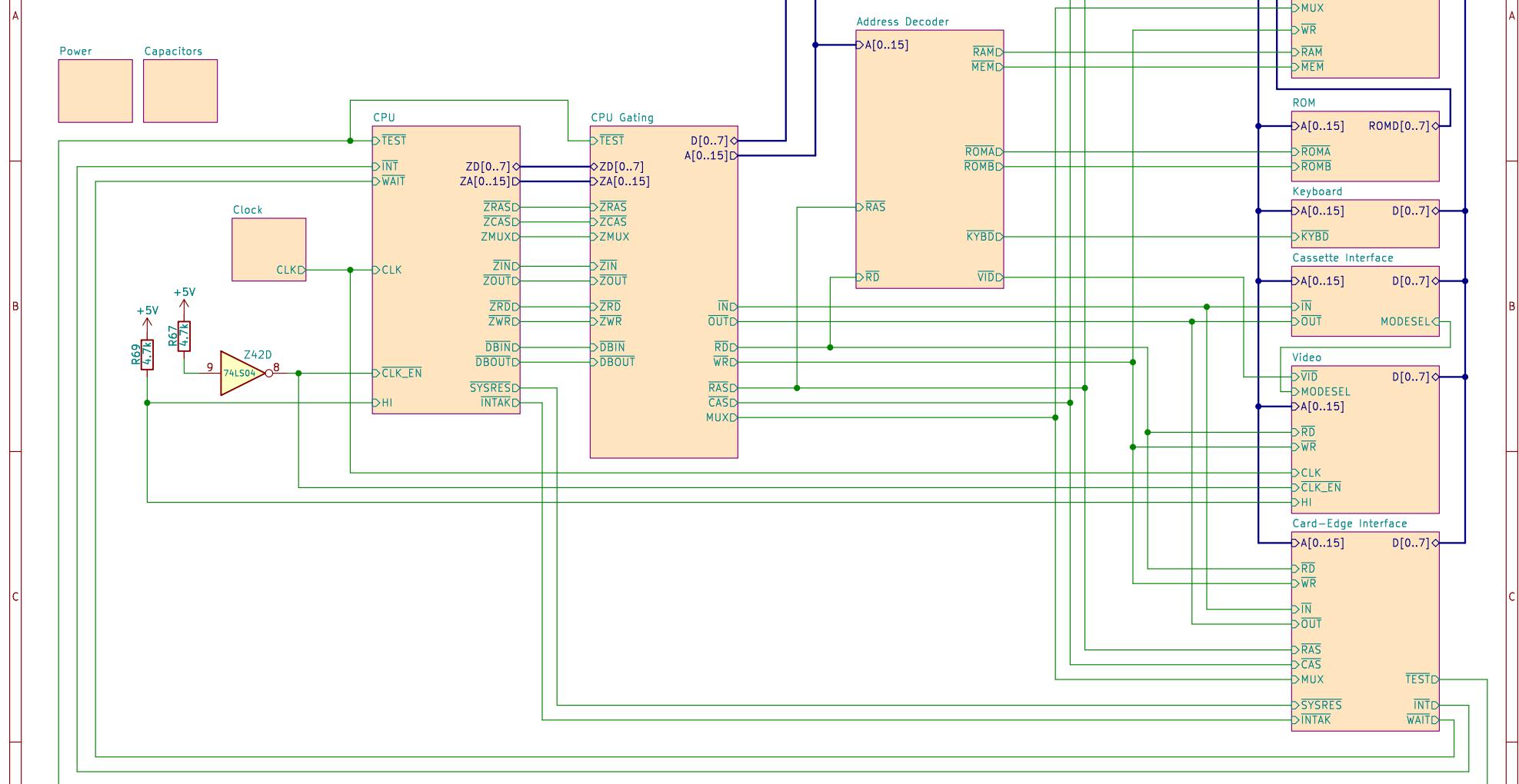


TRS-80 Model I
1700069 G E1



System Overview

Full overview of the system

RetroStack – Marcel Erz

Sheet: /
File: TRS80_Model_I_G_E1.kicad_sch

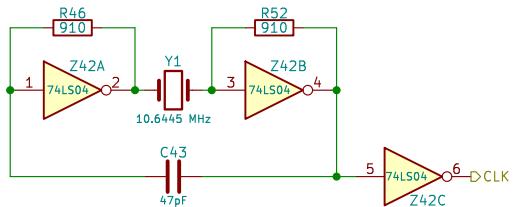
Title: TRS-80 Model I G

