

EN

OPERATING MANUAL
VIDEOSCOPE

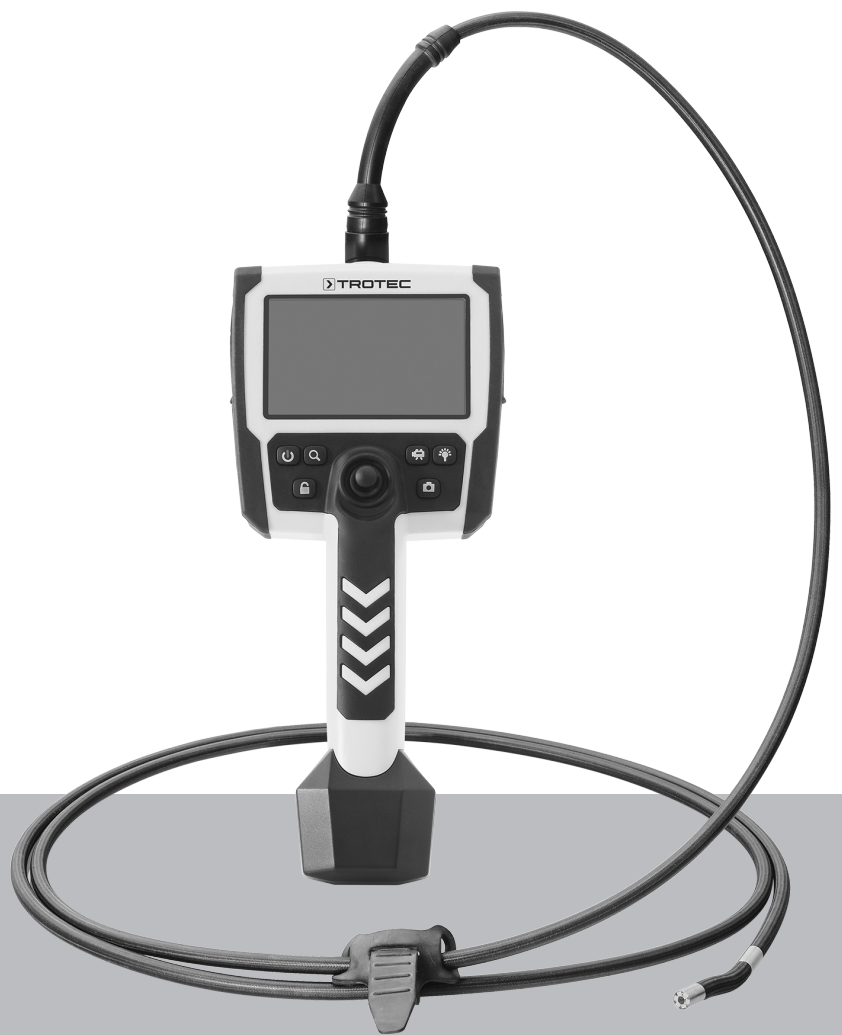


Table of contents

Notes regarding the operating manual..... 2

Safety 2

Information about the device..... 3

Transport and storage..... 6

Operation 6

Software..... 7

Errors and faults 12

Maintenance and repair 12

Disposal 13

Notes regarding the operating manual

Symbols



Warning of electrical voltage

This symbol indicates dangers to the life and health of persons due to electrical voltage.



Warning

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



Caution

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



Info

Information marked with this symbol helps you to carry out your tasks quickly and safely.



Follow the manual

Information marked with this symbol indicates that the operating manual must be observed.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



VSC3008



<https://hub.trotec.com/?id=39601>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use!

- Do not use the device in potentially explosive rooms.
- Do not use the device in aggressive atmosphere.
- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device.
- Observe the storage and operating conditions as given in the Technical data chapter.

Intended use

Only use the device for the visualization of objects.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Improper use

Do not use the device in potentially explosive areas. Do not use the control unit with display underwater. Never use the device on persons or animals. Trotec accepts no liability for damages resulting from improper use. In such a case, any warranty claims will be voided. Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualifications

People who use this device must:

- have read and understood the operating manual, especially the Safety chapter.

