Expansion header

File: expansion_header.kicad_sch

CPU

File: cpu.kicad_sch

Memory

File: memory.kicad_sch

Ethernet

File: ethernet.kicad_sch

UART

File: uart.kicad_sch

Timer & RTC

File: timer_rtc.kicad_sch

Reset

File: reset.kicad_sch

CPLD

File: cpld.kicad_sch

Onboard IO

File: onboard_io.kicad_sch

X busses

File: xbusses.kicad_sch

ROM

File: rom.kicad_sch

NON-COMMERCIAL USE

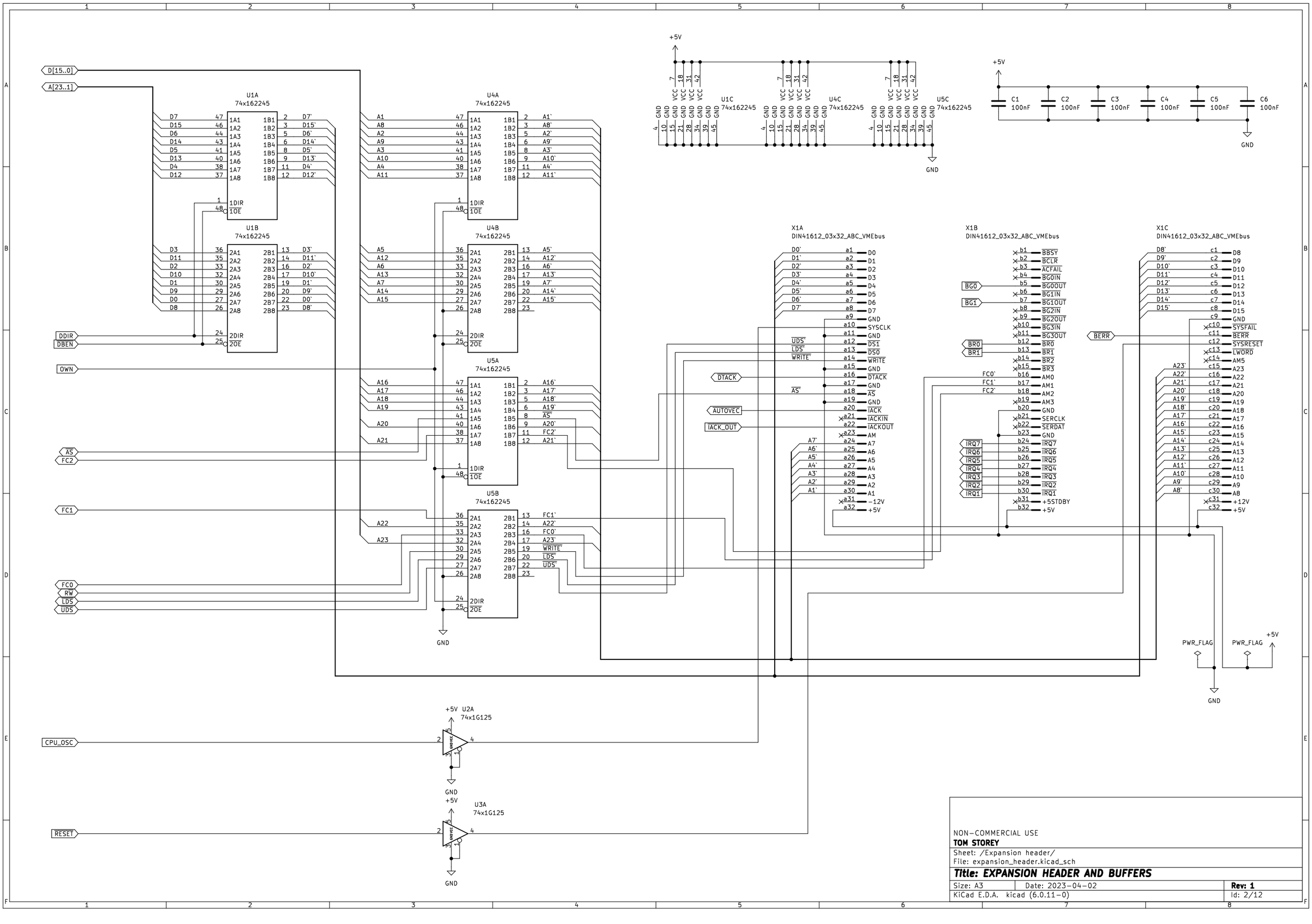
