

Standard Dipmeter Operating Manual

for models

**DM2.1-30 / DM2.1-60 / DM2.1-100
DM2.1-200 / DM2.1-300 / DM2.1-400
DM2.1-500**

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1. General Operational Features

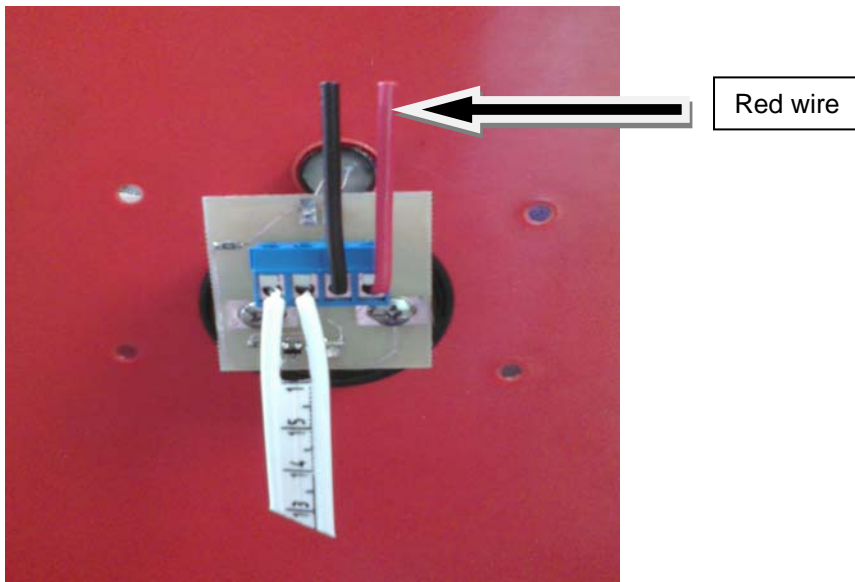
1.1 Reel Lock

To lock the reel turn the plastic knob on the rear clockwise until locked.

1.2 Equipment Check

- Test tape and probe by shorting out the centre conductor and probe body on the stud on the back axle of the unit. The buzzer and light should activate. If not, replace the battery (One 9 v) by removing the front reel flange to gain access to the battery holder. Remove and replace the battery, disposing of the old battery in the appropriate manner. Make sure the reel flange is correctly positioned on the hub during reassembly.

If the wires inside the panel become disconnected replace as shown below. The red wire is on the right of the pair that go to the battery holder.



- Test the unit in tap water before going out to the field. **DO NOT** use distilled or deionised water.

1.3 Use in the Field *

- Reel the tape down the well carefully, avoiding the edge of the casing. Hang the unit on the casing where possible and run the tape over the frame leg to avoid cuts and nicks.
- When the unit sounds, carefully measure the depth to water from your reference point by slowly lowering and raising the probe to the air/water interface. Raise the probe, shake off the water and repeat the measurement.
- The probe is rated to full depth and can be used to measure depth to bottom of well. Reel the tape until the probe touches bottom and the tape becomes slack. **DO NOT** let the probe fall under gravity or it will be damaged when it hits the bottom of the well. **DO NOT** use the unit to measure sand backfill as the tape and probe may get "locked" in the backfill.
- Wind the tape back onto the reel, removing any excess moisture and dirt.

2. Cleaning the Dipmeter

- Always clean the meter after use in the field to maintain optimal performance and extend the life of the unit.
- Unwind the tape and probe and wash with a mild detergent or soapy water. Rinse thoroughly with water afterwards, wipe, dry and rewind onto the reel.
- Wash reel if necessary. The reel may be cleaned with detergent/soapy water. Rinse well with water and let dry before putting the panel back in. **DO NOT** use abrasives, partially halogenated hydrocarbons or ketones to clean the reel or tape.

3. Trouble Shooting

To test the system

Hold the probe centre pin against the stud on the back of the reel axle at the same time touch the probe body against the screw on the frame. The buzzer will sound if the system is ok.

No Sound when the unit is tested

- Remove front reel flange and replace battery if low. If unit still does not sound, with front reel flange still removed, check all connections.
- Check probe conductor to make sure it is clean and not crusted with mineral deposits. Check tape/probe connection for any breaks.

Continuous Sound when the unit is turned on or probe removed from water

- Make sure probe conductor tip is clean.
- Check for excess moisture on the back of the electronic panel. If present leave front flange off to dry naturally.
- Check probe/tape connection and tape for any breaks or leaks where water might get in.

4. Precautions

- Avoid sharp edged casing.
- Avoid entanglement with other equipment in boreholes and wells.
- **DO NOT** use as guide to backfilling with sand etc., Instrument may get locked in sand.
- Rewind tape onto reel after each use.
- The meter may be used outdoors; however, it should not be used in positions where it may be subjected to long periods of inclement weather without further protection.

Warranty is conditional upon adherence to these guide lines.

5. Technical Specification

Physical							
Power source	9V Battery						
Tape length	According to model selected: 30m, 60m, 100m						
Operating temperature	Reel: 100 °C Probe: 150 °c						
Reel seal	Silicone and epoxy resin						
Dimensions and weight							
Length	30M	60M	100M	200M	300M	400M	500M
Height	348mm	348mm	348mm	500mm	500mm	500mm	500mm
Width	270mm	270mm	270mm	405mm	405mm	405mm	405mm
Depth	200mm	200mm	200mm	230mm	230mm	230mm	230mm
Weight	4Kg	6Kg	7Kg	10Kg	13Kg	15Kg	17Kg
Probe diameter	16mm						
Probe Length	190mm						

Materials of Manufacture	
Reel	Nylon disc, hub and electronic panel
Main bearing	Delrin
Frame	Polyurethane powder coated mild steel
Fitting	Stainless steel (where possible)
Probe	Stainless steel and Teflon®
Electronic	Epoxy Coated
Tape	Linear medium density polyethylene, with two 7-strand stainless steel conductors with Kevlar reinforcement Scale printed in black; unitary numbers in red Graduations: Metres, centimetres, millimetres Unitary metres in red, other markings in black

6. WEEE Compliance

The wheelie bin symbol displayed on equipment supplied by Geotechnical Instruments signifies that the apparatus must not be disposed of through the normal municipal waste stream but through a registered recycling scheme.

The Waste Electrical and Electronic Equipment directive (WEEE) makes producers responsible from July 1st 2007 in meeting their obligations, with the fundamental aim of reducing the environmental impact of electrical and electronic equipment at the end of its life.

Geotechnical is now registered with the Environmental Agency as a producer and has joined a recycling scheme provider who will manage and report on our electrical waste on the company's behalf.

Our Producer Registration Number is WEE/GB0052TQ

When your instrument is at the end of its life, please contact the Geotechnical Instruments sales team who will advise you on the next step in order to help us meet our WEEE obligations.

