Nothing but **HEAVY DUTY.®**



M18 SIM

Original instructions
Originalbetriebsanleitung
Notice originale
Istruzioni originali
Manual original
Oorspronkelijke gebruiksaanwijzing
Original brugsanvisning
Original bruksanvisning
Bruksanvisning i original
Alkuperäiset ohjeet
Πρωτότυπο οδηγιών χρήσης
Orijinal işletme talimatı
Původním návodem k používání
Pôvodný návod na použitie
Instrukcją oryginalną
Eredeti használati utasítás
Izvirna navodila
Originalne pogonske upute
Instrukcijām oriģinālvalodā
Originali instrukcija
Algupärane kasutusjuhend
Оригинальное руководство по эксплуатации
Оригинално ръководство за експлоатация
Instrucţiuni de folosire originale
Оригинален прирачник за работа
Оригінал інструкції з експлуатації
التعليمات الأصلية

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1 GENERAL INFORMATIONS

1.1 Additional Safety and Working Instructions

Do not try to replace the battery pack if the surface of the instrument is wet.

Do not dispose of used battery packs in the household refuse or by burning them. Milwaukee Distributors offer to retrieve old batteries to protect our environment.

Do not store the battery pack together with metal objects (short circuit risk).

Use only System M 18 chargers for charging System M 18 battery packs. Do not use battery packs from other systems.

Battery acid may leak from damaged batteries under extreme load or extreme temperatures. In case of contact with battery acid wash it off immediately with soap and water. In case of eye contact rinse thoroughly for at least 10 minutes and immediately seek medical attention.

Warning! To reduce the risk of fire, personal injury, and product damage due to a short circuit, never immerse your tool, battery pack or charger in fluid or allow a fluid to flow inside them. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach containing products, etc., Can cause a short circuit.

This appliance is not intended to be used or cleaned by persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given instructions concerning the safe use of the appliance by a person legally responsible for their safety. They should be supervised whilst using the appliance. Children shall not use, clean or play with this appliance, which when not in use should be secured out of their reach.



Chemical Burn Hazard. This device contains a lithium button/coin cell battery. A new or used battery can cause severe internal burns and lead to death in as little as 2 hours if swallowed or enters the body. Always secure the battery cover. If it does not close securely, stop using the device, remove the batteries, and keep it away from children. If you think batteries may have been swallowed or entered the body, seek immediate medical attention.

1.2 Technical data

Screen size	8 "
Screen resolution	800x600 dpi
Picture resolution	1080 p
Max. zoom	4x
Battery voltage	18 V
Weight according EPTA-Procedure 01/2014 (12 Ah)	3.82 kg
Frequency band(s) of Bluetooth	2402-2480 MHz
Radio-frequency power	1.8 dBm
Bluetooth version	4.0 BT signal mode
Recommended ambient operating temperature	-18 …. +50 °C
Recommended battery Type	M18B…; M18HB….
Recommended charger Type	M12-18C, M12-18AC, M12-18FC, M1418C6

1.3 Specified conditions of use

The wireless monitor allows for viewing the raw video from the camera head, recording videos and capturing picture images and playback functions of video and picture files. During the recording of videos, audio comments can be captured through the internal microphone, and text comments can be added via the labels option. These text comments will appear in the recorded video and will show in the pictures along with the system time, system date and distance of deployed push cable.

Do not use this product in any other way as stated for normal use.

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1.4 Radio Frequency Interface Requirements - Related to European installation

Note: This equipment has been tested and found to comply with the limits for a EN 300 440 v2.1.1 receiver Category 3.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment is sensitive to other equipment that intentionally generates, radio frequency energy in the 2402-2480MHz that may conduce to the instability to use the Remote Control on it. However there is no guarantee that interference will not occur in a particular installation. If this equipment suffer from the harmful interference from another radio device to radio this can be determined by turning the respective equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Turn off the disturbance equipment
- Increase the separation between the disturbance equipment
- Consult the dealer or an experienced radio technician for help

1.5 EC-declaration of conformity

Hereby, Techtronic Industries GmbH declares that the radio equipment type M18SIM is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: http://services.milwaukeetool.eu.

1.6 One-key™

To learn more about the ONE-KEY functionality for this tool, please reference the Quick Start guide included with this product or go to www.milwaukeetool.com/one-key. To download the ONE-KEY app, visit the App Store or Google Play from your smart device.

Also, when the product experiences ESD, the Bluetooth communication will be disconnected. It needs to be reset manually to recover.
We considered the results to be within our minimum acceptable performance level according to EN 55014-2:2015 / EN 301489-1 V2.1.1 / EN 301489-17 V3.1.1.

One-key™ indicator

Solid Blue	Wireless mode is active and ready to be configured via the ONE-KEY™ app.
Blinking Blue	Tool is actively communicating with the ONE-KEY™ app.
Blinking Red	Tool is in security lockout and can be unlocked by the owner via the ONE-KEY™ app.

1.7 Batteries

Battery packs which have not been used for some time should be recharged before use.

Temperatures in excess of 50°C (122°F) reduce the performance of the battery pack. Avoid extended exposure to heat or sunshine (risk of overheating).

The contacts of chargers and battery packs must be kept clean.

For an optimum life-time, the battery packs have to be fully charged, after used.

To obtain the longest possible battery life remove the battery pack from the charger once it is fully charged.

For battery pack storage longer than 30 days:
Store the battery pack where the temperature is below 27°C and away from moisture
Store the battery packs in a 30% - 50% charged condition
Every six months of storage, charge the pack as normal.

1.8 Transporting lithium batteries

Lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

Transportation of those batteries has to be done in accordance with local, national and international provisions and regulations.

• The user can transport the batteries by road without further requirements.

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• Commercial transport of Lithium-Ion batteries by third parties is subject to Dangerous Goods regulations. Transport preparation and transport are exclusively to be carried out by appropriately trained persons and the process has to be accompanied by corresponding experts.

When transporting batteries:

• Ensure that battery contact terminals are protected and insulated to prevent short circuit.
• Ensure that battery pack is secured against movement within packaging.
• Do not transport batteries that are cracked or leak.

Check with forwarding company for further advice

1.9 Maintenance

Use only Milwaukee accessories and spare parts. Should components need to be replaced which have not been described, please contact one of our Milwaukee service agents (see our list of guarantee/service addresses).

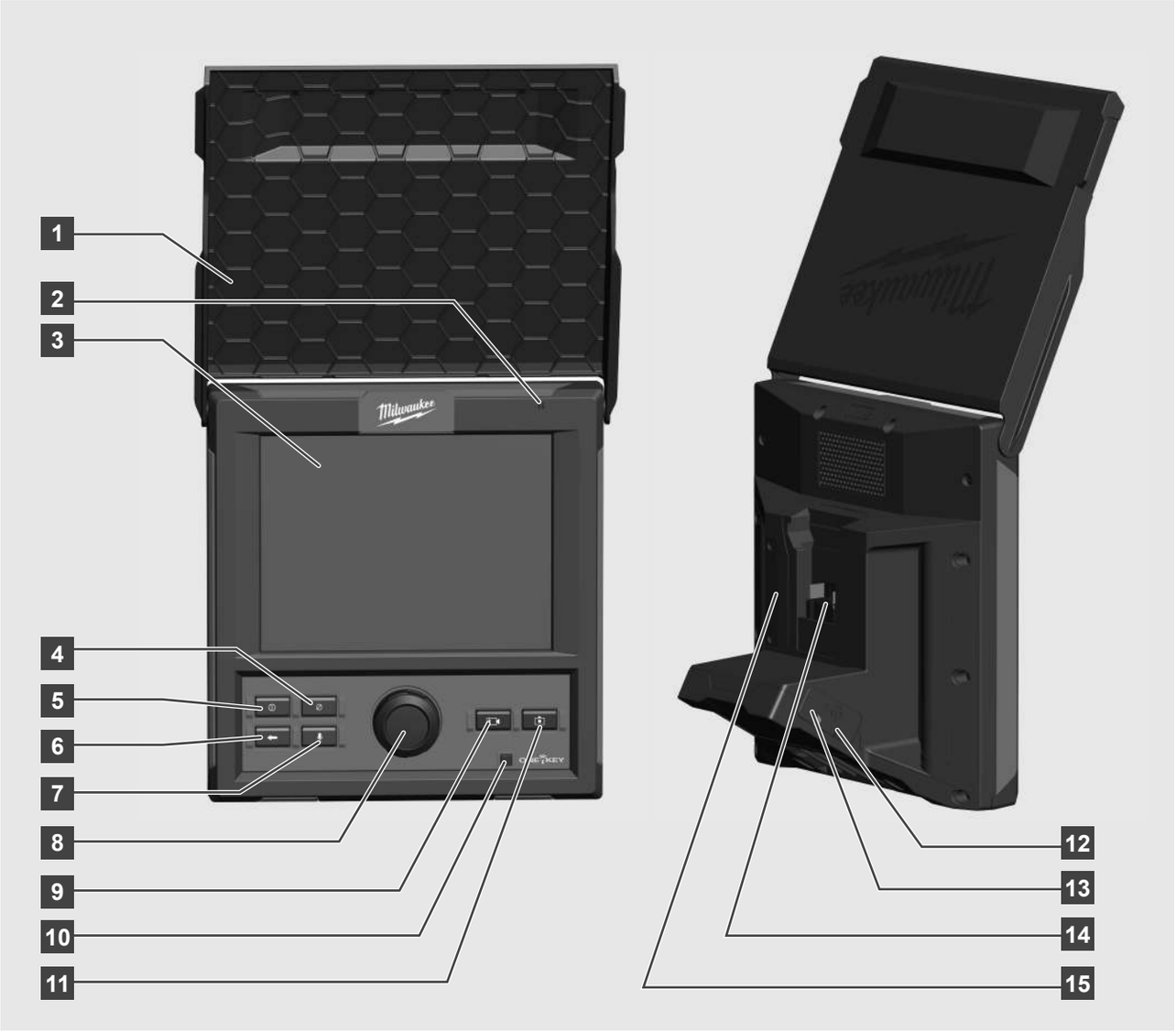
If needed, an exploded view of the tool can be ordered. Please state the machine type printed as well as the six-digit No. on the label and order the drawing at your local service agents or directly at: Techtronic Industries GmbH, Max-Eyth-Straße 10, 71364 Winnenden, Germany.

