VANQUISH® 460 | 560

INSTRUCTION MANUAL

POWERED BY Multi-IQ
Simultaneous Multi-Frequency Technology

MINELAB

Contents

Getting Started

⚠ CAUTION

Before assembling, charging, or using your detector for the first time, read the warnings and safety information listed in the following sections:

- "Charger Information and Safety" (page 27)
- "General Care and Safety" (page 34)

Quick Start

Before first use, it is recommended that you fully charge the battery (page 27).

1 TURN ON

2 WAIT FOR 5 SECONDS

Wait for Auto Noise Cancel to complete.

3 SELECT SEARCH MODE

See "Search Modes" on page 5 for more information on how to choose the most suitable Search Mode.

4 GO DETECTING

If there is excessive ground noise after completing the Quick Start steps, perform an Auto Ground Balance (page 11).
If excessive noise is still being experienced, try reducing the Sensitivity level a little (page 10).

Search Modes

VANQUISH Search Modes each have unique target separation and depth abilities. Choosing the right Search Mode will help you find more of what you're looking for.

PARK

All-round mode for hunting at sites with coins and jewellery among modern trash like bottle caps and foil.

Park Mode is designed for searching in urban parks or other recently inhabited sites where there may be coins and jewellery. There is often also lots of metallic litter including aluminium foil, pull tabs and bottle caps.

Park Mode is a good starting point for other general uses such as freshwater detecting.

Park Mode has a lower recovery speed to provide great depth, accurate target identification and good discrimination in trash-infested areas typical of recreational parks. If in doubt in a new area or when first detecting, try Park Mode first.

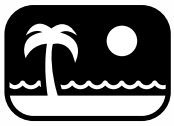
FIELD

Enhanced sensitivity to fine metal relics and excellent unmasking of targets among dense ancient iron trash.

Field Mode is for searching open pasture, cropped or ploughed fields and historically occupied sites. These environments generally contain ferrous trash and coke from previous human occupation.

In highly infested sites, Field Mode is well suited for rejecting coke and detecting hammered coins and ancient artefacts amongst the iron trash.

Field Mode has a higher recovery speed and lower Iron Bias, best suited for locations where target separation is critical.



BEACH

Saltwater beach hunting for coins and jewellery on dry sand, wet sand, and in the water.

Beach Mode is for saltwater beaches including dry sand, wet sand, surf and underwater conditions. Salt water is very conductive, causing responses in the metal detector, Beach Mode helps to eliminate those responses.

Beach Mode specifically identifies any residual salt response and assigns a Target ID of 0 (zero) — indicating that it's an unwanted target — so that desirable low conductive targets such as gold chains can readily be detected with minimal interference from the salt water.

Beach Mode has inbuilt automatic ground tracking to manage the salty beach conditions.

USER PROFILE

Save a customised User Profile for instant access to your favourite settings.

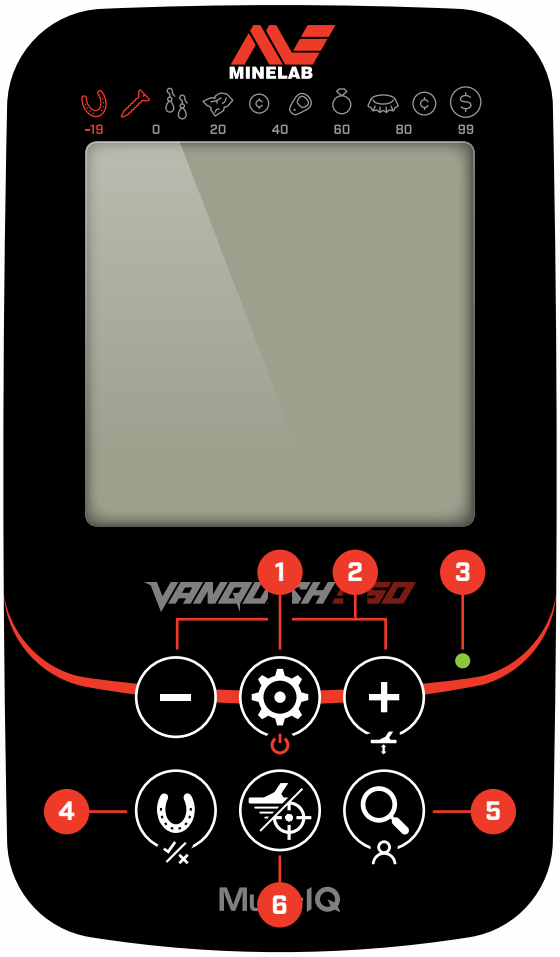
You can adjust the Discrimination Pattern in this mode without losing your changes when the detector is powered off.

Store the User Profile

Any Search Mode (Park, Field, or Beach), can be stored in the Custom Search Mode slot. The current detector settings, discrimination pattern, and the unique target separation and depth characteristics of the Search Modes are saved when the User Profile is stored.

1. Select and Edit the Search Mode you wish to store.
2. Long-press the Search Mode button. 'St' will appear on the Target ID Number display, and there will be a confirmation tone.
3. The newly stored Custom Search Mode will now be active, and can be edited at any time.

Controls



1. **SETTINGS / POWER**
   Press from Off to turn the detector On.

   Press to access and scroll through the Settings Menu.

   Long-press from On to turn the detector Off.

   Long-press (7 seconds) from Off to restore factory settings (page 39).

2. **MINUS / PLUS**
   Press from the Detect Screen to adjust the Sensitivity level (page 10).

   Press from the Settings Menu to adjust the value of the selected setting.

   Press-and-hold Plus (+) from the Detect Screen to Ground Balance (page 11).

3. **CHARGE STATUS LED**
   Shows the charge status of the detector battery (page 27).

4. **ALL METAL**
   Press to toggle between the current discrimination pattern and All Metal to accept all targets (page 17).

   Long-press to reject a detected Target ID (page 17).

