A/S REGNECENTRALEN
HOVEDVEJEN 9 —— 2600 GLOSTRUP
TELEGRAM: indudatamat - TELEX: 33468 rc dk - TLF.: (02) 965366

DERES REF. VOR REF. JAF DATO 16.2.1979

I O C 401

trådningsændringer vedrørende udskiftning af RC315 til V24 enhed.

følgende kort fjernes fra IOC401:

101 - 102 - 103 - 104 - 105 - 106 - 107 - 108 - 109 - 110 - 111
112 - 113 - 114 - 115 - 116 - 117 - 118 - 126 - 127 - 128 - 129
130 - 131 - 132 - 133 - 134 - 135 - 136 - 137 - 153 - 154

følgende positioner anvendes til nye kort:

151 - 176

til ændringen skal benyttes:

200	elco pins for crimp	1 - 3700
12 m	kabel, grå M49	1 - 2008
1	elco receptable 8016-038-000-007	1 - 3712
4	skrue, 3 mm x 25 mm	

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC 401 Designed 23-5-1978 JA 1/8

Signal name	Wire description on input- and/or outputform									In	Out	Execu
16J2	(154-41)	(102-38)	(102-32)	(111-24)	(112-27)	(116-11)	(119-16)				X	
	(176-8)	(154-41)	(102-38)	(102-32)	(111-24)	(112-27)	(116-11)	(119-16)		X		
16H1	(102-33)	(141-14)									X	
	(176-7)	(102-33)	(141-14)							X		
16B1	(102-7)	(145-13)									X	
	(151-30)	(102-7)	(145-13)							X		
3E1	(113-18)	(141-31)									X	
	(151-33)	(113-18)	(141-31)							X		
17A1	(118-13)	(117-17)	(109-2)	(135-5)	(129-5)	(129-30)	(135-30)	(143-37)			X	
	(118-13)	(117-17)	(109-2)	(135-5)	(129-5)	(151-29)	(129-30)	(135-30)	(143-37)	X		

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC. 401 Designed 23-5-1978 JAF 2/8

Signal name	Wire description on input- and/or outputform									In	Out	Execut
17B1	(143-31)	(118-30)	(117-11)	(109-14)	(135-7)	(135-32)	(129-32)	(129-7)			X	
	(143-31)	(118-30)	(117-11)	(109-14)	(135-7)	(135-32)	(129-32)	(129-7)	(151-28)	X		
17C1	(118-15)	(117-13)	(109-31)	(135-9)	(129-9)	(129-34)	(135-34)	(143-26)			X	
	(118-15)	(117-13)	(109-31)	(135-9)	(129-9)	(151-27)	(129-34)	(135-34)	(143-26)	X		
17D1	(108-35)	(109-11)	(117-15)	(118-28)	(143-15)	(135-36)	(129-36)				X	
	(108-35)	(109-11)	(117-15)	(118-28)	(143-15)	(135-36)	(129-36)	(151-26)		X		
17E1	(143-10)	(117-30)	(109-28)	(108-5)							X	
	(143-10)	(117-30)	(109-28)	(108-5)	(151-25)					X		
17F1	(143-1)	(117-28)	(109-40)	(108-7)							X	
	(143-1)	(117-28)	(109-40)	(108-7)	(151-24)					X		

ACSL: 44-RT 1197

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC 401 Designed 23-5-1978 3/8

Signal name	Wire description on input- and/or outputform									In	Out	Execu
1OD1	(140-39)	(108-9)	(110-11)	(117-26)							X	
	(140-39)	(108-9)	(151-23)	(110-11)	(117-26)					X		
16A1	(102-2)	(141-24)									X	
	(151-32)	(102-2)	(141-24)							X		
201H1	(132-34)	(161-29)	(162-11)								X	
	(151-41)	(132-34)	(161-29)	(162-11)						X		
201G1	(132-36)	(161-26)	(162-28)								X	
	(151-40)	(132-36)	(161-26)	(162-28)						X		
201F1	(132-39)	(160-8)	(161-16)	(162-36)	(162-40)	(164-25)	(168-11)				X	
	(151-39)	(132-39)	(160-8)	(161-16)	(162-36)	(162-40)	(164-25)	(168-11)		X		

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC 401 Designed 23-5-1978 4/8

Signal name	Wire description on input- and/or outputform									In	Out	Execu
201E1	(136-2)	(160-7)	(161-13)	(162-9)	(164-34)	(164-37)	(168-10)				X	
	(151-38)	(136-2)	(160-7)	(161-13)	(162-9)	(164-34)	(164-37)	(168-10)		X		
201D1	(168-7)	(162-7)	(161-12)	(160-5)	(136-5)						X	
	(168-7)	(162-7)	(161-12)	(160-5)	(136-5)	(151-37)				X		
201C1	(168-5)	(162-26)	(161-9)	(160-2)	(136-7)						X	
	(168-5)	(162-26)	(161-9)	(160-2)	(136-7)	(151-36)				X		
201B1	(136-17)	(161-4)	(162-24)								X	
	(151-35)	(136-17)	(161-4)	(162-24)						X		
3A1	(142-38)	(115-7)	(114-1)	(113-2)	(112-34)	(108-36)	(103-36)				X	
	(142-38)	(115-7)	(114-1)	(113-2)	(112-34)	(108-36)	(103-36)	(176-25)		X		

A/S REGNECENTRALEN — Modification formular / Hardwaredocumentation — UNIT: IOC 401 — Designed 23-5-1978 JK 5/8

Signal name	Wire description on input- and/or outputform									In	Out	Execu
	(176-23)	(151-16)								X		
	(176-20)	(151-34)								X		
	(176-18)	(151-15)								X		
2 G 1	(136-31)	(140-26)	(114-37)	(145-14)							X	
	(176-17)	(136-31)	(140-26)	(114-37)	(145-14)					X		
	(176-14)	(151-13)								X		
2 a 2 D 1	(140-25)	(140-7)	(139-12)	(137-2)	(112-36)						X	
	(140-25)	(140-7)	(139-12)	(137-2)	(112-36)	(176-26)				X		
	(176-31)	(151-31)								X		
		+12V										
	(151-1)	(128-1)								X		

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC. 401 Designed 23-5-1978 JAF 6 18

Signal name	Wire description on input- and/or outputform									In	Out	Execut
19M1	(136-41)	(116-12)	(116-16)	(117-25)	(118-25)	(119-15)	(119-13)				X	
	(176-9)	(136-41)	(116-12)	(116-16)	(117-25)	(118-25)	(119-15)	(119-13)		X		
202K1	(137-7)	(139-33)	(169-8)								X	
	(176-37)	(137-7)	(139-33)	(169-8)						X		
202J1	(137-10)	(139-30)	(169-14)								X	
	(176-36)	(137-10)	(139-30)	(169-14)						X		
202A1	(92-11)	(113-1)	(139-1)	(160-15)	(160-17)	(166-18)	(166-27)				X	
	(92-11)	(113-1)	(139-1)	(176-28)	(160-15)	(160-17)	(166-18)	(166-27)		X		
202G1	(114-3)	(142-35)	(142-39)	(139-26)	(161-35)	(161-32)	(160-32)				X	
	(114-3)	(142-35)	(142-39)	(139-26)	(161-35)	(161-32)	(160-32)	(176-27)		X		

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC 401 Designed 23-5-1978 7 18

Signal name	Wire description on input- and/or outputform									In	Out	Execu
202F1	(92-6)	(137-3)	(139-16)	(169-7)	(170-7)	(170-15)	(169-15)				X	
	(92-6)	(137-3)	(139-16)	(169-7)	(170-7)	(170-15)	(169-15)	(176-19)		X		
	(176-11)	(151-10)								X		
	(176-13)	(151-19)								X		
		KABPOS										
	(151-8)	B								X		
		KABPOS										
	(176-4)	A								X		
		KABPOS	KABPOS									
	(176-3)	E	F							X		
		KABPOS										
	(176-2)	D								X		
		KABPOS										
	(151-6)	C								X		
	(176-12)	(151-3)								X		

A/S REGNECENTRALEN Modification formular Hardwaredocumentation UNIT: IOC 401 Designed 23-5-78 JA
8/8

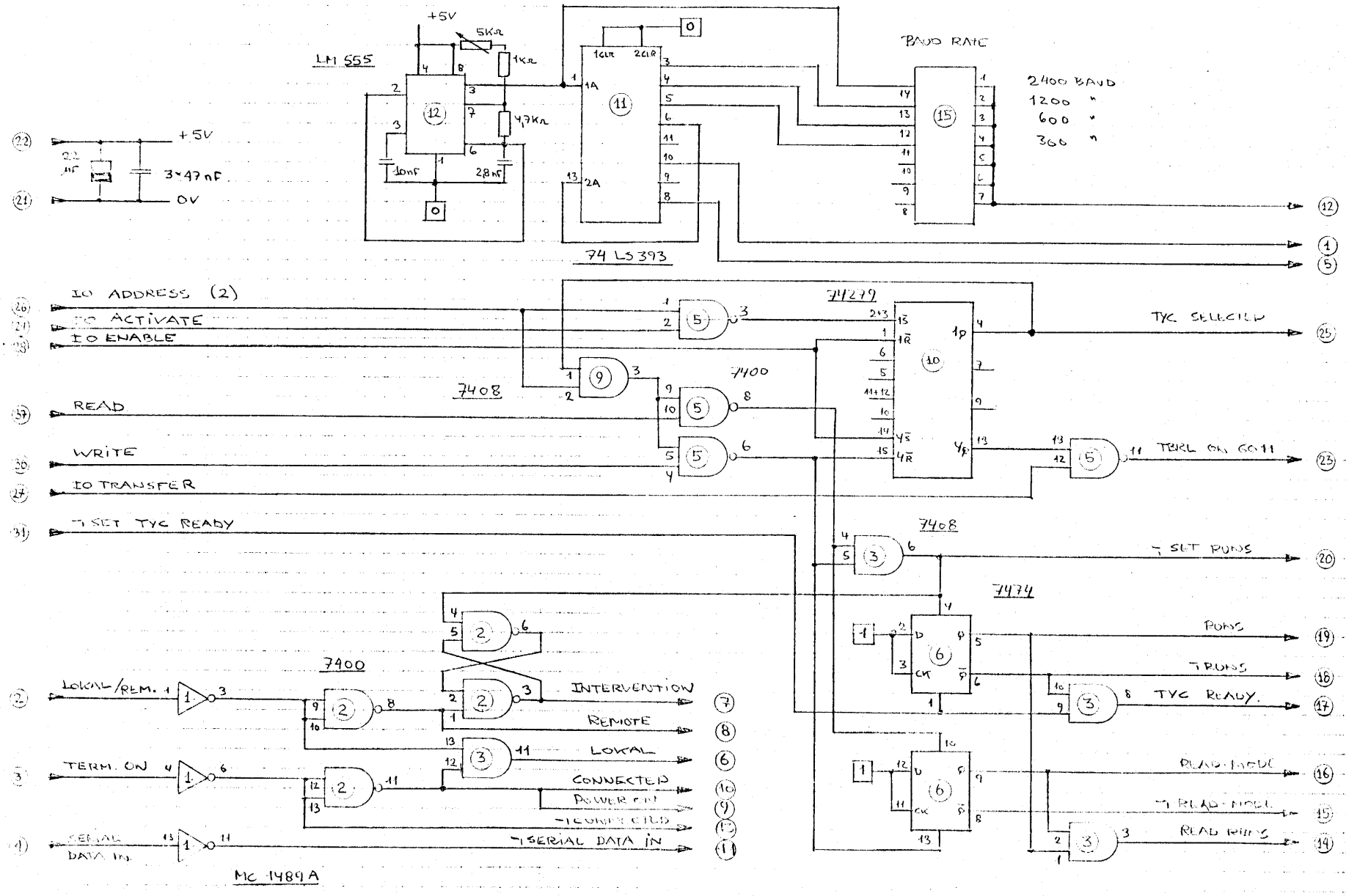
Signal name	Wire description on input- and/or outputform	In	Out	Execu
9F1	112-33 140-6		X	
	176-10 112-33 140-6	X		
16J1	102-36 116-15 117-24 118-24 119-14		X	
	176-6 151-20 102-36 116-15 117-24 118-24 119-14	X		
	176-1 151-4	X		
	176-5 151-5	X		

POS. 176

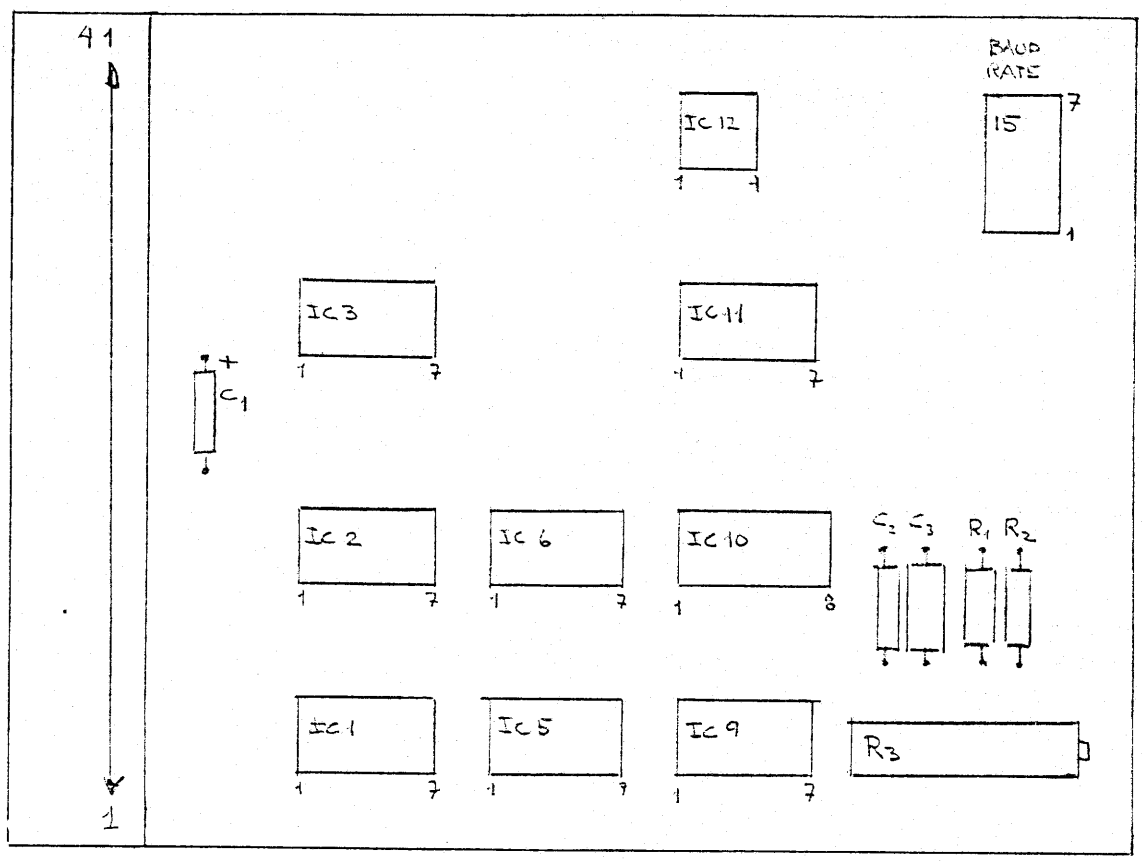
004	139 D 12	ADDRESS (2)	30
004	139 F 16	IO ACTIVATE	29
004	139 A 1	IO ENABLE	28
004	139 G 26	IO TRANSFER	27
002	151 - 31	¬ SET TYC READY	31
	J1238 D	LOKAL / REMOTE	2
	J1238 E/F	TERM. POW. ON	3
	J1238 A	SERIAL IN.	4

12	BAUD RATE
1	300 Hz
5	75 Hz
23	TBRL ON 6011
20	¬ SET RUNS
19	RUNS
18	¬ RUNS
17	TYC READY
16	READ-MODE
15	¬ READ-MODE
14	READ-RUNS
7	INTERRUPT
8	REMOTE
6	LOKAL
10	CONNECTED
9	POWER ON
13	¬ CONNECTED
11	¬ SERIAL DATA IN

TYC 004.


+5V
5KΩ
1KΩ
LM 555
4,7KΩ
10nF
28nF
74 LS 393
BAUD RATE
2400 BAUD
1200 "
600 "
300 "
+5V
2,2 µF
3×47 nF
0V
IO ADDRESS (2)
IO ACTIVATE
IO ENABLE
READ
WRITE
IO TRANSFER
¬ SET TYC READY
7408
7400
74279
TYC SELECTED
TRRL ON CO11
¬ SET PONS
7474
PONS
¬ PONS
TYC READY.
LOKAL/REM.
TERM. ON
SERIAL DATA IN
INTERVENTION
REMOTE
LOKAL
CONNECTED
POWER ON
¬ CONNECTED
¬ SERIAL DATA IN
MC 1489A
+5V pin 22
0V pin 21
IOC POS. 176.

IOC Pos. 176



KOMPONENT	BETEGNELSE	PC PART NR.
IC 1	MC 1489	4-0906
IC 2	SN 7460	3-5900
IC 3	SN 7408	4-3702
IC 5	SN 7400	3-5900
IC 6	SN 7474	3-5911
IC 9	SN 7408	4-3702
IC 10	SN 74279	5-0002
IC 11	SN 74 SL 393	5-8105
IC 12	LM 555	5-4717
15	SOKKEL 14 pin	3-5918
C1	22 µF/15 TANTAL	1-1118
C2	10 nF	1-1015
C3	2,2 nF	1-4901
C4	47 nF x 3	4-3911
R1	1 KΩ	1-0600
R2	4,7 K	1-0616
R3	5 KΩ potm.	1-0904
STIK PRINT	EURO 41 pin	1-3709

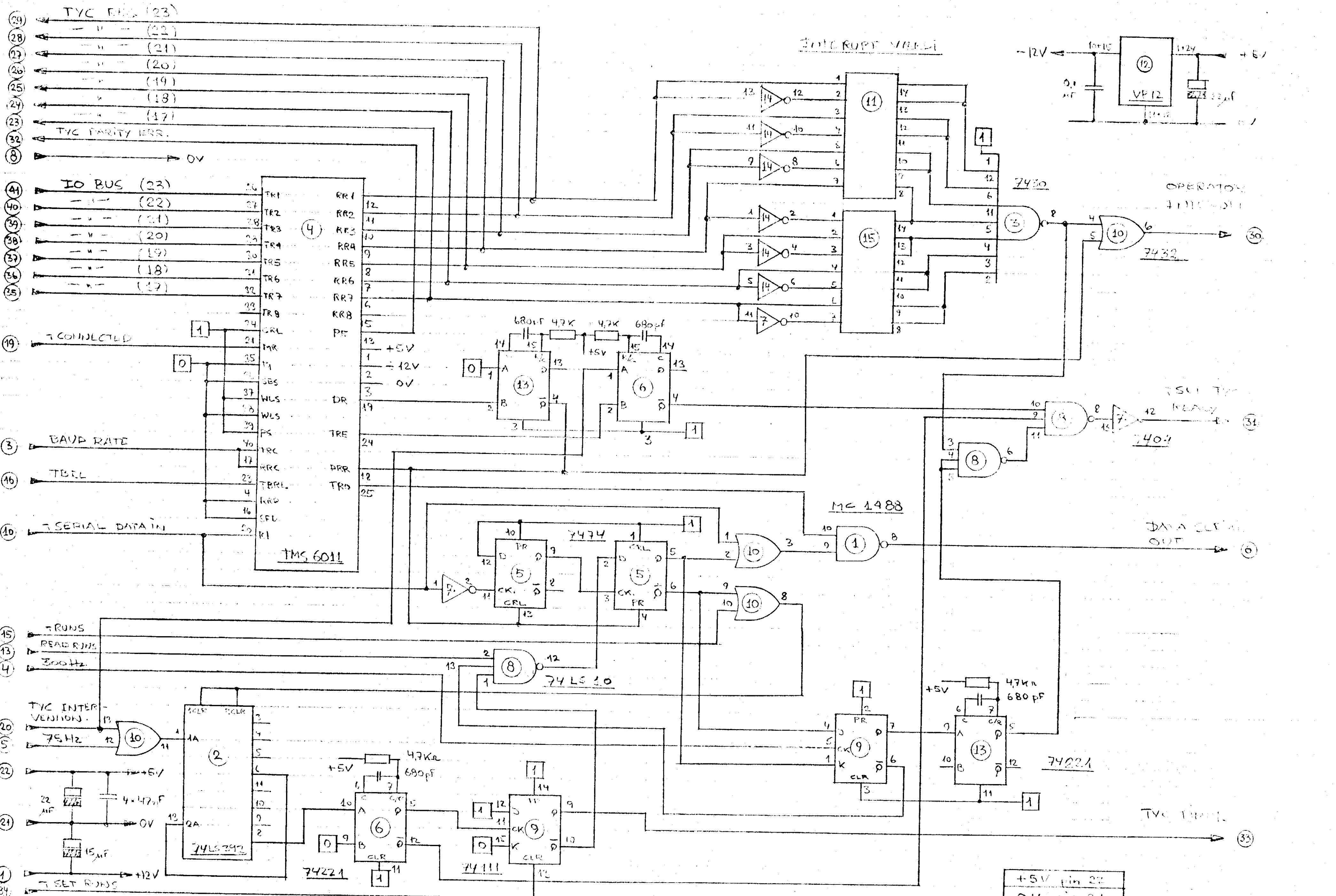
DPS 100129

Pos. 151

04	161 H 29 SB (23)	41	
04	161 G 26 " (22)	40	
04	161 F 16 " (21)	39	
04	161 E 13 " (20)	38	
04	161 D 12 " (19)	37	
04	161 C 9 " (18)	36	
04	161 B 4 " (17)	35	
01	175-13 ⊓ CONNECTED	19	
01	176-12 BAUD RATE	3	
01	175-23 TBRL ON 6011	16	
01	176-11 ⊓ SERIAL DATA IN	10	
01	176-18 ⊓ RUNS	15	
01	176-14 ⊓ READ RUNS	13	
01	176-1 300 Hz	4	
01	176-6 TYC INTERROGATION (10KHL)	20	
01	176-5 75 Hz	5	
01	176-20 ⊓ SET RUNS	34	
	⏚12.30 -B 0V	8	

29	TYC REG. (23)	
28	(22)	
27	(21)	
26	(20)	
25	(19)	
24	(18)	
23	(17)	
32	TYC PARITY ERR.	
30	OPERATOR INTERUPT	
31	⊓ SET TYC READY	
6	DATA SERIAL OUT	⏚12.30 - C
33	TYC TIMER.	

