



Monochrome CCD Camera

## WAT-2200DW

### Operation Manual

This Operation Manual covers safety, camera functions, installation and the correct operating procedure for the WAT-2200DW. First, we ask you to read this Operation Manual thoroughly, then install and operate the WAT-2200DW as advised. In addition, for future reference, we also advise safe keeping of this manual.

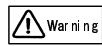
Please contact the distributor or dealer from which the WAT-2200DW was purchased, if you do not understand the installation, operation or safety instructions laid out in this manual. Not understanding the contents of the Operation Manual sufficiently may cause damage to the camera.

### Guide to the safety symbols

The meanings of the symbols used in this operation manual are:



When you do not adhere to or take notice of the "Danger" sign, it may lead to a serious accident such as death or injury caused by fire or electric shock.



When you do not adhere to or take notice of the "Warning" sign, it may cause severe damage such as a physical injury.



When you do not adhere to or take notice of the "Caution" sign, it may incur injury and cause damage to peripheral objects in the immediate surroundings.

### Cautions for safety

The WAT-2200DW is designed to be used safely; however, electrical goods may lead to a physical accident caused by fire and electric shock if not used correctly. Therefore, please keep and read the "Cautions for safety" for protection against accidents.



- Do not disassemble and/or modify the WAT-2200DW.
- Do not operate the WAT-2200DW with wet hands.



- Use a stabilized power adaptor designed for DC+12V±10%, with a current capacity of more than 250mA for the WAT-2200DW.

The recommended voltage is DC+12V±10%

- Do not use the WAT-2200DW under unusual environmental conditions.

The WAT-2200DW is specified as water-resistant. However, the WAT-2200DW is not compliant with dust-proof and explosion-proof standards.

- Should the camera not work properly, switch off the power immediately. Then check the camera according to the "Problems and Trouble Shooting" section.



- Avoid the striking of hard objects or dropping the WAT-2200DW.

The WAT-2200DW uses high quality electrical parts and precision components.

- Do not connect any power supply directly to the video out terminal of the unit.

Do not connect the WAT-2200DW with any monitor using a video/power single transmission terminal. The WAT-2200DW is not designed for use with this type of equipment. We also advise you to read the operation manual of the monitor you plan to use before any connections are made.

- Do not install the WAT-2200DW in a position subject to direct sunlight.

Sunlight shinning directly onto the WAT-2200DW lens can cause damage to the CCD.

- Select a stable place for installation of the WAT-2200DW.

Use a support of durable strength around an installation position on a ceiling or wall when a camera stand or tripod is used.

- Do not move the WAT-2200DW with the cables connected.

Before moving the WAT-2200DW, always remove the video cable and power cable from the rear of the camera first.

- Avoid using the WAT-2200DW near any strong electromagnetic field.

After installing into main equipment, if the WAT-2200DW is exposed to electromagnetic waves causing the monitored image to become distorted, we recommend the camera be shielded by appropriate protective casing.

- Dry the WAT-2200DW well after use.

When the WAT-2200DW is used in seawater, flush well with pure water, and then wipe. If the WAT-2200DW is steeped in water for many hours or left without wiping after use, the surface of the WAT-2200DW may show signs of deposits and/or corrosion.

### Problems and Trouble Shooting

If any of the following problems occur when using the WAT-2200DW,

- An optimal picture cannot be obtained, after checking that all the cables and connections are correctly in place.
- Smoke or any unusual odor emerges from the WAT-2200DW.
- An object becomes embedded or a quantity of liquid seeps into the camera housing.
- More than the recommended voltage or/and amperage has been applied to the WAT-2200DW by mistake.
- Anything unusual occurring to any equipment connected to the WAT-2200DW.

Disconnect the camera immediately according to the following procedures:

- ① Switch off the main power supply to the camera.
- ② Remove the power and video cables connected to the WAT-2200DW.
- ③ Contact the distributor or dealer from which the WAT-2200DW was purchased.

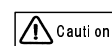
### Waterproof Conformity

The WAT-2200DW casing has waterproof performance per the following:

JIS C 0920 (IEC60529)

Degrees of protection provided by enclosures: IPX7 equivalent

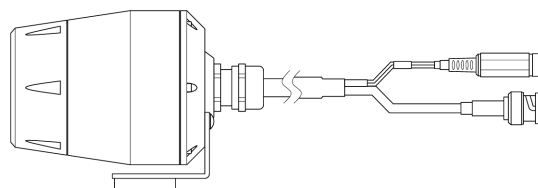
※Waterproof capability of the WAT-2200DW is confirmed according to the above conditions. This waterproof standard does not cover the quality of the operation under unusual condition.



For ⑥POWER IN and ⑦VIDEO OUT(BNC), this part is not included in the compatible range of the waterproof standard. Treat the connector area for waterproofing if needed.

