IR Intelligent High-Speed Dome

Installation and User's manual

English

V3.01

Please read the manual carefully before installing and using the unit.

Catalogue

Welcome

Thank you for purchasing IR intelligent high-speed dome.

This manual is used for operating and programming the unit as your reference. You can find relevant information of functions and commands, as well as detailed menu tree and fast operating instructions in this manual. The section of installation provides the needed information for setting and installing the unit. Before installing and using the unit, please read the information in this manual carefully.

I Important Safeguards

This manual is the basic instruction about IR intelligent high-speed dome. This manual consists of important information about security and warning, function specification, performance characteristic and parameter, installation step, general faults and the solution to get out of them, maintenance and others need to know when using the IR intelligent high-speed dome.

If you first use the IR intelligent high-speed dome or ever used the similar products, you had better read this manual before using this unit.

If possible, please start reading from the first page in sequence. If you just hope to see the needed parts, you also can select them from catalogue. Please refer page 27 to get the function list of the unit. This unit uses special presets to realize some function operation.

★ **Careful transportation**

During the course of transportation and storage, the product should be avoided from incorrect operations such as heavy pressing, strong vibration, soaking,,etc. which may cause damage to the unit. This unit must adopt parts packing transportation regardless of delivery or return to factory maintenance. The damage which caused by assemble packing transportation is not covered by the warranty.

★ **Careful installation**

During the course of installation, the product should be handled properly, and should be avoided from incorrect operations such as squeeze the structure parts, heavy press, strong vibration etc, which may cause mechanical problem and reflect the overall performance of the unit. The dome cover of the unit which belongs to advanced optical products should be avoided from incorrect operations such as directly touch by hand which may scratch the cover and affect image quality. When installed, please follow all electrical standards for safety and adopt the particular power supply which is provided with the unit. Control signal and video signal should be kept enough distance from high voltage equipments and cables when they are in transmission, and necessary steps should be taken to prevent lightning damage or power surge. Don't turn on power before finish installation.

★ **Don't dismantle**

Don't dismantle the unit. There are no parts inside the unit which can be repaired by the users themselves. When mechanical problems arise, do not be in a haste to do any repairing, please refer to the user's manual to find the trouble. If causes can not be located, please refer servicing to qualified professionals. All servicing must be done by authorized personnel.

★ **Set in place far from electric and magnetic fields**

If the unit is set near EMI source such as television, wireless transmitter, electromagnetic device, motors, transformers, speakers etc which may create electromagnetic field, the electromagnetic field will influence images. Please keep sufficient distance.

★ **Don't aim the camera at light objects**

No matter the unit is running or not, the camera should never be aimed at the sun or object with extremely bright light, and never be aimed at or monitor immobile light object for a long time. Otherwise, the camera's CCD might be permanently damaged.

★ **Careful maintenance**

The camera should be carefully used and avoided form impact or vibration, otherwise, it will be damaged. Don't use strong or corrosive detergent to clean dome camera's body. You should clean it with dry cloth. When the dirt is not easy cleared, you can wipe it by neutral detergent. If the camera lens is dirty, please wipe it by the special paper.

Please use this product in the required working environment:

Working Environment	IR intelligent high-speed dome
Environmental Temperature	-35~40 ℃
Environmental Humidity	<95%
Atmospheric Pressure	86~106KPa
Power Supply	AC24V/2.5 A

NOTE: Don't install the indoor unit for outside. Please be sure the outdoor installation meet to waterproof demand.

II Installation Guide

2.1 Preparation for Installation

1. Basic demand

Before installing and using this unit, please read the following warning information:

1) Installation and maintenance should be carried out by professional personnel as per relative regulation. All electrical work must obey the latest electrical regulations, fire regulations and relevant regulation. Check whether the accessories of the unit are complete according to packing list and confirm the place whether the method of installation is correct in accord with required, if not, please contact your supplier. Please use this product in required environment.
2) Indoor IR intelligent high-speed dome only designs for house supply. It can't be installed exposed to rain or in very humid place.
3) After re-installation or repair, you need to measure the resistance between the circuit and shell to check whether the insulation is good, and ensure there is no short-circuit between the circuit and shell.
4) Confirm there is enough place to contain the product and its structure components. Confirm the ceiling, wall and bracket for installation can take the total weight of the product and its structure components, and materials used to support the weight can sustain four times the weight of the product.

2. Cable preparation

1) Select cables according to transmission distance: the minimum specification requirements of vision coaxial-cable is as below:
   - 75Ω impedance;
   - Copper wire;
   - 95% braided copper mesh shielding.

Domestic Model	International Model	Maximum distance (meters /feet)
RG59/U	RG59/U	229m(750ft)
5C-2V	RG6/U	305m(1000ft)
7C-2V	RG11/U	457m(1500ft)

The same type of video cables may be different depending on manufacturer. The data shown in above table is the transmission distance of general vision cable.

2) The following data is recommended maximum distance for application of 24VAC or 24VDC, the distance is calculated from 10% voltage drop. (For AC or DC electric driving equipment, the maximum allowable voltage drop is 10 %.)

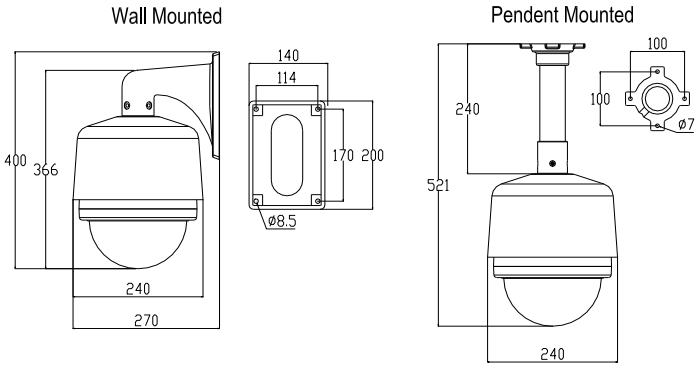
Cable diameter	0.5mm² (20AWG)	1mm² (18AWG)	1.5mm² (16AWG)	2.5mm² (14AWG)
Power 23W	38m(123ft)	60m(196ft)	95m(311ft)	151m(495ft)
Power 72W	12m(39ft)	19m(62ft)	30m(98ft)	48m(156ft)

3. Toggle switch setting

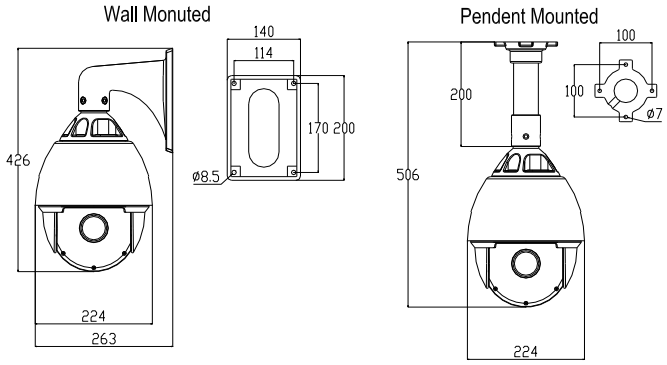
Set the toggle switch according to the control protocol, baud rate and address. (Refer to the third chapter<Description of Functional >)

2.2 Installation

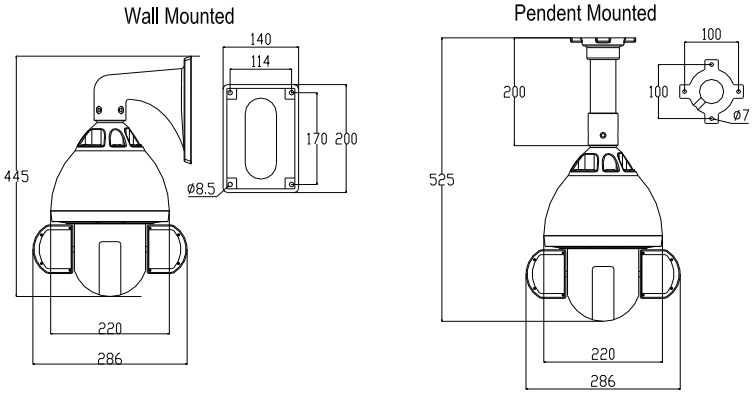
A series of IR intelligent high-speed dome dimension figure



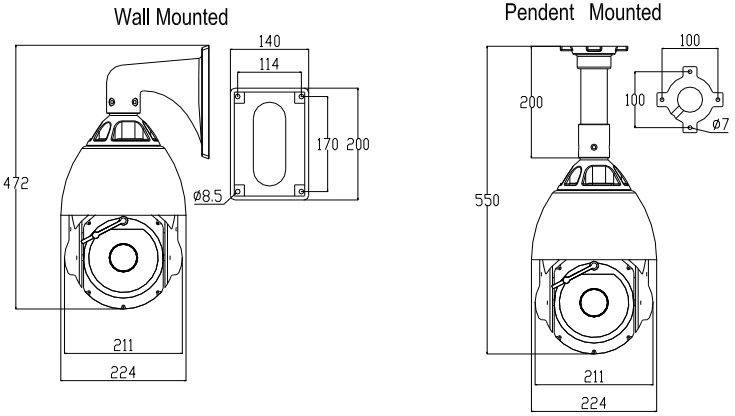
B series of IR intelligent high-speed dome dimension figure



C series of IR intelligent high-speed dome dimension figure



E series of IR intelligent high-speed dome dimension figure



IR intelligent high-speed dome is designed for wall mounted and pendent mounted installation

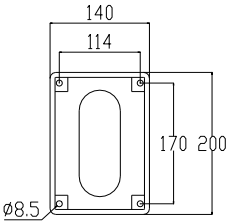
Conditions of wall mounted installation:

Wall mounted unit can be used in the rigid wall structure of indoor and outdoor.

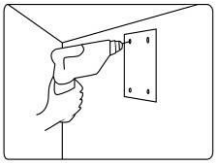
1) The wall thickness should be enough to install setscrews.
2) The wall can withstand at least 4 times the weight of the unit.

Punch holes for wall mounted bracket

Take the wall mounted bracket from the packing box, and use the open holes at the bottom of bracket as template and draw punch positions on the wall. (As shown in the following figure)



Punch holes and drive in four M8 setscrews. (As shown in the following figure)



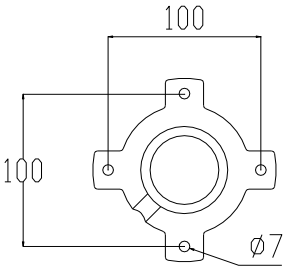
Conditions of pendent mounted installation:

Pendent mounted unit can be used indoor in the rigid wall structure.

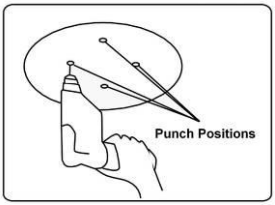
1) The thickness of ceiling should be enough to install setscrews.
2) The ceiling can withstand at least 4 times the weight of the unit.

