
File: powers.kicad_sch

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File: address_decoding.kicad_sch

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File: dma.kicad_sch

File: memory.kicad_sch

File: pit_uart.kicad_sch

File: uart_mods.kicad_sch

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File: crtc_mods.kicad_sch

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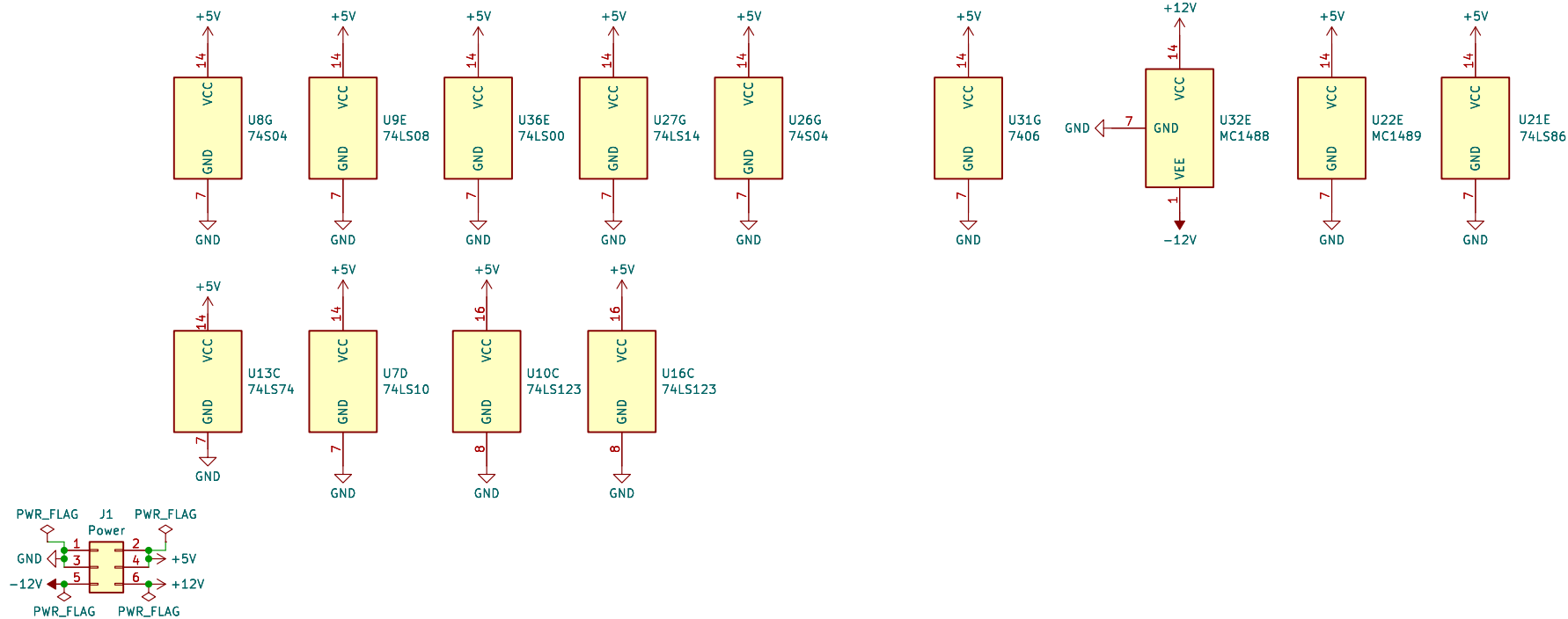
File: partner_video.kicad_sch

