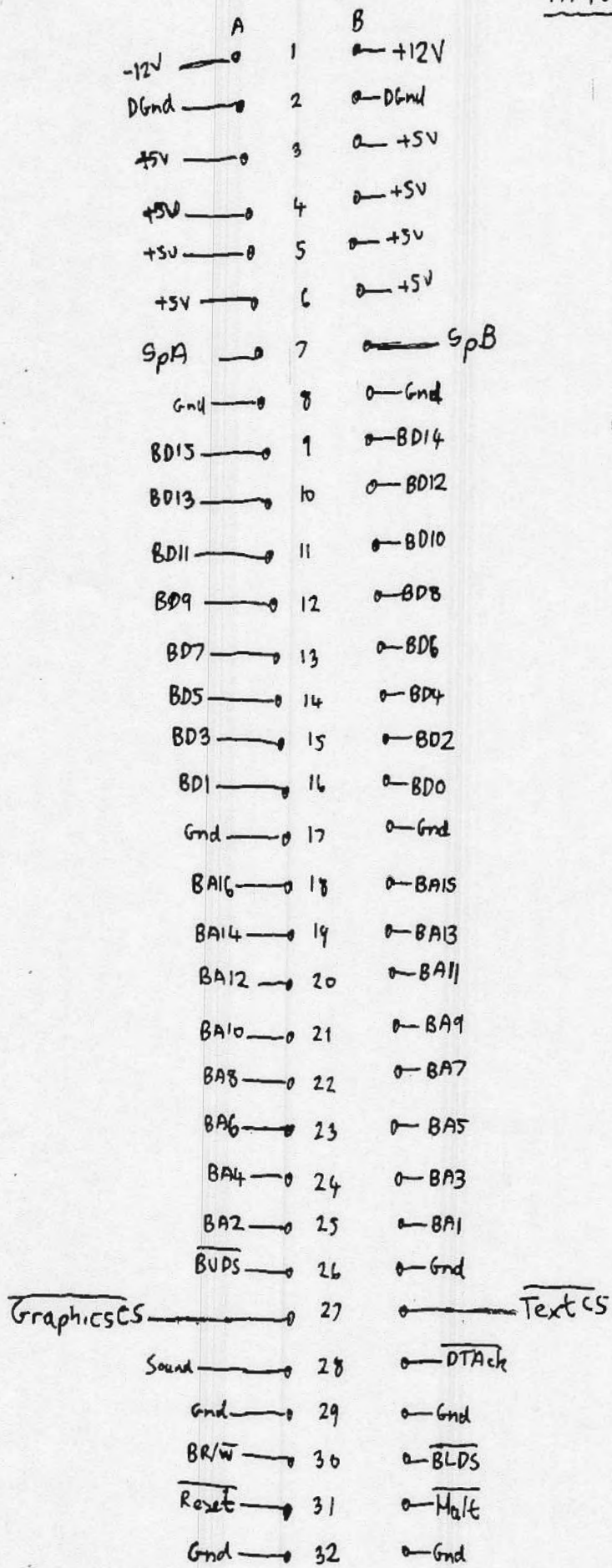


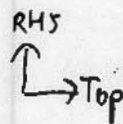
A	B	C
-12V → 0 1	→ Gnd	→ +12V
BD14 → 0 2	→ BD15	→ +5V
BD12 → 0 3	→ BD13	→ +5V
BD10 → 0 4	→ BD11	→ +5V
BD8 → 0 5	→ BD9	→ +5V
BD6 → 0 6	→ BD7	→ +5V
BD4 → 0 7	→ BD5	→ +5V
BD2 → 0 8	→ BD3	→ +5V
BDO → 0 9	→ BA23	→ BD1
BA22 → 0 10	→ BA21	→ SpA
BA20 → 0 11	→ BA19	→ SpB
BA18 → 0 12	→ BA17	→ Gnd
BA16 → 0 13	→ BA15	→ Gnd
BA14 → 0 14	→ BA13	→ Gnd
BA12 → 0 15	→ BA11	→ Gnd
BA10 → 0 16	→ BA9	→ Gnd
BA8 → 0 17	→ BA7	→ Gnd
BA6 → 0 18	→ BA5	→ Gnd
BA4 → 0 19	→ BA3	→ Gnd
BA2 → 0 20	→ BA1	→ Gnd
Hold → 0 21	→ Gnd	→ Gnd
Reset → 0 22	→ BR/W	→ BLD5
Spave1 → 0 23	→ BAS	→ Gnd
B6 → 0 24	→ BUD5	→ BFC2
Vector → 0 25	→ BErr	→ GraphicsCS
IR6 → 0 26	→ DTAck	→ TextCS
IR4 → 0 27	→ BFC1	→ Sound
DMARdy → 0 28	→ EndT	→ BFC0
IR2 → 0 29	→ IRS	→ BDRV
Spave0 → 0 30	→ IR3	→ BGack
DMACK0 → 0 31	→ IR1	→ BR
DMAR0 → 0 32	→ IR7	→ Iack

Processor PCB → Backplane

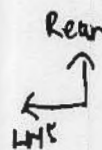
RHS
 ↑
 ↳ Top



Monitor PCB → Backplane

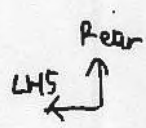


A	B	C
Vidout → 1	Intout	Hsyncout
VSynout → 2	0	LDispen
Gnd → 3	Gnd	Gnd
GClk → 4	GDot5	ClrHClk
→ 5	MClk	(Gnd)
Gnd → 6	Gnd	Gnd
BD15 → 7	BD14	BD7
BD13 → 8	BD12	BD6
BD11 → 9	BD10	BD5
BD9 → 10	BD8	BD4
VData7 → 11	VData6	BD3
VData5 → 12	VData4	BD2
VData3 → 13	VData2	BD1
VData1 → 14	VData0	BD0
Gnd → 15	Gnd	Gnd
Gnd → 16	BA16	BA15
Gnd → 17	BA14	BA13
Gnd → 18	BA12	BA11
Gnd → 19	BA10	BA9
Gnd → 20	BA8	BA7
Gnd → 21	BA6	BA5
Gnd → 22	BA4	BA3
Gnd → 23	BA2	BA1
Gnd → 24	Gnd	Gnd
Gnd → 25	GraphicsCS	TextCS
Gnd → 26	0	DTack
Gnd → 27	Gnd	Gnd
Gnd → 28	BR/W	BLDS
VRst → 29	Rext	Halt
Gnd → 30	0	BUDS
+5V → 31	+5V	+5V
+5V → 32	+5V	+5V

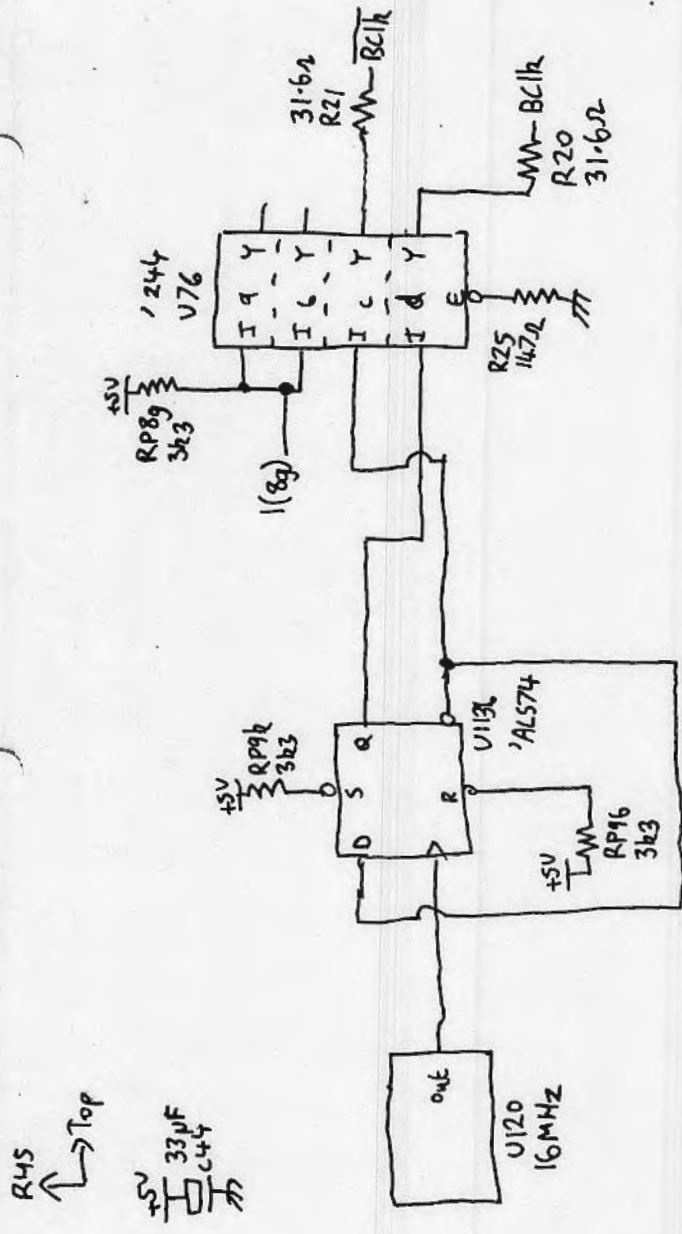
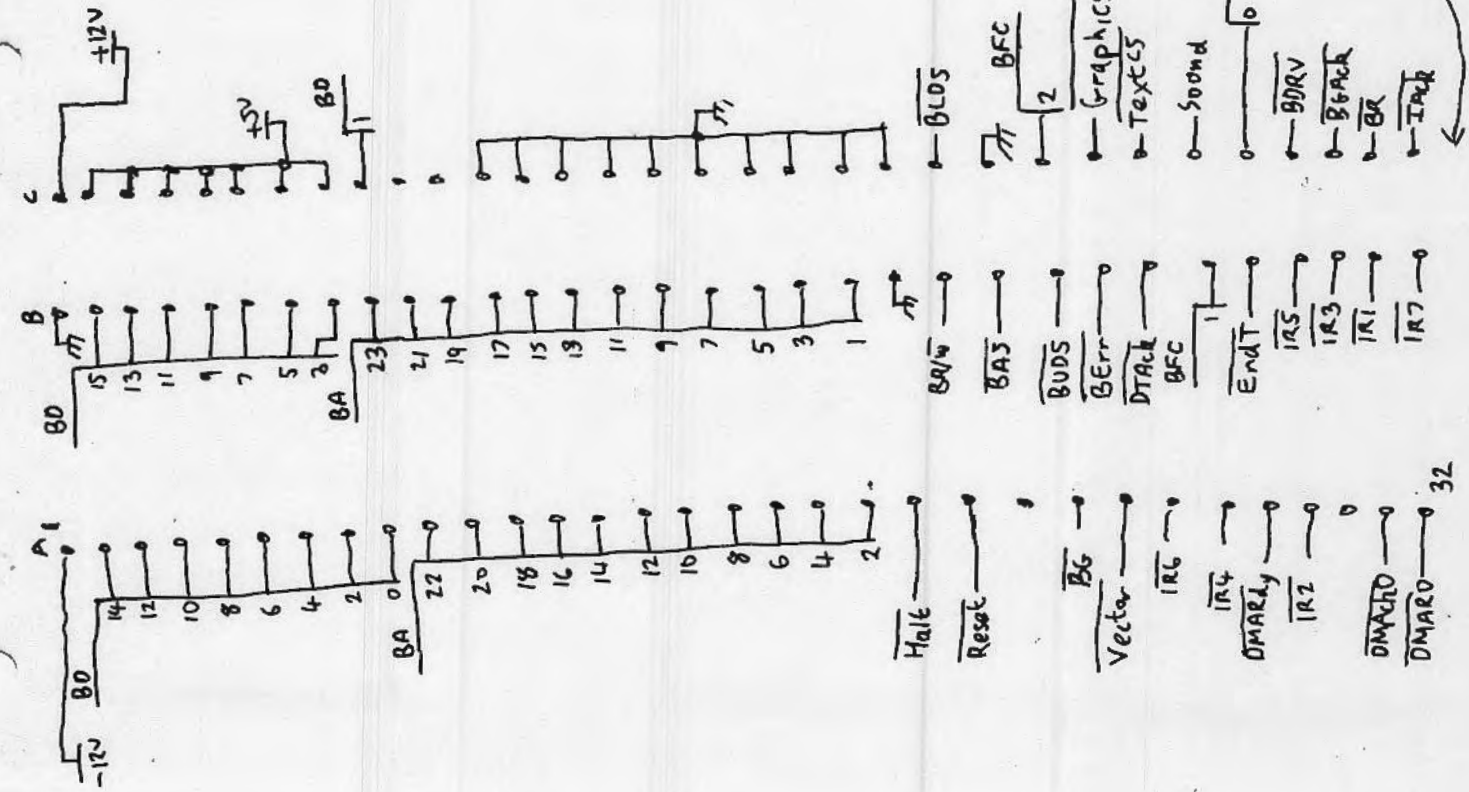


Text PCB → Monitor PCB

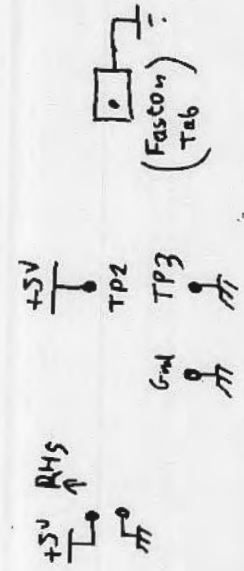
A	B
VSync Out → 1	HSync Out
0 2 →	LDisp En
Gnd → 3	Gnd
0 4 →	CT-HClk
GClk → 5	G-Dots
Gnd → 6	Gnd
BD15 → 7	BD14
BD13 → 8	BD12
BD11 → 9	BD10
BD9 → 10	BD8
VData7 → 11	VData6
VData5 → 12	VData4
VData3 → 13	VData2
VData1 → 14	VData0
Gnd → 15	Gnd
BA16 → 16	BA15
BA14 → 17	BA13
BA12 → 18	BA11
BA10 → 19	BA9
BA8 → 20	BA7
BA6 → 21	BA5
BA4 → 22	BA3
BA2 → 23	BA1
Gnd → 24	Gnd
Graphics → 25	0
0 26 →	DTAck
Gnd → 27	Gnd
BR/W → 28	BLDS
BUDS → 29	VRst
Gnd → 30	Gnd
+5V → 31	+5V
+5V → 32	+5V



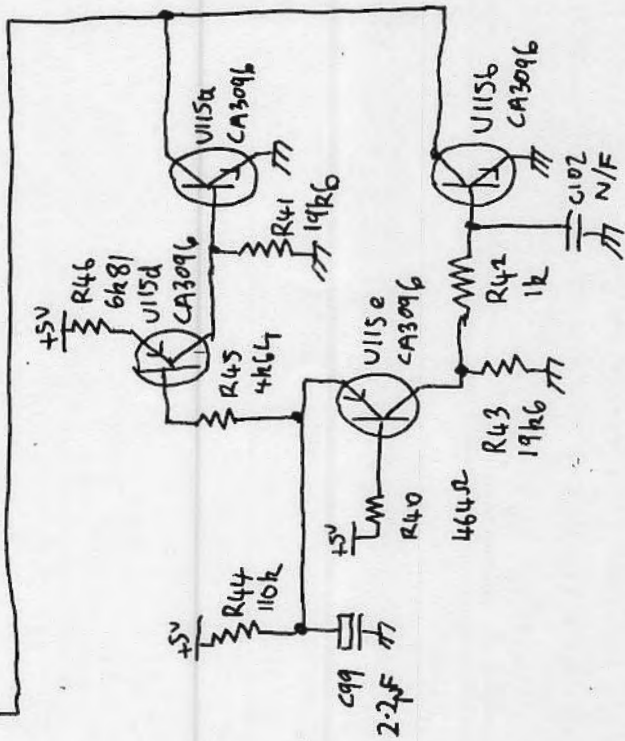
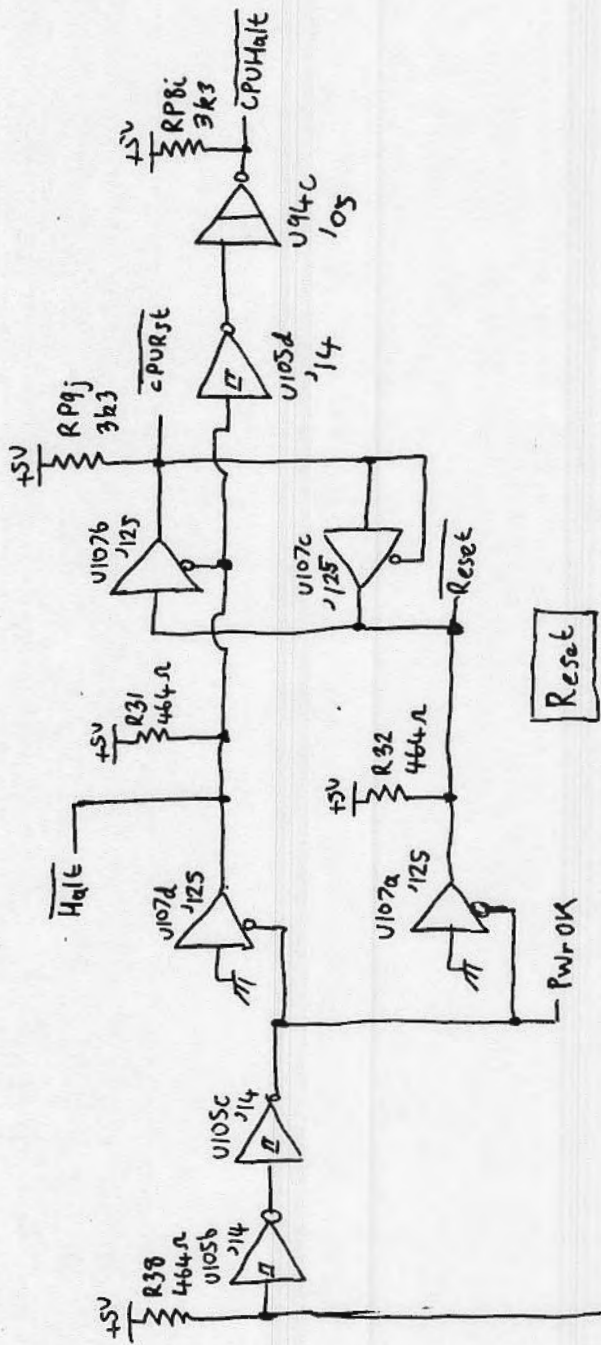
Graphics PCB → Monitor PCB

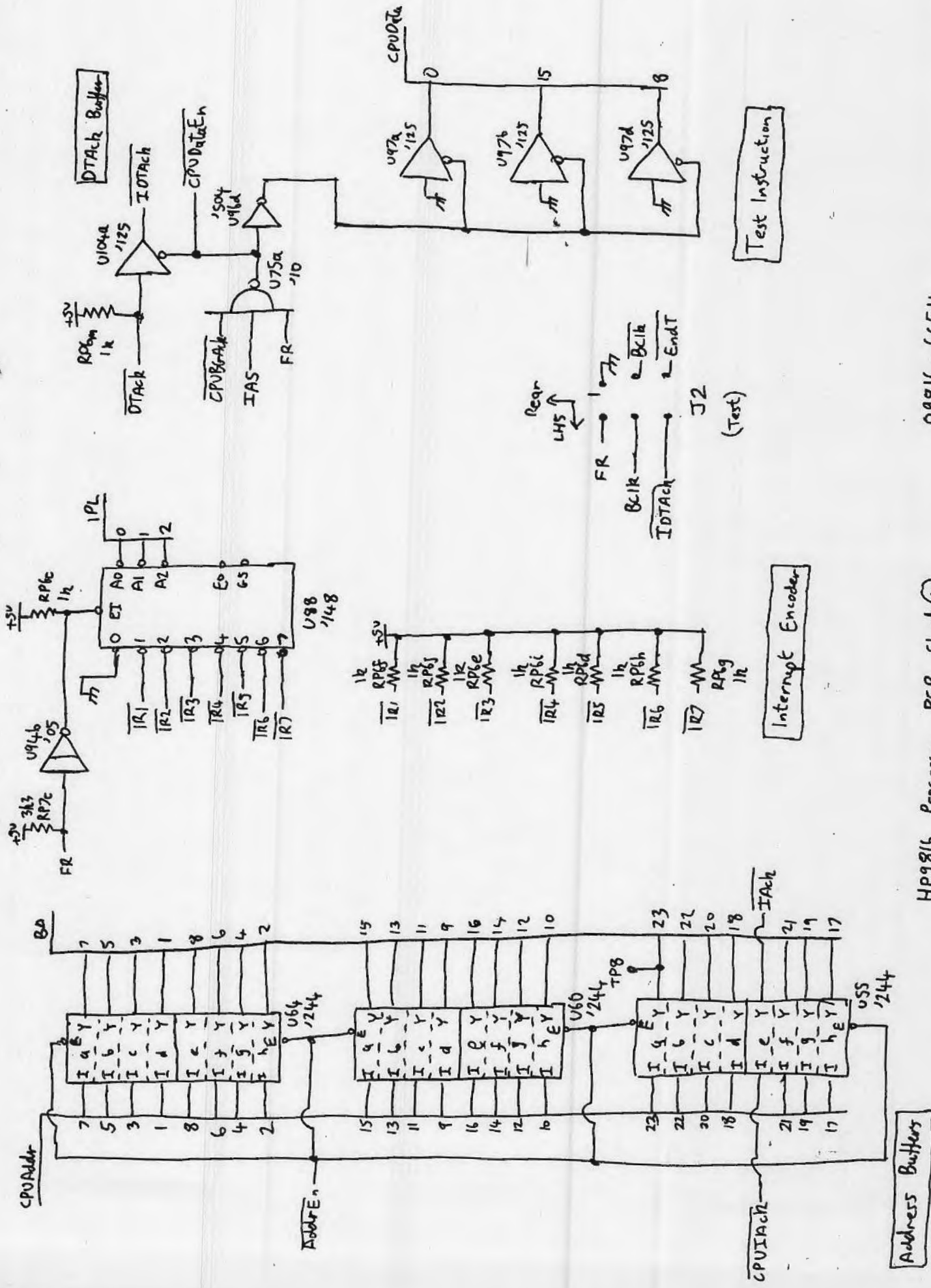


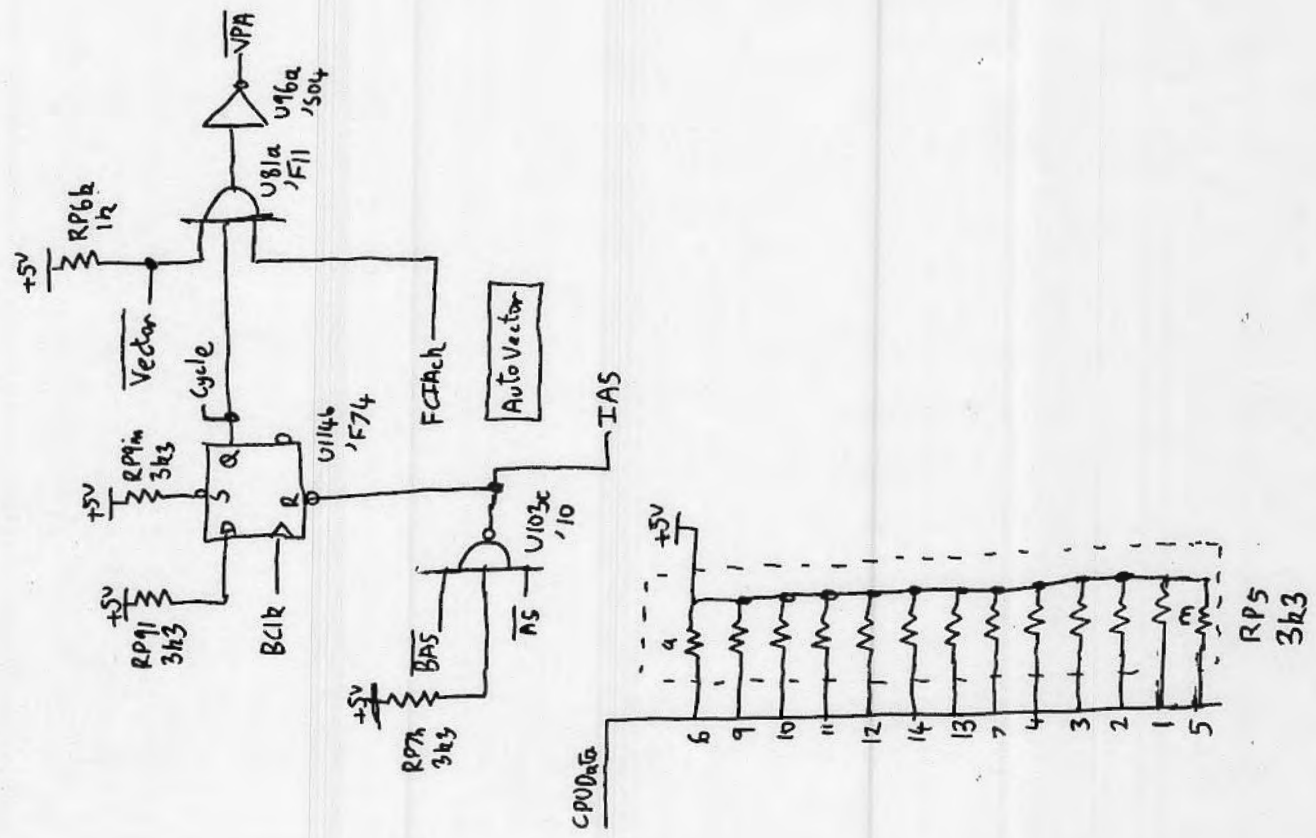
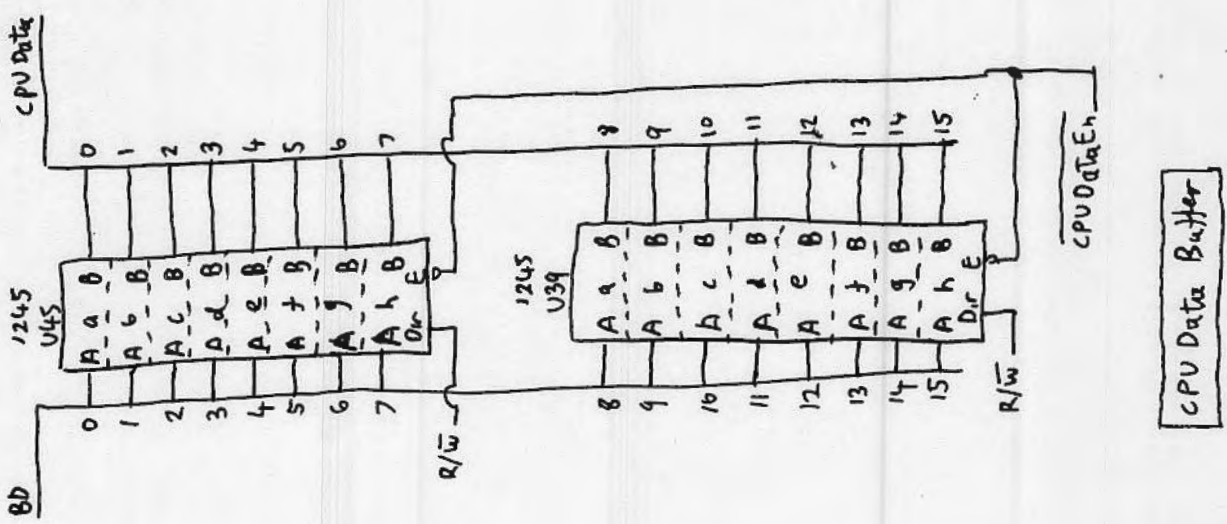
Master Clock



