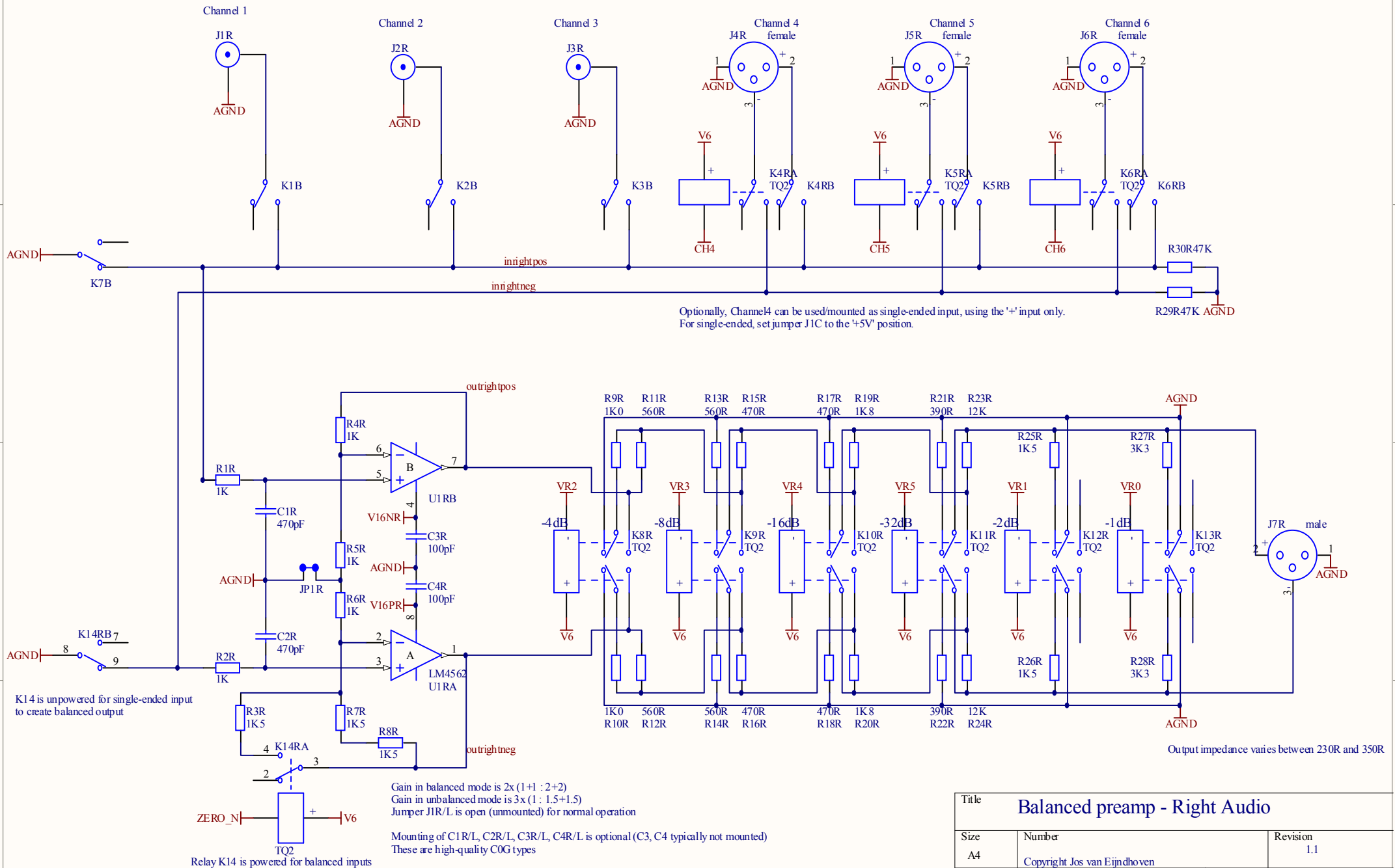