Residual risks



Warning of electrical voltage

Electric shock due to contact with live parts! Do not touch any live parts. Secure neighbouring live parts by covering them or by switching them off.



Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning of electrical voltage

Before any work on the device, remove the mains plug from the mains socket and the battery from the device! Hold onto the mains plug while pulling the power cable out of the mains socket.



Warning of explosive substances

Do not expose the battery to temperatures above 45 °C! Do not let the battery come into contact with water or fire! Avoid direct sunlight and moisture. There is a risk of explosion!



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



Caution

Lithium-ion batteries might catch fire in case of overheating or damage. Ensure a sufficient distance to heat sources, do not subject lithium-ion batteries to direct sunlight and make sure not to damage the casing. Do not overcharge lithium-ion batteries. Only use smart chargers that switch off automatically when the battery is fully charged. Charge lithium-ion batteries in due time before they are discharged completely.



Caution

Keep a sufficient distance from heat sources.

Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

Note

Do not use abrasive cleaners or solvents to clean the device.

Information about the device

Device description

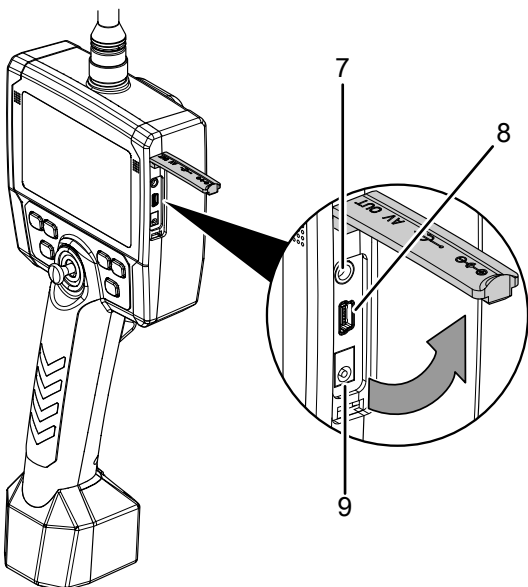
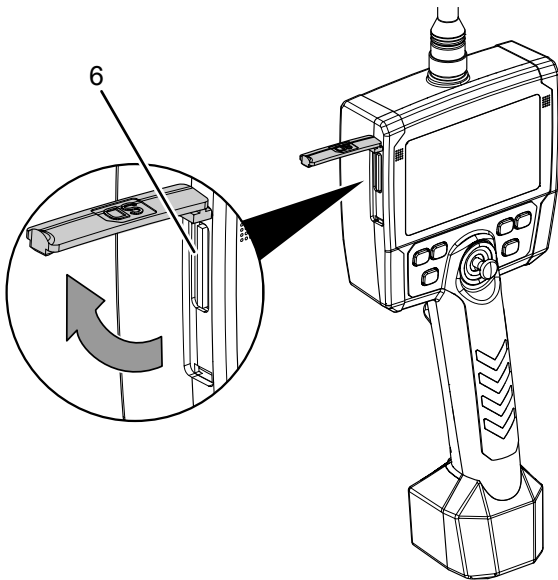
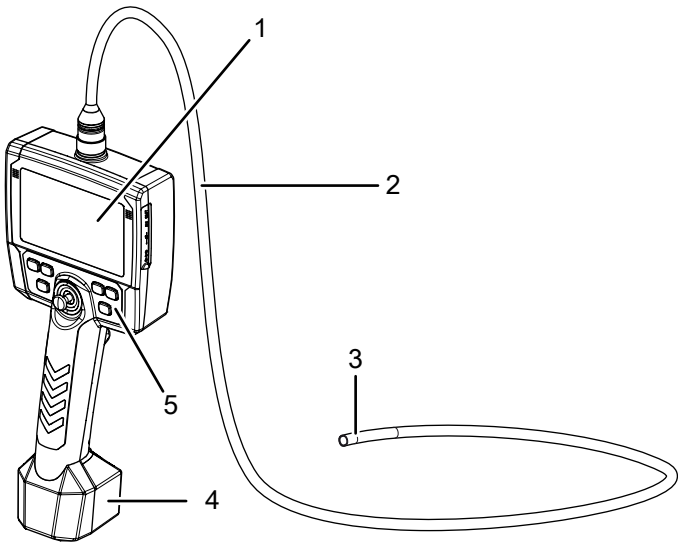
The device VSC3008 serves for inspecting concealed machine components and poorly accessible or inaccessible hollows.