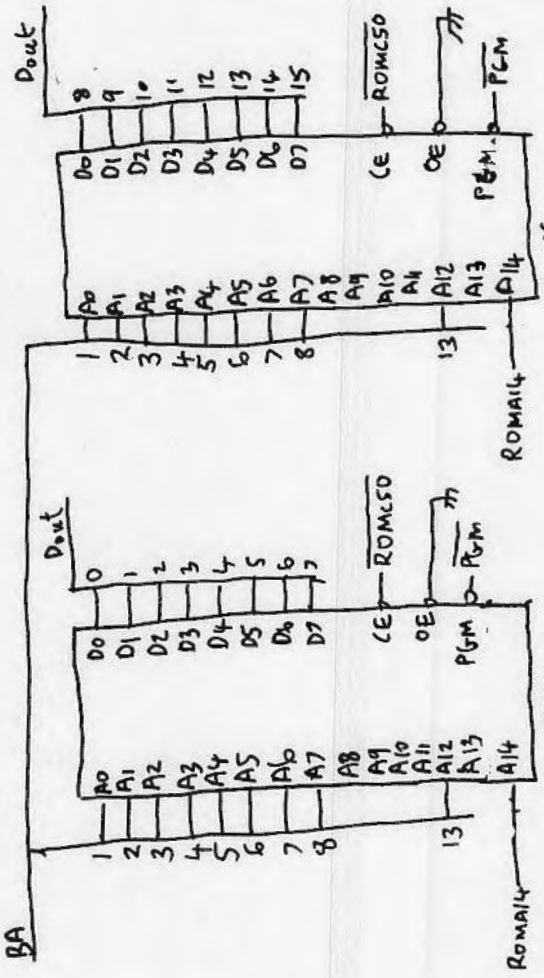
J1 (Backplane)





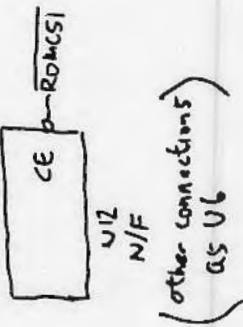


HP9816 Processor PCB Sheet 5 09816-66514



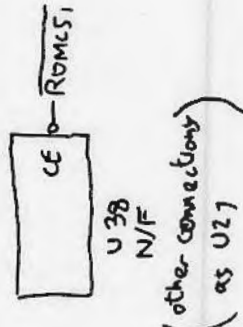
U26
23256
1818-3114

U27
23256
1818-3115



U12
N/F

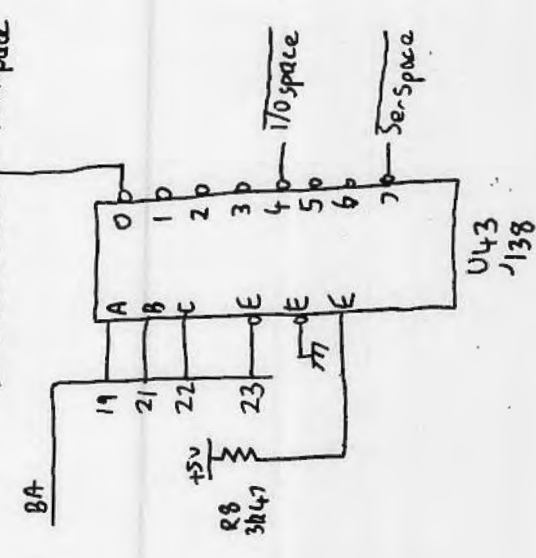
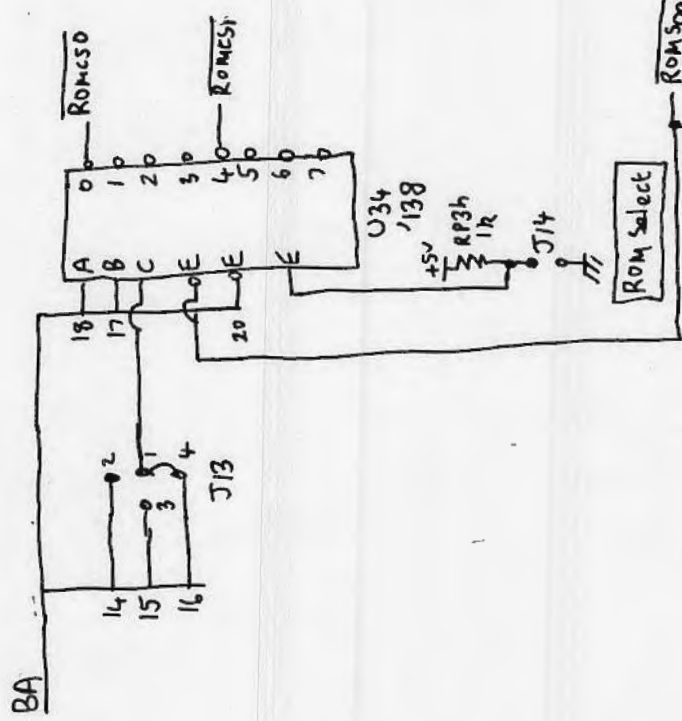
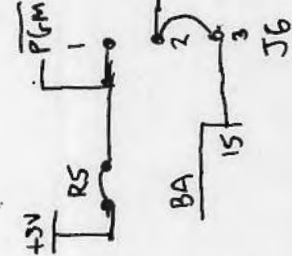
(other connections)
as U6

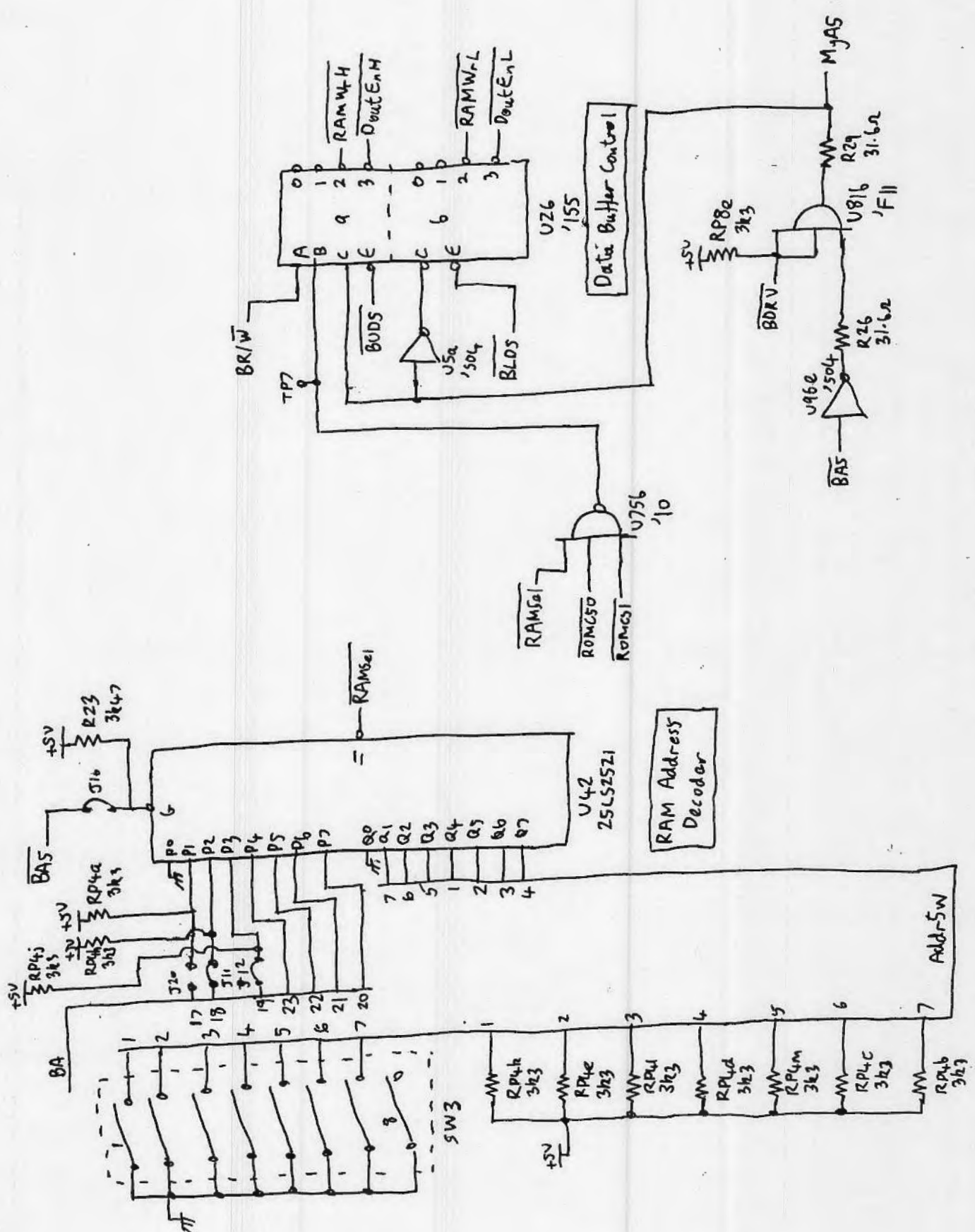


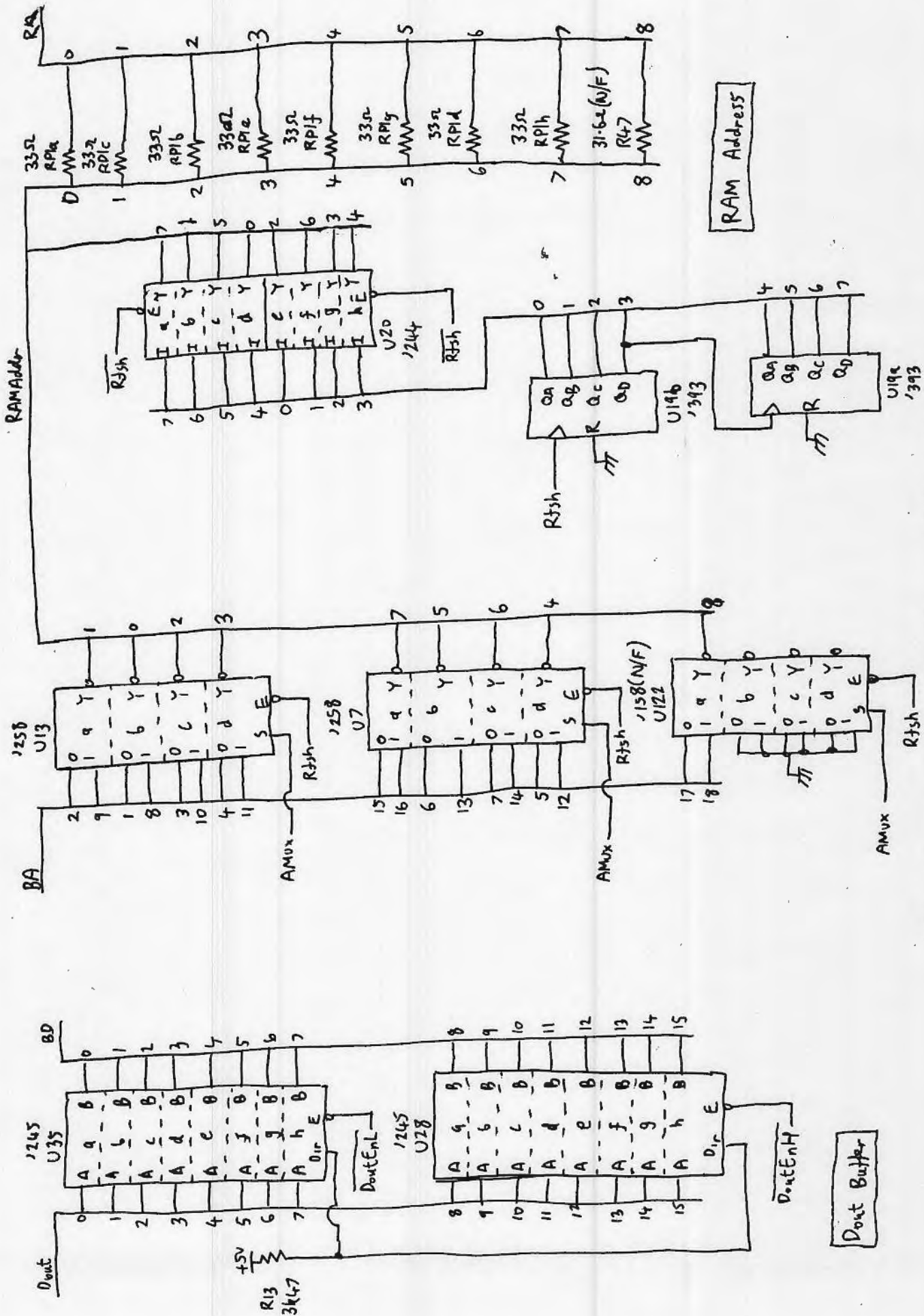
U38
N/F

(other connections)
as U27

ROM

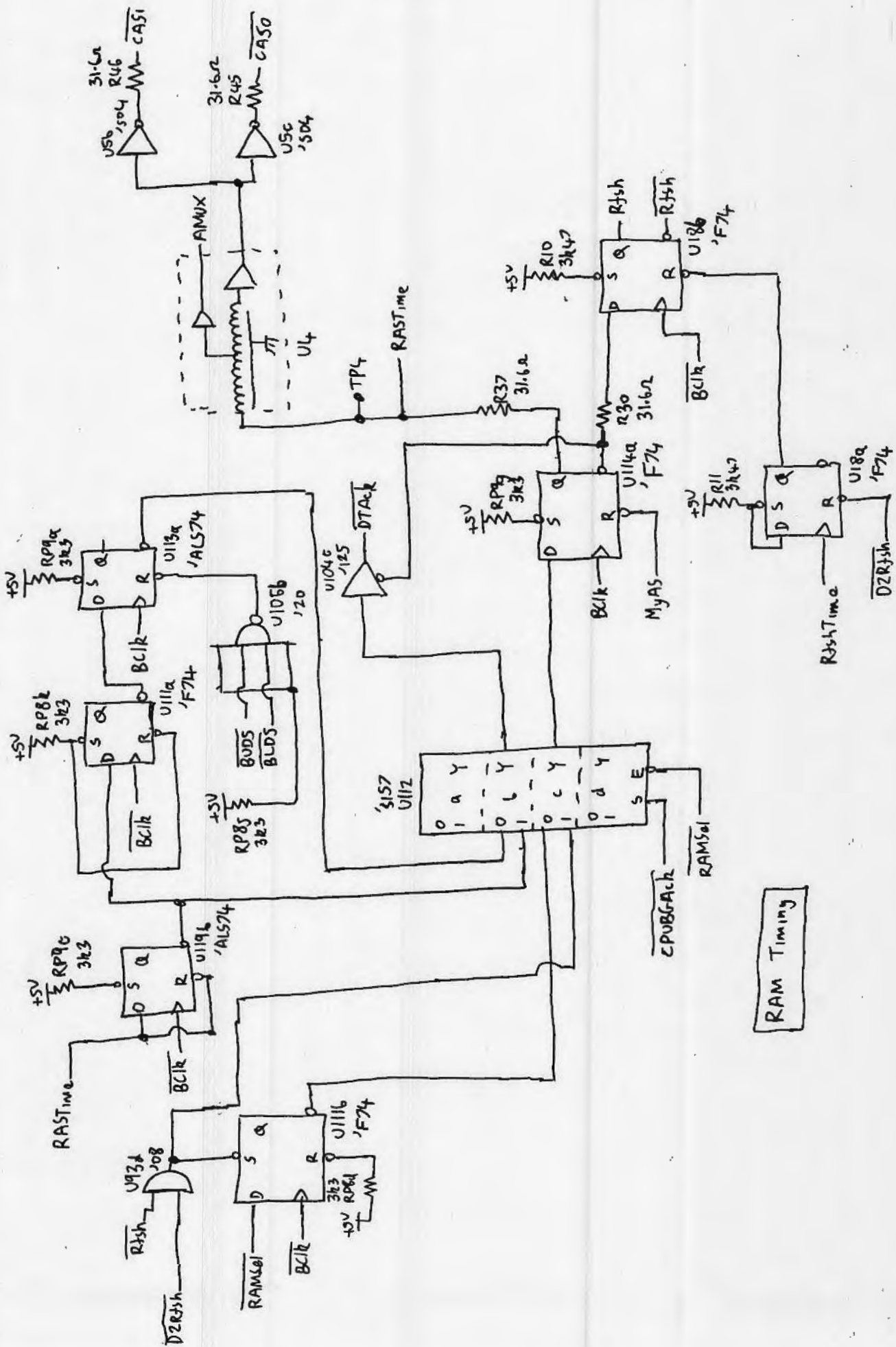




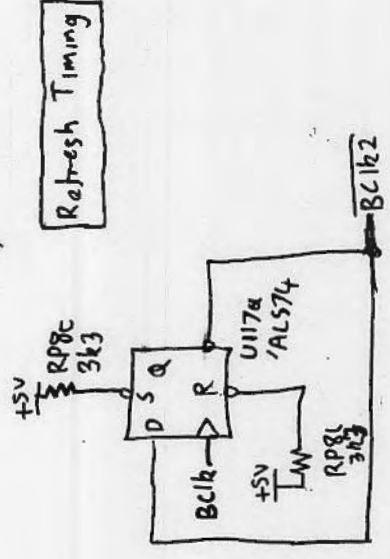
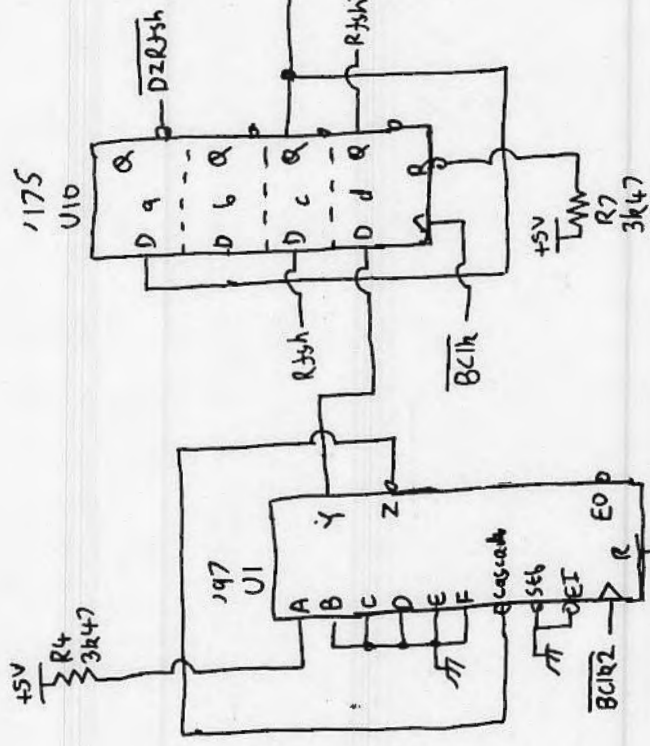
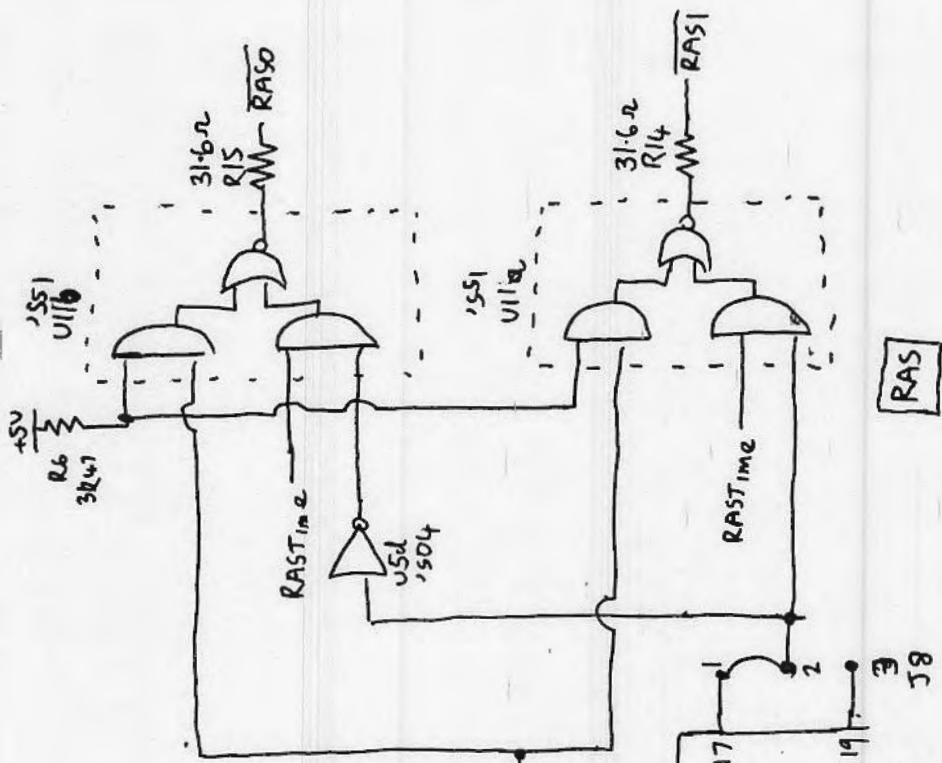


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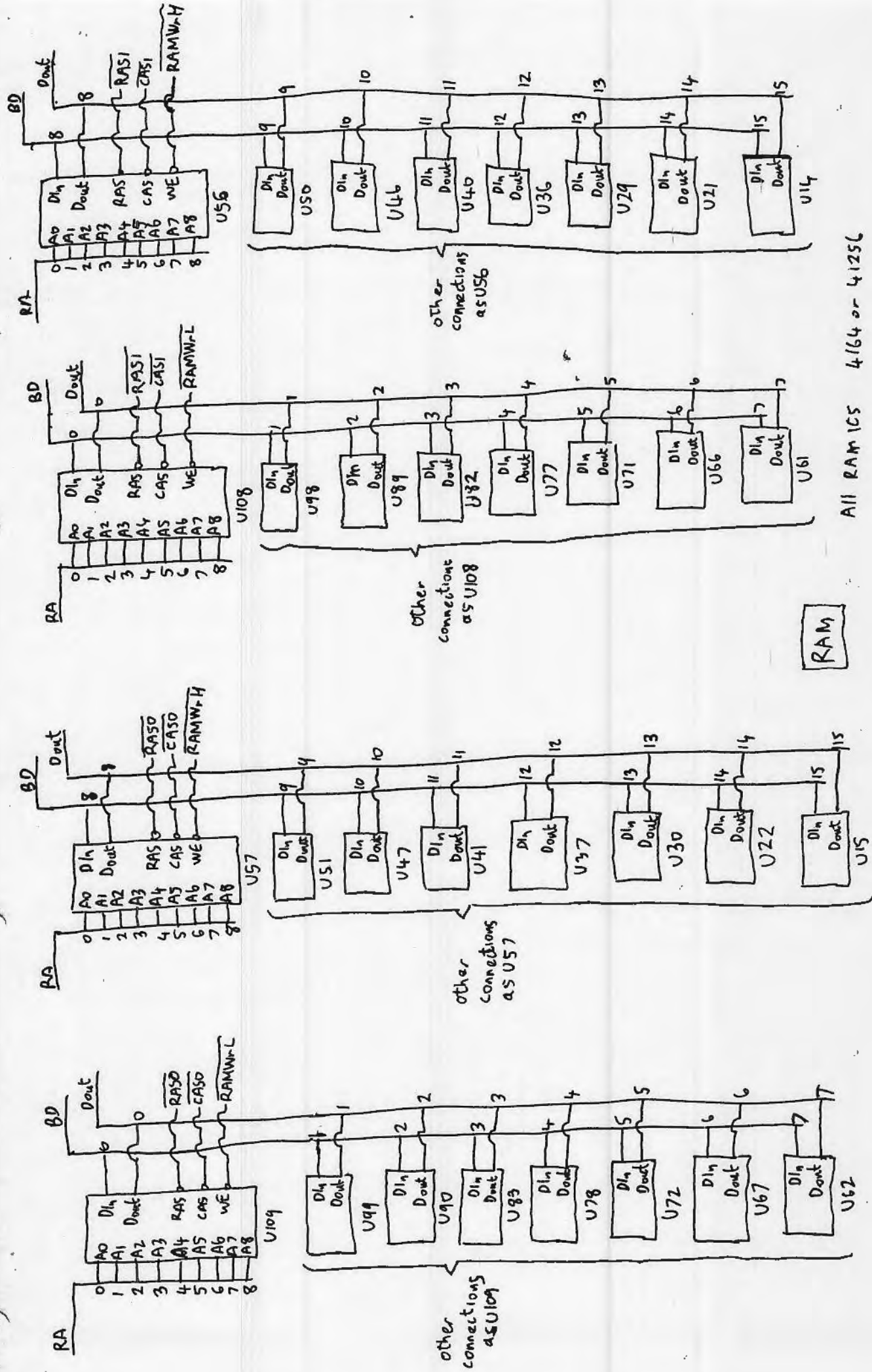
HP9816 Processor PCB Sheet 8

