

Sony SOBAX 2500 Calculator Schematic

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Sony SOBAX 2500 Calculator

Section: Title & Contents

Page: 1 Rendition: Jun 22, 2025

This schematic has been derived through reverse engineering.

This is not the manufacturer's schematic, nor based on the manufacturer's schematic.

Notes

- The symbol  with no voltage specified denotes V+4.
-  connection between different sections.
 connection limited to same section.
Arrows indicate direction of signal or energy flow.
- ‘~’ at the end of a symbol name indicates the logical NOT operation.
- The Acoustic Delay Line is based on magnetostrictive principles.
See the article “Magnetostrictive Delay Lines” in “Electronics World”, Jan. 1964.
- These drawings based on unit with Serial No. 620173 which contains a Board F marked with 1-539-224-12. Component values marked with “*” are the values for Board F marked with 1-539-224-11.

Log

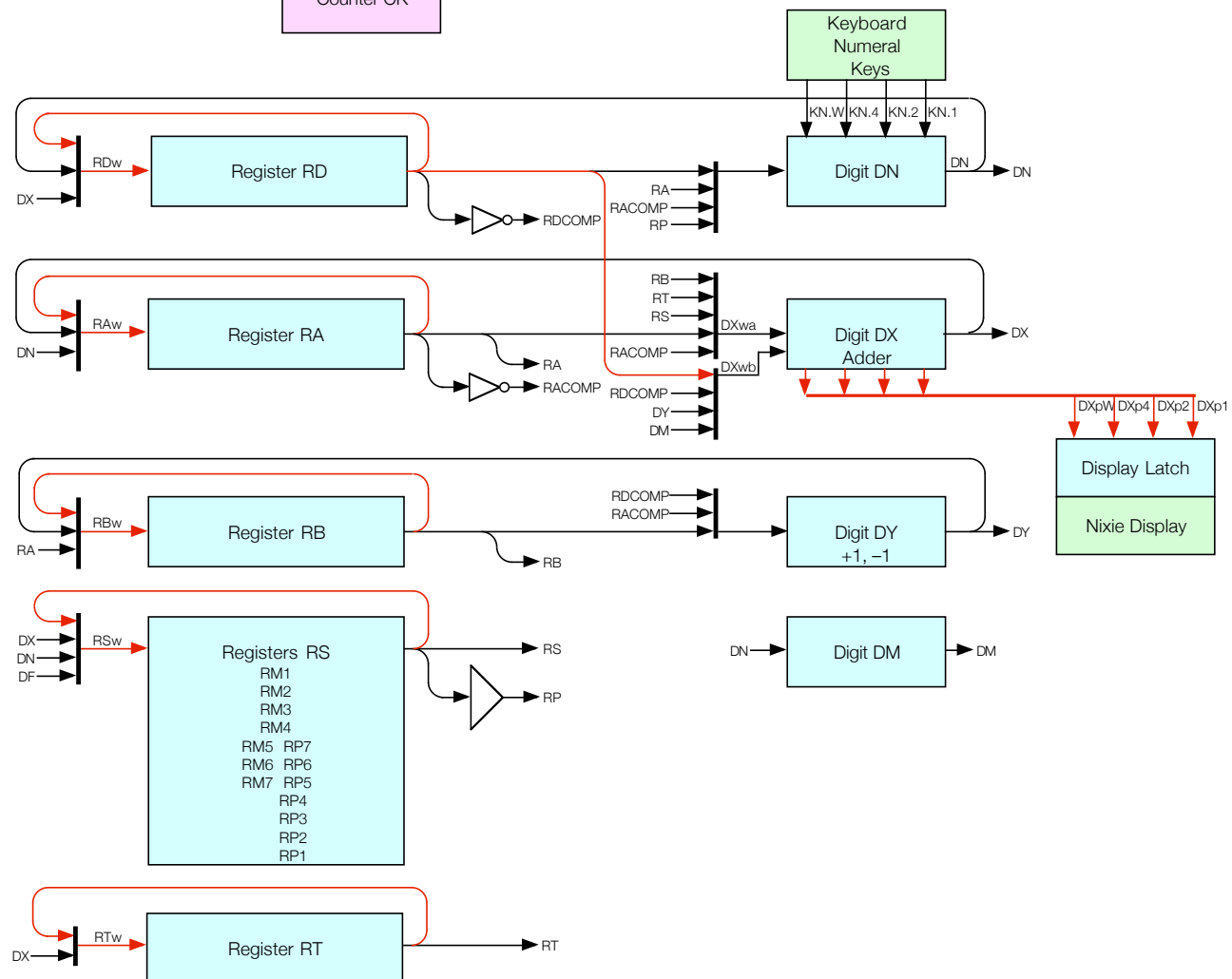
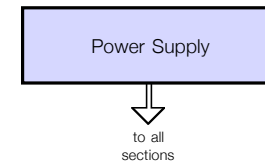
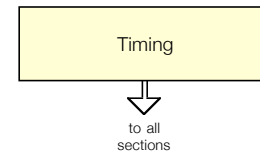
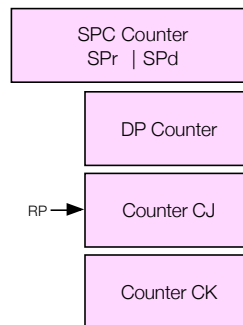
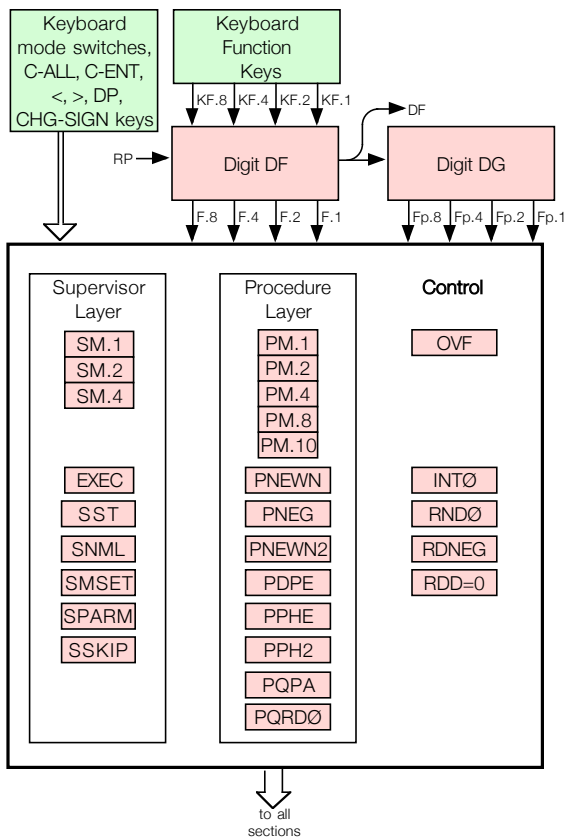
- 1999 Sep-Nov: Initial drawing / bhilpert.
- 2005 Feb: ADLRD source corrected, comes from Q7 rather than Q8.
Corrections to labels on flip-flops in display page.
- 2005 Feb: Some additional labeling of “*” components for board F.
- 2014 May: Backplane connectors correction for V+4/GND, numeric key coupling distinguished, other minor reorganisation.
- 2024 Feb: Reorganisation for state derivation.
- 2024 Fall: Addition of state information, signals renamed to more appropriate names.

