

# Handheld video scope

## USA VS-HD



**USA Borescopes**

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## Safety Recommendations

In order to avoid harm to you and others or affect the service life of this equipment, please read and observe the following "safety precautions" before use. The safety precautions are divided into "warning" and "danger" for explanation.

### WARNING

Incorrect operation may cause damage to the equipment

- Do not stretch or twist the insertion tube of the device with great strength, otherwise it may cause damage to the tube.
- Do not severely hit the probe of this equipment, otherwise it may cause the lens assembly to break.
- Do not use or store this device at temperatures above 60°C or below -20°C.
- Please store this equipment in a dry, non-magnetic, acid-free, and dust-free environment.

### DANGER

Wrong operation may cause personal injury

- Keep the device out of the reach of children.
- Do not look directly into the end of the insertion tube. The bright light may hurt your eyesight.
- Keep the device away from acid or alkaline solutions, oil or gasoline, and do not use it in an atmosphere containing volatile/flammable vapors.
- Do not use an unsuitable power adapter to charge the device.
- This device uses a rechargeable lithium battery to supply power. It is forbidden to approach fire sources.

## Packing List

Open the waterproof case, you will find:



Micro SD card



Monitor



Manual



Probe unit



HDMI cable



Cleaning kit



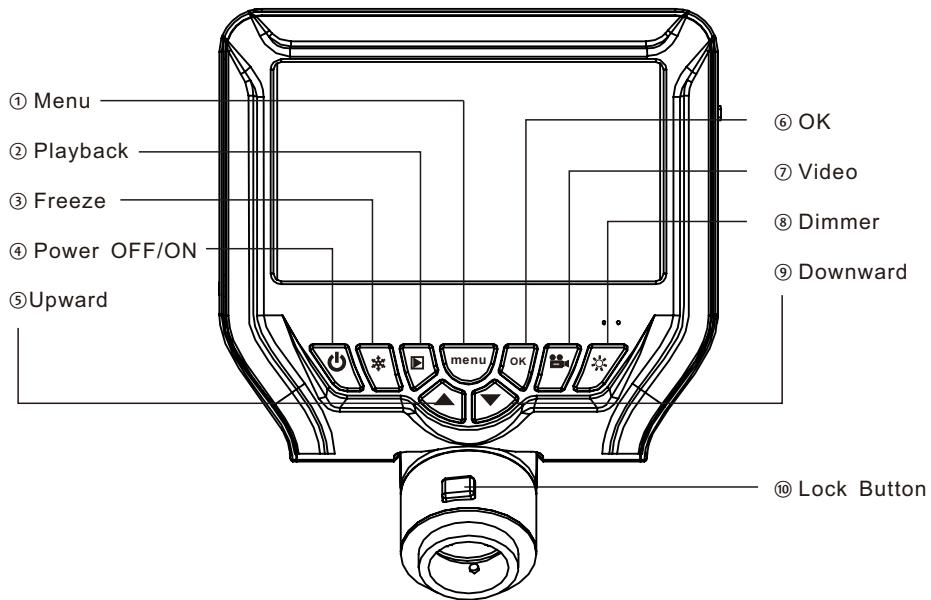
AC Adapter



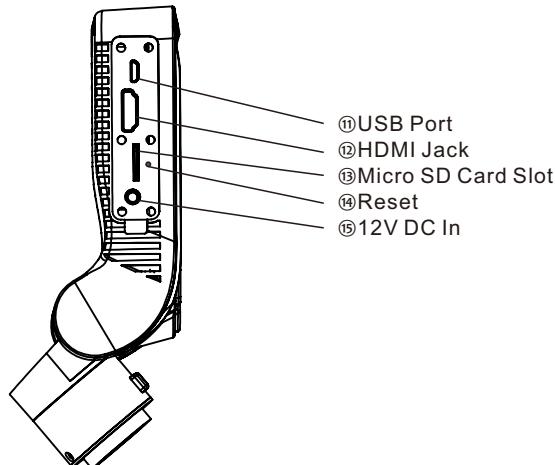
