buffers

File: buffers.kicad_sch

power

File: power.kicad_sch

bus

File: bus.kicad_sch

RTC

File: RTC.kicad_sch

battery

File: battery.kicad_sch

GALS

File: GALS.kicad_sch

IO

File: IO.kicad_sch

RAM

File: RAM.kicad_sch

ROM

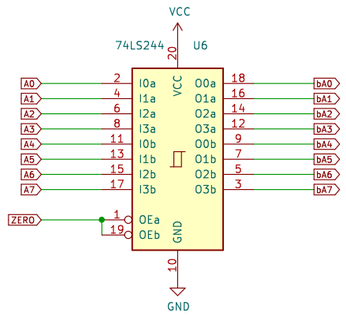
File: ROM.kicad_sch

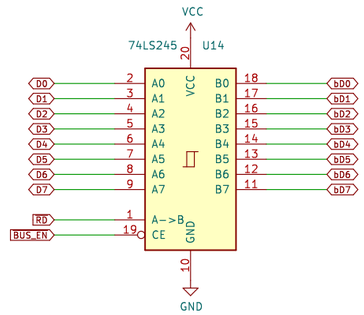
Sheet: /
File: memory.ROMRAM.kicad_sch

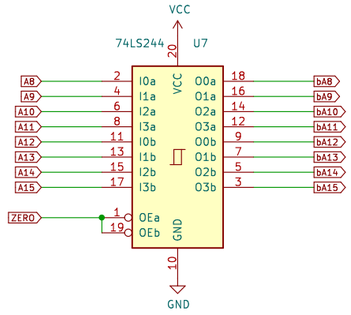
Title:

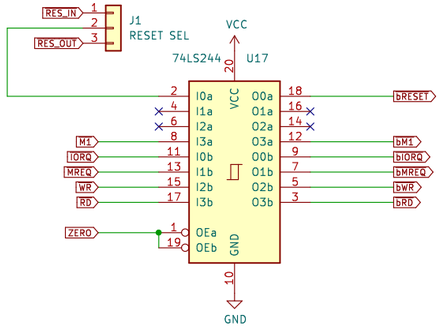
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 1/10

Z80 BUS INTERFACE

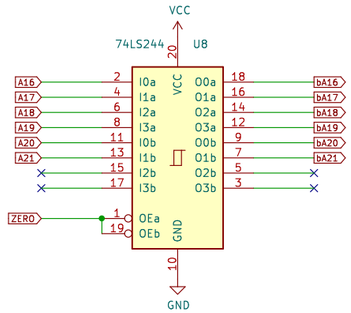








Note: Buffers and Transceivers respond
to both IO and MEM cycles



Sheet: /buffers/		
File: buffers.kicad_sch		
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 2/10

REAL TIME CLOCK WITH NVRAM AND DEBUG

CONFIGURATION LATCH

BOARD OUTPUTS

User Input Button

User Input Button

JUMPER 1–2 CR2032 COIN CELL
JUMPER 3–4 EXTERNAL BATTERY

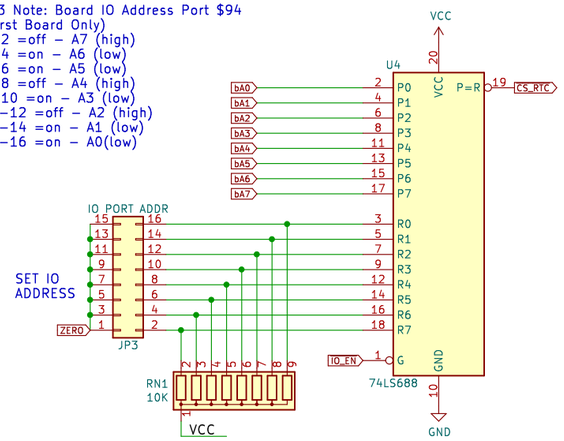
CHIP SELECT

USER LEDS DEFAULT TO OFF

Sheet: /RTC/	
File: RTC.kicad_sch	
Title:	
Size: B	Date:
KiCad E.D.A. kicad (6.0.11)	Id: 3/10

