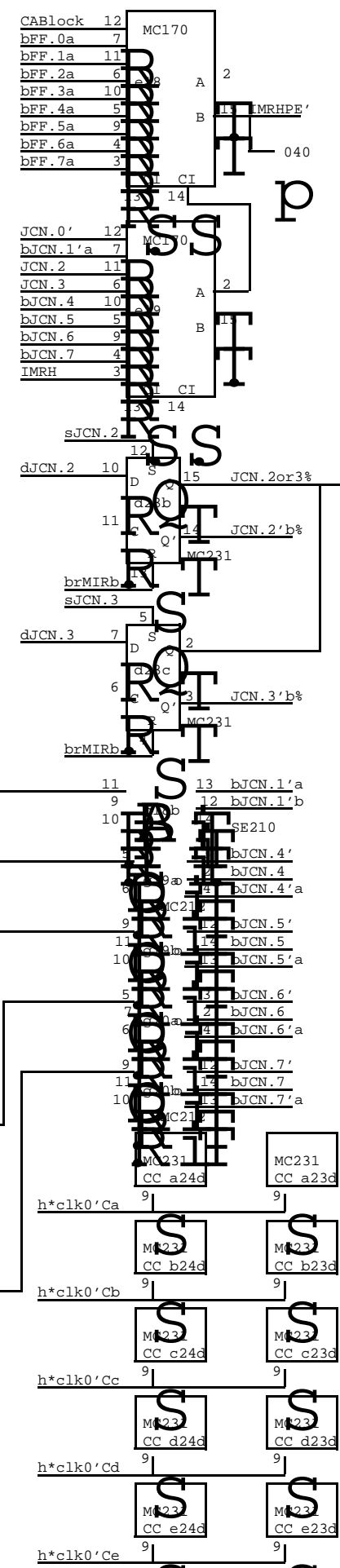
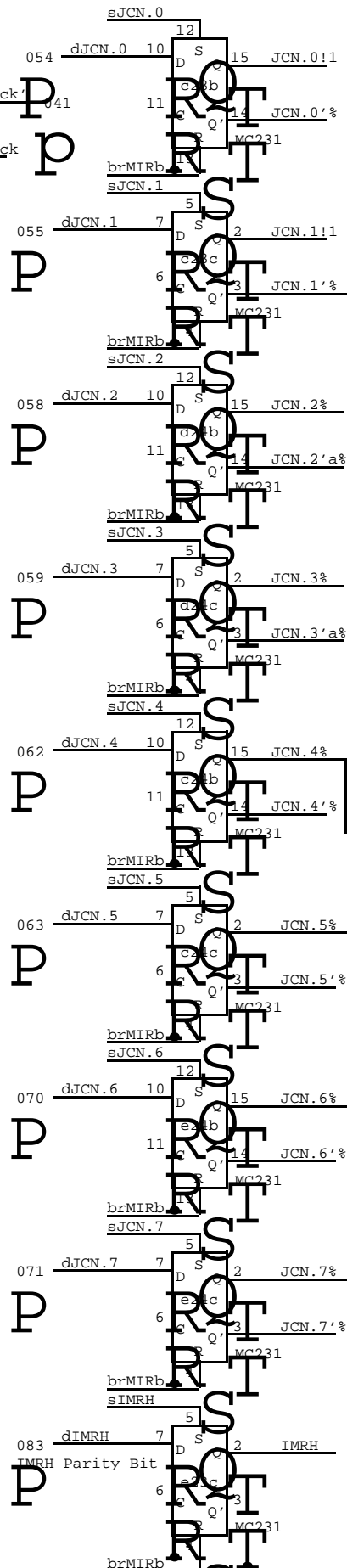
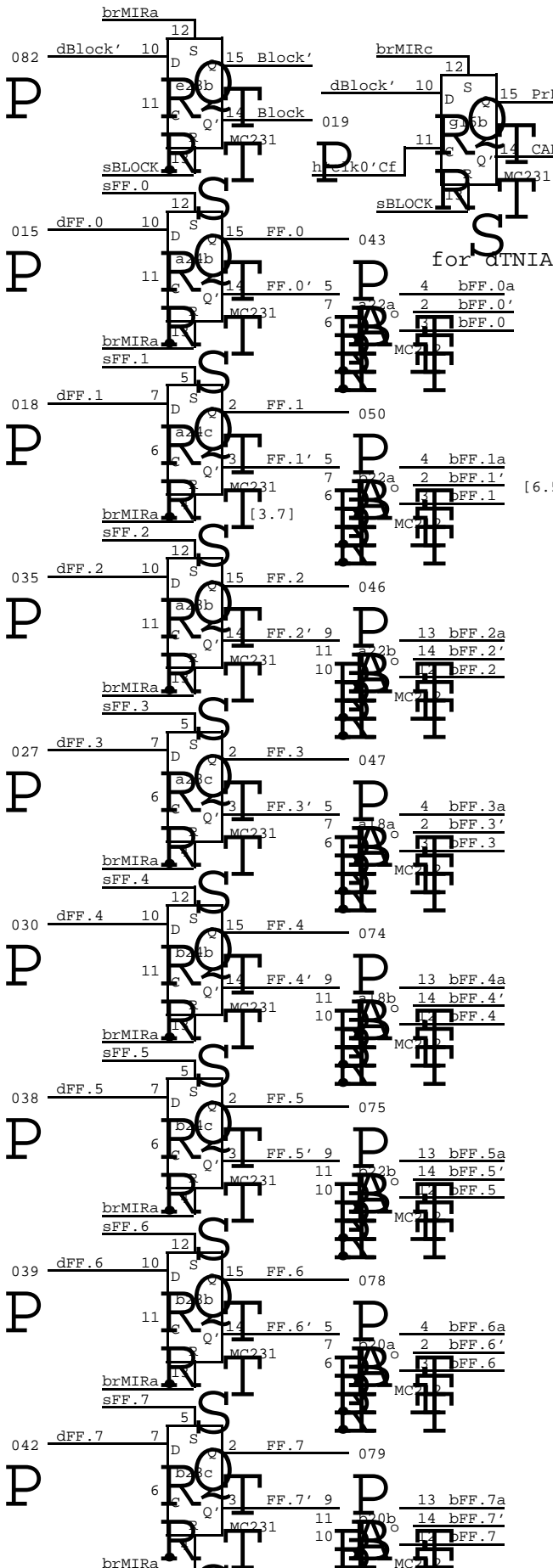


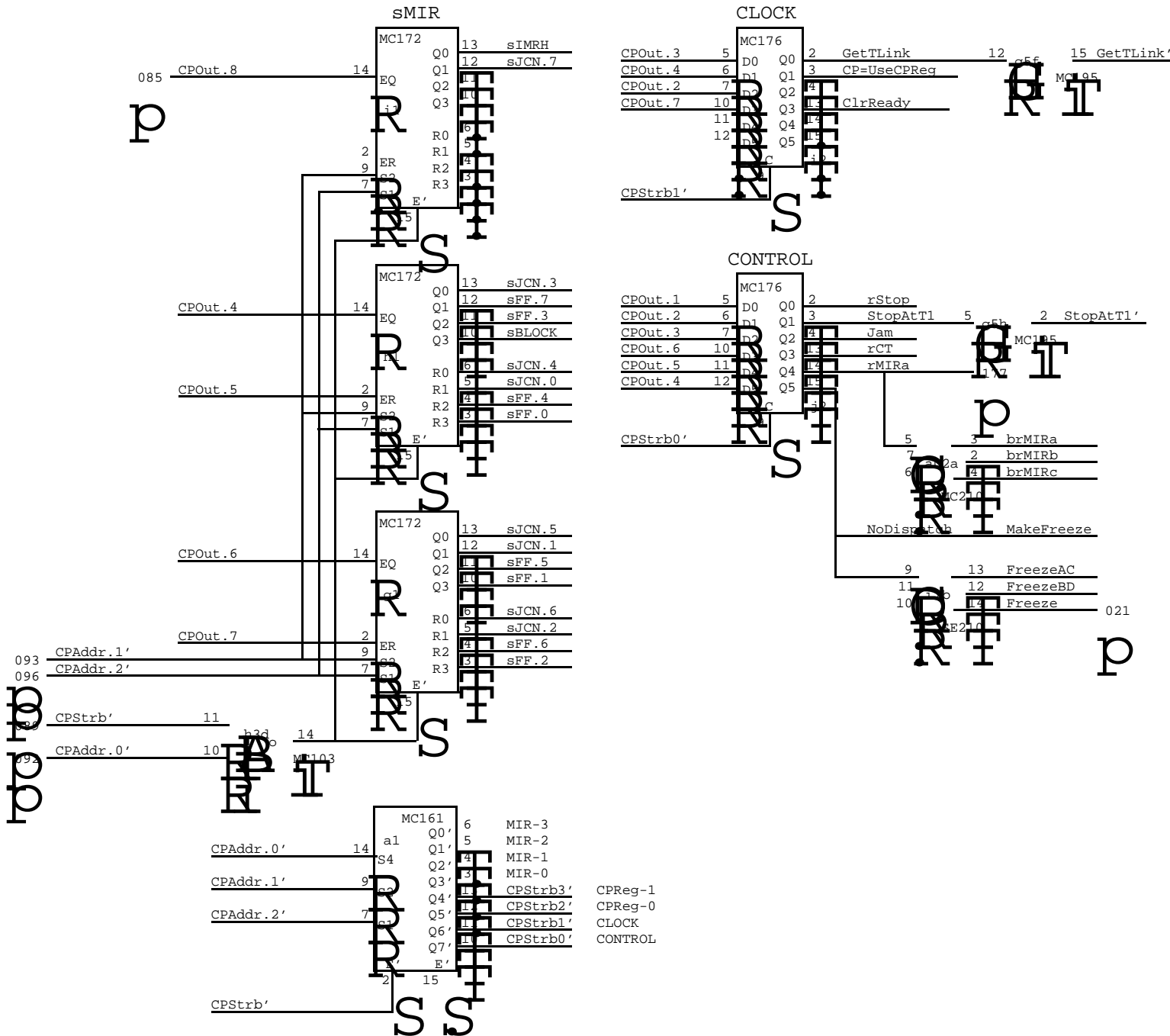
D O R A D O S C H E M A T I C S

C o n t r o l A

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JCN.0' 7 3 LocalBr'a% Midas
 JCN.1!2 5 2 LocalBr'b%
 6 1 LocalBr'c%

JCN.0!2 7
 JCN.1!2 5
 JCN.2'a 6

JCN.5' 11
 JCN.6' 9
 JCN.7' 10

IFUNext'a!1 Midas IFUNext'a!2 12
 IFUNext'b!1
 IFUNext'c!1

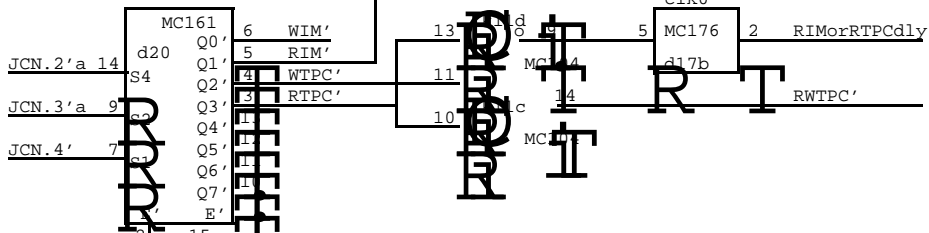
wire-OR page 5
 9 IfuNextMacro' 138
 13 NextMacro!
 15

107 P
 BSEL.0' 5 3
 7 2
 6 1
 JCN.0!0 9 11 FFok'a% 034
 JCN.1!0 11 12 FFok'b% 031
 JCN.2or3 10 13 FFok'c% Midas

JCN.0!0 11 13 LongJump'a% Midas
 JCN.1!0 9 12 LongJump'b%
 JCN.2or3 10 13 LongJump'c%

(2.8)
 JCN.0!0 7 3 CondBra'a% Midas
 5 2 CondBra'b%
 [3.7] 6 1 CondBra'c%
 JCN.1!0 11 14
 JCN.2 9 14
 JCN.3 10 14
 JCN.5' 5 2
 JCN.6' 7 2
 JCN.7' 6 2

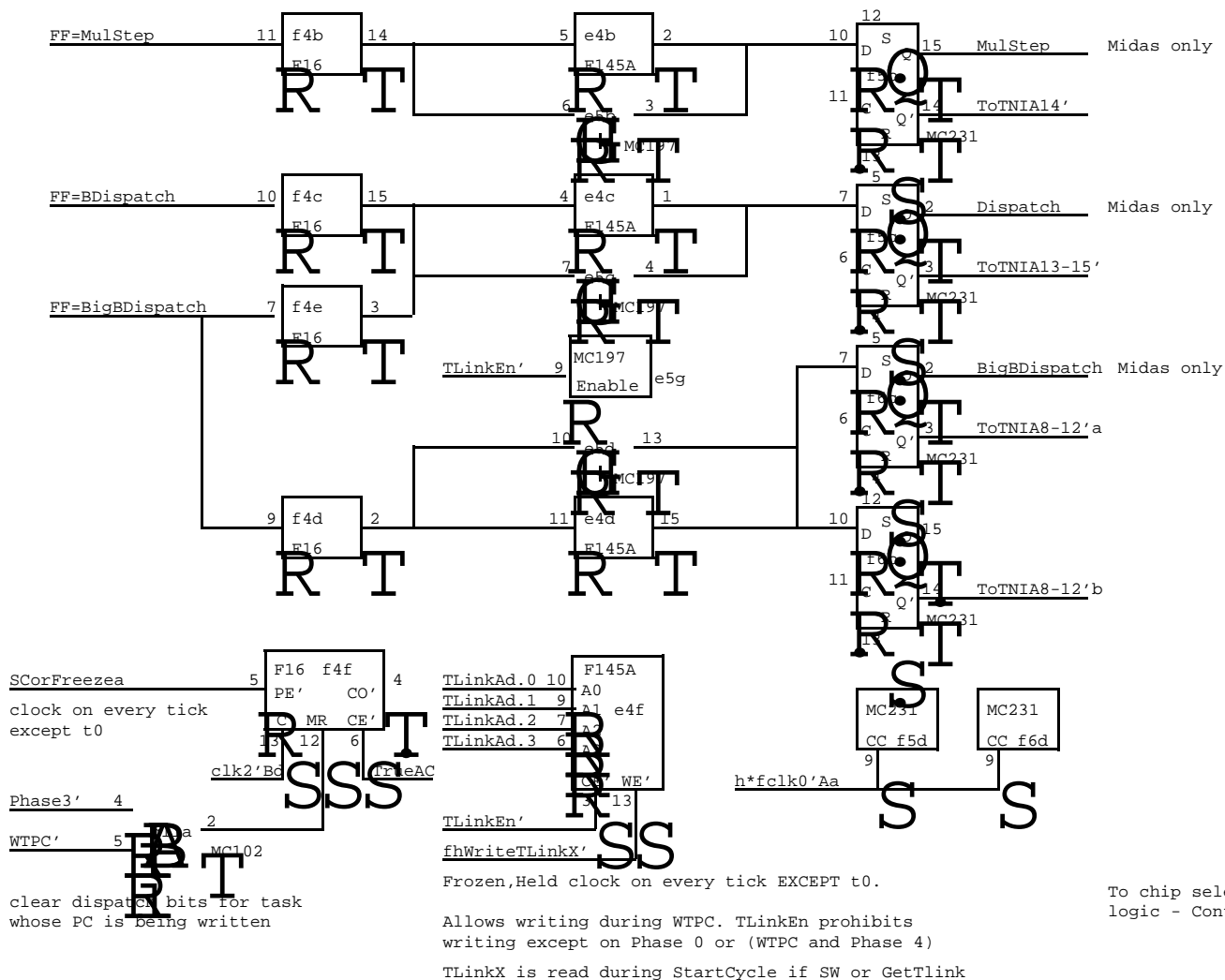
[by ~29]
 Call115 4 2 Call
 Call113' 6 3
 Call112 6 7
 Call114' 7 5
 Call114' 7 5
 Call114' 7 5



