HDL®

Usable for also HDL-MSM.431

Manual describes the snapshots taken in the previous version of the module and using older HBST program. In HBST2, the graphic appearance is slightly different but the functions remain the same.

User Manual

Advanced Security Controller

SB-DN-SEC250K

buspro

www.hdlautomation.com

INDEX

1. Overview 1
1.1 General Information 1
1.1.1 Description 1
1.1.2 Mounting 1
1.2 Functionalities Description 1
1.3 Device Description 2
2. Safety Instructions 2
3. Technical Data 3
4. Installation 4
4.1 Wiring 4
4.2 System Connection 4
4.3 HDL Bus Pro Description 5
4.4 Commissioning 5
5. Software Configuration 6
5.1 Basic Information 6
5.1.1 Change the ID 6
5.1.2 Date Setting for Timer 6
5.1.3 History Log 6
5.2 Basic Setting 7
5.3 Auto Dial Out 10
5.4 Arming Settings 12
5.5 Alarm Commands 13
5.6 Vacation Settings 13
5.7 Bypass Settings 14
5.7.1 Alarm + Bypass 14
5.7.2 Arming Settings 14
5.8 Advanced Security 15
5.9 Arm Flow 16
5.9.1 Vacation/Away Mode 17
5.9.2 Day/Night/Night_Guest) Mode 18
5.10 Alarm Flow 19
5.10.1General flow 19
5.10.2 Vacation/Away/Night for Guest/Day Mode 20
5.10.3 Night Mode 21
5.10.4 Fire Mode 22
5.10.5 Gas leakage 23
5.10.6 Silent panic 24
5.10.7 POWER/TEMP/ Emergency/ Current 25
5.10.8 Panic 26
5.11Disarm 27
6. Application 27
6.1 Panel Settings 27

6.2 Sensor Settings 28
6.3 Vacation Settings.....30
7. Note.....36

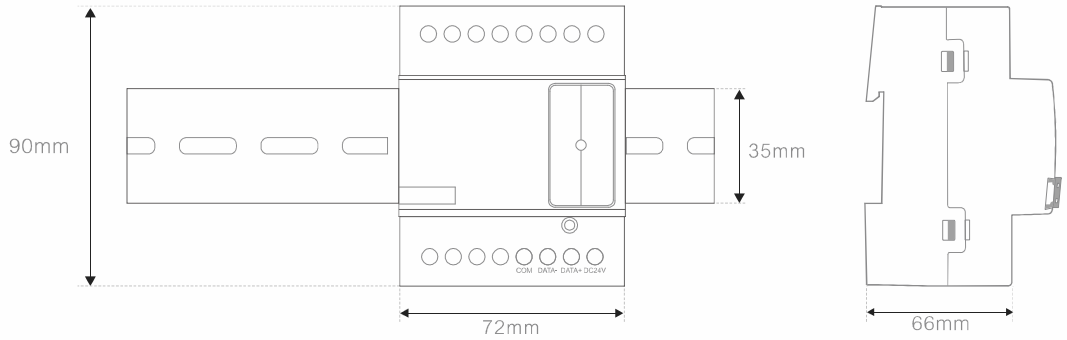
1. Overview

1.1 General Information

1.1.1 Description

SB-DN-SEC250K is a security module, from the sensor status and logic implement, it can manage 8 independent zones' arming and alarm. Up to 32 sensors can be used to detect in each area. Normally use DLP panel, TouchLife and iLife to arm and diasarm the system.

1.1.2 Mounting

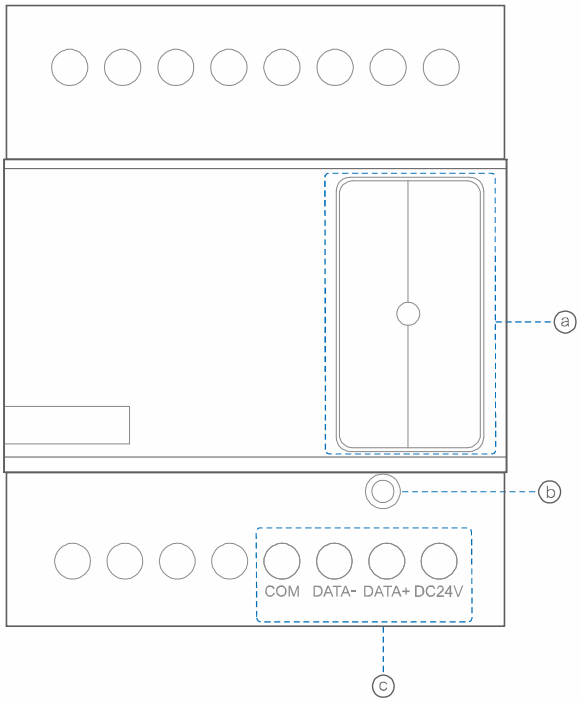


- DB Box installation

1.2 Functionalities Description

- Manage 8 independent areas
- Multiple security modes: Vacation, Away, Night, Day, etc.
- Multiple alarm modes: Panic, Gas, Fire, Temperature, Emergency, etc.
- Multi-Level security protection
- Arm and alarm log.
- Sends SMS message
- Online upgrade is available

1.3 Device Description



ⓐ. LED Indicator
ⓑ. Programming button
ⓒ. HDL Buspro

2. Safety Instructions

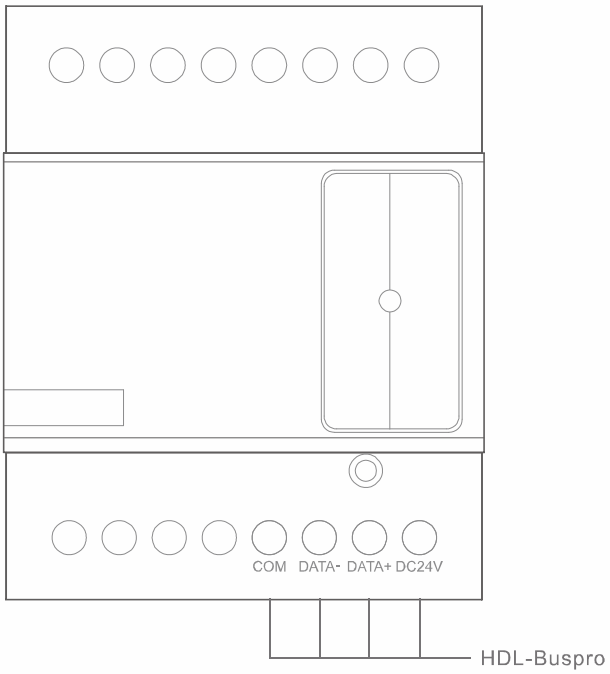
- The screw down strength should not exceed 0.4Nm.
- Do not make wrong connection on Bus interface, it will damage the Bus interface of this module.
- Never let liquids get into this module, it will damage this device.
- Do not get AC220V voltage into Bus wire, it will damage all devices in the system.
- Ensure good ventilation.
- Avoid contact with liquids and corrosive gases.

3. Technical Data

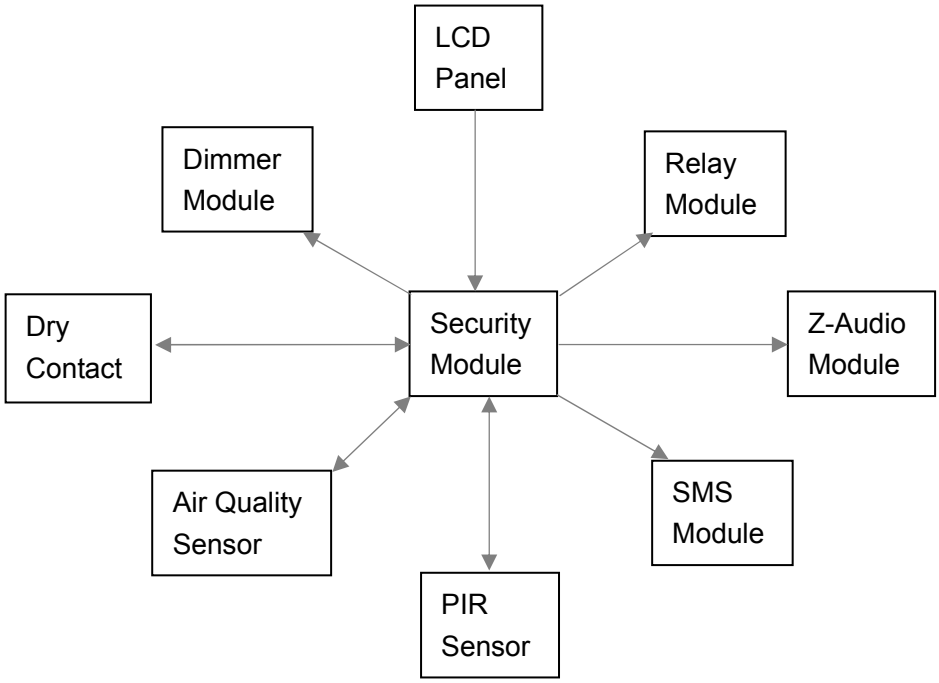
Electric Parameters	
Working power	DC15-30V
Bus power consumption	15mA/DC24V
Total capacity	256Mbytes
Record time (up to capacity)	10400s, about 2hours 50mins
Program number	Max.50
Signal type	DMX512 (1990)
HMI	128x64 raster graphic LCD 6 soft-touch buttons
Environmental Conditions	
Working temperature	0℃~45℃
Working relative humidity	Up to 90%
Storage temperature	-20℃~+60℃
Storage relative humidity	Up to 93%
Approved	
CE	
RoHS	
Production Information	
Dimensions	72×90×66 (mm)
Housing material	Nylon, PC
Installation	35mm DIN rail installation
Protection degree	IP20

4. Installation

4.1 Wiring



4.2 System Connection



Security module should work in conjunction with other products to make up a system.

4.3 HDL Bus Pro Description

Connector Information

buspro	
DC24V	Red
COM	Black
DATA -	White
DATA +	Yellow

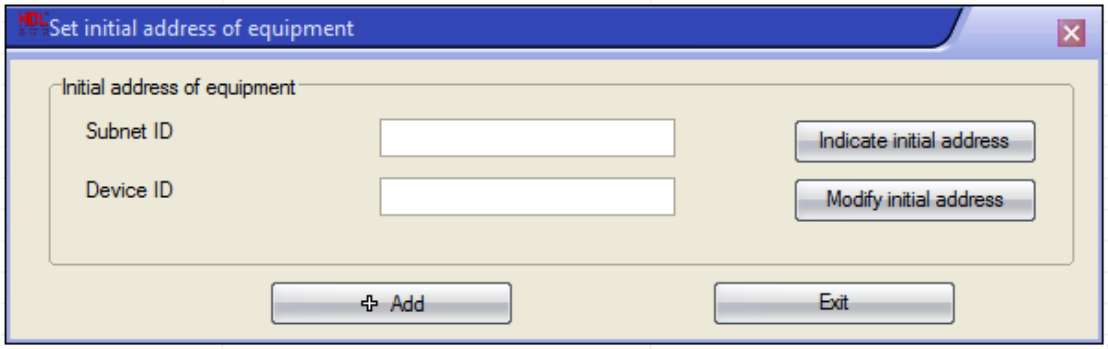
4.4 Commissioning

Method One:

a) open the HDL-BUS Pro Setup tool.

b) keep pressing the programming button for 3 seconds, it turns to red color.

c) on the software, click the “Address management”, and select the “Modify address (when device button is pressed)”, it will show a window like this:



d) click the “Indicate initial address”, then it will show the ID of this device. If you want to modify the address, fill in the new address, and click the “Modify initial address”. Click the “+Add” button, the device will be add in “ON-line devices” list.

Method Two:

a) open the HDL-BUS Pro Setup tool.

b) click the search button, it will show a new window, click fast search button, search the online devices. Click the “Add all” button, the devices which be searched will be added in “ON-line devices” list.

5. Software Configuration

5.1 Basic Information

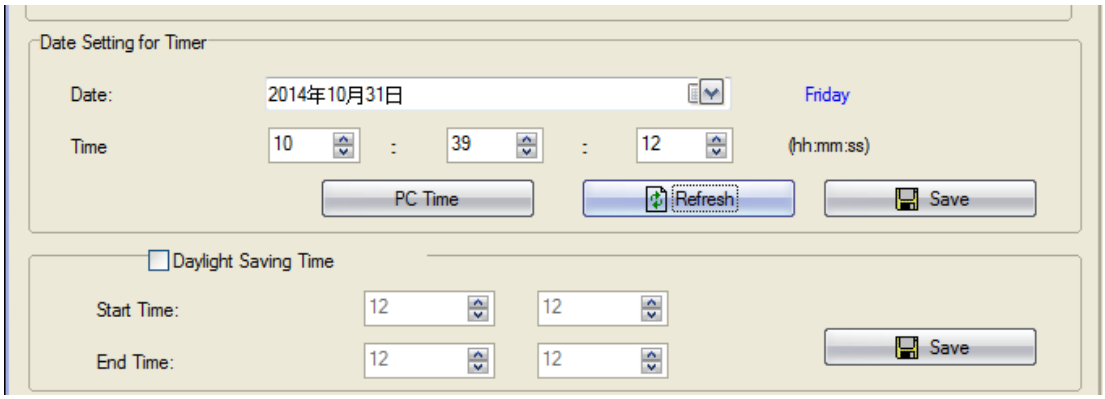
5.1.1 Change the ID

Every HDL-BUS device has one Subnet ID and one Device ID, the Device ID should be unique in its subnet and the Subnet ID should be kept consistent with the Gateway (typically the SB-DN-1IP or HDL-MBUS01IP.431).

5.1.2 Date Setting for Timer

Built-in clock chip, can set Date and Time manually or read it from PC, It broadcasts the time to system by default.

It supports 'Daylight Saving Time' function, some countries like EU countries, Australia need to use it then can set the start time and end time here according to different places.



5.1.3 History Log

- Ready history

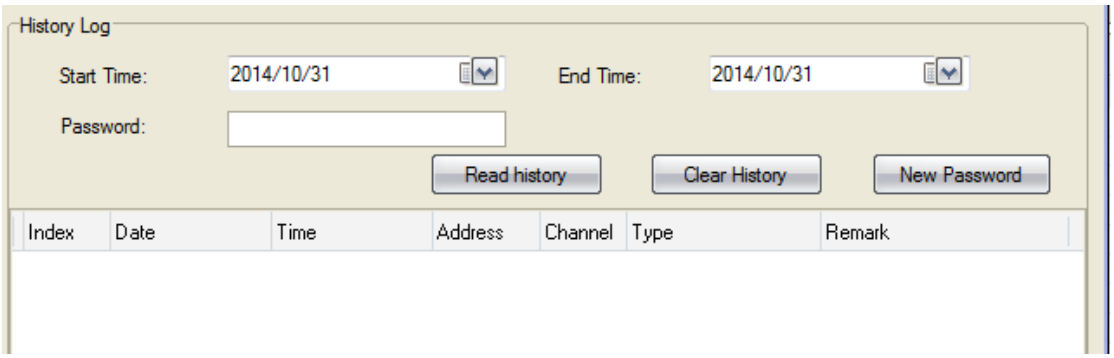
  Enter the start time and end time, so you can view arm, disarm and alarm log during this time period.

