

GS1-A2 version 2.0.4 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

However standard 11mm electrolytics can be used, **IN ALL BUT ONE (C5)**, 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.

Components in [blue](#) are on the upper control board.

 these are included in the partial DIY kit

Value	Count	Location	Mouser	Alternatives	Notes
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Resistors

5% Carbon 1/4W

560R	3	R9,R10,R32	Search "CFR 100ohm 1/4w" etc		
1K	3	R13,R20,R31			
1.5K	2	R30,R41			
2.2K	1	R39			
3.3K	1	R15			
6.8K	1	R27			
8.2K	1	R23			
10K	7	R12,R14,R26,R29,R37,R33,R34			
15K	4	R16,R22,R25,R28			
22K	1	R18			
33K	1	R11			
47K	1	R19			
68K	1	R17			
100K	5	R21,R35,R38,R4,R5			
150K	2	R24,R7			
180K	2	R1,R2			
220K	1	R40			
1M	2	R8,R36			

Capacitors

MLCC				
47p	1 C2	mlcc leaded 47pf		2.5mm leg spacing
100n	2 C303,C304	mlcc leaded 0.1uf		2.5mm leg spacing

Polyester (Nichicon QYX)				
10n	1 C4	qyx 10nf 50v		5mm leg spacing
47n	2 C6,C17	qyx 10nf 50v		5mm leg spacing

Electrolytic				
1u/50	1 C5	ESS105M050AB2AA		Must be low profile!
10u/25 BP	2 C1,C3	UVP1E100MDD1TD		BI-POLAR!!!
47u/25	2 C300,C301			Must be low profile!

Diodes				
1SS133M	4 D1,D2,D3,D4	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 IC3	RC4558P		Any variant of the 4558 op amp
BA6110	1 IC1B	NOS rare part	BA662	Included in partial kit

Transistors				
2SK30A-GR	1 Q1	NOS rare part	2SK30A	Most variants will work
2SA1015	4 Q3,Q5,Q6,Q7	NOS rare part	2SA733,2SA1115	
2SC1815	6 Q2,Q4,Q9,Q10,Q8,Q11	NOS rare part	2SC945,2SC2603	

These are provided in the partial kit option.

Trimmer				
1M	1 VR10	652-3362P-1-105LF		3362
100K	1 VR8	652-3362P-1-104LF		3362
20K	1 VR9	652-3362P-1-203LF		3362

Misc				
A100K	2 VR1-IN1,VR2-IN2	Thonk etc		Song Heui tall trimmer pot
B100K	3 VR4-MOD1,VR5-MOD2, VR7-GAIN	Thonk etc		Song Heui tall trimmer pot
PJ301M	6 U1-U6	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
1x5	1 JP1			1x5 male header

1x2	1 JP2
1x4	1 JP3
1x5	1 JP1
1x2	1 JP2
1x4	1 JP3
11mm	3 Standoff
3mm	6 Screws for standoff

1x2 male header
1x4 male header
1x5 female header
1x2 female header
1x4 female header

PCBS