

Buchla 248 clone BOM (PCB1)

by SAMODULAR rev2.5

	Designator	Quantity	Description	Mouser Part#
Diodes				
1N457	D1-D20	20		512-1N457

Resistors				
100R	R46, R86, R223, R225	4	1% 1/4W	660-MF1/4DC1000F
220R	R48, R88	2	1% 1/4W	660-MF1/4DC2200F
330R	R39, R79, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R188, R189, R191, R193, R194, R195, R196, R197, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R212, R213, R214, R215, R216, R217, R218, R219, R222	45	1% 1/4W	660-MF1/4DC3300F
1K	R35, R36, R37, R40, R41, R42, R44, R47, R75, R76, R77, R80, R81, R82, R84, R87	16	1% 1/4W	660-MF1/4DC1001F
2.2K	R38, R63, R72, R78, R103, R112	6	1% 1/4W	660-MF1/4DC2201F
4.7K	R34, R61, R69, R74, R101, R109	6	1% 1/4W	660-MF1/4DC4701F
10K	R49, R62, R67, R68, R70, R71, R89, R102, R107, R108, R110, R111, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R147, R148, R149, R150, R151, R190, R192, R198, R199, R210, R211, R220, R221	56	1% 1/4W	660-MF1/4DC1002F
20K	R50, R90	2	1% 1/4W	660-MF1/4DC2002F
22K	R64, R73, R104, R113, R152, R153, R156, R157	8	1% 1/4W	660-MF1/4DC2202F
47K	R60, R66, R100, R106, R145, R146, R154, R155	8	1% 1/4W	660-MF1/4DC4702F
49.9K	R224, R226	2	1% 1/4W	660-MF1/4DC4992F
100K	R51, R52, R53, R54, R55, R56, R57, R59, R91, R92, R93, R94, R95, R96, R97, R99	16	1% 1/4W	660-MF1/4DC1003F
150K	R45, R58, R85, R98	4	1% 1/4W	660-MF1/4DC1503F
392K	R43, R83	2	1% 1/4W	660-MF1/4DC3923F
4.7M	R65, R105	2	5% 1/4W	660-CF1/4C475J

Trimmers				
2K	TR1, TR2	2	Single turn	3362P-1-202LF
10K	TR3, TR4	2	Single turn	3362P-1-103LF

Capacitors				
47nF ceramic	C56, C61	2	Ceramic 5mm	810-FG28X7R1H473KNT6
0.1uF ceramic	C9, C10, C12, C13, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C57, C58, C59, C60, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C81, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C104, C105, C106, C107	58	Ceramic 5mm	810-FG28X7R1H104KNT6
15uF elec.	C8, C11	2	Elec. 2mm	647-UKL1V150MDDANA

ICs				
2N3904	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10	10		512-2N3904TA
MAX4617CPE+	IC24	1	16pin DIP	700-MAX4617CPE
HC165	IC11, IC12, IC13, IC14, IC15, IC16, IC17	7	16pin DIP	595-SN74HC165N
HC595	IC32, IC33, IC34, IC35	4	16pin DIP	595-SN74HC595N
LM1117-3.3V	IC4	1	SMD / SMT	926-LM1117IDT3.3NOPB
TL072	IC18, IC20	2	8pin DIP	595-TL072CP
TL074	IC19, IC21	2	14pin DIP	595-TL074CN

uA7810	IC5	1	SMD / SMT	595-UA78M10CKVURG3
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Potentiometers				
10k - 100K lin		2	9mm	Alpha 9mm pot
10k - 100K lin		4	16mm	Alpha 16mm pot (add 4x additional nuts)
50K lin		32	45mm travel	RS4511150K

