

# Pipe Inspection Camera System User Manual



Model No.: U88

**NOTE: All accessories are under the keyboard!**

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Please contact us at first time if you got issues with the product.

Website After-sale: [service@sanyipace.com](mailto:service@sanyipace.com)

# Catalog

1. Notice .....	1
2. Scope of Product Use .....	1
3. Product Specification .....	1
4. LCD Monitor Operation .....	3
5. Counter Function .....	5
6. Control Panel & Keyboard Input .....	5
7. Camera with Self-leveling Function & 512Hz Transmitter .....	7
8. Cable Coil .....	10
9. Battery & Adapter .....	10
10. Device Installation .....	11
11. Device Size .....	13
12. Structure & Accessories .....	14
13. Trouble & Troubleshooting .....	15
14. Warranty .....	16

Attention: The illustrations and screenshots of this manual are to explain the product's operation, which may be a little different from actual products due to the products' version upgrades and different production batches. If the content in this manual does not match your machine, please refer to the machine!

# 1. Notice

- a. Please read the manual carefully before using the product.
- b. Handle the device with care when operating, do not drop or push hard.
- c. Do not dismantle the machine without permission.
- d. Please turn off the monitor and disconnect the device after use.
- e. Before inserting the TF card into the device, please back up the information on the TF card to avoid loss of information.
- f. Do not cut off the power suddenly during recording and playback, otherwise, the product and video files may be damaged.

# 2. Scope of Product Use

- a. Household pipeline blockage inspection
- b. Pipe inspection camera, pipeline tools
- c. Underground water pipes, HVAC systems, oil and gas pipelines
- d. Rescue operations in narrow spaces
- e. For underground exploration
- f. Scientific research on underwater riverbeds
- g. Sewer system inspection
- h. Any other hard-to-reach locations/areas

# 3. Product Specification

## ---Camera and Cable---

Sensor :1/3 CMOS

Resolution: 1000TVL.

Camera material: stainless steel, IP68 waterproof

Camera angle: 120 degrees

Cable diameter and materia: 9mm/0.35in diameter (80m/263ft - 160m/525ft hardest elastic cable optional)

### **512Hz camera**

Camera diameter: 0.9in/23mm

Camera light source: 12pcs 1W high white LED (adjustable)

Camera type: 0.9in/23mm (built-in 512Hz transmitter, self-leveling)

Camera protective cover size: 1.14in\*1.58in/29mm\*40mm

Camera pipe pulley: 1.5in\*3.55in/38mm\*90mm

### **360° rotate camera**

Camera diameter: 2.0in/50mm

Camera light source: 8pcs 1W high white LED (adjustable)

Camera type: 2.0in/50mm 360° rotate camera (built-in 512Hz transmitter, support 360° horizontal rotate & 145° vertical rotate)

Camera pipe pulley: 2.5in\*4.0in/65mm\*100mm

### **---Monitor Screen---**

Size: 9inch

Camera/monitor picture: Color

Function: Video recording, audio recording, capture photos, 5X digital zoom, battery level display, distance counter, 512Hz transmitter, self-leveling, keyboard input (support English), etc.

Monitor input voltage: DC 12V

SD card: package includes 16GB card, support max 128GB

Display resolution: 1024\*600 IPS

Menu language: Chinese/English/Russian/French/German optional

Screen port: power input/video

Screen operation: press buttons

Video format: AVI

Photo format: JPG

Working temperature: -4~140°F / -20~60°C

Storage temperature: -22~176°F / -30~80°C

### **---Control Panel---**

Switch on/off

Five-speed LED adjustment

Meter/Feet switch function

Meter/Feet cleared function

Keyboard input

### ---Battery---

Charger: 100VAC-240VAC/DC 12.6V 1000MA

Battery: lithium battery 4500mAh

Battery continuous working time: about 6-8 hours

### ---Mounting Function---

With wheels, easy to move

## 4. LCD Monitor Operation



TF card: including 16GB, maximum support 128GB card

Built-in microphone and speaker

### Display Operation :

#### - Turn On

Connect all the cables of the device, turn on the battery switch button and press the power button on the screen, and the system starts.

#### - Menu Settings (need to exit REC mode):

Press the "MENU/EXIT" key to enter the menu settings.

