

# ONSIP OINT03D



  
speco technologies®

### **Directions**

Be careful not to cause any physical damage by dropping or throwing OINT03D. Especially keep the device out of reach from children.

Do not disassemble OINT03D. No After Service is assumed when disassembled.

Use only the power adapter provided with OINT03D.

Be careful to prevent moisture or water penetration into the unit. Particular attention is needed when installing OINT03D. The screw holes for the installation screws and pipe should be maintained water tight during the whole life time of the product.

All the electrical connection wires running into the unit should be prepared so that water from the outside cannot flow into the unit through the surface of the wires. Penetration of the moisture through the wire for extended period can cause malfunction of the unit or deteriorated image.

### **Note**

This equipment has been tested and found to comply with the 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 in a residential installation. This equipment generate, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into and outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

**Caution**

Any changes or modifications to this device could void the warranty.

**Revision History**

Date	Revision	Details
2011-11-01	1.0	First manual revision creation.
2012-04-20	1.2	

## Contents

Contents.....	4
1. Introduction .....	6
1.1. Overview.....	6
1.2. Specification .....	7
1.3. Applications of OINT03D .....	9
2. Product Description .....	10
2.1. Contents .....	10
2.2. Product Preview .....	11
2.3. Physical description .....	12
2.4. Functional Description .....	14
2.5. Accessories for installation.....	16
3. On Site Installation.....	17
3.1. Bracket.....	17
4. Getting Started .....	18
4.1. PC Requirement.....	18
4.2. Quick Installation Guide .....	19
5. Trouble Shooting .....	25
5.1. No power is applied .....	25
5.2. Cannot connect to the Video .....	26
5.3. Windows Vista or Windows 7 .....	27
5.4. Technical Assistance .....	30
6. Appendix - OSD menu control.....	31
6-1. OSD .....	33
6-2. Preset Mode .....	33
6-3. Menu Setup.....	33

6-4. Lens Setting.....	35
6-5. Exposure Setting.....	36
6-6. White Balance (White Bal) Setting.....	38
6-7. WDR Setting .....	39
6-8. Backlight Setting .....	40
6-9. SPECO DNR Setting.....	42
6-10. Day/Night Setting .....	43
6-11. Special Setting .....	45
6-12. RETURN Setting .....	50

# **1. Introduction**

## **1.1. Overview**

The OINT03D is multi-codec (H.264, MJPEG) IP camera (or network camera) built with embedded software and hardware technology. It enables real time transmission of synchronized video of up to D1 and audio data. Remote clients can connect to OINT03D for the real time video/audio data through various client solutions running on PC or smart device. Real time 2-way communication is available through bidirectional audio communication feature.

Designed to be a stand-alone streaming audio & video transmission device, OINT03D can be applied to various application area such as video security, remote video monitoring, distance education, video conference or internet broadcasting system.

Vandal proof housing satisfying IP-67 will extend the application area to harsh environment of wide temperature range.

## 1.2. Specification

Category	Sub-Category	Details	
Video	Compression	H.264 / MJPEG	
	Resolution	* Refer to the datasheet.	
Camera Module	Mounting Gimbal	3 Axis Gimbal	
Audio (Bi-directional)	Up	32 Kbps G.726	
	Down	128 Kbps PCM	
Network	Interface	RJ-45, 10/100 Mbps	
	Access network	Static, DHCP, PPP/PPPoE, uPnP	
	Application	RTP, RTSP, SMTP, FTP, HTTP, SDP, NTP, DNS	
I/O	Sensor In	1	NC, NO Selectable
	Relay Output	0	N/A
	RS-232C	N/A	
	Mic/Line In	Selectable in Admin page	
	Line Out	1 V p-p output for amplified speaker	
	CVBS output	For temporal use in installation	
Power Supply	PoE	N/A	
	DC Adaptor	12V DC adaptor (1.5 Amp) - option	
Housing	IP67 compliant Vandal Proof housing		
Mounting	Bracket, Mounting	Wall, Ceiling	
Motion Detection	3 zones	Arbitrary shape with independent sensitivity	
Upgrade	Firmware upgrade over IP network		
Administration	Remote administration over IP network		
Client & Viewer	Web Viewer	Simple viewing over internet explorer	
	Speco-NVR	Standard CMS software	
Dynamic IP support	DDNS support	Supported	
Security	Video/Audio stream encryption		

	ID and Password protection	
	IP filtering for restricting administrative access for audio and bi-audio	
Time management	Sync to PC	Synchronize to PC
	Manual	Manual time setting
	Internet Time Server	Synchronize to Time Server
SDK support	Active-X	
	HTTP	
	Source filter	

### **1.3. Applications of OINT03D**

- Security surveillance (buildings, stores, manufacturing facilities, parking lots, banks, government facilities, military, etc.)
- Remote monitoring (hospitals, kindergartens, traffic, public areas, etc.)
- Teleconference (Bi-directional audio conference). Remote Learning, Internet broadcasting
- Weather and environmental observation


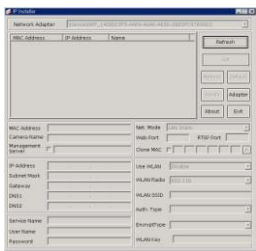

## 2. Product Description

### 2.1. Contents

The product package contains followings:

Contents	Description	Remarks
<b>OINT03D</b>	IP camera OINT03D main unit	
<b>Power Adaptor</b>	12VDC Adaptor (option)	
<b>Tools and Mounting Screws</b>	Screws, L-type wrench	
<b>CD</b>	Software & User's Guide	
<b>Quick Reference Guide</b>	Quick installation guide	

## 2.2. Product Preview

OINT03D	IP-Installer	CMS Software (NVR)
		
<p>Weather proof Bullet IP Camera</p>	<p>PC software to allocate an IP address to the IP Camera</p>	<p>PC software to view and record the A/V streaming data transmitted from IP camera. (Simultaneous support of up to 64 IP cameras)</p>

## 2.3. Physical description

### 2.3.1. External View

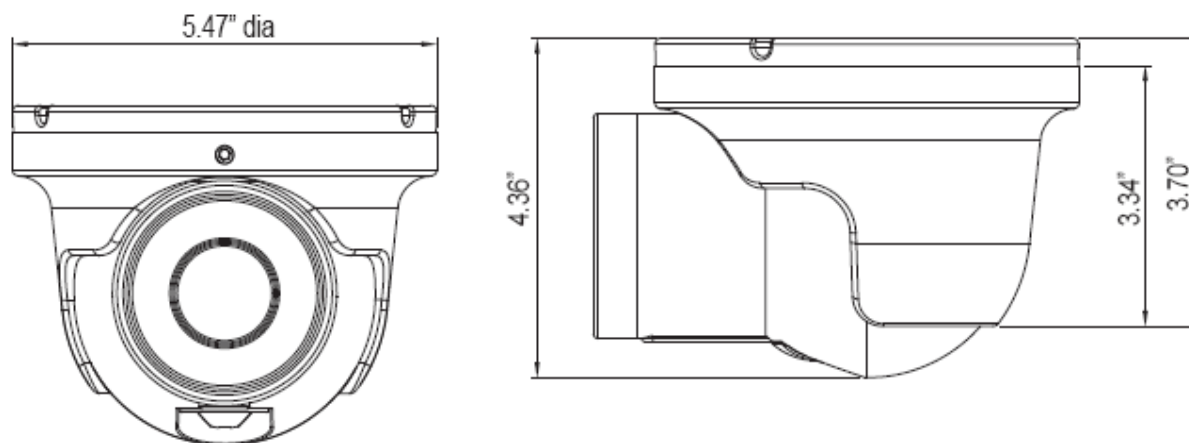


Figure 2-1. External view of OINT03D

### 2.3.2. Connector information

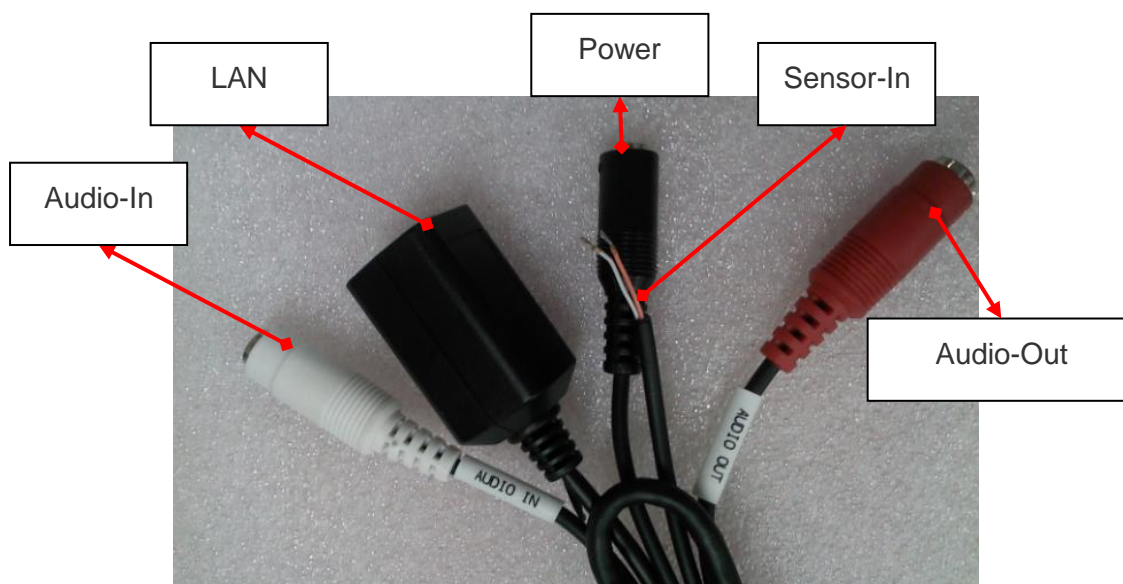
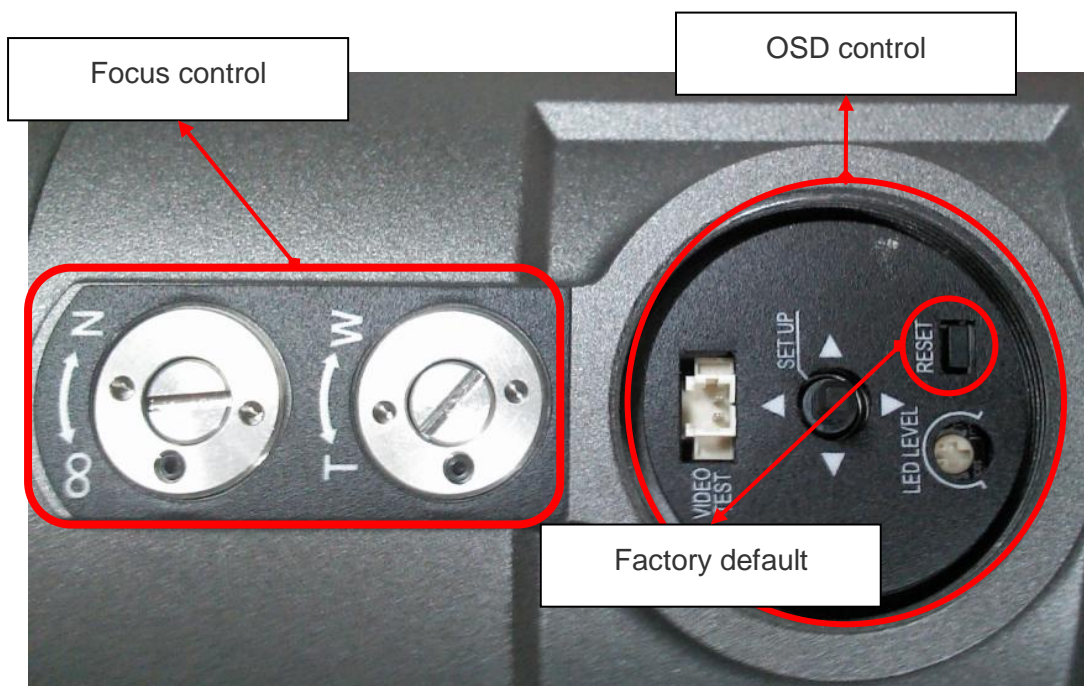


