

1/2.8" Wearable USB Color Camera

WAT-05U2M

Operation Manual

Thank you for purchasing the "1/2.8" Wearable USB Color Camera **WAT-05U2M**" (referred to as the "product" or "camera" in this manual). This operation manual covers safety, functions, installation and the correct operating procedure for the camera. First, we ask you to read this operation manual thoroughly, then install and operate the product as advised. For future reference, we also advise safekeeping of this manual. If you do not understand the installation, operation or safety instructions expressed in this manual, please contact the distributor or dealer from where the camera was purchased. Not understanding the contents of the operation manual sufficiently may cause damage to the camera, personal belongings and/or result in injury. 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.

To Use This Product Safely

Watec cameras are designed to be used safely. If not used safely, it may lead to a physical accident caused by fire and electric shock. Therefore, please keep and read the "Cautions for safety" (P.2) for protection against accidents.

Guide to the Safety Symbols



"DANGER" indicates a compulsorily prohibition to prevent accidents.



"Warning" may lead to a serious accident such as death or injury caused by fire or electric shock.



"Caution" may incur injury and cause damage to peripheral objects in the immediate surroundings.

About EMC

The product is in conformity with EMC test standards carried out by authorized organizations in Japan.

FCC Part15 Class B

EN55032 / EN55024

※Compliance with EMC standards are confirmed using components/peripheral accessories included with the camera.



Do not modify the product. A modified camera may not conform to EMC test standards.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generated, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Waterproof Conformity

Equivalent to JIS waterproof grade 7 (IPX7) *Water compliance test

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Having no ingress of water in the camera after left in the water of up to 1 m depth for up to 30 minutes.

*The camera was designed to use in the environment of the rain and wind. Do not use underwater.



For “②USB micro-B CONNECTOR”, this part is not included in the compatible range of the waterproof standard. Treat the connector area for waterproofing if needed.

Cautions for Safety

Please read and understand the “Cautions for safety” below to ensure the correct use of the product.



- **Do not disassemble and/or modify the camera.**
- **Do not operate the camera with wet hands.**



- Do not expose the camera to wetness or high moisture conditions.
The camera is specified as waterproof (IPX7).
However, the camera is not compliant with dust-proof and explosionproof standards.
- Protect the camera from condensation.
Keep the camera dry at all times during storage and operation.
- Should the camera not work properly, unplug the power immediately.
Check the camera according to the “Problems and Trouble shooting” (P.4) section.



- **Avoid the striking of hard objects or dropping the camera.**
The camera use high quality electrical parts and precision components and may inadvertently be damaged if not cared for properly.
- **Do not install the camera in a position subject to direct sunlight.**
Sunlight shinning directly onto the camera lens can cause damage to the sensor.
- **Select a stable place for installation of the camera.**
Use an appropriately rated mount durable and strong for all installation position.
- **Avoid using the camera near any strong electro-magnetic field.**
Avoid emission sources of electromagnetic waves when the camera is installed into main equipment.
- **Dry the camera well after use.**
When the seawater and the like adheres on the camera, flush well with pure water, and then wipe.

Occurrence of Vignetting and Video Disturbances

• Occurrence of vignetting

The vignetting occurs due to the wide angle lens but it is not a malfunction.

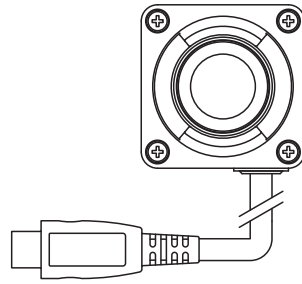
• Occurrence of video disturbance in specific settings

The video disturbance occurs by raising the gain too high when the Frame Rate “30fps” , Output Size “1920x1080” , Color Space / Compression “MJPG” .

In this case, lower the Frame Rate or Output Size, or change the Color Space / Compress to the “YUY2” .

