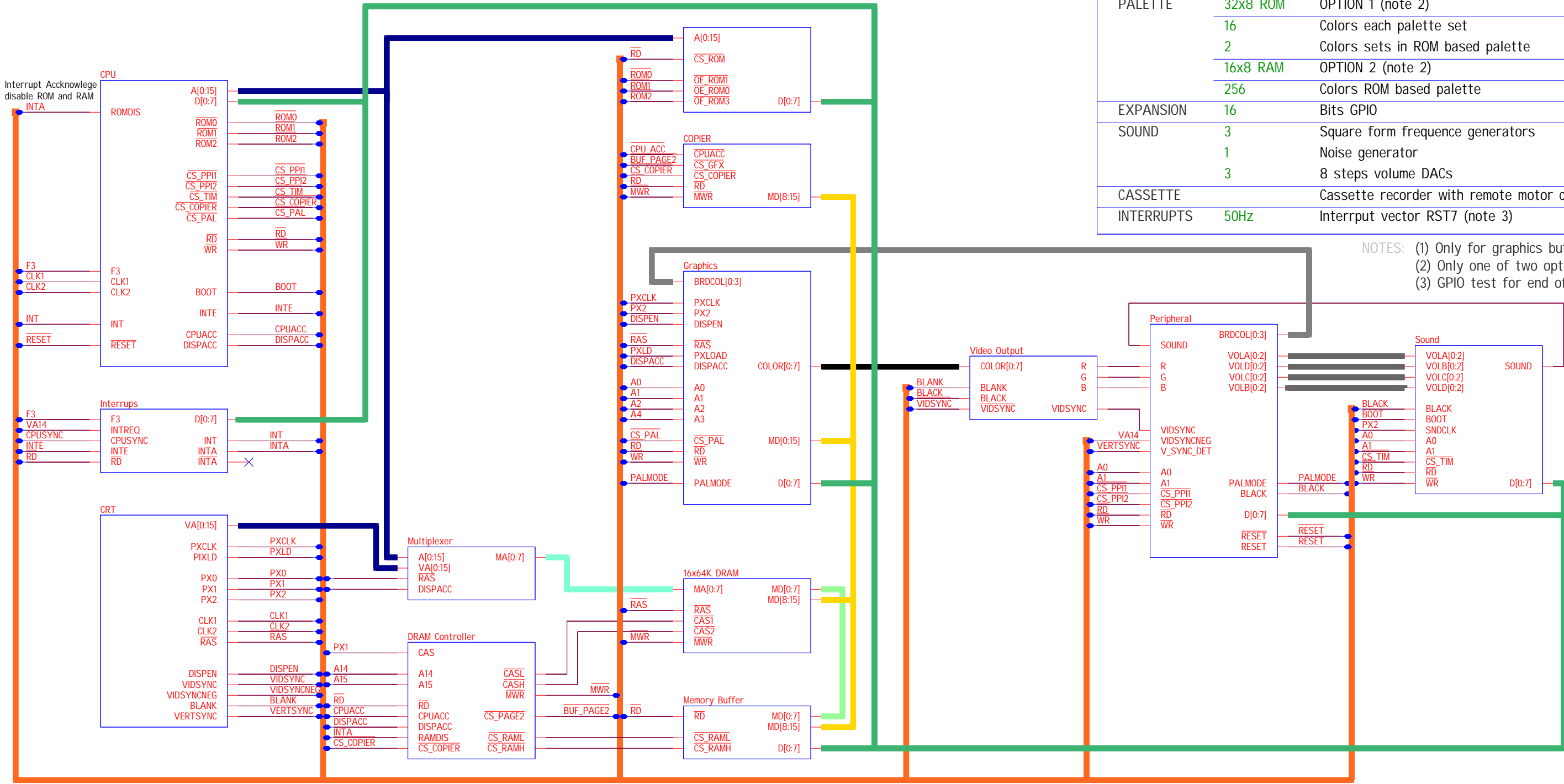


SPECIFICATIONS		
BASED ON		SPECIALIST
CPU		K580IK80
ROM	6KB	3 x K573RF5
RAM	64KB	16 x K565RU5 (manufacturer de-rated)
ADRESSABLE	48KB / 16KB	Directly/Indirectly
ACCELERATOR	COPIER	16 bits per single copy operation (note 1)
GRAPHICS	384x256	Pixels
	2 of 16	Colors per each 8 pixels
	32KB / 24KB	Graphics memory / Frame buffer
PALETTE	32x8 ROM	OPTION 1 (note 2)
	16	Colors each palette set
	2	Colors sets in ROM based palette
	16x8 RAM	OPTION 2 (note 2)
	256	Colors ROM based palette
EXPANSION	16	Bits GPIO
SOUND	3	Square form frequence generators
	1	Noise generator
	3	8 steps volume DACs
CASSETTE		Cassette recorder with remote motor control
INTERRUPTS	50Hz	Interrput vector RST7 (note 3)

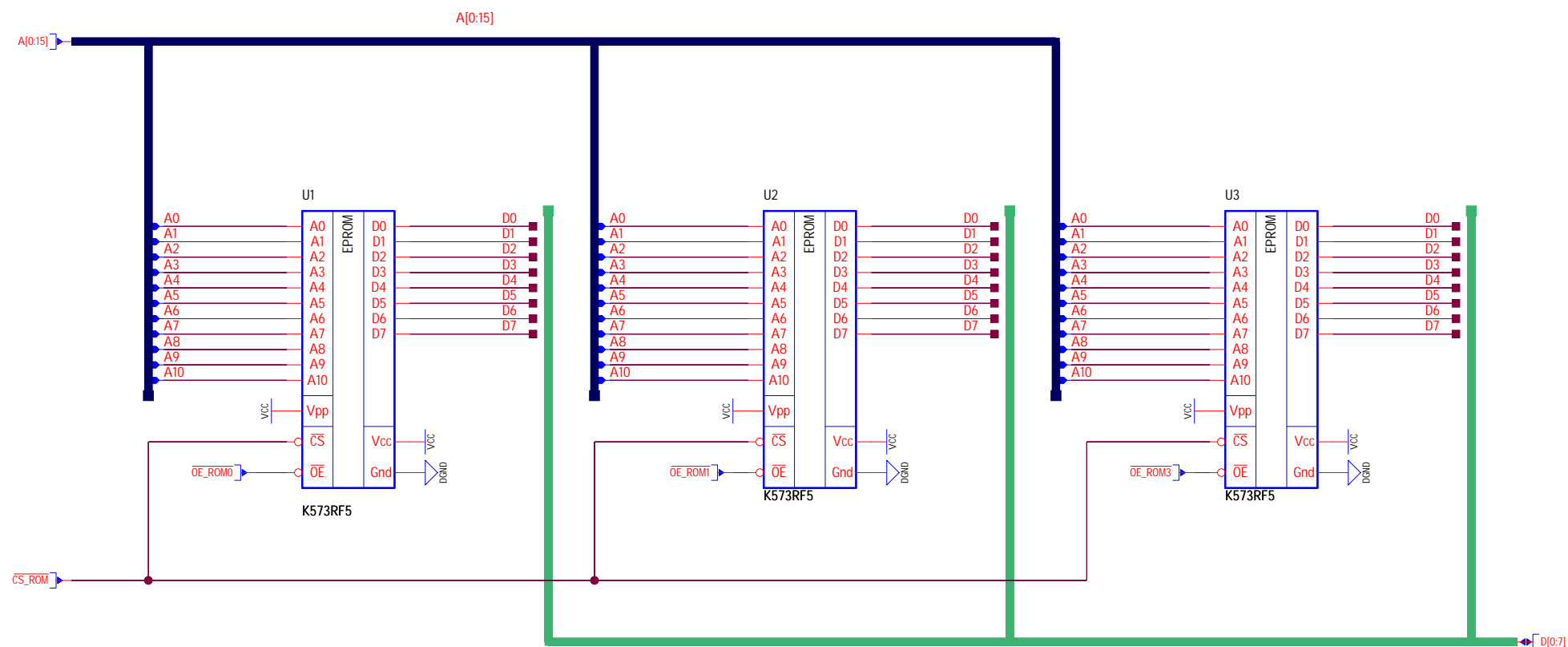
NOTES: (1) Only for graphics buffer
(2) Only one of two options used
(3) GPIO test for end of frame