Figure 2-2. Connector information



**Figure 2-3. Factory Default switch and Video output connector**

## 2.4. Functional Description

- **DC 12V(option): Power input for supplying 12V DC power.**

- **MIC/LINE IN**

Connect external audio source or microphone.

- **Line Out**

Connect speakers with built in amplifier. Audio from remote site is output through Line out in bi-directional audio mode.

- **100Base-T**

100Mbps Ethernet connector (RJ-45)

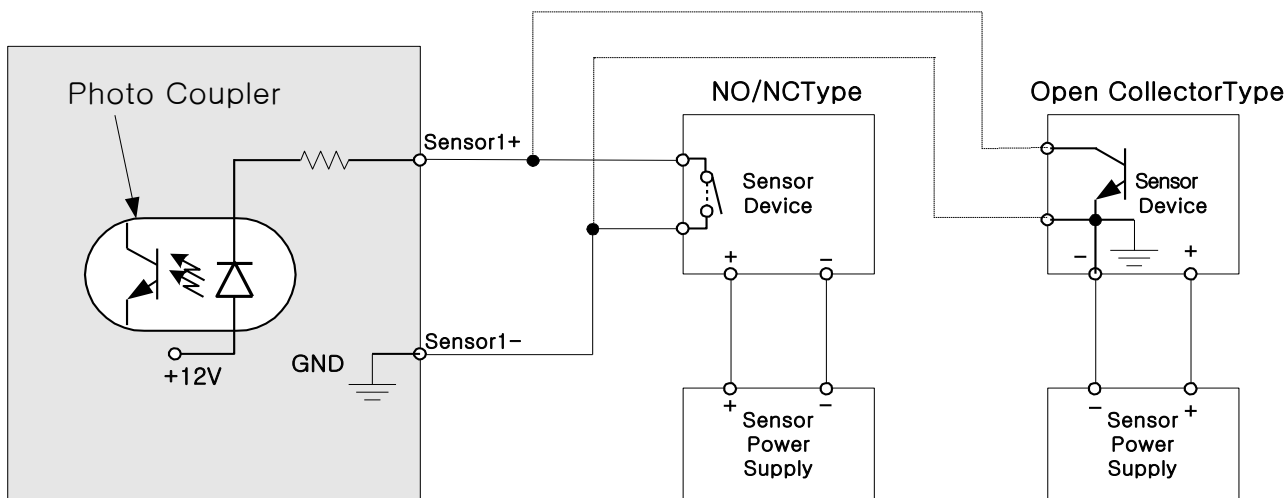
- **Alarm In/Out and Audio In**

Used for connecting alarm sensor, microphone and speaker to OINT03D.

	Description
LINE OUT (+)	1 V p-p audio signal output for amplified speaker.
MIC/LINE GND (-)	Ground for audio signals.
MIC/LINE IN (+)	Audio input: Can be used either for microphone or applying audio signals from other audio equipment.
SENSOR IN	Sensor In (+). NC/NO selectable in admin mode.
SENSOR IN GND	Ground for sensor

- **SENSOR IN**

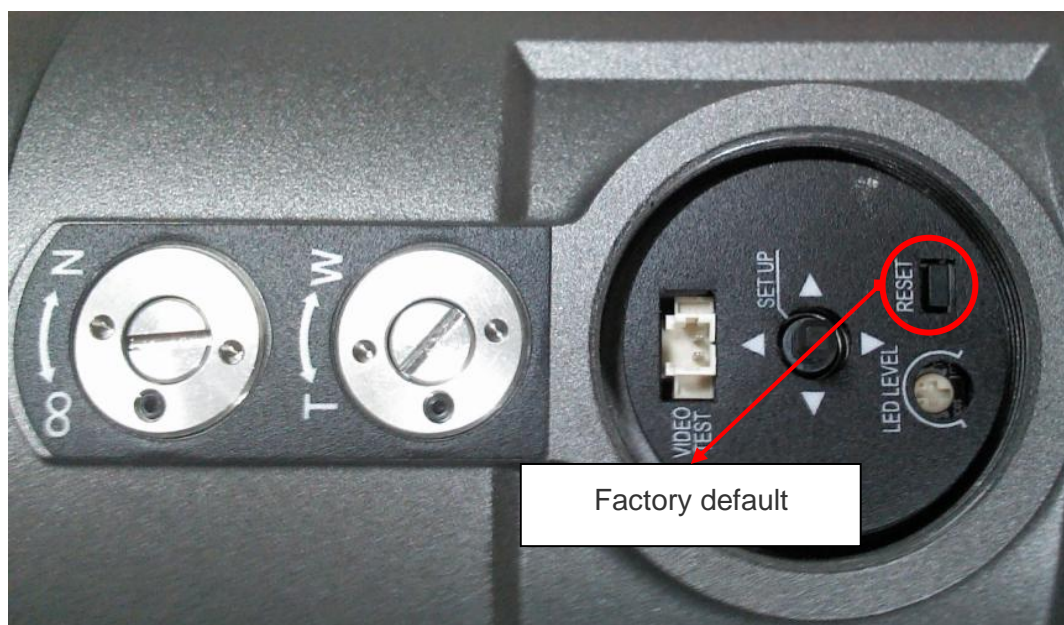
Connect external alarm sensor. Examples of sensing devices are infrared sensor, motion sensor, heat/smoke sensor, magnetic sensor, etc. Connect the two wires of the sensors to "SNS In". The sensor type (NC/NO) can be set in admin page. 10 mA can be flown into sensor device. Multiple sensor devices can be connected in parallel.



**Figure 2-4. SENSOR input and connection of the sensor**

- **Factory Default Switch**

A switch provided for returning the IP camera to factory default state. Open the dome cover to access the switch. Press the switch for a few seconds while power is applied.



**Figure 2-5. Factory Default Switch**

## 2.5. Accessories for installation



**Figure 2-6. Accessories for installation of OINT03D.**

## 3. On Site Installation

Use Cables and conduits that are suitable for the installation and that are compliant to IP-67. Particular attention should be paid in the installation so that no moisture is allowed to penetrate into the unit through the cables or conduits during the life time of the product. Products of which the internal parts are exposed to moisture because of improper installation are not covered by warranty.

### 3.1. Bracket

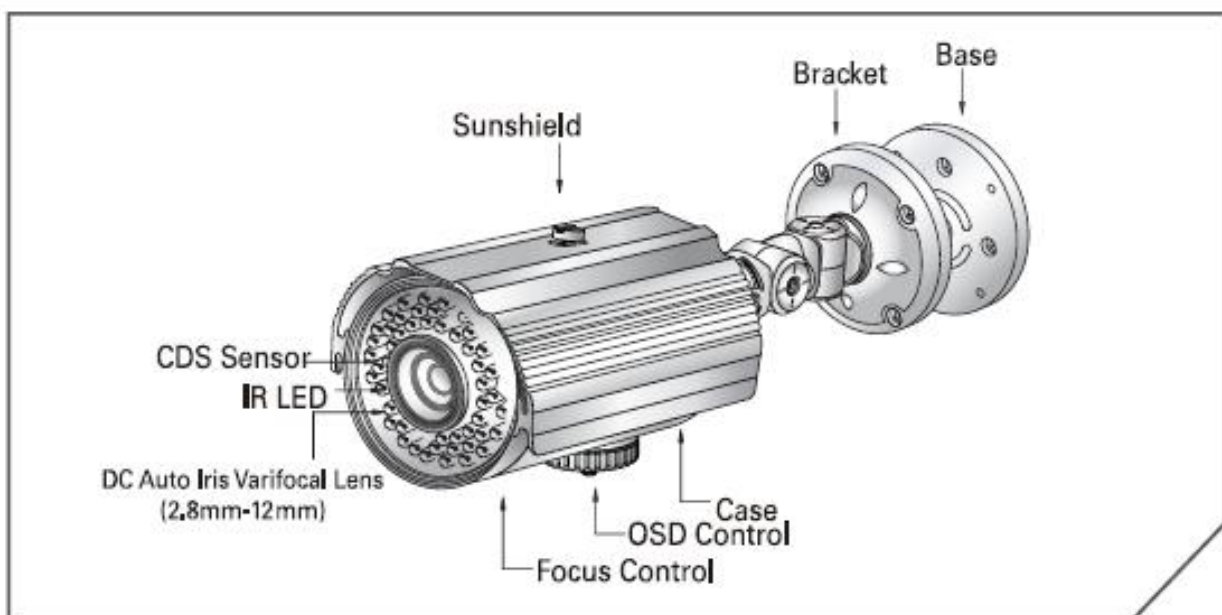


Figure 2-7. Bracket installation

1. Make a suitable hole for cabling
2. Connect the cables.
3. Fix the Base on the wall
4. Adjust the position of the lens for desired viewing of the site.
5. Adjust the focus

## 4. Getting Started

Brief information for first time operation of OINT03D is provided in this chapter.