Title: Iskra Delta Partner Video (text) 30 797 044

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Id: 1/10

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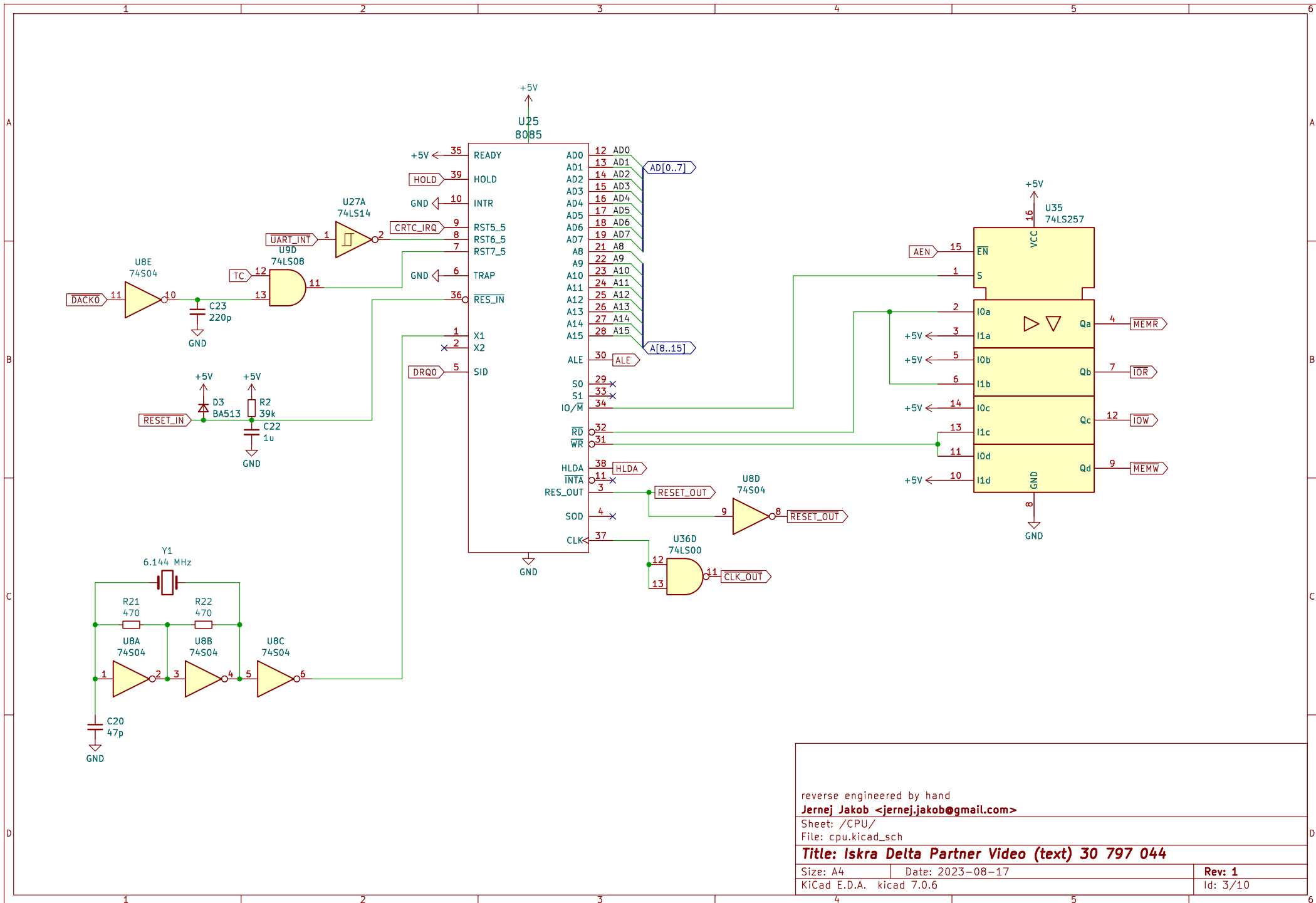
reverse engineered by hand
Jernej Jakob <jernej.jakob@gmail.com>

