COPY No. 375

UNIVAC®
Solid-State
Computer

Manual 2 -

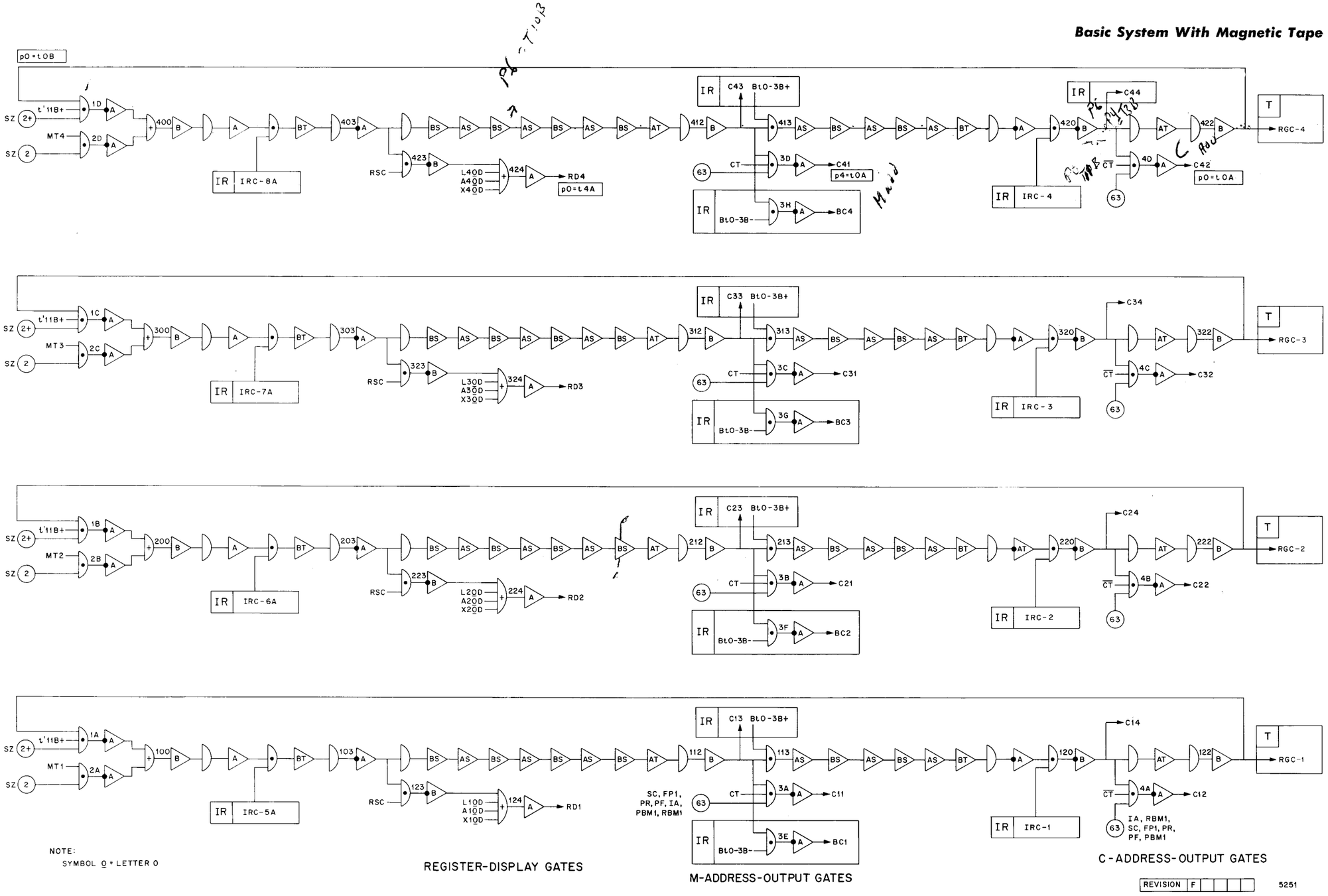
LOGIC DRAWINGS

Volume 1A

BASIC SYSTEM
WITH MAGNETIC TAPE
Models 130 and 131

REPLACED BY VOLUME 1B

Remington Rand Univac®
DIVISION OF SPERRY RAND CORPORATION



NOTE:
SYMBOL O = LETTER O

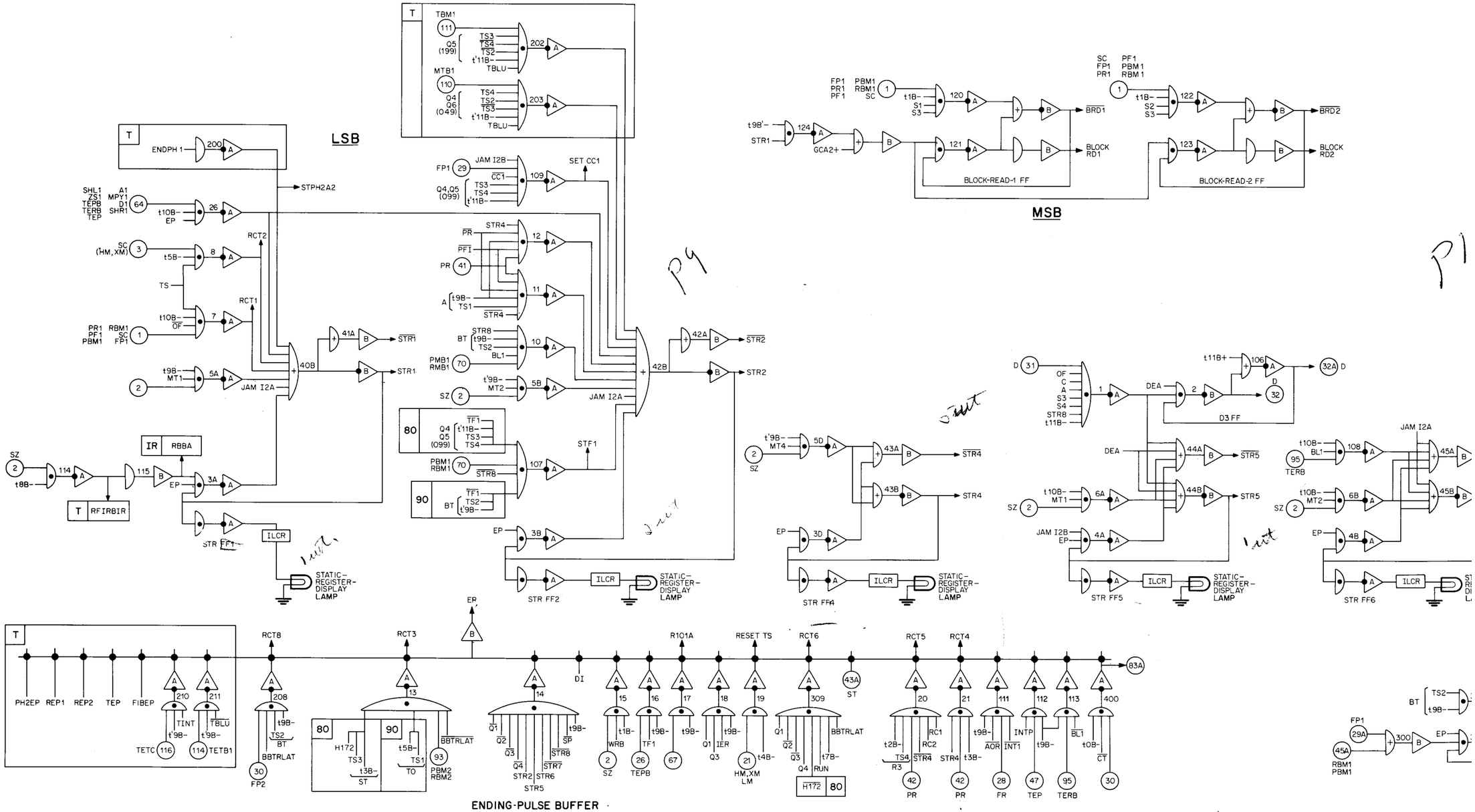
REGISTER-DISPLAY GATES

M-ADDRESS-OUTPUT GATES

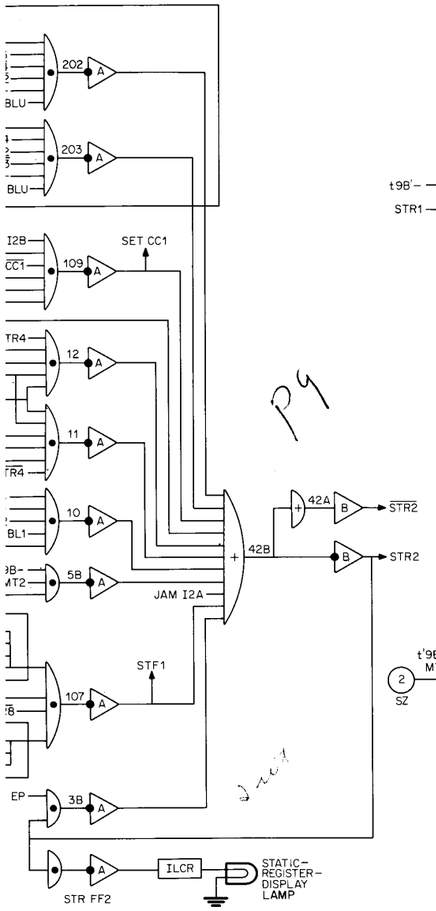
C-ADDRESS-OUTPUT GATES

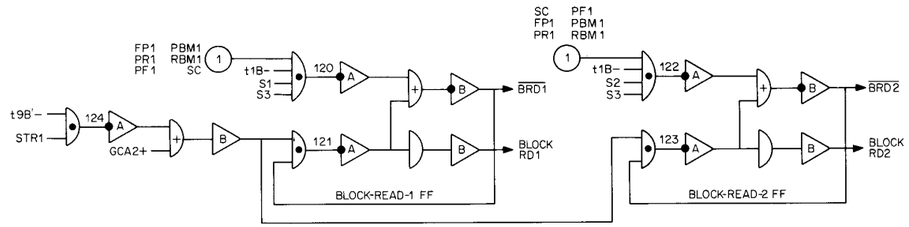
REVISION F

5251

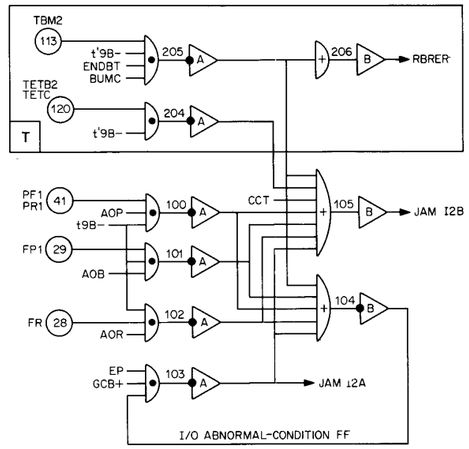


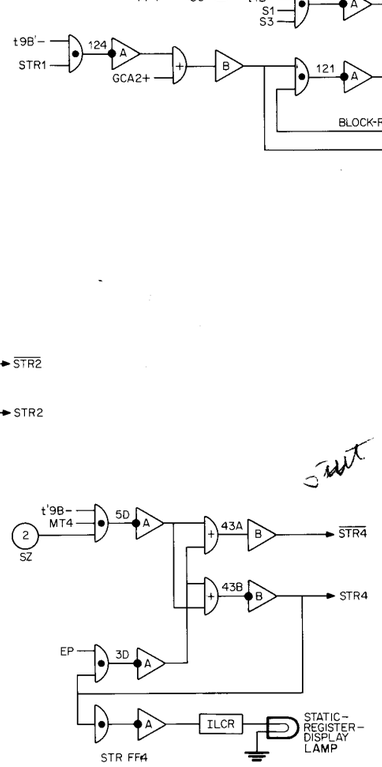
1-2A. *Static Register (Model 131)*

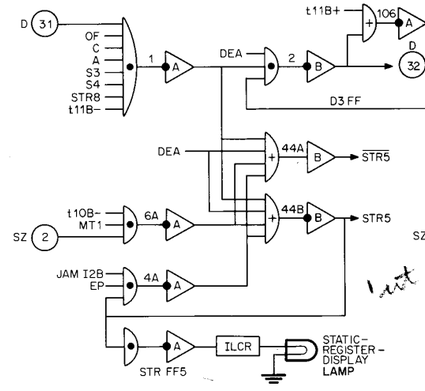


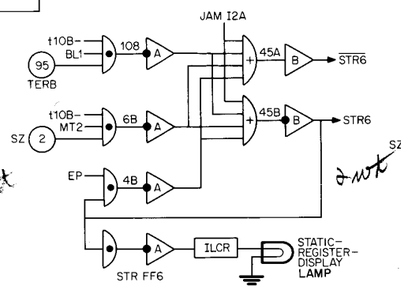


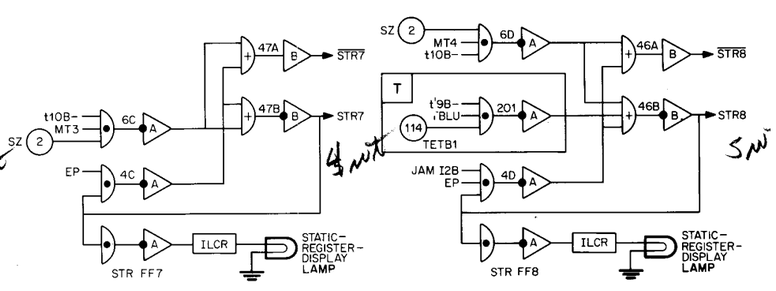
MSB

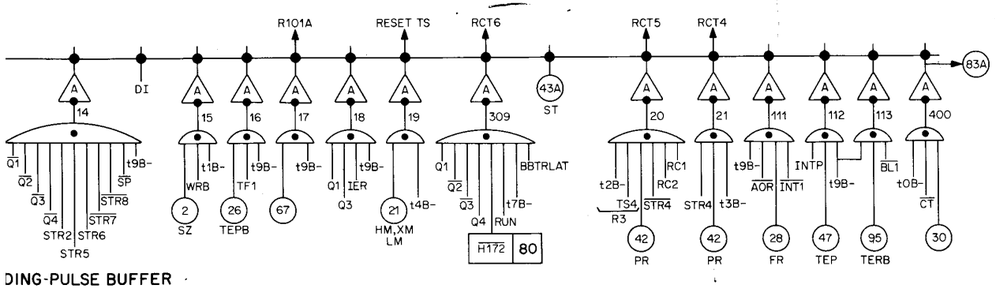




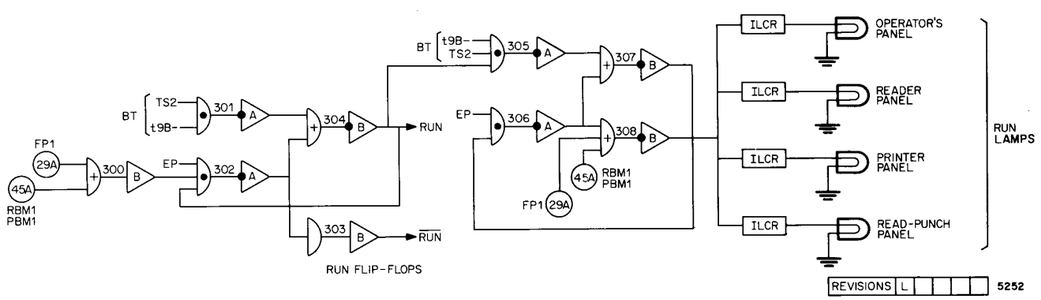




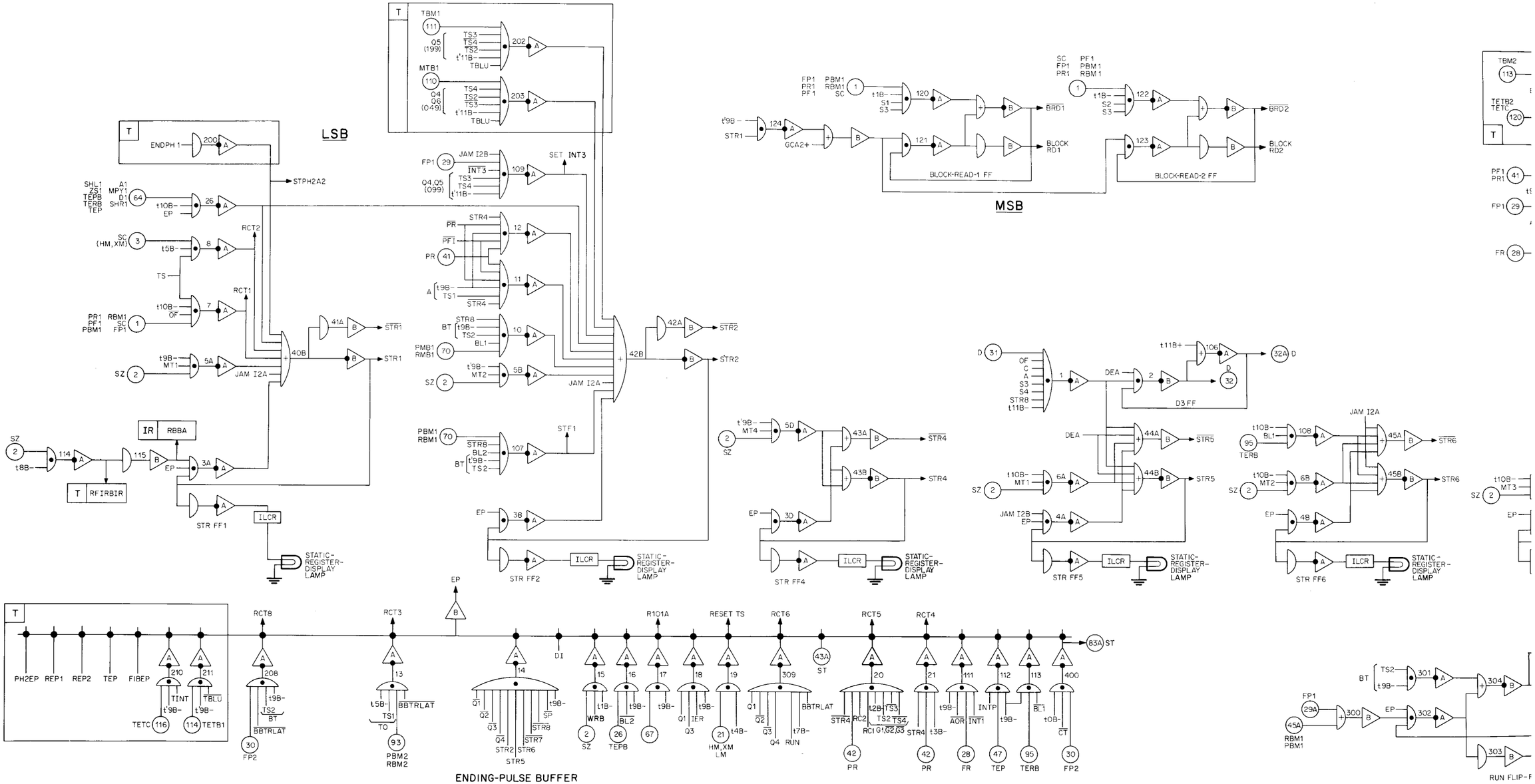




DING-PULSE BUFFER



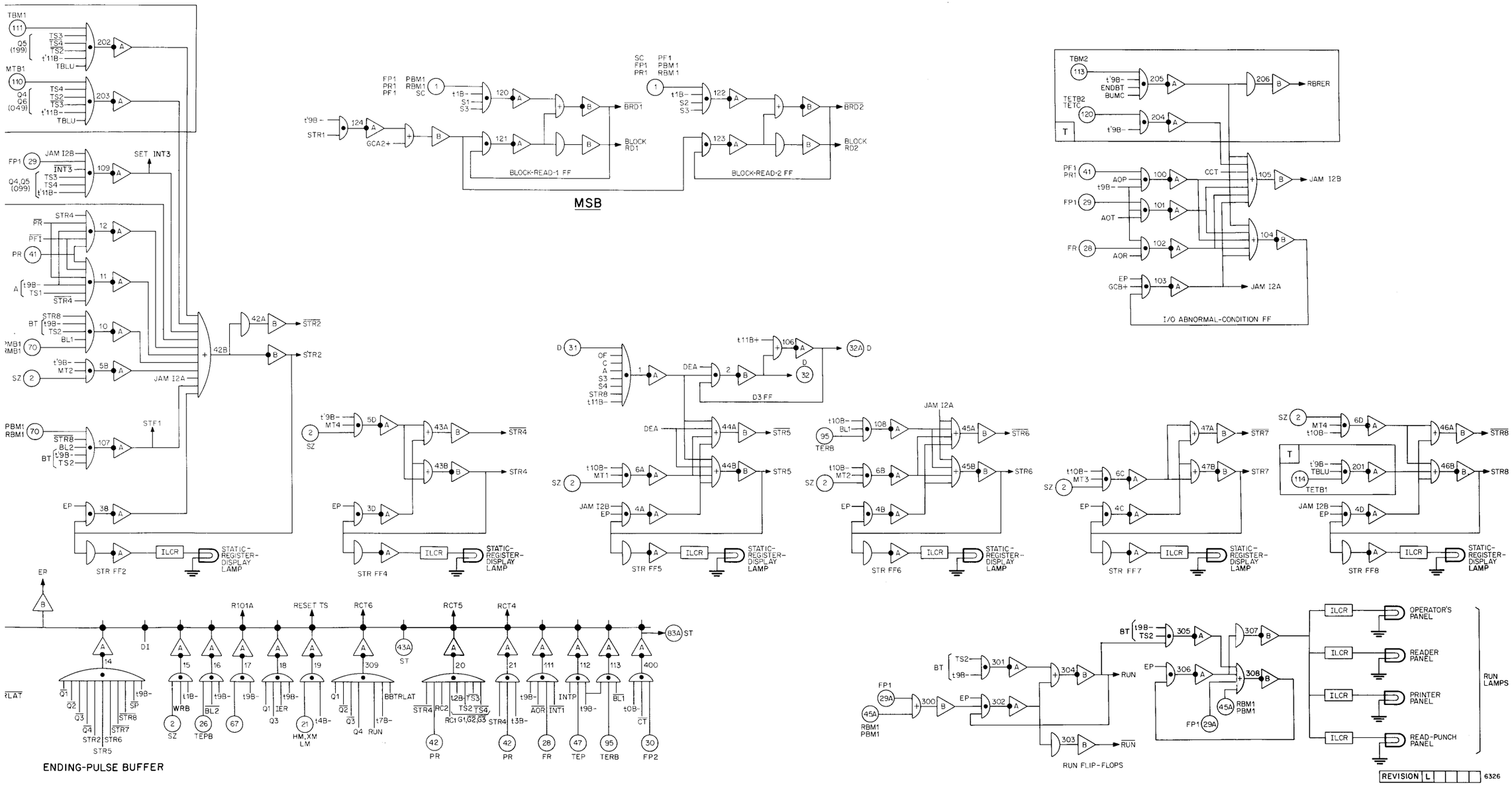
COPY NO. 337



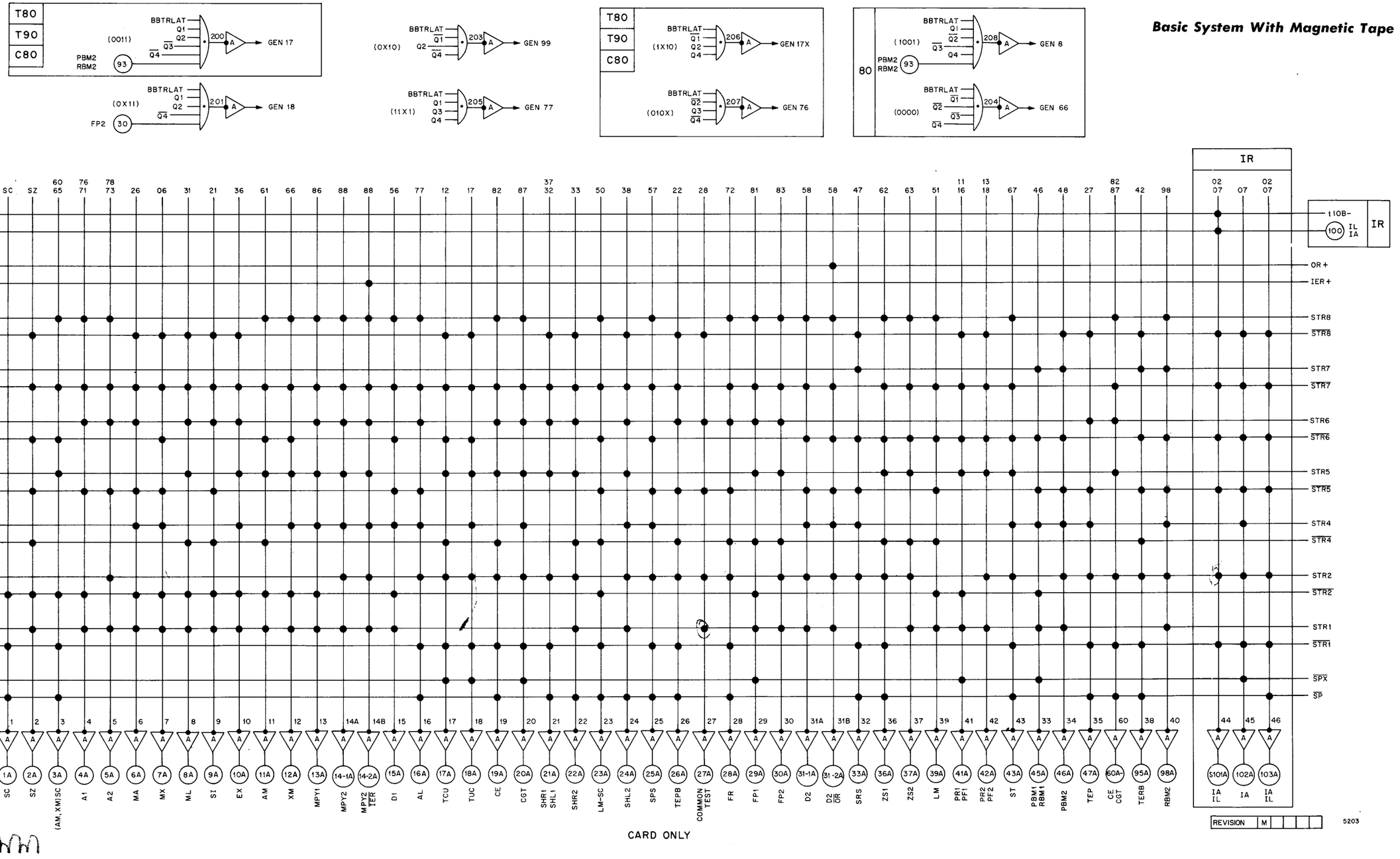
1-2A. Static Register (Model 130)

~~1-3A~~

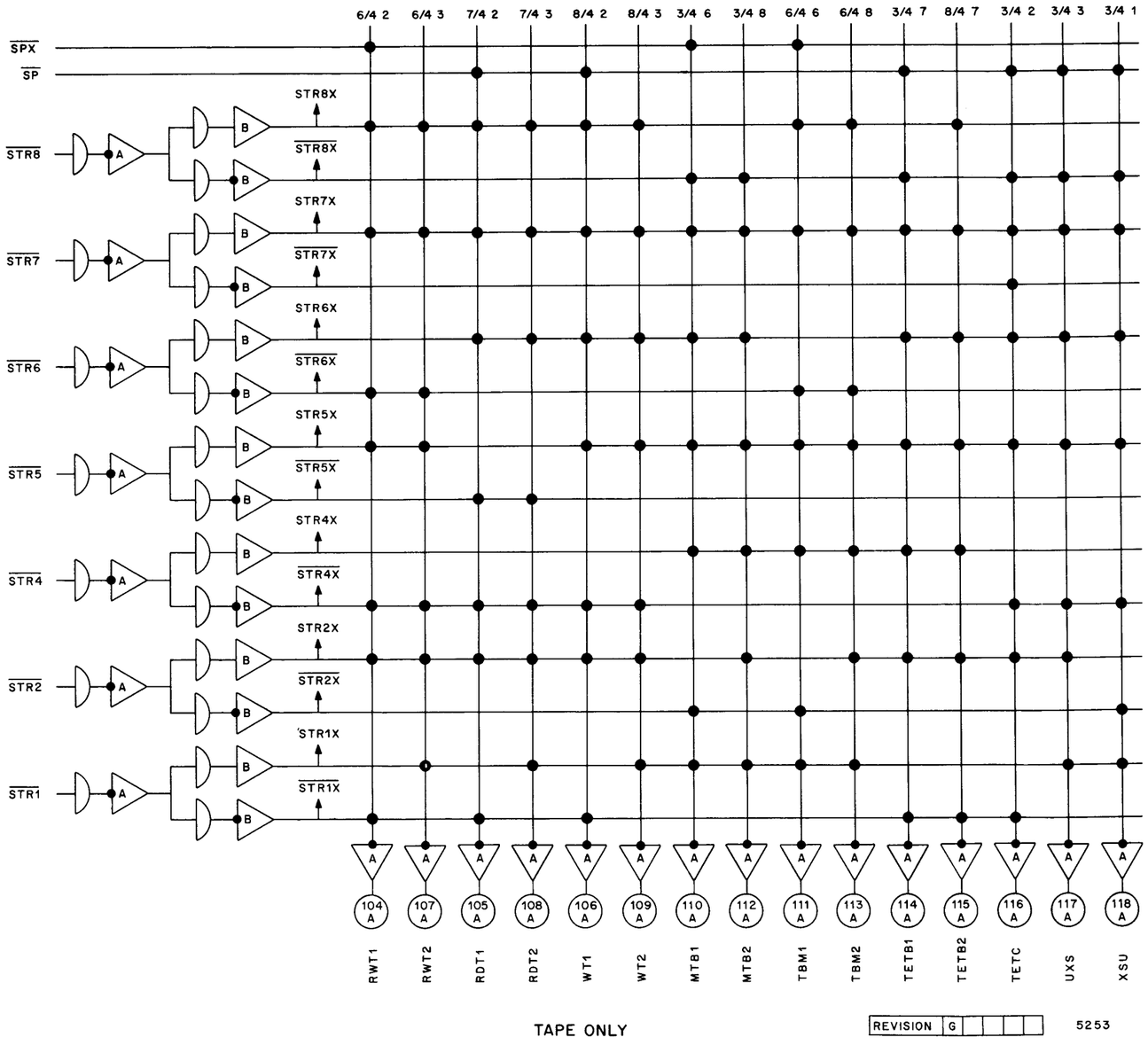
COPY NO. 337



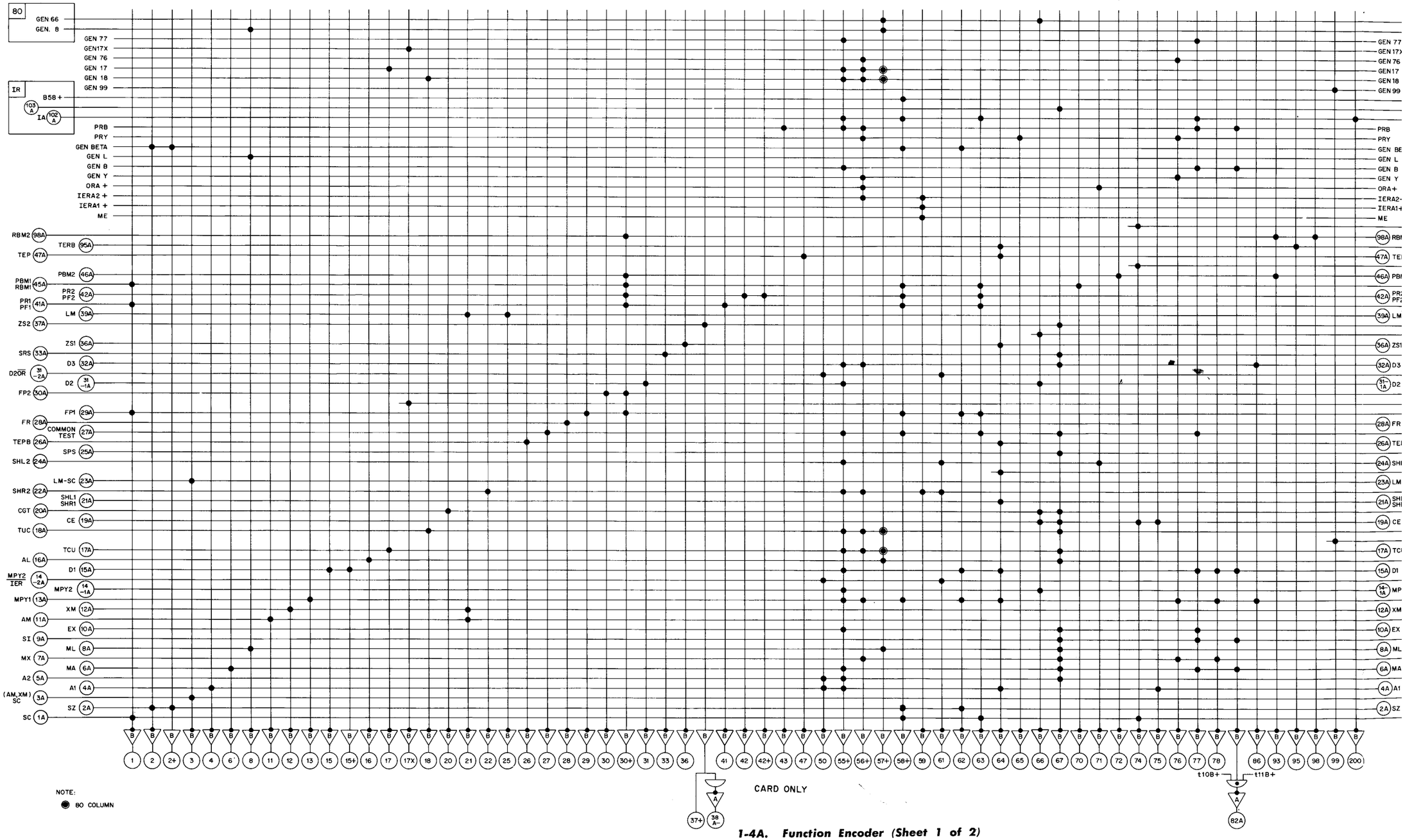
1-2A. Static Register (Model 130)



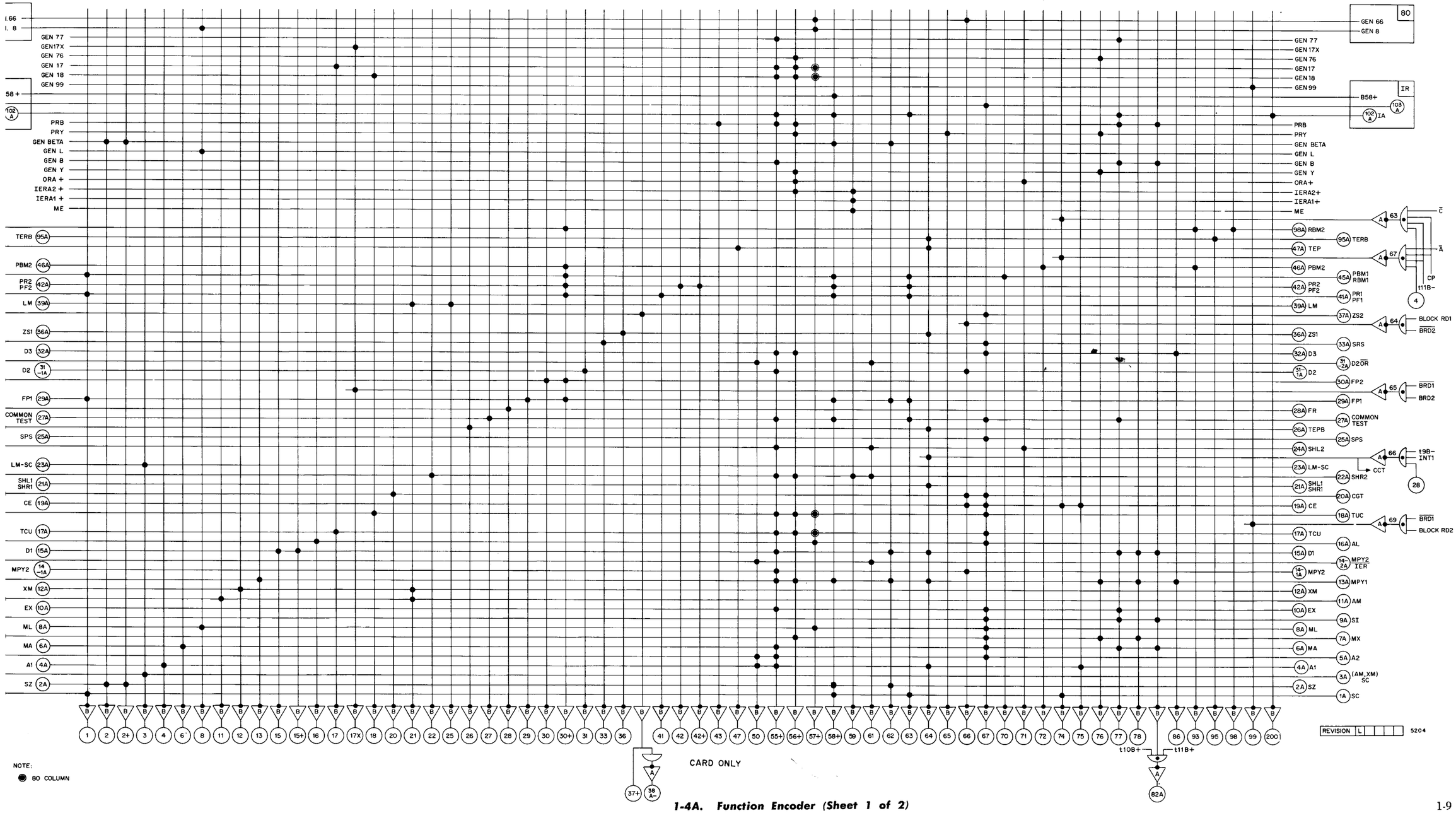
1-3A. Instruction Decoder (Sheet 1 of 2)