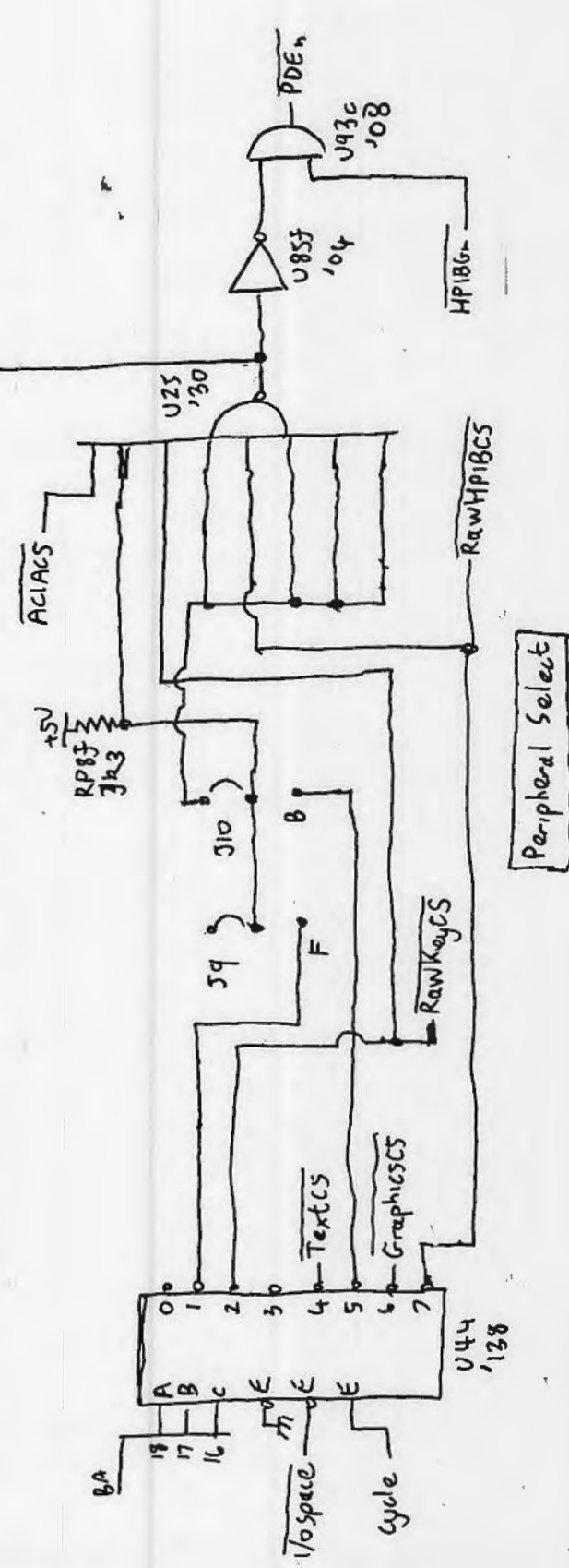
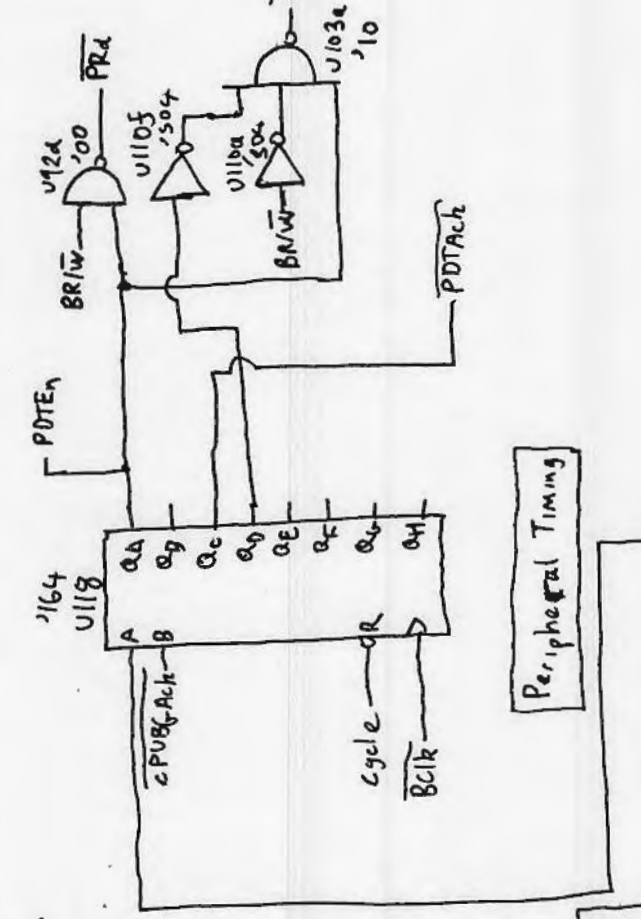
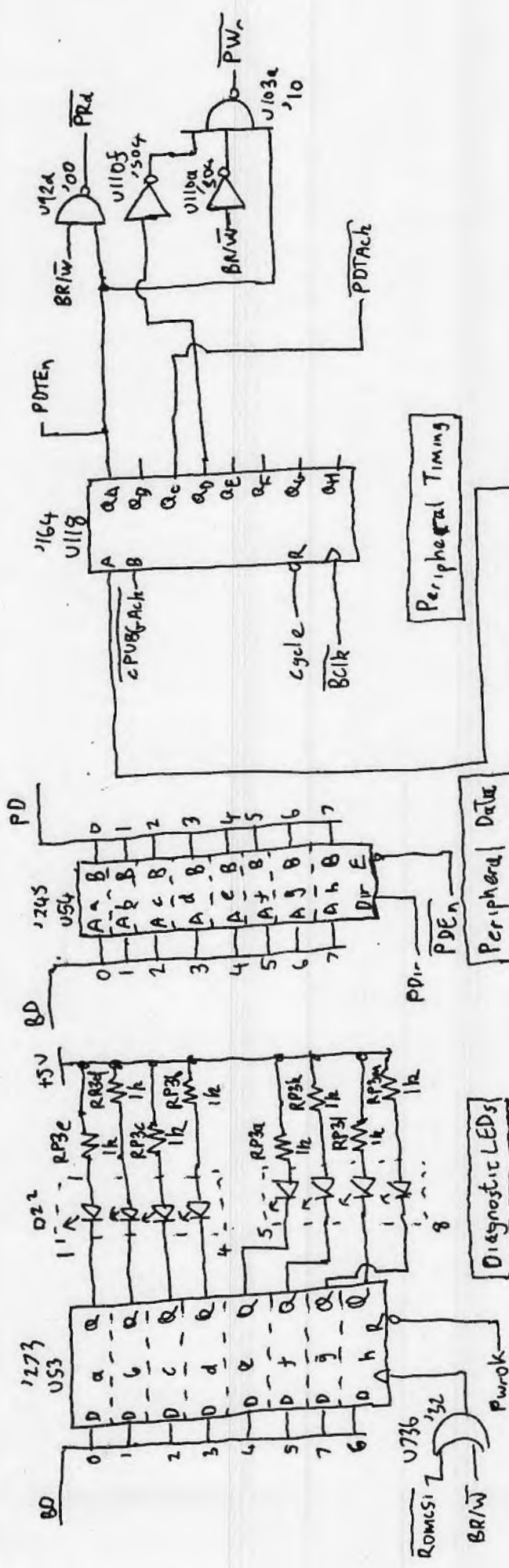


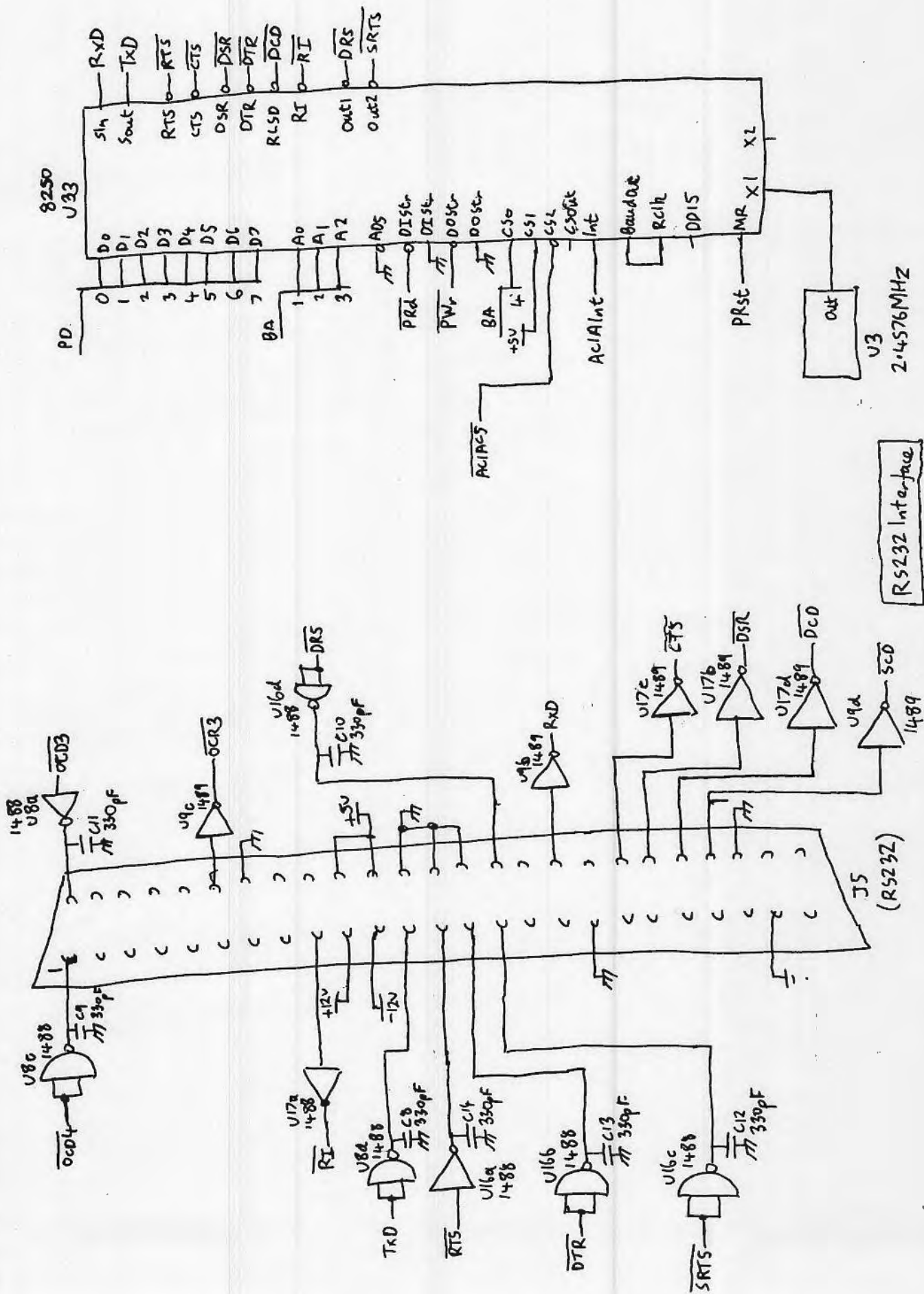
RAM Timing



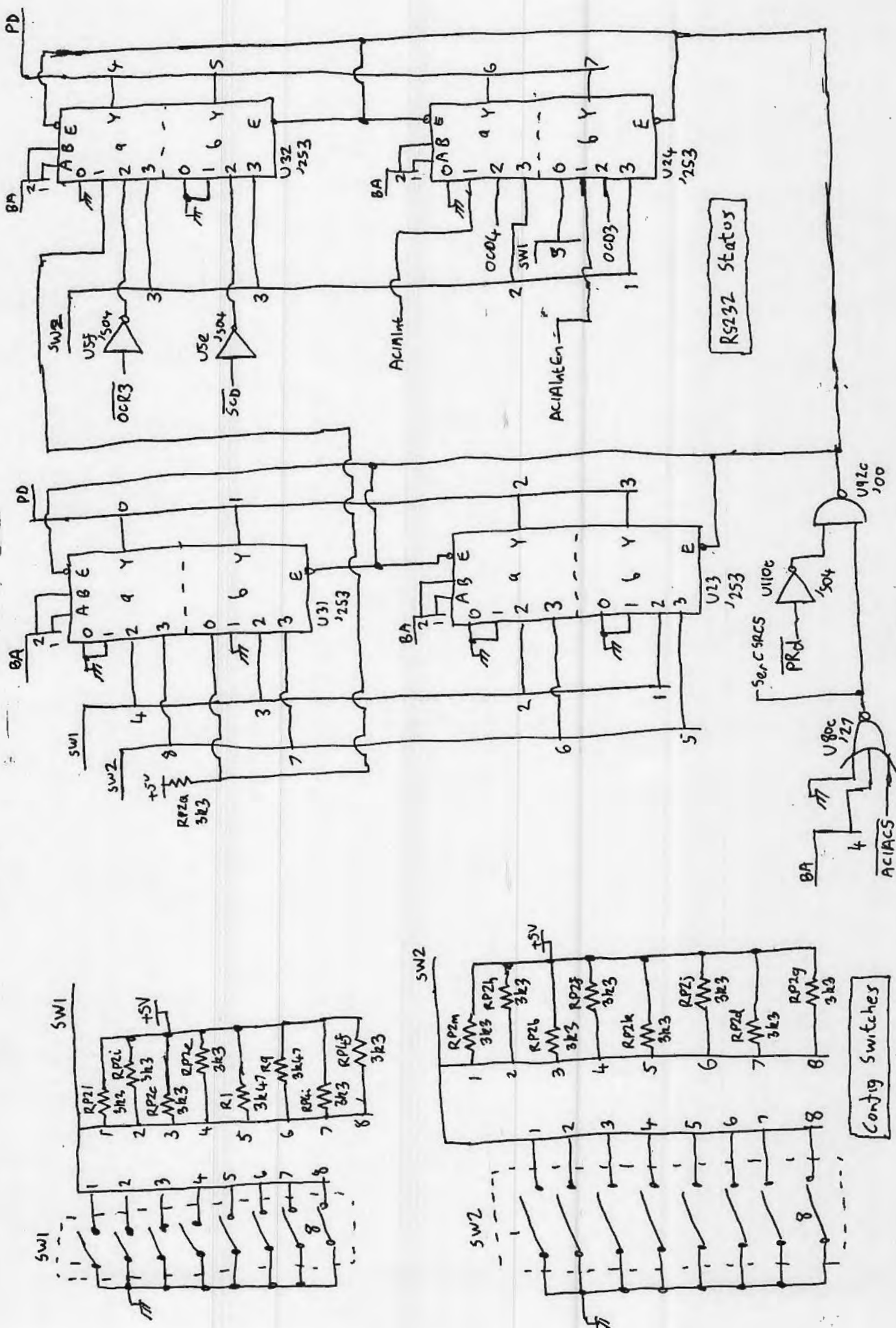
Refresh Timing



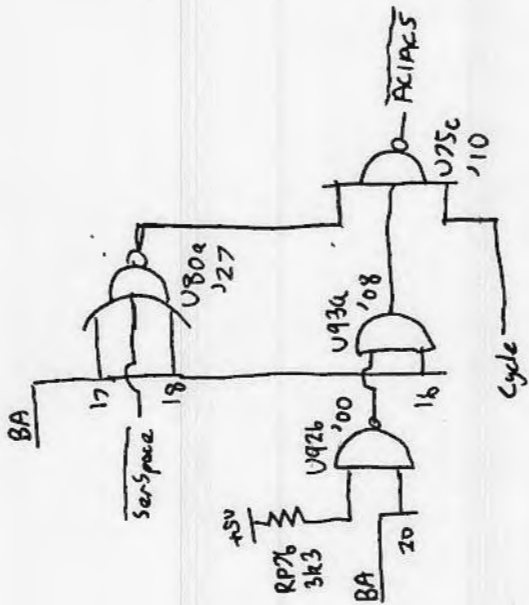
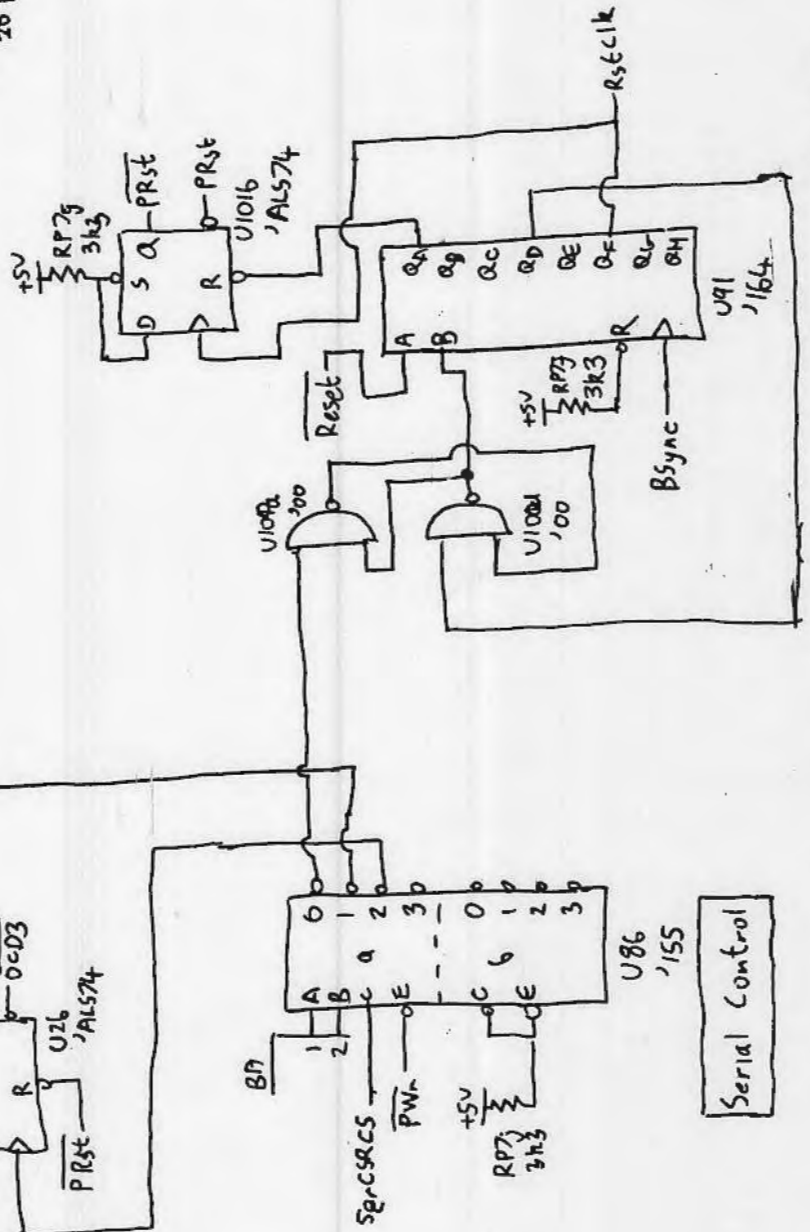
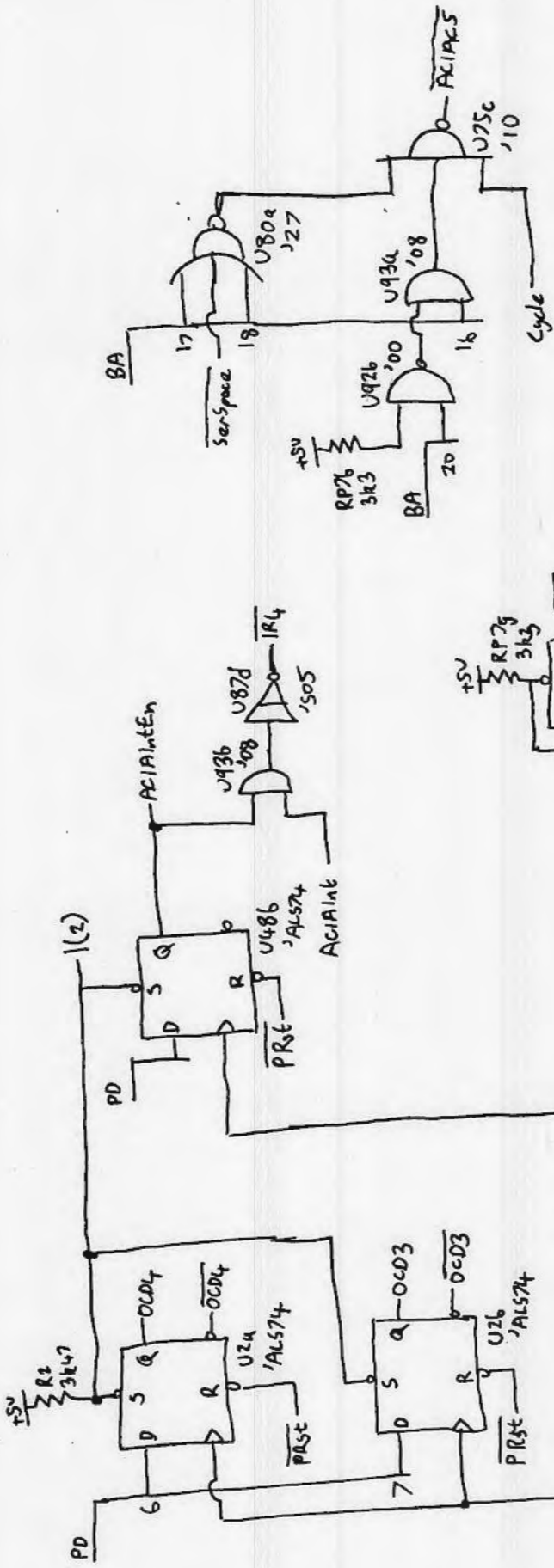