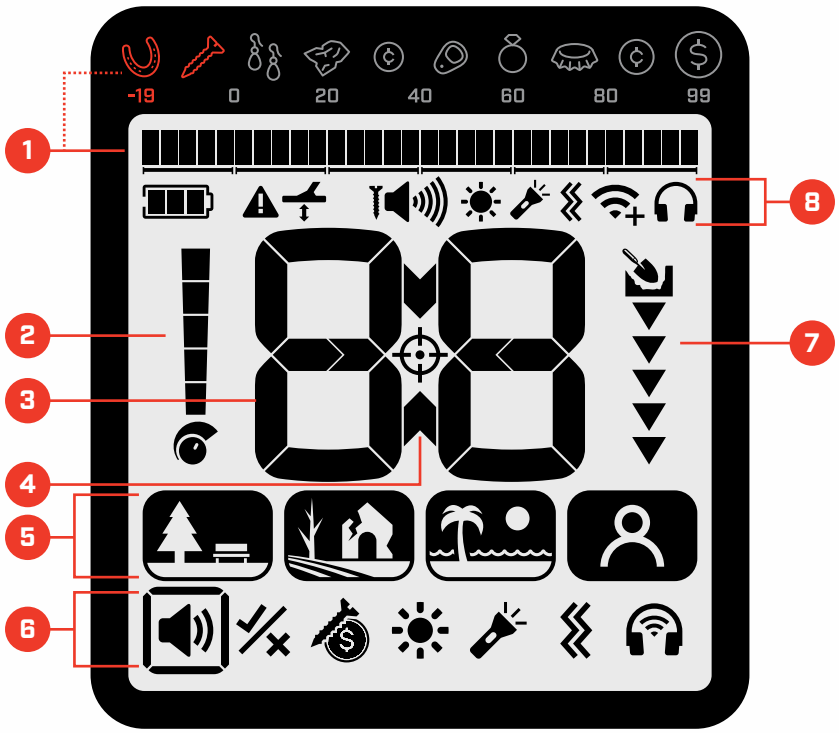
5. **SEARCH MODE**
   Selects the next Search Mode (page 5).

   Long-press to store the current Search Mode and settings to the User Profile.

6. **PINPOINT/DETECT**
   Press from the Settings Menu to return to the Detect Screen.

   Press-and-hold from the Detect Screen to enable Pinpoint to locate the exact position of a target prior to recovery (page 23).

Display



1. **DISCRIMINATION SCALE & TARGET GUIDE**
   The Discrimination Scale is made up of 30 individual segments that correspond to the 119 Target IDs. Each Segment represents 4 Target IDs (page 22).

   The Scale shows a visualisation of target signal strength when in Pinpoint Mode (page 23).

   The Target Guide above the display indicates the types of targets that can be found for the corresponding Target ID segment.

2. **SENSITIVITY LEVEL**
   Displays the Sensitivity level (page 10).

3. **TARGET IDENTIFICATION NUMBER**
   A numerical value (from –19 to 99) is assigned to each detected target based on its conductive or ferrous properties. This allows objects to be identified before digging. For example, a US quarter will typically have a Target ID Number of 89 (page 22).

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

4. **PINPOINT**
   Indicates that Pinpoint is active (page 23).

5. **SEARCH MODES**
   Displays the Search Mode: Park, Field, Beach or User Profile (page 5).

6. **SETTINGS MENU**
   A menu of user-adjustable settings (page 13).

7. **DEPTH GAUGE**
   Shows the estimated depth of a detected target.

8. **STATUS BAR**

   Battery Level/Charging
   Indicates the current battery level (page 27).

   Warning Indicator
   Is displayed when the coil is disconnected (page 30), and in Beach Mode to indicate that Beach Overload is active.

   Ground Balance
   Flashes during Auto Ground Balance (page 11).

   Volume
   Displays the detector audio volume level (page 15).

   A nail icon is displayed next to the Volume level icon when adjusting the Iron Volume setting *(560 only)* via the Settings menu (page 16).

   Backlight
   Indicates that the Backlight is On (page 18).

   Flashlight
   Indicates that the Flashlight is On (page 19).

   Vibration
   Indicates that handle Vibration is On (page 19).

   Wireless Audio
   Indicates that Wireless Audio is On (page 20).

   Headphones
   Indicates that headphones are connected—wireless (page 20), or wired (page 26).

General Settings

Global and Local Settings

Changes made to individual VANQUISH settings are applied either locally to the current Search Mode or globally across all modes.

When adjusting a global setting, all Search Mode icons are shown to indicate that the change applies to all of them.

When adjusting a local setting, only the active Search Mode icon is shown, indicating the change affects that mode only.

Note: When the detector is powered Off, the Park, Field and Beach local settings are reset to default — only discrimination patterns created in or stored to the User Profile are saved.

GLOBAL AND LOCAL SETTINGS REFERENCE

General Settings

Sensitivity	Global
Ground Balance	Local
All Metal	Global

Settings Menu

When you are adjusting items in the Setting Menu, the icons of affected Search Modes will appear on the Display.

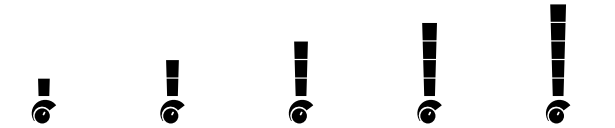
Volume Adjust	Global
Iron Volume	Global
Accept/Reject	Local
Iron Bias	Local
Backlight	Global
Flashlight	Global
Vibration	Global
Wireless	Global

Sensitivity

The VANQUISH detector is highly sensitive and has adjustable Sensitivity. Setting the correct Sensitivity level for individual detecting conditions will maximise detection depth.

Always choose the highest stable Sensitivity setting to get the best performance from your detector.

The Sensitivity Indicator on the LCD shows the approximate Sensitivity level in increments of 2.



ADJUST THE SENSITIVITY LEVEL

Before reducing the Sensitivity, always try to resolve noise by first performing Ground Balance (page 11).

The Sensitivity Level is shown on the Target ID Display while it is being adjusted, and will disappear after 3 seconds of inactivity.

1. Make sure you are in the Detect Screen.
2. Holding the coil stationary, use the Plus button to increase the Sensitivity level until false signals begin to occur.

3. Reduce the Sensitivity level by pressing the Minus button, just enough that the false signals disappear.

4. Sweep the coil over a clear patch of ground, and decrease the Sensitivity Level further if there is still some ground noise.

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).

Ground Balance

Ground Balance calibrates the detector to the local ground in order to eliminate the false signals caused by mineralisation. Ground Balance should rarely need to be performed, as the default setting is suitable for most conditions.

The Ground Balance has a range from -9 to 99, with a default of 0 [zero] for all Search Modes.

Ground Balance adjustment is local; only the current Search Mode is affected by changes.

The default Ground Balance setting of 0 [zero] is generally suitable for most locations, however if the ground is generating many noise signals (and/or the Sensitivity level is set very low), then using Auto Ground Balance is recommended.

If the Auto Ground Balance process does not greatly reduce ground noise (due to highly mineralised ground or high salt levels), then repeat the Auto Ground Balance process by sweeping the coil from side-to-side, rather than the standard up-and-down motion.

TRACKING GROUND BALANCE

VANQUISH Beach mode has automatic Tracking Ground Balance for best performance in beach conditions. It continuously adjusts the Ground Balance when detecting to ensure that Ground Balance is always set correctly.

Beach tracking cannot be manually adjusted or turned Off.

AUTO GROUND BALANCE

Auto Ground Balance automatically determines the best Ground Balance setting, however the process must be initiated by the user.

