

HIGH PERFORMANCE BULLET CAMERA OPERATION MANUAL



Thank you for choosing our high quality camera. Before attempting to connect or operate, please read and follow these instructions.

CAUTIONS

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

In USA and Canada, Use Class 2 Power Supply Only.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note -

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

WARNING -

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Caution -

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAUTION

1. A regulated DC12V 300mA power supply is recommended for use with this camera for the best picture and the most stable operation. **An unregulated power supply can cause damage to the camera. When unregulated power supply is applied, product warranty will be out of subject.**
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level. If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal components. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**

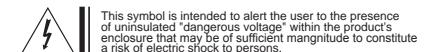
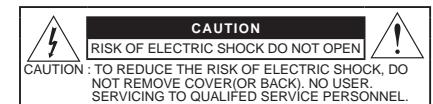
Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicate that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.



IMPORTANT SAFETY INSTRUCTION

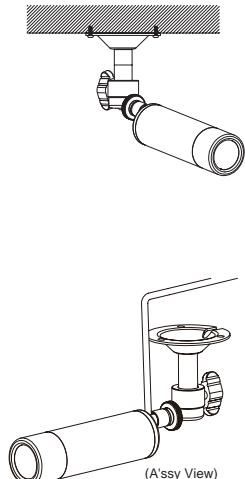
- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (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.
- 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.



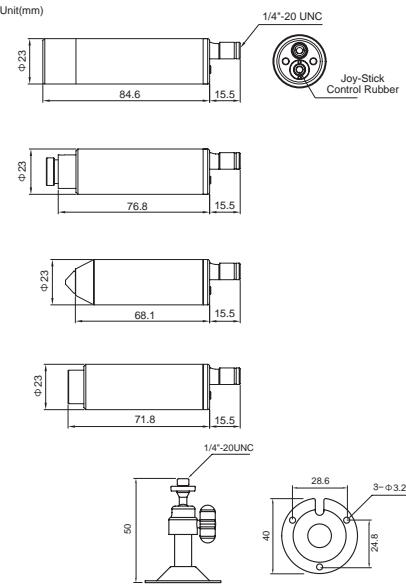
COMPONENTS

Bullet Camera	
Mounting Bracket	
Screw 3ea	
Operation Manual	

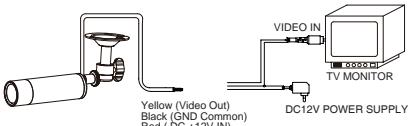
MOUNTING POSITION



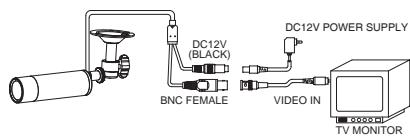
DIMENSIONS



CONNECTION



LEAD WIRE CONNECTION (STANDARD)



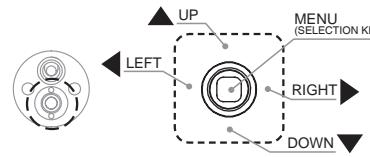
DIY CABLE CONNECTION

! When you install the camera, please glue up the end of cable to keep it stable in order to protect the camera from the humidity problems.

OSD MENU STRUCTURE

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU	5th Sub MENU
EXPOSURE	AUTO	HIGH LUMINANCE	FICKERLESS	OFF / ON	
			BRIGHTNESS	000 ~ 255	
		LOW LUMINANCE	MODE	AGC, SLOW, AGC-SLOW, SLOW-AGC, OFF	
			AGC MAX	6, 12, 18, 24, 30, 36	
			DSS MAX	2, 4, 8, 16, 32, 64, 128, 256	
			BRIGHTNESS	x0.25, x0.5, x0.75, x1.0	
	MANUAL	RETURN	MODE	SHUT, SLOW	
		SHUT	SHUT MODE ONLY 1/50(PAL), 1/60(NTSC), 1/100(NTSC), 1/120(PAL), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 SLOW MODE ONLY 2, 4, 8, 16, 32, 64, 128, 256		
		AGC	6, 12, 18, 24, 30, 36, 42, 44.8		
		RETURN			
		PUSH			
		ATW	SPEED	000 ~ 255	
			DELAY CNT	000 ~ 255	
			ATW FRAME	x0.5, x1.0, x1.5, x2.0	
			ENVIRONMENT	INDOOR, OUTDOOR	
	WHITE BAL	RETURN			
		USER1	B-GAIN	000 ~ 255	
			R-GAIN	000 ~ 255	
		USER2	RETURN		
			B-GAIN	000 ~ 255	
			R-GAIN	000 ~ 255	
		RETURN			
		ANTI CR	LEVEL UP	PUSH ENTER	
			LEVEL DOWN	PUSH ENTER	
			PRESET		
			RETURN		
	DAY&NIGHT	PUSH LOCK			
		AUTO	COLOR		
			BURST	OFF, ON	
			DELAY CNT	000 ~ 255	
			DAY -> NIGHT	000 ~ 255	
		BW	NIGHT -> DAY	000 ~ 255	
			RETURN		
		WDR MODE	BURST	OFF, ON	
			RETURN		
			LEVEL	000 ~ 015	
			CONTRAST1	000 ~ 007	
			CONTRAST2	000 ~ 004	
	WDR / BLC		RETURN		
	BLC MODE	BLC ZONE	CENTER, TOP, BOTTOM, LEFT, RIGHT		
		LEVEL	000 ~ 015		
		RETURN			
	HLC MODE	CLIP LEVEL	000 ~ 255		
		SCALE	000 ~ 015		
		RETURN			
	DNR	2DNR MODE	OFF, ON		
		2DNR LEVEL	000 ~ 015		
		3DNR MODE	OFF, ON		
		3DNR LEVEL	000 ~ 063		
		RETURN			
		IMAGE	HV-FLIP	OFF, ON	
			FREEZE	OFF, ON	
			EZOOM	1.0x ~ 3.0x	
			CONTRAST	000 ~ 063	
			SHARPNESS	000 ~ 015	
			RETURN		

