WIREPATH
SURVEILLANCE

WPS-565-DOM-A

DOME CAMERA

INSTALLATION MANUAL

Review manual thoroughly before installation.
Retain for future reference.

Safety Instructions

This information is provided to ensure your safety and to prevent physical or financial loss. Please read this document carefully before installing and operating the camera.

1. Handle with care.
Use caution when handling to avoid damage to sensitive internal components.

2. Do not install camera under extreme temperatures.
This camera only operates under temperature conditions between 14˚F ~ 140˚F.

3. Do not mount the camera directly facing bright light sources.
Exposing the camera to strong light over long periods of time will damage the camera's sensor.

4. Do not supply voltage other than 12V DC or 24V AC.
This camera regulates power within this range. Higher voltages will damage the camera's electronic components.

5. Do not install camera in environments with extreme humidity.
Installing camera in environments with extreme humidity may cause moisture to condense on the surface of the lens or dome cover, which can affect picture quality.

CE FC RoHS ISO 9001

Table of Contents

1. Features

1/3" 960H Sony Super-HAD II CCD
The Sony Super HAD II CCD is ideal for low lux illumination, resulting in a clear and crisp image.

Varifocal Auto-Iris Lens
This camera features a varifocal lens with a focal length of 2.8-12 mm. The auto-iris function intuitively manages the amount of light passing through the lens for consistent image brightness.

DWDR (Digital Wide Dynamic Range)
Digital Wide Dynamic Range is ideal for high contrast environments, improving the contrast between very dark and very bright areas in a scene, and producing a more balanced image.

2D Digital Noise Reduction
Digital noise reduction produces clear images in low light conditions. Not only does it help to reduce image noise, but it also minimizes burring of objects in motion, producing extremely clear picture quality — even under low-light conditions.

RS-485 Connection and OSD
This camera features an OSD (on-screen display) for initial setup and settings adjustment. Remote control is possible using a compatible DVR or PTZ controller connected to the camera's RS485 wire leads.

Weatherproof Housing
The IP66-rated weatherproof housing makes this camera ideal for outdoor surveillance.

Video Test Port
Adjust angle, zoom, and focus at the camera for fast and easy installation.

2. Package Contents

(1) WPS-565-DOM-A Camera

(1) WPS-ACC-PWR-M AC/DC Power Plug

(1) OSD Joystick / BNC Test Adapter

(4) Surface Mounting Screws (includes 1 spare)

(4) Wall Anchors (includes 1 spare)

(1) 3mm Allen key

(1) Foam gasket

(1) Paper mounting template

(1) Installation Manual

(1) Spare Silica packet in vacuum sealed bag

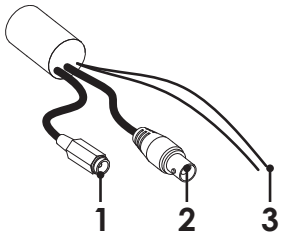
NOTE: A POWER SUPPLY IS NOT INCLUDED WITH THIS CAMERA.
The PS-12DC-1A or WPS-PS multiple output power supplies are recommended.

NOTE 2: A SILICA DESICCANT PACK IS MOUNTED INSIDE THE DOME HOUSING.
This package should remain inside the housing after installation, even when adding additional desiccant packs.

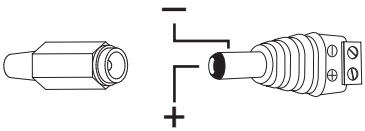
3. Wiring Recommendations

Wiring should be installed, terminated, and tested for connectivity before the camera is installed. Specifications for each connection are detailed below.

3.1. Wiring Connections



1. **Power (Required)**
   It is recommended to install the camera power supply near the recording location and run a remote power wire to the camera. Use the voltage drop calculator at www.SnapAV.com to find the correct gauge for a given length of wire.

Pinout	Wire Size (AWG)	Power Requirements
	Minimum 18 AWG *Calculate based on voltage and wire length*	12V DC or 24V AC (500mA minimum)

Included WPS-ACC-PWR-M is illustrated to demonstrate the correct polarity for power.

2. **BNC Video Output (Required)**
   Install coaxial cable for transmitting video to a DVR or display monitor.

Recommended Cable	Connector Type
RG-59 or RG-6	75-ohm rated BNC connectors *Use a BNC-RCA adapter for composite input*

3. **RS485 Communication +/- Wires (Optional)**
   Connect the RS485 wires to a controller or a Wirepath DVR to enable remote access to the OSD setup menu.

Pinout		Wire Size (AWG)
Camera	**Controller**	Minimum 24 AWG *2 Cat5e/6 conductors or 2-conductor alarm wire is recommended*
+(White)	**+**(Positive)	
–(Green)	**–**(Negative)	

Important! Separate and insulate the ends of the RS485 wires if they will not be connected. **DO NOT** connect the + and - wires together.

4. Installation Instructions

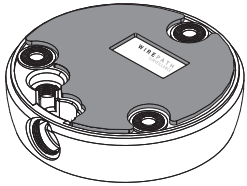
Wiring must be installed before the camera. See the previous page for connections and wiring recommendations.

Step 1. Prepare for Installation

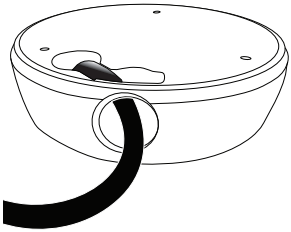
Important! DO NOT remove the protective plastic film from the camera dome until installation is complete and the camera is being sealed for the last time.