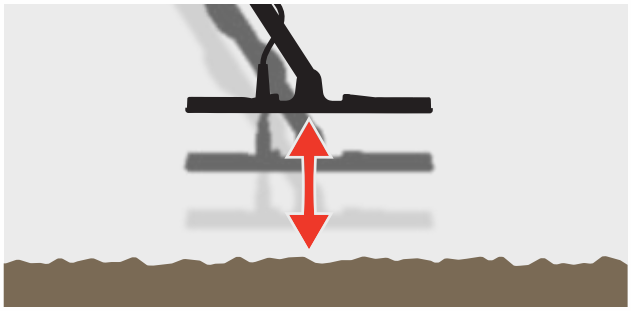
Using Auto Ground Balance is the recommended Ground Balance Method.

1. Make sure you are in the Detect Screen.
2. **Press-and-hold** the Plus (+) button throughout the Auto Ground Balance process; the Ground Balance icon on the LCD will flash rapidly.

(Flashing)

3. Raise and lower the coil repeatedly over a clear patch of soil that does not contain any targets. Observe the Ground Balance number updating dynamically on the Target ID Display, as the audio reduces in response to the ground.

   The response will be stabilised when the value in the Target ID Display settles on a number, and the audible response is minimised.



4. Release the Plus (+) button.

Depth Gauge

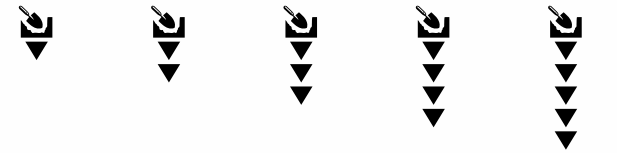
The Depth Gauge indicates the approximate depth of a detected target.

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 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.



The Depth Gauge accuracy is reduced in highly mineralised soil.

Settings Menu

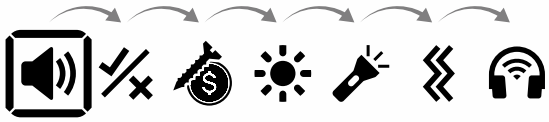
Settings Menu Navigation

The Settings Menu contains adjustable settings relating to the detector.

SETTINGS MENU NAVIGATION

The Settings Menu can be accessed from any screen by pressing the Settings button.

Each press of the Settings button will scroll to the next setting in the Settings Menu in a left-to-right direction. After the last Setting, the detector returns to the Detect Screen. Press the Settings button again to begin scrolling through the Settings from the left.



Press the Pinpoint/Detect button from the Settings Menu to return to the Detect Screen.

The Settings Menu remembers the last accessed setting and will return to that setting the next time the Settings button is pressed.

Volume Adjust

Volume Adjust changes the loudness of all detector audio, including detection signals, the Pinpoint tone, and confirmation tones.

Volume Adjust changes are global, and range from 1 to 10 with a default setting of 7.

ADJUST THE VOLUME

1. Press the Settings button to navigate to the Volume Adjust setting.

2. Use the Minus (–) or Plus (+) buttons to adjust the volume to a comfortable level, making sure that loud signals (close or large targets) do not hurt your ears.

The Volume Level is displayed in the Status Bar. Each volume bar represents 2 levels.

Levels 1–2 | Levels 3–4 | Levels 5–6 | Levels 7–8 | Levels 9–10

Iron Volume *(Advanced Setting)*

VANQUISH detectors have an Iron Volume feature that generates audio from iron at a lower volume to non-ferrous objects. This can be useful in areas of dense ferrous trash or highly mineralised ground, as it lets you hear the ferrous response without being overwhelmed by it.

Iron Volume is proportional to the detector's Volume setting, so iron will generally sound quieter than non-ferrous targets, even if Volume and Iron Volume are set at the same level. If Iron Volume is set to 10, then iron will be the same loudness as non-ferrous targets.

VANQUISH 460 has a default Iron Volume setting of 4, and cannot be adjusted.

VANQUISH 560 allows you to adjust the Iron Volume via an Advanced Setting so that you can control the difference in loudness between ferrous and non-ferrous tones.

Iron Volume changes are global, and range from 1 to 10 with a default setting of 4.

ADJUST THE IRON VOLUME *(560 only)*

1. Press the Settings button to navigate to the Volume Adjust setting.

2. Long-press the the All Metal button to select the Iron Volume Advanced Setting.

3. 'FE' will appear on the display, and a nail icon will appear beside the Volume level in the Status Bar.

The Iron Adjust screen. 'FE' and the nail icon are displayed.

4. Use the Minus (–) or Plus (+) buttons to adjust the volume of iron/ferrous targets. The 'FE' will change to display the setting value, and the Iron Volume icon in the status bar will show the new level.

Note, the Iron Volume setting times-out after a few seconds of inactivity and returns to the Volume Adjust setting.

Accept/Reject

You can create your own discrimination patterns to detect or ignore specific target types, so you can dig more treasure and less trash.

The Discrimination Scale is made up of 30 individual segments that correspond to the 119 Target IDs. Each segment represents 4 Target IDs (page 22).

Segments can be turned On/Off to either detect (accept) or ignore (reject) targets with specific Target IDs.

Discrimination patterns are local, only the current Search Mode Discrimination Pattern will be changed.

Note: When the detector is powered Off, the Park, Field and Beach discrimination patterns are reset to default — only patterns created in or stored to the User Profile are saved.

CREATE A DISCRIMINATION PATTERN

1. Navigate to the Accept/Reject setting.

2. Use the Minus (–) and Plus (+) buttons to navigate to the Discrimination Segment you wish to change.

3. The selected Discrimination Segment will flash slowly, and the Target ID Number of the highest ID represented by that Segment will be displayed. E.g. the sixth segment from the left represents Target ID's 1 to 4, so a 4 is displayed on the Target ID display.

   Press the All Metal button to toggle the Segment On/Off.

   You can also rapidly turn a series of segments On/Off by pressing and holding the All Metal button.

   For example, if segment 5 is selected and turned Off, press-and-hold the All Metal button to turn that segment On, then continue to hold the button. The selector will automatically move to the next segment and turn it On, and so-on. To stop, release the button.

4. Continue to navigate along the Discrimination Scale, turning segments On/Off using the All Metal button until you have created your discrimination pattern.

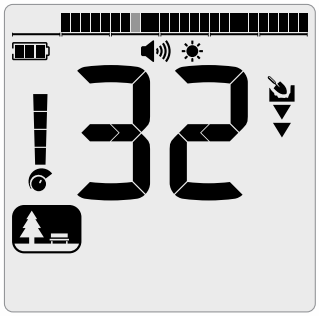
ACCEPT/REJECT TARGETS UPON DETECTION

A target can be rejected upon detection if the corresponding Target ID is currently turned On in the discrimination pattern.

To reject a detected Target ID, long-press the All Metal button.

Targets with that Target ID will now be rejected, and will not be heard.

