

Magnastick Ferrous Metal Detector



Manual Part Number:
030 00106 00

800.851.7347
www.rycominstruments.com

 **RYCOM**[®]
instruments, inc.

Magnastick MSL Introduction

Congratulations on the purchase of your new Magnastick Locator. The MSL is specially designed to detect ferrous metal. The MSL is magnetometer that detects ferrous object, objects containing iron. This device may detect survey markers, steel & iron pipe, cub boxes, valve lids, septic tanks and manhole lids.

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WARRANTY - Three-year warranty from date of delivery against defects in material and workmanship (EXCEPT BATTERIES) on all instruments. This warranty is void if, after having received the instrument in good condition, it is subjected to abuse, unauthorized alteration or casual repair. We will repair or replace products that prove to be defective during warranty period. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WE ARE NOT LIABLE FOR CONSEQUENTIAL DAMAGES. Terms: Net 30 days, Missouri sales tax charged where applicable. Shipping & Delivery: All orders are FOB Raytown, MO. Specifications subject to change without prior notice.

Prepare for Use - Unpack your new MAGNASTICK Locator. Make sure there is no shipping damage. Locate the battery compartment on the top of the Receiver. Open the compartment by unscrewing the gray cap. Install the six Duracell® "AA" batteries as marked. Note: For longer battery life and reliable operation under adverse conditions, use only Duracell® alkaline batteries.

Factory Service - If your MAGNASTICK is not working properly, first call RYCOM Instruments, Inc. Support at 800-851-7347 for assistance. If the locator is in need of repair, RYCOM will provide instructions and a Return Material Authorization (RMA) for returning your locator to the service center. The instrument will be repaired and shipped back with an invoice or you will be advise if the instrument is non repairable. Note: There is a minimum charge for repair and handling.

Send it prepaid to:

RYCOM Instruments, inc.
Attn: Repair (include RMA #)
9351 East 59th Street
Raytown, MO 64133

Magnastick MSL Specifications

Power: 6 "AA" (9v total) batteries

Battery Life: ± 200 hours intermittent operation (alkaline batteries)

Audio: Waterproof mylar speaker

LCD Display : Numeric signal strength, +/- polarity, Bar-graph, and low battery indicator

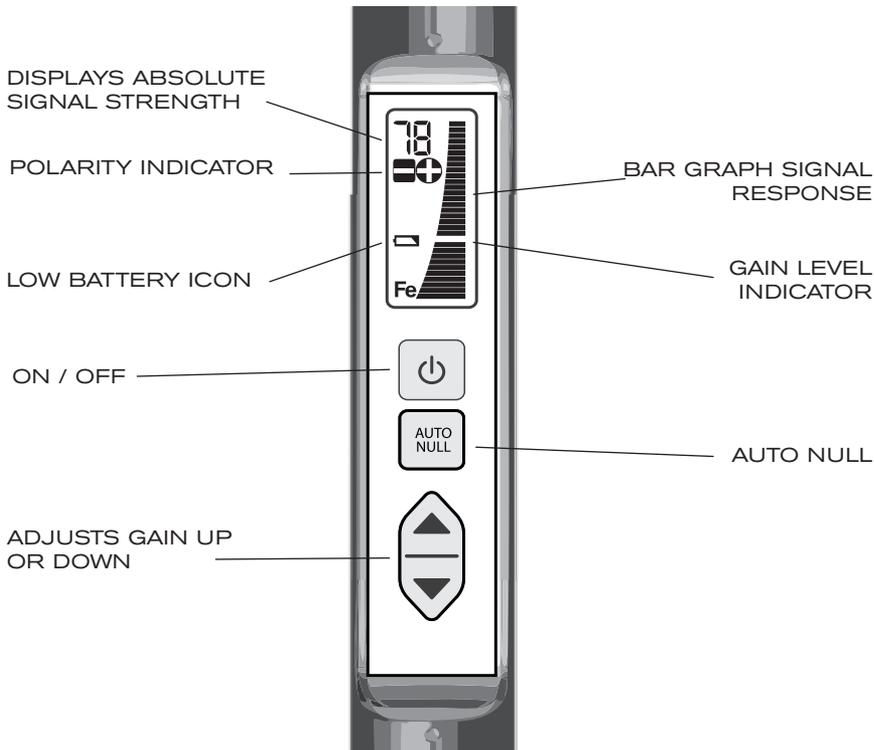
Weight: 1.7 lbs (0.77 kg) with batteries

Operating Temperature: -0° F to +120° F (-18° C to +49° C)

Length: 39.25" (99.7 cm)

Construction: Aluminum tube with recessed controls.

