

UVC-XP3-HR(-P) Camera User Manual

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Product description

This color video camera is the next generation in wide dynamic range cameras. It uses the latest in UTC Xposure image analysis technology.

The sensor architecture provides unequalled wide dynamic range performance and improves how the camera deals with low-light conditions.

Another revolutionary feature of the UltraView XP3 is dual-temperature calibration. The UVC-XP3-HR is calibrated at the factory, so the camera knows how to adjust gain, white balance, and other settings based on

its environment. The camera is able to get the best possible images in any situation and at any temperatures within its operating specifications.

User guidelines

Use the following guidelines:

- Program as many camera settings as possible before mounting the camera. Take appropriate safety precautions while completing programming after installation.
- Always use a 12 VDC or 24 VAC UL listed Class 2 power supply to power the camera.

Do not use the camera outside the temperature range specifications: -57 to 122°F (-50 to +50°C).
- If the light source where the camera is installed experiences rapid, wide- variations in lighting, the camera may not operate as intended.

WARNING: To reduce the risk of fire or electronic shock, do not expose the camera to rain or moisture and do not remove the cover or back.

Package contents

Check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit; contact the supplier immediately. If the unit is returned, it must be shipped back in its original packaging.

Package contents:

- Multilingual Installation Sheet
- CD with User Manual in several languages
- Camera
- C-mount adaptor

CAUTION: Use direct plug-in UL listed power supplies marked Class 2 or LPS (limited power source) of the required output rating as listed on the unit.

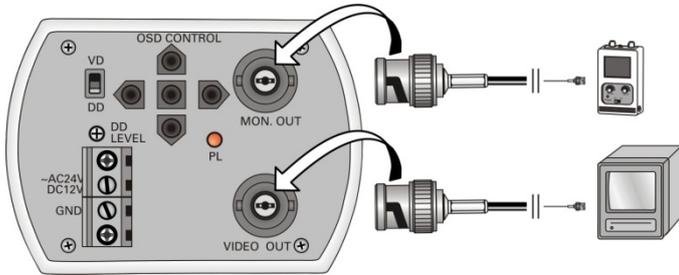
Installation

This chapter provides information on how to install the camera.

Video connections

To make cable connections, do the following:

Figure 1: Making the video connections

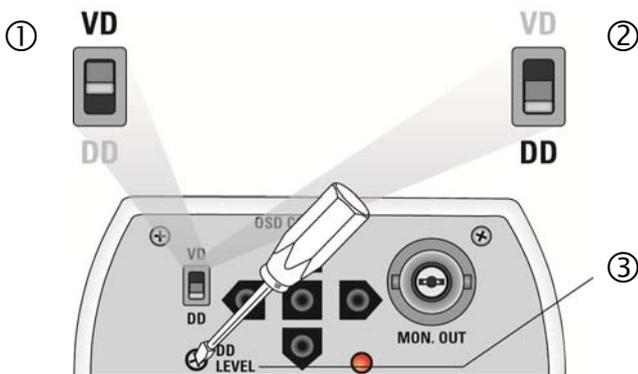


1. Connect a coaxial cable terminated with BNC connectors between the MON OUT connector of the camera and the video in connector on a test or local monitor.
2. Connect a coaxial cable terminated with BNC connectors between the VIDEO OUT connector of the camera and the video in connector on a monitor, multiplexer, switcher, or other standard video device.

Set the lens mode

If your lens has a manual iris, ignore this switch. It is for autoiris lenses only.

Figure 2: Lens mode DIP switch and iris level adjustment



1. Set to VD (video drive) for autoiris lenses with built-in amplifier
2. Set to DD (direct drive) for autoiris lenses without amplifier
3. DD adjustment. See Note.

Note: When the lens mode DIP switch is set to DD, you can use the DD level screw (iris level adjustment) to ensure the correct exposure of images for the camera's position and the lighting conditions. Use an insulated tool to rotate the screw. Observe the results on the monitor screen for the best setting.