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Section: Notes

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1bit

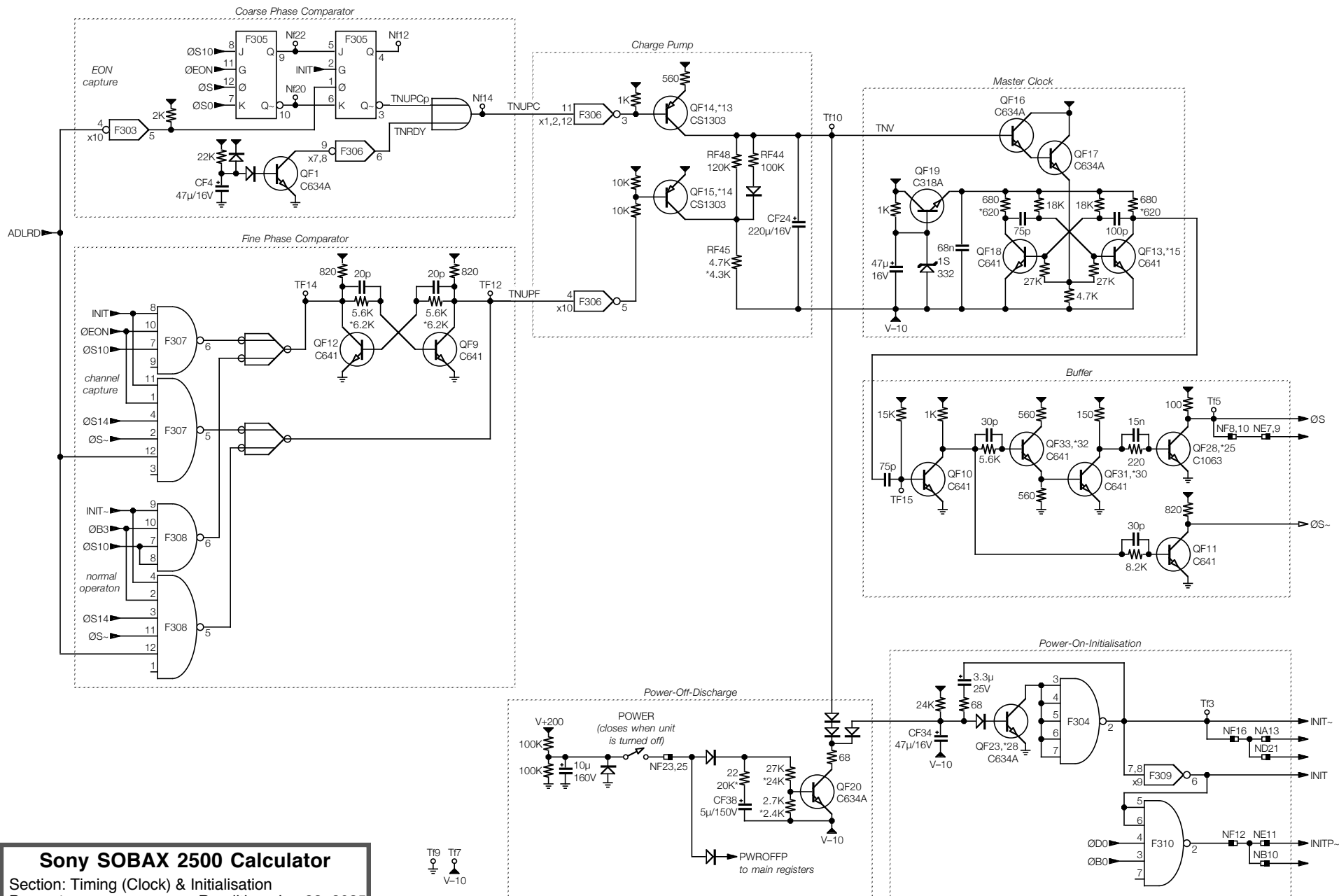
4-bit register

16 digit register

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Section: Block Diagram
Page: 3

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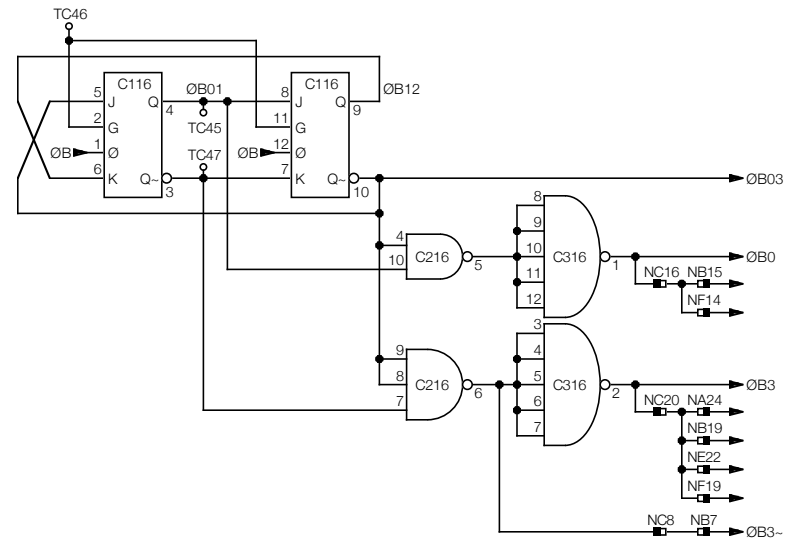
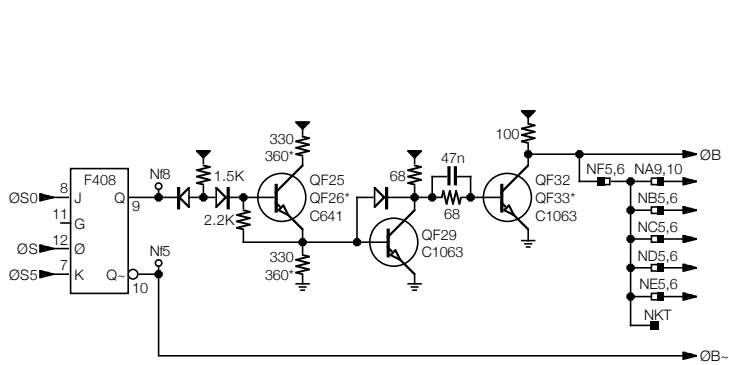
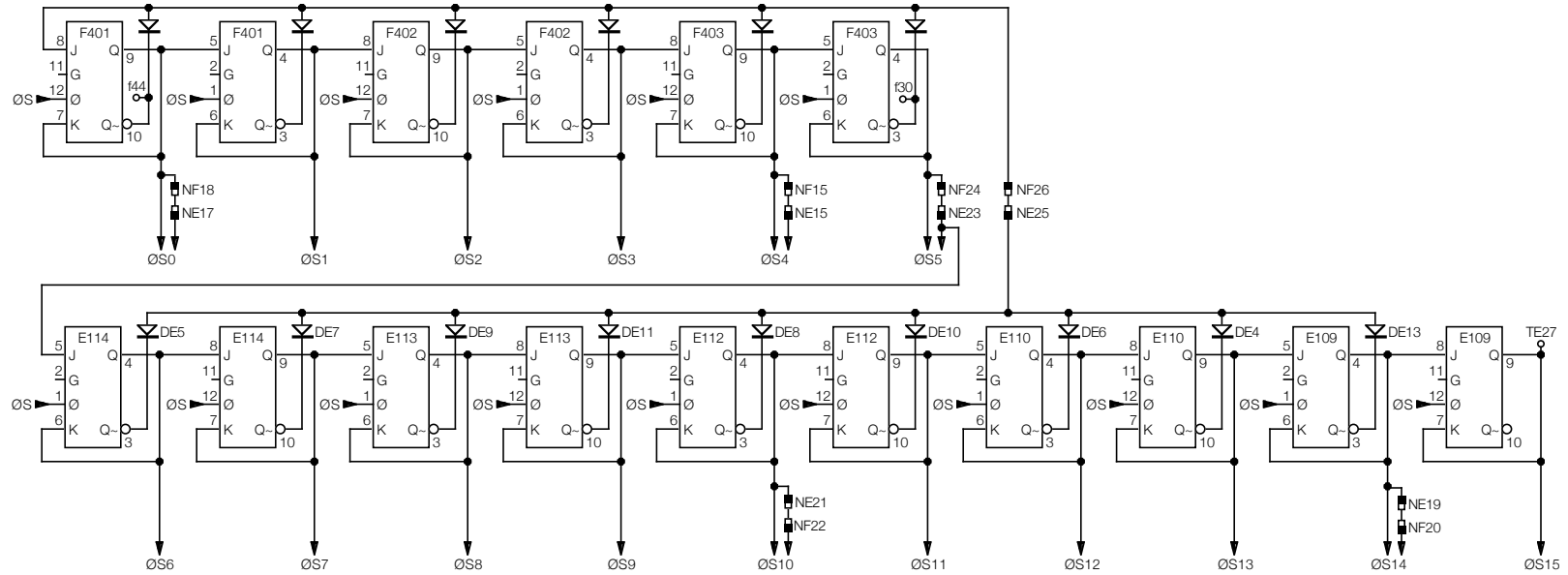


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Section: Timing (Clock) & Initialisation

