BZ HD Series Install Guide

For EX-SDI 2.0 BZ Bullet Cameras: BZ0HD(B)L · BZ1HD(B) · BZ2HD(B) · BZ3HD(B) · BZ1QHD(B)

Included Items:
- BZ Series Camera x 1
- Mounting Plate x 1
- Phillips Screws (M5x25) x 4
- Allen Bolts (M4x8) x 4
- Plastic Washers x 4
- Drywall Anchors x 4
- Foam Gasket x 1
- Instructions x 1
- 3mm Allen Wrench x 1
- 5mm Allen Wrench x 1

Required Items:
- Phillips Head Screwdriver or Drill with Phillips Head Bit
- CE-REMOTE (Zoom/Focus & OSD Control)
- DC12V or AC24V Power Supply

Optional Items:
- Analog Test Monitor
- 3/4" Drill Bit

1. REMOVE FILM

Remove the protective film over the lens of the camera. An out-of-focus, discolored, and poor night-time image can result if this film is not removed.


REMOVE FILM

Peel Off
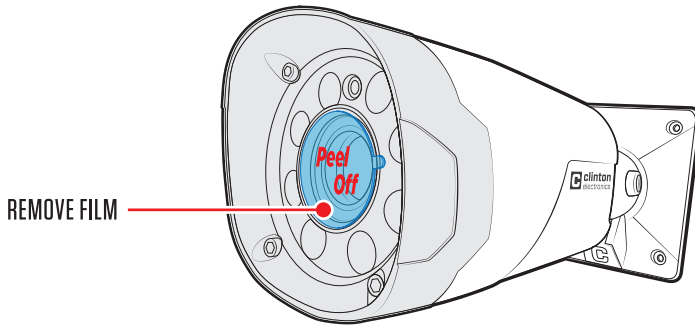
2. PREPARE MOUNTING SURFACE

Depending on the installation type; cable routed through the surface or cable routed on surface exterior– a hole may be required. If the cable will be routed through the surface, a 3/4" hole is required to fit the cable and connections through the surface.

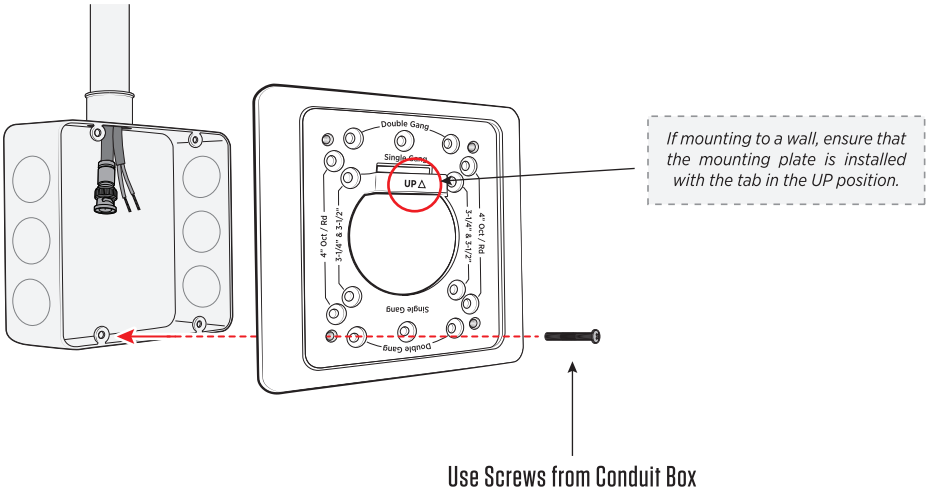**Cable Routed Through Surface** (Using Mounting Plate)

3/4" Hole Required

3/4"
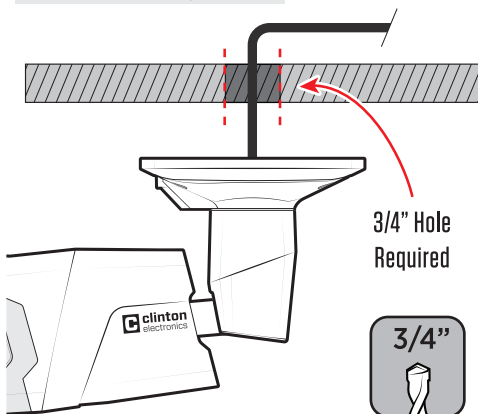
**Cable Routed On Surface** (NOT Using Mounting Plate)