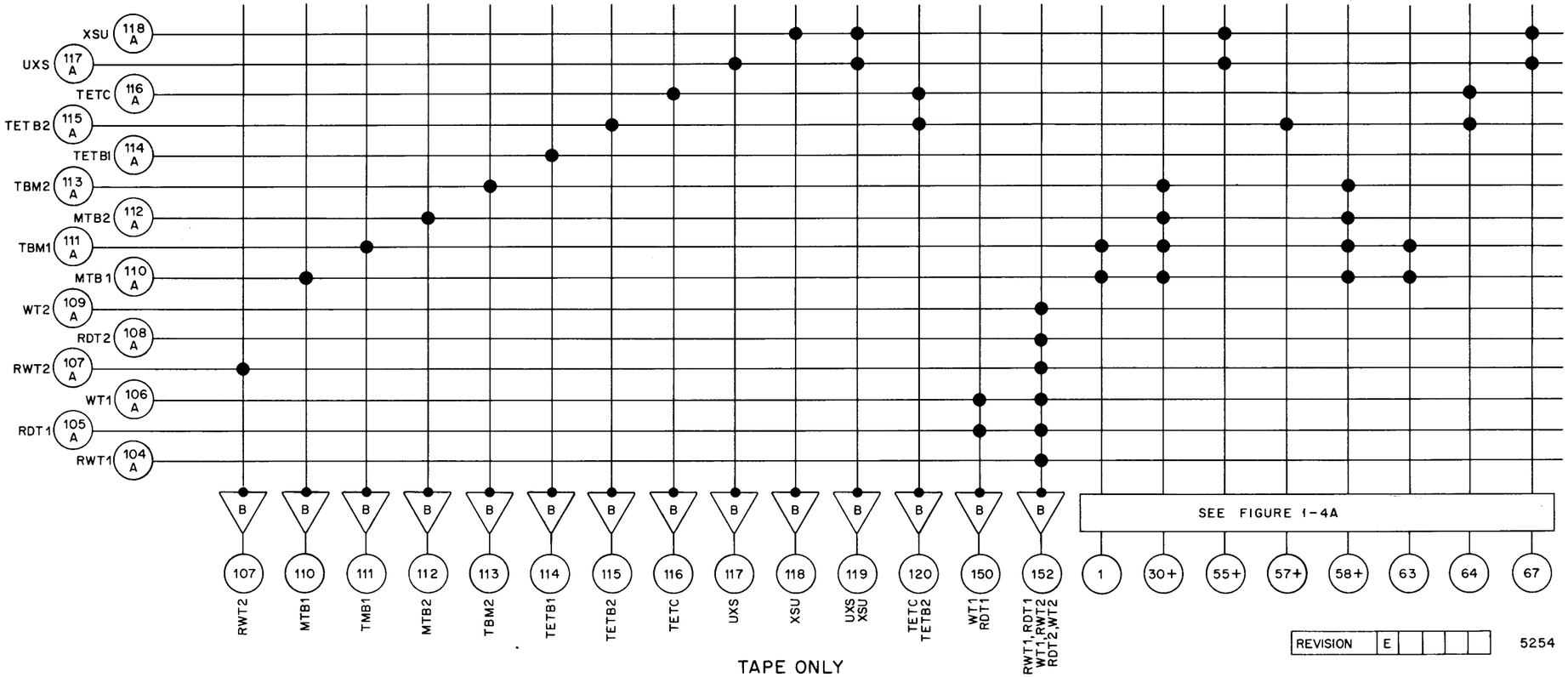
1-3A. Instruction Decoder (Sheet 2 of 2)



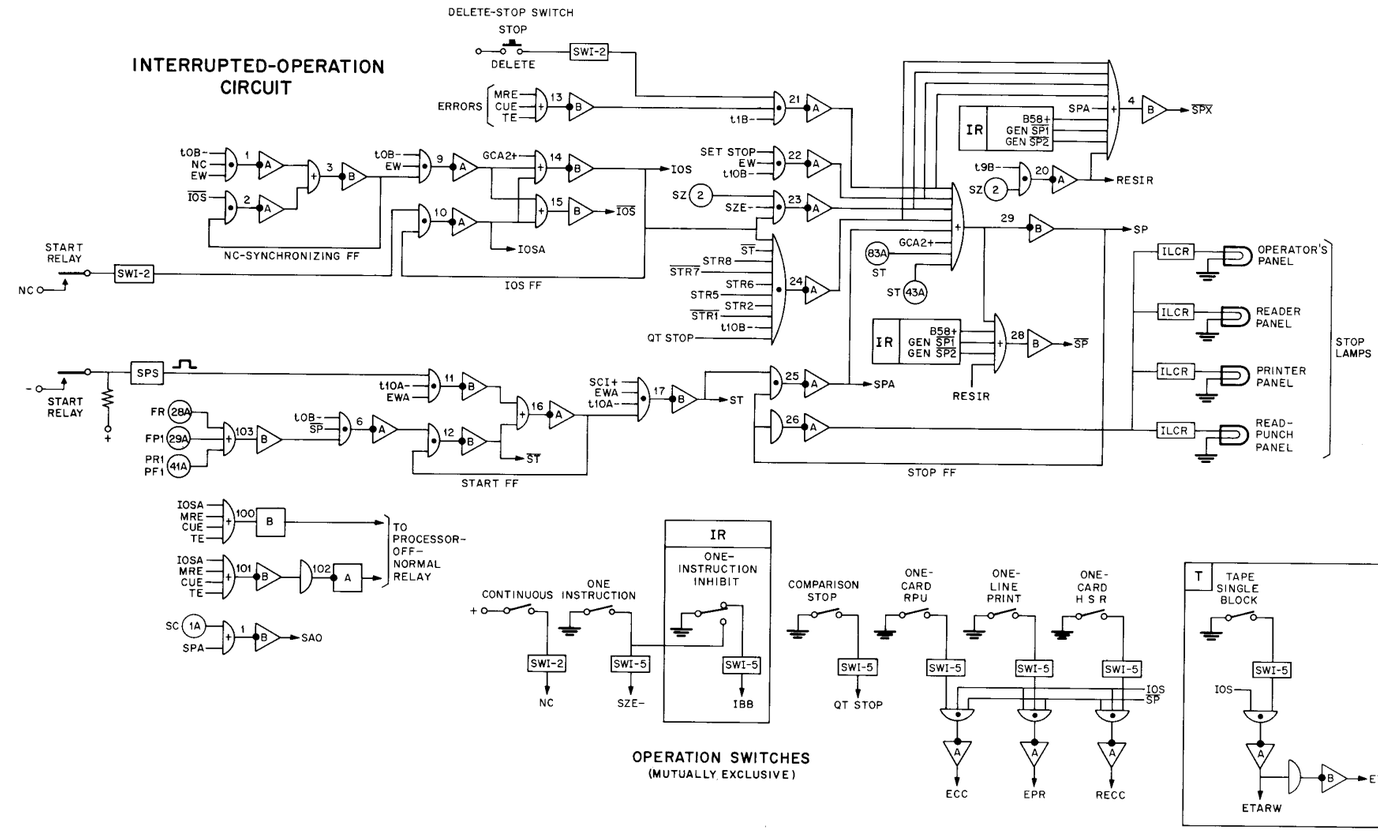
1-4A. Function Encoder (Sheet 1 of 2)



1-4A. Function Encoder (Sheet 1 of 2)

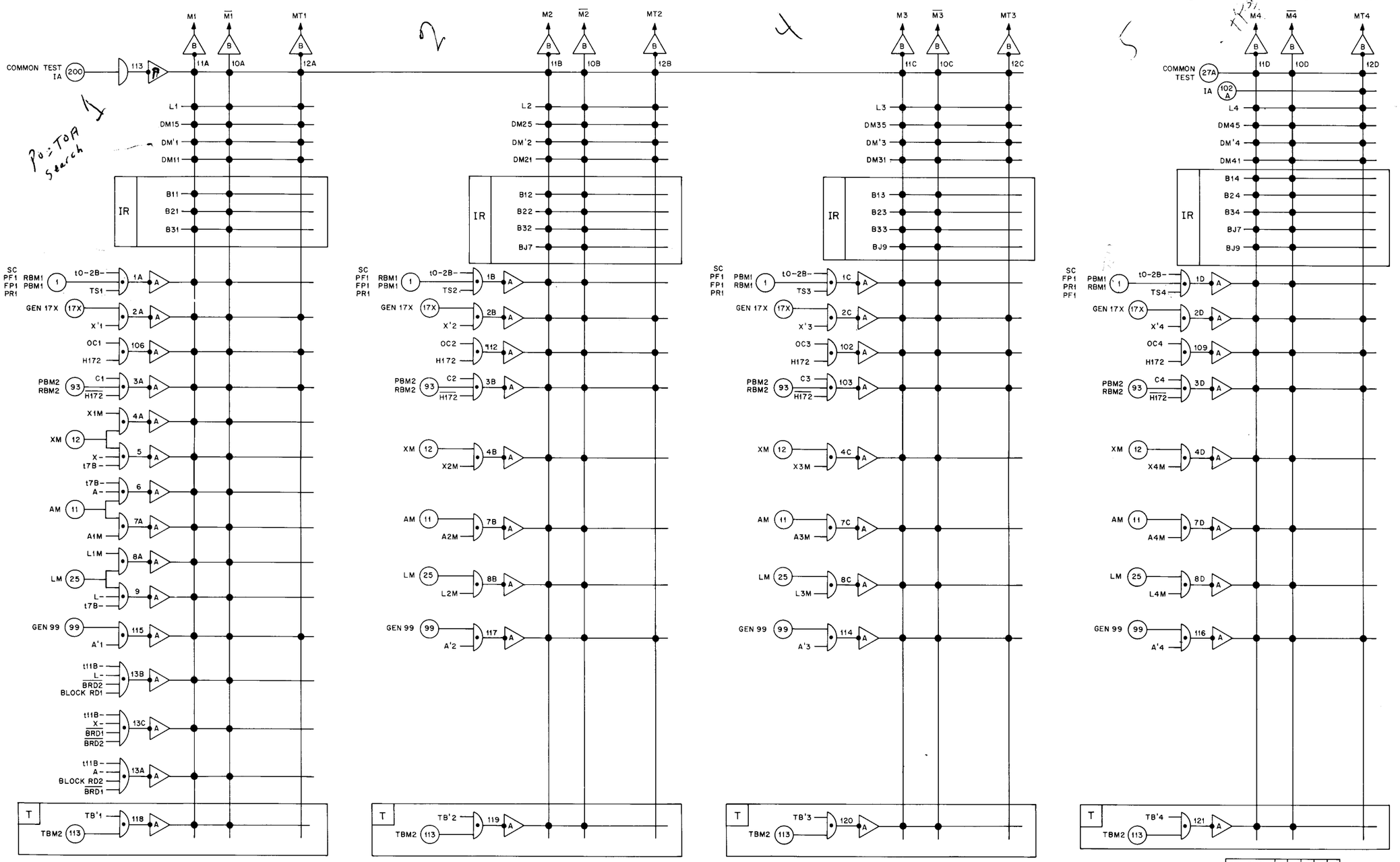


1-4A. Function Encoder (Sheet 2 of 2)

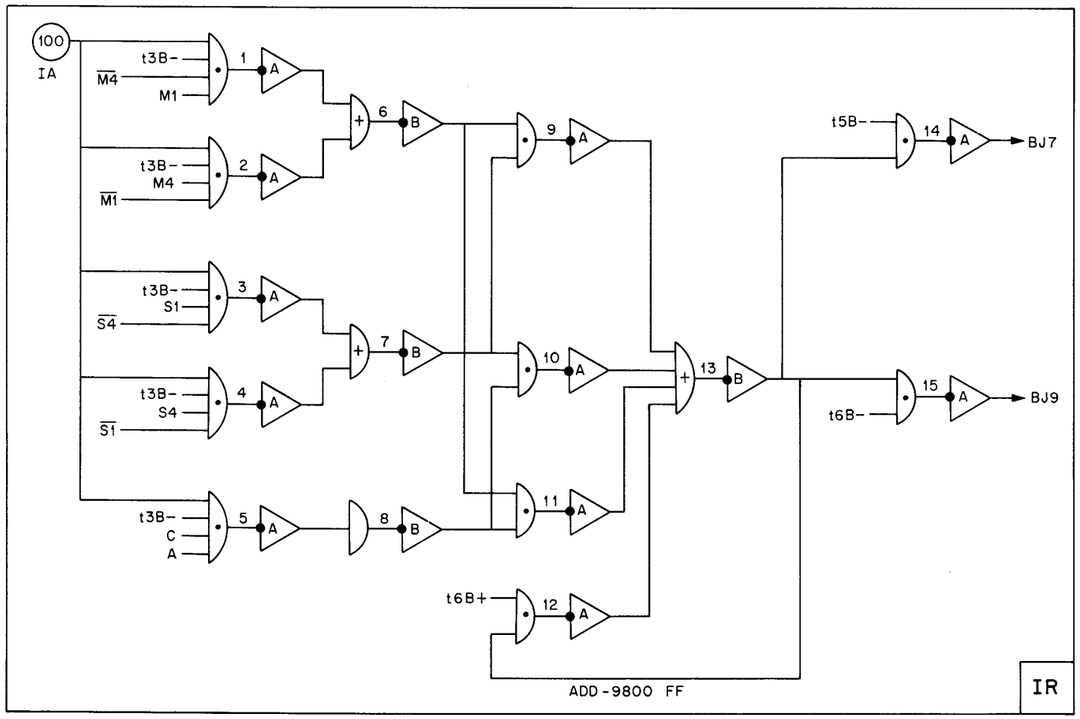


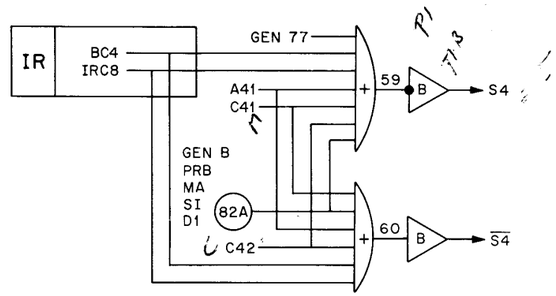
1-5A. Interrupted Operation (Model 131)

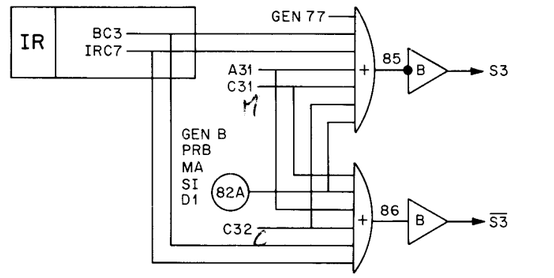
Basic System With Magnetic Tape

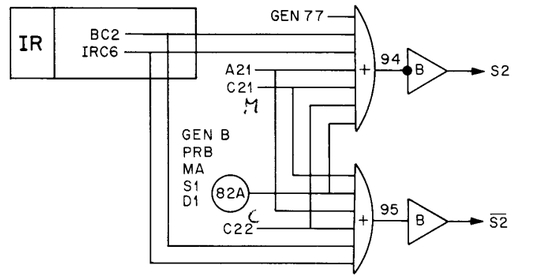


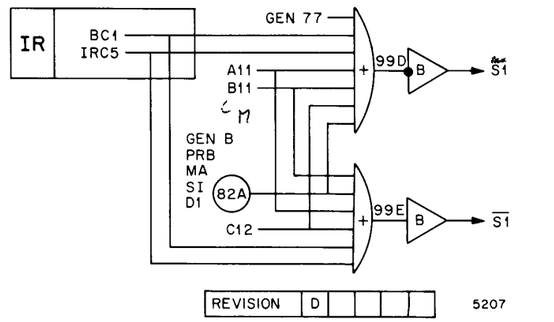
1-6A. M Buffers



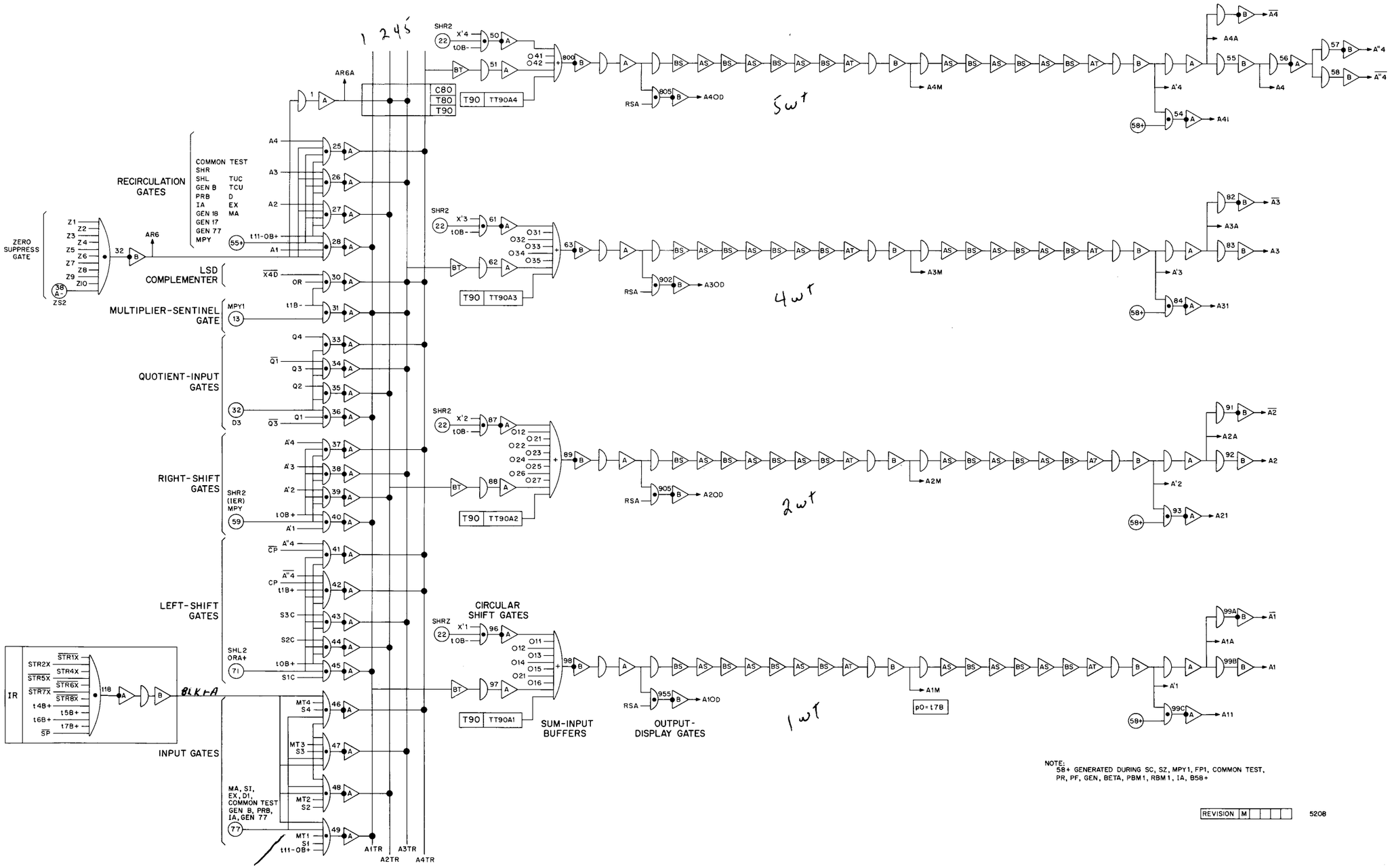








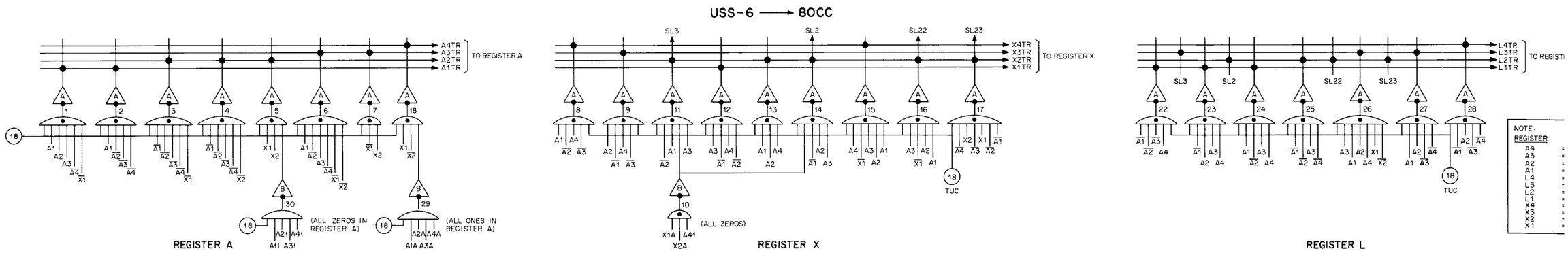
REVISION D 5207

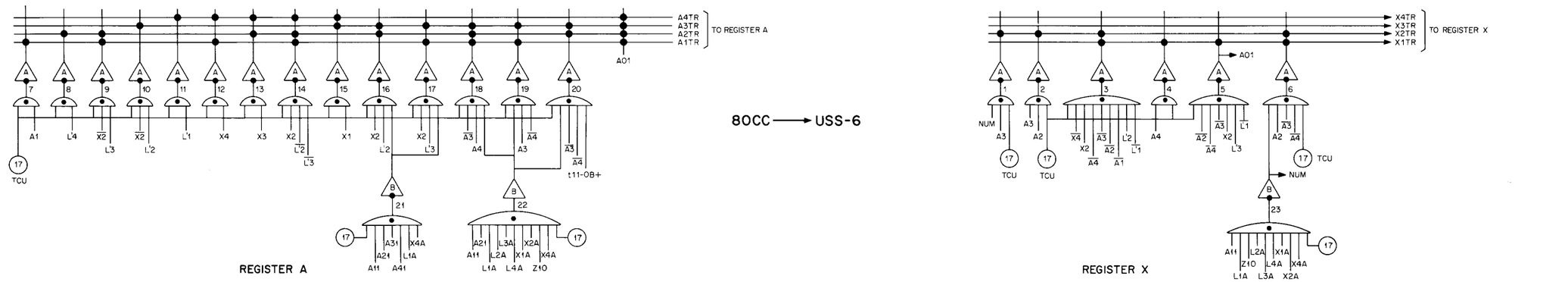


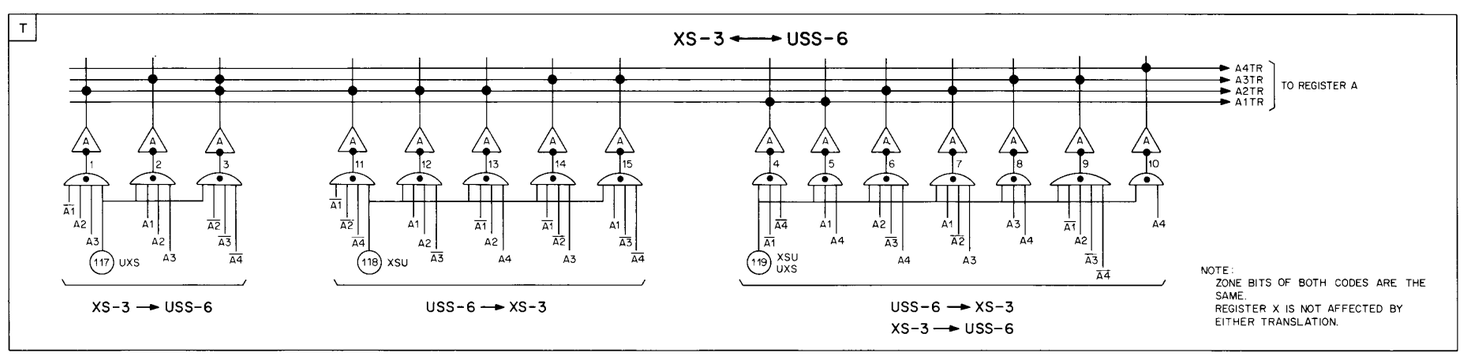
NOTE:
58+ GENERATED DURING SC, SZ, MPY1, FP1, COMMON TEST, PR, PF, GEN, BETA, PBM1, RBM1, IA, B58+

