Fisher Labs

M-101

Rebar Locator & Metal Probe

Operating Manual

FISHER RESEARCH LABORATORY

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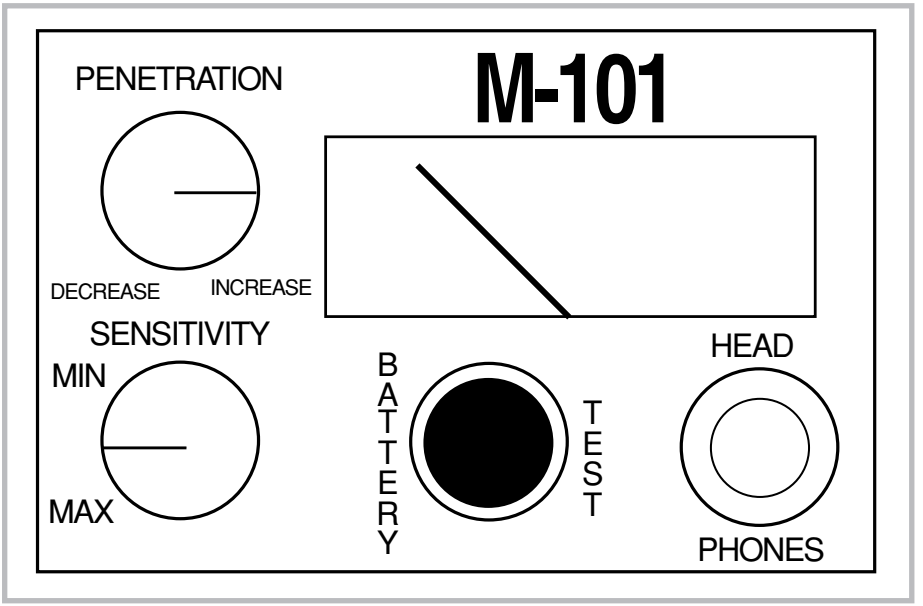
INTRODUCTION

The M-101 is a metal detector with a small search coil that provides a concentrated search signal. The M-101 will respond to all types of metal (rebar, wire mesh, metal conduit, metallic trash, metallic targets on the opposite side of surface to be scanned, etc.) which may be associated with the area that is to be searched. The M-101 will not respond to non-metallic targets such as plastic or fiberglass. The M-101 is not designed to be a wire or pipe tracer. Fisher Research manufactures other specific equipment for that purpose.

Description

The M-101 comes ready to use for searching in floors, walls, columns, and ceilings. The control housing is designed to be chest or belt mounted for ease of use and comfort.
A carrying bag is included in the package.

CONTROL PANEL



Sensitivity
This control turns the M-101 On & Off. It also permits a wide range of sensitivity to metal targets. MAXimum position is normally used in the initial scanning and locating operation. MINimum or reduced sensitivity is used to help pinpoint metal objects.

Penetration
Controls the depth of penetration. This knob is free spinning and does not have stops in either direction.

Meter
Gives a visual display of signal strength and Battery Test

Battery Test
Used to test the condition of the batteries in the M-101.

Battery Access
The M-101 is powered by two 9 volt batteries. Access to the batteries is on the back of the detector.

OPERATION

TEST BATTERIES

Turn the M-101 On (Sensitivity control knob). Depress the Battery Test button. A response of 80 or more on the meter indicates batteries are in an operable condition.

NOTE: Occasionally check the batteries during use, as weak batteries could lead to reduced signal depth.

SCANNING

1.

Turn the M-101 On (Sensitivity control knob) to the RED arrow. If there is a sound and meter reading, reduce (turn counter-clockwise) the Penetration control, or move search coil away from any nearby metal.

2.

Place search coil on the surface that is to be scanned. Continue to keep it away from any metal objects. Adjust the Penetration control until the meter reads 10. (To increase the meter reading, turn the Penetration control clockwise; to decrease the meter reading, turn the control-counter clockwise.)

3.

Scan the area to be searched. When a maximum signal is located, slowly reduce the Penetration control (turn counter-clockwise) to narrow the response area. This narrow response should be the center line of the target. It should be directly underneath the red line on the search coil. (Note: As you reduce the Penetration, be careful not to completely cancel out the target.)

4.

