Product user manual



Thank you for using our industrial endoscope.

Read the book carefully using user manual.

Please keep this book in safe custody so that it can be consulted at any time.

WARNING and Notes

Before using this device, you must read carefully the following notes and DANGERWARNING, which, if improperly operated, could trigger DANGER!


:DANGER


:WARNING


Note:



• This equipment is restricted to the detection of common industrial equipment and is not used for any other purpose, in particular, for non-use

Internal observation or examination of human or animal cavities!

• Refrain from using this equipment to prevent explosions and fires
• Do not use this equipment at high temperatures, extreme temperatures, with strong radiation, dust and larger particles
• Before using this equipment, it is essential that detection devices are used to disable electrical exposure



• Insert in the connection device in strict compliance with the indicator sign, if the violent wrenching can lead to damage to the plug
• Please insert and install in the state of complete shutdown of the machine so as not to damage the machine and equipment
• Do not pull the mainframe strongly while holding the plug, which could cause damage to the plug and equipment
• If HDMI etc. enters water, dry towels should be dryed at the first time and internal moisture drawn out.
• If, during their use, snake bones are stuck in the instrument, do not pull them to cause the snake bones to break,
• Monitors should not be exposed to severe impact, which may cause damage by breaking screens
• Do not put a collision or strong pressure on the surface of LCD. LCD
• None of the components of this product has been designed for water protection except for the insertion of tubes for waterproof design, and be careful to avoid equipment when used
Into the water, causing electrical shocks, etc.
• Avoid direct viewing of front end light sources, which could otherwise cause eye damage
• Avoiding direct hand contact with various ports, which may cause short circuits and malfunctions
• Keep your feet on the line and keep your eyes open for tripping.
• In the event of a noise during use, smoke and so forth should be stopped immediately and touch should be banned after power cuts



• Be careful not to step out of the plugs, which may cause camera damage and accuracy of measurements
• Please do not pull TF cards in the middle of the playtime, when you play pictures, videos, etc., which may cause data storage damage
• When equipment is not used, ensure that interfaces such as USB HDMI are secured to prevent dust and water dripping
• When charged, do not overwhelm the charger with clothing or other articles to prevent DANGER

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Chapter I Check packing

Please compare the equipment contained in the aircraft containers with the container list upon receipt of the goods.
In the event of missing, damaged or other doubts, do not use this product and immediately contact the manufacturer.

Chapter II Description of use

Important information - Read before using

Purpose
This product is mainly a probe at the depths of the curved pipe, which allows the observation of the position where the naked eye and body cannot be seen directly or in direct contact, and
And can observe internal space structure and state within a sealed cavity, and accurately measure the size of the fault position, which can be undismantled
or disrupting assembly and equipment to cease operation, and measuring the size of defects, which will fail by taking photographs or videos
The sections were sent back to facilitate the analysis of the reasons for the handicap by technicians.
Do not use this device for any other purpose other than the above, in particular for internal observation of human or animal cavity or for the purpose of the human or animal cavity.
Check!

Use user manual
This user manual contains basic information on the safe and effective use of this device.
Read this user manual and all equipment to be used in its use carefully before using it, as described below.]
Use the equipment.
Please keep this user manual and all related user manual in a safe and convenient place.
If there is any doubt about the information in this user manual, contact the manufacturer.

Repairs and alterations
This device does not contain user-maintainable components, and do not dismantle, modify or attempt to repair them, otherwise they will cause injury to the user or
Equipment damaged.

Chapter III Access to an endoscope

1. Open the instrument box.
II. Eject insertion section (showers), mainframe, battery package.
III. Fixed a dent in the back of the host to be attached to the insertion card.
IV. Portable batteries to the back end of the handle.
5. Confirm that the installation is free and unusual and ready to go.
Device extraction: After opening an inner-scope airbox, slowly remove the plugs and be careful to remove them so as not to cause a quick twitch.
The plug pipe is damaged and the display screen and battery pack are then removed and installed.
Device Storage: When storing equipment, insert a pipe into the liner in the direction of a clockwise and then insert it into the monitor and put it in the box.
Body.

（注意：如未按要求缠绕线圈，则可能导致蛇骨受挤压损坏）

Chapter IV Pre-use preparatory work

Turn on the power.
Press the power button above the host for at least three seconds, to be shown on the screen with the word "WELCOME" and release the power key.
Just wait for the machine to start (Note: If the screen is still up, try again).

Check appearance
Visual inspection of the presence of broken or fractured or other anomalies on the surface of the hose.

Check the corner.
(c) Lightly push the bend to operate the shaker, and observe the smooth and correct bending of the bend and achieve the maximum curve.

Check image interface icon function/light source
Visually check the normality of the display screen images, open the led light control switch, and observe the normality of the light source at the end of the plug,
The slow-inputing of the equipment being tested begins in-house, and the brightness of the screen and the light is regulated according to observation needs.

Chapter V Keys and software interface instructions

5. 1 Button

Power Opener

Power opener  **Keys, that's to turn on the front end of the snake bone.**

Custom keys

Custom  Press the key, customize the key function according to the client ' s needs.

Manual/automated brightness reconciliation

Press the lever.  key, which can be re-regulated, depending on the working environment, with a 10-scale level of light;

Long press the lever.  **key, which automatically regulates the light level.**

The replacement or heat insertion of the insertion tube during the start-up will result in a failure of the brightness reconciliation function and will require re-entry

Start the device.

Mouse/Record Key

Long  button, click the mouse button, and fine-tune it by bending the control pole. Short press to confirm.

Photography/video keys

Press the manipulator.  key, press short to take a photo of the current image interface and store it automatically in the album. Long press on the current image

The interface is recorded and stored automatically in the album.

Host back button

Short press  Press button to take a photo of the current image interface and store it automatically in the album. Long press the current image interface

A line video is automatically stored in an album.

Press  Press the button, bend to lock, and push the pole to bend and finely adjust. Press the button again, bend the corner.

Lock and unlock.

A bend control pole.

Hand handle corner control control controls the front end of the snake bone lighting, which can reach 180 degrees at the corner (orientated to client needs, maximum 180)

The angle of the congeal is the angle of the convulsive bone.

5.2 Software Interface



1 - Double-eye

2 - Measurement

3 - Data

4 - Deficiencies

5-System Settings

6 - Photo

7 -- Video

8 - Freeze

9 - Local Darkness

10 - Image Settings

5. 3 Interface



1 - Power Charge Port

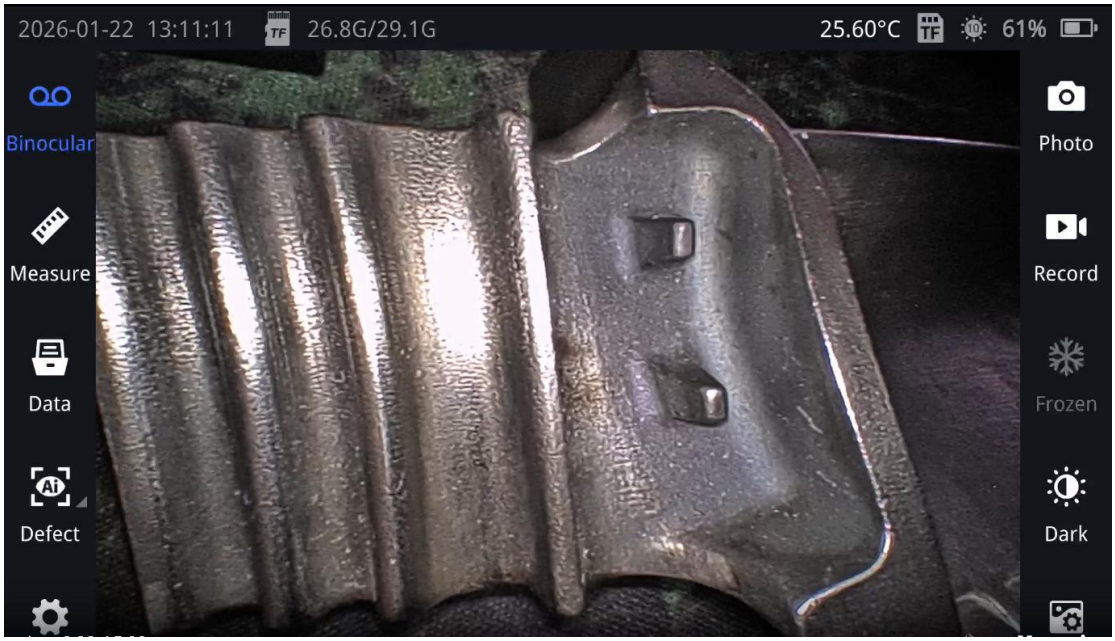


1-TYPE-C Data Interface
2-TF Plugin
3-HDMI video interface
4 - Headphone interface
5-USB interface

