



User Manual

Super Night Vision Outdoor Camera
VN7XEH-12L VN7XEH-50L



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VISION HI-TECH Co.,Ltd.

Dear Customers!

By selecting this product, you have decided to use a professional device that guarantees highest quality and reliability. We would like to thank you very much for your confidence and kindly ask you to read the following instructions carefully before installation and operation in order to take full advantage of all quality features regarding this product.

	<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p> 
<p>CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.</p>	

 The lighting flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION – To prevent electric shock and risk of the fire hazards

- Do NOT use power source other than that specified.
- Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

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1. Precautions

- Please read the manual carefully before the installation in order to set up the camera correctly and to obtain the best picture quality.
- Please keep the manual in good condition for your future reference and service application.
- Installation and services should be only carried out by an authorized personnel according to local safety regulations.
- If any liquid or solid matter gets into the housing, immediately disconnect the camera from power supply and have it checked by your authorized dealer before reusing..
- Avoid installing the camera at extremely hot or cold places.
- If you are not a certified person, never try to dismantle the camera. To avoid electric shock, never remove the screws or covers. There are no parts inside that need maintenance by the user. All maintenance should be carried out by qualified personnel.
- Avoid installing the camera at a place of high humidity.
- Avoid installing the camera at the place exposed to gas or oil.
- Keep the top glass of the lens always clean in order to obtain the best picture quality all the time. Be careful not to be stained by fingerprint.
- Don't face the camera directly toward sunlight or sunlight reflecting area. CCD may go defective at this condition.
- Please give a special attention to keep the unit from dangerous drop or external shock during the process of transportation or handling.
- Never try to touch the camera in wet hand. It may cause an electric shock.
- Do not expose the camera to radioactivity. It causes a serious damage on the CCD.

2. Limitation of liability

This publication is provided "AS IS" without warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for any particular purpose, or non-infringement of the third party's right. This publication could include technical inaccuracies or typographical errors. Changes are added to the information herein, at any time, for the improvements of this publication and/or the corresponding product(s).

3. Disclaimer of warranty

In no event shall seller be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below:

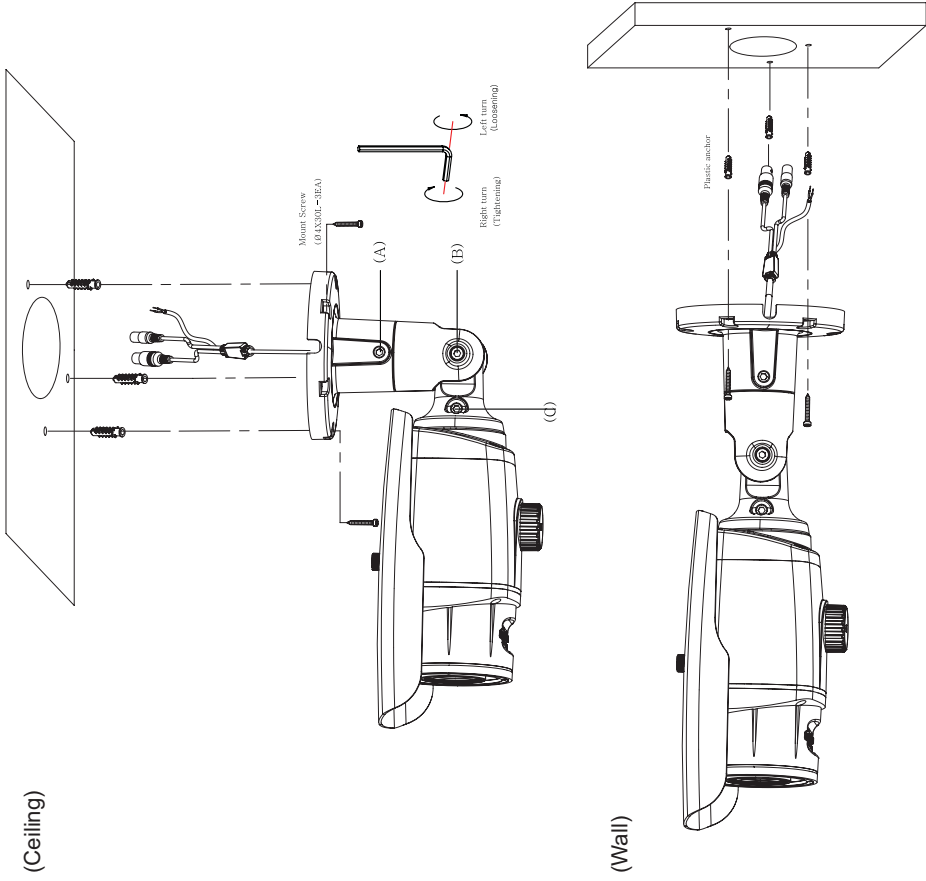
- (1) Any damage and loss, including without limitation, direct or indirect, special, consequential or exemplary, arising out of or relating to the product;
- (2) Personal injury or any damage caused by inappropriate use or negligent operation of the user;
- (3) Unauthorized disassemble, repair or modification of the product by the user;
- (4) Inconvenience or any loss arising when images are not displayed, due to any reason or cause including any failure or problem of the product;
- (5) Any problem, consequential inconvenience, or loss or damage, arising out of the system combined by the devices of third party.
- (6) Any claim or action for damages, brought by any person or organization being photogenic subject, due to violation of privacy with the result of that surveillance-camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance.