The last-rejected target can be instantly re-accepted by long-pressing the All Metal button again, as long as no other detection occurs before doing so.



Example showing the detection of an accepted non-ferrous target with a Target ID of 32.

Segment 13 on the Discrimination Scale flashes because that Segment represents Target IDs 29 to 32.

Accepting a rejected Target ID is not possible directly from the Detect Screen. Rejected Target IDs must be re-accepted by adjusting the discrimination pattern via the Accept/Reject setting in the Settings Menu.

ALL METAL

All Metal is turned Off by default each time the detector is powered On.

Turn All Metal On/Off by pressing the All Metal button.

When All Metal is On, the discrimination pattern is disabled so that all metal objects will be detected.

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) once All Metal is enabled, 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.

Iron Bias

Iron Bias is set to 2 by default for Park, Beach, and User Profile modes. This allows the detector to correctly classify large or complex ferrous targets such as rusty nails or bottle crown caps as ferrous so that they can be more easily rejected.

In Field mode, Iron Bias is set to 0 by default to allow the detector to better identify coins amongst the dense ferrous trash that is typical of these historic locations.

Essentially, Iron Bias helps you to tell good targets from iron junk. Higher settings ignore more iron but might miss some adjacent good targets. Lower settings have better target separation, however there's a risk of misclassifying junk (like bottle caps) as good targets.

VANQUISH 560 has an additional Iron Bias setting of -1 for further improved classification of coins amongst dense ferrous trash.

VANQUISH 460 has three Iron Bias settings: 0, 1 and 2.
VANQUISH 560 has four Iron Bias settings: -1, 0, 1 and 2.

ADJUST IRON BIAS

Note: When the detector is powered Off, the Park, Field and Beach Iron Bias settings are reset to default — only the Iron Bias setting stored to the User Profile is saved.

1. Navigate to the Iron Bias setting.

2. Use the Minus (–) or Plus (+) buttons to adjust the Iron Bias.

Backlight

The VANQUISH LCD and keypad have a red backlight for detecting in low-light situations.

There are 3 backlight level settings — Off (0), Low (1), and High (2).

The Backlight will return to its default setting (Low) each time the detector is powered On.

Continual use of the backlight, especially at full brightness will result in decreased battery runtime.

ADJUST THE BACKLIGHT

1. Navigate to the Backlight setting.

2. Use the Minus (–) and Plus (+) buttons to select the Brightness setting, shown on the Target ID Display.

The Backlight Indicator (☀) appears on the LCD when the Backlight is On.

Flashlight

VANQUISH has a flashlight for detecting in low-light situations.

The Flashlight will be Off by default each time the detector is powered On.

There are 2 Flashlight settings — Off (0) and On (1).

The Flashlight will be Off by default each time the detector is powered On.

Continual use of the Flashlight will result in decreased battery runtime.

TURN THE FLASHLIGHT ON/OFF

1. Navigate to the Flashlight setting.

2. Use the Minus (–) and Plus (+) buttons to select the Flashlight setting, shown on the Target ID Display.

The Flashlight Indicator ( ) appears on the LCD when the Flashlight is On.

Vibration

The Vibration feature provides tactile feedback though the detector handle.

Vibration intensity varies in proportion to the target signal strength (for both regular detecting and in Pinpoint Mode).

There are 2 Vibration settings — Off (0) and On (1).

The Vibration setting is remembered after the detector is powered Off. If Vibration is On when the detector is powered Off there will be a brief vibration pulse at start-up.

Vibration is Off by default.

TURN VIBRATION ON/OFF

1. Navigate to the Vibration setting.

2. Press the Minus (–) button to turn Vibration Off.
Press the Plus (+) button to turn Vibration On.

The Vibration Indicator ( ) appears in the Status Bar when Vibration is On.

Wireless Audio

VANQUISH 560 and 460 are only compatible with headphones that support **Bluetooth® LE Audio with the LC3 codec**. ML60 Bluetooth® LE Audio Wireless Earbuds are recommended — visit the Minelab website to see all compatible headphones.

For detailed information on pairing and other headphones controls and functions, refer to the instructions supplied with your earbuds, or download them at: www.minelab.com/product-manuals

Minelab ML60
Wireless Earbuds

PAIR WIRELESS HEADPHONES

1. Navigate to the Wireless Audio setting.

2. Long-press the Plus (+) button to enter Wireless Pairing mode, indicated by the Wireless Audio icon in the Status Bar flashing rapidly.

Note: When you enter Wireless Pairing mode on the detector, it will forget any previously paired headphones. To reconnect them, repeat the pairing process on both the detector and the headphones.

3. Press-and-hold the Multi Function Button (the centre button) on the ML60 earbuds until the LED flashes red and blue.

4. The earbuds will connect automatically — the Wireless Audio Indicator on the detector will remain on, and the LED on the earbuds will flash blue once every 3 seconds.

   If no connection is made within 5 minutes, Wireless Audio will automatically turn Off.

RE-CONNECT PREVIOUSLY PAIRED HEADPHONES

1. Navigate to the Wireless Audio setting.

2. Press the Plus (+) button to turn On Wireless Audio, indicated by the Wireless Audio icon in the Status Bar.

3. Press the Multi Function Button on the side of the ML60 earbuds to turn them On.

4. They will re-connect automatically.

TURN WIRELESS ON/OFF

1. Navigate to the Wireless Audio setting.

2. Press the Minus (–) button to turn Wireless Off.
   Press the Plus (+) button to turn Wireless On.

The Wireless Audio Indicator ( ) appears in the Status Bar when Wireless is On.

WIRELESS AUDIO INDICATOR

The Wireless Audio Indicator appears on the display when Wireless Audio is On. It displays the current Wireless Audio connection status depending on its display state.

Rapid flashing: Wireless Pairing mode is enabled and searching for nearby wireless headphones.

Slow flashing: Attempting to re-connect to headphones that were previously paired.

Solid on: Wireless headphones are paired and connected.

Target Identification, Pinpointing & Recovery

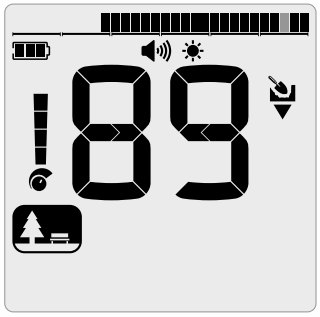
Target Identification

TARGET IDENTIFICATION NUMBER

Target Identification (Target ID) numbers range from –19 to 99 with ferrous (iron) targets ranging from –19 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 89. This means that each time a Target with an ID of 89 is detected, there is a good chance that it will be a US quarter.

