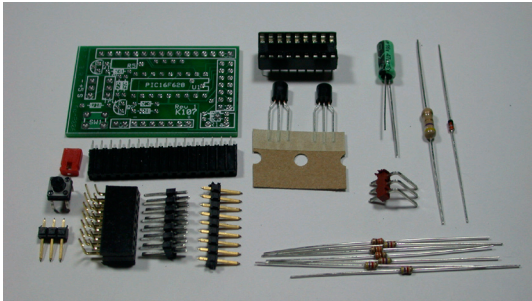


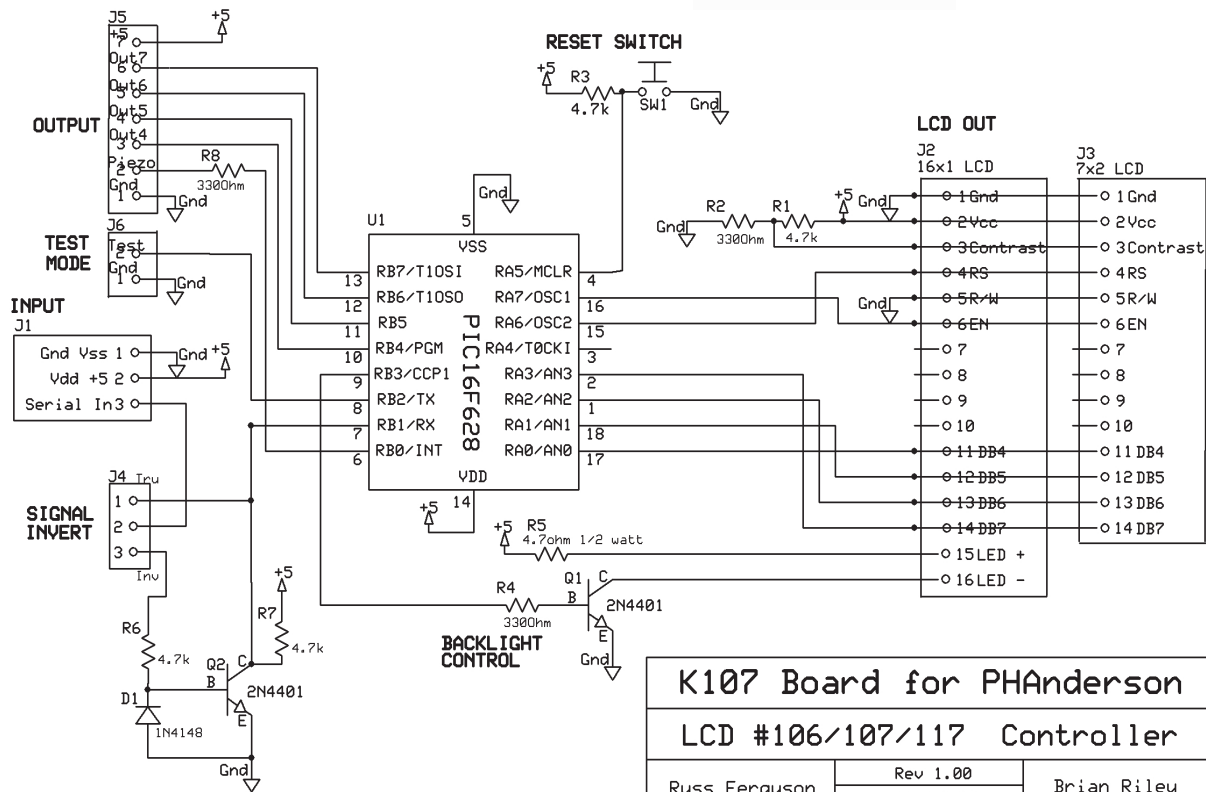
K107 LCD Controller Board

A Flexible Serial Backpack Kit

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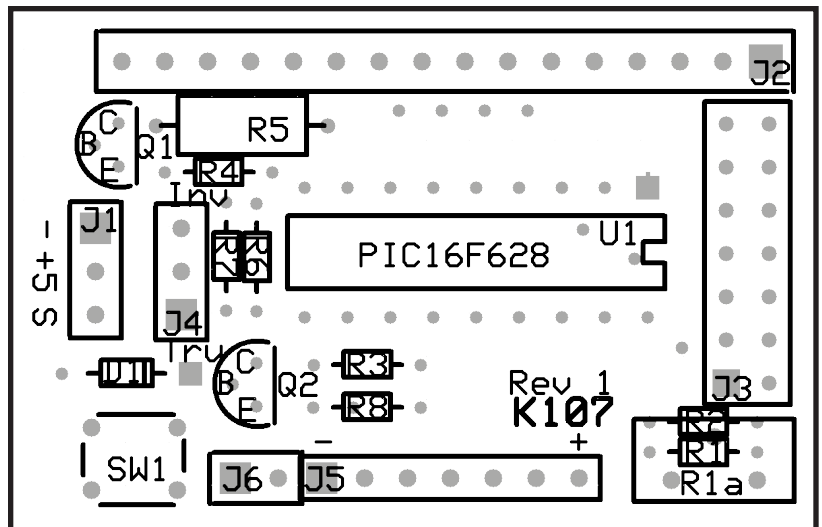


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Full Documentation is available at:
<<http://www.wulfden.org/k107/k107-1.pdf>>

Preliminary 5/23/2006



R1	4.7 Kohm - 1/8 watt resistor (see text)
R2	330 ohm - 1/8 watt resistor (see text)
R3,R6,R7	4.7 Kohm - 1/8 watt resistors
R4	330 ohm - 1/8 watt resistor
R8	330 ohm - 1/8 watt resistor (see text)
or C1	47 uF Tantalum or electrolytic capacitor (see text)
R5	4.7 ohm - 1/2 watt resistor
D1	1N4148 OR 1N 914 diode
Q1, Q2	2N4401 - NPN transistor
U1	pre-programmed PIC 16F628/16F648A
S1	N.O. pushbutton switch (DigiKey P8006S-ND)
J1	.100 pin header right angle - 1x3
J2	.100 socket header - 1x16 (see text)
J3	.100 socket or pin header - 2x7 (see text)
J4	.100 pin header - 1x3
J5	.100 pin header - 1x7 (see text)
J6	.100 pin header - 1x2 (see text)
n/a	18 pin DIP socket for U1
n/a	push on jumper

Pin	Signal Input - J1 Description
1	Ground
2	+ 5 vdc
3	Data Input

Note - this pin arrangement was made specifically to permit easy use of a three wire black/red/white servo/lcd cable to connect the display controller to a project or breadboard. It is also the same convention used by Parallax Corp. to connect to its serial peripherals.

Pin	Signal Invert - J4 Description
1	to U1 - pin 7 (TRU jumper 1-2)
2	Data In from J1-3
3	to R8 (INV jumper 2-3)

Pin	General Outputs - J5 Description
1	Ground
2	Piezo
3	General Output 4 (107,117)
4	General Output 5 (107,117)
5	General Output 6 (107)
6	General Output 7 (107)
7	+ 5vdc

Pin	Test Mode - J6 Description
1	Ground (TEST jumper 1-2)
2	U1 - pin 8 (normal - no jumper)

Note - One good way to 'keep track' of the input configuration of the K107 is to use only a single jumper for J4 and J6. Placed on J6 the K107 is in Test Mode. Placed on J4 in one position or another it is in TTL TRU or RS232 INV input mode and you do not need to store the unused Test Mode jumper.