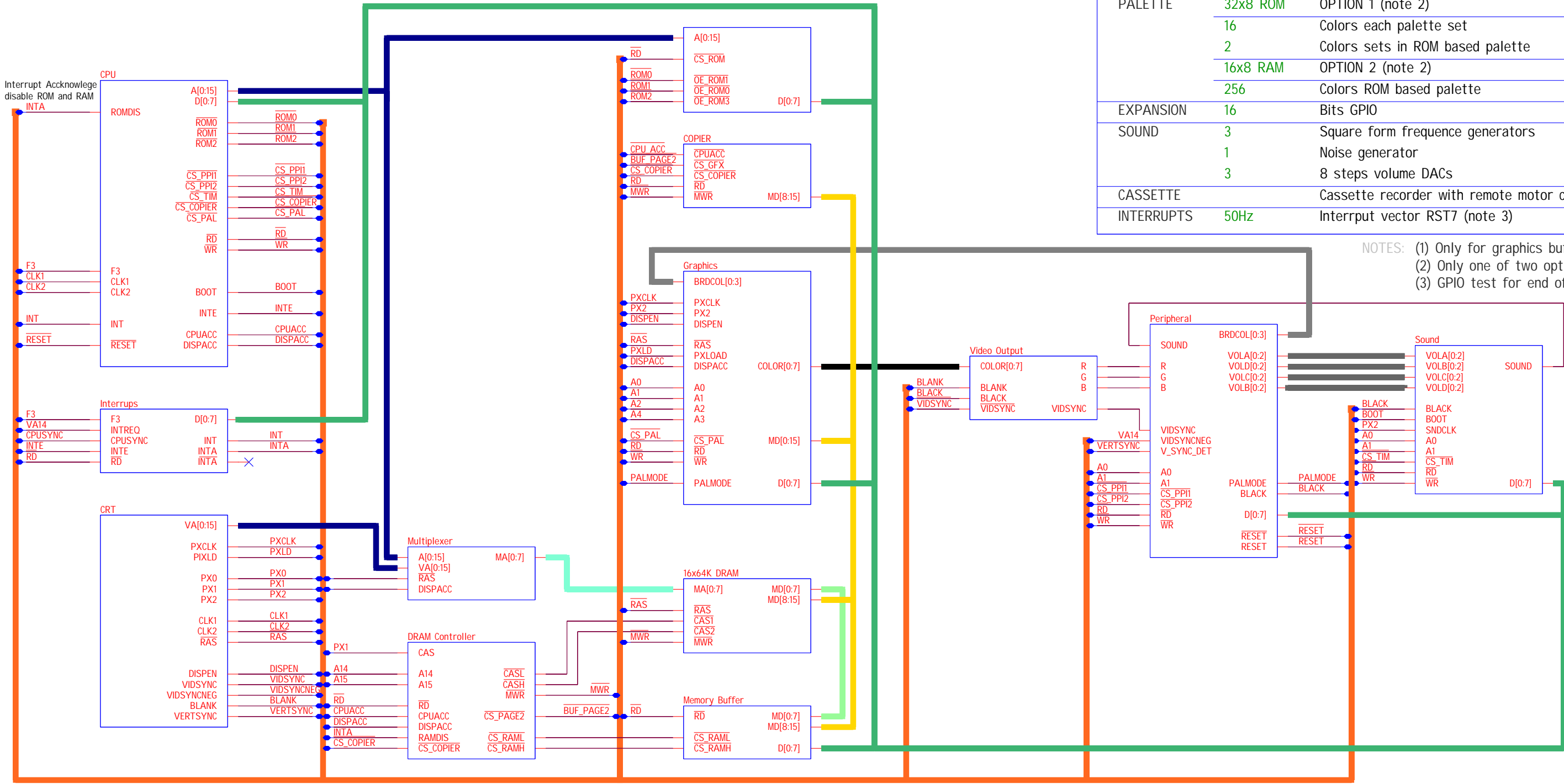


SPECIFICATIONS		
BASED ON		SPECIALIST
CPU		K580IK80
ROM	6KB	3 x K573RF5
RAM	64KB	16 x K565RU5 (manufacturer de-rated)
ADRESSABLE	48KB / 16KB	Directly/Indirectly
ACCELERATOR	COPIER	16 bits per single copy operation (note 1)
GRAPHICS	384x256	Pixels
	2 of 16	Colors per each 8 pixels
	32KB / 24KB	Graphics 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)

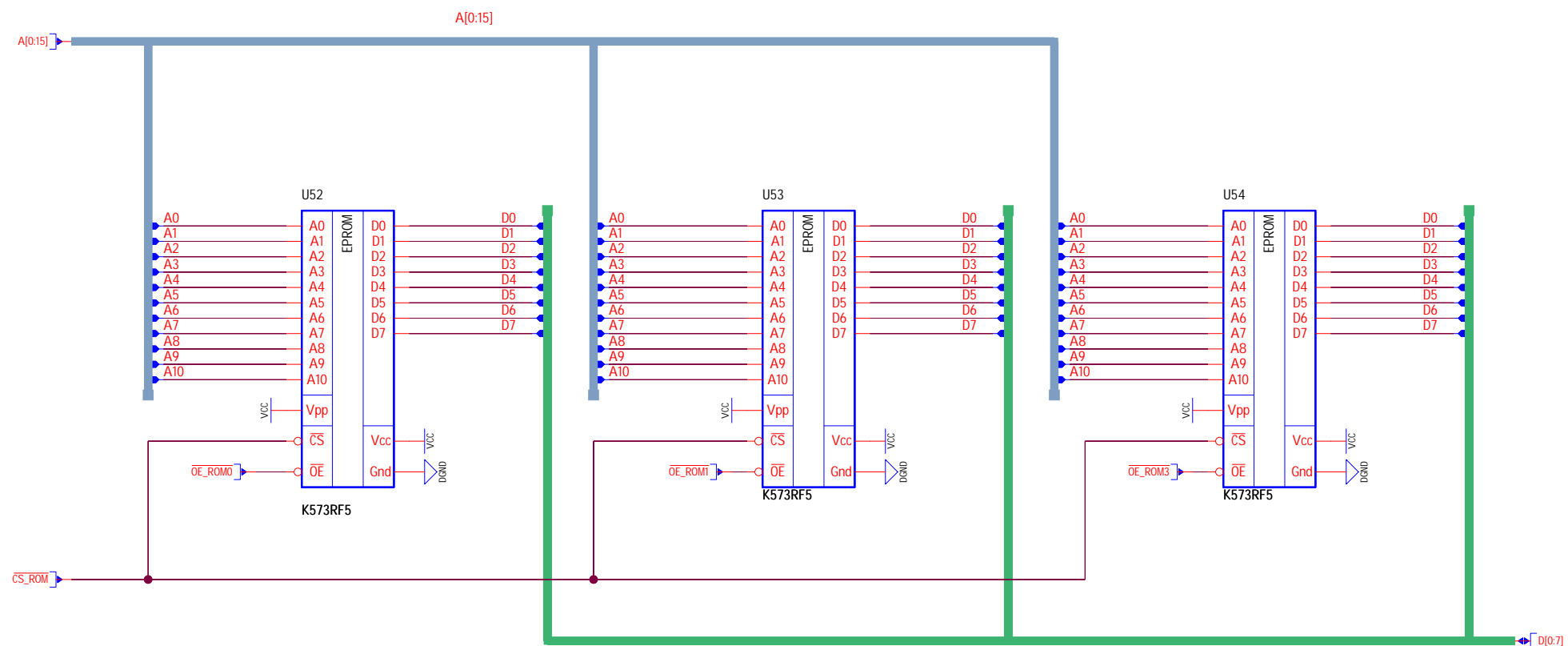
NOTES: (1) Only for graphics buffer
(2) Only one of two options used
(3) GPIO test for end of frame

