

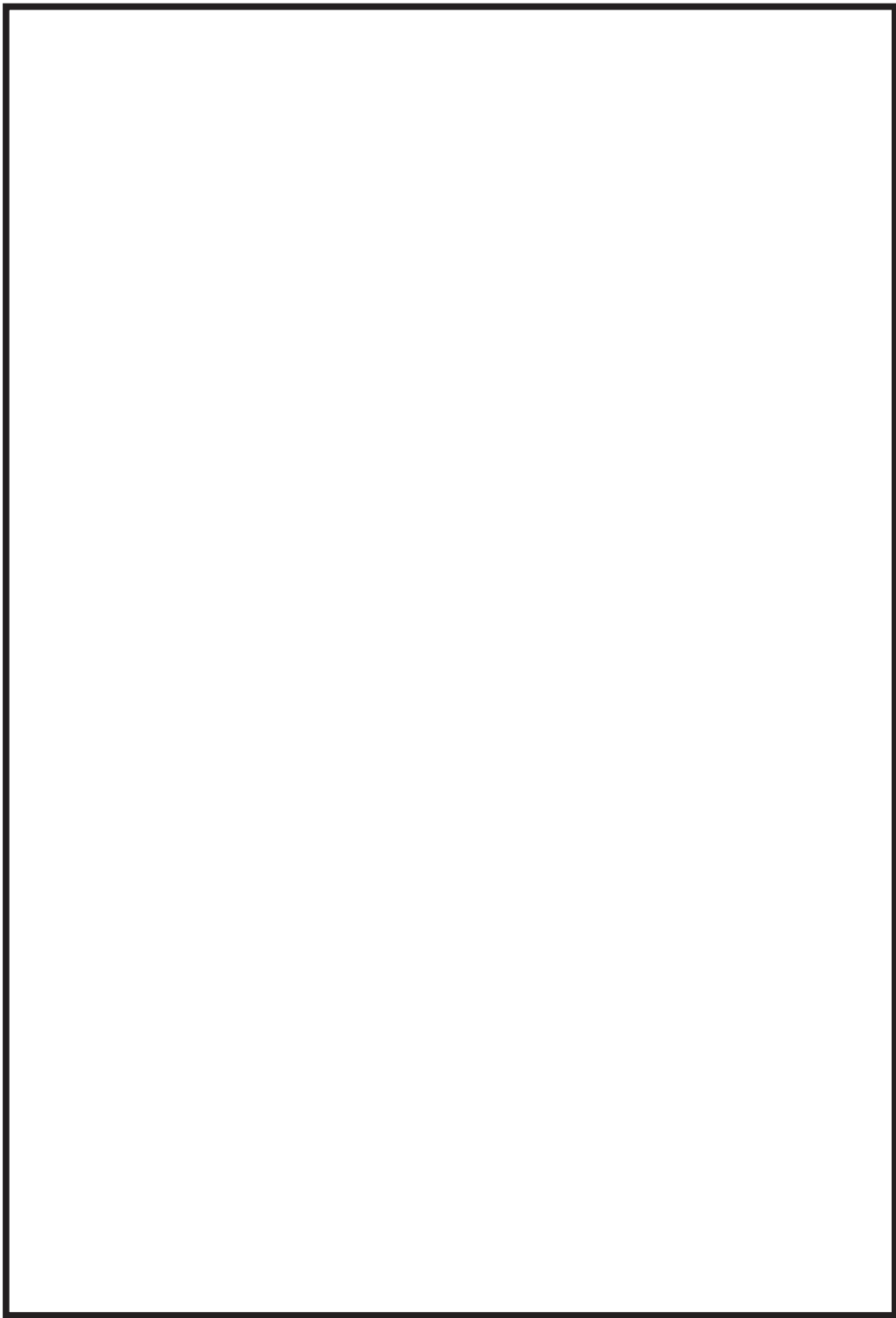


# **MT173**

## **Instruction Manual**

### **Video Borescope**





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## **1.Warning**

### **Safety tips**

Before using the instrument, read all safety information and specification of the Video borescope carefully.

