Pipe Inspection Camera System

Operation Manual

Model No.:3699FB

Model No.:3699F

Read this Operation Manual carefully before using this tool

[INTRODUCTION]

The pipe inspection system is a powerful set of tools that helps you locate and diagnose problems in a pipeline system.
The system is widely used in inspections of sewer, central air conditioning, chimney, plumbing, building, cable pipe and pipe ventilation systems and other places.

[GENERAL SAFETY RULES]

Precautions

Read all safety warnings and instructions. Failure to follow warnings and instructions may result in electric shock, fire and/or serious injury.

1. Save this operation manual for future reference.
2. Do not operate this device in explosive atmospheres, such as in the presence of flammable liquids, gases, hazardous chemicals, superheated liquid or heavy dust. It may create sparks which may ignite the dust or fumes.
3. The camera head and the push cable are waterproof (when camera installed on rod cable); however, the keyboard and DVR inside the control box are not. Do not expose them to water or rain when the control box is open. This will increase the risk of electrical shock.
4. Avoid using the device in environments of extreme cold, heat or humidity as it may damage the device.
5. Do not drop or press hard on the device.
6. Always backup your data before inserting your SD memory card to this system. The manufacturer is not responsible for any data loss or damage on your SD memory card for any reason.
7. Do not disconnect the unit while recording or playing back. It may damage the unit and/or the SD memory card.
8. Only qualified person are allowed to repair this device. Service or maintenance performed by unqualified person could result in injury.
9. Do not use this device in places where there is high voltage equipment. The device doesn't contain high voltage protection and isolation.

[APPLICATION AND KNOW YOUR TOOL]

Application

Suitable for pipes at diameter of 25mm-200mm. Ability to go through 90° bends in pipe DN45mm(for 23mm camera with 5.2mm rod);and in pipe DN32mm(for 14mm camera with 4.8mm rod)and in pipe DN52mm(for 23mm camera with 6.8mm rod).

Know Your Tool

The pipe inspection system includes the following four main parts: Camera head, Cable reel, Frame and Toolbox((including DVR, control device, battery, keyboard).
The camera head includes high-light white LEDs and a highly scratch-resistant sapphire lens cover; this coupled with stainless steel housing allow the camera to withstand repeated hits in various pipes.
Flexible stainless steel spring and associated components make the camera head possible to go through bend pipes. Also the battery pack provides power supply for the system and the DVR monitor can record video and take photos.
The stable and open composite structure is easier to clean.

Camera Head

1. Sapphire Lens
2. PC lens
3. Stainless Steel Shell
4. Stainless Steel Spring
5. Camera O-ring
6. Gold Connecter

Figure 1. Camera Head

Cable Unit

1. Support Frame
2. Coil Wheel
3. Push Cable
4. Meter Component
5. Wire Clip
6. Toolbox Fixed Seat
7. Socket (connect to toolbox)
8. Guiding Wheel
9. Hook
10. Ball Lock Pin
11. Cable Connector (To Camera)
12. Cable Stop Housing
13. Camera Holder
14. Label
15. Soft Handle
16. Coil Fixing Plate
17. Connects Cables

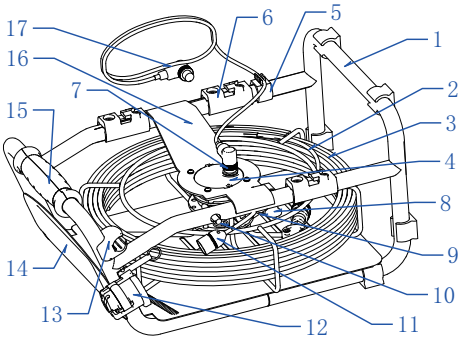


Figure 2. Cable Unit

Toolbox Unit

1. Sunshade
2. High-definition color LCD display
3. DC input
4. Wireless keyboard
5. Aviation socket
6. Toolbox lock
7. SD card slot
8. USB Slot
9. Membrane Switchs
10. Switch button
11. Photo shoot button
12. Start/stop recording
13. LED brightness
14. Image rotation
15. Confirmation/Pause
16. Select right/fast forward/Volume +
17. Downward selection
18. Upward selection
19. Select left/rewind/Volume -
20. Image playback
21. Video playback
22. Mute or Unmute / exit and return
23. Menu Settings / Delete Image or Video
24. Meter counter zero-set button
25. Charging and working indicator
26. Remote control receiver