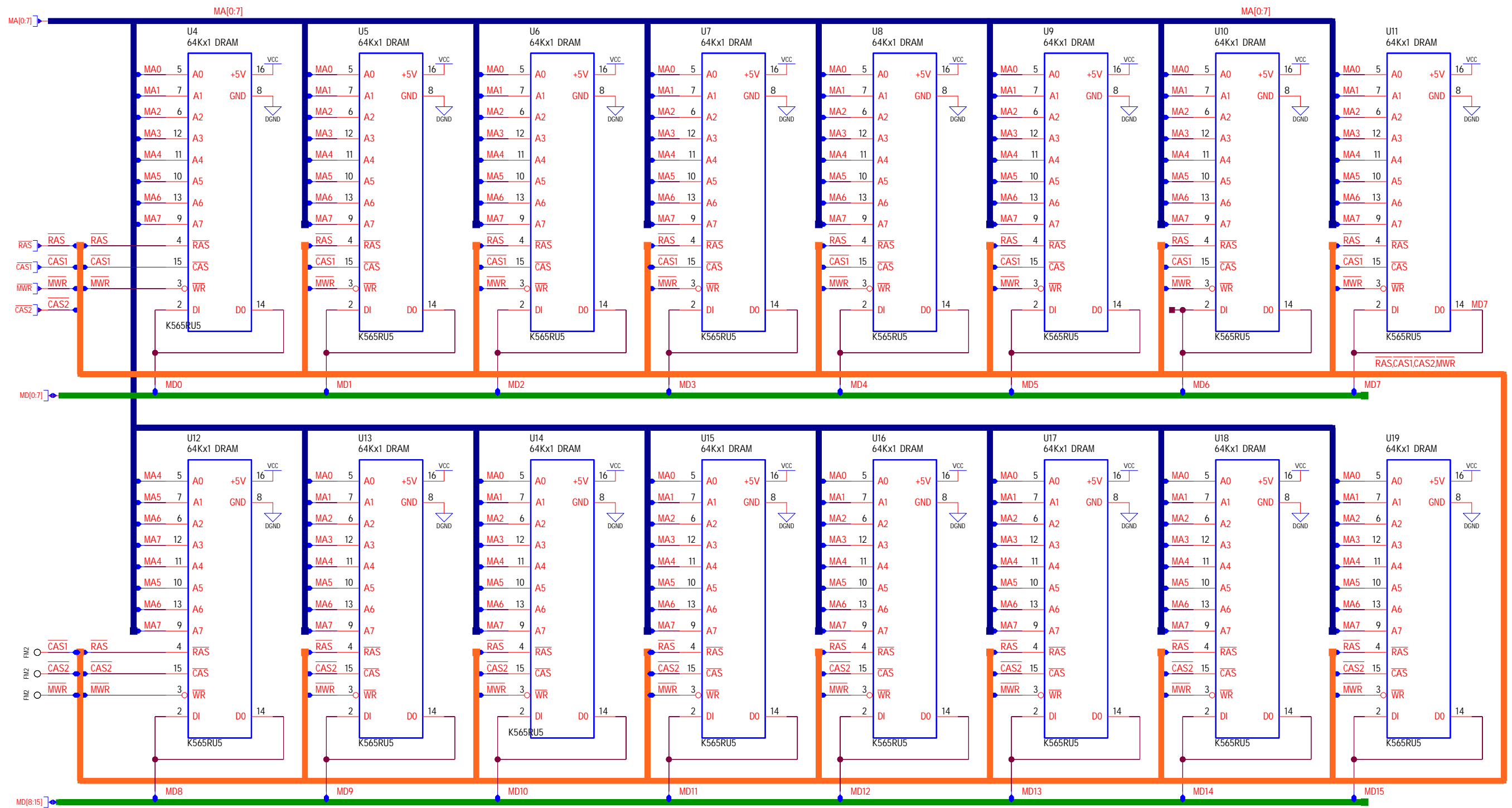


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RETRO COMPUTERS

TITLE
RADUGA Computer

SIZE A3	DWG NO Beta1	Rainbow 1	REV b1
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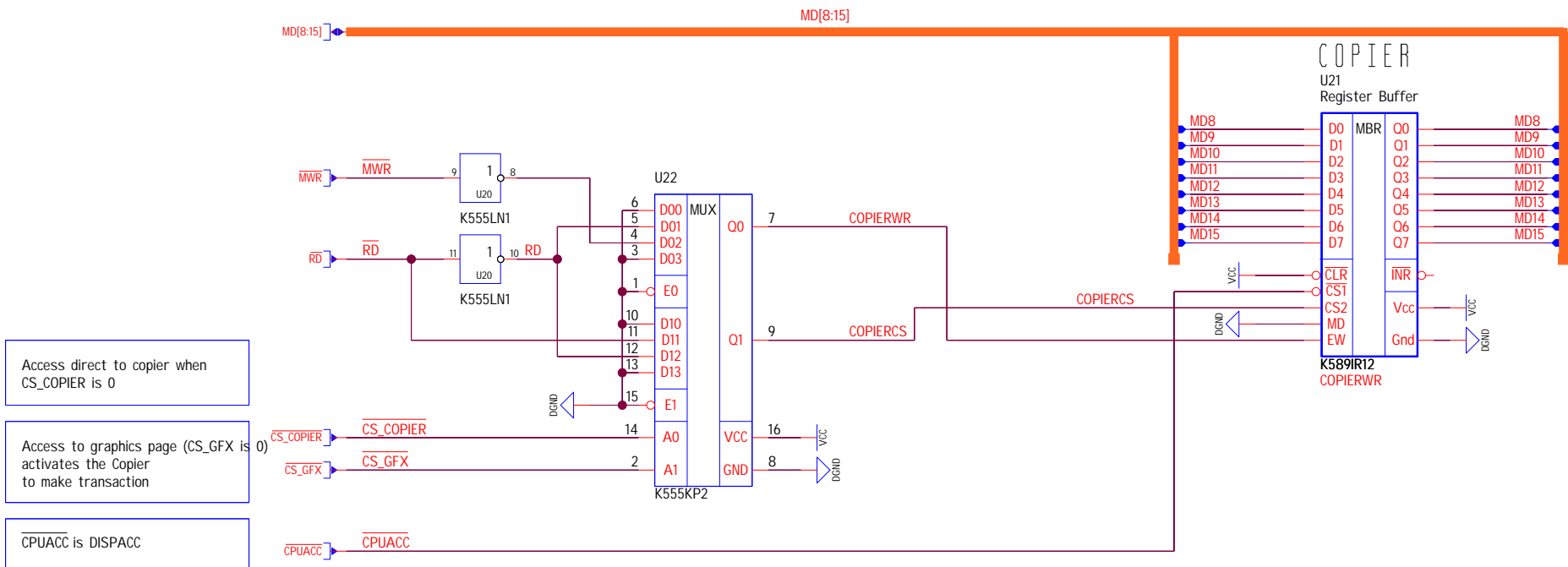
Memory 1

