

HD IP Speed Dome Manual

Thank you for purchasing our products! If you have any questions or need, please contact the customer department at any time.

There may be technical inaccuracies and typographical errors in the manual. Products, updated in real time, the contents of the manual will be updated from time to time without prior notice. The updated content will be added in new version. If it is inconsistent with the products, please be on the products basis.

If in doubt or dispute manual, please refer to the final interpretation of the company.

CALL+"N"+PRESET Show preset
SET+"N"+PRESET Save preset
CALL+"95"+PRESET Enter menu
CALL+"94"+PRESET Restart
CALL+"92"+PRESET Set scan1 Left limit
CALL+"93"+PRESET Set scan1 Right limit
CALL+"97"+PRESET Run scan1
CALL+"98"+PRESET Run tour1
CALL+"62"+PRESET Open IR LED(manual state)
CALL+"63"+PRESET Close IR LED(manual state)

1.Precaution

Notice:

Read this manual before the installation

1.1 Laws and regulations

The using area must abide by the laws and regulations of your country.

1.2 Electrical safety

Conform to country and local electrical safety standard when using or installing the product. Using local special power adapter. This dome uses DC12V/1500mA power supply.

1.3 Transportation

The dome should be protected against extremes of pressure, vibration and humidity during storage and transportation. It should be shipped in parts disassembled as the original packing did. Damage caused by improper transportation is not within the warranty.

1.4 Installation with care

Do not install it in any other orientation. Do not squeezed structure parts, which may cause mechanical damage. Down cover is a precise optical product. Do not touch it directly to avoid scratches which can affect image quality.

1.5 Requirements to service personnel

All the service work should be done by qualified technicians.

1.6 Environmental requirements

Operation environment temperature: -10°C~+50°C

Humidity: < 90%

Air pressure: 86-106Kpa

Power supply: DC12V/1500MA

1.7 Using

Don't place the camera to be shoot by strong light objects. Don't point the dome to the sun or other bright objects when in use or not. It may affect image quality.

3. Performance

3.1 Technology parameter

3.2 Camera parameter

3.3 Performance and feature

This product is high-technology surveillance product with high definition and color camera, variable-speed pan/tilt and multifunction decoder. It can reduce the connection and installation process between systematic parts at a max limit, and also can improve the stability and reliability of the system. Meanwhile it is easy to install and repair, and it has the following advantages: beautiful shape, rotate lightly and neatly, little noise, simple operation and so on.

3.3.1 Built-in digital camera

- a. High sensitivity, high resolution, and integrated digital processing
- b. Auto-focus
- c. Auto brightness control
- d. Auto slow shutter
- e. Auto-Iris
- f. Auto white balance
- g. Auto back light compensation

3.3.2 Integrated and multi-protocol decoder

- a. Figure design, all the data are stored in the inner of camera pan/tilt, when power off, the storage data can't be lose.
- b. Built-in decoder, integrated multi-protocol, including PELCO-D, PELCO-P, FACTORY, etc.
- c. 128 presets can be stored, preset 1-80 support auto tour, and each tour can store up to 32 presets.
- d. 1 pattern, 1 scan, 1 tour
- e. Built-in direction indicator
- f. Built-in direction temperature indicator

3.3.3 Built-in pan/tilt

- a. Iron and carbon alloy structure, high intensity, and good heat dissipation.
- b. Precise stepping motor, rotate smoothly, react sensitivity and orientate accurately.
- c. Exquisite mechanical drive, support pan 360°continuously and tilt 0-90°, and may rotate180°
- d. Rotate slowly at pan 0.2°/s, and the image doesn't jitter.

3.3.4 OSD menu

- a. All the menu option are displayed in English.
- b. Video OSD menu. It is direct and simple to revise the dome information and parameter by keyboard and menu display.
- c. May set park action, and set power up action or carry out appointed action.

3.3.5 Internal temperature test

- a. Real-time temperature display can be set
- b. When the temperature exceeds the upper limit, the screen will display alarm information.

c. According to the real-time temperature, the fan will measure if it starts or not, and prolong the life of fan.

3.3.6 Infrared function

- a. IR up to 150m
- b. IR angle change according to focal length

3.3.7 Network specification

| Specs Items | 1.3Mega Pixel | 2.0Mega Pixel | 4.0Mega Pixel | 5.0Mega pixel |
|----------------------|---|---------------------------------|---|---|
| Toal pixel | 1280*960 | 1920*1080 | 2304x1296@30fps 2592x1520@22fps | 2592x1944@30fps |
| Frame Rate | 1280*960/ 1280*720 | 1920*1080/1280*960/ 1280*720 | 2592*1520/2304*1296/ 1920*1080/1280*960/ 1280*720 | 2592x1944/1592*1944/ 2592*1520/2304*1296/ 1920*1080/1280*960/ 1280*720 |
| Video Compression | H.264/M-JPEG | | H.265/H.264 /M-JPEG | |
| Audio Compression | G711/PCG | | | |
| Network protocol | TCP/IP, HTTP, NTP, IGMP, DHCP, UDP, SMTP, RTP, RTSP, ARP, DDNS, DNS, HTTPS, P2P | | | |
| Code Striam | Dual-Stream/Tri-Stream | | | |
| User Right | Supprt 8 user control at the same time ,4 Class: Administer,Browse,Browse+Control,Browse+Control+Set | | | |
| Safe Mode | Authorized Admin and Pass Word,Encrypted HTTPS;Network Access Controled IEEE 802.1x,FiltrateIP Address | | | |
| Network Interface | 10M/100M | | | |
| TF Card Interface | Support | | | |
| Onvif | Onvif 2.4 Ver | | | |

Picture 3-3

4. Function Instruction

This passage mainly describes the main function and general principle of mini speed dome.

4.1 Auto-run motion

4.1.1 Focus/speed proportion pan

When manually adjusting, for far focus situation, the dome responds at a high-speed so that touching rocker slightly may make picture move rapidly, thus cause the picture to lose. To base on humanized design, the dome automatically adjust pan and tilt rotation according to zoom near and far, which make it is convenient to operate manually to make tracks for the object. In the menu, you may change system parameter setting proportion pan as ON, thus you may run this function.

