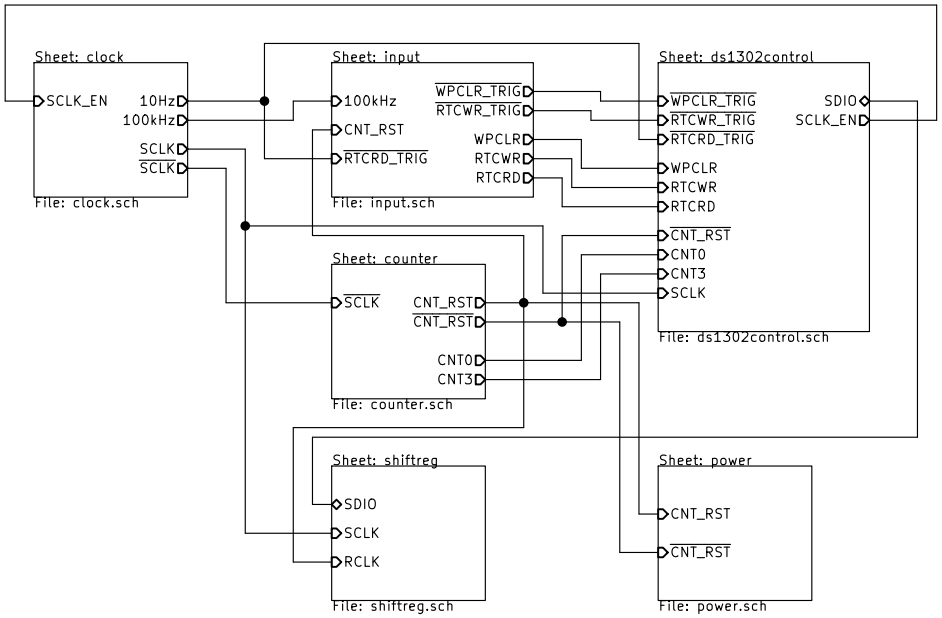
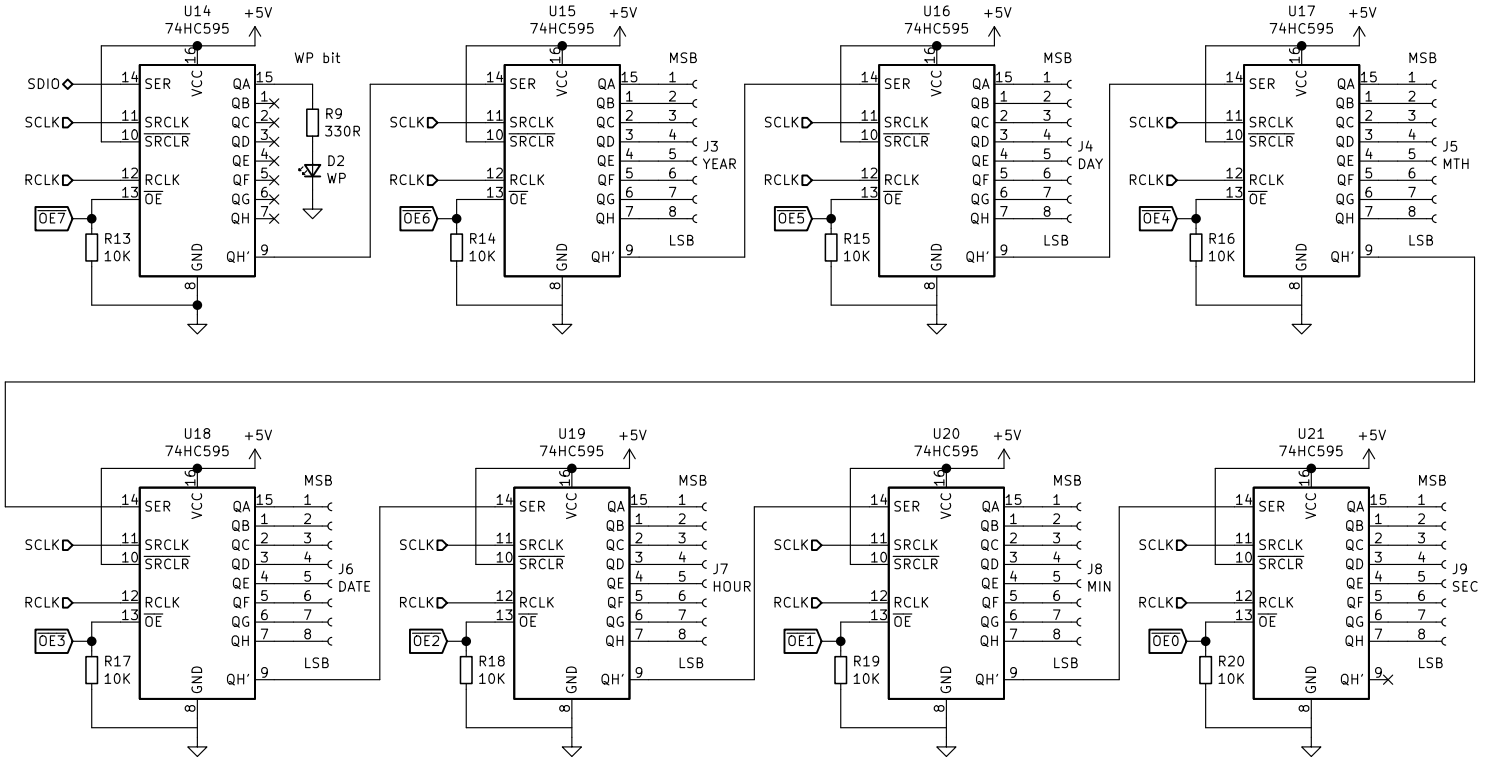
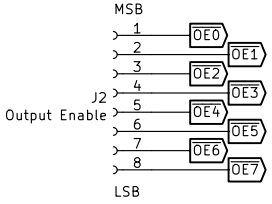