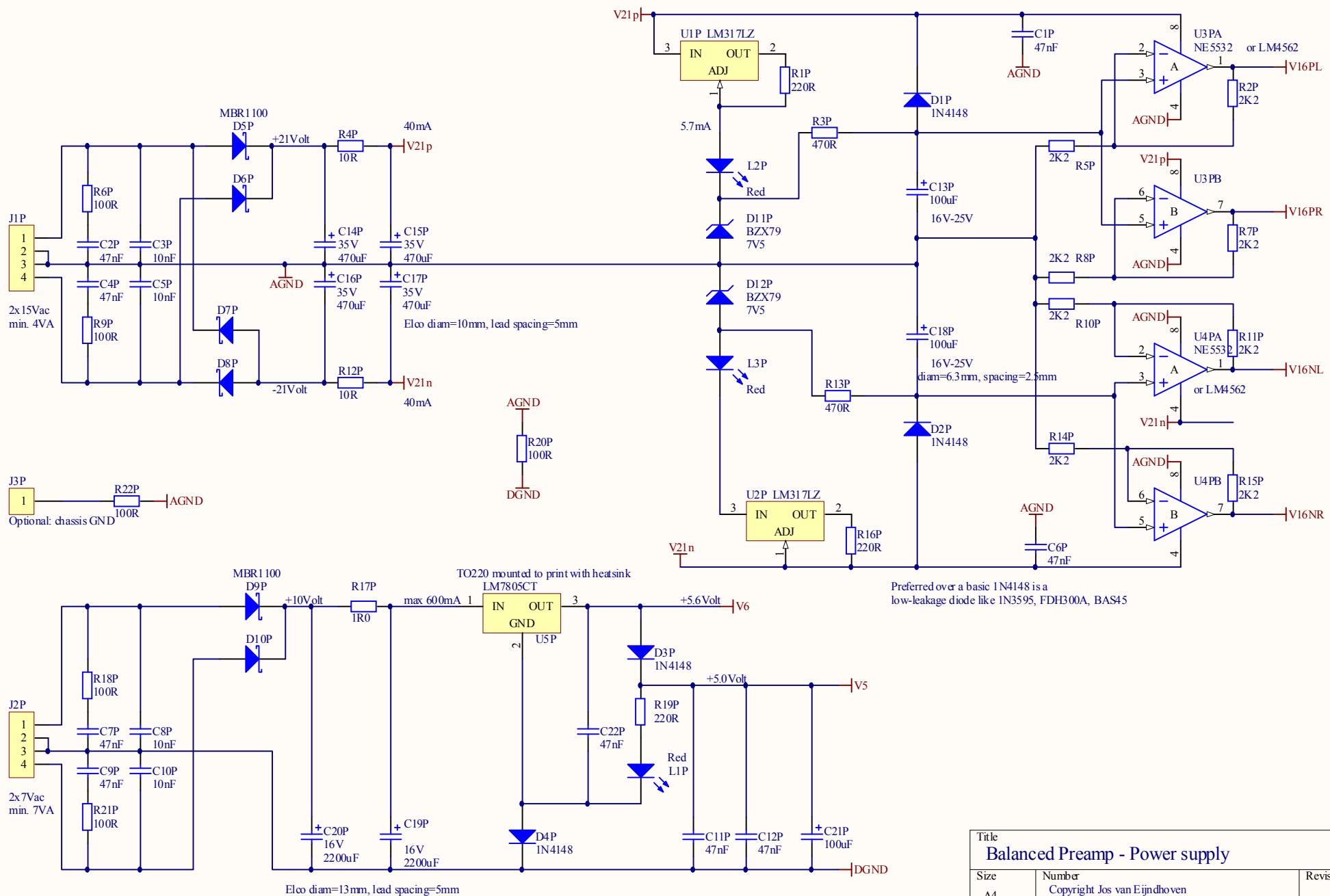