Punch holes for pendent mounted bracket

Take the pendent mounted bracket from the packing box, and use open holes at the bottom of bracket as template and draw punch positions on the ceiling. (As shown in the following figure)

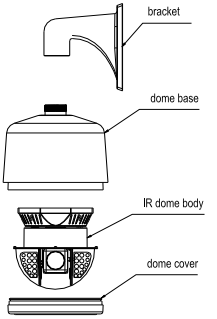


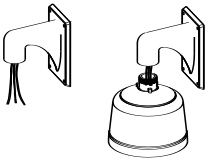
Punch holes in punch positions and drive in four M6 setscrews. (As shown in the following figure)



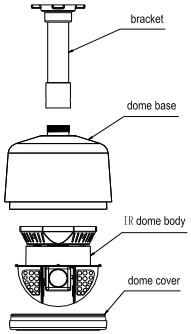
A series of IR intelligent high-speed dome installation

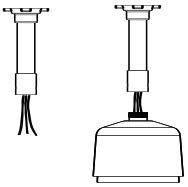
A serial wall mounted structure





A serial pendent mounted structure





Installation steps of wall mounted unit:

1) Take dome base from the packing box. Pull the wire and cables out through the bracket, and than aim at four open holes and fix the bracket firmly to the pre-installed setscrews with four M8 nuts. (As shown on the left)
2) Install the dome base onto the bracket.
3) Please refer the instruction to connect the power supply, video and controlling cables.
4) Take out IR dome body from the packing box. Setup communication protocol, baud rate and address through SW1 and SW2 at the bottom of the IR dome body. When install the IR dome body, IR dome body's socket need to correspond with the dome base's socket. Hold the camera with both hands, aim the IR dome body's clip at the dome base's bayonet (Note the corresponding red marks), put the clip into bayonet slowly, and then press the top of clip with a little force, you can confirm the installation is set at positions after heard two crisp voice of a combined bump.

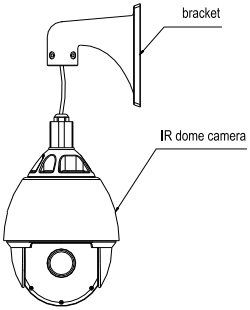
   Note: Confirm the IR dome body was completely stuck, or else the IR dome body may cover off or the dome cover may be fretted. Pull down the IR dome body lightly to check whether the IR dome body is completely stuck.
5) Install demo cover onto demo base and fix them.

Installation steps of pendent mounted unit:

1) Take dome base from the packing box. Pull the wire and cables out through the bracket, and than aim at four open holes and fix the bracket firmly to the pre-installed setscrews with four M6 nuts .(As shown on the left)
2) Refer to the installation steps of wall mounted unit.

B series of IR intelligent high-speed dome installation

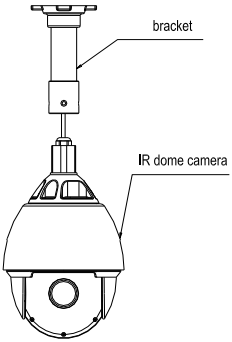
B serial wall mounted structure



Installation steps of wall mounted unit:

1) Take IR dome camera from packing box, set up dome camera protocol, baud rate and address. Pull the wire and cable out through the bracket, and then aim at four open holes on the bracket and fix the IR dome camera firmly to bracket with M6 socket head screws which are along with the unit.(As shown on the left)
2) Aim at four open holes on the wall and fix the bracket firmly to the pre-installed setscrews with four M8 nuts.
3) Please refer to the instruction to connect the power supply, video and controlling cables.

B serial pendent mounted structure

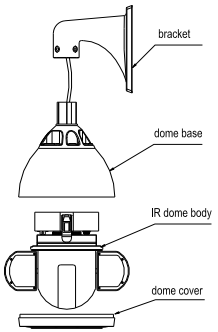


Installation steps of pendent mounted unit:

1) Take IR dome camera from the packing box, setup communication protocol, baud rate and address through SW1 and SW2 at the bottom of the IR dome camera. Pull the wire and cable out through the bracket, and then aim at four open holes on the bracket and fix the IR dome camera firmly to the bracket with M6 screws. (As shown on the left)
2) Aim at four open hole on the ceiling and fix the bracket firmly to the pre-installed setscrews with four M6 nuts
3) Please refer to the instruction to connect the power supply, video and controlling cables.

C series of IR intelligent high-speed dome installation

C serial wall mounted structure

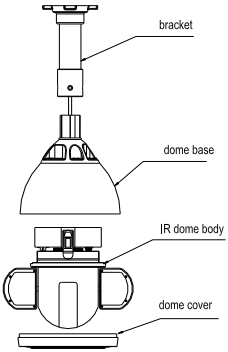


Installation steps of wall mounted unit:

1) Take dome base out from the packing box. Pull the wire and cable out through the bracket, fix the IR dome body firmly to the bracket with M6 socket head screws which are along with the unit.(As shown on the left)
2) Fix the bracket firmly onto the pre-installed setscrews on the wall with four M8 nuts.
3) Take out IR dome body from the packing box. Setup communication protocol, baud rate and address through SW1 and SW2 at the bottom of the dome body. When install the dome body, dome body's socket need to correspond with the dome base's socket. Hold the camera with both hands, aim the dome body's clip at the dome base's bayonet (Note the red marks correspond), put the clip into bayonet slowly, and then press the top of clip with a little force, you can confirm the installation is set at positions, after heard two crisp voice of a combined bump.

   Note: Confirm the dome body was completely stuck, or else the dome body may cover off or the dome cover may be fretted. Pull down the dome body lightly to check whether the dome body is completely stuck.
4) Install dome cover onto dome base and fix them

C serial pendent mounted structure

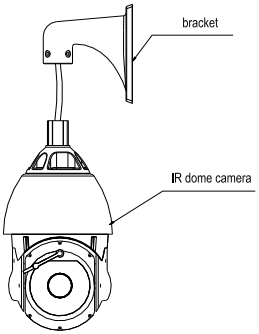


Installation steps of pendent mounted unit:

1) Take dome base out from the packing box. Pull the wire and cable out through the bracket, and fix the IR dome base firmly to the bracket with M6 screws. (As shown on the left)
2) Aim at four open holes on the ceiling and fix the bracket firmly to the pre-installed setscrews on the ceiling with four M6 nuts.
3) Refer to the installation steps of wall mounted unit.

E series of IR intelligent high-speed dome installation

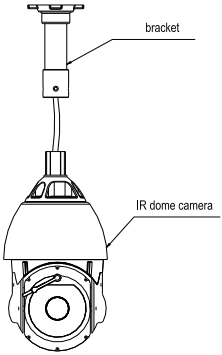
E serial wall mounted structure



Installation steps of wall mounted unit:

1) Take IR dome body from the packing box. Set up communication protocol, baud rate and address. Pull the wire and cable out through the bracket, and then aim at four open holes on the bracket and fix the IR dome camera firmly to bracket with M6 socket head screws along with the unit.(As shown on the left)
2) Aim at four open holes on the wall and fix the bracket firmly to the pre-installed setscrews with four M8 nuts.
3) Please refer to the instruction to connect the power supply, video and controlling cables.

E serial pendent mounted structure



Installation steps of pendent mounted unit:

1) Take out IR dome body from the packing box. Setup communication protocol, baud rate and address through SW1 and SW2 at the bottom of the IR dome body. Pull the wire and cable out through the bracket, and then aim at four installed holes on the ceiling and fix the IR dome camera firmly to bracket with M6 screws (As shown on the left)
2) Aim at four installing hole on the ceiling and fix the bracket firmly to the pre-installed setscrews with four M6 nuts.
3) Please refer to the instruction to connect the power supply, video and controlling cables.

Note: The pendent mounted bracket can not be used outside. Because of this specialized operation condition, please ensure that this dome camera meet to the waterproof demand.

1) The suspender which is used with the pendent mounted bracket must meet to waterproof demand. Otherwise, the customer will be responsible for the water fault.
2) It's forbidden to pull the leading-out wire of the unit out through the Flange side hole of the pendent mounted bracket.
3) Make sure the sealing ring and Flange sunken hole of pendent mounted bracket are tightly combined and sealed from water.
4) Put silica gel around Flange of pendent mounted bracket to seal from water.
5) Put silica gel around the connector of pendent sleeve and upper shield to seal from water.
6) All exposed screw holes of pendent mounted bracket must be played silica gel to seal from water.

III Description of Functions

IR intelligent high-speed dome is equipped with high performance DSP camera with zooming lens, higher efficiency IR lamps, built-in PTZ and digital decoder, which represents the future trend of high technology monitoring products. The unit is adopts full-digital control, flexible programming and exquisitely simple transmission system design. The unit is capable of rapid positioning and consecutively tracing and scanning, which realizes the real sense of all-directional and no blind spots monitoring. The unit support PELCO - D, PELCO - P, TA01 and other communication protocol, makes operation more flexible and simple.

The series of IR intelligent high-speed dome can be applied in every walk of life to monitor moving objects in larger areas, such as monitoring banks, airports, transportation, state government agencies, power, prisons, hotels, commercial buildings, factories, schools, museums etc.

3.1 Performance Characteristic

1. Functions Introduce

★ Adopted full-functional high-performance DSP design, performance stable and reliable.

★ 3D positioning function, realizes screen coordinate positioning and partial enlarges through software.

★ Minimum hand-controlling speed of stable operation is 0.01 ° / S. Maximum patrolling speed of precise positioning is 350 °/S.

★ Reserved network module interfaces can be loaded to network-intelligent camera.

★ Support and automatic identification PELCO-D, PELCO-P, TA01 and other communication protocols.

★ No internally saved data lose when power off; In-build module contains surge immunity protection.

★ 204 presets for free storage, precise positioning, and have preset screen freeze function.

★ Programmable automatic patrolling tracks, automatic linear scan function and guarding function.

★ Supports remote fault diagnosis, system upgrade, reset, and address setting function.

★ Automatically identify different camera modules, communication protocol and baud rate.

★ Optional Multi-language functions, and also achieves date, temperature, angle and compass display.

★ Optional timing function.

2. Integrated high-speed PTZ

★ Integrated design , compact structure, high reliability

★ Precise motor drive, infinite variable speed, steady operation, no jitter, sensitive control.

★ Achieve automatically flip 180º and consecutive monitoring vertically.

★ Low power consumption, calorific value is only half of the similar manufacturer’s products.

3. Built-in HD integrative camera

★ Auto iris, auto backlighting compensation.

★ Auto/manual white balance.

★ Auto / manual focus.

★ Automatic brightness control.

★ HD integrative camera.

★ Multiple zoom integrative cameras can be chosen.

4. 24-hour outdoor design

★ Built-in heaters, sensors intelligent control.

★ Built-in radiator fan, by which the unit can work at high temperature ambient condition 60 ℃.

★ The cover is constructed with all-alloy, which ensures strong and durable.

★ Built-in multilevel 3000V lightning protection, surge protection and surges protection.

3.2 Function declaration

This section describes the principle of main functions' implementation, not involve specific method of operation, different platforms have different operation methods, generally subject to operation manual of manufacturers, there may be some special demand and operation methods in some cases, please contact with the dealers to get necessary information.

★ **Manual target tracking**

Users can control the camera to trace the moving object or change the monitoring area by moving the joystick on the keyboard up, down, left or right What's more, the angle of view or the size of the image of the object can be changed by adjusting the focal length. In the default Auto-focus, Auto-Iris state, the lens can automatically quickly adjust to get clear image according to the change of the object.

★ **Auto flip**

In the process of operating the joystick to trace and monitor, if the user move the lens to the bottom (vertical) then continues pressing the joystick, the lens will automatically flip 180º horizontally, then the user can still control it to move upwards till 90°, which enables the user to directly observe the situation on the back side, thus fore-and-aft 180° consecutive monitoring can be realized.

★ **Set and call preset**

The presets function works in this way: The IR intelligent high-speed dome stores the data of PTZ horizontal angle, tilt angle and lens focal-length in the current state. The user can quickly and conveniently storage and call the preset by the keyboard and other control equipment, and then move the PTZ and camera module to the corresponding position.

★ **Focal length/ speed automatic matching techniques**

When the focus is long and in the mode of manual adjustment, due to the high sensitivity of the IR intelligent high-speed dome, even the slightest movement of the joystick would make the image move quickly, and cause image losses. Based on human design, the IR intelligent high-speed dome can automatically adjust the horizontal and vertical moving speed according to the current focal-length, which makes the manual target-tracing operation much easier.