**TOM STOREY**

Sheet: /

File: COMET68k.kicad_sch

***Title: COMET68k***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 1/12 |




NON-COMMERCIAL USE

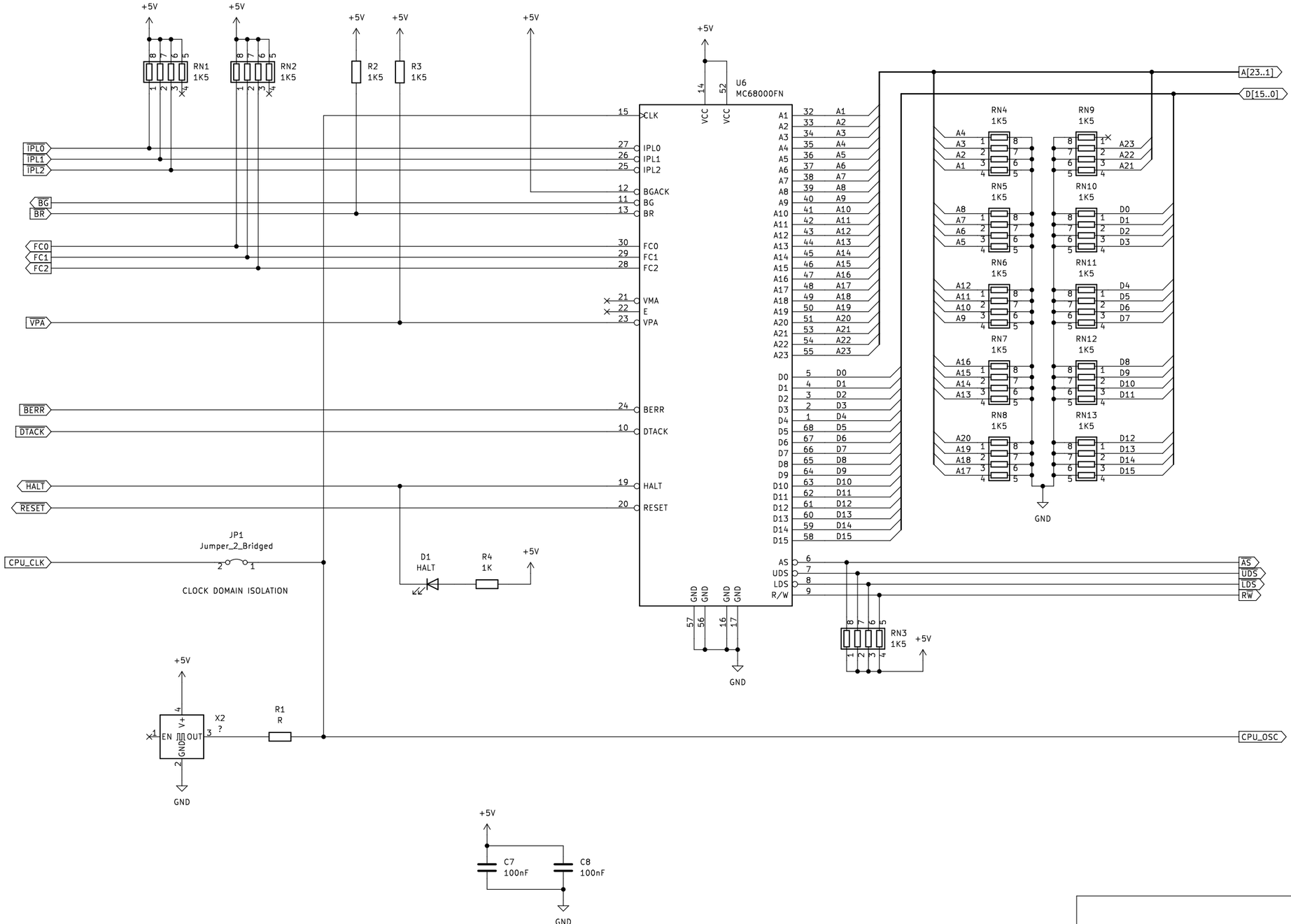
**TOM STOREY**

Sheet: /Expansion header/

File: expansion_header.kicad_sch

***Title: EXPANSION HEADER AND BUFFERS***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 2/12 |




NON-COMMERCIAL USE

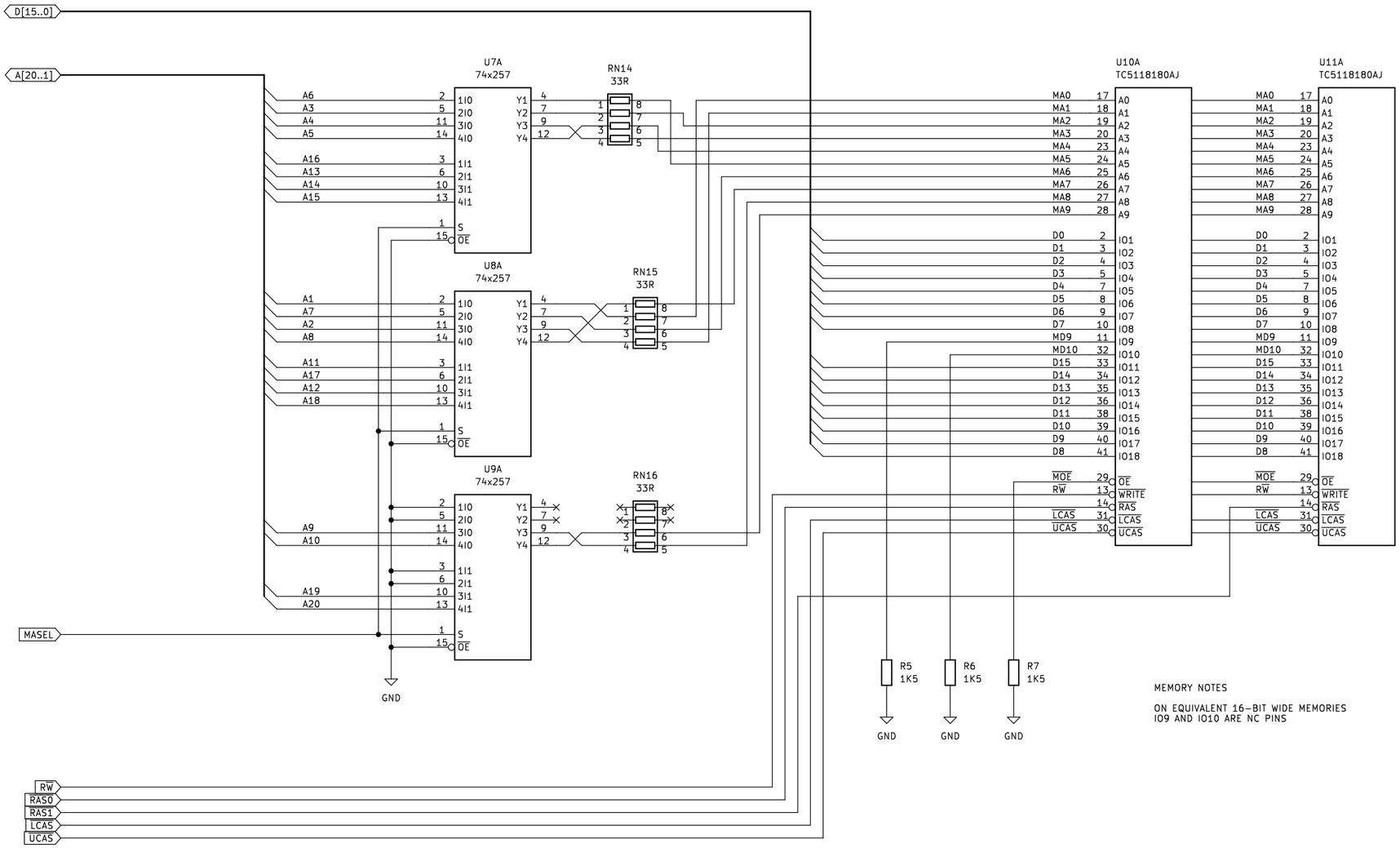