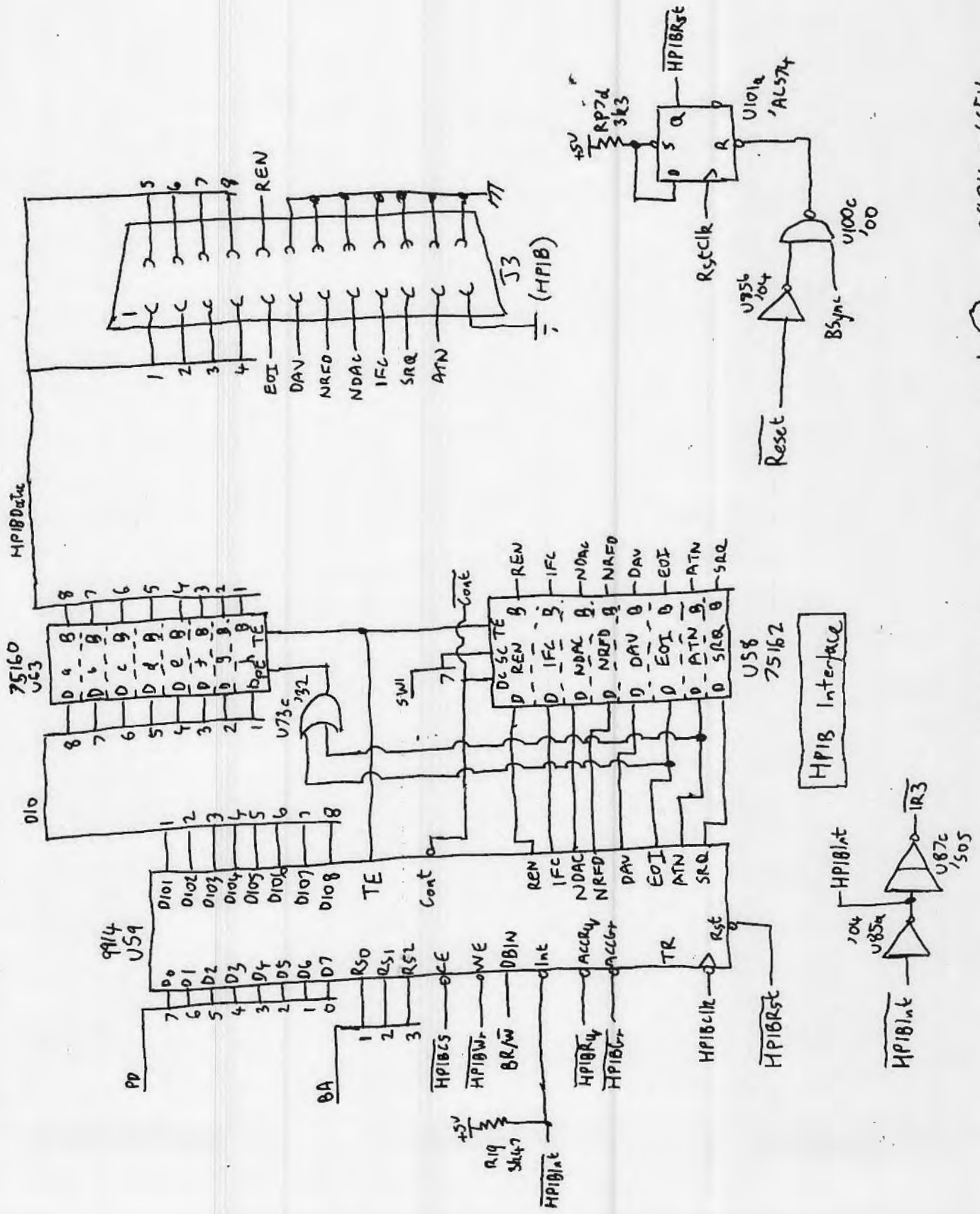


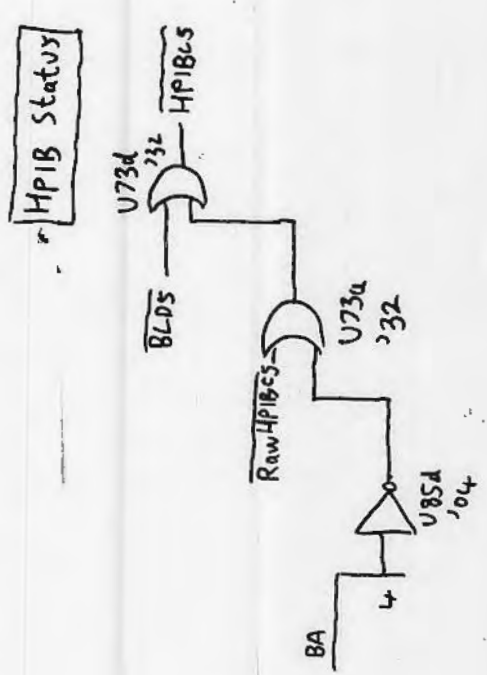
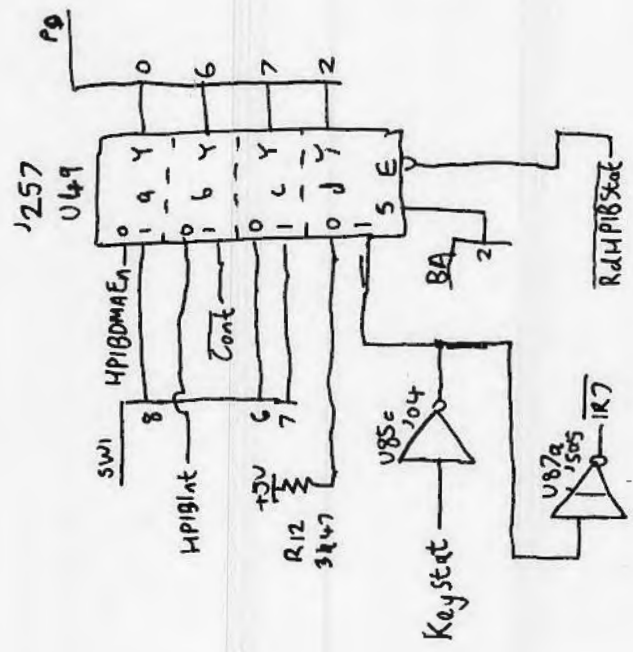
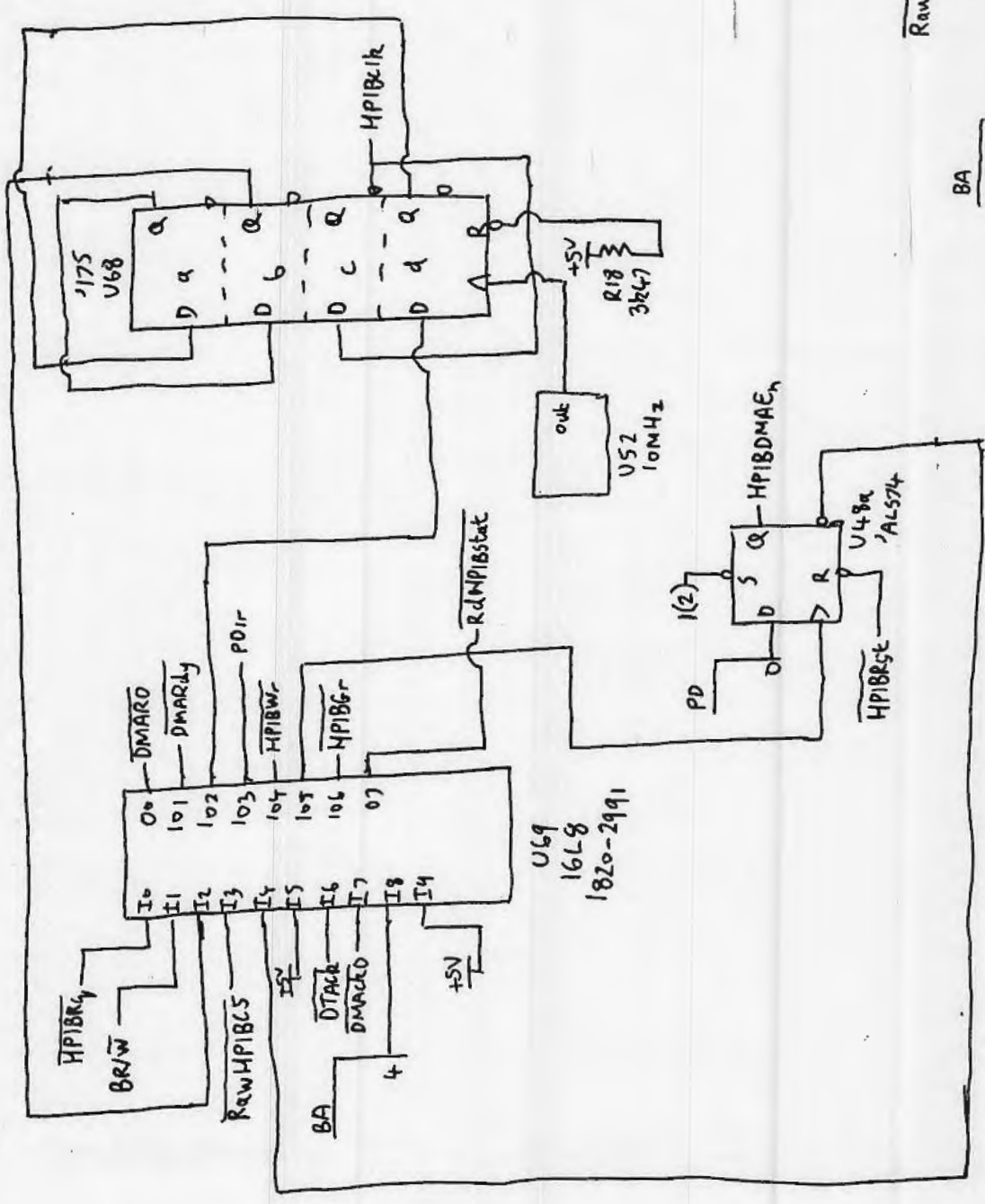
RS232 Interface



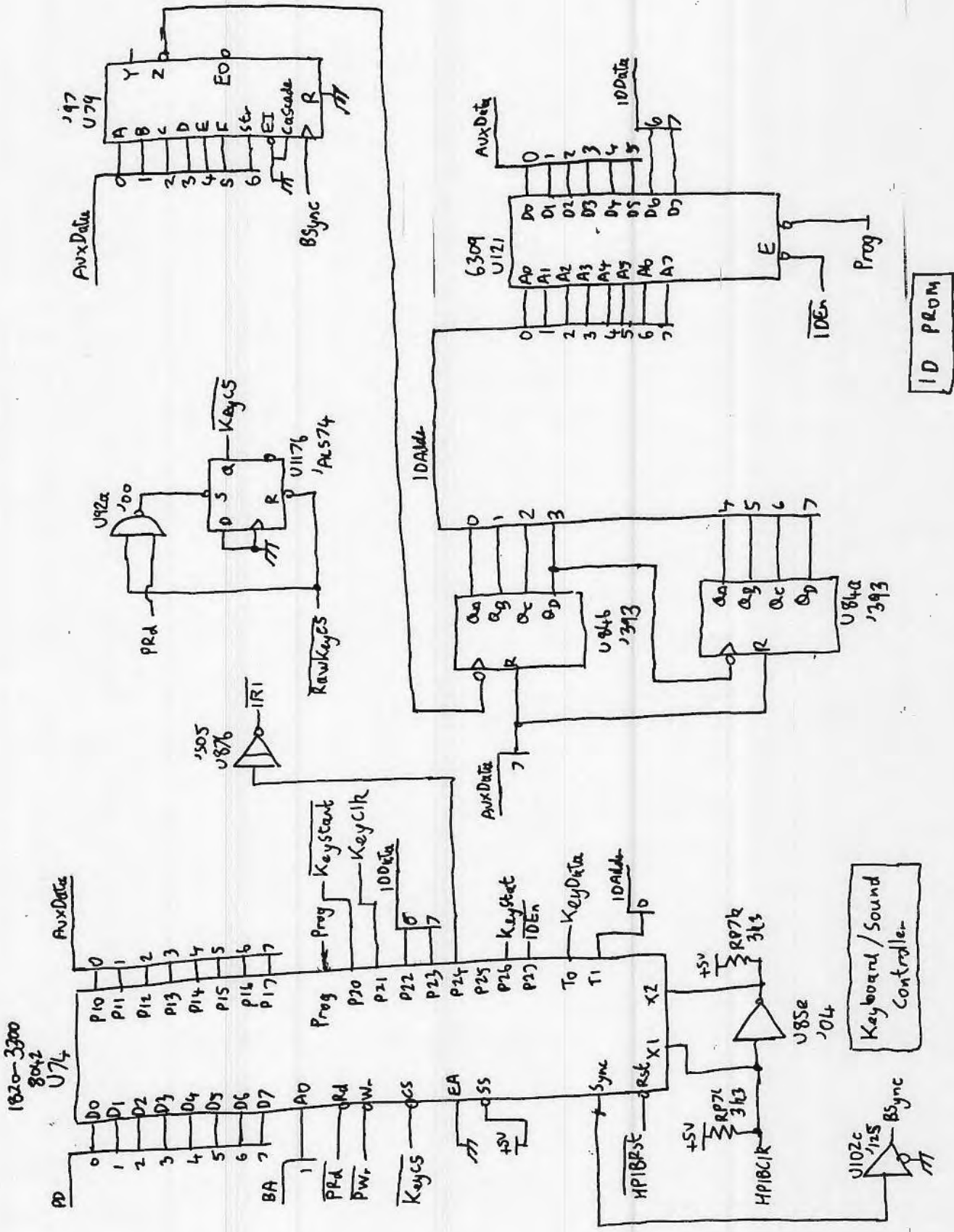
HP9816 Processor PCB sheet 14 09816-66514

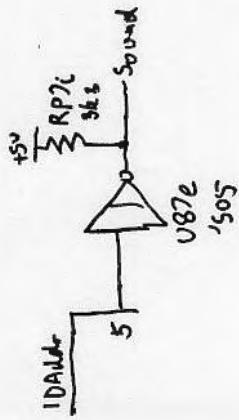




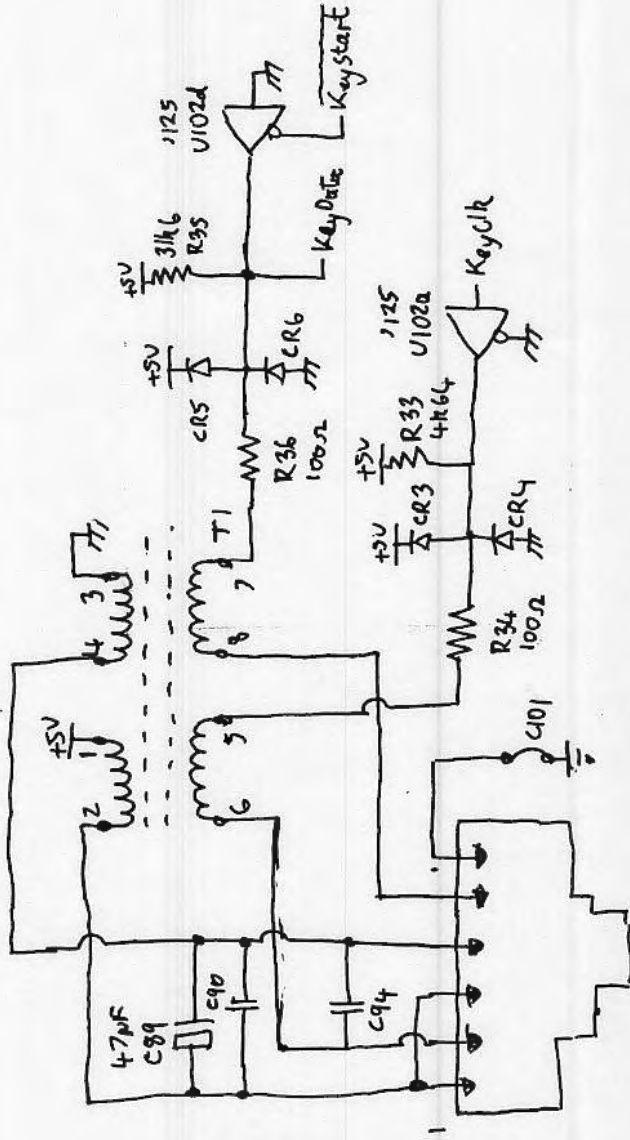


HP-IB Control



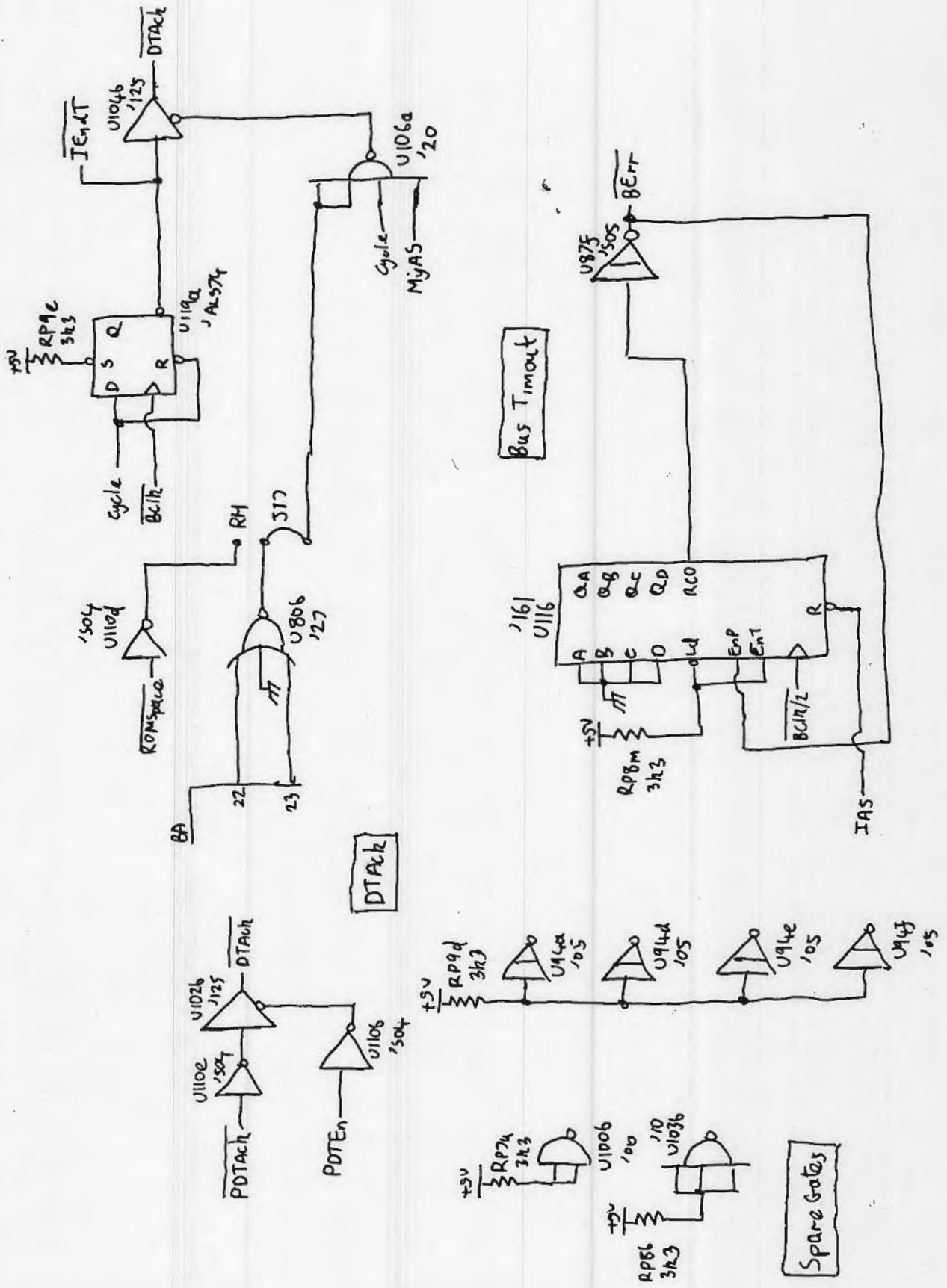


Sound

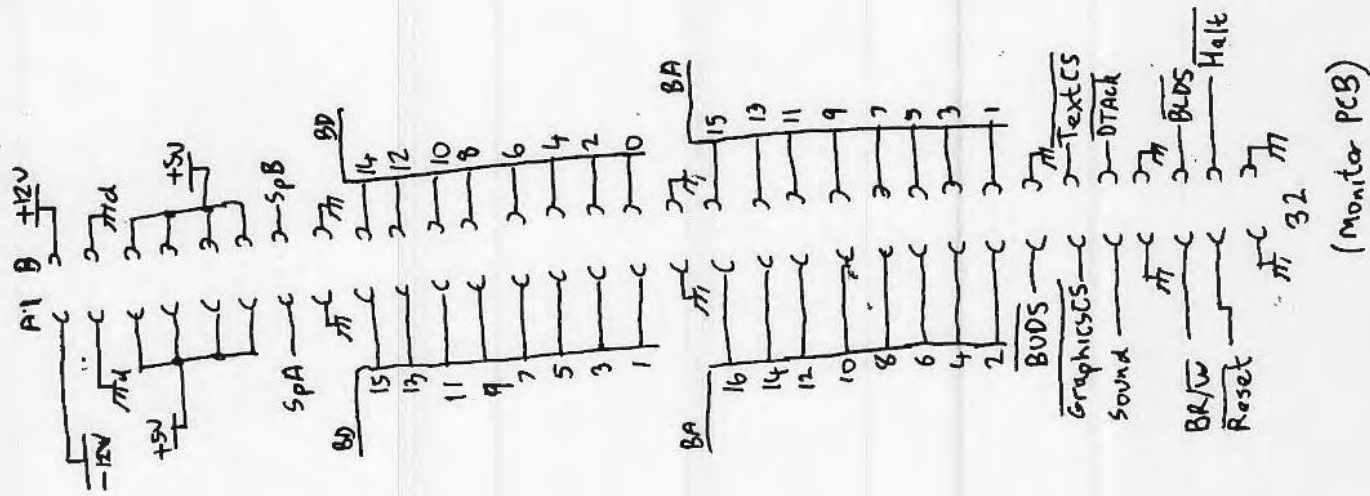


Keyboard Interface

J4
(Keyboard)

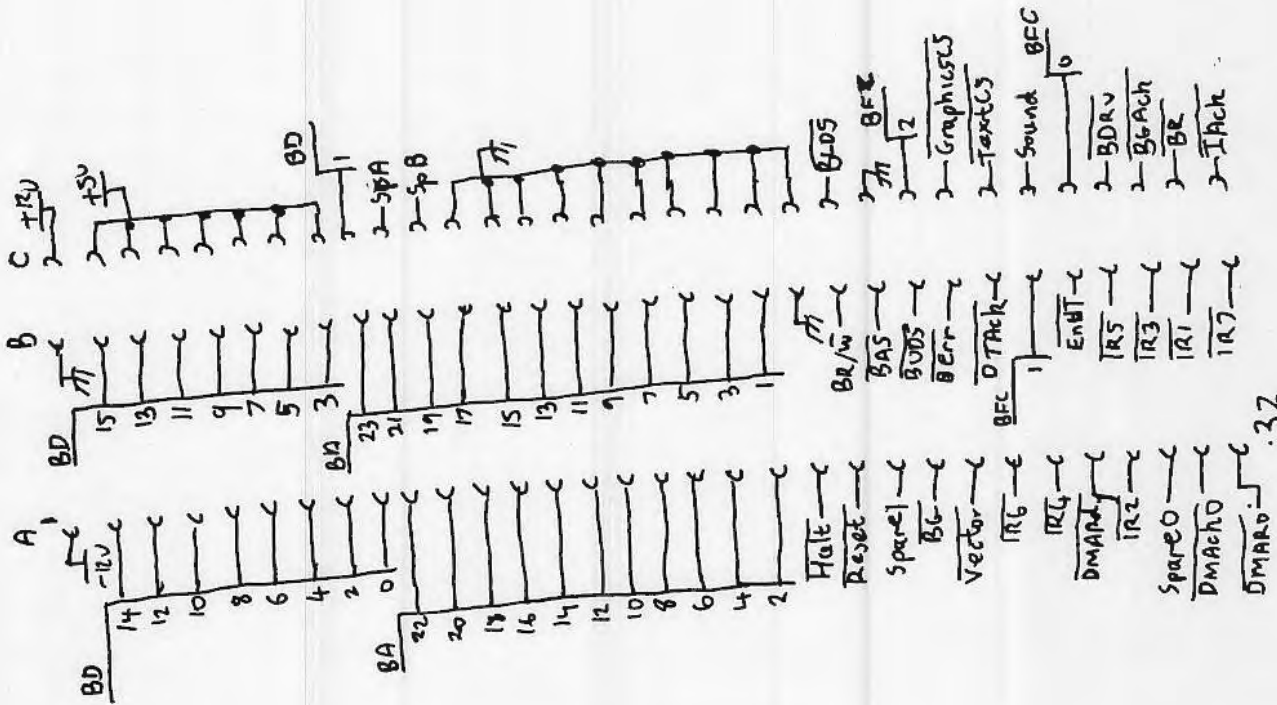


RHS
→ Top



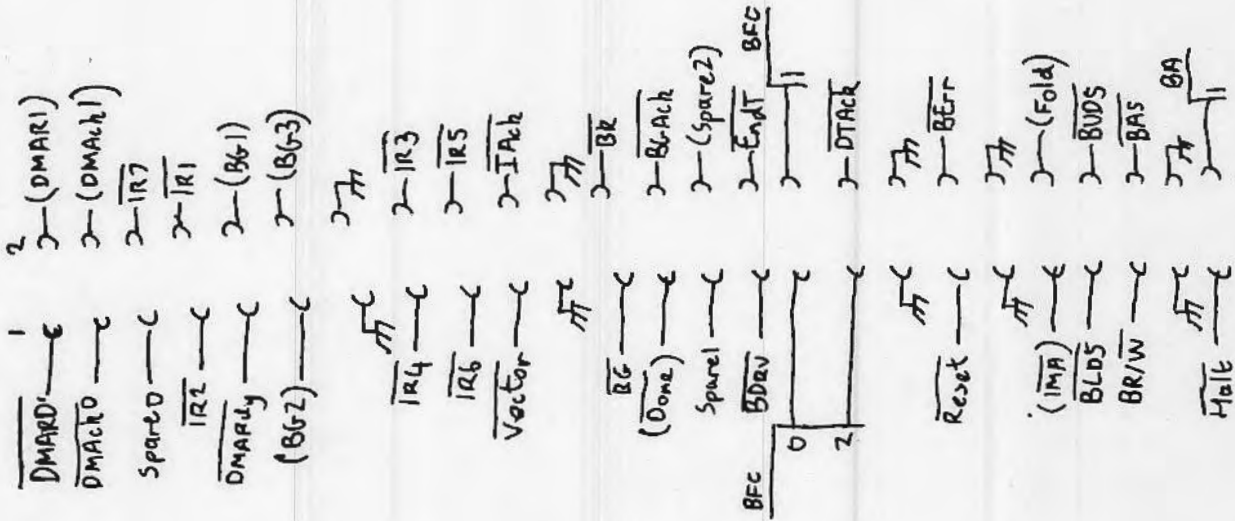
(Monitor PCB)

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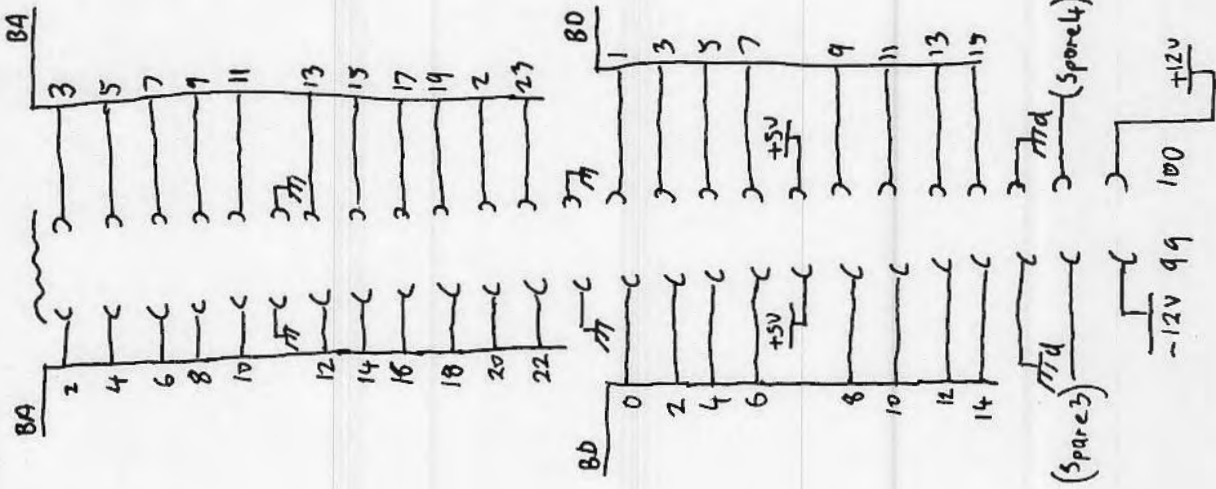
(Processor PCB)