★ **Auto linear scan function**

The auto linear scan function is a built-in function of the IR intelligent high-speed dome, which can preset left/right border. The user can run the left/right scan directly through an external command, and then the dome camera will automatically run horizontally between the left limiting position and the right limiting position at the preset speed.

★ **3D positioning function**

In the effective zoom range of the unit, users can directly enlarge and narrow all area of screen view and put any point in the view moved to center of the field.

★ **Pattern (pattern scan)**

The IR intelligent high-speed dome can continuously record running track for 600 seconds or 500 instructions, after start pattern, the unit can automatically cyclic scanning and monitoring according to preset recorded trajectory.

★ **Observe mode**

Users can preset observe time and action mode of IR intelligent high-speed dome (call preset number, auto linear scan function, auto patrol, patterns, memory recalling function once power off). If users have no action within the setting time, the unit will automatically start up preset action.

★ **Menu function**

The menu can satisfy different customers' requirement by support Chinese and English full screen operation. The menu can be made to other langue according to customer’s demand.

★ **Clock function**

Users can set different action in different time which can realize seven days a week, eight periods a day automatic setting function.

★ **Azimuth function**

Users can set up north direction to realize the precise display of rotation direction. IR intelligent high-speed dome also supports zone indication. When the unit is turned to a preset area, the screen can show the title of the preset area.

★ **Privacy Mask function**

For the privacy and safety area, some black lumps can be set to privacy zones. The size and position of the black lumps can be adjustable. Altogether 24 privacy zones can be set in the unit. (This function needs support of the camera)

★ **Set address**

This IR intelligent high-peed dome support 255 addresses, the unit only responds to the command of its own address or broadcast address. The address can be set by toggle switch or soft address function.

★ **Camera control**

1) Zoom control

Users can adjust the zoom by controlling the keyboard to get panoramic view or close view.

2) Focus control

System default is automatic focus. While the lens moves, the camera module can automatically focus on the center of the object view to get clear image. In special conditions, users can manually adjust the focus to achieve desired image effect.

3) Auto iris control

The iris can automatically influence the change of ambient light and make quickly adjustment to output image of stable brightness.

4) Automatic backlight compensation

When the backlight compensation function is turned on, in extremely bright background, the camera module can compensate the brightness of the relatively dark objects, at the same time adjust the light of the bright background, avoiding that the whole image is too bright to watch due to the too high brightness of the background, while the object is too dark to be distinguished, so that clear image can be got. The system closed this function as the default.

5) Auto / manual white balance

According to the ambient light, automatically or manually adjust the light to reappear the real color.

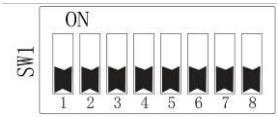
6) IR cut filter (only for cameras with color and black-and-white conversion function)

The camera with night vision function will automatically switch CCD illumination according to the ambient light in auto IR cut filter mode. For example: During the day the light is enough, the camera can use general illumination to get brightly colored picture, while in night, the camera can automatically change low illumination to get clear object with black and white picture.

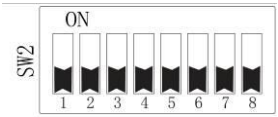
Users can set IR cut filter to manual by the keyboard, in this case, the camera can not automatically make corresponding conversion according to ambient light. Users can manually select color or black-and-white pictures shown.

★ **Set toggle switches**

Before installing the IR intelligent high-speed dome, please configure protocol, baud rate and address code. (The factory default automatic identification protocol & baud rate is address code 1)

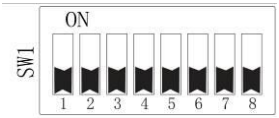


SW1 Protocol & baud rate toggle switch

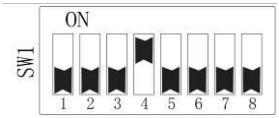


SW2 address code toggle switch

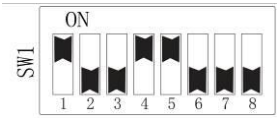
Part of the Data-chosen-switches protocol & baud rate:



Auto identification protocol & baud rate



PELCO-D&2400BPS



PELCO-P&9600BPS

1) Protocol setting

Protocol	SW1-1	SW1-2	SW1-3
Auto identification or PELCO-D	OFF	OFF	OFF
PELCO-P	ON	OFF	OFF
DaHua / GA	ON	OFF	ON
HIK	ON	ON	OFF
Reserve	……	……	……

2) Baud rate setting

Baud rate	SW1-4	SW1-5
Auto identification or 1200bps	OFF	OFF
2400bps	ON	OFF
4800bps	OFF	ON
9600bps	ON	ON

3) Address setting

SW2 toggle switch used to set address of the unit. Address sitting is used binary system, the eighth bit is the highest bit, and the first bit is the lowest bit. The broadcast address is 0, which means if only the address of control port is 0, the units which have suited for protocol and baud rate can be controlled. The following is the protocol address coding table of PELCO - D/TA01:

SW2 PELCO-D address code setting

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON

SW2 PELCO-D address code setting (continued)

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

The following is PELCO-P protocol address coding table:

SW2 PELCO-P address code setting

Address code	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
7	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
8	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
9	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
11	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
12	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
13	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
14	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
15	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
16	ON	ON	ON	ON	OFF	OFF	OFF	OFF
17	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
19	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
20	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
21	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
22	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
23	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
24	ON	ON	ON	OFF	ON	OFF	OFF	OFF
25	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
26	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
27	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
28	ON	ON	OFF	ON	ON	OFF	OFF	OFF
29	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
30	ON	OFF	ON	ON	ON	OFF	OFF	OFF
31	OFF	ON	ON	ON	ON	OFF	OFF	OFF
32	ON	ON	ON	ON	ON	OFF	OFF	OFF

IV Technical parameter

Parameter Index

IR Illumination Distance	Options :30 meters,60 meters,80 meters,120 meters,150 meters etc.
IR LED control	Automatically switch far/near IR lamp according to focal length at night
Power Supply	AC24V±10%(Default) or DC12V±10%
Power Consumption	Maximum: 60W
Working Temperature	-30℃~ 55℃
Manual Rotary Speed	Horizontal:0.05 ~ 240º/s; Vertical:0.03º ~ 160º/s
Horizontal Rotary Range	Horizontal 0º ~ 360º unlimited consecutive rotation
Vertical Rotary Range	Vertical -2º ~ 92º With auto flip
Control Mode	RS485 bus-mastering, support full automatic identify protocol and baud rate
3D Positioning	Realize screen coordinate positioning and local enlarge by software
Auto Patrol	9 groups, the park time of preset is adjustable
Auto Linear Scan	No less than 20 groups, patrol speed and park time can be adjusted
Proportional Reduce Speed	Support intelligent focal length / speed automatic matching technique
Remote Help	Remote fault diagnosis, system upgrade, reset function
Soft Address	Set address without dismantling the unit according to demand
Patterns	4 paths, record no more than 500 instructions or 10 minutes
Power Up Action	Support 18 kinds of power up action
Observe Action	Support 18 kinds of observe action
Camera	Compatible with most integrated camera (customizable specific protocol)
Preset Freeze Frame	Realize freeze frame during preset calling (need camera support)
Menu	Chinese & English ,NTSC/PAL automatic identification output(optional)
Clock	Timing automatically start special function(optional)
Lightning Protection	Voltage of power interface is 4kV,voltage of communication and video interface is 3KV, 3-level surge protection
Shell	Aluminum case, Acid rain-proof ,High hardness
Protection Grade	Meet IP66 FCC CE and pass the Chinese MPS test
Installation	Kinds of installation type, Select one according to application environment

★ The above specifications are subject to change without prior notice

V Functional Instructions

5.1 Common function quick instruction list

The unit has 204 presets. Preset 1-48 and 100-255 for effective presets, and 49-99 for common function quick command, users can quickly use the common function by calling or setting these particular preset numbers.

Num	Call presets	Set presets	Remarks
50	Start pattern 1	Program pattern 1	Pattern function
51	Start preset patrol 1	Set park time of patrol 1>> *	Patrol between preset 1-16
52	Start preset patrol 2	Set park time of patrol 2>>*	Patrol between preset 17-32
53	Start preset patrol 3	Set park time of patrol 2>> *	Patrol between preset 33-48
60	Turn on camera menu		Need camera support
61	Turn off display	Turn on display	Characters display on
62	Turn off reduce speed	Turn on reduce speed	
63	Start horizontally auto scan	Turn on/off auto flip	
65	Horizontally auto scan >>*		
66	Horizontally linear scan >>*	Set scan speed>>>**	
▲70	Turn off privacy mask	Turn on privacy mask	
71	Delete all presets		
72	**Turn off expert mode**	**Turn on expert mode**	**Default is OFF**
▲73	Turn off alarm	Turn on alarm	
79	Restore factory defaults		
80	Set observe time >>*	Set observe action >>*	
81	Set power up action >>*		
87	Set azimuth zero		
▲89	Reboot system		
▲91	Normal mounting	Inverted mounting	
95	Turn on menu		
96	Stop scanning		
97	Start pattern		Start pattern 1
98	Start auto patrol		Start auto patrol 1
99	Start auto scan		Start auto scan 1

*: >> express that this command needs second-level call (set) preset, namely, it needs to call (set) the two presets continuously .

**: >>> express that this command need third-level call(set) preset, namely, it needs to call (set) three presets continuously.

▲: Only can be used when express mode is ON.

e.g., " call (set) 53 + call (set)3" means that you need to continuously call (set) preset 53 and then call preset 3 within 15 seconds when the unit is in readiness, the followings are similar.

★ **Time corresponding preset table:**

Time Preset	1	2	3	4	5	6	7
Time	1SEC	3 SECS	6 SECS	15 SECS	30 SECS	1 MIN	5 MINS
Time Preset	8	9	10	11	12	13	14
Time	15 MINS	30 MINS	1 HOUR	8 HOURS	12 HOURS	24 HOURS	reserve

★ **Action corresponding preset table:**

Action Preset	Action
1	No action
2～9	Preset 1 to preset 8
10～11	Preset patrol1 and 2
12～13	Horizontal linear scan 1 and 2
14～15	Auto scan1 and 5
16～17	Pattern 1 and 2
18	Auto tracking

★ **Patterns**

1) **Program pattern:** Set preset 50 to enter into program pattern, and then operate the unit such as move left, right, up or down, zoom or call preset. When the program is complete, press <IRIS OPEN**>** to exit.
2) **Start pattern:** To start scanning the 1st pattern, call preset 50(or 97).

★ **Preset patrol**

1) **Set preset:** Set the corresponding preset.
2) **Set patrol time:** Set patrol number + time preset, e.g. set patrol 1's time to 15 seconds, operation: set preset 51 and then set preset 4.
3) **Start patrol:** Call the corresponding patrol number to start patrol, e.g. call preset 51 to start patrol 1 between preset 1 and preset 16.

★ **Camera menu**

Call preset 60 to open camera menu (this function needs camera to support), and then select menu item by zooming in (TELE) and zooming out (WIDE), modify selected value by focusing far (FAR) and focusing near (NEAR), modify or open submenu by opening iris open (OPEN). (The above operations are the common camera operations, the specific operations should be referred to the present using camera).

★ **Camera Display**

1) **Close display:** Call preset 61 to close all characters shown on screen.

2) **Open display:** Set preset 61 to display often-used items on screen.

Often-used items include:

- ・Display angles and compass function (need OSD module support)
- ・Zoom display
- ・Preset indicate

★ **Horizontally auto scan**

1) Start auto scan: Call preset 65+ call scan number

Scan number	1	2	3	4	5	clockwise
Scan speed	1 level	2 level	3 level	4 level	5 level	
Scan number	6	7	8	9	10	
Scan speed	6 level	7 level	8 level	9 level	10 level	
Scan number	11	12	13	14	15	anticlockwise
Scan speed	1 level	2 level	3 level	4 level	5 level	
Scan number	16	17	18	19	20	
Scan speed	6 level	7 level	8 level	9 level	10 level	

E.g. Call preset 65 and preset 1 to start auto scan 1.