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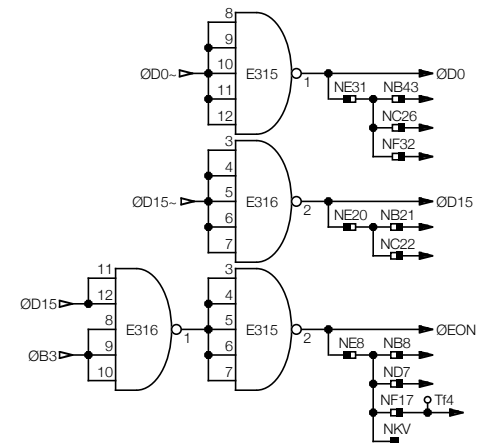
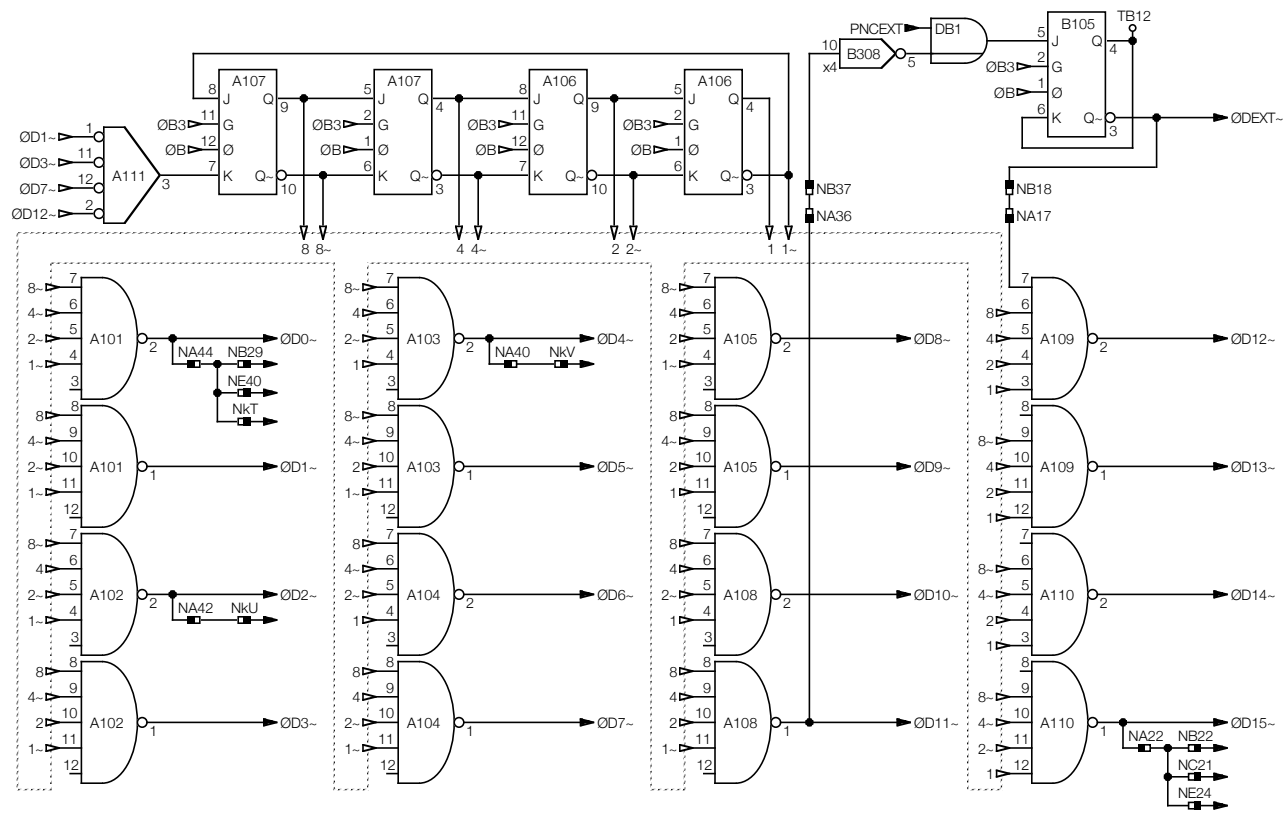


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Section: Timing (Channel & Bit)

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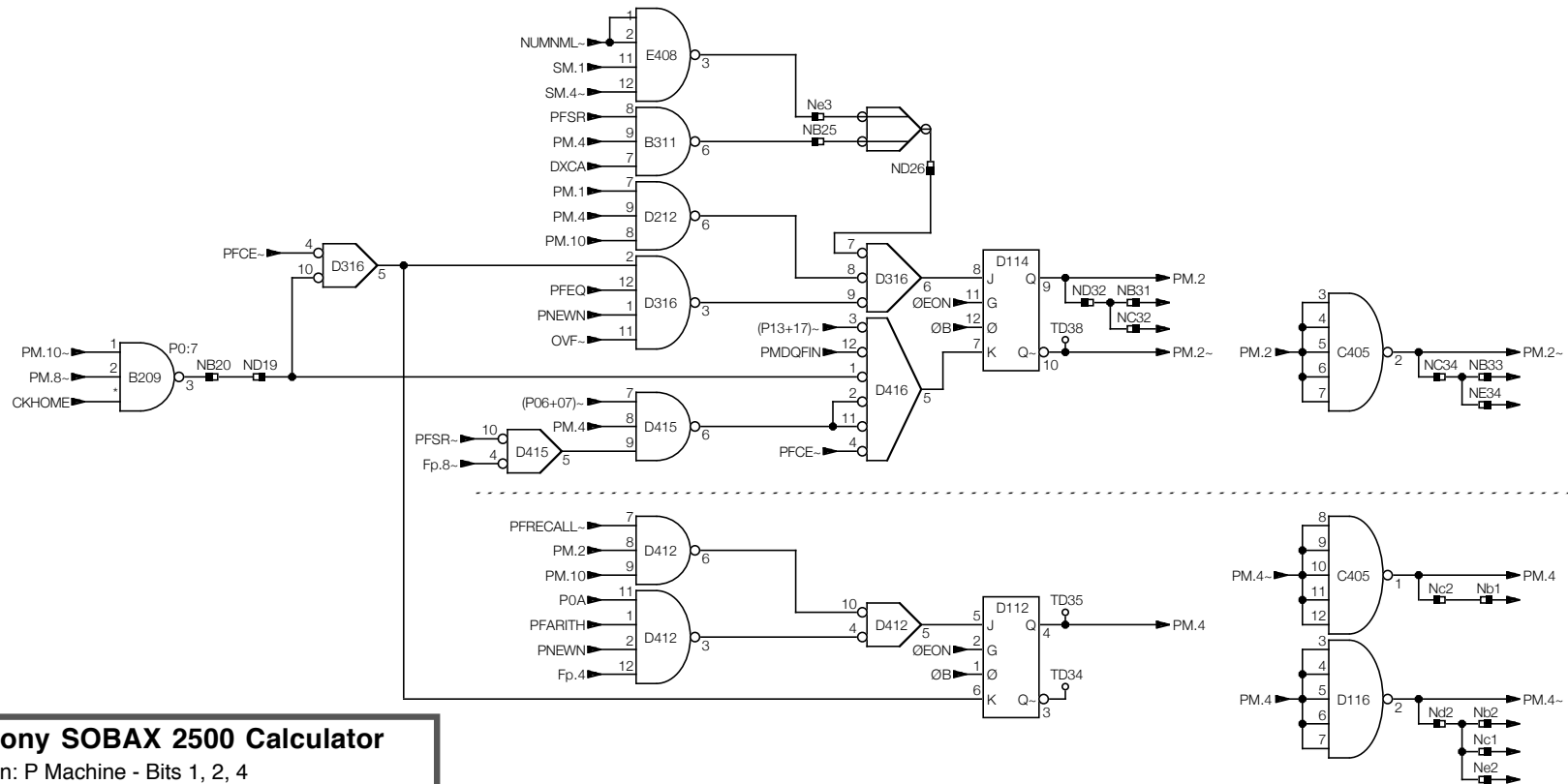
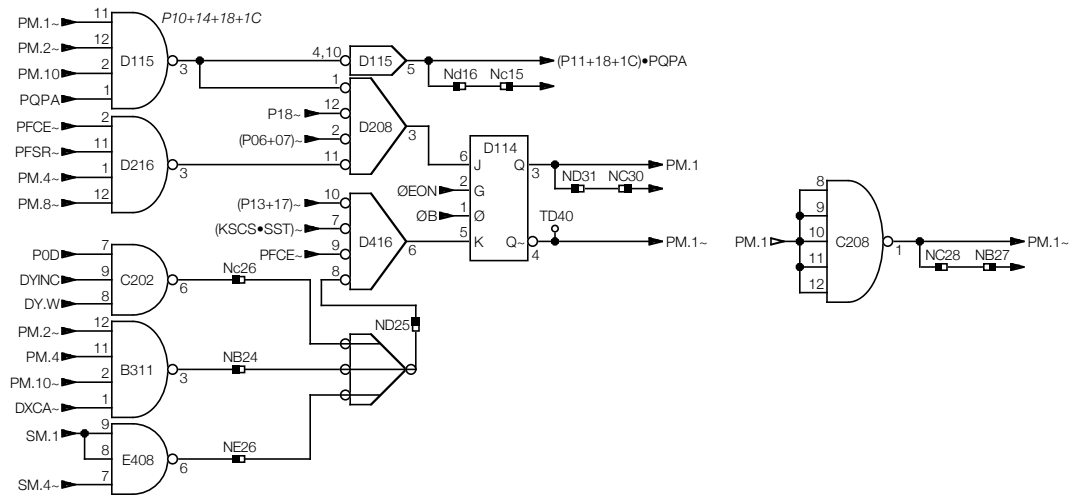
Section: Timing (Digit)