1.10 Symbols

	CAUTION! WARNING! DANGER!
	Remove the battery pack before starting any work on the machine.
	Please read the instructions carefully before starting the machine.
	Do not swallow the coin cell battery!
	Do not dispose electric tools, batteries/rechargeable batteries together with household waste material. Electric tools and batteries that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility. Check with your local authority or retailer for recycling advice and collection point.
V	Volts
	Direct current
	European Conformity Mark
	Ukraine Conformity Mark
	EurAsian Conformity Mark

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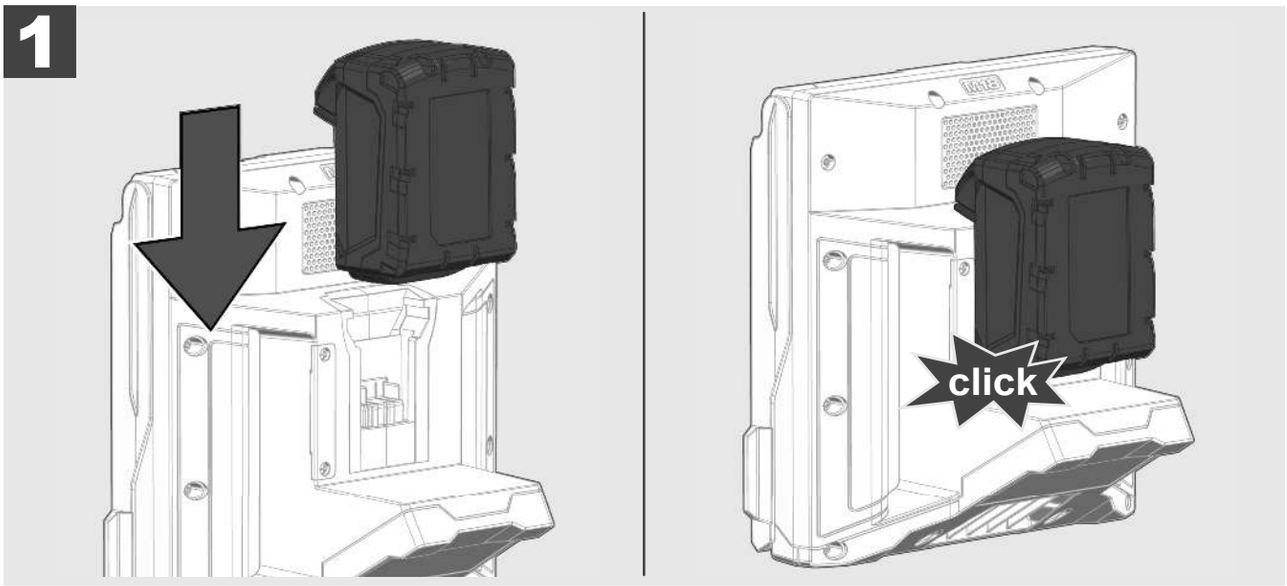
2 OVERVIEW

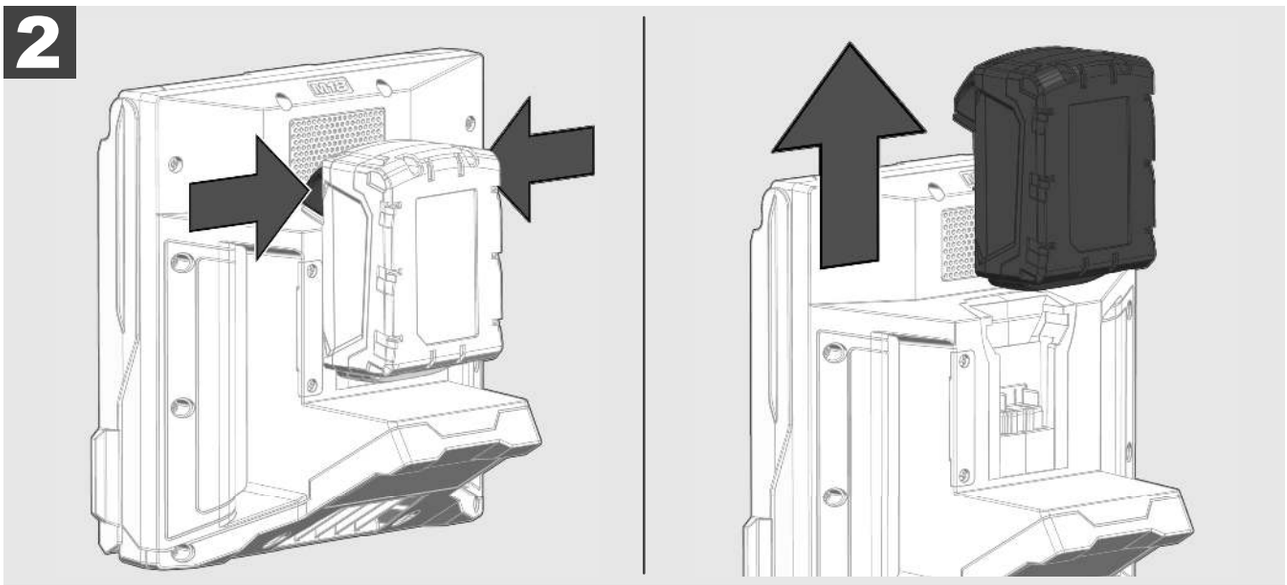


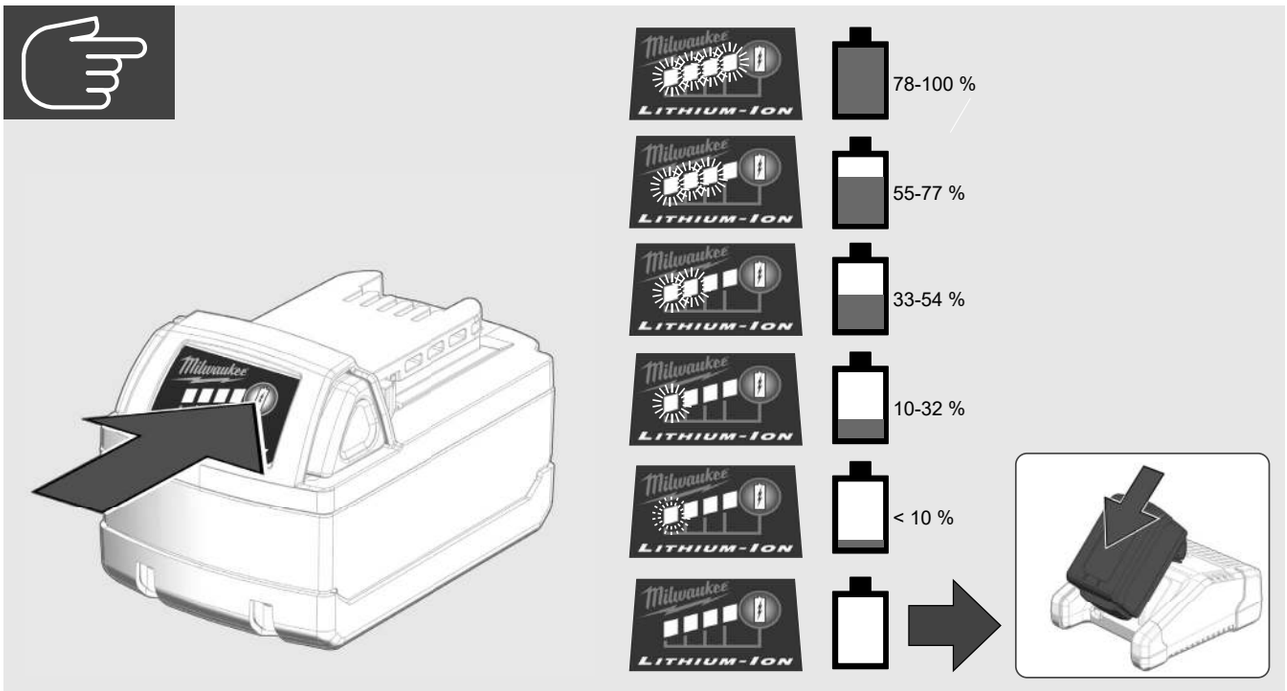
1. Sunshield
2. Internal microphone
3. LCD
4. Distance reset button
5. Power button
6. Back button
7. Microphone button
8. Navigation dial
9. Record video button
10. ONEKEY LED
11. Picture capture button
12. USB-C port
13. USB-A port
14. M18™ BATTERY mounting area
15. ONEKEY battery compartment

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3 INSTALLING AND REMOVING BATTERY PACK

