Filtered Bus Board

Thank you for purchasing Filtered Bus Board. Filtered Bus Board is low profile power distribution board with extra filtered output headers. This is ideal bus board for all Konstant Lab power supplies, but it works with other eurorack power supplies as well.

Bus board contains 18 output headers. 12 direct headers and 6 filtered headers with LC low pass filters. Filtered headers are dedicated for feeding analog modules which are sensitive to power quality. Filters reject noise caused by PSU and digital modules by 70%.

Two 4 ways DIP switches can tune filtration capacity when some PSU has starting problems with big capacity on output. Each power rail is protected against overvoltage for modules safety. 90% bus board area has high only 11mm with inserted connectors. This feature makes Filtered bus board ideal solution of power distribution for skiff cases.

Mounting to case:

1. Find ideal place for Filtered Bus Board in your case.
2. Screw Filtered Bus Board with attached (or other) screws. Use attached spacers between PCB and your case.
3. Connect Filtered Bus Board with PSU via wires and spring terminals or via 16 pin headers to **DIRECT** side (using with StrongPWR module).
4. If you decide for connection via wires and terminals:
    a. Cut wires for exact length. It is good to keep short wires rout. Strip end of the wires to length of cca 12mm.
    b. Push lever on top of terminal and insert striped wire to terminal. Double check polarity and voltages – marks on PCB.
5. Finally, switch PSU on. All three LEDs on Filtered Bus Board should light. Switch power off and connect modules.

Modules connection:

1. Filtered Bus Board has two areas. DIRECT and FILTERED.
2. Connect all digital modules and all noisy modules in to DIRECT area. Filtrating capacitors will keep low noise level in power network.
3. Connect all pure analog modules and modules sensitive to power quality to FILTERED area. LC low pass filter keeps separated your sensitive modules from digital and noisy modules. Do not connect digital modules in to FILTERED area, because main purpose of Filtered Bus Board is separated digital and pure analog modules.
4. Each DIP swich has two levers ON and two levers OFF (default position).
5. Switch on PSU. If PSU starts ok, all three LEDs on Filtered Bus Board should light. If +12V or -12V LED not light, try to turn off DIP switch step by step, until PSU will start correctly.

!!! Always if you connect new module or rearrange power connection in your synth please SWITCH POWER OFF to avoid modules or PSU faults!!!

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DIP Switches

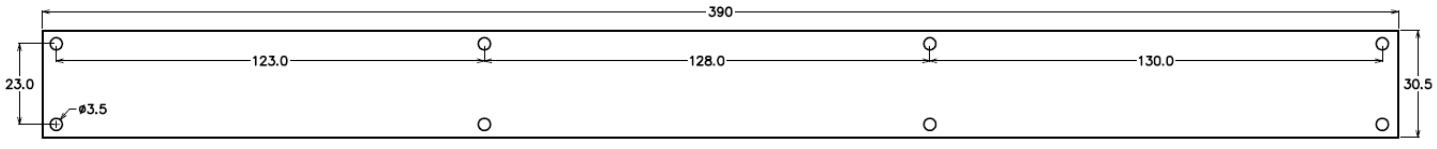
Filtered bus boards come with 2 levers ON and 2 levers OFF on the both DIP switches. **It is the most universal and default setup.**

A DIP switch connects capacitors near switches to the filter circuits. One lever for one capacitor (in total 8 switches for 8 capacitor, 4 for +12 V and 4 for -12 V). In case there is a lot of noise produced by some module in the system, rest of the levers can be used to connect more capacitors to decrease noise.

Also sometimes can be necessary to disconnect some capacitor because there can occur high inrush current during starting sequence of PSU. Some PSU can have issues with starting because of high capacitor charging current. Switching DIP OFF can helps improve PSU behavior during the start.

Specs

- Total 18 output shrouded headers
- 6 filtered headers
- 12 direct headers
- Two shock resistant “Push to Connect” input terminals
- Easy daisy chain connection for more bus boards
- Low pass LC filters with tunable capacity
- Additional SMD filter capacitors on direct and filtered side
- LEDs indicate presence of voltage and voltage drop
- Dimensions: 30mm x 390mm
- Height: 11mm
- Accessories: 8x spacers and 8x screws



Positions of holes