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Section: SM - Supervisor State Machine
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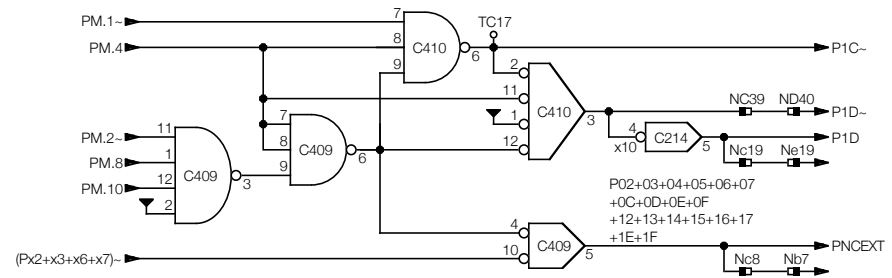
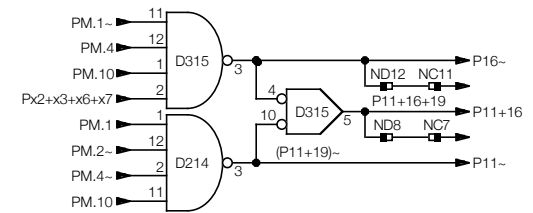
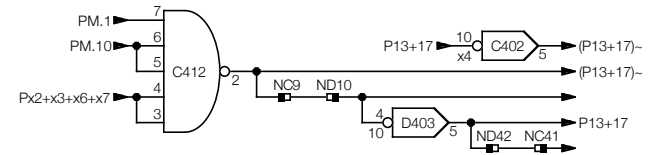
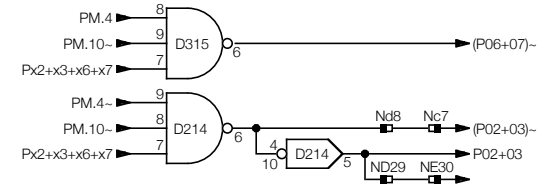
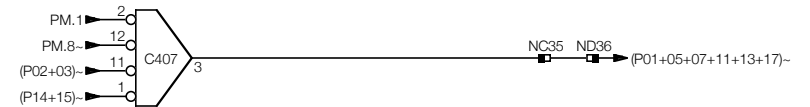
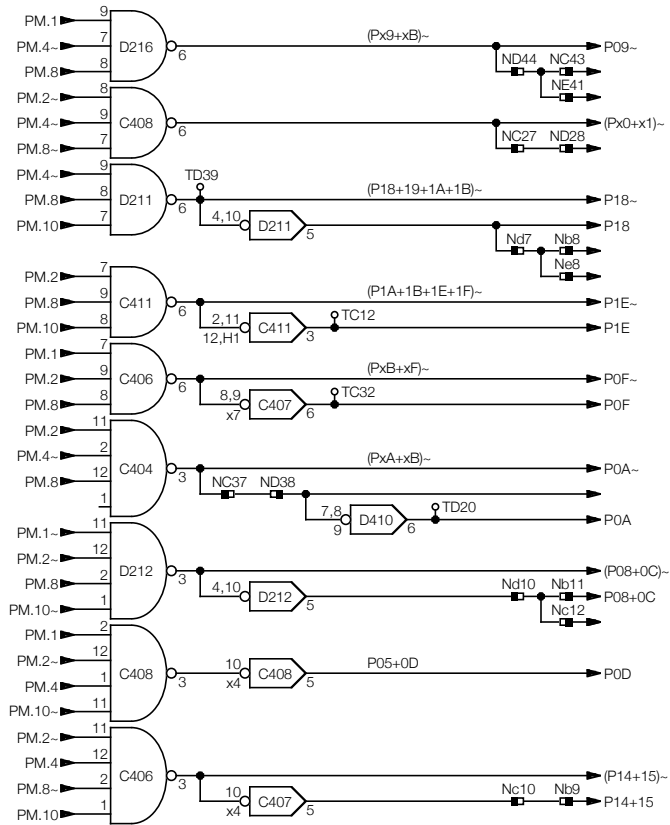


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Section: P Machine - Bits 1, 2, 4

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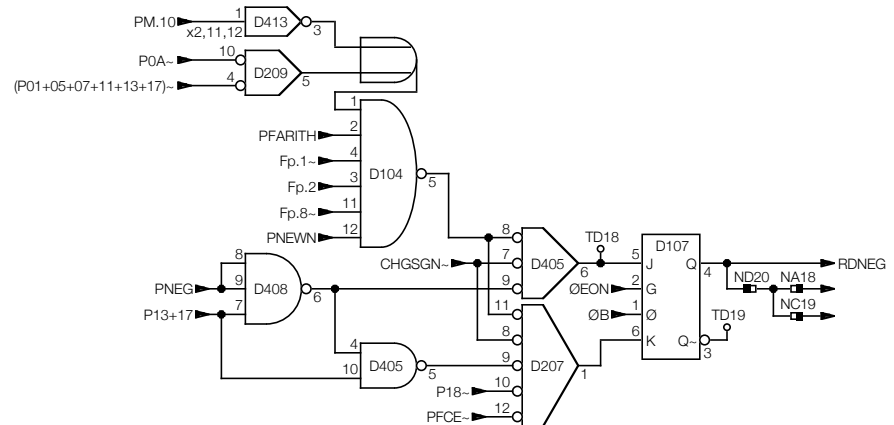
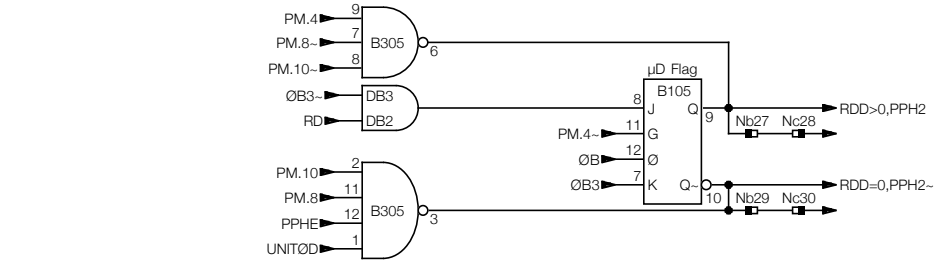
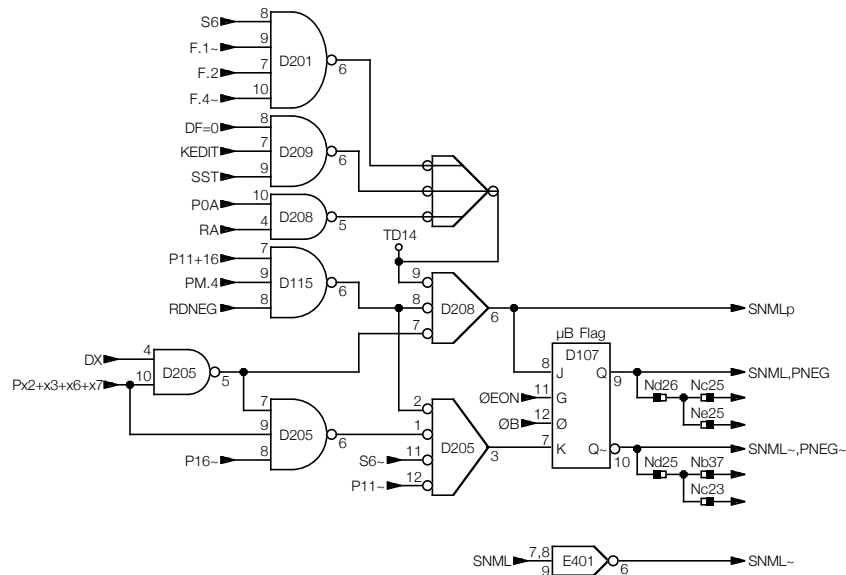
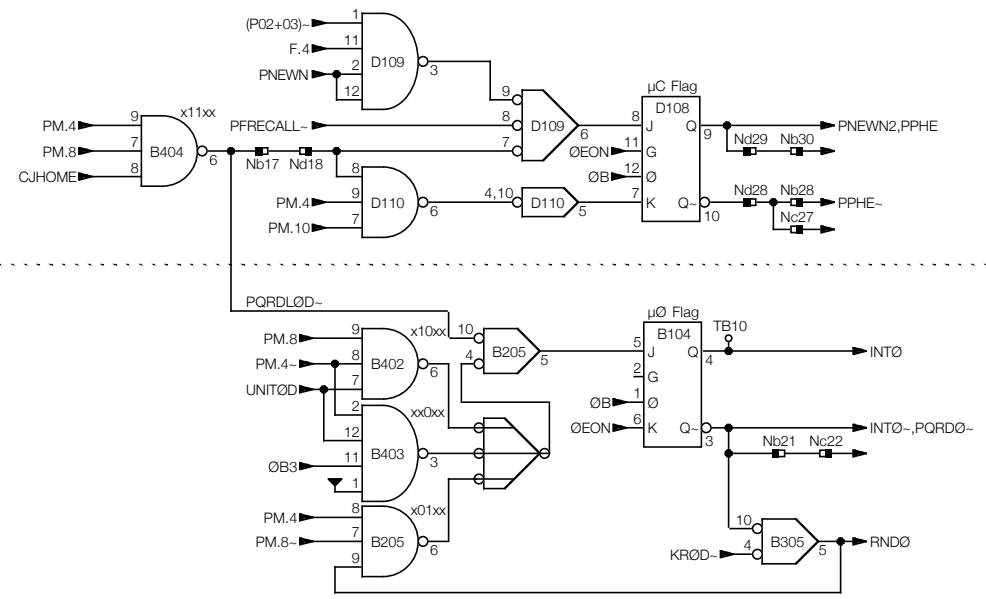
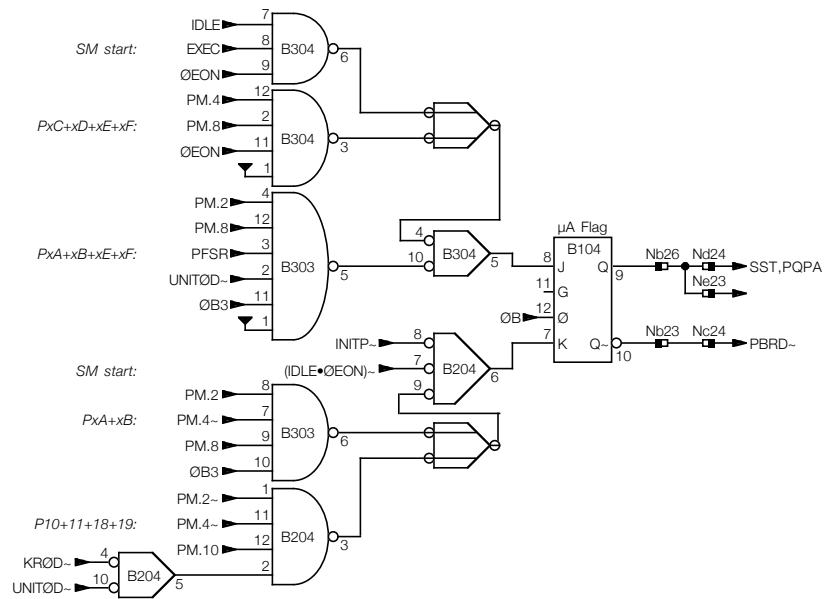


