

# Handheld videoscope

**SV series**

## 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.

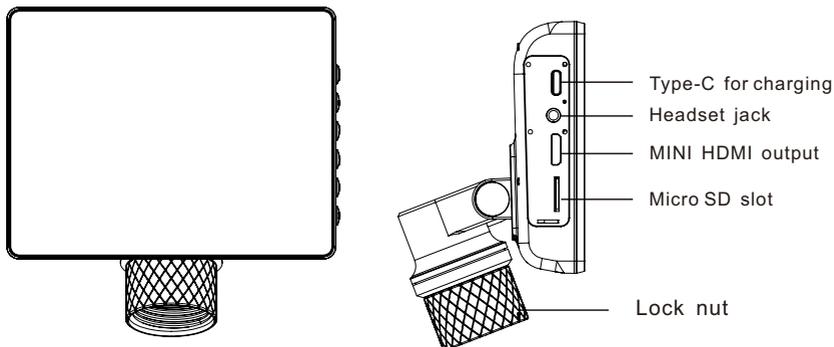
## Packing List

Open the waterproof case, you will find:

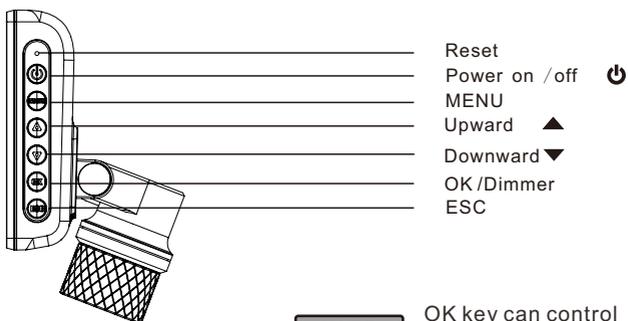


# Parts function

## Monitor



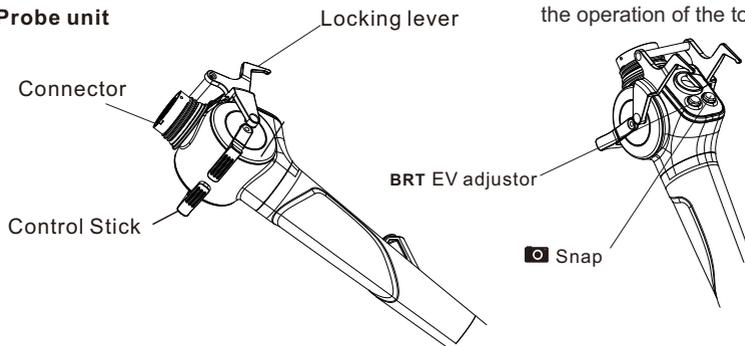
## Side view



### NOTE

OK key can control intensity of light. For key MENU,▲,▼, OK and ESC, in most cases, it is more convenient to realize the same function through the operation of the touch screen.

## Probe unit

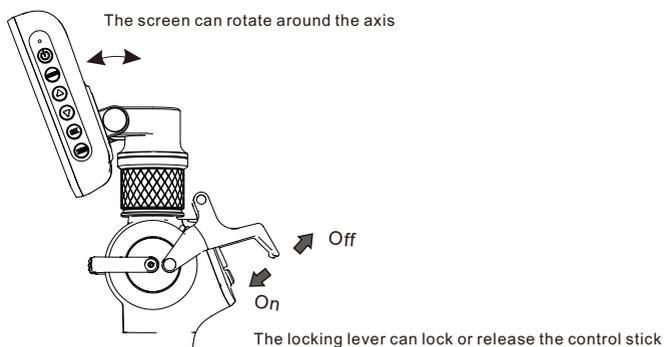
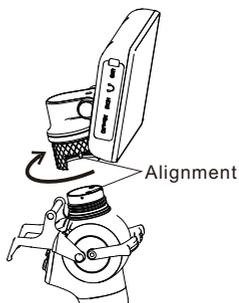


## Quick Setup

### Connecting monitor and probe unit

Align and insert the guide posts into holes at the handle end, then screw in the lock nut to connect the monitor unit securely.

Unscrew and remove the nut can separate the monitor from the handle unit.

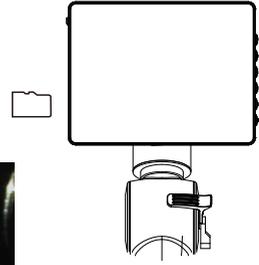


### Charging

If you find the low level of power, please plug the type-c jack to charge, the charge current is 5V 2A, status indicator turn red, the red will change to green when the battery is fully charged.

