VIVAX METROTECH

vCam-6 Training

vCam-6 Control Module with
Standard Type-CP Reel and Type-MX Mini Reel

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Introduction

Introduction

This training presentation covers the vCam-6 Control Module, Type-CP Standard Reel, and optional Type-MX Mini-Reel.

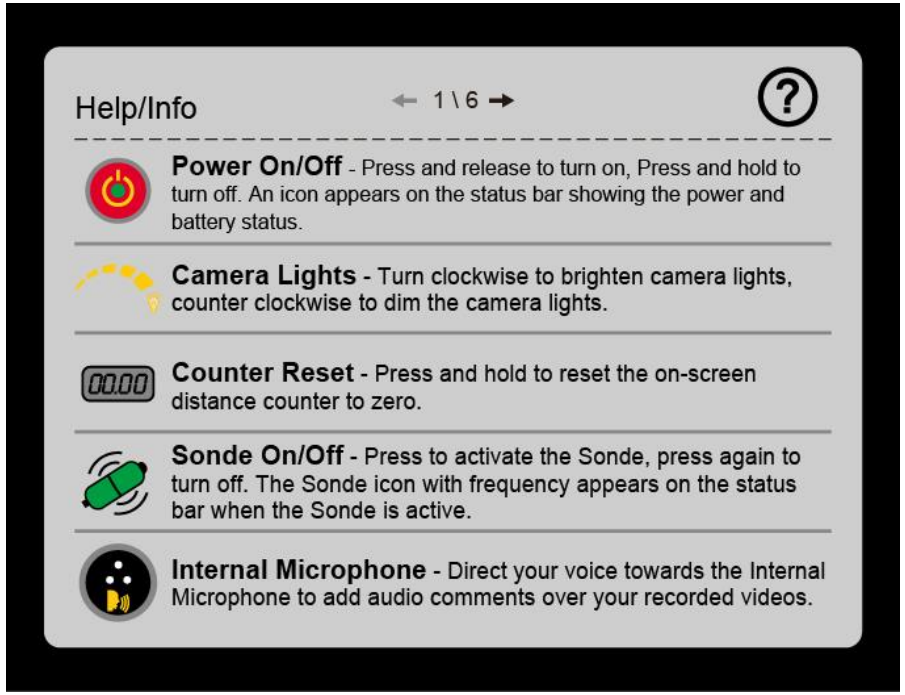
vCam-6 control module mounted on the Type-CP reel

MX Mini reel with the vCam-6 control module

Introduction

The heart of the vCam Inspection System is the control module. The vCam-6 control module has lots of advanced features but is still easy to operate.

At any time press the **F1 Help** key to access screens explaining the features of the vCam-6 control module.



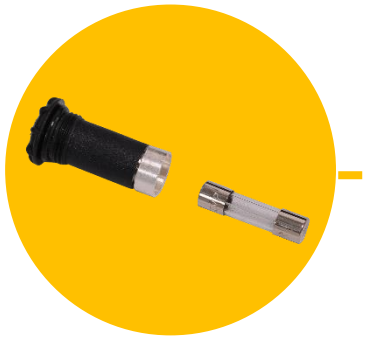
vCam-6 Control Module

Fuse Installation

Install the 10-amp fuse that was provided with the control module. This fuse is necessary for the internal Li-ion battery to charge.

The fuse compartment is located on the back of the unit in the bottom left corner.

Fuse cap and 10 Amp fuse



1. Remove fuse cap

2. Install fuse

3. Replace cover

Latch Assembly

Slide the latch to the right to release the keyboard.

Power – On/off

Press the Power button and the control module will begin its startup.

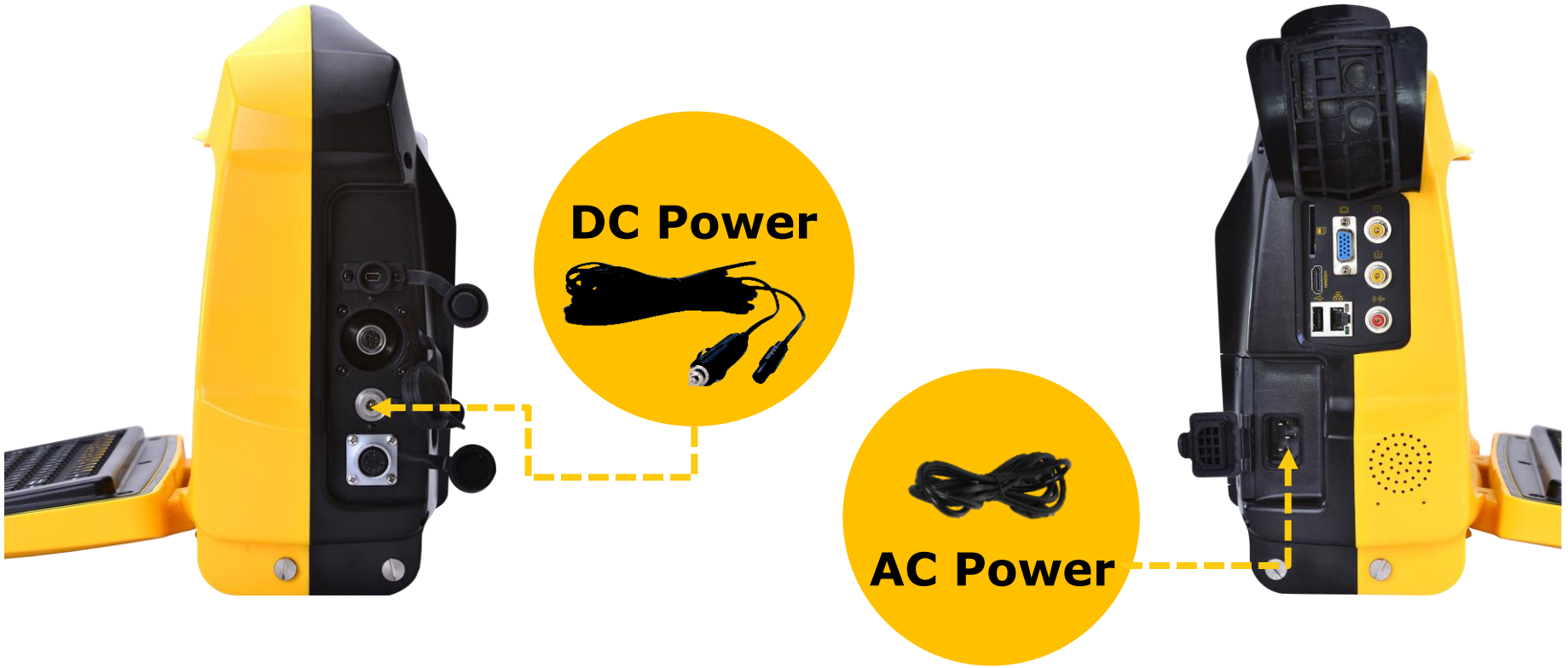
The on/off button will glow green while the control module is turned on.

The battery status icon will appear on the screen in the bottom right corner.

Press and hold the power button for five seconds to turn off.

Power and Charging

The control module can be used while charging via AC or DC current.



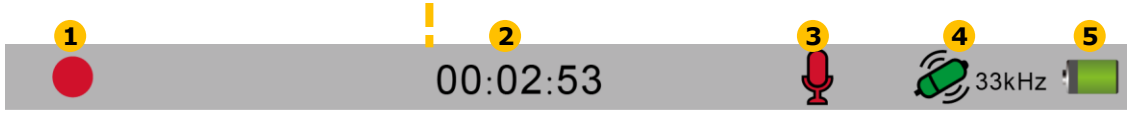
A six-hour charge will supply approximately six hours of battery life.

Only activate the sonde and wi-fi features when needed as they will affect the battery life.

Status Bar

Text from text writer

The status bar (grey bar at the bottom of the screen) shows any activated options such as the sonde or microphone and other information such as recording status and video length.



Status Bar showing:

1. Recording in progress
2. Elapsed recording time
3. Active Microphone
4. Active 33kHz Sonde
5. Battery status

Status Bar – Show and Hide

The status bar can be hidden providing a larger viewing area. The status icons will still appear with the bar hidden.

Press and hold the **Ctrl key** and **tap** the **F10 Menu key** to hide or show the status bar.

The icons of currently running options will still appear in the bottom right of the screen.

Show

Hide

vCam-6 – Other Features - Front Panel

The vCam-6 Control Module has other features available. The features located on the front panel are:

	**Camera LED Dimmer** Turn the knob to turn on the camera LEDs and to control their brightness.
	**Distance Counter Reset** Press the reset button to reset the distance shown on the screen to “0”.
	**Sonde** Press the Sonde button to activate it. The button will glow green and the sonde icon will appear on the status bar. Press again to switch sonde frequencies, press again to turn off.
	**Microphone** Press the **Microphone** button to activate the microphone. The button will glow red and an icon will appear on the status bar. The unit has a **built-in microphone**  to the left of the microphone button or a microphone with a 5mm jack can be plugged into the **microphone socket**  for use in noisy areas. Press the microphone button again to turn it off.

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Type-CP Standard Reel

The Type-CP Standard Reel

Cable guide
Locking and friction brakes

Pushrod Tracing post

1. Control module mounting blocks
2. Interconnect Cable
3. Horizontal position feet
4. Rubber feet
5. Pushrod Cage
6. Camera Heads

D34-HD

D46-HD

Pipe Insert Sleeve

The Type-CP Standard Reel – Mount the Control Module

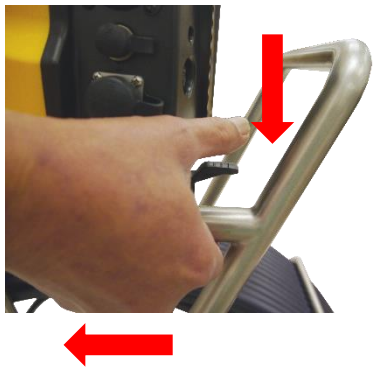
Step1

Line up the mounting pins to the bracket slots.

Step2

Place into the bracket slots and push backward until the locking tab locks into place.

Step3



Remove by pressing down on the locking tab while pulling the control module forward and up.

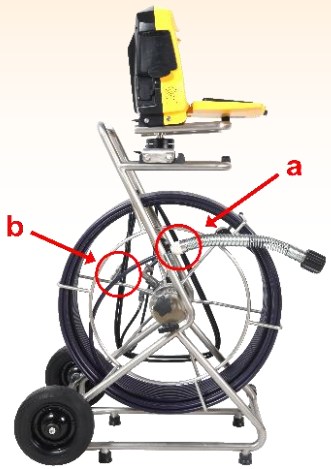
Using the Type-CP Reel

NOTE For best results from the distance counter, follow these instructions starting with the control module **turned off.**

1. Turn the cage to approximately the 9-O'clock position using the sonde cup as the guide.

2. Hold the cage at the 9 O'clock position, grab the spring assembly, and thread the pushrod through the cable guide.

3. Position the base of the sonde cup into the cable guide and lock the cage, as shown below.
The sonde cup **(a)** is now in the cable guide at a 12 O'clock position, and the pushrod section from the cage to the sonde cup **(b)** is bent from the cage to the cable guide.



4. Attach the interconnect cable to the control module.

5. Power on the control module.
When the control module starts, it will see the position of the sonde cup as "zero."

Type-MX Mini Reel

The Type-MX Mini Reel

Reel to control module Interconnect Cable is included with the Type-MX reel

Camera Heads

D26-MX D18-MX

Pipe Insert Sleeve is included with the Type-MX reel

Using the Type-MX Reel

NOTE For best results from the distance counter, follow these instructions starting with the control module **turned off.**

1. Turn the cage to approximately the 9-o'clock position using the sonde cup as the guide. Now use the brake to lock the cage.

2. Reach into the cage and grab the spring assembly and thread the pushrod through the cable guide.

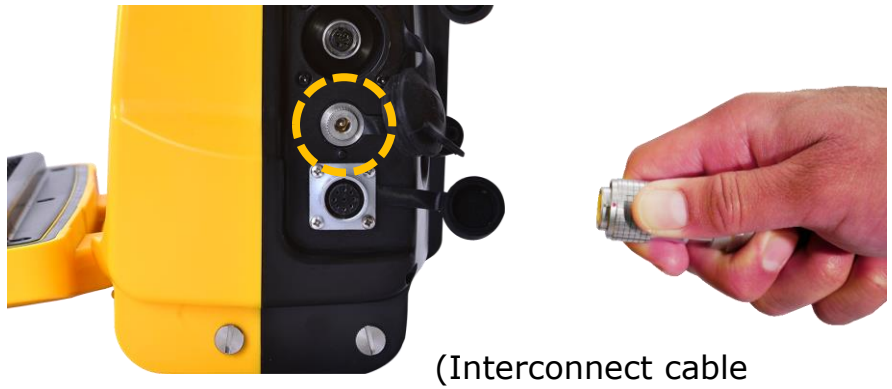
3. Position the base of the sonde cup into the cable guide as shown below.
The sonde cup **(a)** is now in the cable guide at a 12 o'clock position, and the pushrod section from the cage to the sonde cup is bent from the cage to the cable guide.

4. Power on the control module.
When the control module starts it will see the position of the sonde cup as "zero."

Using the Reel – Connect the Reel

An Interconnect Cable is supplied with both Type-MX and Type-CP reels.

Note: The plug and socket are keyed connectors identified on both the plug and socket by a red dot. On the control module the red dot is located at the 12 o'clock position.



