Vālvs - Quad Tube VCA v1.0

Designator	Quantity	Value	Package	Supplier Link	Notes
V2,V1,V4,V3	4	1Ж24Б/1J24B	Valve_Mini_Pentode_1j24b	https://www.ebay.co.uk	Lots of suppliers on eBay - be prepared to wait a long time for Russian post!
IC8,IC6,IC4,IC2	4	LM358	SOIC-8_3.9x4.9mm_P1.27mm	https://www.mouser.co.uk/ProductDetail/Texas-Instruments/LM358DR?qs=Zu35EjizYSSY6pJ37yjmHA%3D%3D	Do not sub for another type, the characteristics of LM358 are required.
IC7,IC1,IC10,IC9,IC5,IC3	6	TL072	SOIC-8_3.9x4.9mm_P1.27mm	https://www.mouser.co.uk/ProductDetail/STMicroelectronics/TL072CDT?qs=6fffrORWf5pLFxBvwrMMAA%3D%3D	Can be subbed for any similar/better op amp with the same pinout.
D18,D17,D14,D13,D10,D9,D6,D5	8	1n4148	D_SOD-323_HandSoldering	https://www.mouser.co.uk/ProductDetail/onsemi-Fairchild/1N4148WS?qs=2%2FYqgE%252BHg%252BKBrKZlAsMLhw%3D%3D	
D16,D15,D12,D11,D8,D7,D4,D3	8	LED	LED_D3.0mm	https://www.mouser.co.uk/ProductDetail/Kingbright/WP3A8YD?qs=DkZGzo4b%252BTKVdEGNaCX1PA%3D%3D	You can use any colour here - the voltage drop isn't important and it doesn't affect the sound.
SW_DIST1,SW_DIST2,SW_DIST3,SW_DIST4	4	SW_SPDT	SW_100SP1T1B4M2QE	https://www.thonk.co.uk/shop/mini-toggle-switches/	SPDT ON-ON. Miniature (NOT sub-miniature) toggle switch with solder pins (lugs won't fit).
C43,C31,C19,C7	4	47uf	CP_Radial_D5.0mm_P2.50mm	https://www.mouser.co.uk/ProductDetail/Nichicon/UVR1E470MDD1TD?qs=nd5JBRjZlXjuiqeEq8Mr7A%3D%3D	
C3,C2	2	10uf	CP_Radial_D5.0mm_P2.50mm	https://www.mouser.co.uk/ProductDetail/Panasonic/EEU-EB1H100SH?qs=MtOUKumLmnaxYZkjnKwzWw%3D%3D	
C42,C41,C30,C29,C18,C17,C6,C5	8	470nf	C_Rect_L7.2mm_W2.5mm_P5.00mm_FKS2_FKP2_MKS2_MKP2	https://www.mouser.co.uk/ProductDetail/WIMA/MKS2C034701C00JI00?qs=sJjjjplDs9sFUTxfzw%2FiOA%3D%3D	Use any good quality audio grade film caps here, e.g. WIMA MKS2
C54,C53,C52,C51,C50,C49,C48,C47,C46,C38,C37,C36,C35,C34,C26,C25,C24,C23,C22,C14,C13,C12,C11,C10	24	100nf	C_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/KEMET/C0603C104J5RACTU?qs=sGAEpiMZZMvsSlwiRhF8qiamir66WTSk12y6gsdY7%252Bl%3D	Just 0603 MLCCs - brand, etc is not important.
C45,C44,C40,C39,C33,C32,C28,C27,C21,C20,C16,C15,C9,C8,C4,C1	16	47pf	C_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/KEMET/C0603C470J5GACTU?qs=sGAEpiMZZMvsSlwiRhF8qtArWTegJmVHgSUES6bCM%2Fw%3D	Just 0603 MLCCs - brand, etc is not important.
R76,R75,R56,R55,R36,R35,R16,R15	8	220k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-10220KL?qs=sGAEpiMZZMvdGkrng054tz1y1XEHv7sNMAnFSvXriNoKizHZKtlSRw%3D%3D	Just 0603 resistors - brand, etc is not important.
R91,R90,R89,R88,R87,R86,R85,R84,R83,R82,R81,R43,R42,R80,R78,R74,R72,R67,R65,R64,R63,R62,R60,R58,R54,R52,R47,R45,R44,R40,R38,R34,R32,R27,R25,R24,R23,R22,R20,R18,R14,R12,R7,R5,R4,R3,R2	47	100k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-07100KL?qs=sGAEpiMZZMvdGkrng054twUTJTt6Prte8f9Q1fTD39M%3D	Just 0603 resistors - brand, etc is not important.
R77,R57,R37,R17	4	51k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-0751KL?qs=sGAEpiMZZMvdGkrng054t2uy2SOblyUPV31m4GYQ2YY%3D	Just 0603 resistors - brand, etc is not important.