Note: The more level, the higher speed.

★ **Horizontal linear scan**

1) The method to set speed of linear scan: Set preset 66 and set preset scan(table 1) and set preset scan speed (table 2)

Table 1:

Linear scan preset	1	2	3	4	5	**A→B direction**
Preset	11～21	12～22	13～23	14～24	15～25	
Linear scan preset	6	7	8	9	10	
Preset	16～26	17～27	18～28	19～29	20～30	
Linear scan preset	11	12	13	14	15	**B→A direction**
Preset	21～11	22～12	23～13	24～14	25～15	
Preset scan	16	17	18	19	20	
Preset	26～16	27～17	28～18	29～19	30～20	

Table 2:

Scan speed preset	1	2	3
Scan speed	low	medium	high

E.g. Set preset 66 and set linear scan preset 1 and set scan speed preset 3 to set the first horizontal linear scan speed to high .

★ **Expert mode**

In order to avoid users operate special functions of presets, these special functions have been blocked in factory default setting .if users need to use these functions, please open Expert mode. Operation method:

1) Open Expert mode: Set preset 72 to open Expert mode.
2) Close Expert mode: Call preset 72 to close Expert mode.

Open and close Expert model only need one time to take effect immediately. The state of expert model will be saved even power off, before you change Expert mode next time, you don't need to open Expert mode every time when you operate the special functions.

The items with▲in common commands table only can be operated when expert mode is open. if you need to restart the unit and the expert mode is already open, please directly call preset 89 to restart the unit, if the expert mode is close, set preset 72 to open expert mode firstly and then call preset 89 to restart the unit.

★ **Delete all presets**

Users can quickly delete all presets with one-key. Operation method: Call preset 71 to delete all presets.

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★ **Restore factory defaults**

The restore factory defaults function can restore all operations to factory defaults. Operation method: Call preset 79 to restore all settings to factory defaults.

★ **Azimuth zero position (system default is low position)**

This function can adjust azimuth zero position. Operation method: Call preset 87 and then call the corresponding azimuth zero preset.

High azimuth zero position means the unit can monitor farther view under normally installation.

Azimuth zero preset	1	2	3
Azimuth zero position	High	Medium	Low

★ **Observe action**

Set observe time: Set preset 80 and then set time preset to set observe time (system default is 30 seconds).

Time preset	1	2	3	4	5	6	7
Time	---	---	---	15 secs	30 secs	1 min	5 mins
Time preset	8	9	10	11	12	13	14
Time	15 mins	30 mins	1hour	8 hours	12 hours	24 hours	reserve

Set observe action: Set preset 80 and then set action preset to set observe action (system default is no action).

E.g. set observe action to preset patrol 1. Operation: set preset 80 and then set action preset 10.

★ **Power up action (system default is call preset 1).**

Set power up action: Set preset 81 and then set action preset.

E.g. set power up action to set preset 1. Operation: set preset 81 and then set action preset 2.

★ **Reboot system**

The unit allows user to reboot the system remotely by a special command. Operation method: call preset 89 to reboot the system.

★ **Automatically identify camera**

Operation: Call preset 49 and then call preset 17 to select automatically identify cameras mode.

★ **IR LED**

Operation: call preset 49 and then call preset N. Firstly call preset 49 to enter into function selected mode, and then call corresponding preset N in the following table to start the corresponding function. It must be coherent when call these two presets. If action between these two calls is not calling a preset, this operation is invalid. You need to call preset 49 again to enter the function selected mode.

N	Functional Description	Remark
1	Switch sensitivity of IR LED to high	The higher the IR sensitivity, the easier to switch to IR black-and-white mode
2	Switch sensitivity of IR LED to medium *	
3	Switch sensitivity of IR LED to low	
7	Manually compulsorily enable IR LED	Operation of IR LED
8	Manually compulsorily disable IR LED	
9	Automatically enable IR LED*.	
50	Automatically enable the brightness of IR LED*	Control brightness of IR LED
57	Manually set IR LED to low brightness	
59	Manually set IR LED to high brightness	

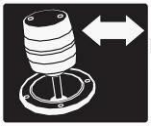
***: the function is system default.**

5.2 Menu operation guide

(The following menu for products with OSD model)

Call preset point No.95 to open the menu

Move the joystick up and down to select menu items



Move the joystick left and right to modify the value of menu items

Press <IRIS OPEN> to enter submenu or to confirm the selected items

Press <IRIS CLOSE> to return to the previous menu or exit the menu

Menu item meaning:

☞ : Currently selected menu item.

[Menu item] : The menu item has submenu.

Menu item> : This menu item can operate after pressing IRIS OPEN button.

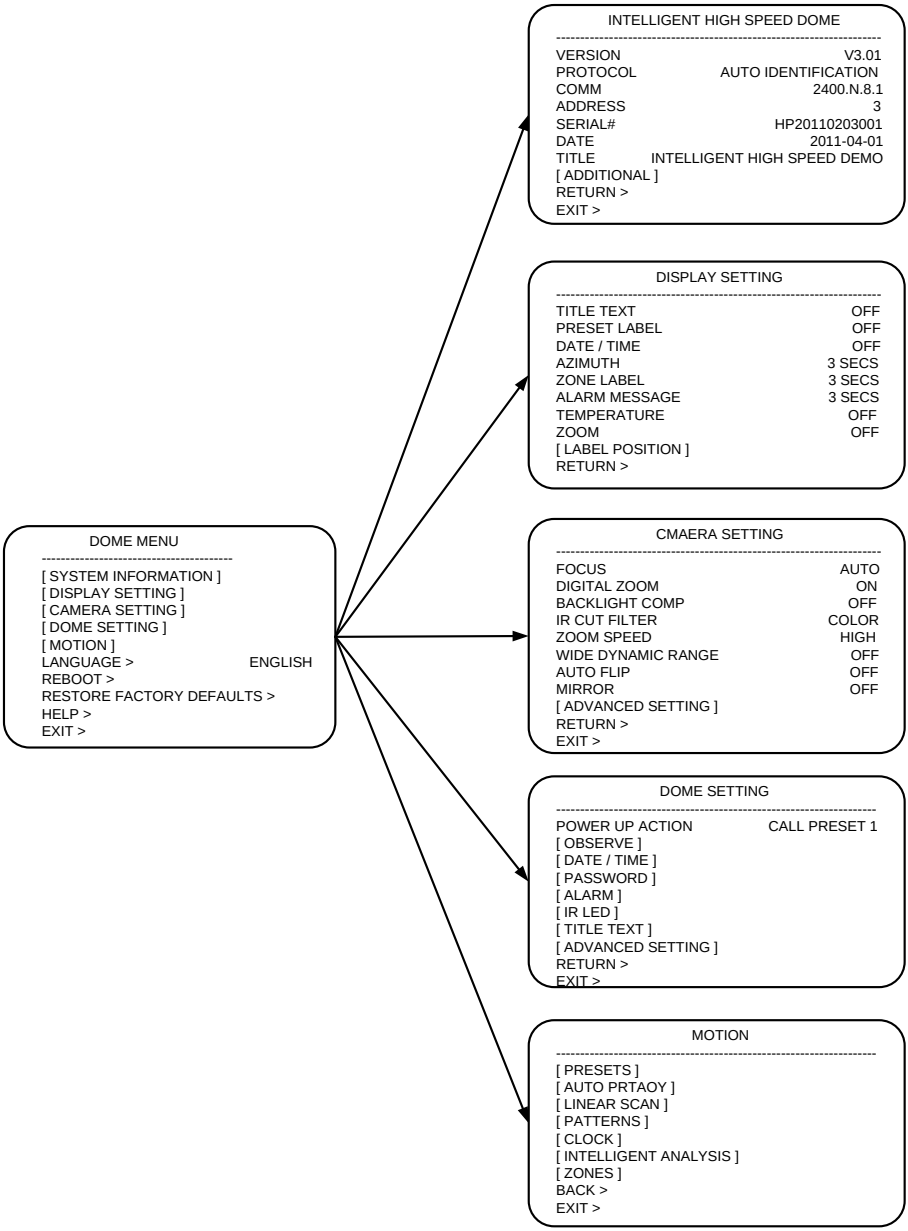
Menu item : This menu value can be modified by move the joystick to left or right

Back> : Return to the previous menu.

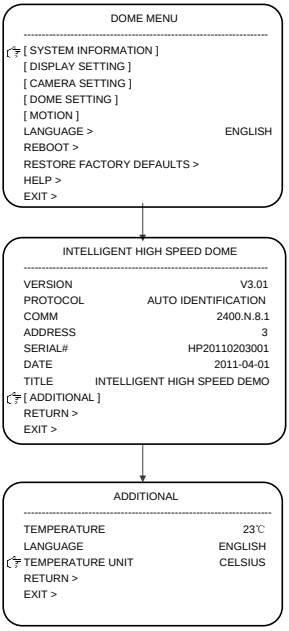
Exit> : Exit the menu.

Access the main menu (call preset 95)

You can call preset 95 to open the main menu on the monitor.


DOME MENU
[SYSTEM INFORMATION]
[DISPLAY SETTING]
[CAMERA SETTING]
[DOME SETTING]
[MOTION]
LANGUAGE > ENGLISH
REBOOT >
RESTORE FACTORY DEFAULTS >
HELP >
EXIT >
INTELLIGENT HIGH SPEED DOME
VERSION V3.01
PROTOCOL AUTO IDENTIFICATION
COMM 2400.N.8.1
ADDRESS 3
SERIAL# HP20110203001
DATE 2011-04-01
TITLE INTELLIGENT HIGH SPEED DEMO
[ADDITIONAL]
RETURN >
EXIT >
DISPLAY SETTING
TITLE TEXT OFF
PRESET LABEL OFF
DATE / TIME OFF
AZIMUTH 3 SECS
ZONE LABEL 3 SECS
ALARM MESSAGE 3 SECS
TEMPERATURE OFF
ZOOM OFF
[LABEL POSITION]
RETURN >
CMAERA SETTING
FOCUS AUTO
DIGITAL ZOOM ON
BACKLIGHT COMP OFF
IR CUT FILTER COLOR
ZOOM SPEED HIGH
WIDE DYNAMIC RANGE OFF
AUTO FLIP OFF
MIRROR OFF
[ADVANCED SETTING]
RETURN >
EXIT >
DOME SETTING
POWER UP ACTION CALL PRESET 1
[OBSERVE]
[DATE / TIME]
[PASSWORD]
[ALARM]
[IR LED]
[TITLE TEXT]
[ADVANCED SETTING]
RETURN >
EXIT >
MOTION
[PRESETS]
[AUTO PRTAOY]
[LINEAR SCAN]
[PATTERNS]
[CLOCK]
[INTELLIGENT ANALYSIS]
[ZONES]
BACK >
EXIT >

System Information

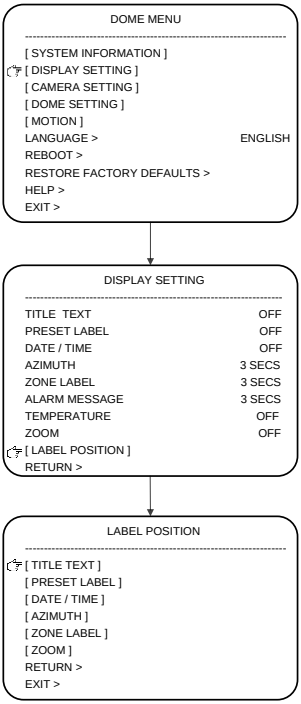


Users can check system information through the menu of the IR intelligent high-speed dome, system information includes: the version of the unit, protocol of the unit, communication speed, address of the unit, serial number of the unit, system date, title of the unit, temperature of the unit, language system, temperature unit etc.