A. Unpack the camera and locate the included foam gasket, hardware, mounting template, silica packet, and 3mm Allen wrench. If a mounting accessory is being used, unpack the accessory and become familiar with its installation and use.

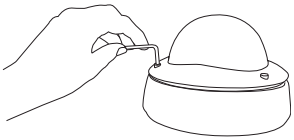
B. Apply the self-adhesive foam gasket to the base of the camera.



C. If the camera will be connected using the 3/4" conduit side entrance, remove the threaded plug and route the wiring pigtail through the opening.

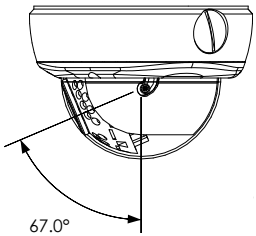


D. Use the 3mm Allen wrench to open the camera.



E. Review the lens angle-of-view limits and make sure the camera location will allow it be aimed toward the desired field of view.

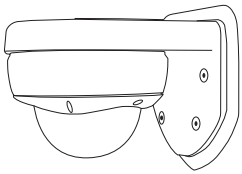
The setscrews for the gimbal should be factory preset to allow adjustment without binding, but may be adjusted as needed using a #1 or #2 Phillips screwdriver.



Step 2. Mount the Camera

Using Mounting Accessories

Mount the accessory according to its instructions, make wiring connections, and mount the camera. Then, continue these instructions below at **Step 3** to complete camera installation.

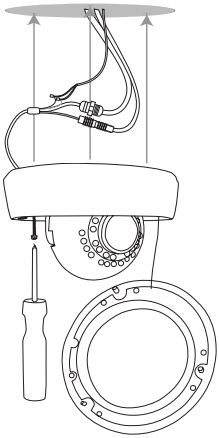


Surface Mounting

A. Use the included template to mark the screw locations for mounting.

B. Connect the camera to the wiring and move it into position. Avoid pinching the wires between the camera and the mounting surface.

C. Use 3 of the included screws to secure the camera. Insert the screws through the black mounting hole gaskets and hand-tighten them evenly.



Step 3. Adjust Focus, Zoom, and Menu Settings

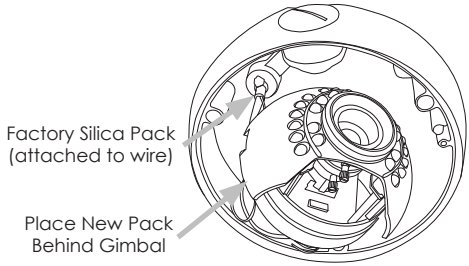
See "Camera Operation Setup" beginning on the next page for instructions. Set the focus and zoom adjustments, and adjust the OSD Setup Menu options as needed. Disconnect the test adapter after completing adjustments.

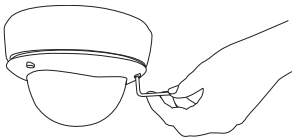
Step 4. Close the Camera

DO NOT remove the factory-installed silica desiccant packet in the camera.

A. Before closing the camera, remove the spare silica packet from its sealed foil package (taking care not to rip the inner packet) and place it inside the camera, out of the lens' field of view. **Do not remove the existing silica gel packet strapped inside the camera.**

B. Close the camera dome and use the 3mm Allen wrench to tighten the screws evenly. **Remove the outer dome protective film last.**