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b1

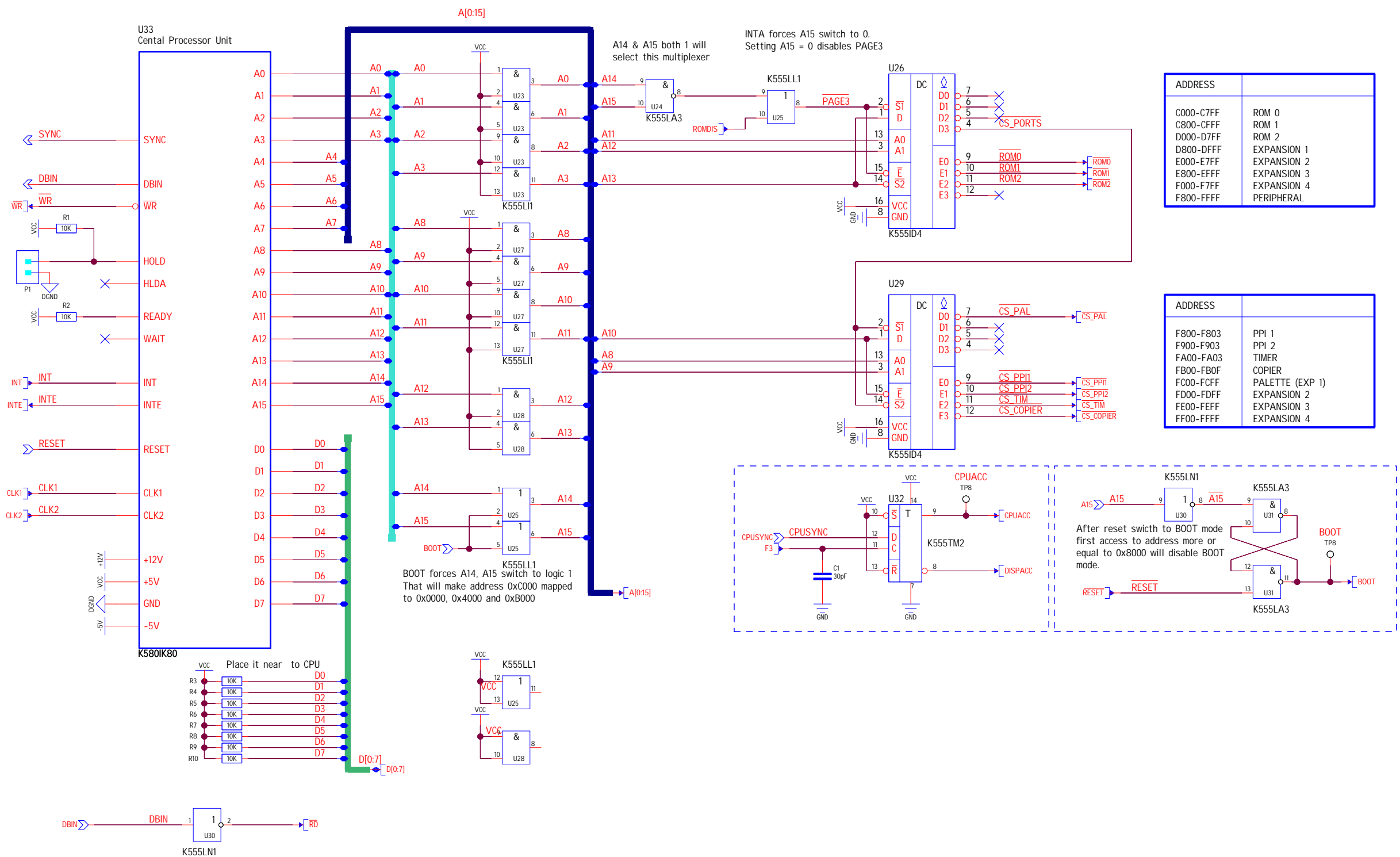
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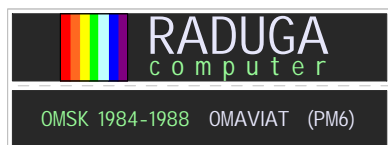
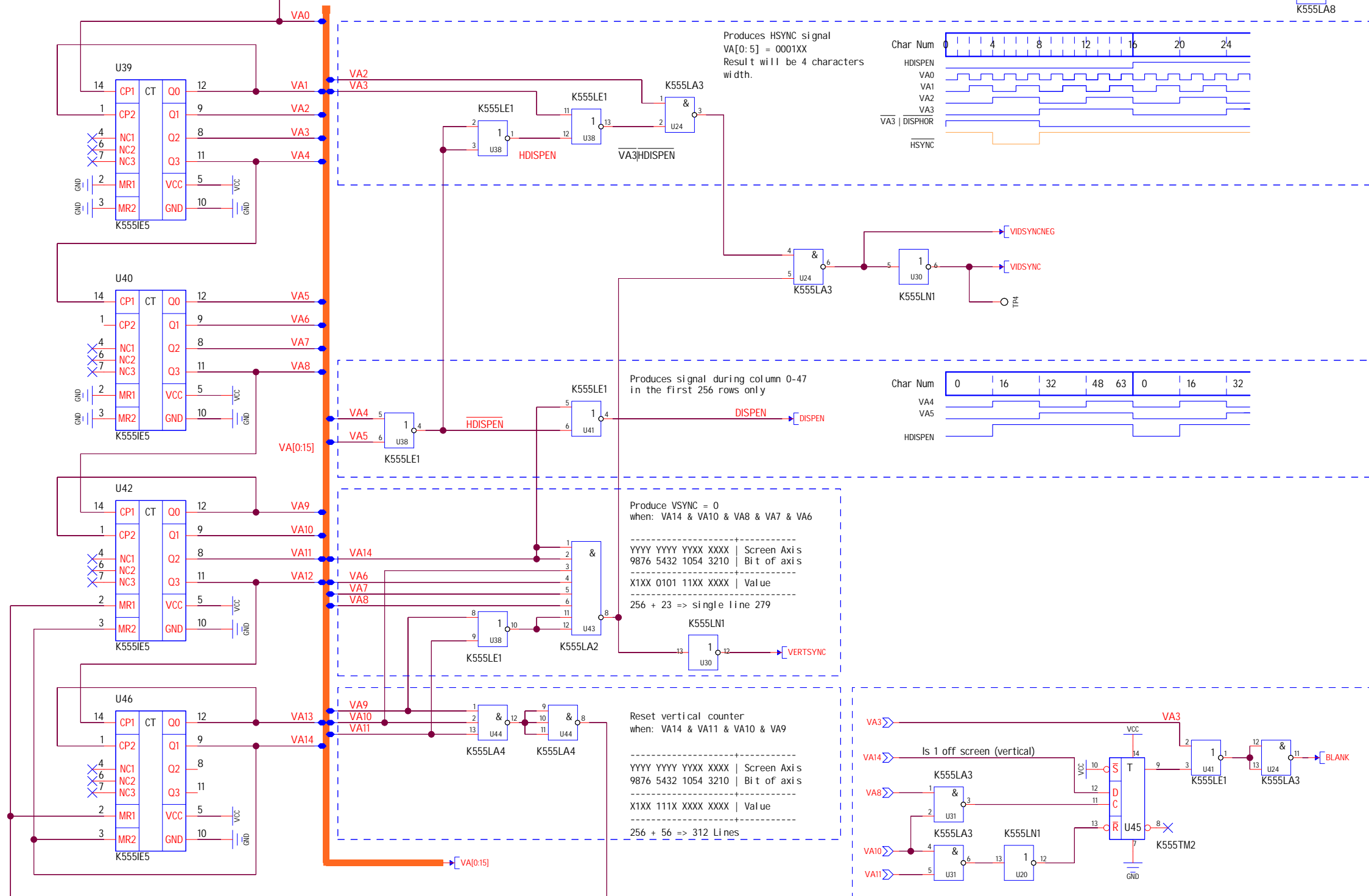
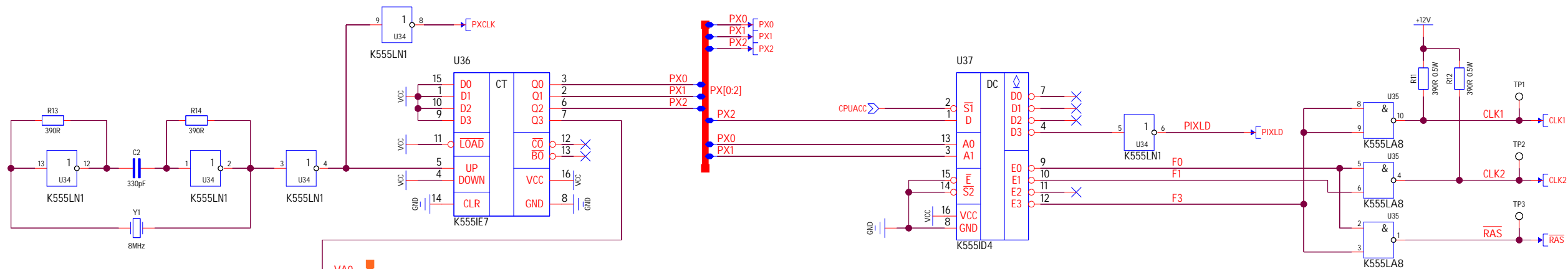
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BUF_PAGE2 8000-BFFF					COPIER's Operation
CPUACC	CSCOPIER		RD	MWR	
1	X	X	X	X	Nothing
X	0	0	X	X	Nothing
X	1	1	X	X	Nothing
0	0	1	Access to PAGE2		
Selected In 1			0	X Read	Store
			1	X Write	Read
0	1	0	Access to COPIER		
Selected In 2			0	1 Read	Read
			1	0 Write	Store





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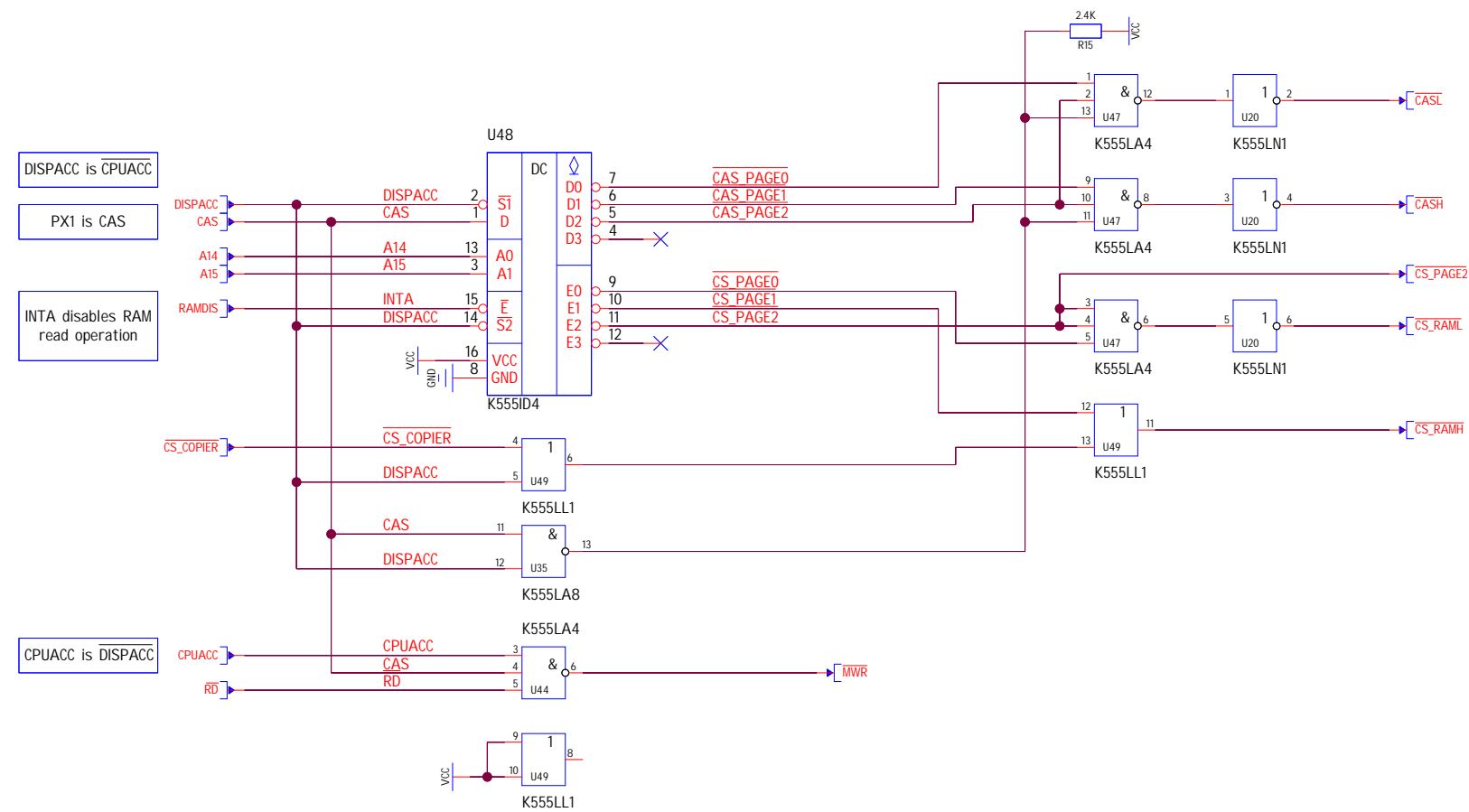
CRT 1