A high-resolution camera and a moveable camera head with a very bright LED illumination are available for the display and capturing/recording of images and videos.

The device's functions can be controlled via an integrated operator software.

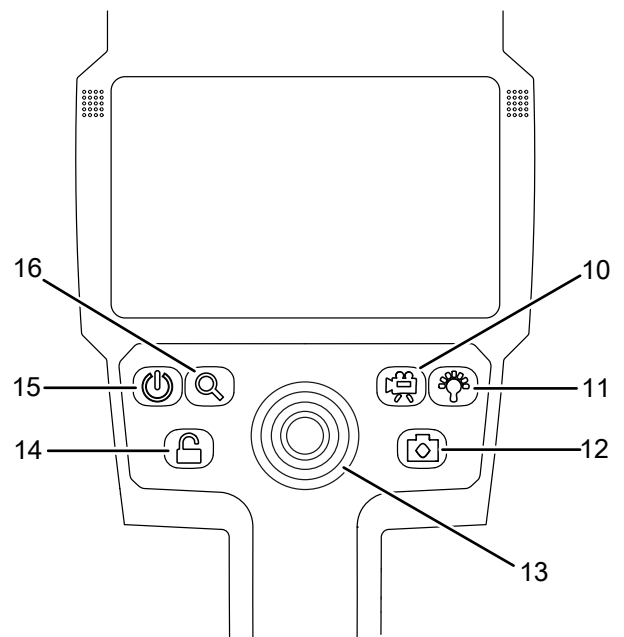
The recordings and measurements can be stored on an SD card and transmitted via a USB interface.

Device depiction



No.	Designation
1	Display
2	Probe cable
3	Fully flexible camera head
4	Battery with charger/power adapter connector
5	Operating elements
6	Slot for SD card
7	Audio/video signal output
8	Port for a mini USB cable
9	Connector for the power adapter

Operating elements



No.	Designation	Meaning
10	Video button	Starts or stops video recording.
11	Brightness button	Controls the light intensity at the camera head.
12	Photo button	Taking a photo
13	Cursor	Controls the camera orientation and the menu.
14	Padlock button	Locking the camera head in the current position
15	On / Off / Menu / Back button	Switching the device on and off, calling up the main menu, leaving a menu
16	Zoom button	Zooming in on the screen (1x, 2x, 3x)

Technical data

Parameter	Value	
Model	VSC3008	
Article number	3.510.009.640	
System	Type of lighting	6 white LEDs (colour temperature 5,000 to 6,000 K)
	Luminous intensity	50,000 lux
	White balance	4 setting options (automatic, sunlight, clouded, artificial light)
	Brightness control	manually adjustable
	LCD display	4.3-inch TFT LCD (800 x 480 px [Wide VGA])
	Interfaces	USB, analogue video (HDTV)
	Memory	slot for removable SD card (max. 32 GB)
	File formats	JPEG image format, AVI video format
	Power supply	5 V lithium polymer battery pack; power adapter (input: AC 100 V to 240 V 50/60 Hz, 0.2 A, output: DC 5 V, 1.0 A)
	Operating time	> 4 h
Probe	Dimensions	length 3 m, \varnothing 8 mm
	Design	exterior: tungsten wire mesh for high torsional strength, inner layer: polyurethane on steel spiral
	Bending	up / down / left / right \approx 120°
	Type of protection	IP67, oil-resistant
Camera	Image sensor	CMOS
	Resolution	440,000 pixels
	Field of vision	130°
	Camera head	stainless steel with titanium coating
	Zoom	3x digital
Control software	Operator guidance	simple interactive menu control, menu navigation via joystick
	Available menu languages	German, English, French
	Software functions	system settings, video settings, memory functions
Ambient conditions	Temperature	-10 °C to +50 °C
	Humidity	< 90 % RH
	Type of protection (housing)	IP54
Physical characteristics	Construction	ABS housing with integrated bumpers
	Dimensions	410 x 154 x 80 mm
	Weight	960 g (incl. batteries)

Scope of delivery

- 1 x Videoscope VSC3008
- 1 x Battery pack 5 V DC
- 1 x Transport case
- 1 x Power adapter/charger
- 1 x AV cable
- 1 x Quick guide
- 1 x SD card
- 1 x LCD cleaning cloth

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged. Note the information regarding transport and storage of the device.

