

C2 Compact Range Installation & Programming Manual



Onsite training is available and telephone technical support with optional remote access for further assistance is all part of the support we can offer.

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CONTENTS

INTRODUCTION	4
SYSTEM CONFIGURATION	4
SINGLE DOOR	4
SINGLE DOOR & CONTROL	5
TWO DOOR	5
OPERATION	6
INDICATORS	6
SOUND	6
USING PROXIMITY CARD	6
USING ACCESS CODES	6
HOLDING A CHANNEL OPEN	6
TOGGLE MODE	6
ALARMS	7
PDO	7
DOOR FORCED	7
DURESS	7
PROGRAMMING	8
CARD FUNCTIONS	9
ADD CARDS	9
REMOVE CARDS	10
PROXIMITY LOCK RELEASE TIME	11
ACCESS CODE FUNCTIONS	12
ADDING ACCESS CODES	12
REMOVING ACCESS CODES	13
CODE LOCK RELEASE TIME	14
PENALTY TIME	15
ALARM & PROGRAMMING FUNCTIONS	16
PROLONGED DOOR OPEN (PDO)	16
PROGRAMMING CODE	17
ENGINEER SETTINGS	18
KEY 1 – CLEAR CARDS	18
KEY 2 – CLEAR CARDS & ACCESS CODES	18
KEY 3 – CLEAR ACCESS CODES	18
KEY 5 – CARD & CODE MODE	18
KEY 6 – CARD OR CODE MODE (DEFAULT)	18
KEY 7 – PART RESET & DURESS OFF	18
KEY 8 – PART RESET & DURESS ON	18
KEY 9 – FULL RESET	18
INSTALLATION	19
MOUNTING	19
WIRING DAIGRAMS	19
PSU & READER	19
LOCKS	20
FAIL SECURE	20
FAIL SAFE	21
24V CONNECTION	22
REQUEST TO EXIT (EGRESS)	23
CALL OUTPUT	24
PDO & DOOR FORCED ALARMS	25
SPECIFICATION	26
PROXIMITY CHANNEL	26
CODE CHANNEL	26
CONTROLLER	26
POWER SUPPLY	27
TABLE	28
RECORD TABLE FOR ACCESS CODES & CARD NUMBERS	28
SAFETY NOTES & DISCLAIMER	29

INTRODUCTION

The C2 Compact system consists of two main items, the proximity reader and the two-channel controller-keyboard. The proximity reader interrogates the cards or fobs and passes the card number and site code to the controller-keyboard. The controller-keyboard has two channels each with its own relay (see Fig 1). One channel is dedicated to the proximity reader. The second is dedicated to the keyboard on the front of the controller. Thus as well as providing a means to program the system the keyboard can be used to open a second door or for a secondary switching function. In the C2 Compact packaging you will also find the labels for the reader and keyboard, 4 mounting screws, Tamper spring and this manual.

Additional equipment needed include:

12V DC power supply, the Progeny 2071 PSU is ideal for this.

Locking device to suit the door

Proximity cards (3804) or fobs (3805)

Screened cable.

Optional equipment:

Door sensor

Break glass unit

Progeny 3068 Touch Switch

The keyboard-controller has two channels, each with its own output relay. Fig 1 illustrates the allocation of inputs, outputs and functions to the two channels.

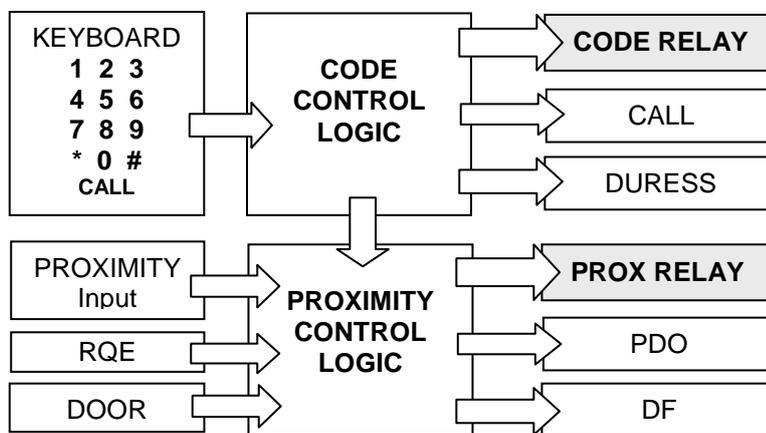


Fig 1

The "CALL" and "DURESS" outputs are associated with the keyboard or "Code" channel. Note that the RQE and Door sensor input are only available for the "Proximity" channel. The arrow linking the CODE CONTROL and PROXIMITY CONTROL blocks indicates that the two channels can be configured to work together as CARD & CODE.

SYSTEM CONFIGURATIONS

Listed below are some of the many configurations that can be achieved using the C2 Compact system.

SINGLE DOOR

Proximity In, RQE Out, Here the proximity reader would be mounted on the insecure side of the door and a separate RQE button, would be mounted on the secure side. Alternatively the Call button of the keyboard-controller can be used.

If the locking device allows for mechanical egress then the RQE button is not needed. In this case it may be mounted near a receptionists desk to allow remote door release.

Proximity In, Code Out, Here the code relay NO & C contacts are wired the RQE input of the proximity channel. Thus a code is required to open the door from the inside.

Card & Code In, RQE Out* Here the proximity and the keyboard controller are mounted next to each other on the insecure side of the door. The controller is set to Card & Code mode (see engineering settings). A separate RQE button can be fitted if required.

Card Or Code In, RQE Out* Here again the proximity reader and the keyboard are next to each other. However, the controller is set for Card OR Code mode and the Code relay is wired to the RQE input. Thus valid access codes OR valid cards will open the door.

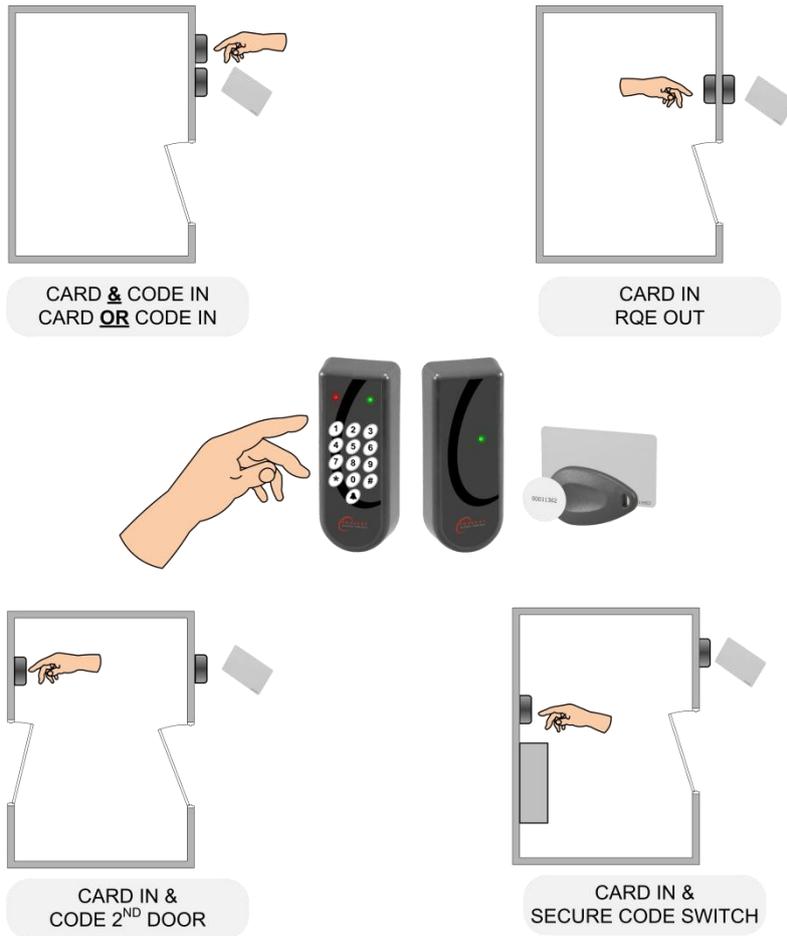
SINGLE DOOR & CONTROL

The proximity channel would work as in the above cases but the code channel can be used for some totally separate function. If the lock time for the code channel is set to zero the relay will toggle each time a valid code is entered. Thus the code can be used to set or un-set an intruder alarm panel, shunt a zone, open a goods entry door, override or inhibit the operation of the proximity relay etc. The list is endless, anywhere a secure switch is required the code channel can be used.

TWO DOOR

Proximity In, RQE Out & Code on a Second Door *. Here the keyboard controller is mounted on the insecure side of a second door. Note that the locking device should provide mechanical egress or be a door to something that a person would not go into such as a store cupboard.

