

# Graphic PPG meter – The Instrument for Powered Paragliding

New function – START MONITOR SYSTEM – control of RPM during the start sequence of engine

**PPG meter with a graphic orange backlit display made in two versions:**

- no battery for paramotors with el. starter
- with a battery box for AAA batteries

**Functions of the new PPG meter:**

- RPM
- Start monitor system – security of the engine startup
- 2x temperature – 1200°C or 2192°F
- Engine timers 4x
- Fuel gauge - fuel level - liter or gallon
- Fuel flow – liter or gallon
- Voltage
- Max. values of temp., RPM and fuel flow
- Alarms –temperature, RPM, minimum and maximum voltage, voltage of battery, fuel gauge

**Two buttons on the front panel:**

- **ENT** - enter - **long push** to enter the menu and change values  
-**short push** to navigate in the menu
- **ESC** – escape – step back,  
- **long push – approx. 2s** - to deactivate a flashing display caused by any alarm, after that the alarm area will be highlighted on the display the alarm remains highlighted only on the display at the position.

- long push – approx. 4s –the PPG meter turns off manually

The PPG meter turns on automatically via the RPM sensor after the engine startup or by a long push of the ENT button.

## Main Menu:

**MAXIMUS – maximal values saved after the last reset**

- **Show maximus** - display of the maximum values
- **Reset maximus** - reset of the maximum values
- **Temperature units** - °C or °F – switching between °C and °F

**ALARMS – settings of all alarms**

- **Temperature 1 alarm** – alarm setting no. 1
- **Temperature 2 alarm** - alarm setting no. 2
- **Revolution alarm** – alarm setting for max. RPM
- **Supply minimum alarm** – alarm setting of the minimum voltage
- **Supply maximum alarm** – alarm setting of the maximum voltage
- **Fuel alarm** – alarm setting of the reserve

**FUEL INDICATION – setting of the fuel level sensor**

- **Tank volume** - setting the size of your tank - displayed on the main display
- **Fuel indication calibration** – fuel cal.of sensor - setting of 0%,50%, 100%
- **Volume units** – switching between liter or gallon
- **Display unit** – setting of units for the fuel level sensor – liter or percent on the display

## **FUEL CONSUMPTION MENU- setting of the fuel flow sensor**

- **Reset long term consumption** – reset of time and aver. fuel consumption
- **Consumption constant** – set the type of the fuel flow sensor

## **TIMERS – display and reset of all timers**

- **Show all** – display of all timers – 1x overall time, 2x user time
- **Reset user timer 1** – reset user timer no. 1
- **Reset user timer 2** - reset user timer no. 2

## **START MONITOR SYSTEM – security of the engine start up**

During the engine startup, the engine revolutions must not be exceeded – **REVOLUTION LIMIT** - in a given period – **TIME LIMIT**. The overspeed will stop the engine for a term – **ALARM TIME**.

- **Status:**
  - **disabled** – turn off the system
  - **enabled** – turn on the system – will always work when the engine stops, no matter whether the PPG meter is on or it has just been turned on for the first start.
  - **just once** – the system is on, but it is active ONLY during the first engine start after turning the PPG meter on. That means that if there are no problems during the first engine start (no need to use start monitor system) the start monitor system will be turned off for the following starts. The system will be reactivated after turning the PPG meter off and on.  
**The function is convenient for paramotors with the electric starter and with a PPG meter connected to the central battery, using the main switch the PPG meter can be turned off.**

In such case I recommend to set up the **Power Off** in the menu and then set up an **auto off timer** into the position **disabled** (turned off) – the PPG meter will not turn off automatically if the engine does not work. The PPG meter will turn off only using the main switch on the device.

**Just Once is a function convenient for pilots who turn the engine during off a flight and require an immediate increase of power.**

This system can be also used for paramotors with a manual starter, i.e. without a central battery and when the main switch is no installed. You just need to activate the button **Power Off** in the menu and then set up an **auto off timer** to enabled. This will prolong the time of an automatic shutdown of the PPG meter according to your ideas – up to 250 min.

**After landing the PPG meter can be manually turned off by a long push of the ESC button.**

- **Revolution limit** – max. RPM for the start monitor system
- **Time limit** – time for activation of the start monitor system
- **Alarm time** – a time period when the engine is stopped

## SETTINGS

- **Backlight** – setting of illumination to the position on/off
- **Contrast** – setting of the display contrast
- **RPM sensor constant** – setting of the synchronization of the RPM of the engine with a displayed rotations. You can set up:
  - 1 pulse per rotation – 1 impulse equals to 1 rotation
  - 2 pulse per rotation - 2 impulses equals to 1 rotation
  - 0,5 pulse per rotation - 1 impulse equals to 2 rotation

## **POWER OFF – switch off PPG meter**

- **Turn off** – PPG meter turns off
- **Auto off timer** :
- **Disabled** - deactivation of the automatical PPG meter shutdown
- **Enabled** – activation of the automatical PPG meter shutdown
- **Auto off timeout** – time setting for the automatical switching off after engine shutdown

## **Tech. Specification:**

**Power supply** : 5-20V

**Size of the display module** : 60x37x15mm

**Size of the sensure module** : 60x28x11mm

**Size of the battery box** : 63x48x15mm

Length of the conductor between display and measuring module : 130cm

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