DeeplyCast.net Transmit/Receive Board

User Guide

Jumper Header Pinout

Jumper #	Pin #	Function	Description
3	1	Mode Select	Transmit/Receive mode select. 0 V is receive mode, 3.3 V is transmit mode. Connected through buffer to relay.
3	2	!CLR	See AD5627R datasheet
4	1	GND	Ground connection
4	2	SDA	I2C communication with DAC, see AD5627R datasheet
4	3	SCL	I2C communication with DAC, see AD5627R datasheet
4	4	OUT	Output signal from receive chain
1	1	!LDAC	See AD5627R datasheet
1	2	GND	Connection to GND for easy jumping to the !LDAC pin

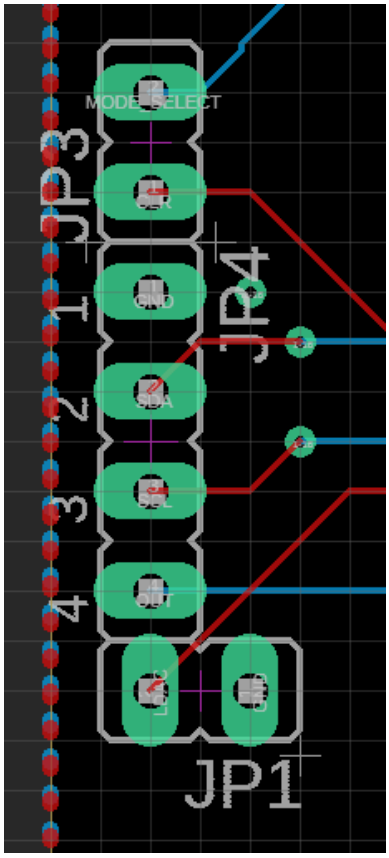

Figure 1. Jumper header as seen in EAGLE. Oriented with board date at the top.

Screw Terminal Pinouts

Terminal	Pin #	Function	Description
GND	1	Ground	Ground connection
GND	2	Ground	Ground connection
PWR	1	+30V	Positive 30V power supply rail
PWR	2	-30V	Negative 30V power supply rail
TRANSDUCER	1	V+	Transducer positive connection
TRANSDUCER	2	V-	Transducer negative connection

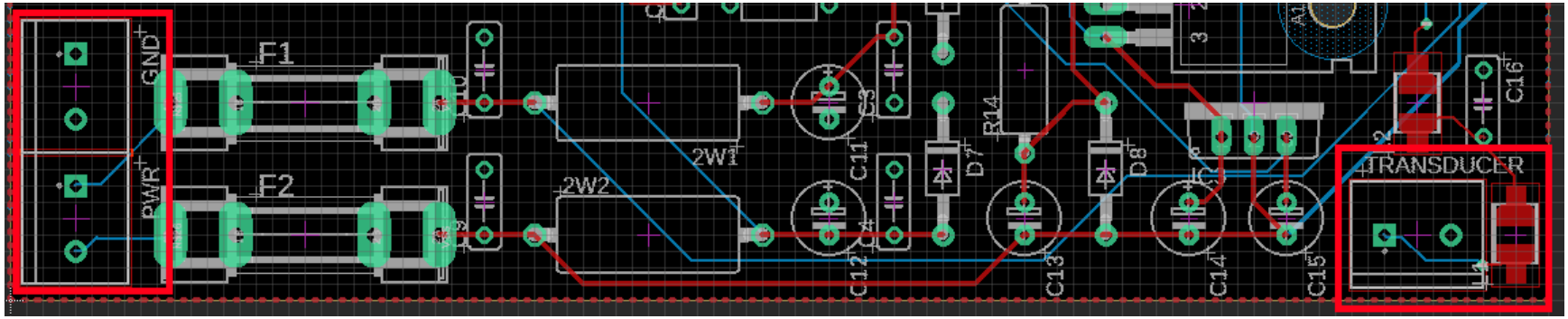

Figure 2. Screw terminals as seen in EAGLE and highlighted in red. Oriented with board date at the top.

References

Class D amplifier design: https://www.allaboutcircuits.com/projects/how-to-build-a-class-d-power-amplifier/

Transducer datasheet: http://www.btechacoustics.com/products/bt-2rcl

Gain calculations: https://dspace.mit.edu/bitstream/handle/1721.1/74140/2-017j-spring-2006/contents/lecture-notes/05_3uap_notes.pdf (also see BTech Acoustics Correspondence)