**TOM STOREY**

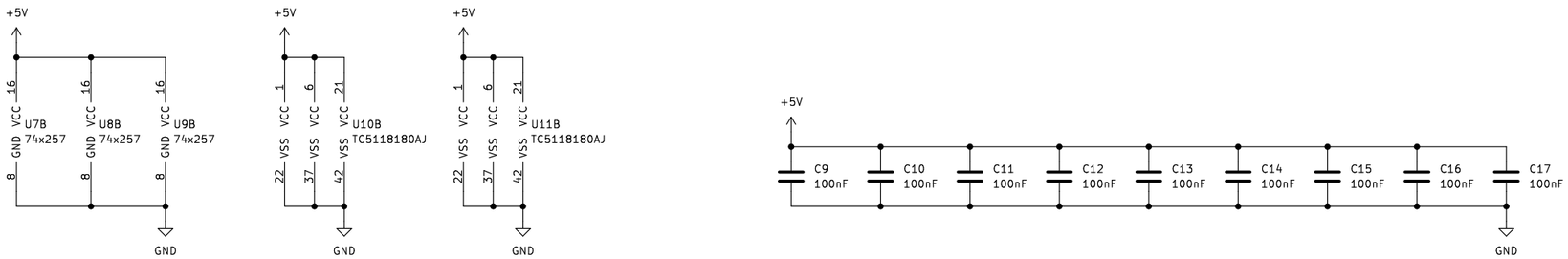
Sheet: /CPU/

File: cpu.kicad_sch

***Title: CPU***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 3/12 |




NON-COMMERCIAL USE

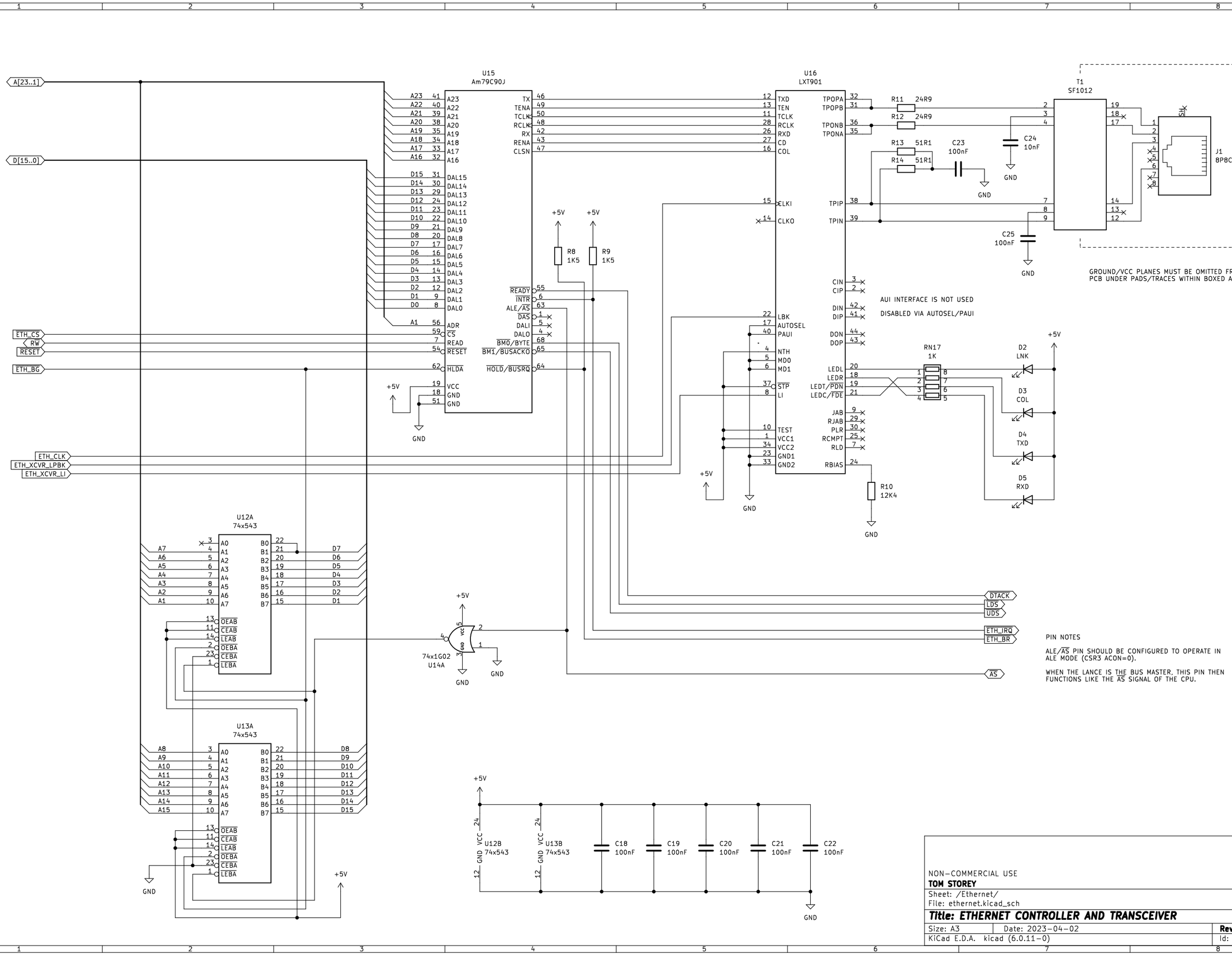
**TOM STOREY**

Sheet: /Memory/

File: memory.kicad_sch

***Title: MEMORY***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 4/12 |



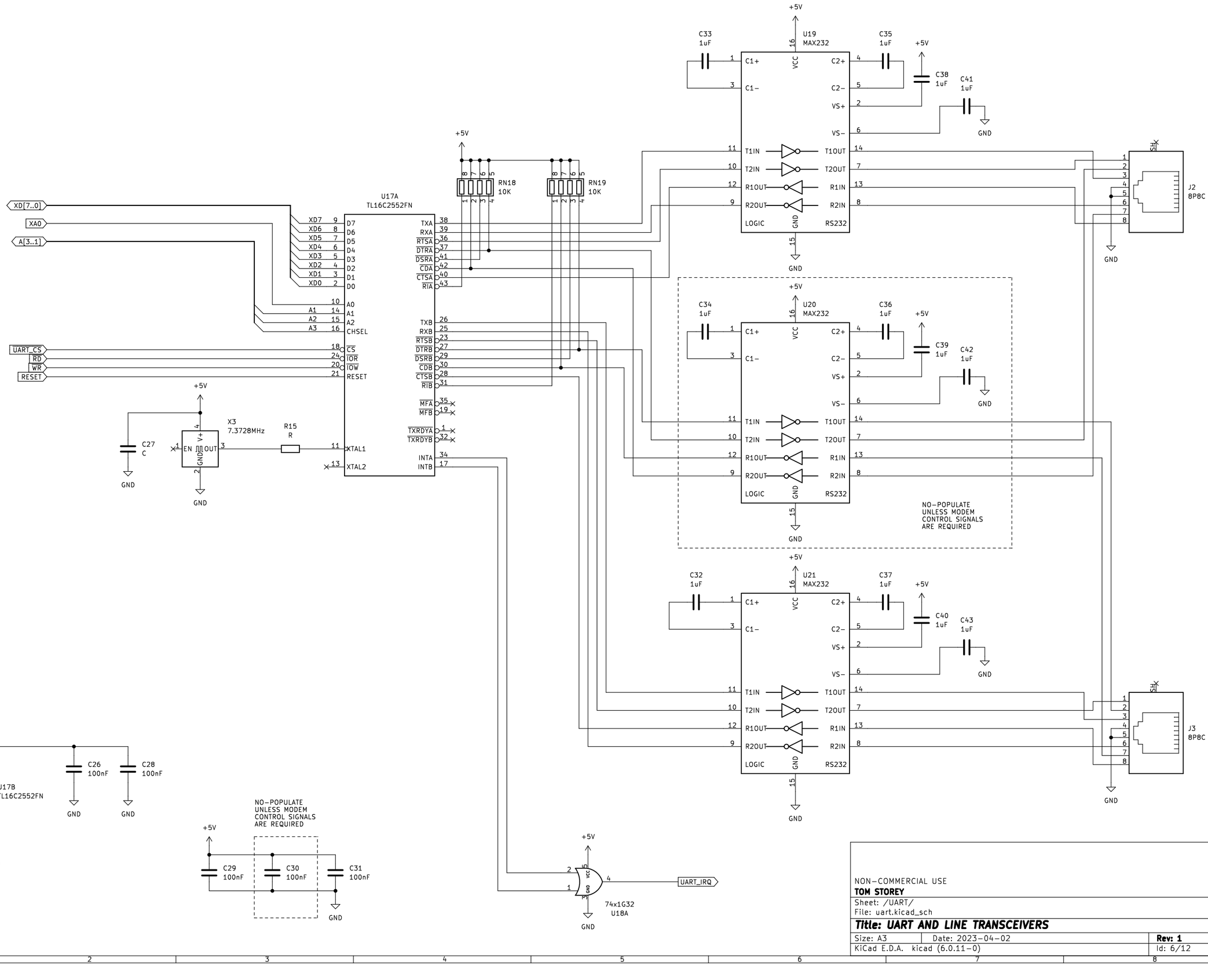

NON-COMMERCIAL USE