(Interconnect cable socket)

Pull back the outer sleeve on the plug.

Push the plug into the socket and release the outer sleeve. Give a slight tug to make sure it is locked.

Using the Reel – Connect the Reel

An Interconnect Cable is supplied with both Type-MX and Type-CP reels.

Use the Velcro strap attached to the interconnect cable to secure the cable in place.

NOTE

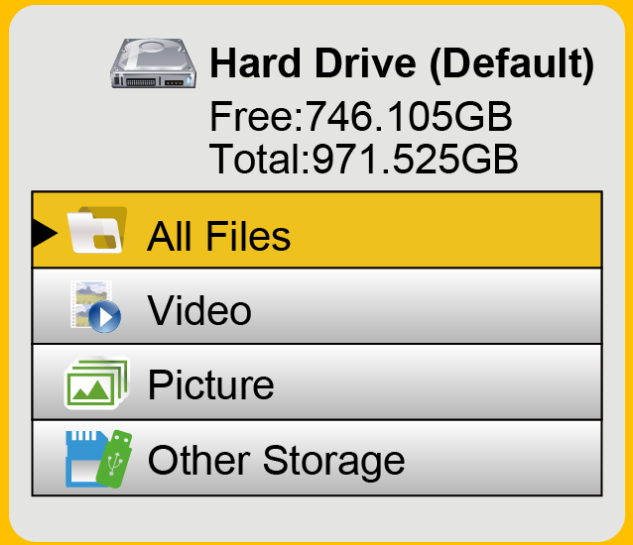
When securing the interconnect cable slack, do not leave the angle of the cable from the socket at a sharp bend. Leave some slack in the cable to prevent any broken internal wires where the cable meets the connector.

Using the Reel – Protecting the Pushrod

Tip

Use a Pipe Insert Sleeve  or Tiger Tail  to keep the pushrod from scraping against sharp edges at the pipe. entrance.

vCam-6 Menu Structure



vCam-6 Menu Structure – Main Menu

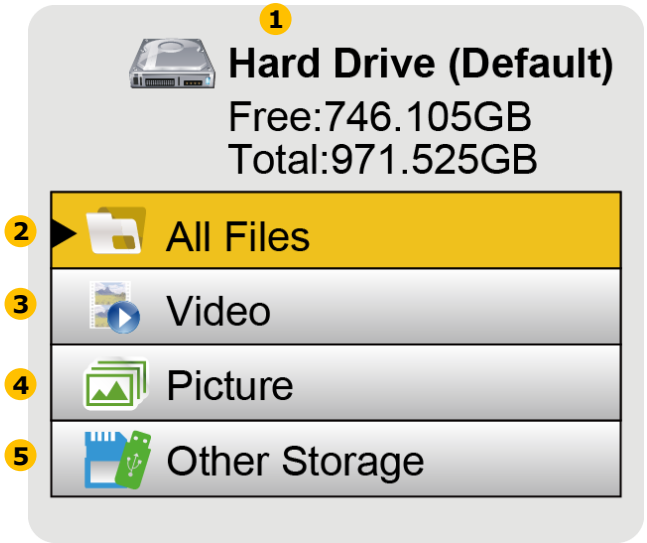
Press the **F10 Menu key** 

to bring up the main menu.

Use the **Up/Down arrow keys**  to select Video, Pictures, All Files or Other Storage.

Use the **Right Arrow key**  or press the **Enter key** 

to move to the next menu.



Active storage device - By default records go to the hard drive.

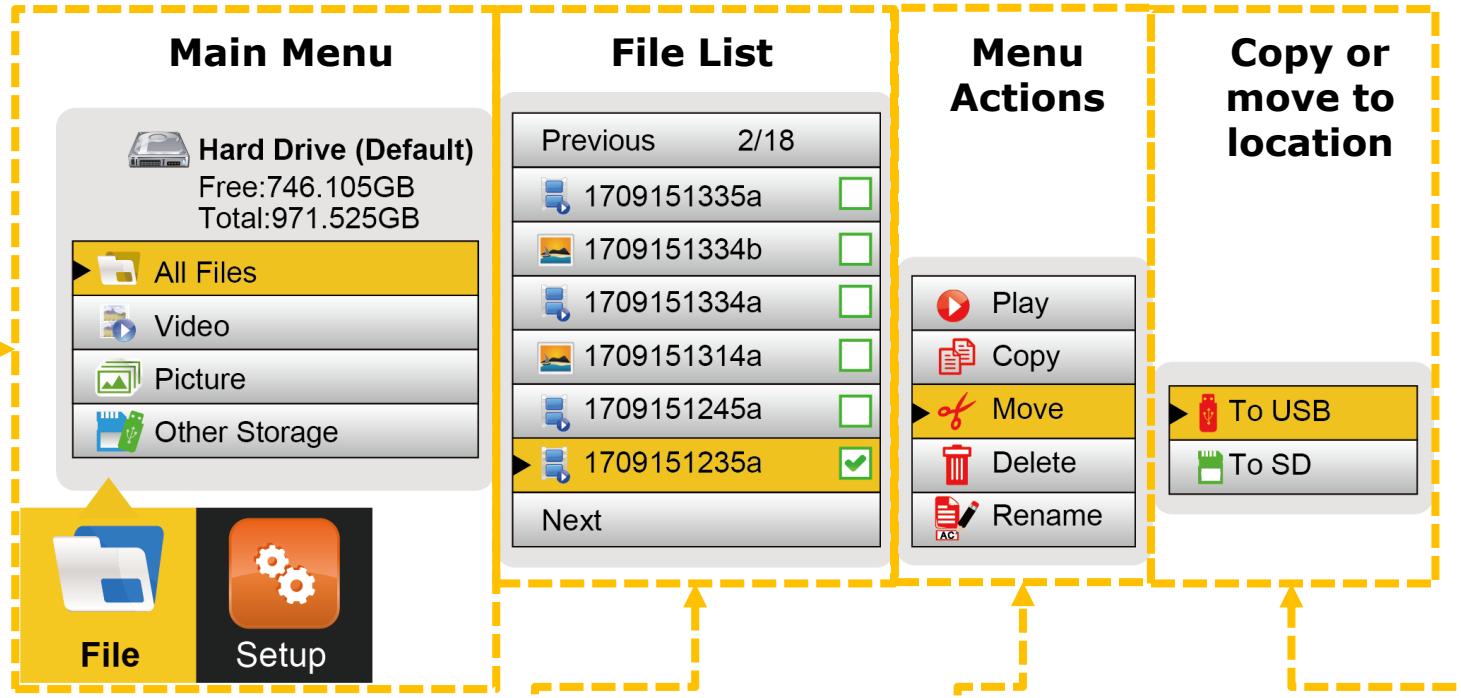
All Files - Select this option to view <u>both</u> videos and pictures on the active storage device.

Video - Select this option to view <u>only</u> videos on the active storage device.

Pictures - Select this option to view <u>only</u> pictures on the active storage device.

Other Storage - Select this option to view videos and pictures from another storage device (USB or SD) that is plugged into the control module.

vCam-6 Menu Structure



Press **F10** to bring up the main menu and use up/down arrows to select.

Use the **Right Arrow** to move to the File list submenu to select files.

Use the **Right Arrow** key to move to the Menu Actions sub-menu to select action.

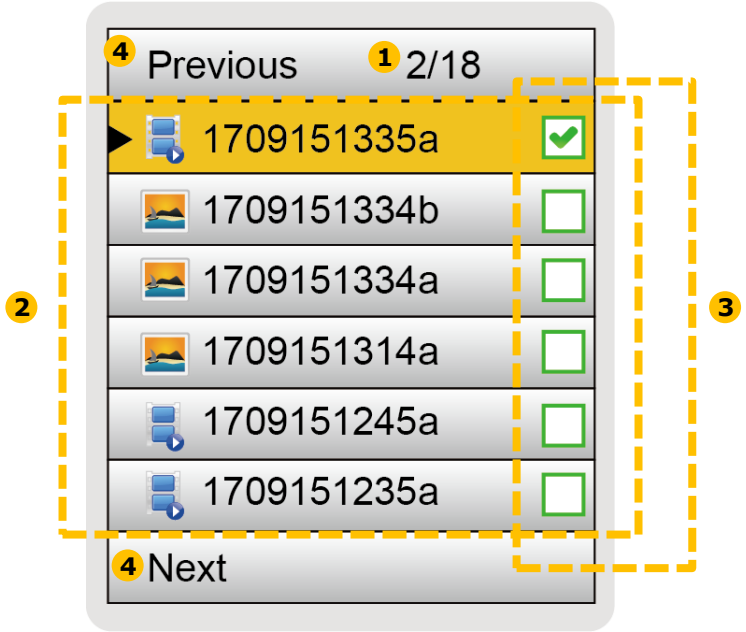
Use the **Right Arrow** key to move to the File Destination sub-menu and press **Enter.**

vCam-6 Menu Structure – File List Sub-menu

Use the **Up/Down arrow keys** to select video(s) or picture(s) files to play, copy, move, delete or rename.

Press the **Enter key** Enter to confirm the selection of the file and a green check mark will appear to the right of the file name.

Use the **Right Arrow key** or press the **Enter key** Enter to move to the next menu.



1. **Page Number/Number of Pages -** The control module can store several pages of files.
2. **File List -** The files are shown in the file list. Newest files at the top. Six files per page.
3. **Select Confirmation Box -** A check mark is shown after files have been selected.
4. **Move to Previous/Next page -** Use the Page Up/Page Down keys to move from page-to-page.

Tip

Keep the number of files on the hard drive to a minimum for fastest response time from the control module.

vCam-6 Menu Structure – Selecting multiple files

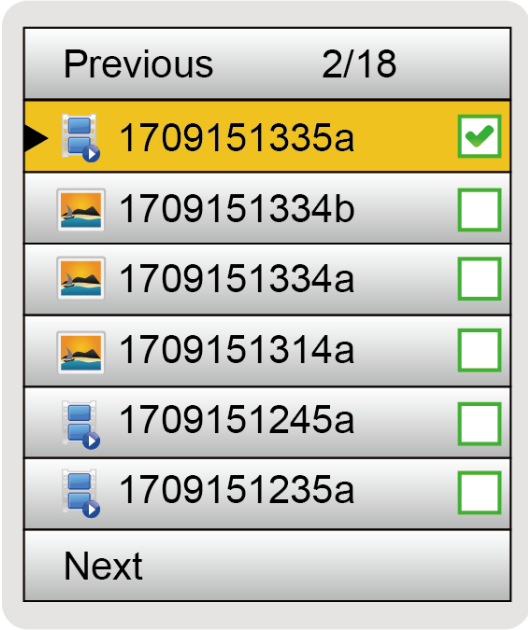
Multiple files can be selected for copying, moving or deleting within one page or across several pages.

Use the **Up/Down Arrow keys** to highlight files.

Press the **Enter key** Enter to confirm the selection of each file and a green check mark will appear to the right of the file name.

Use the **Up/Down Arrow keys** again to continue and highlight more pressing the **Enter** to select them. Continue this until all desired files have the green check mark against them. (Use the Page Up/Page Down keys to select files in other pages.

Use the **Right Arrow key** to move to the next menu to move, copy or delete mass files.



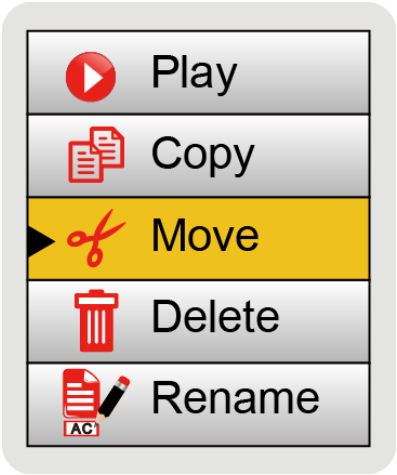
Tip

Press the **TAB key** Tab **to** select the entire page of files.

Menu Structure – Menu Actions Sub-menu

Use the **Up/Down arrow keys** to select the desired action.

Press the **Enter key** Enter or **Right Arrow key** to execute the desired action.



Play - Press Enter or use the Right Arrow key to begin playing a video file.

Copy -. Makes a copy of the video on the hard drive to the USB or SD drive. The original file remains on the control module.

Move - Moves the file from the hard drive to the USB or SD drive.

Delete - Delete the file from the hard dive.

Rename - Rename the selected file. Use up to 20 characters to name the file.

Note
Deleted files **cannot** be recovered**.**

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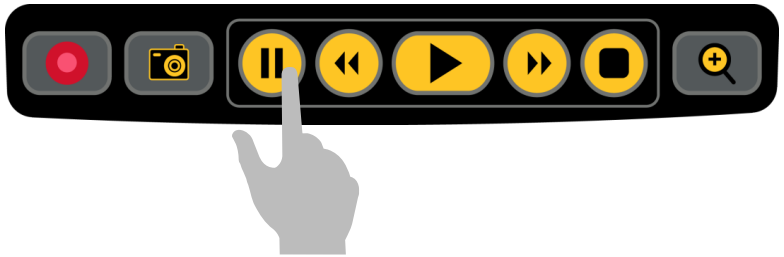
Video Recording

Video Recording – Create a new video

Press the **Record** button on the top keypad.

The flashing recording icon will appear in the status bar with elapsed recording time.



Press **Pause** to pause the video. Press **Pause** again to resume the recording.

Press **Record** or **Stop** to end the recording.

