

clintonelectronics



For 4MP & 2MP EX-SDI 2.0 Pro and Lite Series Cameras

ON SCREEN DISPLAY User Manual

Make sure you read this manual before using the camera. Store this manual safely so that you can use it in the future. Please use this manual along with the Installation Manual included with the camera.

Clinton Electronics Corp. 6701 Clinton Road. Loves Park, IL 61111

Sales: 1-800-447-3306 Support: 1-800-549-6393 www.clintonelectronics.com

IMPORTANT SAFETY INSTRUCTIONS

- 1.** Read these instructions.
- 2.** Keep these instructions.
- 3.** Heed all warnings.
- 4.** Follow all instructions.
- 5.** Do not use this apparatus near water.
- 6.** Clean only with dry cloth.
- 7.** Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatuses (including amplifiers) that produce heat.
- 9.** Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10.** Protect the power cord from being

walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

PORTABLE CART WARNING



13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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



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

In USA and Canada, Use Class 2 Power Supply Only

INFORMATION: This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

DISCLAIMER: Clinton Electronics reserves the right to change the contents of this manual without prior notice.

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

CAUTION: To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than that specified.
- ◆ Do NOT expose the inside of this appliance to rain or moisture.

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

The camera requires periodic inspection.

Contact an authorized technician to carry out the inspection.



Stop using your camera if you find it malfunctioning.

If the camera emits smoke or is unusually hot for a long period, a fire may be caused.



Do not install the camera on a surface that can not support it.

If the camera is installed on an inappropriate surface, it may fall and cause injury.



Do not hold plug with wet hands.

It could cause an electric shock.



Do not disassemble the camera.

It may result in an electric shock or other hazards.



Do not use the camera close to a gas or oil leak.

It may result in a fire or other hazards.



Do not touch the front lens of the camera.

This is one of the most important parts of the camera. Be careful not to leave fingerprints on the lens cover.



Do not install the camera in extreme temperature conditions.

Only use the camera under conditions when temperatures are between -20°F - 122°F. Be especially careful to provide ventilation when operating under high temperatures.



Do not install the camera under unstable lighting conditions.

Severe lighting change or flicker can cause the camera to work improperly.



Do not drop the camera or subject it to physical shocks.

It can damage the housing, compromising weather resistance.



Do not expose the camera to radioactivity.

If exposed to radioactivity the Image Sensor will fail.



Never keep the camera pointed directly at strong light.

It can damage the Image Sensor.



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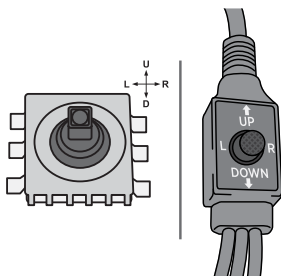
OSD (On Screen Display) MENU

Camera functions and settings can be adjusted or changed by activating the OSD menu. When the OSD menu is activated, text will display on the monitor. The user can then move the cursor to the desired function to change the setting.

| | | | |
|-------------|---|---|---|
| ZOOMFOCUS | <ul style="list-style-type: none">• AF MODE• SYNC TDN | <ul style="list-style-type: none">• SCANNING• LENS RESET | <ul style="list-style-type: none">• ONEPUSH AF• INITIALIZE |
| EXPOSURE | <ul style="list-style-type: none">• SHUTTER | <ul style="list-style-type: none">• SENS-UP | <ul style="list-style-type: none">• AGC |
| WHITE BAL | <ul style="list-style-type: none">• ATW• MANUAL | <ul style="list-style-type: none">• AWB | <ul style="list-style-type: none">• AWC-SET |
| IMAGE ADJ | <ul style="list-style-type: none">• SHARPNESS• COLOR MODE | <ul style="list-style-type: none">• GAMMA• SATURATION | <ul style="list-style-type: none">• BRIGHTNESS• BLACK LVL |
| BACKLIGHT | <ul style="list-style-type: none">• OFF• WDR | <ul style="list-style-type: none">• HLC | <ul style="list-style-type: none">• BLC |
| DAY & NIGHT | <ul style="list-style-type: none">• AUTO• EXTERN | <ul style="list-style-type: none">• COLOR | <ul style="list-style-type: none">• B&W |
| DNR | <ul style="list-style-type: none">• LOW• OFF | <ul style="list-style-type: none">• MIDDLE | <ul style="list-style-type: none">• HIGH |
| SPECIAL | <ul style="list-style-type: none">• ROTATE• DEFOG• MOTION | <ul style="list-style-type: none">• D-ZOOM• LENS SHADING | <ul style="list-style-type: none">• ACE• PRIVACY |
| SERIAL | <ul style="list-style-type: none">• CAM ID | <ul style="list-style-type: none">• BAUDRATE | <ul style="list-style-type: none">• ID DISPLAY |
| SYSTEM | <ul style="list-style-type: none">• SDI OUTPUT• VIDEOSYS• CAM TITLE | <ul style="list-style-type: none">• HD ANALOG• CVBS_FILTER• RESET | <ul style="list-style-type: none">• FRAME RATE• LANGUAGE |
| EXIT | <ul style="list-style-type: none">• SAVE | <ul style="list-style-type: none">• CANCEL | |