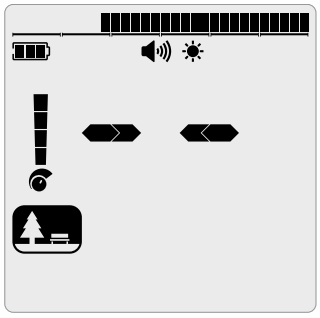


A Target ID Number appears when a target is detected. This example shows the detection of a shallow US quarter. The corresponding Target ID Segment flashes upon detection (flashing segment shown in grey).

The last-detected Target ID remains on the display for five seconds or until another target is detected.

Note: Some non-ferrous targets display a negative ID if there is an adjacent ferrous target.

If there is no detection or the detector passes over a target that it rejects, the display shows two large dashes.

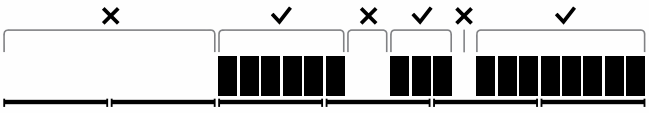


Two large dashes on the Target Identification Number field when there is no detection.

DISCRIMINATION SCALE

The Discrimination Scale corresponds to the 119 Target IDs, with each segment representing 4 Target IDs. Accepted (detected) targets are shown as visible segments, and will flash when a target with that ID is detected. Rejected (non-detected or 'blanked') targets are turned Off.

Discrimination Segments can be turned On (Accepted) or Off (Rejected) to create Discrimination Patterns.



An example Discrimination Pattern Accepted segments (✓) and Rejected segments (✕). The combinations of accepted and rejected segments are called Discrimination Patterns.

You can discriminate between desired and undesired targets that appear along the Discrimination Scale. Therefore you only hear target signals from those you want to find, and unwanted targets are ignored.

You can do this by the following methods:

- Rejecting detected targets upon detection by long-pressing the All Metal button (page 17).
- Creating a discrimination pattern via Accept/Reject in the Settings Menu (page 17).

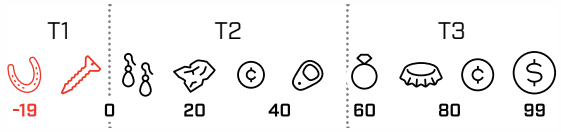
Note: When the detector is powered Off, the Park, Field and Beach discrimination patterns are reset to default — only patterns created in or stored to the User Profile are saved.

TARGET TONES

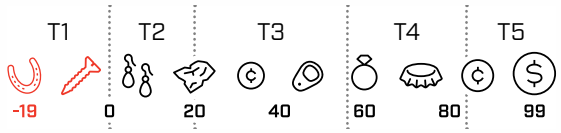
Groups of Target IDs are assigned Target Tones of different pitch (from low to high pitched) to help users to broadly classify the Target ID without having to look at the display.

VANQUISH 460 has 3 Target Tones.
VANQUISH 560 has 5 Target Tones.

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 460 tone break positions (approximate).



VANQUISH 560 tone break positions (approximate).

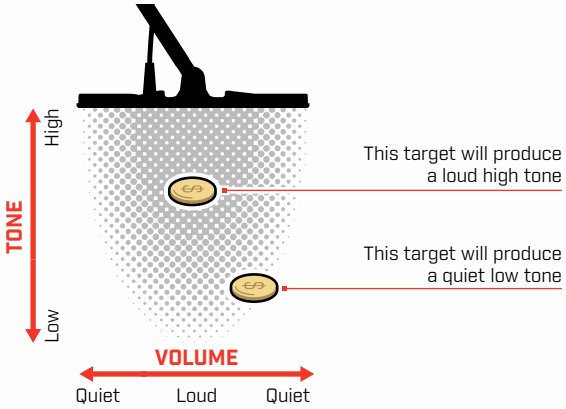
Pinpoint

Pinpointing helps you to quickly narrow down the location of a buried target, allowing you to determine its exact location before digging.

Pinpointing can be done in two different ways:

- Using the Pinpoint Function (see "Locate a Target Using Pinpoint Mode" on page 23)
- Using a manual pinpointing technique (see "Locate a Target Manually" on page 24)

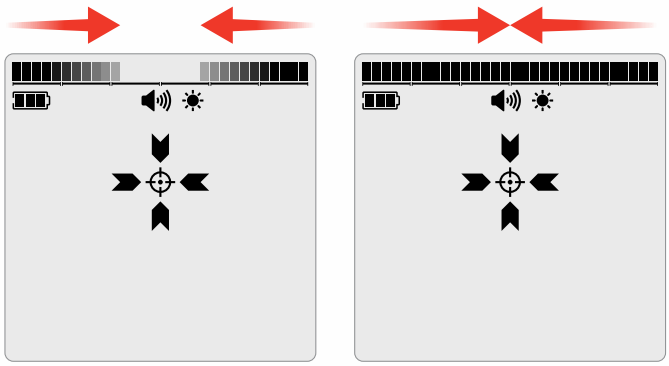
The difference in tone and volume will help to identify the position and depth of the target.



PINPOINT MODE VISUALISATION

When Pinpoint Mode is active, the discrimination pattern is temporarily disabled (i.e. All Metal is enabled). Pinpoint Mode also switches Off motion detection, so target signals occur even if the coil is stationary.

As the centreline of the coil approaches the target, discrimination segments will fill from the outside towards the centre. When the Discrimination Segments are all On, the target is directly beneath the centreline of the coil.



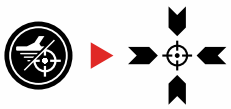
Weak/off-centre target signal: Fewer discrimination segments are On. The target is located nearer to the outside of the coil.

Strongest target signal: All discrimination segments are On. The target is located directly below the centreline of the coil.

LOCATE A TARGET USING PINPOINT MODE

1. Hold the coil away from the approximate target location, then press-and-hold the Pinpoint button, keeping it pressed throughout the procedure.

   The Pinpoint Indicator cross-hairs will appear on the display.



2. Keeping the coil parallel to the ground, sweep slowly over the target location two or three times. This calibrates the Pinpoint function for more accurate pinpoint audio responses.
3. Locate the centre of the target by listening for the loudest signal and/or watching the Pinpoint Visualisation on the display.

   Note: the Pinpoint function progressively masks the target response by reducing the Sensitivity with each sweep until only a very narrow target response remains.
4. When all of the segments on the Discrimination Scale are On, the target will be below the centre of the coil.