Title		
Balanced preamp - Left Audio		
Size	Number	Revision
A4		1.1
Copyright Jos van Eijndhoven		
Date:	4/17/2011	Sheet of
File:	E:\RelaiXed2\SheetRelaysLeft.SCHDOC	Drawn By: jos@vaneijndhoven.net



Title		
Balanced preamp - Right Audio		
Size	Number	Revision
A4		1.1
Copyright Jos van Eijndhoven		
Date:	4/17/2011	Sheet of
File:	E:\RelaiXed2\..SheetRelaysRight.SCHDOC Drawn By: jos@vaneijndhoven.net	



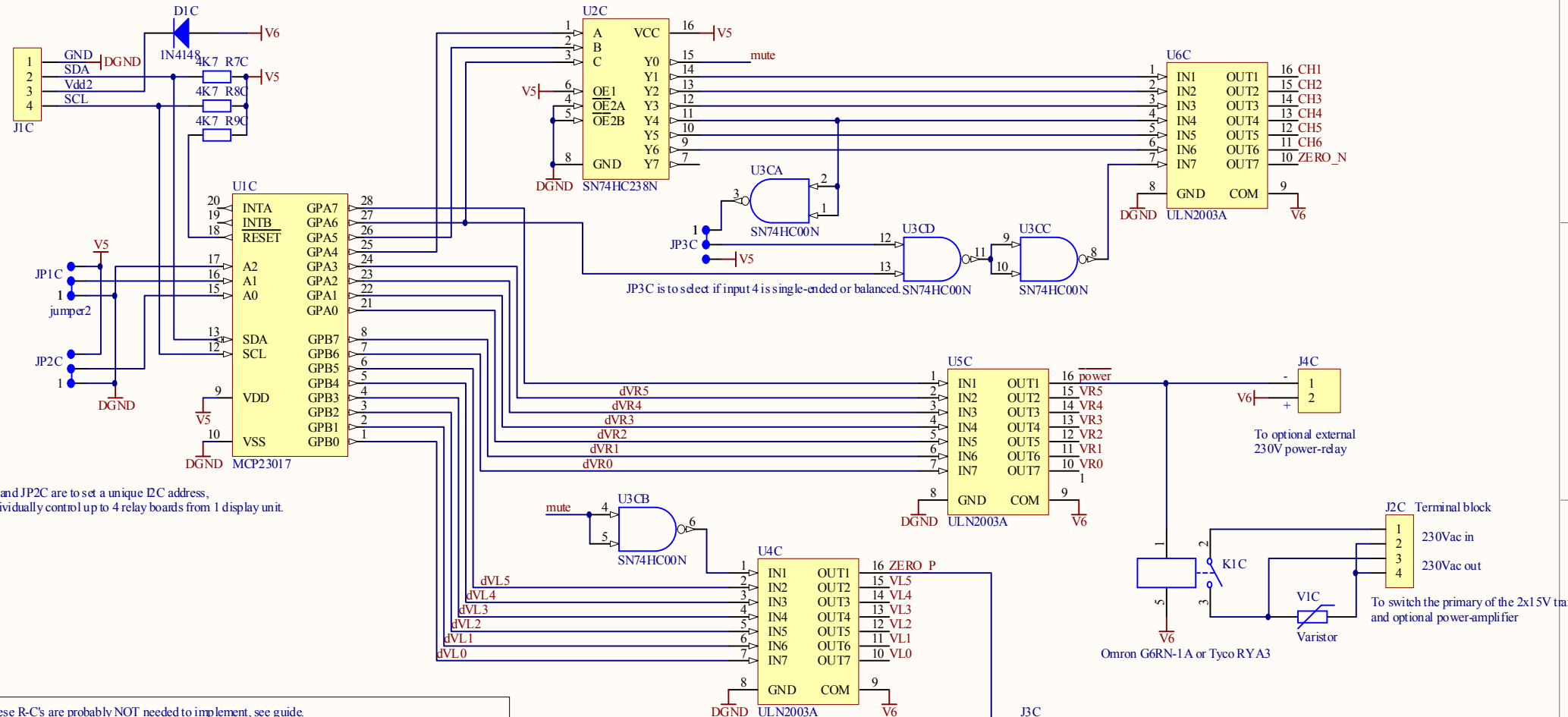
Transformers are not pcb mounted
 10nF and 47nF Cs are Ceramic-Multilayer (X7R or NP0), radial 0.1" pitch, or SMD 0805

The three LEDs have no real functionality for the power supply,
 They only provide a quick visual feedback that the powersupply is operational.

