APPENDIX

DRY CONTACT

A dry contact means that no electricity is connected to it. It is prepared for free connections. The Relay Output contacts provided in this keypad system are dry contacts.

N.C.

Normally Closed, the contact is closed circuit at normal status. It is open circuit when active.

• N.O.

Normally Open, the contact is open circuit at normal status. It is closed circuit when active.

TRANSISTOR OPEN COLLECTOR OUTPUT

An open collector output is equivalent to a Normally Open (N.O.) contact referring to ground similar to a relay contact referring to ground. The transistor is normally OFF, and its output switches to ground (–) when active. The open collector can only provide switching function for small power but it is usually good enough for controlling of an alarm system. The Duress, Inter-lock and Key Active Outputs of the keypad are open collector outputs.



EQUIVALENT



N.O. CONTACT
OUTPUT ---Output switches to
around when activates

td. **5**26

VERSION: 11/09

VANDAL RESISTANT BACK-LIT WEATHERPROOF DIGITAL ACCESS CONTROL KEYPAD



DC60SS, DC50SS & DC50FS
Programming & Installation Manual

FOR ELECTRIC LOCK, INTER-LOCK AND SECURITY SYSTEM INSTALLATIONS

INTRODUCTION

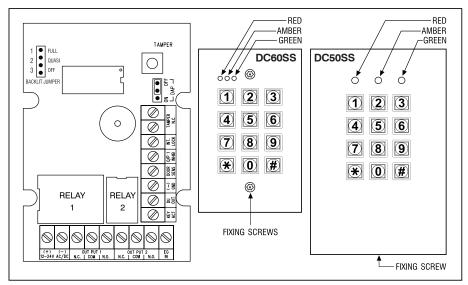
DC60SS / DC50SS / DC50FS are dual relay output, vandal resistant and weatherproof keypads. They are employing the durable back-lit metal key buttons and rugged metal housing for high traffic and harsh environment.

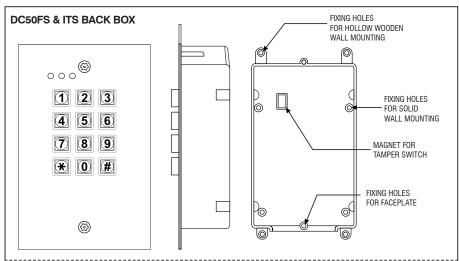
The DC60SS is in the size of fitting to the electric single gang box. It can be surface mount with its aluminum housing or flush mount on wall.

The DC50SS is in the size of fitting for gooseneck mounting. It is also suitable for surface mount or post mount on wall with its steel box.

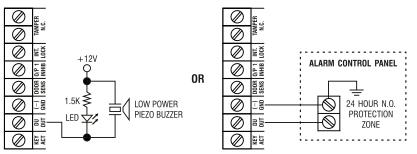
The DC50FS is the flush mount version of the DC50SS. It is designed for flush mounting on any brick or wooden wall with its back box.

CONNECTION TERMINALS OF THE ELECTRONIC MODULES OF THE KEYPADS





(D) DURESS OUTPUT

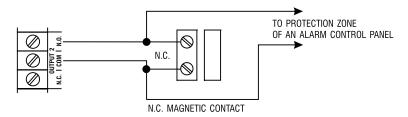


The Duress Output will switch to (–) ground when duress code is entered. You may use it to turn ON an LED lamp and/ or a small buzzer to notify a guard; or connect it to a 24 hour Normally Open protection zone of an alarm system.

 Only one connection option is recommended. Make sure that the sink current does not exceed the maximum rating of 100mA.

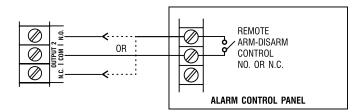
(E) OUTPUT 2

(i) Shunting an N.C. Zone



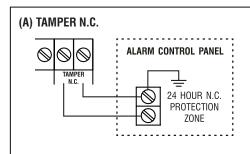
- Use the Normally Open (N.O.) output contact to shunt a Normally Closed (N.C.) protection zone of an alarm system.
- Set output contact to Start / Stop Mode (Programming Option 51).

(ii) Alarm System Arm-Disarm Control



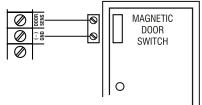
- Use the (N.O.) or (N.C.) output contact to make arm-disarm control of an alarm system.
- Consult your alarm control panel manual for the appropriate output contact to be used in arm-disarm control.
- Usually set output 2 to Momentary mode (Programming Option 501) for multi station systems and Start / Stop mode (Programming Option 51) for single station systems.

APPLICATION HINTS FOR THE AUXILIARY TERMINALS



The tamper switch is Normally Closed while the keypad is secured on gang box. It is open when the keypad is removed from the gang box. To prevent sabotage, connect these terminals in series with a 24 hour N.C. protection zone of an alarm system if required.

