bus

File: bus.kicad_sch

power

File: power.kicad_sch

buffers

File: buffers.kicad_sch

fpanel

File: fpanel.kicad_sch

Z80CPU

File: Z80CPU.kicad_sch

DMA

File: DMA.kicad_sch

GALS

File: GALS.kicad_sch

IM2

File: IM2.kicad_sch

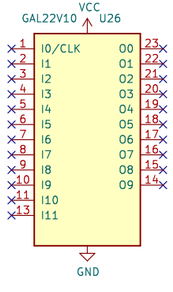
waitstate

File: waitstate.kicad_sch

mapper

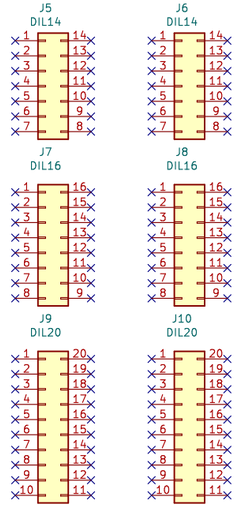
File: mapper.kicad_sch

SPARE GAL FOR DEBUGGING



THROUGH HOLES FOR PATCH WIRE ROUTING ACROSS SIDES

SPARE SOCKETS FOR DEBUGGING



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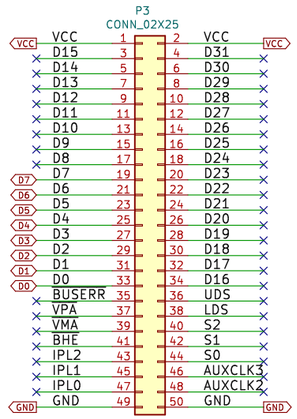
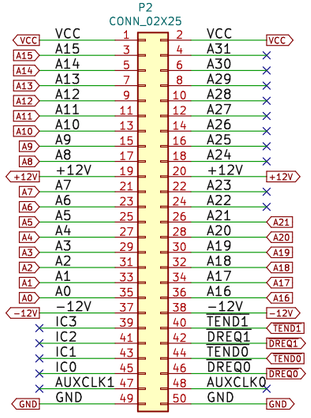
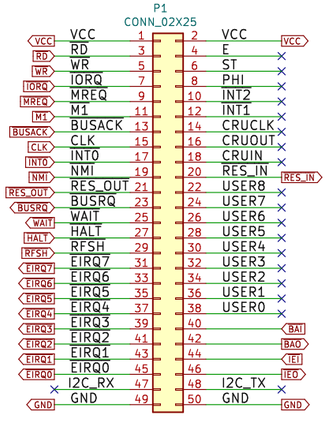
KiCad E.D.A. kicad (6.0.11)		Id: 1/11







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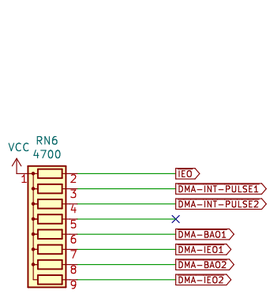
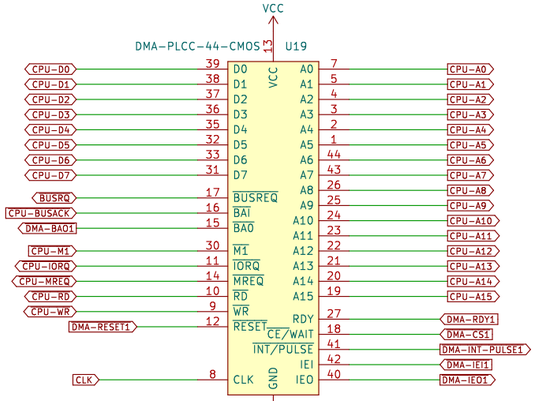
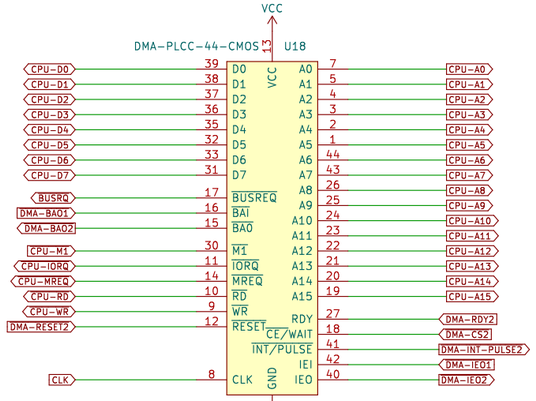
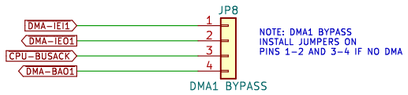