* **Note** when using the keyboard half of the system on the insecure side of the door it is important to remember that the controller is built in to the keyboard. This means that a potential intruder could prise this unit off the wall and "hot wire" the door release. To help prevent this the 3859-KB has a tamper switch built in. Fit the tamper spring and wire the tamper connections to the 24hr loop of an intruder alarm system.



OPERATION

INDICATORS



A coloured indicator is provided for each channel. The colours of these indicators have the following meanings.

LED Colour	Meaning
Red	Lock Closed
Green	Lock Open
Amber	PDO Alarm (Proximity only)
Flashing Off	Programming
Short blink to Off	Keyboard Key Push

SOUND



Sound is used to give the user additional feedback on the status of the controller and progress during programming.

Sound	Meaning
Continuous Two Tone, High Volume	PDO Alarm
Four Notes "Low – High – Low – High"	Programming Mode
Two Notes "Low – High"	Confirm Programming Change
Two Notes "High – Low "	Programming Error
Single Short Note "High"	Keyboard Key Push
Fast Trill sound	Card disabled
Slow warble sound	Card has wrong site code & is not a guest
Tic Tic Tic	Memory programming in progress

Note: The sounds from the keyboard controller can be annoying if located in earshot. Pressing 8 and 9 together will mute the keyboard units sounder. However the sounder will re activate when the * key is pressed. Note that this will not mute the PDO alarm sound.

USING PROXIMITY CARD

The proximity card or key fobs simply needs to be presented to the reader. The readers LED will give a brief blink to green to indicate the card has been read. If the card is programmed into the system the lock will release for the pre-set duration.

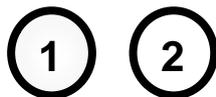
USING ACCESS CODES

Access codes can be five or six digits in length. To operate the code channel simply enter one of the programmed access codes. If a correct code is entered, the code LED will change to green and the code output relay will activate. Access codes can be modified to indicate Duress. Note this feature must be enabled if required. See "RESTORING FACTORY DEFAULT SETTINGS" later in this manual.

HOLDING A CHANNEL OPEN

If a lock timer is programmed for timed operation, the operator can override this and hold the output open. To do this, simply present a valid proximity card or enter a valid access code. Once the output is activated and the LED indicator is showing green, push and hold the 2 & 3 keys as a pair. This will hold open proximity relay. Enter a valid access code and press 1 & 2 keys to latch the code relay. To cancel the latched state of a channel simply present a card or enter a valid access code again. In the case of the proximity channel operating the RQE input will also cancel the latch.

HOLD OPEN CODE RELAY



HOLD OPEN PROX RELAY



TOGGLE MODE

If the lock time for a particular channel has been set to zero then each time a valid card is presented or correct code is entered, the output relay will “Toggle” to the opposite state.

Each channel has its own lock time thus either or both channels can be selected to “toggle” or “timed” operation. One channel can be used to open a door, and the other channel used to turn on and off a piece of equipment.

ALARMS

PDO

The purpose of the Prolonged Door Open (PDO) alarm is to act as a reminder that a door is a security door and should not be wedged or held open for too long. If the door sensor has been connected then each time the door is detected opening a PDO timer starts. If this timer reaches a pre set value before the door closes, a two-tone PDO alarm will be heard from the keyboard and the PDO output will activate. Pressing keys 7 and 8 simultaneously to mute the current two tone sound from the controller.

PDO alarm cancels automatically when the door is closed. The PDO alarm is not active if the door is open due to Toggle or Hold command.

DOOR FORCED

The operation of the door forced alarm depends on the ability of the controller knowing when the door has been opened legitimately or not. In order to do this both the door sensor input and the ReQuest to Exit (RQE) inputs must be wired. Thus if the door is detected as opening without the lock being released then a Door Forced alarm will go active and latch. Door forced alarms can be cancelled by presenting a valid proximity card or entering the valid programming code.

DURESS

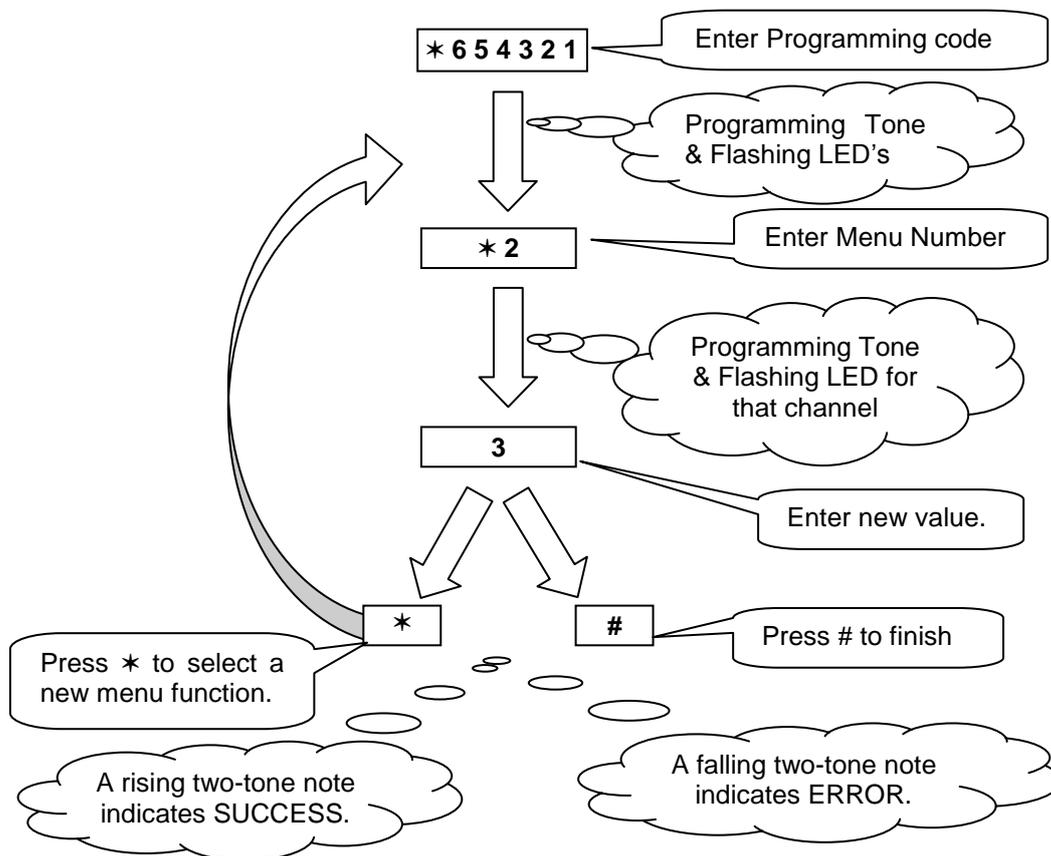
If the duress feature is turned on, a duress alarm is generated when one enters an access code with the last digit incremented. For example if your access code is “1 2 3 4” then if you enter “1 2 3 5” the door will be released as normal but also the duress alarm output will go active and latch. A duress alarm can only be cancelled by entering the valid programming code. If the duress feature is turned off, then “1 2 3 5” would not open the door. See “ENGINEERING SETTINGS” later in this manual.

PROGRAMMING

Programming is achieved by entering the programming code at the keyboard followed by a menu selection code. Depending on the menu option selected data can then be entered at the keyboard. The menu functions available and default factory settings are as follows:

MENU #	DESCRIPTION	DEFAULT SETTINGS
* 0	PROGRAMMING CODE	6 5 4 3 2 1
* 1	ACCESS CODES & ADD CARDS	NONE
* 2	TIME FOR PROXIMITY RELAY	3
* 3	PDO TIME	0
□□4	NOT USED	-
* 5	NOT USED	-
* 6	NOT USED	-
* 7	NOT USED	-
* 8	TIME FOR CODE RELAY	3
* 9	PENALTY TIME	0