Card reader

## Parts function

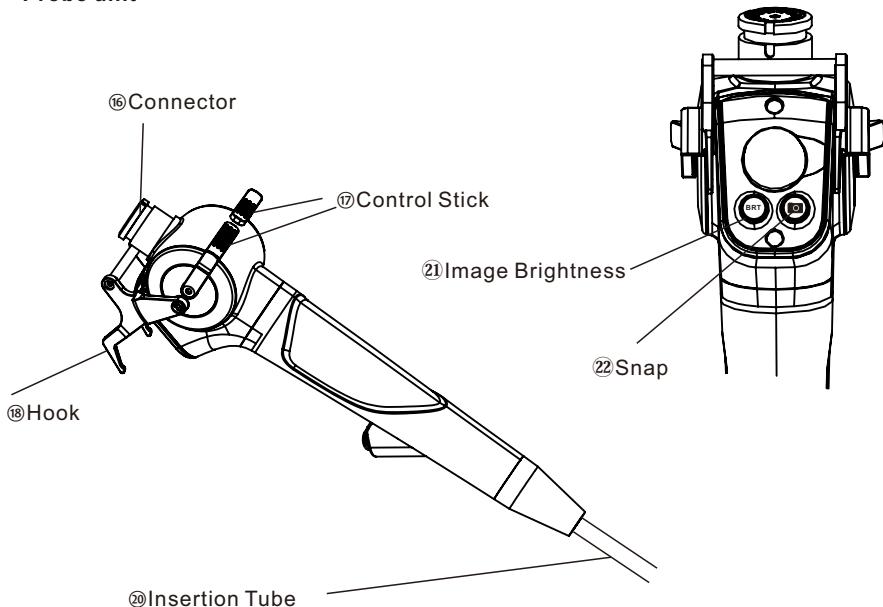
### Monitor



### Side view



## Probe unit



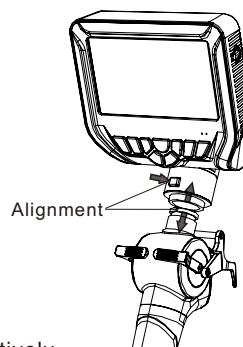
## Quick Setup

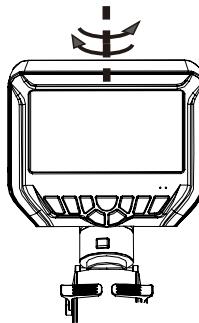
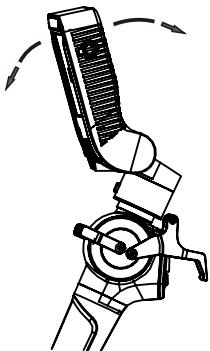
### Connecting monitor and probe unit

Put the connecting parts close facing, align the lock button and the hole on the probe side, press lock button, plug in with a clack, release the lock button, the two parts will be combined securely.

To separate the monitor and probe, press the lock button, pull down the probe unit straightly and which will be taken apart.

After connecting the monitor, please check rotatable of monitor along with horizontal and vertical axis respectively.





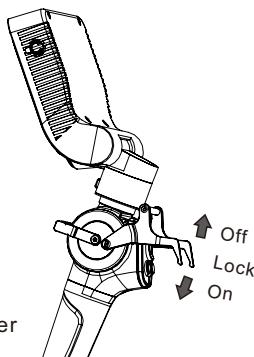
## Hook and lock function

The hook is not only for ease to hang up, it is also a lock lever allow you to fix control stick at certain position.

Turn the hook downwards, the friction to curb movement of control stick. turn it upwards the fixed to be released.

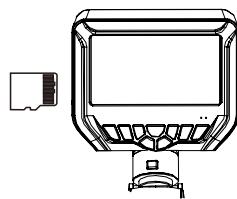
### Charging

If you find the low level of power, please plug the charger in 12V DC jack at side of monitor to charge, status indicator turns red and flashes, the red will stop flashing when the battery is fully charged.



### Ready for use

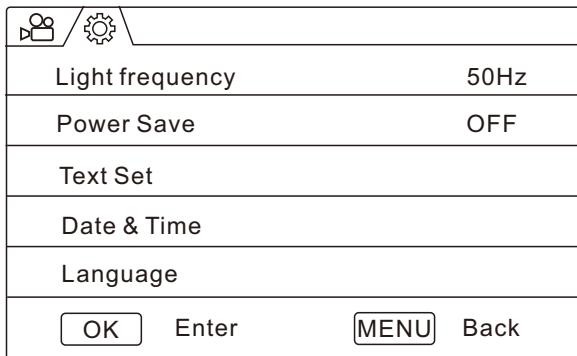
Please insert the Micro SD card into the card slot on, press power button for 3 seconds, the device enters preview mode, real time image appears in screen, for the fist time use, please set the time and date, language, etc .