TYC 602

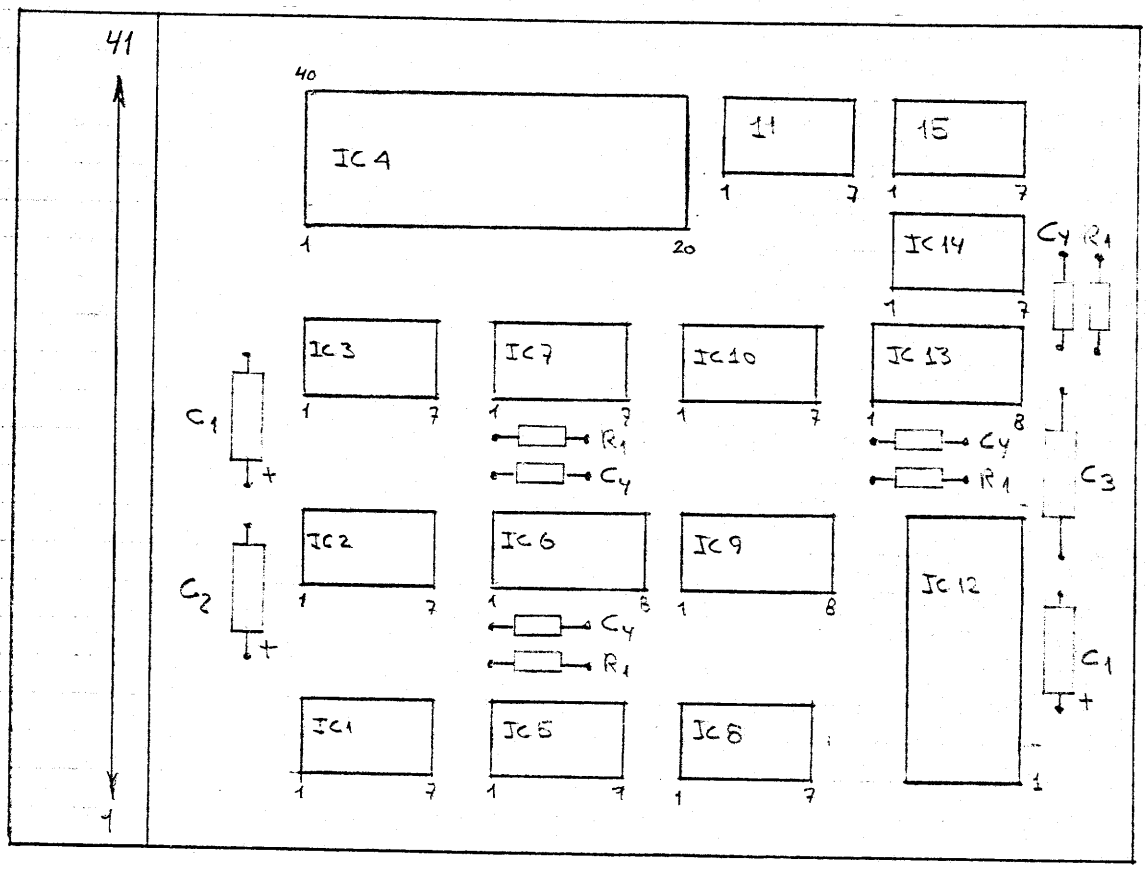

TYC BUS (23)
(22)
(21)
(20)
(19)
(18)
(17)
TYC PARITY ERR.
0V
IO BUS (23)
(22)
(21)
(20)
(19)
(18)
(17)
CONNECTED
BAUD RATE
TBRL
SERIAL DATA IN
RUNS
READ RUNS
300 Hz
TYC INTER-VENTION
75 Hz
+5V
0V
+12V
SET RUNS
TMS 6011
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
CRL
MR
DR
TRE
DRR
TRO
PE
RR1
RR2
RR3
RR4
RR5
RR6
RR7
RR8
WLS
PS
TRC
RRC
SFD
RI
-12V
74LS393
74221
74111
7474
74LS10
MC 1488
7430
7432
7404
VR12
INTERRUPT WORD
OPERATOR ATTENTION
DATA OUT
TYC READY
TYC TIMER
4,7K
680pF
4,7KΩ
680 pF
22 µF
4,47µF
15 µF
0,1 µF

+5V	pin 22
0V	pin 21
+12V	pin 1

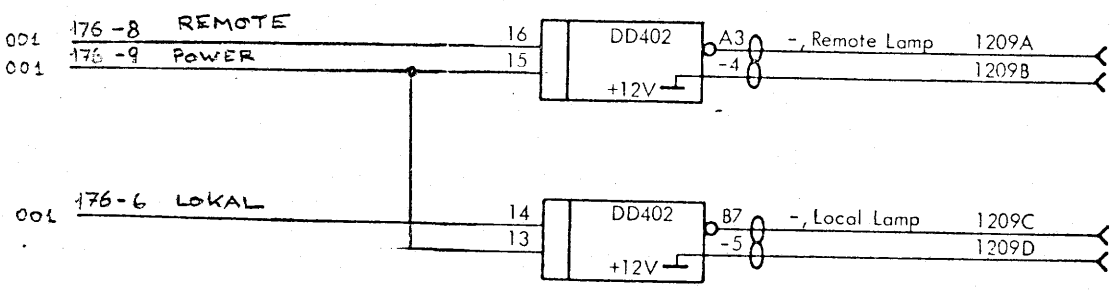
TYC Pos. 25 - IOC Pos. 151.

JPD 220179

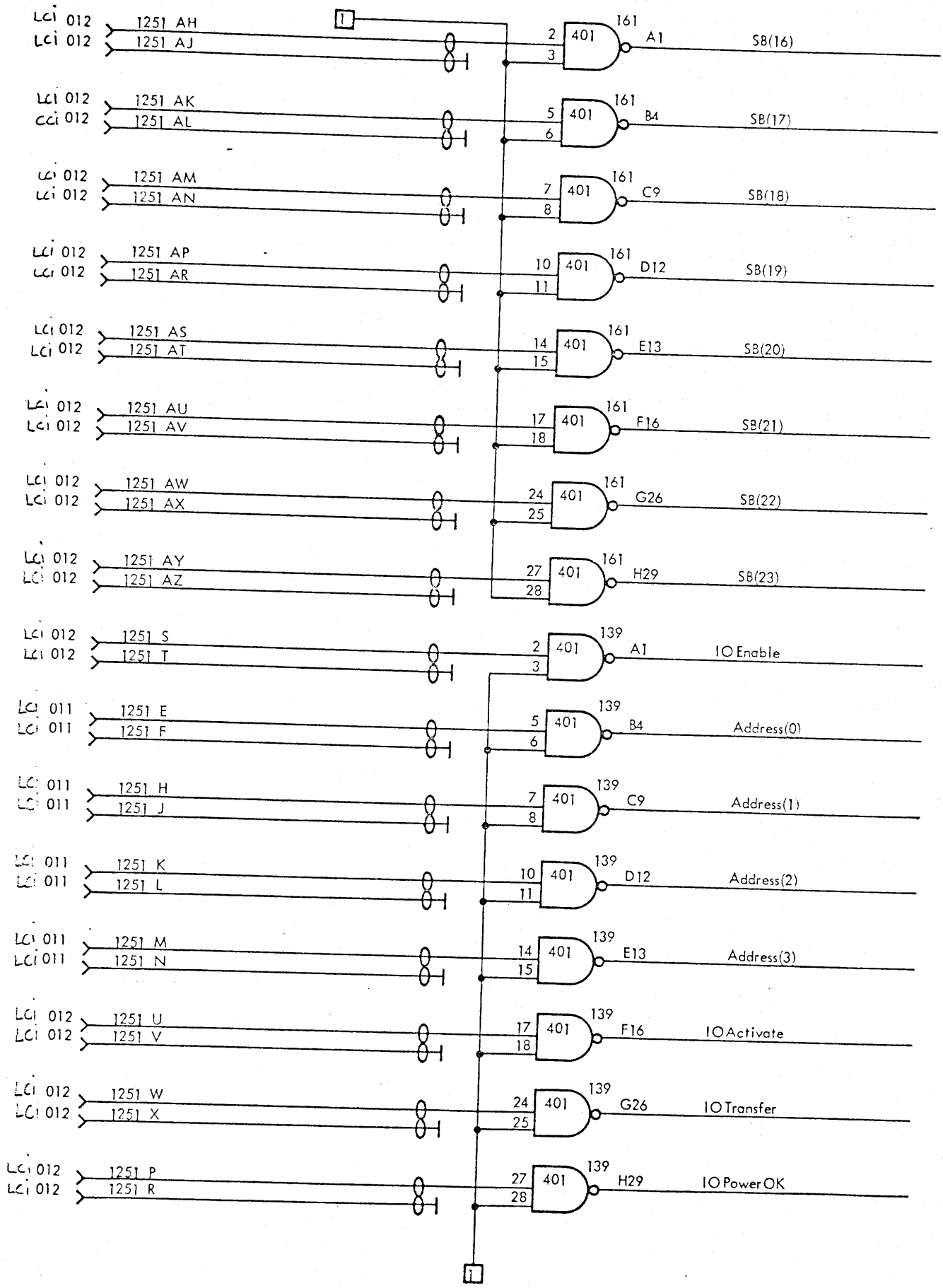
TYC PRG. 25 -200 POS. 151



KOMPONENT	BETEGNELSE	RC PART NR
IC 1	MC 1488	4-9212
IC 2	SN 74 LS 393	5-8105
IC 3	SN 7430	3-5904
IC 4	TMS 6011	5-8900
IC 5	SN 7474	3-5911
IC 6	SN 74221	5-0214
IC 7	SN 7404	1-9210
IC 8	SN 74 LS 10	6-1803
IC 9	SN 74111	4-9617
IC 10	SN 7432	4-7911
11	SOKKEL 14 pin	3-5918
IC 12	VP 12	5-8811
IC 13	SN 74221	5-0214
IC 14	SN 7404	1-9210
IC 15	SOKKEL 14 pin	3-5918
$C_1 \times 2$	22 µF / 15V	1-1118
C_2	15 µF / 20V	1-1116
C_3	0,1 µF	1-1101
$C_4 \times 4$	680 pF	1-1302
$C_5 \times 4$	47 nF	4-3911
$R_1 \times 4$	4,7 KΩ	1-0616
STIK CONNECTOR	ELCO 41 pin	1-3709



LOKAL - REMOTE
Logic Diagram

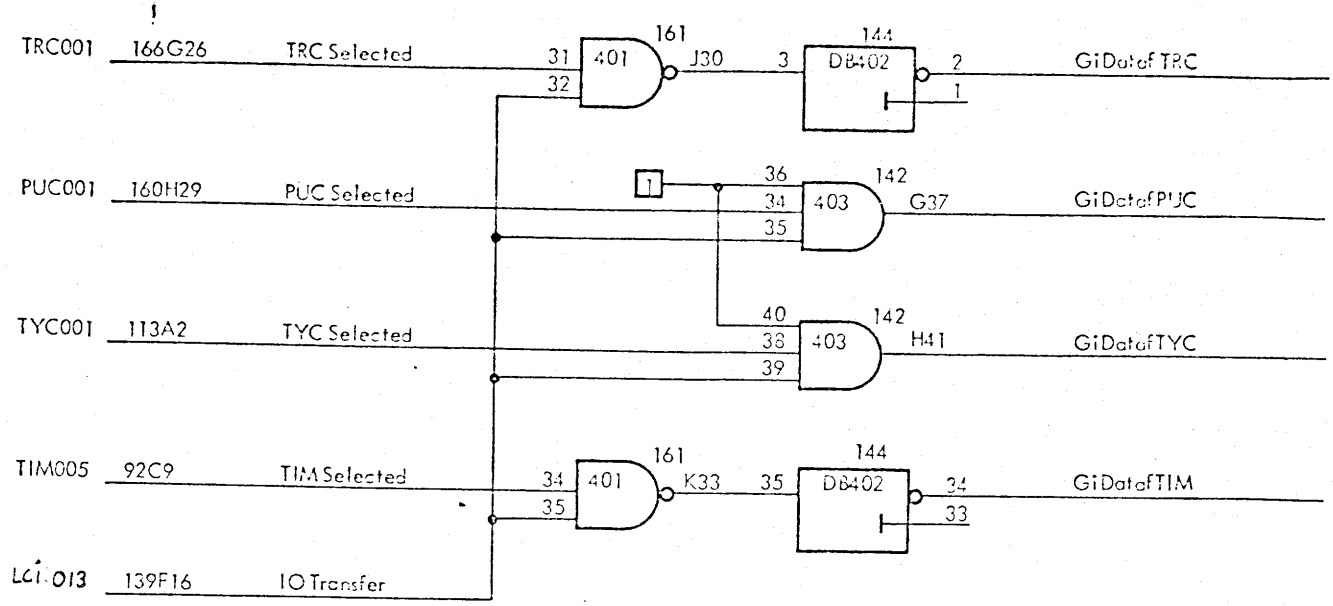


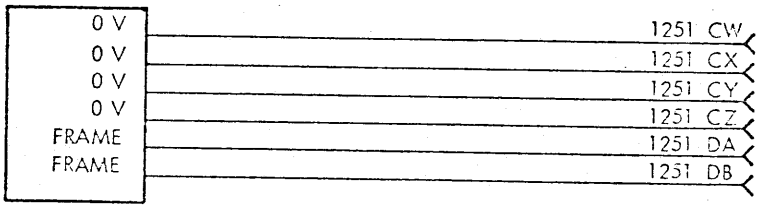
RC4000

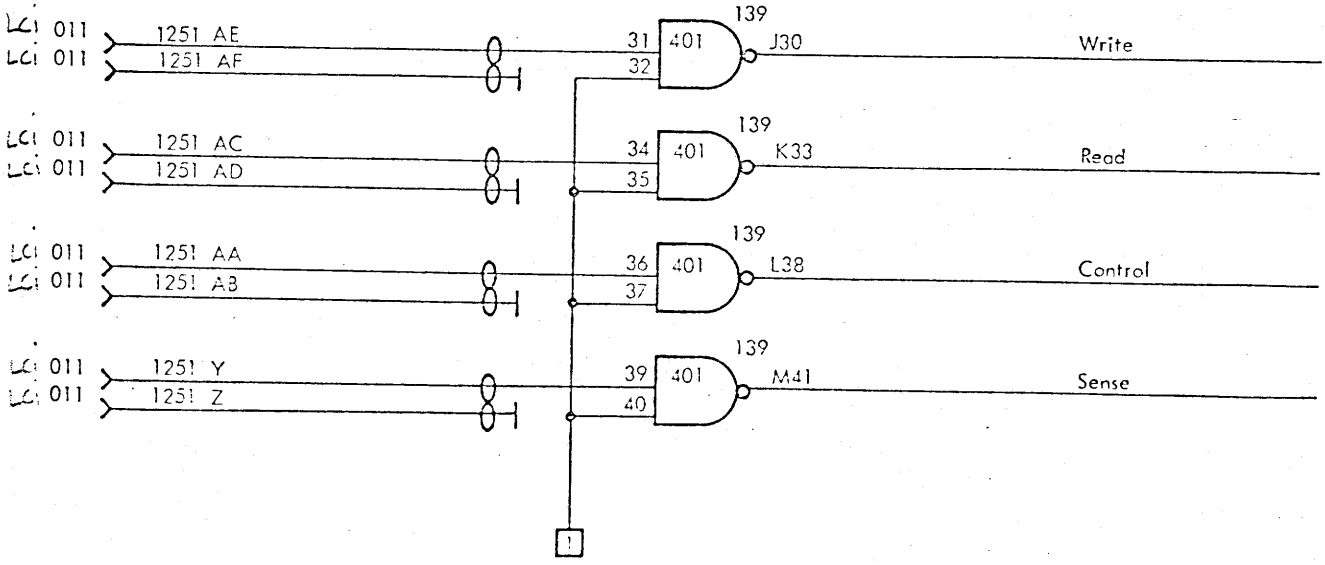
RPT CONTROL SIGNALS AND SB(16:23)