Video Recording – About Recordings

- Recording videos can pause for one hour.
- The maximum length for a video is one hour.
- After one hour the recording will automatically stop, be saved, and another recording will start.
- Pressing the record key while the video is paused will stop the recording. Use the Pause key to resume a paused recording.

Options Available while Recording

While recording a video the following features are available:

Text overlay

JPEG Image capture

Distance counter reset

Voice-over audio commenting

Pause and resume the recording

Sonde location and pushrod tracing

Save and recall pages of saved text

LACP features via mini USB and Video out ports

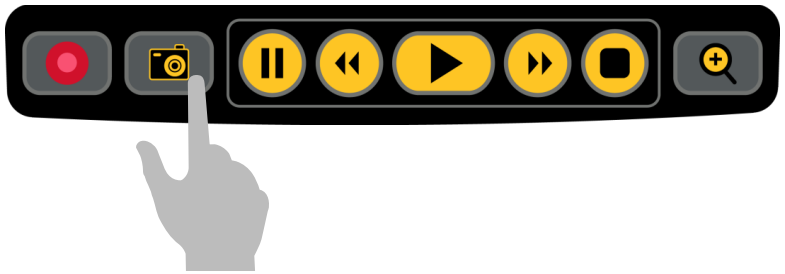
PipeLogix

WinCan

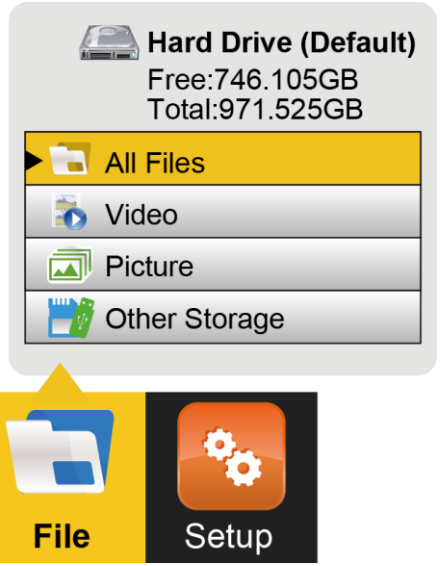
JPEG Image Capture - Take a Picture

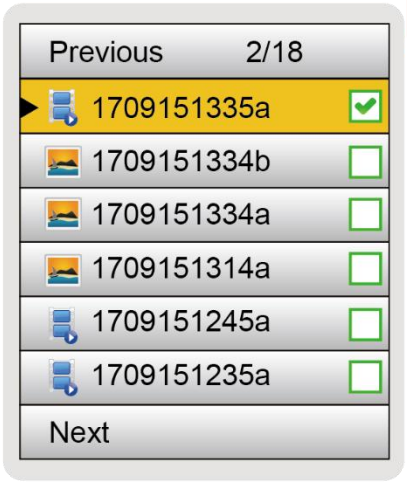
Press the **Camera** button on the top keypad.

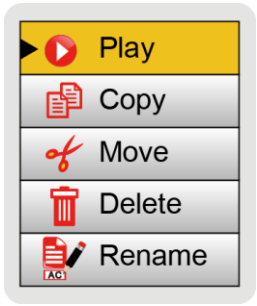
A Camera icon will flash in the status bar giving confirmation.



Playing Videos and Viewing Pictures







Tip

Use the text writer to add text to the first 10 seconds of the video. When looking at the preview window this may make it easier to identify your targeted video.

F10 Menu

Press **F10,** Highlight **All Files,** then use the **Right Arrow** key.

Highlight the video or picture, then use the **Right Arrow** key.

Highlight **Play** and press **Enter.**

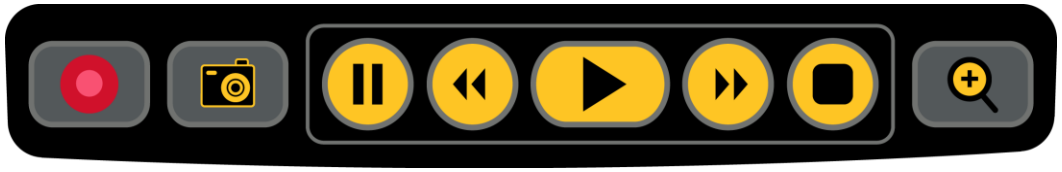
Enter

When finished press the **ESC** key twice to return to the file list.

ESC

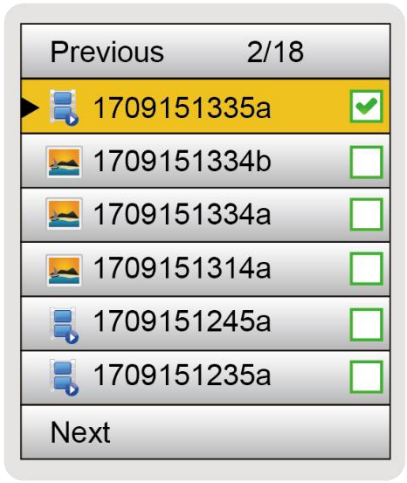
vCam-6 Options While Playing

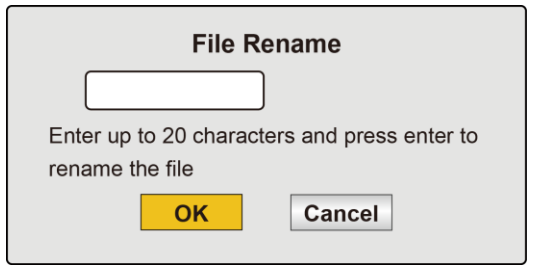
While playing a video
Use the controls on the top **media keypad** while the video is playing to:



Take pictures from the playing video	Pause the playing of the video	Rewind	Play video or view picture	Fast forward
Stop the video (or use the **ESC** key to stop the video) ESC	Zoom in on the playing video or picture	Adjust the speaker volume (Hold the **Ctrl** key while tapping the **+** or **–** key) Ctrl + – or + =	When finished press the **ESC** key twice to return to the file list.	

vCam-6 – Rename Files





Select the file, use the **Right Arrow** key.

Highlight **Rename,** use the **Right Arrow** key.

Enter the new file name in the dialog box and press **Enter**.

Enter

A confirmation box will appear showing that the File rename was successful.

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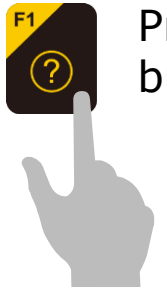
Text Overlay

vCam-6 – Keyboard

The vCam-6 control module comes with a full QWERTY keyboard customized for text overlaying and adjusting the settings in the control module.



Press the **F1 Help key** to view the help screen describing all of the control module's buttons, icons and their meanings.

Text Overlay – OSD (on-screen display)

Any text shown on the screen will appear in videos and pictures. (with the exception of the word “Page”)

The **OSD** (on-screen display) consist of the control modules set time, date and distance counter.

Press the “**F2 Info**” key to cycle through the OSD position of bottom of screen, top of screen or turn off.

Press and hold the **Ctrl key and tap the F2 Info key** to cycle through OSD text colors of white, black, yellow and green.

vCam-6 – Other Features - Keyboard

The **ESC** key clears text from the screen and will "step back" to the previous step.

The **F1 Help** key are pages which describe the icons and their meanings.

The **F2 Info** key controls the position and color (Ctrl+F2) of the OSD shown on the LCD.

The **F3, F4, F5, F6, F7 and F8** keys are all related to using the text overlay functions.

The **F9 Display** key is used to adjust the color properties of the camera, control the backlight setting of the LCD, and control the touch screen option.

The **F10 Menu** key brings up the main menu for access to video and image_files. Pressing this key twice brings up the "**setup**" menus of the control module.

The **F11 Font** key changes the font style of the text overlay.

The **F12 Wi-Fi** key turns on and off the built in Wi-Fi option.

Text Overlay – Colors and Background Settings

Any text shown on the screen will appear in videos and pictures.

F3 – Text – Use the **F3 Text** key to change the **text color** from the default color of white to black, yellow or green.

F4 – Text Background – Use the **F4** key to add a background color of black, white, or grey to the existing text.

F11 – Font – Use the **F11** to select one of four font sizes.

vCam-6 – Text Overlay

The Text Writer has 20 pages with 14 lines and 30 characters per line per page to be saved and later recalled for use.

The current page number is always shown on the same line as the on-screen display. This page number will never be seen in videos or images.

The content from the Text Writer, if saved into memory, will still be available even after the unit is turned off.

Text Overlay – Saving and Recalling Pages

Use the **F5 Recall** key to show text from a saved page of text.

Press the **F5 Recall** key and the recall icon and page number box will appear in the status bar.

Use the **Up/Down Arrow** keys to go to the page number (on manually enter the page number using the keyboard) to be recalled and then press the **Enter** key.

The recalled page of text should now be on the screen.

Press the **ESC** key to clear a page of text from the screen. The saved page will remain in memory until the page is deleted.

Text Overlay – Deleting Pages of Saved Text

Press the **F5 Recall** key and use the **Up/Down Arrow** keys to recall the page of text to be deleted.

Press **F7 Del Page** to delete the page from memory.

Note that you can also use the **F8 Del All** key to delete all of the pages from memory.

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Know what's below.
Call before you dig.

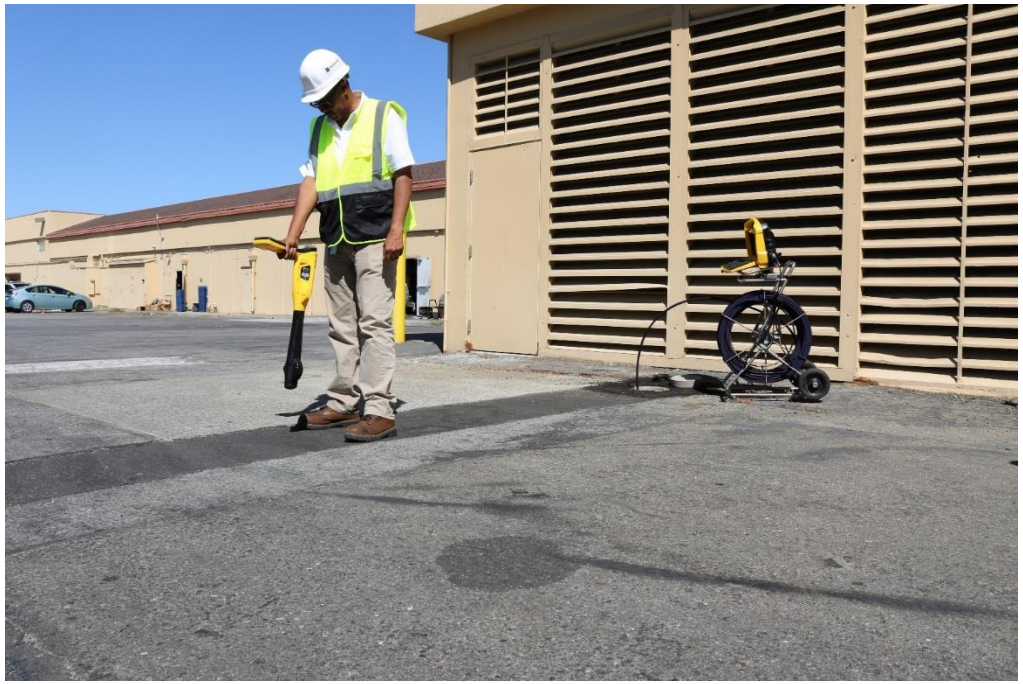
Sonde Locating and Pushrod Tracing

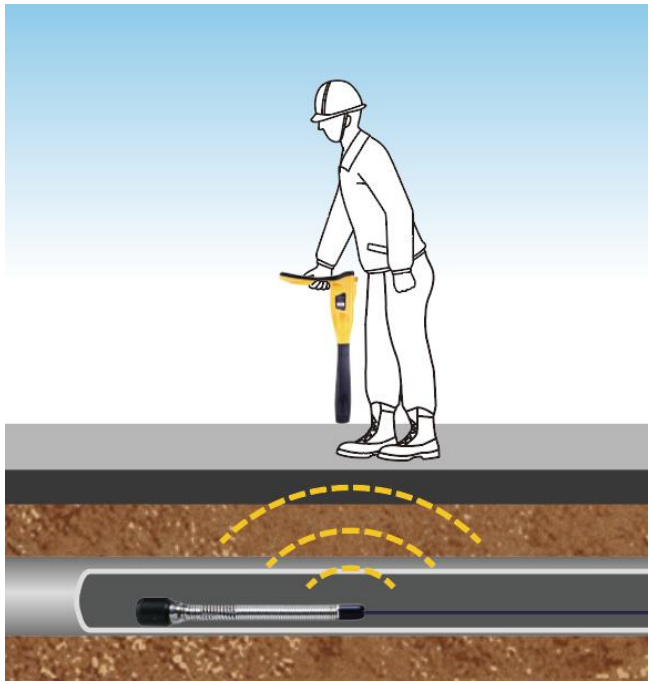
vCam-6 – Sonde Locating

All vCam series reels come with built-in locatable sondes.

Use the distance counter* as a reference to how far down the line the sonde is, and a locator to pinpoint the location and depth to the sonde.

* The distance shown on the LCD should be used for an estimate only. Always use a locator to pinpoint the camera sonde.





Pushrod Tracing

The entire length of deployed pushrod can be traced with the use of a utility locator's transmitter.