REVISION	M					5208

1-8A. Register A

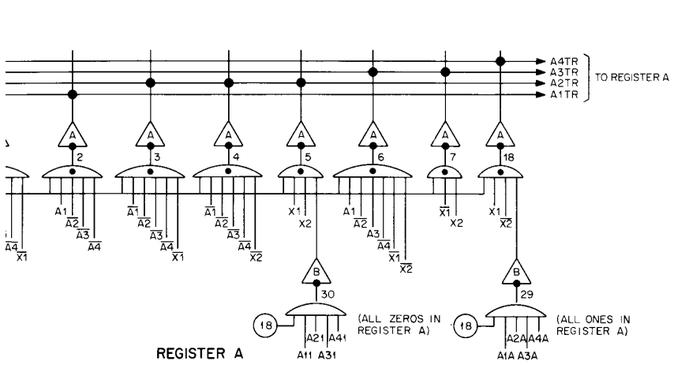


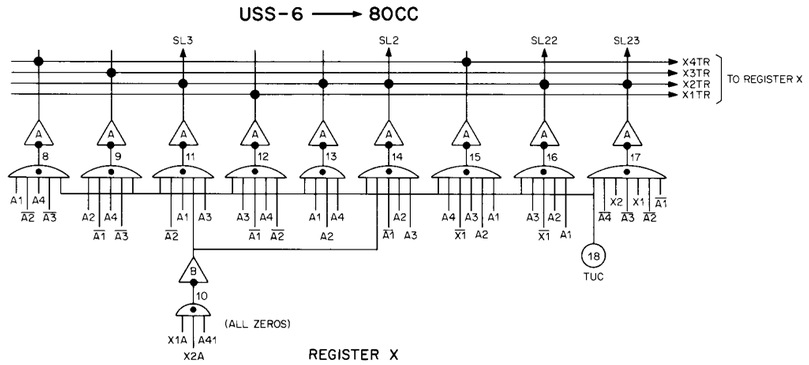


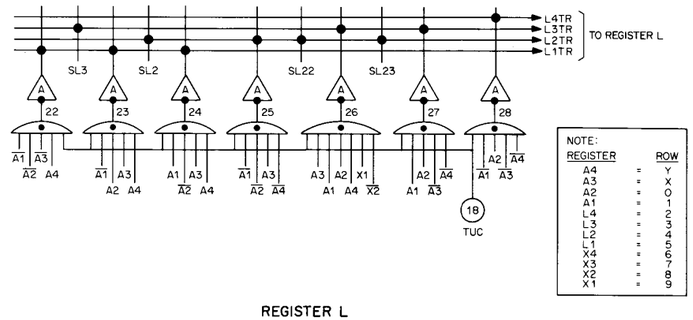


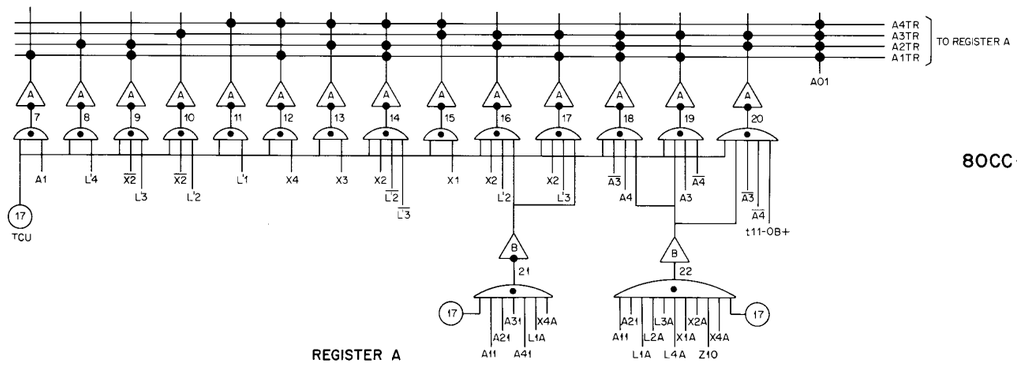
REVISION

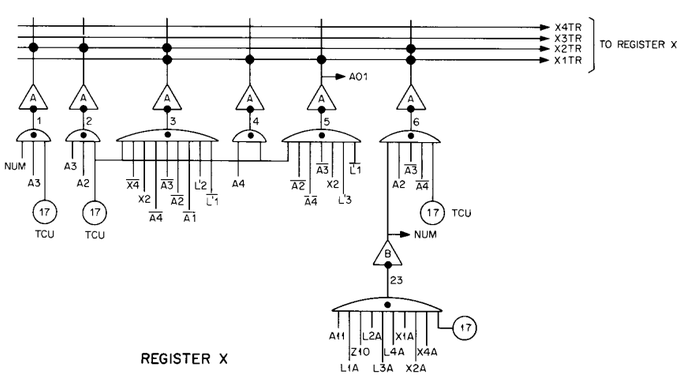
1-9A. Translate Gates, Part 1

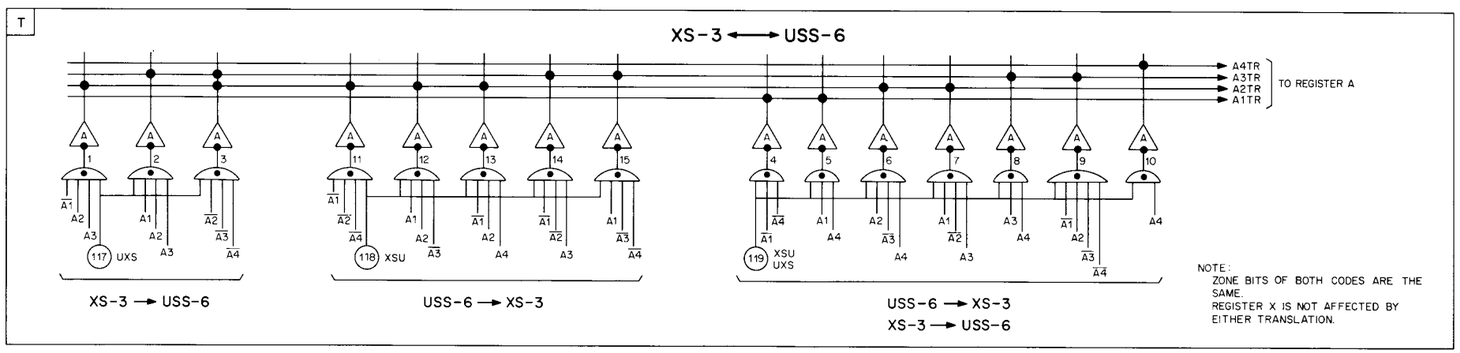




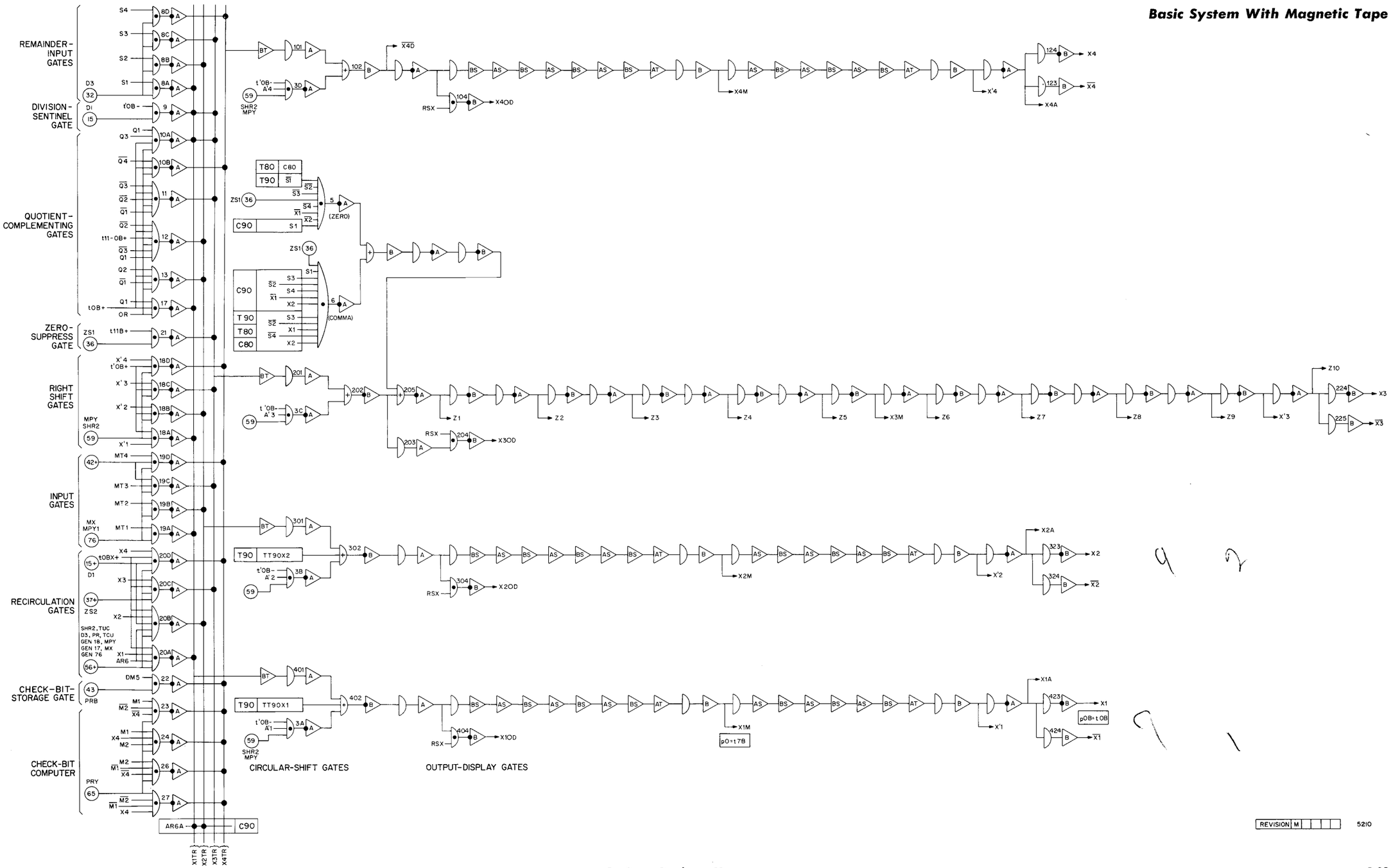




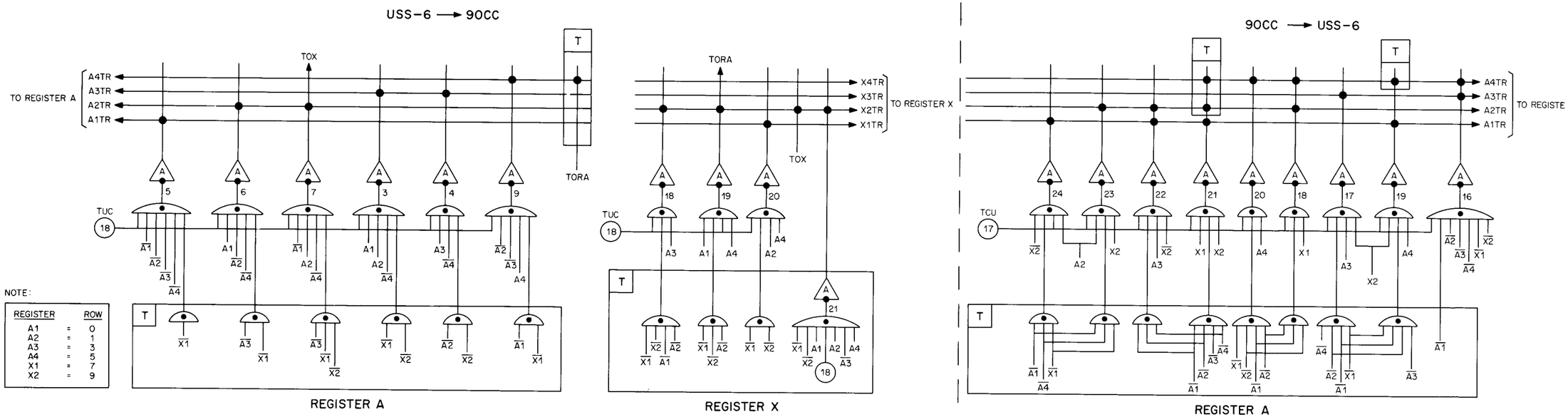




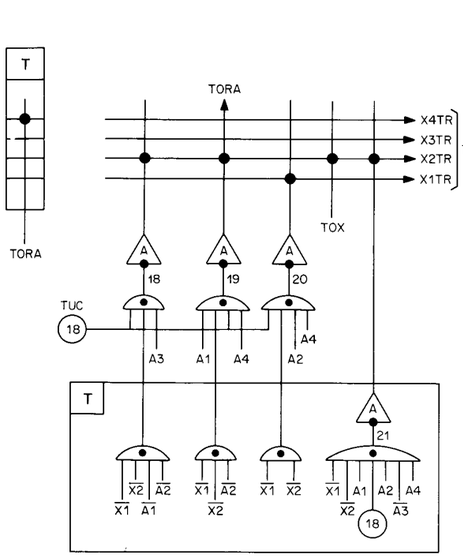
REVISION 5257

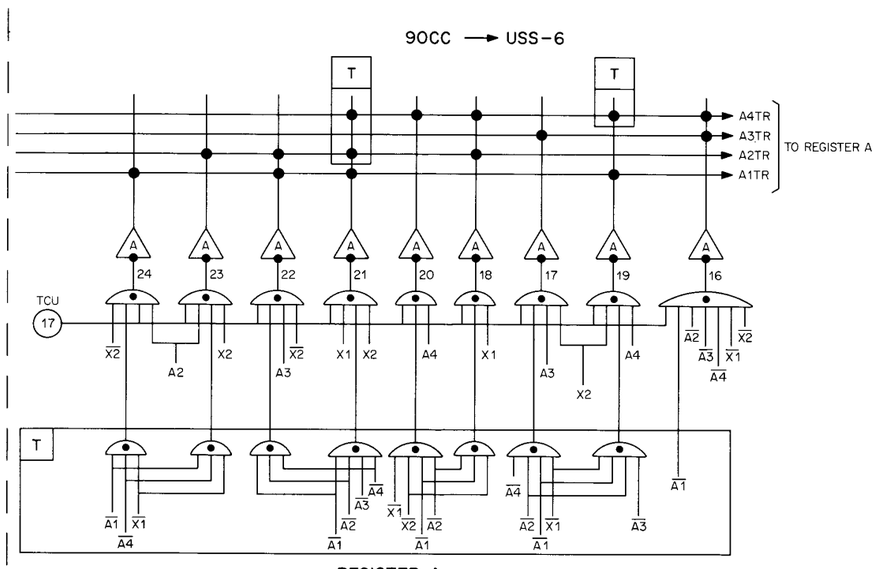


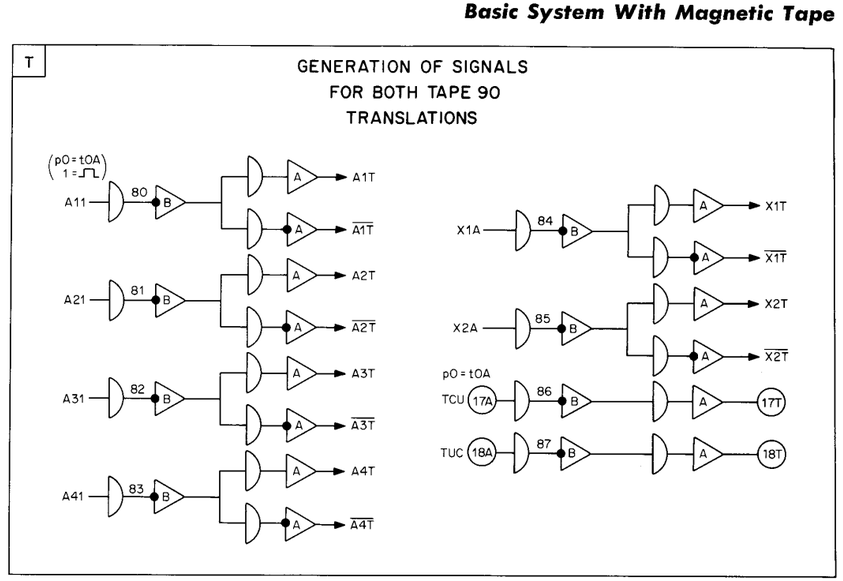
REVISION M 5210

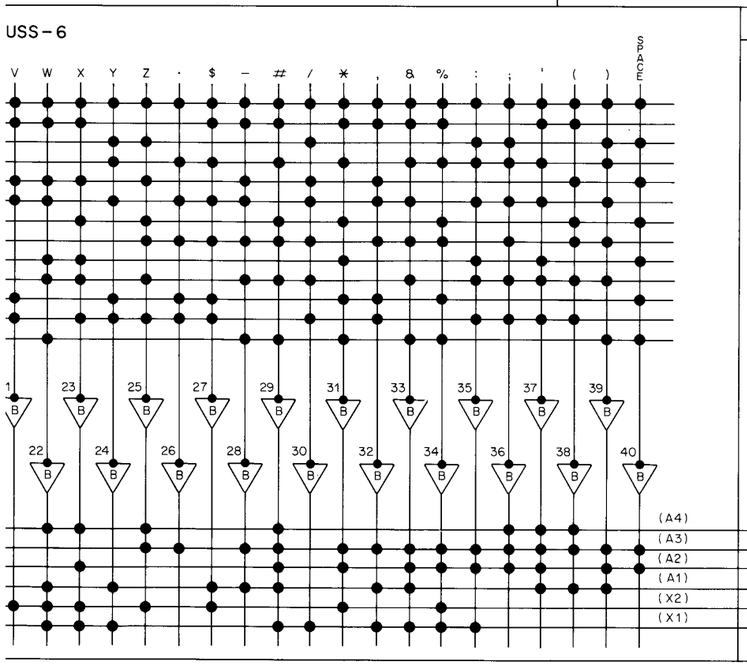


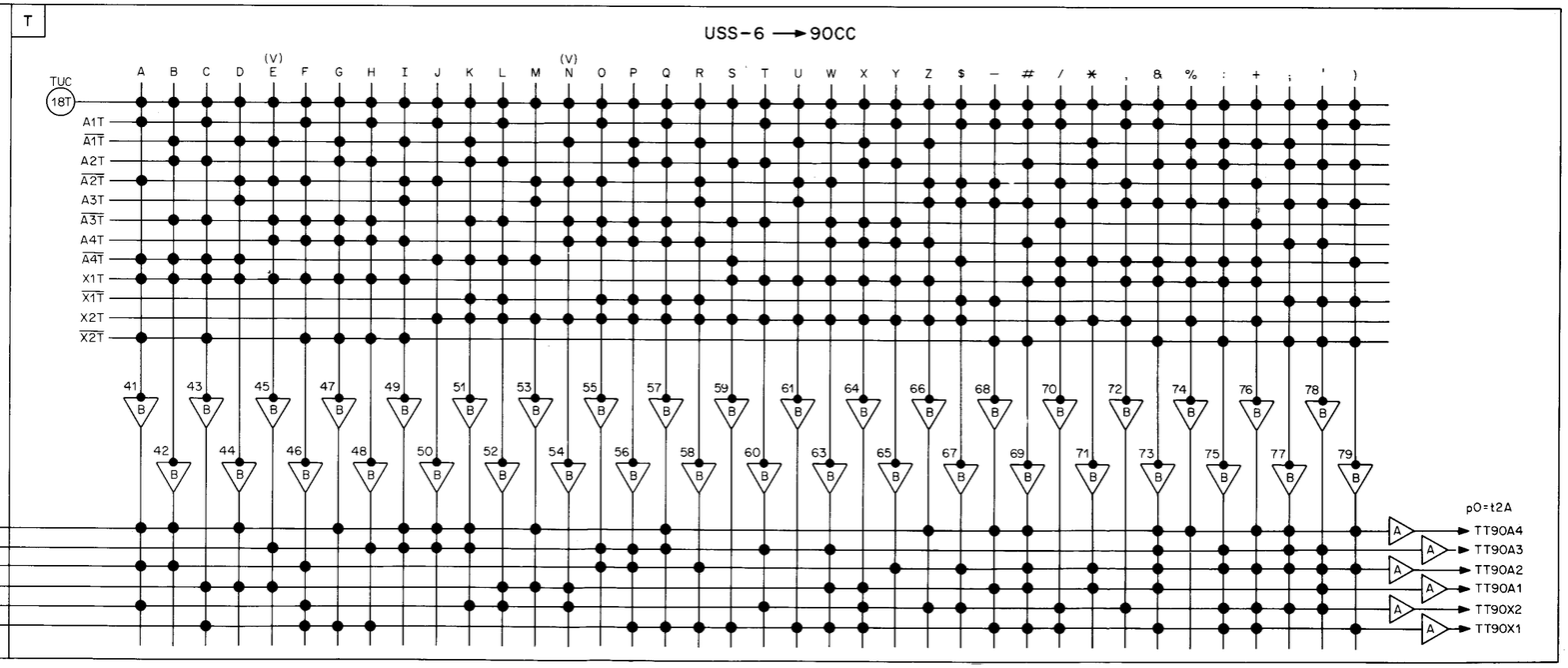
1-11A. Translate Gates, Part 2





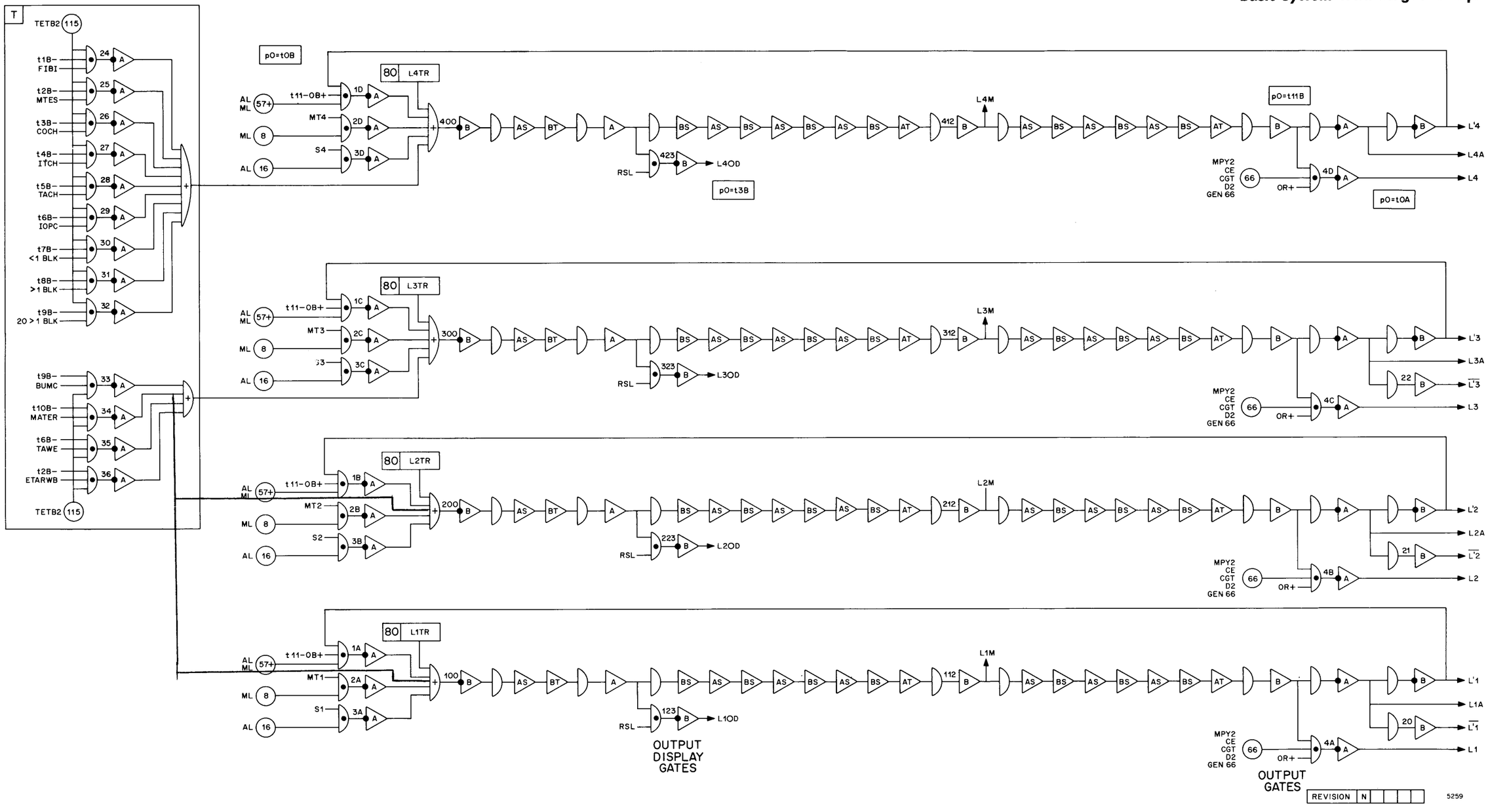


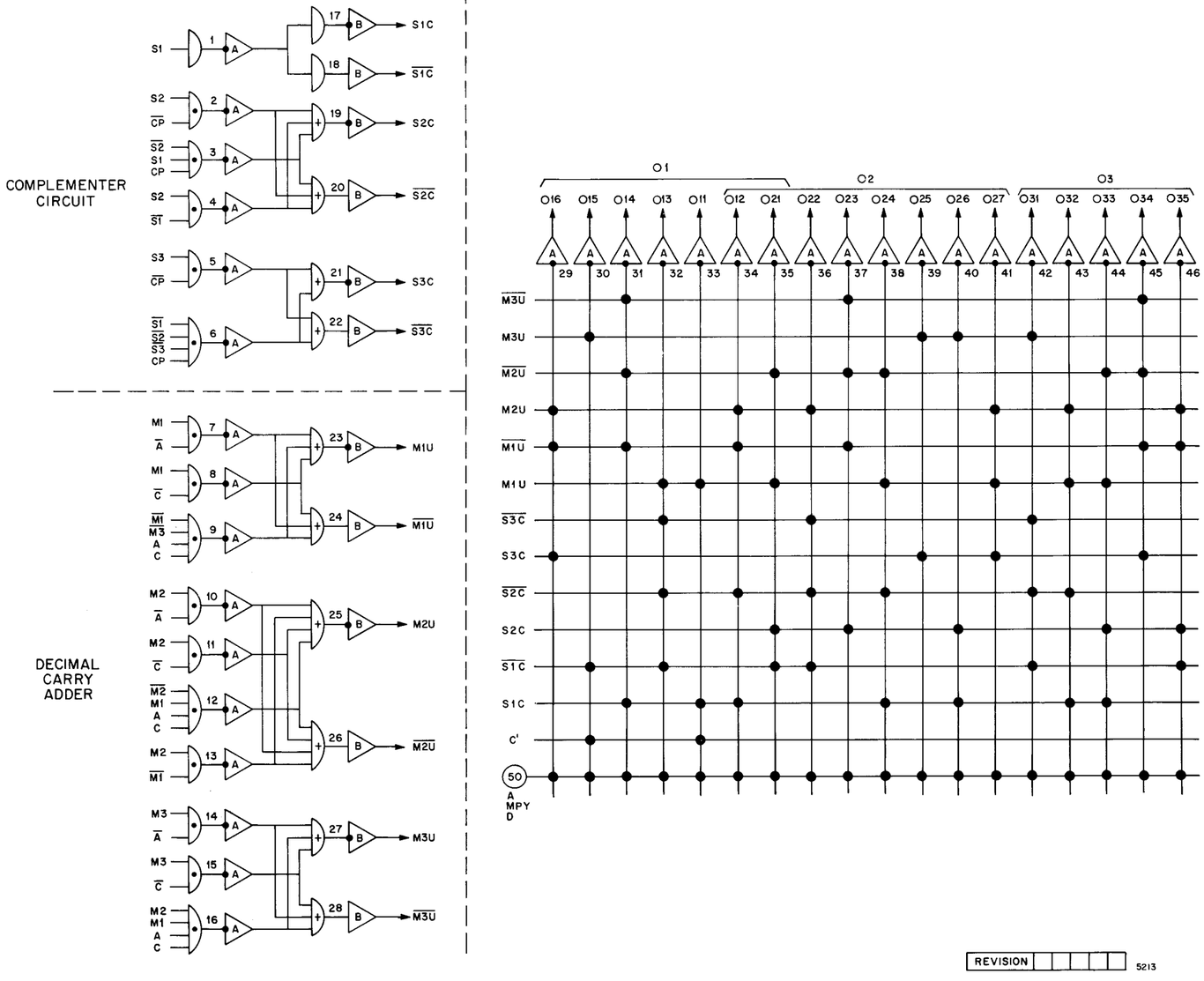




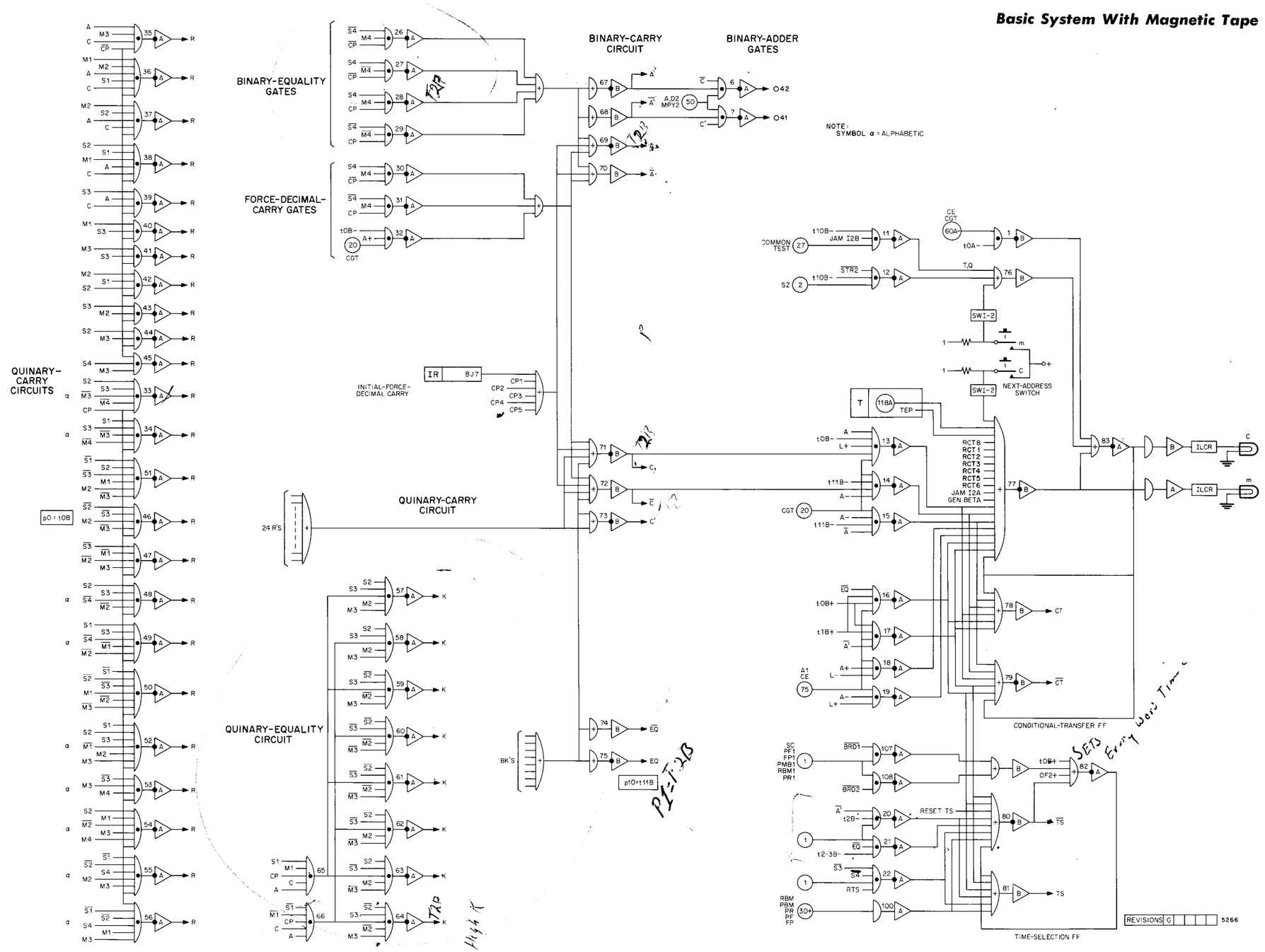
REVISION 5258

1-11A. Translate Gates, Part 2

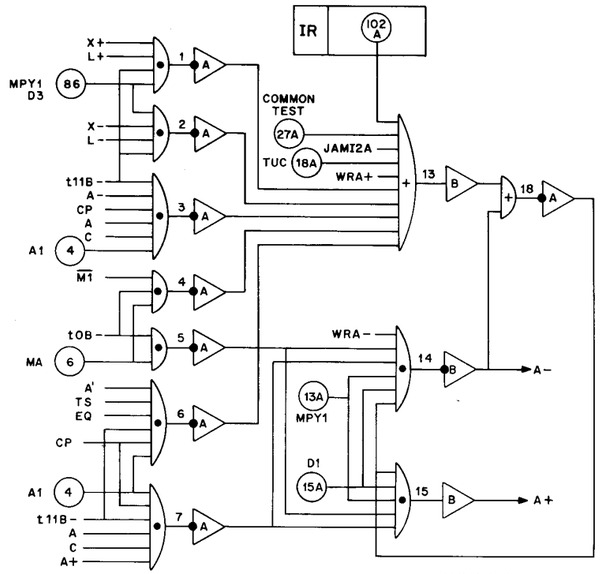

T
TETB2 115
t1B– FIBI
t2B– MTES
t3B– COCH
t4B– ITCH
t5B– TACH
t6B– IOPC
t7B– <1 BLK
t8B– >1 BLK
t9B– 20>1 BLK
t9B– BUMC
t10B– MATER
t6B– TAWE
t2B– ETARWB
TETB2 115
24 25 26 27 28 29 30 31 32 33 34 35 36
pO=t0B
80 L4TR
AL 57+
ML 8
AL 16
t11–0B+
MT4
S4
1D 2D 3D
400 B
AS BT A BS AS BS AS BS AS BS AT 412 B
L4M
423 B
RSL
L4OD
pO=t3B
pO=t11B
MPY2 CE CGT D2 GEN 66
66
OR+
4D
L'4
L4A
L4
pO=t0A
80 L3TR
MT3
3C
1C 2C
300 B
312 B
L3M
323 B
L3OD
L'3
L3A
22 B
L'3
4C
L3
80 L2TR
MT2
S2
1B 2B 3B
200 B
212 B
L2M
223 B
L2OD
L'2
L2A
21 B
L'2
4B
L2
80 L1TR
MT1
S1
1A 2A 3A
100 B
112 B
L1M
123 B
L1OD
L'1
L1A
20 B
L'1
4A
L1
OUTPUT DISPLAY GATES
OUTPUT GATES
REVISION N
5259