4.1.2 Auto flip

If user holds the joystick in the down position, the camera rotates pan 180 degrees, then the camera rotates tilts up to 90 degrees, you may directly watch the rear view to realize surveillance all processes in portrait 180 degrees . In the menu, you may set the system parameter setting AUTO FLIP as ON, thus you may run this function.

4.1.3 Park action

By the menu“park time”and“park action”, user may set auto-call preset or run tour, pattern, and scan, etc after pointing a few minutes if the dome doesn't run any motions.

4.1.4 Power up action

By the menu“power up action”, after the dome powers up or restarts, user may set auto-resume motions before power up and auto- call preset or run tour, pattern, and scan etc.

4.2 Camera control

4.2.1 Magnification control

The user can control  to adjust zoom far and near of the image by PTZ control interface to obtain panoramic image or close view that you need. The speed dome support digital zoom and optical zoom.

4.2.2 Focus control

System defaults Auto focus. When the lens changes, camera will auto-adjust focus according to the centre of the image to get legible image; user also can manually focus to get desire image by PTZ control interface .When operating keyboard joystick, camera resumes to auto focus.

The camera cannot auto focus in the following status:

- a. Target is not the centre of the image
- b. Observation the target near and far at the same time,can not be clearat the same time
- c. Target is a strong light object, such as spotlight etc
- d. Target moves too fast
- e. Target is subfusc, such as wall
- f. Target is too dark or vague
- g. Target image is too small

4.2.3 Iris control

System defaults Auto Iris. Camera canrapidly adjust size of Iris, through the automatically induct the changing of environment ray, and thus make the brightness of deferent image stable.

User may adjust iris byPTZ control interface  to get required brightness that you need. User also can resume auto Iris by joystick operation. When controlling the Iris manually, the dome locks current position you manually controlled; when operating joystick, the dome resume auto Iris.

4.2.4 Auto back light compensation

Camera sub-area can carry out auto back light compensation. Under a strong light background, camera will auto compensate light for the darker object and adjust daylight to the bright background. In order to avoid making the image lack fidelity by the back line is too bright, and the object is unable to recognize because of darkness, thus gain legible image.

4.2.5 Auto white balance

Camera can automatically adjust white balance in accordance with the alteration of background light-ness to reach a true colour.

4.3 Monitor function

4.3.1 Set and call preset

Preset function is that dome stores current pan/tilt angle, zoom and other position parameters into the memory. When necessary dome recalls these parameters and adjust camera to that position. User can store and recall presets easily and promptly by using keyboard controlling. The dome can store up to 128 presets.

4.3.2 Tour

Tour is the built-in function in the speed dome. It can appoint setting in advance, and make pre-sets arranged in needful order in tour dwell. By inserting presets in tour dwell, to make the camera tour between these presets. Tour order can be programmed, each time you run tour, you can set park time. A tour can store 32 preset.

4.3.3 Scan

User can easily preset right limit and left limit by controlling menu and menu, in order to make the camera scanned between right limit and left limit at a setting speed.

4.3.4 Pattern

Pattern is built-in function in the speed dome; the dome can record the tracks that are no less than 180s, when running pattern, the dome moves repeatedly according to the recorded tracks. Each dome can set up to 1 pattern.

4.3.5 Lens position display

The position that the speed dome has finished to self-testing as 0 point of pan rotation and tilt rotation. The pan range is 0-360°, and tilt range is 0-90°. According to the displayed information to set the position of camera lens, and the position can display on the screen.

4.4 Constant temperature function

Inner temperature sensor surveille temperature inside of the dome. When the dome work in the high temperature, the dome will automatically to start-up the fan to reduce the heat, to make sure the dome work in the reliable temperature environment, increase its stability and prolong the life time of the dome.

4.5 Infrared function

- a. Mini illumination 0Lux
- b. Use efficient infrared array, low consumption, IR up to 150m
- c. The brightness of IR LEDs is in proportion to the optical zoom
- d. Built-in heat process and defog system 内置热处理及除雾系统
- e. Constant current control, lower consumption making sure IR LEDs have more than 30,000hs working life.

4.6 Network function

- a. Support ethernet
- b. View monitoring and control the PTZ through browser and Customer Management System
- c. Support Micro SD card

- d. Support NAS record, and support offline transmission
- e. 4 class user authorized management, authorized admin and password, Encrypted HTTPS; Network Access Controlled IEEE 802.1x, Filter IP Address
- f. Dual-Stream/Tri-Stream, H.264/MJPEG video compression. Video output: 1080p、960p and 720p
- g. Multi-protocols: IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTP, TCP/IP, DHCP, PPPoE

5. System Setting

5.1 Basic operation

5.1.1 Power up and self-testing

The dome conducts self-testing after current-carrying, and it rotates slowly until displaying pan origin that is default setting, then moving to tilt origin.

The information will not disappear until you stop to operate the system. If you set "power up action", the dome will automatically activate motions after self-testing. How to operate the function? We will explain detail introduction in following passages.

5.1.2 Call the main menu

The system enters into the main menu by 95 preset or twice transfer 9 preset in 3 seconds. All the menu setting must enter into the main menu at first.

If the PTZ set password, must input the correct password. Input super password (super password: 584609) when forget the setted password, then the password will be the original password (original password: 000000), need to reset the password. We will explain how to reset password in chapter 5.7

5.1.3 Menu and PTZ control interface operation

Ø PTZ Control Interface

 when choosing menu, it means to enter the next menu or enter into setting, or save after finish to set.

 when choosing menu, it means to close to cancel, or exit to the former menu.

 Focus to the distance.

 Focus to the vicinity.

 Amplify multiple.

 Diminish multiple

 : means to choose the former one

 : means to choose the next one

 : when choosing picture, it means camera tilt left, it is equal with .

 : when choosing picture, it means camera tilt right, it is equal with .

Ø Menu operation:

"BACK": Back to the former menu.

"EXIT": Exit to menu

"ON": Open some setting

"OFF": Close some setting

5.2 Edit dome title

When using a lot of systems of the dome, in order to identify to each dome, the systems support title setting. The setting ways as follows:

1. Use 95 preset or transfer 9 preset twice in three seconds to enter the main menu.
2. Moving mouse cursors up and down to move the cursor to **【SYSTEM SETTING】**, click  to enter the next menu.
3. Moving mouse cursor **【EDIT DOME TITLE】**, click  to enter the title setting menu.
4. Moving mouse cursor **【TITLE】**, click  to edit current title.
5. When the mouse cursor is twinkling in the first character of the title, to move mouse cursor to choose character, after editing, click  to save.
6. Moving mouse cursor **【BACK】**, click  to back to the former menu.

