



INDUCTION
BALANCE
TECHNOLOGY

NEXUS STANDARD MP V3



User Guide

Comprehensive owner's instruction manual for operation.



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General Description

The Nexus Standard MP V3 is an Analogue Induction Balance (IB) metal detector that operates in the very low frequency (VLF) range and it is designed for use on inland sites and fresh water beaches. The Nexus Standard MP V3 benefits from our new Super Damping Technology that gives it the ability to effectively suppress by means of proper balance any kind of mineral material that exists on the ground surface.

MP stands for Mineral Power. The Nexus Standard MP V3 may be the most efficient IB metal detector for use in heavy mineral ground conditions and strong magnetite. In this regard the MP V3 is the best IB based metal detector from the Nexus product line. It may be used in any of the two basic modes of operation - All-Metal or VCO Multi tones.

It is designed to be an All-purpose metal detector, capable of finding both small and large targets at extreme depths in normal soil conditions. It is also designed to work with very high efficiency in all existing types of mineral soils and magnetite (black sand) surpassing in performance all other IB metal detectors. To obtain the best results, as with all metal detectors, it is essential to understand the settings and operation of the detector. Professional users can enjoy the benefits of the deep seeking Nexus technology.

As a general rule, the best results will always be obtained when the detector is properly set in All Metal Mode. Therefore users will need to practise and experiment in order to obtain the best possible results on any particular site. All sites and soils are different and settings that will give good results on one site may be less successful if used elsewhere.

The Nexus Standard MP is designed to detect the very deepest of targets and operates near to the limits of what is achievable with induction balance.

Assembly & Preparation



Locking collar.

Knurled ring.

Assembly & Preparation

The Nexus Standard MP is supplied completely assembled with a 4 pole telescopic carbon fibre shaft. Use the plastic bolt on the stem and tighten coil ear lags by hand while the coil is held at the correct angle to the stem. Insert the coil cable plug into the socket at the back of the control box and then tighten the knurled ring.

Take care when winding the cable around the stem so that the cable is not strained.

The detector is supplied with a drop in 10 AA battery holder that can be used for all types of AA size batteries, (alkaline or rechargeable). A charging socket is provided to the battery box for connecting a charger unit. To insert or change batteries remove any three of the thumb plastic screws from the base lid of the battery box (the battery box is below the arm cup at the top of the detector stem) and loosen the fourth screw. Turn the cover to the side. Insert the 10 batteries, in their correct alignments, into the plastic holder and make sure that all the terminals have a good electrical contact. Locate the battery holder into the compartment, ensuring the connecting terminals of the battery holder are in good contact with the two electric spring loaded

terminals behind the recharge socket. Do not over-tighten the plastic thumb screws when refitting.
If you wish to use headphones (highly recommended) connect your available set to the 6 mm jack socket on the battery box. The Nexus Standard MP has an internal loudspeaker so headphones are not absolutely essential. For any headphones that have a volume control, ensure that this is set to MAXIMUM and use the Nexus Standard MP Volume knob on the control box to set the volume level.

Controls



The Nexus Standard MP V3 has eight rotary control knobs and two toggle switches.

Battery Test Toggle Switch

It is located on the front panel of the control box. It is used to

check the condition of the batteries by using the DDM.
The Battery Check of the MP V3 will indicate battery Voltage between 10.5 V and 11.5V.
Full LED meter will indicate battery Voltage 11.5V or higher.
No indication during battery check will mean 10.5V or less in which case the batteries will need to be put on charge.

Volume and Power On/Off switch.

This knob sets the volume of the tone and responses and it is used also to turn on/off the Nexus Standard MP V3. This knob should always be used for setting the volume. Any volume control on the headphones should be set to MAXIMUM.

VCO Tone

This control enables the VCO multi tones on the MP V3.

RGB LED Meter

The RGB meter is based on LED technology and provides a reliable visual discrimination analysis in All-Metal Mode and VCO Multi tone mode.

The RGB meter indicates only Non-Ferrous targets in three basic colours - Green, Orange and White/Purple.