Chapter VI. Operational instructions for endoscopes

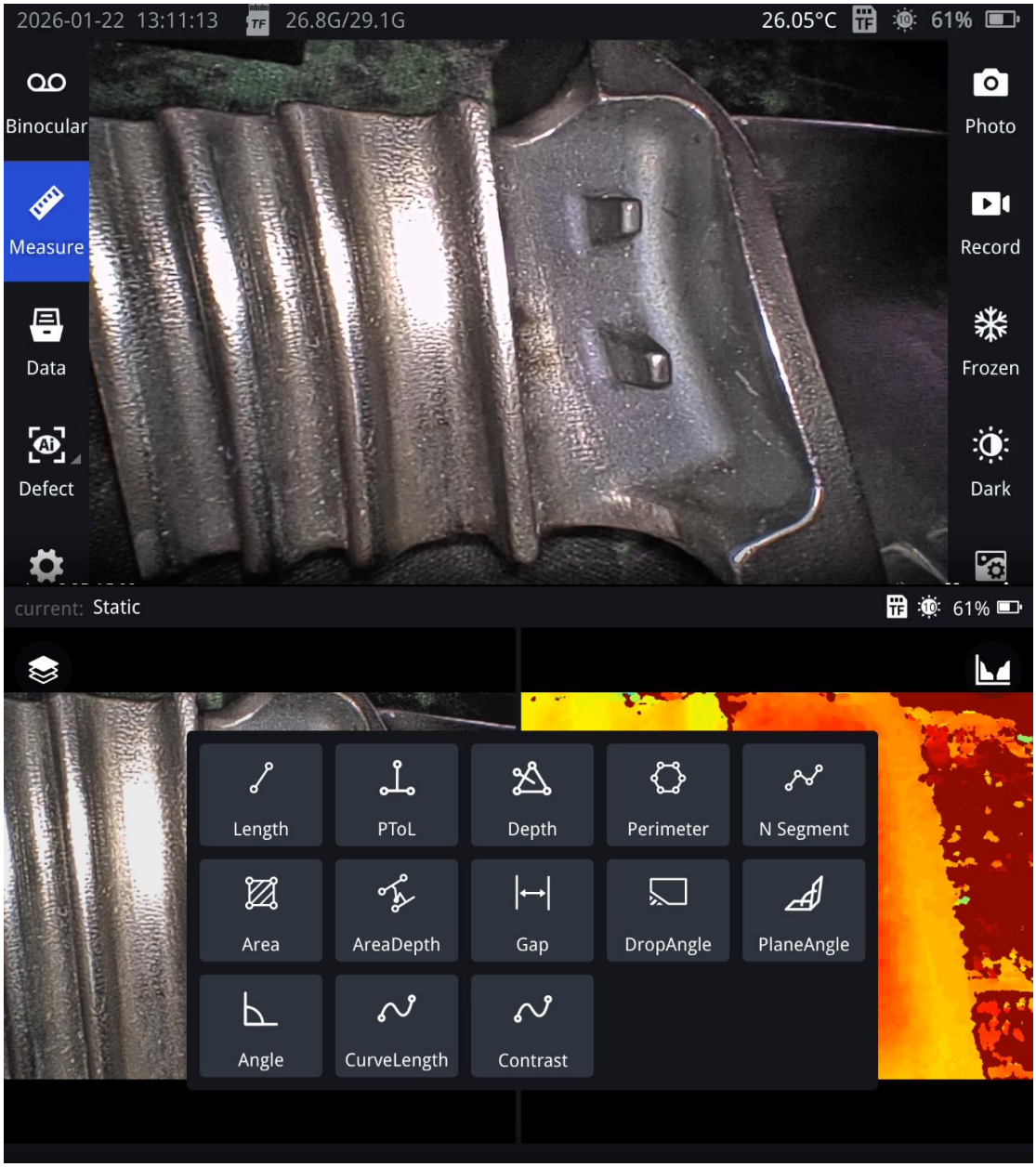
6.1 Double Eyes

Picture default storage format is JPG, default value is 0, image supports 5 multi-scaling, adjusts as needed, looks
Check the size of the job.

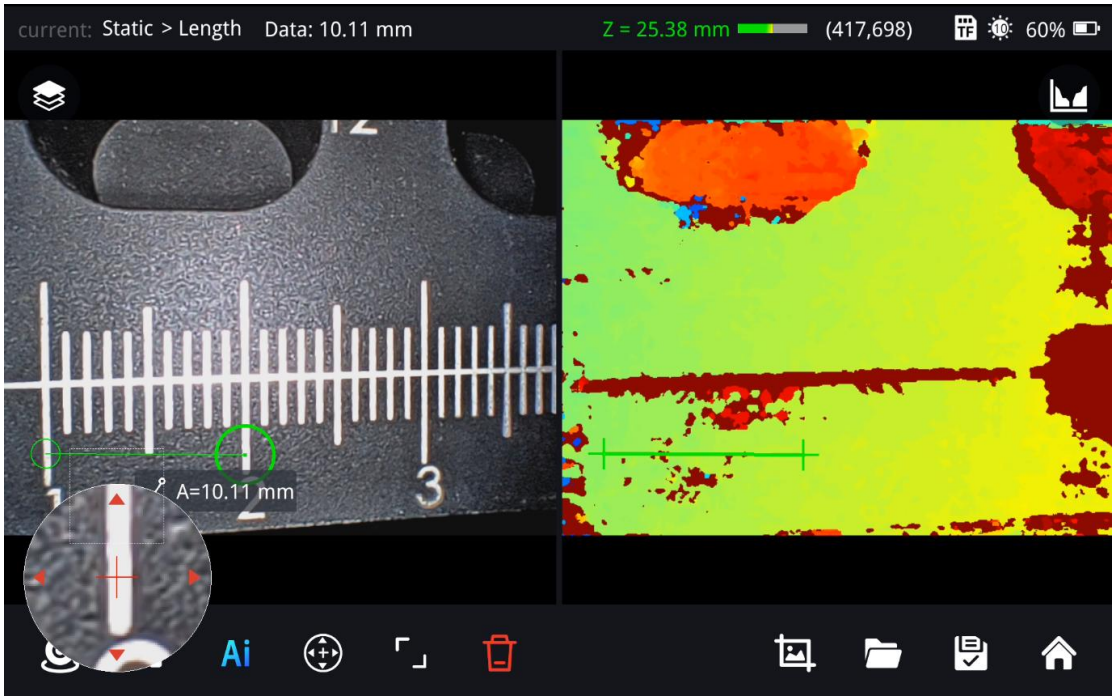


6.2 Measurement

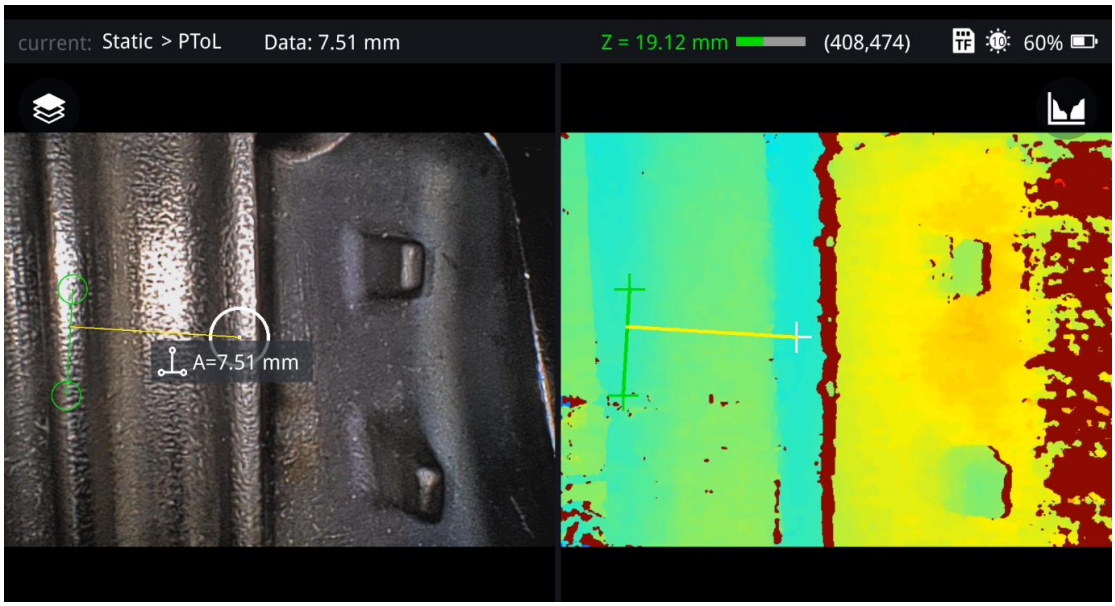
Enter " measurement mode " with " length", "point to line", "deep", "near", "multi-wire", "face" Aggregation, Area Depth, Gap, Shape, " plane-tangular " angle " Curve length " Contrast, etc. 13 measurements pattern, with a working chart on the left and a working chart on the right.
3D



