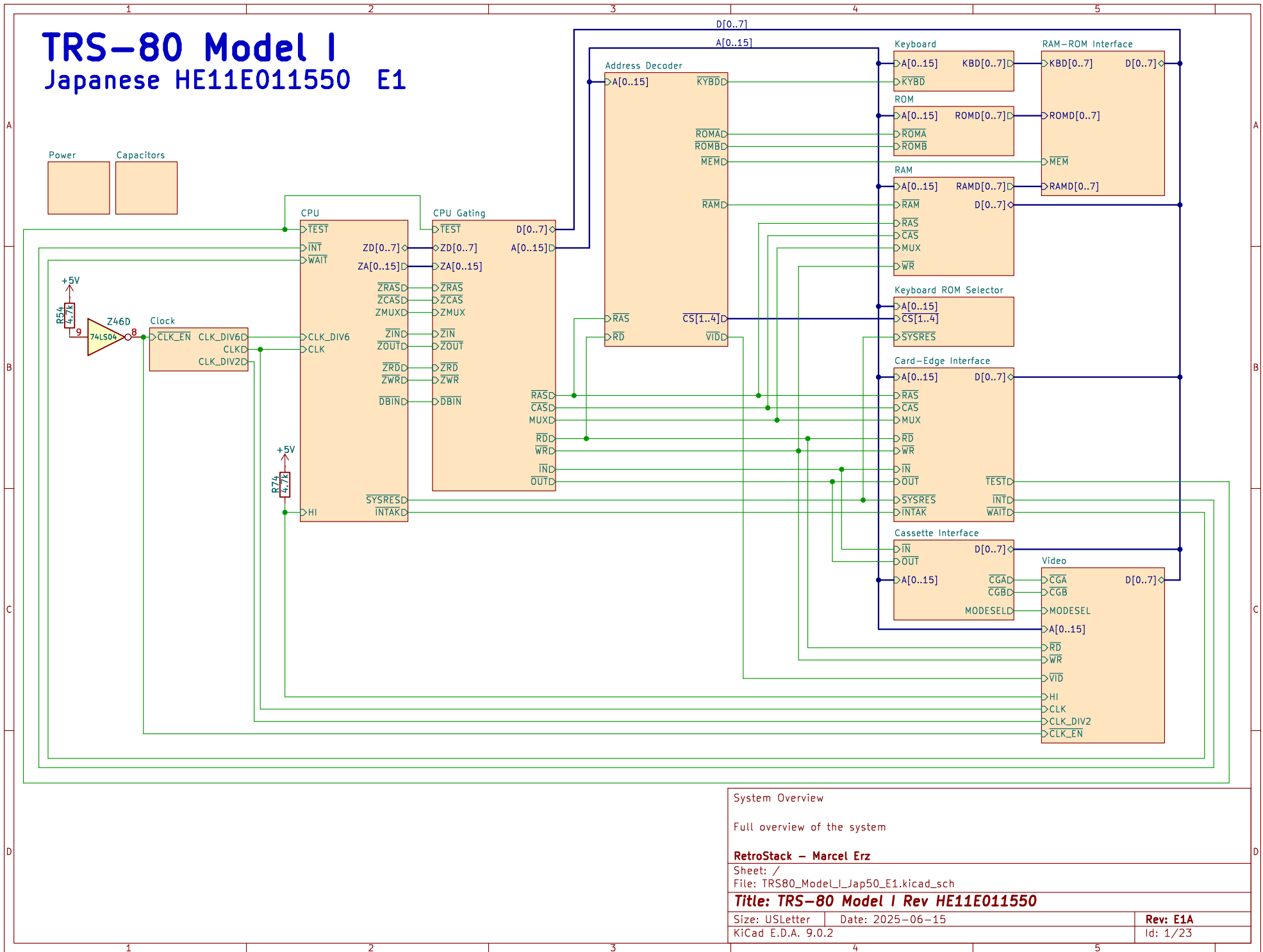
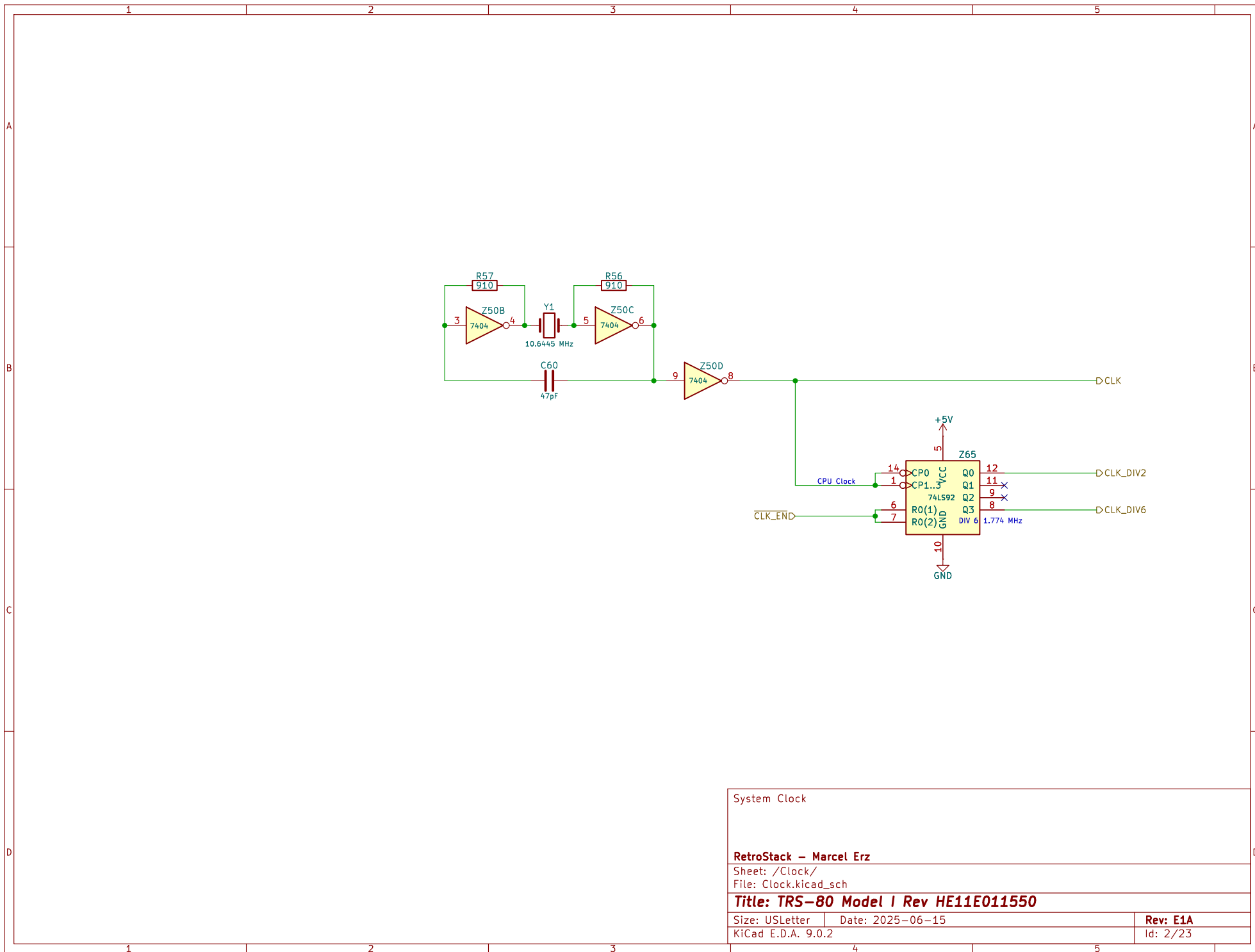


