

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

Please contact the distributor or dealer from which the WAT-2200D 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.

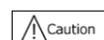
Guide to the Safety Symbols



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-2200D is designed to be used safely; however, it 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" below for protection against accidents.



- Do not disassemble and/or modify the WAT-2200D.
- Do not operate any current-carrying part with wet hands.



- Use a stabilized power adaptor designed for DC+12V±10%, with a current capacity of more than 300mA for the WAT-2200D.

The recommended voltage is DC+12V±10%. Also, we advise the Use of an "inline fuse" power line to protect the camera and peripheral equipment, where applicable.

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

The WAT-2200D is specified as water-resistant. However, the WAT-2200D 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-2200D.

The WAT-2200D uses high quality electrical parts and precision components and may inadvertently be damaged if not cared for properly.

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

Do not connect the WAT-2200D with any monitor using a video/power single transmission terminal. The WAT-2200D utilizes HD-SDI output and 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-2200D in a position subject to direct sunlight.

Sunlight shining directly onto the WAT-2200D lens can cause damage to the sensor.

- Select a stable place for installation of the WAT-2200D. Use an appropriately rated mount durable and strong for all installation position.

- Do not move the WAT-2200D with the cables connected. Before moving the WAT-2200D, always remove the video cable and power cable from the rear of the camera first.

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

In the event of exposure to electromagnetic waves (causing the monitored image to become distorted) we recommend the camera be shielded by an appropriate protective casing.

- Dry the WAT-2200D well after use. When the WAT-2200D is used in seawater, flush well with pure water, and then wipe. If the WAT-2200D is steeped in water for many hours or left without after use, the surface of the WAT-2200D may become white.

Problems and Trouble Shooting

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

- 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-2200D.
- 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-2200D by mistake.
- Anything unusual occurring to any equipment connected to the WAT-2200D.

Required Action:

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

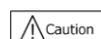
Waterproof Conformity

The external body of the WAT-2200D is in conformity with the following waterproof standard.

The protection rating of WAT-2200D is equivalent to IPX8.

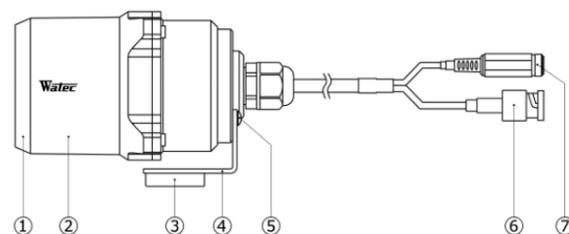
IPX8 equivalent:

The camera has no water coming inside and has no defect after dipping 10m depth for 30 minutes into the tank filled with faucet water.



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

Problems and Trouble Shooting



①FRONT 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.

②HOUSING MAIN BODY

This case is made of aluminum and is given alumite coated.

③TRIPOD 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").

④BRACKET

The bracket for fixing to the camera.

⑤BRACKET MOUNTING SCREWS

The screws for mounting the bracket to the camera.

⑥VIDEO OUT (BNC)

The terminal for SDI signal output.

⑦POWER IN

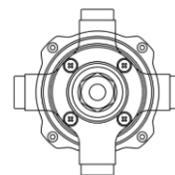
The terminal for connecting the AC adaptor.

Power Supply

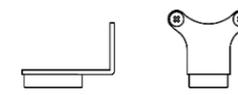
Use a stabilized power adaptor designed for DC+12V, with a current capacity of more than 300mA. Watec recommends our optional AC adapter (SW112-12-N-P5 / GF12-US1210, ref. Options).

Set-up and Operation

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



<WAT-2200D Back view>



<④BRACKET>

Options

To purchase these options, please contact the distributor or dealer from which you purchased the WAT-2200D.

AC Adapter (SW112-12-N-P5)



The optional AC Adapter that can be used to power the camera from a wall outlet. The AC Adaptor meets the US Energy Regulation Level 6.

AC Adapter (GF12-US1210)



The optional AC Adapter that can be used to power the camera from a wall outlet.

Specifications

Model	WAT-2200D
Pick-up Element	1/2.8-inch CMOS image sensor
Number of Effective pixels	1920(H) × 1080(V)
Unit cell size	2.8um × 2.8um
Imaging system	RGB + W array mosaic filters on chip
Synchronizing system	Internal
Scanning system	progressive
Video output	HD-SDI
Output format	1080/60i
Minimum illumination	0.1 lx. F1.2
Resolution (H)	More than 800TVL
S/N	More than 50dB
AE mode	E.I + AGC
Shutter speed	OFF - 1/10000 sec.
Flickerless mode	AUTO
AGC	0 - 42dB
MGC	0 - 30dB
White balance	ATW
Noise reduction	OFF
Mirror image	OFF
Wide dynamic range	OFF
Gamma characteristics	OFF
Back light compensation	OFF
Lens iris	DC
Power supply	DC+12V±10%
Power consumption	2.22W/185mA (1080/60i)
Operating temperature	-10 - +50°C
Storage temperature	-30 - +70°C
Operating/Storage Humidity	95% RH or less (Without condensation)
Cable Length	10m (Max. 30m)
Built-in lens	f=3.0mm F1.2 (f=3.0 - 9.0mm varifocal lens)
Weight	Approx. 820g (Including cable)

※ Various function controls are available on request. Please contact Watec or your supplier for details.

- 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, miss-operation or improper wiring of our equipment.
- If for any reason the WAT-2200D 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

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