

# **INSTRUCTION MANUAL**

**CDD11HW**

## ***960H Diamond Indoor Dome Camera***



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# Warning & Caution



## CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



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**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK).  
NO USER SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance persons.

# General Features

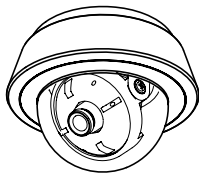
- Resolution : 700 TV Lines
- Built in Fixed Lens 3.6 mm
- Min.illumination :  
Color : 0.1Lux, B/W : 0.01Lux
- Tact Switch type OSD Control
- Motion Detection, Privacy Zone, Mirror Function
- 2nd Video-out connector for installer
- Dynamic 3-Axis Movement for Free Lens Rotation
- Power DC 12V
- DNR : 2D
- DWDR: Digital Wide Dynamic Range

## ■ Power Wire Maximum Distance

Wire Gauge	DC12V
18 AWG	200 m

# Composition

## 1. Camera

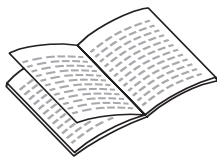


## 2. Mounting Screws

Tapping Screws 4 x 25  
3 pcs



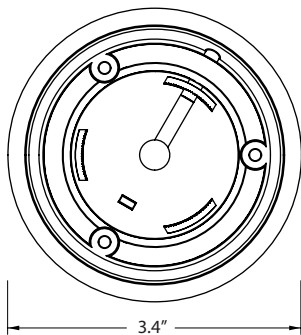
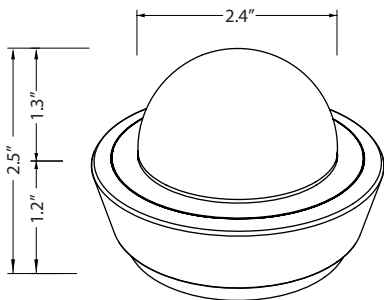
## 3. Instruction Manual



## 4. Pig Tail

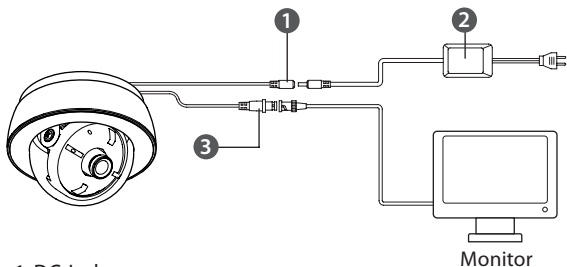


# Dimension



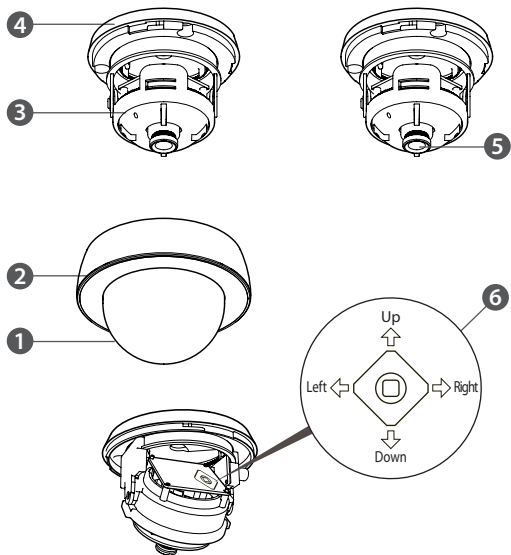
Units : inch

# Connection



- 1. DC Jack
- 2. Power Adaptor (DC 12V)
- 3. BNC Jack (Video Output)

# Product Overview



- 1. Dome Glass  $\varnothing 2.4''$
- 2. Top Cover
- 3. Main Body

- 4. Bottom Cover
- 5. Lens
- 6. OSD Menu Switch



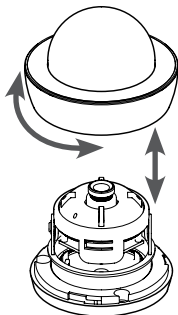
# Installation

Refer all work related to the installation of this product to qualified service personnel or system installer.