**TOM STOREY**

Sheet: /Ethernet/
File: ethernet.kicad_sch

***Title: ETHERNET CONTROLLER AND TRANSCEIVER***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 5/12 |




NON−COMMERCIAL USE

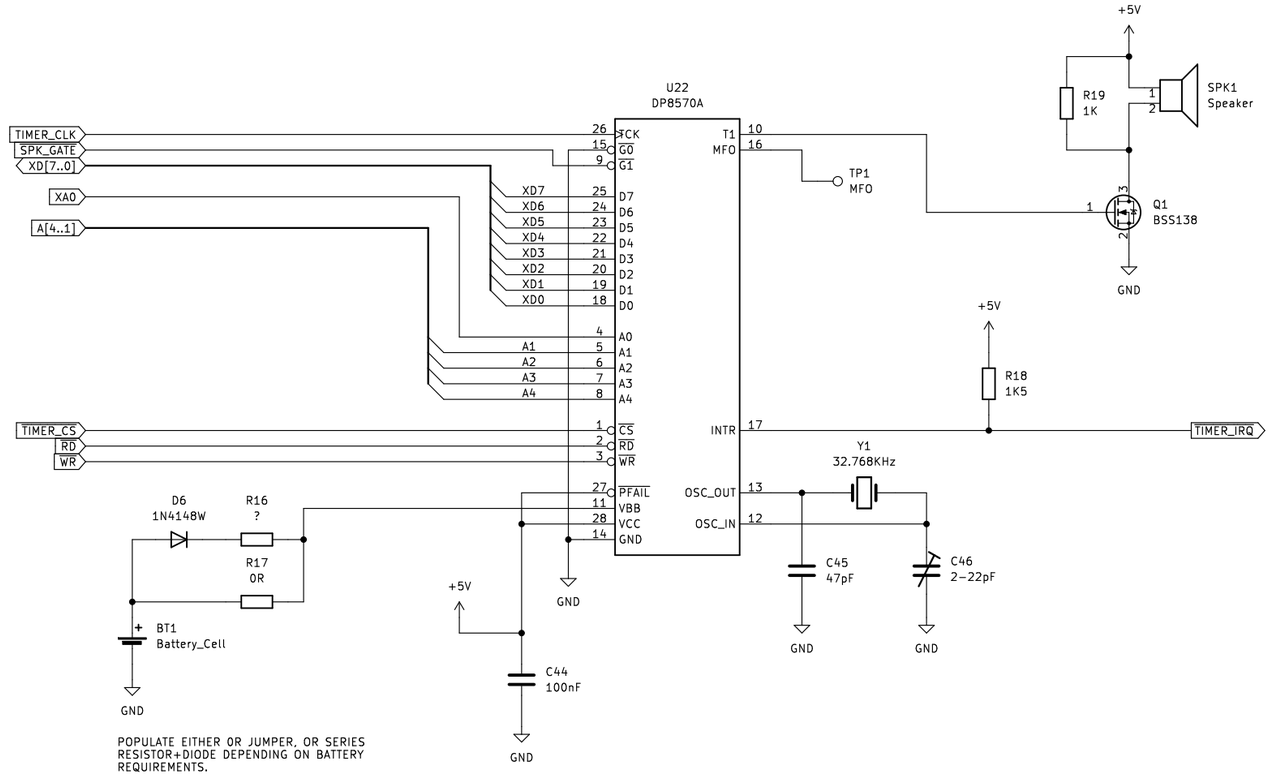
**TOM STOREY**

Sheet: /UART/

File: uart.kicad_sch

***Title: UART AND LINE TRANSCEIVERS***

| Size: A3 | Date: 2023−04−02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11−0) | | Id: 6/12 |



