



SPARTAN

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SINCE 1943



PRODUCT MANUAL



Sewer Inspection Camera

Spartan Tool LLC | 1618 Terminal Road | Niles, Michigan 49120
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Introduction

This user manual is a guide on how to use the TrapJumper camera system appropriately, effectively and reliably. With this in mind it is important that you read this carefully before using the TrapJumper system. Please read the “safety instructions” section carefully and follow them precisely to prevent accidental damage to yourself, your colleagues or the TrapJumper itself.

The following pages provide and grant you the authority to undertake certain functions with the TrapJumper camera system. Spartan Tool, LLC requires you to read this carefully before using the inspection system and the related accessories. It provides important notes to help you avoid accidents, damage and injury.

SYMBOLS



Warning: This safety icon points out dangers to which a risk of death or injury could occur.



Atex: This symbol is in reference to areas specific to explosion proof camera systems. *This is not applicable for this system!*



Caution: This icon points out dangers to which the system may be damaged or damage could occur to other equipment.



Note: This icon is used to mention or remark on a certain area with special requirements.



Maintenance: This symbol is used to give information on how the equipment can be cleaned and maintained to prolong its life and reduce repairs.

IMPORTANT SAFETY INSTRUCTIONS



WARNING: When using electrical equipment, basic safety precautions should always be followed to reduce risk of fire, electric shock and personal injury including the following:

READ ALL INSTRUCTIONS

Double Insulation

Double insulation is used throughout this construction with two separate layers of electrical insulation or one double thickness of insulation between you and the electrical equipment.



CAUTION: WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS SUPPLIED BY SPARTAN TOOL, LLC. Repair or replace damaged cords.

CONTACT US

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1618 Terminal Road
Niles, Michigan 49120
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SpartanTool.com



NOTE: When using a TrapJumper, it is critical that the user has received the relevant training and has a detailed knowledge of the entire contents of the TrapJumper user manual. They must at all times comply with the instructions in the document.

If you have any questions on the use of the TrapJumper camera system or require any additional information that has not been covered in this user manual, please contact Spartan Tool, LLC or one of its authorized agents.

SAFETY INSTRUCTIONS FOR ALL SCANPROBE CAMERA SYSTEMS

- **Power Cord:** Do not use any power cord except the one supplied with the unit.
- **Lifting:** Observe safe lifting procedures when lifting or moving any components of this system.
- **Grounding:** If the system or any auxiliary components are connected to the power supply, then the external equipment must be grounded in accordance with the manufacturer's instructions. Failure to comply with this may cause risk of electrocution.
- **Power Adapter:** The power adapter supplied with the unit is not intended for use in outdoor environments. Do not attempt to charge or operate the unit from the power supply outdoors.
- **Health and Safety:** Sewer systems and other watercourses can be a source of biological hazards. Always use the appropriate PPE and take suitable precautions to prevent infection when using the TrapJumper.
- **Checks:** Before using the equipment, check all parts to ensure there is NO damage. Thoroughly inspect equipment to determine that it will operate properly and perform its intended function.

1. **Lights:** The camera LEDs are very bright. Do not look directly at them or point them at other people's eyes when turned on.

2. **Operating Temperature:**

Battery:

Battery/Cell charging temperature range	50°F to 113°F / +10°C to +45°C
Battery/Cell discharging temperature range	-4°F to 140°F / -20°C to +60°C



WARNING: Do not attempt to operate or charge the system outside the recommended temperature specifications. Exposing the battery to temperatures above 140°F / 60°C may activate safety systems and cause a permanent battery failure.

Safety Instructions

3. Battery:




NOTE: The battery is encapsulated within the Explorer control box and should not be tampered with. In the unlikely event that the battery is exposed, please read the following instructions carefully.

- a. Do not dismantle, open or shred secondary cells or batteries.
- b. Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
- c. Do not subject cells or batteries to mechanical shock by dropping or hitting.
- d. In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash thoroughly with clean water and seek medical attention.
- e. Do not use any charger except the one specifically supplied with the equipment.
- f. Do not leave the equipment on prolonged charge when not in use.
- g. Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.
- h. Seek medical attention immediately if the cell or battery has been swallowed.
- i. All replacement batteries must be supplied and installed by Spartan Tool, LLC.
- j. Keep cells and batteries clean and dry.
- k. After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.
- l. Keep this document in a safe place for future reference.

4. **Disposal:** The operator is solely responsible for the disposal of any equipment at the end of its service life. Dispose of any battery products in accordance to local regulations.

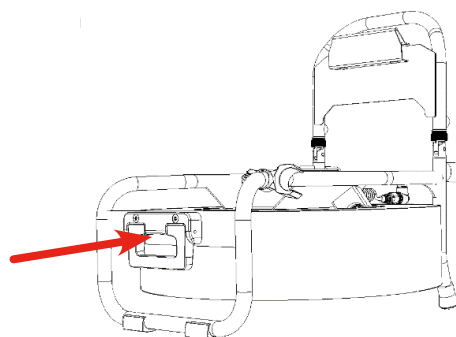
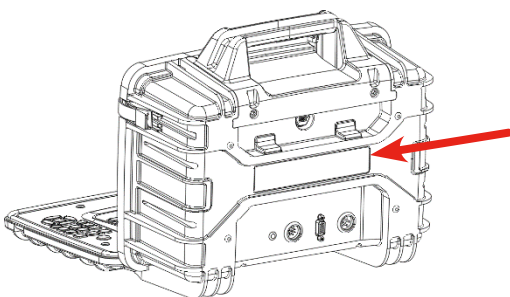


INTENDED USE

The TrapJumper system was designed to examine pipework and record/report its findings. We at Spartan Tool, LLC hold no responsibility for further use that is not considered as intended. Do not use the TrapJumper for other purposes. The system **cannot** be used in pipelines with potentially explosive atmospheres or medium. Only specifically manufactured equipment made with the  identification icon, can be used for this purpose.

LABELING

The TrapJumper components are clearly labeled. The label includes model number, serial number, and all certifications. You may require this information when talking to Spartan Tool, LLC Customer Service, as these can be used when ordering accessories or spare parts for your product.



ABOUT YOUR PRODUCT

The TrapJumper system was designed and manufactured as a pipeline inspection camera. All components are manufactured from high grade materials. A system consists of a control box, color camera, and a push rod reel.

The TrapJumper is designed to survey pipes and sewers up to 40m in length. With a pressure-sealed camera allowing the camera to be submerged up to 5m deep. The control box allows users to view and record the image, measure and document your findings to an on-board storage device, overlay text via a keyboard and write a report onsite using the on-board reporting software. All data can be exported via USB, SD card, wifi or ethernet interfaces.

WARNINGS, RISKS, SAFETY MEASURES, AND CARE

To reduce the risk of injury, all operators and maintenance personnel must read and understand the user manual before operating, changing accessories, or performing maintenance on this camera equipment. Understanding these instructions will reduce the risk of injury and damage to equipment and property. Care must be exercised by everyone using, maintaining, or working near this equipment. They serve for your own safety as well as your coworkers.

BEFORE OPERATION

Risk of harm occurring must be considered before operating the equipment, as these can cause severe or fatal injuries. Please consider the following:



1. Risk of Explosion!

Explosive atmospheres can be caused by flammable gases, mists or vapors, or by combustible dusts. If there is enough of the substance, mixed with air, then all it needs is a source of ignition to cause an explosion. **Never** use a Spartan Tool inspection system in pipelines that may contain these substances. In order to survey such conditions, contact Spartan Tool, LLC to obtain information and equipment designed for such circumstances.

2. Environmental Risk!

Cross contamination and risk of infection: Contamination of drinking water sources by sewage can occur when waste water inspection systems are used in fresh water pipelines. If sewage contaminates drinking water sources, harmful bacterial can cause disease from the ingestion of micro-organisms such as E-Colia, Giardia, Cryptosporidium, Hepatitis A, and Helminths.

Never use an inspection system alternately between waste water and fresh water surveys. Cleaning your inspection system is **not** sufficient. Always use a separate unit dedicated for that particular environment.

Risk of infection and illnesses are not uncommon. Although mild cases of gastroenteritis and potentially fatal diseases, such as leptospirosis (Weil's disease) and hepatitis do pose a serious risk.

To reduce the chances of contracting these diseases when surveying sewage pipelines ensure that employees and line management understand the risks through proper instruction, training and supervision.

