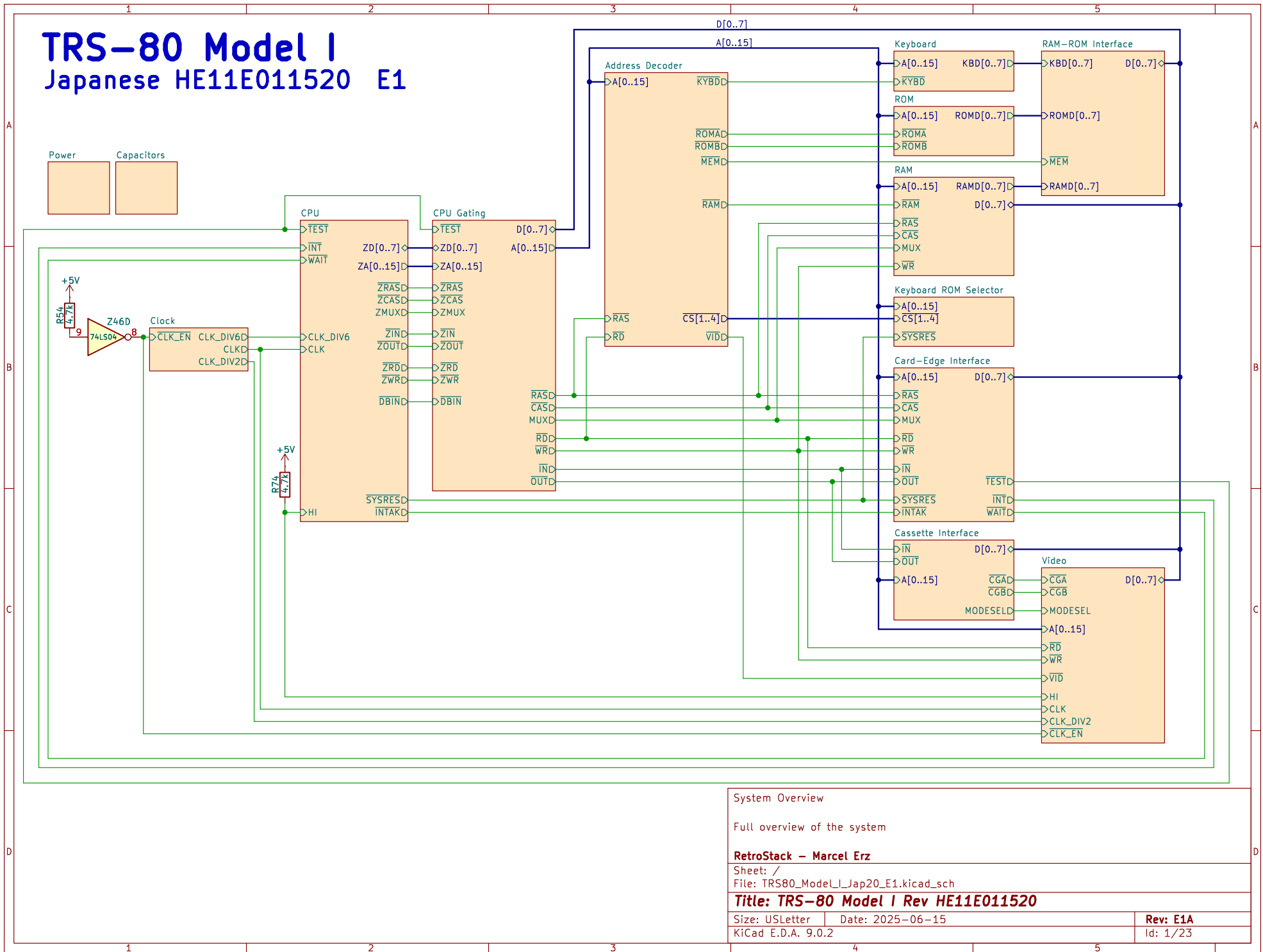


TRS-80 Model I

Japanese HE11E011520 E1



System Overview

Full overview of the system

RetroStack – Marcel Erz

Sheet: /

File: TRS80_ModelI_Jap20_E1.kicad_sch

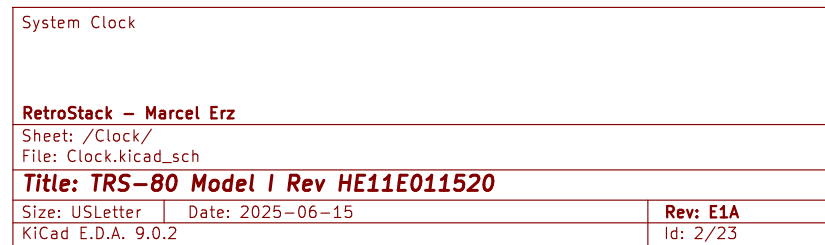
Title: TRS-80 Model I Rev HE11E011520

