# ALARM SYSTEM

USER MANUAL

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Thanks for choosing Multi-Function alarm system panel please read the installation manual carefully before installing and using the alarm system in order to acquaint you with its remarkable performance and use this system better. If you have any problem while using, please contact the installer or our Customer Service Center

LIST IN BOX

The components of the product are packed in a box as followed. Open the box and check it carefully. If finding deficiency, please fetch from the provider in time.

Number	Name	Amount
1	Master controller	1
2	Keypad	1
3	User manual	1
4	Accessory bag(EOL resistances (2.2k), two keys, telephone line	1

Quick Instruction

Number	Functions	operations
1	Arm-away	F1
2	Arm-stay	F2
3	Disarm	F3+Password(Factory fault setting 8888)+#
4	Enter programming status	F4+Password(Factory fault setting 8888)+#
5	Single zone ARM	Zone number+F1
6	Single zone DISARM	Password+ Zone number+F3
7	Input fist group phone number	After enter programming status, 103+ phone number+#(Other to see 4.7)
8	Recording	After hanging up the system, #+Password+4+#,Begin to recording
9	Recorded sound playing	After hanging up the system, #+Password+5+#,Begin to Recorded sound playing
10	hang-up / stop dialing to alarm	When the master controller dials to alarm, user presses 0 after hearing sounds, the system will hang up automatically and not dial other numbers

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Chapter 1 Summary

1.1 Summary

Control Panel takes advanced microprocessor as its core technology. So it has the advantages of high integration, very good stability, flexible function and convenient use.

1.2 Features

8/16 wired programmable zones，16 wireless programmable zones

Different programmable settings, such as alarm sounds, zone types, recording, remote controlling, telephone number, phone line Check, and etc

Single zone ARM and DISARM

Connect 4 keypads at most

Automatically dials alarm center user's mobile phone or telephone with audible alarm while emergency happens

6 groups of phone number and 2 groups alarm center phone number could be set. When the alarm activated, it could repeat dialing the numbers

High speed digital communication, compatible ADEMCO4+1, CID digital communication protocol

Anti-tamper of the control panel and keypad, anti-snipping of keypad communication line

Restore user's password to factory defaults by hardware and restore the system factory defaults by software

Built-in voice module, 10seconds record, voice alarm function

Record 100 latest alarm events

Malfunction alarm: AC power fail, low voltage and telephone line loss

Built-in wireless receiving modular, wireless studying code

Remote controller can be used to set alarm, DIS-ALARM, emergency alarm and other operation

1.3 Main specification

Power supply：	AC220V+10%
Stand by consume current:	≤50mA
Power:	<1.5W
Alarm output current:	≤500mA , 12V
Output voltage:	DC12V～15V
Wireless receiver frequency:	315MHZ/433MHz
Working temperature:	-10 ～ 55°C
Working Humidity:	40 ～ 70%
Weight:	3 kgs
Metal box size	274mm×264mm×86mm
Keypad size:	159mm×138mm×33mm

Chapter 2 Installation and Connection

2.1 Wiring Diagram

2.1.1 Wiring diagram on main board

Control Panel Wiring Diagram
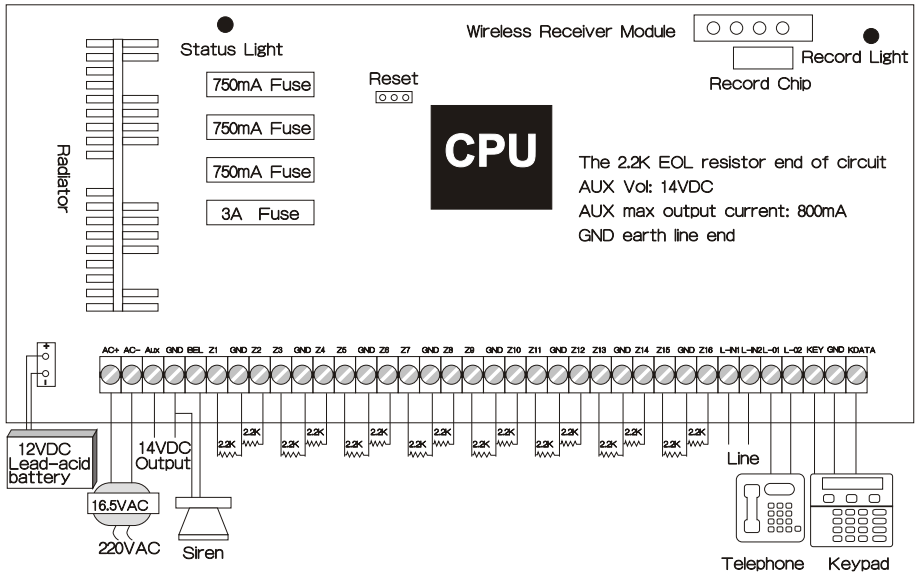
2.2 Connection of power supply