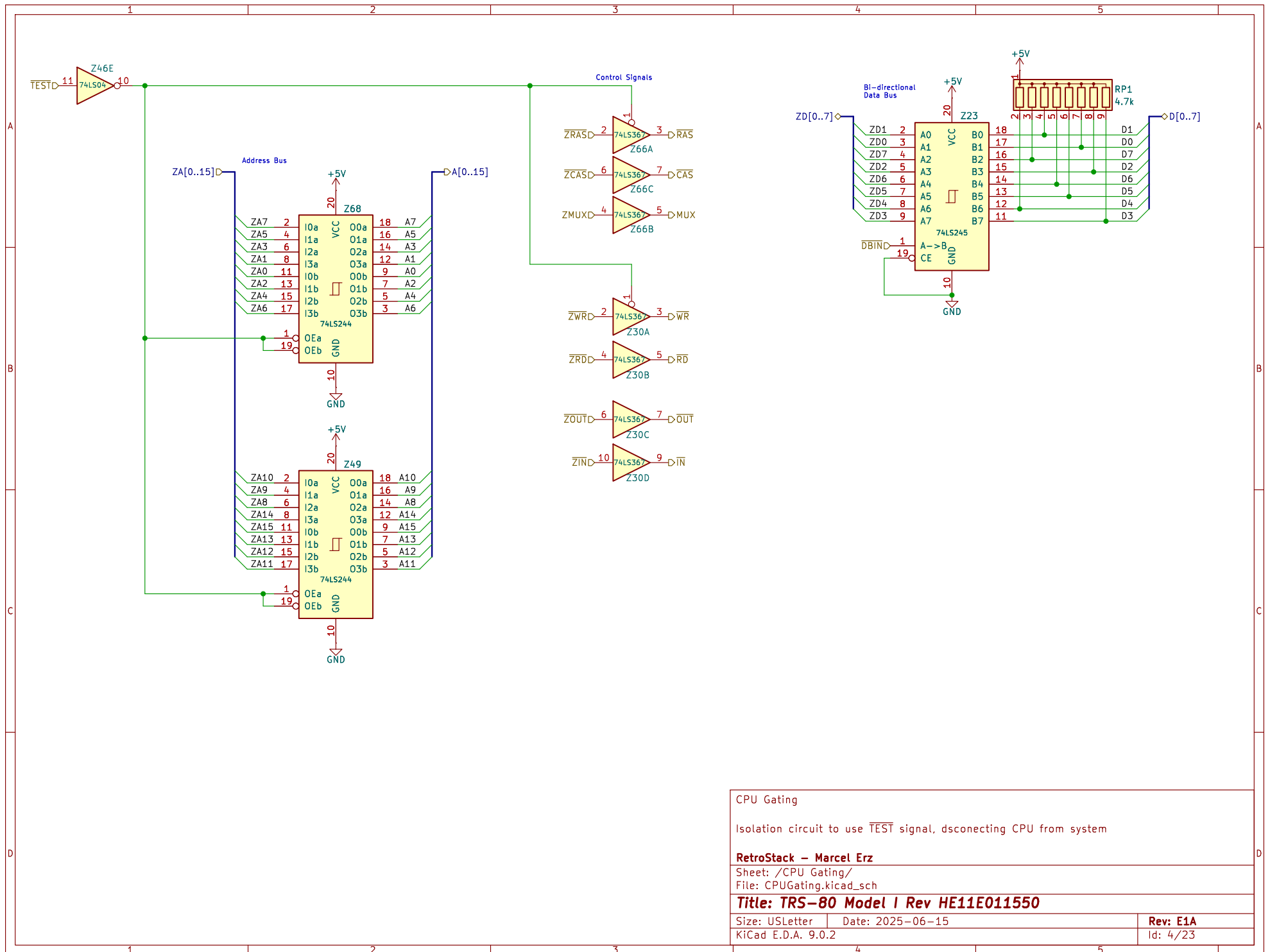
TRS-80 Model I

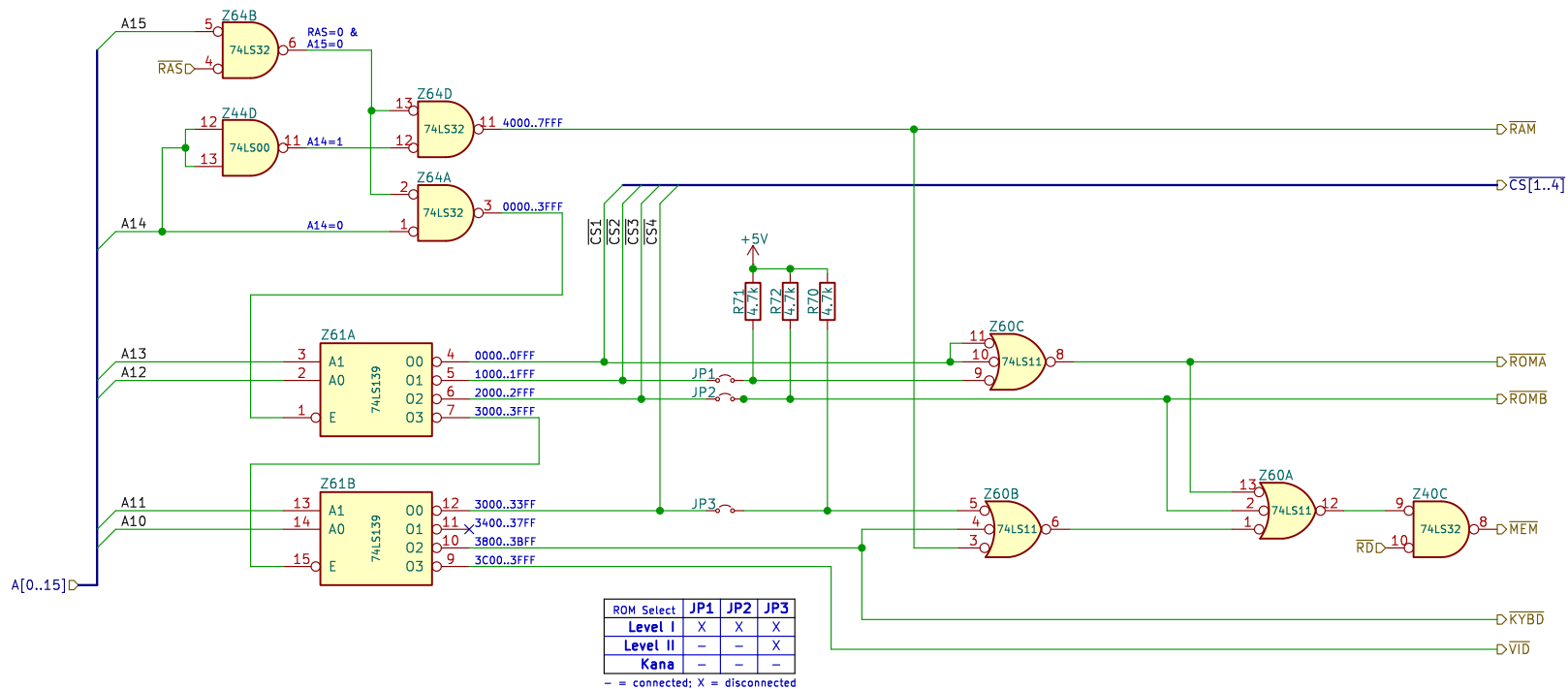
Japanese HE11E011550 E1





System Clock		
RetroStack – Marcel Erz		
Sheet: /Clock/ File: Clock.kicad_sch		
Title: TRS-80 Model I Rev HE11E011550		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 2/23





Address Decoder

Address decoder circuit for main board components (except IO)