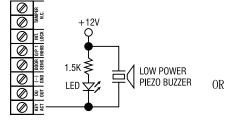
(B) DOOR SENS



With the help of a Normally Closed door position sensor (usually a magnetic door switch) on the door to set up the following functions:

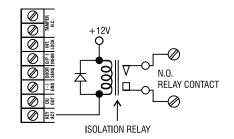
- a) Door Auto Relock -- The system will immediately relock the door after a valid access has been gained to prevent "tailgate" entries.
- b) Door Forced-open Alarm -- The keypad will generate alarm instantly if the door is forced to open. Enable the function with Programming Option 801.
- c) Door Propped-up Alarm -- The keypad will generate alarm if the door is left open longer than the pre-set delay time. Enable the function with Programming Option 9 with time of 1 to 999 seconds possible.
- d) Inter-lock Control -- When the door is open, the interlock output of the keypad will give a (-) command to stop the other keypad in an inter-lock system.

(C) KEY ACTIVE



The Key Active Output will switch to (-) ground for 10 seconds whenever a key is touched. You may use it to turn ON an LED lamp and /or a small buzzer to notify a guard; or to energize a relay to switch ON lights or trigger an CCTV Camera to start recording.

 Make sure that the relay for switching ON lights has high enough isolation between high voltage and low voltage to prevent damage of the keypad.



- Only one connection option is recommended.
 Make sure the sink current does not exceed the maximum rating of 100mA.
- External power supply and isolation relay are strictly necessary in driving high power device, such as lights.

NOTE:

- (1) Cut a rectangular hole on wall carefully for the back box in its right size and depth to ensure that the back box and the faceplate can be tightly shielded together with its rubber pad while they are fixed on wall.
- (2) The four holes on the back side of the box are prepared for fixing the back box on solid wall with screws.
- (3) The four holes on the front edge of the box are prepared for fixing the back box on hollow wooden wall.
- (4) The tamper switch of the DK-2880A is magnetically activated. A magnet is equipped on the back of the back box. The tamper switch is closed circuit (N.C.) while the keypad is fixed on its back box.

• 12-24V AC/DC (POWER INPUT)

Connect to 12-24V AC or DC power supply. The (-) supply and (-) GND are the common grounding points of the keypad system. No selection jumper is required for the full input voltage range.

Connect DC power with the (+) and (-) polarity indicated; and there is no polarity discrimination for AC power input.

OUTPUT 1

5 Amp relay dry contacts, recommended for door strike controls. Normally Open (N.O.) and Normally Closed (N.C.) outputs are available. Use N.O. output for Fail-secure locking device and N.C. output for Fail-safe locking device. The relay can be programmed in Start/Stop (toggle) mode or timer mode from 1 to 999 seconds.

• OUTPUT 2

This is an auxiliary output controlled by the User Code 2, which is ideal for controlling security systems & automatic operators. It is programmable for Start / Stop (toggle) operation or timing operation from 1 to 999 seconds. It is a relay output with 1 Amp rating Normally Open (N.O.) and Normally Close (N.C.) dry contacts.

• EG IN (EGRESS INPUT)

A Normally Open (N.O.) input terminal refers to (–) ground, with the help of a normally open button to activate the Output 1 for the same time period as the user code. Egress button is usually put inside the house near the door. More than one egress buttons can be connected in parallel to the terminal. Leave this terminal open if it is not used.

• KEY ACT.(KEYPAD ACTIVE OUTPUT)

An NPN transistor open collector output. It switches to (–) ground for 10 seconds on each key touching. This can be used to turn on lights, CCTV camera, or buzzer to notify a guard.

The rating of this output is: Ic max: 100mA sink. Vc max: 24VDC

• DU OUT (DURESS OUTPUT)

An NPN trànsistor open collectór output. It switches to (–) ground after the Duress Code is entered. Use it to trigger an alarm zone, or turn on a buzzer to notify a guard. Ic max: 100mA sink. Vc max: 24VDC

• DOOR SENS (DOOR POSITION SENSOR INPUT)

A Normally Closed (N.C.) input terminal referring to '(-) ground. With the help of a normally closed magnetic door switch, the system will monitor the position of the door and will give the following functions:

NOTE: Always connect this terminal to (-) ground if not used.

1) Door Auto Re-lock

The system will immediately relock the door after valid access has been gained before the end of the programmed time for output 1, that prevents unwanted "tailgate" entries.

2) Door Forced Open Alarm

The keypad will generate door forced-open alarm instantly if the door is forced to open without a valid user entry or egress input. The alarm will last for 60 seconds and can be stopped with user code 1 or one of the user codes in Group 1 at anytime. This function is selectable via the programming options at Location 80.

3) Door Propped-up Alarm

When the door is left open longer than the allowable time. The keypad will generate door propped-up alarm after the expiry of the pre-set door-open-time until the door is closed again. The door-open-time is programmable from 1 to 999 seconds at Location 9.

