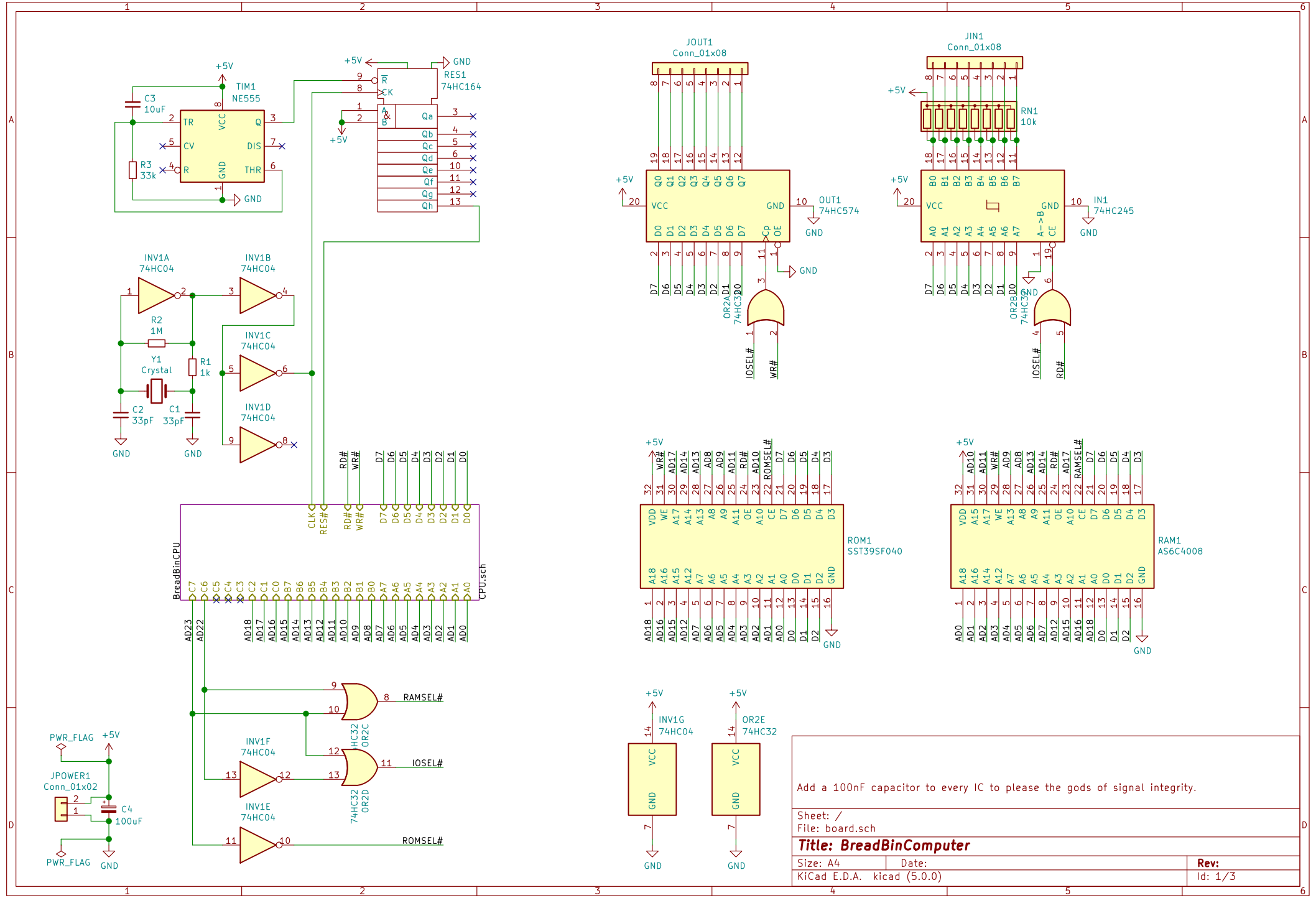
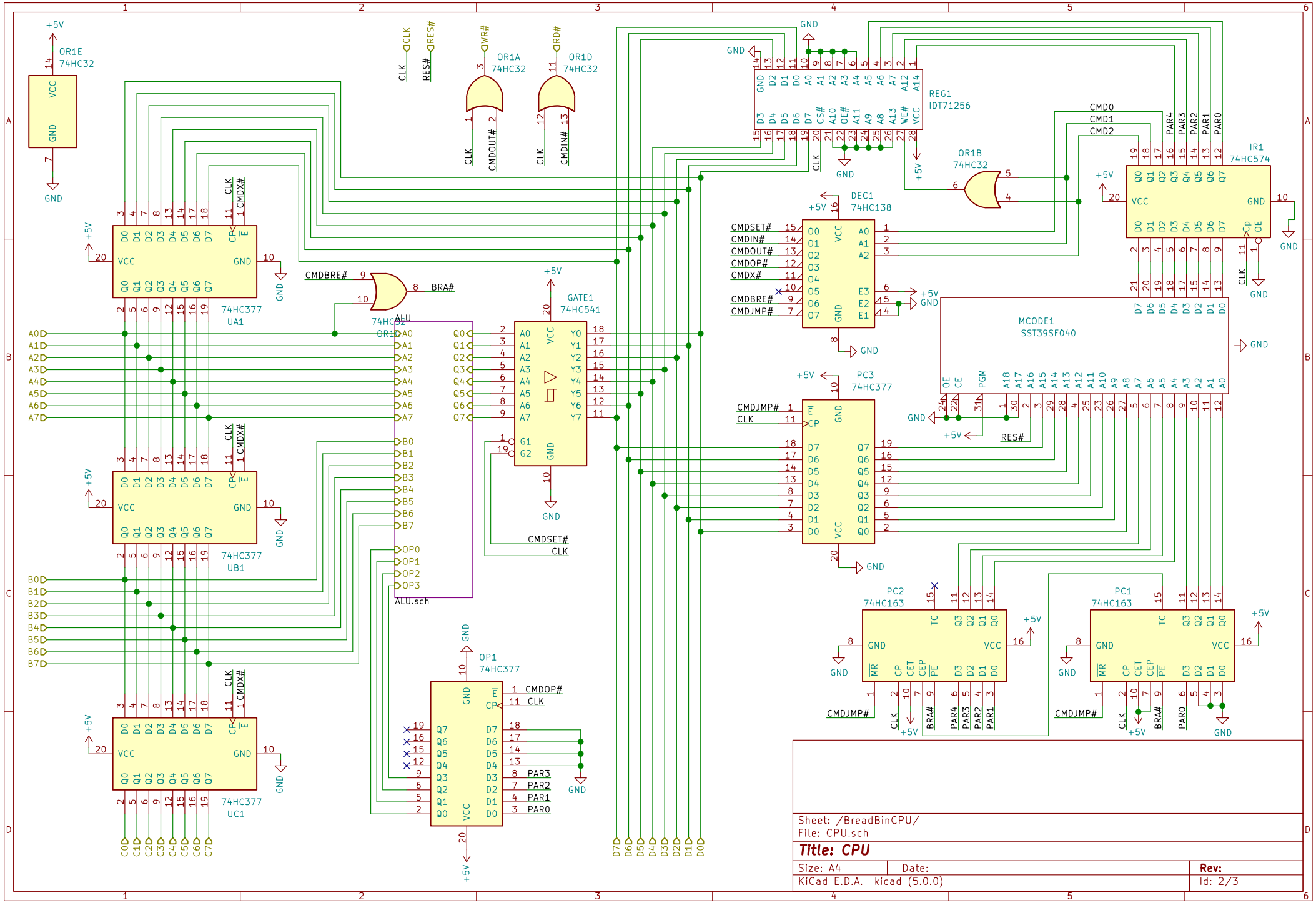
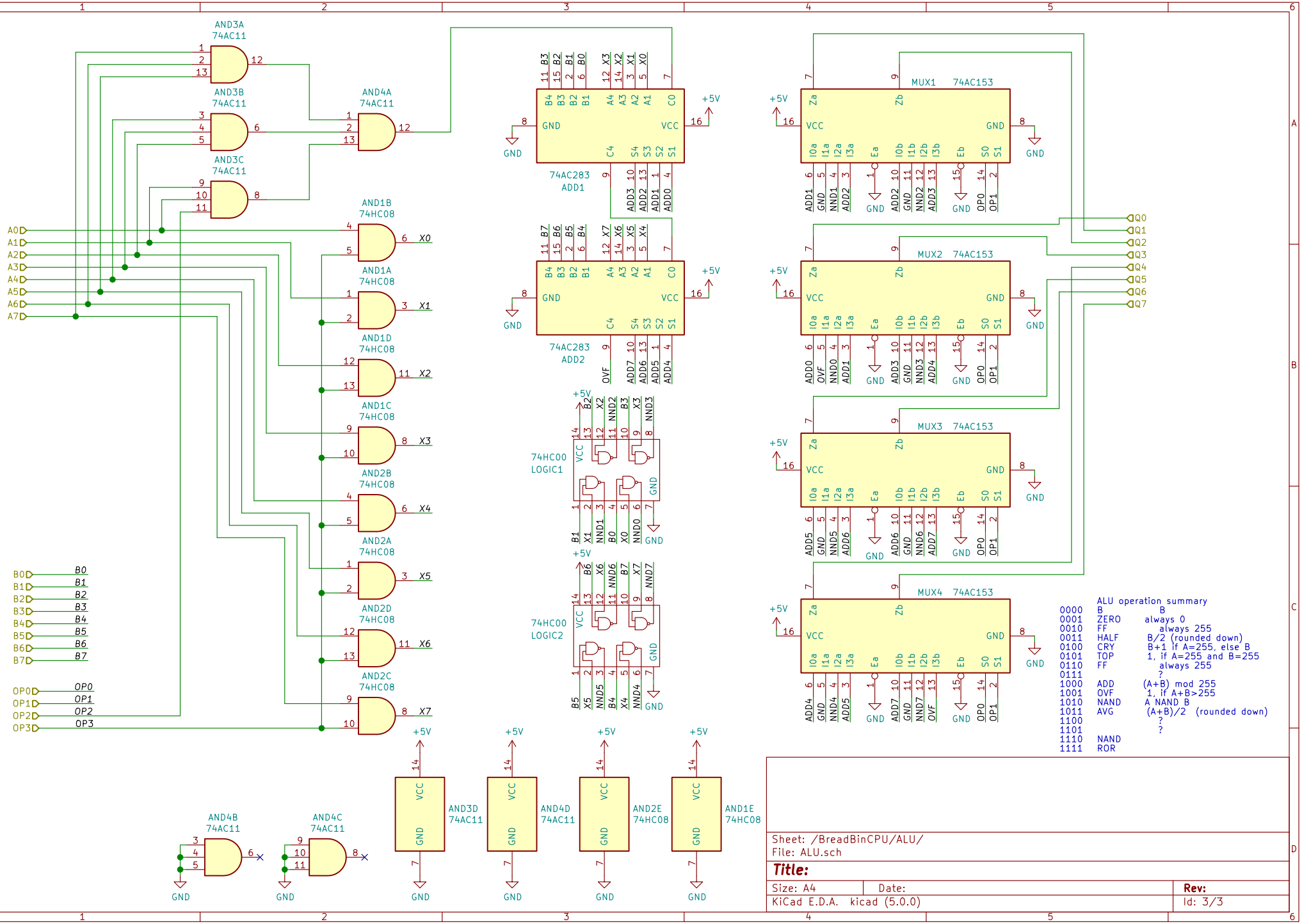

TIM1
NE555
C3
10uF
R3
33k
RES1
74HC164
JOUT1
Conn_01x08
OUT1
74HC574
JIN1
Conn_01x08
RN1
10k
IN1
74HC245
INV1A
74HC04
INV1B
74HC04
INV1C
74HC04
INV1D
74HC04
R2
1M
R1
1k
Y1
Crystal
C2
33pF
C1
33pF
BreadBinCPU
CPU.sch
ROM1
SST39SF040
RAM1
AS6C4008
INV1F
74HC04
INV1E
74HC04
INV1G
74HC04
OR2E
74HC32
RAMSEL#
IOSEL#
ROMSEL#
JPOWER1
Conn_01x02
C4
100uF
PWR_FLAG
+5V
GND
Add a 100nF capacitor to every IC to please the gods of signal integrity.
Sheet: /
File: board.sch
Title: BreadBinComputer
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.0.0)
Id: 1/3