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Section: P Machine - State Decode

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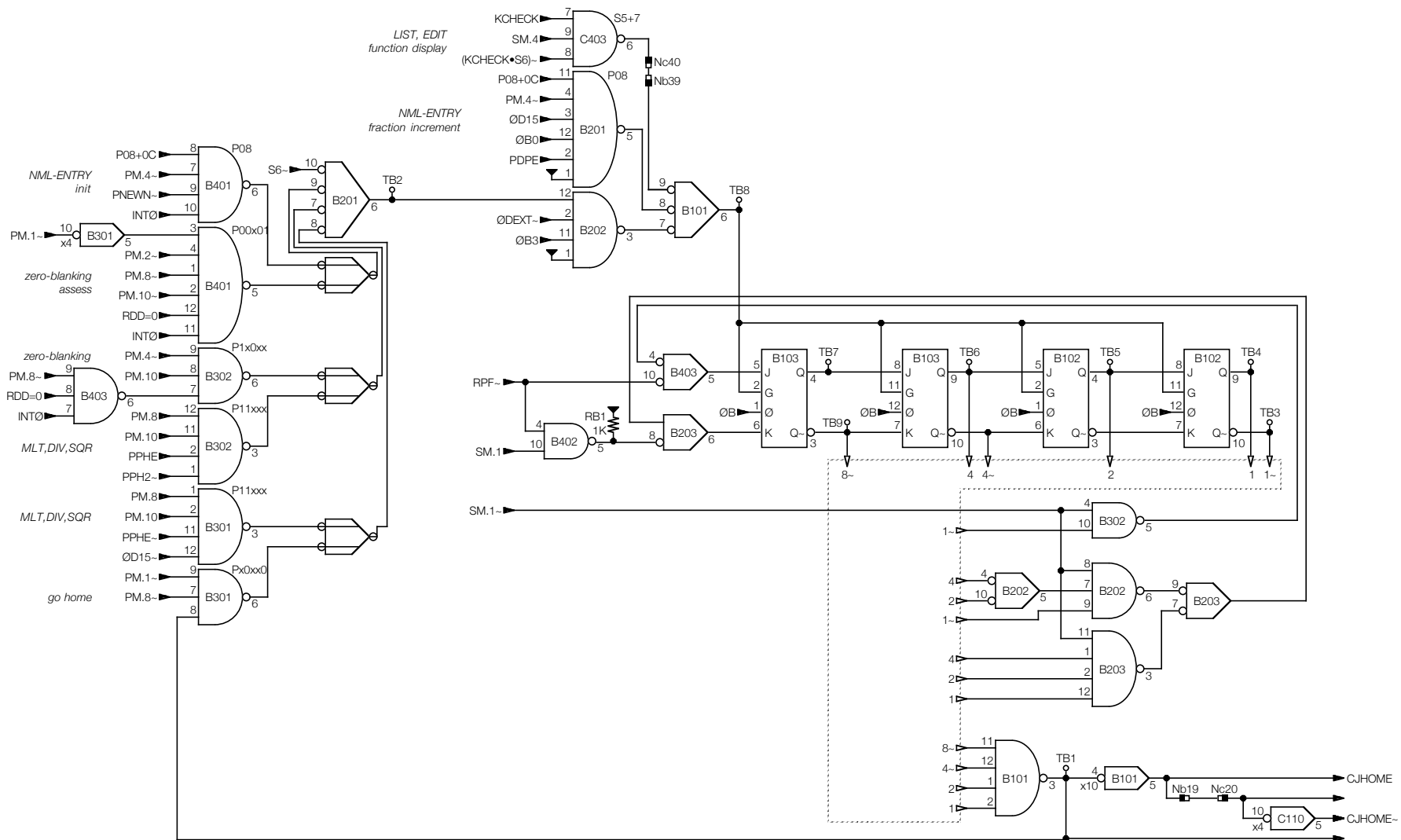


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Section: Misc. Flags

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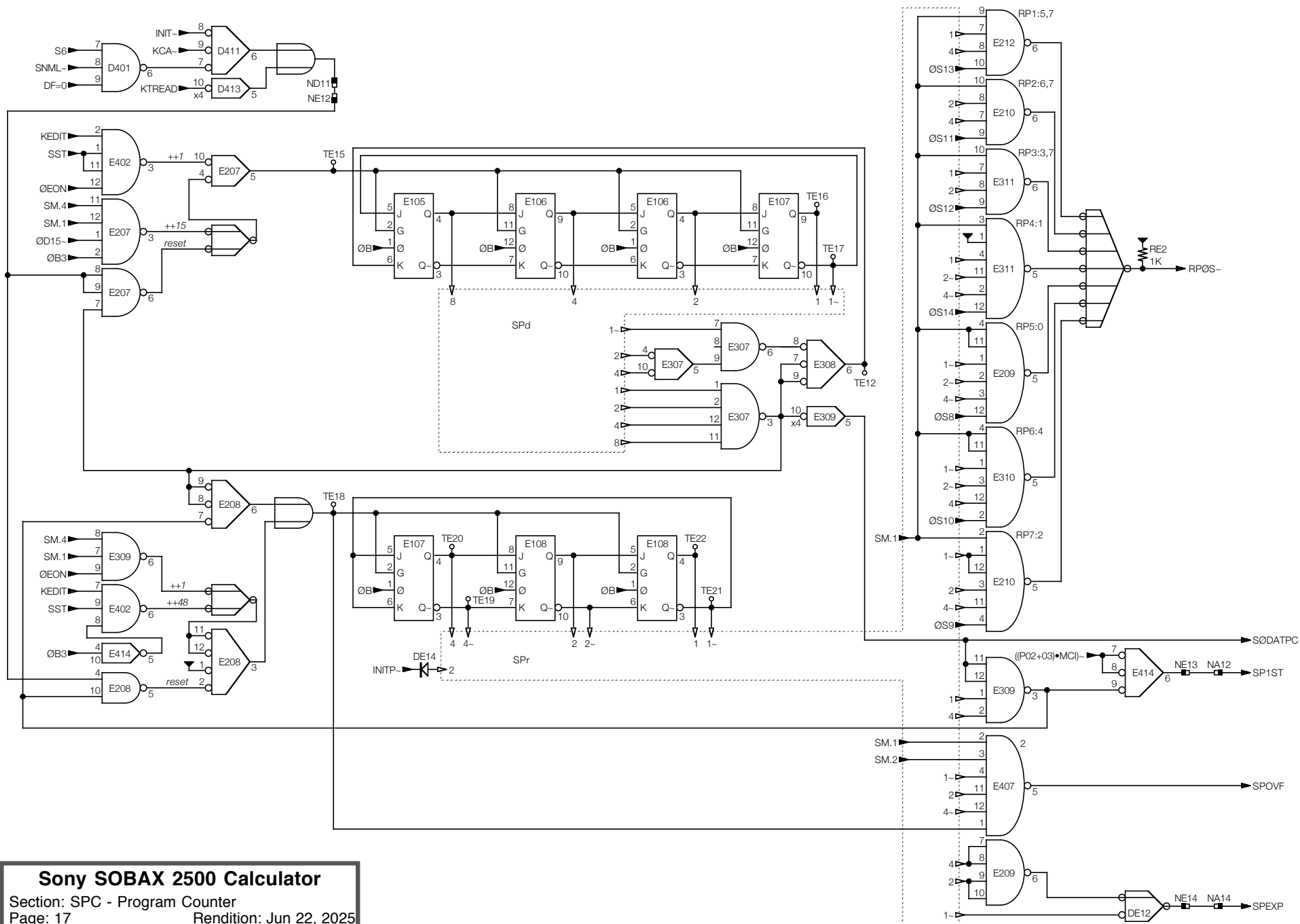
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Section: Counter CJ