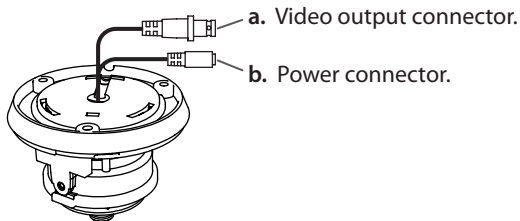
## ■ Preparation

### 1. Remove the Top Cover

- Gently turn the Top Cover counter-clockwise to unlock, then pull free of the Main Body.
- Set the dome and Main Body aside.



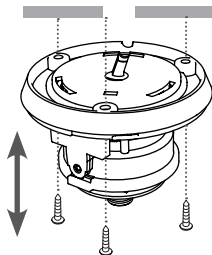
### 2. Connect the Wiring



# Installation

## ■ Camera Mounting

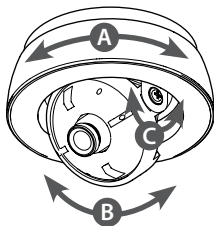
- a. Pass the Power Cable and the Video Cable from the camera unit through the hole in the ceiling.
- b. Install the Main Body to the desired installation surface using 3 supplied mounting screws.



## ■ Camera Adjustment

- The dome camera has three position adjustments, and OSD Menu Setting Switch.

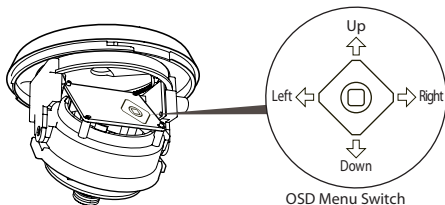
- A = Pan rotation  
B = Horizontal rotation  
C = Tilt rotation



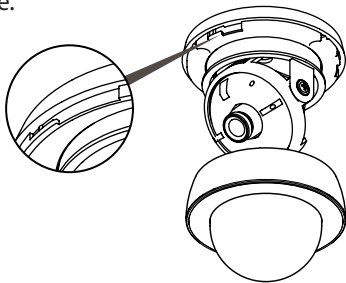
- \* If necessary, loosen the screw that locks the gimbal assembly in place, before adjusting the camera.

# Installation

- OSD Menu Setting is controlled by Tact Switch type OSD Menu Switch located in backside of control PCB.



- After installation and adjustment of the camera is complete, secure the Top Cover by turning it clockwise.



# Specification

Type	CDD11HW
Image Sensor	1/3" Sony Supper HAD II CCD (960H)
Video System	NTSC TV System
Total Pixels	1028(H) x 508(V)
Effective Pixels	976(H) x 494(V)
Scanning Frequency	15.734kHz x 59.94Hz
Scanning System	2:1 Interlace
Sync System	Internal Sync
Shutter Speed	1/60s ~ 1/100,000s
Resolution	Max. 700 TVL
S/N Ratio	50 dB or more (AGC off)
Min. Illumination	Color : 0.1 lux, B/W : 0.01 Lux
Video Output	VBS 1.0V p-p/75 Ω
Gamma	r = 0.45
Lens	Fixed 3.6mm
Auto Gain Control	OFF / LOW / MIDDLE / HIGH Selectable
DNR	2D-DNR: ON / OFF
Motion Detection	ON / OFF (4 Zone ISO Control / Output OSD)
Privacy Masking	ON / OFF (8 areas)
WDR	DWDR
DPC	AUTO / MANUAL / OFF
Sharpness	Level Adjustable
White Balance	ATW / MANUAL / AWC
Power	DC12V / 150mA / 1.8W
Recommended Power	Regulated DC12V 200mA Power Supply
Outside Control	OSD
Operating Temps.	-4° ~ 140F, RH 95% Max
Dimensions	3.4" x 2.5" (Glass Ø 2.4")
Weight	Approx. 0.24lbs

# OSD Menu

## EXPOSURE

- LENS
  - HBLC/D-WDR
    - ELC, DC
    - OFF
    - BLC - MODE, WEIGHT
- AGC — OFF, LOW, MID, HIGH
- 2D-DNR
- RETURN

## COLOR (W B)

- WB MODE — ATW, MANUAL, PUSH
- R-Y GAIN
- B-Y GAIN
- RETURN

## DAY&NIGHT

- D&N MODE — AUTO, COLOR, B&W, EXT
- C\_SUP — <0 ~ 100>
- A\_SUP — <0 ~ 100>
- RETURN

## FUNCTION

- MIRROR — OFF, MIRROR
- SHARPNESS — <0~30>
- LSC — OFF, ON <0 ~ 30>
- RETURN

## MOTION

- MOTION — OFF, ON
- AREA — AREA1 ~ AREA4
- SENSITIVITY — <1 ~ 30>
- DISPLAY — OFF, ICON, TRACE
- HOLD TIME — <0~15>
- ALARM — OFF, ON
- RETURN

