

HOME SECURITY SYSTEM

CONTROL SYSTEM

INSTALLATION AND PROGRAMMING NOTES

4 wired alarming zones

2 emergency buttons

3 output relays

BRIEF INTRODUCTION

This multifunctional alarming control panel consists of 4 programmable wired alarming zones, 2 emergency buttons, 3 programmable output relays for siren, electric door, and other connected electric devices.

With LED display, to form a complete set of alarming systems in residential zones with a low cost. Meanwhile, Coding function is also applied in this control panel. With 6 different code set by the user, the control panel can activate the electric door through its code lock, which enhances the automation and safety of the home.

Duress code is also available. The siren shall not be triggered if the duress code is entered under duress situation, EEPROM memory will not lose programming or system status on power failure.

It has the wireless remote control function; 6 remote controllers in maximum can be used for this alarm panel to arm, disarm and control electronic devices.

BASIC FUNCTIONS

ONS	APPLICATIONS
4 zones to be set at random	8 types of zone can be programmed, to provide full sight of defence for doors, windows and indoors.
Keypad emergency button (*+#, 1+*)	Push the button directly to signal an alarm, with no need of additional installed external emergency button; it can be modified and disabled by program
2 arming, modes	Suitable for periods when the families are out away and staying in house (away mode and stay mode) to arm 24 hours a day

Quick arm	Push #+2 or #+3 to enter the quick arming mode
Remote control	This alarm panel can be armed, disarmed, and functioned by remote controls; the remotes can be refreshed at any time under new code learning
Alarming memory	After the alarm is disarmed, the status of the alarming zone can be memorized and displayed by LED. which effectively avoids the malfunctions.
Door Chime function	The keypad sound can indicate the entrance status such as the door/window open/close, under disarming mode, to arise the alert
Zones bypass	Some zones can be bypassed but shall not influence the proper function of the whole alarm system for example, to bypass the magnet switch to open the door
Code control	The code is used to arm/disarm the system so as to prevent any unauthorized operation. The user can modify the code under disarmed status.
Arm Lock/disarm unlock	The lock switch can be programmed to arm and disarm the system, to facilitate the difficulty of code-re-memorizing
LED display	LED indicates the working status of the system
Illuminating Backlight	Press the button, the keypad is illuminated, to facilitate the operation in dark

Programmable Relay output	Relay 1	<p>The three relay outputs can be programmed as followings:</p> <ol style="list-style-type: none"> 1. Siren output: Activated only when alarm is triggered (except silent arm and duress status); It sounds the siren to frighten the intruders 2. Code lock output: enter code+0, the relay shall be closed for 1 second to activate the electronic lock as code lock. 3. Arm'disarm output: signal output when arming; stop output when disarming 4. Electronic devices output 1: enter #+4 to activate this output; enter *+4 to disable it, which is used to operate electronic devices by the keypad. 5. Electronic devices output 2: enter #+7 to activate; enter *+7 to disable Used to operate electronic devices by the keypad 6. Fire alarm reset output: it is activated when system was disarmed after fire alarm; it will auto reset after 5 seconds It is used for the circuit of the smoke detector 7. Alarming output: Activated when alarming; disabled after reset arming
	Relay 2	
	Relay 3	
Duress Alarm		System can be disarmed by entering the Duress code, or the duress zone can be set as Duress Alarm. siren will not sound when alarm.
Tamper switch		There is a dismounting piston inside the panel, It will alarm when the panel is damaged or dismounted.

