

holybro-analog-pm-note-6x-needs-digital.md

> For the complete documentation index, see `llms.txt` (<https://docs.holybro.com/llms.txt>). Markdown versions of documentation pages are available by appending `.md`` to page URLs; this page is available as Markdown (<https://docs.holybro.com/power-module-and-pdb/power-module/analog-power-module-setup.md>).

Analog Power Module Setup

PX4 QGroundControl Setup

- * `&` Connect the Power Module to a battery and connect the flight controller to your ground station via USB.
- * Open QGroundControl go `*Vehicle*` `*Setup*` and `*Power*` tab and Input the Number of Cells.
- * Ensure the Voltage Divider `&` Amps per Volt is correct.

{% hint style="info" %}

All Holybro Analog Power Modules except `*PM08*` use the following:

- * Voltage Divider (<https://docs.px4.io/main/en/config/battery.html#voltage-divider>): 18.182
 - * Amperes per Volt (<https://docs.px4.io/main/en/config/battery.html#amps-per-volt>): 36.364 \
 - (**Note:** `*PM08*` uses `*Amperes per Volt*` (<https://docs.px4.io/main/en/config/battery.html#amps-per-volt>): `*`
- {% endhint %}

 For more information, refer to the PX4 Guide. (<https://docs.px4.io/main/en/config/battery.html>)

ArduPilot Mission Planner Setup

1. Connect the Power Module to the battery and connect the flight controller to your ground station via USB.
2. Open Mission Planner, go to the `*Setup*` page and `*Battery Monitor*` tab, and select the following:
 - * `**Monitor**` - ``Analog Voltage and Current``
 - * `**Sensor**` - ``9: Holybro Power Module`` (Shown as ``Holybro Pixhawk 4 PM`` in some older Mission Planner versions)
 - * If using `**PM08**`, select ``0: Others`` and go to the parameter list and set `BATT\_AMP\_PERVLT` (<https://ardupilot.org/copter/docs/parameters.html#batt-amp-pervlt>)
 - * The `"**HW VER**"` depends on the flight controller you use. Refer to instructions below.

{% hint style="info" %}

`**Note:**` By selecting `**Sensor**` to ``9: Holybro Power Module`` above, you essentially are setting the the following:

- * `BATT\_VOLT\_MULT` (<https://ardupilot.org/copter/docs/parameters.html#batt-volt-mult>) = ``18.182``
- * `BATT\_AMP\_PERVLT` (<https://ardupilot.org/copter/docs/parameters.html#batt-amp-pervlt>) = ``36.364``

This value is the same for all Holybro Power Modules except `**PM08.**` \

`PM08` uses `BATT\_AMP\_PERVLT` (<https://ardupilot.org/copter/docs/parameters.html#batt-amp-pervlt>) = ``72``

{% endhint %}

Pixhawk 5X or 6X

{% hint style="danger" %}

If you are using `**Pixhawk 5X or 6X**` :

- * You must use a digital power module like the that end with a `"D"` such as the `**PM02D**`, etc.
- {% endhint %}

You do not need to use "Battery Monitor" tab to set up the digital power module for the Pixhawk 5X or 6X. The parameters needed for their operation are already set by default:

- * `BATT\_MONITOR` (<https://ardupilot.org/plane/docs/parameters.html#batt-monitor>) = 21
- * `BATT\_I2C\_BUS` (<https://ardupilot.org/plane/docs/parameters.html#batt-i2c-bus>) = 1
- * `BATT\_I2C\_ADDR` (<https://ardupilot.org/plane/docs/parameters.html#batt-i2c-addr>) = 65

Pixhawk 6C/6C Mini

{% hint style="warning" %}

There is a bug on `**Mission Planner 1.3.80**` where the `***`HW Ver -10: Pixhawk 6C/Pix32 v6`***` does not register

If you are using this version, you must change parameter `**`BATT_VOLT_PIN`**` `&` `**`BATT_CURR_PIN`**` manually

{% endhint %}

Configure the battery monitor to Analog Voltage and Current by setting parameters below:

* `BATT\_MONITOR` (<https://ardupilot.org/copter/docs/parameters.html#batt-monitor>) = 4

If using `**power1**` port, go to "Config" tab and input the following in the parameter list:

- * `BATT\_VOLT\_PIN`: 8
- * `BATT\_CURR\_PIN`: 4

If using `**power2**` port input the following:

- * `BATT2\_VOLT\_PIN`: 5
- * `BATT2\_CURR\_PIN`: 14

Click `**Write Params.**`

Pixhawk 4, Pixhawk 4 Mini, Pix32v5

If using `**power1**` port input the following:

* HW Ver – “0: CUAUV V5/Pixhawk 4 or API “

Alternatively, input the following in the parameter list:

```
* BATT\_VOLT\_PIN: 0
* BATT\_CURR\_PIN: 1
```

If using **power2** port input the following:

```
* BATT2\_VOLT\_PIN: 2
* BATT2\_CURR\_PIN: 3
```

Click **Write Params.**

Durandal

If using **power1** port input the following:

* HW Ver – “9: Durandal/ZealotH743”

Alternatively, input the following in the parameter list

```
* BATT\_VOLT\_PIN: 16
* BATT\_CURR\_PIN: 17
```

If using **power2** port input the following:

```
* BATT2\_VOLT\_PIN: 14
* BATT2\_CURR\_PIN: 15
```

Click **Write Params.**

For more Info regarding how to Configure Ardupilot & Mission Planner, please refer to Ardupilot Wiki.
(<https://ardupilot.org/copter/docs/common-power-module-configuration-in-mission-planner.html>)

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# Agent Instructions
This documentation is published with GitBook. GitBook is the documentation platform designed so that both hu

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Perform an HTTP GET request on the current page URL with the `ask` query parameter, and the optional `goal` query parameter:

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GET https://docs.holybro.com/power-module-and-pdb/power-module/analog-power-module-setup.md?ask=&lt;question
```

```
`ask` is the immediate question: it should be specific, self-contained, and written in natural language.
`goal` is optional and describes the broader end goal you are ultimately trying to accomplish on behalf of t
```

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