#### **1-1.Application Of Places**

- Detect the inside parts of the machinery which is unviable to check whether the machinery is working normally (cars, heavy machinery).
- Put the gooseneck with camera into the underwater to check the objects in the water (Drainage works).
- Used in some special monitor places, back sight of the cars.
- Such as used for wild adventure.

#### **1-2.Maintenance And Cleaning**

- Repair or maintenance should be carried out by professionals, not only to carry out manual.
- The camera after using it, don't use detergents to clean this product.

### **Dangerous Voltage**

Asks the user to see to has dangerous voltage when the appendix careful, because this appendix possibly can cause the serious electric shock accident.

### **Safety Symbols**

Double insulation, accord with CE safety standards.

## **2.Introduction**

The borescope video instrument using super high-definition 3.0 "TFT LCD, Resolution: 960(W) X240(H), application of H. 264 video codec technology makes images clear picture quality, delicate, and equipped with a meter long curved comfortable waterproof goose-shaped tube Simple, convenient, that can not be touched with the naked eye can not watch Object Detection.

## **3.Function Description**

- Support real-time live view
- Support TV-OUT
- TV peripherals to support operations in other
- Highlighted with LED, to support the operation of the dark places
- Built-in 2000mAh lithium battery, support USB charging
- Standby function to support the charge
- Support rotating the image 180° from top to bottom
- Support the OSD regulation of contrast, brightness, color temperature, etc.
- Support English and german

## 4.Specification

### •Camera

Sensor size	1/4 inch CMOS
Sensor pixel	300,000
Maximum resolution	640 x 480
Maximum frame rate(FPS)	30FPS/S
Color median	24 Bit
Focusing method	Fixed focus15cm ~ 25cm(5.9"~9.8")
Gooseneck length	1m(39")
Camera diameter	17mm(0.66")

### •TFT-LCD

Color TFT-LCD size	3.0 inch
Display resolution	960(W)X 240(H)
Active area	60mm X 45mm

### •Light Source

Highlight 4 LED	
Adjustable light intensity level	6 Level

### •Power

Battery	Lithium batteries3.7V/2000mAh
Working Current	MAX 480mA
Standby current	MAX 5mA

