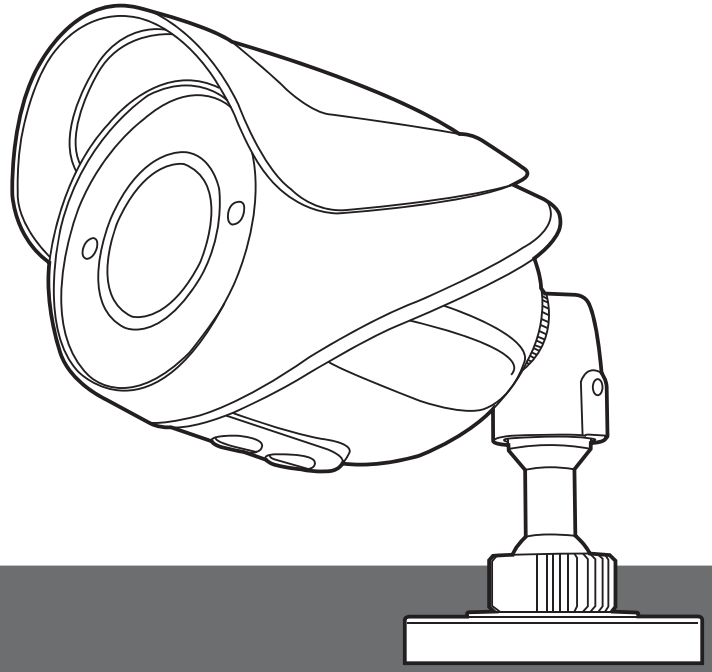
User Manual



COMPACT IR BULLET CAMERA

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Day & Night IP68 Weatherproof Camera

Ver. 1.0

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Components

COMPACT IR BULLET CAMERA

DC Type

Compact IR Bullet Camera	1
Manual	1
L-Wrench	1
Self Tapping Screw	3
Rawlplug Ø6.0 x 30.0	3

Dual Type

Compact IR Bullet Camera	1
Manual	1
L-Wrench	1
Self Tapping Screw	3
Rawlplug Ø6.0 x 30.0	3
DC Jack Plug (TC-0021)	1

Warnings & Cautions

COMPACT IR BULLET CAMERA

- If you fail to read this information and handle the product incorrectly, death or serious injury may occor.
- The unit should be installed by trained personel.
- Switch off immediately if the product emits smoke or abnomal heat.
- Never install the product in an area with exposed oil or gas
- Never install the product on a ceiling that can not hold its weight.
- Never touch the power cord with wet hands. Clean only with a dry cloth.
- Never install the product in extremely high or low temperatures.
- Never drop, hit strongly or cause the product to vibrate.
- Never expose the product to direct sunlight or other sources of bright light.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

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 uninsulated dangerous voltagewithin 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.

General Features

COMPACT IR BULLET CAMERA

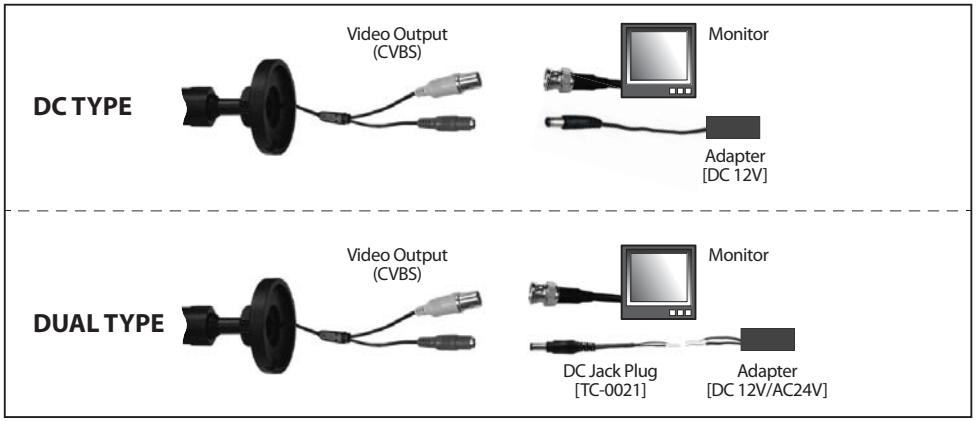
- 600TVL & IP68 Prefect Water-Resistant
- 2D-Digital Noise Reduction
- Digital Wide Dynamic Range
- Dead Pixel Compensation
- BLC (Includes HLC)
- Privacy Masking
- Lens Shading Compensation