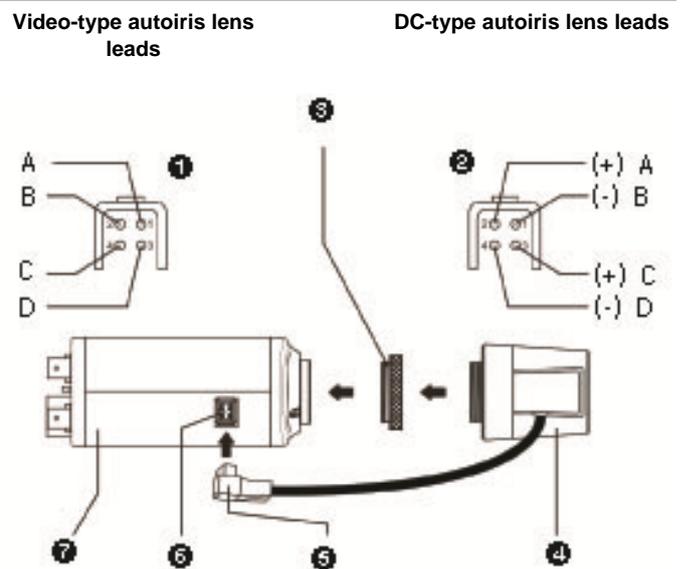
Attach the lens

Refer to the instructions that came with the lens you purchased for complete installation instructions of that lens.

Note: For optimal performance, use an autoiris lens.

To install most lenses, see Figure 4 and do the following:

Figure 3: Attaching your lens



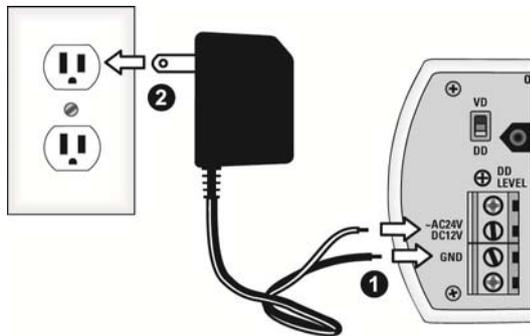
- | Video-type autoiris lens leads | DC-type autoiris lens leads |
|---|--|
| 1. Video-type autoiris lens leads: A. Red (9 VAC); B. NC (no connection); C. Black (ground); D. White (video) | 2. DC-type autoiris lens leads: A. Damping coil (+); B. Damping coil (-); C. Driving coil (+); D. Driving coil (-) |
| 3. C-mount adapter (for C-mount lenses only) | 4. Lens (autoiris lens shown; a manual iris has no cable) |
| 5. Autoiris lens plug | 6. Autoiris lens connector |
| 7. Camera | |
1. If you are using a C-mount lens, screw on the provided C-mount adapter.
 2. Screw your customer-supplied lens onto the camera.
 3. If you are using an autoiris lens, insert the autoiris lens plug into the autoiris lens connector.

Connect power

See Figure 5 and do the following:

Caution: Use direct plug-in UL listed power supplies marked Class 2 or LPS (limited power source) of the required output rating as listed on the unit.

Figure 4: Power connection



1. With a screwdriver, loosen the GND and ~AC24V/DC12V terminal screws on the terminal block.
2. Connect a universal 12 VDC, 24 VAC power supply to the terminal block.

Note: The terminal block is not polarity-sensitive. Either power lead can be connected to either terminal connector. There is no need for an isolated ground wire. The two power terminals can accept any polarity and any combination of power that equals 12 VDC or 24 VDC.

3. Retighten the terminal screws until snug, ensuring that the power leads are secure.
4. Supply power to the unit by plugging the power supply into a proper source.

Note: The power LED illuminates to show that the camera is receiving power. If it does not illuminate, check the terminal block connections and the power source

Mount the camera

To mount the camera, attach the camera to the mounting surface using the appropriate fasteners.

Connect the monitor

Program the cameras by attaching a standard video monitor to the system.

To connect the monitor, do the following:

1. Plug the monitor output cable to the video monitor output connector (see Figure 1 on page 2.)
2. Connect the BNC cable to the video monitor.

3. Press Enter (see OSD control pad on page 9) to display the Setup menu.

Programming

This chapter describes how to navigate the setup menus to adjust the camera settings.

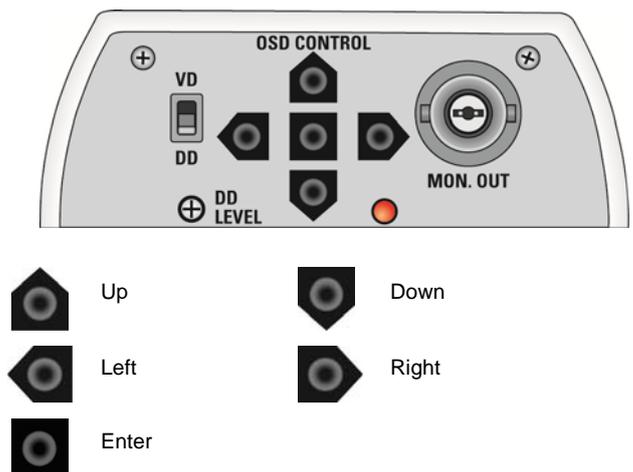
OSD controls

Use the OSD (onscreen display) setup menus to program the camera. See Figure 5 below.