### Ready for use

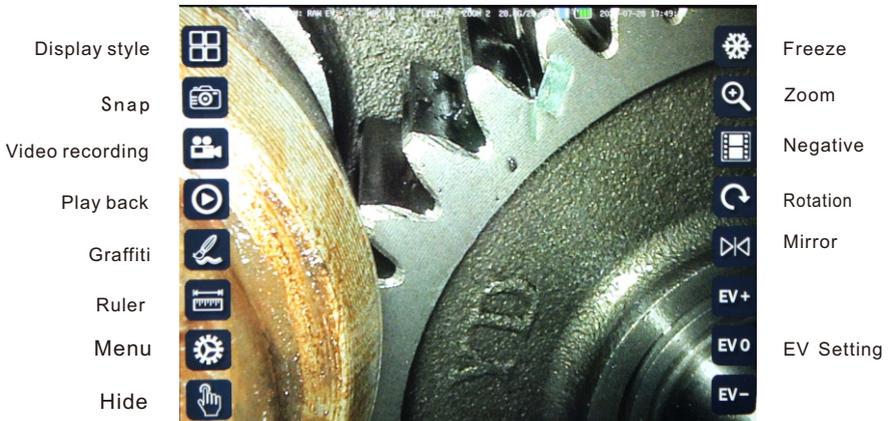
Please insert the Micro SD card into the card slot, press power button, wait around 3 secs, real time image appears in screen, for the first time, please set the time and date, language, etc.



Hide

## TOOLBAR

Touch the hide icon, two columns of toolbar appear at the two sides of screen, touch the icon again, the tool bars will be hidden. Toolbars can help you to get some function rapidly.



**Display style** NOTE this function only applicable to sensor S20.

Three types are optional: rectangular, octagonal and circular.



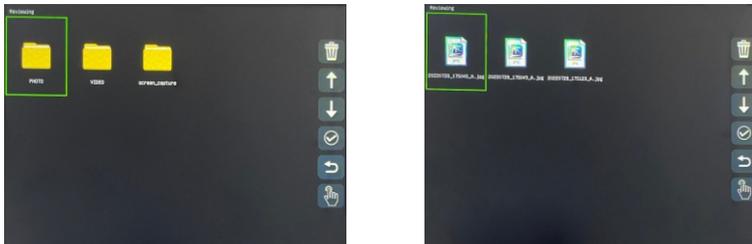
## Snap/ Video recording

NOTE Photos can also be taken by pressing button  on the probe unit.

Short press for take picture, long press for video recording

## Play back

Enter **Display**, there are three folders, store pictures and videos, Screen -capture for graffiti.



Use the key on the right column to select the file to play or delete.

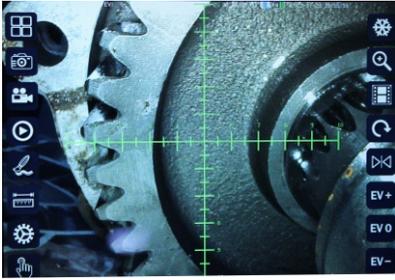
## Graffiti

You can sketch or mark on the image and save to folder SCREEN-CAPTURE on SD card.



## Ruler

According to the reference object, the size of the target in front of the lens can be estimated.

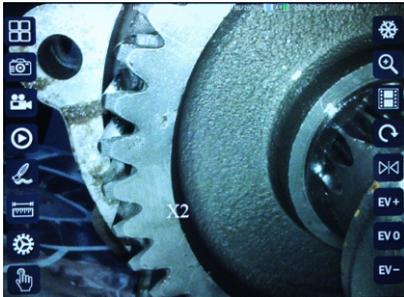


## Freeze



The left is frozen image, the live image in the right for comparison.

## ZOOM



The image can be zoom in or out.

## Negative film



The image shows in a complementary color as the right picture.

## Rotation & Mirror

The image can be clockwise rotation at 90, 180, 270 degree or mirror showed.

## EV Adjustment

Adjusting the EV value can make the lens adapt to different light and dark environments. High EV value may cause overexposure of the bright workpiece surface, and a low EV value can make the details more clearly presented.



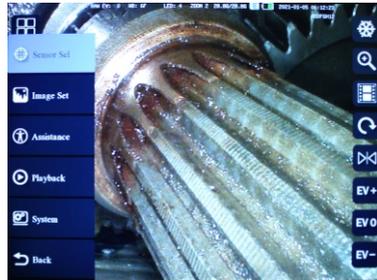
**NOTE** The EV value can also be determined by the **BRT** button.

The above functions such as display style, ruler, graffiti and negative film can also be done through the following menu operations.

## Menu

Enter the menu option, as show the following settings:

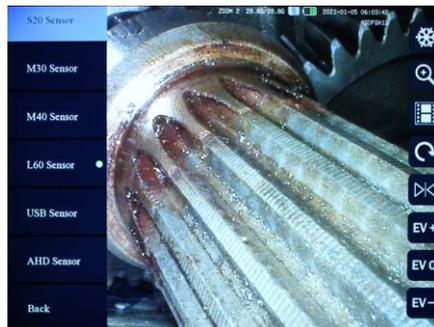
**Sensor Sel**  
**Image set**  
**Assistance**  
**Playback**  
**System**



**NOTE** Press **MENU** button on the right side of the screen also can enter Press menu options. **Playback** please refer to previously described toolbar.

