# USER'S MANUAL



# IR Bullet camera



## CAUTION

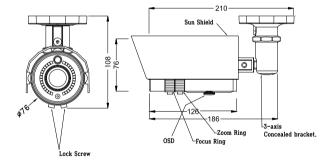
RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER NOT USER SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

# **D**imensions

## Part name & Dimension



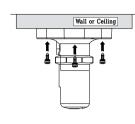
Accessories



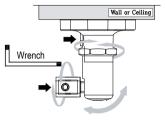


# Installation

## Step.1

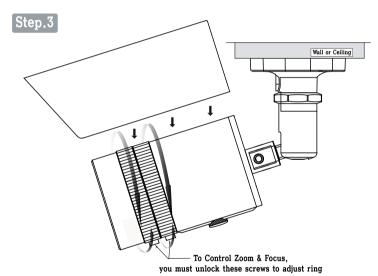


Step.2



Fixing bracket at desired place

Adjust view angle with 3-axis bracket



adjust Zoom & Focus, secure the sun shield to the top of the camera

PIN	SPEC	CONTACT TYPE
1	TRIGGER_DVR	NO
2	EXT_SENSOR	COM
3	SENSOR_IN	NO : NORMAL NC : MAGNETIC CONTACT ONLY
4	ALARM_OUT	GND
5	GND	GND

# **E**eatures

1/3" Sony Super HAD II Color CCD

600 TV Lines of Resoution

3 DNR & Sense-up (Max256)

D-WDR for clear vivid pictures where strong back-lighting occurs

33pcs White IR LEDs

Externally adjustable lens

Cable concealed in bracket

3 axis for both wall and ceiling mount bracket

Weatherproof IP-66 Compliant

# **Specifications**

TV System		NTSC	PAL		
Number of Pixels	Н	768	752		
Trumber of Fixelo	V	494	582		
Scanning Frequency	Н	15.734KHz	15.625KHz		
• , ,	V	59.94Hz	50Hz		
Horizontal Resolution		Color: 600 TV Lines			
Image Pick-UP Device		1/3" Sony Super	1/3" Sony Super HAD $\scriptstyle II$ Color CCD		
Scanning System		2:1 In	2:1 Interlace		
S/N Ratio (AGC Off)		More Than 50dB			
Min. Sensitivity		0 Lux - at F : 1.2 (30m Range)			
Gamma Correction		0.45 Approx.			
Gain Control		Automatic			
Video Output		NTSC Video 1.0Vp-p/75			
Lens		2.8~12mm Varifocal DC Auto Iris lens			
Power Source		DC12V / AC24V Dual Power Voltage			
Power Sonsumption		Max 5Watt			
Operating Temp.		-10℃ ~ +50℃			
Dimensions (mm)		76mm	76mm x126mm (Camera oniy)		
Cable		BNC / DC	BNC / DC Jack Cable		
Weight/g		11	1100g		