Contents

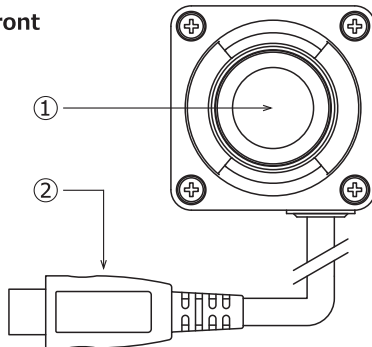
Referring to the illustration below, confirm all parts are present upon receipt of camera.



WAT-05U2M (Camera)

Description of Parts

Front



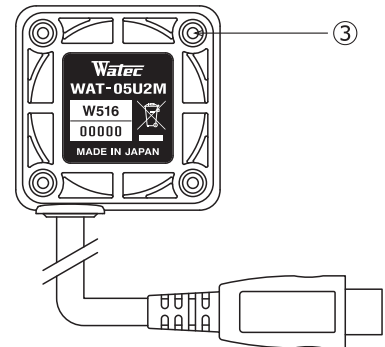
① LENS FRONT FACE

Dirt, water or oil deposits on the lens will cause an unclear picture on the monitor. The focus can not be adjusted by rotating the lens.

② USB Micro-B CONNECTOR

For USB connection with the PC, tablet and so on.

Rear



③ CAMERA MOUNTING (Bolt Size : M2, Depth: 4mm)

These mounting features are used to mount the camera. If utilizing the option B008 (Tripod Adaptor), also fix the 4 bolt locations.

Set-up and Operation

- 1) Download the software or app from our website.
- 2) Connect "②USB Micro-B CONNECTOR" on the camera and the USB terminal of the PC or tablet.
- 3) Start the software or app, and make sure the image displayed.
- 4) When detailed settings are required or an adequate image is not obtained, then set the functions with the software or app.

*Download the software, app and user's manual URL: https://watec.co.jp/English/e_download.html

Options

Please feel free to contact the distributor or Watec at any time.



B008

A tripod adaptor (1/4-20UNC) for such as the **MS50** (Stand) and tripod.

Problems and Trouble Shooting

Trouble Shooting:

Disconnect the camera immediately should any of the following occur:

- 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 camera
- Condensation occurs on the camera
- An object becomes embedded or a quantity of liquid seeps into the camera housing
- More than the recommended voltage and/or amperage has been applied to the camera by mistake
- Anything unusual occurring to any equipment connected to the camera

Required Action:

- 1) Remove the USB cables connected to the peripheral equipments.
- 2) Contact the distributor or dealer from which the camera was purchased.

After-sales Service

For long-term use of the camera

- Regular maintenance is recommended to maintain drip-proof performance.
For maintenance requests, please contact the distributor or dealer from which the camera was purchased.
(The maintenance period varies depending on the usage environment and storage conditions.)
- When the camera is not used or stored, use the zipper bag containing the desiccant in which the camera is packed.

Warranty

All Watec products before being shipped to our customers are tested and inspected to ensure that our products are not faulty and are of the highest quality as directed by our Watec Quality-control System. Watec camera have a 3-year warranty, and the board camera units and peripherals have a 1-year warranty, provided that the products have been operated in accordance with our operation manual and have not been altered in any way.

Note: The Watec 3-year warranty does not cover image sensor repair or replacement caused by white blemish phenomena. For more details about the white blemish, please refer to the "After-sales Service" on our website or catalog.

Repair Service

Watec makes it a policy to repair Watec products first hand with the appropriate charge in accordance with the detailed defect information supplied by you. All repairs in the Watec workshop are quickly and precisely dealt with and returned after the shortest repair period possible.

Contact information

Design and specifications are subject to change without notice. If for any reason the camera does not work properly, or if you have any questions regarding installation or operation, contact the distributor or dealer from which the camera was purchased.

 Watec Co., Ltd. Tokyo Office Add.: 7F O.K Build. 5-5-10 Sotokanda, Chiyoda-ku, Tokyo, 101-0021, Japan

TEL: +81-3-6806-0200 FAX: +81-3-6806-0399 Email: info-o@watec.co.jp