- Clear history

  When enter the password, you can clear the unneeded arm, disarm and alarm log, the default password is 85521566.

- New password

  When enter the password, you can customize the new password for safety.



5.2 Basic Setting

It's mainly for buzzer and siren configuration.

Area No.

Select and enable one area(area No. is from 1 to 8), remark it for easy management, like floor1 or floor2.

Siren Delay(10-180S)

Set the delay time for INDOOR SIREN ON, OUTDOOR SIREN ON

Restart after Alarm(1-30M)

Once alarm is triggered, within the delay time (up to 30 minutes), the security module will no longer alarm again. When the delay time elapses, it will restart into the monitoring state, if there are more triggers, it will trigger the buzzer, siren, alarm and so on then realize that monitor and alarm circularly.

Entry Delay(10-180S)

The delay time for entering the door. Under arming, it will trigger the "ENTER BUZZER ON" targets when entry. If disarmed during the delay time, the "ENTER BUZZER OFF" targets will be triggered.

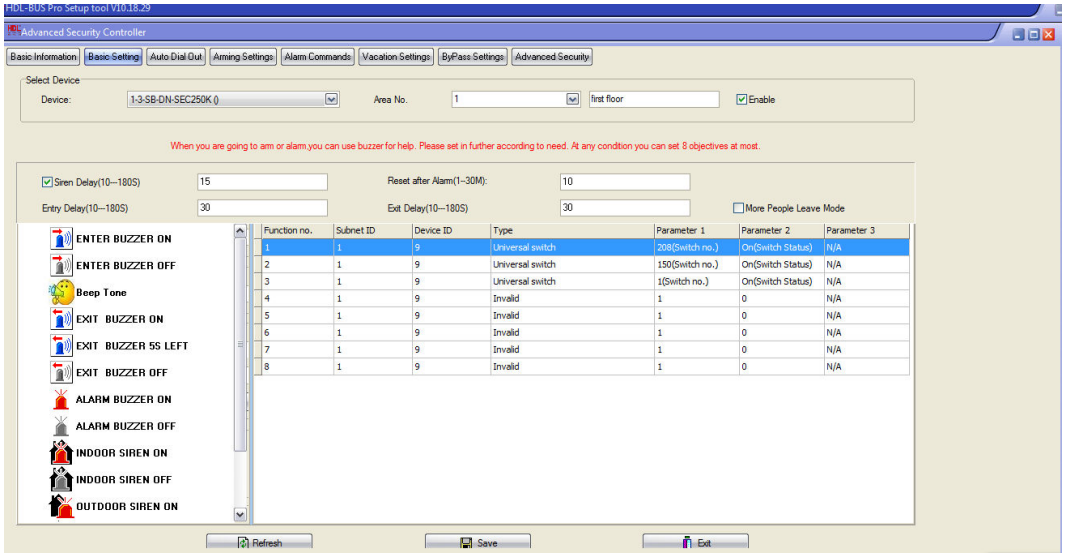
TIP: If do not disarm after the Entry Delay, it will trigger the "ALARM BUZZER ON" setting targets, at the same time, start to countdown the Siren Delay time, when the delay time elapses, the system will trigger "INDOOR SIREN ON, OUTDOOR SIREN ON" setting targets.

Exit Delay(10-180S)

When arming button is pressed, you should leave during the exit delay time otherwise it will trigger the alarm targets.

More People Leave Mode

It's very useful when there are many people going to leave and you want to arm this area now. If the sensor detects two movement's interval less than the exit delay, then it will reset the delay time for the arming; if the sensor detects two movement's interval larger than the exit delay, then it will countdown the 'Entry Delay' time, and trigger the corresponding targets.



ENTER BUZZER ON

The actions when entering the door, the targets can be a voice hint from music player or a buzzer on controlled by relay module.

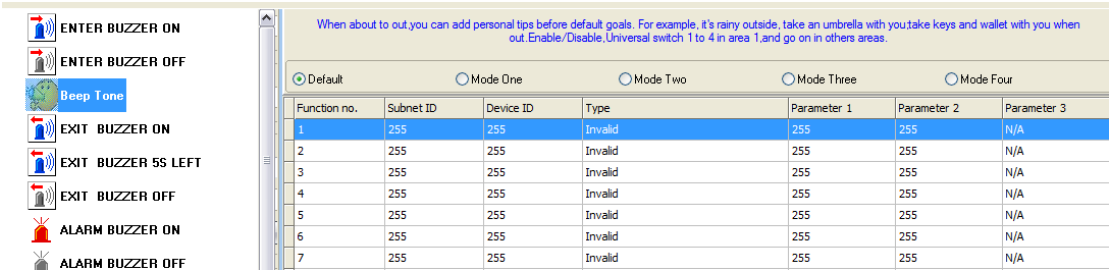
ENTER BUZZER OFF

The setting targets will be triggered if disarm is not happened after the Entry Delay time elapses. Suggest to shutdown the same controlled targets as 'ENTER BUZZER ON'.
When disarmed, it will trigger the 'ENTER BUZZER OFF' targets.

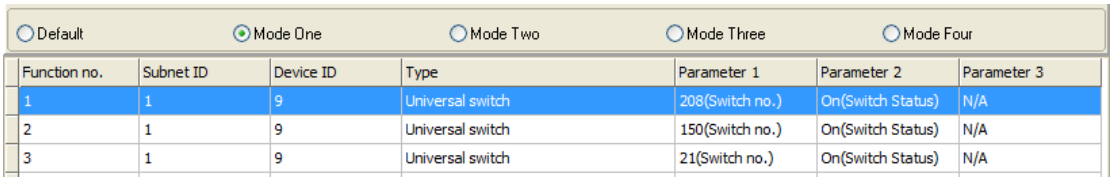
Beep Tone

This is specially used to work with the weather sensor (the 3rd party weather sensor normally needs to connect to our dry contact module), under different weather situation, it can trigger different targets.

UV Switch No. 1-4 is for Mode One to Mode Four in area1, Switch No. 5-8 is for Mode One to Mode Four in area2 and so on. Default is for normal weather, if it does not receive any UV Switch No. from the sensor, then it will trigger the setting targets in Default window. Mode One to Mode Four is for abnormal weather, when it receives one UV Switch No. from the sensor, it will trigger corresponding targets.



E.g. Mode One is for rainy day, when the sensor detects it's raining now, it will send UV Switch 1 to the security module, then security module will trigger the Z-Audio to play the 21st voice hint, the voice hint can be 'it's raining outside, do not forget to take the umbrella with you'.



It will trigger the Beep Tone targets firstly, later trigger the EXIT BUZZER ON targets when leaving the house.

EXIT BUZZER ON

The actions when leaving the house, the targets can be a voice hint from music player or a buzzer on controlled by relay module.

EXIT BUZZER 5S LEFT

The actions for the last 5 seconds of exit delay, the targets can be a rapid buzzer on, to urge people to leave the house quickly.

EXIT BUZZER OFF

Automatically shut down the voice hint and buzzer when the Exit Delay time elapses. When disarmed, it will trigger the 'EXIT BUZZER OFF' targets.

ALARM BUZZER ON

If there is no disarm after Entry Delay, it will trigger the 'ALARM BUZZER ON' targets and the 'ENTER BUZZER OFF' targets at the same time.

ALARM BUZZER OFF

Automatically shut down the voice hint and buzzer when the Siren Delay time elapses.

When disarmed, it will trigger the ‘ALARM BUZZER OFF’ targets.

INDOOR SIREN ON, OUTDOOR SIREN ON

These targets will be triggered if there is no disarm after Siren Delay, they can be a siren, loudspeaker and so on.

INDOOR SIREN OFF, OUTDOOR SIREN OFF

When disarmed, it will trigger these OFF targets.

FIRE SIREN ON

These targets will be triggered if there is a fire alarm, they can be a alarm speaker and so on.

FIRE SIREN OFF

When disarmed, it will trigger the ‘FIRE SIREN OFF’ targets

Recommendation: the above-mentioned OFF and ON targets should be the same, otherwise there will be some of them can not be turned off after you disarm the system.

5.3 Auto Dial Out

Area No.

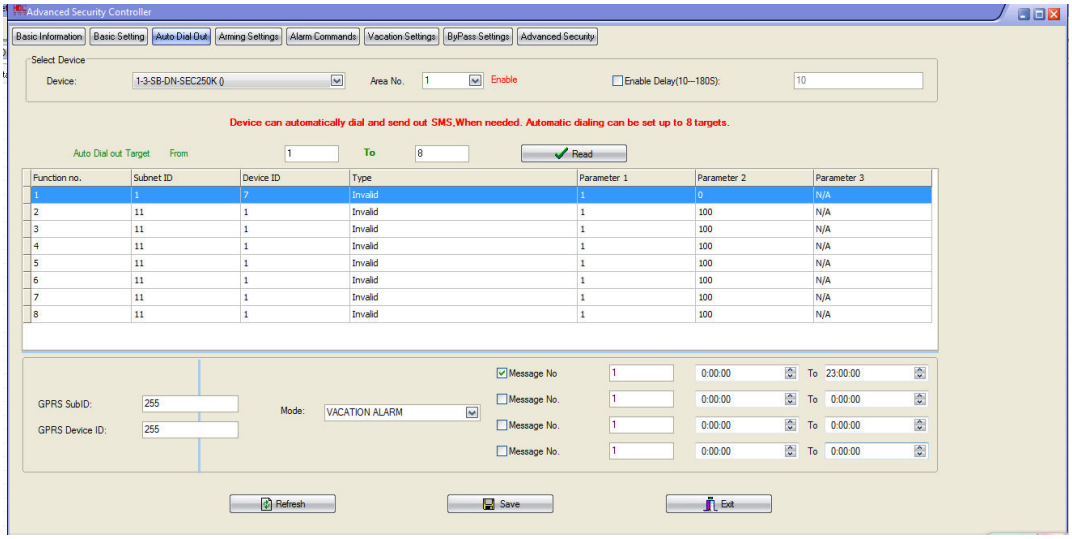
Select one area, area No. is from 1 to 8.

Enable Delay(10-180S)

The delay time can be set for auto-dialing when alarming.

Auto Dial Out Target

The function you want to achieve at the time of auto-dialing

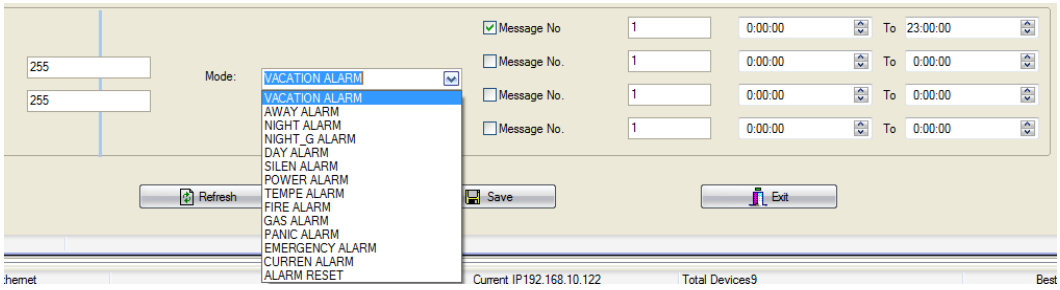


GPRS Subnet/Device ID

Set the GPRS Subnet/Device ID. When the alarm occurs, it will trigger the GPRS module to send out the corresponding messages to some cellphones.

Mode

Up to 13 alarm modes can be set. All these 13 kinds of alarm modes are independent, it will trigger the GPRS module to send out messages during different time period for each mode.



Message No.

Please enable the message number, each alarm mode can send out up to 4 kinds of alarm information, the alarm information can be set in the GPRS module.

Time Period

During the alarm time period, if there is an alarm occurring, the relevant person will receive a text message.

5.4 Arming Settings

Area No.

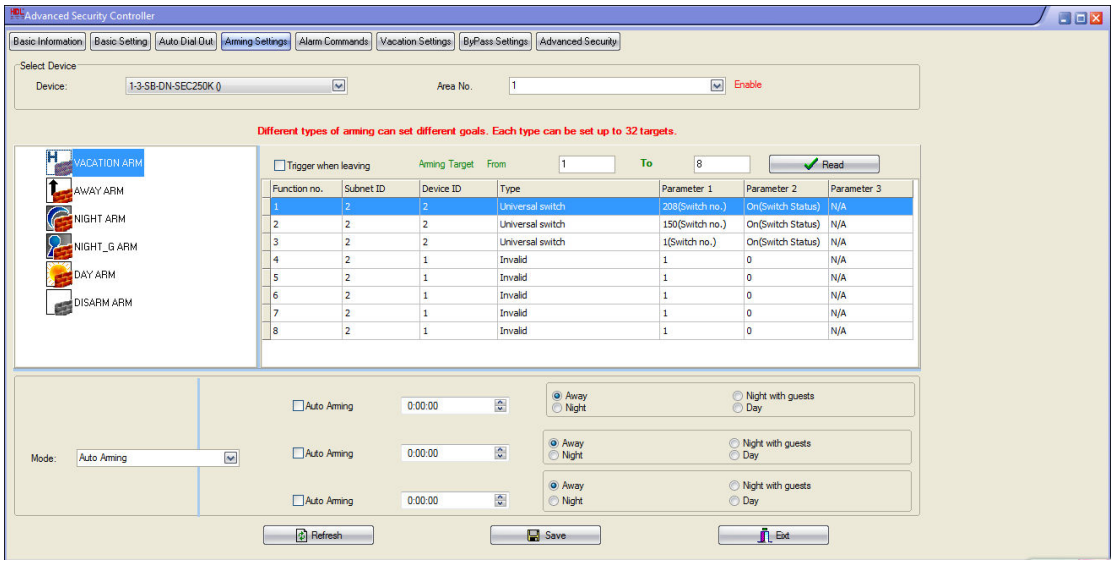
Select one area, area No. is from 1 to 8.

Trigger when leaving

If enable the selection, it will trigger the targets when arming button is pressed; if do not enable the selection, it will trigger the targets after the *Exit Delay* time.

Arming Modes

There are 6 arming modes can be set respectively, they are: VACATION ARM、AWAYARM、NIGHT ARM、NIGHT_G ARM、DAY ARM、DISARM ARM. Each mode can control up to 32 targets.