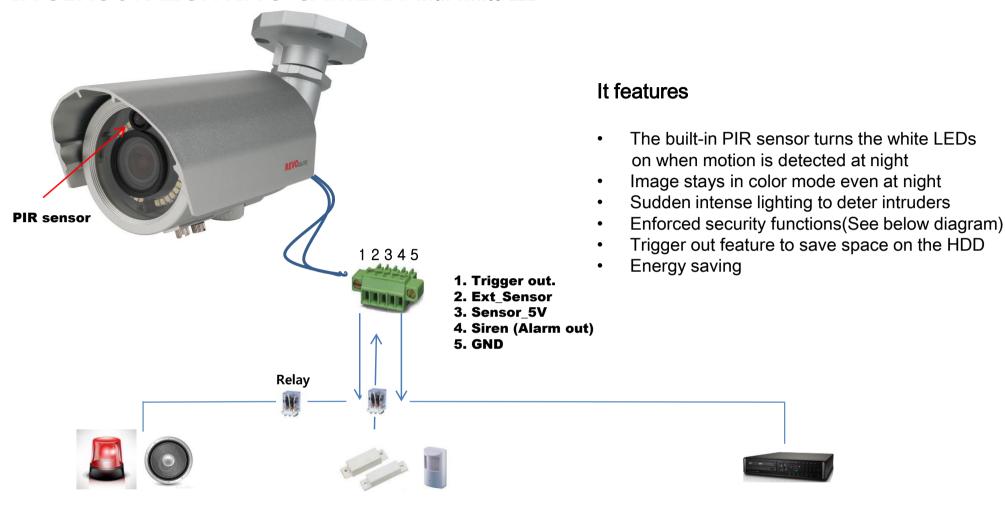


Model Number: RECBP600-1

AC 24V / DC 12V / NTSC **REVO AMERICA** 

700 FREEPORT PARKWAY SUITE 100 COPPELL,

# PIR SENSOR LIGHTING CAMERA with white LED



## Alarm out (Lamp, Siren)

 Built-in PIR sensor turns the white LEDs on and trigger external devices (Siren, Lamp) simultaneously when motion is detected. Only during night time.

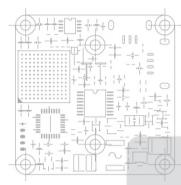
## Sensor input (Magnetic, PIR)

 Remote sensor activates the white LEDs on the camera and other devices simultaneously when an event occurs. Only during night time

## Trigger alarm out (DVR)

PIR sensor detects motion and triggers event recording on the DVR (day & night time)

# **MANUAL**



# OSD# MANUAL

# New OSD Menu tree

MENU		SUB MEN	IU AND DEFUALT SE	TTING			
	DC						
LENS	VIDEO						
	MANUAL						
		AUTO,1/60,FLK,	AUTO,1/60,FLK,1/250,1/500,1/1000,1/2000,1/5000,1/10000,1/100000, x2,x4,x8,				
	SHUTTER	x16,x32,x64,x128	3,x256				
DC	AGC	OFF,LOW,MIDDLE,HIGH					
		OFF					
	x2,x4,x8,	x2,x4,x8,x16,x32,x64,x128,x256					
EXPOSURE	BLC	OFF,BLC,HSBLC	'				
		HIDOOD	LOW-LEVEL	0~15			
	D-WDR	INDOOR	HIGH-LEVEL	0~15			
			LOW-LEVEL	0~15			
		OUTDOOR	HIGH-LEVEL	0~15			
	ATW						
	AWB						
	AWC°ÊSET						
WHITE BAL		BLUE	0~100				
WHITE BAL	MANUAL	RED	0~100				
	INDOOR		'				
	OUTDOOR						
	AUTO	DELAY	0~63				
		D°ÊN (CDS)	48~255				
		N°ÊD (CDS)	0~207				
	COLOR						
DAY&NIGHT		BURST	ON,OFF				
	B/W		GAIN	0~15			
		IR SWART	AREA	POSITION, SIZE			
	EXT						
3DNR	ON,OFF	LEVEL	0~100				
	CAM TITLE	ON,OFF					
EXPOSURE  WHITE BAL  DAY&NIGHT  3DNR		FREEZE	ON,OFF				
	D-EFFECT		OFF,MIRROR,V-F				
		D-ZOOM	D-ZOOM	x1.0~x32			
			PAN	-100~100			
		1150 114105	TILT	-100~100			
			ON,OFF				
SPECIAL	RS485		000~255				
OF LOIAL			ON,OFF 2400,4800,9600,19200,38400,57600				
			2400,4800,9800,19200,38400,57600 AREA1~4				
			AREA1~4 ON,OFF				
	MOTION		0~40				
			ON,OFF				
	PRIVACY		AREA1~8				

