

WATER LEVEL METER

WM-30

WM-50

WM-100

WM-150

WM-200

H2O
TOOLS



Thank you for choosing The H2O Tools Water Level Meter

Our manual was written to provide relevant information and to guide you in best practice when using the Water Level Meter in order for you to gain the most from our product.

Please read this manual thoroughly before using the Water Level Meter to help avoid any problems and keep it handy when using the tool.

H2O Tools – Water Level Meter

Water Level Meter is used to detect water levels in boreholes, standpipes, wells, etc.

The Water Level Meter can measure the depth of water in boreholes, standpipes, wells, etc. The meter comprises of a metal probe fitted to a flexible cable which is wound on to a portable hand reel containing an electronic switched circuit, visual indicators and batteries. The handle can be easily detached and replaced with a wignut and special nut driver socket can be used with any battery power drill, to speed up the winding and unwinding if required.

The Water Level Meter is simple to use and is portable which allows it to be used easily at many locations. The flexible cable allows the probe to be easily dropped inside boreholes, standpipes, wells, etc. and removed without any resistance. The Flex wire is high strength and stretch resistant and designed not to stick to wet surfaces. Depth markings are permanently attached and protected with special tubing on the wire.

The Water Level Meter has a magnetic base that allows unit to be attached to metal section of boreholes, standpipes, wells, etc., which can prevent bending and provides better working ergonomics.

The Water Level Meter has 3 versions: (WM-30) 30 ft, (WM-50) 50 ft and (WM-100) 100 ft measuring depths. Units come with pre-installed (2) 9 Volt batteries, wignut handle replacement, power drill nut driver attachment and a carry bag.

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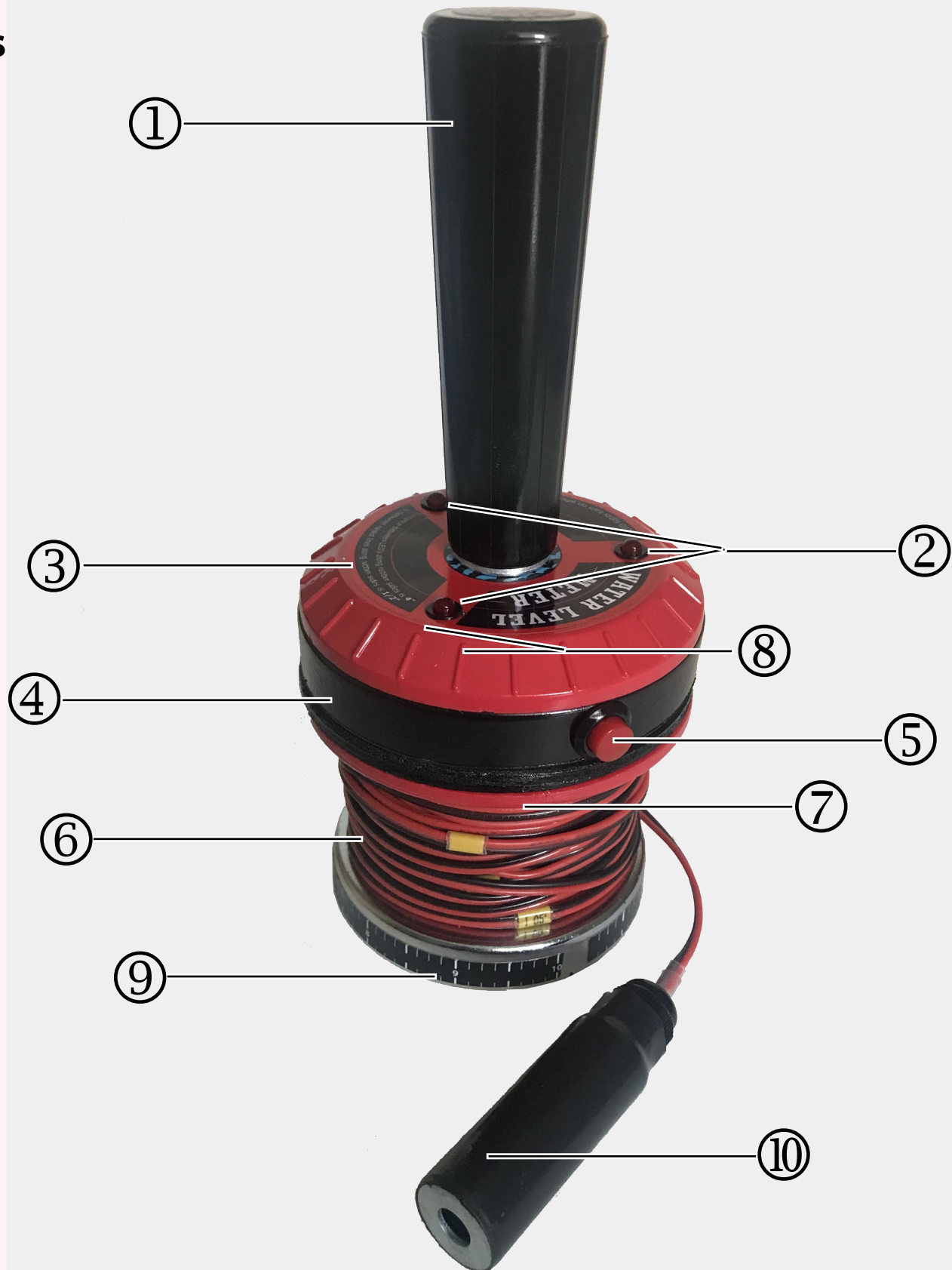
System