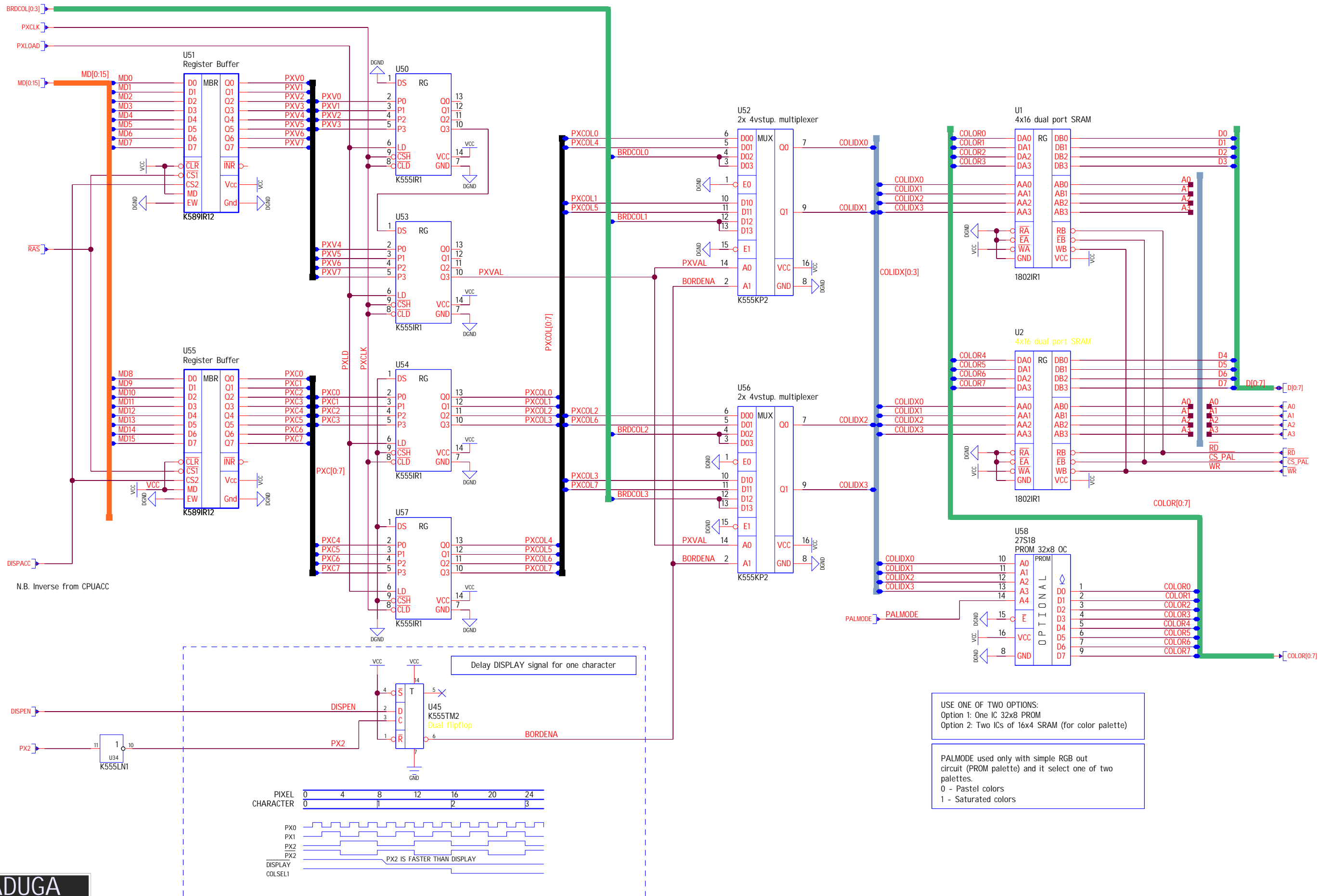
REV
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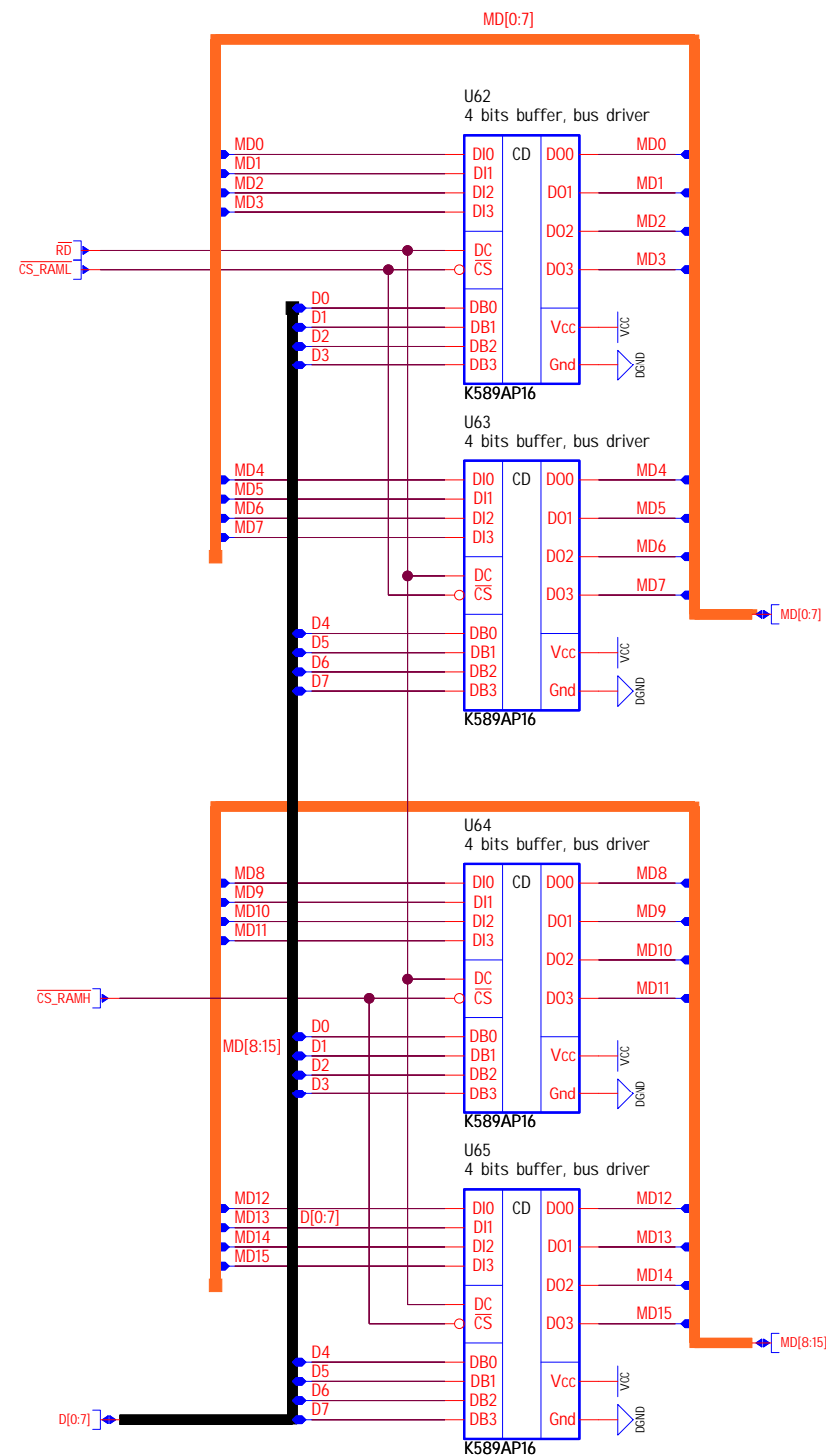
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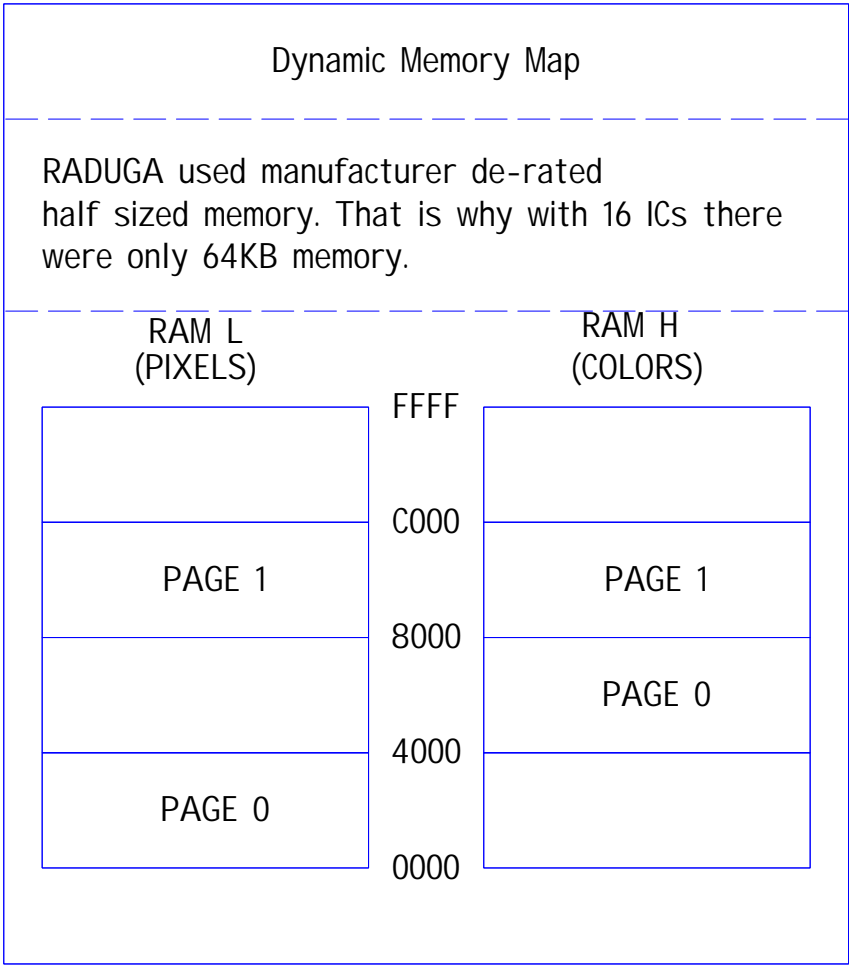
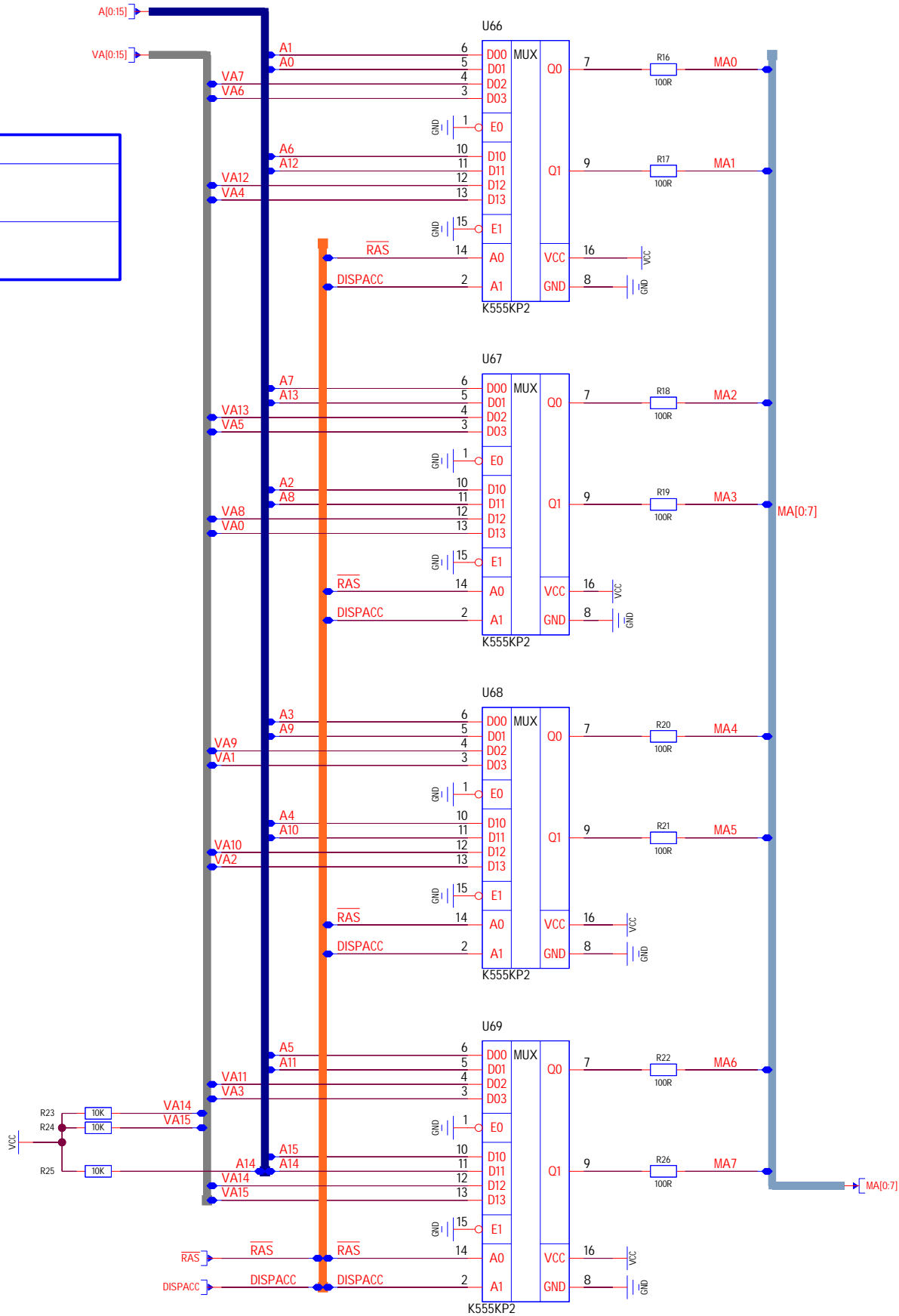
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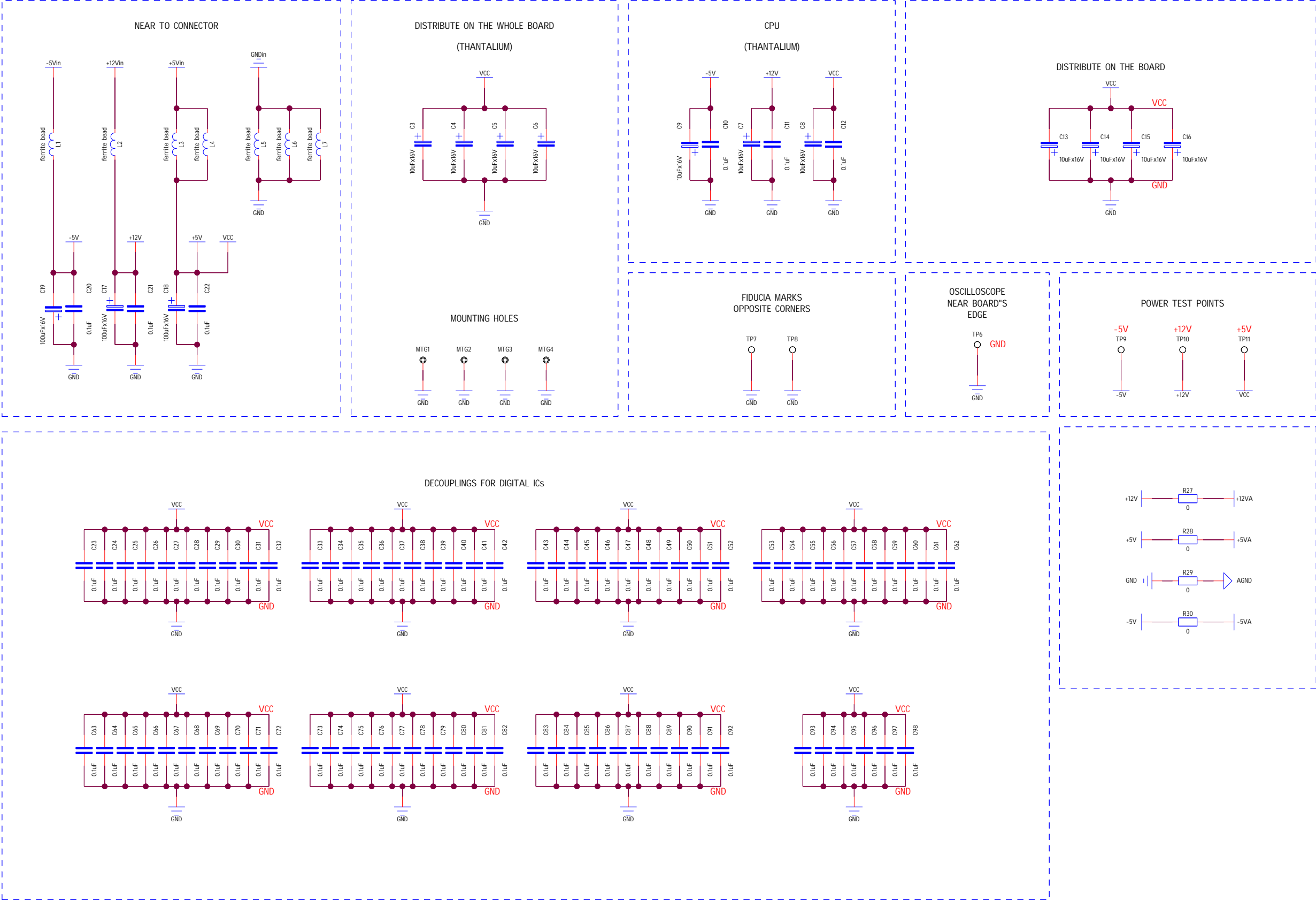


