

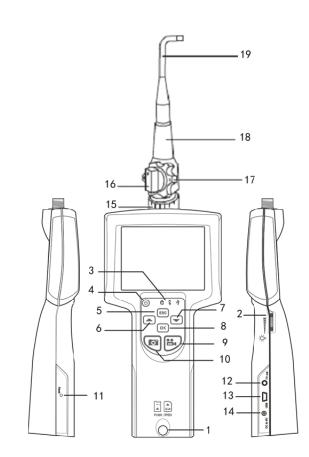
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# **Functions**

### Handheld Inspection Scope

- 1.SD Card/Battery Cover Button
- 2.Brightness
- 3.Status Light
- ( b Power / Flug / Charge)
- 4.Power On/Off
- 5.ESC Key
- 6.Upward Key
- 7.Downward Key
- 8.OK Key
- 9.Video Key
- 10.Still Key
- 11.Reset
- 12.TV Out Jack
- 13.Mini USB Jack
- 14.DC In Jack
- 15.Neck
- 16.Adjustment Knob
- 17.Articulation Control Knob
- 18.Joystick
- 19.Insertion Tube





- . Do not turn the Articulation control knob when the imager head of insertion tube get stuck or blocked by something, or it will cause ever lasting damage to the insertion tube.
- . Do not turn the Articulation control knob forcibly when the Articulation tightness adjustment knob turn to right. Directly on the screen, a "live" picture can be seen. This is the preview mode.

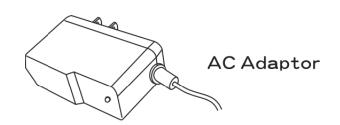
It is strongly advised to properly set-up the 2-Ways Articulation Endoscope beforefirst use. The indexing of saved photos and video is based on date and time only. Other parameters, if set before first use, can make the operation of the 2-Ways Articulation Endoscope easier in the future.

The side view adapter is optional accessory, is ideal for viewing pipe walls. To fit the side view adapter, unscrew the chrome tip of the insertion tube and replace withthe side view adapter.

Press POWER button for 3-5 seconds to turn the display unit off.

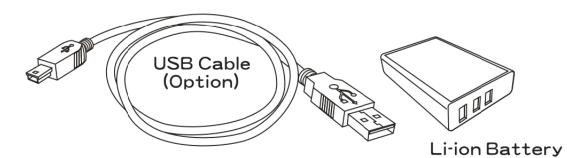
# Accessories







SD Card



# Key Functions

## Handheld Inspection Scope

В	utton	Under the Preview Mode	Under the Surfing Mode	Under the Menu Mode
(Upv	ward Key)	N/A	Back to the previous photo or video	Move the selection to the upper one
(Dow	nward Key	N/A	Go to the next photo or video	Move the selection to the lower one
	ок	To enter the menu mode	Detele the photos or videos	To execute the selected function
	ESC	To enter the surfing mode	Back to the preview mode	Back to the surfing mode
•	O till Key	To take photos	Back to the preview mode	Back to the preview mode (The model version will on screen for 2 seconds)
Vio	leo Key	To start/finish recording videos	To press the button-play during playing-pause	Back to the preview mode

### Operating in Modes

# Preview Mode

- 1. This mode runs under a real-time monitoring condition. The target showed on the screen while the lens aiming on it, The ordinary taking, shooting and monitoring image works are operating under this mode.
- 2. It enters the preview mode automatically after photos or videos being taken. (Including power on and mode shifting)
- 3. It shows the condition of the battery and the time, it will show "no card "on the screen if there is no SD card in.

### Surfing Mode

- 1. It is used to check the photos and videos on the SD card, and provide the deletion of a single file.

#### Menu Mode

File deleting, machine setting, and other related adjustment.

#### **USB** Mode

Please refer to page 15 "Data Access Management"

### Menu Instruction

### Handheld Inspection Scope

Under the preview mode, press the OK key will show MENU (fig 1) as below.

The definitions are:

Video Output

Video Format

Date/Time Setup

Language

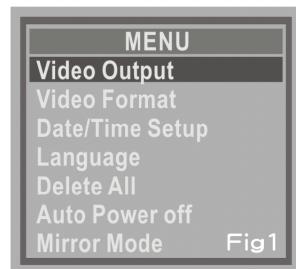
Delete All

Auto Power off

Mirror Mode

#### 1. Video Output (fig 1)

Plug the AV cable into the TV out jack on the right side of the machine. Press OK key to open the menu, Press ▲/▼ key to select" Video Output " then press "OK" key to link to the external monitoring device, meanwhile the machine screen is off, execute this command again to end this function. This output function will automatically detect "TV out" jack whether the AV cable is in or not. If Execute this function without linkage, it will switch the signal back to the machine screen automatically.