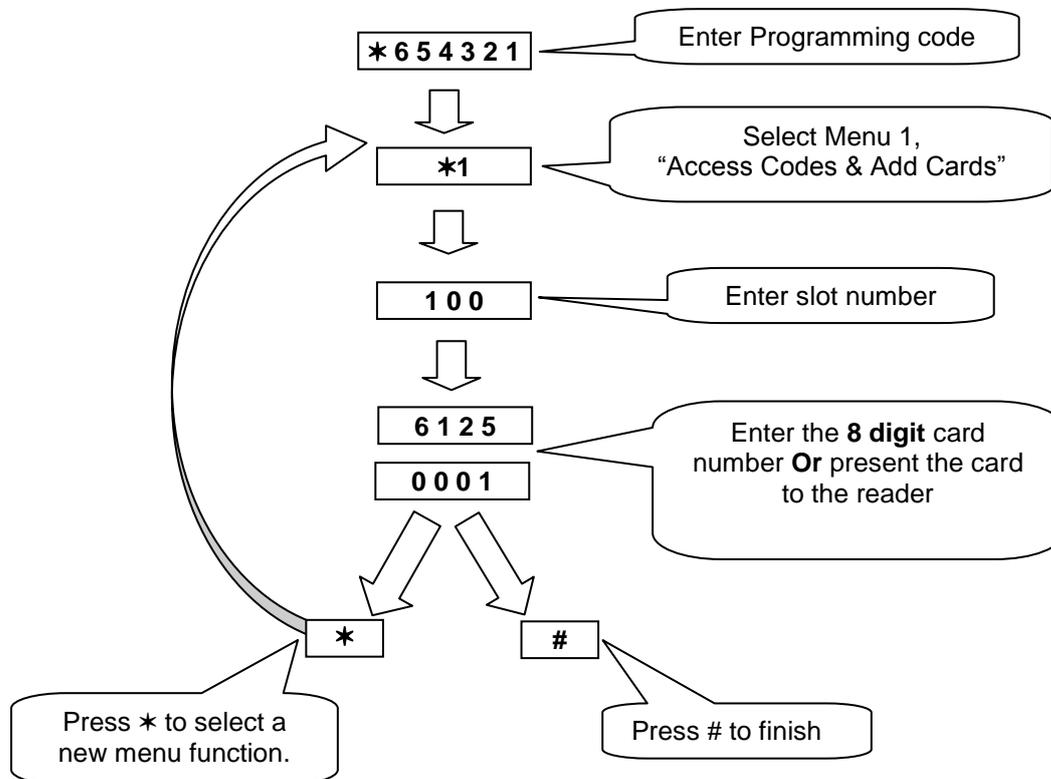
Each menu is described in detail in the following sections. The general programming procedure is shown below:



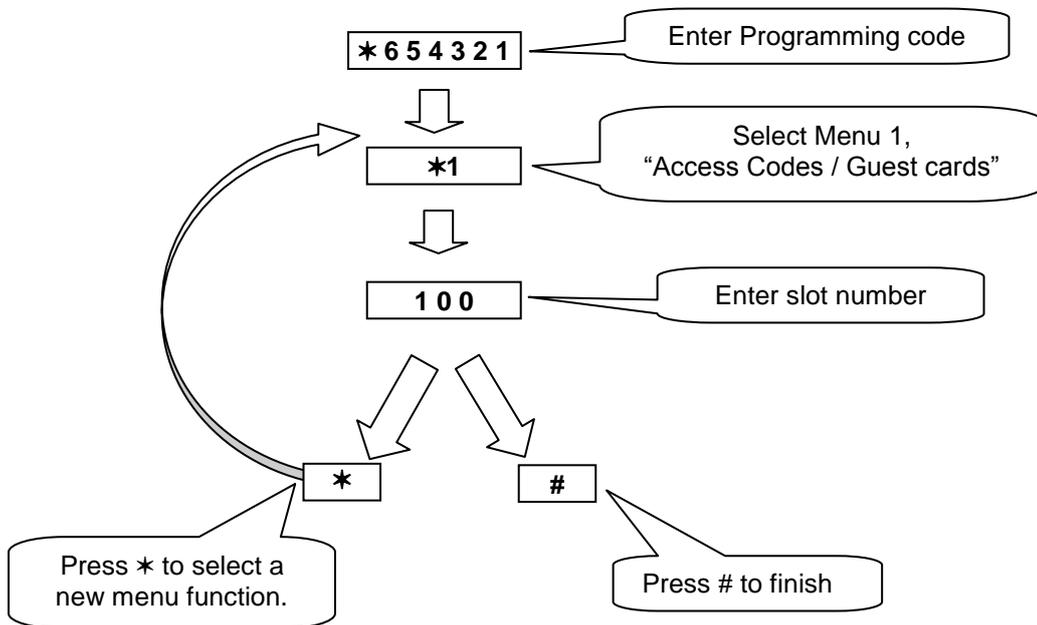
ADD CARD FUNCTIONS

ADD CARDS

The add card facility allows cards with any card number to be granted access. Up to 100 cards can be added in this way. The codes are held in slots or pigeonholes that are numbered 100 through to 199.



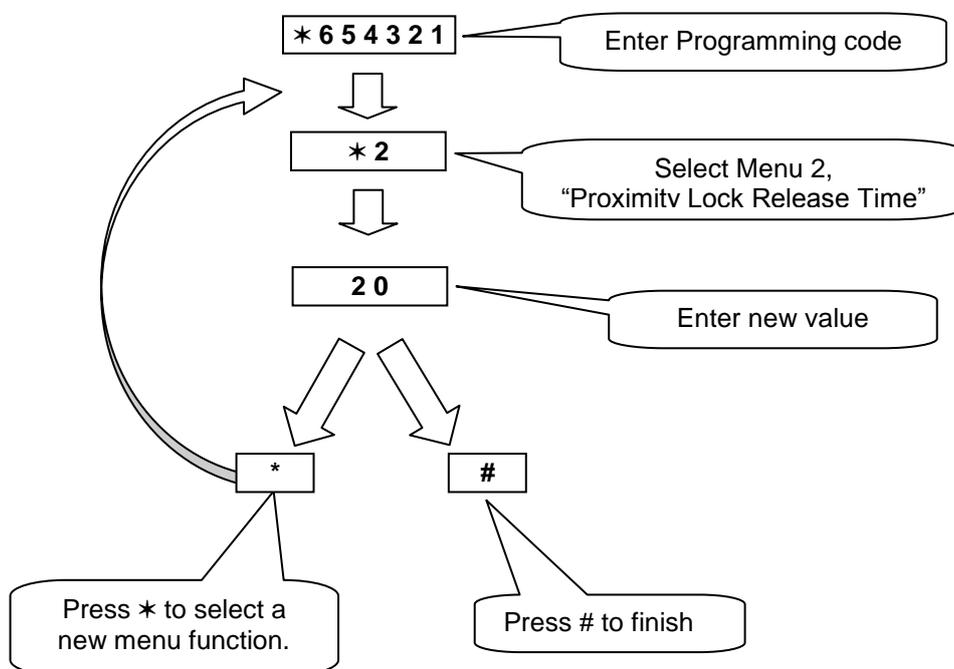
REMOVE CARDS



PROXIMITY LOCK RELEASE TIME

Lock time is the amount of time that the locking device is released following a valid proximity card or the triggering of the RQE input. This may be from 0 to 99 seconds. If set to zero, then each time the channel is triggered the relay will “Toggle” to the opposite state. If a door sensor is fitted then the anti tailgate feature means that the lock time will be cut short once the door closes again.

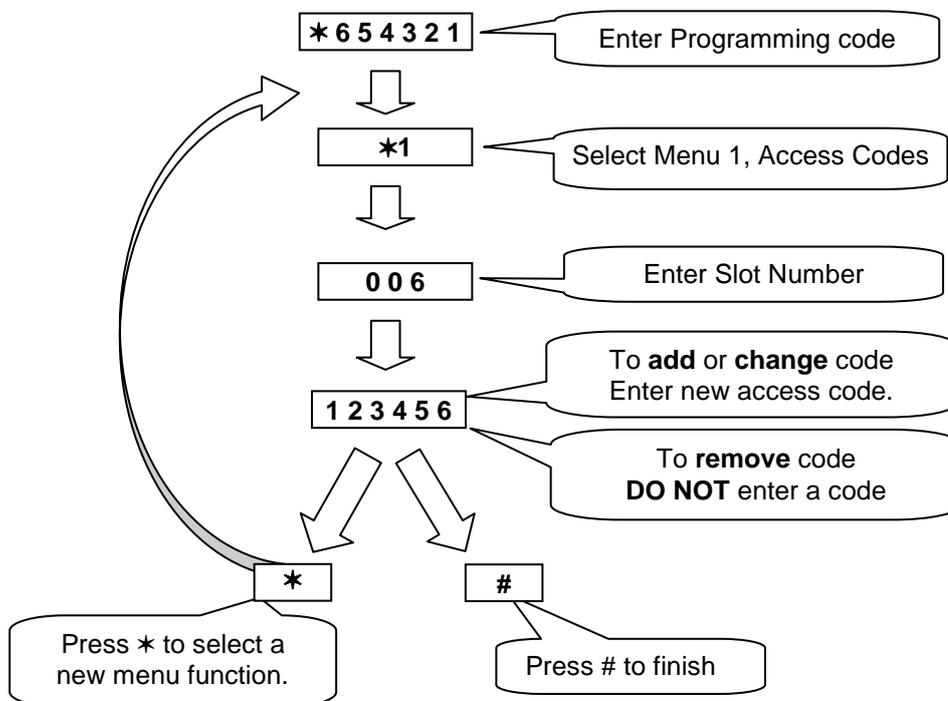
Programming the Lock Release Time



ACCESS CODE FUNCTIONS

Access codes are used to open a door. Up to 50 access codes can be programmed for each door or channel of the controller. The codes are held in slots or pigeonholes that are numbered 001 through to 050.