4) Inter-lock Control

The inter-lock control output goes to (-) while the door is open in order to give signal to disable the other keypad in the inter-lock system.

• 0/P 1 INHIB. (OUTPUT 1 INHIBIT)

A Normally Open (N.O.) input terminal refers to (–) ground. Both user code 1 and Egress button can not activate output 1 while this terminal is tied to (–) ground. It is prepared for cross wire connection in Inter-lock application.

• INT. LOCK (INTER-LOCK CONTROL OUTPUT)

An NPN transistor open collector output. It is OFF at normal condition and switches to (–) ground immediately for the first 5 seconds after keying in a valid user code to operate output 1, then, it will keep tying to (–) ground during the time that the door position sensor is open due to door opening. Use this output to control the other keypad in an inter-lock system to prevent both door opening at the same time.

An inter-lock system is a two-door system that always allows only one door to open during the operation time. While one of the doors in the system is opened, the other door keeps close until the firstly opened door is re-closed in order to prevent the unauthorized people dashing into a protected area.

N.C. TAMPER

Normally Closed contact while the keypad is secured on the box. It is open while keypad is separated from the box. Connect this N.C. terminal to the 24 hour zone of an alarm system if necessary.

THE LED INDICATORS

- RED -- It lights up when output 2 is activated.
- AMBER -- This is a status indicator. Its signal is in synchronization with the pacifier tones from the built-in buzzer.
- GREEN -- It lights up when the output 1 is activated.

THE PACIFIER TONES & THE LED INDICATING SIGNALS

The built-in buzzer and the amber LED indicator give the following tones and signals for operation status:

STATUS	TONES *	LED SIGNALS
1. In programming mode		ON
2. Successful key entry	1 Beep	1 Flash
3. Successful code entry	2 Beeps	2 Flashes
4. Unsuccessful code entry	5 Beeps	5 Flashes
5. DAP jumper not replaced	Continuous Beeps	Continuous Flashes
6. In standby mode		1 Flash in 2 seconds interval
7. Output relay activated	1 second Long Beep * *	

NOTE: * All Pacifier Tones can be enabled or disabled through programming options at Location 83.

* *The Output Activation Beep can be enabled or disabled through programming options at Location 81.

THE DAP JUMPER (DIRECT ACCESS TO PROGRAMMING)

If the Personal Master Code is Forgotten, use the DAP jumper to override the forgotten code permitting the keypad direct entry into programming mode. You are required to apply the following procedures precisely.

- 1. Disconnect power supply.
- 2. Displace the DAP jumper from OFF to ON position.
- 3. Reconnect power supply (buzzer is activated).
- **4.** Put the DAP jumper back to OFF position (this done, the buzzer is de-activated).
- 5. The keypad is in programming mode and ready to receive new programming data.
- 6. As the old master code was forgotten, suggest you to put a 4 digit new master code into Location 0 first.
- 7. Enter the new programming data starting from Section (B) in the summary chart shown below.

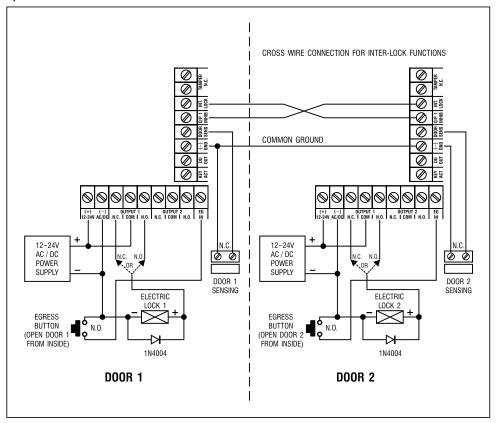
THE FACTORY-SET MASTER CODE -- IMPORTANT NOTE

For the owner's convenience in programming at the first time, the factory has put a Master Code 0000 into the keypad. To compromise security, in all cases, the owner should program a Personal Master Code to invalidate the factory-set Master Code before use.

THE BACK-LIT JUMPER

- 1. FULL ------The keypad gives dim backlit in standby. It turns to full backlit when a key button is pressed, then back to dim backlit 10 seconds after the last key button is pressed.
- QUASI ---- The Keypad gives no backlit in standby. It turns to full backlit when a key button is pressed, then back to OFF 10 seconds after the last key button is pressed.
- 3. OFF ----- The keypad gives no backlit at all.