Check system information as follows:

Move the cursor to "SYSTEM INFORMATION", and press< IRIS OPEN> enter system information menu and check system information. The system support Fahrenheit and Celsius, and the default temperature is Celsius. The method to change the temperature unit: move the cursor to "TEMPERATURE UNIT" and select unit by moving the joystick to left or right.

Display Setting



Display settings menu is used in set display mode of show items on the monitor. The following is usable items:

TITLE TEXT	Indicate the name of dome camera
PRESET LABEL	Indicate preset bits
DATE/TIME	Show current date and time
AZIMUTH	Show Horizontal and vertical angle
ZONE LABEL	Indicate zone
ALARM MESSAGE	Show Alarm information
TEMPERATURE	Inner temperature of the unit
ZOOM	Show Camera zoom

Setting options include:

OFF	Close display item
CONTINUANCE	Continuous display after activated.
1 SEC	Show 1 second after activated
3 SECS	Show 3 seconds after activated
6 SECS	Show 6 seconds after activated
15 SECS	Show 15 seconds after activated

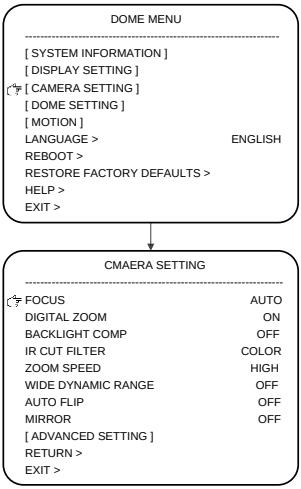
The method to set display state: Move cursor to the required position, select display state by moving joystick to left or right.

Labels can be placed anywhere on the monitor. This function is used to set user-defined interface. The following positions of the display items can be adjusted:

TITLE TEXT
PRESET LABEL
DATE/TIME
AZIMUTH
ZONE LABEL
ALARM MESSAGE
TEMPERATURE
ZOOM

The method to adjust the label position: move the cursor to "DISPLAY SETTING", and press <IRIS OPEN> to enter the menu of "LABEL POSITION", and then users can adjust to proper position by moving the joystick to left, right, up or down. (Note: different label positions can't overlap, otherwise, the characters on the screen will be covered), press <IRIS OPEN> after adjustment. Move the cursor to "RETURN" or "EXIT", and press < IRIS OPEN > to save setting and return to previous menu or exit menu.

Camera Setting



The unit allows users to adjust parameters of camera from the menu, the method to set parameters' specific meanings and settings are as follows (this function needs support by camera):

1. FOCUS (System default is AUTO)

Focus function allows lens keeps focus during using magnified, contractible and mobile function. If focus is set to "AUTO ", camera will auto focus when the unit rotates and zooms. If focus mode is set to "MANUAL ", then adjust focus manually. Press <FAR> or <NEAR> button on the keyboard to adjust focal length. If focus is set to "Once ", focus only once after zoomed, and no focus next time unless reset focus.

Focus mode includes: AUTO, MANUAL and ONCE. Setting method: move the cursor to "FOCUS", and select options by moving the joystick to left or right.

2. DIGITAL ZOOM (System default is OFF)

Close or open the camera digital zoom function from the menu. Setting method: move the cursor to "DIGITAL ZOOM", and then select ON or OFF by moving the joystick to left or right.

3. BACKLIGHT COMP (System default is OFF)

The backlight compensation is that when the brightness of the image center is relative low, you can open backlight compensation function to improve the brightness of the image. You can open or close the backlight compensation function from the menu. Setting method: move cursor to "BACKLIGHT COMP", and select ON or OFF by moving the joystick to left or right.

4. IR CUT FILTER(System default is AUTO)

Set color of the camera from the menu, options: AUTO, COLOR, B&W. Setting method: move the cursor to "IR CUT FILTER ", and then select options by moving the joystick to left or right.

5. ZOOM SPEED (System default is MEDIUM)

Set dome camera's default zoom speed from the menu. Zoom speed can be set to LOW, MEDIUM and HIGH. Setting method: move the cursor to "ZOOM SPEED", and select options by moving the joystick to left or right.

6. WIDE DYNAMIC RANGE (System default is OFF)

Wide dynamic range function can improve the image quality and get clear image in the stronger contrast light condition. Wide dynamic mode can be set to OFF, LOW, MEDIUM and HIGH. Setting method: move the cursor to "WIDE DYNAMIC RANGE" and select options by moving the joystick to left or right.

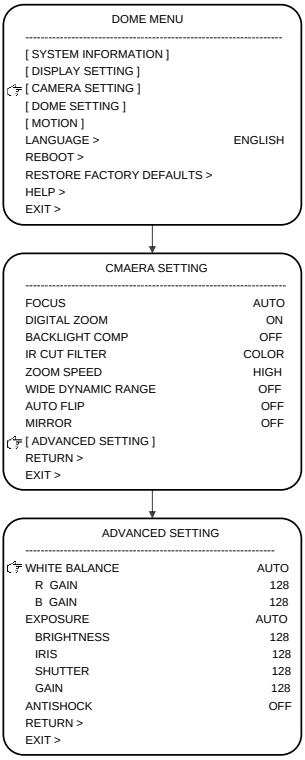
7. AUTO FLIP(System default is OFF)

Setting method: move the cursor to "AUTO FLIP ", and select ON or OFF by moving the joystick to left or right.

8. MIRROR (System default is OFF)

Setting method: move the cursor to "MIRROR", and select ON or OFF by moving the joystick left or right.

Camera Advanced Setting



Setting method is as follows (note: this function needs support by camera):

1. WHITE BALANCE (System default is AUTO)

You can change white balance from menu, so that the most effective and real color image can be got in full ambient light. The white balance model includes: AUTO, MANUAL, INDOOR, OUTDOOR, AUTO TRACKING and SINGLE (Note: Different camera may have different write balance options). Setting method: move the cursor to "WHITE BALANCE", and then select options by moving the joystick to left or right.

2. R GAIN

R gain is the gain of red components. Users can adjust red gain value according to the actual situation (only when white balance is MANUL, this setting can be effective). Setting method: move the cursor to "R GAIN", and then adjust red gain value by moving the joystick to left or right.

3. B GAIN

B gain is the gain of blue components. Users can adjust blue gain value according to the actual situation (only when white balance is MANUL, this setting can be effective). Setting method: move the cursor to "B GAIN", and then adjust blue gain value by moving the joystick to left or right.

4. EXPOSURE (System default is AUTO)

Users can adjust the camera exposure mode from the menu, exposure mode can be set include: AUTO, MANUAL, SHUTTER, IRIS, BRIGHTNESS (Note: Different camera may have different exposure mode options). Setting method: move the cursor to "EXPOSURE", and then select options by moving the joystick to left or right.

5. BRIGHNESS/IRIS/SHUTTER

Users can adjust the image brightness from the menu. Setting method: move the cursor to "BRIGHTNESS", and then adjust brightness values by moving the joystick to left or right.

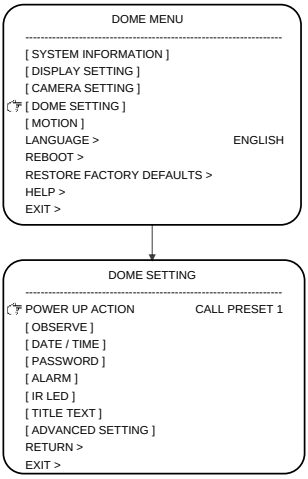
The setting methods of IRIS and shutter are similar with "BRIGHTNESS".

The parameters of brightness, IRIS and shutter can adjust only when exposure mode is MANUAL.

6. ANTISHOCK(System default is OFF)

You can close or open the camera antishock from the menu. Setting method: move the cursor to "ANTISHOCK", and then select ON or OFF by moving the joystick to left or right.

Power up Action



Once power on, the unit enters self-checking procedure, when the self-checking had finished, the unit can run customize commands.

1. POWER UP ACTION (system default CALL PRESET 1)

Move the cursor to "POWER UP ACTION", and then select the action which will run after power on by moving the joystick left or right. Optional power up actions (Total of 18 kinds of action options):

NO ACTION

CALL PRESET 1 TO 8

START PATROL1 OR 2

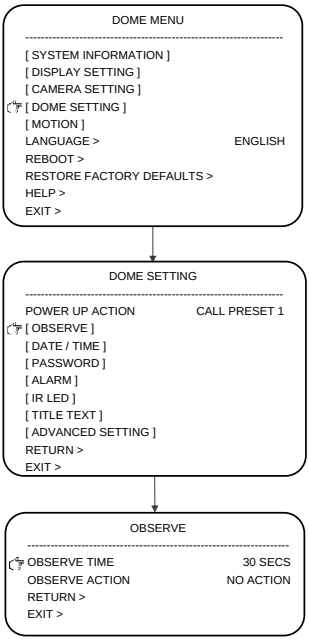
START LINEAR SCAN 1 OR 2

START AUTO SCAN 1 OR 5

START PATTERN 1 OR 2

START AUTO TRACKING

Observe



Observe action setting means that if users have no operation within the specified time, the unit will run the specified function

1. OBSERVE TIME (System default is 30 SECS):

Move the cursor to "OBSERVE TIME ", and select observe time by moving the joystick to left or right. Options: 15 SECS, 30 SECS, 1 MIN, 5 MINS, 15 MINS, 30 MINS, 1 HOUR, 8 HOURS, 12 HOURS and 24 HOURS.

2. OBSERVE ACTION (System default is NO ACTION)

Move the cursor to "OBSERVE ACTION", and select observe action by moving the joystick to left or right. Options of observe actions (total 18 kinds of action options):

NO ACTION

CALL PRESET 1 TO 8

START PATROL1 OR 2

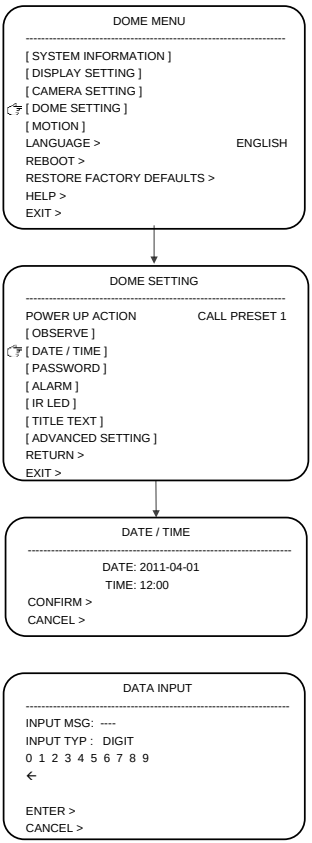
START LINEAR SCAN 1 OR 2

START AUTO SCAN 1 OR 5

START PATTERN 1 OR 2

START AUTO TRACKING

Date / Time



Data input inteface

The unit has date and time display function, user can modify system date and time via the menu (Interface of numeric inputs only accept digital input).The setting method is as follows:

1. DATE / TIME

1) Move the cursor to the corresponding item by moving the joystick to left, right, up or down, and then press< IRIS OPEN> to enter corresponding interface of numeric inputs.

2) In "IPUT MSG" column, select input position by moving the joystick to left and right, and the selected position presents a twinkling state at this moment.

3) Move the cursor to digital area by moving down the joystick, and press<IRIS OPEN> to select the digit, and the selected digit will present a twinkling state, select corresponding digit by moving the joystick to left, right, up and down and then press <IRIS OPEN> to confirm, at the same time, the input position moves to the next position in "IPUT MSG" column. If you input an error digit, you can move the twinkling character to "←" position, and press <IRIS OPEN> to delete it, at the same time, the input position moves to the previous position in "IPUT MSG" column.