Transport

For transporting the device, use the transport case included in the scope of delivery in order to protect the device from external influences.

The supplied Li-ion batteries are subjects to the requirements of dangerous goods legislation.

Observe the following when transporting or shipping Li-ion batteries:

- The user may transport the batteries by road without any additional requirements.
- If transport is carried out by third parties (e.g. air transport or forwarding company), special requirements as to packaging and labelling must be observed. This includes consulting a dangerous goods specialist when preparing the package.
 - Only ship batteries if their housing is undamaged.
 - Mask open terminals with tape and pack the battery in a way that it cannot move inside the packaging.
 - Please also observe any other national regulations.

Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- For storing the device, use the transport case included in the scope of delivery in order to protect the device from external influences.
- The storage temperature is the same as the range given in the Technical data chapter.
- When storing the device for an extended period of time, remove the battery/batteries.

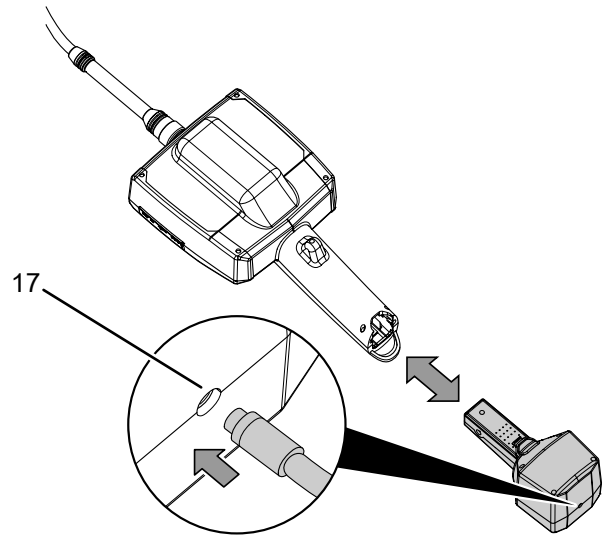
Operation

Inserting the battery pack

Before using the device for the first time, it may be necessary to insert the battery pack.

Note

Make sure that the surface of the device is dry and the device is switched off.

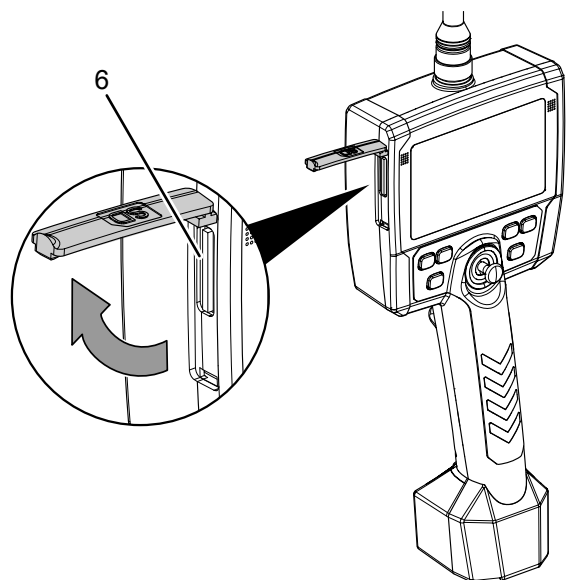


1. Observing the correct orientation, push the battery pack into the device until it engages.

Note

Alternatively, the device can be operated with the power adapter connected. For this purpose, connect the supplied power adapter with the connector (17).

Inserting the SD card



1. Open the rubber tab on the left side of the device.

2. Insert the SD card in the SD card slot (6).
 - ⇒ The printed side of the SD card should point up and the rounded corner to the bottom right.
3. Slightly press down the SD card until it engages.
4. Close the rubber tab.