Adding Access Codes



REMOVING ACCESS CODES

Removing Individual Access Codes

Follow the same procedure as for adding access codes except after select the slot containing the access code in question simply press * or #. This will clear the code contained at that slot.

Removing All Cards and Access Codes

All access codes can be removed by removing power to the controller then while holding the number 2 key apply power only releasing the key when a beep is heard from the control unit.

Removing All Cards

All cards can be removed by removing power to the controller then while holding the number 1 key apply power only releasing the key when a beep is heard from the control unit.

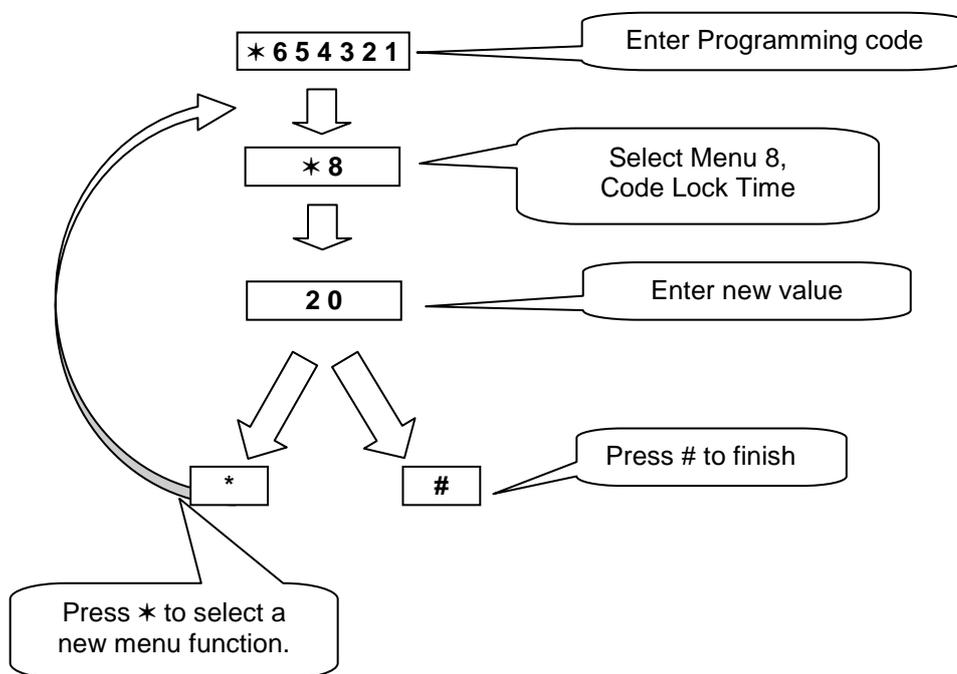
Removing All Codes

All access codes can be removed by removing power to the controller then while holding the number 3 key apply power only releasing the key when a beep is heard from the control unit.

CODE LOCK RELEASE TIME

Lock time is the amount of time that the locking device is released following a valid access code. This may be from 0 to 99 seconds. If set to zero, then each time the channel is triggered the relay will "Toggle" to the opposite state.

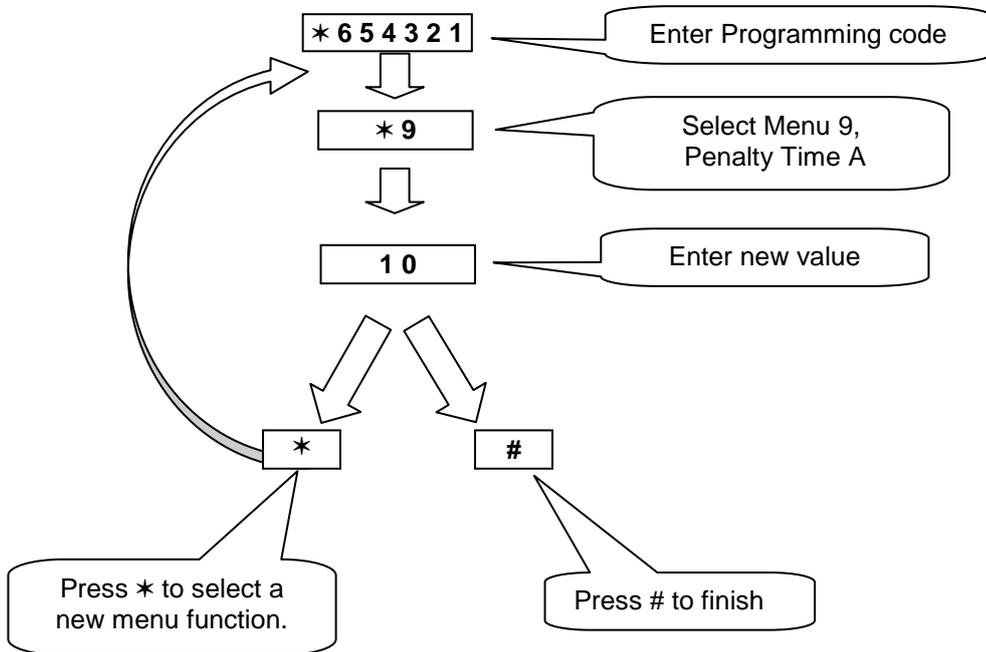
Programming the Lock Release Time



PENALTY TIME

This feature can slow persons, trying to gain access by using successive codes, down. As soon as an incorrect code is detected at the keyboard this penalty time is invoked, preventing any further access attempts until the timer elapses. The factory set default penalty time is 0 seconds (Disabled).

Programming the Penalty Time

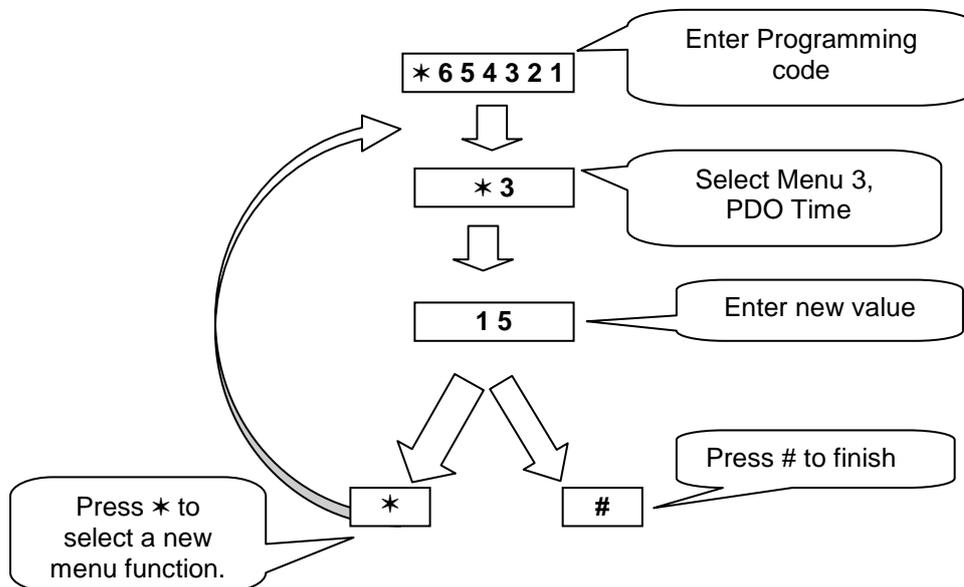


ALARM & PROGRAMMING FUNCTIONS

PROLONGED DOOR OPEN (PDO)

There are connections on the control unit to allow the monitoring of the door open status. PDO is the amount of time the door may be open before triggering an audible alarm from the control unit. This may be from 0 to 99 seconds. If set to zero PDO sensing for that channel is disabled.