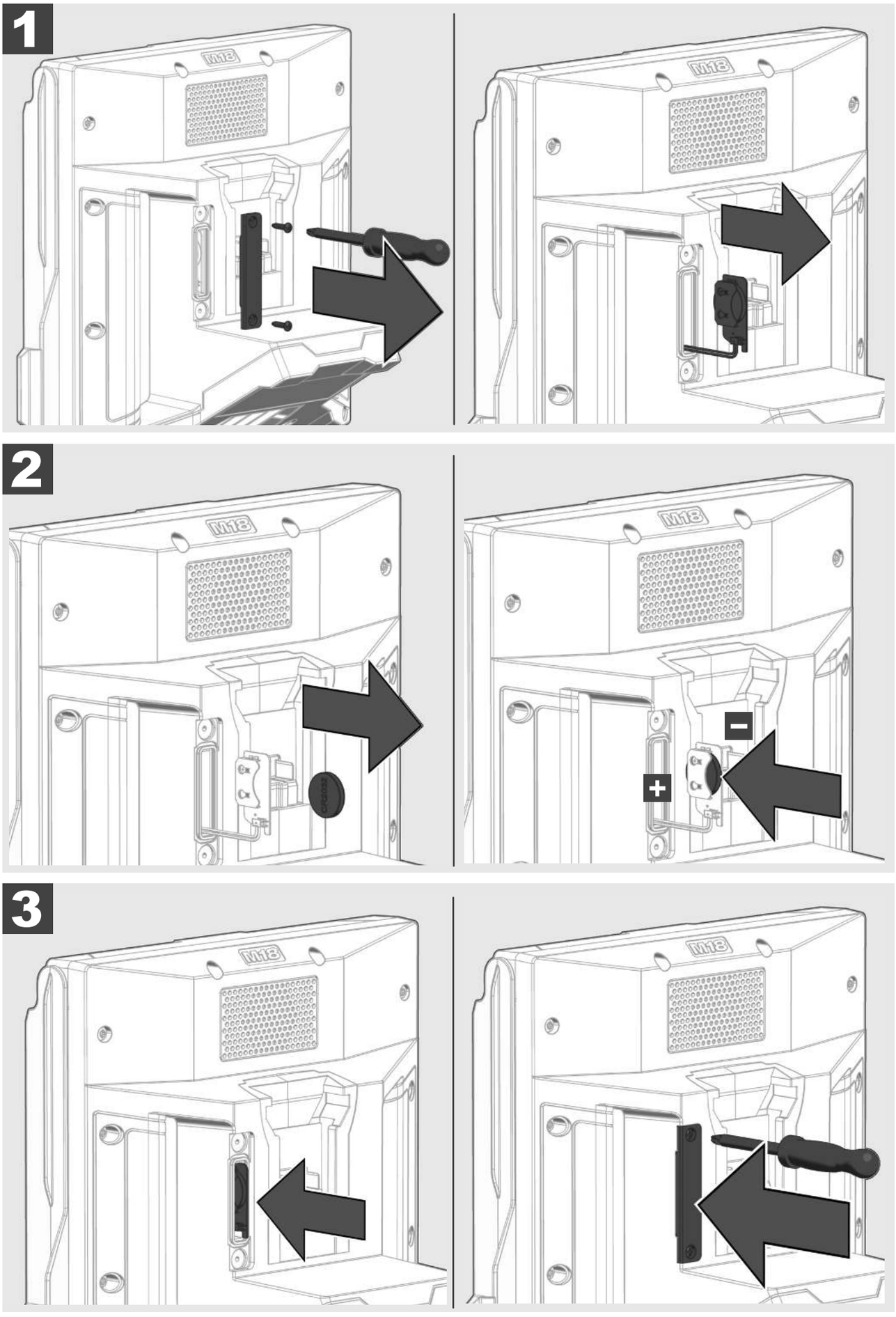






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4 CHANGE ONEKEY BATTERY



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5 SETUP

This section of the manual covers setting up the features and options of the WIRELESS MONITOR. Mounting the WIRELESS MONITOR to the PIPELINE INSPECTION REEL is covered in section 3.5 of the PIPELINE INSPECTION REEL manual.

5.1 Power on/off

Press the POWER button to power on the WIRELESS MONITOR.
The buttons and navigation dial will illuminate, showing that the power is on.
The WIRELESS MONITOR icon will appear in the status bar of the LCD along with the battery state.

Press the POWER button for 2 seconds to power off the WIRELESS MONITOR.

5.2 First time setup

All the settings are saved into the WIRELESS MONITOR's memory and will remain there until changed. Note that the settings will be lost if the unit is reset to factory defaults or by formatting the CONTROL HUB INTERNAL DRIVE. The PIPELINE INSPECTION REEL with camera does not need to be connected to the WIRELESS MONITOR for the first-time setup.

These initial WIRELESS MONITOR settings will set the UNITS of distance measurement, DATE & TIME formats, SONDE frequencies, VIDEO quality, IMAGE quality, CONNECTION SETTINGS and LANGUAGE.

These settings can also be performed through a tablet running the MILWAUKEE® PIPELINE INSPECTION APP.

5.3 Navigating through the settings menu



Navigation dial - Turn the navigation dial clockwise or counter-clockwise to move through the menus. While rotating the navigation dial, the position/menu items will be highlighted by the red cursor line. Press the navigation dial to select and accept the setup menu options.

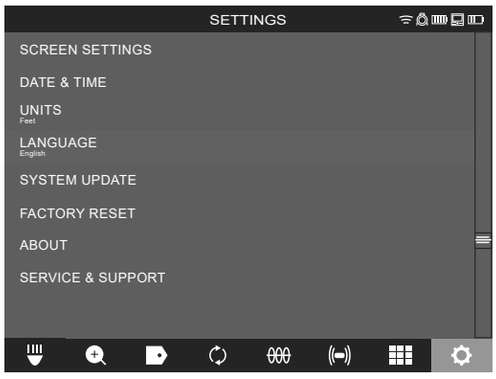


Back button - Pressing the Back button while in any menu or sub-menu will take the screen back to the previous menu. Press the Back Button repeatedly to return to the main viewing screen.

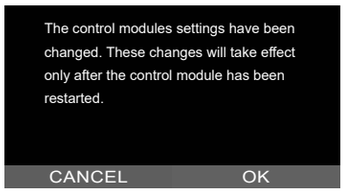
5.4 Setting the WIRELESS MONITOR LANGUAGE

It is recommended to set your LANGUAGE first so that the other menus can be easily read and understood.

1. Go to **SETTINGS** ➔ **LANGUAGE**.



2. Select the desired **LANGUAGE.**
3. Accept the on-screen message



The system will reboot and start in the language selected.

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5.5 Setting the DATE & TIME

The system offers DATE FORMATs of **MM/DD/YYYY**, **DD/MM/YYYY** and **YYYY/MM/DD** with 12-Hour or 24-Hour TIME FORMATs.

1. Go to **SETTINGS** ⚙ ➔ **DATE & TIME**.
2. Select the desired **DATE FORMAT** and **TIME FORMAT**.

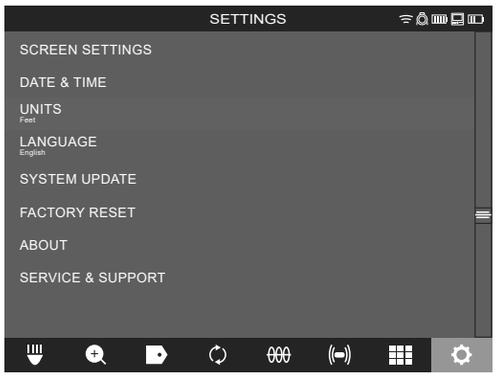


3. Set the DATE and TIME values.
4. When finished setting Date & TIME, press the SAVE key.
   The DATE & TIME are now set, and you will be returned to the **SETTINGS** menu.

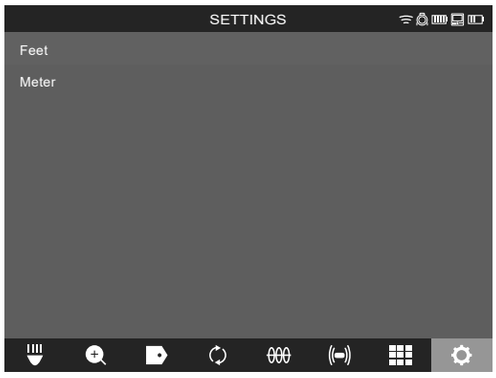
If using a tablet running the MILWAUKEE® PIPELINE INSPECTION APP, the DATE & TIME are taken from the tablet.

5.6 Setting the UNITS of Measure

1. Go to **SETTINGS** ⚙ ➔ **UNITS**.



2. Choose **Feet** or **Meter**.

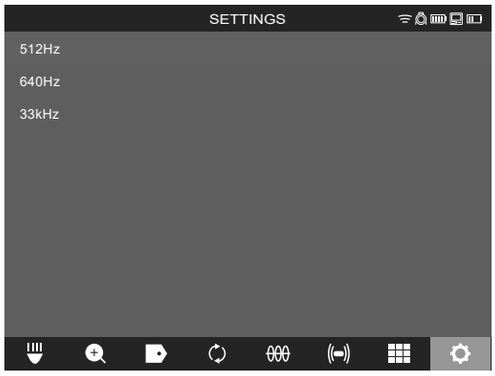


The UNITS of measures are now set, and you will be returned to the **SETTINGS** menu.

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5.7 Setting the SONDE FREQUENCY

1. Go to **SETTINGS** ⚙ ➔ **SONDE FREQUENCY**.

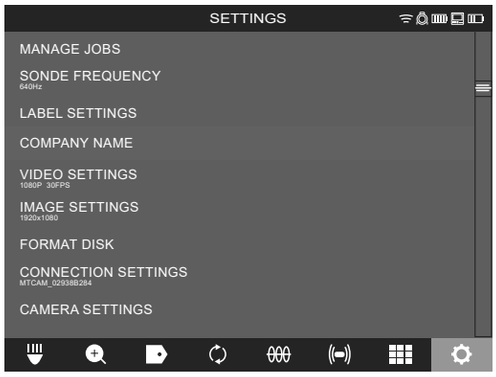


2. Select the desired sonde frequency of 512Hz, 640Hz or 33kHz.
   The sonde frequency is now selected and you will be returned to the **SETTINGS** menu.

5.8 Setting the COMPANY NAME

This setting saves a COMPANY NAME in the system's memory. The COMPANY NAME will splash on the video recordings start for 5 seconds and appear in all JPEG images.

1. Go to **SETTINGS** ⚙ ➔ **COMPANY NAME**.



2. Use the navigation dial to navigate the on-screen keyboard pressing the navigation dial to accept each keyboard character.



3. When finished with the COMPANY NAME, press the **ENTER** key.
4. Select **SAVE** or **CANCEL** to continue.

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5.9 VIDEO and IMAGE SETTINGS

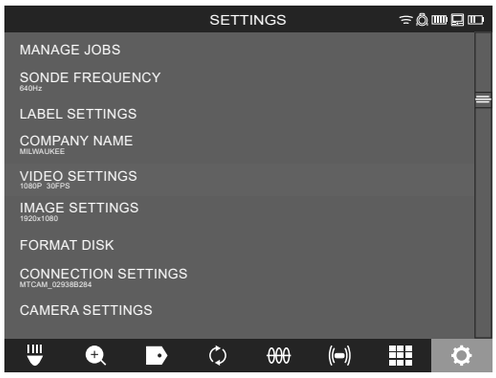
VIDEO SETTINGS

This setting allows for the selection of the video resolution. The video resolution will affect the video quality, which in turn affects the size of the video file. The choices for resolution and frames per second (FPS) are:

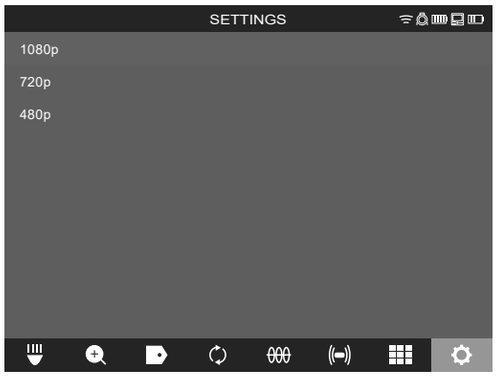
VIDEO SETTING choices

- 1080p with 30 frames per second or 15 frames per second,
- 720p with 30 frames per second or 15 frames per second,
- 480p with 30 frames per second or 15 frames per second

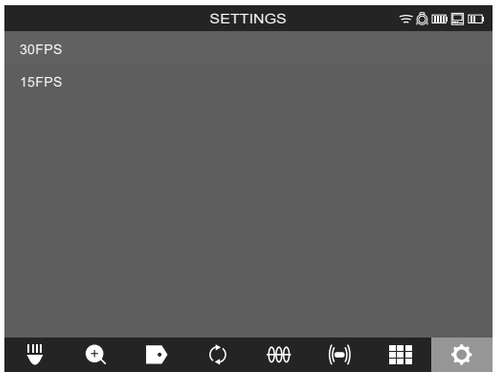
1. Go to **SETTINGS** ⚙ ➔ **VIDEO SETTINGS**.



