

Normal - When no plugs are inserted, each I/O connection entering the panel is electrically connected (with the input routing to the output). When a jack is inserted into the top jack, the input connection is broken, allowing the output signal to pass to the cable. When a jack is inserted into the bottom jack the I/O connection is broken, allowing the input signal to pass through the inserted cable connection.

Parallel - in this mode, each I/O connection entering the panel is electrically connected (with the input routing to the output). When a jack is inserted into either top or bottom jack, the I/O connection will still be intact, allowing you to tap into both the signal path's inputs + outputs.

Power + Ground related issues

- Keep all studio electronics on the same AC electrical circuit
- Keep audio wiring away from AC wiring
- If you only hear hum coming from a particular input channel check for grounding issues
- Dis connect all the devices - then methodically plug them back in one by one (listen through headphones)
- Check cables for bad connections or improper polarity
- Possible ground loops on the rack mount
- Investigate the use of balanced power source.

Balanced power

- able to reduce ~~the~~ line noise if all of the system's gear is plugged into it. As a result, the device must be able to deliver adequate power.
- will not eliminate noise from gear that's already sensitive to hums + buzzes
- is often open to interpretation, depending on who you talk to. Ex. Some feel that a balanced power conditioner should only be used only after all other options to eliminate noise have been explored, while others believe it is a starting point from which to build a noise free environment.

Power Conditioning - often a wise idea to regulate and/or isolate the ∇ supply that's feeding the studio's investments, the gear.

- Voltage regulation
- Eliminating power interruptions
- Keeping the lines quiet

Voltage regulation, high level, short term spikes and surge conditions can be clamped, thereby reducing or eliminating the chance that the main ∇ will rise above a standard, predetermined level.

Eliminate Power interruptions by the use of a UPS (UNINTERRUPTIBLE POWER SUPPLY) this works by using a regulated power supply to constantly charge a rechargeable battery or bank of batteries. This battery supply is again regulated and used to feed sensitive studio equip (computer, bank of effects, etc.) with clean and constant ∇ supply.