

**INTRODUCTION :**

Thank you for choosing our WAT-200D DIGITAL CCD COLOR Camera.

WATEC hopes that both the quality and design satisfy your requirements.

Before proceeding to install or operate the WAT-200D, please read and understand thoroughly the contents of this Operation Manual.

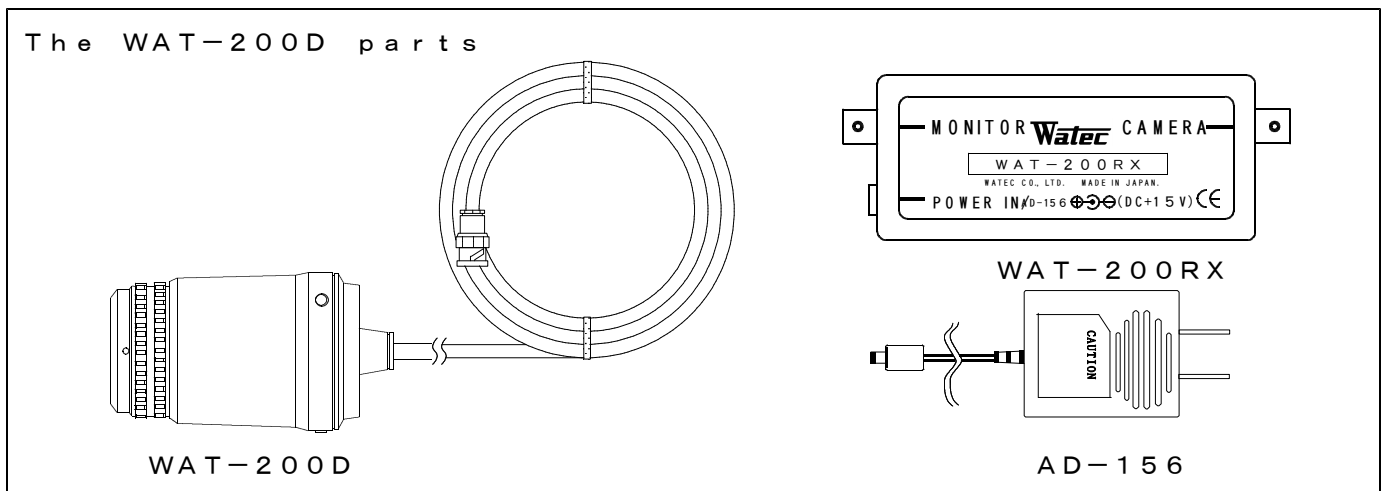
For future reference we also advise safe keeping of this manual.

**CAUTIONS :**

1. Use a stabilized power adaptor designed for DC+15V~16.5V with a current capacity of 600mA. The attached power adaptor AD-156 is optimal for use with the WAT-200D.
  2. The WAT-200D is of water-resistance. Make sure not to use the WAT-200D under water. Make sure to avoid any watery surrounding for its use and to avoid such an environment that the industrial medication will affect the housing of the WAT-200D.  
Attached WAT-200RX, receiver and AD-156, AC adaptor are not water-resistant.
  3. Avoid the striking of hard objects or dropping the unit.
  4. Do not disassemble and/or modify the WAT-200D or any of its component parts or accessories. WATEC can not be held responsible for equipment failure or any damage and/or trouble caused by such action.
  5. Do not install the WAT-200D near heat sources, such as radiators or heating air ducts, or in a position subject to direct sunlight ※, excessive dust, mechanical vibration or shock.
  6. When installing the WAT-200D in an industrial or commercial environment (i.e. within equipment housing, near other electronic device, etc.) Make sure to avoid any strong electromagnetic field, otherwise the video output may be distorted and monitor clearness compromised.
  7. Use only the standard WAT-200RX, receiver for the coaxial power/signal transmission supply model.
  8. Do not connect any power supply directly to the VIDEO OUT terminal of the unit. This may cause damage.
  9. When a cable operation system, such as video/power multiplex transmission is being used, check the specifications or requirements of your monitor for proper connection to the video signal terminal of the camera.
  10. Do not make connections and/or operate the WAT-200D with wet hands.
  11. Should the WAT-200D not work properly, switch off the power and then, check that power and video terminals are properly connected.
- ※ Sunlight shining directly onto the camera lens can cause damage to the CCD.

