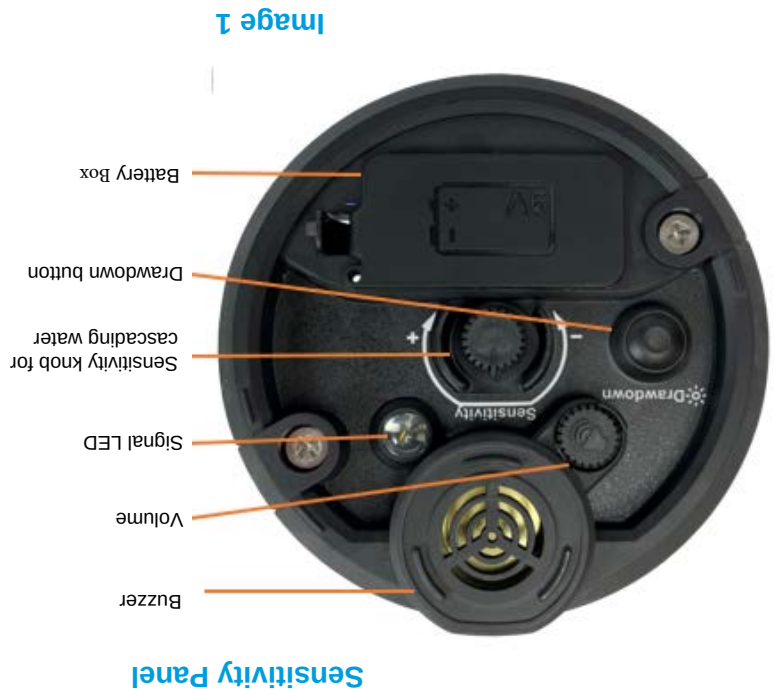
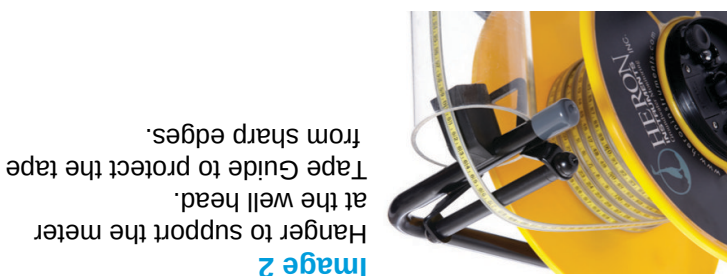


Operating and Maintenance Instructions Inside



PART NUMBER	ITEM
1221-2	Sensitivity Electronic Panel
1209-2	Probe
1108-2	Link Kit
1675-2	Ground Lead - Standard
1676-2	Ground Lead - Large Frame



HERON INSTRUMENTS INC

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www.heroninstruments.com
 for more information on the complete product line.

Certifications

c-QPS-us LR3030
 Class I, Div 1, Groups CD T3;
 Ex ia IIB T3 Ga
 Class I, Zone 0, AEx ia IIB T3 Ga
 IECEx QPS 23.0008X
 Ex ia IIB T3 Ga
 QPS23ATEX5003X
 CE 2900 Ex II 1G
 3CT 23UKEX1002X
 UK 2900 Ex II 1G
 T_{Amb} (Probe) = -45°C to +135°C
 T_{Amb} (Reel) = -45°C to +55°C



Made in Canada



dipper-T2 Static & Drawdown Levels



Operating and Maintenance Instructions



dipper-T2 Water Level Meter Instructions

General Care of the dipper-T2

The **dipper-T2** is a high quality, robust, premium water level meter, capable of **2 Functions** - **static** and **Drawdown** levels. The **dipper-T2** will provide many years of reliable service when these recommendations are followed:

- Avoid sharp edged casing, use the tape guide on the unit to prevent damage to the tape.
- Take care to avoid the tape becoming entangled with other equipment in boreholes or wells, use stilling pipes when possible.
- Neatly rewind and clean the tape after each use. Refer to: Cleaning the **dipper-T2**

DO NOT use the **dipper-T2** as a guide to backfilling, bentonite sealing or sand packing in wells. This type of material falls through the water column at a much slower rate than the **dipper-T2** probe and can result in a trapped tape and probe.

DO NOT allow the tape to "freefall" down the well, it may become caught in other equipment in the well.

Warranty is conditional upon adherence to these guidelines.

Equipment Check

Before taking the unit into the field, carry out these simple tests with the sensitivity knob turned fully clockwise (Image 1).

- First time use, remove the pull tab on the battery.
- Check the condition of battery and circuit by pressing the Drawdown button, turning the unit from static mode (NO sound/light) to Drawdown mode (sound/light). The unit will sound and the indicator light will come on when the probe is in air. If the unit does not respond, replace battery and try again.
- Test the entire unit by placing the probe in tap water. If the **dipper-T2** is working properly, the unit will sound as above. **DO NOT** test in distilled water.
- Adjust the blue indicator on the tape to the caution level desired.