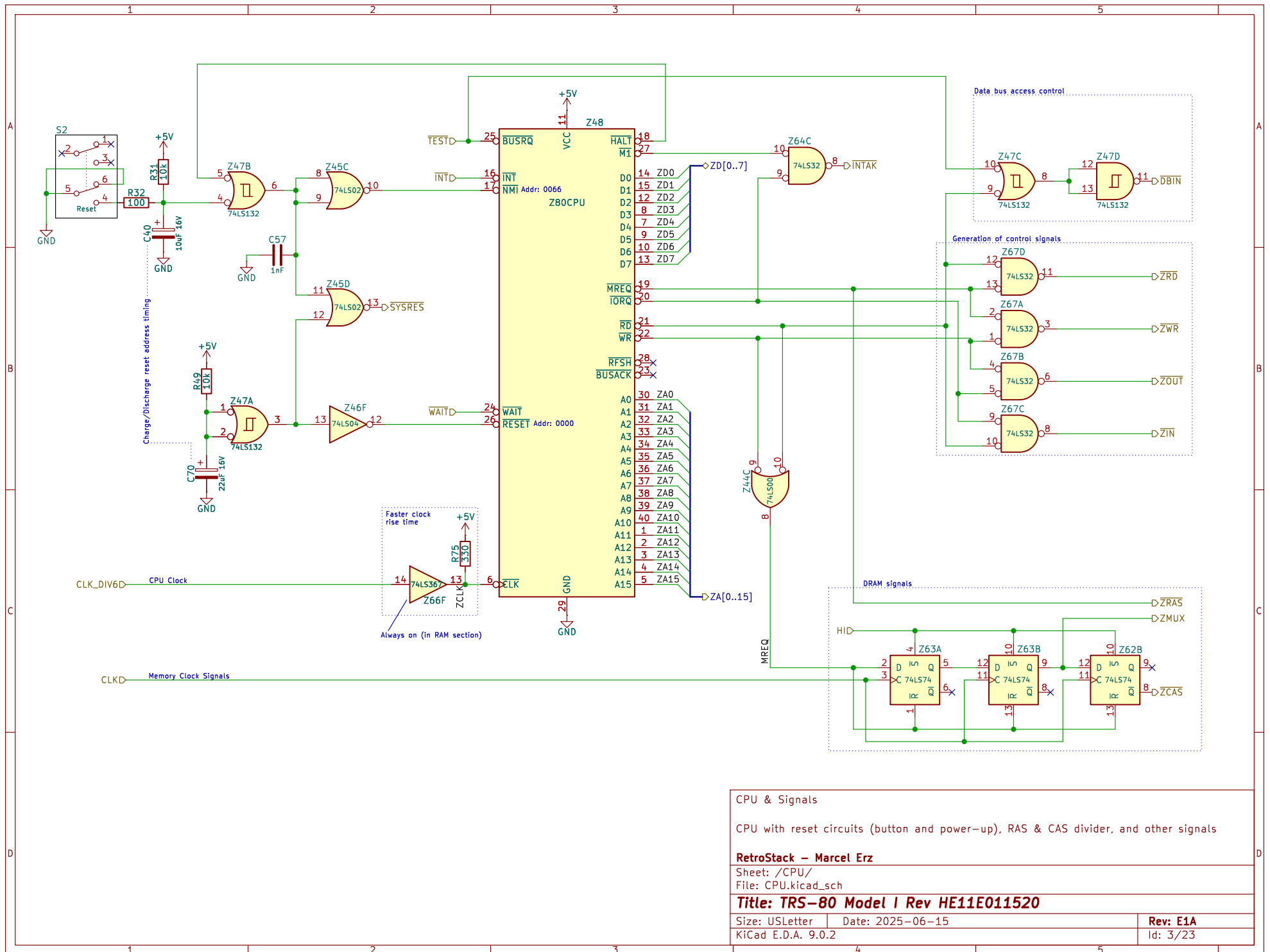
Size: USLetter Date: 2025-06-15

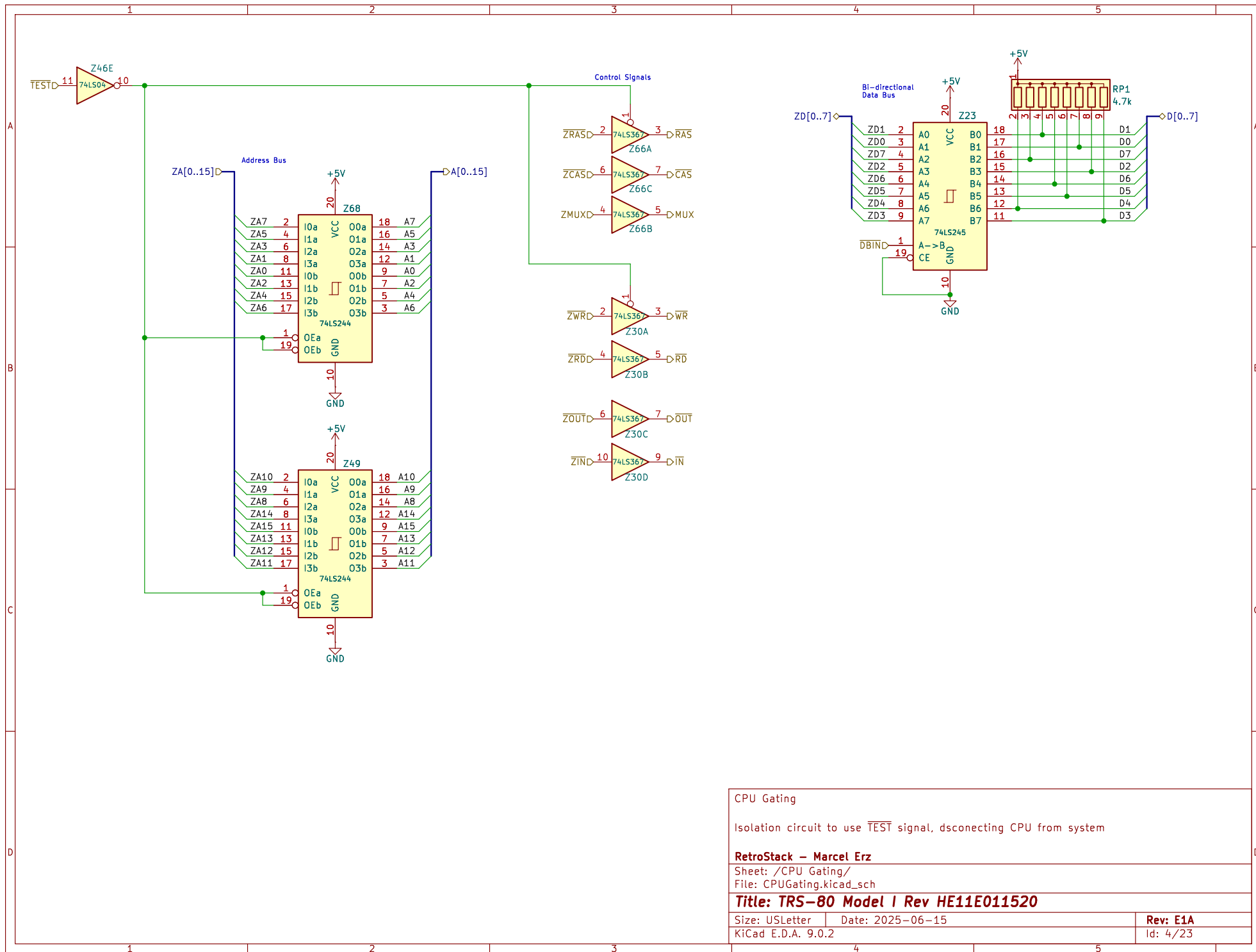
KiCad E.D.A. 9.0.2

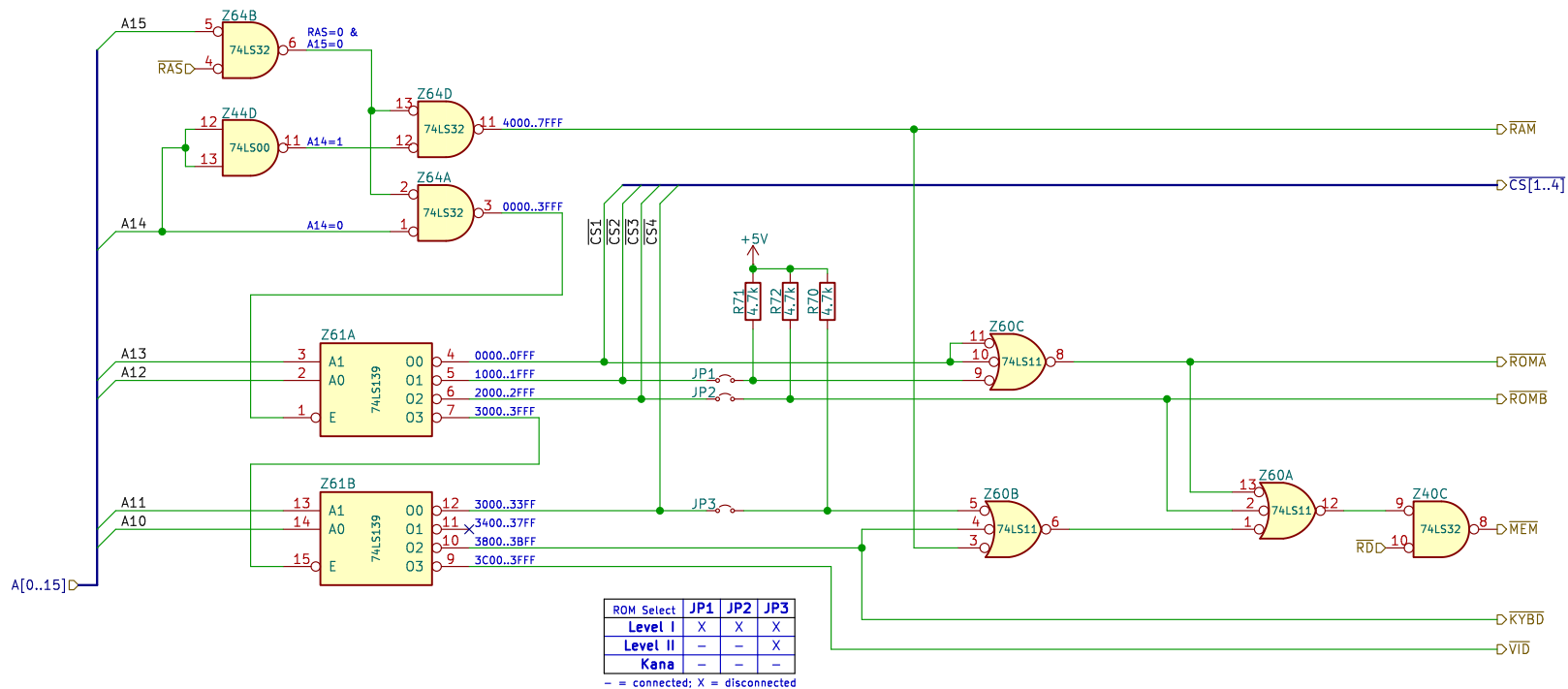
Rev: E1A

Id: 1/23









Address Decoder

Address decoder circuit for main board components (except IO)

