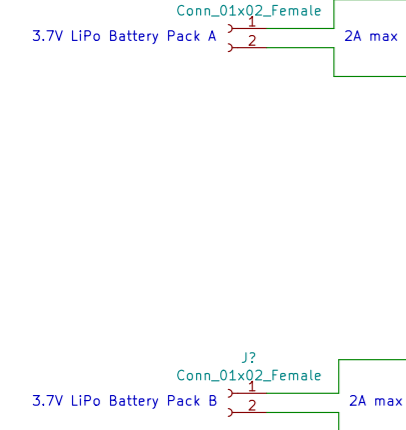


To barrel connector, 4A switched mode supply
 Standby - 2100mA (when charging)
 Powered on - 1439mA + 2000mA relay peaks.
 4A supply recommended. Molex connectors rated to 4A.
 Pin 1: +5V
 Pin 2: 0V

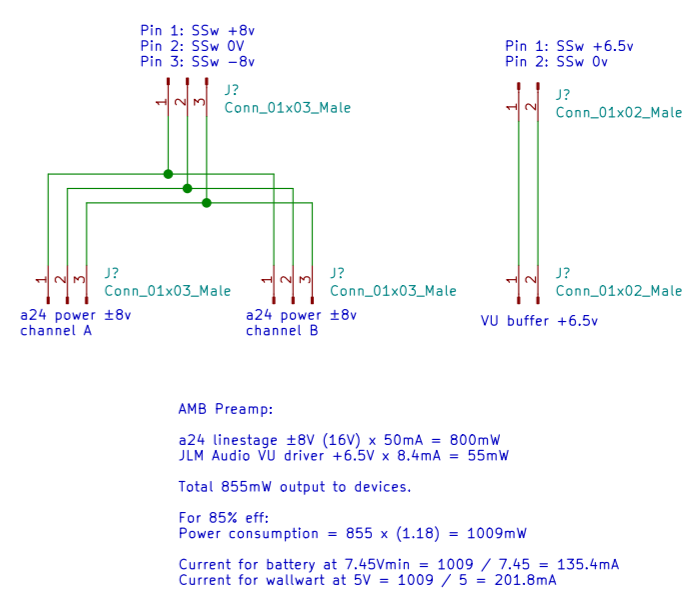


Silent switcher power consumption + monitor circuits = 3600mW worst case
 Battery packs are 10.4Ah
 Voltage range: 8.4V (100%) to 7.45(20%)
 Average voltage = 7.93V
 Avg Current consumption for 3600mW = 3600 / 7.93 = 454mA.
 We cut off at 20% charge, assume 10.4Ah is for 100% to 0%
 $10.4 \times 0.8 = 8.32\text{Ah}$ actual.
 $8320 / 454 = 18.32$ hour's operation. 8.32 hours to recharge.

Pin 1 - +5V LCD power
 Pin 2 - 0V LCD power
 Pin 3 - LCD Power trigger
 Pin 4 - LCD DAC source trigger

LCDUino - 100mA constant draw
 Peaks - 2A for relay switching

DAC
 TP Opus
 Analogue: +8V x 11.6mA
 Digital: +5V x 20.3mA
 JLAudio i2SoverUSB
 Digital: +5V x 100mA
 DIR9001 SPDIF to i2S
 Digital: +5V x 15mA
 TP OTTO switcher (guessing as not specced)
 Digital: +5V x 15mA
 Total on +8V rail - 11.6mA
 Total on +5V rail - 150.3mA
 Power to devices = $(8 \times 11.6) + (5 \times 150.3) = 92.8 + 751.5 = 844.3\text{mW}$
 For 85% eff:
 Power consumption = $844.3 \times 1.18 = 996.3\text{mW}$
 Current for battery at 7.45Vmin = $996.3 / 7.45 = 133.8\text{mA}$
 Current for wallwart at 5V = $996.3 / 5 = 199.3\text{mA}$
 LR Phono:
 $\pm 12\text{V}$ (24V) x 50mA = 1200mW
 Possibly add an On-LED from the other 3.3V supply?
 Total 1200mW output to devices.
 For 85% eff:
 Power consumption = $1200 \times (1.18) = 1416\text{mW}$
 Current for battery at 7.45Vmin = $1416 / 7.45 = 190\text{mA}$
 Current for wallwart at 5V = $1416 / 5 = 283.2\text{mA}$



AMB Preamp:
 a24 linestage ±8V (16V) x 50mA = 800mW
 JLM Audio VU driver +6.5V x 8.4mA = 55mW
 Total 855mW output to devices.
 For 85% eff:
 Power consumption = $855 \times (1.18) = 1009\text{mW}$
 Current for battery at 7.45Vmin = $1009 / 7.45 = 135.4\text{mA}$
 Current for wallwart at 5V = $1009 / 5 = 201.8\text{mA}$