Auto arming and disarming

1- Auto Arming

If the conditions are met(enable auto arming and within the set time), then it will automatically work under the arming mode

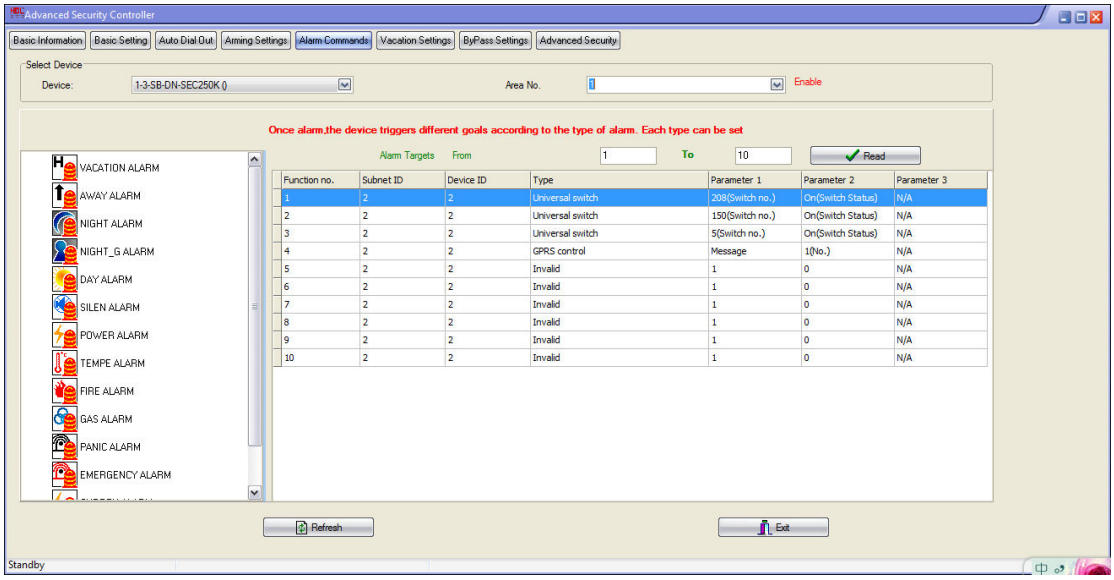
2- Auto Disarming

If the conditions are met (enable auto disarming and within the set time), it will automatically disarm

5.5 Alarm Commands

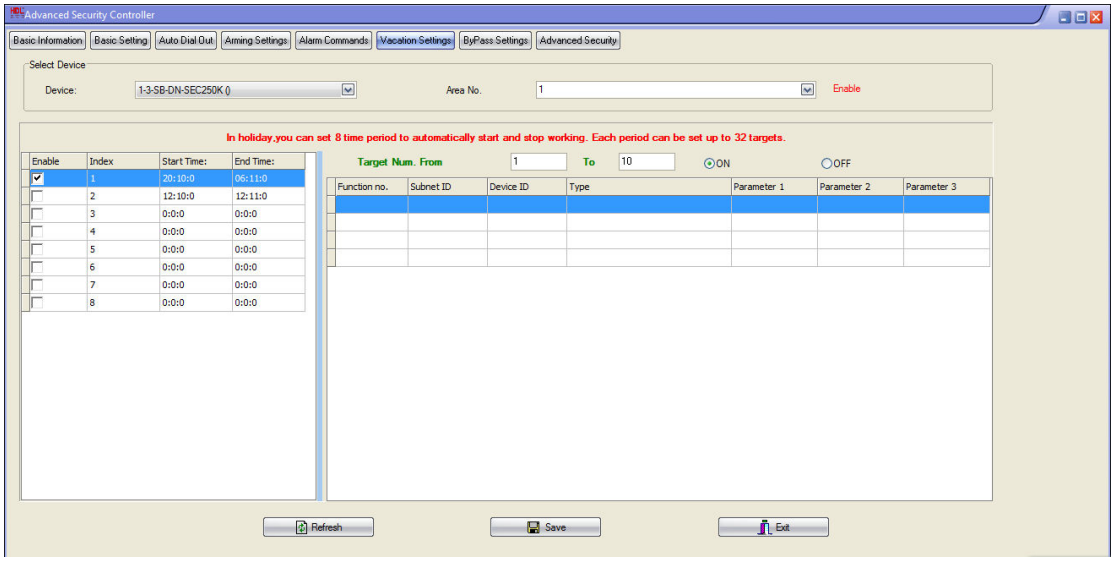
It's mainly for setting the alarm targets for different alarm modes(exceed *Entry Delay*). Fire, gas, etc alarm have no delay, will come into effect immediately.

Each mode can control up to 32 targets.



5.6 Vacation Settings

It's mainly for setting some targets in the vacation mode, so it could simulate scenarios, such as turn on/off lights by timer function in the house to give the illegal invaders a warning that somebody is at home.



Can set the control targets in ‘ON’ and ‘OFF’ windows independently.

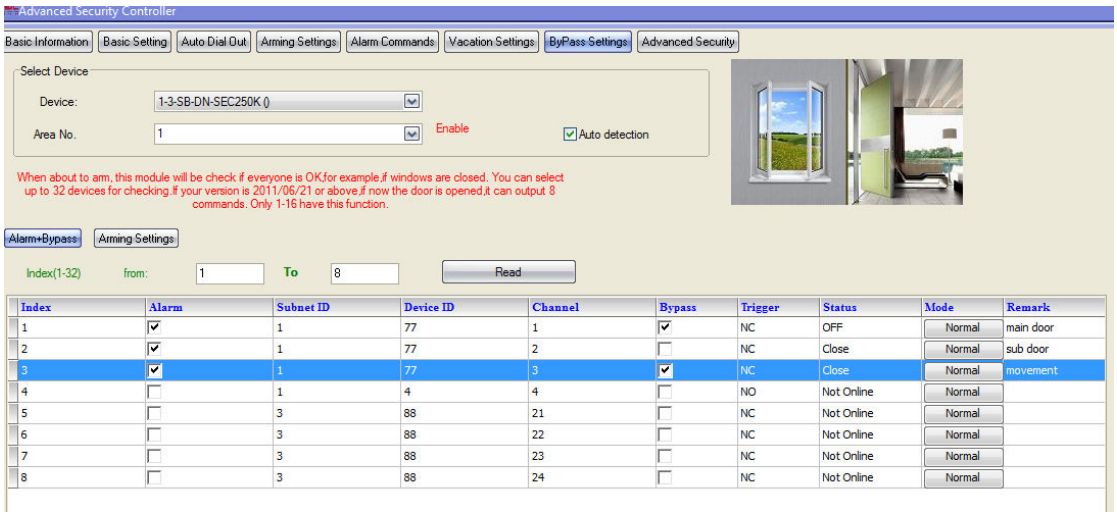
When reach the start time point, it will trigger the ‘ON’ window’s targets, e.g. turn on lights at night.

When reach the end time point, it will trigger the 'OFF' window's targets, e.g. turn off lights in the morning.

5.7Bypass Settings

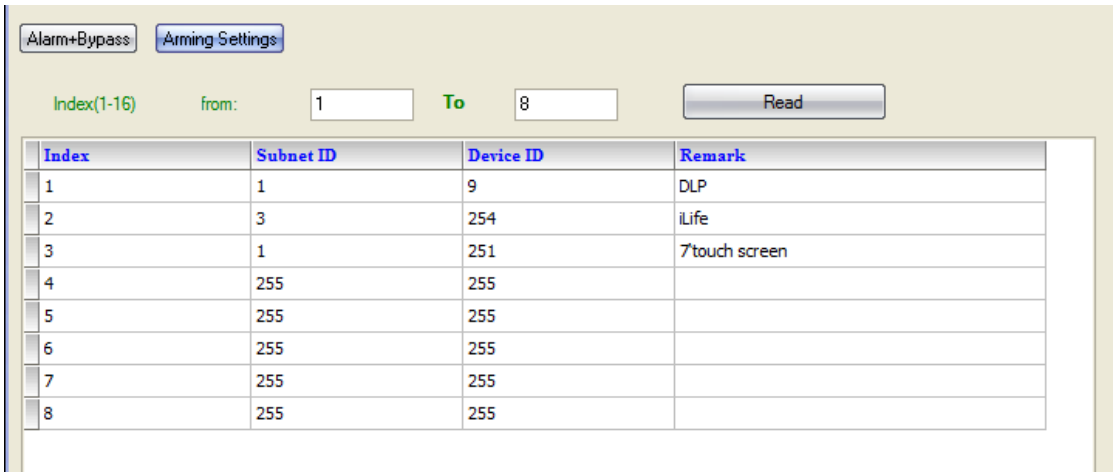
5.7.1 Alarm + Bypass

Authorize the sensor here(need to set the security module's ID in the sensor also), when the status of it has changed under arming mode, it will send out commands to the security module, then the security module will trigger corresponding targets to protect the system. (for details of these settings, please check the '6. Application' below)



5.7.2 Arming Settings

Authorize some user interfaces to arm and disarm the system, e.g. DLP, TouchLife, iLife, iRidium and so on. iLife(IOS) has the fixed ID, 3/254, and the iRidium's fixed ID is 253/254.



5.8 Advanced Security

- 9th line of Defence Activate after Alarm(M)

Set the delay time for the 9th line defence, after the delay time when normal alarm, it will trigger these 9th targets which can be set in the right side window. The time unit is minute.

Can enable this 9th line defence for these normal alarm: Vacation, Night, Away, Day.

- 9th line of Defence Activate after Panic(S)

Set the delay time for the 9th line defence, after the delay time when panic alarm(24 Hours Active mode), it will trigger these 9th targets which can be set in the right side window. The time unit is second.

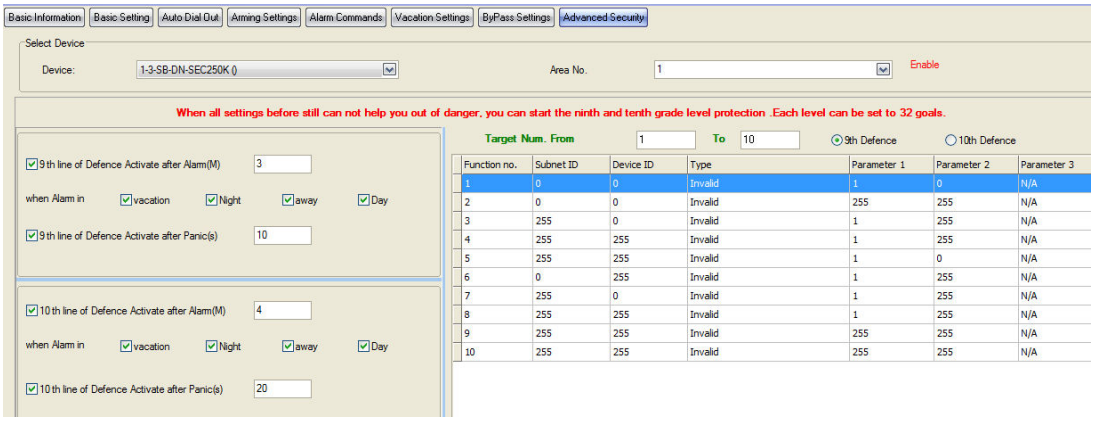
- 10th line of Defence Activate after Alarm(M)

Set the delay time for the 10th line defence, after the delay time when normal alarm, it will trigger these 10th targets which can be set in the right side window. The time unit is minute.

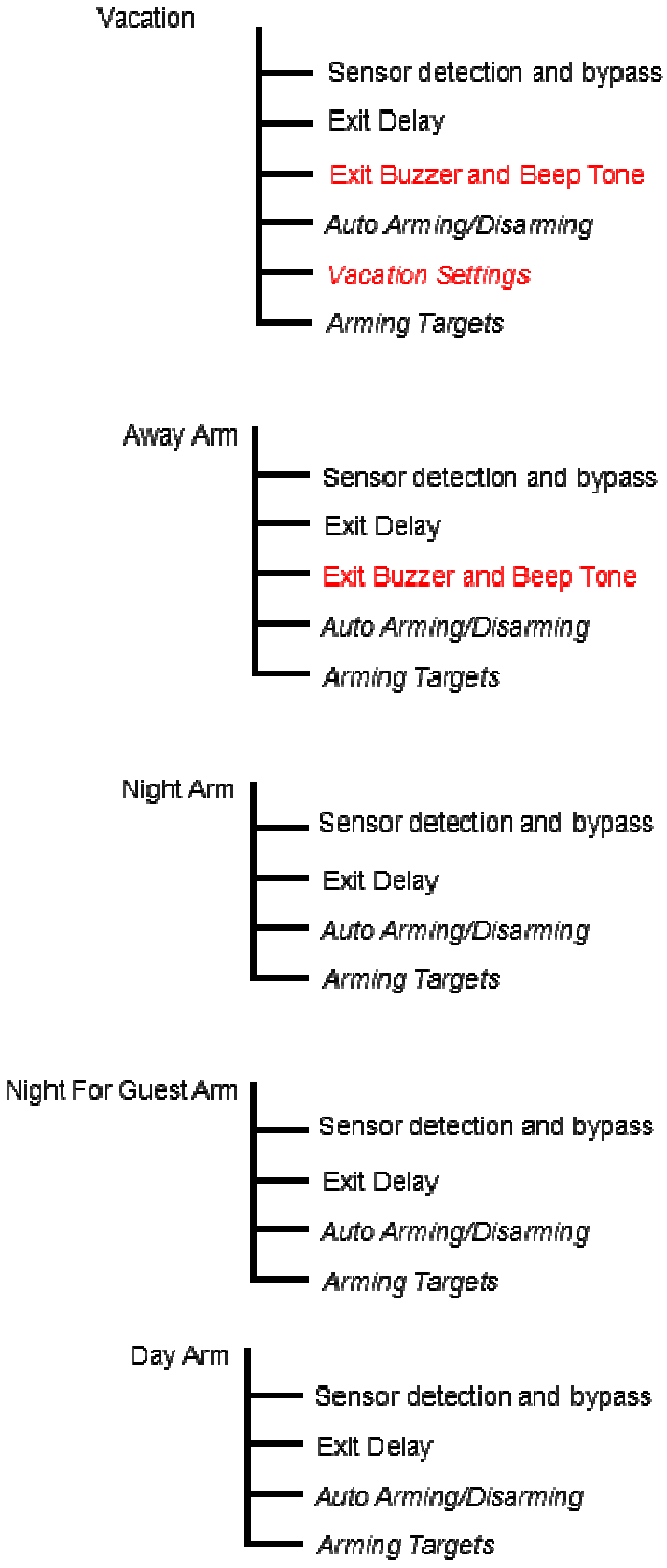
Can select this 10th line defence for these normal alarm: Vacation, Night, Away, Day.

