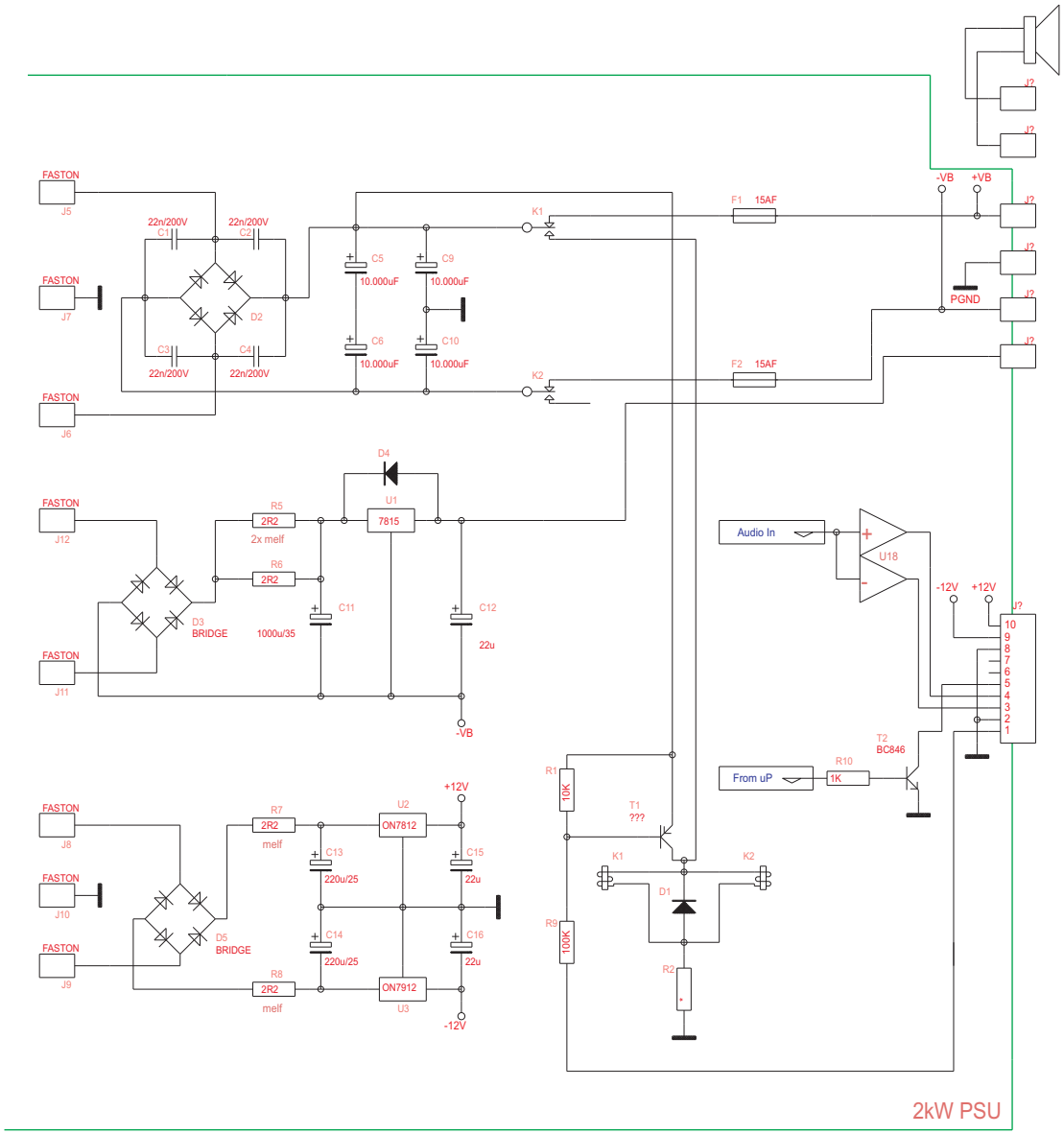
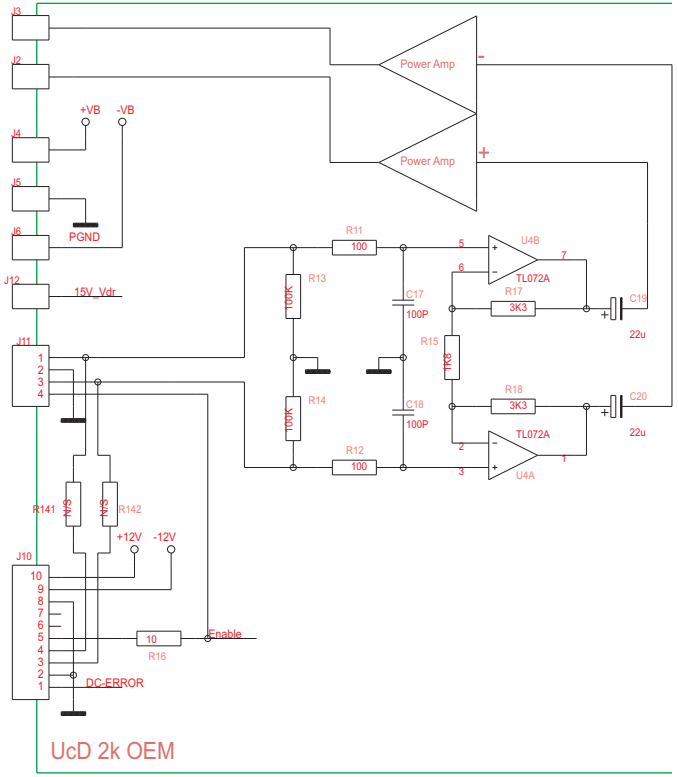


2kW PSU



UcD 2k OEM

Brief explanation (left to right):

Standard rectifier with EMI suppression (C1...C4) followed by 4x10.000uF. Ecap voltage depends on used supply voltage.

Two SPDT relay which are normally closed. When the amplifier detects a DC-error at its output it will open the relay by means of T1 thus disabling both power supply lines. The relay will be held open until the supply voltage has been completely drained.

Fast fuses to protect the supply in the event of a failing amplifier.

The circuit around U1 is to create the driver voltage needed by the UcD2kOEM. This 15V is referred to -VB and NOT to ground. This supply must be able to deliver approx. 200mA continuously.

The circuit around U2/U3 creates the +/- 12V supply for the on-board opamp of the UcD2kOEM. The ground of this circuit need not to be connected to the powerground to avoid groundloops. These grounds are connected on the UcD2kOEM itself.

None of the loudspeakeroutputs is connected to ground due to the full bridge topology

If you chose to apply the input signal to boxheader J10 then R76 and R77 have to be placed (0R).

Audio In: Signal coming from external signal source.
From uP: Amplifier enable (can be used as Mute). Pin 5 needs to be pulled low to enable the amplifier.

BOM:

D2: Regular bridge rectifier 25A 400V
D3, D5: B80C1500 (or similar)
K1: Any DPDT relay (1x16A, 24V coil)
F1, F2: Any fast acting fuse (15AF)
T1: Any PNP-transistor with sufficient a Vce>100V
R2: The value/rating of R2 depends on the supply voltage and the coil of the used relay