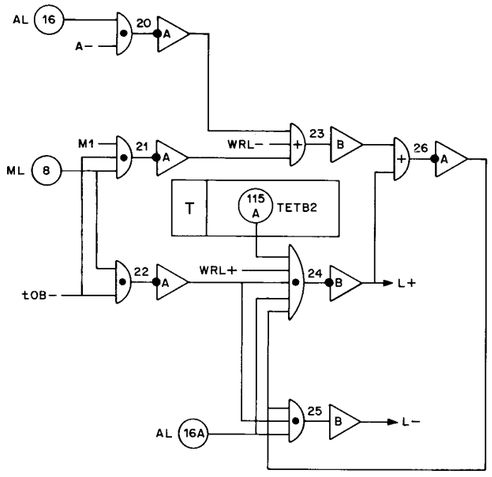
1-13A. *Quinary Adder*



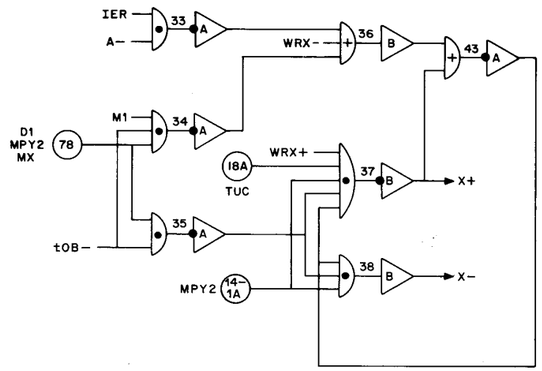
1-14A. Comparator



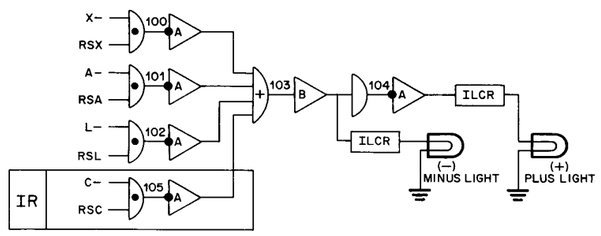
rA-SIGN FF



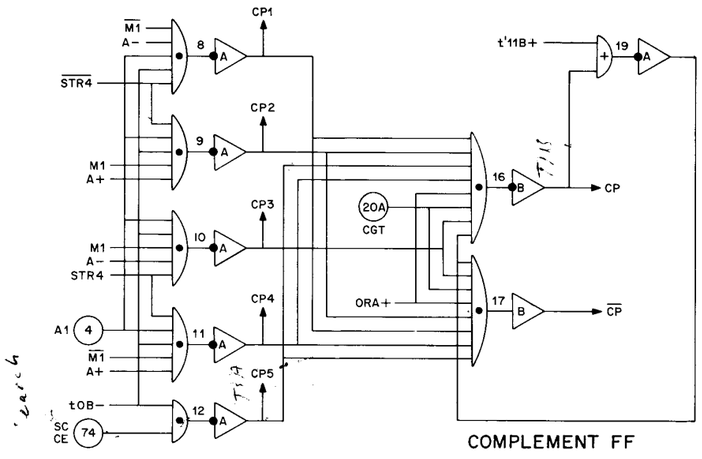
rL-SIGN FF



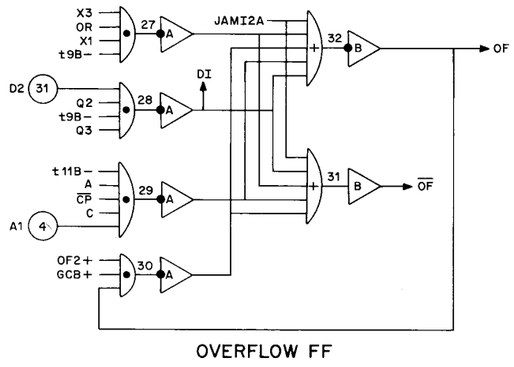
rX-SIGN FF



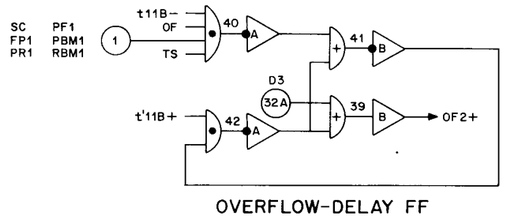
SIGN DISPLAY CIRCUIT



COMPLEMENT FF

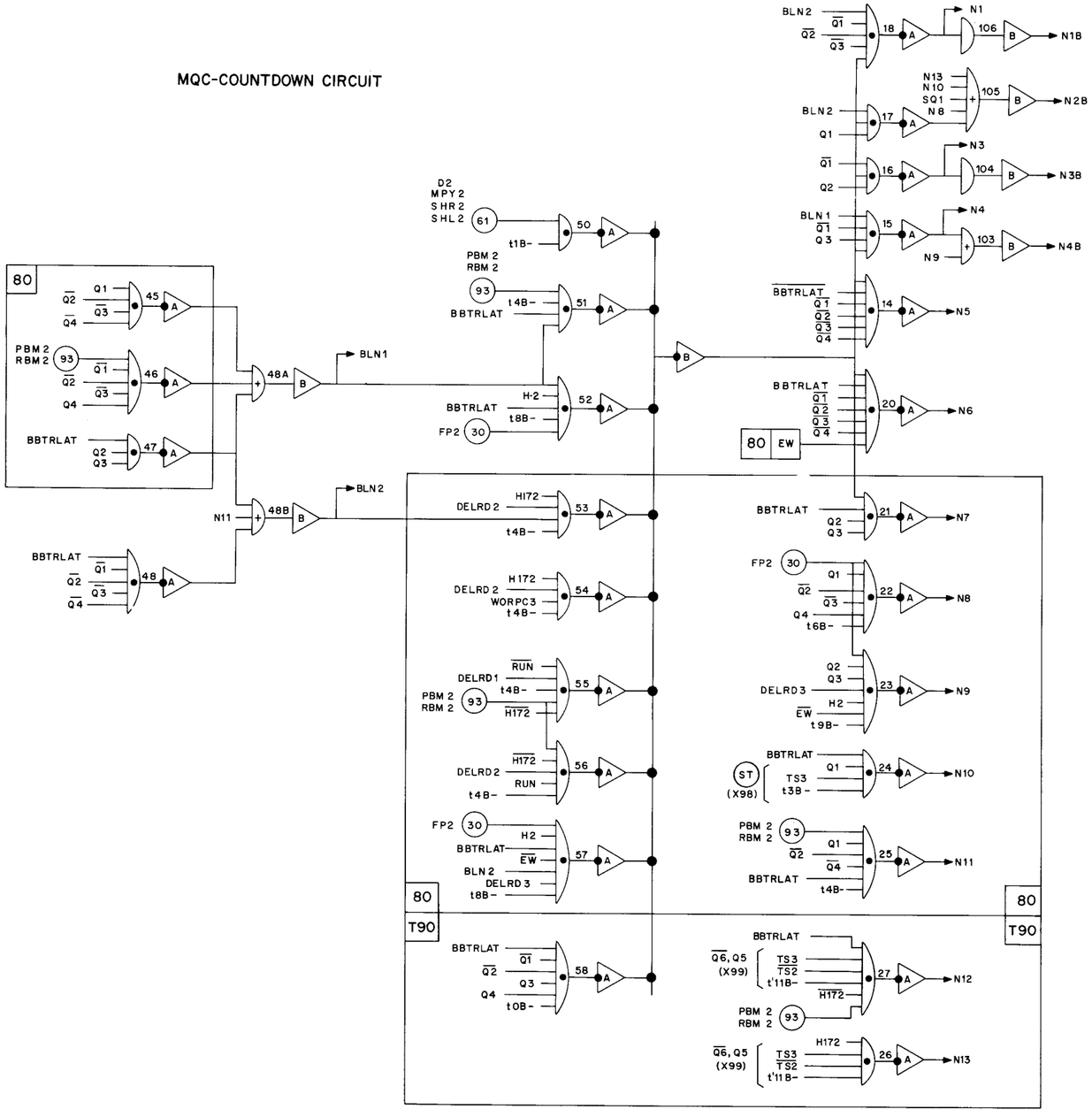


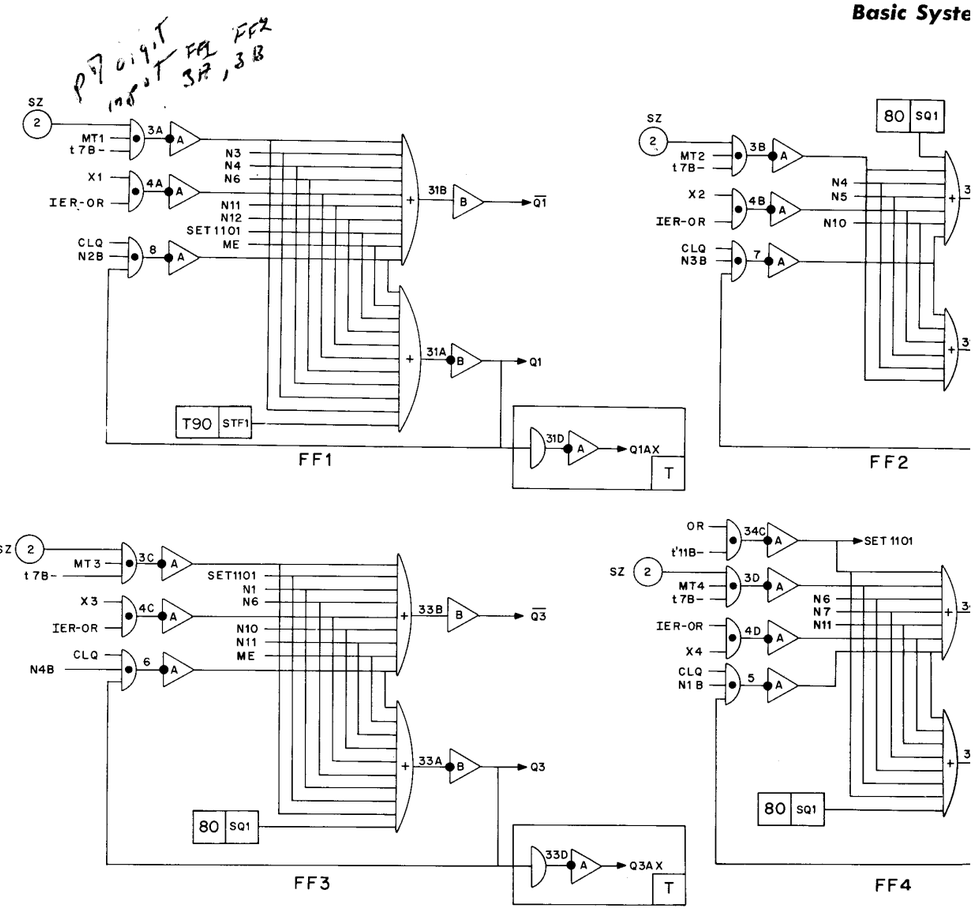
OVERFLOW FF

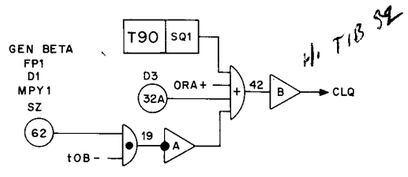


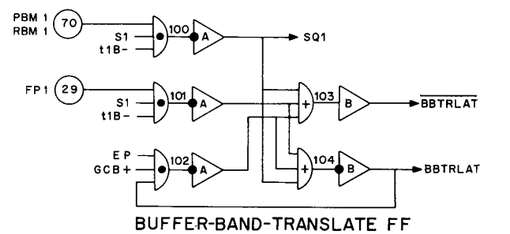
OVERFLOW-DELAY FF

REVISION	D					5260



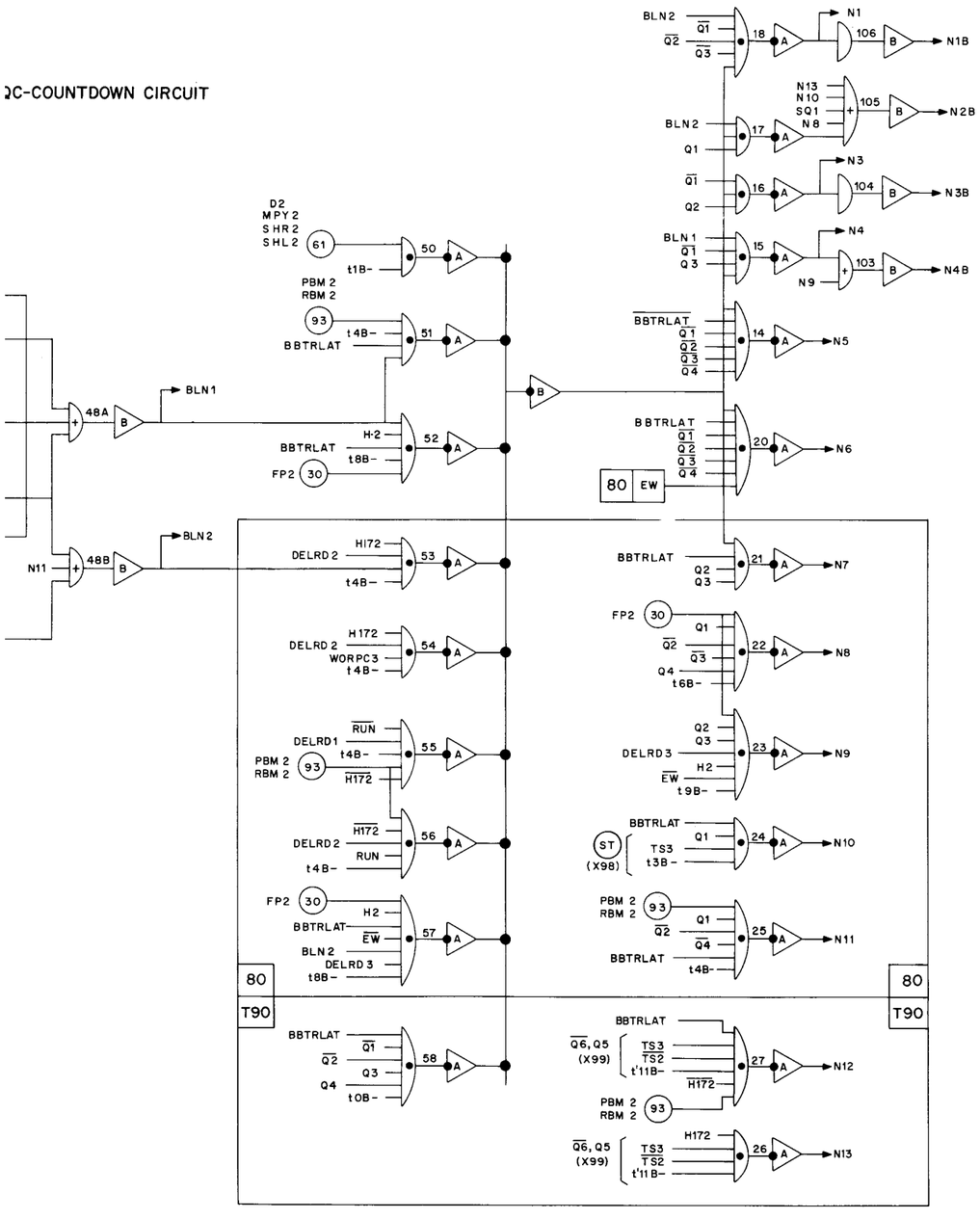


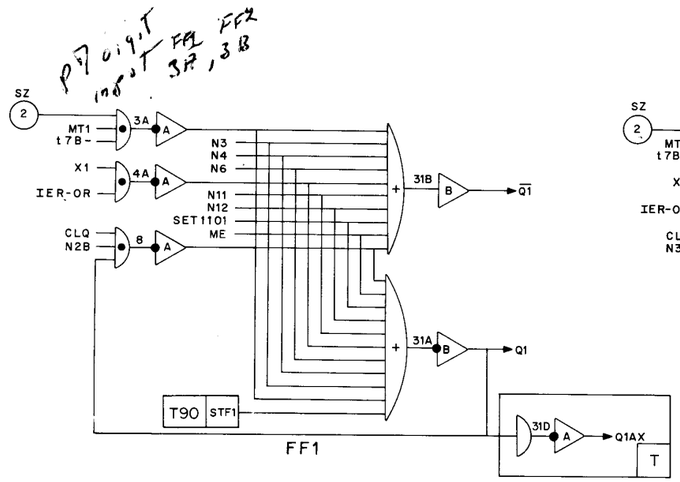


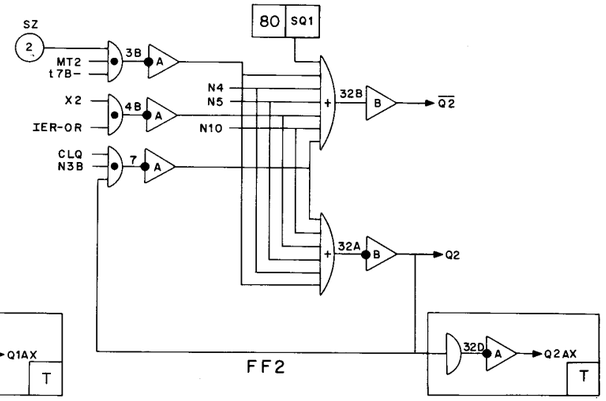


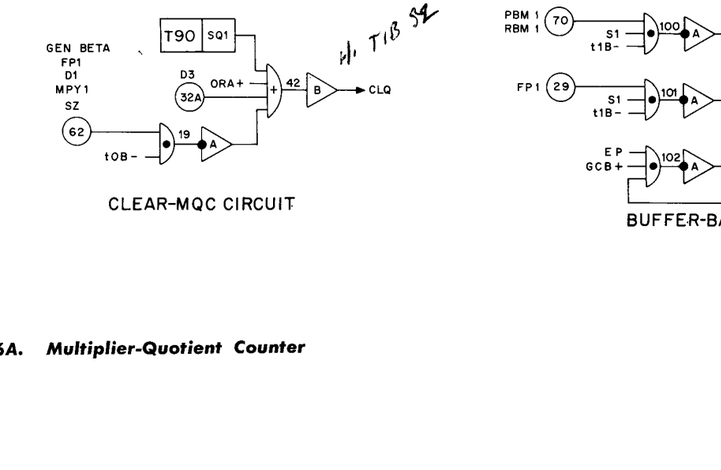
1-16A. *Multiplier-Quotient Counter*

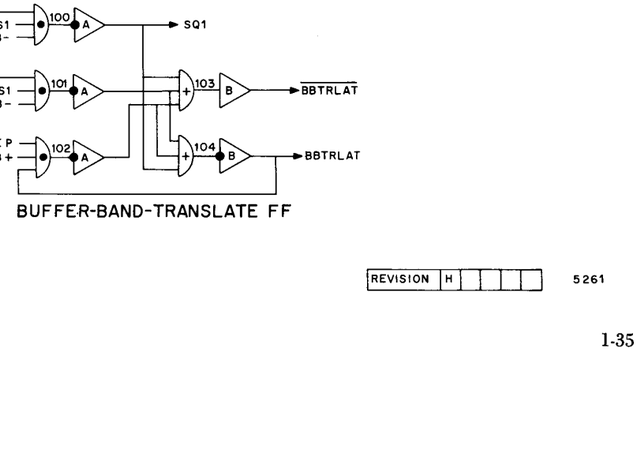
QC-COUNTDOWN CIRCUIT

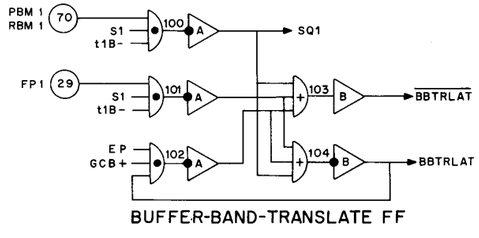




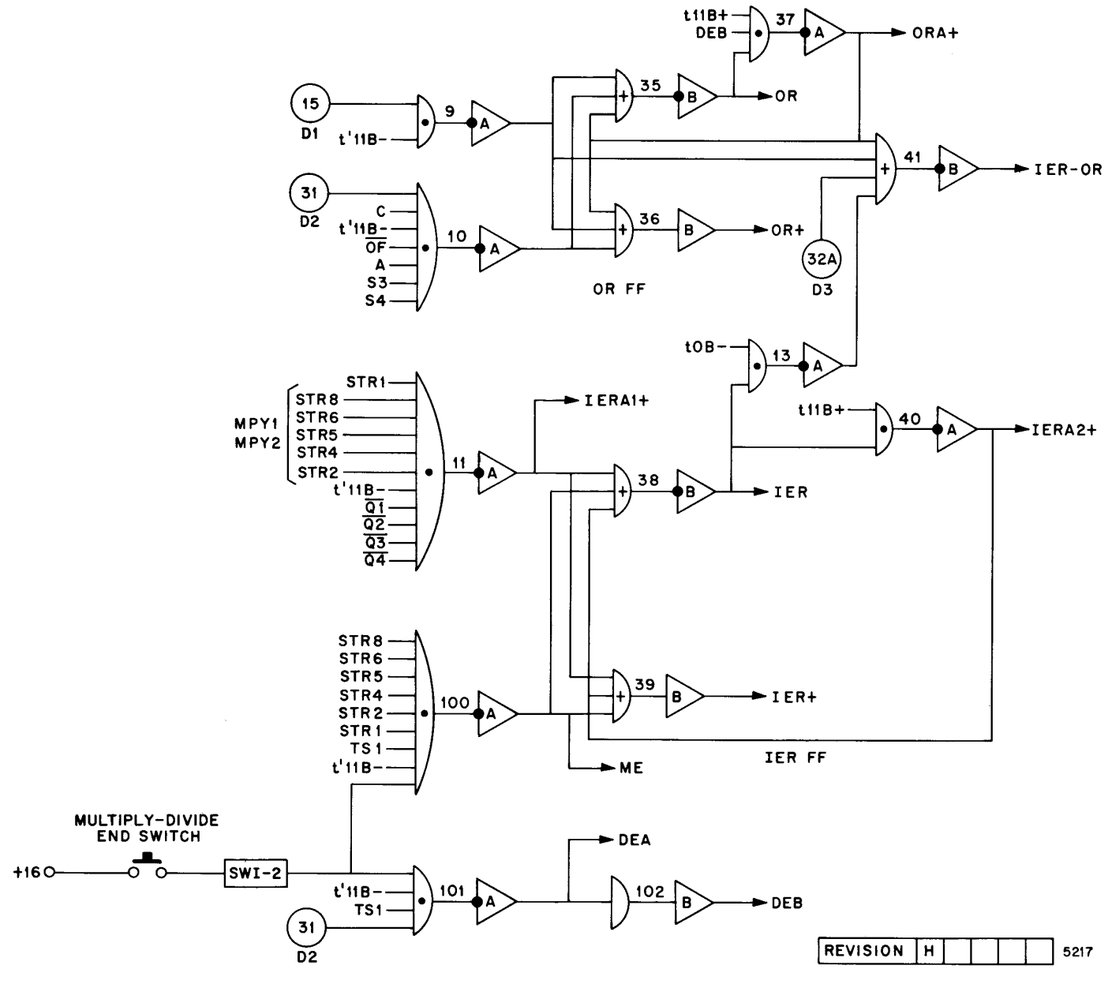




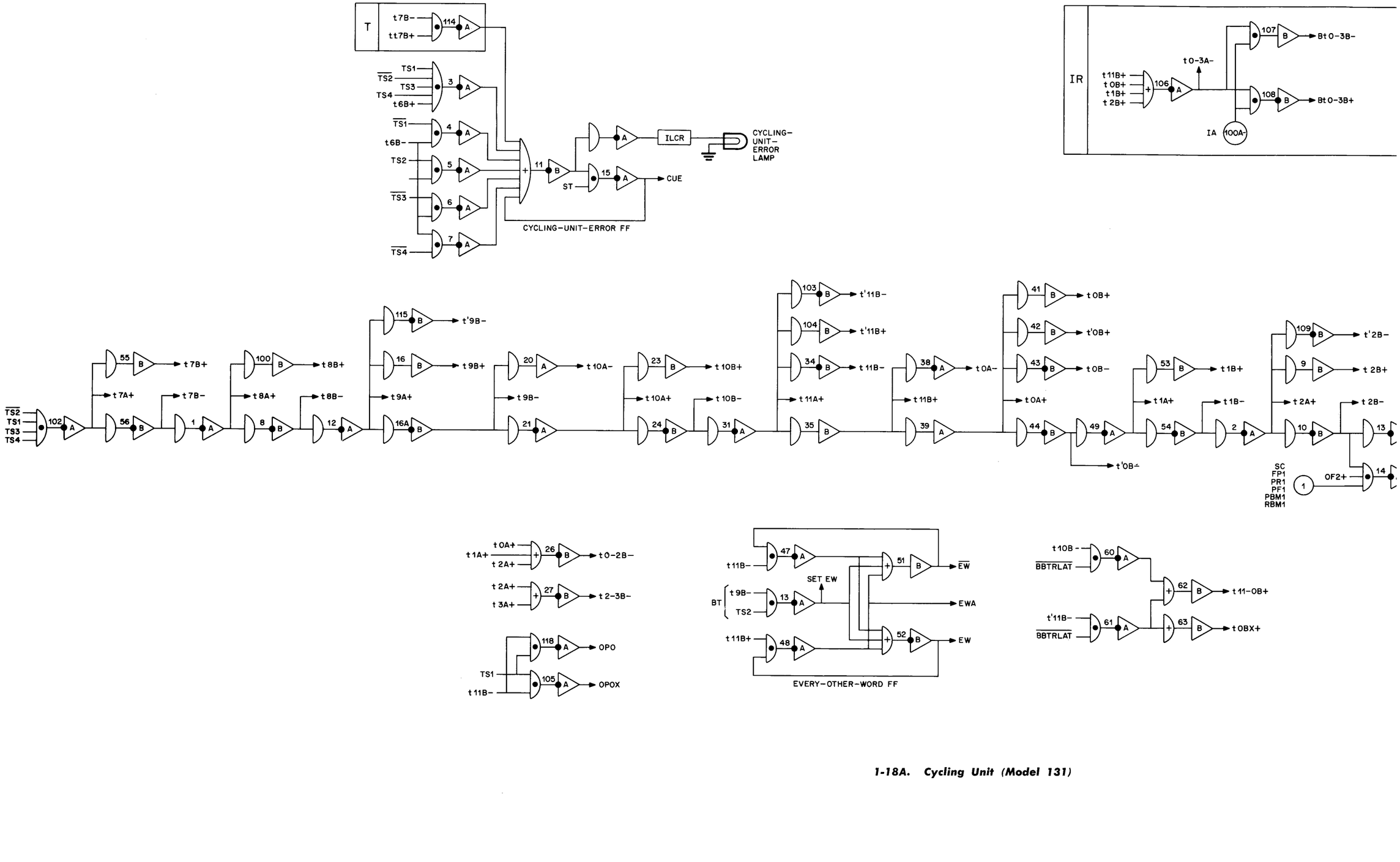




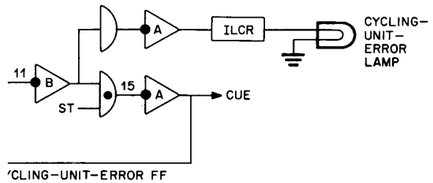
REVISION | H | | | | | 5261

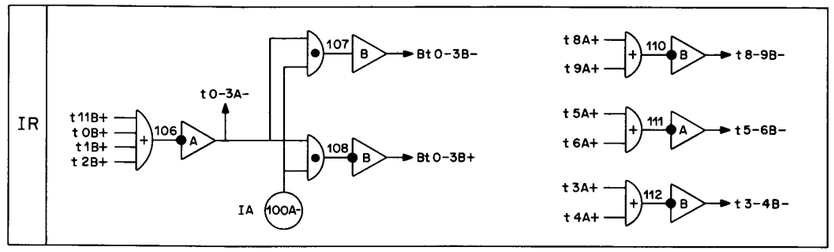


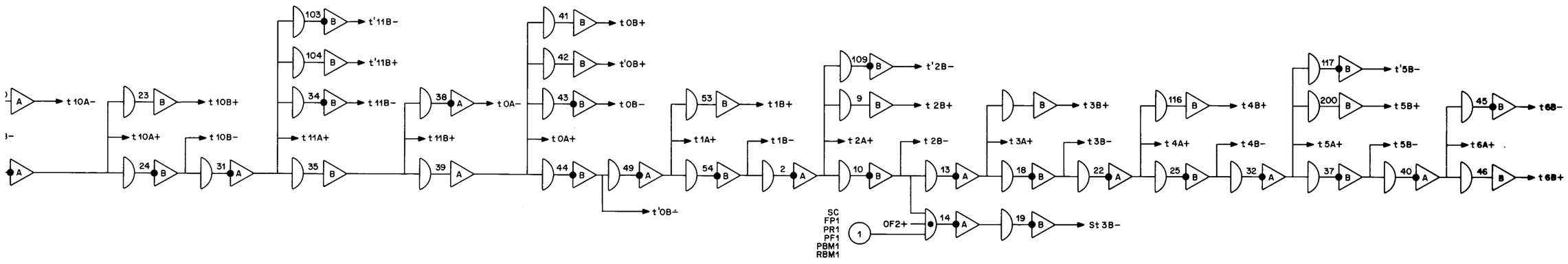
1-17A. IER-OR Flip-Flops

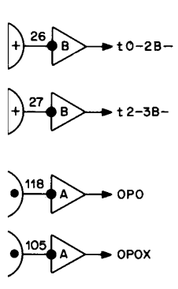


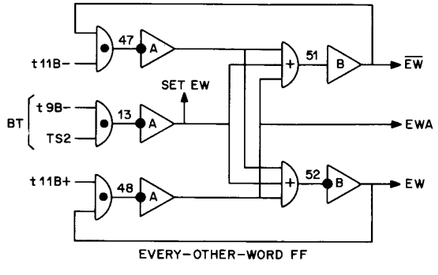
1-18A. Cycling Unit (Model 131)

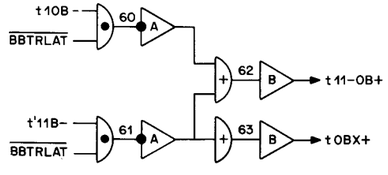




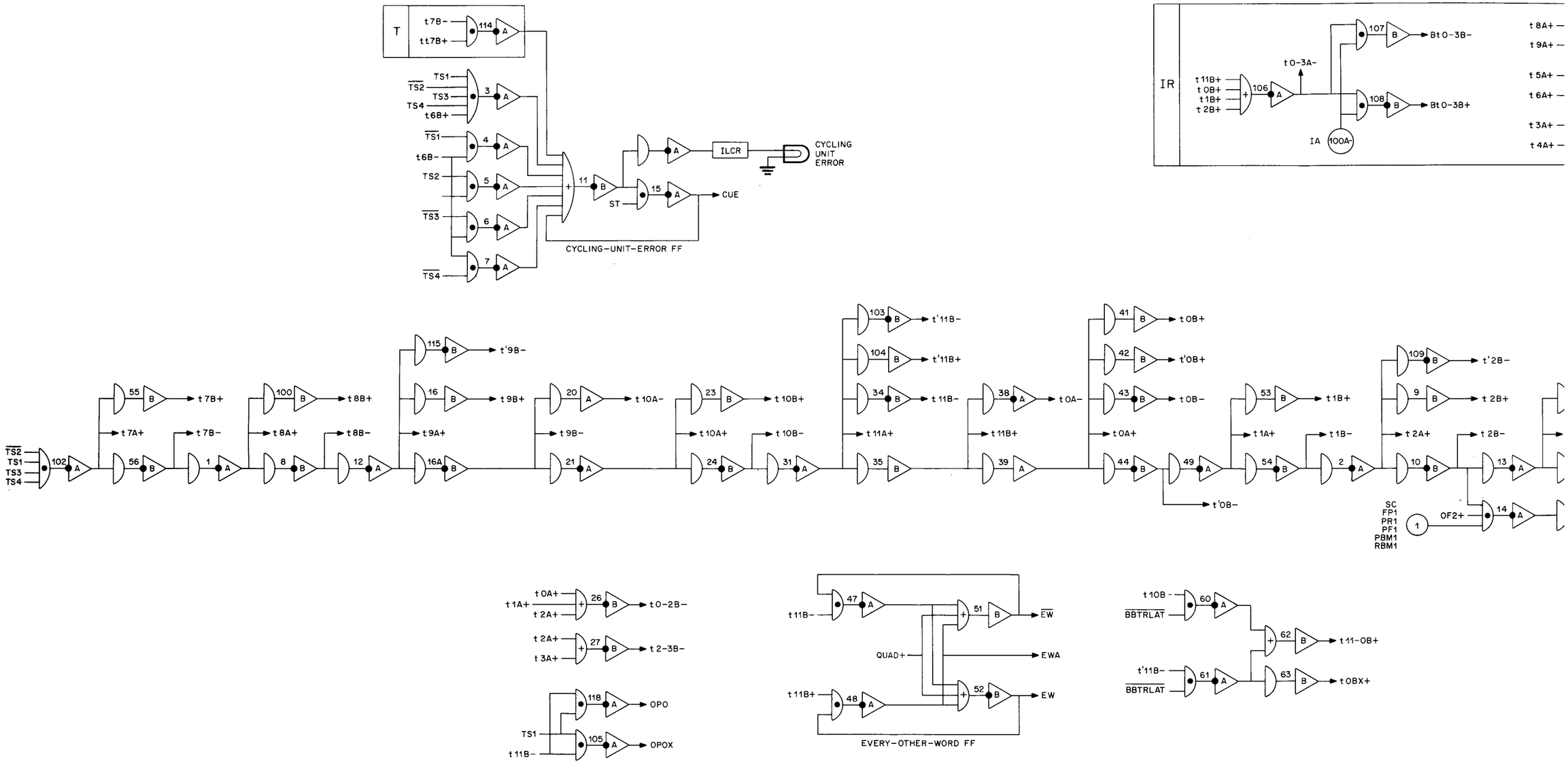






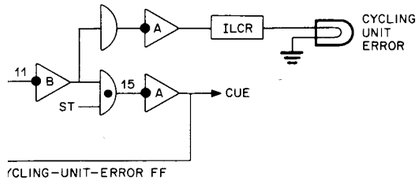


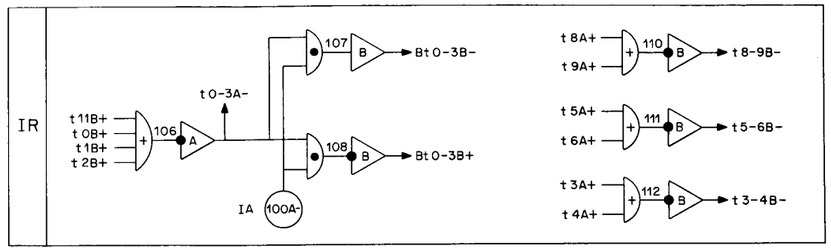
REVISION | K | | | | | 5262

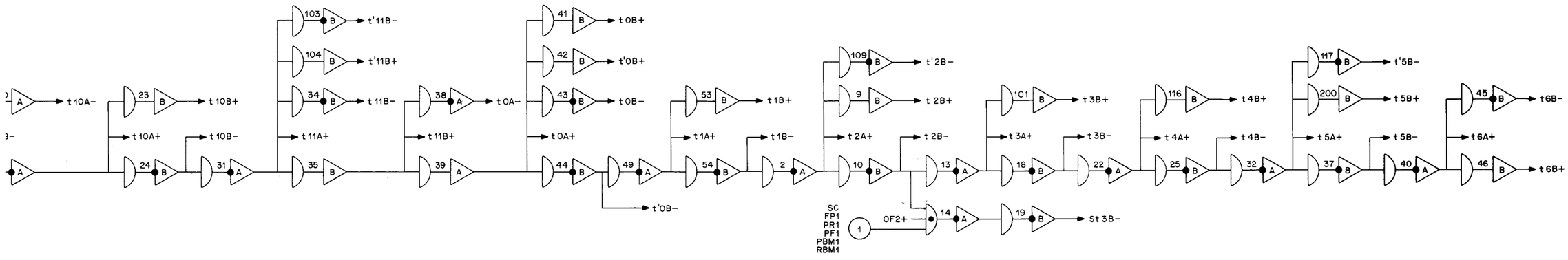


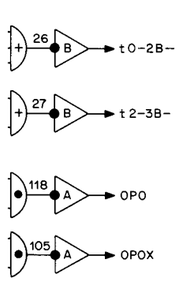
1-18A. Cycling Unit (Model 130)

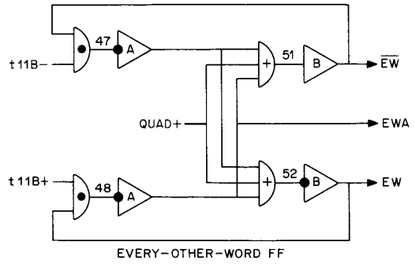
1-18B

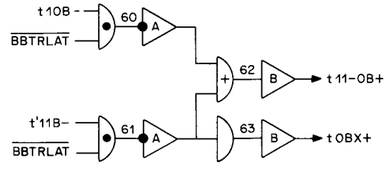










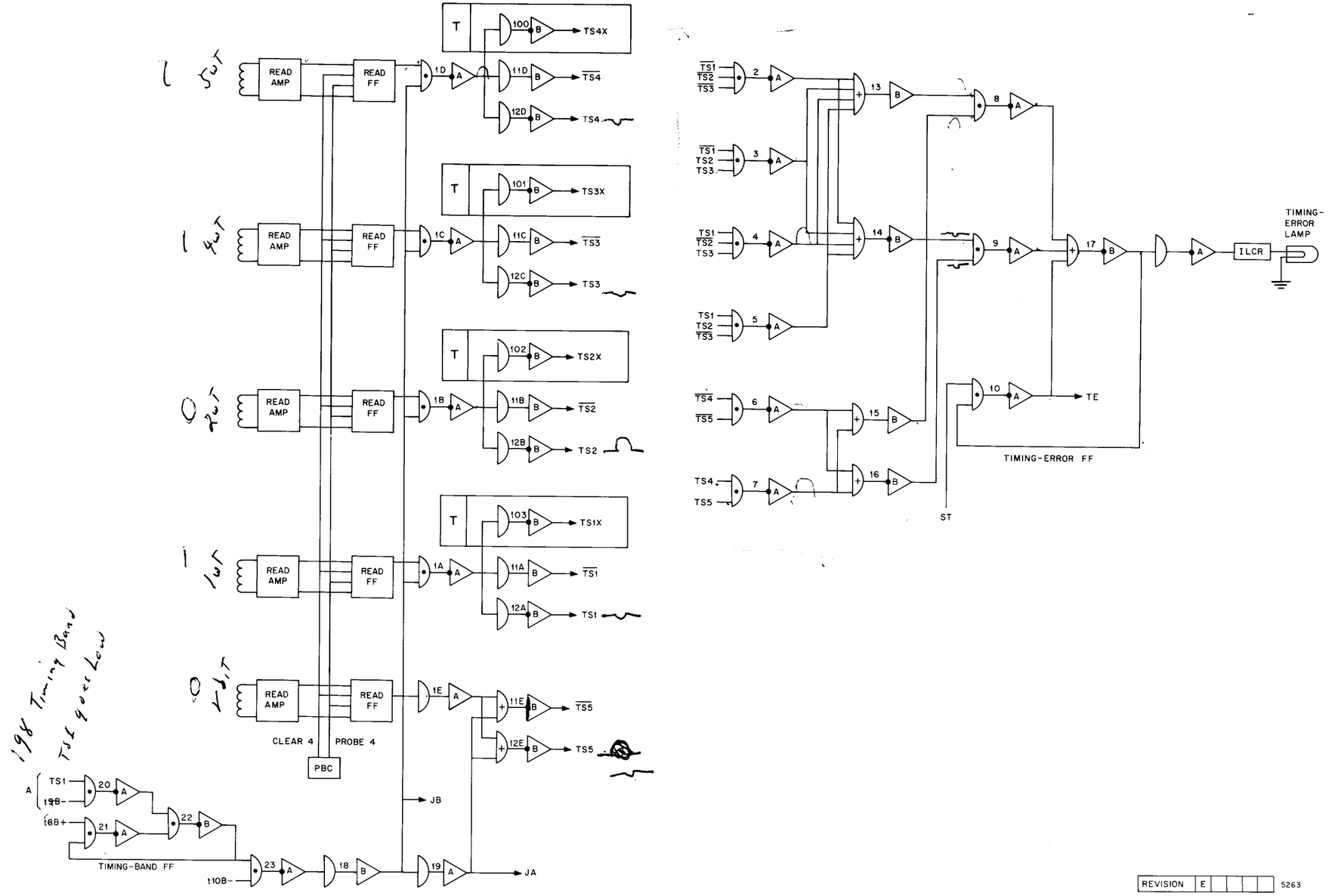


REVISION	K					6328

D 809 452

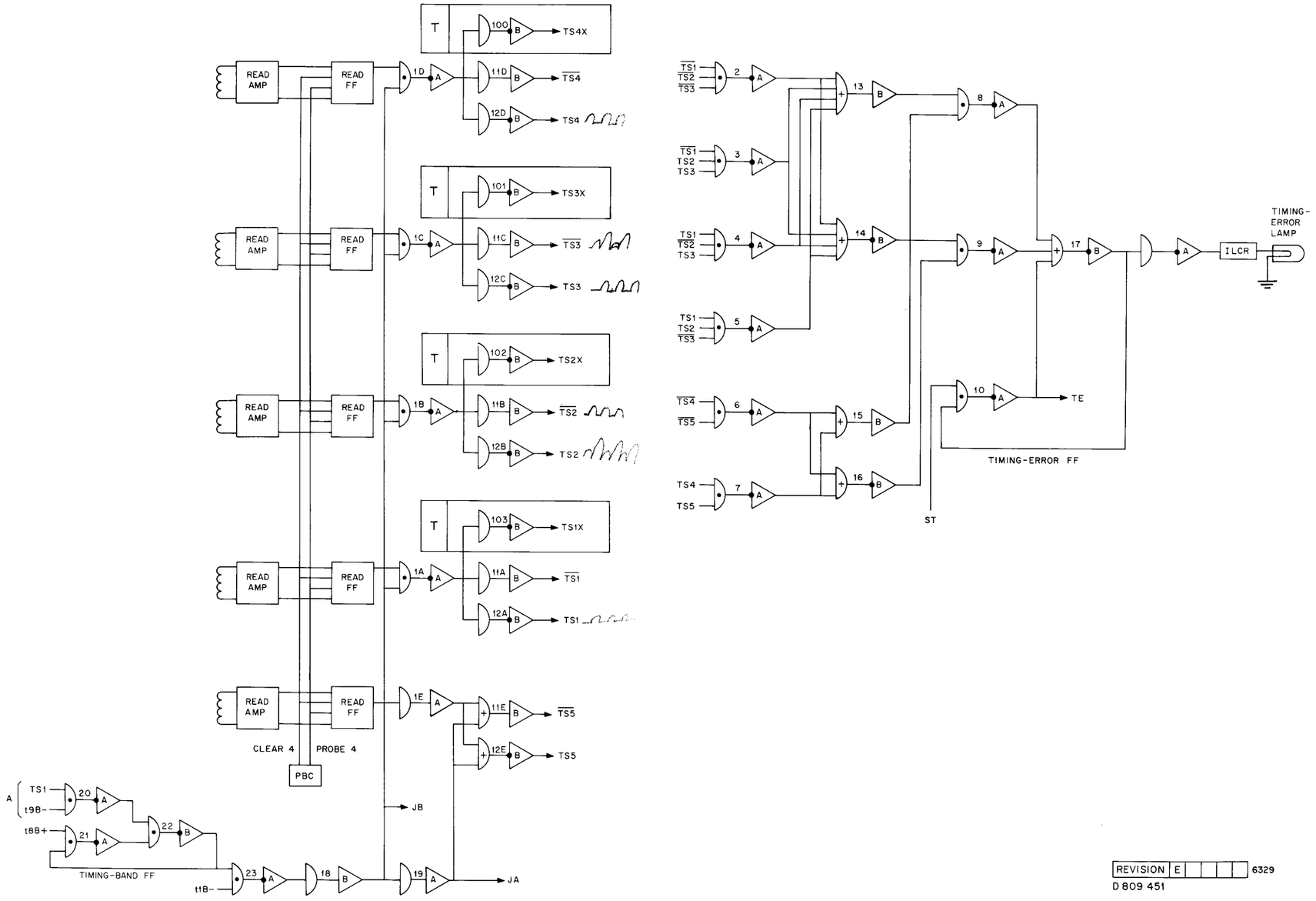
1-18A. Cycling Unit (Model 130)

1-183



REVISION E 5263

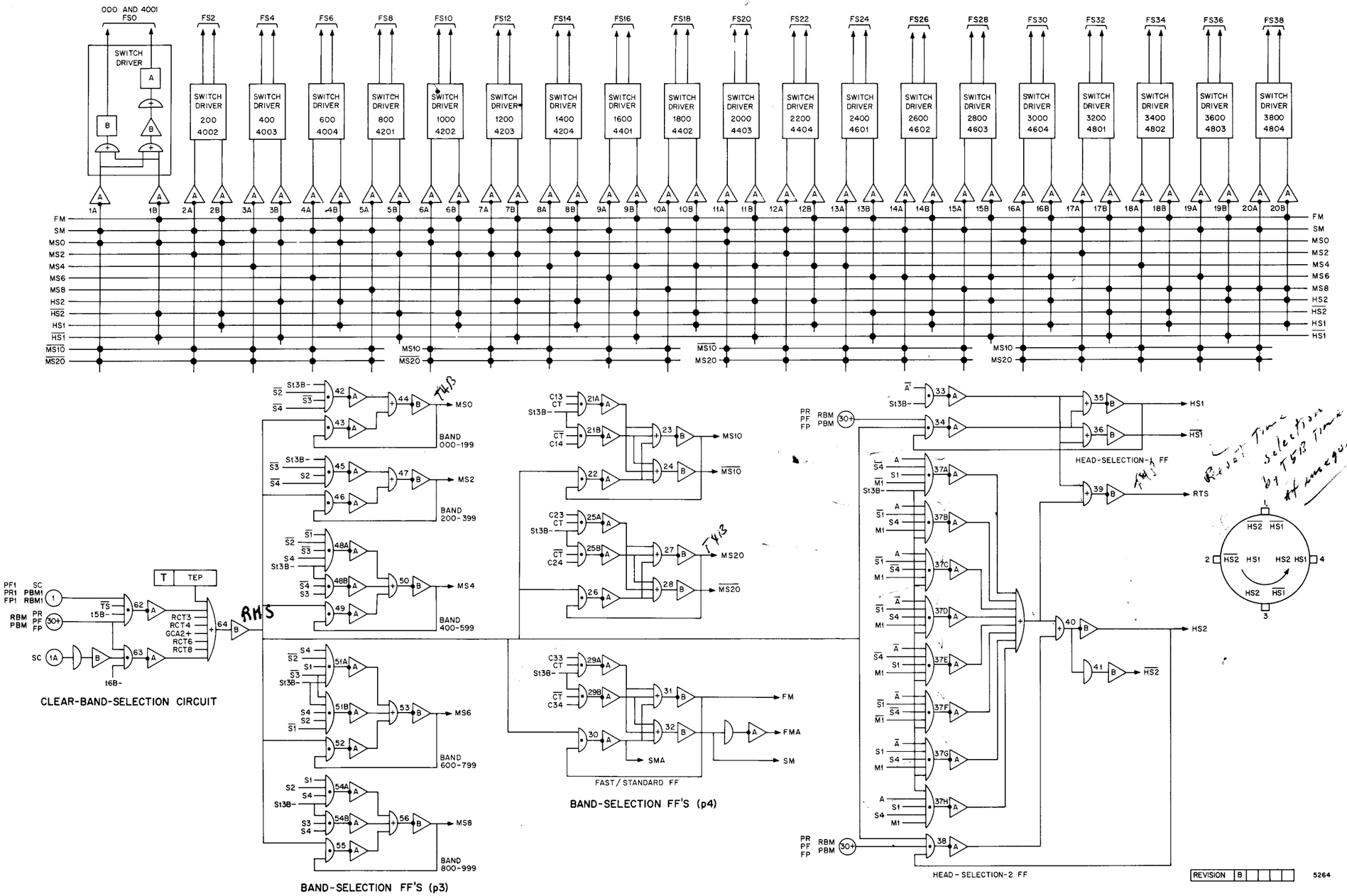
1-19A. Timing-Band Read Circuits (Model 131)

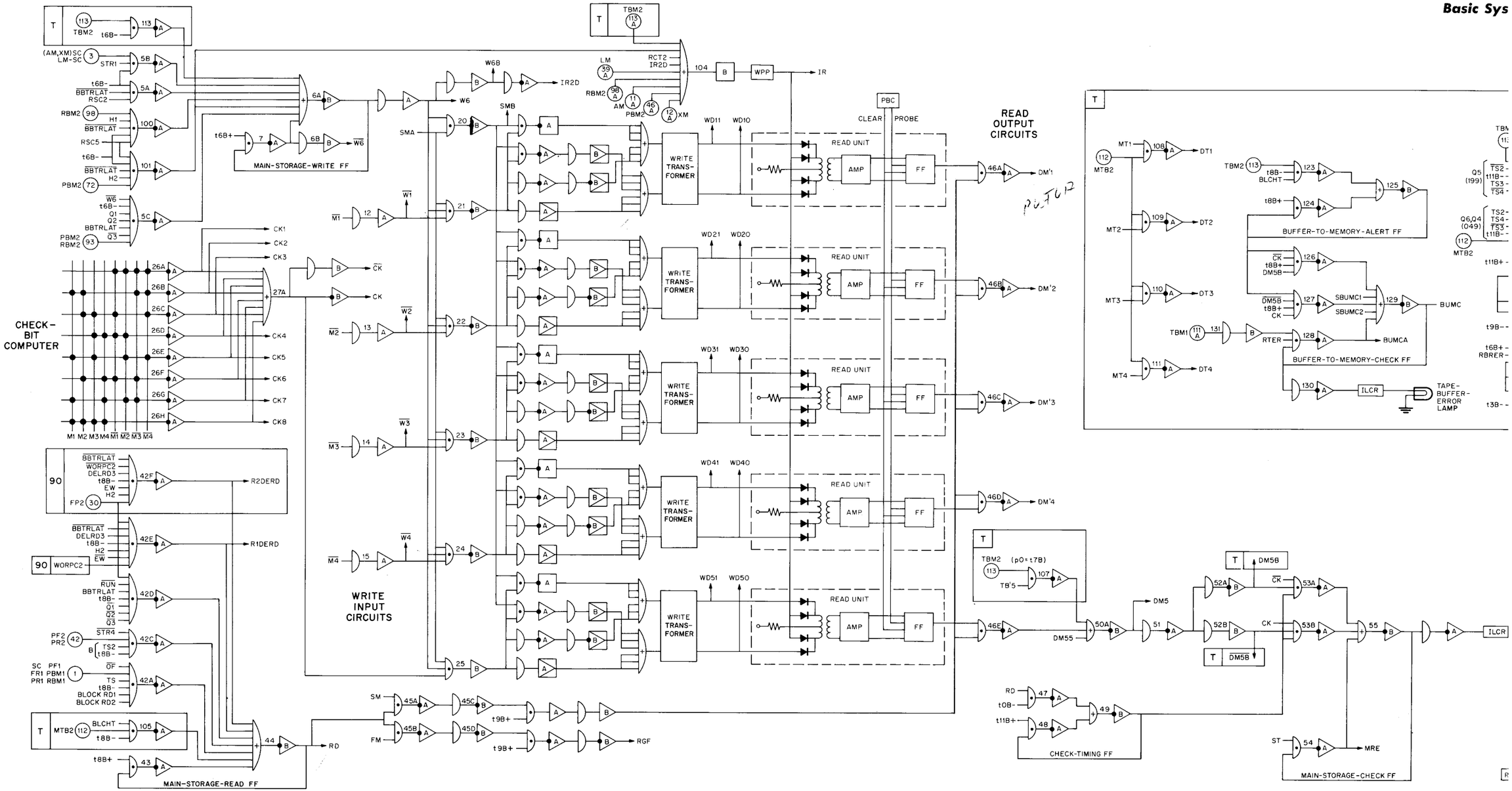


1-19A. Timing-Band Read Circuits (Model 130)