### 4.1. PC Requirement

Audio/Video streaming data received from OINT03D can be displayed or stored in a PC running client programs. Minimum requirement of the PC is described below:

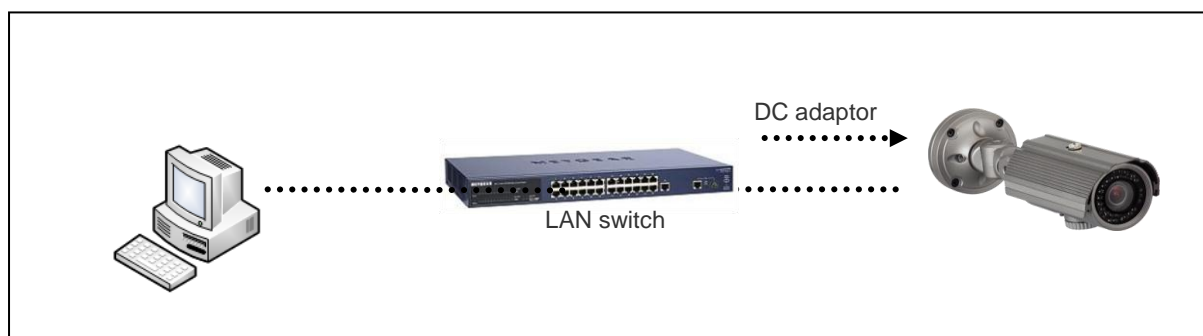
	Recommended	Remark
CPU	Pentium IV 3G above	
Main Memory	1GB above	
Operating System*	Windows XP	
Web Browser	Internet Explorer 6.0 above	
Graphic Card	64M above	Higher than 1600x1200
Network	100 Base-T Ethernet	

\* Operating Systems supported: Windows 2000 Professional, Windows XP / Vista / 7

## **4.2. Quick Installation Guide**

### **1. Connect PC and OINT03D to network.**

- 1) Prepare a PC to run programs for the installation and video connection  
(PC is needed to assign IP address to OINT03D)
- 2) Connect OINT03D as shown in dotted line in Figure 4-1. The DC power is applied through DC adaptor.

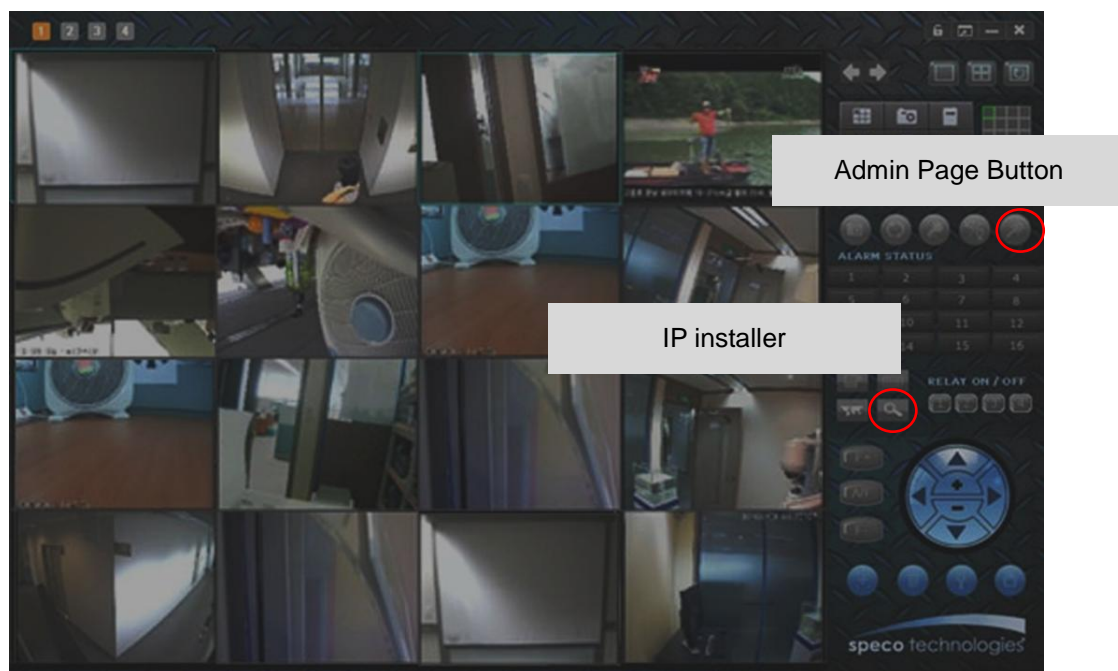


**Figure 4-1. Power and network connection**

## 2. Install Speco-NVR

Speco-NVR is a multi-channel CMS program for to IP camera or Video server. Install Speco-NVR on remote PC to connect to these products. It is needed to assign connection information to Speco-NVR program before connection.

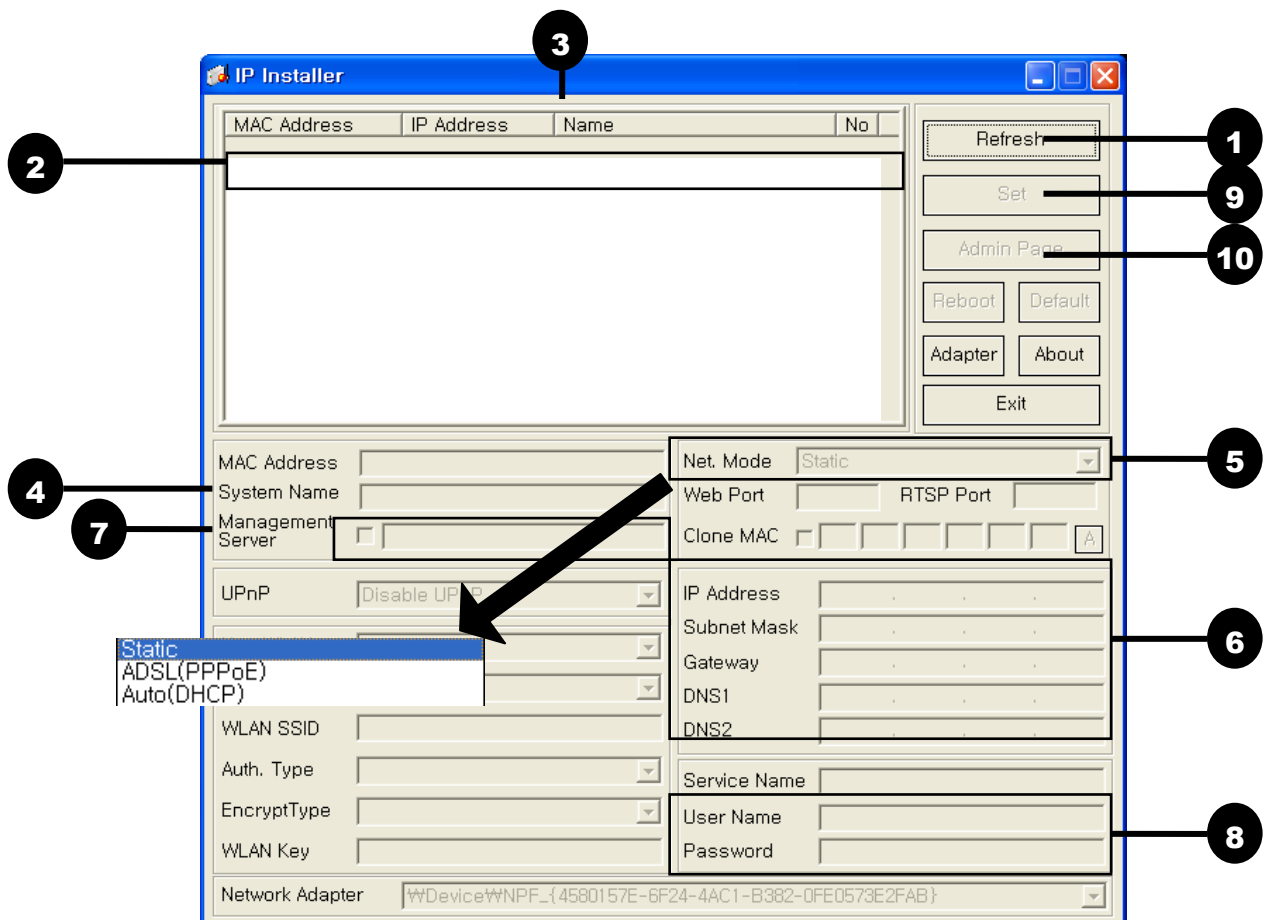
Insert the CD provided with product into the PC and install the Speco-NVR.



**Figure 4-2. Speco-NVR**

Follow the sequence below for setting the IP parameter

- i) Run IP installer
- ii) Click ① in IP installer window.> Double click on ② > Fill in ④ > make a selection in ⑤ > Fill the parameters in ⑥
- iii) Click on ⑨ to apply the settings.
- iv) You can connect to admin page by clicking on ⑩.



Click on the field in ③ for sorting and rearranging the list.

Select network mode that best suits from the drop down list in ⑤. You can choose either Static or ADSL and Auto (DHCP), respectively. If ADSL and Auto are selected, the fields in ⑥ is deactivated.

In case of ADSL, fill the User Name and Password in ⑧ with the values provided by your ISP.

If DDNS service is needed, Check at the box and fill the empty field with hostname you want in ⑦.

## 3. Remote video connection to OINT03D

### 1) Connection through Web Viewer

Web Viewer offers simplest way of video connection to OINT03D. For video connection, enter the IP address of OINT03D in the URL window of Internet Explorer as:

[e.g.] Port 80

http://172.16.64.133/

Can be omitted the default port of 80

[e.g.] Port 8080

http://172.16.64.133 : 8080/



Note: Active-X module should be installed on your PC before actual connection. If your PC is not connected to the internet, you cannot download Active-X module. Most convenient way of installing the Active-X module is installing Speco-NVR which is available from the CD or our web site.

### Connection to Admin Page

### Basic Control Buttons

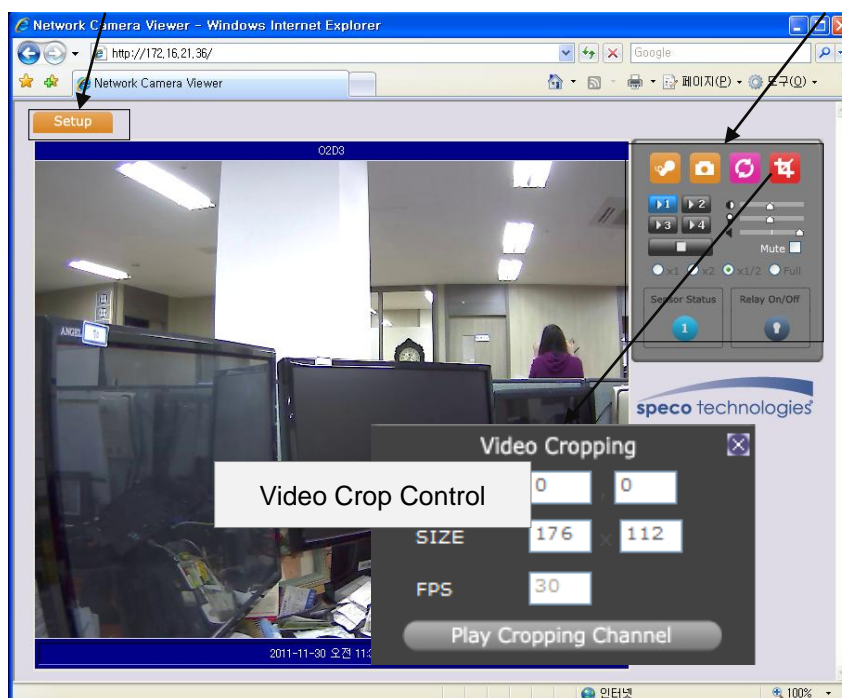


Figure 4-3. Web Viewer

Default ID and password of Admin Page are **admin, 1234**. For more detailed information, please refer to the [\[Configuration\\_Guide\]](#) Guide.

