HDL-MSM.431

User Manual

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GZ HDL Technology Co., L

Modification Record

This record accumulates instructions for each document update. The latest version of the document contains updates from all previous document versions。

Num	Version	Modification Content	Date
1	V1.0.0	First official release	2020/08/23

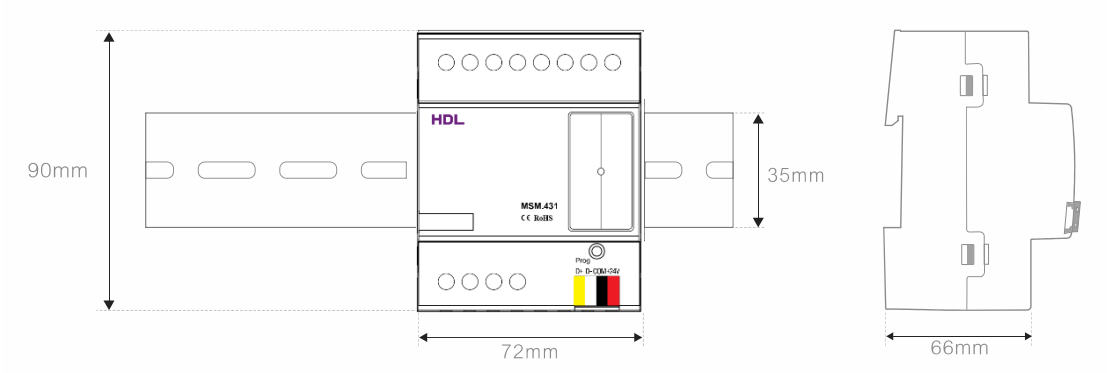
1 Overview

1.1 General Information

1.1.1 Description

HDL-MSM.431 is a security module, from the sensor status and logic implement, it can manage 4 independent zones' arming and alarm. Up to 32 sensors can be used to detect in each area. Normally use DLP panel, TouchLife/iLife/HDL ON to arm and disarm the system.

1.1.2 Device Description



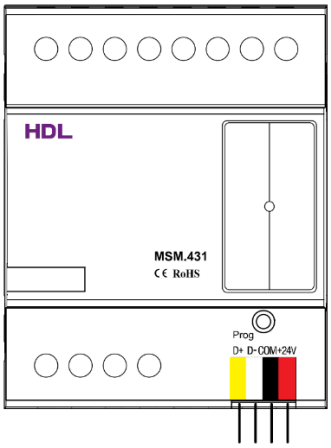
- DB Box installation

1.2 Functionalities

- Manage 4 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

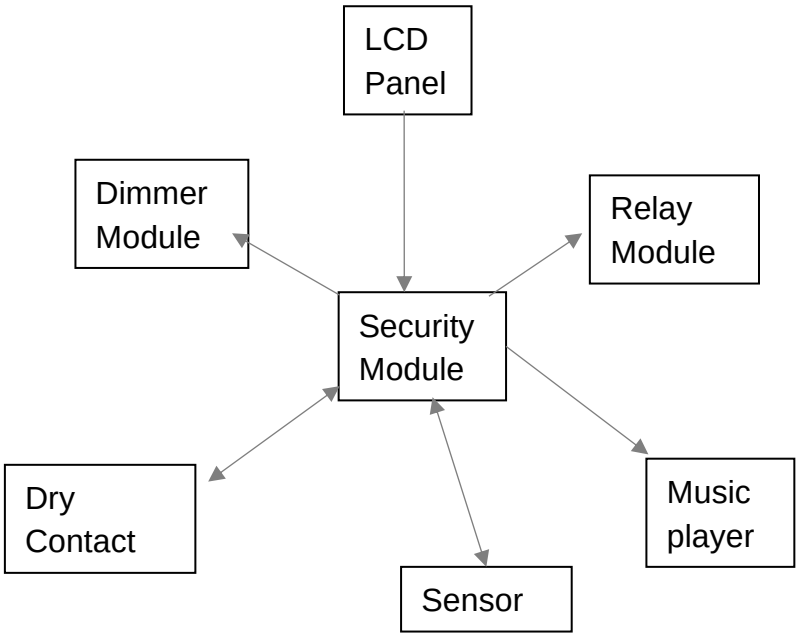
1.3 Connections

Device connection:



HDL Buspro

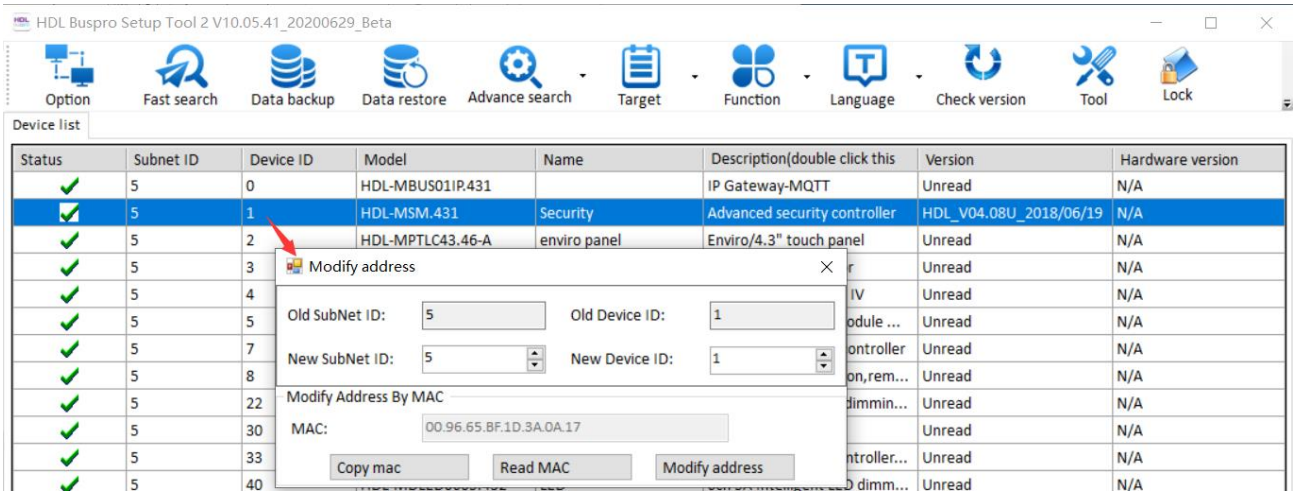
System Connection:



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

2 Software Configurations

2.1 Device Information



Double click Address: Read MAC and modify address. Subnet ID must same with gateway's subnet ID. Device ID must be unique.

Double click Model/Description: Enter to setup page.

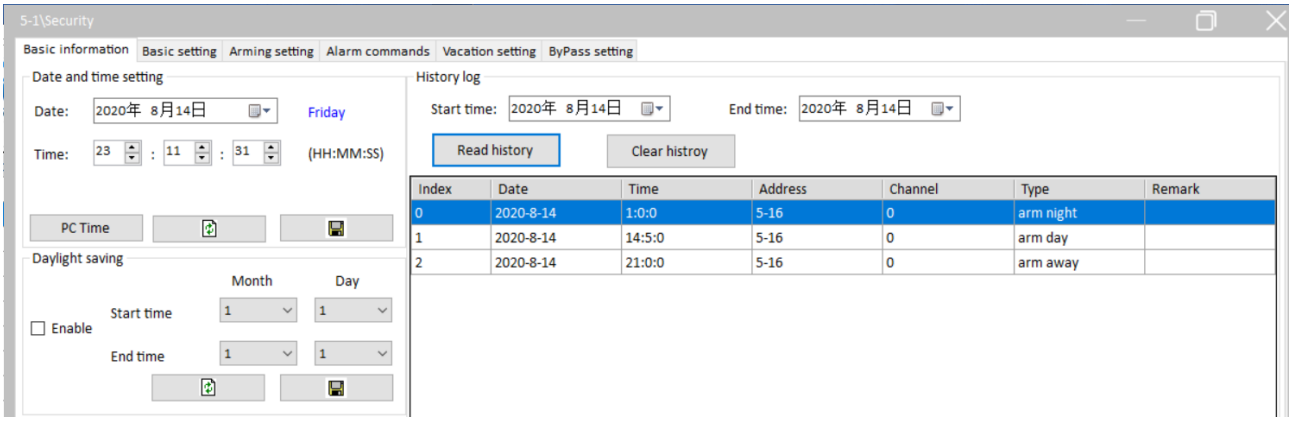
Double click Name: Modify remark of module.

Double click Version: Read firmware version of module.

Double click Hardware Version: Read hardware version of module. This firmware not support to read hardware version.

2.2 Basic Information

Double click Model/Description region, you can enter to the setup page of security module.



- Date and Time Setting:

  Built-in clock chip, you can set Date and Time manually or read it from PC. It broadcast the time to system by default, so the DLP panel can read security's time from bus.

- Daylight Saving:

  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.

- History Log:

  --Read history:

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

  --Clear history:

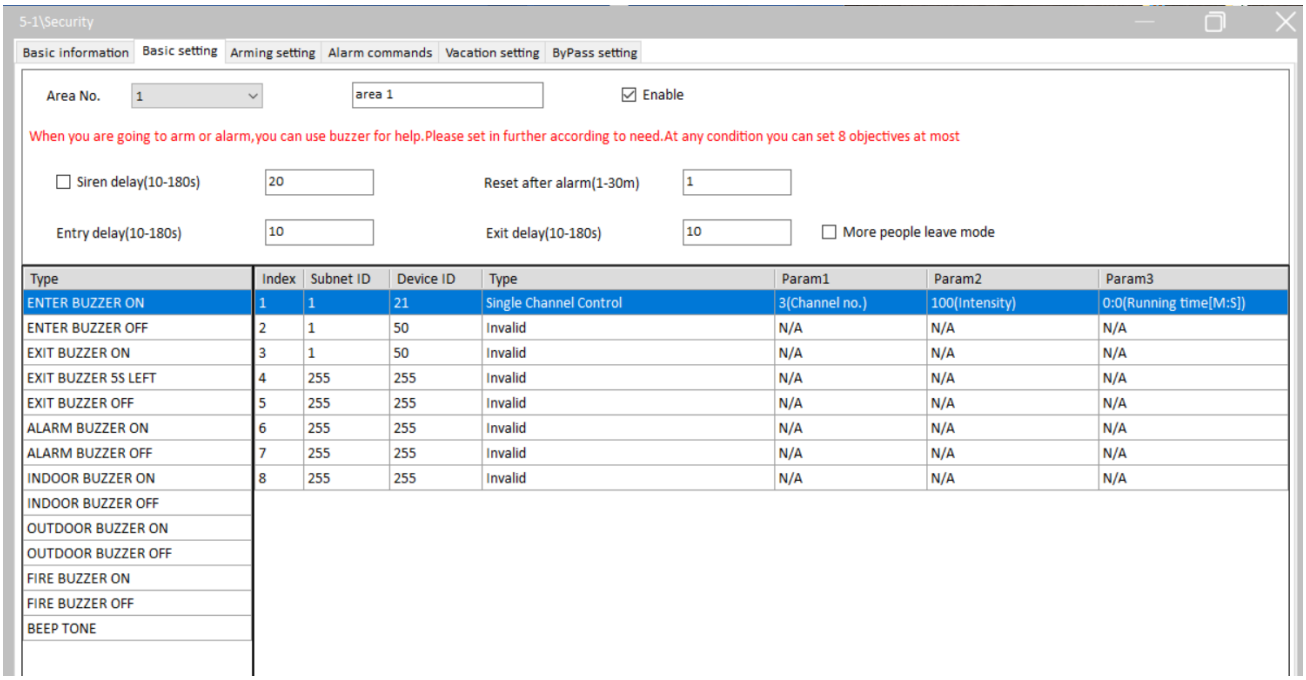
  When enter the password, you can clear the unneeded arm, disarm and alarm log, the default password is 85521566.

  --New password:

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

2.3 Basic Setting

It's mainly for buzzer and siren configuration.



- Area No.

Select and enable one area (area No. is from 1 to 4), remark it for easy management, like floor1 or floor2. You need to enable the area before use it.

- 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 shut down the same controlled targets as 'ENTER BUZZER ON'.
When disarmed, it will trigger the 'ENTER BUZZER OFF' targets.

- 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

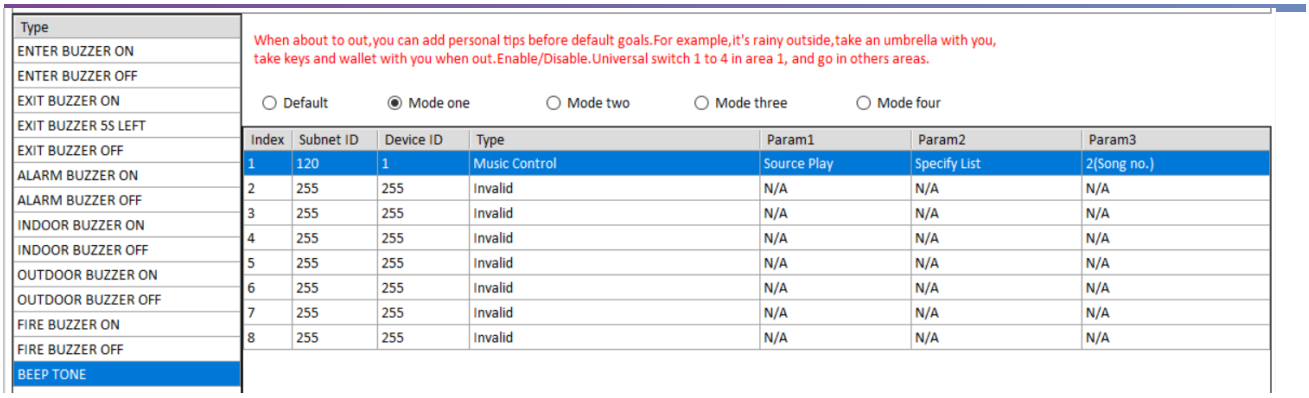
Recommendation: the above-mentioned OFF and ON targets should be the same, otherwise there will be some of them can not be turned off after you disarm the system.

- 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.

