

VANQUISH 340 USER MANUAL

LMS METAL DETECTING

POWERED BY Multi-IQ
Simultaneous Multi-Frequency Technology

MINELAB

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Quick Start

1 Turn On

2 Wait For 5 Seconds

3 Go Detecting

Search Modes



Press the Search Mode button to select the next Search Mode.

The VANQUISH 340 has three Search Modes that each have unique Discrimination Patterns. Choosing the right Search Mode will help you find more of what you're looking for.



COIN

Find common modern coins from around the world while ignoring trash in parks and at the beach.

Coin Mode is recommended for trashy locations because it has excellent target separation abilities. This means you won't miss good targets that are buried directly next to ferrous trash.

The discrimination pattern for this mode rejects all ferrous (iron) targets and also rejects small non-ferrous trash such as foil.



JEWELLERY

Recover precious jewellery no matter where it was lost.

Jewellery Mode has excellent target separation and depth, making it a good all-rounder.

This Mode is ideal for finding jewellery of all shapes, sizes, and metal composition.

The discrimination pattern for this mode rejects only ferrous (iron) targets.



ALL-METAL

Find all targets that contain metal, including iron.

Detecting in All-Metal Mode guarantees you will not miss any targets, however you will also detect more trash.

The discrimination pattern for this mode accepts all ferrous (iron) and non-ferrous targets. The tones are adjusted to classify as trash common non-ferrous targets such as foil.

This Mode can be used to check a target detected in Coin or Jewellery Modes to see if it contains iron (see page 9).

Controls



1. Power On/Off

Turns the detector on and off.

Press and hold from Off (7 seconds) to restore factory settings (page 14).

2. Volume Adjust

Adjusts the audio Volume Level (page 6).

3. Sensitivity

Adjusts the Sensitivity Level (page 6).

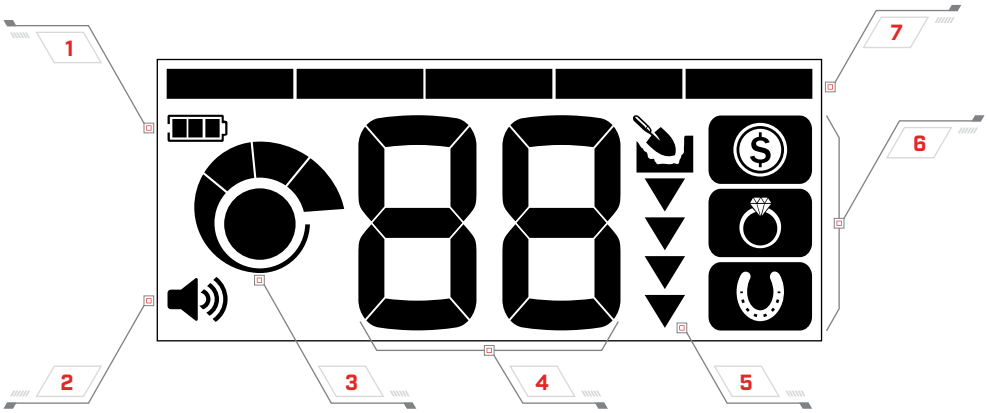
4. Search Mode

Selects the next available Search Mode (page 3).

5. Target Identification Guide

A reference guide indicating the types of targets that can be found for the corresponding Target Identification Segment.

Display



1. Battery Level

Indicates the current battery level (page 10).

2. Volume Level

Displays the detector audio volume (page 6).

3. Sensitivity Level

Displays the Sensitivity level (page 6).

4. Target Identification Number

Indicates the numerical value of a detected target, allowing the identification of an object before digging. For example, a US quarter will always display the same Target Identification (ID) Number.

Negative numbers are ferrous, positive numbers are non-ferrous from fine gold (low ID's) to large silver (high ID's).

5. Depth Gauge

Shows the approximate depth of a detected target (page 7).

6. Search Modes

Displays the active Search Mode (page 3).

7. Discrimination Segments

Represents groupings of Target Identification Numbers as a single segment on a scale.

Discrimination Segments align with the Target Identification Guide.