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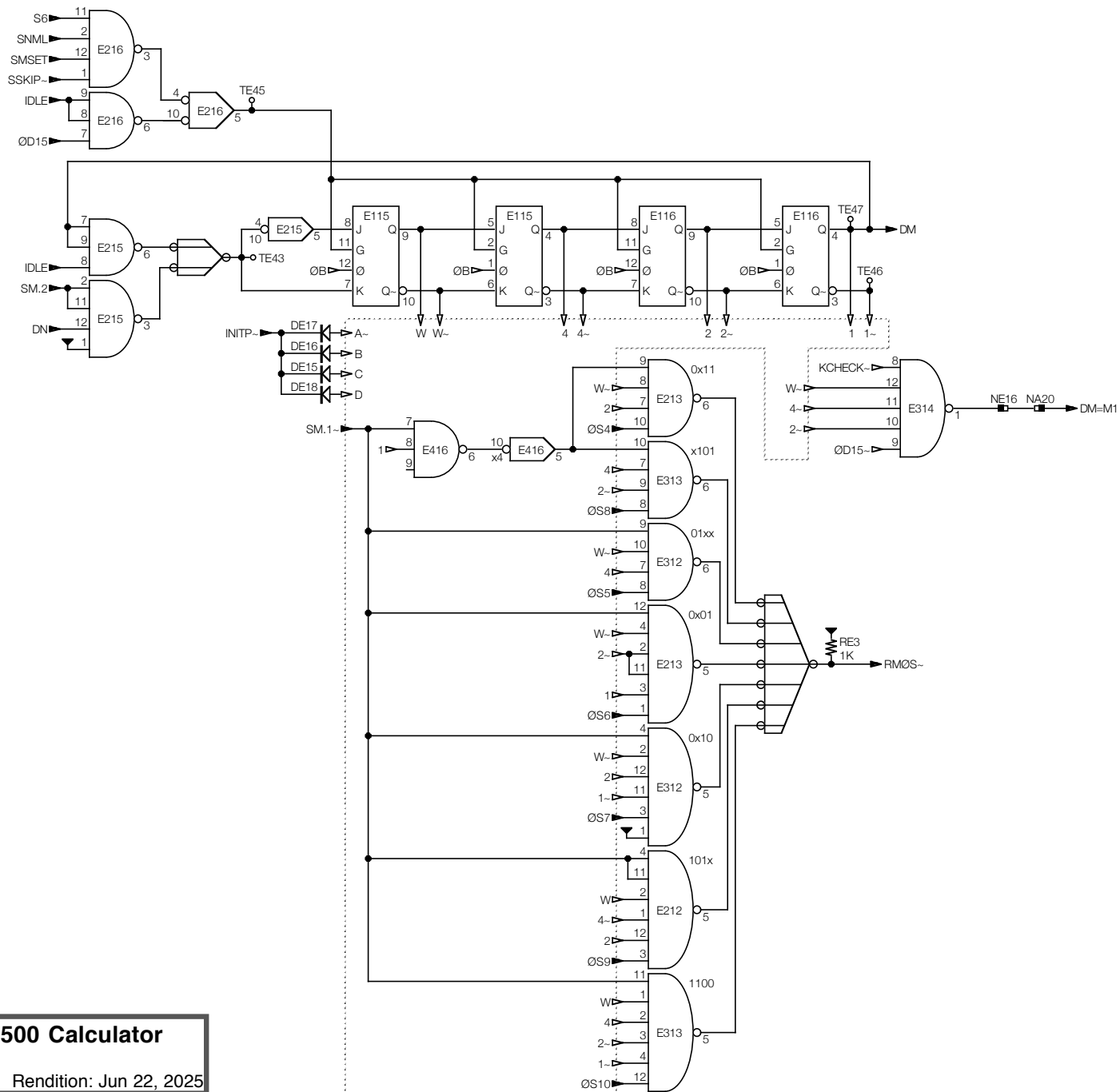


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Section: SPC - Program Counter

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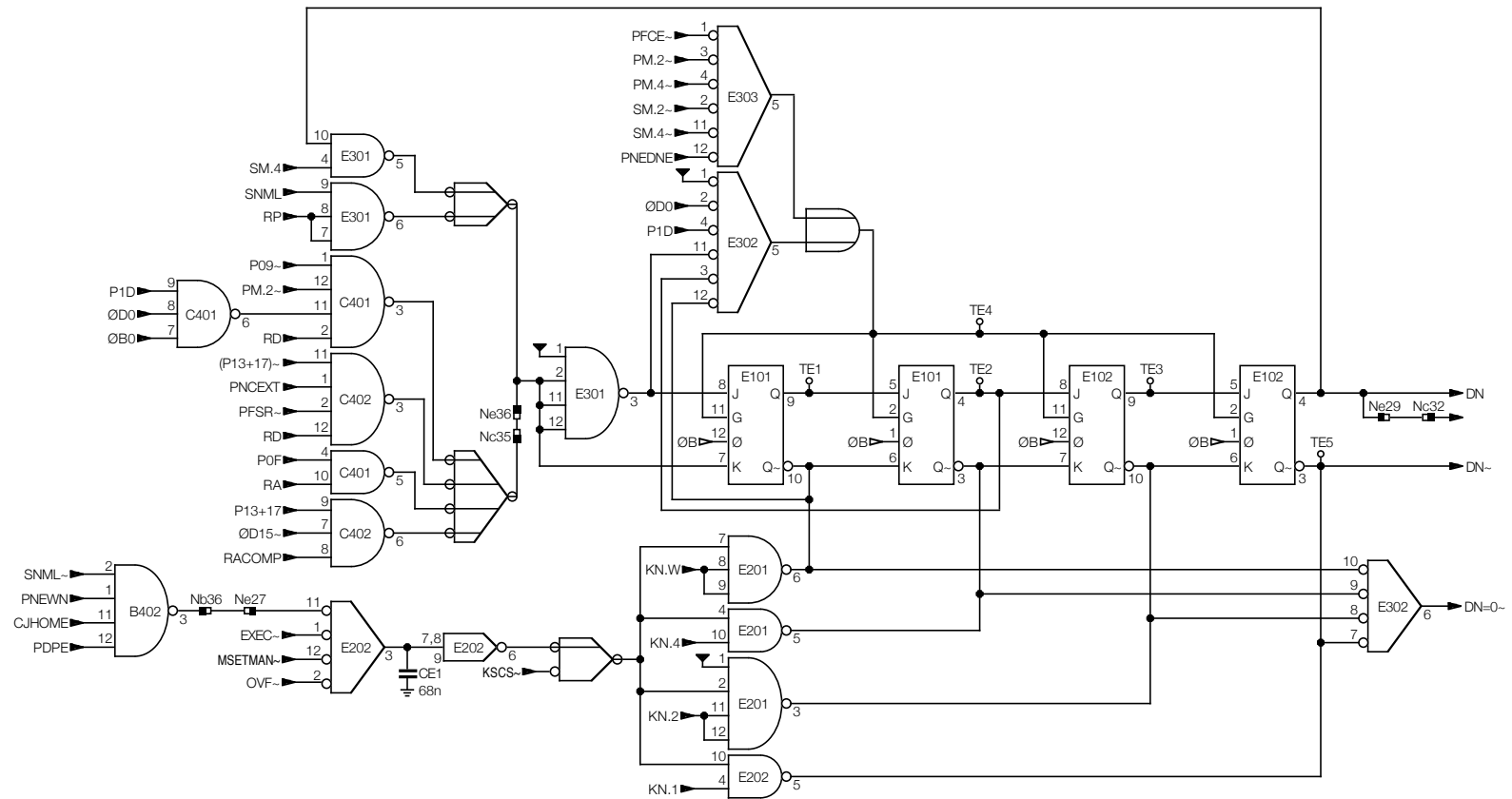


