



IMPORTANT: ENSURE THAT THE PANEL RETAINING THUMB SCREWS (NUTS) ARE TIGHT BEFORE USE

Item	Part Numbers
Drawdown Electronic Panel	1121
Thumb Screws (Set of 2)	1136

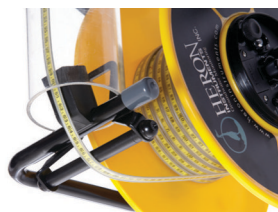
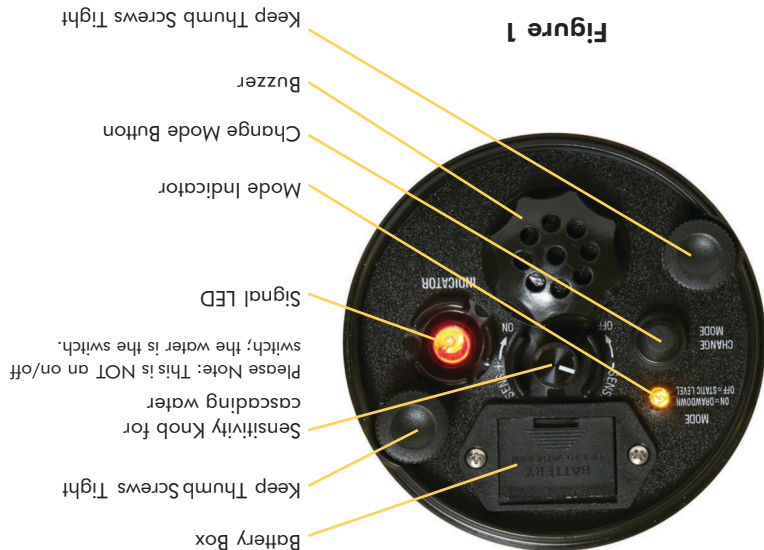


Figure 2  
To Test the Entire System: Make sure sensitivity dial is turned fully clockwise. Touch one end of a conductive wire to the probe body and the other end to the last weight. This will create a short in the probe, the buzzer will sound if the system is okay.

Figure 3  
Hanger to support the meter at the well head. Tape Guide to protect the tape from sharp edges.

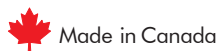
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**SKINNY DIPPER**  
**Static & Drawdown Levels**

Operating and Maintenance Instructions



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# SKINNY DIPPER Water Level Meter Instructions

## General Care of the SKINNY DIPPER

The SKINNY DIPPER is a high quality, robust, economical water level meter capable of 2 Functions - static and drawDown levels. The SKINNY DIPPER will provide 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 SKINNY DIPPER

**DO NOT** use the SKINNY DIPPER 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 SKINNY DIPPER 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 (see Figure 1), and the two panel retaining thumb screws (nuts) tight.

- Insert battery drawer (battery included) into the battery compartment on the electronic panel. Note polarity.
- Check the condition of battery and circuit by pressing the Change Mode button to change from static to drawDown. The unit will sound and the indicator light will come on when the probe is in air. If the unit does not respond, replace the battery and try again.
- Test the entire unit by placing the probe in tap water or touching the probe body to the standoff screw and probe tip to the stud (on axle) as shown in Figure 2. If the SKINNY DIPPER is working properly, the unit will sound as above.

**DO NOT** test in distilled water.

## Use in the Field

The SKINNY DIPPER 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 SKINNY DIPPER consumes no power in static mode when the probe is not in water.

- To avoid damaging the tape on the side of the casing, hang the SKINNY DIPPER on the casing and run the tape over the guide on the frame leg (see Figure 3). If you cannot hang the unit, hold the SKINNY DIPPER away from the side of the casing and guide the tape down the center of the well.
- Swivel the probe holder on the frame to allow the tape free movement down the well (see Figure 3).
- Note the inverted triangle on the probe holder serves as a datum point indicating “top of casing” (see Figure 3).
- The **sensitivity knob** (see Figure 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 your datum point (inverted triangle).
- 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 Change Mode button to drawDown mode (see Figure 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 SKINNY DIPPER back in static mode.

When rewinding the tape, remove as much water and debris as possible from the tape and the probe.

**WATCH THE VIDEO ON “HOW THE DRAWDOWN FEATURE WORKS” FOUND ON HERON INSTRUMENTS’ YOUTUBE CHANNEL.**

## Cleaning the SKINNY DIPPER

Always clean the SKINNY DIPPER after use in the field to maintain optimal performance and extend the life of the unit.

The SKINNY DIPPER 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 retaining thumb screws (nuts) (see Figure 1) to release the panel. Take care not to lose the thumb screws as the unit will not work without them.

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

## Troubleshooting the SKINNY DIPPER

### 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. There may be a lack of connection from the back of the electronic panel, down the tape to the probe. Tighten the panel retaining thumb screws (nuts) (see Figure 1) on the electronic panel to complete contact.

### Q. After tightening the thumb screws, the probe is still not working. How can I fix this problem?

A. Carry out full continuity test shown in Figure 2.

### Q. What should I do if the unit does not sound in static mode (probe in air)?

A. Adjust the sensitivity setting. If the unit still does not work check all the connections inside the hub (inside the hub polarity is not an issue as the current is AC).

### Q. Why would the instrument continue to sound when not in water?

A. The unit may be in drawDown mode. Press the Change Mode button, 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 (5 years, probe 1 year)

**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.

For service information:

- visit [www.heroninstruments.com](http://www.heroninstruments.com) under the **CONTACT** heading
- email [service@heroninstruments.com](mailto:service@heroninstruments.com)
- call **1-800-331-2032** or **905-628-4999**

**Warranty is conditional upon adherence to these guidelines.**