Size: USLetter Date: 2023-12-21

KiCad E.D.A. kicad 7.0.8

Rev: E1B

Id: 1/20



System Clock

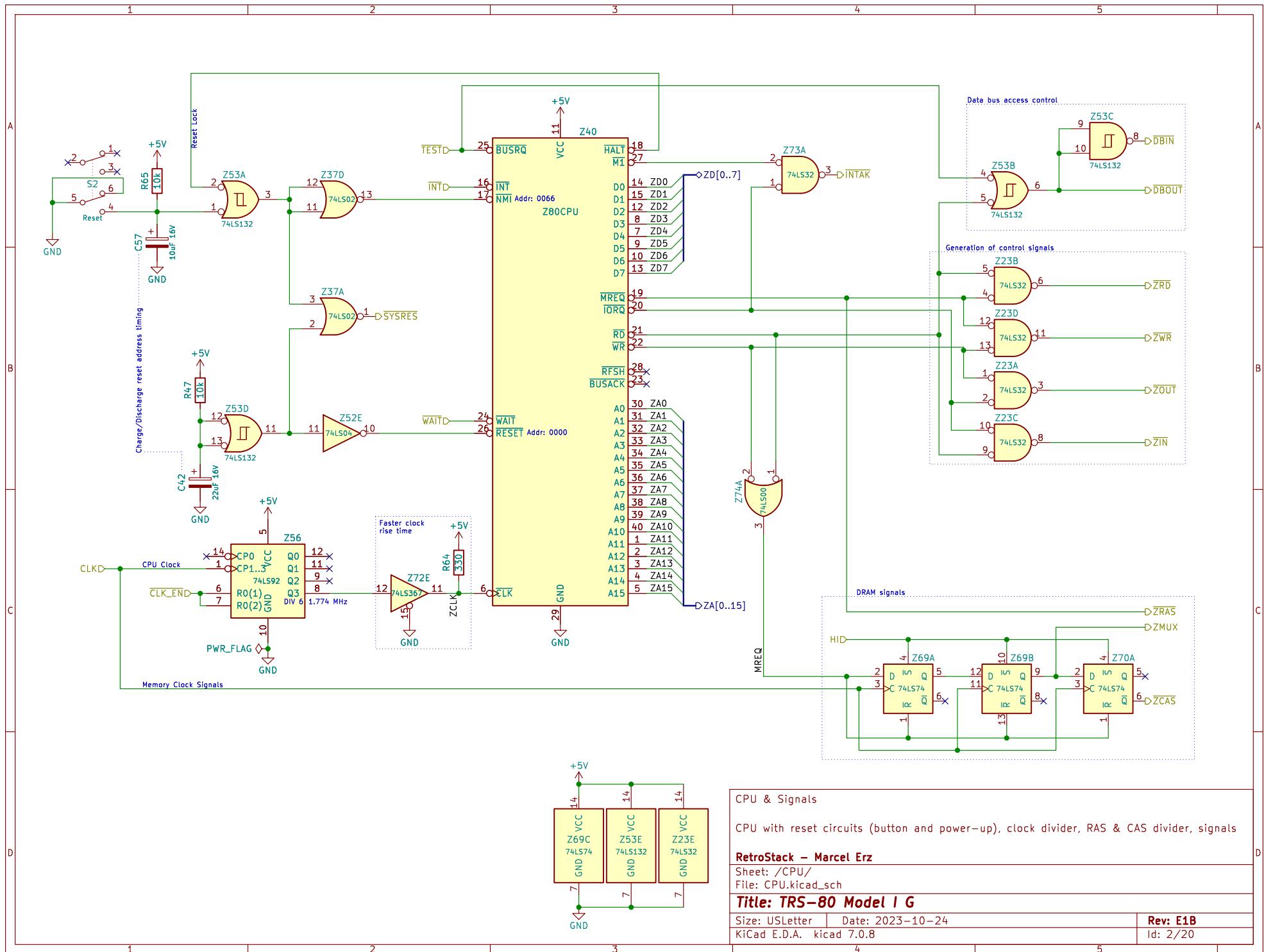
RetroStack – Marcel Erz

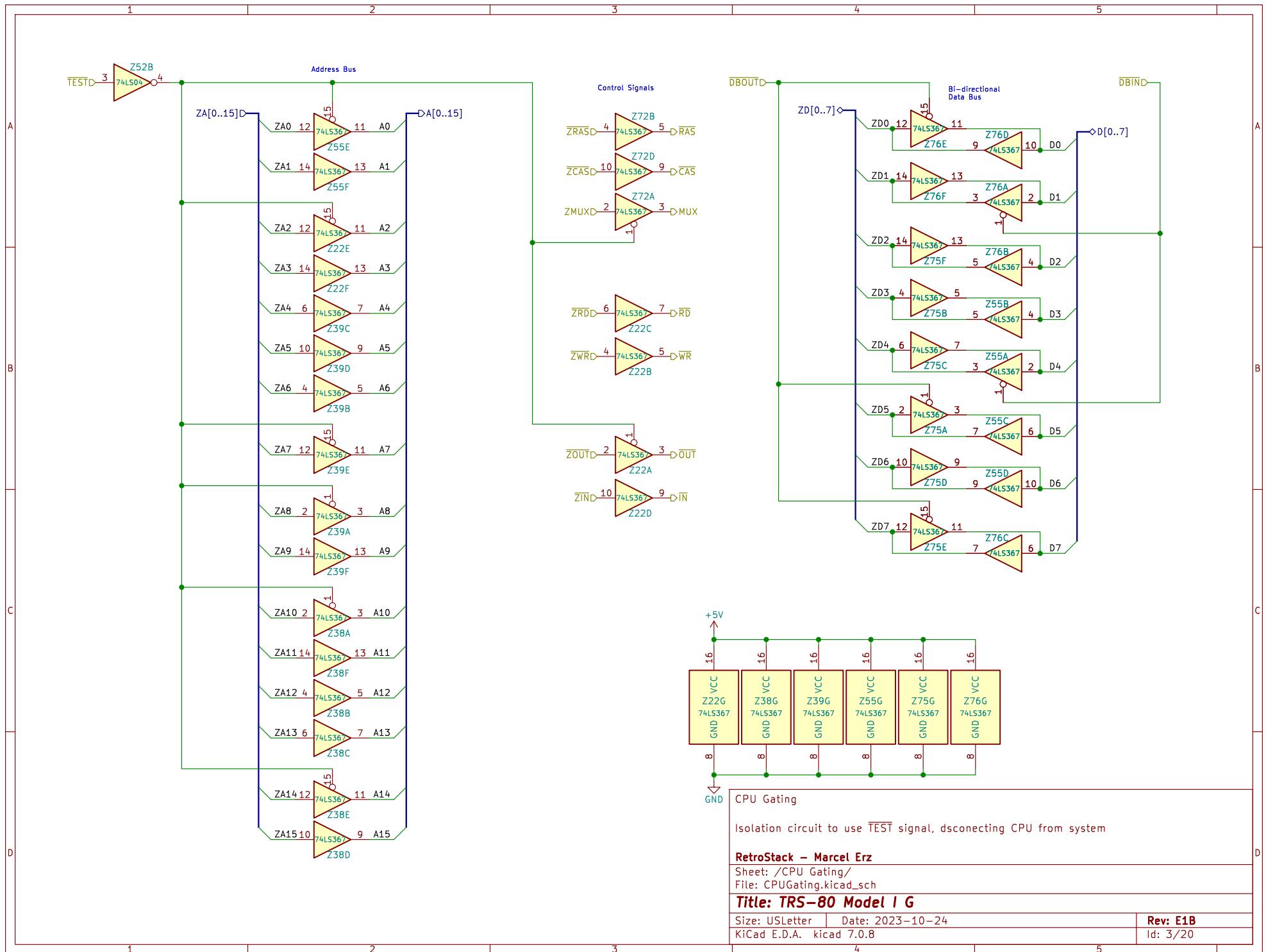
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File: Clock.kicad_sch