Misc				
LED green	LED36, LED45	2		604-WP710A10SGD5V
LED red	all other LEDs	43		604-WP710A10ID5V
LED yellow	LED33, LED42	2		604-WP710A10YD5V
PLD-16	PLD3, PLD4, PLD5	3	16pin header (female)	517-929975-01-08-RK
PLD-18	PLD1	1	18pin header (female)	517-929975-01-09-RK
PLD-20	PLD2	1	20pin header (female)	517-929975-01-10-RK
		8	Banana jack black	530-108-0903-1
		12	Banana jack red	530-108-0902-1
		2	Banana jack violet	530-108-0912-1
		4	Banana jack blue	530-108-0910-1
SPDT ON-ON	SW1, SW7	2	SPDT switches	633-M201201
SPDT (ON)-ON	SW2, SW5, SW6, SW8, SW11, SW12, SW15, SW17, SW20, SW22, SW24, SW25, SW27, SW30, SW32, SW35	16	SPDT switches	633-M201501
SPDT ON-OFF-(ON)	SW4, SW10	2	SPDT switches	633-M201901
SPDT (ON)-OFF-(ON)	SW3, SW9, SW13, SW14, SW16, SW18, SW19, SW21, SW23, SW26, SW28, SW29, SW31, SW33, SW34	15	SPDT switches	633-M201801
			Switch/Slider caps	Switch/Slider caps 248 set
		2	15mm Standoff	15mm I/I
		2	15mm Standoff	15mm I/O
		4	M3 Countersunk screws	
		6	M3 6mm screws	
			Rogans knobs	Rogan 248 set

Buchla 248 clone BOM (PCB2)

by SAMODULAR rev2.3

	Designator	Quantity	Description	Mouser Part#
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Resistors				
22R	R4	1	1% 1/4W	660-MF1/4DC22R0F
220R	R11, R19, R24, R31	4	1% 1/4W	660-MF1/4DC2200F
1K	R1, R2, R12, R13, R16, R17, R18, R22, R23, R29, R30, R158, R159, R164, R165	15	1% 1/4W	660-MF1/4DC1001F
10K	R3, R5, R6, R7, R8, R9, R10, R14, R20, R25, R32, R160, R161, R162, R163, R166, R167, R184, R185, R186, R187	21	1% 1/4W	660-MF1/4DC1002F
30K	R15, R21, R26, R33	4	1% 1/4W	660-MF1/4DC3002F
47K	R27, R28	2	1% 1/4W	660-MF1/4DC4702F

Capacitors				
22pF ceramic	C25, C26	2	Ceramic 5mm	810-FG28C0G1H220JNT6
560pF ceramic	C1, C7	2	Ceramic 5mm	810-FG28C0G1H561JNT0
0.1uF ceramic	C3, C4, C5, C6, C14, C15, C17, C18, C19, C20, C21, C27, C28, C29, C30, C31, C33, C35, C36, C37, C38, C41, C42, C43, C78, C79, C80, C82, C99, C100, C101, C102, C103	33	Ceramic 5mm	810-FG28X7R1H104KNT6
1uF ceramic	C22	1	Ceramic 5mm	810-FG26X7R2A105KNT6
2.2uF ceramic	C23, C24, C32, C34	4	Ceramic 5mm	810-FG28X5R1E225KRT6
4.7uF ceramic	C16	1	Ceramic 5mm	810-FG24X5R1H475KRT6
15uF	C2, C39, C40, C44	4	Elec. 2mm	598-156PUM035M

ICs				
25MHz	ZQ1		1	695-HC49US-25.0ABJB
25AA512	IC6		1	579-25AA512-I/P
MAX4617CPE+	IC22, IC23, IC27, IC28		4 16pin DIP	700-MAX4617CPE
HC595	IC25, IC26, IC29, IC30, IC31		5 16pin DIP	595-SN74HC595N
LM1117-3.3V	IC3		1 SMD / SMT	926-LM1117IDT3.3NOPB
MAX5250	IC8		1 20pin DIP	700-MAX5250AEP
TL072	IC2		1 8pin DIP	595-TL072CP
TL074	IC9, IC10		2 14pin DIP	595-TL074CN
TL431	IC7		1	511-TL431AIZ-AP

Misc				
IDC-10	TO COMPUTER		1 IDC 10pin header	571-1761681-3
IDC-16	TO SLIDERS		1 IDC 16pin header	571-1761681-6
IDC-20	STM-LINK		1 IDC 20pin header	571-1761681-7
PLD-16	PBD3, PBD4, PBD5		3 16pin header (male)	517-929665-09-08-I
PLD-18	PBD1		1 18pin header (male)	517-929836-01-09
PLD-20	PBD2		1 20pin header (male)	517-836-01-10
			1 DIP switch	774-2084
			4 Standoff 11mm	Standoff 11mm I/I
			1 Power connector	587-306-50-010
			1 ST-LINK programmer	511-ST-LINK/V2