Logic Diagram

TYC 4
LCI013

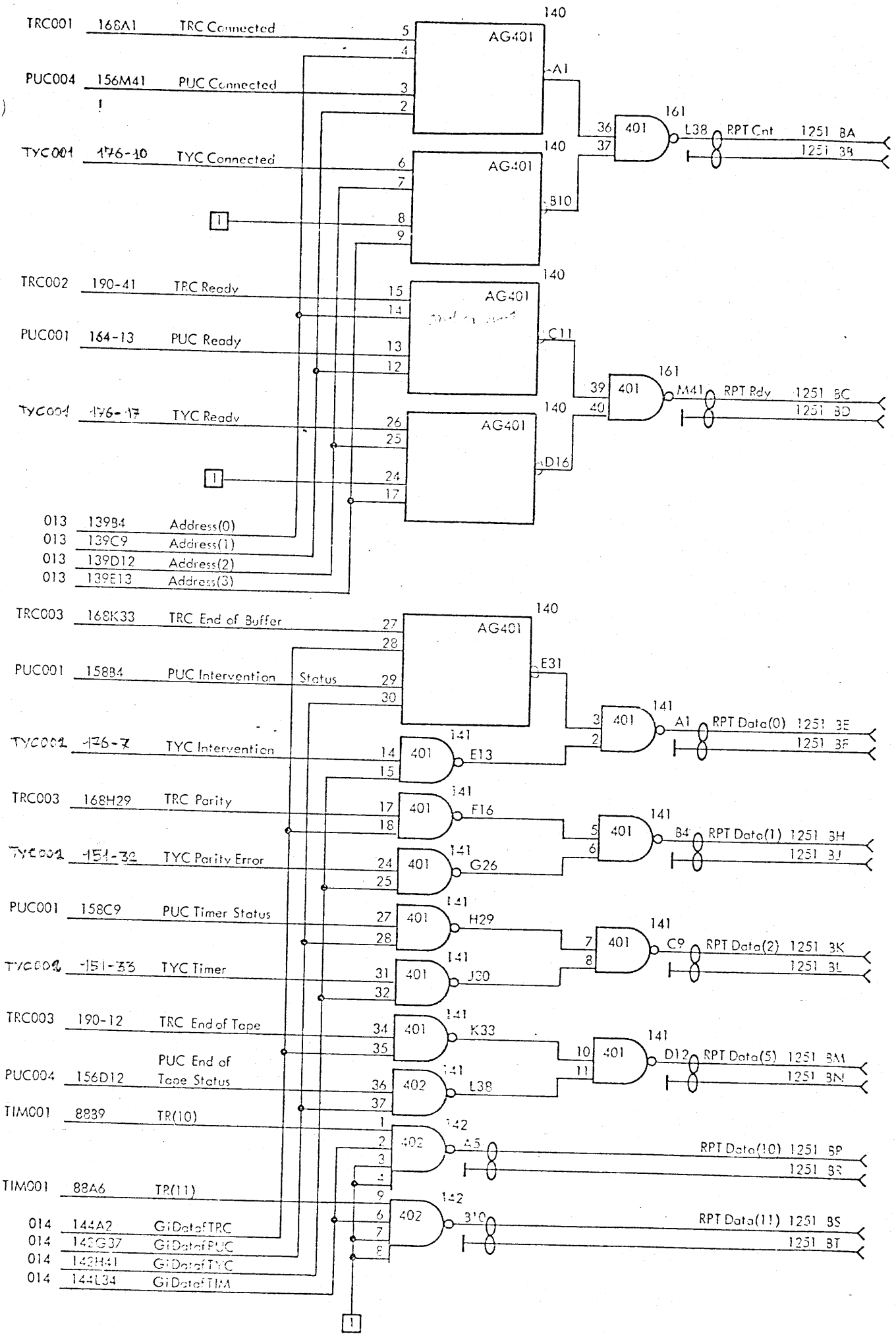






DATA GATES AND COMMAND SIGNALS

Logic Diagram

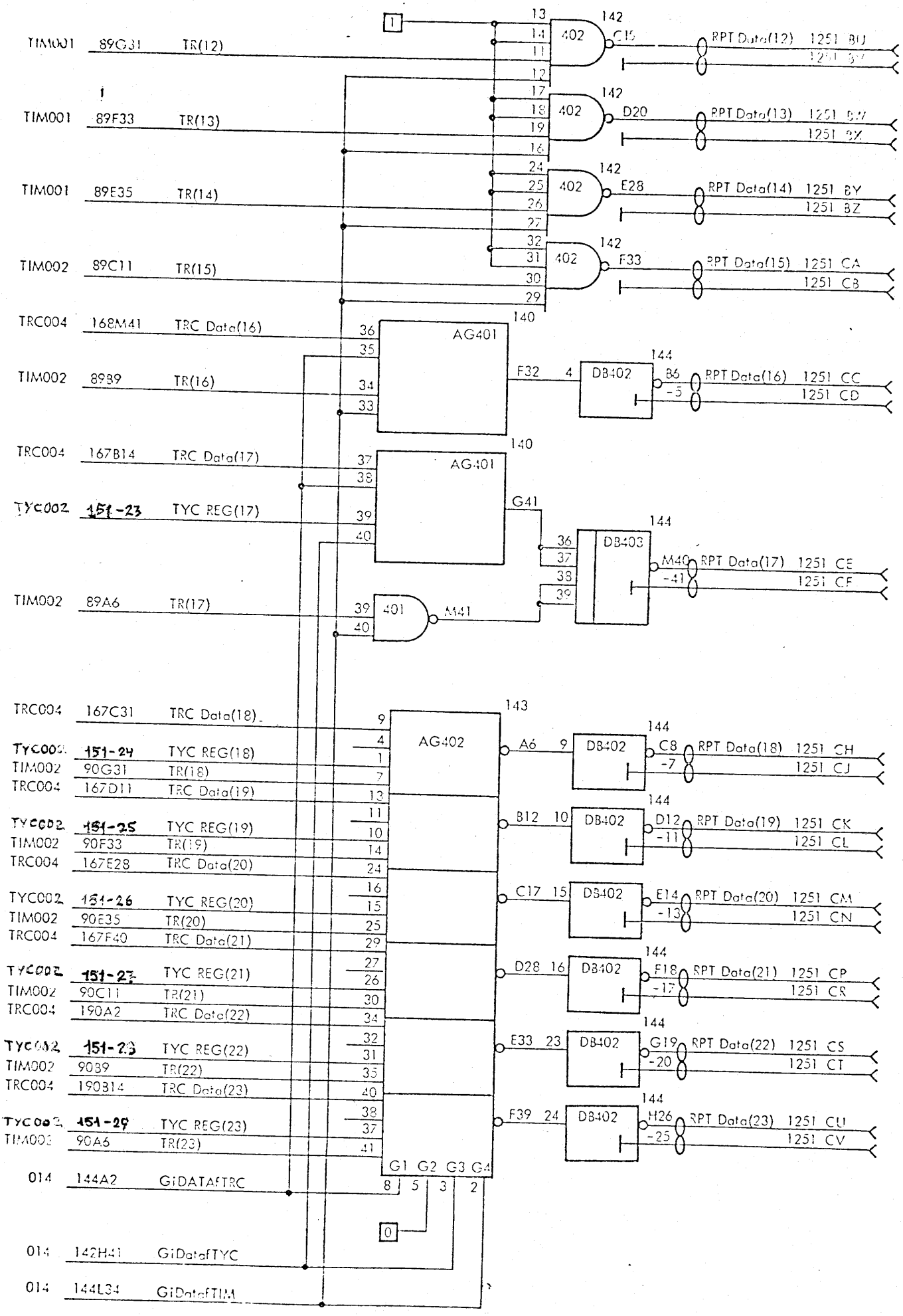


RC4000

RPT Cnt, RPT Rdy, and RPT Data (0:2, 5, 10, 11)

Logic Diagram

TYC006
LC1015



RC4000

RPT Data(12:23)

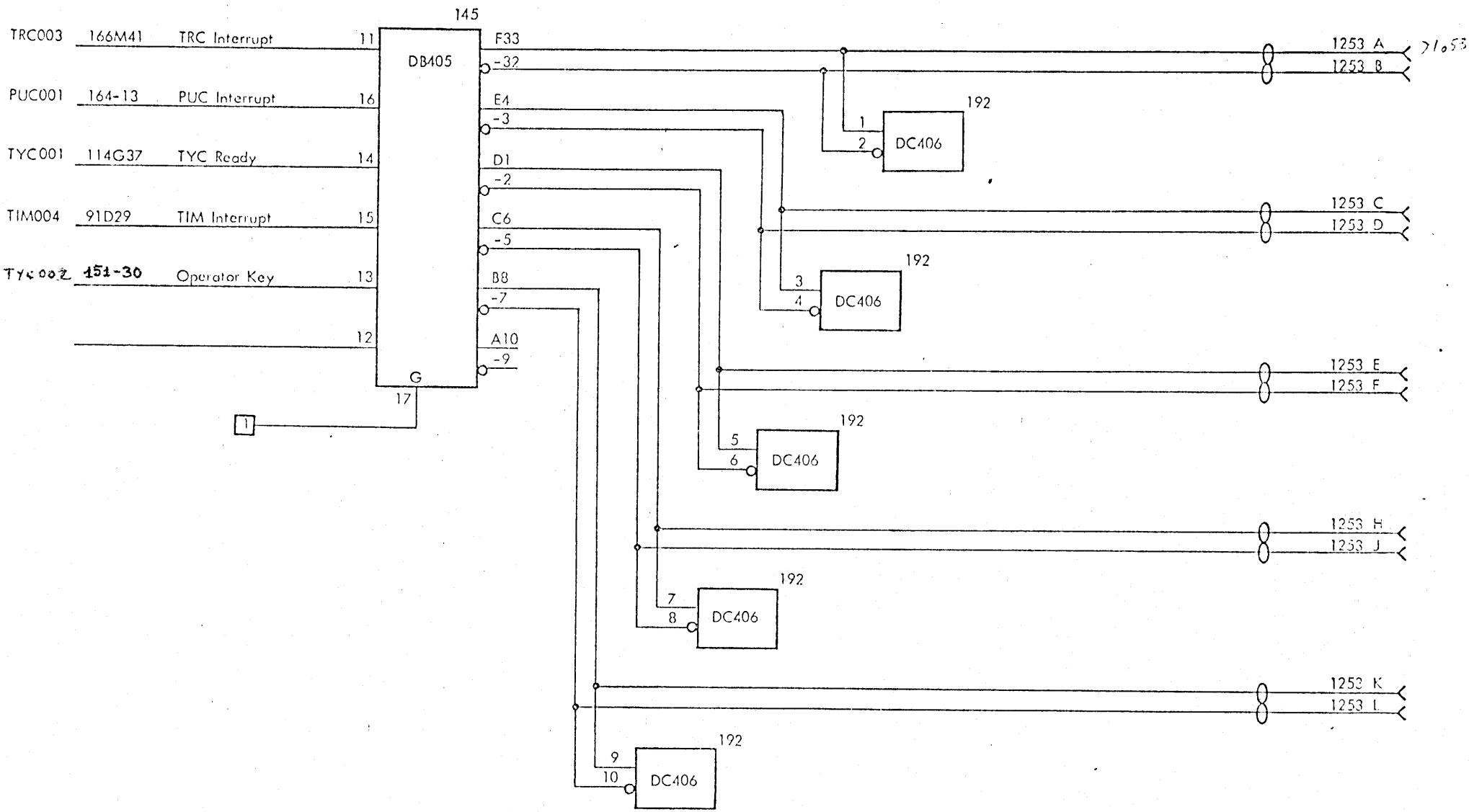
Logic Diagram

TYC007
LC1016

RC4000

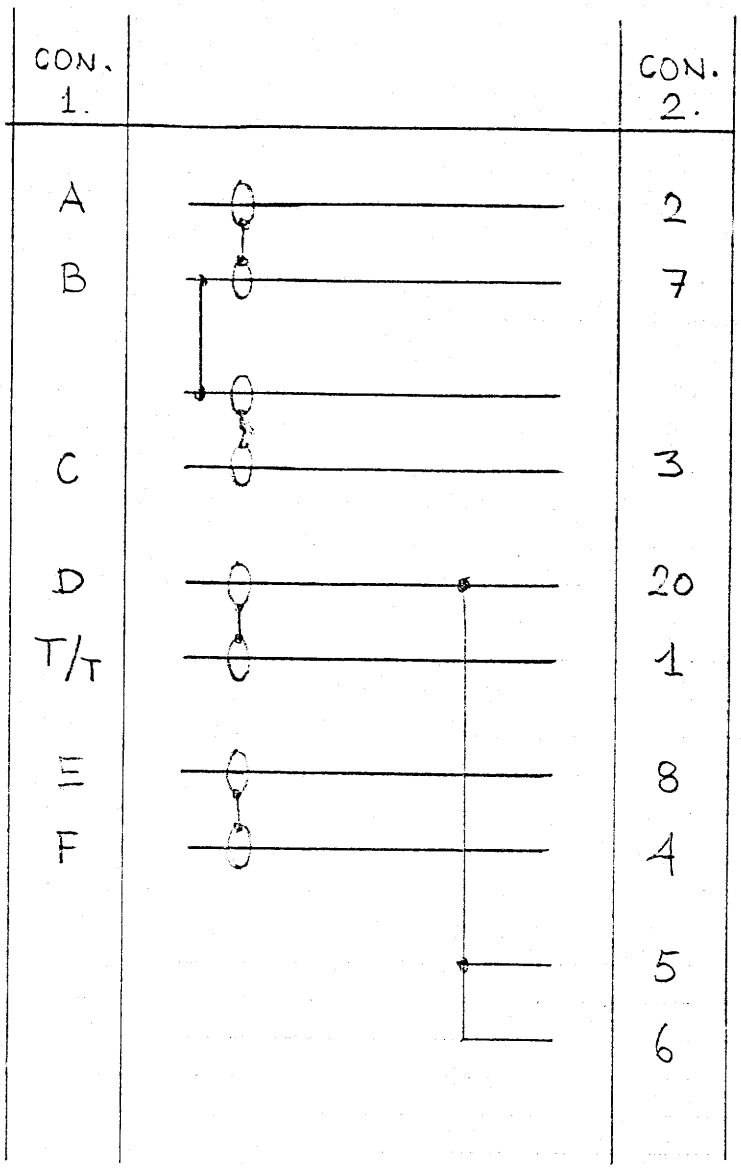
TRANSMITTERS FOR INTERRUPT SIGNALS

Logic Diagram



TYC 8

LC1017



CON. 1 : ELCO 8016-038-000-004
MED KAPPE

CON. 2 : CANNON DBC-25S
MED KAPPE OG MØTRIKKER

CABLE : 4 × 2 × 0,25 mm^2, GRÅ

KABEL TYPE /1200

LOG LIST

UNIT ......[illegible]...... MODEL .... NO ....

This LOG LIST contains information on modifications of the basic unit, due to Options, Engineering Change Notes, and Field Change Orders.

Do not forget to list all future modifications on this page.

OPTION ECN or FCO No.	DATE of Installation	SIGN	SHORT DESCRIPTION
FC 183	23.12.71	SP	[illegible]
	26.1.73	SP	[illegible]

RCSL 44 - RT 23

TECHNICAL MANUAL

RC 4005 LOGIC DIAGRAMS

IOC401

(LCI, TRC, PUC, TYC, TIM)

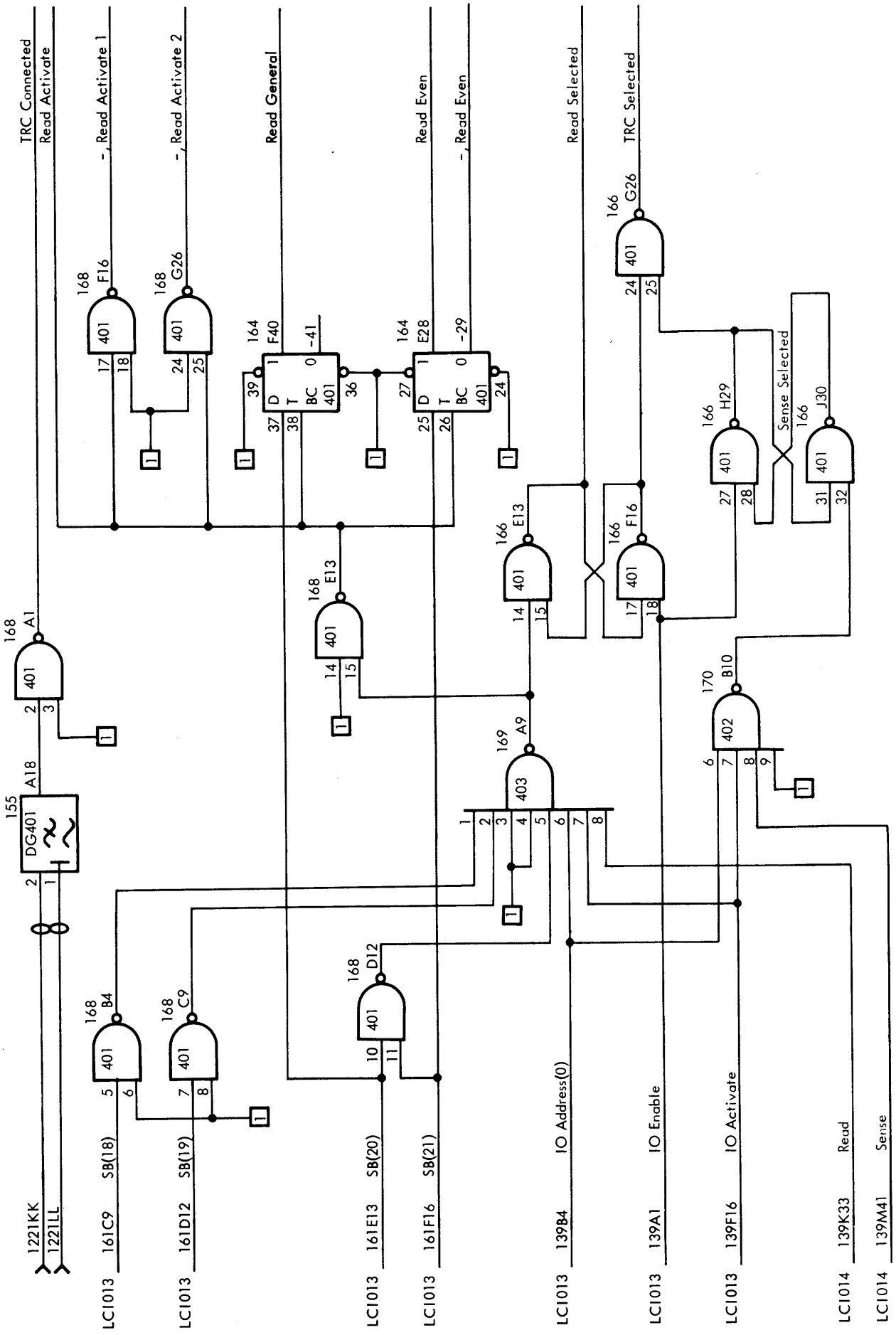
Low-Speed Data Channel Interface (LCI)		Dwg. No.
LCI013	CHANNEL CONTROL SIGNALS AND SB(16:23)	V10461
014	DATA GATES AND COMMAND SIGNALS	V10462
015	RPT Cnt, RPT Rdy, and RPT Data(0:2,5,10,11)	V10463
016	RPT Data(12:23)	V10464
017	TRANSMITTERS FOR INTERRUPT SIGNALS	V11071

Tape Reader Controller (TRC)		
TRC001	SELECTION CIRCUITS	V10428
002	START READER AND BUSY CIRCUITS	V10429
003	PARITY CHECK AND STATUS BUFFER CIRCUITS	V10430
004	DATA BUFFER CIRCUITS	V10431
	RC 4000 Interface Circuits in RC 2000	V11621

Punch Controller (PUC)		
PUC001	SELECTED CIRCUITS AND STATUS BUFFER CIRCUITS	V10424
002	PUNCH TIMING CIRCUITS AND LOCAL MODE CIRCUITS	V10425
003	DATA CIRCUITS	V10426
004	WATCH DOG TIMER AND STATUS BUFFER CIRCUITS	V10427

Typewriter Controller (TYC)		Dwg. No.
TYC001	SELECTION CIRCUIT	V10432
002	CONVERTER TIMING AND END OPERATING CIRCUITS	V10433
003	CASE SHIFT LOGIC	V10434
004	KEYBOARD STATUS AND WRITE ENABLE	V10435
005	TYPEWRITER OPERATION AND INPUT SELECTION FEED BACK	V10436
006	PARITY AND INPUT CHECK	V10437
007	REG.(20) - REG.(23)	V10438
008	REG.(17) - REG.(18), CODE UC AND PRINT	V10439
009	FUNCTION INPUT REGISTER, END OF LINE	V10440
010	SELECTION INPUT	V10441
011	MAGNET DRIVERS	V10442
012	LOCAL - REMOTE CIRCUIT	V10443
013	OUTPUT CONVERTER	V10833
014	INPUT CONVERTER	V10834
015	CONVERTER CURRENT DRIVER (COLUMN DRIVER)	V10835
016	CONVERTER SINK DRIVER (ROW DRIVER)	V10836
017	CROSS WIRING PLUG 1204 - 1206	V10921
018	CROSS WIRING PLUG 1205 - 1206	V10922
020	CROSS WIRING PLUG 1205 - 1206	V10923
029	PLUG 1201 AND 1202	V10970
036	TIMER CIRCUIT	V11059
037	TYPEWRITER TO ISO CODE	V11528
038	ISO TO TYPEWRITER CODE	V11529
039	Opr.Key/Input lampe og Local/Remote lampe	V20805
040	Diagram efter ændring i correspondance I/O wiring	V20793

Timing (TIM)		
TIM001	TIME REGISTER (10:14)	V10990
002	TIME REGISTER (15:23)	V10991
003	INTERRUPT INTERVAL SELECTION	V10992
004	INTERRUPT INTERVAL SELECTION	V10993
005	TIME REGISTER CONTROL	V10994
006	INTERCONNECTION OF CONNECTORS	V10995