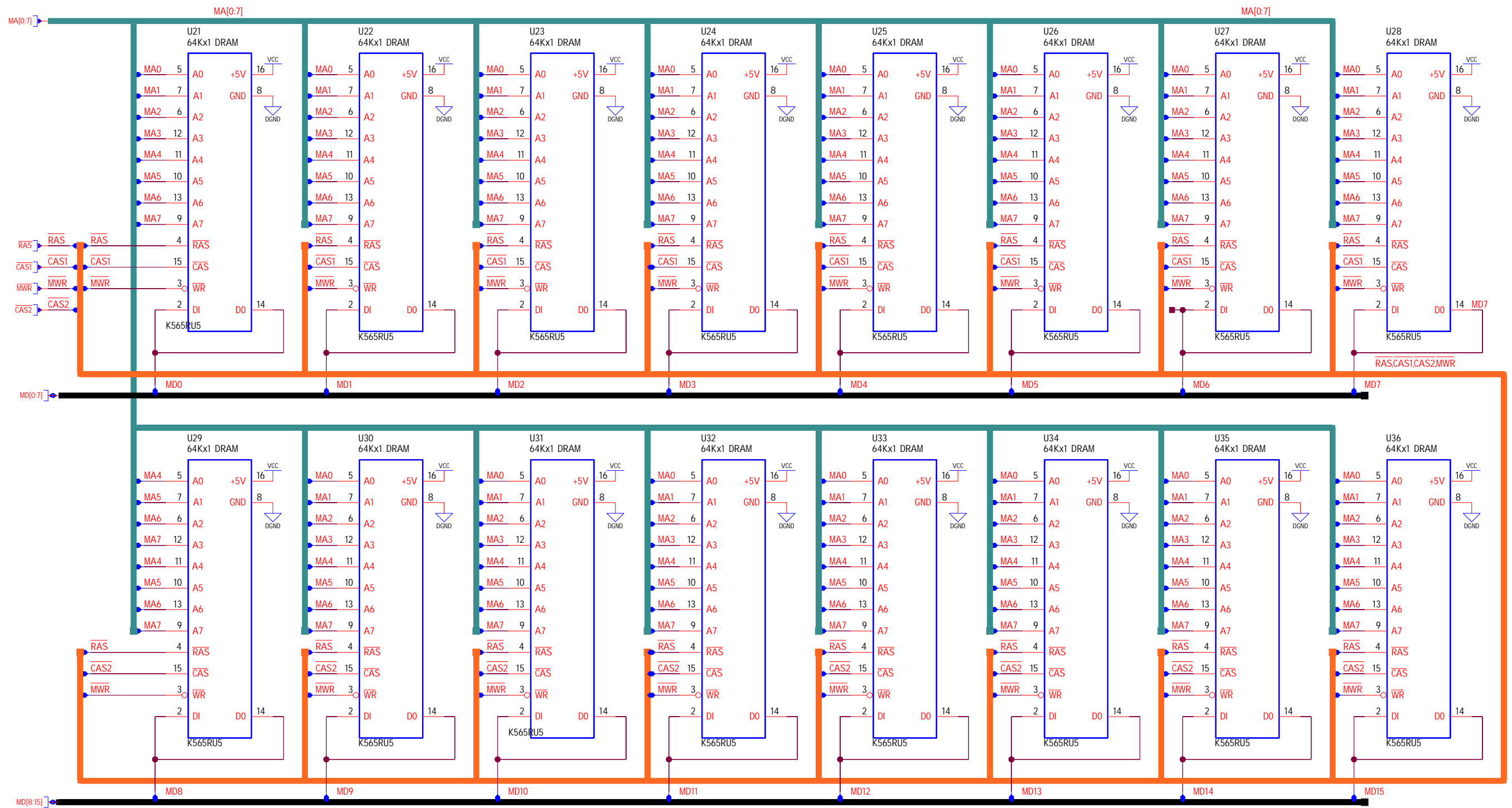


221B Baker Street
RETRO COMPUTERS

TITLE
RADUGA Computer

SIZE A3	DWG NO Alfa3	Rainbow 1	REV a3
DRAWN BY Sherlock	SHEET 1	of 16	21/04/2019:11:24





