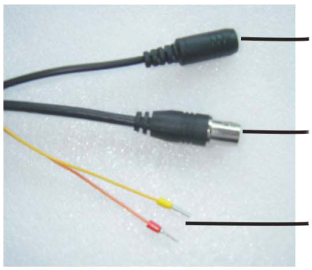
When you ready to install the camera, please note these advices !

We put a bubble piece to stuck the camera, please do not take it out before you finish the installation, that is for prevent you to rotate the dome camera body by hands or force, such a wrong operation will break the component.

Carrying the wire is forbidden. This will draw out the wire, cause damage.

Don't dismantle the machine without professional training. This should be operated by a professional technician.

Position of dial code switch, open the small cover, will see the dial codes. Factory set is:
Protocol: PELCO_D
Baud rate: 2400
Address No.: 001



The big IR LED or laser illuminator will auto turn on at night and when camera zoom to 11X / 5X or more.

Please be careful to use hoisting support, like picture, and please note the waterproof function. If outdoor, please consider to use wall mount.

Catalogue

Production----5
Note
Warning
Friendly suggestion
Installation and connection----6
Indoor & Outdoor IR Medium Speed Dome Camera----7
1. Features
2. Mounting size drawing
2.1 Wall mount
2.2 Hoisting mount----8
3. Setting address, protocol, baud rate, horizontal rotating speed
3.1 Address setting
3.2 Baud rate setting ----9
3.3 Protocol setting
4. Function setting
4.1 Set / Call preset positions
4.1.1 Set preset position
4.1.2 Call preset position----10
4.2 Call / Delete automatic cruise route
4.2.1 Call automatic cruise route
4.2.2 Set the stay time in every preset position when the camera cruising automatically
4.2.3 Delete the automatic cruise route----11
4.3 Set / use / delete Limiting Positions at left & right / auto scan / scan speed
4.3.1 Set left and right limiting positions
4.3.2 Start auto scanning----12
4.3.3 Delete left and right limiting positions
4.3.4 Setting horizontal auto scanning speed
4.4 Set, use, close home place monitoring
4.4.1 Turn on / off the home place monitor
4.4.2 Set home place / use home place
4.5 Restore factory settings----13
5. Camera menu setting
5.1 Basic operation
5.2 Menu introduction
Indoor & Outdoor IR Low Speed Dome Camera----15
1. Features
2. Setting address, protocol, baud rate
2.1 Address setting
2.2 Baud rate setting----16
2.3 Protocol setting
3. Function setting
3.1 Set / Call preset positions
3.1.1 Set preset position
3.1.2 Call preset position----17
3.2 Call / Delete automatic cruise route (auto tour scan)
3.2.1 Call automatic cruise route
3.2.2 Set the stay time in every preset position when the camera cruising automatically
3.2.3 Delete the automatic cruise route
3.3 Setting, using, deleting of Limiting positions on left and right, auto scanning----18
3.3.1 Set left and right limiting positions
3.3.2 Start auto scanning
3.3.3 Delete left and right limiting positions----19
3.4 Restore factory settings
4. Camera menu setting
4.1 Menu introduction
Indoor IR Medium Speed Dome Camera----21
1. Features

2. Mounting size drawing
2.1 Wall mount
2.2 Hoisting mount----------22
3. Setting address, protocol, baud rate, horizontal rotating speed
3.1 Address setting
3.2 Baud rate setting----------23
3.3 Protocol setting
4. Function setting
4.1 Set / Call preset positions
4.1.1 Set preset position
4.1.2 Call preset position----------24
4.2 Call / Delete automatic cruise route
4.2.1 Call automatic cruise route
4.2.2 Set the stay time in every preset position when the camera cruising automatically
4.2.3 Delete the automatic cruise route----------25
4.3 Set, use, delete of Limit positions on left and right, auto scanning, scanning speed
4.3.1 Set left and right limiting positions
4.3.2 Start auto scanning
4.3.3 Delete left and right limiting positions----------26
4.3.4 Setting horizontal auto scanning speed
4.4 Setting, open, call and close the fixed position (home place)
4.4.1 Open and close the home place
4.4.2 Set and call the home place
4.5 Restore factory settings
5. Camera menu setting----------27
5.1 Basic operation
5.2 Menu introduction
5.3 Menu setting
Indoor & Outdoor Normal Medium Speed Dome Camera (W/O IR)----------28
1. Features
2. Mounting size drawing
2.1 Wall mount
2.2 Hoisting mount
3. Setting address, protocol, baud rate, horizontal rotating speed----------29
3.1 Address setting
3.2 Baud rate setting----------30
3.3 Protocol setting
4. Function setting
4.1 Set / Call preset positions
4.1.1 Set preset position
4.1.2 Call preset position
4.2 Call / Delete automatic cruise route----------31
4.2.1 Call automatic cruise route
4.2.2 Set the stay time in every preset position when the camera cruising automatically
4.2.3 Delete the automatic cruise route
4.3 Set / use / delete Limiting Positions at left & right / auto scan / scan speed----------32
4.3.1 Set left and right limiting positions
4.3.2 Start auto scanning
4.3.3 Delete left and right limiting positions
4.3.4 Setting horizontal auto scanning speed----------33
4.4 Set, use, close home place monitoring
4.4.1 Turn on / off the home place monitor
4.4.2 Set home place / use home place
4.5 Restore factory settings
5. Camera menu setting
5.1 Basic operation
5.2 Menu introduction----------34
Clean the dome cover----------35
Notes for maintain

Lightning protection
Simple sheet for check faults----------37
SONY zoom module menu for reference
LG zoom module menu for reference----------38
CNB zoom module menu for reference----------39
SAMSUNG zoom module menu for reference-----------40

1. Products introduction

Thank you for using our INTELLIGENT SPEED DOME CAMERA

Our products use perfect function design of high performance digital DSP, stable performance. The key parts, we use world famous bands, like electrical motor, zoom module, electrical ring, IR lights components. With the perfect electrical circuit design and convenient installation method, make it can tracing objectives fast and correctly. It can monitor all locations in 24 hours. The skillful design of hardware reducing failure rate as its possible. The human design of software make the operation become simple and convenient. These advantages make the system become convenient for installation, using, maintaining, and working stably. We believe our products have excellent performance, so it can be the best in the industry! These products can be applicable to intelligent building, bank security protection, city roads, airport, quay, station, residential district, industrial factory and mine and so on. It can meet various demands, in anywhere, and various moving targets.

Notes

A. Please read the installation instructions before you operate it;
B. Please comply with safe operating instructions when you operate it;
C. Only professional and experienced worker can operate the installation and maintain works of it;
D. Please use reliable tools, those tools which of poor quality maybe causing dangerous situation;
E. Please ensure the installation and using environment is in line with our products demands;
F. Please check the space for install the supporter, including strength and toughness, the weight support capacity of substrate at least up to 5 multiples of both products and parts;
G. Please save the packaging of product, in order to package and transport it in the future.

Warning

A. Don't put it near to inflammable and explosive things, please keep it far away dangerous areas;
B. Don't put it on the unstable or supporter;
C. Don't let any foreign material and liquid into the machine, that will damage it;
D. Don't try to use wrong power or adaptor to supply electricity, it's power voltage is DC 12V;
E. Please recognize the RS-485 control wire;
F. Don't try to supply power for it before you have not finish the installation;
G. Don't try to take it apart to repair;
H. Don't use corrosive cleaner to clean it;
I. Please don't let the camera face to strong light directly, like strong lamp light, strong sunlight, etc. Otherwise its CCD maybe damaged forever;
J. Please do not let it bear weight pressure or strong hit, and strong shake;
K. Please read the introductions carefully before you operate it.

Friendly suggestions

1. Please use high quality and safe power supply, our standard power adaptor should be near to the camera, the best distance is within 3m, to avoid too much attenuation, please make sure your power supply is enough.
2. We suggest you to use high quality wires for both power and transmission, and avoid to tie a knot wires, please try your best to wiring smoothly, sometimes you have to connect many wires together, please be careful to make the connection point be perfect, don't think one core is not important, don't just tie them together, please make all cores one-to-one. Please consider to add electronic resistance and UPS when you find the power supply is not normal.
3. Please never carry the wire which is outside the dome, and don't let that wire to bear the camera weight.
4. We suggest you'd better to do some grounding and lightning protection measures, because speed dome camera have control cable, it is easier to be hit by thunder and lightning than other normal camera.

Installation and connection

Notes before installation

1. Installation must by the professional technicians or someone which have qualification.
2. Detailed wiring method please reference the installation sketch map and the install introductions.
3. When you installing camera, please use clean gloves, and avoid to use metal/strong objects/hands to touch the dome or its cover, in order to avoid damage the cover and affect image quality.
4. After you finish the installation, please use soft and clean cloth or towel to clean the transparent cover carefully, unclean fingers will make smudges on the cover, then will affect the image to be unclear.

Installation requirements

- Please check the accessories are complete before installation;
- Before installation, please make sure the camera's using place and installation method are meet the requirement of the machine.
- Installation must operated by professional worker, and should comply with related rules, in order to avoid faults.
- You must to use right installation tools, like screwdriver etc, please check the dial code switch is right or not.

Installation method

The installation place or wall must be strong and no constructing problems, the weight support capacity of installing place at least up to 4 multiples of both products and parts, including the supporter, in order to avoid camera fall down due to it's unstable.

Installation steps

a. Take out the supporter from box, draw a central position of the drilling hole on the wall;
b. Use M8 electrical hammer to dill 4 holes on the position that out of the central position, then fix M6 screws in it;
c. Insert the wires from supporter top into the supporter inside, leave enough length for the connecting wire;
d. Put 4 holes of the supporter on those 4 screws, fix gaskets, screw those 4 screws, then fix the supporter and camera on the wall;
e. Clean the cover after installation.

External wiring connection

- Put the BNC video interface connecting to the fixed video wire;
- Put the power wire connecting to the fixed power wire (DC12V/5A);
- Put the RS 485 control wire connecting to the fixed control RS 485wire,.please check the positive and negative of RS 485wire, make its in accordance with the remarking connection method on the wire head, if you make its converse, it can't get communication. A is positive of RS485 wire (generally be orange), B is negative of RS485 wire (generally be yellow).
- Please check the whole routes after you connect every wires, including: The polarity and connecting method of power and control wires. If you are sure they all are right, you can turn on the power. The camera will checking itself after turn on power. It will rotating 360° in horizontal firstly, then rotating 90° in vertical. At the same time, every checking informations will display on the screen, like the address, communicating speed rate, camera. After finish all checking, it will stop, this means it's finished checking and waiting for your controlling.

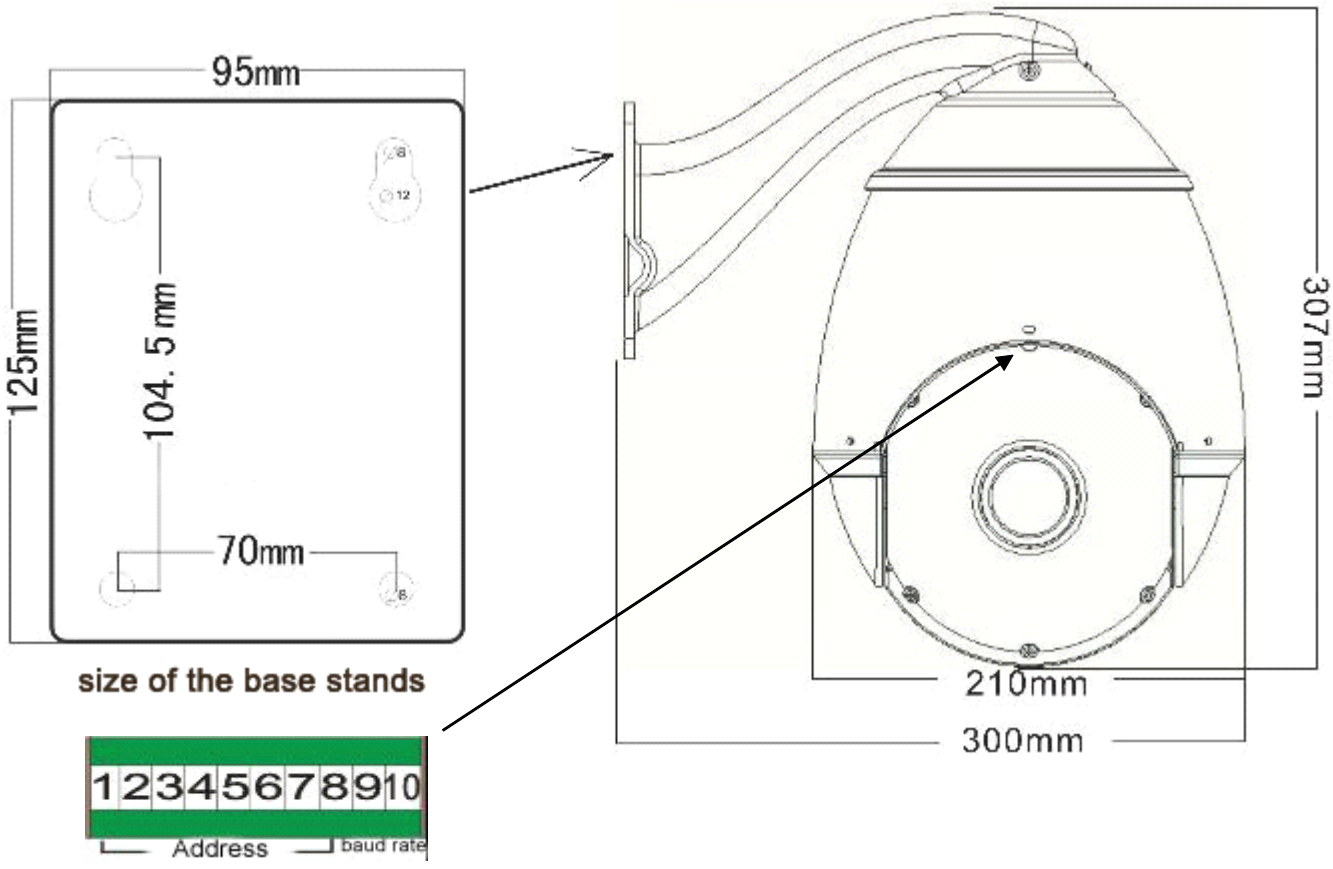
Indoor & Outdoor IR Medium Speed Dome Camera