The three colours represent three different non-ferrous conductivity ranges.

Green colour indicates only the lowest conductors, such as Gold coins and small Aluminium fragments.

Orange colour indicates everything between Lead, Copper and Bronze.

Purple / White colour indicates mostly Silver targets, which are the highest conductivity non-ferrous targets found in most cases.

In this colour very large metal targets will also be displayed as high conductors.

Discrimination

This knob sets the level of the discrimination. Rotating the Discrimination knob clockwise (from 0 to 10) will INCREASE the level so that Iron is increasingly not detected (but high settings will result in the loss of potentially good targets). Generally, the discrimination level should be set as low as possible; to avoid masking the smallest and deepest desired targets.

Ground Balance

The Ground Balance of Nexus Standard MP V3 is controlled by two rotary controls. Coarse and Fine.

The Coarse GB control is a single turn potentiometer. The Fine control is a 10 turn potentiometer with a multi turn dial mechanism with locking function.

These two controls are used to set the balance of the Nexus Standard MP V3 to suit the soil conditions on any given site.

Threshold

This knob sets the level of the threshold tone. The Nexus Standard MP V3 is meant to operate in audible Threshold level at all times when All Metal Mode is in use.

If the VCO Multi tones are engaged permanently then it is recommended that the Threshold level is set to silent.

Mineral Control section

The Mineral Control on Mp V3 is enabled from the Mineral Control

On/Off toggle switch on the front panel. Once this switch is turned to On position the M.C. Fine control can be used to set the level of resistance to high minerals of the MP V3. If the Mineral Control toggle switch in on off position (down) the M.C. Fine control will be disabled.

LC-MC SET control

This rotary control is used to turn on/off the RGB meter and/or to set the cut off point between low conductors and medium conductors. For example in some cases hammered gold coins may be preferable to be set on the meter as low conductors (despite that normally they can read as medium-low conductors), so that all other targets can be ignored without potential loss of hammered silver and hammered gold coins.

This type of setting will be useful on sites littered with useless non-ferrous targets with conductivity higher than the desired small gold and hammered silver coins.

General Operation and Set-Up

Having assembled the Nexus, inserted batteries and connected the headphones, The Nexus is ready for use. The Nexus Standard MP V3 is designed exclusively for use by highly experienced users. No metal detector, however powerful, will operate at its best unless it is set up properly for the conditions in which it is to be used. To obtain the best results and maximum depth and sensitivity to desired targets, the Nexus Standard MP V3 must be properly tuned to the site and the settings to achieve this is set out below.

Full Manual Set-Up

Firstly, ensure that no metal is in close proximity to the coil. It is also advisable to carry out the tuning and setting up of the Nexus Standard MP V3 away from other metal detectors or potential sources of electronic interference. Turn the detector on. A tone will be heard and the RGB meter will flash. The tone will fade and the meter bar will settle after a couple of seconds. To check the condition of the batteries, turn on the Battery Check. After the battery check has been done, turn the toggle switch back down to allow the RGB to indicate metal targets.

* Keeping the RGB in battery check mode for a long time will drain the batteries.

Holding the Nexus Standard MP V3 with the coil well above ground level, adjust the Threshold knob to obtain a faint audible tone setting. Adjust the Volume knob to set a comfortable level (remembering to set any adjustable headphone volume control to MAXIMUM).

Lower the coil to the ground and sweep side to side slowly to ensure that there are no metal targets in the place you are tuning the detector. When you are satisfied, proceed as follows. Position the coil about 3" (subject to coil size) above and parallel to the ground surface. Raise the coil gently above the ground to 25 cm (10", subject to coil size) and lower back to 3" (75 mm) above ground several times. Note whether the threshold tone remains the same or if it increases or decreases in intensity while raising and lowering the coil. There should be no residual tone change left after the GB is done.

* IF THE GROUND BALANCE IS INCORRECTLY SET, THE RGB METER WILL INDICATE STRONG FALSE SIGNALS FROM THE GROUND MINERALS.

How to set the Ground Balance of MP V3.

