

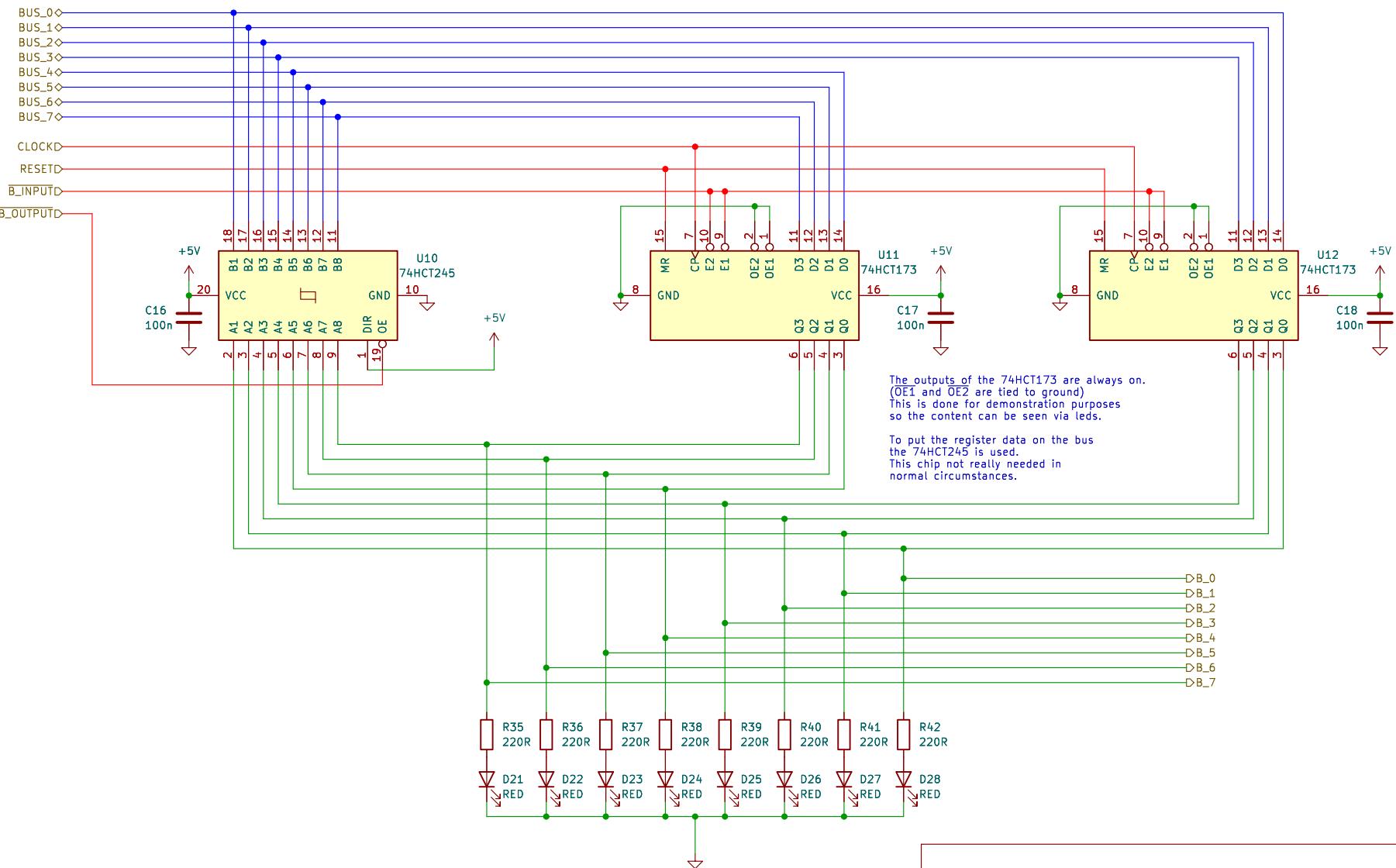
TBR Designs

Sheet: /A register/
File: a-register.kicad_sch

Title: 8-bit CPU

Size: A4 | Date: 2023-11-28
KiCad E.D.A. kicad 7.0.9