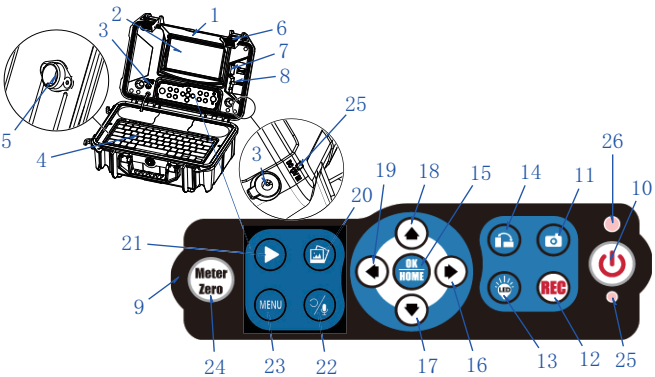


Figure 3. DVR and Toolbox

Remote control

1. Menu Settings / Delete Image or Video
2. Playback mode
3. M/FT
4. Exit and return/Mute or Unmute
5. Upward selection
6. Confirm/Pause
7. Select left/Volume -
8. Select right/Volume +
9. Select downward
10. Image rotation
11. LED brightness
12. Start/stop recording
13. Photo shoot button

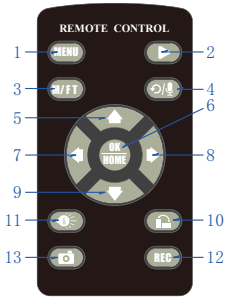


Figure 4. Remote Control

Package Contents

1. Panel with DVR
2. Wireless keyboard
3. Adapter
4. Car charger
5. Remote control
6. 46mm and 80mm skids(for 23mm camera)
7. 28mm skid and Hexagon Spanner (for 14mm head)
8. Screw, nut and waterproof-ring(for 23mm camera) waterproof-ring(for 14mm camera)
9. Hexagon Spanner
10. Screw Driver
11. Operation manual
12. Camera Head
13. Support Frame
14. Coil Wheel
15. Connects Cables

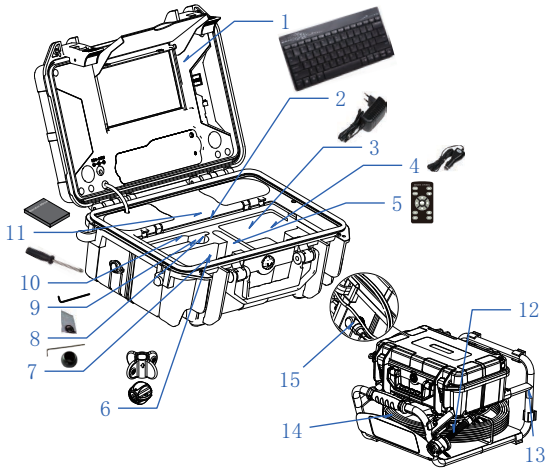


Figure 5. Package Contents

[DESCRIPTION SPECIFICATIONS AND STANDARD EQUIPMENT]

specifications

Type	Item	Parameter		
General	Operating Temperature	-10~50°C/+14~+122°F		
	Operating Humidity	30%RH~90%RH		
	Storage Temperature	-20~60°C/+4~+140°F		
		Input:100-240V AC, Output:12V I		
	MEAS.	55×43.5×34.5cm (LxWxH)		
	Weight			
Camera		**Φ23mm camera head**		**Φ14mm camera head**
	Sensor	1/3" CMOS		1/4" CMOS
	Resolution	AHD 1920×1080		AHD 1920×1080
	View Angle	130° (diagonal)		90° (diagonal)
	Focus Distance	15cm (approx)		6-8cm (approx)
	Depth Of Field	20cm (approx)		20cm(approx)
	Camera Size	Φ23mm×51mm (Main body)		Φ14mm×21mm (Main body)
	Camera Length	155mm		125mm
	Front Lens	Sapphire		Sapphire
	Shell Material	304#Stainless Steel		304#Stainless Steel
	Lighting	Built-in 15×LED (White)		Built-in 4×LED (White)
	Water-Proof	20m water (Camera fix on Cable)		10m water (Camera fix on Cable)
	Power Supply	DC9~15V		
DVR	Screen	Super bright high-definition color LCD screen		
	Screen Resolution	1024*600 LCD (10.1" or 13" optional)		
	Image	Support image rotation		
	Video Resolution	AHD 1080P		
	Video Encoding	High Compression / H.264		
	Photograph Resolution	1920*1080		
	Recording / Playback	Local recording/playback (built-in speaker) Video: Mute/unmute supported		
	External Memory	Support SD Memory Card or U disk up to128GB		
	LED Driver	Built-in Dimmer		
	Play Back	Video and Photo		
	Language	Simplified Chinese, English, Japanese, Korean, Russian, German, French, Italian, Spanish, Portuguese,		
	Power Supply	DC 12V input		
	Current Consume	800mA Max		
	Battery Capacity	7 ,The battery is removable.		
	A Single Charge Work Time	3")		
	Charge Time	About 12 hours		
Text				
			ional)	ional)