Part Names

COMPACT IR BULLET CAMERA

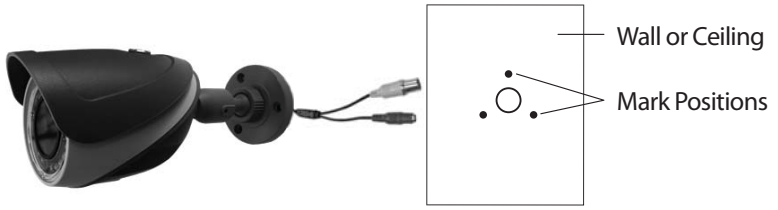
Connections

COMPACT IR BULLET CAMERA



Installation

COMPACT IR BULLET CAMERA



1. Mark the intended position for the camera bracket installation.
2. Three holes - 8mm diameter - should be used for a stable fix (depth around 37mm).
3. Install the supplied rawlplugs into the holes.
4. When installing on a wall or ceiling the total weight of the camera is approximately 450g.

MAIN MENU

LENS	DPC
EXPOSURE	SPECIAL
WHITE BAL	RESET
BACKLIGHT	EXIT
DAY&NIGHT	

EXPOSURE

SHUTTER	DWDR
BRIGHTNESS	RETURN
AGC	

BLC

AREA SEL.	LEFT / RIGHT
AREA STATE	TOP / BOTTOM
GAIN	RETURN
HEIGHT	
WIDTH	

D&N AUTO

D→N LEVEL	N→D DELAY
D→N DELAY	RETURN
N→D LEVEL	

SPECIAL

CAM TITLE	COMM ADJ.
MOTION	LANGUAGE
PRIVACY	VERSION
PARK.LINE	RETURN
IMAGE ADJ.	

MOTION

AREA SEL.	LEFT / RIGHT
AREA STATE	TOP / BOTTOM
GAIN	RETURN
HEIGHT	
WIDTH	

PRIVACY

AREA SEL.	LEFT / RIGHT
AREA STATE	TOP / BOTTOM
GAIN	RETURN
HEIGHT	
WIDTH	

PARKI.LINE

LT	F
LB	N
RT	T
RB	RET

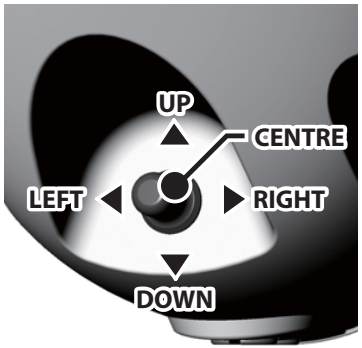
COMM ADJ

CAM ID	RETURN
BAUD RATE	
PROTOCOL	
DISPLAY ID	
ID POS	

IMAGE ADJ

LENS SHAD.	SHARPNESES
2DNR	DISPLAY
MIRROR	NEG.IMAGE.
FRONT COLOR	RETURN
CONTRAST	

OSD Menu Setting
COMPACT IR BULLET CAMERA



CENTRE BUTTON

- Used to access menu mode. Also used to confirm the menu setting.

UP / DOWN BUTTON

- Used to choose the desired menu selection.

LEFT / RIGHT BUTTON

- Used to choose the desired menu feature adjustment.

SETUP

LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

▶ Select the function using Up or Down.
↵ Select to Change the status using Left or Right.
▪▪▪ Icon means menu item is unavailable under certain conditions.

A. LENS

Using this function the screen brightness is controllable. You can select the lens type using Left and Right.

SETUP	
▶ LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

B. EXPOSURE

Using this function, you can select or deselect 'Flickerless' Function on Shutter Menu.

When the SETUP menu screen is displayed, select "EXPOSURE"using Up and Down.
Select the desired mode using Left and Right.

SETUP	
LENS	DC
▶ EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

EXPRSURE	
SHUTTER	1/60
BRIGHTNESS	035
AGC	_ _ _ _
DWDR	OFF
RETURN	RET ↵

B-1. SHUTTER : Shutter speed is controllable.
B-2. BRIGHTNESS : Adjusts the image brightness.
B-3. AGC : The higher the gain level, the brighter the screen but the higher the noise.
B-4. RETURN : Select this to save the changes in the EXPOSURE menu return to the SETUP.