1. Features

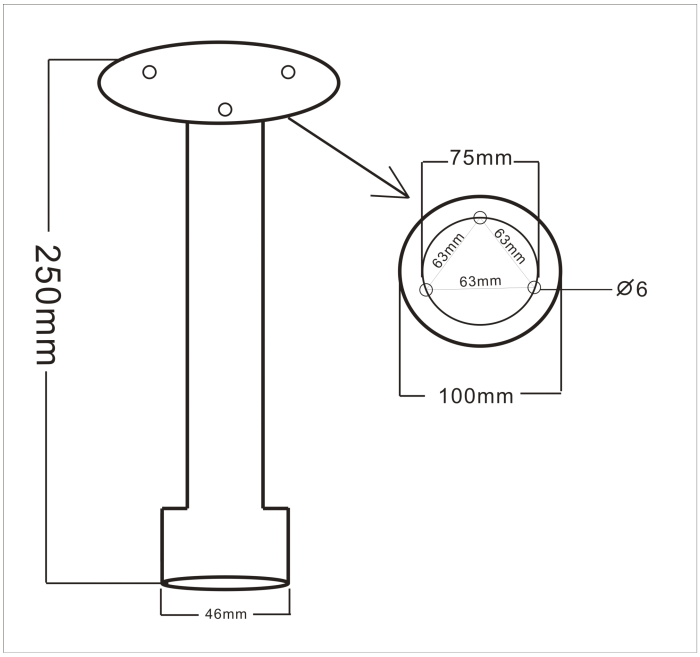
- 128 preset, 8 tour routes, 1 fixed position, can set stay time for preset positions and llimit positions on left and right.
- RS-485 communication, auto identify protocol of Pelco D / Pelco P
- Address codes range: 1~255
- Baud rate: 2400/4800/9600/19200, set by dial codes
- Horizontal rotating speed: 360° continuously, 100° /sec
- Vertical rotating speed: 50° /sec, auto flip
- Working temperature: -20° C--+75° C
- Working humidity: less than 95%
- Waterproof cover level: IP65
- Built-in constant temperature control system
- Installation methods: Hoisting installation, wall mounted installation
- Power: DC12V/ 5A power supply.

2. Mounting size drawing

2.1 Wall mount



2.2 Hoisting mount

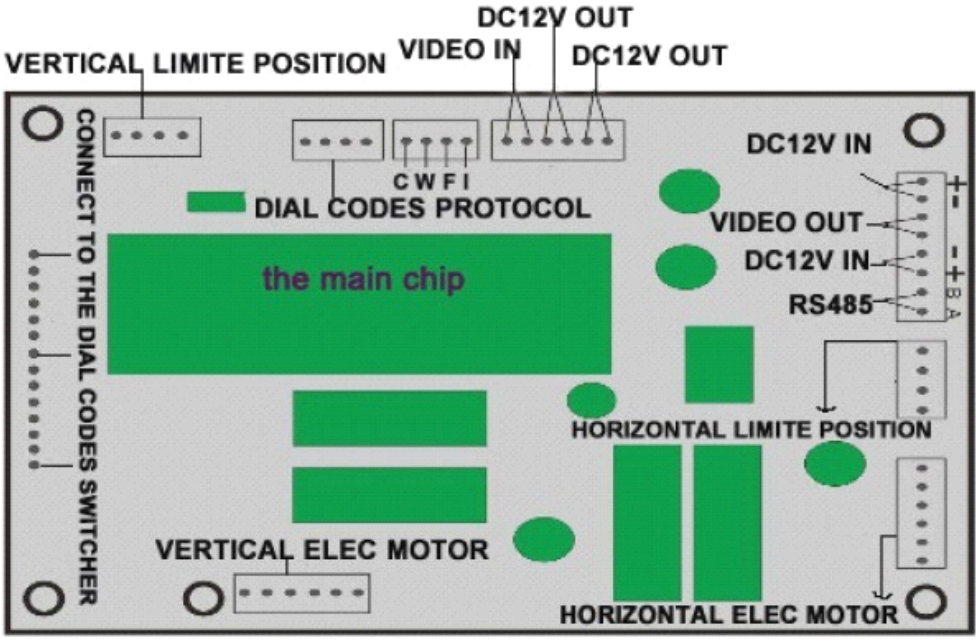


3. Setting address, protocol, baud rate, horizontal rotating speed

This dome camera have built-in decoder board, you can control the PTZ and camera through setting address codes, protocol, baud rate. The dial codes switch is external, please open the small cover on the ball, then you will see dial codes of ten numbers.

3.1 Address setting

1~8 numbers are used to setting address code of the camera (picture), setting range is 1~255, address code of every camera should be same as corresponding DVR / video matrix / control keyboard address code. Using binary mode to set address codes. Set every number are "ON" means the value is "1", every numbers are "OFF" means the value is "0" **(see the picture & sheet)**



Address codes and dial codes switch sheet(Binary), calculate it according to this sheet

Binary	Add	Binary	Add	Binary	Add	Binary	Add
0000000	0	11110000	15	01111000	30	10110100	45
10000000	1	00001000	16	11111000	31	01110100	46
01000000	2	10001000	17	00000100	32	11110100	47
11000000	3	01001000	18	10000100	33	00001100	48
00100000	4	11001000	19	01000100	34	10001100	49
10100000	5	00101000	20	11000100	35	01001100	50
01100000	6	10101000	21	00100100	36	11001100	51
11100000	7	01101000	22	10100100	37	00101100	52
00010000	8	11101000	23	01100100	38	10101100	53
10010000	9	00011000	24	11100100	39	01101100	54
01010000	10	10011000	25	00010100	40	11101100	55
11010000	11	01011000	26	10010100	41	00011100	56
00110000	12	11011000	27	01010100	42	10011100	57
10110000	13	00111000	28	11010100	43	01011100	58
01110000	14	10111000	29	00110100	44	11011100	59

3.2 Baud rate setting

The 9~10 numbers of dial codes are used to set baud rate (picture 2), you can choose 2400bps / 4800bps / 9600bps / 19200bps. Set both "9" and "10" to be "ON" means the value is "1", both of them to be "OFF" means the value is "0"

Baud rate and dial codes switch matching sheet

Dial codes	2400 bps	4800 bps	9600 bps	19200 bps
No. 9	OFF	ON	OFF	ON
No. 10	OFF	OFF	ON	ON

Please set this baud rate according to the communication baud rate of camera controlling equipment.

3.3 Protocol setting

The decoder board protocol is automatic adaptive protocol, it support PELCO_D and PELCO_P.

4. Function setting

4.1 Set / Call preset positions

Preset position function means: set / call the camera angles positions through controlling equipment, then save these setting information in the camera by digital mode, sometimes when you need, you can use these setting informations to make the camera transfer to the preset position mode quickly. This machine can set 128 preset positions.

4.1.1 Set preset position

Move camera to the corresponding position, controlled by the "zoom" keys of keyboard / DVR, adjust the lens

zoom and angle, then set the preset position refer to the introductions, enter a number.

For example: use a controlling keyboard to set NO.1 preset position

1) Press the key "set preset position"
2) Move control joystick to make camera in the position 1 you want
3) Press the key "zoom+ / zoom-", set a suitable zoom and angle for the camera
4) Enter a number "1"
5) Press the key "enter" to save the setting

Now, NO.1 preset position is OK, you can call it later, to make the camera transfer to this position quickly.

4.1.2 Call preset position

Refer to the call preset positions function , you can call all preset positions quickly.

For example: use a controlling keyboard to call NO.1 preset position

6) Press the key "calling preset position"
7) Enter a number "1"
8) Press the key "enter" to make your command working

Now, camera will transfer to the NO.1 preset position quickly, and stay there with the set zoom multiples.

4.2 Call / Delete automatic cruise route

Automatic cruise route means: you can make the camera working automatically, if you set a cruise route, once you enter the command, camera will auto scan according to your set command, as same as your set cruise route, and it can stay in any preset position you want. This product can set 8 cruise routes (maximum: 16 preset positions per route).

4.2.1 Call automatic cruise route

Control the machine through controlling keyboard or DVR. Calling the NO.41 preset position, make the camera to execute the NO.1 cruise route. Calling the NO.42 preset position, make the camera to execute the NO.2 cruise route. Other details please see the sheet 6.

For example: use a controlling keyboard to call NO.2 cruise route,

A. Press the key "calling preset position"
B. Enter number "42"
C. Press the key "enter" to make your command working

Now, the machine will start the NO.2 automatic cruise route.

4.2.2 Set the stay time in every preset position when the camera cruising automatically

When this camera doing its cruise route, you can set staying time at every preset position, there are 5 shifts can select, 2 / 4 / 6 / 8 / 10 seconds. Operating method: set the NO.51 preset position through controlling keyboard / DVR, the staying time is "2" seconds; set the NO.52 preset position, the staying time is "4" seconds.

setting command of auto cruise scan stay time

Stay time	Setting command	Stay time	Setting command
2 seconds	Set NO.51 preset position	4 seconds	Set NO.52 preset position
6 seconds	Set NO.53 preset position	8 seconds	Set NO.54 preset position
10 seconds	Set NO.55 preset position		

For example: use a controlling keyboard to set the stay time to be "8 seconds"

1) Press the key "set preset position "
2) Enter number "54"
3) Press the key "enter" to save the setting

4.2.3 Delete the automatic cruise route

This means delete all preset positions in the corresponding cruise route.

Operating method: setting the NO.41 preset position through controlling keyboard / DVR, delete the NO.1 cruise route; setting the NO.42 preset position through controlling keyboard / DVR, delete the NO.2 cruise route.

For example: use a controlling keyboard to delete the NO.3 cruise route (clean all preset positions of this route)

1) Press the key "setting preset position"
2) Enter number "43"
3) Press the key "enter" to make your command working

Preset positions number of cruise route, and call / delete command

Cruise route	Call command	Delete command	No. Of preset position
NO.1	Call 41# preset position	Set 41# preset	No. 1—16# preset position
NO.2	Call 42# preset position	Call 42# preset	No. 17—32# preset position
NO.3	Call 43# preset position	Call 43# preset	No. 65—80# preset position
NO.4	Call 44# preset position	Call 44# preset	No. 113—128# preset
NO.5	Call 45# preset position	Call 45# preset	No. 129—144# preset
NO.6	Call 46# preset position	Call 46# preset	No. 145—160# preset
NO.7	Call 47# preset position	Call 47# preset	No. 161—176# preset
NO.8	Call 48# preset position	Call 48# preset	No. 177—192# preset

NOTE: If the preset positions appear deviation,it's probably because of the machine doing auto cruise for long time, or it's after power off just now, or some external force lead to deviation. In this case, please call the NO.34 preset position to make machine back to standard state, then you can set every function again.

4.3 Set / use / delete Limiting Positions at left & right / auto scan / scan speed

This product use electric conducting ring and photoelectricity to limit position, so the factory fault is continuous rotating for 360°. You can set the left and right limiting positions through using controlling keyboard or DVR, and can make camera scan automatically between limiting positions.

4.3.1 Set left and right limiting positions

Moving the camera to right, stay at a position you want, then use controlling equipment to call a command : set the NO.35 preset position. Then, moving the camera to left, stay at a position you want, then use controlling equipment to call a command: set the NO.36 preset position. Now finish the setting of left and right limiting positions. This means machine only can working between these 2 points.