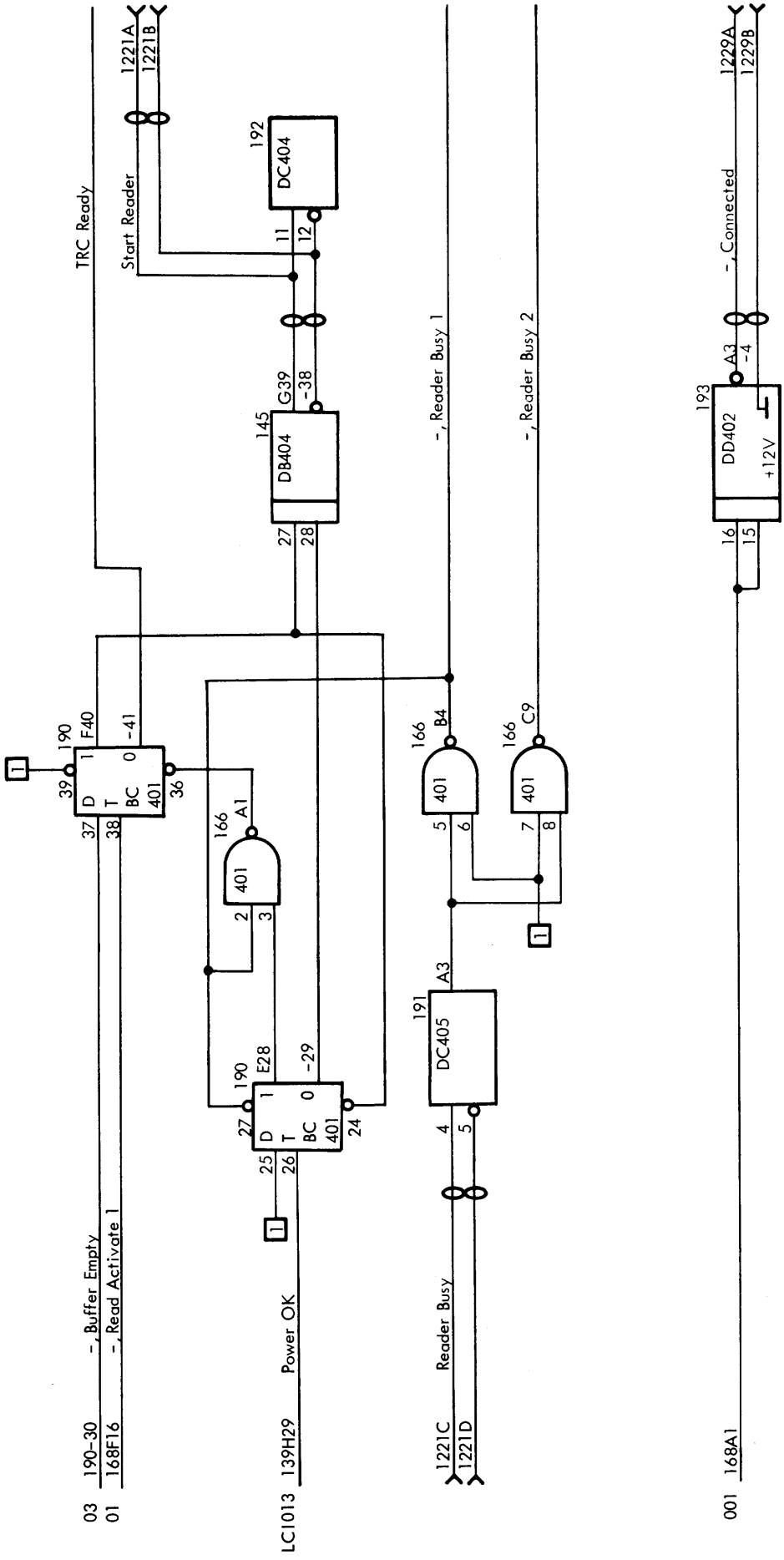
RC4000

V10428

SELECTION CIRCUITS

Logic Diagram

TRC001



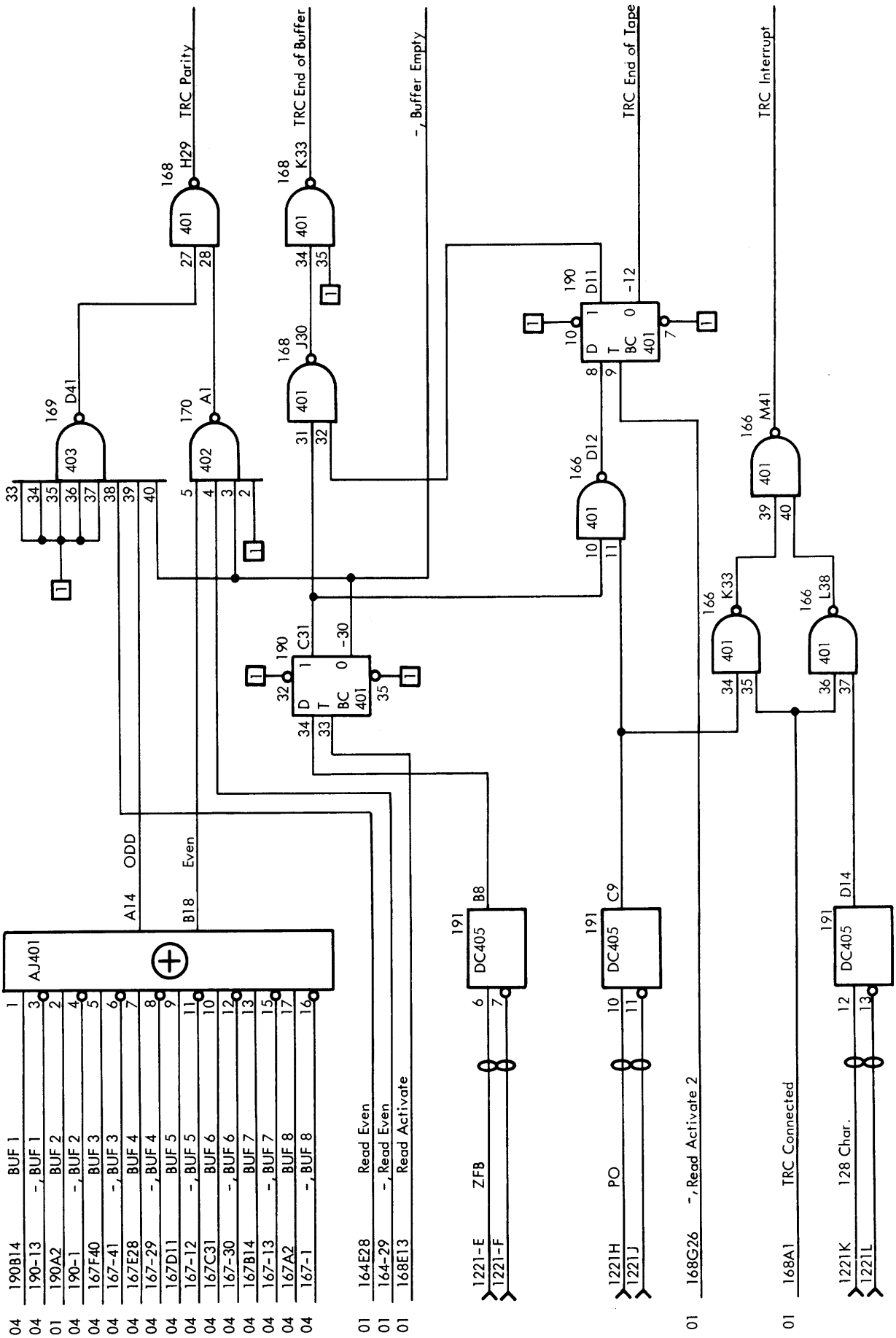
RC4000

START READER AND BUSY CIRCUITS

TRC002

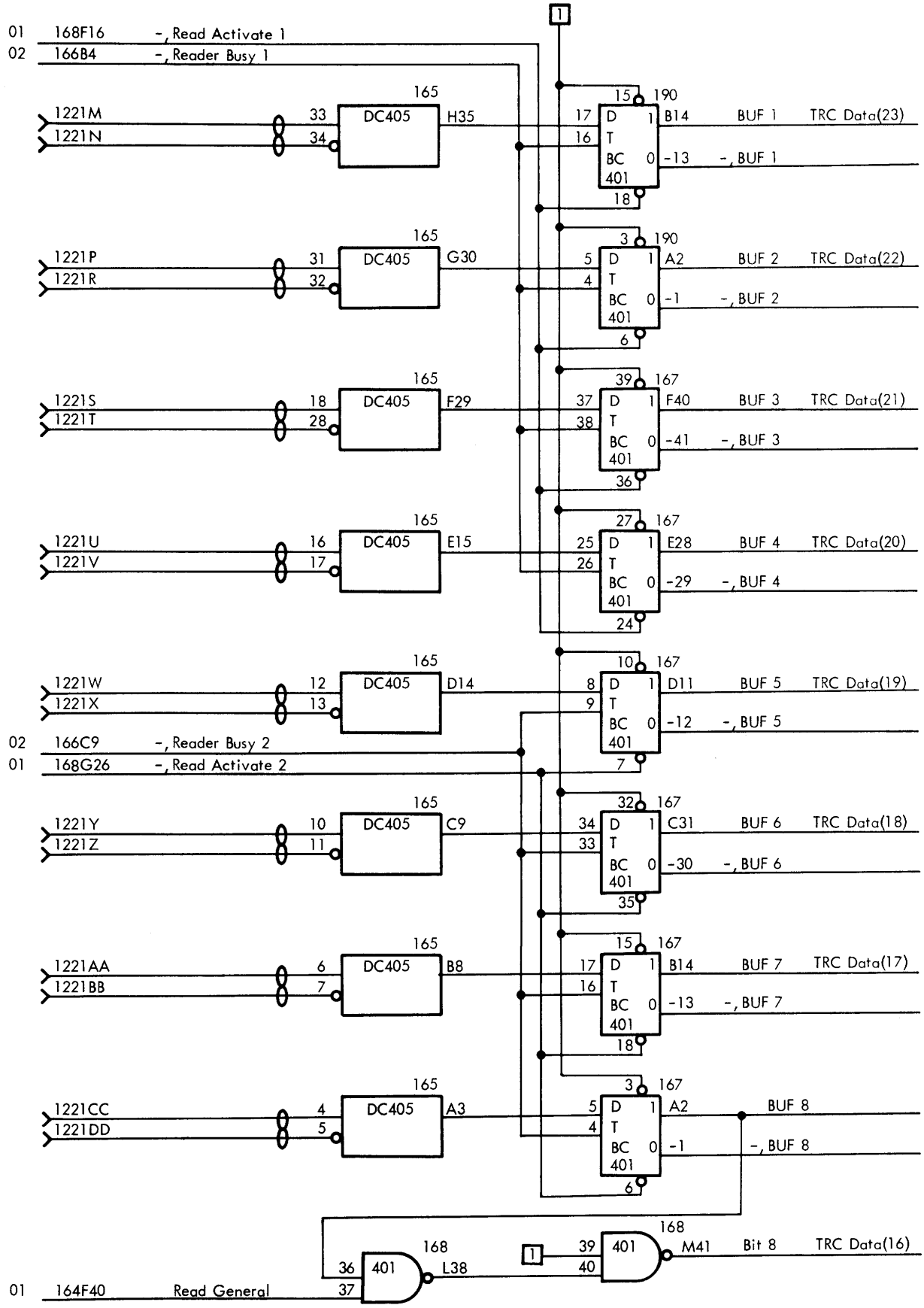
V10429

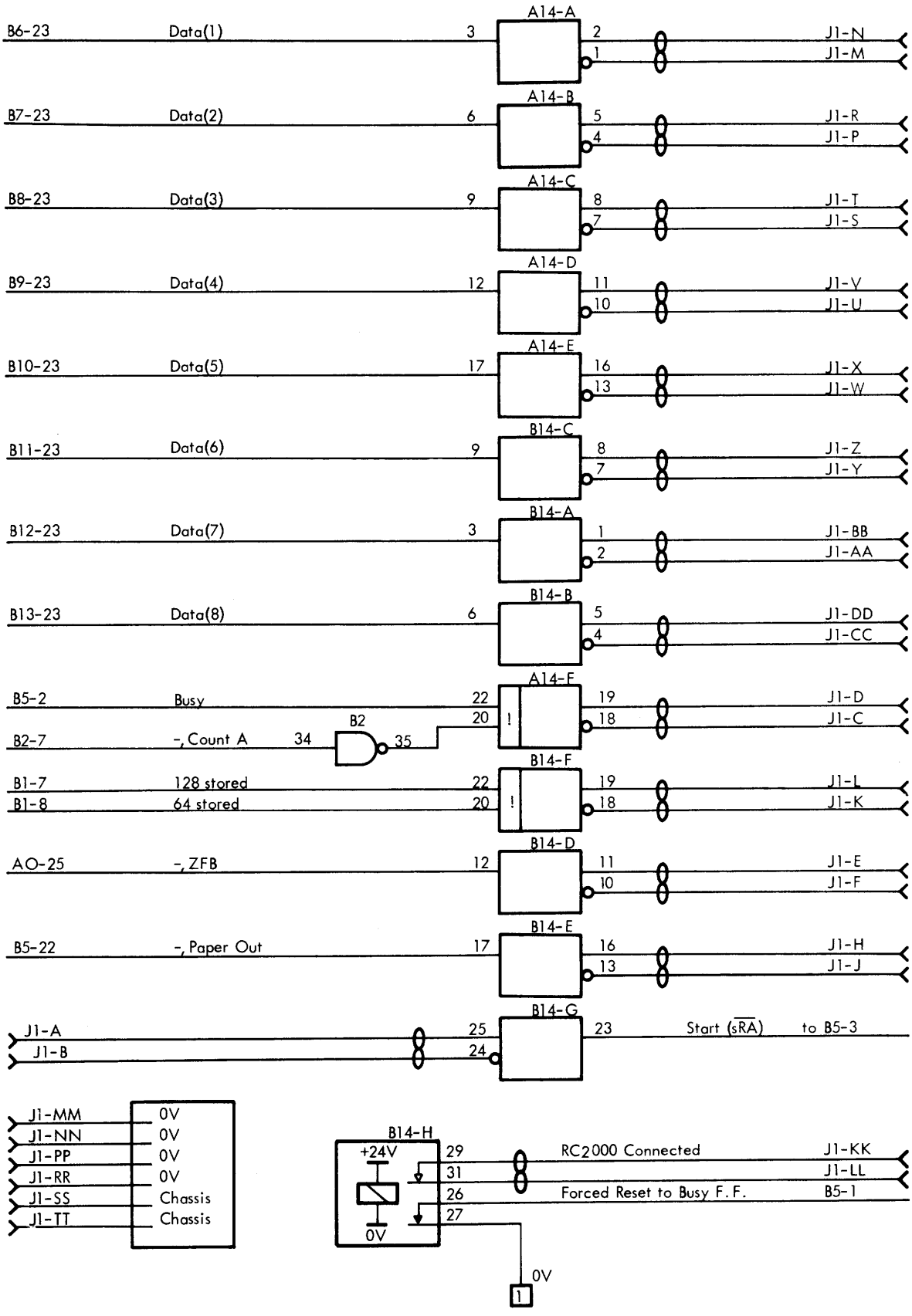
Logic Diagram



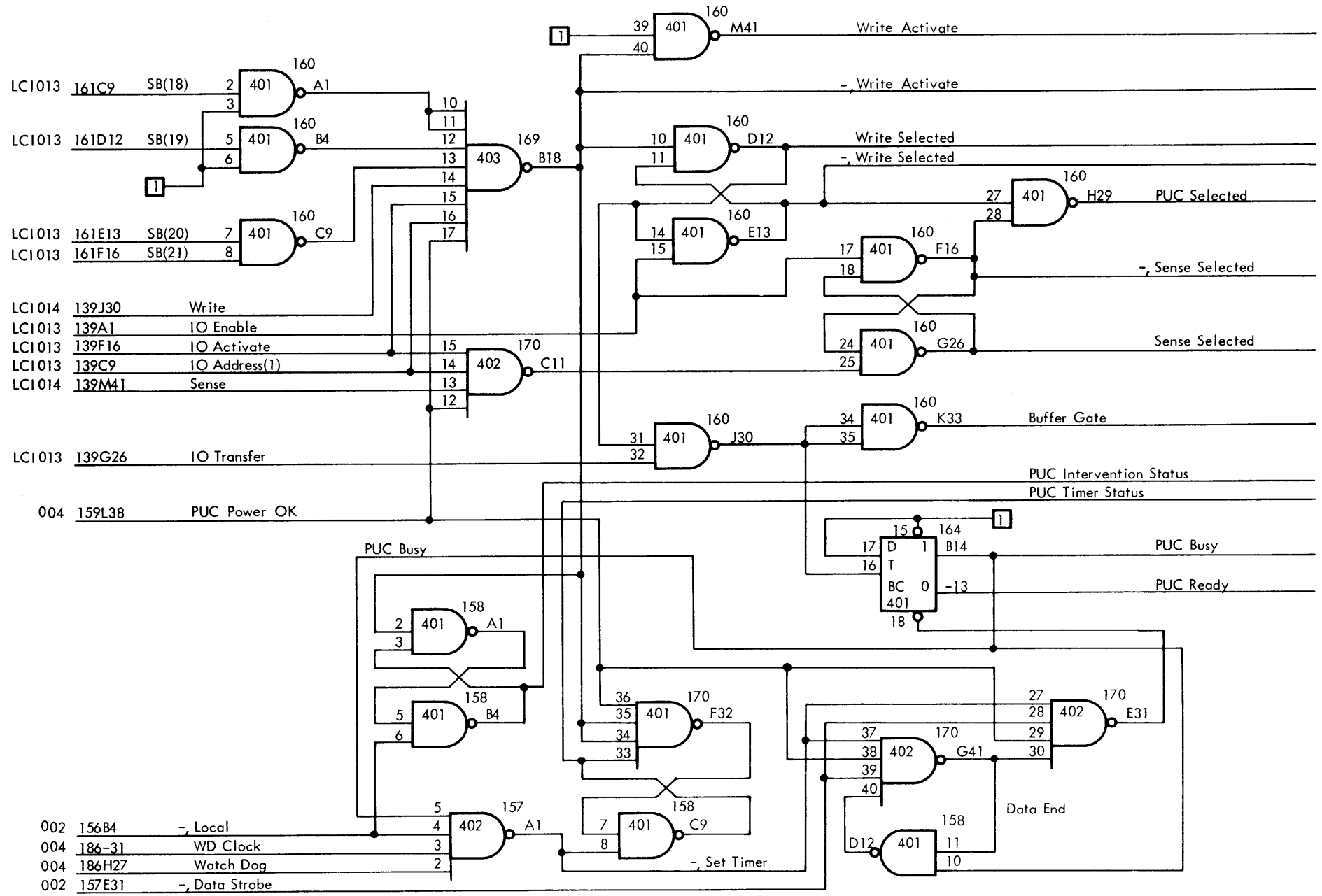
RC4000 PARITY CHECK AND STATUS BUFFER CIRCUITS TRC003

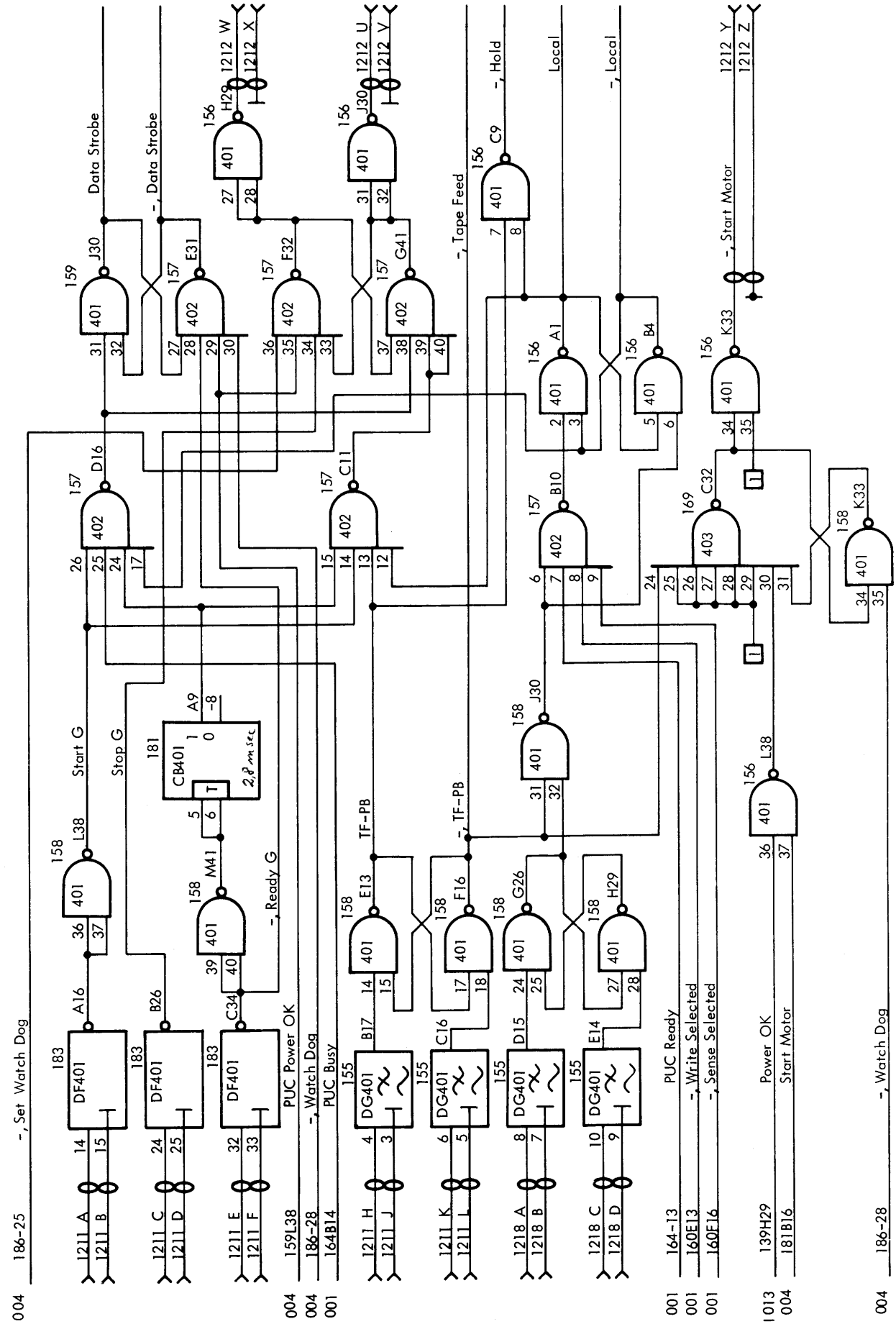
V10430 Logic Diagram


01 168F16 -, Read Activate 1
02 166B4 -, Reader Busy 1
1221M
1221N
33
34
165
DC405
H35
1221P
1221R
31
32
G30
1221S
1221T
18
28
F29
1221U
1221V
16
17
E15
1221W
1221X
12
13
D14
02 166C9 -, Reader Busy 2
01 168G26 -, Read Activate 2
1221Y
1221Z
10
11
C9
1221AA
1221BB
6
7
B8
1221CC
1221DD
4
5
A3
01 164F40 Read General
36
37
168
401
L38
1
39
40
M41
Bit 8
TRC Data(16)
15
190
17
16
D
T
BC
401
1
0
B14
-13
BUF 1
-, BUF 1
18
TRC Data(23)
3
A2
-1
BUF 2
-, BUF 2
6
TRC Data(22)
39
167
37
38
F40
-41
BUF 3
-, BUF 3
36
TRC Data(21)
27
25
26
E28
-29
BUF 4
-, BUF 4
24
TRC Data(20)
10
8
9
D11
-12
BUF 5
-, BUF 5
7
TRC Data(19)
32
34
33
C31
-30
BUF 6
-, BUF 6
35
TRC Data(18)
B14
-13
BUF 7
-, BUF 7
TRC Data(17)
A2
-1
BUF 8
-, BUF 8