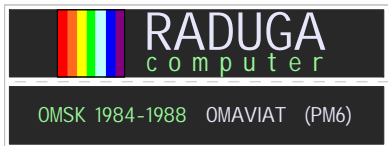
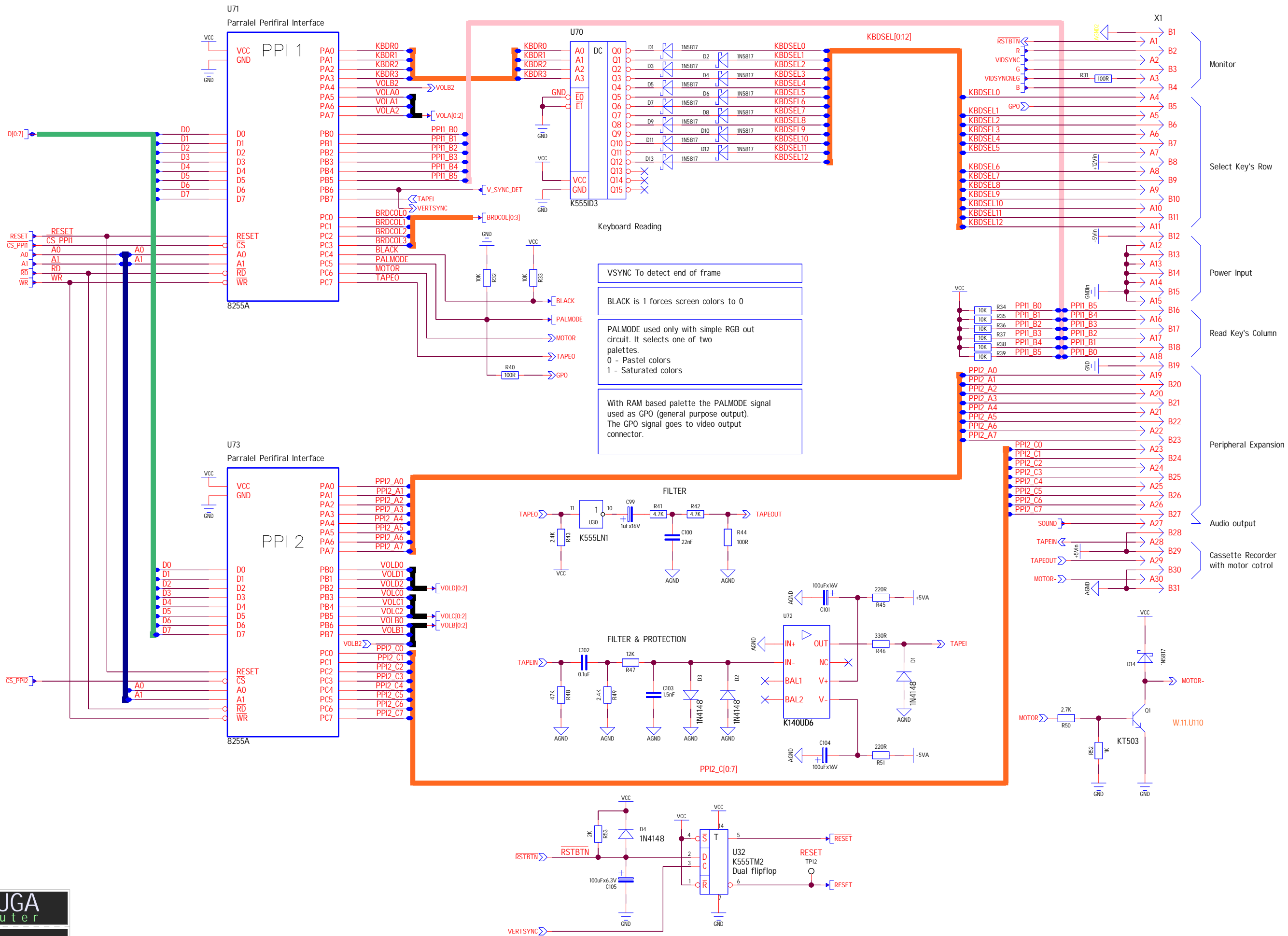