Sheet: / File: logic_ds1302.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 1/7





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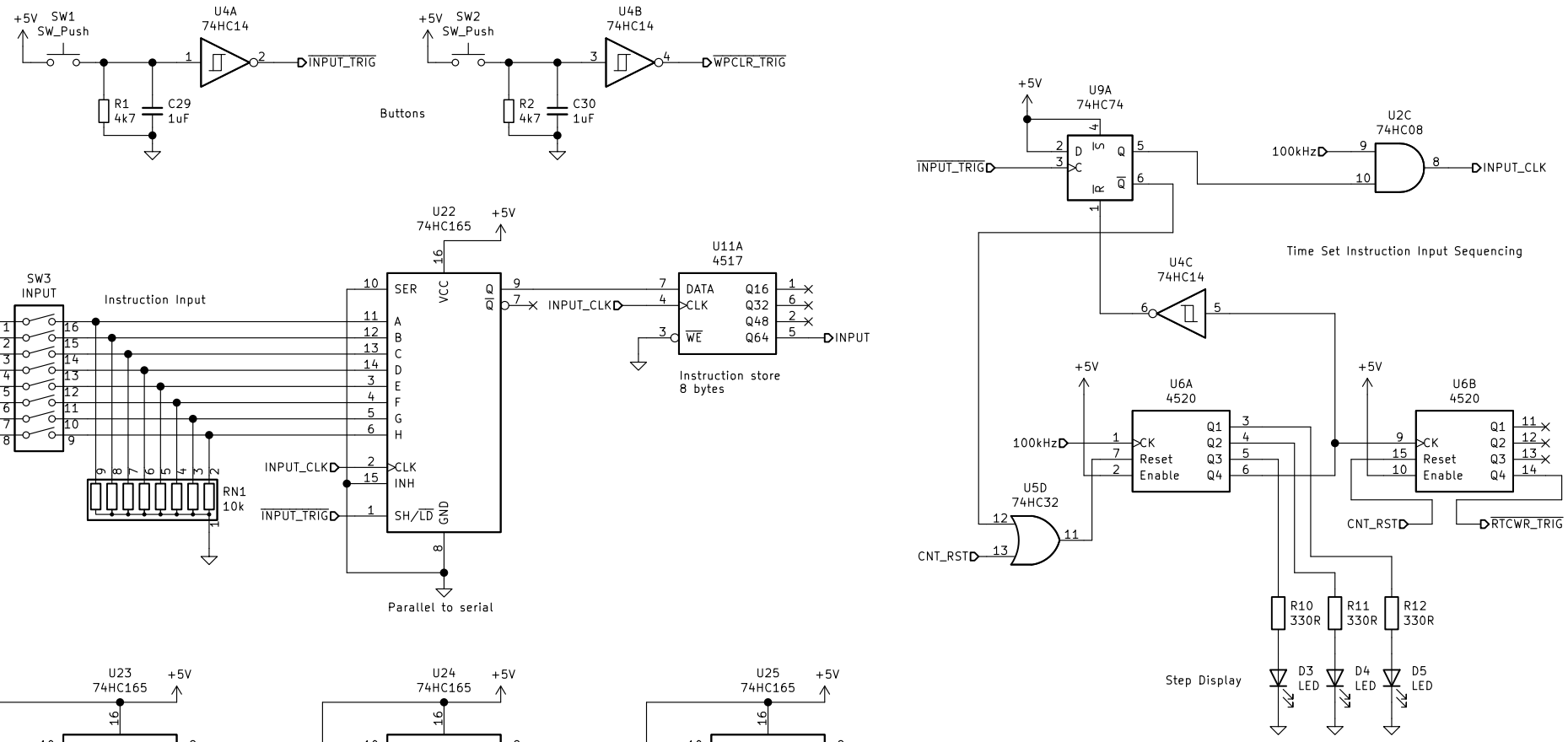
