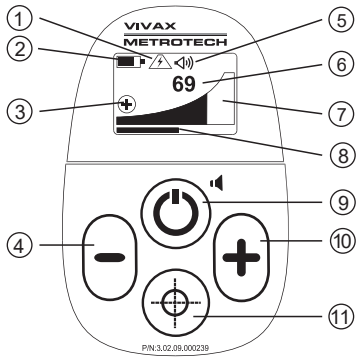
Controls and Indicators



1	Power signal warning. Could be a live cable.
2	Battery level indicator (Flashes when replacement is required)
3	Indicates polarity of field (+ or -)
4	Decrease sensitivity
5	Speaker volume setting
6	Numeric signal level indicator
7	Bar graph indicating signal strength
8	Sensitivity setting indicator
9	Press to switch on, then short press to change speaker volume. Long press to switch off.
10	Increases sensitivity.
11	Short press auto sensitivity set. Sets sensitivity to 60% meter deflection Long press to invert screen when pinpointing

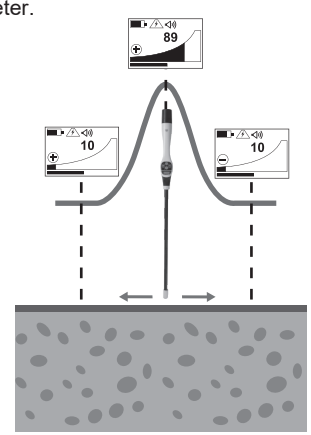
Checkout Procedure

1. Hold the unit in a vertical position well away from any metallic objects. Switch on the unit and check that the battery is good by looking at the battery icon. Replace the battery if necessary. (See Battery Replacement section below)
2. Now momentarily press the auto sensitivity pushbutton. The sensitivity setting indicator should show maximum. (if not, find another test site) The display should read less than one half and the numeric value should be less than 50.
3. Now lower the VM-880 down towards the PK nail.Stop when the numeric valie increases by approximately 10 and the speaker pitch increases.The distance from the nail should be greater than 2" (*50mm*). This will vary greatly due to site condition and PK nail tolerance.
4. If the unit fails this test, it should be returned to the factory or approved service centre as there are no field serviceable parts.

Operation

The VM-880 Ferrous Metal Detector locates only those ferrous metals that attract the earth’s magnetic fields, such as iron, nickel, cobalt and their alloys, as well as magnets, such as magnetic markers.

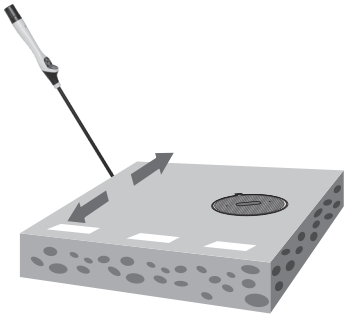
Utility objects that contain these metals would include PK nails, marker stakes, valve boxes, cast iron pipe, manhole covers and large iron tanks. It also locates objects that generate their own magnetic field, such as magnets. This discriminating feature of the VM-880 simplifies the operator’s search for a specific magnetic target. The size, shape, depth and orientation of the target object will define the “profile” or “signature” indicated on the VM-880 meter.



To Operate the VM-880:

1. To turn on the unit, press the ON/OFF/Speaker pushbutton.
2. The sensitivity of the instrument will automatically set itself to the last setting.

3. There will also be a “+” or “-” icon on the screen. This indicates the polarity of the magnetic field which will be explained later.



4. Sweep the area holding the unit such that it is pointing towards the ground at an angle of about 45 degrees. Walk forward slowly sweeping left to right and keeping the tip an even and close distance from the ground.
5. When a ferrous object is approached the bar graph will expand and the pitch from the speaker will increase. (Set the speaker volume with a momentary press of the ON/OFF pushbutton)
6. Hold the unit exactly vertical to pinpoint the highest pitch and largest bar graph deflection. If preferred, invert the screen by a prolonged press of the auto sensitivity pushbutton. The numeric value can be used to aid the pinpointing process. Refer to below picture. Pinpoint in two directions to ensure the exact location is found.
7. If the signal over ranges, use the “+” and “-” keys to bring the signal back into the range of the bar graph.
8. Alternatively pressing the auto sensitivity pushbutton will alter the gain automatically so that the bar graph is set to approximately 50%.

