USER CODE DELETED

USER CODE
DELETION IS
PROGRAMMED

TO DELETE MULTIPLE USER CODES

ENTER

MASTER CODE



5



USER CODE



USER CODE



OBSERVE



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON



ALTERNATING
ON

COMMENT

WAIT
CODE ACCEPTED

WAIT
PROGRAM
ACCEPTED-ENTER
USER CODE TO BE
DELETED

WAIT
USER CODE DELETED
ENTER NEXT USER
CODE TO BE DELETED

WAIT
USER CODE DELETED
ENTER NEXT USER
CODE TO BE DELETED

YOU MAY CONTINUE DELETING UP TO 150 USER CODES



LEDS OFF

Make one selection only for every ENTER step. Enter the (Default) selection if your system does not require a specific feature.

STEP	ENTER	DESCRIPTION
①	<div>MASTER CODE</div> <div>Ⓜ Ⓜ Ⓜ</div> <div>Ⓜ</div> <div>*</div>	PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
②	<div>9</div> <div>Ⓜ Ⓜ Ⓜ</div> <div>Ⓜ</div> <div>*</div>	SYSTEM CONFIGURATION ACCESS "WAIT" "PROCEED"
③	<div>ALX RELAY FUNCTION</div> <div>ONE SELECTION ONLY</div> <div>Ⓜ</div> <div> <div>1 (DEFAULT)</div> <div>or</div> <div>3</div> <div>or</div> <div>5 ✓</div> </div>	MOMENTARY ACTIVATION BY * KEY 5 SECOND ACTIVATION BY ANY KEY 8 SECOND ACTIVATION BY USER CODE (NOTE 2) "PROCEED"
④	<div>ALARM RELAY</div> <div>DURESS</div> <div>ONE SELECTION ONLY</div> <div>Ⓜ</div> <div> <div>1 (DEFAULT) ✓</div> <div>or</div> <div>3</div> </div>	OFF - NO DURESS FUNCTION ON - 30 SECOND ACTIVATION BY ANY KEY WITHIN 3 SECONDS OF USER CODE ENTRY "PROCEED"
⑤	<div>ALARM RELAY</div> <div>DOOR PROP</div> <div>ONE SELECTION ONLY</div> <div>Ⓜ</div> <div> <div>1 (DEFAULT)</div> <div>or</div> <div>3</div> </div>	OFF - NO DOOR PROP FUNCTION ON - 30 SECOND ACTIVATION IF DOOR IS HELD OPEN 30 SECONDS PAST 8 SECOND RELOCK TIME (NOTE 2) "PROCEED"
⑥	<div>REX RELAY SELECTION</div> <div>ONE SELECTION ONLY</div> <div>Ⓜ Ⓜ Ⓜ</div> <div>Ⓜ</div> <div> <div>1 (DEFAULT)</div> <div>or</div> <div>3</div> <div>or</div> <div>5 ✓</div> </div>	MAIN RELAY - 8 SECOND ACTIVATION BY EGRESS SWITCH (NOTE 2) AUX RELAY - 8 SECOND ACTIVATION BY EGRESS SWITCH (NOTE 2) BOTH RELAYS - 8 SECOND ACTIVATION BY EGRESS SWITCH (NOTE 2) "WAIT" "PROCEED"
⑦	<div>*</div>	END PROGRAMMING

NOTES:

1. The alarm relay will always activate 30 seconds anytime 20 wrong digits are entered.

* 2. Factory set time can be reprogrammed for 0 - 255 seconds. SEE: TO PROGRAM TIME SETTINGS, PAGE 19

Up to 150 different user codes can be programmed.

Program each code individually for: a) which relay it operates, b) relay activation time, c) normal or special code types.

Make one selection only for every ENTER step. Enter the (Default) selection if a code does not require a specific feature.