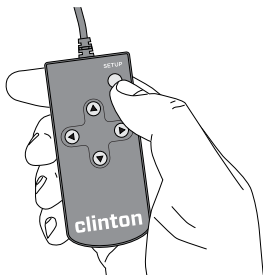
ACCESSING THE OSD

Settings can be adjusted using the built-in joystick, button pad, or optional hand-held CE-REMOTE (sold separately).



Joystick :

Press directly down on the joystick to activate the OSD menu. The OSD joystick is either located on the camera board, or in-line (on the cable).

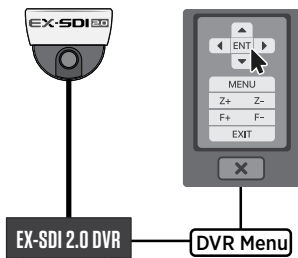


CE-REMOTE* :

Plug the remote into port located on the camera. Press the SETUP button to activate the OSD menu.

*CE-REMOTE

(sold separately) not available for every model.



UCC* :

Use the UCC controls on a connected DVR to adjust camera settings. With the UCC menu open, click ENTER (ENT) with the mouse to display the camera's OSD menu.

*Upstream Coax Communication (UCC) requires both the EX-SDI 2.0 camera and DVR to support UCC. Not every camera supports UCC. For UCC to function, the ID & Baudrate must match on Camera & DVR. Refer to the **SERIAL** section of this manual for more information.

OSD MENU VARIATIONS

The EXHD 2.0 OSD menu varies slightly depending on the camera type. Certain menu options shown in the manual may not be available on your camera.

EXHD 4MP:

Full featured menu for 4MP EX-SDI 2.0 cameras with motorized autofocus lens. Features DOL-WDR as well as selectable analog output options.

CLINTON EXHD 4MP

| | |
|--------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE ↵ |

EXHD 2.0:

Full featured menu for 2MP EX-SDI 2.0 cameras with motorized autofocus lens. Features DOL-WDR as well as selectable analog output options.

CLINTON EXHD 2.0

| | |
|--------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE ↵ |

EXHD Lite 2.0:

Does not have Digital Image Stabilization and other options are limited. For 2MP Lite Series cameras only.

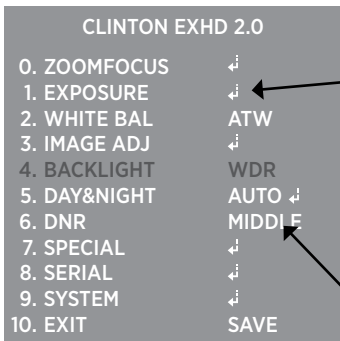
EXHD LITE 2.0

| | |
|--------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE ↵ |

OSD MENU SETTINGS

1. Press the SET button.
 - Settings can only be changed when the OSD menu is displayed on the monitor.

Select the function using the UP or DOWN buttons.




When an arrow is present, press the SET button to enter the sub menu.

Change the setting using the LEFT or RIGHT buttons.

2. Scroll through menu items from the list available by using the UP or DOWN buttons.
3. Use the LEFT or RIGHT buttons to change a setting.
4. When finished— select 'EXIT' with SAVE selected, then press the SET button to save settings.

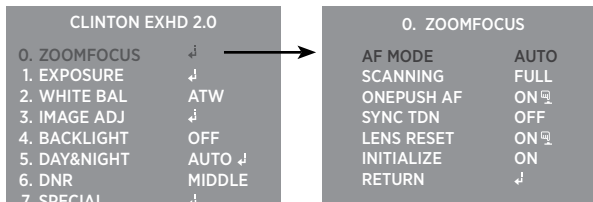


Notes

- An item with the  icon also has sub menus. To select a sub menu, select an item with the icon and press the SET button.
- An item with the “ - - - ” icon is unavailable due to function settings.
- All menu items have a 'RETURN' option. With this function you have the option to 'RET' (RETURN), which takes you back to the previous menu screen.
- The OSD times-out after a period of no activity. Any adjustments there were made will be lost.