MAIN MENU	1st Sub MENU	2nd Sub MENU	3rd Sub MENU	4th Sub MENU	5th Sub MENU
SPECIAL	CAMERA TITLE	OFF, ON	DISPLAY THE TITLE EDITING MENU		
			RETURN		
		LANGUAGE	ENGLISH / РУССКИЙ / ESPAÑOL / DEUTSCH / FRANCAIS / PORTUGUÉS / 日本語 / 中文		
		AREA SEL	1/15 ~ 15/15		
	PRIVACY	MODE	OFF, ON		
		POSITION	NEXT-PUSH ENTER		
		COLOR	WHITE, BLACK, RED, GREEN, BLUE, YELLOW, CYAN, MAGENTA		
		TRANS.P AGENCY	0.00, 0.50, 0.75, 1.00		
	MOTION DET	MOSAIC	OFF, ON		
		RETURN			
		DETECT SENCE	000 ~ 127		
		BLOCK DISP	OFF, ON		
		DETECT AREA	EXIT: HOLD ENTER		
		AREA SEL	1/4 ~ 4/4		
	MONITOR AREA	MODE	OFF, ON		
		TOP	000 ~ 015		
		BOTTOM	000 ~ 015		
		LEFT	000 ~ 023		
		RIGHT	000 ~ 023		
		RETURN			
	FACTORY DEFAULT				
	EXIT				
	SAVE&EXIT				



SPECIFICATION

Signal Format	NTSC	PAL
Image Device	1/3" 960H SONY Double Scan Super HAD CCD II	2 : 1 Interlace
Scanning System		
Scanning Frequency	H:15.734KHz, V:59.94Hz	H:15.625KHz, V:50Hz
Total Pixels	1028(H) X 508(V)	1028(H) X 596(V)
Effective Pixels	976(H) X 494(V)	976(H) X 582(V)
H.Resolution		750TV Lines
Electronic Shutter	1/60 ~ 1/100,000sec	1/50 ~ 1/100,000sec
S/N Ratio	More than 50dB (AGC OFF, 3DNR ON)	
Min.Illumination	Color:0.1Lux (30IRE@F2.0, AGC 36dB) 0.000001Lux (DSS x256)	
Gamma	7 = 0.45	
Video Output	1.0 Vp-p Composite(75Ω)	
Sync System	Internal	
Lens	Board Lens, Pinhole Lens	
Digital Zoom Ratio	3x	
Digital Slow Shutter	OFF, 2 ~ 256 Field	
Flickerless	ON / OFF	
WDR	ON / OFF (Level adjustable)	
BLC	ON / OFF (Level adjustment, Area selection)	
HLC	ON / AUTO / OFF (Level adjustable)	
AGC	OFF, 6 ~ 36dB	
DNR(2D/3D)	ON / OFF (Level adjustable)	
Image Function	Image reverse (Normal / Flip), Freeze, Contrast, Sharpness	
Day & Night	COLOR / BW / AUTO (DIGITAL D/N)	
Motion Detection	4 Zones (Level adjustable, Area adjustment)	
Privacy Masking	15 Zones (Area adjustment)	
White Balance	ATW / PUSH / USER1 / USER2 / ANTI CR / MANUAL / PUSH-LOCK	
OSD	Built in (Joystick)	
LANGUAGE	ENGLISH / РУССКИЙ / ESPAÑOL / DEUTSCH / FRANCAIS / PORTUGUÉS / 日本語 / 中文	
Operating Temperature	14°F ~ 122°F (-10°C ~ +50°C)	
Storage Temperature	-4°F ~ 140°F (-20°C ~ +60°C)	
Humidity	Less than 80%	
Power Consumption	DC 12V (±10%), Max 140mA	
Weight	Approx. 68g	
Dimension(mm)	23.0(Ø) x 85 (mm)	

Specifications and designs are subject to change for improving the functionality of this product without notice.