STEP	ENTER	DESCRIPTION
①	MASTER CODE * ((8 9)) ③	PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
②	3 3 * ((8 9)) ③	"ADD USER CODE" ACCESS "WAIT" "PROCEED"
③	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> SELECT RELAY THAT CODE IS TO OPERATE MAKE ONE SELECTION ONLY </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 1 (DEFAULT) or 3 or 5 or 7 or 9 </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> MAIN RELAY - CODE HAS 24 HR. ACCESS OR (W/EXT. TIMER) CODE HAS "DAY TIME" ACCESS ONLY MAIN RELAY - (W/EXT. TIMER) CODE HAS "NIGHT TIME" ACCESS ONLY MAIN RELAY - (W/EXT. TIMER) CODE HAS 24 HOUR ACCESS AUX RELAY - CODE HAS 24 HOUR ACCESS (SEE PG 15, STEP 3, SELECT 5) MAIN AND AUX RELAY - CODE HAS 24 HOUR ACCESS "PROCEED" </div>	
④	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> MAIN & AUX RELAY ACTIVATION TIME RELOCK DELAY TIME MAKE ONE SELECTION ONLY </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 3 (DEFAULT) or 5 or 7 or 9 </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 8 SECOND DELAY 2 SECOND DELAY 20 SECOND DELAY TOGGLE - MAINTAINED RELEASE (RE-ENTER ANY CODES PROGRAMMED FOR "TOGGLE" FUNCTION TO RE-LOCK) "PROCEED" </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> ALL DELAYS CAN BE CHANGED FROM 0 - 255 SECONDS SEE: TO PROGRAM TIME SETTINGS </div>	
⑤	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> CODE TYPE MAKE ONE SELECTION ONLY </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 1 (DEFAULT) or 3 or 5 or 7 </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> NORMAL ONE TIME USE ONLY (DELETED FROM MEMORY AFTER USE) LOCK OUT-DISABLES ALL USER CODES (RE-ENTER TO RESET) DOUBLE-REQUIRES TWO USER CODES WITH THIS FUNCTION TO ACTIVATE RELAY "PROCEED" </div>	
⑥	* ((8 9)) ③	ENTERS PROGRAM "WAIT" "PROCEED"
⑦	USER CODE * ((8 9)) ③	ENTERS USER CODE "WAIT" "PROCEED" RETURN TO STEP 3 TO ADD MORE CODES
⑧	* ③	END PROGRAMMING (ALL CODES ENTERED)

770 SERIES SMARTENTRY™ DIGITAL KEYPAD ADVANCED PROGRAMMING TO CHANGE USER CODES & FUNCTIONS

User codes and functions already programmed may be changed. The existing code may be retained with changed functions, or the existing code may be changed to a new code with the same, or changed, functions.

Make one selection only for every ENTER step. Enter the (Default) selection if a code does not require a specific feature.

