



Technical Help DataHog2

How to Measure Current Consumption

Measuring the current consumption of the DataHog2 logger is a very useful tool when diagnosing problems and faults. Symptoms of high power consumption may include batteries expiring quickly or suddenly, PSU Reset button will not hold in, and incorrect data on voltage inputs (caused by a drop in the 5V excitation supply).

Remove all sensors and all connectors, Mains Hogs, Solar Hogs etc from the logger before taking any measurements. If the currents measured exceeds the values shown below, please report all findings to Skye for further advice.

If the currents measured are within the advised ranges, then the logger is OK, and maybe one of the sensors is drawing too much current through the logger. Connect one sensor and measure the current consumptions again. Repeat with each sensor individually until you find the faulty sensor.

There are 3 options to make the measurement described below. No 1 requires a power supply which can measure current and voltage of the supply. No 2 involves desoldering a wire to make the measurement. No 3 involves making a reusable device useful for regular testing.

OPTION 1 - Using a Power Supply

*Tools Required: Power supply which can measure current and voltage of the supply
Laptop / PC, DataHog2 software & datalead*

1. Remove the base from the logger
2. Remove the 6 C batteries
3. Set the power supply to 9VDC
4. Connect the power supply across the battery plate, positive to the red wire and negative to the black wire
5. Press the PSU Reset button, it should give one faint click
6. Press the Reset button.
7. Connect the PC datalead and start the logger software
8. Measure the current consumption in Main Menu mode, this should be 8.8 - 12 mA
9. Measure the current consumption in Log Mode, this should be 0.3 – 0.6 mA

OPTION 2 - Using an ammeter and desoldering a wire

*Tools Required: Good quality multimeter or ammeter, which will measure at least 0.1 mA
Soldering iron, solder and wicking
Laptop / PC, DataHog2 software & datalead*

1. Remove the base from the logger
2. Remove the 6 C batteries
3. Desolder the red wire from the battery plate
4. Insert a fresh set of batteries
5. Connect the ammeter in series between the desoldered red wire and the terminal it was removed from
6. Press the PSU Reset button, it should give one faint click
7. Press the Reset button.
8. Connect the PC datalead and start the logger software
9. Measure the current consumption in Main Menu mode, this should be 8.8 - 12 mA
10. Measure the current consumption in Log Mode, this should be 0.3 – 0.6 mA

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OPTION 3 - Using an ammeter and special test device

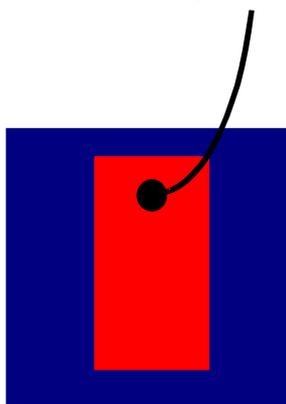
Tools Required: Good quality multimeter or ammeter, which will measure at least 0.1 mA
Special test device (prepared in advance - see below)
Laptop / PC, DataHog2 software & datalead

1. Remove the base from the logger
2. Insert a fresh set of batteries
3. Place the test device between the positive button end of one battery and its battery clip
4. Connect the ammeter in series across the 2 wires of the test device
5. Press the PSU Reset button, it should give one faint click
6. Press the Reset button.
7. Connect the PC datalead and start the logger software
8. Measure the current consumption in Main Menu mode, this should be 8.8 - 12 mA
9. Measure the current consumption in Log Mode, this should be 0.3 – 0.6 mA

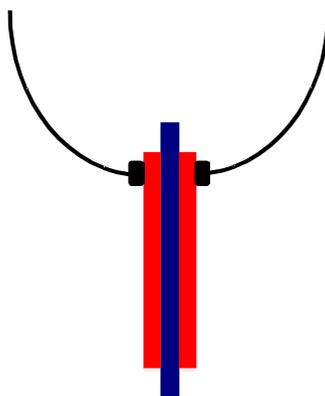
MAKE YOUR OWN TEST DEVICE

Components required: approx. 2x2cmsquare, thin, insulating material, e.g. 1mm plastic film
Two pieces, approx 1x1.5cm copper foil or metal conducting sticky tape
Two single core insulated wires around 6cm length
Soldering iron & solder

1. Solder one wire near the short end of each conducting piece
2. Glue or stick one piece of metal foil / tape on each side of the insulating film



FRONT VIEW



SIDE VIEW