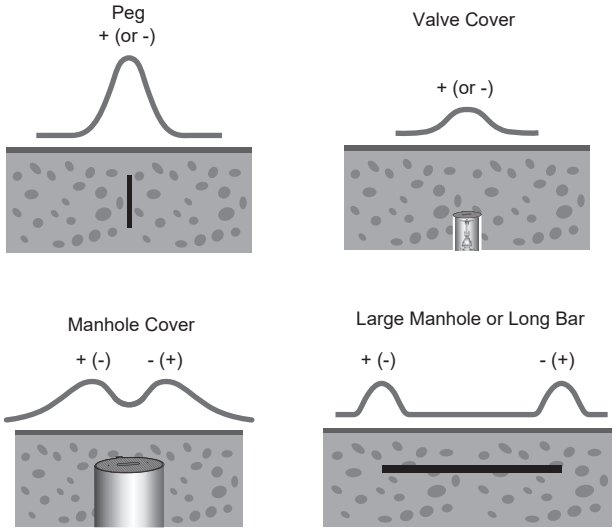
“Signatures” of Different Targets

The following figures illustrate typical VM-880 responses to common targets. With a little experimentation you will become familiar with the “profile” or “signature” of each object you are trying to locate.

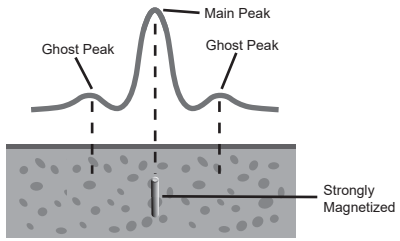
All magnetic fields have a positive or negative polarity. A long bar for instance will be positive one end and negative the other. Knowing the polarity of the magnetic field helps identify the shape and length of the object and helps distinguish it from other objects in the ground.

The polarity is indicated by the "+" or "-" icon. The polarity of the field depends on a number of factors. Magnets are polarized North and South. The polarization of the VM-880 detects depends on the way the magnet was inserted in the ground. Others are polarized by the earth's magnetic field.

The shape of response depends how big and how deep the object, larger objects will display a peak at the extremities of the object. These peaks will be opposite polarity. Smaller or deeper objects will have just one peak and may have a + or – polarity.

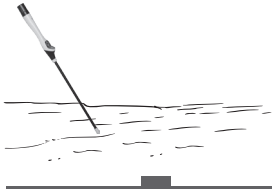


Very strong magnetic fields may have ghost signals either side of the main peak signal. Buried magnets, for instance may exhibit this effect.



Locating in Water

The VM-880 has a fully sealed antenna shaft. Therefore it is suitable for locating in water up to the end of this shaft.



Maintenance

The VM-880 is designed for rugged, outdoor use, but rough handling should be avoided.Keep the equipment dry, clean and free of grit. Store the VM-880 in its carrying case and in a cool, dry place. DO NOT expose to excessive temperatures.

Battery Replacement

The only maintenance requirement for Model VM-880 is to monitor the condition of the battery and replace the battery when necessary.

To replace the battery follow the steps below:

1. Have ready two 1.5V Alkaline AA (LR6) batteries.
2. Unscrew the end cap on the handle end of the VM-880.
3. Remove and replace both batteries.
4. Slide the battery holder back into the handle noting the correct polarity.
5. Replace end cap.

Service Center Information

If the equipment does not function properly, replace the batteries as described above. If the equipment still have malfunctions, contact one of the Vivax-Metrotech Customer Service departments, or call the factory for the nearest authorized Vivax-Metrotech repair station.

Disclaimer: Product and accessory specification and availability information is subject to change without prior notice.

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VIVAX METROTECH

VM-880 User Guide V1.6

VM-880 Introduction

The Vivax-Metrotech Model VM-880 locator is the latest in the generation of 880 series of highly sensitive and discriminating instruments designed to locate only buried magnetic (iron and steel) objects. It rejects those objects that are not magnetic, i.e. aluminum cans, bottle caps, etc. The "finely tuned" sensitivity of the VM-880 makes it possible to locate magnetic objects at greater depths.

The VM-880 is rugged, lightweight, water resistant and compact.

VM-880 Standard Equipment

Standard equipment is listed below and pictured as above.

- VM-880 Ferrous Metal Detector
- Carrying Case
- User Guide

Technical Specifications

Item	Parameter
Batteries	2 x AA (LR6)
Battery Life	Typically 28 hours
Control	4 pushbutton keypad (gain up, gain down, On/Off/speaker, auto gain/screen invert)
Display	Indicates signal level, battery condition, gain setting, magnetic field polarity, speaker volume and power signal proximity
Speaker	Frequency increases or decreases with gradient field intensity
Weight	1.54lbs (*0.7kg*)
Dimensions	43" x 2.5" x 2.6" (*1090mm x 88mm x 67mm*)
Temperature	Operating: 14º F to +122º F (*-10º C to +50º C*) Storage: -40º F to +140º F (*-40º C to +60º C*)
Construction	Carbon fiber reinforced antenna tube and high impact thermoplastic injection molded housing
Sensitivity	Typically detects small PK Nail to a depth of 6"(*15cm*)

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