Note: Posistive Logic


LC1013 161C9 SB(18)
LC1013 161D12 SB(19)
LC1013 161E13 SB(20)
LC1013 161F16 SB(21)
LC1014 139J30 Write
LC1013 139A1 IO Enable
LC1013 139F16 IO Activate
LC1013 139C9 IO Address(1)
LC1014 139M41 Sense
LC1013 139G26 IO Transfer
004 159L38 PUC Power OK
002 156B4 -, Local
004 186-31 WD Clock
004 186H27 Watch Dog
002 157E31 -, Data Strobe
Write Activate
-, Write Activate
Write Selected
-, Write Selected
PUC Selected
-, Sense Selected
Sense Selected
Buffer Gate
PUC Intervention Status
PUC Timer Status
PUC Busy
PUC Ready
-, Set Timer
Data End



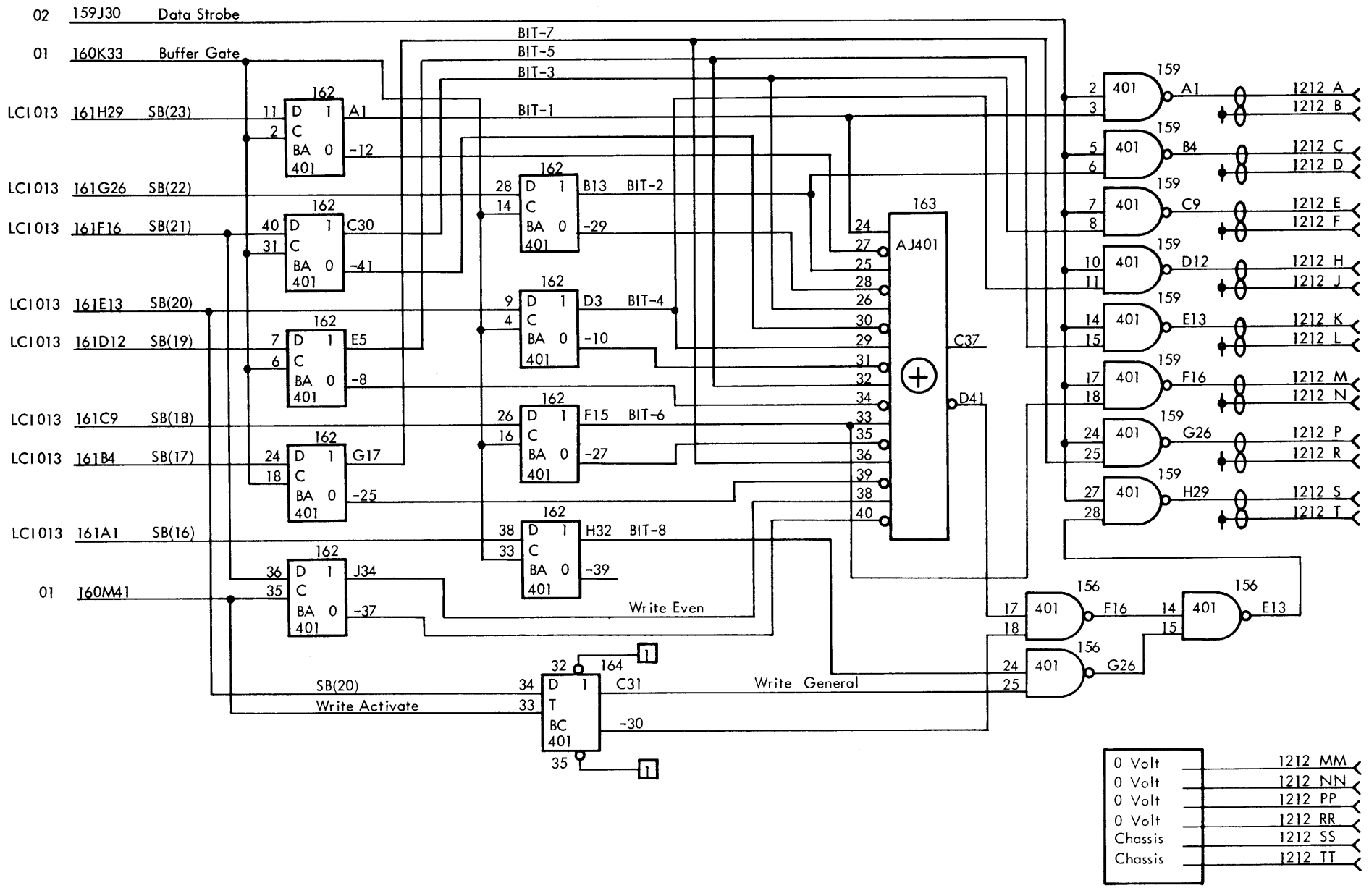
RC4000

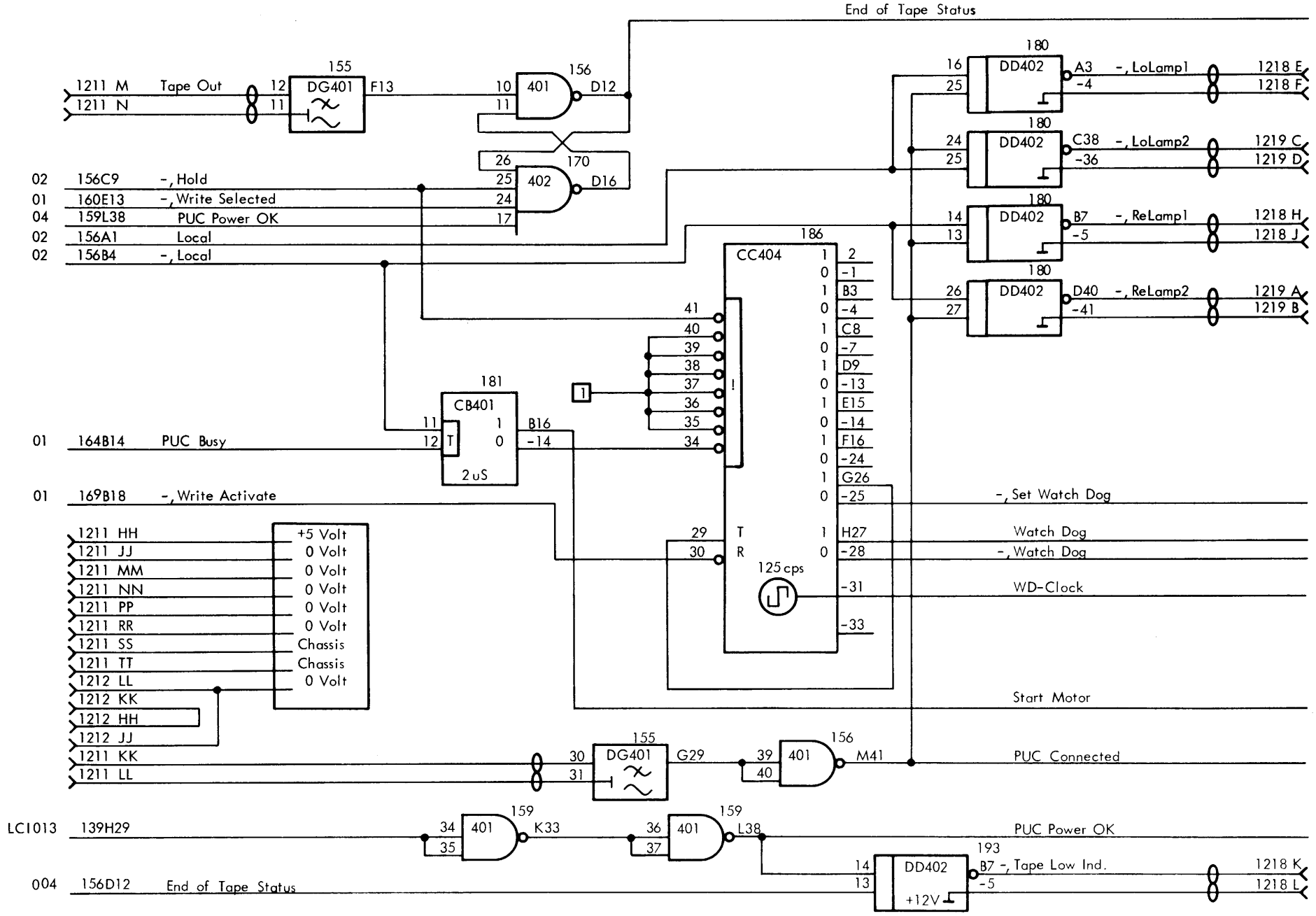
PUNCH TIMING CIRCUITS AND LOCAL MODE CIRCUITS

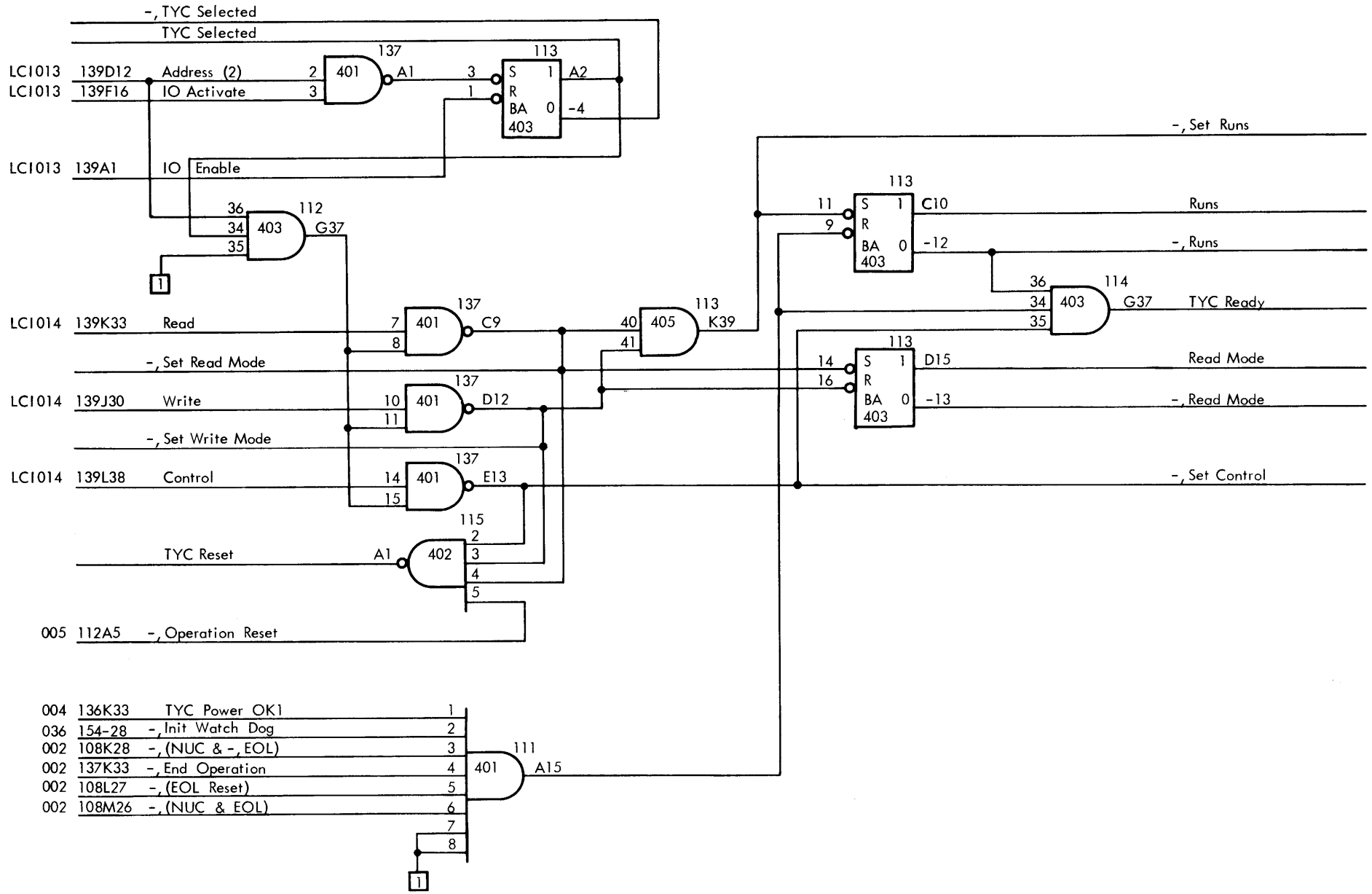
PUC002

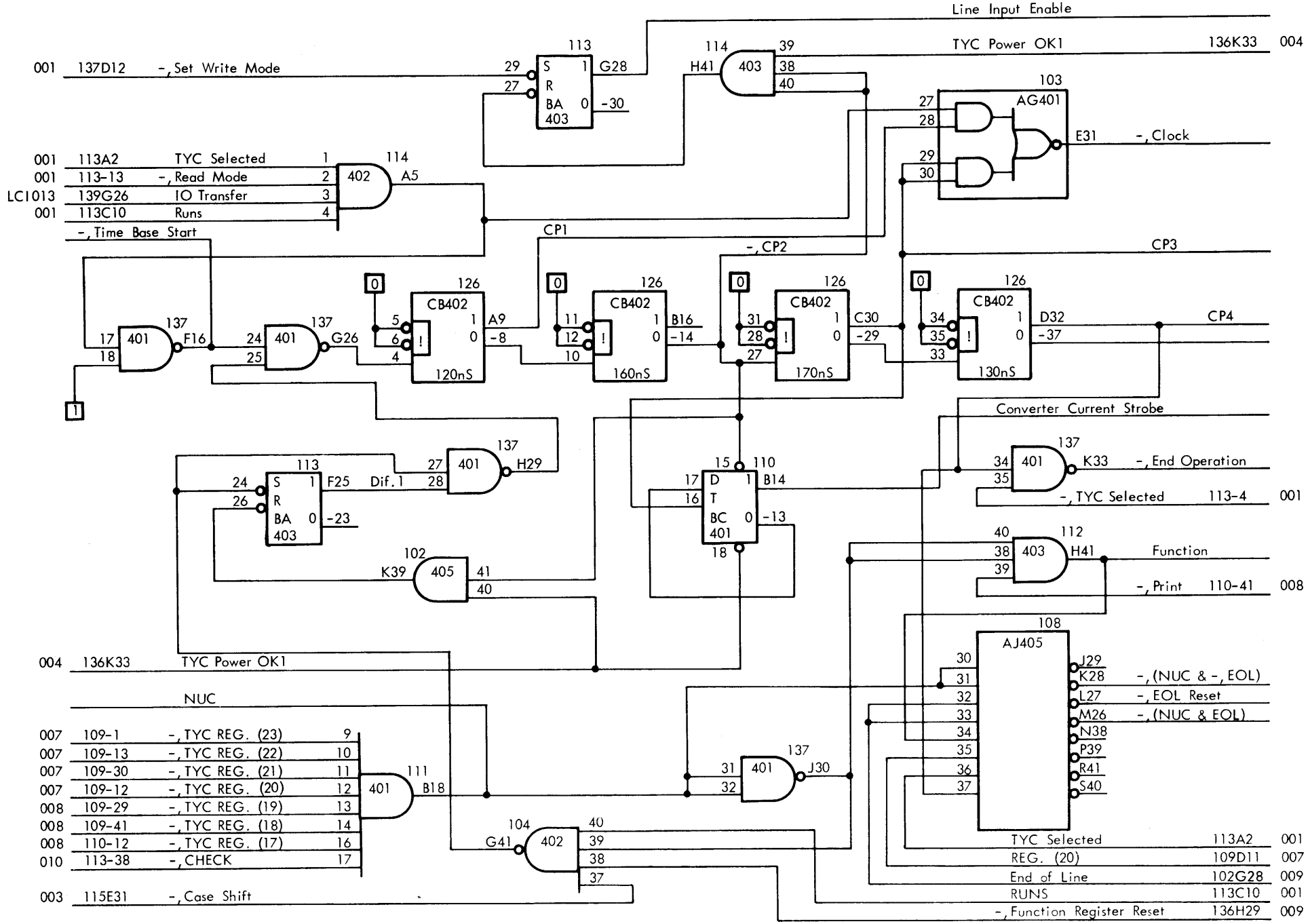
V10425

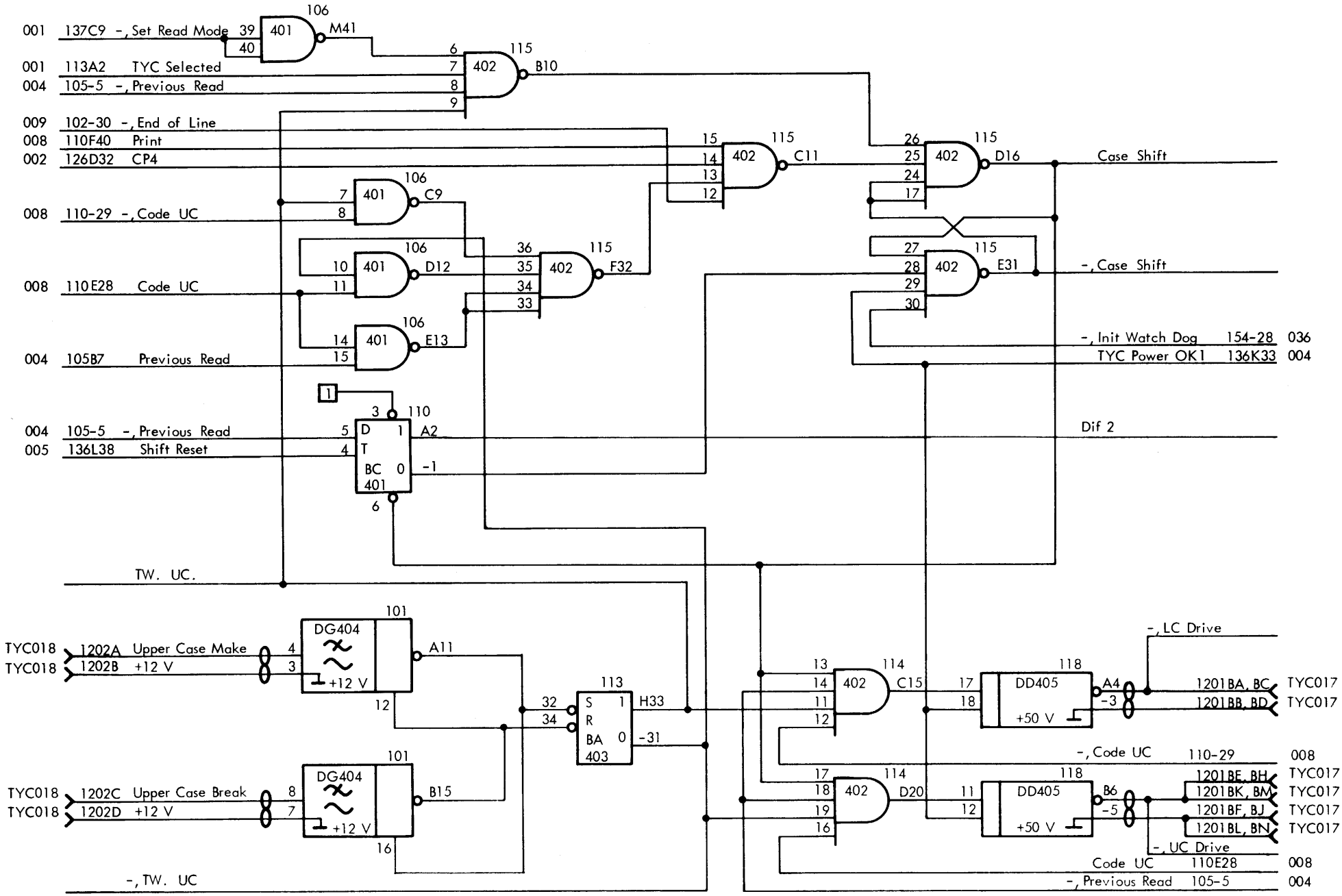
Logic Diagram


02 159J30 Data Strobe
01 160K33 Buffer Gate
01 160M41
LCI013 161H29 SB(23)
LCI013 161G26 SB(22)
LCI013 161F16 SB(21)
LCI013 161E13 SB(20)
LCI013 161D12 SB(19)
LCI013 161C9 SB(18)
LCI013 161B4 SB(17)
LCI013 161A1 SB(16)
BIT-7
BIT-5
BIT-3
BIT-1
BIT-2
BIT-4
BIT-6
BIT-8
162
A1
-12
C30
-41
B13
-29
D3
-10
E5
-8
F15
-27
G17
-25
H32
-39
J34
-37
Write Even
164
C31
-30
SB(20)
Write Activate
Write General
163
AJ401
C37
D41
159
A1
B4
C9
D12
E13
F16
G26
H29
1212 A
1212 B
1212 C
1212 D
1212 E
1212 F
1212 H
1212 J
1212 K
1212 L
1212 M
1212 N
1212 P
1212 R
1212 S
1212 T
156
F16
E13
G26
0 Volt
0 Volt
0 Volt
0 Volt
Chassis
Chassis
1212 MM
1212 NN
1212 PP
1212 RR
1212 SS
1212 TT


