



Color Camera

# WAT-MC01




## Operation Manual

This operation manual covers safety, camera functions, installation and the correct operating procedure for the WAT-MC01. First, we ask you to read this operation manual thoroughly, then install and operate the WAT-MC01 as advised. In addition, for future reference, we also advise safekeeping of this manual.

Please contact the distributor or dealer from which the WAT-MC01 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 definitions of the symbols used in this operation manual are:

-  Danger
- 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.
-  Warning
- When you do not adhere to or take notice of the “Warning” sign, it may cause severe damage such as a physical injury.
-  Caution
- 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-MC01 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.

-  Danger
- **Do not disassemble and/or modify the WAT-MC01.**
  - **Do not operate the WAT-MC01 with wet hands.**
-  Warning
- **Use a stabilized power adaptor designed for DC+12V±10%, with a current capacity of more than 100mA for the WAT-MC01.** The recommended voltage is DC+12V±10%
  - **Do not expose the WAT-MC01 to wetness or high moisture conditions.** The WAT-MC01 is designed and approved for indoor use only. The WAT-MC01 is not water-resistant or waterproof. If the location of the camera is outdoors or in an outdoor like environment, we recommend that you use an outdoor camera housing.
  - **Protect the WAT-MC01 from condensation.** Keep the WAT-MC01 dry at all times during storage and operation.
  - Should the camera not work properly, switch off the power immediately. Then, check the camera according to the [Problems and Trouble Shooting] section.
-  Caution
- **Avoid the striking of hard objects or dropping the WAT-MC01.** The WAT-MC01 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-MC01 with any monitor using a video/power single transmission terminal. The WAT-MC01 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-MC01 in a position subject to direct sunlight.** Sunlight shining directly onto the WAT-MC01 lens can cause damage to the CCD.
  - **Select a stable place for installation of the WAT-MC01.** 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-MC01 with the cables connected.** Before moving the WAT-MC01, always remove the video cable and power cable from the rear of the camera first.
  - **Avoid using the WAT-MC01 near any strong electromagnetic field.** After installing into main equipment, if the WAT-MC01 is exposed to electromagnetic waves causing the monitored image to become distorted, we recommend the camera be shielded by appropriate protective casing.

## Problems and Trouble Shooting

If any of the following problems occur when using the WAT-MC01,

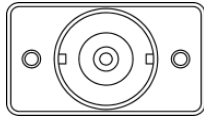
- An optimal picture cannot be obtained, after checking that all the cables and connections are correctly in place
- Smoke or any unusual odor emerges from the WAT-MC01.
- An object becomes embedded or a quantity of liquid seeps into the camera housing
- More than the recommended voltage or/and amperage has been applied to the WAT-MC01 by mistake
- Anything unusual occurring to any equipment connected to the WAT-MC01.

**Disconnect the camera immediately according to the following procedures:**

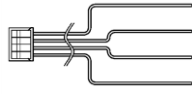
- ① Switch off the main power supply to the camera.
- ② Remove the power and video cables connected to the WAT-MC01.
- ③ Contact the distributor or dealer from which the WAT-MC01 was purchased

## Contents

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

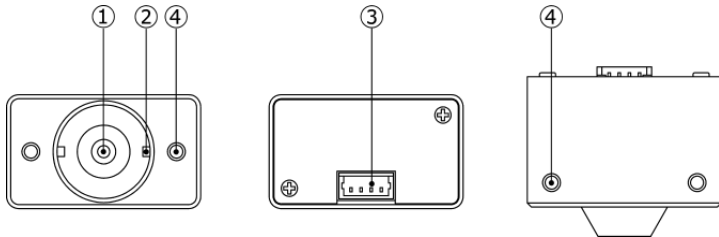


WAT-MC01



Power and Video cable

## Description of Parts

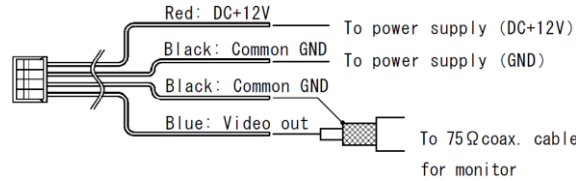


- ① LENS FRONT FACE  
The light receiving face of the CCD camera (Dirt, water or oil deposits on the CCD will cause an unclear picture on the monitor.).
- ② FOCUSING ADJUSTMENT NOTCHES  
Two notches for fine focusing adjustment of the lens.
- ③ POWER IN/VIDEO OUT  
The terminal for power input and video signal output. Use the attached Power and Video cable for this purpose.
- ④ CAMERA MOUNTING HOLES  
Six holes (two on each side) for fixing the camera.

## Power Supply

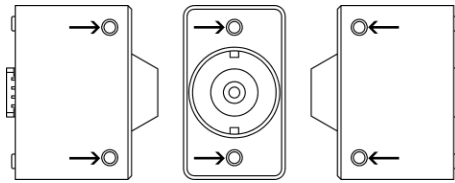
Use a stabilized power adaptor designed for DC+12V±10%, with a current capacity of more than 100mA. The wiring on the connector must be exact. Be careful not to touch the other terminal while wiring. Protect the wiring portion by using insulation tape after wiring. If the above care and attention is not adhered to, damage to the WAT-MC01 and power adaptor may occur or may cause fire.

Power and Video cable



## Mounting

The WAT-MC01 has six holes on each side for M2 thread and screws. Use the holes if the camera needs to be fixed.



## Set-up and Operation

- 1) Refer to the [Power Supply] and the wiring must be exact.
- 2) Join the video out cable with the video in cable of the monitor or peripheral equipment.
- 3) Join the power supply using the correct procedure.
- 4) Make sure that a picture can be seen on the monitor.
- 5) To focus, turn the lens clockwise or counterclockwise while observing the picture on the monitor. Take care when focusing not to scratch or damage the lens.

## Option

To purchase these options, please contact the distributor or dealer from which you purchased the WAT-MC01.



Cable with BNC, Socket and connector (CB-01)

The cable with BNC/DC socket.  
(Cable Length: 1m)

## Specifications

Model	WAT-MC01 (NTSC)
Pick-up Element	1/4 inch CMOS image sensor
Number of Total Pixels	672(H) × 506(V)
Number of Effective Pixels	648(H) × 486(V)
Unit Cell Size	5.6um(H) × 5.6um(V)
Imaging System	RGB primary color filters on chip
Synchronizing System	Internal
Scanning System	2:1 interlace
Video Output	Composite video, 1.0 V(p-p) 75Ω (Unbalanced)
Resolution (Horizontal)	More than 300TVL (Center)
Minimum Illumination	0.4 lx. F2.0
S/N	More than 50dB
AE (Auto-exposure)	ON
White Balance	ATW
AGC	0 - 24dB
Gamma Characteristics	$\gamma \doteq 0.45$
Back Light Compensation	OFF
Power Supply	DC+12V±10%
Power Consumption	0.54W (45mA)
Operating Temperature	-10 - +50°C
Operating Humidity	Less than 95% RH (Without condensation)
Storage Temperature	-30 - +70°C
Storage Humidity	Less than 95% RH (Without condensation)
Lens Mount	M12 P=0.5
Standard lens	f=3.4mm F2.0
Size	24(W)×14(H)×20(D) (mm)
Weight	Approx. 15g

- 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, mis-operation or improper wiring of our equipment.
- If for any reason the WAT-MC01 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 Co., Ltd.**

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