Provide suitable personal protective equipment, which may include waterproof/abrasion resistant gloves, footwear, eye and respiratory protection. Face visors are particularly effective against splashes. Speaking to your doctor for preventative injections and advice is recommended.

Safety Instructions

3. Electric Shock

Risk of death by electric current.

- Check the connector cable and push rod for damage, such as kinks or crushed areas. If damage has occurred, disconnect the power supply immediately. Safeguard the socket against renewed connection and inform Spartan Tool, LLC Customer Service Team or an authorized repair center.
- Ensure no liquid can enter the control box. Fit all rubber blanking bungs and check connector facia rubber flap is closed tight when operating in the rain. When survey is finished, wipe the rubber keypad dry and leave the lid open in a warm environment to allow any condensation to evaporate. Should any water penetrate the box, do not connect the power cords and inform Spartan immediately.
- All work on the electrical system can only be carried out by Spartan Tool, LLC or authorized repair centers. If any work exceeds the tasks described in the Maintenance chapter, please contact Spartan Tool, LLC for assistance.

4. General Precautions/Risks

As with all work, accidents can happen. Please keep the following in mind before any work is carried out. Stay vigilant at all times, be aware of your surroundings and use the correct personal protective equipment—tools, warning signs, barriers, etc.

RISK	DETAILS OF SPECIFIC HAZARD
CONFINED SPACE <ul style="list-style-type: none">• Working in a confined space (manhole/drain)• Lowering and raising operatives via tripod and winch	Lack of oxygen Unconsciousness Suffocation
SLIPS, TRIPS, AND FALLS <ul style="list-style-type: none">• Trailing hoses / cords• Storage of materials• Blocked access and egress• Collision with materials and equipment Public Safety	Bruising Cuts Sprains Fractures
MANUAL HANDLING <ul style="list-style-type: none">• Lifting of manhole covers• Use of hand tools• Handling and use of equipment	Prolapsed disc injuries (back) Damage to muscles, ligaments, and tendons Hernias Cuts, bruises, and fractures Burns
EXPOSURE TO ASBESTOS	Shortness of breath Plural plaques Asbestosis Lung cancer Mesothelioma
EXPOSURE TO NOISE AT WORK	Short-term damage to hearing

FURTHER MEASURES

The TrapJumper system was designed and engineered to the highest standards to the guidelines of safety engineering regulations. Nevertheless, accidents can happen, that could endanger life, the health of its users or third parties and could damage the inspection system itself as well as other machinery.

The user assigned to operate the inspection system must have read and understood the user manual completely before any work is carried out.



WARNING

1. Users of the inspection system should work as safely and risk-free as operationally possible. The following measures will help achieve this:
 - Regularly inspect and perform any maintenance as required
 - Ensure all personnel follow the safety guidelines laid out in this manual at all times.
 - Keep up to date with any training courses.
 - Always have the instruction manual available when using the inspection system.
2. Personal Safety: Any users of the inspection system, whether it's to operate, maintain or set up the equipment, must be fully trained or instructed by an expert. Fully trained operators have sufficient knowledge of the inspection system through their technical training and experience. They would also be familiar with the appropriate health and safety regulations as well as accident prevention, giving them the knowledge to operate the inspection system within safe working conditions.
 - Read, understand, and follow all safety requirements specified in this instruction manual
 - Carry out a risk assessment prior to any work
 - Observe the relevant accident prevention regulations
 - Attend and pass any site induction, if required
 - Be instructed on the handling of any dangerous goods
 - Be vigilant at all times of your work space and surrounding area
3. Avoid damage to property. As the operator of the TrapJumper system, it is your responsibility for the following:
 - Do not use the TrapJumper outside the parameters of "intended use" (see page 6)
 - Observe the operating conditions for this camera system as noted in this instruction manual
 - Keep the equipment clean and in full working order. See cleaning instructions.

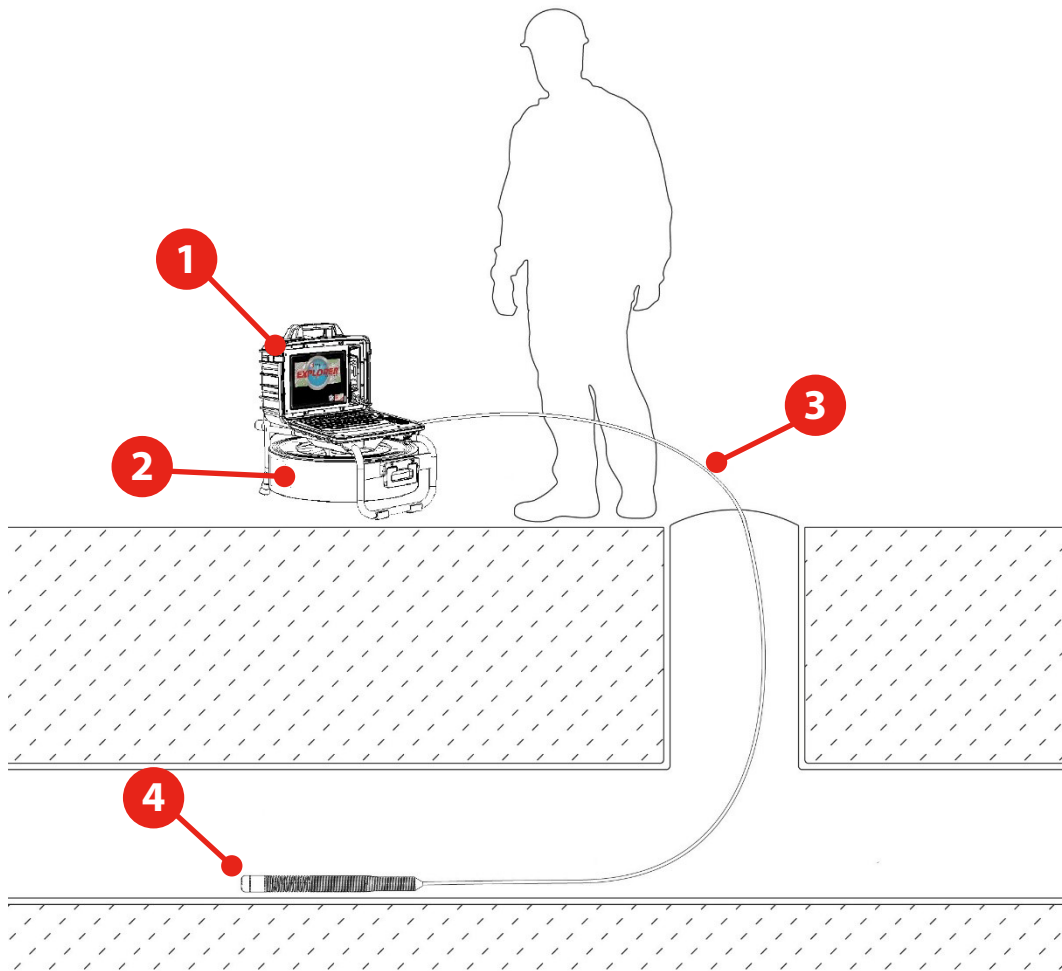


Product Overview

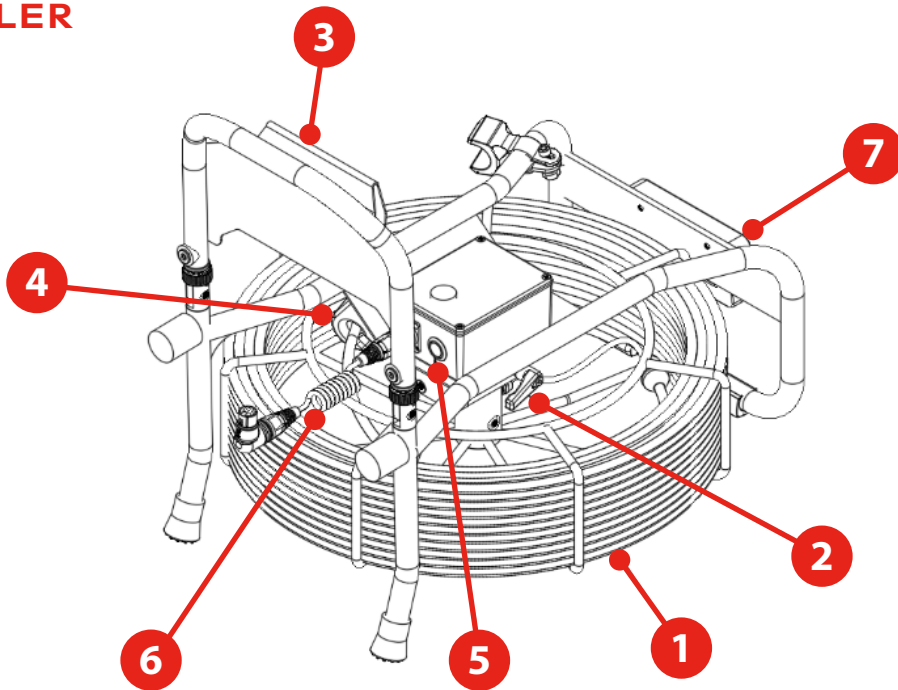
The TrapJumper system consists of the following components:

1. **System box**
2. **Coiler**
3. **Push rod**
4. **Camera head**

The following sketch demonstrates a typical set-up:

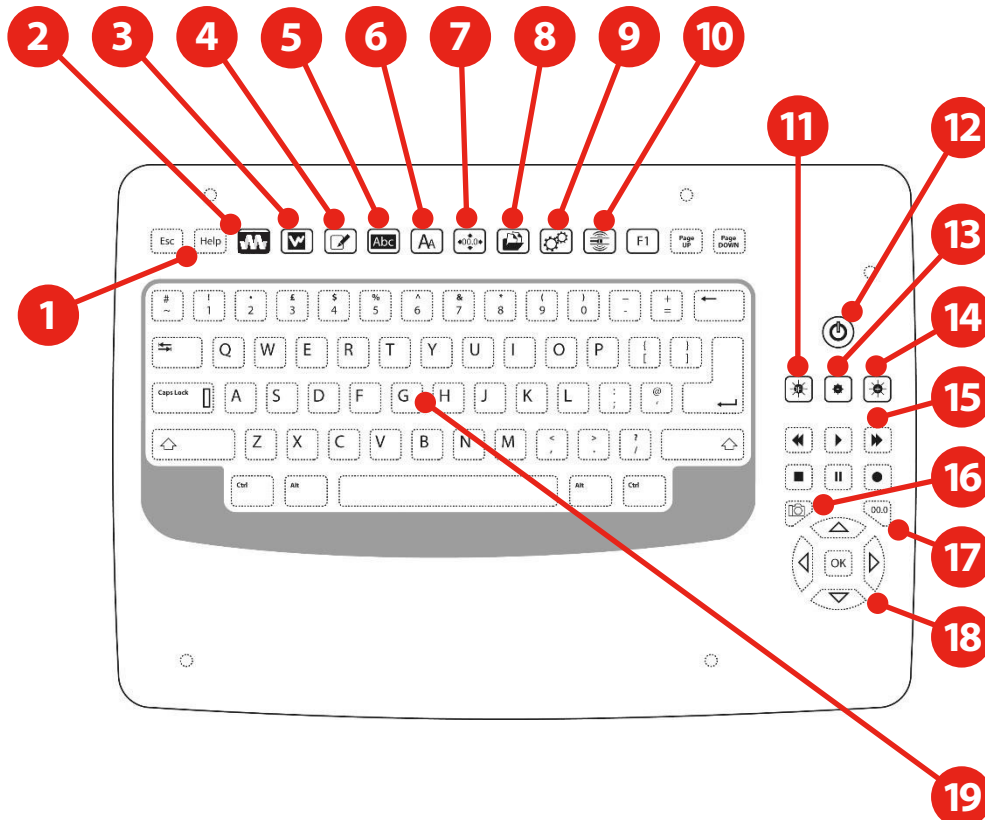


COILER



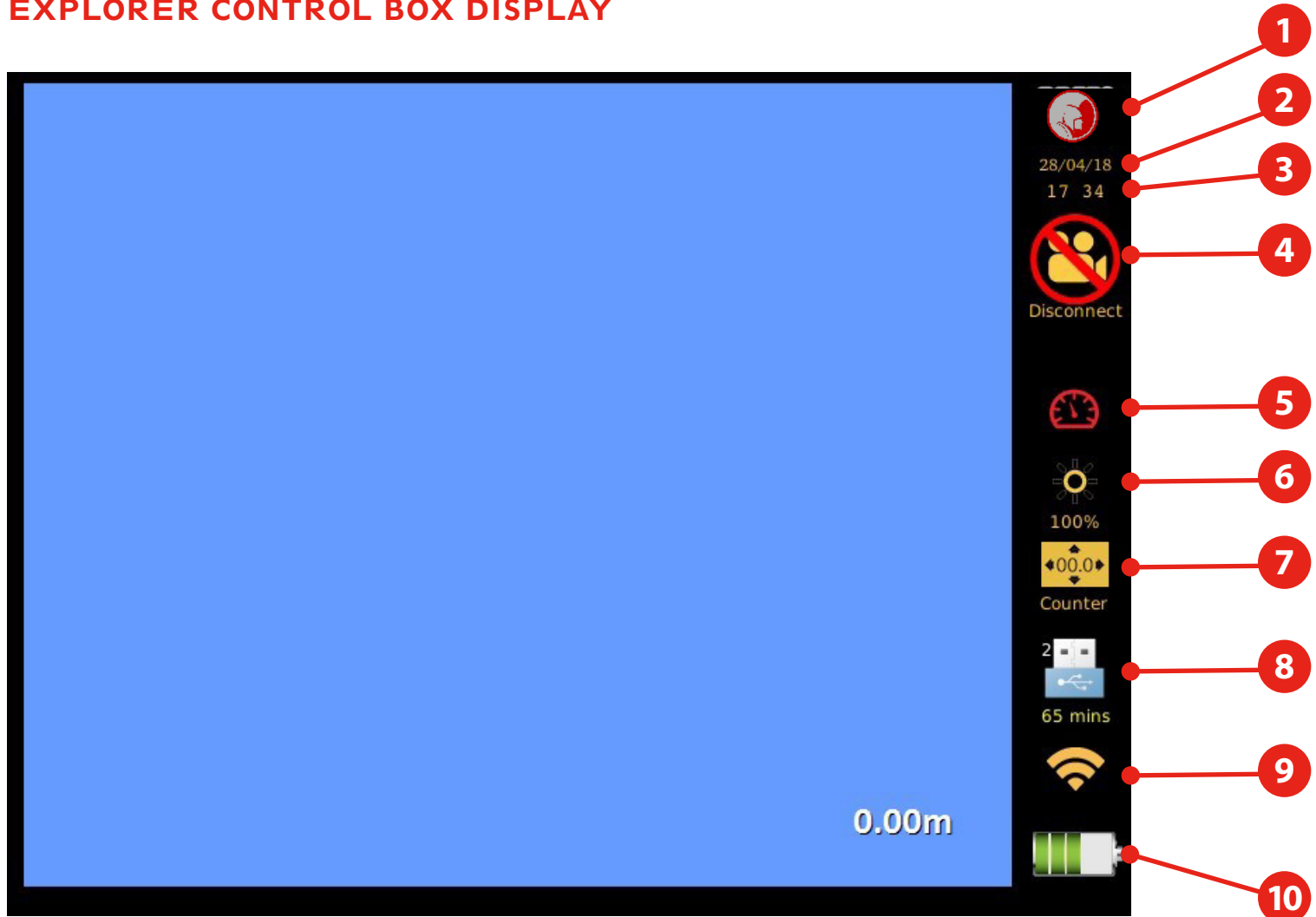
1. Push rod
2. Coiler brake
3. Explorer control box mounting plate
4. Nylon rod guide
5. Sonde ON/OFF
6. Monitor lead
7. Handle