**NOTE** The monitor could not be turned off normally when it is not being combined with the probe unit .

## System Setting

Switch on device and enter preview mode , press **menu** to access menu interface, use **▶** to select system setting  .



**Light Frequency** To select light frequency 50Hz or 60Hz.

**Power Save** OFF Disable this function.

5min Automatically power off when there is no operation for 5minutes .

10M Automatically power off when there is no operation for 10minutes.

30M Automatically power off when there is no operation for 30minutes.

**Text Set:** This function is only available when the date stamp is activated.

How to use: Use the **▶** to move the cursor right, **▲▼** to move up and down , press **OK** that the selected character will appear on top of tablet, you can input total maximum 18 characters one time , once the input is completed, move the cursor to **◀** ,press **OK** to confirm and the input text will present on image like as a stamp.

▲								
1	2	3	4	5	6	7	◀	
8	9	0		a	b	c	d	
e	f	g	h	i	j	k	l	
m	n	o	p	q	r	s	t	
u	v	w	x	y	z	↑	◀	

**NOTE**

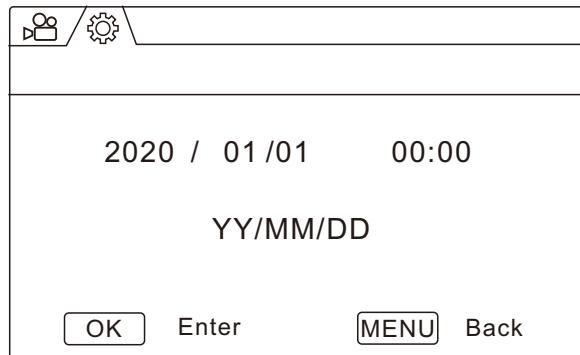


Case key.

◀ To delete the last character.

## Date & Time

Select the **Date & Time** , press the **OK** key button to start the setting, with **▲▼** to change the number , and **◀▶** move to next item .



## Language

Enter the language setting, with **▲▼** to select the language wanted, and press the **OK** key to confirm.

## Format

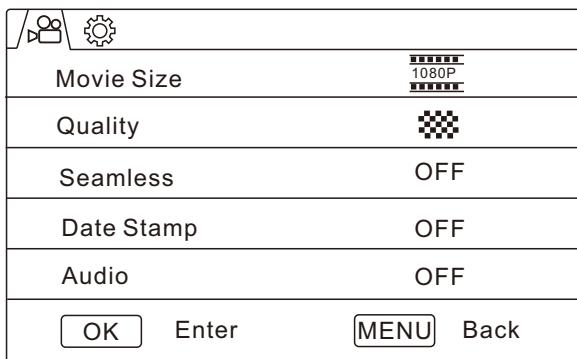
This operation will clear all the contents on the Micro SD memory card and cannot be restored. Please operate with caution!

## Reset All

Operate this item to restore the device to the factory settings.

## Image Setting

Switch on device and enter preview mode , press **menu** to access menu interface, use **◀▶** to select image setting  .



## Movie Size

Two types of image resolution optional 1920X1080 pixels and 1280X720 pixels.

## Quality

Allow to choose 3 types of picture quality, be noted the function is noneffective on current version of device.

**Seamless** The video file consists of consecutive clips with the same duration.

The duration of clip as below:

OFF	The video consists of one single clip.
10 M	10minutes.
20M	20 minutes.
30M	30minutes.

## Date Stamp

Off	Date stamp disable
Date	Date shows on image like as stamp
Date & Time	Both Date and time shows like as stamp

## Audio

The item allows record sound and video simultaneously, you can choose turn on or off this function.

## Mirror& Flip

OFF	Mirror image disable
Mirror	Mirror image , vertical symmetry
Flip	Mirror image , horizontal symmetry
Mirror&Flip	Mirror image , both horizontal and vertical symmetry

## Image viewing and recording

### Zoom and freeze

In preview mode, press **▲▼** to zoom in or out,  $\times 1$ ,  $\times 1.5$ ,  $\times 1.75$ ,  $\times 2$ ,  $\times 2.5$ ,  $\times 3$ ,  $\times 4$ ,  $\times 5$ ,  $\times 6$ ,  $\times 7$ ,  $\times 8$  times optional.