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Section: Digit M

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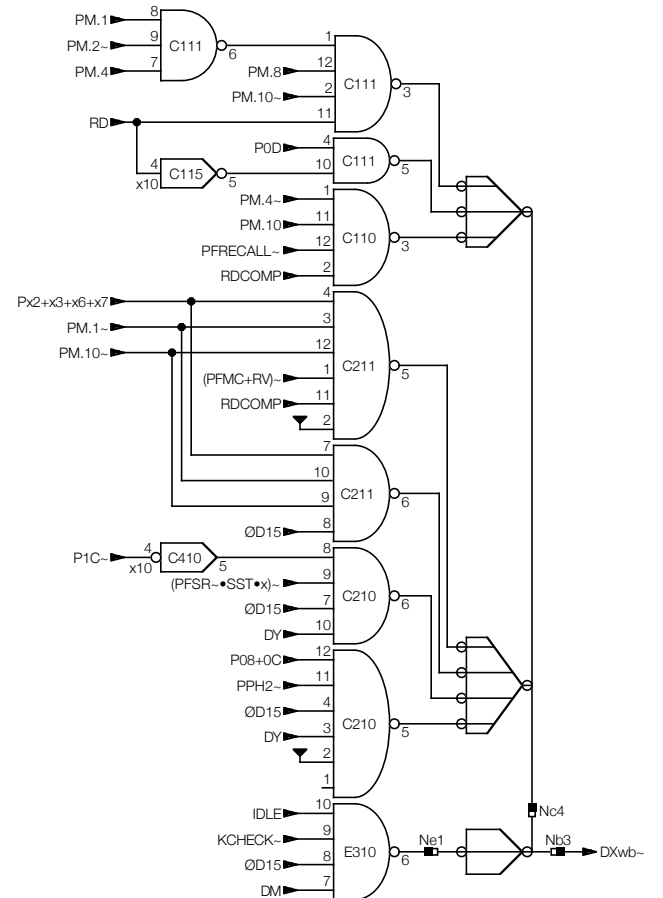
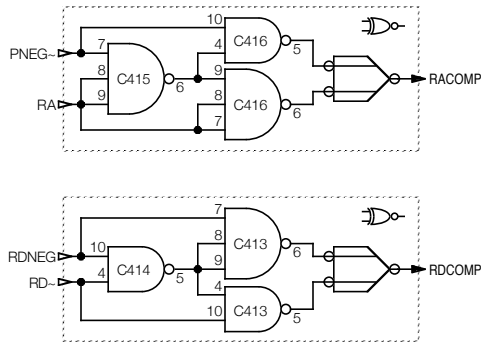
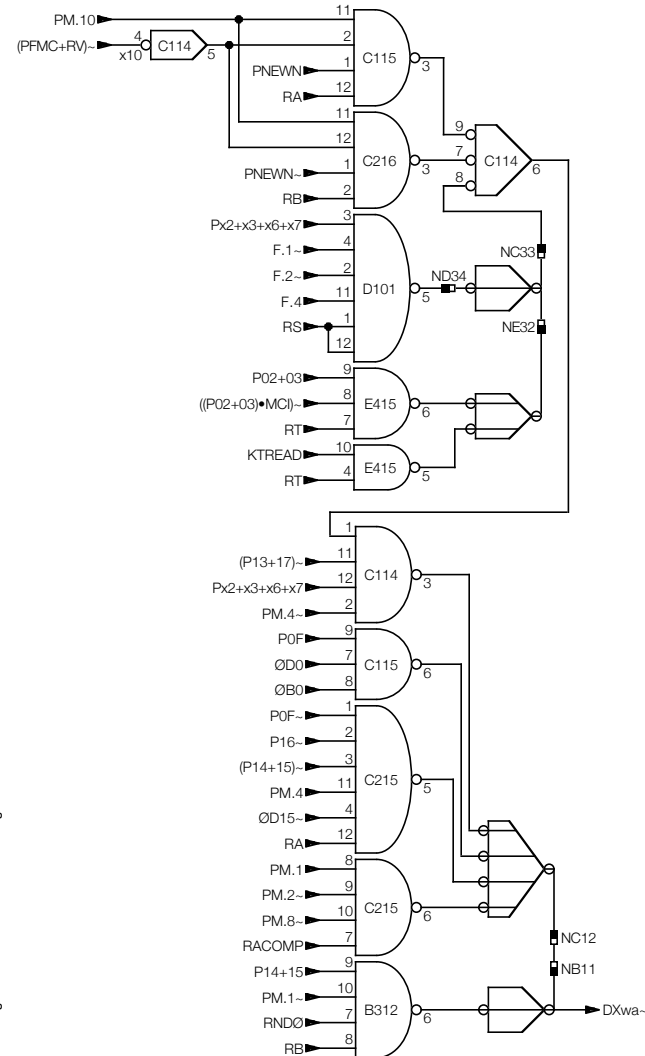


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Section: Digit N

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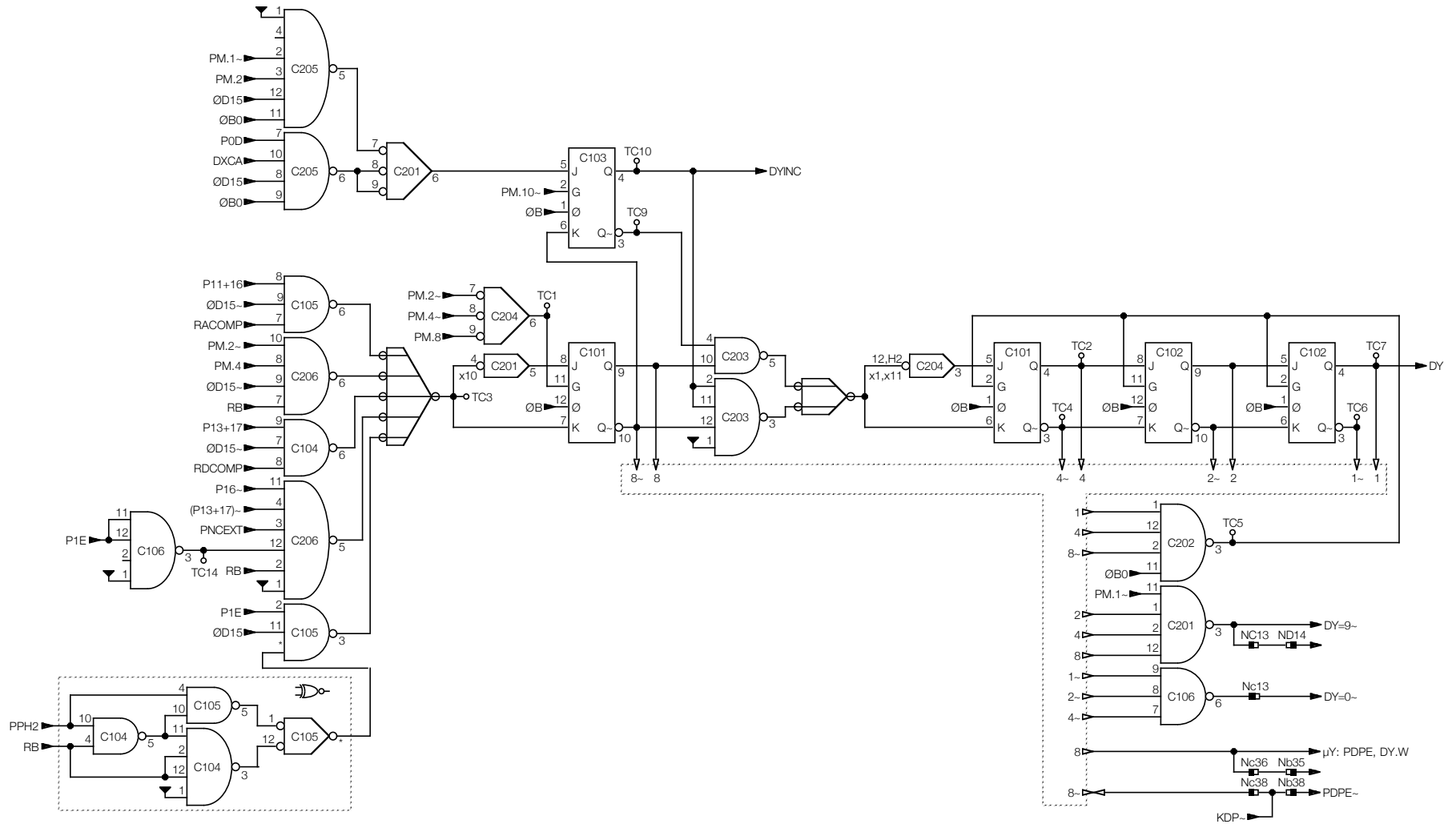
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Section: Digit X Gating

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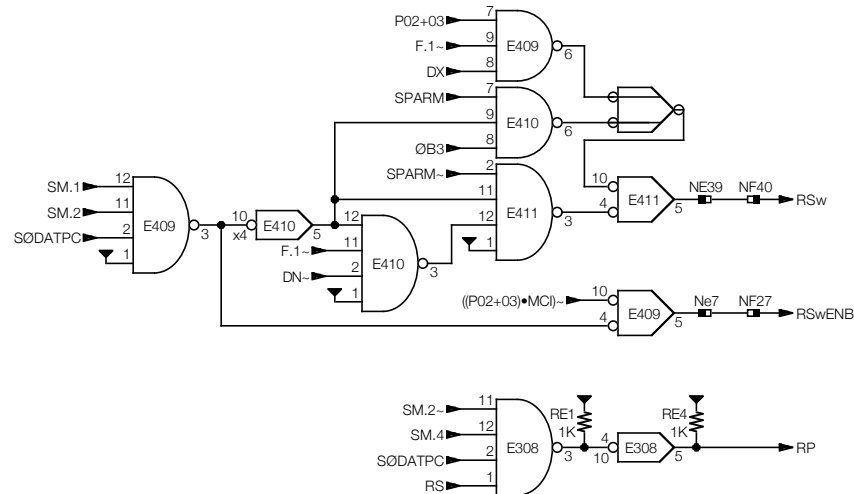
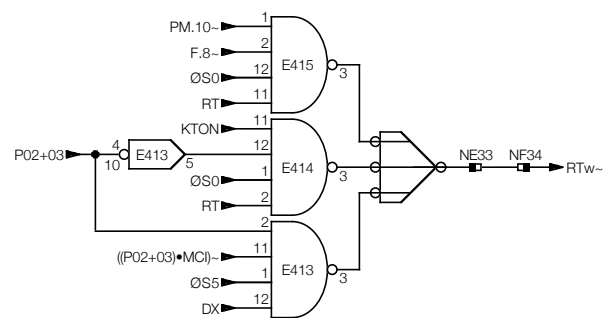