KEYPAD LAYOUT



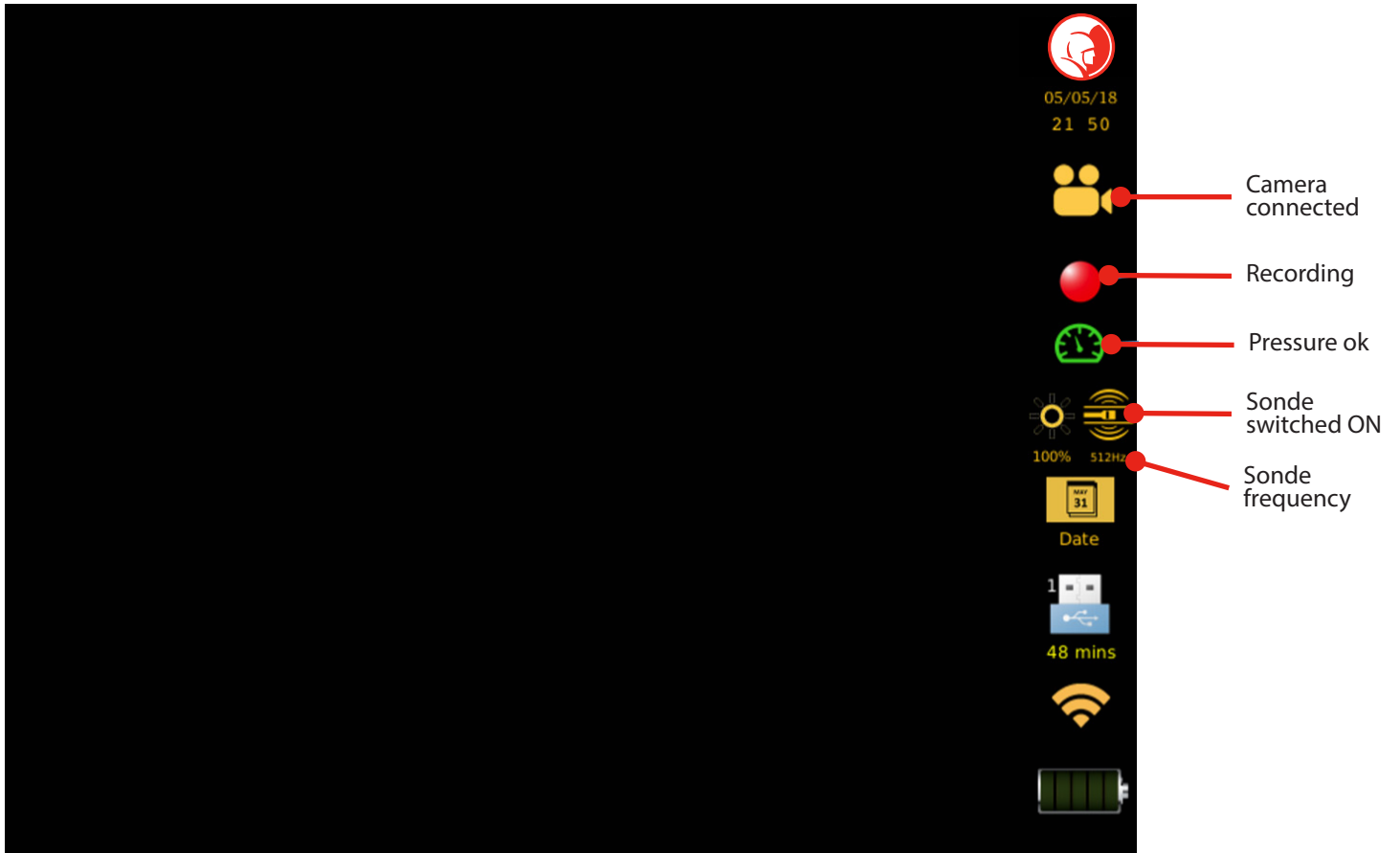
1. Help button
2. mina survey
3. Wincan survey
4. General text overlay
5. Text font
6. Text size
7. Meterage placement
8. File manager
9. Settings
10. Sonde ON/OFF button
11. Lights OFF
12. Power ON/OFF
13. Lights down
14. Lights up
15. Video functions
16. Snapshot
17. Footage counter reset
18. Navigation keys
19. QWERTY keyboard

EXPLORER CONTROL BOX DISPLAY



1. **Function display:** this allows users to determine what mode you're in, i.e. Wincan, mina, etc.
2. **Date:** used on a survey file as a reference
3. **Time**
4. **Camera connectivity:** informs you if there is a camera present
5. **Pressure status:** (*not applicable with TrapJumper*) this allows users to determine whether the camera is water-tight
6. **LED brightness:** indicates the level of brightness
7. **Counter placement:** allows the user to position the counter anywhere on the screen and change the font/size
8. **Storage device:** indicates the device to which your files are stored to
9. **Wifi connection**
10. **Battery status:** ref. charge procedure

Product Overview



Product Overview

SETTINGS MENU

The Settings Menu allows users to access the mainframe of the TrapJumper system. The status menu can be accessed through the settings, which provides a health check of the components. Users can adjust the time/date, connect to WinCan Web, and view the camera temperature/pressure.

Monitor settings & software update menu

Wifi connection

WinCan Web & FTP

WinCan settings

Settings

- Coiler & Camera
- Text & Graphics
- General
- Time & Date
- WiFi
- Cloud
- WinCan
- Status

Coiler & Camera Settings

Press the corresponding letter to select setting.

Meterage Settings:

- [A] Auto Pushrod Length 30m
- [E] Manual 0.76

Camera Diagnostics:

- 2360 mBar
- 2360 mBar
- 48 C

To enable changes to settings press the button below.

Save Settings

System details

Onscreen counter settings

Pressure sensor 1

Pressure sensor 2

Temperature



NOTE: The pressure sensors and temperature are not applicable for the TrapJumper system.



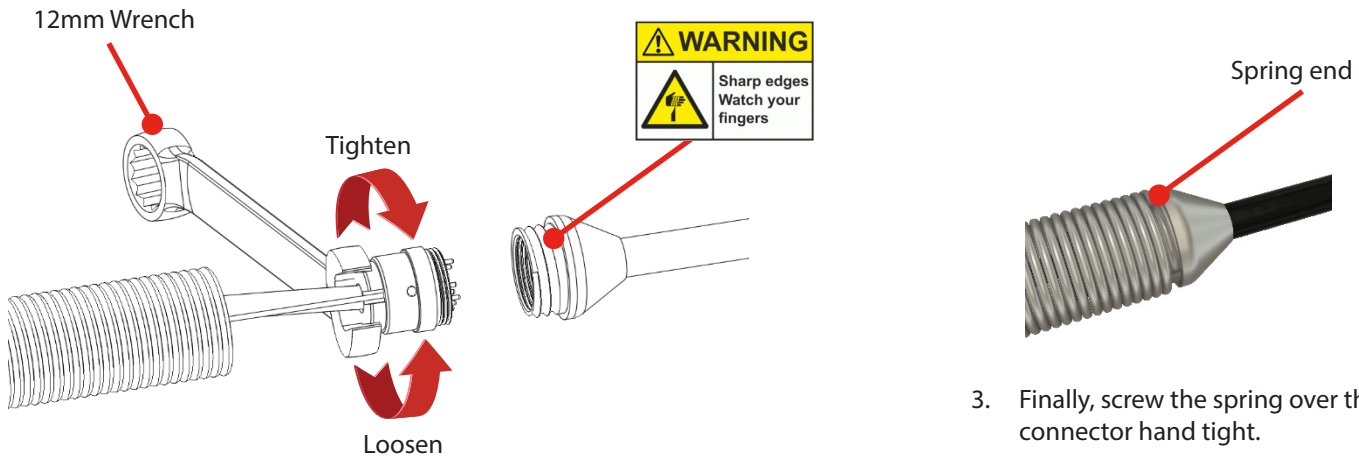
The following guide offers instructions on how to set up your TrapJumper system correctly and safely. Please read these instructions in full before the system is set up. Your TrapJumper system has been built to your specification, the camera and overall setup remains the same. Please pay close attention to any **Notes** and **Warnings**.

CAMERA CONNECTION AND REMOVAL



1. Compress the spring together to reveal the connector.

2. Using a 12mm wrench (as below), screw the male connector into the rod.



3. Finally, screw the spring over the rod connector hand tight.

Repeat this process in reverse to remove the camera head.



NOTE: If the spring is difficult to unscrew when removing the camera, use the camera removal tool provided in the accessory kit. Align the inner tool with the end of the spring (see above) and apply the required force.