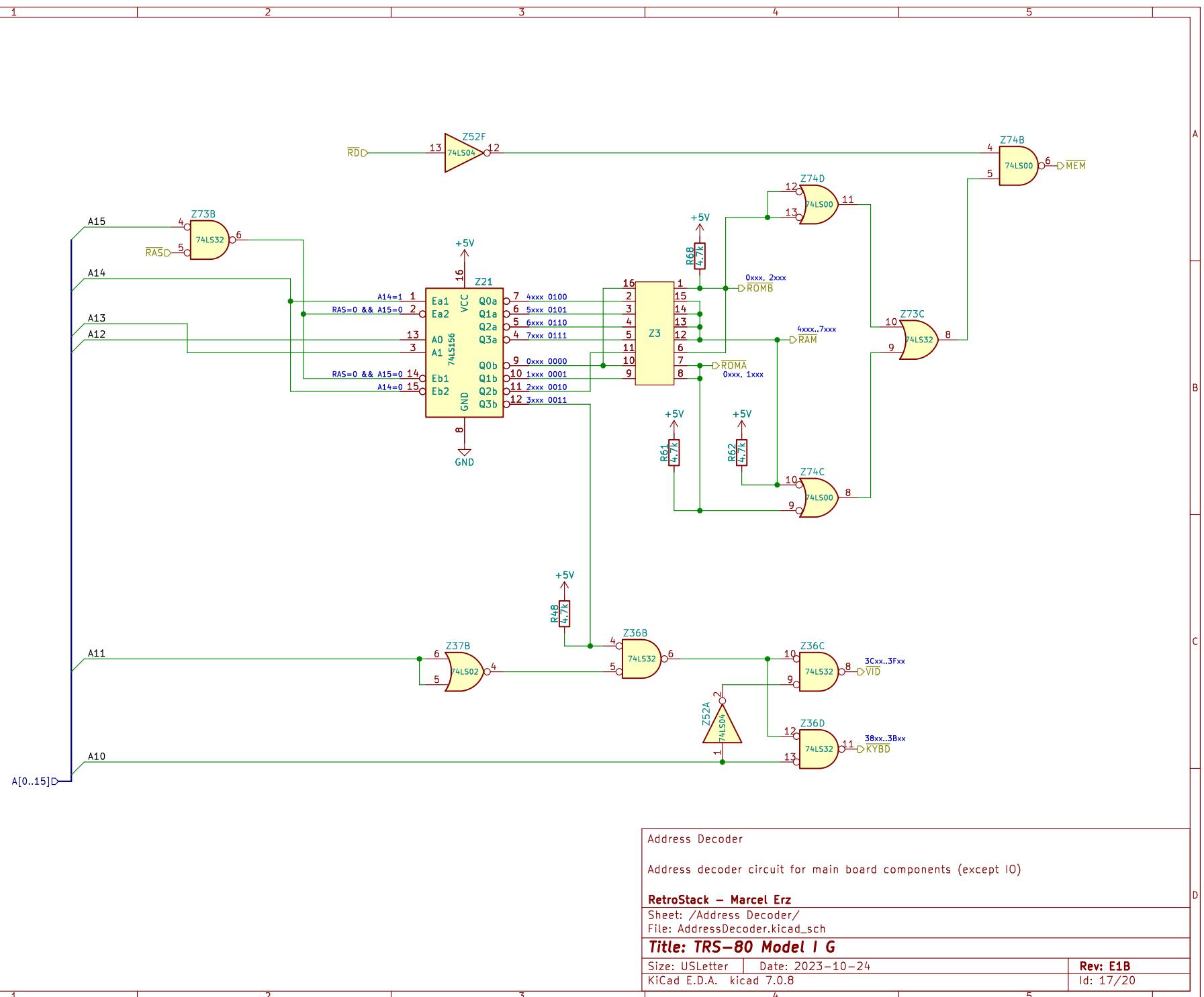
Title: TRS-80 Model I G

Size: USLetter	Date: 2023-10-24
KiCad E.D.A.	kicad 7.0.8

Rev: E1B
Id: 4/20







A

A

B

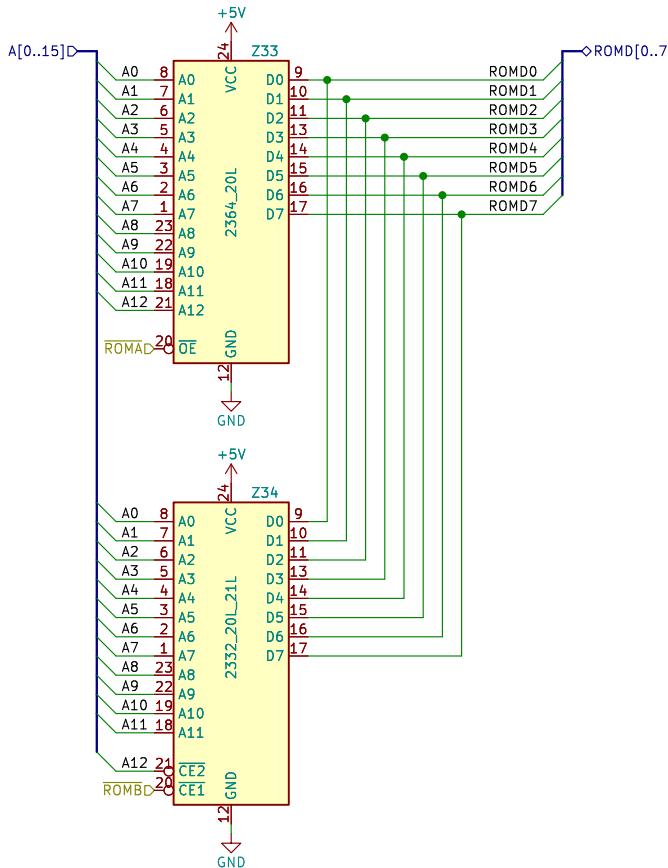
B

C

C

D

D

**Level I ROMs:**

- Intel 2616 EPROM (White Crystal Window)
- National MM2316 ROM (Colored Ceramic) (R/D=ROM A, S/D=ROM B)
- Motorola 7800 Series ROMs (7807=ROM A, 7804=ROM B)