STEP	ENTER	DESCRIPTION
①	<div>MASTER CODE</div> <div>Ⓢ</div>	PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
②	<div>1 1 *</div> <div>Ⓢ</div>	"CHANGE USER CODE" ACCESS "WAIT" "PROCEED"
③	<div>EXISTING USER CODE *</div> <div>Ⓢ</div>	USER CODE BEING CHANGED "WAIT" "PROCEED"
④	<div> <div>SELECT RELAY THAT CODE IS TO OPERATE</div> <div>ONE SELECTION ONLY</div> </div> <div> <div>1 (DEFAULT)</div> <div>or</div> <div>3</div> <div>or</div> <div>5</div> <div>or</div> <div>7</div> <div>or</div> <div>9</div> </div>	MAIN RELAY - CODE HAS 24 HR. ACCESS OR (W/EXT. TIMER) CODE HAS "DAY TIME" ACCESS ONLY MAIN RELAY - (W/ EXT. TIMER) CODE HAS "NIGHT TIME" ACCESS ONLY MAIN RELAY - (W/EXT. TIMER) CODE HAS 24 HOUR ACCESS AUX RELAY - CODE HAS 24 HOUR ACCESS (SEE PG 15, STEP 3 SELECT 5) MAIN AND AUX RELAY - CODE HAS 24 HOUR ACCESS "PROCEED"
⑤	<div> <div>MAIN & AUX RELAY ACTIVATION TIME</div> <div>RELOCK DELAY TIME</div> <div>ONE SELECTION ONLY</div> </div> <div> <div>3 (DEFAULT)</div> <div>or</div> <div>5</div> <div>or</div> <div>7</div> <div>or</div> <div>9</div> </div>	8 SECOND DELAY 2 SECOND DELAY 20 SECOND DELAY TOGGLE - MAINTAINED RELEASE (RE-ENTER ANY CODES PROGRAMMED FOR "TOGGLE" FUNCTION TO RELOCK) "PROCEED" <div> ALL DELAYS CAN BE CHANGED FROM 0 - 255 SECONDS SEE: TO PROGRAM TIME SETTINGS </div>
⑥	<div> <div>CODE TYPE</div> <div>ONE SELECTION ONLY</div> </div> <div> <div>1 (DEFAULT)</div> <div>or</div> <div>3</div> <div>or</div> <div>5</div> <div>or</div> <div>7</div> </div>	NORMAL ONE TIME USE ONLY (DELETED FROM MEMORY AFTER USE) LOCK OUT - DISABLES ALL USER CODES (RE-ENTER TO RESET) DOUBLE - REQUIRES TWO USER CODES WITH THIS FUNCTION TO ACTIVATE RELAY "PROCEED"
⑦	<div>*</div> <div>Ⓢ</div>	ENTERS PROGRAM "WAIT" "PROCEED"
⑧	<div>EXISTING OR NEW CODE</div> <div>Ⓢ</div> <div>(LED'S OFF)</div>	EXISTING USER CODE WITH NEW FUNCTION OR NEW CODE "WAIT" PROGRAMMING ENDED

770 SERIES SMARTENTRY™ DIGITAL KEYPAD ADVANCED PROGRAMMING TO DELETE USER CODE WITH ALARM

Existing user codes may be deleted but retained in the controller memory. Whenever the deleted codes are used the alarm relay will activate for 30 seconds.

Make one selection only for every ENTER step.

STEP	ENTER	DESCRIPTION
①	<div>MASTER CODE</div> <div>Ⓢ Ⓣ</div> <div>Ⓢ</div> <div>*</div>	PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
②	<div>5 5</div> <div>Ⓢ Ⓣ</div> <div>Ⓢ</div> <div>*</div>	"DELETE WITH ALARM" ACCESS "WAIT" "PROCEED"
③	<div>USER CODE</div> <div>Ⓢ Ⓣ</div> <div>Ⓢ</div> <div>*</div>	USER CODE TO BE DELETED "WAIT" "PROCEED" REPEAT STEP 3 TO DELETE MORE CODES
④	<div>*</div>	ENDS PROGRAMMING (ALL CODES DELETED)

Factory set times for "Delay On Relock" and for door prop "Delay Before Alarm" may be changed. Relock delay time was selected for each user code in TO ADD USER CODES AND FUNCTIONS (step 4) section. Each of these "Times" may be changed from 0 - 255 seconds. Door Prop, if selected, was entered in TO CONFIGURE THE SYSTEM (step 5).

Make one selection only for every ENTER step.

STEP	ENTER	DESCRIPTION
①	<div>MASTER CODE</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ</div>	PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
②	<div>9 9</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ</div>	"PROGRAM TIME SETTINGS" ACCESS "WAIT" "PROCEED"
③	<div> SELECT TIME SETTING TO BE CHANGED ONE SELECTION ONLY </div> <div> 1 or 3 or 5 or 7 </div> <div>Ⓢ</div>	TO CHANGE 8 SECOND DELAY ON RELOCK TO CHANGE 2 SECOND DELAY ON RELOCK — NOTE 1 TO CHANGE 20 SECOND DELAY ON RELOCK TO CHANGE 30 SECOND DELAY BEFORE ALARM "PROCEED"
④	<div>*</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ</div>	SELECTION ENTERED "WAIT" "PROCEED"
⑤	<div> PRESS AND HOLD ANY KEY FOR DESIRED TIME - RELEASE TO END </div> <div>Ⓢ</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>Ⓢ Ⓣ Ⓤ Ⓟ</div> <div>(LED'S OFF)</div>	STARTING RED LED BLINKS EACH SECOND KEY RELEASED - TIME IS PROGRAMMED PROGRAMMING ENDED