Detector Settings

VOLUME

The Volume control changes the loudness of target signals.

Use the Volume button to adjust the Volume Level. Each press of the Volume button will advance to the next Volume Level from low to high. Once maximum Volume is reached, pressing the Volume button will return to the lowest Volume Level.



The Volume button

The Volume Level indicator on the display shows the current Volume Level. Each bar represents one level.



The Volume Level indicator showing maximum volume (level 3)

SENSITIVITY

The VANQUISH Series detectors are highly sensitive and have adjustable sensitivity. Setting the correct sensitivity level for individual detecting conditions will maximise detection depth.

Always choose the highest stable Sensitivity setting to ensure optimum performance.

Use the Sensitivity button to adjust the Sensitivity Level. Each press of the Sensitivity button will advance to the next Sensitivity Level from low to high. Once maximum Sensitivity is reached, pressing the Sensitivity button will return to the lowest Sensitivity Level.



The Sensitivity button

The Sensitivity Level indicator on the display shows the current Sensitivity Level. Each bar represents one level.



The Sensitivity Level indicator showing maximum sensitivity (level 4)

To Adjust the Sensitivity Level

1. Hold the coil stationary, then use the Sensitivity button to increase the sensitivity until false signals begin to occur.
2. Reduce the Sensitivity Level just enough that the false signals disappear, by pressing the Sensitivity button (if Level 2, 3, or 4 is selected, press three times to reduce the sensitivity by one level).
3. Sweep the coil over a clear patch of ground, and reduce the Sensitivity Level further if any ground noise is encountered.

Excessive Noise

Sometimes, excessive noise is encountered whilst detecting. This can be caused by environmental electromagnetic interference (EMI) from sources such as power lines, mobile phone towers, or other metal detectors.

If noise is a problem, try the following steps in order until the noise is eliminated.

1. Move away from local sources of Electromagnetic Interference (EMI).
2. Restart the detector, and wait for the automatic Noise Cancel process to complete.
3. If restarting the detector does not eliminate the excessive noise, then try reducing the Sensitivity Level.

Automatic Noise Cancel

VANQUISH Series detectors have an automatic Noise Cancel process that occurs every time the detector is powered on. It calibrates the detector so that excessive noise is not experienced.

For best results, the coil should be held stationary just above the ground until Automatic Noise Cancel is complete (indicated by two large dashes displayed on the Target ID Number field).

Pinpoint

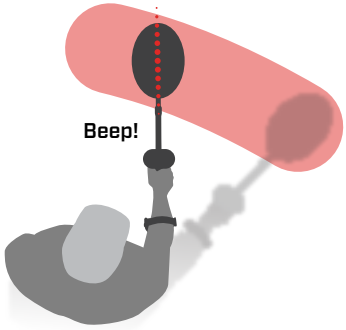
LOCATE A TARGET

Once a target has been detected, the manual pinpointing technique locates the exact position before digging. This means less digging, and faster recovery of the target.

1. Sweep the coil slowly across the target location keeping the coil parallel to the ground.
2. Locate the centre of the target by listening for the loudest target signal response.
3. Make a mental note of the position, or mark a line on the soil with your shoe or a digging tool.
4. Move to one side so that you can pass the coil over the target at right angles to your initial direction.
5. Repeat steps 1 and 3 from your new position. The target is located where the two imaginary lines cross.

1-3

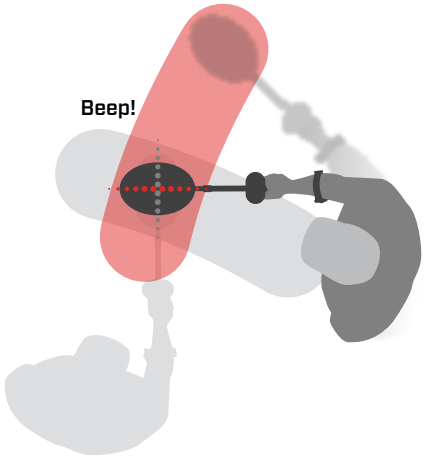
Make a line where the strongest signal is heard.