221B Baker Street
RETRO COMPUTERS

RADUGA Computer

SIZE
A3

DWG NO
Alfa3

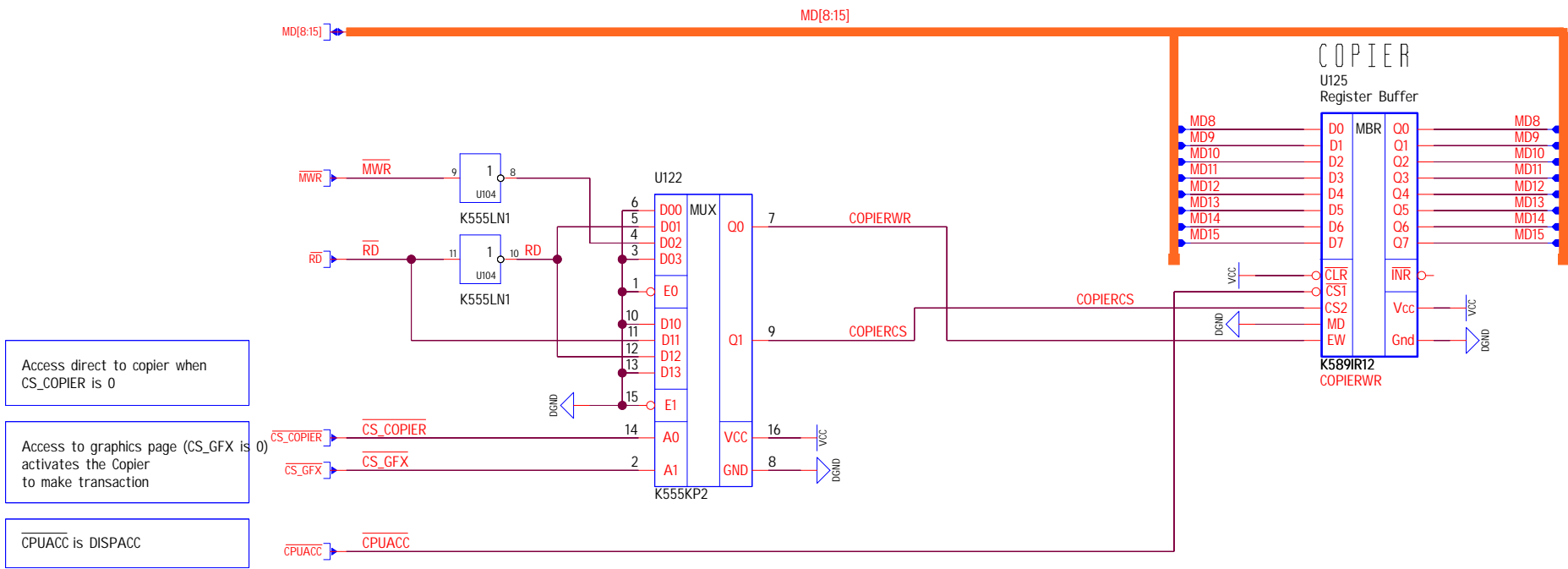
Memory 1



REV
a3

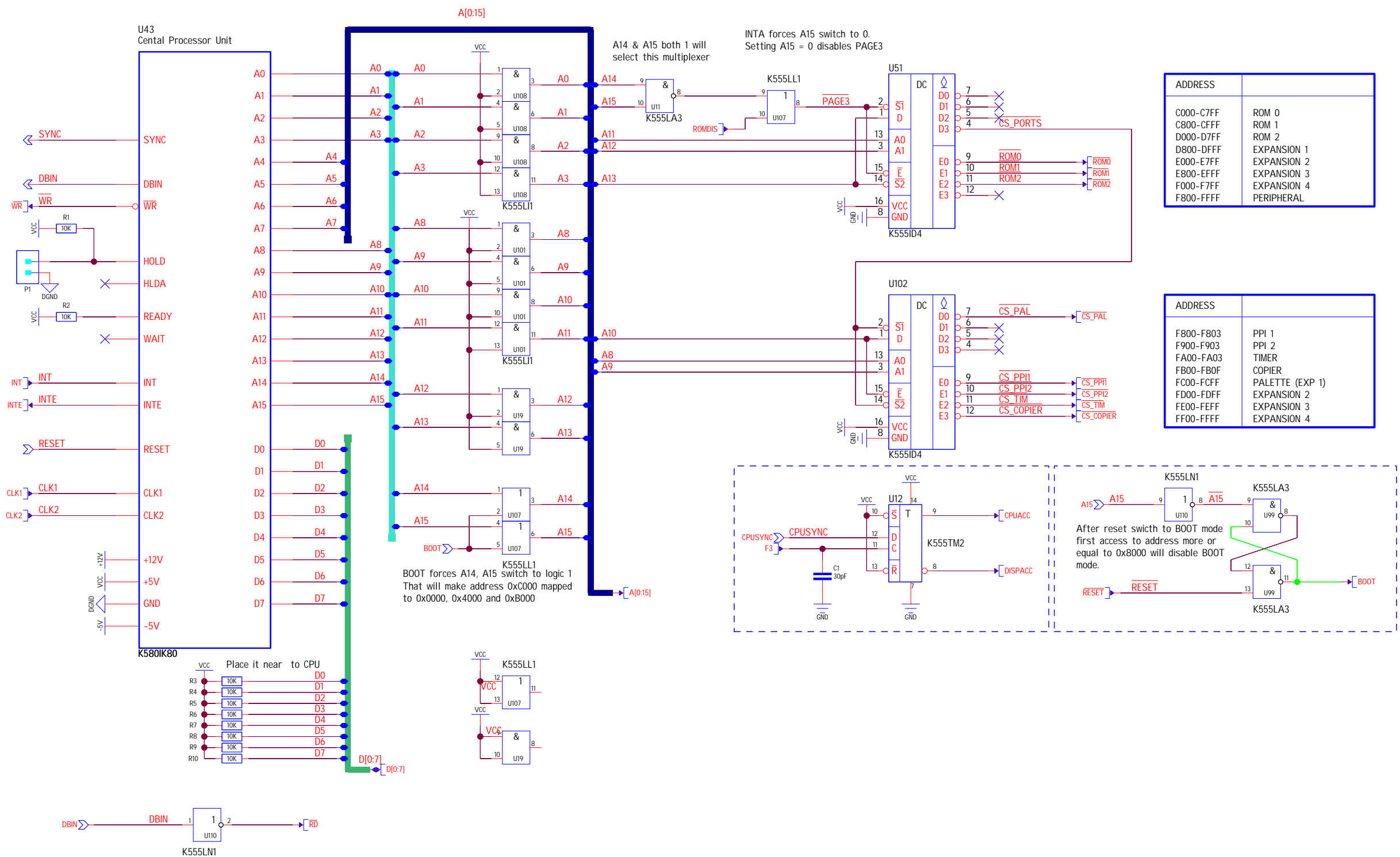
DRAWN BY
Sherlock

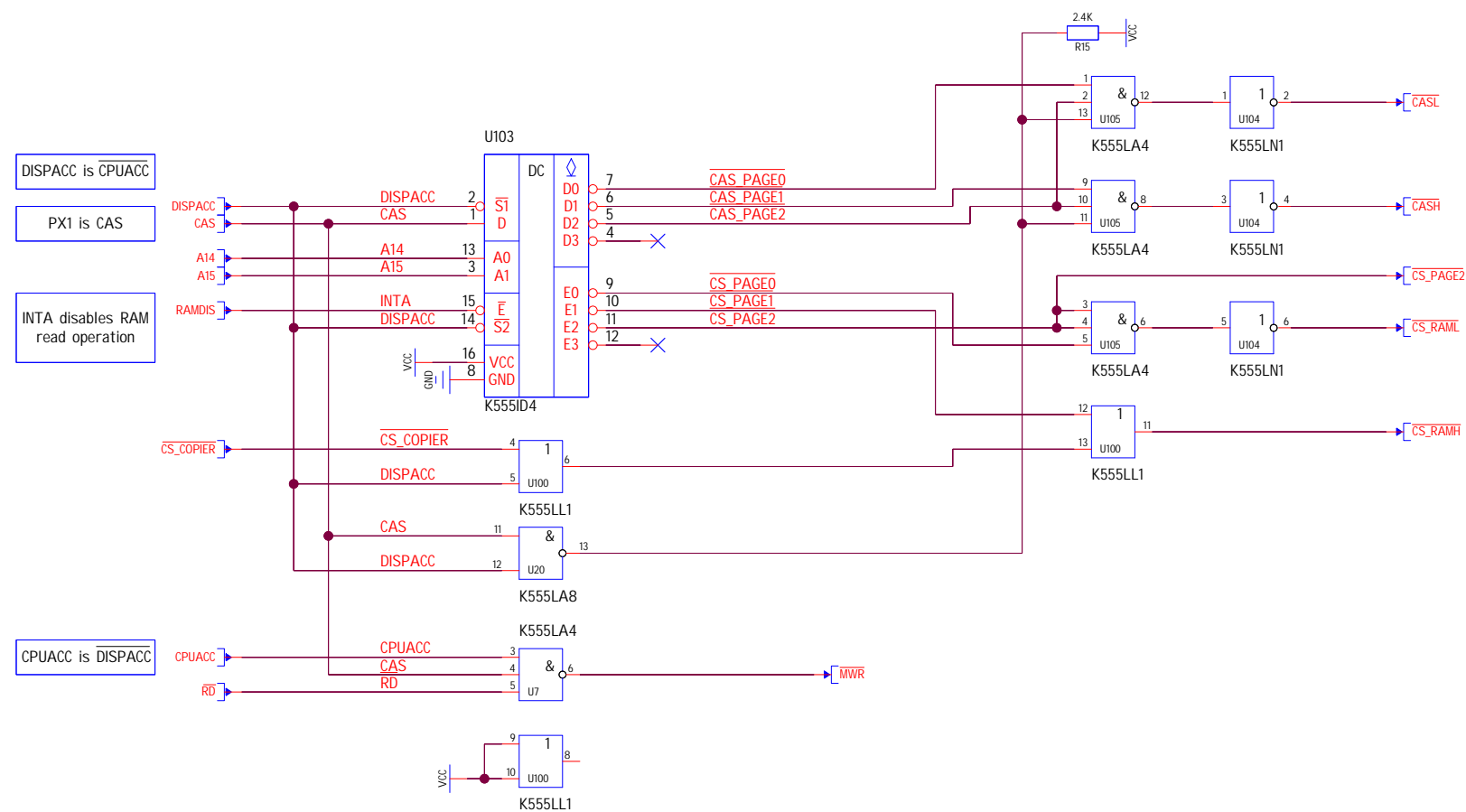
SHEET
3 of 16

21/04/2019:11:22



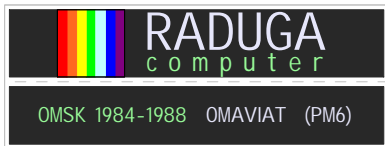
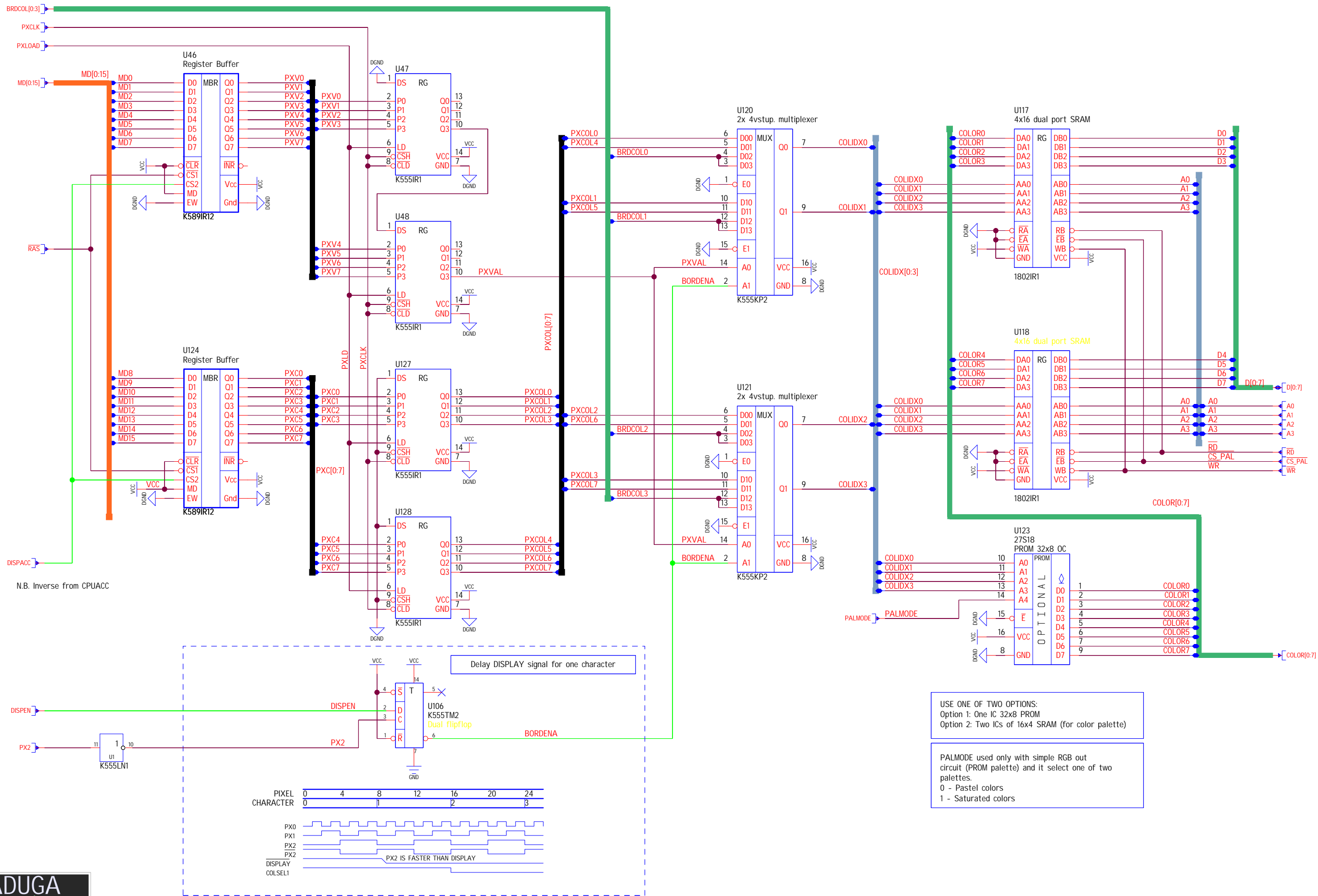
BUF_PAGE2 8000-BFFF					COPIER's Operation
CPUACC	CSCOPIER		RD	MWR	
1	X	X	X	X	Nothing
X	0	0	X	X	Nothing
X	1	1	X	X	Nothing
0	0	1	Access to PAGE2		
 Selected In 1			0	X Read	Store
			1	X Write	Read
0	1	0	Access to COPIER		
 Selected In 2			0	1 Read	Read
			1	0 Write	Store





PAGE	ADDRESS	CAS1	CAS2
3	C000-FFFF	NO	NO
2	8000-BFFF	YES	YES
1	4000-7FFF	NO	YES
0	0000-3FFF	YES	NO

PAGE	ADDRESS	MEMBUF1	MEMBUF2
3	C000-FFFF	NO	NO
2	8000-BFFF	YES	YES
1	4000-7FFF	NO	YES
0	0000-3FFF	YES	NO
COPIER	F800-FB0F	NO	YES