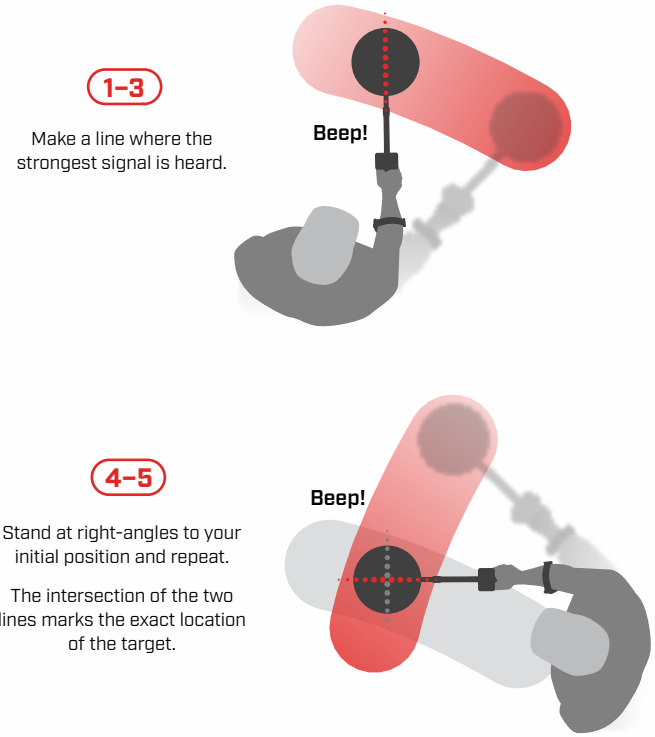
If you have difficulty Pinpointing the target, or if the detector becomes too noisy when Pinpoint is turned On, turn Off Pinpoint and then return to Step 1 and repeat the Pinpoint procedure.

Pinpoint *(Continued)*

LOCATE A TARGET MANUALLY

It is possible to locate a target successfully without using Pinpoint, however this requires practice. This method may be required when a desirable target is surrounded by trash.

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.



Headphones, Batteries & Charging

Wired Headphones

Any standard 3.5 mm (⅛-inch) headphones can be connected to VANQUISH, provided that the headphone connector overmold is less than 9 mm (0.35") in diameter. If it is larger, the connector will not fit inside the waterproof socket.

For instructions for connecting wireless headphones, see "Pair Wireless Headphones" on page 20.

CONNECT WIRED HEADPHONES

1. Unscrew the plastic dust-cap from the Headphone Socket on the rear of the Control Pod. If it is tight, it can be loosened with a small coin.
2. Plug the headphones into the headphone socket.

   The Headphone icon will appear in the Status Bar.

> ! When headphones are not in use, make sure that the waterproof dust-cap on the rear of the Control Pod is screwed firmly into place.

CONNECT WATERPROOF HEADPHONES

VANQUISH is waterproof, and can be fully submerged to a depth of 5 metres (16 feet).

Minelab waterproof headphones must be used for underwater detecting, as they have a unique connector that forms a waterproof seal when used with your VANQUISH.

1. Unscrew the plastic dust-cap from the headphone socket on the rear of the Control Pod. If needed, it can be loosened with a small coin.
2. Make sure that the headphone socket and connector are dry and free from sand, dust, and dirt.
3. Plug the headphones into the socket on the back of the Control Pod.
4. Carefully align the retaining ring over the connector thread and screw them together, making sure no cross-threading occurs.

   The Headphone icon will appear in the Status Bar.
5. Firmly tighten the retaining ring.

HEADPHONE SOCKET SUBMERSION

Before detecting underwater without headphones, **always** make sure the waterproof dust-cap is securely fitted to the Headphone Socket.

While the uncovered Headphone Socket is waterproof and can be submerged without immediately damaging the internal electronics of the detector, it can cause corrosion of the socket and false headphone detection.

> ! Whenever the Headphone Socket has been submerged, follow all advice listed in "Headphone Socket Maintenance" (page 35).

Batteries and Charging

CHARGER INFORMATION AND SAFETY

VANQUISH is supplied with a USB charging cable with a snap-on magnetic connector.

The charge time from completely flat to 100% is approximately 7 hours when a high capacity (1 A @ 5 V) charger is used. A range of charging accessories are available for separate purchase.

Any standard USB port compatible with USB battery charging can be used to charge your battery, however charge times may be longer if using lower-power ports or chargers.

CAUTION: Only charge the detector in ambient temperatures between 0°C and +40°C (+32°F and +104°F).

CAUTION: DO NOT use the detector underwater whilst charging or when connected to a power bank.

NOTE: The power delivered by the charging source must be minimum 5 W in order to achieve the maximum charging speed.

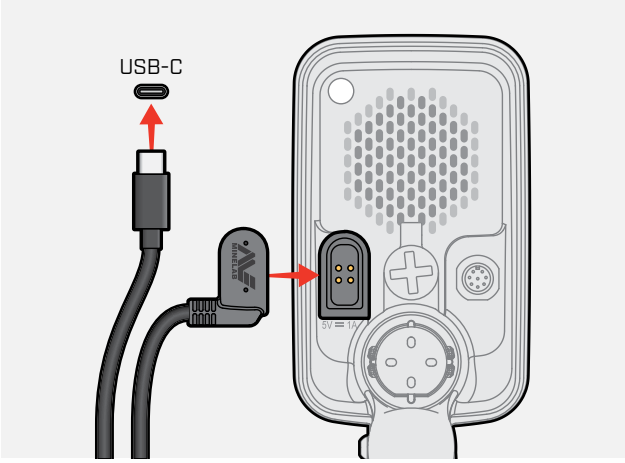
NOTICE: Minelab Metal detectors and accessories are not intended to be operated while connected to a mains (AC) charger.

Going detecting with a fully charged battery is recommended. Typical battery runtime is approximately 10 hours.

CHARGING THE BATTERY

If the detector is powered On during charging, the charge time will be longer.

1. Plug the supplied charging cable into any standard powered USB-C port.
2. Connect the magnetic connector to the charging interface on the rear of the Control Pod.



3. The battery will begin to charge. Charging progress is indicated by either the Charge Status LED (if charging while the detector is Off), or the Battery Level indicator in the Status Bar (if charging while the detector is On).

Charge Status LED

Charging (flashing)	
Fully charged (on)	

Batteries and Charging *(Continued)*

BATTERY LEVEL INDICATION

The Battery Level indicator shows the current battery level.

The Battery Level Indicator (fully-charged state shown)

The detector regulates the battery voltage so that detector performance remains constant regardless of the battery level.

Automatic Shut-Down

When the battery level is critically low, 'bF' Error Code will appear on the Target ID Display. The detector will then shut down automatically.

See "Critically Low Battery Error" on page 30 for steps to resolve this error.

OPERATING WITH A POWER BANK

CAUTION: The detector must not be used underwater whilst charging or when connected to a power bank.

You can use your VANQUISH detector whilst plugged into a portable power bank. This means you can continue detecting even if the detector battery is flat.

Connect the power bank to your detector using the supplied USB charging cable, and continue detecting.

BATTERY MAINTENANCE

See "Battery Maintenance" on page 35.

Errors & Troubleshooting

Error Codes

Some detector faults will display an Error Code/Number on the Target ID Display. Try the recommended actions listed before contacting an Authorised Service Centre.

