TB-EFA v1.6.2 BOM

The part numbers may seem strange at first.
To try and simplify things, the parts that come directly from the original 303 schematic maintain the 303 original part numbering.
The parts added for this design are generally numbered 300+ for the voice board, and 400+ for the control board.
Things like IC, pots, jacks etc don't follow this numbering. They just start from part number 1 etc.

Part substitution is fine, if you have lots of 1% resistors, then go for it.
The only thing to watch is the height of electrolytics, low profile ones can be used (an example Mouser part is provided)
However standard 11mm electrolytics can be used, just lay them flat against the board (where space permits) or place them at 45degrees to the board.
Voltages also not an issue, anything over 16v should be good, maybe 25v for the 47uF in the power filtering.

Standard 11mm clearance between the two boards, so just keep that in mind.

If you are sourcing your own transistors, Aliexpress has loads of modern 733,945,1815 etc, I've tested these and they work fine and have >300hfe mostly
In the Mouser column, I've either placed a part number or search terms. Due to part shortages etc, the string that will find you suitable parts to choose from what is in stock etc.

Value	Count	Location	Mouser	Alternatives	Notes	
Resistors						
5% Carbon 1/4W						
22R	1	R150	Search "CFR 1K 1/4w" etc			
100R	4	R95,R130,R132,R152				
2K2	12	R67,R68,R69,R70,R71,R98,R108,R124, R125,R126,R133,R162				
4K7	1	R97A			Combines with VR97 to tweak rez chirp - 10K fixed in original 303 - so if no B5K pots, try 10K and R100 here or such	
10K	16	R47,R61,R64,R65,R94,R96,R109,R112, R115,R116,R142,R143,R144,R145,R148, R149				
22K	8	R110,R111,R117,R120,R129,R134,R146,R151				
33K	1	R62*			Initisl drive level into filter - reduce for overdrive!	
47K	3	R46,R119,R127				
68K	1	R138				
100K	11	R66,R72,R73,R99,R113,R114,R122,R139 R140,R141,R300				
220K	4	R63,R121,R128,R131				
1M5	1	R123				
Capacitors						
MLCC						
10n	1	C305	mlcc leaded 0.01uf		2.5mm leg spacing	
100n	1	C303	mlcc leaded 0.1uf		2.5mm leg spacing	
					2.5mm leg spacing	
Tantalum						
1uF/35	2	C42,C62	581-TAP105K035SRS		2.5mm leg spacing	
Polyester (Nichicon QYX "yellow") - Panasonic "red" - old style "greenies" or poly box in theory						
10n	2	C20*,C21	"qyx 10nf 50v"		5mm leg spacing	C20* - Marked C22 input to VCA on 303 service notes, but already C22 in filter - should be C20 !
18n	1	C18	"qyx 18nf 50v"		5mm leg spacing	The "missing" 4th pole - could try 33n here to make 4pole?!
33n	4	C19,C24,C26,C36	"qyx 33nf 50v"		5mm leg spacing	
47n	1	C54	"qyx 47nf 50v"		5mm leg spacing	
100n	3	C25,C27,41	"qyx 100nf 50v"		5mm leg spacing	
Electrolytic						
0.33u/25	1	C302	50NW50R33MEFC4X5		Low profile, but normal 11mm will fit laying flat	
1u/50	7	C13,C14,C15,C22,C23,C29,C38			C17 - can use higher capacitance, say 10uF and will allow hotter signal into filter - especially if overdriving with R62 at lower values	
10u/16	6	C16,C17,C30,C37,C40,C72				
47u/25	4	C28,C55,C300,C301				

Diodes					
1N4148	8	D24,D26,D27,D28,D29*,D35,D36,D37	512-1N4148		D27 appears twice on the 303 service notes, input to amp should be D29
1N5817	2	D301,D302	511-1N5817		

IC					
78L05	1	IC2	511-L78L05ABZ		
BA662	1 or 0	IC1 or IC1A		OML BA662 Clone	**For rev 1.6.1 and before, there is only a BA662 footprint (IC1)**
BA6110	0 or 1	IC1B		BA6110 original	**For rev 1.6.2 boards with footprint for both IC1A and IC1B ONLY FIT ONE OF THESE**
					Your Partial kit will either have a BA662 ir a BA6110, these are interchangable and the board caters for EITHER type.
4066	1	IC3	595-CD4066BE	MC14066B,HD14066BP	
4013	1	IC4	595-CD4013BE		

Transistors					
2SC1583	2 or 0	Q12,Q21	NOS rare part	*	If you use Q12 and Q21 leave Q12A,Q12B,Q21A and Q21B empty
2SC2291	1 or 0	Q22	NOS rare part	*	If you use Q22 leave Q22A and Q22B empty
2SA733P	5	Q9,Q10,Q31,Q36,Q38	NOS rare part	2SA1015,2SA608**	
2SC945P	15 or 21	Q11,Q13,Q14,Q15,Q16,Q17,Q18,Q19			
		Q20,Q23,Q32,Q35,Q37,Q40,Q41			
		[Q12A,Q12B,Q21A,Q21B,Q22A,Q22B]	NOS rare part	2SA1815,2SC536F**	If you use Q26A and Q26B then leave Q26 empty
2SK30A-Y	1	Q39	NOS rare part		

* To be clear, the board has space for either. If you don't have any 1583,2291 as real ones are getting harder to find and can be costly, a matched pair of the NPN you are using will be fine. So if you are using a matched pair, use the A and B locations, and ignore the 5 pin footprints.
** Ignore most of the voodoo around transistor types, the original 303 used all NPN types listed during production, so any will be fine.

These are provided in the partial kit option.

Misc					
B5K	1	VR97-CHIRP	Thonk etc	9mm alpha	See notes re R97A - can use B10K with different resistor at R97A
B50K	1	VR7-ACCENT	Thonl etc	9mm alpha	
B50K-**DUAL**	1	VR4-REZ	Thonk etc	**9mm alpha dual**	
B500K	1	VR-TM3-WIDTH	Thonk etc	9mm alpha	
A50K	2	VR3-CUTOFF, VR5-ENV-MOD	Thonk etc	9mm apha	
A100K	1	VR1-DRIVE	Thonk etc	9mm alpha	
A1M	1	VR6-DECAY	Thonk etc	9mm apha	
PJ301M	5	U1-U5	Thonk etc		Thonkiconn
PWR	1				10pin euro power header or 2x5 pin header
1x10	1				1x10 male header 2.54mm
1x4	3				1x4 male header 2.54mm
1x10	2				1x10 female header 2.54mm
1x4	1				1x4 female header 2.54mm
11mm	3	Standoff			
3mm	6	Screws			