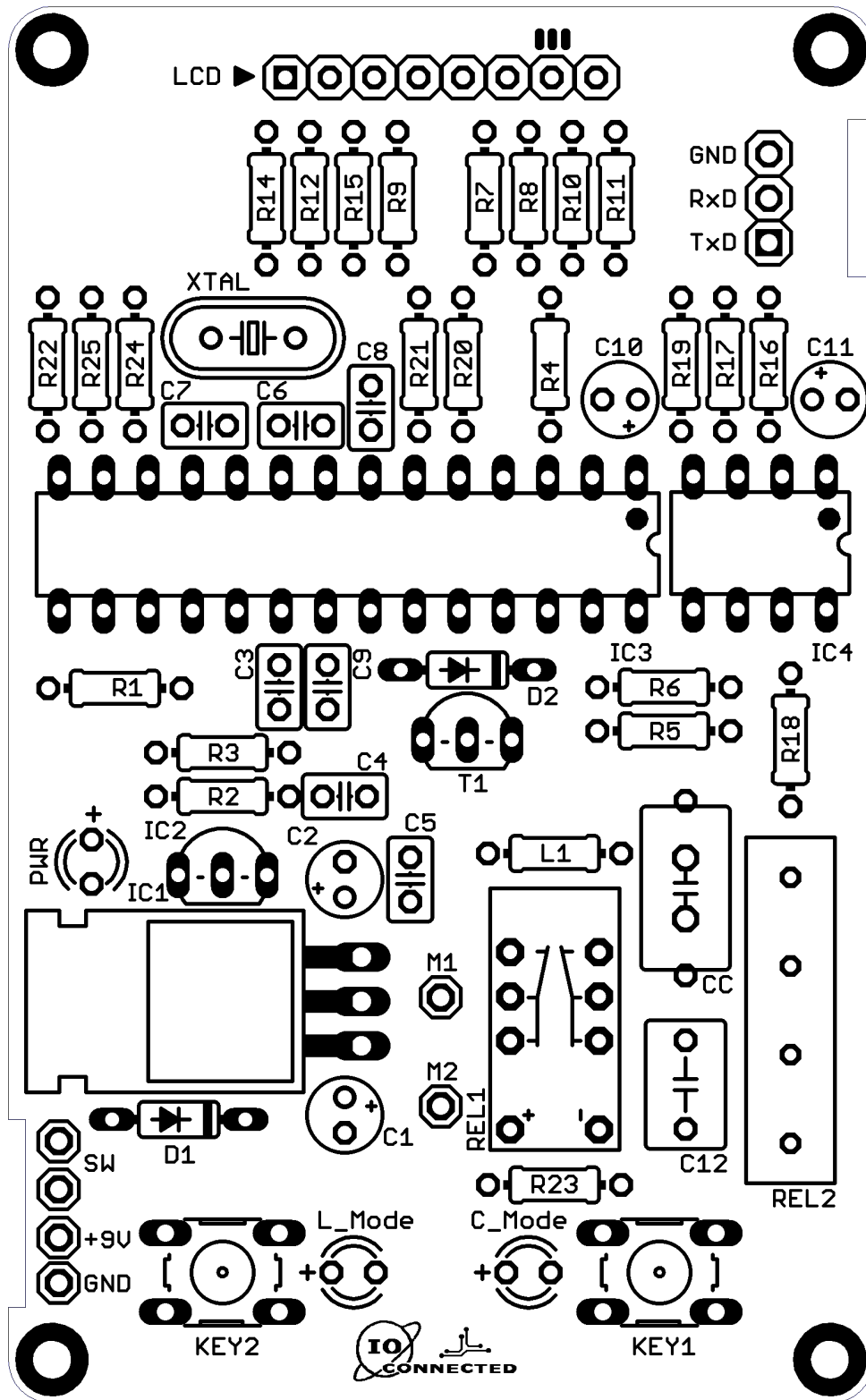


LC Meter – Layout *(UPDATED: Apr. 08, 2021)*

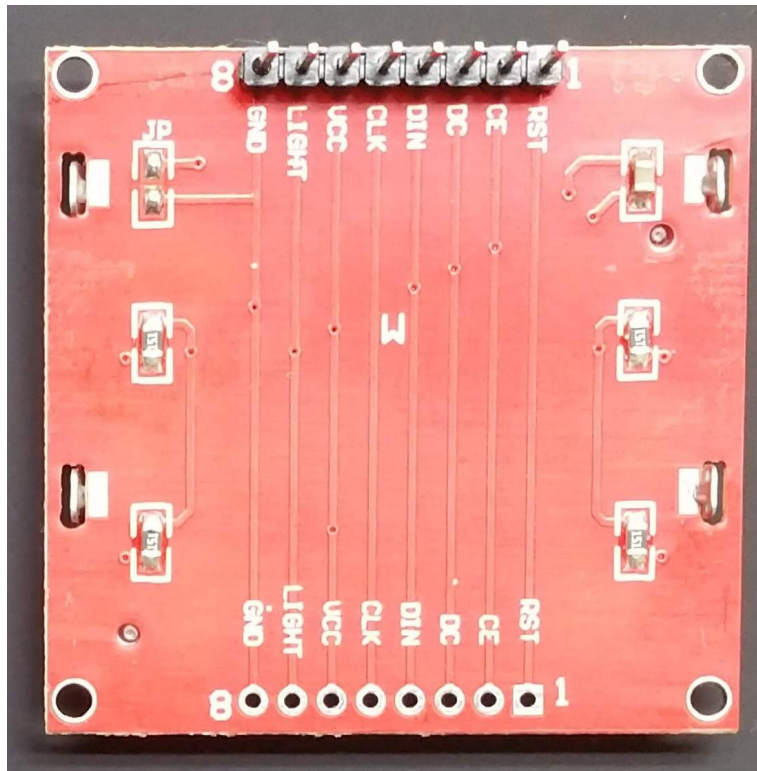


LC Meter – BOM

Qty	Value	Package	Parts
1	7805	T0220	IC1
1	LM317	T092	IC2
1	ATMEGA328P	DIP28	IC3
1	LM311N	DIP8	IC4
1	8MHz	HC49U-V	XTAL
3	1k	R-US_0204/7	R21, R24, R25
1	470R	R-US_0204/7	R1
1	330R	R-US_0204/7	R2
1	540R	R-US_0204/7	R3
1	10k	R-US_0204/7	R4
2	1k2	R-US_0204/7	R7, R10
8	2k2	R-US_0204/7	R5, R6, R8, R9, R11, R12, R15, R22
1	3k9	R-US_0204/7	R14
1	6k8	R-US_0204/7	R20
1	120R	R-US_0204/7	R23
3	100k	R-US_0204/7	R16, R17, R18
1	47k	R-US_0204/7	R19
4	10uF	CPOL-USE2-4	C1, C2, C10, C11
2	22pF	C-US025-025X050	C6, C7
5	100n	C-US025-025X050	C3, C4, C5, C8, C9
1	1000pF	C-US050-045X075	C12
1	1000pF	C-11.5X4.5	C_CAL
1	82uH	L-US0204/7	L1
1	BAT42	1N4148D035-7	D1
1	1N4148	1N4148D035-7	D2
1	BC547	TRANSISTOR_NPN	T1
1	PWR	LED_3MM	LED1
1	CMODE	LED_3MM	LED2
1	LMODE	LED_3MM	LED3
1	2UM_NA05WK	RELAY_2UMNA05WK	RELAY1
1	Reed SIL 7271-L 5V	REED_RELAY	RELAY2