TITLE

RADUGA Computer

SIZE
A3

DWG NO
Alfa3

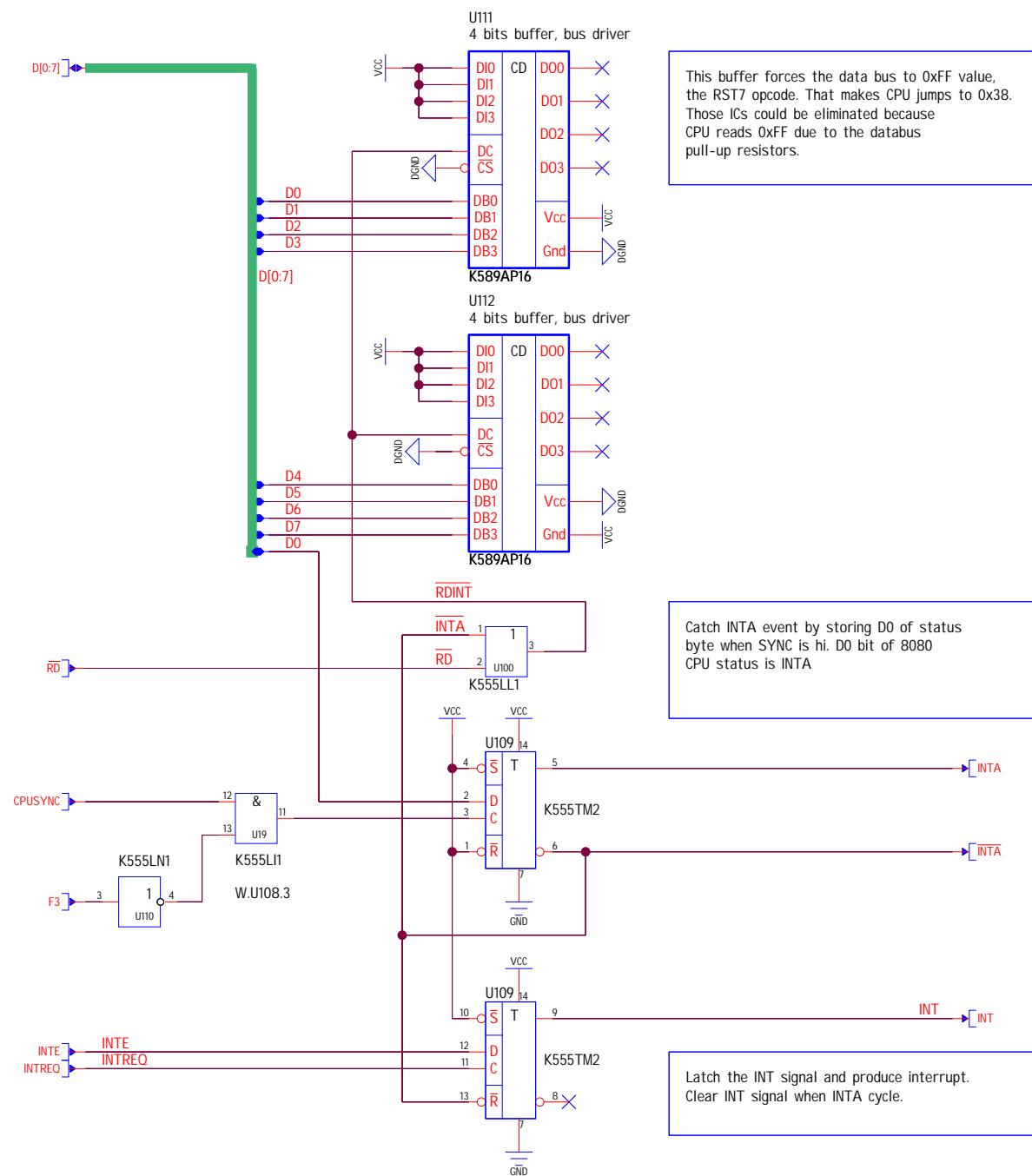
Graphics 1

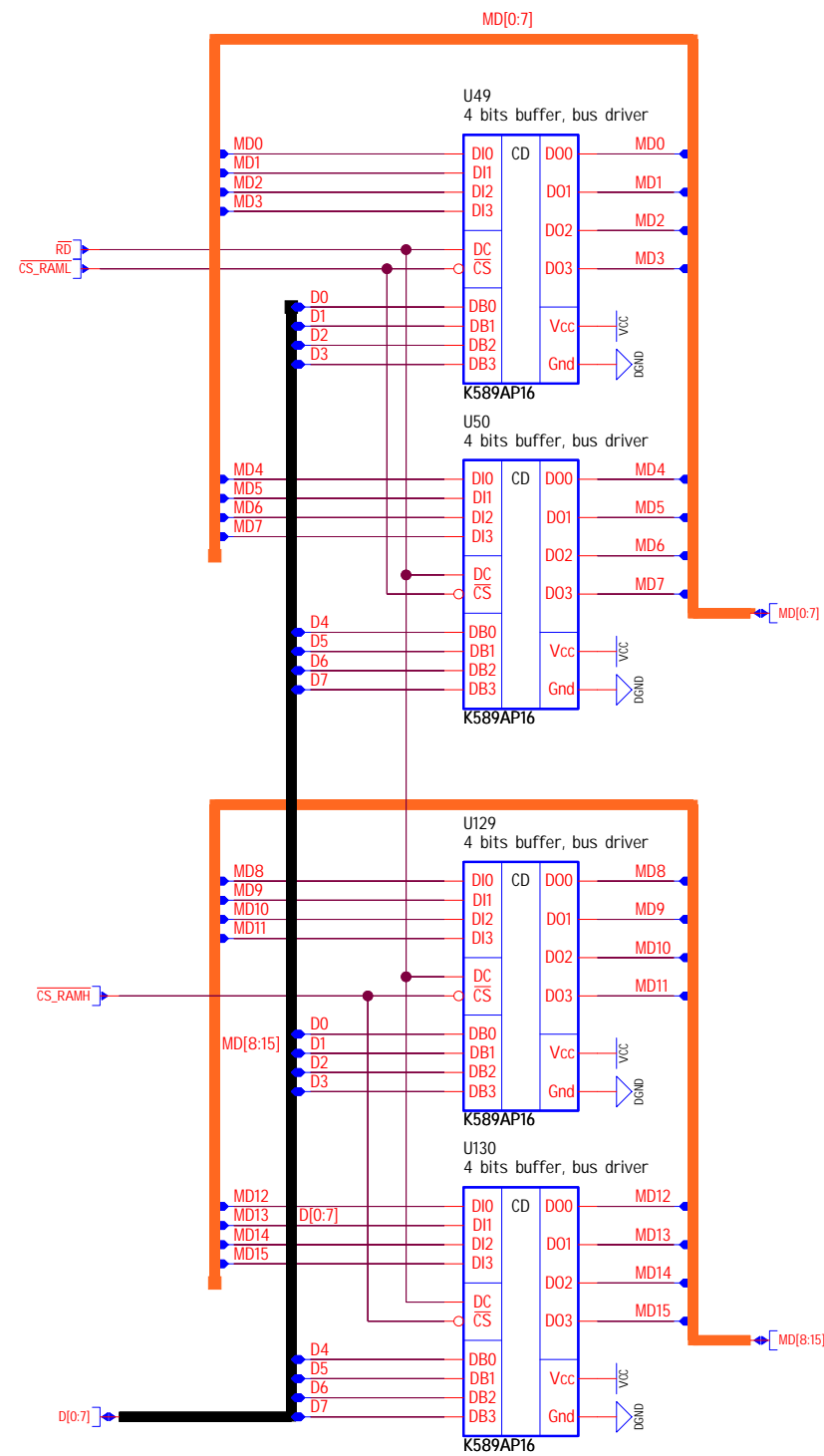
REV
a3

