

flight of harmony



Eurorack Module
~rev1.0~



Components

| | |
|---|---|
| 1 | Assembled POWER module |
| 1 | 13" 18AWG DC power harness |
| 4 | M3x0.5x6mm Stainless-Steel machine screws |
| 4 | M3 Nylon washers |

Specifications

| | | |
|------------------------|---------------|----------------|
| Module width | 10 h.p. | |
| Input voltage | 12VAC | |
| Maximum current output | $I_{V+} = 1A$ | $I_{V-} = -1A$ |
| Output voltage | $\pm 12VDC$ | |

What is it?

This one is pretty straightforward: a power supply for your modular synthesizer rig. No sweet spots, no easter eggs, it just makes juice.

POWER was designed with portable racks in mind — shallow depth, reduced weight, and keeping the mains transformer outside of the case to eliminate related noise and heat — but it can be used to supply any compatible system.

Usage

The standard AC wall adapter (if you purchased the standard unit) is rated for 1 Ampere (A. K. A. 1 Amp, 1A, 1000mA), as is the POWER module itself. For best performance – and this applies to ALL electronics, by the way – you should never run POWER at its maximum rating. A 60% load (600mA) is the practical limit for best performance. If you need/want to run it up to 75% or 80%, a greater capacity adapter is needed to maintain performance. Adapters get hotter as more power is drawn from them, which increases the internal resistance and thusly reduces the performance. A 1500mA rated adapter is recommended. The adapter plug must be a 2.1 mm x 5.5mm x 9.5mm barrel-type plug.

Connections

The output connectors are standard 0.25" width male quick-connect terminals, compatible with the standard Doepfer PSU harnesses and distribution board terminals.

T+1 & T+2: +12V

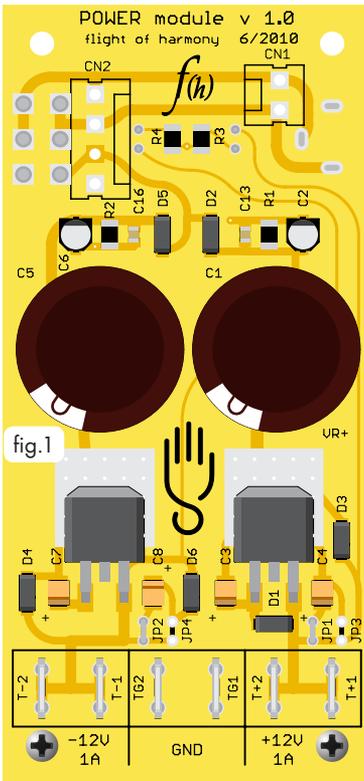
T-1 & T-2: -12V

TG1 & TG2: System ground

Compensation jumpers

Power supplies are infamous for mysteriously becoming unstable. Their performance is dependent upon the type of load they are powering, and no two systems are the same. As I have dealt with this sort of problem in the past, there are provisions on the PCB to adjust the regulator output capacitors to tailor output performance to your specific load characteristics.

The existing jumpers – JP1 (V+) & JP2 (V-) – bypass these provisions, and are required for normal operation. The positions marked JP3 & JP4 are connected in parallel with C4 and C8, respectively, and can be used to increase the regulator output capacitance. Cut JP1 or JP2 as necessary to reduce the output capacitance.



Stuff

There is a lot of discussion about POWER on the Muffwiggler forums, come check it out! People have posted some excellent examples on there. I haunt the forums as well, and new things are posted there long before they hit the f(h) web site.

<http://www.muffwiggler.com/forum/index.php>

A big thank you to those who have sent in suggestions and comments, keep them coming!

Send samples to: samples@flightofharmony.com

Comments, suggestions, complaints to: flight@flightofharmony.com

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<http://www.flightofharmony.com>

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A stylized, elegant cursive logo consisting of a large lowercase 'f' followed by a smaller lowercase 'h' in parentheses. The 'f' has a long, sweeping tail that curves under the 'h'. The 'h' is also cursive and fits snugly within the parentheses.