Press "<" ">" to select, press "Rec/-" to confirm, and press "EXIT" to return. Allow operating time setting/playback setting/display setting/recording setting/system setting.

#### **- How to Record Video:**

Press "REC/-" to start recording (video with audio), press again to stop recording.

#### **- How to Playback Images/Videos:**

Press "PLAY/+" to enter image browsing, press it again to enter video playback, press "<" ">" button to select, press "REC/-" to play, press "REC/-" again to exit.

#### **- How to Take Photos:**

Press ">/PHOTO" to capture a photo, press one at a time.

#### **- How to Zoom the Image While Recording:**

Press "<" to zoom in 0-5 times, press the 6th time to return to normal (0).

#### **- How to Delete Pictures or Videos:**

Press "PLAY/+" to enter photo/video viewing, press ">" to select one of the pictures or videos, press "MENU/EXIT" and ">" to enter delete or all delete options, press "REC/-" to confirm, press "PLAY/+" again to exit.

#### **- How to Modify Video Length:**

The recorded video will be divided into fixed-length videos and stored in the memory card, and the default length is 3 minutes. You can adjust it up to 10 minutes. Press "MENU/EXIT" and ">/PHOTO" to select "Video Menu", press "REC/-" to change it to 1mins, 3mins, 5mins, or 10mins, and press "Menu" to exit after setting.

#### **- How to Set Recording without Audio:**

Press "MENU/EXIT" and ">" to select "System Settings", press "REC/-" to enter sub-options, press ">" to find "Sound Settings", press "REC/-" to adjust turn on or off, press "MENU/EXIT" to quit.

## 5. Counter Function



Before using this function, please press the CLEAR button or F7 key to clear the counter information. You can toggle the display in feet or meters by pressing the F4 key. It will start counting feet/meters when the coil rotates, and display it on the screen in real time.

## 6. Control Panel & Keyboard Input



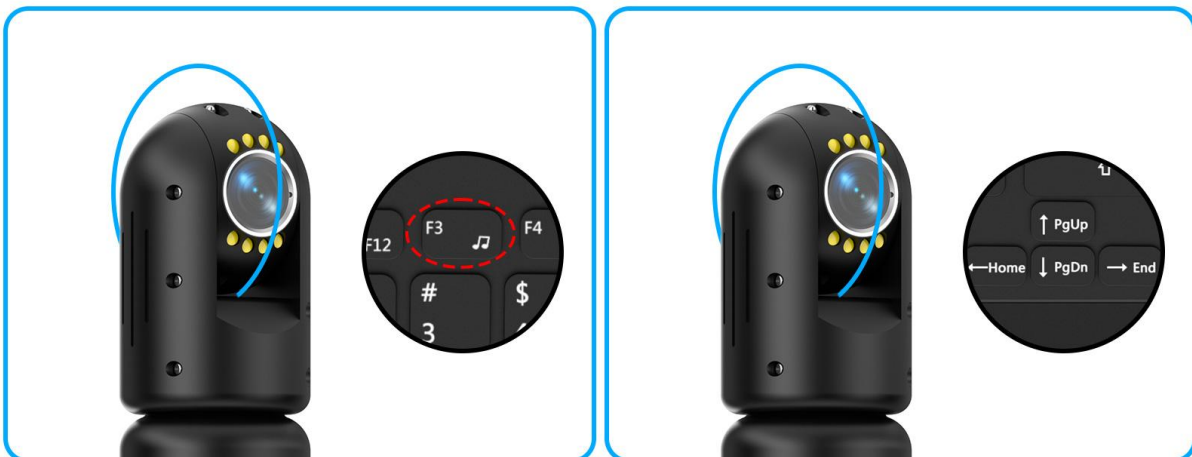
- For 512Hz camera and 360° rotate camera

- ① Power charging port
- ② Battery switch (Note: please turn off the switch when not in use)
- ③ Counter reset button
- ④ LED brightness adjustment (0-5 gear)

- ⑤ Power indicator light
- ⑥ Second keyboard USB port (The first USB Port is under the control panel)
- ⑦ Esc: Clear characters
- ⑧ F4 key: Meter/Feet switch
- ⑨ F5 key: OSD switch (on-screen display)
- ⑩ F6 key: LED brightness adjustment (0-5 gear)
- ⑪ F7 key: Clear counter
- ⑫ F9 key: Reset Factory Settings (Press F9 then input password “3131” to enter settings, press ⑬ UP/Down to select cable's diameter and meters, Left/Right to select model (U16 or U88 is the correct model), then press F9 to save settings and exit)



Press F2 to select Horizontal Rotation Auto Mode or Manual Mode. When manual mode is selected, the rotation angle can be controlled using the up, down, left and right arrow keys.