1

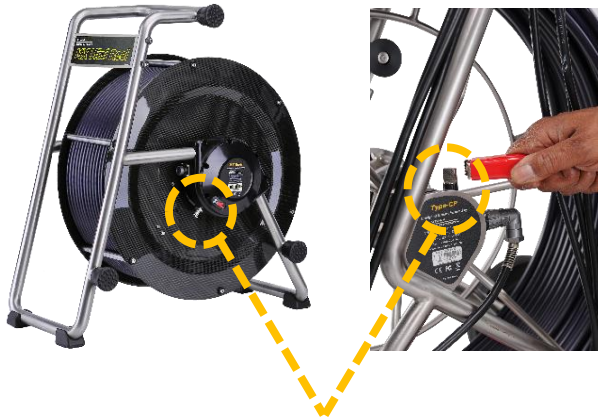
Attach the **red** "hot" lead to the trace post on the reel.

2

Attach the **black** "ground" lead to earth.

3 Power on the transmitter and use a frequency of 33kHz or higher.

4 The length of pushrod will now carry the locate signal and can be traced like a buried utility.



Pushrod Trace Post

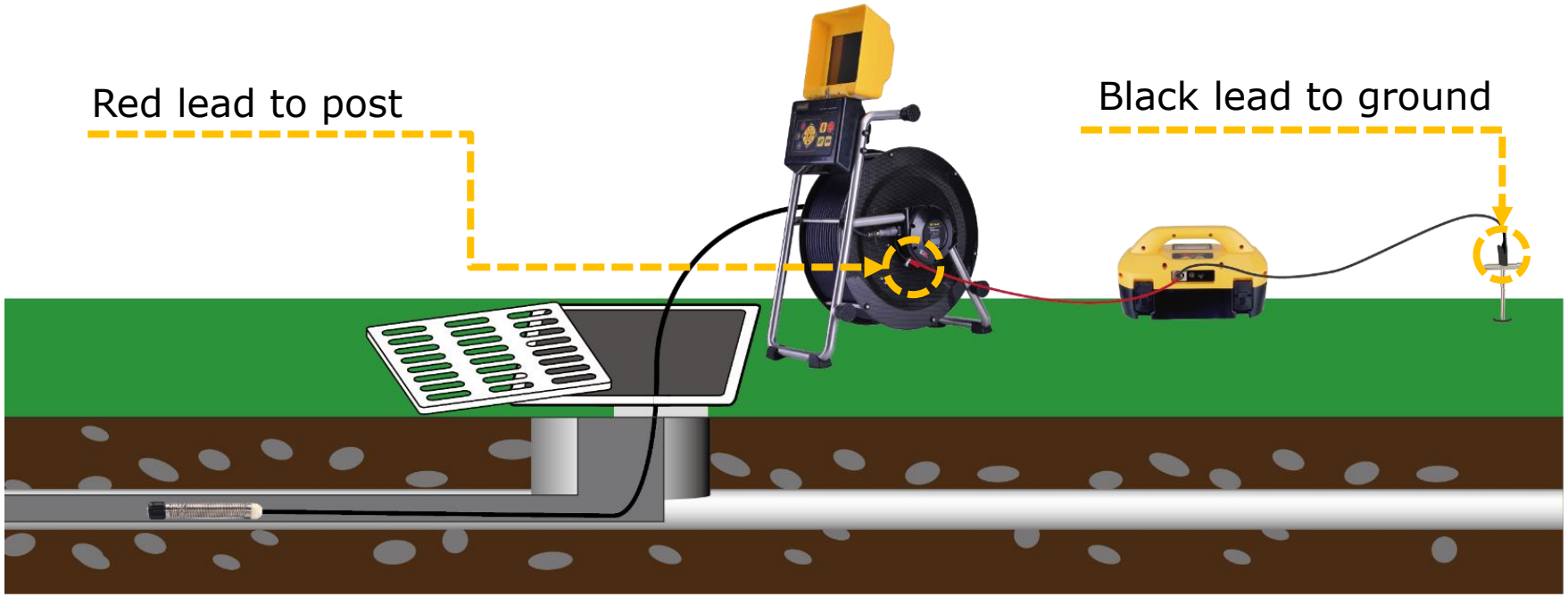
Utility locator Transmitter

Connection Leads and Earth Stake

Locator

vCam-6 – Pushrod Tracing

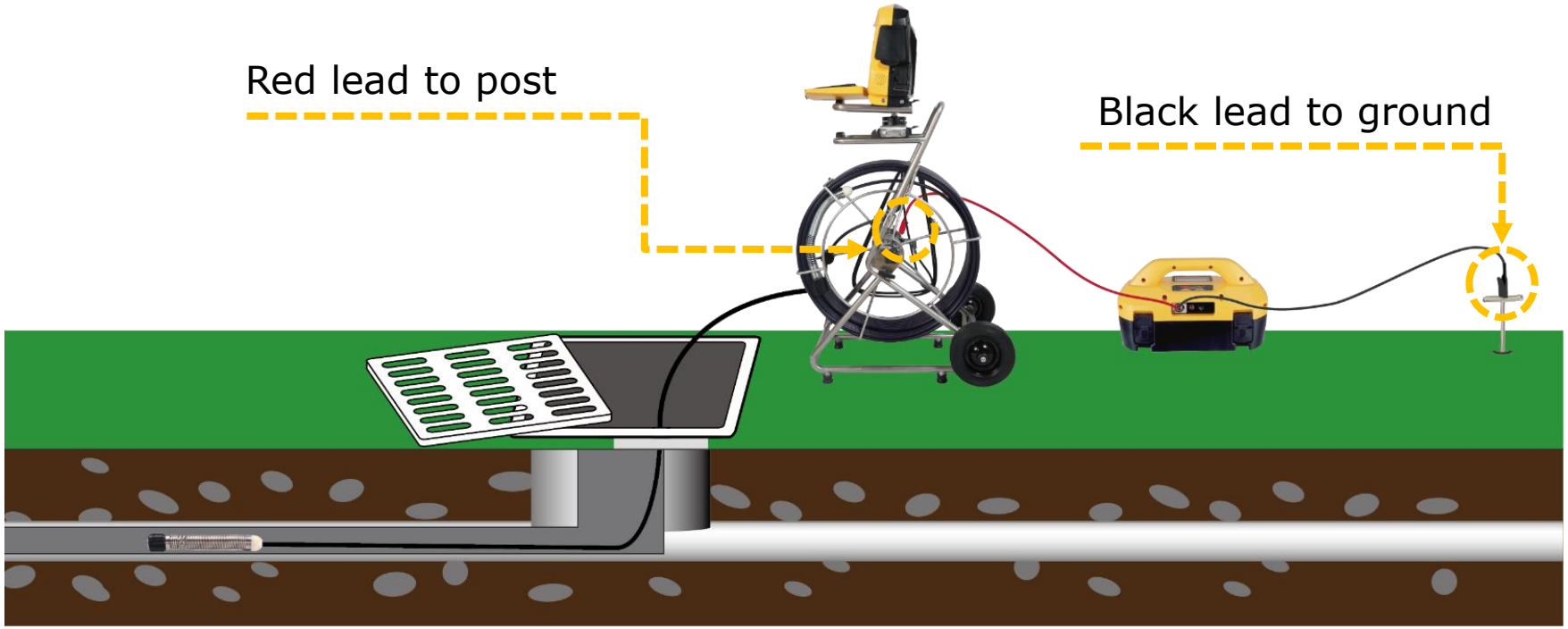
Transmitter Connection for MX Reel



Power on the transmitter and use a frequency of 33kHz or higher.
The length of pushrod will now carry the locate signal and can be traced like a buried utility.

vCam-6 – Pushrod Tracing

Transmitter Connection for Type-CP Reel

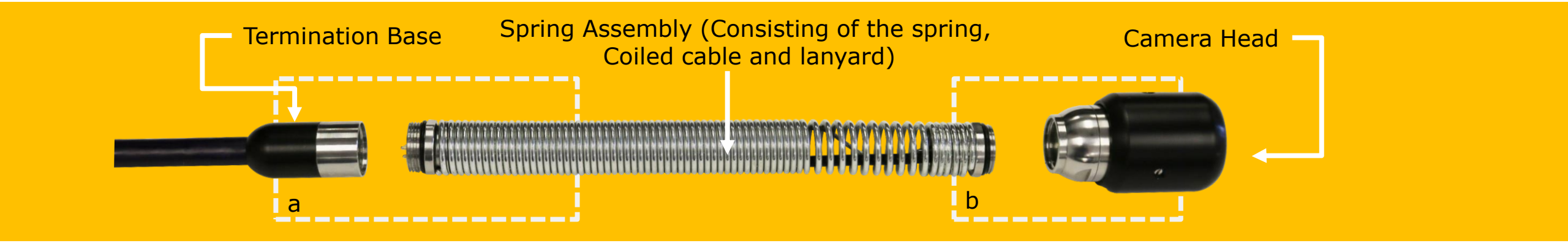


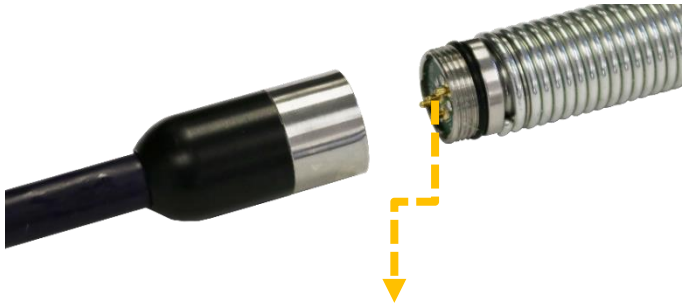
Power on the transmitter and use a frequency of 33kHz or higher.
The length of pushrod will now carry the locate signal and can be traced like a buried utility.

Changing Camera Heads and Spring Assemblies

The Type-MX Spring Assembly

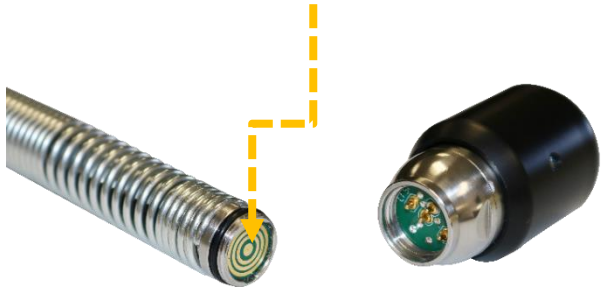
The spring assembly of the Type-MX Reel can be removed and changed by the user. No tools are needed when installing. Hand tighten only.





a Spring end with pins screws into the Termination Base

b Camera screws onto the end With the flat circuit board



vCamMX-2 - Removing and Installing the Spring and Camera

This video is available on our YouTube Channel

Removing and Installing the MX Camera Head

Try not to touch the green circuit board or gold pins on the spring assembly or camera head with bare hands. Touching these can transfer oils from the fingers to these components which may lead to corrosion. Wear clean rubber gloves if possible.

Remove any excess dirt that might come into contact with the gold pins or green circuit board. Check that the O-ring is in good condition.

1

Grasp the termination spring close to the base of the camera head.

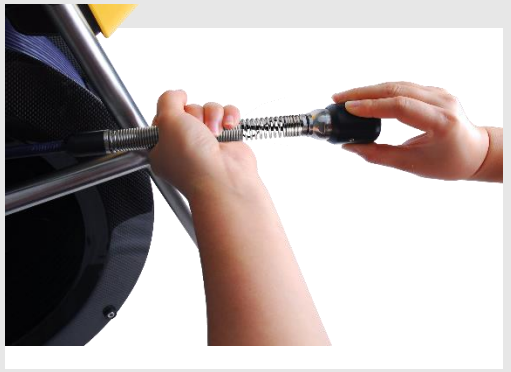
2

Present the camera head to the spring and turn the camera head clockwise until the O-Ring is no longer visible.

3

Hand tighten the camera head. Do not use any tools to tighten the camera head.

4



Removing and Installing the Type-MX spring assembly

Remove any excess dirt that might come into contact with the gold pins or green circuit board. Check that the O-rings are in good condition.

1

Grasp the termination base in one hand while unscrewing or screwing on the spring assembly.

2

Screw on the spring assembly (or camera head until the O-Rings are no longer visible.

3

Hand tighten the camera head and spring assembly. Do not use any tools.
Try not to touch the green circuit board or gold pins on the spring assembly or camera head with bare hands.

4

Removing and Installing the Type-MX spring assembly

1 Remove any excess dirt that might come into contact with the gold pins or green circuit board. Check that the O-rings are in good condition.

2 Grasp the termination base in one hand while unscrewing or screwing on the spring assembly.

3 Screw on the spring assembly (or camera head until the O-Rings are no longer visible.

4 Hand tighten the camera head and spring assembly. Do not use any tools. Try not to touch the green circuit board or gold pins on the spring assembly or camera head with bare hands.

Removing the Type-CP Reel Camera Heads

This video is available on our YouTube Channel

Removing the Type-CP Reel Camera Heads

Tools needed: Camera Removal Tool (supplied with control module) and optional clamping or holding device, like a vise, would be helpful. Use only the tool provided to remove the spring assembly.

1 Clamp the pushrod into a vice at the base of the termination.

2 Position the “hook” part of the camera removal tool on top of the springs starting coil.

3 Hold the camera in one hand while using the camera removal tool to turn the spring starting coil clockwise. Continue this until the camera is loose enough to be removed by hand.

Camera Tool

Lead Coil

Lead Spring Coil

Removing the Type-CP Reel Camera Heads

4 After the camera head is completely off of the spring, unscrew the floating camera nut from the base of the camera by turning it counterclockwise.