DRAWN BY
Sherlock

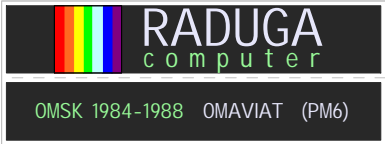
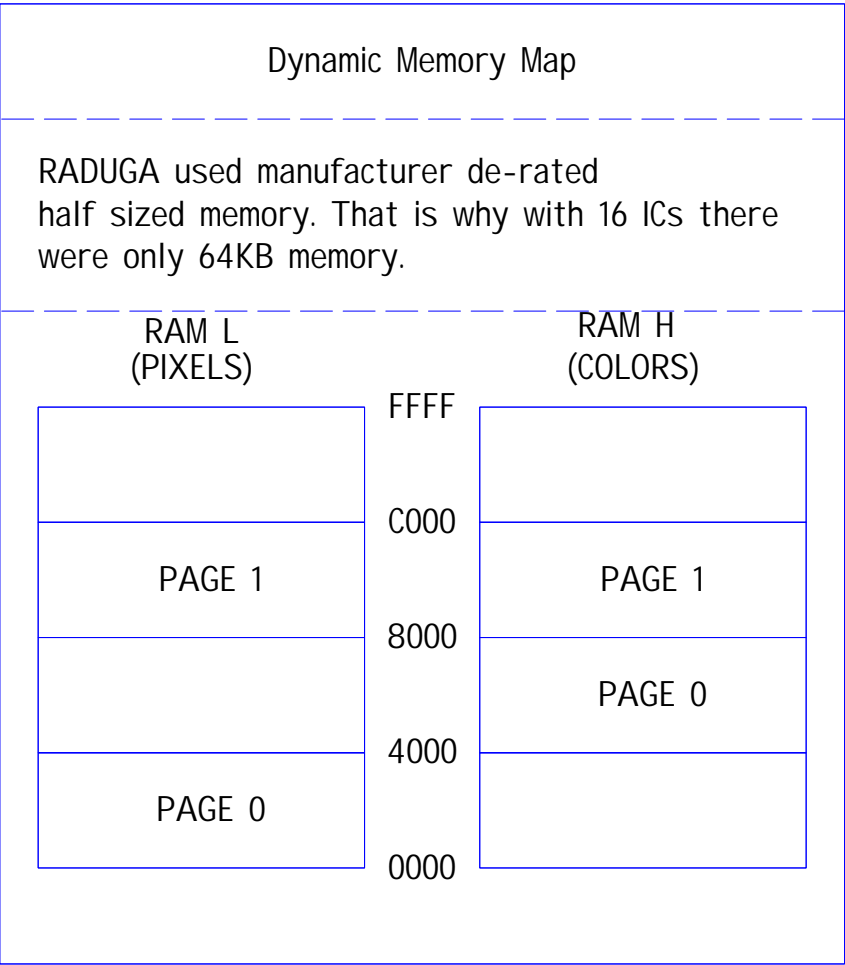
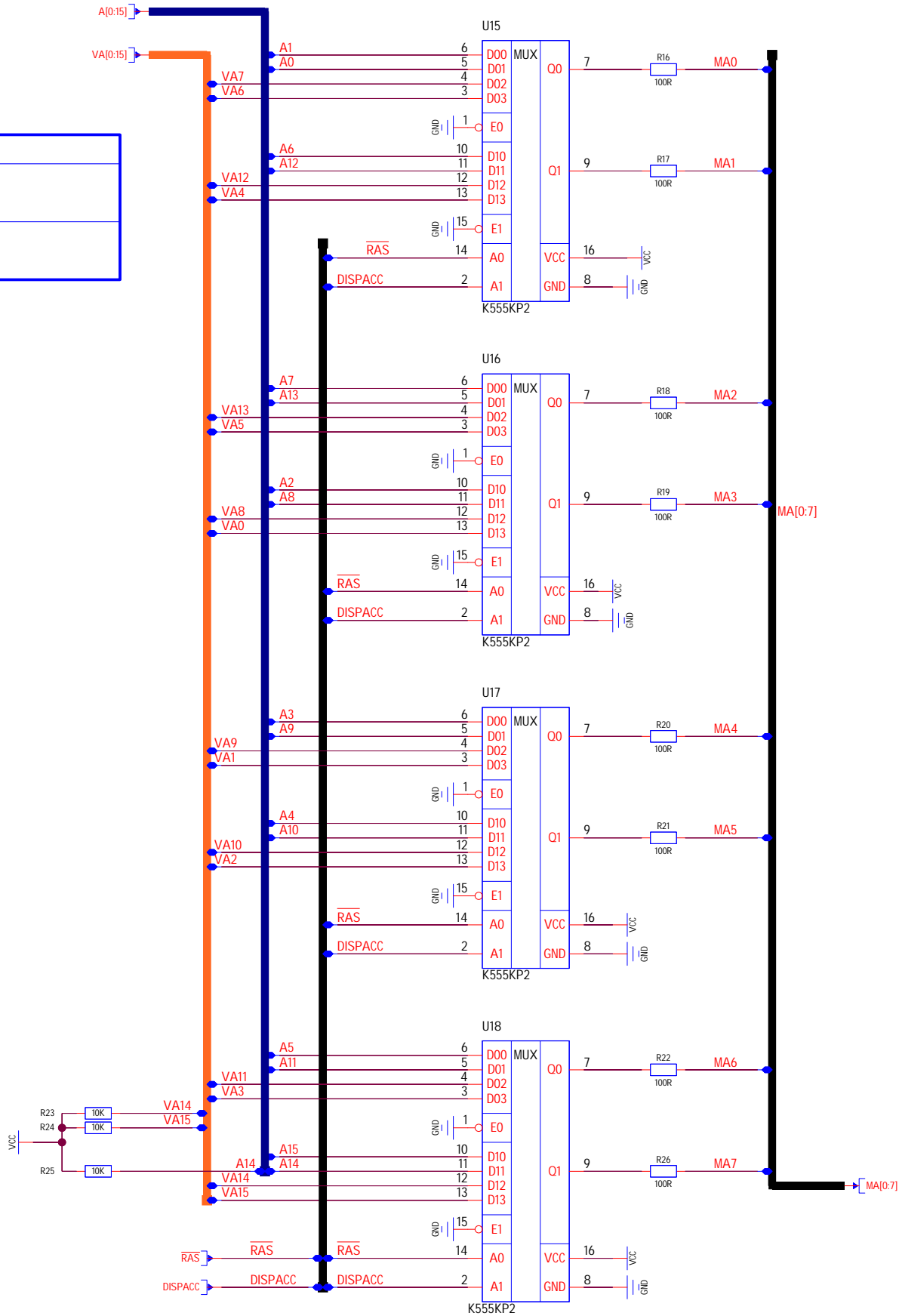
SHEET
8 of 16