[INSTALLATION]

To reduce the risk of serious injury during use, follow these procedures for proper assembly.

1. Install Cable Reel (Figure 6.)

Put the cable reel into the frame from the right side, place it in the right direction and then tighten the screws and nut. Pull out the cable with care, thread it through the guiding wheel and lead the cable out.

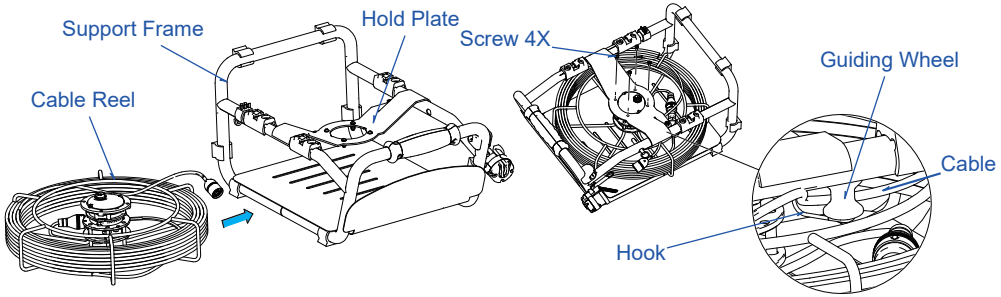


Figure 6. Install Cable Reel

2. Install Toolbox Unit (Figure 7.)

Step 1. Plug one end of the spring cable into the cable wheel aviation socket according to the direction(direction of long straight cable), and tighten the screw, Finally adjust the length and fixed it on the wire clip.
Step 2.Clip the toolbox holder into the fixed seat on the frame, and push it inside according to the direction.
Step 3.Thread the ball lock pin through the toolbox holder and the frame.
Step 4.Connect the other end of the spring cable with the aviation socket of the toolbox and tighten the screw(direction of long spring cable).

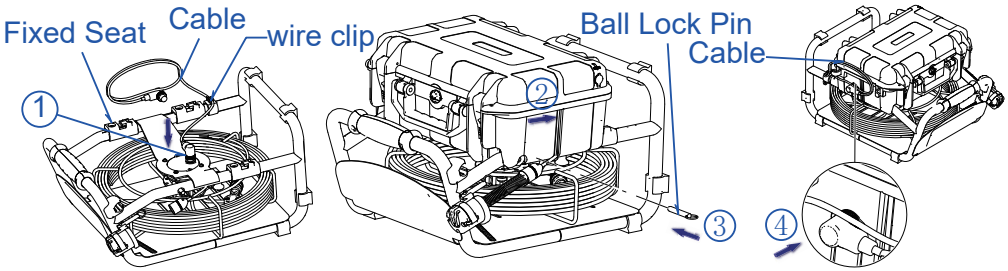
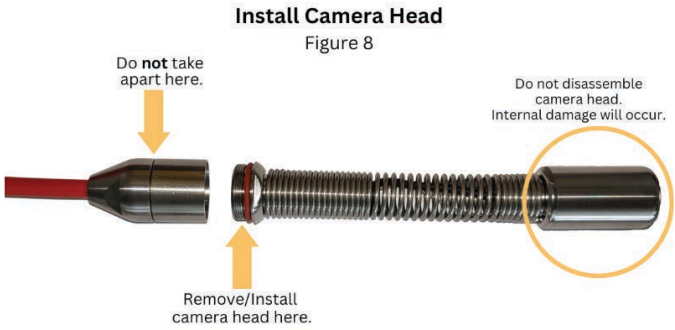


Figure 7. Install Toolbox Unit

3. Install Camera Head (Figure 8.)

Hold the push cable end firmly in one hand, then screw the camera onto the cable end hand tight. No tools are required.



