THD107A – Bill Of Materials
11/07

Part Description	QTY	Ref ID * =MPK	Value	Mouser P/N (Unless indicated Otherwise)	Notes and Comments (L/S in In.)
CAPACITORS					**Polyester = Mylar**
Film, polyester	**2**	C1,C2	100pf	505-FKP2100/100/5	Op Amp compensation .2 L/S
Film, polyester	**1**	C3	.001uF	581-BQ014D0102J	(102 = 1N = .001uF) .2 L/S
Film, polyester	**1**	C4	.0022uf	581-BQ014D0222J	(222 = 2N2 = .0022uF) .2 L/S
Ceramic (Bypass)	**9**	*C5-C11 C15,C16	**.1uF** or **.01uF**	147-72-104-RC **Stock up!**	.2 L/S Monolithic or multilayer OK (104 = 100N = .1uf) Mini Parts Kit)
Electrolytic	**2**	C13,C14	**10uF,25v+**	140LLRL35V10-RC	16V OK for 12V PWR (35V P/N)
Film, Timing High	**1**	C12	*.001uF	147-72-104-RC	Polyester OK.(L/S up to .400")
Film,Timing Med.	**1**	C17	*.47uF	75-MKT1818447064	Polyester OK (L/S up to .950")
Film,Timing Low	**1**	C18	*2.2uF	5989-100V2.2-F	Polyester OK (L/S up to 1.1")
				For Addtl. Info	**See Links Below (Timing Caps)**
DIODES					(Included In Mini Parts Kit)
Silicon Switching	**2**	***1n4148**		512-1N4148T26A	1N914 is equivalent. **Stock up!**
GP 1A, 50V rectifier	**2**	*1N4001		625-1N4001-E3	Any general purpose rectifier 1A+, 50V+ will work here.
FUSES					
PTC Polyfuse resettable	**2**	PTC (2 places)	60R020	576-060R002U	May be replaced w/ 10R, 1/4W metal film resistors
Integrated Circuits (IC's)					
Dual OTA	**1**	IC1	13700	513-NJM#13700D	16DIP pkg
Quad Op Amp	**2**	IC2,IC3	**TL074**	595-TL074CDG4	14DIP pkg **Common. Stock up!**
Quad NOR CMOS	**1**	IC4	CD4001	511-4001	14DIP pkg
TRANSISTORS					**04,06=Common Parts. Stock Up!**
NPN Gen. Purpose	**1**	Q1	**2N3904**	512-2N3904TA	TO-92 Flat fwd, L-R, EBC
PNP Gen. Purpose	**2**	Q2,Q3	**2N3906**	512-2N3906TFR	TO-92 Flat fwd, L-R, EBC
N-Channel JFET Amplifier	**1**	Q4	MPF-102	512-MPF102	TO-92 Flat fwd, L-R, DSG

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RESISTORS			**R=Ω**	1% metal film P/N's	¼ W, 5% types OK
	1	R2	390R	271-390R-RC	
.02each / 200	**8**	R3-R10	**1K**	271-1K-RC	**Common size, Stock up!**
Tempco 3500ppm **This OR R11A. Not both!**	**1**	R11	2K, 3500 PPM, 1/4W+	See Comments	2K Tempco from MFOS, MSE (not required for typical LFO use, and can be added later)
This, OR R11. Not Both!	**1**	R11A	2K	271-2K-RC	Use this while waiting for Tempco. Snip R11A out then.
	1	R12	4K7	271-4.7K-RC	
	1	R13	5K6	271-5.6K-RC	
.02 each / 200	**11**	R14-R24	**10K**	271-10K-RC	**Common size. Stock up!**
	1	R25	12K	271-12K-RC	
	1	R26	15K	271-15K-RC	
	1	R27	18K	271-18K-RC	
	2	R28,R29	22K	271-22K-RC	
	***3**	R30,R31	47K	271-47K-RC	*3rd for Optional Modulation Input
	1	R32	56K	271-56K-RC	
.02 each / 200	**6**	R33-R38	**100K**	271-100K-RC	**Common size. Stock up!**
	1	R44	150K	271-150K-RC	
	1	R45	3M3	291-3.3M-RC	Note: not available in 271-series
TRIMPOTS					All 3 are Multi-turn type .100 l/s
V/Octave trim 20T, 1/2w Cermet	**1**	R1	100R	858-67WR100LF	Triangle-lead P/N. In-line .1 leads also supported on PCB
Offset, Connect 20T, 1/2w Cermet	**2**	R39,R40	100K	858-67WR100K	Triangle-lead P/N. In-line .1 leads also supported on PCB
POTS					MANY Pot types Supported On PCB. (OR use 3 pin .100 headers.)
Get 4 if using R-Aux and J-Aux for 2nd modulation input.	**3**	R41,R42, R43	100K Linear (B)	313-1230F-100K	Alpha 12mm PCB mount D-shaft P/N given. Blacet type P/N is: Digi-Key P3T9503-ND.

