

Mark Keppinger Tube Theremin Component List

Keppinger "Bass" Tuning with
Hasten "Concert" Tuning Option

Component	Value	Specifications
Tubes		
V1	6J5	Medium-Mu Triode
V2	6H6	Twin Diode
V3	6J5	Medium-Mu Triode
V4	6SN7	Medium-Mu Twin Triode
V5	6J5	Medium-Mu Triode
V6	5Y3	Full-Wave Rectifier
V7	OD3/VR150	Voltage Regulator
V8	6SN7	Medium-Mu Twin Triode
V9	6V6	Beam-Power Tetrode
V10	6V6	Beam-Power Tetrode
Resistors		
R1	100K Ω	1/2 WATT
R2	10K Ω	2 WATT
R3	100K Ω	1/2 WATT
R4	10K Ω	2 WATT
R5	220K Ω	1/2 WATT
R6	100K Ω	1/2 WATT
R7	10K Ω	2 WATT
R8	220K Ω	1/2 WATT
R9	1M Ω	1/2 WATT
R10	10K Ω	1/2 WATT
R11	39K Ω	2 WATT
R12	1M Ω	1/2 WATT
R13	1M Ω	1/2 WATT
R14	100K Ω	1/2 WATT
R15	15K Ω	2 WATT
R16	1.5K Ω	1/2 WATT
R17	39K Ω	2 WATT
R18	1M Ω	1/2 WATT
R19	1K Ω	1/2 WATT
R20	39K Ω	2 WATT
R21	10K Ω	1/2 WATT
R22	1M Ω	1/2 WATT
R23	10K Ω	1/2 WATT
R24	100K Ω	1/2 WATT
R25	100K Ω	2 WATT
R26	220K Ω	1 WATT
R27	220K Ω	1 WATT
R28	270 Ω	5 WATT
R29	3K Ω	10 WATT
R30	100K Ω	1/4 WATT

Component	Value	Specifications
Capacitors		
C1	0.1 μ F	400V, High Quality
C2	200 pF	400V, High Quality
C3	9-50 pF	Trimmer, compression type
C4	0.001 μ F	400V, High Quality
C5* **	750 pF	400V, High Quality
C6	9-50 pF	Trimmer, compression type
C7	0.001 μ F	400V, High Quality
C8	0.047 μ F	400V, High Quality
C9**	680 pF	400V, High Quality
C10	9-50 pF	Trimmer, compression type
C11	***	Variable, panel mount, 1/4" (6.35mm) shaft
C12	0.001 μ F	400V, High Quality
C13	0.047 μ F	400V, High Quality
C14	0.001 μ F	400V, High Quality
C15	0.001 μ F	400V, High Quality
C16	0.047 μ F	400V, High Quality
C17	47 pF	400V, High Quality
C18	47 pF	400V, High Quality
C19	0.047 μ F	400V, High Quality
C20	0.047 μ F	400V, High Quality
C21	N/A	
C22	N/A	
C23	0.047 μ F	400V, High Quality
C24	47 μ F	100VDC, Polarized
C25	0.047 μ F	400V, High Quality
C26	0.047 μ F	400V, High Quality
C27	0.047 μ F	400V, High Quality
C28	47 μ F	100VDC, Polarized
C29	0.047 μ F	400V, High Quality
C30	22 μ F	450VDC, Polarized
C31	22 μ F	450VDC, Polarized
C32	100 μ F	50VDC, Polarized
C33	0.1 μ F	50VDC, Polarized

*may need (2) caps in parallel to get this value

** substitute 430pF for "concert" tuning

*** Suggested ranges are 5-15 pF and 10-20 pF - may be obtained by removing all but one rotor plate from an air capacitor

Jacks	Value	Specifications
J1	1/4" (6.35mm)	Phone Jack, Mono
J2	1/4" (6.35mm)	Phone Jack, Stereo
J3	1/4" (6.35mm)	Phone Jack, Mono

Data provided by:

Mark Keppinger
Steven Hasten
Howard Mossman
Vincent Renaud
Philip Neidlinger

Note: While every effort was made to ensure accuracy, no guarantee is offered or to be implied.

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Resistors		
R31	100 Ω	1 WATT Potentiometer, Linear Taper 1 WATT Potentiometer, Audio Taper
R32	100 Ω	
VR1	5K Ω	
VR2	500K Ω	
Transformers		
T1	1608	Hammond Audio (Output) Transformer
T2	270EX	Hammond Power Transformer
Inductors		
L3	4.7 mH	Iron Core
L7	12 H	Choke (DC Filter), Iron Core Hammond 193B
Miscellaneous		
Tube Socket		(8) Octal
Fuse Holder		
Power Switch		SPST, rated for line voltage
Connectors		Male/Female, Hex or Octal
Terminal Strip		
Fuse		3A

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Air Coils							
L1	Volume Oscillator Coil	Wire	Windings	Turns	Winding Length	Form Diameter	Form Length
		#28 Enamel	1	150	2.20" (55.9mm)	1.60" (40.64mm)	3.30" (84mm)
Notes: Coil is close wound. Coil is tapped at 50 turns. (see schematic)							
L2	Volume Antenna Coil	Wire	Windings	Turns	Winding Length	Form Diameter	Form Length
		#32 Enamel	1	600	5.65" (143.51mm)	3.10" (78.74mm)	10.25" (260.4mm)
revised 01/18/10							
Notes: Coil is close wound.							
L4, L5	Pitch Oscillator Coil	Wire	Windings	Turns	Winding Length	Form Diameter	Form Length
		#28 Enamel	1	150	2.20" (55.9mm)	2.25" (57.15mm)	3.30" (84mm)
Notes: Coil is close wound. Coil is tapped at 50 turns. (see schematic)							
L6	Pitch Antenna Coil	Wire	Windings	Turns	Winding Length	Form Diameter	Form Length
		#32 Enamel	1	1200	11.30" (287mm)	3.10" (78.74mm)	12.50" (317.5mm)
revised 01/18/10							
Notes: Coil is close wound.							
General Coil Notes:		Coil forms are resin-impregnated phenolic. Coil forms are painted black with Krylon® spray paint. CAUTION: other types / brands of paint may be conductive/inductive! Use ONLY brass hardware to mount oscillator coils.					

- Revision 2 Form Diameter of coils L2 and L6 were 3.30"
- Revision 3 Added R31 and R32 to list
- Revision 4 Added note for C11

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