5 Firmly grasp the connector base and carefully pull it out of the camera base.

6 Clean off any grease and debris from the o–rings at the base of the camera and connection plug if needed.
Store the camera head in a clean dry place to prevent corrosion to any camera parts and prevent the pins from being damaged.
If storing for long periods of time remove the skid from the camera head.

Removing the Type-CP Reel Spring Assembly

Tools needed: Camera Removal Tool (supplied with control module) and optional clamping or holding device, like a vise, would be helpful. Use only the tool provided to remove the spring assembly.

1 Position the “hook” part of the camera removal tool on top of the spring’s lead coil.

2 Using the tool turn the spring counterclockwise until the spring is loose enough to be removed by hand.

3 Un-screw the floating camera nut from the termination base.

Camera Tool

Lead Coil

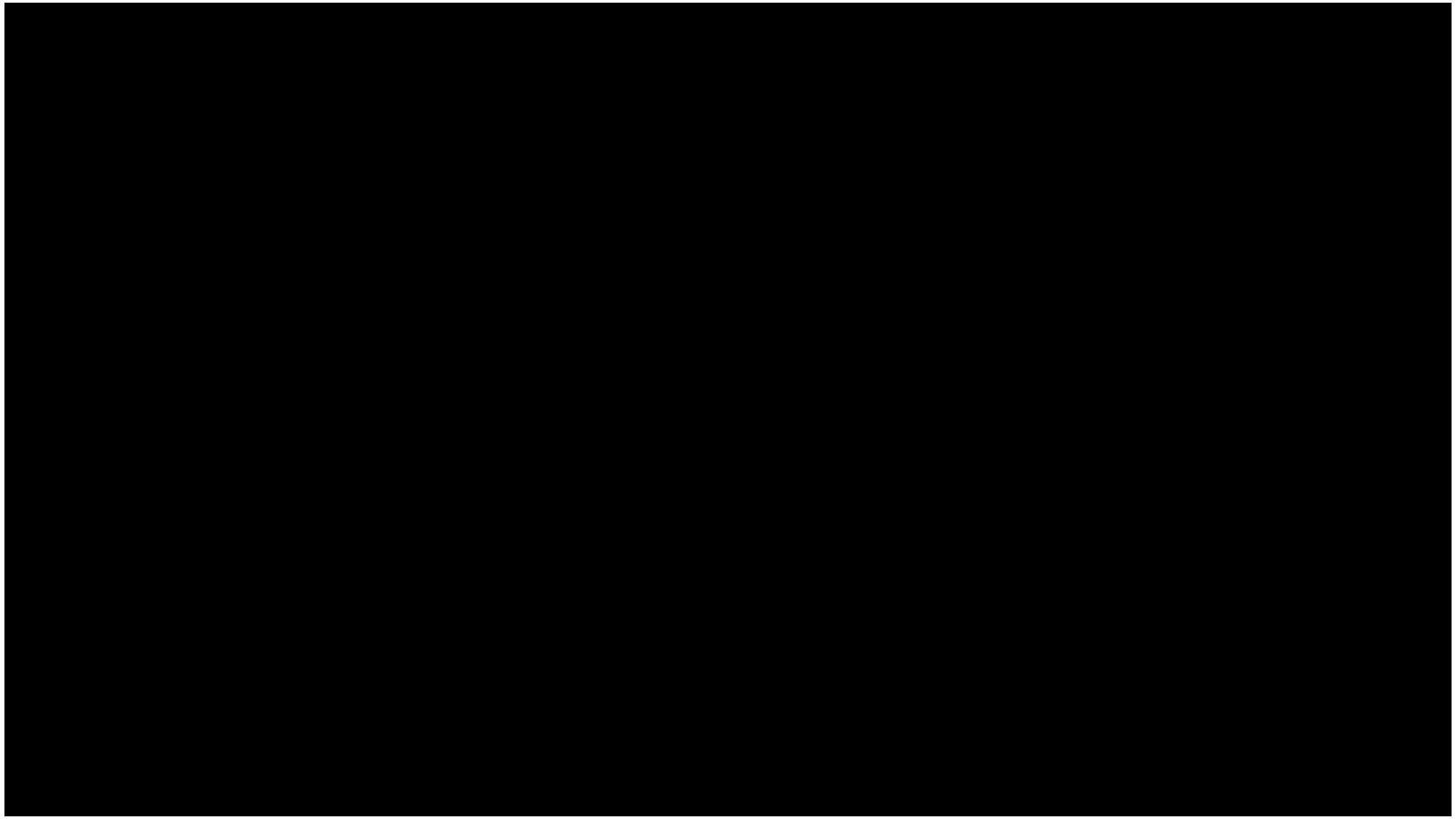
Lead Spring Coil

Removing the Type-CP Reel Spring Assembly

4 Firmly grasp the connector base and pull it out of the termination base.

5 Clean off any grease and debris from the o–rings at the base of the connecting plugs and sockets if needed.
Store the camera head in a clean, dry place to prevent corrosion to any camera parts and prevent the pins from being damaged.
If storing for prolonged periods of time, remove any skids from the camera head.

Installing the Type-CP Reel Termination Parts



This video is available on our YouTube Channel

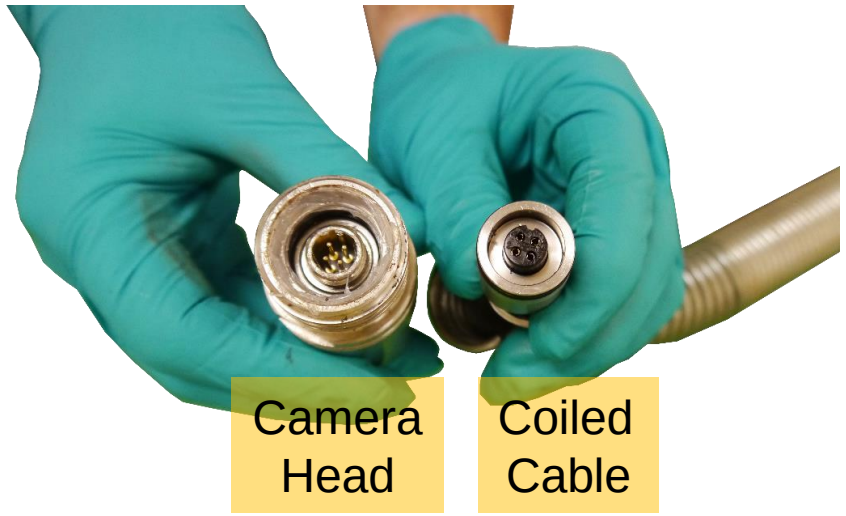
Installing the Type-CP Reel Termination Parts

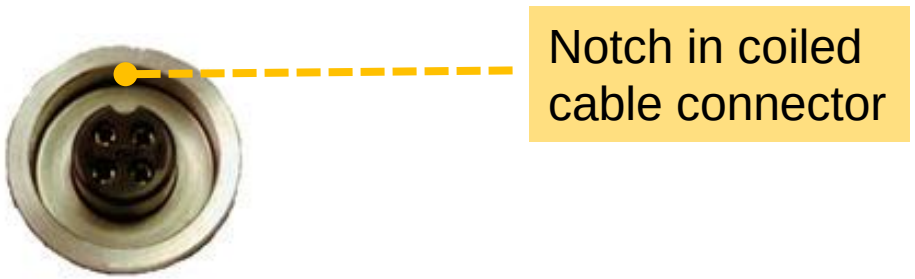
Attention

The 4-pin male plug and female socket used to mount the camera head have “keyed” connectors.

The keyed notch on the camera base must line up with the keyed groove in the coiled cable socket.

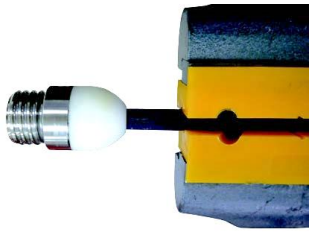
Failure to align these keys together correctly will result in damage to the camera pins, coiled cable connector, or termination base connector.





Installing the Type-CP Reel Coiled Cable and Spring

1

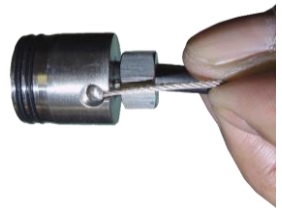


Clamp the pushrod into a vice at the base of the termination.

2

Clean the threads in the termination base then apply a liberal bead of silicone grease to the base female threads.

3



Feed the two lanyards through the floating camera nut and insert into the lanyard slots. Make sure that the lanyards are straight and not tangled in the coiled cable.

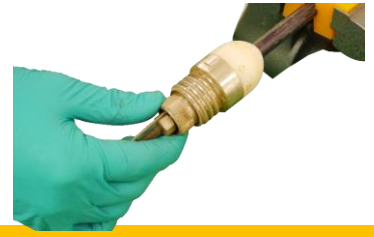
4

Pull the floating camera nut up and over the lanyards.

5

Line up the 4-pin female connector notch with the 4-pin male connector in the termination base.

6



Insert the coiled cable connector into the termination base and hand tighten.
Do not use any tools to tighten this connection.

Installing the Type-CP Reel Coiled Cable and Spring

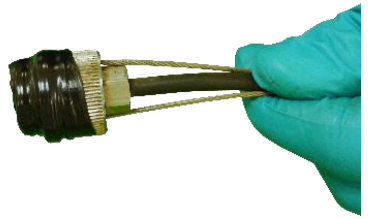
7

Feed the opposite end of the lanyards through the floating camera nut and insert into the opposite connector base lanyard slots. Make sure that the lanyards are straight and not tangled in the coiled cable.

8

Pull the knurled camera nut up and over the lanyards.

9



Wrap a piece of electrical tape around the floating camera nut securing the nut with lanyards to connector.

10

Slide the spring over the coiled cable assembly.

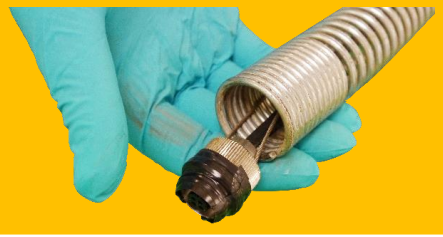
11

Screw the spring onto the termination base.
Hand tighten until flush with the termination base.

12

Pull enough of the coiled cable through the spring to work with to attach a camera head.

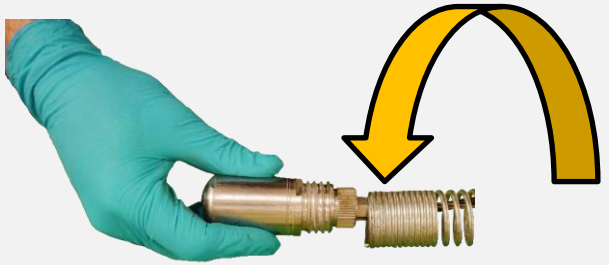
Installing the Type-CP Reel Camera Heads

1	Use a swab applicator to apply a bead of silicone grease on to the female threads in the camera base.	
1a	Use a fingertip and apply a bead of silicone grease on top of the two O-rings on the coiled cable connector.	
2	Feed the coiled cable with lanyards through the spring. Feed an amount that is comfortable to work with.	

Tip

Use a nylon cable tie to compress some of the coils in the spring. This will give you a few inches of space to work in while attaching the coiled cable.

Installing the Type-CP Reel Camera Heads

3	Line up the keyway on the 4-pin male and female socket and plug and press the coiled cable connector into the camera head.	
4	Pull up the floating camera nut to cover the lanyard mounting holes and screw the nut into the camera head. **Do not use any tools, hand tighten only**.	
5	To prevent the lanyards from becoming twisted during installation of the camera head, first turn the camera cable assembly **counterclockwise four complete turns**. Now when screwing the camera head into the spring the lanyards should not get twisted around the coiled cable.	

Installing the Type-CP Reel Camera Heads

6

Screw the camera head clock-wise into the termination spring until the camera base is flush with the spring. Hand tighten only.

Tip

Apply a layer of electrical tape over the screw holes on the installed skid. This will help keep debris and soil out of the screw slots making it easier to remove.

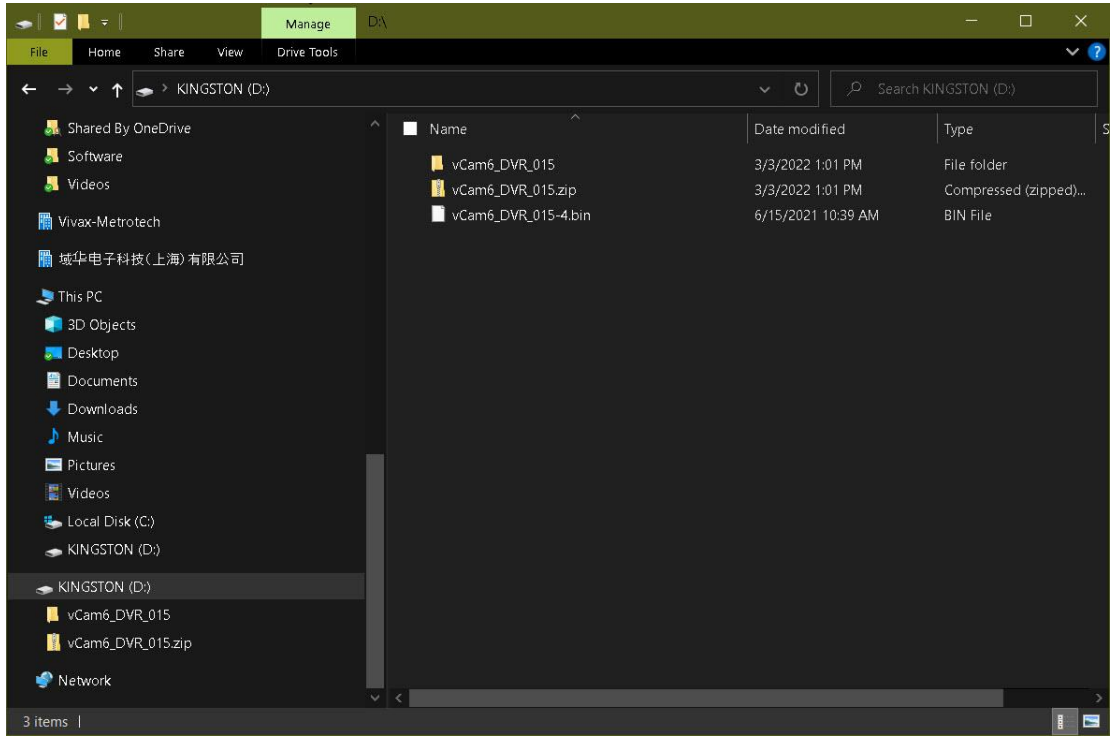
Software Updates

Updating the Software (firmware)

- The control module can be updated by loading the given firmware file onto a USB Thumb Drive.