Sheet: /Powers/
 File: powers.kicad_sch

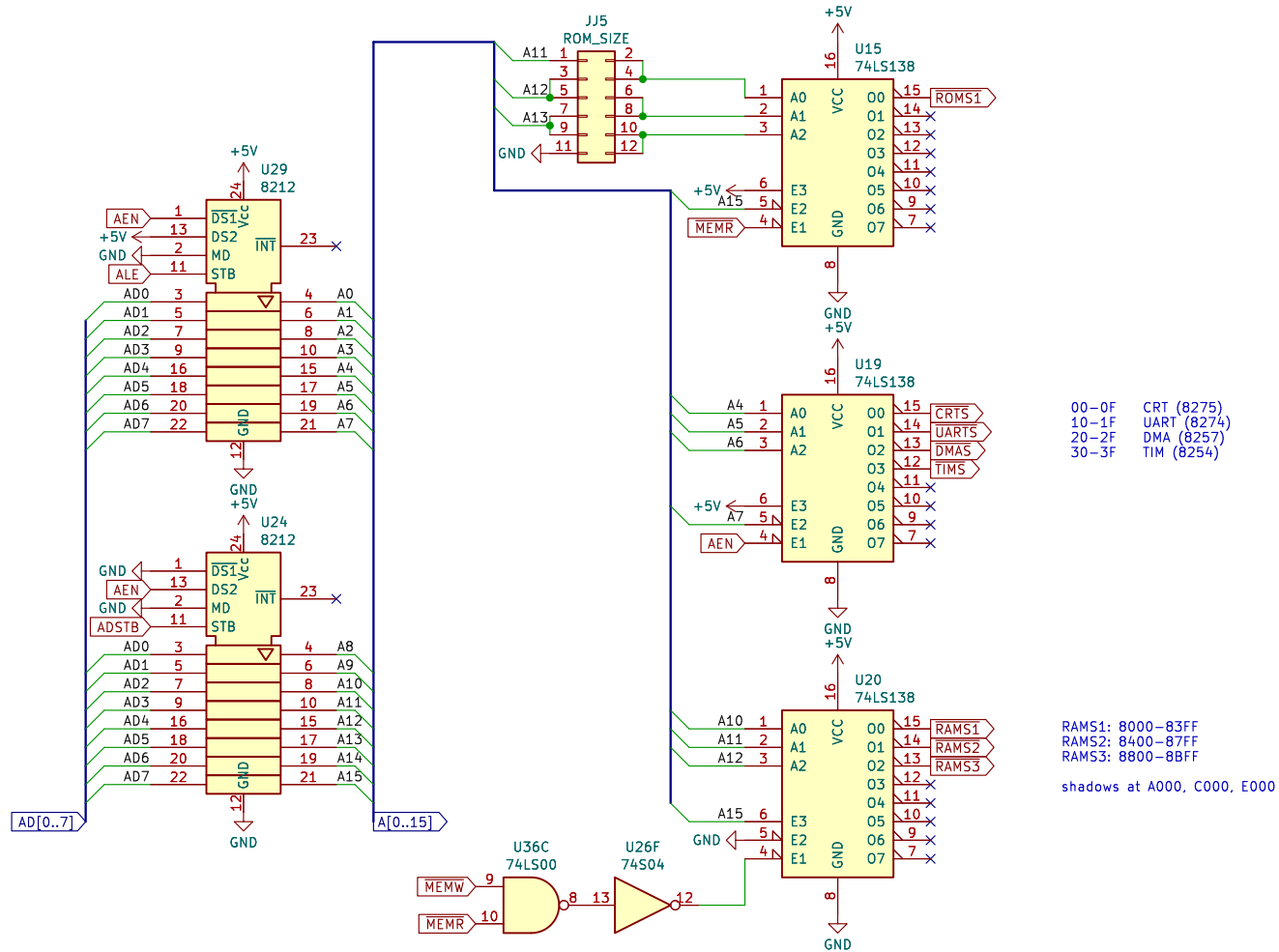
Title: Iskra Delta Partner Video (text) 30 797 044

Size: A4 Date: 2023-08-17
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Rev: 1
 Id: 2/10



JJ5 ROM_SIZE JUMPERS:
 1-2, 5-6, 9-10 = 2kB (2716) address: 0000-07FF (shadow 4000-47FF)
 3-4, 7-8, 11-12 = 4kB (2732) address: 0000-0FFF (shadow 4000-4FFF)



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Sheet: /Address Decoding/
 File: address_decoding.kicad_sch