NOTES:

- Any existing user code with this selection will have new delay on relock time.
- New setting will effect the following sections:

TO CONFIGURE THE SYSTEM	(Step 3, Step 5, Step 6)
TO ADD USER CODES AND FUNCTIONS	(Step 4)
TO CHANGE USER CODES AND FUNCTIONS	(Step 5)

LOCKNETICS

Security Engineering
500 Bush Street • Farmington, CT 06030 • (860) 564-2100

770 SERIES SMARTENTRY™ DIGITAL KEYPAD ADVANCED PROGRAMMING TO PROGRAM DELAY EGRESS OPTION

The 770 Controller can be used as a Delayed Egress Controller. The "default" settings conform to part of the requirements of the NFPA 101 LIFE SAFETY CODE for "Special Locking Arrangements". Consult local code requirements before using this feature.


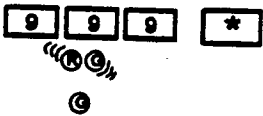
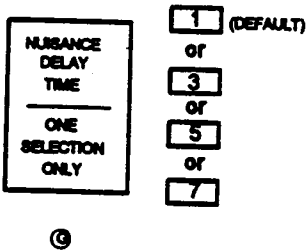
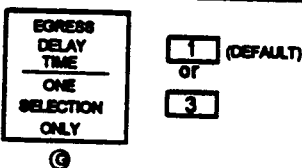
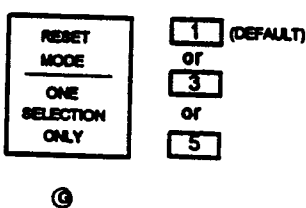

This configuration requires the use of a normally open contact from a request to exit (REX) device (i.e., a panic bar with internal switch) to trigger the delay cycle.

When configured properly, the REX device must be activated long enough to overcome the "nuisance delay" (0-3 seconds). After this time, the delayed egress timer (15 or 30 seconds) is activated and the alarm relay is energized. At the end of this delay, the lock will be released and the alarm relay will remain energized until an external reset device has been activated.

The reset device can be a manual type, i.e., key switch or keypad. Some codes may allow "automatic reset" by a Door Status Switch (resets when door closes). When using the automatic reset, the reset is delayed (30 or 45 seconds) before the lock is energized and the alarm relay is de-energized. Check Local Codes.

A typical wiring diagram is shown on Page 23.

Make one selection only for every ENTER step. Enter the (Default) selection if a code does not require a specific feature.

STEP	ENTER	DESCRIPTION
①	SET SW1-1 DIP SWITCH ON CONTROLLER BOARD TO "ON". SEE PAGE 6 FOR LOCATION	
②		PROGRAMMING ACCESS "WAIT" INDICATOR "PROCEED" INDICATOR
③		"DELAY EGRESS" ACCESS "WAIT" "PROCEED"
④		3 SECOND DELAY 2 SECOND DELAY 1 SECOND DELAY NO DELAY "PROCEED"
⑤		15 SECOND DELAY 30 SECOND DELAY "PROCEED"
⑥		MANUAL RESET AUTO RESET (30 SECONDS AFTER DOOR CLOSURES) AUTO RESET (45 SECONDS AFTER DOOR CLOSURES) "PROCEED"
⑦	 (LED'S OFF)	ENTERS PROGRAM "WAIT" PROGRAMMING ENDED

LOCKNETICS

Security Engineering

540 Bush Street - Norwalk, CT 06850 - (203) 864-2136

770 SERIES SMARTENTRY™ DIGITAL KEYPAD TROUBLE SHOOTING

The following commands and LED indications are functional during programming operations.