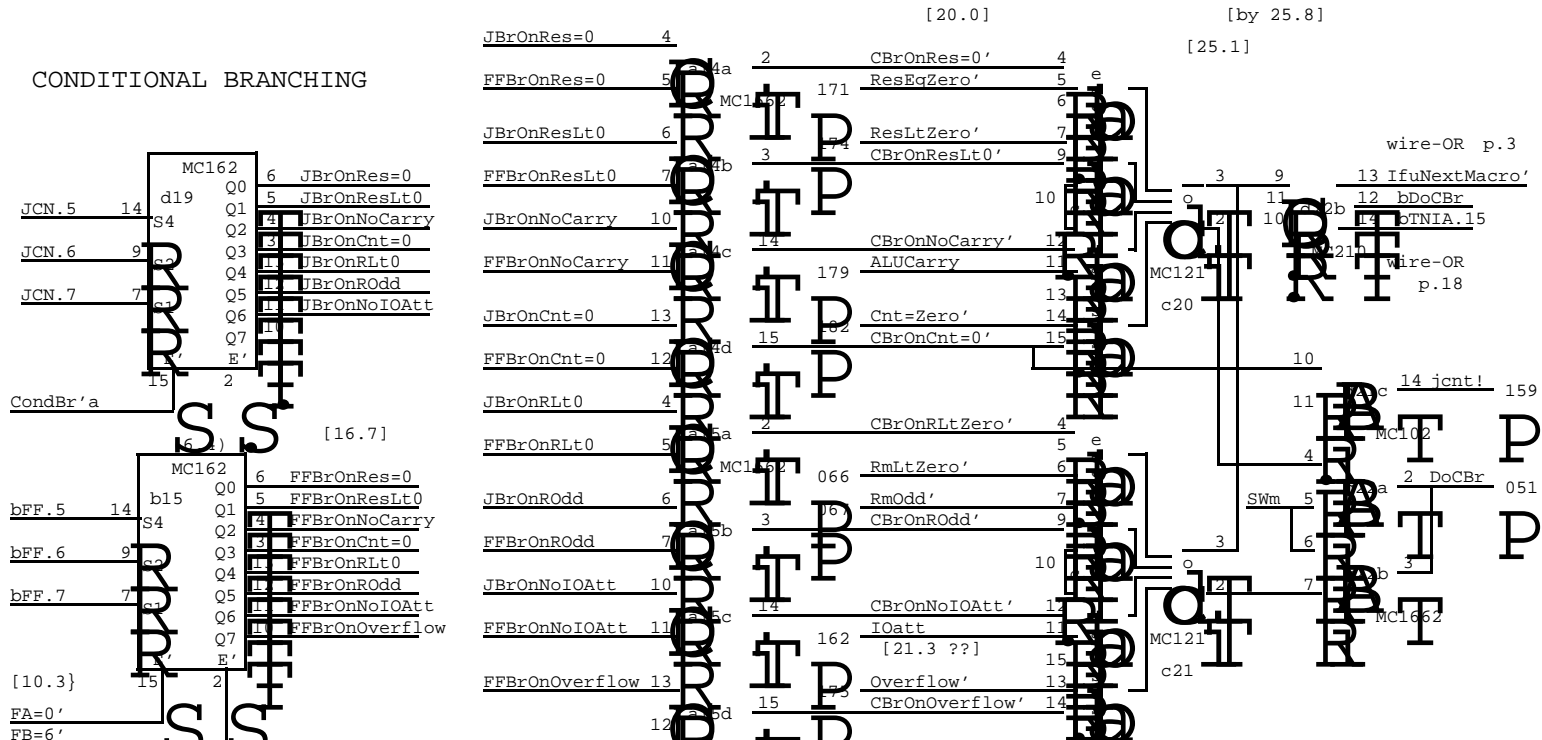
Midas
 JCN.0!2 7 3 Return'a!1 Return'a!2
 5 2 Return'b!1
 JCN.1' 6 1 Return'c!1
 [6.5]
 JCN.5' 11 13
 JCN.6' 9 12
 JCN.7' 10 13

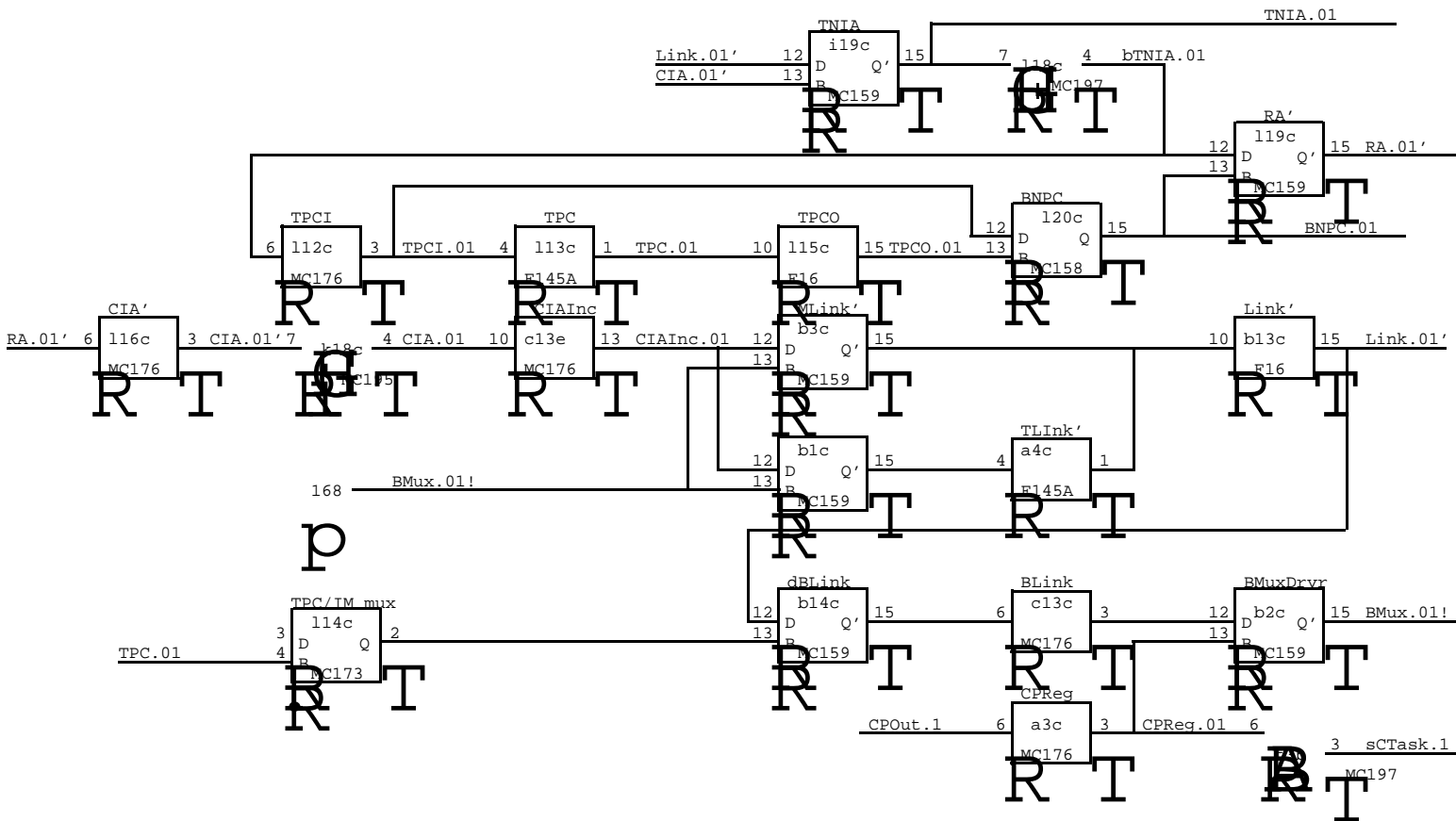
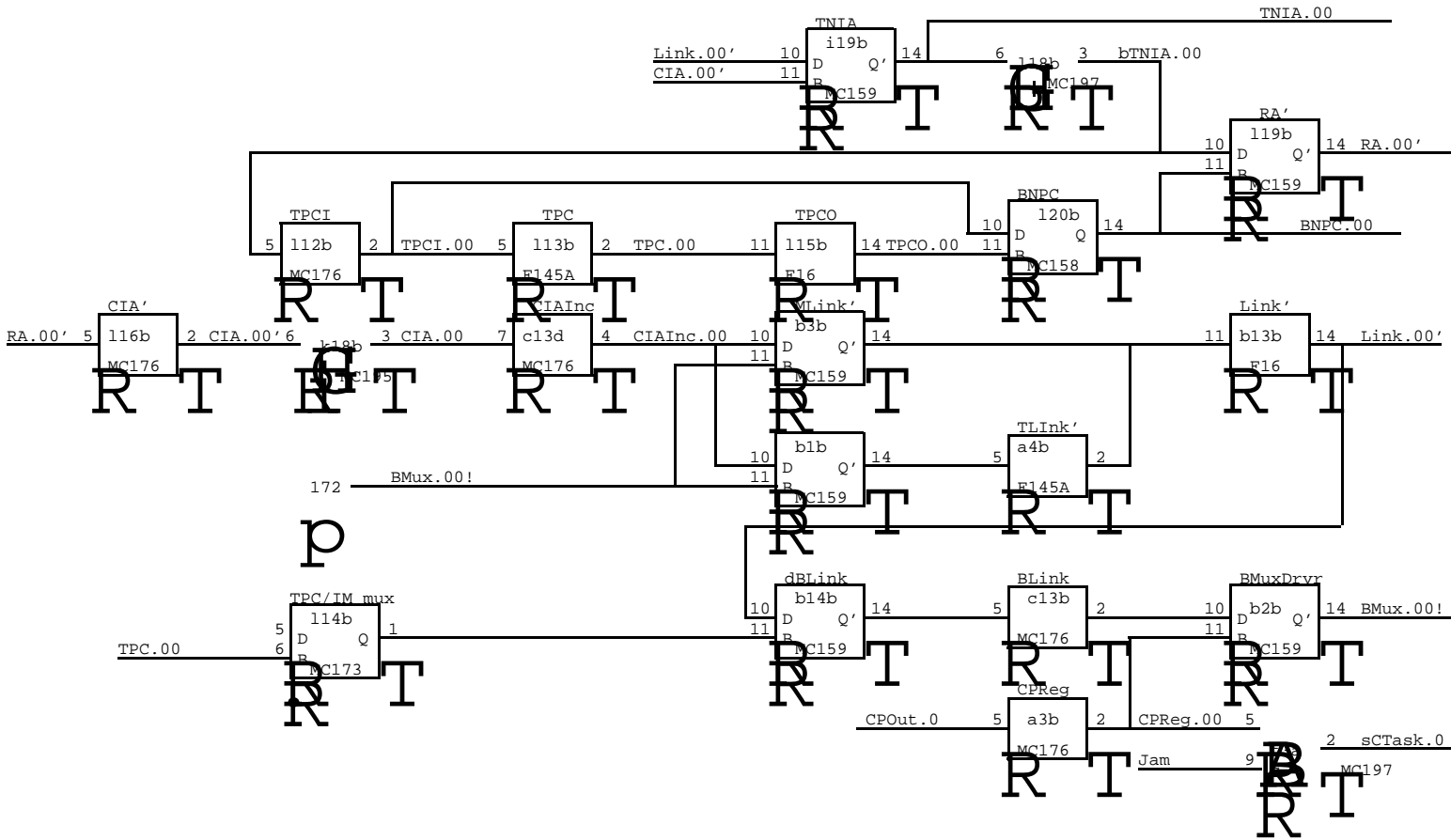
(3.3) [9.8]
 JCN.2'b 4 2 RWTPCorRWIM
 Return'a!0 12 15 Link CIAInc
 IFUNext'a!0 5 2

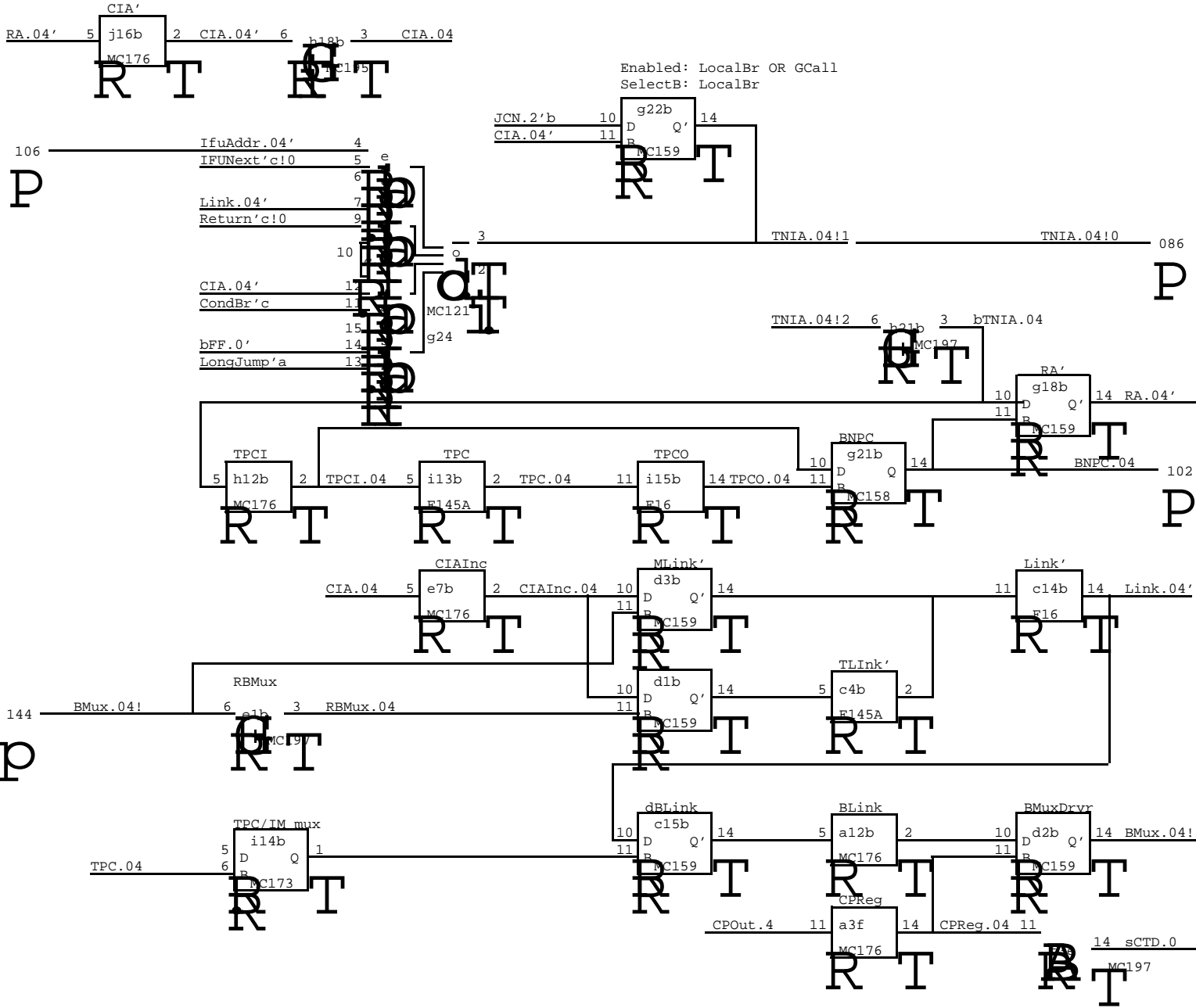
Link Extension T1 * no Hold write @ T3 Held T2 Held unless SwitchUp