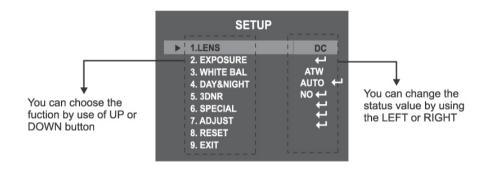
MENU		SUB ME	NU AND DEFUALT SET	TING		
	PRIVACY	AREA DISPLAY	ON,OFF			
		COLOR	0~15			
	SYNC	INT				
	LANGUAGE ENGLISH,KOREAN,JAPANESE,CHINESE1,CHINESE2					
		SENS-UP	x4,x8,x16,x32,x64			
	DEFECT	DIFF	1~6			
		START	COVER THE LENS 1	COVER THE LENS THEN PRESS ENTER KEY		
	SHARPNESS	0~31	0~31			
	MONITOR		LEVEL	0~63		
		CRT	BLUE GAIN	0~100		
			RED GAIN	0~100		
ADJUST			GAMMA	USER,0.5~1.0		
			LEVEL	0~63		
		LCD	BLUE GAIN	0~100		
			RED GAIN	0~100		
			GAMMA	USER,0.5~1.0		
		USER	LEVEL	0~63		
		OSEK	BLUE GAIN	0~100		
			RED GAIN	0~100		
	OSD COLOR	0~15				
RESET	FACTORY	RESET				
EXIT						

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

## New OSD Menu tree

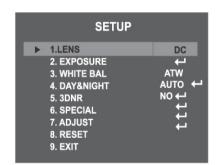
## Menu Control

- 1. Please press the SET button of the OSD control button.
- 2. You can select a function by use of the UP or DOWN buttons.
- 3. You can setup a chose item by use of the LEFT or
- 4. For finishing the setting, please choose 'EXIT' and
- \* icon is unavailable because of function



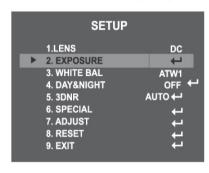
## 1. LENS

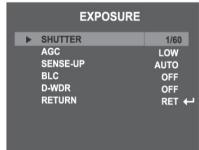
You can select the type of lens you wish to use by pressing the LEFT or RIGHT button. (DC / VIDEO / MANUAL)



#### 2. EXPOSURE

- Once the SETUP menu screen is displayed, choose 'EXPOSURE' by using the Up or Down buttons in order to indicate the arrow 'EXPOSURE'
- 2. You can select wanted mode by using the Up or Down buttons.





SHUTTER: You can select condition and speed control of the SHUTTER.

**AUTO**: Select this to control the shutter speed automatically. Once ESC is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.

**FLK**: You are able to select when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.

**MANUAL**: You can control shutter speed manually. (1/60(50)~1/100,000, x2,x4,x8,x16, x32,x64, x128, x256)

 AGC (Auto Gain Control): The higher the gain level, the brighter the screen. But the higher the noise.

OFF : Deactivates the AGC function

LOW: Allows automatic gain control from 5.3dB to 26dB.

MIDDLE: Allows automatic gain control from 5.3dB to 32dB.

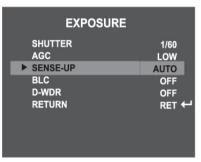
HIGH: Allows automatic gain control from 5.3dB to 37dB.

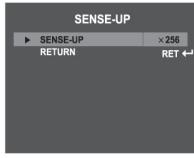
 SENSE-UP: When it is night or dark circumstance, the camera automatically detects the light level and maintains a clear picture if this mode is operated.

**OFF**: Deactivates the SENSE-UP function. **AUTO**: Activated the SENSE-UP function.

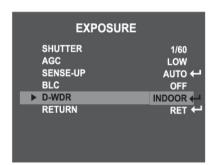
\*You can choose the SENSE-UP value from x2 to x256.

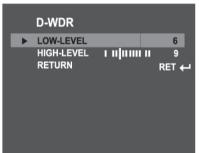
: If the AGC function is set to OFF, the SENSE-UP setting can't be changed.