There is a menu map on the back page of the manual that shows an overview of the menus (see "Menu Map" on page 10.)

Note: If you do not press a button for two minutes, your changes are saved, and the camera returns to its normal function.

Figure 5: OSD menu controls



Note: Wherever the PREVIOUS PAGE option appears, use it to leave the current menu and return to the previous menu. Move to the PREVIOUS PAGE option and press the center button.

Main menu

The camera is configured through the setup menus which appear onscreen.

To access and navigate the main menu, press and hold the center button of the OSD (See Figure 6). Use the up or down buttons to move between items, and press the center button to select that item. Use the left and right buttons to select the different options available for the item.

Figure 6: Main menu

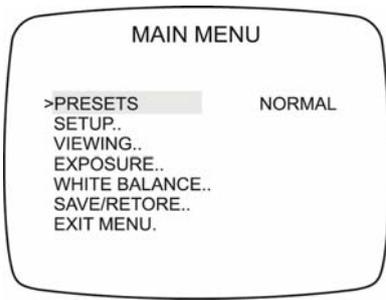


Table 1 lists the main menu options.

Table 1: Main menu options

Menu option	Function
Presets	Configures the preset for the lighting condition.
Setup	Configures camera ID, video I/O, type of lens, motion detection, and wide dynamic range options.
Viewing	Configures flip, resolution, gamma correction, image sharpness, and saturation settings.
Exposure	Configures automatic gain control (AGC), AE preferences, range, shutter limit, and advanced exposure limits.
White balance	Configures white balance (WB) mode, magenta control, WB bias, and auto tracking white balance.
Save/restore	Displays firmware version, resets camera, saves user settings, restores user settings, and restores factory settings.
Exit	Exits the OSD menu system.

Presets menu

Table 2 lists the presets for common lighting conditions. Select the option that suits your camera's situation.

Table 2: Preset menu options

Menu option	Description
Normal	This is the camera default preset for general lighting conditions out of the box. This mode supports 14 bits of dynamic range and gives priority to rendering the highlights in the scene.
Indoor	This preset supports 16 bits of dynamic range and gives priority to rendering the shadows in the scene. It is primarily used for typical indoor scenes and when you want to see backlit objects clearly in front of bright backgrounds (as in a building lobby, for example).
Outdoor	This preset offers the highest dynamic range of 17 bits and gives priority to rendering the highlights in the scene. This mode produces flatter images than modes with lower dynamic range.

Menu option	Description
Fluor 1	This mode uses line lock to eliminate phase roll under fluorescent lights. Dynamic range is 14 bits. It must be used with a 24 VAC power supply.
Fluor 2	This mode uses a DC iris lens to reduce phase roll under fluorescent lights. Dynamic range is reduced to 12 bits in this mode. With some fluorescent lights, the roll is slowed down, but not completely eliminated. This mode will not function correctly with a manual iris lens.
Custom	Whenever any menu items are changed, Custom will be displayed.

Setup menu

From the Main menu, use the arrow buttons to select Setup and press the center button. The Setup menu screen appears.

Figure 7: Setup menu

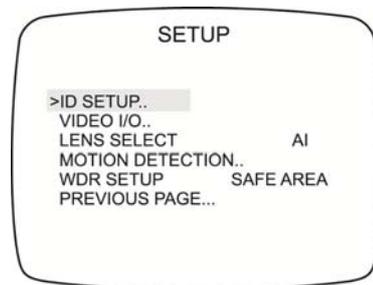


Table 3 below lists the main menu options.

Table 3: Setup menu options

Menu option	Description
ID setup	Configures camera identification and position. See "Camera ID setup" on page 5 for setup information.
Video I/O	Configures video standard and sync options. See "Video I/O" on page 5 for setup information.
Lens select	Configures the lens as autoiris or manual.
Motion detection	Configures detection threshold, PTZ settings, and the location and size of the detection zone. See "Motion detection" on page 5 for setup information.
WDR setup	Configures wide dynamic range. Select one of the four options available: safe area, center spot, Lower 1/3, or Full screen.
Previous page	Returns to previous menu.