RetroStack – Marcel Erz

Sheet: /Address Decoder/

File: AddressDecoder.kicad_sch

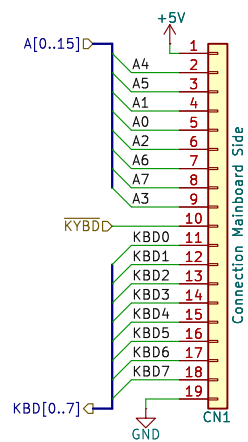
Title: TRS-80 Model I Rev HE11E011520

Size: USLetter Date: 2025-06-15

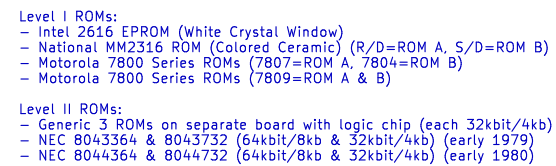
KiCad E.D.A. 9.0.2

Rev: E1A

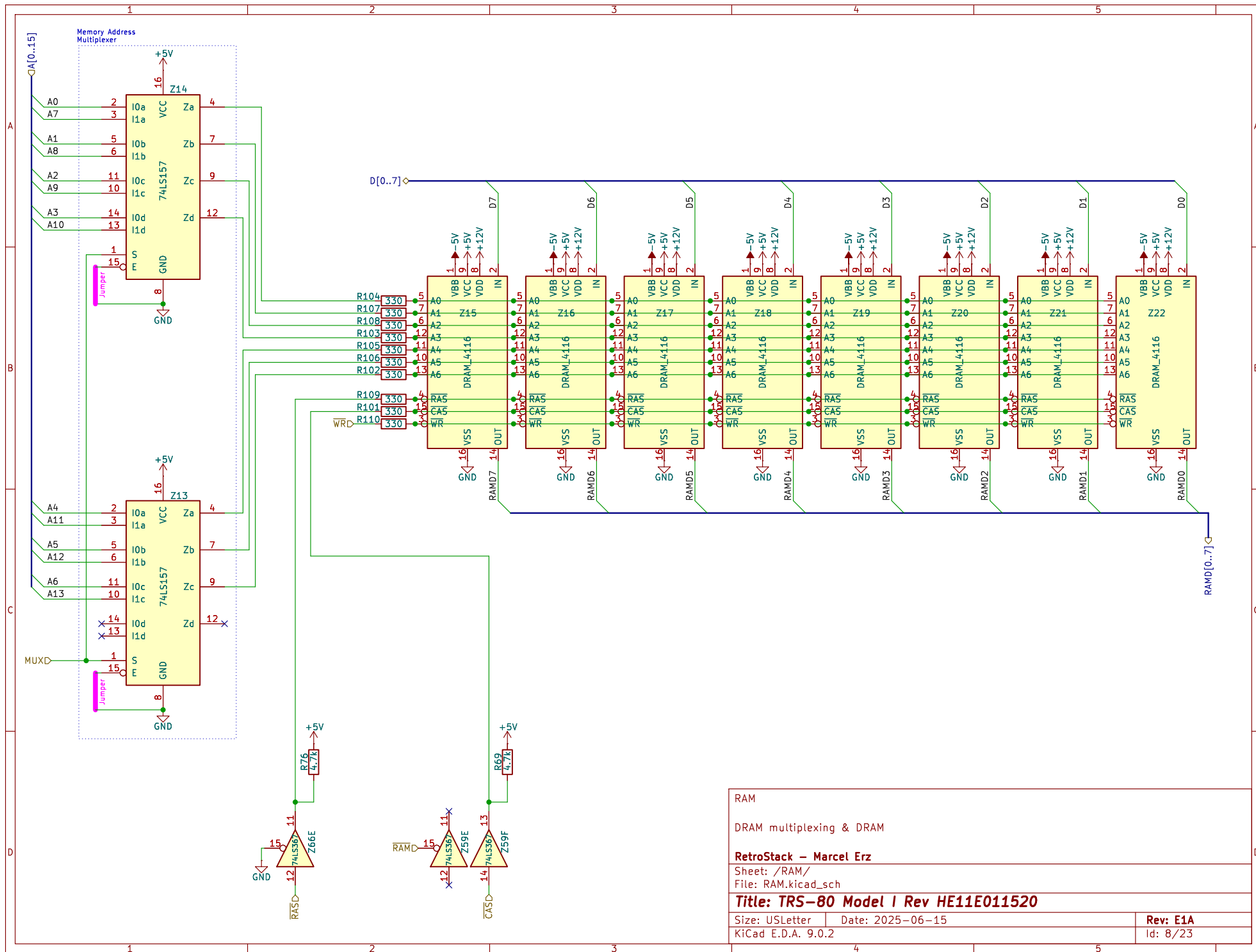
Id: 5/23

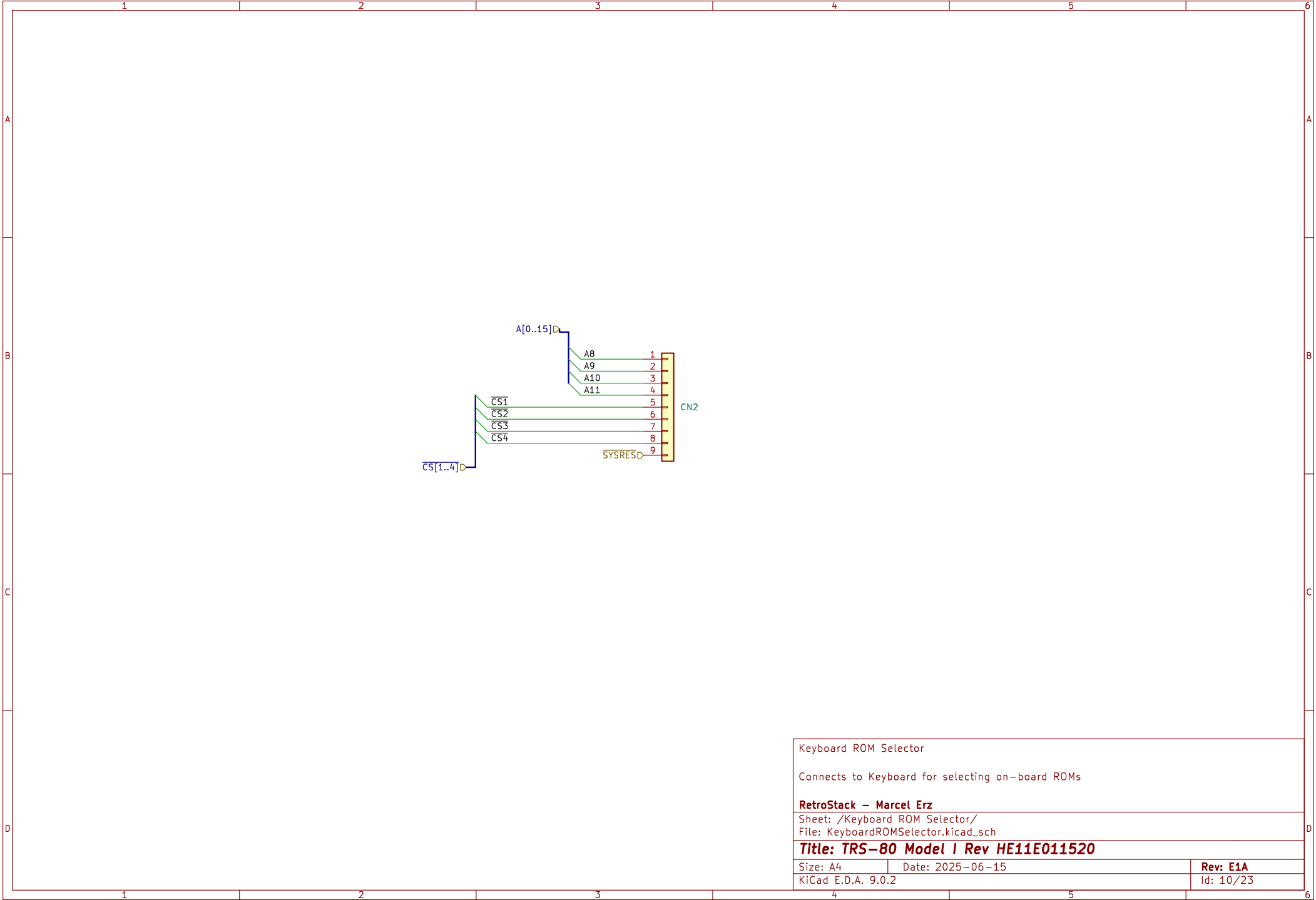


Keyboard & Interface		
Keyboard interface		
RetroStack – Marcel Erz		
Sheet: /Keyboard/ File: Keyboard.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 6/23