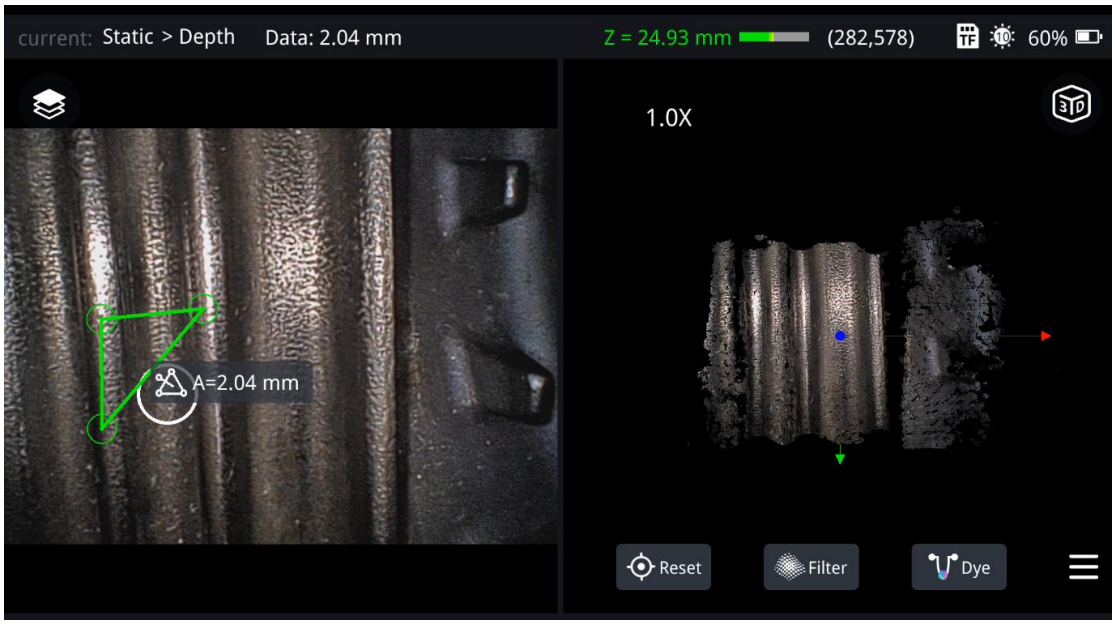
Select the " length" measurement mode, allowing for two points, fine-tune the position, and precise measurements are shown at the top left corner.



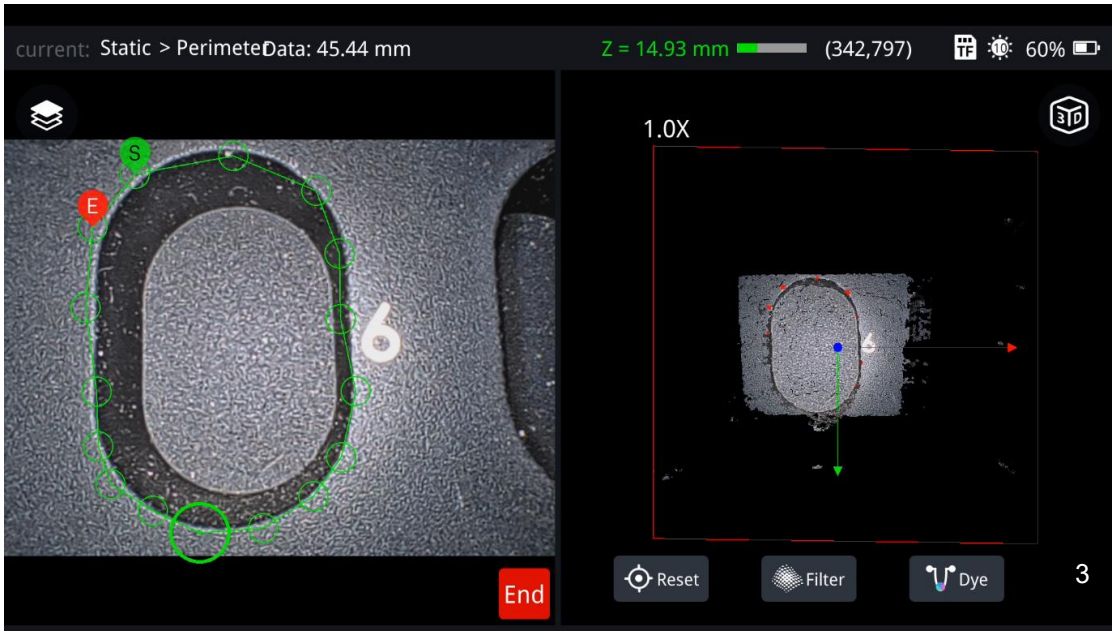
Select the Point-to-line measurement mode, select two points of the line segment, and take another point to automatically connect the line segment, so that the point reaches this segment
The distance.



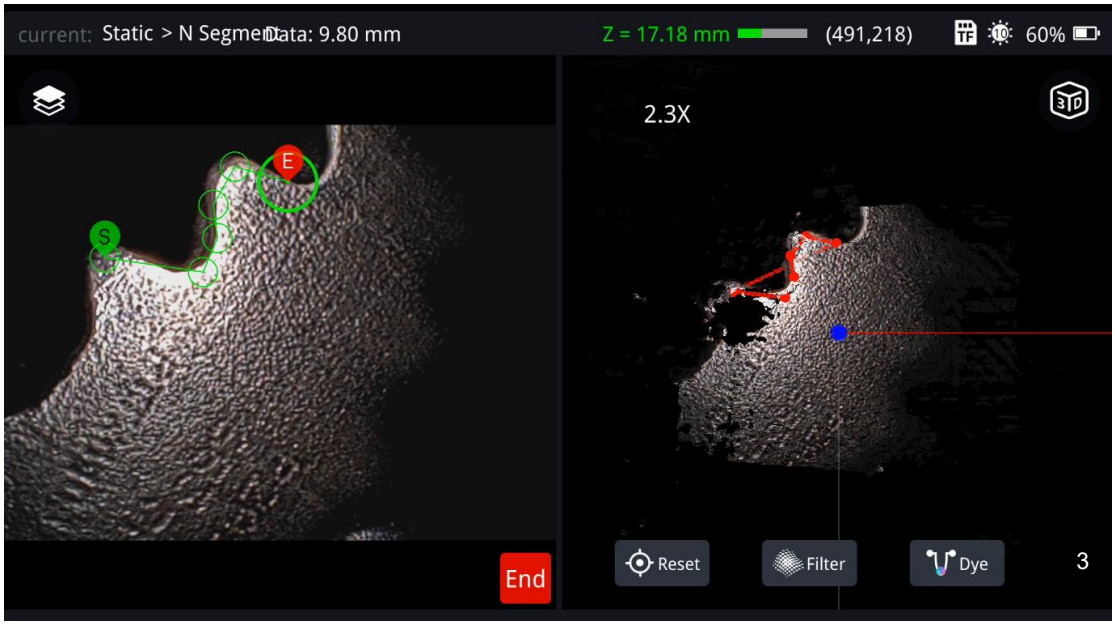
Select the "deep" measurement mode, take three points above the depth, make it triangular, take one point at the bottom and complete the depth survey.
Volume.



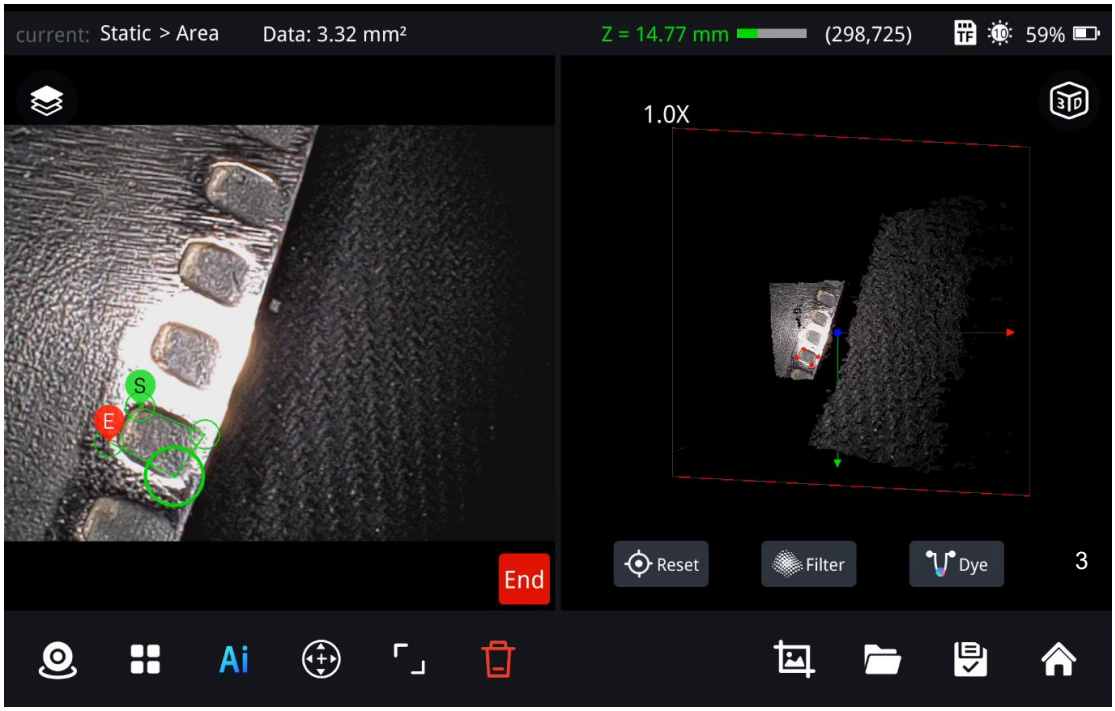
Select the "week" measurement model, take any point at the edge of the job situation and complete the perimeter measurement.



