OKM

USER MANUAL

OKM® Delta Ranger

DETECTOR FOR TREASURE, GOLD AND CAVITY HUNT

MODEL: DR-A01

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U.S. Edition | ENGLISH
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> **Do not drink any alcohol or take any drugs before or during the operation of the device and follow the instructions carefully!**

NOTICE

The search for historical and archaeological artifacts and structures may be regulated in different ways from state to state. Searching with a detector may require approvals and permissions from landowners, public agencies and/or government authorities.

With the purchase of the OKM detector you DO NOT automatically receive a detection permit or excavation permit!

Consult the authorities responsible for your search project and/or area for information on required permits.

NOTICE

> **Read all instructions first before commencing the assembly and usage!**

NOTICE

All artifacts found on public lands are protected by state and federal laws. It is illegal to collect artifacts on public lands. Artifacts include anything made or used by humans including arrowheads and flakes, pottery, basketry, rock art, bottles, coins, metal pieces, and even old cans. Ancient objects that are found on private land are legal for individuals to collect with written permission from the landowner and legal for individuals to own under the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).

However, these objects could be subject to a civil claim of superior title by a tribe. Other requirements depend on the state. If you are interested in collecting or metal detecting on private property, contact your State Historic Preservation Office for more information.

Before collecting minerals found, familiarize yourself with the rules stated on the Bureau of Land Management Website for your State.

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TABLE OF CONTENTS

TRANSPORTATION & STORAGE

1 TRANSPORTATION AND STORAGE

Protect your detector and accessories by storing them in the Protector Case in a cool, dry place (50 to 75 °F | 10 to 25 °C). Unplug the probe from the Control Unit and power off the Control Unit before packing the device and its accessories into the case.

Use the Protector Case for the intended purpose only. Keep away from children!

DANGER

CHOKING AND ASPHYXIATION HAZARD!
A Cover is Not a Toy! Keep Away from Children!

When shipping, use the original cartboard box or similar heavy-duty container and provide sufficient padding around all parts.

1.1 AVOID EXTREME TEMPERATURES AND MOISTURE

Protect your device from extreme temperatures as well as dust and moisture during transportation and storage.

1.2 CHECK BATTERY STATUS REGULARLY

Check the detector regularly if it is not used for a long time. When storing the Delta Ranger for long periods of time, avoid completely discharging of the batteries. Instead, recharge the battery at least every 3 months and up to approx. 90 % of the maximum charge capacity.

SCOPE OF DELIVERY

2 SCOPE OF DELIVERY AND CONTROL ELEMENTS

The scope of delivery depends on the selected model version: Light or Professional.

		Light	Professional
I	Control Unit	✓	✓
II	Android Smartphone with OKM App	✓	✓
III	Charger	✓	✓
IV	Travel Adapter	✓	✓
V	Headphones with charging cable	✓	✓
VI	Long-Range Probe (L)	✓	✓
VII	Thermo Probe (T)		✓
VIII	Ground Scan Probe (G)		✓
IX	Notebook with OKM Visualizer 3D Studio		✓
X	Protector Case	✓	✓

2.1 CONTROL UNIT
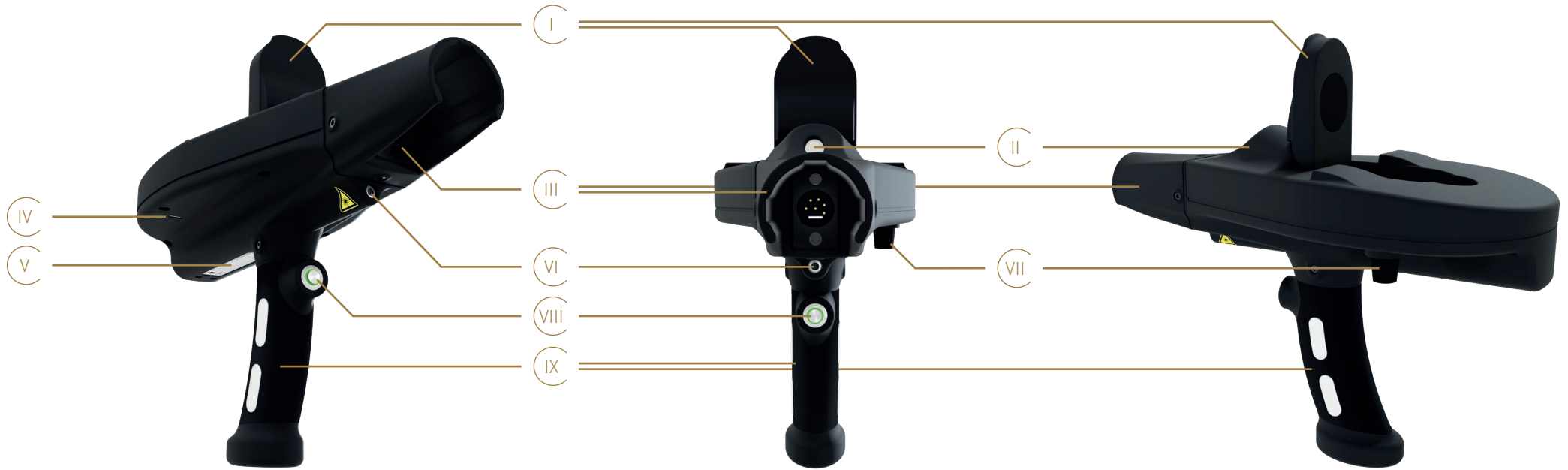
I   Smartphone Mount – see 3.3 Attach Smartphone on page 11.

II   LED Lighting to illuminate dark areas.

III   Probe Fitting with Probe Socket to ensure that the probe is plugged in correctly – see 3.2 Attach Probe on page 11.

IV   Charger Socket (USB-C) to charge the Control Unit with LED Indicator to show the charging state while charging the internal battery – see 4.1 Charge Internal Batteries on page 13.

V   Label with device information like Serial Number and Model Number – see 6.3 Register/Verify Detector on page 47.

VI   Laser Pointer to set the crosshairs position – see 4.6 Set Crosshairs Position on page 17.

VII   Knob to calibrate the Bionic Sensors – see 5.4.1 Calibrate Bionic Sensors on page 24.

VIII   Trigger with LED to switch the Control Unit on and off. Control and confirm various functions. The ring-shaped LED indicates 4 connection states:

Flashing Green	The Control Unit is switched on and waiting for a connection. No probe is connected and the App is not connected.
Permanently Green	The Control Unit is switched on and successfully connected to the probe, but the App is not connected.
Flashing Blue	The Control Unit is switched on and connecting/connected to the App, but no probe is connected.
Permanently Blue	The Control Unit is switched on and successfully connected to the probe and to the App.

IX   Handle with Electrodes – see 5.4.1 Calibrate Bionic Sensors on page 24.

2.2 ANDROID SMARTPHONE

The Control Unit is controlled via an Android smartphone App. For detailed information refer to the respective sections in this manual. For further settings and information beyond the use of the OKM App, refer to the smartphone manual.

2.3 CHARGER AND TRAVEL ADAPTER

The Control Unit is charged via charger. For detailed information refer to 4.1 Charge Internal Batteries on page 13. In some countries the use of the Travel Adapter may be required.

2.4 WIRELESS HEADPHONES

The Android smartphone can be paired with wireless headphones via Bluetooth. For detailed information refer to 4.5 Pair Wireless Headphones on page 17. For further settings and information, refer to the smartphone and headphones manuals respectively.
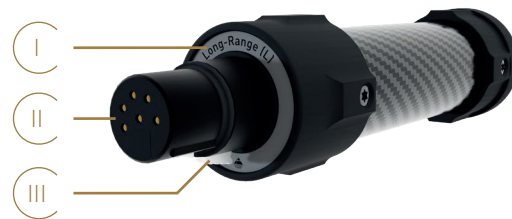
2.5 PROBES

The OKM Delta Ranger is equipped with various probes according to the acquired edition:

Long-Range   Thermo   Ground Scan
Probe (L)   Probe (T)   Probe (G)
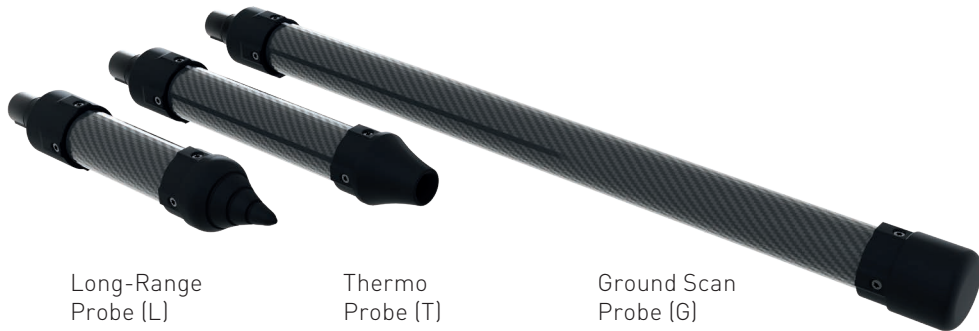
I   Probe Label
II   Probe Connector
III   Notch

For correct assembly see 3.2 Attach Probe on page 11.

2.6 PROTECTOR CASE

The device and its accessories are stored and transported in a Protector Case – see 1 TRANSPORTATION AND STORAGE on page 5. For further information, refer to the Protector Case Care and Instructions.

ASSEMBLY

3 ASSEMBLY

3.1 NECESSARY TOOLS

No additional tools are required to assemble the OKM Delta Ranger.

Do not open the device and/or accessories. There are no end user serviceable parts inside.

3.2 ATTACH PROBE

Probes shall always be attached in the prescribed way matching the Probe Socket Pins.

	NOTICE
	Make sure the Probe Connector and Socket Pins are clean before assembly!

Depending on the measurement, attach the probe to the Probe Socket:

1

Plug the Probe Connector into the Probe Socket. Note the correct position of the pins!

2

Push carefully until the notch snaps in with a noticable click sound.

3.3 ATTACH SMARTPHONE

3

Lift the Smartphone Mount.

4

Attach the smartphone to the magnet.

3.4 DETACH PROBE

1

Press and hold the notch of the Probe Connector to release the Probe.

2

Pull out the Probe carefully as specified by the Probe Fitting.

GETTING STARTED

4 GETTING STARTED

4.1 CHARGE INTERNAL BATTERIES

Fully charge the Control Unit and the smartphone.

To charge the internal batteries, connect the charger from the power supply to the designated Charger Socket. Use the Travel Adapter to enable a connection between the charger and a non-compatible wall socket.

The charging progress is indicated by the LED light next to the Charger Socket: Orange when charging, and Green when fully charged.

It can take up to 4 hours to fully charge the battery.

1

Locate the Charger Socket.

2

Remove the protection cap.

3

Plug in the Charging Cable (USB-C).

4

Charge the smartphone via charging cable.

4.2 PREPARE ANDROID DEVICE AND APP

The OKM Delta Ranger is by default equipped with a pre-configured Android smartphone with pre-installed and activated OKM Delta Ranger App.

You may install and activate the OKM App if:

- you want to use your own Android device.
- you want to add further Android devices.
- you reset the pre-configured Android device.
- you have technical problems with the OKM App.

4.2.1 Download and Install OKM App

The OKM Delta Ranger App is usually pre-installed on the included Android smartphone. Browse the Apps in your smartphone to make sure the required OKM App has not yet been installed.

- Get the Download File from the OKM online store or contact OKM Support.
- Download the OKM App to the Android device.
- Install the OKM App on the Android device.
- After successful installation, start the App, select Settings from the main menu and start Update by tapping on the icon.
- After successful update, restart the App and proceed with the Activation – see .
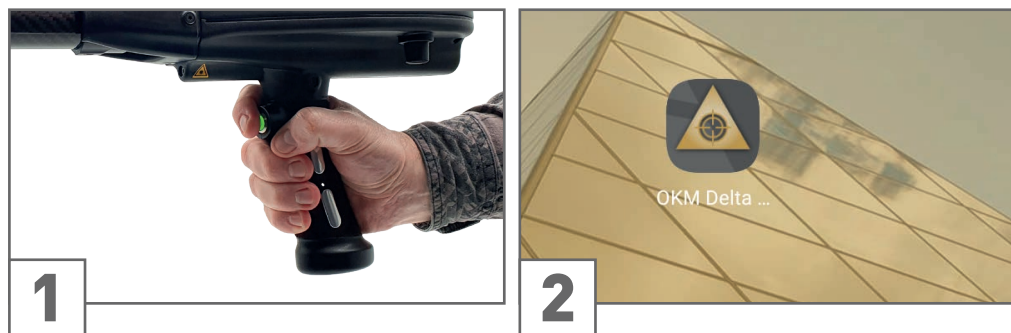
4.2.2 Activate OKM App

1 Select Activate App from the Settings menu.

2 If you have received a QR Code from OKM for an automatic activation, select QR Code.

3 Use the smartphone camera to scan the QR Code that you received with the detector.

2 If you have problems using the QR Code or you do not have a QR Code, select Manual.

3 Enter the OKM Delta Ranger Serial Number.

4 Enter the OKM Delta Ranger Activation Code.

5
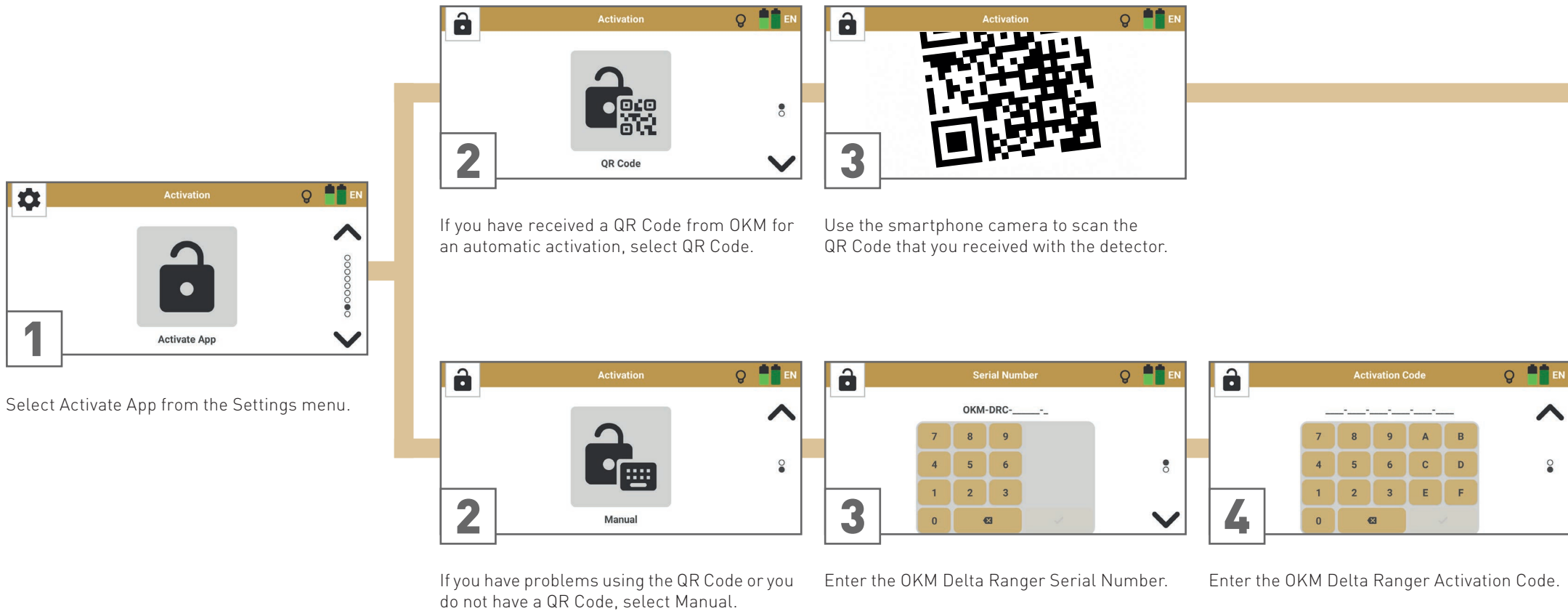
Confirm the activation by tapping on ✓

If the activation failed, try again. Make sure that all entered data are correct.