COMMAND LIST - PROGRAMMING

KEY ENTRY

FUNCTION

1

Change User Code

3

Add User Code

5

Delete User Code

7

Change Master Code

*

Separates or Ends Commands

LED INDICATION - PROGRAMMING ERRORS

The LED's will assist you in identifying any error you might make during programming.

If an error is made:

(R)

The RED LED goes on and stays on.

((G))

The GREEN LED will flash an error code. It will repeat the error code three times.

(R) (G)

LED's will then go out - ends programming - start over.

By counting the number of green LED flashes you can determine your error.

LED INDICATION - PROGRAMMING

(R)

Indicates acceptance of digit.

(G)

Indicates to proceed with programming. Stays on during programming. Turns off when programming is ended or after 45 seconds of no programming activity.

((R) (G))

After each [*] entry, the Red / Green LED's will alternate for approximately one second confirming acceptance of code.

ERROR CODE CHART

By counting the number of green LED flashes you can determine your error.

NUMBER OF FLASHES

ERROR

2

Code entered too long. Code length cannot exceed 8 digits.

3

Memory full- too many codes entered.

4

Master code cannot be deleted, only changed.

5

Second entry of master code does not match first entry. Master code not changed.

6

Invalid command.

7

Code does not exist.
(For "Delete With Alarm" only)

8

Code too short. Minimum master code 5 digits, minimum user code 3 digits.

9

Not a unique code, duplication of existing code.

FACTORY SETTINGS AND CODES

Each system is shipped configured to the following setting and codes.

Programmed codes:

Master Programming code: 9 7 5 3 1

User Code: 1 3 5 7 9

Pushing SW2 switch three times will return the controller memory to these codes.

Set and Programmed:



SW1 - All switches set in off position as shown.

Set for instant lock release by egress control wired to controller TB2 - 1&2

Set for timed relock when lock is released by keypad. Programmed for 8 second delay.

PROGRAMMED:

Alarm Relay: Contacts @ TB1 - 7,8,9 are programmed to trigger any time 20 wrong digits are entered. Remain triggered for 30 seconds.

Aux Relay: Contacts @ TB1 - 10,11,12 are programmed to trigger whenever the [*] key is pressed as the first key and remain triggered until key is released.

SPECIFICATIONS:

Electrical:

Input Power: 12 to 24 VAC/VDC
Current Draw: 200mA max.
Output: VDC, 1 amp max. (output voltage, i.e., 12 or 24, matches input voltage. Input current must be 1.2A min.)

Electro-Static protected to 20KV

Control Relays:

Main - DPDT contacts, 5 amp max @ 30VDC
Aux - SPDT contacts, 5 amp max @ 30VDC
Alarm - SPDT contacts, 5 amp max @ 30VDC

Keypad Cable: 9 cond., 24 ga., 16 feet long
Cable Extension: 200 feet max.

Mechanical:

Controller: 8" H x 7-3/8" W x 3-1/2" D - steel enclosure NEMA Grade 1
Finish: Beige Baked Enamel

Operating Temperature:

Keypad: -40° F (-40°C) to +158° F (+70°C)
Controller: +32°F (0°C) to +140°F (+60°C)

Internal "Timers": (All Adjustable 0-255 Seconds)