Description

Features & Benifits

- Flexible tape/cable for easy winding and unwinding, even in cold temperatures
- Waterproof design
- Permanent depth markings with extra tubing protection
- Strong 80lb base magnet allows it be placed at any angle of metal section of borehole, well or standipe etc.
- 3 bright LED signals, that can be view at any angle even in bright sunlight up to 20 ft
- (2) 9 volt batteries power the tool providing maximum usage between battery changes
- Lightweight and portble
- Ergonomically designed for ease of use
- Probe can quickly and easily be attached to magnetic base while not in use or can hang from handle prior to use
- Magnetic base allows it to be fastened on metal panel of work van or any metal surface for quick and easy access
- Tape range, 30ft, 50ft or 100ft
- On/ Off switch conserves battery life
- Power drill nut driver attachement can be used to speed up the winding and unwinding of tape/cable and prevent fatigue

Compenents



① Handle

② 3 LED's

③ Top cap

④ Rubber gasket

⑤ On Off button

⑥ Flex measure wire

⑦ Distance ft. marker

⑧ 1/2" measure guage

⑨ Magnet holder & Ruler

⑩ Sensor Head

Operation

features and benefits

The Water Level Meter is used to measure the standing water level inside a dry barrel hydrant. The Water Level Meter can be used at any angle and can be easily attached to any well, borehole, standpipe etc. that has a metal surface.

Each Water Level Meter is comprised of a metal probe fitted to a flexible cable wire tape that is wound on to a hand-held reel with an ergonomical handle. The cable is connected to an electronic circuit, 3 LED (light) signal indicator and (2) 9 volt batteries and an On / Off switch.

The sensor probe incorporates an insulated gap which acts as a switch, the circuit being completed when contact is made with the water.

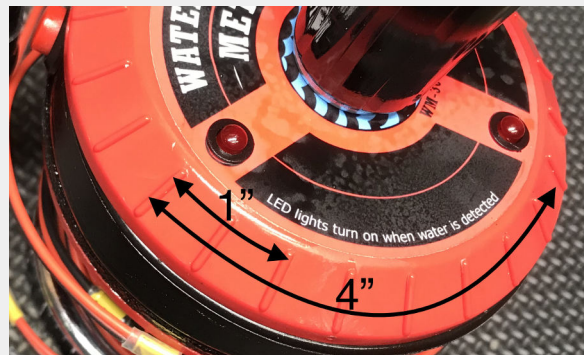
The cable consists of a non-stretch flexible wire/tape with copper conductors marked in one foot intervals. Measurements can be done to 1/8" accuracy using the ruler on the magnet base or 1/2" accuracy using the caps raised lines/notches.

The probe is lowered down the borehole, standpipe, well, etc. When it makes contact with water, the 3 LED's come on (located at the top of the tool). A reading can then be taken from the measuring cable at the port level to record the depth.

Ensure the unit is turned off to conserve battery life.