1. Turn the detector on from the Volume control.
 2. Set the audio to a level comfortable for you.
 3. Set the threshold to a barely audible level.
 4. Set the discrimination level to 0 if a low frequency coil is fitted. For high frequency coils the discrimination level will be different. Read the User Manual on how to set the discrimination level.
 5. Mineral Control and VCO Off.
 6. Find ground free from metal.
 7. Turn the Coarse Gb knob to 10 (fully clockwise).
 8. Begin moving the search coil up and down between 8 cm and 25 cm above ground.
 9. If the detector beeps while the search coil is going up - turn the Fine GB knob slightly to the right.
 10. If the detector beeps while the search coil is going down - turn the Fine GB knob slightly to the left.
 11. Keep repeating step 8. & 9. until there are no beeping sounds when the search coil moves up and down.
- If the Fine GB is out of range (the detector beeps only when the coil goes down) then turn the Coarse GB to 9.5-9 to set a different GB range.

To achieve the best ground balance tuning, it is essential that the coil be held parallel to the ground surface at all times during the procedure.

In highly mineral soil conditions the use of Mineral Control may be necessary to apply to tune the detector in stable operating condition.

* After every change in Mineral control levels ground balance must be done again.

The use of mineral controls will lead to some loss of depth.

DISCRIMINATION SETTINGS.

As a general rule when the MP V3 is fitted with a low frequency search coil the Discrimination level should be set to 0.

If HF coil is fitted the Discrimination level should be set as suggested below.

If Iron gets through as non-ferrous regardless of the coil in use do the following discrimination adjustment;

The most effective method of setting the Discrimination level, suitable for all search conditions, is by passing a rusty iron nail (about 50 mm long) close to the search coil pointed against the coil centre.

While moving the nail left-right in front of the coil adjust the Discrimination level from 0 by small increments until the Iron nail is indicated as Iron. On the MP V3 this means no LED meter readings should light at the same time when the sound comes and VCO tone will be low when the Iron nail is in front of the coil middle.

With all available coils Discrimination level 0 will be most receptive to all targets and higher levels than 0 less so.

Finally, check again the threshold for audible level and volume for comfortable level.

The Nexus Standard MP V3 is now set up for the particular site conditions and it is ready for use.

Search Method

With the Nexus Standard MP V3 set up and ready, the coil should be swung smoothly from side to side, a little above the ground surface. The sweep speed should be moderate to slow and never

fast. It is strongly recommended that the MP V3 is used in All Metal mode with audible level in the Threshold so that the deepest targets can be registered.

Suggested operating heights for the standard coils with MP V3 are:

13" DD coil: 4" (100 mm) minimum above ground surface.

10" DD coil: 3" (75 mm) minimum above ground surface.

For larger coils the minimum distance to ground will be higher.

The suggested operating heights are set so that only metal targets will cause changes in the Threshold. Carrying the coil close to the ground will result in minor Threshold changes caused by the ground, which may inhibit the detection of the deepest and very faint targets.

However by applying a Mineral Controls up to a certain level the MP V3 detector can effectively remove all residual ground noise and then the search coils can be carried at any distance above ground. In this case there will be some loss of depth.

Make sure that the coil is swung evenly over and parallel to the ground surface and that the coil does not rise at each end of the swing. Cover the ground in smooth, parallel swings to ensure maximum detection coverage.

In All-Metal Mode, both ferrous and non-ferrous targets will give the same audio response by a sudden increase in the intensity of the threshold tone. A strong response indicates a large or relatively shallow target and a weak response indicates a small or deep target. Any audio signal in All-Metal Mode may be analysed by using the RGB meter. To analyse a signal with the RGB Meter observe its colour response in the exact time of audio response.

In VCO Multi tone Mode, good non-ferrous targets will give a clear, well defined, two-way, repeatable audio signal with a smooth rise in audio frequency. Ferrous targets will give a signal

by lowering the audio frequency and some time they may sound erratic. Pinpointing is by simply X-ing the coil across the signal. The position where the signals are strongest below the coil centre indicates the target position. As with all detectors, when targets are of complex shape or are located at an angle in the soil, pin-pointing may not be entirely accurate so it is suggested that, when digging, the user allows space to avoid possible damage to finds.