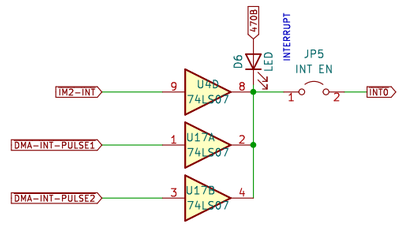
NOTE: PROCESSOR BOARD MUST
BE THE START OF THE BAI/BAO CHAIN.
BAO ORIGINATES WITH CPU BUSACK.
NO BAI SIGNAL TO PROCESSOR BOARD.

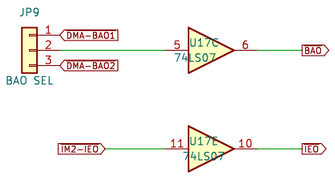


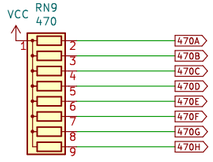


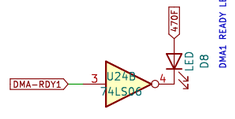
NOTE: DMA1 BYPASS
INSTALL JUMPERS ON
PINS 1-2 AND 3-4 IF NO DMA

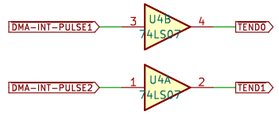
NOTE: DMA2 BYPASS
INSTALL JUMPERS ON
PINS 1-2 AND 3-4 IF NO DMA



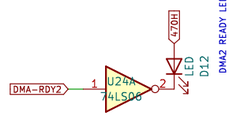








TEND IS AN OUTPUT FROM DMA

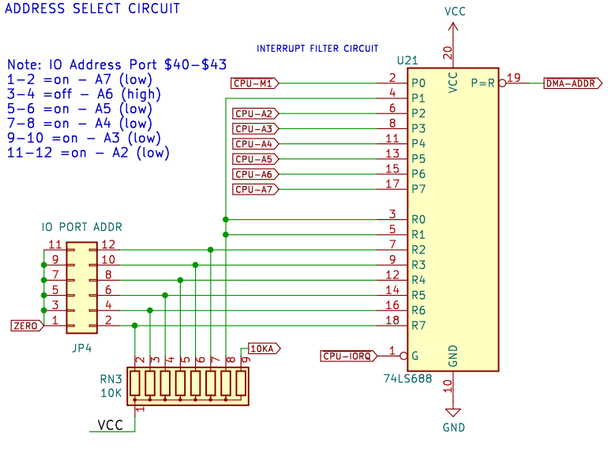


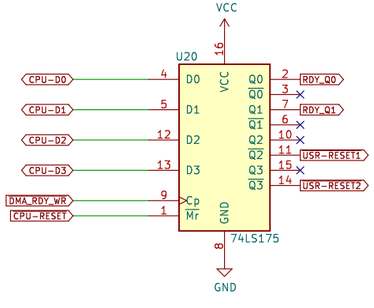
IO ADDRESS SELECT CIRCUIT

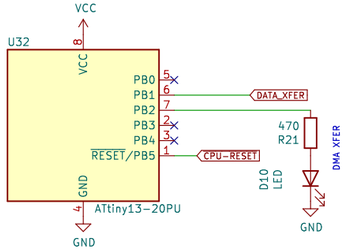
Z80 DMA IO PORT DECODER

Note: IO Address Port $40-$43
1-2 =on - A7 (low)
3-4 =off - A6 (high)
5-6 =on - A5 (low)
7-8 =on - A4 (low)
9-10 =on - A3 (low)
11-12 =on - A2 (low)

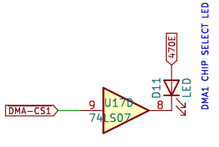
INTERRUPT FILTER CIRCUIT

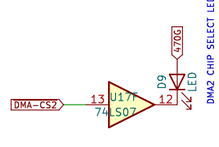






DMA Transfer LED triggered whenever a DMA transfer is in progress and the pulse signal is active. DMA software configuration needs to program the activation of the pulse signal.