Notice:

The label may set 16 characters, and doesn't need editing characters. Pressing  continuously to jump over and using spacebar to replace the deleted characters. When you finish to edit character, press  to enter into the next editing character. When you editing the last character, pressing  to save. Press  to exit. Character of label is suitable for choosing as follows: 0-9、A-Z、:<>-.、Space.

Other labels' input ways are the same as above

5.3 Dome initial information

1. Use 95 preset or transfer 9 preset twice in three seconds to enter the main menu.
2. Operate the mouse cursor to **【SYSTEM SETTING】**, click  to enter submenu.
3. Operate the mouse cursor to **【INITIAL INFO】**, click  to display initial information as the left picture shows.
4. Initial information includes S/N of the dome, soft edition, protocol, dome ID, communication parameter. System setting may change the numerical value of initial information.



5.4 Password setup

The original password is 000000.

1. Call 95 preset or call 9 preset twice within 3 seconds and then input the password to enter the main menu.
2. Operate the mouse cursor to **【SYSTEM SETTING】**, click  to call the submenu.
3. Operate the mouse cursor to **【PASSWORD SETUP】**, move mouse cursor to right or click  to call the submenu. Please refer to the left picture.
4. Operate the mouse cursor to **【OLD PASSWORD】**, click  choose **【OLD PASSWORD】**, input the password.
 - **【NEW PASSWORD】**: input new password
 - **【CONF PASSWORD】**: confirm password
 - **【ENABLE PASSWORD】**: enable password



The password function is effective only "ENABLE PASSWORD" is set as "ON".

Notice:

When user forgot the password and can not enter into the main menu, he can use the super password to enter, which is "584609", at this time, the password of dome will change to initial one, which is "000000", and then user may set the password by himself again.

5.5 System parameter

Systematic motion controlling may control a series of canonical movement of the dome, and plays an important role in controlling the image of the dome.

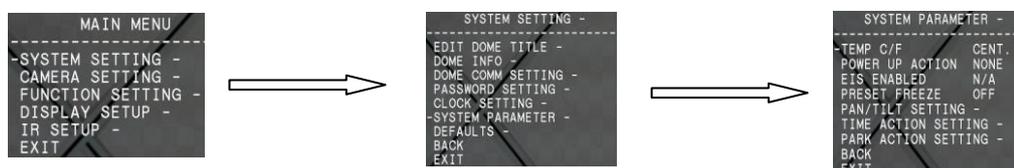
1. The system enters into the main menu by calling 95 preset or by
2. Operate the mouse cursor to **【SYSTEM SETTING】**, click  to enter submenu.
3. Operate the mouse cursor to **【SYSTEM PARAMETER】**, click  to enter the system parameter menu, as left picture.

- **【EIS ENABLED】** : electronic anti-quake function, related to the camera module
- **【PRESET FREEZE】** : preset freeze function, the screen can change when the PTZ move to the next preset.

5.5.1 Power up action

The dome startup to run actions after self-testing, if nobody intervenes with it, the dome will repeatedly run this action continuously, if default sets as **【NONE】**. Operate cursor, move the cursor to **【POWER UP ACTION】**: press  to jump to the following choice, tilt up/down cursor to choose "power up action", press  to save.

- **【NONE】**: none action
- **【AUTO】**: the dome resumes the primary action and direction before power up.
- **【PAT1】**: run pattern
- **【TOUR】**: run tour
- **【SCAN】**: run scan
- **【PRESET】**: use preset



5.5.2 PAN/TILT setting

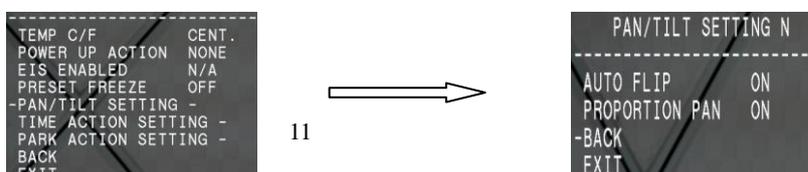
Move the mouse cursor to **【PAN/TILT SETTING】**, operate PTZ control interface setting

1. **【AUTO FLIP】**: auto flip function setting, choose "ON", open "auto flip", choose "OFF", then close auto flip function. click  to save setting.

OPERATION KNACKS:

When manually adjusting, for far focus situation, the dome responds at a high-speed so that touching rocker slightly may make picture move rapidly, thus cause the picture to lose. To base on humanized design, the dome automatically adjust pan and tilt rotation according to zoom near and far, which make it and tilt rotation according to zoom near and far, which make it

2. **【PROPORTION PAN】**: proportion pan setting, choose "ON", open "proportion pan", choose "OFF", then close "proportion pan". click  to save the setting.

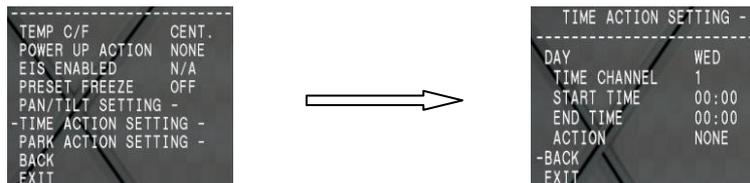


5.5.3 Time action setup

This setting allows the dome to run an appointed action in the set time in one day

Move mouse cursor to **【TIME ACTION SETUP】** , click  to enter the set.

- **【DAY】** : set day of the action
- **【TIME CHANNEL】** : set the time channel, 4 time channel can be set in one day
- **【START TIME】** : start time of the action
- **【END TIME】** : end time of the action
- **【ACTION】** : perform the action in this time,NONE---no action/ PRESET---call preset/ SCAN---perform scan/ PAT--- perfrom pattern/ TOUR—perform tour



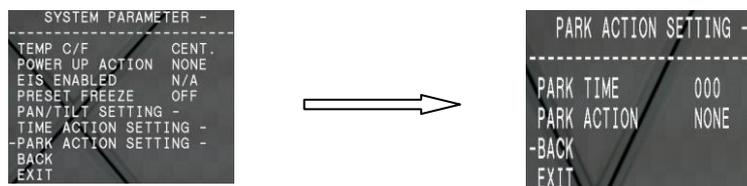
5.5.4 Park action setup

This setting allows the dome to run an appointed action after it enters vacancy for a few time (1-240minutes). If default sets as 0, it means not to run this action.