4) After completely input, you can press< IRIS CLOSE> to exit digital area and the digit in digital area will stop twinkling.

5) Move the cursor to "ENTER" by moving down the joystick, and press< IRIS OPEN> to confirm input and return to the interface of "DATE / TIME". If the cursor moves to "CANCEL", press< IRIS OPEN>to cancel modification and return to interface of "DATE / TIME".

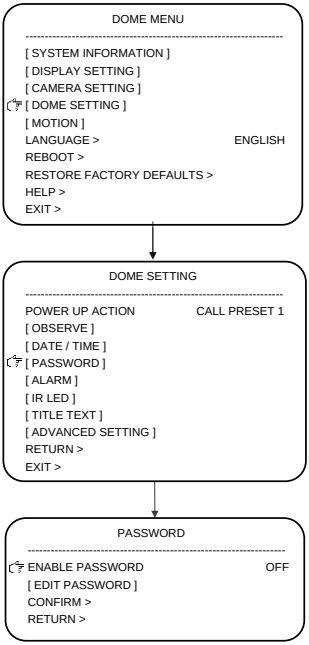
2. CONFIRM

Move the cursor to "CONFIRM", and press <IRIS OPEN> to save modification and return to the previous menu.

3. CANCEL

Move the cursor to "CANCEL ", and press<IRIS OPEN> to cancel modification and return to the previous menu.

Password



You can restrict users without permissions to modify the system settings through password protection function of the unit. If you open the password protection function, you need to input correct password when open the menu. The method to enable and modify password is as follows:

1. ENABLE PASSWORD

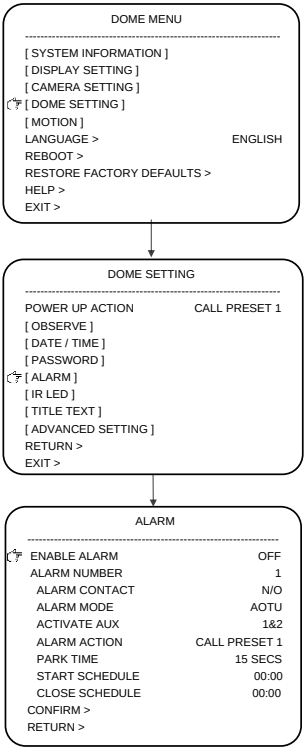
Move the cursor to "ENABLE PASSWORD ", and select ON or OFF by moving the joystick to left or right.

When password is ON, you need to input correct password to open the menu.

2. EDIT PASSWORD

Move the cursor to "EDIT PASSWORD", and press<IRIS open> to edit password. You need to input old password before you input a new password. The initial password of the unit is "000000". Password input please refers to the section of "Date / Time".

Alarm



The unit has 8 channels alarm input, 2 channels alarm output (alarm function need to select alarm module). when received the alarm, alarm input signal can trigger user defined action, meanwhile cause specified alarm output. Alarm function setting method is as follows:

1. ENABLE ALARM

You can open or close the alarm function. Setting method: move the cursor to "ENABLE ALARM", and select ON or OFF by moving the joystick to left or right.

2. ALARM NUMBER

Move the cursor to "ALARM NUMBER", and select alarm input channel by moving the joystick to left and right (Total of support eight alarm input channels). After alarm number changed, the system will automatically refresh associated setting items to display the corresponding data.

3. ALARM CONTACT

Move the cursor to "ALARM CONTACT", and select input type by moving the joystick to left or right. Alarm input type can be set to normally open or normally closed.

N/O: Normally open. When channel is closed, it means system has received effective warning signs.

N/C: Normally closed. When channel is open, it means system has received effective warning signs.

4. ALARM MODE

Alarm mode includes: AUTO, CLOCK and MANUAL. Move the cursor to the "ALARM MODE" and select mode by moving the joystick to left or right.

5. ACTIVATE AUX

Move the cursor to "ACTIVATE AUX", and select the output type by moving the joystick to left or right. The types use to set whether to link the alarm switch when system receives effective alarm input signal. The type can be set to OFF, 1, 2, and 1 & 2.

6. ALARM ACTION

Move the cursor to "ALARM ACTION ", and press <IRIS OPEN> to set alarm action. This function used to set whether link to some preset special functions, such as preset, patrol, pattern, linear scan when the current channel alarm.

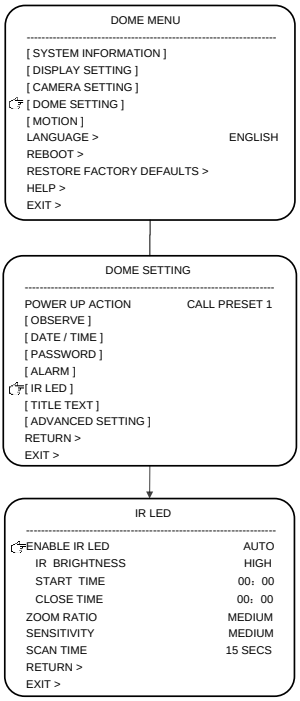
7. PARK TIME

Move the cursor to" PARK TIME", press<IRIS OPEN> to set park time. When the current channel alarm occurs, if link to alarm output, activate aux will be OFF, alarm park time is the time between detecting alarm signals and removing the alarm (alarm output switch off). Options: 15 SECS, 30 SECS, 1 MIN, 5 MINS and 15 MINS.

8. START and CLOSE SCHEDULE

Start and close schedule means the time to open or close alarm, only when "START SCHEDULE" is set to CLOCK, this setting is valid. Move the cursor to" START SCHEDULE", time input please refer to the section of "Date / Time".

IR LED



You can open and close IR LED via the menu.

1. ENABLE IR LED (System default is AUTO)

AUTO: According to the brightness, IR LED can automatic open and close.

CLOCK: IR LED can open and close according to the timing.

ON: Compulsorily open the IR lamp.

OFF: Compulsorily close the IR lamp.

2. IR BRIGHTNESS (System default is high power)

You can set IR brightness to HIGH, MEDIUM and LOW. Setting method: move the cursor to "IR BRIGHTNESS", and select options by moving the joystick to left or right.

3. START TIME

You can set the starting time of ENABLE IR LED only when the IR LED is set to CLOCK. Please refer to the section of "Date / Time" to input starting time.

4. CLOSE TIME

You can set the closing time of the IR LED only when ENABLE IR LED is set to CLOCK. Please refer to the section of "Date / Time" to input closing time.

5. ZOOM RATIO (System default is MEDIUM)

You can adjust the camera's zoom ratio. The multiple values including: HIGH, MEDIUM and LOW. Setting method: move the cursor to "ZOOM RATIO", and select options by moving the joystick to left or right.

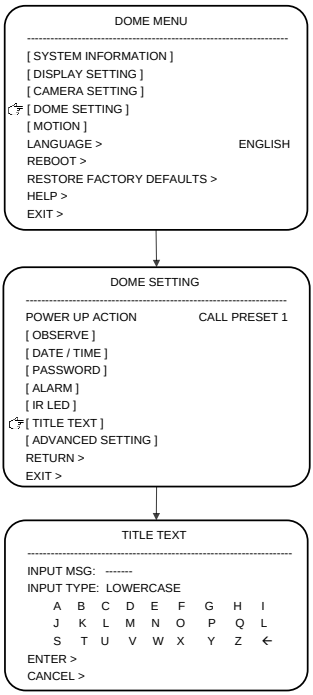
6. SENSITIVITY (System default is MEDIUM)

When ENABLE IR LED mode is set to AUTO, the sensitivity of brightness can be set to HIGH, MEDIUM and LOW. Setting method: move the cursor to "SENSITIVITY", and select options by moving the joystick to left or right.

7. SCAN TIME (System default is 15 SECS)

You can control the interval time of detecting the ambient light. Options: 1 SEC, 3 SECS, 6 SECS, 15 SECS, 30 SECS, 1 MIN, and 5 MINS. Setting method: move the cursor to "SCAN TIME" and select options by moving the joystick to left or right.

Title Text

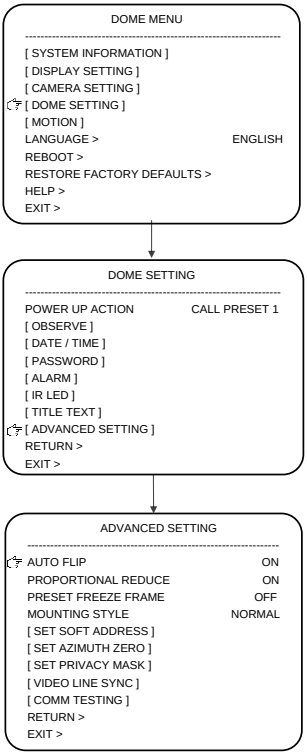


Set the unit's title from the menu and display it on monitor, so as to identify each monitor point easily. The method is as follows:

Input method may be DIGIT, UPPERCASE, LOWERCASE, SPECIAL SYMBOLS and CHINESE etc.

1. Move the cursor to "TITLE TEXT", and press <IRIS OPEN>to edit title text, and then move the cursor to "INPUT TYPE" by moving the joystick to up or down, and select suitable input method by moving the joystick to left or right. Optional input method is DIGIT, UPPERCASE, LOWERCASE, SPECIAL SYMBOLS and CHINESE.
2. Move the cursor to the next line under option of "INPUT TYPE", and press <IRIS OPEN> to enter character input mode, at this time the selected character is twinkling, select character by moving the joystick to up, down, left and right, press <IRIS OPEN> to put the twinkling character into the position of "←" in "INPUT MSG" column
3. After the input the title is completed, move the cursor to "ENTER", and press <IRIS OPEN> to confirm input and return to the previous menu.
4. If move the cursor to "CANCEL", and press<IRIS OPEN> will cancel the title modification and return to the previous menu.

Advanced Setting



1. AUTO FLIP (System default is ON)

When the len runs to 90°vertically, if the user keep direction of motion constant pressing the joystick, the lens will automatically flip 180º horizontally, thus consecutive monitoring of moving object can be realized. Setting method: move the cursor to "AUTO FLIP ", and select ON or OFF by moving the joystick to left or right.

2. PROPORTIONAL REDUCE (System default is ON)

Setting method: move the cursor to "PROPORTIONAL REDUCE", and select ON or OFF by moving the joystick to left or right.

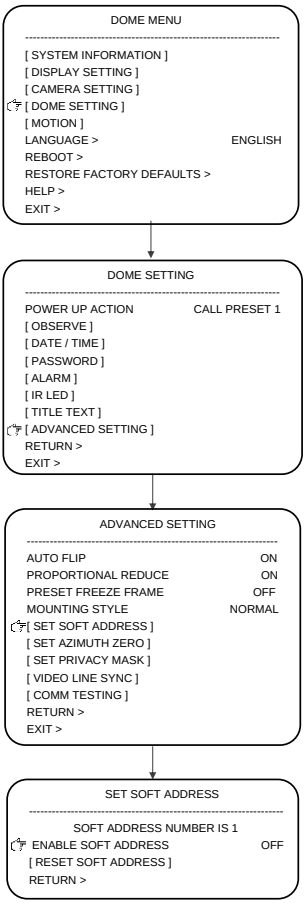
3. PRESET FREEZE FRAME (System default is OFF)

Preset freeze frame means whether freeze current image when call the preset. Setting method: move the cursor to “PRESET FREEZE FRAME ", and select ON or OFF by moving the joystick to left or right.

4. MOUNTING STYLE (System default is NORMAL)

Mounting style includes: NORMAL and INVERSION. When inversed mounting, pictures and operating will auto adjust to match with the inverted mounting. Setting method: move the cursor to "MOUNTING SYTLE", and select options by moving the

Set Soft Address



You can open soft address from the menu. The address identified by dial-up address of the unit will be shielded at this time.