ZOOM FOCUS

Use the options in this menu function to turn On/Off Auto Focus, reset focus and turn On/Off Day Night Sync. These settings are only available on cameras with motorized autofocus lenses.



From the main menu, scroll to ZOOMFOCUS and press the SET button to access the sub-menu.

► AF MODE

Choose either *AUTO* or *MANUAL* focus.

- **AUTO:** The lens will focus automatically after zooming in/out.
- **MANUAL:** Allows for manual lens focus using the joystick or D-Pad of CE-REMOTE.



Notes

- If Manual is the desired AF MODE; do not set SYNC TDN to 'ON' - doing so will refocus the camera at night, over-riding the manual focus selection.

► SCANNING

Choose either *HALF* or *FULL* scan for focusing during zoom adjustments.

- **HALF:** The lens scans only the current focal length, taking about 10 seconds.
- **FULL:** The lens scans the entire focal length, taking 50 seconds or longer.

| | Scanning Mode: | Half | Full |
|---------------|----------------|------------|------------|
| EXHD Lite 2.0 | One Push | 10 seconds | 50 seconds |
| | LensReset | 30 seconds | 75 seconds |

| | Scanning Mode: | Half | Full |
|----------|----------------|------------|------------|
| EXHD 2.0 | One Push | 5 seconds | 20 seconds |
| | LensReset | 15 seconds | 30 seconds |

ZOOM FOCUS : CONTINUED

► ONEPUSHAF

Press and hold the SETUP button to force the lens to quickly Auto Focus to the current zoom level/focal length.



Notes

- Upon initial installation/power ON of camera the camera will begin to focus on the current scene. If there is an obstruction of the lens; installer in front of camera, dome housing over camera– the camera might focus on those objects and could appear out of focus. To refocus the camera either adjust the level of zoom (zoom in / zoom out) or press and hold on ONEPUSHAF.

► SYNC TDN

Set to ON to automatically change the focus when the camera switches from Day to Night mode. (re-focuses when switches back to Day mode from Night).



Notes

- If SYNC TDN is set to 'ON' regular inspection and cleaning of the camera surface is strongly recommended. If the surface is dirty from dust, moisture, spider webs– the camera might not focus correctly.
- During refocusing of SYNC TDN, the camera will be out of focus for a few seconds. If the refocus time is too long, change the SCANNING mode to Half.

► LENSRESET

Press and hold the SETUP button to reset the lens– this will go through the currently selected Scanning mode (Half or Full). During LENSRESET the lens will zoom in & out, then return to the previous zoom level before adjusting the focus.

► INITIALIZE

- **ON:** The lens will automatically refocus during boot up/power on, even if set to Manual.
- **OFF:** The lens will not refocus during boot up/power on.



Notes

- For areas that are prone to power outages it may be useful to set INITIALIZE to the OFF position. Setting INITIALIZE to OFF will lock the zoom/focus at the last adjusted spot.
- If INITIALIZE is set to OFF, wait for the boot up message to disappear. Operating the OSD during the boot up can cause errors with some camera settings.

EXPOSURE

This function allows for the control of the amount of light that enters the camera. Too much light results in a washed out image.

| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE |

Press the SET button to access the sub-menu items listed below.

► SHUTTER

Select either *AUTO*, *MANUAL* or *FLICKER*.

- **AUTO:** Automatic shutter speed/control.
- **MANUAL:** Control the shutter speed manually (1/30-1/30,000).
- **FLICKER:** Select this when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.

► SENS-UP

During low light situations, the camera will automatically detect the light level and maintain a clear picture if this mode is activated.

► AGC (Auto Gain Control)

The higher the gain level, the brighter the screen, but the higher the noise.



Notes

- The higher the SENS-UP level, the brighter the screen, but the more likely it is that an after-image will appear. Possible image blur is normal with increased zoom while using SENS-UP.

WHITE BALANCE

This function allows the ability to adjust the color temperature, based on colors being emitted from different light sources.

| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ↔ |
| 1. EXPOSURE | ↔ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↔ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↕ |

From the main menu, scroll to **WHITE BAL** and select one of the 4 following modes using the Left or Right buttons.