- 10th line of Defence Activate after Panic(S)

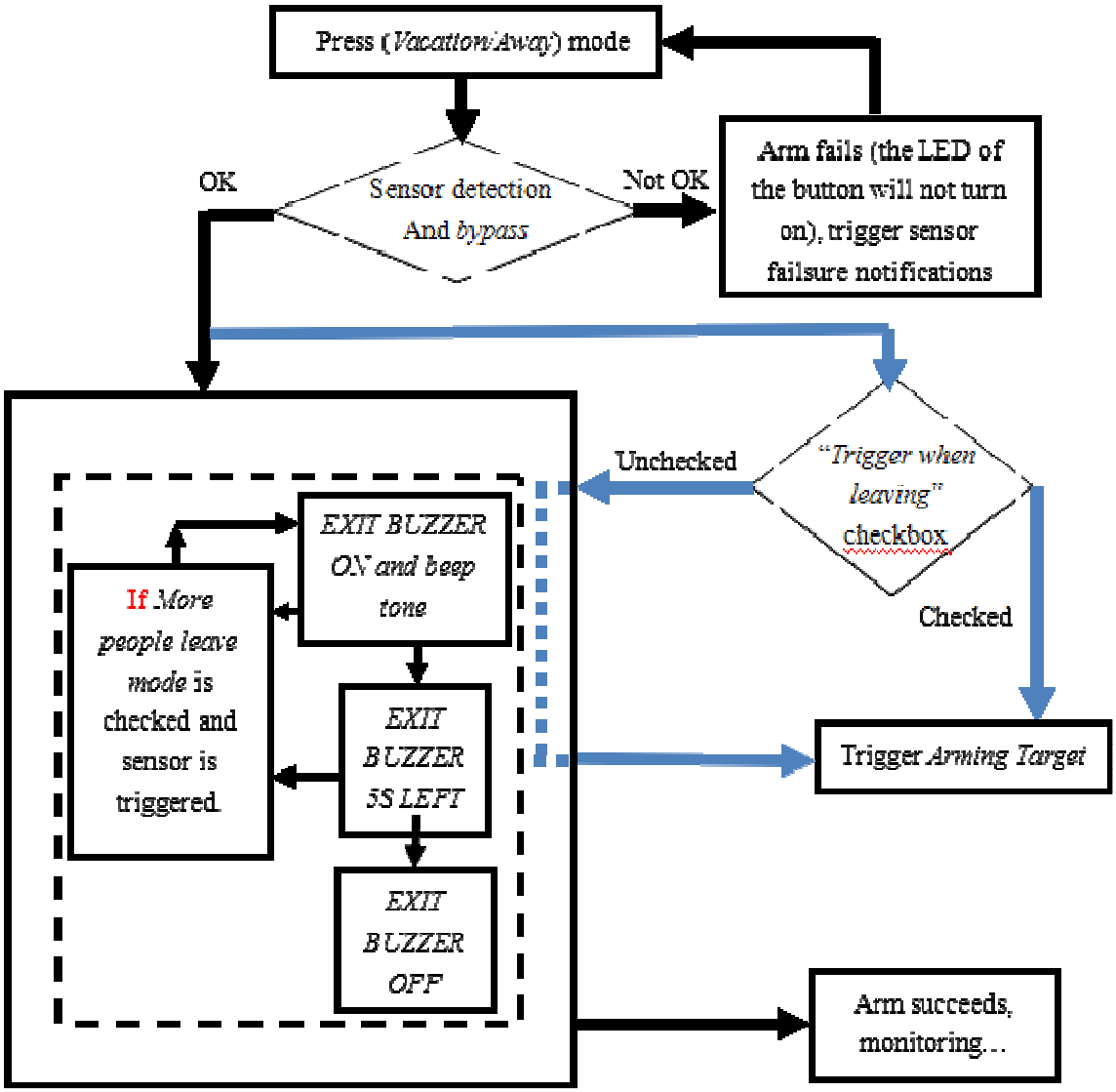
Set the delay time for the 10th line defence, after the delay time when panic alarm(24 Hours Active mode), it will trigger these 10th targets which can be set in the right side window. The time unit is second.



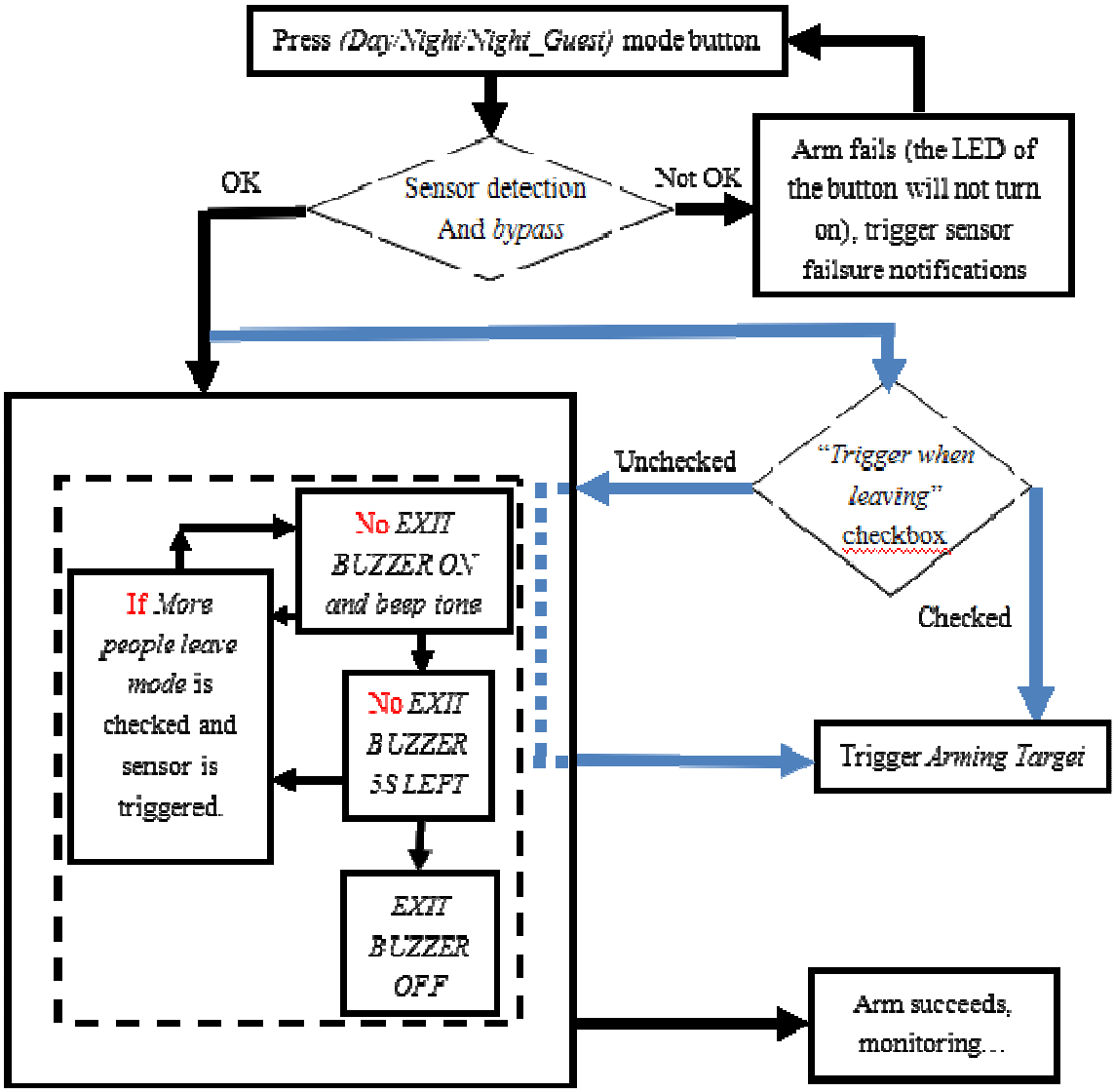
5.9Arm Flow


Vacation
Sensor detection and bypass
Exit Delay
Exit Buzzer and Beep Tone
Auto Arming/Disarming
Vacation Settings
Arming Targets
Away Arm
Sensor detection and bypass
Exit Delay
Exit Buzzer and Beep Tone
Auto Arming/Disarming
Arming Targets
Night Arm
Sensor detection and bypass
Exit Delay
Auto Arming/Disarming
Arming Targets
Night For Guest Arm
Sensor detection and bypass
Exit Delay
Auto Arming/Disarming
Arming Targets
Day Arm
Sensor detection and bypass
Exit Delay
Auto Arming/Disarming
Arming Targets

