BZ3HD

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.

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

S3125A

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.

TABLE OF CONTENTS

```
              CLINTON

 1.  ZOOMFOCUS      ↵
 2.  EXPOSURE       ↵
 3.  WHITE BAL      ↵
 4.  IMAGE ADJ      ↵
 5.  BACKLIGHT      OFF
 6.  DAY&NIGHT      EXT-IN↵
 7.  SPECIAL        ↵
 8.  SYSTEM         ↵

   [EXIT]    [SAVE]    [DFLT]
```

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.

1. Press the SETUP button to bring up the OSD Menu.

2. Scroll through menu items from the list available by using the UP or DOWN buttons.

3. Enter a Sub-Menu item by pressing the SETUP button.

4. Use the LEFT or RIGHT buttons to adjust settings.

[EXIT] Exits the menu, changes are temporarily held– changes will be lost when camera is power cycled (On>Off>On).

[SAVE] Saves any adjustments made. After SAVE, select EXIT to close the OSD Menu.

[DFLT] Returns camera settings to DEFAULT values.

CE-REMOTE use:
Plug the remote into the DIN port located on the base of the camera. Press the SETUP button to activate the OSD menu. Refer to camera install guide for location.

CE-REMOTE (sold separately)

```
            CLINTON
  1.  ZOOMFOCUS      ↵
  2.  EXPOSURE       ↵
  3.  WHITE BAL      ↵
  4.  IMAGE ADJ      ↵
  5.  BACKLIGHT      OFF
  6.  DAY&NIGHT      EXT-IN↵
  7.  SPECIAL        ↵
  8.  SYSTEM         ↵

    [EXIT]    [SAVE]    [DFLT]
```

```
           ZOOMFOCUS
  AF MODE          CONSTANT
  DISTANCE         1.0m
  ZOOM SPEED       ▮▮▮▮▮▭▭7
  LENS RESET       ON↵
  E. ZOOM          OFF

    [BACK]    [SAVE]    [DFLT]
```
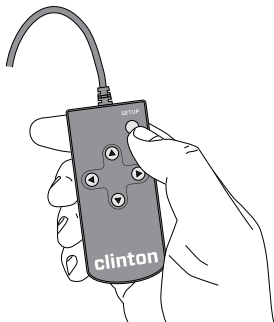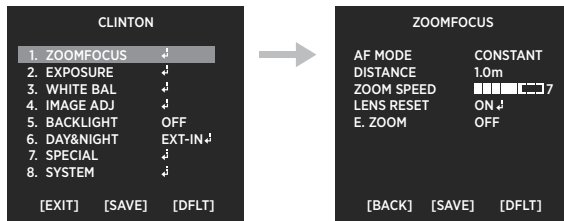
◆ **MODE:** Select Auto Focus Mode.

▶ Constant / One Time / Manual

◆ **DISTANCE:** Set the minimum distance in focus between camera & object.

▶ 0.1 / 1.0 / 3.0 / 5.0 / 10m

◆ **ZOOM SPEED:** Set the speed of how fast the lens zooms In/Out

▶ 0 (Slow) ~ 7 (Fast)

◆ E. **ZOOM:** Set the maximum digital zoom level

▶ Off / x2~x32

NOTICE

• When the Focus Mode is set to CONSTANT: The camera will automatically re-adjust the focus each time an object moves closer or farther away from the camera. To prevent the camera from re-adjusting the focus, set the Focus Mode to ONE TIME.
• ONE TIME Focus Mode only adjusts the focus when the camera is zoomed In or Out.

```
            CLINTON
  1.  ZOOMFOCUS        ↵
  2.  EXPOSURE         ↵
  3.  WHITE BAL        ↵
  4.  IMAGE ADJ        ↵
  5.  BACKLIGHT        OFF
  6.  DAY&NIGHT        EXT-IN↵
  7.  SPECIAL          ↵
  8.  SYSTEM           ↵

     [EXIT]    [SAVE]    [DFLT]
```

```
            EXPOSURE
  MODE              AUTO
  AGC               ON
  SHUT SPEED        - - -
  IRIS              - - -
  DSS               OFF
  FLICKERLESS       OFF




     [BACK]    [SAVE]    [DFLT]
```
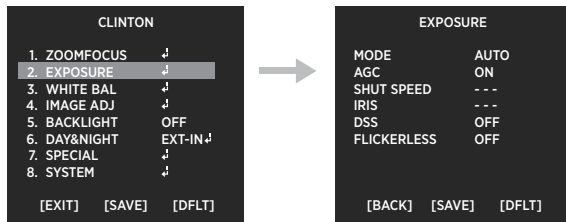
◆ **MODE:** Select Exposure Mode.