- Updates come in the form of ".bin" (to update the DVR) and ".soc" (to update the MCU) files.

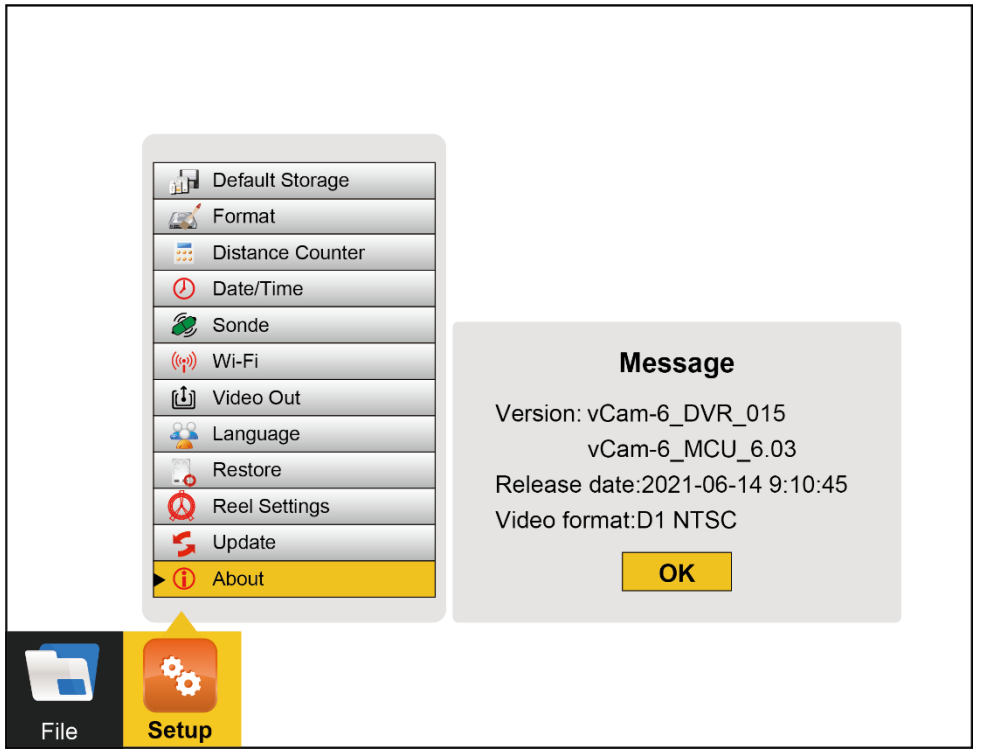
- The firmware update files must be installed on the USB or SD Cards "root" directory. That means that the files must be visible when you look at the contents of the USB drive. They cannot be compressed or in any folders.



Updating the Software (firmware)

The current software version of the control module can be found on the “**About** ” screen located in the **Settings sub-menu**. 

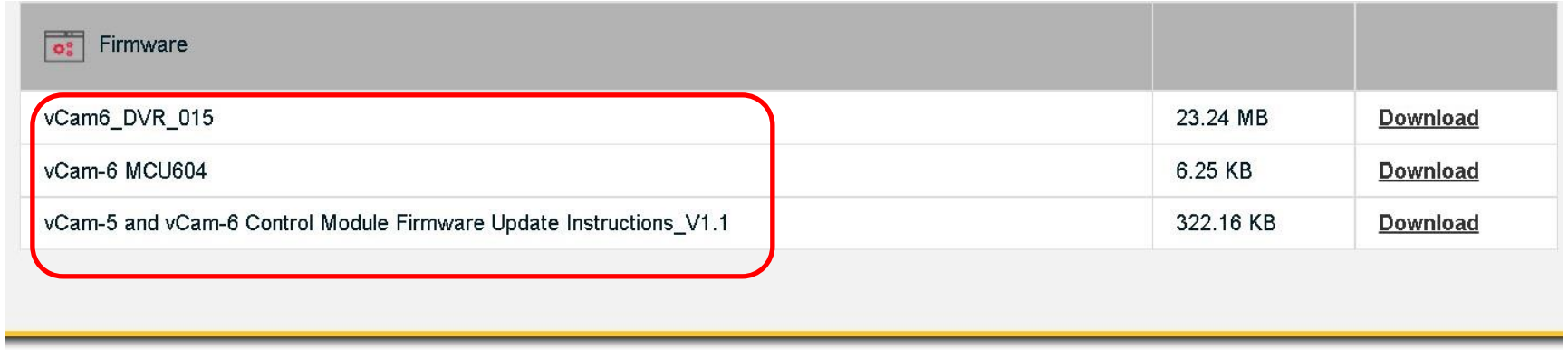
Press the F10 key twice to bring up the **Setup** menu.
Scroll down to and select **About.**



Updating the Software (firmware)

The software update files can be found on the vCam-6 webpage in the Firmware section.

https://www.vivax-metrotech.com/vivax-product/vcam-6/



Firmware		
vCam6_DVR_015	23.24 MB	Download
vCam-6 MCU604	6.25 KB	Download
vCam-5 and vCam-6 Control Module Firmware Update Instructions_V1.1	322.16 KB	Download

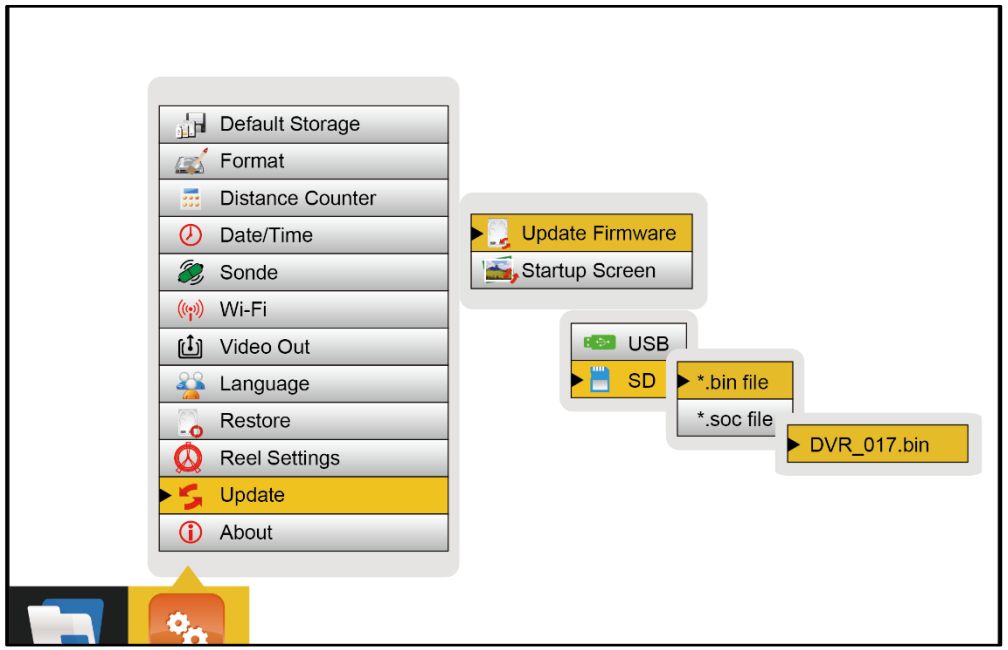
NOTE

Subscribe to our newsletters to receive email notifications of software updates.

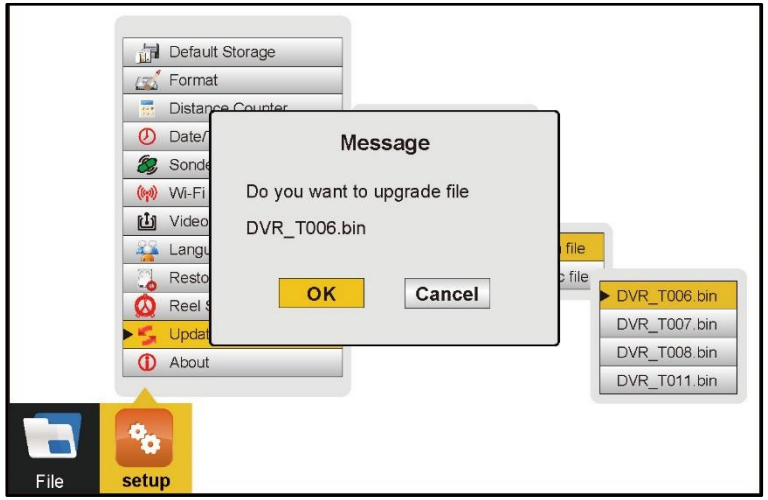
Contact - Vivax (vivax-metrotech.com)

Updating the Software (firmware)

1. Press the **F10** key twice to enter the **Settings** menu.
2. Scroll to **Update** > **Update Firmware** > **USB** > ***bin file** > then **select the bin file** on the USB drive.

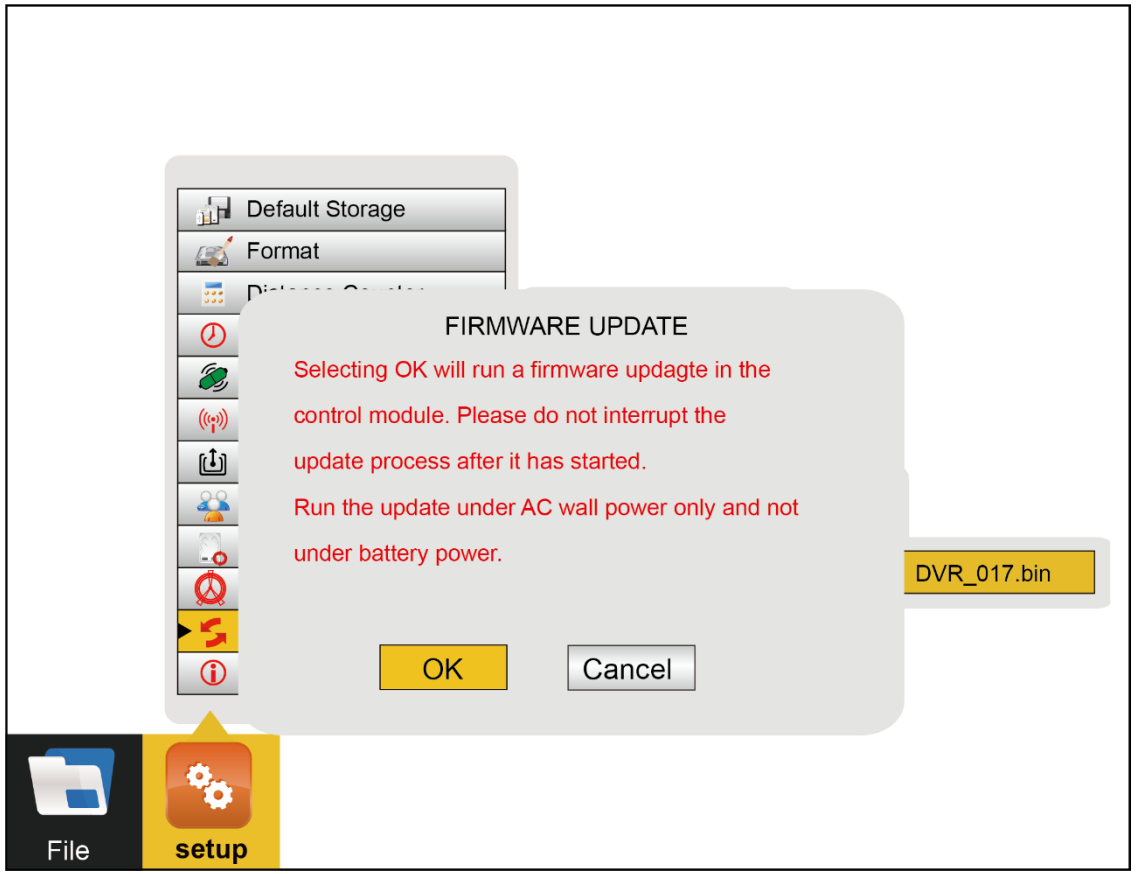


Now select **OK** to start the update.