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Part Description	QTY	Ref ID * =MPK	Value	Mouser P/N Unless indicated Otherwise	Notes and Comments
SOCKETS	**2**	IC1-4	58 Pins	575-113130	P/N is 30Pin Socket strips. Cut 6@7p, and2@8p.
HEADERS/ IO	*				*Included in Mini Parts Kit
MOTM / Frac	**1**	N/A	.156 x 4pins	571-6404454 (Tin)	
Euro / Doepfer	**1**	N/A	*2x5/ *2x8, .100	517-2316-6121TG	2x5 for basic power (Yes, 517, not 571)
Pots, Range Switch	**5**	R41-43,S1, R-Aux	*3 pin, .100 MTA	571-6404543 (Tin)	4 may be optional in your build! Using one for S1 is advised.
CV- ins and Outputs	**11**	J1-J6, CV-Sum, J-AUX, LED x 4,	*2 pin, .100 MTA	571-6404542 (Tin)	6 may be optional in your build! If add-on PCB is being used With THD107A, J3-J6 need to be 3 pin. J-Aux and CV-Sum are optional.
Opt. PWR header		N/A	*6pin, .100 MTA	571-6404546 (Tin)	Optional Power header. Distributes Doepfer bus signals
Outs with Add-on	**4**	J3-J6	*3pin MTA	571-6404543 (Tin)	Replaces J3-J6, 2pin types above
MTA connectors	**?**	N/A	2 and 3 pos.	See link below	As needed by your build decisions
Panel Jacks	**6**	N/A	^Mono 3.5 mm Jacks	16PJ012	Build determined. Minimum Qty. shown (Blacet P/N given.)
SWITCH	**1**	S1	SPDT	108-MS3T1B1M1QE-EVX	Miniature Toggle, (Bat type P/N)
LEDs, PANEL	**4**	N/A	Red, 3mm	859-LTL-1CHE	Build determined. (3mm P/N)

Note: R1 is located so it may be laid down to allow V/Oct. tuning through a small access hole the front panel of a completed module (Buchla style). Use this P/N: 858-67PR100LF instead of the one listed above (It has a triangle lead layout to give the pot more secure mounting if this enhancement is desired.) The optional CV-Sum header will look to be in the way if you choose this option. The designed solution is to place the CV-SUM header (or direct wiring) on the opposite side of the PCB. Similarly, the J1-V/Oct. and J2-Env. headers are intended for the solder side of the PCB in a Frac or Euro build. Kind regards, Randal

HELPFUL LINKS-PART information

http://www.vishay.com/docs/26009/mkt1818.pdf **Timing Cap information**
http://www.mouser.com/catalog/632/720.pdf
http://www.mouser.com/catalog/632/710.pdf
http://www.mouser.com/catalog/632/1223.pdf .100 MTA Headers Information (Gold/Tin P/N's)
http://www.mouser.com/catalog/632/1222.pdf .100 MTA IDC connector information
http://www.mouser.com/catalog/632/1199.pdf .100 Strip headers Single and double, RA and straight
http://www.mouser.com/catalog/632/119.pdf **LED information**