1. Operate cursor to **【PARK ACTION SETUP】** , click  , to set park time the range is 0-240 (minute), press **【OPEN】** to save. Click  to save the set. **【PARK ACTION】** is running action at park time, when **【PARK TIME】** sets as 0, this item can't be set.

2. Operate cursor to **【PARK ACTION】** , click  , there will be a sign “ ” in the front of **【PARK ACTION】** , the cursor jump to right, after tilting up/down, cursor to choose "park action", there are options for choosing as follows, press  to save.:

- **【NONE】** : (default) no action
- **【PAT1】** : run pattern
- **【TOUR】** : run tour
- **【SCAN】** : run scan
- **【PRESET】** : use preset



5.6 Defaults

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.

2. Operate cursor to **【SYSTEM SETTING】** , click  to enter submenu.

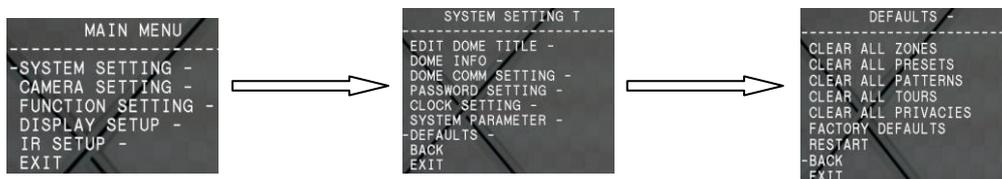
3. Operate cursor to **【DEFAULTS】** , click  to enter submenu, as left picture shows.

- **【CLEAR ALL ZONES】** : clear all zones
- **【CLEAR ALL PRESETS】** : clear all presets
- **【CLEAR ALL PATTERNS】** : clear all patterns

- **【CLEAR ALL TOURS】** : clear all tours
 - **【CLEAR ALL WINDOWS】** : clear all windows
 - **【FACTORY DEFAULTS】** : resume the factory default. Run this function, the camera parameter and system parameter will resume before production, clear all windows and alarm setting. Please be cautious to use this function
 - **【RESTART】** : restart the dome
4. Set clear zone as an example to explain the process. Tilt up/down。 joystick to **【CLEAR ALL ZONES】** , press **【OPEN】** to clear all zones.

NOTICE:

Once clear all commands in the controlling menu,they don't resume, so please be careful of using.

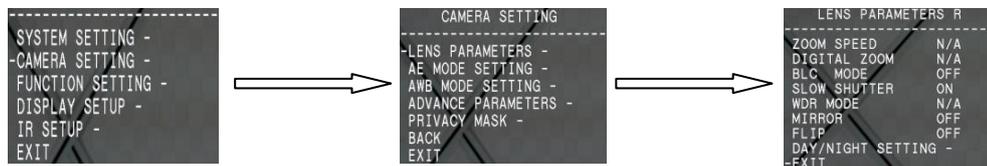


6. Camera Setting

6.1 Lens parameters

6.1.1 Zoom speed

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【LENS PARAMETERS】**.
3. Operate cursor to **【ZOOM SPEED】**, click , then choose **【HIGH】** or **【LOW】** to set speed.
4. click  to save set, click **【CLOSE】** /  to not save set.



6.1.2 Digital zoom control

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  then enter **【LENS PARAMETERS】**.
3. Operate cursor to **【DIGITAL ZOOM】**, click , to enter digital zoom setting, operate mouse, to choose ON means open digital zoom control which is digital zoom is pulled near, if pulling the digital zoom near again, the dome enters into "digital zoom increase", to choose OFF means to close digital zoom control.
4. Click  to save the set.

OPERATION KNACKS:

When open the "DIGITAL ZOOM", maximum zoom of the PTZ is the optical zoom multiply by digital zoom. When close the "DIGITAL ZOOM", maximum zoom is only the optical zoom.

NOTICE:

When the optional item display N/A, it means the PTZ do not have that function.

6.1.3 Back light compensation

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【LENS PARAMETERS】**.
3. Operate cursor to **【BLC MODE】**, click , there will be a sign " " in the front of **【BLC MODE】**, the cursor jump to right, tilt joystick to open or close back light compensation function. If choose ON means to open back light compensation mode. If choose OFF means to close back light compensation mode.

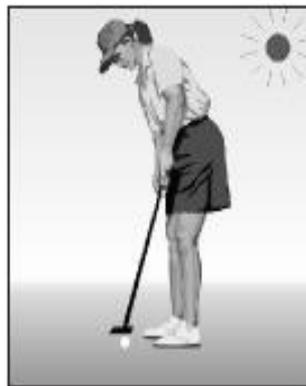
NOTICE:

When the optional item display N/A, it means the PTZ do not have that function.

4. Click , to save the set.



Non-use back light compensation, in strong sunshine, the back light side is subject to dark.



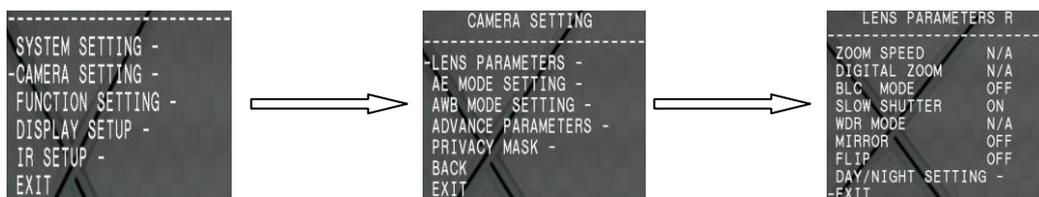
Use back light compensation, the image is in gear.

OPERATION KNACKS:

Strong background ray can make backlighting objects engender shadow, (back light compensation), the speed dome can auto-adjust iris to match with the changes of various ray, and auto-revise the main lightness to make the pictures more legible.