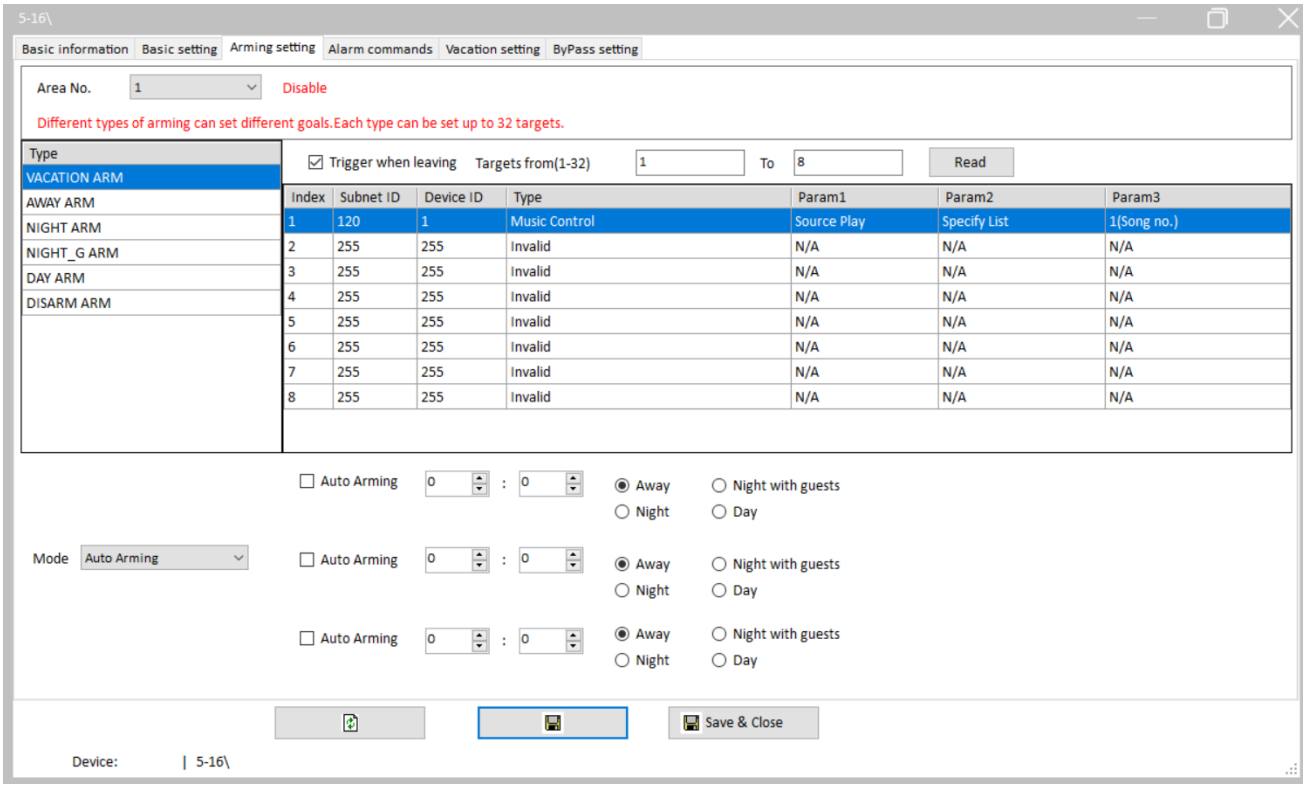
UV Switch No. 1 to 4 is for Mode One to Mode Four in area1, Switch No. 5 to 8 is for Mode One to Mode Four in area2 and so on. Default is for normal weather, if it does not receive any UV Switch No. from the sensor, then it will trigger the setting targets in Default window. Mode One to Mode Four is 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 player the 2nd 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.

2.4 Arming Setting



- Area No.

Select one area, area No. is from 1 to 4, need to enable the area in Basic page first.

- 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

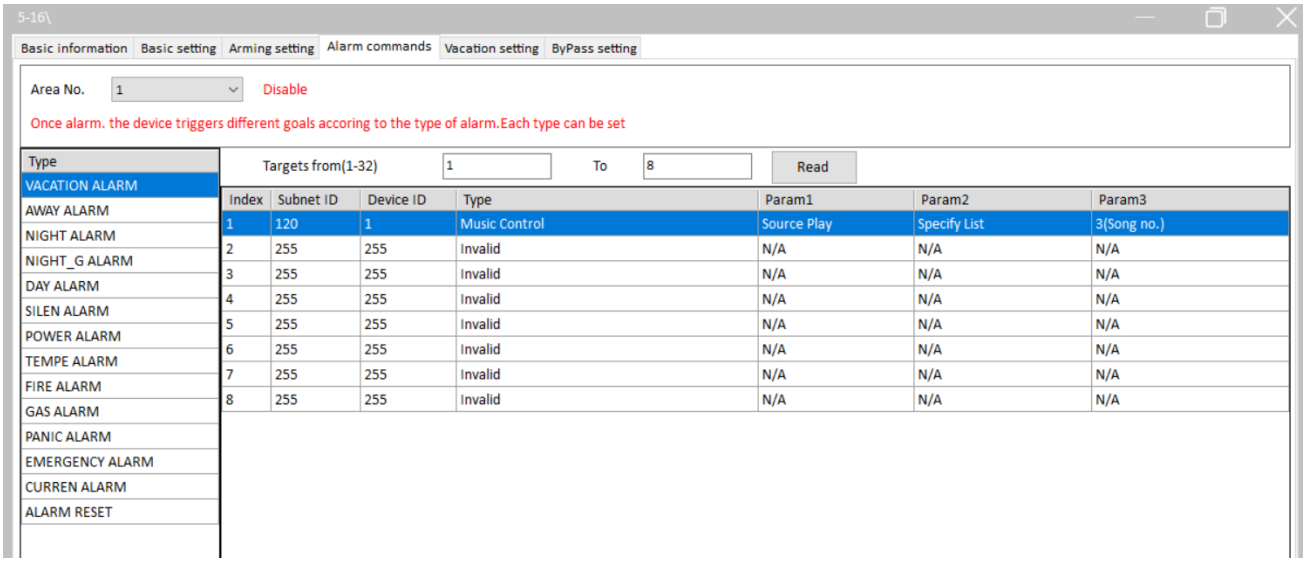
If the conditions are met (enable auto disarming and within the set time), it will automatically disarm

2.5 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.

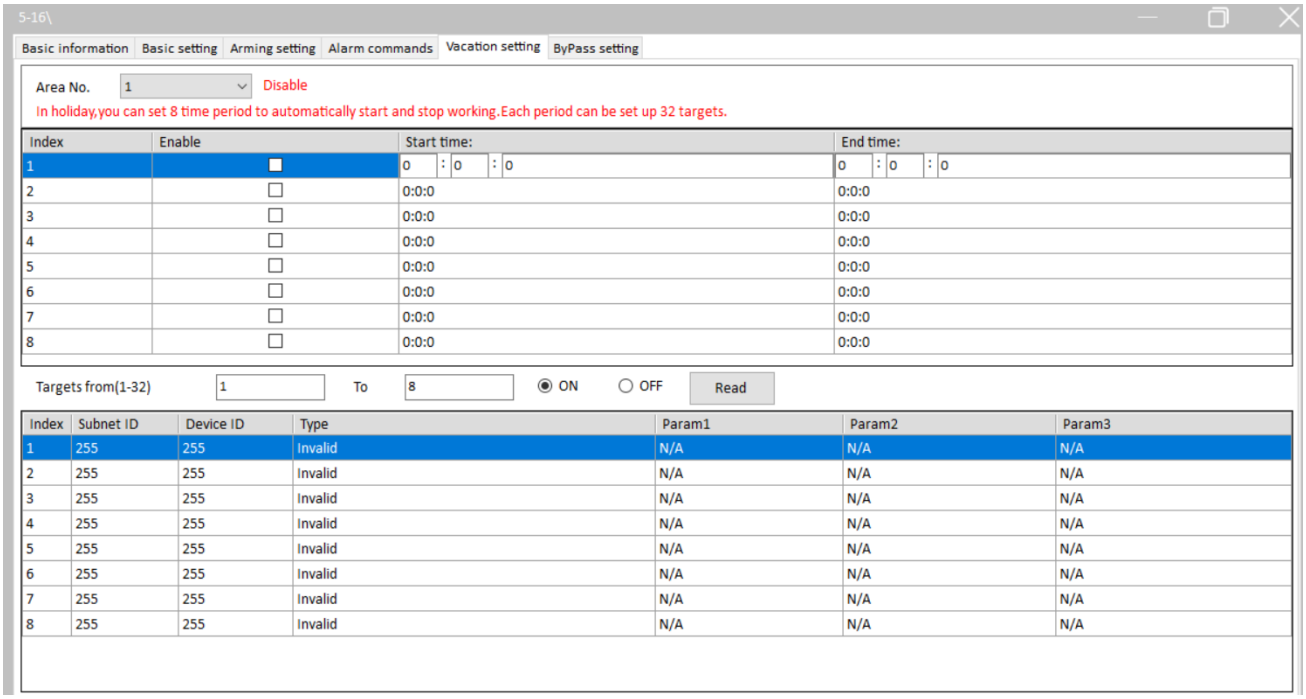
Each mode can control up to 32 targets.

Alarm reset: The system will reset after ‘reset after alarm’ time in Basic page.



2.6 Vacation Setting

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.

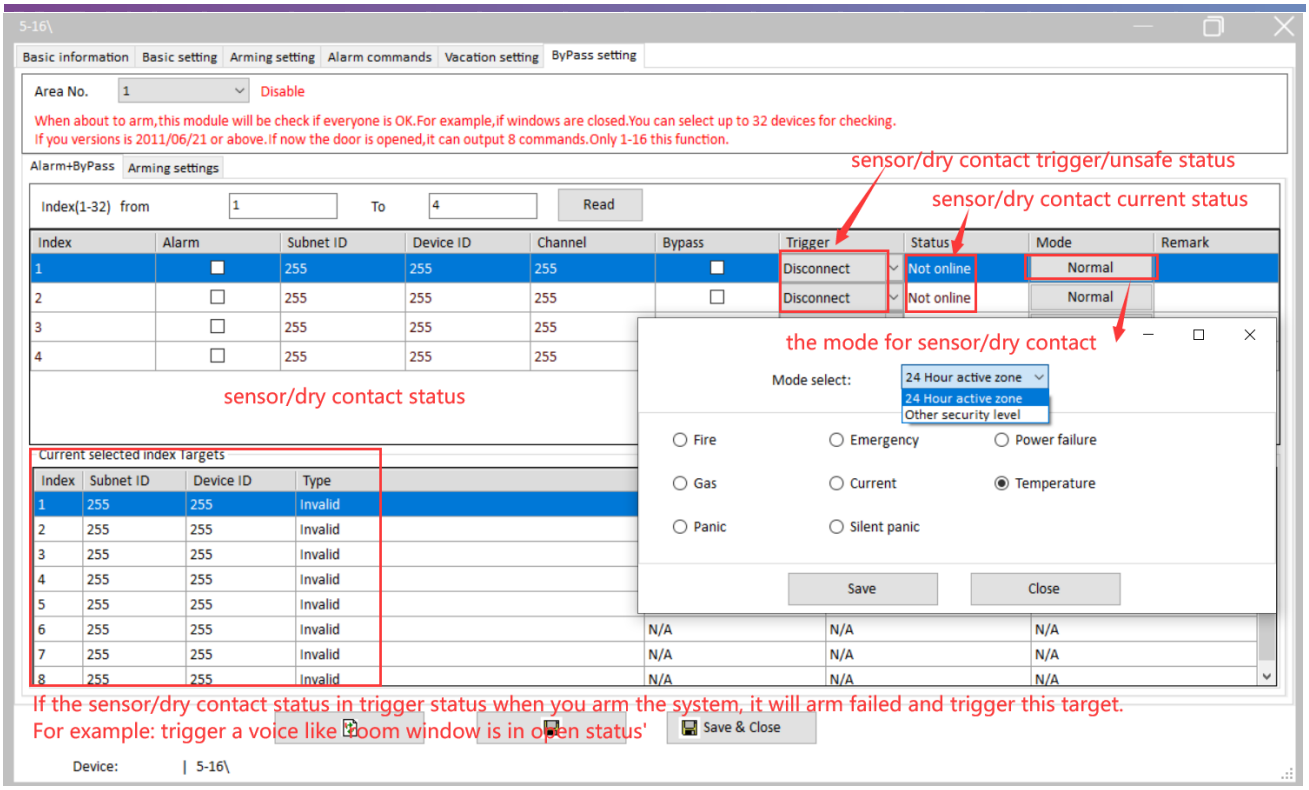
When reach the start time point, it will trigger the ‘ ON’window’s targets, e.g. turn on lights at night.

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

2.7 Bypass Settings

2.7.1 Alarm + Bypass

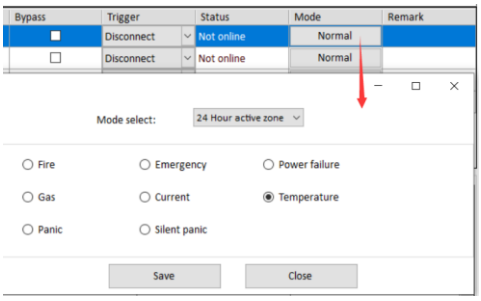
Authorize the sensor here (need to set the security module’s ID in the sensor also), when the status of it has changed under arming mode, it will send out commands to the security module, then the security module will trigger corresponding targets to protect the system. (for details of these settings, please check the ‘4. Application’ below)

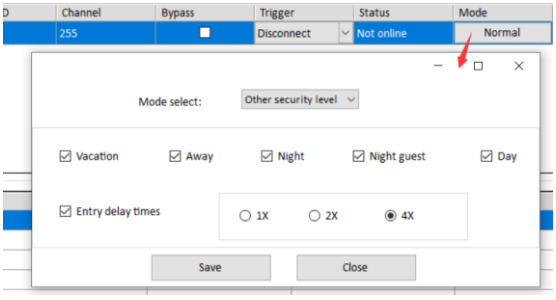


- **Bypass:**

If enable, the system will ignore its status when arm. Like the main door in house, the door is open when you press the Arm button, so we can ignore the main door status when arm.

- **Mode:** set the security mode for sensor/dry contact channel.





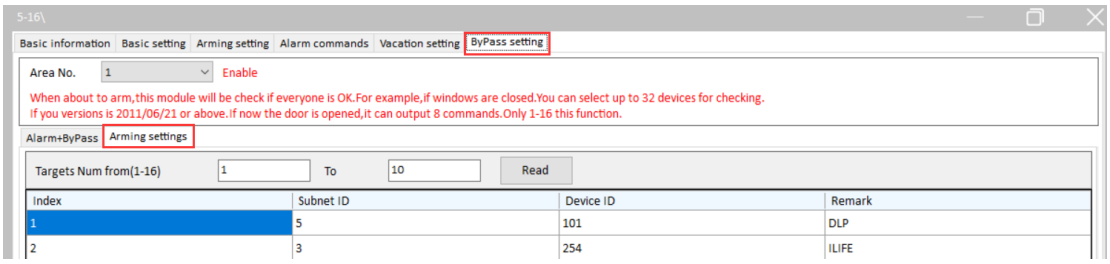
1) 24 Hour active zone: These modes no need to arm by user, use 3rd party sensor connect to HDL dry contact channel, it will trigger the targets in 'Alarm commands' page when detects.