Press **\*** freeze the current image, press once more to release .

### Dimmer

With **\*** to adjust the light intensity on the probe end, from 1-5 levels optional.

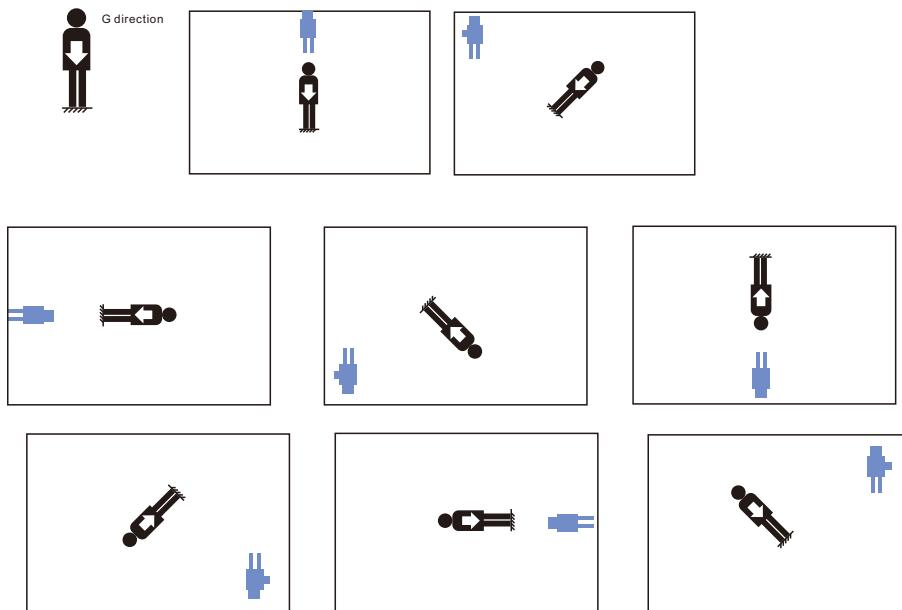
### Image brightness

With **BRT** key to adjust the image brightness, generally, to see dark objective, set higher value can get better picture, or vice versa. In most cases, the value suggested to be set  $+1.3$  or  $+1.7$ . The selectable value number from  $-2.0$  to  $+2$  as follows:

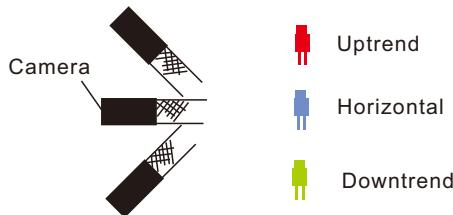
$-2.0$ ,  $-1.7$ ,  $-1.3$ ,  $-1.0$ ,  $-0.7$ ,  $-0.3$ ,  $0$ ,  $+0.3$ ,  $+0.7$ ,  $+1.0$ ,  $+1.3$ ,  $+1.7$ ,  $+2.0$

## Gravity direction indicator

A gravity sensor is built in camera, an icon appearing on the screen is to indicate the gravity direction on the image, the total 8 different positions of icon and relevant gravity direction are showed as below :



The color indicates camera angle related to horizon.

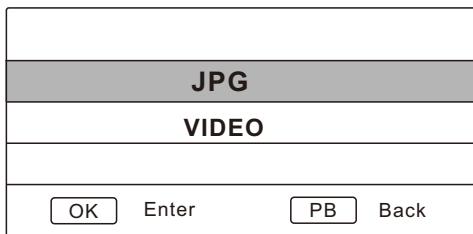


## Take picture and video recording

Power on the device, enters preview mode, real time image appears on screen, press button behind the probe unit to take snapshot, or press to take video.

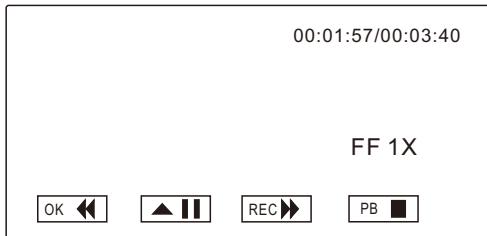
## Image viewing

In the preview state, press to enter the stored image files, the pictures and videos are saved in JPG and VIDEO folder respectively.



