

# Giling Computer Applications

**GCA145**

Revised: Dec 2, 2017

Bill Of Materials

Version V1.3

Qty	Ref	Part
4	R1,R 14, R15, R16	1 Kohm
1	R2	2,2 Kohm
2	R5,R6	22 Kohm
2	R7, R8	3,3 Kohm
4	R10..R13	33 Ohm
8	R9, R17, R18, 19, R21..24	10 Kohm
6	R20, R26, R27, R28, R29, R31	470 Ohm
1	R25	3.9 Kohm
2	R30, R32	4,7 Kohm
1	P1	Trimmer 20 Kohm
1	P2	Trimmer 2 Kohm
2	R3 ,R4	0,47 Ohm 2 Watt
1	C1	Elco 4700 uF, minimum 35V, radial
1	C2	Elco 100 uF, minimum 35V, radial
1	C3	Elco 1000 uF, minimum 25V, rad
4	C4, C5, C6, C10	Capacitor 100 nF ceramic (104) 2,5 mm pitch
2	C11, C12	Elco 10 uF, minimum 16 V, rad
1	C7	Capacitor 10 nF 5mm pitch (103)
2	C8, C9	Capacitor 15 – 22 pF 2,5 mm pitch
3	Led1, Led4, Led6	Led 3mm green
2	Led2, Led3	Led 3mm yellow
1	Led5	Led 3mm red
9	D1..8, D10	Skottky Diode 1N5818
1	D9	Scottly Diode 1N5822
2	D11, D12	Diode 1N4148
3	D13, D14, D15	Diode 1N4003
4	T1..4	Transistor BC547b
1	VR1 !!!!!!!	LM2576t-adj
1	VR2 !!!!!!!	7805 TO-220
1	U1	PIC16F886 with firmware
1	U2	L297
1	U3 !!!!!!!	L298
1	U4	LTV844 or 2 x LTV824
1	L1	Inductor FED100
1	F1	PFRA185 Multifuse 1,85 Amp
1	F2	PFRA050 Multifuse 0,5 Amp
1	X1	Crystal 20 Mhz
2	JP1,JP2	3 pin header with jumper
1	J1	AKL320-04+ AKL314-04
3	J2, ICSP1 ,J2C1	PSS254/5G
1	J4	PSS254-3G with jumper
3	J5 ,J6, J8	PSS254-10G
1	J7	PSS254-8G
2	K1,K2	Relais Omron G5V-1 5 or 6 Volt
1	GR1	KBU6B
4	GR2..GR5	B80C1500
1	socket	DIL-28s
1	socket	DIL-20
1	socket	DIL-16
3	connector	PSK254-10W
3	connector	PSK254-5W
45	Pins	PSK-pins
4	Bolts	M4x8
4	Supports	M4x10
2	bolts	M3x8
1	cooling	V PR127/94-M3
3	clips	MC 725
1	Hall sensor + magnet	for use to zero-point detection

**Important !!!!!**

For assembling cooling, VR1,VR2 and U3 :

First mount cooling device with screws, then insert VR1, VR2 and U3, bending wires so that they are flat to cooling, then fix clamps to hold IC's and after that solder IC's.