



ADDAC System
Instruments for Sonic Expression
Est.2009

INTRODUCING
ADDAC300
REV.02
POWER
STARVATION

USER'S GUIDE . REV01
February,2025



ADDAC
System

From Portugal with Love!

Welcome to: ADDAC300 POWER STARVATION REV.02

USER'S GUIDE

Revision.01 February,2025

WELCOME

This is revision 02 of our Power Starvation module. It provides an "ideal" way to power starve other modules, starving modules means the modules will receive less voltage than the standard $\pm 12V$ supply.

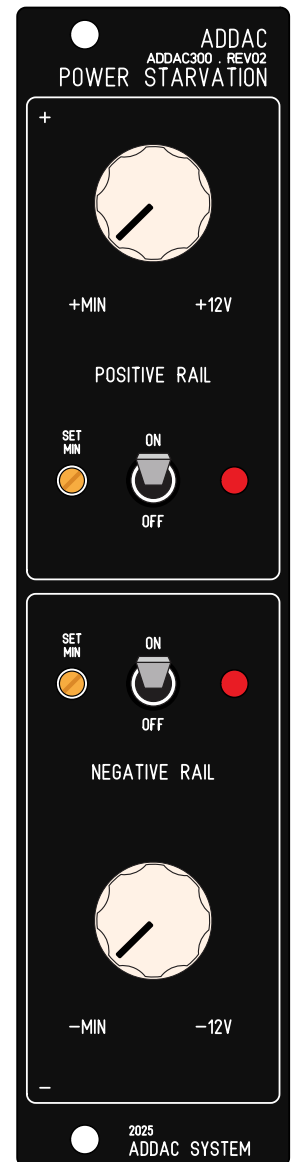
Power starvation is the first hack that any "DIY'er" learns. It's also one of the hacks that can generate some of the most interesting sonic effects in circuit bending. Plug any module below $\pm 200mA$ through it and independently tune it's supply power. This will have most interesting effects in analog modules: filters, delays, mixers... They can either go silent or start screaming at your ears, going berserk with the lack of current to behaving normally, making them cough, choke, go spastic... Something like a safely induced heart attack...

While revision 01 was a simple circuit with pot working as a voltage divider, this upgraded version uses a DC to DC converter that receives its input from the +12V power rail and outputs a bipolar 15V supply. This DC-DC converter also offers short circuit and overcurrent protection. The $\pm 15V$ lines are then sent through variable analog voltage regulators that can output a range of 2.5V to 13.5V. In other words, the module features a $\pm 200mA$ PSU with variable voltage outputs.

SAFETY DISCLAIMER:
WHILE USING ADDAC300 SHOULD BE SAFE FOR ANY MODULE THERE MAY BE SPECIFIC MODULES WHERE ITS USE MAY NOT BE ADVISED

!! USE AT YOUR OWN RISK !!

**ADDAC SYSTEM WON'T BE RESPONSIBLE FOR ANY ISSUE THAT MAY ARISE WHILE USING ADDAC300 POWER STARVATION.
IF IN DOUBT CONTACT US PRIOR TO ANY CONNECTION.**



Tech Specs:
6HP
4.5cm deep

UP TO 600mA +12V
(Depending on the module connected)
0mA -12V

CONTROLS DESCRIPTION

There are two main sections, the top to control the Positive Rail (+) and the bottom to control the Negative Rail (-)

[POSITIVE RAIL] Sets the positive voltage output, from the minimum to the maximum voltage set.

[ON / OFF] On engages power starving. Off bypasses to the busboard power.

[SET MIN] Sets minimum output

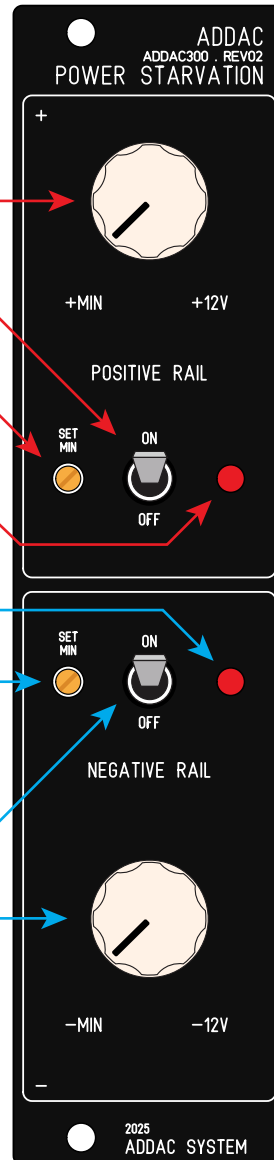
[POSITIVE LED] Shows signal presence, the led dims slightly when power is starved.