2) Other Security level: These modes need to arm by user. Will trigger the targets in 'Arming Setting' page when arm success. Will trigger the targets in 'Alarm commands' page when alarm.

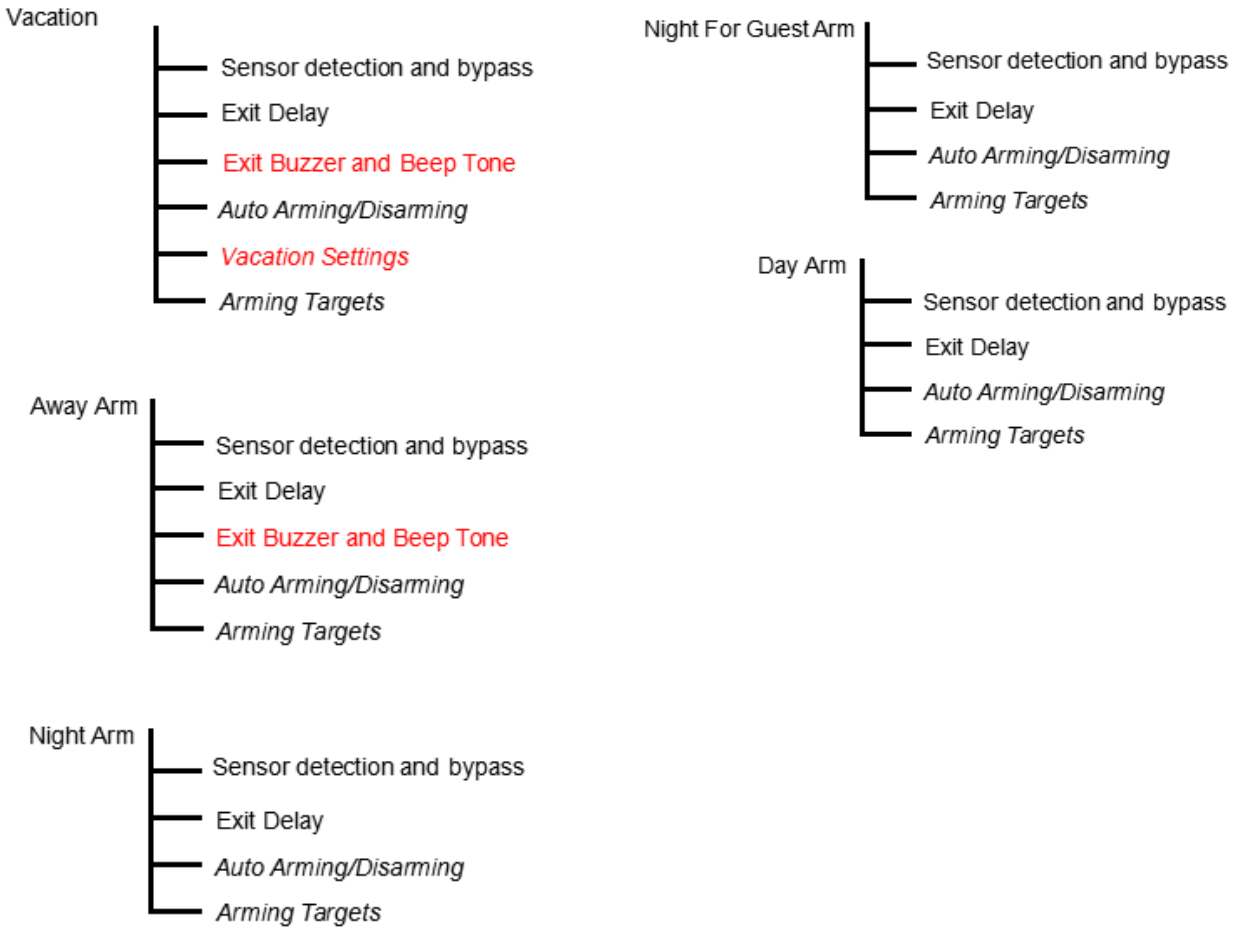
   Entry delay times: Set the multiple of Entry delay time (which set in Basic setting page).

2.7.2 Arming Setting

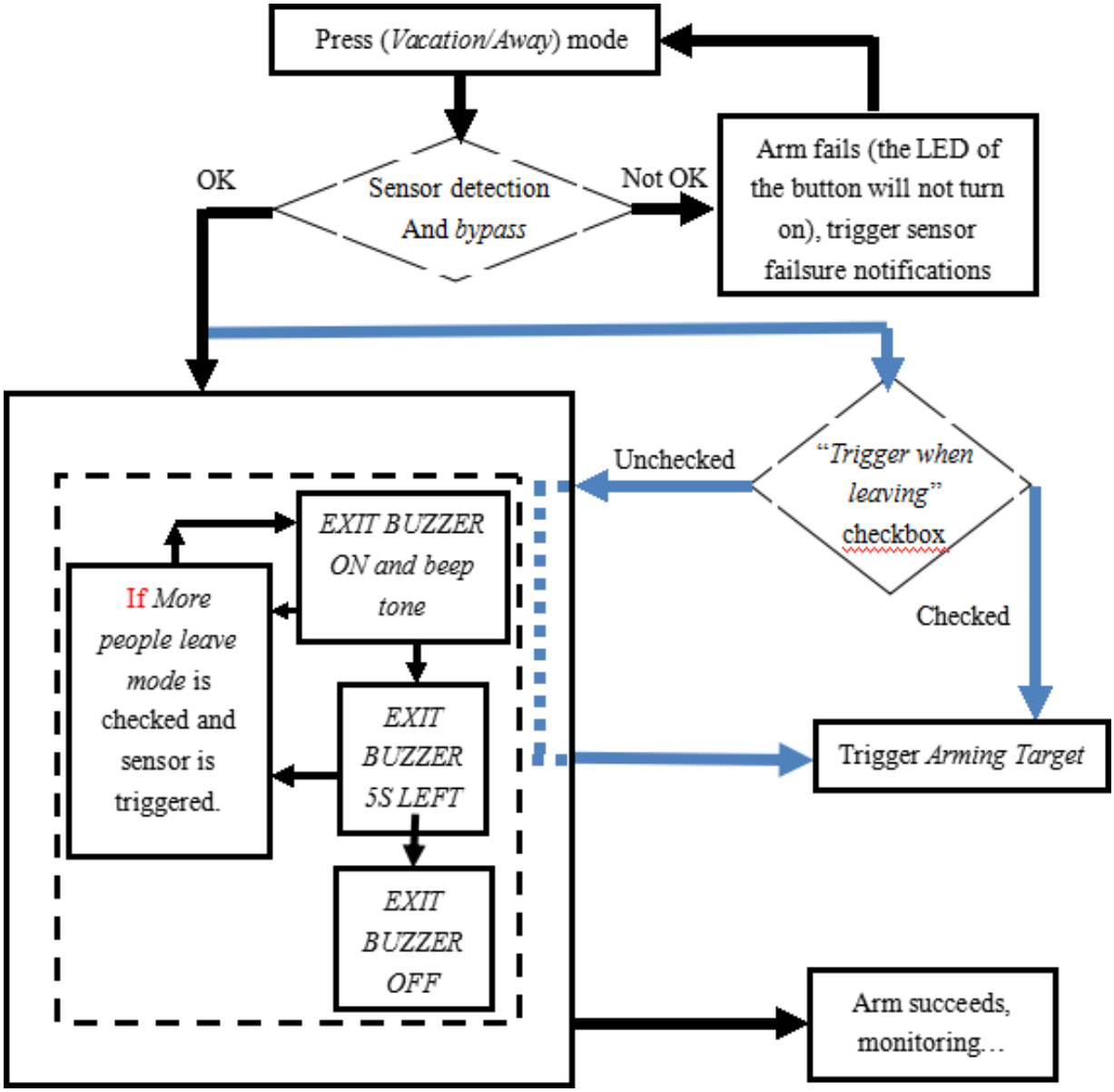
Authorize some user interfaces to arm and disarm the system, e.g. DLP, TouchLife, iLife, iRidium and so on. iLife(IOS) has the fixed ID, 3/254, and the iRidium's fixed ID is 253/254. HDL ON is 252/252.



