

Heron Instruments Inc warrants to repair or replace any such defective equipment or part (determined to our satisfaction to have a defect in workmanship or original material) upon receipt and inspection of such defective equipment to Heron Instruments Inc. with all shipping pre paid by the user.

In no event shall Heron be liable for any direct, indirect or consequential damages, abuse, acts of third parties (rental equipment) environmental conditions or other expenses which may arise in connection with such defective equipment. This warranty shall not apply to damage of equipment caused by incorrect installation, usage, storage alteration or inadequate care.

Heron 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 hazardous and as such have rendered the unit unserviceable as outlined in the maintenance guide and warranty manual.
- Parts failure due to neglect in cleaning or servicing.
- Failure of parts caused by misuse or inappropriate use.

All probe tips (excluding dipper-T/5/8 probe tip) warranted for 1 year.

When returning a product under warranty, please review service options available or advise Heron Instruments in advance, by telephone at 1-800-331-2032 or 905-634-4449; by fax at 905-634-9657 or by e-mail at info@heroninstruments.com

Warranty

Accurate. Efficient.
On the job!
 Groundwater monitoring instruments

Operating/Maintenance Instructions & Warranty for
dipper-T, little dipper, SKINNY DIPPER, WATER TAPE & potable water meter
 Water Level Meters



Maintenance continued inside

Warranty is conditional upon adherence to these guide lines.

Avoid sharp edged casing

Avoid entanglement with other equipment in boreholes and wells.

Do not use to plumb borehole depths

Do not use as guide to backfilling with sand etc. Instrument may get locked in sand.

Rewind tape onto reel after each use

General

Contact Heron Instruments Inc.

T 1-800-331-2032
 905-634-4449

F 905-634-9657

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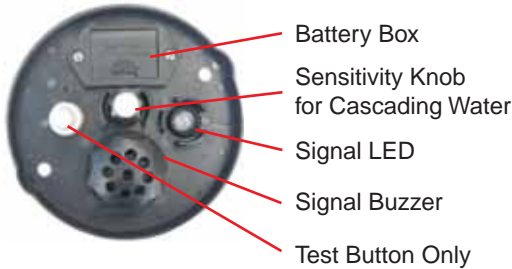
Heron also carries:

- dipper-log groundwater dataloggers
- H.OIL Interface Meter's
- Sm.OIL Interface Meter's



Water Level Meter Instructions

dipper-T, little dipper, potable water meter, SKINNY DIPPER

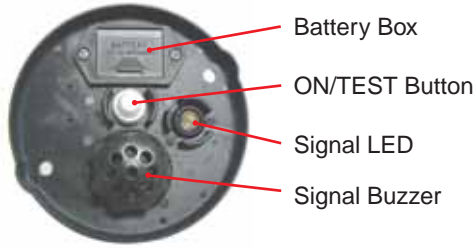


IMPORTANT
This is not an ON/OFF switch



Reel Lock
To unlock the reel turn the plastic lock handle in the direction shown until it touches the frame.

WATER TAPE



NOTE: WATER TAPE does not have a sensitivity control.



To Test Entire System
Hold the centre pin on the probe against the stud on the back of the axle at the same time touch the probe body against the screw on the frame. The buzzer will sound if the system is ok. **Make sure unit is on.**

Equipment Check

- 1 Test circuit and battery by pressing the **white** button. Make sure the panel securing knobs are tight. If the unit does not sound, replace the battery (one 9 volt) in the drawer on the faceplate and repeat.
- 2 Test tape and probe by shorting out the centre conductor and probe body on the stud on the back axle of the unit as shown. The buzzer and light should activate; if not, adjust the sensitivity and repeat. **Make sure unit is on.**
- 3 Test the unit in tap water before going out to the field. **DO NOT** use distilled or deionized water.

- 3 Wash reel if necessary. The central electronic panel can be removed and the reel washed down. Unthread the panel securing knobs and carefully pull out the central panel. Disconnect the panel from the tape. The reel may be cleaned with the following: soap solution, naphtha alcanox 10%, Fantastic, Windex, Joy, Top Job, Mr. Clean, Formula 409; hexane, heptane, white kerosene, mineral spirits; methyl, isopropyl, isobutyl and 1 + 3 denatured alcohols; freons TF + TE. 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.

Use in the Field - Important*

- 1 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 tape guide on the frame leg to avoid cuts and nicks.
- 2 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. In wells with cascading water, reduce the sensitivity by turning the Sensitivity Knob anti-clockwise.
- 3 The dipper-T, little dipper and WATER TAPE probes are 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.
- 4 Wind the tape back onto the reel, removing any excess moisture and dirt.

Cleaning the Meters

- 1 Always the clean the meters after use in the field to maintain optimal performance and extend the life of the unit.
- 2 Unwind the tape and probe and wash with a mild detergent. Rinse well, wipe and rewind onto the reel. The tape and probe can be cleaned and degreased with the following: soap solution, naphtha alcanox 10%, Joy detergent 10%, Lestoil; methyl, isopropyl and isobutyl alcohols; hexane, heptane and fully halogenated freon. Rinse thoroughly with water afterwards.

Trouble Shooting

No Sound when the unit is tested

- 1 Check battery by pressing the **white** button. Replace battery if low and make sure panel securing knobs are tight. If unit still does not sound, remove central panel and check all connections.
- 2 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.

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

General

- 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

Warranty is conditional upon adherence to these guide lines.

*Important: **Ensure that the Panel Securing Nuts are tight before use.**