4.3 PAIR ANDROID DEVICE WITH DETECTOR

1 Press the trigger to power on the Control Unit.

2 Power on the smartphone. Tap on the OKM Delta Ranger App icon to start the application.

The App automatically establishes a connection to the Control Unit, if activated correctly.

4.4 OKM APP INTERFACE
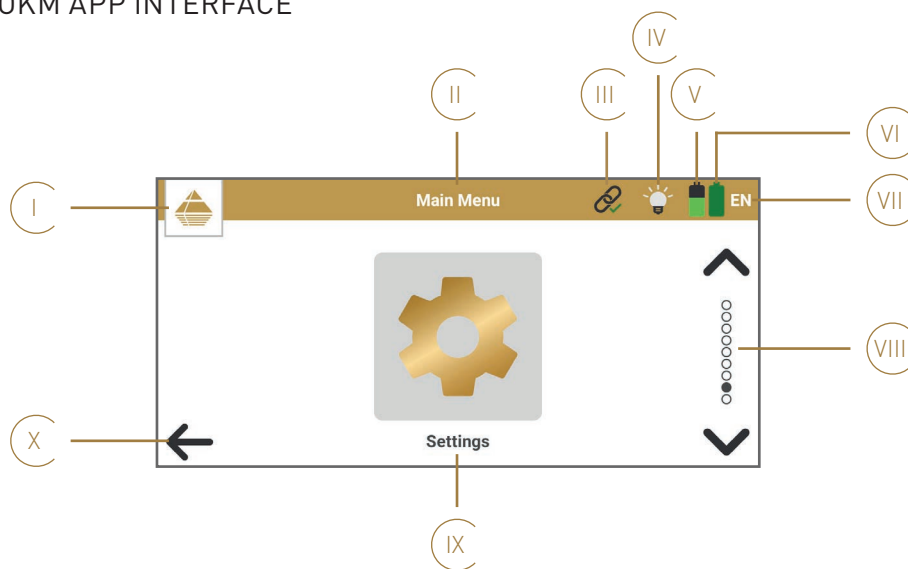
I   Menu Icon shows the active menu. Tap to return to the main menu.

II   The headline shows the active menu or option.

III   App Connection Status indicates the connection status between App and Control Unit.

    not connected

    connecting

    connected

IV   LED Lighting: Tap on the icon to toggle between ON and OFF:

    OFF (default)

    ON

V   Smartphone Battery Status

    battery level

VI   Control Unit Battery Status

    battery level

    critical

    charging

    unknown

VII   Language Code shows the selected language – see .

VIII   Navigation Sidebar: Tap on the arrows to browse through the options. The dots indicate the number of available options.

IX   Selectable Option: Tap on the icon to enter the menu or launch the option.

X   Return to the previous menu.

4.5 PAIR WIRELESS HEADPHONES

The acoustic feedback of the detector can be provided by headphones instead of smartphone speakers in order to avoid attracting attention. Connect wireless headphones by pairing with the smartphone:

Settings > Connected devices > Pair new device > Available devices > [Bluetooth Headphones] Baseline HS
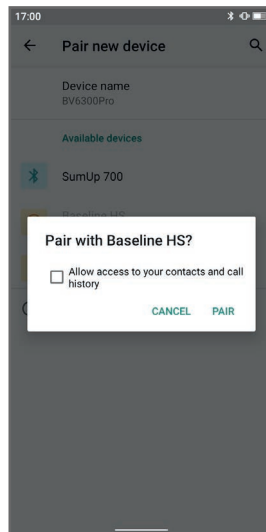
These settings may vary from one smartphone to another. Refer to your smartphone manual if you have trouble pairing headphones.

4.6 SET CROSSHAIRS POSITION

Crosshairs Calibration is used to align the reticle (crosshairs) on the smartphone screen with the laser dot on a distant object. This calibration is recommended before performing a new measurement and every time you have changed the smartphone position on the Control Unit.

Make sure you have powered on the Control Unit and plugged in the Long-Range Probe (L) or Thermo Probe (T).
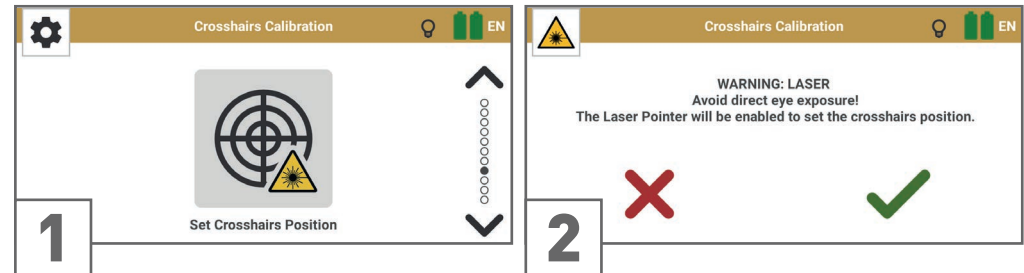
Select Settings from the main menu and tap on the Crosshairs Calibration icon.

The laser pointer is enabled as soon as you confirm with ✔.

Point the probe at a distant object so that you can clearly see the red laser dot.

Drag the crosshairs to the correct position on the smartphone screen: Center the crosshairs on the red laser dot. Confirm with ⊙.

4.7 CALIBRATE COMPASS

Compass Calibration ensures that the cardinal directions are displayed correctly. This calibration is recommended every time you have restarted the detector. Keep at least 160 ft (50 m) distance from ferromagnetic interferences (e.g. power lines, electric fence).
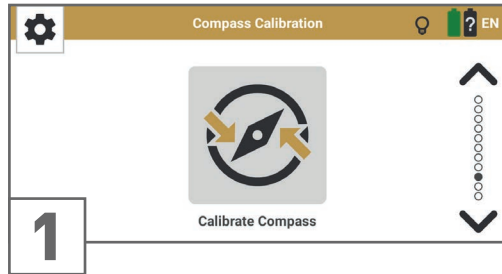
1 Select Settings from the main menu and tap on the Compass Calibration icon.
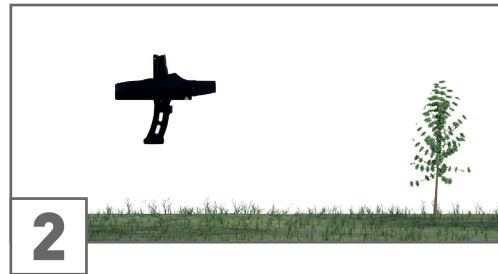
2 Make sure to hold the Control Unit horizontally.

3 Press the trigger and rotate slowly around your own axis ...
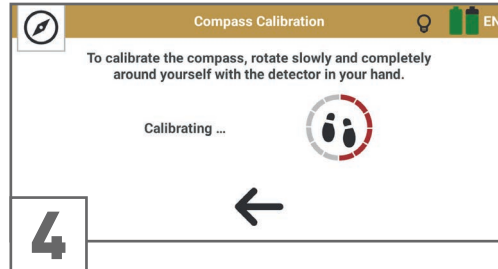
4 ... while the calibration screen is visible. Avoid pivoting or swinging during calibration.
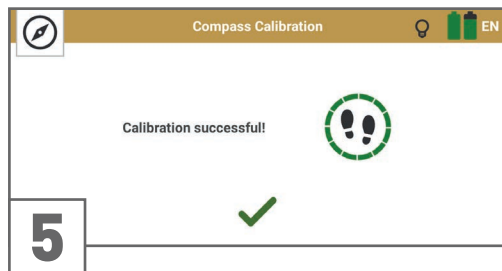
5 After completing your 360° rotation, finish the successful calibration with ✔ ...
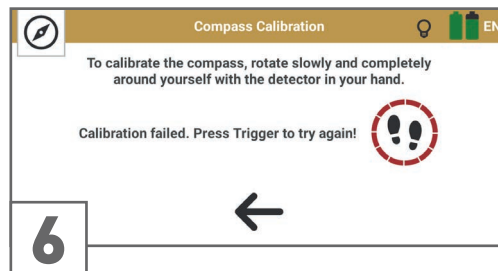
6 ... or retry the calibration.

4.8 SETTINGS

The following preferences and configurations are available via the **Settings** menu:

Language	see 4.8.1 Language on page 19
Sound	see 4.8.2 Sound on page 19
Vibration	see 4.8.3 Vibration on page 19
GPS	see 4.8.4 GPS on page 19
App Theme	see 4.8.5 App Theme on page 20
Length Unit	see 4.8.6 Length Unit on page 20
Temperature Unit	see 4.8.7 Temperature Unit on page 20
Crosshairs Calibration	see 4.6 Set Crosshairs Position on page 17
Compass Calibration	see 4.7 Calibrate Compass on page 18
Activation	see 4.2.2 Activate OKM App on page 14
Update	see 6.2 Check for App Updates on page 47

4.8.1 Language

Use the ‹ › buttons to loop through the available languages. The selection is automatically applied as soon as you return to the previous menu by tapping ← or proceed to the next settings option by tapping ∨.

The selected language is indicated in the toolbar with the 2-letter-code according to ISO-639-1:

عربي (AR)	Español (ES)	Polski (PL)
български (BG)	فارسی (FA)	Русский (RU)
Deutsch (DE)	Français (FR)	Türkçe (TR)
Ελληνικά (EL)	Italiano (IT)	中文 (ZH)
English (EN)	日本語 (JA)	

4.8.2 Sound

The App provides acoustic feedback for various functions. Tap on the switch to toggle between **ON** and **OFF**. To avoid attracting attention you may use Bluetooth headphones (see 4.5 Pair Wireless Headphones on page 17) or select Sound OFF.
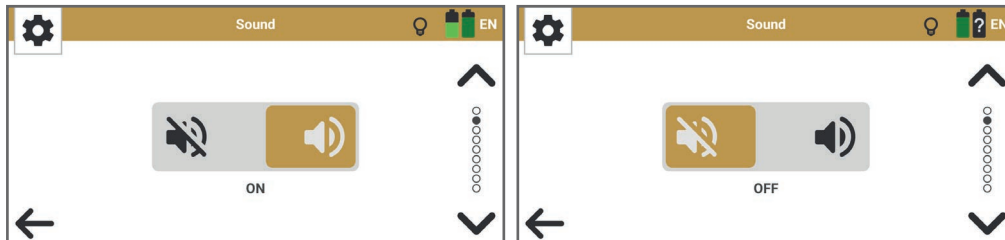
VOLUME is adjusted via smartphone volume control buttons or Settings > Sound > Media Volume.

TOUCH SOUNDS are adjusted via smartphone: Settings > Sound > Advanced > Touch sounds.

These sound settings may vary from one smartphone to another. Refer to your smartphone's manual if you have trouble adjusting the volume and touch sounds.

4.8.3 Vibration

Tap on the switch to toggle between ON and OFF.

The operating modes Bionic Stream, Ionic Stream, and Magnetometer provide vibration feedback (via smartphone).
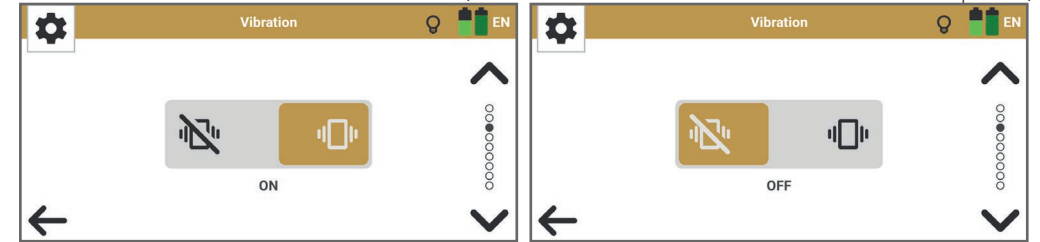
4.8.4 GPS

GPS coordinates can be logged for 3D Ground Scan and Thermo Scan, and will be saved as scan file Meta Data for further documentation in the Visualizer 3D Studio software. Tap on the switch to toggle between ON and OFF.
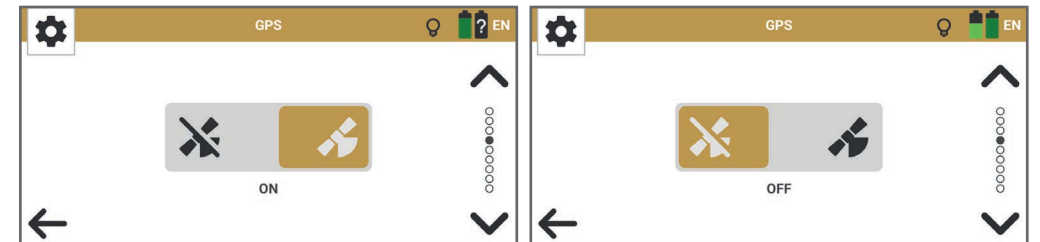
4.8.5 App Theme

Tap on the switch to toggle between Day Mode and Night Mode.

Day Mode is recommended in very bright environments. Night Mode is recommended in dark conditions and allows to remain inconspicuous in the dark.
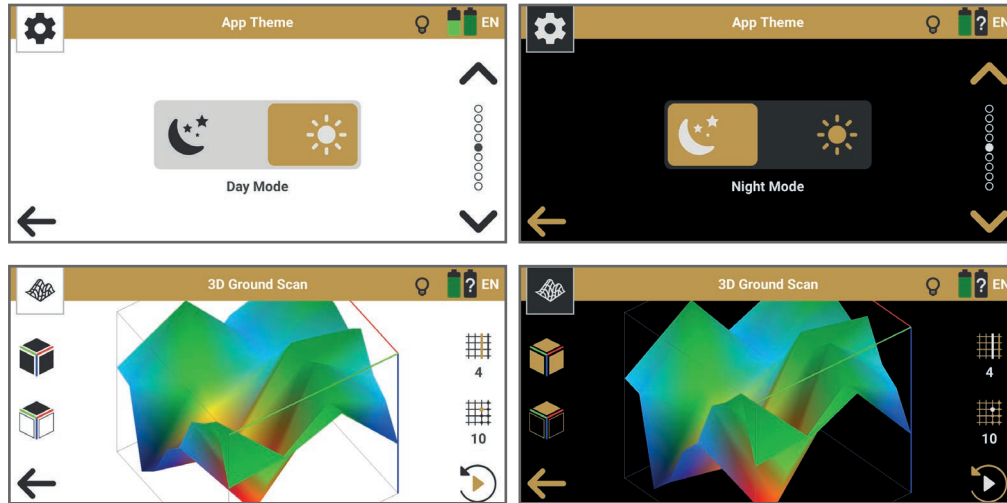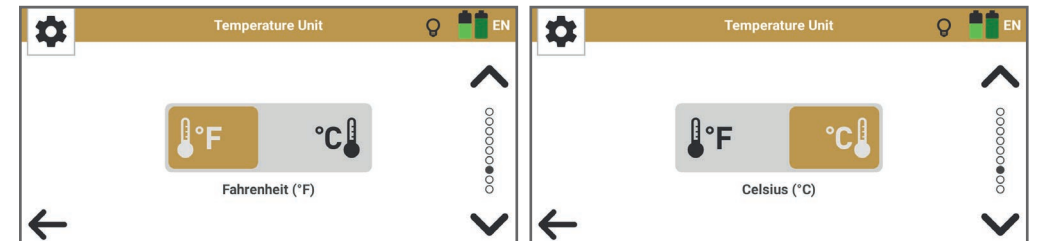

4.8.6 Length Unit

Tap on the switch to toggle between Imperial and Metric.