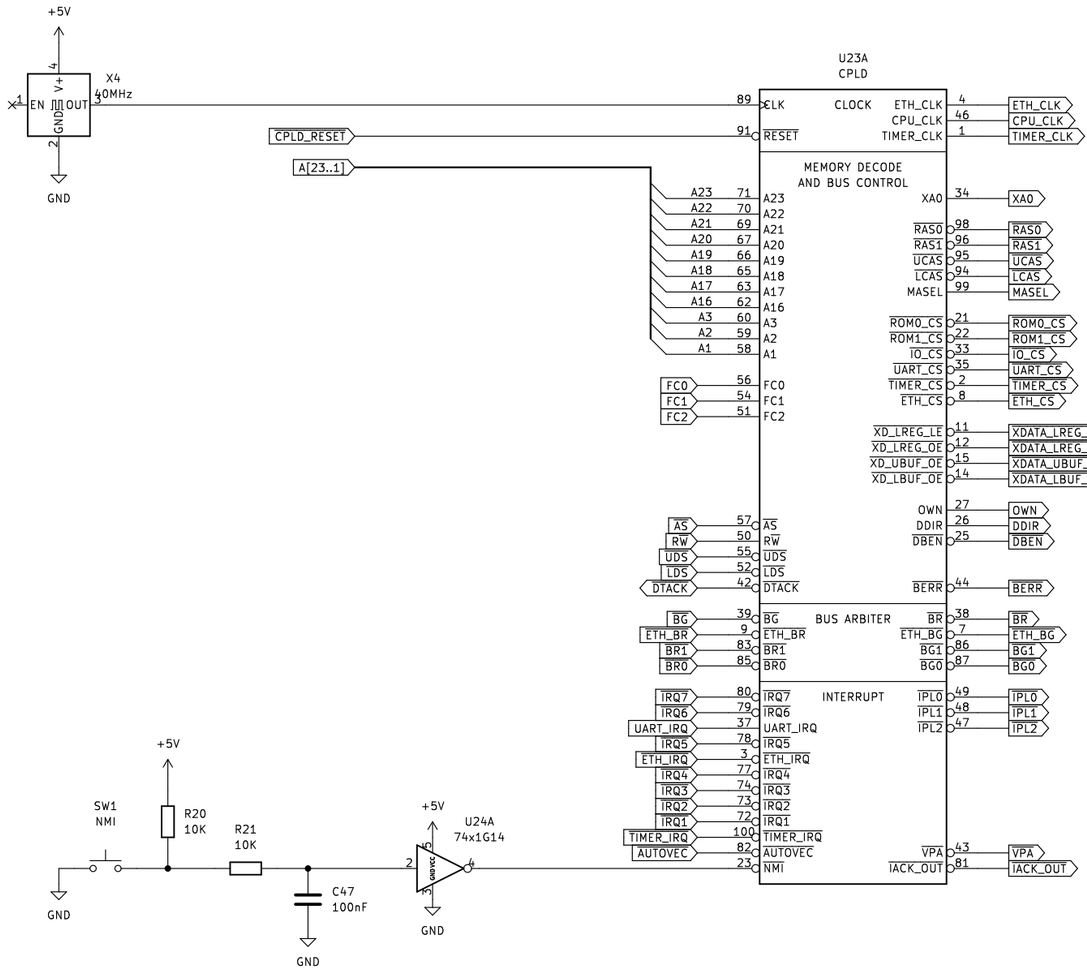

NON-COMMERCIAL USE

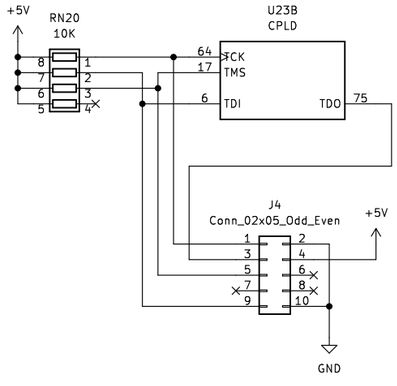
**TOM STOREY**

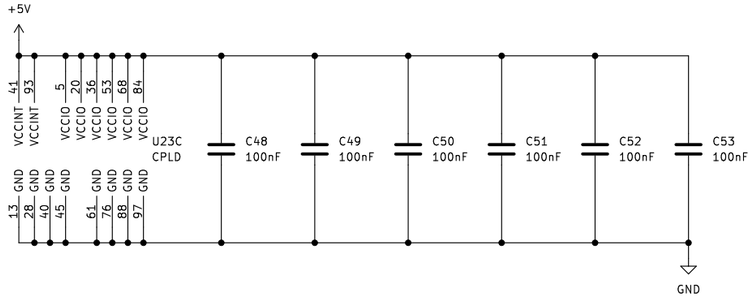
Sheet: /Timer & RTC/
File: timer_rtc.kicad_sch