Rev: 1.0
Id: 3/20



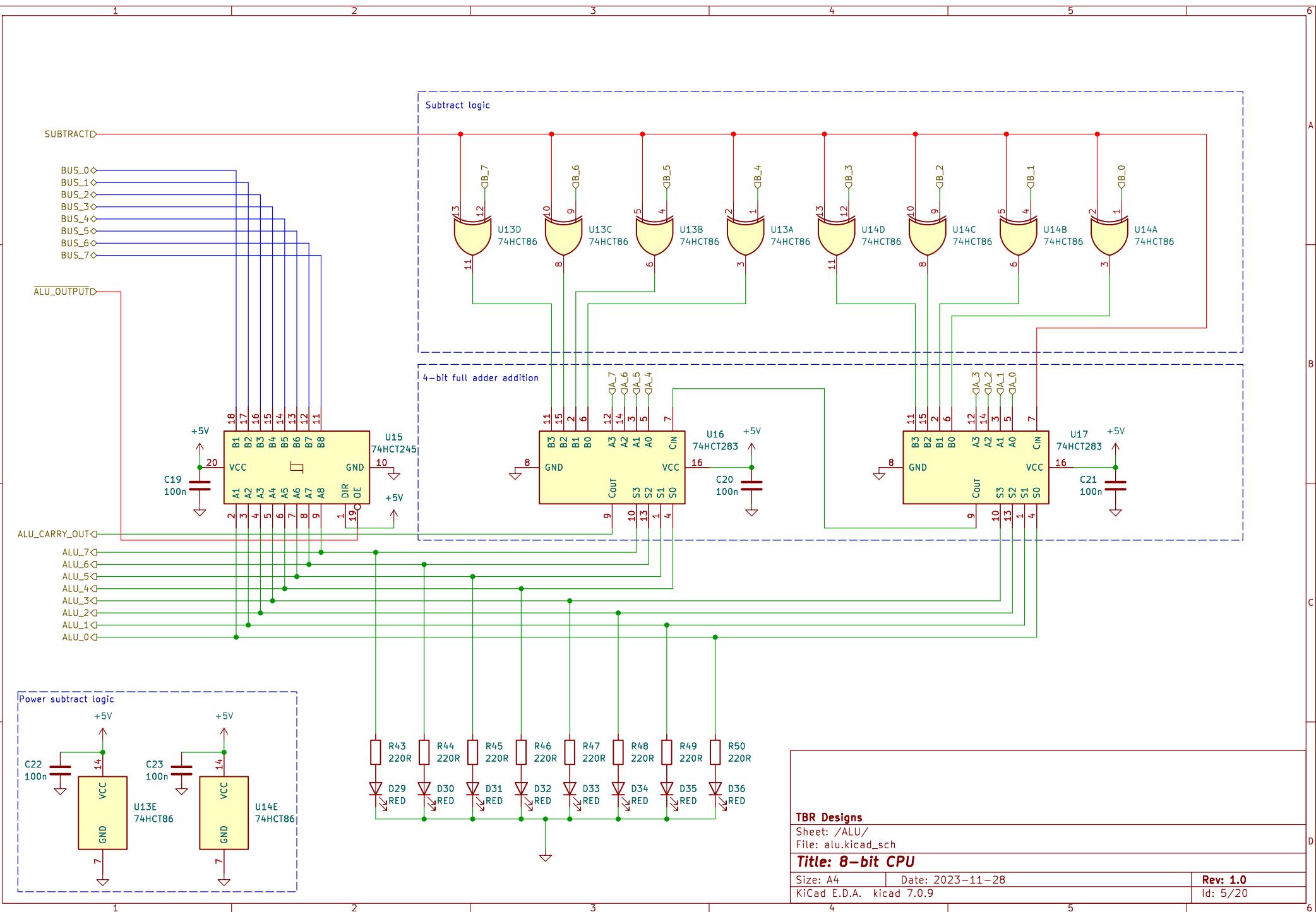
TBR Designs

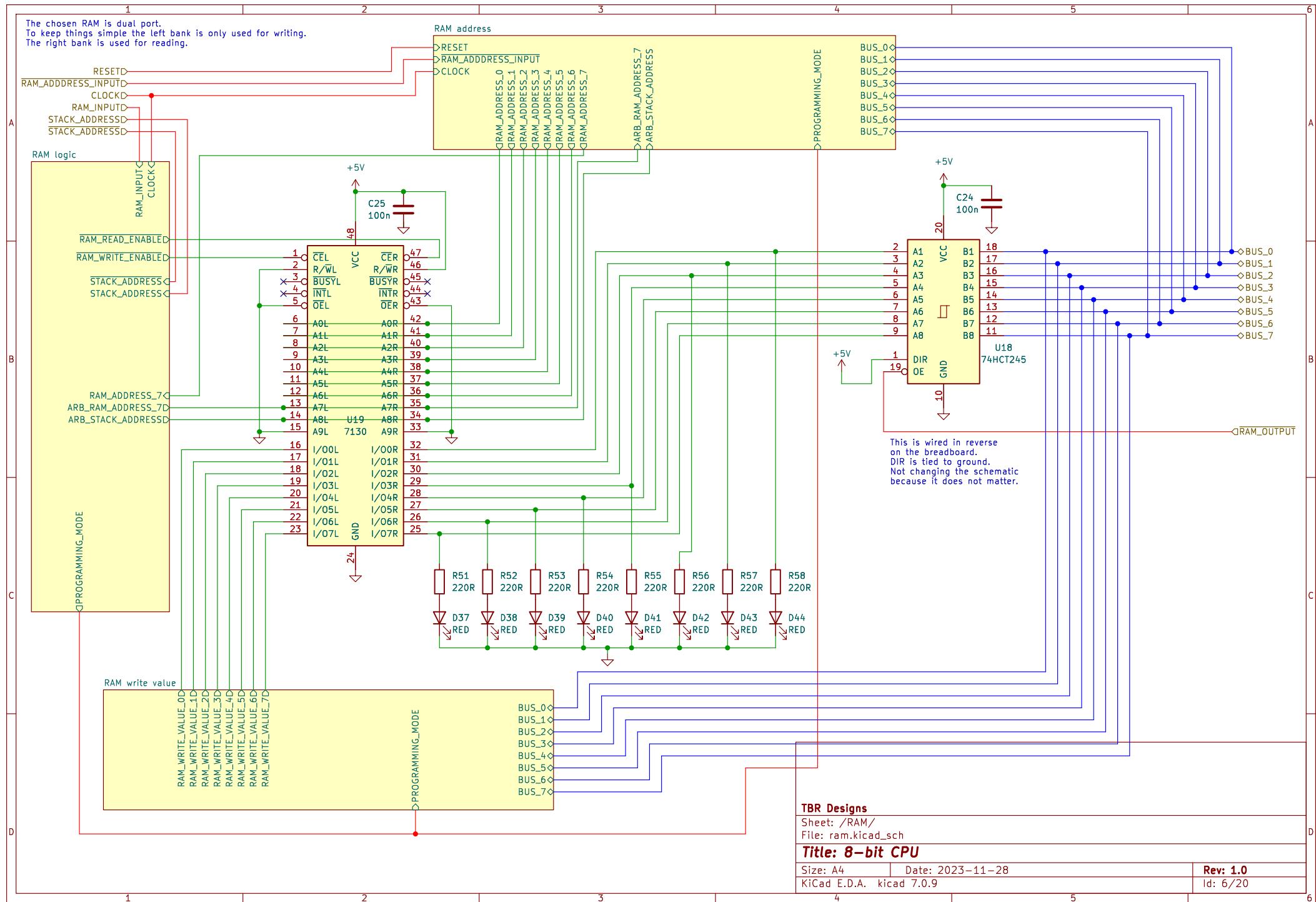
Sheet: /B register/
File: b-register.kicad_sch

