

# Geotech

## DIPMETER



### OPERATING MANUAL



## Operating Manual

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## Operating Manual

### MANUAL GUIDELINES

#### Introduction

This manual shows you how to use QED's dipmeter, this includes the following models: DM2.1-30, DM2.1-60 and DM2.1-100.

It also shows you how to troubleshoot the meter, in case you have any issues, and includes the declaration of conformity.

#### Hazard warnings and safety symbols



Information in this manual that may affect the safety of users and others will be placed in a box identical to this one.

#### Notes

Important/useful information and instructions are shown clearly throughout the manual in a note format. For example:

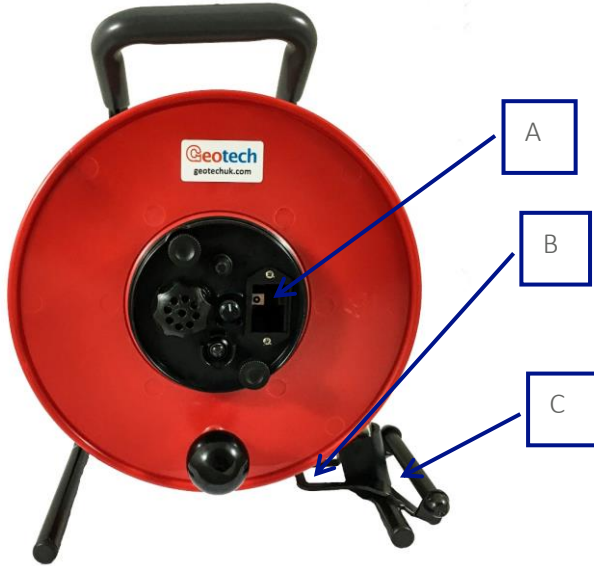
Note: For further information please contact Technical Support at QED on +44(0)333 800 0088 or email [technical@qedenv.co.uk](mailto:technical@qedenv.co.uk).

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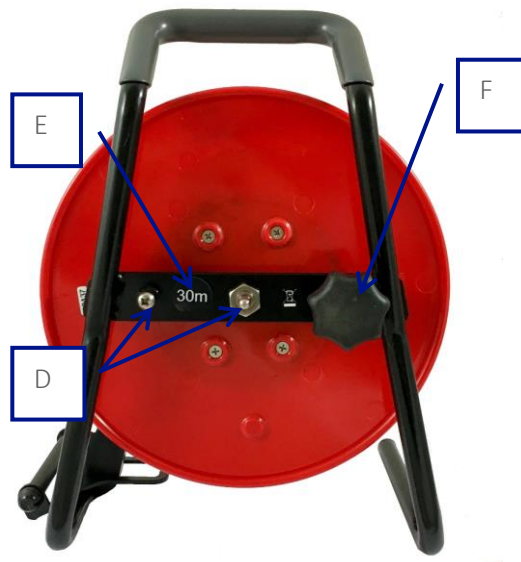
## Operating Manual

### GENERAL OPERATIONAL FEATURES

FRONT



REAR



FRONT FASCIA



- |   |                          |   |                        |
|---|--------------------------|---|------------------------|
| A | Battery compartment      | F | Brake                  |
| B | Probe                    | G | Test button            |
| C | Tape guide               | H | Sensitivity knob       |
| D | Instrument test function | I | Fascia securing screws |
| E | Maximum depth            |   |                        |

Note: You must ensure the Fascia screws (annontation I) are tight during use.

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### Operational notes

#### Reel Lock

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



### 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 9V) by:

- 1) Removing the battery compartment on the front of the instrument (see annotation A on [General Operating Features](#)).
- 2) Remove and replace the battery (disposing of the old battery in the appropriate manner)
- 3) Re-insert the battery compartment.

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

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### Use in the Field

- Lower the tape down the well carefully, avoiding the edge of the well casing. Hang the unit on the casing, where possible, and run the tape over the tape guide to avoid cuts and nicks to the tape.
- 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 the bottom of well. Reel the tape until the probe touches the 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.

### 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. **DO NOT** use abrasives, partially halogenated hydrocarbons or ketones to clean the reel or tape.

### Troubleshooting

#### To test the system

#### No sound when the unit is tested

- Remove the battery compartment and replace battery if low.
- Check probe conductor to make sure it is clean and not crusted with mineral deposits. Check tape/probe connection for any breaks.
- Make sure the fascia securing screws are tight.

#### Continuous sound when the unit's probe is removed from water

- Make sure probe conductor tip is clean.
- Check for excess moisture on the back of the electronic panel.
- Check probe/tape connection and tape for any breaks or leaks where water might get in.

### 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.

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- 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.

Note: Warranty is conditional upon adherence to these guidelines.

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### TECHNICAL SPECIFICATION

Physical			
Power source	9V Battery		
Tape length	According to model selected: 30m, 60m, 100m		
Operating temperature	Reel: 100 °C (max) Probe: 150 °C(max)		
Reel seal	Silicone and epoxy resin		
Dimensions and weight			
Length	30m	60m	100m
Height	348mm	348mm	348mm
Width	270mm	270mm	270mm
Depth	200mm	200mm	200mm
Weight	4Kg	6Kg	7Kg
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		



### EU DECLARATION OF CONFORMITY



## EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer:

QED Environmental Systems  
Cyan Park – Unit 3  
Jimmy Hill Way  
Coventry  
CV2 4QP  
UNITED KINGDOM

**Product:** Dipmeter DM2.1-30, DM2.1-60, DM2.1-100

**Type of equipment:** Portable water level measuring instrument with various lengths of tape.



The Dipmeters described above are in conformity with the relevant Union harmonisation legislation:

2014/30/EU: Electromagnetic capability (EMC)

- IEC 61326-1:2012 / EN 61326-1:2013

2011/65/EU: Restriction of the use of hazardous substances in electrical and electronic equipment (RoHS)

Signed for and on behalf of:

**Name:** Mr. Craig Millar  
**Position:** Engineering Manager  
**Done at:** QED Environmental Systems  
**On:** 28th August 2018

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### WEEE COMPLIANCE

The wheelie bin symbol displayed on equipment supplied by QED Environmental Systems Limited 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 1<sup>st</sup> 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.

QED 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.

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.