# OSD Menu

## PRIVACY

MASK1



MASK8

RETURN

OFF

ON

DOT SEL

DOT XY

MOVE XY

COLOR SET

OFF

ON

DOT SEL

DOT XY

MOVE XY

COLOR SET

## SET UP

TITLE

DPC

OLPF

MONITOR

GAMMA

RETURN

AUTO/MANUAL

FILTER 1

CRT

0.45

## SYSTEM

CAMERA ID

COMMUNI.

LANGUAGE

OSD COLOR

RETURN

OFF

BLUE

## EXIT

FACTORY

SAVE & EXIT

EXIT

NO

\* Depending on the setting of sub menu, the default value may be changed.

# OSD Menu Setting

## ■ EXPOSURE

The Lens, HBLC/D-WDR, AGC, etc options that are available in the EXPOSURE menu.

### EXPOSURE – LENS


#### EXPOSURE

▶ LENS	ELC ←
HBLC/D-WDR	OFF
AGC	HIGH
2D DNR	ON
RETURN	RET ↓

- Select ELC mode for electronic shutter AE controls.
- Select DC mode for DC-IRIS controls.

### EXPOSURE – LENS – ELC – E.SHUTTER

#### LENS – ELC


▶ E. SHUTTER	AUTO
BRIGHT	050 
RETURN	

- E.SHUTTER – setting value of electronic shutter.
- Select mode : Auto, 1/60(1/50), 1/100, 1/120FLK, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/100000 sec. (default : AUTO)

- When selecting in Auto mode(default) : The shutter mode from 1/60 to 1/100000 is controlled automatically.

### EXPOSURE – LENS – ELC – BRIGHT

#### LENS – ELC

E. SHUTTER	AUTO
▶ BRIGHT	050 
RETURN	

- BRIGHT : For target brightness control.
- AE controls this in compliance with a set bright control. Bright control from 1 to 100, the default is 50.


## EXPOSURE – LENS – DC

- DC modes use DC-IRIS lenses and they control AE.

Electronic shutter speed default is 1/60.

## EXPOSURE – LENS – DC – E.SHUTTER

### LENS – DC

► E. SHUTTER 1 / 60  
BRIGHT 050   
DC REF 000   
RETURN ↓



- LENS – DC mode setting.

- E.SHUTTER : Electronic shutter value setting mode in DC IRIS.

- 1/60(1/50), 1/100, 1/120FLK, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/100000 sec.

## EXPOSURE – LENS – DC – BRIGHTNESS

### LENS – DC


E. SHUTTER 1 / 60  
► BRIGHT 050   
DC REF 000   
RETURN ↓

- BRIGHT : Setting for target brightness.

- Controls brightness value of DC IRIS. Bright control from 1 to 100, the default is 50.

## EXPOSURE – LENS – DC REF

### LENS – DC

E. SHUTTER 1 / 60  
BRIGHT 050   
► DC REF 000   
RETURN ↓

- Control value from 0 to 20, the default is 10.

## EXPOSURE – HBLC/D-WDR

### EXPOSURE

LENS ELC ←  
► HBLC/D-WDR OFF  
AGC HIGH  
2D DNR ON  
RETURN ↓

- Select menu for BLC / HLI / D-WDR

- BLC mode : Back Light Compensation.

- HLI mode : High Light Inverse.

- D-WDR mode : Digital Wide Dynamic Range.



## EXPOSURE – HBLC/D-WDR – BLC

### EXPOSURE

LENS	ELC ←
▶HBLC/D-WDR	BLC ←
AGC	HIGH
2D DNR	ON
EXIT	RET ↓

-Selected BLC mode.

## EXPOSURE – HBLC/D-WDR – BLC – BLC MODE

### BLC

▶BLC MODE	MANUAL←
BLC WEIGHT	MID
RETURN↓	

- Select AUTO or MANUAL.
- Sets the total AE level at AE value of select window area.
- AUTO, selects the darkest area with automatic and photometry weight.