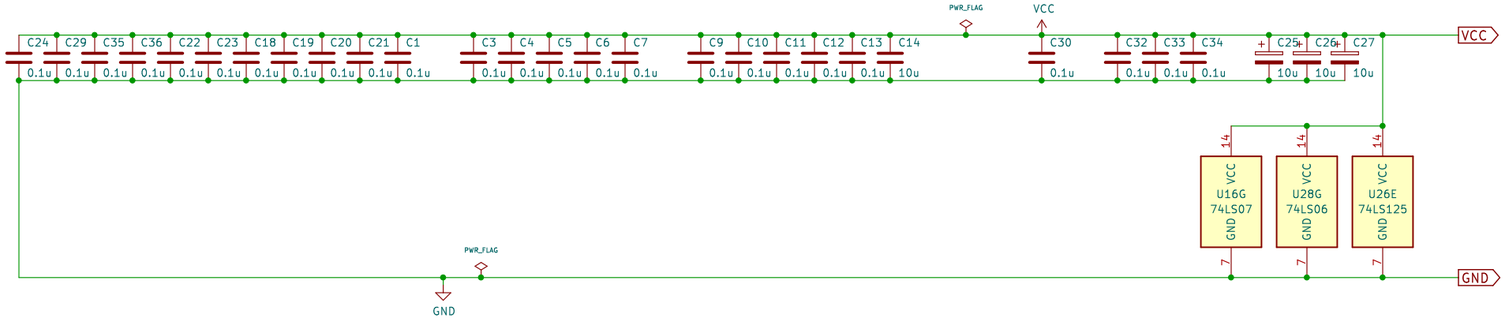
IO ADDRESS SELECT CIRCUIT
RTC

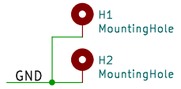
JP3 Note: Board IO Address Port $94
(First Board Only)
1-2 =off - A7 (high)
3-4 =on - A6 (low)
5-6 =on - A5 (low)
7-8 =off - A4 (high)
9-10 =on - A3 (low)
11-12 =off - A2 (high)
13-14 =on - A1 (low)
15-16 =on - A0(low)

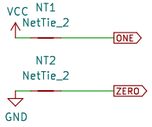


NOTE: MULTIPLE BOARDS INSTALLED
MUST HAVE UNIQUE IO PORT ADDRESSES

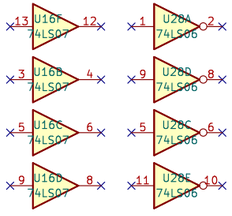
Sheet: /IO/		
File: IO.kicad_sch		
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 4/10





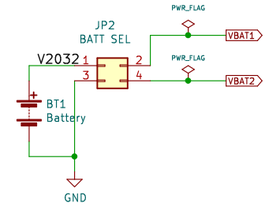


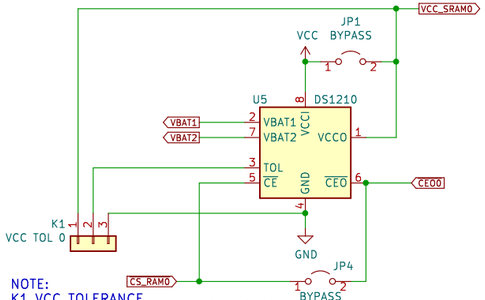
Spare Gates



Sheet: /power/		
File: power.kicad_sch		
Title:		
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 5/10

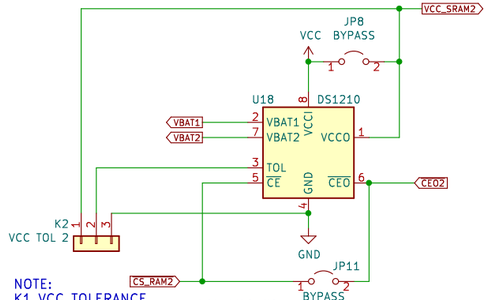
JUMPER 1-2 CR2032 COIN CELL
JUMPER 3-4 EXTERNAL BATTERY





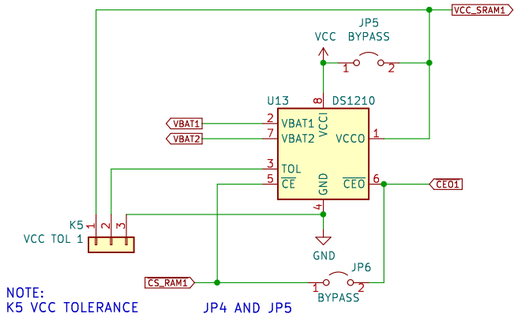
NOTE:
K1 VCC TOLERANCE
1-2 CLOSED 10%
2-3 CLOSED 5%

