

reSEMble V1.2 – Application Note 01

Background

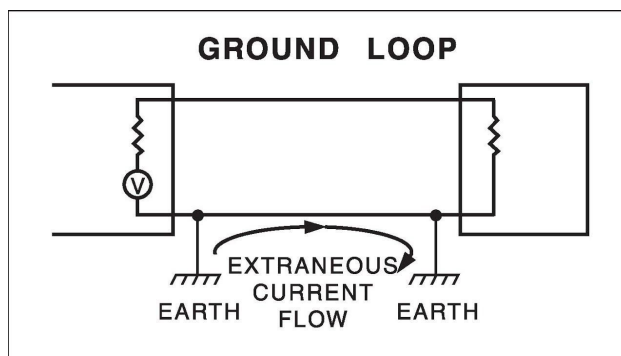
reSEMble PCB sets currently shipping may display some **ground loop issues** if you try to interconnect with modules in other racks and/or on other power supplies and/or external keyboards.

Causes

The input and output PCBs used in reSEMble version 1.2 labeled "7-OR-V1.0 2019 reSEMble" do not connect to the power supply since they contain only passive and mechanical components.

When connecting CV, gate, external audio, output mixer etc. from other modules that use the same power supply that is used by your reSEMble, the common ground path the power supply will act as the ground for the input and output boards and everything will work as designed.

However, if an input or output is connected from a module on a different power supply, there will be no common ground for the patch cords that are used to connect the modules so if these grounds are at slightly different potentials you could experience **ground loop effects** ranging from cross talk, audio bleed, transient generation etc.



Solution

If you experience any issues described above you can create a common ground to interconnect the grounds between these systems. This can be done in a number of ways, including:

- adding a jumper between cabinets to connect the grounds of the power supplies together;
- connecting one of the ground pins of one of the jacks on each of the IN and OUT PCBs to the power supply of the reSEMble;
- connecting one of the ground pins on one of the jacks on each of the IN and OUT PCBs to the ground pin of any jack on any of the other reSEMble module sections.

Following this, a patch cord with ground can be used to connect the modules in different cabinets with no ground issues.

Future releases

We are redesigning the reSEMble IN and OUT PCBs to provide a power header that will connect to the reSEMble power supply using a standard 10-16 ribbon cable. Future builders will have the option of using this method if preferred to create a common ground. The above methods can also be used if the builder desires to save on power headers and ribbon cables.

Contact

If you have any questions about this Application Note please contact admin@pmfoundations.com or leave us a message on the Tindie Forum by accessing the Tindie Store Page:

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