4 INCH IR SPEED DOME CAMERA

User Manual

Power Supply DC 12V

Factory Configuration: PELCO-D/P protocol, Baud rate 2400, address code 1

Please read carefully before use; please well keep the manual for reference when needed

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1. NOTICE

Congratulations on purchasing our product

According to the insurance description, we are responsible for free maintenance or spare parts replacement in common use within insurance period.

In insurance period, besides the maintenance or replacement of housing, bracket and other outer connecting wire, we will also maintain and replace the spare parts by free, if the damage or malfunction is caused in common use after the exam of our technical staff.

Will not offer free maintenance if below situation happened:

1. malfunction and damage caused by any illegal repair or refit.

2. damage caused in the customer's transportation.

3. damages like fall, press, damp, and erosion caused by that customer didn't use and maintain the dome according to the manual.

4. damages caused by unsuitable working environment or overload; superficial damages caused in the use.

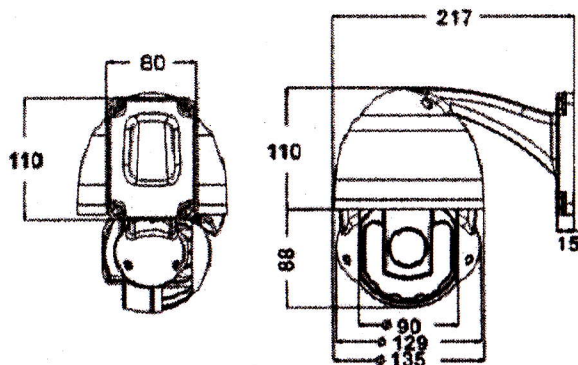5. damages caused by natural disasters.

Notice: to achieve product's full function, please do the compatibility test before using the third-party's product in the system.

2. PRODUCT CHARACTER

◆ New design, streamlined appearance, fine work, professional function and patent protected.

◆ The new structure of high-strength aluminum alloy. IP66 weatherproof rating.

◆ Special park function, timing test the dome camera running status, to prevent dome camera working and save user setting.

◆ Cooling devices: semiconductor refrigeration + circulative wind + aluminum slice.

◆ 128 preset positions, 8 cruising tracks, each cruising track consisting 16 preset positions.

◆ Zoom rate, dome speed depend on zoom depth, to ensure clear best image resolution.

◆ DOME SPEED

   IR low dome: 360° unlimited rotation, horizontal 20°/S, vertical 25°/S

   IR high dome: 360° unlimited rotation, horizontal 180°/S, vertical 100°/S

◆ LED QUANTITY

   IR low dome: Φ42*9pcs, infrared distance of 60 meters

   IR high dome: Φ42*9pcs, infrared distance of 60 meters

◆ Can work with SONY, LG, SAMSUNG... Camera Module.

◆ Self-recovery after power reconnected, inside protector for surge and thunder.

3. DIMENSION

3.1 Camera's Size of wall bracket

4. MAJOR TECHNICAL PARAMETER

	High Dome		Low Dome
Working power	DC12V-5A		
Standard Movement	IR low dome：1/4" SONY CCD，420TVL，Low Illuminance IR medium dome：1/4" SONY CCD，480TVL，Low Illuminance IR high dome：1/4" SONY CCD，480TVL，with IR cut，Low Illuminance Laser speed dome：1/3" SONY CCD，650TVL，with auto iris，with IR cut，Low Illuminance		
Led quantity and infrared distance	IR low dome：Φ42*9pcs, infrared distance of 60 meters IR high dome：Φ42*9pcs, infrared distance of 60 meters		
Cooling devices	semiconductor refrigeration+ aluminum slice		circulative wind + aluminum slice
OSD menu	English / NO		NO
Pan speed	180° / s		20° / s
Pan range	360°continuous rotation		
Tilt speed	100° / s		25° / s
Tilt range	90° or 180° turn rotation		
Communication Format	RS485		
Communication Protocol	PELCO-D/P		
Baud Rate	2400bps / 4800bps / 9600bps / 19200bps		
Address range	1～256		
Preset	128		
dwell time of preset	4 / 6 / 8 / 10 / 12sec		