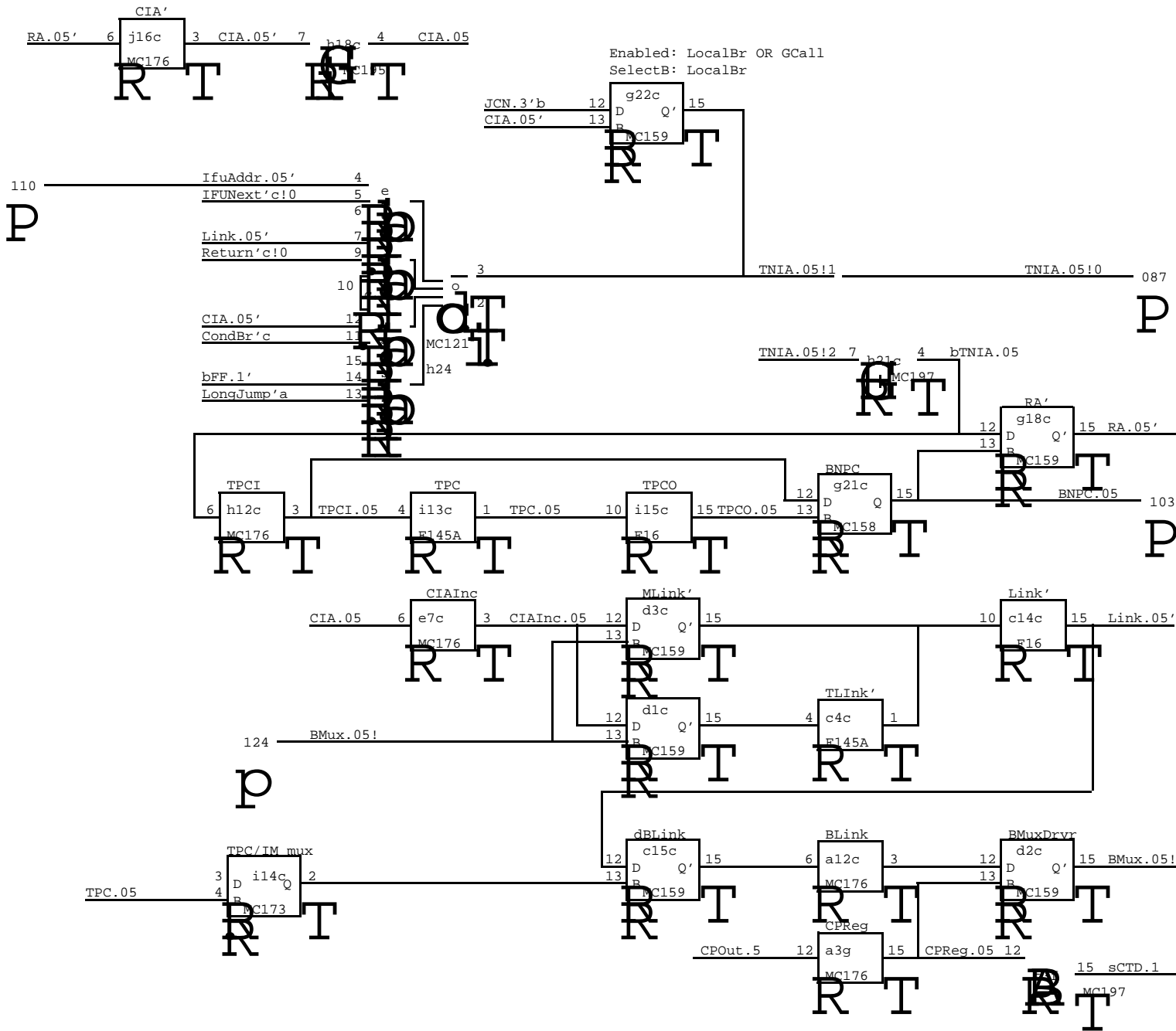


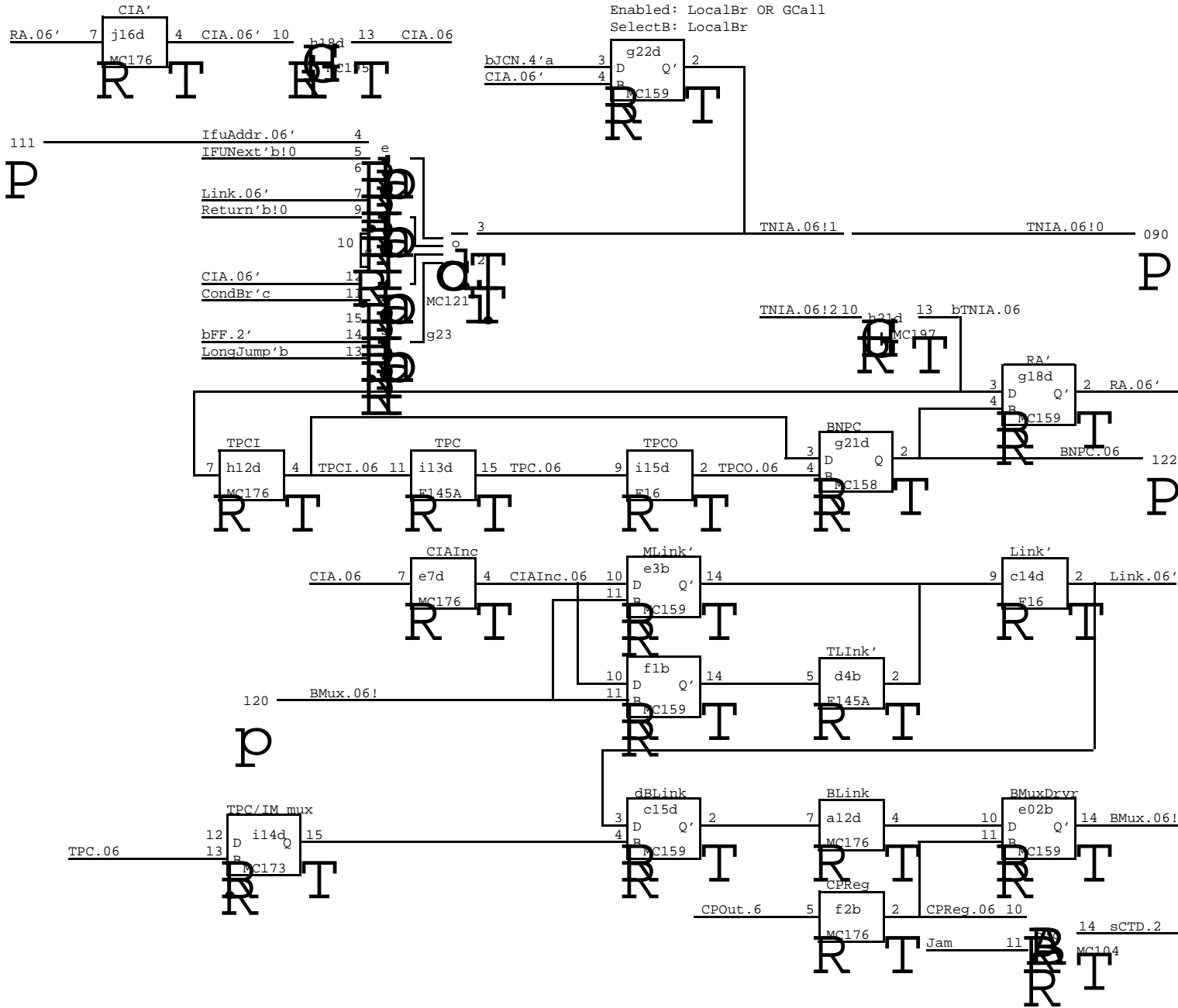
CONDITIONAL BRANCHING

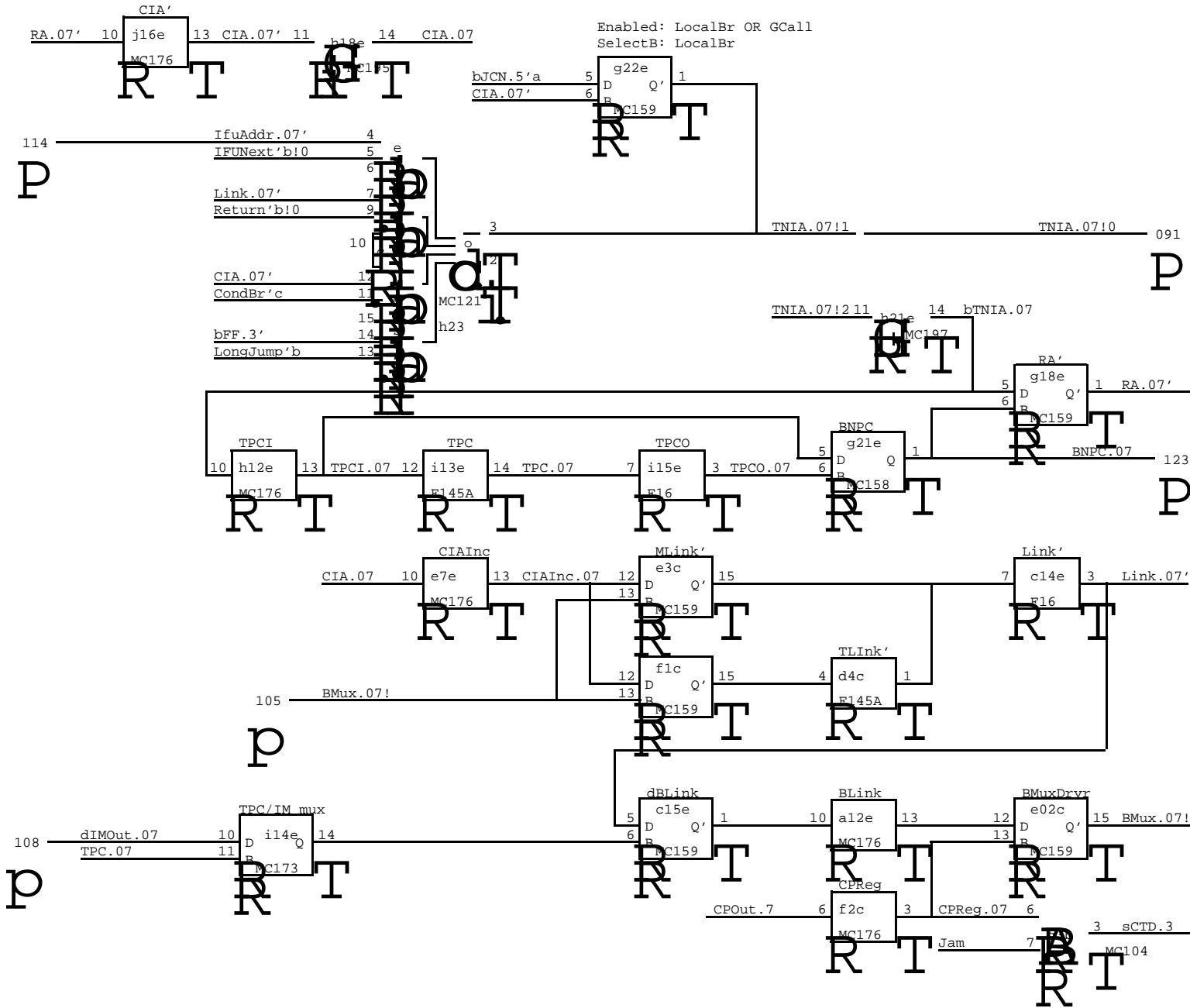


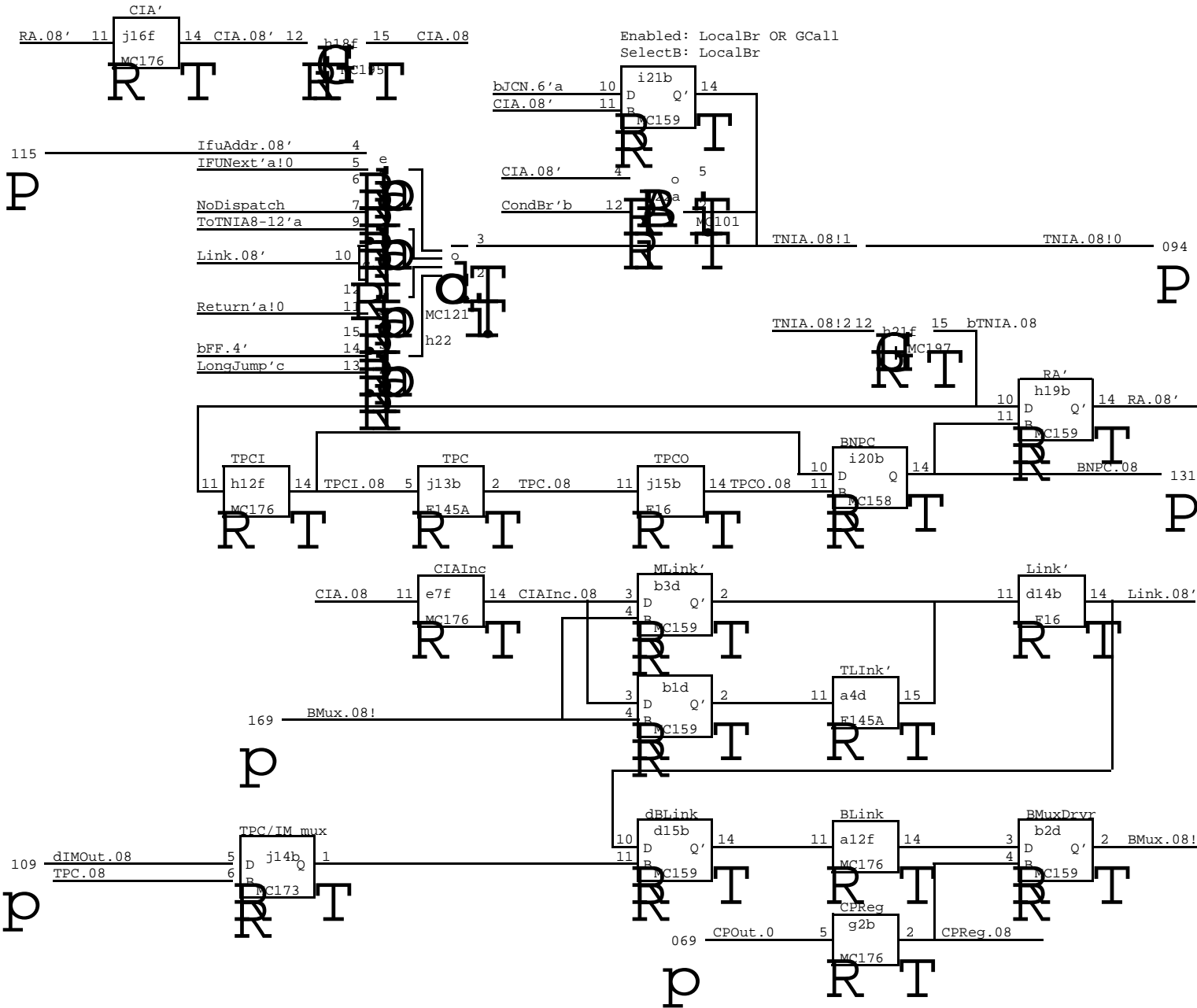


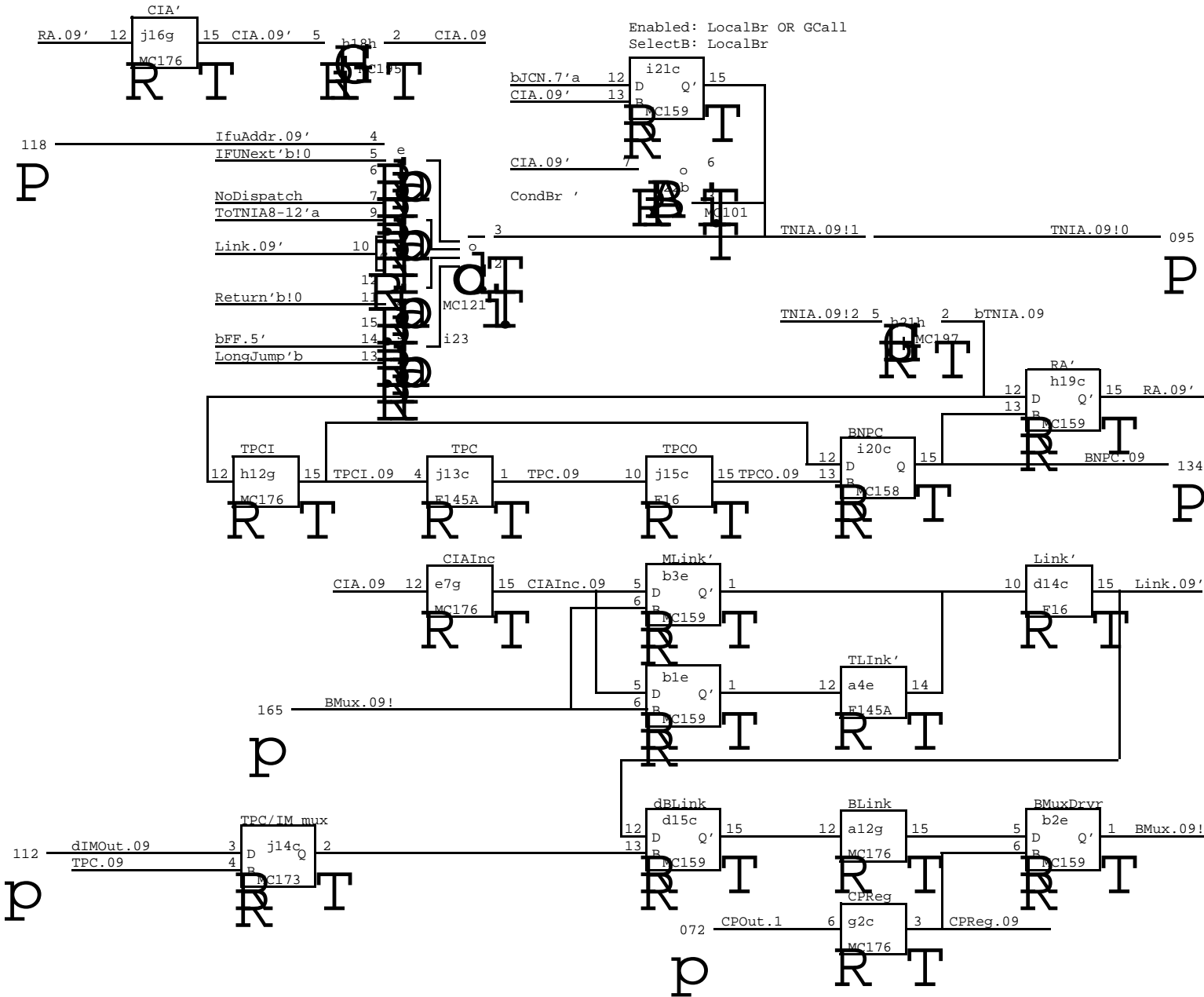


