



Max power consumption 3.3V line:
 2x 10mA MCU
 0.5mA IR receiver
 2x1x4mA for status LEDs
 2x1.3mA for red power LED
 Sum: 111.1mA (worse case, all LEDs on - wont happen in practice)
 P 3.3V regulator: 4.7V-3.3V = 1.4V*0.111A -> 0.15W
 To air: 336K/W -> 52°C above ambient. 40°C ambient -> 92°C worse case -> ok
 Max power consumption 5V line:
 2x5x25mA relais
 111mA for 3.3V rail
 Sum: 361mA
 153K/W -> max 0.55W heat dissipation at 40°C ambient.
 Need regulator with extra heatsink here.
 Actually expected power consumption (4 outputs on or muted):
 2x10mA MCU
 0.5mA IR receiver
 4x4mA for status LEDs
 2x1.3mA for red power LED
 Sum: 59.1mA @ 3.3V
 4x25mA for relais
 Sum 139.1mA @ 5V
 -> max 3.9V delta. 5V + 3.9V + 0.3V diode -> 9.2V at DC jack
 Wanting 13V at DC jack -> 13V in - 5V out - 0.3V diode = 7.7V delta
 -> 1.1W average -> 78K/W limit.

