

Power Supply and Reset



File: power_supply_and_clock.kicad_sch

Instruction Register and Decoder



File: instruction_register.kicad_sch

Registers



File: registers.kicad_sch

ALU

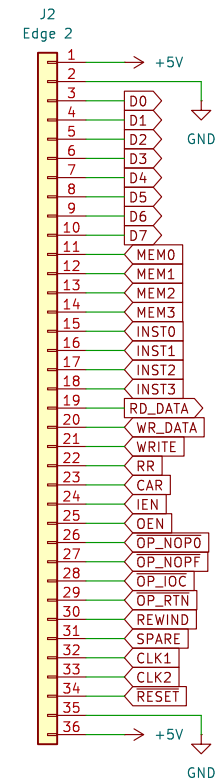
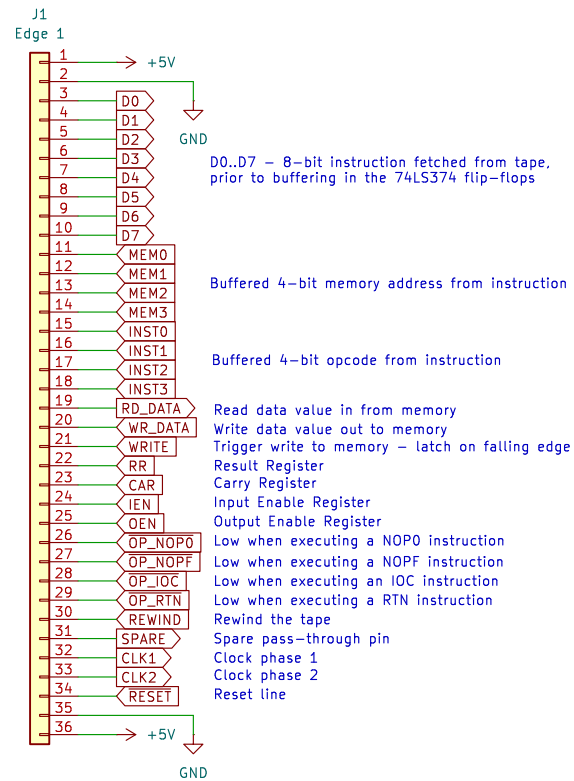


File: ALU.kicad_sch

Skip Register



File: skip_register.kicad_sch



Edge Connectors

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Sheet: /
File: UE14500-TTL.kicad_sch

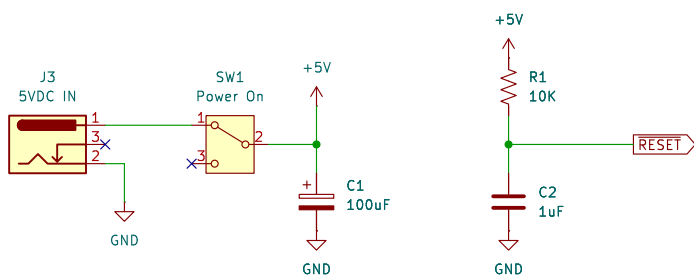
Title: UE14500 TTL 1-bit Microprocessor

Size: A4 Date: 2025

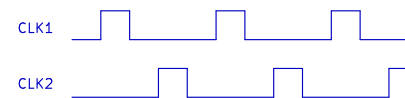
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Rev: 1

Id: 1/6



Required Clock Signals



CLK1 rising edge - Load instruction into instruction register
CLK1 falling edge - Update registers and memory
CLK2 rising edge - Update skip register
CLK2 falling edge - Increment program counter / advance tape position

Power Supply and Reset

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Sheet: /Power Supply and Reset/
File: power_supply_and_clock.kicad_sch