5.9.1 Vacation/Away Mode

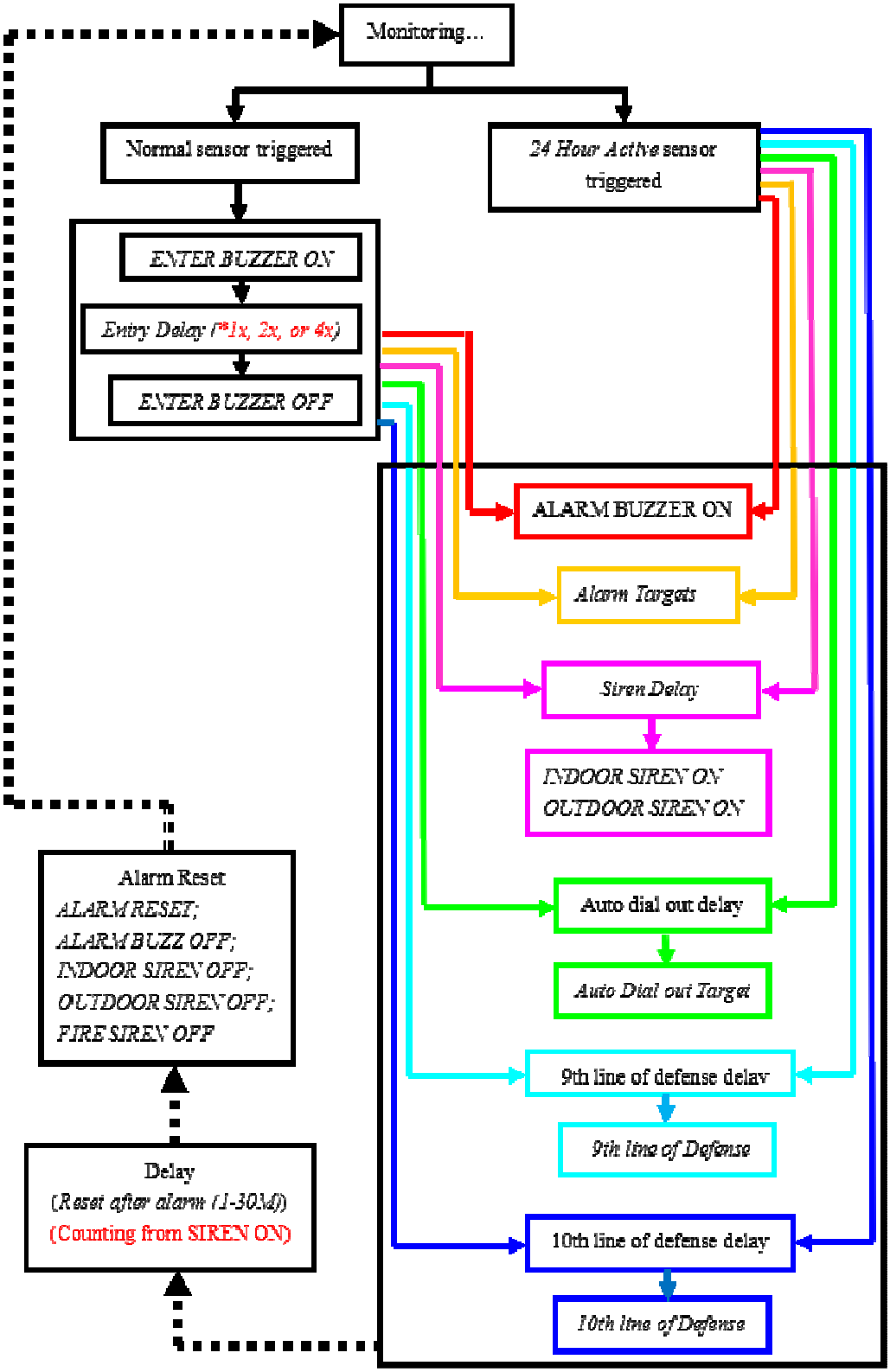


5.9.2 Day/Night/Night_Guest) Mode

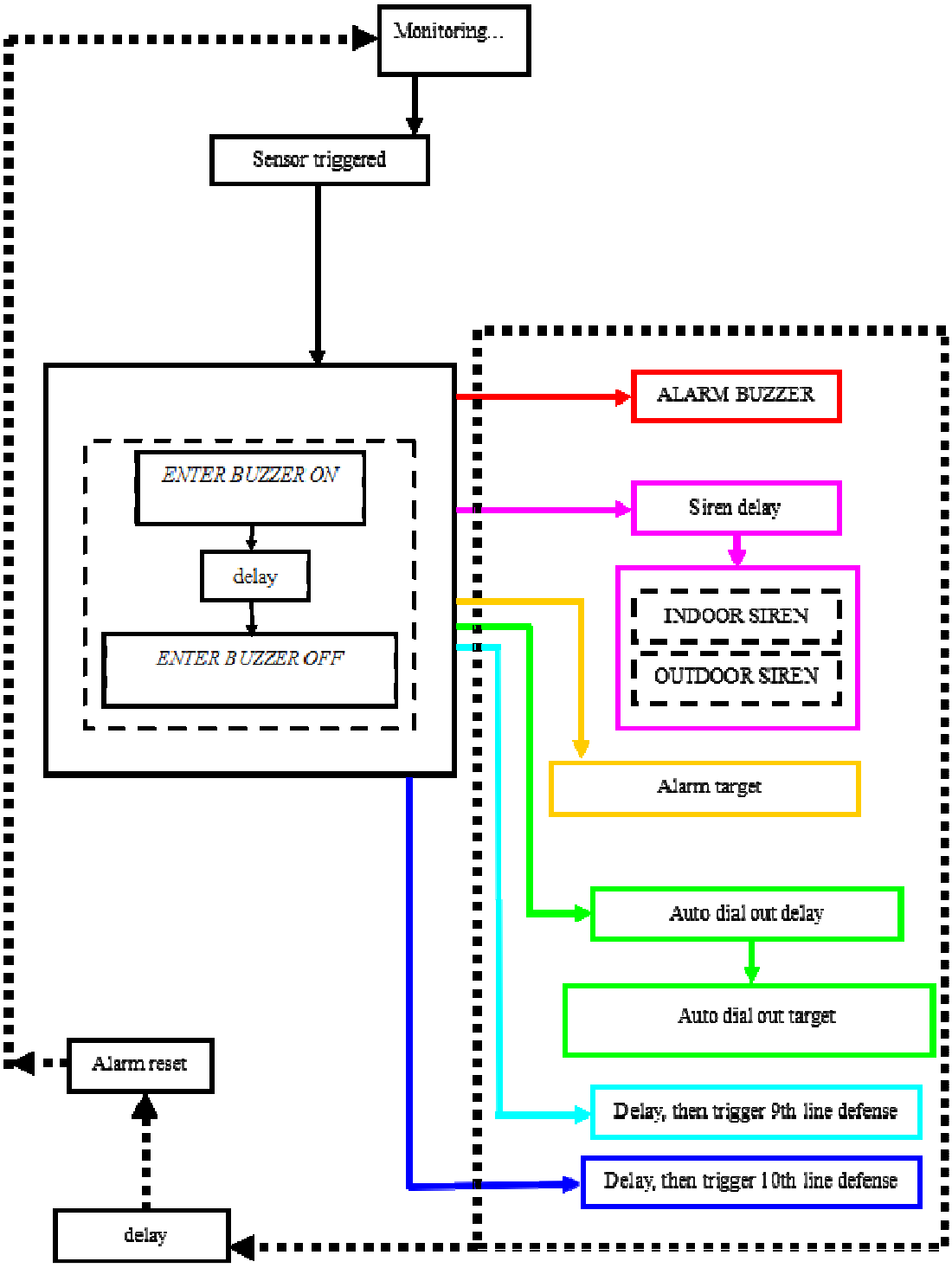


5.10Alarm Flow

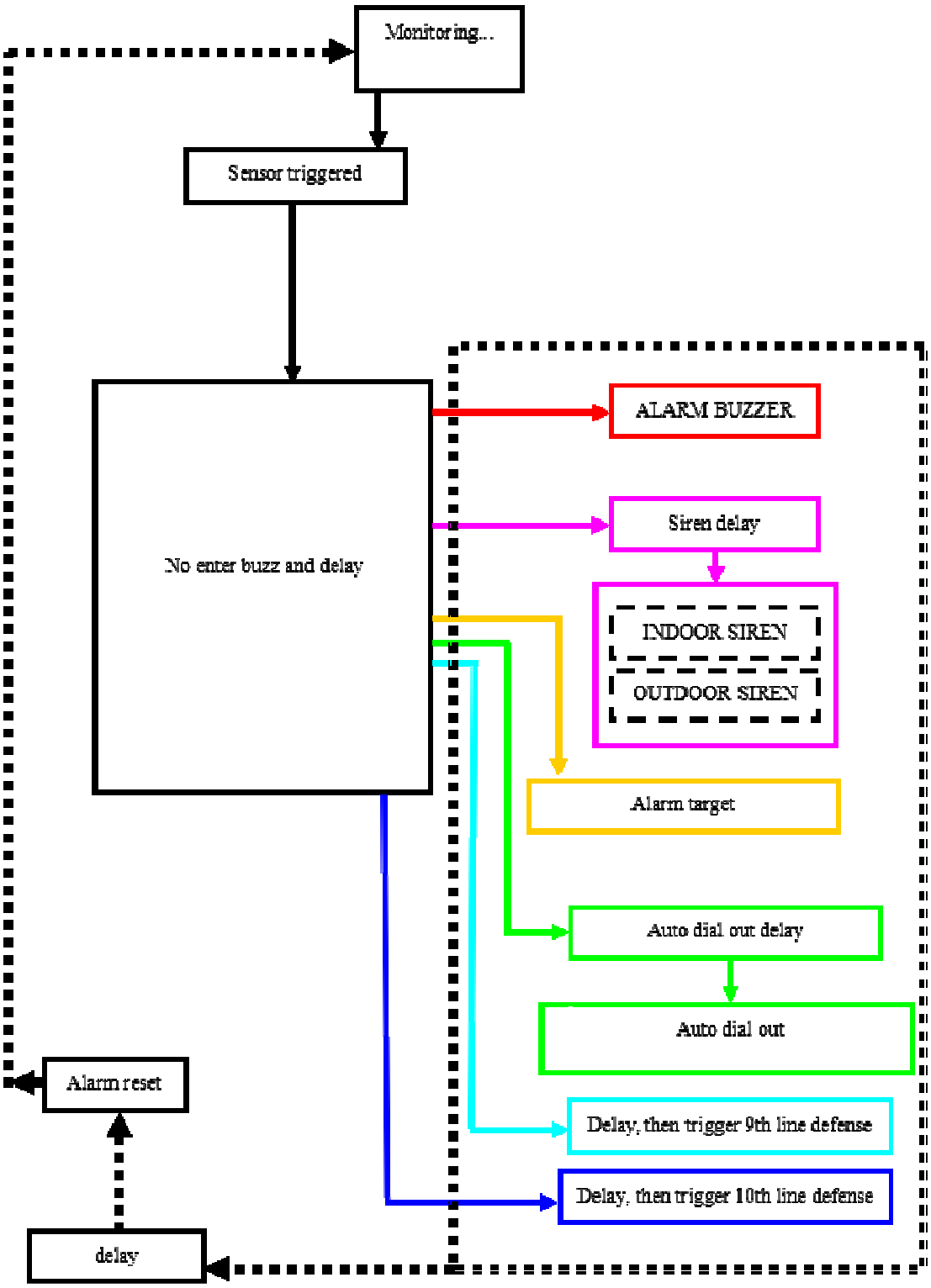
5.10.1General flow



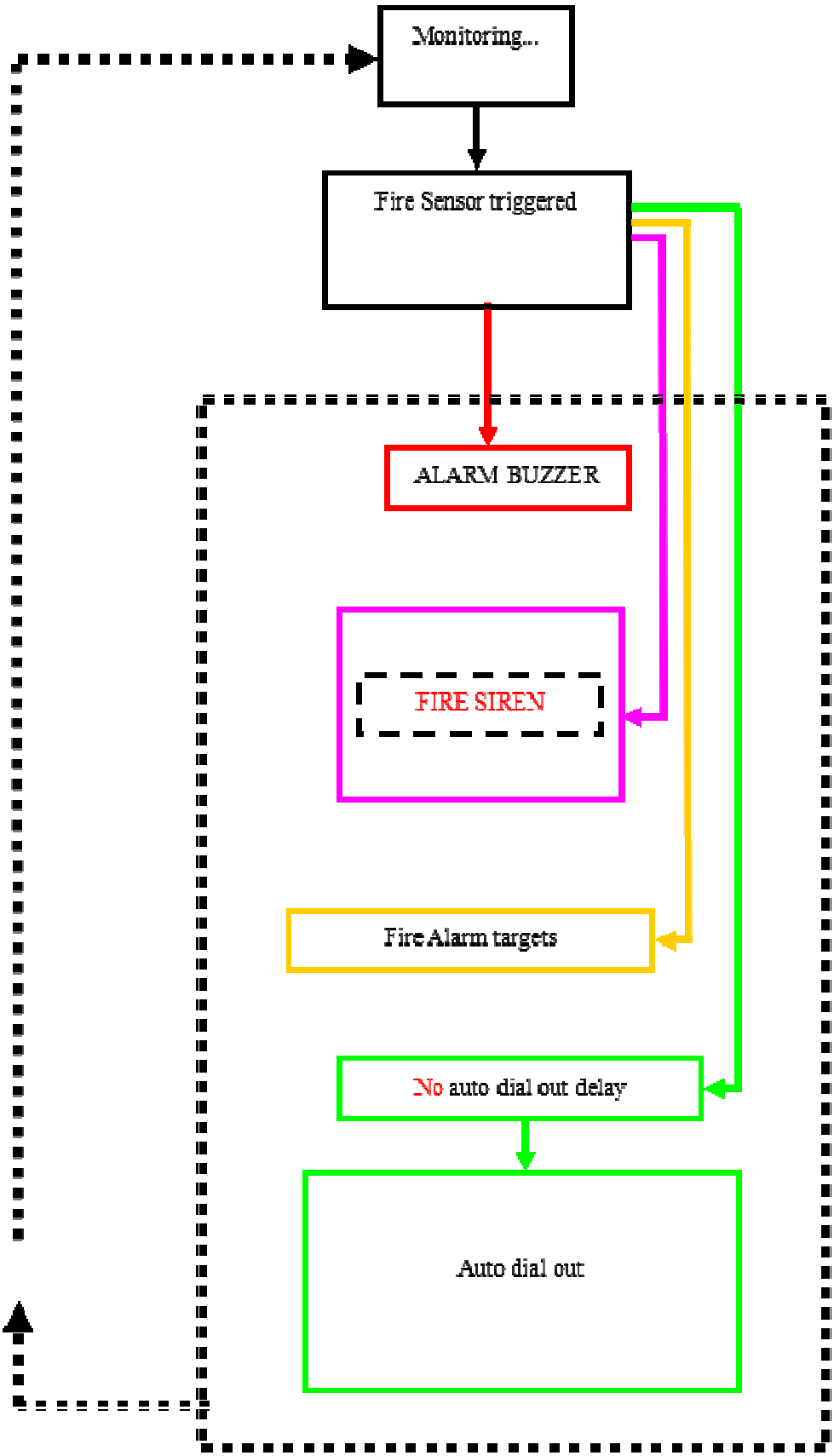
5.10.2 Vacation/Away/Night for Guest/Day Mode