SIGNAL	VALUE	FUNCTION
RAS	0 1	COLUMNS ROWS (REFRESH)
DISPACC	0 1	CPU CRT







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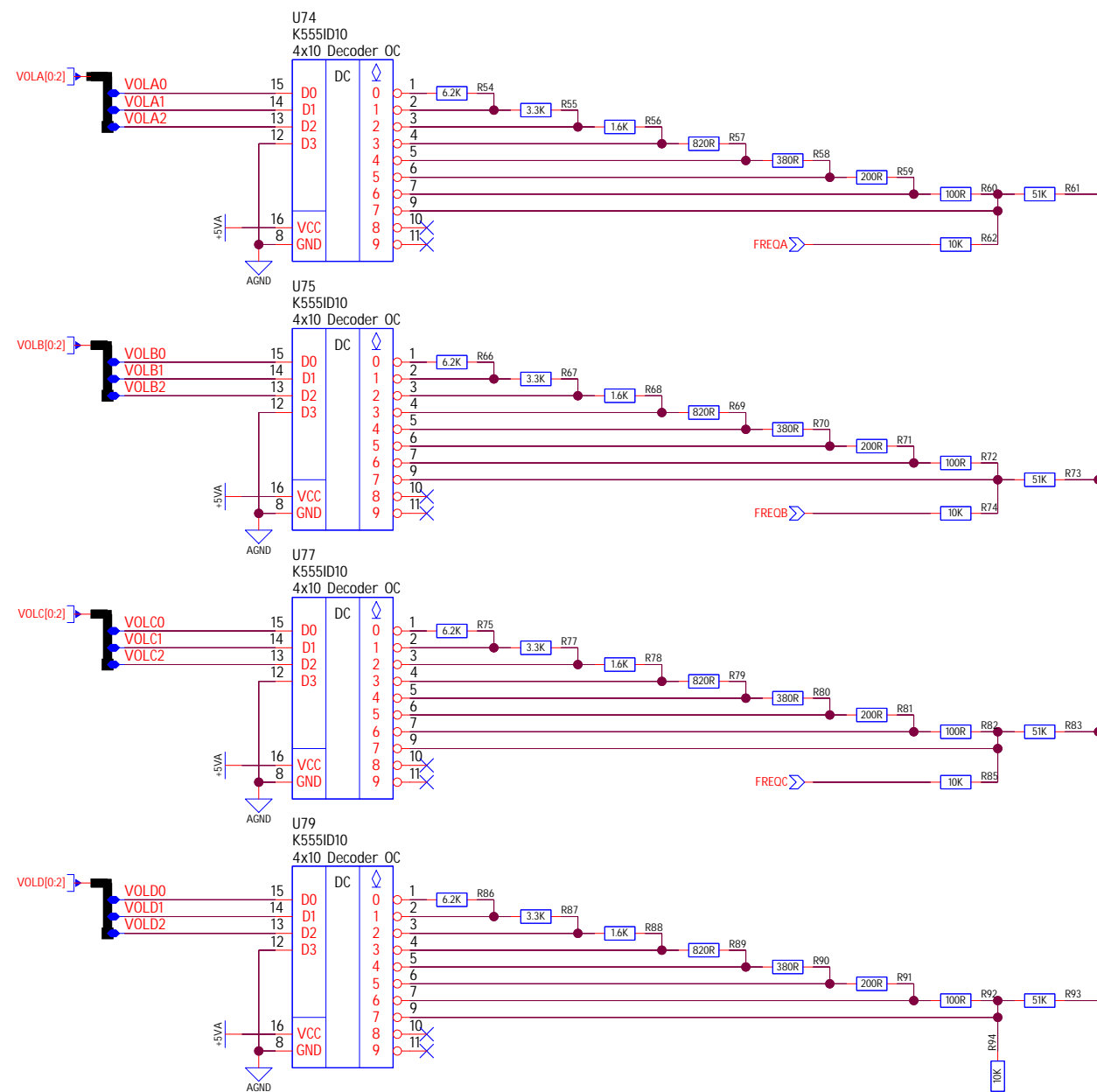
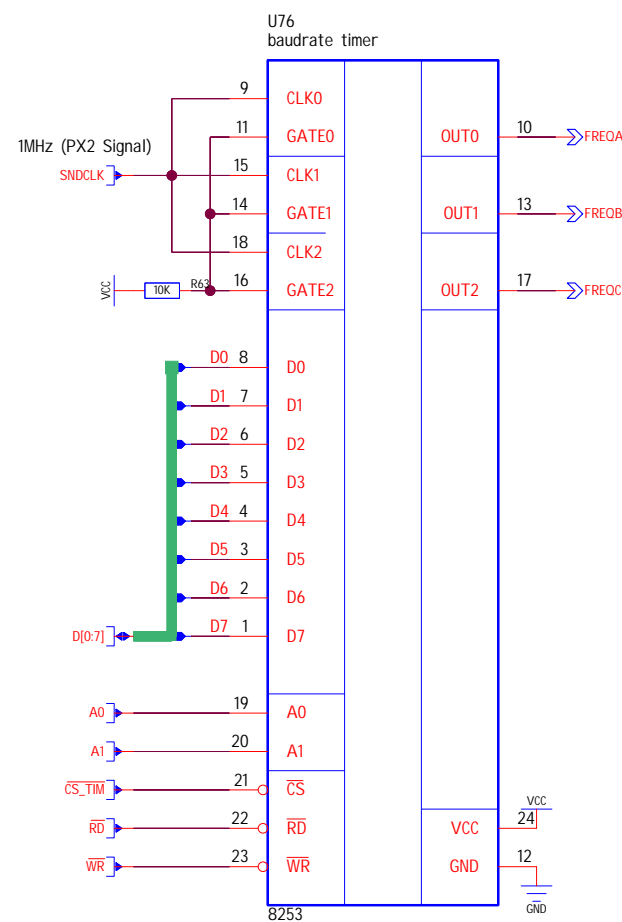
Peripherals 1