RetroStack – Marcel Erz

Sheet: /Address Decoder/

File: AddressDecoder.kicad_sch

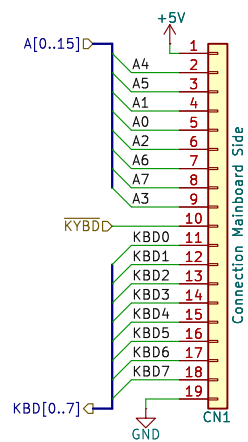
Title: TRS-80 Model I Rev HE11E011550

Size: USLetter Date: 2025-06-15

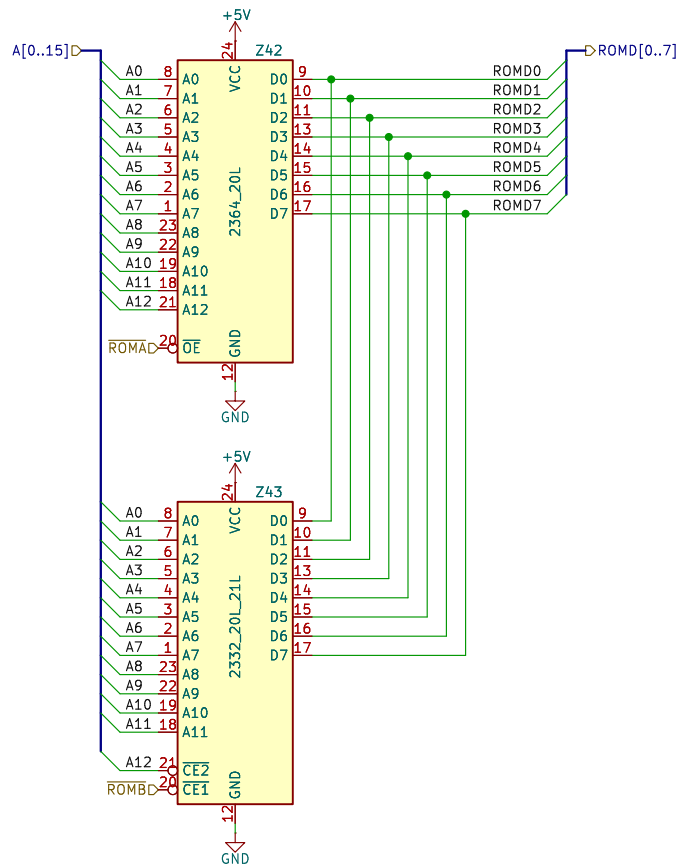
KiCad E.D.A. 9.0.2

Rev: E1A

Id: 5/23

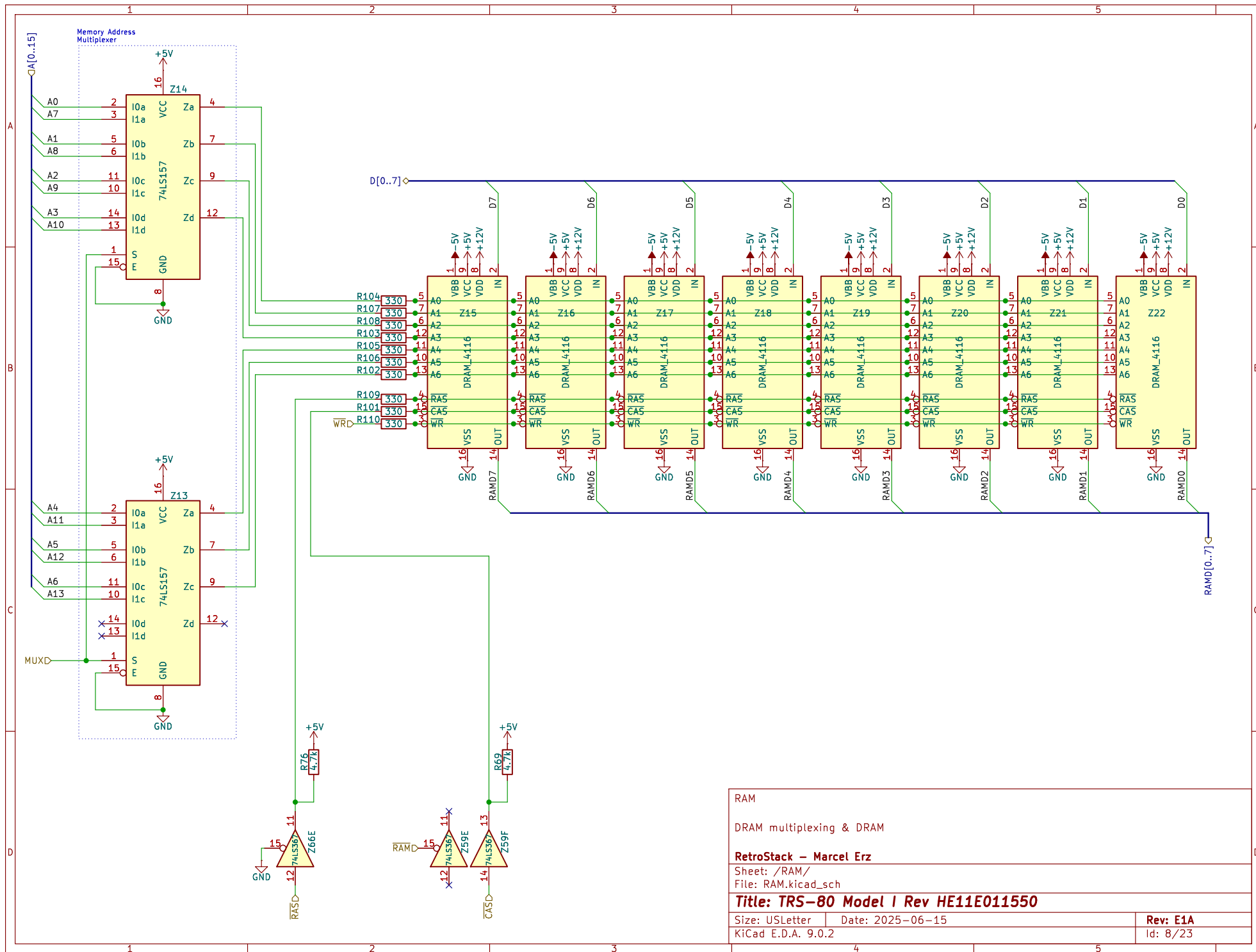


Keyboard & Interface		
Keyboard interface		
RetroStack – Marcel Erz		
Sheet: /Keyboard/ File: Keyboard.kicad_sch		
Title: TRS-80 Model I Rev HE11E011550		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 6/23