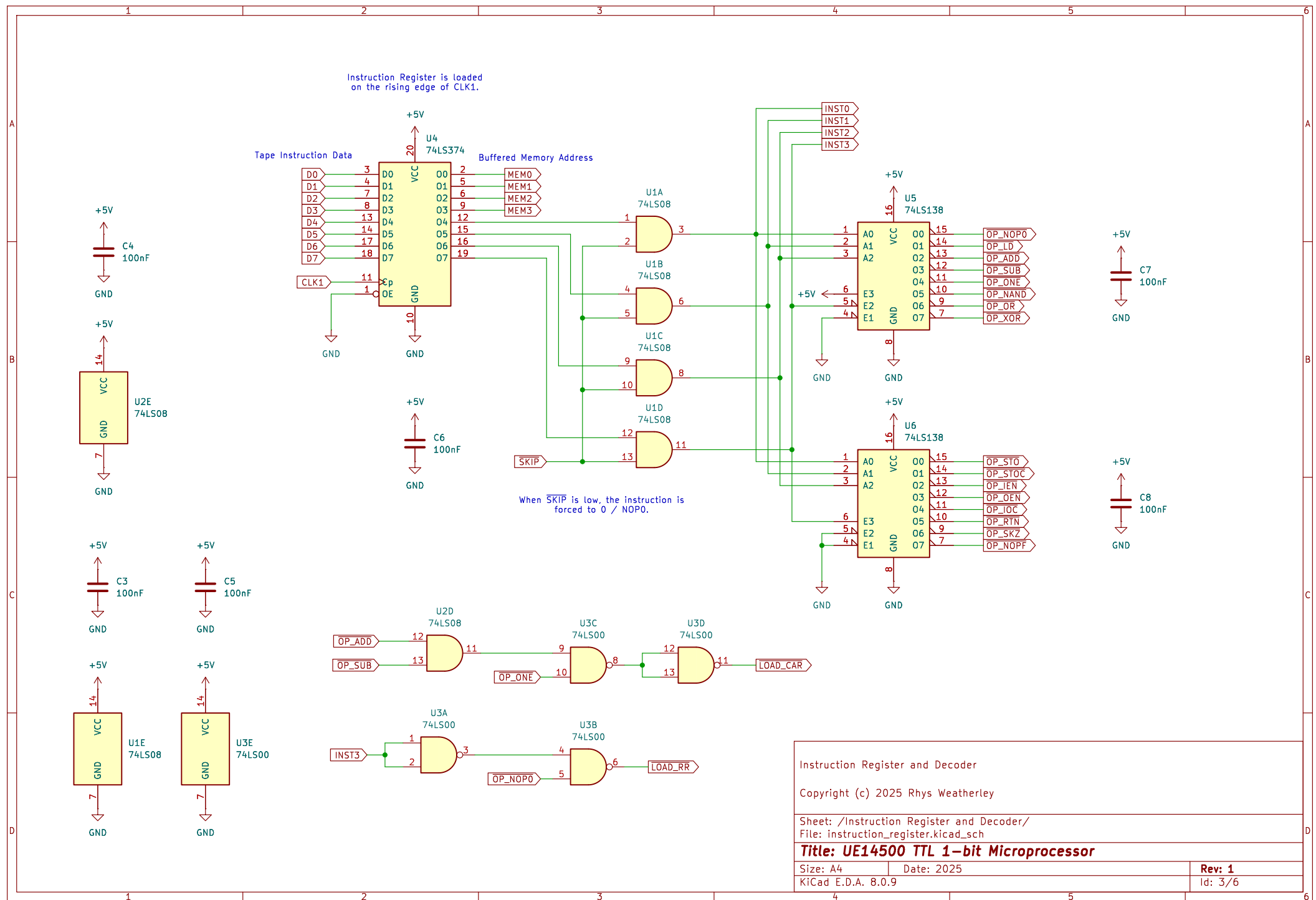
Title: UE14500 TTL 1-bit Microprocessor

Size: A4 Date: 2025

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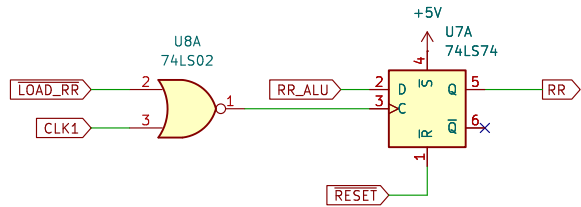
Rev: 1

