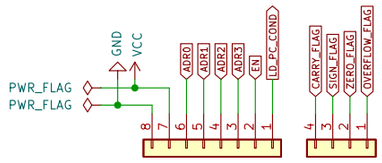
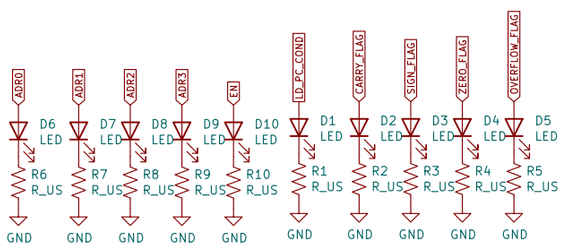
ALU Conditional Jump Logic

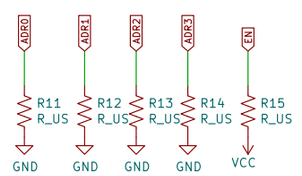
CPU Connections



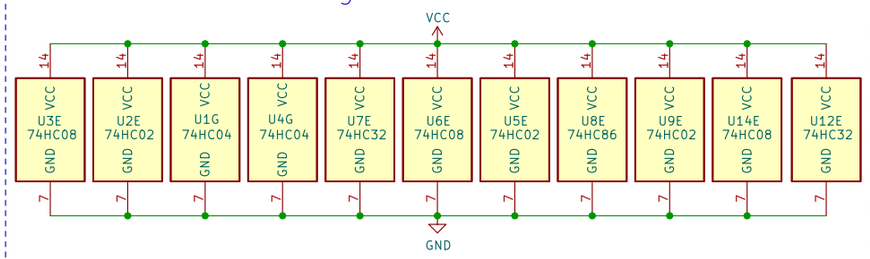
LED Indicators



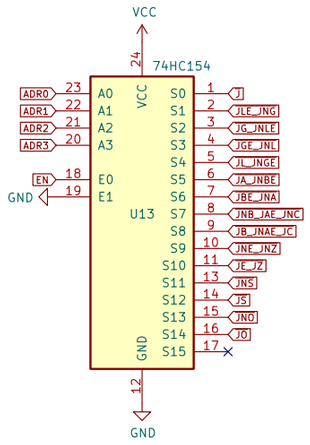
Pull U/D



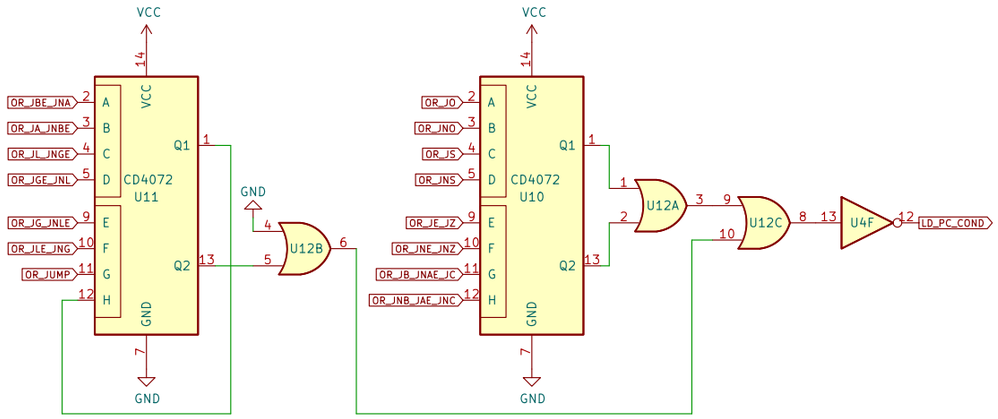
Logic Gates Power



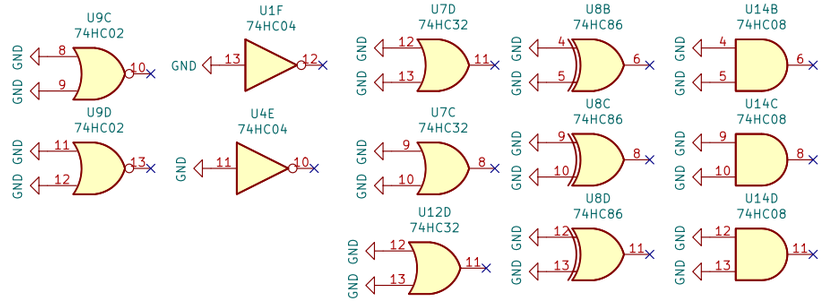
Jumps MUX



FINAL OR GATE FOR PC_LOAD control line

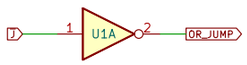


Unused Logic Gates



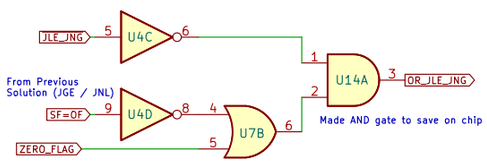
J — 0000

Unconditional Jump



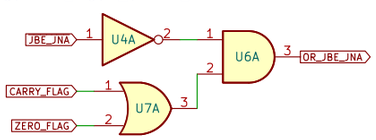
JLE / JNG — 0001

Jump if less or equal Jump if not greater
ZF = 1 or SF <> OF



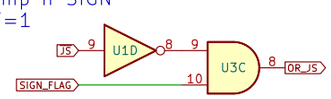
JBE / JNA — 0110

Jump if below or equal
Jump if not above
CF = 1 or ZF = 1



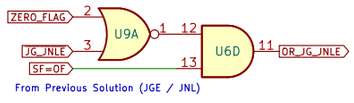
JS — 1100

Jump if SIGN
SF=1



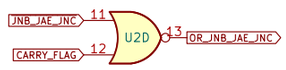
JG / JNLE — 0010

Jump if greater
Jump if not less or equal
ZF = 0 and SF = OF



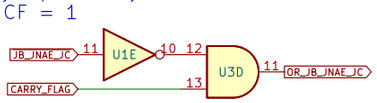
JNB / JAE / JNC — 0111