PANEL INSTALLATION AND WIRING DIAGRAM

Terminal Descriptions:

Terminal	Function	Description
1	Power Input	+12VDC; supplied by the control unit or individual power source. With wrong connection protection design. Static electricity: 40mA. Available to supply sensor power.
2	Ground	Connect with control unit or individual power ground end.
3	Z1	Each terminal (3),(4),(6),(7) should be connected with an additional piece of 1K wire end resistor to prevent the wire from cutting off or short circuit. The alarm will be triggered once resistor detects abnormality (tolerance: +/-30%), The public terminal (5) of 4 zones shall connect with power ground end.
4	Z2	
5	Zones Public terminal	
6	Z3	
7	Z4	
8	Programmable Output 1 (Terminal 1)	<p>NO/NC relay output, program Section 21 as following:</p> <ol style="list-style-type: none"> 1. Siren output: Activated only when alarm is triggered; It sounds the siren to frighten the intruders. 2. Code lock output: enter code+0. the relay shall be closed for 1 second to activate the electronic lock as code lock

8	Programmable Output 1 (Terminal 1)	3. Arm/disarm output: signal output when arming; stop output when disarming. 4. Electronic devices output 1: enter #+4 to activate this output; enter *+4 to disable it. which is used to operate electronic devices by the keypad.
9	Programmable Output 1 (Terminal 2)	5. Electronic devices output 2: enter #+7 to activate; enter *+7 to disable. Used to operate electronic devices by the keypad. 6. Fire alarm reset output: it is activated when system was disarmed after fire alarm; it will auto reset after 5 seconds. It is used for the circuit of the smoke detector 7. Alarming output: Activated when alarming; disabled after reset arming; it can be connected with the master communication system to report the alarm status. * When 1,2,3,4,5 selected, the terminals of programmable output (1) and (2) are NO, if 6,7 selected, the terminals are NC output.
10	Programmable Output 2 (Terminal 1)	NO/NC relay output, program Section 22 as following: 1. Siren output: Activated only when alarm is triggered (except silent arm and duress status); It sounds the siren to frighten the intruders. 2. Code lock output: enter code+0, the relay shall be closed for 1 second to activate the electronic lock as code lock. 3. Arm/disarm output: signal output when arming; stop output when disarming.

11	Programmable Output 2 (Terminal 2)	4. Electronic devices output 1: enter #+4 to activate this output; enter *+4 to disable it. which is used to operate electronic devices by the keypad. 5. Electronic devices output 2: enter #+7 to activate; enter *+7 to disable. Used to operate electronic devices by the keypad. 6. Fire alarm reset output: it is activated when system was disarmed after fire alarm; it will auto reset after 5 seconds, It is used for the circuit of the smoke detector.
12	programmable Output 2 (Terminal 3)	7. Alarming output: Activated when alarming; disabled after reset arming; it can be connected with the master communication system to report the alarm status. * If 1,2,3,4,5 selected, the terminal (1) is NO output (2) is public terminal, and (3) is NC output. If 6,7 selected, the terminal (1) is N/C output. (2) is public terminal, and (3) is N/O output.
13	Programmable Output 3 (Terminal 1)	NO/NC relay output, program Section 23 as following: 1. Siren output: Activated only when alarm is triggered (except silent arm and duress status); It sounds the siren to frighten the intruders. 2. Code lock output: enter code+0, the relay shall be closed for 1 second to activate the electronic lock as code lock 3. Arm/disarm output: signal output when arming; stop output when disarming.

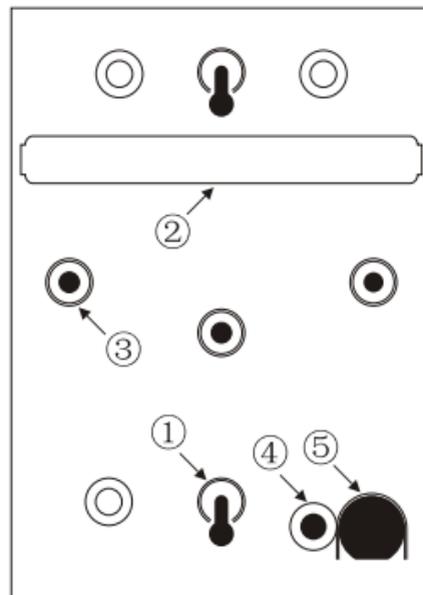
Installation:

1) Mount the in convenient location for operation and no higher than the shoulder height of the shortest person operating the system.