2.2.1 AC connection terminal AC1, AC2: AC power is supplied after transformation by transformer. The transformer is fixed on the metal box of main panel. (Spec: input AC220V two red wires, output 16.5V two black wires). When connecting directly with exterior wire, or using 3-outlets connector plug into the transformer input terminal (to avoid interrupt of AC current, please don't use 2-outlets plug), the transformer output terminal will connect AC terminal **AC1** and **AC2**.

2.2.2 DC12V storage battery connection: To keep the system working when AC power supply interrupted, we use high quality sealed lead-acid for backup use. Right connection: the red wire of the main board should be connected to the positive of battery; the black wire should be connected to negative of battery.

2.3 Connection of wired detector

2.3.1 Connection of signal wires of wired detector:

There are two connection way to avoid destroy, cutoff or short connection, **see picture**:

N/C CONNECTING   N/O CONNECTING

Detector signal end   Detector signal end

2. 2K

2. 2K

Zn   GND   Zn   GND

Alarm panel zone port   Alarm panel zone port
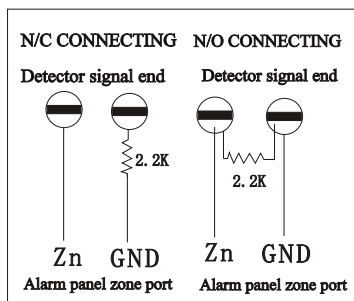
1, **NORMALLY CLOSED:** Connecting a 2.2K EOL resistor in series to the terminal detector of the loop of each zone; connecting the other end of the resistor to the signal terminal of wired detector. One of the signal connector should be soldered to the resistor. The other end of resistor should be connected to the other signal terminal of detector by corresponding signal wire, and then connected to GND port of main board.

2, NOMORMALLY OPENED: Connecting a 2.2K resistor in parallel connection to the terminal detector of the loop of each zone.

2.3.2 Connection of power of Wired Detector: connecting the POSITIVE of wired detector to the AUX port; connecting the negative to the ground wire GND port.

2.3.3 Connecting the unused zones with 2.2K EOL resistor connection, otherwise the corresponding indicator light will keep lighting, so that the ARM cannot be set.

Note: Mark wires to avoid miss-connection when using too many wired zones!

2.4 Connection of siren/speaker

Siren/Speaker Port: The POSITIVE of siren/speaker should be connected to BELL end of alarm panel; the negative should be connected to the ground wire GND.

2.5 Connection of telephone line

Phone Communication Port: The exterior line should be connected to **LIN1, LIN2.** **L-OUT1** and **L-OUT2** should be connected to the telephone.

2.6 Installation of keypad

2.6.1 Opening of the keypad: use a screwdriver to open the plastic hole of the back cover upside of the keypad, fix the back cover to the 86 box.