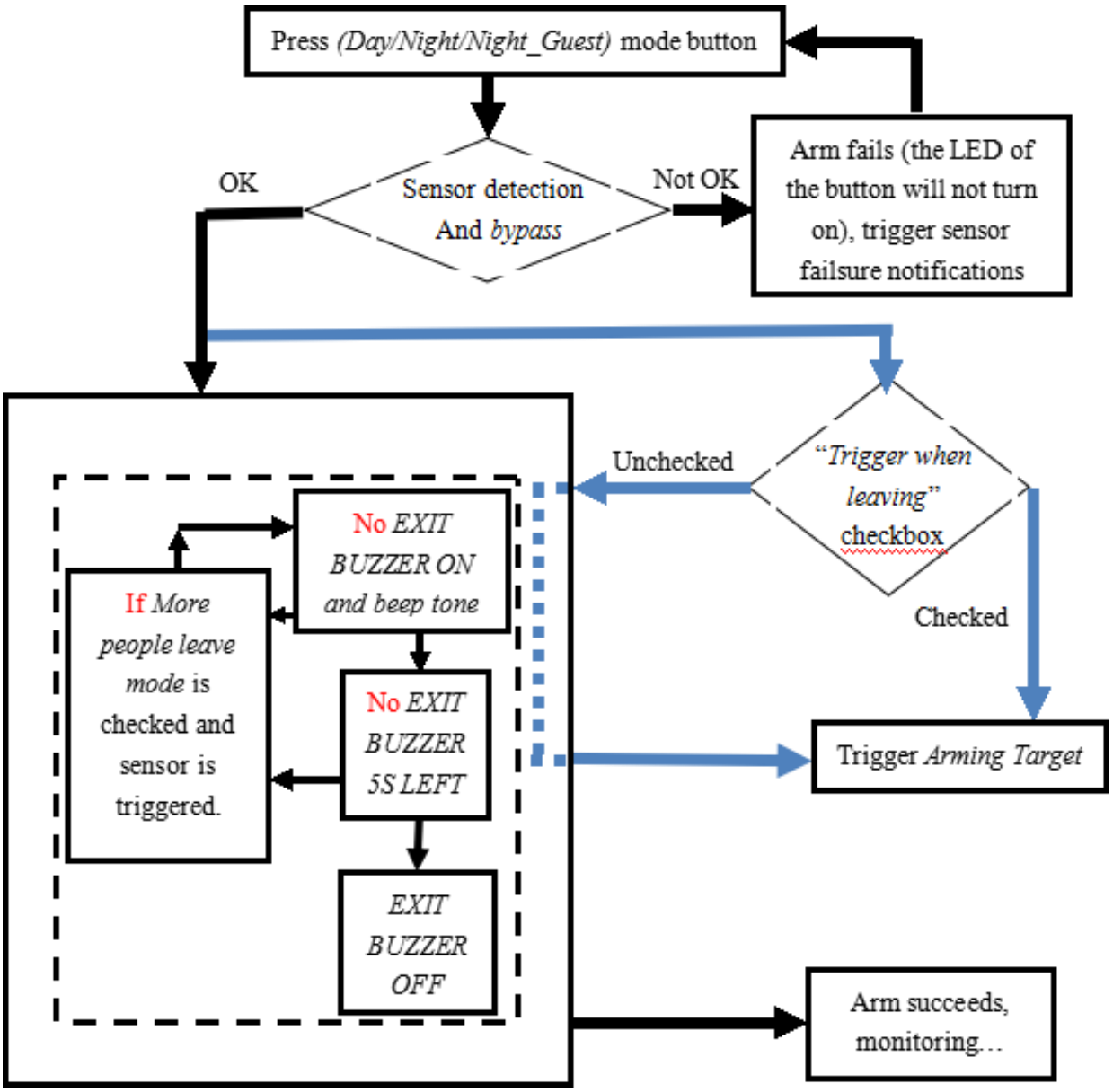
2.8 Arm Flow



2.8.1 Vacation/Away Mode

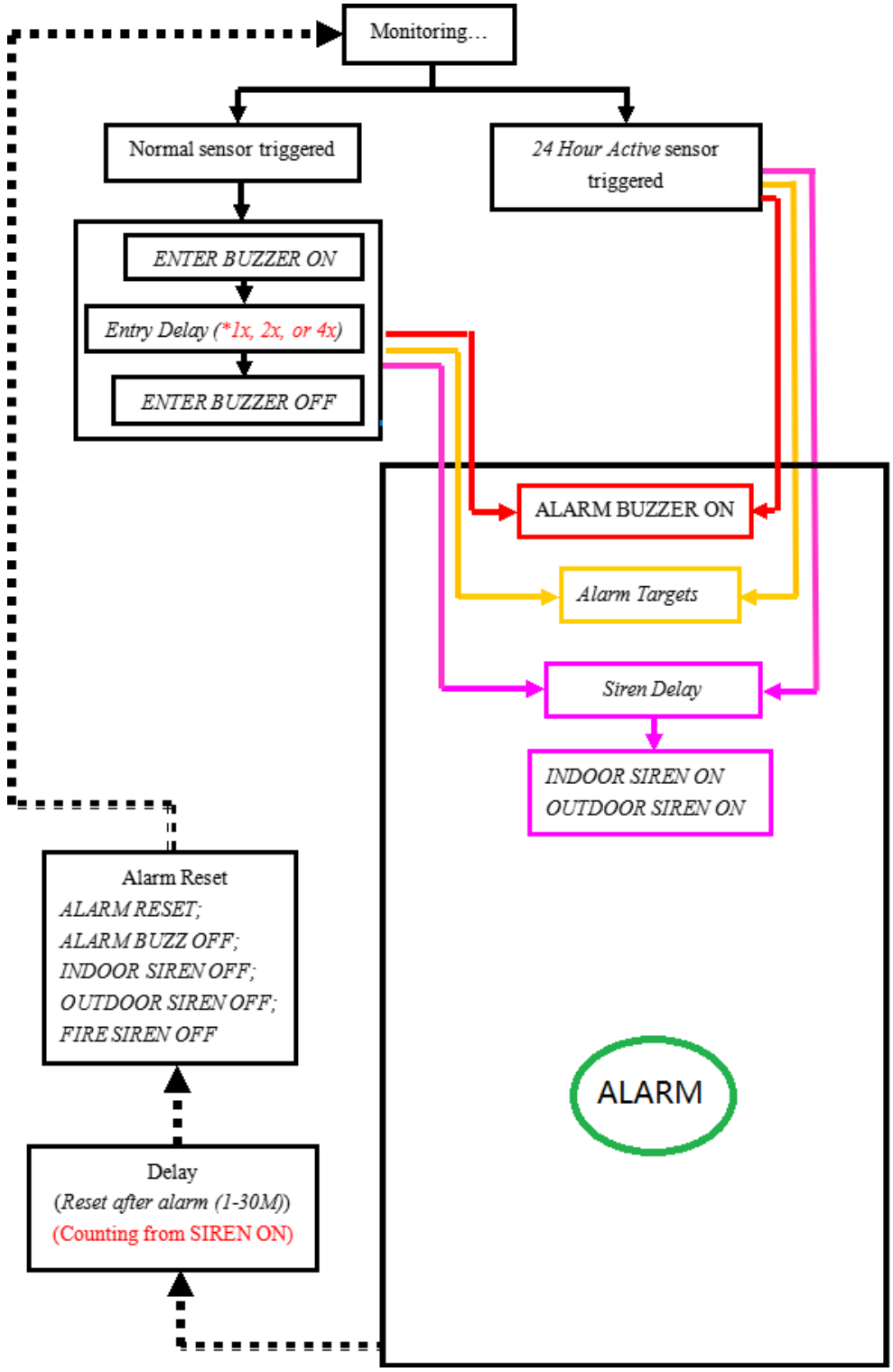


2.8.2 Day/Night/Night_Guest Mode

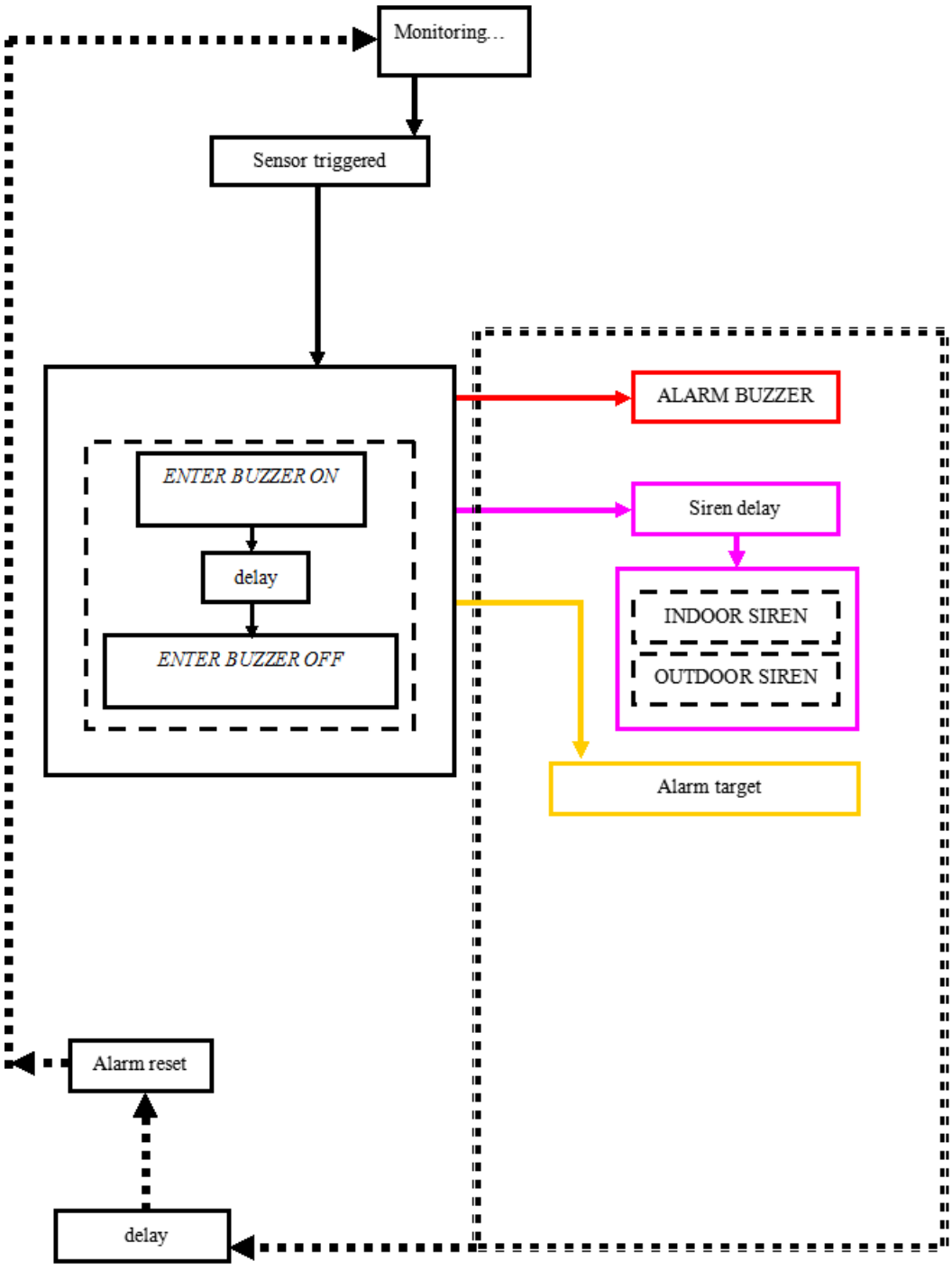


2.9 Alarm Flow

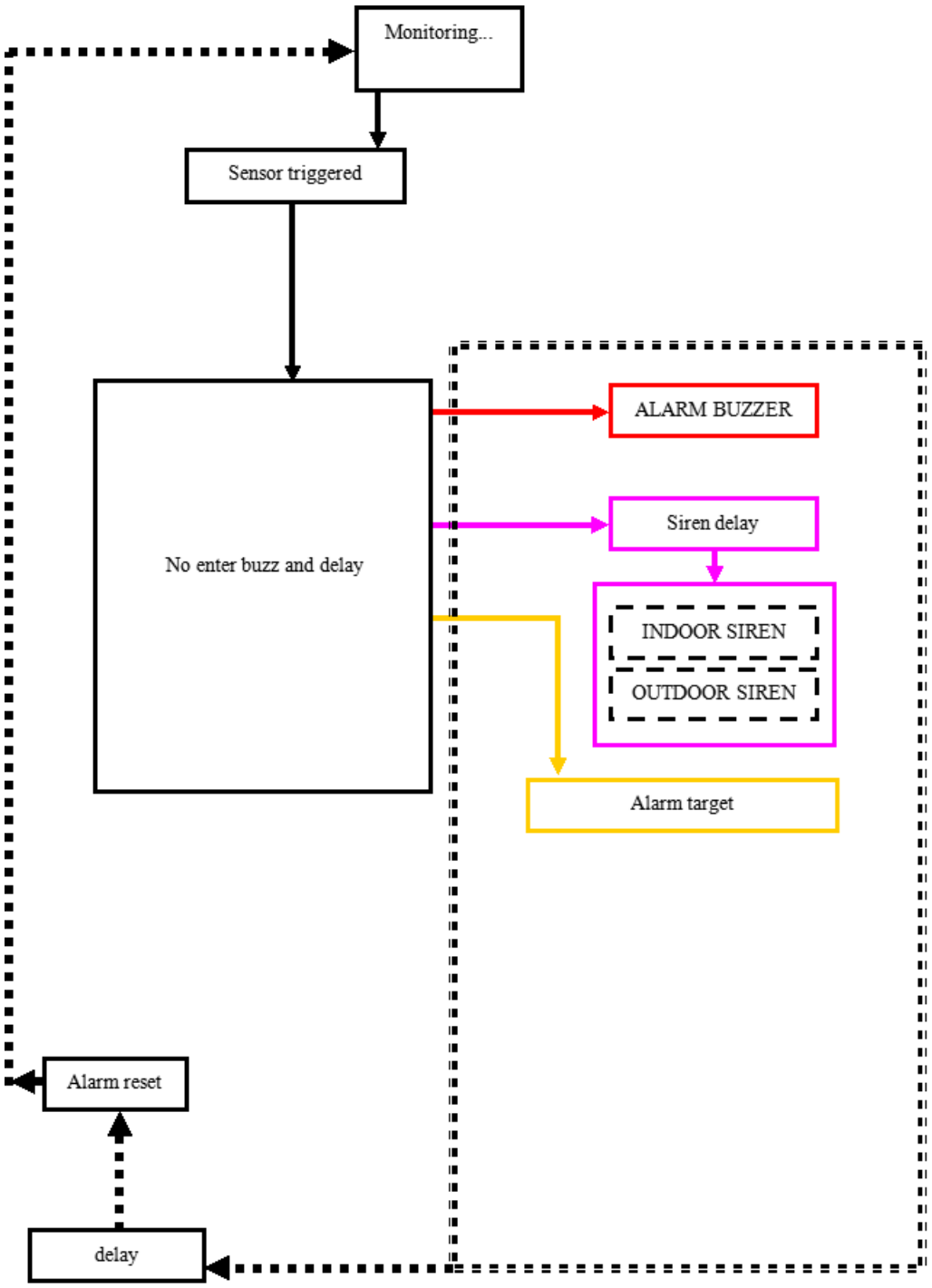
2.9.1 General flow



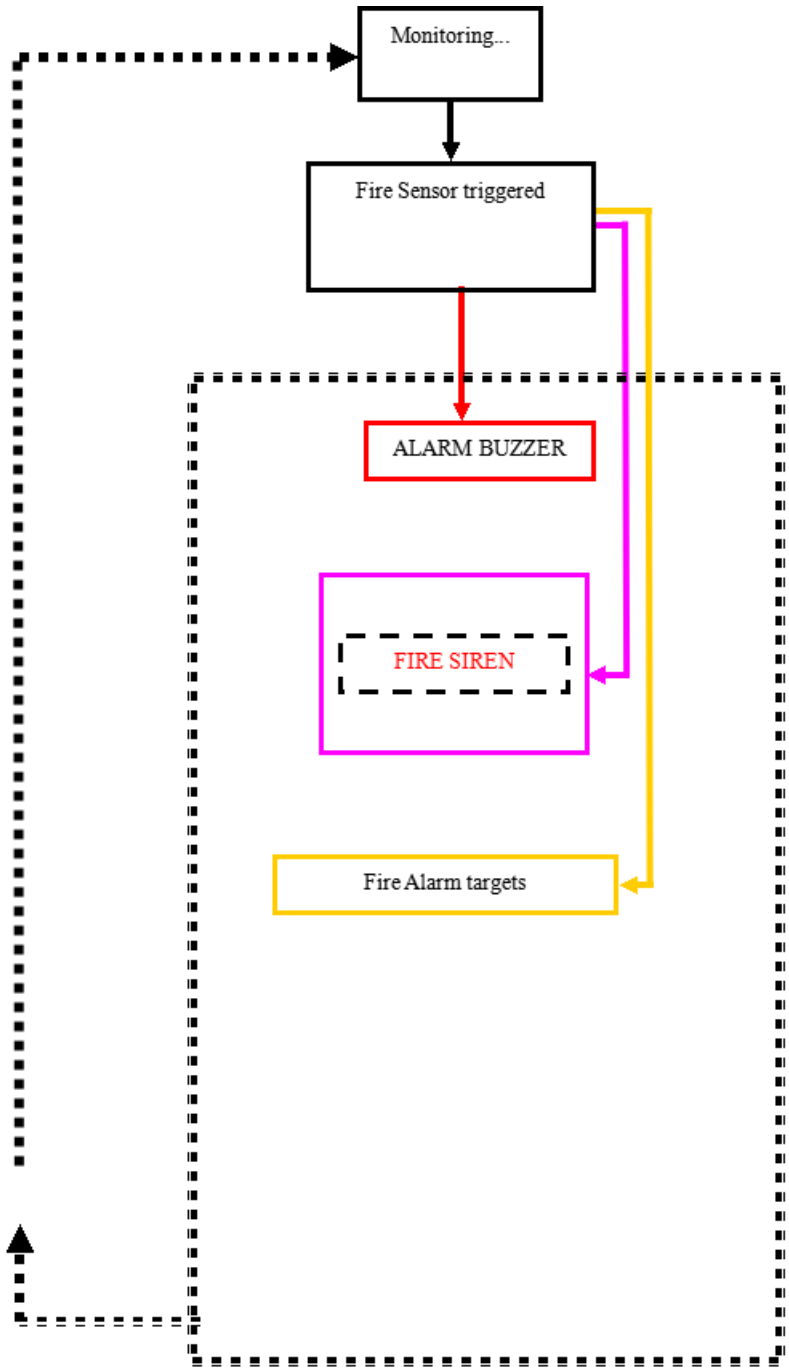
2.9.2 Vacation/Away/Night for Guest/Day Mode