For example: use a controlling keyboard to set left and right limiting positions

1) Press the key "set preset position "
2) Shake the controlling joystick to move camera to right, stay at a position you want
3) Enter number "35"
4) Press the key "enter" to save the setting
5) Shake the controlling joystick to move camera to left, stay at a position you want
6) Enter number "36"

7) Press the key "enter" to save the setting. Now the setting is finished.

4.3.2 Start auto scanning

Use controlling equipment. Execute command : call the NO.38 preset position. On condition that you didn't set limiting positions, auto scanning function will make machine continuous rotating for 360°, if you have been set left and right limiting positions, machine will scan between these two limiting positions.

For example: use a controlling keyboard to start auto scanning

1) Press the key "calling preset position"
2) Enter number "38"
3) Press the key "enter" to make your command working

4.3.3 Delete left and right limiting positions

Use controlling equipment. Execute command : set the NO.38 preset position.

For example: use a controlling keyboard to start auto scan

1) Press the key "set preset position"
2) Enter number "38"
3) Press the key "enter" to make your command working

4.3.4 Setting horizontal auto scanning speed

About the horizontal rotating speed, this machine have 4 shifts can be selected when it's auto scanning. Operating method: use controlling keyboard or DVR, execute "set the NO.64 preset position", it's rotating speed is 40°/sec. Execute "set the NO.63 preset position", it's rotating speed is 15°/sec.

Setting command of horizontal auto scanning speed

Rotating	Setting command	Rotating speed	Setting command
9°/sec	set the NO.61 preset position	20°/sec	set the NO.62 preset position
30°/sec	set the NO.63 preset position	50°/sec	set the NO.64 preset position

For example: use a controlling keyboard to set the horizontal rotating speed as 9°/sec, when the camera is auto scan Press the key "set preset position"

1) Enter number "62"
2) Press the key "enter" to make your command working.

4.4 Set, use, close home place monitoring

Home place means when the speed dome without any action / operation after about 180 seconds, the camera will automatically turn itself to the home place where was set before, to monitor that fixed position.

4.4.1 Turn on / off the home place monitor

1) Turn on: use keyboard or other controller to **call preset # 56,** then press "enter" to confirm and make it works.
2) Turn off: use keyboard or other controller to **set preset # 56,** then press "enter" to confirm and make it works.

4.4.2 Set home place / use home place

1) Set home place: se keyboard or other controller to move the camera to look at the place where you want to make it to be the "home place", then press "set preset + #58".

2) Call home place: when the speed dome without any action / operation after about 180 seconds, the camera will automatically turn itself to the home place. Or press "call preset + #58".

4.5 Restore factory settings

Using controlling keyboard or DVR, execute the command: set the NO.40 preset position. After this operation, all settings with this machine will back to the factory defaults, all your setting will be deleted, except the left and right limiting positions.

For example: use a controlling keyboard to do the restore factory settings

1) Press the key "set preset position"
2) Enter number "40"
3) Press the key "enter" to make your command working

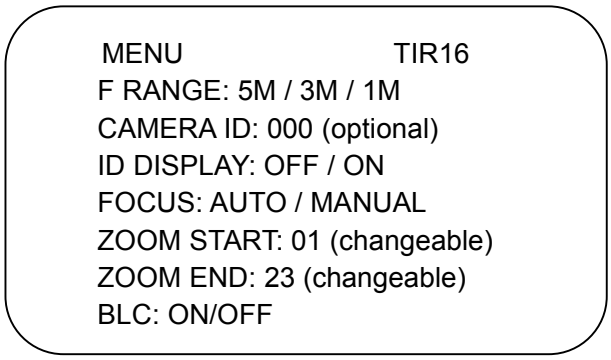
5. Camera menu setting

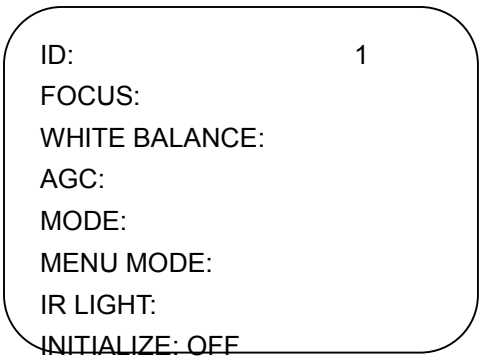
5.1 Basic operation

- Using controlling keyboard / DVR, press the key "aperture" / "iris" to open main menu (call #59 preset)
- Using controlling keyboard / DVR, press the key "zoom" to select project
- Using controlling keyboard / DVR, press the key "focus" to select project
- Factory set, focus mode is "MANUAL", this means when it zooming, it can auto focus, and when it stop zoom, the focus is lock.

5.2 Menu introduction

When you enter the main menu, you will see the information as follows:





After enter the main menu, you can choose these menu items as below by the key "zoom" (the key "zoom" original function is for change the image zoom definition), or use the joystick, use "focus" to change value.

F RANGE: 5M /3M /1M--------the range of the FOCUS

CAMERA ID: 000:--------000-255(selectable by useing the key "zoom")

ID DISPLAY: ON/OFF:--------"ON" means display, "OFF" means no display(selectable by useing the key "zoom")

FOCUS: MANUAL/AUTO: --------manual zoom (defaults)/ auto zoom(selectable by useing the key "zoom")

ZOOM START: 01:--------default is 01X,(selectable by useing the key "zoom")

ZOOM END: 23:--------default is 23X,(selectable by useing the key "zoom")

BLC: ON/OFF:--------back light compensation is selectable,ON/OFF(selectable by useing the key "zoom")

RESET:--------restore factory settings

EXIT:--------return

ID: --------ID of every camera, in order to control all cameras more conveniently, from 1~255

FOCUS:

FOCUS MODE----AUTO: real time, default; MANU: manual focus; PUSH: find image clear point when the zoom stopping, then focus, will not focus again. (MANUAL MODE, if change zoom, focus mode will auto change to AUTO FOCUS

MODE; AUTO MODE, if change zoom, focus mode will auto change to MANUAL FOCUS MODE)

FOCUS DISTANCE----5 / 20 CM / 1M

INITIALIZE----5K / 15K / 25K / 35K / EXEC / OFF (in order to solve lens lose steps, when it focus certain times, the module will auto check itself again, EXEC means REBOOT AND SELFCHECK)

ZOOM START----1, means the zoom starting time of the zoom module

ZOOM END----30, mean the biggest zoom times of the zoom module (initialization can clear this set)

EXIT

WHITE BALANCE:

MODE----AUTO / SPECIAL / WAWB / OUTDOOR / INDOOR

R----1~255

B----1~255

EXIT

AGC:

AGC----AUTO / MANU

LEVEL----1~16

BEIGHTNESS----AUTO / 1~15

SHUTTER----AUTO / 1/50~10K

EXIT

MODE:

BLC----ON / OFF

D/N----AUTO / DAY / NIGHT

MIRROR----ON / OFF

PROTOCOL----VISTA / PELCO D (**Don't change this protocol, otherwise you can not control the PTZ anymore**)

EXIT

MENU MODE:

LANGUAGE----CHS/ENG

MODE----PUSH / OFF / ON

ID----OFF / ON

FOCUS----OFF / ON

EXIT

IR LIGHT:

FUNCTION (MODE)----OFF / ON

IR LIGHT (LEVEL)----1 / 2 / 3 (IR light turn on set)

SWITCH----OFF / ON

ZOOM STAR----1 (changeable)

ZOOM END----30 (changeable)

EXIT

INITIALIZE: ON / OFF

EXIT

Indoor & Outdoor IR Low Speed Dome Camera

1. Features

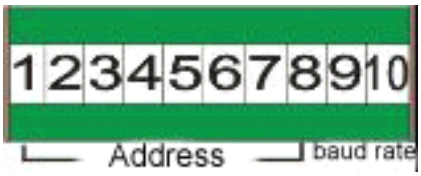
- 128 preset positions, 8 tour routes, can set fixed monitoring position, set stay time for preset positions.
- RS-485 communication, auto identify protocol of Pelco D / Pelco P
- Address codes range: 1~255
- Baud rate: 2400/4800/9600/19200, set by dial codes
- Horizontal rotating speed: 360° continuously, 30° /sec
- Vertical rotating speed: 20° /sec, auto flip
- Working temperature: -20° C--+75° C
- Working humidity: less than 95%
- Waterproof cover level: IP65
- Built-in constant temperature control system
- Installation methods: Hoisting installation, wall mounted installation
- Power: DC12V/ 3A power supply.

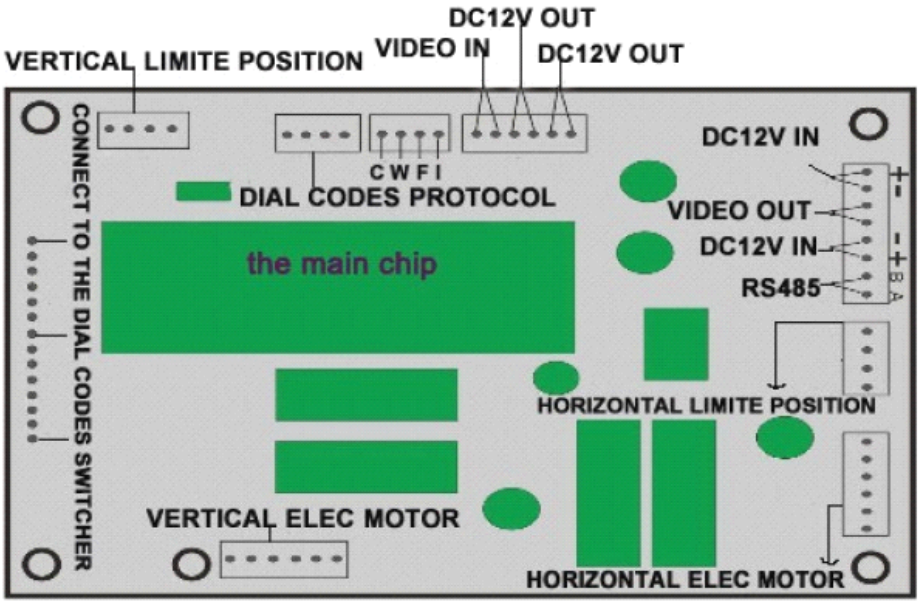
2. Setting address, protocol, baud rate

This camera built-in decoder board, you can control the PTZ and camera through setting address code, protocol, baud rate. The dial codes switch is external, please open the cover on the dome housing, you will see it.

2.1 Address setting

1~8 numbers are used to set address code of the camera (picture), setting range is 1~256, address code of every camera should be same as corresponding DVR / video matrix / control keyboard address codes. Using binary mode to set address code. Set every number "ON" means the value is "1", every numbers "OFF" means the value is "0" .





Address codes and dial codes switch sheet (Binary), calculate it according to this sheet

Binary	Add	Binary	Add	Binary	Add	Binary	Add
0000000	0	11110000	15	01111000	30	10110100	45
10000000	1	00001000	16	11111000	31	01110100	46
01000000	2	10001000	17	00000100	32	11110100	47
11000000	3	01001000	18	10000100	33	00001100	48
00100000	4	11001000	19	01000100	34	10001100	49
10100000	5	00101000	20	11000100	35	01001100	50
01100000	6	10101000	21	00100100	36	11001100	51
11100000	7	01101000	22	10100100	37	00101100	52
00010000	8	11101000	23	01100100	38	10101100	53
10010000	9	00011000	24	11100100	39	01101100	54
01010000	10	10011000	25	00010100	40	11101100	55
11010000	11	01011000	26	10010100	41	00011100	56
00110000	12	11011000	27	01010100	42	10011100	57
10110000	13	00111000	28	11010100	43	01011100	58
01110000	14	10111000	29	00110100	44	11011100	59

2.2 Baud rate setting

The 9~10 numbers of dial codes are used to set baud rate (picture 2), you can choose 2400bps / 4800bps / 9600bps / 19200bps. Set both "9" and "10" to be "ON" means the value is "1", both of them to be "OFF" means the value is "0"

Baud rate and dial codes switch matching sheet

Dial codes	2400 bps	4800 bps	9600 bps	19200 bps
No. 9	OFF	ON	OFF	ON
No. 10	OFF	OFF	ON	ON

Please set this baud rate according to the communication baud rate of camera controlling equipment.

2.3 Protocol setting

The decoder board protocol is automatic adaptive protocol, it support PELCO_D and PELCO_P.

3. Function setting

3.1 Set / Call preset positions

Preset position function means: set / call the camera angles positions through controlling equipment, then save these setting information in the camera by digital mode, sometimes when you need, you can use these setting informations to make the camera transfer to the preset position mode quickly.

