

R*S PSD

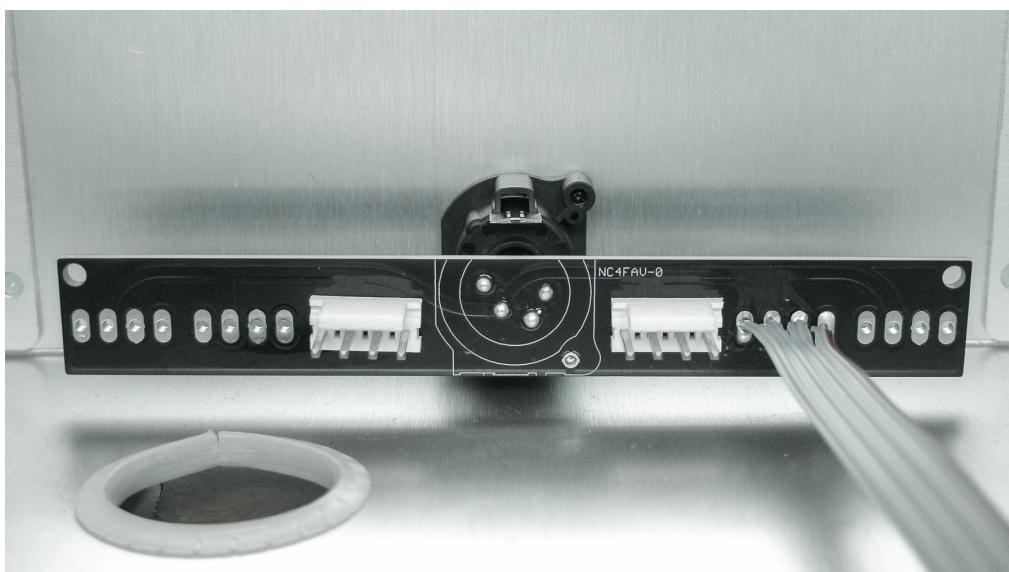
Power Distribution for Serge Modular / 4U

The Random*Source PSD pcb is designed as a PSD solution for RandomSource boats with a XLR cutout for a Neutrik XLR socket (4 pin, Neutrik NC4MAV = male or NC4FAV = female). It is soldered right onto the XLR-socket and provides 6 power outlets in MTA156 format. A pair of the pcbs can also be (ab)used to build a standalone PSD for Serge or other 4U modules (see Appendix below).

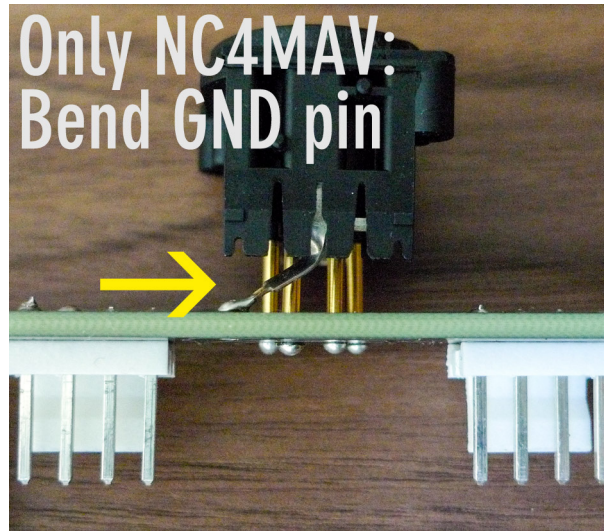


(A) In-Boat PSD

The pcb can be used with either a (female) Neutrik NC4FAV (as indicated on the rear side of the pcb) or a (male) Neutrik NC4MAV socket (on the other side). The 6 outlets can be used either for MTA-156 headers (see Recommended Parts below) or to directly solder wires onto the pcb.



Please note that the **NC4MAV** will not fit right away due to the silver (flat) ground pin that connects the case to GND - **this pin has to be bent so that it reaches the corresponding pcb pad:**



It is essential to check and double-check the correct pinouts / connections before connecting the PSD to a power source. Do not connect any modules before you have checked the voltages of every single pin / power cable to be used to connect to a module.

The PSD pcb is held (only) by the 4 pins of the Neutrik connector. The pcb is extra-thick, but be careful when plugging and unplugging any MTA connectors.

Recommended Pinouts / Colors:

We recommend the following color scheme:

| | Color | Neutrik XLR | MTA-156 | Serge (Molex) |
|------|-------|-------------|---------|------------------------|
| +12V | RED | Pin 1 | Pin 1* | Pin 4 (flat end) |
| 0V | GREEN | Pin 2 | Pin 2* | Pin 3 |
| 0V | BLACK | Pin 3 | Pin 3* | Pin 1 (triangular end) |
| -12V | WHITE | Pin 4 | Pin 4* | Pin 2 |

* MTA-156 as indicated on the pcb or module pcbs. **MTA-156 PIN ORDER DEPENDS ON THE ORIENTATION OF THE HEADER - IF YOU USE THE OTHER SIDE OF THE PCB, THE MTA-156 HEADER HAS TO BE UPSIDE-DOWN!!! PLEASE PAY ATTENTION TO THE +V and -V MARKINGS ON THE PCB FOR BOTH SIDES.**

If you use the PSD with 4 pin Molex connectors (Serge standard), please note that for Molex, the -V and 2nd 0V have to be swapped (Serge-standard seen from the flat end is RED +12V, GREEN 0V, WHITE -12V, BLACK 0V).

We recommend using 22 AWG wire within the boat and 20 AWG to connect the PSU to the boat/PSD.

Recommended Parts:

| Part | Manufacturer | Part# | Mouser |
|---|-----------------------|-------------|-----------------|
| Male XLR connector (4pin) | Neutrik | NC4MAV | 568-NC4MAV |
| Female XLR connector (4pin) | Neutrik | NC4FAV | 568-NC4FAV |
| Screws for XLR Connectors | Neutrik | A-SCREW-1-8 | 568-A-SCREW-1-8 |
| MTA-156 Header | TE Connectivity / AMP | 640445-4 | 571-6404454 |
| MTA-156 Connector (22 AWG red, THROUGH) | TE Connectivity / AMP | 3-640601-4 | 571-6406014 |
| MTA-156 Connector (22 AWG red, CLOSED) | TE Connectivity / AMP | 3-640428-4 | 571-3-640428-4 |

Serge-style connector

from PSU

| | | | |
|----------------------------------|-----------------------|----------|--------------|
| Female crimp socket | TE Connectivity / AMP | 770146-1 | 571-770146-1 |
| Receptable M (plastic connector) | TE Connectivity / AMP | 7700751 | 571-7700751 |

from panel/module

| | | | |
|----------------------------------|-----------------------|----------|--------------|
| Male crimp socket | TE Connectivity / AMP | 770147-1 | 571-770147-1 |
| Receptable F (plastic connector) | TE Connectivity / AMP | 770078-1 | 571-7700781 |

Appendix: Standalone PSD

Two PSD pcbs can be joined with short spacers to form a simple standalone PSD. Any solder points should be inside - the second pcb only acts as a protection of the contacts:



You may want to use some sort of insulation (tape) to cover any unused pads / outlets.

Again, please check all connections with a multimeter before you connect a power source. Then carefully check the voltages before you connect any modules. Any swapped power pins can cause serious damage.

(Version 22 Jan 2015)