4-5

Stand at right-angles to your initial position and repeat.

The intersection of the two lines marks the exact location of the target.



Depth Gauge

The Depth Gauge indicates the approximate depth of a detected target.

The Depth Gauge is a guide only. Fewer arrows indicate a shallower target, more arrows indicate a deeper target. The accuracy can vary depending on the target type and ground conditions.

After a target is detected, the Depth Gauge will remain on the LCD for up to 5 seconds, or until the next target is detected.

When there is no detection, the Depth Gauge icon and arrows are turned off.

Here is an example of the Depth Gauge reading and the approximate target depth for a US quarter.



50mm	100mm	150mm	>150mm
2"	4"	6"	>6"

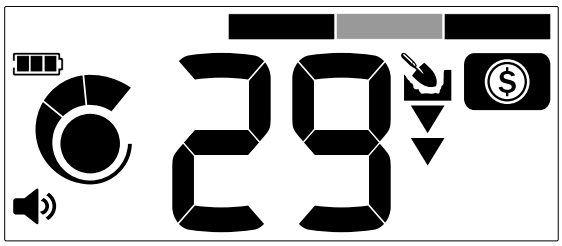
Target Identification

TARGET IDENTIFICATION NUMBER

Target Identification (Target ID) numbers range from –9 to 40 with ferrous (iron) targets ranging from –9 to 0.

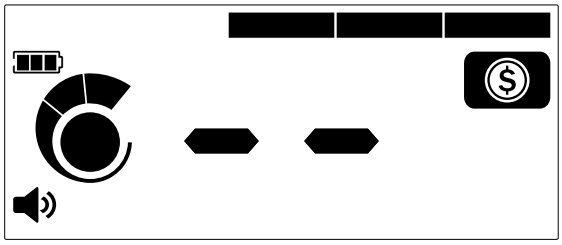
When a target is detected, it is represented as a number that appears on the Target Identification Number field on the display. This indicates the target's ferrous or non-ferrous properties for quick and easy identification.

For example, a US quarter has a Target ID of 29. This means that each time a Target with an ID of 29 is detected, there is a good chance that it will be a US quarter.



A Target ID number appears when a target is detected. This example shows the detection of a shallow US quarter. The corresponding Target ID Segment flashes upon detection (shown in grey).

The last detected Target ID remains on the display for five seconds or until another target is detected. If there is no detection or the detector passes over a target that it rejects, the display shows two large dashes.



Two large dashes on the Target Identification Number field when there is no detection.

DISCRIMINATION SEGMENTS

Discrimination Segments are located along top of the LCD. They display Target IDs grouped into zones.

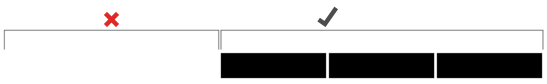
Each Target Identification Number has a corresponding Discrimination Segment that will flash when a target with that ID is detected.

DISCRIMINATION PATTERNS

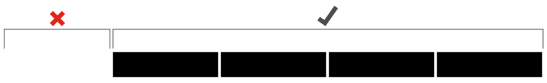
Discrimination Segments are turned on or off to either detect or ignore targets. All segments that are on will be heard (accepted), and all segments that are off will not be heard (rejected).

The combinations of accepted and rejected segments are called Discrimination Patterns.

VANQUISH 340 has three discrimination patterns: Coin and Jewellery Modes (below), and All-Metal (see page 9).



The Coin Mode Discrimination Pattern showing Accepted segments (✓) and Rejected segments (✖).



The Jewellery Mode Discrimination Pattern showing Accepted segments (✓) and Rejected segments (✖).

Target Identification

ALL-METAL

In All-Metal Search Mode, all Discrimination Segments are on so that all metal targets will be detected, including iron.



The VANQUISH 340 All-Metal discrimination pattern.

Detecting in All-Metal Mode is a strategy that guarantees you will not miss any targets, however you will also detect more trash that contains iron.

Enable All-Metal

1. Press the Search Mode button until the All-Metal Search Mode is selected.



The Search Mode button



The All-Metal Search Mode icon

2. All of the Discrimination Segments will turn on and all metal objects will be detected.
3. To disable All-Metal, press the Search Mode button to select either Coin or Jewellery Mode.