Updating the Software (firmware)

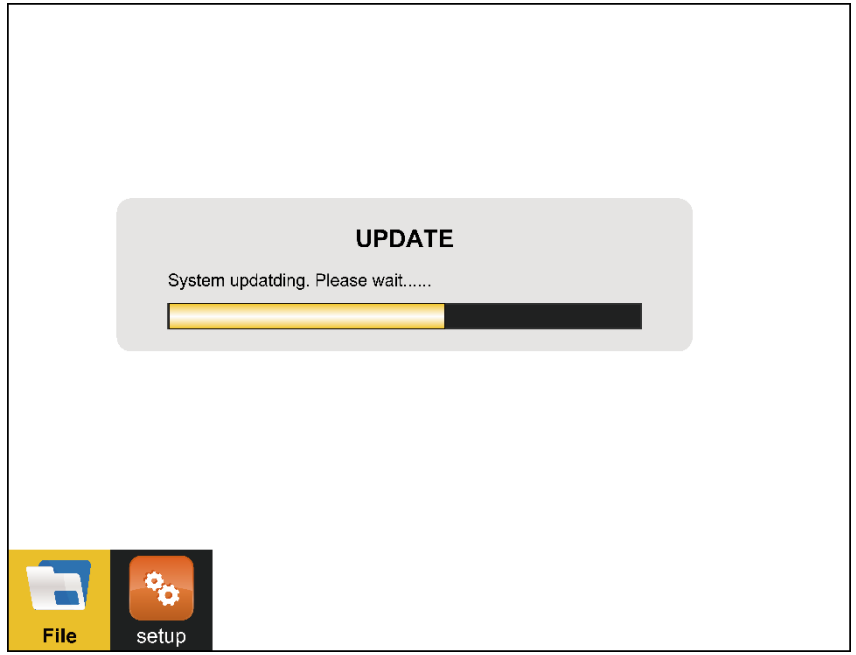
3. Read and select **OK** to the Power warning if the control module meets the criteria.

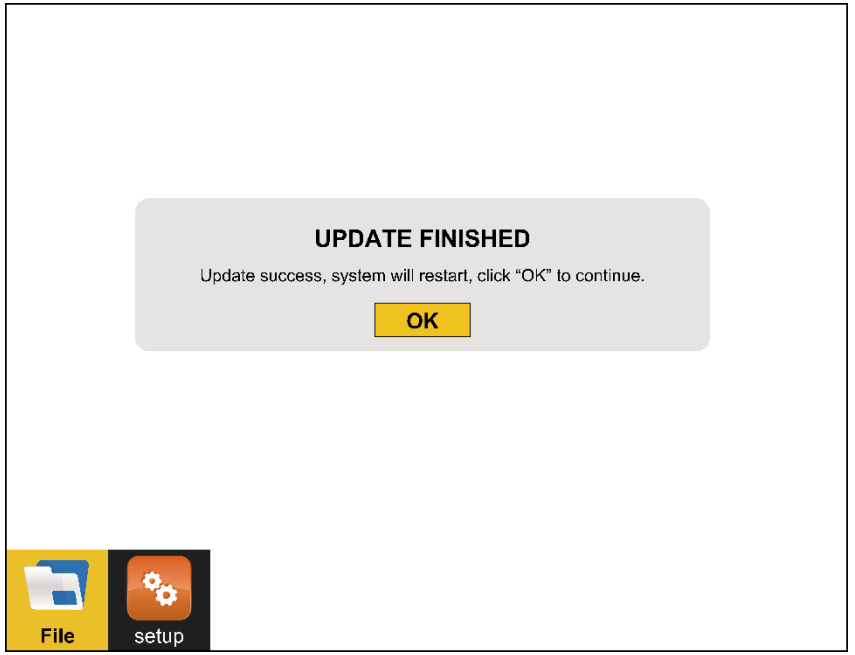


Updating the Software (firmware)

4. Let the update run uninterrupted.

5. When the update has completed the control module will restart.



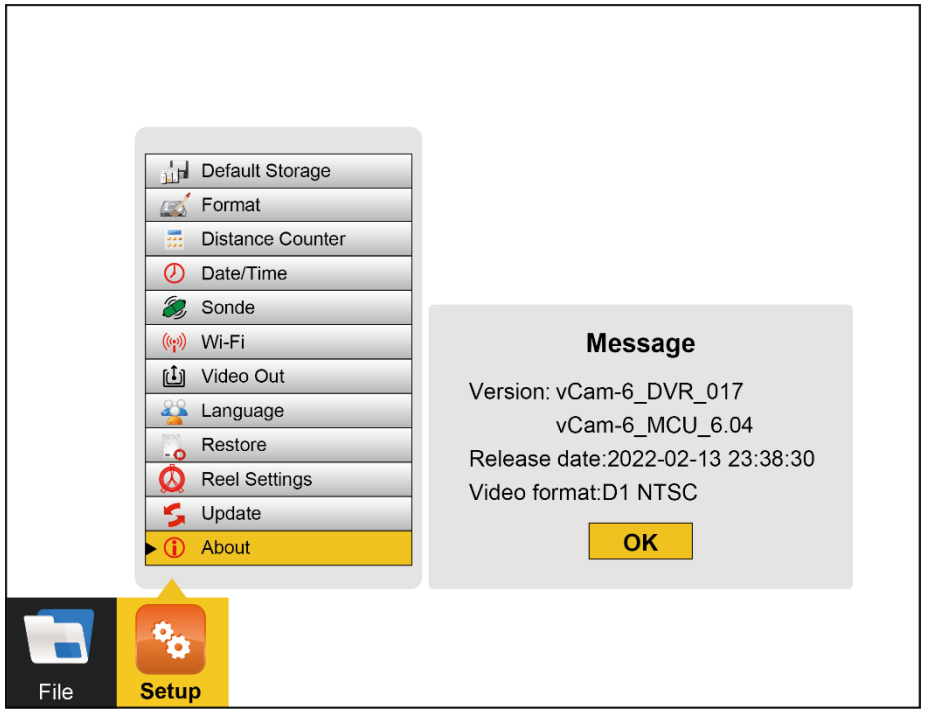


Updating the Software (firmware)

Return to the About to check that the update was successful.

The current software version of the control module can be found on the “**About** ” screen located in the **Settings sub-menu**. 

Press the F10 key twice to bring up the **Setup** menu.
Scroll down to and select **About.**



Add a Start Screen

Add a Start Screen

This option allows the personalization of the second start screen seen when the control module is starting. Any image, text, or logo can be used as long as it is in a JPEG image format.

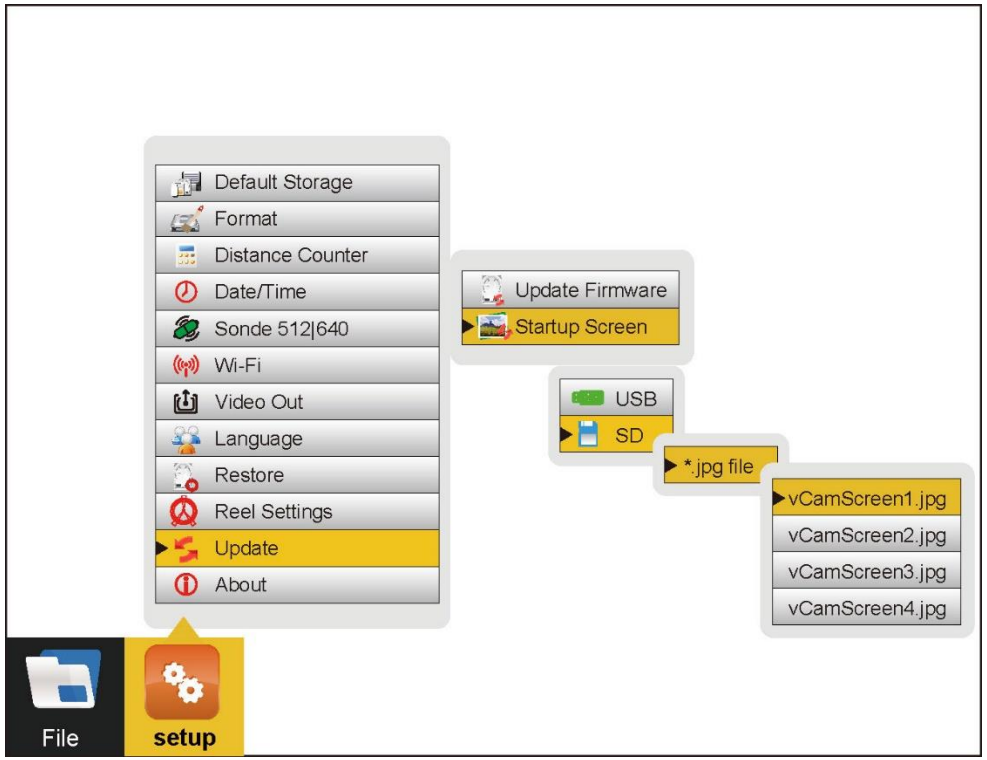
To use a picture, it must be:

- JPEG format
- 24-bit or 32-bit color depth
- 700 x 480 pixels
- 96 dpi

If larger or smaller images is used, the picture seen on the screen may be distorted.

Add a Start Screen

1. Add the jpeg image to a USB drive and insert it into the control module.
2. Press the **F10** key twice to enter the **Settings** menu.
3. Scroll to **Update** > **Startup Screen** > **USB** > **jpeg file** > then **select the picture** on the USB drive.



Compatibility, Camera Specifications and Popular Accessories

vCam-6 Control Module Compatibility

Reels and Camera Compatibility

vCam-6 Control Module

Type-MX Mini Reel

Type-CP Standard Reel

D18-MX

D26-MX

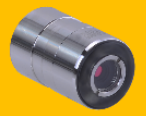
D34-C D46-CP

Previous version vCam-5
Standard Definition

D34-HD D46-HD

Current version vCam-6
High Definition

Camera Specifications – Type-MX Reel Range

	D18-MX 	D26-MX 
Pipe size:	Up to 4”/101mm	Up to 4”/101mm
Dimensions:	0.70”/18mm D x 18.6/29mm L	1”/26mm D x 2”/50mm L
Resolution:	520 TVL	700 TVL
Active Pixels:	NTSC: 704X480 PAL: 704X576	NTSC: 704 X480 PAL: 704X576
Environmental:	11 BAR	10 BAR
Lighting:	17.53 Lumens	20.39 Lumens
Auto upright:	No	Yes
Construction:	Stainless steel housing with Sapphire glass lens	
Reel compatibility:	MX Reel	MX Reel

Camera Specifications – Type-CP Reel Range

	D34-HD 	D46-HD 
Pipe size:	3”/76mm to 6”/152mm	3”/76mm to 8”/203mm
Dimensions:	1.3”/34mm D x 2.9"/73mm L	1.8"/46mm D x 2.7"/68.8mm L
Resolution:	1080	1080
Active Pixels:	1920 x 1080	1920 x 1080
Environmental:	11 BAR	11 BAR
Lighting:	12.87 Lumens	44.02 Lumens
Auto upright:	Yes	Yes
Construction:	Stainless steel housing with Sapphire glass lens	
Reel compatibility:	Type-CP	Type-CP

Camera Test Port and Test Leads

To help troubleshoot any possible camera head issues:

Plug the D34 or D46 series cameras into the camera test port on the control module.
(Be sure to unplug the interconnect cable first.)

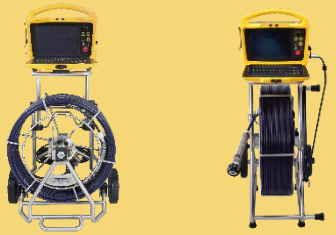
The test port and test lead can confirm that the lighting and picture quality of the cameras are working correctly.

Use the Camera Test Lead plugged into the control module for the MX series cameras.

Skid Range

Model	D18-MX	D26-MX	D34-HD	D46-HD
2.25”/57mm Guide Skid Pipe Range: 4” (100mm) 	●	●	●	–
3”/75mm Guide Skid Pipe Range: 4” (100mm) 	–	●	●	●
4”/100mm Guide Skid Pipe Range: 6” (150mm) 	–	–	●	●
5”/127mm Guide Skid Pipe Range: 6” (150mm) 	–	–	–	●
Type-B Adjustable Skid Pipe Range: 10”/255mm to 16”/405mm  Skid minimum diameter: 8”/200mm Skid minimum length: 11”/270mm Skid maximum diameter: 12”/305mm Skid maximum length: 10”/255mm  Optional Light Kit	–	–	●	●

Popular Accessories

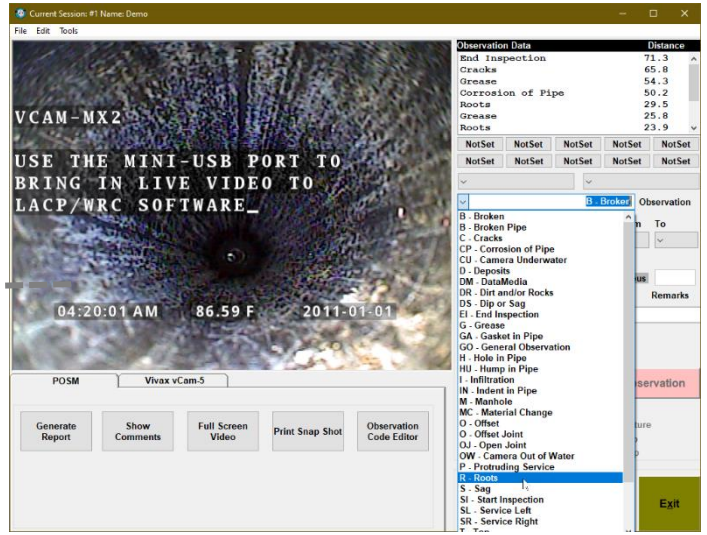
Description	Picture
Rotate and Tilt Table - A swivel table that mounts between the Type-CP reel and control module which allows rotating and tilting of the control module.	
Drip Bag, for Type-CP Standard Reel or Type-MX Mini Reel - Use a drip bag when working indoors to help prevent water and debris from falling off the pushrod onto a floor or carpet.	
Extended Interconnect Cable, 26 feet – Extended length 26-foot interconnect cable to allow more separation between the control module and reel.	
Type-C vCam-6 Mounting Handle Assembly - Replacing the original handle of the older Type-C reel with this version allows the newer vCam-6 control module to mount atop the older Type-C reel.	