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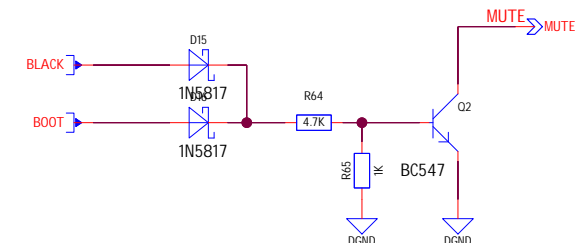
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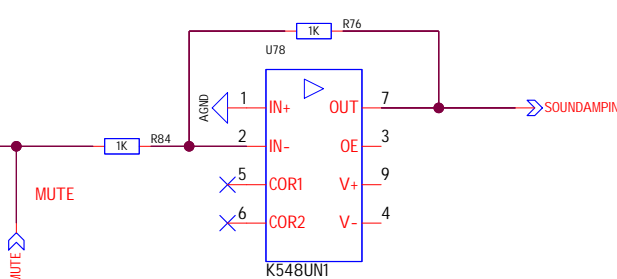
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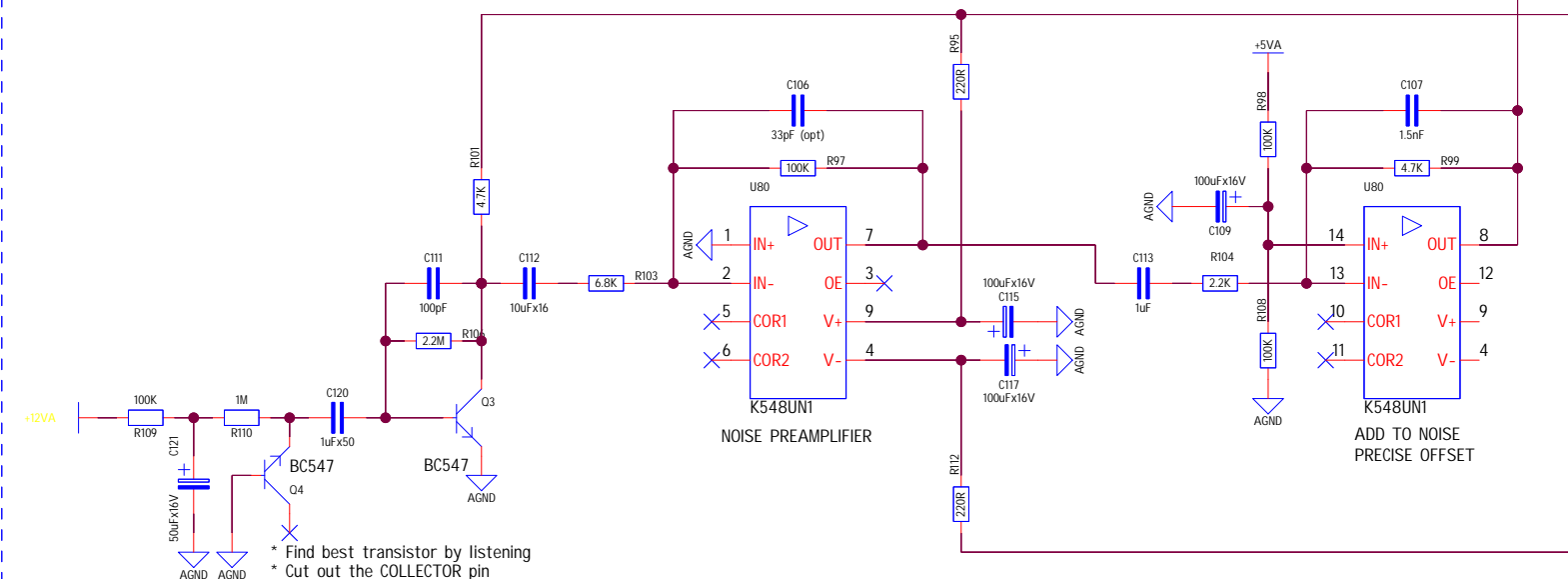
MUTE SOUND



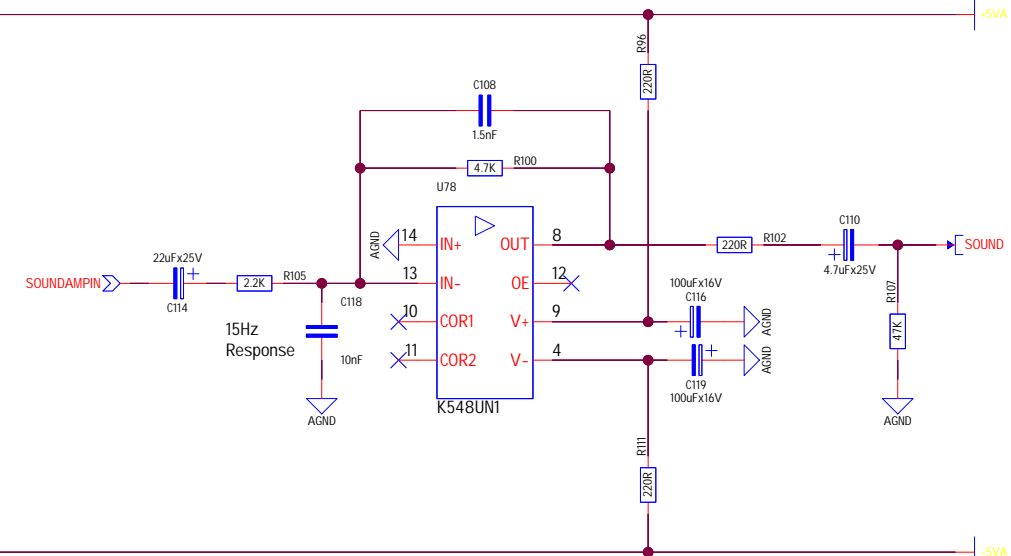
PREAMP



NOISE GENERATOR



AMPLIFIER



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Sound 1

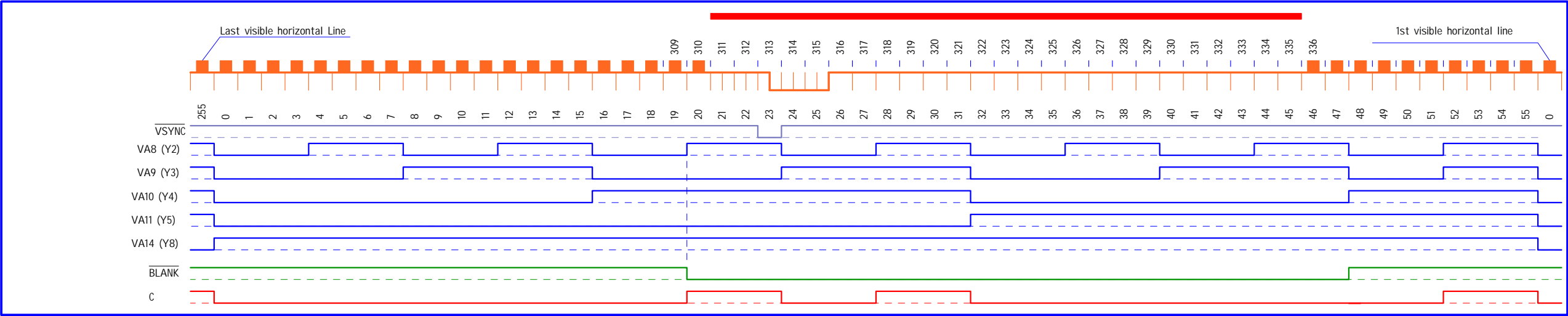
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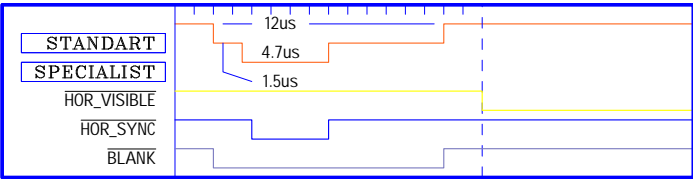
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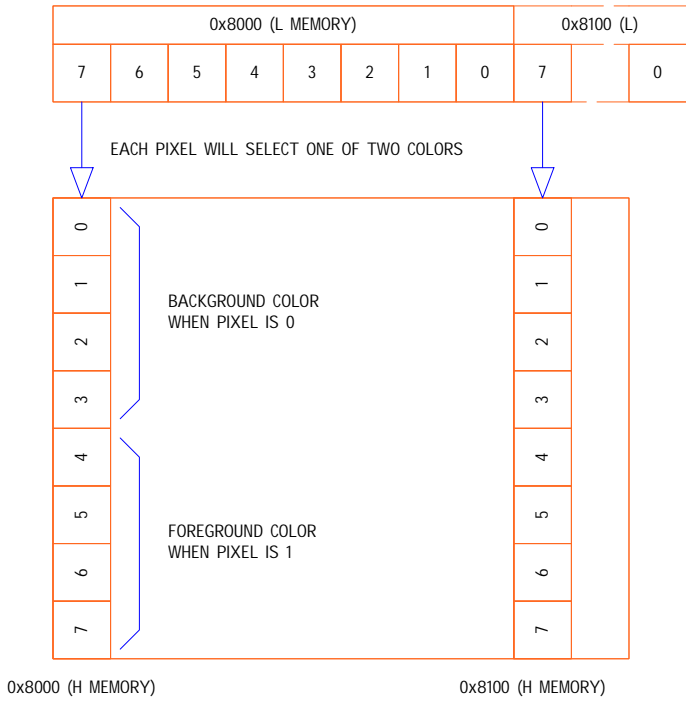
Required vertical timing