2) Remove the chassis from the base by inserting a small flathead screwdriver in the two slots at the bottom of the housing. Press up while pulling the rear chassis away from the front cover.

Wall mount

Using the base as a guide, mark the location for the three mounting holes and the wire/cable entry on the wall.



1. Single gang mounting slots
2. Wire entrance
3. Wall surface mounting holes
4. Tamper
5. Do not use as wire entrance

STATUS INDICATOR & SOUND:

Six LED Indicator and Buzzer

Led indicator: When Power is on, all LEDs will light up and music starts within 50 seconds, which means the system is in the pre-warming mode. (This mode can be cancelled by pressing # and 0)

Arming/Power	Different color light of the LED indicates different situation: Green: Power On. Flash slowly when in programming. Flash quickly when in chime. Yellow: Arming-Stay indication. Light up when entering Arming-Stay. Red: Arming-Away indication. Light up when entering Arming-Away.
Alarming	When system is alarmed the related LED of zone will light up: Light off when disarmed.
Zone 1-4	LED indicates the status of Zone 1-4. LED lights up when Zone is not ready and off when ready LED flashes slowly when zone bypassed. LED lights up when the zone is alarming and alarming memory, and lights off when disarming
Arming/Power	Different color light of the LED indicates different situation: Green: Power On, Flash slowly when in programming. Flash quickly when in chime. Yellow: Arming-Stay indication. Light up when entering Arming-Stay. Red: Arming-Away indication. Light up when entering Arming-Away.

There is background light with keypad, which will automatically light on for 5 seconds once button pressed.
 2. Buzzer. The buzzer will sound in all operations and status. Please refer to the following related descriptions.

ZONES

The 4 Switch Input Zones are all armed with a 1K resistor at the end of wire for extra protection. When the resistance value is waved beyond +/- 30% the system will be triggered at once, which enhances the Protection capability from malicious destroy

Emergency Zones on keypad: Zone 5 (press *+# simultaneously), and Zone 6 (press 1- * simultaneously)

There are 7 programmable types zone types for each zone:

Zone type	Performance	Description
Entry/exit Zone	Porch	Activated after arming. When Exit Delay has been set, sensors will not be triggered when user going out of the zone, and vise versa for entry delay.
Interior Follower	Room	Only Exit Arming works. In Stay Arming it will be auto-bypassed. After arming, there is the Exit Delay. The Entry Delay can only be available after triggering Exit/Entry Zone. Or the system will be alarming immediately without entry delay.
Interior/Delay	Room	Similar to Interior Zone-Follow, but Entry delay is available no matter if Entry Zone has been triggered or not.

Perimeter Burglary	Windows	Effective right after arming, without delay. Alarming at once when sensor triggered.
Emergency	Emergency button. Gas Leakage Detector	Workable under arming and disarming. The system starts alarming once sensor is triggered Without delay.
Fire	Smoking Detector	Workable under arming and disarming. The system starts alarming once sensor is triggered. Without delay.
Duress	Emergency button	Workable under arming and disarming Without delay When press button, the siren and keypad buzzer will remain silent Only through Alarm Relay to send out warning signal

PROGRAMMING.

Code

After exit programming and in disarm mode, the user can create new code or modify the code by inputting:
MASTER CODE + 8 + USER No. (01-05) + desired new code

Or delete the user's code by inputting:

MASTER CODE + 8 + USER No. (01-05) + MASTER CODE

(Notes: No. 01-04 is the user's code, and 05 is the Duress Code)

When all the correct code have been inputted, beeping from the keypad can be heard as an indication of completion. To cancel the programming during inputting simply presses # or *.

Entering Programming Mode:

To enter programming mode, press * and # buttons together within 50 seconds after power on. or input master code - 800 when in disarm Mode. then the "TROUBLE" LED will flash slowly, which indicates the main unit is ready to program

Input the Programming Items:

The programming input format is * - Programming Code (zone number) + Value (zone type etc) (please refer to program table), When the last number is inputted, the main unit will emit Beep Beep as an indication of correct input and programming is completed. If wrong input occurs press * to stop and then proceed the entire steps again.