   ▶ Auto / Iris P. / Shut P. / Manual

     ▷ Iris P. / Shut P. (Iris or Shutter Priority): If you want to set a specific value for Shutter Speed while Iris and AGC change automatically- select Shut P.

◆ **AGC:** Auto Gain Control

   ▶ Off / On (Auto, Iris P, or Shutter P Exposure Modes)

   ▶ 0 ~ 10 (Manual Exposure Mode)

◆ **SHUT SPEED: (Shutter Speed)** Can be set in Shut P or Manual mode.

   ▶ **30fps mode:** x4, x2, 1/30, 1/60, 1/120, 1/250, 1/700, 1/1000, 1/1600, 1/2500, 1/5000, 1/7000,1/10000, 1/30000 sec

   ▶ **60fps mode:** x8, x4, x2, 1/60, 1/120, 1/250, 1/700, 1/1000, 1/1600, 1/2500, 1/5000, 1/7000,1/10000, 1/30000 sec

◆ **IRIS:** Iris level can be set in Iris P or Manual mode.

▶ **0 ~ 20**

◆ **DSS:** (Digital Slow Shutter) Setting the Digital Slow Shutter manually allows to adjust the amount of light being allowed to hit the sensor - for example, setting DSS to x2 is equivalent to two times the amount of "normal" light. Select from 2x~4x, or OFF. The AE MODE must be set to AUTO or IRIS to configure this setting

▶ **30fps mode:** Off / x2 / x4

▶ **60fps mode:** Off / x2 / x4 / x8

◆ **FLICKERLESS:** Select Flickerless mode, useful when there is a clash in frequency with the camera & lighting.

▶ **Off / On (remove screen flicker)**

NOTICE

• Enabling WDR will disable certain OSD functions (DSS, Flickerless, etc do not function w/ WDR turned ON).

```
          CLINTON                          WHITE BAL

  1.  ZOOMFOCUS      ↵          MODE              AUTO
  2.  EXPOSURE       ↵          RED GAIN          - - -
  3.  WHITE BAL      ↵          BLUE GAIN         - - -
  4.  IMAGE ADJ      ↵
  5.  BACKLIGHT      OFF
  6.  DAY&NIGHT      EXT-IN↵
  7.  SPECIAL        ↵
  8.  SYSTEM         ↵

   [EXIT]    [SAVE]    [DFLT]        [BACK]    [SAVE]    [DFLT]
```

◆ **MODE:** Set White Balance Mode.

▶ Auto / AWC-Set / Indoor / Outdoor / Manual

▷ Auto: The white balance automatically readjusts each time there is a change in lighting/color.

▷ AWC-Set: Set a fixed white balance mode by pressing down the 'SET' button. This mode does not automatically readjust if there are any changes in lighting.

▷ Indoor / Outdoor: White Balance settings are optimized for the install location.

▷ Manual: Manually adjust White Balance settings (Red & Blue Gain).

```
              CLINTON

  1.  ZOOMFOCUS        ↵
  2.  EXPOSURE         ↵
  3.  WHITE BAL        ↵
  4.  IMAGE ADJ        ↵
  5.  BACKLIGHT        OFF
  6.  DAY&NIGHT        EXT-IN↵
  7.  SPECIAL          ↵
  8.  SYSTEM           ↵

      [EXIT]    [SAVE]    [DFLT]
```

```
              IMAGE ADJ

  BRIGHTNESS      ▮▮▮▮▮▯▯▯8
  BLACK LVL       COMP
  SATURATION      ▮▮▮▮▯▯▯▯10
  SHARPNESS       ▮▮▮▮▮▯▯▯7
  GAMMA           0.55
  DNR             MIDDLE
  ACE             OFF


      [BACK]    [SAVE]    [DFLT]
```
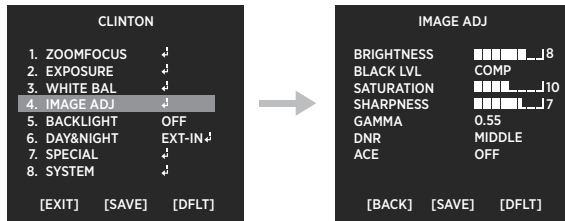
◆ **BRIGHTNESS:** Increase or decrease the overall brightness of the image.

   ▶ 1 (Dark) ~ 20 (Bright)

◆ **BLACK LVL:** Adjust the black level to match the dark/bright level of the camera with that of other devices like monitors or DVRs

   ▶ Full: Shows 'real black' as it is.