HP9816 Backplane sheet ①

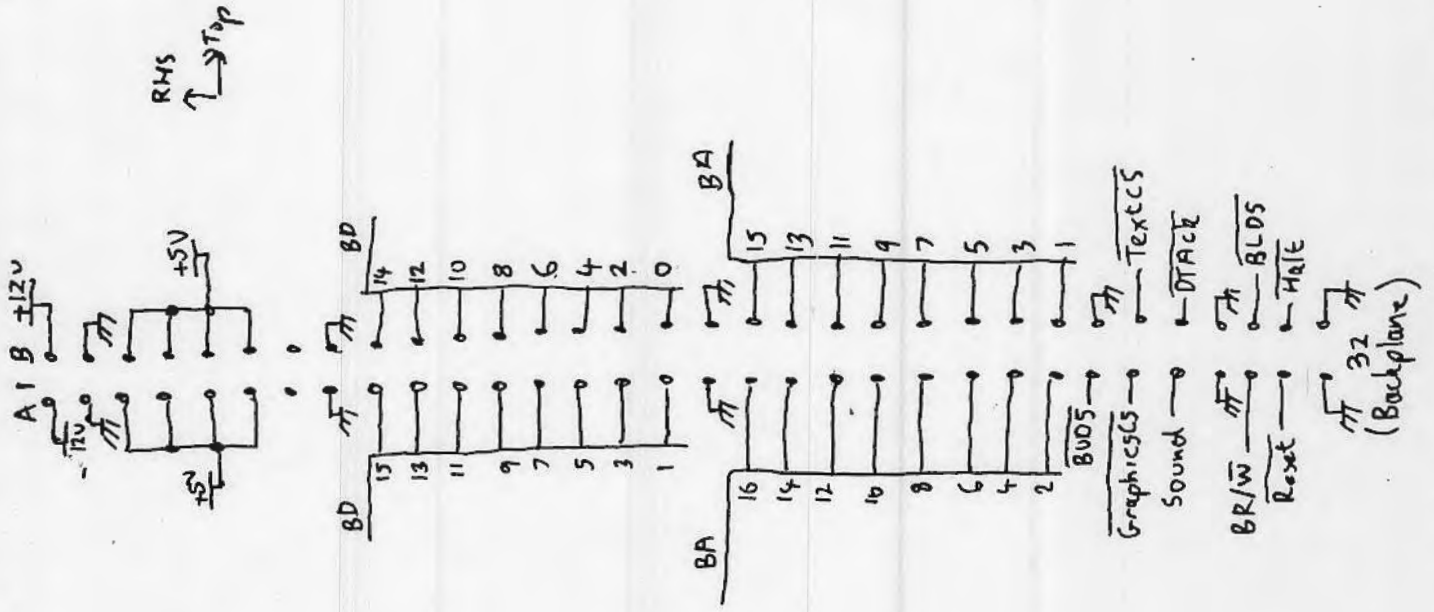
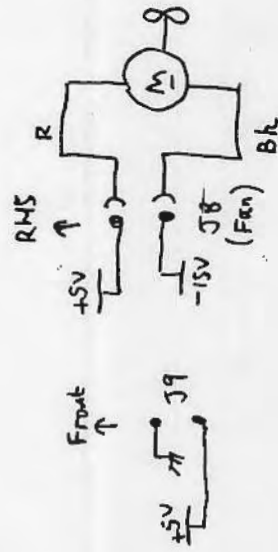
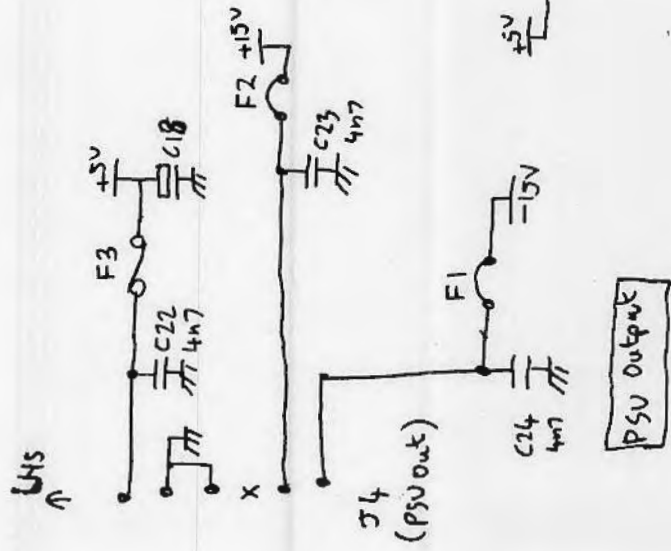
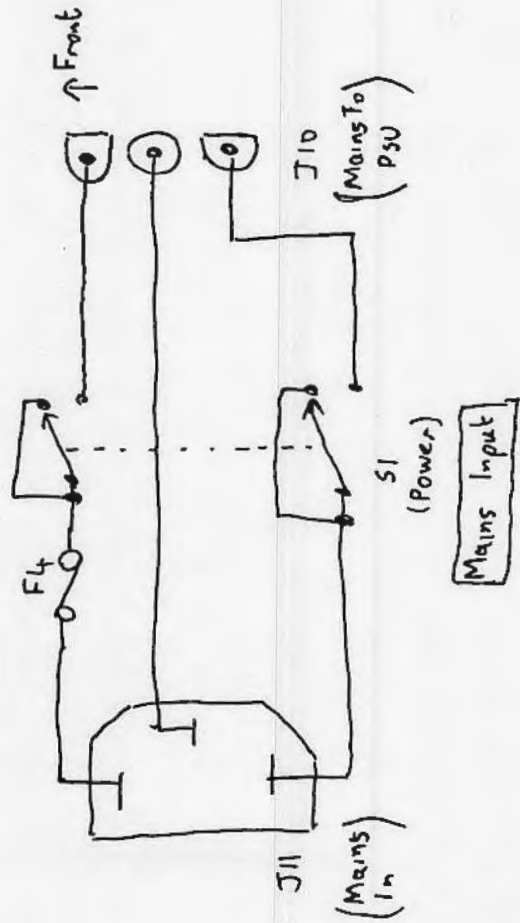


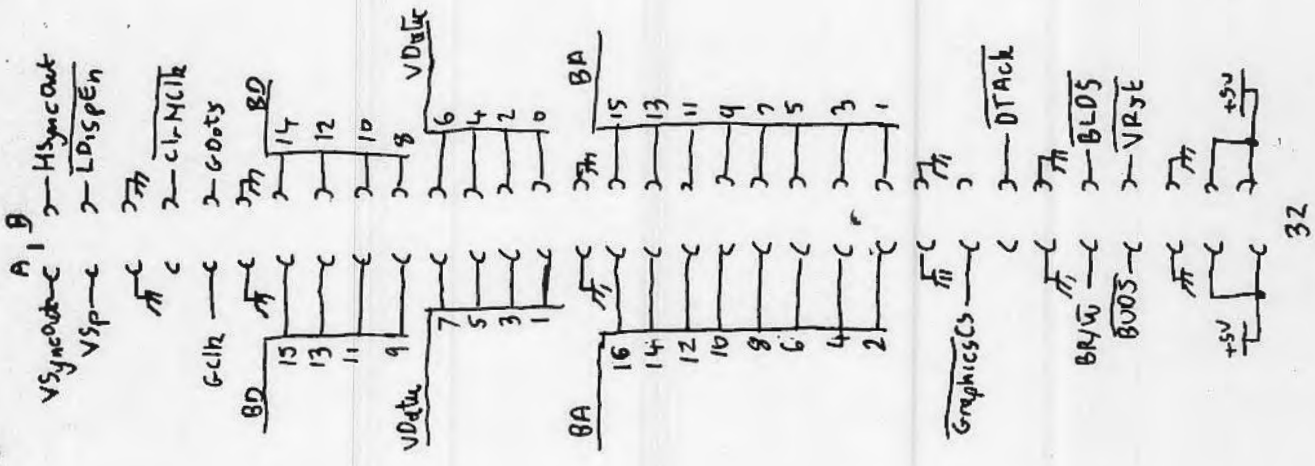
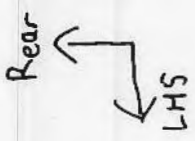
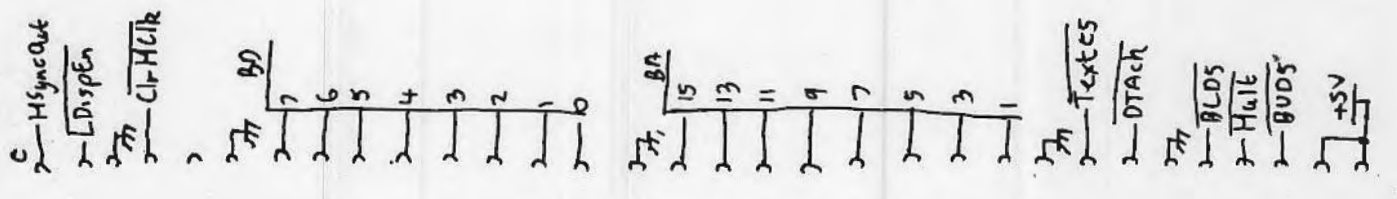
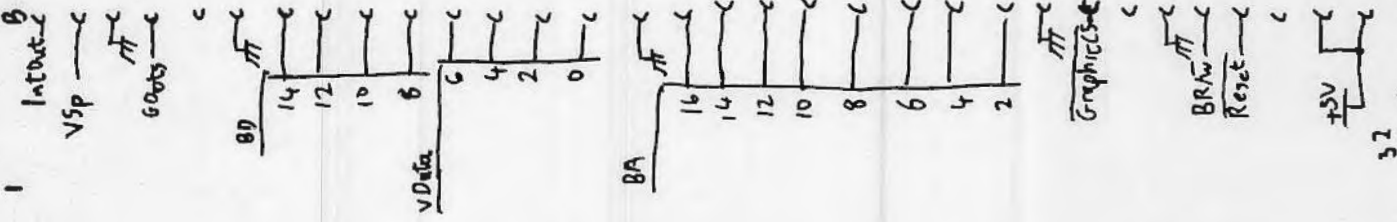
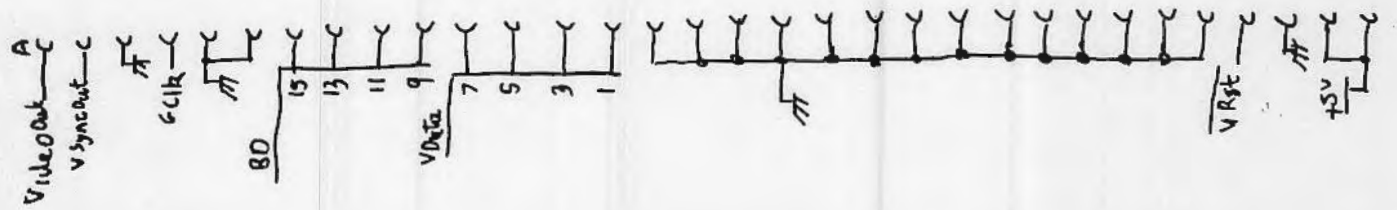
LMS
Top

Signal names in parentheses are connected between the 2 DIO slots, not to the processor or Monitor PCBs



(DIO slot Typical of 2)

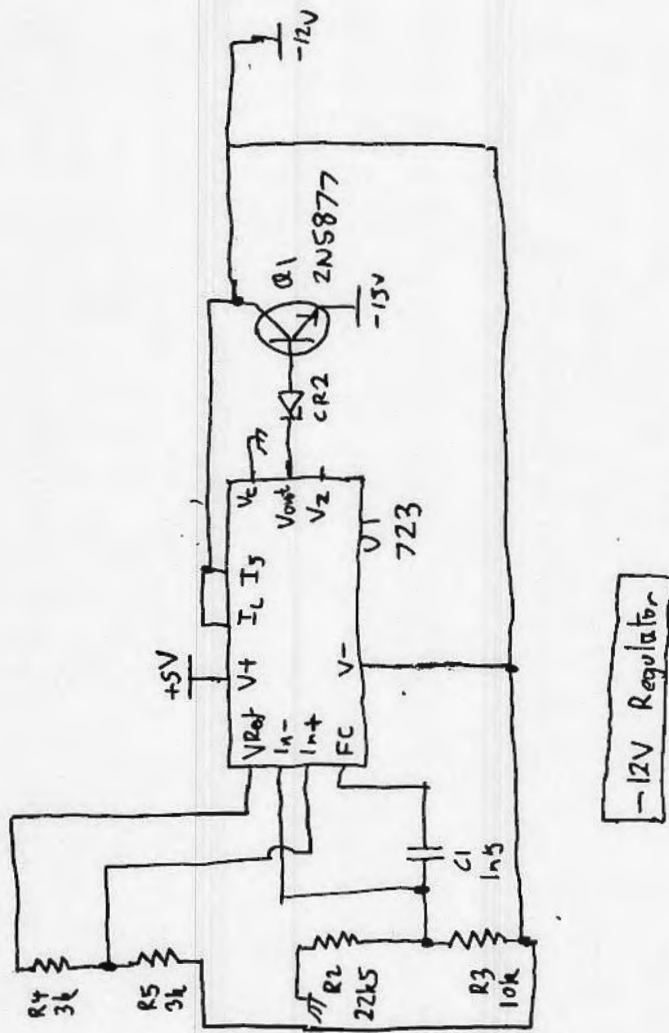




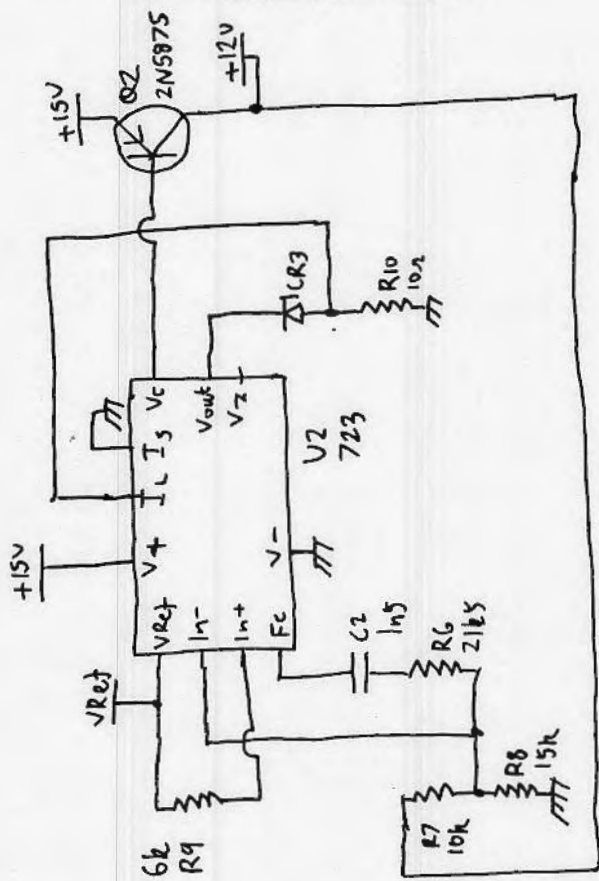
32

(Graphics PCB)

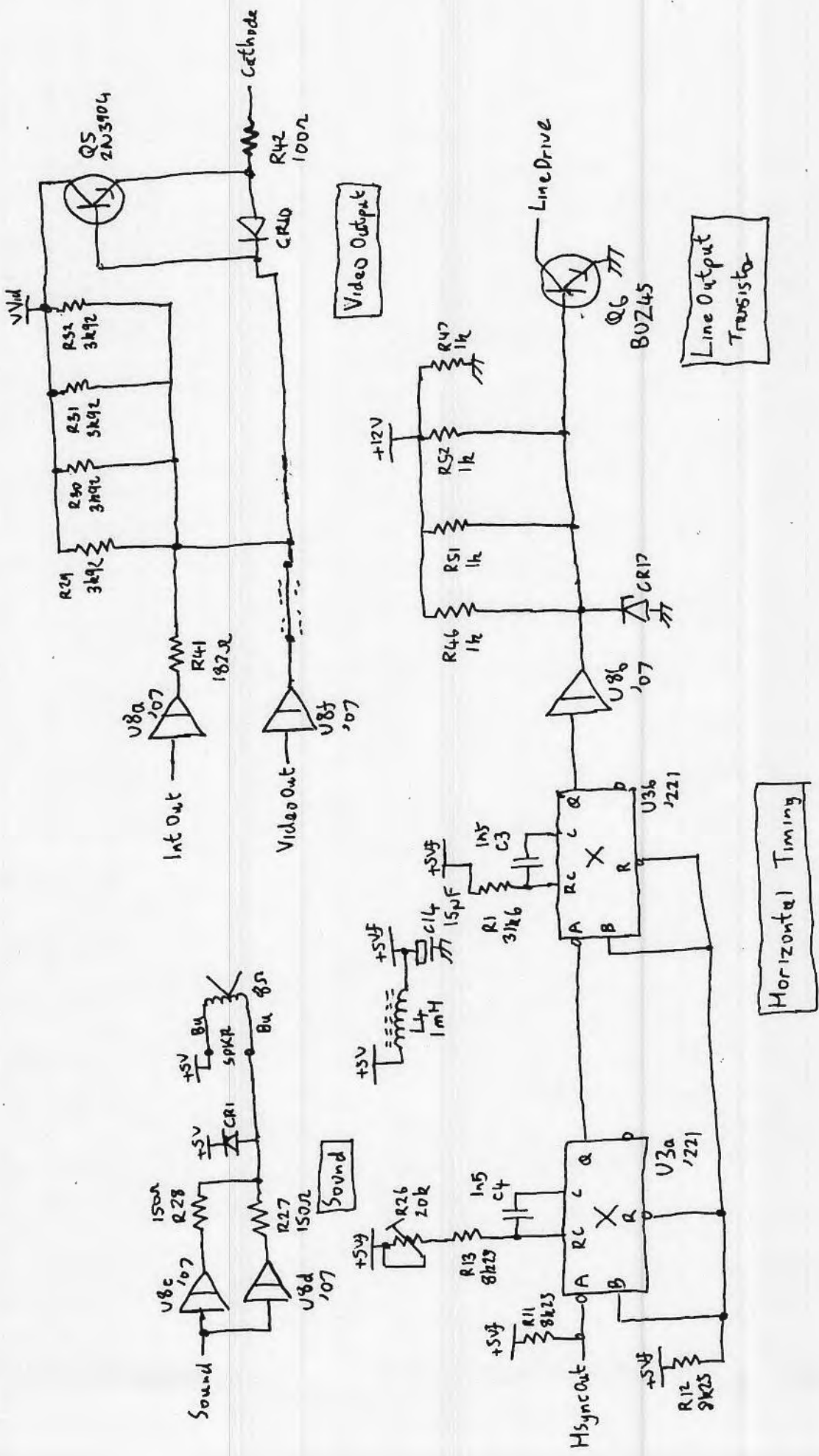
32 (Text PCB)



-12V Regulator

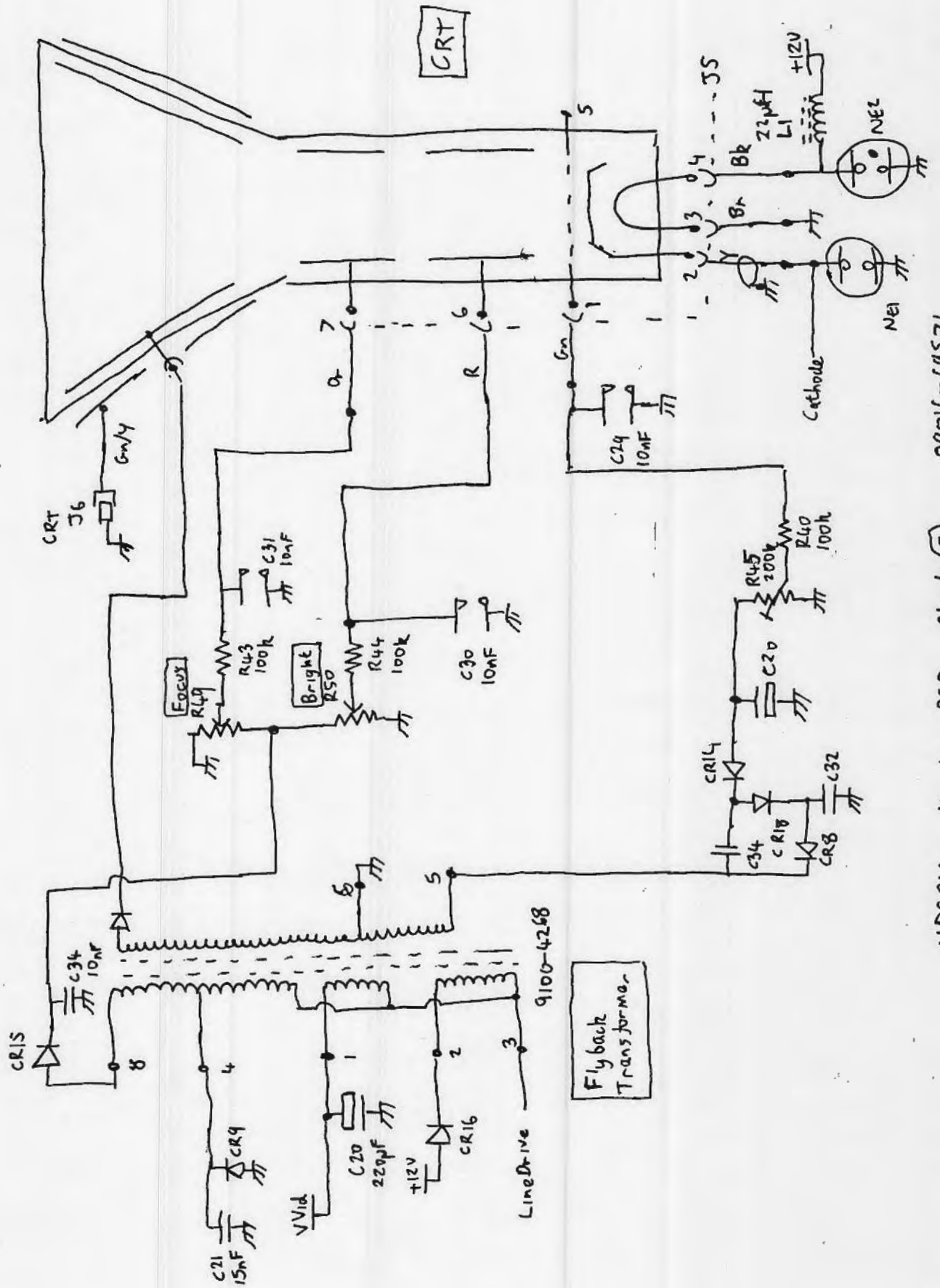


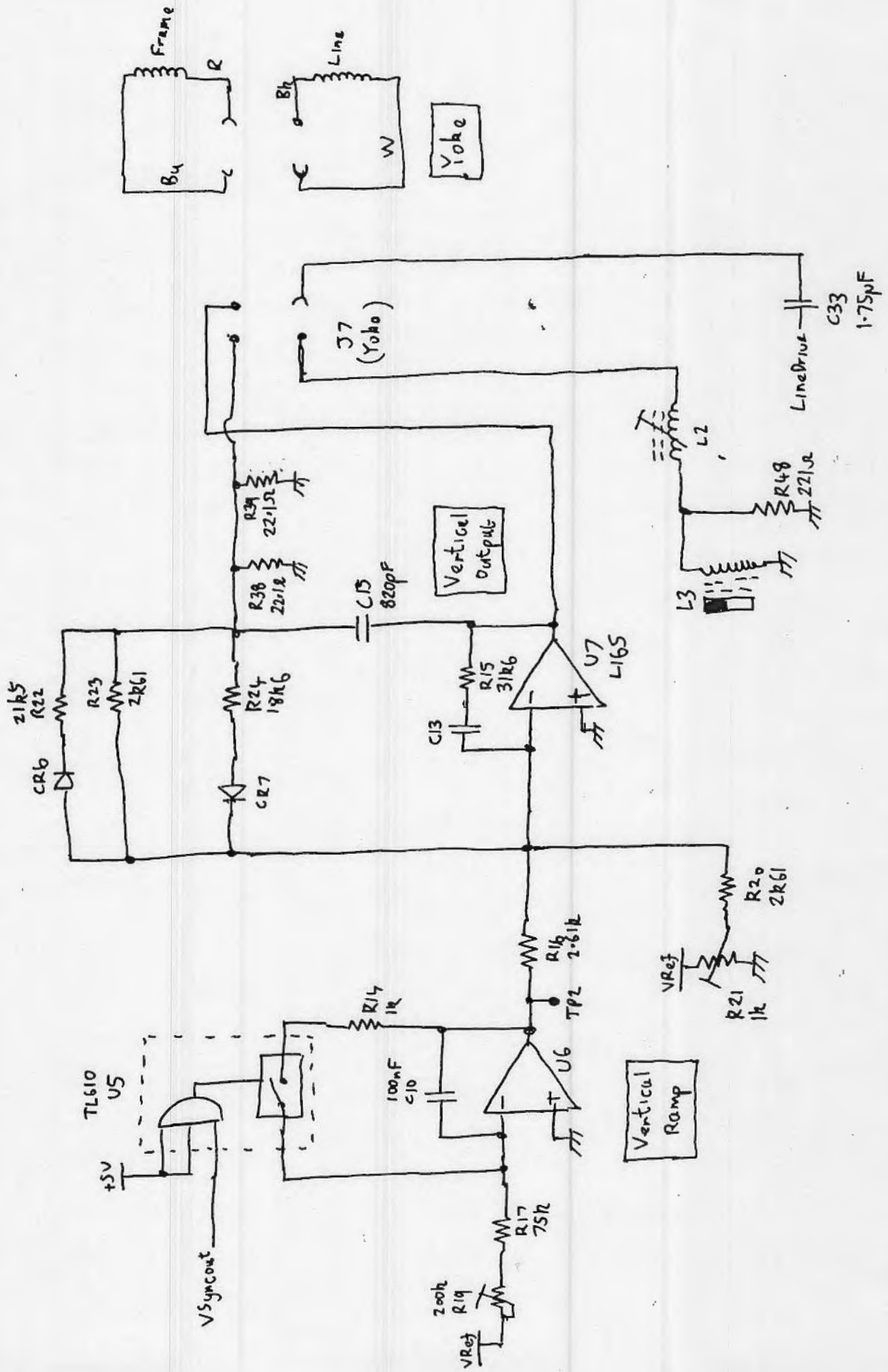
+12V Regulator



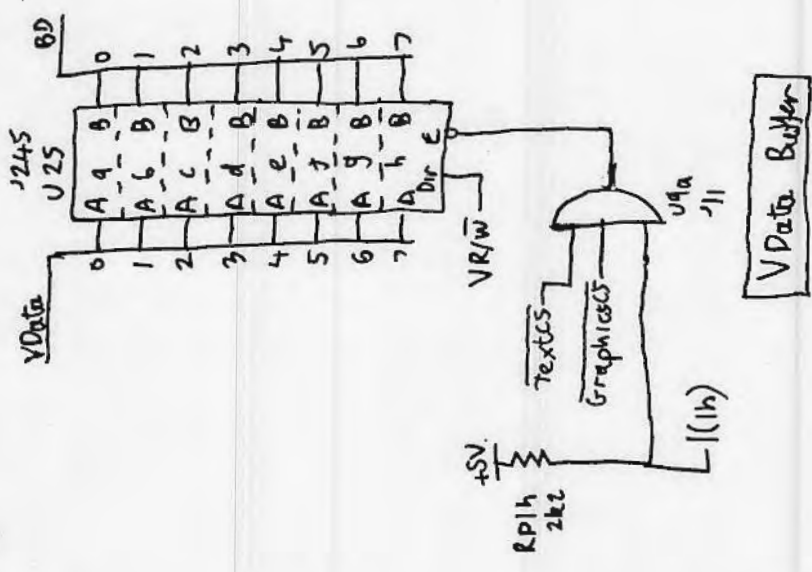
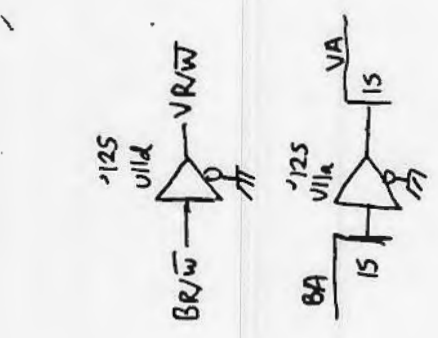
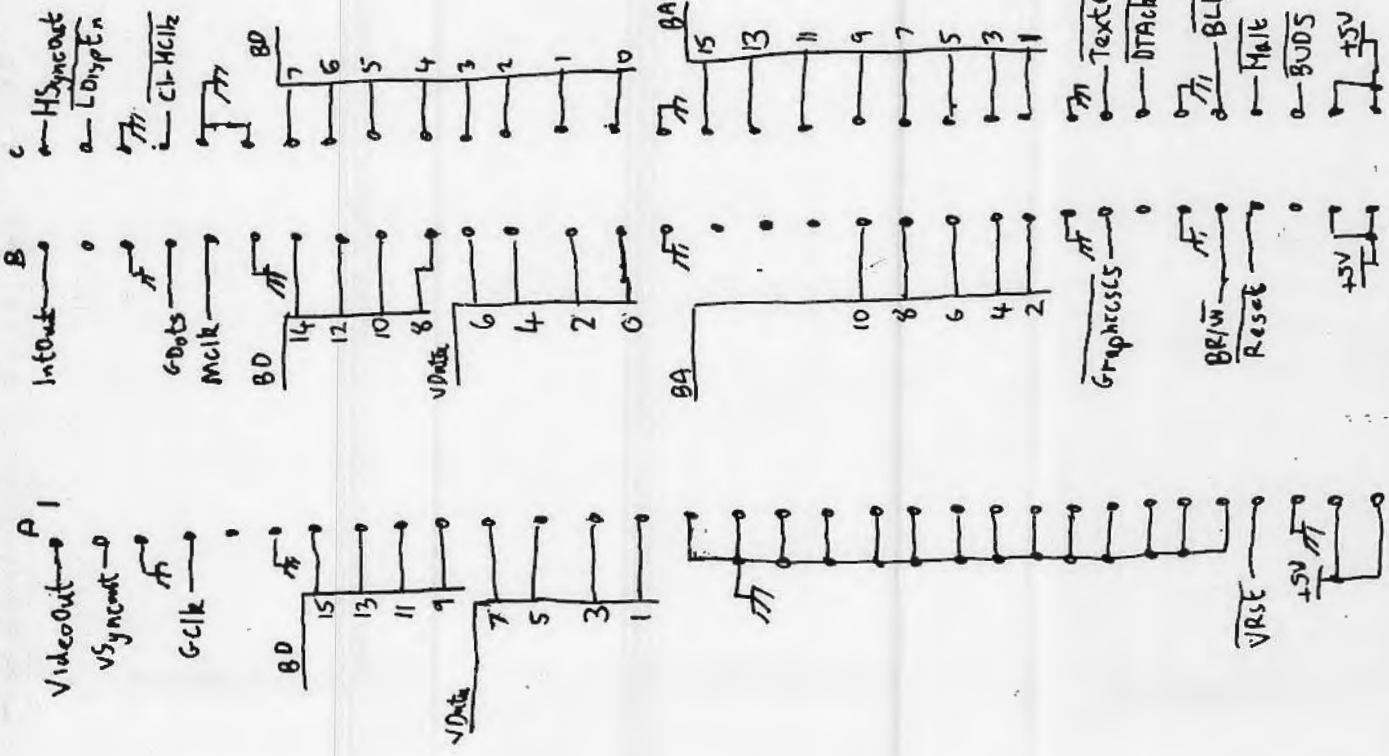
09816-69571