JP1 AND JP3
U2 DS1210 INSTALLED
CLOSE BOTH TO BYPASS
DEFAULT BOTH OPEN



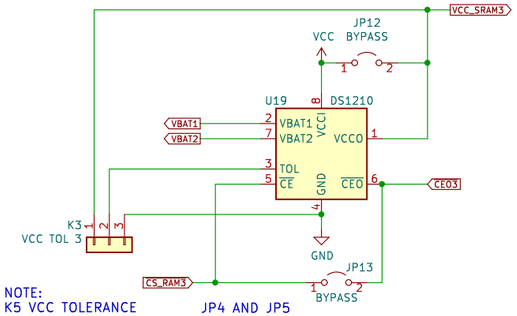
NOTE:
K1 VCC TOLERANCE
1-2 CLOSED 10%
2-3 CLOSED 5%

JP1 AND JP3
U2 DS1210 INSTALLED
CLOSE BOTH TO BYPASS
DEFAULT BOTH OPEN



NOTE:
K5 VCC TOLERANCE
1-2 CLOSED 10%
2-3 CLOSED 5%

JP4 AND JP5
U11 DS1210 INSTALLED
CLOSE BOTH TO BYPASS
DEFAULT BOTH OPEN



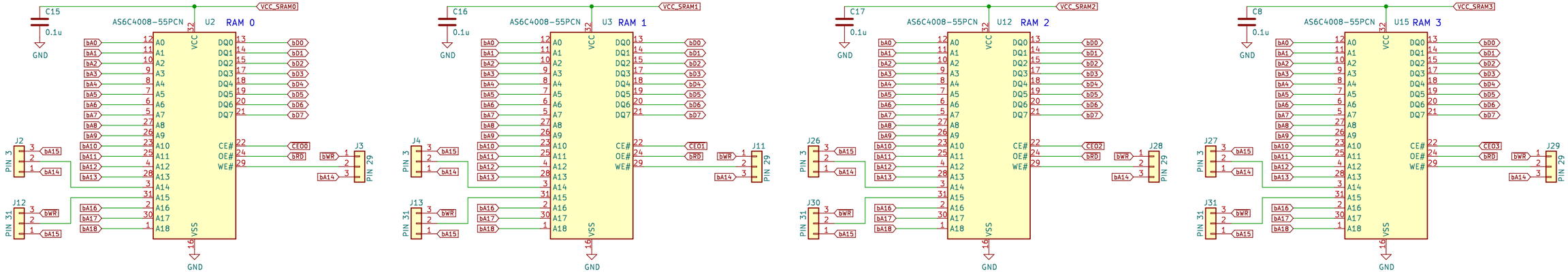
NOTE:
K5 VCC TOLERANCE
1-2 CLOSED 10%
2-3 CLOSED 5%

JP4 AND JP5
U11 DS1210 INSTALLED
CLOSE BOTH TO BYPASS
DEFAULT BOTH OPEN

Sheet: /battery/
File: battery.kicad_sch

Title:

Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 6/10



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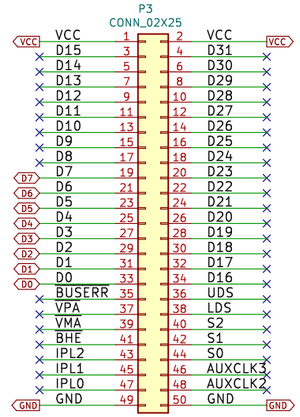
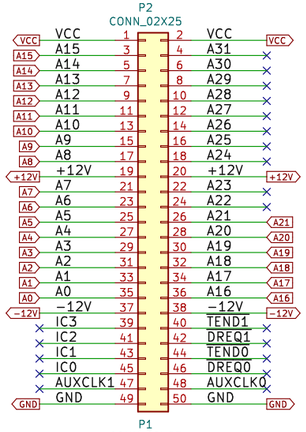
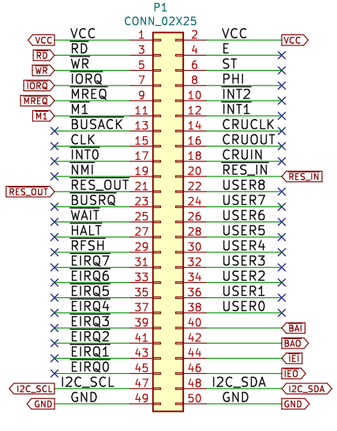
Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 7/10