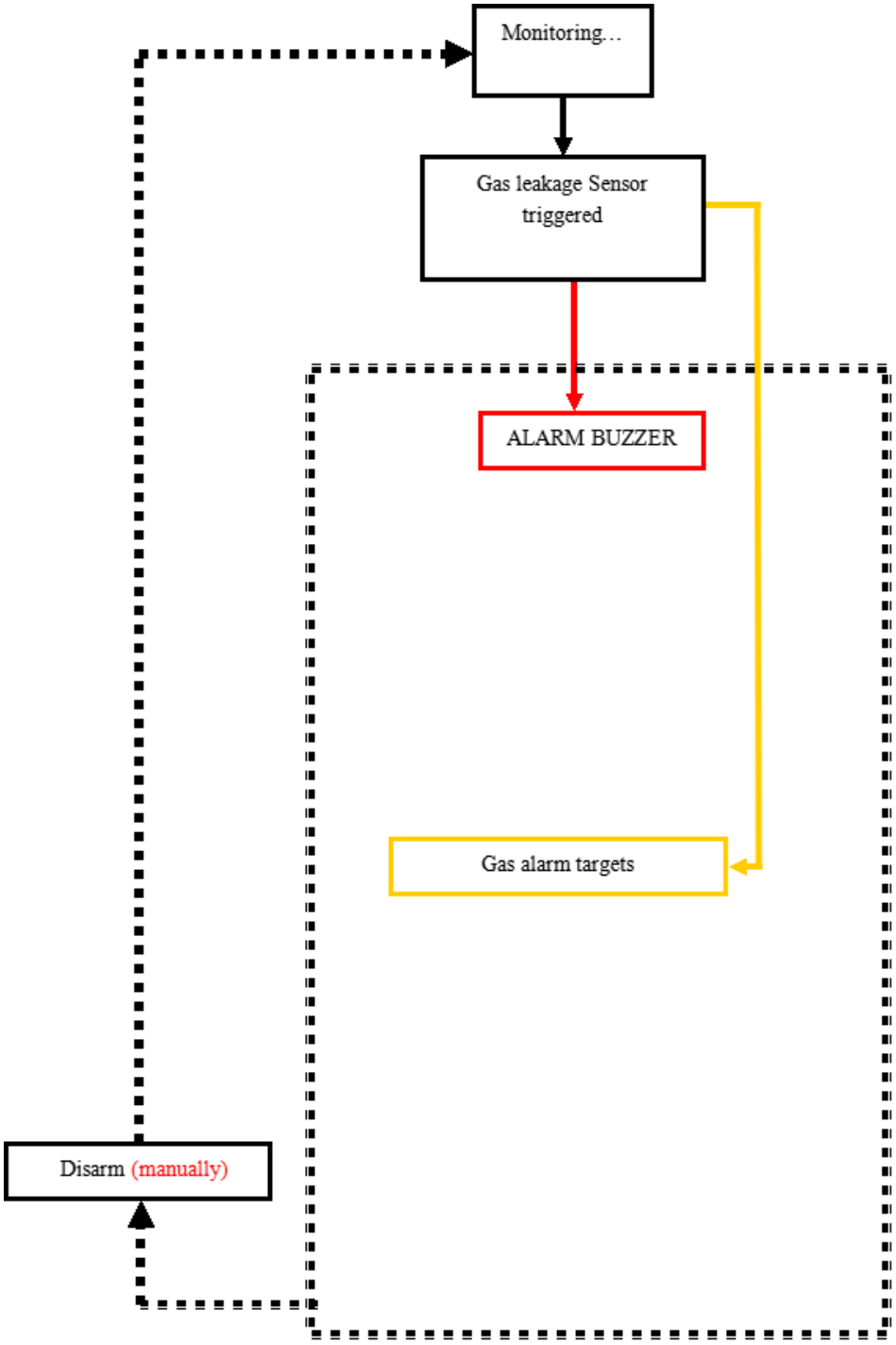
2.9.3 Night Mode



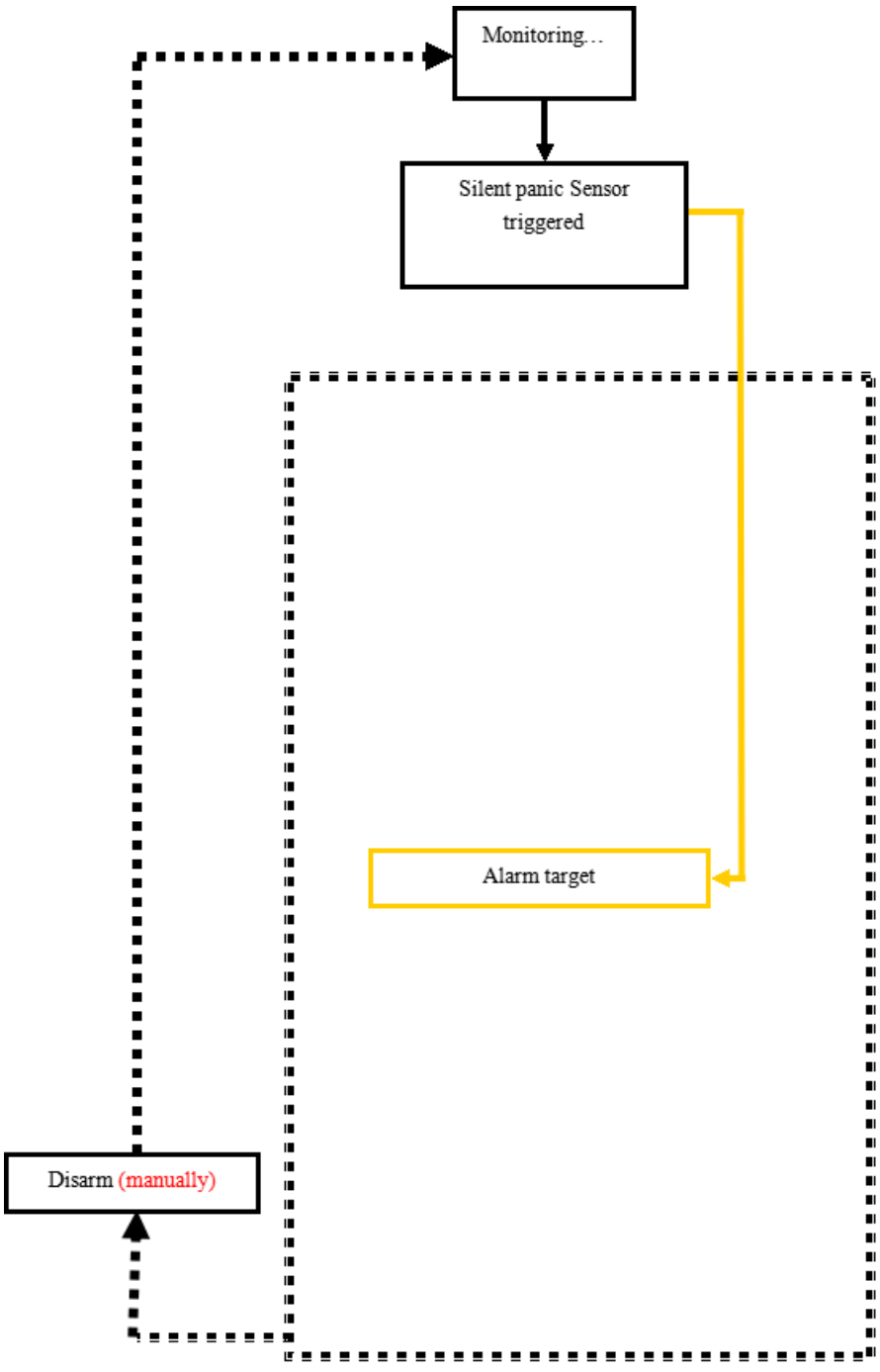
2.9.4 Fire Mode



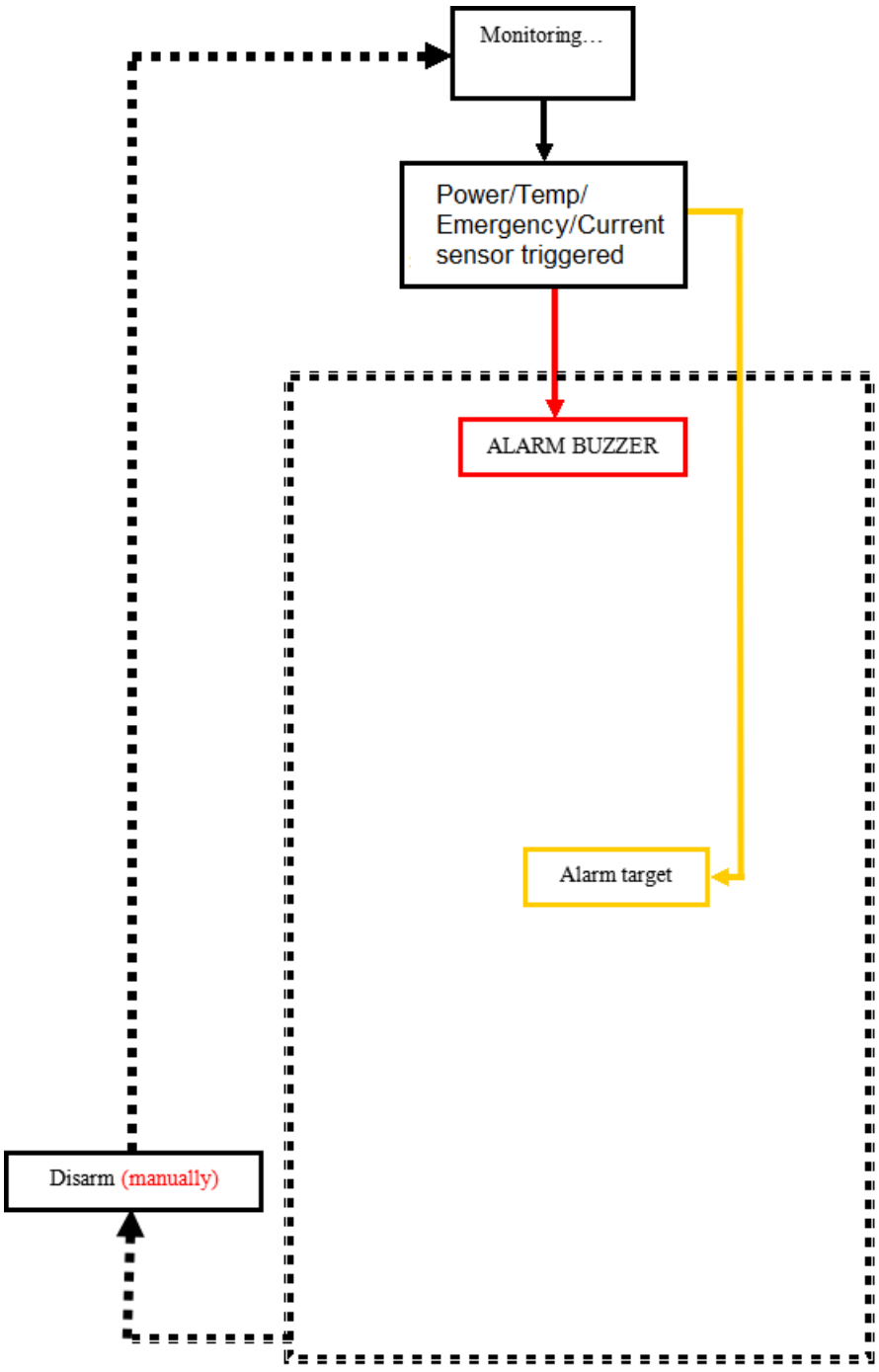
2.9.5 Gas Leakage Mode



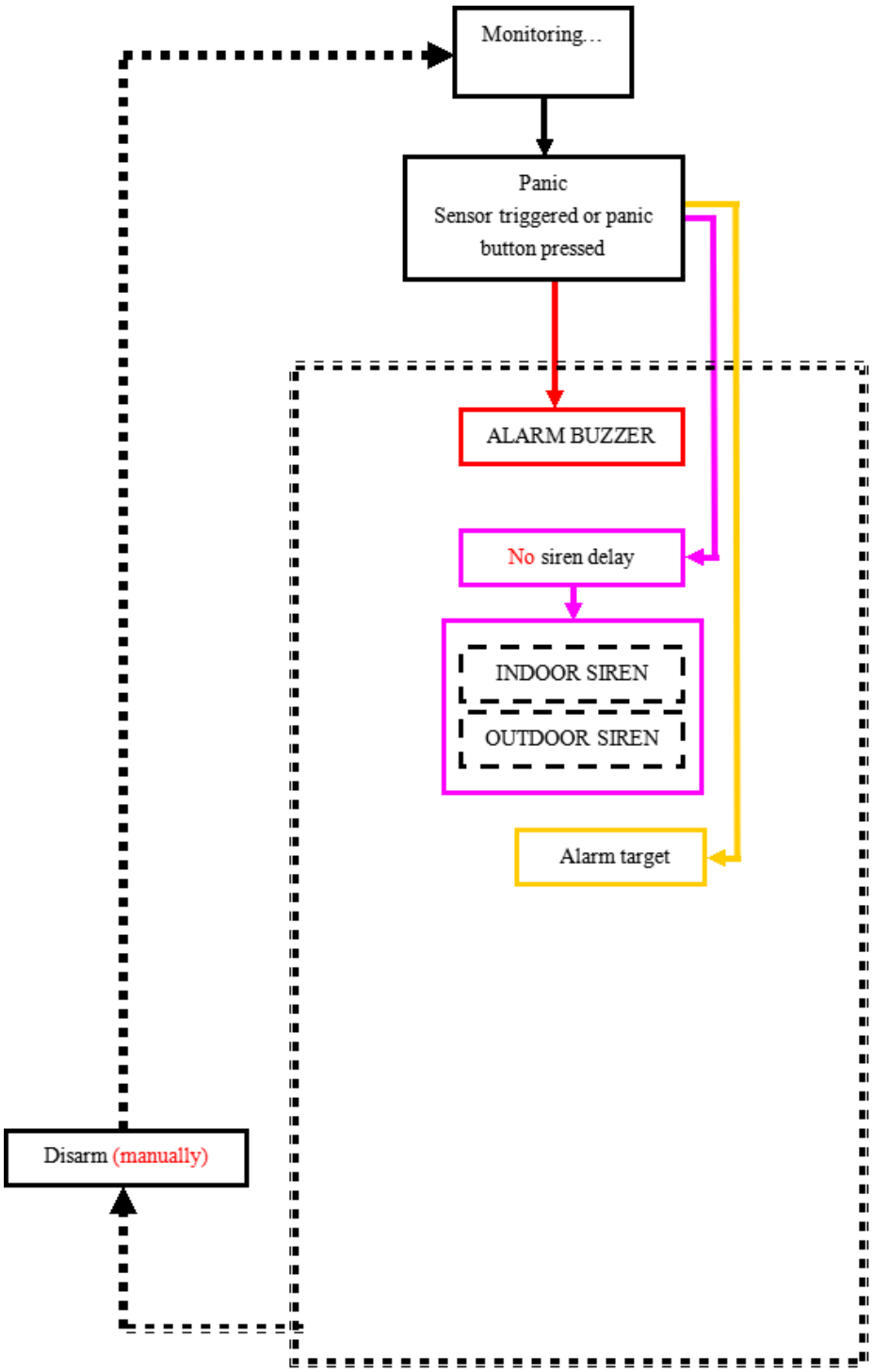
2.9.6 Silent Panic Mode



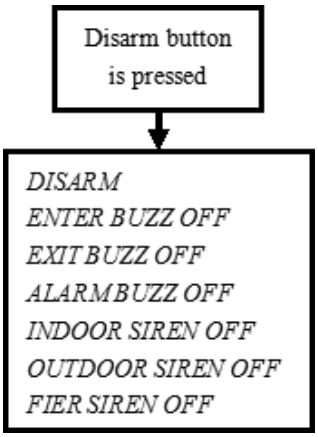
2.9.7 Power/Temp/Emergency/Current Mode



2.9.8 Panic Mode



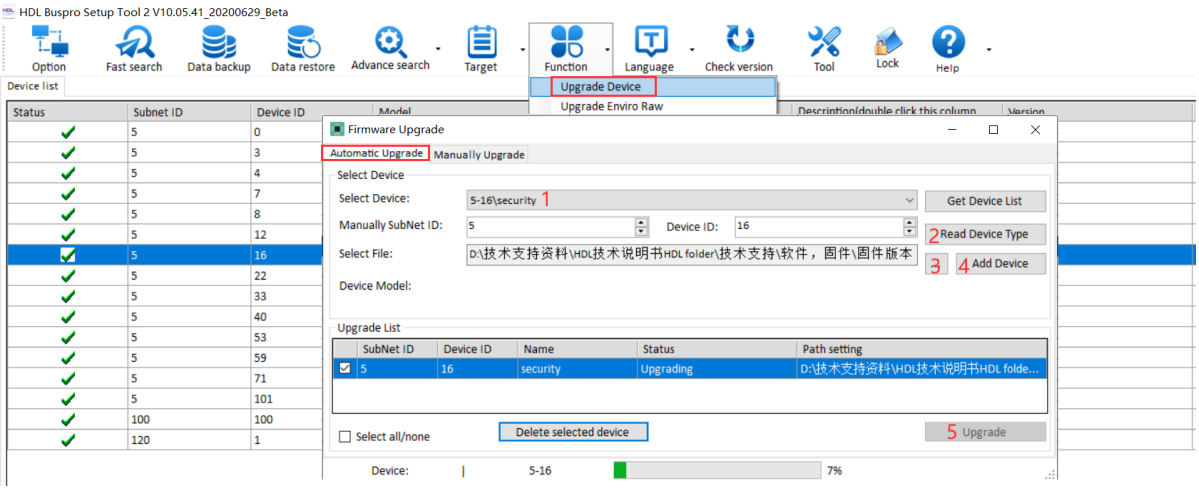
2.10 Disarm flow



3 Firmware Upgrade

Security module supports Automatic Upgrade and Manually Upgrade.