HP9816 Monitor PCB sheet (4)

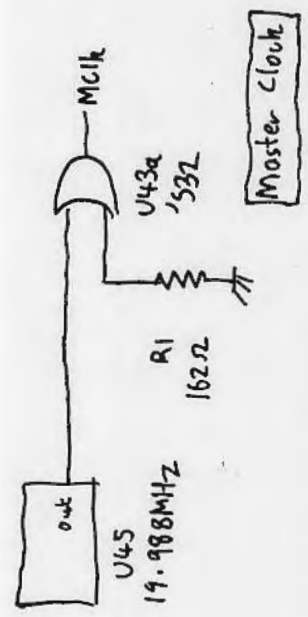




CHSY Recv



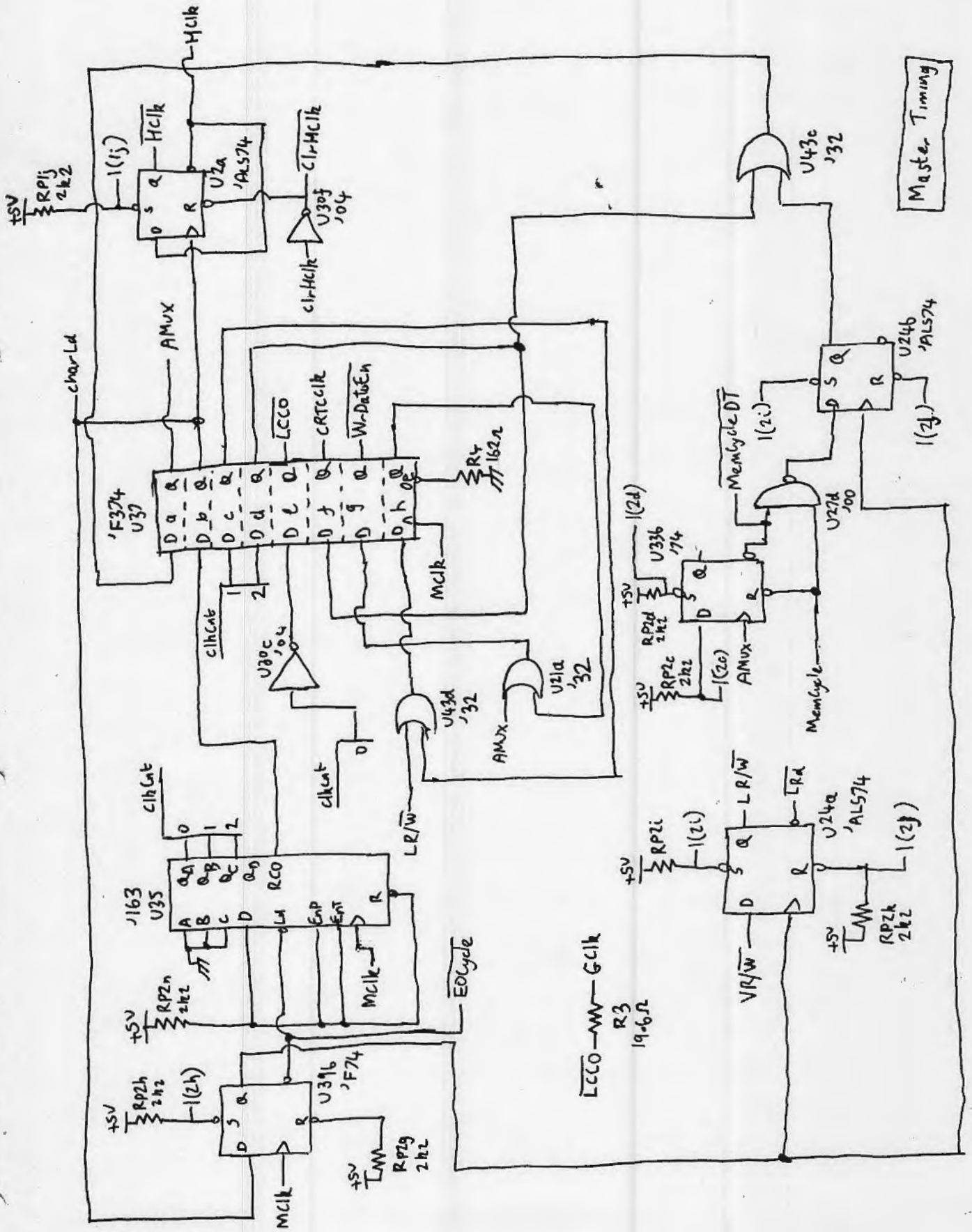
VData Buffer



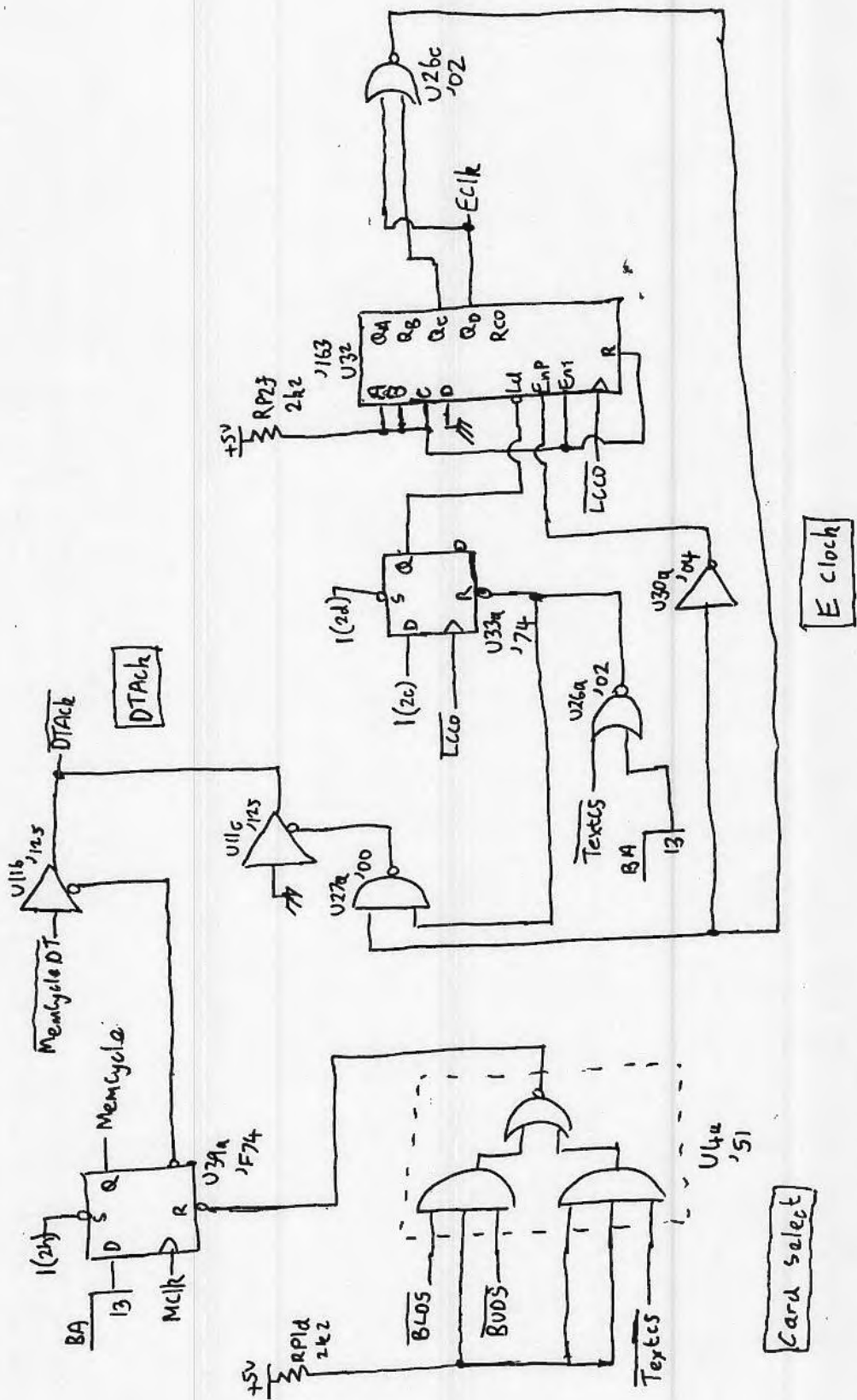
PI (Monitor)

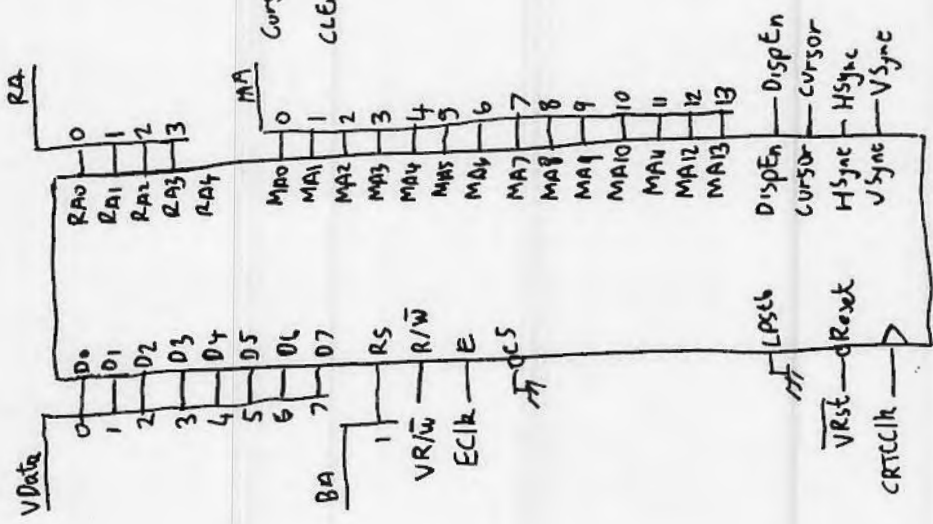
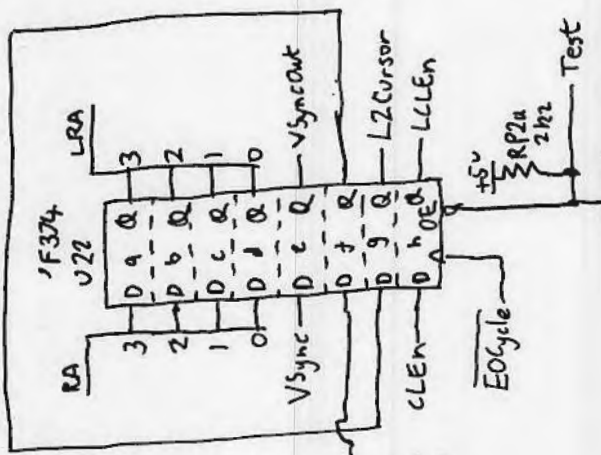
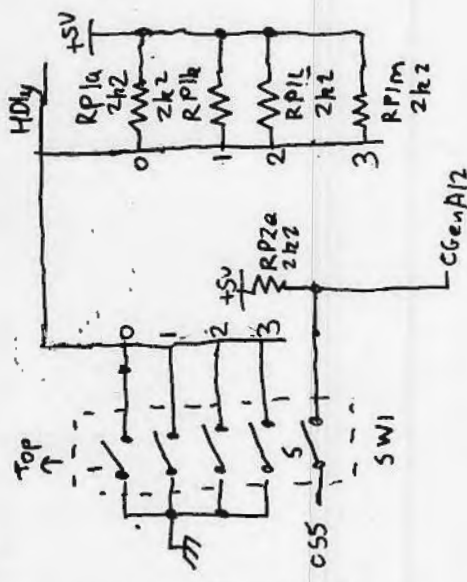
HP 9816 Text PCB sheet(1)

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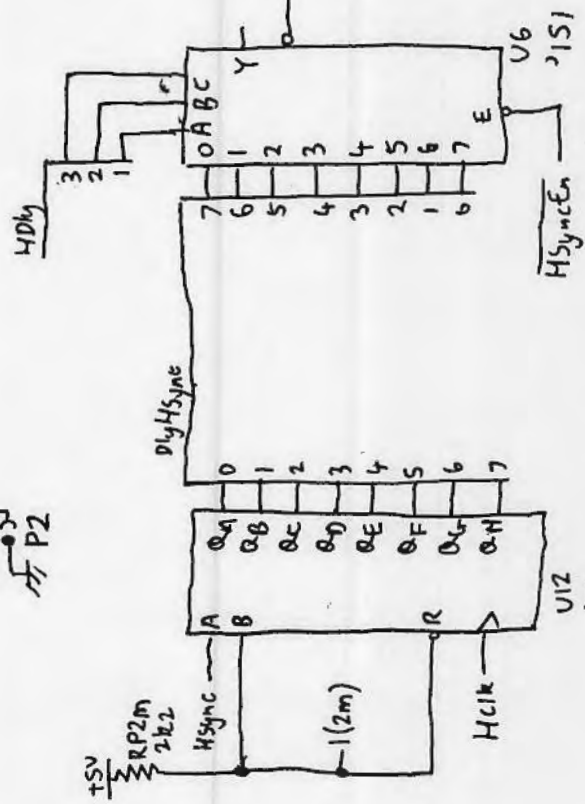


