

1

B

1001

C



D

11

E

11

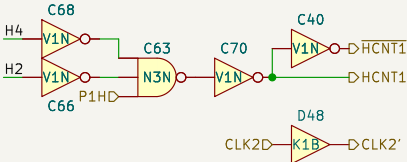
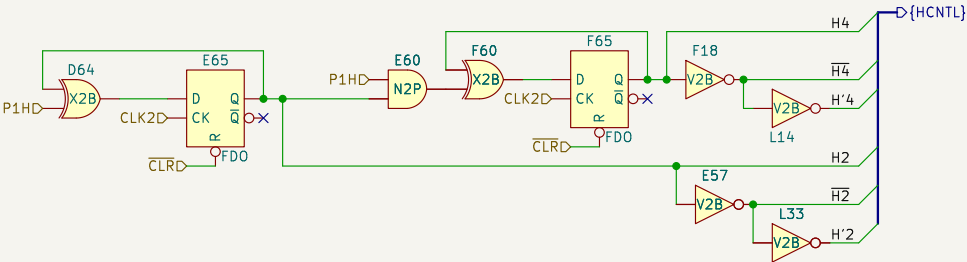
F

11

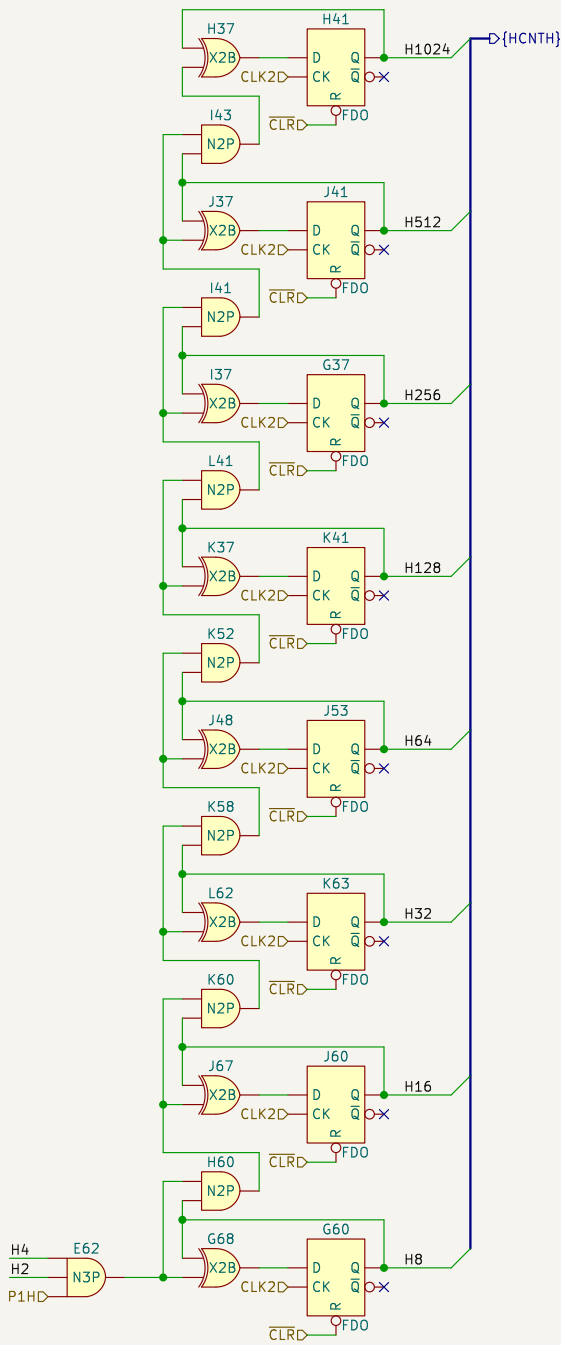
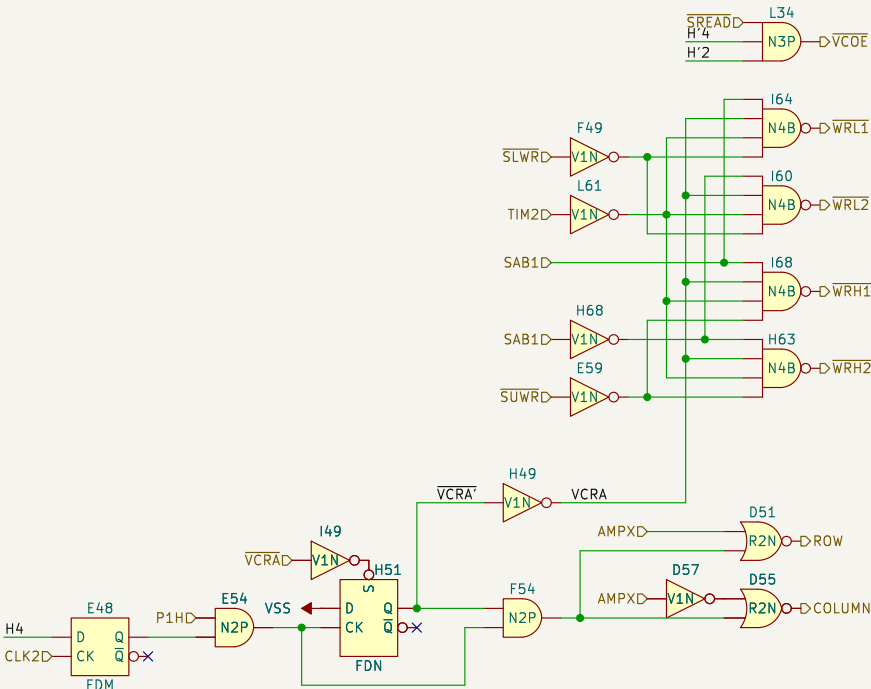
Horizontal clock P1H and $\overline{\text{CLR}}$ initiates the timing of the 007780. H2 and H4 are also generated which creates a 3-bit counter, HCNT, which controls the timing of the device. There are $2^3 = 8$ different counter values: 0..7.

HCNT 0,1 Render Tilemap 1
HCNT 2,3 Render Tilemap 2
HCNT 4,5 Idle, writing to page 0
HCNT 6,7 CPU read/write cycle

TIM2 is active low during HCNT cycles 6 and 7.
When HCNT is 4 or 5 then row address = 0. The column address is incremented by one for each HCNT cycle. Is this used to not wear out the DRAM modules?



DRAM Control Signals



Sheet: /Counters/
File: counters.kicad_sch.kicad_sch

Title: Konami 007780

Size: A3 Date: 2024-07-28

KiCad E.D.A. 8.0.4

Rev:

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