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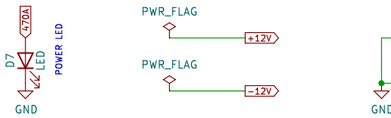
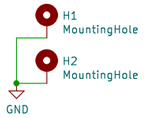
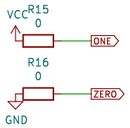
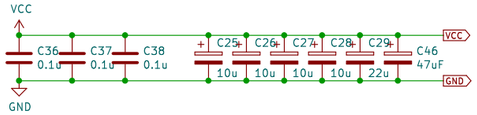
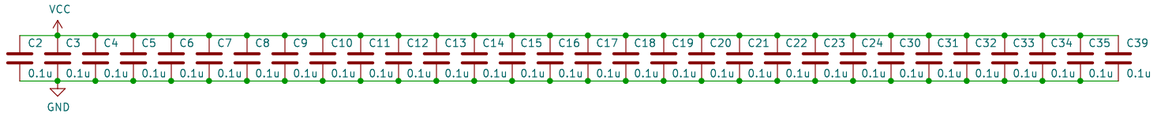
KiCad E.D.A. kicad (6.0.11)		Id: 3/11

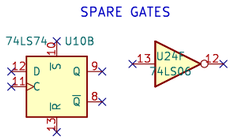


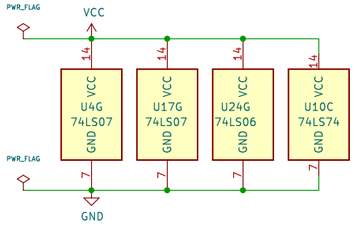












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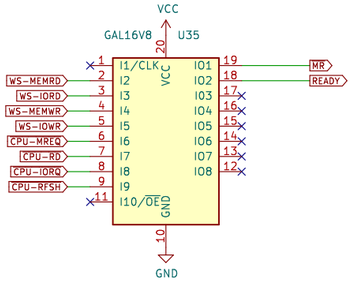
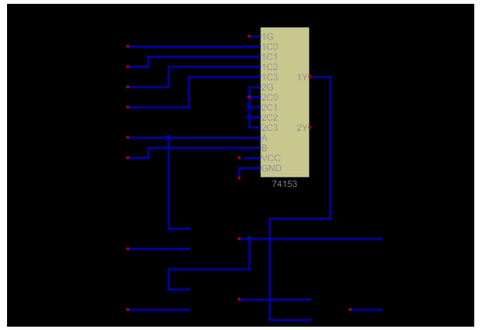
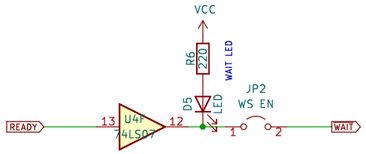
KiCad E.D.A. kicad (6.0.11)		Id: 4/11