- Motorola 7800 Series ROMs (7809=ROM A & B)

Level II ROMs:

- Generic 3 ROMs on separate board with logic chip (each 32kbit/4kb)
- NEC 8043364 & 8043732 (64kbit/8kb & 32kbit/4kb) (early 1979)
- NEC 8044364 & 8044732 (64kbit/8kb & 32kbit/4kb) (early 1980)

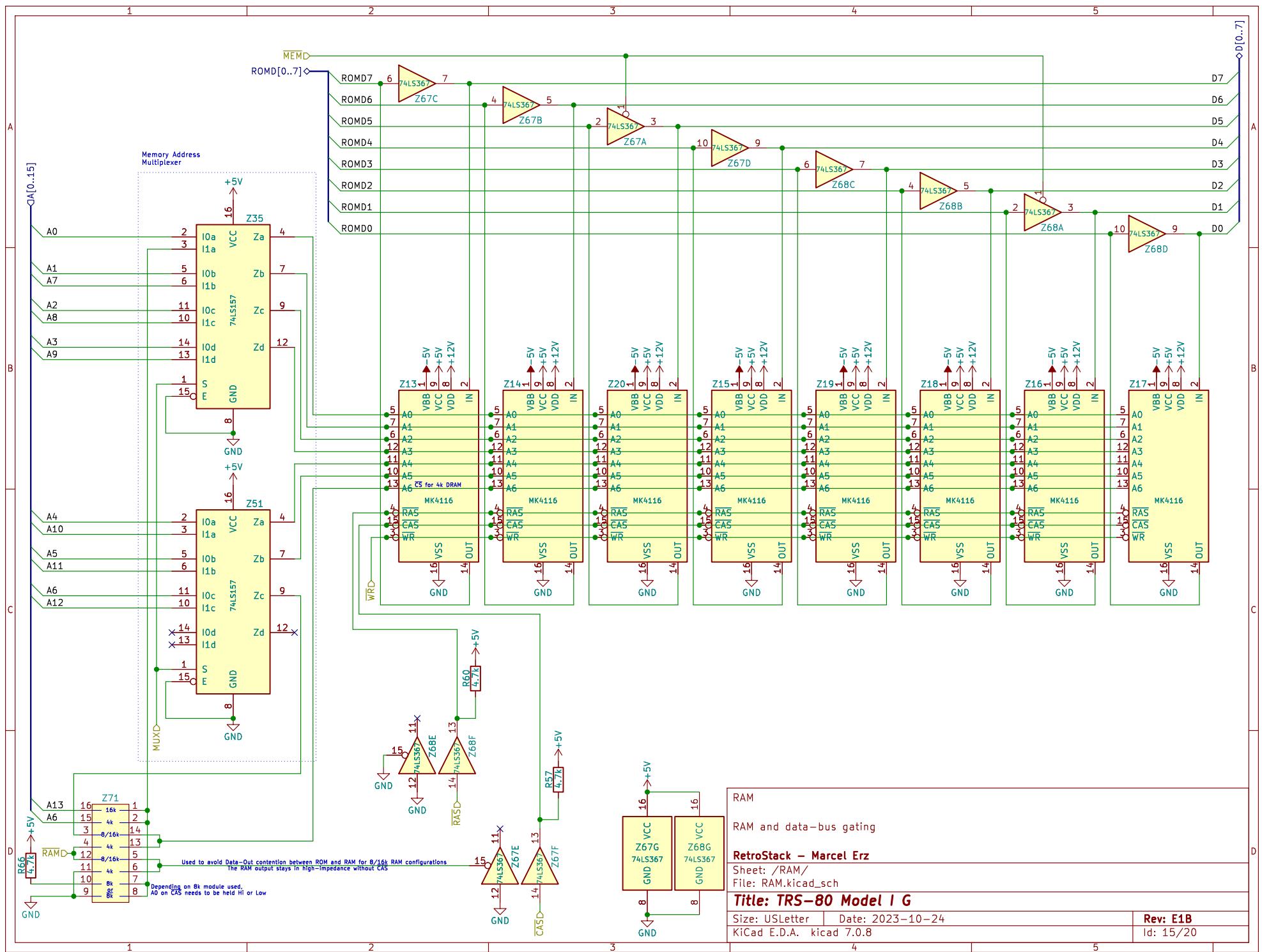
ROM**ROM circuit****RetroStack – Marcel Erz**