Notch for Cable Exit
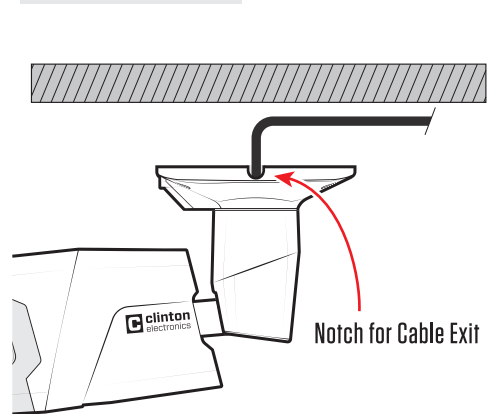
3A. INSTALL MOUNTING PLATE - (for conduit box install)

If installing the mounting plate on a conduit box, choose the appropriate hole pattern for that box. Use the screws provided with the conduit box for mounting. If installing the mounting plate on surface such as wood, use the 4 included Phillips-head screws. When installing onto drywall use the 4 included drywall anchors in conjunction with the screws.
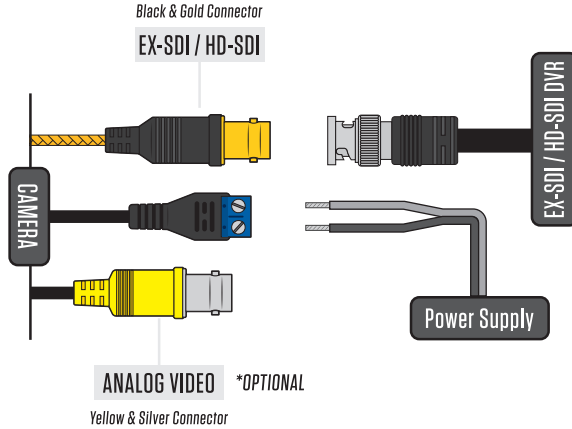

If mounting to a wall, ensure that the mounting plate is installed with the tab in the UP position.

Use Screws from Conduit Box

3B. INSTALL WITHOUT MOUNTING PLATE - (for cable side exit)

If installing the mounting plate on surface such as wood, use the 4 included Phillips-head screws and plastic washers. When installing onto drywall use the 4 included drywall anchors in conjunction with the screws. If installing the camera onto a metal structure or bracket, it is recommended to use the included foam gasket to help prevent damage to the camera caused by power surges.


