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Data Sheet

RMD-1

Remote Metal Detector



- **Detects All Metals**
- **62 inch Deep x 52 inch Wide Detection Area**
- **Can Use Its Own Cable Or The ROV's Cable**
- **Corrosive Proof Materials**
- **2 Year Warranty**

System Information

- Max Detection area (standard coil) - 62" deep, 52" wide
- Input voltage - 9-36 vdc "downstairs" , 120 vac topside box
- Power consumption - 8 watts
- Output signals - meter, audio, analog, RS232 with GPS (4,800 or 9,600 baud)

Sensitivity (in water or air)

- Piece of eight - 10 inches
- Shotgun - 28 inches
- 4" diameter pipe - 34 inches
- One gallon can - 36 inches
- 2' x 4' sheet metal - 50 inches
- Maximum range - 62 inches



Dimensions and Weights

- Coil set - 10" x 16" x 5"H / 38 oz. (air) w/out mount 48 oz. (air) with mount or 28 oz. (water)
- U/W housing & electronics - 9 1/2"L x 2 1/2"D / 1.4 lbs. (air) 4 oz. positive (water)
- Electronics alone - 1 7/8" x 7" x 1 1/2"H - 5 oz.
- Surface control box - 14"L x 10"W x 6"H / 7.6 lbs.
- Cable - 1/4"D x 150'-1,000' / 4-25 lbs.
- Shipping box - 27"L x 23"D x 12"H - 25 lbs.

Options

- 9 to 18 vdc input power for topside box.
- 220 vac to 120 vac transformer (for powering control box from 220 VAC).
- Analog output (0-5 vdc) for topside box or "downstairs" elec-tronics unit.
- RS232 Output at "downstairs" electronics unit and RS232 input to topside control box (used if info is multiplexed in cable).
- RS232 Output at topside box with boat's GPS.
- RS232 is 4800 baud, 9600 baud is available.
- Coil set rated for "full ocean depth".

The RMD-1 is a high performance Pulse Induction metal detector which can be attached to almost any ROV or towed underwater system. Pulse induction technology allows the RMD-1 to detect both ferrous and non-ferrous metal objects under the ocean floor while ignoring mineralization in the salt water and seabed. The ROV metal detector locates and tracks underwater pipelines, finds missing tools and dredge parts, locates weapons and unexploded ordnance, and finds lost treasure.

The system employs two coils molded into rugged ABS shells and firmly attached to the underwater vehicle with a corrosive-proof tubular PVC frame. The frame provides a sturdy mount and keeps the coils far enough away from the ROV so as not to be affected by the metal parts. The oval coils produce a detection envelope which extends more than 5 feet into the bottom. The sleek, low profile coil design minimizes drag and weight on the ROV.

When the coil senses metal it sends a signal to the RMD-1 "downstairs" electronics unit attached to the underwater vehicle. This downstairs electronics unit can produce RS232 output , 0-5 VDC output, or a proprietary signal used by the JWF topside control/readout unit. The output from the downstairs electronics unit can be transmitted through the ROV's umbilical or a separate cable.

The standard RMD-1 has a topside Control Box which displays the readout with both a meter and audio alarm. The closer the proximity of the metal target, the stronger the reading. The top-side unit can use the underwater vehicle's umbilical cable to supply voltage to the downstairs electronics unit and to receive the output signal from the downstairs unit. The RMD-1 can be powered from 120 vac (standard) or 220 vac, or 9 - 18 vdc.