Programming PDO Time

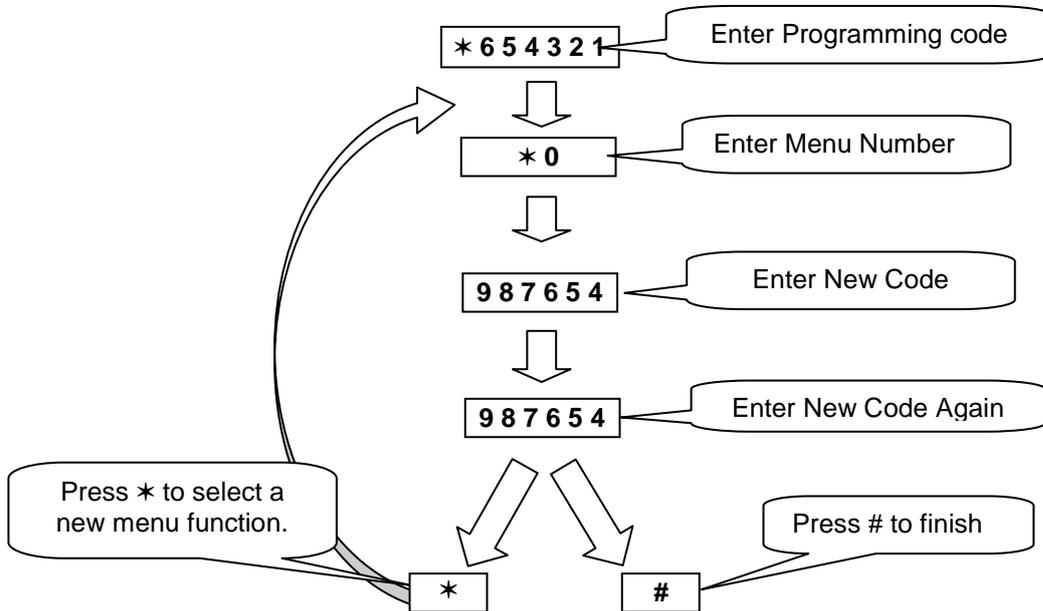


Pressing 7 and 8 together will mute the integral PDO alarm sounder. This does not affect the PDO alarm output. The PDO will however re sound on the next alarm occurrence. To disable the PDO sound and output permanently, program the PDO time to zero.

PROGRAMMING CODE

The programming code is the means by which the systems operator gains access to the programming functions. This is a 6-digit number and can be changed by using the following procedure.

Changing the Programming Code



ENGINEERING SETTINGS

There are a number of engineering options that can be programmed at commissioning time. These options include:
Full factory reset

- Clearing proximity cards from memory
- Clearing access codes from memory
- Turning the Duress feature On or OFF
- Selecting "CARD & CODE" or "CARD OR CODE" mode

The procedure consists of first removing power to the controller, then while holding one of the keys, re-apply power. Release the key when a beep is heard from the control unit.

KEY 9 "FULL RESET"

This resets all parameters to the factory default values and removes all Cards, Guest Cards and Access Codes.

KEY 1 "CLEAR CARDS"

KEY 2 "CLEAR CARDS & ACCESS CODES"

KEY 3 "CLEAR ACCESS CODES"

KEY 7 "PART RESET & DURESS OFF"

KEY 8 "PART RESET & DURESS ON"

KEY 5 "CARD & CODE MODE"

When this mode is selected a valid proximity card AND a valid access code must be entered for the Proximity relay to be activated. Note that in this mode the Code relay has no function.

KEY 6 "CARD OR CODE MODE" (Default)

In this mode, a proximity card or access code operate the respective relay. Note if the code and the proximity channels are to open the same locking device use the following wiring diagrams for the lock circuit.

INSTALLATION

MOUNTING

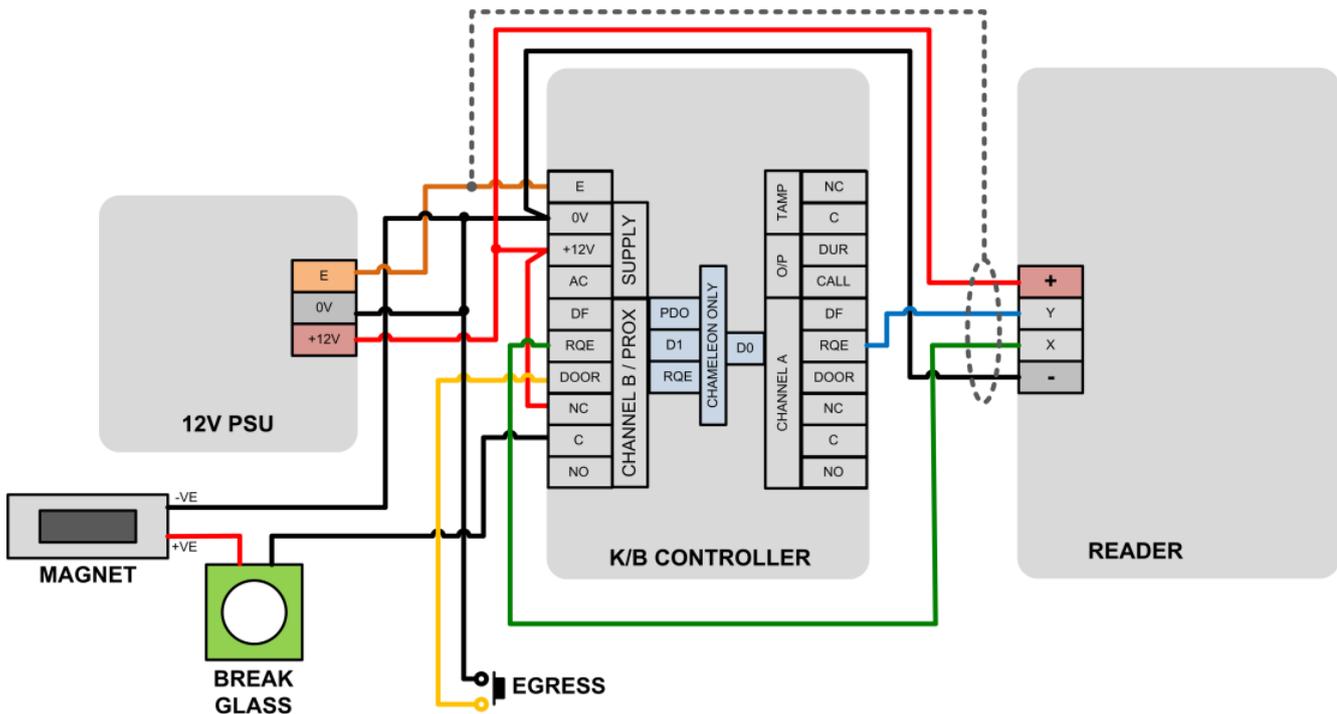
The controller and reader should be mounted at height that is convenient for all users of the system (between 1.2 and 1.5m from the floor).

The self-adhesive labels for the proximity reader and the controller are supplied unattached. It is recommended that the system is fully tested before these are attached.

WIRING DIAGRAMS

PSU & READER

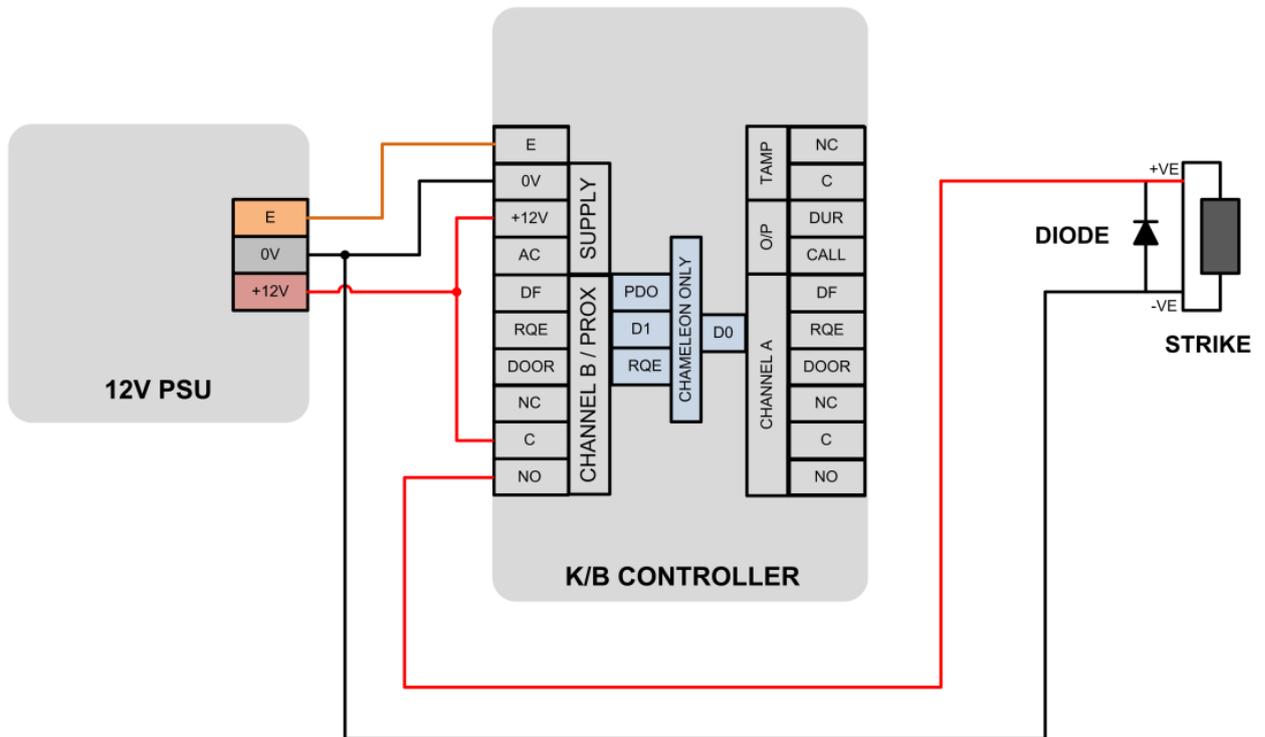
The 3859-PRX reader unit should be connected to the 3859-KB using screened 4 core cable. The cable should not exceed 100m in length. The power supply can be wired in the same cable. Make sure that the power supply is suitable fused or current limited for the cable being used. The supply voltage must not exceed 16V. Be careful that voltage drops do not bring the supply voltage below 11.5V.