2.6.2 Connection of the keypad: **SEE PICTURE**, use a copper core wire to connect the keypad with connector of alarm panel. The wire from the keypad to alarm panel is up to 150 meters, 4 keypads can be connected in series
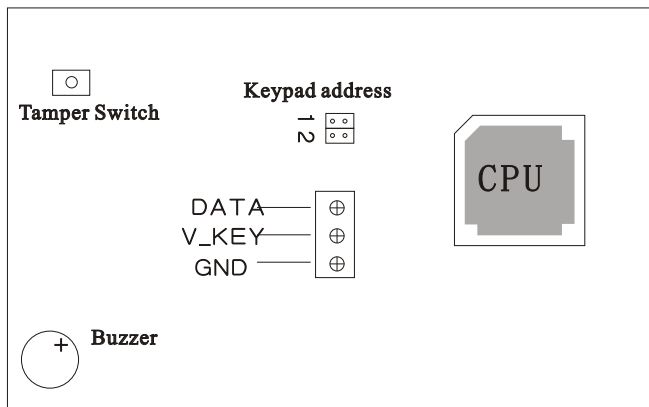
2.6.3 Keypad address:

Keypad Num	First	Second	Third	Fourth
mode				

2.6.4 Close the cover when the connection is finished.

2.7 Installation when wireless zones only.

If you want to use the wireless zones only, connect the wired zones with the ground wire GND by 2.2K resistors in short connection, keep close of the wired zones.

Note: Make sure the all the connections are correct before power up the alarm panel. Avoiding any opposite connection, short connection of power line, siren line and detector power line; avoiding short connection of detector power line and signal line!

Chapter 3 System Operation

3.1 System operation

The main usage of the alarm system is to prevent illegal intruder from your home or office, or to get help in emergency. When you are leaving your office or home, make sure all the windows and doors are locked. Set ARM by remote controller or keypad of alarm panel, the system will be in guard status. If any alarm zone is activated, the following circs will happen:

3.1.1 Siren/speaker will yelp loudly if set siren/speaker alarm.

3.1.2 Alarm panel will send the alarm to control center by dialing the telephone if set to send the alarm to control center.

3.1.3 If telephone number is set, it will dial the preset numbers in turn. You can take the following action:

Press "0" Hung up the phone to confirm;

Press "1" Arm-away

Press "2" Arm-stay

Press "3" Disarm

3.1.4 Zone LED will keep light on in alarm status till someone comes

When you go to office or home, use remote controller, or press user password to disarm, System alarm status will stop, the indicate LED of the zone activated will keep light on till eliminate its alarm memory.

3.2 Operation of remote controller

🔒---Arm-away;   🔒------Arm-stay

🔓---Disarm;   ⚡-------Panic (Press ⚡ key for 2 seconds)
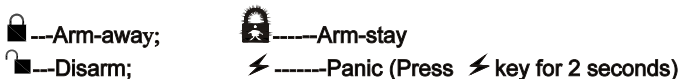
3.3 Keypad panel and indicator LED light
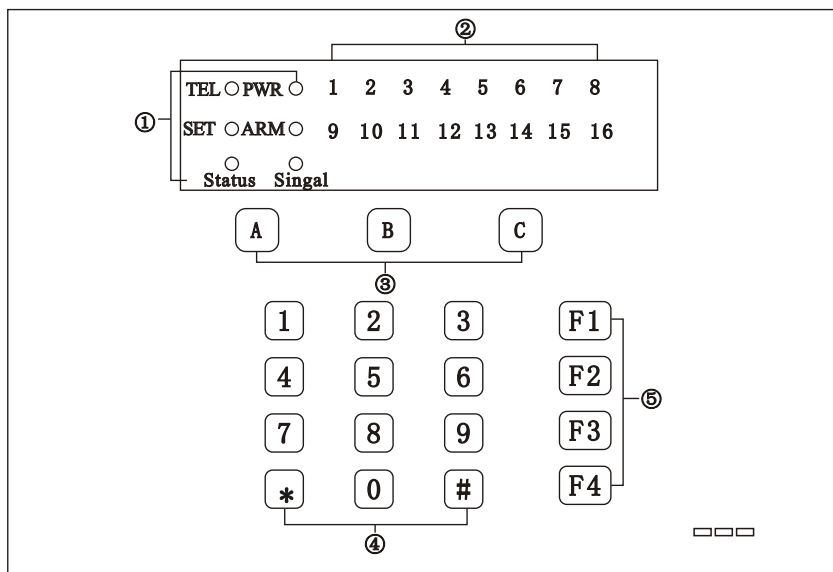
Parts Name:

①---Function Indicator Light   ②---ARM Zone Light   ③---Emergency Alarm Key   ④---Number keystrokes   ⑤---Function keystrokes (F_1-Arm-away; F_2-Arm-stay; F_3-Disarm; F_4-Set)

Specification:

①. Function Indicator Light **(Telephone, Power Supply, Setting, ARM, Status, Signal):** Indicate the working status of the System

Indicator Light	OFF	ON	Flash
Phone	Normal	Phone Line Failure	Connect the alarm center
Power Supply	AC Power Supply Break	Power Supply Normal	Slow Flash: AC Power Supply Break
			Fast Flash: lead-acid battery Supply Break
Setting	Normal	Programming	
Arm	No ARM Status	Arm-away/ /Single Zone Arm	Arm-stay /Exit delay
Status	Normal	Tamper	Panic
Signal		Signal Received from Wireless Detector	Wireless Zone alarm

② **ARM Zone Light(1, 2, 3……14, 15, 16): Display the Zone Status**

③ **Emergency Key (A, B, C)** 24 hours Alarm Status, can be defined as Fire Alarm, Robbery Alarm, Emergency Call; No indicator, no sound; If telephone preset, it will dial the number when alarm, the communication light will on

④ **Number Key (1, 2, 3, 4, 5, 6, 7, 8, 9, *, 0, #): For password and program set use.**

⑤Function keystrokes (F_1-Arm-away; F_2-Arm-stay; F_3-Disarm; F_4-Set)

⑥ **Buzzer Sound**; In this operation, different buzzer sound indicates different meaning

Sound	Explanation
Long Sound 1 time	Remote Control or Keypad operation received
Long Sound	Sound Zone Alarm
Short Sound 1time	Sound per press the Keypad
Short Sound 3 times	Invalid Input or Remote Control Operation
Short Sound per 1 second	Delay ARM Started, or Delay Zone Activated, the sound will end till the delay time is over

3.4 ARM

3.4.1 Arm-away; All zones (except Side Road or Screened Zones) start Alarm Status, if any zone activated, the system will take relevant reaction, dial the alarm center, preset telephone number or local police.

1, Operation: Press F_1 Key or press " 🔒 " on remote controller to set ARM.

2, If ARM succeed, the Buzzer will long sound, ARM Indicate Light on; if the system refuse the dictate, the Buzzer will short sound 3 times, it means that some zone is activated or set ARM already. If there is an ARM Delay, the system will exit the delay after inputs ARM dictate, and short sound every second till delay time is over. It will not send alarm before some zone is activated.

3.4.2 Arm-stay, when a BOUNDARY ARM start alarm status, non-BOUNDARY ARM will not activate alarm

Operation: Press F2 Shortcut Key or press " 🔒 " on remote Controller to set ARM.

3.4.3 Single zone Arm/Disarm: the specified zone start alarm status, the other zones will not activated alarm

Operation: 1 Single Zone Arm : Zone Number＋F1

2 Single Zone Disarm: User Password(4 bites)+Zone Number+F3

3.5 Disarm: DIS-ALARM Status

Operation: F3+User Password (4 bites)＋"#" (Factory User Password: 8888), or press " 🔓 " key on Remote Controller

3.6 Panic

Press 'Program/Panic' key for 2 seconds, the system will alarm. or press " ⚡ " key on Remote Controller

3.7 Duress combination:

When user is forced to disarm the control panel by burglar, the user inputs duress password, the control panel is disarmed but sends alarm information to the alarm center or receiver. The duress combination can be used to disarm but set parameters. The duress combination is the last digit of user combination plus 1 without carry (9+1=0). E.g. while master combination is 08889, the duress combination is 08880; while master combination is 09999, the duress combination is 09990

3.8 Remote telephone operation

User can dial master phone of the system, and perform the operations: arm away/stay, disarm, recording and Record playing Dial the master phone for more than ringing attempts set. The system will answer automatically and announce the user with a sound 'Di', Then user presses '# + 4 digits user password + 1 digit operand + #' , the system will operate corresponding commands. Operand has 6 digits, 0 means hang-up / stop dialing to alarm ,1 means arm-away,2 means arm-stay, 3 means disarming,4 means recording, 5 means Record playing