Press F3 to select Vertical Rotation Auto Mode or Manual Mode. When manual mode is selected, the rotation angle can be controlled using the up, down, left and right arrow keys.



**- For 360° rotate camera**

(F1,F2,F3 only for 360 rotating camera)

F1 key: Rotate speed adjustment (low, middle, high)

F2 key: Horizontal rotation auto and manual mode selection

F3 key: Vertical rotation auto and manual mode selection

Arrow key: For angle adjustment in manual mode

**The function of the keyboard: During working, you can input text/symbols/numbers to mark events.**

## 7. Camera with Self-leveling Function & 512Hz Transmitter

**Camera probe size details:**





**Built-in 512Hz transmitter:**

The camera probe has a built-in 512Hz transmitter, which transmits a 512Hz frequency signal through a built-in chip, compatible with any 512Hz pipe locator.





## 512Hz Transmitter

Transmit Frequency: 512Hz  
 Output Waveform: sine wave  
 Transmit Distance: about 16.4ft/5m

### Built-in Self-leveling:

Self-leveling can be defined as the ability of any instrument to level itself regardless of the angle of inclination.

The camera probe is equipped with a self-levelling gravity bearing inside which automatically level the direction of the lens no matter how the camera probe rotates, providing users with upright pictures all the time.

#### Our



#### Self Leveling

The image is always displayed correctly, without flipping

#### Other



#### No Self Leveling

The picture will flip as the camera flips



## 8. Cable Coil

**Note: Please unlock the latch before releasing the coil.**

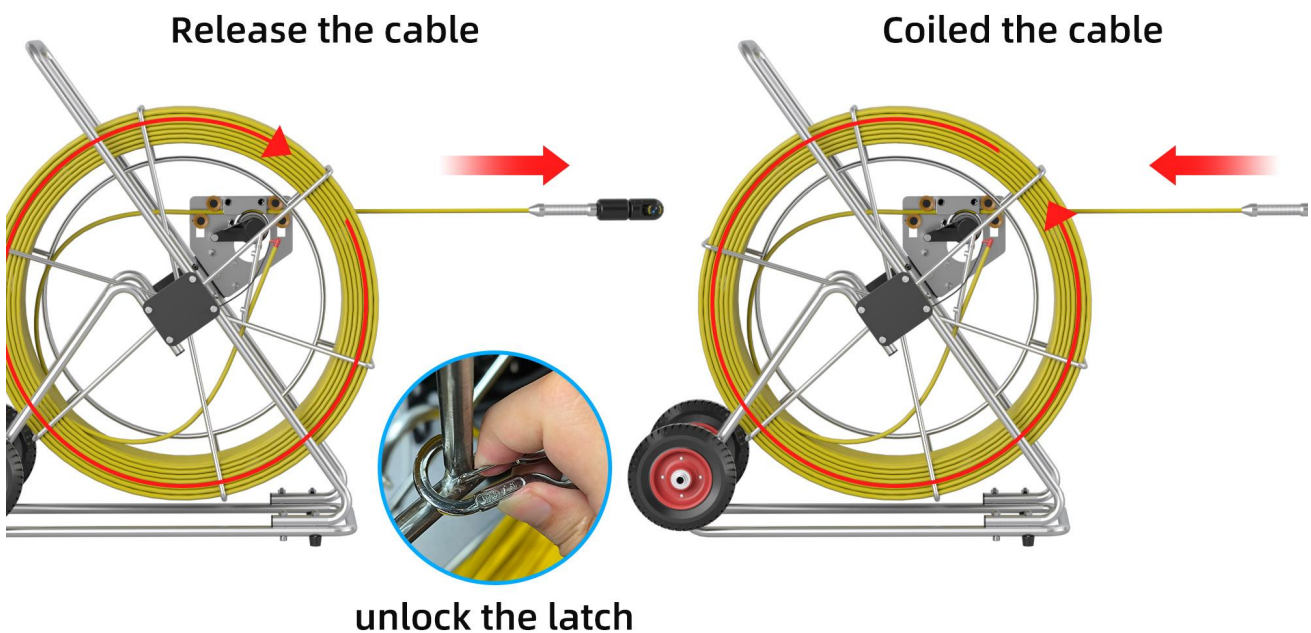
New large stable and strong coil structure with steel bearing inside, can easily release or coil the cable with less time and force.