***Title: RTC/TIMERS AND SPEAKER***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 7/12 |




NON-COMMERCIAL USE

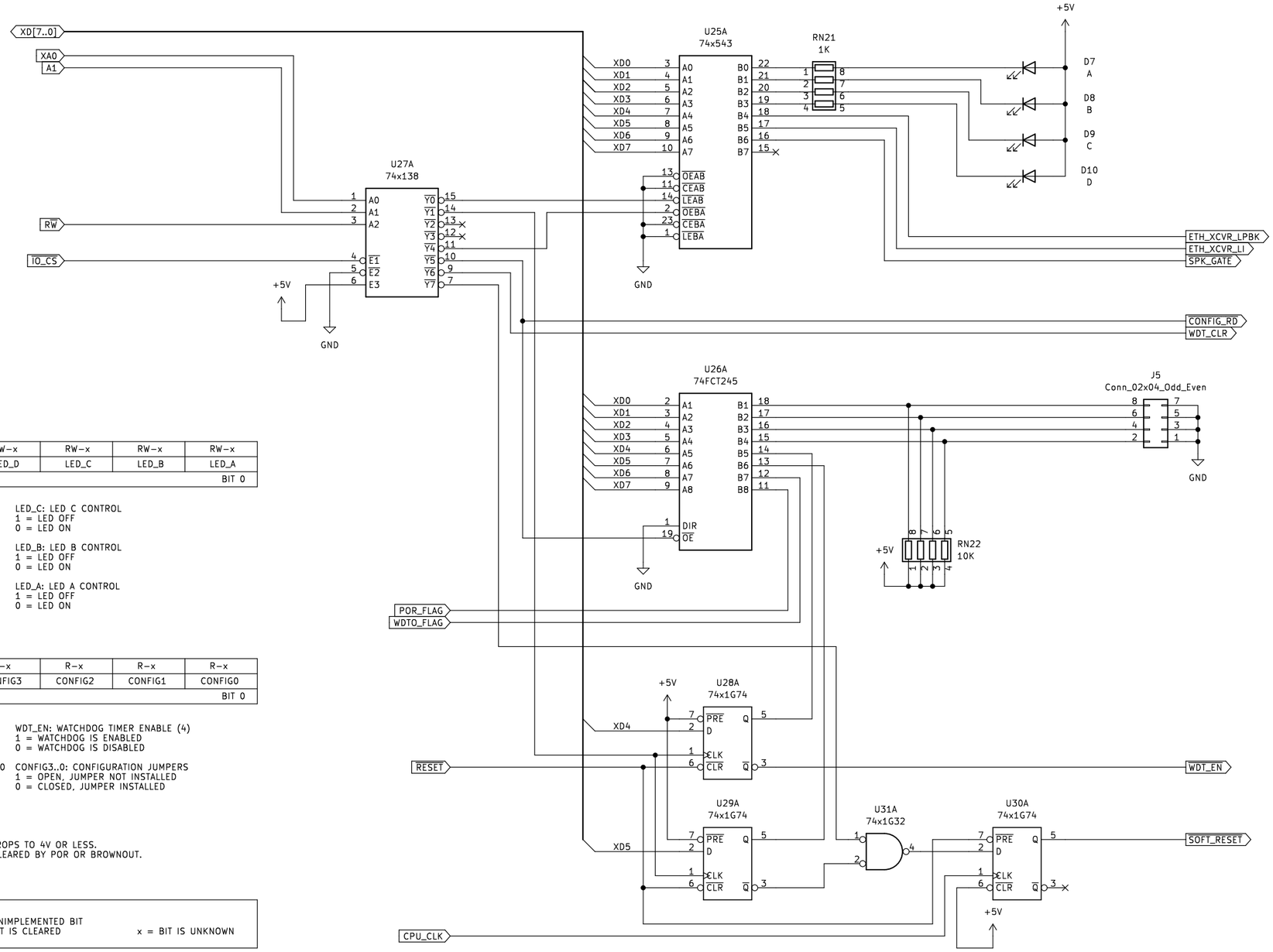
**TOM STOREY**

Sheet: /CPLD/

File: cpld.kicad_sch

***Title: CPLD***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 8/12 |




IO DECODE SUMMARY

| OFFSET | WRITE | READ | FUNCTION |
|---|---|---|---|
| 0 | X | | WRITE CONTROL REGISTER 1 |
| 0 | | X | READ CONTROL REGISTER 1 |
| 1 | X | | WRITE CONTROL REGISTER 2 |
| 1 | | X | READ CONTROL REGISTER 2 |
| 2 | | X | WATCHDOG TIMER RESET |
| 3 | | X | SOFTWARE RESET (IF ENABLED VIA CR 2) |

## CONTROL REGISTER 1

| RW–x | RW–x | RW–x | RW–x | RW–x | RW–x | RW–x | RW–x |
|---|---|---|---|---|---|---|---|
| | | ETH_LI | ETH_LPBK | LED_D | LED_C | LED_B | LED_A |
| BIT 7 | | | | | | | BIT 0 |

BIT 5 ETH_LI: ETHERNET LINK INTEGRITY TEST
1 = LINK INTEGRITY TEST ENABLED
0 = LINK INTEGRITY TEST DISABLED

BIT 4 ETH_LPBK: ETHERNET LOOPBACK
1 = LOOPBACK ENABLED
0 = LOOPBACK DISABLED

BIT 3 LED_D: LED D CONTROL
1 = LED OFF
0 = LED ON

BIT 2 LED_C: LED C CONTROL
1 = LED OFF
0 = LED ON

BIT 1 LED_B: LED B CONTROL
1 = LED OFF
0 = LED ON

BIT 0 LED_A: LED A CONTROL
1 = LED OFF
0 = LED ON

## CONTROL REGISTER 2

| R–1 | R–0 | RW–0 | RW–0 | R–x | R–x | R–x | R–x |
|---|---|---|---|---|---|---|---|
| POR | WDTO | SOFT_RST_EN | WDT_EN | CONFIG3 | CONFIG2 | CONFIG1 | CONFIG0 |
| BIT 7 | | | | | | | BIT 0 |

BIT 7 POR: POWER ON RESET FLAG (1)(3)
1 = POWER ON RESET OCCURRED
0 = NORMAL RESET

BIT 6 WDTO: WATCHDOG TIMEOUT FLAG (2)(3)
1 = WATCHDOG TIMEOUT CAUSED RESTART
0 = NORMAL RESET

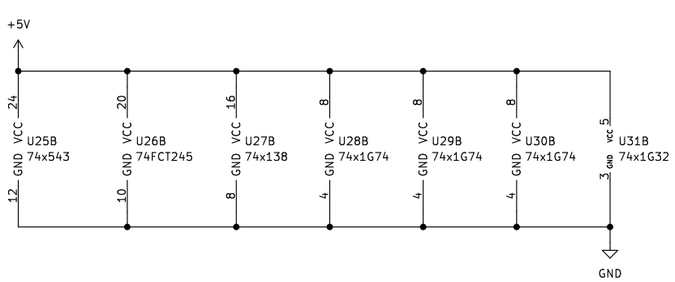
BIT 5 SOFT_RST_EN: SOFTWARE RESET ENABLE (4)
1 = SOFTWARE RESET MAY BE PERFORMED
0 = SOFTWARE RESET IS INHIBITED

BIT 4 WDT_EN: WATCHDOG TIMER ENABLE (4)
1 = WATCHDOG IS ENABLED
0 = WATCHDOG IS DISABLED

BIT 3–0 CONFIG3..0: CONFIGURATION JUMPERS
1 = OPEN, JUMPER NOT INSTALLED
0 = CLOSED, JUMPER INSTALLED

NOTE 1: BIT IS SET DURING POWER UP, OR BROWNOUT IF VOLTAGE DROPS TO 4V OR LESS.
NOTE 2: BIT IS SET IN THE EVENT OF A WATCHDOG TIMEOUT. BIT IS CLEARED BY POR OR BROWNOUT.
NOTE 3: BIT IS CLEARED AFTER CONTROL REGISTER 2 IS READ.
NOTE 4: BIT IS CLEARED FOLLOWING ANY RESET CAUSE.