View the Programming Items:

Input #+Programming Code (Zone number) to view the program contents. The system will emit beep after the number represented by LED. E.g. Entry Delay is 45 seconds, first will see zone 2 Led lit (beep), then follow by LED of zone 2 and zone 4 (beep).

LED of zone 1 - 4 is to indicate the digital by binary system as table below:

LED \ No.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Zone 1	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
Zone 2	-	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0
Zone 3	-	-	0	0	-	-	0	0	-	-	0	0	-	-	0	0
Zone 4	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0

Notes: →LED Off; 0→LED On. This table is also working in conjunction with programming Table,

Exit Programming Mode:

There are two ways to exit the programming mode:

1. Press * 99 to exit programming, to re-enter programming simply following both above-mentioned procedures stated in it.
2. Press * 98, but can only re-enter programming mode by press * and # simultaneously within 50 seconds after power on. This is used to avoid the unintentional entry of the program mode. The system will also exit programming mode automatically, when no information is entered within 60 seconds after system is in programming mode,

Restore the Programming Default:

When in programming mode, input *97. then all the setting will resume to default,

Programming Table:

"X" in the following table means value(s) variable to input

Programming Code	Function
*00+XXXX	Change the master code (XXXX stands for the digits between 0000 to 9999. the default value is 1040)
*01+X	Type of Zone 1 (X=0=disable; X=1=Exit/Entry Zone; X=2=Interior following Zone; X=3=Perimeter Zone; X=4=Emergenc) Zone; X=5=Interior Delay Zone; X=6=Fire Zone, X=7=Duess Zone. The default value is 1.)
*02+X	Type of Zone 2 (X=0=disable; X=1=Exit/Entry Zone; X=2=Interior following Zone; X=3=Perimeter Zone; X=4=Emergenc) Zone; X=5=Interior Delay Zone; X=6=Fire Zone, X=7=Duess Zone. The default value is 2.)

*03+X	Type of Zone 3 (X=0=disable; X=1=Exit/Entry Zone; X=2=Interior following Zone; X=3=Perimeter Zone; X=4=Emergency Zone; X=5=Interior Delay Zone; X=6=Fire Zone, X=7=Duell Zone. The default value is 3.)
*04+X	Type of Zone 4 (X=0=disable; X=1=Exit/Entry Zone; X=2=Interior following Zone; X=3=Perimeter Zone; X=4=Emergency Zone; X=5=Interior Delay Zone; X=6=Fire Zone, X=7=Duell Zone. The default value is 4.)
*05+X	Type of Zone 5 (button *+#)(X=0=disable; X=4=Emergency.Zone; X=6=Fire Zone, X=7=Duell Zone. The default value is 4.)
06+X	Type of Zone 6 (button 1+)(X=0=disable; X=4=Emergency.Zone; X=6=Fire Zone, X=7=Duell Zone. The default value is 7.)
*07+XX	Exit Delay (XX=00 to 99 seconds, the default value is 30.)
*08+XX	Entry Delay (XX=00 to 99 seconds, the default value is 45.)
*09+XX	Siren Sounding output time (XX=00 to 99 minutes, the default value is 08; 00=no time limited.)
*11+X	Reacting speed of Zone 1 (X=0=Normal <400ms>; X=1=fast <10ms>, the default value is 0.)
*12+X	Reacting speed of Zone 2 (X=0=Normal <400ms>; X=1=fast <10ms>, the default value is 0.)
*13+X	Reacting speed of Zone 3 (X=0=Normal <400ms>; X=1=fast <10ms>, the default value is 0.)
*14+X:	Reacting speed of Zone 4 (X=0=Normal <400ms>; X=1=fast <10ms>, the default value is 0.)
*15+X	Keypad sounds or not while alarming (X=0=silent; X=1=sounds. the default value is 1.)
*16+X	Keypad sounds or not while exit delay (X=0=silent; X=1=sounds. the default value is 1.)
*17+X	Keypad sounds or not while entry delay (X=0=silent; X=1=sounds. the default value is 1.)