4. Install guide fitting

Roller skids are used to keep the camera head in the center of dif f erent sized pipes and also to keep camera head away from mud at the bottom of pipes, in order to keep camera head clean and also view best qualit y images.

4.1. 23mm camera head

a.Install 46 support guides. (Figure 9.)

Mount the 46 support guide onto the stainless steel camera head. Then tighten the screw by screwdriver.

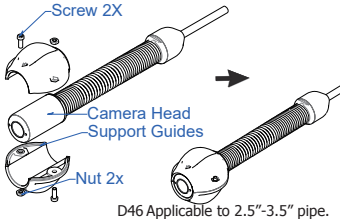


Figure 9. Install 46 Support Guides

b. Install 80 support guides. (Figure 10.)

Mount the 80 support guide onto the stainless steel camera head. Then tighten the screw by screwdriver.

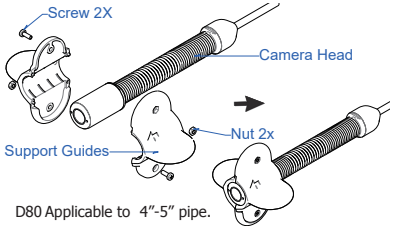


Figure 10. Install 80 Support Guides

4.2. 14mm camera head

Install 28 support guides. (Figure 12.)

Mount the 28 support guide onto the stainless steel camera head. Then tighten the screw by Wrench.

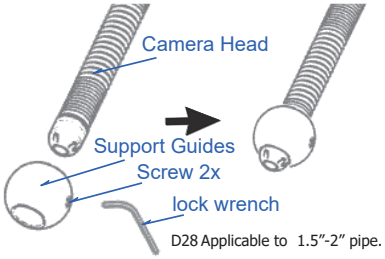


Figure 12. Install 28 Support Guides

5. Install SD card/ USB Flash Drive (Figure 13.)

Push the wireless keyboard receiver and storage device in the correct slot as required.

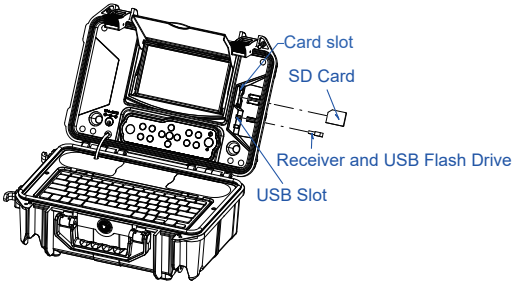


Figure 13. Install SD Card/ USB Flash Drive

6. Turn on the DVR.

[FUNCTION GUIDE AND OPERATING INSTRUCTIONS]

DVR icon introduction

1. Date indication
2. Time indication
3. Meter counter display (meters/feet)
4. LED brightness
5 Record indication
6. Sound recording indication
7. WIFI
8. SD card
9. Battery level indicator

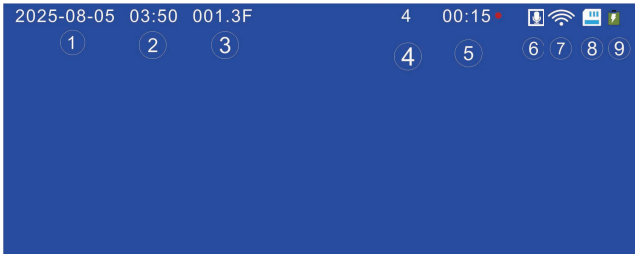


Figure 14. Screen icon

[DVR Operation]

1. Insert the card

Please insert the SD card/USB Flash Drive before using the device. (Hint: In order to ensure the normal operation of the device, please use a Class10 high-speed branded SD card. Please format the SD card for the first time using it)

2. Turn On/Off

Press the [ ] key to turn on/off, and it will automatically enter the real-time image mode when it is turned on.

