

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

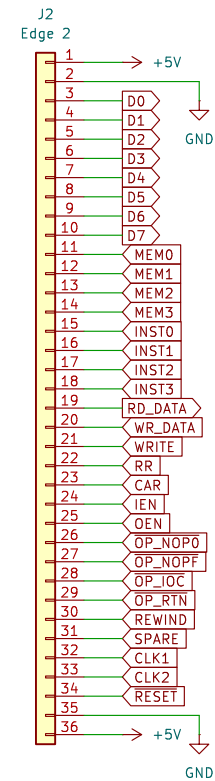
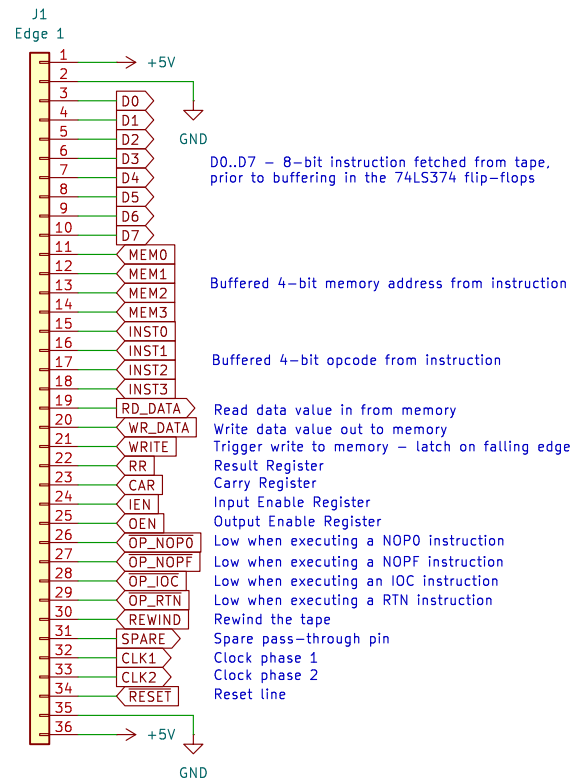


File: ALU.kicad_sch

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

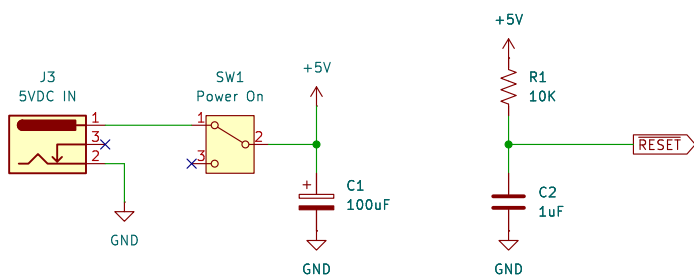
Size: A4

Date: 2025

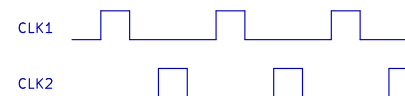
Rev: 2

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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

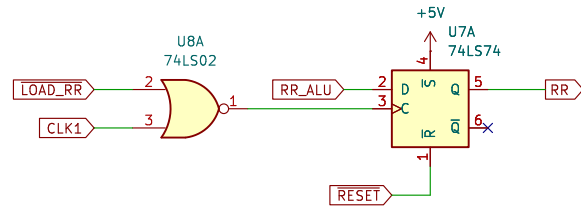
KiCad E.D.A. 8.0.9

Rev: 2

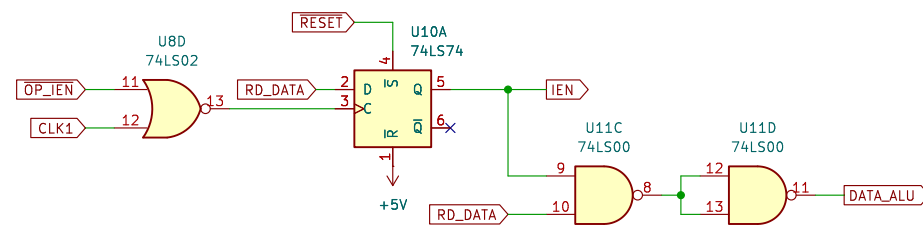
Id: 2/6

Registers are loaded on the falling edge of CLK1.