Imperial indicates all dimensions in feet (ft). Metric indicates all dimensions in meters (m).
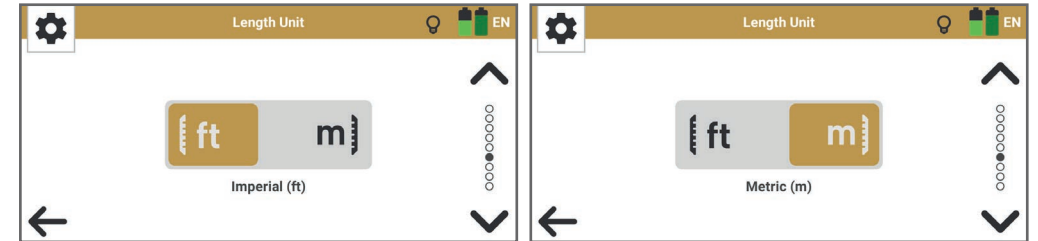
4.8.7 Temperature Unit

Tap on the switch to toggle between °Fahrenheit and °Celcius.

NOTES

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OKM

OPERATIONS

5 OPERATIONS

5.1 PACEMAKERS

OKM Delta Ranger is a passive measuring instrument that does not emit magnetic waves. Clarify possible interferences with your medical doctor if you are wearing a pacemaker or similar medical device.

Magnetic fields and metallic objects influence the scan results. Keep the detector at least 160 ft (50 m) away from magnetic fields, electric motors, speakers, phones, keys, and jewelry.

Remove visible metallic objects such as cans, nails, screws or debris from your scan field before performing measurements with the detector.

5.2 CAUTION DURING EXCAVATION

DANGER
Do not touch detected ammunition! **Report it to the police!**

Once you get a clear target signal, excavate the area around the target object carefully to prevent damage to a potential rare find and minimize the possibility of accidentally detonating old ammunition.

Note the color of the soil close to the surface: A reddish color can be an indicator of rust trace of various kinds of fuses.

Pay attention to the shape of target objects: Curved or round objects can be coins or wedding bands, but may also be parts of ammunition. If you identify buttons, rings or little pegs, excavate particularly carefully.

5.3 OPERATING MODES

The following operating modes are available in the OKM Delta Ranger App:

	Bionic Stream	see 5.4 Bionic Stream on page 24
	Ionic Stream	see 5.5 Ionic Stream on page 26
	Magnetometer	see 5.6 Magnetometer on page 28
	3D Ground Scan	see 5.7 3D Ground Scan on page 30
	Thermo Scan	see 5.8 Thermo Scan on page 38
	Thermo Stream	see 5.9 Thermo Stream on page 42
	File Explorer	see 5.11 File Transfer on page 45

The operating modes are activated as soon as the correct probe is connected.

5.4 BIONIC STREAM

Use the operating mode Bionic Stream to detect recently buried gold objects, long-time buried gold as well as golden artifacts that are buried at long distances.
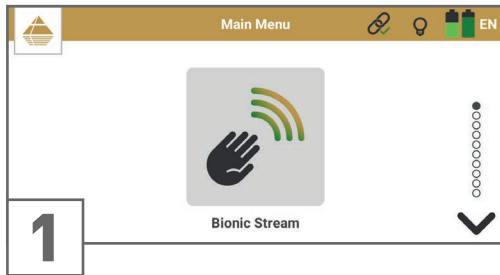

| L T G	Make sure you have plugged in the Long-Range Probe (L).
	This operating mode allows horizontal probe orientation.

5.4.1 Calibrate Bionic Sensors

1 Start the operating mode **Bionic Stream** by tapping on the option in the App main menu.

2 Grasp the handle with your leading hand. Make sure that palm and fingers touch the electrodes.

3 With the other hand, turn the Knob very gently to calibrate the Bionic sensors.
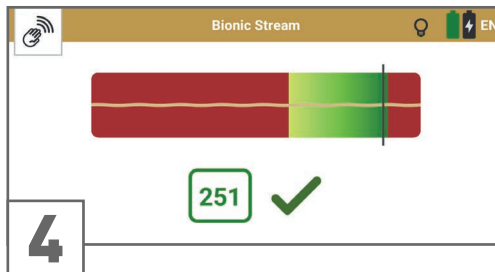
4 Set a value within the green range - ideally reach the highest possible value close to 254. Make sure to keep the value stable for at least 3 seconds. Confirm with ✔.

If contact to the electrodes is lost during calibrating or measuring, repeat the calibration by tapping on ⚡.

5.4.2 Measurement Screen

⊚	Enable the laser pointer for 5 s as an additional tool for aiming at the target object. You may correct the crosshairs position via Settings – see 4.6 Set Crosshairs Position on page 17.
⊕	Change Reticle (crosshairs): Tap to change the reticle design. Choose from 5 different options. Your choice is saved automatically.
⚡	Recalibrate Bionic Sensors, see 5.4.1 Calibrate Bionic Sensors on page 24.
←	Exit Bionic Stream and return to the main menu.

Before performing a measurement, make sure you have set the crosshairs position according to your planned scan zone. You may recalibrate the crosshairs whenever you like.

5.4.3 Perform Triangulation Measurement

Triangulation (or Cross Bearing) uses two or more points simultaneously to fix a position. This procedure helps to determine a potential target spot more precisely and to verify detected target spots.
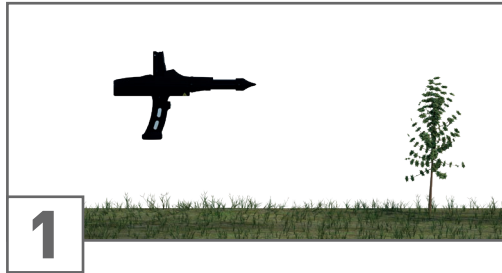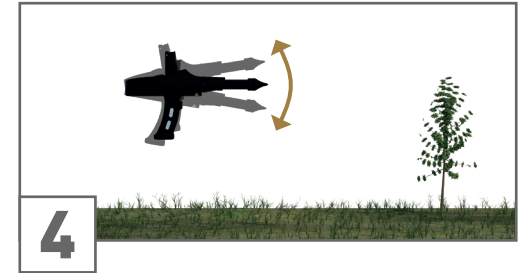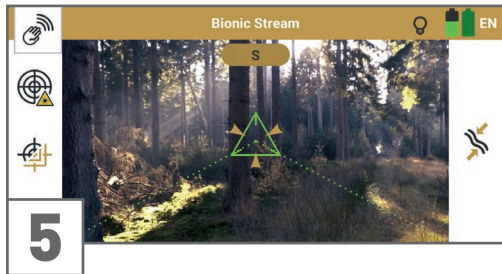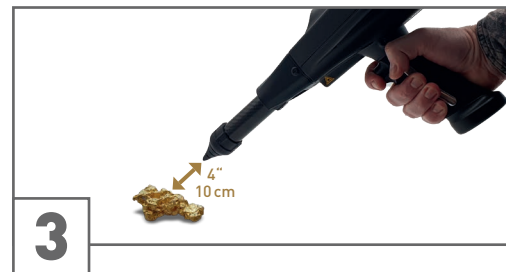

1 Hold the Probe horizontally.

2 Scan the area from the first position.
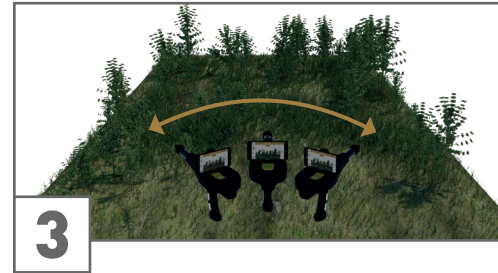
3 Move the Probe slowly from side to side ...

4 ... as well as up and down.

5 A hit is signaled by:
- acoustic feedback (if Sound is enabled)
- vibration (if Vibration is enabled)
- visual feedback (flashy crosshairs)

6 Perform a Control Scan from a different direction at about 80 to 1600 ft (25 to 500 m) distance from your first spot.

7 Before proceeding with the measurement, you may recalibrate the crosshairs position – see 4.6 Set Crosshairs Position on page 17 – and the Bionic Sensors – see 5.4.1 Calibrate Bionic Sensors on page 24.

8 As soon as you get a hit on the same target spot, it is likely it is a potential target.

You may perform further control scans to verify the target spot.

5.5 IONIC STREAM

Use the operating mode Ionic Stream to detect gold objects that have been buried for a long time.

L T G	Make sure you have plugged in the Long-Range Probe (L).
	This operating mode allows horizontal probe orientation.

5.5.1 Calibrate Ionic Sensors
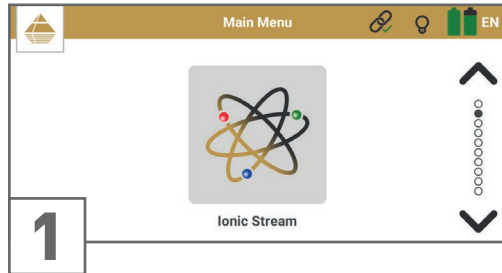
1 Start the Operating Mode *Ionic Stream* by tapping on the option in the App main menu.

2 Place a reference object – an object made of the same material you are looking for – in front of you. Aim at it with the probe heading to the North.

3 Keep a distance of about 4" (10 cm) between the tip of the probe and the reference object.
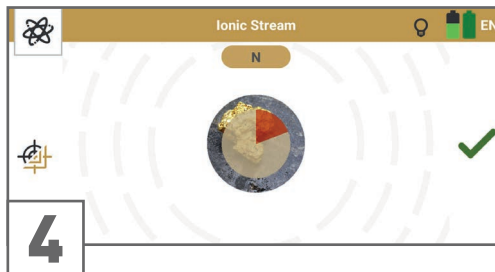
4 Confirm by tapping on the focus zone (alternatively by pressing the trigger or tapping on ✔). Keep aiming at the object and wait until the countdown has finished.

5.5.2 Measurement Screen

⊕	Enable the laser pointer for 5 s as an additional tool for aiming at the target object. You may correct the crosshairs position via Settings – see 4.6 Set Crosshairs Position on page 17.
⊕	Change Reticle (crosshairs): Tap to change the reticle design. Choose from 5 different options. Your choice is saved automatically.
⌇	Recalibrate Ionic Sensors, see 5.5.1 Calibrate Ionic Sensors on page 26.
←	Exit Ionic Stream and return to the main menu.

Before performing a measurement, make sure you have set the crosshairs position according to your planned scan zone. You may recalibrate the crosshairs whenever you like.

5.5.3 Perform Triangulation Measurement

Triangulation (or Cross Bearing) uses two or more points simultaneously to fix a position. This procedure helps to determine a potential target spot more precisely and to verify detected target spots.
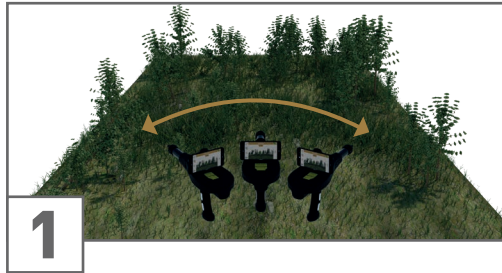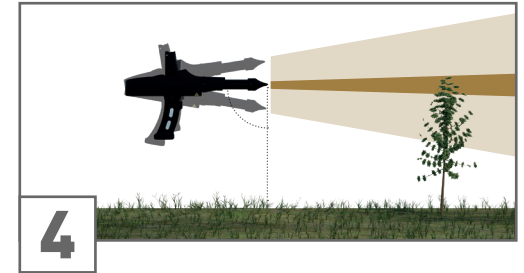

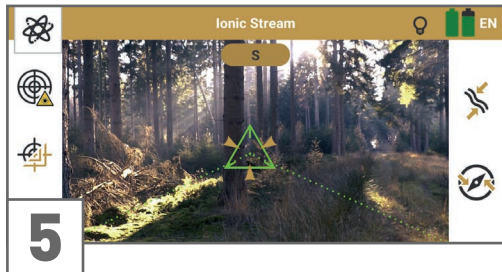**1** Move the probe slowly from side to side ...
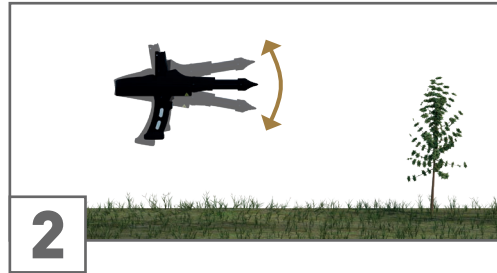
2 ... as well as up and down.
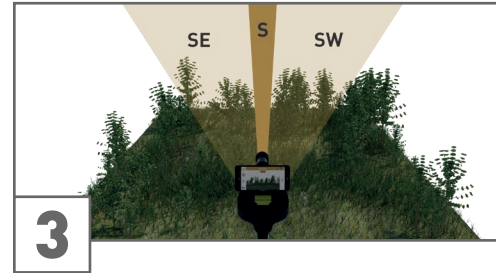
3 For best measurement results, scan into the natural ion stream of the geomagnetic field: always pointing to the South, Southeast or Southwest.
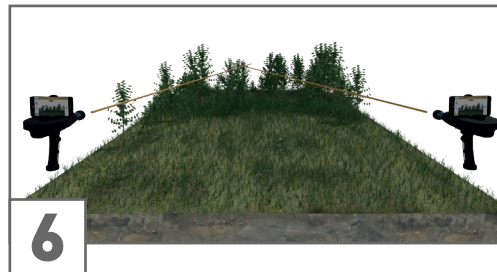

4 Measure perpendicular to the ground. Avoid pointing the detector too high or too low.

5 A hit is signaled by:
- acoustic feedback (if Sound is enabled)
- vibration (if Vibration is enabled)
- visual feedback (flashy crosshairs)

6 Perform a Control Scan from a different direction at about 80 to 1600 ft (25 to 500 m) distance from your first spot.

7 Before proceeding with the measurement, you may recalibrate the crosshairs position.
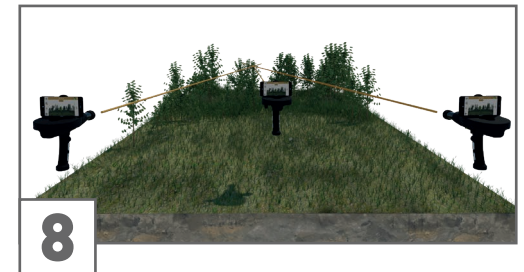
8 As soon as you get a hit on the same target spot, it is likely it is a potential target.

You may perform further control scans to verify the target spot.

5.6 MAGNETOMETER

Use the operating mode Magnetometer to detect small metal objects like nails, screws and wires made of ferromagnetic materials such as iron, nickel and cobalt close to the surface. Remove these items from the scan field before performing further scans!

The fewer small metal items in the soil, the deeper you can detect targets with 3D Ground Scan.

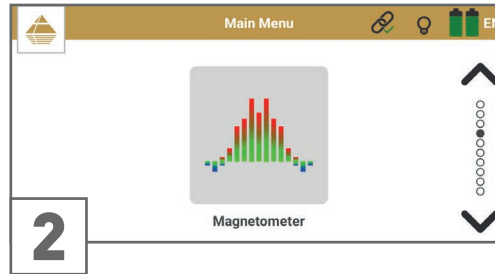Moreover, use Magnetometer to pinpoint objects during excavation.

L T G	Make sure you have plugged in the Ground Scan Probe (G).
	This operating mode allows vertical and horizontal (short-range) probe orientation.