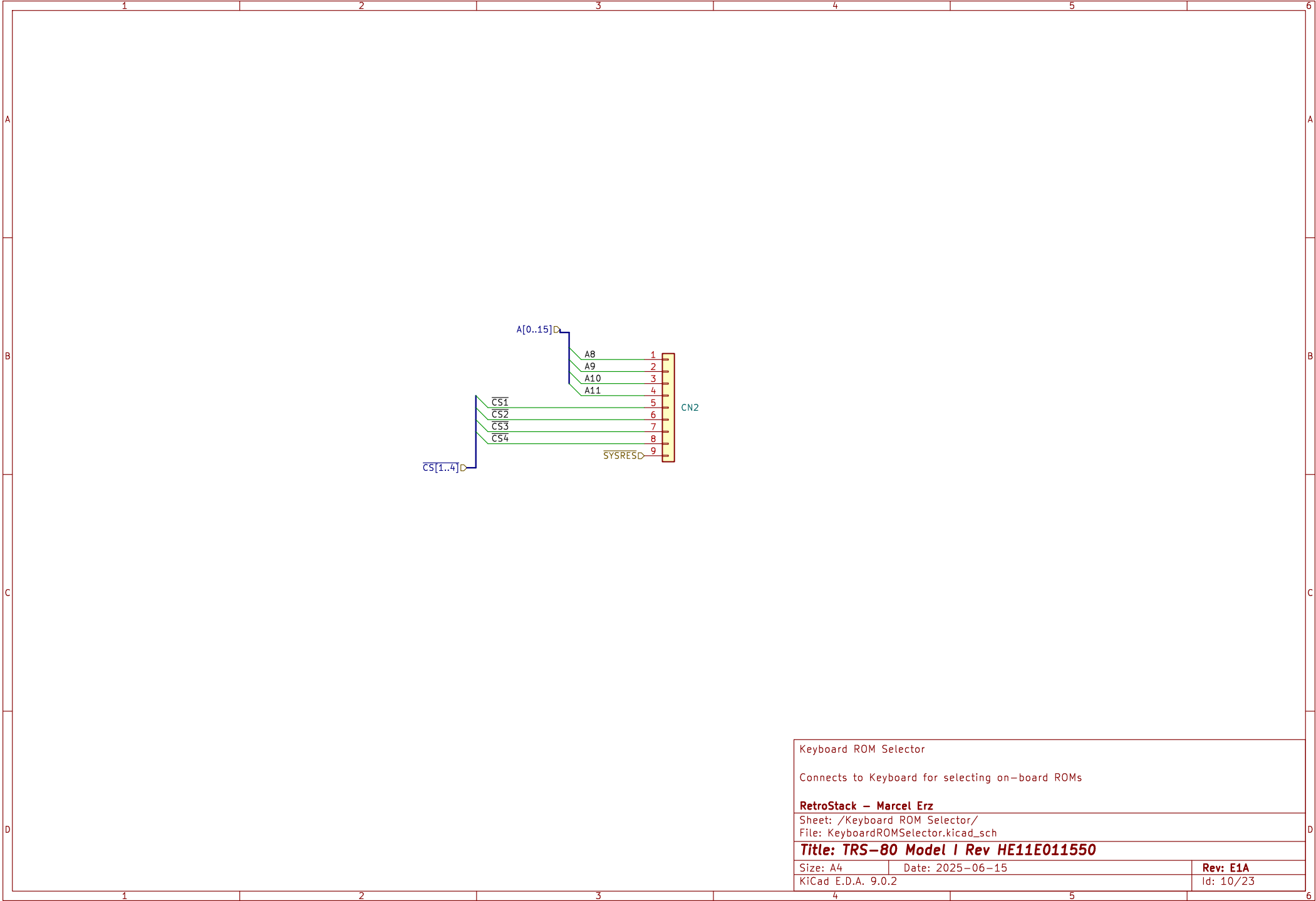


- Level I ROMs:
- Intel 2616 EPROM (White Crystal Window)
 - National MM2316 ROM (Colored Ceramic) (R/D=ROM A, S/D=ROM B)
 - Motorola 7800 Series ROMs (7807=ROM A, 7804=ROM B)
 - Motorola 7800 Series ROMs (7809=ROM A & B)
- Level II ROMs:
- Generic 3 ROMs on separate board with logic chip (each 32kbit/4kb)
 - NEC 8043364 & 8043732 (64kbit/8kb & 32kbit/4kb) (early 1979)
 - NEC 8044364 & 8044732 (64kbit/8kb & 32kbit/4kb) (early 1980)

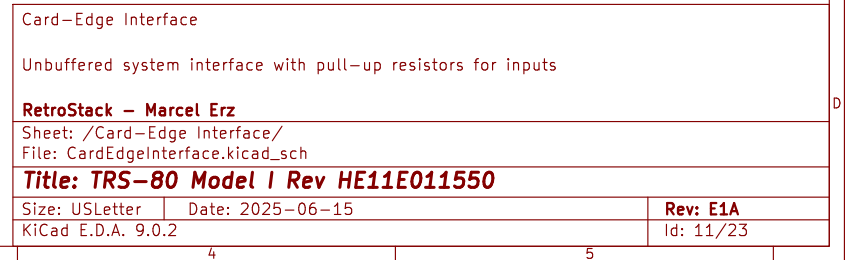
ROM		
ROM circuit		
RetroStack – Marcel Erz		
Sheet: /ROM/		
File: ROM.kicad_sch		
Title: TRS-80 Model I Rev HE11E011550		
Size: USLetter	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2		Id: 7/23

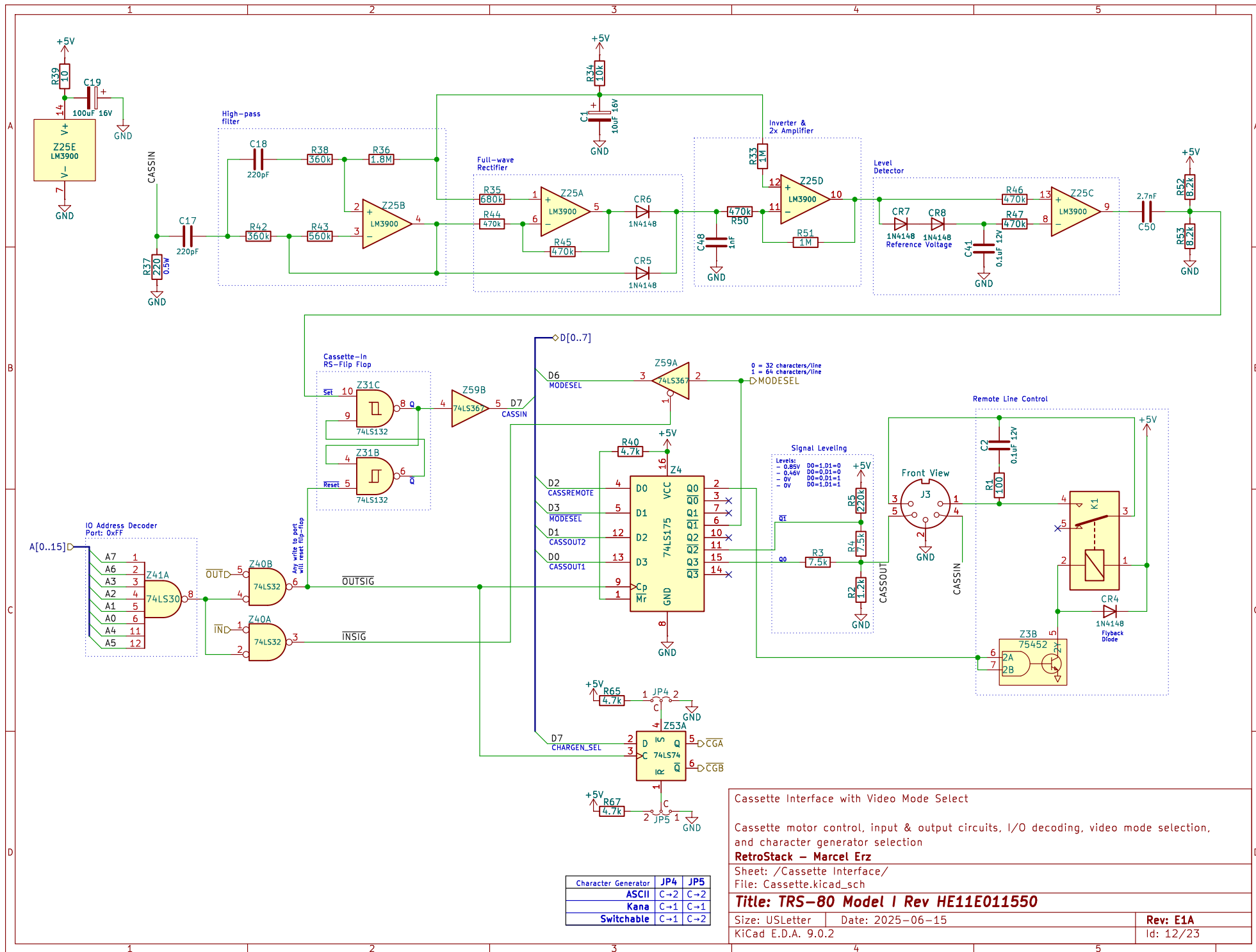


RAM	
DRAM multiplexing & DRAM	
RetroStack – Marcel Erz	
Sheet: /RAM/	
File: RAM.kicad_sch	
Title: TRS-80 Model I Rev HE11E011550	
Size: USLetter	Date: 2025-06-15
KiCad E.D.A. 9.0.2	Rev: E1A
	Id: 8/23



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 HE11E011550		
Size: A4	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2	Id: 10/23	