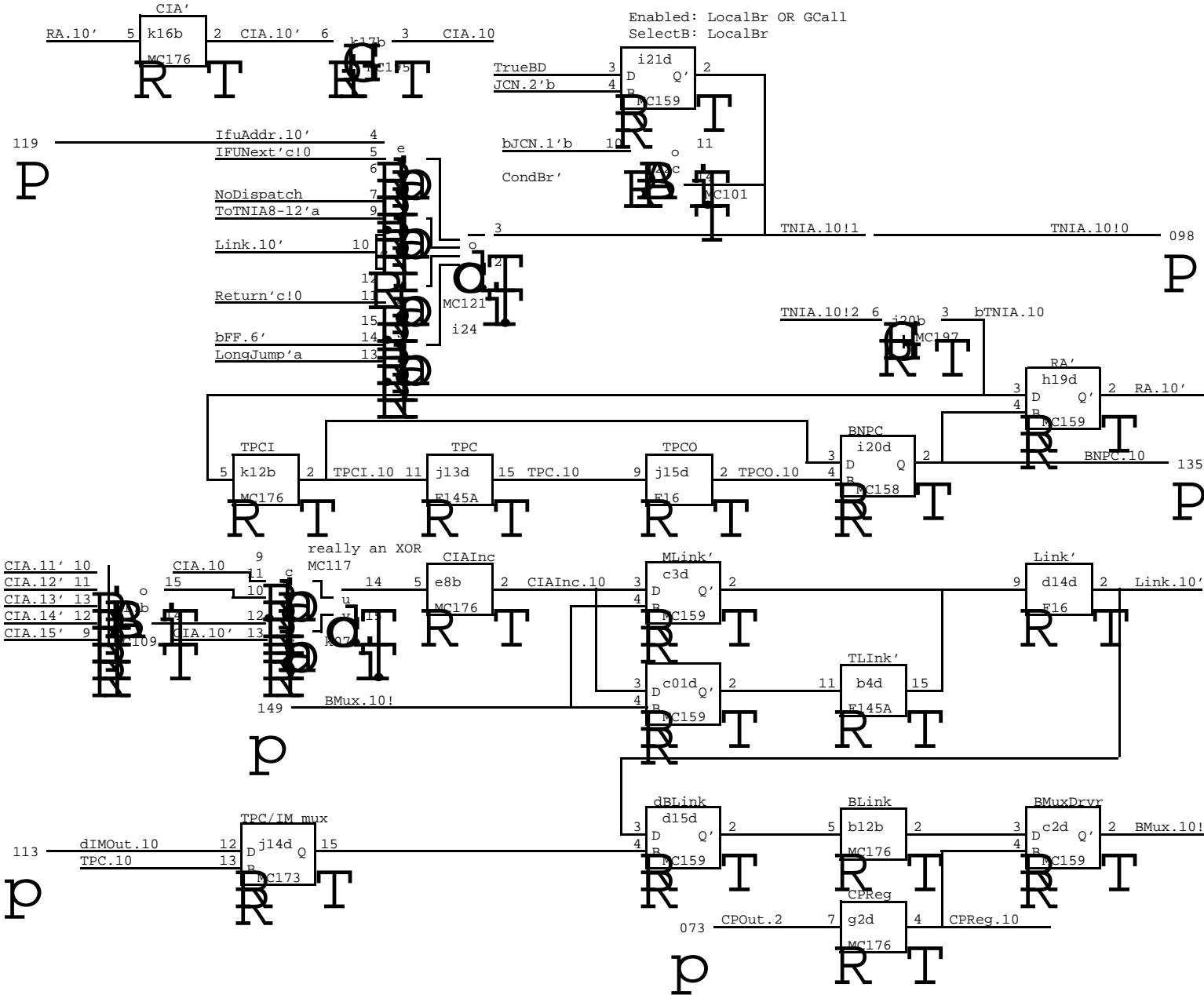


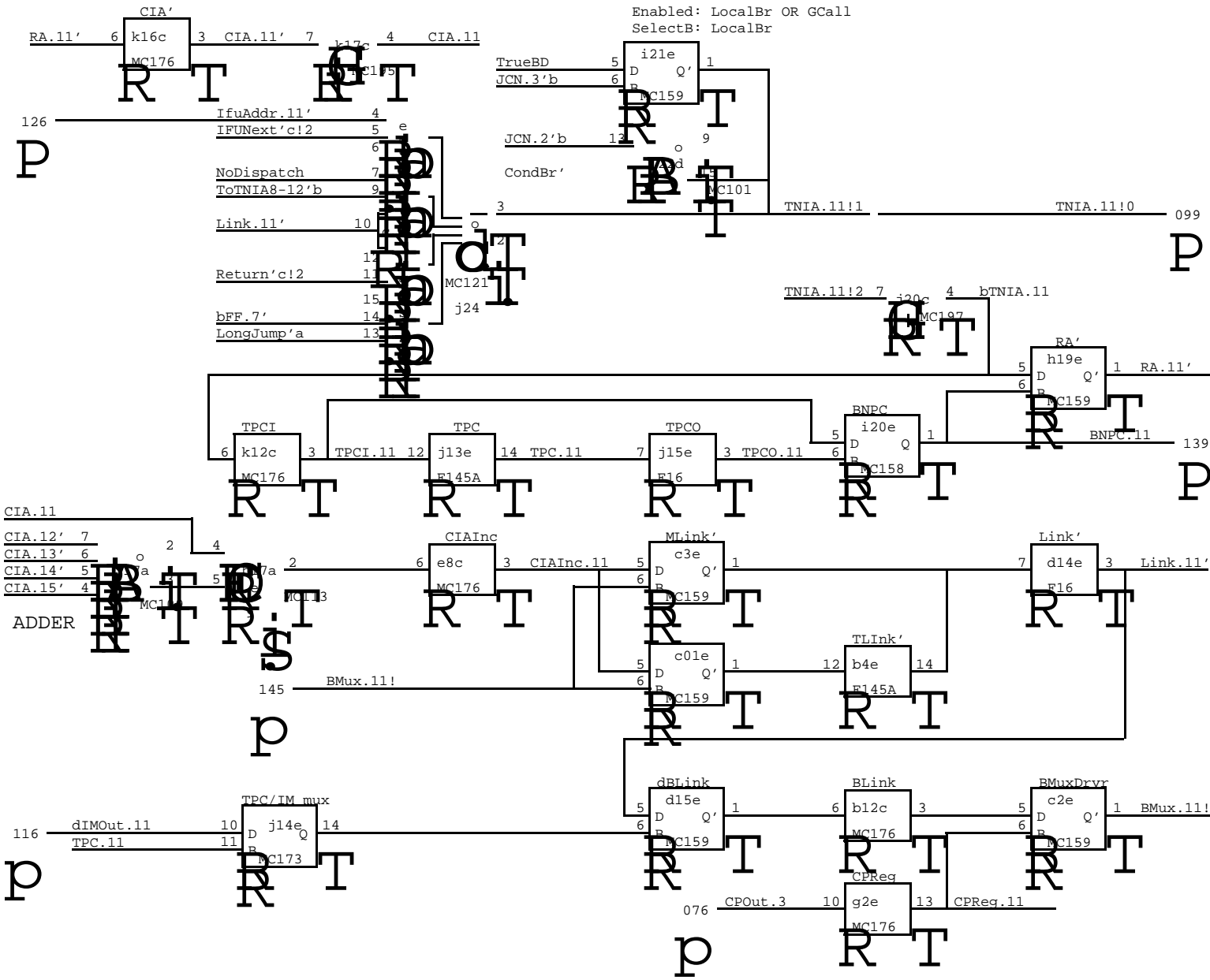


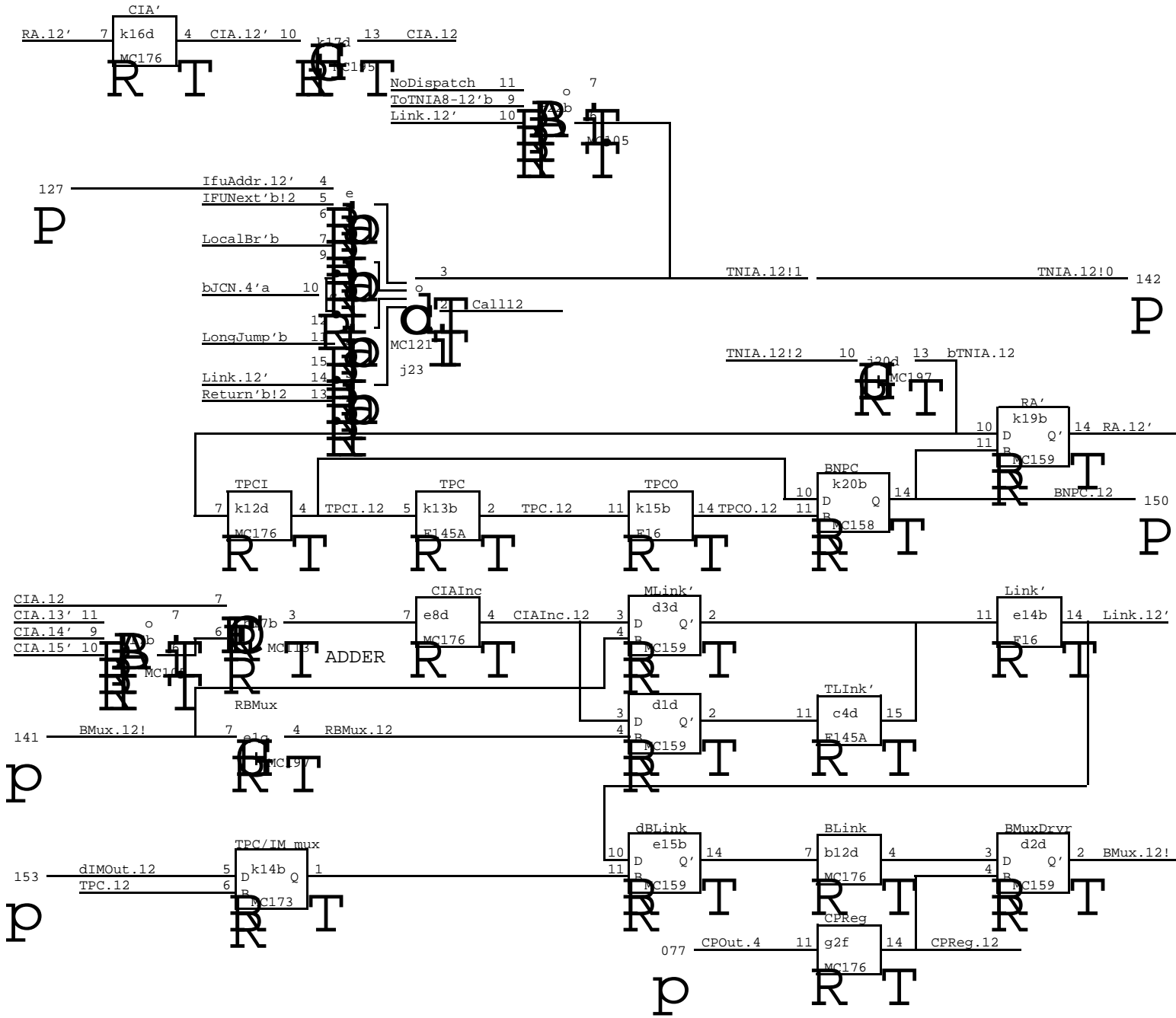


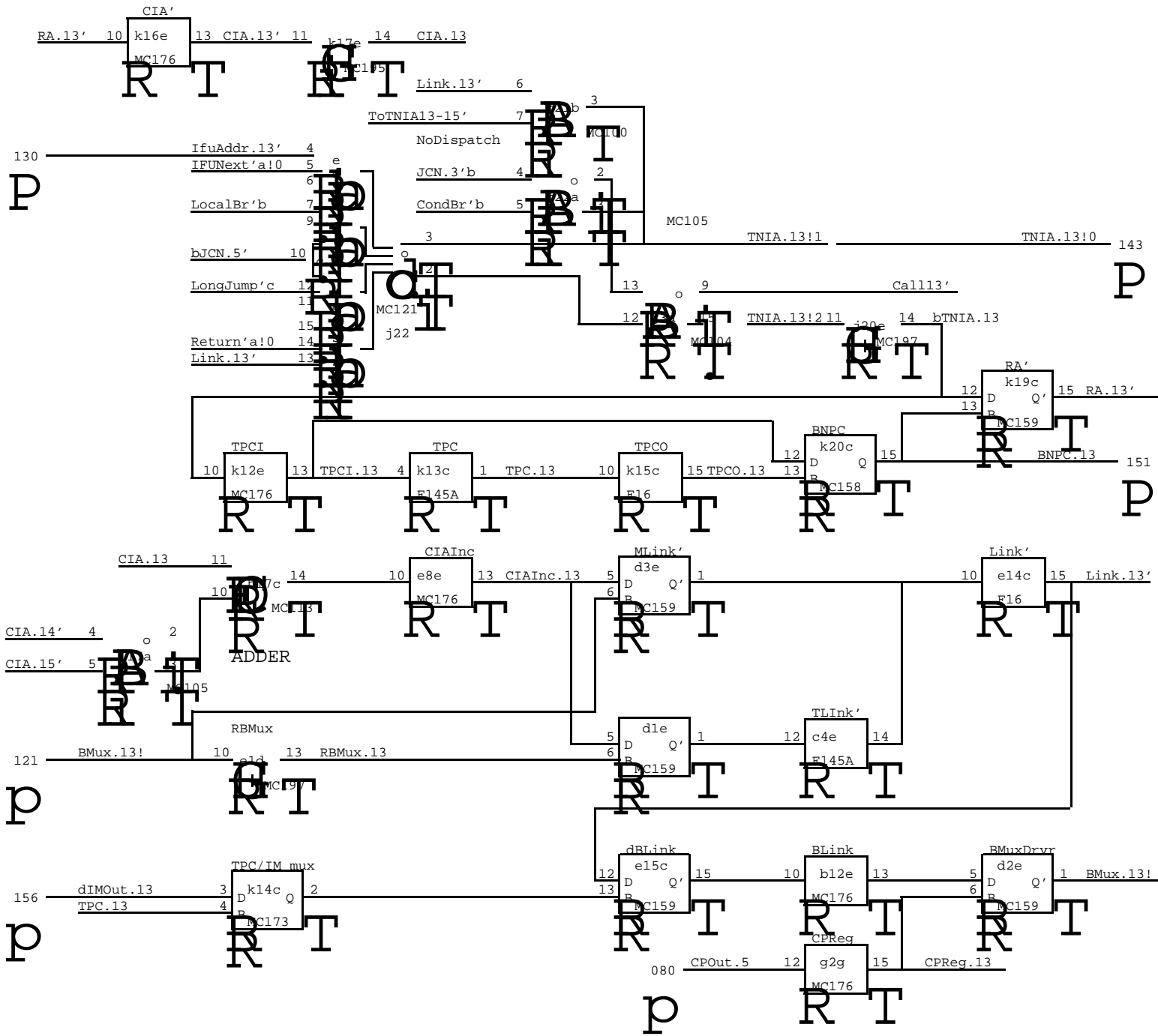


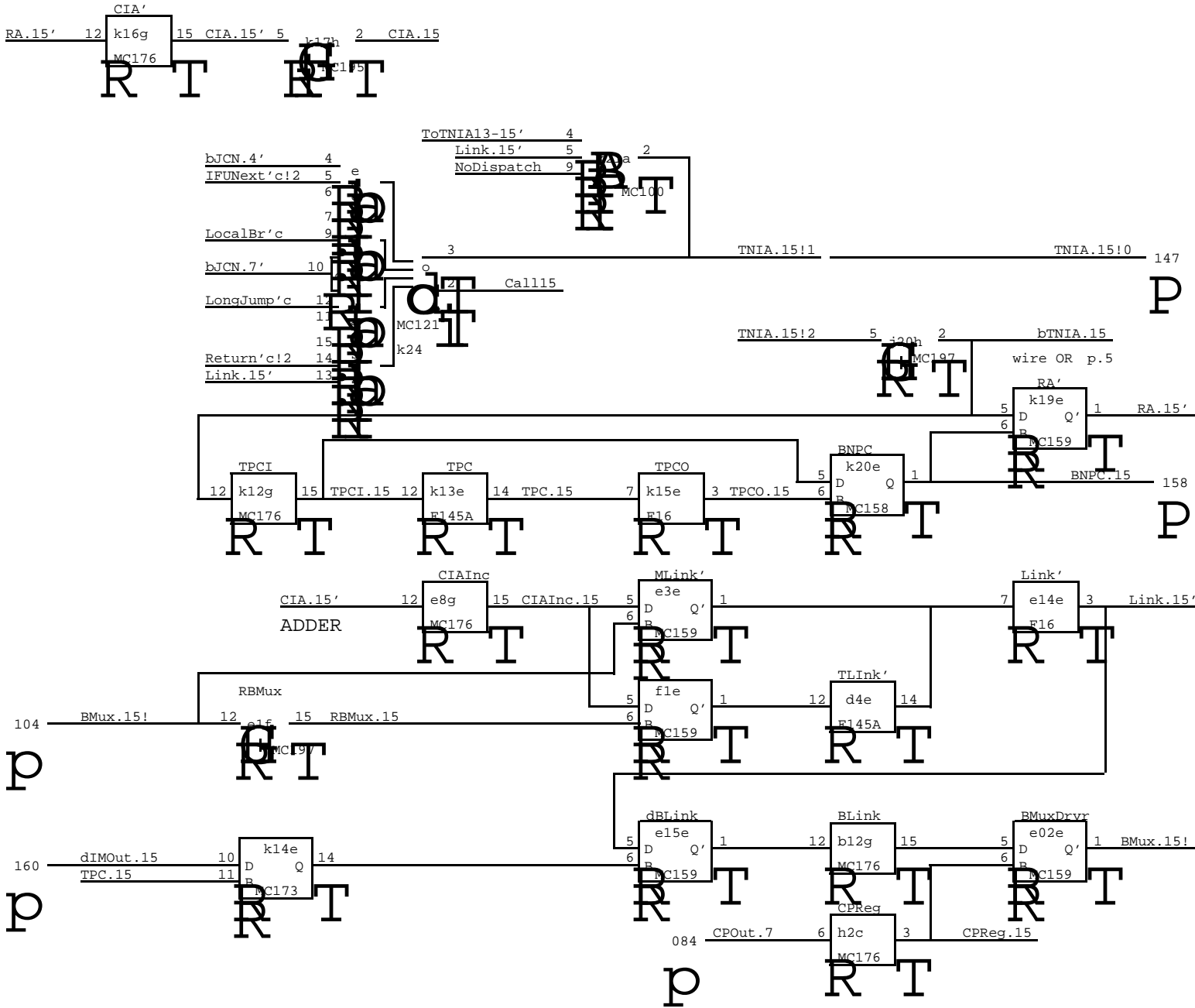