Switch-on

1. Press the power button (15) for approx. 5 s.
 - ⇒ An acoustic signal will be emitted three times. The display will be switched on and the device ready for operation.

Aligning/moving/holding the camera

Note

Avoid pulling on the probe cable while the lock is enabled. The camera head and the cable may get damaged!

The camera head is held in position by the lock (padlock symbol) and can thus inadvertently become a barbed hook.



Info

If the position of the camera head is maintained for at least three seconds via the cursor, the lock is automatically activated!

1. Use the cursor (13) to move the camera (3) in the desired direction.
2. Hold the cursor in this position and press the padlock button (14).
 - ⇒ The camera head is fixed in its position.
 - ⇒ A padlock appears on the display.
 - ⇒ The cursor (13) is locked.
3. Press the padlock button (14) to unlock the camera head.
 - ⇒ The camera head moves back to a neutral position.
 - ⇒ The padlock symbol on the display disappears.

Note

Always carry out this HOME function before pulling the probe cable out of the inspected hollow space to prevent the camera head from getting caught, and thus to avoid damage to the Bowden cables in the probe cable!

Taking a picture

1. Press the photo button (12).
 - ⇒ The picture is taken and saved.

Recording a video

1. Press the video button (10).
 - ⇒ The videoscope switches to recording mode.
 - ⇒ The recording is started.
 - ⇒ A video camera symbol appears in the top left of the display.
2. Press the video button (10) again.
 - ⇒ The recording is stopped.

Viewing recordings

1. Press the cursor for approx. 5 s.
 - ⇒ The browser for recordings opens.
 - ⇒ By moving the cursor up/down or to the right/left you can navigate through the browser.
2. By moving the cursor to the right/left you can move from one image/video file to the next.
 - ⇒ Open the desired file by slightly pressing the cursor.
 - ⇒ Start a video file by slightly pressing the cursor again.
 - ⇒ Stop the video file by pressing the zoom button (16).
3. To return to the live image mode briefly press the power button (15) once.

Zooming in a recording

1. To magnify a recording, press the zoom button (16).
 - ⇒ In this mode, magnifications of up to three times are possible.
2. By moving the cursor up/down or to the right/left you can navigate through the magnified image until reaching the desired spot.
3. To exit the zoom mode briefly press the power button (15) once.

Cutting an image

1. By pressing the cursor in the zoom mode you can cut out the selected part of the magnified image.

Deleting a file

1. When the file is open, press the cursor for approx. 3 s.
 - ⇒ Another submenu opens asking you whether or not to delete the selected files (YES/NO).

Switch-off

1. Press the power button (15) for approx. 2 s.
 - ⇒ The device switches off.

Software

The device has various setting options which can be accessed via an operator software.

The main menu consists of two submenus allowing to adjust the basic device settings and the photo/video settings.

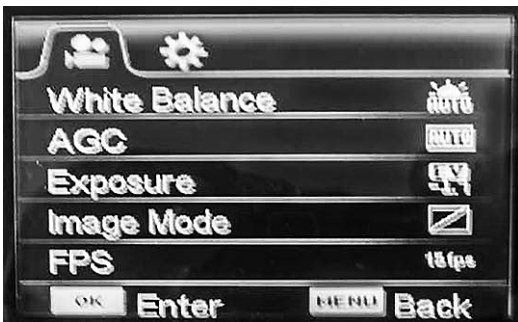
1. Press the menu/back button (15).
 - ⇒ The photo/video settings submenu is displayed.
2. To switch between the two submenus, move the cursor (13) to the left or right.
3. To select a menu, press the cursor (13).

- To leave a menu, press the menu/back button (15).

Photo and video settings submenu

The submenu offers the following options:

Setting	Function
White Balance	Setting the white balance
AGC	Setting the image gain
Exposure	Setting the exposure
Image Mode	Setting the image mode
FPS	Setting the refresh rate
Screen Brightness	Setting the display brightness
Screen Contrast	Setting the display contrast
Image Proportion	Setting the display format
Auto Save	Switching automatic saving on or off



Setting the white balance

- Use the cursor (13) to select the *White Balance* option.
- Press the cursor to open the *White Balance* menu.



