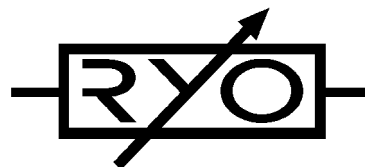


Ljunggren Audio – Roll Your Own  
 Bills of material  
 APERTURE 1.0



Type	Qty	Value	Parts	Description
Power header	1	2x5pin	POWER	Euro power connector
Socket strip	2	1x8pin	CON1-PCB1, CON2-PCB1	
Pin strip	2	1x8pin	CON1-PCB2, CON2-PCB2	
Potentiometer	1	B22K	POT1	9mm vertical mount
Potentiometer	2	B100K	POT2, POT3	9mm vertical mount
Potentiometer	1	A100K	POT4	9mm vertical mount
Jack	4	3.5mm	J1, J2, J3, J4	PJ301M-12 / Thonkiconn / Inline
Toggle switch	1	SPDT on-off-on	SW1	
Toggle switch	1	SPDT on-on	SW2	
LED 3mm	1	orange	D8	
Diode	4	1N4148	D4, D5, D6, D7	General purpose.
Diode	2	1N5818	D1, D2	Schottky rectifier. Power polarity protection. Alternatives: 1N5817, 1N5819, SB130.
3.5mm resistor	1	680K	R16	1% Tolerance
3.5mm resistor	4	68K	R4, R5, R22, R34	1% Tolerance
3.5mm resistor	5	47K	R14, R19, R21, R24, R30	1% Tolerance
3.5mm resistor	1	4.7M	R28	
3.5mm resistor	5	330K	R17, R18, R31, R43, R45	1% Tolerance
3.5mm resistor	3	12K	R13, R15, R25	1% Tolerance
3.5mm resistor	1	0R	R20	Zero ohm/Jumper
3.5mm resistor	5	10K	R3, R27, R29, R40, R44	1% Tolerance
3.5mm resistor	10	100K	R7, R8, R9, R10, R11, R12, R32, R33, R37, R38	1% Tolerance
7mm resistor	1	100R	R23	1/4W
7mm resistor	2	10R	R1, R2	1/4W
7mm resistor	3	1K	R6, R26, R39	1/4W
MLCC X7R	14	100nF	C1, C2, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16	2.5-2.54mm pin pitch
MLCC C0G	1	33nF	C21	2.5-2.54mm pin pitch TDK recommended
MLCC C0G	1	68nF	C19	2.5-2.54mm pin pitch TDK recommended
Electrolytic	4	10uF	C3, C4, C17, C18	2mm pin pitch, 5mm dia, max 10mm height. Min 25V.
Electrolytic	1	2.2uF	C25	2mm pin pitch, 4-5mm dia, max 10mm height. Min 16V.
Film cap	1	220nF	C20	5mm pin pitch WIMA MKS2 recommended
Film cap	1	470nF	C24	5mm pin pitch WIMA MKS2 recommended
Trimmer	3	50K	VR1, VR2, VR3	
Transistor	3	BC547	Q1, Q2, Q3	
Voltage reference	1	LM4040 5V	D3	
IC socket	1	DIP16	IC1	16 pin DIP
Switch IC	1	DG412DJ	IC1	16 pin
IC socket	1	DIP14	IC2	14 pin DIP
OpAmp	1	LM324	IC2	14 pin Alternative: TL064 Alternatives with higher current consumption: TL074, TL084
IC socket	3	DIP8	IC3, IC4, IC5	8 pin DIP
OpAmp	3	TL072	IC3, IC4, IC5	8 pin
Vactrol socket	4	SIP2	LDR1, LDR2	2 pin SIP
Vactrol	2	NSL-32 SR3	LDR1, LDR2	Advanced Photonix/Silonex
Power cable	1	16pin-10pin		
Mounting screws	2	M3x6 black		
Frontplate	1	2mm black		PCB material
PCB1	1			
PCB2	1			
spacers	2	11mm		M3
nuts	2	for spacers		M3
screws	2	for spacers		M3
Knob	3	small cream		
Knob	1	big red		