Using All-Metal to Check a Target

All-Metal can be used to check a non-ferrous detection to see if it also contains ferrous material.

If the target gives a mixed response (both non-ferrous and ferrous) when in All-Metal mode, then there is a chance that the target is a large iron object or a crown bottle cap.

If there is a repeatable non-ferrous response, then the target does not contain iron. This means that the target is more likely to be a good (non-ferrous) target.

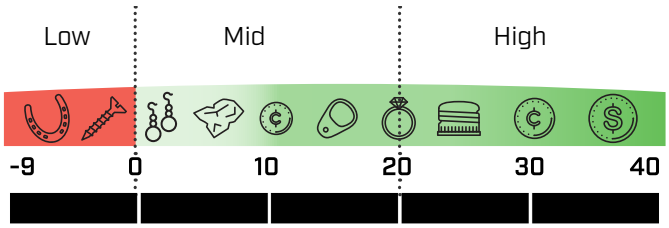
Note, targets such as large iron objects or crown bottle caps commonly appear as a non-ferrous target to other detectors. The VANQUISH 340 has been designed to classify these Targets as trash to make detecting sessions more productive. The All-Metal Search Mode can be used if you want to detect these targets.

TARGET TONE

Groups of Target IDs are assigned Target Tones of different pitch so that the operator can broadly classify the Target ID without having to look at the display.

VANQUISH 340 has three Target Tones: Low, Mid, and High.

The tone break position is the point on the discrimination scale at which the Target Tone changes from one pitch to another. Note that the exact tone break positions vary slightly for each Search Mode.



VANQUISH 340 tone break positions (approximate).

Batteries and Charging

The VANQUISH Series is compatible with both rechargeable and non-rechargeable AA batteries.

> **WARNING:** Never use a combination of non-rechargeable and rechargeable batteries in the detector, as this may result in damage to the detector or batteries.

> **WARNING:** There is a risk of explosion if the battery is replaced by an incorrect type.

BATTERY LEVEL

The Battery Level indicator shows the current battery level.


The battery Level Indicator

Note that rechargeable and non-rechargeable batteries have different discharge rates, therefore the Battery Level Indicator is approximate only.

Low Battery

If using non-rechargable batteries, the Battery Level Indicator will flash for approximately 20 minutes before automatic shut-down.

If using rechargeable batteries, the Battery Level Indicator will display a single battery segment for approximately 20 minutes before automatic shut-down.

The detector will play a short audio tune when the battery enters the Low Battery state (with flashing indicator). The volume will be limited in this state to prolong battery life without affecting detector performance.

Automatic Shut-Down

When the battery level is critically low, the detector will automatically shut-down. 5 seconds before automatic shut-down, 'bF' displays on the Target ID Number, accompanied by a shut-down audio tune.



'bF' on the Target ID Number field.

Note that when using some brands/types of rechargeable batteries, the detector may not show 'bF' before automatic shut-down.

Battery Run/Charge Times

Minelab rechargeable AA NiMH batteries have an approximate charge-time of 8 hours, and a run-time of approximately 11 hours.

Non-rechargeable AA alkaline batteries have a run-time of approximately 10 hours.

RECHARGEABLE BATTERIES

Minelab rechargeable AA NiMH batteries (4 pack) and a Minelab AA NiMH Battery Charger are available to purchase separately.