**CONTENT :**

Using the contents figures below, check to make sure all parts are present before use.



**Note :** The WAT-200D stands the company's test for water-resistance corresponding to Japanese Water-resistance standard(JIS C-0920, Protection class 6, Protection against water invasion).



## SETTING UP AND OPERATION OF THE WAT-200D

**NOTE:** Ensure that before any connections are made to the WAT-200D the power is switched OFF.

1. Connect ⑧VIDEO OUT/POWER IN BNC on the WAT-200D to ⑬CAMERA on the WAT-200RX.

Note: Select a coaxial cable with 75Ω impedance, such as 3C2V or 5C2V, when it can be extended for connection between the WAT-200D and the WAT-200RX and the parts of connection should be coated for water-resistance. Transmittable range for connection between the WAT-200D and the WAT-200RX:

Up to 100m by 3C2V and

Up to 180m by 5C2V

Contact the distributor or dealer from which it was purchased, if any further extension will be required for connection than the above-mentioned distances.

2. Connect ⑪MONITOR on the WAT-200RX to the monitor, using a coaxial cable with 75Ω impedance, such as 3C2V or 5C2V.

IMPORTANT NOTES ON THE MONITOR SPECIFICATIONS.

:Select a monitor with the same transmission mode as the WAT-200D, there are two versions, NTSC and PAL.

:A monitor with more than 500TV lines is recommended.

CAUTION: Do not use a monitor which uses a video signal/power multiplex transmission cable.

3. Connect the AD-156, AC adaptor to ⑫POWER on the WAT-200RX.

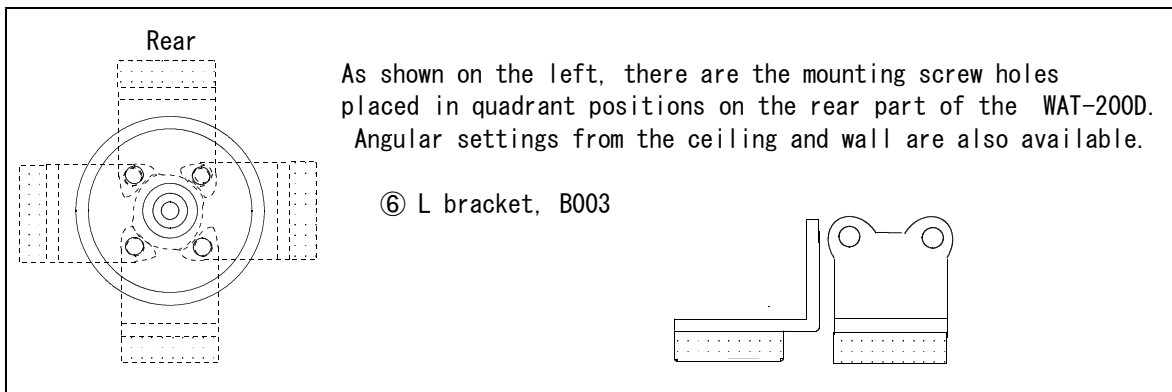
4. Switch on the WAT-200D, monitor and all other allied equipment.

Remove the DC plug of the AD-156, AC adaptor immediately whenever the picture does not appear on the monitor.