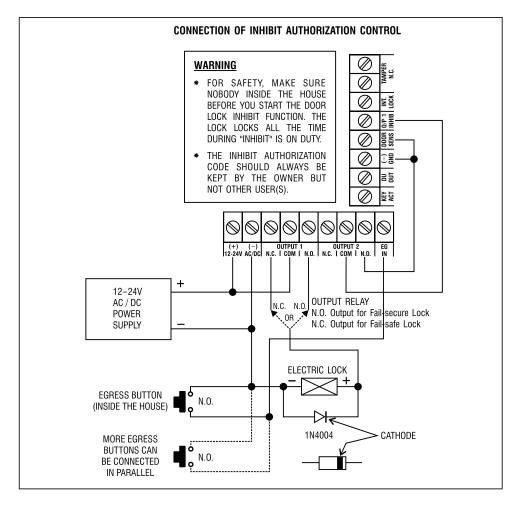
3) BASIC WIRINGS OF AN INTER-LOCK SYSTEM USING TWO KEYPADS



An inter-lock system needs two door controllers. This application example uses two of DC60SS, DC50SS or DC50FS with simple cross wire connection on their "Output 1 Inhibit" and "Inter-lock Control Output" terminals. It is necessary to link up the "(–) GND" terminals of the two keypads as common ground to achieve the inter-lock logical functions.

- Use keypad to open the door from outside
- Press egress button to open the door from inside
- Connect the door magnetic sensors on the doors to monitor their positions
- While door 1 is open, then, door 2 is forced to keep close, or vice versa
- Use N.O. Relay output for fail-secure lock; and N.C. output for fail-safe lock
- Please also see the "NOTE" stated in the Application Example (1)

2) BASIC WIRINGS OF A STAND ALONE DOOR LOCK WITH INHIBIT AUTHORIZATION CODE



- Use output 2 as authorization control. The owner may key in the user code 2 to stop the operation of the electric lock in the night time or after office hour to prevent unauthorized access.
- Set output 2 in Start / Stop mode (Programming Option 51) for ON-OFF control.
- Simply connect the "output 1 inhibit" (O/P 1 INHIB) terminal with output 2 as like the wiring diagram shown. User code 1 is invalid while the "O/P 1 INHIB" terminal is shunted to ground with user code 2.

PROGRAMMING OPTIONS -- SUMMARY CHART

A) Use The Fa	-	ter Code to Entry in Programming When starts for the first time Comments Set system into Programming Mode with the Factory-set Master Code						
B)Set System	to Single User	or Multi U	ser Mo	de & Ref	resh The System Installer Programming			
User Mode Op	otions Validation	Comme	<u>nts</u>					
8900	#	Set syste	m to Sing	jle User Mod	e, clear all the data previously stored and refresh system			
8901	#	Set syste	Set system to Multi User Mode, clear all the data previously stored and refresh system					
C) Recording	of Personal Mas	ster Code	& Use	r Codes	User Programming			
i) Recording	of the master co	de and use	er codes	for Single	User (Digits may be repeated)			
Locations	Entry of Codes	Validatio	on Com	<u>nments</u>				
0	4 digits, fixed	#	Pers	onal Master	Code & Super User Code			
1	4 digits, fixed	#	User	Code 1 for o	output 1 with Duress Code function			
2	4 digits, fixed	#	User	Code 2 for o	output 2			
ii) Recording	ii) Recording of the master code and user codes for Multi-User (Digits may be repeated)							
Locations	<u>User Number</u>	Entry of (Codes	<u>Validation</u>	Comments			
0		4 to 8 d	igits	#	Personal Master Code & Super User Code			
1	00 to 99	4 to 8 d	igits	#	100 User Codes in Group 1 for output 1 with Duress Code function $% \left(1\right) =\left(1\right) \left(1\right) \left($			
2	0 to 9	4 to 8 d	igits	#	10 User Codes in Group 2 for output 2			
D) Configurati	ion of Output Mo	odes In:	staller F	Programm	ing			
Locations C	Code of Duration	<u>Validation</u>	Comm	<u>ents</u>				
40	1 to 999	#	Output 1	1 in Momenta	ary Mode from 1 to 999 seconds			
4 1		#	Output 1	1 in Start / St	op Mode (toggle)			
42		#	Output 1	1 in Start / St	op Mode (toggle) with accelerated code			
50	1 to 999	#	Output 2	2 in Momenta	ary Mode from 1 to 999 seconds			
51		#	Output 2	2 in Start / St	op Mode (toggle)			
52		#	Output 2	2 in Start / St	op Mode (toggle) with accelerated code			
F) Personal Sa	afety Installer	Programm	mina					
•	No. of False Entry	Validatio	· ·	nments				
70	INO. OF FAISC LITTY	<u>valiualit</u>			ive false codes, the keypad locks during 30 seconds			
71		#			ive false codes, the Duress output switches to ground			
72	5 to 10	#	Sele minu	ctable of afte ites. The key	er 5 to 10 successive false codes, the keypad locks during 15 pad can be reset to release locking with the Master Code at any cking period			
76	00	#	Disappearance of all the above securities					

F) Door Forced-Open Alarm -- Installer Programming

<u>Locations</u>	Code of Functions	<u>Validation</u>	<u>Comments</u>
80	1	#	Door Forced-Open Alarm is Enabled
80	0	#	Door Forced-Open Alarm is Disabled

