

4. Power Supply Service Information

Your system will be fitted with one or more SL569 Motor Fader PSUs (depending upon the size of your console), and with either the SL668 or the SL564 Moving Fader Analogue PSU. The SL564 and SL569 supplies both use proprietary PSU modules; the SL668 PSU circuitry is mostly contained on the 82E362 Card, which is described below.

4.1 82E362 Card Description (*SL668 PSU only*)

Analogue Supply ($\pm 15V$)

The positive and negative sections of the Analogue Power Supply Circuitry are similar. The description that follows is with reference to the positive section, with the equivalent components for the negative section shown in brackets.

Input supply to the card is via PL7. It feeds via a 5 Amp fuse FS1 (FS2) to regulators IC1-2 (IC3-4), wired in parallel. Capacitors C4 (C9) and C29 (C30) provide transient filtering on the regulator input. VR1 (VR2) and R14 (R15), if fitted, constitute the regulator output voltage setting network. Alternatively, remote voltage setting is from the 82E363 card via the four SET_OUTPUT lines.

Link LK1 (LK2) is set at the factory to the position giving the higher (lower) output voltage at the relevant front panel test point. Regulator current-sharing is via R1-2 (R3-4).

Capacitor C6 (C10) improves ripple rejection, and diodes D4 (D5) and D7 (D8) provide discharge paths for C1 (C2) and C6 (C10) respectively, to protecting the regulator. Circuitry based around thyristor SCR1 (SCR2) forms a 'crowbar' circuit as over voltage protection.

The outputs from R1-2 (R3-4) feed to connectors PL8-9 via an 8 Amp series diode D1 (D2).

Additional circuitry, in the form of TR3 (TR2) and associated components, will shut down one half of the supply if the other half short-circuits. Normally, TR3 (TR2) is biased off via the current from the outputs of IC3-4 (IC1-2) through R9 (R10). If a short-circuit occurs on the output of IC3-4 (IC1-2), TR3 (TR2) will turn on, pulling the output of IC1-2 (IC3-4) to within 1.25 Volts of the 0V rail. When the fault has been cleared, normal operation resumes.

Note that links LK3-4 are supplied for test purposes only, and both must normally be inserted.

Logic Supply (+5V)

The logic input supply is via PL6. It feeds via a 5 Amp fuse FS3 to regulator IC5. Capacitors C12 and C31 provide transient filtering on the regulator input. VR3 and R20 constitute the regulator output voltage setting network. Alternatively, remote voltage setting is via the two SET_OUTPUT lines. A separate 2A fused supply for the heatsink-mounted fan is provided via FS4 to PL4 Pins 12-13 and PL5.

Capacitor C13 improves ripple rejection, and diodes D6 and D9 provide discharge paths for C3 and C13 respectively, protecting the regulator from damage. Circuitry based around thyristor SCR3 forms a 'crowbar' circuit as voltage transient protection.

The output from IC5 feeds to the output connector PL4 via an 8 Amp series diode D1.