NOTICE:

This function relates to models and parameters of the built-in camera in the dome, when open black compensation, it has two functions which are auto-adjust (when you choose ON) or manual adjust (0-255) according to the different of the camera.



6.1.4 Slow shutter control

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.

2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【LENS PARAMETERS】**.

3. Operate cursor to **【SLOW SHUTTER】**, click , there will be a sign "" in the front of **【SLOW SHUTTER】**, the cursor moves to right, tilt up/down joystick to "slow shutter" choice, if choosing ON means to open slow shutter function, if choosing OFF means close "slow shutter" function.

4. Click , to save the set.

OPERATION KNACKS:

When the dome monitors at night or dark environment, because the ray is not enough, the image on the screen is too dark, setting slow shutter can lengthen the time of lighting so that make the picture that is shoot in dark more legible.

NOTICE:

This function depends on the models and parameters of built-in camera module in dome, if it does not have this function, then this function will be invalid.

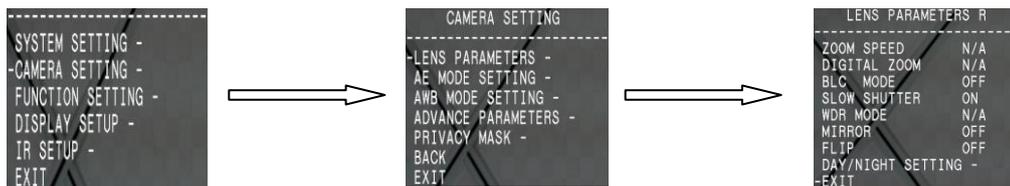


6.1.5 WDR control

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【LENS PARAMETERS】**.
3. Operate cursor to **【WDR MODE】**, click , to set WDR. Choose ON means open WDR, choose OFF means close WDR, press  to save.
4. **【MIRROR】**: image mirroring function.
5. **【FILP】**: 180° inversion imaging function of image.

NOTICE:

This function is relative with the model and parameter of the camera module which insert in the dome. The option is useless(N/A) when the camera module has no such function.



6.1.6 Day/night setting

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【LENS PARAMETERS】**.
3. Operate cursor to **【DAY/NIGHT SETTING】**, the cursor jumps to right, there are three choices of "DAY/NIGHT", which is as follows:
 - **【AUTO】**: IR cut filter mode, it means the dome automatically transfers according to sensitivity.

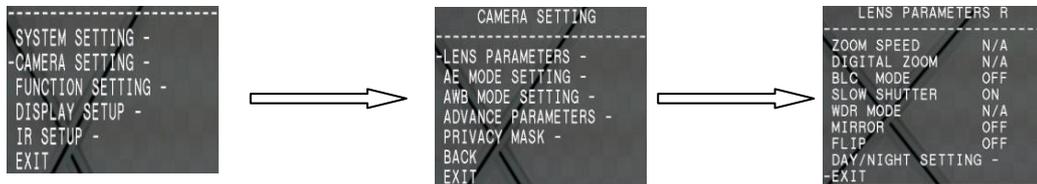
- **【TIME】**: set the time of opening IR cut filter
 - **【COLOR】**: set as color mode
 - **【BLACK】**: set as black and white mode
4. **【THRESHOLD】**: sensitive of IR cut filter, the range from 0 to 28dB.
 5. click  to save.

OPERATION KNACKS:

IR cut filter function uses color in day; use black and white at night. This function notably guarantees the quality of image, but also saves the room of storage.

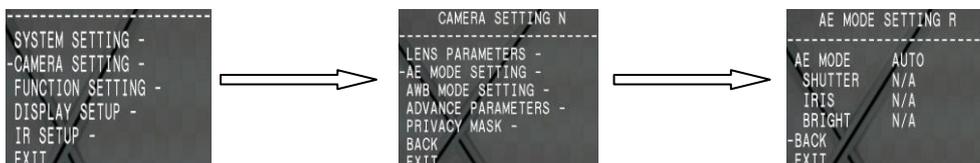
NOTICE:

This function depends on the models and parameters of built-in camera in dome, if the camera haven't this function, then this function is invalid.(N/A).



6.2 AE mode

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】** to enter submenu
3. Operate cursor to **【AE MODE SETTING】**, click , tilt up/down mouse to choose AE mode, modes for choosing as follows:
 - **【AUTO】**: default setting, auto Iris mode
 - **【SHUTTER】**: shutter priority mode
 - **【IRIS】**: iris priority mode
 - **【BRIGHT】**: brightness priority mode
4. Choose iris priority mode **【IRIS】**, click  to save the set.
5. Move mouse cursor to the sub-choices of AE mode **【IRIS F1.4】**, click , 选 to choose adequate Iris, click  to save set.
 - **【SHUTTER 1/50】** it means shutter speed, when AE mode is shutter priority, this function can be set.
 - **【IRIS F1.4】** it means the size of iris, when AE mode is iris priority, this function can be set.
 - **【BRIGHT F2.0/ODB】** it means brightness, when AE mode is brightness priority, this function can be set.



OPERATION KNACKS:

Quality of photo relates to exposure amount, that is to say how much light can make CCD receives legible image. Exposure amount is relative to the time of lighten (be up to shutter speed) and the area of lighten (be up to the size of iris).

The camera can automatically calculate suitable exposure amount according to brightness of scenery and CCD sensitivity, in the situation that the exposure amount is certain:

【SHUTTER】 (shutter priority) is to fix shutter speed, the camera will auto decide to use how much iris; 【IRIS】 (iris priority) is to fix the size of iris, and auto-decide to use shutter speed.

【BRIGHT】 (brightness priority) is point that the camera TTL check the light directly and control the brightness of image.

Notice:

This function depends on the models and parameters of built-in camera in dome, different camera models, the menu maybe different.

6.3 White balance mode

System supports 【AUTO】 , indoor mode 【INDOOR】 , outdoor mode 【OUTDOOR】 , auto track mode 【ATW】 , single mode 【OPW】 , 【OPT】 mode, manual mode 【MANUAL】 and kinds of white balance modes, etc. Detailed setting as follows:

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.