G) Output Activation Announcer -- Installer Programming

Locations	Code of Functions	<u>Validation</u>	Comments
81	1	#	1 second notifying beep is given to notify the person outside to open the door when output relay is activated with an user code or egress button. Good for the locking device that gives no sound when it activates, such as a magnetic lock.
8 1	0	#	Notifying beep disabled and replaced by 2 short successful code entry beeps for valid user codes

H) User Code Entry Mode (Auto or Manual) -- Installer Programming

Locations	Code of Functions	<u>Validation</u>	Comments
8 2	1	#	Auto Entry Mode is selected. # key that follows the user code is NOT required in code entry. The User Codes MUST be set in the same digit length as the Master Code in Auto Entry Mode and the code length can be 4-8 digits.
82	0	#	Manual Entry Mode is selected. # key that follows the user code is required in code entry. The user codes can be 4-8 digits and they are not required to be in the same length as the Master Code.

NOTE: In Single User Mode, no matter the selection is Auto or Manual mode, the Master Code and the User Code MUST be set in the length of 4 digits.

I) Pacifier Tones (Keypress Acknowledgement Tones) -- Installer Programming

<u>Locations</u>	Code of Functions	<u>Validation</u>	<u>Comments</u>
83	1	#	Pacifier tones available on keypress
8 3	0	#	All pacifier tones are off. Good for place requires silent environment

J) Allowable Time to Start Door Propped-up Alarm -- Installer Programming

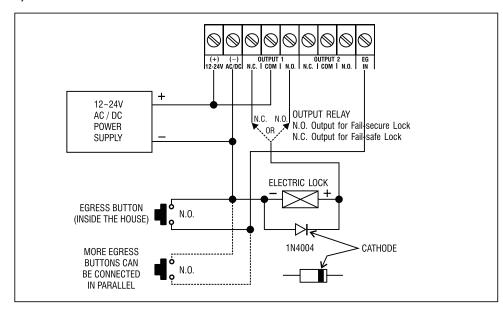
<u>Locations</u>	Code of Functions	<u>Validation</u>	<u>Comments</u>
9	0	#	No propped-up alarm
9	1 to 999	#	Allowable time from 1 to 999 seconds for door left open before the door propped-up alarm starts $$

K) Exit Programming Mode

<u>Validation</u>	<u>Comments</u>
*	Keypad exits programming mode and returns to normal operation

APPLICATION EXAMPLES

1) BASIC WIRINGS OF A STAND ALONE DOOR LOCK



NOTE:

- Connect the 1N4004 as close as possible to the lock in parallel with the lock power terminals to absorb the back EMF to prevent it from damaging the keypad. The 1N4004 is not required if the electric lock is AC operated.
- To avoid Electro-Static-Discharge from interfering with the operation of the keypad, always ground the (–) terminal of the keypad to earth.
- Always connect DOOR SENSOR terminal to (-) ground if not used.

SPECIFICATIONS

Operation Voltage:

12V - 24V AC/DC, No Jumper selection is required for full voltage range

• Operation Current: 15mA (Quiescent) to 100mA peak (two output relays in operation)

• Operation Temperature: -20°C to +70°C

• Ambient Humidity: 5–95% relative humidity non-condensing

• Environment: All weather, IP66

Operation Modes:

a) Single User Mode, Auto, or Manual Code Entry

b) Multi-User Mode -- 100 user codes for output 1 (user number 00-99), Auto or Manual Code Entry -- 10 user codes for output 2 (user number 0-9), Auto or Manual Code Entry

User Code Combinations:

a) Single User Mode- 10,000 (non-volatile memory)

b) Multi User Mode -- 111,110,000 (non-volatile memory)

Input Sensing Terminals:

a) Egress Input (EG IN) -- Normally open referring to (-) ground

b) Door Position Sensor Input (DOOR SENS)-- Normally closed referring to (-) ground

c) Relay 1 Stop Control (O/P 1 INHIB) -- Normally open referring to (-) ground

Relay Output Contacts:

OUTPUT 1: Normally Closed and Normally Open Dry Contacts, 5A / 30VDC Max. Rating OUTPUT 2: Normally Closed and Normally Open Dry Contacts, 1A / 30VDC Max. Rating

• Tamper Switch Contact:

Normally Closed Dry Contact, 50mA Max.

Duress, Inter-lock & Key Active Output Rating:

NPN Open Collector switches to ground when active, 24VDC / 100mA Sink

Auto Refreshing Time During Code Entry:

a) Each Digit Maximum Entry Time Limit -- 10 seconds

b) Each Code Maximum Entry Time Limit -- 30 seconds

• Dimensions: DC60SS — 125(H) X 79(W)mm X 46/54(D)mm

DC50SS — 156(H) X 103(W) X 50/70(D)mm DC50FS — 151(H) X 97.5(W) X 42(D)mm

• Weight: DC60SS — 530g net

DC50SS — 980g net DC50FS — 430g net

• Housing: DC60SS — Cast Aluminum, Powder paint coating

DC50SS — Anodized steel, Powder paint coating

DC50FS — Plastic Back Box

• Face Plate: 1 5mm Stainless Steel

• Kev Button: Cast Metal Back-lit Buttons

Specifications are subject to change for modification without notice

SINGLE USER MODE OR MULTI-USER MODE SELECTION

The keypad consists two sets of software for owner's selection in user code programming. They are "Single User Mode" and "Multi-User Mode".