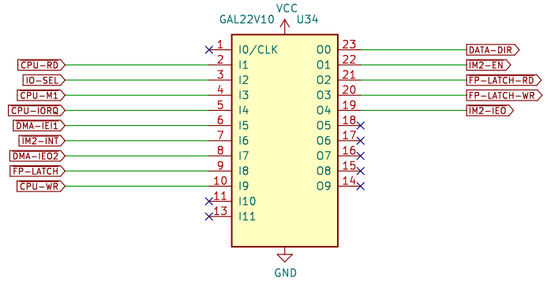
CPU WS GAL16V8

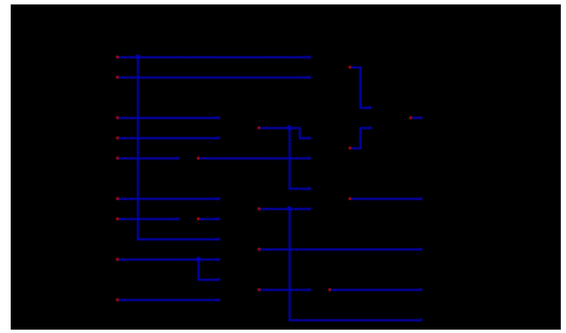




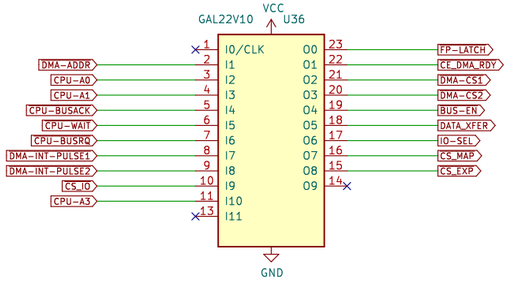


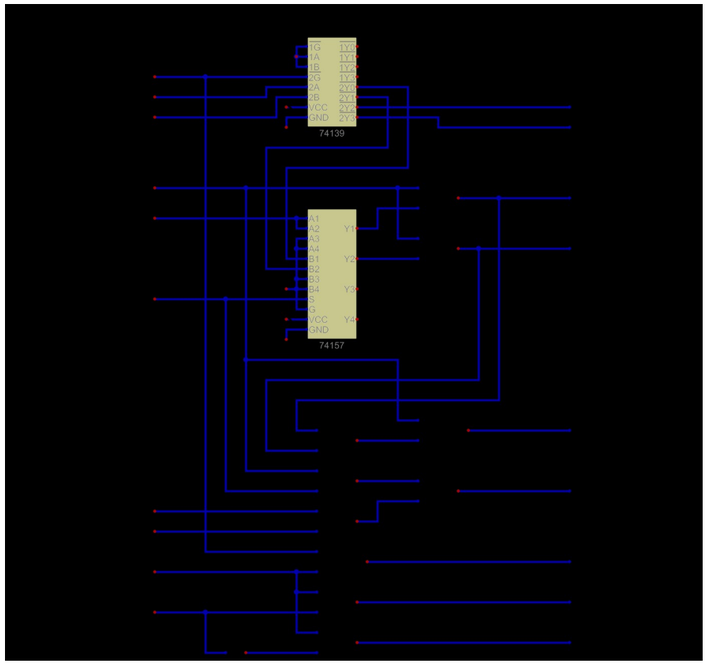
CPU DATA DIR GAL22V10



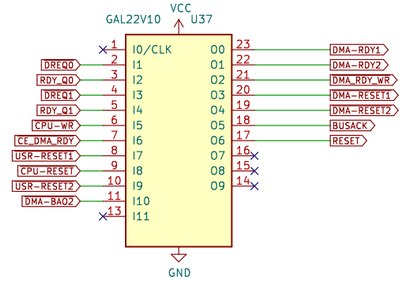


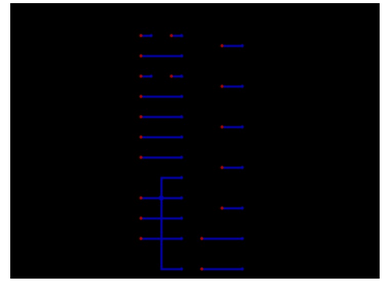
DMA CS GAL22V10





DMA RDY GAL22V10





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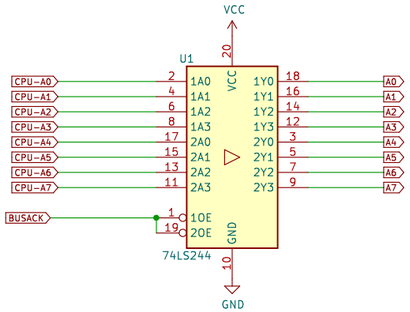
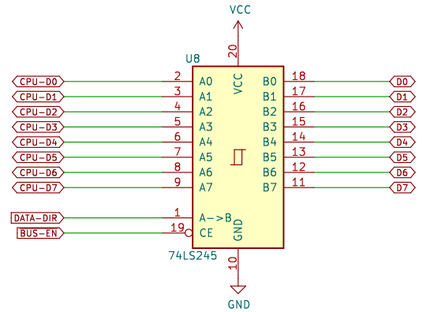