#### 2. Video Format

Under MENU mode select "Video Format", press OK key to start "TV output "(fig 2). Press ▲/▼ key to select NTSC or PAL, then press OK key to decide. The system will enter into "FACTORY SETUP" automatically for further detail settings.

#### **FACTORY SETUP**

On the page of FACTORY SETUP (fig 3), press ▲/▼ key to select items, press "OK" key to enter into the detail image setup, press ▲/▼ key to modulate the item value. Press any of OK / ESC / OT / Let key to save the value.



Under "FACTORY SETUP", the item value definition showed as below:

BRIGHTNESS: To adjust the illumination

CONTRAST: To adjust the objects in screen

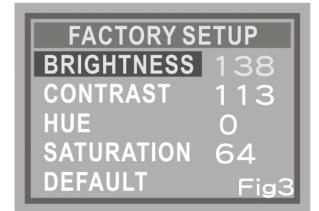
differ in brightness

HUE: To adjust differ in color

SATURATION: To modulate the value of the

saturation

DEFAULT: Back to original system settings





### 3. Date/Time Setup

Under MENU mode select" Date/Time setup", press OK key to set the time (fig4) Press ▲/▼ key to modulate Date/hour/minute …etc. Then press lockey to set the time forward or lockey key to set the time forward or lockey backward, press OK key to end the setting

#### 4. Language

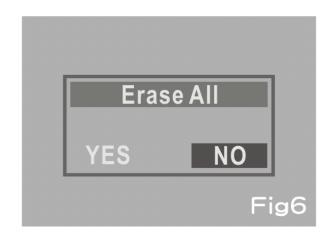
Under MENU mode select "Language", press OK key to open the Language page (fig5). With ▲/▼ key to select the language item, press OK key to save and end the setting.

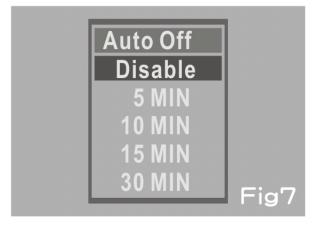


### Menu Instruction

#### 5. Delete All Files

Under MENU mode select" Delete All files ", press OK key to open " Erase All ", with ▲/▼ key to select YES (delete all files) or NO (keep all files), then press OK key. (Please refer page 14 "Delete a Single file")



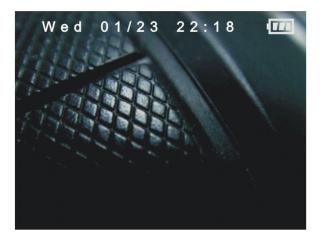


#### 6. Auto Power off

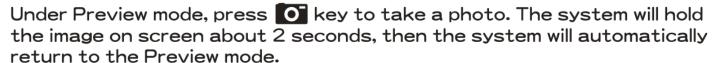
Under MENU mode select "Auto Power off", press OK key to open "Auto off" page (fig 7). Press ▲/▼ key to select time to off or Disable for not to select, press OK key to save and end it.

## 1. Power on/off $\circlearrowleft$

Hold the Power key for 2 seconds to activate the machine. The system will always standby at "Preview mode" as it powered on. The top corner of the screen will show the system time and battery symbol (As the figure below showed, I is the battery capacity meter).

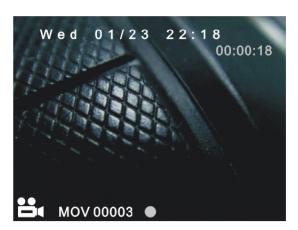


# 2. Taking photos O



## 3. Recording Videos

Under "Preview mode", press key to start recording, there will be a symbol • appeared on the bottom of the screen as the function starts (see figure), the recording time will be showed in red on the upper-right corner of the screen. Press any key to end the recording.



Note: Photos or videos can not be made while there is no SD card in the machine.

#### 4. Seeing in Surfing Mode

Under "Preview mode", press ESC key to enter into surfing mode, system will start displaying the saved files from the latest taken photos or videos, then with △/▼ key to surf other image files (as shown on figure A for Photos, figure B for Videos, symbols shown on the lower-left corner of the screen). Press ♣ to play video files.

During the Video playing:

Press any of  $\bigcirc / \bigcirc / \bigcirc$  /OK key will pause the video (fig C), press  $\bigcirc / \bigcirc$  key to resume the play, or press any of ESC/  $\bigcirc / \bigcirc / \bigcirc$  to switch back to Surfing Mode from the pause.