Relock Timer - 8 seconds default
Door Prop Timer - 30 seconds default

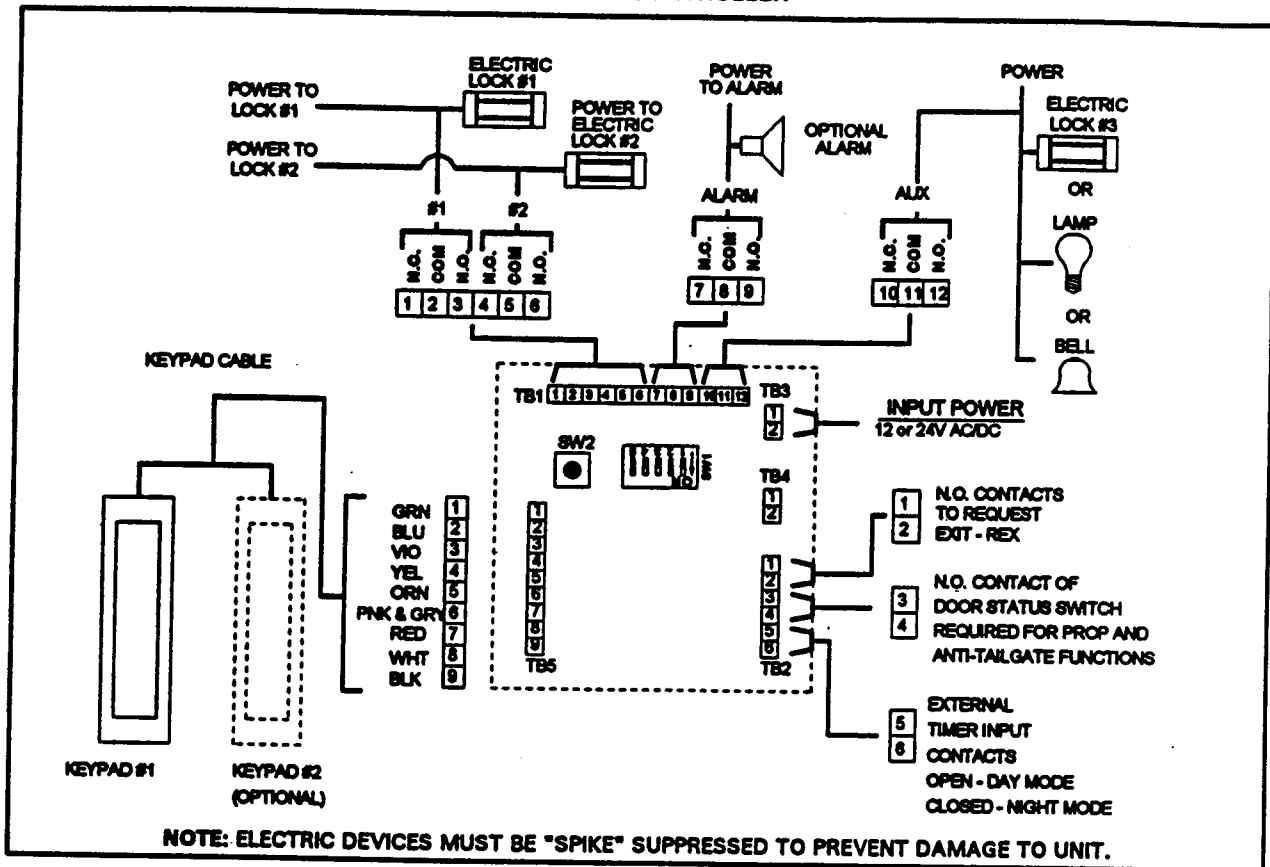
Programmable Codes:

User Codes: 150 codes max.
3 to 8 digits long

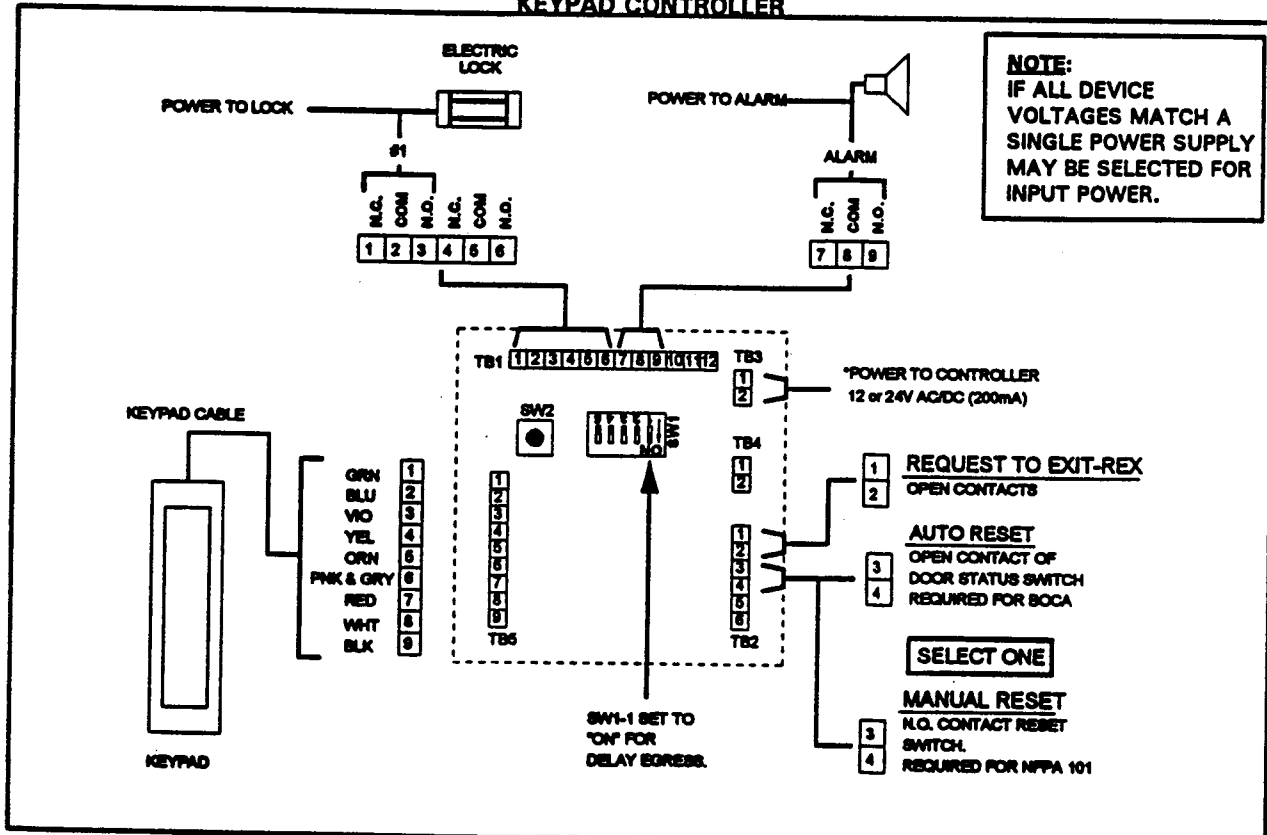
Master Programming Code:

Master Code: 1 code max.
5 to 8 digits long

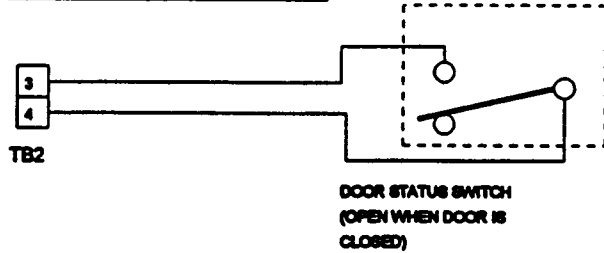
STANDARD FEATURE SELECTIONS KEYPAD CONTROLLER