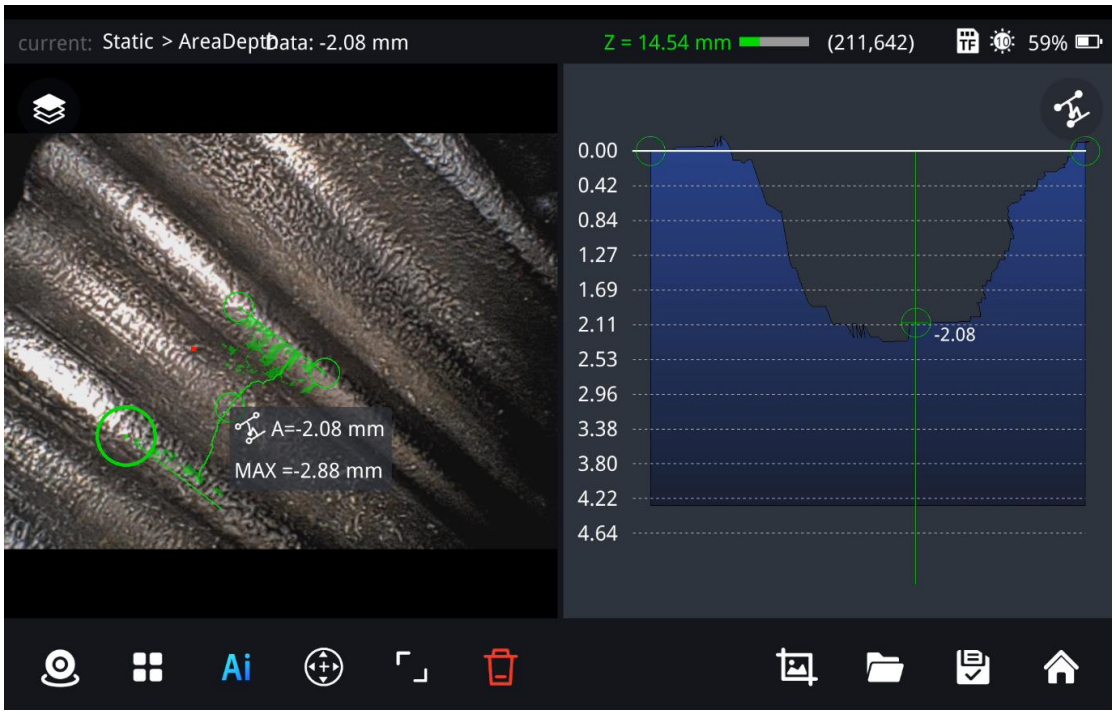
Select the " Multi-line Segment" measurement mode, select the point close to the shape of the work piece, and complete the multi-line segment measurement.



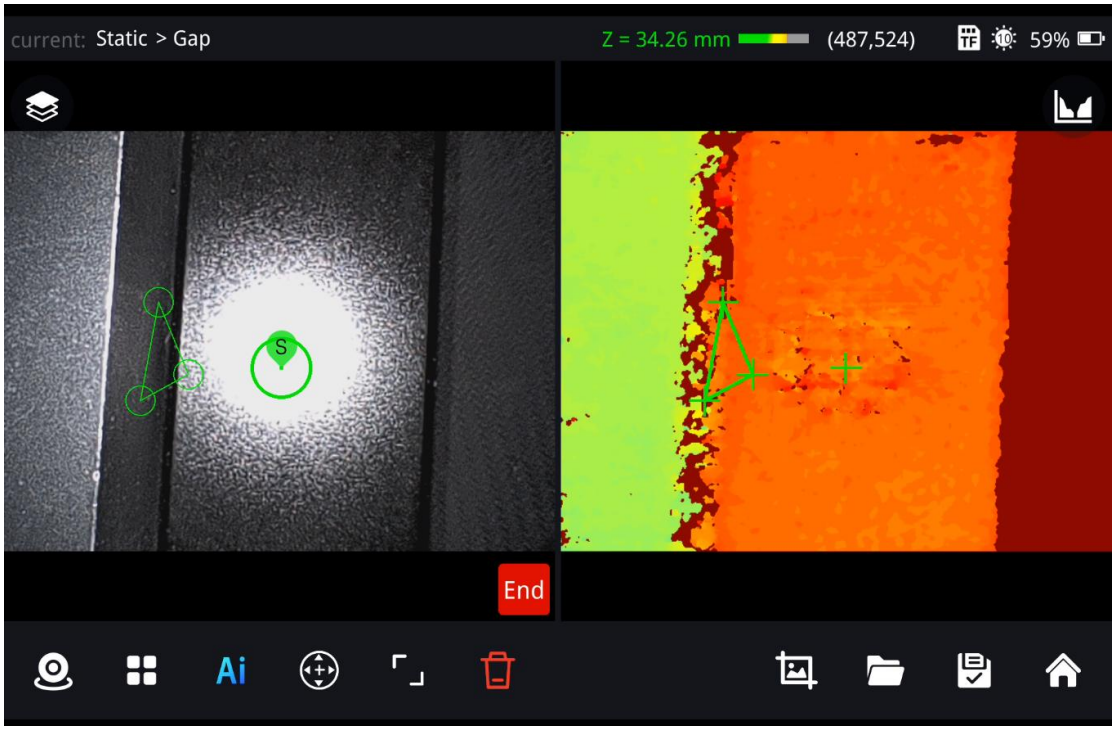
The “area” measurement model is selected, the location of the interior defects of the work situation is taken at any point and the area measurement is completed.



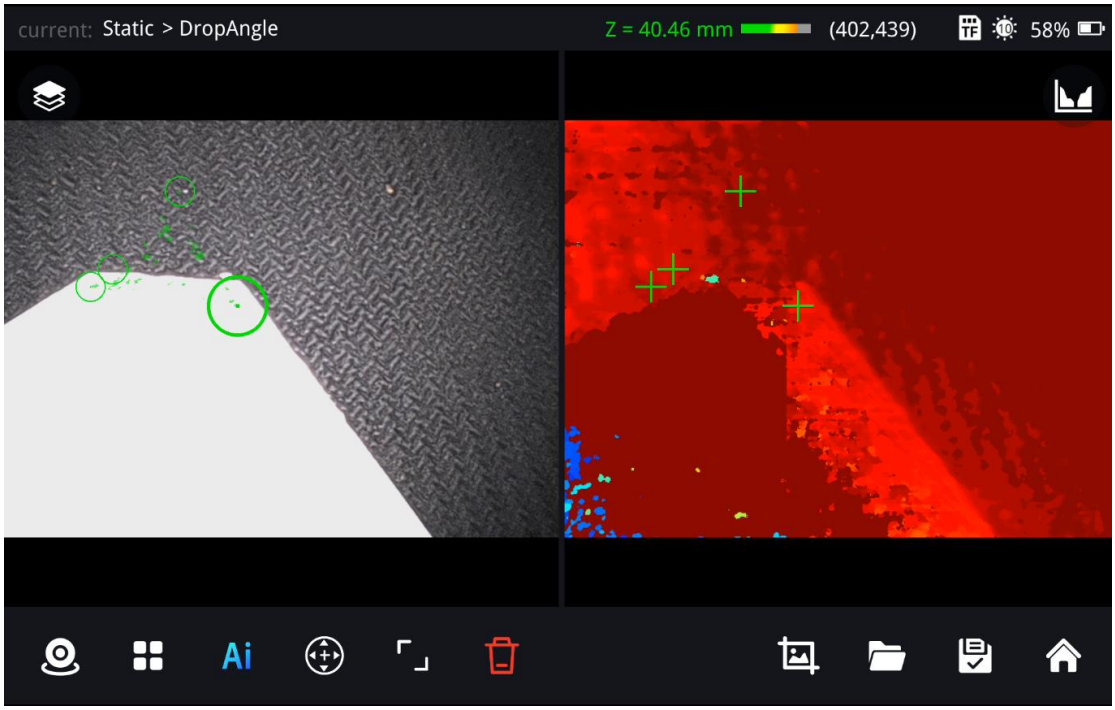
Select the Depth of the Area measurement mode to take three points higher by the depth to triangulate it and complete the Depth of the Area.



Select the " gap " measurement mode, the measurement reference line (as specified by two reference points) to the reference plane (as determined by three reference points)
- The vertical distance.



Select a “flash” measurement mode, with three points from the surface of the object to form a plane, three points to form a missing surface, click
END, which produces missing face data.



