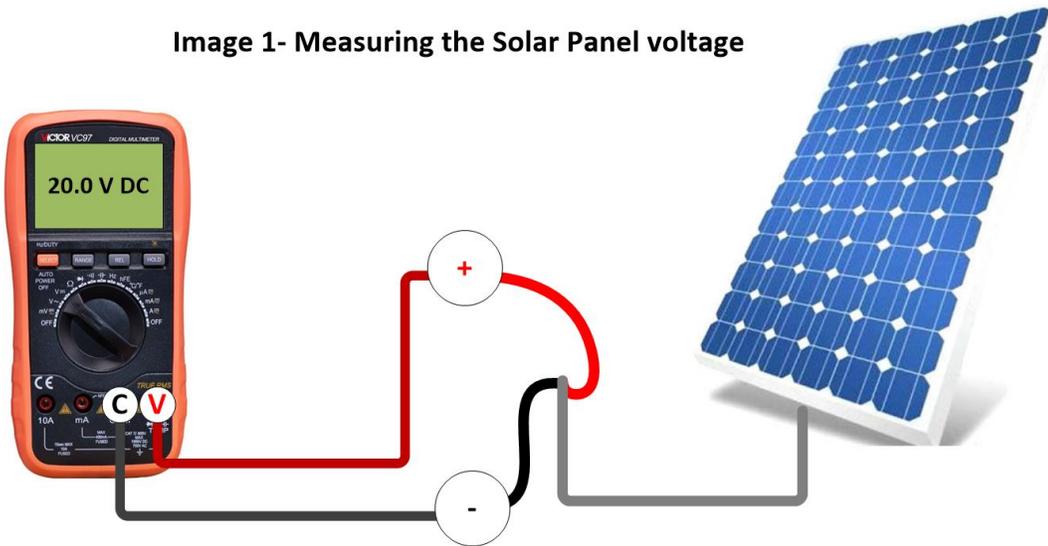


Testing the Solar Panel

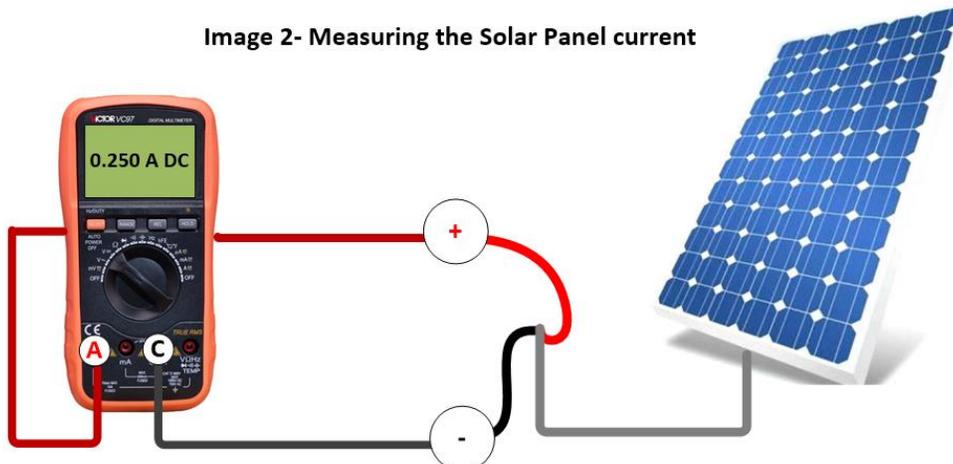
1. Disconnect the Solar panel from the controller power supply plug.
2. Connect a Voltmeter to the Solar panel two wires as described on image 1.
3. The measured voltage supposed to be close to 20V DC.

Image 1- Measuring the Solar Panel voltage



4. Connect an Ampere meter to the Solar panel two wires as described on image 2.
5. The measured current can be calculated by the next formula: **$I=P/V$** where "I" is the current , "P" is the solar panel power, and "V" is the solar panel Voltage . For example, if the solar panel power is 5 Watts, the current supposed to be 5 watts/20 volts=0.250A DC (250 milli Ampere).