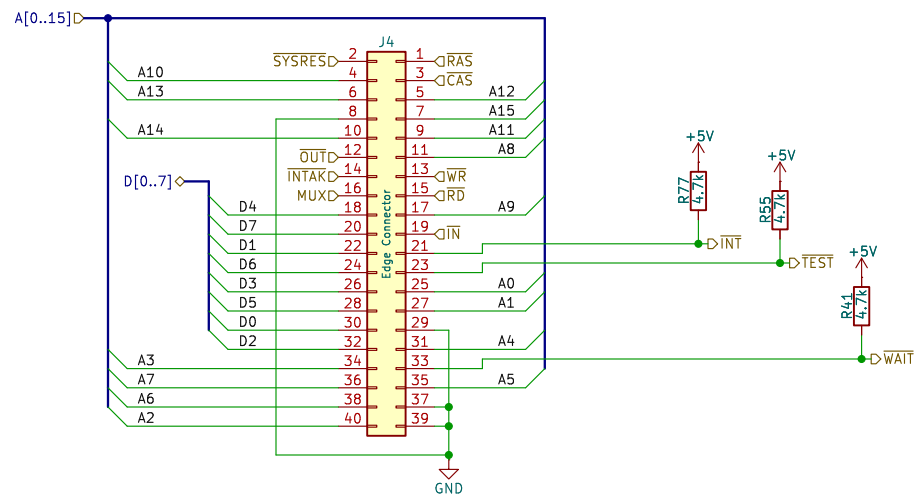


Id: 7/23

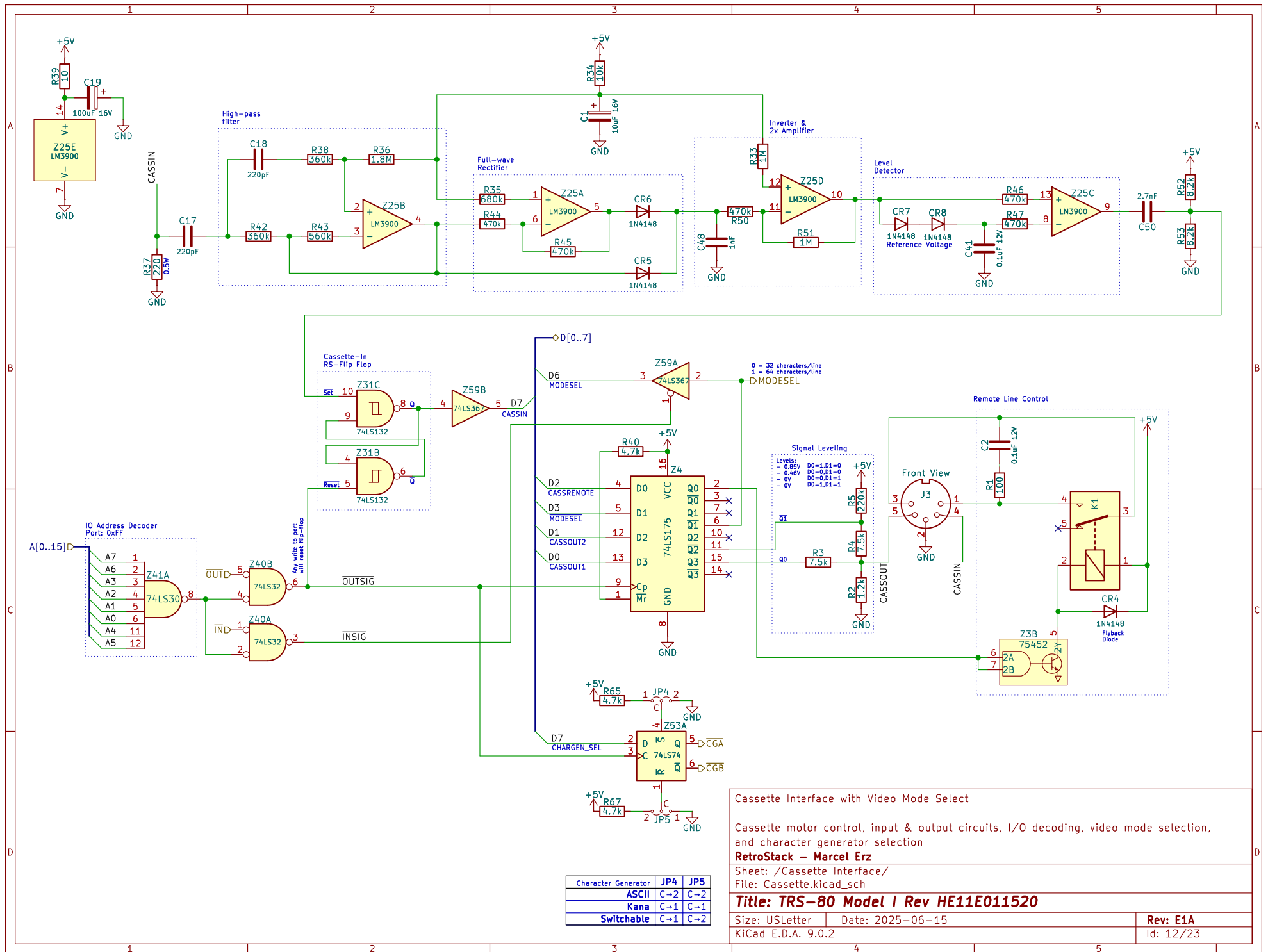




Keyboard ROM Selector		
Connects to Keyboard for selecting on-board ROMs		
RetroStack – Marcel Erz		
Sheet: /Keyboard ROM Selector/ File: KeyboardROMSelector.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: A4	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2	Id: 10/23	



Card-Edge Interface	
Unbuffered system interface with pull-up resistors for inputs	
RetroStack – Marcel Erz	
Sheet: /Card-Edge Interface/	
File: CardEdgeInterface.kicad_sch	
Title: TRS-80 Model I Rev HE11E011520	
Size: USLetter	Date: 2025-06-15
KiCad E.D.A. 9.0.2	Rev: E1A
Id: 11/23	



Cassette Interface with Video Mode Select

Cassette motor control, input & output circuits, I/O decoding, video mode selection, and character generator selection