End of Tape Status
1211 M Tape Out
1211 N
155
DG401
F13
156
401
D12
26
170
402
D16
02 156C9 -, Hold
01 160E13 -, Write Selected
04 159L38 PUC Power OK
02 156A1 Local
02 156B4 -, Local
180
DD402
A3 -, LoLamp1 1218 E 1218 F
C38 -, LoLamp2 1219 C 1219 D
B7 -, ReLamp1 1218 H 1218 J
D40 -, ReLamp2 1219 A 1219 B
186
CC404
41 40 39 38 37 36 35 34
1 2 -1 B3 -4 C8 -7 D9 -13 E15 -14 F16 -24 G26 -25 H27 -28 -31 -33
181
CB401
2 uS
B16 -14
01 164B14 PUC Busy
01 169B18 -, Write Activate
125 cps
-, Set Watch Dog
Watch Dog
-, Watch Dog
WD-Clock
1211 HH +5 Volt
1211 JJ 0 Volt
1211 MM 0 Volt
1211 NN 0 Volt
1211 PP 0 Volt
1211 RR 0 Volt
1211 SS Chassis
1211 TT Chassis
1212 LL 0 Volt
1212 KK
1212 HH
1212 JJ
1211 KK
1211 LL
Start Motor
G29
M41
PUC Connected
159
K33
L38
LC1013 139H29
PUC Power OK
193
DD402
+12V
B7 -, Tape Low Ind. 1218 K 1218 L
004 156D12 End of Tape Status

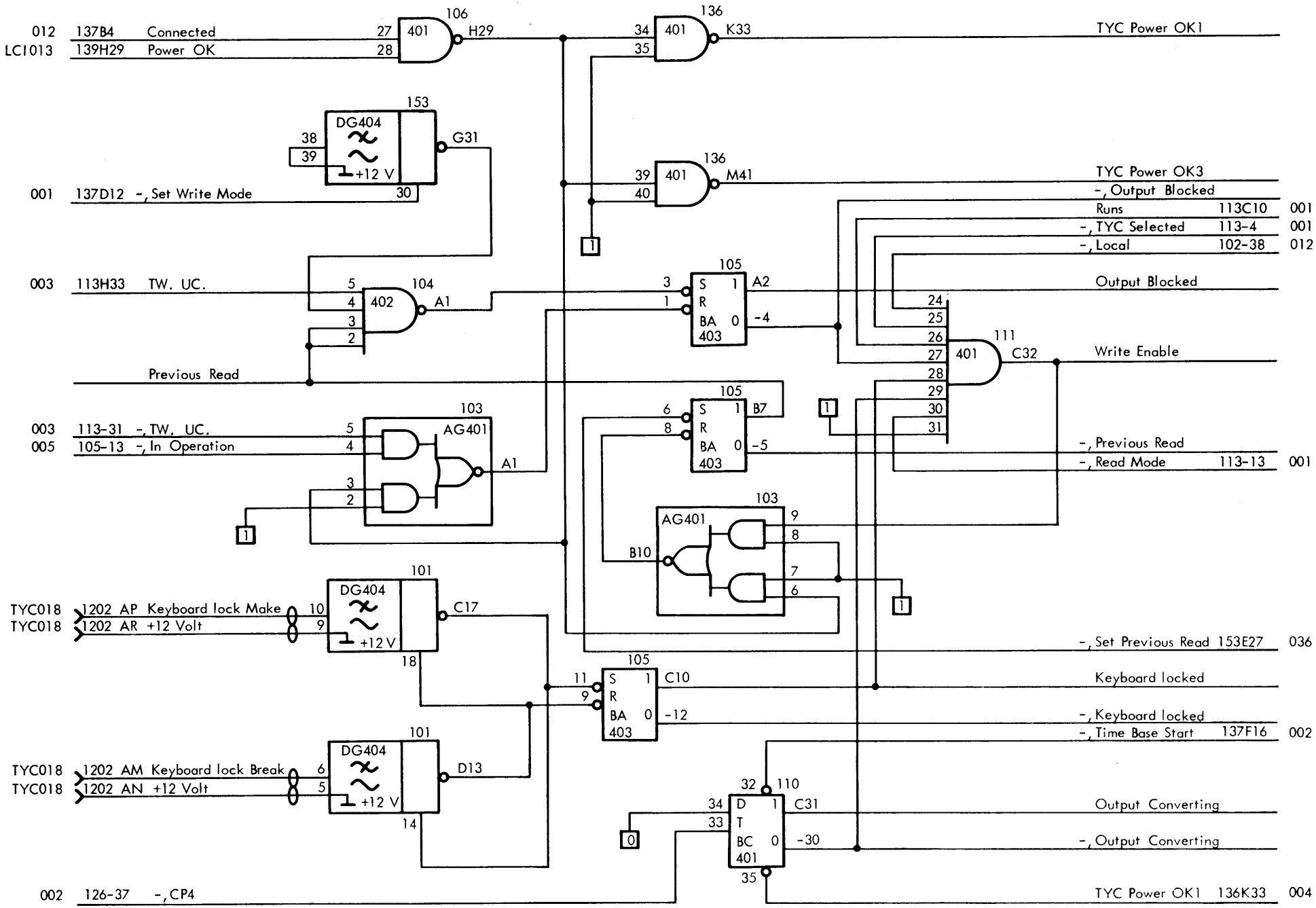

-, TYC Selected
TYC Selected
LCI013 139D12 Address (2)
LCI013 139F16 IO Activate
LCI013 139A1 IO Enable
137
401
A1
113
S 1
R
BA 0
403
A2
-4
112
403
G37
LCI014 139K33 Read
LCI014 139J30 Write
LCI014 139L38 Control
-, Set Read Mode
-, Set Write Mode
C9
D12
E13
405
K39
TYC Reset
402
115
005 112A5 -, Operation Reset
004 136K33 TYC Power OK1
036 154-28 -, Init Watch Dog
002 108K28 -, (NUC & -, EOL)
002 137K33 -, End Operation
002 108L27 -, (EOL Reset)
002 108M26 -, (NUC & EOL)
111
A15
-, Set Runs
C10
-12
Runs
-, Runs
114
TYC Ready
D15
-13
Read Mode
-, Read Mode
-, Set Control


Line Input Enable
001 137D12 -, Set Write Mode
113
S 1 G28
R
BA 0 -30
403
29
27
114
H41
403
39
38
40
TYC Power OK1 136K33 004
103
AG401
E31 -, Clock
27
28
29
30
001 113A2 TYC Selected 1
001 113-13 -, Read Mode 2
LC1013 139G26 IO Transfer 3
001 113C10 Runs 4
114
402
A5
-, Time Base Start
CP1
-, CP2
CP3
CP4
126
CB402
A9 -8 120nS
B16 -14 160nS
C30 -29 170nS
D32 -37 130nS
137
401
F16
G26
H29
J30
K33 -, End Operation
-, TYC Selected 113-4 001
Converter Current Strobe
113
S 1 F25 Dif.1
R
BA 0 -23
403
27
28
24
26
102
K39
405
41
40
110
D 1 B14
T
BC 0 -13
401
15
17
16
18
112
H41
403
Function
-, Print 110-41 008
108
AJ405
J29
K28 -, (NUC & -, EOL)
L27 -, EOL Reset
M26 -, (NUC & EOL)
N38
P39
R41
S40
004 136K33 TYC Power OK1
NUC
007 109-1 -, TYC REG. (23) 9
007 109-13 -, TYC REG. (22) 10
007 109-30 -, TYC REG. (21) 11
007 109-12 -, TYC REG. (20) 12
008 109-29 -, TYC REG. (19) 13
008 109-41 -, TYC REG. (18) 14
008 110-12 -, TYC REG. (17) 16
010 113-38 -, CHECK 17
111
B18
104
G41
402
003 115E31 -, Case Shift
TYC Selected 113A2 001
REG. (20) 109D11 007
End of Line 102G28 009
RUNS 113C10 001
-, Function Register Reset 136H29 009


001 137C9 -, Set Read Mode
001 113A2 TYC Selected
004 105-5 -, Previous Read
009 102-30 -, End of Line
008 110F40 Print
002 126D32 CP4
008 110-29 -, Code UC
008 110E28 Code UC
004 105B7 Previous Read
004 105-5 -, Previous Read
005 136L38 Shift Reset
TW. UC.
-, TW. UC
TYC018 1202A Upper Case Make
TYC018 1202B +12 V
TYC018 1202C Upper Case Break
TYC018 1202D +12 V
DG404
+12 V
401
402
403
DD405
+50 V
Case Shift
-, Case Shift
-, Init Watch Dog 154-28 036
TYC Power OK1 136K33 004
Dif 2
-, LC Drive
1201BA, BC TYC017
1201BB, BD TYC017
-, Code UC 110-29 008
1201BE, BH TYC017
1201BK, BM TYC017
1201BF, BJ TYC017
1201BL, BN TYC017
-, UC Drive
Code UC 110E28 008
-, Previous Read 105-5 004

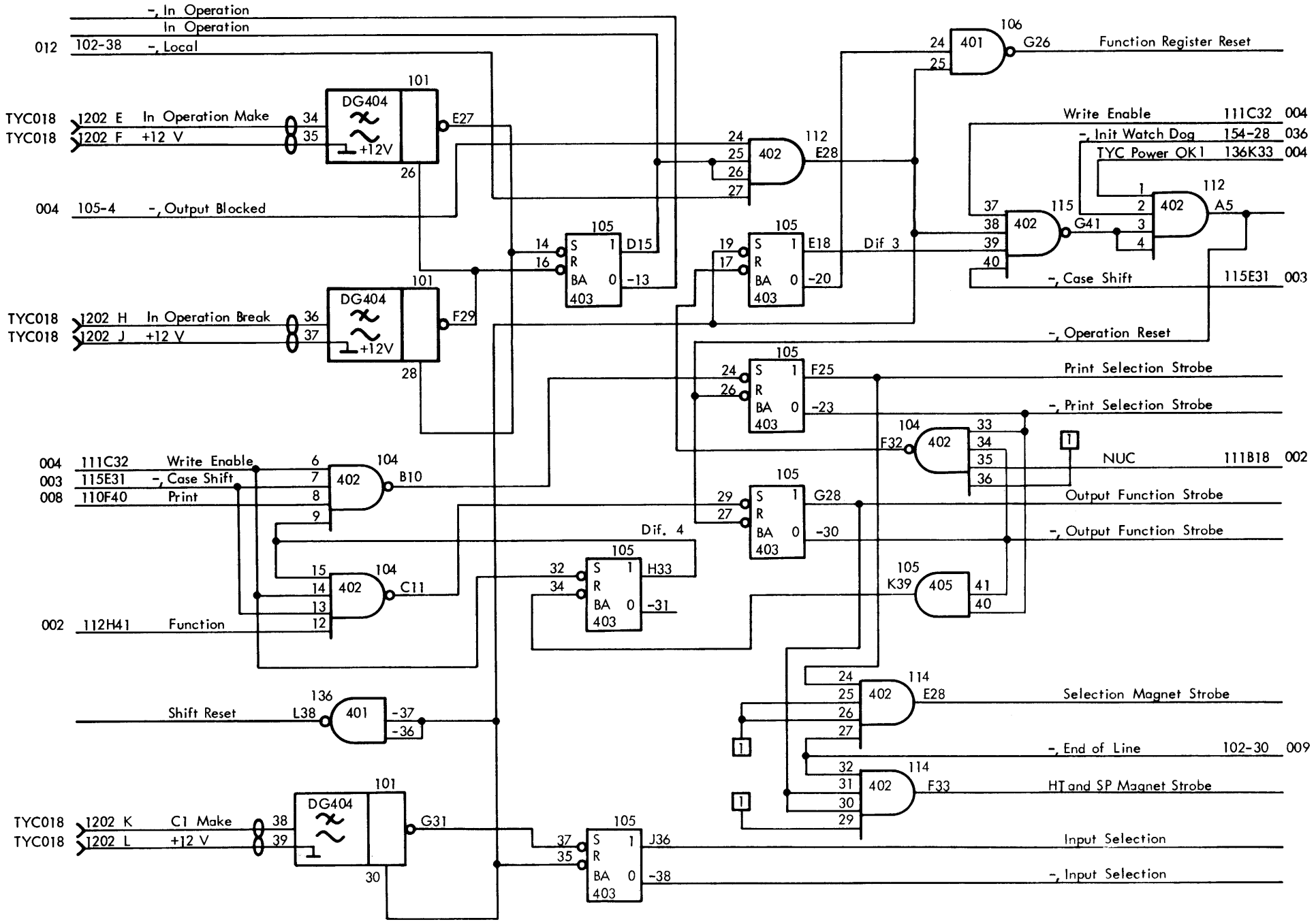
KEYBOARD STATUS AND WRITE ENABLE

Logic Diagram



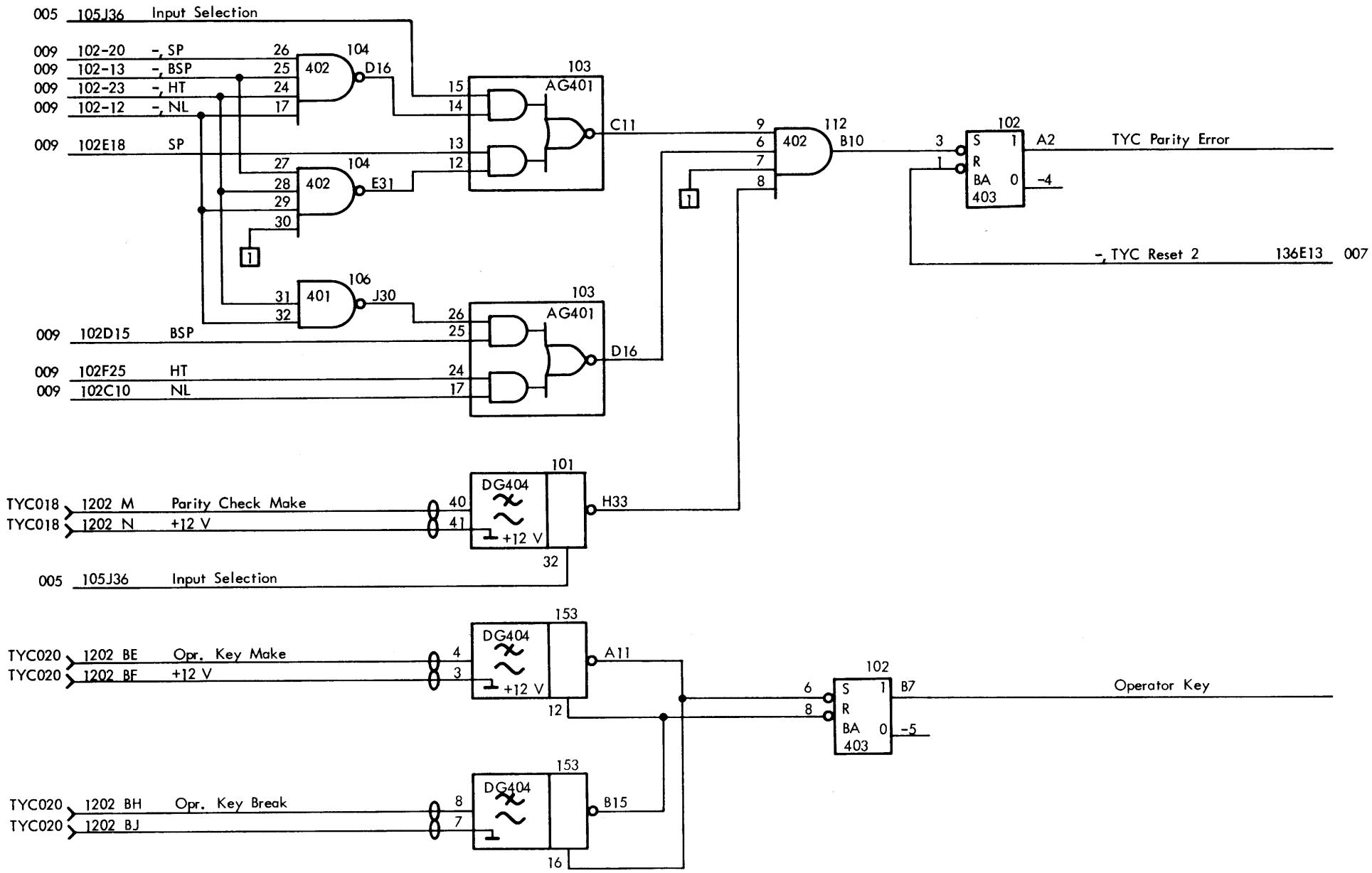
TYPEWRITER OPERATION AND INPUT SELECTION FEED BACK