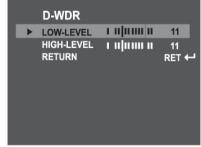


- BLC: It Enables a user to choose a wanted area on a picture and view that area more clearly.
   You can select the function BLC (Back Light Compensation) or HSBLC (Highlight Suppress Back Light Compensation).
- D-WDR: The D-WDR (Digital Wide Dynamic Range function illuminates...) darker areas of an image during retaining the same light level for brighter areas to even out the overall brightness of images with high contrast between bright and dark areas.







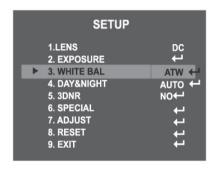


 RETURN: Please select this to save the changes in the EXPOSURE menu and return to the SETUP menu.

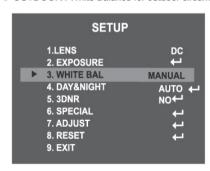
#### 3. WHITE BALANCE

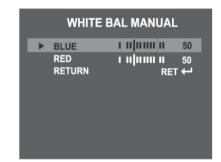
To adjust the screen color, you can use the White Balance function.

- Once the SETUP menu screen is displayed, choose 'WHITE BAL' by using the Up and Down buttons in order to indicates the arrow 'WHITE BAL'
- 2. You can select a wanted mode by using the Up and Down buttons.
- \* Please select one of the following 5 modes, as appropriate for your purpose



- ATW: You can select this when the color temperature is between 2.000°K and 9.500°K.
- AWB : Auto White Balance.
- AWC → SET: To adjust the optimal luminance level for the current environment point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, please readjust it.
- MANUAL: You can select this to fine-tune White Balance first by using the ATW or AWC mode. Then, switch to MANUAL mode fine-tune the White Balance (BLUE, RED) and then press the SET button.
- INDOOR: White Balance for indoor circumstance.
- OUTDOOR: White Balance for outdoor circumstance.



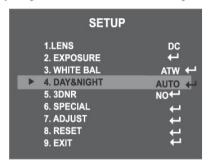


## New OSD Menu tree

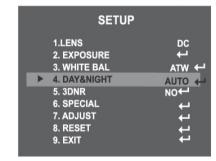
### 4. DAY/NIGHT

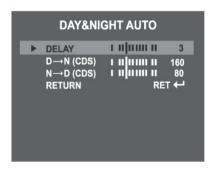
You can display pictures in color or black and white.

- Once the SETUP menu screen is displayed, kindly select 'DAY/NIGHT' by using the UP/DOWN buttons in order to indicate the arrow 'DAY/NIGHT'.
- 2. Select a wanted mode by using the LEFT/RIGHT buttons according to the picture display you want.



 AUTO: The mode is switched to 'Color' in a normal circumstance, but switches to 'BW' Mode when ambient illumination is low. To set up the switching time for AUTO mode, press the SET button. You can turn on or off the burst signal in B/W mode.

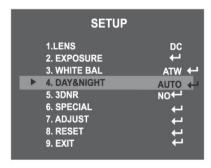


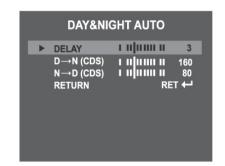


**DELAY**: You can delay a switch time from color mode to B/W mode or from the B/W mode to color mode.

 $D \rightarrow N$  (CDS): DAY  $\rightarrow$  NIGHT setting of the CDS value. (48~255)  $N \rightarrow D$  (CDS): NIGHT  $\rightarrow$  DAY setting of the CDS value. (0~207)

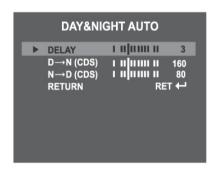
- COLOR: The picture is always displayed in color.
- B/W : The picture is always displayed in black and white. You can turn on or off the burst signal on B/W mode.