2. Operate cursor to 【CAMERA SETTING】 ,to enter submenu.

3. Operate cursor to 【ABW MODE】 , to choose AWB mode,click  to save set.

【AUTO】 is the default mode of speed dome, which is auto-revert real color after the white balance sensor check the environment by camera. When choosing manual mode【MANU-AL】 , adjust the numerical value of 【R GAIN】 and 【B GAIN】 .

- 【R GAIN】 the range is 1-225, the numerical value is bigger, it means that adding red is more, the tone changes to be warm.

- 【B GAIN】 the range is 1-225, the numerical value is bigger, it means that adding green is more, the tone changes to be cold.

Indoor mode 【INDOOR】 , and the tone leans to cold.

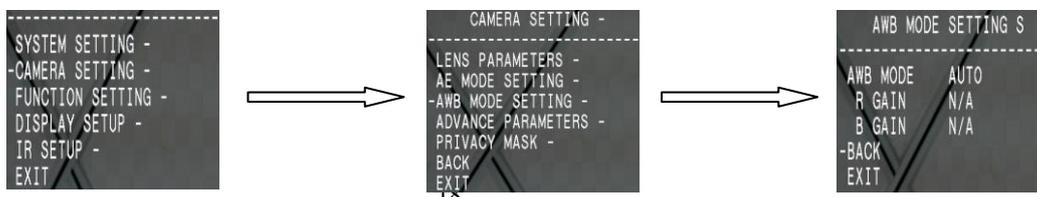
Outdoor mode 【OUTDOOR】 , and the tone leans to warm.

【ALC】 Chosing range:000~255

【PLC】 Chosing range 000~127

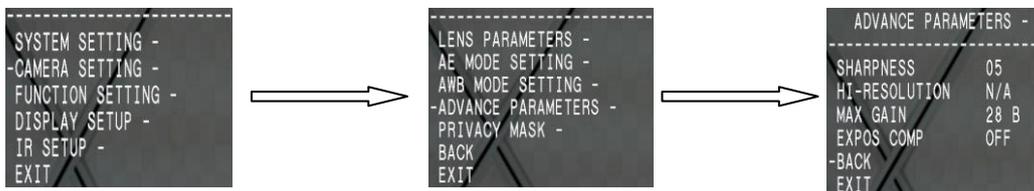
NOTICE:

It is possible that some cameras do not have the setting of 【INDOOR】 , 【OUTDOOR】 , 【HI-RESOLUTION】 , which means the current camera does not have such function when the setting option shows N/A.



6.4 Advance parameters

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click **【OPEN】** to enter **【ADVANCE PARAMETERS】**。
3. **【SHARPNESS】**: change the sharpness of the image. The value is bigger, the image will be clearer.
4. **【HI-RESOLUTION】**: high resolution is built-in function of camera. This function is relative with the model of camera.
5. **【MAX GAIN】** : it is the max gain of auto gain, and can be set between 8-28dB. When the light is very dark, the value is smaller, the noise of image will be less. The value is larger, the noise of image will be more.
6. **【EXPOS COMP】**: exposal compensation function.



6.5 Privacy zone masking

Privacy function can show someone piece of regional shielding while protecting. For example, protect the window of bedroom or ATM of bank. Each dome can set up to 24 privacy windows. (Masking setting function is relative with the model of camera module. The masking numbers will be different according to the different cameras.)

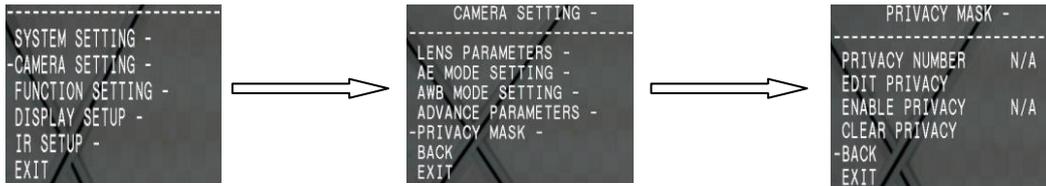
1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate cursor to **【CAMERA SETTING】**, click  to enter **【PRIVACY MASK】**
click enter the PRIVACY MASK MENU
 - **【PRIVACY NUMBER】** choose window number as current privacy window, other choices in the menu just aim at current privacy window.
 - **【EDIT PRIVACY】** program current window.
 - **【ENABLE PRIVACY】** permit/prohibit current privacy window, there are two choices: ON---permit current privacy window/ OFF---prohibit current privacy window.
 - **【CLEAR PRIVACY】** clear current privacy window, after clearing it, the window will auto-change as OFF.
3. Program current privacy window: Firstly choose window number, then do the following operations:
 - a. Operate cursor to **【EDIT PRIVACY】**, click  to move the image that need privacy window to display
 - b. click , there will be a square displaying in the centre of the screen, operate joystick, and move the square to the central place that need to conceal.
 - c. click , operate mouse cursor to adjust the size of privacy zone: cursor to up, the height

is increased; cursor to down, the height is reduced; joystick to right, the width is increased; cursor to left, the width is reduced.

d. Click  to save the current privacy zone setting, and the window will auto-change as ON at the same time.

NOTICE:

This function is decide by the parameter of built-incamera, if the camera does not have this function, this option isinvalid.



7. Function Setting

7.1 Preset

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds. Click each command to enter "preset menu" according to the order of the left picture. As follows:

- 【PRESET NUMBER】
- 【SET PRESET】
- 【SHOW PRESET】
- 【CLEAR CURRENT PRESET】
- 【EDIT PRESET TITLE】

Define preset and call preset function can be set by keyboard operation, input preset number at first, then click the key "save /call preset" to carry out.

2. Define current preset number: move the cursor to 【PRESET NUMBER】, click  to choose preset number, the range is 01-128 as the left picture shows, here chooses number 5 as current preset, the following operations aim at the current preset.

3. Define current preset: move the cursor to【SET PRESET】, click , by operating mouse cursor to adjust magnification, to choose good objective image, click  to save. If the image is very near, the image is belong in digital zoom; when setting preset, the image will jump to maximal optical zoom.