Camera ID setup

From the Setup menu, use the arrow buttons to select ID setup and press the center button. The Camera ID Setup menu screen appears.

Figure 8: ID setup menu

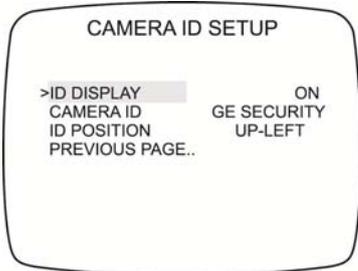


Table 4 below lists the Camera ID setup menu options.

Table 4: Camera ID setup menu options

Menu option	Description
ID display	Select on or off.
Camera ID	Press the right button to move the cursor to edit the camera ID. Use the up or down buttons to cycle through the options and the center button to select. When complete use the up or down buttons to leave the editing field.
ID position	Select one of the position options: Up-Left, Up-Center, Up-Right, Down-Left, Down-Right.
Previous page	Select to return to the previous menu.

Video I/O

From the Setup menu, use the arrow buttons to select Video I/O and press the center button. The Video I/O menu screen appears.

Figure 9: Video I/O menu

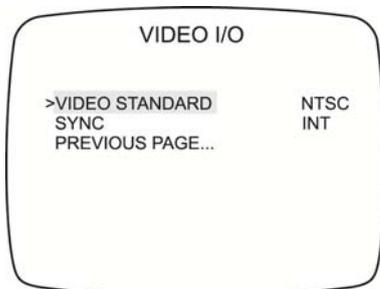


Table 5 below lists the Video I/O menu options.

Table 5: Video I/O menu options

Menu option	Description
Video Standard	Select NTSC or PAL.
Sync	Select one of the two options: INT - Internal Synch. This is used with DC Power

Menu option	Description
	Input as a way to reduce the phase roll of fluorescent lights. LL - Line Lock. This is used to synch video for AC Power Input so that the synch matches the frequency of the power input. This will completely eliminate the roll caused by fluorescent lights.
Previous Page	Returns to previous menu.

Motion detection

From the Setup menu, use the arrow buttons to select Motion detection and press the center button. The Motion Detection menu screen appears.

Figure 10: Motion detection menu

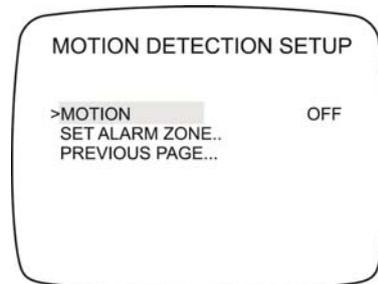
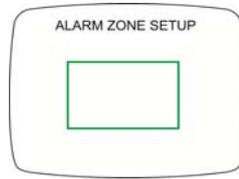


Table 6 below lists the Motion Detection setup menu options.

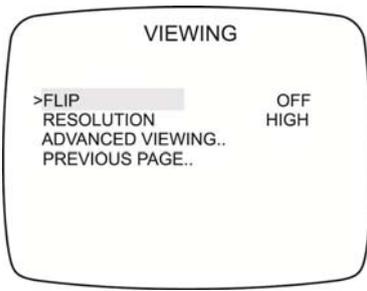
Table 6: Motion Detection setup menu options

Menu option	Description
Motion	Select one of the options: Off - Turns off motion detection. All Alarms - Not used. GPI Trigger - Not used. Motion Detection - Set activity threshold, digital zoom, digital pan, and digital tilt.
Set Alarm Zone	Select to launch <i>Alarm zone setup</i> menu. This menu lets you select the location and size of the detection zone. Use the arrow buttons to move and size the selection box.
	
Previous Page	Select to return to the previous menu.

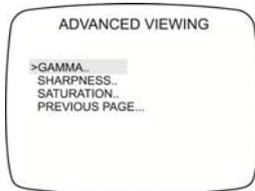
Viewing menu

From the Main menu, use the arrow buttons to select Viewing and press the center button. The Viewing menu screen appears.

Figure 11: Viewing menu



Menu option	Description
Flip	Configures horizontal flip. Select on or off option.
Resolution	Configures resolution. Select high or normal option. The High option oversharpens the image for higher resolution.
Advanced Viewing	Gamma correction, image sharpness, and saturation settings.