The keypad has been set with a Master Code of "0000" and in Single User Mode at the factory. If your required mode is Multi-User, you have to refresh the system with the appropriate comment code, 8901, to set it into Multi-User Mode.

Single User Mode (Command Code: 8900)

Single User Mode is prepared for the simple users, which allows only one user code to operate each output. The user codes are fixed to 4 digits and 10,000 code combinations are possible. User codes can be programmed directly into the User Code Location 1 and Location 2. Please see Programming Summary Chart Section (C), item i) for details. This mode is always set with Auto Code Entry in default. The user does not require to press the relative key in user code entry. The user only needs to enter the 4 digit user code. The relay will activate for the programmed time.

NOTE: The system can be set for Manual Entry with programming option 0 at Location 82 if required.

Multi-User Mode (Command Code: 8901)

Multi-User Mode allows up to 100 individual user codes to operate the output 1 and 10 individual user codes to operate the output 2. The user codes can be 4 to 8 digits with over 100 million code combinations. The user codes can be set for Auto Entry or Manual Entry with programming options at Location 82. Manual Entry Mode is in default. The user code followed by # key is required.

Once the keypad is programmed in Auto Entry, the Master Code and the User Codes MUST be set in the same digit length, and the need for the user code not to be followed by # key is required.

The Default Values

<u>Default Values</u>	<u>Comments</u>
401	Output 1 in 1 second Momentary Mode
501	Output 2 in 1 second Momentary Mode
70	After 10 successive false code, the keypad locks during 30 seconds
800	Door forced-open alarm disabled
811	Output relay activation beep ON
820	User code Manual Entry Mode ** (For Multi-User Mode)
821	User code Auto Entry Mode ** (For Single-User Mode)
831	Pacifier Tones ON
90	No propped-up alarm

NOTE: ** The default values in Multi-User Mode and Single User Mode are exactly the same except the User Code Entry Mode.

Code Entry Limitation in Multi-User Mode due to Duress Code

The system comes with DURESS function for the user code 1 in Single User Mode and all the user codes of Group 1 in Multi-User Mode; The DURESS CODE is set up by the system automatically with the first digit of the User Code "+2". To prevent the other User Codes fall into the Duress Code, or the Duress Codes fall into other User Codes, the first digit of a "Stored" User code "+2" or "-2" is not allowed for the later User Code entry in programming. The system will refuse those code entries.

For example: An User Code 56789 was stored in the system, then 36789 and 76789 are not allowed for other User Codes.

SET THE SYSTEM TO SINGLE USER MODE

The system can be set to Single User Mode with the command code "8900" and will stay in that mode until the system is refreshed for other mode. Make sure that the Master Code was already in 4 digits before setting the system to Single User Mode.

MASTER CODE

8 9 0 0 # ---- Single User Mode on Duty (please wait 2-3 seconds until the confirmation beeps are heard after the key # is pressed)

SET THE SYSTEM TO MULTI-USER MODE

The system can be set to Multi Users Mode with the command code "8901" and will stay in that mode until the system is refreshed for other mode.

MASTER CODE - 8901 # ----- Multi-User Mode on Duty (please wait 2-3 seconds until the confirmation beeps are heard after the key # is pressed)

REFRESH THE SYSTEM -- WHEN IN CHANGE OF OPERATION MODE

The system can be changed from Single User Mode to Multi-User Mode; or vice versa with the above operation command codes.

When this is done, the keypad will reset itself as a fresh unit with the default values; and all the previously programmed data will be cleared except the Master Code.

IMPORTANT NOTES:

- Make sure all the User Codes and Master Code are in the length of 4 Digits if the system is in Single User Mode operation. Otherwise, code entry will not be accepted.
- 2) It is necessary to change the Master Code in the length of 4 digits first (no matter it was in 4 digits or more than 4 digits in Multi-User Mode) before refreshing it from Multi-User Mode to Single User Mode.
- 3) The system takes approximate 2 to 3 seconds to refresh itself for the new operation mode after the command code is entered. DO NOT enter any code during the system is being refreshed until the 2 confirmation beeps are heard.