RetroStack – Marcel Erz

Sheet: /Cassette Interface/

File: Cassette.kicad_sch

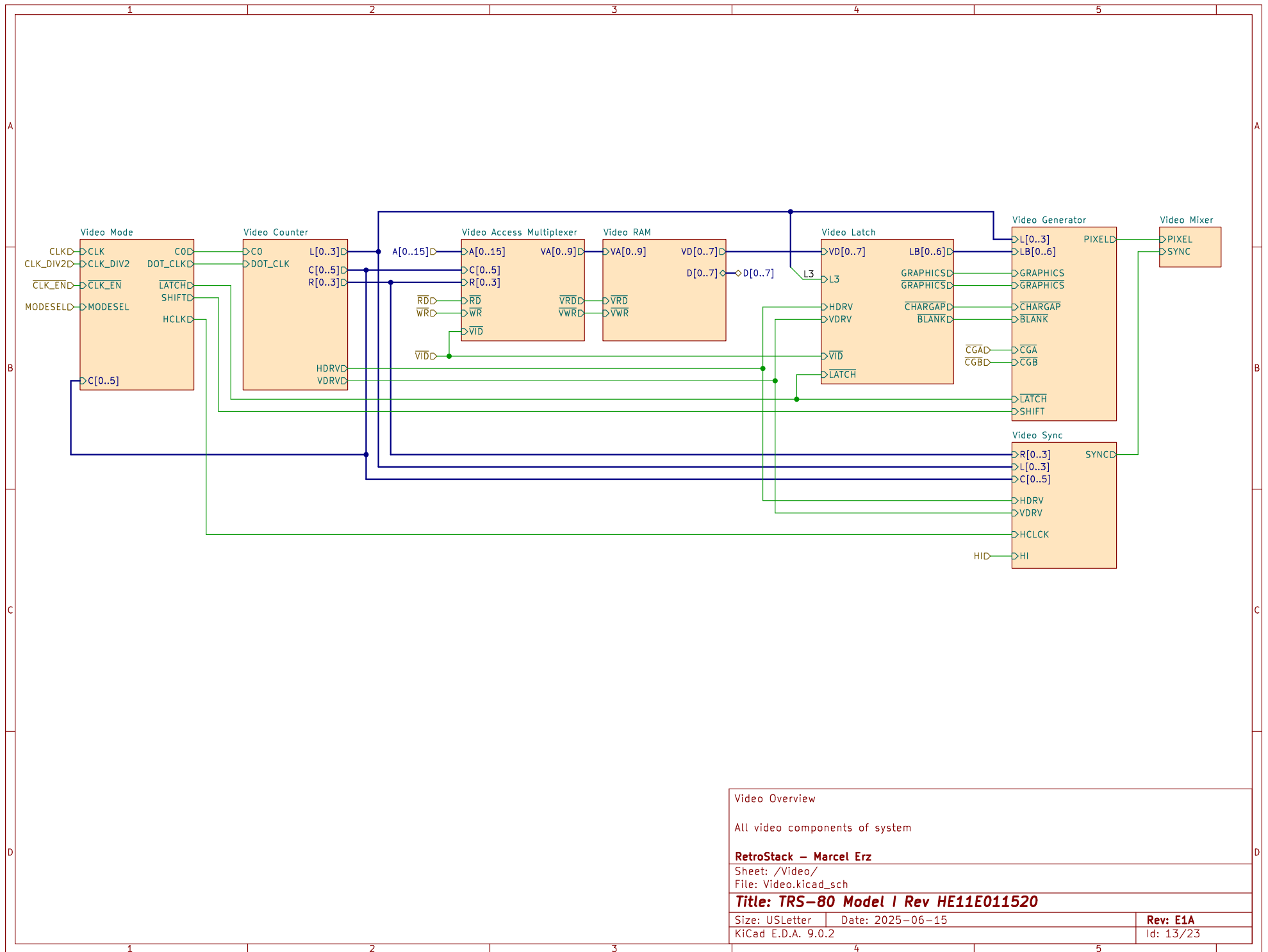
Title: TRS-80 Model I Rev HE11E011520

Size: USLetter Date: 2025-06-15

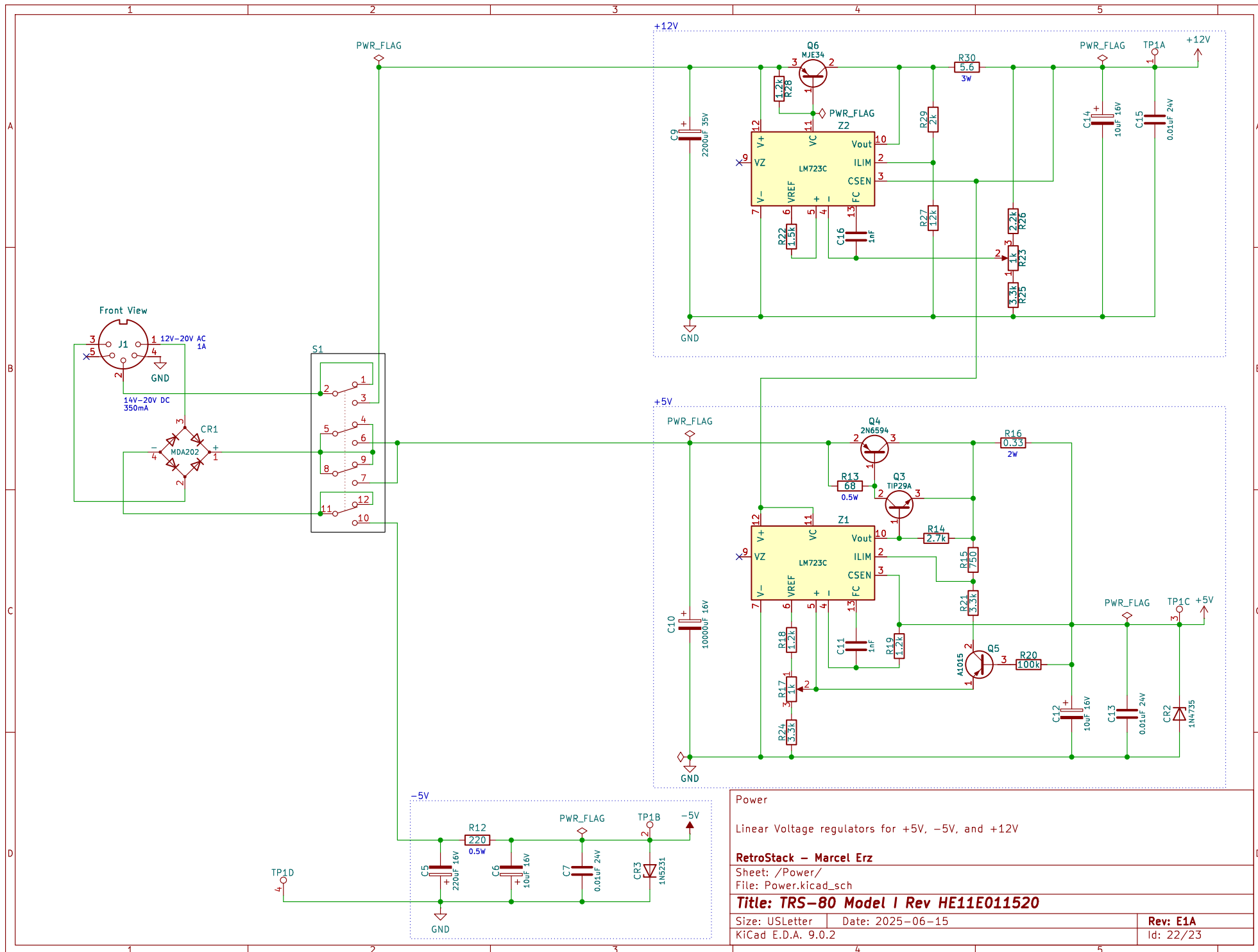
KiCad E.D.A. 9.0.2

Rev: E1A

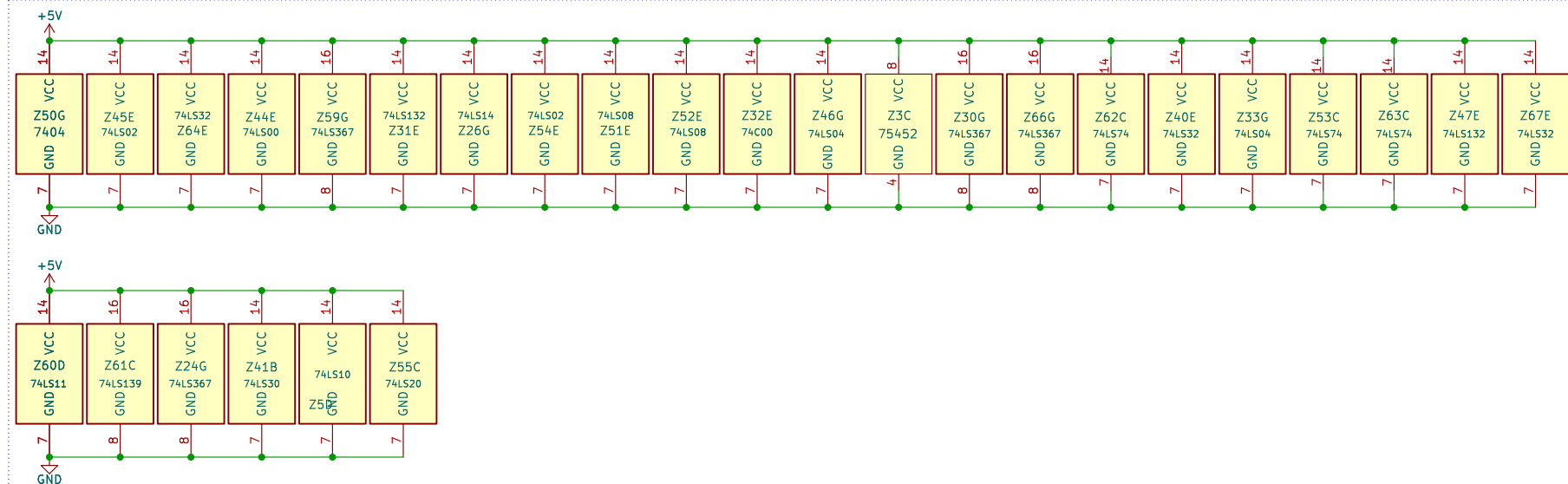
Id: 12/23



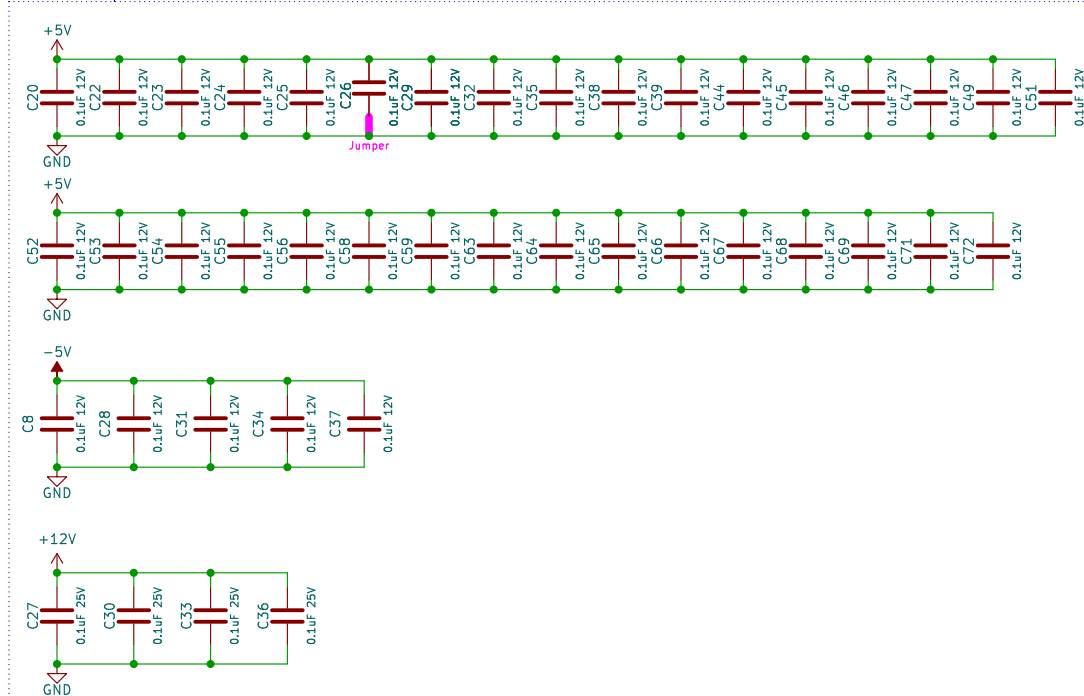
Video Overview		
All video components of system		
RetroStack - Marcel Erz		
Sheet: /Video/		
File: Video.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 13/23



