Night Chaser 44 Infrared
High Speed PTZ
Camera Manual

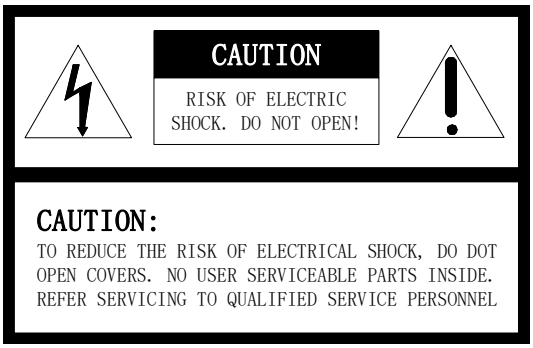
VER:6.0

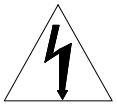
Please read the operation manual

Carefully before installing and using this product

www.envirocams.com

PRECAUTIONS:





The lighting flash with a arrowhead symbol, in an equilateral triangle, is intended to alert the user. There is uninsulated “dangerous voltage” presence near by the product’s enclosure which may be risk of to persons .

The exclamation point within an equilateral triangle is intended to alert the user to reference of the important operating and maintenance (servicing) instructions .

I. Important Safeguards

1. All the safety and operating instructions should be read before the units is operated.
2. Power supply for HD IR PTZ Camera：DC12V. The power input power supply indicated on the base of PTZ or other related marking label.
3. During the course of transportation, storage and installation, the product should be avoided from incorrect operations such as heavy pressing, strong vibration etc., which can cause damage of product as there are sophisticated optical and electronic devices inside the machine.
4. Do not attempt to disassemble the camera. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.
5. Always follow all electrical standards for safety when it is in operation. Adopt the particular power supply which is provided with the unit. RS-485 and video signal should keep enough distance with high voltage equipments and cables when they are in transmission. Precautions for anti-lightning and anti-surging should be taken if necessary.
6. Do not operate it in case temperature, humidity and power supply are beyond the limited stipulations.
7. Do not let the camera aim at the sun or the object with extreme light whatsoever it is switched on or not. Do not let the camera aim at or monitor bright and standstill object for a long time.
8. Do not use aggressive detergent to clean the main body of the camera. Wipe dirt with dry cloth. If needed, mild detergent can be used suitably.
9. Operate the intelligent PTZ camera with great care to avoid shock or vibration. It operate incorrectly, the PTZ could be damaged.
10. Please ensure the installation position with enough endurance when you install the intelligent IR High speed PTZ camera.
11. If necessary, use a commercial lens cleaning paper to clear the lens windows. Gently wipe the lens window until clean..

II. Description of Functions

The intelligent PTZ camera is a hi-tech CCTV product which incorporates high-clarity color camera, panoramic speed-variable PAN/TILT, multifunctional decoder, universal character generator, CPU processor, memory chip into a whole. It can largely reduce connection and installation processes of components in the system, rise up reliability of the system and facilitate installation and maintenance. Therefore it has advantages of beautiful appearance, compact structure and easy operation.

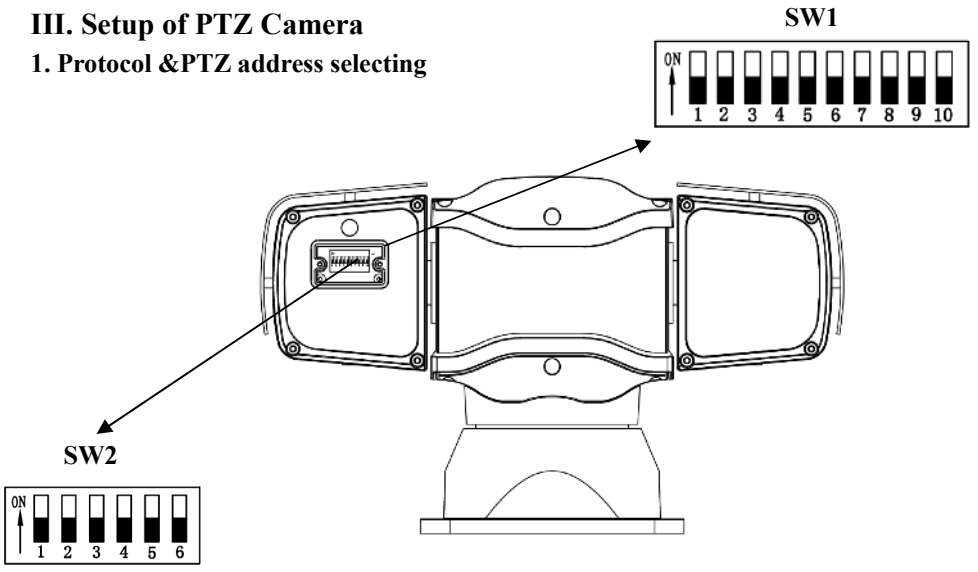
1. PTZ Camera descriptions:

a. Pan 360º continuously rotation, manual pan control speed 0.9～60rad/s;Tilt range 0～90º(It could be up to - 60°～ 90°without outer housing),Manual operation control speed 90°/s, pan preset speed max up to150°/s,tilt preset speed max up to 120°/s.
b. Running stably at low speed with super lower noise. Pictures have no shaking.
c. Automatic flip and panoramic monitoring without blind point, the location precision up to ±0.1°.
d. It could setup 6 cruising tracks, 4 scanning commands, 1 patterns function.

e. Home position as tracking, patterns, presets
f. Memory function after power off, it automatically returns to the original station after power on.
g. Built-in temperature sensor, with temperature display function, can control internal air cooling system by manual or auto.
h. Coordination display function, the compass direction way could setup to the North.
i. PELCO-D coordination searching, coordination setup functions.
j. It stores 256 preset positions, data memorize after power off.
k. Proportional pan function, it could recognize many normal using cameras.
l. With wiper for the PTZ, it could solve the disadvantages side of cleaning camera lens.
m. IP Grade: IP66.
n. 4 Alarm input, 1 Alarm output (Optional).
o. It could analyze dome camera fault problem, some fault details information, such as pan/tilt information, and self-testing information could be displayed on the screen.
p. IR lamp opening threshold could be adjusted. It could be used at different environment.
q. Infrared lights and cameras really achieve three-compartment isolation; completely solve the infrared lamp rapidly aging and camera lens fog problem.
r. Constant current dimming design, more stable infrared lamp life up to 30,000 hours.
s. This PTZ applies with the 3rd generation high-power IR light, multiple angles with the adjustable of brightness, could maximally achieve the best illumination.
t. 4 different IR lamp light compensation, it meets different requirement.

III. Setup of PTZ Camera

1. Protocol &PTZ address selecting



Protocol selecting

PTZ address selecting

SW1：DIP1—DIP8 selecting address

DIP10: 120Ω Resistor to selecting

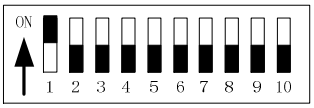
Diagram 1

2.Setup of Coding Switch of PTZ Camera . As diagram 1 shows， SW1 is used to set address of the PTZ camera from 1 – 255. The coding switches from DIP-8 to DIP-1 are equivalent to a 8-bit binary digital. DIP-8 is MSB while DIP-1 is LSB. The state “ON” of each bit means 1 while “OFF” means 0. Following table shows states of coding switches of some addresses.

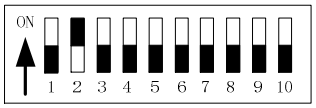
Dome Address	Coding Switch Status							
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6	DIP-7	DIP-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
…	…	…	…	…	…	…	…	…
255	ON	ON	ON	ON	ON	ON	ON	ON

Table 1

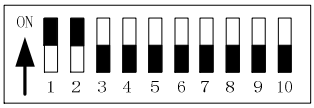
For example：



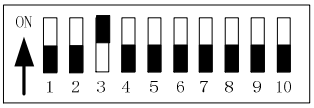
Speed Dome Address=1



Speed Dome Address=2

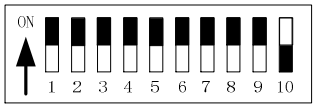


Speed Dome Address=3



Speed Dome Address=4

Speed Dome Address=18



Speed Dome Address=512

3. Setup of the Protocol and the Default Baud Rate. As figure 1shows**,** SW2 is used to set the protocol of communication and the baud rate used by the PTZ camera. DIP-4 to DIP-1 of SW2 is used to select protocols.