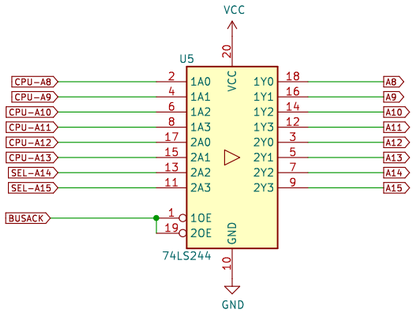
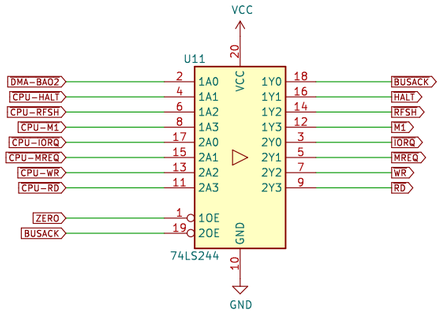
KiCad E.D.A. kicad (6.0.11)		Id: 5/11

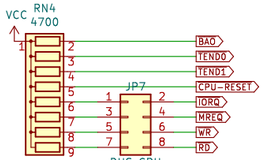
Z80 BUS INTERFACE

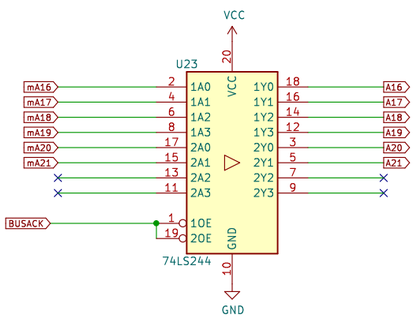


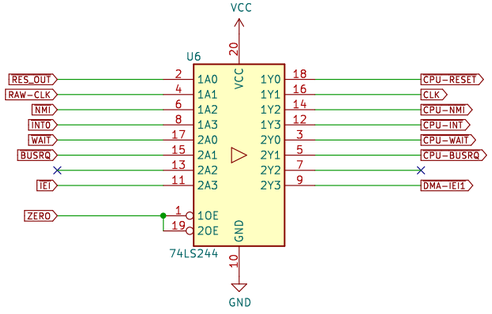


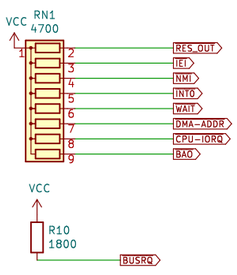












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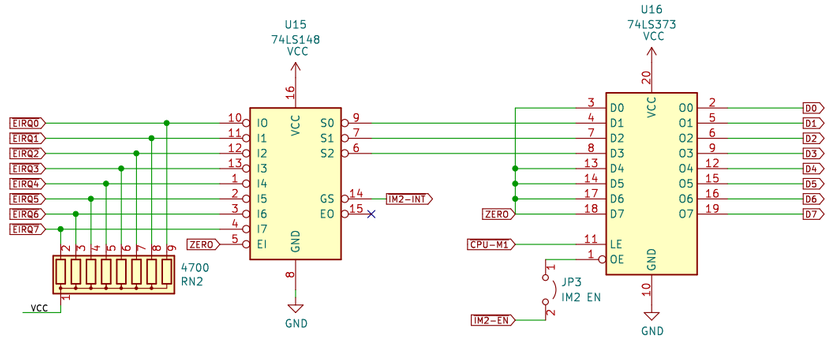
KiCad E.D.A. kicad (6.0.11)		Id: 6/11