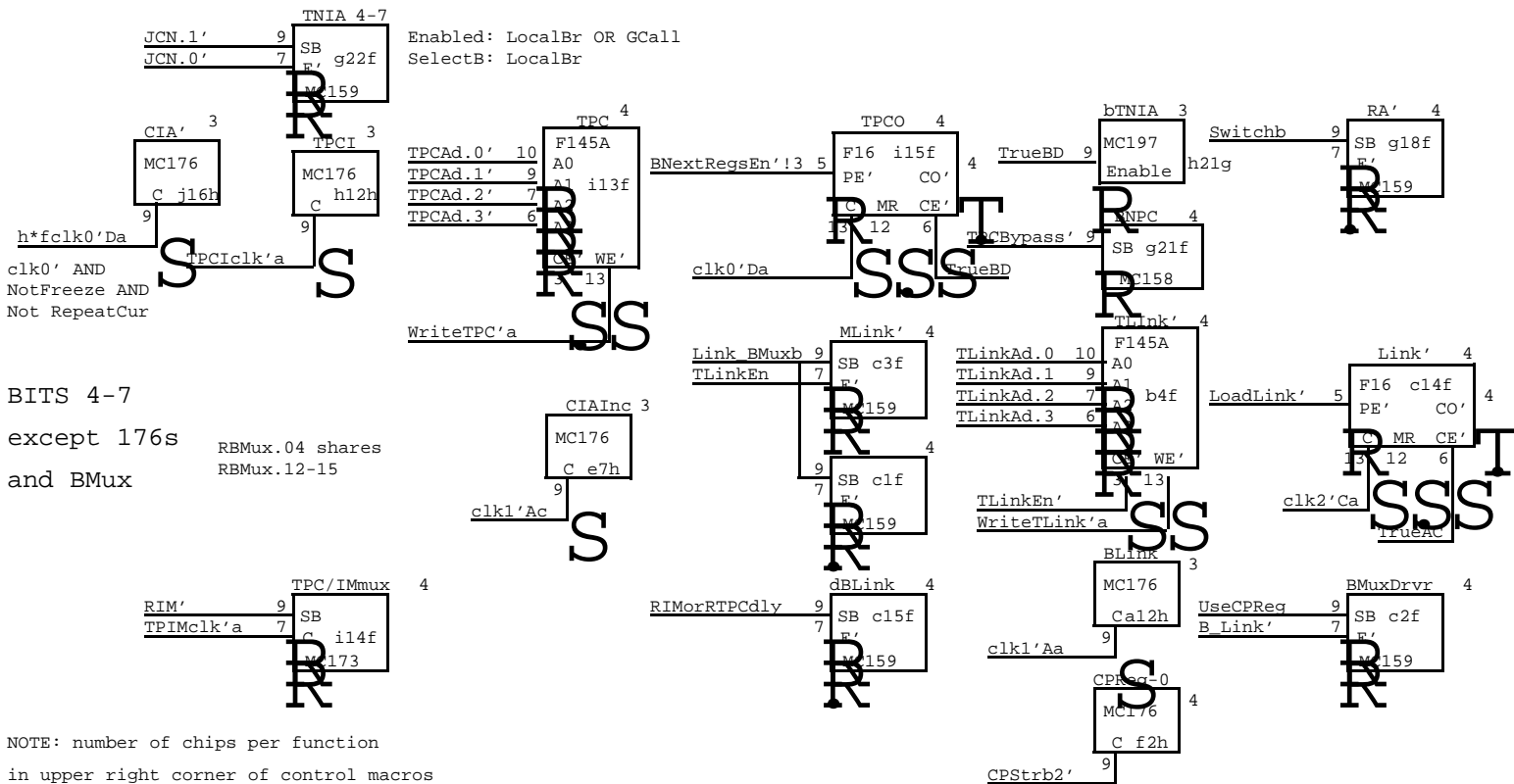
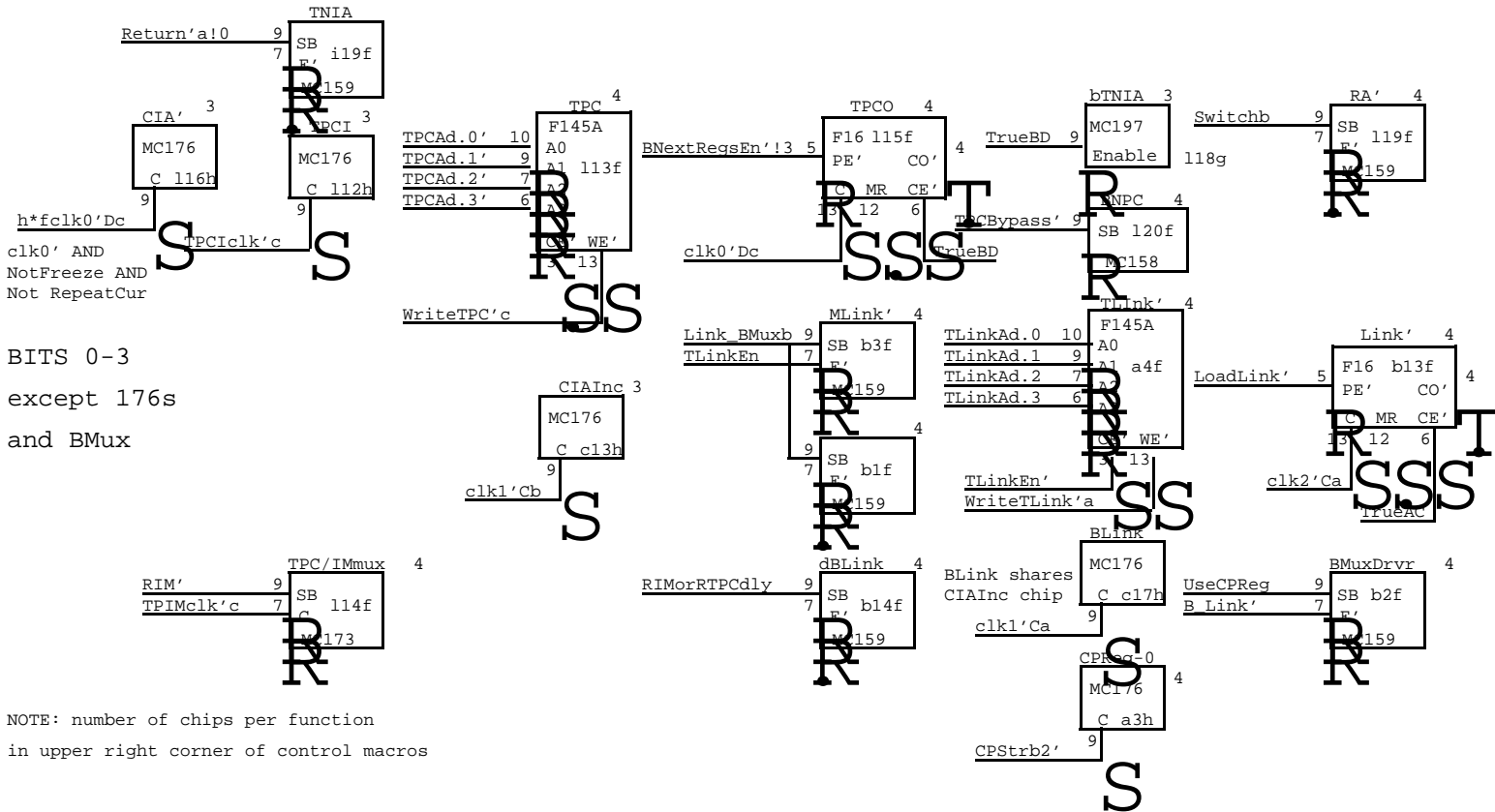




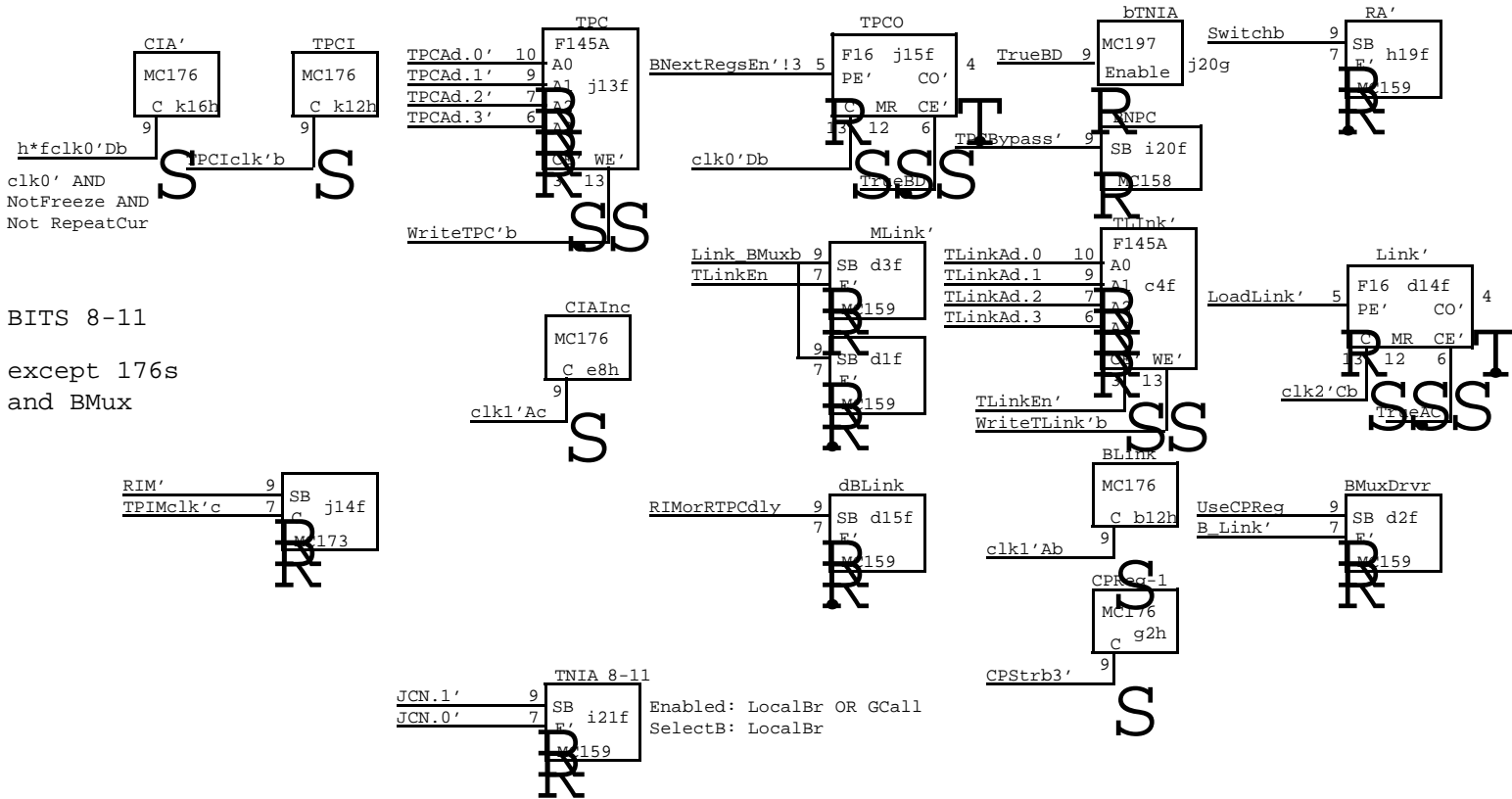








XEROX	Project	Control Section	File	Designer	Rev	Date	Page
PARC	Dorado	Data Paths	ContA20.sil	Pier	Cd	7/13/79	20

