Cimel triple sunphotometer quick start guide

1) Quick Install

- Install the whole system.

Be very cautious about the robot level \rightarrow check the bubble

The sensor head has to be on the same plan than the V-shape part and the robot and head notches face each other's.



- Plug all the wires to the control unit and also plug the GPS. The Jupiter cable loop, after being attached to the pig tail, must not be too long neither too short. (a bit less than the collimator extremity)



Then in the following order, launch GPS info, PARK, GOSUN, TRACK.



If after the **TRACK scenario**, the sunphotometer is correctly pointing at the sun, you can put the photometer in **AUTO mode**.



2) Quick look

Here are the main parameters you can set and photometers values you can look at if needed:

- Switch ON/OFF/stanbye

When powered it automatically switches ON. Sleep mode come after 1 min of inactivity. <u>Press the yellow button to switch it ON while in Sleep mode</u>. To switch OFF disconnect the external battery.

- MEASURES:
 - Battery: Voltage of the external battery.
 - Ibattery: Consumption by the electronic box.
 - · Vsolar: Voltage of the solar panel.
 - Isolar: Charging current.
 - Vcoin, Vcpu, Vgsm, Vradio: Internal power supplies.
 - Vrg: Pyranometer.
 - Wetting: Measure of the wet sensor. [wet; dry]
 - Temperature: Temperature inside the electronic box.
 - · Humidity: Humidity inside the electronic box.
 - Pressure: Current atmospheric pressure.
- SETTINGS:
- Auto: Enable or disable automatic measurement. The internal scheduler is executed automatically [OFF; ON]: OFF.
- Moon: Enable or disable moon measurement. The moon menus are invisible in the SCENARIO menu if this setting is OFF. [OFF; ON]: OFF.
- P. Moon: Period between two Group L scenarios. [2min; 15min]: 3min.
- Country: Country identification. [0; 255]: 0.
- District: District identification. [0; 255]: 0.
- Number: Number identification. [0; 9999]: 0.
- Latitude: Latitude of the current electronic box. [-90.00°; +90.00°]: 0.0000°.
- Longitude: Longitude of the current electronic box. [-180.00°; +180.00°]: 0.0000°.
- Altitude: Altitude of the current electronic box. [0m; 6000m]: 0m.

3) Weekly quick maintenance

Always put the photometer in Manual mode before doing the weekly maintenance



- 1. Check all the connections, especially the ones on the battery (rust).
- 2. Check the sensor head cable. Check that the AZ and ZN cables are not wrapped around the robot.
- 3. Check that the communication between the acquisition PC and the photometer is still OK. If used, check that the satellite transmitter is still running and does not have any errors by checking the led status.
- Check that the wet sensor functions correctly. Clean it lightly with demineralized water and a non-abrasive tissue.
 Go in the MEASURES menu and look at wetting parameter. If wet, "wet" is displayed, if not "dry" is displayed. In order to test the sensor if it is not raining, wet it with water and wait around 20s, the value of wetting should go from "dry" to "wet".
- 5. Check that the robot is correctly levelled Check that the level spirit of the robot is well centered.
- Check the voltage of external batteries and the DCP battery if used. Check the photometer external battery measuring the voltage of the battery terminals. It should be over 12 Volts. Same process for the DCP battery if used
- 7. Check the batteries general state. There must be no rust, leak and so on.
- 8. Disassemble the collimator from the sensor head. Check each channel inside the collimator for possible obstruction. If necessary, clean it with dry air. It should be perfectly clean.
- 9. Check the four quadrant sensor. If dirty clean it with a cotton swab.Never clean the 2 main lenses on the front plate, except after a dust event when they can be cleaned with dry air.
- 10. Checking if the GOSUN and the TRACK are correct.