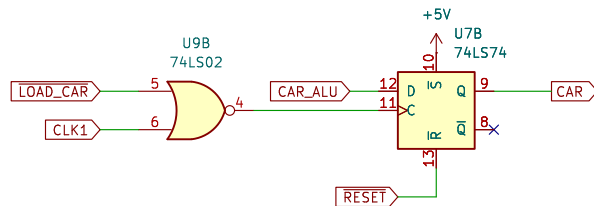
RR – Result Register



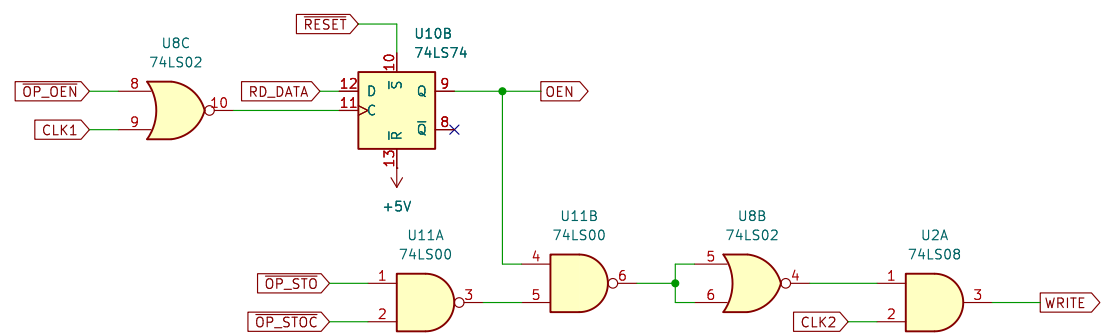
IEN – Input Enable Register



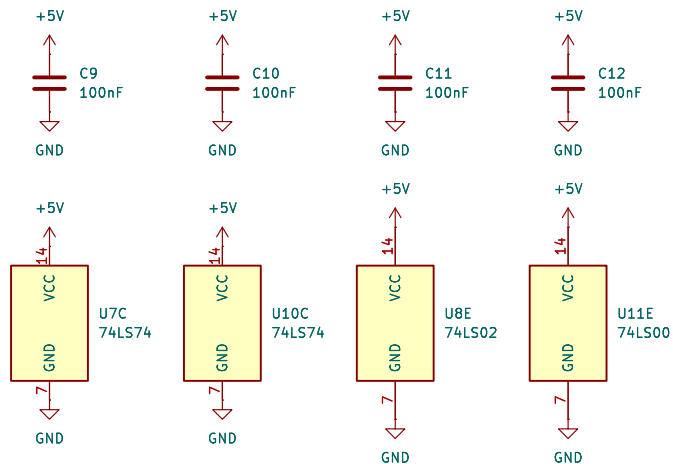
CAR – Carry Register



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

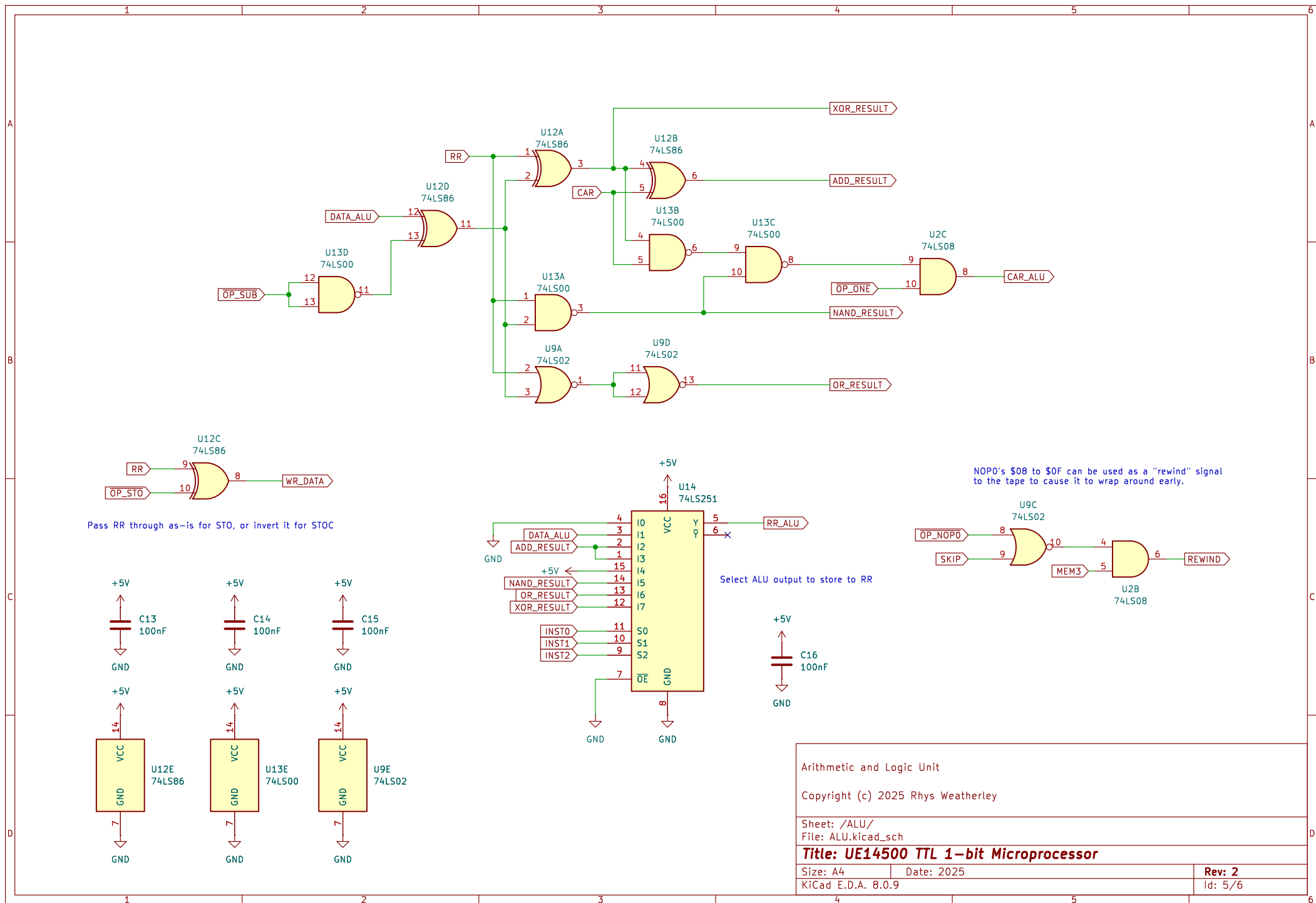