2. Choose **1080p**, **720p** or **480p**.



3. After a resolution of 1080p, 720p or 480p has been selected the next screen will require a selection of frames per second.
   Choose **30FPS** or **15FPS**.



4. After the frames per second choice is selected, the system will return to the **SETTINGS** menu.

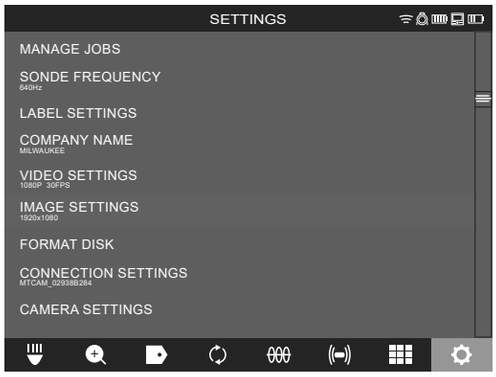
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IMAGE SETTINGS

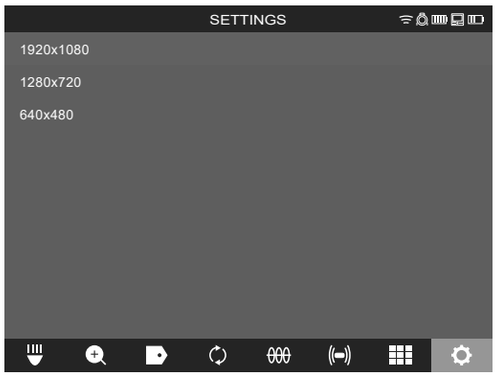
This setting allows for the choice selection of the picture IMAGE dimensions. These dimensions will affect the picture quality, which in turn affects the size of the picture file.

Image setting choices - 1920 x 1080, 1280 x 720 or 640 x 480

1. Go to **SETTINGS** ⚙ ➔ **IMAGE SETTINGS**.



2. Choose **1920x1080**, **1280x720** or **640x480**.



3. After the IMAGE setting choice is selected, the system will return to the **SETTINGS** menu.

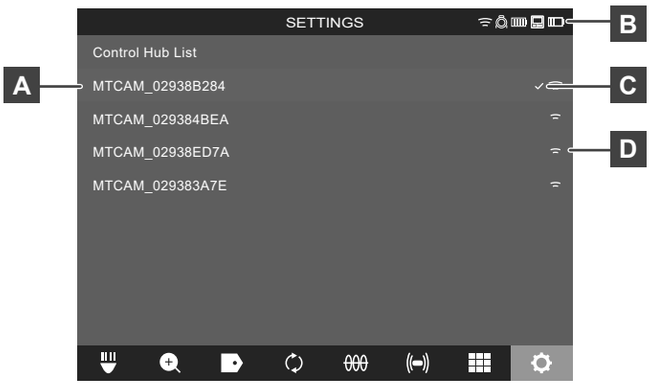
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5.10 CONNECTION SETTINGS

The default connection method for the WIRELESS MONITOR and CONTROL HUB is via WI-FI. The wireless range between the two units is 150 m. If an active CONTROL HUB is within the 150 m range, it will show here in the **Control Hub List**. As a backup, the WIRELESS MONITOR and CONTROL HUB can be connected by using a USB-C cable.

First-time WIRELESS MONITOR Paring

- If only one CONTROL HUB is in range, the WIRELESS MONITOR will automatically force pair with it without any user interaction.
- If there is more than one CONTROL HUB in range, the Control Hub List will appear on the WIRELESS MONITOR or MILWAUKEE® PIPELINE INSPECTION APP so the user can choose the desired CONTROL HUB.



A List of nearby CONTROL HUBs with active WI-FI

B Battery Capacity - Both M18™ BATTERY icons have four segments in the icon. Each segment represents 25% of the battery's power capacity. A low battery warning will appear when the capacity reaches 10%

C Status – checkmark indicates as connected

D Signal strength of nearby CONTROL HUBs with active WI-FI

Cable Connected icon – Shows the WIRELESS MONITOR and CONTROL HUB are connected by a USB-C cable.

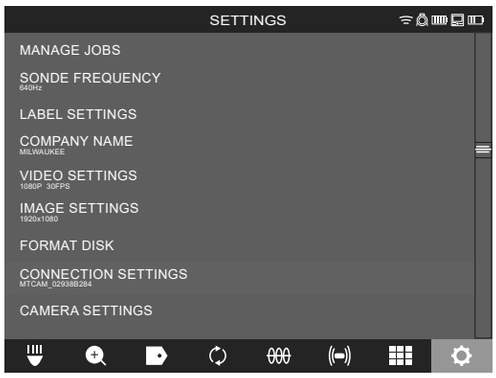
CONTROL HUB connection status and wireless signal strength. This icon appears when the CONTROL HUB is connected to the WIRELESS MONITOR by WI-FI.

PIPELINE INSPECTION REEL icon – appears when the WIRELESS MONITOR and CONTROL HUB are connected by WI-FI or USB-C cable.

WIRELESS MONITOR icon – appears when the WIRELESS MONITOR and CONTROL HUB are connected by WI-FI or USB-C cable.

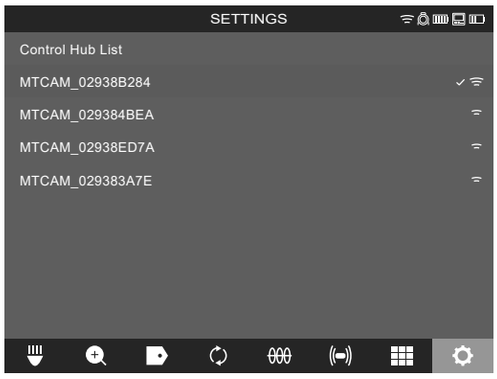
M18™ BATTERY Status icon – two battery icons are shown separated by the WIRELESS MONITOR icon. The battery icon to the left of the monitor icon represents the CONTROL HUB. The battery icon to the right of the monitor icon represents the WIRELESS MONITOR.

1. Go to **SETTINGS** ⚙ ➔ **CONNECTION SETTINGS**

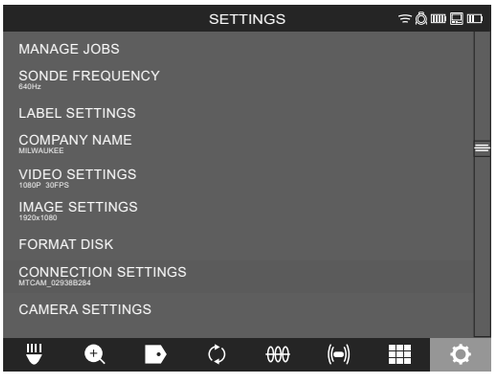


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2. Choose the desired available **CONTROL HUB**.



3. After selecting the **CONTROL HUB** you will be returned to the main menu. The CONTROL HUB name is shown in the menu bar under the **CONNECTION SETTINGS**.



USB-C Cable Connection

The WIRELESS MONITOR can also be powered by the CONTROL HUB battery via the supplied USB-C cable. This is extremely useful in some emergency situations in case your battery runs low.

1. With the supplied USB-C cable, plug one end into the CONTROL HUB and the other into the WIRELESS MONITOR.
2. Confirm the USB-C connection by checking the icons in the status bar on the right. When connected by USB-C cable the WI-FI icon is now replaced by the cable-connect icon.



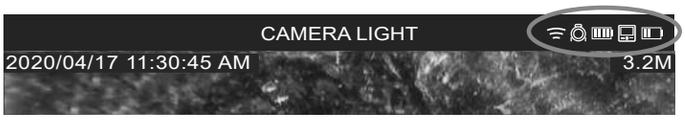
The WI-FI icon is replaced by the cable-connect icon and the WIRELESS MONITOR battery shows as empty.

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5.11 M18™ BATTERY

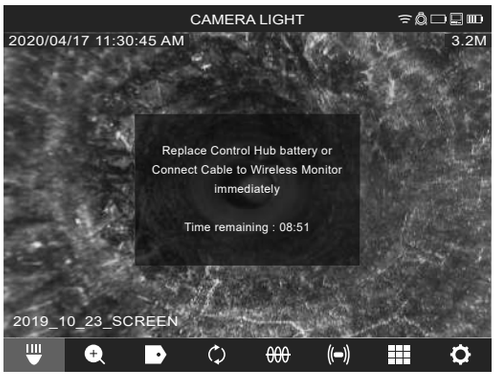
Both the WIRELESS MONITOR and CONTROL HUB are powered by an M18™ BATTERY. The battery condition of both is always shown in the status bar on the WIRELESS MONITOR screen.

⚠WARNING Recharge only with the charger specified for the battery. For specific charging instructions, read the operator's manual supplied with your charger and battery.



The icon to the left of the WIRELESS MONITOR icon represents the battery status of the CONTROL HUB while the icon to the right represents the WIRELESS MONITOR.

The CONTROL HUB is powered by its M18™ BATTERY which is hot-swappable. If the battery is removed from a running CONTROL HUB, the below message will appear warning that the CONTROL HUB is operating on the internal backup battery for a period of nine minutes. During these nine minutes a charged M18™ BATTERY must be installed, or a USB-C cable must be attached between the WIRELESS MONITOR and CONTROL HUB. The USB-C cable will now power the CONTROL HUB temporally.