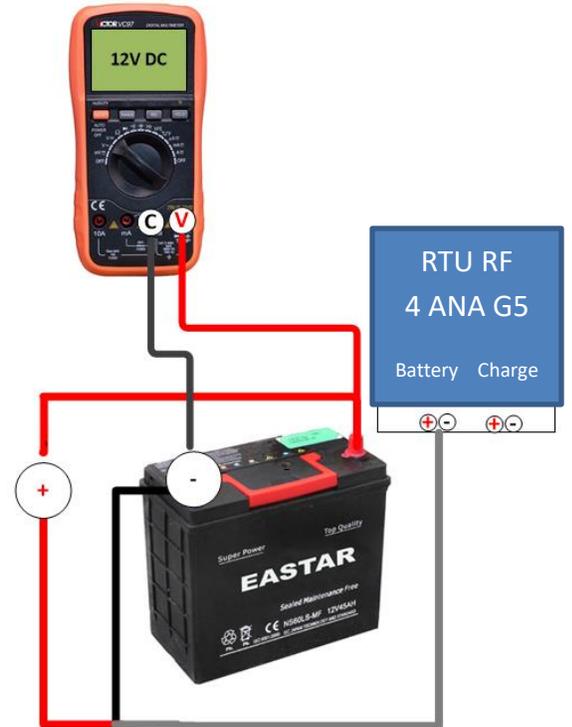
Image 2- Measuring the Solar Panel current



Testing the Rechargeable battery and charging

1. Disconnect the solar panel from the power supply plug.
2. Connect a Voltmeter to the rechargeable battery two poles as described on image 3. The voltage supposed to be above 12V DC.
3. Measure the battery voltage and make sure that the rechargeable battery voltage does not reduce. The voltage supposed to be stable for 5 minutes.
4. Connect the Solar panel back to the power supply plug to CHARGE terminal.

Image 3- Measuring the Rechargeable battery Voltage



5. Connect an ampere meter to the rechargeable battery as described on image 4. In this way you can measure the charging current. The charging mechanism works in pulses. It is not charging continuously so wait until you will see a positive value.

Image 4- Measuring the Rechargeable battery charging



Measuring the current consumption of the RTU RF 4 ANA G5

1. Disconnect the +12V DC wire (Red or Brown wire) from the rechargeable battery.
2. Connect the positive probe of your Ampere meter to the +12V DC wire of the rechargeable battery.
3. Connect the negative probe of your Ampere meter to the +12V DC input on the power supply plug of the RTU RF 4 ANA G5.
4. Measure the current consumption of the RTU RF 4 ANA G5.

The Current consumption of RTU RF 4 ANA G5 should be:

RTU RF 4 ANA G5	LEDS on: 7 mA (Router 12 mA)	LEDS off: 70 μ A (Router 9 mA)
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Image 5- Measuring the current consumption of RTU RF 4 ANA G5



Charging Rechargeable Batteries

1. To charge a Rechargeable battery, read the Manufacturer instructions. Make sure that the Charger voltage output match the Manufacturer recommendation for **Cycle Use**. **Cycle Use** is a process when a rechargeable battery being charged and recharged every period of time (It is not connected to a power supply constantly).
2. Connect charger to the rechargeable battery. Make sure that the polarity is correct. The positive charging wire should be connected to the positive poll of the rechargeable battery.
3. The period of charging time depends on the Charger power, rechargeable battery capacity, how much the battery is charged before, and on rechargeable battery quality.
4. Leave the rechargeable battery under charging for 12 hours. After 12 hours, disconnect the charger and measure the rechargeable battery voltage. The rechargeable battery voltage should be stable. If the voltage is being reduced, do not use this rechargeable battery.
5. Connect the rechargeable battery to Controller/ RTU RF, measure the battery voltage and make sure that it is not reduced.