OSD Menu Setting
COMPACT IR BULLET CAMERA

C. WHITE BALANCE

Use the White Balance function to adjust the image colour.

SETUP	
LENS	DC
EXPOSURE	↵
▶ WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

C-1. ATW1, ATW2: Select this when the colour temperature is between 2700°K~10500°K.
C-2. MANUAL: Select this to fine-tune the White Balance - using the ATW or AWC mode first.
C-3. AWC -> SET: To find the optimal luminance level, for the current environment, point the camera toward a sheet of white paper and press the function setup switch.
If the environment changes, readjustment is required.

D. BACKLIGHT

Unlike conventional cameras, this camera is designed to deliver a distinctive subject and background at the same time; even when the subject is backlight.

SETUP	
LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
▶ BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

D-1. HLC: Enables a user to select a desired area on a picture and view that area more clearly.

E. DAY & NIGHT

SETUP	
LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
▶ DAY&NIGHT	AUTO ↵
DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

E-1. COLOR: The picture is always displayed in colour.

E-2. BW: The picture is always displayed in black and white.

E-3. AUTO: The mode switches to 'Color' in a normal daytime environment and switches to 'B/W' mode when ambient illumination is low. To set up the switching time for AUTO mode press the Function Setup switch.

F. DPC (Dead Pixel Compensation)

This function masks dead pixels on the CCD sensor.
It works when the lens is completely covered by hand and the set key is pressed.

SETUP	
LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
▶ DPC	↵
SPECIAL	↵
RESET	↵
EXIT	↵

COVER THE LENS
THEN
PRESS ENTER KEY

OSD Menu Setting
COMPACT IR BULLET CAMERA

G. SPECIAL

SETUP	
LENS	DC
EXPOSURE	↵
WHITE BAL	ATW1
BACKLIGHT	OFF
DAY&NIGHT	AUTO ↵
DPC	↵
▶ SPECIAL	↵
RESET	↵
EXIT	↵

G-1. CAM TITLE: If you enter a title, the title appears on the monitor screen.

1. When the SPECIAL menu screen is displayed, use the Up and Down keys to move the cursor to "CAM TITLE".
2. Set to "ON" using the LEFT and RIGHT keys.
3. Press the SET button.
4. Use the 4 directional buttons to move to a desired character, and select the letter by pressing the set button. Repeat this process to enter multiple characters. You can enter up to 15 letters.
5. Enter a title, move the cursor to "POS"and press the SET button to determine where, on the image, to display the title.

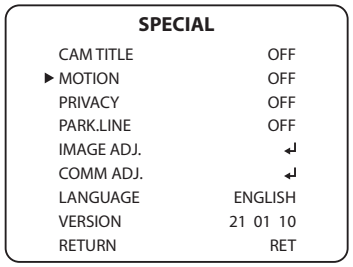
SPECIAL	
▶ CAM TITLE	OFF
MOTION	OFF
PRIVACY	OFF
PART.LINE	OFF
IMAGE ADJ.	↵
COMM ADJ.	↵
LANGUAGE	ENGLISH
VERSION	21 01 10
RETURN	RET

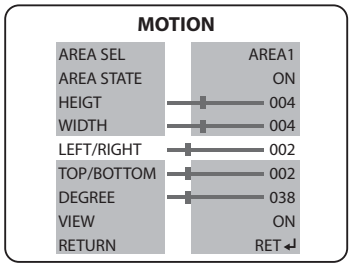
	0	1	2	3	4	5	6
7	8	9	A	B	C	D	E
F	G	H	I	J	K	L	M
N	o	p	Q	R	S	T	U
V	W	X	Y	Z	▶	→	←
↑	↓	{	}				■
/	=	&	;	~	,	.	↵
←	→	CLR		POS		END	

TDC2040

G-2. MOTION: This product has a feature that allows you to observe and detect movement of an object within four different areas of the image.

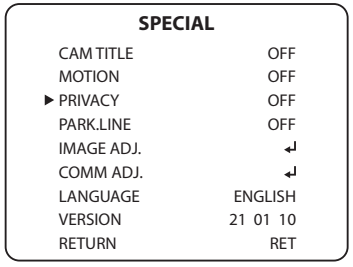
You can select up to four Motion Detection areas.