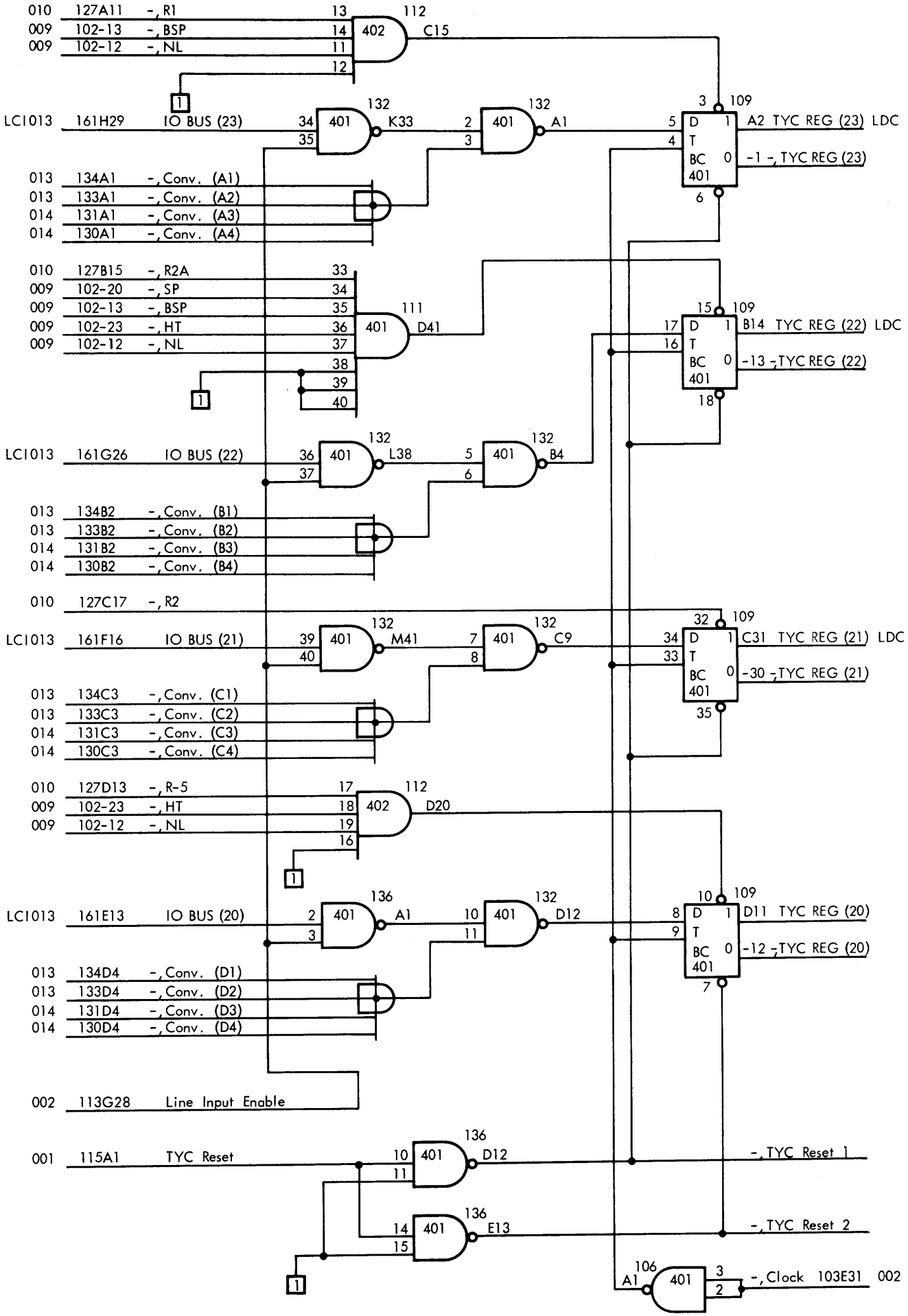
Logic Diagram



PARITY AND INPUT CHECK

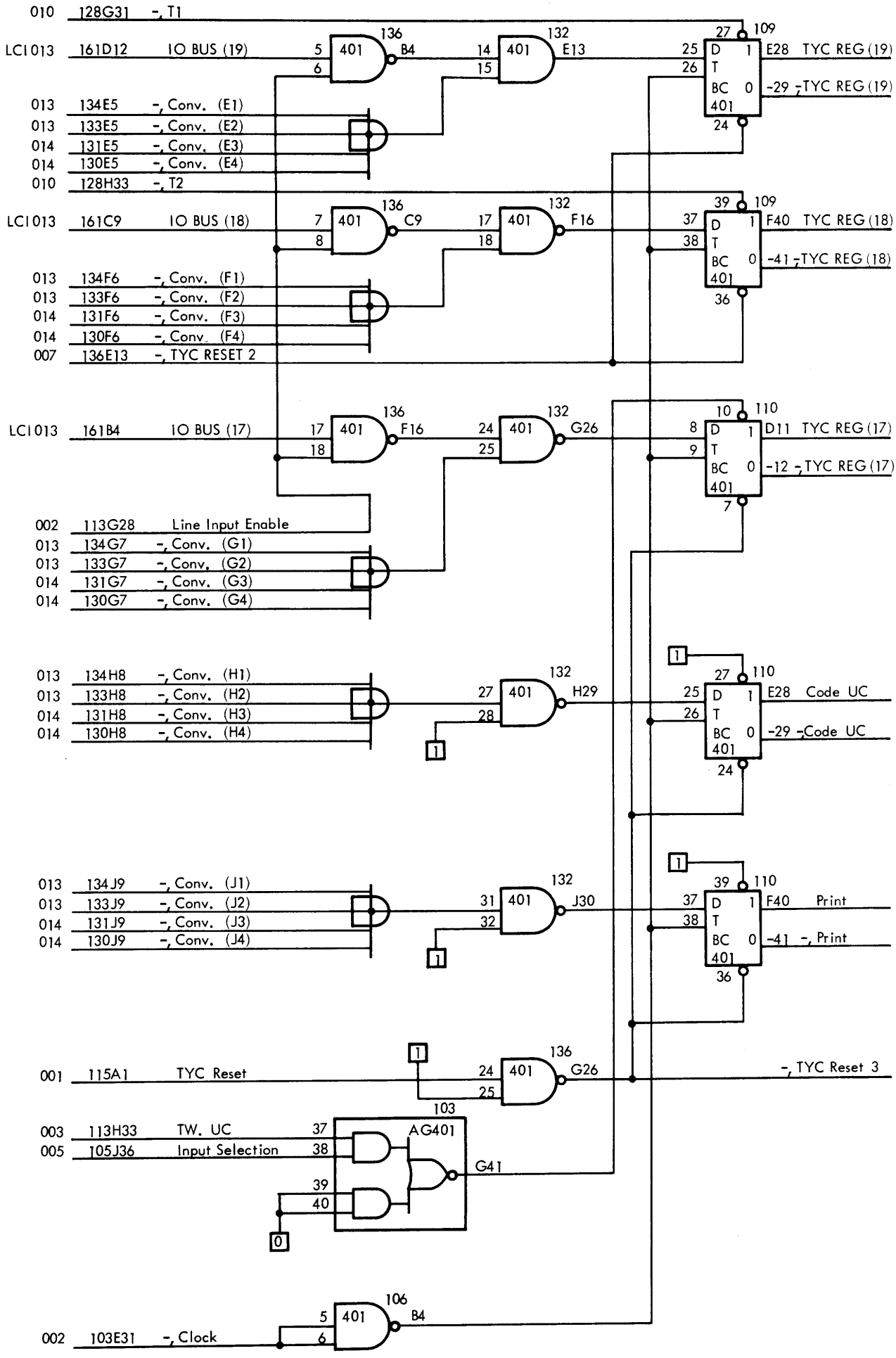
Logic Diagram





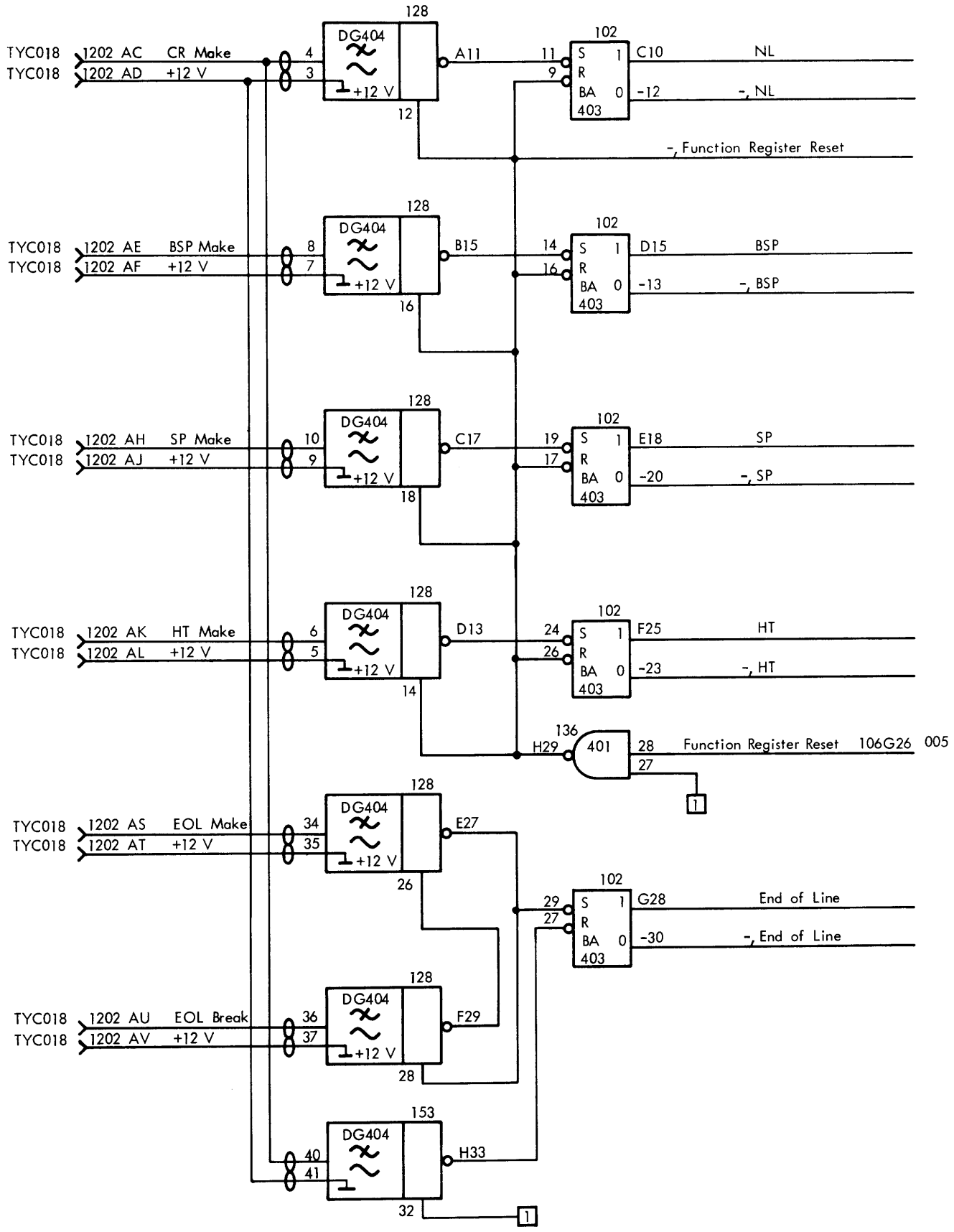
RC4000 REG. (20) - REG. (23) TYC007

V10438 Logic Diagram



RC4000 REG, (17) - REG. (19), CODE UC AND PRINT TYC008

V10439 Logic Diagram



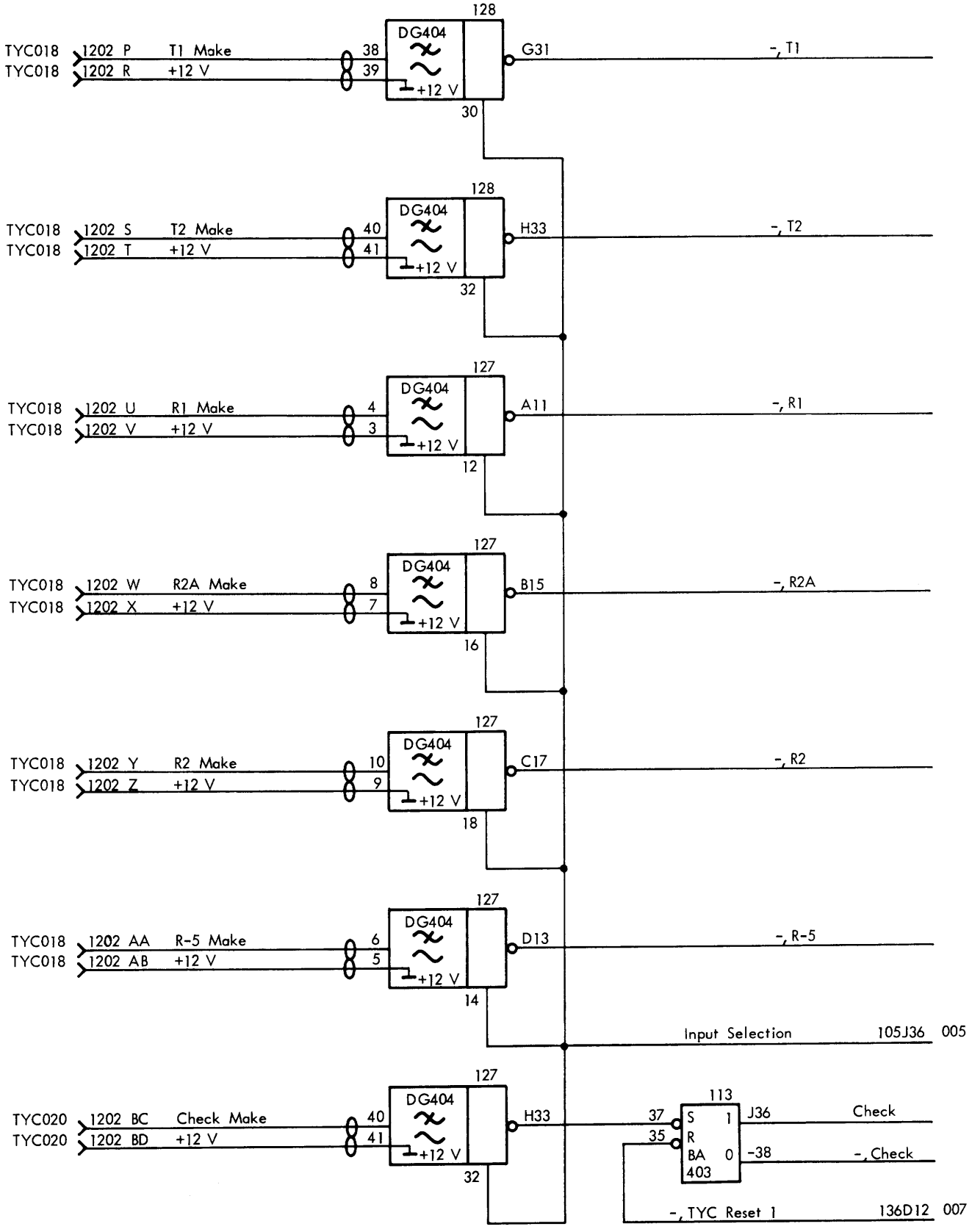
RC4000

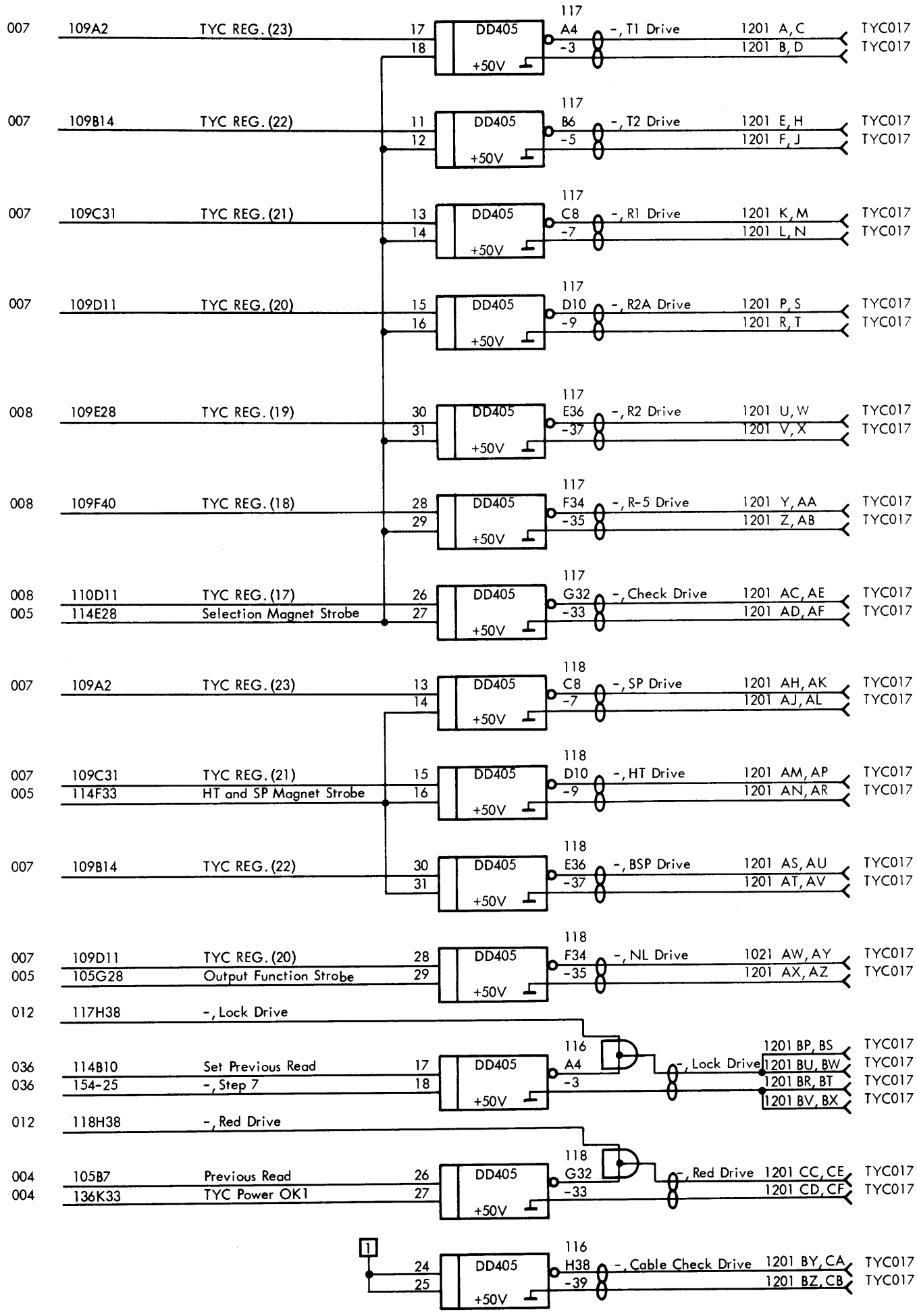
FUNCTION INPUT REGISTER, END OF LINE

TYC009

V10440

Logic Diagram


TYC018 1202 P T1 Make
TYC018 1202 R +12 V
38
39
128
DG404
+12 V
30
G31
-, T1
TYC018 1202 S T2 Make
TYC018 1202 T +12 V
40
41
128
DG404
+12 V
32
H33
-, T2
TYC018 1202 U R1 Make
TYC018 1202 V +12 V
4
3
127
DG404
+12 V
12
A11
-, R1
TYC018 1202 W R2A Make
TYC018 1202 X +12 V
8
7
127
DG404
+12 V
16
B15
-, R2A
TYC018 1202 Y R2 Make
TYC018 1202 Z +12 V
10
9
127
DG404
+12 V
18
C17
-, R2
TYC018 1202 AA R-5 Make
TYC018 1202 AB +12 V
6
5
127
DG404
+12 V
14
D13
-, R-5
Input Selection 105J36 005
TYC020 1202 BC Check Make
TYC020 1202 BD +12 V
40
41
127
DG404
+12 V
32
H33
37
35
113
S 1
R
BA 0
403
J36
Check
-38
-, Check
-, TYC Reset 1 136D12 007