5.6.1 Prepare Measurement

1 Point the probe to a neutral (non-ferrous and non-magnetic) surface.

2 Start the operating mode *Magnetometer* by tapping on the option in the App main menu.

5.6.2 Measurement Screen
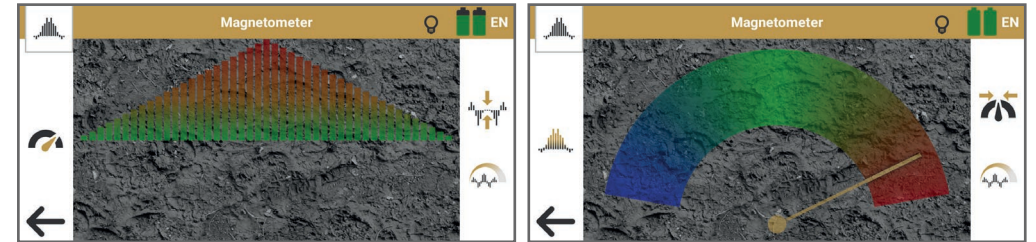
Magnetometer View (default)

Ferro Pointer View

	Switch to Ferro Pointer View.		Switch to Magnetometer View.
	Perform a Ground Balance: Point the probe to a neutral (non-ferrous and non-magnetic) surface and tap on the icon to reset the bar graph.		Perform a Ground Balance: Point the probe to a neutral (non-ferrous and non-magnetic) surface tap on the icon to reset the indicator.

|	
	Change the Sensor Sensitivity: Tap to switch between
	low
	medium
	high
	Set low sensitivity when using Magnetometer on rough terrain or on scan fields with high mineralization.
←	Exit Magnetometer and return to the main menu.

5.6.3 Perform Measurement
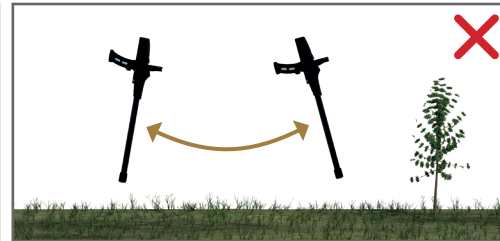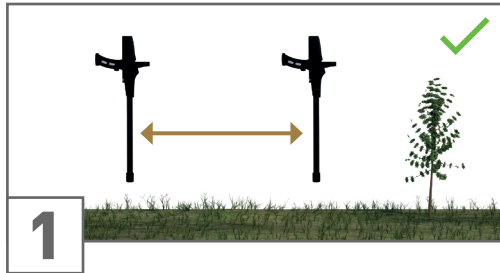
Hold the probe vertically.
Move the detector back and forth ...

... but keep the orientation of the probe parallel to your starting orientation.
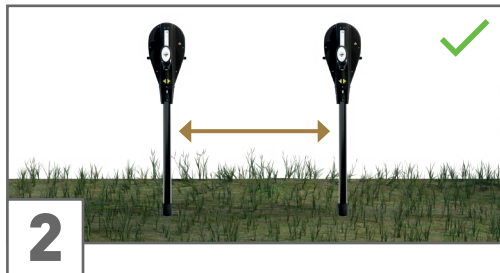
Move the detector to the sides ...

... but do not pivot, swing or rotate the probe.
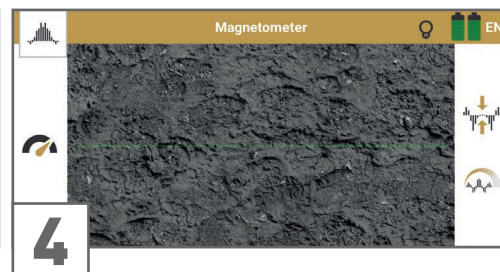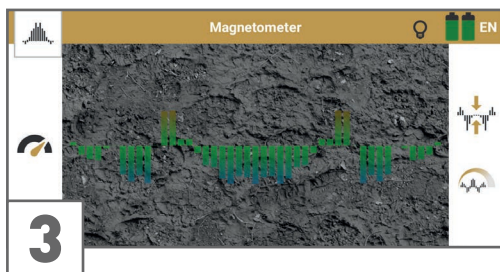
If the signal becomes unstable, point the probe to a neutral (non-ferrous and non-magnetic) surface ...

... and press the trigger or tap on 🛒 to perform a Ground Balance. The bar graph is immediately reset to the zero line.

In Ferro Pointer View, tap on 🛒 or press the trigger to reset the indicator.

5.6.4 Interpret Measurement

Magnetometer provides

- acoustic feedback (if Sound is enabled),
- vibration feedback (if Vibration is enabled) and
- a basic visual representation.

As soon as you get a clear signal, the device has detected a potential metal target in front of (horizontal measurement) or below (vertical measurement) the probe respectively.

As soon as the probe is very close to the detected object, the values reach its peak and indicate a hit with vibration.
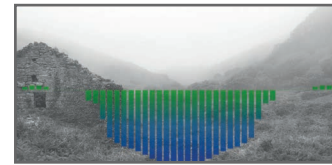
The bar graph shows BLUE peaks if the probe is pointing at the negative magnetic pole of a ferrous object.
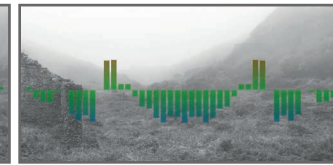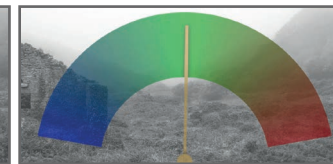
The bar graph is in the GREEN range (close to zero line) if there is no ferrous or magnetic target object.
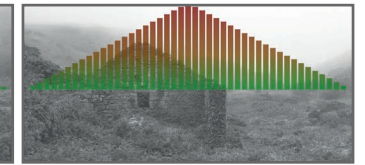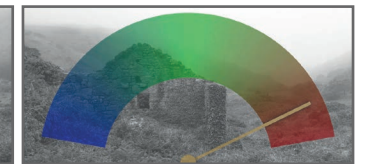
The bar graph shows RED peaks if the probe is pointing at the positive magnetic pole of a ferrous object.
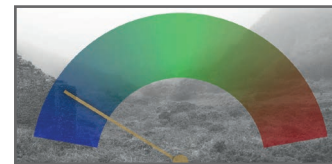
The indicator is in the BLUE zone if the probe is pointing at the negative magnetic pole of a ferrous object.

The indicator is in the GREEN zone if there is no ferrous or magnetic target object.

The indicator is in the RED zone if the probe is pointing at the positive magnetic pole of a ferrous object.

5.7 3D GROUND SCAN

Use the operating mode 3D Ground Scan to get a detailed visualization of underground structures and potential target objects for further analysis in Visualizer 3D Studio.
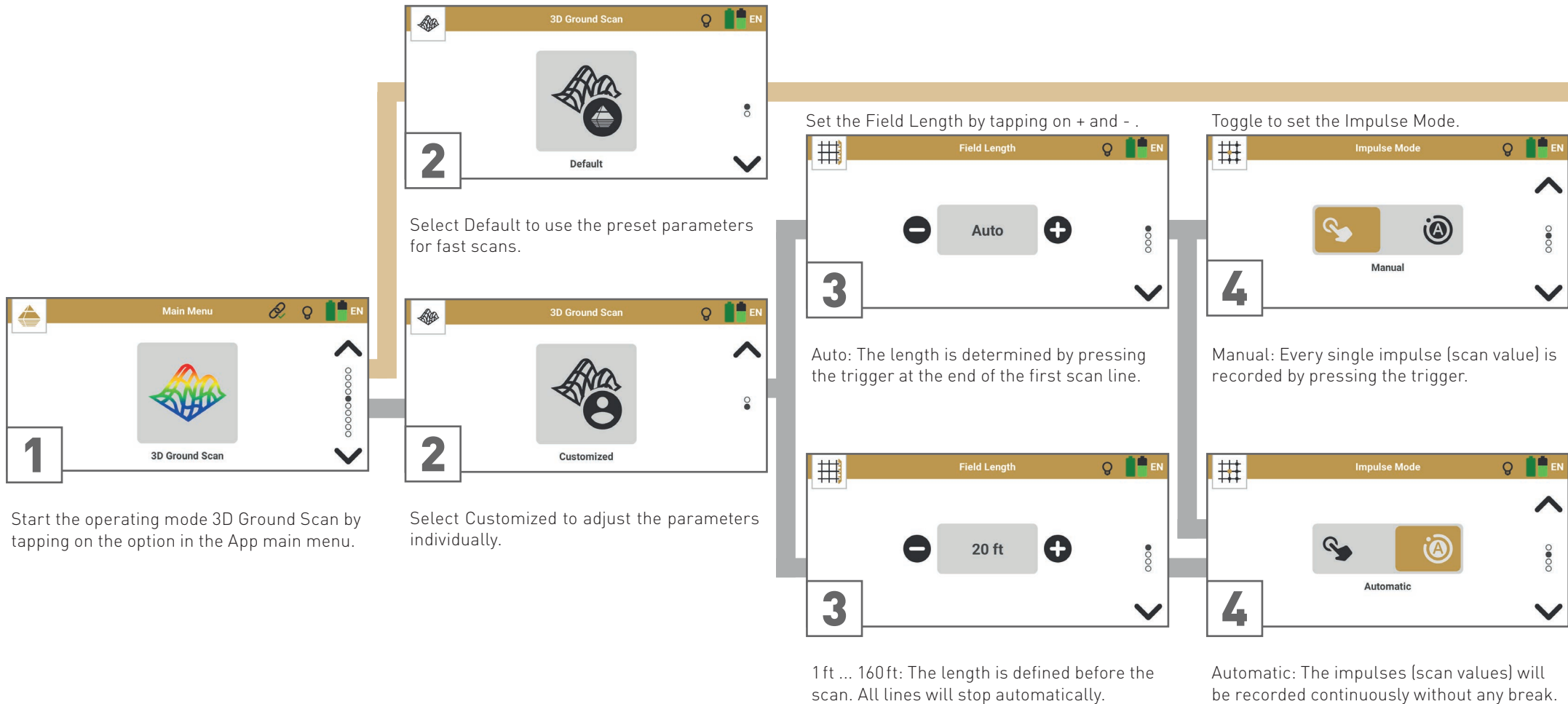
Learn more in the 3D Ground Scan Guide.
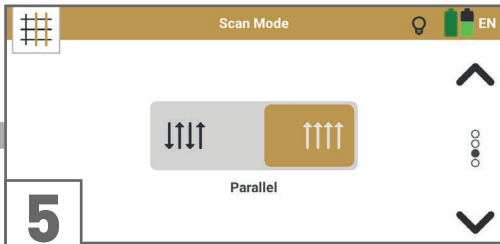
5.7.1 Configure Measurement

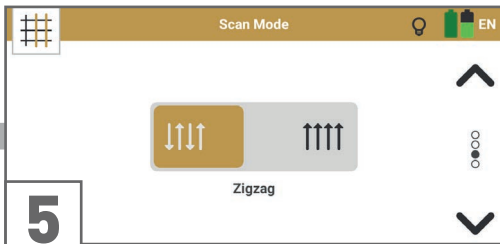**L T G**   Make sure you have connected the Ground Scan Probe (G).

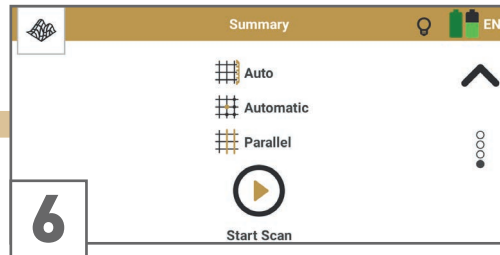This operating mode allows vertical and horizontal (short-range) probe orientation.
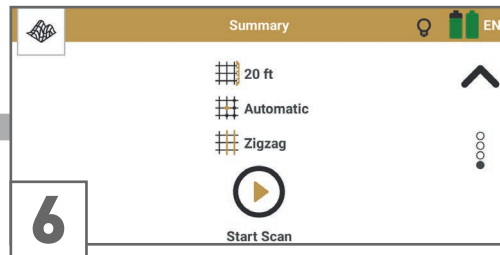
---

1 Start the operating mode 3D Ground Scan by tapping on the option in the App main menu.

2 Select Default to use the preset parameters for fast scans.

2 Select Customized to adjust the parameters individually.

Set the Field Length by tapping on + and - .

3 Auto: The length is determined by pressing the trigger at the end of the first scan line.

3 1 ft ... 160 ft: The length is defined before the scan. All lines will stop automatically.

Toggle to set the Impulse Mode.

4 Manual: Every single impulse (scan value) is recorded by pressing the trigger.

4 Automatic: The impulses (scan values) will be recorded continuously without any break.

Toggle to set the Scan Mode.

Scan Mode	EN

Parallel

5

Parallel: Scan all lines in the same direction.

Scan Mode	EN

Zigzag

5

Zigzag: Scan all scan lines forwards and backwards alternately.

Summary	EN

Auto
Automatic
Parallel

Start Scan

6

Confirm by tapping on Start Scan.

Summary	EN

20 ft
Automatic
Zigzag

Start Scan

6

Confirm by pressing Start Scan.

Searching for a GPS Signal (if enabled).

GPS	EN

GPS

✗

7
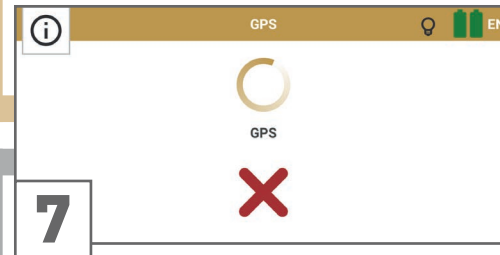
Ready to start your 3D Ground Scan.

Start Scan	EN

Press the Trigger to start scanning!

1

Finish Scan

8
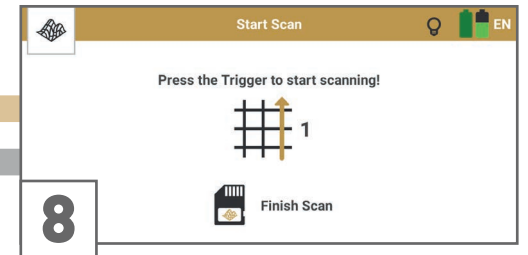
Continue with section
5.7.2 Perform Default 3D Ground Scan on page 32,
5.7.3 Perform Zigzag 3D Ground Scan on page 34 or
5.7.4 Perform Manual 3D Ground Scan on page 36.

5.7.2 Perform Default 3D Ground Scan

The default parameters Field Length: Auto | Impulse Mode: Automatic | Scan Mode: Parallel are recommended for entry-level detector users and allow scanning in slightly sloping terrain.
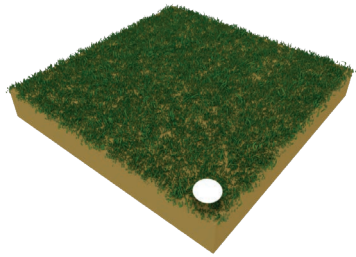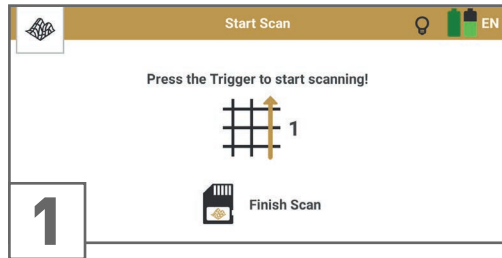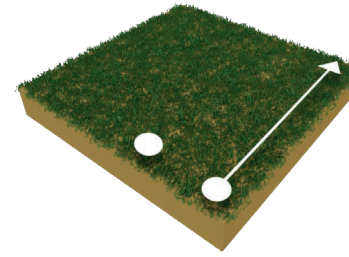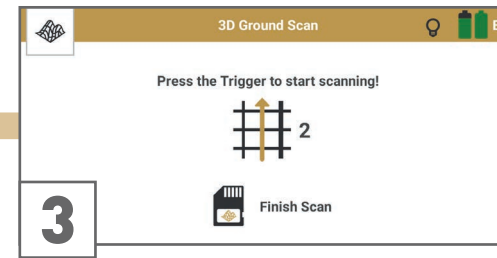

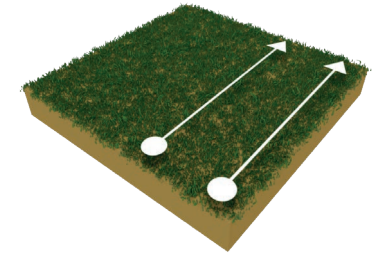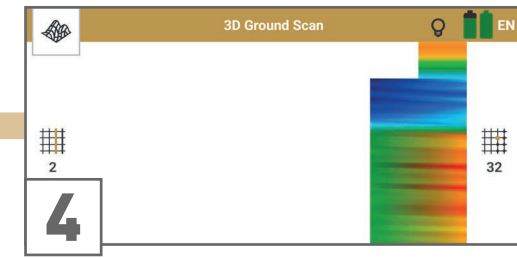Go to the starting point of the first scan line (bottom right corner).