[NEGATIVE LED] Shows signal presence, the led dims slightly when power is starved.

[SET MIN] Sets minimum output

[ON / OFF] On engages power starving. Off bypasses to the busboard.

[NEGATIVE RAIL] Sets the negative voltage output, from the minimum to the maximum voltage set.



RIBBON CONNECTIONS

The ADDAC300's 2x5 IDC connector is connected to the busboard via a standard ribbon cable. The module to be starved is then connected to the 2x8 IDC connector, this module will then use ADDAC300's built in psu to power the module allowing to starve its voltage rails.

[POWER RAILS] Ribbon cable connects to the Busboard

[STARVING MODULE] Ribbon cable connects to the module to be starved

VOLTAGE RANGE

As a standard in Eurorack we refer to the +12V as the Positive Rail and -12V as the Negative Rail.

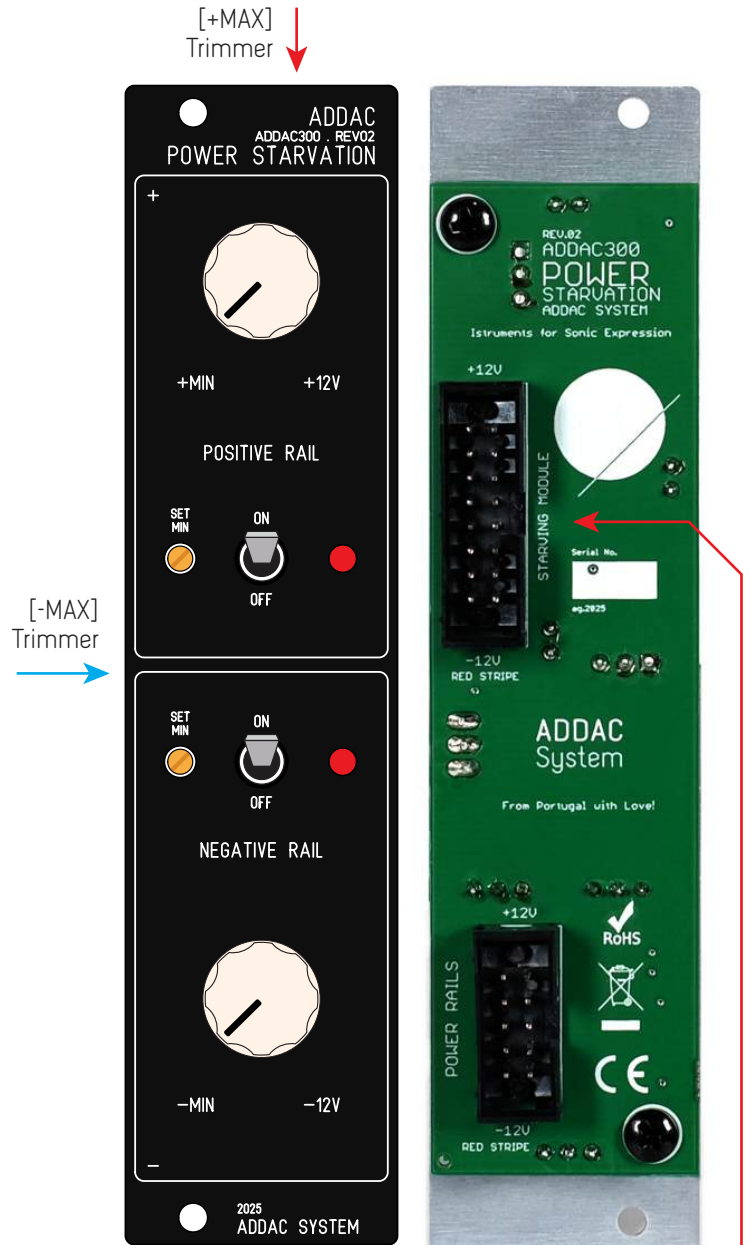
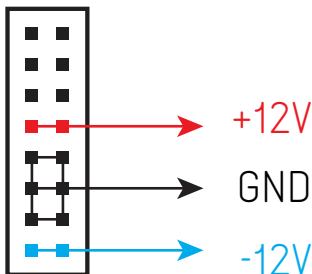
By default we calibrate the module output from +4.5v to +12v on the Positive rail and -4.5v to -12v on the Negative rail. This range is enough to clip any signal as well as turn off any digital module

User's don't really need to calibrate this factory pre-set range but in case the user wants to then there are two sets of trimmers that define this voltage range. The Minimum voltage is set by the [SET MIN] trimmers on the frontpanel, however when adjusting this trimmer the maximum voltage will also change.