Master Timing

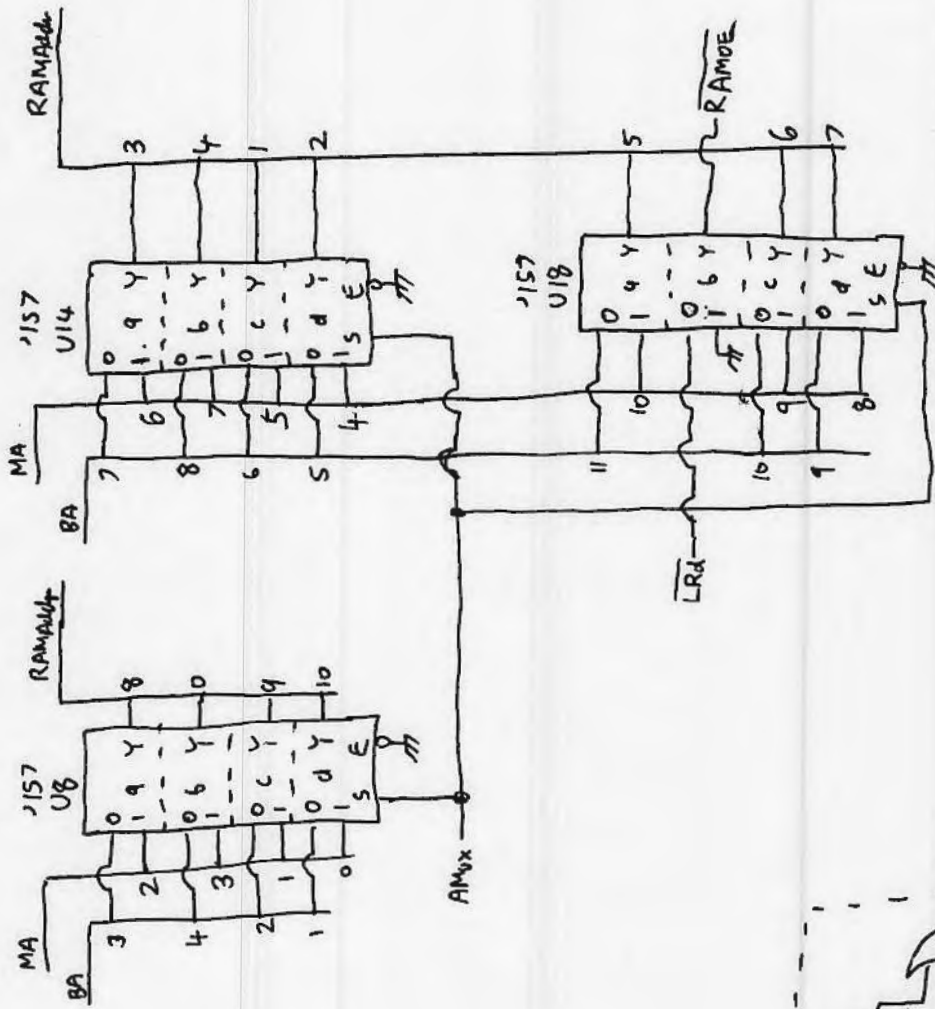




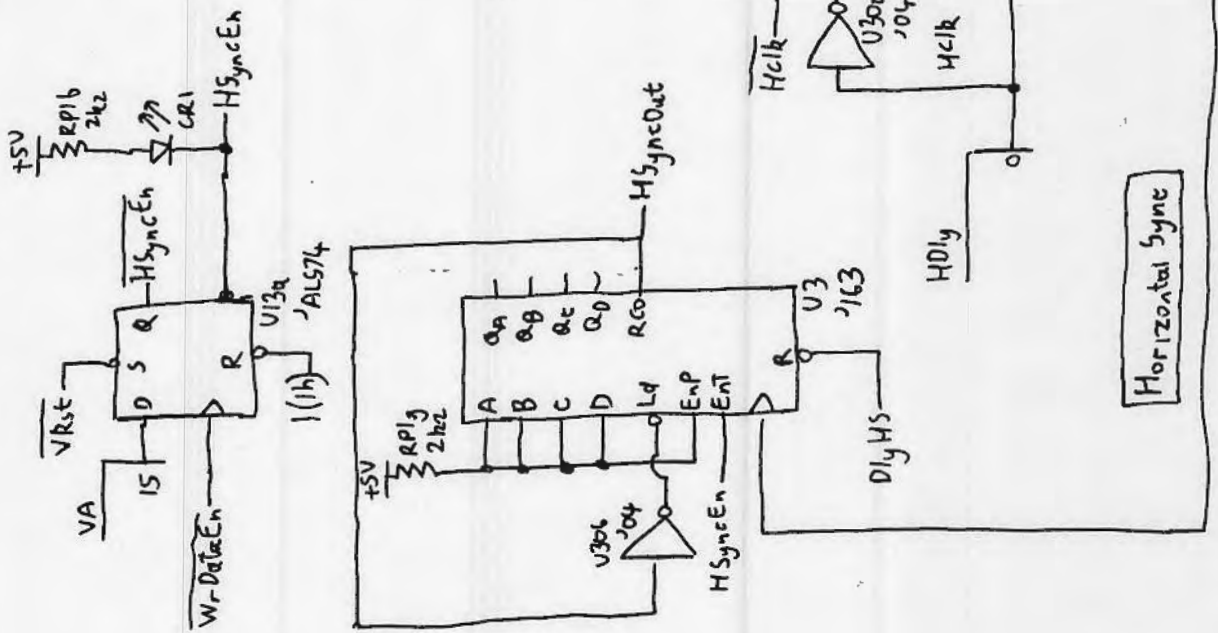
CRT Controller

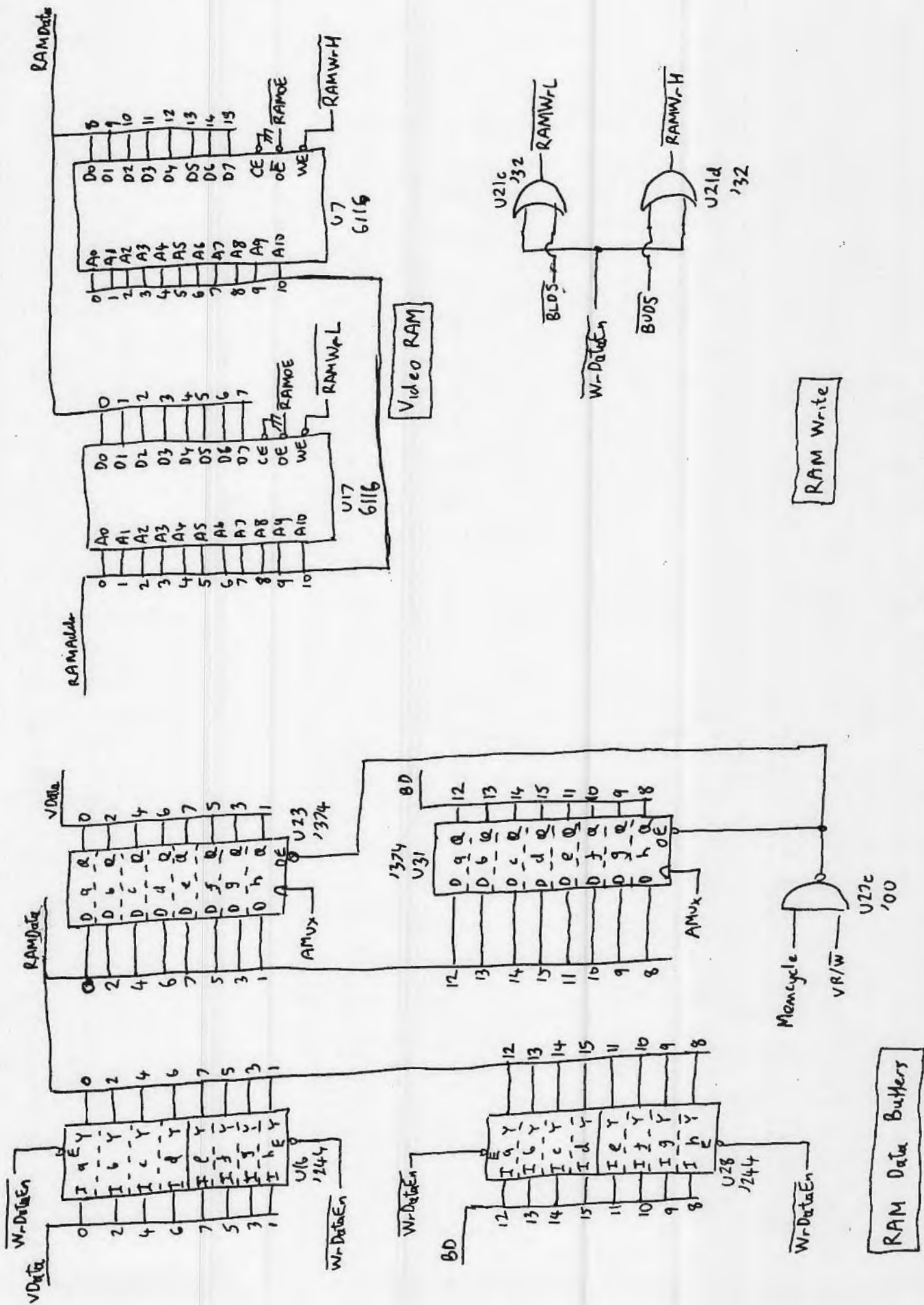


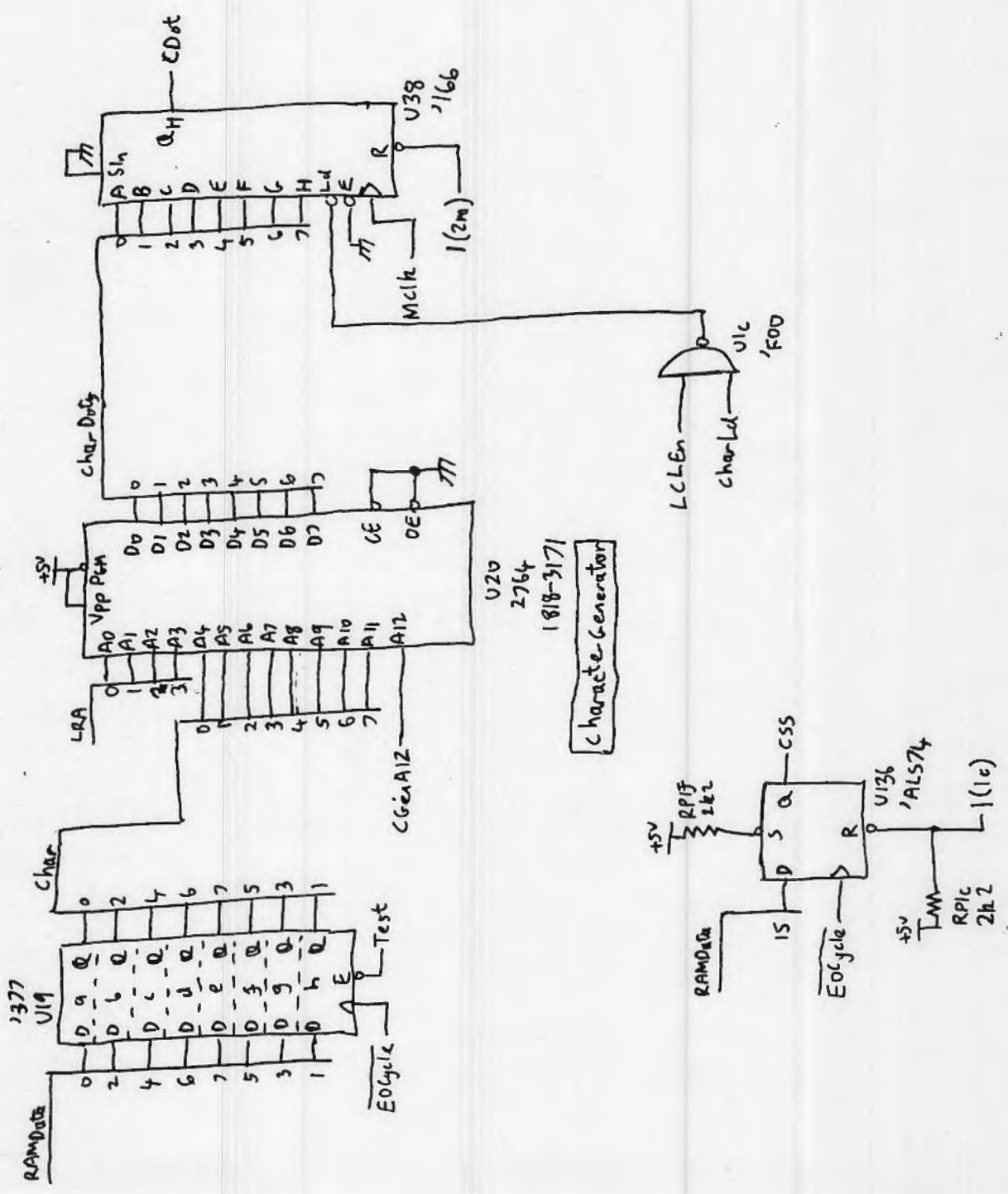
Horizontal Timing

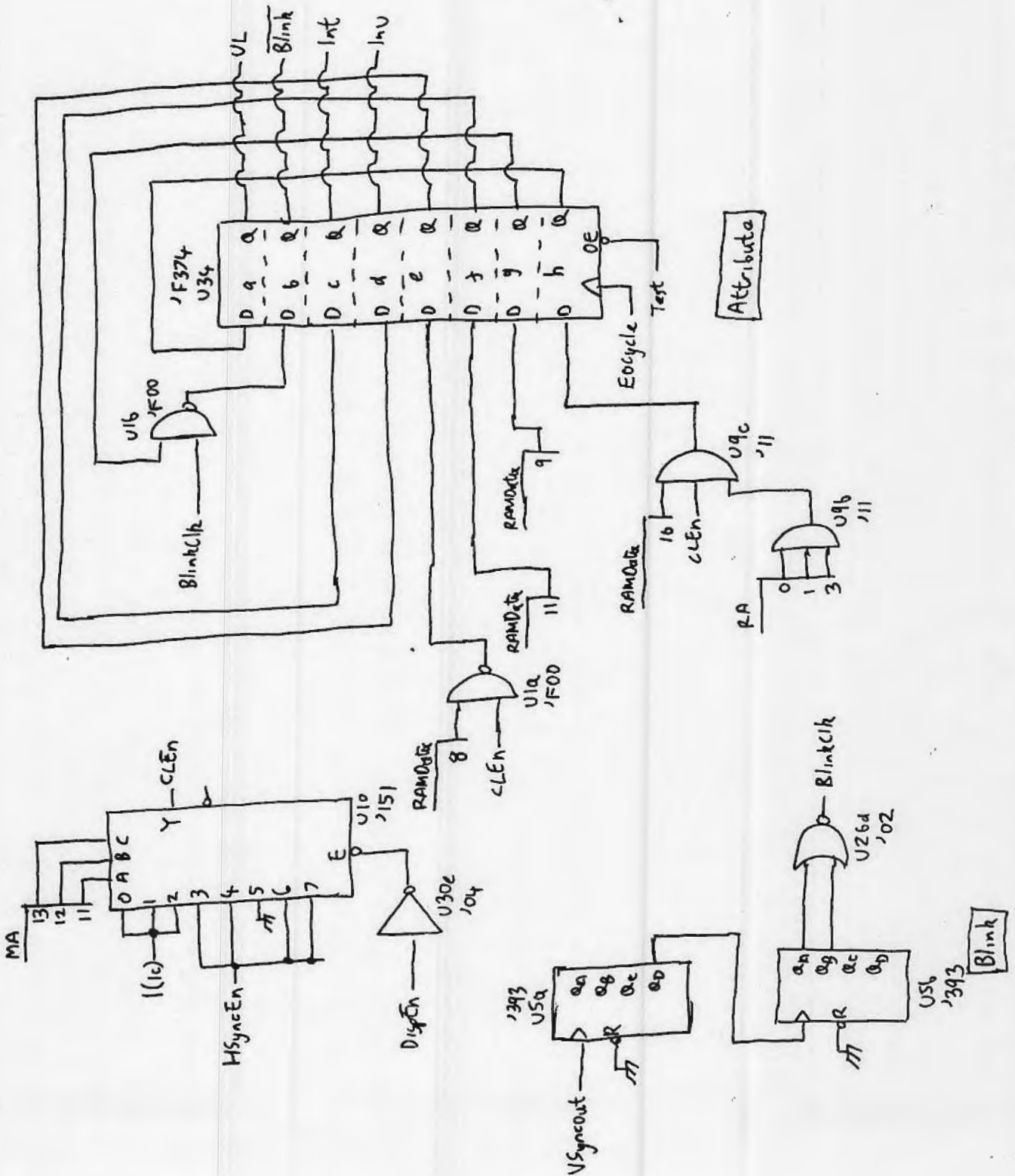


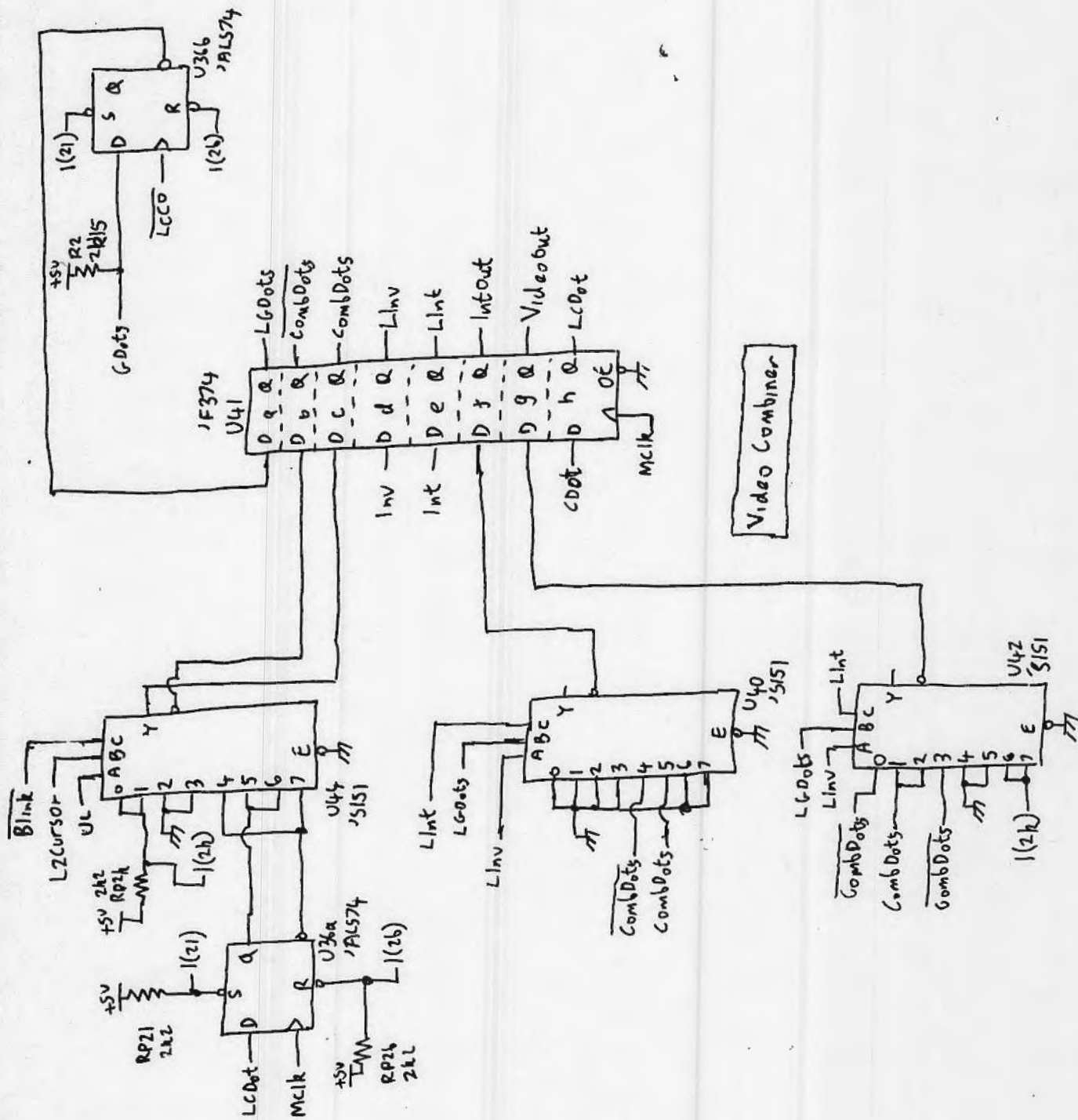
RAM Address Multiplexer





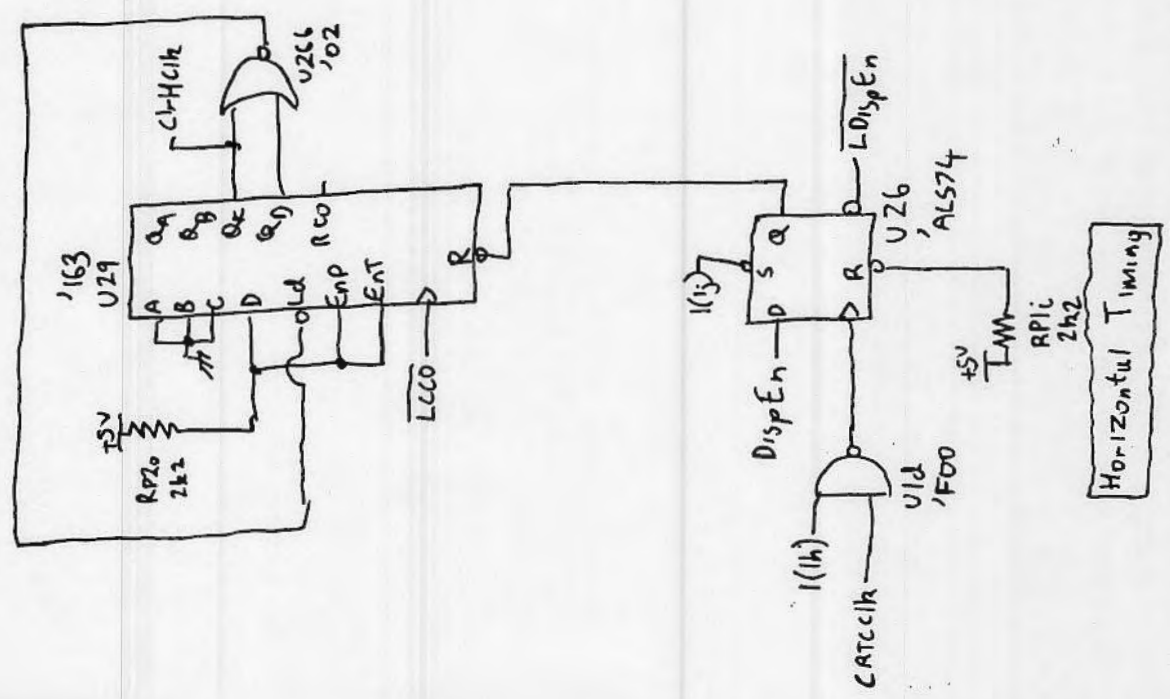


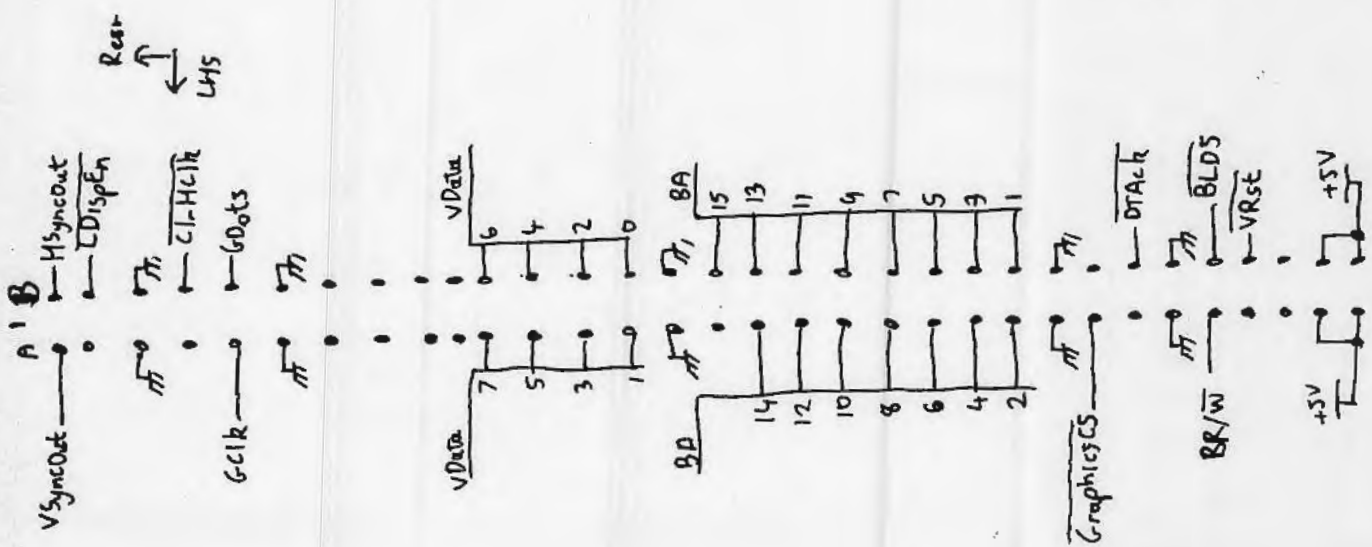




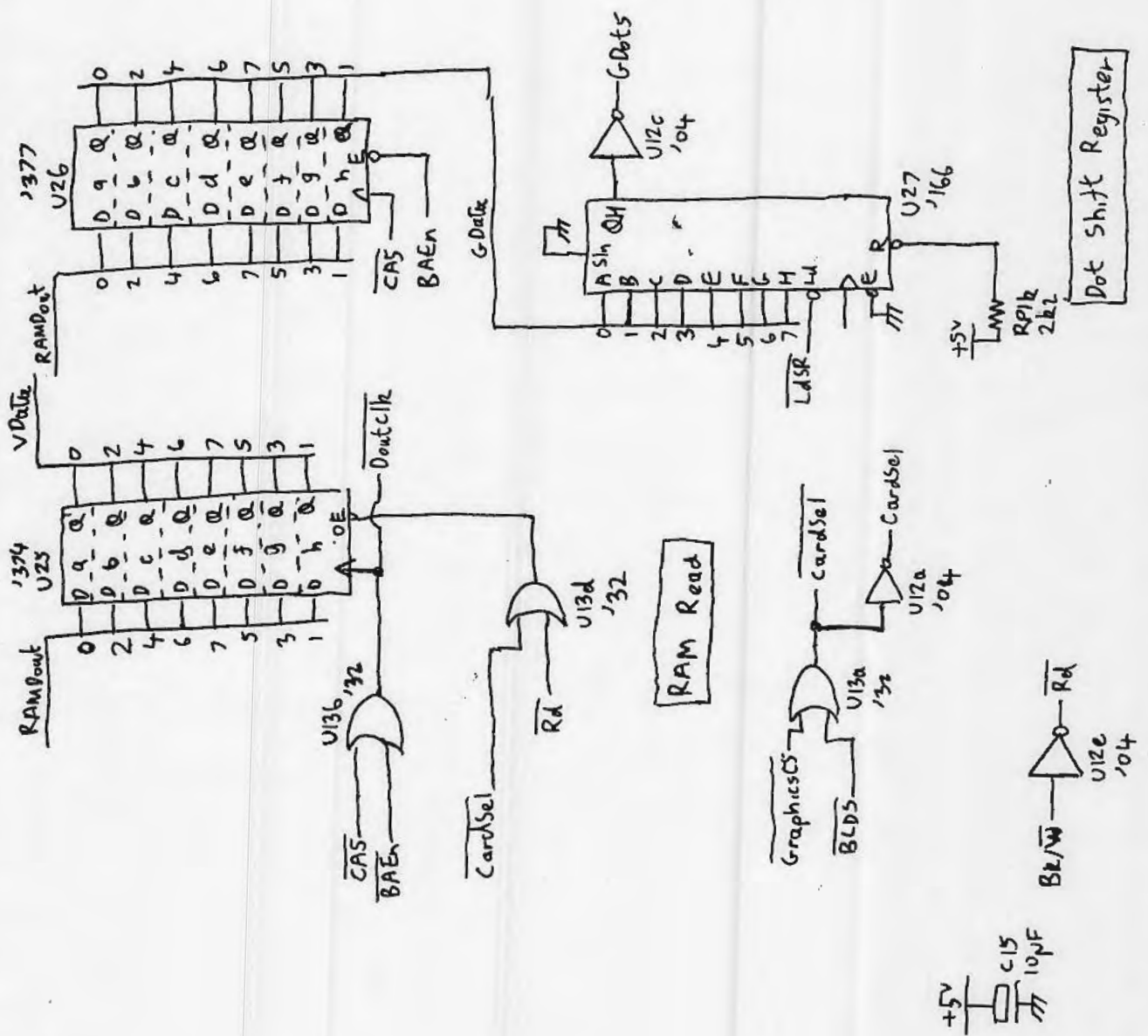
- Front
↑
- WDataEn → TP1
 - AMux → TP2
 - LCCO → TP3
 - EClk → TP4
 - CATCclk → TPS
 - HsyncOut → TP6
 - LCDDt → TP7
 - VsyncOut → TP8
 - MClk → TP9

Testpoints

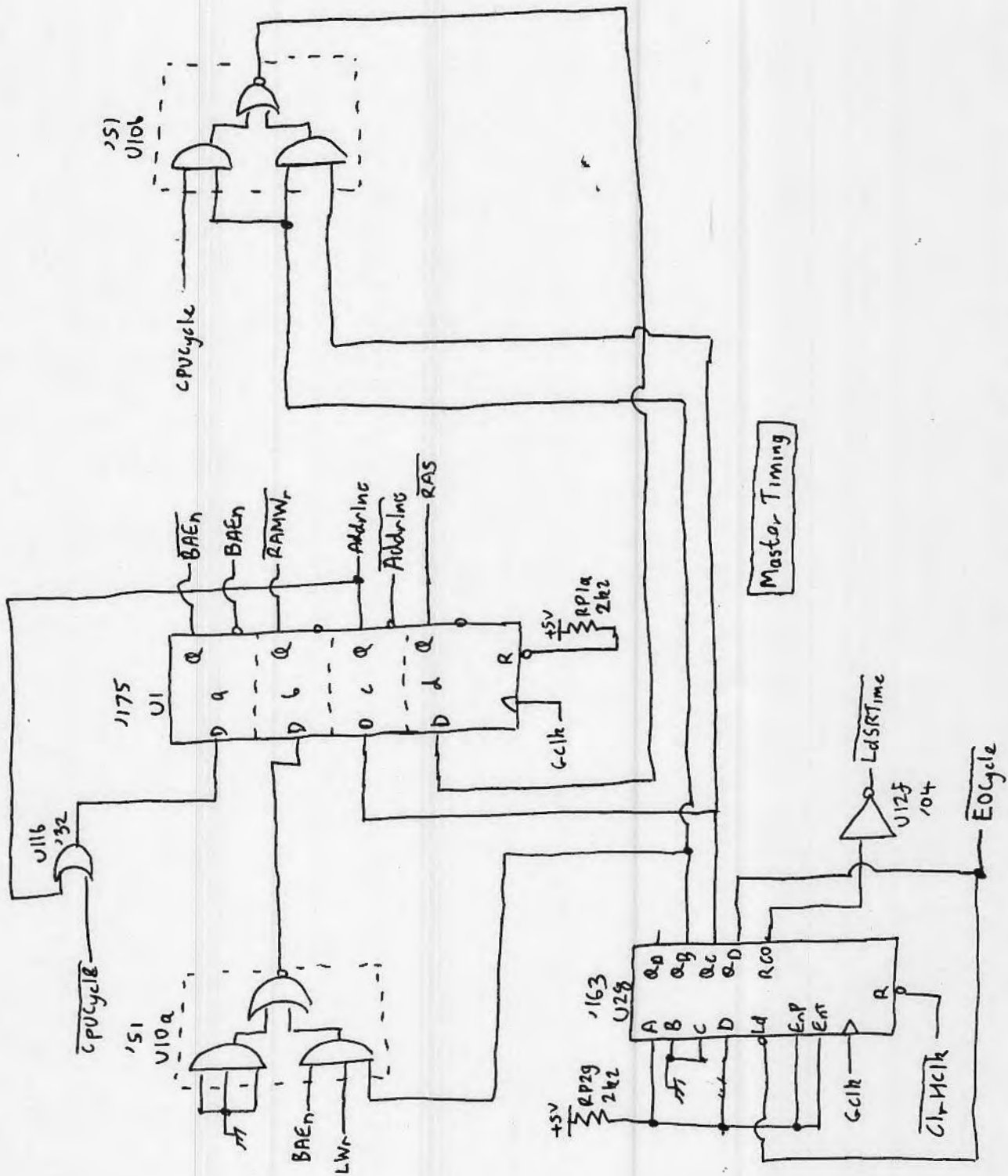


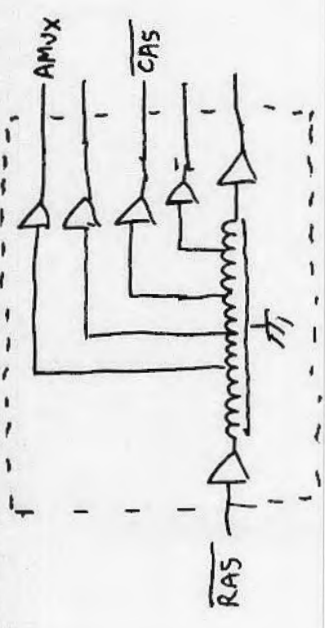


(Monitor PCB)