Automatic Upgrade: suitable for searched device.



1- Select device which need upgrade firmware.

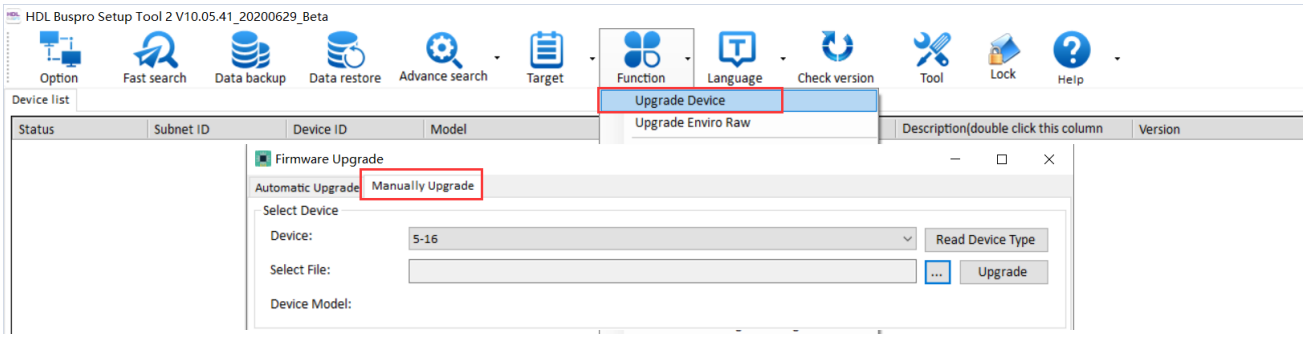
2- Read Device Type.

3- Select upgrade firmware file for current device.

4- Add it to upgrade list

5- Upgrade.

Manually Upgrade: You can switch to Manually Upgrade page when upgrade failed, if shows device's address, then select the upgrade file again and upgrade it.



How to make device enter to manual upgrade mode?

1- Go to Manually Upgrade page in software.

2- Power off the security module.

3- Long pressing the PRO and then power on it, after see the PRO flicker in red, release the PRO button.

4- Go to manually upgrade page, Software will show its address in Manually Upgrade page by auto, select upgrade file and upgrade it.



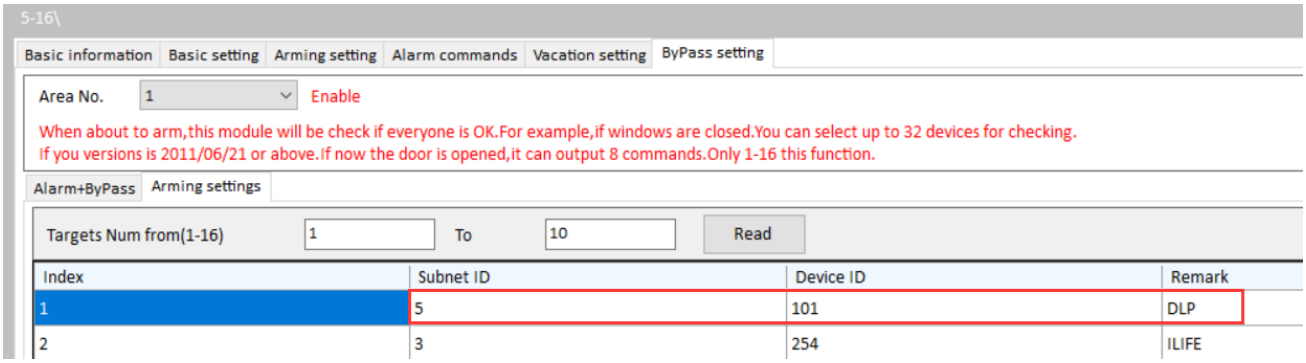
5- Done

4 Application

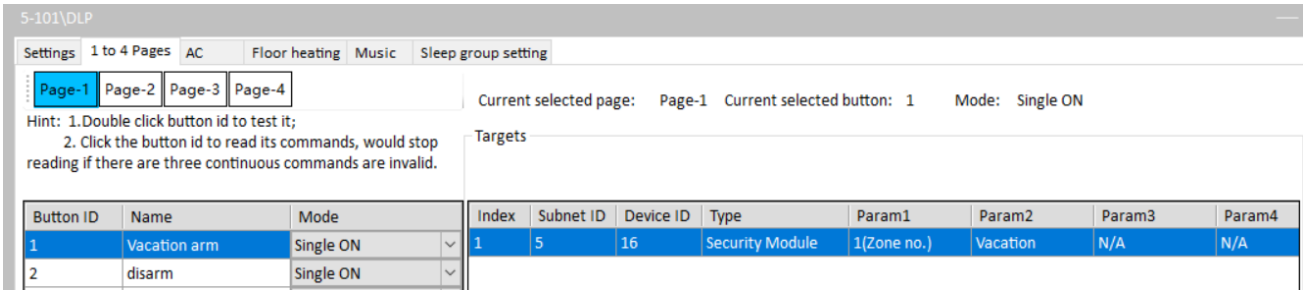
Security module work with 7in1 sensor, home player, HDL-MPL8.48, etc. to show the functions of arm (vacation mode), disarm and alarm.

4.1 Panel Settings

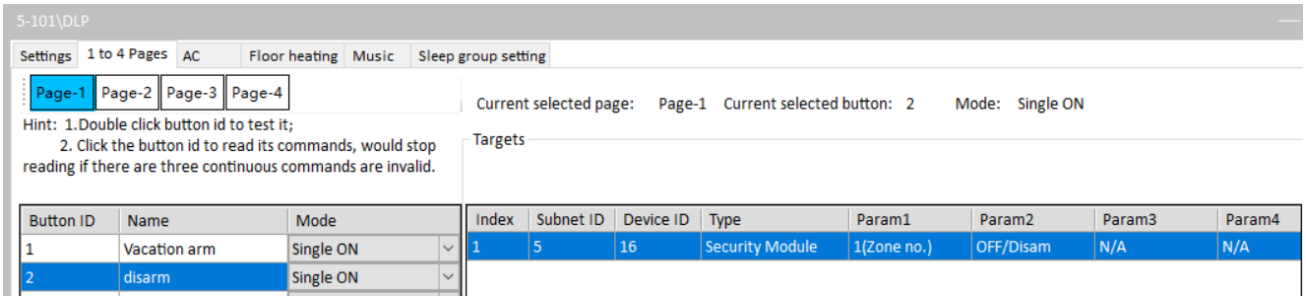
a) Authorize the HDL-MPL8.48 to arm and disarm the system in Arming Settings window of in Bypass Settings page, Subnet/Device ID is 5/101.



b) Go to HDL-MPL8.48 panel, configure button 1 to arm for vacation mode, key mode is ‘single on’, Subnet/Device ID is 5/16, key type is ‘security module’, parameter1(area No.) is 1, and parameter2 is ‘vacation’.

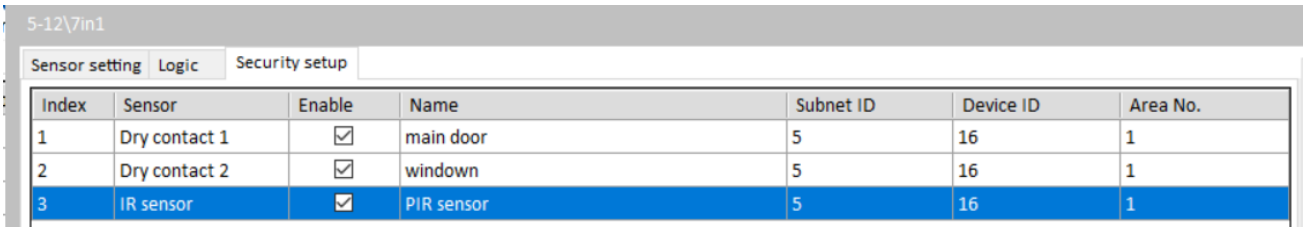


c) Configure button 2 to disarm, parameter2 is ‘disarm’, other settings are same as button 1.



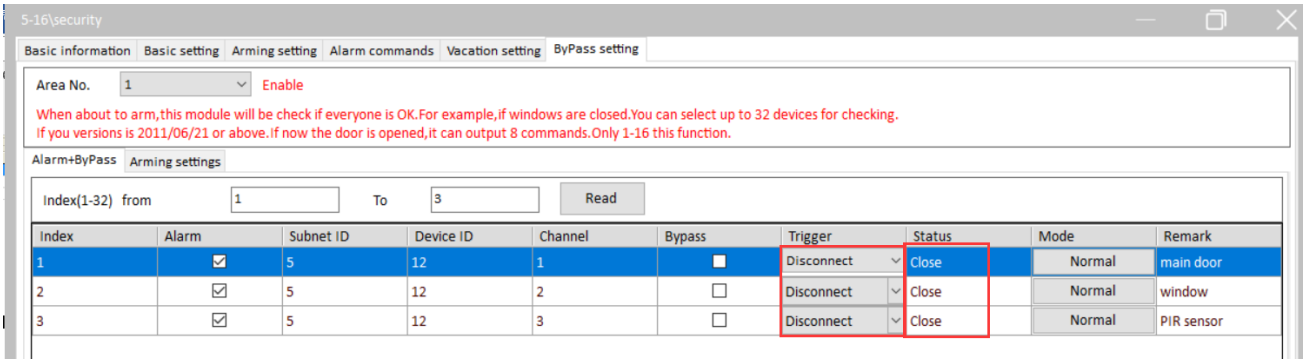
4.2 Sensor Settings

a) Go to 7in1'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 5/16, and select area 1.

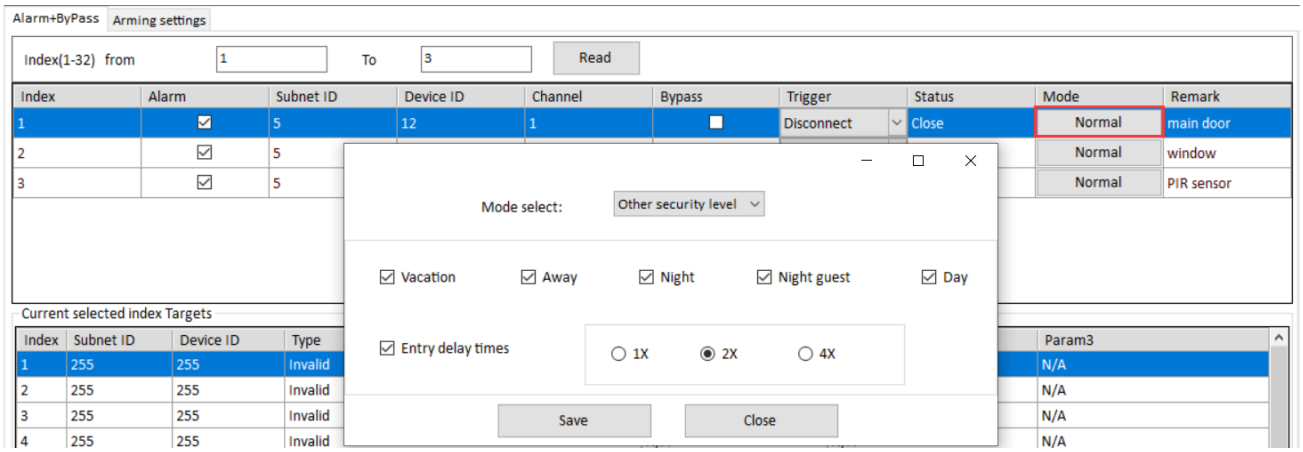


b) Go to security module's Bypass Settings page, enable the alarm for index 1/2/3, input the 7in1 sensor's ID, here is 5/12, and channel 1/2/3(the index No. in 7in1 sensor). Close the door and window, and make sure there is no movement in the detection range of 7in1, then refresh this page, you will 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 'Disconnect' for them in 'Trigger' column (if it shows 'OFF' under normal situation, then select 'Connect' for it).

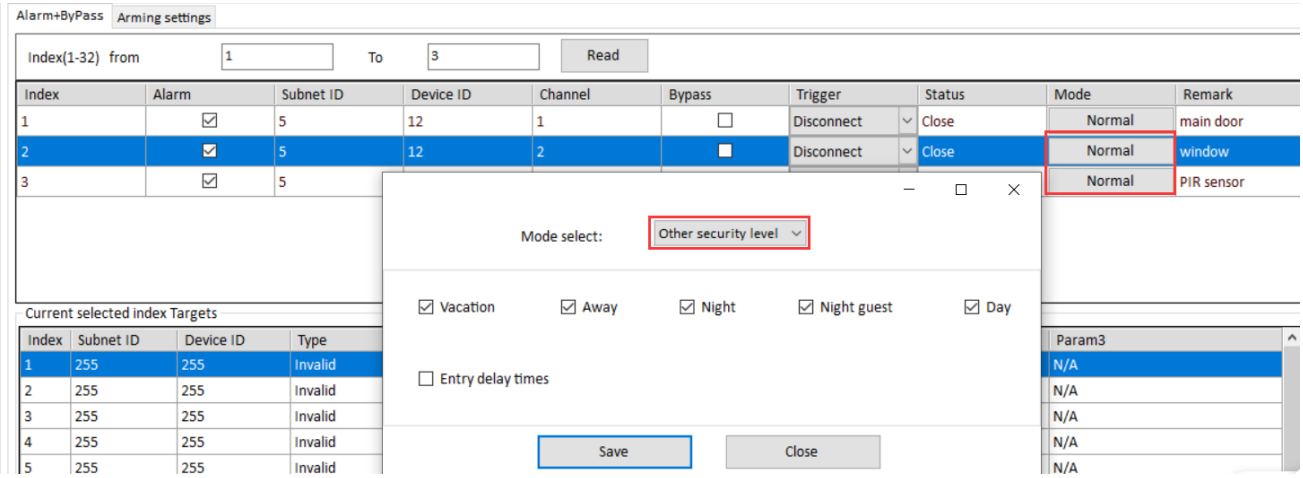
Notice: make sure all in safe status (like close door/window, no movement), read Status. And then select the Trigger status (unsafe status).



