Motor: SunTracer
Model: OG (OnGrid)
Firmware version: H1.7
Date: 15. Jun. 2009

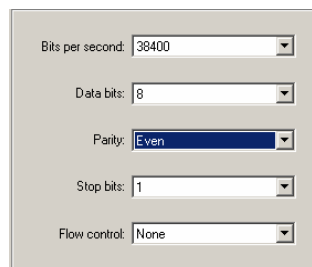<div style="text-align:center">

Changes in this release

</div>

- internal power optimization

H1.6 changes:
- Enabled error check bit in RS232 (parity "even")
- Added "watchdog" feature for reliable working

RS232 configuration:

Bits per second:	38400
Data bits:	8
Parity:	Even
Stop bits:	1
Flow control:	None

H1.5 changes:
- Different, more accurate tracking algorithm
- Stronger power delivered to motor
- Protection against too heavy panels (load) with indication (Red LED will light)
- Synchonization every day at 23:00

<div style="text-align:center">

Menu commands

</div>

```
SunTracer OG ver.H1.7

U=24,4V
time=11:09:09 en
ha=12,7e
hemi=N
int=01

p=2218 d=2216
ov=00

Enter:<press space>
```

- ATTENTION!! Changing the values will influence the motor operation. Incorrect operation can destroy the motor or the solar cell. Therefore, do not change the values if you do not know what you are changing! Keyboard is locked until you press on "space" key (green blinking LED on the motor means unlocked keyboard). After 10 seconds of no activity or wrong string keyboard will be locked again.

- **Clock setting**

Here you can set you solar mean time by directly entering a time from 00:00 to 23:59. After typing the time in (confirmed with the currenct time is changed immediately. Use the following command:

- **time=xx:xx** (+ the Enter key) to set solar mean time for your longitude (not for your time zone!!)

(example: **time=11:55** or **time=08:05** or **time=16:25** + the Enter key)

How to get mean solar time exact for your longitude? MeanTime = GMT + (YourLongitude * 4)

- **Turning internal clock on/off**

- **auto** (+ the Enter key) turns on/off the control of tracking according to the internal clock.

en – control according to the internal clock is enabled
dis – control according to the internal clock is disabled

When the internal clock is disabled, the motor will not turn automatically. In this mode, the motor can be turned using the "ha" command (see the following section).

- **Motor turning according to the hour angle**

To turn the motor according to the hour angle, enter the following string in the menu window:

- **ha=xx,xe** or **ha=xx,xw** (+ the Enter key). Hour angle is expressed in angular degrees.

Enter the angle in degrees, zero degrees for the solar noon. The range is from 00.0 to 50.0 degrees for each direction. The motor will not respond to an incorrect entry. This command does not operate if the internal clock is enabled. The current direction is shown in the menu.

- **Motor operation for the southern hemisphere**

The motor is factory-set for operation in the northern hemisphere. In the southern hemisphere the motor is facing the North and the movement directions east-west are exactly opposite. Therefore, it has a setting where the direction of turning for the southern (or northern) hemisphere is set.
To change the hemisphere, type in:

- **hemi** (+ the Enter key); this command changes the setting of the hemipshere, depending on where the motor is installed.

 The current setting is shown on the menu. Upon each command entry, the setting toggles between northern - southern - northern – etc.).

- **Selecting the turning interval**

The command:

- **int** (+ the Enter key) is used to change the automatic turning time interval.

It denotes how frequently the internal clock will change the motor position. The following options are available: 1, 2, 3, 4, 5, 10 and 15 minutes. Upon each entry the cycle is changed. The factory setting is 1 minute.

- **Other values**

There are also some internal helpful values, meant **only** for monitoring. Values P and D are current position and destination both in pulses. OV warns you if you are using too high voltage to supply the motor (42VDC is maximum).

Alesh Oman
development department

Sat Control d.o.o.
Pozenik 10
SI-4207 Cerklje na Gorenjskem
Slovenia, EU

tel: +386 4 2816219
fax: +386 4 2816212
web and **online live support**: www.solar-motors.com