Protocols	DIP Status				Normal Baud Rate	
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
PELCO-D	OFF	OFF	OFF	OFF	OFF	OFF
PELCO-P	OFF	ON	OFF	OFF	OFF	OFF

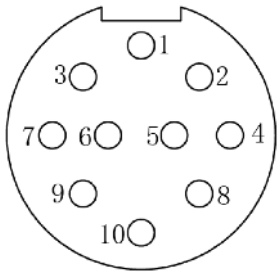
Tablet 2

4. Setup of the Baud Rate of Communication. As shown in Figure 1, SW2 is used to set the protocol of communication and the baud rate used by the PTZ camera. DIP-6 and DIP-5 of SW2 are used to select the baud rate of communication and 4 different baud rates can be selected in maximum. If the controller adopts non-standard baud rate, you can adjust it to be identical with that of the main machine as per the following table.

Baud Rate of Communication					Setup of Baud Rate	
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
2400bps					OFF	OFF
4800bps					ON	OFF
9600bps					OFF	ON
19200bps					ON	ON

5. Selection of the Terminal Resistor of the PTZ Camera. As shown in Figure 1, SW1is the select switch of the 120 Ω terminal resistors on the bus RS485, on which only one terminal resistor of the dome camera at the farthest end can be connected, while the terminal resistors of other devices should be opened. Dip 10 turns ON of SW1,it means 120 Ω resistor turns ON; Dip 10 turns OFF of SW1.it means 120 Ω resistor turns OFF.

6. Outline connecting socket description：



A．10-pin input connecting socket

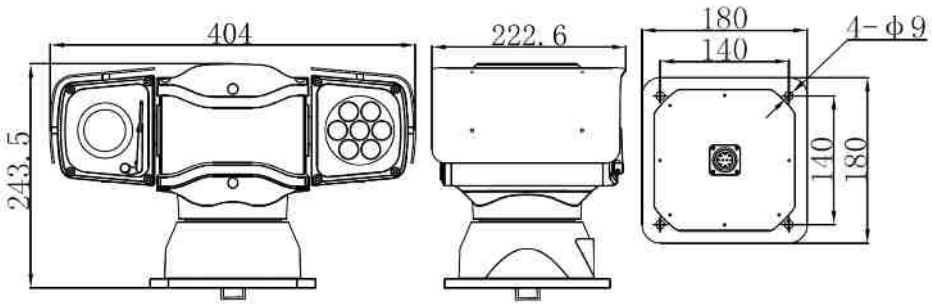
6.1 10-pin input connecting socket description：

1．NET_TX-	2．NET_RX+
3．NET_TX+	4．Video output(CVBS)
5．GND	6．POWER-
7．POWER+	8．NET_RX-
9．RS485+	10．RS485-

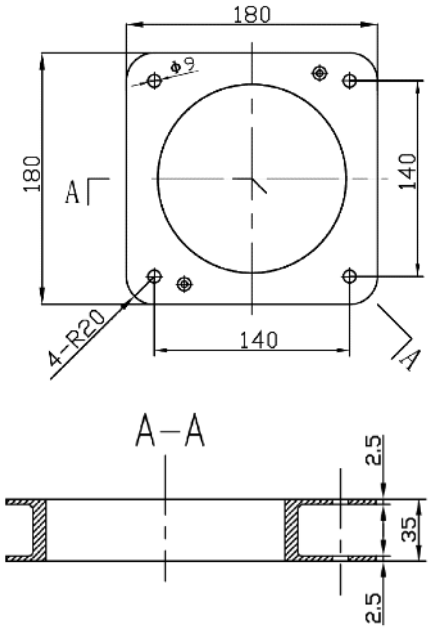
Ⅳ. The installation of system

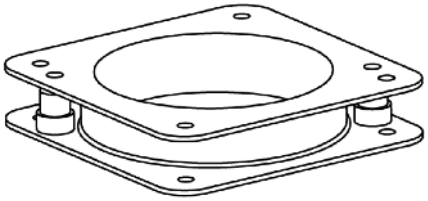
1. Installing ways

1）Dimension(IR Version)