OR1E
74HC32
OR1A
74HC32
OR1D
74HC32
OR1B
74HC32
REG1
IDT71256
IR1
74HC574
DEC1
74HC138
GATE1
74HC541
MCODE1
SST39SF040
PC3
74HC377
PC2
74HC163
PC1
74HC163
UA1
74HC377
UB1
74HC377
UC1
74HC377
OP1
74HC377
ALU
ALU.sch
CMDBRE#
BRA#
CMDSET#
CMDIN#
CMDOUT#
CMDOP#
CMDMX#
CMDJMP#
RES#
CLK
WR#
RD#
CMDIN#
CMDOUT#
CMD0
CMD1
CMD2
PAR0
PAR1
PAR2
PAR3
PAR4
Sheet: /BreadBinCPU/
File: CPU.sch
Title: CPU
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.0.0)
Id: 2/3


AND3A 74AC11
AND3B 74AC11
AND3C 74AC11
AND4A 74AC11
AND1B 74HC08
AND1A 74HC08
AND1D 74HC08
AND1C 74HC08
AND2B 74HC08
AND2A 74HC08
AND2D 74HC08
AND2C 74HC08
AND4B 74AC11
AND4C 74AC11
AND3D 74AC11
AND4D 74AC11
AND2E 74HC08
AND1E 74HC08
74AC283 ADD1
74AC283 ADD2
74HC00 LOGIC1
74HC00 LOGIC2
MUX1 74AC153
MUX2 74AC153
MUX3 74AC153
MUX4 74AC153
A0
A1
A2
A3
A4
A5
A6
A7
B0
B1
B2
B3
B4
B5
B6
B7
OP0
OP1
OP2
OP3
X0
X1
X2
X3
X4
X5
X6
X7
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
+5V
GND
ALU operation summary
0000 B B
0001 ZERO always 0
0010 FF always 255
0011 HALF B/2 (rounded down)
0100 CRY B+1 if A=255, else B
0101 TOP 1, if A=255 and B=255
0110 FF always 255
0111 ?
1000 ADD (A+B) mod 255
1001 OVF 1, if A+B>255
1010 NAND A NAND B
1011 AVG (A+B)/2 (rounded down)
1100 ?
1101 ?
1110 NAND
1111 ROR
Sheet: /BreadBinCPU/ALU/
File: ALU.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (5.0.0)
Id: 3/3