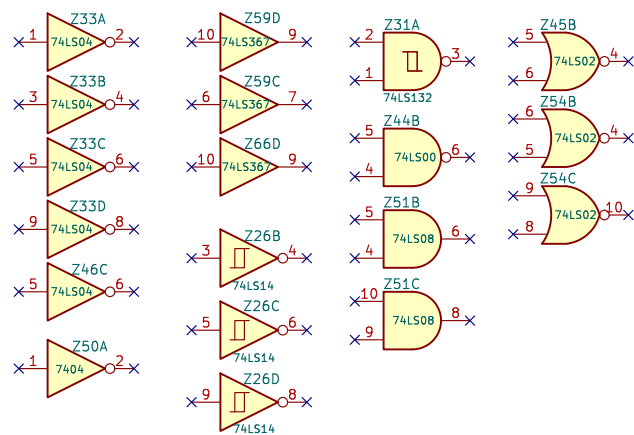
Power Units



Power Rail Capacitors



Unused Units



Capacitors & Others

Power Units, Capacitors, and unused units

RetroStack – Marcel Erz

Sheet: /Capacitors/

File: Capacitors.kicad_sch

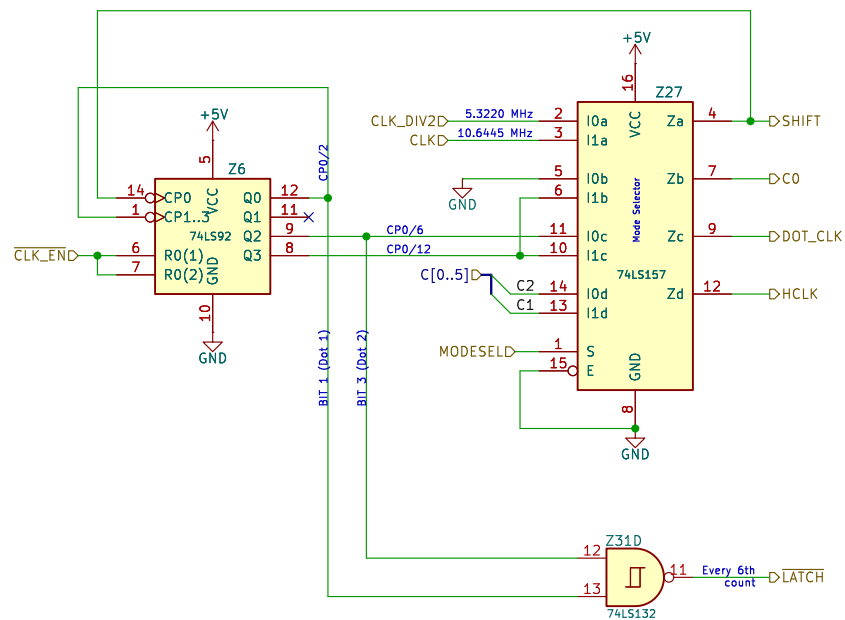
Title: TRS-80 Model I Rev HE11E011520

Size: USLetter Date: 2025-06-15

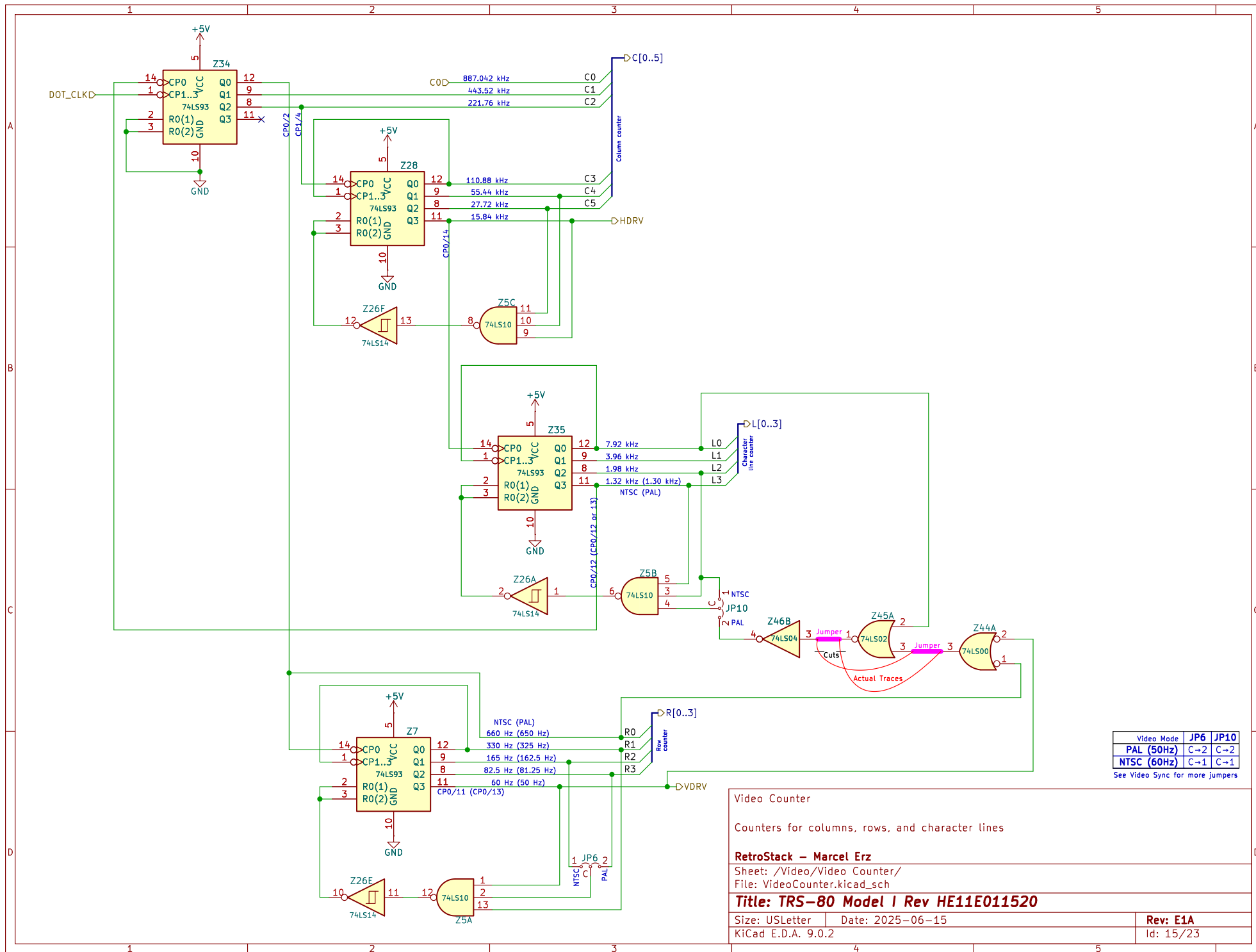
KiCad E.D.A. 9.0.2

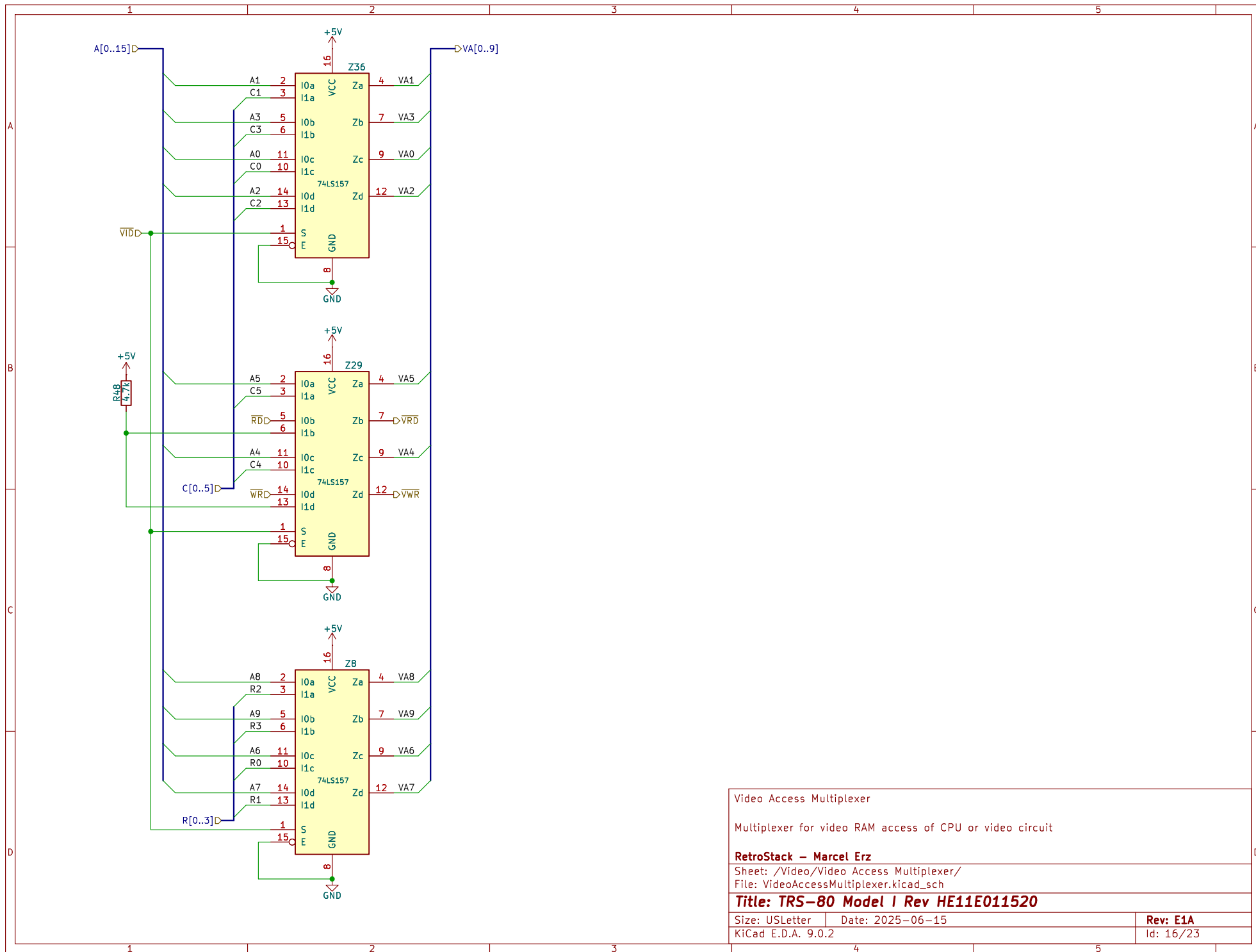
Rev: E1A

Id: 23/23

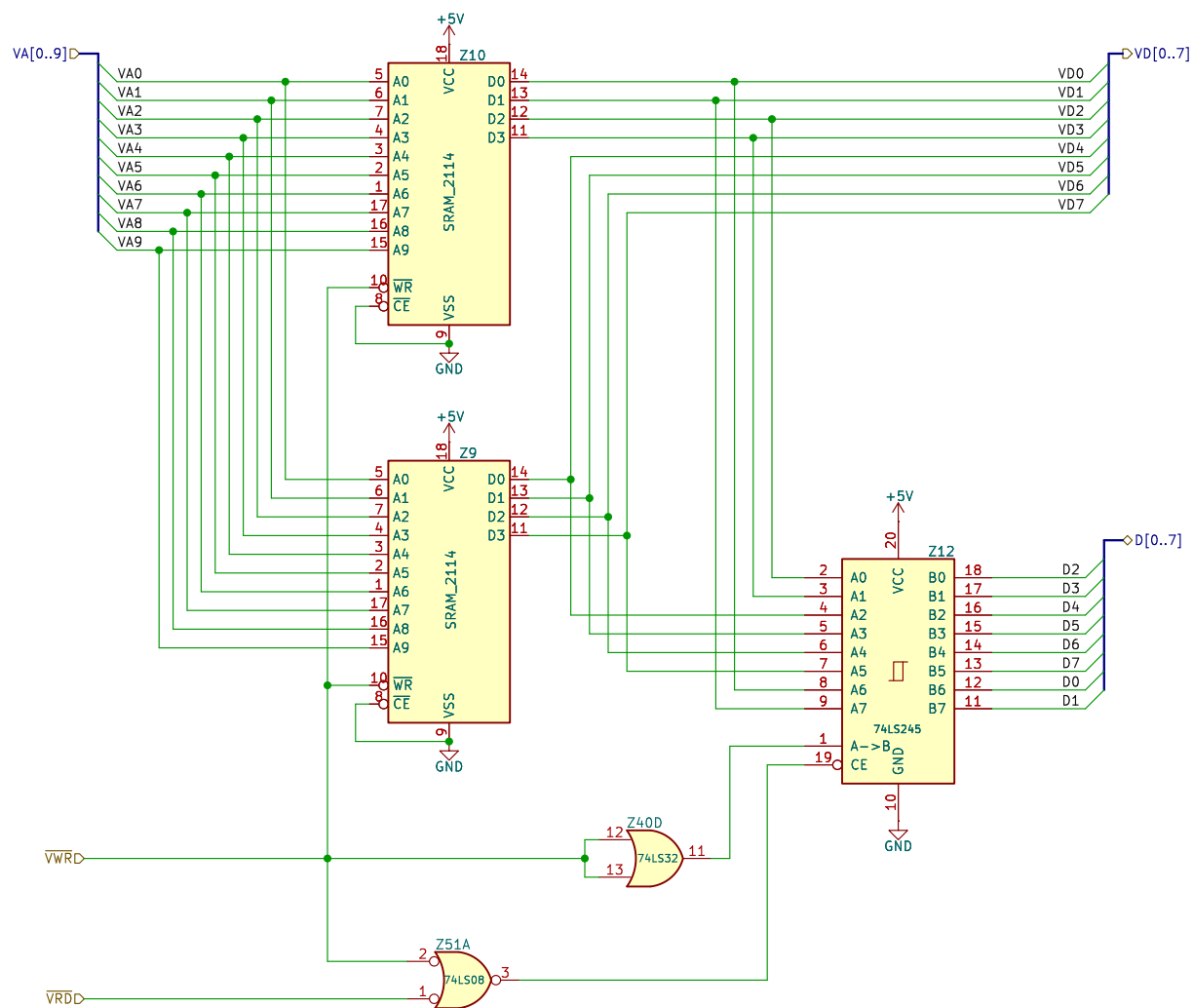


Video Mode		
Defines dot-rate per video mode		
RetroStack – Marcel Erz		
Sheet: /Video/Video Mode/ File: VideoMode.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: A4	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2	Id: 14/23	





Video Access Multiplexer		
Multiplexer for video RAM access of CPU or video circuit		
RetroStack – Marcel Erz		
Sheet: /Video/Video Access Multiplexer/ File: VideoAccessMultiplexer.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 16/23