For gamma correction setup, see “Gamma correction” below.

For image sharpness setup, see “Sharpness” below.

For saturation settings, see “Saturation” below.

Previous page	Returns to previous menu.
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Gamma correction

From the Advanced viewing menu, use the arrow buttons to select Gamma and press the center button. The Gamma menu screen appears.

Figure 12: Gamma menu

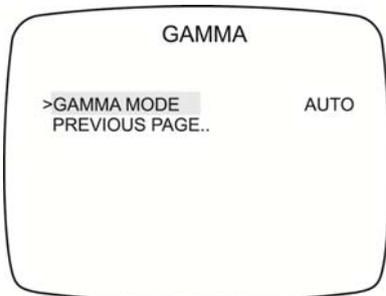


Table 7 below lists the Gamma menu options.

Table 7: Gamma mode menu options

Menu option	Description
Gamma mode	The automatic value is 0.45. Adjust the value manually to change the picture contrast on the monitor if the controls on the monitor are not giving sufficient adjustment. Select one of the three options: Auto, Manual, Off
Previous page	Returns to previous menu.

Sharpness

From the Advanced viewing menu, use the arrow buttons to select Sharpness and press the center button. The Sharpness screen appears.

Figure 13: Sharpness menu

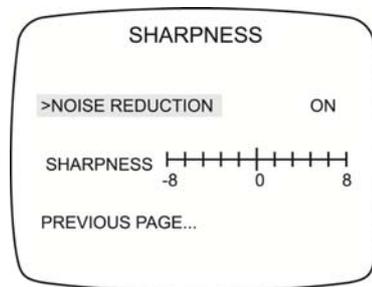


Table 8 below lists the Sharpness menu options.

Table 8: Sharpness menu options

Menu option	Description
Noise reduction	Noise is unwanted signals on the data lines. Select on or off.
Sharpness scale	Use the left or right buttons to raise or lower the sharpness.
Previous page	Select to return to previous menu.

Saturation

From the Advanced viewing menu, use the arrow buttons to select Saturation and press the center button. The Saturation screen appears.

Figure 14: Saturation menu

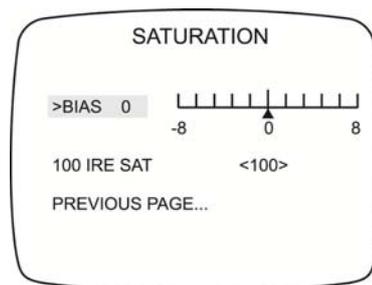


Table 9 on page 7 lists the Saturation setup options.

Table 9: Saturation menu options

Menu option	Description
BIAS scale	Use the left and right buttons to raise or lower the image sharpness level.
IRE saturation	IRE is the measurement of composite video signals. This value shows the usable light level. Enter a value between 100 and 130.
Previous page	Returns to previous menu.

Exposure menu

From the Main menu, use the arrow buttons to select Exposure and press the center button. The Exposure screen appears.

Figure 15: Exposure menu

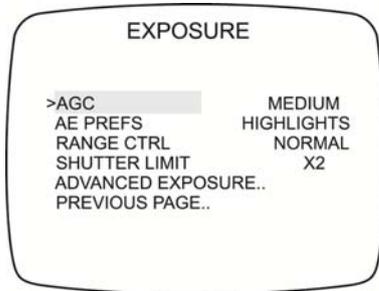


Table 12 lists the Exposure setup options.

Table 10: Exposure options

Menu option	Description
AGC	Configures auto gain control (AGM). The image quality is automatically adjusted in low light conditions. Select one of the options: Medium, High, Custom, Low.
AE preferences	Highlights or Shadows.
Range CTRL	Normal, High, or Custom.
Shutter limit	Configures shutter limit. Select one of the options: X2, X4, X8, X16, X32, Off.
Advanced exposure menu	Configures frame repeat, day/night setup, transitions. See "Advanced Exposure" below for setup information.
Previous page	Select to return to previous menu.

Advanced Exposure

From the Advanced Exposure menu, use the arrow buttons to select Advanced Exposure and press the center button.

Figure 16: Advanced exposure menu

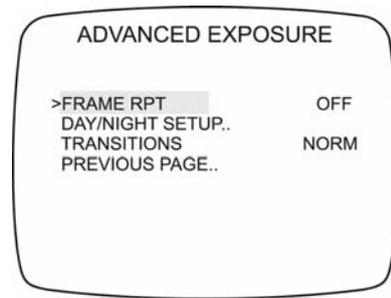


Table 11 below lists Advanced Exposure setup options.