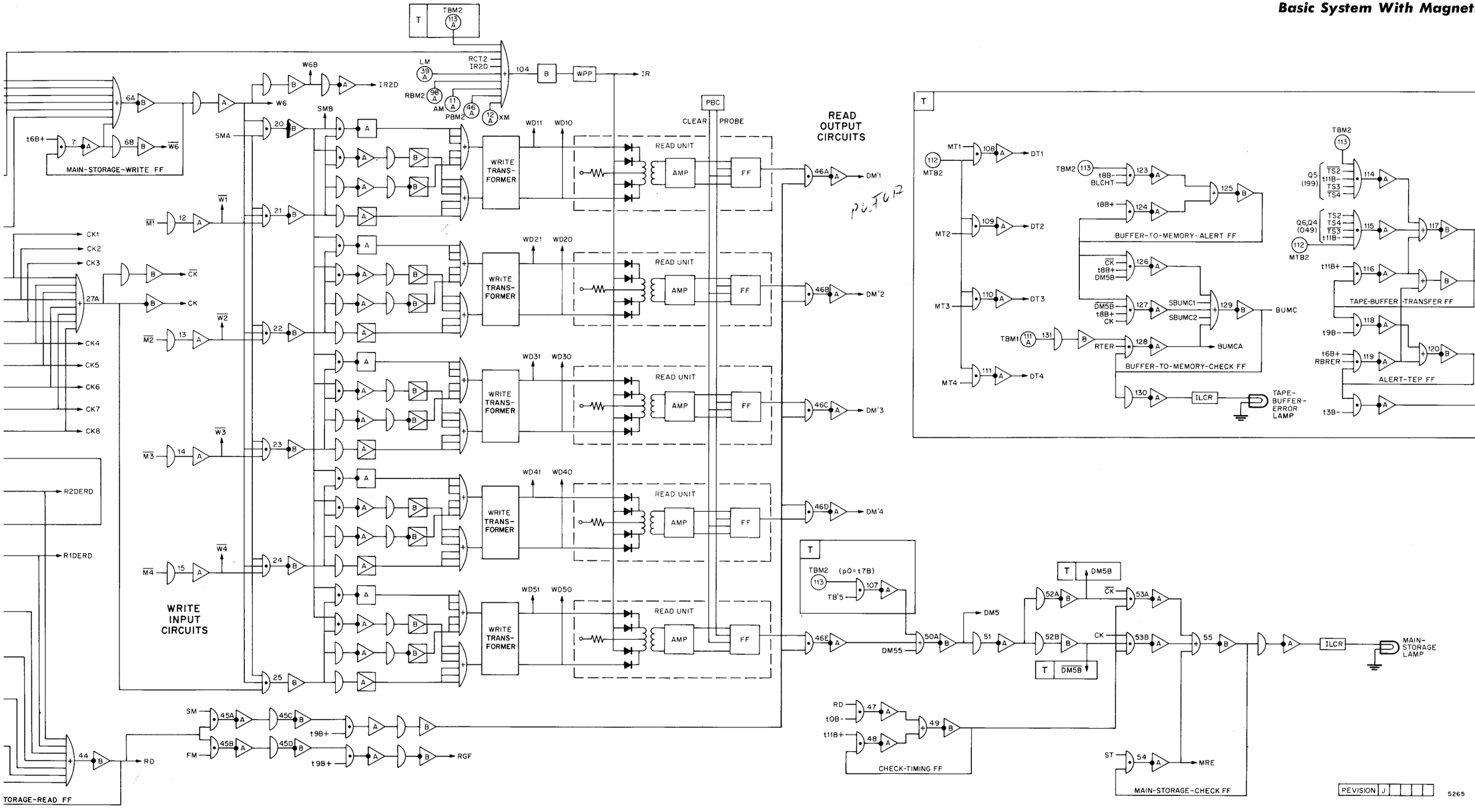
1-19B

REVISION E 6329
D 809 451

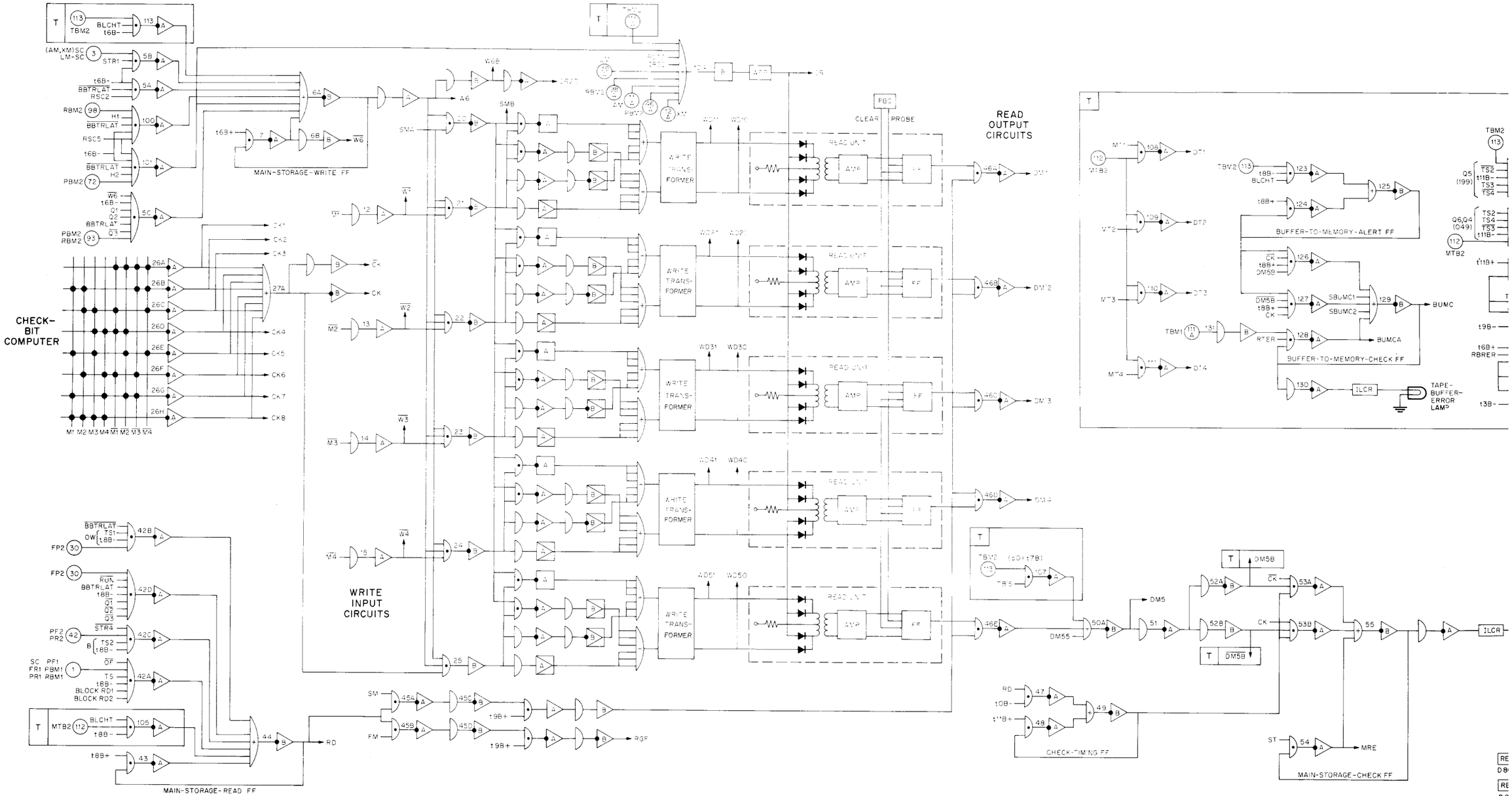

000 AND 4001 FSO
SWITCH DRIVER
A
B
FS2
FS4
FS6
FS8
FS10
FS12
FS14
FS16
FS18
FS20
FS22
FS24
FS26
FS28
FS30
FS32
FS34
FS36
FS38
SWITCH DRIVER 200 4002
SWITCH DRIVER 400 4003
SWITCH DRIVER 600 4004
SWITCH DRIVER 800 4201
SWITCH DRIVER 1000 4202
SWITCH DRIVER 1200 4203
SWITCH DRIVER 1400 4204
SWITCH DRIVER 1600 4401
SWITCH DRIVER 1800 4402
SWITCH DRIVER 2000 4403
SWITCH DRIVER 2200 4404
SWITCH DRIVER 2400 4601
SWITCH DRIVER 2600 4602
SWITCH DRIVER 2800 4603
SWITCH DRIVER 3000 4604
SWITCH DRIVER 3200 4801
SWITCH DRIVER 3400 4802
SWITCH DRIVER 3600 4803
SWITCH DRIVER 3800 4804
1A 1B 2A 2B 3A 3B 4A 4B 5A 5B 6A 6B 7A 7B 8A 8B 9A 9B 10A 10B 11A 11B 12A 12B 13A 13B 14A 14B 15A 15B 16A 16B 17A 17B 18A 18B 19A 19B 20A 20B
FM
SM
MS0
MS2
MS4
MS6
MS8
HS2
HS2
HS1
HS1
MS10
MS20
MS10
MS20
MS10
MS20
FM
SM
MS0
MS2
MS4
MS6
MS8
HS2
HS2
HS1
HS1
St3B-
S2
S3
S4
42
43
44
MS0
BAND 000-199
45
46
47
MS2
BAND 200-399
48A
48B
49
50
MS4
BAND 400-599
51A
51B
52
53
MS6
BAND 600-799
54A
54B
55
56
MS8
BAND 800-999
BAND-SELECTION FF'S (p3)
C13
CT
C14
21A
21B
22
23
24
MS10
MS10
C23
C24
25A
25B
26
27
28
MS20
MS20
BAND-SELECTION FF'S (p4)
C33
C34
29A
29B
30
31
32
FM
FMA
SM
SMA
FAST/STANDARD FF
PR
PF
FP
RBM
PBM
30+
33
34
35
36
HS1
HS1
HEAD-SELECTION-1 FF
37A
37B
37C
37D
37E
37F
37G
37H
38
39
RTS
40
41
HS2
HS2
HS2
HEAD-SELECTION-2 FF
HS2 HS1
HS2 HS1
HS2 HS1
HS2 HS1
1
2
3
4
REVISION B
5264
PF1 SC
PR1 PBM1
FP1 RBM1
1
RBM PR
PBM PF
FP
30+
SC
1A
TS
t5B-
t6B-
62
63
64
T
TEP
RCT3
RCT4
GCA2+
RCT6
RCT8
CLEAR-BAND-SELECTION CIRCUIT



1-21A. Standard-Access Read/Write Circuits (Model 131)

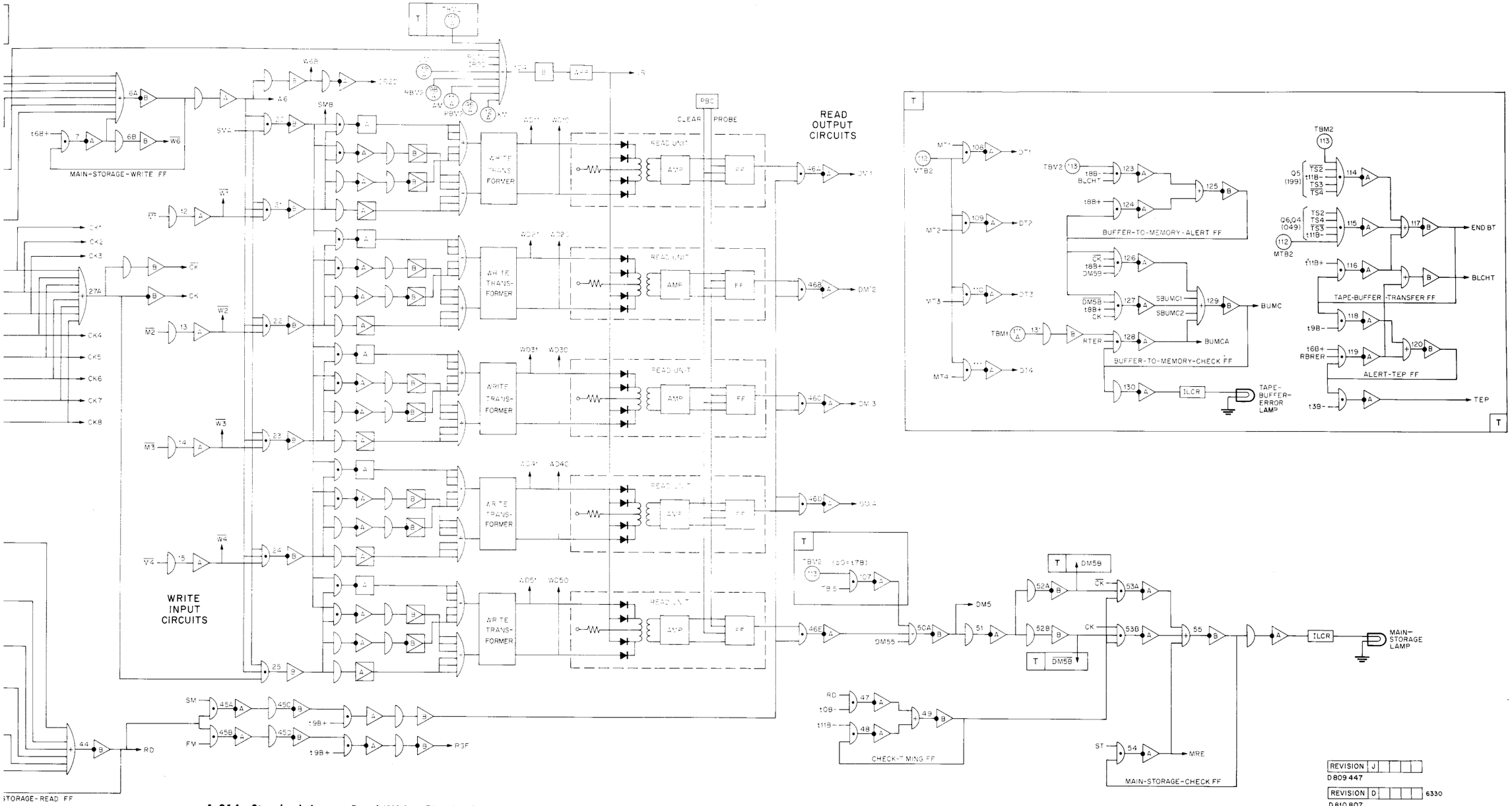


1-21A. *Standard-Access Read/Write Circuits (Model 131)*



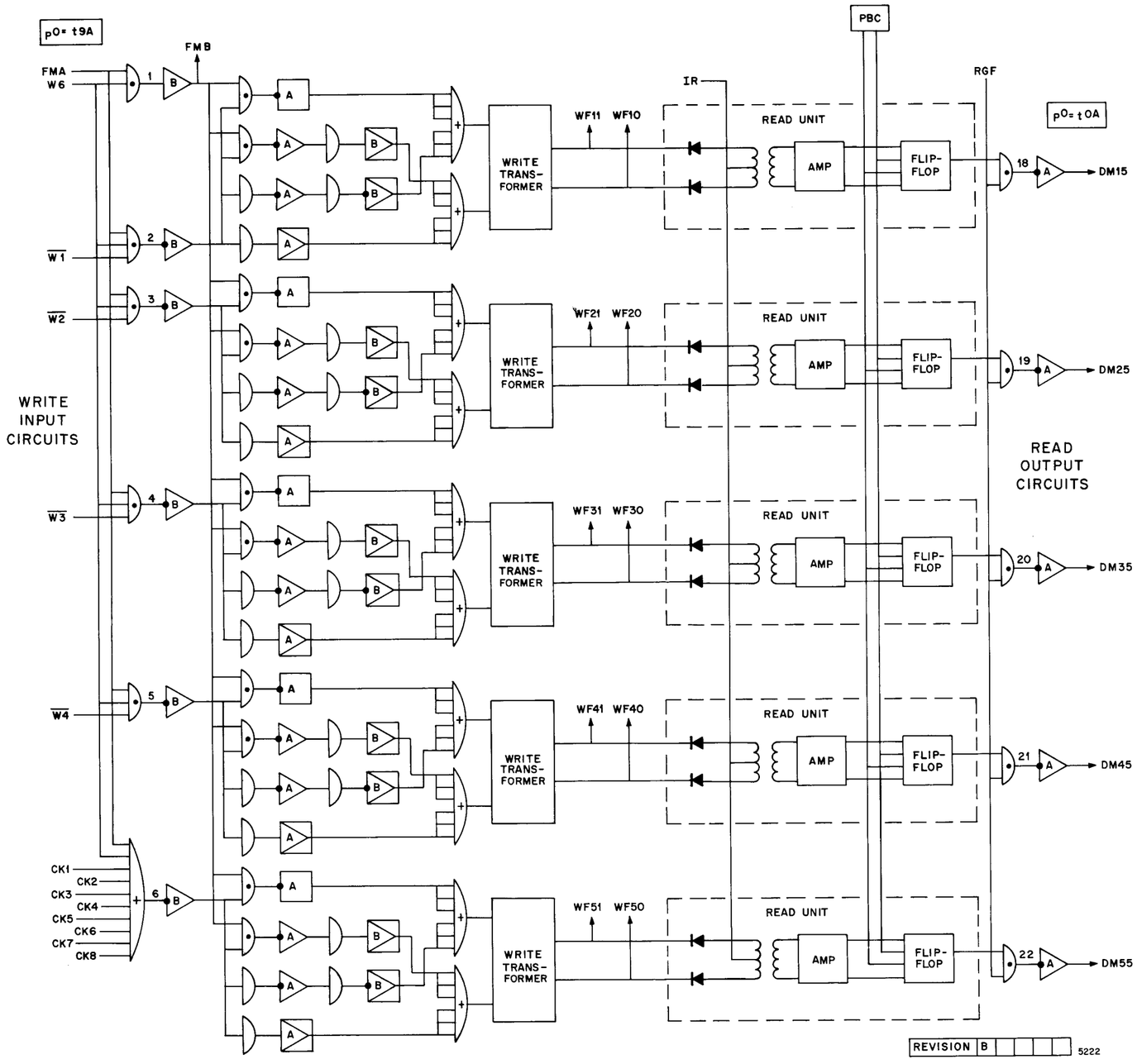
1-21A. Standard-Access Read/Write Circuits (Model 130)

~~1-21B~~

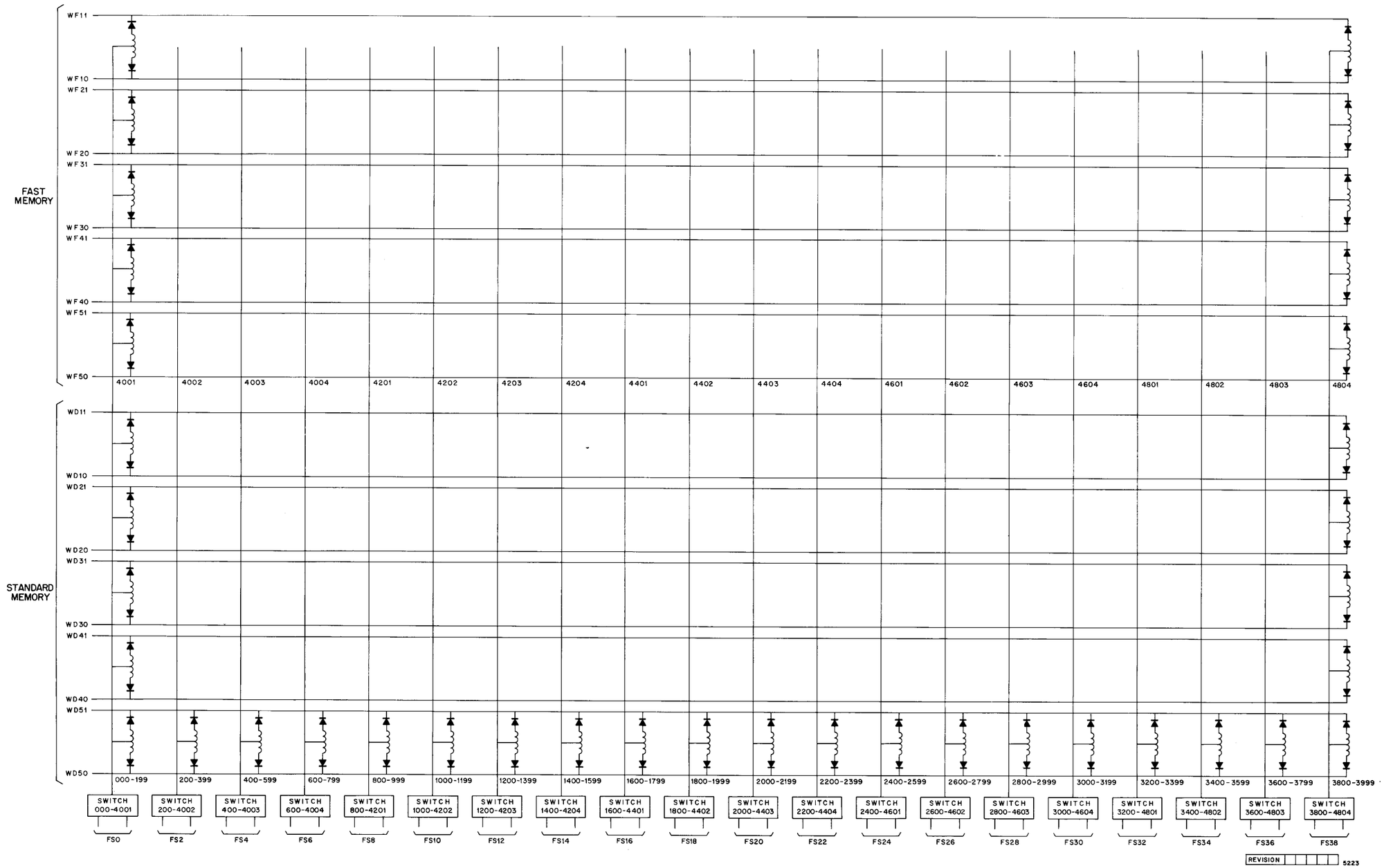


1-21A. Standard-Access Read/Write Circuits (Model 130)

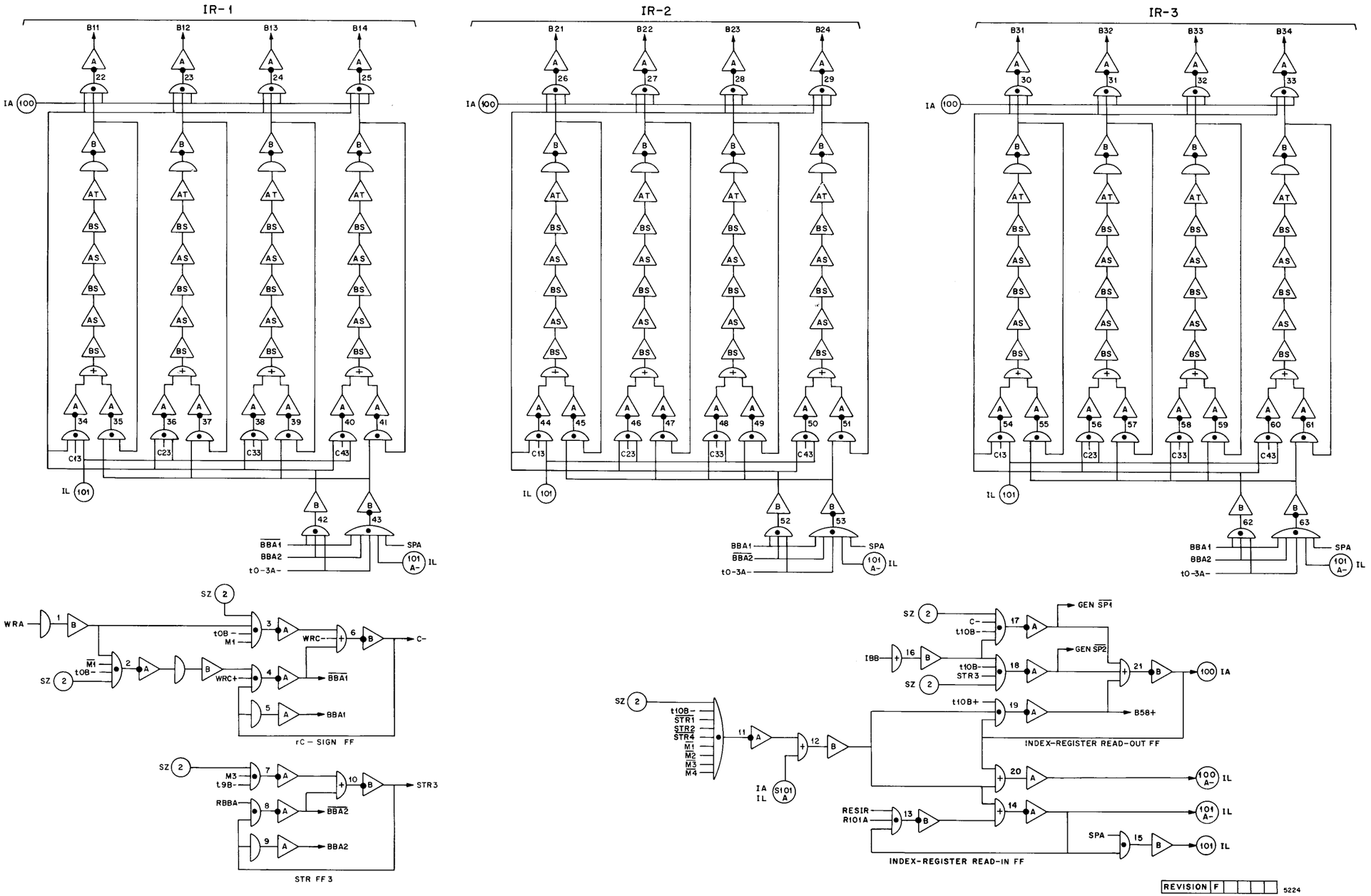
~~1-21B~~



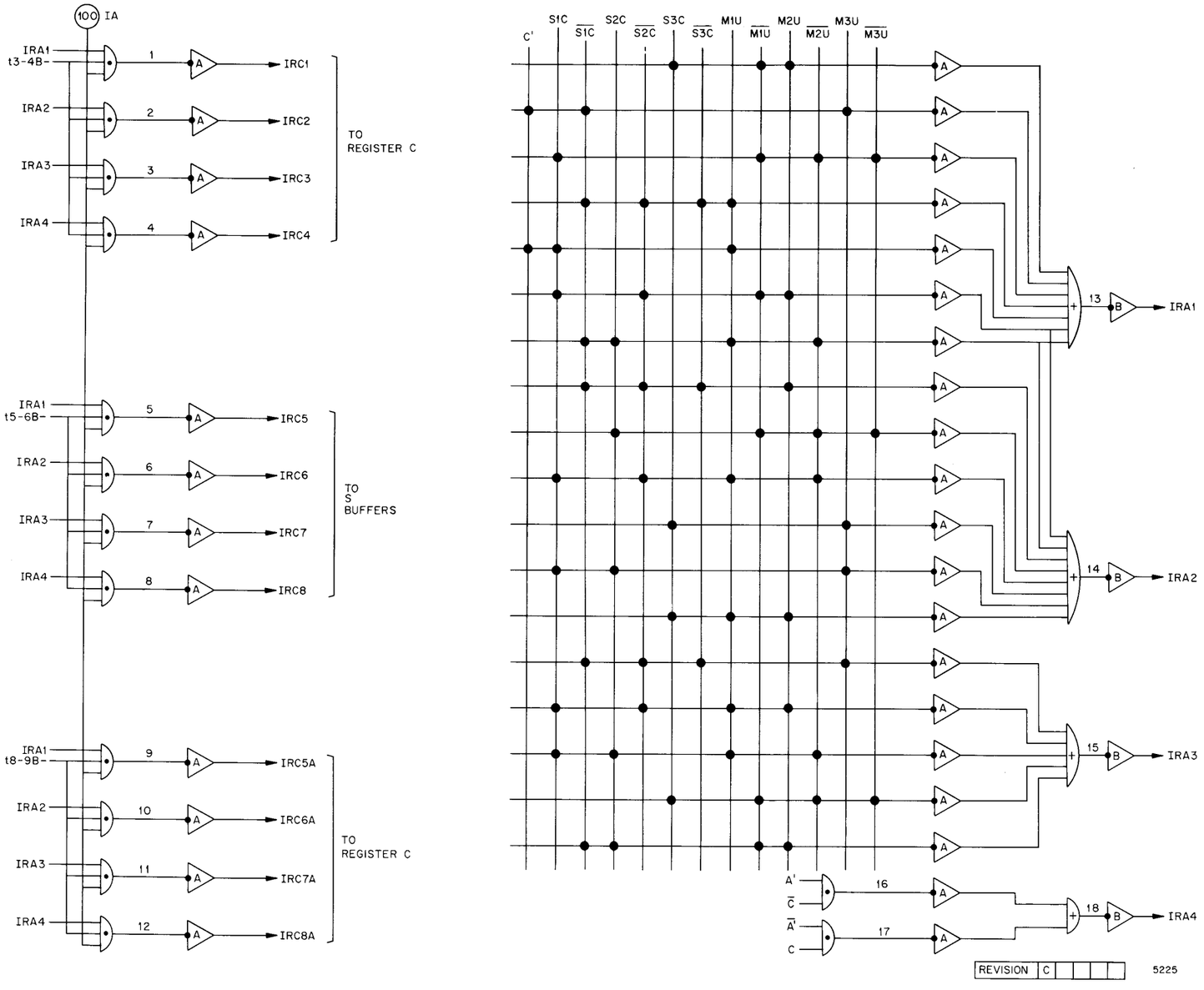
1-22A. *Fast-Access Read/Write Circuits*



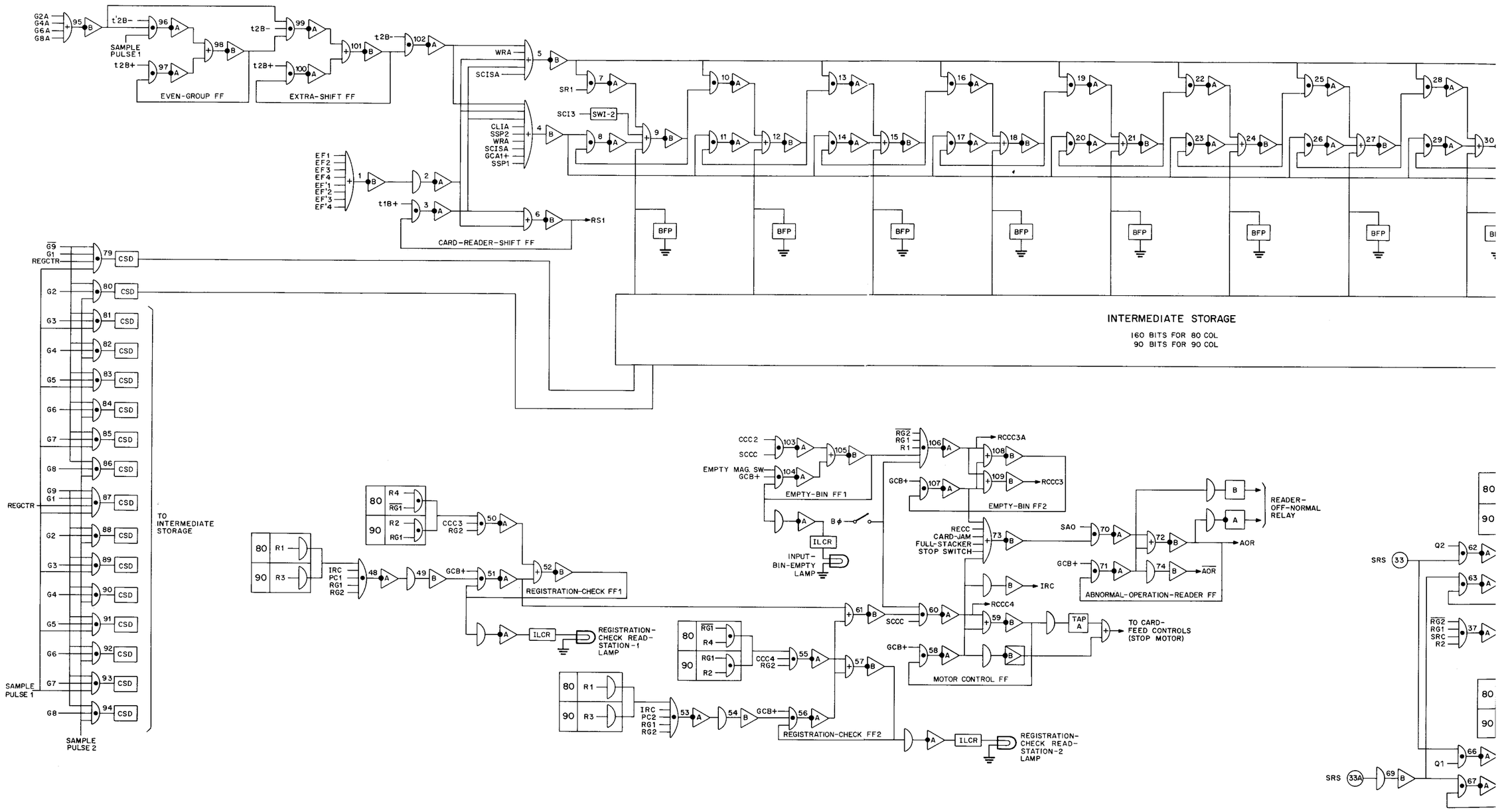
1-23A. *Memory Switch*



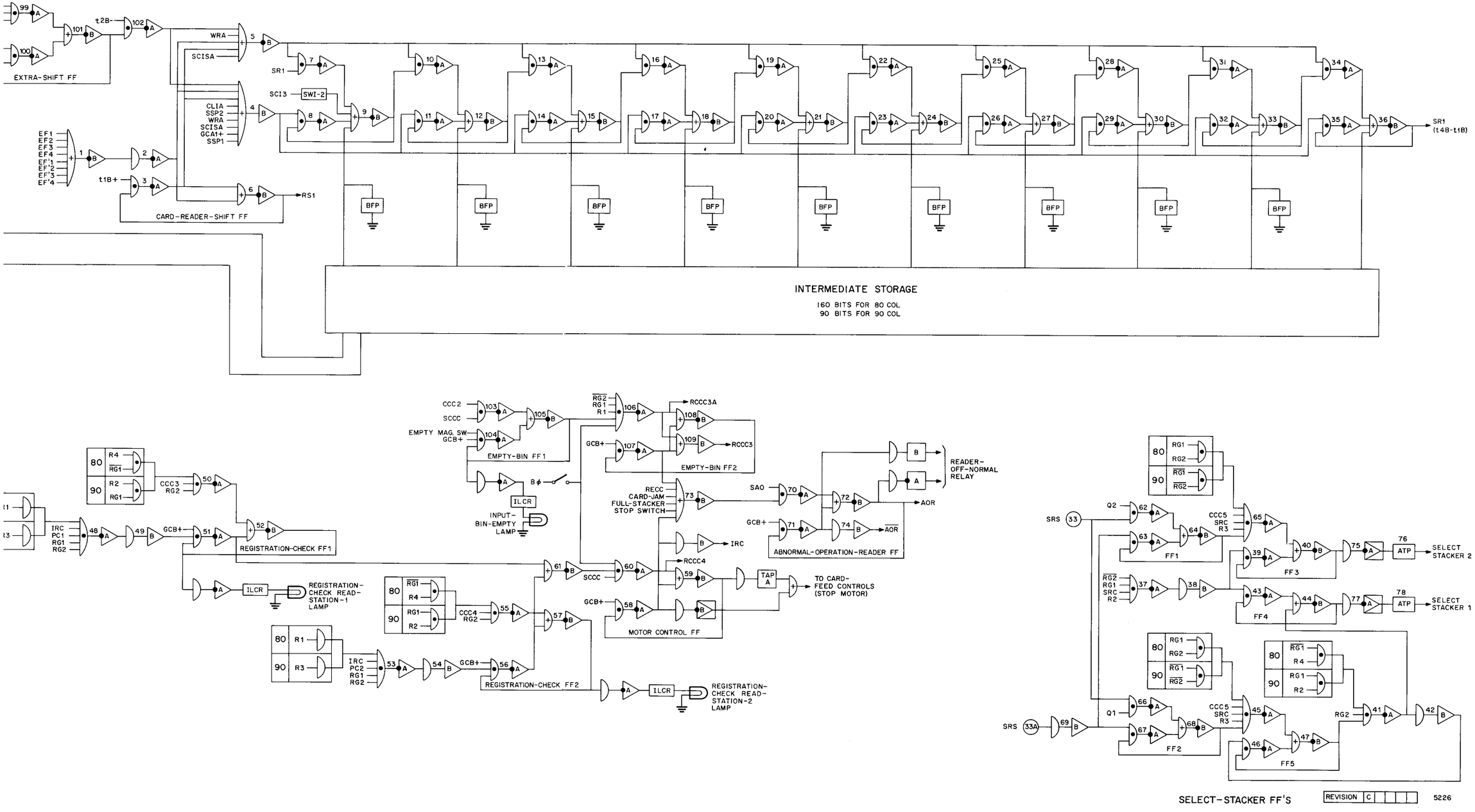
1-24A. Index Registers



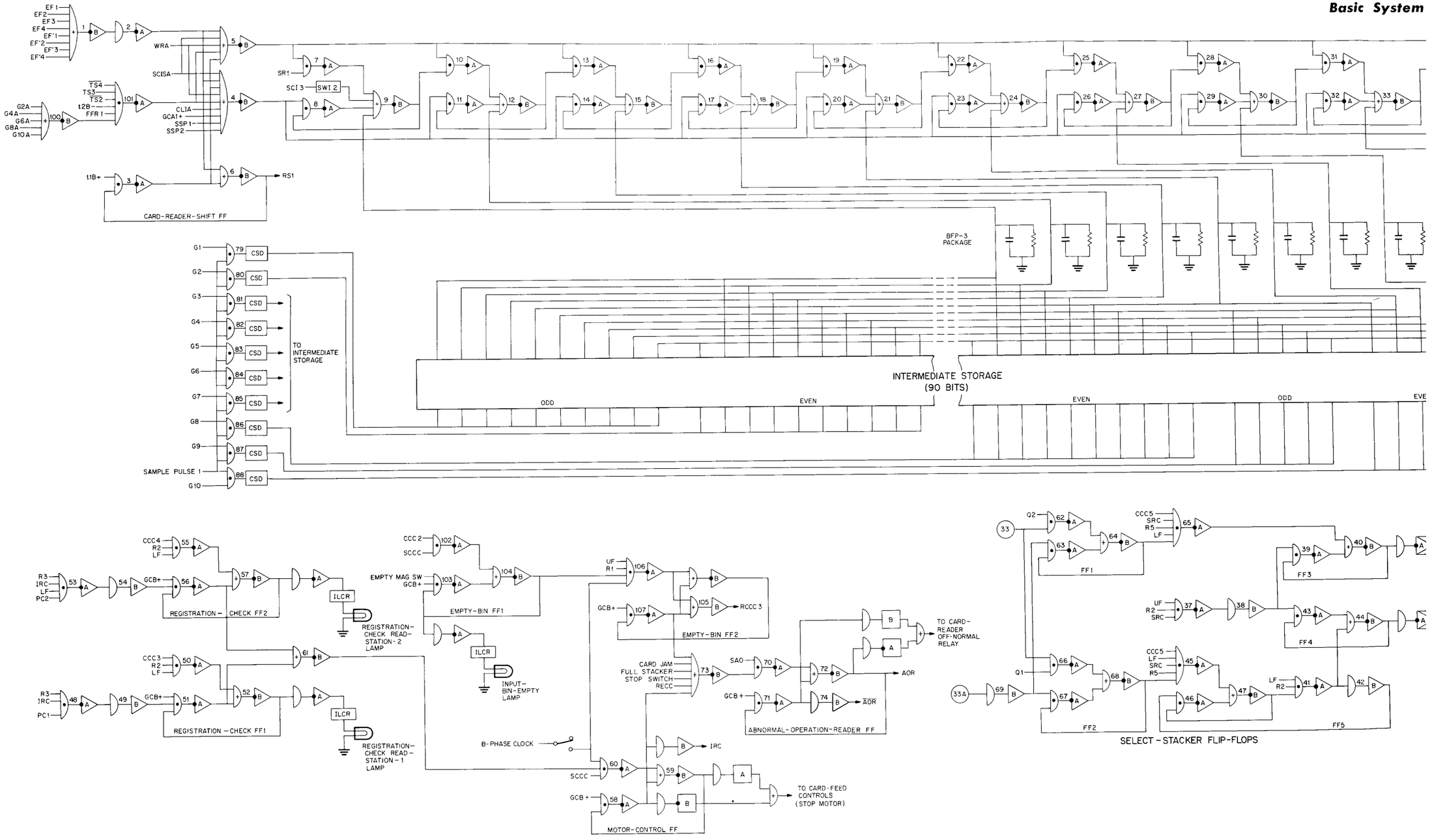
1-25A. Index-Register Adder



1-26A. Card-Reader Shift Register (Model 131)