▶ **ATW (Auto Tracking White Balance)**

Select this to automatically readjust the white balance each time a change in the ambient color temperature is detected.

▶ **AWB (Auto White Balance)**

Select this to set the white balance for only one particular environment. More accurate than AUTO, but has to be reset manually when there is a change in ambient color temperature.

▶ **AWC-SET**

Select this to find the optimal luminance level for the current environment, point the camera towards a sheet of white paper, then press and hold the SET button. 'PUSH&HOLD' will display once the change has been made.

▶ **MANUAL ↕**

Select this to fine-tune white balance manually. Color Temp (°Kelvin) and Red/Blue gain values are adjustable.



NOTICE

• **WHITE BALANCE** may not work properly under the following conditions:

1. When the color temperature of the environment surrounding the subject is out of the control range (ie. 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.

IMAGE ADJUST

This function includes features that allow you to make adjustments to fine-tune the quality of the image displayed on the monitor.

| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ← ↕ |
| 1. EXPOSURE | ← ↕ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ← ↕ |
| 4. BACKLIGHT | OFF |
| 5. DAY&NIGHT | AUTO ↕ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ← ↕ |
| 8. SERIAL | ← ↕ |
| 9. SYSTEM | ← ↕ |
| 10. EXIT | SAVE |

Press the SET button to access the sub-menu items listed below.

▶ **SHARPNESS**

The outline of the image becomes cleaner and more distinctive as the SHARPNESS level increases. If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.

▶ **GAMMA**

Adjust how light and color are displayed.

▶ **BRIGHTNESS**

Increase or decrease overall brightness of the image.

▶ **COLOR MODE**

Select the appropriate color mode for the scene; Normal or Vivid. If colors look too muted select Vivid, if the scene is overly colorful select Normal. Color can be fine tuned using the Saturation option.

▶ **SATURATION**

The higher the value, the more saturated the colors are. The lower the value, the less color there is overall.

▶ **BLACK LEVEL**

The lower the value, the darker the overall image.



Notes

- On certain cameras Gamma may be disabled when WDR is enabled. “N/A or - - -” icon is displayed instead of the options.

BACKLIGHT

This function is useful for adjusting areas of interest that appear too bright or too dark due to bright lighting conditions.

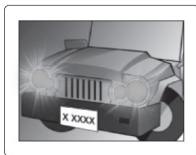
| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ← ∷ |
| 1. EXPOSURE | ← ∷ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ← ∷ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↕ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ← ∷ |
| 8. SERIAL | ← ∷ |
| 9. SYSTEM | ← ∷ |
| 10. EXIT | SAVE |

Select a desired mode using the LEFT or RIGHT buttons depending on the camera purpose.

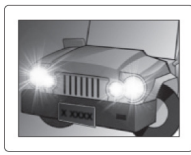
► HLC (High Light Compensation)

If the scene contains extremely bright light areas such as car headlights, the light can mask out much of the on-screen detail. Use the HLC feature to remove these bright lit areas to allow detail, such as a car license plate number, to become more visible.

- **MODE:** Adjust when HLC is active; All Day or Night Only.
- **LEVEL:** The lower the level, the more of the HLC mask will be applied.
- **COLOR:** Black, White, Yellow, Cyan, Green, Magenta, Red, and Blue.



HLC ON



HLC OFF



Notes

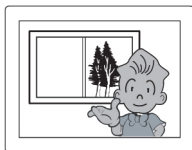
- NIGHT ONLY/ALL DAY is not available on Lite Series cameras.
- On certain cameras HLC will not function while the OSD is displayed.

BACKLIGHT : CONTINUED

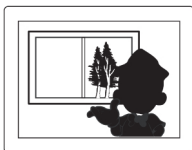
► BLC (Back Light Compensation)

An area with a bright light source in the background can cause objects in the foreground to appear as silhouettes. Use this setting to adjust the exposure of the image to properly expose the object in the foreground.

- **H-POS:** Adjust LEFT or RIGHT to move the Horizontal Position.
- **V-POS:** Adjust LEFT or RIGHT to move the Vertical Position.
- **H-SIZE:** Adjust LEFT or RIGHT to increase or decrease the Horizontal Size.
- **V-SIZE:** Adjust LEFT or RIGHT to increase or decrease the Vertical Size.



