

# Power Monitor Model 313



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**Please carefully read these instructions completely, and also follow GliderKeeper Manual specially:**

**Annex 1: SAFETY INSTRUCTIONS before using GliderKeeper**

**Please send those comments to [support@gliderkeeper.com](mailto:support@gliderkeeper.com)**

## 1. Introduction.

Power Monitor is an accessory for GliderKeeper or GliderKeeper Pico that properly connected to your model's battery leads will measure electrical power variables and pass them to the logger for recording.



## 2. Installation.

### Battery Connections.

Power monitor comes with three free cabling terminations for you to solder or clamp the terminal to you own type of battery connections either banana, 3,4 or 5mm XT60...

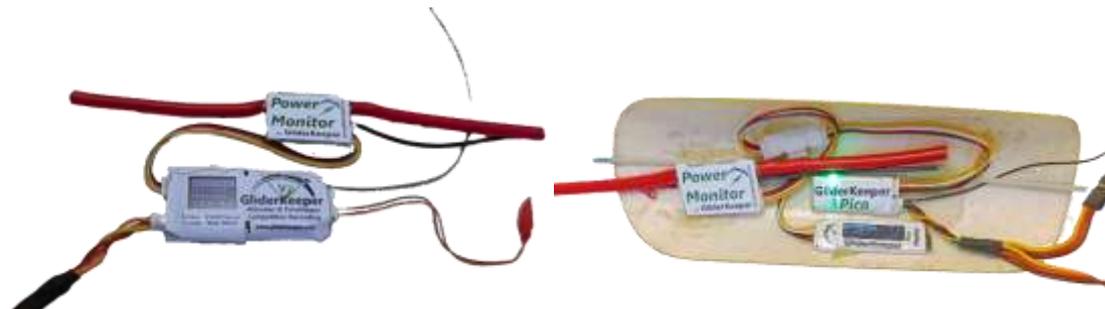
It is important you follow the indications of the backshell of your power monitor unit.



Batt (+), Bat (-), and +Load.

Since the red wire will carry all the current of your model (up to 100A) Power Monitor may eventually get warm.

Then connect the supplied 4 pin communications cable to your Gliderkeeper brand altimeter.





You would need to use display connector hub in case you want to run Pico display simultaneously with the power monitor.

**WARNING: In any new installation perform a static test before flying, safety first.**

Perform a ground test to your full specifications to confirm you will not experience overheating and install power monitor unit in a suitable place in model's fuselage where it can dissipate any generated heat.

### 3. Operation:

Make sure your GliderKeeper is loaded with the appropriate Fw, to read Power Monitor.

Powerer Monitor operation is pretty transparent.

Follow your competition Formula power up sequence and fly your flight.

GliderKeeper display will show the parameters of the last flight or successful power sequence.

Once throttle is advanced the display will switch to the new flight details and the logged parameters will be shown upon the are available.

-Power Up (Last Flight info) Green LED blinks once a second.

-Throttle moved above threshold (1.2 milliseconds). Motor phase, while motor is on and plus 10 seconds after motor shut, F5J start height is being calculated, accumulated energy and motor time als in calculation. Green LED double blinks once a second.

-After F5J start height calculated. Glide mode. Triple Green LED blink. Calculating Time of Flight.

-Landed (wait 15 seconds to disturb the model). No Green led Blink.

- In case of emergency (if Fw allows) or memory full warning Ble LED will wildly blink in landed state.

### 4. Optional Reset Switch

F3G formula allows for several attempts during the working time. An optional reset switch can be installed in the 8 pins expansion connector of your Gliderkeeper.



It is a reed switch that will trigger a signal to reset once a magnetic field is approached to it.

It is used for resetting the Gliderkeeper cycle at any time in its sequence, as it was re powered again.

Take care with this feature. Follow Competition Director instructions.

You should perform this reset at ground. The reset will not work is throttle is above the “motor ON “ position.

## 5. Power Monitor Fw’s.

At the date of publishing this manual there are 3 Fw’s that will run with the power monitor, for each altimeter platform.

**NOTE: YOU MUST UPDATE to UI\_x.31 (GKP\_UI\_3.31.bin for Pico or GK\_UI\_1.31.bin)**

Without it, you will not see electric parameter plots or load special Fw.

- F3G formula officially approved FW by FAI.

GKP\_Fw\_F3G\_3.31.4.bin or GK\_Fw\_F3G\_1.31.4.bin

No Emergency motor enabled. Energy limit 350 Wmin. Motor time limit 30sec.

-Training for F3G Formula (Special fw).

GKP\_Fw\_SPT\_53.31.bin or GK\_Fw\_SPT\_51.31.bin

Emergency Motor enabled.

**CONFIGURABLE ENERGY AND MOTOR TIME, do it via UI x.31 in Keeper Conf, menu. It will use same variables as “ALES”, so please confirm your setting before fight.**

-Power Monitor recorder. General Purpose or investigation.

GKP\_Fw\_SPG\_63.31.bin or GK\_Fw\_SPG\_61.31.bin

**Fw that will never shut the throttle.**

Ignore display information apart of flight number

If Power Monitor is not detected an “error 8” will appear in display.

**To enter Wi-Fi mode in error 8 the Altimeter must be vertical before and during Power UP.**