8

D) DELETE USER (MULTI-USER MODE)

lf١	vou need to de	elete a user who	has left the con	npany or who	no longer has	authority to	enter the	protected are

13

1) Set system in programming mode with the Personal Master Code and the key 3289 - ----- The keypad is now in the programming mode

2) Enter the User Number (00-99 for output 1; 0-9 for output 2) and the key # to delete a user code
If you want to delete User Number 05 in Group 1, press 1 05 #
If you want to delete User Number 3 in Group 2, press 2 3 #

- 3) You may delete other user code(s) in this fashion
- 4) Exit the programming mode by pressing the 🗈 key after the work is done

C)	The Persona	ıl Master	Code	is a	Super	User	Code	to	comn	nand	the	output	s. This	feature	allows	the	owne
	to use only	one cod	e to o	perat	e seve	eral ke	eypads	if	they	are l	havin	g the	same	Master	Code b	ut d	ifferen
	user codes.	Enter the	Perso	nal I	Master	Code	and v	alio	date v	/ia 🏻	an	d the o	corresp	onding	output	numl	ber.

3 2 8 9 # 1 --- Output 1 activates for 1 second
3 2 8 9 # 2 --- Output 2 starts or stops

d) The Duress Codes do not need to be programmed. The keypad determines them automatically by increasing the first digit of the User Codes in Group 1 of Two units. All the User Codes have Duress Code Function.

For example:	The User Codes in Group 1	The Corresponding Duress Codes				
	8321	0321				
	11223	31223				
	33221	53221				

To command the Duress Function, enter the Duress Code(s).

O 3 2 1 # ---- Duress output activates (output switches to ground) & Output 1 activates for 1 second 3 1 2 2 3 # -- Duress output activates (output switches to ground) & Output 1 activates for 1 second 5 3 2 2 1 # -- Duress output activates (output switches to ground) & Output 1 activates for 1 second

NOTE:

The Duress Code(s) has double actions. It activates the Duress Output and at the same time activates the Output 1 as like the normal User Codes in Group 1. The Duress Code(s) can always activate or deactivate (in Start / Stop mode) Output 1, but cannot deactivate (reset) the Duress Output. ONLY the User Codes in Group 1 can deactivate (reset) the Duress Output.

e) The Accelerated Code is the First Two Digits of the User code(s). If the Output has been programmed in Start / Stop mode with Accelerated Code (Programming Option 42 for user codes in Group 1 and Programming Option 52 for user codes in Group 2), it is possible to activate the Output with only the First Two Digits of the User Code(s). Deactivating of the Output always requires the composition of the Complete User Code(s) in their code Group.

Example:

Output 1 has been re-programmed to Start / Stop Mode with Accelerated Code (Programming Option 42) with the Complete Code of 1st User Code in Group 1: 8321 The Accelerated Code is: 83

2nd User Code in Group 1: 11223 The Accelerated Gode is: 11

8 3 # ----- Output 1 starts
8 3 2 1 # ----- Output 1 stops
1 1 # ----- Output 1 starts
1 1 2 2 3 # --- Output 1 stops

f) Try to put some random false codes to the keypad to test its Safety. The keypad generates 5 beeps for each unsuccessful code entry. The keypad locks itself during 15 minutes after 10 successive false codes are entered. Normal operation will resume after 15 minutes expired, or, it can be reset with the Master Code during the locking period.

3289 # ----- Locking is reset and keypad resumes normal operation

A) PROCEDURES OF PROGRAMMING

- a) All programming is accomplished entirely from the front of the keypad. The keypad may be programmed in your shop or at the installation site. Programmed information is stored in non-volatile memory so it will not be lost if power is removed.
- b) When programming is required. It is necessary to set the keypad into programming mode first with the master code and validating it with 🖸 key.

MASTER CODE

NOTE: If the master code is forgotten, please use DAP jumper to set the keypad into programming mode. See DAP JUMPER description in previous section for the details.

- c) After the keypad is in programming mode, you may go to any Location for your programming options one by one, please see Programming Options Summary Chart for the feature details.
- d) You may make continuous programming until all desired options are programmed. Repeated programming at the same Location is allowed if the previous entry was mistaken.



e) Exit programming mode with the 🔼 key after all your required options are programmed. The new information that you have just programmed is saved.

*

B) SINGLE USER MODE OPERATION -- An Example

1) Requirement

- a) Single User Mode Operation
- b) Change the factory-set Master Code 0000 to a Personal Master Code 3289
- c) Set User Code 1 of 8321
- d) Set User Code 2 of 6854
- e) Set Output 1 to Momentary Mode, 1 second
- f) Set Output 2 to Start / Stop Mode
- g) Set the keypad to lock itself during 15 minutes after 10 successive false codes

2) Programming -- Set the above requirement into the keypad:

0000 ★ System has been set in programming mode with the factory-set Master Code
8900 # System has been set for Single User Mode** (please see NOTE (a) below)
0 3289 # 3289 has been stored as the new Personal Master Code & Super User Code
$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$
2 6854 # 6854 has been stored as User Code 2, for output 2
40 1 # Output 1 has been set to Momentary Mode, 1 second
5 1 # Output 2 has been set to Start / Stop Mode

72 10 # ---- The keypad has been set to lock during 15 minutes after 10 successive false codes
------ Keypad exits programming mode. All the above data are stored and ready for use

NOTE:	a)	**Enter the Single User Mode Command Code "8900" may not be necessary if the keypad was already in Single User Mode.
	b)	In case of wrong entry during programming, cancel it with ## key, or, wait 10 seconds, then re-try.