4. Package



5. Installation

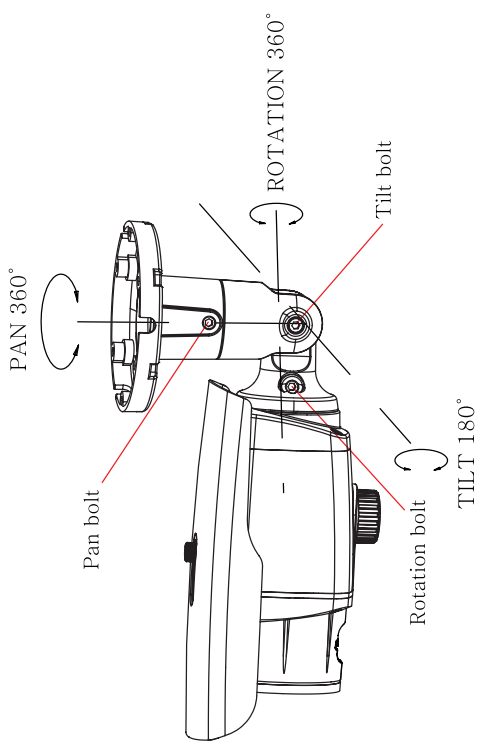
5-1. How to mount to Ceiling/ Wall



- ① Drill three screw holes on the wall plate to fix three plastic anchors (supplied) in the holes.
- ② Fix the plastic anchors in the holes.
- ③ Position the mounting bracket on the screw points.
- ④ Fix the mounting bracket by tightening the screws.
- ⑤ Slightly loosen bolt (A) then adjust tilt(180°) and rotation(360°) of the camera using a serration on the bracket and tighten the bolt firmly.
- ⑥ Slightly loosen bolt (B) then adjust pan(360°) of the camera and tighten the bolt firmly.

5. Installation

5-2. 3-Axis Adjustment



① Pan 360°

Slightly loosen Pan bolt then adjust pan of the camera using a serration on the bracket and tighten the bolt firmly .

② Tilt 180°

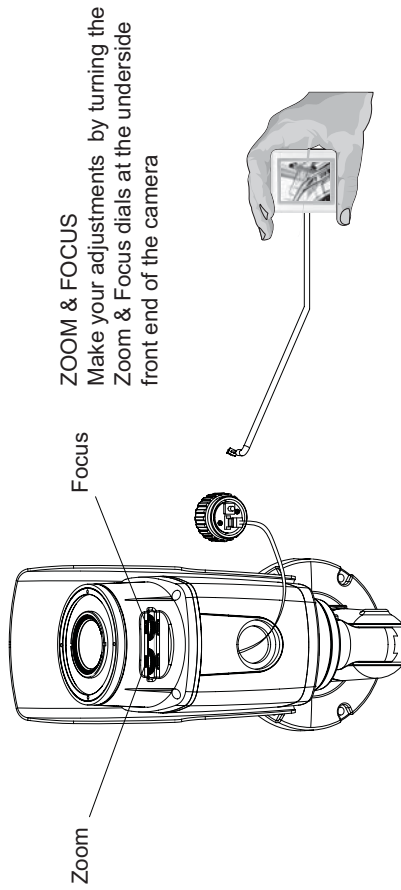
Slightly loosen Tilt bolt then adjust tilt of the camera using a serration on the bracket and tighten the bolt firmly.

③ Rotation 360°

Slightly loosen Tilt bolt then adjust rotation of the camera using a serration on the bracket and tighten the bolt firmly.

5. Installation

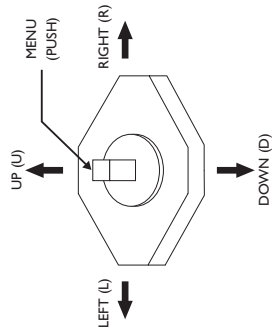
5-3. Lens external adjustment, EXT-Video



- How to use
Connect Extra video output (BNC cable) to LCD monitor as a picture.

