

BOM for Haible SOST beta RANDOM*SOURCE 2015

*** preliminary version * please check against original BOM and schematics!**

CAPACITORS

18	CS1, CS2, CS3, CS4, CS5, CS6, CS7, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16, CS17, CS18	SMT Bypass Caps
1 10p	C27	C0G, CORRECTED!
9 33p	C7, C8, C19, C21, C32, C35, C37, C44, C49	C0G recommended
3 100p	C2, C40, C45	C0G recommended
4 220p	C23, C41, C46, C48	C0G recommended
1 330p	C22	C0G recommended
3 1n	C26 C27 C31 C34	C0G recommended
2 3n3	C4, C24	C0G recommended
7 10n	C12, C13, C25, C53, C54, C55, C56	C0G recommended
1 15n	C20	C0G recommended
1 22n	C16	C0G recommended
2 220n	C5, C6	
1 220n	C10	
1 470n	C29	
1 470n	C18	
1 470n	C3	
1 1u	C47	FILM (e.g. WIMA)
3 1u	C39, C42, C43	FILM (e.g. WIMA)
1 1u	C1	FILM (e.g. WIMA)
1 4.7u	C11	
4 10u	C9, C15, C28, C38	10u; 35V or higher voltage rating
1 22u	C17	22u; 25V or higher voltage rating
4 22uF	CB1, CB2, CB3, CB4	Haible: 10u for CB1, CB2
1 47u	C14	
4 100u	C30, C33, C36, C50	1x 25V or higher voltage rating (near TDA1022 ICs)
2 470uF 35V	C57, C58	470u; 35V or higher voltage rating

SEMICONDUCTORS

2 AA143	D15, D16	or similar Germanium Diode (marked "Germanium")
13 1N4148	D1, D2, D3, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14	DIODE
1 ZF10 (D02C2)	D4	or similar 10V / 500mW Zener Diode

2 TDA1022	IC16, IC18	BBD chip (not manufactured anymore. Make sure you get some before you buy the PCB.)
1 CD4007UB	IC13	Dual COMPLIMENTARY PAIR plus INVERTER
1 CD4013B	IC5	Dual D FLIP FLOP, set/reset
1 CD4049UB	IC6	Hex inverting CMOS BUFFER
4 BC550C	Q1, Q4, Q5, Q6	NPN Transistor
2 BC560C	Q2, Q3	PNP Transistor
1 BF245A	J1	N-Channel Junction FET transistor
1 BF545A	J1S	Alternative to BF245A - Do not install both!
3 LF412N	IC17, IC19, IC24	Dual BiFET OpAmp low offset
1 LM13700 (LM	IC9	National Dual OTA with buffers.
1 LM1458N	IC15	MC1458 Dual OpAmp low bandwidth
1 LM301A	IC10	OpAmp with external compensation
1 LM3046	IC1	NPN Transistor Array in SMT
1 LM324N	IC4	OP AMP
1 LM358N	U1	Dual Op-Amp
4 LM4558N	IC11, IC14, IC20, IC21	RC4558 Dual op-Amp
1 OPA2134	IC8	Dual Op-Amp
2 TL074P	IC7, IC12	OP AMP
1 TL082P	IC3	OP AMP
	*AC POWER SUPPLY ONLY:	
2* 1N4002	DR17, DR18	1A Diode (the big ones)
1 LM317	UR1	VOLTAGE REGULATOR
1 LM337	UR2	VOLTAGE REGULATOR
1* B80C1500	B1	Bridge Rectifier (round)
1 1k_TC	R28	TEMPCO resistor, 3000ppm/K ... 3500ppm/K or just use an ordinary 1k resistor. V/Oct tracking isn't that good anyway.
4 BEAD	F1, F2, F3, F4	
2 47R	R36, R131	
1 51R	R73	
1 160R	R127	
2 240R	R148, R151	
1 470R	R35	
2 620R	R89, R98	
1 820R	R68	
5 1k	R54, R57, R59, R61, R104	
2 1k5	R90, R95	
1 2k	R39	
1 2k2	R108	
2 2k7	R149, R152	

1 3k3	R80	
2 4k7	R105, R119	CORRECTED!
1 5k1	R126	
3 5k6	R74, R88, R94	
2 6k8	R77, R106	
1 8k2	R70	
14 10k	R9, R12, R44, R62, R69, R71, R78, R79, R83, R132, R138, R140, R143, R146	
5 15k	R21, R40, R41, R51, R601	
1 20k	R128	
9 22k	R72, R136, R137, R139, R141, R142, R144, R145, R147	
4 30k	R22, R34, R115, R123	
9 33k	R38, R43, R48, R49, R50, R75, R82, R87, R93	
2 39k	R114, R124	
1 43k	R27	
4 47k	R63, R64, R105, R119	R105 R119 CORRECTED!
8 51k	R16, R17, R46, R47, R52, R91, R96, R133	
3 62k	R23, R112, R121	
2 68k	R111, R120	
1 82k	R25	
2* 82k	R150, R153	
28 100k	R101, R3, R4, R6, R7, R11, R15, R18, R19, R20, R37, R45, R66, R84, R85, R86, R92, R97, R99, R100, R102, R103, R116, R117, R118, R125, R129, R130	
1 120k	R60	
3 150k	R1, R2, R56	
1 220k	R31	
1 300k	R42	
1 470k	R5	
2 510k	R109, R110	
1 680k	R76	
5 1M	R10, R13, R55, R58, R65	
1 2M2	R14	
1 3M3	R81	
3 10M	R8, R30, R53	
1 22M	R26	
Trim pots (see pcb layout for dimensions)		
1 500R	MAX_CLK	
1 1k	FILTER	
1 5k	BBD_BIAS	
1 20k	V_OKT	Multiturn
1 50k	CLK_LOW	
3 100k	CLK_TUNE, LONG_RESO, SHORT_RESO	