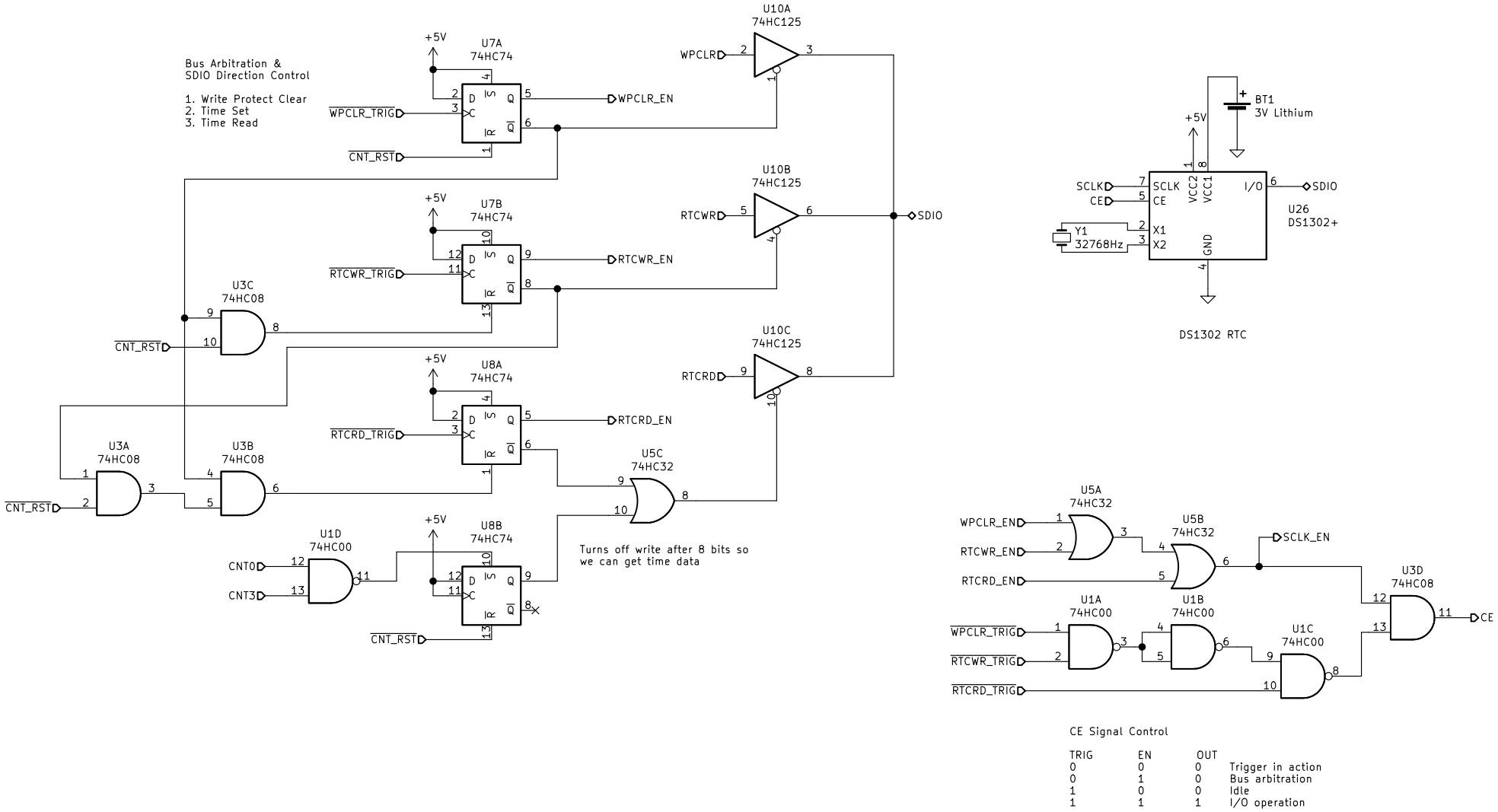
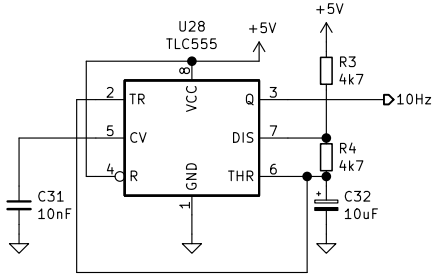
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 2/7