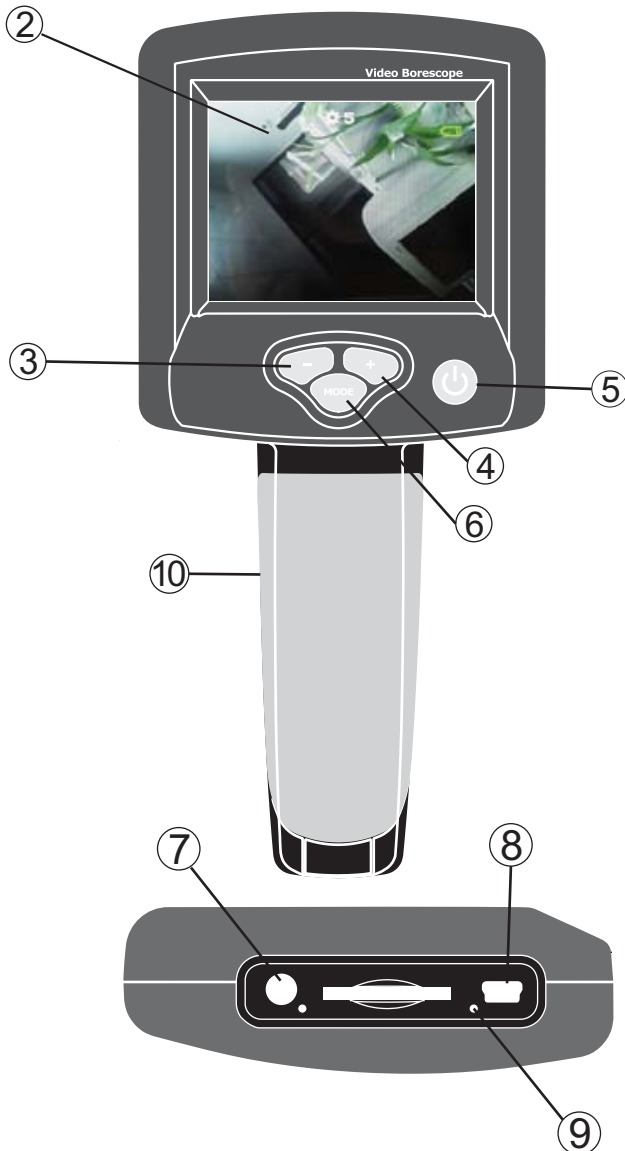
### •Temperature

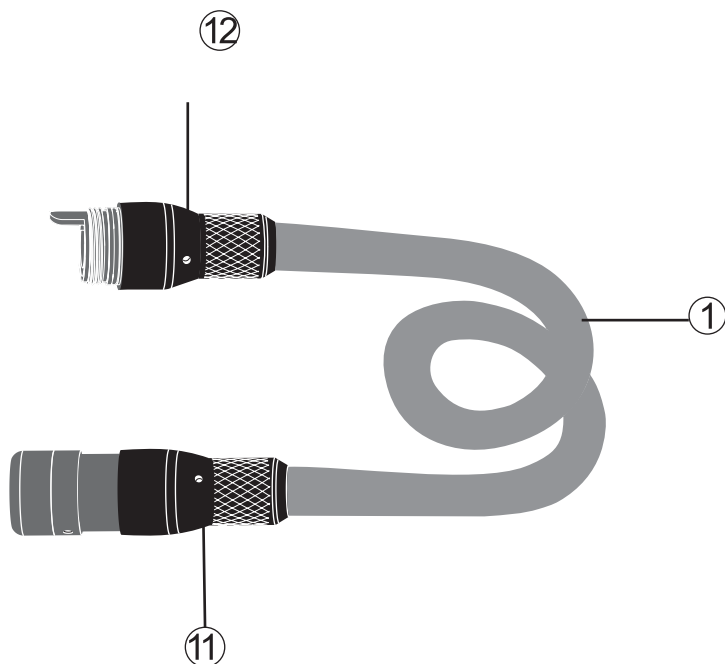
Operating Temperature	0°C----50°C
Storage temperature	-20°C----60°C
Relative Humidity	5% ----85%

### •Product attributes

Size	100*95*235mm
Weight	596.2g

## 5. Panel Name And Function Description





- 1. Goose-shaped
- 2. Light source level
- 3. decrease button
- 4. addition button
- 5. Power button
- 6. Mode button/confirmed button
- 7. TV Output"
- 8. USB Charge port
- 9. System reset
- 10. Lithium batteries
- 11. Camera
- 12. Camera connectors



## 6. Operating Instructions

### Systems Open And Closed

- Power switch: press the power key to open, Video borescope systems to open, once again press the power switch to close Video borescope system.

- USB charging start: The system will automatically open to charge in off position. TFT-LCD display mode prompt menu "is charging standby?", press "-", "+" button and moving the cursor, press "MODE" button for confirmation.

A. Select standby charge, camera, FTF-LCD, video processor source was closed, system enter in lowest power consumption.

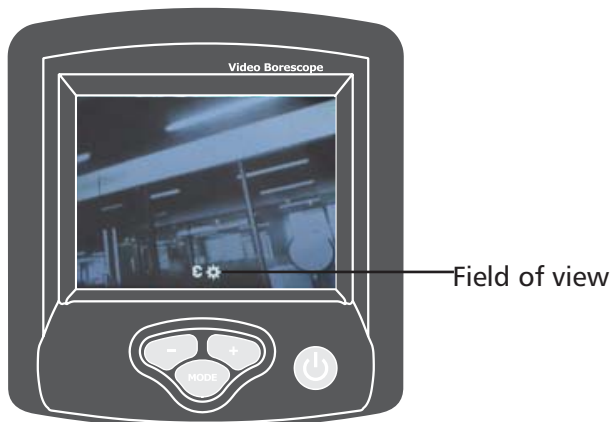
B. Choose not to charge the standby, system enters normal operating mode.

C. Normal operating mode, when the battery voltage is greater than 4.0V, the top right corner of TFT-LCD displays "▢▢▢▢" battery symbol, that indicates the voltage is full. When the battery voltage less than 4.0V the top right corner of TFT-LCD display such as "▢▢▢▢, ▢▢▢▢, ▢▢▢▢, ▢▢▢▢," that indicates the battery is charging. When USB charging start, it is no effect to press the power switch. Press "MODE" button on the panel long time to enter standby charge of system.