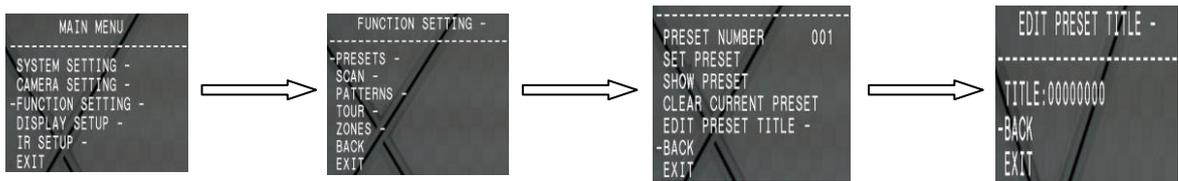
OPERATION KNACKS:

Preset function is that dome stores current pan/tilt angle, zoom and other position parameters into the memory. When necessary dome recalls these parameters and adjust camera to that position.

4. Display current preset: move the cursor to 【SHOW PRESET】, click , the screen will display the current preset.

5. Clear current preset: move the cursor to【CLEAR PRESET】, click , the current preset is cleared.

6. Edit current preset label: move the cursor to 【EDIT PRESET TITLE】, click  to enter into editing preset submenu, system auto set title as PRESET-XX, click  to revise title.



NOTICE:

1. When running to program, display, clear preset and edit label, should choose preset number at first.
2. The label may set up to 16 characters, and doesn't need editing characters. Press **【OPEN】** continuously to jump over and use edit space bar character, to replace the **【deleted OPEN】** characters. to enter into When they next finished editing to character; when you finish to edit the last character, pressing **【OPEN】** to save. Press **【CLOSE】** to exit. Character of label is suitable for choosing as follow: 0-9、A-Z、:;<>-. , space.
3. As the submenu **【STATE】** in **【AUTO TRACKING】** is set as OFF, it is valid to Call preset to set auto-tracking ON/OFF. (Pls reference the Paragraph 6.7)

7.2 Scan

1. Scan is that pre-set two points , then the camera repeatedly scan between the two points at a stable speed, the same magnification and pan. Each dome has four scan.

2. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds. Click menu to enter "scan" menu, as the left picture shows.

- **【SCAN NUMBER】**
- **【SCAN SPEED】**
- **【SET LEFT LIMIT】**
- **【SET RIGHT LIMIT】**
- **【RUN SCAN】**
- **【CLEAR SCAN】**
- **【EDIT SCAN LABEL】**

3. Define current scan number: operate mouse, move the cursor to **【SCAN SPEED】** , click  , operate mouse cursor to control scan speed, click  to save

4. Left limit setting: operate mouse cursor to **【SET LEFT LIMIT】** , click  , operate mouse to choose objective image, press, click  to save; Right limit setting is the same as left limit setting.

5. Edit scan label: operate mouse, move the cursor to **【EDIT SCANTITLE】** , click  to enter submenu "edit title", move the, move cursor to **【TITLE】** , system auto-set AUTOSCAN, click  to revise.

NOTICE:

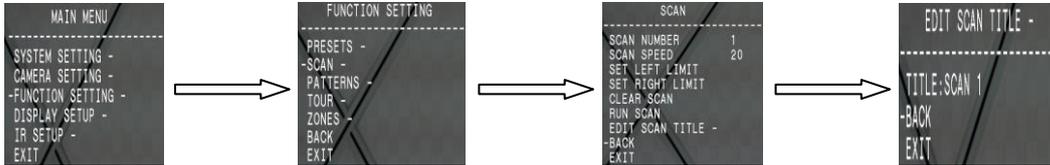
The label can set up to 16 characters, and doesn't need editing characters.

Click  continuously to jump over and using spacebar to replace the deleted characters. When you finish to edit a character, click  to enter into the next editing character when you finish to edit the last character, click  to save. Click  to exit. Character of label is suitable for choosing as follow: 0-9, A-Z, :;<>-. , Space. The editing ways of other labels are the same as above.

6. Run scan: operate mouse to **【RUN SCAN】** , click  to exit the menu, and it starts to run scan.

NOTICE:

- a. Left limit and right limit of scan can't be set the same point.
- b. Under scan process, speed, magnification and tilt direction won't change, if the speed, magnification and tilt direction of the two limits are inconsistent, run scan is base on left limit.



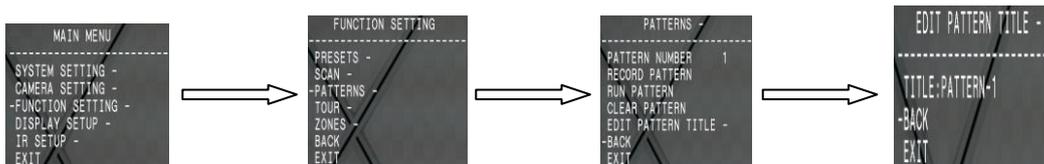
7.3 Pattern

Pattern is built-in function in camera; the speed dome can record tracks that are no less than 180s. (A series of pan/tilt controlling and lens controlling command). Each dome may set up to 4 patterns.

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate the mouse to **【FUNCTION SETTING】** , click  to enter submenu
3. Operate the mouse to **【PATTERNS】** , click  to enter menu "Pattern"..
 - **【PATTERN NUMBER】**
 - **【RECORD PATTERN】**
 - **【RUN PATTERN】**
 - **【CLEAR PATTERN】**
 - **【EDIT PATTERN TITLE】**
4. Choose pattern: move cursor to **【PATTERN NUMBER】** , click  , the pattern you choose as current one, the following operations aim at the current pattern.
5. Define current pattern tour: move the cursor to **【RECORD PATTERN】**, click  , to set pattern track, move the image random, and draw the focus. Each dome has a tour that is no less than 180s, a series of park time, magnification, focus will be recorded, click  to save.
- 6.Run pattern: operate mouse to **【RUN PATTERN】**, click  to run, the dome will continuously and repeatedly record the specific track.

NOTICE:

When carry out program, run,clear pattern and edit title, should choose pattern number at first.