- Select the desired setting using the cursor (13):
 - ⇒ Press *Auto* to select the setting for an automatic adjustment.
 - ⇒ Press *Type A* to select the setting for sunny daylight.
 - ⇒ Press *Type B* to select the setting for cloudy daylight.
 - ⇒ Press *Type C* to select the setting for artificial light.
- Press the cursor (13) to confirm your selection.

Setting the image gain (AGC)

- Use the cursor to select the *AGC* option.
- Press the cursor to open the *AGC* menu.



- Select the desired setting using the cursor (13):
 - ⇒ Press *Auto* to select the setting for an automatic adjustment.
 - ⇒ Press *x4* to select the setting 4-fold.
 - ⇒ Press *x8* to select the setting 8-fold.
 - ⇒ Press *x16* to select the setting 16-fold.
- Press the cursor (13) to confirm your selection.

Setting the exposure

1. Use the cursor (13) to select the *Exposure* option.
2. Press the cursor to open the *Exposure* menu.



3. Select the desired setting using the cursor (13).
4. Press the cursor to confirm your selection.

Setting the image mode

1. Use the cursor (13) to select the *Image Mode* option.
2. Press the cursor to open the *Image Mode* menu.



3. Select the desired setting using the cursor (13).
4. Press the cursor to confirm your selection.

Setting the refresh rate

1. Use the cursor (13) to select the *FPS* option.
2. Press the cursor to open the *FPS* menu.



3. Select the desired setting using the cursor (13).
4. Press the cursor to confirm your selection.

Setting the display brightness

1. Use the cursor (13) to select the *Screen Brightness* option.
2. Press the cursor to open the *Screen Brightness* menu.



3. Select the desired value using the cursor (13).
4. Press the cursor to confirm your selection.

Setting the display contrast

1. Use the cursor (13) to select the *Screen Contrast* option.
2. Press the cursor to open the *Screen Contrast* menu.



3. Select the desired value using the cursor (13).
4. Press the cursor (13) to confirm your selection.

Setting the display format

1. Use the cursor to select the *Image Proportion* option.
2. Press the cursor to open the *Image Proportion* menu.



3. Select the desired setting using the cursor.
4. Press the cursor to confirm your selection.

Setting Auto Save

1. Use the cursor (13) to select the *Auto Save* option.
2. Press the cursor to open the *Auto Save* menu.



3. Select the desired setting using the cursor (13).
4. Press the cursor to confirm your selection.

System settings submenu

The submenu offers the following options:

Setting	Function
Date and time	Setting the date and time
Language	Setting the menu language
Format	Formatting the SD card
Power frequency	Selecting power frequency 50 Hz or 60 Hz
Sounds	Setting the sounds
TV System	Selecting NTSC or PAL
Automatic shutdown	Selecting automatic shutdown to save energy
Firmware Update	Updating the system software



Setting date and time

1. Use the cursor (13) to select the *Date & Time* option.
2. Press the cursor to open the *Date & Time* menu.



3. Move the cursor to the left or right to select the year, date or time.
 - ⇒ The current selection is highlighted by a square.
4. Move the cursor (13) up or down to set the value for the current selection.
5. Repeat steps 3 and 4 until the date and time are set as desired.
6. Press the cursor (13) to confirm the settings.

Setting the menu language

1. Use the cursor (13) to select the *Language* option.
2. Press the cursor to open the *Language* menu.



3. Select the desired menu language using the cursor (13).
4. Press the cursor to confirm your selection.

Formatting the SD card

Note

If you format the SD card, all image data (photos and videos) will be deleted!

1. Use the cursor (13) to select the *Format* option.
2. Press the cursor to open the *Format* menu.



3. Select the desired setting using the cursor.
4. Press the cursor to confirm your selection.

Setting the power frequency

1. Use the cursor (13) to select the *Power frequency* option.
2. Press the cursor to open the *Power frequency* menu.



3. Select the desired setting using the cursor.
4. Press the cursor to confirm your selection.

Setting the signal sounds

1. Use the cursor (13) to select the *Sounds* option.
2. Press the cursor to open the *Sounds* menu.



3. Select the desired setting using the cursor:
 - ⇒ Press *Shutter* to switch the shutter sound for image recordings on or off.
 - ⇒ Press *Start_up sound* to select or switch off the melody for system start.
 - ⇒ Press *Beep* to switch the button sounds on or off.
 - ⇒ Press *Volume* to adjust the volume.
4. Press the cursor to confirm your selection.