1	Key1	10-XX	S1
1	Key2	10-XX	S2
1	UART	PINHD-1X03_2.54-S	JP1
1	LCD_N5110_HEADER	PINHD-1X08_2.54-S	LCD Header*

*There are many different Breakouts for the Nokia's 5110 (3310) LCD. Make sure it has the following pinout, before buying:

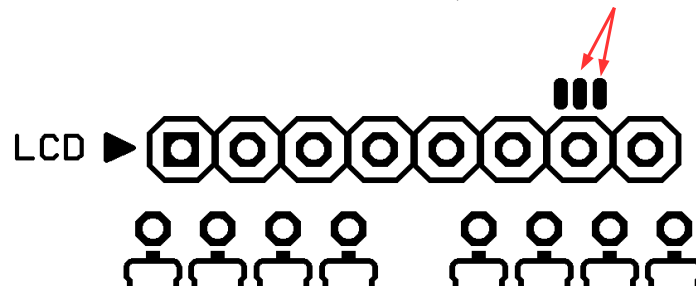
- 1 – RST
- 2 – CE
- 3 – DC
- 4 – DIN
- 5 – CLK
- 6 – VCC
- 7 – Backlight
- 8 – GND



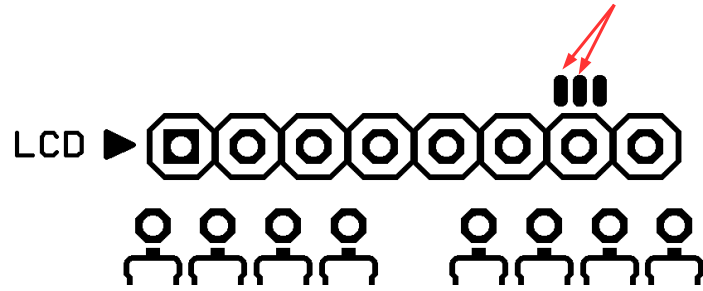
backside of the LCD

In 4 cases out of 5 the pin7 (Backlight) needs to be connected to VCC. However I also found one LCD with the exact pinout but with PIN7 (BL) connected to GND. That's why I included testpads on the PCB.

If your LCD's Backlight needs to be connected to GND, short these two pads (mid + right):



If the LCD's Backlight pin needs to be connected to VCC, short these two pads (mid + left):



*My special thanks to Mike Doty from "Hackaday" who discovered some of the errors in the original documentation, and helped me improve the LC-Meter's case.
Thanks Mike !*