3.1.1 Set preset position

Move camera to the corresponding position, controlled by the "zoom" keys of keyboard / DVR, adjust the lens zoom and angle, then set the preset position refer to the introductions, enter a number.

For example: use a controlling keyboard to set NO.1 preset position

1) Press the key "set preset position"
2) Move control joystick to make camera in the position 1 you want

3) Press the key "zoom+ / zoom-", set a suitable zoom and angle for the camera

4) Enter a number "1"

5) Press the key "enter" to save the setting

Now, NO.1 preset position is OK, you can call it later, to make the camera transfer to this position quickly.

3.1.2 Call preset position

Refer to the call preset positions function of controlling keyboard or DVR, you can call all preset positions quickly.

For example: use a controlling keyboard to call NO.1 preset position

1) Press the key "call preset position"

2) Enter a number "1"

3) Press the key "enter" to make your command working

Now, camera will transfer to the NO.1 preset position quickly, and stay there with the set zoom multiples.

3.2 Call / Delete automatic cruise route (auto tour scan)

Automatic cruise route means: you can make the camera working automatically, if you set a cruise route, once you enter the command, camera will auto scan according to your set command, as same as your set cruise route, and it can stay in any preset position you want. This product can set 2 cruise routes (maximum: 16 preset positions per route).

3.2.1 Call automatic cruise route

Control the machine through controlling keyboard or DVR. Call the NO.41 preset position, make the camera to execute the NO.1 cruise route. Call the NO.42 preset position, make the camera to execute the NO.2 cruise route. Other details please see the sheet 6.

For example: use a controlling keyboard to call NO.2 cruise route,

1) Press the key "call preset position"

2) Enter number "42"

3) Press the key "enter" to make your command working

Now, the machine will start the NO.2 automatic cruise route.

3.2.2 Set the stay time in every preset position when the camera cruising automatically

When this camera doing its cruise route, you can set staying time at every preset position, there are 5 shifts can select, 2 / 4 / 6 / 8 / 10 seconds. Operating method: set the NO.51 preset position through controlling keyboard / DVR, the staying time is "2" seconds; set the NO.52 preset position, the staying time is "4" seconds.

Set command of auto cruise scanning stay time

Stay time	Setting command	Stay time	Setting command
2 seconds	Set NO.51 preset position	4 seconds	Set NO.52 preset
6 seconds	Set NO.53 preset position	8 seconds	Set NO.54 preset
10 seconds	Set NO.55 preset position		

For example: use a controlling keyboard to set the stay time to be "8 seconds"

1) Press the key "set preset position "

2) Enter number "54"

3) Press the key "enter" to save the setting

3.2.3 Delete the automatic cruise route

This means delete all preset positions in the corresponding cruise route.

Operating method: setting the NO.41 preset position through controlling keyboard / DVR, delete the NO.1 cruise route; setting the NO.42 preset position through controlling keyboard / DVR, delete the NO.2 cruise route;

For example: use a controlling keyboard to delete the NO.3 cruise route (clean all preset positions of this route)

1) Press the key "setting preset position"
2) Enter number "43"
3) Press the key "enter" to make your command working

Preset positions number of cruise route, and call / delete command

Cruise route	Call command	Delete command	No. Of preset position
NO.1	Call 41# preset position	Set 41# preset position	No. 1—16# preset position
NO.2	Call 42# preset position	Call 42# preset position	No. 17—32# preset position
NO.3	Call 43# preset position	Call 43# preset position	No. 65—80# preset position
NO.4	Call 44# preset position	Call 44# preset position	No. 113—128# preset
NO.5	Call 45# preset position	Call 45# preset position	No. 129—144# preset
NO.6	Call 46# preset position	Call 46# preset position	No. 145—160# preset
NO.7	Call 47# preset position	Call 47# preset position	No. 161—176# preset
NO.8	Call 48# preset position	Call 48# preset position	No. 177—192# preset

NOTE: If the preset positions appear deviation,it's probably because of the machine doing auto cruise for long time, or it's after power off just now, or some external force lead to deviation. In this case, please call the NO.34 preset position to make machine back to standard state, then you can set every function again.

3.3 Setting, using, deleting of Limiting positions on left and right, auto scanning

This product use electric conducting ring and photoelectricity to limit position, so the factory fault is continuous rotating for 360°. You can set the left and right limiting positions through using controlling keyboard or DVR, and can make camera scan automatically between limiting positions.

3.3.1 Set left and right limiting positions

Moving the camera to right and stay at a position you want, then use controlling equipment to call a command (set the NO.35 preset position). Then move the camera to left, stay at a position you want, then use controlling equipment to call a command (set the NO.36 preset position). Now finish the setting of left and right limiting positions. This means machine only can working between these 2 points.

For example: use a controll keyboard to set limiting positions:

1) Press the key "set preset position "
2) Shake the controlling joystick to move camera to right, stay at a position you want
3) Enter number "35"
4) Press the key "enter" to save the setting
5) Shake the controlling joystick to move camera to left, stay at a position you want
6) Enter number "36"
7) Press the key "enter" to save the setting. Now the setting is finished.

3.3.2 Start auto scanning

Use controlling equipment. Execute command: call the NO.38 preset position. On condition that you didn't set limiting positions, auto scanning function will make machine continuous rotating for 360°, if you have been set left and right limiting positions, machine will scan between these two limiting positions.

For example: use a controlling keyboard to start auto scanning

1) Press the key "call preset position"
2) Enter number "38"
3) Press the key "enter" to make your command working

3.3.3 Delete left and right limiting positions

Use controlling equipment. Execute command: set the NO.38 preset position.

For example: use a controlling keyboard to start auto scanning

1) Press the key "set preset position"
2) Enter number "38"
3) Press the key "enter" to make your command working

3.4 Restore factory settings

Using controlling keyboard or DVR, execute the command: set the NO.40 preset position.

After this operation, all settings of this machine will back to the factory defaults, all your setting will be deleted, except the left and right limiting positions.

For example: use a controlling keyboard to do the restore factory settings

1) Press the key "set preset position"
2) Enter number "40"
3) Press the key "enter" to make your command working

Now, all setting information of the speed dome camera are our factory defaults.

4. Camera menu setting

- Using controlling keyboard / DVR, press the key "aperture" / "iris" to open main menu
- Using controlling keyboard / DVR, press the key "zoom" to select project
- Using controlling keyboard / DVR, press the key "focus" to select project
- Factory setting of this machine, focus mode is "MANUAL", this means when it zoom, it can auto focus, and when it stop zoom, the focus is locking

4.1 Menu introduction

When you enter the main menu, you will see the information as follows:

MENU TIR16
F RANGE: 5M / 3M / 1M
CAMERA ID: 000 (optional)
ID DISPLAY: OFF / ON
FOCUS: AUTO / MANUAL
ZOOM START: 01 (changeable)
ZOOM END: 23 (changeable)
BLC: ON/OFF

ID: 1
FOCUS:
WHITE BALANCE:
AGC:
MODE:
MENU MODE:
IR LIGHT:
INITIALIZE: OFF

After enter the main menu, you can choose these menu items as below by the key "zoom" (the key "zoom" original function is for change the image zoom definition), or use the joystick, use "focus" to change value.
F RANGE: 5M /3M /1M--------the range of the FOCUS
CAMERA ID: 000:--------000-255(selectable by useing the key "zoom")
ID DISPLAY: ON/OFF:--------"ON" means display, "OFF" means no display(selectable by useing the key "zoom")
FOCUS: MANUAL/AUTO: --------manual zoom (defaults)/ auto zoom(selectable by useing the key "zoom")
ZOOM START: 01:--------default is 01X,(selectable by useing the key "zoom")
ZOOM END: 23:--------default is 23X,(selectable by useing the key "zoom")
BLC: ON/OFF:--------back light compensation is selectable,ON/OFF(selectable by useing the key "zoom")
RESET:--------restore factory settings
EXIT:--------return

ID: --------ID of every camera, in order to control all cameras more conveniently, from 1~255
FOCUS:
FOCUS MODE----AUTO: real time, default; MANU: manual focus; PUSH: find image clear point when the zoom stopping, then focus, will not focus again. (MANUAL MODE, if change zoom, focus mode will auto change to AUTO FOCUS MODE; AUTO MODE, if change zoom, focus mode will auto change to MANUAL FOCUS MODE)
FOCUS DISTANCE----5 / 20 CM / 1M
INITIALIZE----5K / 15K / 25K / 35K / EXEC / OFF (in order to solve lens lose steps, when it focus certain times, the module will auto check itself again, EXEC means REBOOT AND SELFCHECK)
ZOOM START----1, means the zoom starting time of the zoom module
ZOOM END----30, mean the biggest zoom times of the zoom module (initialization can clear this set)
EXIT
WHITE BALANCE:
MODE----AUTO / SPECIAL / WAWB / OUTDOOR / INDOOR
R----1~255
B----1~255
EXIT
AGC:
AGC----AUTO / MANU
LEVEL----1~16
BEIGHTNESS----AUTO / 1~15
SHUTTER----AUTO / 1/50~10K
EXIT
MODE:
BLC----ON / OFF
D/N----AUTO / DAY / NIGHT
MIRROR----ON / OFF
PROTOCOL----VISTA / PELCO D (**Don't change this protocol, otherwise you can not control the PTZ anymore**)
EXIT
MENU MODE:
LANGUAGE----CHS/ENG
MODE----PUSH / OFF / ON
ID----OFF / ON
FOCUS----OFF / ON
EXIT
IR LIGHT:

FUNCTION (MODE)----OFF / ON
IR LIGHT (LEVEL)----1 / 2 / 3 (IR light turn on set)
SWITCH----OFF / ON
ZOOM STAR----1 (changeable)
ZOOM END----30 (changeable)
EXIT
INITIALIZE: ON / OFF
EXIT

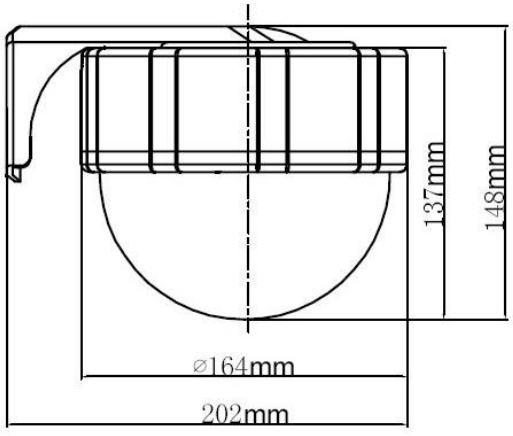
Indoor IR Medium Speed Dome Camera

1. Features

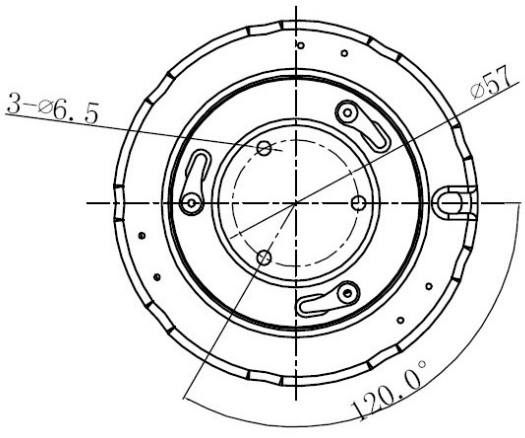
- 32 preset positions, 2 tour routes, fixed monitoring position, 2 limit positions on left and right.
- RS-485 communication, auto identify protocol of Pelco D / Pelco P
- Address codes range: 1~255
- Baud rate: 2400/4800/9600/19200, set by dial codes
- Horizontal rotating range: 0° –360° continuously
- Horizontal rotating speed: 50° /sec
- Vertical rotating speed: 25° /sec
- Working temperature: -30° C--+65° C
- Working humidity: less than 95%
- Installation methods: Hoisting installation, wall mounted installation, in-ceiling mount.
- Power: DC12V/ 3A power supply.