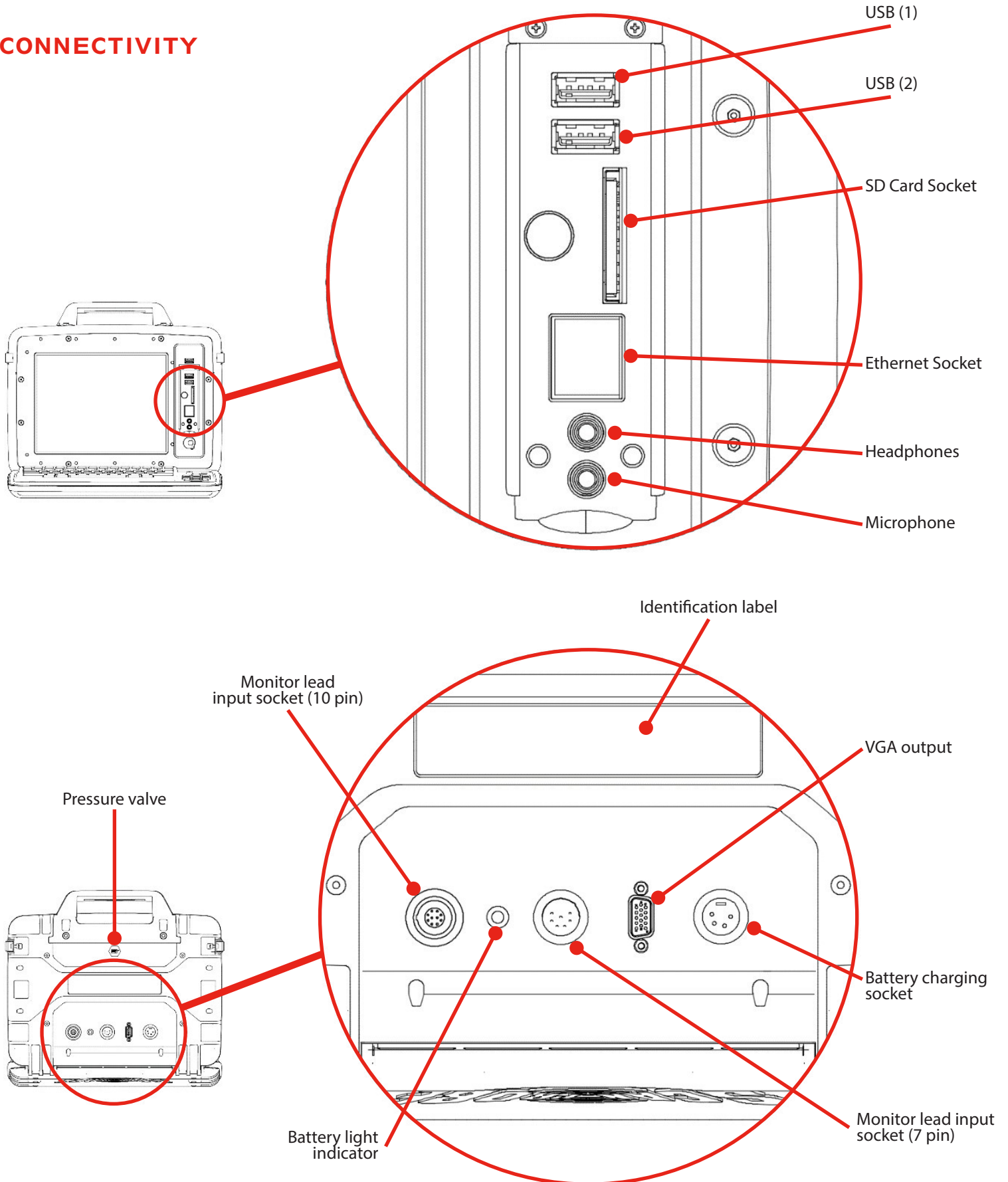
WARNING: Wear gloves! The spring thread contains sharp edges and should not be touched without hand protection. Take care with the connector thread and avoid extreme force. **Do not over tighten!**



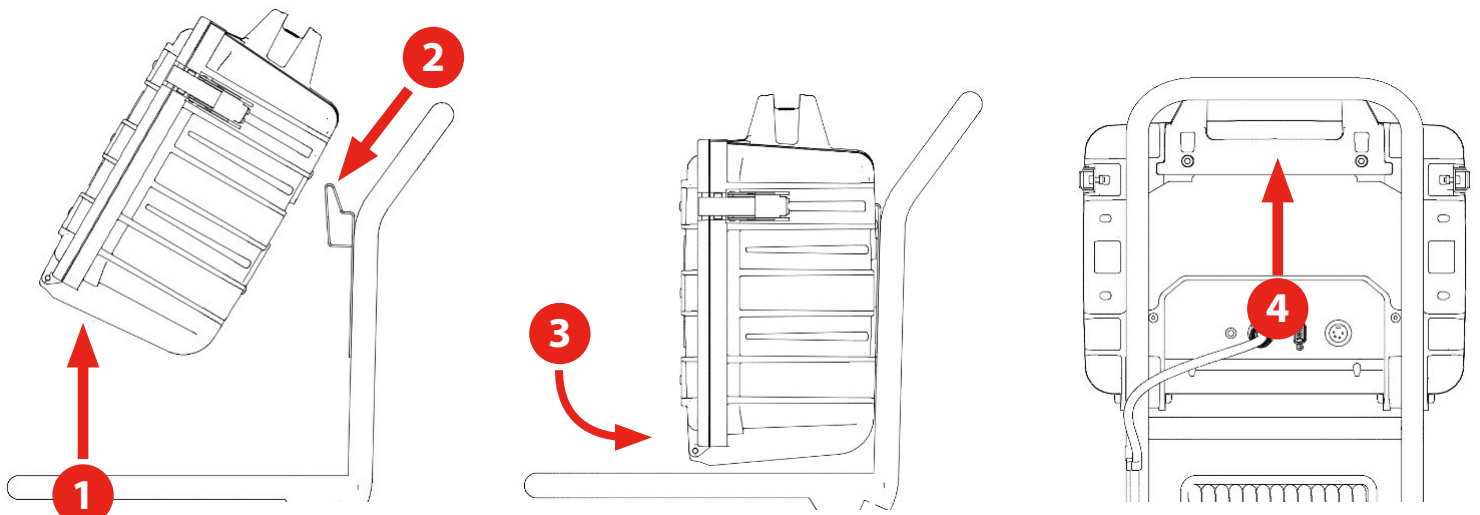
NOTE: Always ensure the connector is clean and the electrical contacts remain grease free at all times.

Start-Up Guide

CONNECTIVITY



MOUNTING THE CONTROL BOX



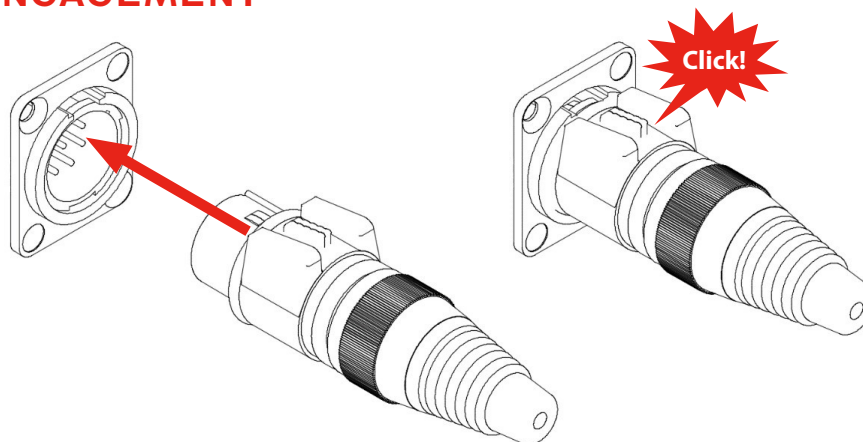
1. Lift box at an angle above the mounting plate.
2. Align the base of the handle and clip over the plate.
3. Lower box against the handle.
4. Check the box is central to the frame.



NOTE: To remove the box, disconnect the cables and repeat the steps above in reverse.