Sheet: /ROM/
File: ROM.kicad_sch

Title: TRS-80 Model I G

Size: USLetter | Date: 2023-10-24
KiCad E.D.A. kicad 7.0.8

Rev: E1B
Id: 14/20



A

A

B

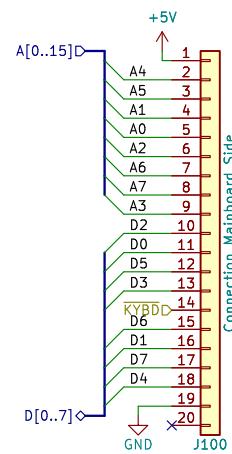
B

C

C

D

D



Keyboard & Interface

Keyboard interface circuit

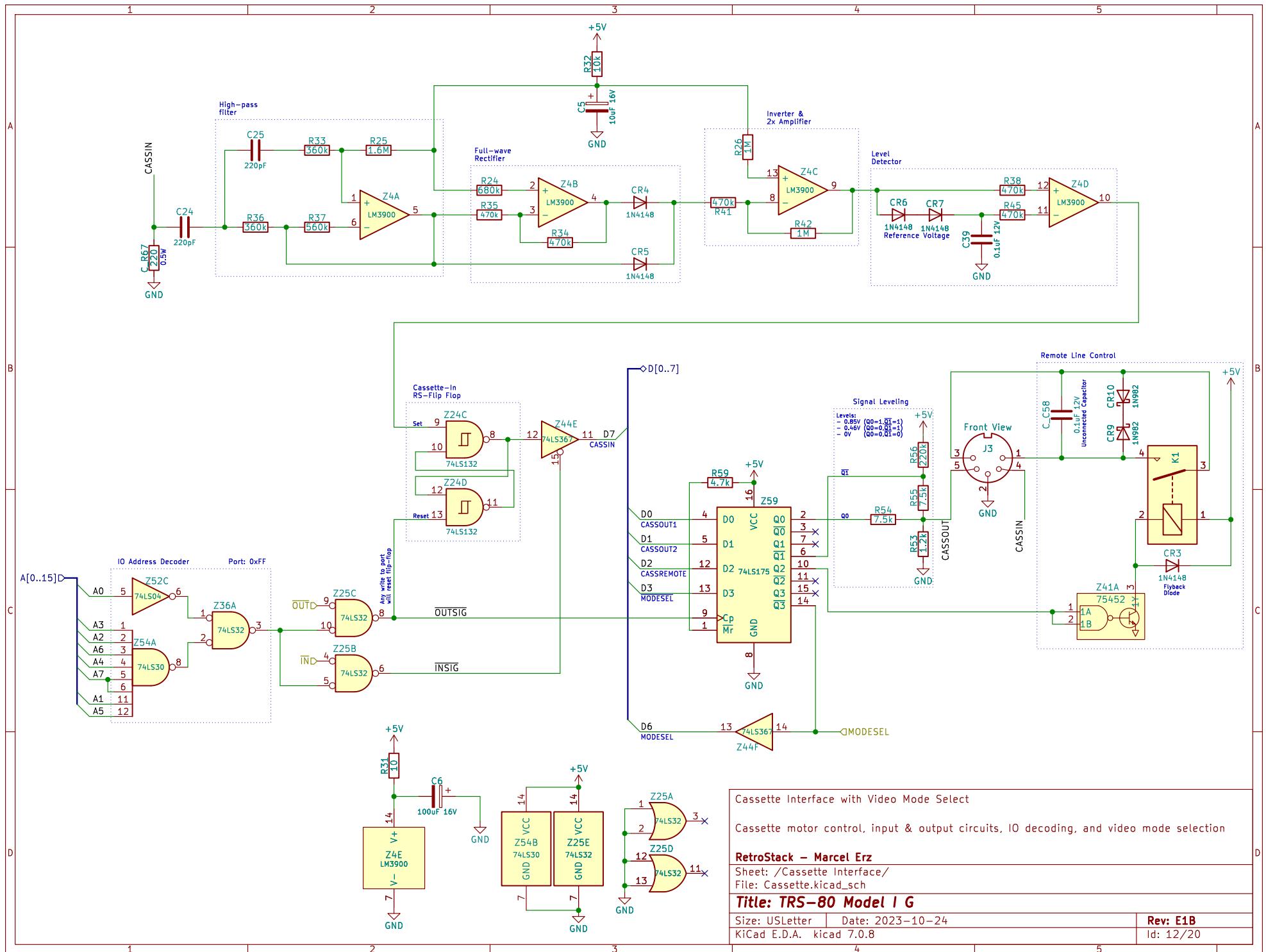
RetroStack – Marcel Erz

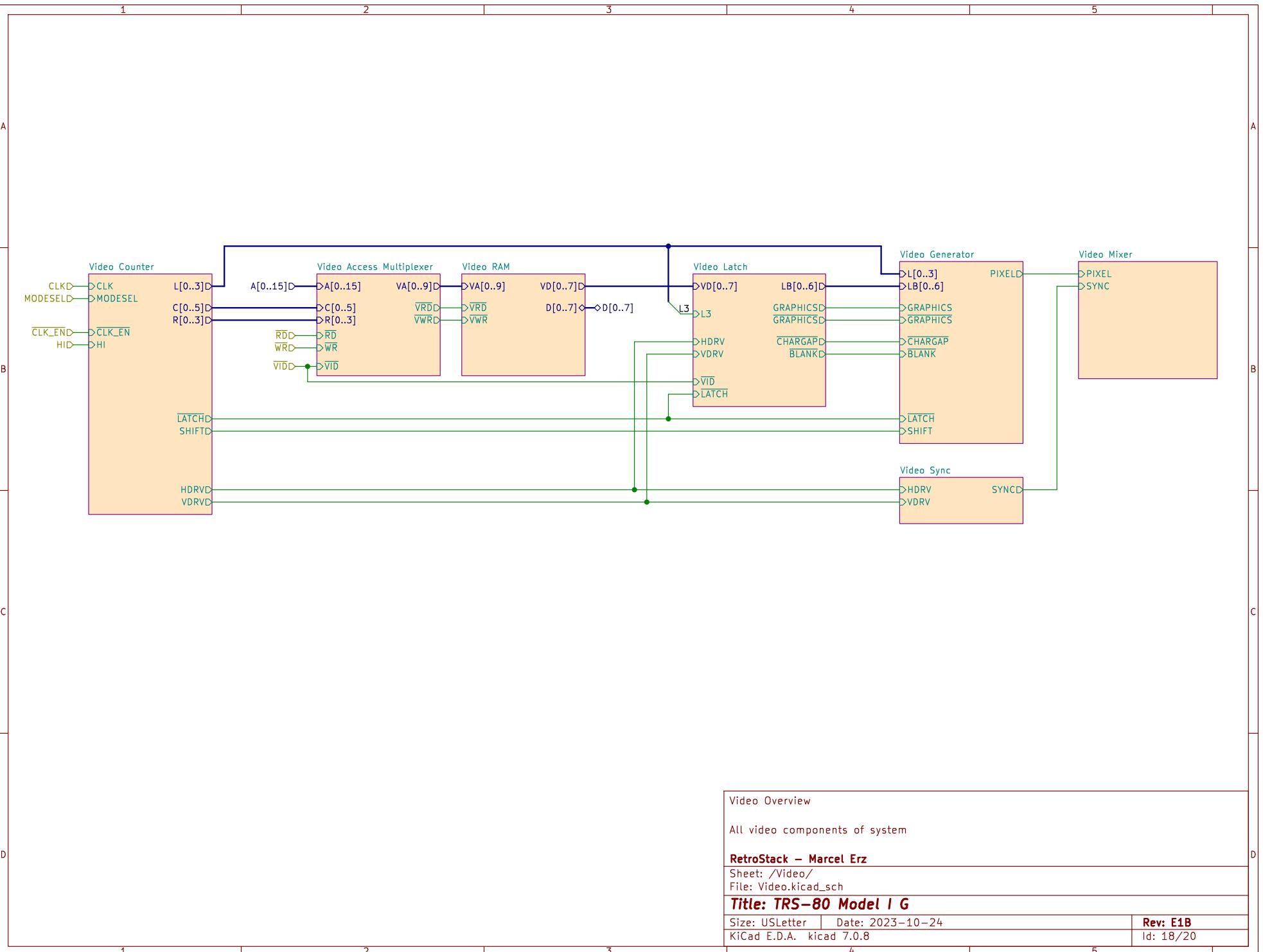
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File: Keyboard.kicad_sch