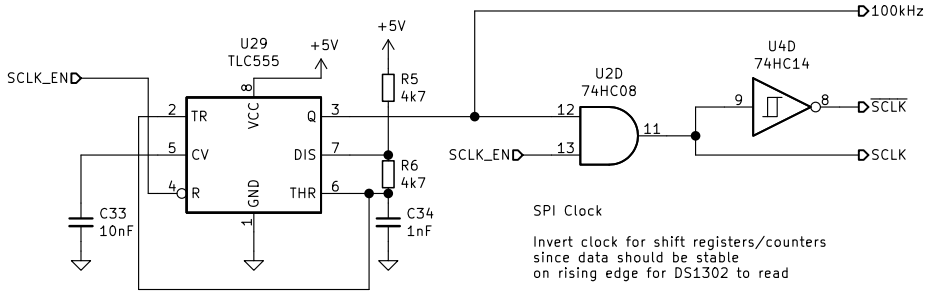

+5V
SW1
SW_Push
U4A
74HC14
INPUT_TRIG
R1
4k7
C29
1uF
Buttons
SW2
SW_Push
U4B
74HC14
WPCLR_TRIG
R2
4k7
C30
1uF
U22
74HC165
U11A
4517
SW3
INPUT
Instruction Input
SER
VCC
GND
SH/LD
CLK
INH
A
B
C
D
E
F
G
H
DATA
Q16
Q32
Q48
Q64
WE
INPUT_CLK
INPUT
RN1
10k
Instruction store
8 bytes
Parallel to serial
U9A
74HC74
U2C
74HC08
100kHz
INPUT_CLK
Time Set Instruction Input Sequencing
U4C
74HC14
U6A
4520
U6B
4520
CK
Reset
Enable
Q1
Q2
Q3
Q4
U5D
74HC32
CNT_RST
RTCWR_TRIG
R10
330R
R11
330R
R12
330R
D3
LED
D4
LED
D5
LED
Step Display
U23
74HC165
U24
74HC165
U25
74HC165
INPUT
RTCWR
0xBE
SCLK
RTCWR_TRIG
Time write cmd load
length = 8
RTCRD
0xBF
RTCRD_TRIG
Time read cmd load
length = 8
WPCLR
0x8E
WPCLR_TRIG
Write unlock cmd load
length = 16
Sheet: /input/
File: input.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.1.10)-1
Id: 3/7



Sheet: /ds1302control/		
File: ds1302control.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 4/7



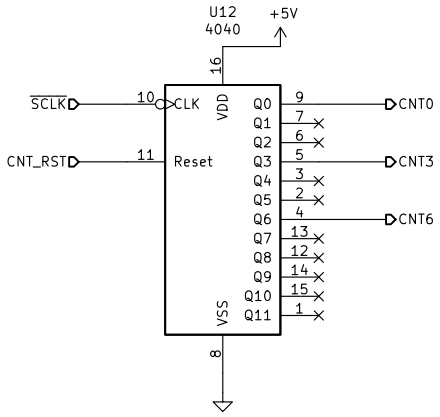
Time Read Signal Clock



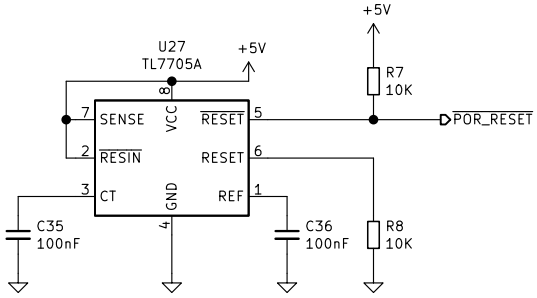
SPI Clock

Invert clock for shift registers/counters
since data should be stable
on rising edge for DS1302 to read

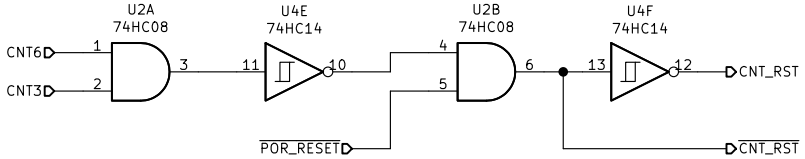
Sheet: /clock/ File: clock.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 5/7