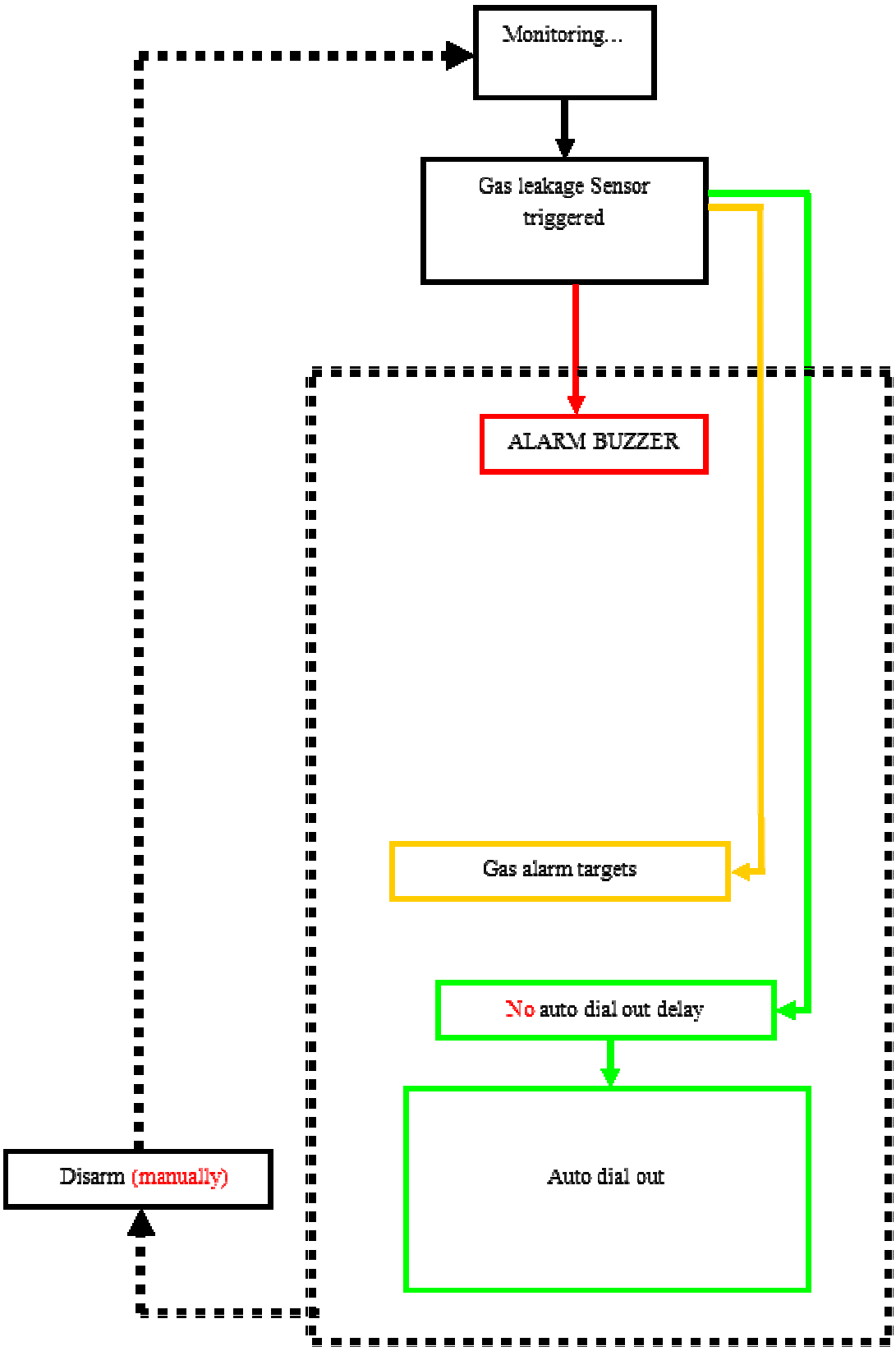
5.10.3Night Mode



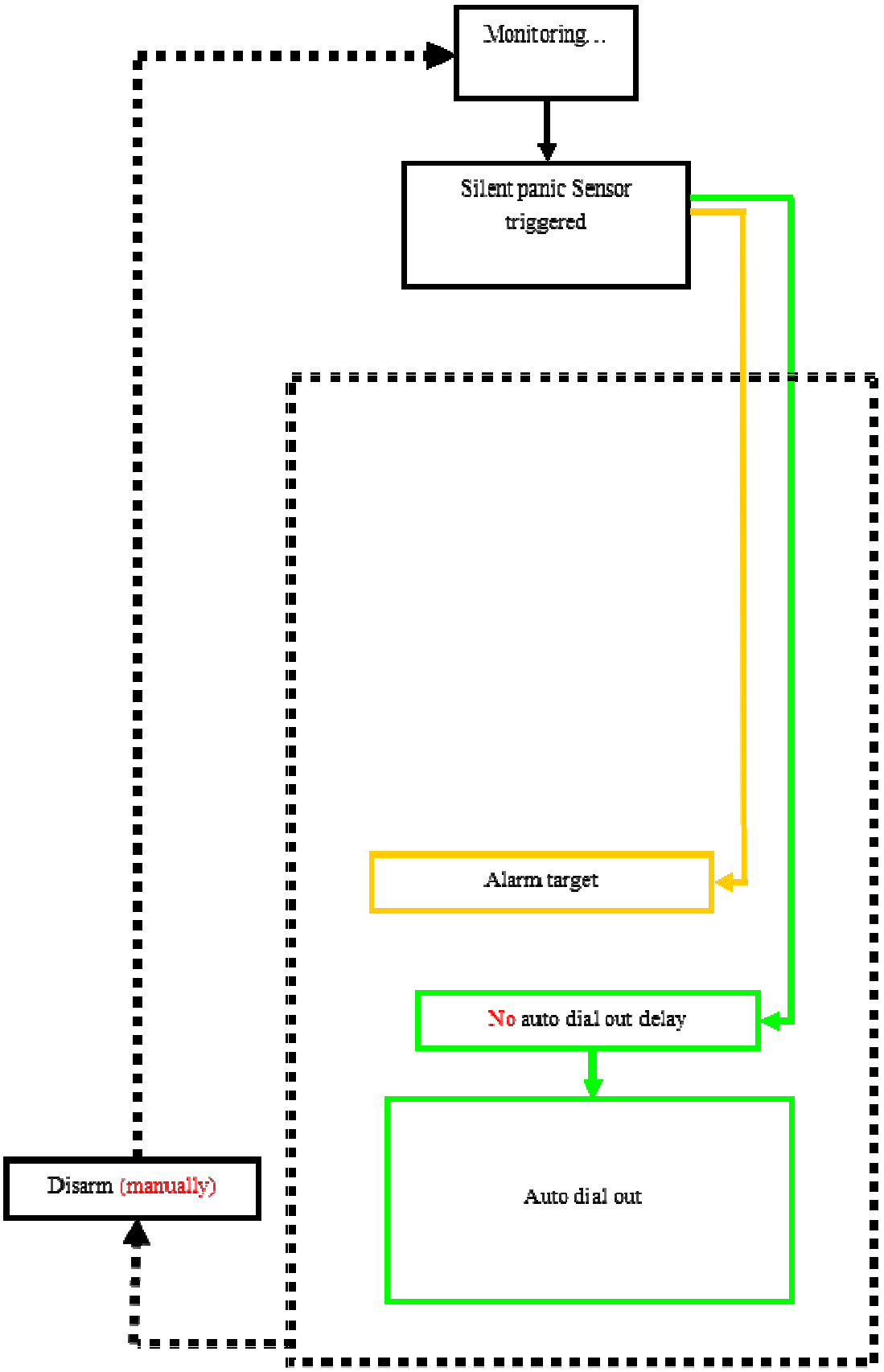
5.10.4 Fire Mode



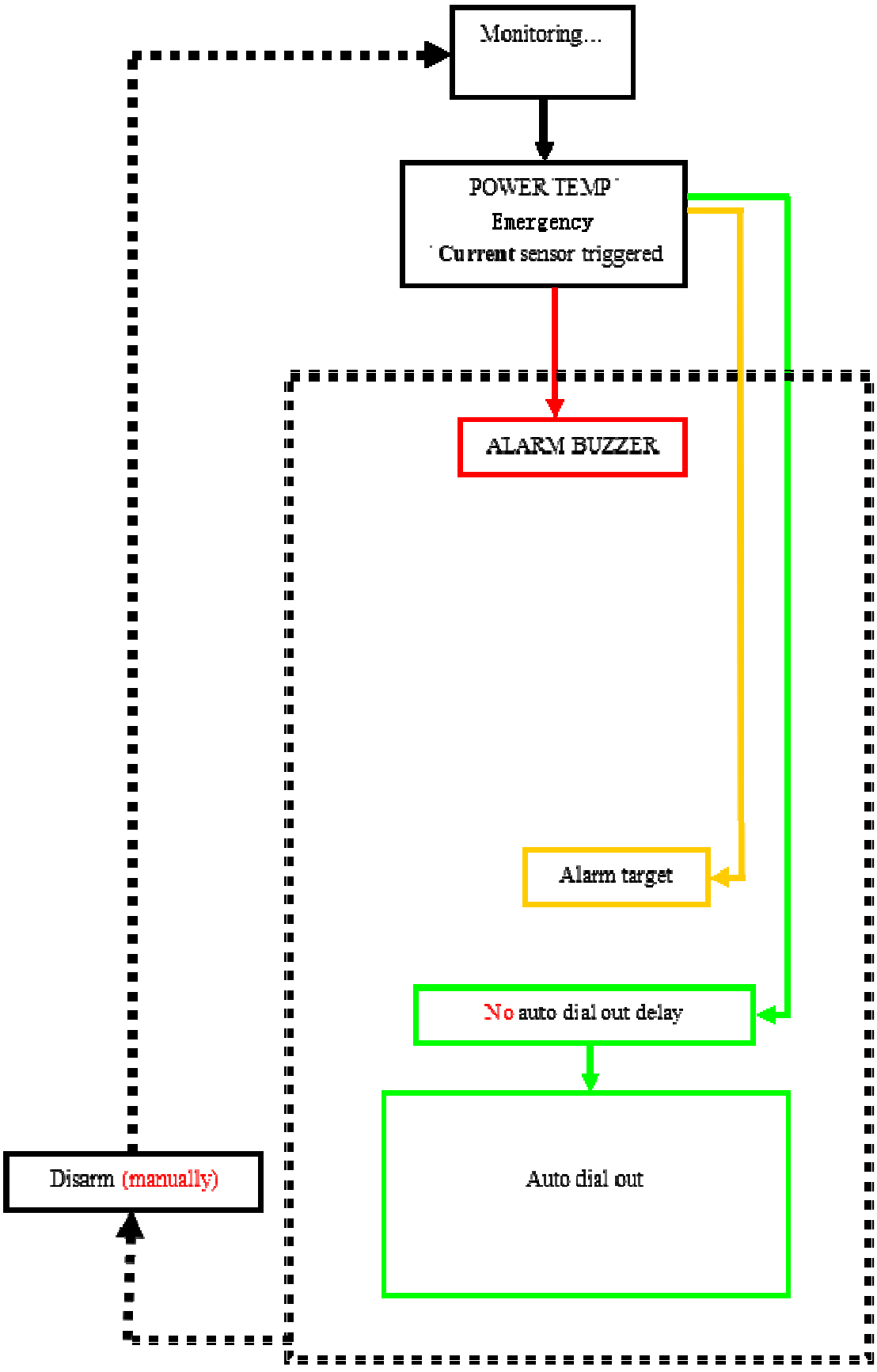
5.10.5 Gas leakage



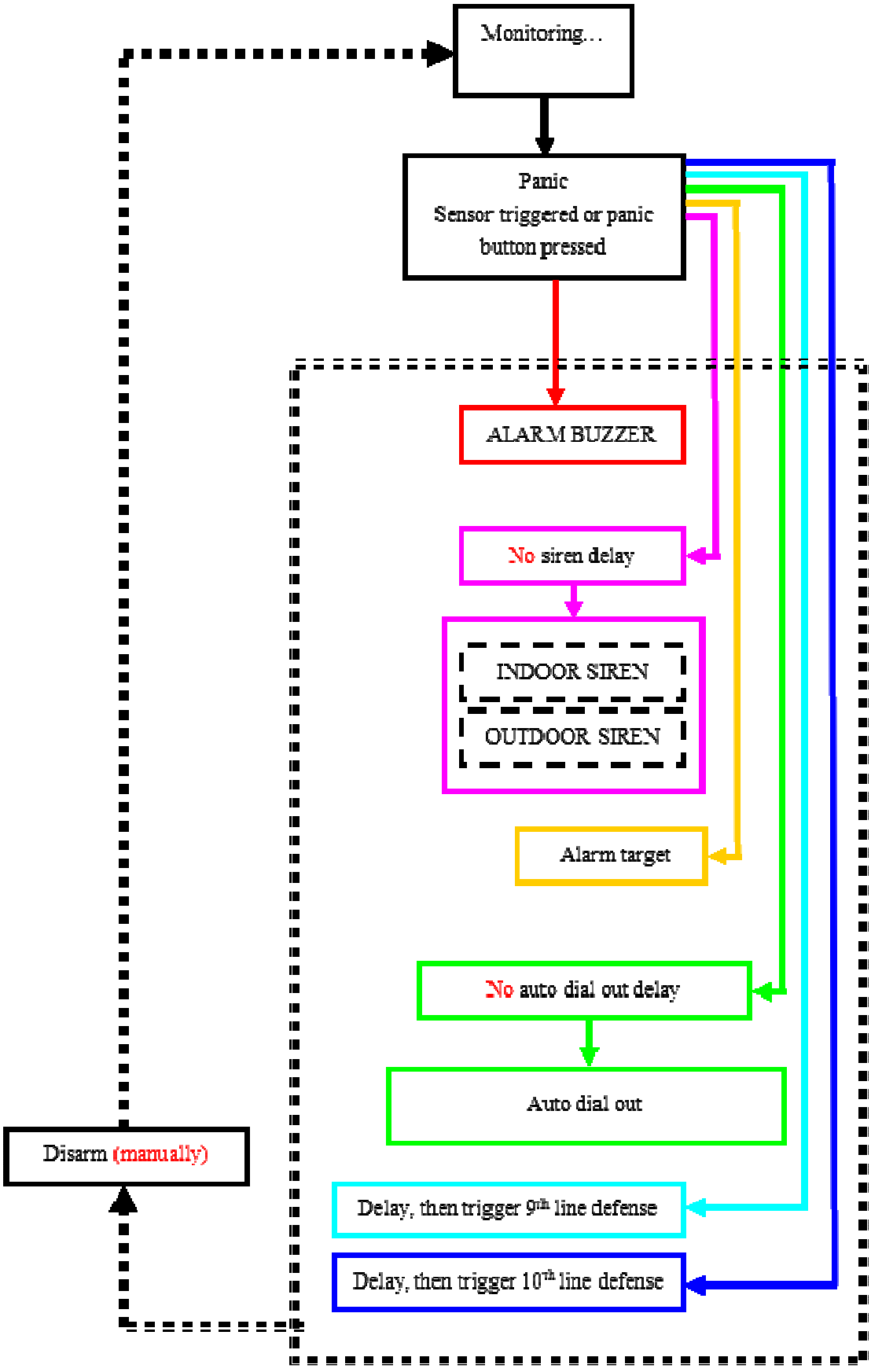
5.10.6 Silent panic



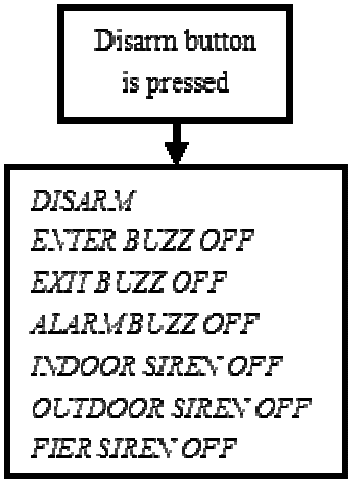
5.10.7POWER/TEMP/ Emergency/ Current



5.10.8 Panic


Monitoring…
Panic
Sensor triggered or panic button pressed
ALARM BUZZER
No siren delay
INDOOR SIREN
OUTDOOR SIREN
Alarm target
No auto dial out delay
Auto dial out
Disarm (manually)
Delay, then trigger 9th line defense
Delay, then trigger 10th line defense

5.11Disarm

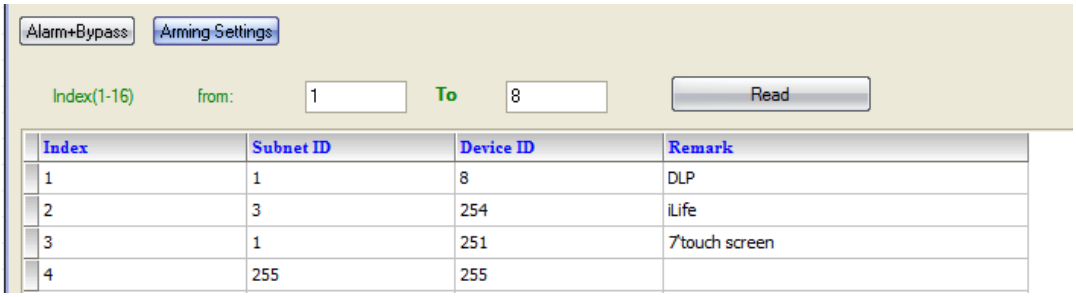


6. Application

Security module work with 8in1 sensor, Z-Audio, HDL-MPL8.48, etc. to show the functions of arm(vacation mode), disarm and alarm.

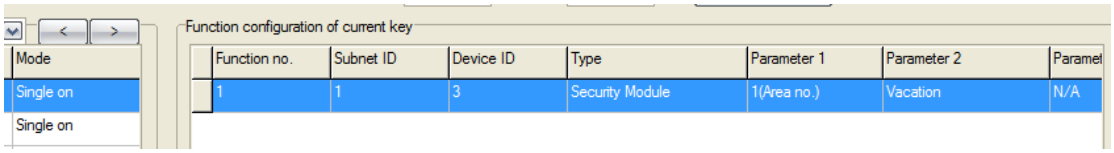
6.1 Panel Settings

a) Authorize the HDL-MPL8.48 to arm and disarm the system in Arming Settings window of in Bypass Settings page, Subnet/Device ID is 1/8.

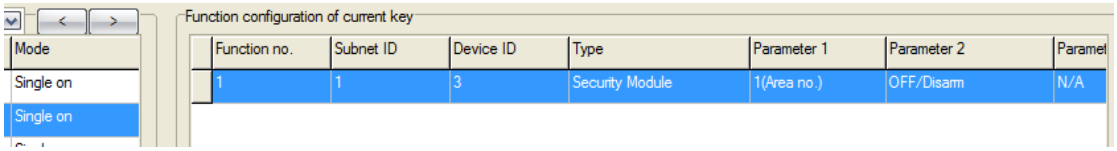


Index	Subnet ID	Device ID	Remark
1	1	8	DLP
2	3	254	iLife
3	1	251	7'touch screen
4	255	255	

b) Go to HDL-MPL8.48 panel, configure button 1 to arm for vacation mode, key mode is 'single on', Subnet/Device ID is 1/3, key type is 'security module', parameter1(area No.) is 1, and parameter2 is 'vacation'.

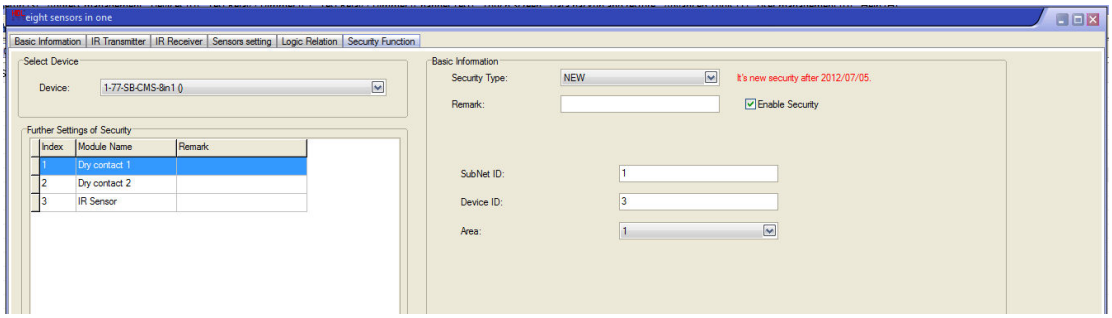


c) Configure button 2 to disarm, parameter2 is ‘disarm’, other settings are same as button 1.