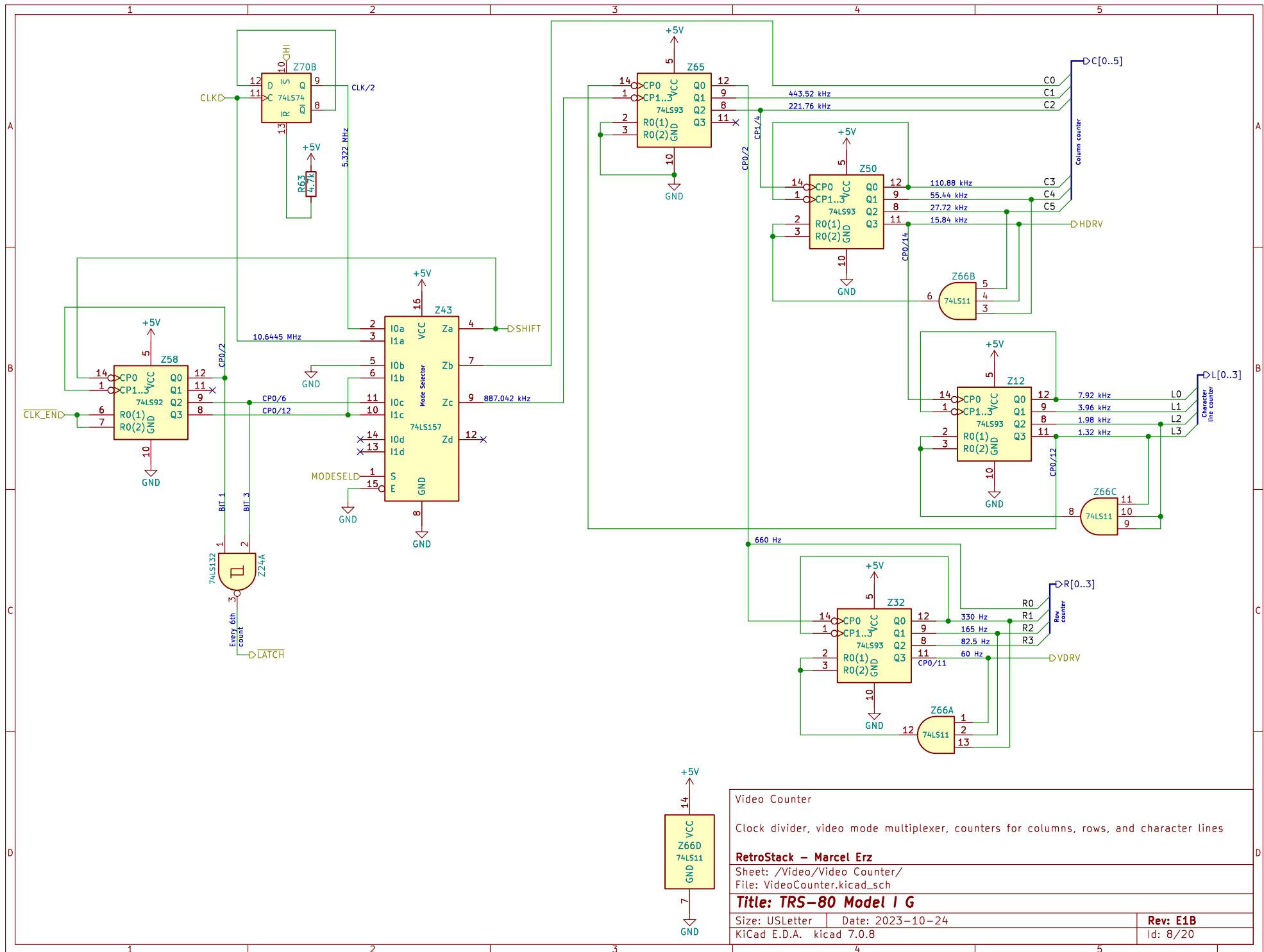
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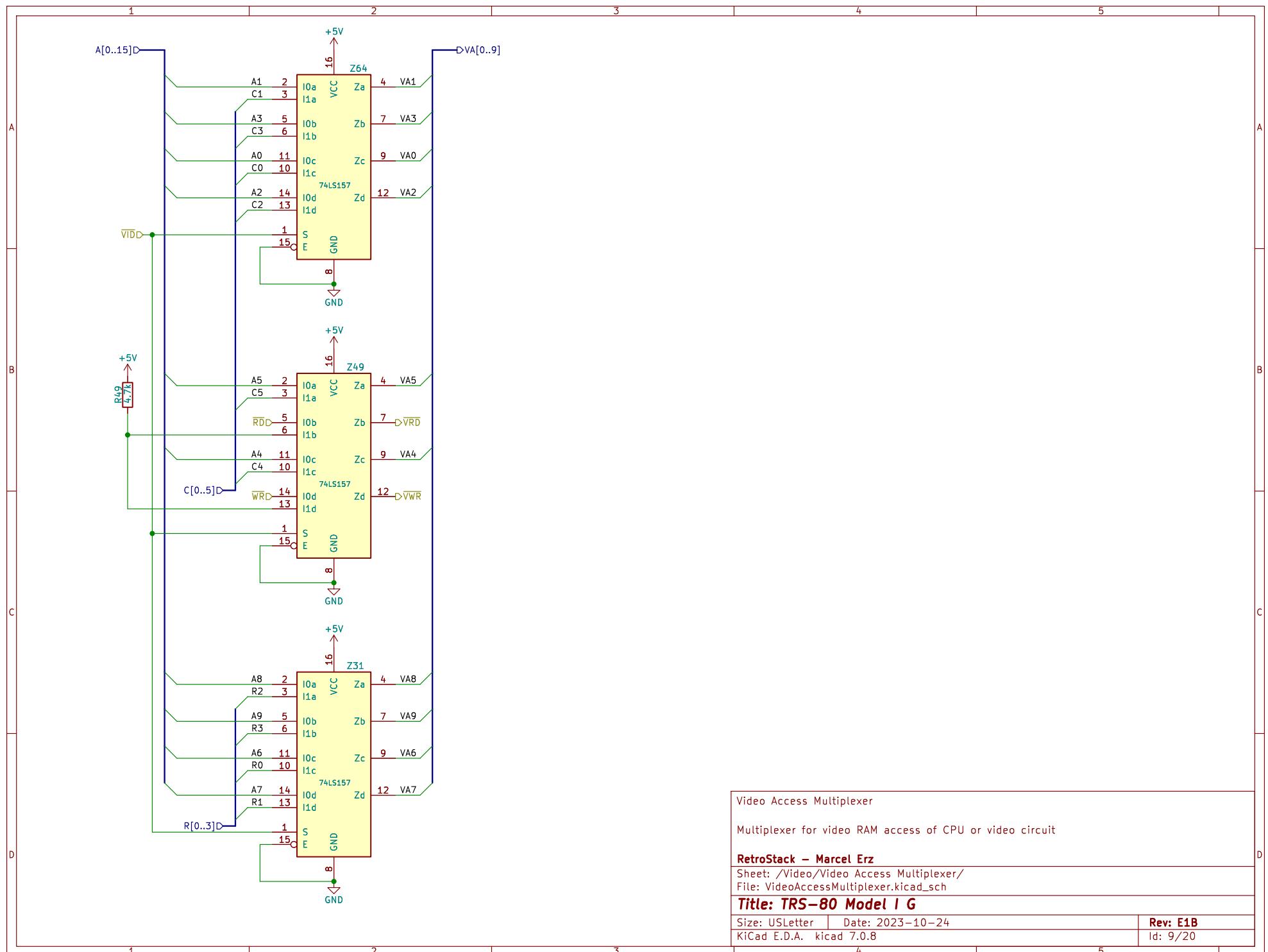
Size: USLetter | Date: 2023-10-24
KiCad E.D.A. kicad 7.0.8