Press the trigger to start scanning. Start walking as soon as you press the trigger.
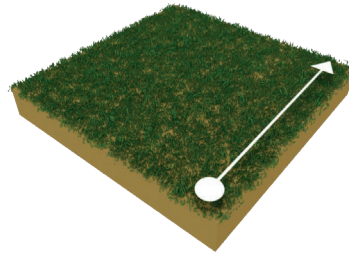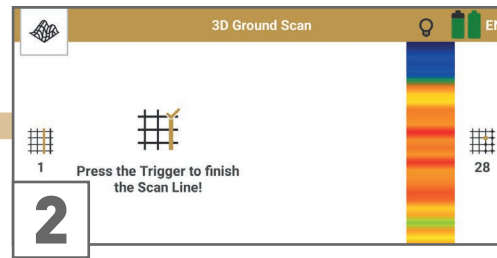
Walk to the end of the first scan line. Press the trigger as soon as you reach its end to set the field length for the following lines.

The scan image will be generated line by line to help you to follow your progress while measuring.

The first scan lines may initially look incorrect. However, the inconsistent scan image will stabilize in the course of the scan.

Return to your first starting point without scanning and take one step to the left: This is the starting point of the second scan line.
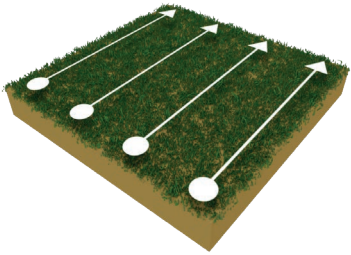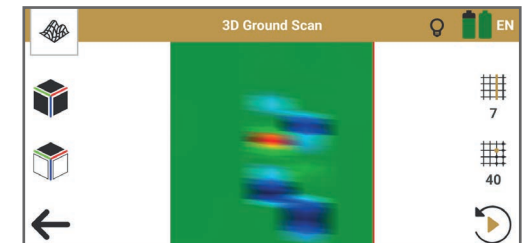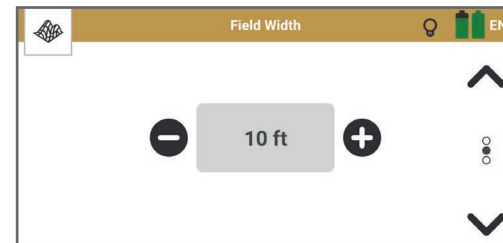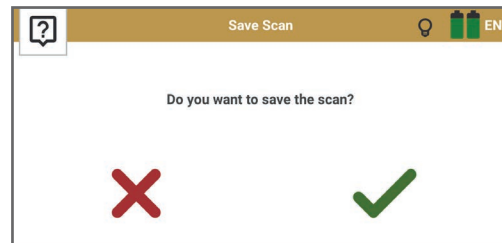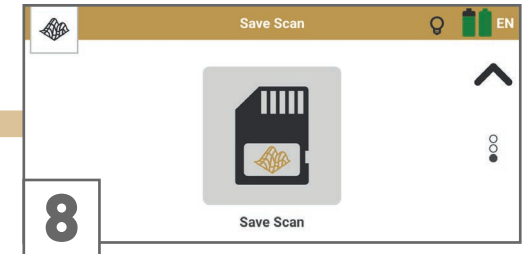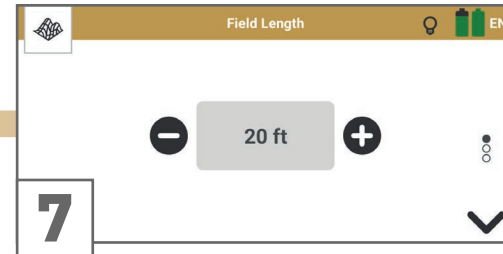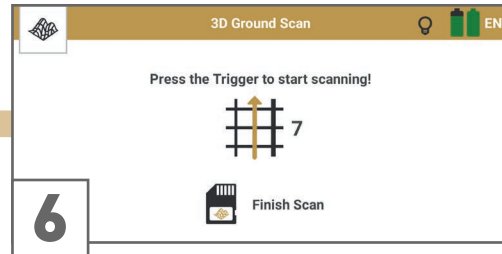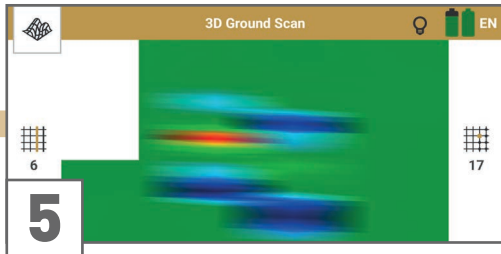
Press the trigger to start scanning. Start walking as soon as you press the trigger.

Walk parallel to your first scan line and at the same speed. The impulse sound should stop at the end of the line.

5

6

Press the Trigger to start scanning!

⊞ 7

Finish Scan

7

Field Length

⊖ 20 ft ⊕

8

Save Scan

Save Scan

Save Scan

Do you want to save the scan?

✖ ✔

Field Width

⊖ 10 ft ⊕

3D Ground Scan

⊞ 7

⊞ 40

Return to the previous starting point and take a step to the left (without scanning): This is the starting point of the next scan line.

Press the trigger to start scanning and walk at the same speed until you reach the end of the scan line.

Repeat this to scan as many lines as you like.

Complete the measurement by tapping on Finish Scan 🖫.

Confirm saving with ✔ or discard the scan with ✖.

If you chose to save the scan, enter the Field Length and Field Width that you actually measured.

The scan file is opened in the File Explorer – see 5.10 File Explorer on page 44.
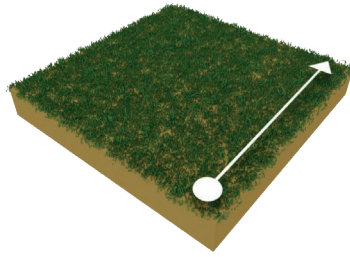
5.7.3 Perform Zigzag 3D Ground Scan

The parameters Field Length: Individual | Impulse Mode: Automatic | Scan Mode: Zigzag
are recommended for advanced detector users and can be applied in flat terrain.
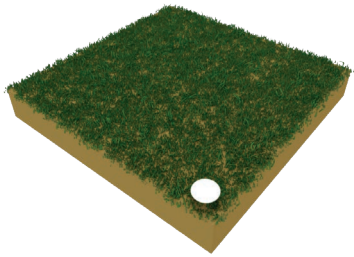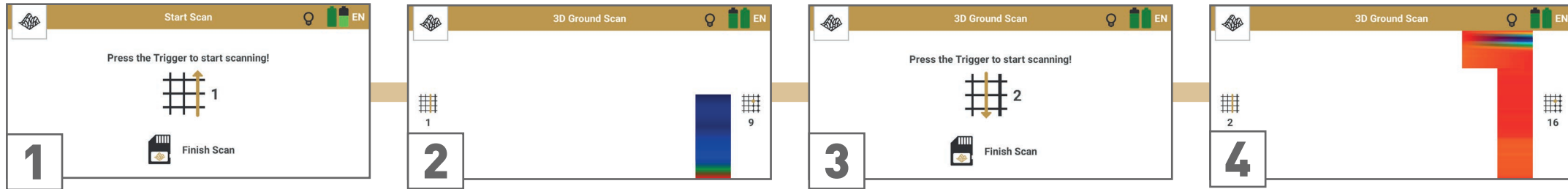
Go to the starting point of the first scan line (bottom right corner).

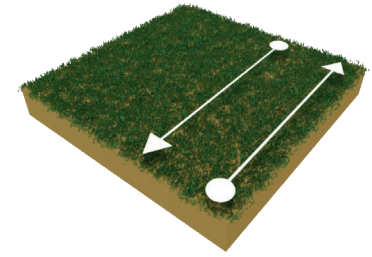Press the trigger to start scanning. Start walking as soon as you press the trigger.

Walk the first line at a constant speed. The App stops recording values automatically as soon as reaching the preset field length and indicates this by a noticeable sound signal.

The scan image will be generated line by line to help you to follow your progress while measuring.

The first scan lines may initially look incorrect. However, the inconsistent scan image will stabilize in the course of the scan.
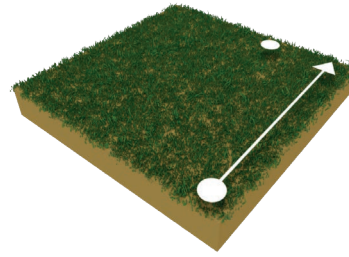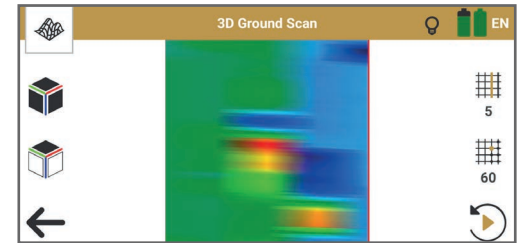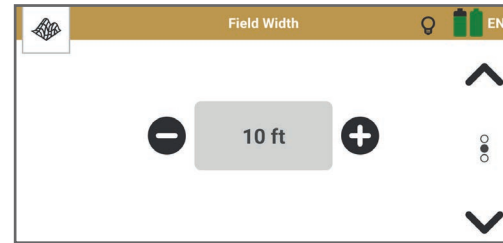
Remain at the end of the scan line and take a step to the left (without scanning). Keep holding the probe in the same direction as in the first scan line.

Press the trigger to start scanning. Walk parallel to your first scan line but in reverse until you reach the end of the scan line.

Walk at the same speed as in the first scan line. The impulse sound should stop as soon as you reach the end of the line.

In Scan Mode Zigzag all scan lines are scanned by walking forwards and backwards. However, the scan lines shall still be parallel to each other and the probe shall always point in the same direction.
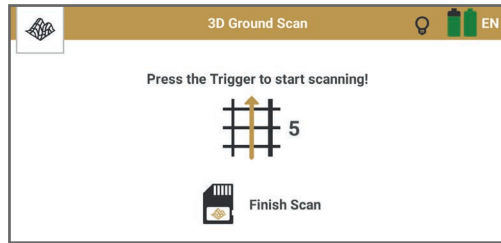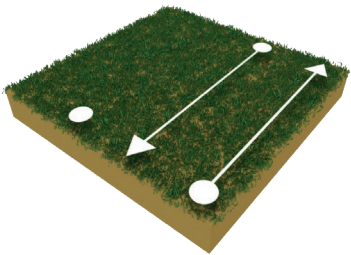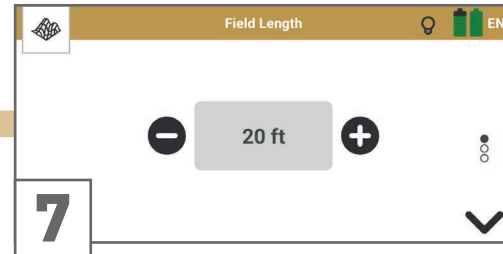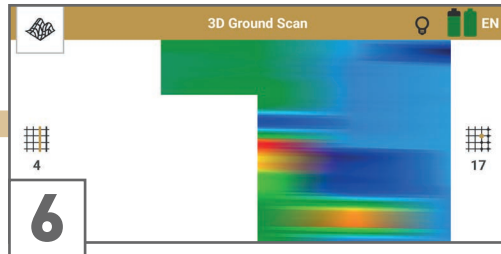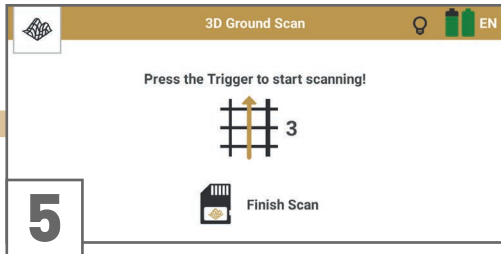
Remain at the end of the scan line and take a step to the left (without scanning).

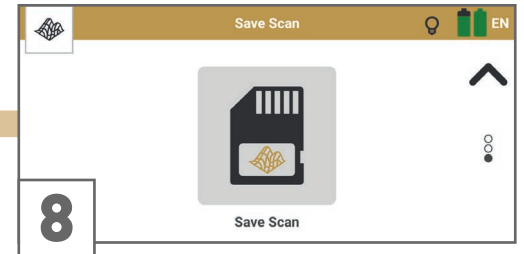Press the trigger to start scanning. Walk parallel to the first scan line (forwards) and at the same speed until you reach the end of the scan line.

Repeat steps 3 to 5 to scan as many lines as you like: Odd scan lines forwards, even scan lines backwards.

Follow the App instructions to scan in the correct direction.

Complete the measurement by tapping on Finish Scan ▦.

Confirm saving with ✔ or discard the scan with ✖.

If you chose to save the scan, check and correct/confirm the preset Field Length and enter the Field Width.

The scan file is opened in the File Explorer – see 5.10 File Explorer on page 44.

5.7.4 Perform Manual 3D Ground Scan

The parameters Field Length: Auto | Impulse Mode: Manual | Scan Mode: Parallel
are recommended for rough terrain.

1

Go to the starting point of the first scan line (bottom right corner).

When using Impulse Mode Manual each single impulse (scan value) is released manually one by one by pushing the trigger.

2

Press the trigger to start the measurement. Take a step forward and press the trigger to record an impulse.
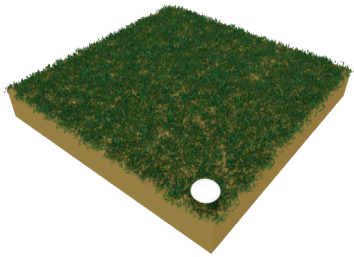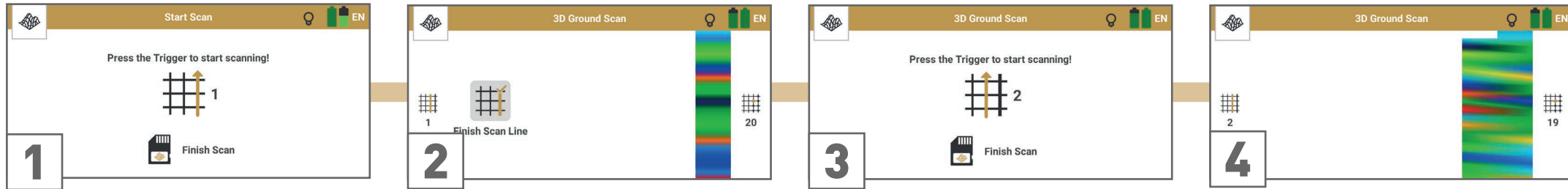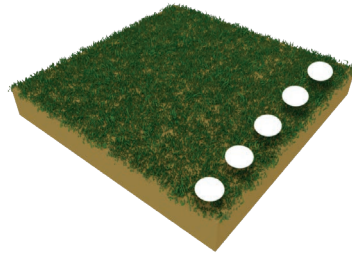
Continue in this way until you reach the end of the first scan line. Tap on Finish Scan Line ⌗ to set the field length.