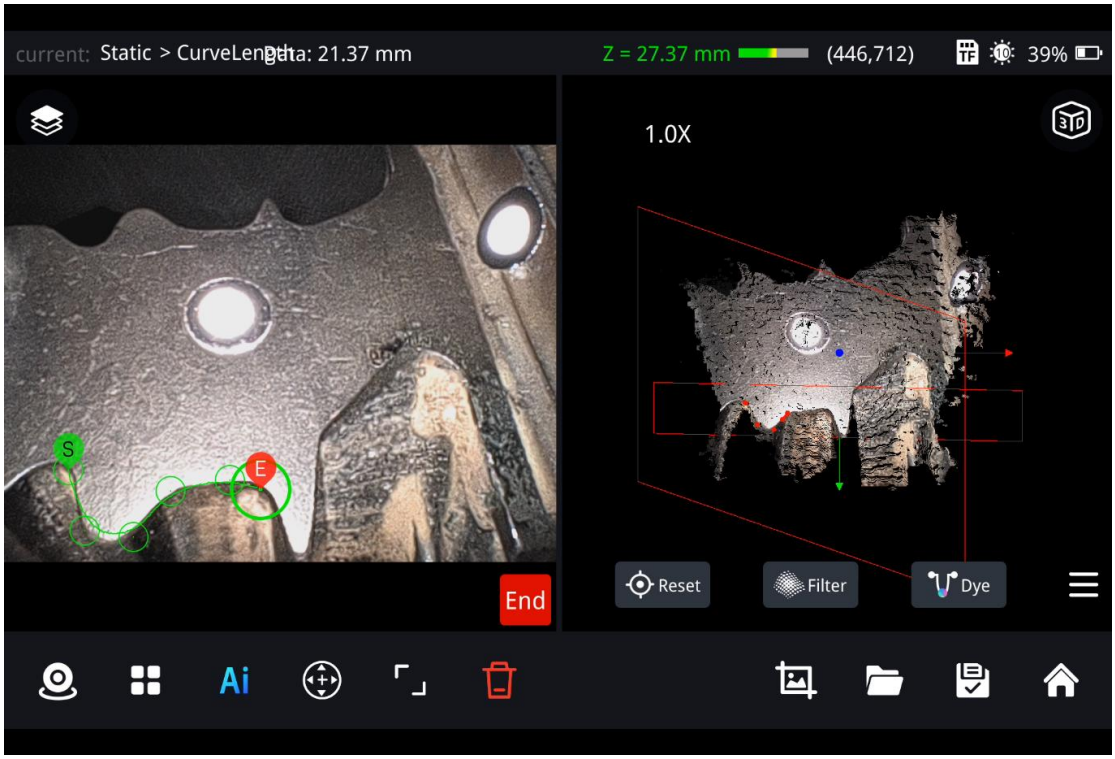
Select the " plane-tip" measurement mode, with three points on one surface to form a plane and one to form a trap on the other
Angular, you can get a flat corner.



Select the " angle " measurement mode, with three points on the side side of the object along the side, to arrive at a flat angle.



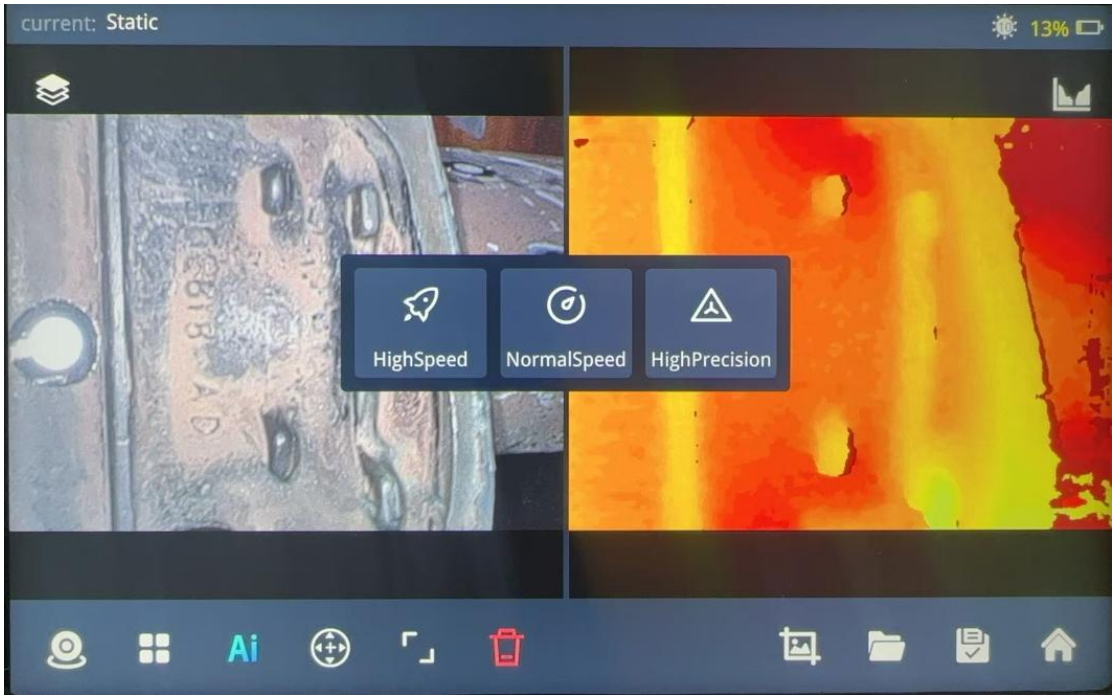
Select the Curve Length measurement mode, select the point close to the work curve according to the shape of the work curve, and complete the curve
Measurement.



Select the " Contrast " measurement mode, with two points selected where the defects are known, and two points selected for the unknown.
You can obtain an unknown deficiency value by comparing the measurements.



Select the "AI" mode, which is fast, standard, high-precision, and selects the mode according to the user's needs, which generates more
Good three-dimensional and depth maps to improve the optimal measurement accuracy.



6.3 Data

Click " Data " to see the saved pictures and videos.



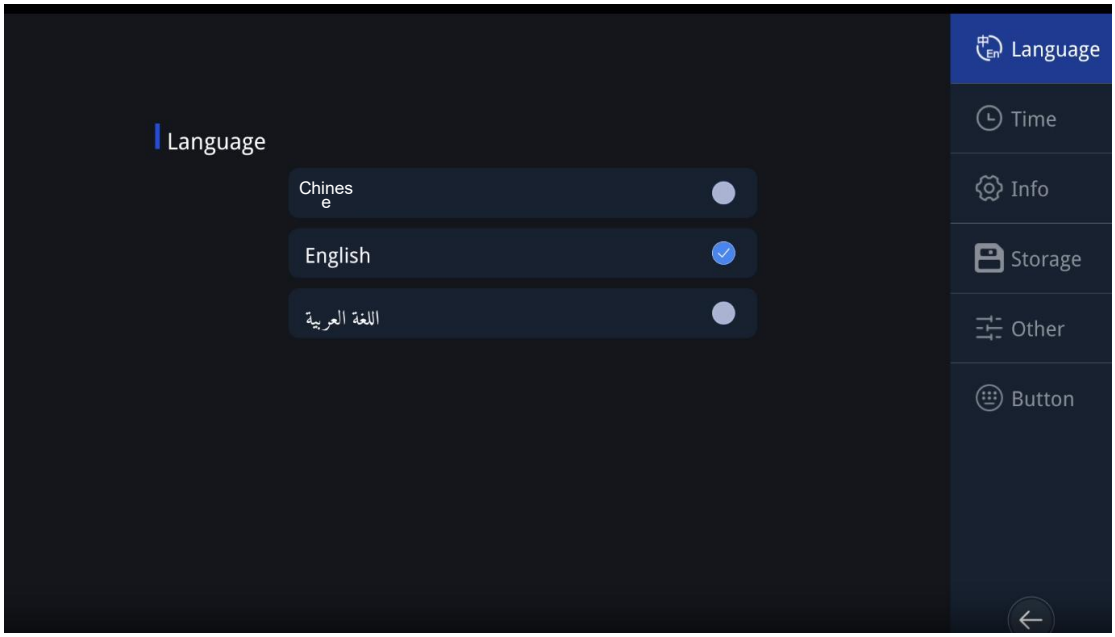
6.4 Impairment

Clicking on the " defect " will automatically circle the deficiencies in real-time images.