BLC ON

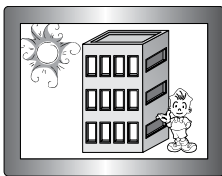


BLC OFF

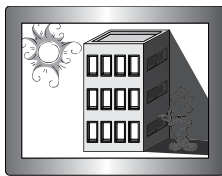
► WDR (Wide Dynamic Range)

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

- **WEIGHT:** Set to LOW, MIDDLE or HIGH.



WDR ON



WDR OFF



Notes

- **On LITE Series cameras:** WDR mode will not function when the camera is connected via the ANALOG connection. WDR mode is an EX-SDI/HD-SDI only function. The analog video will go black once exiting the OSD menu.
- **On LITE Series cameras:** WDR does not function while in the OSD menu. Exit the OSD to see the results of WDR turned ON.

BACKLIGHT : CONTINUED

- ▶ **WDR (Wide Dynamic Range) - Continued**
 - **WDR MODE:** Choose either *DOL-WDR* or *FRAME*
 - » **DOL (Digital Overlap) WDR:** *DOL-WDR* combines 3 frames into 1 frame providing an improved WDR image, especially in low-light environments.
 - » **FRAME:** Frame WDR only combines 2 frames, best used in conjunction with ROI.
 - **ROI (Region Of Interest) MODE:** *ROI Mode* compensates the exposure for inside and outside the selected areas. Best used with *FRAME WDR*.
 - » **Window Zone:** Select the desired Zone 0-4.
 - » **Window Use:** Turn *ON* or *OFF* the selected Zone.
 - » **H-POS / V-POS:** Adjust *LEFT* or *RIGHT* to move the *Hor/Ver* Position.
 - » **H-SIZE / V-SIZE:** Adjust *LEFT* or *RIGHT* to increase or decrease the *Hor/Ver* Size.



Notes

- DOL-WDR & FRAME WDR Modes are not available on LITE Series cameras.
- ROI MODE is not available on LITE Series cameras.
- Enabling WDR can disable certain camera functions; Gamma, ACE, Defog, Lens Shading, etc...

DAY & NIGHT

This function displays images in color or B/W. In AUTO mode the camera will automatically transition to B/W to allow for clearer low-light images. This also allows cameras equipped with infrared illuminators to provide clear images in low-light or no-light situations.

CLINTON EXHD 2.0

| | |
|--------------|--------|
| 0. ZOOMFOCUS | ↕ |
| 1. EXPOSURE | ↕ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↕ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↕ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↕ |

From the main menu, scroll to DAY&NIGHT and select a desired mode using the Left or RIGHT buttons according to the picture display you want.

► AUTO ↕

The mode is switched to 'COLOR' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. *Default setting for standard cameras (cameras without IR LEDs).

- **AGC Thres:** Day/Night switching level in Auto Mode.
- **AGC Margin:** Margin between Day/Night and Night/Day switching level.
- **DELAY:** Sets a delay time before the switch is made from day to night/night to day.

► COLOR

The image is always displayed in color. Automatic switching does not occur.

► B/W

The image is always displayed in black and white. Automatic switching does not occur.

► EXTERN ↕ (External)

The mode is switched to 'COLOR' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. *Default setting for cameras with IR LEDs.

- **ANTI-SAT:** Cameras equipped with IR LEDs may have an over-saturated night time image. Adjust the level of ANTI-SAT to compensate for over-saturation.
- **D>N THRES:** Day to Night change level.
- **N>D THRES:** Night to Day change level.
- **DELAY:** Sets a delay time before the switch is made from day to night/night to day.



NOTICE

- On cameras equipped with IR LEDs it is recommended to choose EXTERN instead of AUTO. Choosing AUTO can cause intermittent changing of Day to Night.

DNR (DIGITAL NOISE REDUCTION)

This function reduces background image noise in a low light environment, improving visibility.

| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE |

From the main menu, scroll to DNR and select one of the 4 following modes using the Left or Right buttons.

► DNR

- OFF
- LOW
- MIDDLE
- HIGH



OFF



LOW



MIDDLE



HIGH



NOTICE

- When adjusting the noise reduction level, remember that the higher the level is set, the greater the reduction in noise level, as well as the brightness of the image but trailing may occur with moving objects.

SPECIAL

This function includes features that allow you to make adjustments to fine-tune the quality of the image displayed on the monitor.

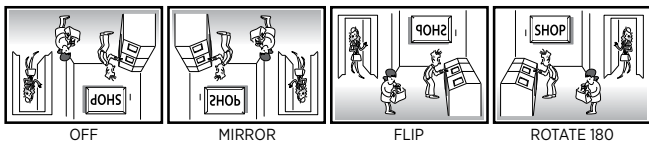
| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE |

Press the SET button to access the sub-menu items listed below.

