

## ==== MB-6582 CS Parts List =====

Part Name	Quantity	Notes	Supplier 1	Supplier 2
Pactec PT-10	1	See Note 1	<a href="#">Mouser</a>	<a href="#">Pactec</a>
25mm M3 Countersunk Head Bolt	4	See Note 2		
M3 Nut	8	See Note 2	<a href="#">Mouser</a>	
M3 Flat Washer	8	See Note 2	<a href="#">Mouser</a>	
M3 Spring Washer	8	See Note 2	<a href="#">Mouser</a>	
10mm M3 Threaded Spacer	25	See Note 3	<a href="#">Mouser</a>	
6mm M3 Screws	25	See Note 3	<a href="#">Mouser</a>	
M3 Spring Washers	25	See Note 3	<a href="#">Mouser</a>	
JB Weld	1	See Note 4	<a href="#">Mouser</a>	
13mm Tactile Switches (Alps)	48	See Note 5	<a href="#">Mouser</a>	
4x20 Character LCD	1	See Note 6/7	<a href="#">CrystalFontz</a>	<a href="#">Divineo (Cheap!)</a>
3mm LEDs	113	See Note 8	<a href="#">Mouser (Red)</a>	<a href="#">SmashTV</a>
1N4148 Signal Diodes	50	See Note	<a href="#">Mouser</a>	<a href="#">Voti.nl</a>
Rotary Encoders	15	See Note 9	<a href="#">Mouser</a>	<a href="#">Voti.nl (Cheaper)</a>
Knobs (Such as Alps)	15	See Note 10	<a href="#">Albs.de</a>	Check Forum Bulk Orders
40mm Fan (Optional)	1	See Note	<a href="#">Mouser</a>	<a href="#">Performance PC's</a>
Front Panel & Back Panel	1	See Note	<a href="#">Schaeffer</a>	Check Forum

**GM5X5X5 Part list**

Part	Value	Count	Footprint/ lead spacing	Part #	Supplier
Crystal	16Mhz	1	HC18/U	Q1	
LED 3mm	-	11	-	LED1 - LED11	
Diode	1N4148	5	-	D1 - D5	
Optocoupler	6N138	5	DIP 8	IC8 - IC12	
GM5	GM5	1	TQFP32	IC1	
<b>Hex inverter(*2)</b>	74HC14	5	DIP 14	IC3 - IC7	
USB Type B socket	-	1	-	J1	
DIN 5 (MIDI) socket	-	10	MAB5SH	IN1 - IN5, OUT1 - OUT5	
3-pin SIL header	-	10	100 mil	IN1 - IN5, OUT1 - OUT5	
2-pin SIL header	-	5	100 mil	J2, J8, S1 - S3	
EEPROM	24C04	1	DIP8	IC2	
Resistor	220 Ohm	15	0207	R1 - R3, R6 - R8, R11 - R13, R16, R18, R31 - R33, R39	
Resistor	<b>1k Ohm(*1)</b>	18	0207	R5, R10, R15, R17, R20 - R30, R35, R38, R40	
Resistor	27 Ohm	2	0207	R36, R37	
Resistor	4.7k Ohm	5	0207	R4, R9, R14, R19, R34	
Polyfilm/Ceramic cap	100nF	6	200 mil	C2 - C7	
Electrolytic capacitor	10uF/16V	1	100 mil	C1	
Ceramic capacitor	22pF	2	100 mil	C8, C9	
Ceramic capacitor	1uF	1	100/200 mil	C10	
Jumper	-	5	100 mil	-	

DIP8 IC Socket	IC2, IC8 - IC12	6	7.62mm	<a href="#">Mouser</a>	
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(\*1) Note that 11 of the resistor listed as 1k in the above list (R21 - R30 and R40) are for the LEDs. The values for these resistors depends on the color of LEDs you plan to use and the brightness you wish to achieve. Suggested values:

LED color	Value
red	220-1k
yellow	470-2k
green	470-1k
blue	1k-4.7k

(\*2) The inverters can be left out when no status LEDs are needed. Leaving them will require soldering some additional bridges which will be described in a section in this document later on.

**Don't forget to order 6 DIP8 and 5 DIP14 IC sockets and pin headers (16 pins total).**

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