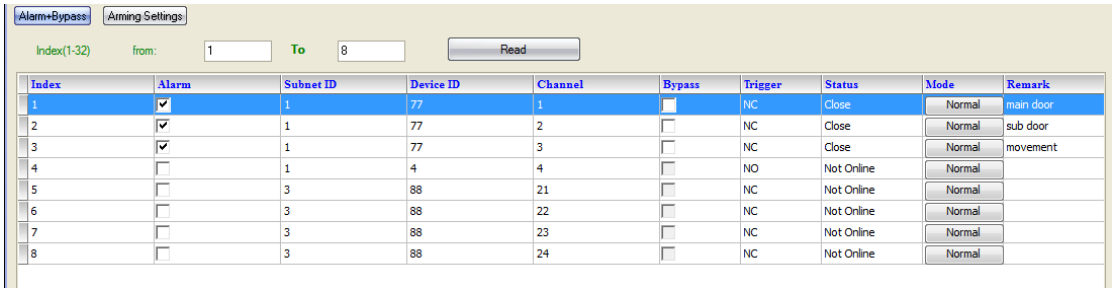


6.2 Sensor Settings

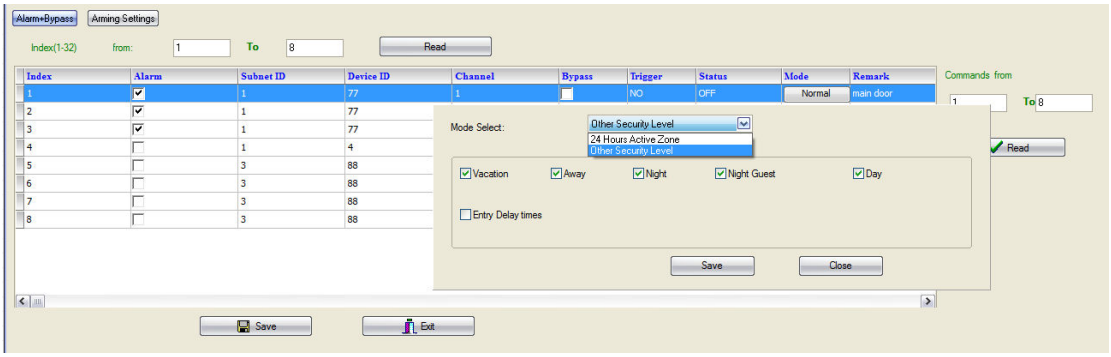
a) Go to 8in1’s Security Function page, enable the security function of dry contact 1, dry contact 2 and IR sensor. Input the security module’s ID, here is 1/3, and select area 1.



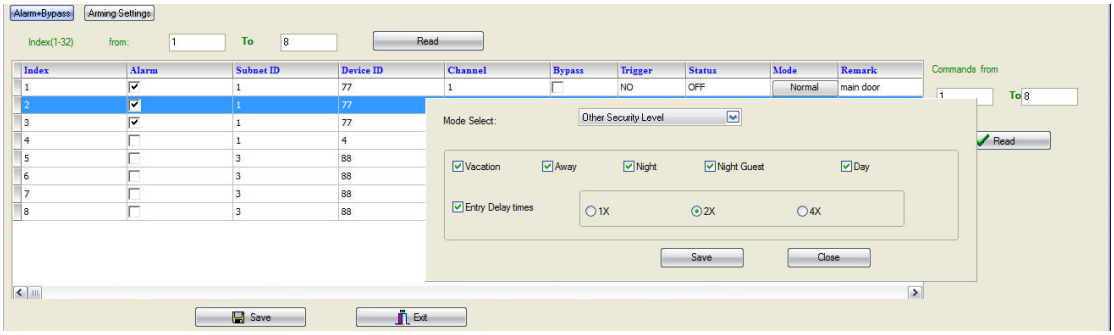
b) Go to security module’s Bypass Settings page, enable the alarm for index 1/2/3, input the 8in1 sensor’s ID, here is 1/77, and channel 1/2/3(the index No. in 8in1 sensor). Close the doors, and make sure there is no movement in the detection range of 8in1, then refresh this page, you will be able to get the normal status of these three channels in the ‘Status’ column, here channel1, channel2 and channel 3 status are ‘Close’, then select ‘NC’ for them in ‘Trigger’ column(if it shows ‘OFF’ under normal situation, then select ‘NO’ for it)



c) Click the button in ‘Mode’ column of channel 1, select ‘Other Security Level’ for mode type, enable ‘Vacation’, then save.



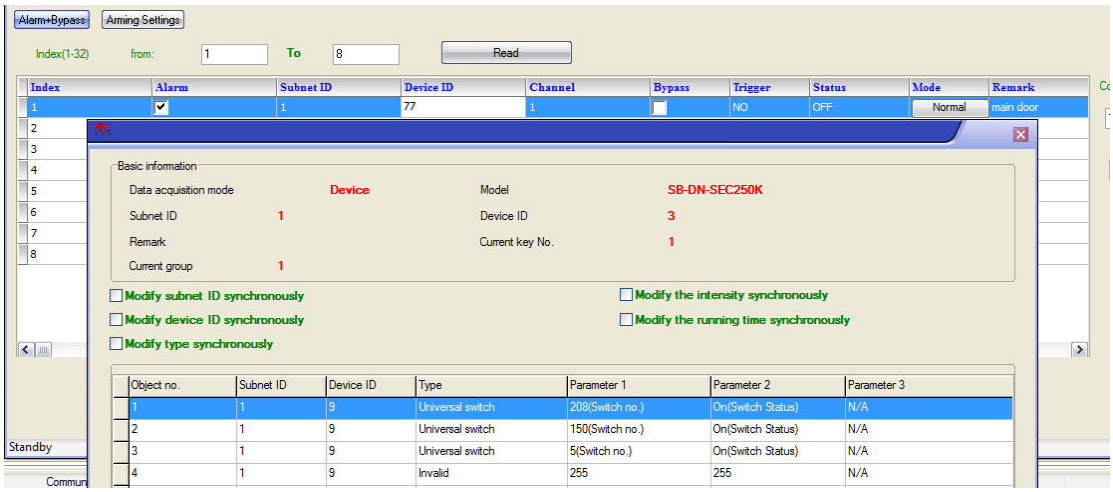
d) Click the button in ‘Mode’ column of channel 2, select ‘Other Security Level’ for mode type, enable ‘Vacation’, enable ‘entry delay times’, select ‘2X’(suppose this door is far away from the HDL-MPL8.48, and it takes more time to disarm when enter from this door, then can select its entry delay time is two/four times of Entry Delay), then save.



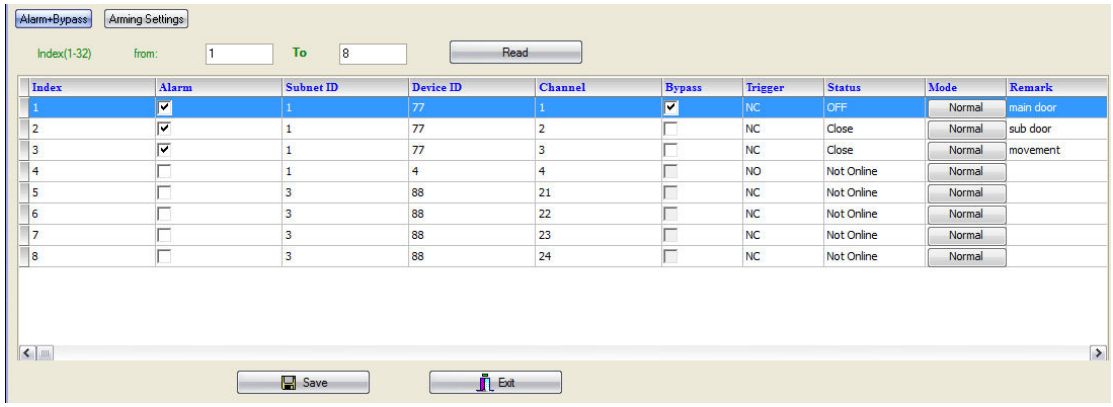
e) When press the arm button, the senor will start to detect the status of these three channels to check whether they are in normal states or not. If all of them are ‘Close’, then the security will start to arm after Exit Delay. If one of them is not in the normal state(e..g. channel 1 shows ‘OFF’ status, the main door is still open), then it will fail to arm until you close this door.

Index	Alarm	Subnet ID	Device ID	Channel	Bypass	Trigger	Status	Mode	Remark
1	☑	1	77	1	☐	NC	OFF	Normal	main door
2	☑	1	77	2	☐	NC	Close	Normal	sub door
3	☑	1	77	3	☐	NC	Close	Normal	movement
4	☐	1	4	4	☐	NO	Not Online	Normal	
5	☐	3	88	21	☐	NC	Not Online	Normal	
6	☐	3	88	22	☐	NC	Not Online	Normal	
7	☐	3	88	23	☐	NC	Not Online	Normal	
8	☐	3	88	24	☐	NC	Not Online	Normal	

The users can double click index1/2/3 rows to set some warning targets when fails to arm. e.g. if chann1 is OFF when trying to arm, will play the 5th warming tone from the Z-Audio,



f) Also users can enable the 'Bypass' function of channel 1, then the sensor will not detect this channel status when trying to arm. This is very useful when you need to walk out through one door after arm from the DLP Panel inside the room.

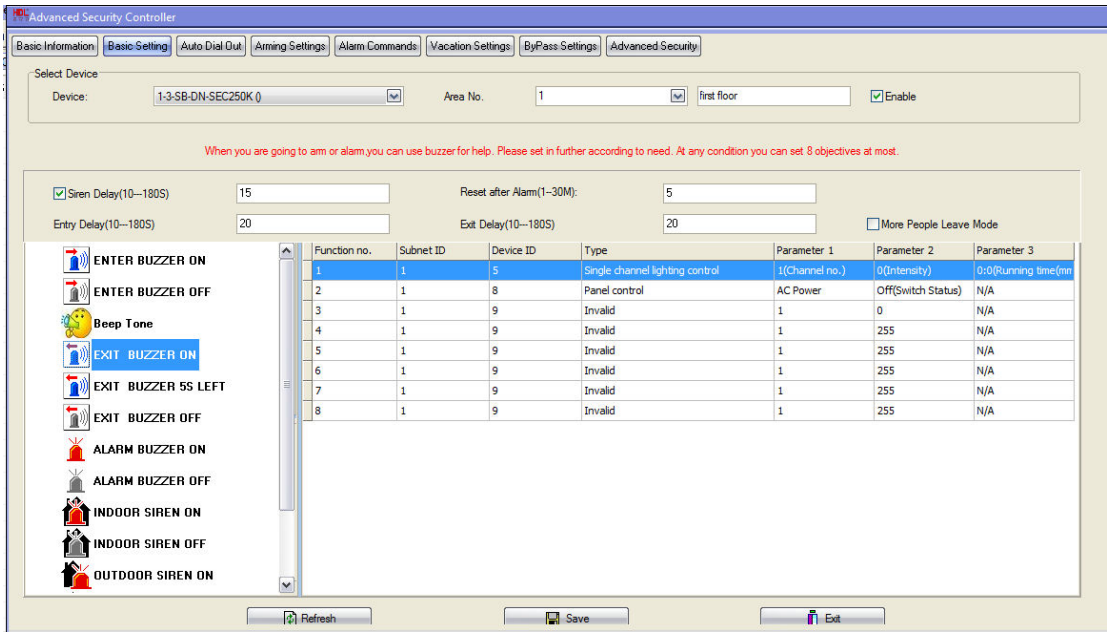


6.3 Vacation Settings

1. Before leave for vacation, press the 'vacation mode' button, turn off AC and light, the music player will play a voice hint. After 20s (Exit Delay), the security module starts to arm the house.

a) Set 20s for Exit Delay

b) Turn off channel 1 of relay(Subnet/Device ID is 1/5) and AC which is controlled by HDL-MPL8.48(Subnet/Device ID is 1/8) in 'EXIT BUZZER ON' window (user can set any targets they need, then when press arm button, it will trigger these targets)

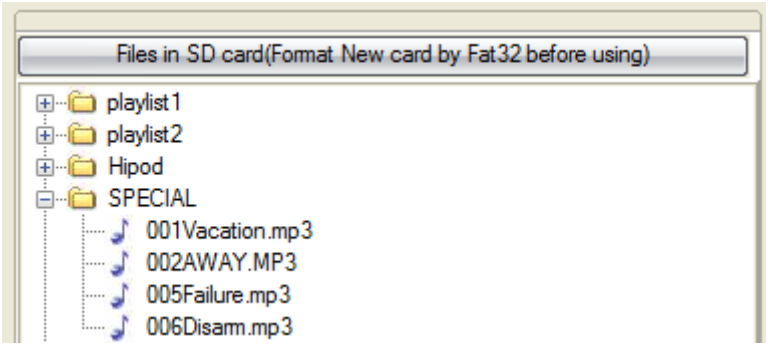


c) Trigger the Z-Audio (create a folder and name it ‘special’ in SD card, put some voice files (.mp3 and sort them with a header ‘001xx’, ‘002x’, ‘003xx’…)) to play a voice hint from the ‘VACATION ARM’ window, need to set three commands here(Check the universal switch list of Z-Audio):

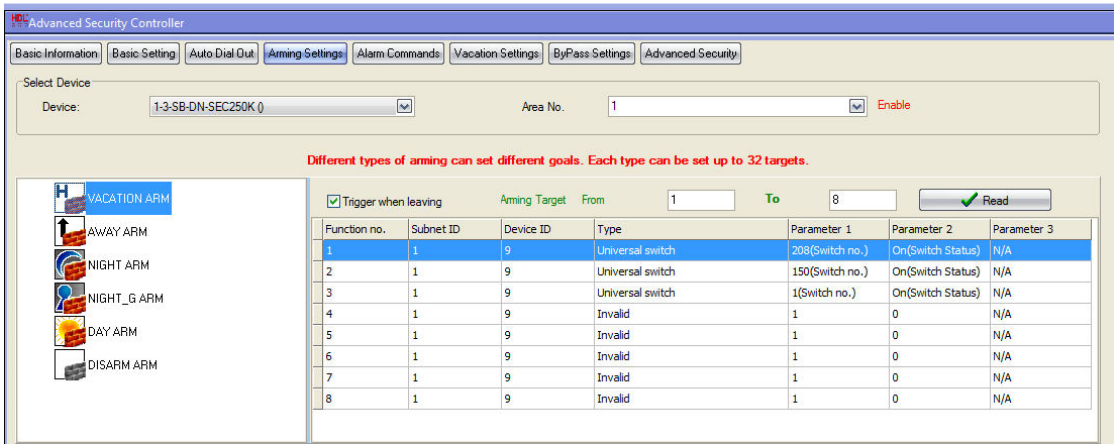
1- send universal switch 208, ON(Select Audio source – SD Card)

2- send universal switch 150, ON(Select List – 150 is reserved for folder ‘special’)

3- send universal switch 1-149, ON(Select the number that at front of voice)

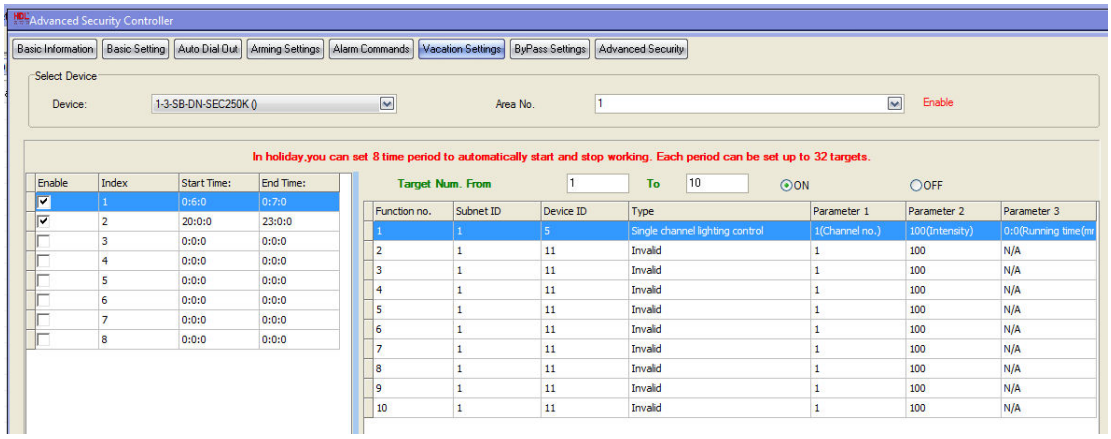


Here the voice hint for vacation is ‘001Vacation’, then set three commands to trigger it. The ID of Z-Audio is 1/9, the third command’s parameter1 is 1.