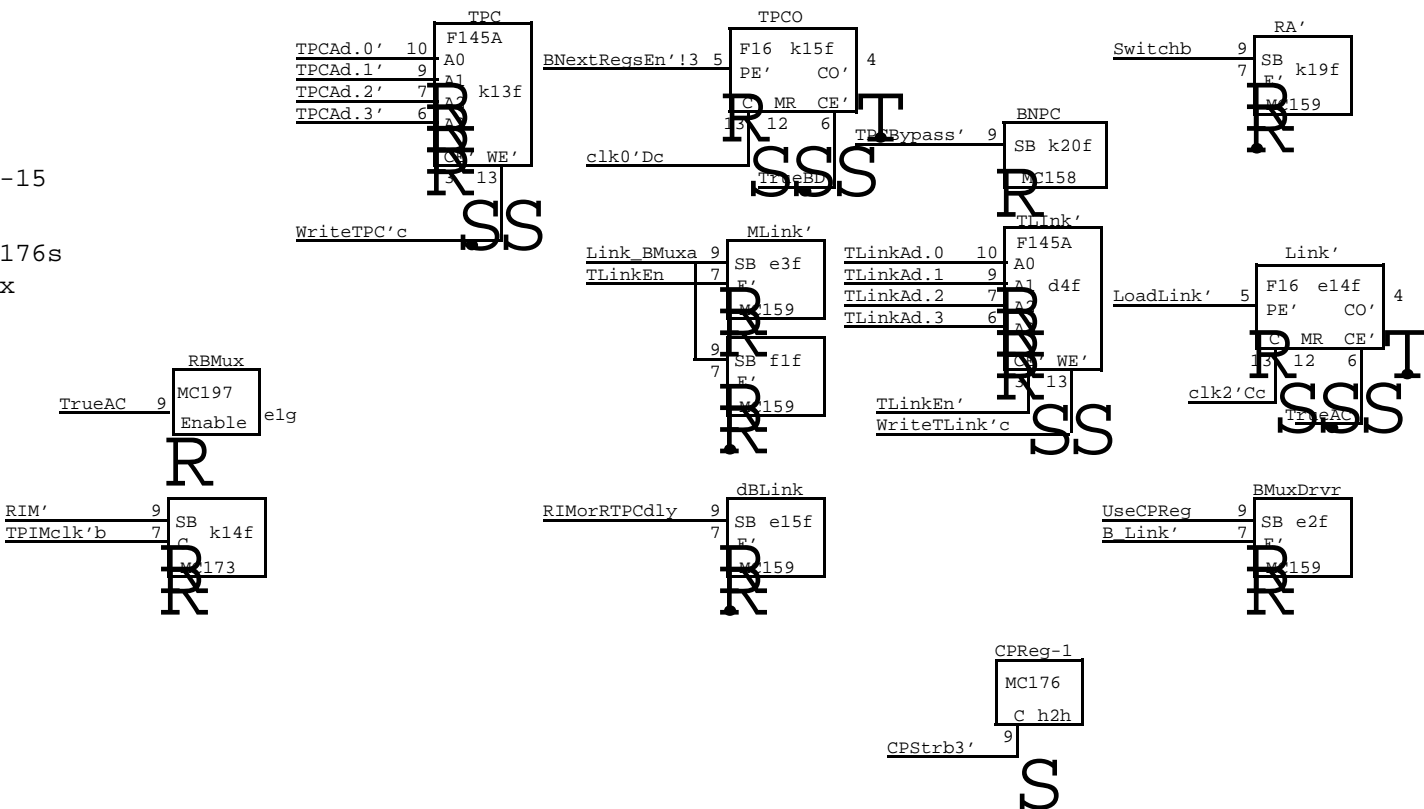


BITS 8-11

except 176s
and BMux

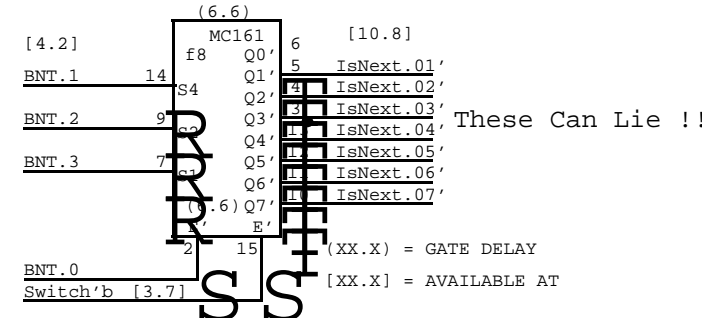
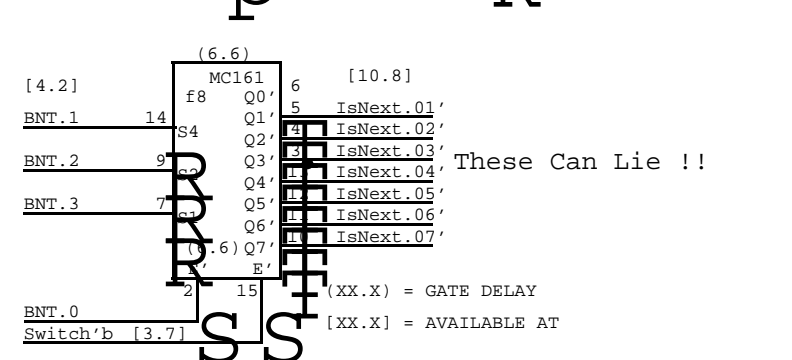
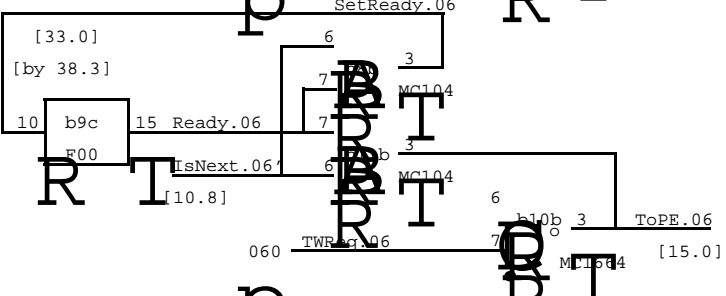
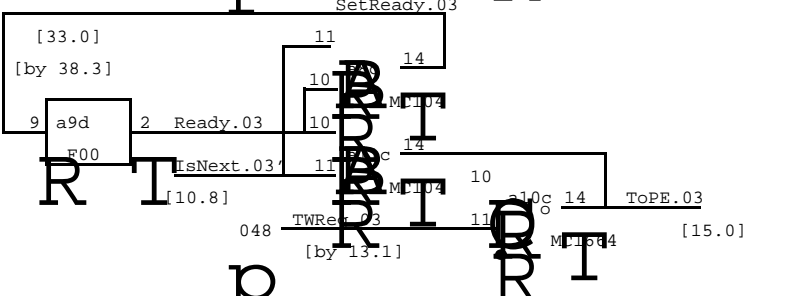
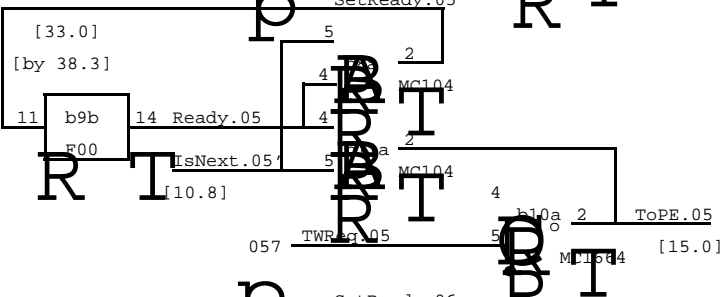
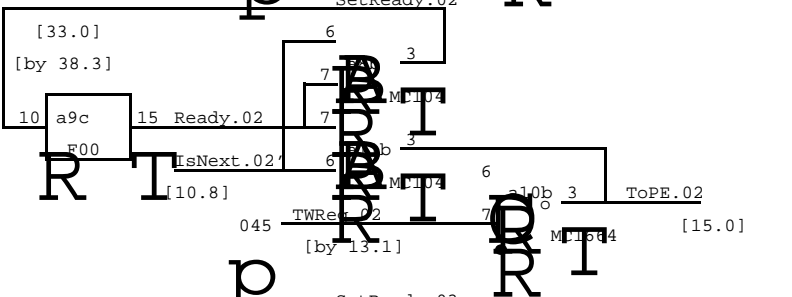
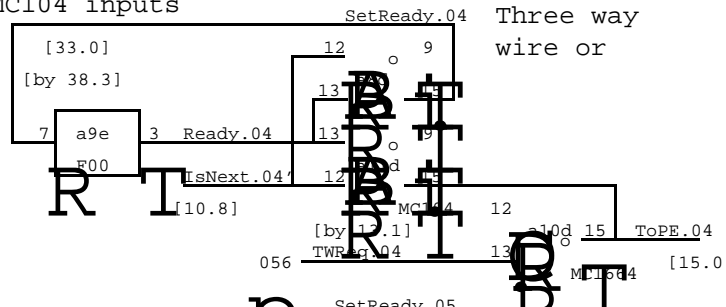
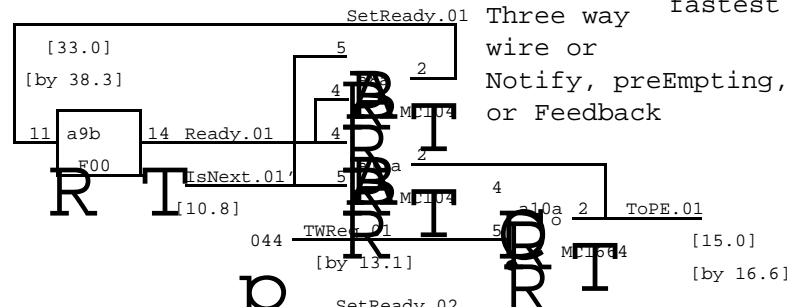
BITS 12-15

except 176s
and BMux

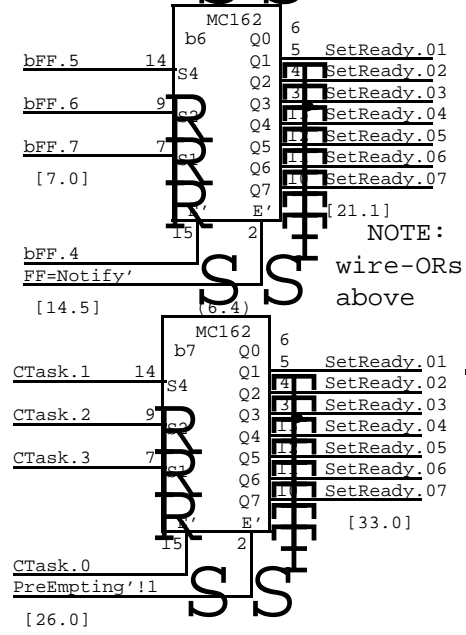


XEROX PARC	Project Dorado	Control Section Data Paths	File ContA21.sil	Designer Pier	Rev Cd	Date 7/13/79	Page 21
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Note: choose IsNext' into fastest MC104 inputs



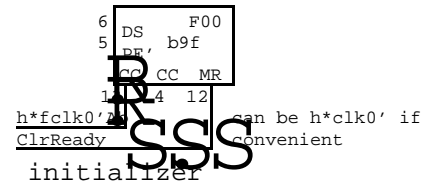
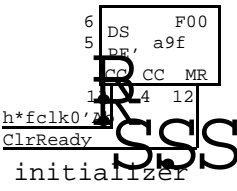
These Can Lie !!



NOTE !!!
Model0 Notify uses inverted FFs. These are uninverted; e.g. FF=361b is Notify[1]

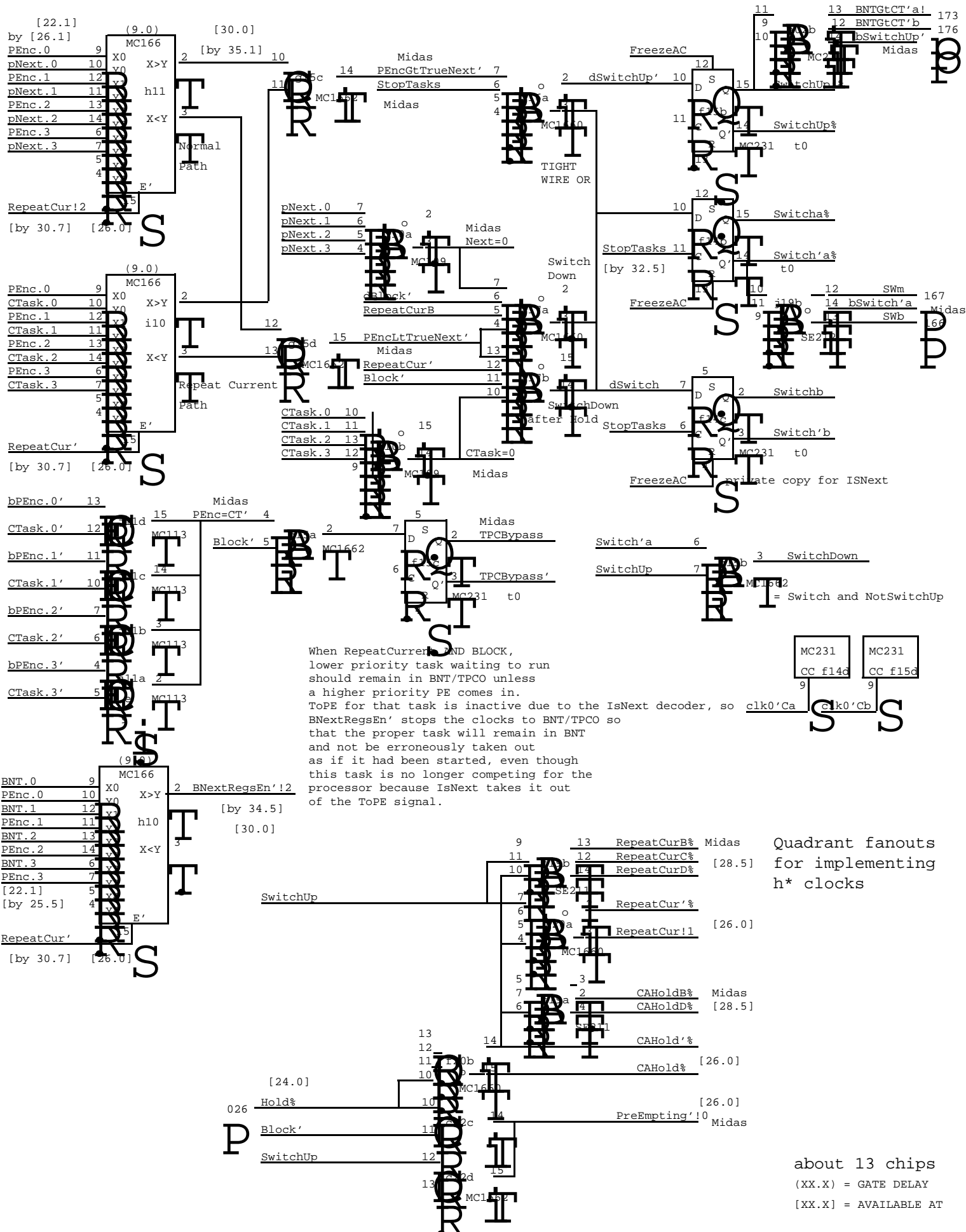
Prevent loading when IsNext lies

Prevent loading when IsNext lies



about 11 chips

XEROX PARC	Project Dorado	Ready Logic	File ContA22.sil	Designer Pier	Rev Cd	Date 7/13/79	Page 22
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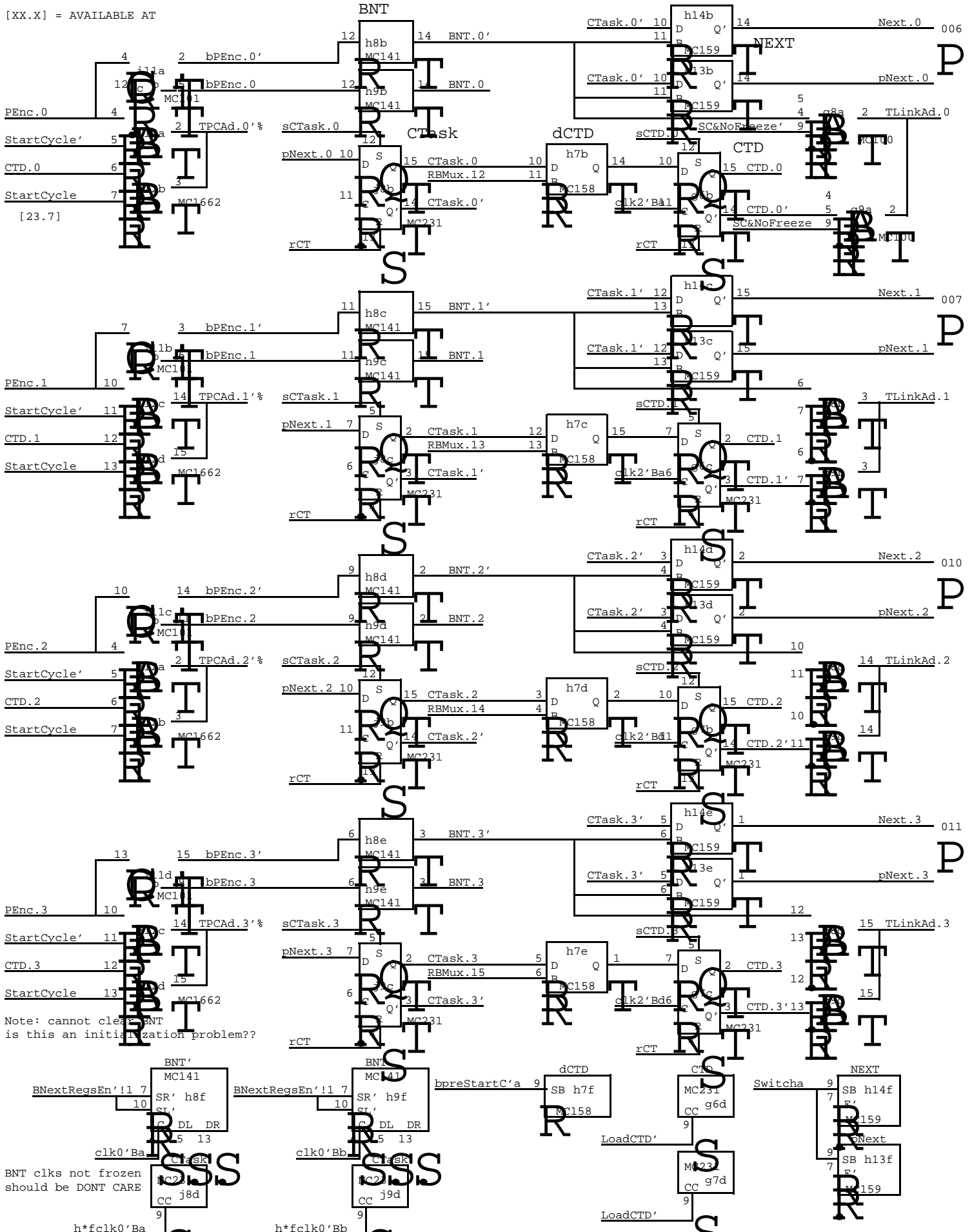
When RepeatCurrent AND BLOCK, lower priority task waiting to run should remain in BNT/TPCO unless a higher priority PE comes in. ToPE for that task is inactive due to the IsNext decoder, so BNextRegsEn' stops the clocks to BNT/TPCO so that the proper task will remain in BNT and not be erroneously taken out as if it had been started, even though this task is no longer competing for the processor because IsNext takes it out of the ToPE signal.