3. Function Buttons

Light adjustment: In the real-time image mode, press the [ ] to decrease or increase the brightness of the LEDs.

Image rotation: In real-time image mode, press the [ ] to realize image rotation.

Take a photo: In the real-time image mode, press the [ ] to take a photo, and the photo will be saved in the photo folder of the SD card / USB Flash Drive. Press the [ ] key to enter photo Menu.

Record a Video: In the real-time image mode, press the [ ] to start/stop recording a video, and the video file will be saved in the video folder of the SD card / USB Flash Drive. Press the [ ] key to enter Video Menu.

Menu setting: In the real-time image mode, press the [ ] to enter the menu setting.

Mute or Unmute: In the real-time image mode, press the [ ] to toggle Microphone on / off

Exit/Return: During parameter setting and file management, press [ ] to exit or return.

Meter-Zero: In the real-time image mode, press the [ ] to set the meter to zero on screen display.

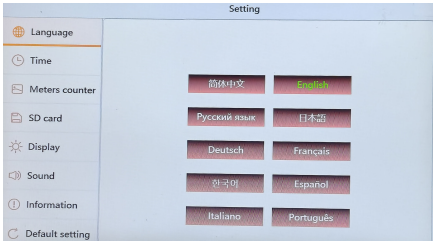
4. Parameter Settings

Under real-time image mode, press [MENU] to enter the parameter setting; press [▲] and [▼] to select the submenu that you need to change, and press [OK HOME] to confrm the submenu you need to change; press [◀] and [▶] to select the value you need to change, press [OK HOME] to confirm and save the settings; press [⏻] to exit the setting. Note: In Language submenu only, press [▲] and [▼] to change value

System settings:

4.1 Language settings: Simplified Chinese, English, Japanese, Korean, Russian, German, French, Italian, Spanish, Portugues.

4.2 Date and time: To adjust date and time.



4.3 Meter Counter settings：To set the unit of length (meter/ft)

4.4 Format: User can format the SD card.

4.5 Screen brightness: You can set the display brightness of the screen.

4.6 Volume: Adjust the playback and recording volume levels (with speaker)

4.7 Device information: system version information.

4.8 Restore factory settings: In case of abnormality, the factory settings can be restored

5. Recording Settings

5.1 Loop recording: the video is automatically saved in 5-minute segments.

5.2:Voice-over Recording with Mute Control: allows you to add verbal notes during inspections. The microphone can be muted or unmuted at any time to avoid background noise and keep recordings clear. ⏻

6. Video Management

In the real-time image mode, press the [▶] key to enter the video menu , and the user can browse, play or delete recorded videos

Browse videos: After entering the video menu, press the [▲] and [▼] keys to browse the video files.

Playback videos: After entering the video menu, press the [▲] and [▼] keys to select the video to be played back, pressthe OK HOME key to play or pause the play ,During playing a video press the ▲ key to play the previous video, press ▼ Key to play the next video. **Press and hold ▲ ▼ to fast forward or rewind**

Volum+ / -: During video playback, press the [▶] to increase volume, press the [◀] to decrease volume.

Delete Video: a. After entering the video menu, press the [▲] and [▼] keys to select the video file to be deleted. Press the [MENU] key to enter the delete mode, press the [▲] and [▼] keys to select whether or not to delete Video file, and press the OK HOME key to delete or cancel the deletion of the video file.

b. During playing back a file, you can also delete or cancel the deletion of video files according to the above steps.

7 . Photo Management

Browse Photos : In the real-time image mode, press the [🖼] key to enter the Photo submenu,Press the ▲ ▼ ▶ ◀ Keys to browse the photos.

Fast forward / Rewind: During photo playback, press the ▲ ▶ to fast forward or press ▼ ◀ to rewind .

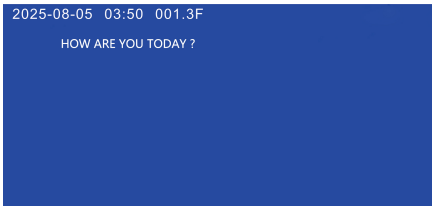
Delete Photo : During photo playback, Press the ▲ ▼ ▶ ◀ keys to select the photo file to be deleted.