## 2) Connection through Speco-NVR

Click the camera assignment button for setting camera address. Input the description, address, Ch#, User ID, Password and port and then click the save button. After assignment procedure, you must click the SAVE button. You can see the live video when you click the live view button as below. When you exit Speco-NVR, you have to input the ID/PW, admin/1234. Details for the Speco-NVR can be found in **[Speco-NVR User's Guide]**.

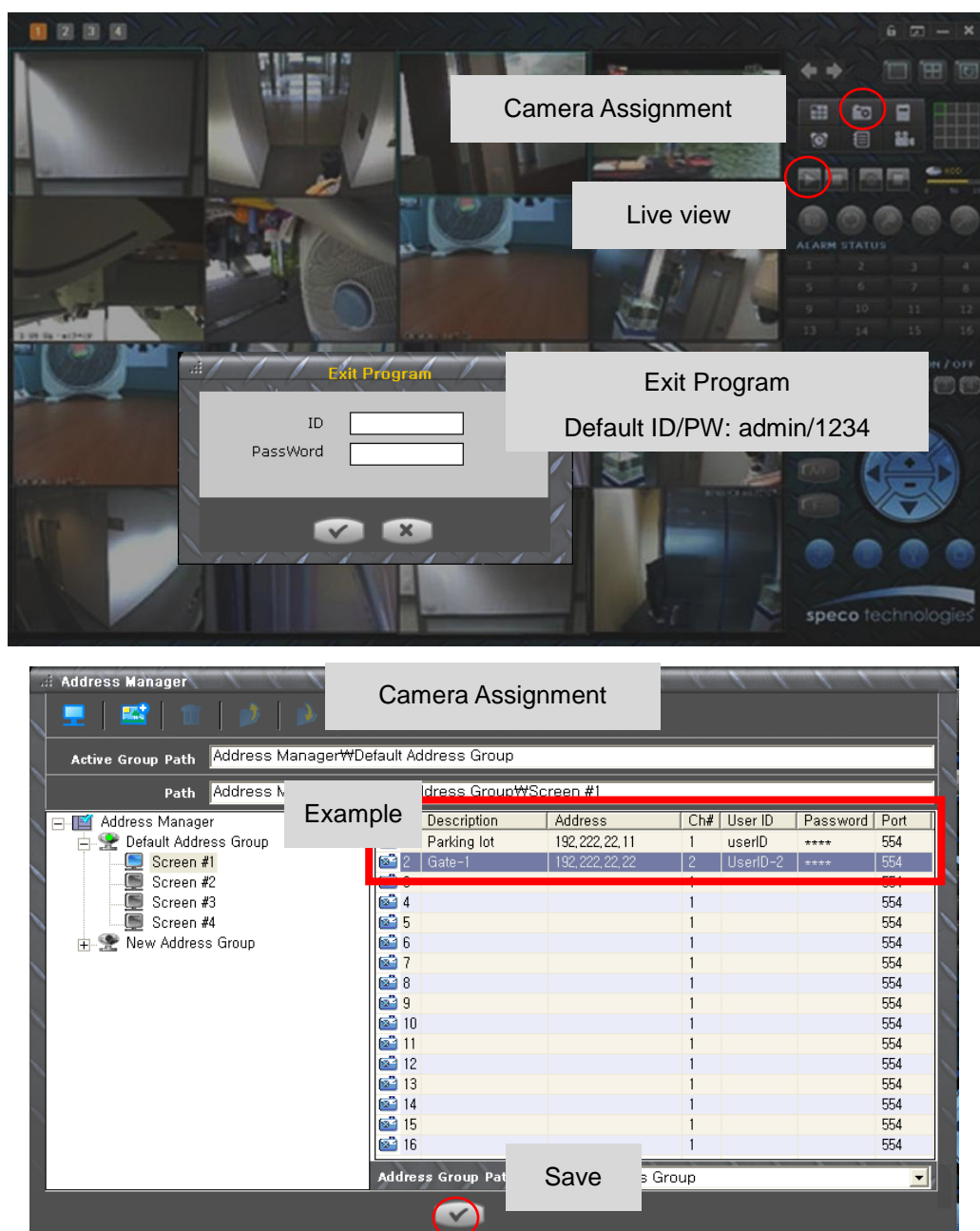


Figure 4-4. Speco-NVR

#### **4. Additional settings through connection to the Admin Page**

All the parameters of new IP camera follows factory default values. For more sophisticated target application it is needed to change parameters. The admin page can be connected through

**"http://IP\_address:HTTP\_port\_number"/admin.htm**

It is needed to enter ID and password of the administrator. Default ID and password are **admin, 1234**. It is highly recommended to change the ID and password to prevent illegal access to the IP camera. For more detailed information, please refer to the **[Configuration\_Guide]** Guide.

## **5. Trouble Shooting**

### **5.1. No power is applied**

- In case of DC adaptor

If PoE is not applied, the power and network connection should be made through separate cables.

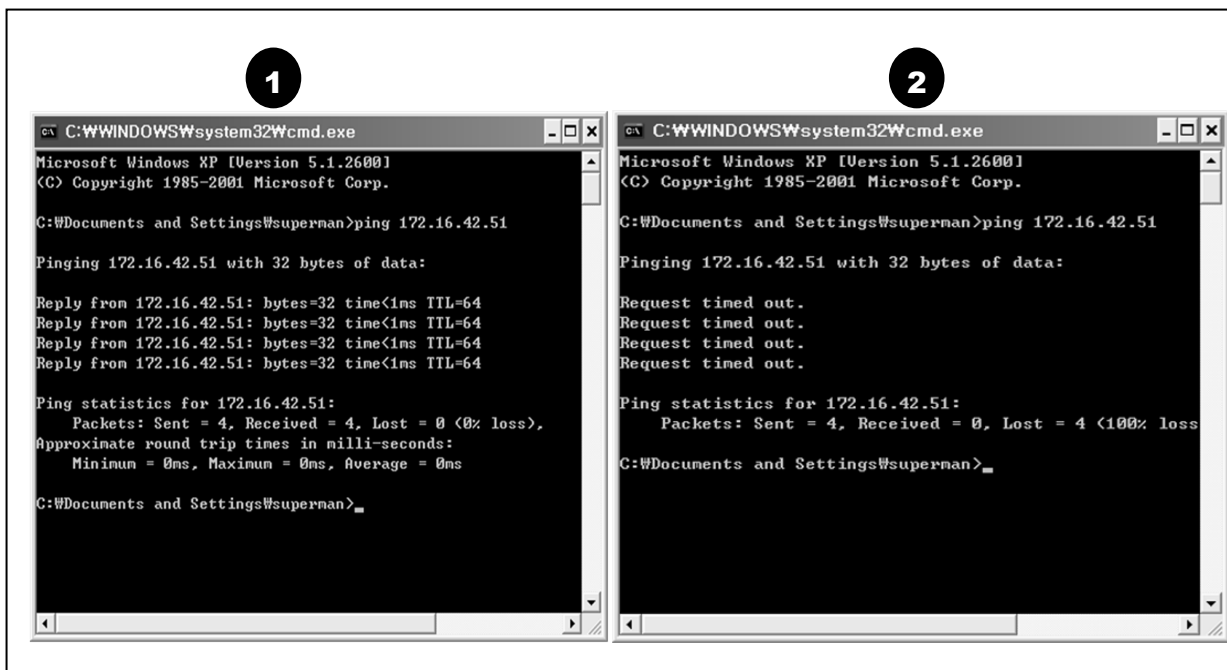
It is recommended to use DC adaptor supplied by provider for the feeding of the power. In case of replacing the DC power supply, make sure that the power supply meets with the power requirement of the IP camera to prevent damage or malfunction.

## 5.2. Cannot connect to the Video

Check the status of the network connection through PING test.

Try the following on your PC:

- Start > Run > Cmd > Ping IP address (Ex : Ping 172.16.42.51)
- If "Reply from ~" message is returned (① in the figure below), the network connection is in normal state. Try connection to the video again. If the problem persists, or refer to other trouble shooting notes.
- If "Request timed out" message is returned. (② in the figure below), the network connection or network setting is not in normal state. Check the network cable and settings.



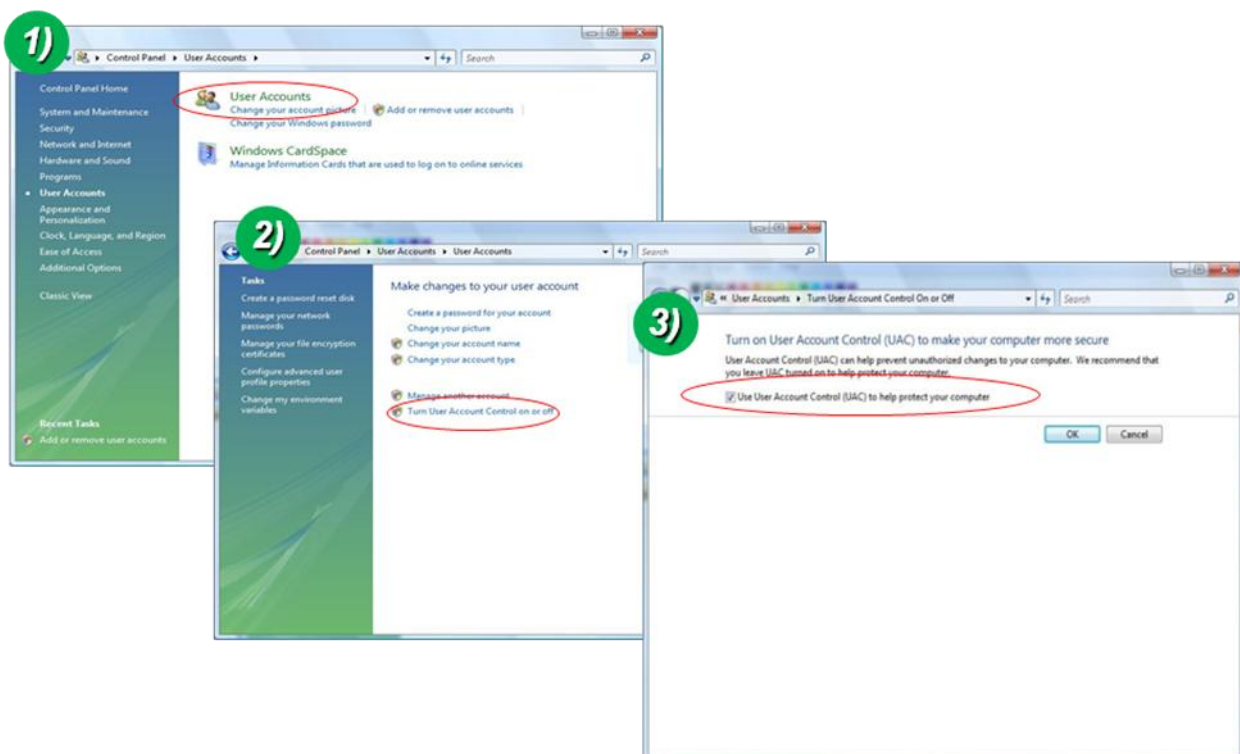
## 5.3. Windows Vista or Windows 7

Windows Vista and Windows 7 users need to configure UAC (User Access Control) and Privilege Level for proper recording and still video capture in Speco-NVR and Web Viewer.