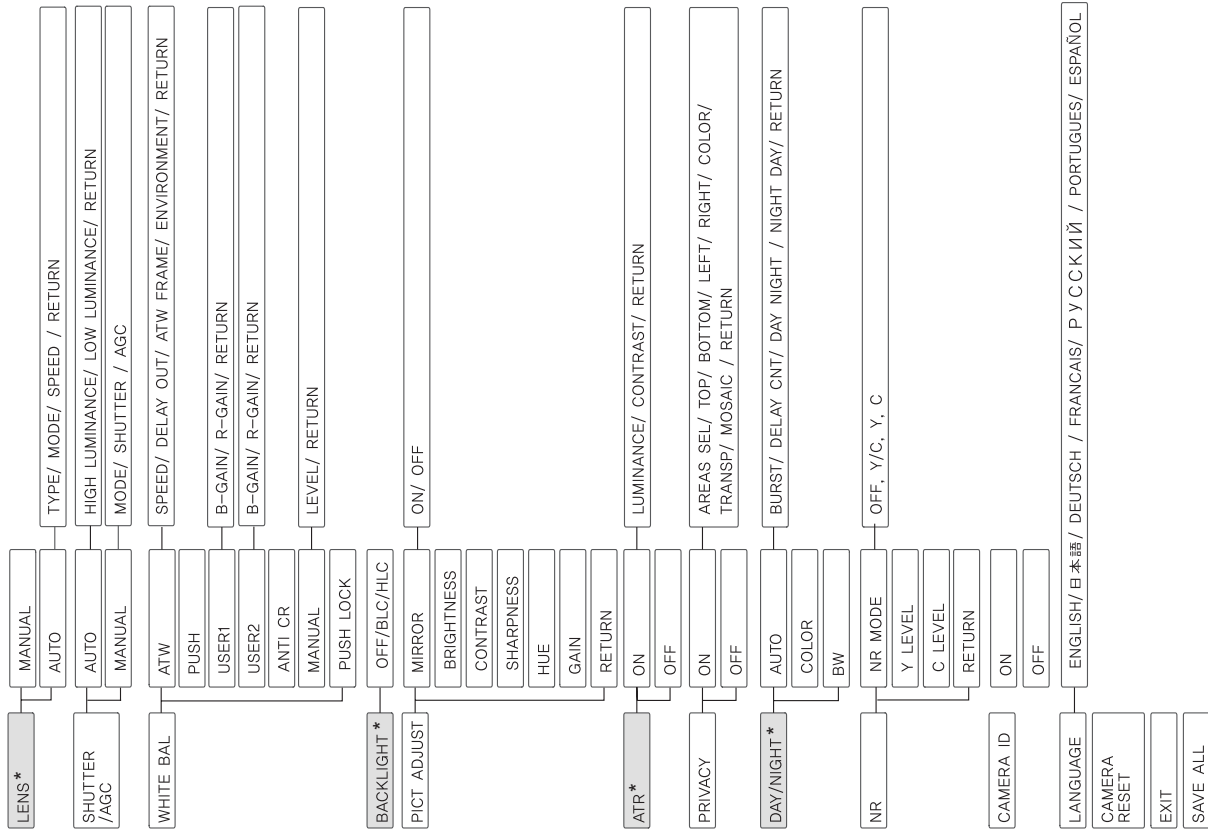
5-4. OSD Manual for functions control

How to use tactile switch on the OSD control
Push – to enter the menu, to save settings.
Push up or down – to select functions
Push left or right – to adjust levels.



6. OSD Menu tree

OSD Menu tree



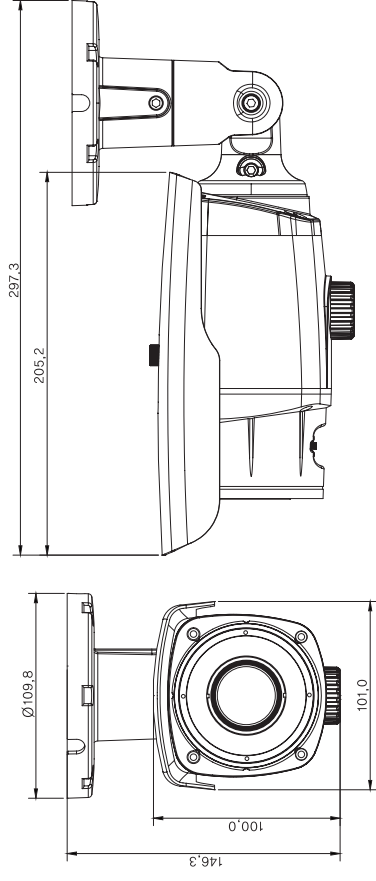
* Some menu is excluded in IR LED cameras.
For detailed information regarding OSD menu, refer to OSD guide.

7. Troubleshooting guide

If there are problems in operating, please refer to the checklist below. If the problem persists, please contact the agent where this product is purchased.