The scan image will be generated line by line to help you to follow your progress while measuring.

The first scan lines may initially look incorrect. However, the inconsistent scan image will stabilize in the course of the scan.

3
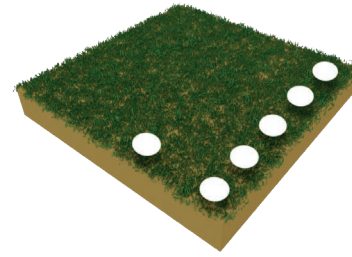
Return to your first starting point without scanning and take one step to the left: This is the starting point of the second scan line.

Press the trigger to record the first impulse of your second scan line.

4
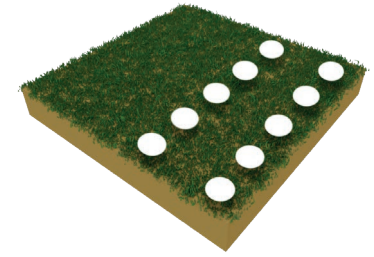
Take a step forward and press the trigger again to record the next impulse. Continue until you reach the end of the scan line.

Scan parallel to your first scan line with the probe heading into the same direction as in the first scan line.

The App indicates the end of the scan line.
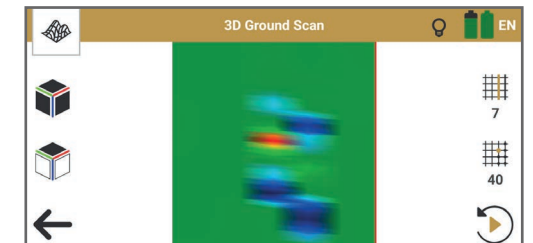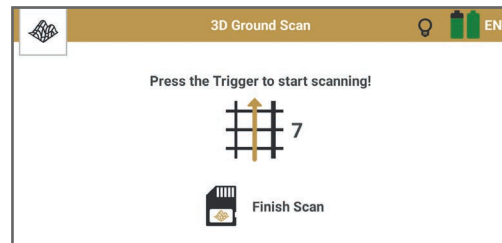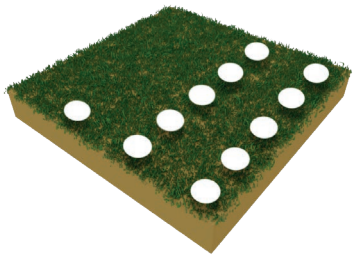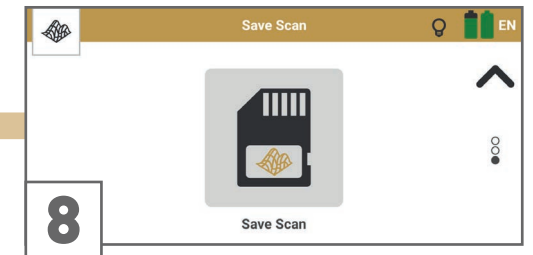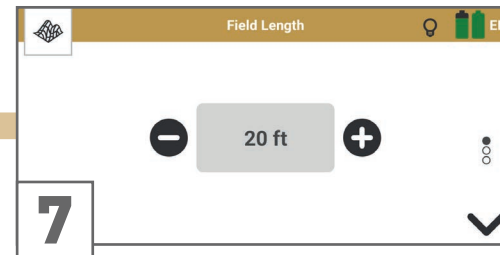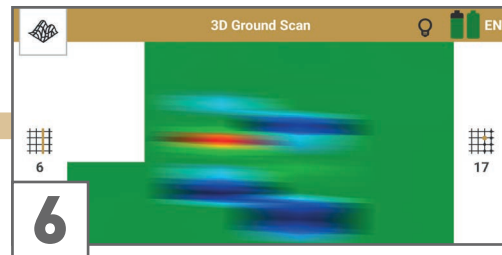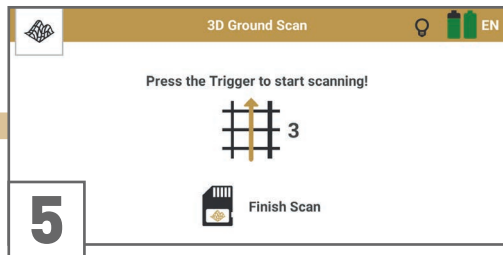
5

3D Ground Scan

Press the Trigger to start scanning!

3

Finish Scan

6

3D Ground Scan

6   17

7

Field Length

− 20 ft +

8

Save Scan

Save Scan

3D Ground Scan

Press the Trigger to start scanning!

7

Finish Scan

Field Width

− 10 ft +

3D Ground Scan

7

40

Return to the previous starting point and take a step to the left (without scanning): This is the starting point of the next scan line.

Press the trigger to start scanning. Release an impulse at each step forward until you reach the end of the scan line.

Repeat this to scan as many lines as you like.

Complete the measurement by tapping on Finish Scan .

Confirm saving with ✔ or discard the scan with ✘.

If you chose to save the scan, enter the Field Length and Field Width that you actually measured.

The scan file is opened in the File Explorer – see 5.10 File Explorer on page 44.

5.8 THERMO SCAN

Use the operating mode Thermo Scan to visualize hidden structures such as rooms, caves and tunnels based on noticeable temperature deviations of surfaces. These visualizations allow further analyses in Visualizer 3D Studio.

5.8.1 Configure Measurement

Make sure you have connected the Thermo Probe (T).

This operating mode allows horizontal (short-range) and vertical probe orientation.

2 — Default

Select Default to use the preset parameters for fast scans.

1 — Thermo Scan

Start the operating mode Thermo Scan by tapping on the option in the App main menu.

2 — Customized

Select Customized to adjust the parameters individually.

Set the Field Length by tapping on + and − .

3 — Field Length — Auto

Auto: The length is determined by pressing the trigger at the end of the first scan line.

3 — Field Length — 20 ft

1 ft ... 160 ft: The length is defined before the scan. All lines will stop automatically.

Toggle to set the Impulse Mode.

4 — Impulse Mode — Manual

Manual: Every single impulse (scan value) is recorded by pressing the trigger.

4 — Impulse Mode — Automatic

Automatic: The impulses (scan values) will be recorded continuously without any break.

Toggle to set the Scan Mode.

5 Scan Mode — Parallel

Parallel: Scan all lines in the same direction.

5 Scan Mode — Zigzag

Zigzag: Scan all scan lines forwards and backwards alternately.

6 Summary — Auto / Automatic / Parallel — Start Scan

Confirm by pressing Start Scan.
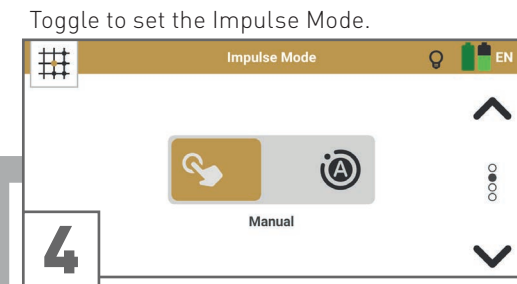
6 Summary — Auto / Automatic / Zigzag — Start Scan

Confirm by pressing Start Scan.

Searching for a GPS Signal (if enabled).

7 GPS

Ready to start your Thermo Scan.

8 Start Scan — Press the Trigger to start scanning! — Finish Scan

Continue with section 5.8.2 Perform Zigzag Thermo Scan on page 40.

5.8.2 Perform Zigzag Thermo Scan

The parameters Field Length: Auto | Impulse Mode: Automatic | Scan Mode: Zigzag
are recommended for fast measurements with horizontal probe orientation.

For measurements with vertical probe orientation refer to 5.7.2 Perform Default 3D Ground Scan on page 32.
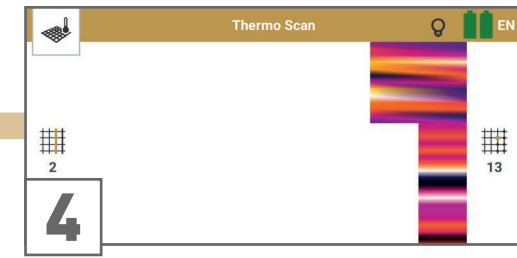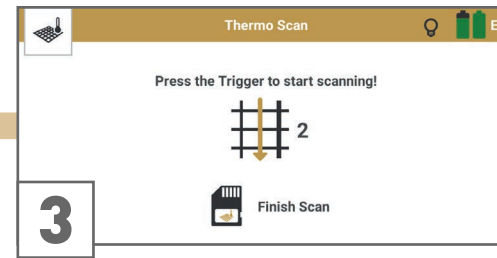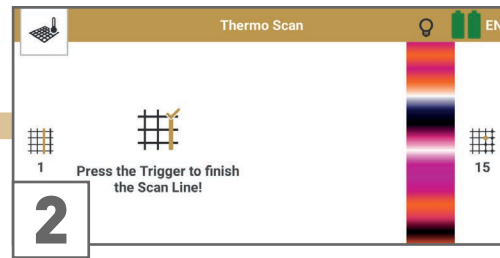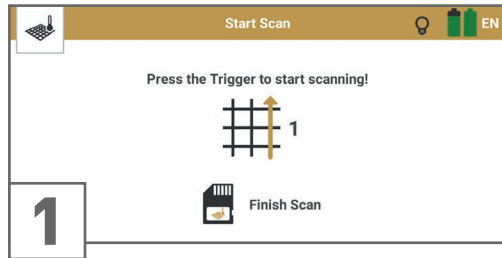
1
Point the probe at the starting point of the first scan line (bottom right corner).

Press the trigger to start the first scan line. Start moving the probe upwards as soon as you press the trigger.

2
Move the probe upwards at a constant speed following an imaginary line to the end of your scan field.

Press the trigger as soon as you reach the end of your scan line to set the field length for the following lines.

The scan image will be generated line by line to help you to follow your progress while measuring.

The first scan lines may initially look incorrect. However, the inconsistent scan image will stabilize in the course of the scan.
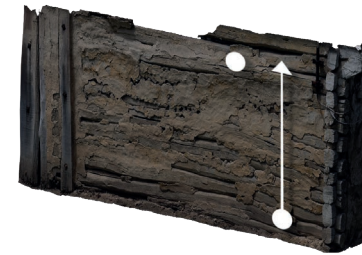
3
Keep pointing the probe at the end of the scan line. Take a step to the left (without scanning). The probe now points at the next starting point.

4
Press the trigger to start scanning. Move the probe parallel to your first scan line but downwards until you reach the end of the scan line.

Move the probe at the same speed as in the first scan line. The impulse sound should stop as soon as you reach the end of the line.

In Scan Mode Zigzag all scan lines are scanned by moving the probe upwards and downwards. However, the scan lines shall still be parallel to each other.
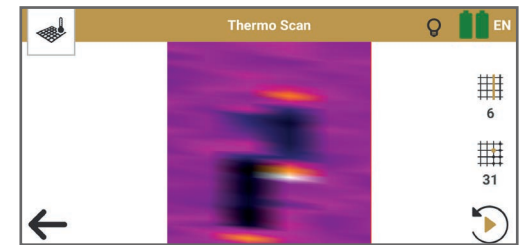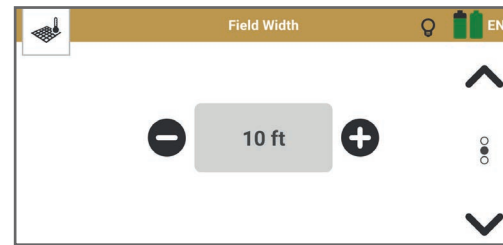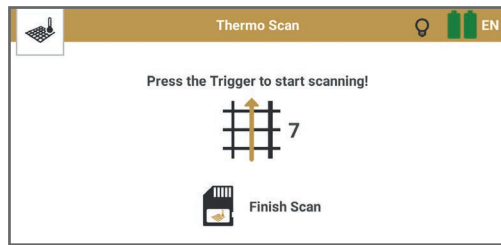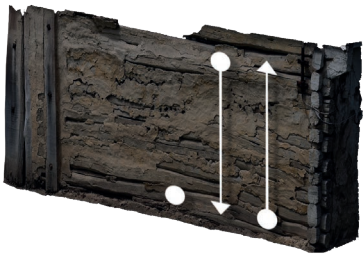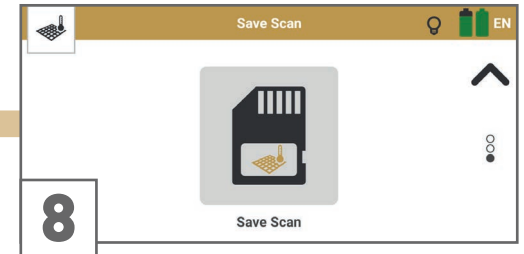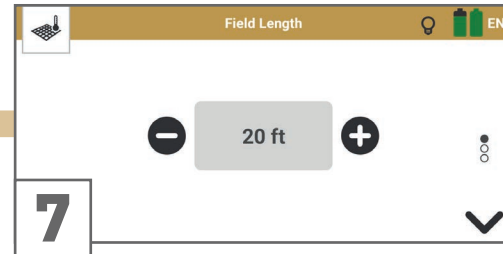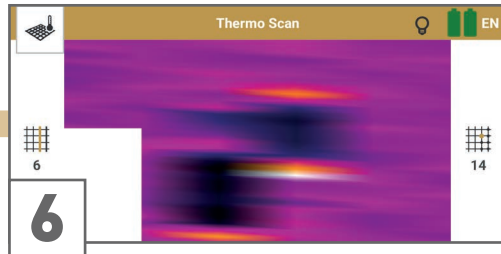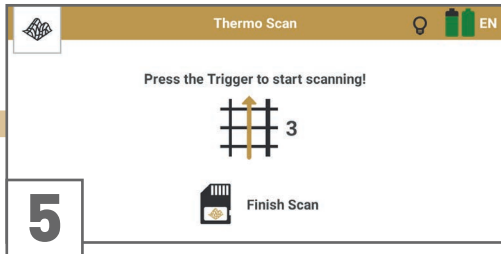
5 — Thermo Scan

Press the Trigger to start scanning!

3

Finish Scan

6 — Thermo Scan

6   14

7 — Field Length

20 ft

8 — Save Scan

Save Scan

Thermo Scan

Press the Trigger to start scanning!

7

Finish Scan

Field Width

10 ft

Thermo Scan

6

31

Keep pointing the probe at the end of the scan line and take a step to the left (without scanning).

Press the trigger to start scanning. Move the probe parallel to the first scan line (upwards) and at the same speed until you reach the end of the scan line.

Repeat steps 3 to 5 to scan as many lines as you like: Odd scan lines upwards, even scan lines downwards.

Follow the App instructions to scan in the correct direction.

Complete the measurement by tapping on Finish Scan.

Confirm saving with ✔ or discard the scan with ✖.

If you chose to save the scan, enter the Field Length and Field Width that you actually measured.

The scan file is opened in the File Explorer – see 5.10 File Explorer on page 44.

5.9 THERMO STREAM

Use the operating mode Thermo Stream for initial explorations of unknown locations to detect structures such as hidden rooms, caves and tunnels behind walls and in the underground based on noticeable surface temperature deviations.

L T G   Make sure you have connected the Thermo Probe (T).

This operating mode allows horizontal (short-range) and vertical probe orientation.

5.9.1 Perform Measurement

1
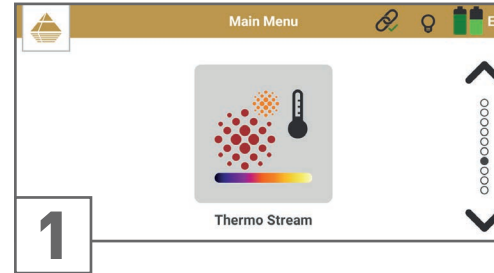
Start the operating mode **Thermo Stream** by tapping on the option in the App main menu.