Video RAM & Gating

Video RAM circuit with data-bus gating

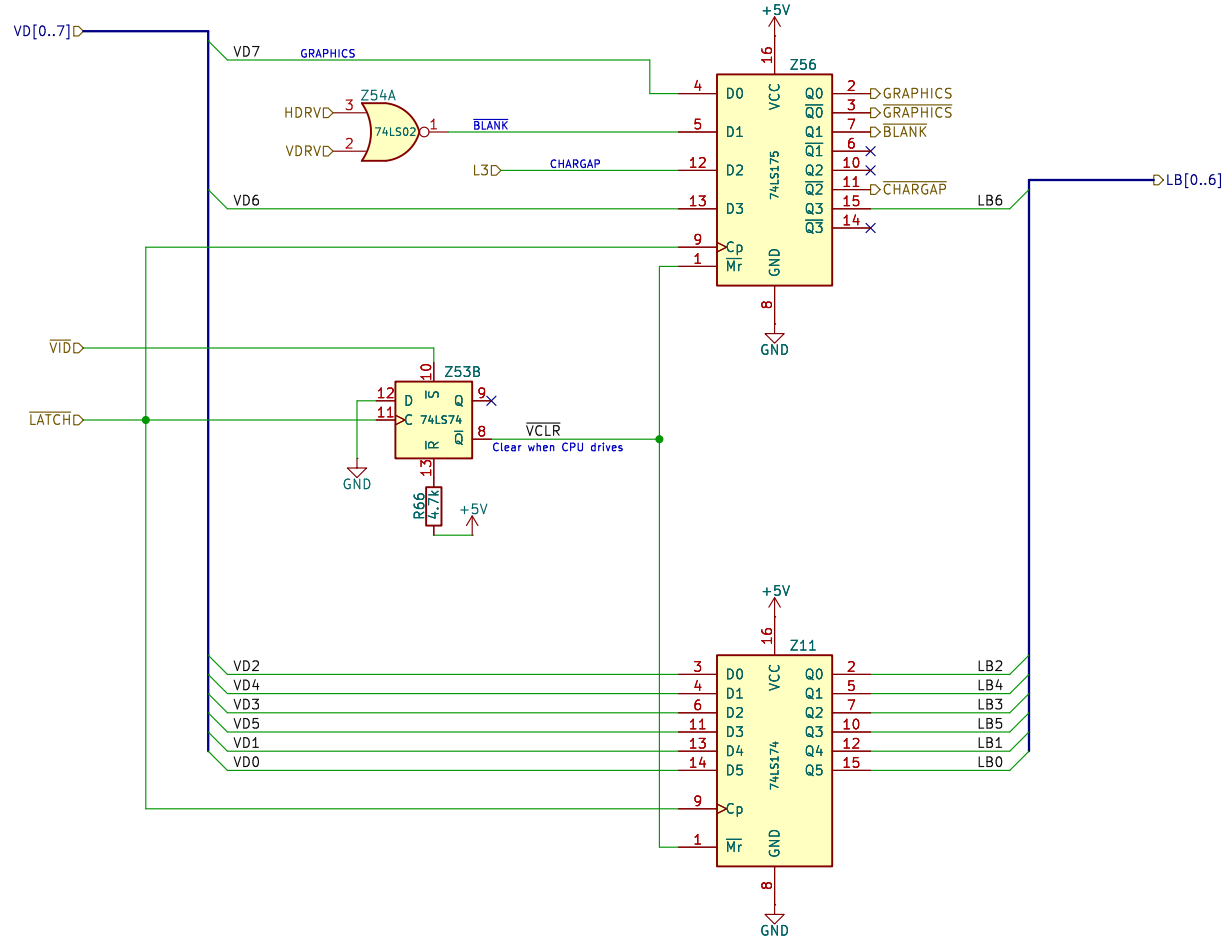
RetroStack – Marcel Erz

Sheet: /Video/Video RAM/
File: VideoRAM.kicad_sch

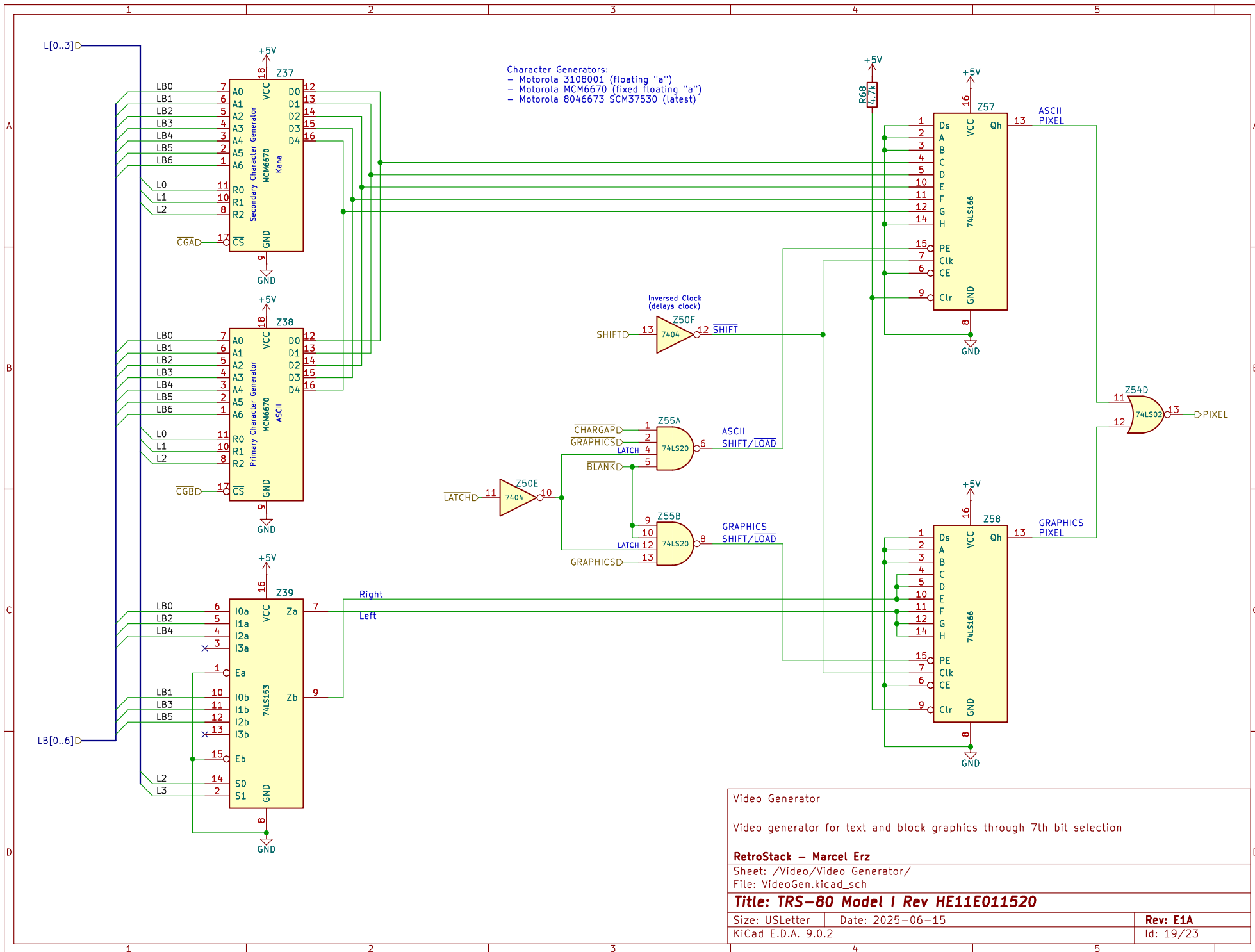
Title: TRS-80 Model I Rev HE11E011520

Size: USLetter Date: 2025-06-15
KiCad E.D.A. 9.0.2

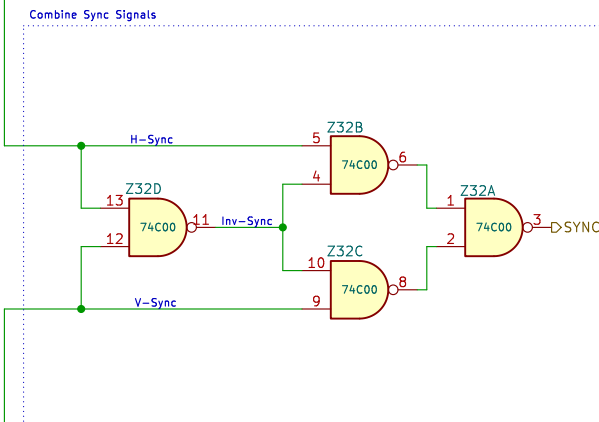
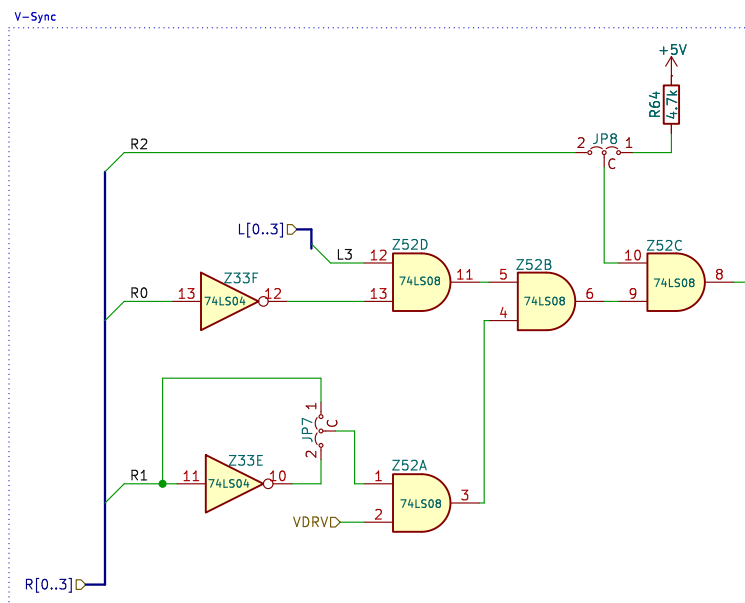
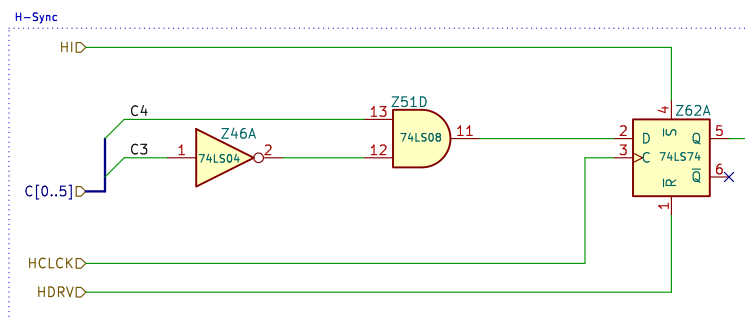
Rev: E1A
Id: 17/23



Video Latch		
Circuit to latch video content addressed in video RAM		
RetroStack – Marcel Erz		
Sheet: /Video/Video Latch/		
File: Video Latch.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 18/23



Video Generator		
Video generator for text and block graphics through 7th bit selection		
RetroStack – Marcel Erz		
Sheet: /Video/Video Generator/		
File: VideoGen.kicad_sch		
Title: TRS-80 Model I Rev HE11E011520		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 19/23



Video Mode	JP7	JP8
PAL	C→2	C→2
NTSC	C→1	C→1

See Video Counter for more jumpers

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

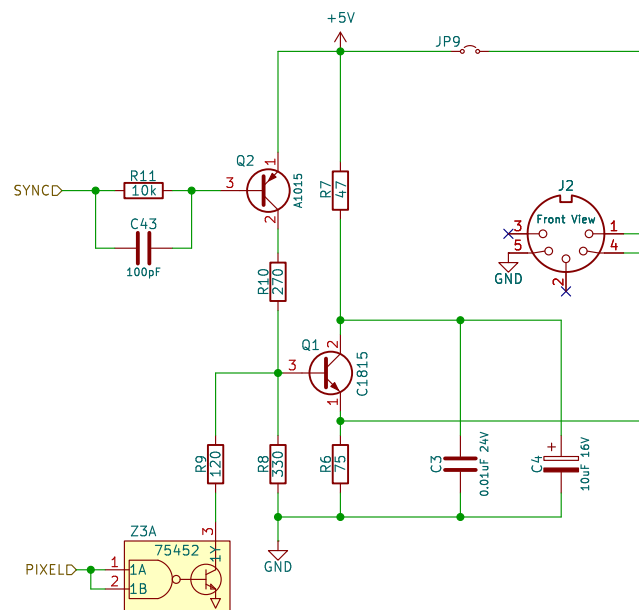
Title: TRS-80 Model I Rev HE11E011520

Size: USLetter Date: 2025-06-15

KiCad E.D.A. 9.0.2

Rev: E1A

Id: 20/23



Q2 open, Z3 any => 0V (sync level)
 Q2 closed, Z3 closed => 1.23V (black level) – R10 with series resistors R8 & R9
 Q2 closed, Z3 open => 2.75V (white level) – Only R8 & R10

Video Mixer	
Mixing circuit for sync and pixel data	
RetroStack – Marcel Erz	
Sheet: /Video/Video Mixer/ File: VideoMixer.kicad_sch	
Title: TRS-80 Model I Rev HE11E011520	
Size: USLetter	Date: 2025-06-15
KiCad E.D.A. 9.0.2	Rev: E1A Id: 21/23