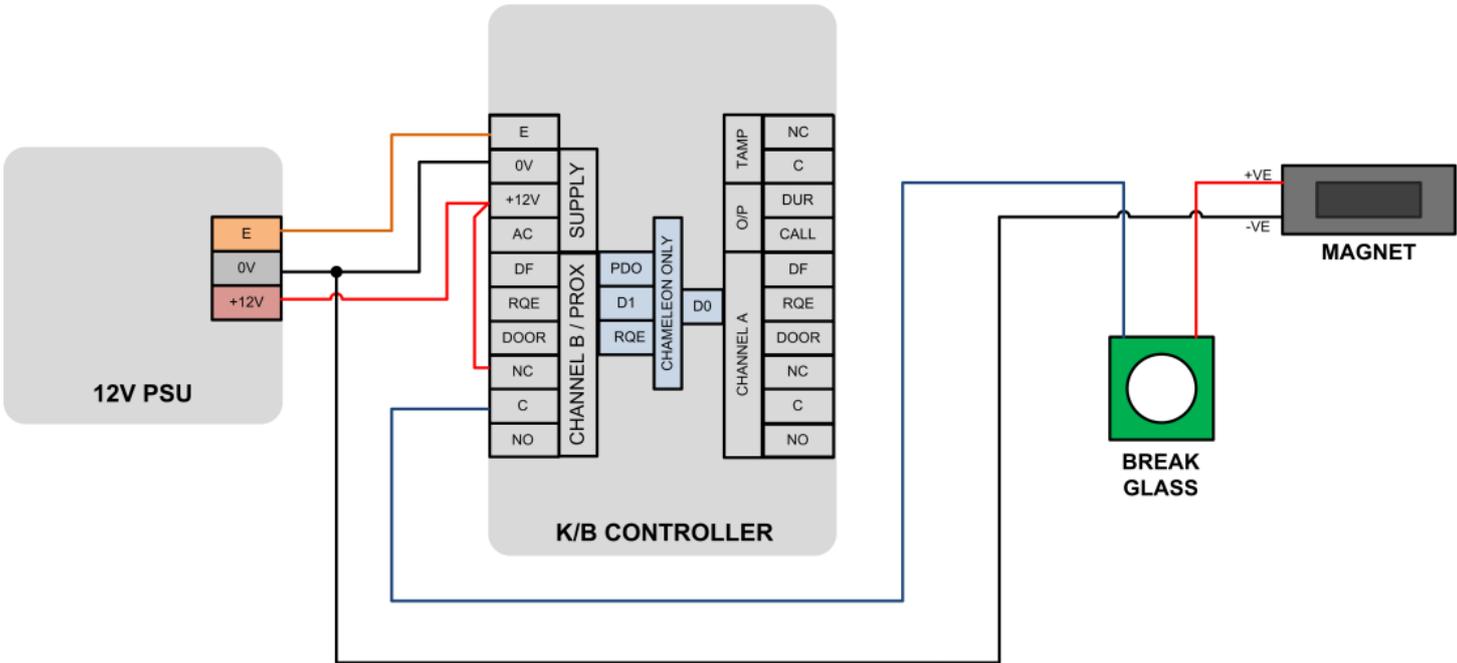
LOCKS

Locking devices fall into two main categories: "Fail Secure" and "Fail Open". The fail secure type requires power to release the door while the fail open type require power to hold the door locked. The following diagrams show the connection, to the Proximity channel, of these two types of locking device. The same principle of connection can be applied to the Code channel.

LOCK CONNECTION (FAIL SECURE)

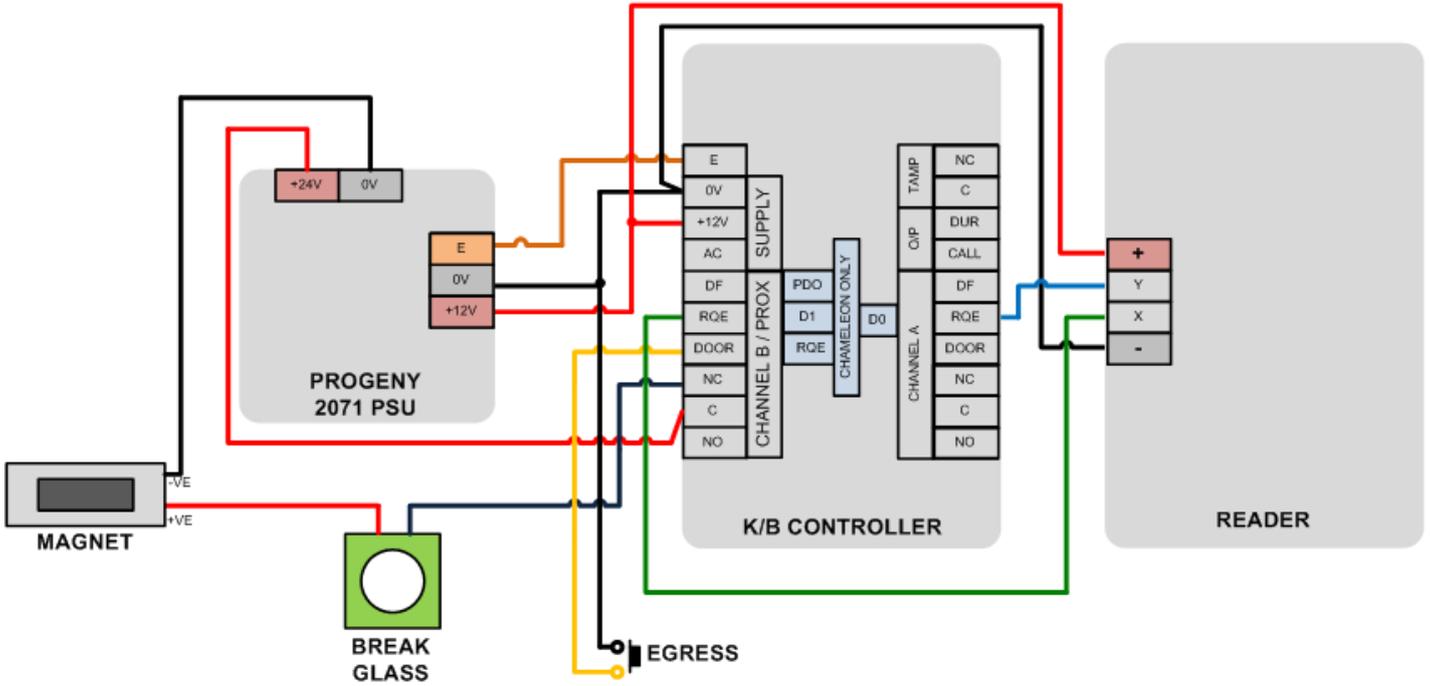


LOCK CONNECTION (FAIL SAFE)



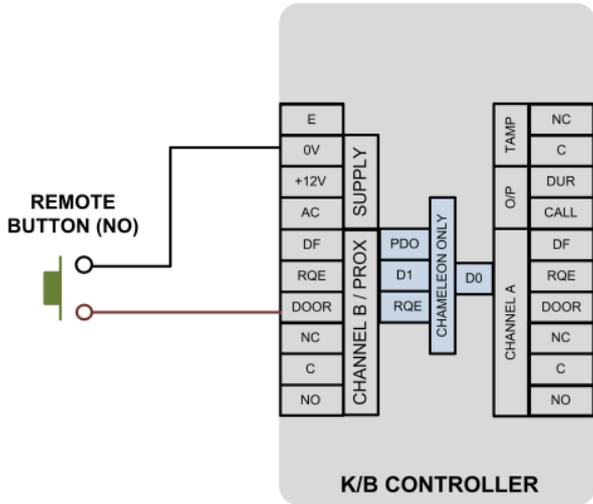
The previous diagrams show the lock connected to the 12V supply. 24V locking devices can also be switched via the voltage free relay contacts as long as the supply to the proximity reader is kept at 12V (below 16V). Either use a separate power supply or a dual voltage supply such as the Progeny 2071 PSU.