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

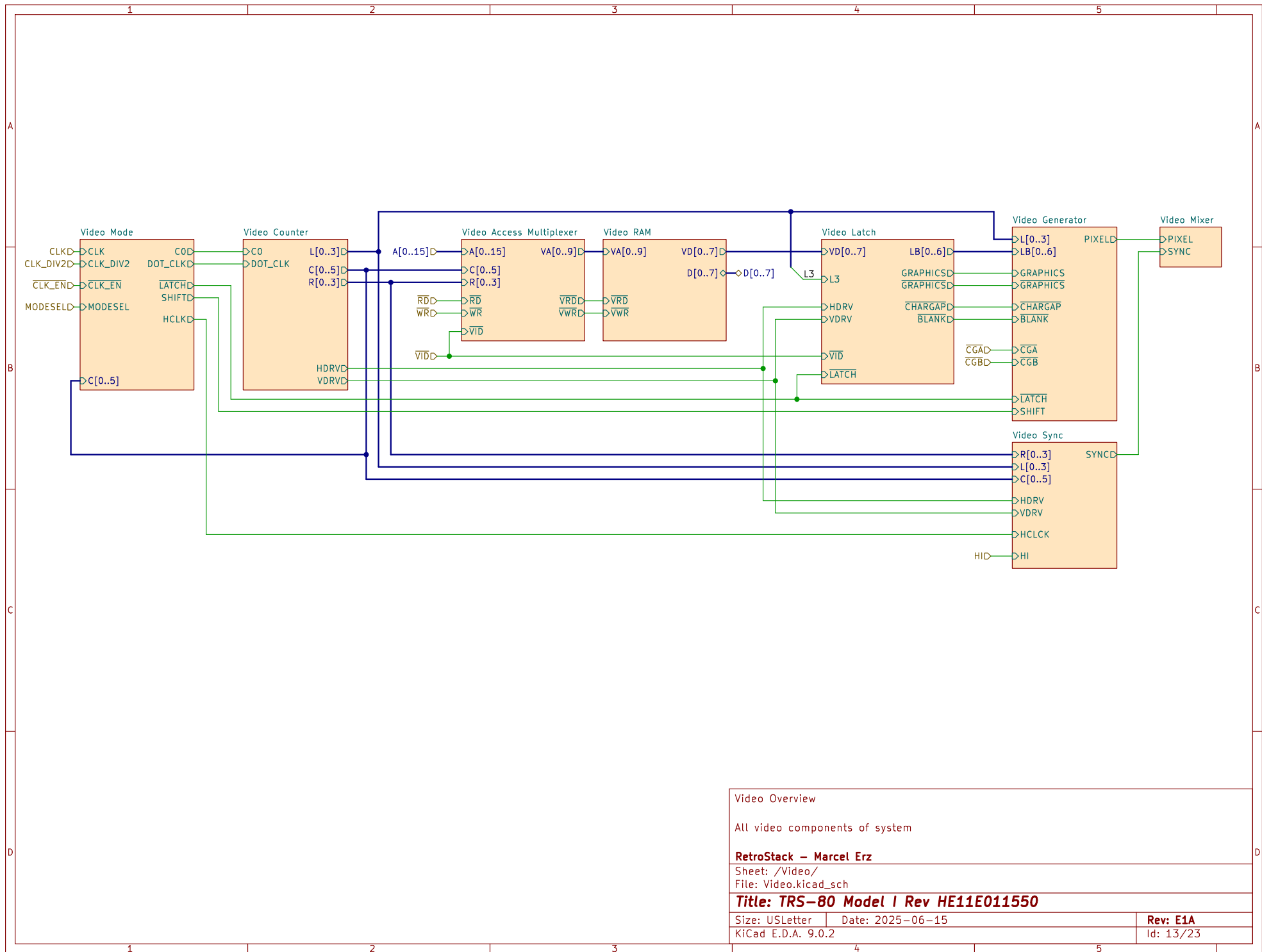
Title: TRS-80 Model I Rev HE11E011550

Size: USLetter Date: 2025-06-15

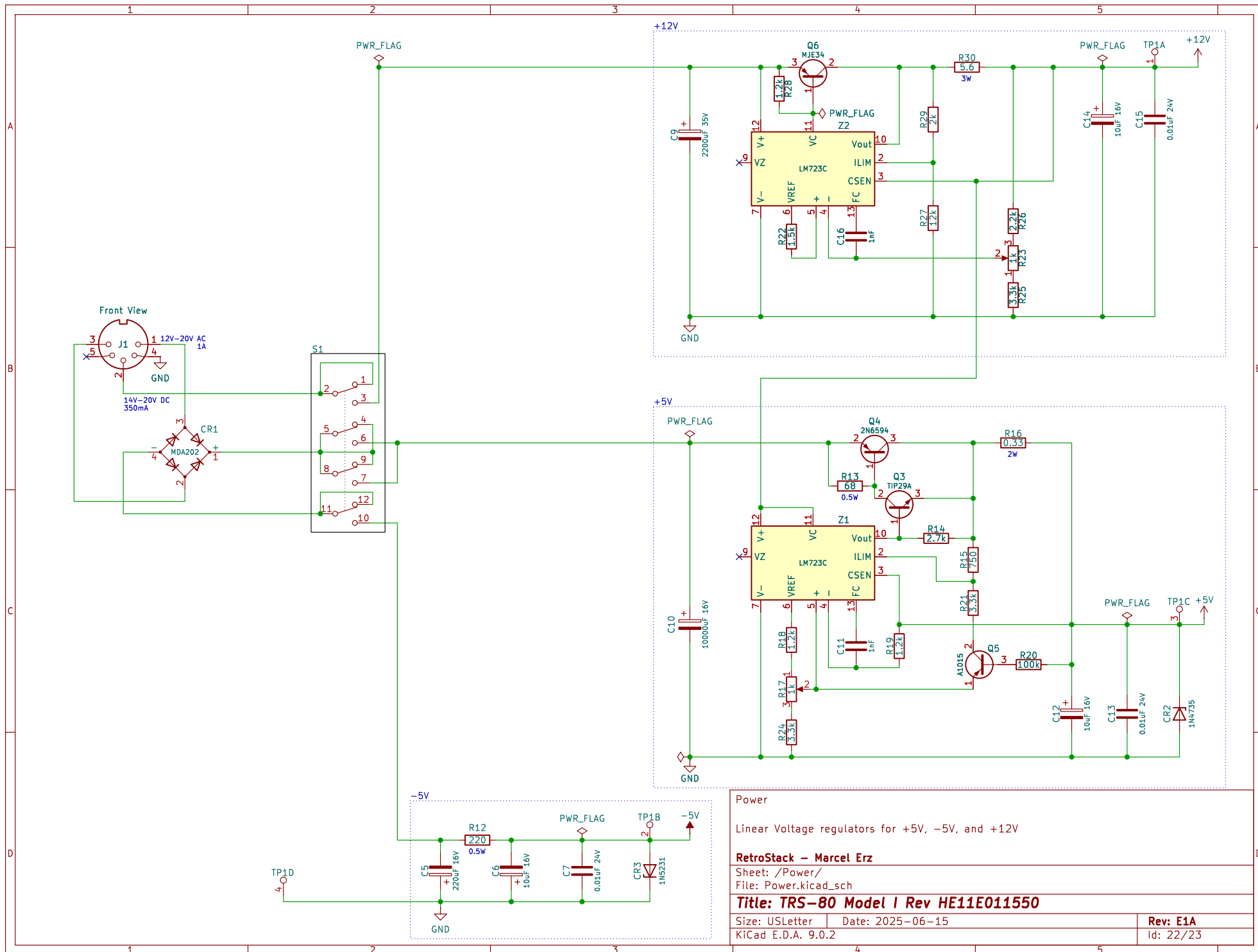
KiCad E.D.A. 9.0.2

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 HE11E011550			
Size: USLetter	Date: 2025-06-15		Rev: E1A
KiCad E.D.A. 9.0.2			Id: 13/23