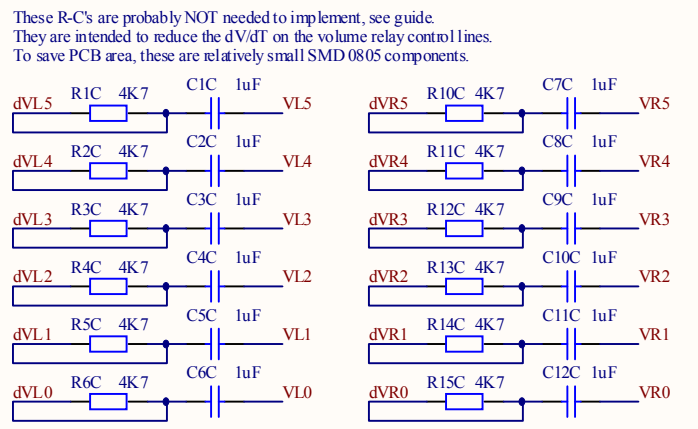
Preferred over a basic 1N4148 is a
 low-leakage diode like IN3595, FDH300A, BAS45

Title		
Balanced Preamp - Power supply		
Size	Number	Revision
A4	Copyright Copyright Jos van Eijndhoven	1.1
Date:	8-8-2010	Sheet of
File:	E:\DOCUMENTS\JOS\SheetPower.SCH Drawn By: jos@vaneijndhoven.net	

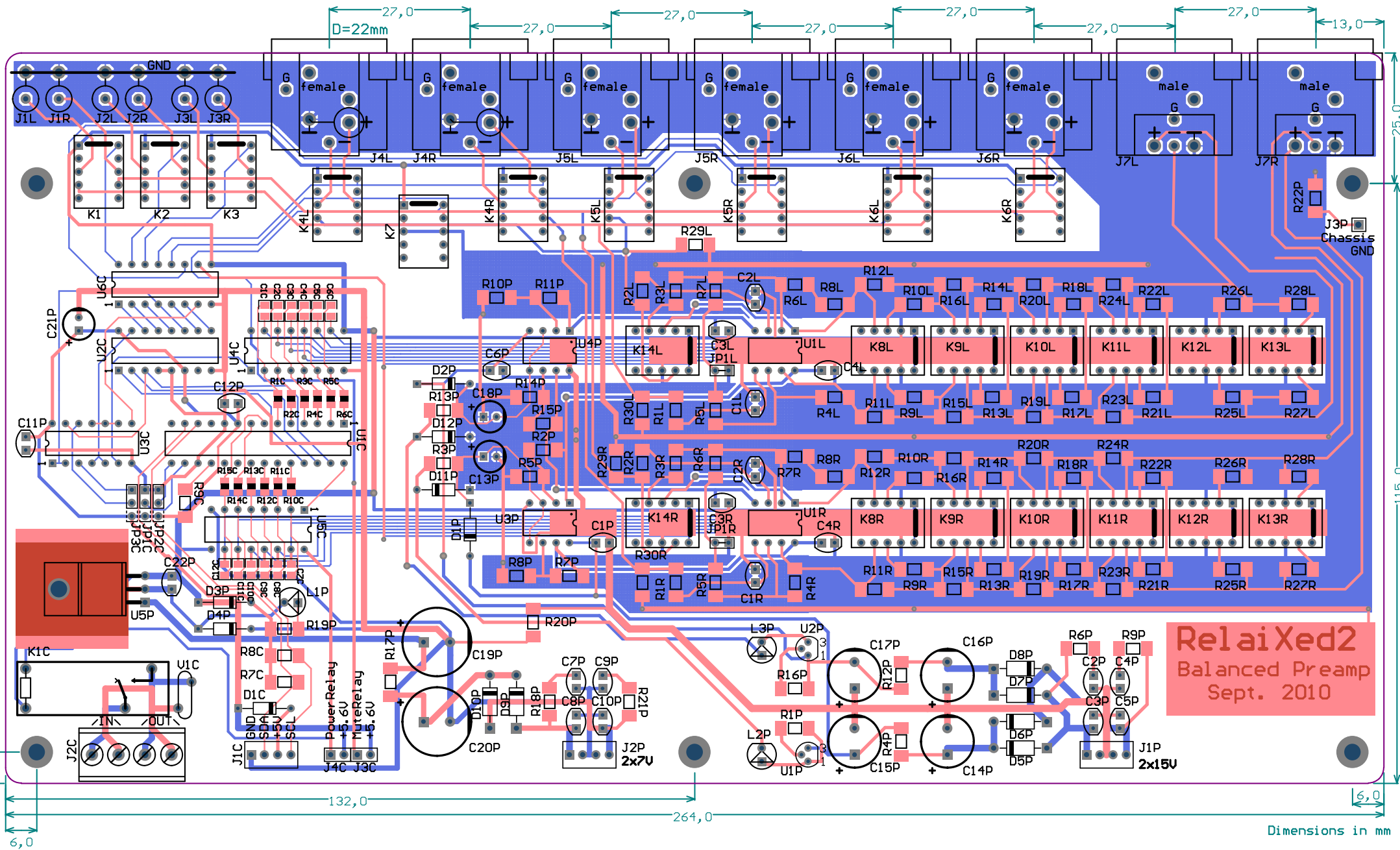
D1C feeds power to display, allows parallel relay boards, and prevents power coming in during programming



