GS1-F version x.2.1 BOM

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 1015,1815 etc, I've tested these and they work fine
In the Mouser column, I've either placed a part number or search terms. Due to part shortages etc, using that string will find you suitable parts to choose from what is in stock etc.

NOTE: The kit comes with two lower voice boards, you only need to build one based on the use of either BA6110 or BA662 op amps - the rest of the BOM is the same.
Components in blue are on the upper control board.

these items are included in the partial DIY kit version

Value	Count	Location	Mouser	Alternatives	Notes
Resistors					
Thermistor					
NTC-10K	1	R46	995-3DA100K		
5% Carbon 1/4W					
100R	1	R8	Search "CFR 100ohm 1/4w" etc		
560R	9	R12,R13,R18,R19,R24,R25,R30,R31,R51			
1K	1	R50			
1.5K	3	R44,R49,R60			
1.8K	1	R42			
2.2K	1	R58			
5.6K	1	R43			
6.8K	1	R36			
10K	9	R35,R39,R41,R48,R52,R53,R56,R121,R122			
15K	6	R15,R21,R27,R33,R40,R47			
22K	4	R16,R22,R28,R34			
27K	1	R10			
33K	3	R9,R11,R29			
68K	6	R14,R17,R20,R23,R26,R32			
100K	9	R1,R2,R3,R4,R5,R6,R45,R54,R57			
150K	1	R7			
220K	1	R59			
270K	1	R37			
1M	2	R38,R55			
Capacitors					
MLCC					
100n	2	C303,C304	mlcc leaded 0.1uf	2.5mm leg spacing	
Polystyrene					
470pf	4	C5,C6,C7,C8	23PS147	Polystyrene, or C0G MLCC if not available.	
Polyester (Nichicon QYX)					
2.2n	1	C2***	qyx 2.2nf 50v	5mm leg spacing	This is the HPF cap, you can try different values here 4.7nf, 2.2nf and 1nf all give differing levels of HPF.
47n	2	C11,C27	qyx 10nf 50v	5mm leg spacing	C27 is just for the LED, so any ceramic, mlcc or poly works fine here.
Electrolytic					
1u/50	1	C10	1u 50v electrolytic radial	Low profile, but normal 11mm will fit laying flat as marked	
10u/25 BP	2	C4,C9	UVP1E100MDD1TD	**BI-POLAR!!!**	
47u/25	2	C300,C301		Low profile, but normal 11mm will fit laying flat as marked	

Diodes

1SS133M	6	D1,D2,D3,D4,D14,D15	1SS133M	
1N5817	2	D301,D302	511-1N5817	
3mm LED	1	D5	Red	Any standard 3mm LED
3mm LED	1	D6	Blue	Any standard 3mm LED

IC

4558	1	IC1	RC4558P	Any variant of the 4558 op amp
BA6110	4	IC2,IC3,IC4,IC5	NOS rare part	Included in partial kit
BA662	4	IC2,IC3,IC4,IC5	Rare part	Only need either BA6110 or BA662 depending on PCB being built

To be clear, you either need 4x BA6110 or 4x BA662 depending on which lower board you are building - you do not need both.

Transistors

2SK30A-GR	4	Q1,Q2,Q3,Q4	NOS rare part	2SK30A	Most variants will work
2SA1015	3	Q7,Q8,Q9	NOS rare part	2SA733,2SA1115	Q7 label on some PCB maybe wrong - it should be the 1015 with extra line on footprint
2SC1815	6	Q5,Q6,Q10,Q11,Q12,Q13	NOS rare part	2SC945,2SC2603	

These are provided in the partial kit option.

Trimmer

100K	1	VR9-FREQ	652-3362P-1-104LF	3362
10K	1	VR10-WIDTH	652-3362P-1-103LF	3362

Misc

A100K	3	VR1-IN1,VR2-IN2,VR3-IN3	Thonk etc		Song Heui tall trimmer pot
B100K	3	VR4-MOD1,VR5-MOD2, VR6-MOD3	Thonk etc		Song Heui tall trimmer pot
A100K	1	VR8-REZ	Thonk etc		9mm alpha
B100K	1	VR7-CUTOFF	Thonk etc		9mm alpha
PJ301M	7	U1-U7	Thonk etc		Thonkiconn
ON-ON	1	SW1	612-200MSP1T1B1M2RE	Thonk cheaper etc	Sub-mini on-on switch
PWR	1	SV1			10pin euro power header or 2x5 pin header
2x4	1	JP3			2x4 male header
1x3	1	JP2			1x3 male header
1x2	1	JP1			1x2 male header
2x4	1	JP3			2x4 female header
1x3	1	JP2			1x3 female header
1x2	1	JP1			1x2 female header
11mm	2	Standoff			
3mm	4	Screws for standoff			

PCB