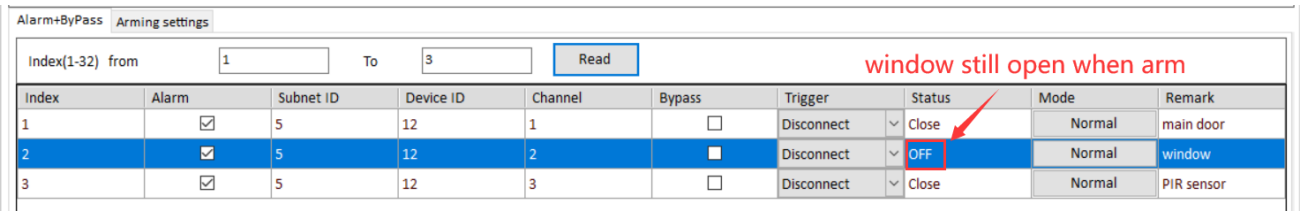
c) Click the button in 'Mode' column of channel 1, select 'Other Security Level' for mode type, enable 'Vacation', enable 'entry delay times', select '2X'(suppose this door is far away from the HDL-MPL8.48, and it takes more time to disarm when enter from this door, then can select its entry delay time is two/four times of Entry Delay), then save.



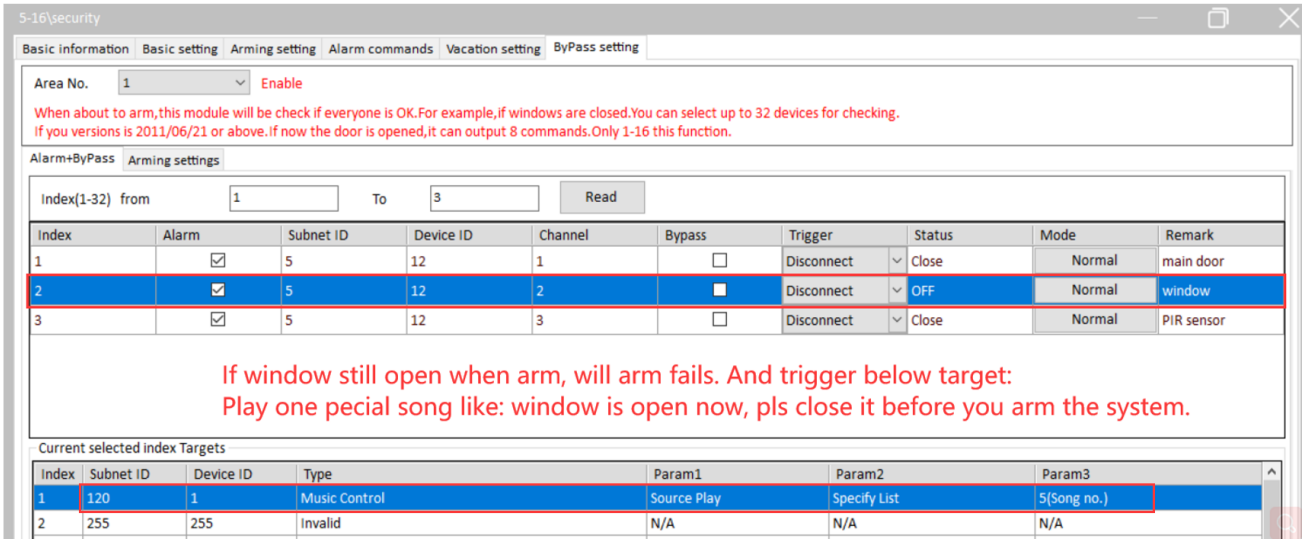
d) Click the button in ‘Mode’ column of channel 1 and 3, select ‘Other Security Level’ for mode type, enable ‘Vacation’, then save.



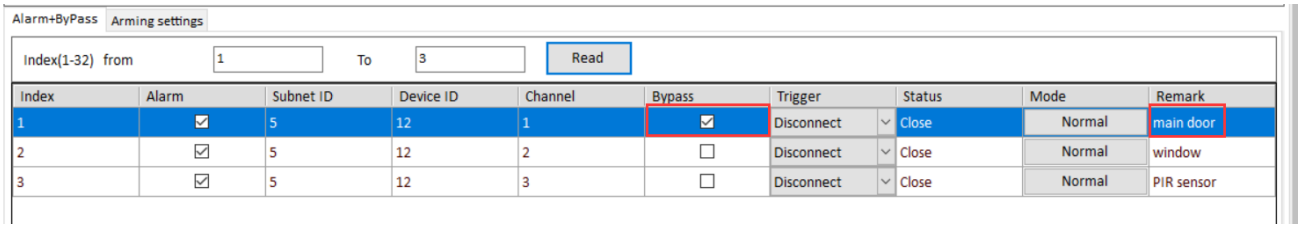
e) When press the arm button, the senor will start to detect the status of these three channels to check whether they are in normal states or not. If all of them are ‘Close’, then the security will start to arm after Exit Delay. If one of them is not in the normal state (e..g. channel 2 shows ‘OFF’ status, the main door is still open), then it will fail to arm until you close window.



The users can double click index 1/2/3 rows to set some warning targets when fails to arm. e.g. if channl2 is OFF when trying to arm (window still open when arm), will play the 5th warming tone from the home player,



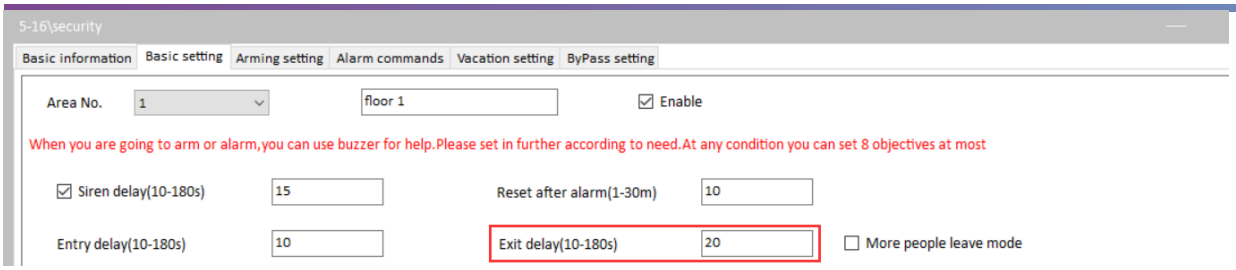
f) Also users can enable the 'Bypass' function of channel 1, then the sensor will not detect this channel status when trying to arm. This is very useful when you need to walk out through one door after arm from the DLP Panel inside the room.



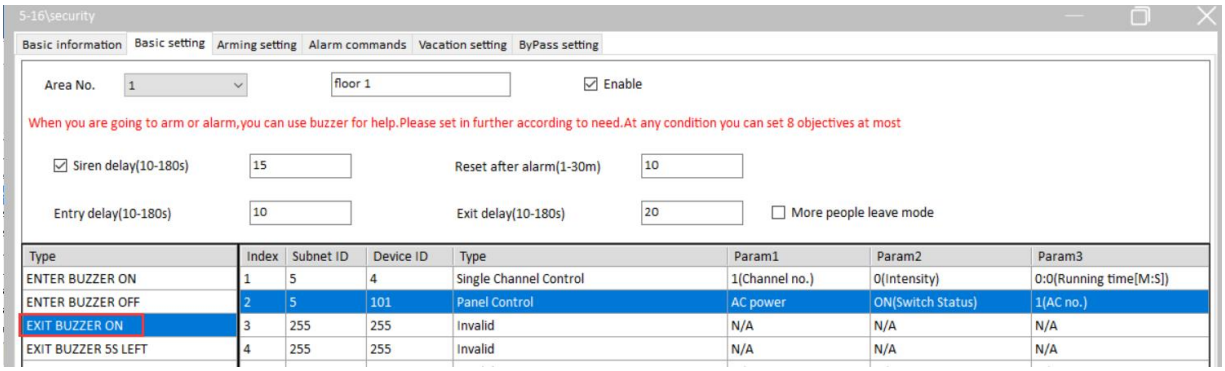
4.3 Vacation Settings

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



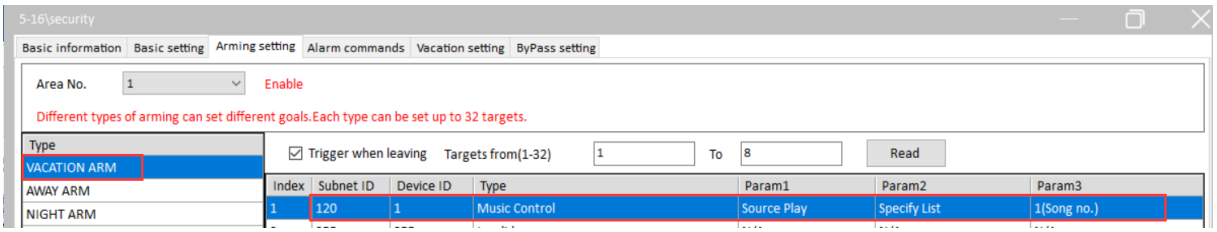
b) Turn off channel 1 of relay(Subnet/Device ID is 5/4) and AC which is controlled by HDL-MPL8.48(Subnet/Device ID is 5/101) in 'EXIT BUZZER ON' window (user can set any targets they need, then when press arm button, it will trigger these targets)



c) Trigger the home player (create a folder and name it 'special' in USB disk, put some voice files (.voc and sort them with a name '001', '002', '003'…)) to play a voice hint from the 'VACATION ARM' window, need to set Music commands here



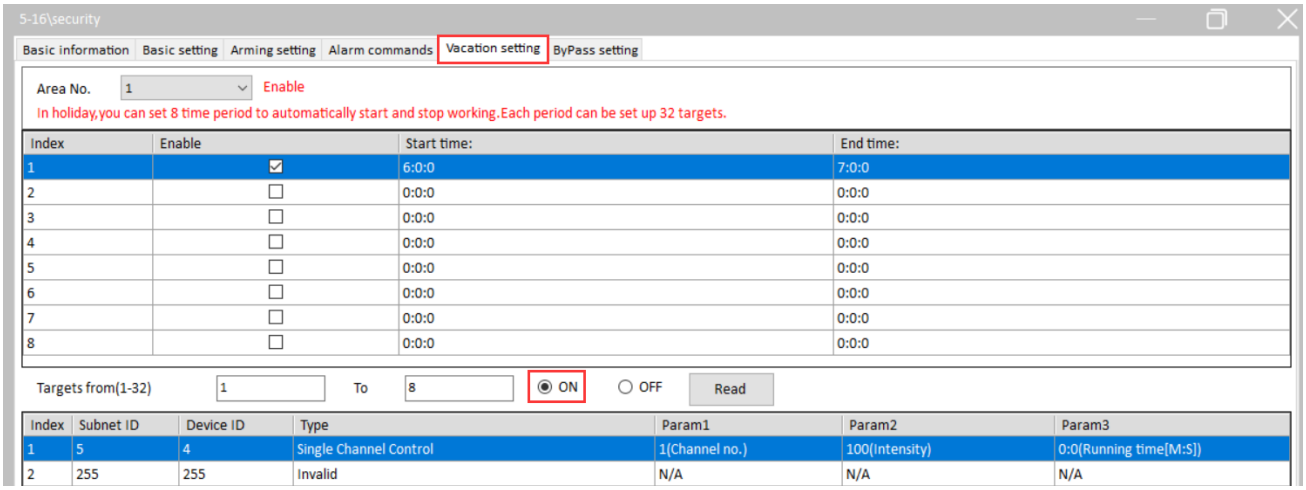
Here the voice hint for vacation is '001.voc', then set Music command to trigger it. The ID of home player is 120/1, the parameter3 is the voice number in name.



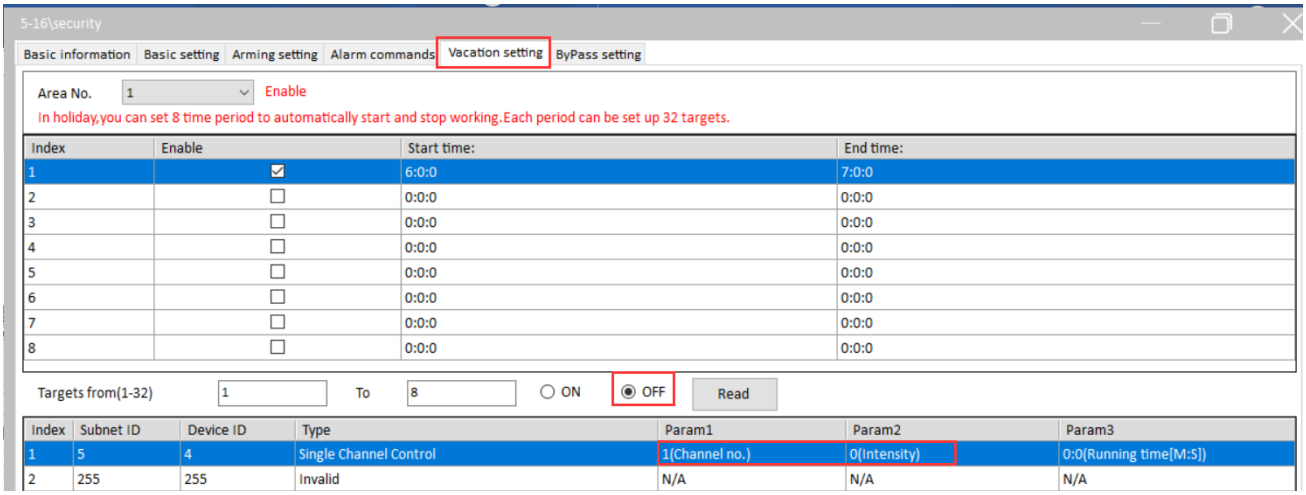
2. Simulate has someone at home to control the light during vacation.