## EXPOSURE – HBLC/D-WDR – HLI

### EXPOSURE

LENS	ELC ←
▶HBLC/D-WDR	HLI ←
AGC	HIGH
2D DNR	ON
EXIT	RET ↓

- HLI mode : High Light Inverse.
- It is a function which reverses the area with strong light.
- The HLI BLC mode control by BLC window area. (HBLC)
- Use mode set of HLI (ALL DAY / NIGHT).
- ALL DAY : Always operating HLI
- NIGHT : Operating only in NIGHT

environment, HLI does not operate in DAY conditions.

- You can select 4 mask areas in DAY&NIGHT and adjust HLI level.

## EXPOSURE – HBLC/D-WDR – D-WDR

- D-WDR captures the images at all light levels by correcting GAMMA CURVE.
- If you use an ordinary camera in a scene with an intensive backlight, the object will be displayed dark on the monitor .To solve this problem, you can use the D-WDR function is to improve the dark parts without saturation from bright part.You can adjust SET LEVEL to get clearer images.

## EXPOSURE – AGC

### EXPOSURE

LENS	ELC ←
HBLC/D-WDR	BLC ←
▶AGC	HIGH
2D DNR	ON
SENSE-UP	AUTO
RETURN ↓	



- AGC : Auto Gain Control level set OFF / LOW / MIDDLE / HIGH.

## ■ COLOR (WB)

The white balance mode and color gain setting menu.

## COLOR – WB MODE



### COLOR

▶WB MODE	ATW
R - Y GAIN	128 
B - Y GAIN	128 
RETURN ↓	

- White Balance control mode selects. ATW / MANUAL / AWC>PUSH
- Selection of COLOR-WB MODE- ATW
- ATW : Auto Tracking White Balance mode
- User can change color.

## COLOR – R-Y GAIN

### COLOR

WB MODE	AWC
▶R - Y GAIN	128 
B - Y GAIN	128 
EXIT	RET ↓

- The color gain controls R-Y

## COLOR – B-Y GAIN



- The color gain controls B-Y

## ■ DAY&NIGHT

- Color & B/W change, D&N filter change, Color/Aperture level control.

### DAY&NIGHT – D&N MODE

#### DAY&NIGHT

► D&N MODE      COLOR  
C - SUP          030   
A - SUP          030   
RETURN ↓

- D&N change mode sets.
- Select of AUTO / COLOR / B&W / EXT.
- **AUTO mode: D&N is decided by AGC gain level.(without LED)**
- COLOR mode: Only Color mode

operates.

- B&W mode: Only B&W mode operates.

- **EXT mode: D&N decision by external CDS signal. (with LED)**

### DAY&NIGHT – C\_SUB

-The color noise suppress in NIGHT mode.

### DAY&NIGHT – A\_SUB



- The aperture level suppress in NIGHT mode.

## ■ FUNCTION

- Sets for MIRROR, Sharpness, LSC mode

### FUNCTION

#### DAY&NIGHT

► MIRROR          OFF   
SHARPNESS      020   
LSC                OFF  
RETURN ↓

- MIRROR : Image mirroring ON/OFF mode.
- SHARPNESS: Sharpness level control ( 0 ~ 30, 1 step)
- LSC: Lens Shading Compensation ON/OFF mode

## ■ MOTION

- This function informs the user there is motion on the screen.  
Up to 4 area zones.

### MOTION

#### MOTION

▶ MOTION	OFF
AREA SEL	AREA1 ←
SENSITI.	025 ←
DISPLAY	TRACE
HOLD TIME	003 ←
ALARM	OFF
RETURN ↓	

- MOTION : Select operates ON/OFF
- AREA SEL : Select each area
- SENSITI. : Control MOTION sensitivity. (0 ~ 30, 1 step)
- DISPLAY: Control alarm mode when MOTION indicates.  
( Select of OFF / ICON / TRACE)

## ■ PRIVACY

- The mask controls are for the zones where privacy is necessary.  
There are total of 8 mask zones.

### PRIVACY – MASK1 ~ MASK 8

#### PRIVACY

▶ MASK 1	ON ←
MASK 2	ON ←
MASK 3	ON ←
MASK 4	OFF
MASK 5	OFF
MASK 6	OFF
MASK 7	OFF
MASK 8	OFF
RETURN ↓	

- The each mask selects ON/OFF
- After selecting each mask, it can select color, location, area of mask.