Title: 8-bit CPU

Size: A4 | Date: 2023-11-28
KiCad E.D.A. kicad 7.0.9

Rev: 1.0
Id: 4/20

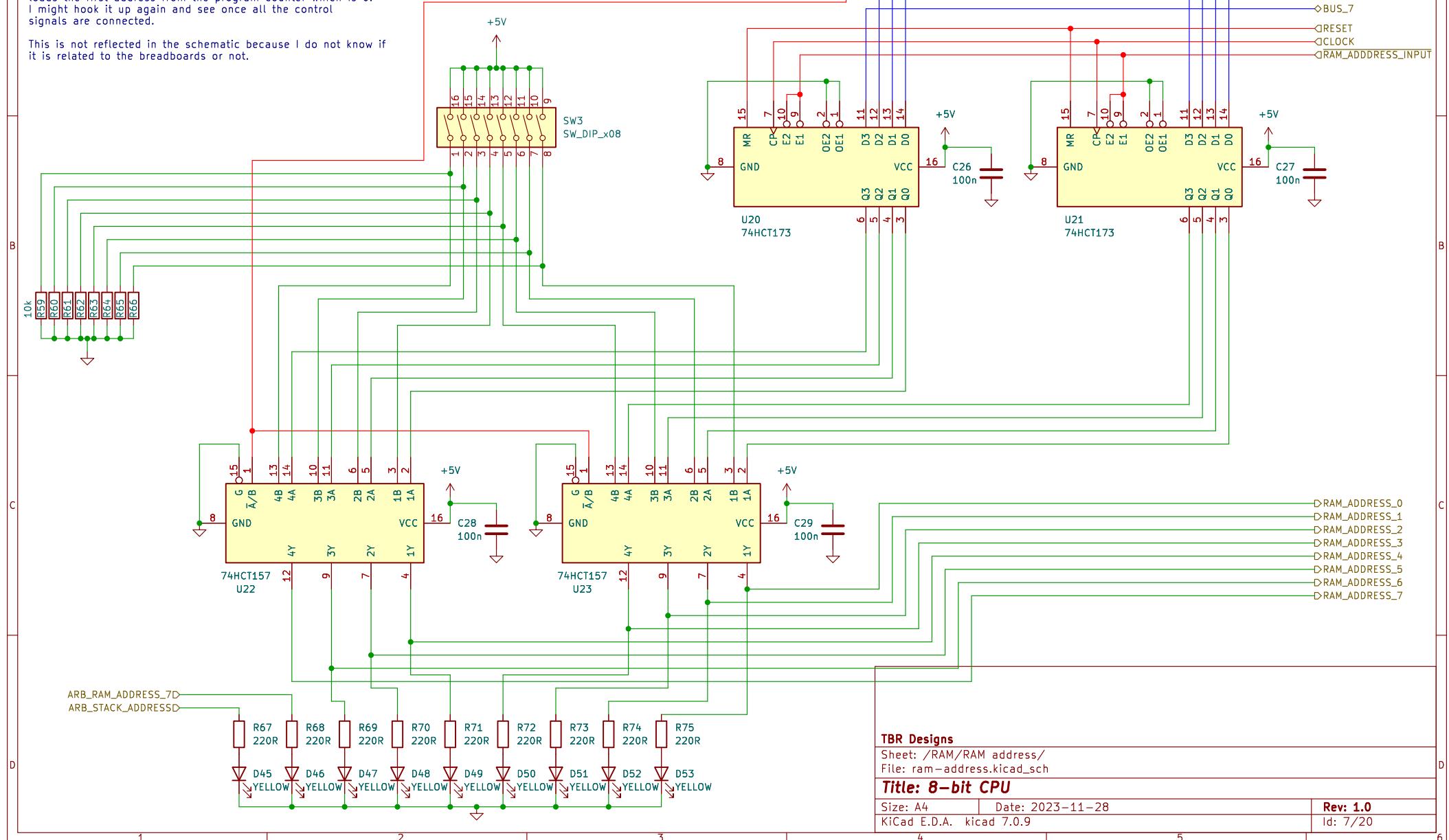




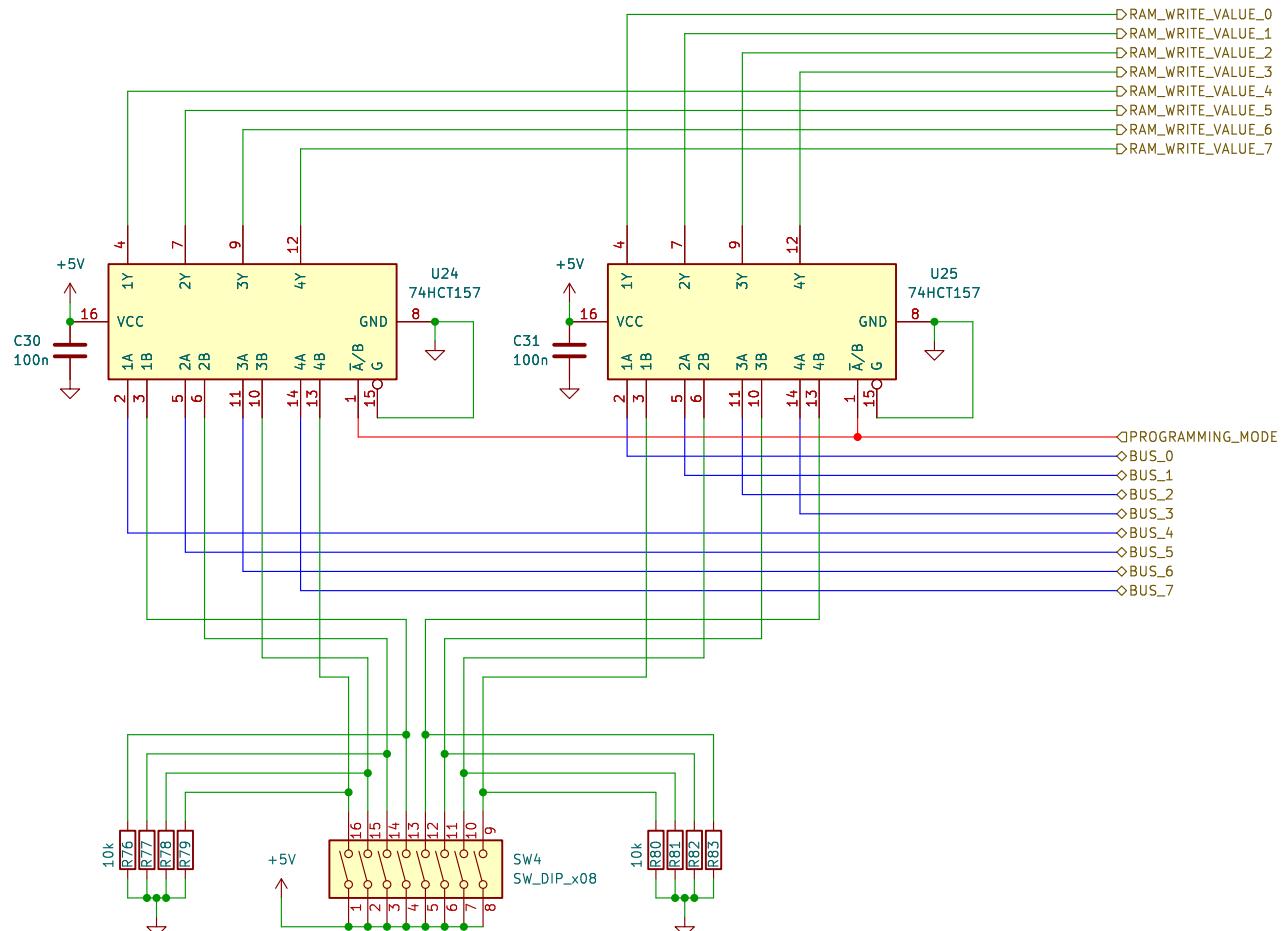
A word on the RESET line.
On my breadboards this is giving me a lot of problems.
When there are 4 or more lines high on the RAM value
and I toggle between RAM_OUTPUT and not RAM_OUTPUT
the RAM address gets RESET for some reason.
After trying everything I could think of (pull ups, pull downs,
disconnecting the bus, replacing chips, replacing wires, ...)
I got nowhere. So I decided to disconnect the RESET line from the
flip flops and just tie them to GND.
RESET for the RAM address is not really needed given the program
loads the first address from the program counter which is 0.
I might hook it up again and see once all the control
signals are connected.

This is not reflected in the schematic because I do not know if
it is related to the breadboards or not.

When in programming mode the value from the dip-switches is selected. Otherwise the values from the flip flops are selected.



When in programming mode the value from the dip-switches is selected. Otherwise the value from the bus is selected.