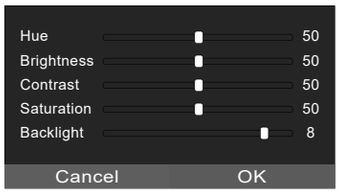


Typical battery life:
WIRELESS MONITOR: Nine hours on a fully charged battery
CONTROL HUB: Nine hours on a fully charged battery

5.12 Setting the LCD SCREEN SETTINGS

This setting adjusts the WIRELESS MONITOR LCD screen settings.

1. Go to **SETTINGS** ⚙ ➔ **SCREEN SETTINGS**.

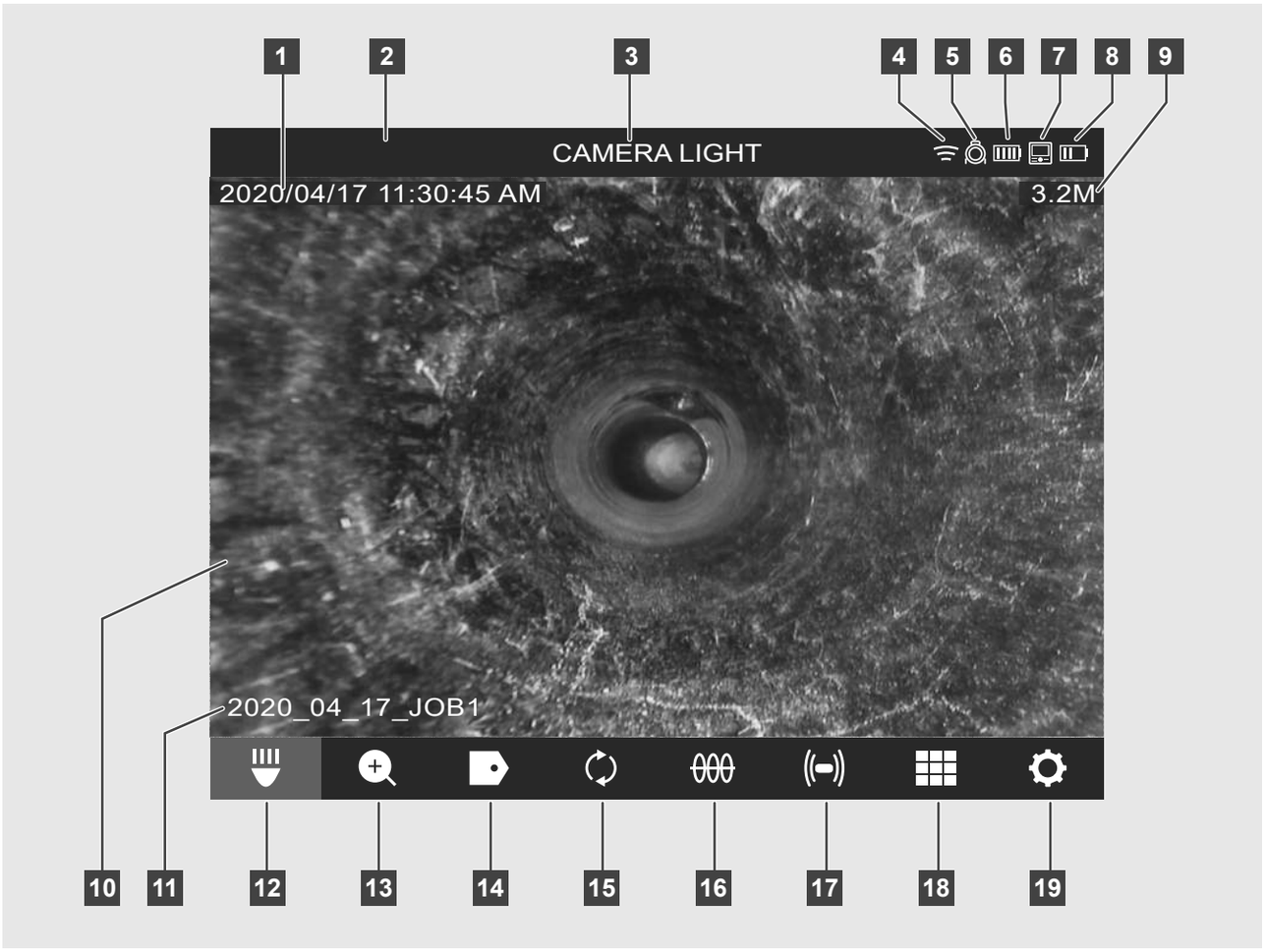


2. Use the navigation dial to navigate through the menu choices, press the navigation dial to select one.
3. Turn the navigation dial left and right to adjust the setting, press the navigation dial to accept it.
4. Scroll to the bottom of the sub-menu and press the navigation dial on OK to accept the changes.

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6 USING THE WIRELESS MONITOR

Many of these instructions also apply to the Milwaukee® Pipeline Inspection App. The Milwaukee® Pipeline Inspection App is available for download from the Apple App Store or at Google Play.



1 DATE and TIME stamp: displayed from the system and will appear in all recorded videos image files.
2 Status bar: shows the running options, menu location, connection status and battery status of both the CONTROL HUB and WIRELESS MONITOR. The status bar is always shown regardless of what mode or option is being used.
3 Menu location
4 WI-FI status
5 CONTROL HUB connection status icon
6 CONTROL HUB battery status
7 WIRELESS MONITOR connection status icon
8 WIRELESS MONITOR battery status
9 Distance out count
10 Main viewing area: shows the raw video from the camera or videos being played back.
11 Active JOB description
12 CAMERA LIGHT: of the cameras LED's are controlled here
13 ZOOM & PAN: allows for 4 x zooming with vertical and horizontal panning of the video feed.
14 LABELS
15 Screen ROTATE
16 LINE TRACE
17 SONDE
18 GALLERY
19 SETTINGS menu

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6.1 Using JOBS

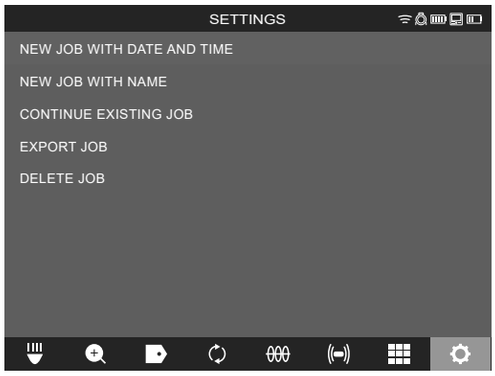
Before creating a video or image file, you can tell the system where to store the files. This is known as creating a **NEW JOB** or **CONTINUE EXISTING JOB**. Creating a NEW JOB will setup a container (folder) for both video and image files to be stored in. CONTINUE EXISTING JOB will route the recordings to a JOB folder that already exists.

The system will automatically ask which JOB to use in certain situations.

- Whenever the system clock changes to a new day (after 11:59PM).
- Whenever the CONTROL HUB is restarted (turned off and on again).

When the Record button is pressed under the above situations, the **SELECT JOB** List will appear with options of: NEW JOB WITH DATE AND TIME, NEW JOB WITH NAME or EXISTING JOB. From this point on the same JOB will be used until changed.

1. Go to **SETTINGS** ⚙ ➔ **MANAGE JOBS**.
   The **MANAGE JOBS** sub-menu has five menu options.



   NEW JOB WITH DATE AND TIME - Creates a NEW JOB with the systems date and time as the prefix for all files in this folder.

   NEW JOB WITH NAME - Creates a NEW JOB with the text title entered via the on-screen keyboard.

   CONTINUE EXISTING JOB – Sends the new files to an EXISTING JOB previously created.

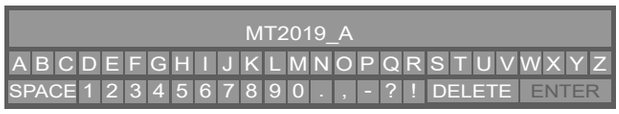
   EXPORT JOB – Copies the JOB from the CONTROL HUB INTERNAL DRIVE to a CONTROL HUB THUMB DRIVE.

   DELETE JOB – Deletes the JOB from the CONTROL HUB INTERNAL DRIVE.

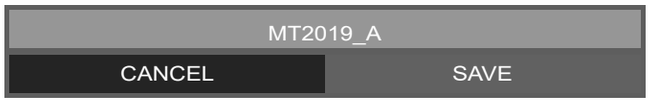
2. Choose the desired sub-menu.
   The changes will be saved into memory, and the system will return to the main viewing screen.

Creating a NEW JOB

1. Go to **NEW JOB WITH DATE AND TIME** or **NEW JOB WITH NAME**.
   If **NEW JOB WITH DATE AND TIME** is selected a JOB folder with the system current date and time will be created and named YYYY_MM_DD_HH_MM_SS.
   If a **NEW JOB WITH NAME** is selected, the next screen will be the on-screen keyboard.
2. Use the navigation dial to enter the name.



3. When finished save the name.



   When a **NEW JOB WITH NAME** is selected a JOB folder with the system current date and time will be used as a prefix. The folder created and named YYYY_MM_DD_NEW JOB NAME.

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6.2 Creating a Video Recording and Image Capturing

By default, all videos and images recorded are saved to the CONTROL HUB INTERNAL DRIVE. If a thumb drive is plugged into the CONTROL HUB, all videos and pictures can be saved to both the CONTROL HUB INTERNAL DRIVE and CONTROL HUB THUMB DRIVE.

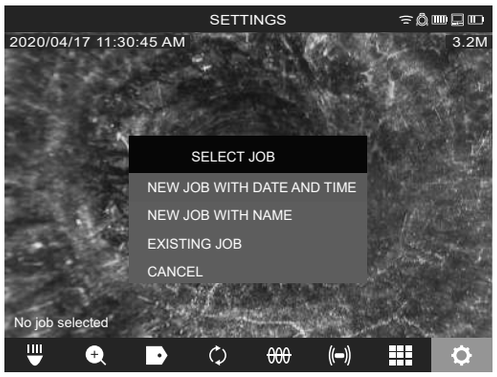
Filenames – the file names are automatically created by the system and consist of the year, month, day, time created, and or JOB name. This will vary depending on the JOB type selected.