Interrupt Mode 2 (IM2) Circuit



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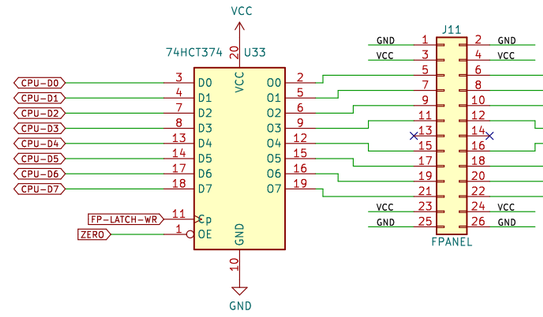
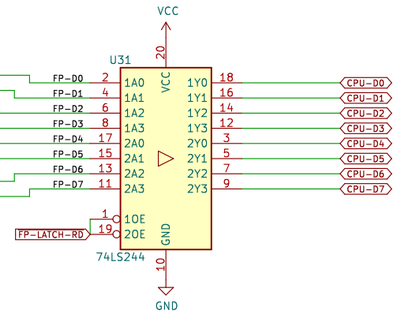
KiCad E.D.A. kicad (6.0.11)		Id: 7/11

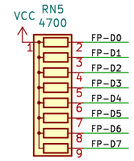
FRONT PANEL LED OUTPUT



U33 NOTE: USE 74HCT374 TO SOURCE OR SINK ADEQUATE CURRENT TO DRIVE LEDS ON FRONT PANEL

FRONT PANEL SWITCH INPUT





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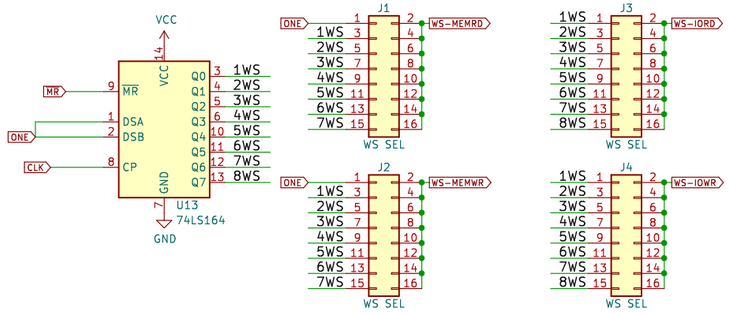
Wait State Generator Circuit



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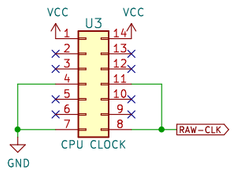
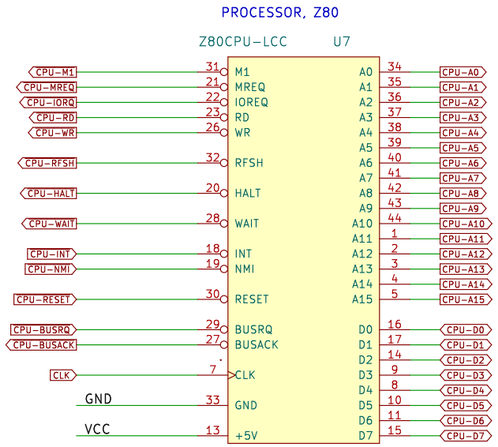
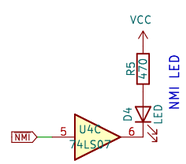
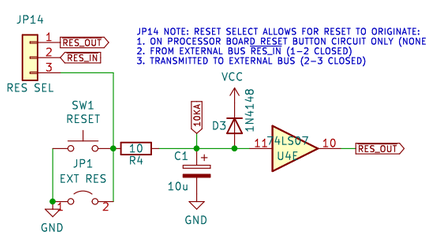
KiCad E.D.A. kicad (6.0.11)		Id: 9/11





Tri-state address, data, & control bus during DMA





Reset Button Circuit

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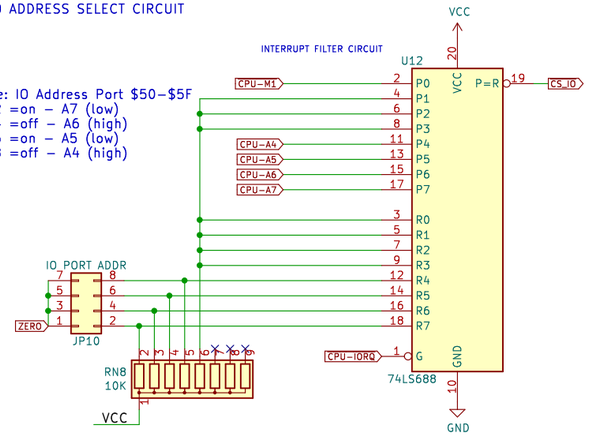
Z80 MEMORY MAPPER AND EXPANSION IO PORT DECODER