Select **JPG**, Press **OK** and you will see the last picture, press **◀** return to previous interface, with **▲▼** to find previous or next picture.

Select **VIDEO**, Press **OK** to find video column, with **▲▼** to select the file to play.



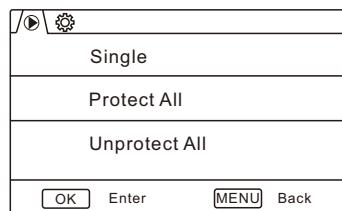
- OK** Press **OK** to back-forward, repeatedly press **OK** to get 2x,4x,6x speed.
- ▲ ||** Press **▲** to pause or continue to play .
- REC ▶** Press to fast -forward, repeatedly press to get 2x,4x,6x,8x speed.
- PB □** Press to go back previous interface .

### Protect&Delete

In the image viewing mode, select a picture or video file, press MENU to enter the item of **Protect and Delete**.

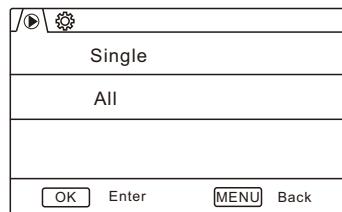
**Protect** is to prevent the files from being deleted carelessly. You can choose :

Single	The current one
Protect All	All the files
Unprotect All	Remove protect from all files



### Delete

Single	Delete the current one
All	Delete all files



## Storage & Maintenance

### 1. Cleaning components

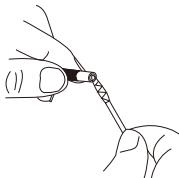
#### Cleaning insertion tube

Wipe thoroughly with a piece of gauze or other material moistened with neutral detergent, next clean by gauze moistened with clear water, and then wipe the insertion tube dry off all moisture.

**NOTE** Clear the insertion tube immediately after withdrawing the insertion tube. Leave the very dirty insertion tube for long periods can cause it to be corroded.

#### Cleaning distal end

Grasping the rigid portion of camera end, use a clean soft piece of gauze or cotton swabs to wipe off dirty and water. Best results may be obtained using commercially available absolute ethanol. Fig08



#### Cleaning unit body

Wipe with soft cloth dampened with clean water, and wipe with clear and dry cloth.

### 2. Storage precautions

- Store the instrument under normal room temperature and humidity.
- Straighten angulation section while lay into carrying case.
- Store the equipment at a clear, dry and stable place.

## Q & A

Q:What should I do if the device cannot be turned on?

A: Connect the power adapter to the charging port of the display for charging.

Q: What should I do if there is no picture or light on the screen?

A: Battery is exhausted, connect the main unit to the power adapter and recharge.

Q: What should I do if the image is too dark or too bright?

A: The BRT button at behind of control unit to adjust the brightness value.

Q: What should I do if the light of the probe is too dim?

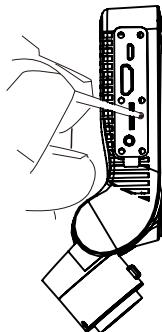
A: Press the dimmer to get right light intensity.

Q: What should I do if I can not take photos or record videos?

A: The Micro SD card is missing, incorrectly inserted, full or malfunctioning, try to format or replace it with a new one.

Q: What should I do if the screen is stuck, garbled, or white screen?

A: When all the function keys freeze or fail, insert the insulated needle into the reset hole on the side of the monitor, and restart the device to see if the problem can be solved.



## System parameters

LCD Panel	5" TFT LCD Support Micro SD Card, HDMI output
Power source	Lithium battery 2600mAh 7.4V AC adapter: Input 100-240VAC Output 12VDC 2A
Effective pixels	2,000,000
Depth of view	10-100mm
Field of view	90degrees
Photo size	JPG 1920x1080
Video size	MOV 1920X1080
Weight	1.0Kg

## Operating Environment

Operating Temperatures	Distal end and insertion tube :0-60° C
	Other parts excepted of above :0-40° C
Operating Humidity	15-90% RH
Water proof	Ip67 Insertion tube only