24V LOCK DIAGRAM

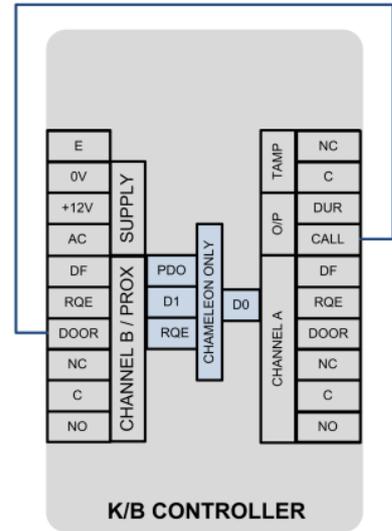


REQUEST TO EXIT

REQUEST TO EXIT OPTIONS



CONNECTING A REMOTE BUTTON

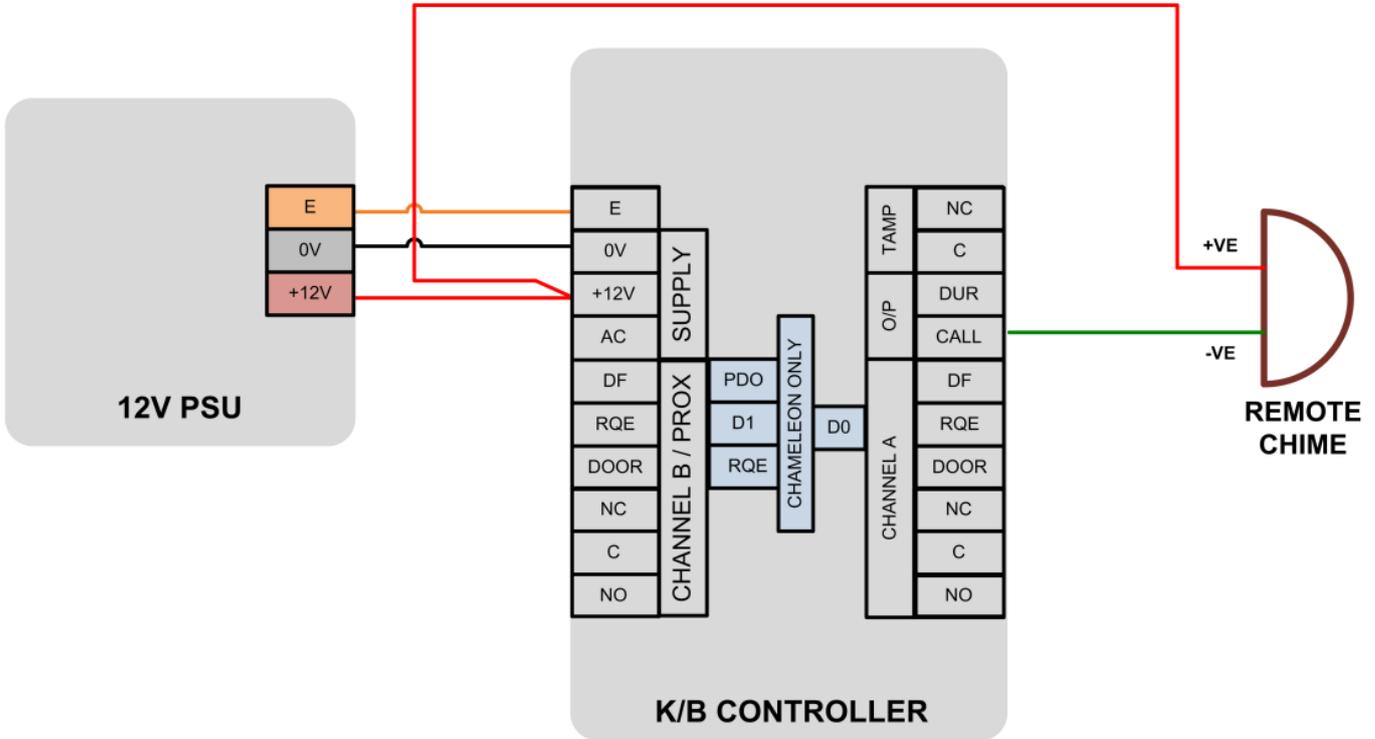


USING THE CALL BUTTON AS RQE

CALL OUTPUT

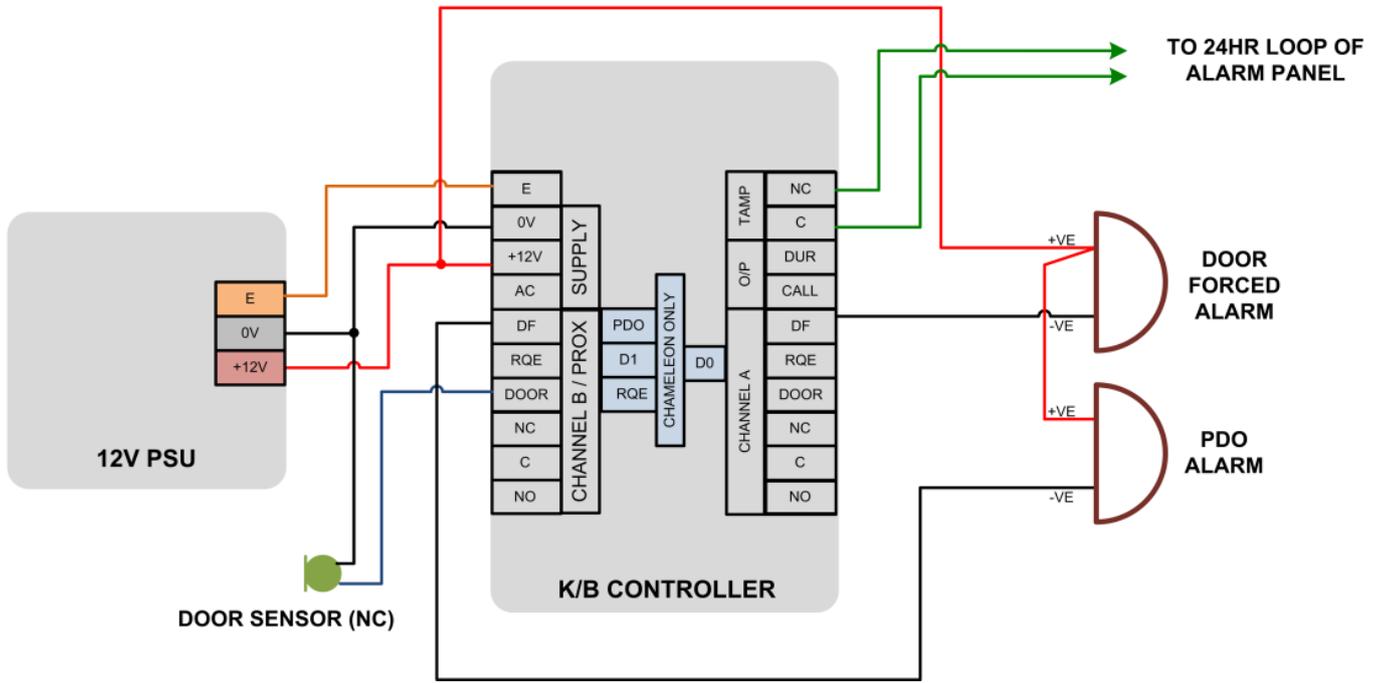
The 3859-KB keyboard has a call button. If this unit is mounted on the secure side of a door, it may be used to ring a visitor bell or chime.