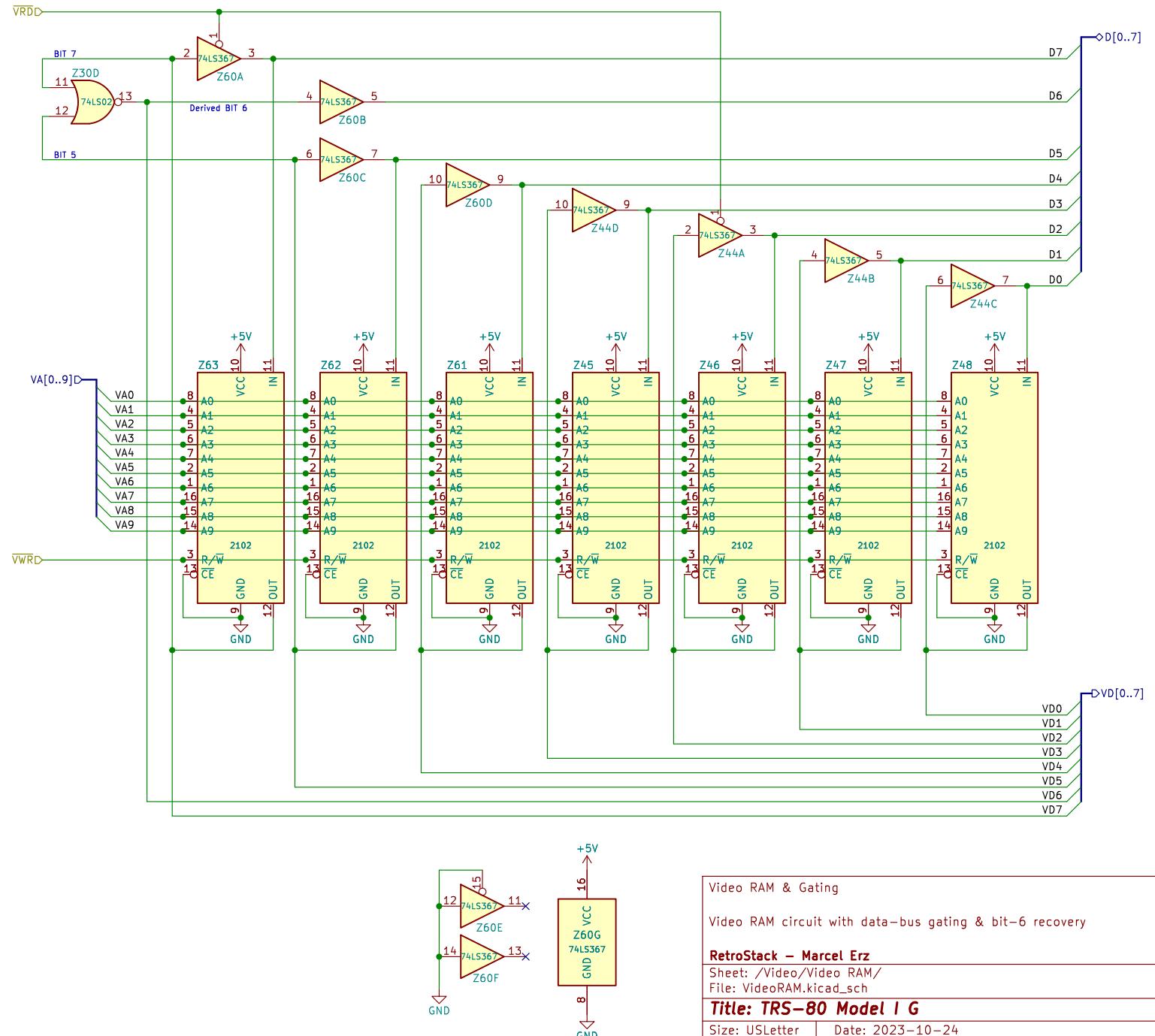
Rev: E1B
Id: 16/20

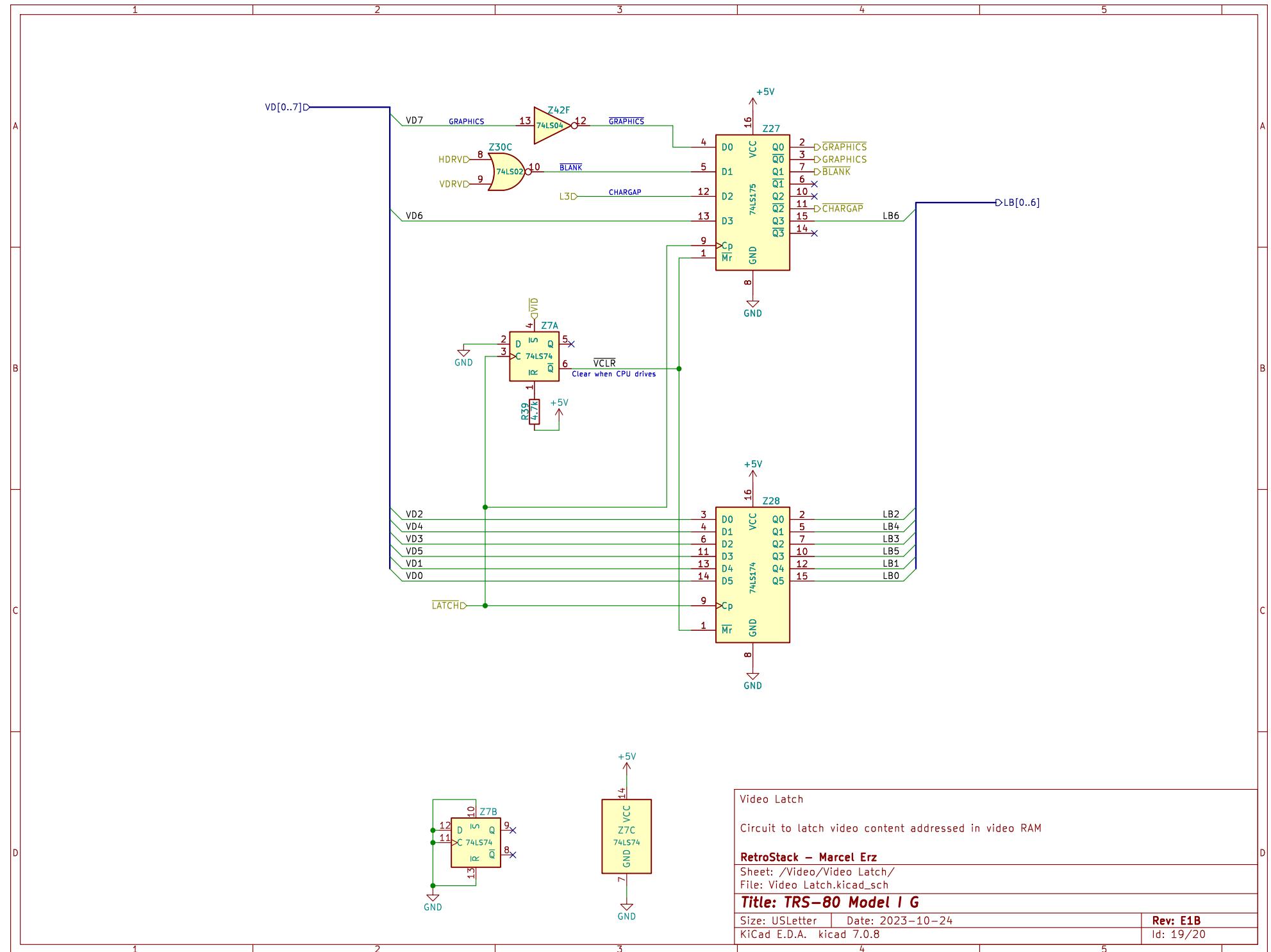


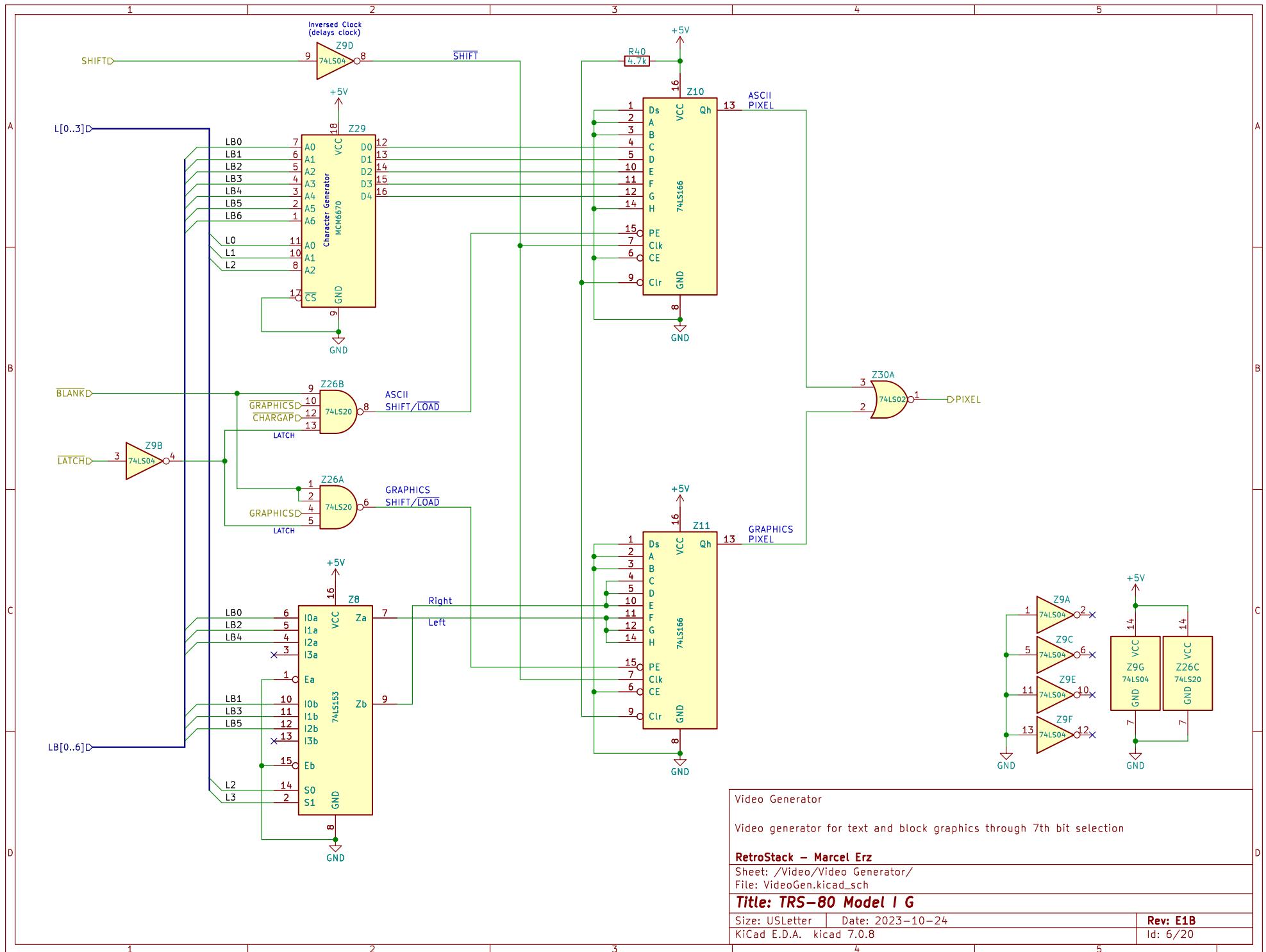












A

A

B

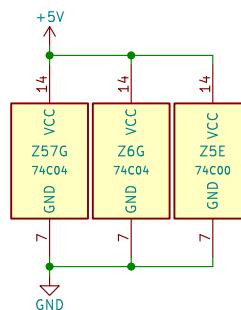
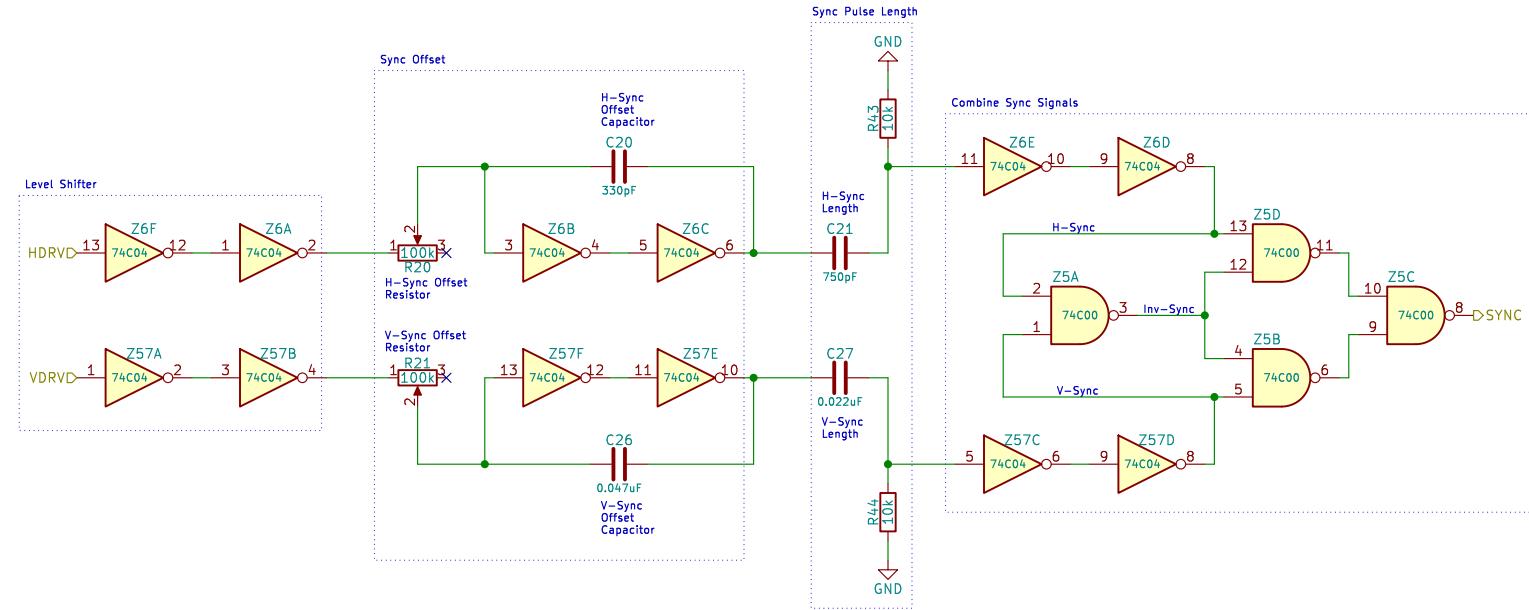
B

C

C

D

D

**Video Sync**

Circuit to combine sync signals and defining front- and back-porches in video signal

RetroStack – Marcel Erz

Sheet: /Video/Video Sync/
File: VideoSync.kicad_sch

Title: TRS-80 Model I G

Size: USLetter Date: 2023-10-24

KiCad E.D.A. kicad 7.0.8