PLUG / SOCKET ENGAGEMENT

7 pin-din:



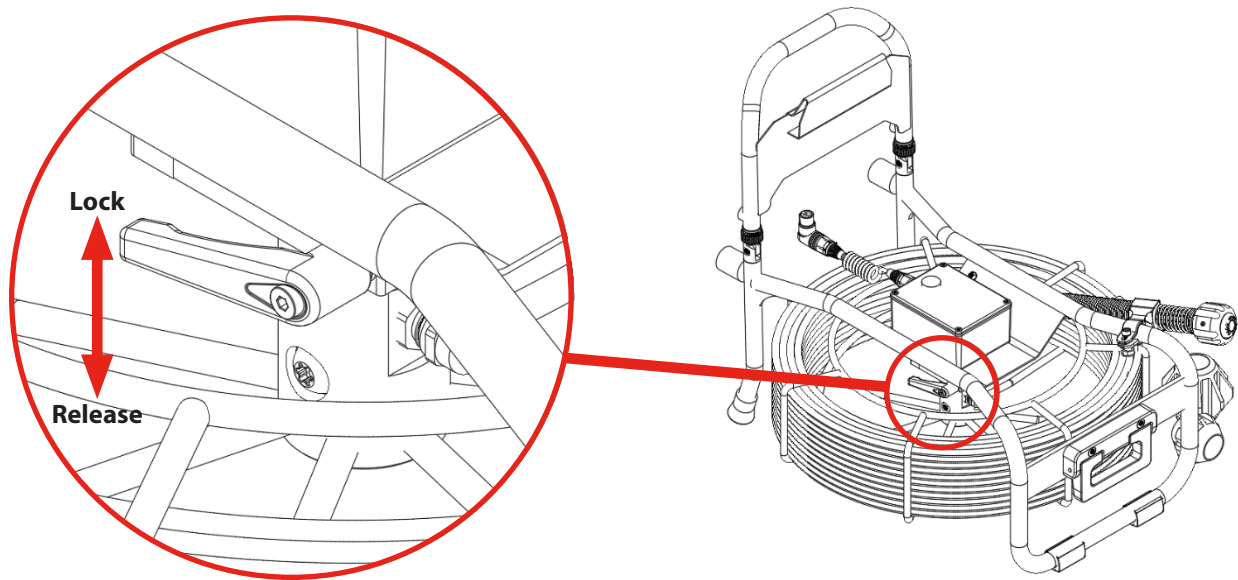
- Align the keyway clip at 12 o'clock with the socket
- Push connector into the socket until you hear the click of it locating



NOTE: Please ensure all connectors are clean and dry before connection. **Do not twist.**

Start-Up Guide

BRAKE OPERATION



WARNING: Be careful your hands don't get trapped or pinched.

- Turn the handle counterclockwise to release reel and clockwise to apply the brake.

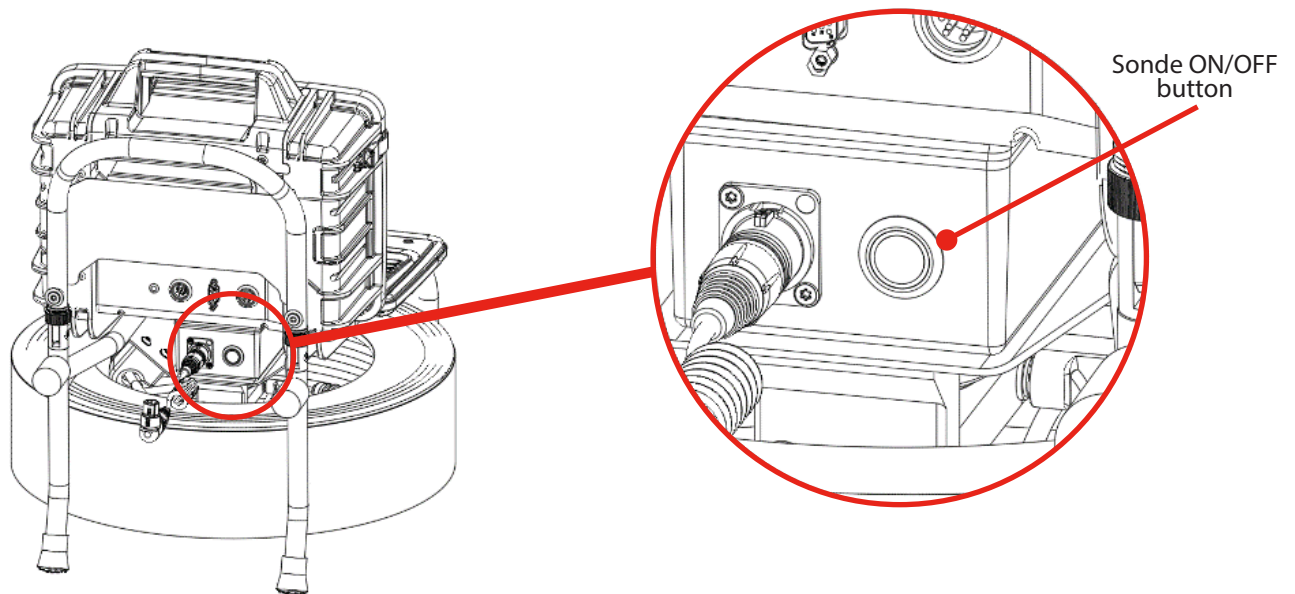
PUSH ROD INSTRUCTIONS

- When loading the push rod onto the frame, be sure to align the rod and do not cross it over. This will reduce the risk of damage and an imprecise meterage reading.



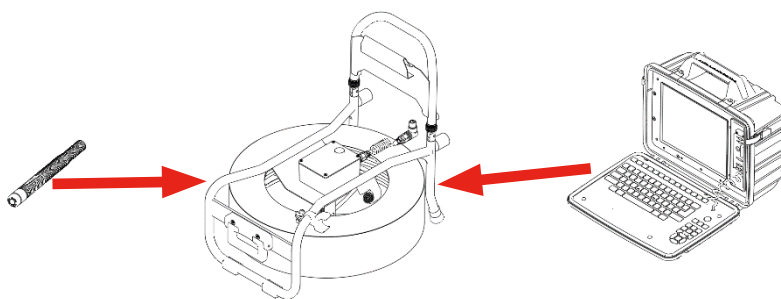
CAUTION: Excessive force on the push rod will cause damage and can even snap the inner cores. Do not over exert when surveying or reeling back onto the coiler. Different push rods are designed for different environments; be sure the rod you are using is fit for the pipe it's being used on. If you are unsure, contact Spartan Tool, LLC for help and advice.

SONDE (LOCATOR) OPERATION



- Engage the push button to turn on the 512 Hz sonde.
- The red light will illuminate to indicate the sonde is active.

CONNECTABILITY



No.	Description	Part No.
1	TrapJumper Camera	1024-1002-0
2	TrapJumper Coiler	1024-1001-0
3	Explorer Control Box	6405CBOX

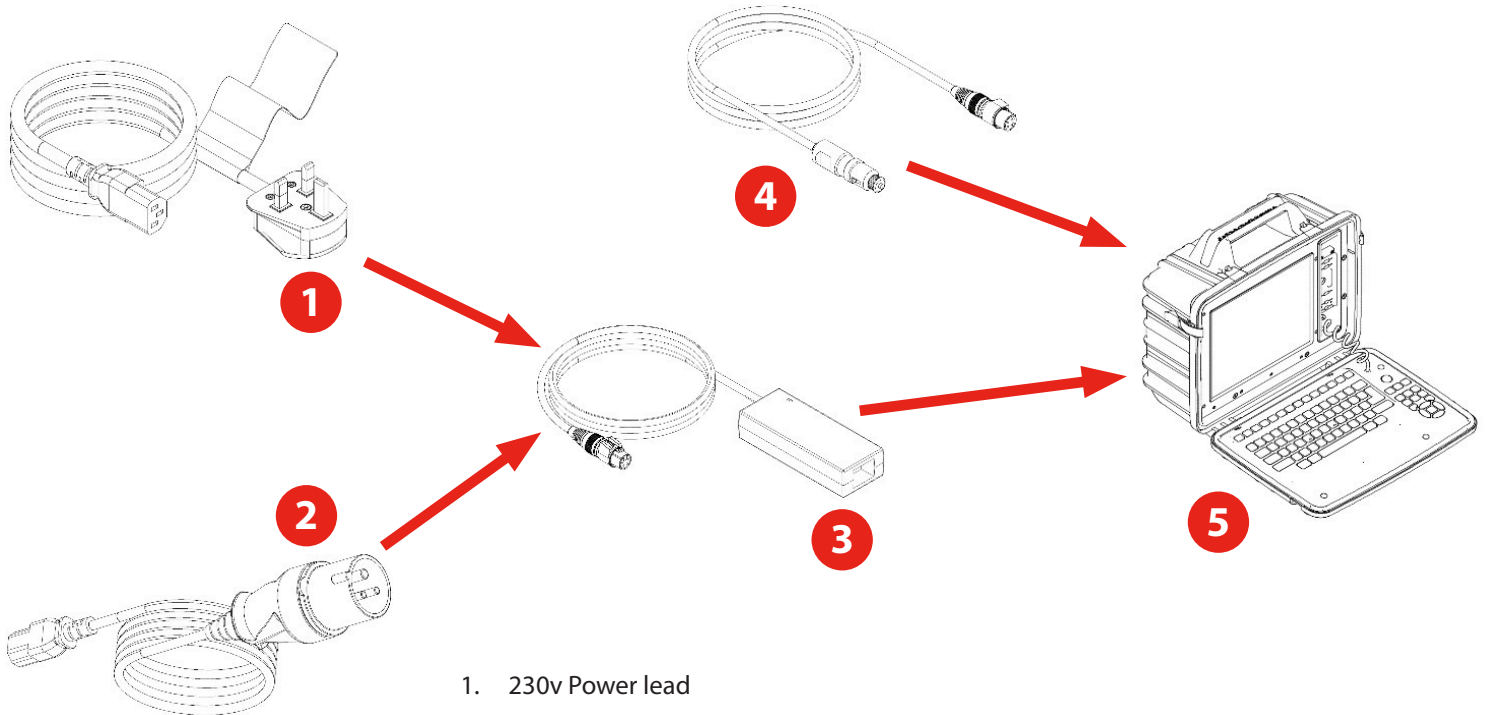


CAUTION: When connecting or disconnecting any cables or cameras, ensure the system is switched off and disconnected from power supply.