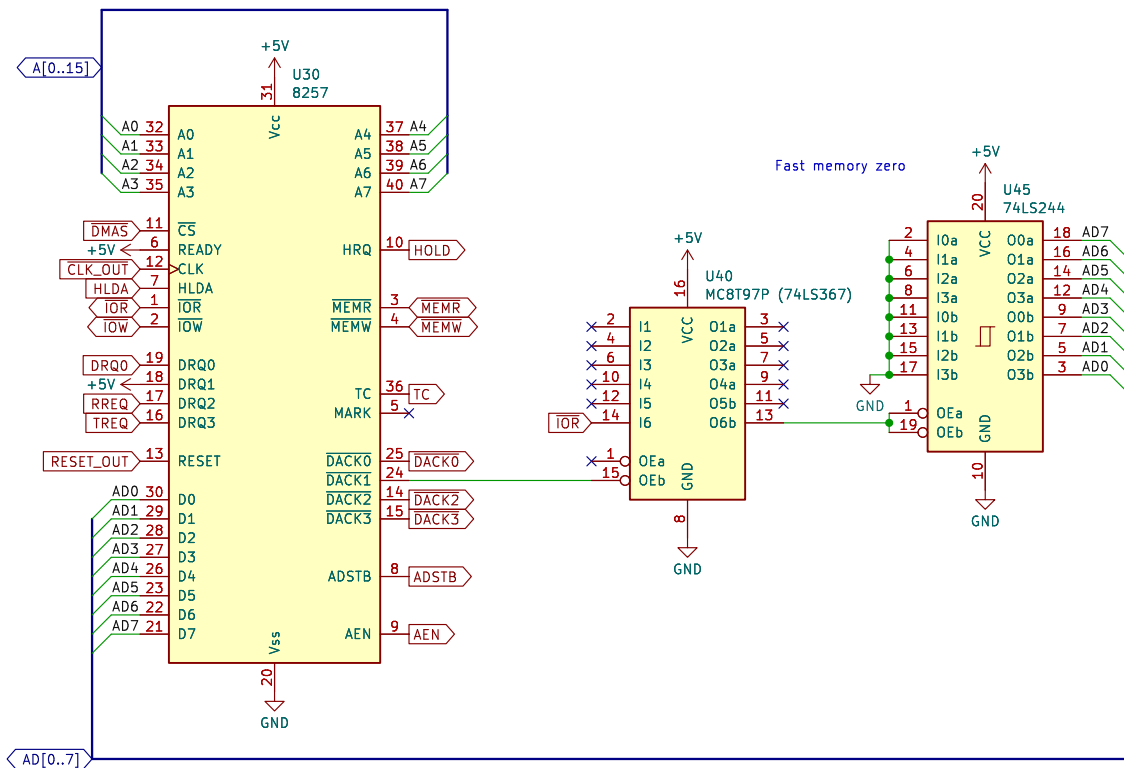
Title: Iskra Delta Partner Video (text) 30 797 044

Size: A4 Date: 2023-08-17

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Rev: 1

Id: 4/10



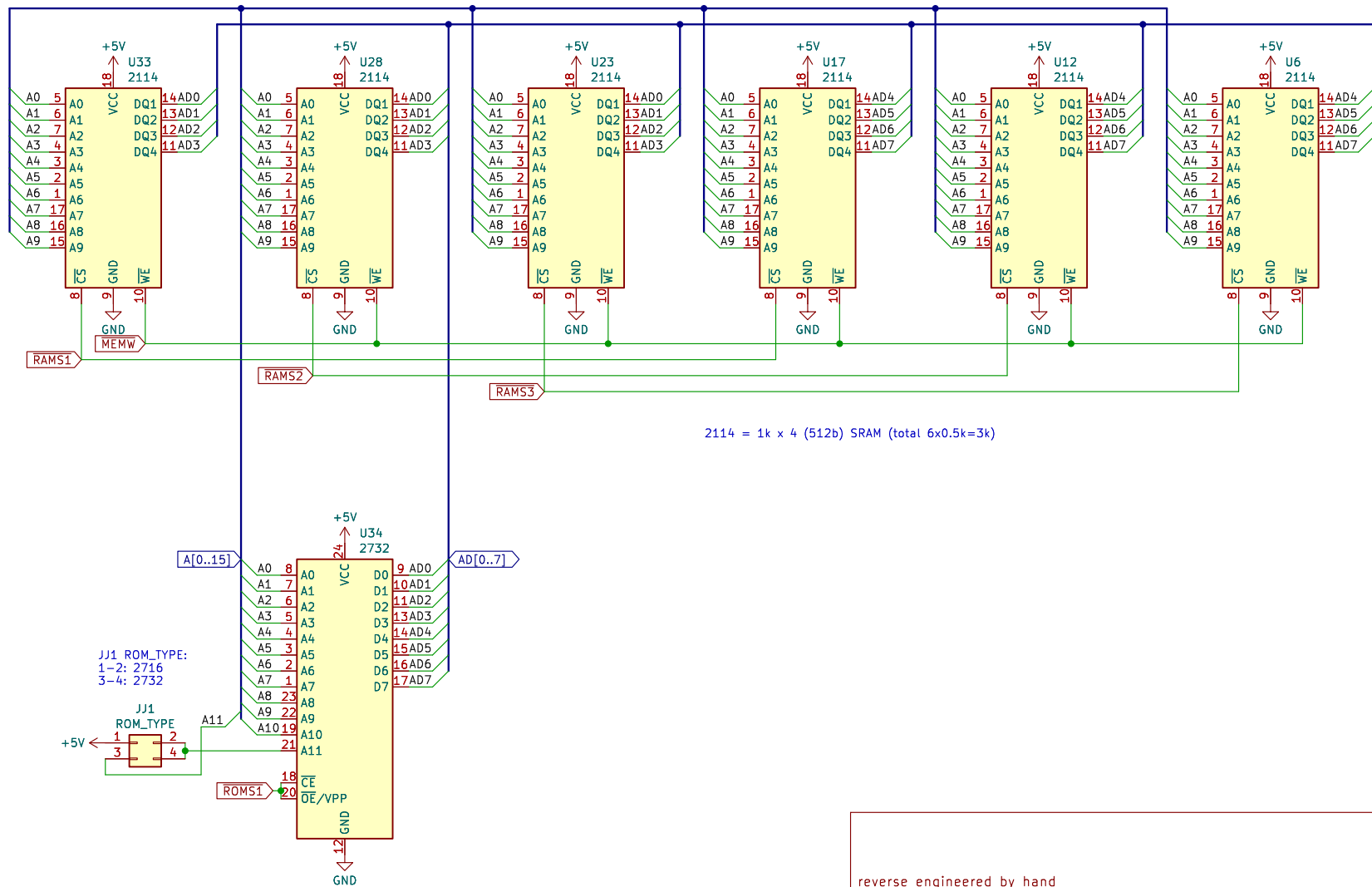
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Sheet: /DMA/
 File: dma.kicad_sch