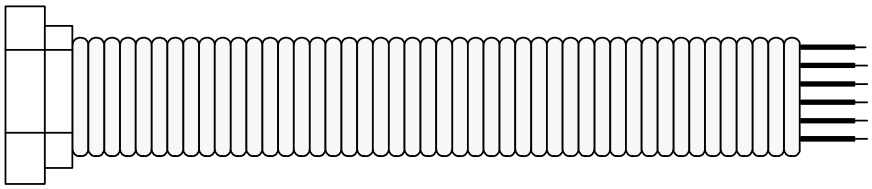


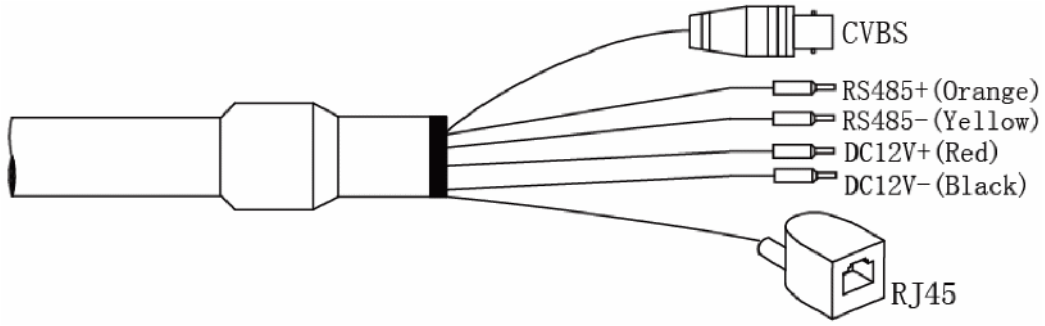
2. Dimension for shock absorber





Dimension for shock absorber





Notes: Please connect the related adaptor according to the actual using situation: DC power supply input could be recommended as car surveillance.

V. Technical Parameter

Model		SVN-44TW10SL
Camera	Image Sensor	1/2.8 Progressive Scan CMOS Sensor
	Effective pixels	1920*1080@60fps
	Min illumination	Colour:0.002Lux@F1.2,B/W:0.0002Lux@F1.2
	White balance	AUTO/MANUAL/ATW/INDOOR/OUTDOOR
	Focal length	F=5-220mm(F1.2 to 3.5)
	Optical Zoom	44X
	View angle	56.7° ～3.07°
	AGC	AUTO/MANUAL
	S/N Ratio	≥50dB
	WDR	Support(120dB)
	Shutter time	1/1～1/30000s
PTZ function	Pan range	360°contimuously rotation
	Pan speed	Pan control speed：0.1°-100°/s, Pan preset speed：150°/s
	Tilt range	-60° - 90°
	Tilt speed	Tilt speed：0.1°-90°/s, Tilt preset speed：120°/s
	Proportional pan function	Support
	Preset positions	256
	Cruising scanning	6, each with 16 preset positions

	Patterns function	4, pattern direction and speed could adjust
	Self-studying function	1 with 200 seconds
	Memory after power off	Support
	Home position	Presets /Tracking/ Pan scanning
	Coordination display	Support
	Temperature display	Support
	Compass function	Support, the North direction could be setup
	Wiper function	Support jog and linkage mode
	Power supply	DC10.8V-DC18V
	Consumption	50W (Max)（IR lamp 20W Max，Heater 5W Max）
	Temperature and humidity	-30 ℃ - 65℃ humidity less than 90%
	IP Grade	IP66(Outdoor)TVS 4000V lightning、anti-surge protection
	Installing way	Different installing ways accordingly(Support car surveillance)
	Weight	6kg
IR function	IR range	100-200m
	IR lamp consumption	8W