I/O Bytes Counter

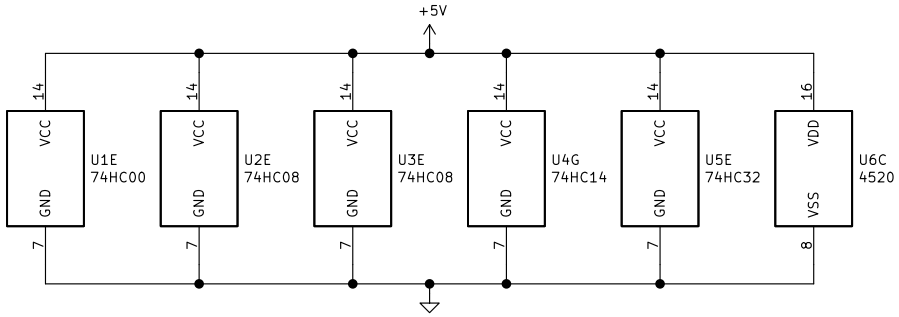


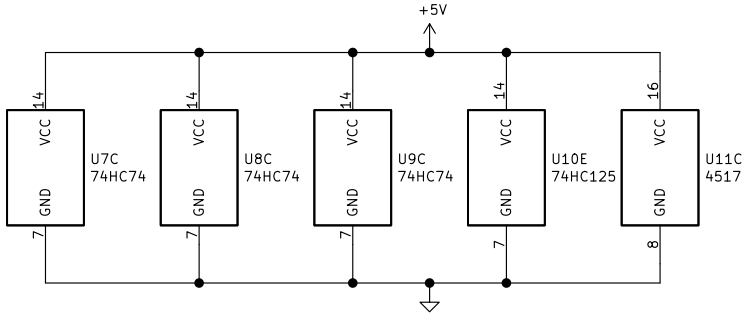
POR Reset 1.3ms



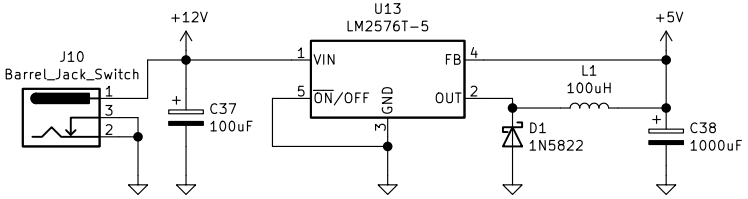
Reset Logic
- Reset on counter reaching 72
- Reset on POR

Sheet: /counter/ File: counter.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 6/7

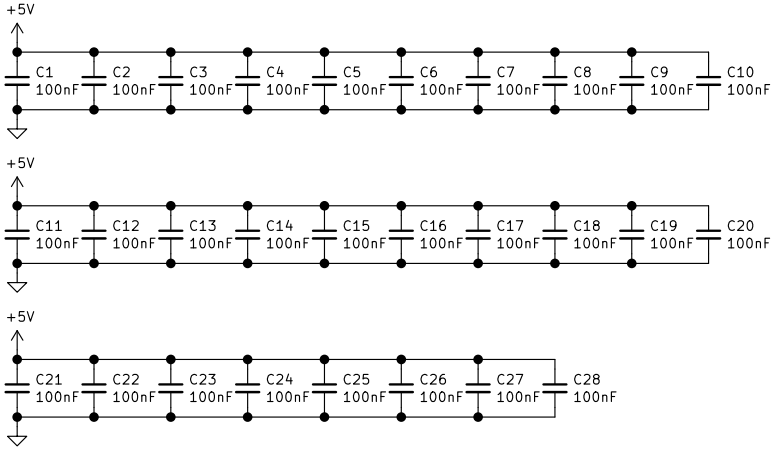




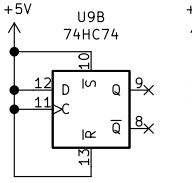
Power Units

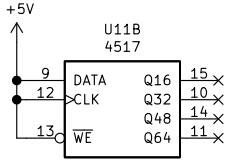


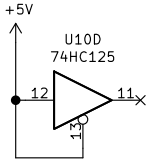
Buck Converter



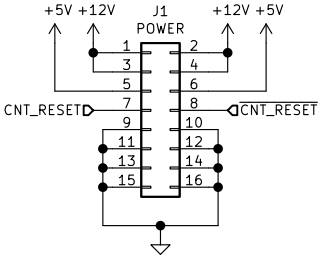
Decoupling Capacitors







Unused Units



Output Board
Connection Header

Sheet: /power/ File: power.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.10)-1		Id: 7/7