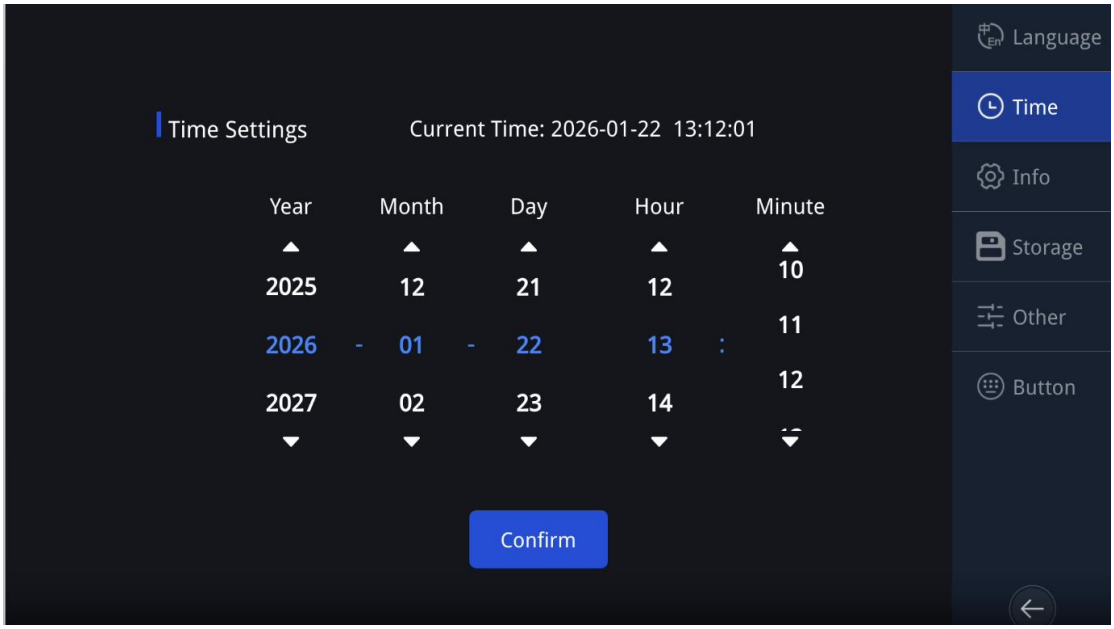


6.5 System Settings

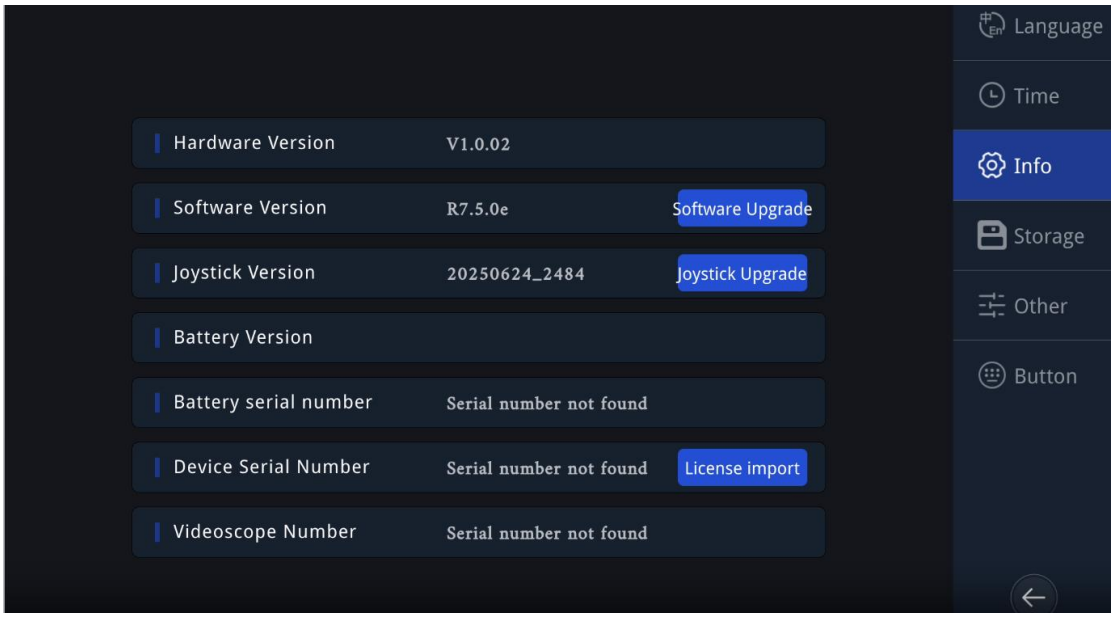
Click the Language Settings option, with Chinese and two language types in English, to select the language to change, point
"Certificate" means successful replacement.



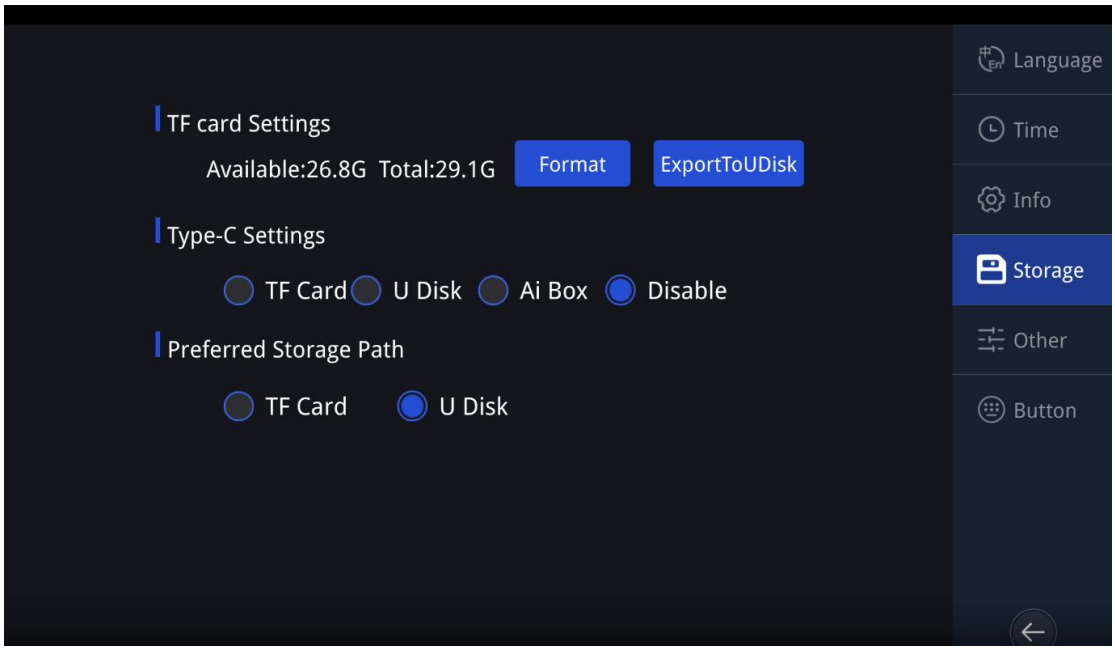
Click the Time Settings option to make changes based on local time in the user's country and region.



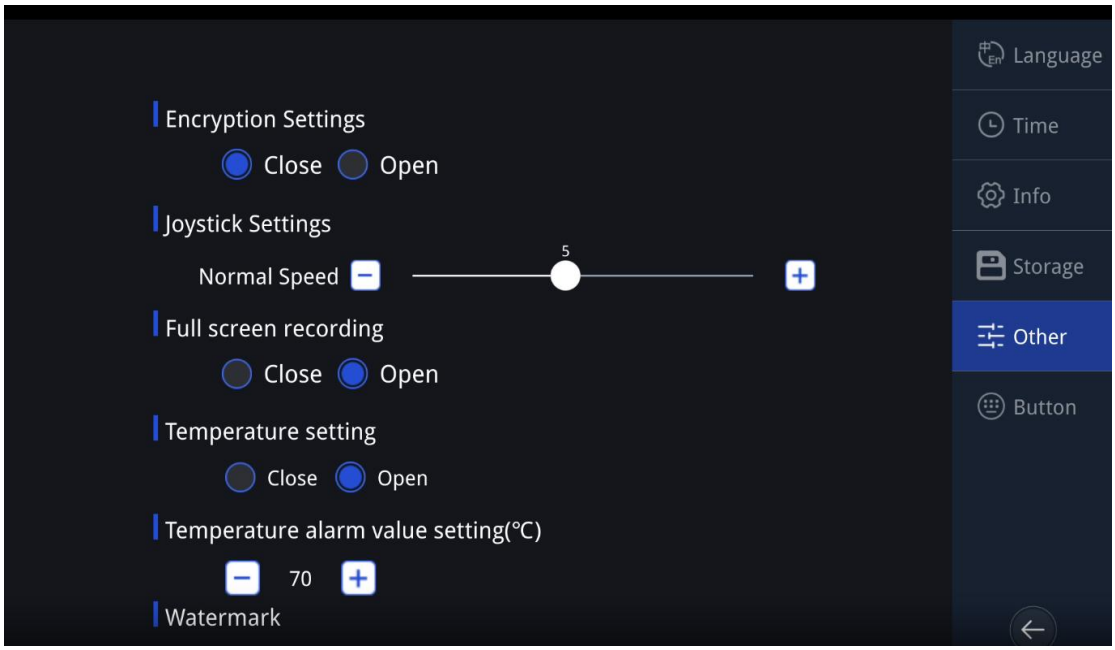
Click on the " System Info " option to view system information and update the current version of the old software to the latest version.



Click on the Storage Settings option, with a custom TF card settings " Type-c Settings " Priority Storage Path Settings " etc.
Choose.



Click on the " Other Settings " option, with options for custom encryption settings, electro-control pole adjustments, black box functions, temperature alerts, etc.
Select settings.