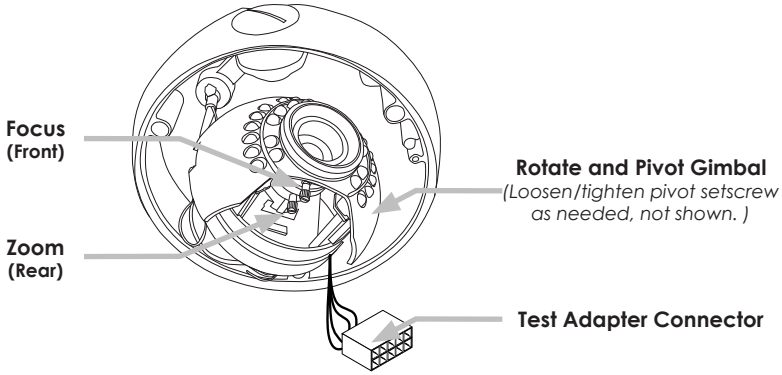




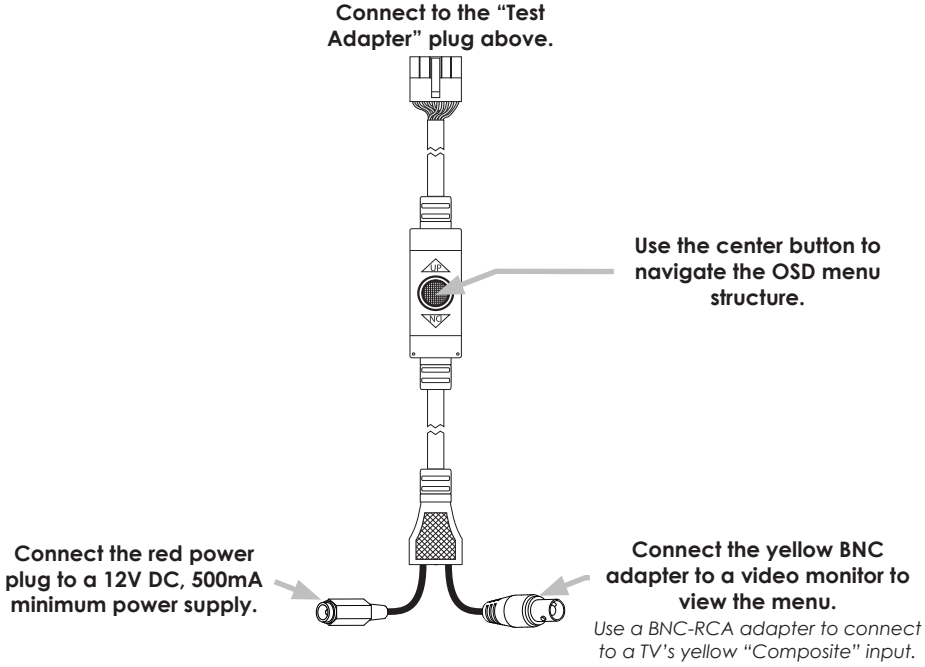
5. Camera Operation Setup

5.1. Focus, Zoom and Position

The lens of the camera has manual focus and zooms knobs for setting the correct field of view and the gimbal may be rotated for tilt correction. Connect the test adapter as described below to use a monitor at the camera location for viewing adjustments.

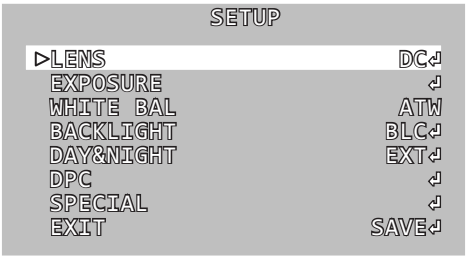


5.2. Using the Test Adapter



6. OSD SETUP Menu

WPS-565 series cameras use an on-screen (OSD) menu system for setup of advanced image and control settings.



Default OSD menu view and settings

Use the OSD SETUP menu to:

- **Improve image quality —** change settings to suit any environment;
- **Set up advanced image features —** parking lane, dead pixel compensation, motion detection, privacy masking, and more;
- **Display custom text options —** choose whether or not to display options like camera ID and where to position overlaid text;
- **Configure RS485 —** communicate between cameras and DVRs or other security and automation systems.

6.1. Default Settings Description

Default settings for each SETUP menu section are written in **bold** type in the menu overview to follow.

Defaults in the SETUP menu are optimized for the best balance of performance in typical conditions:

- Daytime light should evenly illuminate the field of view. Setting changes can be made to accommodate for moderate brightness and contrast issues. Too much direct sunlight or glare from reflective and white surfaces should be avoided.
- Night-time conditions should allow for the IR LEDs to reflect on surfaces within range, or for artificial lighting to illuminate areas beyond IR range.

6.2. How to Navigate the OSD SETUP Menu

The OSD menu is displayed as an overlay of the camera field-of-view. It will remain visible as long as the menu is active. Use the test adapter or RS485 to navigate. (use test adapter for initial setup. RS485 setup is detailed in section "6.4.7.6. COMM ADJ. — RS485 Setup" on page 24)

6.2.1. OSD Joystick (Test Adapter)

Menu Navigation
Pivot the joystick up, down, left and right to move the white menu cursor over the desired option.

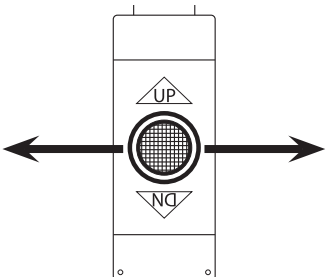
Sub-menus
Selections with a "⏎" to the far right have a sub-menu. Press the center joy-stick button to access the menus.

6.2.2. How to Save Settings

Setting changes anywhere in the menu must be saved to take effect. Save changes immediately from within the sub-menu (example below), or from the main setup menu EXIT function (see "6.4.8. Exit Menu — Save and Reset" on page 24).

Scroll down any menu page to the "RETURN" setting, and scroll left or right to select whether settings are saved.

Move the cursor left or right to select saving options.



6.3. OSD Menu Structure Outline

LENS	**DC**	BRIGHTNESS	0...**42**...255		
		IRIS SPEED	0...**4**...15		
	MANUAL	BRIGHTNESS	0...**37**...255		
EXPOSURE	SHUTTER	**AUTO** 1/60 FLK(1/120) 1/250 1/500 1/1000 1/2000 1/4000 1/5000 1/10000 1/100000			
	BRIGHTNESS	0...**37**...255			
	AGC	OFF LOW **MIDDLE** HIGH			
	DWDR	ON	LEVEL	0...**35**...63	
		OFF			
WHITE BAL.	**ATW**				
	AWB				
	AWC->SET				
	ANTI. CRL				
	MANUAL	COLOR TEMP	MANUAL	BLUE	0...**19**...255
				RED	0...**24**...255
			OUTDOOR		
			INDOOR		
BACKLIGHT	**BLC**	AREA SEL.	AREA1 (***on*** by default)		
			AREA2 (***off*** by default)		
		AREA STATE	ON, OFF		
		GAIN	0...**165**...255		
		HEIGHT	0...**10**...15		
		WIDTH	0...**4**...15		
		LEFT/RIGHT	0...**5**...15		
		TOP/BOTTOM	0...**5**...15		
	HLC	LEVEL	0...**150**...255		
		MODE	**NIGHT ONLY**		
			ALL DAY		
		MASK SKIP	ON	HEIGHT	0...**3**...15
				WIDTH	0...**3**...15
				LEFT/RIGHT	0...**6**...15
				TOP/BOTTOM	0...**7**...15
			OFF		
	OFF				
DAY&NIGHT	**EXT**	D→N DELAY	**1** 3 5 10 15 20 25 30 (seconds)		
		N→D DELAY	**1** 3 5 10 15 20 25 30 (seconds)		
	COLOR				
	AUTO	D→N LEVEL	0~192		
		D→N DELAY	**1** 3 5 10 15 20 25 30 (seconds)		
		N→D LEVEL	0~16		
		N→D DELAY	**1** 3 5 10 15 20 25 30 (seconds)		
	B/W	BURST	ON, OFF		
		IR SMART	ON, OFF		
		IR LEVEL	LOW, HIGH		
DPC	START	COVER LENS THEN ENTER			
	DPC VIEW	**OFF** ON			
	LS VALUE	0...**16**...63			
	DIFF.	0...**1**...63			
	AREA HS	0...**33**...255			
	AREA HE	0...**245**...255			
	AREA VS	0...**11**...255			
	AREA VE	0...**123**...255			