Battery symbol



- Image rotation and image setting
- Image Rotation: Video borescope systems in open, short press the panel "MODE" button to rotate the image 90°



- Image setting: switch on Video borescope system, long press "MODE" button 2 seconds, then system enter in image setting mode, can regulate the brightness, contrast, definition, color temperature, language and etc., operation procedure:



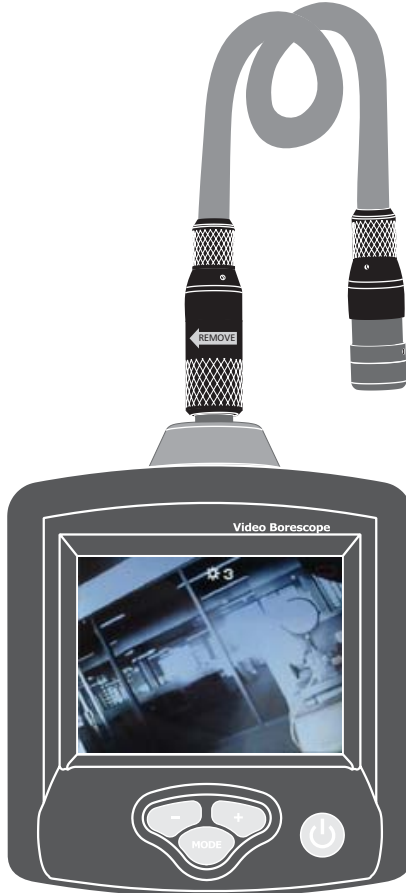
- long press "MODE" button 2 seconds, system enter in the Menu mode of image setting.
- Short press or long press "+", "-" and moving the cursor, choosing the short press "MODE" button and enter in the selected sub-menu items regulator, then short press or long press "+", "-", regulate selected functions by single-step and step approach mode, then short press "MODE" button for confirmation, and return to previous menu that is cursor moving mode.
- Remove the cursor to exit Menu, short press "MODE" button, will save the data and exit image setting mode.



- Image format(PAL/NTSC)automatic conversion:  
system can recognize the image format when it switch on, and enter in the corresponding standard mode once identification success, will not recognize the image format anymore from then.
- System default image format PAL.

### Regulating light Illumination

- Light illumination default as 3.
- Short press the panel button "-" to lower illuminance level 1, the lowest illumination for 0, when the level is 0, the LED will not light.













- Short press the panel button "+" to plus illuminance level up to a maximum illumination for 5, When the level is 5, the LED is brightest.