3.8.1 Telephone arm/disarm

Arm-away operation: #+User Password+1+#,
Arm-stay operation: #+User Password+2+#

Disarm operation: #+User Password+3+#

3.8.2 Telephone recording /record playing

Recording operation: #+User Password+4+#

Record playing operation: #+User Password+5+#

Chapter 4 System Settings

4.1 Enter programming status

Operation: F4+user password(8888)+#

Status: the indicator LED will light, In the status, continually set parameters and numbers according the command code

4.2 Exit programming status

Operation: *+#

Status: Exit successfully, the buzzer will sound a long" Di", or system well exit automatically after one minute

4.3 Reset

4.3.1 Hardware reset

There is a jumper 'CB301' on PCB of the master controller, 1 and 2 Jumper on the main board must be short connected

4.3.2 Software reset

Operation: (F4+password(8888)+#)+990+#

Status: Reset Basic Settings from Factory

4.4 Change user password

Operation: (F4+password(8888) +#)+001+XXXX+#

Parameters setting: XXXX = 4 digits code

Status: after the buzzer sound a long "Di"; new installer password is in effect

4.5 Change operation password

Operation: (F4+password(8888) +#)+002+XXXX+# the first operation password;

Operation: (F4+password(8888) +#)+003+XXXX+# the second operation password;

Operation: (F4+password(8888) +#)+004+XXXX+# the third operation password;

Parameters setting: XXXX = 4 digits code

Status: after the buzzer sound a long "Di"; new installer password is in effect

4.6 Definitions of zone number

The master controller: Wire/wireless zone: 01~32

Help: 41

Duress code: 42

Tamper: 43

The keypad: Keypad 1: tamper 51

Keypad 2: tamper 52

Keypad 3: tamper 53

Keypad 4: tamper 54

4.7 Set alarm phone number

Operation:

(F4+password(8888) +#)+101+XX---XX+#   the first center phone number
:   (F4+password(8888) +#)+102+XX---XX+#   the second center phone number
(F4+password(8888) +#)+103+XX---XX+#   the first user phone number
(F4+password(8888) +#)+104+XX---XX+#   the second user phone number
(F4+password(8888) +#)+105+XX---XX+#   the third user phone number
(F4+password(8888) +#)+106+XX---XX+#   the fourth user phone number
(F4+password(8888) +#)+107+XX---XX+#   the fifth user phone number
(F4+password(8888) +#)+108+XX---XX+#   the sixth phone number

Status: X indicates phone number needed to dial (1~16 digits), phone number is null in factory setting. The system can be set 8 groups of alarm phone number. No.1 and 2 is for the alarm center,No.3~8 is for the user phone

4.8 Cancel alarm telephone number

Operation:

(F4+password (8888) +#)+101+#   the first center phone number
: (F4+password (8888) +#)+102+#   the second center phone number
(F4+password (8888) +#)+103+#   the first user phone number
(F4+password (8888) +#)+104+#   the second user phone number
(F4+password (8888) +#)+105+#   the third user phone number
(F4+password (8888) +#)+106+#   the fourth user phone number
(F4+password (8888) +#)+107+#   the fifth user phone number
(F4+password (8888) +#)+108+#   the sixth phone number

4.9 User address code setting

Operation: (F4+password (8888)+#)+099+XXXX+#

Status: XXXX = 4 digits user code which is 1234 in factory setting. After setting user code, when alarm happens, the alarm center will distinguish which master controller is alarming

4.10 Set Report Output

Operation: (F4+password (8888) +#)+171+X+#, the First alarm center
Operation: (F4+password (8888) +#)+172+X+#, the second alarm center
Status: x=1,,send Zones alarm, bypass/ bypass cancelling, arm, disarm , keypad A,B,C Panic