   ▶ COMP: Shows 'real black' brighter and greyish.

   ▶ USER: Users can set up the black level range manually.

◆ **SATURATION:** Increase or decrease the overall color saturation of the image.

   ▶ 1 (Less Colorful) ~ 20 (More Colorful)

◆ **SHARPNESS:** Increase or decrease the sharpness of the image.

   ▶ 0 (Less Sharp) ~ 10 (More Sharp)

IMAGE ADJUST

```
            CLINTON
  1.  ZOOMFOCUS      ↵
  2.  EXPOSURE       ↵
  3.  WHITE BAL      ↵
  4.  IMAGE ADJ      ↵
  5.  BACKLIGHT      OFF
  6.  DAY&NIGHT      EXT-IN↵
  7.  SPECIAL        ↵
  8.  SYSTEM         ↵

    [EXIT]    [SAVE]    [DFLT]
```

```
            IMAGE ADJ
  BRIGHTNESS    ▮▮▮▮▮▯▯|8
  BLACK LVL     COMP
  SATURATION    ▮▮▮▮▯▯▯|10
  SHARPNESS     ▮▮▮▮▮▯▯|7
  GAMMA         0.55
  DNR           MIDDLE
  ACE           OFF


    [BACK]    [SAVE]    [DFLT]
```
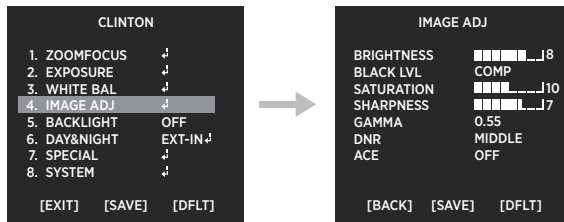
◆ **GAMMA:** Adjust the gamma level.

▶ 0.45 / 0.55 / 0.65 / 0.75

◆ **DNR:** (Digital Noise Reduction) Reduces background noise in low light environments.

▶ Off / Low / Middle / High / Auto

◆ **ACE:** (Adaptive Contrast Enhancement) Enhances the color contrast of the image.

▶ Off / Low / Middle / High

NOTICE

• Enabling WDR will disable certain OSD functions (ACE, Defog, Gamma etc do not function w/ WDR turned ON).
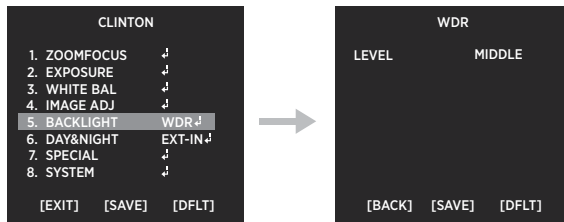
◆ **WDR: (Wide Dynamic Range)** Illuminates darker areas of an image while retaining the same light level for brighter areas to even out the overall brightness of images with high contrast between bright and dark areas.

▶ LEVEL: Low / Mid-Low / Middle / Mid-High / High

◆ **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.

▶ Position: Adjust the position of the BLC window.

▶ Size: Adjust the size of the BLC window.

NOTICE

- *Enabling WDR disables analog output.*
- Enabling WDR will disable certain OSD functions (DSS, Flickerless, etc do not function w/ WDR turned ON).

```
              CLINTON
  1. ZOOMFOCUS         ↵
  2. EXPOSURE          ↵
  3. WHITE BAL         ↵
  4. IMAGE ADJ         ↵
  5. BACKLIGHT         OFF
  6. DAY&NIGHT         EXT-IN↵
  7. SPECIAL           ↵
  8. SYSTEM            ↵

    [EXIT]   [SAVE]   [DFLT]
```
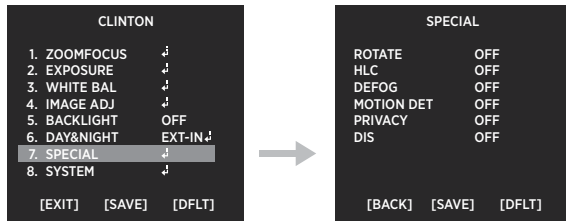
```
             DAY&NIGHT
  DELAY              5sec
  BURST              ON




    [BACK]   [SAVE]   [DFLT]
```
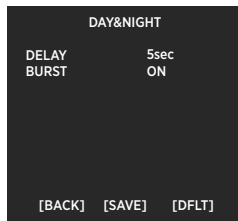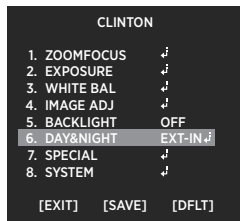
NOTICE

- EXT-IN is the default Day&Night mode for this camera, for best automatic switching of color/night mode it is recommended to use this setting. Changing to AUTO could cause erratic switching from day to night or no switching.