Problems	Troubleshooting
Nothing appears on the screen.	<ul style="list-style-type: none"> * Please check that the power cord and line connection between the camera and monitor are fixed properly. * Please check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	<ul style="list-style-type: none"> * Is lens stained with dirt? Clean your lens with soft, clean cloth. * Set the monitor to proper condition. * If the camera is exposed to too strong light, change the camera position.
The image on the screen is dark.	<ul style="list-style-type: none"> * Adjust the contrast feature of the monitor. * If you have an intermediate device, set the 75Ω / Hi-Z properly (Please check the impedance)
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none"> * Please check that you have properly connected the camera to an appropriate power source.
Color is not correct.	<ul style="list-style-type: none"> * Please check the setting of WHITE BAL SETUP menu .
The screen flickers continually.	<ul style="list-style-type: none"> * Please check that direction of camera turns toward the Sun.

8. Dimension (mm)



7. Troubleshooting guide

If there are problems in operating, please refer to the checklist below. If the problem persists, please contact the agent where this product is purchased.

Problems	Troubleshooting									
RS-485 communication fails.	<ul style="list-style-type: none"> * Please check the polarity between RS-485 Control Port and RS-485 cable. 									
	<table border="1"> <tr> <td>485 Control Board Connection Port</td> <td>RS-485 Control Port</td> </tr> <tr> <td>(+)CONNECTION TERMINAL(TRX+)</td> <td>485+</td> </tr> <tr> <td>(-)CONNECTION TERMINAL(TRX-)</td> <td>485-</td> </tr> </table>	485 Control Board Connection Port	RS-485 Control Port	(+)CONNECTION TERMINAL(TRX+)	485+	(-)CONNECTION TERMINAL(TRX-)	485-			
	485 Control Board Connection Port	RS-485 Control Port								
(+)CONNECTION TERMINAL(TRX+)	485+									
(-)CONNECTION TERMINAL(TRX-)	485-									
<ul style="list-style-type: none"> * Please check if the initial value of the RS-485 Communication setup matches between camera and OSD Controller or DVR. * RS-485 Communication establishment initial value <table border="1"> <tr> <td>Item</td> <td>Camera ID</td> <td>BAUD RATE</td> <td>UART MODE</td> <td>RET PKT</td> </tr> <tr> <td>Initial value</td> <td>1</td> <td>9600</td> <td>8-NONE-1</td> <td>ENABLE</td> </tr> </table>	Item	Camera ID	BAUD RATE	UART MODE	RET PKT	Initial value	1	9600	8-NONE-1	ENABLE
Item	Camera ID	BAUD RATE	UART MODE	RET PKT						
Initial value	1	9600	8-NONE-1	ENABLE						
	<ul style="list-style-type: none"> * We recommend that you make ground connection between camera and controller for safe communication control. 									

9. Specification

Class	Super Night Vision Outdoor Camera
Image sensor	1/3" Sony 960H Ex-view HAD CCD II
Effective Pixels	NTSC : 976(H) x 494(V), PAL : 976(H) x 582(V)
H. Resolution	650TV Lines(Color)/ 700TV Lines(B/W)
Synchronizing system	Internal
Scanning system	NTSC : 525 Lines PAL : 625 Lines 2:1 Interlaced
Video output	1.0Vp-p Composite 75 Ohms
S/N ratio	More than 52dB (AGC Off)
Min. Illumination	0Lux (w/IR ON)
Shutter Speed	NTSC:1/60~1/10,000 sec. PAL:1/50~1/10,000 sec.
Gamma Correction	Standard $\gamma = 0.45$
White Balance	1,800°K ~ 10,500°K Auto (ATW/ Push/ Push lock/ User1/2, Anti CR, Manual)
Gain Control	Standard : -6dB ~ 44.8dB Auto
Smear Effect	0.005%
Power source	12VDC/24VAC
Operating current	500mA/12VDC, 200mA/24VAC
MTBF of IR	20,000 hours
Lens	2.8~12mm Varifocal DC Iris (CIR-700M30) 5~50mm Varifocal DC Iris (CIR-700M50)
Operating temp./Humidity	-10°C ~ 50°C (Humidity : 0% RH ~ 90% RH),
Measurement (mm)	108.8(W) x 146.3(H) x 297.3(L)
Weight (Approx. g)	1,200
FUNCTION	
Shutter/ AGC	Auto/ Manual
White Balance	ATW / Push /Push Lock / User 1, 2/ Anti CR/ Manual
Backlight	BLC/HLC/Off
Picture Adjust	Mirror(On/Off), Brightness, Contrast, Sharpness, HUE, Gain
ATR	On/Off
Privacy Mosaic	On/Off (4 Zone setting available)
NR	NR Mode/Y Level/ C Level
Camera ID	On/ Off
Language	English/ Germany/ French/ Russian/ Spanish/ Portuguese/ Japanese

*Specifications are subject to change without prior notice for better improvement.

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