Press the [MENU] key to enter the delete mode, press the ▲ and ▼ to select whether or not to delete the photo.

and press the OK HOME key to delete or cancel the deletion of the photo.

[Keyboard Text Input Function]

This feature enables real-time character input via wireless keyboard, with typed text displayed simultaneously on screen. The entered characters will be embedded directly into both recorded videos and captured photos. During recording sessions, all text editing operations are preserved and saved within the final video files.



Keyboard Shortcuts

Backspace : Deletes one character.
Delete (Del) : Erases all characters on the current page.
Enter : Creates a new line or confirms settings (same as OK button).
Caps Lock : Toggles letter case .
ESC : Mute/Unmute or exit and return.
F1 : Photo capture button.
F2 : Start/stop recording.
F3 : Rotate image.
F4 : Zoom in (20x magnification).
F5 : Zoom out (20x reduction).
F6 : Adjust LED brightness.
F7 : Meter Zero
F8 : Image playback.
F9 : Video playback.
F10 : Menu Settings / Delete Image or Video

Navigation Keys

Up / Down Arrow Keys : Select the submenu to modify.
Left / Right Arrow Keys : Adjust values within the selected submenu.
Note : In the Language submenu only, use Up / Down Arrow Keys to change values.

Steps to pair a new keyboard with the USB receiver:
1.Install the batteries, turn off the keyboard, and remove the USB receiver (do not plug it in yet).
2.Turn the keyboard back on, then quickly press "ESC + Q". When the light starts flashing rapidly, immediately plug in the USB receiver while keeping the keyboard close to it. Once the light stops flashing, the pairing is complete **Before using the keyboard, make sure to insert two batteries.**

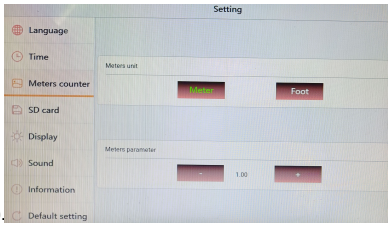
[METER COUNTER OPERATION]

1. Press the meter-zero button to set the meter to zero on screen display.
2. Set the unit of length (meter/ft).

3.Meter Coefficient Calibration :

When to Adjust: if the display does not match the real cable length.

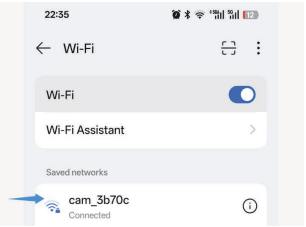
The "meter coefficient" defines the ratio between the actual pushed cable length and the displayed value. Coefficient Principle:
Displayed Distance = Actual Pushed Cable Length × Meter Coefficient
If set to 1, it means 1 meter pushed = 1 meter shown.
If set to 3, 1 meter pushed = 3 meters shown.
Coefficient What It Means
1.0 (default) 1 meter pushed = 1 meter shown
>1.0 Displayed distance is greater than actual (magnified)
<1.0 Displayed distance is less than actual (reduced)



Calibration Steps:
Use a reference cable or marked ground of known length (e.g., 10 meters).
Reset the meter counter to zero.
Push the cable exactly 10 meters.
Compare the display value:
If it shows less than 10m → increase the coefficient.
If it shows more than 10m → decrease the coefficient.
Use this formula:
New Coefficient = Current Coefficient × (Actual Distance ÷ Displayed Distance)

Note1: Turn on the system before pulling out the push cable from the cable reel. It can decrease the deviation of the MC.

Wi-Fi User Instructions



1.Scan the QR code and download the "**Sewer Camera**" app (Supports Android and iOS).
Note: For Android phones, please download the app using a browser.

2.Connect to Wi-Fi: About 1 minute after the machine is powered on, go to your phone’s Wi-Fi settings and find the network named **cam__xxxxx.** Enter the password 1**2345678** and tap Connect.
(No other Wi-Fi network is needed.)

3.Open the app. The live image will appear in real time, and you can take photos.

4.Supports multiple smart devices connecting via Wi-Fi at the same time

Notice:
1. If no image appears, please exit the app and reconnect.
2. In Real-Time Image Mode, you can take photos, adjust the camera brightness, and flip the image. In other modes, these features are not available via the mobile phone
3. Video Recording:
Please note that the WiFi function is an additional auxiliary feature, intended primarily for photo capture and not for video recording. The video recording feature is currently being upgraded, so stay tuned. For more reliable results, we recommend recording videos directly with the device. If you need to quickly share videos, you can use a U-disk Multiport Adapter/Reader or a U-disk with a Type-C interface to connect the device to your phone.