Quadrant fanouts for implementing h* clocks

about 13 chips
 (XX.X) = GATE DELAY
 [XX.X] = AVAILABLE AT

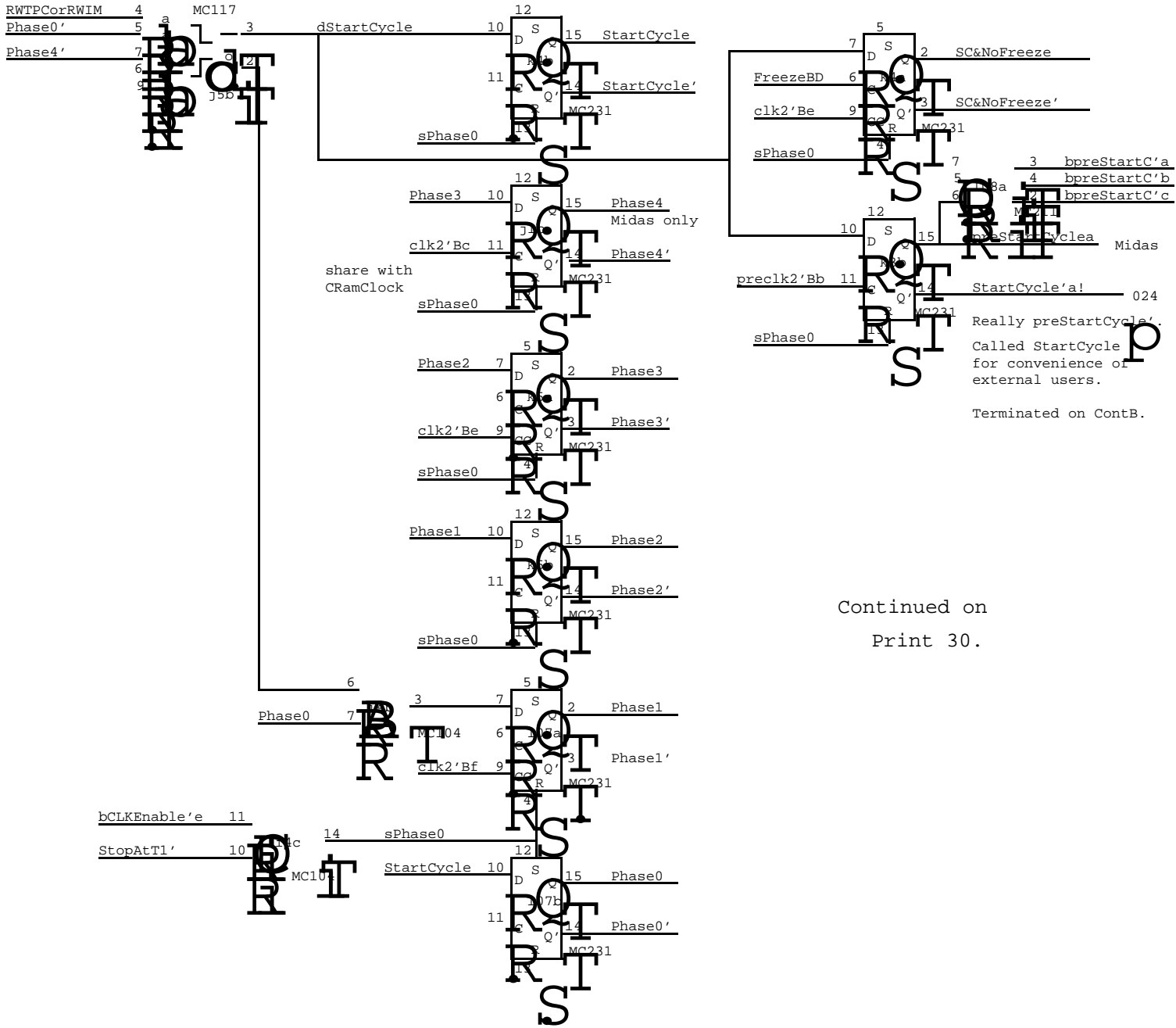
XEROX PARC	Project Dorado	Task Switch Generator	File ContA25.sil	Designer Pier	Rev Cd	Date 7/13/79	Page 25
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(XX.X) = GATE DELAY
 [XX.X] = AVAILABLE AT

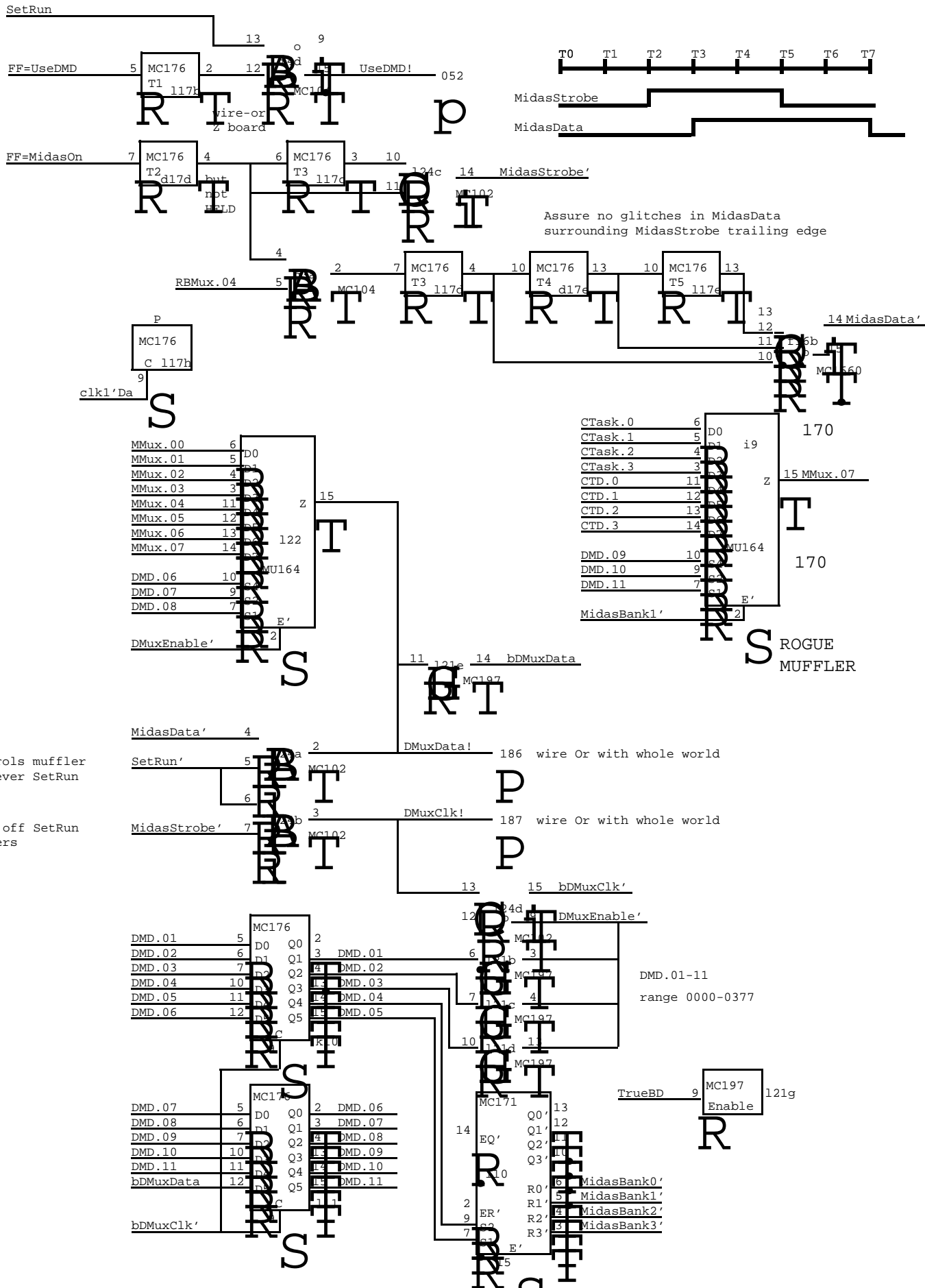


[9.8]

[by 10.9]

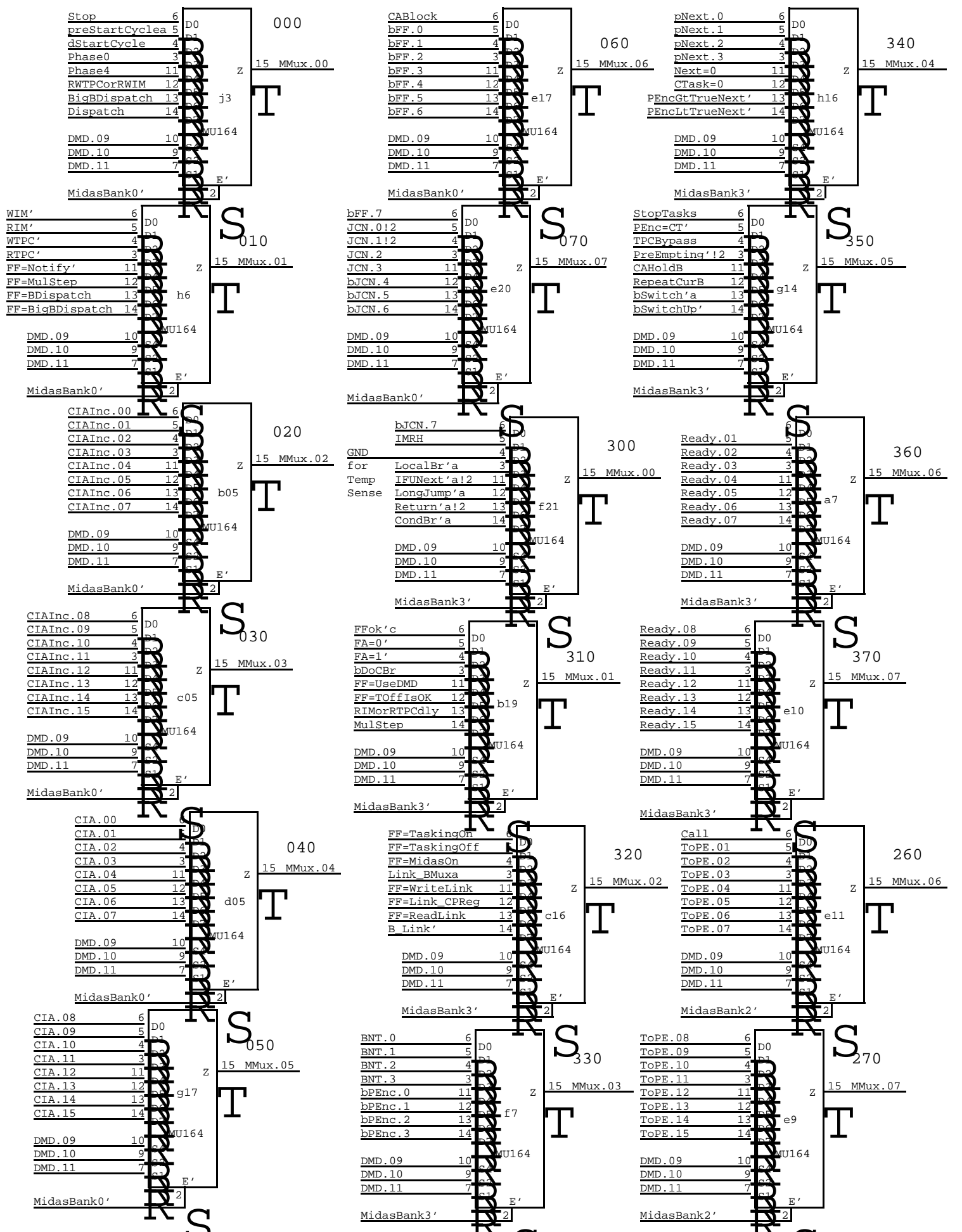


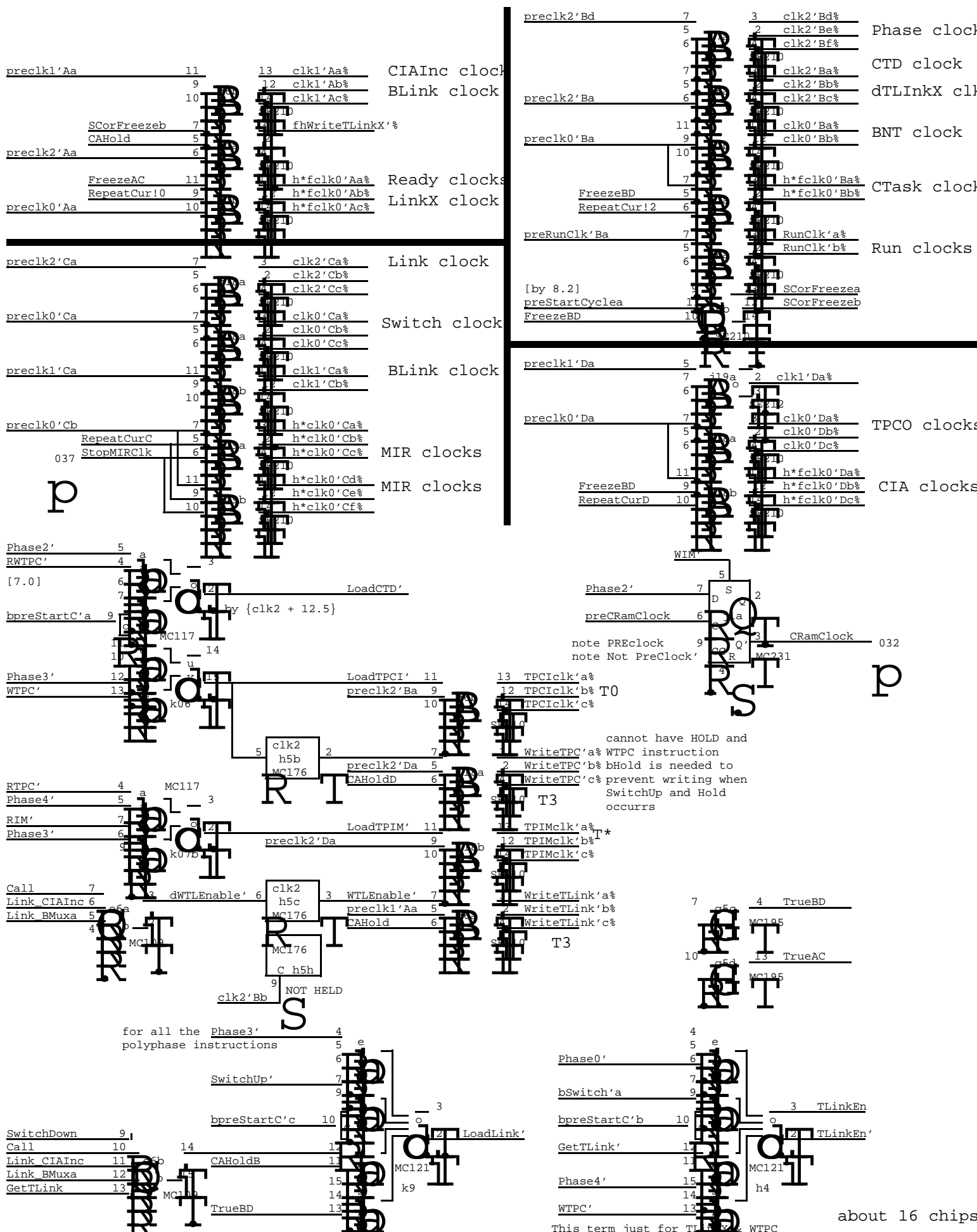
Continued on
Print 30.