R70,R50,R30,R10	4	33k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/RC0603FR-0733KL?qs=sGAEpiMZZMvdGkrng054t3pr%252BPE%2FADjs1q%2FZ%252BrnSSyk%3D	Just 0603 resistors - brand, etc is not important.
R79,R59,R39,R19	4	10k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/RC0603FR-0710KL?qs=sGAEpiMZZMvdGkrng054t0Ql6vgZwrVhDmPP4HS%2FwqE%3D	Just 0603 resistors - brand, etc is not important.
R66,R46,R26,R6	4	8k2	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-078K2L?qs=sGAEpiMZZMvdGkrng054twVr7TWeaA0s3ovyErAAXeo%3D	Just 0603 resistors - brand, etc is not important.

R69,R49,R29,R9	4	2k2	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-072K2L?qs=sGAEpiMZZMvdGkrng054t2uy2SOblyUP4r6YZnZO93Q%3D	Just 0603 resistors - brand, etc is not important.
R73,R71,R53,R51,R33,R31,R13,R11	8	1k2	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-071K2L?qs=sGAEpiMZZMvdGkrng054twVr7TWeaA0sx2gFaWLcM6A%3D	Just 0603 resistors - brand, etc is not important.
R61,R41,R21,R1	4	1k	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/AC0603FR-071KL?qs=sGAEpiMZZMvdGkrng054twUTJTt6Prte5idpC10RpFA%3D	Just 0603 resistors - brand, etc is not important.
R68,R48,R28,R8	4	330R	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/YAGEO/RC0603FR-07330RL?qs=sGAEpiMZZMvdGkrng054t3pr%252BPE%2FADjsgbcW32RiNJg%3D	Just 0603 resistors - brand, etc is not important.
FB2,FB1	2	Ferrite	R_0603_1608Metric	https://www.mouser.co.uk/ProductDetail/TDK/MMZ1608D100CTAH0?qs=sGAEpiMZZMt1hubY80%2Fs8NxD%2FRHPQm5hFzPldG0m4y4c5F3mTa3nVA%3D%3D	Just don't, I know, alright!
JP1	1	EURO_PWR_2x5	PinHeader_2x05_P2.54mm_Vertical	https://www.ebay.co.uk/sch/i.html?_from=R40&_trksid=p2380057.m570.l1313&_nkw=arduino+headers&_sacat=0	Just use standard pin header strips. There *might* be room for a shrouded header, I have't tried.
POT_IN_DRIVE4,POT_IN_DRIVE3,POT_IN_DRIVE2,POT_IN_DRIVE1,POT_GAIN4,POT_GAIN3,POT_GAIN2,POT_GAIN1,POT_FEEDBACK4,POT_FEEDBACK3,POT_FEEDBACK2,POT_FEEDBACK1	12	A100k	Alpha9mmPot	https://www.thonk.co.uk/product-category/alpha/alpha-9mm-vertical/	Use pots that attach to the panel, not the trimmer type, as the nuts hold the panel on! Don't forget knobs!
POT_CV_LEVEL4,POT_CV_LEVEL3,POT_CV_LEVEL2,POT_CV_LEVEL1	4	B100k	Alpha9mmPot	https://www.thonk.co.uk/product-category/alpha/alpha-9mm-vertical/	Use pots that attach to the panel, not the trimmer type, as the nuts hold the panel on! Don't forget knobs!
J_OUT4,J_OUT3,J_OUT2,J_OUT1,J_IN4,J_IN3,J_IN2,J_IN1,J_CV_IN4,J_CV_IN3,J_CV_IN2,J_CV_IN1	12	PJ301M-12	PJ301M-12	https://www.thonk.co.uk/shop/thonkiconn/	Don't forget nuts!
TRIM_DIST4,TRIM_DIST3,TRIM_DIST2,TRIM_DIST1	4	1M	Potentiometer_Bourns_3296W_Vertical	https://www.thonk.co.uk/shop/25-turn-trimmer-potentiometer/	DIST - Adjust to trim the amount of distortion for the dirty setting.
TRIM_CV_INIT4,TRIM_CV_INIT3,TRIM_CV_INIT2,TRIM_CV_INIT1,TRIM_CLEAN4,TRIM_CLEAN3,TRIM_CLEAN2,TRIM_CLEAN1	8	100k	Potentiometer_Bourns_3296W_Vertical	https://www.thonk.co.uk/shop/25-turn-trimmer-potentiometer/	CV INIT - Adjust to trim the initial CV amount to ensure the VCA closes fully. CLEAN - Adjust to trim the amount of distortion for the dirty setting.
TRIM_PLATE4,TRIM_PLATE3,TRIM_PLATE2,TRIM_PLATE1	4	20k	Potentiometer_Bourns_3296W_Vertical	https://www.thonk.co.uk/shop/25-turn-trimmer-potentiometer/	PLATE - Adjust to trim the plate voltage for more/less overall gain.