

TECHNICAL NOTE

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Raised by: DP/TC

Distributed to: as required

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SD7 Mixer Power Supply Adjustments

If instructed by the factory, adjustment of the power supplies can be made as follows.

Note there are separate adjustments for the main DSP/computer and the local IO sections.

**Make changes ONLY to the section as instructed by the factory.
Do NOT change any other setting unless specifically instructed to do so.**

If possible do the adjustment after the mixer has been allowed to warm up to normal running temperature (about 1 hour).

As you look at the rear of the desk the No 1 supply is on the left of the two power supplies, and the No 2 supply is on the right of two power supplies, nearest the outside edge of the mixer.

The adjustment controls are accessible through the ventilation holes in the rear of the PSU as shown and can be made with the supply "live".

The mixer is operated on each supply in turn and adjustments made as required.



Cont/

Adjusting the Main 5V Rails

The adjustment for the main 5v supply is a small preset, located just under the internal 5v terminals on the right side of the power supply. Refer to picture below. This shows the PSU internal module out of the main housing and without connecting cables, for clarity.

The control is a multi-turn pot and operates in reverse to normal. i.e. Clockwise turns the volts down, Anticlockwise turns the volts up. One turn is approximately 0.1V

Use either a plastic shaft flat adjustment trim tool or a small electrical screwdriver insulated with tape.

With only the No 1 supply on and both engines running, switch to Engine A and open the Diagnostics panel / Console tab. The +5V and + / - 12V rails for both supplies are shown. It is normal for the +5V rail to be around 5.6V.

Go to the Engine tab. The Environment section on the left will report Engine Voltages, and the 6th box down is the 5V reading.

Adjust the Main 5V Rail on the No 1 Power Supply until the 5V rail reads just 5.0V. (i.e. adjust the 5V rail to 4.9V, and then adjust up until the 5V rail reading just turns to 5.0V)

Note going below 4.9V is likely to reset the engine and or control computer. No damage is done but will slow the process down.



Turn on the No 2 Supply and then turn off the No 1 Supply. Repeat the above adjustment, but this time on the No 2 Supply. You should still be switched to the A Engine.

Turn on both supplies and re-check the engine voltage. It should be between around 5.1 volts, a reading toggling 5.0 and 5.1V is acceptable.

Continued

Adjusting the Local I/O 5V Rails

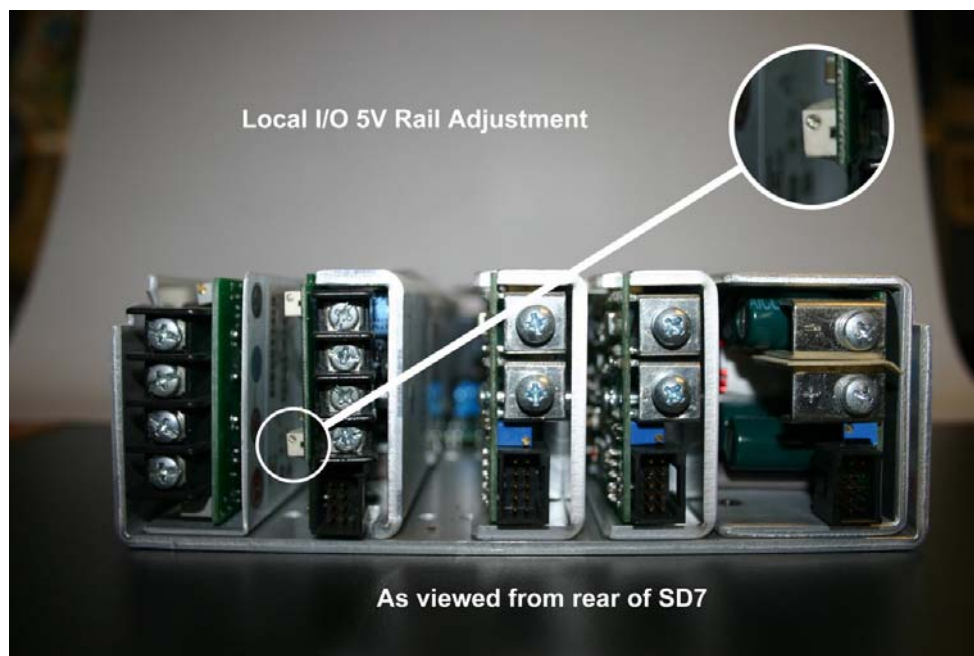
The adjustment for the local I/O 5v supply is a small preset, near the left side of the power supply.

Note this requires a very small flat blade adjustment tool. A small electrical screwdriver will be too large. Use either a purpose designed sub-miniature trim tool with a plastic shaft or a jeweler's screwdriver with a maximum 1.4 x 0.3mm blade, insulated with tape.

The control is a multi-turn pot and operates in reverse to normal. i.e. Clockwise turns the volts down, Anticlockwise turns the volts up. One turn is approximately 0.1V

With both supplies on and both engines running, open the Diagnostics panel / Console Tab. The Local I/O Voltage readings are in the bottom left section. The Local I/O 5V reading is the top reading in this section. Do not confuse the Local I/O readings with the PSU readings above.

Note : There are two sets of voltage readings in the Local I/O section. The left hand set of voltages refer to the No1 Power Supply, and the right hand set of voltages refer to the No2 Power Supply.



While monitoring the Local I/O supply voltage in diagnostics / Console Tab adjust both supplies as follows.

Adjust the supply *down* to just read 5.0V. Now adjust the output *up* to read 5.1V . This will be about 1 turn.

Adjust the control back to half way between the 2 settings, i.e. to around 5.05V
This is the correct setting.

Adjusting the Local I/O 5V Rails with unstable readings

In the event there is a problem with the readings this may be due to the excess supply voltage.

The readings appear too unstable to make sensible adjustments and cause error messages to pop up showing obviously untrue readings. Proceed as follows.

If this only occurs with both supplies on, but not with only one supply on, operate with only 1 supply switched on. Reduce the voltage as noted above on each supply separately. The reading for the PSU that is off, will read "LO" on screen.

Having adjusted both PSU's as above, switch both on. It is likely the stability will have returned. Re-adjust with both supplies on.

If the problem occurs on only 1 supply out of the 2 (i.e. 1 supply appears to cause the fault) or occurs all the time with either supply in use, reduce the voltage by 2 full clockwise turns of the control on the bad supply, or both as required.

This likely to show a low (say 4.9V) reading on the supplies, but the reading should be stable. Now proceed to adjust as noted on page 3.