If selecting NEW JOB WITH DATE AND TIME, the filename will look like this:
2019_10_01_12_50_10_2
2019 = Year, _10 = Month, _01 = Day, _12 = Hour, _50 = Minutes, _10 = Seconds and _2 = second file created.

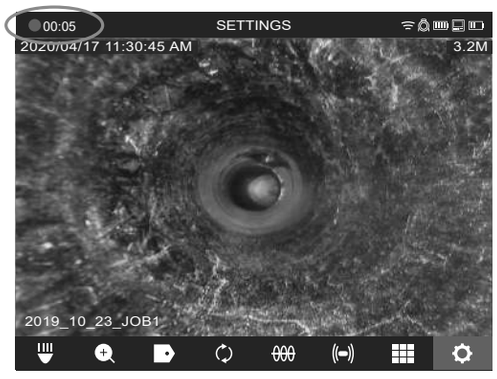
If selecting NEW JOB WITH NAME, the filename will look like this:
2019_10_01_JOBNAME_3
2019 = Year, _10 = Month, _01 = Day, _JOBNAME and_3 = third file created.

If a file were saved as a Highlight video, the filename would be followed by "_h".

1. Press the Record button to start the recording. If this is the first recording of the day or if the WIRELESS MONITOR or CONTROL HUB was restarted, when the record button is pressed the SELECT JOB dialog box will appear to route the recording record to the appropriate JOB folder.



2. Choose the desired option and press the navigation dial.
3. After the JOB option has been selected, a flashing recording icon will appear in the upper left corner of the status bar with the video recording length in minutes and seconds.



Images can be captured while recording or viewing raw video from the camera. The image will be saved in the same JOB folder as the video.

4. Press the **PICTURE** button to capture an image. The screen will flash red for a moment confirming that the image was captured.

   At the end of the session, press the **RECORD** button again to end and save the video file.

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6.3 EXPORT JOB

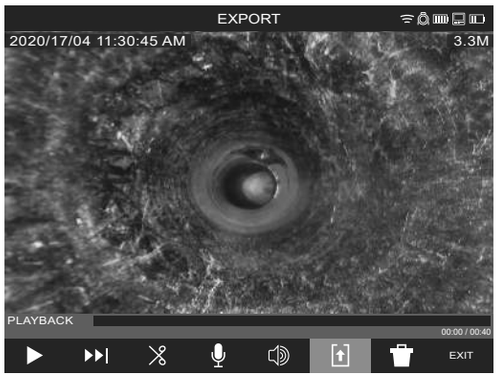
The EXPORT JOB allows for the copying of files from the CONTROL HUB INTERNAL DRIVE to the CONTROL HUB THUMB DRIVE.

From within the **GALLERY** individual files can be exported one at a time.

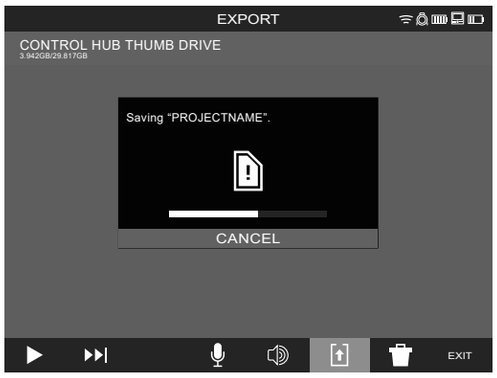
From the **MANAGE JOBS** option, under **SETTINGS** entire folders of JOBS can be EXPORTED in one session.

EXPORT JOB from the GALLERY

1. Go to **GALLERY**
2. Select the desired video or image.
3. Go to **EXPORT**



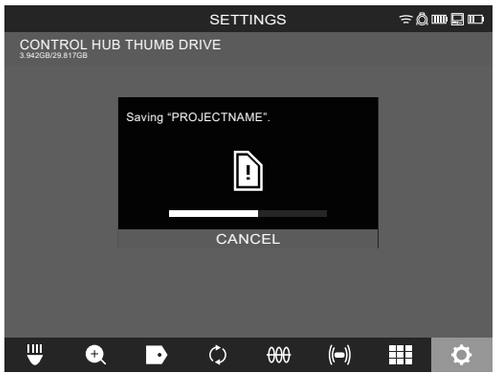
4. Choose **CONTROL HUB THUMB DRIVE**.
   The progress indicator will appear showing the status.



5. Wait for the progress indicator to run until completed.

EXPORT JOB from within the SETTINGS menu

1. Go to **SETTINGS** ➔ **MANAGE JOBS** ➔ **EXPORT JOB**.
2. Select the **JOB** and choose **CONTROL HUB THUMB DRIVE**.
   The progress indicator will show the status.

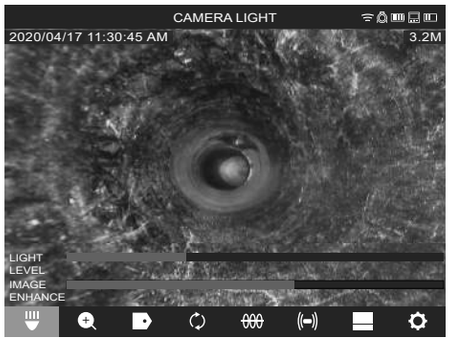


3. Wait for the progress indicator to run until completed.

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6.4 Adjusting the CAMERA LIGHT and IMAGE ENHANCE

1. Go to **CAMERA LIGHT** and set the desired light level.



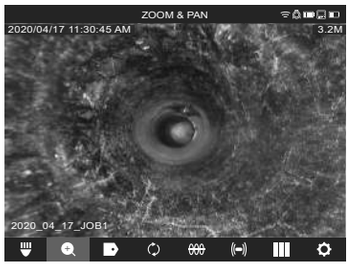
2. Pressing the navigation dial again will select the **IMAGE ENHANCE** option.

   The IMAGE ENHANCE feature allows the LCD display to show more detail and depth from the camera head in different textures and colors of pipes. The IMAGE ENHANCE feature automatically adjust the LCD's display brightness and contrast settings based on the light from the camera head.

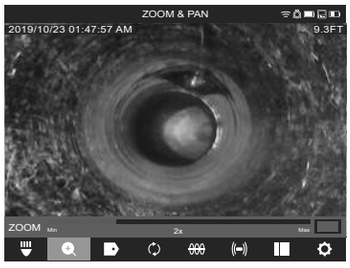
3. Use the navigation dial to move the IMAGE ENHANCE scale stopping on the best result.
   Press the navigation dial to accept the setting.
4. Press the **BACK** button to exit and return to the main viewing area.

6.5 ZOOM & PAN

1. Go to **ZOOM & PAN** ➔ **ZOOM**
2. Turn the navigation dial to reach one of four ZOOM levels and press the navigation dial. Turn the navigation dial to ZOOM in or out, the graphic to the far right will grow or shrink according to the ZOOM level.

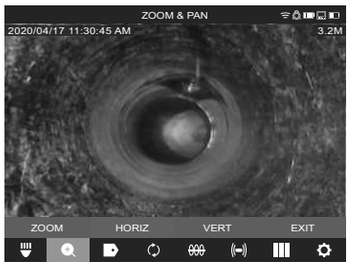


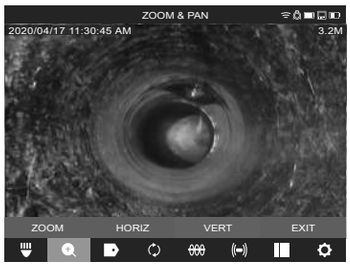
Standard ZOOM



ZOOM X 2

3. Press the navigation dial and go to **HORIZ** or **VERT**.





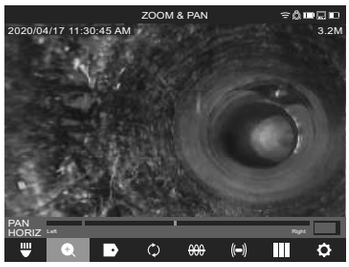
Select HORIZ or VERT and press the navigation dial

PAN Horizontal and Vertical – Panning horizontally moves the position in the image in right and left directions. Panning vertically moves the position in the image in up and down directions. In both options as the navigation dial is turned in PAN HORIZ or PAN VERT, the graphic to the far right on will move with the vertical or horizontal panning showing where you are located within the image.

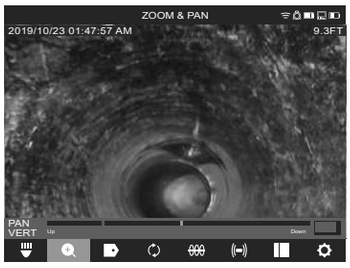


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Pan location reference



Example of PANNING HORIZ, to the left



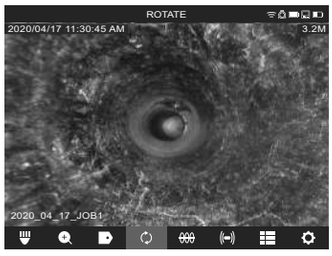
Example of PANNING VERT, up

4. Press the BACK ← button to exit and return to the main viewing area.

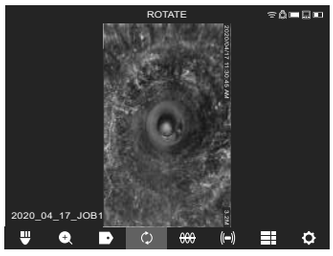
6.6 Screen ROTATE

Screen ROTATE – will invert the upright picture 90° with each push of the navigation dial. This is helpful while using the reel in the horizontal position, and the monitor may not be in an upright position.