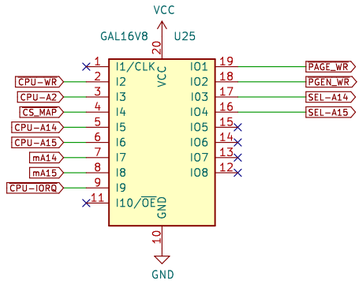
IO ADDRESS SELECT CIRCUIT

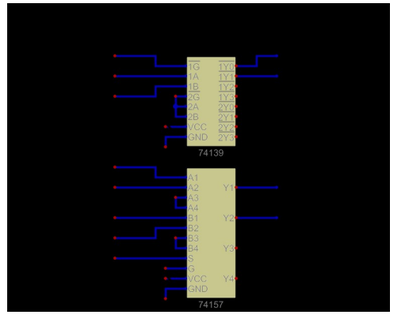
INTERRUPT FILTER CIRCUIT

Note: IO Address Port $50-$5F
1-2 =on – A7 (low)
3-4 =off – A6 (high)
5-6 =on – A5 (low)
7-8 =off – A4 (high)

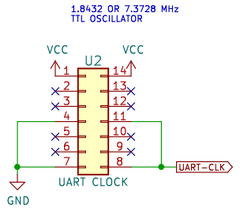


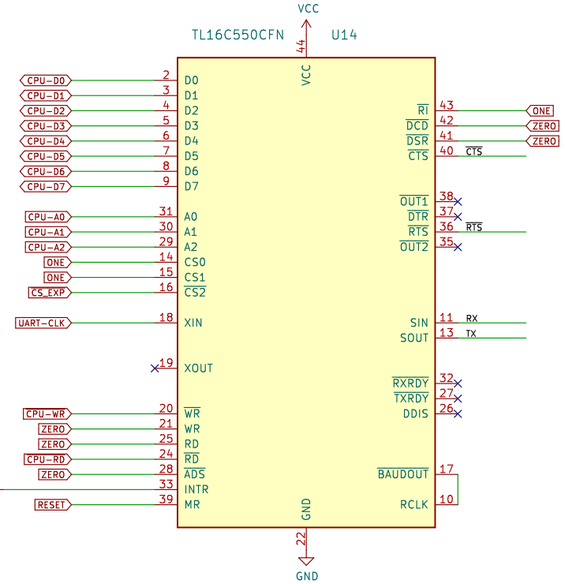
CPU MAPPER GAL16V8



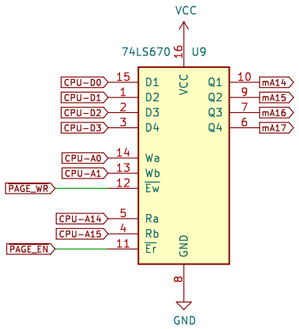


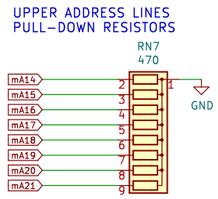
1.8432 OR 7.3728 MHz TTL OSCILLATOR

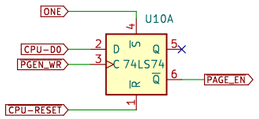


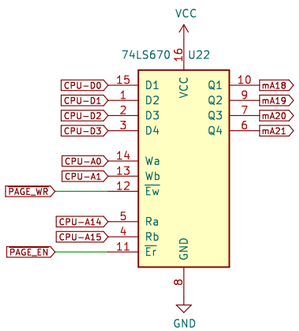


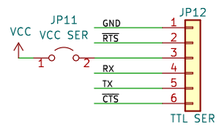
MEMORY PAGING SRAMS

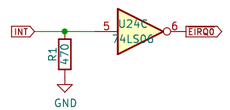












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