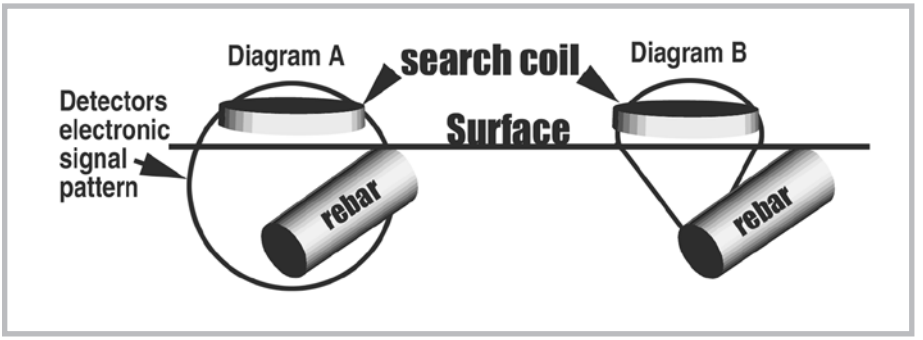
If you find that it is difficult to get a narrow response, it may be to your advantage to increase the distance from the search coil to the target. Use a clean spacer such as a piece of wood to elevate the coil. You may still need to adjust the Sensitivity to pinpoint the target.

PRINCIPLES OF OPERATION

When the unit is properly tuned, the M-101 will locate ½ inch (1.25 cm) diameter rebar 8 to 9 inches (20 to 23 cm) from the bottom of the search coil. A larger target can be located deeper, a smaller target shallower.

Detectors electronic signal pattern

With the M-101 initially tuned, the search pattern is wide and deep **(diagram A)** , and as the operator reduces the Sensitivity and Penetration, the search signal of the M-101 changes shape **(diagram B).** Thus, the idea for operation is to reduce the search field so that only a small portion of the signal is influenced by the metal target. Be aware that if the target is to close to the coil, it is very difficult to get a narrow response. This is when the use of a spacer will be necessary.



SPECIFICATIONS

Subject to improvement or modification without notice.

Operating Frequency of Search Coil: ..... 4.5 kHz

Sensitivity Adjustment. Range: 12:1

Output Indication:..... Meter - 1 milliamp, 1 - 100 linear scale

Speaker - 16 Ohm impedance

Headset (optional) - 8 Ohm impedance

Audio Frequency: ..... 450 Hz

Power Supply: ..... +/- 9 V, (2) 9V NEDA 1604

Coil Configuration:..... Double D

Weight: ..... 2.8 lbs (1.3 kg)

Dimensions:..... Control Box ..... 3 x 5 x 6 inches (8 x 12 x 16 cm)

Handle..... 0.75 x 23 inches (1.9 x 58.4 cm)

Shipping Weight: ..... 4 lbs (1.8 kg)

Shipping Dimensions:... 26.5 x 6.25 x 6.25 inches (67 x 16 x 16 cm)

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Fisher Research Laboratory does not warrant suitability to specific use. Fisher Research Laboratory shall in no event be liable for any direct, incidental, consequential or indirect damages.

QUALITY

Fisher detectors are renowned for their quality.
Each detector is hand crafted in the USA with pride

PERFORMANCE

The worldwide underground utility industry relys on Fisher.
Our instruments are durable, dependable, and locate deeper.

REPUTATION

Fisher produced the first patented metal detector in 1931. For over 70 years, the Fisher logo has been a mark of excellence.

2 - YEAR LIMITED WARRANTY

Fisher believes in the products we produce and backs this belief with a 2 year limited warranty.

Proof of purchase is required to make a claim under this warranty.

NOTE TO FOREIGN COUNTRY CUSTOMERS

This warranty may vary in other countries, check with your distributor for details.
Factory warranty follows the channel of distribution.
Warranty does not cover shipping costs.

SERVICE

Fisher is committed to providing you, our valued customer, with superior service. Each and every instrument is rigidly tested and carefully inspected during assembly and before shipment.
Should you have any questions or problems, contact:

FISHER RESEARCH LABORATORY

1465-H Henry Brennan,
El Paso, Texas 79936
Tel 915.225.0333 Fax 915.225.0336
www.fisherlab.com email:info@fisherlab.com