

**Vacuum Tube Quartz Clock BOM**

Rev. 4 1/2/17

Note-1: 9900 in Ord Qty indicates commodity or on-hand code

Note-2: Tube manufacturers are given for reference only.

Note-3: Cap voltages are minimum values. Higher is okay.

Note-4: Film and ceramic cap tolerance is 5% unless specified.

Note-5: Resistors are 1/2W 5% unless specified.

Note-6: cer = ceramic, PP = polypropylene, film = polyester

Note-7: Total cost is imprecise: doesn't include items on hand and DOES include extras for stock and vendor considerations. Some items may be extravagant.

Note-8: Not shown: Screws, nuts, lockwashers.

Qty	Ord qty	Cost	Ext Cost	Schem Ref Nos.	Vendor	Part#	Value	Description	Comments
1	1	\$6.14	\$6.14	P1	Mouser	562-311010-01		AC line cord	
1	9900	\$0.98	\$0.00	J1	Mouser	562-738W-CX2-01		AC-outlet, single, panel mount, Qualtek	
1	4	\$0.92	\$3.68		Lowes	364270		brace, corner (pack of four)	for mounting perfboard for two trimmer caps
3	3	\$0.56	\$1.68	C10, C13, C32	Mouser	75-561R10TCCQ10BA	10pF 250V	capacitor, cer, C0G	
1	10	\$0.14	\$1.40	C21	Mouser	140-102N6-330J-RC	33pF 250V	capacitor, cer, C0G, 22mm LDs	
1	3	\$0.86	\$2.58	C16	Mouser	75-561R10TCCQ47	47pF 250V	capacitor, cer, C0G	
1	9900			C33			56pF 250V	capacitor, cer, C0G	
2	3	\$0.71	\$2.13	C11, C12	Mouser	667-ECW-HC3F242J	2.4nF 250V	capacitor, PP, 3KV part used for lead size/spacing	orig 5nF
1	3	\$0.93	\$2.79	C3	Mouser	75-561R10TCCT10	100pF 250V	capacitor, cer, C0G	
5	10	\$0.63	\$6.30	C17, C18, C19, C20, C25	Mouser	667-ECW-H8513JV	0.051 250V	capacitor, PP	orig 0.05
1	9900		\$0.00	C23			0.022 50V	capacitor, film	orig 0.02
1	9900		\$0.00	C26			47uF 25V	capacitor, electrolytic	orig 50uF
3	9900		\$0.00	C27, C30, C31			22uF 450V	capacitor, electrolytic	orig 16uF
1	2	\$0.80	\$1.60	C28	Mouser	667-ECW-FD2W155J	1.5uF 350V	capacitor, PP	orig 0.5uF
4	9900		\$0.00	C4, C9, C24, C29			0.1 400V	capacitor, film	
1	10	\$0.29	\$2.90	C5	Mouser	FK14C0G2E821J	820pF 250V	capacitor, cer, C0G	short leads, orig 790pF
1	10	\$0.19	\$1.94	C6	Mouser	810-FK18C0G2E471J	470pF 250V	capacitor, cer, C0G	short leads
4	9900		\$0.00	C7, C14, C15, C22			10nF 250V	capacitor	
1	9900		\$0.00	C8			680pF 100V	capacitor, PP	orig 1000pF
1	9900		\$0.00	C1			2-8pF 250V	capacitor, trimmer	
1	9900		\$0.00	C2			4.5-65pF 250V	capacitor, trimmer	
1	1	\$27.78	\$27.78		Mouser	563-AC-1421	3x9x15"	chassis, aluminum	
1	1	\$13.50	\$13.50		Amazon/Bud	BPA-1522	9x15"	cover, bottom for AC-1421 chassis	forgot to order from Mouser
1	9900		\$0.00	Y1	eBay		120kHz	crystal, vintage, Northern Engring Labs T9-D series	Bill's original was bad, see text
1	9900		\$0.00	F1			2A slow	fuse	
1	2	\$2.50	\$5.00	F1	Fry's	576-03450603HX020	1.25" fuses	fuse holder	
1	1	\$1.71	\$1.71	L1	Mouser	546-1535B	2.5mH	inductor	Hammond, DCR=9
1	1	\$60.71	\$60.71	L2	Mouser	546-193J	10H 150mA	inductor (choke)	Hammond version rated 200mA
1	1	\$3.45	\$3.45	J2	Mouser	3542-2		jack, pin tip, red, Pomona, for AC output test point	Mfr# 3542-2
1	2	\$3.50	\$7.00	J3	Digikey	501-1091-ND		jack, pin tip, black, Pomona, for AC output test point	Mfr# 3542-0
1	1	\$2.87	\$2.87	NL1	Mouser	607-1050QC2	120VAC	lamp, neon, panel mount, 1050QC2, w/resistor	
1	9900							perfboard, preferably FR-4, 1.2 x 0.8"	for mounting two trimmer caps
1	1	\$9.00	\$9.00	R28	SurSalesNeb	RCV-RV4LAYS4504A	500K	pot Ohmite slot adjust	Level pot
2	2	\$6.00	\$12.00	R22, R23	SurSalesNeb	RCV-JA1L040S254	250K	pot Type J Allen Bradley Slot-Lk Nut	
2	2	\$10.95	\$21.90	R14, R19	Antique ES	R-VPEC-100KL	100K	pot Precision Electronics, Linear, 28mm	
2	2	\$10.95	\$21.90	R13	Antique ES	R-VPEC-25KL	25K	pot Precision Electronics, Linear, 28mm	
3	3	\$3.00	\$9.00	R8, R9, R18	SurSalesNeb	RCV-137-6127	10K	pot slotted Clarostat Lo Noise, 1W Lk Nt	
1	9900		\$0.00	R1			2.2M	resistor, carbon film, 1/2W	orig 2M
1	9900		\$0.00	R10			270	resistor, carbon film, 1/2W	

