

- 5) Move rod to the image as the ending scanning position;
 - 6) Set #128 preset position to confirm the ending location.
 - 7) Recall #128 preset position.
- 2. Recall the cruise group**
 Recall #101 and #102 preset positions to start #1 cruise group (8 preset positions) and #2 cruise group (16 preset positions) separately.
 For example: Start #1 cruise group.
 Method: Recall #101 preset position.
- 3. Start the linear scanning**
 Recall #128 preset position.
- 4. Start auto-scanning**
 Recall #125 preset position or press auto-run button.
 360° Auto-scanning back and forth. The speed is set fixed internal.

Part 4 Appendix

1. Clearing of faults

Trouble	Possible Reasons	Troubleshooting
No movement or image at power-on	1. Check the connection of 12VDC power supply; 2. City electricity power-off and check the transformer	1. Check power supply, ensure the socket is well connected; 2. Ensure electricity and the transformer work well.
Power-on with self-testing image, but the controller does not work	1. Setting of DIP switches is incorrect; 2. RS485 port is wrongly connected or open; 3. RS485 line is Mal-functional.	1. Re-set the DIP switches referring to instructions. 2. Connect RS485 interface in a correct way 3. Referring to the Appendix: RS485
Blurred Image	Ball case is dirty	Clean the ball case

2. Setting of DIP Switches

There is a 10-DIP-switch in the internal black cover, Number 8, 7, 6, 5, 4, 3, 2, 1, are for address setting, number 10, 9 are to set communication Baud Rate.

In the following table, tag "1" for DIP switch "ON"; tag "0" for DIP Switch "OFF".

a) Setting of Baud Rate

Baud Rate	Switch # (SW2)		Baud Rate	Switch # (SW2)	
	BIT 10	9		BIT 10	9
2400bps	0	1	1200bps	1	1
4800bps	1	0	9600bps	0	0

b) Setting of Address Code

In a system, decoder includes intelligent speed dome camera and common decoder. No repeating address codes exist. As you see in the table, "1" for "ON", "0" for "OFF"

Address	Address Switch (8 digits)	Address	Address Switch (8 digits)
Code	1 2 3 4 5 6 7 8	Code	1 2 3 4 5 6 7 8
1	1 0 0 0 0 0 0 0	33	1 0 0 0 0 1 0 0
2	0 1 0 0 0 0 0 0	34	0 1 0 0 0 1 0 0
3	1 1 0 0 0 0 0 0	35	1 1 0 0 0 1 0 0
4	0 0 1 0 0 0 0 0	36	0 0 1 0 0 1 0 0
5	1 0 1 0 0 0 0 0	37	1 0 1 0 0 1 0 0
6	0 1 1 0 0 0 0 0	38	0 1 1 0 0 1 0 0
7	1 1 1 0 0 0 0 0	39	1 1 1 0 0 1 0 0
8	0 0 0 1 0 0 0 0	40	0 0 0 1 0 1 0 0
9	1 0 0 1 0 0 0 0	41	1 0 0 1 0 1 0 0
10	0 1 0 1 0 0 0 0	42	0 1 0 1 0 1 0 0
11	1 1 0 1 0 0 0 0	43	1 1 0 1 0 1 0 0
12	0 0 1 1 0 0 0 0	44	0 0 1 1 0 1 0 0
13	1 0 1 1 0 0 0 0	45	1 0 1 1 0 1 0 0
14	0 1 1 1 0 0 0 0	46	0 1 1 1 0 1 0 0
15	1 1 1 1 0 0 0 0	47	1 1 1 1 0 1 0 0
16	0 0 0 0 1 0 0 0	48	0 0 0 0 1 1 0 0
17	1 0 0 0 1 0 0 0	49	1 0 0 0 1 1 0 0
18	0 1 0 0 1 0 0 0	50	0 1 0 0 1 1 0 0
19	1 1 0 0 1 0 0 0	51	1 1 0 0 1 1 0 0
20	0 0 1 0 1 0 0 0	52	0 0 1 0 1 1 0 0
21	1 0 1 0 1 0 0 0	53	1 0 1 0 1 1 0 0
22	0 1 1 0 1 0 0 0	54	0 1 1 0 1 1 0 0

23	1 1 1 0 1 0 0 0	55	1 1 1 0 1 1 0 0
24	0 0 0 1 1 0 0 0	56	0 0 0 1 1 1 0 0
25	1 0 0 1 1 0 0 0	57	1 0 0 1 1 1 0 0
26	0 1 0 1 1 0 0 0	58	0 1 0 1 1 1 0 0
27	1 1 0 1 1 0 0 0	59	1 1 0 1 1 1 0 0
28	0 0 1 1 1 0 0 0	60	0 0 1 1 1 1 0 0
29	1 0 1 1 1 0 0 0	61	1 0 1 1 1 1 0 0
30	0 1 1 1 1 0 0 0	62	0 1 1 1 1 1 0 0
31	1 1 1 1 1 0 0 0	••	••••••••••
32	0 0 0 0 0 1 0 0	255	1 1 1 1 1 1 1 1

Part 5 PELCO-D Protocol

Data Form: 1 beginning position, 10 pieces for data, 1 ending position, invalid checking point

Baud Rate: 2400, 4800, 9600, 19200 Bit/S

Command Form:

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Synchron-ized Byte	Address Code	Command Code 1	Command Code 2	Data Code 1	Data Code 2	Confirmation Code

1. All data in the Protocol as REX;
2. Synchronised Byte is 0FFH;
3. Address Code is the logical address number of cameras, Address Range: 01H -0FFH

Form of Command Code as follows:

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Com-mand Code1	0	0	0	Auto Scan	0	Iris close	Iris open	Focus Near
Com-mand Code2	Focus Far	Zoom Wide	Zoom Tele	down	Up	Left	Right	0

1. Command Code 1: BIT7, BIT6, BIT5, BIT3 is 0 without exception; (BIT4 is auto-scanning control points 1/0: ON/OFF) BIT2 Iris smaller (1 valid); BIT1 Iris larger(1 valid); BIT0 focus nearer(1 valid);
2. Command Code 2: BIT7 focus farther(1 valid); BIT6 & BIT5 for the

zoom control, BIT6 far away from the object(1 valid), BIT5 near the object(1 valid); BIT4, BIT3, BIT2, BIT1 separately control movement of down, up, left, right(1 valid); BIT0 is 0 without exception.

3. Data Code 1 controls the horizontal direction of speed 00-3FH

4. Data Code 2 controls the vertical direction of speed 00-3FH

5. Confirmation Code index [(Byte 2 + Byte 3 + Byte 4 + Byte 5 + Byte 6) /100H];

6. Confirmation Code = MOD[(Byte 2 + Byte 3 + Byte 4 + Byte5 + Byte 6) /100H]

7. Setting and Recalling of preset command:

(a) Set the command of preset positions

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Synchron-ized Byte	Address Code	00H	03H	00H	Preset Point #	Confirm-ation Code

(b) Transfer the command of preset positions

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Synchron-ized Byte	Address Code	00H	07H	00H	Preset Point #	Confirm-ation Code

Preset Point # Range: 00 - FFH

1. Turn on and off the command of auxiliary switches:

(a) Turn on the command of auxiliary switches

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
Synchron-ized byte	address	00H	09H	00H	Auxiliary Switch #	confirma-tion code

(b) Turn off the command of auxiliary switches

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Synchron-ized Byte	Address Code	00H	0BH	00H	Auxiliary Switch #	Confirma-tion code

Auxiliary Switch # Range: 01 to 10