### <Windows Vista>

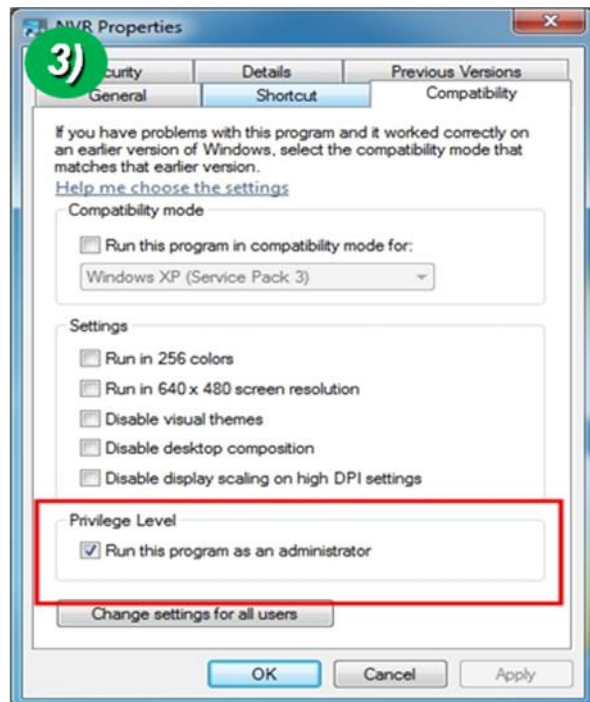
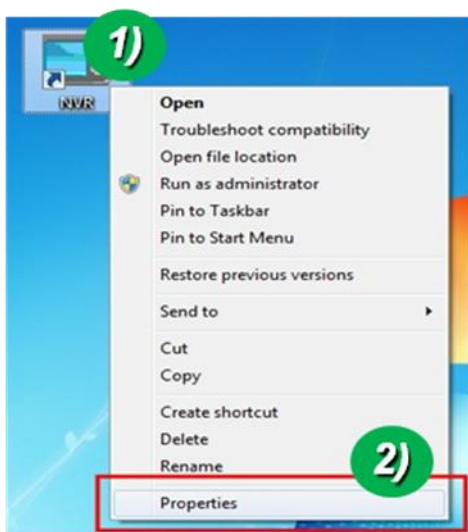
#### 1. UAC (User Access Control) configuration

- 1) Double-click "User Accounts" in control panel
- 2) Double-click "Turn User Account Control on or off"
- 3) Uncheck "Use UAC to help protect your computer"



#### 2. Privilege Level Control

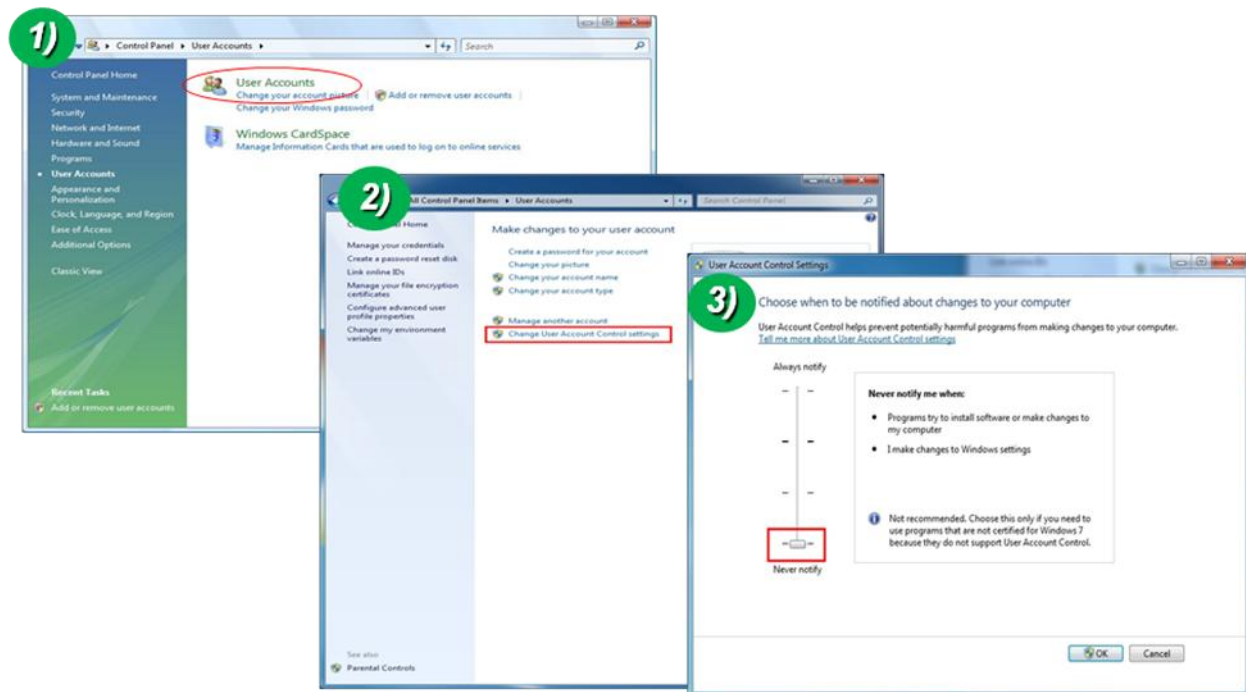
- 1) Select "NVR" icon on the desktop
- 2) Click right mouse button and select "Properties"
- 3) Check "Privilege Level" in "Compatibility" tab



## <Windows 7>

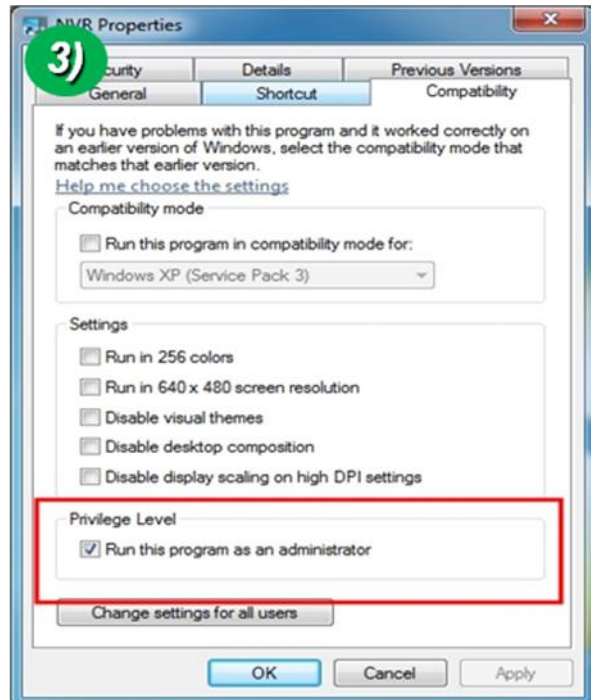
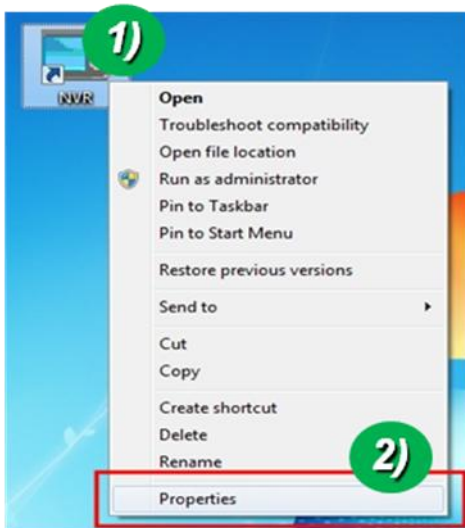
### 1. UAC (User Access Control) configuration

- 1) Double-click "User Accounts" in control panel
- 2) Double-click "Change User Account Control setting"
- 3) Set to "Never notify"



## 2. Privilege Level Control

- 1) Select "NVR" icon on the desktop
- 2) Click right mouse button and select "properties"
- 3) Check "Privilege Level" in "Compatibility" tab



## **5.4. Technical Assistance**

If you need any technical assistance, please contact your dealer. For immediate service please provide the following information.



1. **Model name**
2. **MAC address and Registration number**
3. **Purchase date**
4. **Description of the problem**
5. **Error message**

## 6. Appendix - OSD menu control

To control OSD menu, there are two methods.

First is Video setup page in Administration Tool using Internet Browser as below.

**VIDEO SETUP**

Channel Selection Channel 1

Video Adjust

Contrast		50
Brightness		50
Saturation		50
Hue		50
OSD Time Display	<input type="checkbox"/> Enable	Position <span>LEFT-BOTTOM</span>
OSD Menu Control		

Restore original values

SETUP

▶ 1. LENS	DC
2. EXPOSURE	
3. WHITE BAL.	ATW
4. DAY NIGHT	AUTO
5. 3DNR	ON
6. SPECIAL	
7. ADJUST	
8. RESET	
9. EXIT	

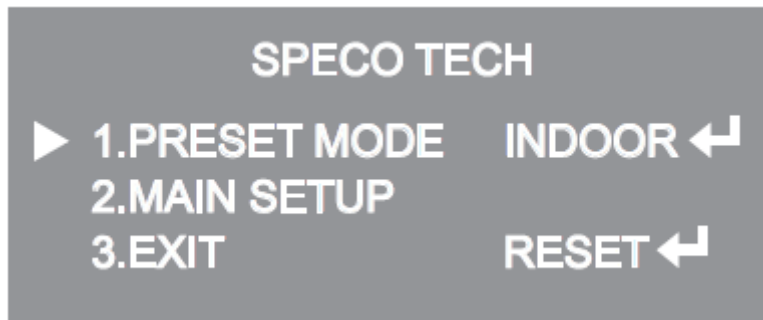
Scnd is OSD menu controller on camera as below.