Notch for Cable Exit

Foam Gasket - *ONLY if not using mounting plate

Use Plastic Washers w/ Screws

4 x
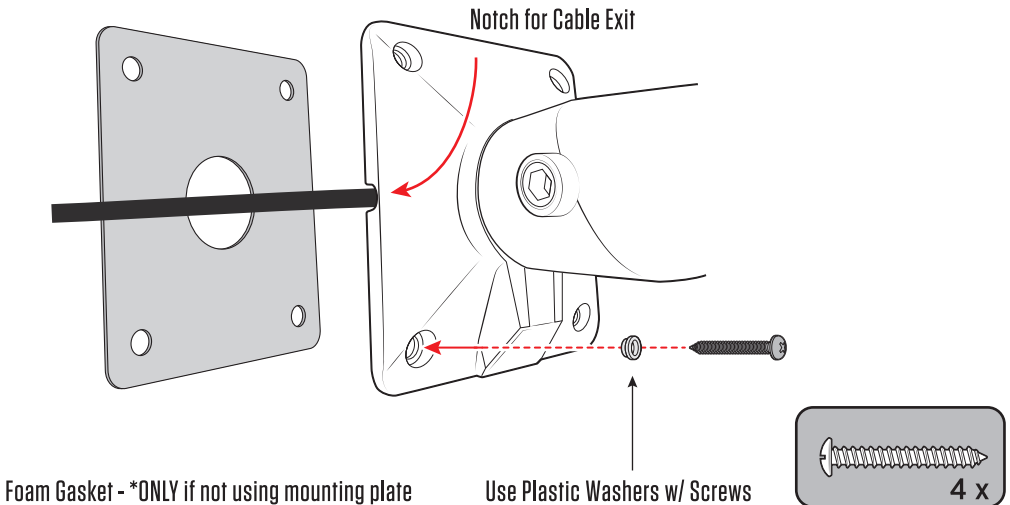
4. CONNECT CABLES

Make connections to the BNC cable and the power connection. Feed any cable slack into the mounting surface. To ensure quality operation, verify proper BNC and power termination, along with proper voltage at camera.

Black & Gold Connector

EX-SDI / HD-SDI

CAMERA

EX-SDI / HD-SDI DVR

Power Supply

ANALOG VIDEO *OPTIONAL*

Yellow & Silver Connector

Inferior quality coax cable or excessively long runs of cable will cause an HD-SDI video signal to be poor or not viewable. It is recommended to test all coax cable to be used as HD-SDI with a HD-SDI Cable Tester.

A Power LED (on the face of the camera) will illuminate RED for 1 second on initial power. If the RED light is ON, either flashing RED or solid RED, check the voltage at the camera. If the RED light is OFF the camera has correct voltage.

LED INDICATOR
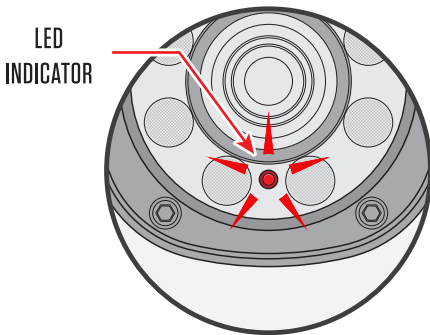
RVM – Rated Voltage Monitoring

| LED COLOR	STATUS
- - -	Safe Power
RED - SOLID	Over 29 Volts (AC24V)
RED - BLINK	Under 10 Volts (DC12V)

An under-powered camera (less than 12 Volts DC) might function initially, but it may stop working at night-time when the IR LEDs are activated (as this draws more power). Constantly under-powering a camera can cause the camera to malfunction.

5. ATTACH CAMERA TO MOUNTING PLATE

Align the hook on the underside of the camera to the tab on the mounting plate. Slide the camera base onto the mounting plate.

TAB   HOOK

Double Gang

Single Gang

UP △

4" Oct / Rd

3-1/4" & 3-1/2"

4" Oct / Rd

3-1/4" & 3-1/2"

Single Gang

Double Gang

Underside of camera base
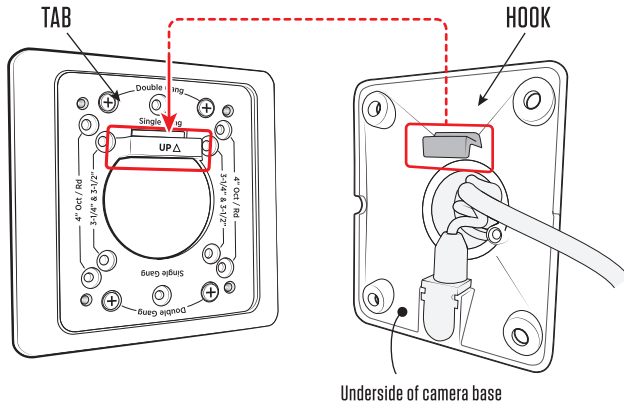
With the camera hooked onto the mounting plate, use the supplied 4 hex head bolts and 3mm Allen wrench to secure in place.