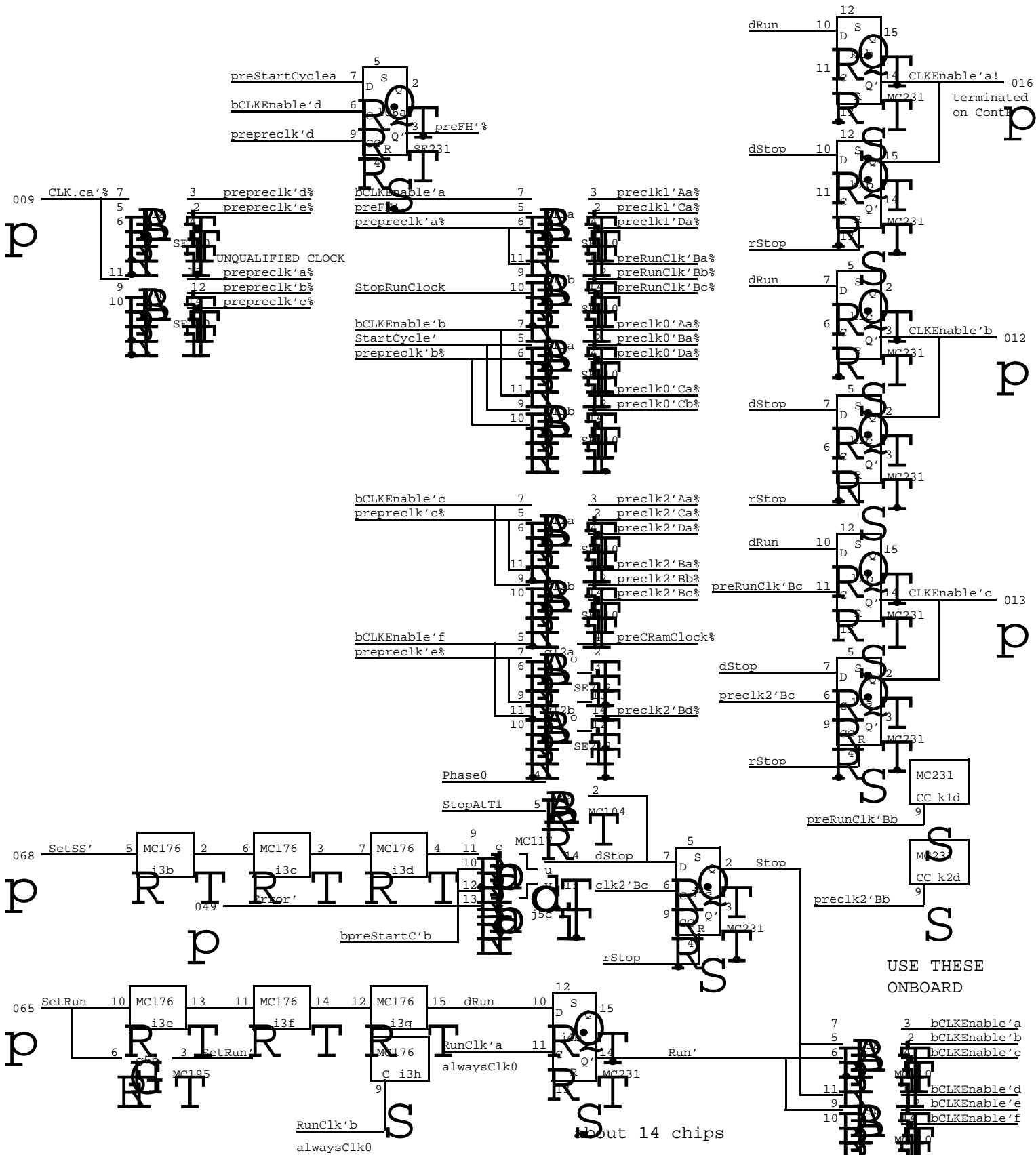


DORADO controls muffer system whenever SetRun is active

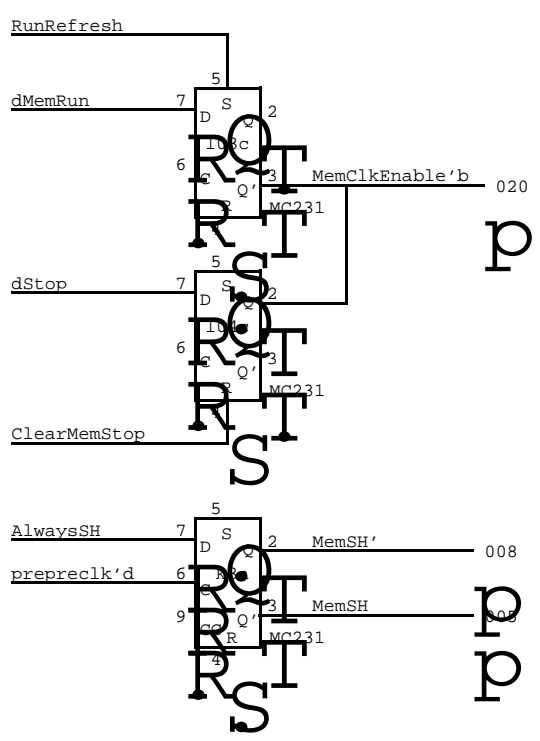
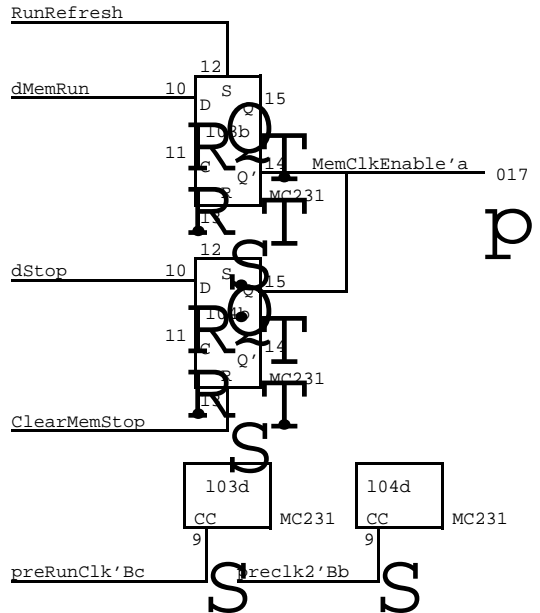
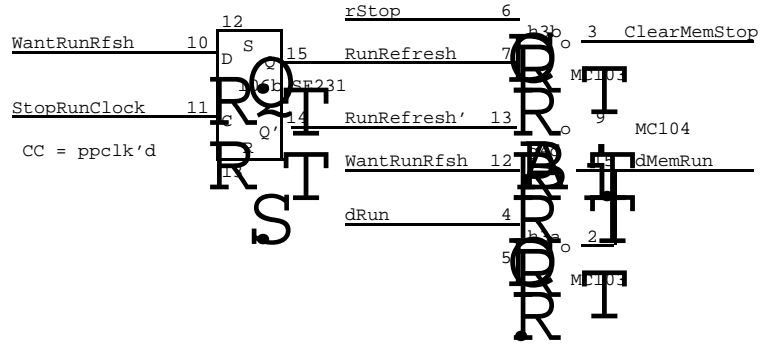
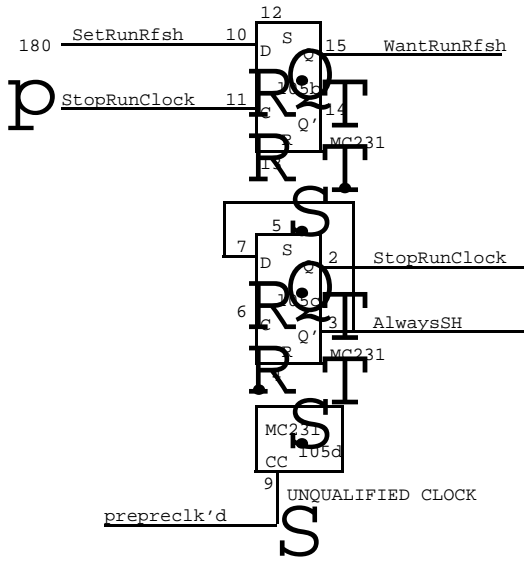
CP must turn off SetRun to use muffers







XEROX PARC	Project Dorado	PreClock generator	File ContA31.sil	Designer Pier	Rev Cd	Date 7/13/79	Page 31
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Whatever	p1	SPARE
16	p16	a5
8	pp	a6
Whatever	p	SPARE
16	p16	a6
8	pp	a6
Whatever	p	SPARE
16	p16	dl6
8	pp	dl6
Whatever	p	SPARE
16	p16	e16
8	pp	e16
Whatever	p	SPARE
16	p16	f18
8	pp	f18
Whatever	p	SPARE
16	p16	h15
8	pp	h15
Whatever	p	SPARE
16	p16	h20
8	pp	h20
Whatever	p	SPARE
16	p16	i8
8	pp	i8
Whatever	p	SPARE
16	p16	i16
8	pp	i16
Whatever	p	SPARE
16	p16	j21
8	pp	j21
Whatever	p	SPARE
16	p16	k8
8	pp	k8
Whatever	p	SPARE
16	p16	l9
8	pp	l9
Whatever	p	SPARE
16	p16	l23
8	pp	l23

MultiWire
spares

C	IMRHPE	BNTGtCT	dCSOut	TWRq9-15	dCSOut	CP INTERFACE	TWRq1-8	RSTK	CLOCK	B			
A	a 181	b 168	c 153	d 137	e 124	f 109	93 g	80 h	64 i	48 j	33 k	20 l	B
1	CPStrobe 161 2	dTLINK 159	dTLINK 159	dTLINK 159	RBMux .4,.12-15 159	dTLINK 159	SetMIR 172 2	SetMIR 172 2	SetMIR 172 2	CramClk Phase4 231	CLKEN 231	RAWClk 210	1
2	MIR/BGtCT 2,25 210	DrMux 159	DrMux 159	DrMux 159	DrMux 159	CPREG-0 176	CPREG-1 176	CPREG-1 176	CLOCK 176 2	CONTROL 176 2	CLKEN 231	CLKEN 231	2
3	CPREG-0 176	dTLINK 159	dTLINK 159	dTLINK 159	dTLINK 159	CPREG-0 197	CPREG-1 197	CPREG-1 197	dStpRun 176	MU 000	SCycle 27 MemSH' 30 231	MEMCLKEN 231	3
4	TLINK 145	TLINK 145	TLINK 145	TLINK 145	TLINKX 145 5	F16 5 104	TLINKEn 121	TLINKEn 104	sPh0,d.. 31,27,27,28 231	Stp/run 231	SC(NF) 231	MEMCLKEN 231	4
5	MU 020	MU 030	MU 040	TLINKX bypass 197 5	LINKX 231 5	inverter 195	CLK2 30,30,.... 176	bClkEn 210	Err/dSC 117	2,3 231 25	RunRfsh 231		5
6		NOTIFY 162	CLK 210	dWTL 109	LINKX 231 5	CTD 231	MU 010	CLK 210	CLK 210	TPCI/CTD 117	FH 231		6
7	MU 360	PREEMPT 162	CLK 210	CIAInc 176	MU 330	dCTD 158	clk/Freez 210	CLK 210	TPCSclk CIA 117	0,1 231			7
8	SETREADY 104	104	104	104	IS 161	TLink 100	BNT 141	CTASK 231	bSC 27,B 211				8
9	READY F00	3*23,D F00	MU 270	NEXT 161	Addr 100	MU 170	LoadLink 121						9
10	TWREQ 1664	3*23,D 1664	MU 370	PE 121	BNxtEn 166	PE>TN 166	CT=NX=0 109	DMD 176	MIDAS 171				10
11	ToPE drivers 104	3*23,4 104	MU 260	PE>TN 166	bPE 101	PE=CT 113	CALL 104	DMD 176					11
12	BLINK 176	ToPE rcvrs 109	3*24, d101 109	PRECLK 210	PRECLK 212	TPCI 176	TPCAd 1662	TPCI 176	TPCI 176				12
13	4,4,c,4 102	LINK F16	BLINK CIAInc 176	102	102	PRECLK 210	PRECLK 210	pNext 159	TPC 145	TPC 145	TPC 145	TPC 145	13
14	dBLINK 159	LINK F16	LINK F16	LINK F16	SWUp 231	MU 350	NEXT 159	TPIM 173	TPIM 173	TPIM 173	TPIM 173	TPIM 173	14
15	5,5,5,4 102	FFBR 162 5	dBLINK 159	dBLINK 159	dBLINK 159	SWUp 231	1662	TPCO F16	TPCO F16	TPCO F16	TPCO F16	TPCO F16	15
16	4,4,5,4 100 4	MU 320	dSWup 1660	STKSEL 231 1,C	MU 340	CIA' 176	CIA' 176	CIA' 176					16
17	bFF 212 1	109 4	CLK 210	CLK 210	IMRH 170 1	RA 159	CIA 195	CLK 210	CLK 210	CIA 195	bTNIA 197		17
18	FB= 161 4	MU 310	CLK 210	JBr 162 5	IMRH 170 1	Hold 211	bJCN 212 1	RA 159	TNIA 0-3 159	CLK/SW 212	RA 159	RA 159	18
19	bFF 109 4	DoCBr 121 5	RW... 161 3	MU 070	RptCur 1660	bJCN 212 1	BNPC 158	bTNIA 197	bTNIA 159	BNPC 158	bTNIA 158	BNPC 158	19
20	FC= 102 4	161 4	DoCBr 121 5 d	3,3,5,3 102	RETURN 210 3	MU 300	BNPC 158	bTNIA 197	bTNIA 159			Midas 4*28 fh 197	20
21	bFF 212 1	bFF 212 1	DoCBr 5 PreEmp 1662	LocalBr 210 3,5	IFUNext 210 3	CBR/LJ 210 3	TNIA 159	8 121	TNIA 101	13 121		Midas 164	21
22	FF2,3 231 1	FF6,7 231 1	JCN0,1 231 1	JCN2or3 231 1	IMRH,BLK 231 1	CBR 211 3	6 121	7 121	9 121	TNIA 121	12 121	14 121	22
23	FF0,1 231 1	FF4,5 231 1	JCN4,5 231 1	JCN2,3 231 1	JCN6,7 231 1	FFok 211 3	4 121	5 121	10 121	11 121	15 121	Midas 102	23

C	a 11	b 26	c 39	d 55	e 70	f 86	99 g	114 h	129 i	143 j	159 k	174 l	D			
E	NEXT	BLOCK	HOLD'	FFOK	dMIR	FF0-3	dMIR	BrCond	FF4-7	TNIA0-7	BNPC0-2	IFADR	TNIA/BNPC	BrCond	SW	DMUX

PEROX	Project	Reference	File	Designer	Rev	Date	Page
PARC	Dorado	Control A Layout	ContA33.sil	Pier	Cd	7/13/79	33