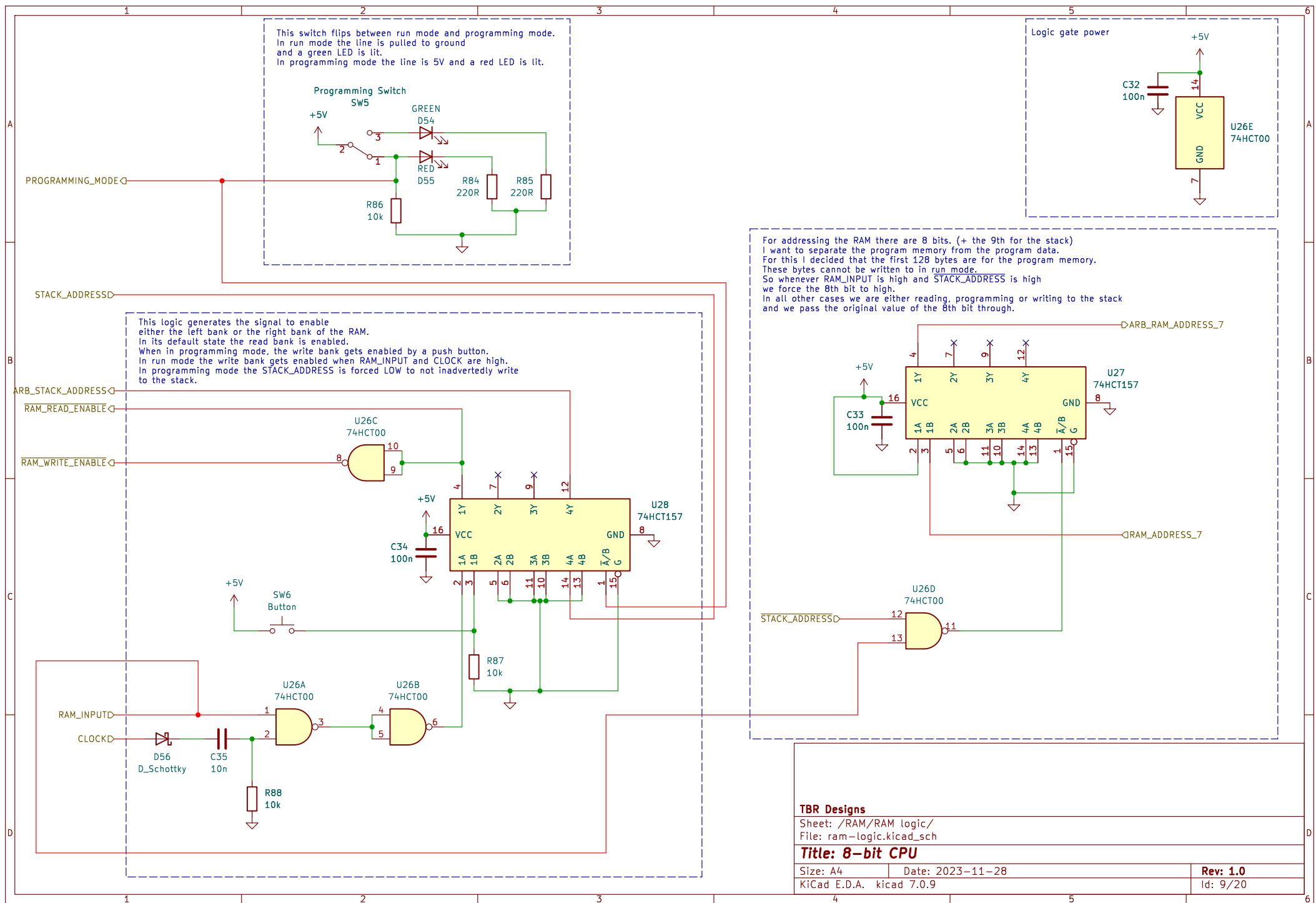
TBR Designs

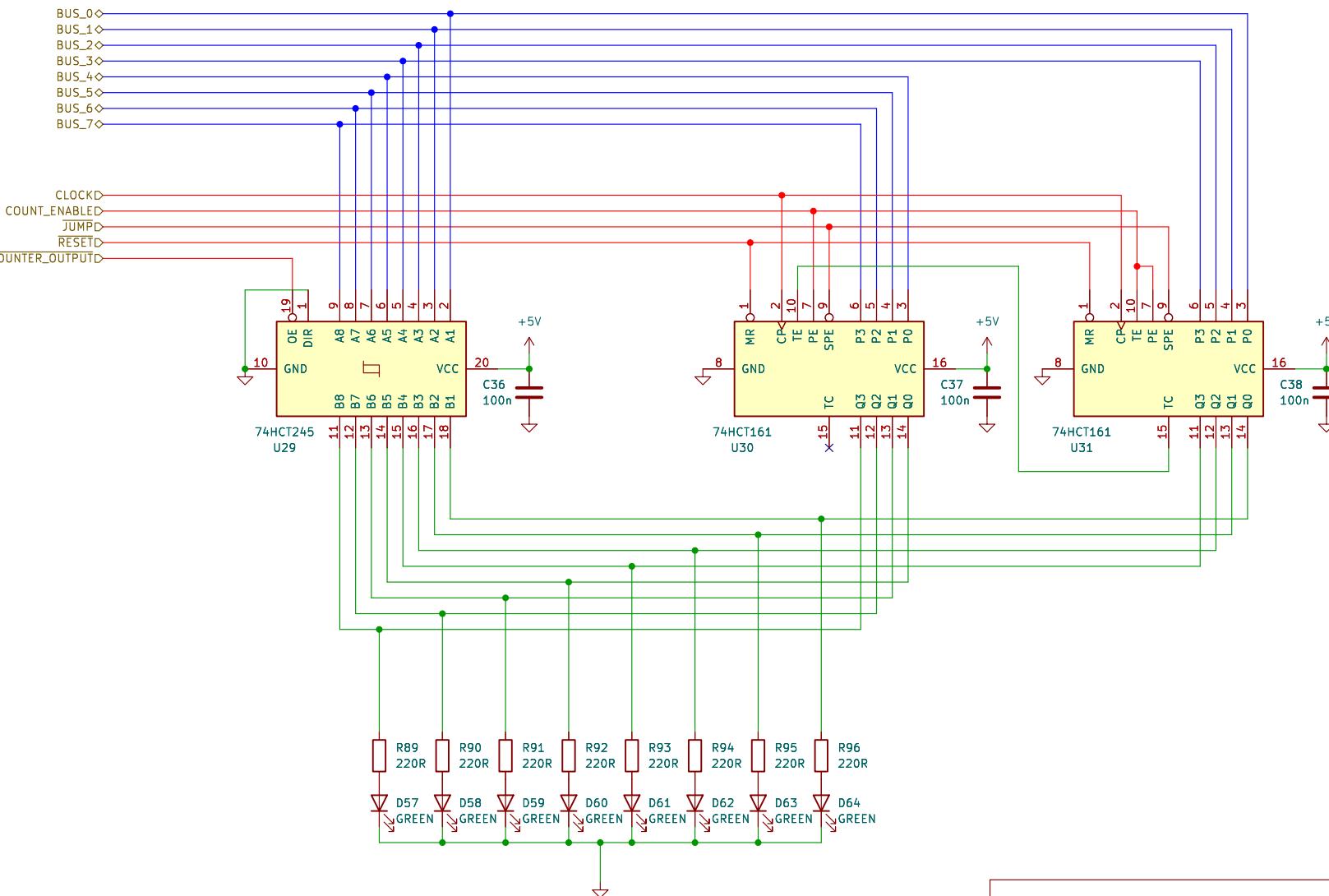
Sheet: /RAM/RAM write value/
File: ram-write-value.kicad_sch