(Menu structure continued on next page)

SPECIAL	CAM TITLE	**OFF** ON			
	MOTION	**OFF**			
		ON	AREA SEL.	1~4 *(all 4 are **on** by default)*	
			AREA STATE	**ON** OFF	
			HEIGHT	0...**3**...15	
			WIDTH	0...**3**...15	
			LEFT/RIGHT	0...**2**...15	
			TOP/BOTTOM	0...**2**...15	
			DEGREE	0...**32**...255	
			VIEW	**ON** OFF	
	PRIVACY	**OFF**			
		ON	AREA SELECT	1~8 *(all 8 are **on** by default)*	
			AREA STATE	**ON** OFF	
			HEIGHT	0...255 *(default setting varies for each of the 8 areas)*	
			WIDTH	0...255 *(default setting varies for each of the 8 areas)*	
			LEFT/RIGHT	0...255 *(default setting varies for each of the 8 areas)*	
			TOP/BOTTOM	0...255 *(default setting varies for each of the 8 areas)*	
			COLOR	**0**...15 *(each number represents a different color)*	
	PARK LINE	**OFF**			
		ON	LT	0...**90**...255	
			LB	0...**32**...255	
			RT	0...**168**...255	
			RB	0...**228**...255	
			F	0...**18**...255	
			N	0...**65**...255	
			T	0...**4**...15	
			V1	0...**38**...255	
			V2	0...**46**...255	
			V3	0...**72**...255	
	IMAGE ADJ.	LENS SHAD.	**OFF**		
			ON	LEVEL	0...**130**...255
				H-CENTER	0...**81**...255
				V-CENTER	0...**22**...255
		2DNR	**ON**	LEVEL	0...**12**...15
			OFF		
		MIRROR	**OFF** ON		
		FONT COLOR	FONT	0...**3**...15 *(each number represents a different color)*	
			ID&TITLE	0...**3**...15 *(each number represents a different color)*	
		CONTRAST	0...**133**...255		
		SHARPNESS	0...**15**...31		
		DISPLAY	**LCD**	GAMMA	0.30...**0.40**...1.00 *(in 0.05 increments)*
				PED LEVEL	**0**...63
				COLOR GAIN	0...**224**...255
			CRT	PED LEVEL	0...**16**...63
				COLOR GAIN	0...**224**...255
			USER	GAMMA	0.30...**0.45**...1.00 *(in 0.05 increments)*
				PED LEVEL	0...**16**...63
				COLAR GAIN	0...**224**...255
		NEG. IMAGE	**OFF** ON		
	COMM ADJ.	CAM. ID	000...**001**...255		
		BAUD RATE	2400 **4800** 9600 19200 38400 57600		
		PROTOCOL	NEXTCHIP **PELCO-D** PELCO-P		
		DISPLAY ID	**OFF** ON		
		ID POS	*(Position the COMM ID using the directional keys)*		
	LANGUAGE	ENGLISH, CHN2(Simplified Chinese), SPANISH, RUSSIAN, GERMAN, PORTUGUESE, FRENCH, JAPANESE			
	VERSION	**13 12 04**			
EXIT	SAVE				
	NOT SAVE				
	RESET				

6.4. OSD MENU SETTINGS

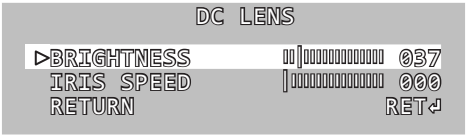
6.4.1. LENS Menu

The amount of light entering the camera lens is controlled by the size of the aperture, (called IRIS in SETUP menu).

- The **default** DC setting is recommended when lighting levels vary regularly.
- For conditions with fixed, low-level lighting, the MANUAL setting may be ideal. Both settings offer additional setup options for fine tuning:
- Set the lens mode on the main setup screen. Move the joystick left and right to select DC (Auto-IRIS), or MANUAL mode and enter each setting's sub-menu.

6.4.1.1. DC Mode

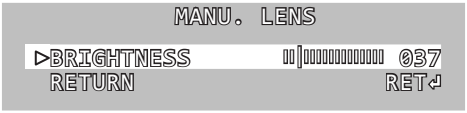
DC mode is the recommended setting for outdoor locations and environments with varying light conditions. In DC mode, the camera adjusts the aperture of the lens automatically based on the lighting conditions of the environment.



- **Brightness —** Set level from 1(dark) to 255(bright). Too much brightness will cause washing out. Too little will leave the picture too dim to view clearly.
- **Iris Speed —** Sets the reaction speed of iris changes related to light changes. Leave the setting at 0 unless there is light strobing regularly in the scene causing excessive variation in brightness.