LEGEND:
R = READABLE BIT W = WRITABLE BIT U = UNIMPLEMENTED BIT
–n = VALUE AT POR 1 = BIT IS SET 0 = BIT IS CLEARED x = BIT IS UNKNOWN



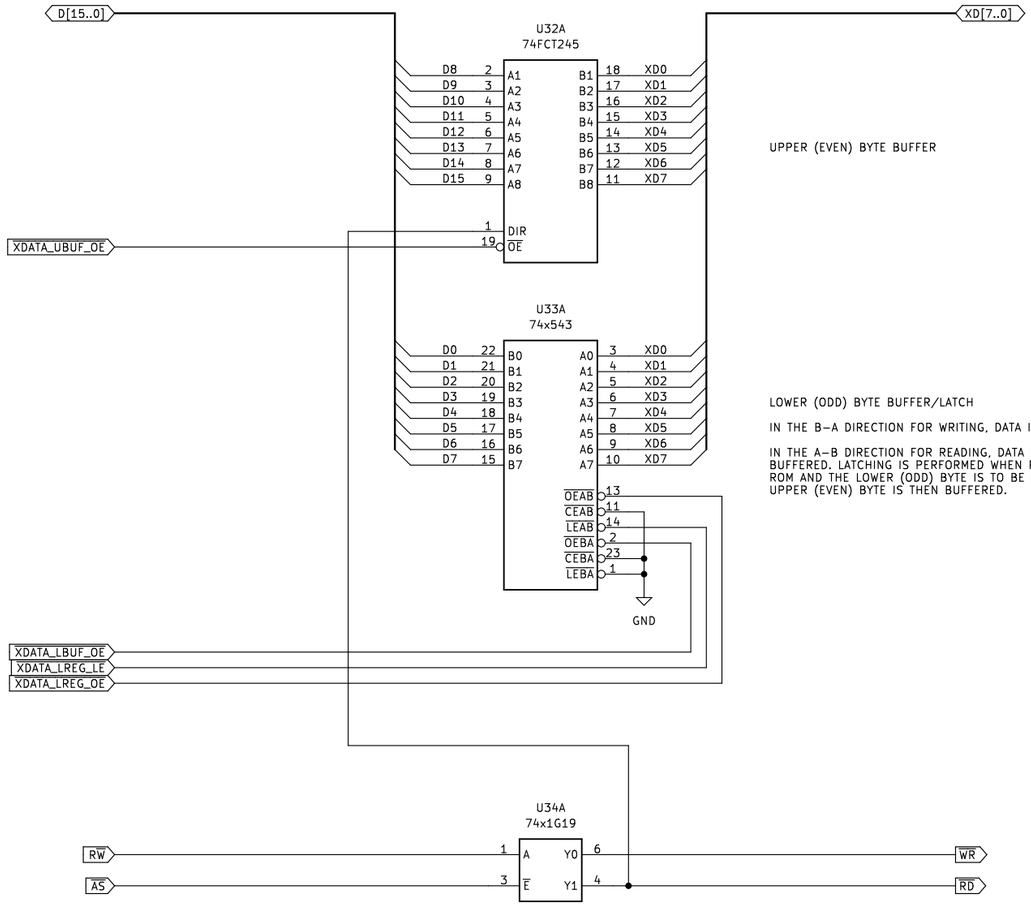


**TOM STOREY**

Sheet: /Onboard IO/
File: onboard_io.kicad_sch

***Title: ON–BOARD I/O PORTS***

| Size: A3 | Date: 2023–04–02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11–0) | | Id: 9/12 |

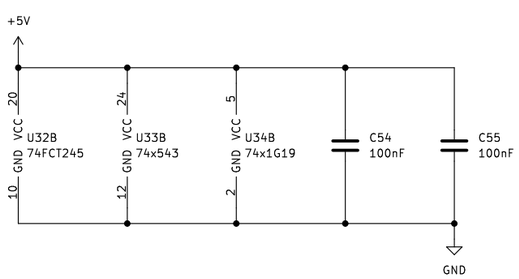



UPPER (EVEN) BYTE BUFFER

LOWER (ODD) BYTE BUFFER/LATCH

IN THE B–A DIRECTION FOR WRITING, DATA IS BUFFERED ONLY.

IN THE A–B DIRECTION FOR READING, DATA MAY BE LATCHED OR BUFFERED. LATCHING IS PERFORMED WHEN READING A WORD FROM ROM AND THE LOWER (ODD) BYTE IS TO BE LATCHED BEFORE THE UPPER (EVEN) BYTE IS THEN BUFFERED.



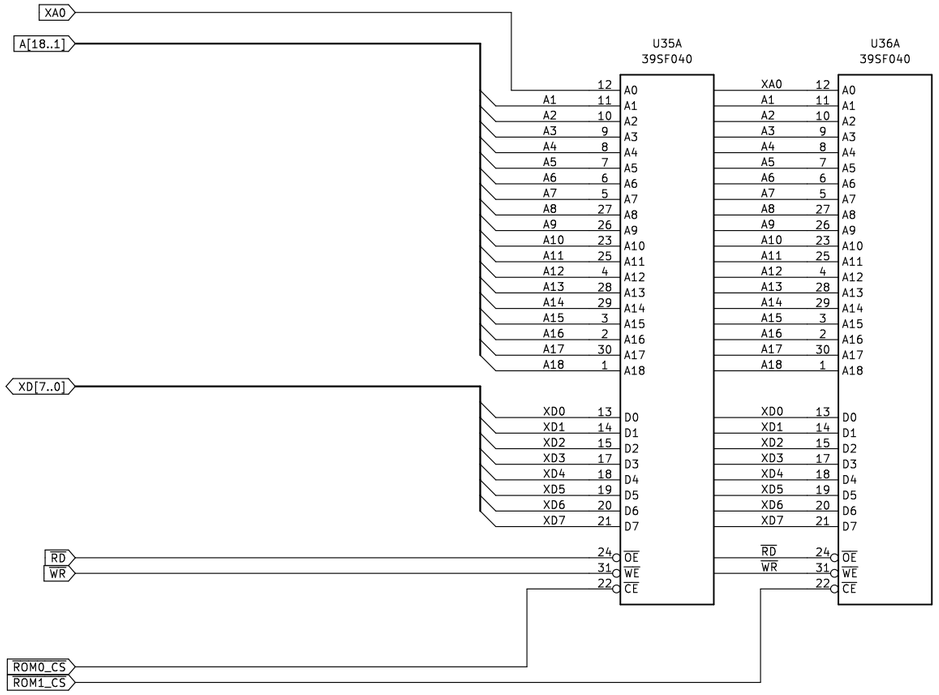


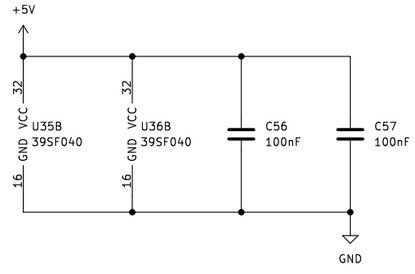

**TOM STOREY**

Sheet: /X busses/
File: xbusses.kicad_sch

***Title: X–BUS***

| Size: A3 | Date: 2023–04–02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11–0) | | Id: 10/12 |