Jump if not below
Jump if above or equal
Jump if not carry
CF=0



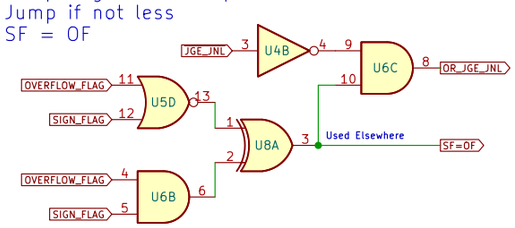
JB / JNAE / JC — 1000

Jump if below
Jump if not above or equal
jump if Carry
CF = 1



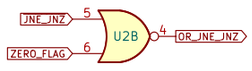
JGE / JNL — 0011

Jump if greater or equal
Jump if not less
SF = OF



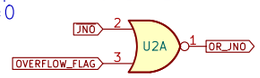
JNE / JNZ — 1001

Jump if not equal
Jump if not zero
ZF=0



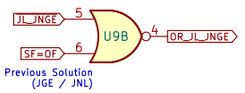
JNO — 1101

Jump if NOT OVERFLOW
OF=0



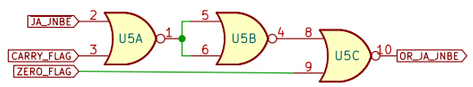
JL / JNGE — 0100

Jump if less
Jump if not greater or equal
SF <> OF



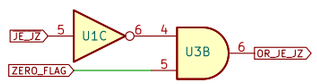
JA / JNBE — 0101

Jump if above
Jump if not below or equal
CF = 0 and ZF = 0



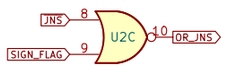
JE / JZ — 1010

Jump if equal,
Jump if zero
ZF=1



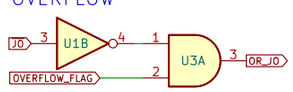
JS — 1011

Jump if NOT SIGN
SF=0



JO — 1110

Jump if OVERFLOW
OF=1



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Size: User	Date: 2022-07-19	**Rev: v2**
KiCad E.D.A. kicad (6.0.0-0)		Id: 1/1