Track type	8route
Two point scan	set
Auto scan	set
auto level scan speed	6°/s、9°/s、15°/s、40°/s
Alarm	choose
optional zoom cameras	kinds of import, home make zoom camersa for option
Operation Temperature	-30℃～+50℃
Install	Indoor / Outdoor

5. CAMERA'S DIAL-UP AND SWITCH SETTING

Before installed the dome camera, the communication protocol, the baud rate and the dome address, should be confirmed, then set the DIP switch, keeping the setting consistent with control system, the corresponding DIP switch and connecting wire diagramed as below:

5.1 Address setting

The speed dome camera should be set dome address before use. 1 to 8 bits of 10-bit DIP switch is used to set dome address. The switch uses the 8421 binary coded decimal system. The largest value is established at 128. DIP switch appropriated for "ON" means "1", DIP switch appropriated for "OFF" means "0". As follows form 1.
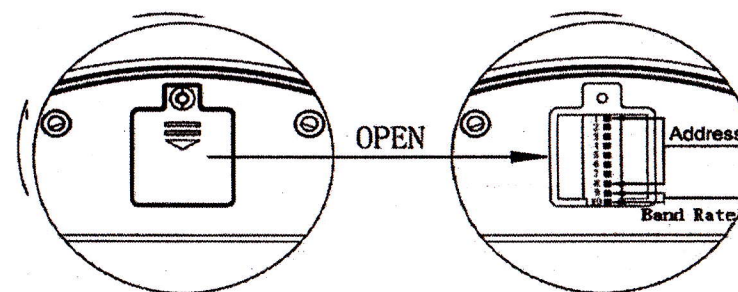
Form 1: Coding table address

binary coded	address	binary coded	address	binary coded	address	binary coded	address
0000000	0	1111000	15	0111100	30	1011010	45
1000000	1	0000100	16	1111100	31	0111010	46
0100000	2	1000100	17	0000010	32	1111010	47
1100000	3	0100100	18	1000010	33	0000110	48
0010000	4	1100100	19	0100010	34	1000110	49

1010000	5	0010100	20	1100010	35	0100110	50
0110000	6	1010100	21	0010010	36	1100110	51
1110000	7	0110100	22	1010010	37	0010110	52
0001000	8	1110100	23	0110010	38	1010110	53
1001000	9	0001100	24	1110010	39	0110110	54
0101000	10	1001100	25	0001010	40	1110110	55
1101000	11	0101100	26	1001010	41	0001110	56
0011000	12	1101100	27	0101010	42	1001110	57
1011000	13	0011100	28	1101010	43	0101110	58
0111000	14	1011100	29	0011010	44	1101110	59

5.2 Transmission speed setting

9 to 10 bits of 10-bit DIP switch is used to set baud rate. As follows form 2.

Form 2: Baud rate setting form

Buad rate	2400 bps	4800 bps	9600 bps	19200 bps
9	OFF	ON	OFF	ON
10	OFF	OFF	ON	ON

5.3 Protocol setting

Protocol is auto identify PELCO_D and PELCO_P.

6. BASIC OPERATION

(Note: Different manufacturers keyboard preset keys are different, the keyboard manufacturer.)

6.1 Setting and Adjust Preset Position

The Preset function is the dome's default level angle, lean angle and camera focal length in keep memory in dome camera by 1-128 digital, by using this saved parameter, the dome and camera can run to the preset positions when it is required. Operator can save and adjust preset positions by using the control keyboard; the speed dome can support 128 preset positions.

6.1.1 Setting Preset Position

Adjust the speed dome camera to the desired position using the keyboard joystick (including location, camera zoom, focus and iris), and then input the required preset position number +"PRESET". the preset position was set successfully.

For example: Set NO.1 preset position

A. Adjust the speed camera to the desired position including location, camera zoom, focus and iris.
B. Enter preset position "1" + "PRESET".

◆ When set preset position for the far objects, can use manually set the focus, the camera adjusted to the far distance, through the control keyboard keys FOCUS far and FOCUS near get the best image storage, to avoid interference from other objects make the image no clear

6.1.2 Call Preset Position

Call preset position is let the dome camera run to the preset positions was stored previous.
Enter the preset position NO and press "Call" key, the dome camera will move to the target place.