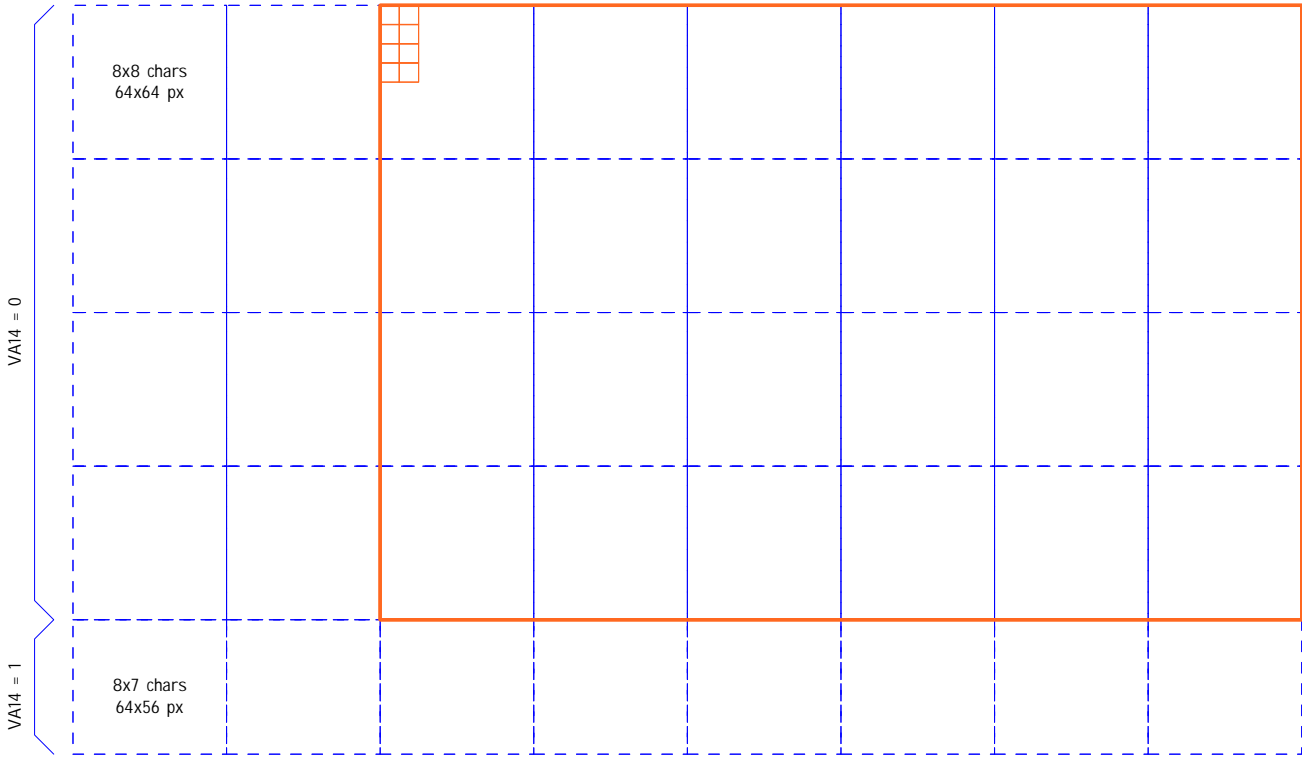
Required horizontal timing (only for composed video)



COLOR DECODING



VISIBLE AREA
48x32 CHARACTERS
384x256 PIXELS



TOP-LEFT

GRAPHICS DATA IN MEMORY

0x8000	0x8100
0x8001	0x8101
0x8002	
0x8003	
0x8004	
0x8005	
0x8006	
0x8007	
0x8008	
.....	



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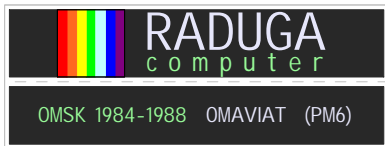
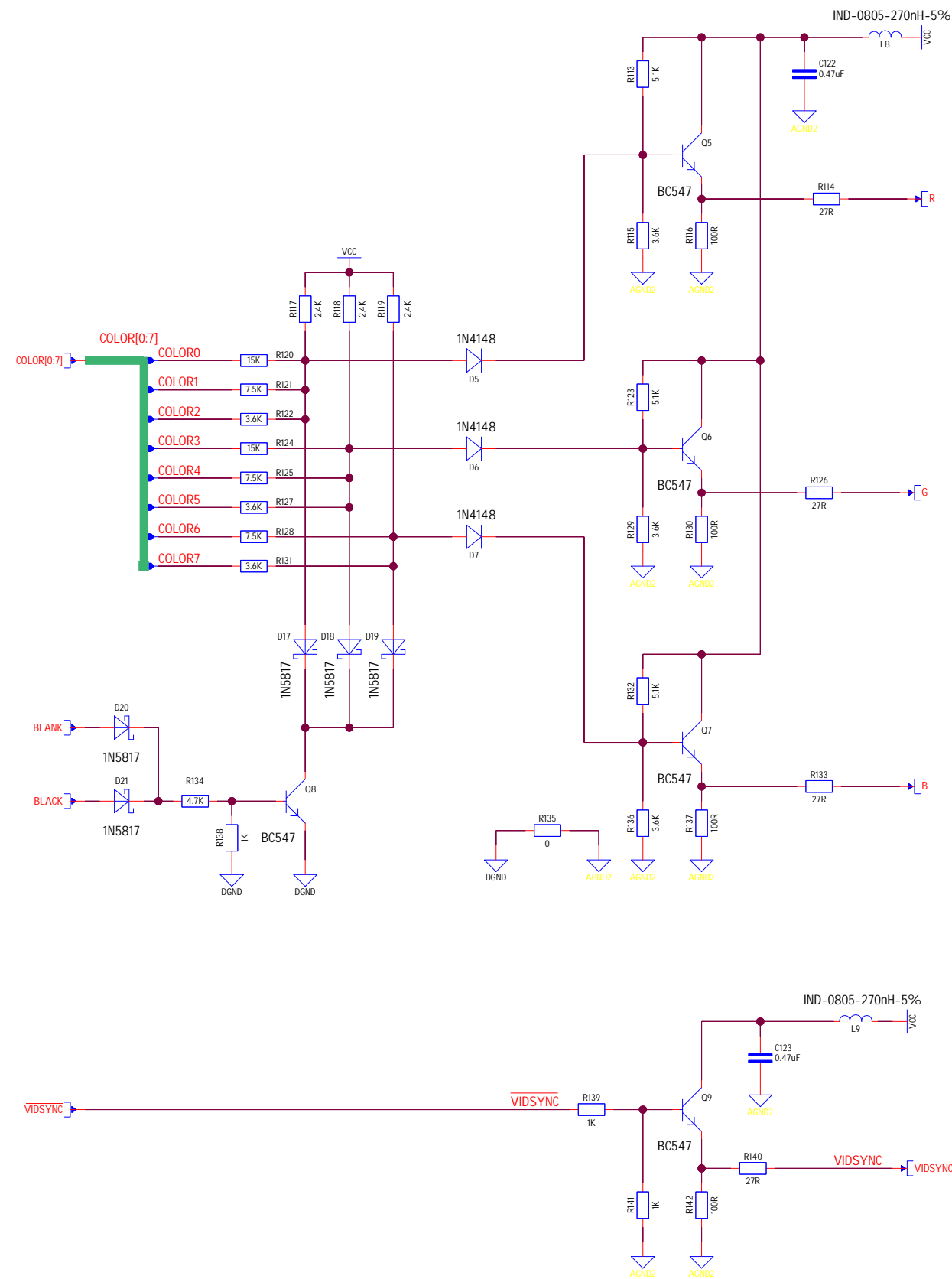
CRT_TimeDiagrams 1

REV
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VideoOut 1

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