BURST: You can choose whether to use of BURST at NIGHT MODE.

IR SMART: Setting of IR SMART related.



NOTE: NO IR LEDs on this camera.

IR GAIN: The strength adjustment of

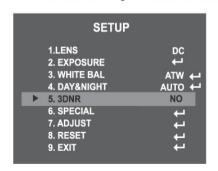
IR SMART.

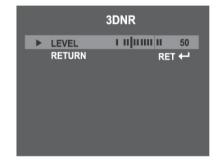
AREA: The area size adjustment of

IR SMART.

#### 5. 3DNR

The 3DNR reduces the background noise in a low lumination circumstances.



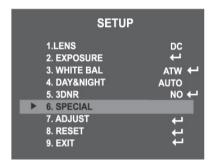


## New OSD Menu tree

- Once the SETUP menu screen is displayed, you can choose '3DNR' by using the UP/DOWN buttons in order to indicate the arrow '3DNR'
- Set the 3DNR mode to 'ON' and press the SET button. Then you can adjust the noise reduction level by using the LEFT/RIGHT buttons.

#### 6. SPECIAL

- When the SETUP menu screen is displayed. You can choose 'special' by using the UP or DOWN buttons so that the arrow indicates 'SPECIAL'
- 2. You can select a wanted mode by using the UP and DOWN buttons.



### **◆ CAM TITLE**

If you enter a title, the title will appear on the monitor.

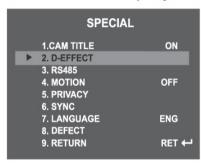
- Once the SPECIAL menu screen is displayed, please use the UP/DOWN buttons so that the arrow indicates 'CAM TITLE'
- 2. Set in to 'ON' by using the Left and Right buttons.
- 3. Press the SET button.
- 4. Please use the 4 direction buttons to move to a wanted letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 15 letters.
- 5. Enter a title, move the cursor to 'POS' and press the SET button. The entered title appears on the screen. Select the position to display the title on the screen by using the 4 direction buttons and press the SET button. Once the position is decided, please select 'END' and press the SET button to return to the SPECIAL menu.

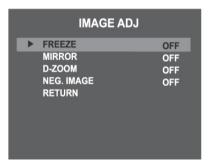




#### ◆ D-EFFECT

- Once the SETUP menu screen is displayed, you can select 'D-EFFECT'(Digital Effect) by using the UP and DOWN buttons in order to indicate the arrow 'D-EFFECT'
- 2. Please select a wanted mode by using the UP/DOWN buttons.





- FREEZE: You can freeze the live picture on screen when you press the button at ON. You can release the frozen live view by pressing the button at OFF.
- MIRROR: OFF, MIRROR, V-FLIP, and ROTATE.
- D-ZOOM: You can use a digital zoom of x1~x32
- NEG. IMAGE: OFF, or ON.
- RETURN: You can select this function to save the settings for the D-EFFECT menu and to return to the SETUP menu.

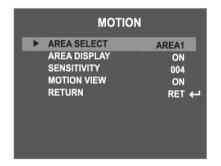
## New OSD Menu tree

#### MOTION

This product has a feature that allows you to observe movement of object in 4 different areas on the screen, and the words 'MOTION' appear on the screen when movement is detected. You can monitor activity more efficiently.

- Once the SPECIAL menu screen is displayed, please press the Up and Down buttons so that the arrow indicates 'MOTION'
- 2. You can set up the mode by using the 4 direction button.





AREA SELECT: You can select the area where motion is occurred.

AREA DISPLAY: It can show the area state.

**SENSITIVITY**: You can select sensitivity of the motion detection.

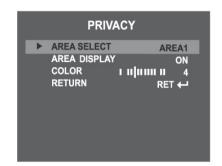
MOTION VIEW: It will be displayed the position where motion is occurred on the screen.

#### PRIVACY

Mask an area you want to hide on the screen.