CONNECTING A REMOTE VISITOR CHIME



PDO & DOOR FORCED ALARMS

DOOR SENSOR & ALARMS



SPECIFICATION

PROXIMITY CHANNEL

Cards	100 (Slots 100 to 199)
Read range with ISO card	100mm
Read range with key fob	25 to 50mm
Dimensions:	136mm, 53.5mm, 25.4mm
Relay timer	1 to 99 seconds 0 = Toggle mode
Relay contact ratings	2.0 Amps at 30V DC 2.0 Amps at 120V AC
Request to exit input	Normally open contact
Door monitor input	Closed contact when door closed
Anti Tailgate Feature	Yes
Door forced alarm output	100 mA
PDO alarm output	100 mA
LED indicator	Red = Normal Green = Unlocked Amber = PDO Alarm Flashing = Programming

CODE CHANNEL

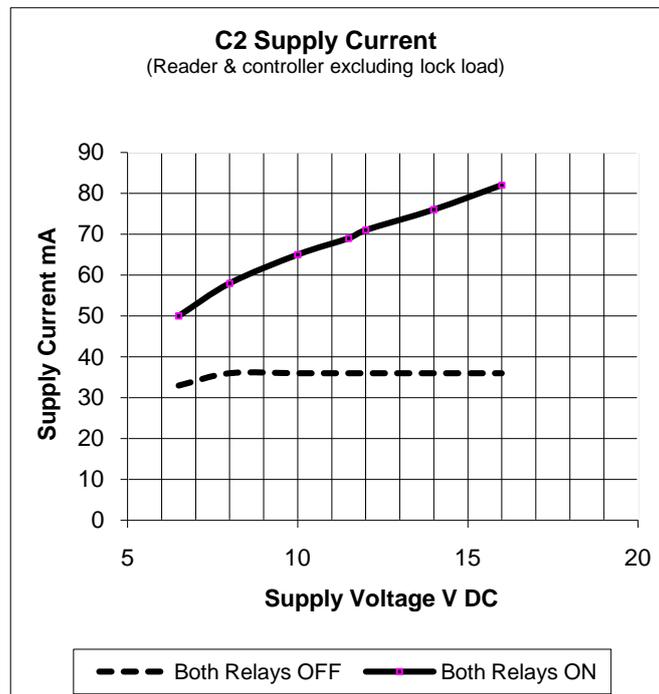
Access codes	50 (Slots 001 to 050)
Code length	5 or 6 digits
Penalty Timer	0 to 99 seconds
Dimensions:	136mm, 53.5mm, 25.4mm
Call output	100 mA switched to 0V
Duress output	100 mA switched to 0V
Tamper switch output	N/O contacts
Relay timer	1 to 99 seconds 0 = Toggle mode
Relay contact ratings	2.0 Amps at 30V DC 2.0 Amps at 120V AC
LED indicator	Red = Normal Green = Unlocked Flashing = Programming

CONTROLLER

Programming code	6 Digits
Keypad Functions	PDO Mute Sounder Mute
Engineer Functions	Card & Code / Card OR Code Select Duress ON/OFF Clear Cards / Codes Factory Reset
Menu Functions	*1 Access Codes / Guest Cards *2 Proximity Relay TIME *3 PDO Time *4 Add Cards *5 Remove Cards *6 Test Cards *7 Site Code *8 Code Relay Time *9 Penalty Time *0 Programming Code

POWER SUPPLY

Minimum Supply Voltage 11.5 V DC
Absolute Maximum Supply Voltage 16 V DC
Supply Current:



SLOT NO	ACCESS CODE	SLOT NO	CARD NO	SLOT NO	CARD NO
001		100		150	
002		101		151	
003		102		152	
004		103		153	
005		104		154	
006		105		155	
007		106		156	
008		107		157	
009		108		158	
010		109		159	
011		110		160	
012		111		161	
013		112		162	
014		113		163	
015		114		164	
016		115		165	
017		116		166	
018		117		167	
019		118		168	
020		119		169	
021		120		170	
022		121		171	
023		122		172	
024		123		173	
025		124		174	
026		125		175	
027		126		176	
028		127		177	
029		128		178	
030		129		179	
031		130		180	
032		131		181	
033		132		182	
034		133		183	
035		134		184	
036		135		185	
037		136		186	
038		137		187	
039		138		188	
040		139		189	
041		140		190	
042		141		191	
043		142		192	
044		143		193	
045		144		194	
046		145		195	
047		146		196	
048		147		197	
049		148		198	
050		149		199	

Keep important information here:

INSTALLATION DATE _____

Notes:

Safety Notes and Disclaimers

Please read this manual carefully before attempting to install, program or operate the Progeny Chameleon access control equipment.

This equipment must be installed in line with all relevant regulations and standards. This equipment should be powered by a power supply classed as SELV, as defined in BS EN 60950. All connections to this unit must also be SELV.

Make sure that wiring is rated according to fuses and current limits of relevant power supplies.

Every effort is made to ensure that this manual is complete and free from errors. However we reserve the right to make changes to these products and this manual without notice.

No liability is accepted for loss damage or injury as a consequence of using these products or instructions.

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Addendum

Programming Instructions for Site Coded P2 Cards/Fobs & Dots (3840, 3841 & 3842)

It is important to enter Site Coded cards in the procedure shown below. Also when ordering additional cards for your C2 system, please quote the Site Code allocated.

Progeny Cross Reference Report

Date: 01/07/2010 Site Code: 8000 BSB Ref: 12345

Internal Number	External Number						
1	30000	51	30050	101	30100	151	30150
2	30001	52	30051	102	30101	152	30151
	30002	53	30052	103	30102	153	30152
			30053	104	30103	154	30153
			30054	105	30104	155	30154
			30055	106	30105	156	30155
			30056	107	30106	157	30156
			30057	108	30107	158	30157

00019953

Fig 1.

Enter Site Code

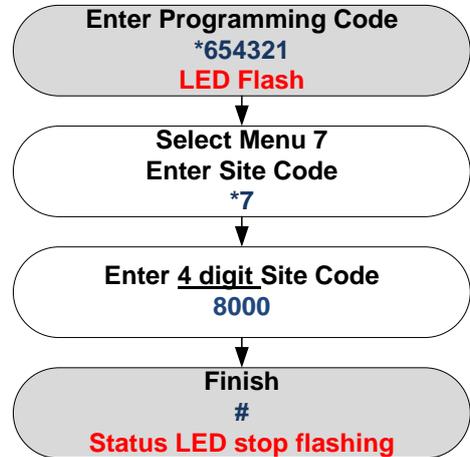
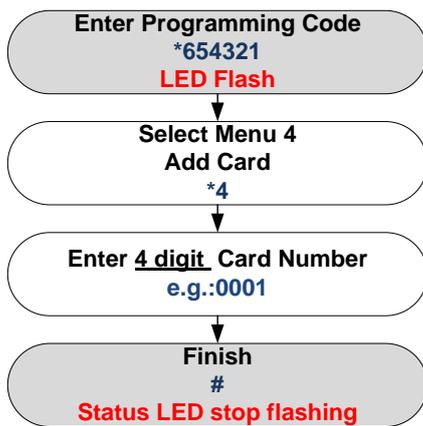
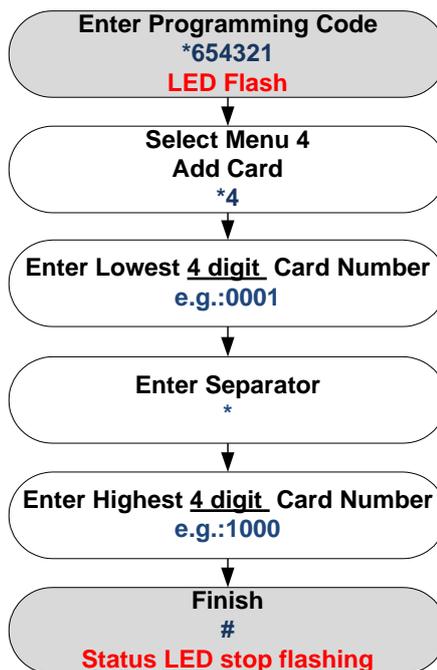


Fig 2.

Add Single Card



Add Block of Cards



Delete Single Card

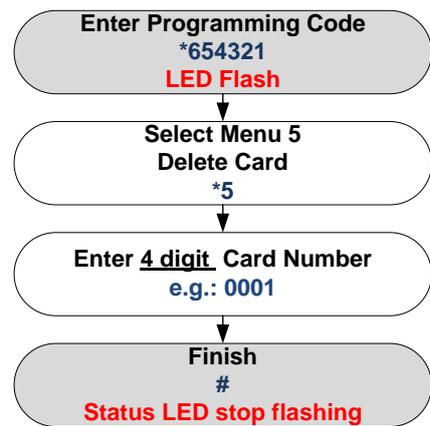


Fig 3.

When adding Site Coded tokens, follow the procedure below:

- Look up Site Code (Fig 1.)
- Enter 4 digit Site Code following procedure in Fig 2.
- Look up 4 digit Internal Number from Cross Reference Report (see Fig 1.)
- Add Single/Block of card(s) following procedure shown in Fig 3.
- Delete Cards follow procedure shown in Fig 3.