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

Part Name	Quantity	Notes	Supplier 1	Supplier 2
Pactec PT-10	1	See Note 1	Mouser	Pactec
25mm M3 Countersunk Head Bolt	4	See Note 2		
M3 Nut	8	See Note 2	Mouser	
M3 Flat Washer	8	See Note 2	Mouser	
M3 Spring Washer	8	See Note 2	Mouser	
10mm M3 Threaded Spacer	25	See Note 3	Mouser	
6mm M3 Screws	25	See Note 3	Mouser	
M3 Spring Washers	25	See Note 3	Mouser	
JB Weld	1	See Note 4	Mouser	
13mm Tactile Switches (Alps)	48	See Note 5	Mouser	
4×20 Character LCD	1	See Note 6/7	CrystalFontz	Divineo (Cheap!)
3mm LEDs	113	See Note 8	Mouser (Red)	SmashTV
1N4148 Signal Diodes	50	See Note	Mouser	Voti.nl
Rotary Encoders	15	See Note 9	Mouser	Voti.nl (Cheaper)
Knobs (Such as Albs)	15	See Note 10	Albs.de	Check Forum Bulk Orders
40mm Fan (Optional)	1	See Note	Mouser	Performance PC's
Front Panel & Back Panel	1	See Note	Schaeffer	Check Forum

GM5X5X5 Part list

Part	Value	Count	Footprint/ lead spacing	Part #	Supplier
Crystal	16Mhz	1	HC18/U	Q1	Mouser
LED 3mm	-	11	-	LED1 – LED11	Mouser (RED)
Diode	1N4148	5	-	D1 – D5	Mouser
Optocoupler	6N138	5	DIP 8	IC8 – IC12	Mouser (White ;))
GM5	GM5	1	TQFP32	IC1	
Hex inverter(*2)	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	**1k Ohm(*1)**	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	8 Pin	6	7.62mm	IC2, IC8 - IC12	Mouser
DIP14 IC Socket	14 Pin	5	7.62mm	IC3 - IC7	Mouser
SIL Header	16 Pins	-	-		

(*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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