◆ **EXT-IN:** The camera automatically switches from color mode (Day) to black & white mode (Night) when the IR Sensor on the camera detects a change in the light level of the image.

▶ DELAY: 0 ~ 255sec

▶ BURST: Off / On

◆ **AUTO:** Automatic switching from day to night - using this setting can cause erratic operation.

▶ DELAY: 0 ~ 255sec

▶ THRS: Increase the threshold level for switching in lower Lux.

▶ GAP: The margin between Day/Night & Night/Day switching level.

▶ IR DETECTION: Turn 'On' to prevent the camera switching to Day mode when installed near other IR LEDs.

▶ IR DET LEVEL: Set the level of IR Detection.

▶ BURST: Off / On

◆ **NIGHT:** The camera will always be shown in black & white, automatic switching does not occur.

◆ **DAY:** The camera will always be shown in color, automatic switching does not occur.

```
            CLINTON                              SPECIAL

   1.  ZOOMFOCUS      ↵             ROTATE           OFF
   2.  EXPOSURE       ↵             HLC              OFF
   3.  WHITE BAL      ↵             DEFOG            OFF
   4.  IMAGE ADJ      ↵             MOTION DET       OFF
   5.  BACKLIGHT      OFF           PRIVACY          OFF
   6.  DAY&NIGHT      EXT-IN↵       DIS              OFF
   7.  SPECIAL        ↵
   8.  SYSTEM         ↵

   [EXIT]    [SAVE]    [DFLT]          [BACK]    [SAVE]    [DFLT]
```

◆ **ROTATE:** Off / Mirror / Flip / Rotate 180

  ▶ Mirror: Horizontally mirror the image.

  ▶ Flip: Vertically mirror the image.

  ▶ Rotate 180: Horizontal & Vertical flip combined.

◆ **HLC: (High-Light Compensation)** When a bright light is projected into the camera, masking is used on the light source to prevent partial over-exposure.

  ▶ Mode: Off / On / Night.

    ▷ On: HLC is applied all day and all night.

    ▷ Night: HLC is only active at night.

  ▶ Level: Adjust the amount of HLC mask.

  ▶ Color: Set the color of the mask.

◆ **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.

◆ **MOTION DET:** This can be setup to optically zoom the camera in (to the center of the image) when a motion event occurs within a predefined area.

▶ Area#: Choose which motion area to edit, 1 ~3.

▶ Mode: Turn the selected area On or Off.

▶ Sensitivity: Adjust the motion detection sensitivity level.

▶ Position: Adjust the position of the motion detection area.

▶ Size: Adjust the size of the motion detection area.

▶ Interval: Select the amount of time the camera will be zoomed in.

▶ Dwell Time: Set the amount of time before the camera can zoom in again.

▶ Zoom Preset: Set the level of zoom that the camera will go to when motion is detected. (the camera will only zoom into the center of the image– regardless if the motion area is in a different spot)
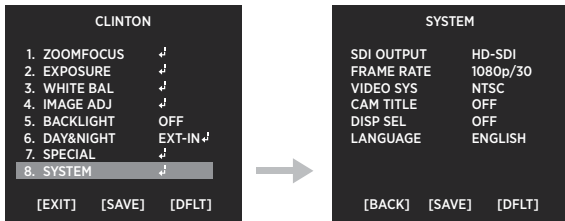
NOTICE

- When using Motion Detection/Zoom Preset: the camera will only zoom into the center of the image– regardless if the motion area is in a different spot.
- It is recommended to have the Focus Mode set to Continuous for best results.
- Enabling DIS (Digital Image Stabilization) will disable the Motion Det Zoom Preset feature.

◆ **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.

◆ **DIS: (Digital Image Stabilization)** Turn this setting 'On' to help stabilize the camera image when the camera may be exposed to high wind or vibration.

▶ Range: Range is effectively a level of image stabilization. The percent range refers to the amount of viewable area that will be consumed from the perimeter to enable image stabilization. The larger the percentage, the greater effect image stabilizer will have.

▷ 10% / 20% / 30%

▶ Filter: Select the filter strength level of Digital Image Stabilization. For example: if a large moving object is on the screen, it may be recognized as a shaking screen, and an error may occur with the image stabilization. The lower the filter strength, the better the stabilization, but also will result in higher probability of an error occurring.