Backpack Carrying System (Optional)

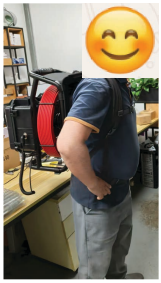
To support outdoor and rooftop inspections, selected models are equipped with backpack straps for convenient, hands-free transportation.

Carrying Tip: Adjust the backpack straps to fit comfortably on your shoulders, allowing for safe and stable ladder climbing or movement in the field.

The system features:

Reinforced stitching and durable materials for long-term outdoor use
Quick-release chest and waist straps to distribute weight evenly and reduce strain
Removable harness design that attaches securely without interfering with the camera system

These enhancements are ideal for technicians who frequently work in elevated or challenging environments.



[PUSH CABLE AND CAMERA OPERATION]

At the job site

1. Always wear rubber gloves to operate the camera for health and safety reasons. Properly positioning the cable reel will save time and strength to push out and in the cable, and minimize the rate of equipment damage.

- When pushing, the end of your stroke should be as close to the entry as possible. Standing too far back with an excess of cable between your hands and the entry may cause the cable to fold on itself outside the entry and damage the cable.
- Try to keep the push cable away from sharp edge of a pipe entry because this may cause damage. If the camera does not seem to go any farther, **DO NOT FORCE TO PUSH THE CAMERA!** Try another entry if possible.

NOTE! Hands should be close to the line opening. DO NOT catch the cable on the edge of an entry and continue to push.

2. Always try to run water down the pipe under going inspection. This will keep the system much cleaner, and allow you to push noticeably farther with less friction. If the water is preventing you from seeing an area of importance, temporarily turn it off.

3. When push the push cable through the pipeline by steady and slowly, a short distance entry per time, keeps the hands at the entrance, so that can control the push cable and prevent it stuck, bent or scratch.

4. When inspecting a pipe, most of the time a slow steady push through the system works the best. At changes in direction such as P-traps, Tee's, Y's, Elbows, etc. It is usually necessary to give a little extra push in the bends. Back the camera head approximately 8" (20cm) from the bend, if necessary, and give it a quick push, "popping" the camera through a turn, using the least amount of force required. Try to be as gentle as possible, and do not hammer or snap the camera head through corners. After some practice, you may learn that the best way to inspect a section of pipe is to push the camera through quickly. Then draw the camera back home slowly and evenly.

5. Make sure the sapphire window is clean prior to entry. Some users claim that a slight film of detergent on the lens minimizes the possibility of grease sticking to the port. If necessary, take advantage of any standing water in the pipe to wash the front of the camera by jiggling it in the water.

6. When you place the camera head into the pipe remember, as the materials of pipe vary, it will be necessary to adjust the lighting settings to maximize picture quality.

7. The system can travel through multiple 45 and 90 degree bends and wyes. Do not, however, try to force it through a P-trap or tee if there is a large amount of resistance.

NOTE! Do not try to use the camera head to clear obstructions. This System is a diagnostic tool, not a drain cleaner. Using the camera head to clear obstructions could damage the camera head or cause it to be caught in the obstruction.

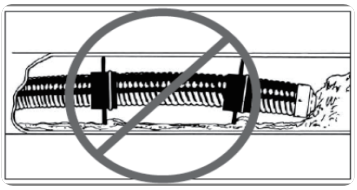


Figure 16. Improper operation

8. Do not attempt to remove or stores push cable on the reel solely by turning the reel itse if. You can manually push or pull cable from the reel and wind or unwind it.

9. If the camera sits in a pipe, or an enclosed environment, heat will build-up. This may lead to the camera head overheating which will cause fuzzy lines to appear on the monitor. In the event, this happens, turn off the system, remove the camera from the pipe (or enclosed environment) and let the camera head cool for 10 to 15 minutes. Running water into the line will also help cool the camera head. Always use the minimum illumination required to maximize picture quality and to avoid excessive heat build-up.

NOTE! The camera head can get HOT! When finished with your inspection, or if taking a prolonged break in the middle of the inspection, turn off the system.