Rev: E1B

Id: 10/20

A

A

B

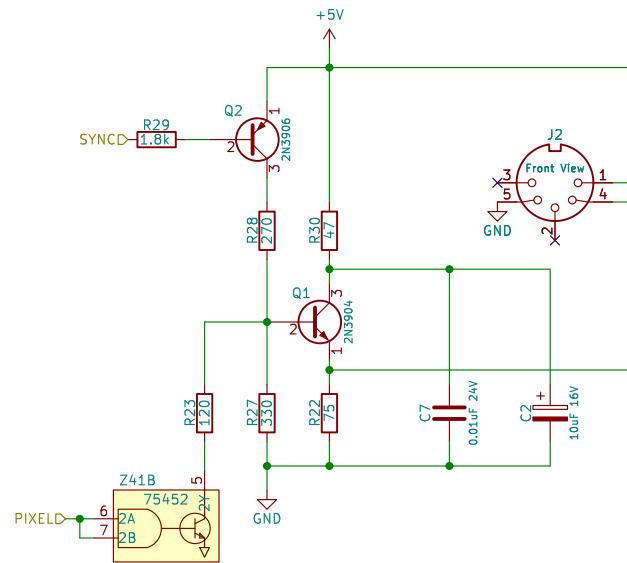
B

C

C

D

D



Q2 open, Z41 any => 0V (sync level)
 Q2 closed, Z41 closed => 1.23V (black level) – R28 with series resistors R23 & R27
 Q2 closed, Z41 open => 2.75V (white level) – Only R27 & R28

Video Mixer

Mixing circuit for sync and pixel data

RetroStack – Marcel Erz

Sheet: /Video/Video Mixer/
 File: VideoMixer.kicad_sch

Title: TRS-80 Model 1 G

Size: USLetter | Date: 2023-10-24
 KiCad E.D.A. kicad 7.0.8

Rev: E1B
 Id: 7/20