2. Mounting size drawing

2.1 Wall mount

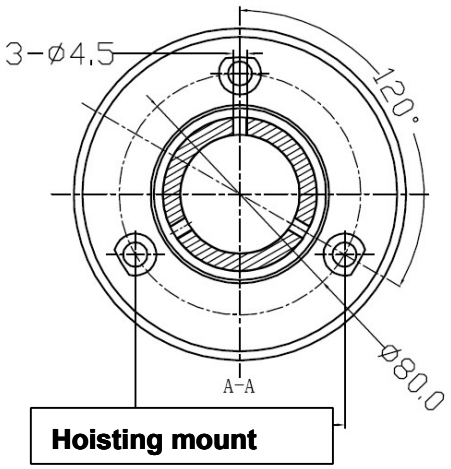


Camera size

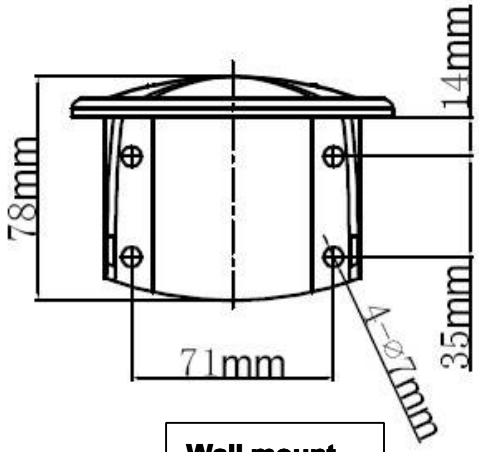


In-ceiling mount

2.2 Hoisting mount



Hoisting mount



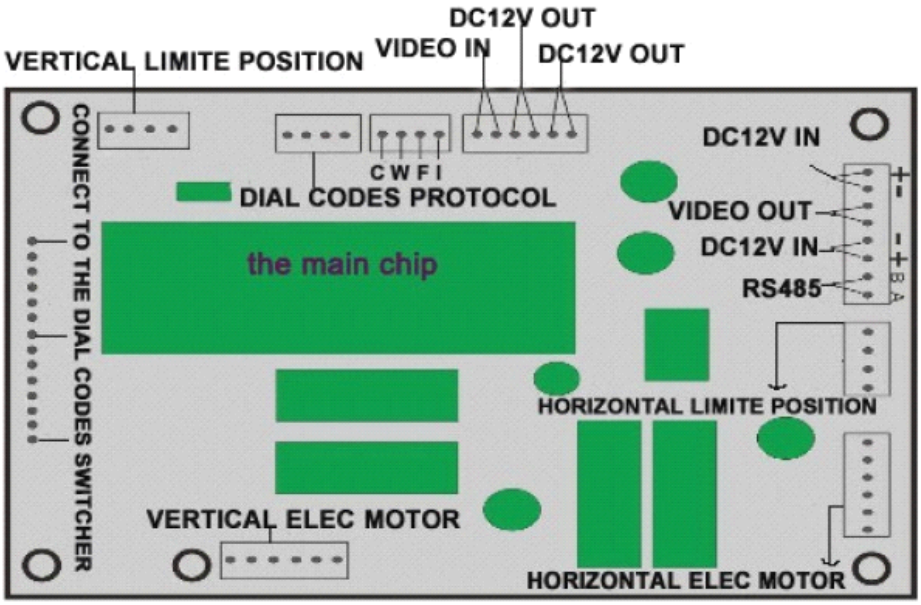
Wall mount

3. Setting address, protocol, baud rate, horizontal rotating speed

This dome camera has built-in decoder board, you can control the PTZ and camera through setting address codes, protocol, baud rate. The dial codes switch is internal, please open the dome cover to find dial codes of ten numbers.

3.1 Address setting

1~8 numbers are used to setaddress codes of the camera, setting range is 1~256, address codes of every camera should be same as corresponding DVR / video matrix / control keyboard address codes. Using binary mode to set address codes. Set every number are "ON" means the value is "1", every numbers are "OFF" means the value is "0"



Address codes and dial codes switch sheet (Binary), calculate it according to this sheet

Binary	Add	Binary	Add	Binary	Add	Binary	Add
0000000	0	11110000	15	01111000	30	10110100	45
10000000	1	00001000	16	11111000	31	01110100	46
01000000	2	10001000	17	00000100	32	11110100	47
11000000	3	01001000	18	10000100	33	00001100	48
00100000	4	11001000	19	01000100	34	10001100	49
10100000	5	00101000	20	11000100	35	01001100	50
01100000	6	10101000	21	00100100	36	11001100	51
11100000	7	01101000	22	10100100	37	00101100	52
00010000	8	11101000	23	01100100	38	10101100	53
10010000	9	00011000	24	11100100	39	01101100	54
01010000	10	10011000	25	00010100	40	11101100	55
11010000	11	01011000	26	10010100	41	00011100	56
00110000	12	11011000	27	01010100	42	10011100	57
10110000	13	00111000	28	11010100	43	01011100	58
01110000	14	10111000	29	00110100	44	11011100	59

3.2 Baud rate setting

The 9~10 numbers of dial codes are used to set baud rate (picture 2), you can choose 2400bps / 4800bps / 9600bps / 19200bps. Set both "9" and "10" to be "ON" means the value is "1", both of them to be "OFF" means the value is "0".

Baud rate and dial codes switch matching sheet

Dial codes	2400 bps	4800 bps	9600 bps	19200 bps
No. 9	OFF	ON	OFF	ON
No. 10	OFF	OFF	ON	ON

Please set this baud rate according to the communication baud rate of camera controlling equipment.

3.3 Protocol setting

The decoder board protocol is automatic adaptive protocol, it support PELCO_D and PELCO_P.

4. Function setting

4.1 Set / Call preset positions

Preset position function means: set / call the camera angles positions through controlling equipment, then save these setting information in the camera by digital mode, sometimes when you need, you can use these setting informations to make the camera transfer to the preset position mode quickly. This machine can set 128 preset positions.

4.1.1 Set preset position

Move camera to the corresponding position, controlled by the "zoom" keys of keyboard / DVR, adjust the lens zoom and angle, then set the preset position refer to the introductions, enter a number.

For example: use a controlling keyboard to set NO.1 preset position

A. Press the key "set preset position"

B. Move control joystick to make camera in the position 1 you want

C. Press the key "zoom+ / zoom-", set a suitable zoom and angle for the camera

D. Enter a number "1"

E. Press the key "enter" to save the setting. Now, NO.1 preset position is OK, you can call it later, to make the camera transfer to this position quickly.

4.1.2 Call preset position

Refer to the calling preset positions function introductions of controlling keyboard or DVR, you can call all preset positions quickly.

For example: use a controlling keyboard to call NO.1 preset position

A. Press the key "calling preset position"

B. Enter a number "1"

C. Press the key "enter" to make your order working. Now, camera will transfer to the NO.1 preset position quickly, and stay there with the set zoom multiples.

4.2 Call / Delete automatic cruise route

Automatic cruise route means: you can make the camera working automatically, if you set a cruise route, once you enter the order, camera will auto scan according to your set order, as same as your set cruise route, and it can stay in any preset position you want. This product can set 8 cruise routes (maximum: 16 preset positions per route).

4.2.1 Call automatic cruise route

Control the machine through controlling keyboard or DVR. Calling the NO.41 preset position, make the camera to execute the NO.1 cruise route. Calling the NO.42 preset position, make the camera to execute the NO.2 cruise route. Other details please see the sheet 6.

For example: use a controlling keyboard to call NO.2 cruise route,

A. Press the key "calling preset position"

B. Enter number "42"

C. Press the key "enter" to make your order working. Now, the machine will start the NO.2 automatic cruise route.

4.2.2 Set the stay time in every preset position when the camera cruising automatically

When this camera doing its cruise route, you can set staying time at every preset position, there are 5 shifts can select, 2 / 4 / 6 / 8 / 10 seconds. Operating method: set the NO.51 preset position through controlling keyboard / DVR, the staying time is "2" seconds; set the NO.52 preset position, the staying time is "4" seconds.

setting order of auto cruise scanning stay time

Stay time	Setting order	Stay time	Setting order
2 seconds	Set NO.51 preset position	4 seconds	Set NO.52 preset
6 seconds	Set NO.53 preset position	8 seconds	Set NO.54 preset
10 seconds	Set NO.55 preset position		

For example: use a controlling keyboard to set the stay time to be "8 seconds"

A. Press the key "set preset position "

B. Enter number "54"

C. Press the key "enter" to save the setting

4.2.3 Delete the automatic cruise route

This means delete all preset positions in the corresponding cruise route.

Operating method: setting the NO.41 preset position through controlling keyboard / DVR, delete the NO.1 cruise route; setting the NO.42 preset position through controlling keyboard / DVR, delete the NO.2 cruise route; Other details please see the sheet.

For example: use a controlling keyboard to delete the NO.3 cruise route (clean all preset positions of this route)

A. Press the key "setting preset position"

B. Enter number "43"

C. Press the key "enter" to make your order working

Preset positions number of cruise route, and calling / delete command

Cruise route	Call command	Delete command	No. Of preset position
NO.1	Call 41# preset position	Set 41# preset position	No. 1—16# preset position
NO.2	Call 42# preset position	Call 42# preset position	No. 17—32# preset position
NO.3	Call 43# preset position	Call 43# preset position	No. 65—80# preset position
NO.4	Call 44# preset position	Call 44# preset position	No. 113—128# preset
NO.5	Call 45# preset position	Call 45# preset position	No. 129—144# preset
NO.6	Call 46# preset position	Call 46# preset position	No. 145—160# preset
NO.7	Call 47# preset position	Call 47# preset position	No. 161—176# preset
NO.8	Call 48# preset position	Call 48# preset position	No. 177—192# preset

NOTE: If the preset positions appear deviation,it's probably because of the machine doing auto cruise for long time, or it's after power off just now, or some external force lead to deviation. In this case, please call the NO.34 preset position to make machine back to standard state, then you can set every function again.

4.3 Set, use, delete of Limit positions on left and right, auto scanning, scanning speed

This product use electric conducting ring and photoelectricity to limit position, so the factory fault is continuous rotating for 360°. You can set the left and right limiting positions through using controlling keyboard or DVR, and can make camera scan automatically between limiting positions.

4.3.1 Set left and right limiting positions

Moving the camera to right, stay at a position you want, then use controlling equipment to call a order: set the NO.35 preset position. Then, moving the camera to left, stay at a position you want, then use controlling equipment to call a order: set the NO.36 preset position. Now finish the setting of left and right limiting positions. This means machine only can working between these 2 points.

For example: use a controlling keyboard to set left and right limiting positions

A. Press the key "set preset position "

B. Shake the controlling joystick to move camera to right, stay at a position you want

C. Enter number "35"

D. Press the key "enter" to save the setting

E. Shake the controlling joystick to move camera to left, stay at a position you want

F. Enter number "36"

G. Press the key "enter" to save the setting. Now the setting is finished.

4.3.2 Start auto scanning

Use controlling equipment. Execute order: call the NO.38 preset position. On condition that you didn't set limiting positions, auto scanning function will make machine continuous rotating for 360°, if you have been set left and right limiting positions, machine will scan between these two limiting positions.

For example: use a controlling keyboard to start auto scanning

A. Press the key "calling preset position"

B. Enter number "38"

C. Press the key "enter" to make your order working

4.3.3 Delete left and right limiting positions

Use controlling equipment. Execute order: set the NO.38 preset position.

For example: use a controlling keyboard to start auto scanning

A. Press the key "set preset position"

B. Enter number "38"

C. Press the key "enter" to make your order working

4.3.4 Setting horizontal auto scanning speed

About the horizontal rotating speed, this machine have 4 shifts can be selected when it's auto scanning. Operating method: use controlling keyboard or DVR, execute "set the NO.64 preset position", it's rotating speed is 40°/sec. Execute "set the NO.63 preset position", it's rotating speed is 15°/sec. Other order details please refer to sheet.

setting order of horizontal auto scanning speed

Rotating speed	Setting command	Rotating speed	Setting command
6°/sec	set the NO.61 preset position	9°/sec	set the NO.62 preset position
15°/sec	set the NO.63 preset position	40°/sec	set the NO.64 preset position

For example: use a controlling keyboard to set the horizontal rotating speed as 9°/sec, when the camera is auto canning.

A. Press the key "set preset position"

B. Enter number "62"

C. Press the key "enter" to make your order working.

4.4 Setting, open, call and close the fixed position (home place)

This product have fixed monitoring position, if you call the “home place” function, when the camera have no any operation after 180 seconds, it will auto rotate to the set fixed position to monitoring the place.

4.4.1 Open and close the home place

Call: call the “NO.56 preset”

Close: set the “NO.56 preset”

4.4.2 Set and call the home place

Set: move the camera to the position you want, then set “the NO.58 preset”, save the set, this means you set the present position as the home place.

Call: call “the NO.58 preset”, then the camera will auto move to the home place that you already set before. If the camera have no any operation after 180 seconds, it also will auto start to run the home place monitoring.

4.5 Restore factory settings

Using controlling keyboard or DVR, execute the order: set the NO.40 preset position. After this operation, all

settings with this machine will back to the factory defaults, all your setting will be deleted, except the left and right limiting positions.