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.

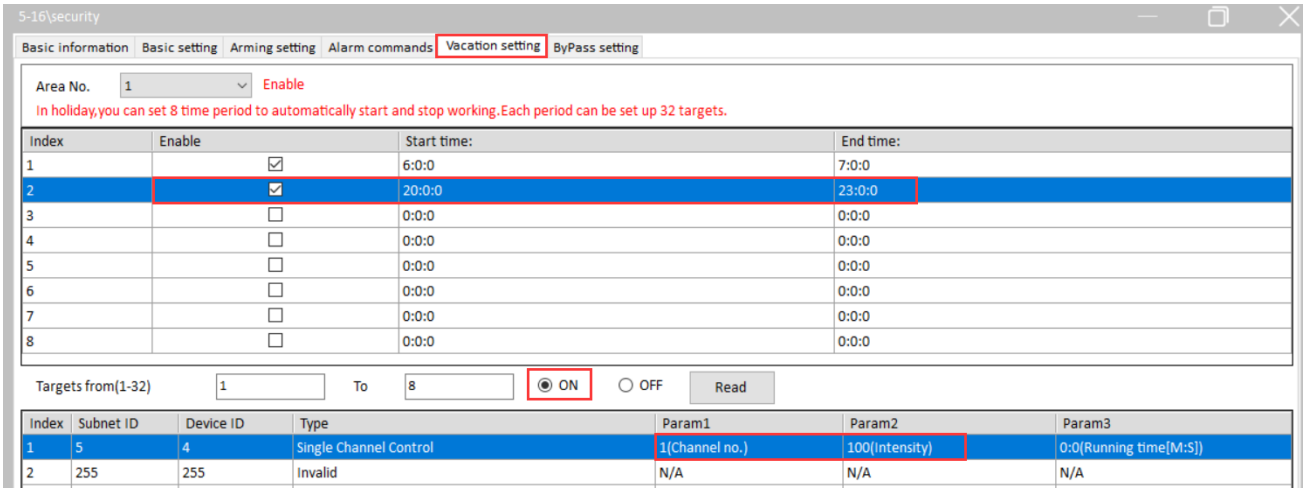
a) Enable index 1, set the ‘Start Time’ is 6:00, and the ‘End Time’ is 7:00 in ‘Vacation Settings’ page. When the time reaches 6:00, it will turn on it.

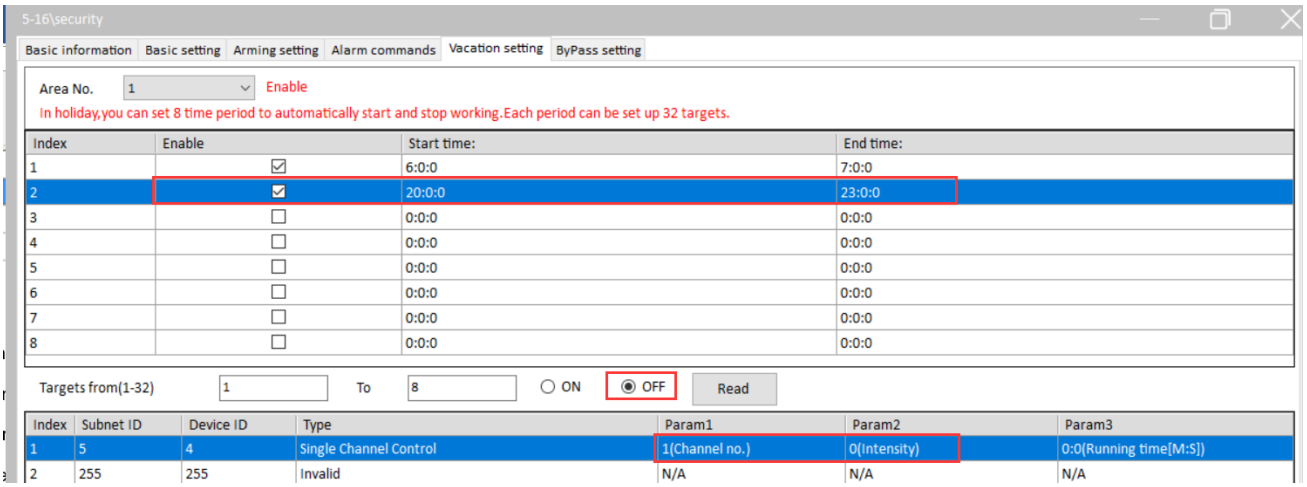


b) Select ‘OFF’, setup to turn off channel1 of relay (ID is 5/4). When the time reaches 7:00, it will turn off it.



c) 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.



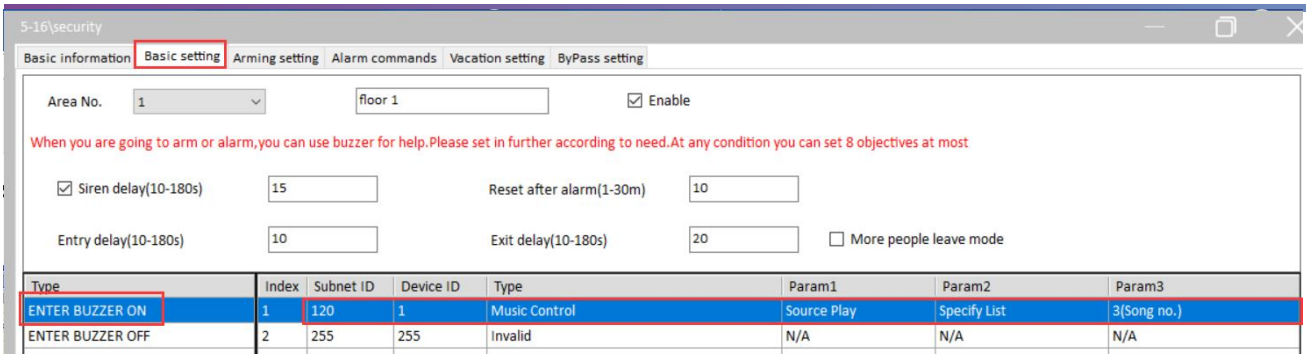


3. When there is someone opening the door, then 7in1 sensor's detected status will change(no movement -> movement, dry contact: connected ->disconnected), it will report to the security module, then security module will trigger to the home player to play 'welcome home' voice hint.

a) Make sure there is one voice hint for come back in special folder of USB disk. Here it is '003.voc' (come in voice).

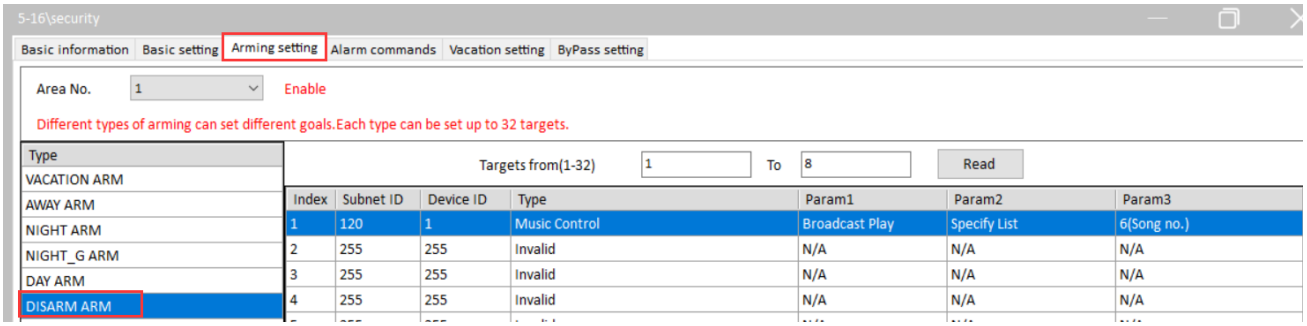


b) Go to 'ENTER BUZZER ON', setup to trigger the home player (ID is 120/1) to play the 3rd voice when open the door.



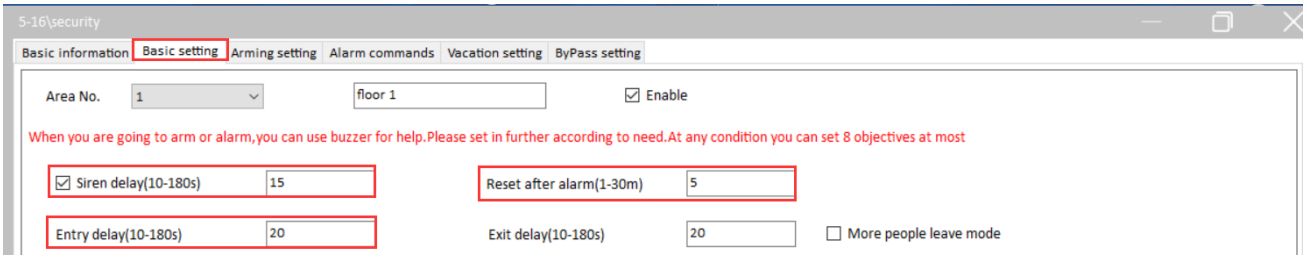
4. The house owner go to the HDL-MPL8.48 to press the disarm button within 20s (Entry Delay), then security module will work under the non-monitoring mode. Better to set password for this arm/disarm page, then only the owner can access it to control.

When press disarm button, will trigger disarm targets. Like play the disarm voice.

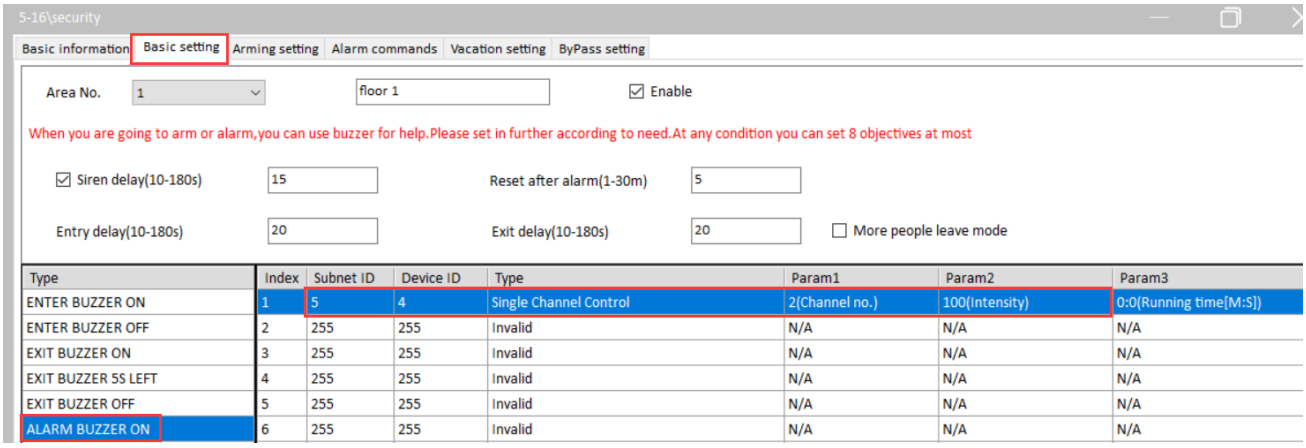


5. If it's not the house owner, after 20s (Entry Delay), will turn to alarm. After 5 minutes of alarm, still not disarm, stop alarm. When there are more triggers from 8in1 sensor, it will start to alarm again, and that cycle repeats.

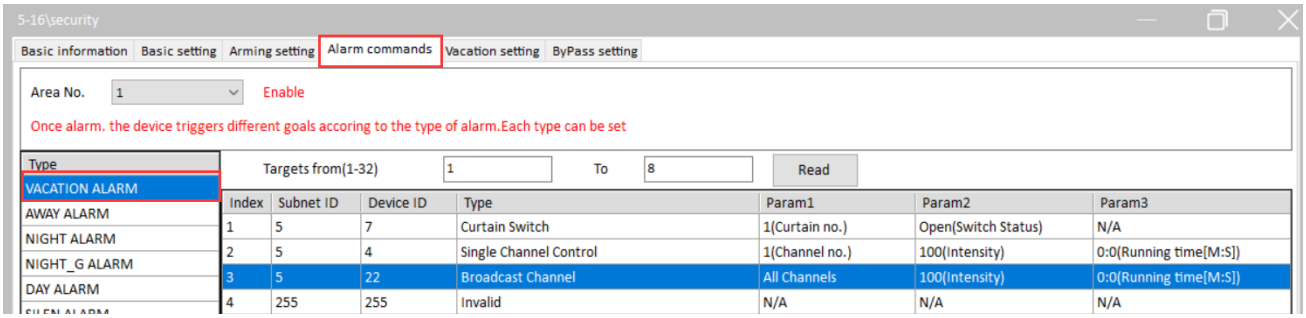
a) Set 20s for Entry Delay, 15s for Siren Delay, 5 minutes for Reset after Alarm.



b) Can set to trigger the alarm buzzer after 20s, e.g. the alarm buzzer is connected to channel 2 of one relay (ID is 5/4), then can set as below:

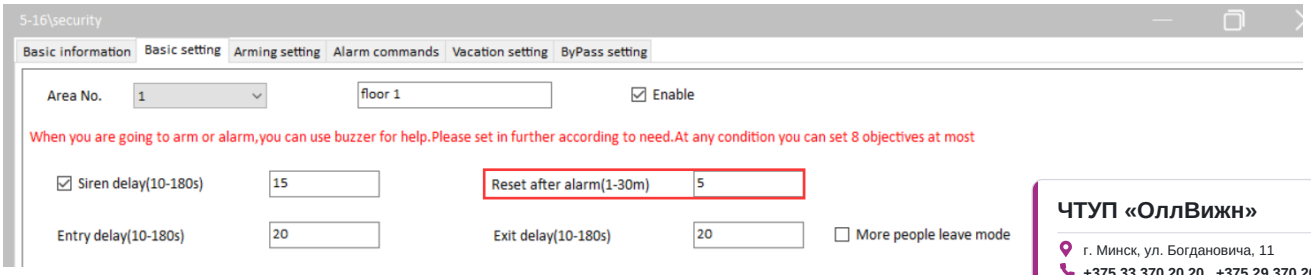


c) It will trigger the alarm targets in the ‘VACATION ALARM’ after 20s at the same time. Here set to open the curtain and turn on lights when alarm.



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’ in ‘Basic setting’ page.

e) After 5 minutes from alarm, 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.



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