1	100	\$0.02	\$2.40	R15	Mouser	603-CFR-50JR-521K	1K	resistor, carbon film, 1/2W Yageo	
3	9900		\$0.00	R16, R17, R37			47K	resistor, carbon film, 1/2W	
1	9900		\$0.00	R2			33K	resistor, carbon film, 1/2W	
3	100	\$0.06	\$5.80	R20, R21, R27	Mouser	660-CF1/2C104J	100K	resistor, carbon film, 1/2W KOA	
1	9900		\$0.00	R24			270K	resistor, carbon film, 1/2W	
1	9900		\$0.00	R25			1M	resistor, carbon film, 1/2W	
1	9900		\$0.00	R29			270 1W	resistor, carbon film, 1W	orig 2W. using 2W on hand
1	100	\$0.03	\$3.00	R3	Mouser	293-62K-RC	62K	resistor, carbon film, 1/2W Xicon	
2	9900		\$0.00	R31, R39			68K	resistor, carbon film, 1/2W	
2	9900		\$0.00	R32, R33			68	resistor, carbon film, 1/2W	
3	9900		\$0.00	R34, R36, R40			1	resistor, carbon film, 1/2W	
1	9900		\$0.00	R35			47K 2W	resistor, carbon film, 2W	flameproof too small using NOS
1	9900		\$0.00	R38			10M	resistor, carbon film, 1/2W	substituting 1/4W
1	9900		\$0.00	R4			470K	resistor, carbon film, 1/2W	
2	100	\$0.03	\$3.00	R5, R26	Mouser	293-2K-RC	2K	resistor, carbon film, 1/2W Xicon	
4	9900		\$0.00	R6, R7, R11, R12			10K	resistor, carbon film, 1/2W	
1	1	\$18.00	\$18.00	R30	SurSalesNeb	(RWA) 0161	3.5K 25W	rheostat, 25W	orig 3K 20W
10	11	\$5.00	\$55.00		pacifictv.ca	K8A-8R1		socket, octal, ring mount, with snap ring, 1-11/64 hole	
1	5	\$0.26	\$1.29		eBay memotronics_lic			strain relief for round cable, hole 0.55"	
1	9900		\$0.00	S1				switch, SPST, full size toggle	
6	20	\$0.33	\$6.55	TPA, TPB, TPC, TPD, TPE,	eBay shop4x4		red and black	terminal, binding post	eBay shop4x4 "20 Pcs Speaker Amplifier Terminal Bi
12	9900		\$0.00					terminal strip, vintage, 5-posn (center gnd)	cut as needed to make smaller strips
3	100	\$0.11	\$10.71		Mouser	574-T68/C		terminal, wire-wrap, Vector (pack of 100)	for terminals on trimmer perfboard (see drawing)
1	1	\$41.23	\$41.23	T1	Mouser	546-125D		transformer, output, 10W, Hammond	
1	1	\$61.31	\$61.31	T2	Mouser	546-270DX		transformer, power, Hammond 550VCT 6.3 5.0	orig 500VCT
1	1	\$12.95	\$12.95	V1	eBay-Vintageel	6SJ7GT	6SJ7GT	tube, NOS	eBay shop:Vintageelectron NOS JAN Sylvania
1	1	\$19.50	\$19.50	V2	McShane	6SN7WGT	6SN7	tube, NOS	"NOS/NIB"
4	4	\$14.15	\$56.60	V3, V4, V5, V6	Antique ES	T-6SL7GT-SOVT ID:4765	6SL7	tube, NOS	Sovtek new production, 4 working well
1	1	\$16.15	\$16.15	V7	Antique ES	T-6V6 ID:4775	6V6	tube, NOS, metal	"NOS"
1	1	\$29.75	\$29.75	V8	McShane	5Y3WGTA JAN Philips	5Y3	tube, NOS	Philips, "NOS, JAN boxed"
1	1	\$8.50	\$8.50	V9	McShane	0D3 GE NOS	VR150/0D3	tube, voltage regulator	"NOS in white box"

**\$580.70** Not accurate. See Note-7.

132 components (sum of column-A)