Power

Linear Voltage regulators for +5V, -5V, and +12V

RetroStack – Marcel Erz

Sheet: /Power/

File: Power.kicad_sch

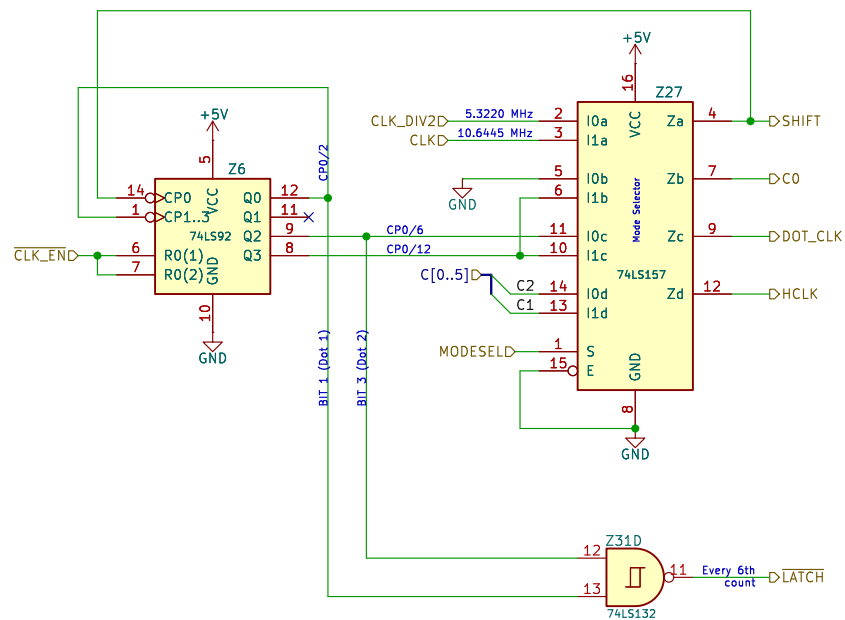
Title: TRS-80 Model I Rev HE11E011550

Size: USLetter Date: 2025-06-15

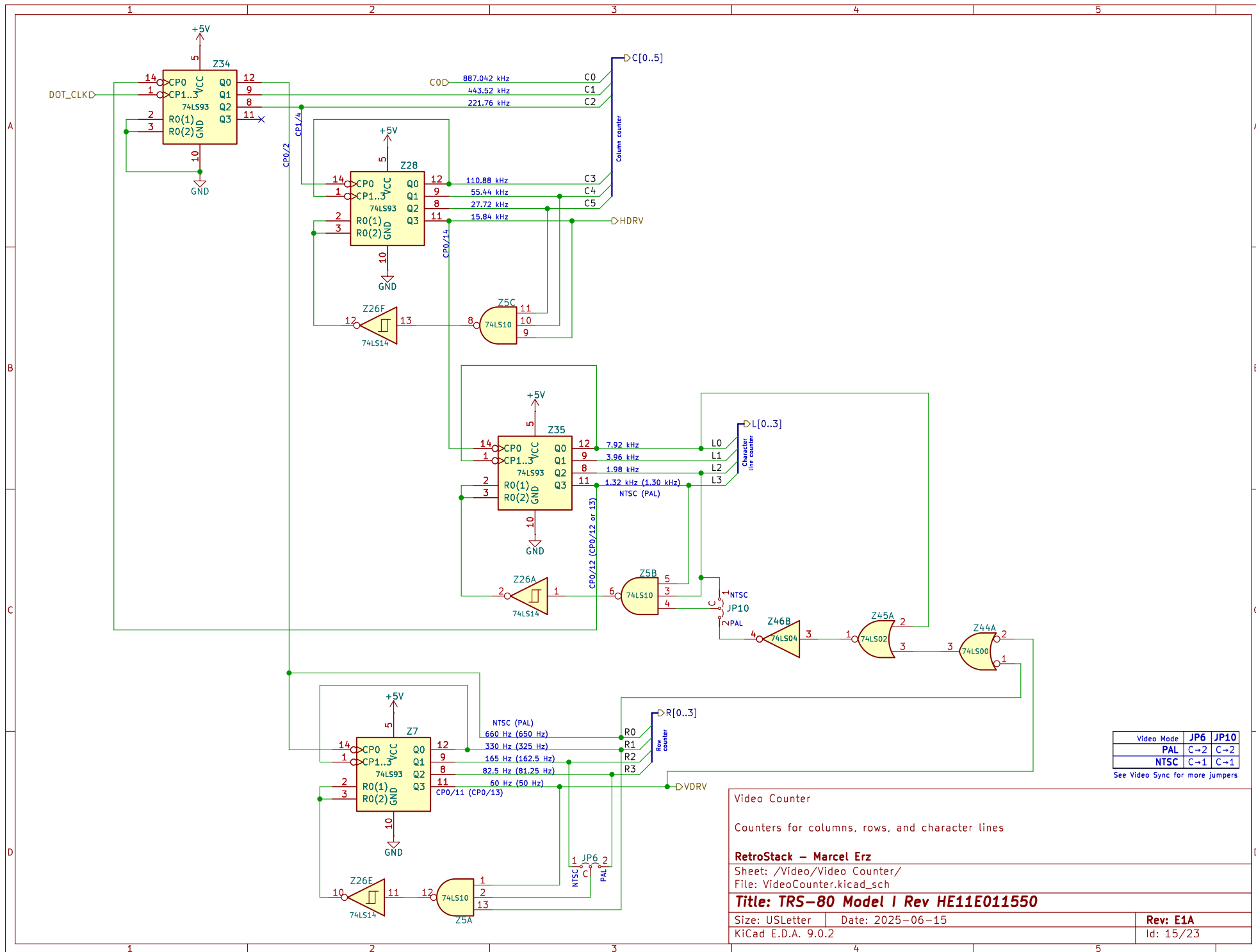