JP1C and JP2C are to set a unique I2C address, to individually control up to 4 relay boards from 1 display unit.

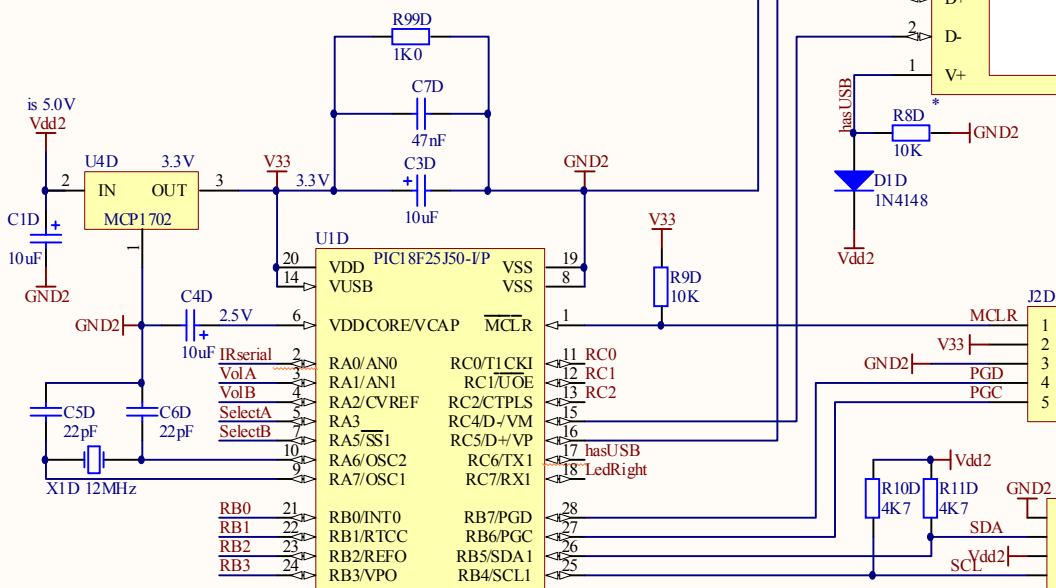


Title		
Balanced preamp - Digital control		
Size	Number	Revision
A4	Copyright Jos van Eijndhoven	1.0
Date:	1/28/2012	Sheet of
File:	E:\RelaiXed2\Altium\SheetControl1.SchDoc	Drawn By: Jos van Eijndhoven