Title: Iskra Delta Partner Video (text) 30 797 044

Size: A4 Date: 2023-08-17
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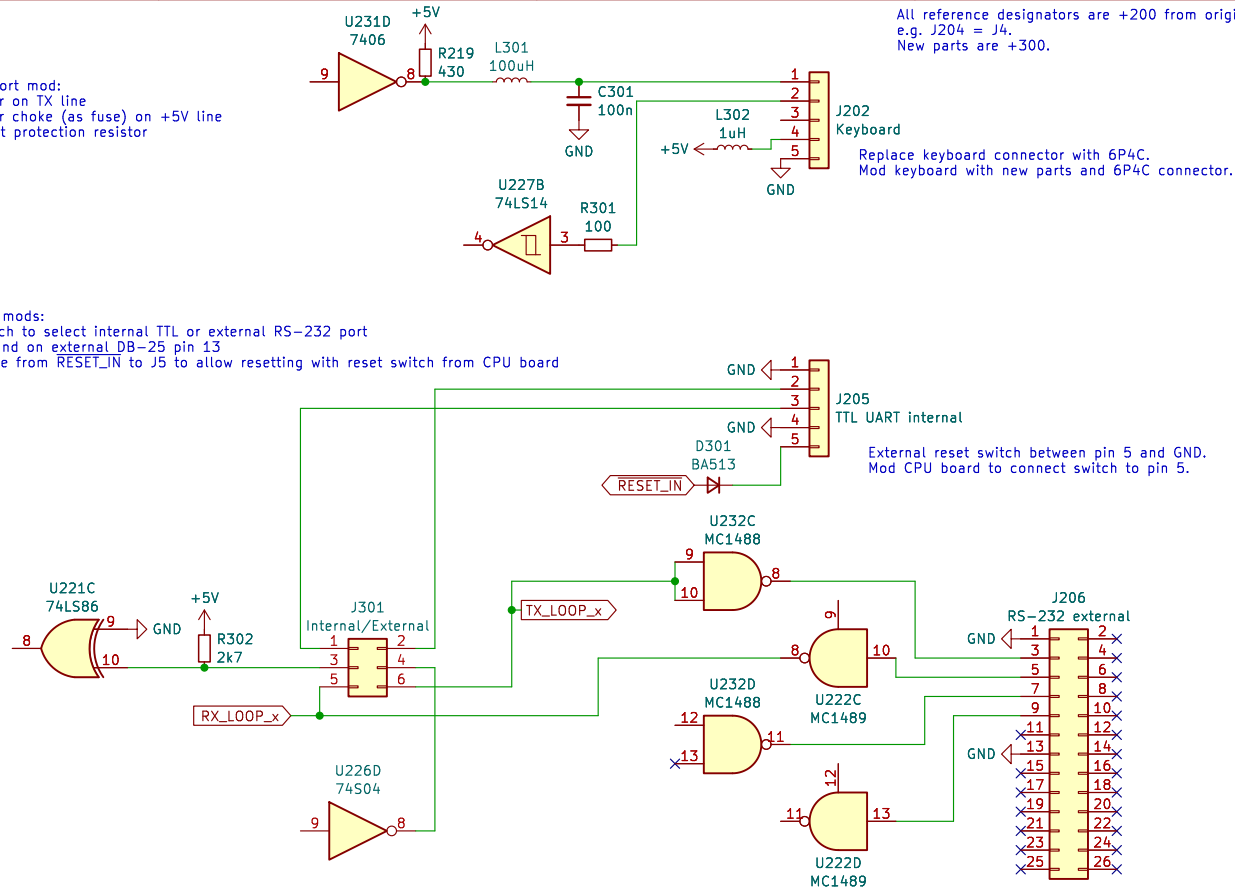
Rev: 1
 Id: 5/10