KiCad E.D.A. 9.0.2

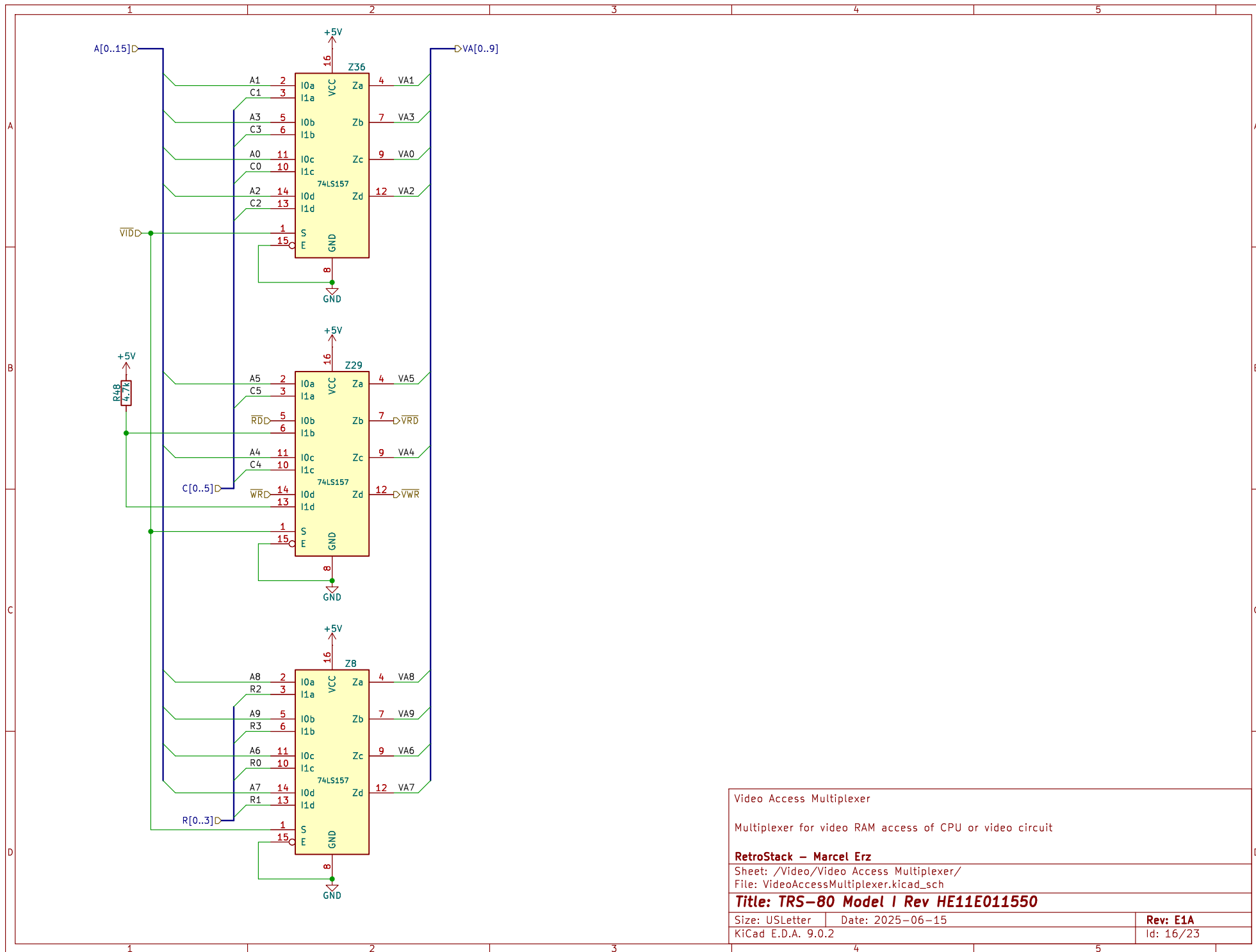
Rev: E1A

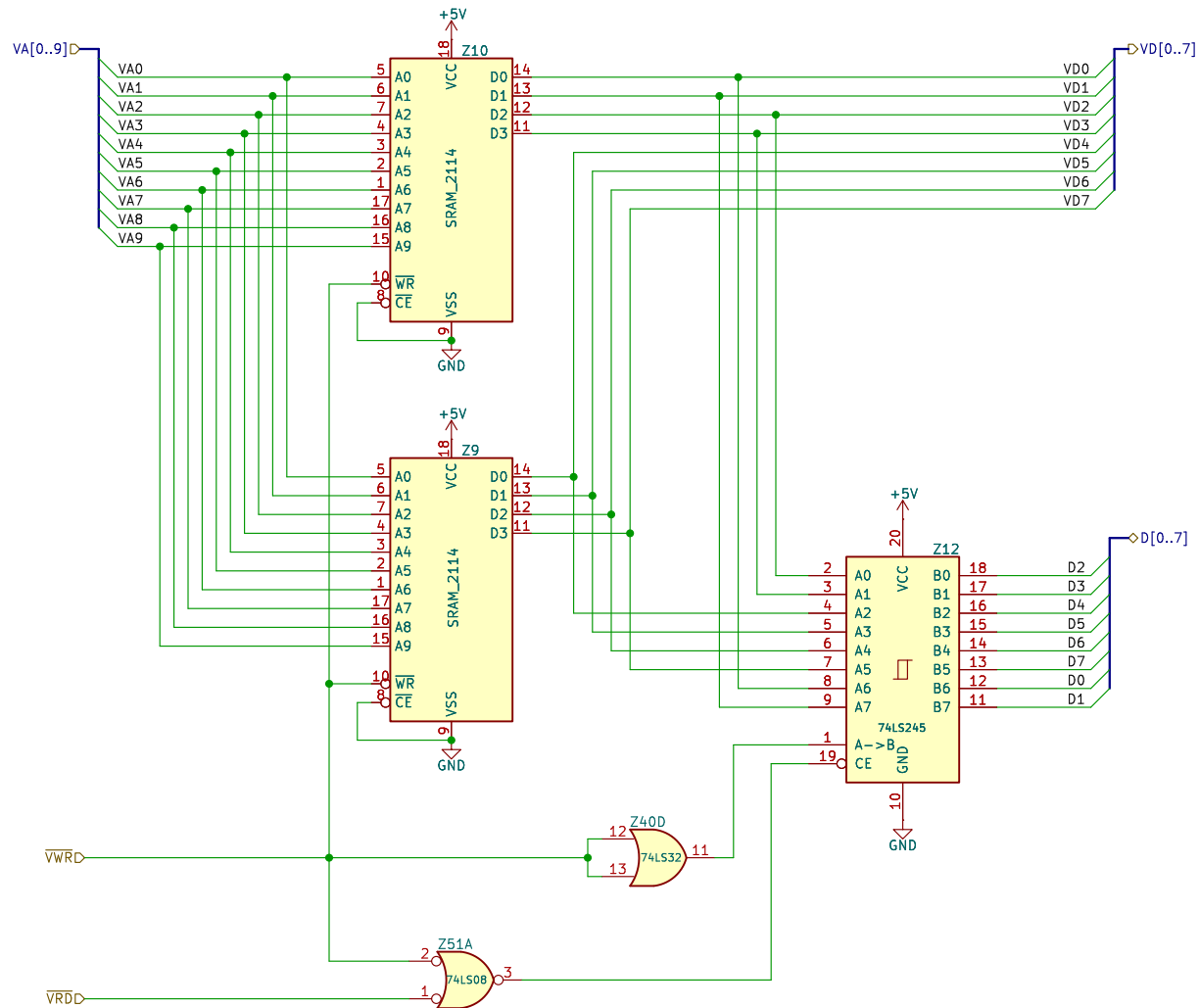
Id: 22/23



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 HE11E011550		
Size: A4	Date: 2025-06-15	Rev: E1A
KiCad E.D.A. 9.0.2	Id: 14/23	