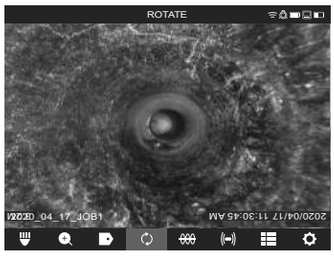
1. Go to **ROTATE** .
2. With each press of the navigation dial, the screen will ROTATE 90° to the right



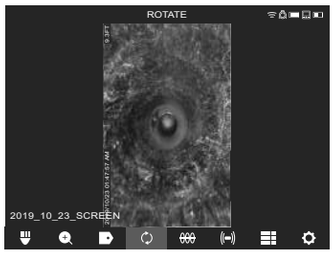
0 Degrees (default)



90 Degree position



180-degree position



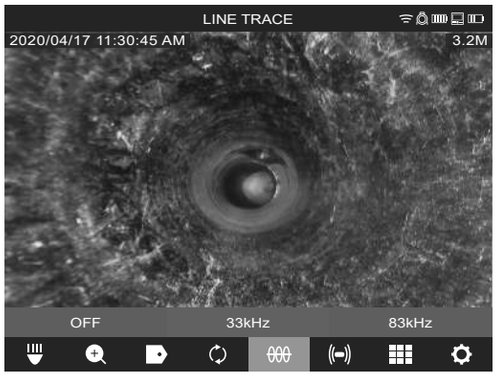
270-degree position

Note: The screen will remain in a ROTATE position until it is adjusted back to the default in this setting.

6.7 LINE TRACE

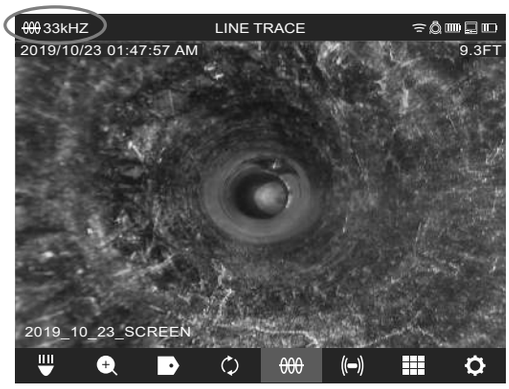
LINE TRACE – activates the internal transmitter to inject a locate signal onto the push cable. The length of deployed push cable can now be located and traced above ground with a locator set to the matching LINE TRACE frequency. The CONTROL HUB must be properly grounded when using the LINE TRACE feature. See manual for CONTROL HUB covering the Grounding Post for additional information.

1. Go to **LINE TRACE** .
2. Choose a LINE TRACE frequency of 33kHz, 65kHz or 83kHz and press the navigation dial.



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The LINE TRACE is now active, and the LINE TRACE icon with selected frequency will appear in the status bar.



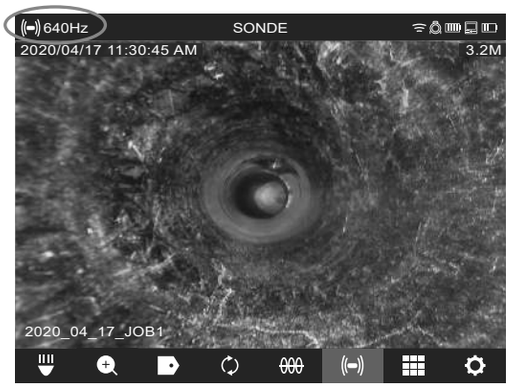
3. Deactivate the LINE TRACE mode by going to **LINE TRACE** and select OFF.

6.8 SONDE

SONDE - activates the SONDE transmitter attached at the end of the PIPELINE INSPECTION REEL termination spring to locate the approximate position of the SONDE in the pipe. The choice of the SONDE frequency was selected during setup and can be changed by going to **SETTINGS** ➔ **SONDE FREQUENCY**. The choices of SONDE frequencies to use are 33kHz, 512Hz or 640Hz.

- 33kHz – is useable in non-metallic pipes.
- 512Hz – is mostly used in North America and is useable in both metallic and non-metallic pipes
- 640Hz – is mostly used in Europe and is useable in both metallic and non-metallic pipes

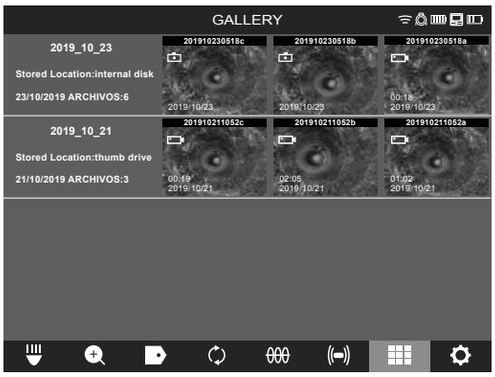
Go to **SONDE** and press the dial. The SONDE is now active, and the SONDE icon will appear in the status bar along with the frequency.



To deactivate the SONDE press the navigation dial when it shows the SONDE icon selected.

6.9 GALLERY Overview

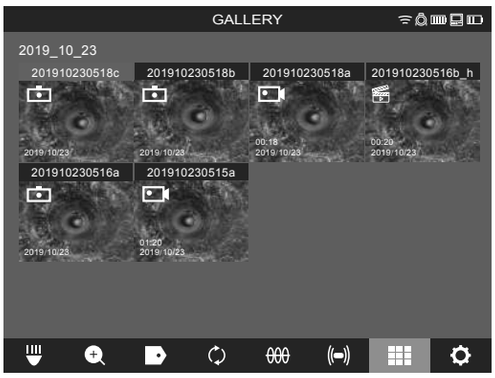
In the **GALLERY**, all the videos and pictures are shown organized in folders and stored for reviewing, editing, exporting or deleting.



In the GALLERY view, each JOB folder is shown with the date and number of files in the job.

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The Saved Locations labels GALLERY show if the files are located on the CONTROL HUB INTERNAL DRIVE or CONTROL HUB THUMB DRIVE.



When entering the job folder, the individual files are shown with thumbnails showing the video or picture icon.

Options for files in the gallery include:

PLAY		Plays back a recorded video file or views a jpg picture file
RW/FF		Rewind and fast forward
TRIM		Edits the video length by selecting portions of the video to keep and portions trim
RECORD AUDIO		Add audio comments on top of video files
SPEAKER VOLUME		Adjust the playback volume of video files
EXPORT		Copies the files from the CONTROL HUB Internal Drive to the CONTROL HUB THUMB DRIVE or mobile device
DELETE		Deletes the file(s) from the CONTROL HUB INTERNAL DRIVE or CONTROL HUB THUMB DRIVE
EXIT	EXIT	Exits the GALLERY menu and returns to the JOB folder

6.10 Playback Highlights

When LABELS (see section 6.17 „Using LABELS“) or audio comments (see section 6.14 „Recording Audio“) are added to recording videos via the internal microphone, these parts of the video where the label or audio was added are marked with a highlight marker in the video playback progress bar. These highlight markers are shown with a white bar in the playback progress bar.



This is extremely useful while reviewing videos as it shows a place of interest or comment in the video to fast forward or rewind to.

6.11 Playing videos and viewing pictures

1. Go to **GALLERY**, select the folder and then the desired video or picture.
   Video file **:** press the navigaton dial double to play the video
   Picture file **:** press the navigation dial to show the picture
2. When finished viewing the video or picture press the BACK button to return to the main viewing screen.

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6.12 Rewind and Fast Forward

Use the rewind and fast forward feature to move through a playing video.

1. Go to **GALLERY**, select the job folder and then the desired video.
2. Select the RW/FF (rewind/fast forward) menu option and press the navigation dial.



3. Turn the navigation dial clockwise to fast forward or counterclockwise to rewind. While turning the navigation dial, the red bar progress indicator shows the place in the video recording. Each turn of the navigation dial advances or rewinds the video.
4. When finished viewing the video or picture press the BACK button to return to the main viewing screen.

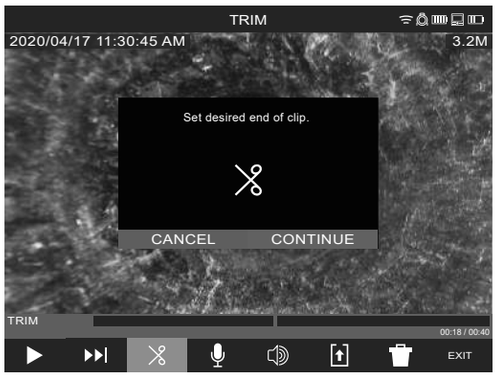
6.13 Trimming Video Files

Use the TRIM feature to edit the length of a video and save it as a new file.

1. Go to **GALLERY**, select the job folder and then the desired video.
2. Select the **TRIM** menu option.
3. Press **CONTINUE** at the "**Set desired beginning of clip message**". Turn the navigation dial clockwise while watching the advancement of the video to select the TRIM starting point, press the navigation dial.



4. Press **CONTINUE** at the "**Set desired end of clip**" message. Turn the navigation dial counterclockwise while watching the advancement of the video to select the TRIM ending, press the navigation dial.



5. Press **TRIM** at the "Confirm trim" message, this will create a new trimmed video.

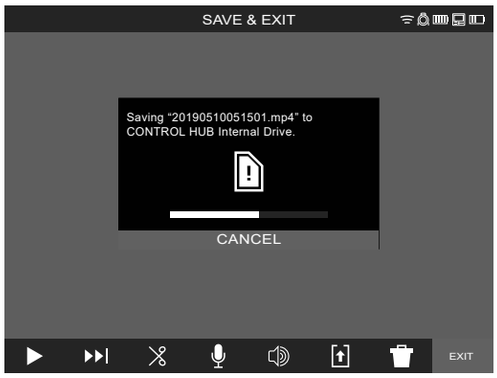


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6. Use the on-screen keyboard to enter the new file name, when finished navigate to **ENTER** and press the navigation dial.



7. Now select **SAVE** to save the new trimmed file. A dialog box will appear showing the file saving progress.



8. The new trimmed file is now placed in the same JOB folder as the original file.

6.14 Recording Audio

This feature adds audio comments to recording videos or to existing videos already in the gallery. This is useful to add audio annotations to accompany any labels used in the video or if something new was spotted during the review of the video. When adding annotations to an existing video file, the original file will remain the same, and a new file will be created with the annotations. You will have to name this new file at the end of the procedure.

Note that any HIGHLIGHTS from the original video will not be saved in the newly created video you are adding an audio comment to.

1. Go to **GALLERY**, select the job folder and then the desired video add annotations to.
2. Select **PLAY** to watch the video, press **PAUSE** at the spot to add the annotation.
   Use the **RW/FF** feature to reach highlighted parts of the video.
3. Press the MICROPHONE button to activate the microphone - the microphone button will glow red when active.
4. Speak clearly facing the internal microphone (located in the top left corner of the WIRELESS MONITOR) and be in the range of 1 m from it.
5. Press the MICROPHONE button to deactivate the microphone.
6. Turn the navigation dial to select **SAVE & EXIT**.
7. Select **OK** on the message to set a name for the new annotated file and enter a name for the file, navigate to and select **RETURN**, then select **SAVE**.
8. Wait for the progress indicator to run until completed.