Sheet: /bus/
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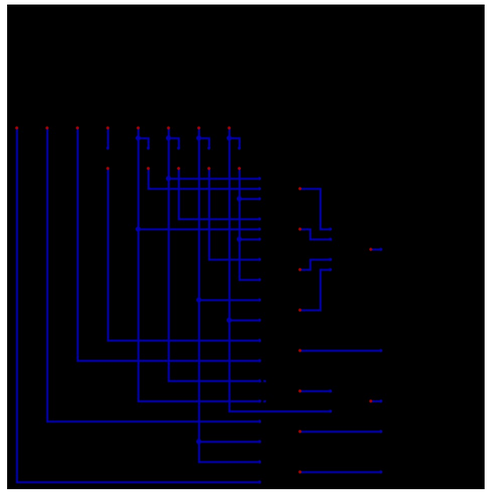
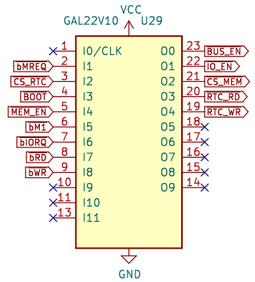
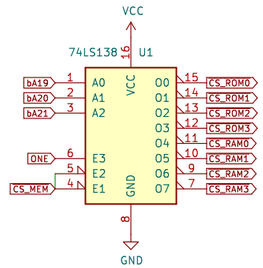
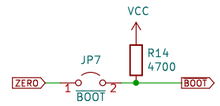
Size: B | Date: | **Rev:**
KiCad E.D.A. kicad (6.0.11) | Id: 8/10





GAL22V10-1

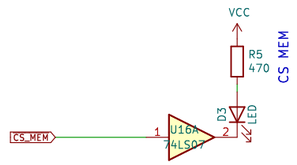




JP7 NOTE: FIRST ROM & RAM BOARD IN SYSTEM MUST HAVE JP7 JUMPER INSTALLED. ALSO MUST HAVE ROM INSTALLED IN U20 WITH BOOT CODE. FIRST BOARD ONLY RESPONDS WHEN MEM_EN LOW (BY DEFAULT).

SECOND ROM & RAM BOARD INSTALLED IN SYSTEM MUST HAVE JP7 JUMPER NOT INSTALLED. ALSO SECOND BOARD ONLY RESPONDS WHEN MEM_EN IS HIGH.

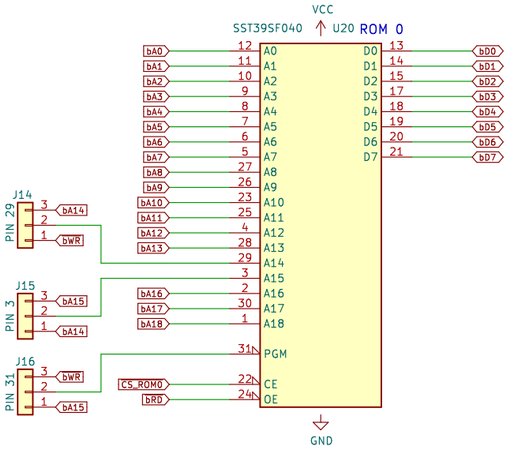
ACCESS IS CONTROLLED BY SOFTWARE TO ENSURE THAT ONLY ONE OF BOARDS HAS MEM_EN HIGH AT ANY GIVEN TIME OR BUS CONTENTION.