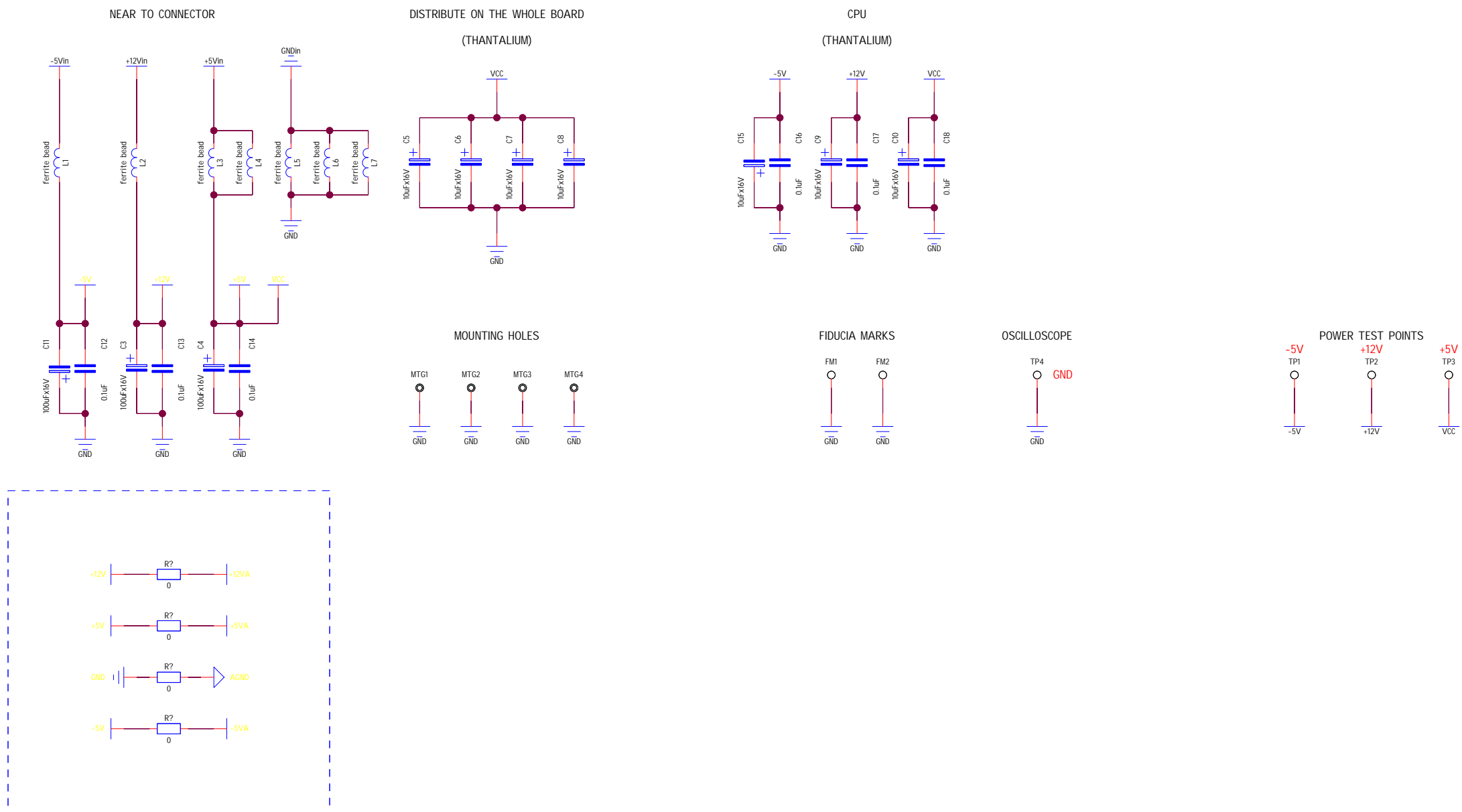
21/04/2019:11:22

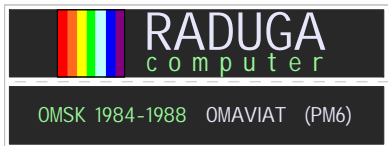
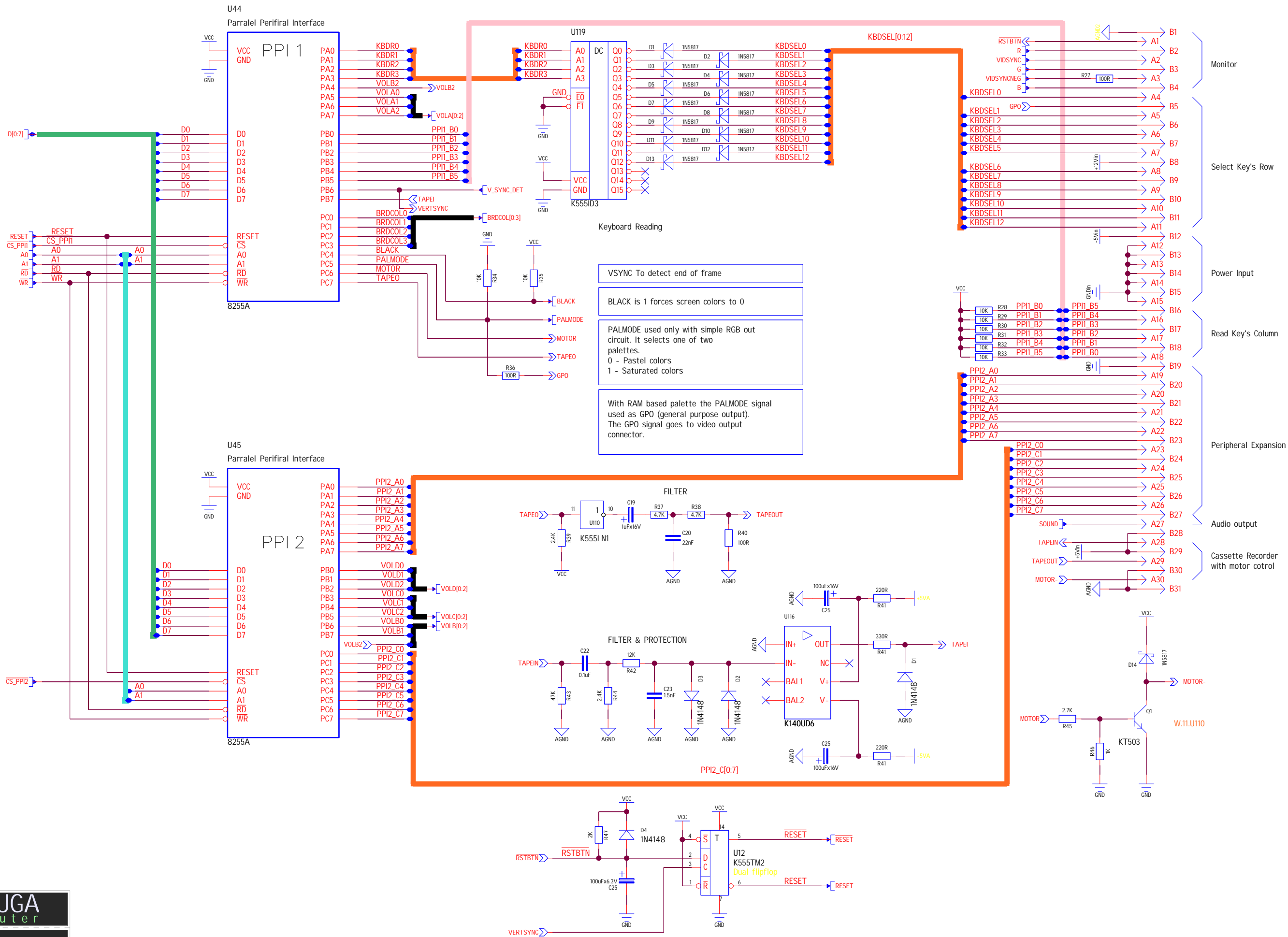