## ■ SETUP

- The SETUP mode set USER TITLE, DPC(Dead Pixel Compensation), OLPF, MONITOR MODE.

### SETUP – TITLE

#### SET UP

▶ TITLE            OFF ←  
DPC                MANUAL  
OLPF               FILTER 1  
MONITOR           CRT  
GAMMA            0.45  
RETURN ↓

- User sets TITLE ON/OFF.
- The user can edit the TITLE by selecting ON.

### USER TITLE – Text setting mode.

#### USER TITLE

ABCDEFGHIJKLMN  
OPQRSTUVWXYZ 012345  
6789!"#\$%&'()\*+  
, - . / : ; < = > ? @ [ \ ] ^ \_  
← → CLR POS RET ↓  
| \_ \_ \_ \_ \_ \_ \_ \_

- TITLE can be up to 64 characters.
- ←, →: Used to modify text.
- CLR: User can remove all text.
- POS: Move text position.
- RET : Accept and return to the previous menu.

### SETUP – DPC (Dead Pixel Compensation)

#### SET UP

TITLE            OFF ←  
▶ DPC            MANUAL ←  
OLPF               FILTER 1  
MONITOR           CRT  
GAMMA            0.45  
RETURN ↓

- It is the function to compensate for CCD defect.
- User can select OFF / MANUAL.
  - Select MANUAL mode to control DPC settings.

## SETUP – OLPF

### SET UP

TITLE	ON↵
DPC	MANUAL↵
▶OLPF	FILTER 1
MONITOR	CRT
GAMMA	0.45
RETURN ↓	

- This mode is intended for the factory use only

## SETUP – MONITOR

### SET UP

TITLE	ON↵
DPC	MANUAL↵
OLPF	FILTER 1
▶MONITOR	CRT
GAMMA	0.45
RETURN ↓	

- The DISPLAY MONITOR mode can supports two kinds of displays( CRT/LCD)

## SETUP – GAMMA

### SET UP

TITLE	ON↵
DPC	MANUAL↵
OLPF	FILTER 1
MONITOR	CRT
▶GAMMA	0.45
RETURN ↓	

- User can adjust GAMMA level.
- Selecting of 0.45 / 0.60 / 1.0 / USER.
- After selecting USER mode, the gamma value adjust 0.20 ~ 1.00. (0.05 step)

## ■ SYSTEM

- The setting Camera ID, 485 comm., language.

### SYSTEM – CAMERA ID

#### SET UP

▶ CAMERA ID      001 ☒  
COMMUNI. ☒ OFF  
LANGUAGE      ENGLISH  
OSD COLOR      BLUE  
RETURN ↓

- This mode is intended for the factory use only

### SYSTEM – COMMUNI. (communication setting)

- This mode is intended for the factory use only

### SYSTEM – LANGUAGE

- User can set language of OSD menu.

### SYSTEM – COMMUNICATION sub menu.

- This mode is intended for the factory use only

## ■ EXIT

- EXIT menu allows resetting, saving, or cancelling configuration setup.

### EXIT – FACTORY SET.

#### SET UP

▶ FACTORY      NO ↓  
SAVE&EXIT ↓  
EXIT ↓

- Reset camera setting to factory default.

- After factory set mode, user has to enter SAVE&EXIT.

### EXIT – SAVE&EXIT.

- After adjusted data, exit OSD menu.

### EXIT – EXIT

- Exit without saving changed data.

# Trouble Shooting

## **? No picture**

Check if the power is connected correctly.

Check if all the cables are connected correctly.

## **? Camera with heat, abnormal motion black lines**

Check if the power supply meets standard.

Check if input power supply changes irregularly.

## **? Blinking Screen**

Check if the camera set toward sun or fluorescent lamp.

Check if the connector of Auto Iris Lens is connected correctly when using.

## **? Unclear Screen**

Check if the lens is dirty.

You can wipe the lens with clean fabric or brush.

Check for any irregularity in monitor setting.

## **? No operation of Motion Detection**

Check if you set 'Motion Detection' mode off.

Check if you set 'MD Area' properly.

## **? Incorrect color**

Check if you set 'White Balance' mode correctly.



# Memo





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