2

Point the probe at a referential target object (e.g. a wall).

Check the point cloud position by tapping on the laser pointer icon.

To correct the position see
4.6 Set Crosshairs Position on page 17.

3
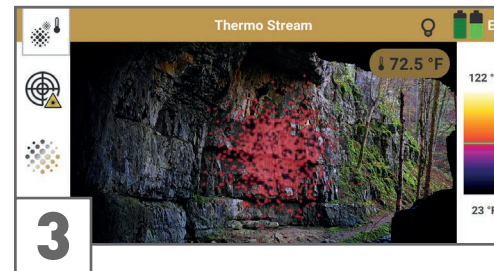
Move the probe freely and point it on any target object or area that you want to measure.

4
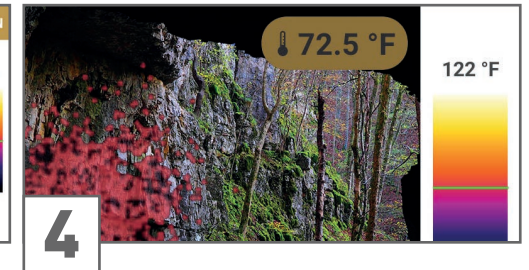
The temperature of the target object is indicated by

- the colored point cloud,
- the pointer on the temperature scale,
- as measured value.

5.9.2 Measurement Screen

⊕⚠	Enable the laser pointer for 5 s as an additional tool for aiming at the target object. You may correct the Point Cloud position via Settings – see 4.6 Set Crosshairs Position on page 17.
⁙	Change Point Cloud Opacity: Adjust the transparency in 3 levels to see target objects in the background more clearly. The default is set to an intermediate value.
←	Exit *Thermo Stream* and returning to the main menu.

5.10 FILE EXPLORER

Use File Explorer to view your stored scan files directly on the smartphone and to open them for an initial evaluation. To view scan files, no connection to the Control Unit is required.

Start File Explorer by tapping on the option in the App main menu.

Use the up and down arrows to browse through the saved Thermo Scan ...

... and 3D Ground Scan files.
Tap on the preview image to open the scan.

5.10.1 Review 3D Ground Scan
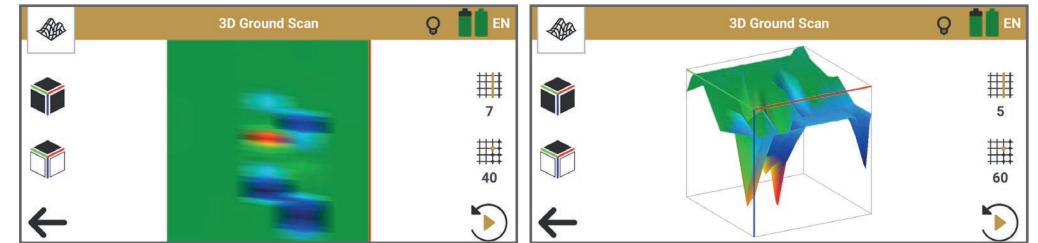
3D Ground Scan Top View (2D)   3D Ground Scan Perspective View (3D)

Use intuitive gestures to review the 3D Ground Scan image on the smartphone in detail:

- Rotate: Drag by moving one fingertip over the screen to rotate the scan image.
- Move: Touch with two fingers and drag the scan image to the desired spot.
- Scale: Pinch to zoom out and spread to zoom in.

Icon	Description
	View the scan image in Top View to get an initial overview of your scan field.
	View the scan image in Perspective View for an initial analysis.
	Number of Scan Lines performed in this measurement. During Replay, the current number is displayed corresponding to the scan image.
	Number of Impulses per scan line. During Replay, the current number is displayed corresponding to the scan image.
	Replay the measurement to track the progress of the scan image over the course of the measurement.
	Replay in progress: The percentage shows how much of the scan image has already been processed. Tap on the icon to cancel replay and show the complete scan image.
	Exit the scan file and return to the File Explorer.

For a more detailed analysis, transfer the scan files to a Windows notebook and open them in Visualizer 3D Studio – see .

5.10.2 Review Thermo Scan

Thermo Scan Top View (2D)

Thermo Scan Replay in progress

Thermo Scan maps measured surface temperatures in a 2D image.

	Number of Scan Lines performed in this measurement. During Replay, the current number is displayed corresponding to the scan image.
	Number of Impulses per scan line. During Replay, the current number is displayed corresponding to the scan image.
	Replay the measurement to track the progress of the scan image over the course of the measurement.
	Replay in progress: The percentage shows how much of the scan image has already been processed. Tap on the icon to cancel replay and show the complete scan image.
	Exit the scan file and return to the File Explorer.

For a more detailed analysis, transfer the scan files to a Windows notebook and open them in Visualizer 3D Studio – see 5.11 File Transfer on page 45.

5.11 FILE TRANSFER

The saved OKM scan files are stored in the smartphone's internal memory:

Internal Storage > Documents > OKM > DeltaRanger > groundscan
Internal Storage > Documents > OKM > DeltaRanger > thermoscan

Transfer the scan files by connecting the smartphone with the Notebook via USB cable. To transfer scan files, no connection to the Control Unit is required.

On your smartphone, enable USB connection to transfer any files:
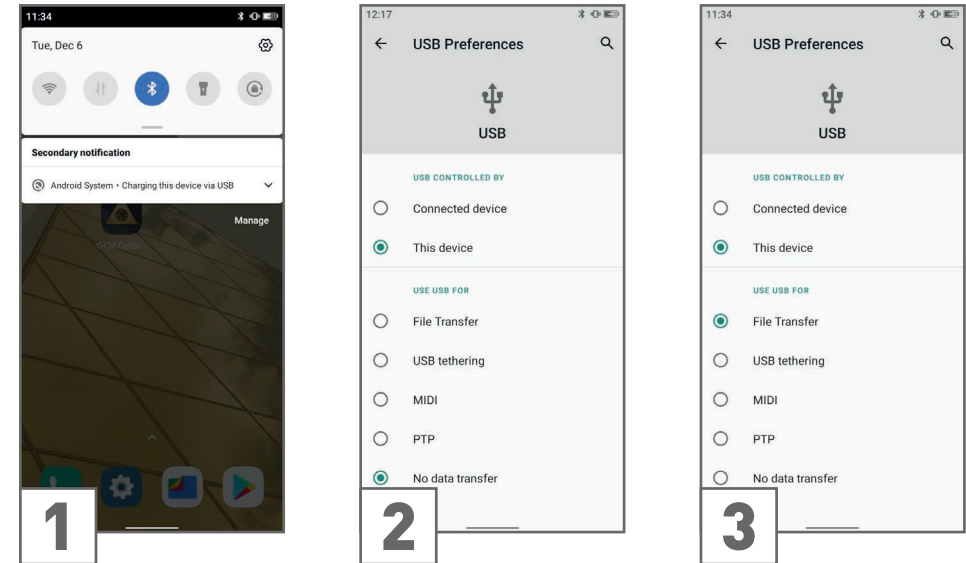
1

Swipe down to open the notification.

2

Tap for more options.

3

Set the USB Preferences to File Transfer.

After successfully setting the USB preferences to file transfer, open the File Explorer on the Notebook and access the internal storage:

My PC > [Smartphone] > Internal shared storage > Documents > OKM > DeltaRanger BV6300Pro

Copy the scan files to the notebook and open the files in Visualizer 3D Studio.

If the smartphone is not displayed in My PC, make sure the drivers in Windows are set correctly (see Windows Device Manager).

OKM

MAINTENANCE

6 MAINTENANCE

	## WARNING
	ELECTRICAL HAZARD! **Keep water away from electronic components and cables.**

6.1 CHECK AND CLEAN CONTROL UNIT AND PROBES

To always get the best performance from your detector, clean it regularly and check it for damages.

- Keep the Control Unit and probes away from strong magnetic fields.
- Avoid penetrating water, dust and dirt. If you cover the Control Unit with a plastic bag, make sure it can 'breathe' to avoid overheating and condensation inside.
- Check for blockages in the probe socket, charger socket and the probe connectors and remove any dirt and particles.
- Clean the Control Unit and probes with a soft, damp, lint-free cloth after each use. Do not use detergents or polishes.
- Recharge the batteries regularly, see 4.1 Charge Internal Batteries on page 13.

6.2 CHECK FOR APP UPDATES
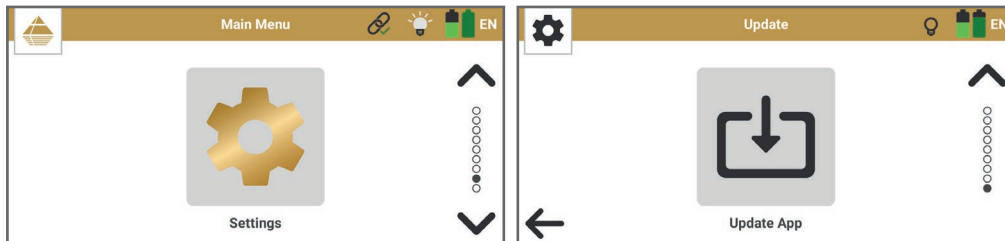
Make sure the smartphone Wi-Fi is enabled and connected to the internet.

Select Settings from the Main Menu.

Tap on Update App to start searching for new updates. If you have the latest version or an error occurred, confirm the message by tapping on ✔. Otherwise, download and install the new update.

6.3 REGISTER/VERIFY DETECTOR

In order to register your detector and/or verify the detector authenticity, the manufacturer OKM GmbH requires information about your device. You can find these in the Information menu:

- App Version / Firmware
- Serial Number
- OKM contact information
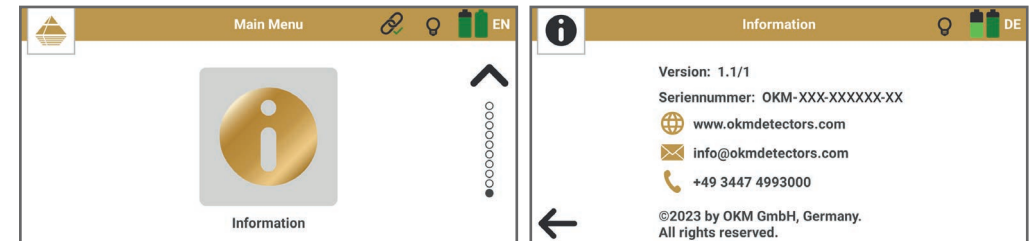
Get more information on registration and verification at www.okmdetectors.com/service

6.4 MAINTENANCE AND REPAIR BY OKM

Do not attempt to repair the device yourself. In case of technical problems, first read chapter 7 TROUBLESHOOTING on page 49. If your problem is not listed or can not be resolved, contact your local dealer (listed at www.okmdetectors.com/dealers) and/or the manufacturer

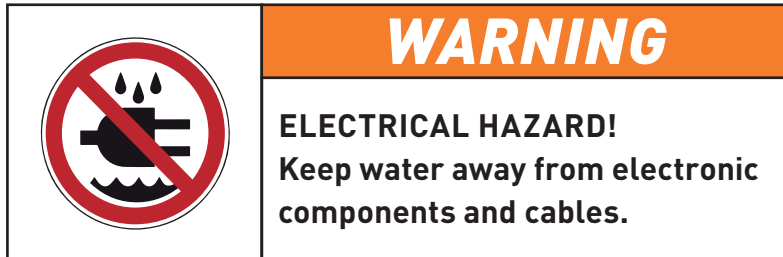|		
OKM GmbH	Web: www.okmdetectors.com	Facebook: okmmetaldetectors
Julius-Zinkeisen-Str. 7	Email: info@okmdetectors.com	Instagram: okmdetectors
04600 Altenburg	Phone: +49 3447 499 3000	YouTube: okmdetectors
Germany	WhatsApp/SMS: +49 162 419 2147	

Repairs should always be carried out by authorized personnel, e.g. your dealer and/or the manufacturer. This requires prior consultation.

If the device is defective and it's a warranty case, refer to 10 REPS & WARRANTIES on page 58. If the device is defective but it is not a warranty case, you may use the service OKM Device Check, which includes:

1. After prior consultation, send the device to your local dealer or to OKM in compliance with the transport instructions in 1 TRANSPORTATION AND STORAGE on page 5.
2. Authorized OKM personnel checks the functionality of the device.
3. If a defect is found, a repair cost estimate is provided to you.
4. You agree to authorize the repair or reject the offer.
5. You receive your device back. The customer is responsible for shipping costs and insurance.

TROUBLESHOOTING

7 TROUBLESHOOTING

ERROR	POSSIBLE PROBLEM	SOLUTION
The Control Unit does not power on.	The internal battery is low or empty.	Charge the battery – see 4.1 Charge Internal Batteries on page 13.
	The ambient temperature is too low or too high.	Your device won't operate if the ambient temperature is below 14 °F (-10 °C) or higher than 140 °F (60 °C).
The Control Unit does not power off.	The trigger has been released too early.	Keep the trigger pressed for at least 3 seconds to switch off the detector.
The Control Unit does not start charging.	The ambient temperature is too low or too high.	Your device won't charge if the ambient temperature is below 14 °F (-10 °C) or higher than 140 °F (60 °C). Ensure a temperature between 50 and 77°F (10 and 25°C) and wait until possible condensation (moisture) has evaporated before you start charging or switch on the device.
	The cable may be damaged.	Check the Charging Cable with the smartphone to make sure it is working correctly, or try another standard USB-C cable.
The operating mode won't start and I see the following screen:	The Control Unit is not powered on.	Power on the Control Unit by pressing the trigger.
	The Control Unit is not successfully connected to the OKM App.	Tap on the red cross to retry establishing a connection. If this doesn't work, restart the App and the Control Unit: Hold the trigger for 3 seconds until the Control Unit turns off. Then press the trigger again to power it on again.
The operating mode won't start and I see the following screen:	The required probe is not connected.	Plug in the Long-Range Probe (L). See 3.2 Attach Probe on page 11.

The operating mode won't start and I see the following screen:	The required probe is not connected.	Plug in the Long-Range Probe (L). See 3.2 Attach Probe on page 11.
The operating mode won't start and I see the following screen:	The required probe is not connected.	Plug in the Ground Scan Probe (G). See 3.2 Attach Probe on page 11.
The operating mode won't start and I see the following screen:	The required probe is not connected.	Plug in the Ground Scan Probe (G). See 3.2 Attach Probe on page 11.
The operating mode won't start and I see the following screen:	The required probe is not connected.	Plug in the Thermo Probe (T). See 3.2 Attach Probe on page 11.