Title: 8-bit CPU

Size: A4 Date: 2023-11-28
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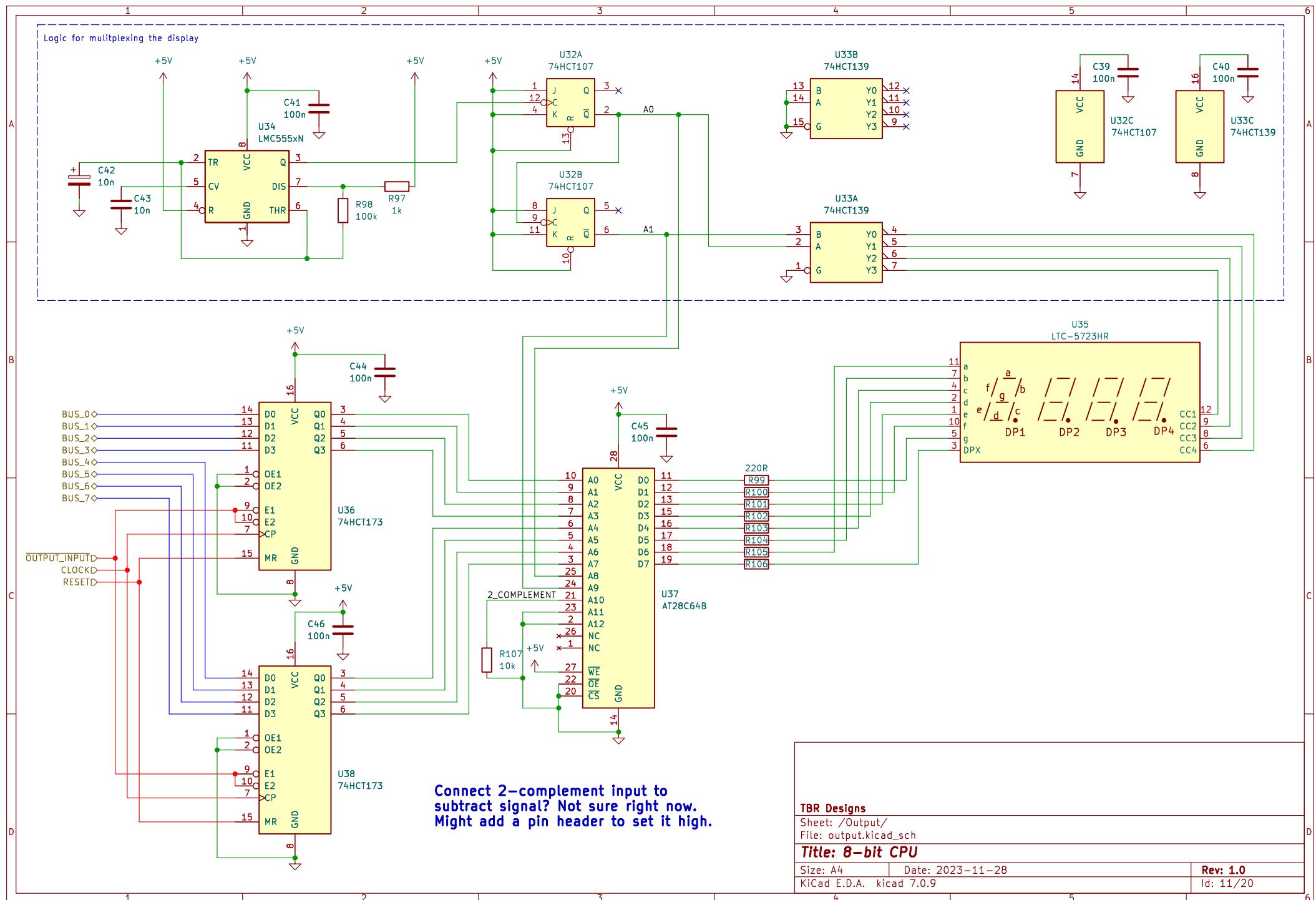
TBR Designs