7.4 Tour

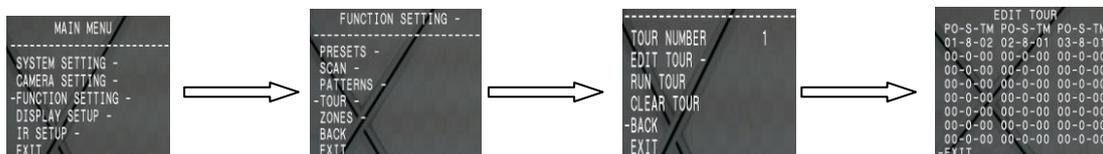
Tour is the built-in function in the speed dome, it will arrange the presets into the queue of

auto-tour, and can set how long it will park at preset. Operate auto-tour is a process of incessantly transfer each preset. One tour can store 32 presets at most.

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate mouse to **【FUNCTION SETTING】**, click  enter submenu.
3. Operate mouse to **【TOUR】**, click  to enter menu "tour".
 - **【TOUR NUMBER】**
 - **【EDIT TOUR】**
 - **【RUN TOUR】**
 - **【CLEAR TOUR】**
4. Set tour: move the cursor to **【TOUR NUMBER】** , click , to set tour interface.
5. Run tour: Operate joystick, move the cursor to **【EDIT TOUR】** , click  to exit the menu, it starts to run tour.

【PO-S-TM】 set preset, speed and time, click  , the first dwell is activated , tilt up/down mouse to choose preset number, the preset numerical value should be within 1-80 preset, a tour can set up to 24 presets. click  the cursor jump to the next dwell, tilt up/down joystick to choose current arrival preset speed , total 8 level of speed , increasingly from level1 to level 8. Click  the cursor jumps to the next dwell, tilt up/down joystick to set current preset maintaining time, 60 seconds maximum. If set the presets of the second line , move the cursor to the second line, click  to edit. Click  to save after setting, click  to exit.

6. Run tour: Operate mouse, move the cursor to **【RUN TOUR】** ,click  to exit the menu, it starts to run tour.



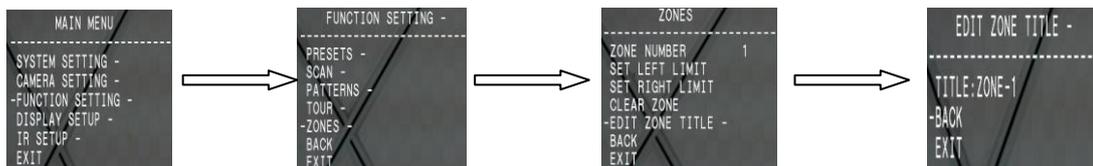
7.5 Zones

Each dome may be set up to 8 zones, and the regional scene can't be overlapped. User will set label for each zone. When setting **【ZONE TITLE】** as ON, the dome will display zone title as it runs some zone. It is convenient to know the zone that the camera shoots by setting zone title.

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.
2. Operate mouse, move the cursor to **【FUNCTION SETTING】**, click  to enter submenu.
3. Operate mouse, move the cursor to **【ZONES】**, click  to enter submenu, as the left picture shows.
 - **【ZONES NUMBER】** : choose zone number as current zone, there choices in the menu aim at current zone.
 - **【SET LEFT LIMIT】** : set current zone's left limit

- **【SET RIGHT LIMIT】** : set current zone's right limit
- **【CLEAR ZONE】** : clear current zone setting
- **【EDIT ZONE TITLE】** : edit current zone title, if zone number is 1, zone title will auto change to ZONE-1

Regard the left/right limit as the demarcation line, and set the middle part as a zone. Various operational ways are the same as other settings in the menu. Therefore we won't explain it again.



8. Display Setup

1. The system enters into the main menu by calling 95 preset or by calling 9 preset twice within 3 seconds.

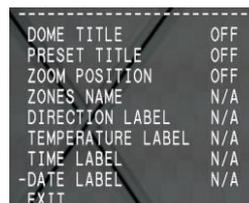
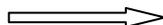
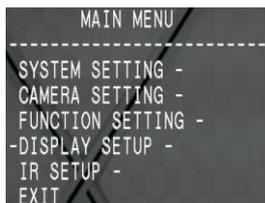
2. Operate the mouse up and down and move the cursor to【DISPLAY SETUP】, click  to enter menu, to set the content of the display setup as follows:

- 【DOME TITLE】
- 【PRESET TITLE】
- 【ZOOM POSITION】
- 【ZONES NAME】
- 【DIRECTION LABEL】
- 【TEMPERATURE LABEL】
- 【TIME LABEL】
- 【DATE LABEL】

3. Taking display dome title as an example to explain the operation 【process. Operate up/down joystick to move cursor to 【DOME TITLE OFF】 ,click , there is a sign " " besides 【DOME TITLE】 , the cursor is twinkling besides 【OFF】 , as left picture shows.

4. Mouse tilts up/down, setting number changes between ON/OFF, when setting 【ON】 , it means to display "dome title". When setting 【OFF】 , it means not to display "dome title". When click , the cursor jump back in front of 【DOME TITLE】 , which means title setting is finished, when moving the cursor to 【EXIT】 , it means exiting the menu setting.

The displaying information on the screen will change with the dome rotation. Through the information on the screen, user can see current dome inside temperature, magnification, display zone etc. When all the titles are displayed, the dome works as the following picture shows: (In the picture "305" means pan angle, "45" means tilt angle.)



9. Infrared Setting

IR SENSITIVITY: infrared automatic open sensitivity settings, LOW MID HIGH Three grades, the user can according to the environmental illumination status modulates infrared automatic open.

MANUAL DELAY: infrared light manual opening, closing time, if time is 0, Do not automatically close infrared lamp

IR ON/OFF: IR control mode, can be divided into a, AUTO, MANUAL, TIME three models, In TIME model, according to the user set time to switch IR; in MANUAL mode, Call the 62 preset command to open the infrared light, open the 63 preset closed lamp

IR LUMINANCE: infrared brightness control method in infrared light, open effect after, AUTO Mode: AUTO, GROUP, MANUAL, three states AUTO mode, infrared automatic brightness matching lens distance, according to the camera lens changes, Infrared high beam and dipped beam headlights will automatically lens changes, Infrared high beam and dipped beam headlights will automatically matching, And can improve the infrared lamp life.

GROUP GROUP mode, packet mode, in a packet mode, infrared high beam and dipped beam headlights will match According to the lens distance packet opened at the same time.

MANUAL MANUAL mode, the manual control mode, infrared brightness from the lens parameters influence, The user can set the high beam and dipped beam brightness, range 0~100