X=0,send Zones alarm

4.11 Set Alarm Center Communication Protocol

Operation: (F4+password (8888) +#)+161+X+#, the First alarm center
Operation: (F4+password (8888) +#)+162+X+#, the second alarm center
Status: x=1 Contact ID Code ,x=0   ADEMOCO 4+1 code, which is 1 in factory setting

4.12   Bell chirp time setting

Operation: (F4+password (8888)+#)+501+XX+#
Status: XX=00~30 ,indicating time, unit is 1 minute. delay time is among 00~30 minutes

4.13 Exit delay adjustment

Operation: (F4+password (8888)+#)+502+XX+#

Status: XX=00~30, indicating time, which is 100 seconds in factory setting, unit is 10 seconds, delay time is among 00~300 seconds

4.14 Entry delay adjustment

Operation: (F4+password (8888)+#)+503+XX+#

Status: XX=00~30 indicating time, which is 40 seconds in factory setting, unit is 10 seconds, delay time is among 00~300 seconds

4.15 Zone type setting

Operation: (F4+password (8888)+#)+3XX+Y+#

Status: XX means zone number, Y means zone type: type code Y=1 ~ 8, which is 3 in factory setting

Zone type in the table below

Zone type	Disarm	Arm Away	Arm stay	Exit delay	Entry delay	Acousto -optic alarm	Type Number
Entry/Exit zone	Ineffective	Effective	Effective	Yes	Yes	Yes	1
Active zone	Ineffective	Effective	Ineffective	Yes	Yes	Yes	2
Perimeter zone	Ineffective	Effective	Effective	No	No	Yes	3
Panic zone	Effective	Effective	Effective	No	No	Yes	4
Fire zone	Effective	Effective	Effective	No	No	Yes	5
Gas zone	Effective	Effective	Effective	No	No	Yes	6
Tamper zone	Effective	Effective	Effective	No	No	Yes	7
Duress zone	Effective	Effective	Effective	No	No	No	8

4.16 Zone type initialization

Operation (F4+password (8888)+#)+991+#

4.17 Zone bypass

1 Signal Zone bypassed

Operation (F4+password (8888)+#)+2XX+Y+#

Status: XX , means zone number, XX=01~32, Y=0(bypass) or 1(Cancel bypass), which is 1 in factory setting

Function: User needs to close some zone temporarily, then the zone can be activated freely without alarm. At this time bypass can be selected

2 All zones bypassed

Operation (F4+password (8888)+#)+9010+#

3 All zones bypass canceling

Operation (F4+password (8888)+#)+9011+#

4.18 Query zones bypass information

Operation (F4+password (8888)+#)+7XX+#

Status: XX means zone number

zone indicator is on if zones by bypass, status indicator is on if control panel anti-tamper or emergence bypass; zone number and status indicator is on if keypad anti-tamper bypass.

4.19 Event records reading

Operation (F4+password (8888)+#)+8XX+#

Status: 8XX means event records number, value:00-99

If a zone alarm, the zone indicator is on; if arm-away, zone 1ande zone 5 indicator is on; if arm-stay, zone 1 and zone 6 indicator is on; if disarm, zone 1 and zone 7 indicator is on , if duress, zone 1 and zone 8 indicator is on ; status indicator is on if control panel anti-tamper or emergence alarm; zone number and status indicator is on if keypad anti-tamper alarm

4.20 Code for restoring and reading in wireless zone

Operation (F4+password (8888)+#)+508+XX+#

Status: XX, 00means remote controller; 01-16 means wireless detector

After inputting command, user has to activate a wireless detector, then corresponding zone indicator and signal indicator is on ,press "#" is OK

Notes: Control panel mostly restores 5 remote controllers code. If exceeding 5 ,control panel can delete one by one precedent logging in ,at last only 5 remote controllers are valid