Id: 2/6

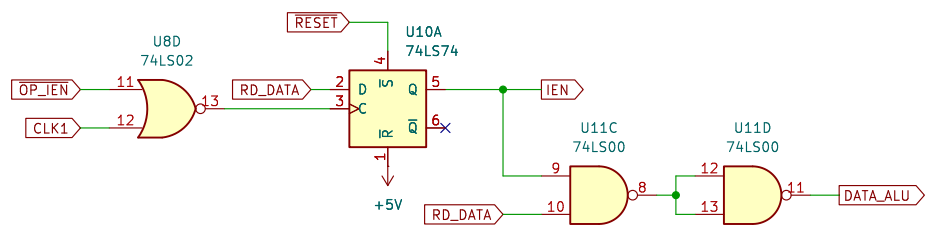


Registers are loaded on the falling edge of CLK1.

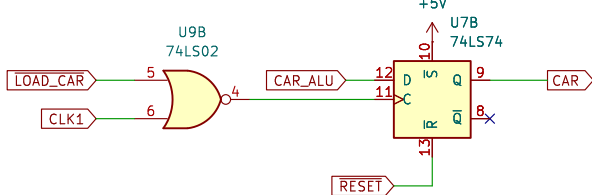
RR – Result Register



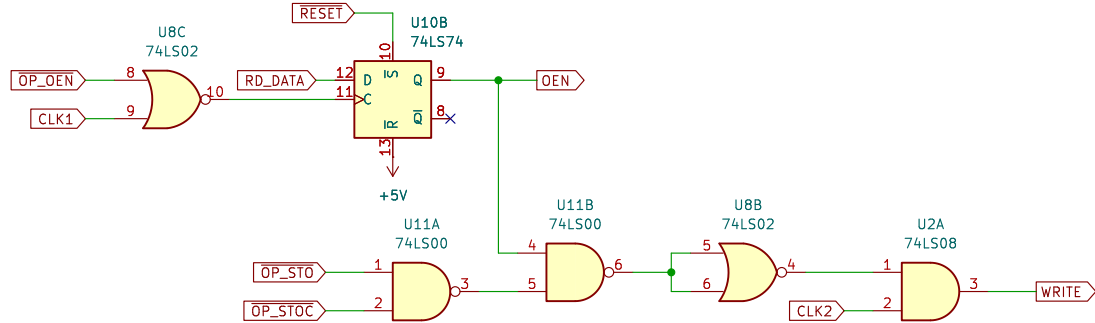
IEN – Input Enable Register



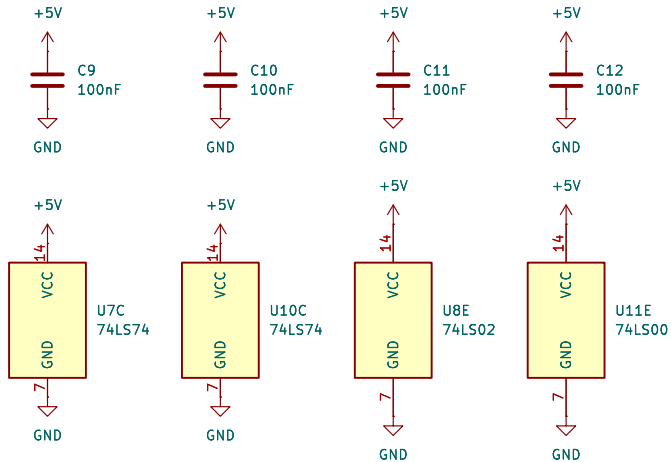
CAR – Carry Register



OEN – Output Enable Register



Latch downstream registers and memory
on the falling edge of WRITE.