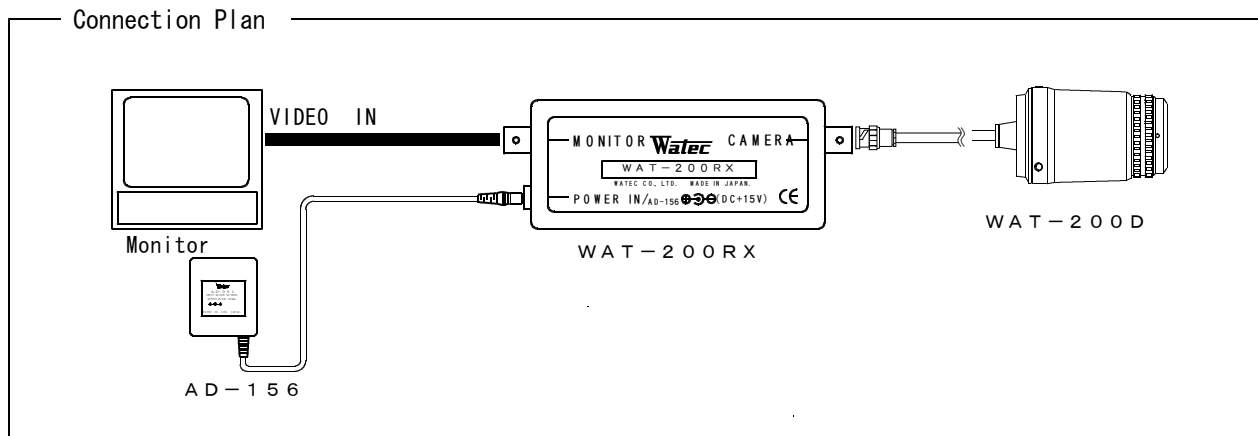
5. Focus the lens of the WAT-200D by turning ②Focusing ring clockwise or counter-clockwise, and select the most required field of view on the monitor screen by turning ③Zooming ring clockwise or counter-clockwise while looking at the monitor screen.

**Note:** Check to see some water deposit will not adhere around ②Focusing ring and ③Zooming ring, otherwise it may cause invasion into these ② and ③ rings.

6. When a change of the installation position is required, set ⑥ L bracket, B003 at your required position after removing ⑦ Bracket mounting screw from the WAT-200D and tighten ⑦ firmly.



8. Avoid installation of the WAT-200RX in a position subject to mechanical vibration and shock.



**SPECIFICATIONS :**

Model	WAT-200D (NTSC)	WAT-200D (PAL)
Pick-up element	1/3" Interline transfer CCD image sensor	
Number of pixels	811 (H) × 508 (V)	795 (H) × 596 (V)
Sensing area	768 (H) × 494 (V)	752 (H) × 582 (V)
Unit cell size	6.35 μm (H) × 7.4 μm (V)	6.5 μm (H) × 6.25 μm (V)
Sync system	Internal	
Scanning system	2:1 Interlaced	
Video output	1Vp-p 75Ω (unbalanced)	
Horizontal resolution	more than 470 TV lines (center)	
Minimum illumination	1.0 lx. F1.2	
S/N Ratio	more than 50dB (AGC OFF)	
Built-in Lens	Auto iris lens f4~9mm, F1.6	
Angular view (H)	35° ~ 70°	
Shutter speed	1/60 sec	1/50 sec
White balance mode	automatically adjusts the color temperature of the illumination.	
AGC	AGC ON : 8 ~ 36 dB	
Γ Characteristic	$\gamma \cong 0.45$	
Back light compensation	ON	
Power supply	DC +15.0~16.5V (WAT-200RX)	
Current consumption	max. 300mA (3C2V at 100m in length)	
Used condition	indoor/outdoor (water-resistant)	
Storage temperature	-30°C ~ +70°C	
Operating temperature	-10°C ~ +40°C	
Weight	approx. 300g	

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, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Important :

The camera mentioned above does not comply with this regulation, if it is modified at your disposal.

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

If for any reason the WAT-200D 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.

Design and specifications are subject to change without notice.



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