3mm Allen Wrench

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Use Plastic Washers

4 x   4 x
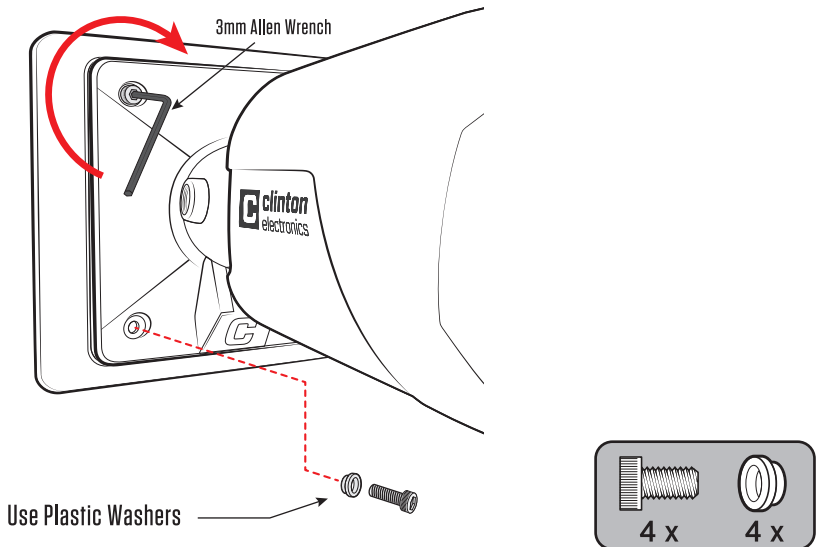
6. TEST MONITOR / OSD CONTROL

Before proceeding with final assembly it is suggested to test the camera with a test monitor to verify proper camera angle/zoom. To test, lift the rubber flap on the camera base to access the DIN jack, then plug in a CE-REMOTE (sold separately). Connect an analog test monitor to the Yellow connector from the CE-REMOTE.

DIN PORT

CE-REMOTE
connection under FLAP
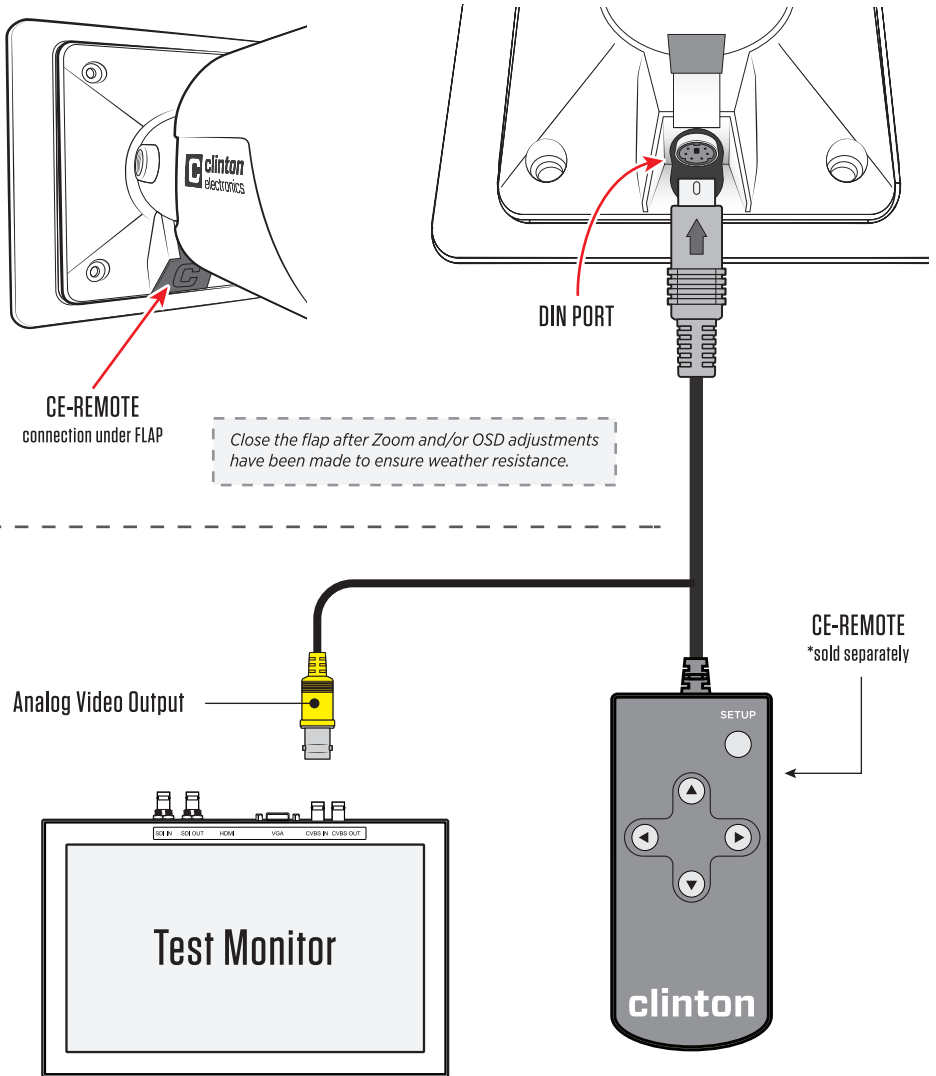
Close the flap after Zoom and/or OSD adjustments have been made to ensure weather resistance.