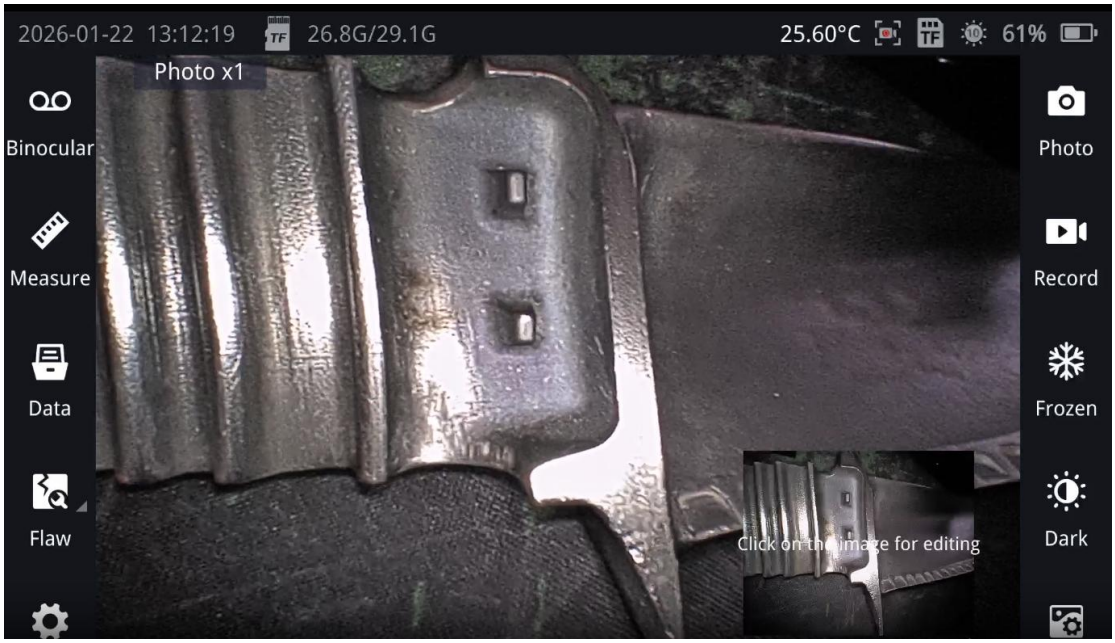


Click the Key Settings option to customize the distribution of function keys according to user preferences.



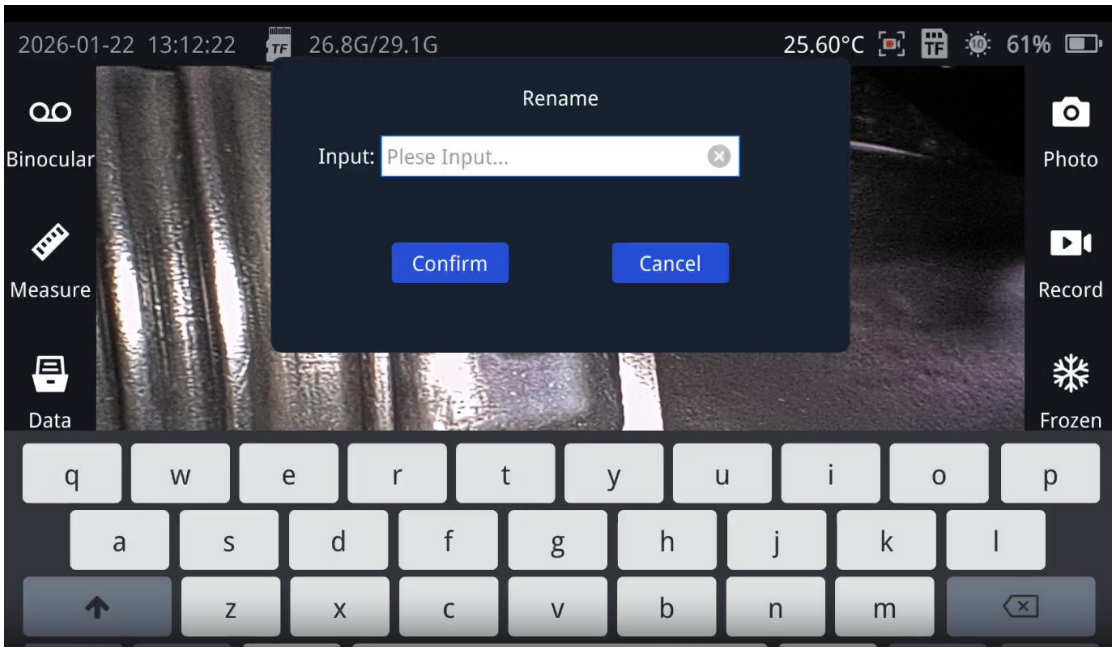
6.6 Photo

Click the Photo option to show the number of photo sheets in the upper left corner, in the form of photos*1, which can be quickly compiled in the lower right corner, the labeled defect is saved in the album without returning the album for editing.
The label font selects the appropriate colour according to the working interface, which supports custom comments and font size adjustments.



6.7 Video

Click on the Video option, pop up the bullet box to define the folder name, and there's a red mark on the top right of the screen, that is, the hint is being recorded.
Click again on the " Video " feature, at which point the video stopped and the video content was automatically stored in the album.



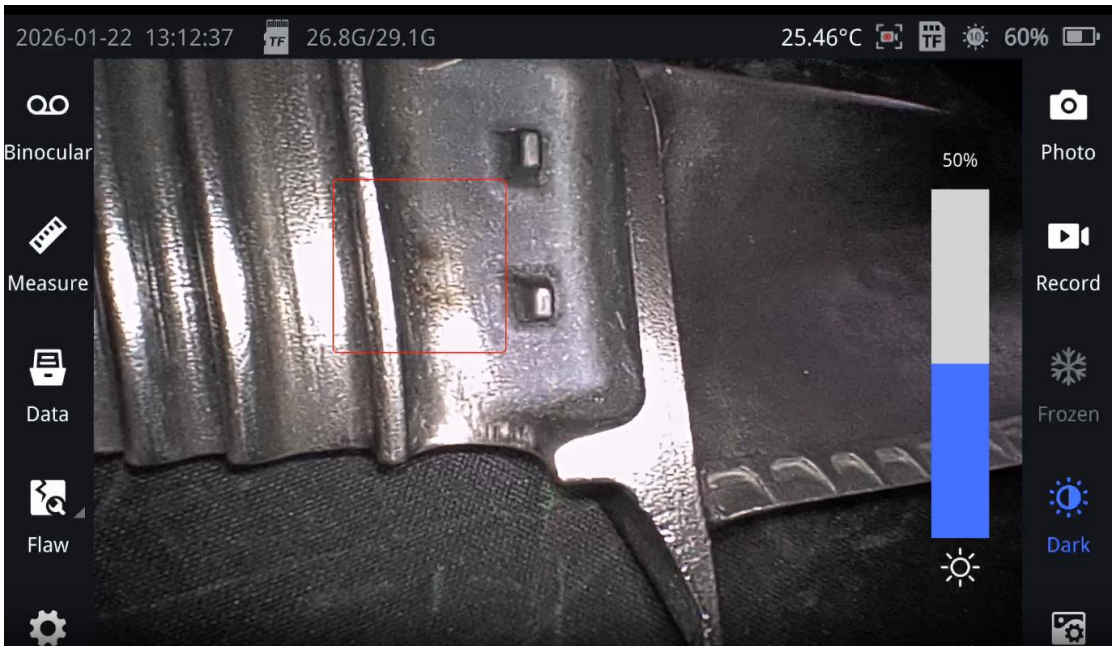
6.8 Freeze

Click the Freezing option to automatically intercept the current image, place the lower right corner box, and continue to work as a camera Inside, the left large image continues to move, and the operator puts it in the assigned position, matching the lower right corner box.