TYPICAL DELAYED EGRESS SYSTEM KEYPAD CONTROLLER

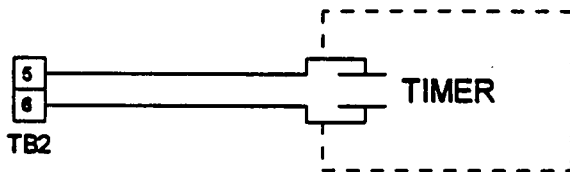


A: DOOR PROP HOOK-UP



PROGRAMMING REQUIRED.
SEE: TO CONFIGURE THE SYSTEM (PG 15)

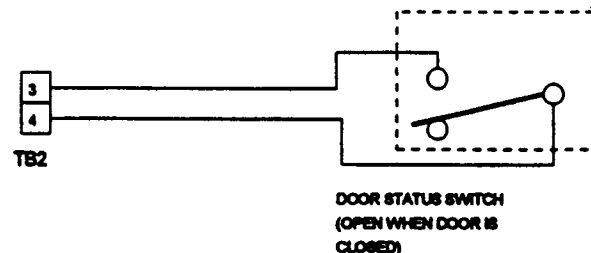
B: DAY/NIGHT MODE TIMER HOOK-UP



TIMER CONTACTS:
DAY TIME - OPEN
NIGHT TIME - CLOSED

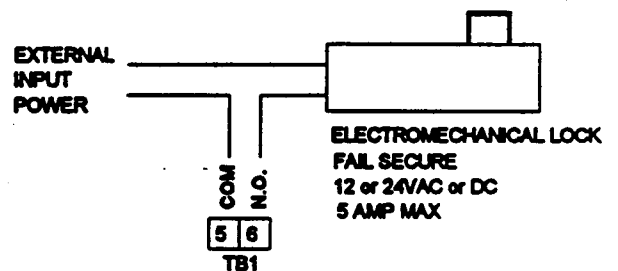
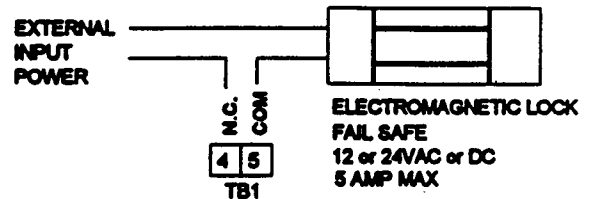
AN EXTERNAL TIMER
(DAY/NIGHT MODE)
MAY BE PROGRAMMED IN
ADVANCED PROGRAMMING
STEPS:
TO ADD USER CODES &
FUNCTIONS (PG 16)
AND
TO CHANGE USER CODES &
FUNCTIONS (PG 17)

C: ANTI-TAILGATE HOOK-UP

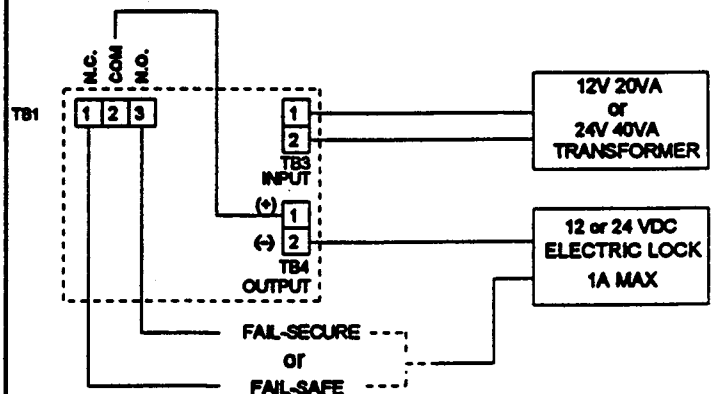


PROGRAMMING NOT REQUIRED

D: EXTERNAL POWER SOURCE SECOND LOCKING SYSTEM SHOWN



E: INTERNAL OUTPUT POWER (TB4)



When the current rating of the input power is 1.2 A or higher, up to 1 amp maximum may be used as output power. The output power is filtered, unregulated DC voltage. Do not exceed 1 amp current draw.

The output power is "on" as long as input power is present. It must be wired to a set of contacts on TB1 to be properly controlled by keypad entries.