

Winlink HF Simulator Ver 2a/2b

Device	QTY	As Built QTY	Value	Note	Pkg
C1, C9, C11, C12, C13, C18	6	6	0.1uf	X5R, X7R, 50V	0805
C14	1	1	.15uf	X5R, X7R, 50V	0805
C3, C4, C5, C6, C7, C8	6	6	.01uf	X5R, X7R, 50V	0805
C2, C11, C19, C24, C17	5	3	10uf	X5R, X7R, 16V	0805
C15, C16, C23, C22, C20, C21	6	6	2.2uf	X5R, X7R, 16V	0805
R1, R2, R3, R4	4	4	1.2k		0805
R5, R6	2	2	4.7k		0805
R7, R8, R9, R10, R11, R12, R13, R14, R22, R37, R29	11	8	10k		0805
R20, R30, R31, R15, R16, R17, R18, R19	8	8	120 Ohms		0805
R23	1	0	240 Ohms		0805
R21	1	0	470 Ohms		0805
R27, R35, R25, R28	4	4	100k		0805
R32, R24	2	2	0 Ohms		0805
R26, R34	2	2	1k		0805
Q1	1	0	IRLML6244TR		SOT-23
L1, L2, L3	3	1	1K @100 MHz		0805
U1	1	1	Teensy 4.0	Processor, with pins	
U2, U3	2	2	PEC11R-4230F-S0024	Encoder	
U4	1	1	AP7313-18SRG	1.8v LDO	SOT-23
U5	1	1	SGTL5000	Audio Codex	QFN32
U6	1	0	PVT312LSPBF	SS Relay	6-SMD

U7		1	1	OPA2322AID	Dual Op-Amp	8-MSOP
J1		1	0	P02EK381V2	Wire Connector, 2 pin	
J2, J3		2	2	STX-3120-3B	1/8 in Stero Audio Jack	
P1		1	0	4 pin, .1in Male Pins	Male Pins	2.54mm
P2		1	1	14 pin, .1in header	13.59mm tall	2.54mm
P3		1	0	9 pin, .1in header	13.59mm tall	2.54mm
P4		1	1	5 pin, .1in header	13.59mm tall	2.54mm
U1 Socket for Teensy 4.0		2	0	14 pin, .1in header	8.5mm tall	2.54mm
U1 Socket for Teensy 4.0		2	2	14 pin, .1in header	7 mm tall	2.54mm
D1, D2, D4		3	0	LED Amber		0805
D3		1	0	Led Green		0805
		2	2	Knob, .250 Shaft	Black	
		0	0	Case, Poly	Case, Gray	
		1	1	Case, Poly	Case, Gray	
		4	4	Case PCB, Screws	4/24, 3/8 in	
PCB		1	1	Circuit Board		
LCD		1	1	2.8in TFT LCD	320x240, No Touch Panel	
PCB Assembly		1	1	PCB Assembly		
Shipping Cost, Misc		1	1			
Duty		1	1			
Alt Parts						
C16, C23, C20, C21					47uf 10v 0805 X5R	
C16, C23, C20, C21					22uf 10v 0805 X5R	

Most small parts are priced at 100 each

Mfg Part Number	Mfg	Cost (100's)	Total		
C0805C104M5RACTU	Kemet	0.05	0.30		Substitute pa
CC0805KRX7R9BB154	Yageo	0.07	0.07		Substitute pa
C0805C103J5RAC7210	Kemet	0.05	0.30		Substitute pa
C0805C106K4PACTU	Kemet	0.07	0.21	C19, C24 Not Installed	Substitute pa
CC0805KRX5R7BB225	Yageo	0.08	0.48		
			0.00		
			0.00		
RC0805FR-071K2L	Yageo	0.02	0.08		Substitute pa
RC0805FR-074K7L	Yageo	0.02	0.04		Substitute pa
RC0805FR-0710KL	Yageo	0.02	0.16	R22, R29, R37 Not Installed	Substitute pa
					Substitute pa
RC0805FR-07120RL	Yageo	0.02	0.16		Substitute pa
RC0805FR-07240RL	Yageo	0.02	0.00	Not Installed	Substitute pa
RC0805FR-07470RL	Yageo	0.02	0.00	Not Installed	Substitute pa
RC0805FR-07100KL	Yageo	0.02	0.08		Substitute pa
RC0805FR-070RL	Yageo	0.02	0.04		Substitute pa
RC0805FR-071KL	Yageo	0.02	0.04		Substitute pa
			0.00		
IRLML6244TRPBF	Infineon	0.18	0.00	Not Installed	alt part: 2N70
			0.00		
			0.00		
BK2125HS102-T	Taiyo Yuden	0.40	0.40	L2, L3 Not Installed	
			0.00		
	PJRC	22.95	22.95		
PEC11R-4230F-S0024	Bourns	1.56	3.12		
AP7313-18SAG-7	Diode Inc	0.19	0.19		
SGTL5000XNAA3	NXP	3.03	3.03		
PVT312LSPBF	NXP	2.84	0.00	Not Installed	

OPA2322AID	TI	1.49	1.49		
			0.00		
P02EK381V2	Kobiconn	0.49	0.00	Not Installed	
STX-3120-3B	Kycon	0.49	0.98		
			0.00		
		0.68	0.00	Not Installed	I2C Connecto
ESW-114-23-L-S	Samtec	2.46	2.46		
ESW-109-23-L-S	Samtec	1.24	0.00	Not Installed	For 2.2in dis
ESW-105-23-L-S	Samtec	1.05	1.05		
			0.00		
PPPC141LFBN-RC	Sullins	0.68	0.00		
76341-314LF	FCI	1.40	2.80	Prefered part, 4-point contact	
LTST-C171AKT	Lite-On	0.08	0.00	Not Installed	
LTST-C171KGKT	Lite-On	0.08	0.00	Not Installed	
			0.00		
420063B14	APEM	2.81	5.62		
JG-22450A*01	PolyCase	0.00	0.00	ARSFI, Special Part number, machine and silkscr	
DC-45PMBYT*01	PolyCase	22.00	22.00	Un-Machine case	
		0.02	0.08		
		3.00	3.00		
MSP2806	China	6.00	6.00		Alt Parts
		0.00	0.00		
		0.00	0.00		
		0.00	0.00		
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		Total:	77.13		
GRM21BR61A476ME15L	Murata	0.37			
GRM21BR61A226ME51L	Murata	0.15			

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MSP2807 with Touch