## 6-1. OSD

All camera functions are menu driven for easy use.

## 6-2. Preset Mode



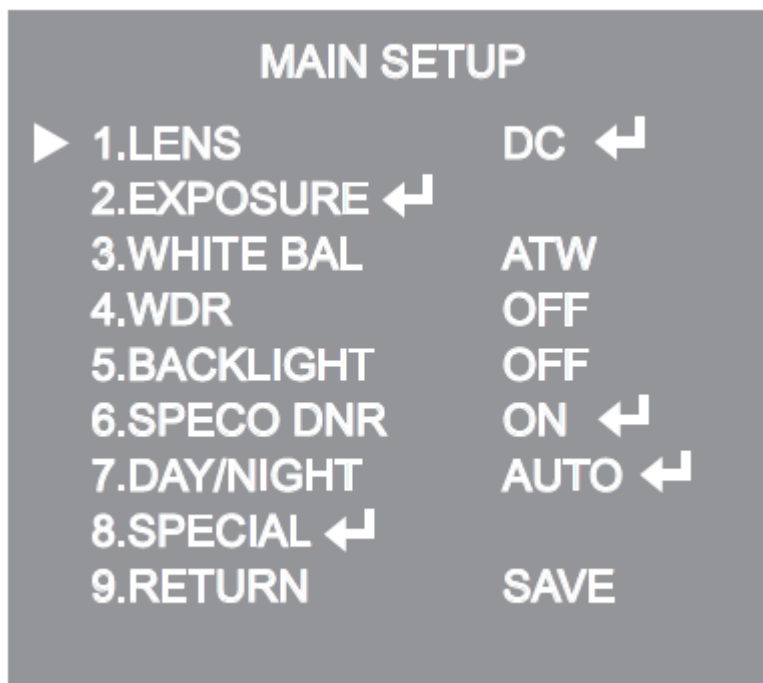
1. Preset : INDOOR / OUTDOOR / LOW LIGHT / HALLWAY / LOBBY / ELEVATOR.

- Used for a quick and easy setup for the installation environment.

## 6-3. Menu Setup

1. Press the Function Setup switch.

- Main setup menu is displayed on the monitor screen.



2. Select a desired function using the Function Setup switch.

- Place the cursor over a desired item.

3. Set up a selected item by using the Function Setup switch.

4. To finish the setting, select 'RETURN' and press the Function Setup switch.

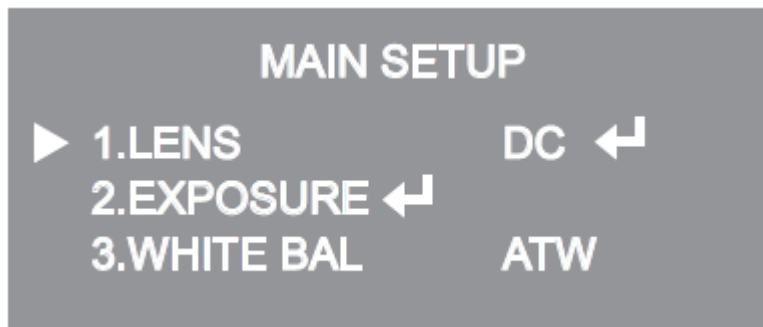
 **NOTE**

- An item with the ◀ icon also has sub menus. To select a sub menu, select an item with the icon and press the Function Setup switch.
- An item with the - - - icon is unavailable due to function settings.

## **6-4. Lens Setting**

Using this function, you can control the screen brightness.

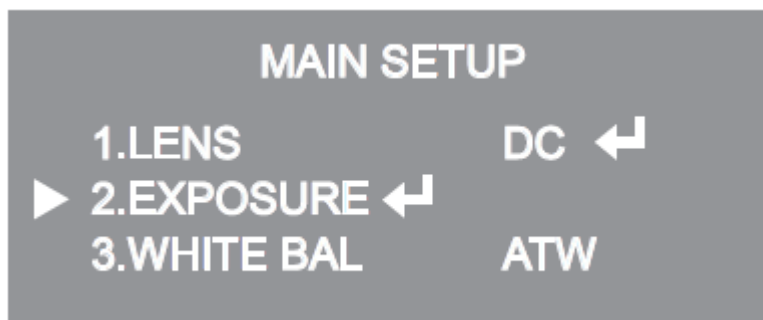
1. When the SETUP menu screen is displayed, select 'LENS' by using the Function Setup switch so that the arrow indicates 'LENS'.
2. DC: You can adjust the minimum shutter and maximum value of ESC shutter mode.



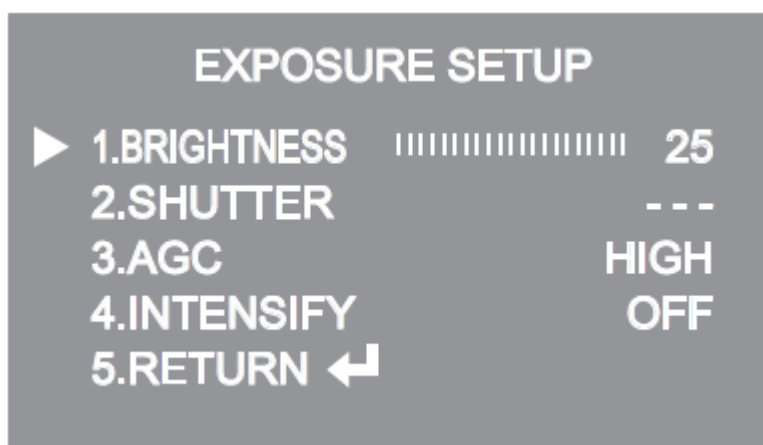
### NOTE

- If color rolling occurs when using a DC lens, set Shutter to Fixed (---).

## 6-5. Exposure Setting



1. When the SETUP menu screen is displayed, select 'EXPOSURE' by using the Function Setup Switch.
2. Select a desired mode using the Function Setup switch.



◆ SHUTTER : You can select either auto or manual shutter.

\* --- : Shutter speed is fixed at 1/60sec(1/50sec)

\* ESC : Select this to control the shutter speed automatically. If ESC is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.

\* MANUAL : You can control shutter speed manually.

(NTSC MODEL : 1/60~1/120,000, PAL MODEL : 1/50~1/120,000)

\* A.FLK : Select this when you see picture flicker, this can happen when the frequency of the local lighting clashes with the camera.

### NOTE

■ When the SHUTTER is set to MANUAL or A.FLK mode, INTENSIFY will be disabled.

◆ AGC(AUTO GAIN CONTROL) : The higher the gain level, the brighter the screen  
- but the higher the noise.

\* OFF : Deactivates the AGC function.

\* LOW : Allows automatic gain control from 5.3dB to 32dB.

\* HIGH : Allows automatic gain control from 5.3dB to 37dB.

◆ INTENSIFY : When it is night or dark, the camera automatically detects then light level and maintains a clear picture if this mode is activated.

\* OFF : Deactivates the INTENSIFY function.

\* AUTO : Activates the INTENSIFY function.

◆ RETURN : Select this to save the changes in the EXPOSURE menu and return to the SETUP menu.

 NOTE

■ If you press the Function Setup switch to 'AUTO' mode, you can adjust brightness by increasing or decreasing the shutter speed. (x2 ~ x512)

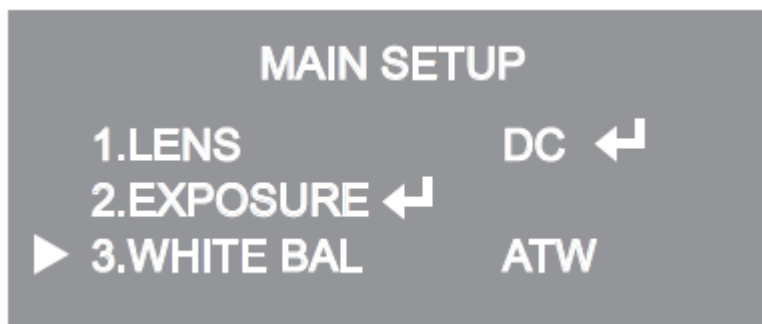
■ Note that the higher the zoom level, the brighter the screen, but the more likely there will be a ghosting effect.

■ It is normal for Noise, Spots and Whitish symptoms to appear in INTENSIFY mode when the D-ZOOM level is increased.

## 6-6. White Balance (White Bal) Setting

Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'White Bal' by using the function Setup switch so that the arrow indicates 'White Bal'.
2. Select a desired mode using the Function Setup switch.



※ Select one of the following 5 modes, as appropriate for your purpose.

- ◆ ATW : Select this when the color temperature is between 1,700°K and 11,000°K.
- ◆ OUTDOOR : Select this when the color temperature is between 1,700°K and 11,000°K. (sodium light inclusion)
- ◆ INDOOR : Select this when the color temperature is between 4,500°K and 8,500°K.
- ◆ MANUAL : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the Function Setup switch.
- ◆ AWC→SET : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.

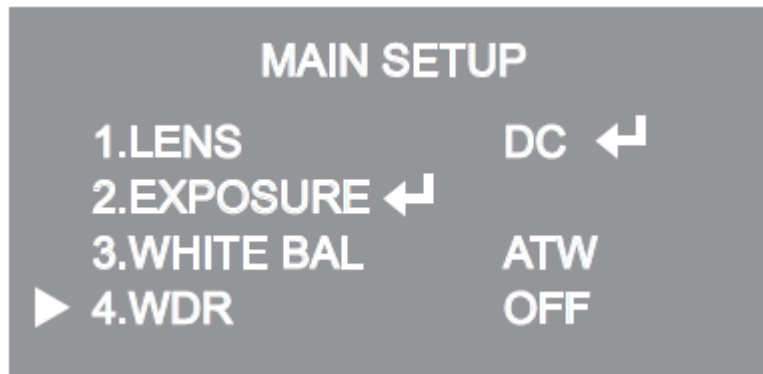
### NOTE

■ White Balance may not work properly under the following conditions. In this case select the AWC mode.

- ① When the color temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).
- ② When the ambient illumination of the subject is dim.
- ③ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

## **6-7. WDR Setting**

WDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots.