Setting the TV system

This setting must be made before transferring an image from the device to a monitor. Please note that the monitor must support the PAL or NTSC format.

1. Use the cursor (13) to select the *TV System* option.
2. Press the cursor to open the *TV System* menu.



3. Select the compatible setting for your monitor using the cursor.
4. Press the cursor to confirm your selection.
5. If necessary, make the required settings at the monitor.
6. Connect the device to the monitor via the supplied AV cable and the AV output (7).

Selecting automatic shutdown

In this mode, the device will switch off automatically after a specified period of time if no menu navigations or device activities were carried out during this period.

1. Use the cursor (13) to select the *Automatic shutdown* option.
2. Press the cursor to open the *Automatic shutdown* menu.



3. Select the desired setting using the cursor:
 - ⇒ Press *OFF* to deactivate automatic shutdown.
 - ⇒ Press *5 min* to set an automatic switch-off after 5 minutes.
 - ⇒ Press *10 min* to set an automatic switch-off after 10 minutes.
 - ⇒ Press *15 min* to set an automatic switch-off after 15 minutes.
4. Press the cursor to confirm your selection.

Update firmware



Info

The firmware should only be updated after consultation with the dealer or manufacturer.

The firmware update must have been loaded onto the inserted SD card beforehand. The firmware update must **not** be located in a subfolder.

1. Use the cursor (13) to select the *Firmware Update* option.
2. Press the cursor to open the *Firmware Update* menu.



3. Select the desired setting using the cursor.
4. Press the cursor to confirm your selection.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

For repairs or device testing, contact the manufacturer.

Maintenance and repair

Charging the battery

Before using the device for the first time, it may be necessary to charge the battery.

- The battery can either be inserted in the device or removed for charging.
- If the battery is inserted, the device should be switched off during charging.

1. Plug the power adapter into the connector at the battery pack (17).
2. Plug the power adapter into the socket.
 - ⇒ The battery is charging.
 - ⇒ The single-cell lithium battery voltage is 3.7 - 4.2 V, charged by a 5 V charger.



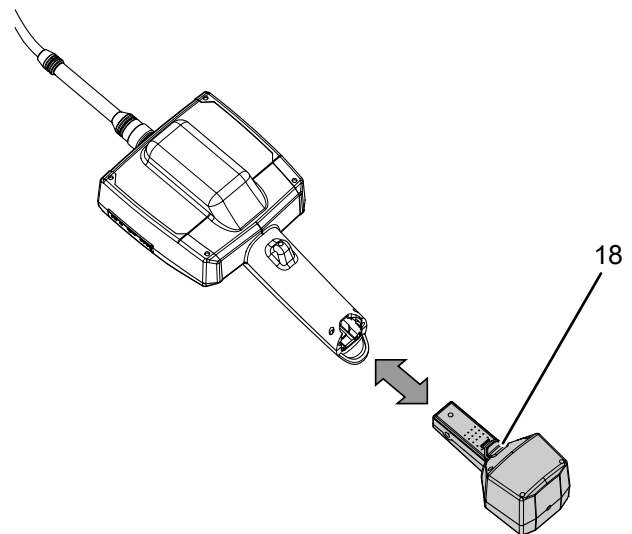
Info

The power adapter may become hot during charging of the battery pack, particularly if the videoscope is operated while the power adapter is connected. This is normal and does not affect its functioning.

Changing the battery

Note

Make sure that the surface of the device is dry and the device is switched off.



1. Press the button (18) at the rear of the battery pack.
2. Hold the button and pull the battery pack out of the device.
3. Push the new battery pack into the device until it engages.

Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. For further return options provided by us please refer to our website <https://de.trotec.com/shop/>.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



Li-Ion

In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

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