Minelab AA NiMH Battery Charger

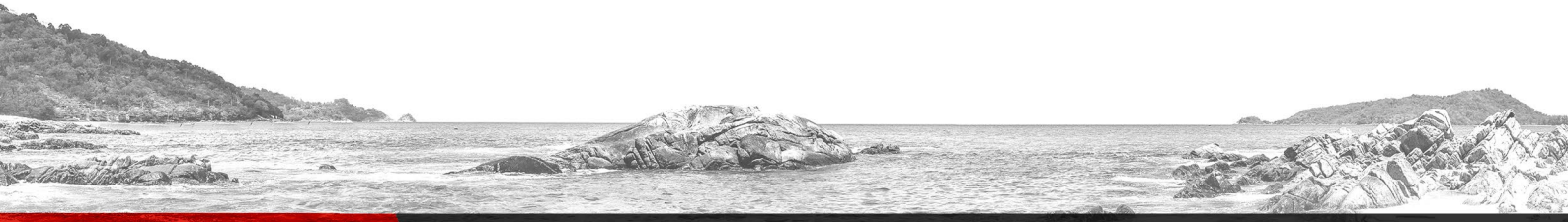

Minelab rechargeable AA NiMH batteries

Instructions, compliance and safety information for the Minelab AA NiMH Battery Charger are included with the charger.

> **WARNING:** The Minelab NiMH Battery Charger must only be used to charge NiMH rechargeable batteries.

Detector Care and Safety

- Wash your hands before handling the detector after applying sunscreen or insect repellents.
- Do not use solvents to clean. Use a damp cloth with a mild soap detergent.
- Never allow the detector to come into contact with gasoline/petrol or other petroleum-based liquids.
- Avoid getting sand and grit in the shafts and fastenings (e.g. coil yoke assembly and camlocks). If sand and grit accumulates in these parts they should be wiped clean with a damp cloth.
- Do not bring the detector or accessories into contact with sharp objects as this may cause scratches and damage.
- If the shafts become noticeably scratched, wipe them thoroughly with a damp cloth.
- Do not leave the detector in excessive cold or heat longer than necessary. Covering it when not in use will help protect it. Avoid leaving it in a hot vehicle.
- Ensure the coil cable is in good condition and not subject to undue stress.
- Take precautions when transporting or storing the detector. Although the detector is constructed from the highest quality materials and has undergone rigorous durability tests, the display screen could be prone to scratching or serious damage if not treated with due care.
- Do not expose the detector to extreme temperature conditions. The storage temperature range is from -20°C to +70°C (-4°F to +122°F).
- Do not expose accessories not listed as waterproof to liquid/moisture or excessive humidity.
- Do not allow children to play with the detector or accessories, small parts are a choking hazard.
- Only charge rechargeable batteries and accessories according to the instructions provided.
- Avoid charging rechargeable batteries and accessories in extreme temperature conditions.
- Remove batteries prior to air transportation.



Error Codes

Some detector faults will display an Error Code on the Target ID Number field. Try the recommended actions shown below before contacting an Authorised Service Centre.

Coil Disconnect



'Cd' will appear on the Target ID Number in the event of a Coil Disconnect Error.

In the event of a Coil Disconnect Error, follow these steps:

1. Check that the coil connector is connected properly at the back of the control unit.
2. Check the coil cable for damage.
3. Check the coil connector pins are free of dirt and debris.
4. Check the coil for visible signs of damage.
5. Try another coil if you have one available.
6. Perform a Factory Reset by powering off the detector, then press and hold the Power button for 7 seconds (see "Factory Reset" on page 14.)
7. If the error still remains, return the detector to your nearest Authorised Service Centre for repair.

System Error

System Error code 'E' is accompanied by an Error Code Number e.g 'E2'. The detector will shut down 5 seconds after reporting a system error.



Example Error Code 'E2' displayed on the Target ID Number

In the event of a System Error, follow these steps:

1. Restart the detector to determine if the error still remains.
2. Confirm the coil is attached correctly.
3. Perform a Factory Reset by powering off the detector, then press and hold the Power button for 7 seconds (see "Factory Reset" on page 14.)
4. If the error still remains, return the detector to your nearest Authorised Service Centre for repair.

Troubleshooting

Detector does not turn on, or turns off by itself (with or without 'bF' indication)

1. Replace the batteries.

Erratic/excessive noise

1. Move away from local sources of Electromagnetic Interference (EMI).
2. Restart the detector and wait for Automatic Noise Cancel to complete.
3. Reduce the Sensitivity level (page 6).

No sound – Wired headphones

1. Check that the detector is on, and start-up has completed.
2. Check that the headphones are plugged in.
3. Check that Volume is set to an audible level.
4. Unplug the headphones and confirm that the detector speaker is audible.
5. If available, try using a different set of headphones.