Retrieving the push cable

1. Once the inspection has been completed, pull the push cable back with slow, steady force. Do not force the push cable or exert excessive force. This could damage the camera or push cable. The push cable may get hung up while being retrieved, and may need to be manipulated as did during insertion.

2. While take back the push cable, running water can be used to flush down the push cable. After recycling, you can wipe the push cable with a towel.

Note! NEVER USE SOLVENTS to clean any part of the system. Substances like acetone and other harsh chemicals can cause cracking of the camera ring, which could affect waterproofing.

3. Storing the push cable into the cable reel. One hand holds the push cable, the other hand close to the cable wheel. Slowly and gently push the push cable slide via the hook of the handle, cable reel will rotate and store the push cable inside.

Note! The hands should be close to the cable wheel when storing the push cable. Push the push cable a small piece every try. Push a long distance can cause the push cable bend or broken.

[BATTERY SAFETY AND USING GUIDE]

Using safety

Read the following battery precautions before charger, to reduce the risk of electrical shock.

1. Recharge batteries with accessory charging units.
2. Check the power units every time before using the equipment, be sure no problem, use of unauthorized parts may result in electrical shock, fire and/or serious personal injury or damage other instruments and system.
3. Never connects the car charger to any 24 volt cigarette lighter slot. It will harm the battery and DVR.
4. Do not short circuit, it may cause fire, electrical shock.
5. Do not charge the battery under rain or wet conditions. Water entering the charger will increase the risk of electrical shock.
6. If the charger and battery are damaged, do not use or stop to charge. It may cause electrical shock.
7. Don't disassemble the case, only qualified repair person can repair and maintenance.
8. Properly dispose of the battery. Exposure to high temperatures can cause the battery to explode. So do not dispose of in a fire. Some countries have regulations concerning battery disposal. Please follow all applicable regulations.
9. Do not touch anything which out from battery, which would burn or damage the skin, once touches please flush with water. If in eyes, immediately get medical help fast.

Using Guide

Follow the steps as below to reduce the injury of the electric shock.

1. **Power indicator LED will be green during charging, will be turned to red when charged fully**. If battery empty for a long term, it will pre-charge the battery automatically in 10 minutes, and LED will be blinking in red.
2. It needs about 10 hours to charge the battery fully. The battery can charge online, charging and supplying of work will not increase charging times.
3. User can use a power adaptor or car charger to charge the battery. If no use in a long term, take a recharge per 6 month, to ensure the battery in normal working status.

[OTHERS]

Troubleshooting

Problem	Probable fault location	Solution
The LED light isn't turning on	The camera head might be loosely connected	please check and reconnect it.
The DVR do not recognize SD memory card.	SD Card is faulty.	Format the SD card using a PC. Change an other SD memory card.
	Gold fingers on the SD card are dirty.	Clean the gold finger on the SD card.
	SD card slot in the DVR may fault.	Check the SD card slot in the DVR .
No image	Cable connection faulty or loosely	Check cable connection, clean and reconnect if necessary
	Camera connector soiled	Clean the camera connector
	Wrong SD memory card	Turu off power and replace SD card
	Wrong setting	Enter the setup menu and select reset
DVR Can not boot	No power	Recharge
	Transient short circuit in the cable cause the battery short circuit protection	Recharge the DVR more than 2 seconds with adaptor or car-charger to activate the battery
Can not input Characters	The wireless keyboard low battery	Chang battery
	Wireless Keyboard or Receiver fault	Check the Keyboard Receiver and the keyboard on a PC
The deviation of MC more than 0.5%	After cutting more than 5 meters, there may be some deviation	Meter Coefficient Calibration
	Pull out cable more than 3 meters before turning on the system	Turn on the system before pulling out the push cable from the cable reel
DVR charging indicator lights up green and cannot be charged	The battery temperature exceeds the range of -5~+48°C	Put the product under normal temperature for 30 minutes to automatically resume charging
When charging, the yellow and green charging indicator lights are not on	Power adapter failure	Replace a power adapter

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation. Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

CE

This product complies with standards including Low Voltage Device Directive 2014/35/EU;

EMC

Directive 2004/108/EC. It passed the subject tests by the authority concerned and is authorized to bear CE mark.