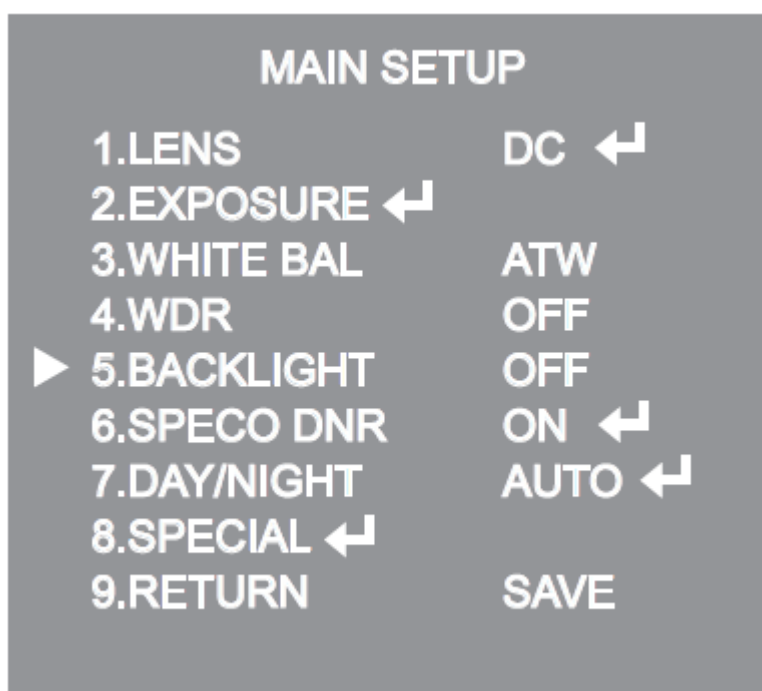


1. When the SETUP menu screen is displayed, select 'WDR' by using the switch so that the arrow indicates 'WDR'.
2. Use the switch to change the WDR level according to the contrast between bright and dark areas.<sup>9</sup>

## 6-8. Backlight Setting

Unlike conventional cameras, the 650Line Intensifier3™ Series are designed to deliver a distinctive subject and background at the same time, even when the subject is backlight, by using the features of the proprietary W-V DSP chip.

1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Function Setup switch so that the arrow indicates 'BACKLIGHT'.

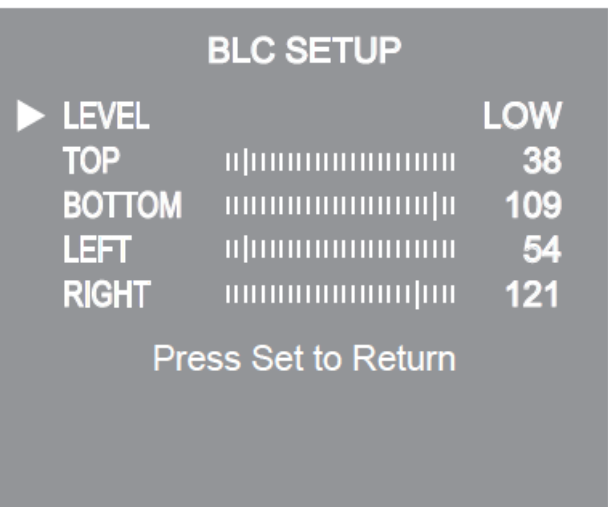
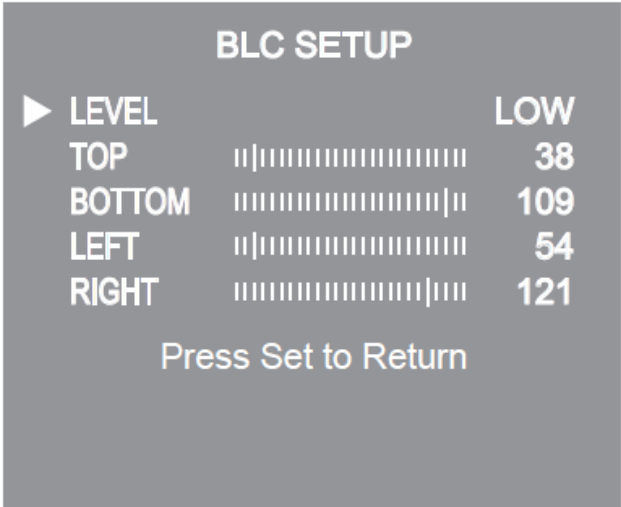



2. Select a desired mode using the Function Setup switch.

- ◆ BLC : Enables a user to directly select a desired area from a picture, and to view the area more clearly.
- ◆ HLC (High Light Compensation) : If the scene contains extremely bright light areas such as; from car headlights, the light can mask out much of the on-screen detail
  - LEVEL : Adjust level of the HLC function.
  - LIMIT : Enable to change the operating condition.
  - MASK COLOR/TONE : Change the color / transparency of the masking area.  
(Black, Red, Blue, Cyan, Magenta)
  - TOP/BOTTOM/LEFT/RIGHT : Adjust the area to be enhanced
- ◆ OFF : Not being used

3. Select a desired mode using the Function Setup switch and press the Function Setup switch.

- ◆ Select 'BLC' to adjust the area to be enhanced then adjust the level.

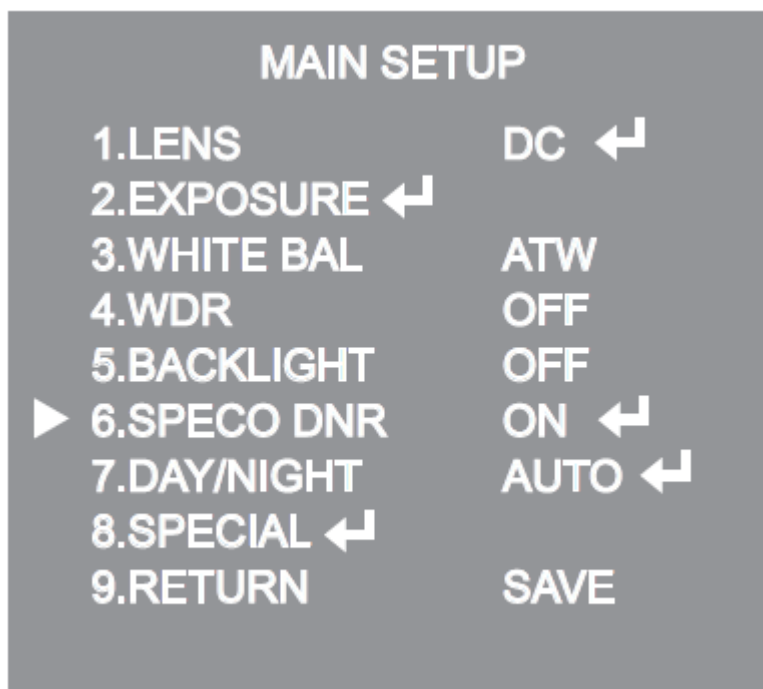


-  **NOTE**
- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
  - When dark, the HLC is only activated when a bright light exceeding a specific size in NIGHT ONLY mode.
  - The HLC is not activated in day light or when bright light is not present at night in NIGHT ONLY mode.
  - BLC Function doesn't work in the B/W mode of the DAY/NIGHT menu.

## 6-9. SPECO DNR Setting

This function reduces the background noise in a low luminance environment.

- When the SETUP menu screen is displayed, select 'SPECO DNR' by using the Function Setup switch so that the arrow indicates 'SPECO DNR'.



- Select a desired mode using the Function Setup switch.
  - ◆ OFF : Deactivates SPECO DNR. Noise is not reduced.
  - ◆ ON : Activates SPECO DNR so that noise is reduced.
- Set the SPECO DNR mode to 'ON' and press the Function Setup switch. Then you can adjust the noise reduction level.

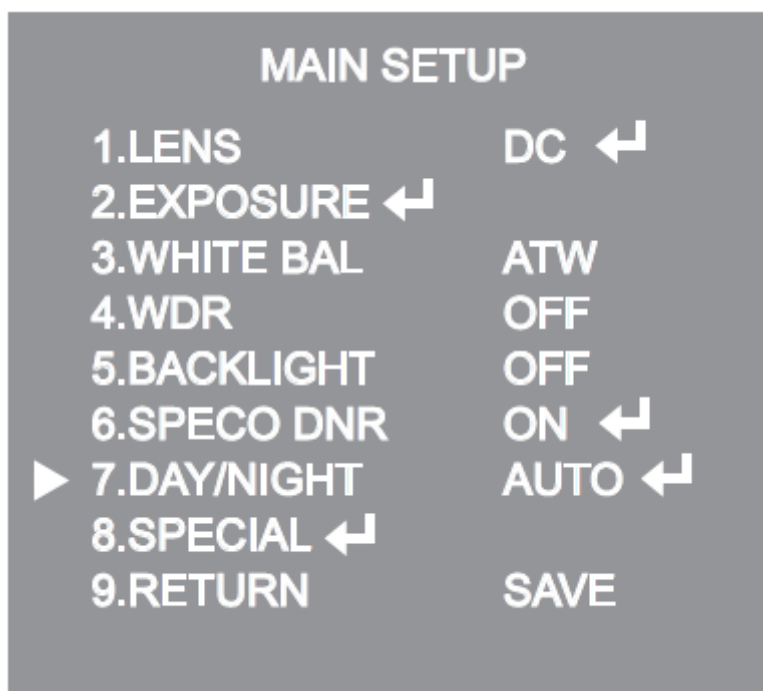
### NOTE

- You cannot set the SPECO DNR to 'ON' or 'OFF' when the AGC mode of the EXPOSURE menu is 'OFF'.
- When adjusting the noise reduction level in the SPECO DNR mode, remember that the higher the level set, the more the noise level will be reduced, as will the brightness of the image.

## 6-10. Day/Night Setting

You can display pictures in color or black and white.

- When the SETUP menu screen is displayed, select 'DAY/NIGHT' by using the Function Setup switch so that the arrow indicates 'DAY/NIGHT'.



- Select a desired mode using the Function Setup Switch according to the picture display you want.

- ◆ COLOR : The picture is always displayed in color.
- ◆ B/W : The picture is always displayed in black and white.
- BURST MODE : You can turn on or off the burst signal on B/W mode.



- ◆ AUTO : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time for AUTO mode, press the Function Setup switch. You can turn on or off the burst signal on B/W mode.