Keyboard port mod:
 - add filter on TX line
 - add filter choke (as fuse) on +5V line
 - add input protection resistor

Serial port mods:
 - add switch to select internal TTL or external RS-232 port
 - add ground on external DB-25 pin 13
 - add diode from RESET_IN to J5 to allow resetting with reset switch from CPU board

All reference designators are +200 from original.
 e.g. J204 = J4.
 New parts are +300.



Cut traces to pins 9 and 12 of U22 (MC1489) to make inputs RS-232 compliant.
 Add GND to pin 13 of J4.
 Connect J204 to DB-9 or DE-9 male socket.
 Connect DPDT switch to J301.
 JJ10 must be set to GND.

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Sheet: /UART mods/
 File: uart_mods.kicad_sch

Title: Iskra Delta Partner Video (text) 30 797 044

Size: A4 Date: 2023-08-17

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Rev: 1
 Id: 8/10

PAL standard timing mods:

Horizontal front porch (1.65us):
R9 = 10k + 5k pot (12.2k total set)

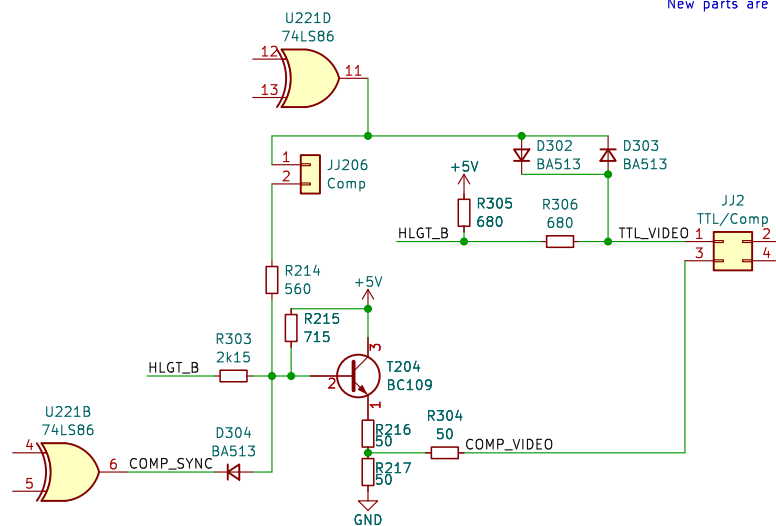
Horizontal sync pulse (4.7us):
C17 = 1n
R10 = 12k

Vertical front porch (?us):
R11 = 47k pot (21k set)

Vertical sync pulse (160us):
C15 = 47n
R12 = 10k

Composite, highlight mod

All reference designators are +200 from original.
e.g. J204 = J4.
New parts are +300.



Composite signal levels (75 ohm load):
0V sync
0.3–0.4V black
0.7–0.8V normal white
1.0V highlight (100% white)

TTL video levels (into monitor):
0V black
2.5–3V normal white
3.5–4V highlight (100% white)

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Sheet: /CRT controller mods/
File: crt_mods.kicad_sch

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Size: A4 Date: 2023–08–17

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Rev: 1

Id: 10/10