The VCO can be used to indicate the exact position on most targets by listening to the maximum audible frequency raise.

Tips

Some practice and experimentation with the settings is necessary to get the best results on different sites.

Users should persist and regular use over a reasonable period is likely to be needed to become proficient, especially in successfully locating the very deepest and smallest of targets.

It must always be remembered that no detector can find what is not there – nor can any detector give a signal unless the coil is passed directly over that target! There will always be sites on which any single detector does not work to peak efficiency.

All detectors and sites are different and a particular combination of frequency and filtering might be best on a specific site, although the range of accessory coils available for the Nexus Standard MP V3 will allow effective operation under all conditions and for all types of targets. Site conditions will significantly affect depths and performance. Heavily furrowed, broken ground or thick stubble are all especially difficult ground types to search. Sites where the ground conditions vary to a considerable degree may require the Ground Balance to be adjusted from time to time for best results.

Care of the Nexus Standard MP

All metal detectors are precision instruments and require careful handling to ensure they remain in good working order.

Avoid dropping, impacts or violent shaking of the detector and protect it while transporting.

The detector should not be used in wet conditions and damage caused by use in wet conditions are not covered under the warranty.

Mud and soil should be carefully removed, using a damp cloth. Do not use detergents or abrasives and avoid getting water in the control boxes.

When storing the detector for long periods or when shipping, the batteries should be removed.

Avoid storing the detector in areas where it will be exposed to extreme temperatures, dust, moisture or contaminants.

When changing search coils, do not pull the coil cable, hold only onto the coil plug. Damage to the coil cable from prohibited pulling is not covered under the warranty.

Do not attempt to modify or repair the detector or allow any unauthorised repair centre to do so.

Technical Specifications

Weight: (main unit only) 1.0 kg (without batteries).

Coil Case Construction: ABS plus Fibreglass or Carbon Fibre.

Audio Frequency: Custom tuned.

Audio Output: 6mm stereo headphone jack.

Power Supply: Up to 16v (10 AA alkaline batteries).

Battery Life: Up to 12 hours if only headphones are in use, depending on the brand quality.

Operating Modes: All-Metal, VCO Multi tones.

Optimum Temperature Range: -15° to +60°C

Optimum Humidity Range: 0 to 85% RH

Troubleshooting

1. The detector does not turn on.

Check the batteries. If they are old, replace them with new. Make sure the batteries are properly inserted into the battery holder and have a good electrical contact.

2. The detector is giving too many false signals.

Check the Ground Balance if it is adjusted correctly according to the ground balance procedure. If the problem still persists, check if the soil does not contain hot rocks or other contaminants. If this is the case then use Mineral Control to stop the interference.

3. The detector is picking up too much Iron .

Check the Discrimination level according to the recommended Settings.

4. I only plug the search coil and detector does not work after that.

Make sure that it is the correct search coil for your Nexus model. The search coils for Nexus Standard MP V3 are interchangeable only with coils manufactured for the MP range, MP V1, MP V2 and MP V3.

5. One or more control functions does not work.

Make sure that you know how to use those control functions according to this User Manual. In case that any of the control functions do not cause any change of response in the detector functions then return the detector to your dealer for check and possible repair.

6. The detector is unstable.

Nexus detectors are not affected by power lines. A demo video is available on our YouTube channel.

Make sure not to use the detector near uncommon, strong sources of electrical interference.

Do not carry active smartphones with you while using the MP V3.

7. The detector stopped working during the rain.

Nexus detectors are not water or weather proofed. Knowing that we do not recommend use in rain. If this happens, turn off the power of the detector from the Volume knob. Take out the batteries and leave the detector near a warm place for a couple of days to dry out. After that, if still not working, return the detector for maintenance and repair.

8. The batteries drain faster than expected.

Check if the battery test toggle switch remained in the on position, as this can cause the batteries to drain faster.

Also make sure the batteries in use are in good condition.