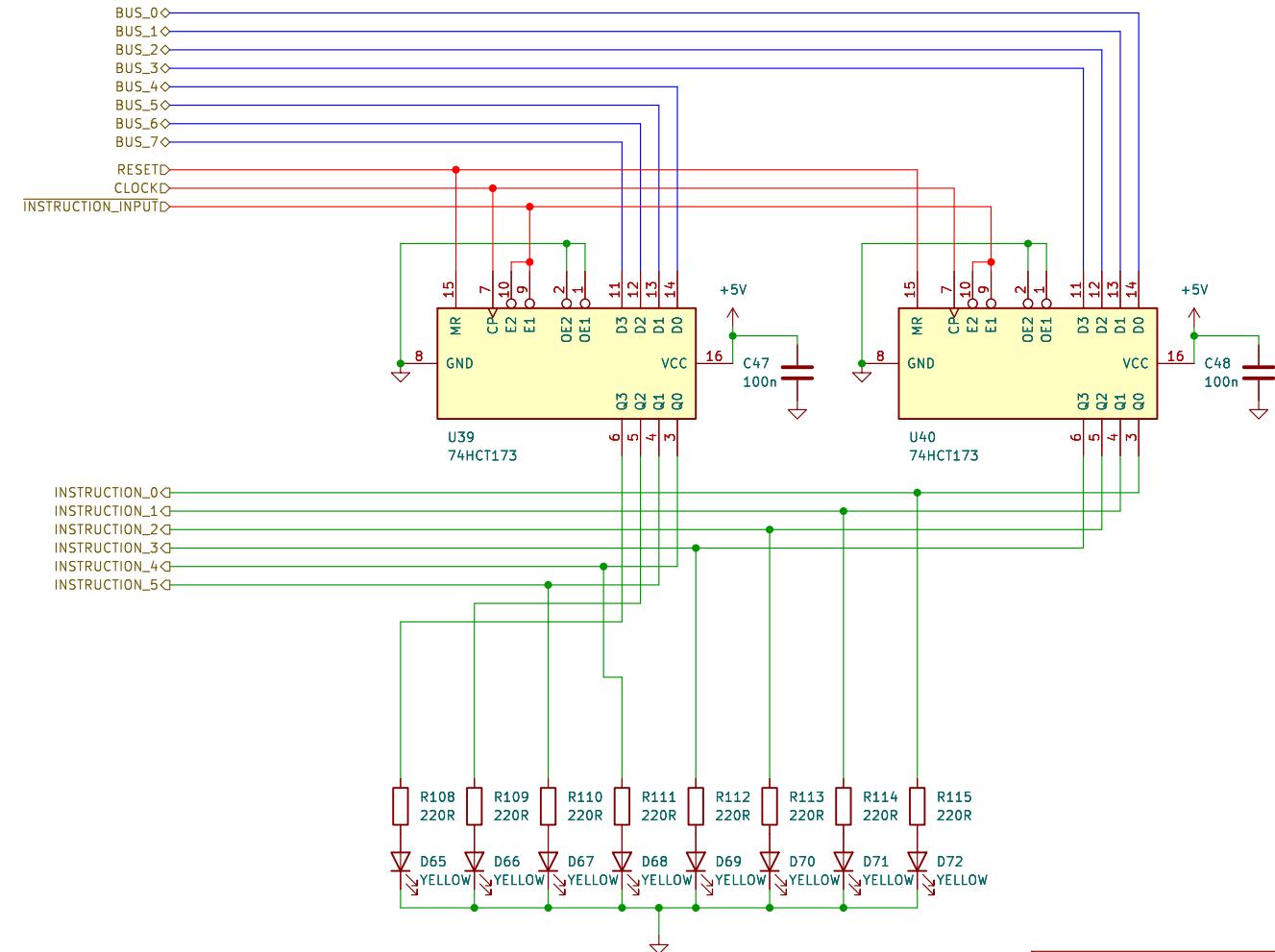
Sheet: /Program Counter/
File: program-counter.kicad_sch