For example: use a controlling keyboard to do the restore factory settings

A. Press the key "set preset position"

B. Enter number "40"

C. Press the key "enter" to make your order working

5. Camera menu setting

5.1 Basic operation

A. Using controlling keyboard / DVR, press the key "aperture" / "iris" to open main menu

B. Using controlling keyboard / DVR, press the key "zoom" to select project

C. Using controlling keyboard / DVR, press the key "focus" to select project

D. Factory setting of this machine, focus mode is "MANUAL", this means when it zoom, it can auto focus, and when it stop zoom, the focus is locking

5.2 Menu introduction

Press the key "aperture" / "iris" to open main menu, you will see menu as below:

CAMERA ID

ID DISPLAY: ON/OFF

FOCUS: MANUAL/AUTO

ZOOM START: 01

ZOOM END: 30

BLC: ON/OFF

RESET

5.3 Menu setting

MENU----------(enter the main menu)

CAMERA ID: 000----(the ID number of this machine is "000~255")

ID DISPLAY: ON / OFF---- ("ON" means display ID number, "OFF" means not to display ID number)

FOCUS: MANUAL/AUTO----(two focus modes)

ZOOM START: 01----(zoom starting value) factory default is 1X, if you change this value to be "5", then the zoom starting value of this machine will change to be 5X

ZOOM END: 30----(zoom ending value) factory default is 30X, if you change this value to be "20", then the zoom ending value of this machine will change to be 20X

BLC: ON / OFF---- (back light compensation) open / close

RESET: (restore to the factory setting)

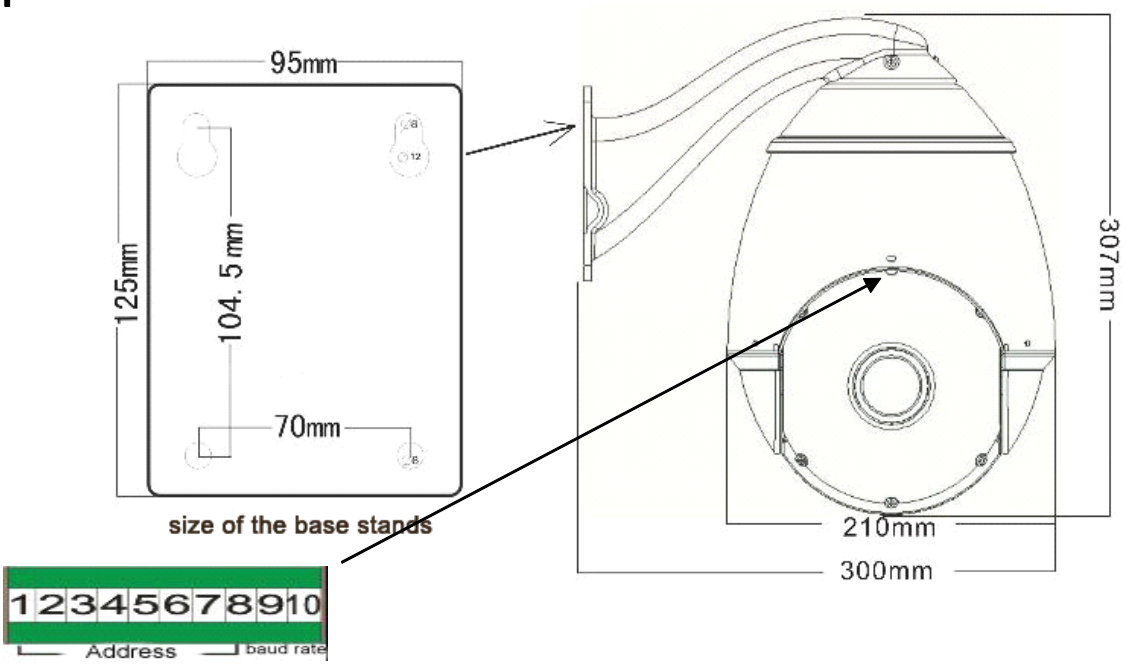
Indoor & Outdoor Normal Medium Speed Dome Camera (W/O IR)

1. Features

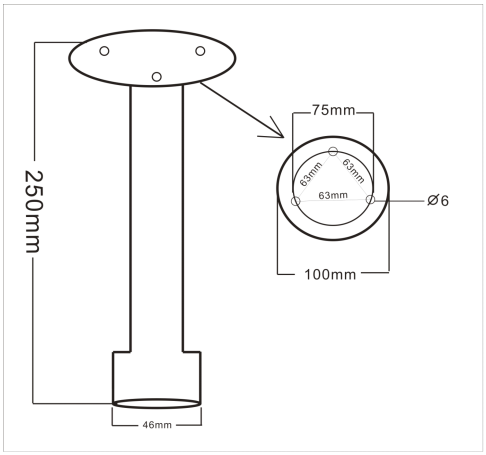
- 128 preset, 8 tour routes, 1 fixed position, can set stay time for preset positions and llimit positions on left and right.
- RS-485 communication, auto identify protocol of Pelco D / Pelco P
- Address codes range: 1~255
- Baud rate: 2400/4800/9600/19200, set by dial codes
- Horizontal rotating speed: 360° continuously, 100° /sec
- Vertical rotating speed: 50° /sec, auto flip
- Working temperature: -20° C--+75° C
- Working humidity: less than 95%
- Waterproof cover level: IP65
- Installation methods: Hoisting installation, wall mounted installation
- Power: DC12V/ 5A power supply.

2. Mounting size drawing

2.1 Wall mount



2.2 Hoisting mount

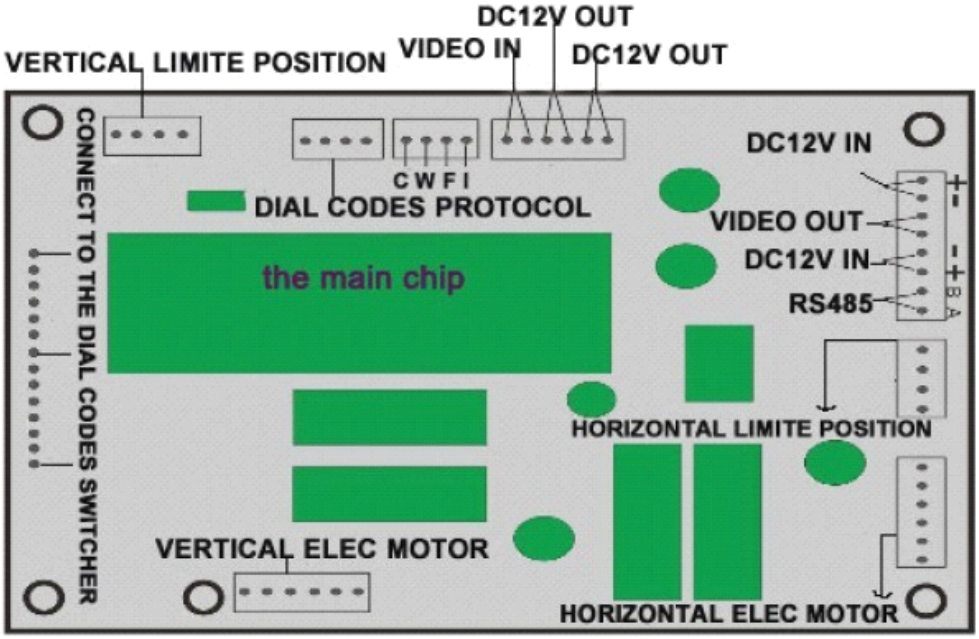


3. Setting address, protocol, baud rate, horizontal rotating speed

This dome camera have built-in decoder board, you can control the PTZ and camera through setting address codes, protocol, baud rate. The dial codes switch is external, please open the small cover on the ball, then you will see dial codes of ten numbers.

3.1 Address setting

1~8 numbers are used to setting address code of the camera (picture), setting range is 1~255, address code of every camera should be same as corresponding DVR / video matrix / control keyboard address code. Using binary mode to set address codes. Set every number are "ON" means the value is "1", every numbers are "OFF" means the value is "0" **(see the picture & sheet)**



Address codes and dial codes switch sheet(Binary), calculate it according to this sheet

Binary	Add	Binary	Add	Binary	Add	Binary	Add
0000000	0	11110000	15	01111000	30	10110100	45
10000000	1	00001000	16	11111000	31	01110100	46
01000000	2	10001000	17	00000100	32	11110100	47
11000000	3	01001000	18	10000100	33	00001100	48
00100000	4	11001000	19	01000100	34	10001100	49
10100000	5	00101000	20	11000100	35	01001100	50
01100000	6	10101000	21	00100100	36	11001100	51
11100000	7	01101000	22	10100100	37	00101100	52
00010000	8	11101000	23	01100100	38	10101100	53

10010000	9	00011000	24	11100100	39	01101100	54
01010000	10	10011000	25	00010100	40	11101100	55
11010000	11	01011000	26	10010100	41	00011100	56
00110000	12	11011000	27	01010100	42	10011100	57
10110000	13	00111000	28	11010100	43	01011100	58
01110000	14	10111000	29	00110100	44	11011100	59

3.2 Baud rate setting

The 9~10 numbers of dial codes are used to set baud rate (picture 2), you can choose 2400bps / 4800bps / 9600bps / 19200bps. Set both "9" and "10" to be "ON" means the value is "1", both of them to be "OFF" means the value is "0"

Baud rate and dial codes switch matching sheet

Dial codes	2400 bps	4800 bps	9600 bps	19200 bps
No. 9	OFF	ON	OFF	ON
No. 10	OFF	OFF	ON	ON

Please set this baud rate according to the communication baud rate of camera controlling equipment.

3.3 Protocol setting

The decoder board protocol is automatic adaptive protocol, it support PELCO_D and PELCO_P.

4. Function setting

4.1 Set / Call preset positions

Preset position function means: set / call the camera angles positions through controlling equipment, then save these setting information in the camera by digital mode, sometimes when you need, you can use these setting informations to make the camera transfer to the preset position mode quickly. This machine can set 128 preset positions.

4.1.1 Set preset position

Move camera to the corresponding position, controlled by the "zoom" keys of keyboard / DVR, adjust the lens zoom and angle, then set the preset position refer to the introductions, enter a number.

For example: use a controlling keyboard to set NO.1 preset position

9) Press the key "set preset position"
10) Move control joystick to make camera in the position 1 you want
11) Press the key "zoom+ / zoom-", set a suitable zoom and angle for the camera
12) Enter a number "1"
13) Press the key "enter" to save the setting

Now, NO.1 preset position is OK, you can call it later, to make the camera transfer to this position quickly.

4.1.2 Call preset position

Refer to the call preset positions function , you can call all preset positions quickly.

For example: use a controlling keyboard to call NO.1 preset position

14) Press the key "calling preset position"
15) Enter a number "1"
16) Press the key "enter" to make your command working

Now, camera will transfer to the NO.1 preset position quickly, and stay there with the set zoom multiples.

4.2 Call / Delete automatic cruise route

Automatic cruise route means: you can make the camera working automatically, if you set a cruise route, once you enter the command, camera will auto scan according to your set command, as same as your set cruise route, and it can stay in any preset position you want. This product can set 8 cruise routes (maximum: 16 preset positions per route).

4.2.1 Call automatic cruise route

Control the machine through controlling keyboard or DVR. Calling the NO.41 preset position, make the camera to execute the NO.1 cruise route. Calling the NO.42 preset position, make the camera to execute the NO.2 cruise route. Other details please see the sheet 6.

For example: use a controlling keyboard to call NO.2 cruise route,

D. Press the key "calling preset position"

E. Enter number "42"

F. Press the key "enter" to make your command working

Now, the machine will start the NO.2 automatic cruise route.

4.2.2 Set the stay time in every preset position when the camera cruising automatically

When this camera doing its cruise route, you can set staying time at every preset position, there are 5 shifts can select, 2 / 4 / 6 / 8 / 10 seconds. Operating method: set the NO.51 preset position through controlling keyboard / DVR, the staying time is "2" seconds; set the NO.52 preset position, the staying time is "4" seconds.

setting command of auto cruise scan stay time

Stay time	Setting command	Stay time	Setting command
2 seconds	Set NO.51 preset position	4 seconds	Set NO.52 preset position
6 seconds	Set NO.53 preset position	8 seconds	Set NO.54 preset position
10 seconds	Set NO.55 preset position		

For example: use a controlling keyboard to set the stay time to be "8 seconds"

4) Press the key "set preset position "

5) Enter number "54"

6) Press the key "enter" to save the setting

4.2.3 Delete the automatic cruise route

This means delete all preset positions in the corresponding cruise route.

Operating method: setting the NO.41 preset position through controlling keyboard / DVR, delete the NO.1 cruise route; setting the NO.42 preset position through controlling keyboard / DVR, delete the NO.2 cruise route.