3)	Operate	The	Kevpad	 Taking	the	data	programmed	above	and	other	features	in	default	value	as	reference

8321 Output 1 activates for 1 second	
6 8 5 4 Output 2 starts or stops	

a) To command an output, only enter its user code. Press # is NOT required.

b) The Personal Master Code is a Super User Code to command the outputs. This feature allows the owner to use only one code to operate several keypads if they are having the same Master Code but different user codes. Enter the Personal Master Code and validate via #1 and the corresponding output number.

```
3289 #1--- Output 1 activates for 1 second
3289 #2--- Output 2 starts or stops
```

c) The Duress Code does not need to be programmed. The keypad determines it automatically by increasing the first digit of the User Code 1 of Two units.

For example: The User Code 1 is "1234", then the Duress Code is "3234"; or the User Code 1 is "8321". then the Duress Code is "0321".

To command the Duress Function, enter the Duress Code.

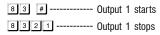
Duress output activates (output switches to (-) ground) & Output 1 activates for 1 second

NOTE:

The Duress Code has double actions. It activates the Duress Output and at the same time activates the Output 1 as like the User Code 1. The Duress Code can always activate or deactivate (in Start / Stop mode) Output 1, but cannot deactivate (reset) the Duress Output. ONLY the User Code 1 can deactivate (reset) the Duress Output.

d) The Accelerated Code is the First Two Digits of the User Code. If the Output 1 has been programmed in Start / Stop mode with Accelerated Code at Location 42, it is possible to activate the Output 1 with only the First Two Digits of the User Code. Deactivating of the Output 1 always requires the composition of the Complete User Code 1.

Example: Output 1 has been re-programmed to Start / Stop Mode with Accelerated Code (Location: 42) with the Complete Code of: 8321 The Accelerated Code will be: 83



e) Try to put some random false codes to the keypad to test its Safety. The keypad considers 4 digits as one code and it generates 5 beeps for each unsuccessful code entry. The keypad locks itself during 15 minutes after 10 successive false codes. Normal operation will be resumed after 15 minutes expired, or, it can be reset with the Master Code during the locking period.

3289 # ----- Locking is reset and keypad resumes normal operation.

1) Requirement

- a) Multi-User Mode Operation
- b) Change the factory-set Master Code 0000 to a Personal Master Code 3289
- c) Set 1st User Code in Group 1 of 8321
- d) Set 2nd User Code in Group 1 of 11223
- e) Set 3rd User Code in Group 1 of 33221
- f) Set 1st User Code in Group 2 of 6854
- g) Set 2nd User Code in Group 2 of 54321
- h) Set Output 1 to Momentary Mode, 1 second

2) Programming -- Set the above requirement into the keynad

- i) Set Output 2 to Start / Stop Mode
- j) Set the keypad to lock itself during 15 minutes after 10 successive false codes

-,	i rogramming	OUL THE ADOLO I	oquitorione into the keypad
	0000 * -		System has been set in programming mode with the factory-set Master Code
	8901#.		System has been set for Multi User Mode** (please see NOTE (a) below)
	0 3289	#	3289 has been stored as the new Personal Master Code & Super User Code
	1 0 1 8 3	2 1 #	8321 has been stored as the 1st User Code in Group 1 with Duress Code function
	1 02 11	223 #	11223 has been stored as the 2nd User Code in Group 1 with Duress Code function
	10333	2 2 1 #	33221 has been stored as the 3rd User Code in Group 1 with Duress Code function
	2 1 6 8 5	4 #	6854 has been stored as the 1st User Code in Group 2
	2 2 5 4 3	2 1 #	54321 has been stored as the 2nd User Code in Group 2
	401#		Output 1 has been set to Momentary Mode, 1 second
	5 1 #		Output 2 has been set to Start / Stop Mode
	72 10 #		The keypad has been set to lock during 15 minutes after 10 successive false codes
	* 1		Keynad evits programming mode. All the above data are stored and ready to

NOTE: a) **Enter the Multi User Mode Command Code "8901" may not be necessary if the keypad was already in Multi User Mode.

- b) In case of wrong entry during programming, cancel it with # key, or, wait 10 seconds, then retry.
- 3) Operate The Keypad -- Taking the data programmed above and other features in default values as reference
 - a) To command output 1, enter any one of the User Codes in Group 1 and validate via the ${{\mathbb F}}$ key

8	3 2 1 #]	Output 1	1	activates	for	1	second
Ŀ	1223	#	Output 1	1	activates	for	1	second
3	3 2 2 1	#	Output 1	1	activates	for	1	second

b) To command output 2, enter any one of the user codes in Group 2 and validate via the # key.

```
6 8 5 4 # ----- Output 2 starts or stops
```