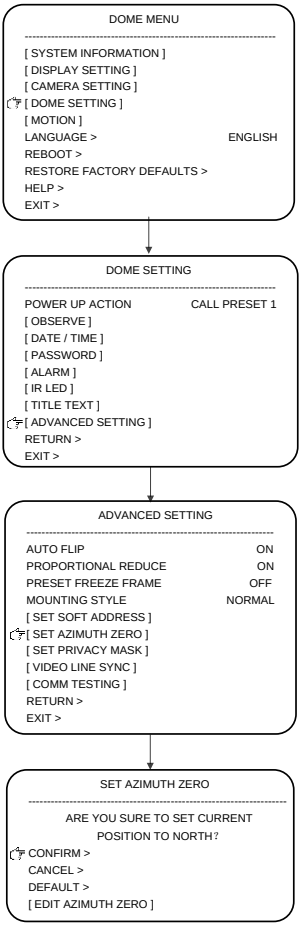
1. ENABLE SOFT ADDRESS

Setting method: move the cursor to "ENABLE SOFT ADDRESS", and select ON or OFF by moving joystick to left or right

2. RESET SOFT ADDRESS

Move the cursor to "RESET SOFT ADDRESS ", and press <IRIS OPEN> to edit soft address number, and then input the required number of soft address. About how to input soft address number, please refer to "Date / Time".

Azimuth Setting

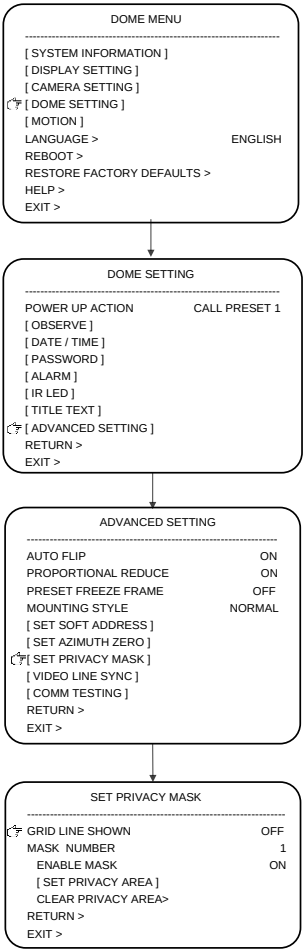


You can set horizontal azimuth from the menu. The north direction is 0 ° angle direction in horizontal and corresponds with N orientation of the compass.

1. SET AZIMUTH ZERO

Setting the current position to the north direction, move the cursor to "CONFIRM", and press <IRIS OPEN> to confirm that the current position is north direction. If you need to readjust, move the cursor to "EDIT AZIMUTH ZERO", and press<IRIS OPEN>, and then reorientate the north direction by moving the joystick to left or right, and press<IRIS OPEN> to confirm modification after the setting is complete.

Set Privacy Mask



Privacy mask function allows that privacy zones in the monitoring image can be shielded by black-box. Altogether 8 privacy zones can be set in the unit. The setting method is as follows:

1. GRID LINE SHOWN (System default is OFF)

The whole screen image can be divided into many small pieces through the grid lines, in order to orientate conveniently. Setting method: move the cursor to "GRID LINE SHOWN", and select ON or OFF by moving the joystick to left or right.

2. MASK NUMBER

Setting method: move the cursor to "MASK NUMBER", and select number by moving the joystick to left or right.

Note: This function needs support by the camera. The number of privacy area is related to camera models.

3. ENABLE MASK (System default is OFF)

Move the cursor to "ENABLE MASK", and select ON or OFF by moving the joystick to left or right.

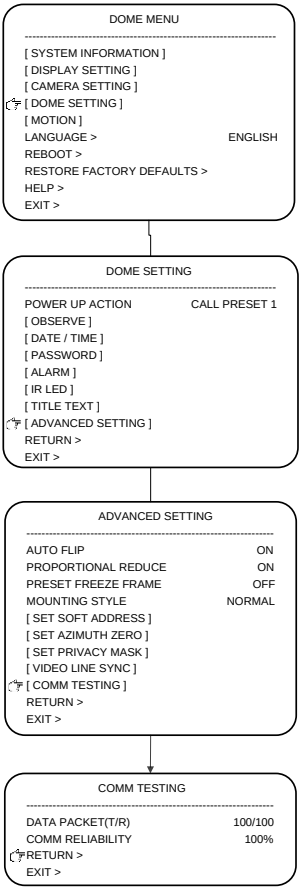
4. SET PRIVACY AREA

Move the cursor to "SET PRIVACY AREA", and press <IRIS OPEN> to set mask zone, and then operate the joystick to control the unit, moving the zone which need to be masked to the center of the screen, and then press<IRIS OPEN> to enter the size setting mode of mask zone, and then adjust the size of mask area by moving the joystick to up, down, left or right, then press<IRIS OPEN> after the setting is complete.

5. CLEAR PRIVACY AREA

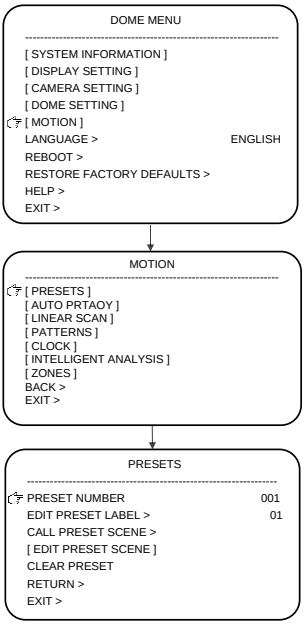
Move the cursor to "CLEAR PRIVACY AREA", and press<IRIS OPEN> to clear the corresponding privacy area.

Communication Testing



The unit can diagnose the stability of communication lines with TA8000 control software. Start communication test via software, the window such as the left picture will be shown on the screen, and the numbers of data packet sent from test software, the numbers of data packet received and the reliability of communication lines will be shown in the window.

Presets



The IR intelligent high-speed dome stores horizontal , vertical,also coordinate and information of camera zoom. Users can quickly orientate the camera to the wanted testing scene. The unit supports 204 presets totally. The method to set preset is as follows:

1. PRESET NUMBER

Move the cursor to "PRESET NUMBER" and set preset number by moving the joystick to left or right. The unit supports 204 presets totally. (1 to 48 and 100 to 255).

2. EDIT PRESET LABEL

Move the cursor to "EDIT PRESET LABEL", and press <IRIS OPEN> to edit preset label. See the section of "Title Text" for more information.

3. CALL PRESET SCENE

Move the cursor to "CALL PRESET SCENE", and press <IRIS OPEN> to call the corresponding preset scene.

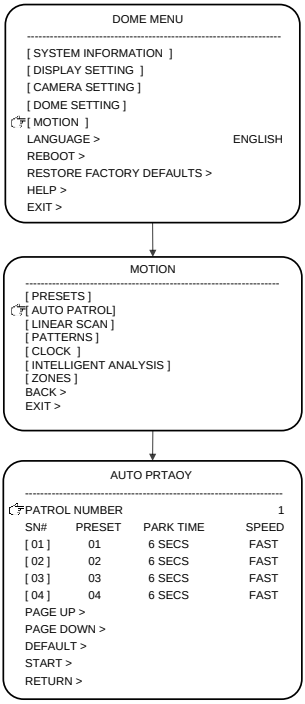
4. **DEIT PRESET SCENE**

Move the cursor to "DEIT PRESET SCENE", and press <IRIS OPEN> to edit preset scene. When the unit reaches the expected preset scene, press <IRIS OPEN> to store the current position.

5. CLEAR PRESET

Move the cursor to "CLEAR PRESET", and press <IRIS OPEN> to delete the corresponding preset scene.

Auto Patrol



Auto patrol means the unit can switched among the specified presets. The switching time can be set by users. The unit supports 8 groups patrol path, each patrol path max. supports 32 presets. The setting method is as follows:

1. PATROL NUMBER

Move the cursor to "PATROL", and select the patrol number by moving the joystick to left and right

2. Edit Patrol SN#

Move the twinkling position to the corresponding position, and press<IRIS OPEN> to enter the modified mode, and then modify the value by moving joystick to left and right, after modification is complete, press<IRIS OPEN> to exit the modified mode.

Park time can be 1 SEC, 3 SECS, 6 SECS, 15 SECS, 30 SECS, 1 MIN, 5 MINS, 15 MINS, 30 MINS, 1 HOUR, 8 HOURS, 12 HOURS and 24 HOURS.

Patrol speed can be FAST, MEDIUM, and SLOW.

You can select serial number in different page through "Page Up" and "Page Down". Each page can show four serial numbers in all, move the cursor to "PAGE UP" or "PAGE DOWN", and press<IRIS OPEN> to page up or page down,

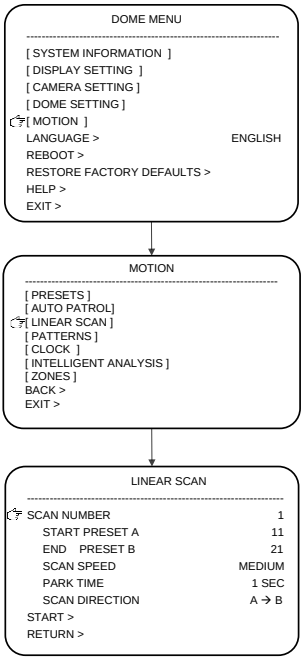
3. DEFULE

The default is the preset 1 to preset 4, the default park time is 6 seconds, and the default speed is FAST.

4. START

Move the cursor to "START", and press <IRIS OPEN> to start the corresponding auto patrol.

Linear Scan



Horizontal linear scan means that the unit scans back and forth between two specified horizontal presets, and the scanning speed and scanning direction can be set by users.

1. SCAN NUMBER

Move the cursor to "SCAN NUMBER ", and select scan number by moving joystick to left or right. Optional scan number is from 1 to 20.

2. SCAN SPEED (System default is MEDIUM)

Move the cursor to "SCAN SPEED ", and select the speed by moving the joystick to left or right.

Options of scan speed: FAST, MEDIUM, SLOW.

3. PARK TIME (System default is 1 SEC)

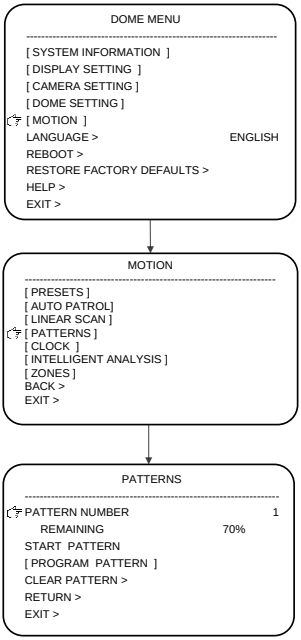
Move the cursor to “PARK TIME", and select the time by moving the joystick to left or right.

Options of park time: 1 SEC, 3 SECS, 6 SECS, 15 SECS, 30 SECS, 1 MIN, 5 MINS, 15 MINS, 30 MINS, 1 HOUR, 8 HOURS, 12 HOURS and 24 HOURS.

4. SCAN DIRECTION

Move the cursor to "SCAN DIRECTION", and select the direction from A →B and B →A by moving the joystick to left or right.

Patterns



The IR intelligent high-speed dome stores a series of users' operations within the specified time, such as horizontal and vertical rotation, camera zoom operation etc. Users can review all operations that users have done by starting up the pattern. The unit supports four groups of patterns, each group can record 10 minutes or 500 instructions at most.

1. **PATTERN NUMBER**

Move the cursor to "PATTERN NUMBER", and select the number by moving joystick to left or right.