COIL DISCONNECT ERROR

'Cd' is displayed 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 Pod.
2. Check the coil connector pins on the back of the Control Pod for any damage
3. Check the coil cable for damage.
4. Check the coil for visible signs of damage.
5. Try another coil, if you have one available.

SYSTEM ERROR

In the event of a System Error, 'Er' and an Error Number will alternate on the Target ID Display. The detector will shut down 5 seconds after reporting a System Error.

'Er' is displayed in the event of a System Error.

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 (see page 39).
4. If the error still remains, return the detector to your nearest Authorised Service Centre for repair.

CRITICALLY LOW BATTERY ERROR

When the battery level is critically low, ‘bF’ will appear on the Target ID Display. The detector will shut down 5 seconds after reporting a Critically Low Battery Error.

'bF' is displayed in the event of a Critically Low Battery Error.

In the event of a Critically Low Battery Error, follow these steps:

1. Recharge the battery or connect a USB power bank.
2. Contact an Authorised Service Centre to replace the internal battery.

General Troubleshooting

Try the recommended actions listed, in order, before contacting an Authorised Service Centre.

Detector does not turn on, or turns Off by itself (with or without the 'bF' Error Code)

1. Check that the Coil is connected.
2. Charge the detector.
3. Check that the detector is charging and the green Charge Status LED is flashing.
4. Check that you are charging from a USB charging source with a 1 A @ 5 V charging capacity.
5. Check that the magnetic connector and Charging Interface on the back of the Control Pod are clean and free of debris.
6. Check that the USB charging cable is properly seated/connected to the detector.

Erratic and/or excessive noise

1. Move away from local sources of Electromagnetic Interference (EMI).
2. Restart the detector to initiate an Auto Noise Cancel.
3. Perform a Ground Balance.
4. Reduce the Sensitivity Level.

No sound — Wired headphones

1. Check that the detector is On, and start-up has completed.
2. Check that the headphones are plugged in and fully inserted into the headphone socket.
3. Check that the headphones indicator is displayed in the Status Bar.
4. Check that Volume is set to an audible level.
5. Unplug the headphones and confirm that the detector speaker is audible.
1. Check that the headphones connector is free of moisture or debris.
2. If available, try using a different set of headphones.

No sound — Wireless Headphones

1. Check that the headphones are turned On.
2. Check that detector Wireless is turned On and paired with headphones (i.e. the Wireless indicator is steady On).
3. Check that the headphones are charged.
4. Check that the detector volume is set to an audible level.
5. Check the volume control on the headphones is set to an audible level.
6. Pair the detector to a different set of compatible wireless headphones.
7. Try wired headphones.

Wireless Headphones will not pair

1. Check that the headphones are compatible with your detector — Minelab ML60 Bluetooth LE Audio wireless earbuds are recommended. **Note:** VANQUISH 560 and 460 are only compatible with headphones that support **Bluetooth® LE Audio with the LC3 codec**.
2. Try powering Off the headphones and then re-pair.
3. Ensure the headphones are within 1 metre (3 feet) of the detector Control Pod, with no obstructions between the headphones and detector (including your own body).
4. Move away from sources of interference such as mobile phones.
5. If there are many other wireless devices nearby, pairing may take longer. Move away from the area and try to pair again.
6. Perform a Factory Reset on the headphones and attempt to re-pair to the detector.
7. Pair the detector to a different pair of compatible wireless headphones, then attempt to re-pair the original headphones to the detector.

General Troubleshooting *(Continued)*

Distortion/crackling heard in Wireless Headphones when connected via Wireless

1. Ensure the headphones are within 1 metre (3 feet) of the detector Control Pod, with no obstructions between the headphones and detector (including your own body).

Speaker is squeaky or muffled after submersion in cold water

1. Allow up to 30 minutes for the detector internal air pressure to return to normal. Note, laying the detector on the ground with the Control Pod standing up may equalise internal air pressure faster.

Headphone indicator is On, but no headphones are connected

There may be water inside the Headphone Socket causing false detection of wired headphones.

1. Check that the Headphone Socket is clear of water and obstructions.
2. If water is present, use a warm (not hot) air dryer to dry the Socket.

Detector does not operate after being left in an extremely hot environment (e.g., backseat of a car on a sunny day)

The detector has overheated. It may briefly power On and display “bF” before freezing.

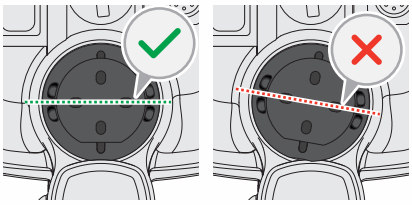
1. Place the detector in a cool, dry location and allow it to cool down. Once it has cooled sufficiently, normal operation will resume.

Safety, Care and Maintenance

Detector Care and Safety

GENERAL CARE AND SAFETY

- ⚠ **WARNING:** Do not allow small children to play with the detector or accessories, small parts are a choking hazard.
- ⚠ **WARNING:** When transporting the detector by air, the coil must be disconnected from the Control Pod. Ensure you also comply with airline regulations regarding the transport of lithium batteries in equipment.
- Wash your hands before handling the detector after using sunscreen or insect repellents.
- The Display lens is made from quality optical plastic for clear viewing of the screen and is therefore prone to scratching or serious damage if not treated with due care. Application of a screen protector is strongly recommended. Replace it periodically if it becomes scuffed or scratched.
- Never clean the Display lens using solvents or alcohol-based cleaners. To clean the Display lens, use a slightly damp cloth with mild soap detergent. Dry with a clean lint-free cloth to remove water-spots.
- Do not use any lubricants, sealants, or solvent or alcohol-based cleaners on any part of your detector. Even chemicals typically considered mild such as isopropyl alcohol or silicone lubricants can degrade material properties or the integrity of seals. Use of chemicals on the product may void the warranty. To clean, use a slightly damp cloth with mild soap detergent.
- Do not apply any chemicals including O-ring lubricant, grease or silicone grease to seals or O-rings if replacing the internal battery, as this will damage the battery seal.
- Do not allow the detector to come into contact with gasoline/petrol or other petroleum-based liquids.
- Do not bring the detector or accessories into contact with sharp objects as this may cause scratches and damage.
- Avoid getting sand and grit in any moving parts including the Shafts, Camlocks and Yoke assembly. If sand and grit accumulates in these parts they should be rinsed in fresh water then dried thoroughly.
- Do not expose the detector to extreme temperature conditions. The storage temperature range is from -20°C to +70°C (-4°F to +158°F). Avoid leaving it inside a vehicle parked in the sun on a hot day, as temperatures can reach extreme levels. If the detector has been exposed to high temperatures, allow it to cool down before attempting to power it On.
- Ensure the Coil Cable is kept in good condition, free of strain, kinks and tight bends.
- Do not expose accessories not listed as waterproof to liquid/moisture or excessive humidity.
- Only charge the detector and accessories according to the instructions provided.
- Do not charge the detector or accessories in extreme temperature conditions — Only charge the detector in ambient temperatures between 0°C and +40°C (+32°F and +104°F).
- Do not use tools to tighten the Coil Connector to the Control Pod, this will damage the Control Pod. If the Coil Connector is not fitting easily, flush any dirt/grit away with fresh water then allow it to dry before trying again.
- Do not attempt to adjust the Coil Connector nut on the back of the Control Pod. This is locked in place and tampering will damage the Control Pod.
- Do not poke sharp objects into the Speaker grille to clean it, this will damage the Speaker and compromise waterproofing. Clean the Speaker by flushing fresh water through the grille.
- After replacing the battery, do not over-tighten the battery seal. With the detector upright, the twist-lugs on the battery cap should be horizontal.