6.4.1.2. MANUAL Mode

In this mode the aperture is set fully open and light level is not controllable. This setting is only recommended for an environment with consistent lighting conditions.



- **Brightness —** Set level from 1 (dark) to 255 (bright). Too much brightness will cause washing out. Too little will leave the picture too dim to view clearly.

6.4.2. EXPOSURE Menu

Exposure settings use the sensor in the camera to control how much light is recorded in each frame of video.

- Access the EXPOSURE sub-menu settings from the main SETUP menu.

6.4.2.1. SHUTTER

Electronic shutter speed controls how much light gets to the camera sensor with each frame of video.

- Use the **default** AUTO setting in normal lighting conditions.
- Move the joystick left or right change the setting to any speed between 1/60 and 1/100000 or to FLK mode.
- Use a slower shutter speed for dim environments with fixed lighting conditions.
- Use a faster shutter speed in bright environments with fixed lighting conditions or when fast-moving objects must be captured.
- Use FLK mode for scenarios where lighting or a television is causing visible flicker in the scene.

6.4.2.2. AGC (Auto Gain Control)

Auto Gain Control automatically amplifies the video signal during low light conditions. Use this setting to increase contrast in dimly lit parts of the scene.

- Use the **default** MEDIUM setting unless the scene is always very dark.
- Move the joystick left or right to turn AGC to LOW or OFF in areas that are always well-lit.
- Too much amplification (HIGH) will cause distortion in the video feed, but may be necessary for acheiving contrast in low light.

6.4.2.3. DWDR(Digital Wide Dynamic Range)

DWDR improves contrast between very dark and very bright areas for a more balanced image. DWDR is OFF by default.

- Move the joystick left or right to turn DWDR ON and access the submenu:
  - Adjust the level from 1 to 63 based on the environment.
  - The higher the setting, the brighter the scene will appear.
  - Too much DWDR in too bright a setting may cause the image to appear washed out or colors to be somewhat inaccurate.

6.4.3. WHITE BALANCE Menu

White balance adjusts the image color according to the lighting conditions of the scene to correct for different lighting color ranges.

- Move the joystick left or right to select the desired mode.

6.4.3.1. Auto Modes

Auto modes are preset to match the color needed for several common types of light bulbs. Use the MANUAL setting below for other conditions. Move the joystick left or right to change the mode.

- **ATW1 —** Auto Tracking White Balance, color temperature is set to 2000° K.
- **ATW2 —** Auto Tracking White Balance, color temperature is set to 2500° K.
- **AWB —** Auto White Balance
- **ANTI CRL —** (Anti Color Roll) Use to avoid rolling color under flourescent lights.

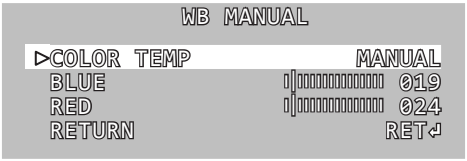
6.4.3.2. AWC⇨SET Mode

This function is ideal for environments with the predominance of a single color. For example, in a casino where the camera is pointed to a green table, the color will be inaccurate. The overall tone of the picture will be too red. This mode compensates the white balance and provides a more accurate color.

- Move the joystick left or right in the WHITE BAL menu to select AWC⇨SET mode, and press the OSD button for 3 seconds. The camera will automatically set the white balance value based on the scene.

6.4.3.3. WB MANUAL Setting Mode

Use manual mode to correct for irregular lighting.



- Move the joystick left or right in the WHITE BAL menu to select MANUAL and enter the sub-menu.
- Select a manual preset for INDOOR or OUTDOOR conditions, or select MANUAL to set blue and red values individually.

6.4.4. BACKLIGHT Menu

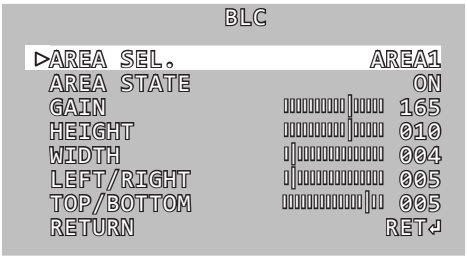
Back Light Compensation (BLC, **default**) clarifies objects in front of bright light. For example, in a scene with lighting facing the camera, if a person walks toward a normal camera, they will appear as a silhouette, but BLC will adjust contrast for more detail. BLC is ideal where the field of view is focused close to the camera.

High Light Compensation (HLC) blocks bright light from causing white-out. For example, with HLC, car headlights will appear to be blacked out and surrounding light levels will be balanced enough to reveal details that would normally be washed out. HLC is ideal for a wide field of view focused far from the camera.

Use MASK SKIP to define where BLC/HLC is active; for example, where bright light only disrupts the top or bottom of a scene.

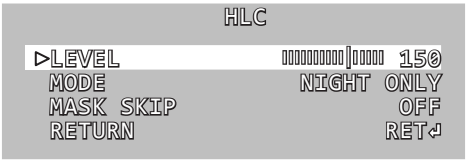
- Move the joystick left or right to select HLC or BLC and enter its sub-menu.

6.4.4.1. BLC (Back Light Compensation) Setup



- **AREA SEL —** Select AREA1 or AREA2 to adjust BLC values for that area.
- **AREA STATE —** Set BLC to OFF or ON in each area.
- **GAIN —** Adjust the level of BLC from 0~255.
- Set the BLC area by adjusting **HEIGHT, WIDTH, LEFT/RIGHT,** and **TOP/BOTTOM**.