Relai Xed2
 Balanced Preamp
 Sept. 2010

Dimensions in mm



All components mount on the front-side of the Display-PCB, except for J1D, J2D, J3D, which are mounted on the backside. The PCB backside is mostly covered by a groundplane, to minimize digital EMI (radiation)

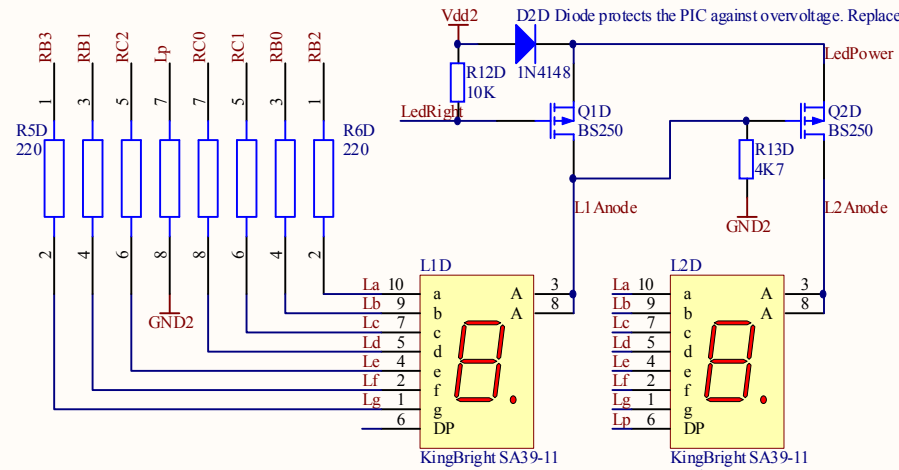
USB B-type connector for updating firmware, or developer debug
 USB can provide power for reprogramming with amplifier switched off
 (Note: USB power gives Vdd=4.3, which is still fine for MCP1702)

10u caps are radial, H=7mm, D=4mm, pitch=1.5mm, low-ESR types
 Resistors are MELF 0207

ICSP / Debug Header
 ICSP can provide power for reprogramming with amplifier switched off
 (Note: Ok because MCP1702 can withstand reverse power)

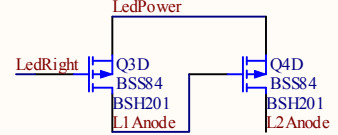
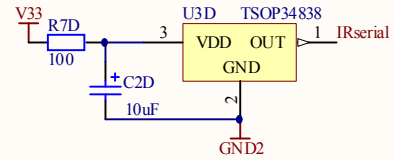
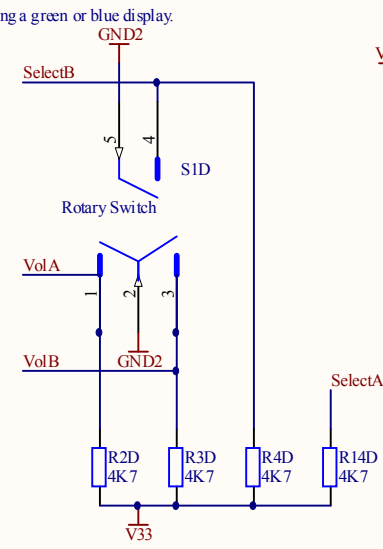
I2C output control signals to relay board
 Pin 3 provides the +5V power to this display board during normal operation

Note: RB[4:7] and RC[6:7] are 5V tolerant, only RB and RC are high-current



The 220-ohm resistors are combined by 4 in an 8-pin SIL footprint
 e.g. Bourns 4608X-102-221
 or BI Technologies L83C221

KingBright SA39-11
 or Liteon LTS4801
 or Avago HDSP 315 series CA



Q3D/Q4D are alternative to Q1D/Q2D (different footprint)

Title		
RelaiXed2 preamp - Display Board		
Size	Number	Revision
A4	Copyright Jos van Eijndhoven	1.0
Date:	8/4/2011	Sheet of
File:	E:\RELAIXED2\AltiumSheetDisplay.SchDoc	Drawn By: Jos van Eijndhoven

Display PCB July 2011