► ROTATE

Digital flip the camera image instead of manually rotating the camera.

- **MIRROR:** Mirrors the image left to right.
- **FLIP:** Flips the image top to bottom.
- **ROTATE 180 :** Mirrors and Flips the image (Rotates 180°).



► DZOOM (Digital Zoom)

Digital zoom; too much digital zoom can make the image pixelated.

► ACE (Adaptive Color Enhancement)

Enhance the color contrast of the image.

► DEFOG:

Images in extraordinary environments such as fog, smoke, rain or smog have a dynamic range lower than ordinary images. This function is a contrast enhancement, which is used to overcome such shortcomings.

SPECIAL : CONTINUED

► LENS SHADING:

Select to adjust for smoke-tinted domes or image vignetting caused by wide angle lens limitations.



Notes

- DZOOM & LENS SHADING is not available on Lite Series cameras.
- On certain cameras ACE, DEFOG & LENS SHADING may be disabled when WDR is enabled. “ N/A or - - - ” icon is displayed instead of the options.

► PRIVACY ↴

Apply a mask to an area you want to hide. Useful in areas where a camera can see into areas that are not relevant to security needs.

- **ZONE NUM:** Select Privacy mask 0-15.
- **ZONE DISP:** Turn 'ON' or 'OFF' the selected mask.
- **H-POS/V-POS:** Adjust Left or Right to move position of the mask area.
- **H-SIZE/V-SIZE:** Adjust Left or Right to change the size of the mask area.
- **Y/Cr/Cb LEVEL:** Adjust the color of the mask area.
- **TRANS:** Adjust the transparency of the mask area.

► MOTION ↴

Monitor activity more efficient with this feature by means of highlighting moving objects with a red outlined box around the moving object.

- **DET WINDOW ↴**
Choose from 4 different detection windows to adjust their size and position as needed.
- **SENSITIVITY:**
The lower the value the more sensitive the camera will be to motion.
- **MOTION OSD:**
Turn On or Off the Motion Detection boxes shown on the screen.
- **TEXT ALARM**
When motion is detected text will be displayed on screen to alert you to the type of motion; Motion Detected / Shifting Detected.



Notes

- If MOTION or PRIVACY options are turned 'ON'— the DVR will record with any colored Motion boxes and/or Privacy areas.

SERIAL

This function sets up the camera communication status when controlling the camera from an EX-SDI 2.0 DVR using UCC.

| | |
|--------------|--------|
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↕ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↕ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↕ |
| 8. SERIAL | ↕ |
| 9. SYSTEM | ↕ |
| 10. EXIT | SAVE |

From the main menu, scroll to **SERIAL** and press the **SET** button to access the sub-menu.

► **CAM ID**

Set the ID # of the camera. (selectable from 000-255)

► **ID DISPLAY**

Display the set ID # in the top left corner of the image.

► **BAUDRATE**

Set the baudrate value of the camera. (2400 / 4800 / 9600 / 57600 / 115200)

| CLINTON Defaults | EX-SDI 2.0 Camera | EX-SDI 2.0 DVR |
|------------------|-------------------|----------------|
| Cam ID | 001 | 001 |
| Baudrate | 9600 | 9600 |



Notes

- The CAM ID & BAUDRATE of the camera need to match the DVR.
- UCC (Universal Coax Communication) requires an EX-SDI 2.0 DVR and camera equipped with UCC function. UCC allows camera adjustments to be made remotely through DVR when connected to a channel that supports UCC.
- Depending on DVR model there may be an option for UCC Type (A/B). For most 2MP cameras select Type B.
- UCC may not function if the output is set to EX-SDI 1.0 or HD-SDI output.
- UCC does not function through the Analog/HD Analog output.

SYSTEM

| | |
|--------------|--------|
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE |

From the main menu, scroll to SYSTEM and press the SET button to access the sub-menu.

► SDI OUTPUT

Select the HD video output of the camera; EX-SDI 2.0, EX-SDI 1.0 or HD-SDI. If set to EX-SDI the camera must be connected to an EX-SDI DVR or Monitor to receive signal.

- EX-SDI 4MP / EX-SDI 2.0 / EX-SDI 1.0 / HD-SDI

► HD ANALOG

Select the Analog video output of the camera; CVBS (standard Analog), C_VI, T_VI or A_HD. Verify the connected equipment can support the analog output type if set to one of the HD Analog signals.