For example: Call NO.1 preset position

A. Press "1" + "Call" key.

6.2 Multiple scan

Multiple scan is a important function for speed dome camera, using the control keyboard you can set the cruise route, only an outer command unit can transfigure the speed dome camera into a pattern tour program route. Speed dome camera has the capacity to set up to 8 group multiple scan, Max 16 points/each group, dwell time and speed at each preset position can be different.

6.2.1 Call Multiple scan

To start NO.1 cruise (to-and-from mode) Call number 41 preset, input "41" and press "CALL".

To start NO.2 cruise (to-and-from mode) Call number 42 preset, input "42" and press "CALL".

To start NO.3 cruise (to-and-from mode) Call number 43 preset, input "43" and press "CALL".

To start NO.4 cruise (to-and-from mode) Call number 44 preset, input "44" and press "CALL".

To start NO.5 cruise (to-and-from mode) Call number 45 preset, input "45" and press "CALL".

To start NO.6 cruise (to-and-from mode) Call number 46 preset, input "46" and press "CALL".

To start NO.7 cruise (to-and-from mode) Call number 47 preset, input "47" and press "CALL".

To start NO.8 cruise (to-and-from mode) Call number 48 preset, input "48" and press "CALL".

6.2.2 Set the dwell time

Set the dwell time as 4sec Set number 51 preset, input "51" and press "preset".

Set the dwell time as 6sec Set number 52 preset, input "52" and press "preset".

Set the dwell time as 8sec Set number 53 preset, input "53" and press "preset".

Set the dwell time as 10sec Set number 54 preset, input "54" and press "preset".

Set the dwell time as 12sec Set number 55 preset, input "55" and press "preset".

6.2.3 Clear cruise

To clear NO.1 cruise set number 41 preset, input "41" and press "preset".

To clear NO.2 cruise set number 42 preset, input "42" and press "preset".

To clear NO.3 cruise set number 43 preset, input "43" and press "preset".

To clear NO.4 cruise set number 44 preset, input "44" and press "preset".

To clear NO.5 cruise set number 45 preset, input "45" and press "preset".

To clear NO.6 cruise set number 46 preset, input "46" and press "preset".

To clear NO.7 cruise set number 47 preset, input "47" and press "preset".

To clear NO.8 cruise set number 48 preset, input "48" and press "preset".

6.3 Scan A-B and 360°Scan

Scan A-B point is the dome camera scan between A & B points, the preset A,B/dwell time/scan speed can be set

360°level continuous scanning as pre-set speed.

6.3.1 Set Scan A-B

Set Position A

Move Dome Camera to desired position, adjust zoom/focus parameter, set number 35 preset, input "35"and press "preset"

Set Position B

Move Dome Camera to desired position, adjust zoom/focus parameter, set number 36 preset, input "36"and press "preset"

6.3.2 Call Scan A-B or 360°Scan Function

if Scan A-B is not set, 360°Scan will start; if Scan A-B is set, it will scan between A & B points

Call number 38 preset

For example: Call Scan A-B or 360°Scan Function

A. Press "38" + "Call" key.

6.3.3 Clear Scan A-B

Set number 38 preset

For example: Clear Scan A-B

A. Press "38" + "preset" key.

6.3.4 Set Scan Speed

Set Scan Speed as 6°/sec   Set number 61 preset, input "61" and press "preset".

Set Scan Speed as 9°/sec   Set number 62 preset, input "62" and press "preset".

Set Scan Speed as 15°/sec   Set number 63 preset, input "63" and press "preset".

Set Scan Speed as 40°/sec   Set number 64 preset, input "64" and press "preset".

6.4 Watch Position

Watch function is an important position that the speed dome camera will come back to automatically when there is no operation for defined perio a d.

6.4.1 Set Position

Call number 101 preset,   input "101"and press "CALL".

6.4.2 Enable Watch Position

Call number 105 preset,   input "105"and press "CALL".

6.4.3 Disable Watch Position

Set number 105 preset,   input "105"and press "preset".