- When the SPECIAL menu screen is displayed, please press the UP/DOWN buttons so that the arrow indicates 'PRIVACY'
- 2. You can set up the mode by using the 4 direction buttons.





AREA SELECT: You can set up the PRIVACY area from AREA1 to AREA8.

AREA DISPLAY: Move the arrow down to AREA DISPLAY. AREA DISPLAY can be displayed on screen ON or OFF by pushing the button LEFT or RIGHT. When set OFF of each AREA, the color shades will not be display on screen. When set ON of each AREA, the color shades will appear on screen.

COLOR: You can select your color shade from 15 colors.

#### **◆ LANGUAGE**

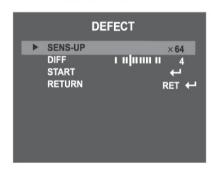
You can select the menu language according to your requirements.

You can change Display Language on [Language] of function Menu by operating LEFT/RIGHT buttons. (ENGLISH,KOREAN,JAPANESE,CHINESE1,CHINESE2)

#### **◆ DEFECT**

You can compensate by using 'DEFECT' function if there is defect on CCD Sensor.



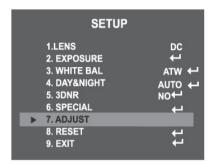


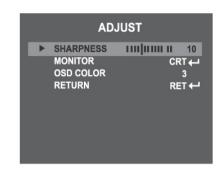
- Once the SETUP menu screen is displayed, you can choose 'DEFECT' by using the UP/DOWN buttons in order to indicate the arrow 'DEFECT'
- 2. After finish set up the mode by use of SENS-UP, DIFF, press the 'START' button.
- 3. Cover the lens then press set key

## New OSD Menu tree

#### 7. ADJUST

This function gives a various effect on the screen.





- When the ADJUST menu screen is displayed, please press the UP/DOWN buttons so that he arrow indicates 'ADJUST'
- 2. You can set up the mode by using the 4 direction buttons.

#### SHARPNESS

You may adjust picture sharpness of the screen by using the LEFT or RIGHT button on a scale from 0 to 31.

#### MONITOR

Please change the settings value of video appropriate to your monitor.

LCD: Please select this menu item when using on LCD monitor

CRT: Please select this menu item when using a CRT monitor.

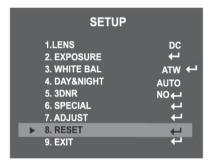
**USER:** Please use this menu item when using a monitor other than standard ones. You can change the gamma, PED level, and color gain in the sub menus.

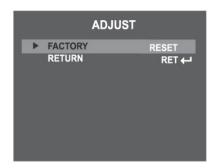
#### OSD COLOR

Adjustment of FONT COLOR of OSD, ID&TITLE. (16 Colors)

#### 8. RESET

Initialize of the setting value.





## 9. EXIT

You can select a desired EXIT mode by using the UP/DOWN buttons depending on the camera purpose.

# **TROUBLESHOOTING**

PROBLEM	SOLUTION		
No picture	Check if the power cable is connected properly. Check if the video cable is connected correctly.		
Camera with excessive heat, abnormal motion of black lines on the screen.	Check if the power supply meets the minimum requirements and that the power supply is functioning properly.		
Blinking Screen	Check if the Camera faces the Sun or fluorescent lamp.		
Unclear Screen	Check if the Lens is dirty. If necessary, clean the lens with a soft cloth or lens brush.  Check the camera positioning and setting.  Adjust the camera position if too much light is entering the iris.		
No operation of Color Auto mode	Check if you set 'Color' mode 'EXT/ON/OFF' Check if you set 'Gain' mode off. Burst set to off will also enable B&W mode.		
No operation of Motion Detection	Check if 'Motion Detection' mode is on Check if the 'MD Level' is set too low. Check if the 'MD Area' is set properly.		
Inaccurate Color	Insure that 'White Balance' is set properly.		

5



MEMO		