Detector Care and Safety *(Continued)*

MAINTENANCE OF PARTS

Battery Maintenance

Lithium-ion battery performance may degrade if unused for long periods of time. Fully charge the battery at least once every 3 to 4 months to prevent this from occurring.

Even with correct care and maintenance, Lithium-ion battery performance reduces over time with normal use. Therefore the battery may need to be replaced every few years. Replacement batteries can be supplied and installed by a Minelab Authorised Service Centre.

⚠ **Do not apply any chemicals including O-ring lubricant, grease or silicone grease to seals or O-rings if replacing the internal battery,** as this will damage the battery seal.

Coil Maintenance

The Skidplate is a sacrificial/replaceable part intended to protect the Coil from damage. Replace the Skidplate when it becomes excessively worn, but before it wears through in any place.

After Beach/Saltwater Detecting

Sand is abrasive, and salt can corrode metal parts of the detector over time. Following the listed advice is essential to avoid damage to parts of your detector.

Removing Sand From the Detector

Immediately after detecting at the beach or in saltwater, rinse all parts of the detector with fresh water. Avoid wiping the detector to remove sand as this may cause the sand to scratch the detector.

Open both Camlocks and flush with clean fresh water.

Headphone Socket Maintenance

Immediately after underwater detecting sessions, make sure that the area around the connector is dry and free of sand/mud **before** disconnecting the headphones (or the waterproof dust-cap).

If any sand/mud accidentally gets inside the Headphone Socket, flush it gently with fresh water before drying it thoroughly.

Specifications, Presets & Compliance

Technical Specifications

	VANQUISH 360	VANQUISH 460	VANQUISH 560
Search Modes	Park, Beach, All Metal	Park, Field, Beach, User Profile	
All Metal Shortcut	No	Yes	
Custom User Search Profile	No	Yes	
Operating Frequencies (kHz)	Multi-IQ®		
Noise Cancel	Auto (19 Channels)		
Wireless Audio	No	Yes*	
Iron Bias	Fixed	0 to 2	-1 to 2
Sensitivity	5 levels (1 to 5)	10 levels (1 to 10)	
Volume	5 levels (1 to 5)	10 levels (1 to 10)	
Iron Volume	Fixed		10 levels (1 to 10)
Target Tones	3 tones		5 tones
Discrimination Segments	6 segments (in groups of 20 Target ID's)	30 segments (in groups of 4 Target ID's)	
Pinpoint Mode	Yes		
Target Identification (ID)	119 levels notch discrimination: Ferrous: -19 to 0 | Non-ferrous: 1 to 99		
Depth Indicator	5 levels		
Length	Extended: 142 cm (56 in) Collapsed: 79.5 cm (31.2 in)		
Weight	1.16 kg (2.6 lbs)		1.26 kg (2.8 lbs)
Display	Monochrome LCD	Monochrome LCD with Red backlight (Off (0), Low (1), High (2)	
Keypad Backlight	—	Yes, controlled by Backlight setting	
Flashlight	—	Off, On	
Vibration	—	Off, On	
Supplied Coil	V10X™ 10" Double-D		V12X™ 12" Double-D
Supported Coils (not included)	V8X, V10X, V12X, EQX06, EQX11, EQX15		
Supplied Charging Cable	USB-C Magnetic Charging Cable		
Audio Outputs	In-built loudspeaker Wired 3.5 mm (1/8") headphones	In-built loudspeaker Wired 3.5 mm (1/8") headphones Wireless audio	
Supplied Headphones	—	Wired 3.5 mm (1/8") headphones	
Battery	3.7 V/4500 mAh Internal Lithium-Ion battery (approx. runtime 10 hours)		
Additional Included Accessories	Getting Started Guide Armrest with strap V10 skidplate		Getting Started Guide Armrest with strap V12 skidplate
Waterproof	Waterproof to 5 m (16 ft), IP68		
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®		
VANQUISH 560 PRO-PACK	VANQUISH 560 Pro-Pack is based on the standard VANQUISH 560 with the following differences: Includes ML60 Bluetooth® LE Audio Wireless Earbuds* and a V8X™ 8"×5" Double-D coil with skidplate. Excludes Wired 3.5 mm (1/8") headphones.		

* VANQUISH 560 and 460 are only compatible with headphones that support Bluetooth® LE Audio with the LC3 codec.

Minelab reserves the right to make changes to the design, equipment and technical features at any time. For the most up-to-date specifications for your detector, visit www.minelab.com.

Default Settings

The default search mode is Park. Global Settings are highlighted in grey.

	Park	Field	Beach	User Profile
Volume Adjust	7			
Iron Volume *(Adjustable on 560 only)*	4	4	4	4
Accept/Reject ↺	✕ –19 to 16 ✓ 17 to 99	✕ –19 to 8 ✓ 9 to 99	✕ –19 to 0 ✓ 1 to 99	✕ –19 to 0 ✓ 1 to 99
Iron Bias ↺	2	0	2	2
Backlight ↺	Low (1)			
Flashlight ↺	Off (0)			
Vibration	Off (0)			
Wireless Audio	Off (0)			

Sensitivity	8			
All Metal ↺	Off			
Noise Cancel	Auto (on start-up)	Auto (on start-up)	Auto (on start-up)	Auto (on start-up)
Ground Balance ↺	0	0	0 (Auto tracking)	0

↺ Setting resets to default state upon power-off, with the exception of User Profile mode which retains changes made to local settings.

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 powered Off.
2. Press-and-hold the Settings/Power Button until 'FP' appears on the Target ID Display.

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

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

Software Updates

VANQUISH detectors contain software that can be updated via the supplied USB charging/data transfer cable.

Visit www.minelab.com/product-manuals for up-to-date VANQUISH Software and installation instructions.

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.

COMPLIANCE

Refer to the included *Instructions and Safety Information* leaflet for further regulatory information.

To view product compliance information, navigate to the Iron Bias setting, then press-and-hold the All Metal button.

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MINELAB

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