6.4.4.2. HLC (High Light Compensation) Setup



- **LEVEL —** Adjust from 0 to 255. The larger the value, the more the camera will black out light sources.
- **MODE —** Set to ALL DAY or NIGHT ONLY mode. NIGHT ONLY mode turns off HLC unless the color mode is in black and white (BW).
- **MASK SKIP —** Turn ON and enter the sub-menu (not pictured) to size and position the square MASK SKIP area.

6.4.5. DAY & NIGHT Menu

The camera sensor has DAY (color) and NIGHT(black and white) mode. Use this menu to set up the mode, how it is switched and also IR levels.

- Move the joystick left or right to select a mode and enter its sub-menu (if applicable). Not all menus are displayed due to similarities in settings.

6.4.5.1. D&N EXT (External Sensor)

By default (**D&N EXT**), the color mode is set based on a light sensor on the front of the camera. Recommended for most applications.

- **D→N DELAY:** Set delay for switching day (COLOR) to night (B/W) mode. Set from 0 to 30 seconds. Increase if night mode switches on too quickly.
- **N→D DELAY:** Set delay from Night to Day mode (opposite of above). Set from 0 to 30 seconds. Increase if day mode switches on too quickly.

6.4.5.2. D&N COLOR Mode

Lock the camera in COLOR (daylight) mode. IR will NOT activate in this mode, so the ambient lighting level must be sufficient for viewing.

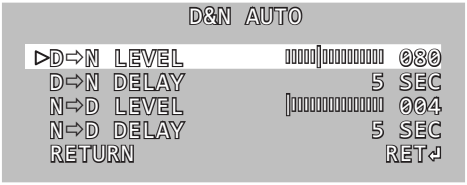
6.4.5.3. B/W Setting

Lock the camera in B/W (night time) mode. IR intensity may also be set.

- **BURST —** Turn ON and image is converted to a grey image containing the color signal. OFF sends a true B/W image containing no color signal.
- **IR SMART —** Prevents over-exposure by reducing IR LED intensity when objects are too close to the camera. Scroll left or right to turn ON or OFF.
- **IR LEVEL —** Scroll left or right to set the IR output level to HIGH or LOW.

6.4.5.4. D&N AUTO Setting

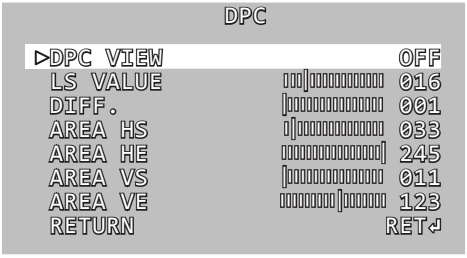
In this mode, the camera uses the light entering the sensor to determine daytime (COLOR) or nighttime (BW) mode.



- **D > N LEVEL —** Set the light level required to switch from COLOR to B/W mode. Increase if the camera switches to B/W mode too early at night.
- **D > N DELAY —** Set the delay for switching to B/W mode. Increase if the camera fluctuates between COLOR and B/W mode early at night.
- **N > D LEVEL —** Set the light level required to switch from B/W to COLOR mode. Increase if the camera switches to COLOR mode too late in the morning.
- **N > D DELAY —** Set the delay for switching to COLOR mode. Increase if the camera fluctuates between B/W and COLOR mode early in the morning.

6.4.6. DPC (Dead Pixel Compensation)

Dead Pixel Compensation automatically removes defective pixels and “fills in” the image. Use the UP arrow function to exit this menu without performing DPC.



- **START —** Covers the lens and then press ENTER allow the camera to search for dead pixels.
- **DPC View—** Turn ON to see where compensation is active.
- **LS VALUE —** The speed at which the shutter closes. Higher value means faster speed.
- **DIFF. —** (Diffusion) Higher value means the dead pixel spots are expanded.
- **AREA HS —** Adjust the right box line on screen, from 0 to 255.
- **AREA HE —** Adjust the left box line on screen, from 0 to 255.
- **AREA VS —** Adjust the top box line on screen, from 0 to 255.
- **AREA VE —** Adjust the bottom box line on screen, from 0 to 255.

6.4.7. SPECIAL Menus

6.4.7.1. CAM TITLE Setting

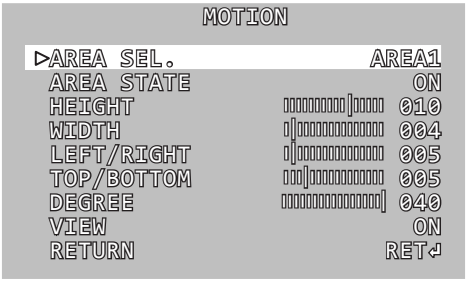
The CAM TITLE sub-menu provides the ability to set a camera name and have it appear on the screen.

- **CAM TITLE** — Set to ON to display the camera name on the screen.
- Set a camera name by selecting one letter/number at a time using the menu at the bottom of the screen. Assigning a name that highlights the location of the camera such as Lobby, Main Hall, etc. is recommended.
- Press **CLR** to clear all letters, press **POS** to choose the position of **CAM NAME** on the screen, and press **END** to exit the menu.

6.4.7.2. MOTION Detection

Motion Detection allows for up to 4 zones of motion detection. When an object in one of the zones moves, the camera will highlight motion in magenta rectangles. This allows for monitoring motion more efficiently.