*18+X	Arm/disarm lock (X=0=No; X=1=Yes. the default value is 0.)
*19+X	Functions of button 3 on Transmitter (X=0=Arming Stay; X=1=Code Lock; X=2=RelayOutput 1.the default value is 0.)
*21+X	Programmable output 1 (X=0=no; X=1=siren output; X=2=code lock output; X=3=arm/disarm output; X=4=relay output 1; X=5=relay output 2; X=6=fire alarm output; X=7=alarm output, the default value is 1.)
*22+X	Programmable output 2 (X=0=none; X=1=siren output; X=2=code lock output; X=3=arm/disarm output; X=4=relay output 1; X=5=relay output 2; X=6=fire alarm; X=7=alarm output, the default value is 7.)
*23+X	Programmable output 3 (X=0=none; X=1=siren output; X=2=code lock output; X=3=arm/disarm output; X=4=relay output 1; X=5=relay output 2; X=6=fire alarm; X=7=alarm output, the default value is 3.)
*96	Code learning to transmitters Press any button on the transmitter needing to learn code, the zone LED on Keypad will light up to indicate the success of code learning. The system allows a maximum of 6 transmitters code learning. More than six all pre-learnt code shall be deleted and all the transmitters need to learn the code again While in code learning mode, press "", the buzzer will chip thrice, and the system clear all pre-learnt code, Other any button on the keypad was pressed or no any button on the transmitter pressed within 8 seconds, the buzzer Will chip twice, and the system will exit the code-learning mode.

*97	Restore default value of all the program values.
98	Exit programming mode The system can enter programming mode again only through pressing "" + #" within 50 seconds after power on,
*99	Exit programming mode. The system can enter programming mode again through pressing master code, 800

OPERATION

All functions can be operated through keypad by inputting user code or, # or * + function button (refer to control panel function list). Time interval between pressing buttons can not exceed 5 seconds. When button is pressed, system will beep once.

In this alarm panel most functions can be operated by transmitter,

Once all functions are operating correctly (including the remote operation), the system will sound beep twice to indicate the success of operation, and LED on the module will light up to indicate the related status.

Arm the System

Only when all Zones are ready (the "TROUBLE" LED is OFF) the system can be armed. The system can be fast armed if the user presses to replace the code.

Arming-Away	Input: code (or #) + 2 or press the Arming-Away button on the transmitter to enter this mode. The "ARM" LED will flash quickly to indicate entering exit delay time. Then all zones will be ready to arm, the Exit / Entry Zone and the two Interior Zones will delay for the use, to exit, while the keypad keeps beeping to indicate the "Away" mode. After the delay time of Arming-Away is over. the "ARM" LED light up and the system is entering arming mode.
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Arming-Stay	Input: code (or #) + 3 or press the Arming-Stay button on the transmitter to enter this mode. The "ARM" LED will flash quickly when in exit delay, and the Interior Zones will bypass and its LED will flash slowly, the other zones will be in the status as that of "Arming- Away", After the delay of Arming-Away is over, the "ARM" LED will flash slowly and the system stays in arming mode.
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Arm/Disarm Lock:

If the system is featured with Arm/Disarm Lock, when the lock switch is turned from ON to OFF, the system is Disarmed, on the other hand, when the lock switch is turned from OFF to ON, then all Zones will enter Arming mode automatically.

Disarm:

When system is Armed, if the user wants to Disarm it or to stop alarming:

Input: code + 1 press Disarm button of the remote controller.

When System is in Arming mode, if the Delay Zone is triggered, the system will gives beep-beep sound to indicate the system is entering delay mode. If you disarm the system will, the system will come to normal,

When system alarming, siren will stop sounding if disarm the system

If there axe zones bypassed, disarm the system will activate all bypassed zones to normal arming mode.