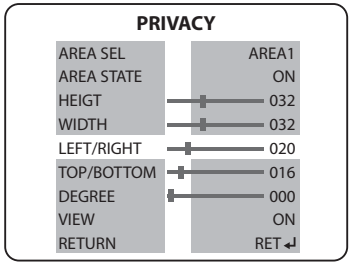




G-3. PRIVACY

Mask an area you want to hide on the screen. You can select up to six PRIVACY zones.

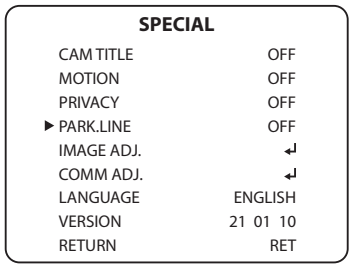


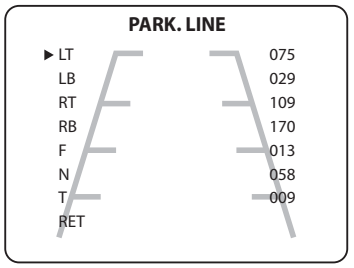


OSD Menu Setting
COMPACT IR BULLET CAMERA

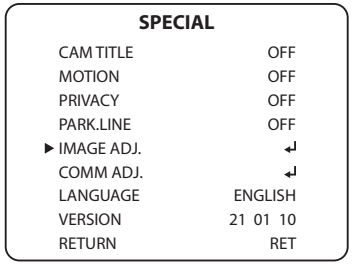
G-4. PARK. LINE

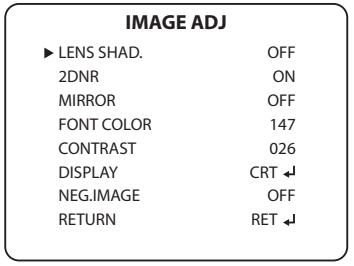
You can set a parking line.





H. IMAGE ADJ





I . COMM ADJ (Communication Adjustment)

COMM ADJ is a function to setup when you want the camera to communicate externally.

Note: The function is disabled when camera doesn't have IP support.

J . LANGUAGE

You can select the menu language according to local requirements.

Troubleshooting

COMPACT IR BULLET CAMERA

If you have trouble setting up or operating the camera, refer to the following.

NO PICTURE
- Check if the Power is correctly connected.
- Check if all the cables are correctly connected.

CAMERA IS HOT, ABNORMAL MOVING BLACK LINES ON THE SCREEN.
- Check the camera power supply meets the necessary requirements and the mains power supply does not have different ground potentials.

BLINKING SCREEN
- Check if the camera is facing toward bright sunshine or fluorescent lighting.
- Check if the Auto Iris Lens is correctly connected.

UNCLEAR SCREEN
- Check if the lens is dirty. Clean with a soft lint free cloth.

NO OPERATION OF COLOUR AUTO MODE
- Check the camera is set to 'Color' mode.
- Check that 'GAIN' mode is not set to off.

NO OPERATION OF MOTION DETECTION
- Check that 'Motion Detection' mode is not set to off.
- Check that 'Area' is properly configured.

