

FISHER RESEARCH LABS

M-101

Rebar Locator & Metal Probe

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

TestEquipmentDepot.com



Operating Manual

FISHER RESEARCH LABORATORY

CONTENTS

Introduction	pg. 3
Control Panel.....	pg. 4
Operation	pg. 5
Principles of Operation.....	pg. 6
Specifications	pg. 7

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.

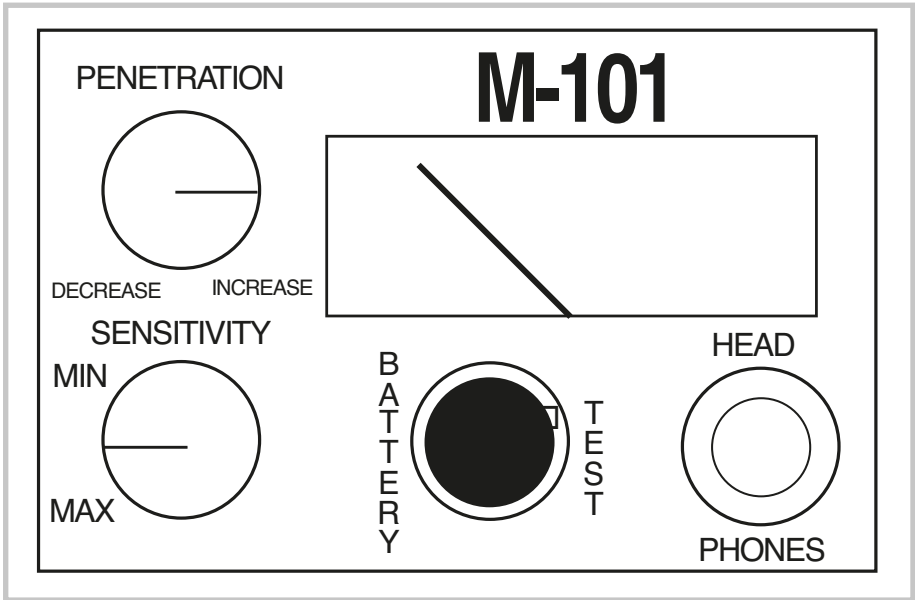
Description

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.

Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

TestEquipmentDepot.com

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.

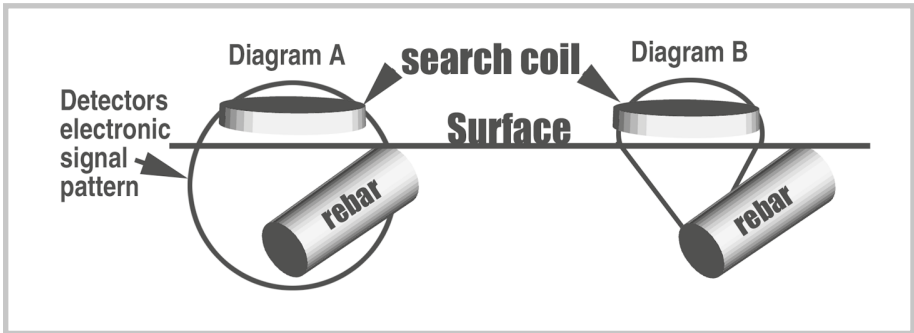
If you find that it is difficult to get a narrow response, it may be to your advantage to increase the distance from the search coil to the target. Use a clean spacer such as a piece of wood to elevate the coil. You may still need to adjust the Sensitivity to pinpoint the target.

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 too close to the coil, it is very difficult to get a narrow response. This is when the use of a spacer will be necessary.



Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

TestEquipmentDepot.com

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)

.....
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.



Test Equipment Depot - 800.517.8431 - 99 Washington Street Melrose, MA 02176

TestEquipmentDepot.com