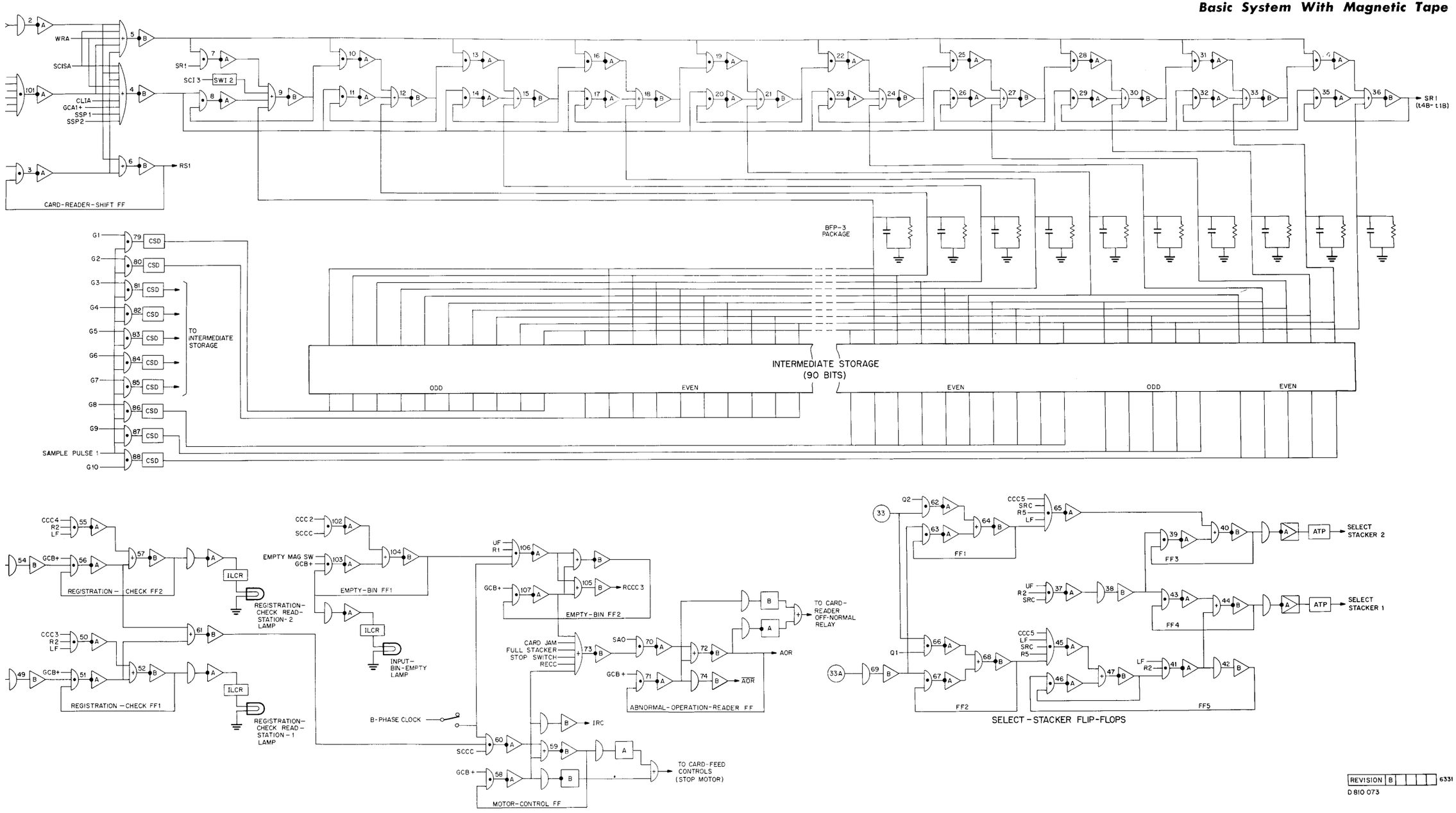


1-26A. Card-Reader Shift Register (Model 131)



1-26A. Card-Reader Shift Register (Model 130)

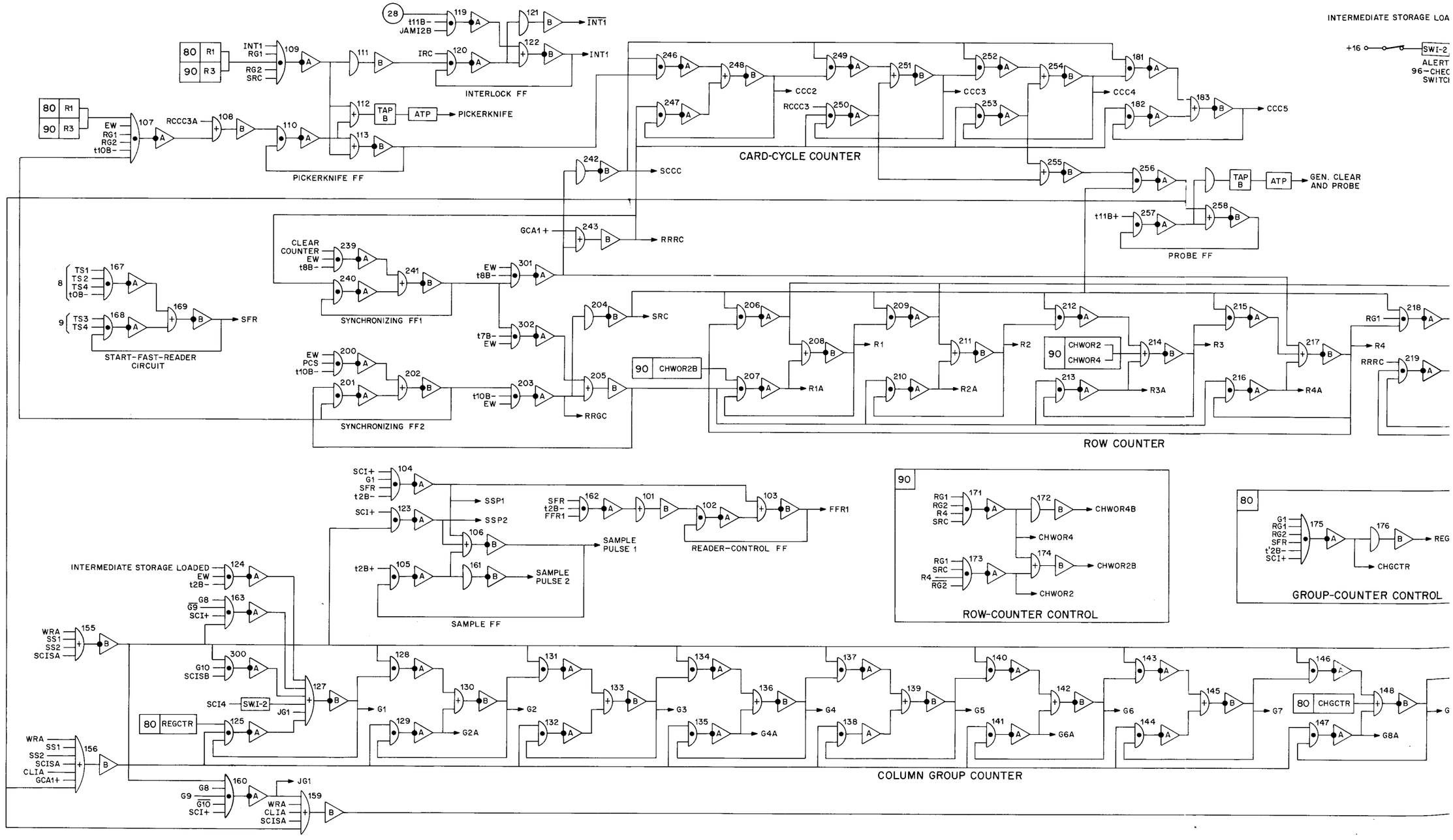
1-26B



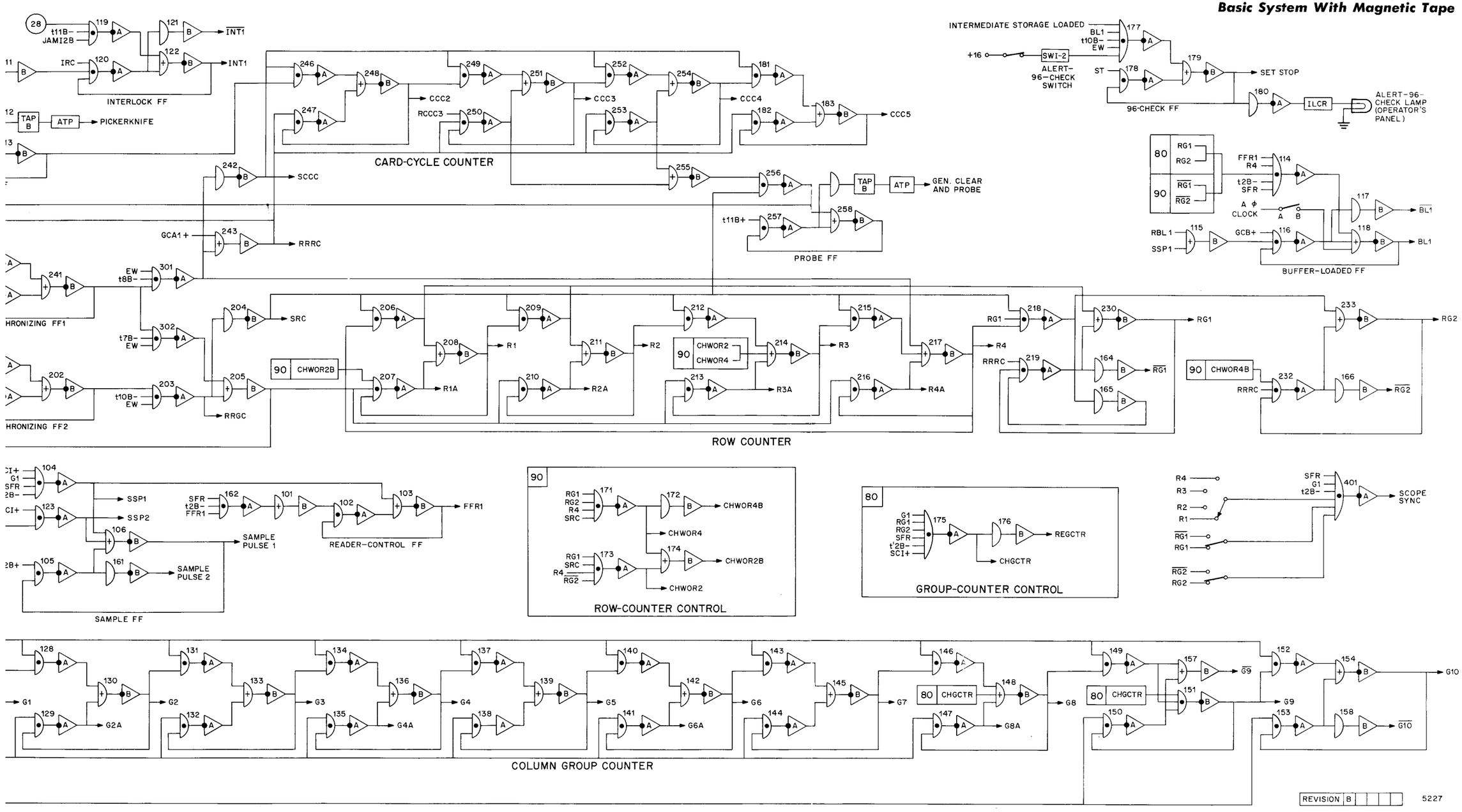
1-26A. Card-Reader Shift Register (Model 130)

1-26B

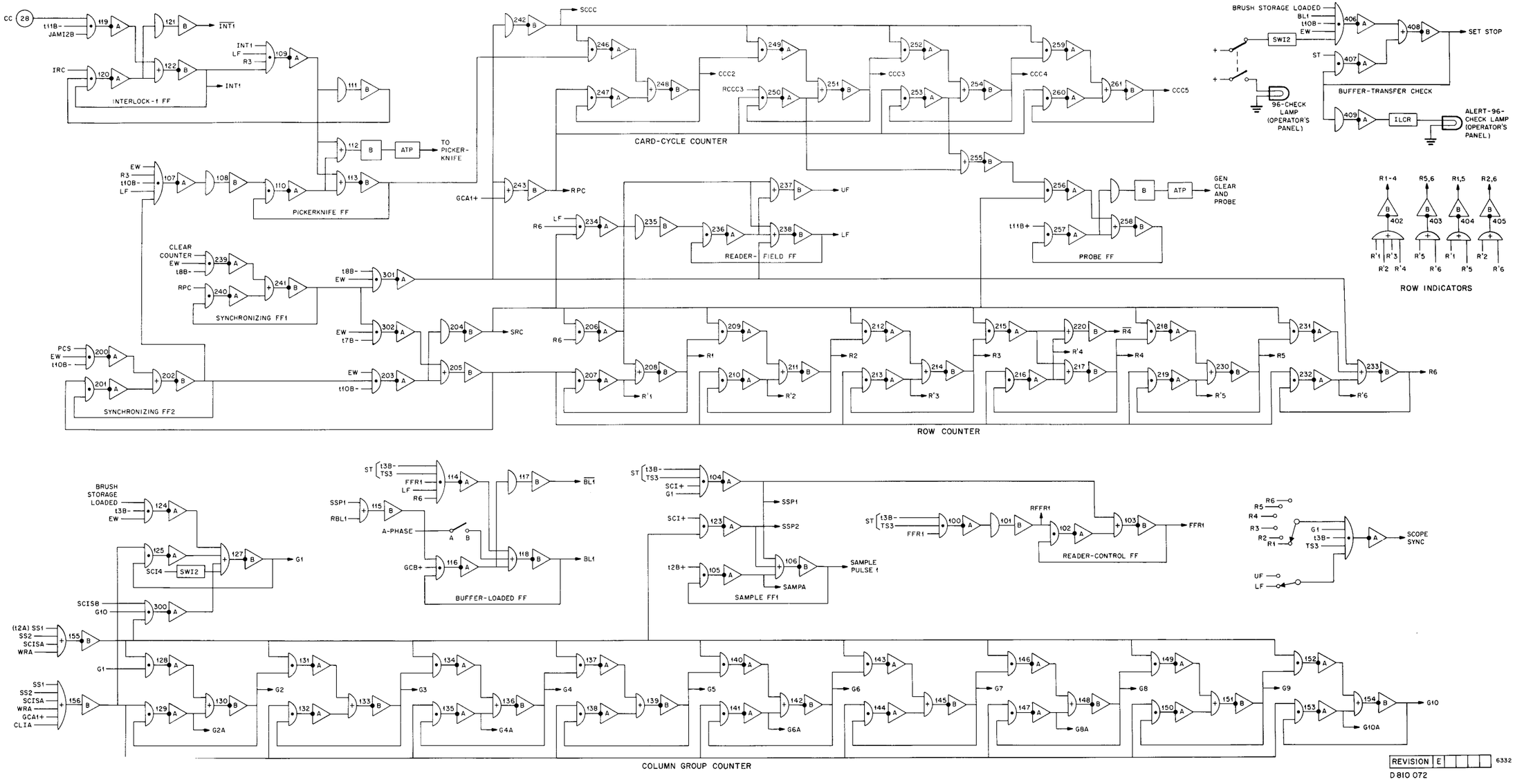
REVISION B 6331
D 810 073



1-27A. Card-Reader Control (Model 131)

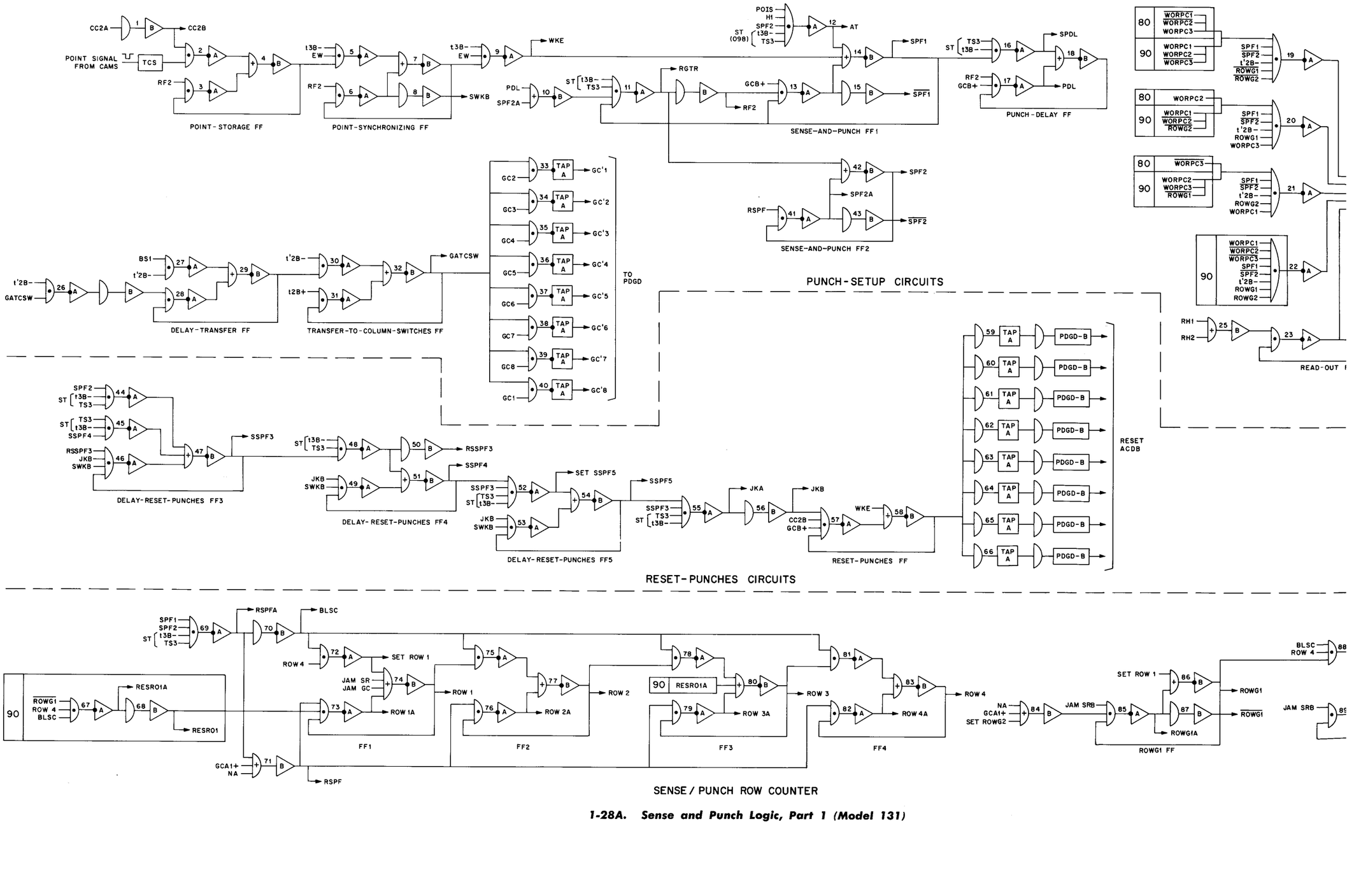


1-27A. Card-Reader Control (Model 131)

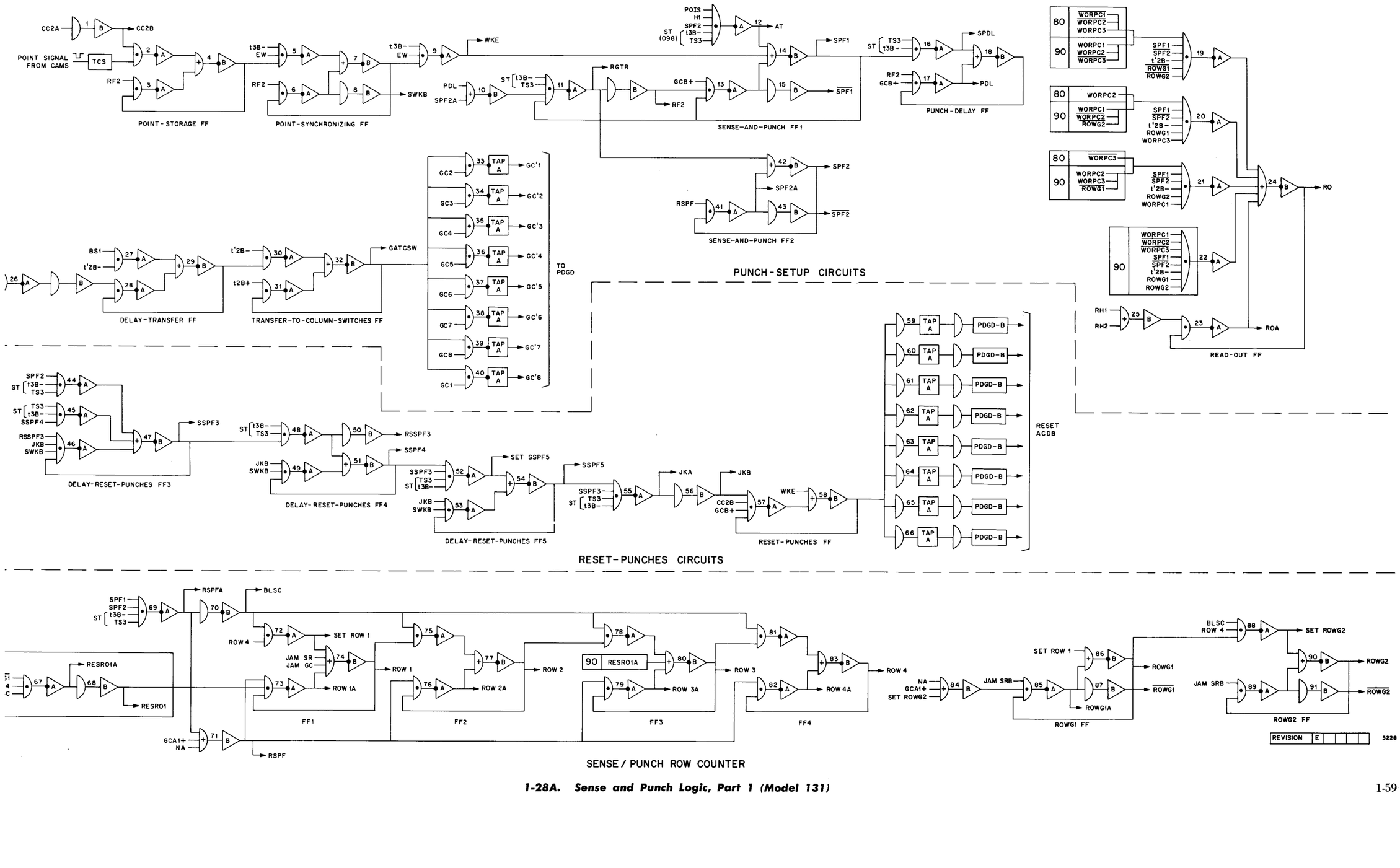


1-27A. Card-Reader Control (Model 130)

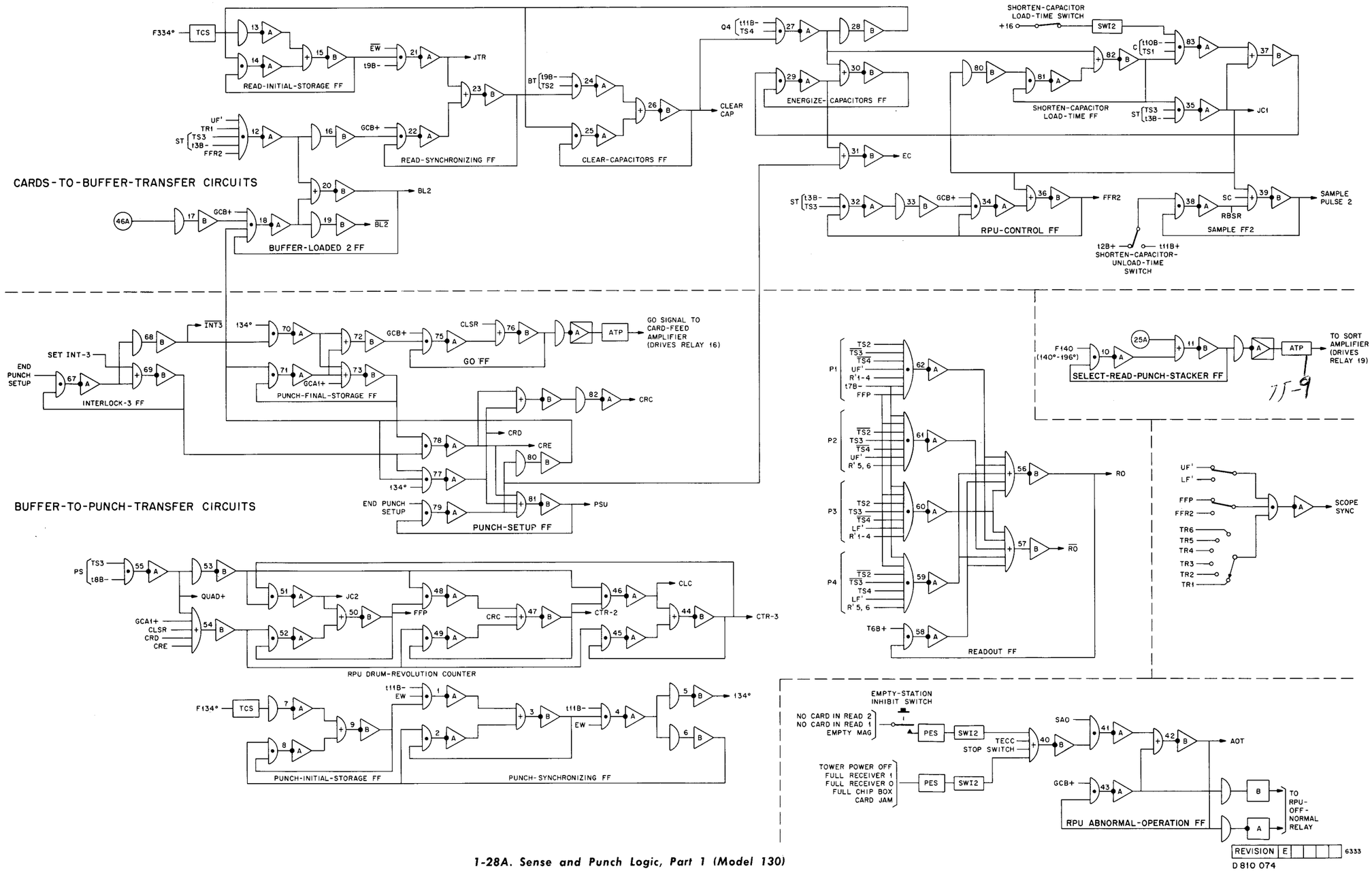
1-27B



1-28A. Sense and Punch Logic, Part 1 (Model 131)

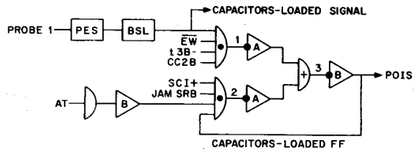


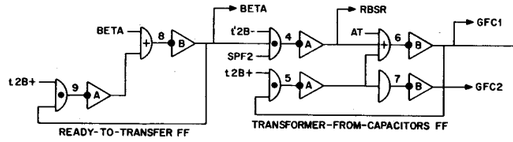
1-28A. Sense and Punch Logic, Part 1 (Model 131)

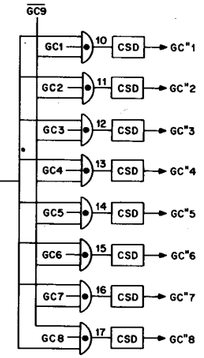


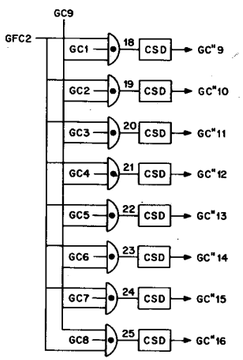
1-28A. Sense and Punch Logic, Part 1 (Model 130)

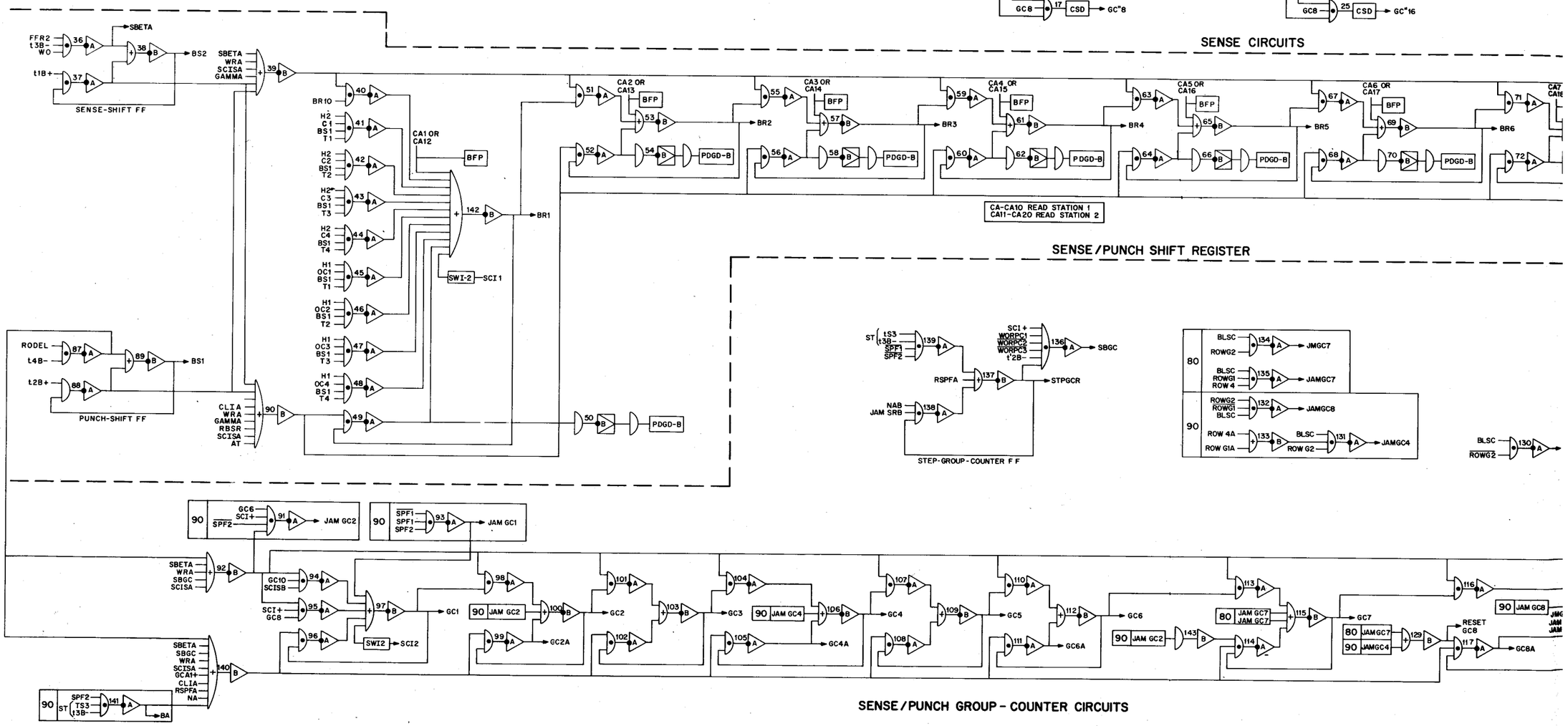
1-28A3



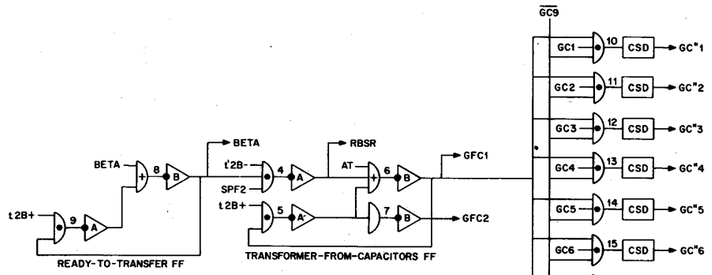


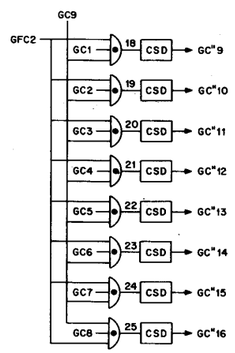


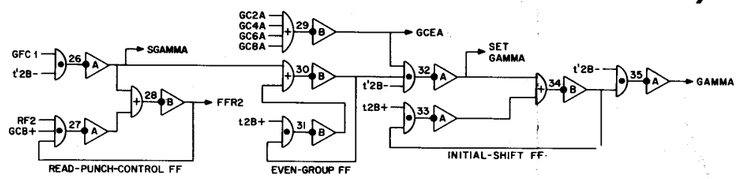




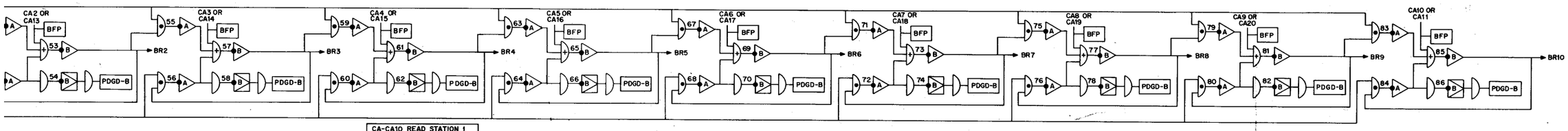
1-29A. Sense and Punch Logic, Part 2 (Model 131)