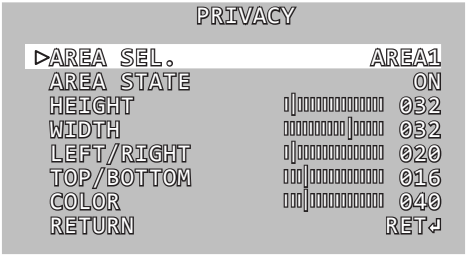
Scroll left or right to set MOTION DET to ON and enter into the Motion sub-menu.



- **AREA SEL. —** Select from zones 1~4 to adjust the motion detection settings of that area(zone).
- **AREA STATE —** Set to ON to display the detection zone on the screen: set to OFF to hide the detection zone on the screen.
- Customize the size and the position of each detection zone by adjusting **HEIGHT**, **WIDTH**, **LEFT**/**RIGHT**, **TOP**/**BOTTOM** values.
- **DEGREE —** Increase to raise motion detection sensitivity.
- **VIEW —** When set to ON, the screen will highlight motion of the moving object with magenta rectangles.

6.4.7.3. PRIVACY Setting

Privacy Mask allows the masking of up to 8 “surveillance-free” zones in the field of view. This may be used for a camera that has a neighbor’s window in part of the scene, or with an area where sensitive information would be visible.



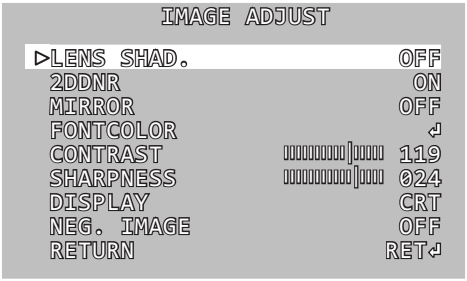
- **PRIVACY MASK —** Set to ON to enter into the sub-menu.
- **AREA SEL —** Select zone 1-8 to adjust a region.
- **AREA STATE —** Set to ON to show the privacy zone mask on the screen. Set to OFF to hide the privacy zone mask.
- Customize the size and the position of privacy zone by adjusting **HEIGHT**, **WIDTH**, **LEFT/RIGHT**, and **TOP/BOTTOM** values.
- **COLOR —** Options for mask color include 16 different colors for each privacy zone. Change the color by selecting a value from 0 to 15.

6.4.7.4. PARK LINE Setting

The PARK LINE function may be useful if the camera is used in a mobile application. The parking line can be aligned with objects in the field of view.

- **LT —** Adjust the top left area on screen, from 0 to 195 steps.
- **LB —** Adjust the bottom left area on screen, from 0 to 194 steps.
- **RT —** Adjust the top right area on screen, from 0 to 194 steps.
- **RB —** Adjust the bottom right area on screen, from 0 to 194 steps.
- **F —** Adjust the front area on screen, from 0 to 68 steps.
- **N —** Adjust the near area on screen, from 0 to 68 steps.
- **T —** Adjust the parking line thickness, from 0 to 15 steps.

6.4.7.5. IMAGE ADJ. Setting



- **LENS SHAD. —** This feature brightens the corners of the image when using a wide angle view. Scroll left or right to toggle OFF or ON.
- **2DNR —** 2D-DNR digital noise reduction produces clear images in low light conditions. Not only does it help to reduce image noise, but it also minimizes the object from becoming blurred when in motion. Scroll left or right to toggle **OFF** or ON.
- **MIRROR —** Allows the image to be mirror reversed. Typically used in vehicles or mobile applications. Scroll left or right to toggle **OFF** or ON.
- **FONT COLOR —** Enter the sub-menu (not pictured) to change the font color, size, and position. There are 16 options for the OSD Font Color and CAM TITLE color. Change colors by selecting a value from 0 to 15 steps.
- **CONTRAST —** When increasing the contrast value, dark colors become darker and light colors become lighter. The value ranges from 0 to 255.
- **SHARPNESS —** Adjust the clarity of the image. The higher th value the more claritty, but too high a setting will have extra noise. The value ranges from 0 to 31.
- **DISPLAY —** Scroll left or right to select CRT, LCD, or USER depending on the type of monitor used to view the camera. CRT sub-menu adjustments include:
  - **PED LEVEL —** The higher the value, the brighter the image.
  - **COLOR GAIN —** The higher the value, the darker the image.
  - **GAMMA —** Standard value is 0.55. Adjust between 0.05 ~1.00. To correct color issues.
- **NEG. IMAGE —** Offers a wider dynamic range and preserves most detail because it displays data exactly as the CCD sees it. Select ON for images with the most light intensity and color information.

6.4.7.6. COMM ADJ. — RS485 Setup

Set up remote control of the camera's OSD SETUP menu from a PTZ controller or DVR through RS485.

```
COMM ADJ

▷CAMERA ID          001
 BAUDRATE          4800
 PROTOCOL       PELCO-D
 DISPLAY ID         OFF
 ID POS              ↵
 RETURN           RET↵
```

- **CAM ID —** Scroll left or right to select a unique ID number from 0 to 225 to identify the camera on the RS485 loop.

  Note: Each device in the RS485 connection MUST be set to a unique address number for proper RS-485 communication.

- **BAUD RATE —** Scroll left or right to choose a baud rate for RS485 communication between the camera and controller. Baud rate options include 4800, 9600, 19200, 38400, and 57600.

  Note: ALL devices in the RS485 connection must be set to the same baud rate for proper RS-485 communication.