NON-COMMERCIAL USE

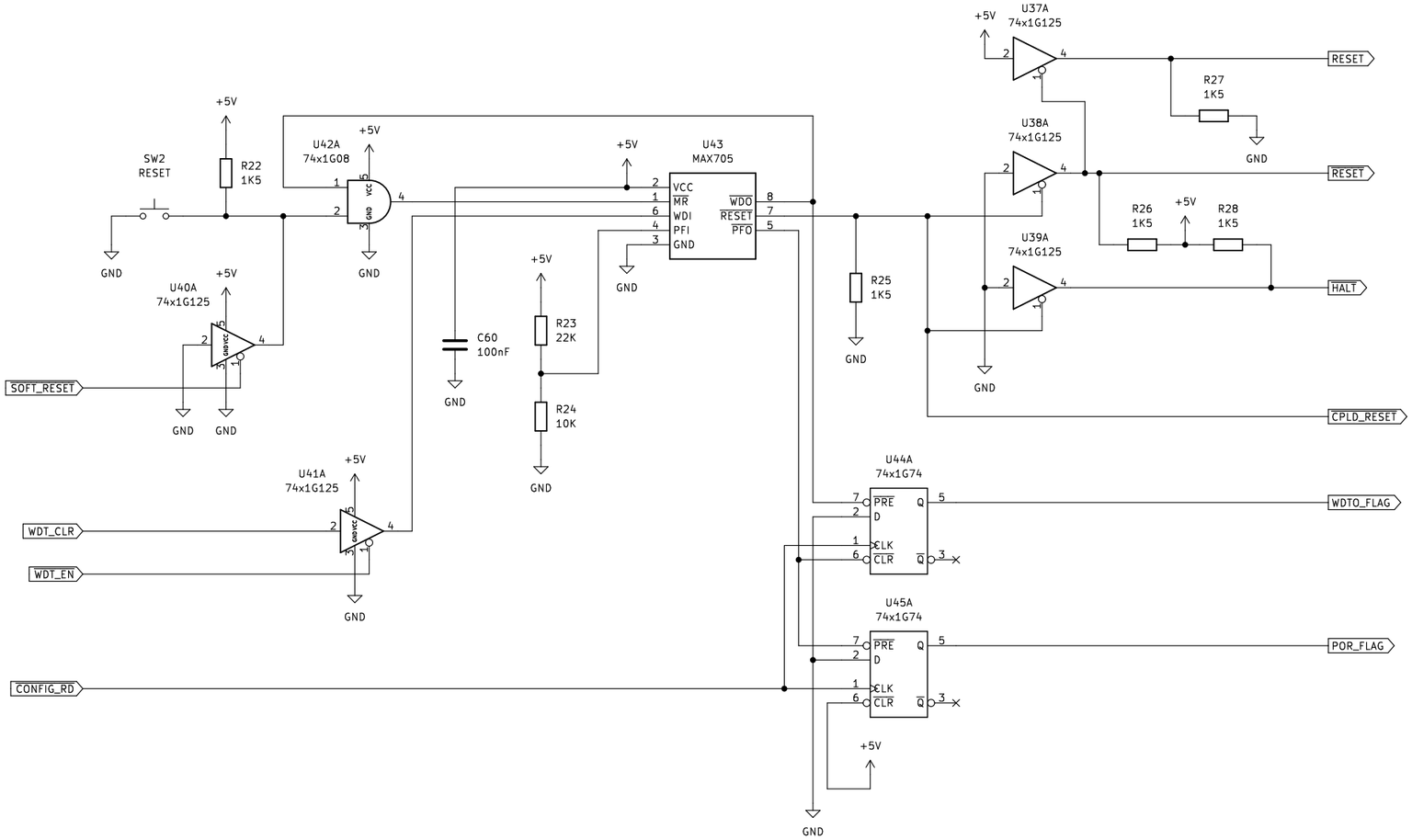
**TOM STOREY**

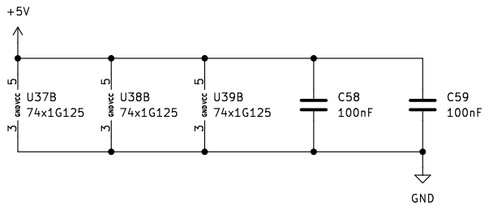
Sheet: /ROM/
File: rom.kicad_sch

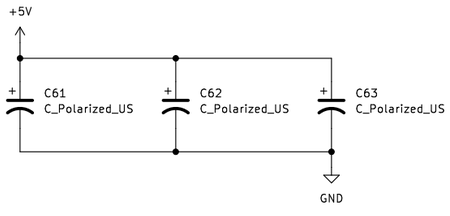
***Title: ROM SOCKETS***

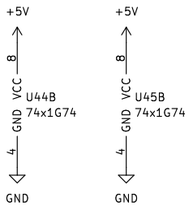
| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 11/12 |

THE "RESET" SIGNAL IS THE COMPLEMENT OF $\overline{\text{RESET}}$ SPECIFICALLY
SO THAT IF THE CPU ASSERTS $\overline{\text{RESET}}$, THEN THIS WILL CAUSE ALL
PERIPHERALS USING A POSITIVE RESET SIGNAL TO BE RESET AS WELL.




NON-COMMERCIAL USE
**TOM STOREY**

Sheet: /Reset/
File: reset.kicad_sch

***Title: RESET, VOLTAGE SUPERVISOR, WATCHDOG***

| Size: A3 | Date: 2023-04-02 | **Rev: 1** |
|---|---|---|
| KiCad E.D.A. kicad (6.0.11-0) | | Id: 12/12 |