MINIMET

Testing a SolarHog

1. TO TEST SOLAR HOG WITH DATAHOG CONNECTED

Tests when the Solar Hog is connected to the RS232 port of the DataHog

a) Connect the DataHog to the PC and wake up to Main Menu. Check battery voltage through Display Current Setup option.

If the voltage displayed is 9V or less, the DataHog is running on its internal alkaline batteries, if fitted, and not being powered by the Solar Hog at all. In this case charge the Solar Hog before testing as described below.

If the voltage displayed is greater than 9.5V, put a 60 watt tungsten (standard) light bulb lamp next to the solar panel for a few seconds, you should see the voltage rise. The actual rise may be only 0.05V if the Solar Hog batteries are already well charged.

*** You have to exit from the battery voltage display menu and re-enter this menu each time so that the voltage measurement is refreshed.

REMOVE THE LAMP IMMEDIATELY ELSE DAMAGE TO THE SOLAR PANEL MAY RESULT !! (From heat and / or radiation.)

2. TO CHARGE THE SOLAR HOG

Advisable before testing to ensure conclusive measurements. A 7.2 - 7.5 V power supply is required, current limited to 1 amp.

a) Remove the brown wire from the battery connection (it is OK to leave the blue wire in place)
b) Charge the 3 batteries as a set, between the blue wire and where the brown was connected, until the charge current drops to less than 100 mA
c) Reconnect the brown wire

3. TO TEST SOLAR HOG ONLY

Tests when Solar Hog is not attached to DataHog - these will be more conclusive when the Solar Hog is charged.

a) Check both 5 pin and 8 pin round connectors for corrosion around the pins.
b) Measure the voltage across all 3 internal rechargeable batteries - this should be around 6.5 V in total when fully charged
c) Measure the voltage of each of the 3 internal rechargeable batteries in turn - you may find one is giving much less output than the others. In this case the battery needs replacement.
d) To test the batteries under load, put a 6V torch bulb across the set of 3 batteries for about 10 minutes. Check the voltage of each battery in turn at about 3 minute intervals (as in c) above).
e) Measure the voltage output between pin 3 and 4 of the 8 pin connector (which connects to the RS232 of the DataHog). This should be 11-13 V

Testing a SolarHog (cont)

f) Remove the 5 pin connector which connects the solar panel itself to the Solar Hog box. Measure the voltage between the positive and negative pins (pins 1+2 are linked to give a positive output, pins 3+4+5 are linked to give a negative output). Put a 60 watt tungsten (standard) light bulb lamp next to the solar panel for a few seconds, you should see the voltage rise to about 10V.
   REMOVE THE LAMP IMMEDIATELY ELSE DAMAGE TO THE SOLAR PANEL MAY RESULT !! (From heat and / or radiation.)

g) Repeat test f) above with a resistance load of 1 kohm across the positive and negative pins. The voltage should drop only about 0.25 V

4. STORAGE OF SOLAR HOG WHEN NOT IN USE

The Solar Hog will slowly discharge itself if left unused for a few months, leaving the batteries incapable of being recharged.

If not in use, it is advisable to leave the Solar Hog on an indoor, south facing windowsill so that it receives direct sunlight to keep it operational.

SKYE INSTRUMENTS LTD
21, Ddole Enterprise Park, Llandrindod Wells, Powys, LD1 6DF, UK
Tel: +44(0)1597 824811 Fax: +44(0)1597 824812
Email: skyemail@skyeinstruments.com Web: www.skyeinstruments.com