- **PROTOCOL —** Scroll left or right to select a communication protocol - PELCO-D or PELCO-P. Wirepath devices use Pelco-D.
- **DISPLAY ID —** Scroll left or right to set DISPLAY ID to ON and show the CAMERA ID on the screen. This feature is useful when needing to know the ID of a camera simply by viewing a picture.
- **ID POS —** Scroll left or right to set the position for the CAMERA ID on the display screen.

6.4.8. Exit Menu — Save and Reset

After making changes, settings should be saved either in the sub-menu, or, by using the SAVE function in the EXIT menu. If adjustment to the camera's settings results in poor picture quality, settings may be discarded (NOT SAVE) or RESET:

6.4.8.1. SAVE

Save all current settings and exit the SETUP menu.

6.4.8.2. NOT SAVE

Discard all unsaved changes and exit the SETUP menu.

6.4.8.3. RESET

All configurations with the exception of the COMM SETTINGS will be reset back to factory default settings. This option does not have an "UNDO" feature, so ensure default settings are desired before selecting this function. The cursor will return to the top of the SETUP menu after the reset is complete.

7. Troubleshooting

If you have trouble operating the camera, first refer to the following guidelines. If the problem persists, contact Technical Support at (866) 838-5052.

Nothing appears on the display:

- Check if the power for the camera and the monitor is ON.
- Check if the VIDEO cable is connected to the camera BNC video output jack.
- Check if the VIDEO cable is connected to the monitor VIDEO input jack.

Image appears dim on the display:

- Check the monitor contrast setting.
- Check the monitor brightness setting.
- Check the lens. If necessary, clean with a soft, clean eyeglasses cloth.
- Check if the camera is facing towards a bright light. If so, change the camera position.
- If a device exists between the camera and screen, confirm the signal accepted by the screen is strong enough – 75 Ohm.

Image appears blurry on the display:

- Check the focus of the lens.
- Check the lens. If necessary, clean with a soft, clean eyeglasses cloth.

The camera is not working properly and the camera housing is hot:

- Check if camera is connected to the correct power source.

Condensation Appears on Camera Lens Cover:

- Add a new silica desiccant pack inside the camera housing.

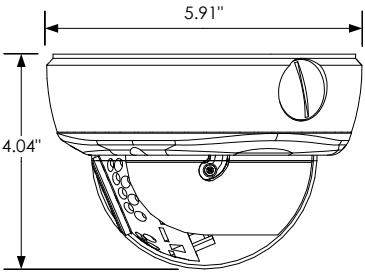
Camera Power Cycles Intermittently:

- Check voltage at camera for proper voltage level.
- Connect camera locally with a different power supply to test.

8. Specifications

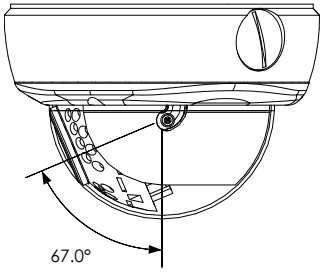
Imaging		
Image Sensor		960H 1/3" Color Sony Super HAD II
Lens		2.8 ~ 12mm Auto Iris Vari-Focal Lens
Estimated Horizontal Viewing Angle		92˚(W)~30˚(T)
Resolution (TVLs)		700
Effective Pixels		NTSC:976(H)x494(V)
Gamma		0.45
S/N Ratio		>50dB
Sync. Mode		Internal Sync
Scanning System		2:1 Interlace
Auto IRIS		Yes
IR Range		65ft
Smart IR		Yes
True Day / Night		Yes
Technology		
OSD		Yes
WDR		Yes
DNR		Yes
Minimum Illumination		0.01 Lux color, 0 Lux IR on
Highlight Compensation		Yes
Auto Gain Control		Yes
Back Light Compensation		Yes
White Balance		Yes
Lens Correction		Yes
Privacy Mask		Yes
Motion Detection		Yes
Mirror Mode		Yes
Parking Line		Yes
Housing and Power		
Weather Rating		IP66
Vandal Resistant		Yes
Side Conduit Threading		3/4" NTP
RS485		Yes
Operating Temperature		14°F-140°F
Operating Humidity		30%-80% RH
Power Source (Not Included)	**Main Power**	12V DC or 24V AC (500mA minimum)
	Test Adapter	12V DC (500mA minimum)
Power Consumption		4.5W 375mA
Dimensions		See Dimensions (next page)
Weight		2 lbs

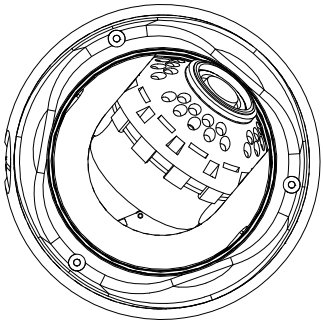
9. Dimensions



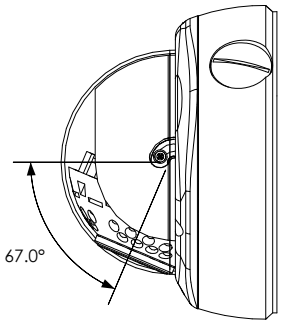
Side View

Maximum Camera Angle





Top View



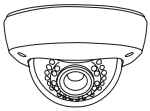
10. 5-Year Limited Warranty

This camera has a 5-Year Limited Warranty. The warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products which have been abused, modified, disassembled or improperly installed. Products to be repaired under this warranty must be returned to Wirepath™ Surveillance or a designated service center with prior notification and an assigned return authorization number (RA).

11. Contacting Technical Support

Phone: (866) 838-5052

Email: Techsupport@snapav.com



WIREPATH
SURVEILLANCE

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