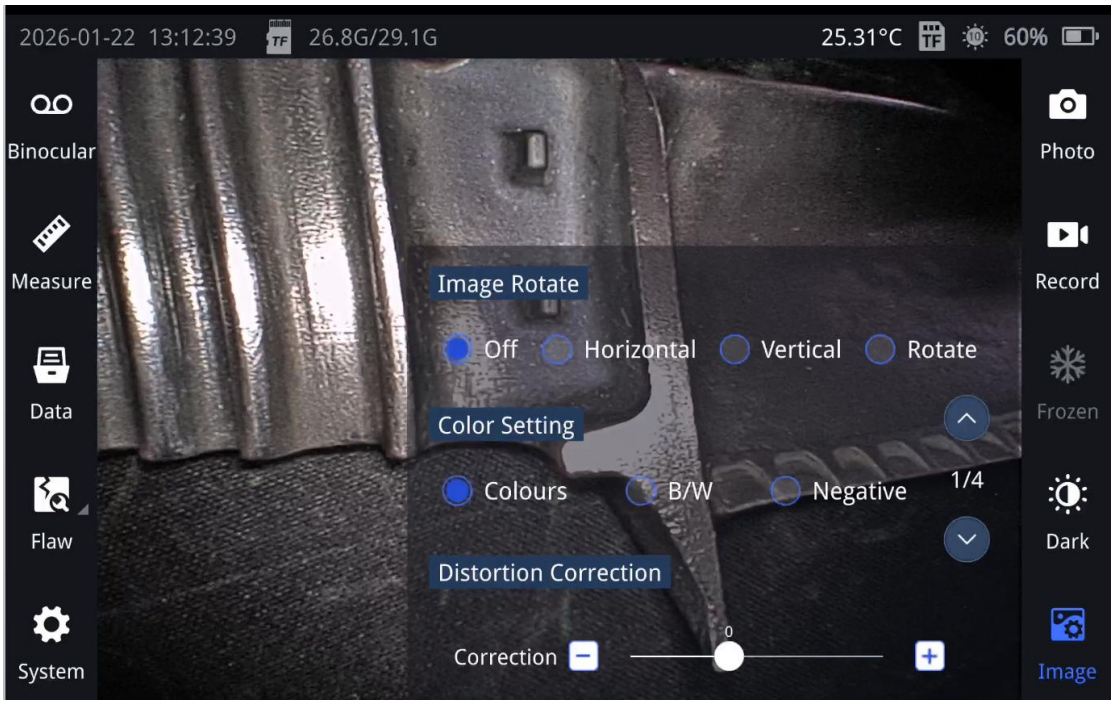
6.9 Local Darkness

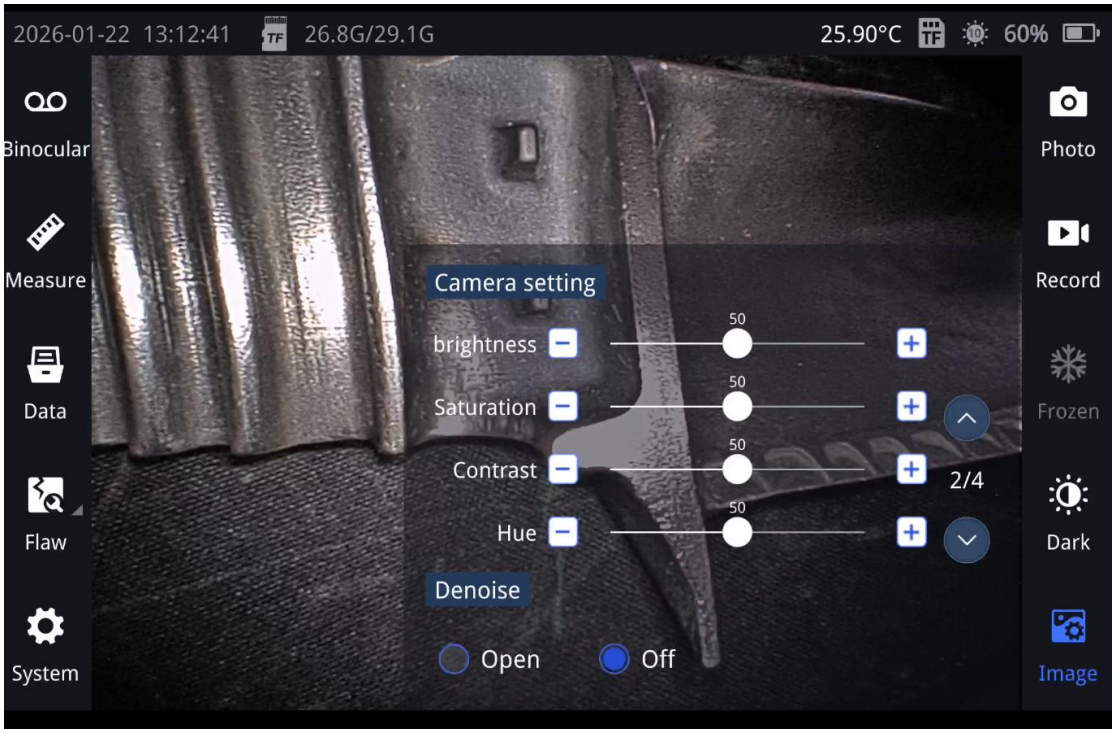
In some cases, when the light is darker, it tends to see a sharper distance, and it's still dark in the depths. Case, which opens the "local brightness" function, supports the adjustment of the gain light, improves the local dark light, and below is the local one.
Before and after the light is adjusted.

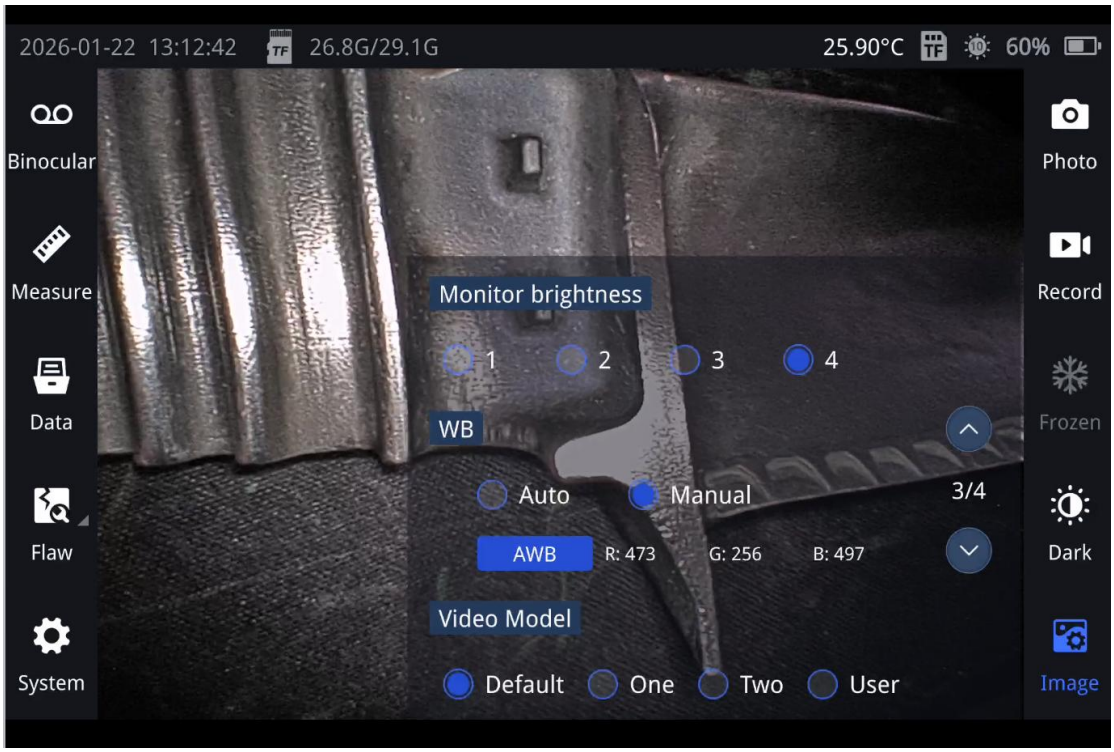


6.10 Image Settings

Click Image Settings, with image rotation, colour settings, malformation, camera setup, noise reduction, digital multiplication,
Screen brightness, white balance, etc.


2026-01-22 13:12:39
26.8G/29.1G
25.31°C
60%
Binocular
Photo
Measure
Record
Data
Frozen
Flaw
Dark
System
Image
Image Rotate
Off
Horizontal
Vertical
Rotate
Color Setting
Colours
B/W
Negative
1/4
Distortion Correction
Correction
0


2026-01-22 13:12:41
26.8G/29.1G
25.90°C
60%
Binocular
Photo
Measure
Record
Data
Frozen
Flaw
Dark
System
Image
Camera setting
brightness
50
Saturation
50
Contrast
50
Hue
50
2/4
Denoise
Open
Off


2026-01-22 13:12:42
26.8G/29.1G
25.90°C
60%
Binocular
Measure
Data
Flaw
System
Photo
Record
Frozen
Dark
Image
Monitor brightness
1
2
3
4
WB
Auto
Manual
3/4
AWB
R: 473
G: 256
B: 497
Video Model
Default
One
Two
User


2026-01-22 13:12:43
26.8G/29.1G
25.46°C
60%
Binocular
Measure
Data
Flaw
System
Photo
Record
Frozen
Dark
Image
Img Contrast
Open
Off
LightPower
Auto
Level
10
4/4
Ruler
Level 10
Level 100
Open
Off
Recover
Save Config

Chapter 7 Charge and External Use Standard Charge

In desktop mode, light-button 3 seconds or so after the device is shut down; after confirmation of power out of the host, remove the battery bag and use the device
Specialized power adapter charger; battery power is fully required for 8 hours, after battery charger sign from (b) Switching to green;

Data Export of 7.1 TF Cards

The internal storage data is exported by inserting a reader with a TF card. Use the TF card reader to insert a TF card. Connects to the computer USB interface, where the computer terminal moves in a hard drive and directly handles the recording data for export.

7.2 TYPE-C interface data export

Using the TPYE-C data line to connect computers, you can read the hard drive directly and operate the export of recorded data.

Chapter VIII Common problem resolution

- **Cannot open: check battery status.**
- Could not close temporary folder: %s
- Could not close temporary folder: %s
- **Cannot display charge icon: Check battery state.**
- Could not take a picture or video: check if SD card is inserted and is working properly.

Plant maintenance

When failure cannot be judged, no self-repair may be performed, either under the guidance of an engineer or by sending it back to the manufacturer.

Fault performance	It could cause a cause.	Approach
I don't know.	**Mirror Blur**	**Wipe the mirror surface.**
	The beads were found in the sights.	**Discontinuation, timely delivery of plant maintenance**
Head bends are abnormal.	**Curved angle below specification value**	Please send an endoscope to your company for adjustment. (If you feel prevented) Hard, hard to work the roller, or it'll lead to a bending machine. **Early wear or tear.**
	The swing pole's resistance is abnormal.	
	♪ The bend is broken ♪	**Discontinuation, delivery to the factory for repair.**