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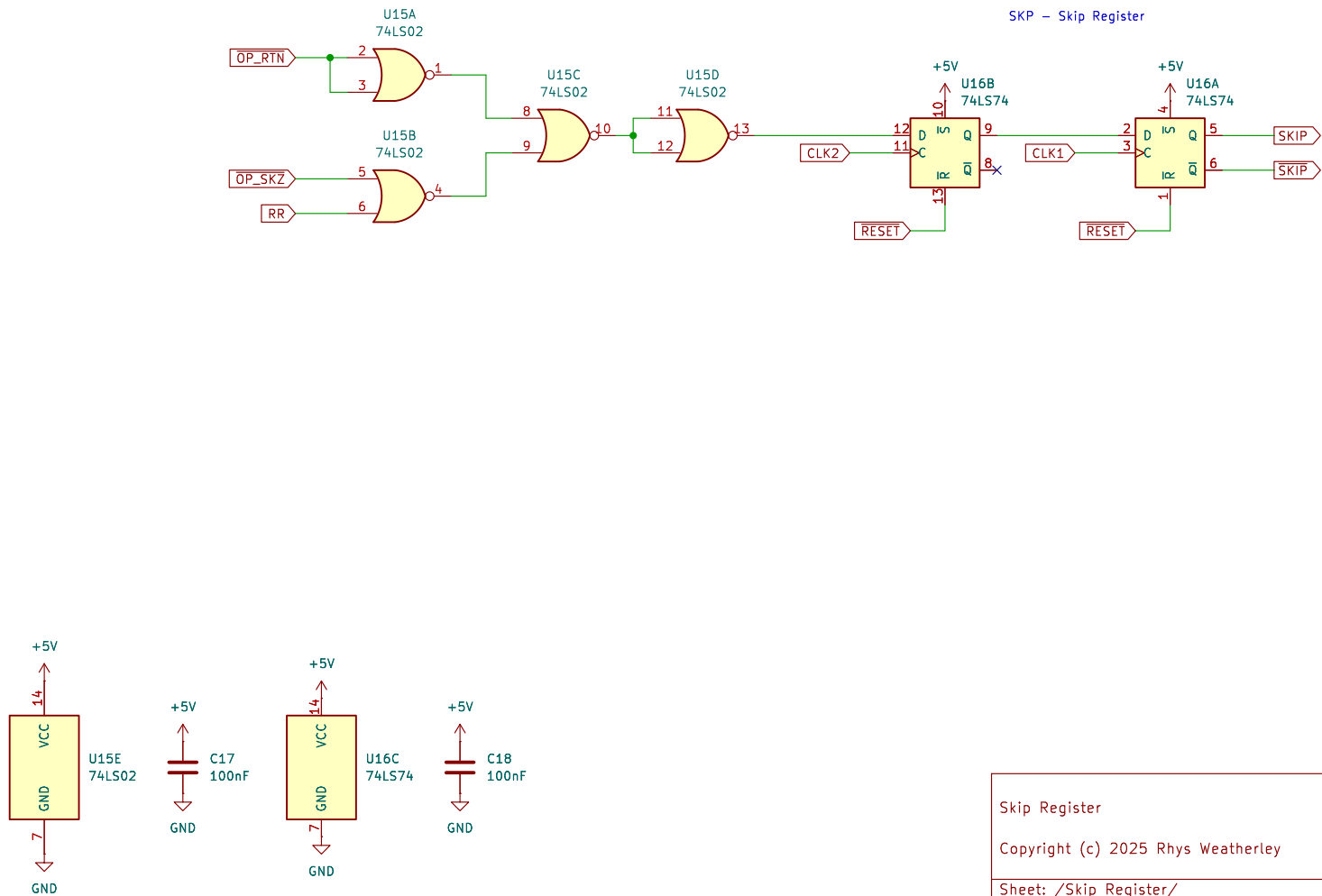
Size: A4
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Date: 2025

Rev: 2

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

KiCad E.D.A. 8.0.9

Rev: 2

Id: 6/6