- Do not expose mains cables/charges to rain or moisture.
- Keep all power cables clean. Contamination will increase the risk of electric shock.
- Connect all cables in accordance with the connector diagram.
- Check charging cables are not damaged. Do not use if damage is located. Purchase a new replacement from Spartan Tool, LLC or a recommended repair center.

Start-Up Guide

CHARGING AND POWER



1. 230v Power lead
2. 110v Power lead (64051697)
3. 24v Explorer control supply PSU
4. 12v Car charger (64051821)
5. Explorer control box (6405CBOX)



NOTE: Observe power voltage: the voltage of the power source must correspond with the information provided on the equipment or power supply label.

CHARGING PROCEDURE

To begin charging, insert the power supply or car charger into the battery charging socket (connect to a source with a power cord using PSU). Charging begins as soon as power is connected. The charging procedure automatically recognizes the charge state of the battery. Charge current will fluctuate according to the battery temperature and voltage. This protects the battery, which is always fully charged when connected to a power source.

- Explorer control box, estimated battery life: 9 hours
- Explorer control box, estimated charging cycle: 4 hours
- Battery indication light will flash red and an alarm will sound to warn of low battery power.



NOTE: Batteries and life cycles are given as estimates. To increase the batteries' life, health and longevity, please read the battery maintenance section.

BATTERY ICON DEFINITIONS

Battery charge indication is shown in 20% increments:



Charge
Required



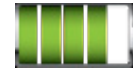
Charge
Warning



40%



60%



80%



Fully
Charged



Charging



Connected
to a power
source



Battery level
unknown

LITHIUM-ION BATTERY BENEFITS

- **High Capacity:** With energy densities up to 475 Wh/L, lithium-ion batteries offer the highest energy in the smallest space for the lowest weight.
- **Light Weight:** One of the lightest rechargeable battery technologies on the market, lithium-ion batteries are indispensable for modern electronics.
- **UN 38.3 Tested:** The Explorer control High-Power lithium-ion battery has passed tests as per UN 38.3 regulations and are safe for transport.

LITHIUM BATTERY SHIPPING

The Explorer's lithium-ion battery pack uses lithium-ion cells that are certified to UN 38.3 shipping regulations. The Explorer control battery falls below 100 Wh.

Explorer Control Battery Pack: part number 64051779

BATTERY MAINTENANCE

Charging and Recharging

How do you make your lithium-ion battery last as long as possible? You may have heard that you need to do a full charge and discharge on batteries, but this really doesn't matter with lithium-ion. What matters most is how you charge your battery after you've started using it. Shallow discharges and recharges are better than full ones, because you put less stress on the battery, so it lasts longer. When your battery is discharging, Spartan Tool recommends that you only let it reach 50 percent before topping it up again. While you're charging it back up, you should also avoid pushing a lithium-ion battery all the way to 100 percent.

If you do discharge your battery all the way up, don't leave the PSU plugged in. Instead, follow the shallow discharge and recharge cycle just mentioned. This isn't a safety issue: lithium-ion batteries have built-in safeguards designed to stop them from exploding if they're left charging while at maximum capacity. But in the long term, electronics will age faster if they're constantly plugged in while already charged to 100 percent.

Finally, although shallow charges and discharges hit the longevity sweet spot, there are exceptions to this rule. Once a month, let the battery undergo a full discharge to about 5 percent, just to recalibrate its self-assessment. This mechanism allows the Explorer control box to give you an "estimated battery time remaining" reading that's somewhat accurate. Regular full discharges aren't a good idea though. In general, you should be keeping your battery above 20 percent.

Start-Up Guide

GENERAL MAINTENANCE

Rod Guide

The rod guide is an integral part of the coiler which will increase the longevity of the push rod if maintained correctly. By allowing the guide material to wear out first, it significantly decreases wear to the push rod jacket. Please clean all parts thoroughly with clean water if dirt builds up.

Connector and Cable Care

Connectors and cables are an integral part of any system. Taking good care of these will allow the electrical signals to reliably transmit. It is therefore essential to check the cable, connectors and interfaces after each inspection.

- Ensure the system is disconnected from the power supply.
- Check connector pins are all intact, clean, and no visible damage is present on the cable.
- Check O-rings for damage and replace if necessary (grease regularly).
- If damage is located, contact Spartan Tool, LLC or its authorized agents.



NOTE: Depending on the camera system and year of manufacture, a variety of different cables and connectors will have been used, but the principle of care remains the same.

CLEANING AND MAINTENANCE

To increase the service life of your TrapJumper equipment, we recommend the devices and components are kept clean and serviced. To achieve the greatest improvement in longevity, pay close attention to moving parts like rollers. Spartan Tool, LLC also notes a significant reduction in the danger of catching infections from the equipment if cleaned thoroughly after each use.

The following list provides a guide on some care and maintenance measures that should be applied when operating TrapJumper equipment. This will not replace repairs and maintenance entirely but should prolong the life of the equipment and reduce time spent with Spartan Tool, LLC Service Department or its authorized agents.

- Always be vigilant and clean/replace parts after every inspection according to their condition.
- Check for loose parts after every inspection.
- Clean camera heads with water after use and remove all debris (a soft brush may be required).
- Ensure the connector contacts are clean, use an electrical contact cleaner, if cleaning is required.
- Use clean water only. Don't add any cleaning products.
- If the Explorer control keypad/screen has been used in the rain, dry with a clean cloth and leave open until all water has evaporated.
- Keep all power leads, chargers and accessories clean and dry.
- Clean all parts that have had contact with the inspection area thoroughly and wipe them over with a cloth if necessary after every use.
- Roll cables up neatly after use and store in a dry area.

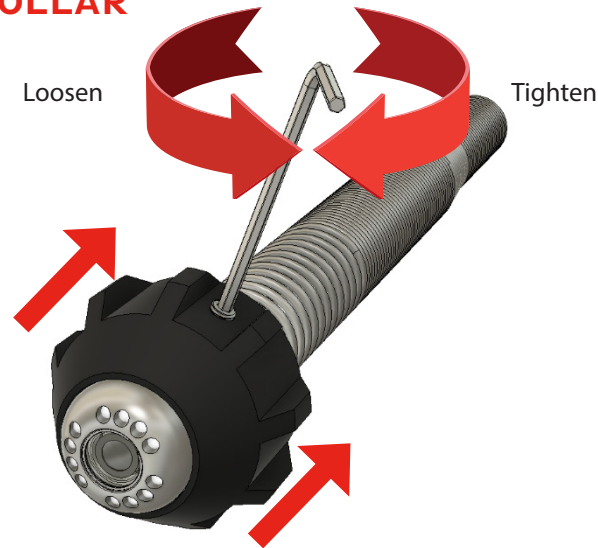


WARNING: Never use a high pressure cleaner or any cleaning agents on any of the Explorer equipment. It may result in damaging components, O-ring and increase the need for repair.



NOTE: It is the sole responsibility of the user to keep the equipment to a good standard, any repairs required due to negligence will invalidate the warranty and will be chargeable.

FITTING PROTECTIVE COLLAR



1. Slip the collar over the camera head.
2. Adjust it to the chosen position.
3. Tighten the three grub screws hand tight.
4. Check the collar is secure.




NOTE: Ensure the grub screw threads remain clean of grit and other particles!