MSL Controls & Indicators



MSL Controls & Indicators

ON / OFF: Powers the unit on and off.

GAIN: Increase or decrease the gain level. Gain level displayed by the single bar on the bar graph.

AUTO NULL: Automatically nullifies unwanted magnetic field gradient. Used to cancel out small magnetic gradients. To reset, hold unit upside down and press AUTO NULL.

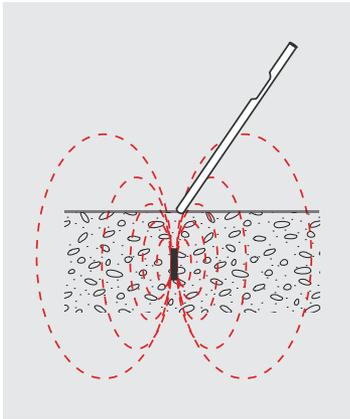
POLARITY: Indicates the fields polarity.

ABSOLUTE SIGNAL STRENGTH: Numerical Indication of signal level.

BAR GRAPH: Graphically indicates signal level. Single bar indicates gain setting.

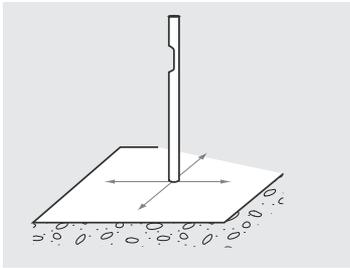
LOW BATTERY ICON: Indicates a low battery condition.

MSL Field Operation



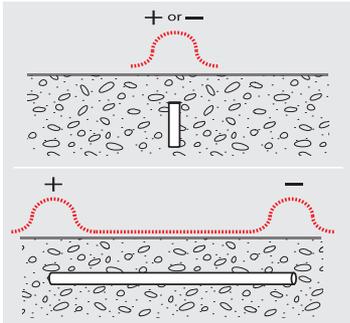
Searching for a Target

To search an area for a target hold the MSL at a comfortable angle (close to 45°) to the ground. Set the gain to a medium to medium-high level. Please note that the unit will detect interference from metallic items carried by the user. At a slow to normal walking pace sweep the unit from side to side. The locator responds to a magnetic field with a peaking indication, The audio indication, numeric signal strength and the bar graph will rise when closer to the target and fall as it moves away from the target. As the locator gets closer to a magnetic field the signal may become saturated. This is indicated by the bar graph being off scale and the audio tone reaching a maximum pitch. Adjust the gain down until the unit is no longer saturated. This may need to be repeat as the locator continues into a stronger magnetic field.



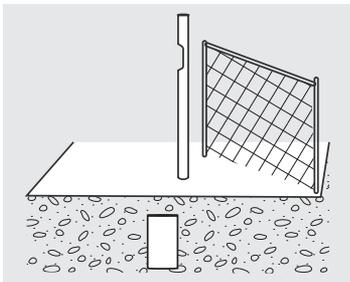
Pinpointing a Target

Once a target has been identified with the search method, the pinpoint method will allow for more accurate location. With the locator in a vertical position move the locator in a cross pattern. Gain to the lowest point that still defines the target and signal deflection is easily detected across the target. The audio response and graphical display will be at maximum when over the target.



Polarity

A target orientation and shape will effect the polarity reading. A survey spike, rebar, nail or any vertical ferrous object will show a single pole, either positive or negative. A pipe, spike, manhole lid or any horizontally positioned ferrous object will show a strong reading at either pole with little signal in between the poles. Polarity can often aid the user when identifying a target from non-targets as the polarity may flip from positive to negative.



Auto Null

Auto Null is a feature that allows the user to “re-calibrate” the magnetometer to the immediate environment. Pressing the AUTO NULL button while in a non-target field will nullify the field allowing the user to remove the unwanted magnetic field.

NOTE: To return the unit to normal settings/sensitivity, hold the unit upside down and press Auto Null.