6.5 Factory reset

"Call, according to preset button"

For example: Factory reset

Call 115 preset positions

7. CAMERA(LENS) SETTINGS MENU

Camera menu can set all parameter for integrative camera module (difference camera module with different features, whether use of the parameter depend on the camera module)

Press IRIS-key enter camera menu, the screen will display:

SETUP MENU	
LANGUAGE	ENGLISH
ZOOMDISP	ON/OFF
AGC	160~240/AUTO
BLC	ON/OFF
SHUTTER	AUTO(1/50~1/10000)
FOCUS	AUTO/MANU/KEYAUTO
BRIGHT	60~170
COLORSEL	AUTO/BLACK/COLOR
MIRROR	ON/OFF
LENINIT	- - -

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DEFAULT	- - -

8. SIMPLE TROUBLESHOOTING TABLE

Failure	Possible Cause	Solutions
Electricity without action, no images, light does not shine.	Connected the wrong power cord	Corrections
	Power supply is damaged	replace
	Bad fuse	replace
	Power cord connection is bad	Exclusion
Power are self-test, there are images, not control	IR uniform ball address code, the baud rate setting does not	To re-set the high-speed dome address code and baud rate
	Wrong protocol	corrections
	RS485 line reversed or open	Check wiring RS485 control line
Unable to complete self-test, there are images associated with motor tweet sound	Mechanical failure	Maintenance
	Camera Tilt	Straightened
	Power is not enough	Replacement to meet the requirements of the power supply, it is best to power the ball on the near-infrared uniform
Image instability	Video line connection is bad	Exclusion
	Power is not enough	replace
Blur	Manual focus on the state	Operation of any infrared uniform ball or call a preset point
IR control of a uniform-speed ball non-stop or delay	Power is not enough high-speed Dome	Replacement to meet the requirements of the power supply, it is best to power on the high-speed ball in the vicinity
	Check control of the most distant high-speed ball match whether to join the resistance	The most far away from the control of the ball-type cameras by adding matching resistor
	Far from 485 the signal attenuation	Bold Line of Control
	Converter 485 is not enough driving force	Replacement of a source converter

9. INSURANCE CARD

Warranty Description:

1. This product is free of charge warranty period of one year, during the warranty period any product quality problems occur, so doing the warranty card for free (non-human damage), life-long maintenance.

2. A result of improper use or other reasons as well as the failure of products outside the warranty period can be so doing card repair, free of maintenance, only the income component costs.

3. Product required maintenance should be a copy of this card and the invoice with the product delivery of the Company or the local special maintenance department.

4. Secretly open the machine casing, tearing up letters labeling, according to the provisions of collecting maintenance fees and components and other expenses.

5. Does not accept any modification or installation of other functions due to failure after the machine.

The following conditions will not be free of charge Warranty:

1. Due to normal wear and tear caused by periodic inspection, maintenance, repair or replacement parts.

2. As the fall, extrusion, soaking, damp, and other man-made damage.

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3. Because of flood, fire, lightning and other natural disasters or force majeure of the factors that damage.

4. By non-authorized repair centers repair the machine off.

5. Listed above, if changes to the relevant provisions shall prevail.

Model Number	
Serial number	
The date of manufacture	
Company	
Name	
Address	
Telephone	

Maintenance date	Failure case	Maintenance site	Maintenance result

Remark: _____

Serial #	part	Qty(pcs)
1	Dome Camera	1
2	Power cord	1
3	DC12V 5A	1
4	Wall or ceiling bracket	1
5	Manual	1

Safety Precautions

1. Careful Transport
Transport, storage and installation process, we need to prevent stress, severe vibration and damage to the product immersion.

2. Careful installation of movement
To be especially careful, light-light, do not force squeezing movement and the structural components, so as to avoid the ball machine trouble. For security reasons, do not cover the ball is not installed electricity.

3. The power, video lines and control lines
Power lines, video lines and control lines preferable to use shielded cable and is independent of routing, can not blend together with other lines.

4. Electrical Safety
In use must comply with all electrical safety standards, the ball machine or signal transmission line should work with high-voltage equipment or cables to maintain a sufficient distance (at least 50 meters), if necessary, do a good job against lightning, surge and other protective measures.

5. Cleaning
Cleaning the camera housings, please use the dry soft cloth, such as severe dirt, use neutral cleaning agent gently wipe. Do not use strong or with abrasive cleaning agents, so as not to scratch jacket, affecting image quality.

6. Note that strictly sealed to prevent liquid splashing into or foreign bodies falling into the ball machine, otherwise it will result in permanent damage to the device.

7. Do not be a long time the camera toward a strong light source, such as the sun.
Spotlight and other light sources will cause screen aging. A long time the camera toward a strong light source may be due to the color filters on CCD damage caused by loss of color images.