2. START PATTERN

Move the cursor to the "START PATTERN", and press <IRIS OPEN> to start the corresponding pattern.

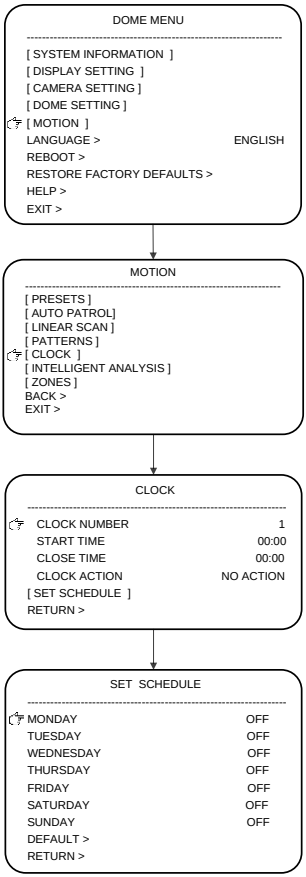
3. PROGRAM PATTERN

Move the cursor to "PROGRAM PATTERN", and press <IRIS OPEN> to program pattern. The unit will automatically store horizontal and vertical rotation and camera zoom operation at this time. When the recording space is filled to full or press <IRIS OPEN>, the unit will stop the pattern settings.

4. CLEAR PATTERN

Move the cursor to "CLEAR PATTERN", and press<IRIS OPEN>to delete the corresponding pattern.

Clock



The timing of the unit can be divided into seven days a week, eight periods everyday. Users can set actions for every period according to the requirement. When the system time is in the specified period of time, the unit will automatically run the preset action.

1. START TIME

Move the cursor to "START TIME", and press<IRIS OPEN> to enter time input mode. Please refer to the section of “Date / Time”.

2. CLOSE TIME

Move the cursor to "CLOSE TIME", and press<IRIS OPEN>to enter time input mode. Please refer to the section of “Date / Time”.

3. CLOCK ACTION

The linked action of each period can be set as follows (18 kinds of actions in all).

NO ACTION

CALL PRESET 1 TO 8

START PATROL1 OR 2

START LINEAR SCAN 1 OR 2

START AUTO SCAN 1 OR 5

START PATTERN 1 OR 2

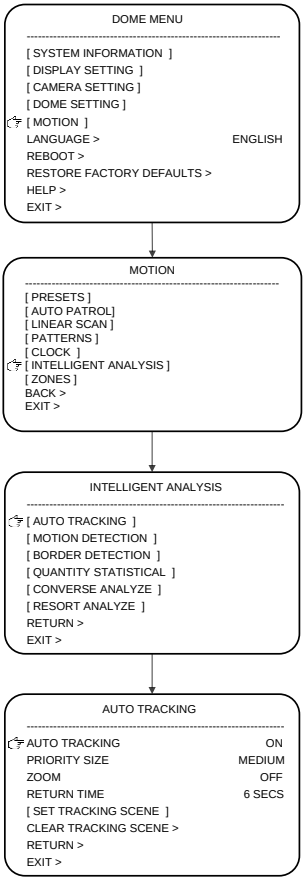
START AUTO TRACKING

4. SET SCHEDULE

Move the cursor to "SET SCHEDULE", and press<IRIS OPEN> to set schedule.

Note: Different periods can't overlap, and the period can't span 00:00. If users operate the unit during timing period, the timer action will be interrupted. If there is no action within the specified time and the current time is still in timing period, the timer action will be executed again.

Auto Tracking



Auto tracking IR intelligent integrative camera can intelligently analyze the video images, and automatically track the moving object in the monitoring area. In tracking mode, the unit will automatically tack the moving target when the monitoring area has moving target. When the moving target moves out of the monitoring area or it can't trigger the tracking function, the unit will stay for the preset park time, and then return to the preset scene.

1. AUTO TRACKING

Move the cursor to "AUTO TRACKING", and select ON or OFF by moving the joystick to left or right.

2. PRIORITY SIZE

Target size can be set to LARGE, MEDIUN and SMALL, and it means that how big the moving targets can trigger the function of auto track. Setting method: move the cursor to "PRIORITY SIZE ", and select options by moving the joystick to left or right.

3. ZOOM

When auto tracking function are ON, the unit will automatically adjust the zoom of the camera according to the size of the moving target, so that the moving target can adapt to the scene of video screen. Zoom track can be set to OFF, x1 to x10. Setting method: move the cursor to "ZOOM", and select options by moving the joystick to left or right.

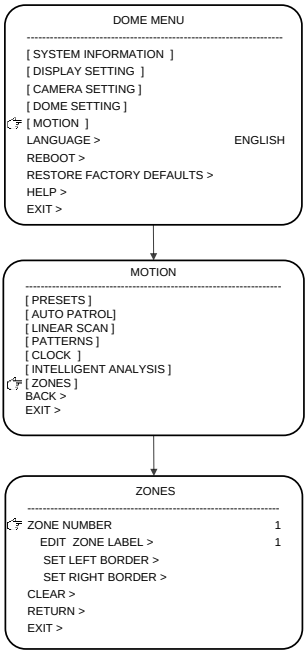
4. RETURN TIME

In the menu of auto tracking, users can set and delete the return time which the unit needs to wait after the moving target disappears from the monitoring area. Return time can set to 3 SECS, 6 SECS, 15 SECS, and 30 SECS.

5. SET TRACKING SCENE

In the menu of set tracking scene, users can set and delete the scene which the unit needs to return after the moving target disappears from the monitoring area.

Zones



When users move the unit into the range of the specified preset zone by operating the joystick, the screen will display the title of this preset zone, so that users can check different zones conveniently. The unit supports eight zones indications. Users can enable zones only when the left border and the right border are set firstly. Priority of zones: 1 as highest priority, and 8 as lowest priority. When deferent zones are overlap, only higher priority zone can be shown. The setting method is as follows:

1. ZONE NUMBER

Move the cursor to the "ZONE NUMBER" and select number by moving the joystick to left or right.

2. EDIT ZONE LABEL

Move the cursor to "EDIT ZONE LABEL", and press <IRIS OPEN> to edit zone label. Set the zone label referring to the section of "Title Text".

3. SET LEFT BORDER

Move the cursor to "SET LEFT BORDER", and press <IRIS OPEN> to set left border, and then move the cursor to expected position by operating the joystick, and then press < IRIS OPEN >to storage the current position as the left border.

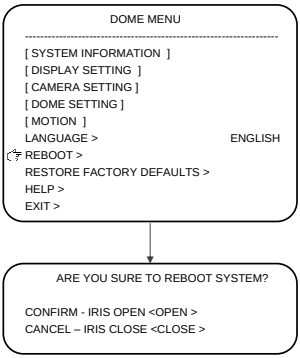
4. SET RIGHT BORDER

Move the cursor to "SET LRIGHT BORDER", and press<IRIS OPEN> to set right border, and then move the cursor to expected position by operating the joystick, and then press < IRIS OPEN >to storage the current position as the right border.

5. CLEAR

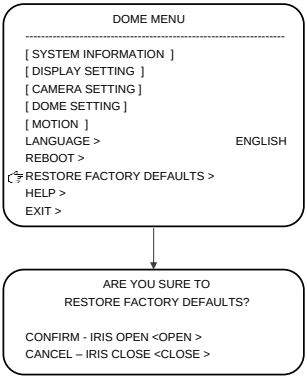
Move the cursor to "CLEAR", and press<IRIS OPEN>to delete the corresponding zone.

Reboot



IR intelligent high-speed dome can be rebooted remotely from the menu. Operation method: open the menu, and move the cursor to “REBOOT“, and then press <IRIS OPEN> to enter the confirmation menu of reboot, and then press<IRIS OPEN> again to reboot system or press <IRIS Close> to cancel the operation of reboot system.

Restore Factory Defaults



The function of restore factory defaults can restore all operation that users did to the factory default settings. Operation method: open the menu, and move the cursor to "RESTORE FACTORY DEFAULTS", and Press<IRIS OPEN>to enter the confirmation menu of factory settings, and then Press<IRIS OPEN>again to restart the unit and restore factory settings or press <IRIS CLOSE>to cancel the operation of restore factory settings.

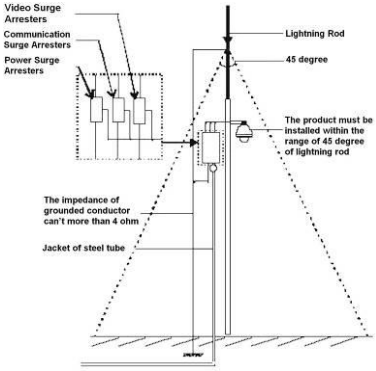
Simple Trouble Shooting Table

Problems	Possible causes	solutions
No action, no picture when power is switched on.	Power supply adaptor damaged or Power supply not sufficient	Replace
	Wrong contact of power cables	Correct
	Engineering line fault	Exclude
Abnormal self-check, image shown with motor noise	Mechanical failure	Repair
	Camera inclined	Reinstall
	Power supply not sufficient	Replace, better to place the adaptor nearby the unit
Normal self-check but no image	Wrong contact of video lines	Correct
	Bad contact of video cables	Exclude
	Camera is damaged	Replace
Normal self-check and image but out of control	Wrong contact of control signal	Correct
	Address configuration wrong	Choose new address and power up
	Protocol or Baud rate configuration wrong	Adjust Protocol, baud rate to match controller and power up
Unstable image	Bad contact of video cable	Exclude
	Power supply not sufficient or Power cables too long	Replace
IR intelligent high-speed dome out of control	Abnormal self-check	Power On again
	Bad contact of control lines	Remove
	The host operations have a problem	Power up the host again
	the load is too much ,the distance is too far	Increase yards distributor
Focus out of control	Focus is in automatic mode	Set focus mode to manual

Lightning and Surge Protection

This product adopts Ceramic Gas Discharge Tube and TVS-class lightning protection technology to effectively prevent such pulse signal damage caused by instantaneous lightning under 3KW or electric surge. But, for outdoor installing, on the premise of ensuring electric safety, necessary protective measures should be taken according to practical situation:

- Signal transmission lines must be kept at least 50 meters from high voltage equipment and high voltage.
- For outside, please select the place under eaves to layout the routing.
- For open field, you must use underground sealed steel tube, and the steel tube must be adopted one point grounding mode, and absolutely forbid adopted overhead wiring.
- In intense thunderstorms or high induced voltage areas (such as high voltage substations), must use extra high-power lightning protection equipment and install lightning rod and others measures.
- The lightning protection and grounded design for outdoor installation and wiring must be combined with requirements of building's lightening prevention, and comply with the relevant national standards and industry standards.
- The system must be equipotential grounding. Grounded device must meet double requirements of system anti-jamming and electrical safety, and can't be short-circuited or hybrid-circuited with neutral leg of forceful electric power. When system grounded alone, the impedance of grounded conductor can't more than 4 ohm, and sectional area of grounded wire can't more than 25mm^2 wire shorted.



Propositional preventive maintenance

The cover of IR intelligent high-speed dome doesn't need any special maintenance. Dust may accumulate on the inside or outside of the dome cover occasionally. When it is happen, please shut off the power firstly and then remove downward dome cover from dome base, then clean up the dust on the dome cover by compressed air in the sprayer.

Warning: When use the sprayer, please wear appropriate eyeshade.

This unit includes various electrical and electronic device, these devices must comply with the EU Directive 2002/96/E of Waste Electrical and Electronic Equipment (WEEE) to properly recycle. About the recycling of this unit, please contact with local supplier.

Serial number of the product is shown on the bottom or inside. Please fill in the following blanks with mode number and serial number , and properly keep this menu for checking.

Mode Number:_____

Serial Number:_____

CCTV SYSTEM