Table 11: Advanced exposure menu options

Menu option	Description
Frame repeat	Off, 2X, Set, or Freeze.
Day/night setup	Day/night setup settings. See "Day/night setup" below for setup information.
Transitions	Normal, Fast, or Slow.
Previous page	Returns to previous menu.

Day/night setup

From the Advanced exposure menu, use the arrow buttons to select Day/night setup and press the center button.

Figure 17: Day/night setup menu

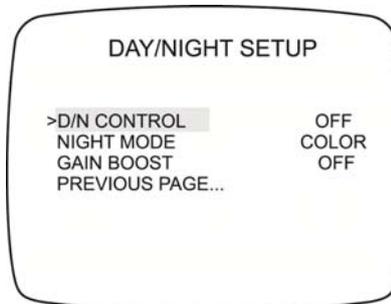


Table 12 below lists the Day/Night setup options.

Table 12: Day/Night setup options

Menu option	Description
D/N control	Select on or off.
Night mode	Use this option in monochrome or low light situations. Select one of the three options: Color, B/W, B/W and Burst. Burst allows the camera to display color menus on top of black and white video.
Gain boost	Used in low light levels. Select on or off.
Previous page	Returns to previous menu.

White balance menu

From the Main menu, use the arrow buttons to select White balance and press the center button.

Figure 18: White balance menu

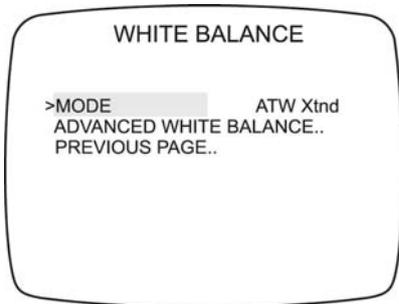


Table 13 below lists the White Balance menu options.

Table 13: White balance options

Menu option	Description
Mode	<p>ATW Xtend (Auto tracking white balance) - The default white balance range of the XP3 camera is between 2800 and 7500 Kelvin depending on the color temperature of the scene illumination. It can be manually adjusted to between 2000 and 11000 Kelvin.</p> <p>AWB (Auto white balance) – use this mode to set a specific white balance. Typically this is done by placing a white object in front of the camera, letting the white balance adjust, and then hitting the AWB set command to lock in the white value. The camera will use this value as the default white balance setting.</p> <p>Manual - Use this mode to set the camera to a specific color temperature. The camera will not adjust to white balance changes in the scene over time.</p>
Advanced white balance menu	Advanced white balance settings. See “Advanced white balance” below for setup information.
Previous page	Returns to previous menu.

Advanced white balance

From the White balance menu, use the arrow buttons to select Advanced White Balance and press the center button.

Figure 19: Advanced white balance menu

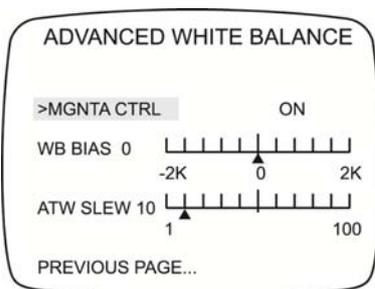


Table 14 below lists the Advanced White Balance menu options.

Table 14: Advanced white balance options

Menu option	Description
Magenta control	Select one of the options: on, off, custom.
WB BIAS scale	Use the left or right buttons to raise or lower the WB BIAS.
ATW slew scale	Use the left or right buttons to raise or lower the ATW slew.
Previous page	Returns to previous menu.

Save/restore menu

From the Main menu, use the arrow buttons to select Save/restore and press the center button.

Figure 20: Save/restore menu



Table 15 below lists the Save/restore menu options.

Table 15: Save/restore options

Menu option	Description
System info menu	Displays firmware version.
Reset camera	Performs camera reset.
Save user settings	Saves all current changes.
Restore user settings	Discards all current changes.
Restore factory settings	Resets all settings to factory levels.
Previous page	Returns to previous menu.

Regulatory information

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FCC compliance 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 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.

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user 's authority to operate the equipment.

Certification  N4131

European Union directives 12004/108/EC (EMC directive): Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.



2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Contact information

For contact information see: www.interlogix.com or www.utcssecurityproducts.eu.

Menu Map