▷ Low / Middle / High

▶ Auto C: Function which determines whether or not to move the digital zoom area to the center of the full screen which is actually being shown. Selecting OFF will keep the position even if Digital Zoom is pointing in one direction. Full moves the screen image to the center of the screen. Half moves the screen image toward the center only to a certain degree of margin.

▷ Off / Half / Full

NOTICE

• Digital Image Stabilization may not function when there is excessive camera movement or when the scene has low light or low contrast objects.
• Enabling DIS (Digital Image Stabilization) will disable the Motion Det Zoom Preset feature.

```
            CLINTON                              SYSTEM

 1.  ZOOMFOCUS       ↵                SDI OUTPUT      HD-SDI
 2.  EXPOSURE        ↵                FRAME RATE      1080p/30
 3.  WHITE BAL       ↵                VIDEO SYS       NTSC
 4.  IMAGE ADJ       ↵                CAM TITLE       OFF
 5.  BACKLIGHT       OFF              DISP SEL        OFF
 6.  DAY&NIGHT       EXT-IN↵          LANGUAGE        ENGLISH
 7.  SPECIAL         ↵
 8.  SYSTEM          ↵

   [EXIT]   [SAVE]   [DFLT]            [BACK]   [SAVE]   [DFLT]
```

◆ **SDI OUTPUT:** Set the digital output of the camera, either HD-SDI or EX-SDI. Check to ensure that the connected device (DVR or Monitor) can accept the selected signal.

▶ HD-SDI: 275 ft max distance

▶ EX-SDI: 800 ft max distance

◆ **FRAME RATE:** Adjust the output frame rate as necessary.

▶ 1080p 30fps / 720p 30fps / 720p 60fps

◆ **VIDEO SYS:** In the USA & North America leave set to NTSC. Changing to PAL can result in no video displayed.

◆ **CAM TITLE:** Assign a name or title to the camera. Useful for installs that are not connected to a DVR.

NOTICE

• The assigned CAM TITLE will not display until it is turned 'ON' in the DISP SEL menu. Select Title and turn On.

◆ **DISP SEL:** Choose what text items (if any) are displayed on the screen.

   ▶ ID: On / Off (not user adjustable)

   ▶ Title: Turn On / Off the set Cam Title (see previous page).

   ▶ ZOOM RATIO: Display the current level of zoom; x1 ~ x10

   ▶ SYSTEM MSG: Display the word "Motion" when a motion event occurs in the setup area (see SPECIAL/MOTION DET)

◆ **LANGUAGE:** Set the OSD language

   ▶ English / Simplified Chinese / Traditional Chinese / Japanese

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.	• Check the power connection. • Check the video signal connection (SDI-black connector or Analog-yellow connector). • 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 only system. • If set to WDR the analog signal is disabled.
The video image is not clear.	• Check if the lens is clean. Clean the lens with a clean cloth, if the lens is dirty it will not focus correctly. • Check the focus of the camera. • Make sure that the screen is not exposed directly to a bright light. Move the camera if necessary.
The screen is dark.	• Adjust the contrast feature of the monitor. • Adjust the Brightness level in the IMAGE ADJ menu. • If you have an intermediate device, check that the device can accept the SDI output type & frame rate.
The MOTION function is not working.	• Check if MOTION is turned 'ON.' • Check if the SENSITIVITY level is too low.
Colors are not quite right.	• Check the WHITE BAL setting. • Perform AWC-SET.
The screen is flickering.	• Check if the camera is facing directly into sunlight or fluorescent light. Move the camera if necessary. • Set Flickerless to 'ON'. (Exposure/Flickerless) • 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.
The camera is not switching to B/W mode at night.	• Check the DAY&NIGHT setting. For correct switching between day mode & night mode, leave set to EXT-IN. • If the camera is facing a bright light, automatic switching may not occur– reposition the camera.
OSD Settings were lost.	• If the [SAVE] selection was not made during adjustments, the settings are reset during a power cycle.

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 CVI, TVI, AHD 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, YELLOW Connector is Analog).

DISTANCES:
The camera can transmit EX-SDI (1.0), which is capable of transmitting video up to 800' over RG59 coax cable.

SDI Output	Distance*
EX-SDI 1.0	800 ft
HD-SDI	275 ft

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.

SDI OUTPUT:
To change the digital video output of the camera (SDI Output): Enter the camera's OSD menu– then access the SPECIAL menu, scroll to SDI Output and move left or right to change from HD-SDI to EX-SDI.

clintonelectronics

EXHD

TECH SUPPORT
1-800-549-6393

SALES
1-800-447-3306

ADDRESS
6701 Clinton Road | Loves Park, IL 61111

WEB
www.clintonelectronics.com