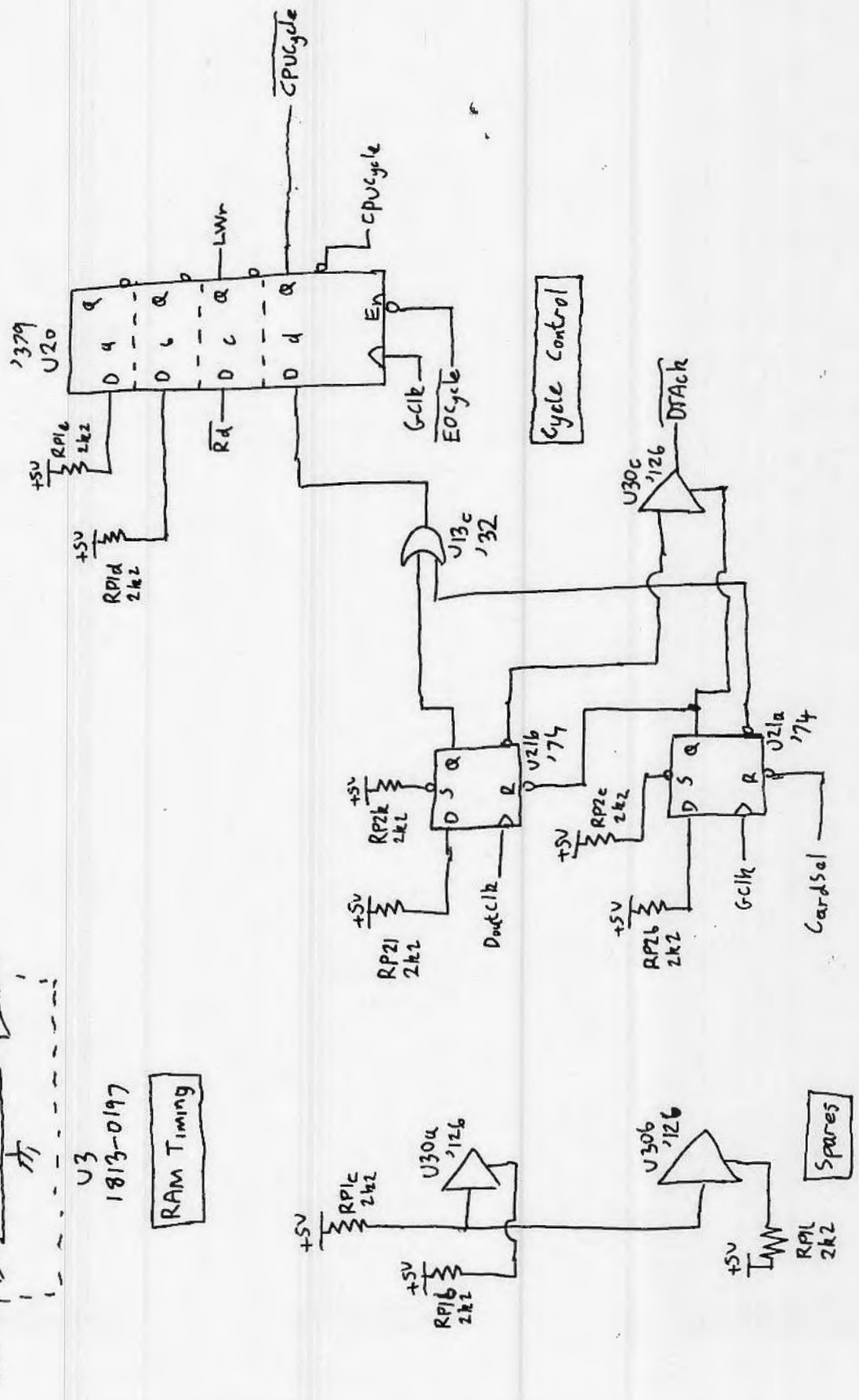
HP9816 Graphics PCB sheet ① 09816-66591

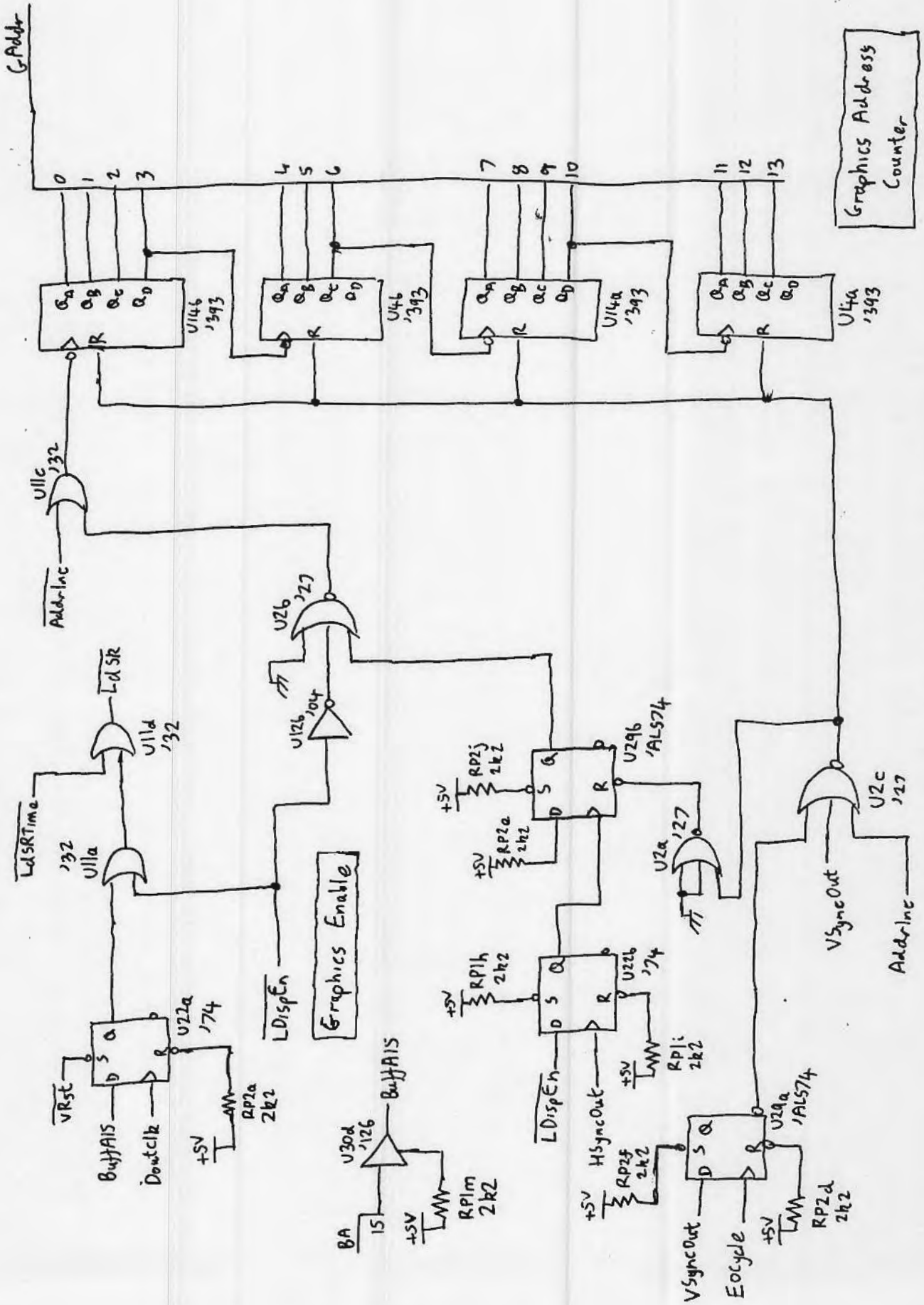


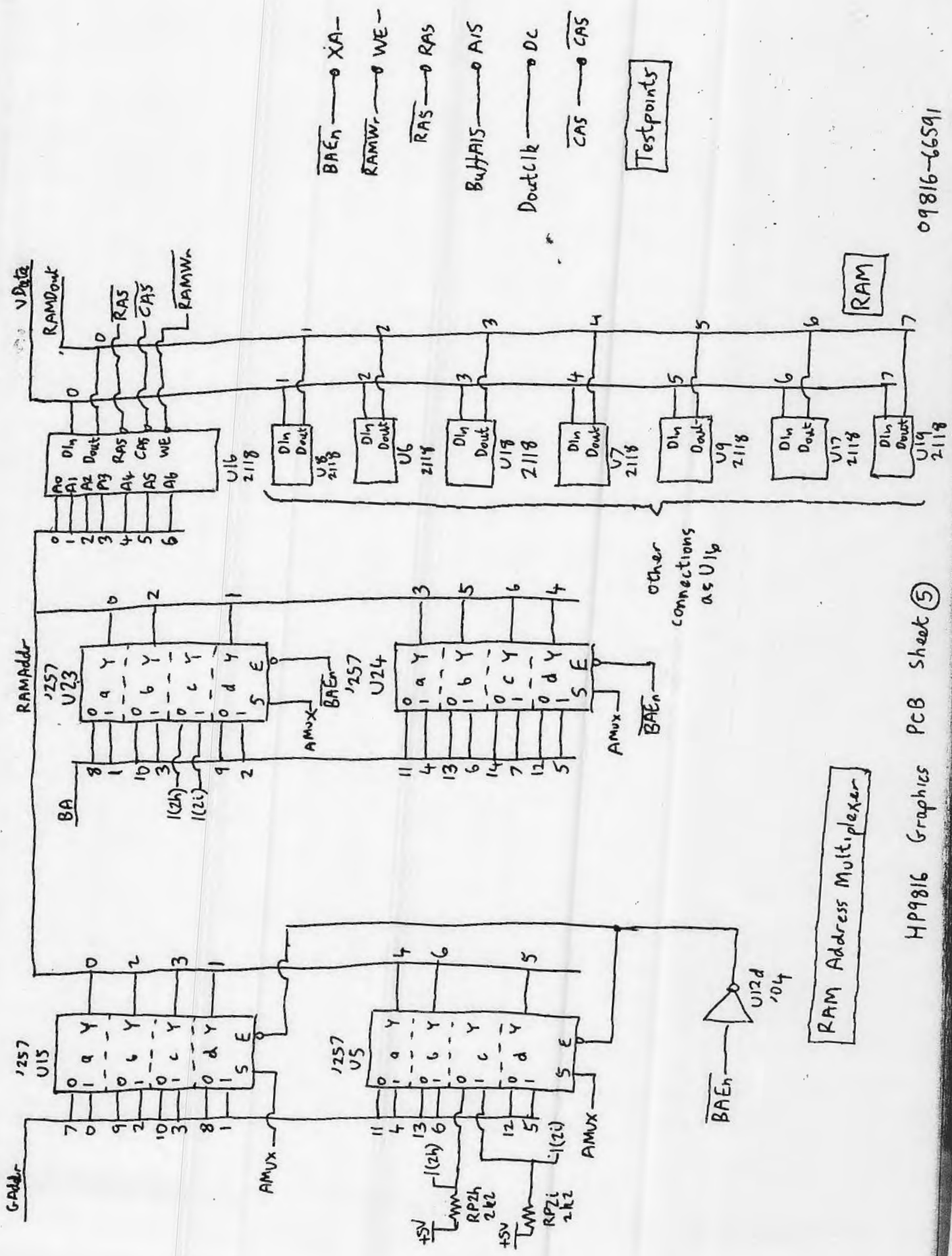


U3
1813-0197

RAM Timing





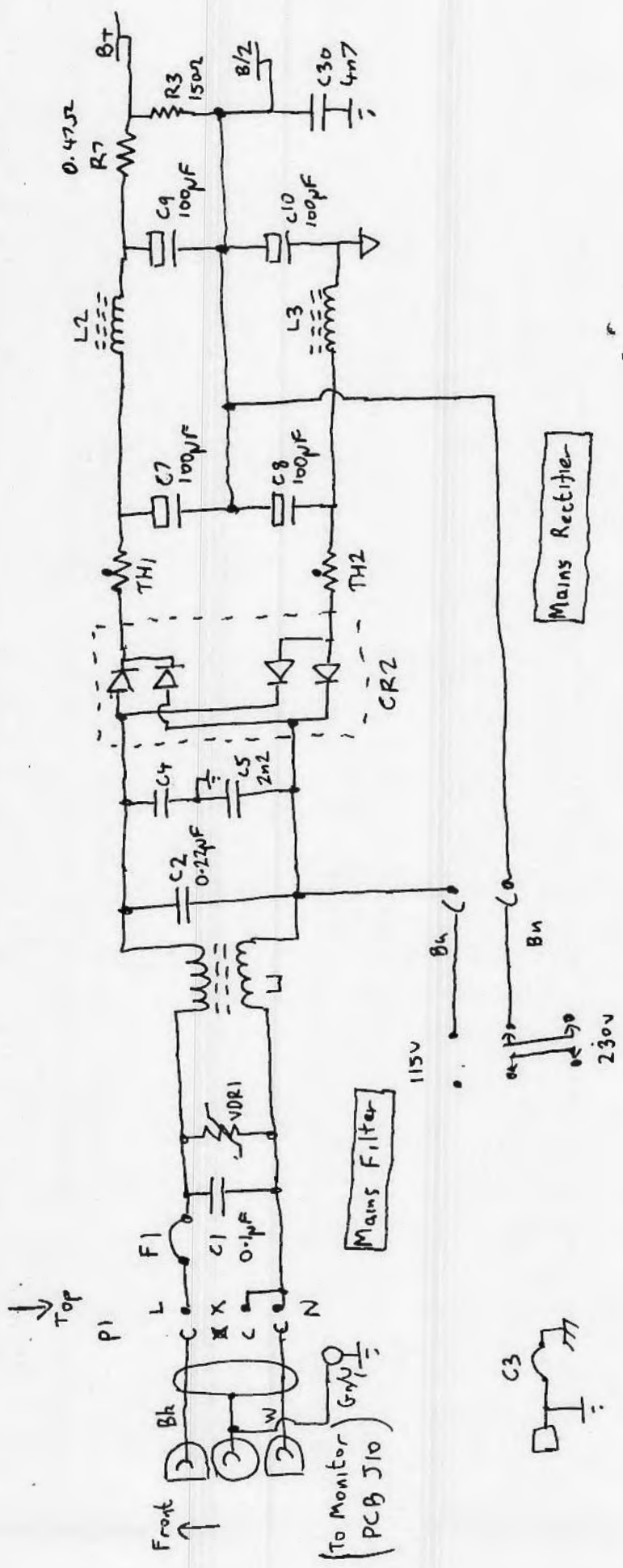


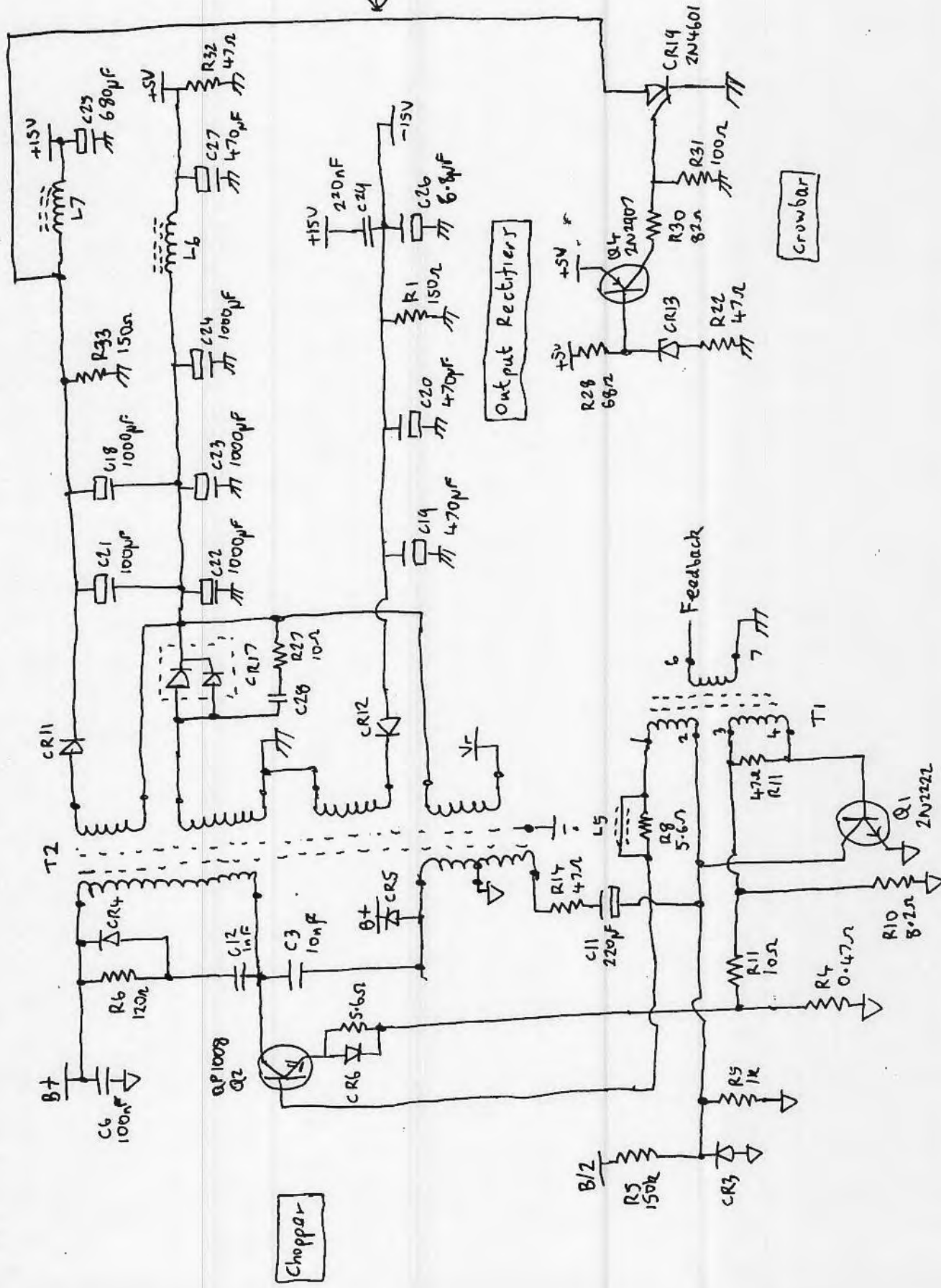
BAEn → XA-
 RAMW- → WE-
 RAS → RAS
 BuffA15 → A15
 DoutClk → DC
 CAS → CAS
 Testpoints

09816-66591

RAM Address Multiplexer

HP9816 Graphics PCB Sheet 5



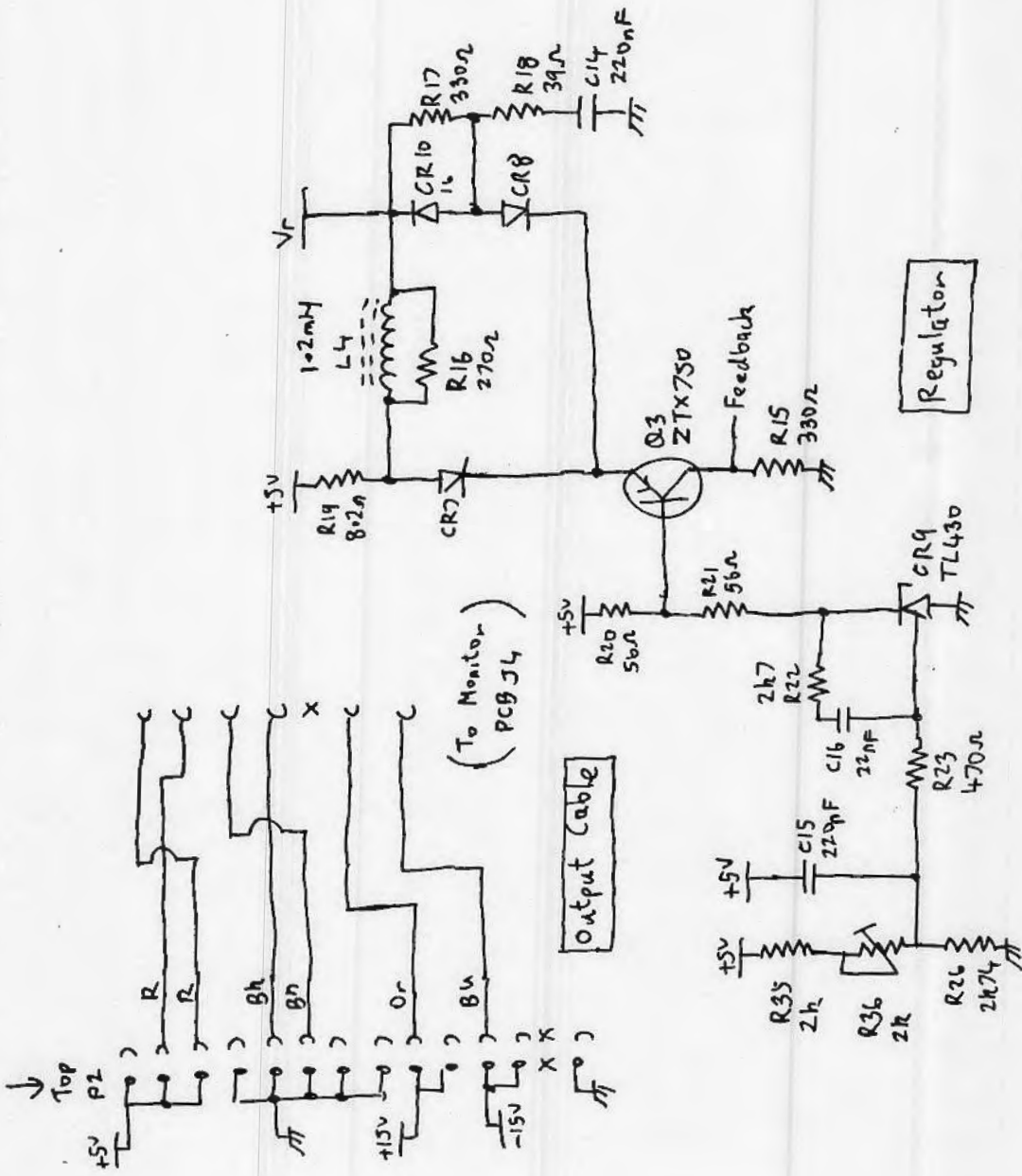


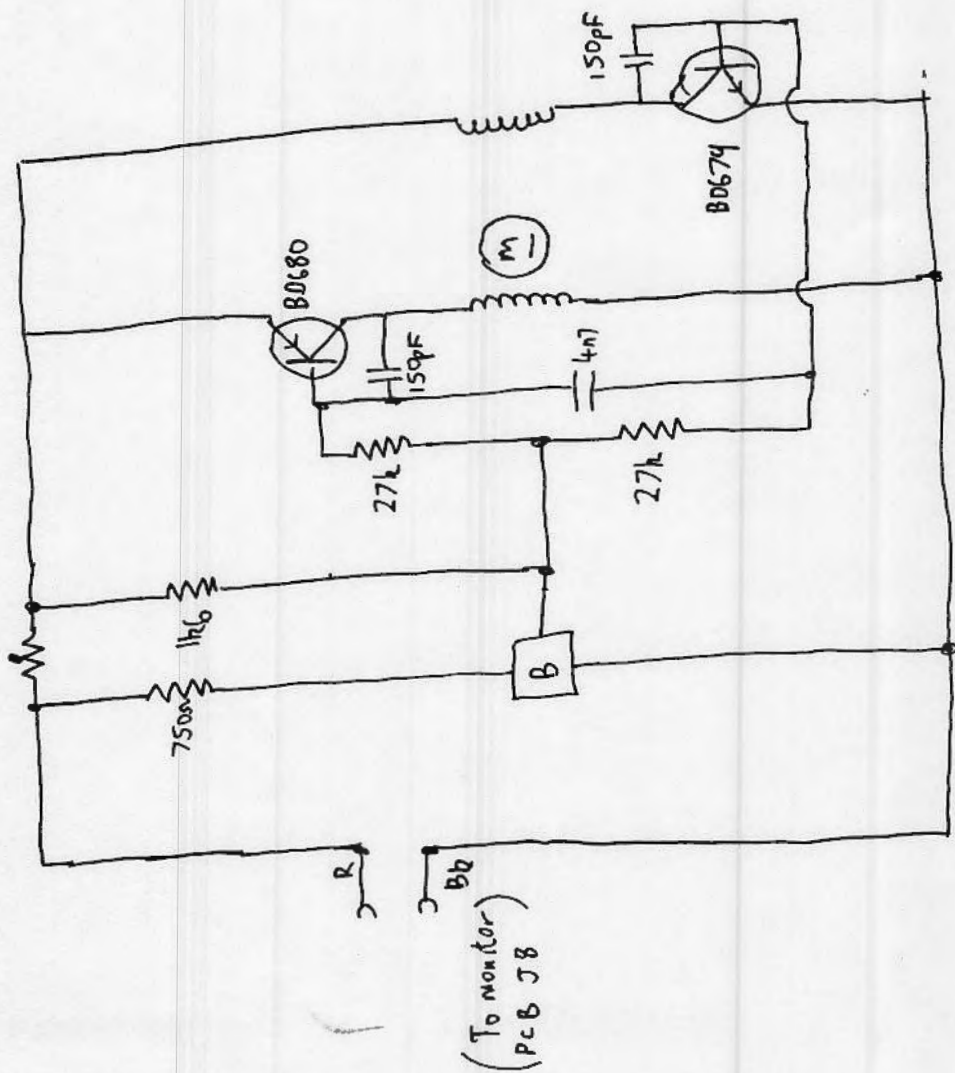
This connection is made via output headbank

Chopper

Output Rectifier

Crowbar





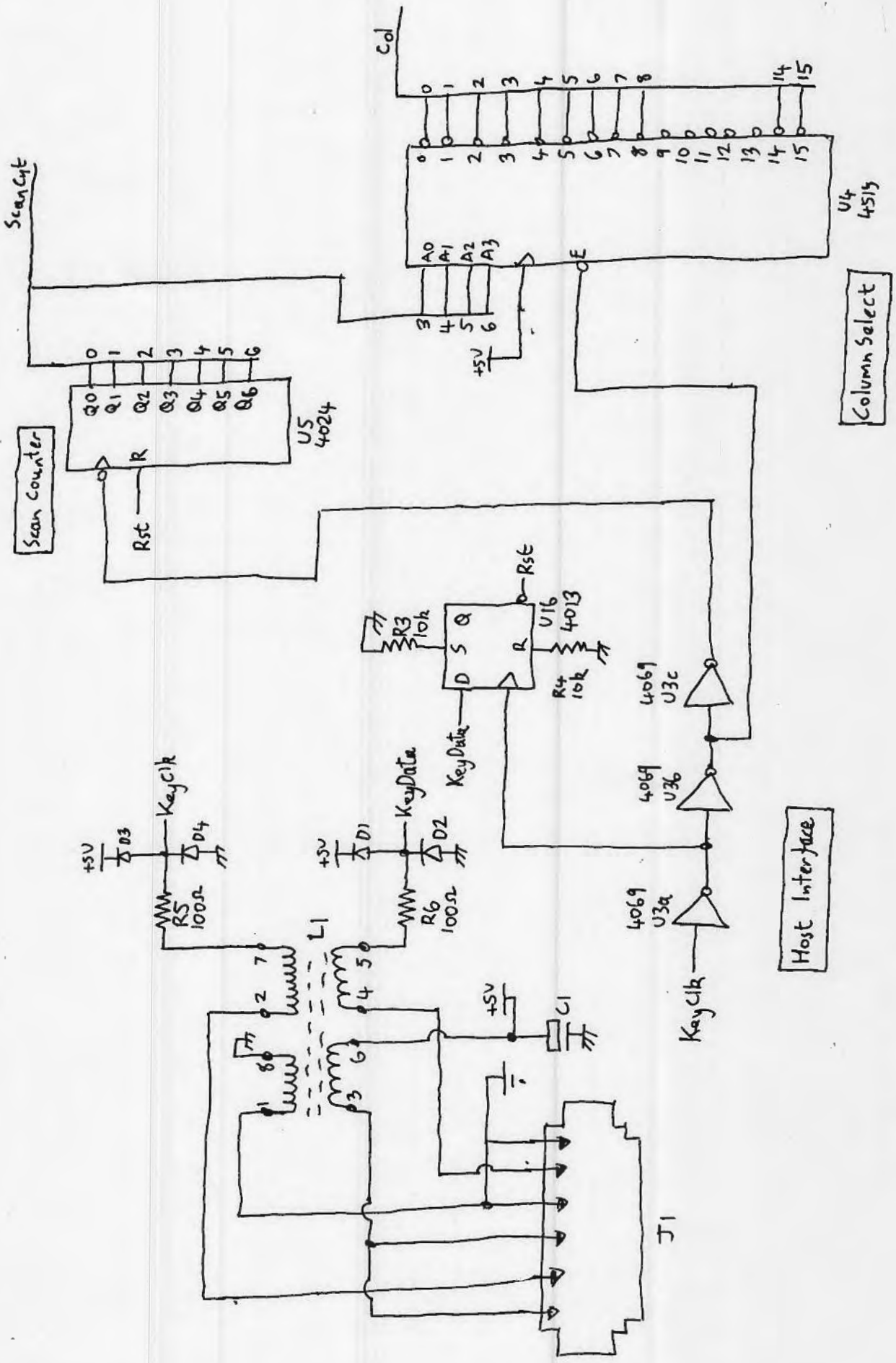
(To monitor)
(PCB JB)

Papst Multiton 8314

HP 9816 Fan

1 R0 R5	2 K1 K6	3 K2 K7	4 K3 K8	5 K4 K9	6 ↓ ←	7 ↑ →	8 RCL	9 DELL INSL	10 SETT INSC	11 CLRT DELC	12 CLAS CLRL	13 ANYE STEP	14 STOP C I/O
15 ! .	16 @ 2	17 # 3	18 \$ 4	19 % 5	20 ^ 6	21 & 7	22 * 8	23 (9	24) 0	25 — —	26 + =	27 BACK SPACE	28 RST PSE
29 Q	30 W	31 E	32 R	33 T	34 Y	35 U	36 I	37 O	38 P	39 { [40 }]		41 RUN
42 CTRL	43 A	44 S	45 D	46 F	47 G	48 H	49 J	50 K	51 L	52 : ;	53 , '	54 PRT ALL ENTER	55 CONT
56 SHIFT	57 Z	58 X	59 C	60 V	61 B	62 N	63 M	64 < ,	65 > ;	66 ? /	67 SHIFT	68 EXEC	
					Space Bar					70 TAB	71 CAPS		

HP98203 Keycaps



HP 98203 Keyboard Sheet 1