- CVBS / A_HD / C_VI / T_VI

► FRAME RATE

Set the frame rate and resolution output from the camera.

- 1440p 30 / 1080p 30 / 720p 60 / 720p 30



Notes

- EX-SDI 4MP: to change the output type to 2MP— first change the frame rate to 1080p 30.
- EX-SDI 4MP is only available on 'QHD' model cameras.
- EX-SDI 4MP will not display on 2MP only EX-SDI DVRs.
- HD Analog (A_HD, C_VI, T_VI) is not available on Lite Series cameras.
- Before changing the HD Analog output of the camera, check the compatibility of the DVR to ensure that it can accept the desired camera output. Selecting an incorrect HD Analog output from the camera can result in poor video / no video on the connected DVR.

SYSTEM : CONTINUED

▶ VIDEOSYS

Choose either NTSC or PAL depending on the region of the world the camera is installed and display settings other connecting video components are set to. In North America leave set to NTSC.



Notes

- Switching from NTSC to PAL can result in no image.

▶ CVBS FILTER

The resolution of the analog output might be too high for older DVRs (pre 960H) or PC based DVRs (that only accept D1 or CIF), and can result in moiré patterns (rainbow artifacts). Turn this filter 'ON' to soften the resolution of the analog signal. Enabling this does not effect the EX-SDI output.

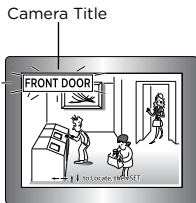
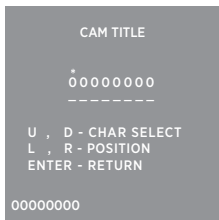
▶ LANGUAGE

Change the language of the OSD Menu.

- ENGLISH, CHINESE, CHINESE (S), JAPANESE or KOREAN

▶ CAM TITLE

Use this feature if you want to quickly identify a given image by assigning a title that will display on screen.



- 1) Select CAM TITLE, then use the LEFT/RIGHT button to set it to 'ON' and then press the SET button.
- 2) Use the 4 direction buttons to move to a desired letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 8 letters.

▶ RESET

Press and hold the SET button to reset the camera OSD settings to the factory defaults. Release the SET button when "PUSHING" is displayed.

EXIT

| CLINTON EXHD 2.0 | |
|------------------|--------|
| 0. ZOOMFOCUS | ↵ |
| 1. EXPOSURE | ↵ |
| 2. WHITE BAL | ATW |
| 3. IMAGE ADJ | ↵ |
| 4. BACKLIGHT | WDR |
| 5. DAY&NIGHT | AUTO ↵ |
| 6. DNR | MIDDLE |
| 7. SPECIAL | ↵ |
| 8. SERIAL | ↵ |
| 9. SYSTEM | ↵ |
| 10. EXIT | SAVE |

From the main menu, scroll to EXIT and press the SET button to exit from the OSD menu.

► **SAVE**

Saves current settings and exits the OSD menu.

► **CANCEL**

Deletes any changes made to the settings and exits the OSD menu.

TROUBLESHOOTING

If you have trouble operating your camera, refer to the following table. If the guidelines do not enable you to solve the problem, contact Clinton Electronics Technical Support at 1-800-549-6393 or 815-633-1444.

| Problem | Solution |
|--------------------------------|--|
| Nothing appears on the screen. | <ul style="list-style-type: none">• Check the power connection.• Check the video signal connection (EX-SDI or Analog).• When the camera's EX-SDI BNC output is directly connected to the DVR's or monitor's BNC terminal: Make sure the DVR or monitor supports that signal type/input.• Check SDI Output; change to HD-SDI if connected to HD-SDI system, or EX-SDI if connected to EX-SDI system.• EX-SDI 4MP- ensure DVR supports 4MP EX-SDI input. If DVR does not support 4MP, change the SDI Output & frame rate to EX-SDI 2.0 1080p 30.• Check HD Analog Output type. Ensure connected DVR supports the signal.• HD-SDI output is converted into other format such as HDMI, DVI or VGA by using a video converter. Make sure the converter's HD-SDI input format supports the product's output video format/frame rate.• If set to WDR, the analog signal is disabled (Lite Series cameras). |
| The video image is not clear. | <ul style="list-style-type: none">• Check if the lens is clean. Clean the lens with a clean cloth.• Check if the dome is clean. Clean the dome with water and a clean, lint-free cloth.• Check the focus of the camera.• Adjust the contrast feature of the monitor.• Make sure that the screen is not exposed directly to a bright light. Move the camera if necessary. |
| The screen is dark. | <ul style="list-style-type: none">• Adjust the contrast feature of the monitor.• Adjust the BRIGHTNESS level of the IMAGE ADJ.• If you have an intermediate device, set the 75Ω/Hi-z properly, and check the terminals. |