VI. PTZ Special Function Operation

A. 8 Linear Scanning

Operation steps

1. SET 92, 93 preset setting,Setting left and right scan boundary respectively
2. SET 80 (81/82/83/84/85/86/87) preset,Set up a scan
3. Repeat steps 1 and 2 to set up other scanning paths
4. Setting Scanning Speed by Preset Position 88 and 89,The default is medium speed.
   SET 88:low speed CALL 88: Medium Speed SET 89: High Speed
5. CALL 80 (81/82/83/84/85/86/87) preset,Call the corresponding bar scan
6. CLEAR 80 (81/82/83/84/85/86/87) preset,Delete the corresponding bar scan
7. CALL 96 preset,Stop scanning(Or stop scanning for any processable command on the platform)

Example:Set up the first line scan,SET 92 pre-positioning after alignment with object A,Then control the platform to the B object SET 93.Re-operation SET 80 preset,Save the position of the first line sweep.SET 88,Set the line sweep speed of the platform to low speed.After CALL 80 is preset, the first line sweep is performed by the platform.

Set up the second line scan,SET 92 Prepositioning after Aligning C Object,Then control the platform to the D object SET 93.Re-operation SET 81 preset,Save the second line sweep position.SET 88 preset position, set the line sweep speed of PTZ Camera to low speed.After CALL 81 is preset, the platform begins to perform the second line sweep.

3-8 operation analogy

B. 8 Cruises

Operation steps

1. SET 70 (71/72/73/74/75/76/77) preset,Setting up cruise preset,(Seven other items can be set up as well.)
2. Select the preset number to be added,Use the SET Preset Bit Number command,Add up to 32 presets(Note: It can be repeated. The number of useless presets is also occupied.)
3. SET 96,Complete this setup.
4. Repeat steps 1, 2 and 3 to complete other cruise settings
5. Setting Cruise Interval Time by Pre-positioning No. 78 and No. 79,Default 15 seconds

   SET 78:5S CALL 78:15S SET 79:30S CALL 79：60S
6. CALL 70 (71/72/73/74/75/76/77) preset,Call the corresponding Cruise
7. CLEAR 70 (71/72/73/74/75/76/77) preset,Delete the corresponding Cruise
8. CALL 96,Stop cruising(Or give PTZ any processable instructions to stop cruising)

Example:Setting up the first cruise:Set the preset bit number for the scene to be monitored first,For example, 1-8 preset.Then SET 70 preset,Re-select the cruise preset that needs to be added,For example, No. 1, 2, 3, 4 preset,SET 1, SET 2, SET 3, SET 4 preset position.Operation SET 96 preset,By this time the 1 - 4 preset was added to the first cruise.SET 78 preset can set cruise preset interval to 5 seconds.CALL 70 is preset to start the first cruise.

Setting up the second cruise:Set the preset bit number for the scene to be monitored first,For example, 1-8 preset.Then SET 71 preset,Re-select the cruise preset that needs to be added,For example, 5, 6, 7, 8 preset,SET 5, SET 6, SET 7, SET 8.Operation SET 96 preset,By this time, the 5 - 8 reserve was added to the first cruise,SET 78 preset can set cruise preset interval to 5 seconds.CALL 71 is preset to start the second cruise.

3-8 operation analogy

C. Watch position setting

Operation steps

1. Watching mode is selected by 64 and 65 preset position: default is 66 preset position (need to be set);
2. Set Preset No. 66 as a Preset for Watcher Call
3. Open and close the watchdog function by preset position 67 (default is on)
4. Selection of Watch Position Silence Time Limit by Preset Positions 68 and 69: Default 30 seconds

Preset position number		SET	CALL
Keep watch mode(3)	64	Watch to No. 66 Reserve	Watch for the first scan (to be set)
	65	Watch Article 1 Inspection (to be set)	
Keep Watch switch	67	Turn off the watchdog function	Open Watch Position Function
Silent time limit	68	30s	60s

	69	300s	600s

D. Other special presets

Delete commands, note that delete commands need to be operated twice to prevent misoperation

SET 90: Delete all user presets (operation twice).

CALL 90: Restore factory settings (operation twice).

SET 91: Delete 8 scans (operation twice).

CALL 91: Delete 8 cruises (operation twice).

CALL 94: PTZ reset self-test (operation twice).

SET 51: Open the wiper (single).

SET 61: Open the wiper (multiple).

CALL 51/61 : Turn off the wiper.

SET 52: Open the glass to remove the fog.

CALL 52: Turn off the glass defogging.