Zone Bypass:

Input: code + 6 + Zone No.

If the zone is bypassed, it is disabled, whose LED will flash slowly, When disarm, bypassed zone will return to normal.

Forced bypass zones input: code + 6, This function can bypass all unready zones, The bypassed zones LEDs will flash.

Chime Mode:

Input: # + 9 to activate, the "TROUBLE" LED will flash quickly; Input : * + 9 to exit this mode.

In this mode and when system disarmed, If the entry / exit zone or perimeter zones are triggered, the system will give warning beeping three times.

Alarming Mode:

After delay time is over, if the system is not disarmed, the system will be alarming, Control panel buzzer and siren will keep sounding loudly, and the alarm LED will be ON; the LED in armed zones will light up, Once the Buzzer and Siren sound the preset time (by program), they will stop sounding automatically, but the alarm display will remain on. If the armed zones are triggered once more, it'll be alarmed once more. When alarming press code + 1 or press the disarm button on remote control, it can stop the siren sounding, but it'll not disarm the system, alarm display will flash. LED of triggered zone will light because of memory function. To clear the system and memory, press code + 1 or the disarm button on remote control one more time.

Code Lock

When programmable output (Section 21, 22 or 23) is selected as code lock, Relay 1, 2 or 3 output is to act as user's lock. When user enter code + 0 on the control panel the relay is activated and the lock switch shall be open for one second, which can drive electric garage door.

PGM Output

When programmable output (Section 21, 22 or 23) is selected as PGM output, Relay 1, 2 or 3 can control the electrical equipment through user's operating on the control panel, When user input # + 4 or 7 on the control panel, the relay will be activated, when input * + 4 or 7, the relay will be OFF. Please refer to Control panel Set Up and Function List.

Duress Alarm

When user is under duress, and forced to disarm the system, it is available to input the Duress Code for disarm, then the system will be disarmed but at the same time the control panel will send alarming signal to the security center automatically, whilst all on-site siren and LED will remain calm to protect the safety of users.

PERFORMANCE:

1. Zone: 4 programmable zones, 2 emergency buttons on control panel.
2. Zone Type: 8 types
3. Code Operation: Yes
4. Arm Type: 2 (Away/Stay)
5. Chime Function: Yes
6. Bypass Zone: Yes
7. Zone Monitor: 1K wire terminal resistor. +/-30% tolerance
8. Display: LED, buttons luminance, buzzer
9. Programmable Relay Output: 3 NO or NC outputs, load capacity 30VDC. 3A.
10. Protect against dismount switch: Yes
11. Remote control Function: Yes.
12. Voltage: 12V DC +/-20%
13. Current: Static state 40mA, alarming 90mA
14. Dimension: 125.5(H) x 91(W) x 33.5(D) mm³

CONTROL PANEL SET UP AND FUNCTION LIST

Control Panel Set Up List:

Item	Setting
Master Code	
User's Code (No. 1)	
User's Code (No. 2)	
User's Code (No. 3)	
User's Code (No. 4)	
Duress Code (No. 5)	
Zone 1	
Zone 2	
Zone 3	
Zone 4	
Zone 5 (* + # or F1)	
Zone 6 (1 + * or F2)	
Away delay	
Entry delay	
Arm / Disarm Lock	
Relay Output 1	
Relay Output 2	
Relay Output 3	

Note: F1 - F4 are the function buttons on the left side of control panel from up to down. When press these 4 buttons, you must hold it for 2 sec.

Control Panel Function List:

Arm (Away)	Code + 2 or # + 2
Ann (Stay)	Code + 3 or # + 3
Disarm	Code + 1
Activate chime	# + 9
Inactivate chime	* + 9
Bypass Zone	Code+6+Zone No
Start PGM 1	# + 4 or F3
Stop PGM 1	* + 4 or F3
Start PGM 2	# + 7 or F4
Stop PGM 2	* + 7 or F4
Start Code Lock	Code + 0