Video RAM & Gating

Video RAM circuit with data-bus gating

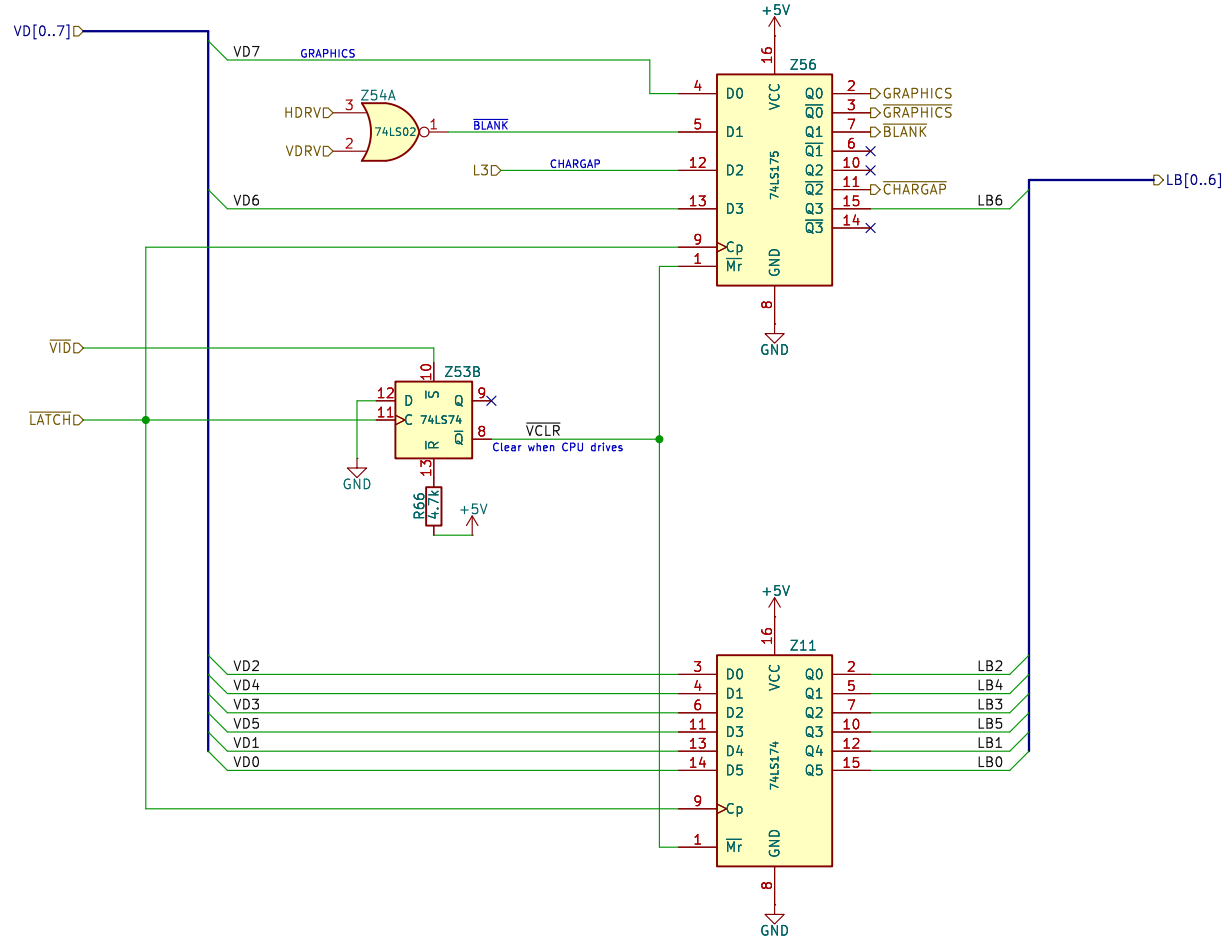
RetroStack – Marcel Erz

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

Title: TRS-80 Model I Rev HE11E011550

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

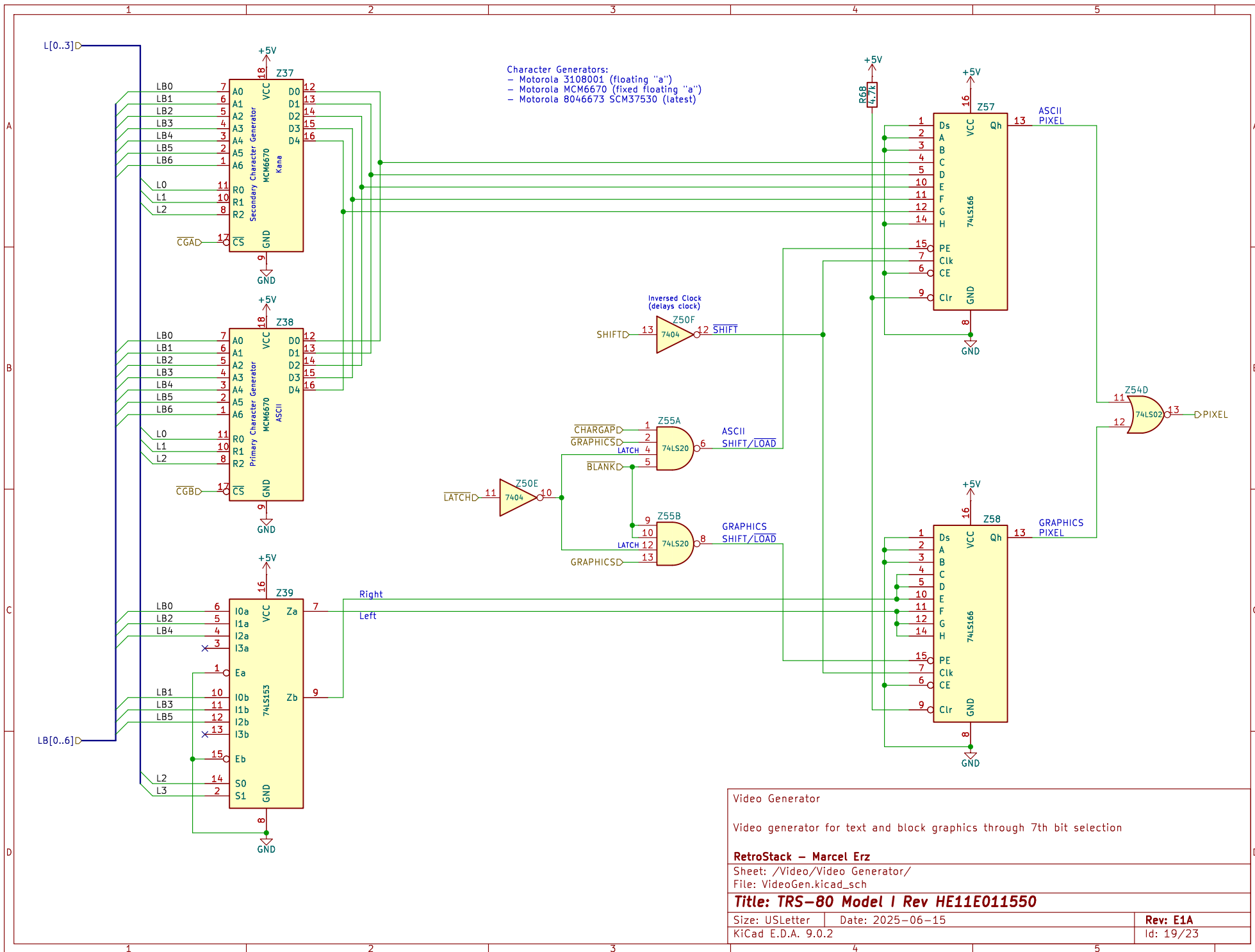
Title: TRS-80 Model I Rev HE11E011550

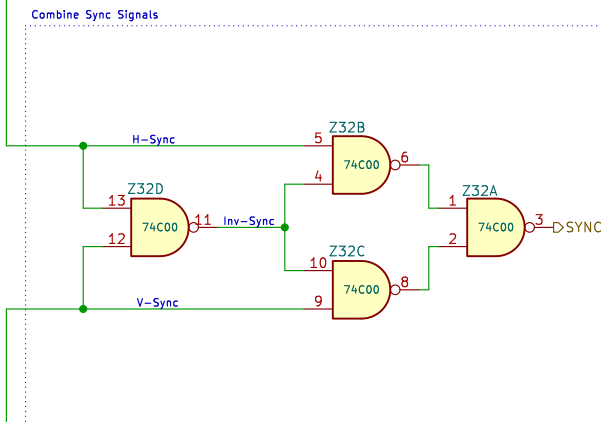
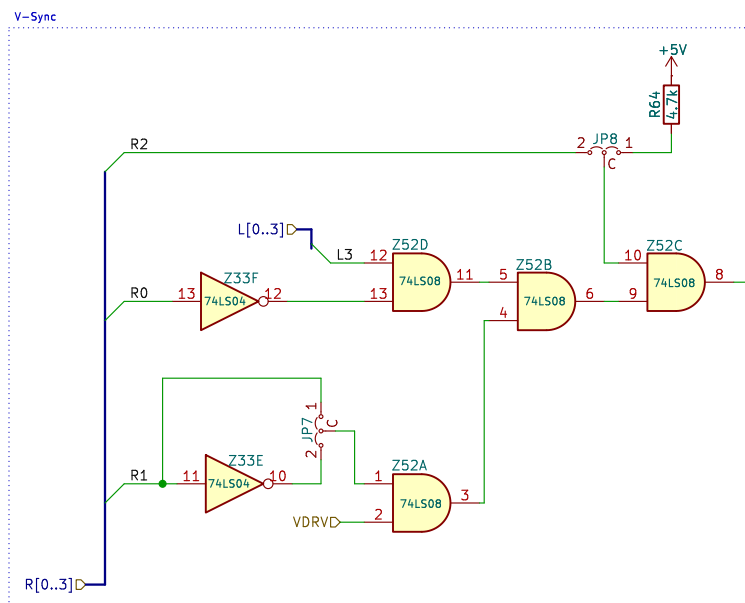
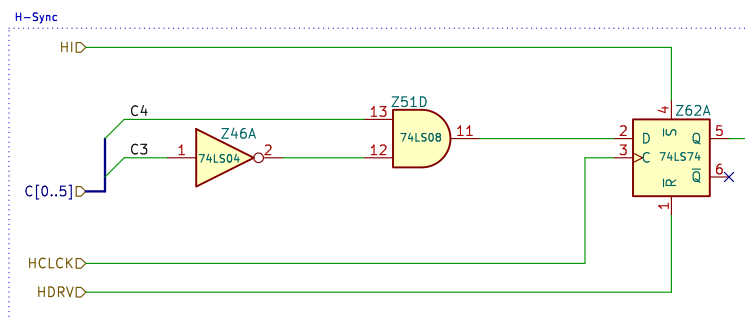
Size: USLetter Date: 2025-06-15

KiCad E.D.A. 9.0.2

Rev: E1A

Id: 18/23





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

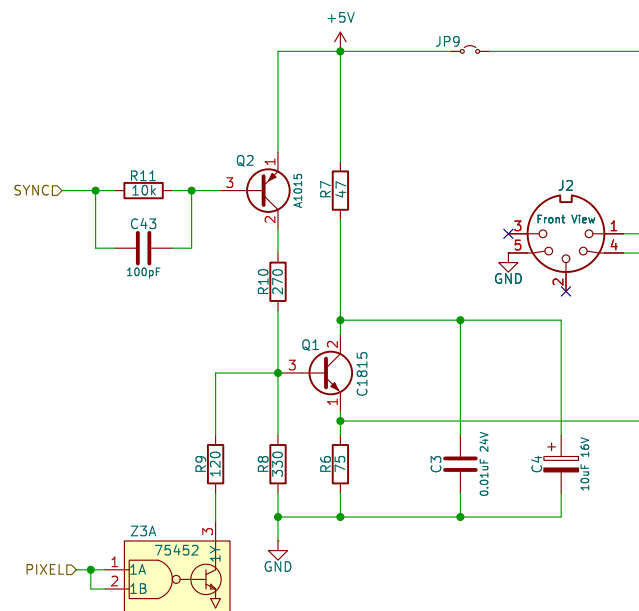
Title: TRS-80 Model I Rev HE11E011550

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 HE11E011550	
Size: USLetter	Date: 2025-06-15
KiCad E.D.A. 9.0.2	Rev: E1A Id: 21/23