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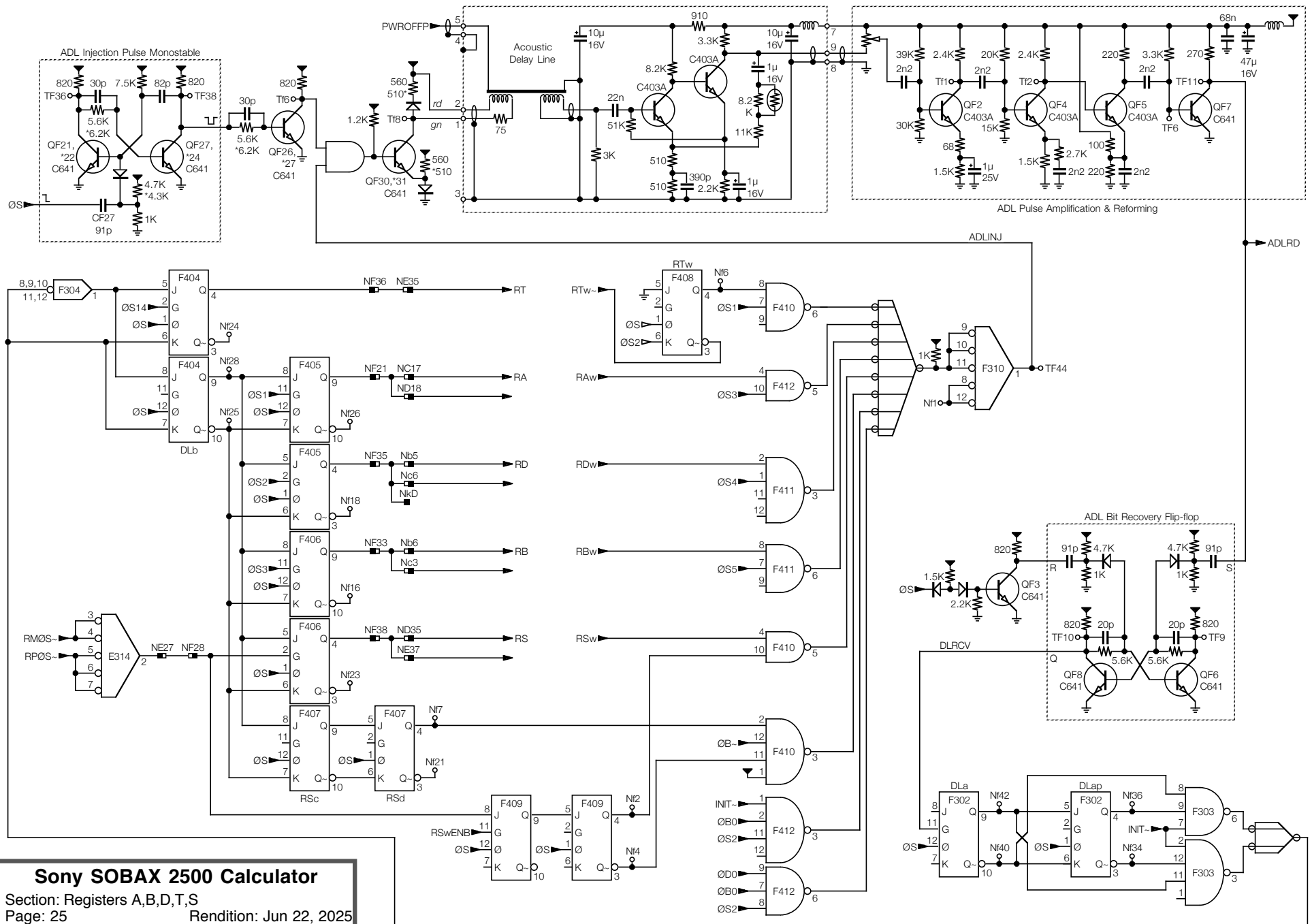
Section: Digit Y

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Section: Registers A, B, T & S Gating
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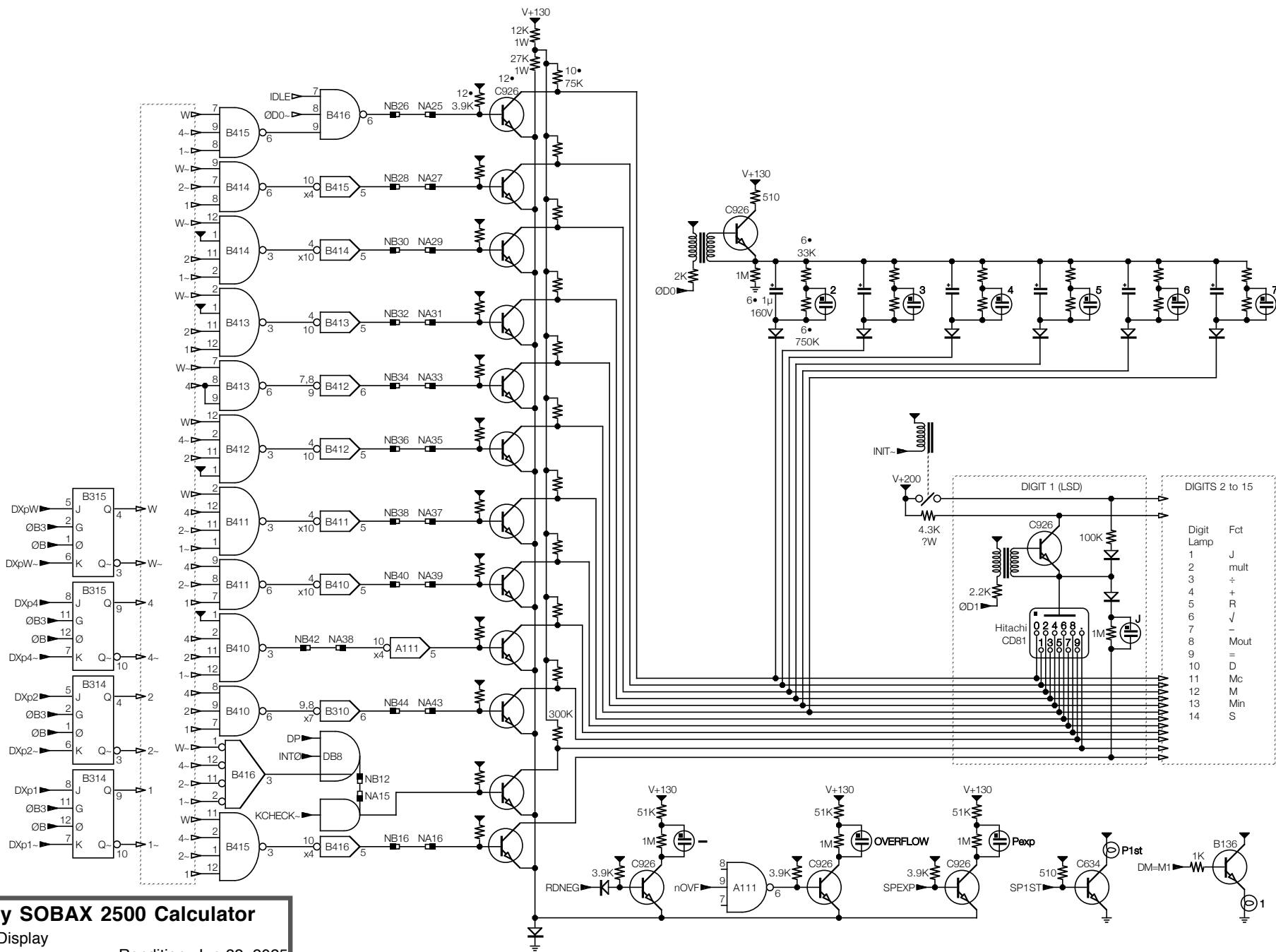


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Section: Registers A,B,D,T,S

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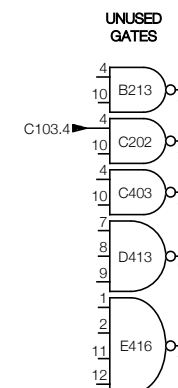
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Section: Display
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Section: Power Supply & Unused Gates
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