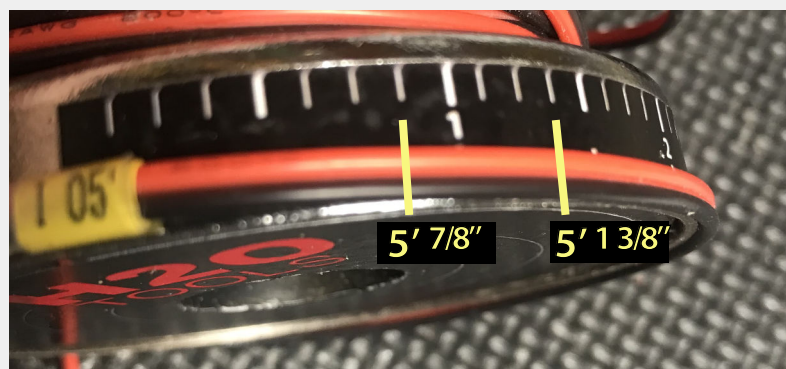
Measuring the depth to the closest 1/2"

- Use the cap's 1/2" notched lines as a guide
- Place the wire along rubber sides and count notches
- Example: 2 notches equal 1" - 6 notches equal 3"
- Also, the distance between LED's along rubber sides is 4" (8 notches)



Measuring the depth to the closest 1/8"

- Use the ruler markings on the magnetic base for more accuracy once the closest footage distance is noted.
- Place wire along the ruler, aligning the closest ft marker of the water depth to the zero point of ruler then add the distances from there, using the ruler
- Image below shows examples



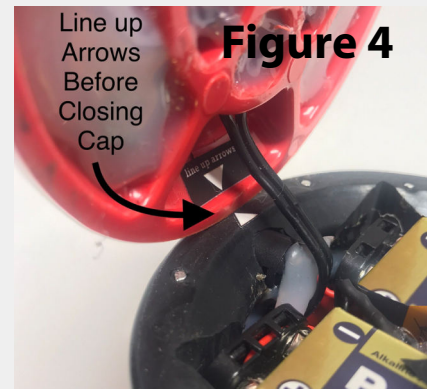
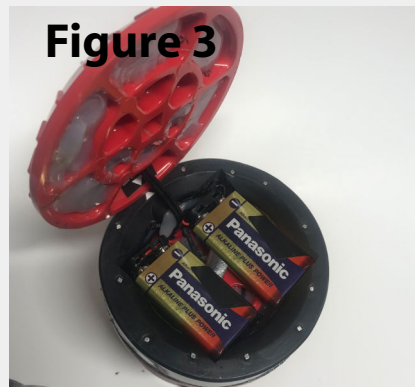
- Battery Replacement

- Cleaning

- Nut Driver Install

9 Volt Battery Replacement

1. To replace the 2 batteries, unscrew the handle (Figure 1)
2. Gently lift the top cap from the edge opposite the on/off button (Figure 2)
3. Allow the cap to be held open by the wire (Figure 3)
4. Carefully replace the 2 batteries not to jam or pull on any wires
5. Line up arrows on caps before closing (Figure 4)
6. Gently fold down top lid of unit making sure no wires are trapped when cap is lowered
7. Screw handle back on to bolt



Cleaning the Conductive Contact

The conductive contact inside the probe should be periodically cleaned with a non-abrasive cleaner such as isopropyl alcohol or a phosphate free type cleaner. To clean the conductivity contact, place a small amount of the cleaner on a cotton swab and gently rub (don't use too much force) the conductivity contacts to remove all foreign material. Repeat the process until all foreign matter has been removed.

Installing Drill Nut driver attachment

We recommend removing handles and replacing it with wingnut provided. Take the nut driver and insert it carefully on bottom of magnetic bases nut. There is a strong magnetic force that will hold the nut driver attachment to the base. Attach the other end to your drill and set it to the slowest speed to unwind and wind the water level sensor at allow the most control of the operation.



Troubleshooting

No Signal when unit is turned on and probe is in water.

- The battery is discharged. Check the battery.
(Section 5: Battery Replacement)
- The circuit is malfunctioning. Contact H2O Tools.

No Indication of water.

- The conductive probe contacts are dirty, clean the contact.
(section 5: Cleaning the conductive contact)
- There is an open connection in the cable. Replace the cable and or the probe.
- The circuit is malfunctioning. Contact H2O Tools.

The signal LED's are intermittent.

- There is an open connection in the cable. Replace the cable or probe.
- There is a loose connection in the circuit or the probe.
Repair the connection.

The signal LED's are continuously.

- The Conductive contact is dirty (causing bridging).
Clean the contacts. (section 5: Cleaning the conductive contact)
- There is a short in the cable or probe. Replace the cable or probe.
- The circuit is malfunctioning. Contact H2O Tools.

The signal LED's stay dim after probe is withdrawn from water.

- When using the unit in areas of hard water, the LED's may continue to respond after the probe is withdrawn from the water. When this happens, the LED's will stay on faintly and not on full brightness. Dry out the probe contacts or blow out the electrode.