**How to release the cable:**

Take out the cable from the holder, then pull the coil clockwise to release.

**How to coil the cable:**

Turn the cable counterclockwise to coil the cable back then lock the cable in the holder.



## 9. Battery & Adapter

The control panel has a built-in battery with a capacity of 4500mAh, and the screen displays the battery power status. **When the screen shows that the battery level is less than one bar, please charge the battery.**

AC: 100-240V  
OUTPUT: 12.6V-1000MA  
Indicator Light  
Red Color - Charging  
Green Color - Fully Charge



The steps of charging are as follows:

- a. Take out the DC adapter from the box.
- b. Connect the DC adapter port to the charging port (on the control panel).
- c. Plug the DC adapter into 100-240V AC, when the indicator light shows red, it means it is charging.
- d. When the indicator light turns green, it means it is fully charged, the fully charging time is about 5-6 hours.

**Note: To ensure a longer battery life, please charge it in time. otherwise, the battery may be damaged and cannot be recharged.**

## 10. Device Installation

**Note: Please install the parts in off-status**

1. Connect the camera head to the coil
2. Connect the cable coil to the device
3. Connect the cable coil to the control box
4. Press "ON/OFF" button to turn on the switch
5. Please dry the camera head with a cloth after use to avoid being rusty



**The following are the steps to install the pulley**



1. find the mini screwdriver in the package



2. put the camera protective case on the camera head



3. screw the 3 white screw on the protective case, until it was fixed on the camera head