CE-REMOTE
sold separately

SETUP

Analog Video Output

SDI IN   SDI OUT   HDMI   VGA   CVBS IN   CVBS OUT

Test Monitor

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THE TEST MONITOR CONNECTION ON THE CE-REMOTE IS ONLY AN ANALOG VIDEO OUTPUT . CERTAIN OSD MENU OPTIONS ARE EX-SDI/HD-SDI ONLY AND WILL NOT DISPLAY VIDEO IF CONNECTED TO AN ANALOG MONITOR.

7. CAMERA ANGLE ADJUSTMENT

Loosen the hex-head bolt on the camera base with the included 5mm Allen wrench. Adjust the camera angle as needed. After the desired angle is achieved, tighten the hex-head bolt to hold the camera in that position.


5mm Allen Wrench
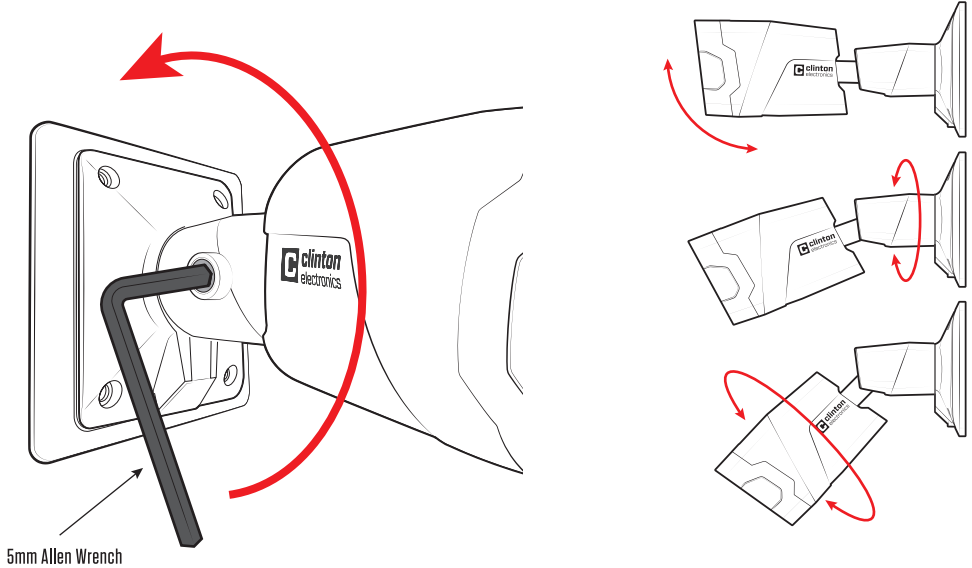
8. ZOOM / FOCUS ADJUSTMENT

The lens will auto focus once powered; this can take several seconds. To set the zoom use the directional buttons on the CE-REMOTE. Press UP to zoom in & press DOWN to zoom out.

After the zoom adjustment has been made the camera will auto focus again; this can take several seconds.

To manually adjust the focus: from the OSD Menu, change the AF MODE to Manual, then press either the LEFT or RIGHT buttons to manually set the focus. The camera will no longer Auto Focus if set to Manual.

ZOOM IN
(TELE)

FOCUS NEAR

FOCUS FAR

ZOOM OUT
(WIDE)
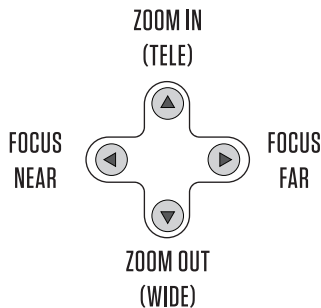
⚠️ **NOTICE**

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 or equipment in-front of 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 power cycle the camera (power off - power on).