Specifications & Accesories

	WATER LEVEL METER WM-30	WATER LEVEL METER WM-50	WATER LEVEL METER WM-100
Weight	1036 gm	1112 gm	1279 gm
Dimensions	208mm X95mm X95mm	213mm X95mm X95mm	250mm X95mm X95mm
Measuring tape lengths	30 feet	50 feet	100 feet
Colour coded wire	×	×	×
Power Supply	2 x 9 Volt Batteries	2 x 9 Volt Batteries	2 x 9 Volt Batteries
Measuring tape	Flex Silicone with copper	Flex Silicone with copper	Flex Silicone with copper
Measuring Accuracy	1/8 Inch	1/8 Inch	1/8 Inch
Marked Measurements	Marked per foot	Marked per foot	Marked per foot
Probe Dimensions (LxWXH)	20mm x 20mm x 70mm	20mm x 20mm x 70mm	20mm x 20mm x 70mm
On/Off button	✓	✓	✓
3 LED Visual Indicators	✓	✓	✓
Drill Attachment (nut driver)	✓	✓	✓
Wingnut Handle Replacement	✓	✓	✓
Batteries Included	✓	✓	✓
Magnetic Base	80 lb Holding Capacity	80 lb Holding Capacity	80 lb Holding Capacity
Waterproof	✓	✓	✓
Operating Temperature	-18°C to 55°C (0°F to 130°F)	-18°C to 55°C (0°F to 130°F)	-18°C to 55°C (0°F to 130°F)

(there may be small variatiions to specifications)

Power Supply:

2 x 9 Volt Batteries (included)

Measuring Cacle/Wire:

Flex Silicone with Copper

Button:

On/ Off Button

Visual Indicators:

3 LED's

Magnetic Base:

80 lb Holding Capacity

Operating Envirnoment:

Rated for outdoor use and is Water-proof

Battery Life:

20 hours continuously detecting

1 year on, but not detecting

Operating Tempurature:

-18°C to 55°C (0°F to 130°F)

[can be used periodically at lower tempratures, if stored in warmer environment when not in use]

Response time:

<100 milliseconds

Accesories:

Carry Bag

Drill attachment (nut driver)

Wignut (handle replacement when using drill)

* Revolving Ball Handle (WM-150, WM-200)

WATER LEVEL METER WM-150	WATER LEVEL METER WM-200
1425 gm	1595 gm
275mm X95mm X95mm	300mm X95mm X95mm
150 feet	200 feet
×	×
2 x 9 Volt Batteries	2 x 9 Volt Batteries
Flex Silicone with copper	Flex Silicone with copper
1/8 Inch	1/8 Inch
Marked per foot	Marked per foot
20mm x 20mm x 70mm	20mm x 20mm x 70mm
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
80 lb Holding Capacity	80 lb Holding Capacity
✓	✓
-18°C to 55°C (0°F to 130°F)	-18°C to 55°C (0°F to 130°F)



Warranty

Warranty

For a period of one (1) year from date of first sale, product is warranted to be free from defects in materials and workmanship. H2O Tools agrees to repair or replace, at H2O Tools option, the portion proving defective, or at our option to refund the purchase price thereof. H2O Tools will have no warranty obligation if the product is subjected to abnormal operating conditions, accident, abuse, misuse, unauthorized modification, alteration, repair, or replacement of wear parts. User assumes all other risk, if any, including the risk of injury, loss, or damage, direct or consequential, arising out of the use, misuse, or inability to use this product. User agrees to use, maintain and install product in accordance with recommendations and instructions. User is responsible for transportation charges connected to the repair or replacement of product under this warranty

Equipment Return Policy

Equipment Return Policy A Return Material Authorization number (RMA #) is required prior to return of any equipment to our facilities, please email us. An RMA # will be issued upon receipt of your request to return equipment, which should include reasons for the return. Your return shipment to us must have this RMA # clearly marked on the outside of the package. Proof of date of purchase is required for processing of all warranty requests. This policy applies to both equipment sales and repair orders.

FOR A RETURN MATERIAL AUTHORIZATION, PLEASE EMAIL US
at H2OToolsCanada@gmail.com.

Model Number: _____

Serial Number: _____

Date of Purchase: _____

Serial Number

The serial number for each tool is located inside cap near the batteries.
(see Figure 3 , Page 8)

Equipment Decontamination

Prior to return, all equipment must be thoroughly cleaned and decontaminated. Please make note on RMA form, the use of equipment, contaminants equipment was exposed to, and decontamination solutions/methods used. H2O Tools reserves the right to refuse any equipment not properly decontaminated. H2O Tools may also choose to decontaminate the equipment for a fee, which will be applied to the repair order invoice.

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