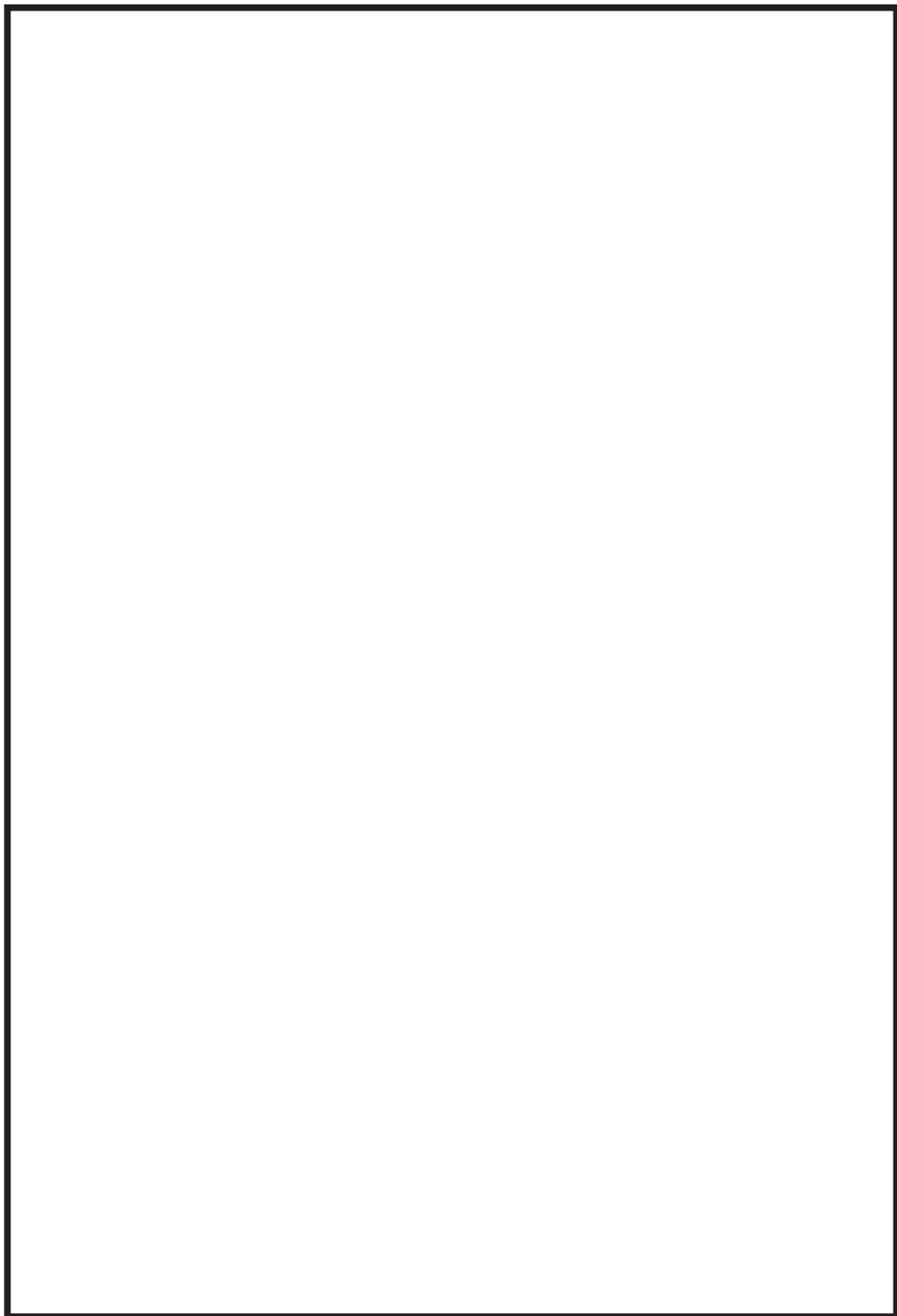
- Illumination indicator icon to open and close: Press the panel button illumination directions "-", "+" icon off, Then press the panel button again to open "-", "+" illumination icon.

## **Power Management**

- Low power: when the system battery voltage is lower than 3.3V the top right corner of TFT-LCD display battery symbol "", it indicates low supply voltage.
- Charging: When the battery voltage less than 4.0V, the top right corner of TFT-LCD display battery symbol ", , , " it indicates the battery is charging.
- Full: When the battery voltage greater than 4.0V the top right corner of TFT-LCD display battery symbol "", it indicates full battery voltage.
- Charge standby: TFT-LCD display mode prompt menu "is charging standby?", press "-", "+" button and moving the cursor, press "MODE" button for confirmation, camera, FTF-LCD, video processor source was closed, system enter in lowest power consumption.
- Battery capacity view: confirm the system in working condition, long press "+" two seconds, battery symbol display on the top right corner of TFT-LCD:  indicates battery voltage more than 4.0V,  indicates battery voltage less than 3.8V,  indicates battery voltage more than 3.6V,  indicates battery voltage less than 3.4V.

## **7. Notes**

- Do not open the housing cover except professionals.
- Handle with care.
- Camera has waterproof function but the host does not have water features. So please do not put the video borescope in the wet and rain areas and do not do operation in the wet. Once video borescope wet, please turn off then send it to professionals for maintenance. Wet may be easy to damage the video borescope and cause electrical accidents.
- Please do not mirror or face the video borescope into the sun whether indoors or outdoors. Please do not operate in the spotlight, high lights and reflector.
- Please do operation under the range of the specified temperature, humidity and power supply. please operate on the range of 0°C ~ 50°C (32°F ~ 122°F), humidity below 85% and voltage referred to the manual.





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