AUTO SETUP	
▶ 1.BURST MODE	ON
2.COLOR→B/W	
DURATION	FAST
DWELL TIME	3SEC
3.B/W→COLOR	
DURATION	FAST
DWELL TIME	10SEC
4.RETURN ◀	

- BURST MODE : You can turn on or off the burst signal on B/W mode.
  - DURATION : You can select brightness of illumination about changing the day/night mode.
  - DWELLTIME : You can select the duration time about changing the day/night mode.
- 3s, 5s, 7s, 10s, 15s, 20s, 30s, 40, 60s

	COLOR→B/W	B/W→COLOR
FAST	2.5 lux	5 lux
SLOW	1 lux	10 lux

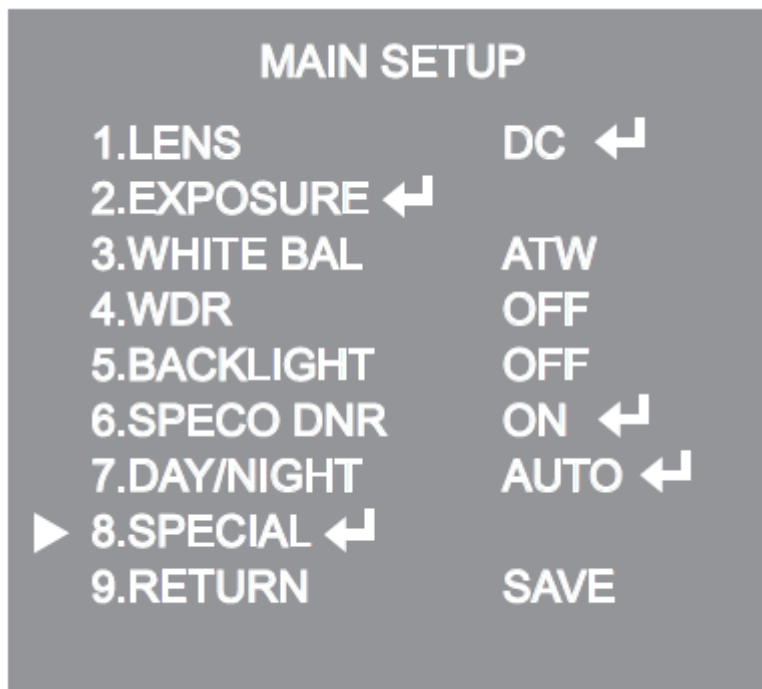
\* The day/night switching point of the camera can be adjusted.

#### NOTE

- When AGC in the EXPOSURE menu is 'OFF', '---' mode operates as like selecting 'COLOR' mode and 'AUTO' mode can not be selected.

## 6-11. Special Setting

- When the SETUP menu screen is displayed, select 'SPECIAL' by using the Function Setup switch so that the arrow indicates 'SPECIAL'.

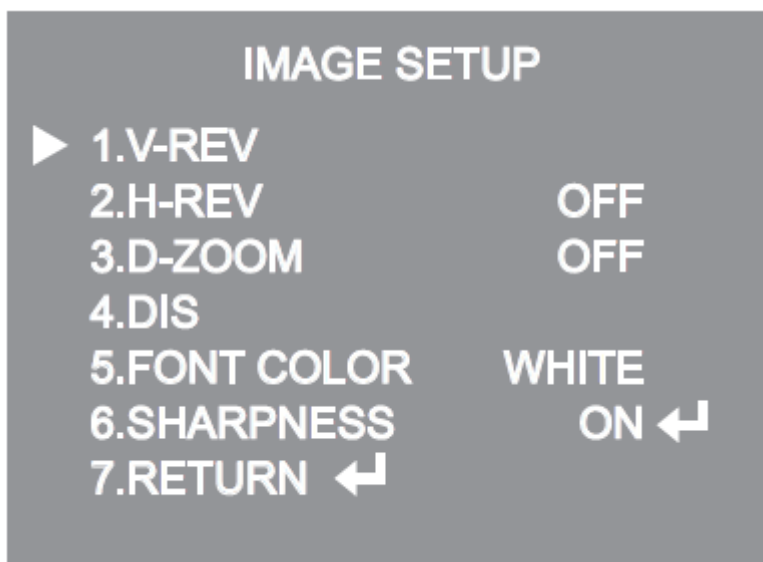


- Select a desired mode using the Function Setup switch.



◆ IMAGE ADJ. :

- 1) When the SETUP menu screen is displayed, select 'IMAGE ADJ' by using the Function Setup switch so that the arrow indicates 'IMAGE ADJ'.
- 2) Select a desired mode using the Function Setup switch.



- \* V-REV : You can flip the picture vertically on the screen.
- \* H-REV : You can flip the picture horizontally on the screen.
- \* D-ZOOM : You can use a digital zoom of x1 ~ x16.
- \* DIS (Digital Image Stabilizer) : This function mitigates any picture movement due to external factors such as wind.
- \* FONT COLOR : You can change the OSD font color. (White, Yellow, Green, Red, Blue)
- \* SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer. Adjust this value appropriately depending on the sharpness of the picture.
- \* RETURN : Select this to save the settings for the IMAGE ADJ menu and to return to the SETUP menu.

NOTE

- When the V-REV or H-REV mode is enabled, the text on the screen does not flip.
- If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.

◆ MONITOR: Please change the settings value of video appropriate to your monitor.

- 1) LCD: Please select this menu item when using a LCD monitor.
- 2) CRT: Please select this menu item when using a CRT monitor.
- 3) USER: Please use this menu item when using a monitor other than standard ones. You can change the gamma, PED level, and color gain in the sub menus.

- ◆ CAM TITLE: If you enter a title, the title will appear on the monitor.



- 1) If the SPECIAL menu screen is displayed, use the Function Setup switch so that the arrow indicates 'CAM TITLE'.
- 2) Set it to 'ON' by using the Function Setup switch.
- 3) Press the Function Setup switch.
- 4) Use the Function Setup switch to move to a desired letter and select the letter by pressing the Function Setup switch. Repeat this to enter multiple letters. You can enter up to 15 letters.
- 5) Enter a title, move the cursor to 'POS' and press the Function Setup switch. The entered title appears on the screen. Select the position to display the title on the screen by using the Function Setup switch and press the Function Setup switch. When the position is determined, select 'END' and press the Function Setup switch to return to the SPECIAL menu.

**NOTE**

- When the CAM TITLE menu is 'OFF', no title will be displayed on the monitor screen even if you enter one.
- Only English is available in this mode.
- If you move the cursor to CLR and press the Function Setup switch, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the Function Setup switch. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the Function Setup switch.

◆ SYNC: In areas where the supply is at 60Hz(NTSC), 50Hz(PAL), you can synchronize the output phase of multiple cameras using the power synchronization function (Line-Lock) without using a synchronization signal generator.

- INT: Internal Synchronization Type

- L/L: Power Synchronization Type, Line-lock

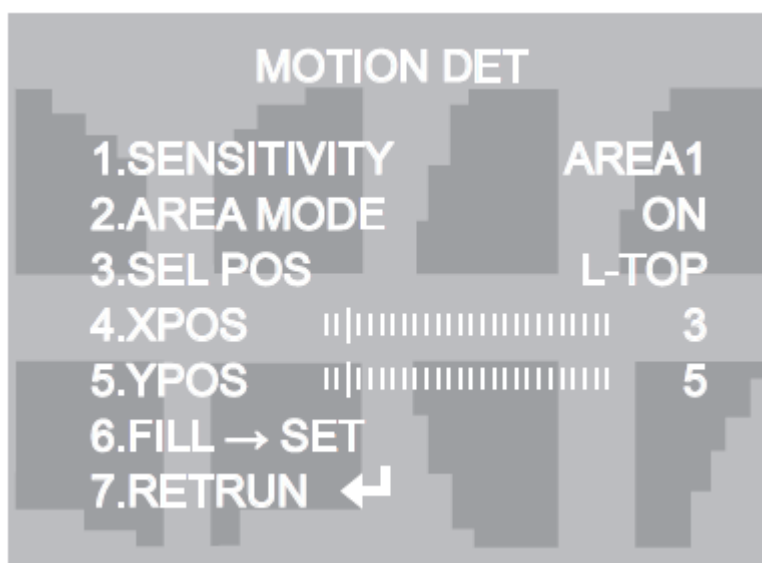
\* Press the Function Setup switch.

\* You can select a desired phase from 0 to 359 when select 'phase'.

**NOTE**

- When using AC power at 60Hz(NTSC), 50Hz(PAL), frequency, you can use the L/L type synchronization.
- When the power is DC 12V, the SYNC menu is fixed to the 'INT' mode.

◆ MOTION DET: This product has a feature that allows you to observe movement of objects in 8 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected. Activity can be monitor more efficiently.

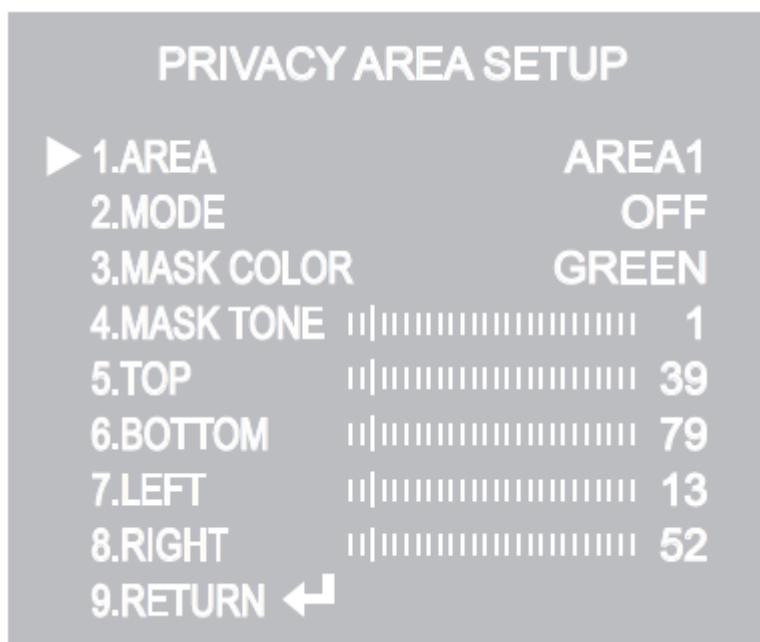


1) When the SPECIAL menu screen is displayed, press the Function Setup switch so that the arrow

indicates 'MOTION DET'.

2) Set up the mode using the Function Setup switch.

- SENSITIVITY: You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement.
- AREA MODE: Determines whether to use the MD area selected in SENSITIVITY.
- SEL POS: Determines which of the 4 vertices of each MD area is to be used.
- XPOS: Determines the coordinate of the horizontal axis for SEL POS.
- YPOS: Determines the coordinate of the vertical axis for SEL POS.
- FILL→SET: Fills in a selected MD area. The color of the area can be selected from brown, orange, blue, cyan, green, yellow, magenta and red.
- RETURN: Select this to save the MOTION DET menu settings and return to the SPECIAL menu.
- ◆ PRIVACY: Mask an area you want to hide on the screen.



1) When the SPECIAL menu screen is displayed, press the Function Setup switch so that the arrow indicates 'PRIVACY'.

2) Set up the mode using the Function Setup switch.

- AREA: You can select up to 12 PRIVACY areas.
- MODE: Determines whether to use the area selected in the AREA.
- MASK COLOR: Determine area color. You can select Green, Red, Blue, Black, White, and Gray.
- MASK TONE: Adjust the brightness of MASK COLOR.
- TOP/BOTTOM/LEFT/RIGHT: Adjust the size and position of the selected area.
- RETURN: Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

## **6-12. RETURN Setting**

Select a desired RETURN mode using the Function Setup Switch.

- SAVE: Save the current settings and RETURN the MAIN SETUP menu.
- NOT SAVE: Do not save the current settings and RETURN the MAIN SETUP menu.
- RESET: Resets the camera settings to the factory defaults. Language, Communication and Monitor Settings are not initialized.