Description	30mm TrapJumper Camera Head
TrapJumper Slip Skid	64051824
TrapJumper Skid 60mm OD	64051825
TrapJumper Skid 85mm OD	64051826


Spartan Tool, LLC continues to offer a wider range of protective sleeves and equipment for all the camera ranges. Please check www.spartantool.com for new accessories.



User Interface




The main principles of the Explorer control remain the same throughout the device. You will certainly pick up the correct navigation tools after a few weeks of using the software. The following lay out a brief description on how to do certain functions on the device. For further help, press the  key, located at the top of the Explorer control rubber keypad.

BASIC FUNCTIONS FOR BASIC RECORDING

Check the function display located on the top right hand side of the Explorer monitor. This should display the Spartan logo  to indicate you're in the basic setting mode.

Press a number, for instance press (1) for page 1 and (4) for page 4, etc.



WRITING TEXT

1. Press the text overlay  key.
2.  key changes the size of text.
3.  key changes the font/color of text.
4. Use **SHIFT** and the **Arrow** keys to move the text around the screen.
5. Press **OK** when the text is in the correct position.
6. When editing text, the navigation keys move the cursor through the text. By pressing Shift and one of the navigation keys, the whole block of text moves.



NOTE: If the **OK** button is not pressed, the text will not be stamped on the screen and will not appear on your recording.




DATE

- Press the number of the page you wish to add the date to.
- Press **Ctrl** and **D** to put the date on the screen.
- Again,  and  will change the size and font/color of the date.
- Press **OK** when the date is in the correct position to stamp it on the screen.

TIME

This works the same as the date, only this time you need to press **Ctrl** and **I** to put the time on the screen.


COUNTER

- Press the number of the page you wish to add the counter to.
- Press  and the counter will appear on the screen.
- Use the arrow keys to move the counter to the desired position.
- Again,  and  will change the size and font/color of the counter.



NOTE: To stamp the counter on the screen, press **OK**. If this is overlooked, the counter will **NOT** appear on the recording.

COUNTER RESET

Press and hold the  button for 3 seconds to reset the counter to zero.



NOTE: Open the Setting on the Explorer control box and select TrapJumper to obtain the correct footage. Alternatively, insert 1.25 into the *Manual* coiler setting.

RECORDING



Simply press the record button to begin recording. The Explorer will automatically record direct to the SSD unless another device like a USB is inserted. The inserted device then becomes the default.





NOTE: In basic recording mode, the Explorer control box will record exactly what appears on the screen (**as long as it has been stamped**).

VIEWING, COPY, AND DELETING RECORDINGS



Viewing Recordings

- Press the  button to open the file manager.
- Select the storage device the recordings are recorded to, i.e. USB-SSD, USB-1, USB-2, etc.
- Press OK to view files. Press the left navigation key  to go back.

Deleting Recordings




Highlight the file you wish to delete and press shift + backspace and then OK.  + 

Transferring Files

- To transfer/copy recordings between devices (i.e., USB, SSD, etc.), press the  button to open the file manager
- Select the device the recording is on (for example, SSD). Highlight the file or folder you wish to copy.
- Press shift  and **C**. You will be prompted as to where you wish to copy the file/folder to. Select the desired destination and press **OK**.
- Please allow time for the files to be transferred.

User Interface




LIGHT ADJUSTMENT

- Press the  button to increase the LED brightness.
- Press the  button to decrease the LED brightness.
- The LED brightness increases in steps. There are 20 steps total, plus off.
- The  button turns the LED light off.




WARNING: Do not look directly into the camera LEDs or point them at other people when they are turned on. Exposure to LED lights can cause irreparable harm to the retina of the human eye.

FILE MANAGER



- Press the  button to open the file manager.
- Use the navigation keys to select the storage device of interest and press OK or the right arrow to view.
- The copy and delete process are repeated in Wincan and mina mode the same as basic survey mode described earlier.
- Use the navigation keys to select a file. Press OK or the right arrow key to view, and shift  backspace  to delete.
- From within the survey folder, the video can be played or images viewed.
- Press Esc or the left arrow key to go back a step. Continued back step will take you out of file manager.



mina SURVEY

1. Press the mina icon button  and select New Project. This will open a blank information form. Alternatively, you can select Open Project, allowing you to carry on with an existing project.
2. Complete the information form and press the mina button to proceed or Esc to return to basic mode.
3. Press the mina icon button to select a new section. Alternatively, you can close a project at this point.
4. If a new section is selected, the run information screen appears.



NOTE: *Start ref. End ref. direction, site address and pipe size* are mandatory fields that must be completed.




5. Once the information has been completed, press the mina button  or press Esc to start over.
6. Run info can be edited by pressing the mina button again and choosing Edit Section.
7. To begin, press the record button  - editing is now disabled.
8. When recording, the snapshot button will take a screen shot and save it to file.
9. Press the stop key to end the survey.

10. Pressing the mina button  again allows users to start a new section under the same project. Alternatively, you can close a project at this point.
11. If you press the mina button  one more time, you can select the export option. This will accumulate all the sections + project information and save it into a single file on your chosen storage device.






NOTE: Spartan Tool, LLC recommends all recordings are stored directly to the SSD internal memory and copied to external devices at a later stage.

WINCAN SURVEY

1. Press the WinCan  button to start.
2. You are then prompted with two options. Select according to whether you're starting from fresh (new project) or continuing a previous survey (open project).
3. Enter the project name and press the WinCan  button to continue.
4. Fill out the required information using the "page up/down" key to toggle through the pages. Once all the information has been implemented, press the WinCan  button to confirm.




NOTE: *Project/job name - Upstream Node/Ref - Downstream Node/Ref - Pipe material inspection direction and Site* are mandatory fields and must be completed.

5. Press the record button  to commence recording.
6. When the section has been surveyed, press the stop or WinCan  button and select "end section" to save the file.
7. To continue project, press the WinCan  button again and select "new section." To finish a project, the files will need to be finalized.



WARNING: Once you have finished the project, the files will need to be encoded in a format WinCan office software understands. "Finalize project" will generate this for you. If you fail to finalize a project, WinCan office software will not recognize the file!

8. To finalize a WinCan project, while the project is open press the WinCan  button and select "Finalize project."



NOTE: When finalizing a WinCan project, the file will be encoded to a *MiracullX* format. This means that without WinCan software on your PC, the files **cannot** be interpreted.

CONNECTION SETUP

Press the settings key  and scroll along to the cloud tab.



NOTE: This function is only available on units running v1.7.0 or greater.

- Using your WinCan login details, sign into WinCan Web and press OK to test the connection.
- A "connection success" message will appear if connection is successful.
- The process will need to be repeated if the connection has failed.
- Please check signal prior to connection and ensure it is stable.



Technical Data Overview



Description	TrapJumper
Cable Length	40 m / 130 ft standard
Footage Counter	Yes
Driving Force	Manual (push rod)
Voltage	12v DC / 230v AC / 110v DC
Current	Ex Power Supply 1.7 amp max
Battery	Li-ion - 9 hrs running time
Operating Temp	14°F to 122°F / -10°C to +50°C
Charging Temp	50°F to 113°F / +10°C to + 45°C
Coiler Weight	11.8 kg / 26 lbs
Coiler Height	20.5" / 520 mm
Coiler Width	17.5" / 445 mm
Coiler Depth Folded	12.25" / 310 mm
Coiler Depth Unfolded	18.75" / 478 mm
LCD Size	10.4" diagonal
Resolution	720 x 576 RGB (SVGA)
LCD Viewing Angle	85° typical
IP Rating	Box- IP54 open, IP67 closed Camera - IP68
Memory	32 GB SSD
Data Export	x2 USB 2.1, x1 SD card, x1 Ethernet, Wifi, 4G
Software	WinCan Embedded + WinCan Web Basic, mina Survey
Output	800 x 600 SVGA, DE15
Sonde - frequency	512 Hz
Min. bend radius	76mm



SPARTAN TOOL
FOR TOUGH CUSTOMERS. SINCE 1943.

The TrapJumper is Spartan Tool's lightweight push-rod camera solution, designed to provide both flexibility to navigate trap-bends while being strong enough to be pushed the distance in abrasive pipes. The TrapJumper is fully compatible with the Explorer control box, meaning that it is simple plug 'n play to start using the latest addition to the Spartan range of products.



SPARTAN

FOR TOUGH CUSTOMERS.

SINCE 1943

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