Technical Specifications

	VANQUISH 340	VANQUISH 440	VANQUISH 540
Search Modes	Coin, Jewellery, All-Metal	Coin, Relic, Jewellery, Custom	
All-Metal Shortcut	No	Yes	
Custom User Search Profile	No	Yes	
Operating Frequencies (kHz)	Multi-IQ		
Noise Cancel	Auto (19 Channels)		
Bluetooth Audio	No		Yes
Iron Bias	High		High (default), Low
Sensitivity	4 levels	10 levels	
Volume	3 levels	10 levels	
Iron Volume	Fixed		10 levels
Target Tones	3 tones (Low, Mid, High)		5 tones
Discrimination Segments	5 segments	12 segments	25 segments
Discrimination Notch	No	Yes	
Pinpoint Mode	No	Yes	
Target ID's	–9 to 40		
Depth Indicator	4 levels	5 levels	
Length	Extended: 145 cm (57 in) Collapsed: 76 cm (30 in)		
Weight (incl. batteries)	1.2 kg (2.6 lbs)		1.3 kg (2.8 lbs)
Display	Monochrome LCD		Monochrome LCD with red backlight
Supplied Coil	V10 10"×7" Double-D		V12 12"×9" Double-D
Audio Output	In-built loudspeaker Wired 3.5 mm (1/8") headphones		In-built loudspeaker Wired 3.5 mm (1/8") headphones Bluetooth wireless audio
Supplied Headphones	–	Wired 3.5 mm (1/8") headphones	
Supplied Batteries	4 × AA Alkaline non-rechargeable		4 × AA NiMH rechargeable
Additional Included Accessories	Getting Started Guide	Getting Started Guide Rain Cover Armrest strap V10 skidplate	Getting Started Guide Rain Cover Armrest strap V12 skidplate
Waterproof	Coil to 1 m (3.3 ft)		
Water Resistant	Control box (with Rain Cover attached)		
Operating Temperature Range	–10°C to +40°C (+14°F to +104°F)		
Storage Temperature Range	–20°C to +70°C (–4°F to +158°F)		
Key Technologies	Multi-IQ		Multi-IQ, Bluetooth, aptX™ Low Latency

VANQUISH 540 PRO-PACK	VANQUISH 540 Pro-Pack is based on the standard VANQUISH 540 with the following differences: Includes Bluetooth wireless headphones and a V8 8"×5" Double-D coil and a V8 skidplate. Excludes Wired 3.5 mm (1/8") headphones.

Equipment may vary according to the model or items ordered with your detector. Minelab reserves the right to respond to ongoing technical progress by introducing changes in design, equipment and technical features at any time.

For the most up-to-date specifications for your VANQUISH detector, visit www.minelab.com

Factory Reset

The Factory Reset function returns all detector settings, Search Modes, and Discrimination Patterns to their Factory Preset state.

1. Ensure the detector is turned Off.
2. Press and hold the Power button (for approximately 7 seconds).



The Power button

> **NOTE:** If another button is pressed whilst the power button is held down, the detector will not perform the Factory Reset and will start normally once all buttons have been released.

3. 'FP' will appear on the Target ID display, indicating that Factory Presets have been restored.



'FP' will appear on the Target ID display when Factory Presets are restored.

4. Release the Power button. Automatic Noise Cancel will begin when Factory Reset is complete.

DISCLAIMER

The Minelab metal detector described in this instruction manual has been expressly designed and manufactured as a quality metal detector and is recommended for treasure and gold detecting in non-hazardous environments. This metal detector has not been designed for use as a mine detector or as a live munitions detection tool.

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Minelab Electronics,
PO Box 35, Salisbury South,
South Australia 5106

Bluetooth™ Qualcomm® aptX™ Low Latency

COMPLIANCE STATEMENT FOR CANADA

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

INFORMATION RÉGLEMENTAIRE

Avis de conformité canadien Le présent produit est conforme aux spécifications techniques retenues par l'Innovation, Sciences et Développement économique Canada (ISDE).



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