For example: use a controlling keyboard to delete the NO.3 cruise route (clean all preset positions of this route)

4) Press the key "setting preset position"

5) Enter number "43"

6) Press the key "enter" to make your command working

Preset positions number of cruise route, and call / delete command

Cruise route	Call command	Delete command	No. Of preset position

NO.1	Call 41# preset position	Set 41# preset	No. 1—16# preset position
NO.2	Call 42# preset position	Call 42# preset	No. 17—32# preset position
NO.3	Call 43# preset position	Call 43# preset	No. 65—80# preset position
NO.4	Call 44# preset position	Call 44# preset	No. 113—128# preset
NO.5	Call 45# preset position	Call 45# preset	No. 129—144# preset
NO.6	Call 46# preset position	Call 46# preset	No. 145—160# preset
NO.7	Call 47# preset position	Call 47# preset	No. 161—176# preset
NO.8	Call 48# preset position	Call 48# preset	No. 177—192# preset

NOTE: If the preset positions appear deviation,it's probably because of the machine doing auto cruise for long time, or it's after power off just now, or some external force lead to deviation. In this case, please call the NO.34 preset position to make machine back to standard state, then you can set every function again.

4.3 Set / use / delete Limiting Positions at left & right / auto scan / scan speed

This product use electric conducting ring and photoelectricity to limit position, so the factory fault is continuous rotating for 360°. You can set the left and right limiting positions through using controlling keyboard or DVR, and can make camera scan automatically between limiting positions.

4.3.1 Set left and right limiting positions

Moving the camera to right, stay at a position you want, then use controlling equipment to call a command : set the NO.35 preset position. Then, moving the camera to left, stay at a position you want, then use controlling equipment to call a command: set the NO.36 preset position. Now finish the setting of left and right limiting positions. This means machine only can working between these 2 points.

For example: use a controlling keyboard to set left and right limiting positions

8) Press the key "set preset position "
9) Shake the controlling joystick to move camera to right, stay at a position you want
10) Enter number "35"
11) Press the key "enter" to save the setting
12) Shake the controlling joystick to move camera to left, stay at a position you want
13) Enter number "36"
14) Press the key "enter" to save the setting. Now the setting is finished.

4.3.2 Start auto scanning

Use controlling equipment. Execute command : call the NO.38 preset position. On condition that you didn't set limiting positions, auto scanning function will make machine continuous rotating for 360°, if you have been set left and right limiting positions, machine will scan between these two limiting positions.

For example: use a controlling keyboard to start auto scanning

4) Press the key "calling preset position"
5) Enter number "38"
6) Press the key "enter" to make your command working

4.3.3 Delete left and right limiting positions

Use controlling equipment. Execute command : set the NO.38 preset position.

For example: use a controlling keyboard to start auto scan

4) Press the key "set preset position"

5) Enter number "38"

6) Press the key "enter" to make your command working

4.3.4 Setting horizontal auto scanning speed

About the horizontal rotating speed, this machine have 4 shifts can be selected when it's auto scanning. Operating method: use controlling keyboard or DVR, execute "set the NO.64 preset position", it's rotating speed is 40°/sec. Execute "set the NO.63 preset position", it's rotating speed is 15°/sec.

Setting command of horizontal auto scanning speed

Rotating	Setting command	Rotating speed	Setting command
9°/sec	set the NO.61 preset position	20°/sec	set the NO.62 preset position
30°/sec	set the NO.63 preset position	50°/sec	set the NO.64 preset position

For example: use a controlling keyboard to set the horizontal rotating speed as 9°/sec, when the camera is auto scan Press the key "set preset position"

3) Enter number "62"

4) Press the key "enter" to make your command working.

4.4 Set, use, close home place monitoring

Home place means when the speed dome without any action / operation after about 180 seconds, the camera will automatically turn itself to the home place where was set before, to monitor that fixed position.

4.4.1 Turn on / off the home place monitor

3) Turn on: use keyboard or other controller to **call preset # 56,** then press "enter" to confirm and make it works.

4) Turn off: use keyboard or other controller to **set preset # 56,** then press "enter" to confirm and make it works.

4.4.2 Set home place / use home place

3) Set home place: se keyboard or other controller to move the camera to look at the place where you want to make it to be the "home place", then press "set preset + #58".

4) Call home place: when the speed dome without any action / operation after about 180 seconds, the camera will automatically turn itself to the home place. Or press "call preset + #58".

4.5 Restore factory settings

Using controlling keyboard or DVR, execute the command: set the NO.40 preset position. After this operation, all settings with this machine will back to the factory defaults, all your setting will be deleted, except the left and right limiting positions.

For example: use a controlling keyboard to do the restore factory settings

4) Press the key "set preset position"

5) Enter number "40"

6) Press the key "enter" to make your command working

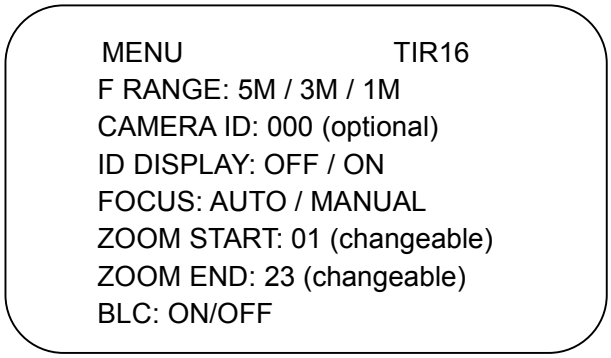
5. Camera menu setting

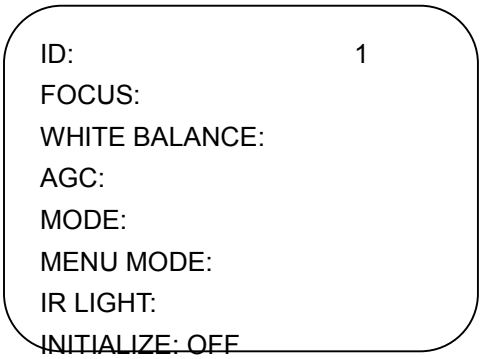
5.1 Basic operation

- Using controlling keyboard / DVR, press the key "aperture" / "iris" to open main menu (call #59 preset)
- Using controlling keyboard / DVR, press the key "zoom" to select project
- Using controlling keyboard / DVR, press the key "focus" to select project
- Factory set, focus mode is "MANUAL", this means when it zooming, it can auto focus, and when it stop zoom, the focus is lock.

5.2 Menu introduction

When you enter the main menu, you will see the information as follows:





After enter the main menu, you can choose these menu items as below by the key "zoom" (the key "zoom" original function is for change the image zoom definition), or use the joystick, use "focus" to change value.
F RANGE: 5M /3M /1M--------the range of the FOCUS
CAMERA ID: 000:--------000-255(selectable by useing the key "zoom")
ID DISPLAY: ON/OFF:--------"ON" means display, "OFF" means no display(selectable by useing the key "zoom")
FOCUS: MANUAL/AUTO: --------manual zoom (defaults)/ auto zoom(selectable by useing the key "zoom")
ZOOM START: 01:--------default is 01X,(selectable by useing the key "zoom")
ZOOM END: 23:--------default is 23X,(selectable by useing the key "zoom")
BLC: ON/OFF:--------back light compensation is selectable,ON/OFF(selectable by useing the key "zoom")
RESET:--------restore factory settings
EXIT:--------return

ID: --------ID of every camera, in order to control all cameras more conveniently, from 1~255
FOCUS:
FOCUS MODE----AUTO: real time, default; MANU: manual focus; PUSH: find image clear point when the zoom stopping, then focus, will not focus again. (MANUAL MODE, if change zoom, focus mode will auto change to AUTO FOCUS MODE; AUTO MODE, if change zoom, focus mode will auto change to MANUAL FOCUS MODE)
FOCUS DISTANCE----5 / 20 CM / 1M
INITIALIZE----5K / 15K / 25K / 35K / EXEC / OFF (in order to solve lens lose steps, when it focus certain times, the module will auto check itself again, EXEC means REBOOT AND SELFCHECK)
ZOOM START----1, means the zoom starting time of the zoom module
ZOOM END----30, mean the biggest zoom times of the zoom module (initialization can clear this set)
EXIT
WHITE BALANCE:
MODE----AUTO / SPECIAL / WAWB / OUTDOOR / INDOOR
R----1~255
B----1~255
EXIT
AGC:
AGC----AUTO / MANU

LEVEL----1~16
BEIGHTNESS----AUTO / 1~15
SHUTTER----AUTO / 1/50~10K
EXIT

MODE:
BLC----ON / OFF
D/N----AUTO / DAY / NIGHT
MIRROR----ON / OFF
PROTOCOL----VISTA / PELCO D (**Don't change this protocol, otherwise you can not control the PTZ anymore**)
EXIT

MENU MODE:
LANGUAGE----CHS/ENG
MODE----PUSH / OFF / ON
ID----OFF / ON
FOCUS----OFF / ON
EXIT

IR LIGHT:
FUNCTION (MODE)----OFF / ON
IR LIGHT (LEVEL)----1 / 2 / 3 (IR light turn on set)
SWITCH----OFF / ON
ZOOM STAR----1 (changeable)
ZOOM END----30 (changeable)
EXIT

INITIALIZE: ON / OFF

EXIT

Clean the dome cover

A， In order to get image with high definition, please clean the dome cover with gloves regularly. Please dismount the cover carefully, don't be hurt, and keep your hands be dry, the sweat maybe will erode the cover.
B， Please use dry cloth.
C， Please use neutral cleaner.

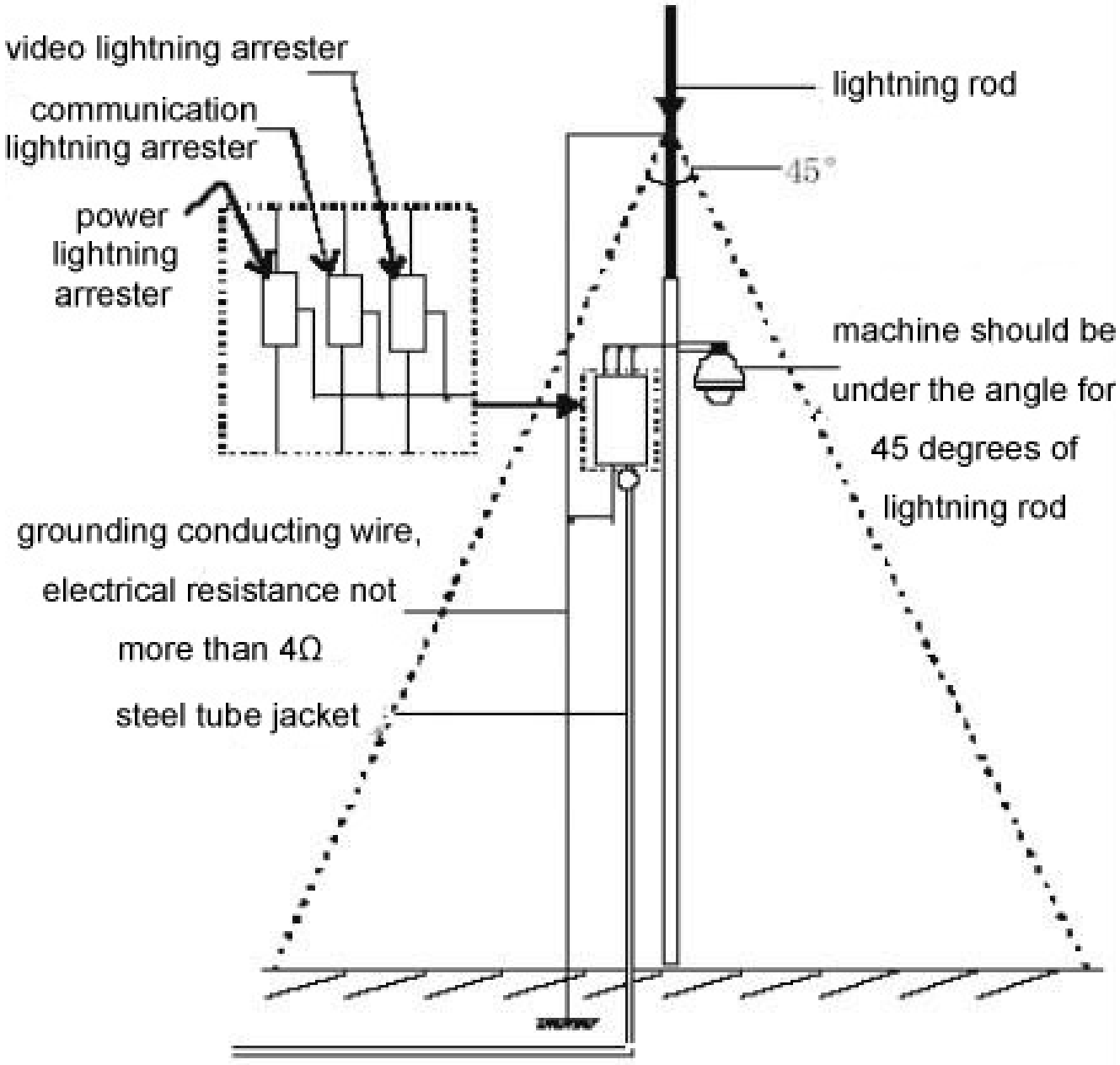
Notes for maintain

1、Check every power sockets about every camera regularly.
2、Ensure every power voltage is stable.
3、Set obvious mark for camera which installed in a low position, remind else people who isn't monitor worker don not to touch or move it.
4、Arrange a special person to manage the monitoring equipments, forbid other person to use it.
5、Should shut off the power of monitoring equipments, when the monitoring center have no person every evening.
6、Maintain the machine regularly.