## Sensor Sel

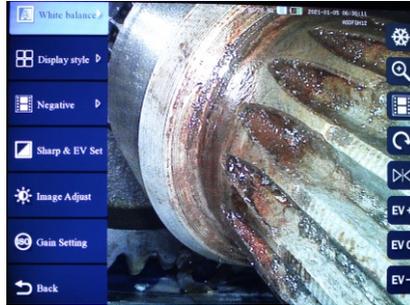
The product can be adapted to various probes, please select this item according to the camera in use.



## Image set

The following items can be set in image settings:

**White balance**  
**Display style**  
**Negative**  
**Sharp & EV Set**  
**Image Adjust**  
**Gain Setting**



### White balance

According to different probes and illumination modes to select the appropriate white balance option.



You choose to define white balance by yourself, the RGB colour can be set by +, -, after setting, press the exit, and + to return.

If you choose the Default, press + or - to confirm and then press Exit, and + to complete the setting.

**Display style & Negative**, please refer to the previous description of TOOLBAR.

### Sharp & EV Set

Sharpness and exp comp value can be set by +, -, after setting, press the exit, + or - to confirm to exit.

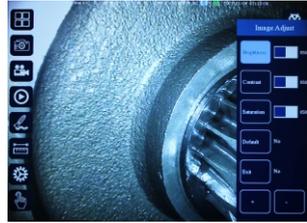
If you choose the Default, press + or - to confirm and then press Exit, and + or - to complete the setting.



## Image Adjust

Brightness, contrast and saturation value can be set through + -, after setting, press Exit key, and + or - to confirm to exit.

If you choose the Default, press + or - to confirm and then press Exit, and + or - to complete the setting.



## Gain Setting

Automatic or manual mode can be selected through + -. If manual mode is selected, it can be used+ - to set the gain value and exposure time. After setting, press Exit, and then press + or-Confirm to exit.

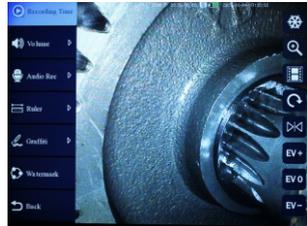
If you choose the Default, press + or - to confirm and then press Exit, and + or - to complete the setting.



## Assistance

Assistance has the following options to set:

- Recording Time**
- Volume**
- Audio Rec**
- Ruler**
- Graffiti**
- Watermark**



## Recording Time

Video is composed of continuous clip files, and the length of clip files can be set:



**Volume** to set the sound of the horn. (for certain models)  
**Audio Rec** sets whether recording sound while video recording.(for certain models)  
**Ruler** and **Graffiti**. Please refer to the previous toolbar description.

## Watermark

You can add date and text watermarks to pictures and videos.



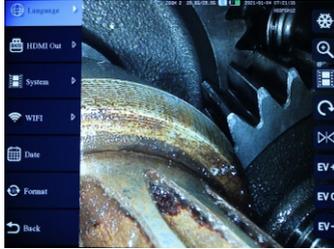
NOTE

Only input should up to 8 characters can be displayed.

## System

The following items can be set under **System** settings.

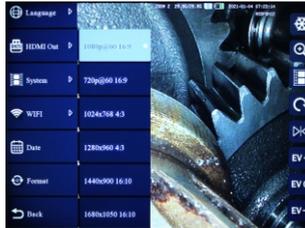
**Language**  
**HDMI Out**  
**System**  
**WiFi**  
**Date**  
**Format**



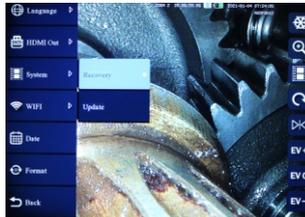
**Language:** you can select the language used by the system.



**HDMI:** HDMI cable can connect to external screen to display, according to external screen to select appropriate parameters.



**System:** The system version can choose to return to the default or upgrade by inserting SD card containing system software.



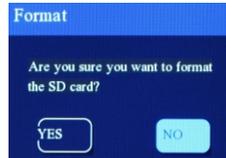
**WiFi:** You can activate or turn off Wi-Fi transmission. (for certain models)



**Date:** This item is used to set the date and time of the system. It is recommended to set the local time for the first time use.



**Format:** this item can format the SD card, please back up your files before formatting.



## Storage & Maintenance

### 1. Cleaning components

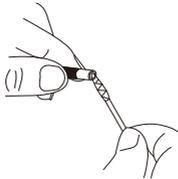
#### Cleaning insertion tube

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.

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?

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?

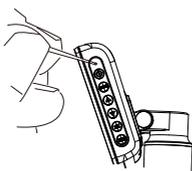
A: Press the dimmer to get right light intensity .

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" Touch screen LCD Support Micro-SD Card, HDMI output
Power source	Lithium battery 3700mAh 3.7V Charging current : 5V / 2A
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