### Contents

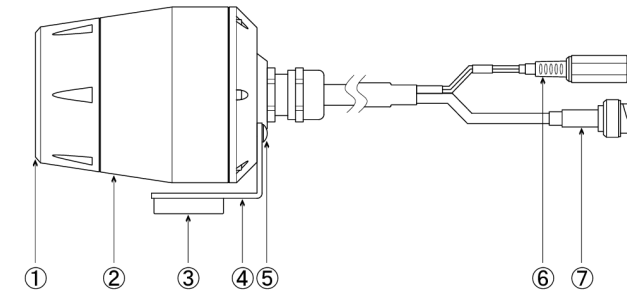
Check to make sure all parts are present before use.



### Power Supply

Use a stabilized power adaptor designed for DC+12V±10%, with a current capacity of more than 400mA.

### Description of parts



- ① FRONT GLASS (Tempered glass)

• Dirt, water or oil deposits on the front glass will cause an unclear picture on the monitor and scratches might become permanent damage. Do not dismount the front glass.

- ② HOUSING MAIN BODY

• This case is uses aluminum and is given alumite treatment.

- ③ TRIPOD MOUNTING SCREW HOLES

• Mounting holes for stands. The size of these threads are 1/4", 20 threads, 4.5±0.2mm, which is the same as any standard camera tripod (U1/4").

- ④ BRACKET

• The bracket for fixing to the camera.

- ⑤ BRACKET MOUNTING SCREWS

• The screws for mounting the bracket to the camera.

- ⑥ POWER IN

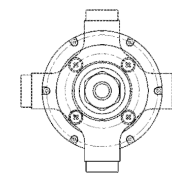
• The terminal designed for connection with the DC-plug of the power adaptor.

- ⑦ VIDEO OUT (BNC)

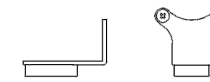
• The terminal for composite video signal output.

### Set-up and Operation

- 1) Ensure that the power to the WAT-2200DW and the peripheral equipment is turned off before making any connections.
- 2) Connect ⑦VIDEO OUT on the WAT-2200DW with the monitor, using a coaxial cable with 75Ω impedance.
- 3) Insert the power plug of the power adaptor into ⑥POWER IN. Confirm that the power adaptor is not connected to the power supply before insertion of the power plug into ⑥POWER IN.
- 4) Turn on the power to the WAT-2200DW, monitor and all other allied equipment. When a picture cannot be obtained on the monitor, check and follow the procedure mentioned in the [Problems and Trouble Shooting] section.
- 6) When a change of installation position is required, set ④BRACKET to your required position after removing ⑤BRACKET MOUNTING SCREWS from the WAT-2200DW, then retighten ⑤ BRACKET MOUNTING SCREWS firmly. Angular settings for ceiling and wall are also available.



<Back side of the WAT-2200DW>



<<④BRACKET >>

### Specifications

Model	WAT-2200DW	
Pick-up Element	1/2.8-inch CMOS image sensor	
Number of total pixels	2144(H)×1588(V)	
Number of Effective Pixels	1080i/1080p	1920(H)×1080(V)
	720p	1280(H)×720(V)
Sync. System	Internal	
Scanning System	Progressive	
Video Output	HD-SDI	
Output format	1080i60, 1080p30, 1080i50, 1080p25, 720p60, 720p50	
Minimum Illumination	0.2 lx. F1.2	
Flickerless mode	50Hz, 60Hz, OFF	
Shutter speed	AUTO, 1/100, 1/120, 1/200, 1/500, 1/1000, 1/2000, 1/5000, 1/10000 sec.	
Exposure compensation	+2.0EV ~ -2.0EV (12 steps)	
Wide dynamic range	①OFF ②Highlight priority ③Shadow priority-low ④Shadow priority-high	
Noise reduction	OFF/LOW/HIGH	
Sharpness	7 steps	
White balance	ATW, Preset(4 types)	
Privacy mask	16 selectable area settings	
Lens	f 3.0mm F=1.2	
Power Supply	DC+12V	
Power Consumption	3.12W (260mA)	
Operating Temperature	-10 ~ +40°C	
Storage Temperature	-20 ~ +60°C	
Size	φ68×112 (mm)	
Cable Length	10m	
Weight	Approx. 1.2kg	

• Design and specifications are subject to change without notice.

• Watec is not responsible for any inconvenience or the attendant damages to the video and monitoring recording equipment caused by misuse, misoperation or improper wiring of our equipment.

• If for any reason the WAT-2200DW does not work properly, or if you have any questions regarding installation or operation, please contact the distributor or dealer from which it was purchased.

### Contact information

**Watec Watec Co., Ltd.**

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