Title: 8-bit CPU

Size: A4 | Date: 2023-11-28
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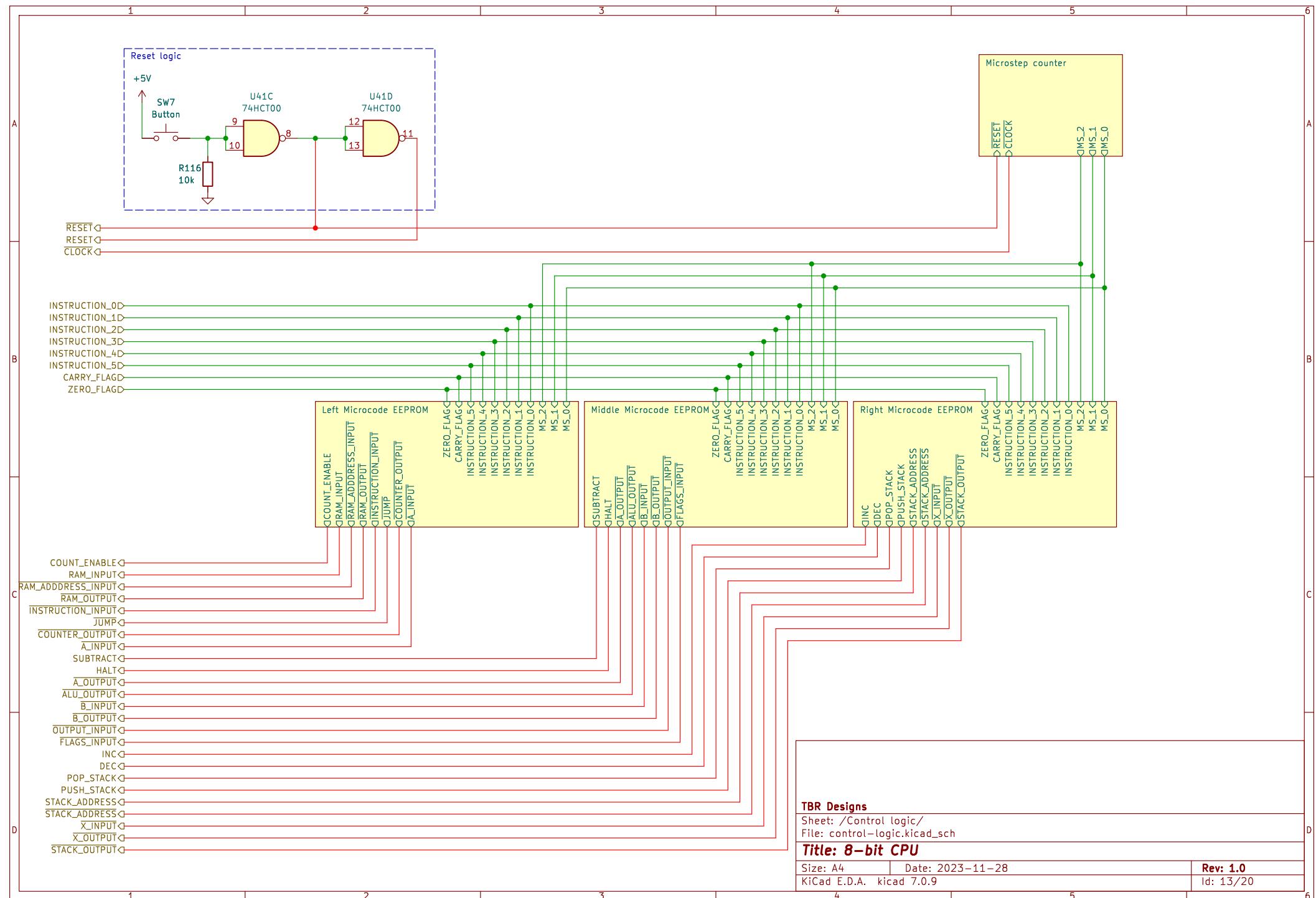
TBR Designs

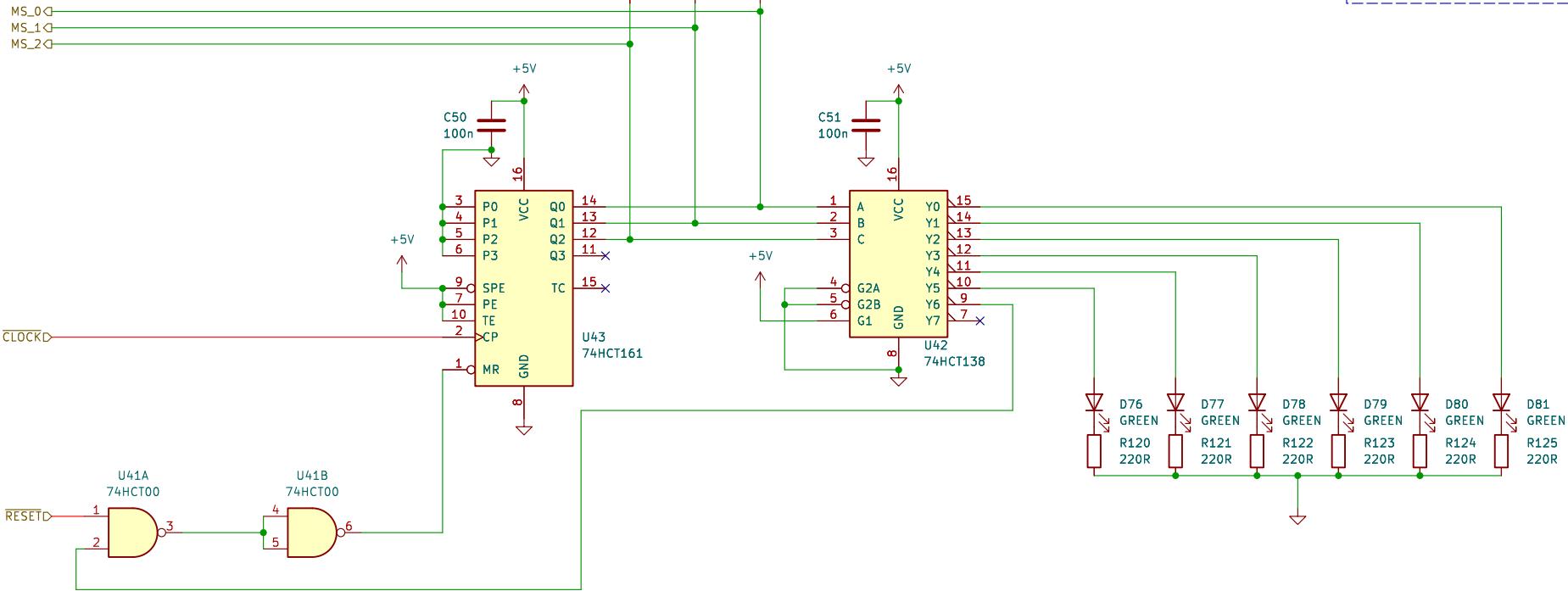
Sheet: /Instruction register/
 File: instruction-register.kicad_sch

Title: 8-bit CPU

Size: A4 | Date: 2023-11-28
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Sheet: /Control logic/Microstep counter/
File: microstep-counter.kicad_sch

Title: 8-bit CPU

Size: A4 Date: 2023-11-28
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Rev: 1.0
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