Lightning protection

This products use TVS lightning protecting technology, it can protect the equipment in these situations: momentary lightning striking power voltage below 1.5W, electrical surge and other pulse signal. But, if you installed the machine outdoor, should consider practical situations, should ensure the electrical security, and do necessary protecting measures. Like this picture:

- Signal transfer wires should stay away from high voltage equipment or wires at least 50m distance ;
- Wiring outdoor should choose to along under house eaves;
- In the open zoom, please use sealed steel tube to cover land and wiring, and use the steel tube to touch the land, forbid to wiring in the air;
- In strong thunderstorm area, or high voltage area (like high voltage substation), must install special powerful lightning protecting equipment, and lightning rod, and all these equipments must be installed by professional worker;
- The system must be electrical bonding, the earthing device must meet all professional demands both of system and electricity, and don't connect to strong electrical net wires. When the system earthing alone, the impedance of earthing device should be less than 4Ω, cross sectional area of earthing conducting wires must be smaller than 25mm.



Simple sheet for check faults

Faults	Possible reasons	Solution
Power on, but no action, no image, indicating lights off.	Power wires connected wrong	Correct
	Power damaged	Change
	Power is not right	Change
	Power wires are poor connection	Rule out
Power on, camera can check itself and display the image, but you can't control it	Address codes, baud rate are wrong	Reset the address codes and baud rate
	Wrong protocol	Correct
	RS485 wires connected wrong or damaged	Check RS485wires connection
Self-check is abnormal, have image but with electrical motor working voice	Machine faults	Repair
	Camera is crooked	Move and adjust its position
	Power is not enough	Change the power
Image is unstable	Video wires are poor connection	Rule out
	Power is not enough	Change the power
	Video route is bearing interruption	Rule out
image is unclear	Camera is manual zoom mode	Change to auto zoom mode
	The dome cover is dirty	Clean the dome cover
Bad controlling	Power is not enough	Change power, you'd better put the power near to the camera
	Check the farthest camera's controlling resistance, see if it added into	Add the resistance
	The distance is too long, 485 signal are cut down	Use the twisted pair or add the diameter of the wire
	Wrong operating method lead to out of the control	Power off and reboot

SONY zoom module menu for reference:

M.FOCUS (OFF / ON)----manual focus;

M.IRIS (OFF / ON)---- manual iris;

A.SBLC (OFF / ON)----super back light compensation;

WBMODE----white balance mode (6 optional);

B.GAIN (OFF / ON.ADJ)----blue gain adjustable;

ALARM----alarm (13 modes optional);

P.ZONE 2 (ON - POS - SIZE - OFF)----privacy zones;

D.ZOOM (OFF / ON)----digital zoom;

V.INVERT (OFF / ON)----vertical invert;

M.SHUTTER (OFF / ON)---- manual shutter

NIGHT (OFF / ON)----auto night vision mode

BRIGHT (ADJ)---- brightness adjustable

R.GAIN (OFF / ON. ADJ)----red gain adjustable

SHARP (ADJ)---- sharp adjustable

P.ZONE 1 (ON - POS - SIZE - OFF)----privacy zones

Z.OSD (OFF / ON)----zoom displayed on the screen

H.INVERT (OFF / ON)----horizontal invert

P.EFFECT----picture effect (negative / B&W /

OFF)

F.LIMIT (00~12)----focus limit; .SPEED (00~07)----zoom speed

2P.ZOOM (OFF / ON)----2 points zoom; L.INIT (SET)----lens initialization

FREEZE (OFF / ON); FACTORY.SET (SET)

RS 485 COMMUNICATION INTERFACE (OFF / ON)

LG zoom module menu for reference:

FOCUS SET

FOCUS MODE:AUTO / KEY / TRIGGER / MANUAL; FOCUS RANGE: 50CM / 1M / 3M / 5M

ZOOM START: X1 ~X22; ZOOM STP: X2~X276 / X324 / X396 / X444

ZOOM SPEED: SLOW / MID / HIGH; ZOOM MODE: AUTO / MANUAL / FIXED AUTO

INITIAL SET; BACK / EXIT: PREVIOUS MENU / MAIN OPTION / END

EXPOSURE SET

IRIS: AUTO / MANUAL; AGC: OFF / LOW / MID / HIGH

WDR / BLC: OFF / WDR / BLC / STRONG LIGHT RESTRAINT;

BRIGHTNESS: 0~100;

SHUTTER: X512 / X2 / AUTO / OFF / ANTI-FLICKER / 1/160 / 1/90000

SENS-UP: OFF / AUTP / X2~ / AUTO / X128

INITIAL SET: EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END

AWB SET----AUTO WHITE BALANCE

AWB: AUTO / KEY CONTROL AUTO / MANUAL----COLOR (IN / OUTDOOR) / RED (-100~100) / BLUE (-100~100) / INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END

D / N----DAY / NIGHT SWITCH

AUTO / LEVEL LOW, MID, HIGH / WAIT TIME 5, 10, 15, 30, 60 SECONDS / INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END / DAY / NIGHT / EXTERNAL CONTROL

DYNAMIC SENSE SET

OFF / ON / AREA 1~4 / STATUS: OFF, ON / WIDTH / HEIGHT / HORIZONTAL MOVE / VERTICAL MOVE / SENSITIVITY / DYNAMIC ZOOM: OFF, X1~X23, X27, X33, X37 / INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END / DAY / NIGHT / EXTERNAL CONTROL

PRIVACY MASK ZONE SET

OFF / ON / ZONE: 1~8 / DISPLAY: OFF, ON / COLOR: BLACK, GRAY, WHITE / WIDTH / HEIGHT / HORIZONTAL MOVE / VERTICAL MOVE / PRIVACY MASK RESTORE / INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END / DAY / NIGHT / EXTERNAL CONTROL

3D DIGITAL NOISE REDUCTION

OFF / LOW / MID / HIGH

SPECIAL SET

CAMERA ID: 0~255;

DIGITAL EFFECT: OFF / VERTICAL INVERSE / MIRROR / ROTATE
COLOR: OFF / ON; FREEZE: OFF / ON
SHART: 0~68;
DISPLAY ON SCREEN: OFF / ON: USER NAME / ZOOM STATUS DISPLAY / FUNCTION DISPLAY / CAMERA ID
LANGUAGE: ENG / CHN;
INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END

RESET
FACTORY SET; SOFTWARE VERSION; REBOOT;
PROTOCOL: PELCO-D / PELCO-P;
INITIAL SET / EXIT / BACK TO PREVIOUS MENU / BACK TO MAIN OPTIONS / END

EXIT

Note: If built in LG module to our speed dome, when you enter MENU, "FOCUS+ / -" at keyboard can used to change value, "ZOOM + / -" can used to choose options.

CNB zoom module menu for reference:

GENERAL
CAMERA ID; LANGUAGE; ZONE LABEL; BACK LIGHT; SHARPNESS; MIRROR;
PROTOCOL; INITIAL; EXIT

FOCUS
FOCUS MODE; FOCUS DIST; ZOOM START; ZOOM END; ZOOM SPEED; INITIAL; EXIT

AWB----AUTO WHITE BALANCE
AWB MODE; RED CONT; BLUE CONT; PUSH AUTO; INITIAL; EXIT

AE----AUTO EXPOSURE
AE MODE; BRIGHTNESS; FLICKERNESS; SHUTTER SPD; IRIS ADJUST;
AGC ADJUST; AGC MAS SET; INITIAL; EXIT

D&N----DAY & NIGHT
D & N MODE; D & N DELAY; INITIAL; EXIT

SLOW_SHT----SLOW SHUTTER
SHT_FLD; INITIAL; EXIT

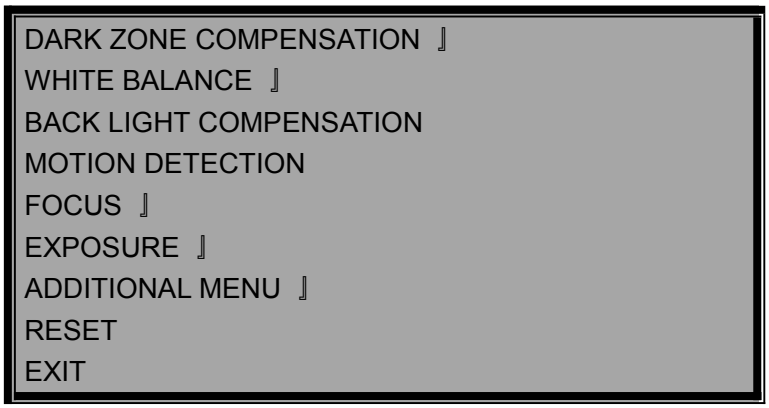
MOTION
DETECT MODE; DETECT AREA; SENSITIVITY; INITIAL; EXIT

DISPLAY
WHOLE OSD; FUNC OSD; MOTICM DET; CAMERA ID; ZOOM MAG; ZONE LABEL;
VERSION; INITIAL; EXIT

INITIAL
OFF STATE; ON STATE

EXIT

SAMSUNG zoom module menu for reference: Main menu on screen,



- **(e.g. Our control keyboard, if for mid / low speed dome camera, press IRIS + for about 15 seconds , you wills see the zoom module menu. zoom+ / zoom - can be used to choose option, focus + / focus - can be used to change the options value)**
- Use UP / DOWN button to choose the option, when you choose options, the arrow on screen will follow your choice to move, use LEF / RIGHT button to change the mode of your chose option, when you finish all set, move the arrow to "EXIT" to quit and save the set.
- Some options with "』" mark, means this option have sub options, you can enter its sub options.

DARK ZONE COMPENSATION----this function means you can adjust the image brightness and saturation.

1. Press "SET" button to enter the sub menu, 0~15 adjustable, default set is 8.
2. Enter "LEVEL" of this function, can change to be LOW / MID / HIGH.
3. Move the arrow to EXIT to quit.

WHITE BALANCE----AUTO TRACK / AUTO / MANUAL

BLC----when the camera focused object have strong light to shine it from its back, the image will be dark, you ca use this function to adjust the image. The sensitivity of BLC can be HIGH / MID / LOW / OFF

MOTION DETECTION----this module have 8 motion detection zones, camera can detect the object by its color, brightness, when the screen show "moving object", you need to pay attention on it.

1. Choose the area you want to detect under option "SELECT AREA".
2. Change the MOTION DETECTION function to be "ON", then set the area you want to detect.
3. Finish set, exit and save the set.

FOCUS----enter its sub menu,

AUTO: when camera doing optical zoom, it will auto turn on DIGITAL ZOOM, it will auto focus when it zooming.

ONE TIME FOCUS: when zoom stop, it will focus one time, and it will auto focus one time when zoom stop.

MANUAL: use controller to change zoom, and confirm the screen change, now it without auto focus function.

ZOOM TRACKING MODE: use controller to choose OFF / ON.

ZOOM TRACKING SPEED: use this to choose the digital zoom times, 1x ~ 16x.

INITIALIZE ZOOM POSITION.

USER DEFAULT SET.

LENS INITIALIZATION.

EXIT.

EXPOSURE----enter the sub menu,

BRIGHTNESS; IRIS: AUTO / MANUAL; SHUTTER: ANTI-FLICKER / MANUAL / AUTO (best mode);

AGC: HIGH / MID / LOW; DIGITAL NOISE REDUCTION;

SENSE LIGHT: help camera to get better image at dark environment.

ADDITIONAL MENU----enter the sub menu

DAY / NIGHT: DAY (COLOR) / NIGHT (B&W) / AUTO; DIGITAL IMAGE STABLIZATION;

SYNCHRONOUS MODE: INTERNAL SYNC / EXTERNAL SYCN; COMMUNICATION;

BAUD RATE: 2400 / 9600 / 19200

ASYNCHRONOUS MODE: set parity as NO PARITY / ODD PARITY / EVEN PARITY; EXIT;

IMAGE ADJUST: HORIZONTAL INVERSE / VERTICAL INVERSE / SHARPNESS (this can make object edge to be clear, but if value is too high, will interrupt the image) / EXIT;

IMAGE: use can choose suitable monitor. CRT / LCD / USER DEFAULT

DISPLAY: set the information will be displayed on screen when the camera is working.

CAMERA ID: 1~255; POWER DISPLAY; MOTION DETECTION; ZOOM; WORD COLOR;

LANGUAGE: 16 kinds can be chose; BACK.

BACK MAIN MENU

RESTORE

EXIT