Use in the Field

NOTE: Ex Products can only be used for application intended, DO NOT MISUSE. Before using the dipper-T2 ensure the ground lead is connected to a grounding source

The **dipper-T2** operates in two modes, **static** and **Drawdown**. In **static** mode, the unit is silent until the probe touches the water. In **Drawdown** mode, the unit sounds and the light remains on when the probe is **not** in water.

NOTE: There is no on/off switch on the instrument. If using in **Drawdown** mode, return the unit to **static** mode to turn indicators off.

The **dipper-T2** consumes no power in **static** mode when probe is not in water.

- To avoid damaging the tape on the side of the casing, hang the **dipper-T2** on the casing and run the tape over the guide on the frame leg (see Image 2). If you cannot hang the unit, hold the **dipper-T2** away from the side of the casing and guide the tape down the center of the well.
- The **sensitivity knob** (see Image 1) is used to maintain a sharp distinctive signal by adjusting the unit's response to varying conductivities. Turn the knob clockwise for low conductivity (pure) water and counter-clockwise for high conductivity (dissolved minerals) water. In wells that have cascading water that may give false readings, reduce the sensitivity by turning the sensitivity knob counter-clockwise.
- Reel the tape down the well carefully, avoiding the edge of the casing.

FOR STATIC MODE

- When the unit sounds (in **static** mode) carefully measure the depth to water indicated on the tape from roller guide
- Raise and lower the probe in and out of the water to ensure a consistent result.

FOR DRAWDOWN MODE

- When the probe is in water at the desired **Drawdown** level push the **Drawdown** button to **Drawdown** mode (see Image 1), the unit will now be silent in water and start pumping the water out. Once the water goes past the tip of the probe, the unit will sound in air.
- Turn off pump and put the **dipper-T2** back in **static** mode.

Caution: Note the blue indicator on the tape to avoid injury from the probe coming out of the well too quickly.

Removing the Probe

To remove the probe, you simply unscrew the probe from the link. When replacing the probe, make sure the connections are tight.

Cleaning the dipper-T2

Always clean the **dipper-T2** after use in the field to maintain optimal performance and extend the life of the unit. The **dipper-T2** may be cleaned with any **mild** household dishwashing detergent and rinsed with water. If the electronic panel is removed first, the reel and tape can be washed gently with a power washer. Remove the screws (See Image 1) to release the panel (take care not to lose the screws).

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

Troubleshooting the dipper-T2

- Q. What if there is no sound or indicator light when the unit is tested?**
A. Refer to Equipment Check and follow procedures. Change the battery if necessary.
- Q. Why doesn't the unit sound when testing the probe?**
A. Make sure there are no cuts or nicks in the tape
- Q. If I check the above and the unit still doesn't sound.**
A. Loosen the screws from the electronic panel and take the panel off the unit. Make sure tape connectors are connected to the back of the electronic panel.
- Q. Why would the instrument continue to sound when not in water?**
A. The unit may be in Drawdown mode. Press the Drawdown button (see Image 1), putting the unit into static mode (silent in air). Dry the probe with a clean cloth.

Contact Heron Instruments or your Heron Distributor if you cannot isolate the problem.

Warranty (2 years, 1 year probe)*

Heron Instruments Inc. warrants to repair or replace any defective equipment or part upon inspection by a **Heron** service technician. Warranty will be determined to our satisfaction to have a defect in workmanship or original material. The customer is responsible for all shipping fees to return the item to **Heron**.

This warranty shall not apply to damage of equipment caused by improper installation, usage, storage, alteration or inadequate care.

In no event shall **Heron** be held liable for any direct, indirect or consequential damages, abuse, acts of third parties (rental equipment), environmental conditions or expenses which may arise in connection with such defective equipment.

Heron Instruments Warranty coverage does not extend to the following:

- Tape, bag or batteries used with the product.
- Products used as rental equipment.
- Products contaminated by materials which are known to be hazardous and have rendered the unit unserviceable.
- Parts failure due to neglect in cleaning or servicing.
- Failure of parts caused by misuse.

* unless otherwise specified under local law

Intrinsically Safe/Sécurité Intrinsèque:

Use only battery/Utiliser uniquement des accumulateurs Duracell MN1604, Procell PC1604, Energizer 522.

Always use grounding cable/Utilisez toujours un câble de mise à la terre.

For service information:

visit www.heroninstruments.com

email service@heroninstruments.com

call 1-800-331-2032 or 905-628-4999

WATCH THE VIDEO ON "HOW THE DRAWDOWN FEATURE WORKS" FOUND ON HERON INSTRUMENTS' YOUTUBE CHANNEL.

Warranty is conditional upon adherence to these guidelines.