The operating mode won't start and I see the following screen: 	The required probe is not connected.	Plug in the Thermo Probe (T). See 3.2 Attach Probe on page 11.
The Laser Pointer does not power on.	The Laser Pointer is available via the Settings menu or in the crosshairs calibration mode of Bionic Stream, Ionic Stream or Thermo Stream.	Select the proper menu and tap on the Crosshairs Calibration icon – see 4.6 Set Crosshairs Position on page 17. **LASER RADIATION** **Avoid Direct Eye Exposure!**
The Sensor Calibration indicator in the Bionic Stream does not move. 	The hand is not touching the electrodes.	Grasp the handle so that the palm and all fingers touch the electrodes on both sides. With the other hand, turn the knob and confirm the desired value by tapping in the App – see 5.4.1 Calibrate Bionic Sensors on page 24.
I don't get best values during Bionic Stream calibration. 	The fingers that touch the electrodes have been moved during calibration.	Grasp the handle so that the palm and all fingers touch the electrodes on both sides. With the other hand, turn the knob and confirm the desired value by tapping in the App instead of pushing the trigger on the handle – see 5.4.1 Calibrate Bionic Sensors on page 24.
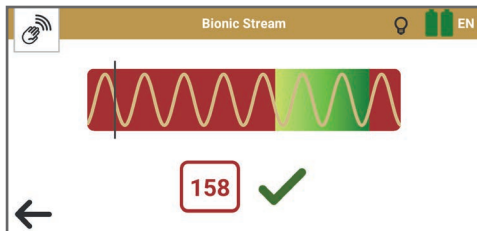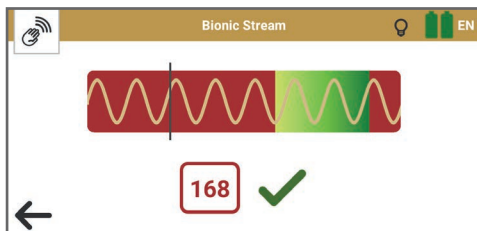
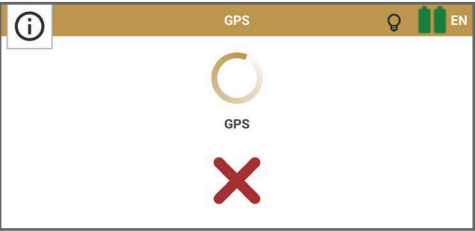|		
The Compass Calibration failed.	You moved too fast or too slowly.	Retry calibration: Press the trigger and start rotating as slowly as described in 4.7 Calibrate Compass on page 18.
	The probe was pivoted while calibrating.	Retry calibration: Hold the detector horizontally during the complete calibration process. Press the trigger and start rotating.
	There are too many ferromagnetic interferences in the area (e.g. power lines).	Retry calibration in a place where there are less magnetic interferences. Make sure there are no power lines above or a electric fences near you. The Compass may not work indoors.
3D Ground Scan does not start. Instead, I see the following screen: 	GPS is trying to locate your position.	Make sure there are no interfering barriers like a roof or dense trees above the smartphone to allow GPS tracking. GPS tracking does not work indoors. You should switch off GPS in the Settings menu to disable GPS.
Thermo Scan does not start. Instead, I see the following screen: 	GPS is trying to locate your position.	Make sure there are no interfering barriers like a roof or dense trees above the smartphone to allow GPS tracking. GPS tracking does not work indoors. You should switch off GPS in the Settings menu to disable GPS.
My scan data look unusual and/or seem to be incorrect.	The sensor range has been exceeded.	Make sure you hold and move the probe in the correct orientation according to the recommendations of the selected operating mode.
	The internal batteries are too low.	Charge the detector batteries – see 4.1 Charge Internal Batteries on page 13.
	The detector is too close to other electric or magnetic devices, or in atmospheric conditions such as lightning prevail.	Keep at least 160 ft (50 m) distance to magnetic fields, electric motors, speakers, phones, keys, and jewelry. Avoid using the detector during thunderstorms – see 5.1 Pacemakers on page 23.

NOTES

DISPOSAL

8 DISPOSAL

	Dispose the device or its components in accordance with local regulations.
	RECYCLE USED PRODUCTS! Reusing extends product life spans and contributes to the source reduction of raw materials.
	RECYCLE PROPERLY! Do not put devices with integrated batteries in the trash or municipal recycling bins.
	CHOKING AND ASPHYXIATION HAZARD! A Plastic Bag is Not a Toy! Keep Away from Children!
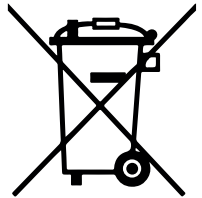
TECHNICAL SPECIFICATIONS

9 TECHNICAL SPECIFICATIONS

Manufacturer	OKM GmbH
Type	Treasure Detector
Model	DR-A01

The technical specifications are medial values. Slight variations are possible during operation.

9.1 CONTROL UNIT

Dimensions (L x W x H)	11.8 x 5.3 x 8.7" | 300 x 135 x 220 mm
Weight	22.6 oz | 640 g
Battery	Li-ion, non-removable
Input (max)	5 V DC, 2 A, 10 W
Charge Time	3.5 h @ 50 – 86 °F | 10 – 30 °C
Operating Time	approx. 24 h
Processor / Main CPU	Cortex M3, 32 MHz
Sample Rate	1024 values/second
Measurement Resolution	16 bit
Operating Temperature	23 – 122 °F | -5 – 50 °C
Storage Temperature	-4 – 158 °F | -20 – 70 °C
Air Humidity	5 % – 75 %
Compass	Yes
Waterproof	No

9.1.1 Laser

Laser Beam Distance	max. 490 ft | 150 m
Laser Output	max. 2.5 mW
Emitted Wavelength	650 nm
Laser Class	3R (EN 60 825-1)
Operating Temperature	23 – 122 °F | -5 – 50 °C

9.1.2 Data Transfer

Technology	Bluetooth 5.2
Frequency Range	2.4 – 2.4835 GHz
Maximum Transfer Rate	1 Mbps
Receiving Sensitivity	-85 dBm
Maximum Range	approx. 25 ft | 8 m (Line of Sight)

9.2 PROBES

9.2.1 Long-Range Probe (L)

Length	7.7" | 195 mm
Diameter	1.6" | 40 mm
Weight	3.7 oz | 105 g
Sensor Technology	SCMI-15-D / LD-4E

9.2.2 Thermo Probe (T)

Length	9.1" | 230 mm
Diameter	1.6" | 40 mm
Weight	3.9 oz | 110 g
Technology	Contactless infrared
Optimal Surface Temperature	50 – 77 °F | 10 – 25 °C
Temperature Range	23 – 122 °F | -5 – 50 °C
Resolution	32.2 °F | 0.1 °C
Accuracy	±33.8 °F | ±1 °C
Aperture Angle	5° (± 2.5 °)

9.2.3 Ground Scan Probe (G)

Length	18.7" | 475 mm
Diameter	1.6" | 40 mm
Weight	5.8 oz | 165 g
Sensor Technology	SCMI-15-D

10   REPS & WARRANTIES

To the extent applicable, the manufacturer OKM warrants that the Goods shall be free from material defects in workmanship and materials, so long as such Goods are used in conformance with their intended use and in strict compliance with the instructions of OKM, for a period of

- TWO (2) YEARS for new devices and demonstration devices,
- TWELVE (12) MONTHS for used devices,
- SIX (6) MONTHS for internal batteries, Power Packs, chargers, and travel adapters,

the period shall start with the invoice date of said Goods to the Customer.

10.1 ACKNOWLEDGEMENTS, REPRESENTATIONS, AND WARRANTIES

THE WARRANTY SET FORTH IN THIS SECTION IS MADE IN LIEU OF ALL OTHER WARRANTIES (WHETHER EXPRESS OR IMPLIED), RIGHTS OR CONDITIONS, AND CUSTOMER ACKNOWLEDGES THAT EXCEPT FOR SUCH LIMITED WARRANTY, THE PRODUCTS ARE PROVIDED "AS IS." COMPANY SPECIFICALLY DISCLAIMS, WITHOUT LIMITATION, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF ANY KIND, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, AND THOSE WARRANTIES ARISING FROM A COURSE OF PERFORMANCE, A COURSE OF DEALING OR TRADE USAGE.

The Customer represents and warrants, by entering into the Agreement and accepting the Services and/or Goods from OKM, that the Customer's execution, delivery, and performance of the Agreement has been duly authorized by all appropriate corporate action on the part of Customer, and the Agreement constitutes a valid and binding obligation of Customer enforceable against it in accordance with its terms.

The Customer agrees that he/she inspects the delivered Goods immediately upon receipt. If the Customer finds defects and/or experience technical problems, he/she agrees to contect the local dealer first (listed at www.okmdetectors.com/dealers). If the Customer cannot resolve the problem with the local dealer, the Customer will contact the manufacturer OKM:

OKM GmbH	Web: www.okmdetectors.com	Facebook: okmmetaldetectors
Julius-Zinkeisen-Str. 7	Email: info@okmdetectors.com	Instagram: okmdetectors
04600 Altenburg	Phone: +49 3447 499 3000	YouTube: okmdetectors
Germany	WhatsApp/SMS: +49 162 419 2147	

Defects must be claimed immediately in writing (at the latest 7 days after receipt) by using the OKM RMA Form provided at www.okmdetectors.com/rma and including the original proof of purchase (e.g. invoice).

Goods which are subject to complaints must be provided to the local dealer and/or to the manufacturer OKM for inspection. The Customer agrees to not send the Goods back without prior

consultation. The Customer must contact the local dealer and/or the manufacturer before returning the Goods.

Shipping costs (including fees, insurance etc.) to the local dealer and/or manufacturer are not covered by the dealer or manufacturer and are the responsibility of the customer.

10.2 INDEMNIFICATION

Filing a warranty claim does not automatically imply a refund. If a functional or material defect occurs and is claimed within the warranty period, the manufacturer OKM has the right to rectify the defect and provides the following warranty services at its own expense:

- rectification and repair of the defective device or component(s) **or**
- replacement of the defective component(s) **or**
- replacement with a new device.

After rectification or replacement, the return of the Goods from the manufacturer OKM to the Customer or assigned local dealer is covered by OKM and includes shipping insurance.

In cases in which the error cannot be eliminated, attempts at elimination are unreasonable or the elimination of the error has failed completely, the Customer may choose to

- request a reduction of the purchase price **or**
- withdraw from the contract and get the purchase price refunded.

For defects asserted within the warranty period but not eliminated, warranty is given until the defect is eliminated.
In the case of delivery of a new device, a new warranty period starts.

In the case of a warranty repair, the original warranty period and starting date applies to the Goods. A new warranty period applies only to the part replaced where such a replacement occurred.

10.3 LIMITATION OF LIABILITY

The Customer acknowledges that excluded from warranty are:

- poor performance due to improper use,
- signs of wear and tear,
- theft and/or loss of the device,

as well as defects and damages caused by:

- improper use and/or poor maintenance,
- defects created due to hitting and/or dropping the device,
- unauthorized alterations, repairs and/or modifications,

- abuse, misuse, deliberate destruction, accident,
- unusual physical and/or electric stress,
- exposure to moisture, water, extreme temperatures and/or fire,
- improper handling, transportation and/or storage,
- opening of any technical component and/or accessory.

If the device is defective but it is not a warranty case, refer to 6.4 Maintenance and Repair by OKM on page 47. If there is no warranty case, the costs for returning the device to the Customer are not covered are not covered by the dealer or manufacturer.

OKM SHALL NOT BE LIABLE FOR AND DISCLAIMS ANY AND ALL LOST PROFITS AND ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR EXEMPLARY DAMAGES, WHETHER ARISING OUT OF THE SERVICES, THE GOODS, OR THE PERFORMANCE BY OKM UNDER THE AGREEMENT. IN THE EVENT OF TERMINATION FOR ANY REASON, OKM SHALL NOT BE LIABLE TO CUSTOMER FOR COMPENSATION, INDEMNIFICATION, REIMBURSEMENT OR DAMAGES ON ACCOUNT OF ANY LOSS OF PROSPECTIVE PROFITS OR ANTICIPATED SALES OR ON ACCOUNT OF EXPENDITURES, INVESTMENTS, LEASES OR COMMITMENTS MADE IN CONNECTION WITH THE AGREEMENT OR THE ANTICIPATION OF EXTENDED PERFORMANCE THEREUNDER. NOTWITHSTANDING THE FOREGOING, CUSTOMER'S EXCLUSIVE REMEDY AGAINST OKM, AND OKM'S SOLE OBLIGATION, FOR ANY AND ALL CLAIMS, WHETHER FOR BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, SHALL BE LIMITED TO EITHER REPAIR OR REPLACEMENT OF THE NONCONFORMING GOODS OR REFUNDING THE AMOUNTS PAID BY CUSTOMER TO OKM DIRECTLY ATTRIBUTABLE TO NON-CONFORMING GOODS OR SERVICES. IN NO EVENT SHALL OKM HAVE ANY LIABILITY FOR DELAYS IN SHIPMENTS, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, REGARDLESS OF WHETHER SUCH CLAIM IS BROUGHT IN TORT, BREACH OF CONTRACT, BREACH OF WARRANTY OR OTHER THEORY OF LAW OR EQUITY.

10.4 SERVICE & SUPPORT

Support during and after the warranty period is provided in all countries where the product is officially distributed by OKM. Refer to 6.4 Maintenance and Repair by OKM on page 47 and contact your local dealer and/or the manufacturer OKM for further information.
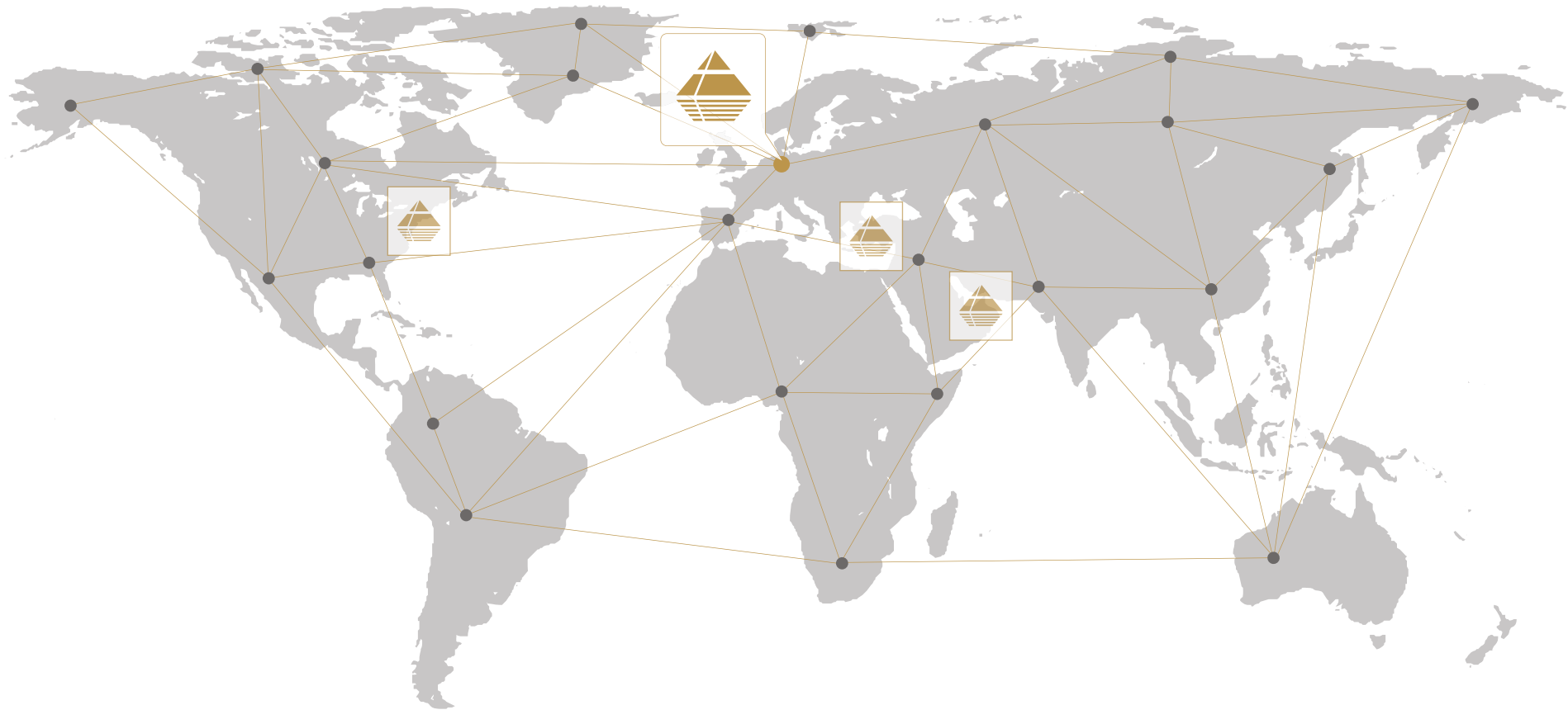
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