Registers

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Sheet: /Registers/
File: registers.kicad_sch

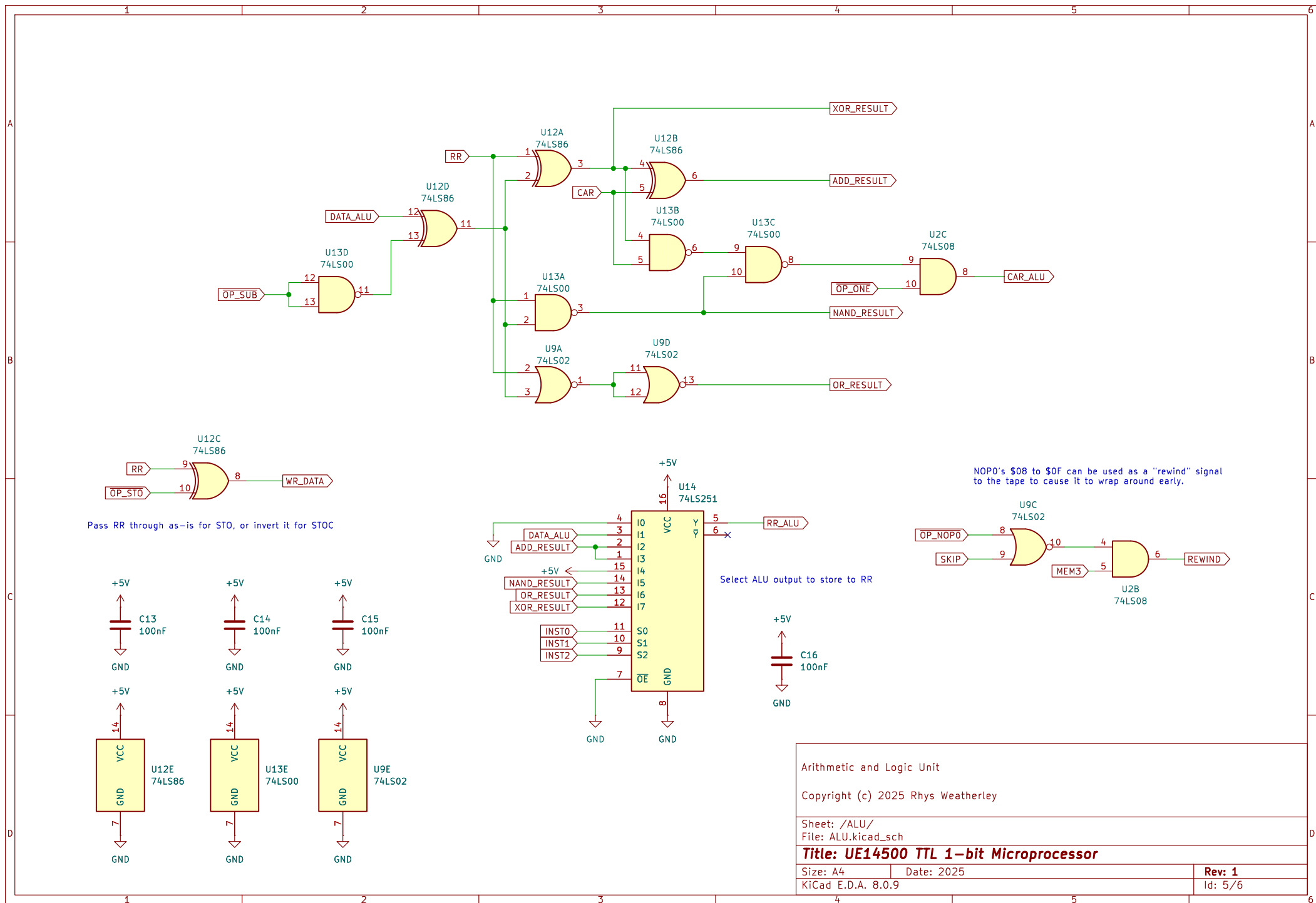
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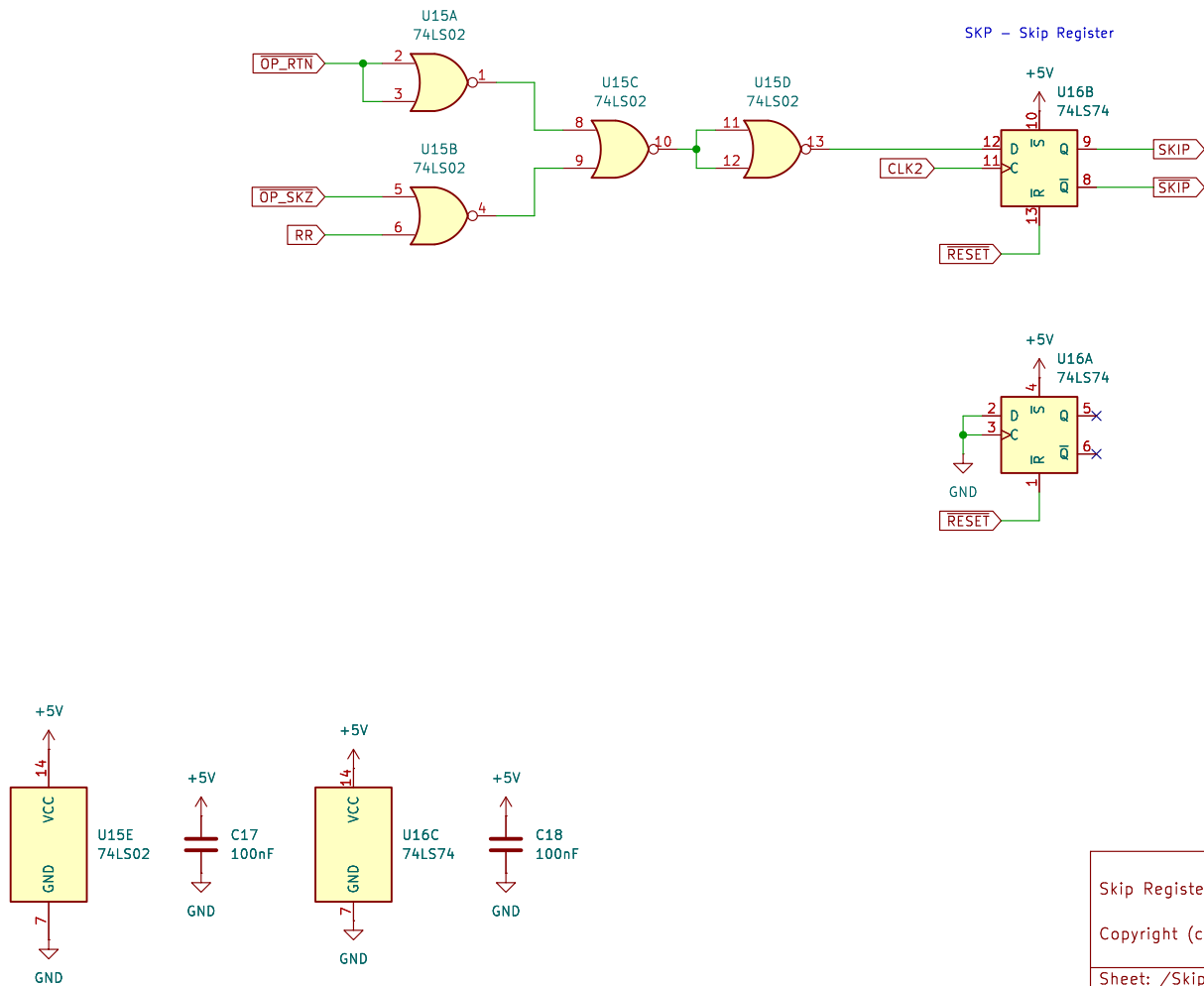
Size: A4
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Rev: 1

Id: 4/6





Skip Register

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Sheet: /Skip Register/
File: skip_register.kicad_sch

Title: UE14500 TTL 1-bit Microprocessor

Size: A4 Date: 2025

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Rev: 1

Id: 6/6