Recording time will be showed in yellow on the lower-right corner of the screen

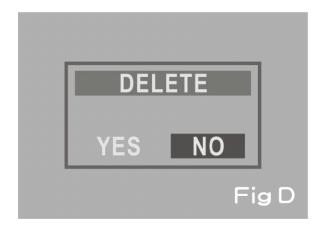






#### 5. Delete a Single file (In Surfing Mode Only)

Under Preview mode, press ESC key to enter into Surfing mode, with  $\triangle/\nabla$  key to find the file to delete, press OK key to open the DELETE function (fig D) With  $\triangle/\nabla$  key to select YES (delete file) or NO (keep file) or press ESC key to leave the page.



#### **USB MODE**

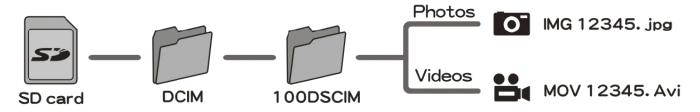
Link the USB cable from computer USB terminal to the machine mini USB jack, the system will activate USB mode automatically (fig E). Under this

mode the computer can access the saved photos and videos in the SD card.

Use the attached SD card as the standard accessory. All the photos and videos are saved in [100DSCIM] file folder, under [DCIM] the main folder. Files are named by sequential numbers. All photos and videos have the same naming rule but different in filename extensions .JPG for photos and .AVI for videos.



The data folder structure is showed as below figures.



Do not take the SD card out while taking photos or videos. That would cause data lost or machine damaged. An 80X or up of the speed, 2G capacity SD card is recommended, the image will performed better. The system does not support SD cards with capacity higher than 2G.

- \* Do not use the machine under an environment near with inflammable or corrosive, hazardous substances, such as Oil tanks.
- \* Do not use corrosive liquid to clean the machine cover.
- \* Do not disassemble the machine by self, it may cause electric shock or damage the machine.
- \* Do not touch the image cable lens tip since high temperature heat could be produced after an activation for a period of time.
- \* Beware of coiling the image cable for storage. Do not coil or bend it too hard, as the bending angle over 150 degree.
- \* Please use accessories as the product attached. Otherwise this may result in considerable damage to the machine.
- \* Do not use the product on aircrafts or medical places.
- \* Do not expose the product to direct sunlight.
- \* Please store the product in a dry, well-ventilated place.

- Q: The machine powered on but the screen no image
- A: It may caused by the low battery energy, the machine would shut down as the power just on. Please plug the power in before using it.
- Q: Under the preview mode, the screen is showing text, but no video image.
- A: Please check the connection of image cable, be sure it is well plugged in, then restart the machine by reset it or switch the power button again.
- Q: System hang up
- A: Under some unpredicted conditions may result the system hang up (Ex: Image freeze, buttons malfunction), please take a needle-like object that made with insulating materials to insert into the reset hole to reset the system. The machine will shut down automatically, then power it on to restart the system.
- Q: Can not take photos or record videos
- A: 1.The SD card is not pushed in accurately. 2.The SD card malfunctioned.

# Dim. & Temp. Related

### Handheld Inspection Scope

Handheld working temperature:

-20 ~ 60°C

Image cable tip working temperature:

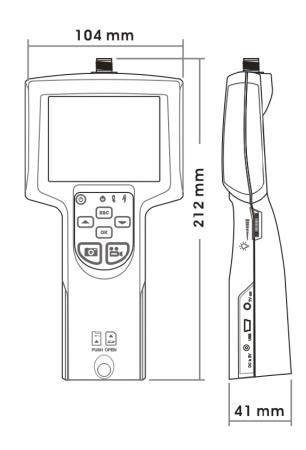
-20 ~ 70°C

Total storage Temperature:

-20 ~ 60°C

Battery charging temperature:

 $0 \sim 40^{\circ} C$ 



# Spec.

#### **Function**

#### Quick Snap

- Quick Video Recording
- Quick Review
- AV Out
- Video / Picture Viewer

### Image cable & Light Source Spec.

Image Sensor	Colour VGA sensor		
Resolution	720*525(N) /720*625(P)		
Tip (Insertion Tube) Diameter	5.5mm		
Frame rate	~30fps		
S/N Ratio	42dB		
Exposure	Automatic		
White balance	Fix		
Field of View (FOV)	67°		
Depth of Field (DOF)	1.5-8mm/1m-∞		
Light Source	4 White LED		

#### System Spec.

Power	DC 5V		
Display	3.5"TFT LCD Monitor		
Interface	Mini USB 1.1 / AV out		
Battery	Rechargeable Li-ion Battery (3.7V)		
Video Output Format	NTSC & PAL		
Recording medium	SD card (the capacity up to 2G)		
Compression Format	MPEG4		
Still Image Storage Format	JPEG		
Video Recording Format	AVI		
Language	English + option (one language)		

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