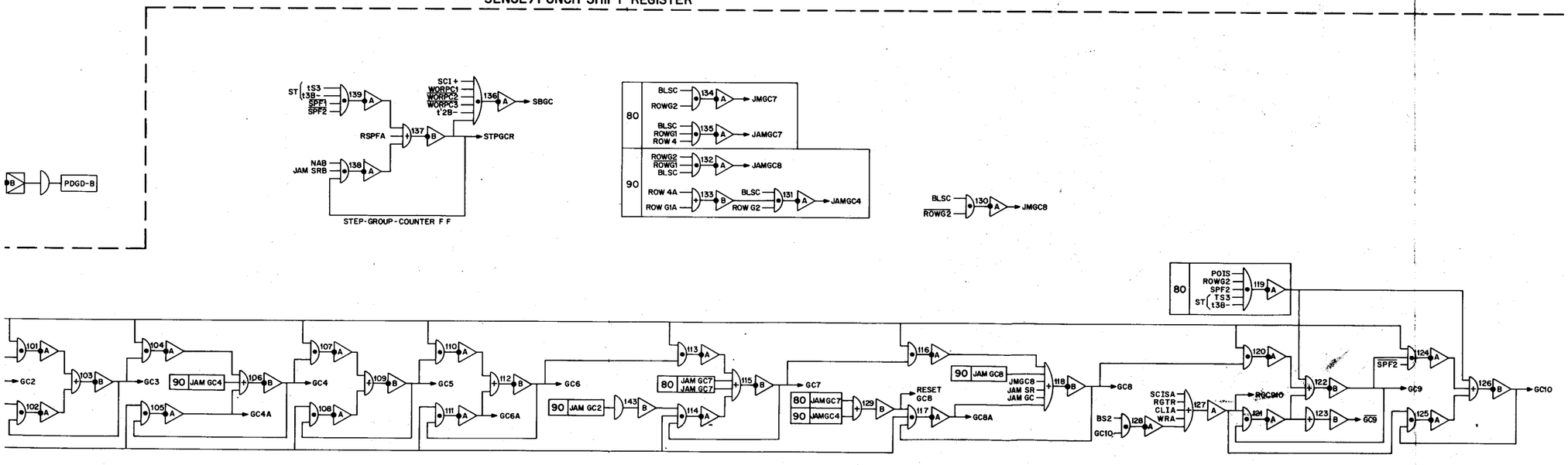




SENSE CIRCUITS



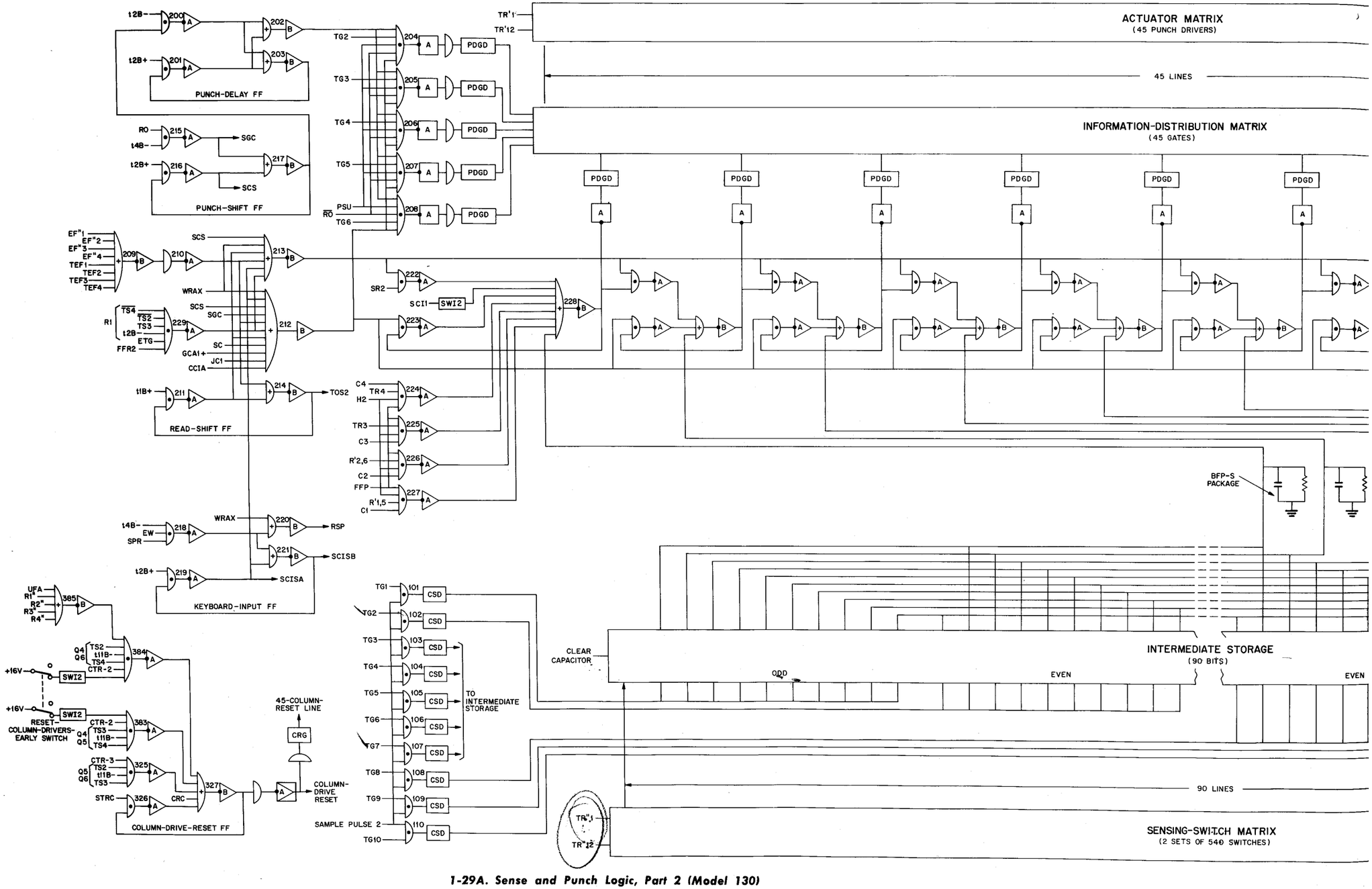
SENSE/PUNCH SHIFT REGISTER



SENSE/PUNCH GROUP-COUNTER CIRCUITS

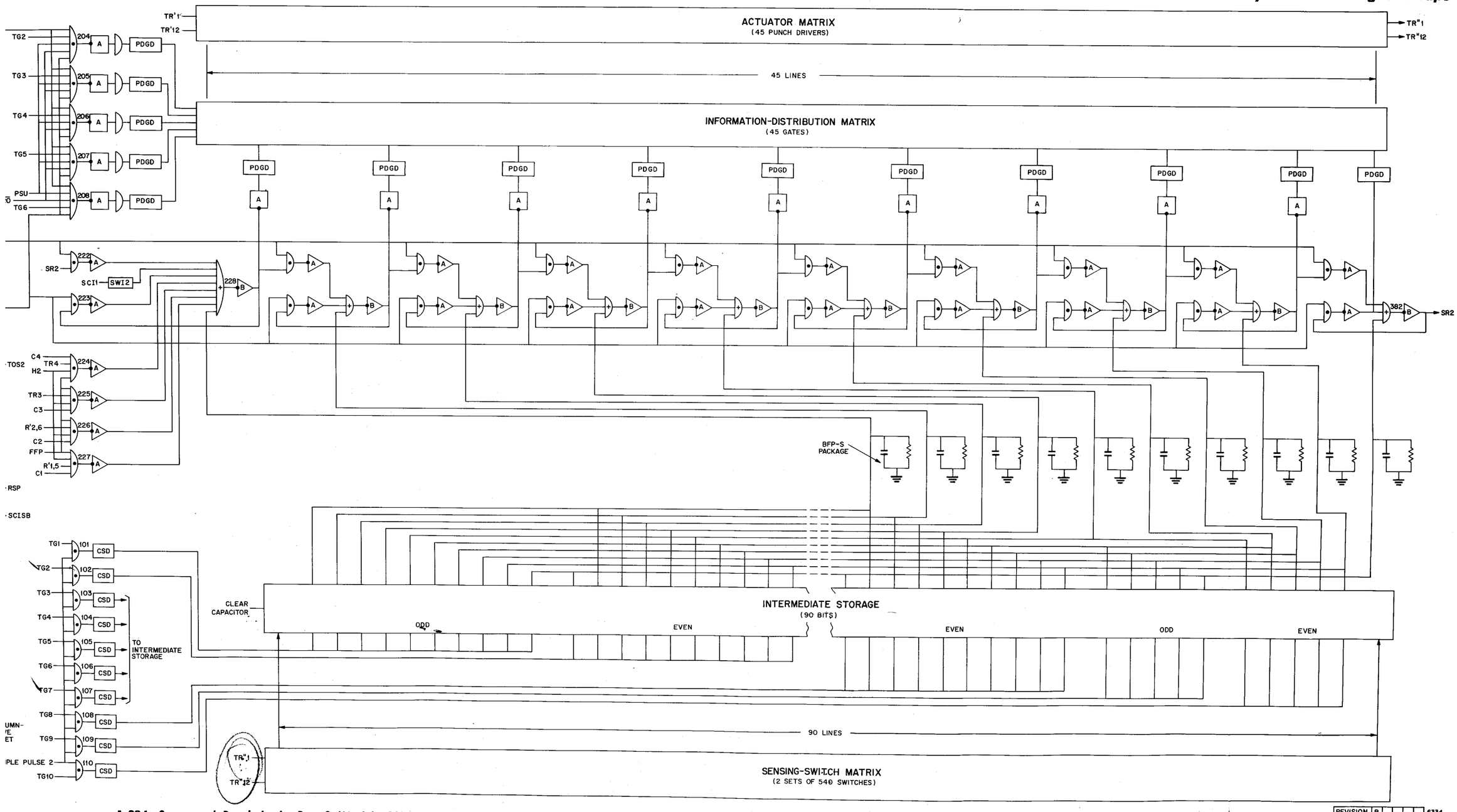
REVISION B 5229

1-29A. Sense and Punch Logic, Part 2 (Model 131)



1-29A. Sense and Punch Logic, Part 2 (Model 130)

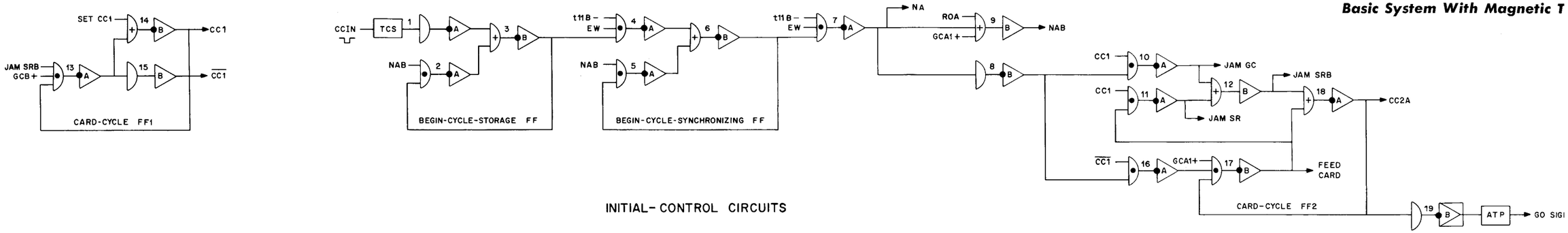
1-29B



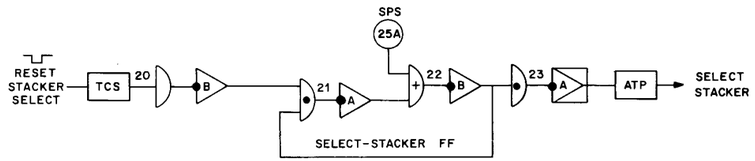
1-29A: Sense and Punch Logic, Part 2 (Model 130)

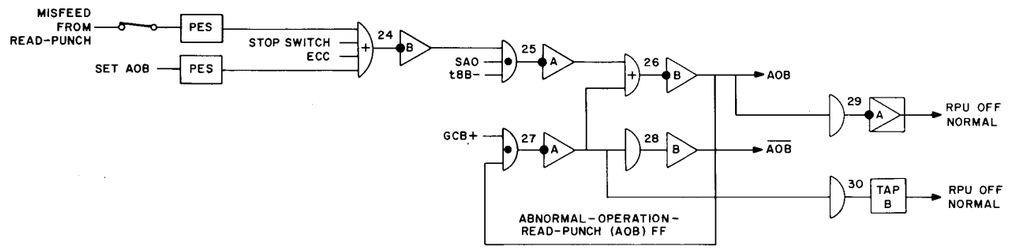
1-29B

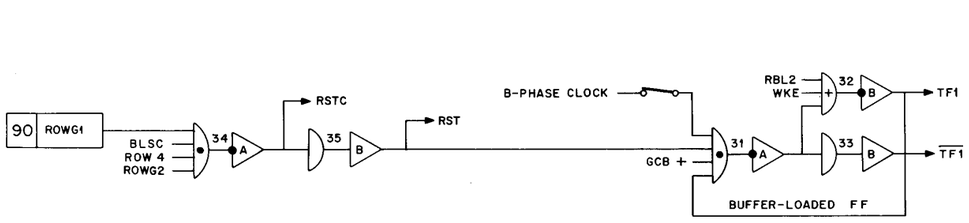
REVISION B 6334
D810 075



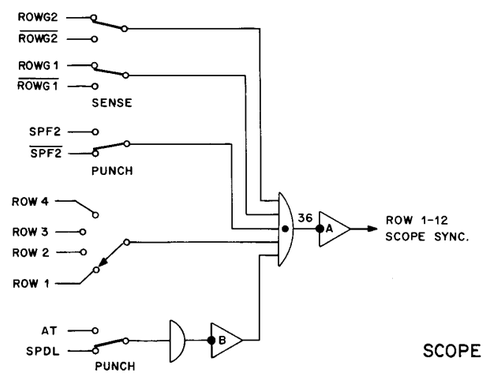
INITIAL-CONTROL CIRCUITS

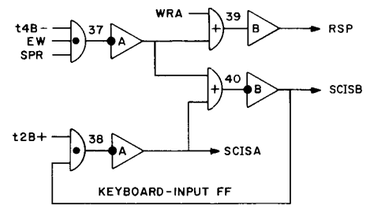






END-CARD-CYCLE CIRCUIT

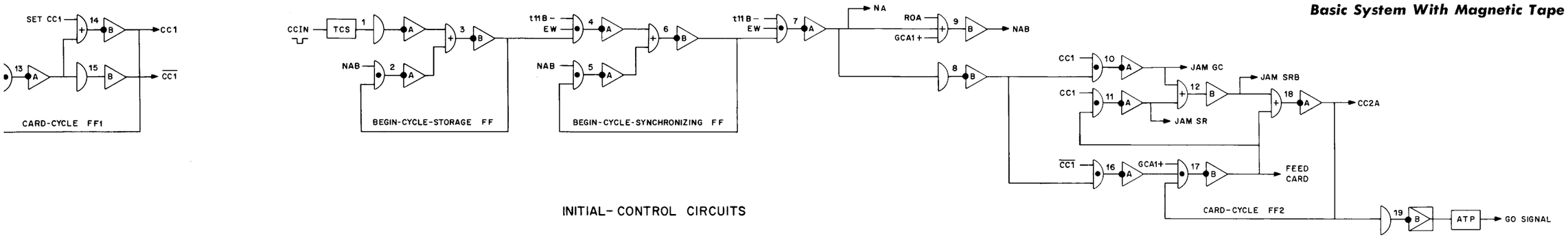




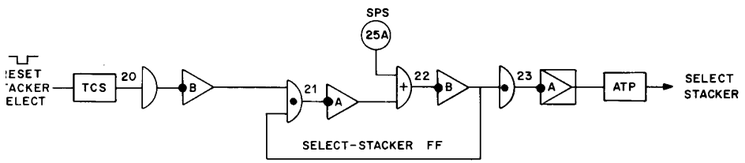
SCOPE SYNCHRONIZING CIRCUIT

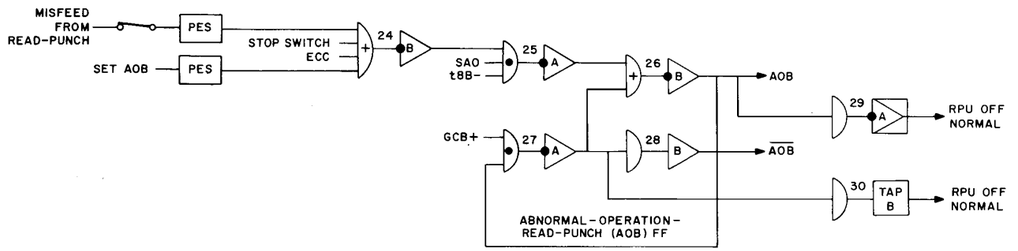
REVISION D

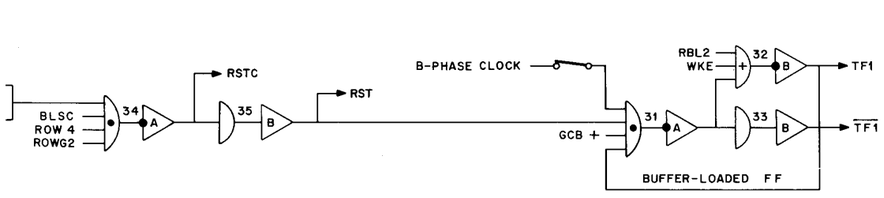
1-30A. Sense and Punch Logic, Part 3 (Model 131)



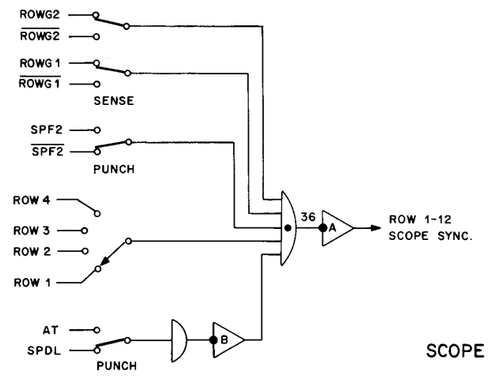
INITIAL-CONTROL CIRCUITS

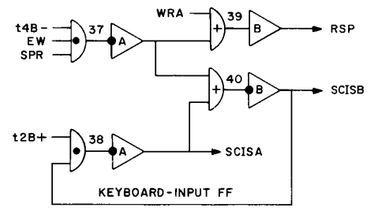






END-CARD-CYCLE CIRCUIT

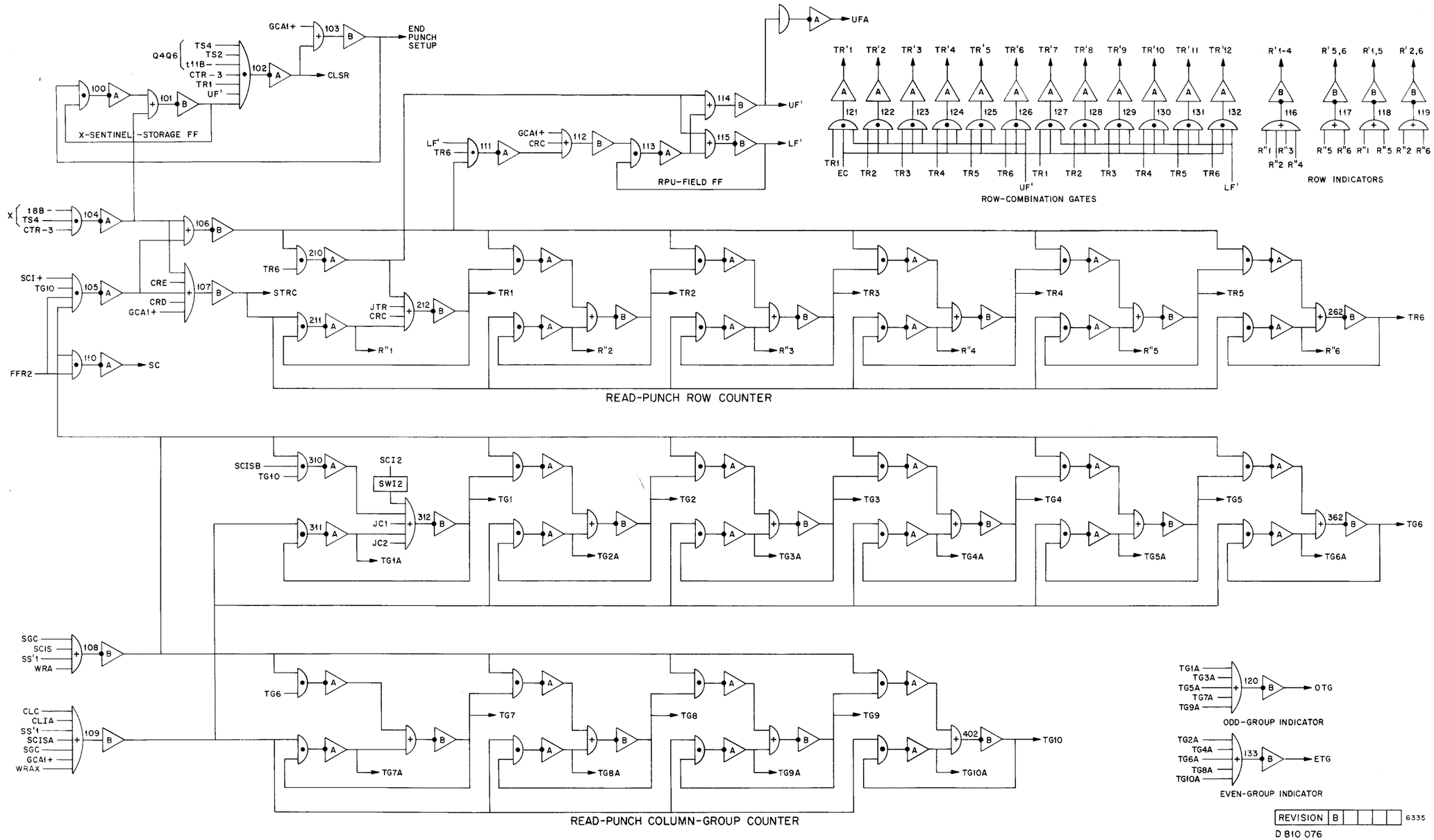




SCOPE SYNCHRONIZING CIRCUIT

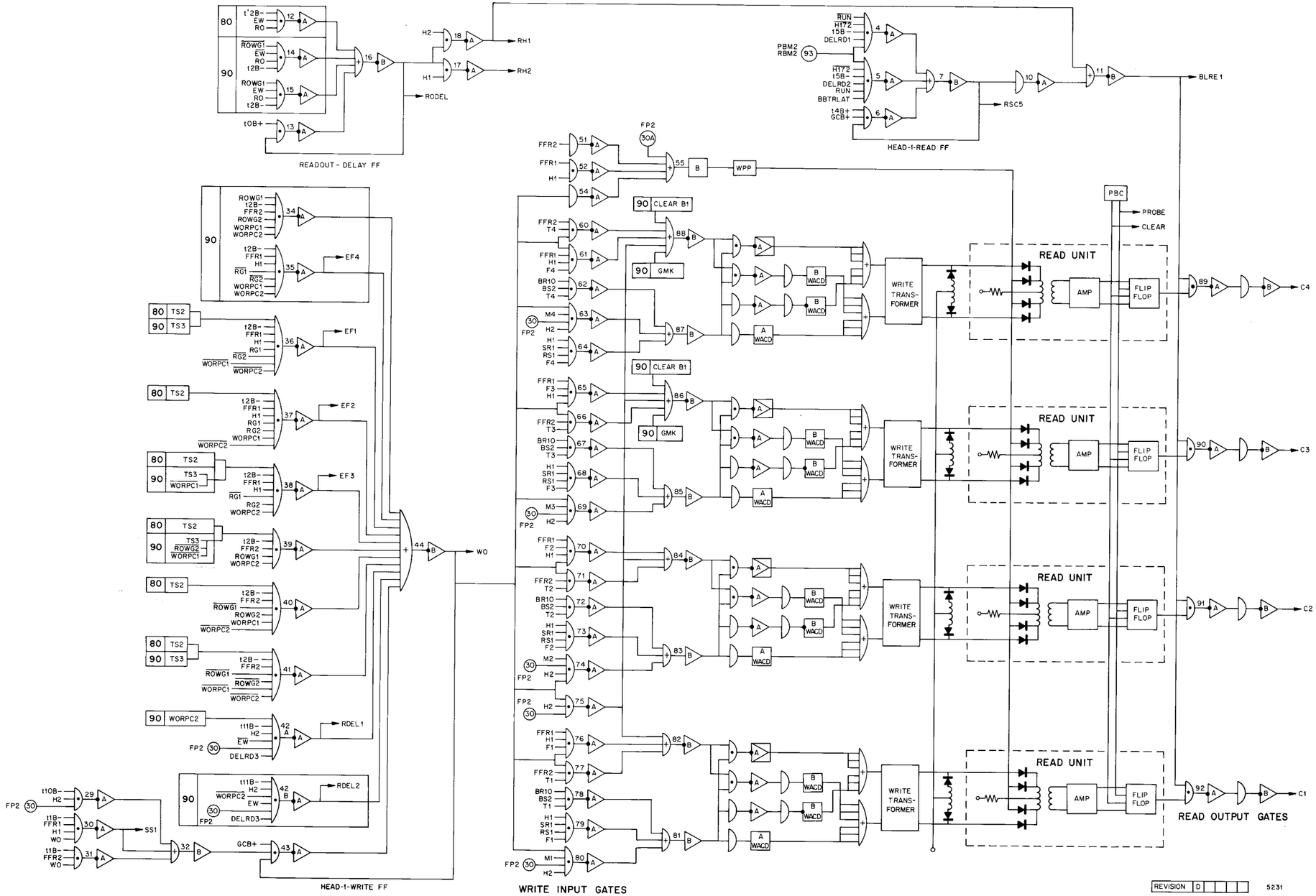
REVISION | D | | | | |

5230

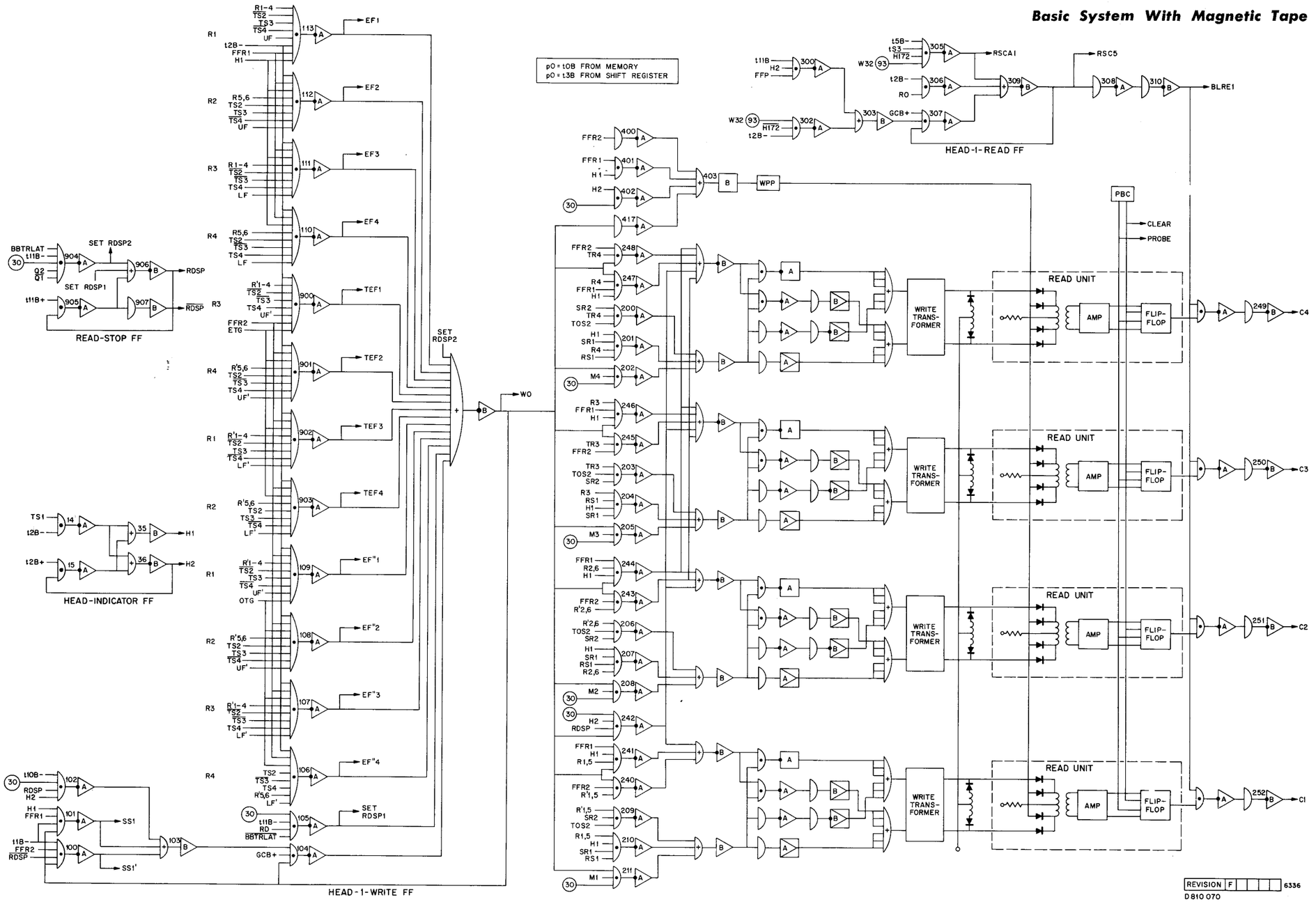


1-30A. Sense and Punch Logic, Part 3 (Model 130)

1-303



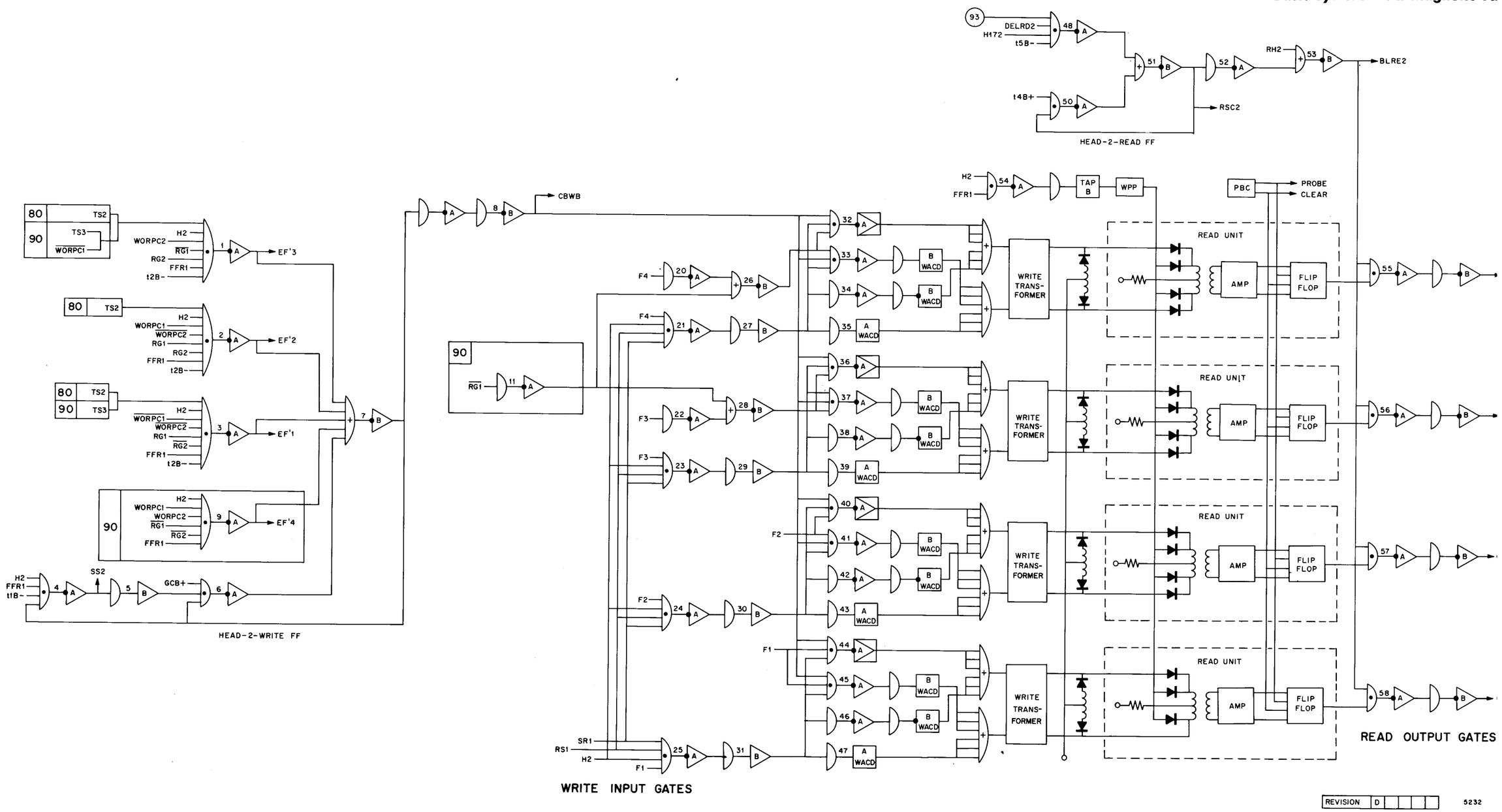
1-31A. Card-Buffer Head 1 (Model 131)



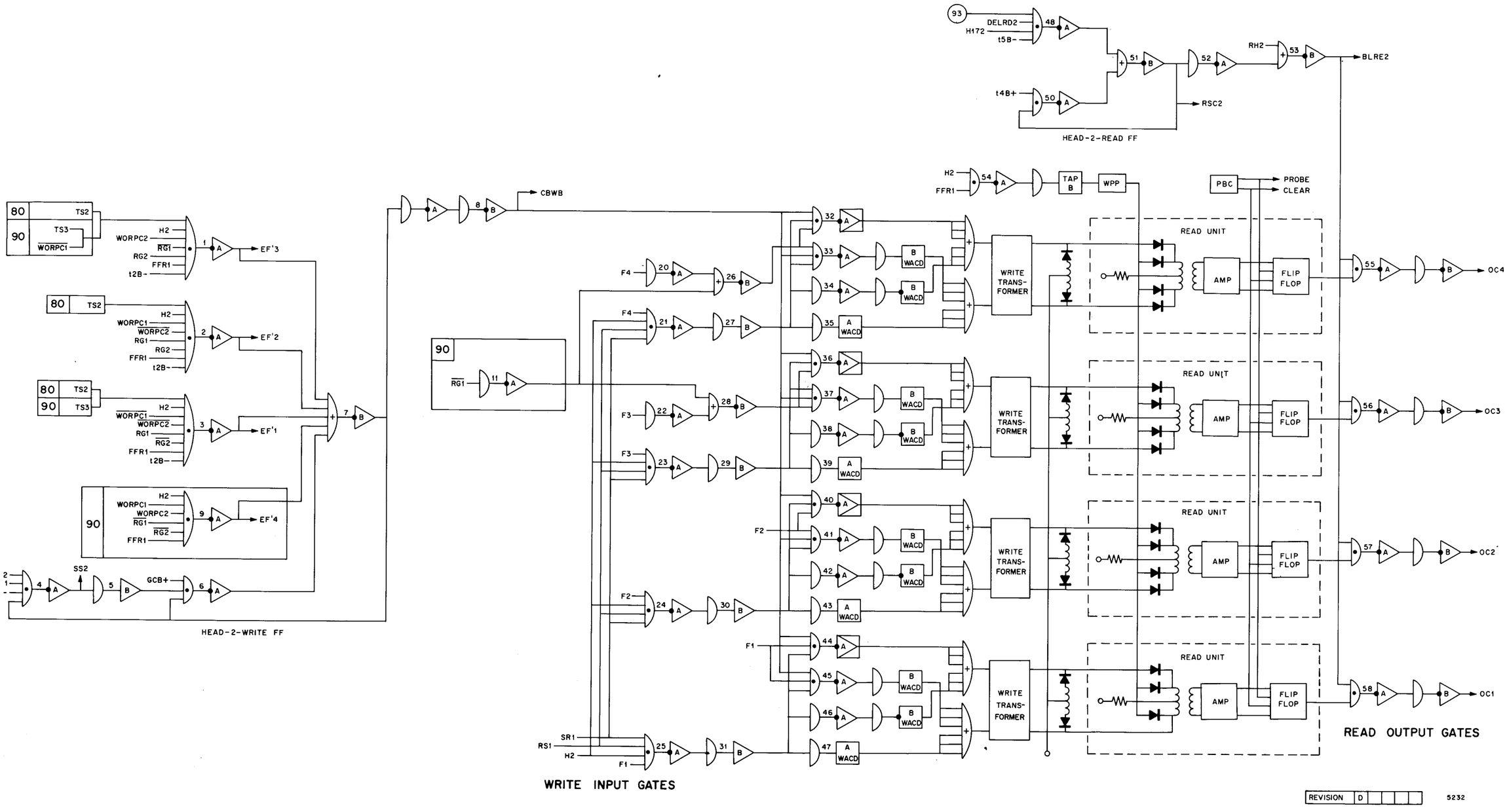
REVISION F 6336
D 810 070

1-31A. Card-Buffer Head 1 (Model 130)

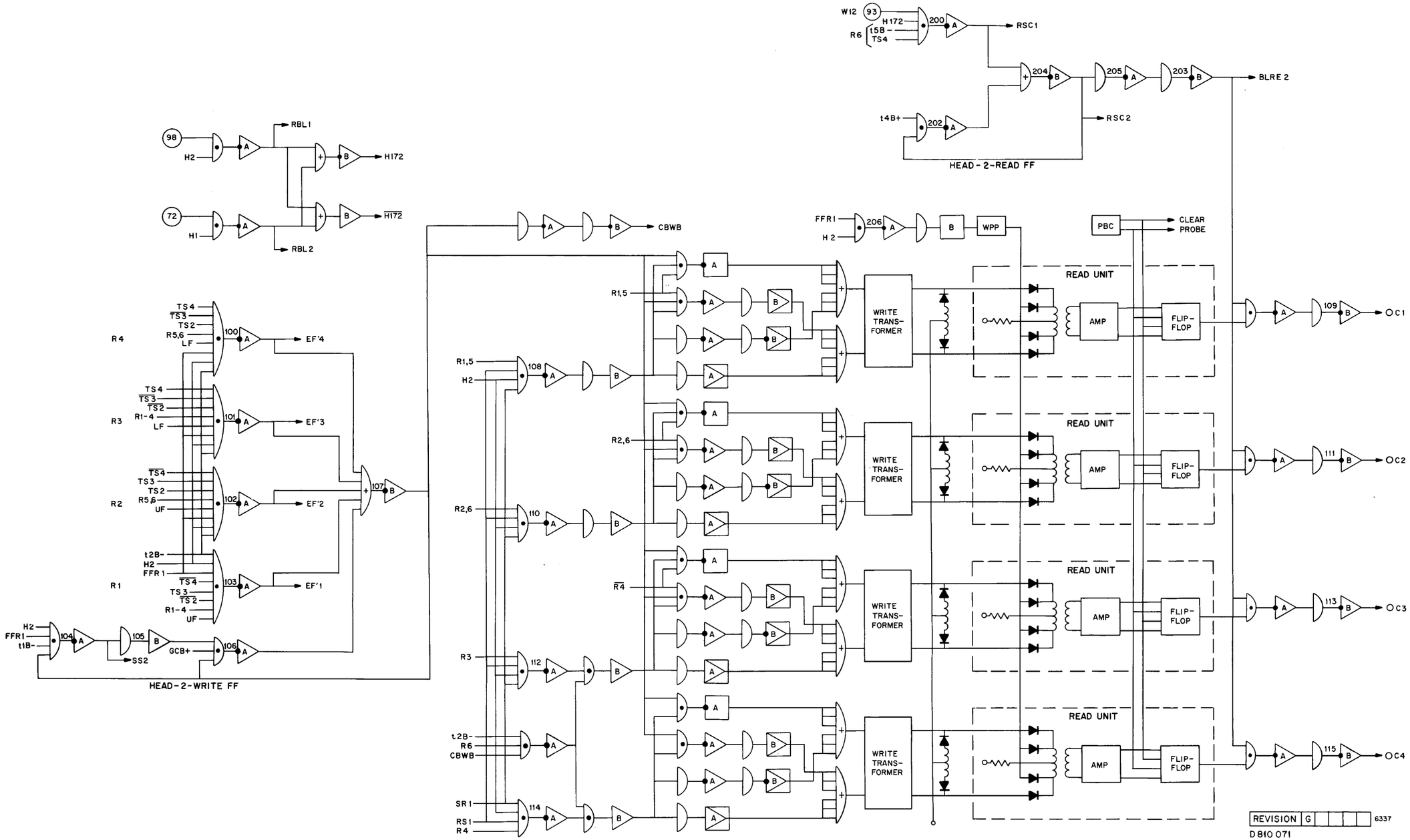
1-31B



1-32A. Card-Buffer Head 2 (Model 131)

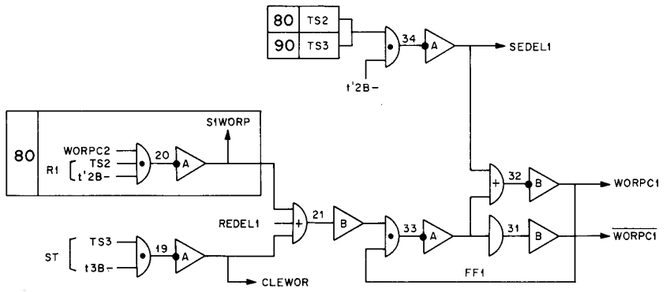


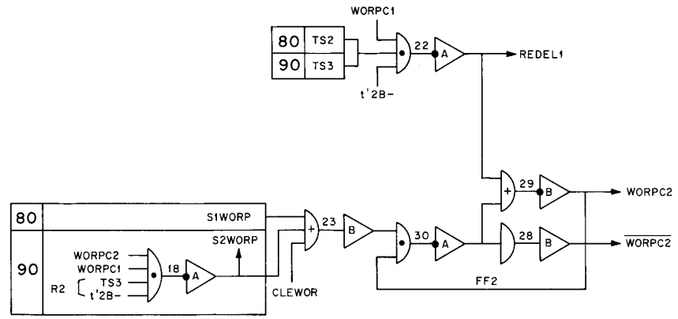
1-32A. Card-Buffer Head 2 (Model 131)