TROUBLESHOOTING

| Problem | Solution |
|---|---|
| There is a problem with the camera operation. The camera surface is too hot and black stripes appear on the screen. | <ul style="list-style-type: none">• Check if the camera power supply meets the minimum power requirement, or if the voltage keeps changing. |
| The MOTION function is not working. | <ul style="list-style-type: none">• Check if the SENSITIVITY level is too low.• Motion OSD need to be set to ON for the detection boxes to display. |
| Colors are not quite right. | <ul style="list-style-type: none">• Check the WHITE BAL setting.• Perform AWC→SET.• Check and adjust Color Mode and Saturation values. |
| The screen is flickering. | <ul style="list-style-type: none">• Check if the camera is facing directly into sunlight or fluorescent light. Move the camera if necessary.• Set Shutter to FLK. (Flicker)• HD-SDI video may not appear to be normal if distance exceeds the maximum transferable distance.• When a BNC cable adapter is used to combine two or more BNC cables for distributed HD-SDI video transfer, make sure the impedance of the adapter is 75Ω. Otherwise, it may cause shorter transfer distance or broken video transfer. |
| COLOR (Day&Night) mode is not working. | <ul style="list-style-type: none">• Check the delay in the DAY&NIGHT 'AUTO' sub-menu. |
| The camera is not switching to B/W mode at night. | <ul style="list-style-type: none">• Check the DAY&NIGHT setting. If the camera is equipped with IRs, leave set to EXTERN. |
| SENS-UP function is not working. | <ul style="list-style-type: none">• Check if Shutter settings are set to AUTO or 1/30. |

EX-SDI INSTALL TIPS

COMPATIBILITY:

While EX-SDI, HD-SDI and Analog share the same type of cable and connectors, that is where the similarities end.

- EX-SDI will not work on Analog only DVRs & Devices
- EX-SDI will not work on C_VI, T_VI, A_HD DVRs & Devices
- EX-SDI will not work on HD-SDI only DVRs & Devices

When making video connections, ensure the correct BNC connector is used (BLACK Connector is EX-SDI, GREEN Connector is Analog/HD Analog).

DISTANCES:

The camera is defaulted to (2MP) EX-SDI 2.0, which is capable of transmitting video up to 1,400' over RG59 coax cable. EX-SDI 4MP cameras are defaulted to EX-SDI 4MP.

| SDI OUTPUT | DISTANCE | RESOLUTION |
|------------|----------|-------------|
| EX-SDI 4MP | 800' | QHD - 1440p |
| EX-SDI 2.0 | 1,400' | FHD - 1080p |
| EX-SDI 1.0 | 800' | FHD - 1080p |
| HD-SDI | 275' | FHD - 1080p |

Distances will vary depending on RG59 coax integrity.

Cable splices, improper BNC termination, damaged shielding, kinks and severe bends in the cable will reduce the possible distance of the video transmission.

UCC - Universal Coax Comm:

For UCC to function, SDI Output from the camera must be set to EX-SDI 2.0 & connected DVR must be EX-SDI 2.0/UCC compatible. The ID & Baudrate must match on Camera and DVR.

To change the ID & Baudrate of the camera: Enter the camera's OSD menu- then access the SERIAL Menu and scroll to CAM ID and/or BAUDRATE to set the desired settings.

If set to HD-SDI or EX-SDI 1.0, UCC may NOT function.

SDI OUTPUT:

To change the digital video output of the camera (SDI Output): Enter the camera's OSD menu- then access the SYSTEM Menu and scroll to SDI Output and move left or right to change to the desired output.

CONTACT



CCTV Sales
1-800-447-3306



CCTV Support
1-800-549-6393



Web
www.clintonelectronics.com



Address
6701 Clinton Road
Loves Park, IL 61111

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For 4MP & 2MP EX-SDI 2.0 Pro and Lite Series Cameras

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Clinton Electronics Corp. 6701 Clinton Road. Loves Park, IL 61111

Sales: 1-800-447-3306 Support: 1-800-549-6393 www.clintonelectronics.com

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