9A. ZOOM / AUTO FOCUS OSD MENU - (for BZOHDL, BZ1HD & BZ2HD)

Using the CE-REMOTE press 'SETUP' to access the camera's OSD menu.
While on the ZOOMFOCUS option, click press 'SETUP' to enter the sub-menu.

```
          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
```

```
          0.  ZOOMFOCUS

 AF MODE          AUTO
 SCANNING         FULL
 ONEPUSHAF        ON ꒐
 SYNC TDN         OFF
 LENSRESET        ON ꒐
 INITIALIZE       ON
 RETURN            ↵
```

AF MODE: Choose either AUTO or MANUAL.
  AUTO will focus automatically after zooming in/out.
  MANUAL allows for manual focus using the joystick or D-Pad of CE-REMOTE.

SCANNING: Choose either HALF or FULL.
  HALF- the lens scans only the current focal length, taking up to 30 seconds.
  FULL- the lens scans the entire focal length, taking up to 1 minute or longer.

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

SYNC TDN: Set to ON to automatically change the focus when the camera switches from Day to Night mode.

LENSRESET: Press and hold the SETUP button to reset the focus of the lens.

INITIALIZE: When 'ON' the lens will automatically refocus during boot up/power on, even if set to Manual. For areas prone to storms/power outages set to 'OFF' to lock the focus and prevent the camera from refocusing during boot up.

> *Refer to OSD Manual for detailed instructions on adjusting camera settings.*

9B. ZOOM / AUTO FOCUS OSD MENU - (for BZ3HD)

Using the CE-REMOTE press 'SETUP' to access the camera's OSD menu.
While on the ZOOMFOCUS option, press 'SETUP' to enter the sub-menu.

```
          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]
```

FOCUS: Choose either AUTO, ONE PUSH or MANUAL.
  CONSTANT- the lens will constantly re-adjust the focus depending on how close objects are to the camera.
  ONE TIME- the focus will only be set after any zoom adjustments have been made, it will not re-adjust.
  MANUAL- allows for manual focus using the D-Pad on the CE-REMOTE.

DISTANCE: Select minimum distance in focus between camera and object.

ZOOM SPEED: Set zoom speed; 0 (slow) ~ 7 (fast).

> *Refer to OSD Manual for detailed instructions on adjusting camera settings.*

LENS REFRESH: Reset the focus of the camera while in the OSD menu with ONE PUSH.

E. ZOOM: Set the maximum level of digital zoom.

ZOOM PRESET: This function has been disabled on this model camera.

EX-SDI

4MP MEGAPIXEL 2560 x 1440p **Quad HD**

4MP COMPATIBILITY

The EX-SDI 4 Megapixel camera image will only display on a **4MP EX-SDI DVR** or other EX-SDI 4MP device.

~~HD-SDI~~   ~~HD-CVI~~   ~~HD-TVI~~   ~~AHD~~   ~~ANALOG~~

Use the **BLACK BNC connector for EX-SDI 4MP** Output (Yellow connector is analog).

EX-SDI 4MP

ANALOG VIDEO for test monitor connection

Turning **WDR 'ON'** will cause noise in the **Analog** signal.

4MP DISTANCE

The camera is defaulted to **EX-SDI 4MP**, which is capable of transmitting video up to **800'** over RG59 coax cable.

For greater distance change the SDI Output to a lower resolution (2MP).

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

4MP SDI Output

To change the 4MP Output: Enter the OSD Menu of the camera, then access the SYSTEM Menu. Change the frame rate from 1440p to either 1080p or 720p, then select the desired SDI Output (EX-SDI 2.0, EX-SDI 1.0, or HD-SDI).

Step 1: **Change Frame Rate**

Step 2: **Change Output**

SDI OUTPUT	EX-SDI 4MP
FRAME RATE	1440 30p
VIDEOSYS	NTSC
CVBS FILTER	OFF
LANGUAGE	ENG
CAM TITLE	OFF
RESET	ON
RETURN	

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