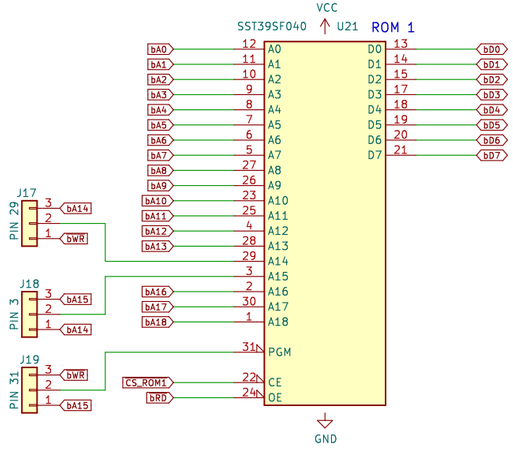
Sheet: /GALS/
File: GALS.kicad_sch

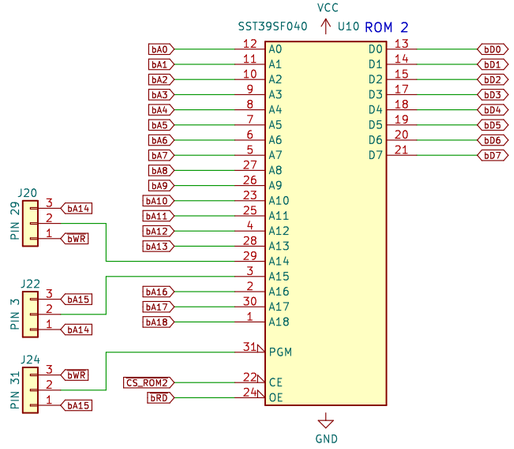
Title:

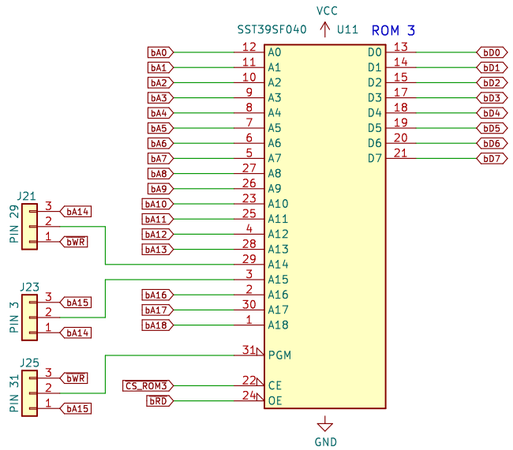
Size: B | Date: | **Rev:**
KiCad E.D.A. kicad (6.0.11) | Id: 9/10

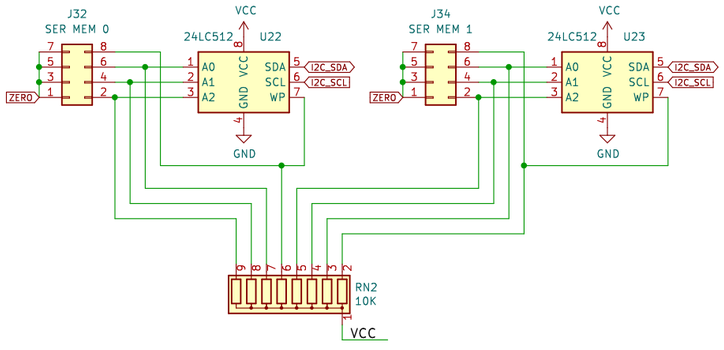


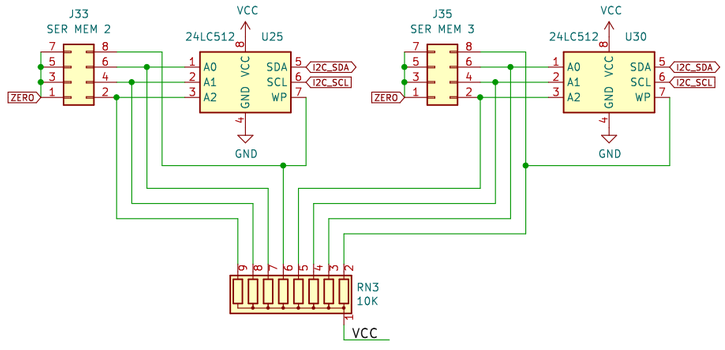
U20 NOTE: FIRST BOARD IN SYSTEM MUST HAVE ROM INSTALLED IN U20 WITH BOOT CODE AND JP7 INSTALLED FOR PROPER BOOT SEQUENCE.











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Size: B	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 10/10