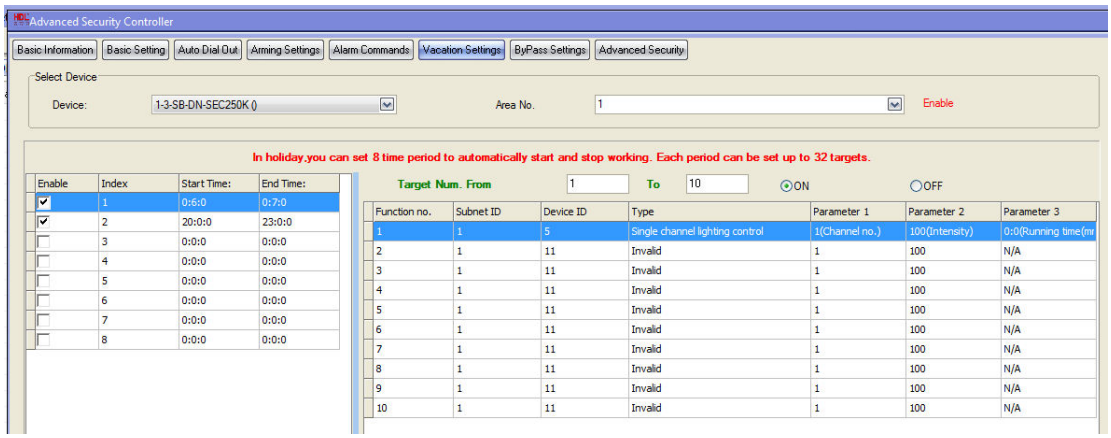


2. The room lights will turn on at 6:00, and turn off at 7:00 in the morning, and turn on at 20:00, turn off at 23:00 in the evening.

a) Enable index 1, set the ‘Start Time’ is 6:00, and the ‘End Time’ is 7:00.

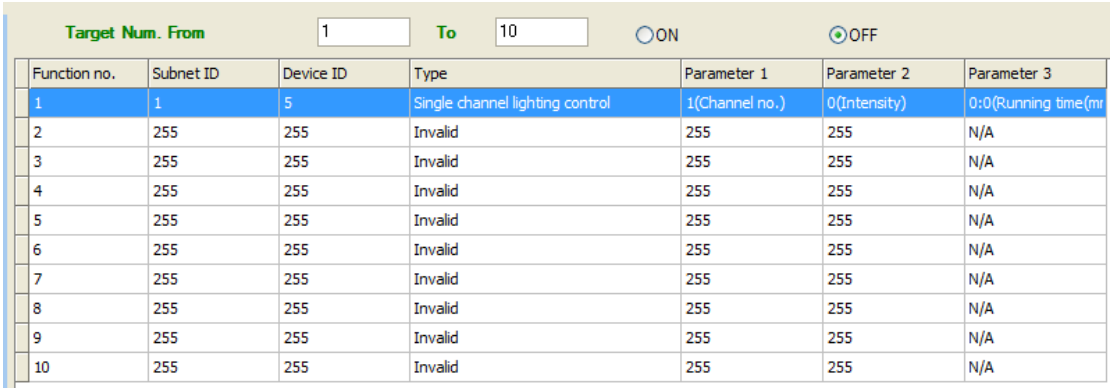


b) Select ‘ON’ in the right side, setup to turn on channel1 of relay(ID is 1/5). When the time reaches 6:00, it will turn on it.



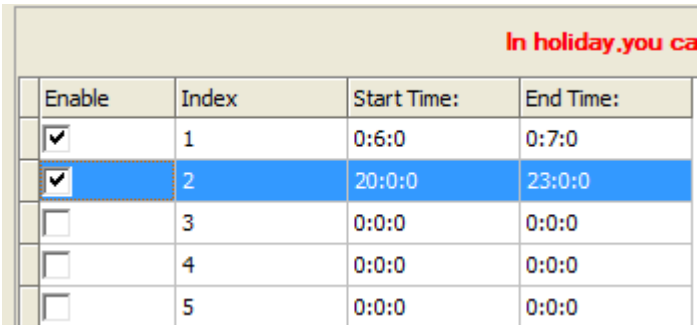
c) Select ‘OFF’ in the right side, setup to turn off channel1 of relay(ID is 1/5). When the

time reaches 7:00, it will turn off it.



Function no.	Subnet ID	Device ID	Type	Parameter 1	Parameter 2	Parameter 3
1	1	5	Single channel lighting control	1(Channel no.)	0(Intensity)	0:0(Running time(mr
2	255	255	Invalid	255	255	N/A
3	255	255	Invalid	255	255	N/A
4	255	255	Invalid	255	255	N/A
5	255	255	Invalid	255	255	N/A
6	255	255	Invalid	255	255	N/A
7	255	255	Invalid	255	255	N/A
8	255	255	Invalid	255	255	N/A
9	255	255	Invalid	255	255	N/A
10	255	255	Invalid	255	255	N/A

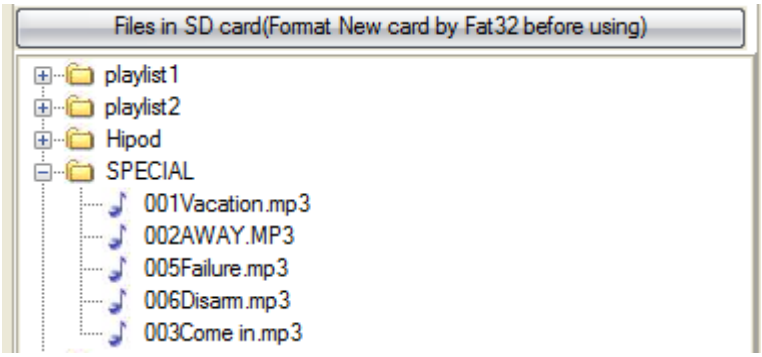
d) Enable index 2, set the ‘Start Time’ is 20:00, and the ‘End Time’ is 23:00, follow above settings to turn on lights at 20:00, turn off at 23:00 in the evening.



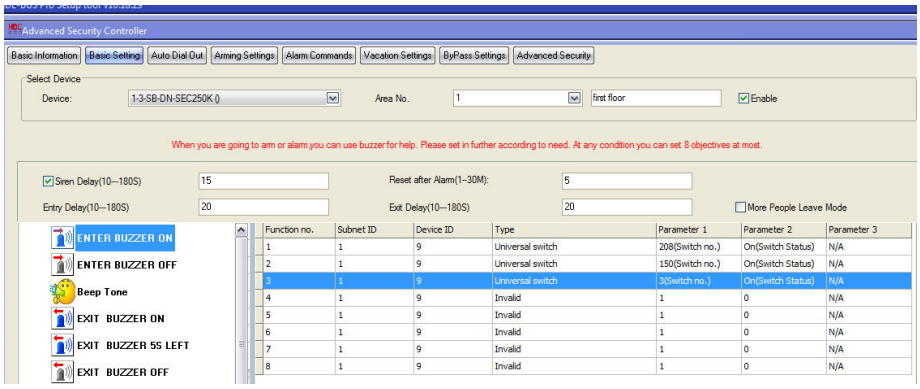
Enable	Index	Start Time:	End Time:
☑	1	0:6:0	0:7:0
☑	2	20:0:0	23:0:0
☐	3	0:0:0	0:0:0
☐	4	0:0:0	0:0:0
☐	5	0:0:0	0:0:0

3. When there is someone opening the door, then 8in1 sensor’s detected status will change(no movement -> movement, dry contact: connected ->disconnected), it will report to the security module, then security module will trigger to the Z-Audio to play ‘welcome home’ voice hint.

a) Make sure there is one voice hint for come back in special folder of SD Card. Here it is ‘003Come in’



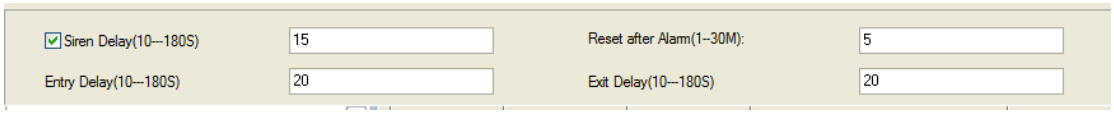
b) Go to 'ENTER BUZZER ON', setup to trigger the Z-Audio(ID is 1/9) to play the 3rd voice when open the door.



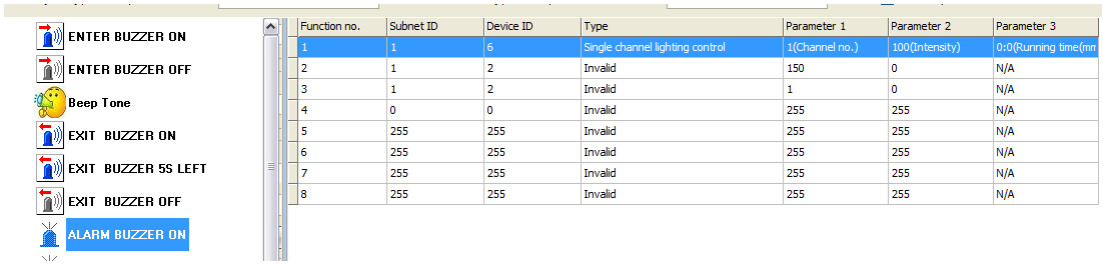
4. The house owner go to the HDL-MPL8.48 to press the disarm button within 20s (Entry Delay), then security module will work under the non-monitoring mode. Better to set password for this arm/disarm page, then only the owner can access it to control.

5. If it's not the house owner, after 20s (Entry Delay), will turn to alarm. After 5 minutes of alarm, still not disarm, stop alarm. When there are more triggers from 8in1 sensor, it will start to alarm again, and that cycle repeats.

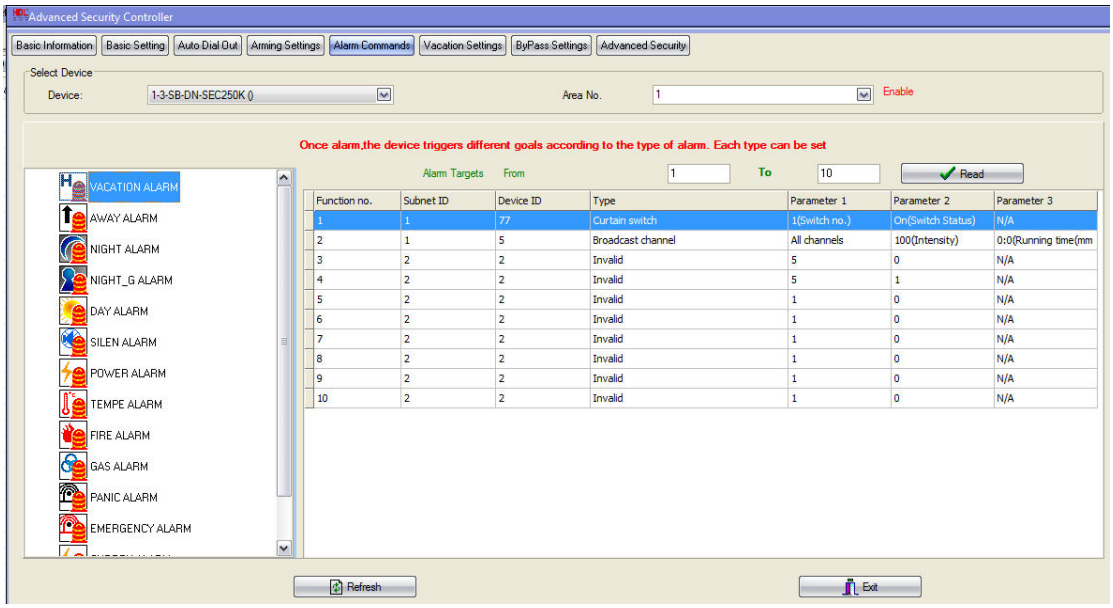
a) Set 20s for Entry Delay, 15s for Siren Delay, 5 minutes for Reset after Alarm.



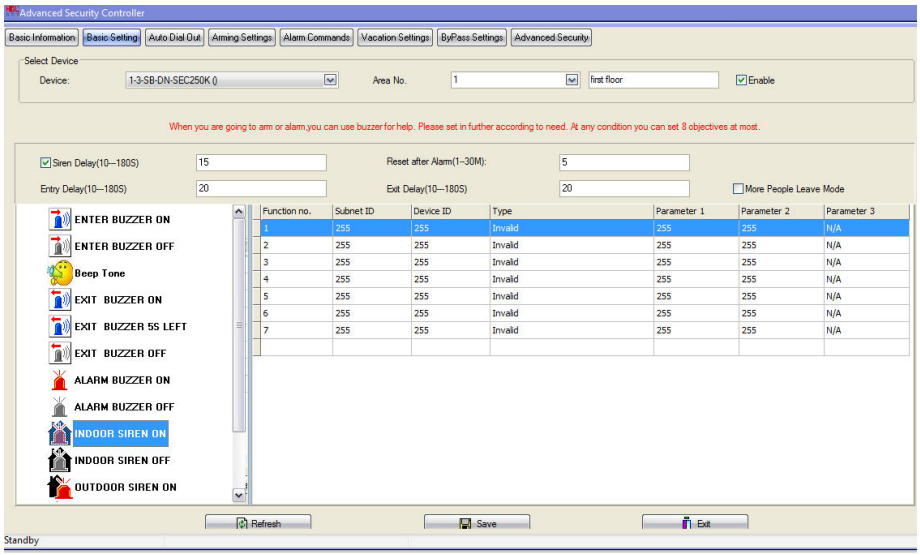
b) Can set to trigger the alarm buzzer after 20s, e.g. the alarm buzzer is connected to channel 1 of one relay(ID is 1/6), then can set as below:



c) It will trigger the alarm targets in the 'VACATION ALARM' after 20s at the same time. Here set to open the curtain and turn on lights when alarm.



d) After the Siren Delay, here it's 15s, if still not disarm, it will trigger the targets in 'INDOOR SIREN ON' and 'OUTDOOR SIREN ON'.



After 5 minutes, it will restart into the monitoring state, if there are more triggers, it will trigger the buzzer, siren, alarm and so on then realize that monitor and alarm circularly.

7. Note

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