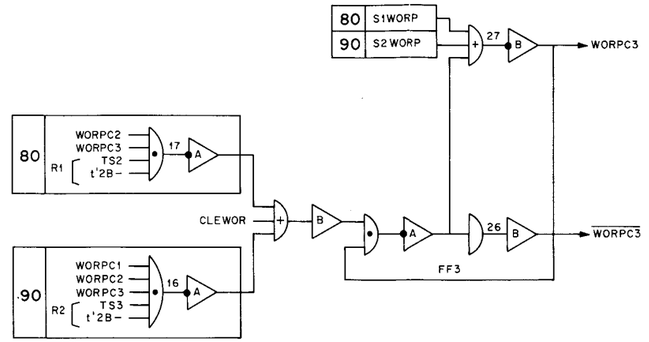


1-32A. Card-Buffer Head 2 (Model 130)

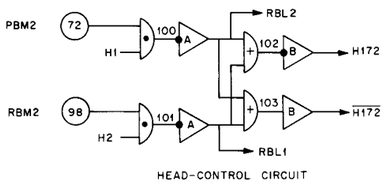
1-32B



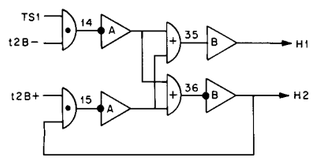




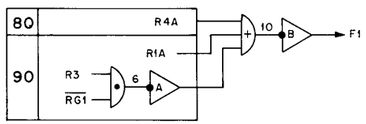
WORD-POSITION COUNTER

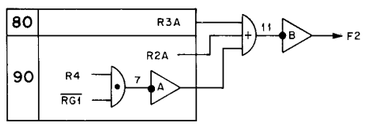


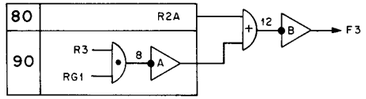
HEAD-CONTROL CIRCUIT

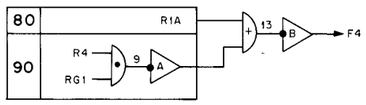


HEAD-INDICATOR FF

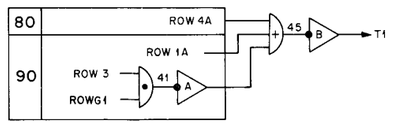


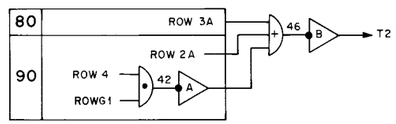


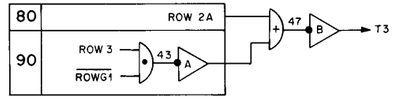


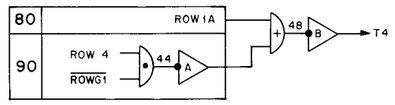


READER-ROW CONTROLS

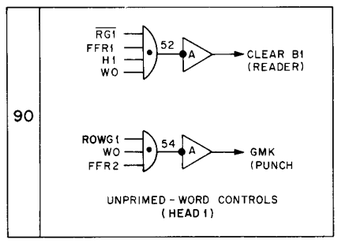


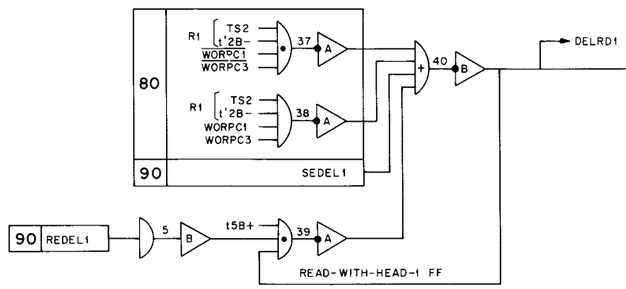






PUNCH-ROW CONTROLS

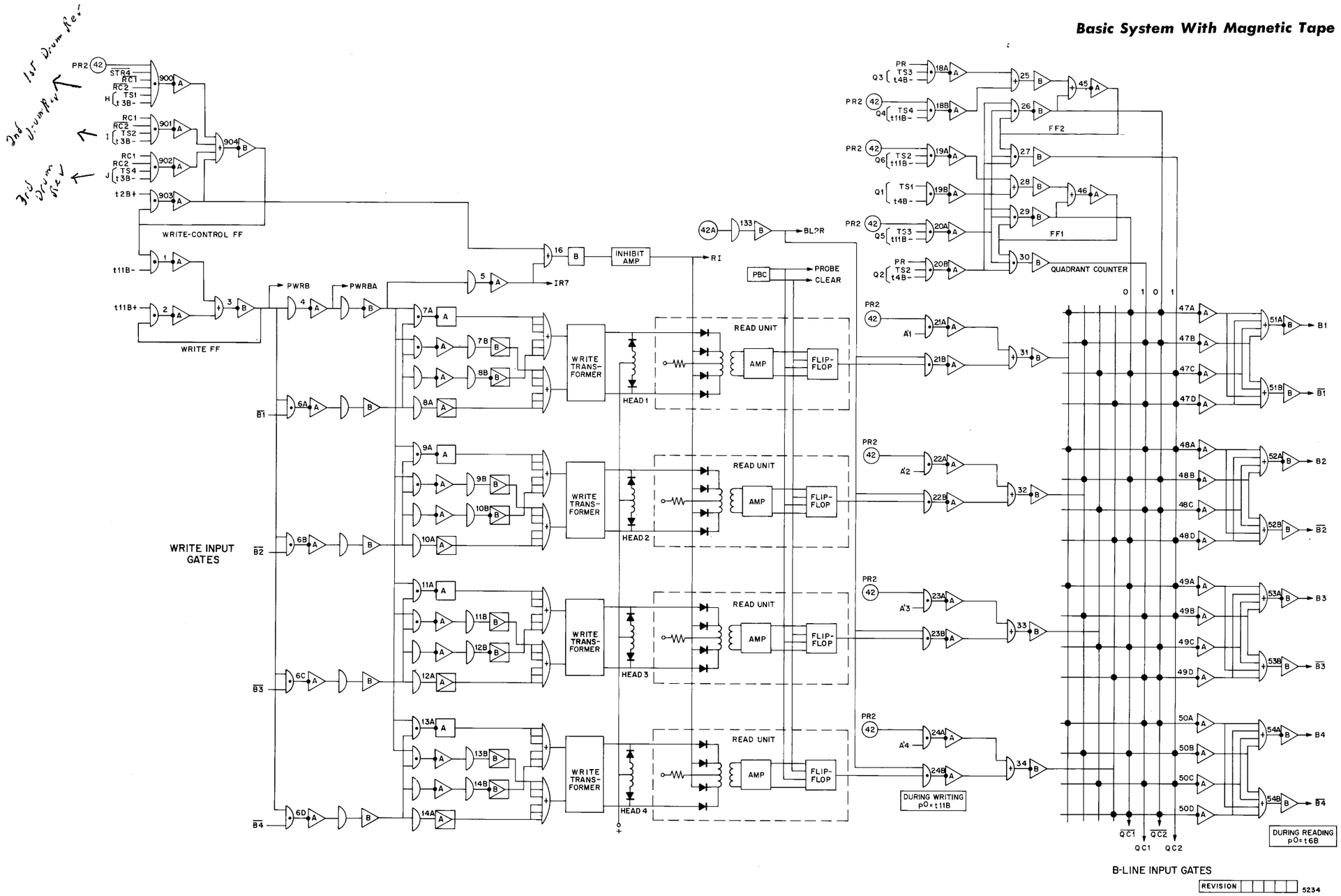


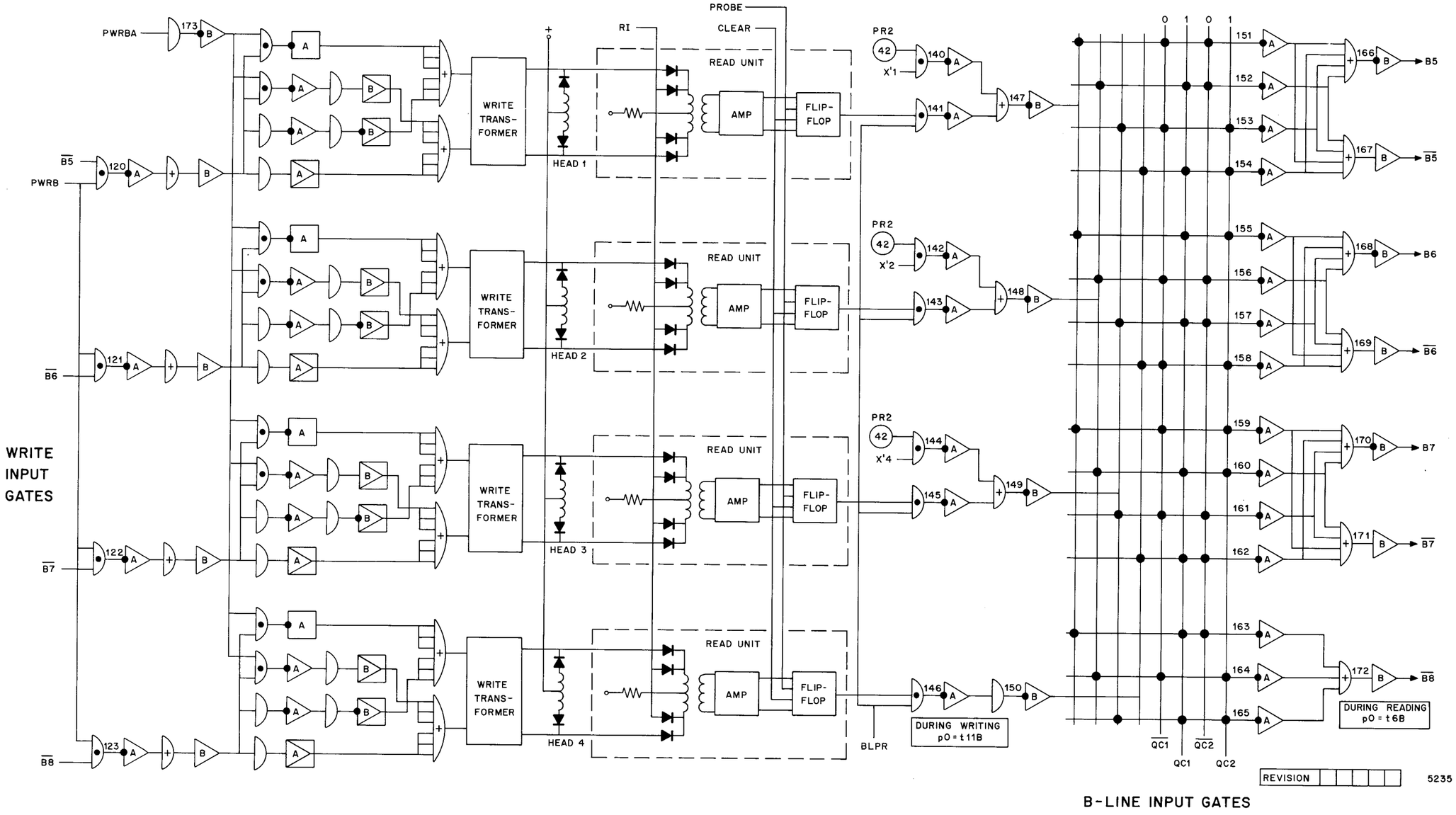


REVISION | C | | | | |

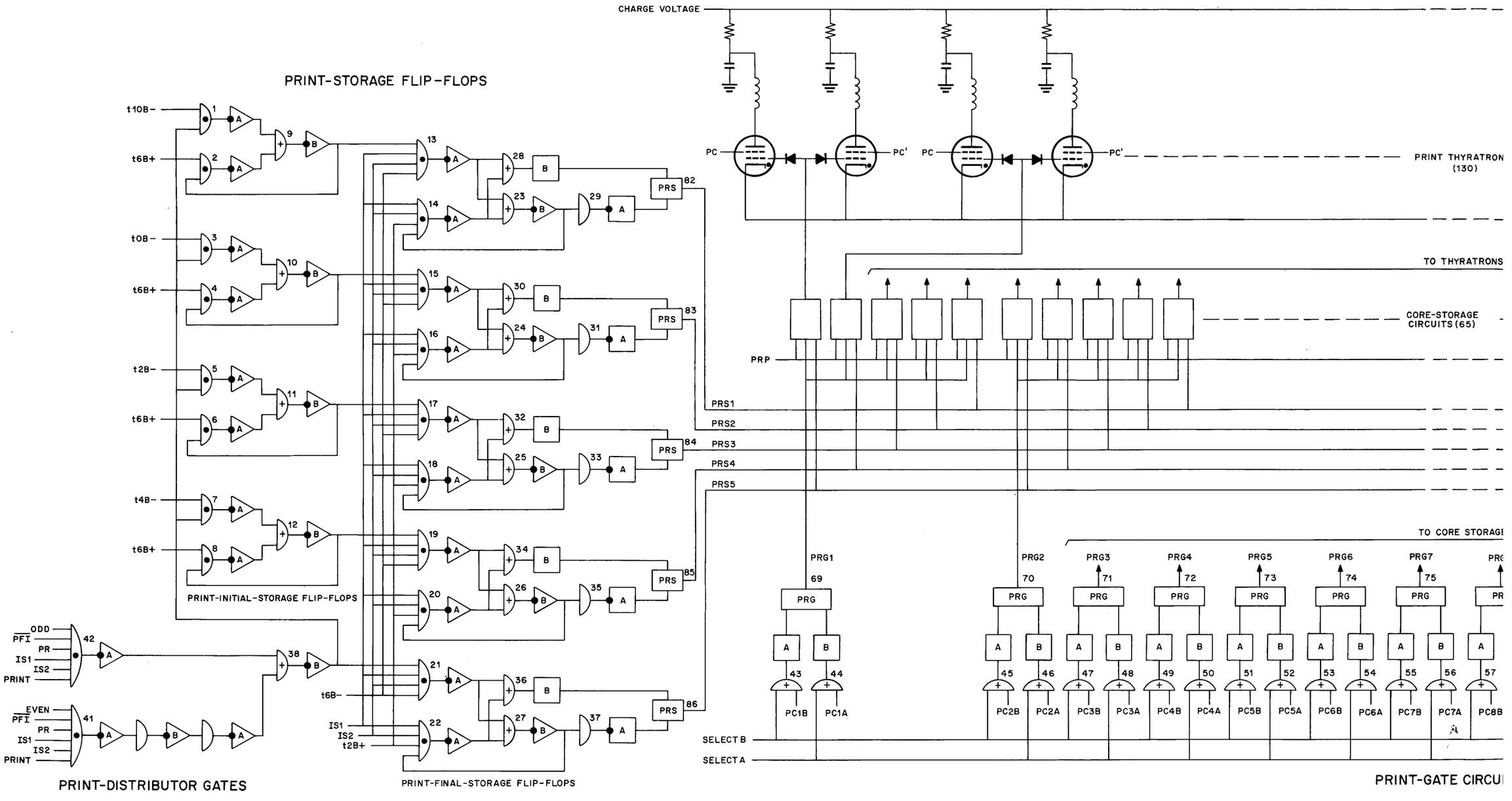
5233

1-33A. Card-Buffer-Band Controls

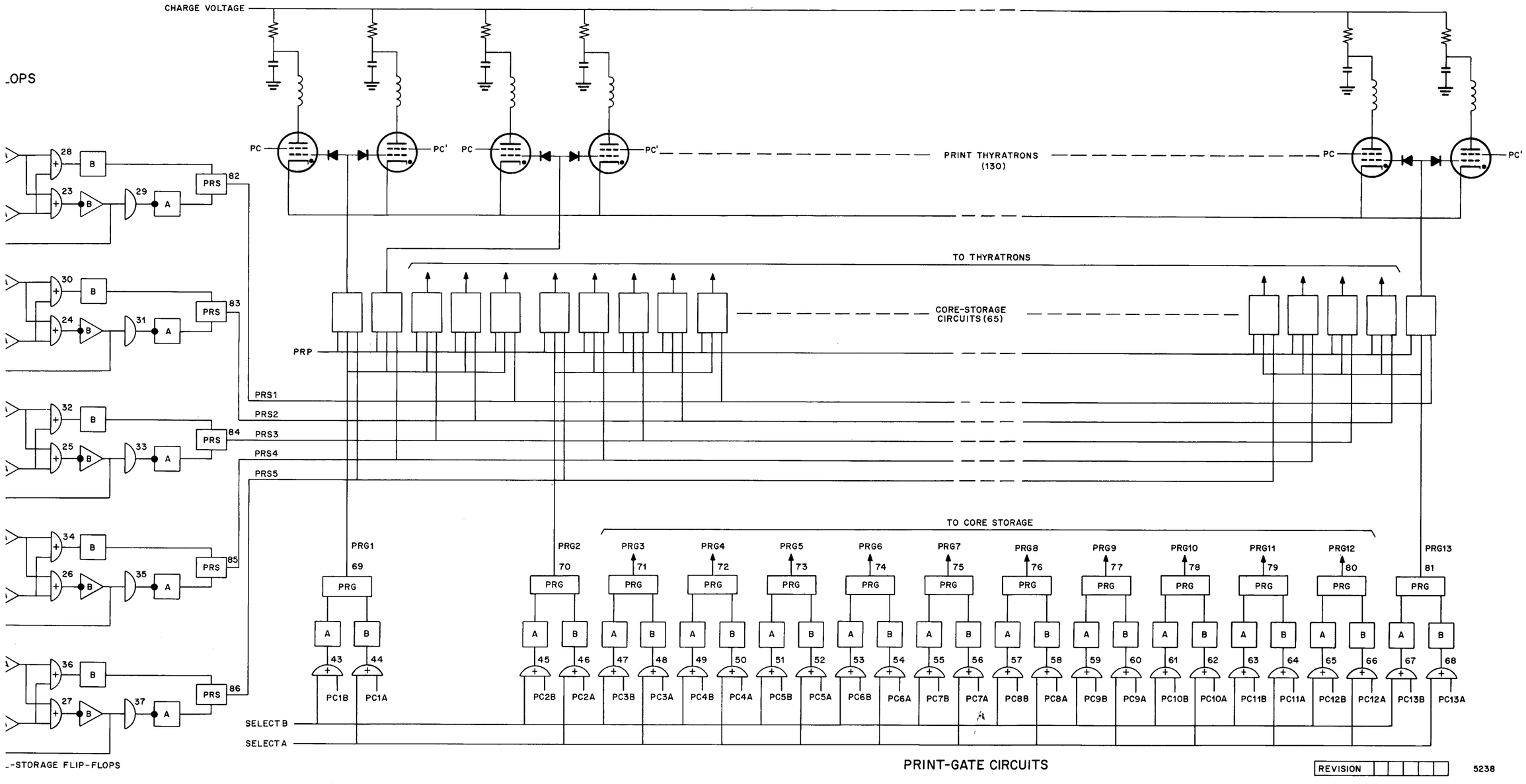

WRITE-CONTROL FF
WRITE FF
PWRB
PWRBA
INHIBIT AMP
RI
IR7
PBC
PROBE
CLEAR
BLPR
READ UNIT
WRITE TRANS-FORMER
HEAD 1
HEAD 2
HEAD 3
HEAD 4
AMP
FLIP-FLOP
WRITE INPUT GATES
FF2
FF1
QUADRANT COUNTER
DURING WRITING p0=t11B
DURING READING p0=t6B
B-LINE INPUT GATES
REVISION
5234



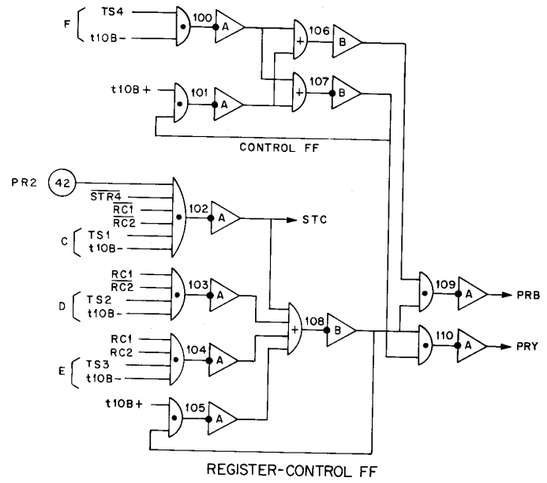
1-35A. Print-Buffer Track 2

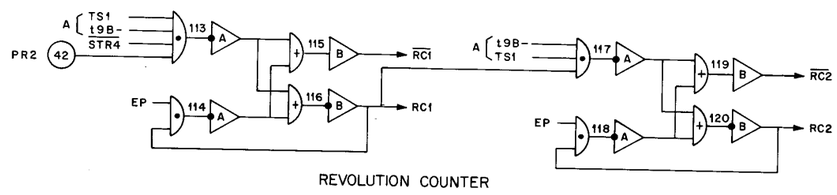


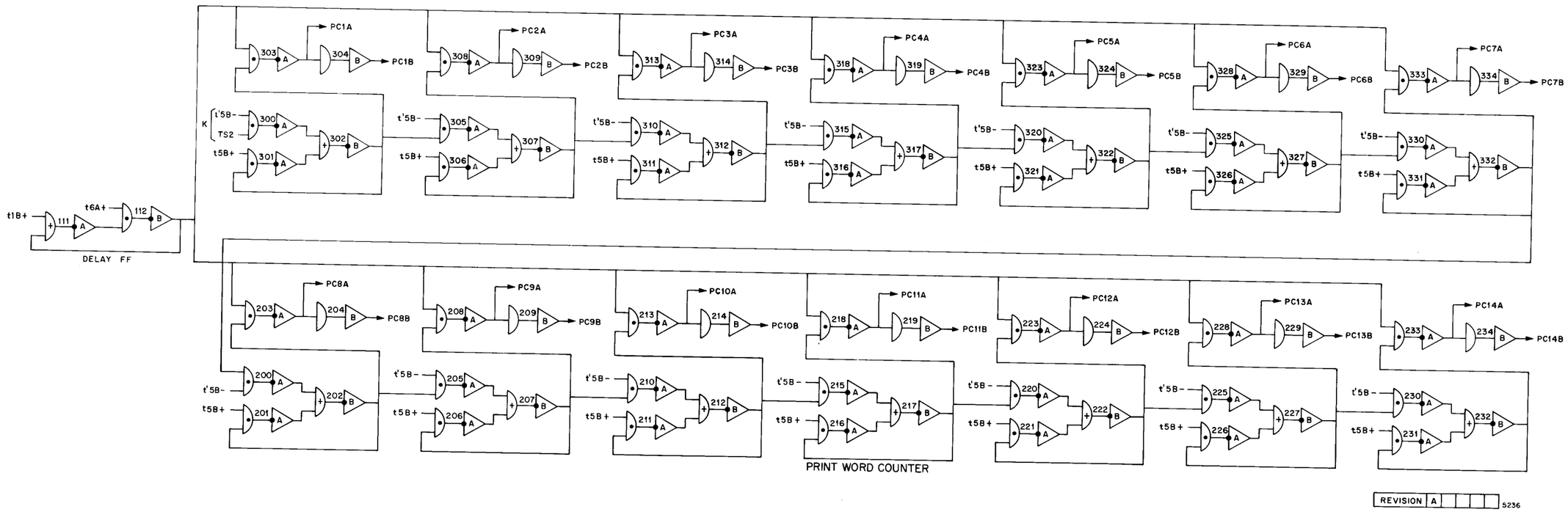
1-38A. Print Distributor



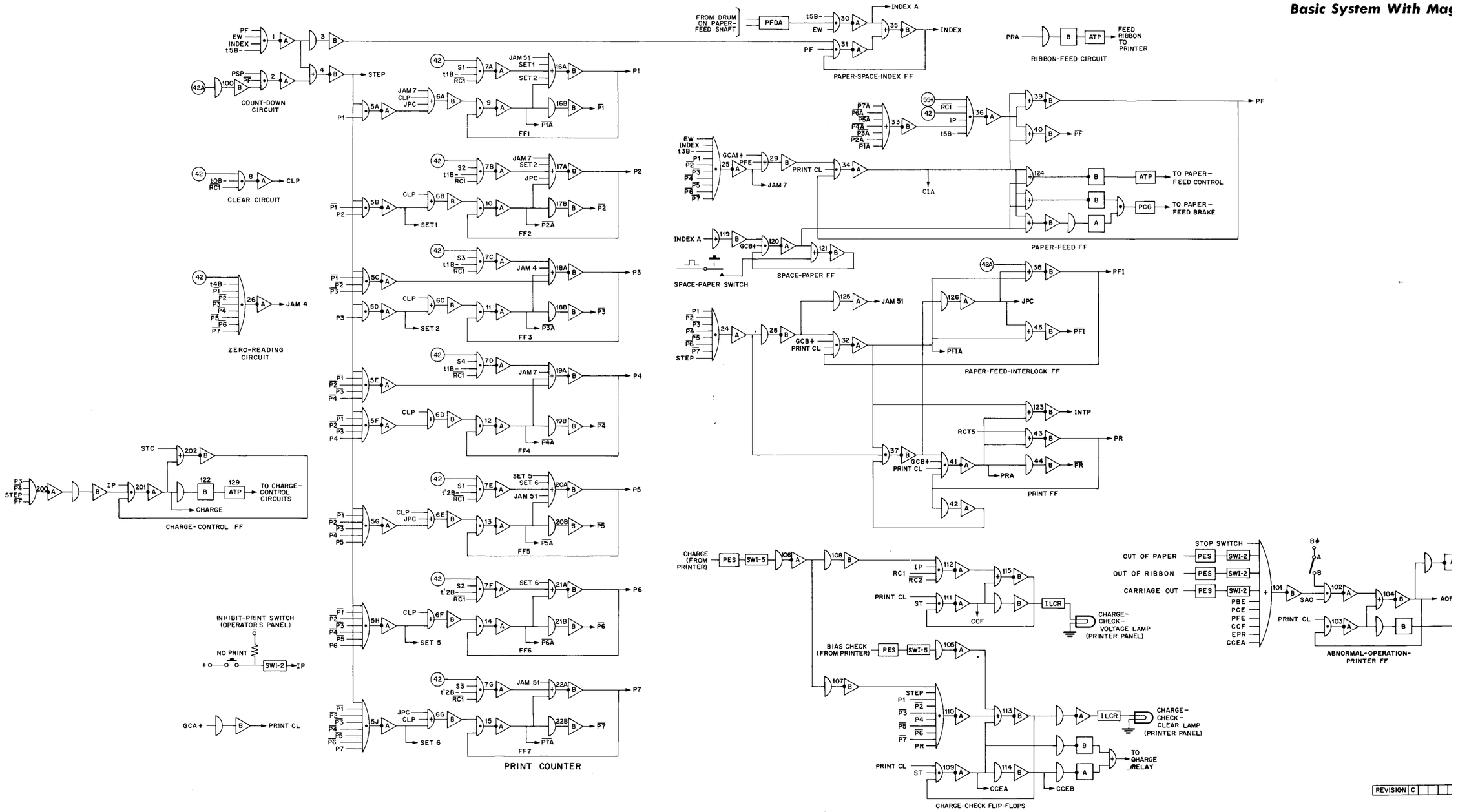
1-38A. Print Distributor



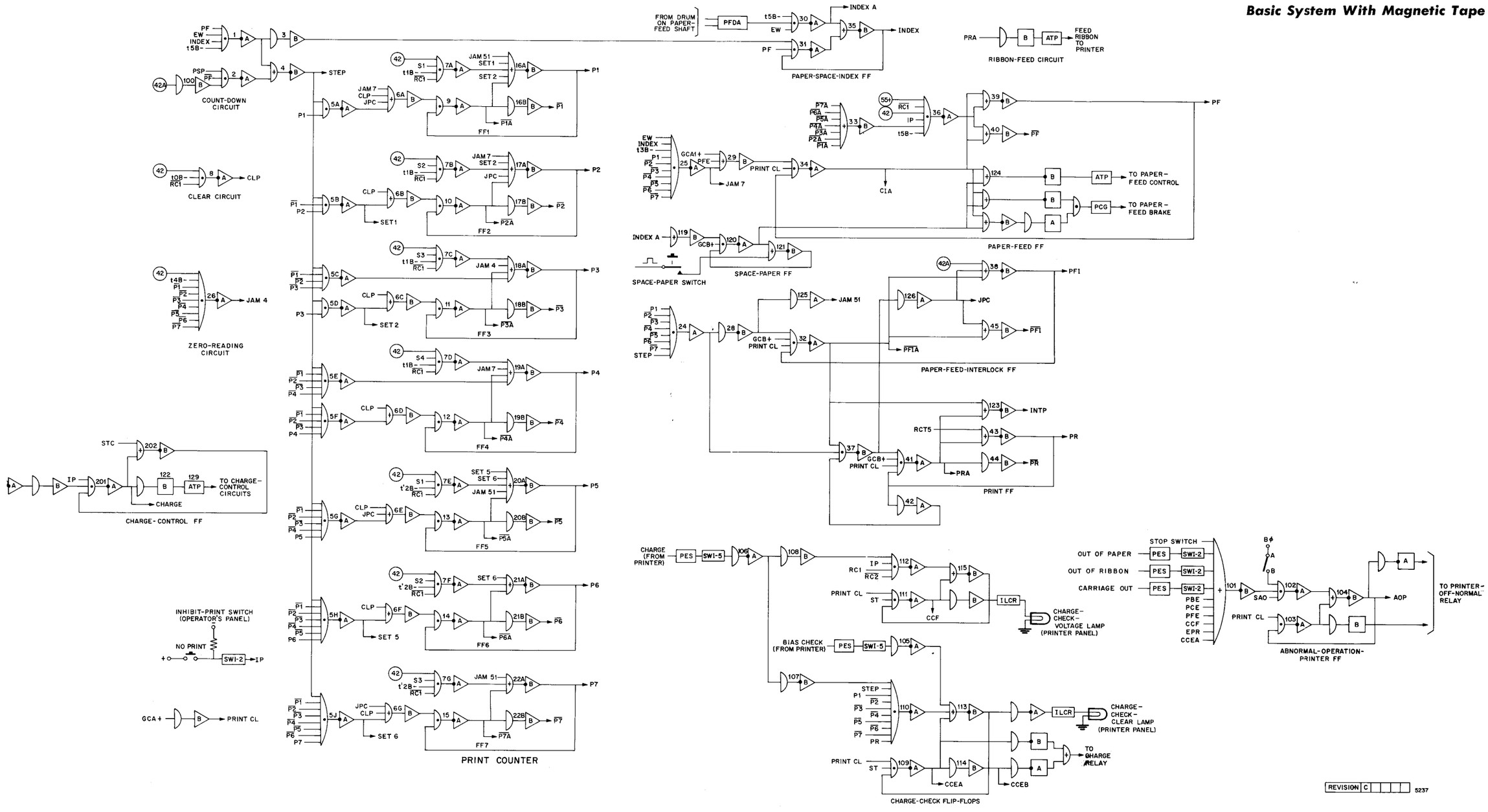




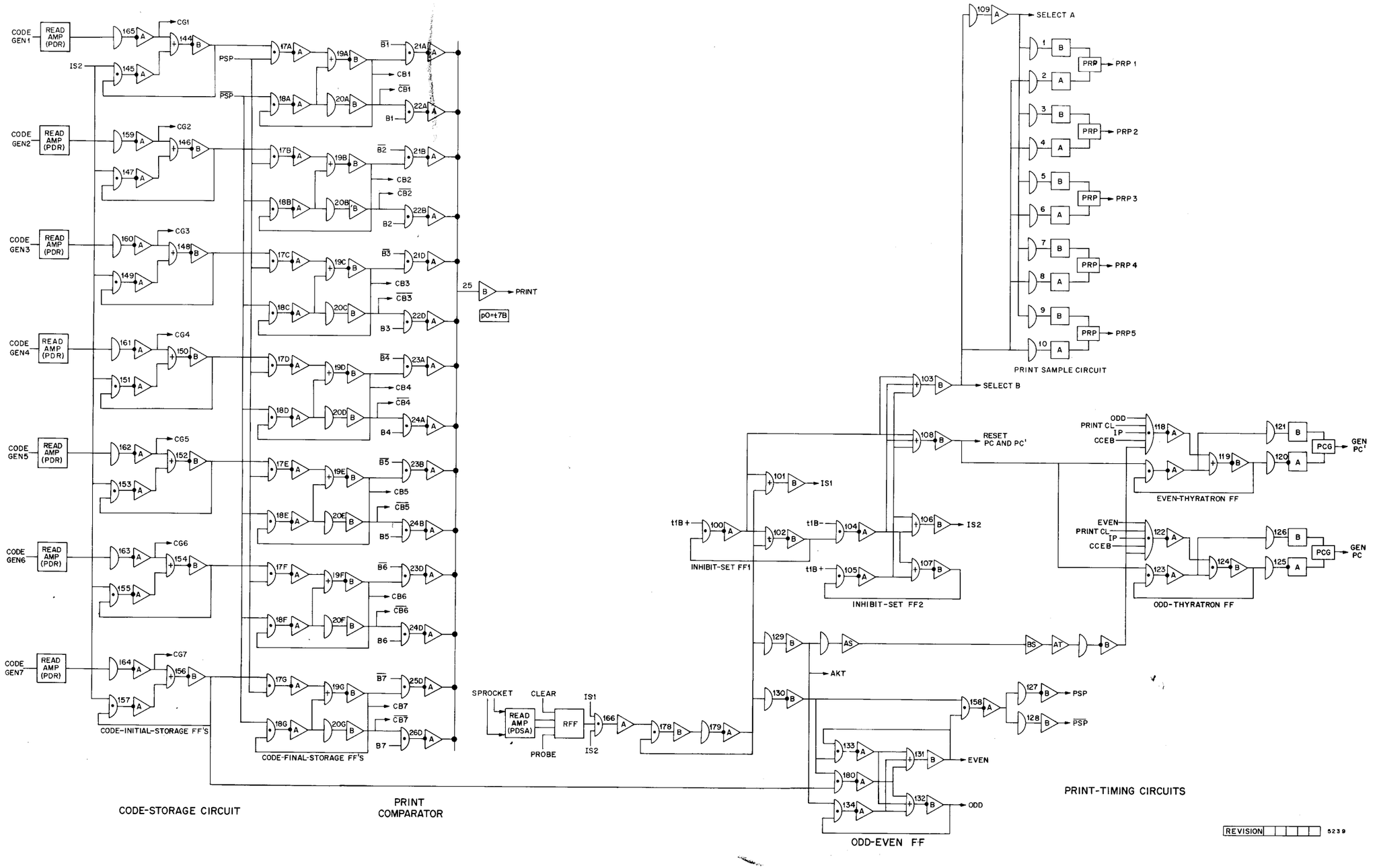
1-36A. Memory-to-Print-Buffer Control



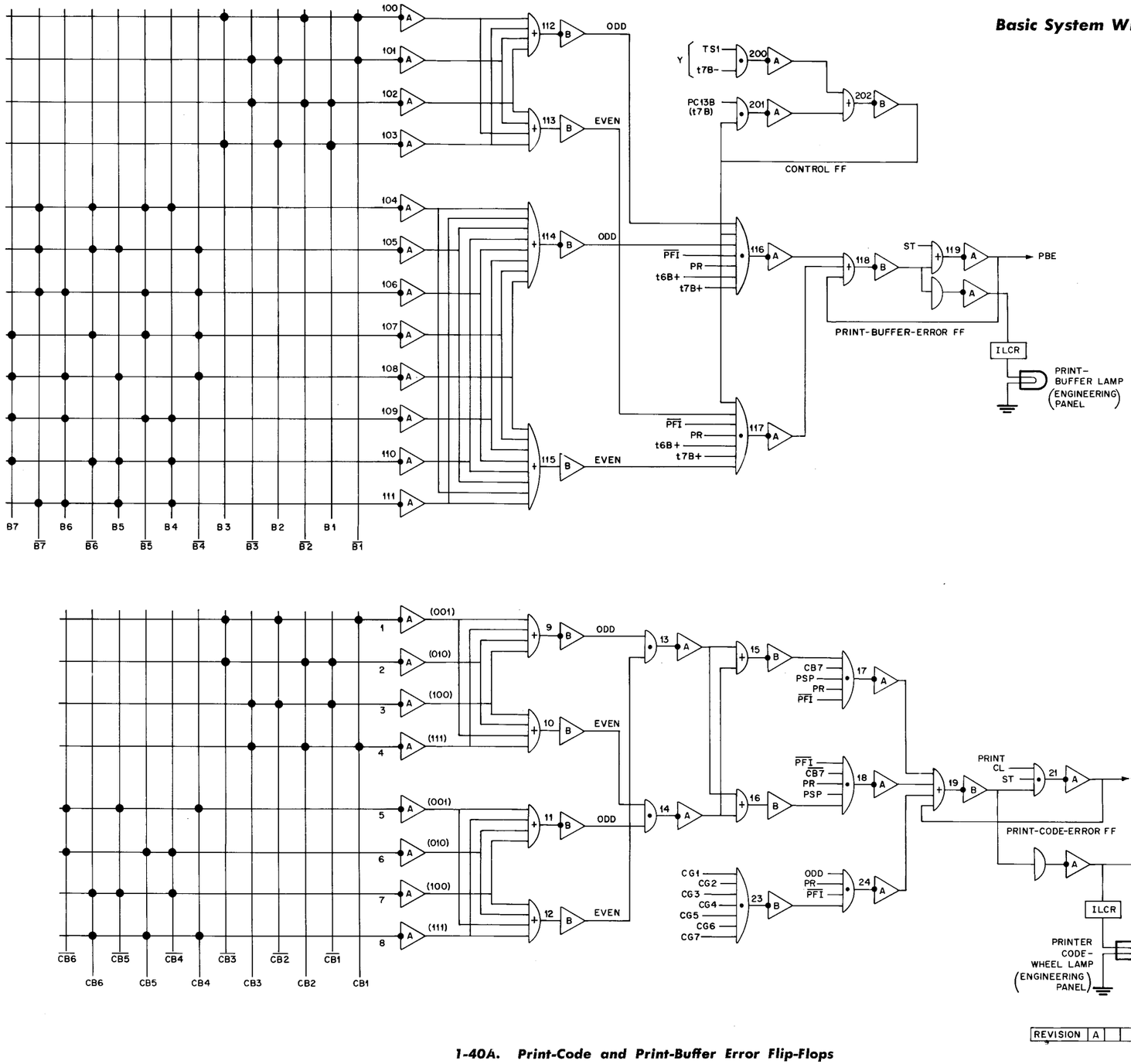
1-37A. Print Control



1-37A. Print Control



1-39A. Print Comparator



REVISION | A | | | | | 5240

1-40A. Print-Code and Print-Buffer Error Flip-Flops