6.15 Speaker Volume

The SPEAKER VOLUME can be adjusted during video playback and while editing videos.

1. Go to **GALLERY**, select the job folder and then the desired video.
2. Go to **SPEAKER VOLUME** use the navigation dial to set the SPEAKER VOLUME, then press the navigation dial and the system will return to the video sub-menu.

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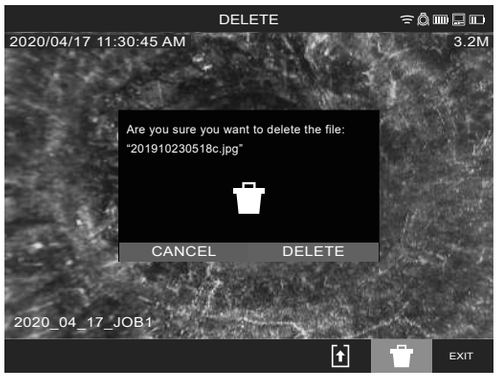
6.16 Delete Files

From within the **GALLERY** individual files can be deleted one at a time.

From the **SETTINGS** menu, select **MANAGE JOBS** and **entire folders** of jobs can be deleted in one session.

Deleting files from the Gallery

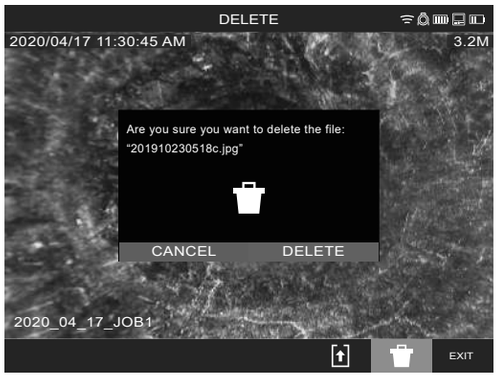
1. Go to **GALLERY**, select the job folder and then the desired video.
2. Go to **DELETE**, press the navigation dial.
3. Accept the on-screen message.



The file has been deleted, and the system returns to the gallery sub-menu.

Deleting Files from within the SETTINGS menu

1. Go to **SETTINGS** ➔ **MANAGE JOBS** ➔ **DELETE JOB**.
2. S**elect the JOB** to delete, press the navigation dial.
3. Accept the on-screen message.

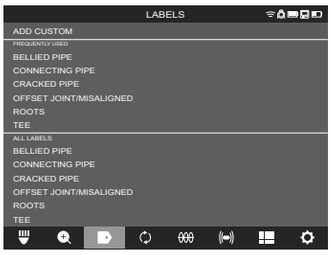


The JOB folder and files within it have been deleted, and the system returns to the MANAGE JOBS sub-menu. Press the back ← button to return.

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6.17 Using LABELS

LABELS are predefined observations that are splashed on the screen and appear in recorded videos and captured pictures. When a LABEL is selected, it will appear on the screen for 15-seconds and then disappear.



List of created LABELS



The LABEL shown splashed on the screen

In the LABELS sub-menu, the option of ADD CUSTOM allows the creation of a new label. Also shown on the screen is the list of FREQUENTLY USED and ALL LABELS.

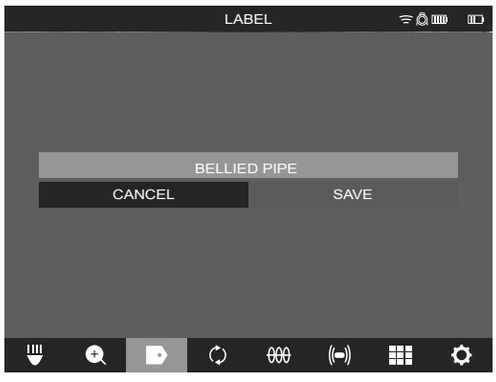
After a label is used more than five times, it will automatically be added to the frequently used list of labels.

Creating and saving a new label

1. Go to **LABELS** ➔ **ADD CUSTOM**
2. Use the on-screen keyboard to enter the new label, when finished navigate to **ENTER** and press the navigation dial.



3. Accept the on-screen message.



The label now appears in the ALL LABELS list and is available to use with the LABELS option from the main viewing screen.

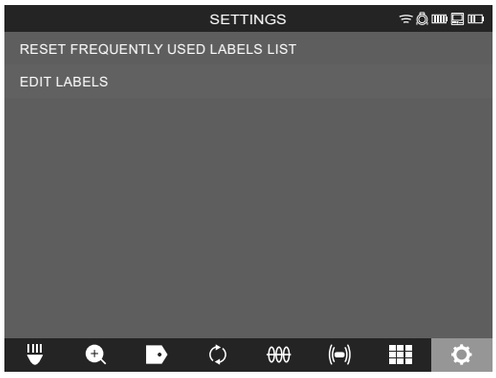
4. Press the back button to return.

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Editing labels

Previously created LABELS can be edited or deleted with this option.

1. Go to **SETTINGS** ⚙ ➔ **LABEL SETTINGS** ➔ **EDIT LABELS**.



2. Select the label for editing or deletion. Select **EDIT** or **DELETE** and press the navigation dial.

   Editing – will bring up the on-screen keyboard, make the edits and navigate to the ENTER key, press the navigation dial, then select SAVE to save the label changes. Follow the instructions under "Creating and saving a new label" to edit and save.

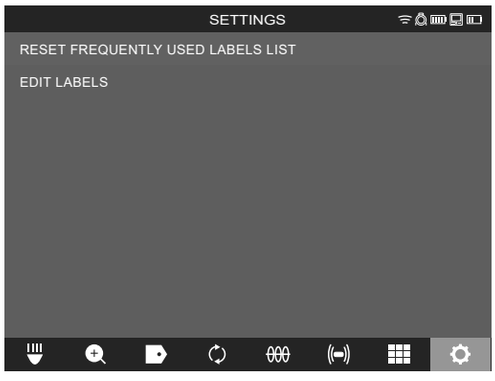
   Delete – Will delete the label from memory.

3. Press the back ← button to return.

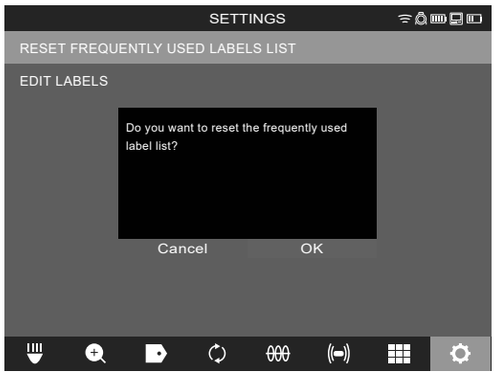
Reset the FREQUENTLY USED LABEL LIST

This will remove previously used labels currently in the FREQUENTLY USED LABEL LIST.

1. Go to **SETTINGS** ⚙ ➔ **LABEL SETTINGS** ➔ **RESET FREQUENTLY USED LABEL LIST**.



2. Accept the on-screen message.



3. Press the back ← button to return.

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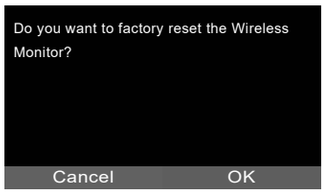
7 FACTORY RESET & FIRMWARE UPDATES

7.1 Factory Reset

Performing a factory reset will reset the WIRELESS MONITOR to the factory defaults. On the WIRELESS MONITOR, the functionality that will reset to the factory default will be:

- Backlight settings back to default
- WIRELESS MONITOR/CONTROL HUB connection settings
- System language

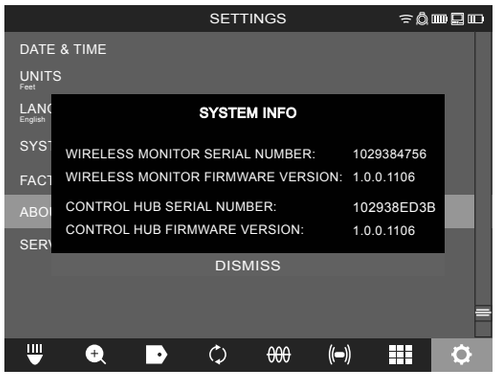
1. Go to **SETTINGS** ⚙ ➔ **FACTORY RESET** ➔ **FACTORY RESET WIRELESS MONITOR** and press the navigation dial.
2. Accept the on-screen message.



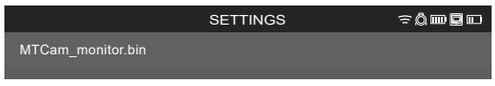
The factory reset is now complete, and the system is returned to the FACTORY RESET sub-menu.

7.2 Firmware Updates

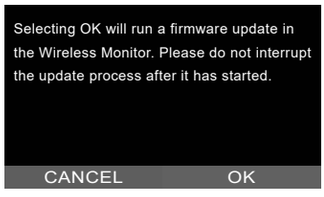
Before updating a system, go to **SETTINGS** ⚙ ➔**ABOUT**, look at the **SYSTEM INFO** and make a note of the curret firmware revisions.



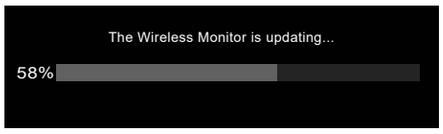
1. Insert the USB stick containing the firmware update into the WIRELESS MONITOR's **USB** port.
2. Go to **SETTINGS** ⚙ ➔ **SYSTEM UPDATE** ➔ **WIRELESS MONITOR**
   The filename of the update should be seen in this window.
   Press the navigation dial when the update file is highlighted in red to begin the update.



3. Accept the on-screen message.

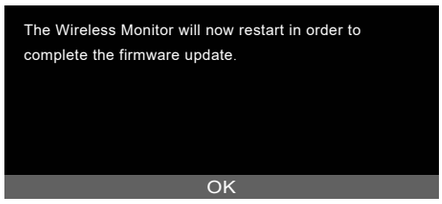


4. A progress indicator will appear showing the progress of the update.



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5. A confirmation message will appear when the update is complete, and the system will reboot.



6. Go to **SETTINGS** ⚙ ➔**ABOUT** to confirm that the firmware revision numbers have updated.

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