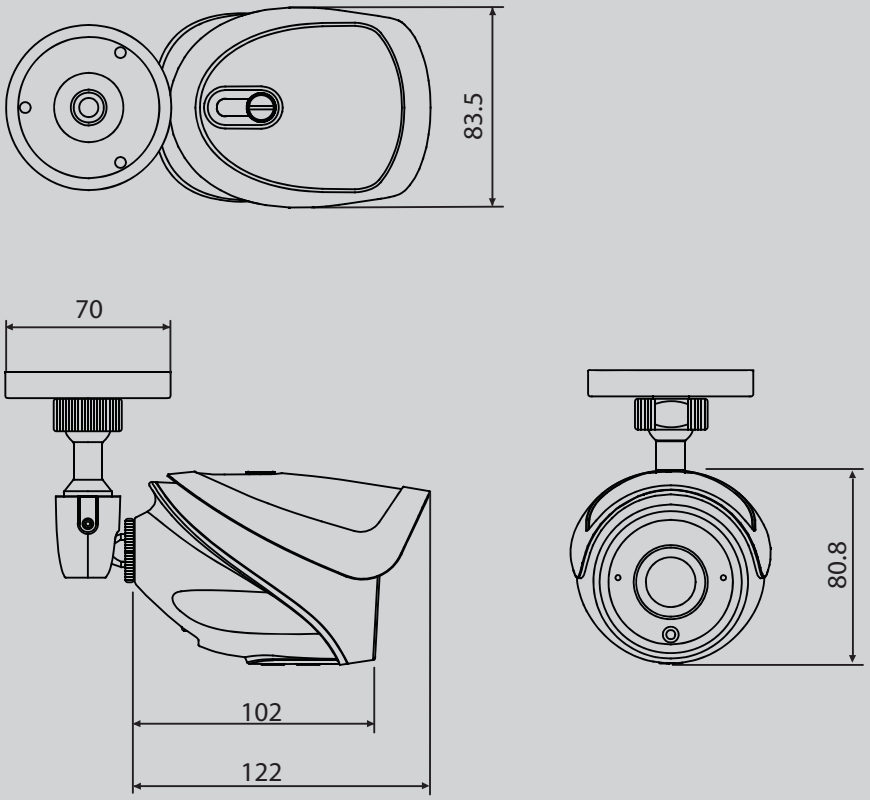
NOT THE RIGHT COLOURS
- Check the 'White Balance' setting is correct.

Specification

COMPACT IR BULLET CAMERA

MODEL		COMPACT IR BULLET CAMERA
VIDEO		
Image Sensor		1/3" Sony Super HAD II CCD
Total Pixels		NTSC: 811 (H) X 508 (V), PAL: 795 (H) X 596 (V)
Effective Pixels		NTSC: 768 (H) X 494 (V), PAL: 752 (H) X 582 (V)
Scanning System		2:1 Interlace
Scanning Frequency		NTSC: 15.734kHz x 59.94Hz, PAL: 15.625kHz x 50Hz
Synchronization		Internal
Shutter Speed		NTSC:1/60s~1/100,000s, PAL:1/50s~1/100,000s
Horizontal Resolution		600TVL (Colour) / 650TVL (B/W)
S/N Ratio		50dB or more (AGC off)
Min. Illumination		Colour: 0.1 Lux, B/W: 0.01 Lux, (F1.2 at 30 IRE)
Video Output		VBS 1.0V p-p /75Ω
LENS		
Varifocal Lens	Lens	[2.8~12mm] DC Auto IRIS Lens (Option: IR Filter Change)
	Angular Field of View	H: 102° (Wide) ~ 28° (Tele), V: 73° (Wide) ~ 21° (Tele)
Fixed Lens	Lens	3.6mm, 4.3mm, 6.0mm
	Angular Field of View	[3.6mm] H: 72° V: 53° , [4.3mm] H: 63.7° V: 52.1°, [6.0mm] H: 46° V: 34°
OPERATIONAL		
On Screen Display		Support
Day & Night		Colour / BW / Auto Selectable
Motion Detection		On / Off (4 Zone ISO Control/ Output OSD)
Privacy Masking		On / Off (8 Areas)
White Balance		ATW1, ATW2/AWC->SET/MANUAL
DNR		On / Off
WDR		DWDR
Sens-Up		N/A
Auto Gain Control		OFF / LOW / MIDDLE / HIGH Selectable
DPC		On / Off
Sharpness		Level Adjustable
Heater		Option
ENVIRONMENTAL		
Operating Temp. / Storage Temp.		-10°C~+50°C / -20°C~+60°C
Operation Humidity		Under 90% (Non-condensing)
ELECTRICAL		
Current	DC (Varifocal)	Max. DC12V 280mA [3.5W]
	DC (Fixed)	Max. DC12V 400mA [4.8W]
	Dual	Max. DC12V 350mA [4.5W] Max. AC24V 300mA [7.2W]
Power Supply	DC	DC12V 500mA / DC12V 1.0A
	Dual	DC12V 500mA / DC12V 1.0A AC24V 500mA / AC24V1.0A
MECHANICAL		
Dimensions		124mm (W) x 80.8mm (H) x 83.5mm (D)
Weight		450g
IR LED		20EA (Verifocal) / 35EA (Fixed)
Environmental		IP68 [1m for 2 hours], not suitable for swimming pools etc
Certifications		CE, FCC
Outside Control		Zoom, Focus, OSD

Dimensions



UNITS : mm

Memo

Memo

Memo