4.21 Delete wireless detectors

Operation (F4+password (8888)+#)+509+XX+#

Status: XX, 00means remote controller; 01-16 means wireless detector

4.22 Set Remote Control Ring Time

Operation (F4+password (8888)+#)+505+X+#

Status: X -1-9, which is 6 in factory setting

4.23 Set Telephone Line Check on/off

Operation (F4+password (8888)+#)+151+X+#

Status: X=1 check; X=0 no check, which is 1 in factory setting

4.24 Set control panel and keypad anti-tamper

Operation (F4+password (8888)+#)+243+X+#   control panel   anti-tamper

Operation (F4+password (8888)+#)+251+X+#   keypad first anti-tamper

Operation (F4+password (8888)+#)+252+X+#   keypad second anti-tamper

Operation (F4+password (8888)+#)+253+X+#   keypad third anti-tamper

Operation (F4+password (8888)+#)+254+X+#   keypad fourth anti-tamper

Status X=1 alarm; X=0 No alarm

4.25 Set Bell open/closed of arm/disarm

Operation (F4+password (8888)+#)+150+X+#

Status: X=1 Bell open; X=0 Bell closed, which is 0 in factory setting

4.26 Battery check cycle

Operation (F4+password (8888)+#)+601+X+#

Status: X=1-5, 1:15min;2:30min;3: 1 hour; 4:2 hours; 5:4hours which is 3 in factory setting

4.27 Adding keypad

Function: Control panel mostly connect 4 keypads, control panel differentiate keypad number through keypad address;

4.28 Cancelling keypad

Operation (F4+password (8888)+#)+992+#

Command code in the table

Setting items	operational code	parameter	factory default	Notes
Center 1 phone number	101	Phone number	NULL	0-9, at length 16 digits
Center 2 phone number	102	Phone number	NULL	0-9, at length 16 digits
User 1 phone number	103	Phone number	NULL	0-9, at length 16 digits
User 2 phone number	104	Phone number	NULL	0-9, at length 16 digits
User 3 phone number	105	Phone number	NULL	0-9, at length 16 digits
User 4 phone number	106	Phone number	NULL	0-9, at length 16 digits
User 5 phone number	107	Phone number	NULL	0-9, at length 16 digits
User 6 phone number	108	Phone number	NULL	0-9, at length 16 digits
User code setting	099	XXXX	1234	X=4 digits
User password	001	XXXX	8888	X=4 digits
Operation password 1	002	XXXX	NULL	X=4 digits
Operation password 2	003	XXXX	NULL	X=4 digits
Operation password 3	003	XXXX	NULL	X=4 digits
Bell chirp time setting	501	XX	10	XX minute
Exit delay adjustment	502	XX	10	X=10 delay for 100 seconds
Entry delay adjustment	503	XX	4	X=04 delay for 40 seconds
Code for restoring and reading in wireless zone	508	XX	NULL	XX=00 remote controller;01-16 detector
Delete wireless detectors	509	XX	NULL	XX=00 remote controller;01-16 detector

Set Bell open/closed of arm/disarm	150	X	0	X=1 Yes，X=0 No
Set Telephone Line Check on/off	151	X	1	X=1 Yes，X=0 No
Center 1 Agreement selection	161	X	1	X=1 CID ,X=0 ADEMCO 4+1
Center 2 Agreement selection	162	X	1	X=1 CID ,X=0 ADEMCO 4+1
Center 1 receiving other types alarm besides zone alarm	171	X	1	X=1 Yes X=0 No
Center 2 receiving other types alarm besides zone alarm	172	X	1	X=1 Yes X=0 No
Set Remote Control Ring Time	505	X	6	X=1-9
Battery check cycle	601	X	3	X=1-5
01-32 zone type setting	301-332	X	3	X=1-8 zone type value
01-32 zone bypass setting	201-232	X	1	X=0 Yes X=1 No
Control panel anti-tamper	243	X	0	X=0 No X=1 Yes
Keypad anti-tamper	251-254	X	1	X=0 No X=1 Yes ;51-54means keypad number
Query zones bypass information	701-732	NULL	NULL	NULL
Event records reading	800-899	NULL	NULL	NULL
All zones bypassed	9010	NULL	NULL	NULL
All zones bypass canceling	9011	NULL	NULL	NULL
System defaults values restoration	990	NULL	NULL	NULL
Zone type initialization	991	NULL	NULL	NULL
cancelling keypad	992	NULL	NULL	NULL