VIVAX METROTECH

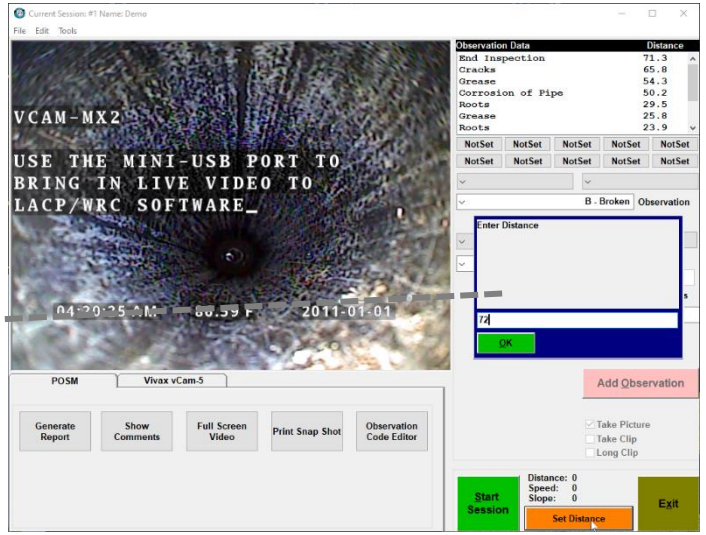
LACP/WRC Integration

vCam-6 Control Module - LACP/WRC Integration

- Use the Video Out to send raw video into the LACP/WRC software.
- Use the video out with or without the vCam-6 overlay.



- Use the mini-USB out port to import the distance count from the vCam-6 control module into the LACP/WRC software.
- Reset the control module distance count through the LACP/WRC software.



vCam-6 Control Module - POSM LACP Integration

Items needed:

For distance counter interface: USB-A to USB-Mini Cable

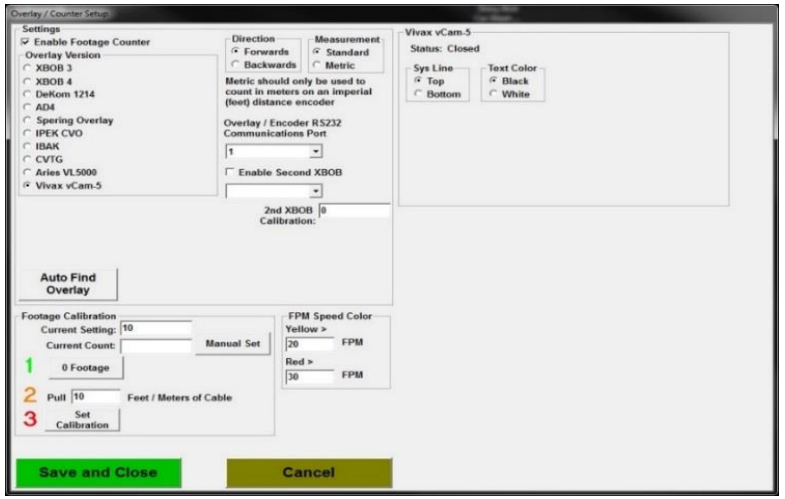
For live video interface: Sensoray model 2253-S Encoder

BNC male to RCA female adapter

RCA Video cable

USB 2.0 A-Male to B-Male USB cable

In the POSM software go to Settings
And select Vivax vCam-5



vCam-6 Control Module - WinCan LACP Integration

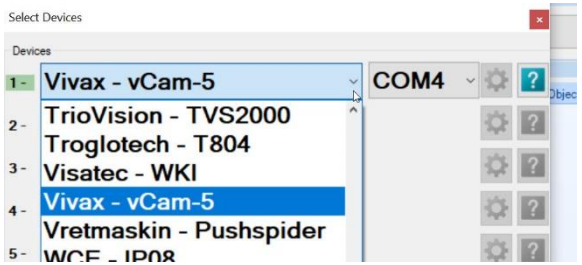
Items needed:

For distance counter interface: USB-A to USB-Mini Cable

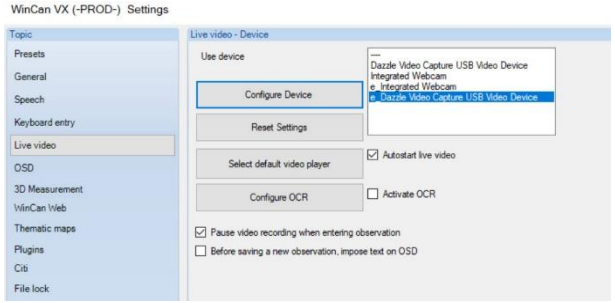
For live video interface: USB Dazzle Video Capture Device

RCA Video cable

In the WinCan software go to Settings and select Vivax vCam-5



Then select eDazzle Video Capture Device

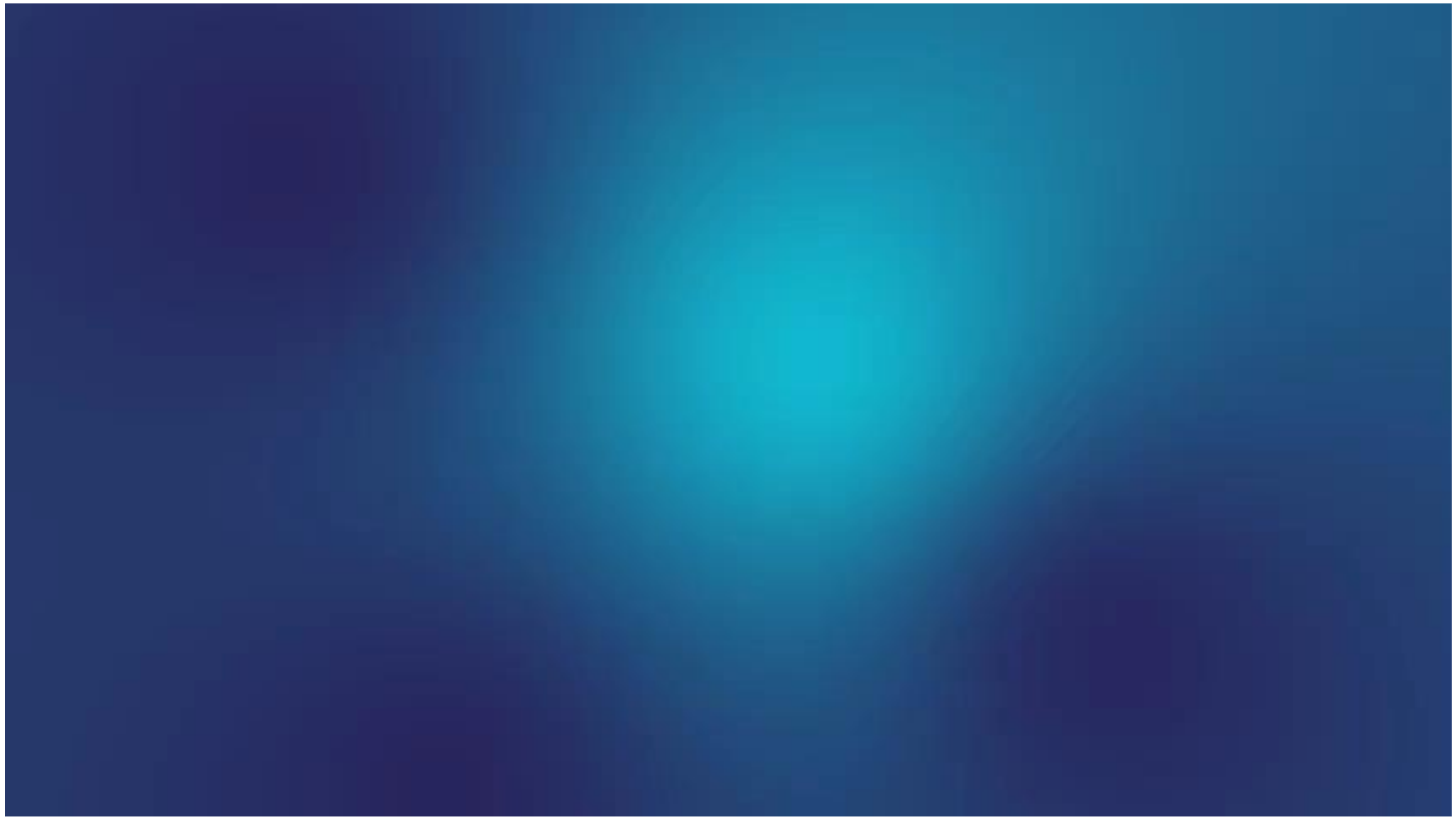


vCam-6 Control Module - LACP/WRC Integration

- A customer's custom cart to inspect up to twenty laterals a day using LACP software.

vCam-6 Control Module - LACP/WRC Integration

POSM



Locators, Sonde and Utility

vLoc3-Cam
Sonde Locator

vLoc3-Pro
Utility Locator
Receiver

Loc3-5Tx
5-Watt Transmitter

vScan Sonde and
Utility Avoidance
Tool

vScan Transmitter

VM-540 Sonde and
camera locator

All-in-one Mini-Inspection System

The vCamMX-2

The vCamMX-2 Mini-Inspection System is an all-in-one mini-camera for the inspection of smaller diameter lines.

Internal microphone for audio commenting over recording videos

8” daylight viewable display

Automatic backup of videos and pictures to SD Card

Locatable three frequency sonde and traceable pushrod for pinpointing and mapping out lines

Choice of two interchangeable camera heads

D18-MX 0.7” / 17mm fixed position camera

D26-MX 1” / 26mm self-leveling camera

Wi-Fi Option

Record direct to USB drive in MP4 video format

One-touch recording and JPGE still image capture

2 x Digital zoom viewing

Large keypad usable while wearing gloves

Internal rechargeable battery provides more than 5 hours of battery life

Lightweight durable carbon fiber pushrod drum

Range of camera skids up to 3” / 76mm

- 1-year warranty covers entire system.
- A Camera exchange program is available for out of warranty camera heads.

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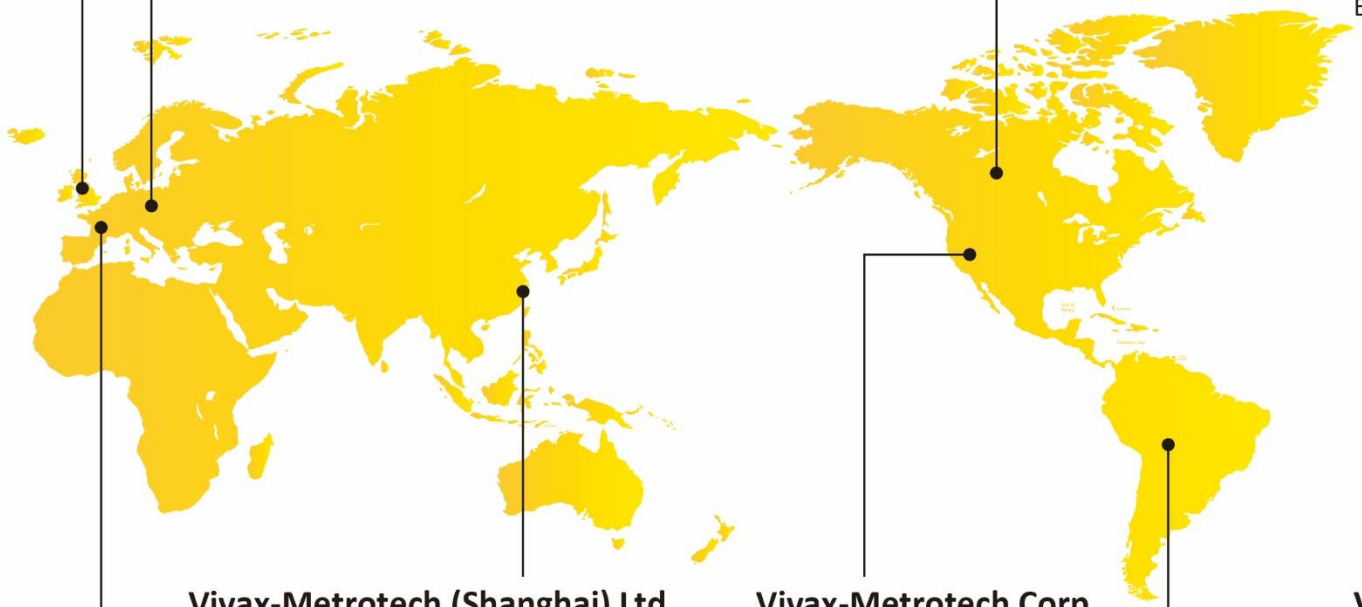

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The End

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