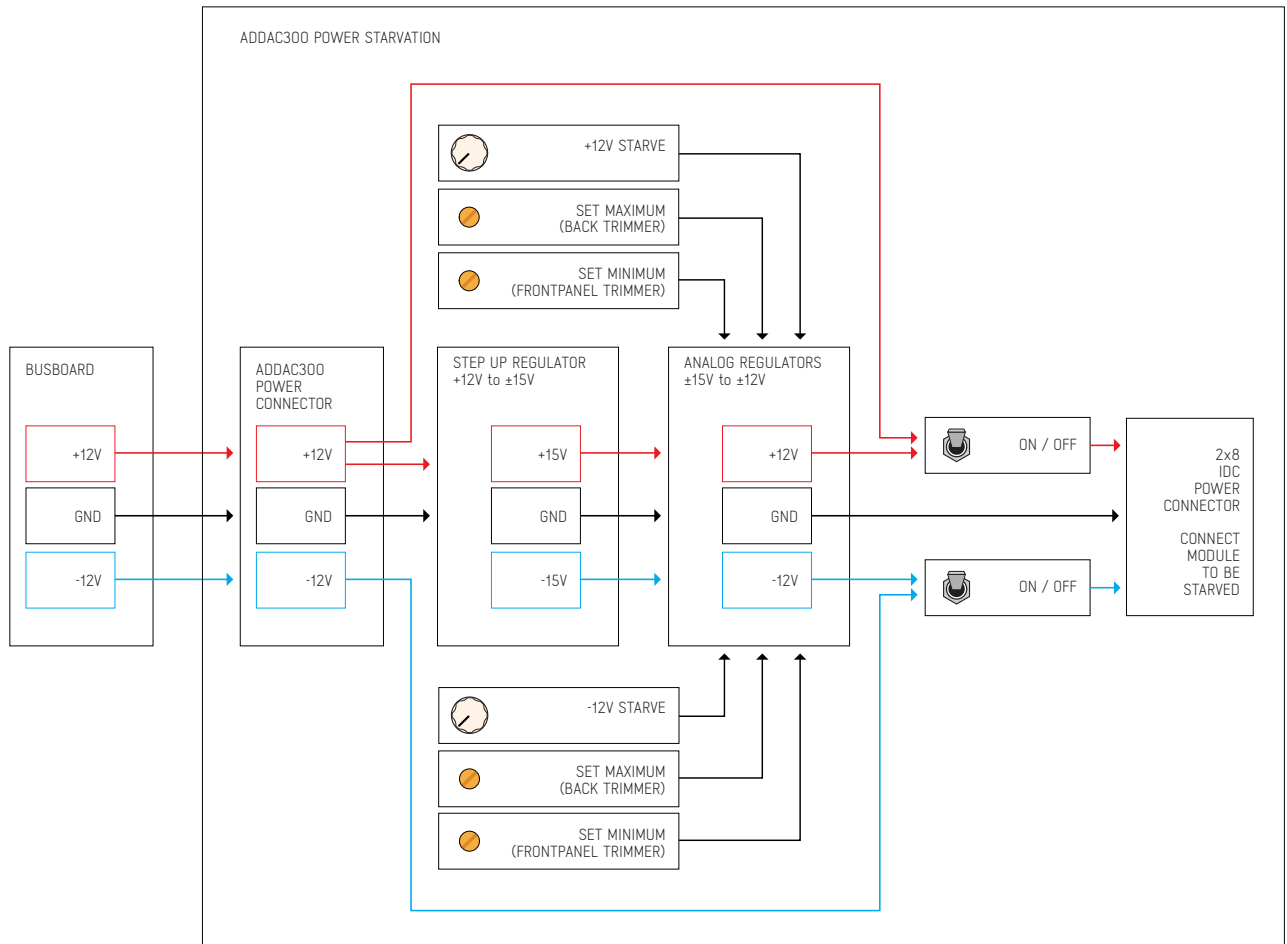
To adjust the Maximum voltage there are 2 other trimmers on the top and side of the module marked [+MAX] and [-MAX]

To calibrate the signal the user will require a voltmeter to probe the 2x8 IDC Connector outputs while calibrating the trimmers. As both trimmers influence each other keep checking the output voltage with the control knob varying from CCW to CW.

2x8 IDC CONNECTOR



OVERALL SIGNAL FLOW DIAGRAM



For feedback, comments or problems please contact us at:
addac@addacsystem.com