1. Install the pulley from the bottom



2. put the camera protective case on the camera head

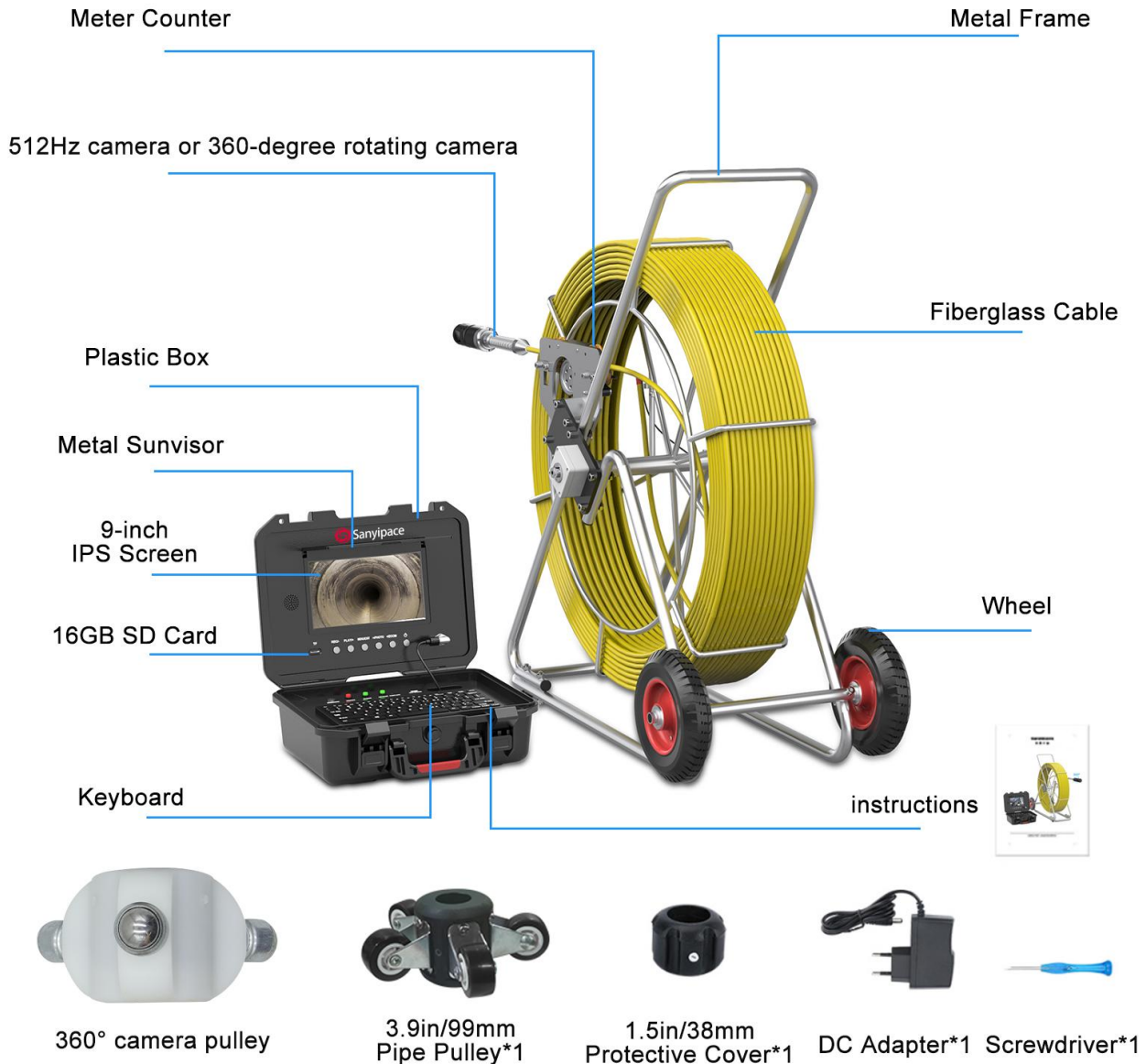


3. screw the 3 white screw on the protective case, until it was fixed on the camera head

## 11. Device Size



# 12. Structure & Accessories



- ① Meter Counter\*1      ② 512Hz camera or 360-degree rotating camera\*1
- ③ Plastic Box\*1      ④ Metal Sunvisor\*1      ⑤ 9-inch IPS Screen\*1
- ⑥ 16GB SD Card\*1      ⑦ Keyboard\*1      ⑧ Metal Frame\*1
- ⑨ Fiberglass Cable\*1      ⑩ Wheel\*2      ⑪ Instruction\*1
- ⑫ 360° camera pulley      ⑬ 3.9in/99mm Pipe Pulley\*1
- ⑭ 1.5in/38mm Protective Cover\*1      ⑮ DC Adapter\*1      ⑯ Screwdriver\*1
- ⑰ Lithium Battery\*1



# 13. Trouble & Troubleshooting

Trouble	Troubleshooting
No power	a. Check whether each interface is connected correctly; b. Check whether the battery is out of power, check the power display.
Can't be charged	a. Is the DC adapter plug-in correctly; b. Check if the indicator light of the DC adapter is on.
Can't record videos	a. Whether the SD card is inserted correctly; b. Insufficient SD card memory; c. Check whether the power off during the recording process.
Recording videos in black and white color	Adjust the LED light button to the appropriate brightness, observe the screen display, and select a brightness that is clearer and more colorful.
Screen flashes	Please fully charge the device and confirm it again, the device doesn't have enough power to support its work.
Turn on the device but the screen freezes	Please take out the SD card and confirm it again, if you take it out and the device can work, please format the SD card on PC or use another SD card to work with the device.
Keyboard can't work	May we know if some keys do not work or if the whole keyboard does not work? If the whole keyboard doesn't work, do you have another keyboard that can confirm the problem? Is the keyboard broken or the port? The keyboard is universal, you can use the keyboard for the computer to confirm.
No signal, screen turns blue	Contact Sanyipace after-sales email: <a href="mailto:service@sanyipace.com">service@sanyipace.com</a>
LED lights not working	a. Check whether the LED lights setting is turned on, by pressing the LED adjustment button on the

	<p>panel or F6 to adjust the brightness;</p> <p>b. Tighten or loosen the camera probe slowly to check if it works;</p> <p>c. Contact <b>Sanyipace</b> to replace the coil cable connector.</p>
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## 14. Warranty

We provide a one-year product quality warranty from the date of purchase and provide free lifetime product technical support. For normal faults or quality problems within the warranty period, we provide free replacement or repair services. For damage caused by manual operation, we will charge the cost of product parts for repair. Our technical support team is at your service 24 hours a day. If you encounter any problems during use, please feel free to contact us.

### ----Contact Us----

Go to our website to download the user manual or view more products:

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