SIGNAL	VALUE	FUNCTION
\overline{RAS}	0 1	COLUMNS ROWS (REFRESH)
DISPACC	0 1	CPU CRT







221B Baker Street
RETRO COMPUTERS

RADUGA Computer

SIZE
A3

DWG NO
Alfa3

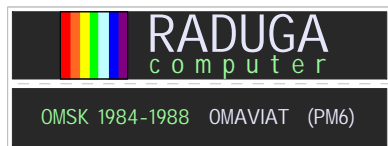
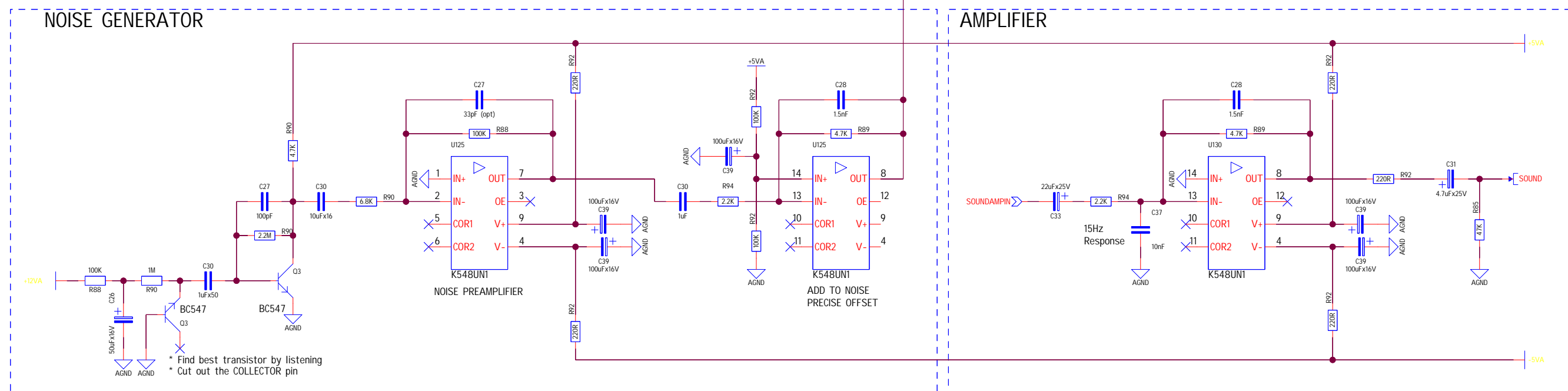
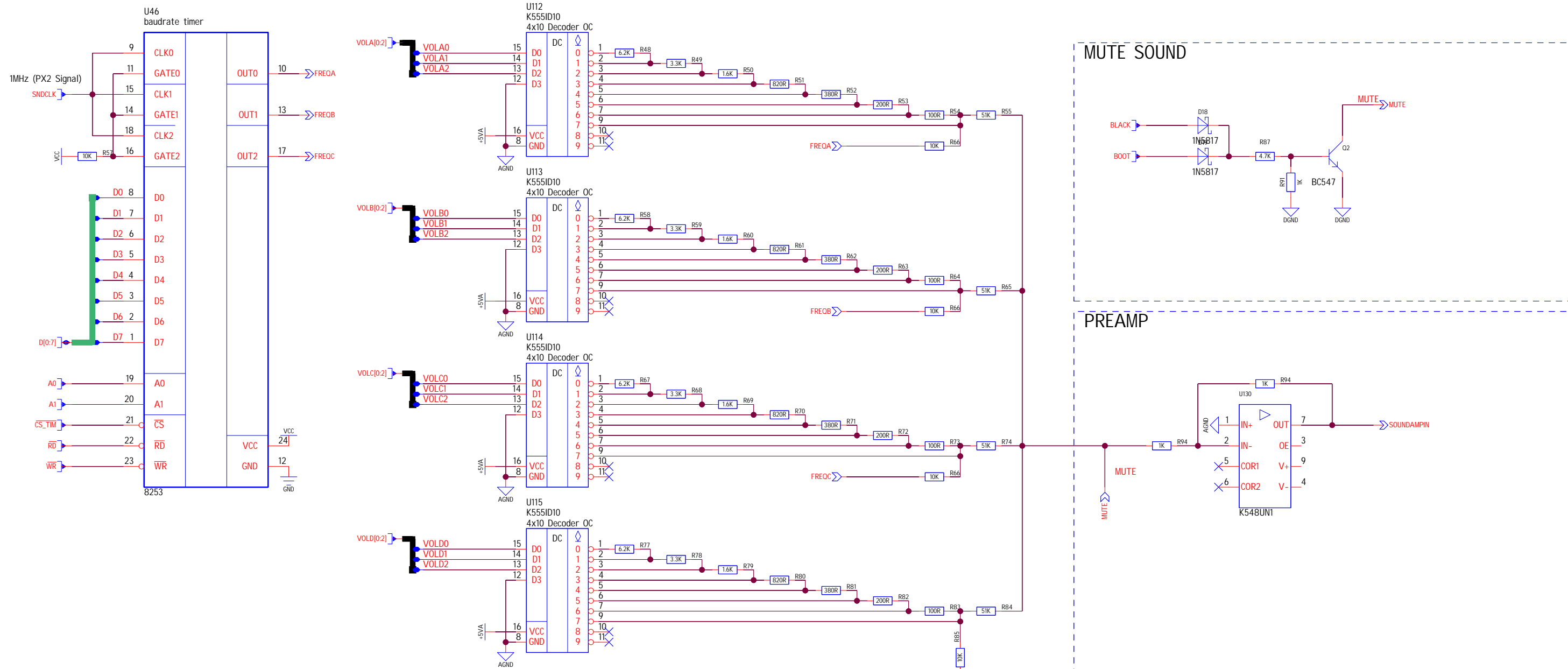
Peripherals 1

REV
a3

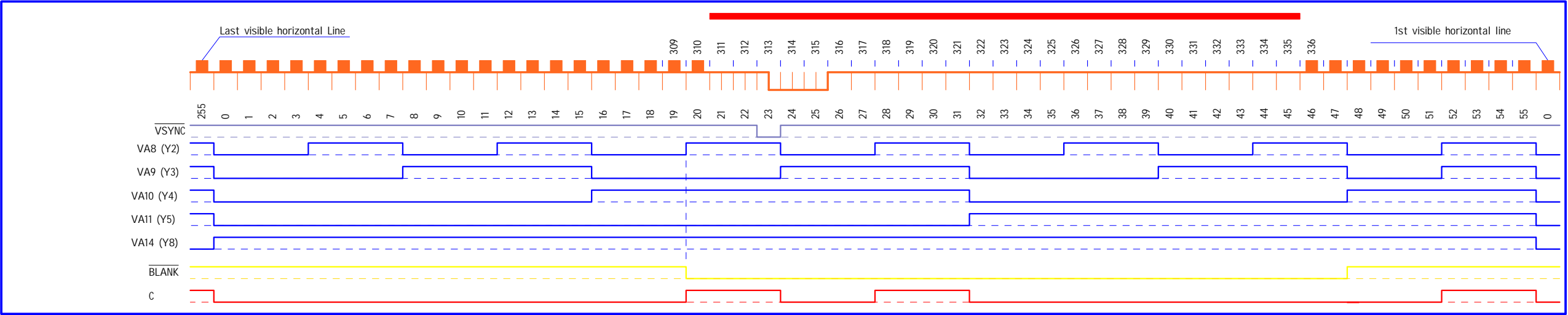
DRAWN BY
Sherlock

SHEET
13 of 16

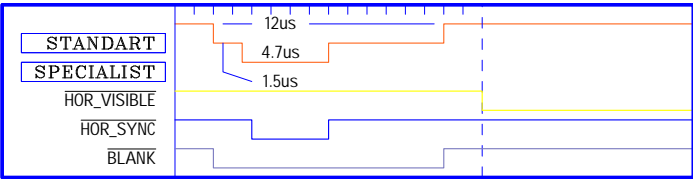
21/04/2019:11:22



Required vertical timing



Required horizontal timing (only for composed video)



VISIBLE AREA
48x32 CHARACTERS
384x256 PIXELS