RC4000

V10442

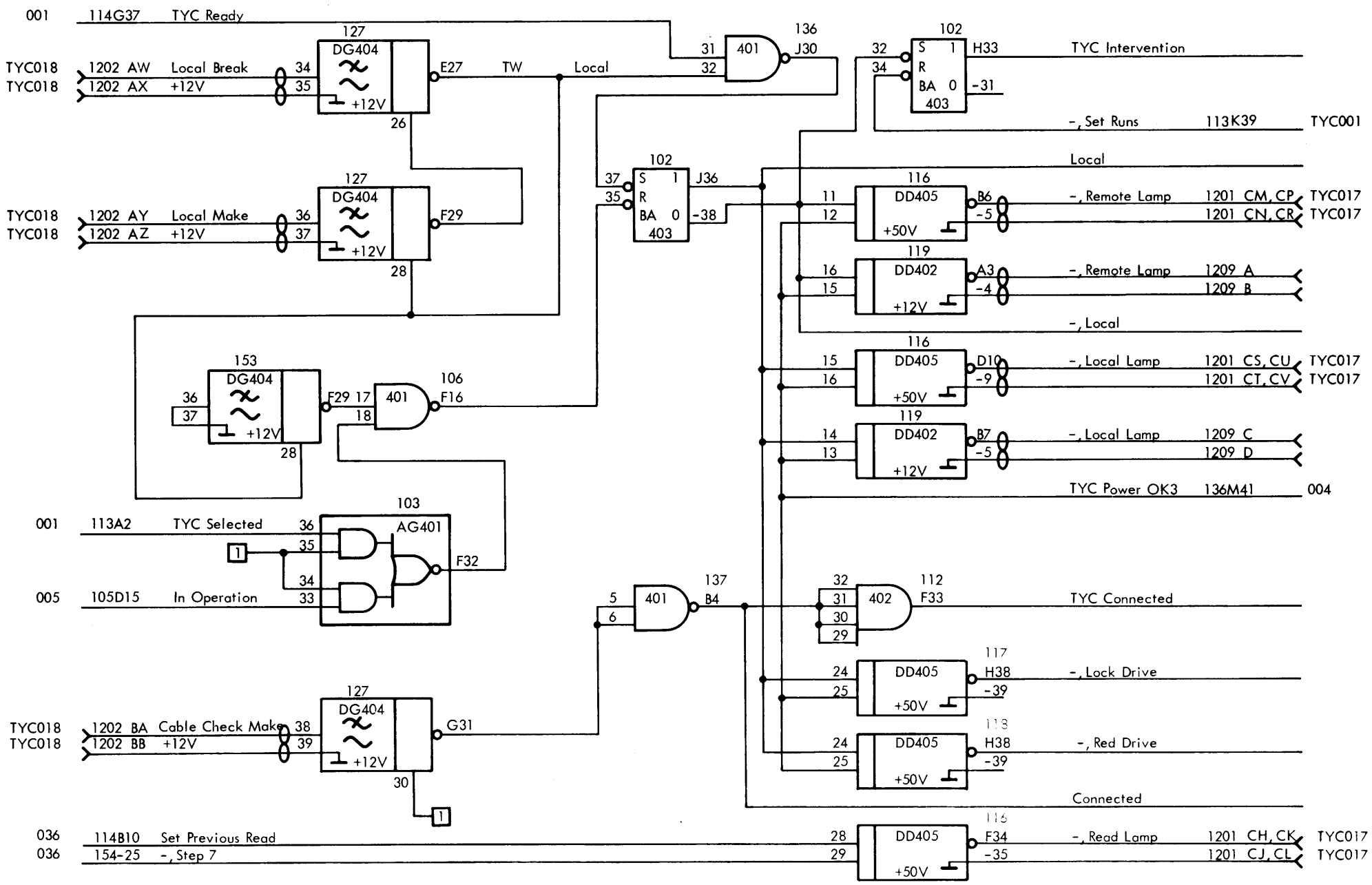
MAGNET DRIVERS

Logic Diagram

TYC011

LOCAL - REMOTE CIRCUIT

Logic Diagram



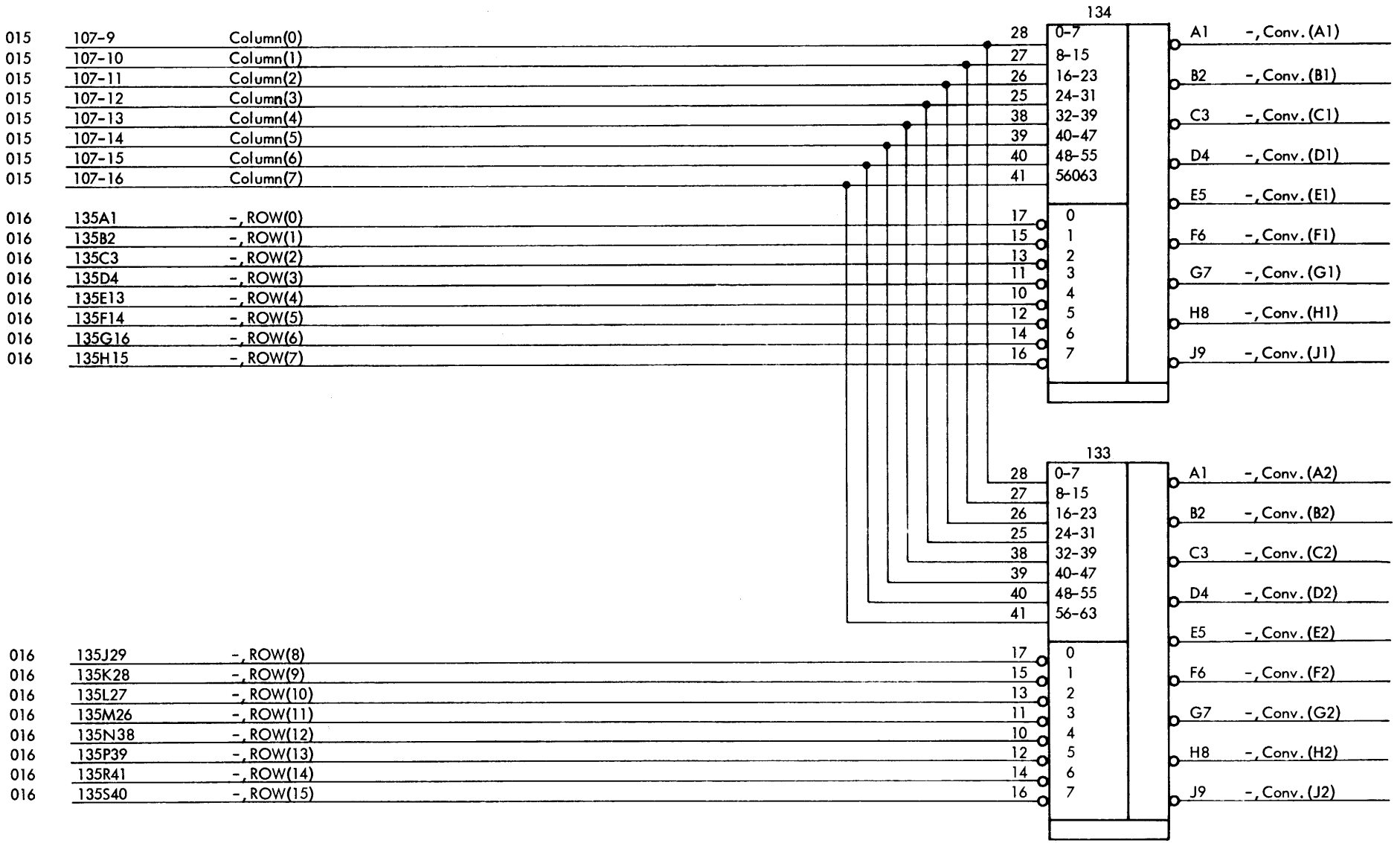
RC4000

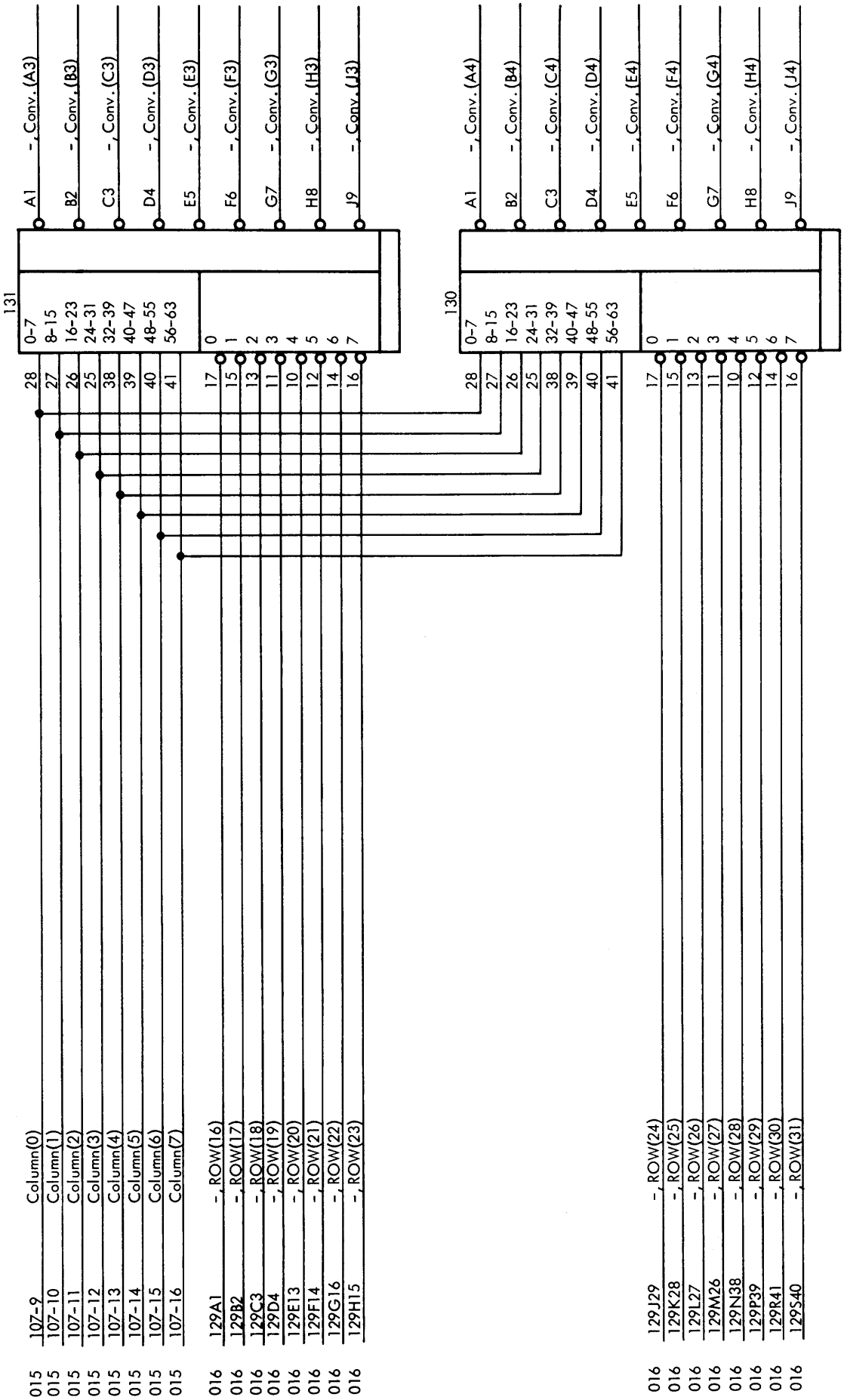
V10833

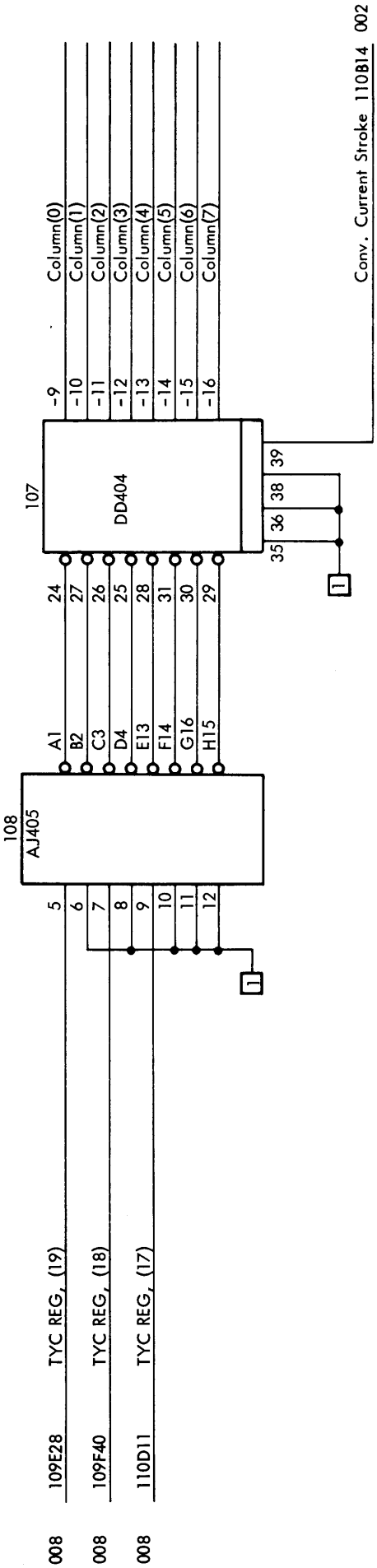
OUTPUT CONVERTER

Logic Diagram

TYC013




131
130
A1 - Conv. (A3)
B2 - Conv. (B3)
C3 - Conv. (C3)
D4 - Conv. (D3)
E5 - Conv. (E3)
F6 - Conv. (F3)
G7 - Conv. (G3)
H8 - Conv. (H3)
J9 - Conv. (J3)
A1 - Conv. (A4)
B2 - Conv. (B4)
C3 - Conv. (C4)
D4 - Conv. (D4)
E5 - Conv. (E4)
F6 - Conv. (F4)
G7 - Conv. (G4)
H8 - Conv. (H4)
J9 - Conv. (J4)
0-7
8-15
16-23
24-31
32-39
40-47
48-55
56-63
10Z-9 Column(0)
10Z-10 Column(1)
10Z-11 Column(2)
10Z-12 Column(3)
10Z-13 Column(4)
10Z-14 Column(5)
10Z-15 Column(6)
10Z-16 Column(7)
129A1 - ROW(16)
129B2 - ROW(17)
129C3 - ROW(18)
129D4 - ROW(19)
129E13 - ROW(20)
129F14 - ROW(21)
129G16 - ROW(22)
129H15 - ROW(23)
129J29 - ROW(24)
129K28 - ROW(25)
129L27 - ROW(26)
129M26 - ROW(27)
129N38 - ROW(28)
129P39 - ROW(29)
129R41 - ROW(30)
129S40 - ROW(31)



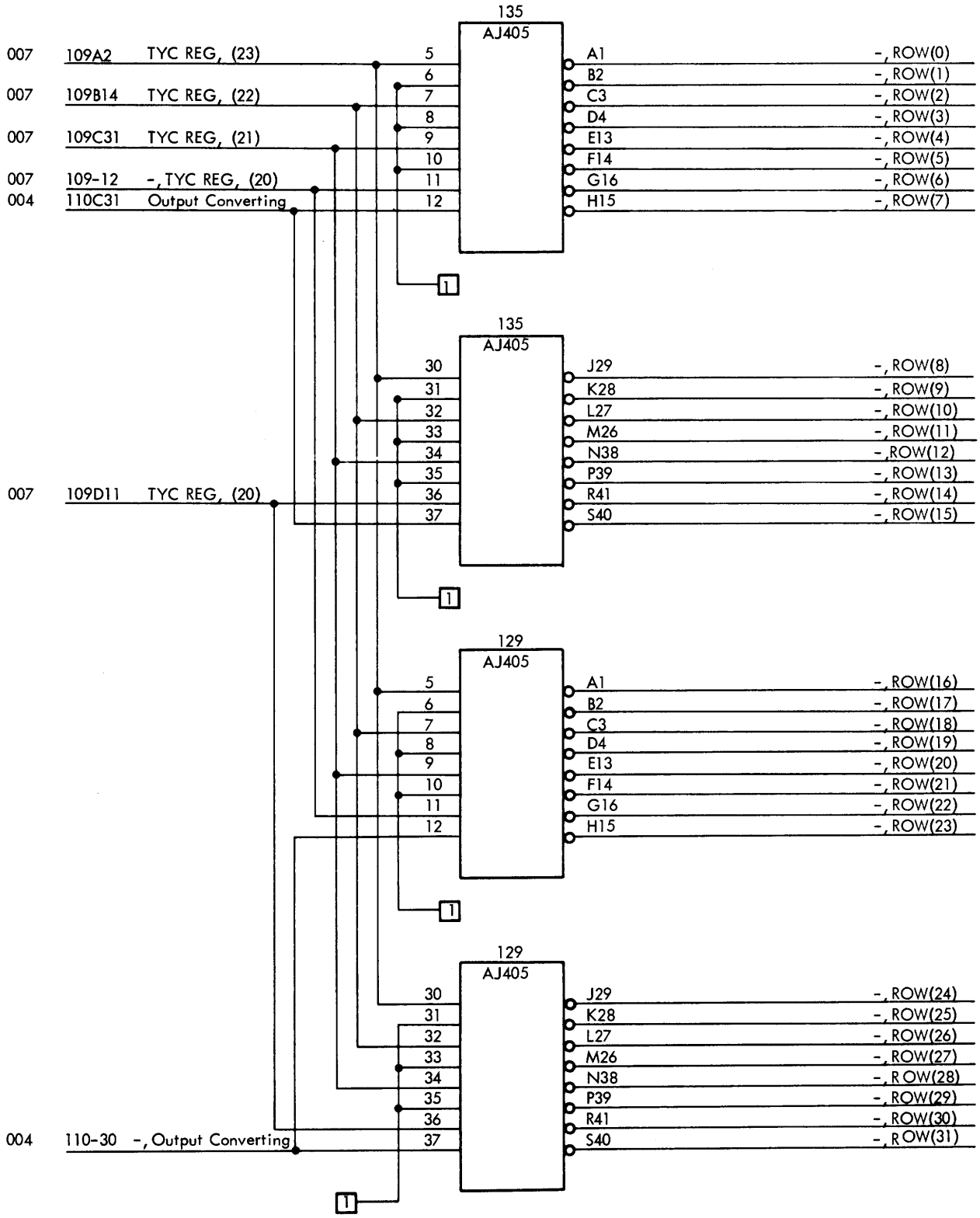
RC4000

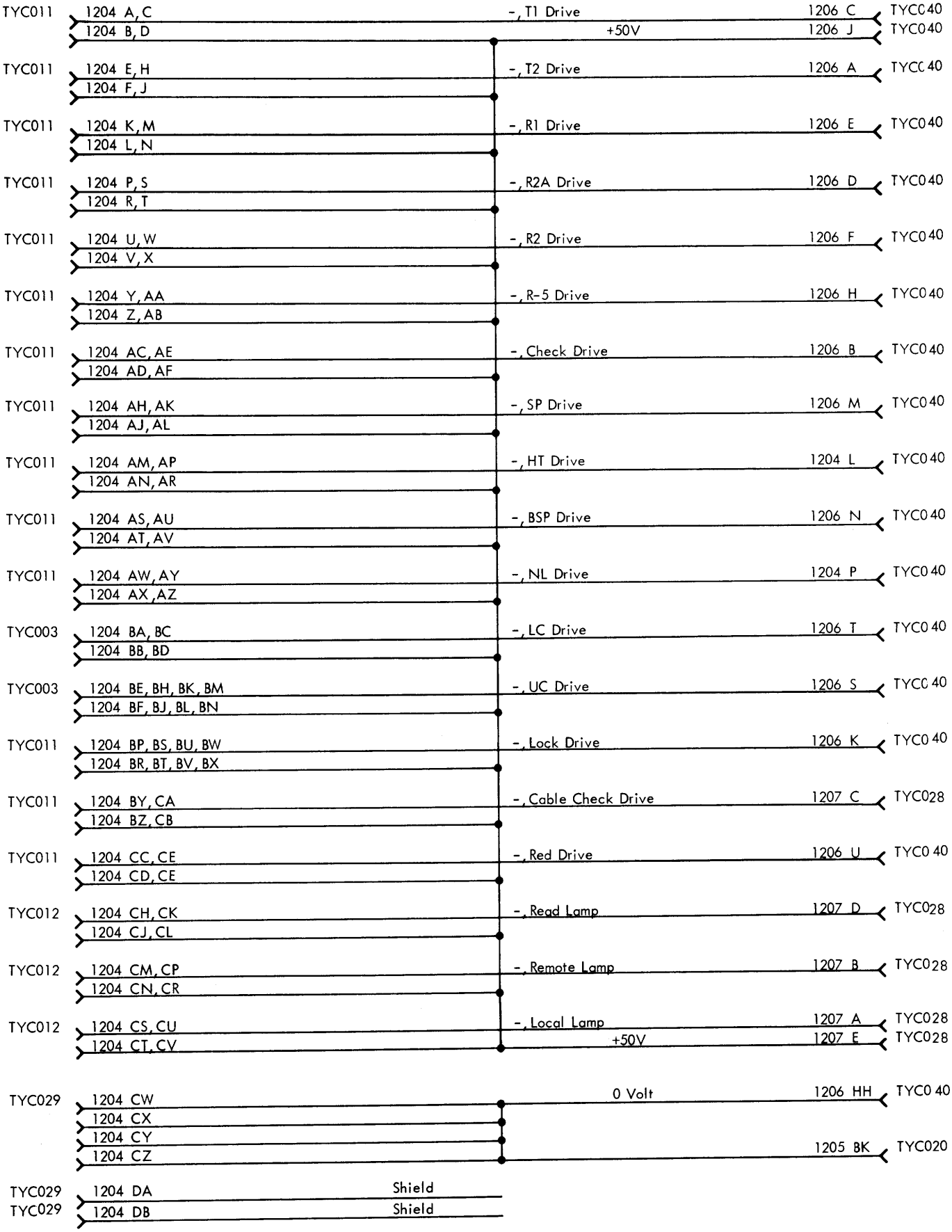
V10835

CONVERTER CURRENT DRIVER (COLUMN DRIVER)

Logic Diagram

TYC015


135
AJ405
007 109A2 TYC REG, (23)
007 109B14 TYC REG, (22)
007 109C31 TYC REG, (21)
007 109-12 -, TYC REG, (20)
004 110C31 Output Converting
5
6
7
8
9
10
11
12
A1 -, ROW(0)
B2 -, ROW(1)
C3 -, ROW(2)
D4 -, ROW(3)
E13 -, ROW(4)
F14 -, ROW(5)
G16 -, ROW(6)
H15 -, ROW(7)
1
135
AJ405
007 109D11 TYC REG, (20)
30
31
32
33
34
35
36
37
J29 -, ROW(8)
K28 -, ROW(9)
L27 -, ROW(10)
M26 -, ROW(11)
N38 -, ROW(12)
P39 -, ROW(13)
R41 -, ROW(14)
S40 -, ROW(15)
1
129
AJ405
5
6
7
8
9
10
11
12
A1 -, ROW(16)
B2 -, ROW(17)
C3 -, ROW(18)
D4 -, ROW(19)
E13 -, ROW(20)
F14 -, ROW(21)
G16 -, ROW(22)
H15 -, ROW(23)
1
129
AJ405
004 110-30 -, Output Converting
30
31
32
33
34
35
36
37
J29 -, ROW(24)
K28 -, ROW(25)
L27 -, ROW(26)
M26 -, ROW(27)
N38 -, ROW(28)
P39 -, ROW(29)
R41 -, ROW(30)
S40 -, ROW(31)
1



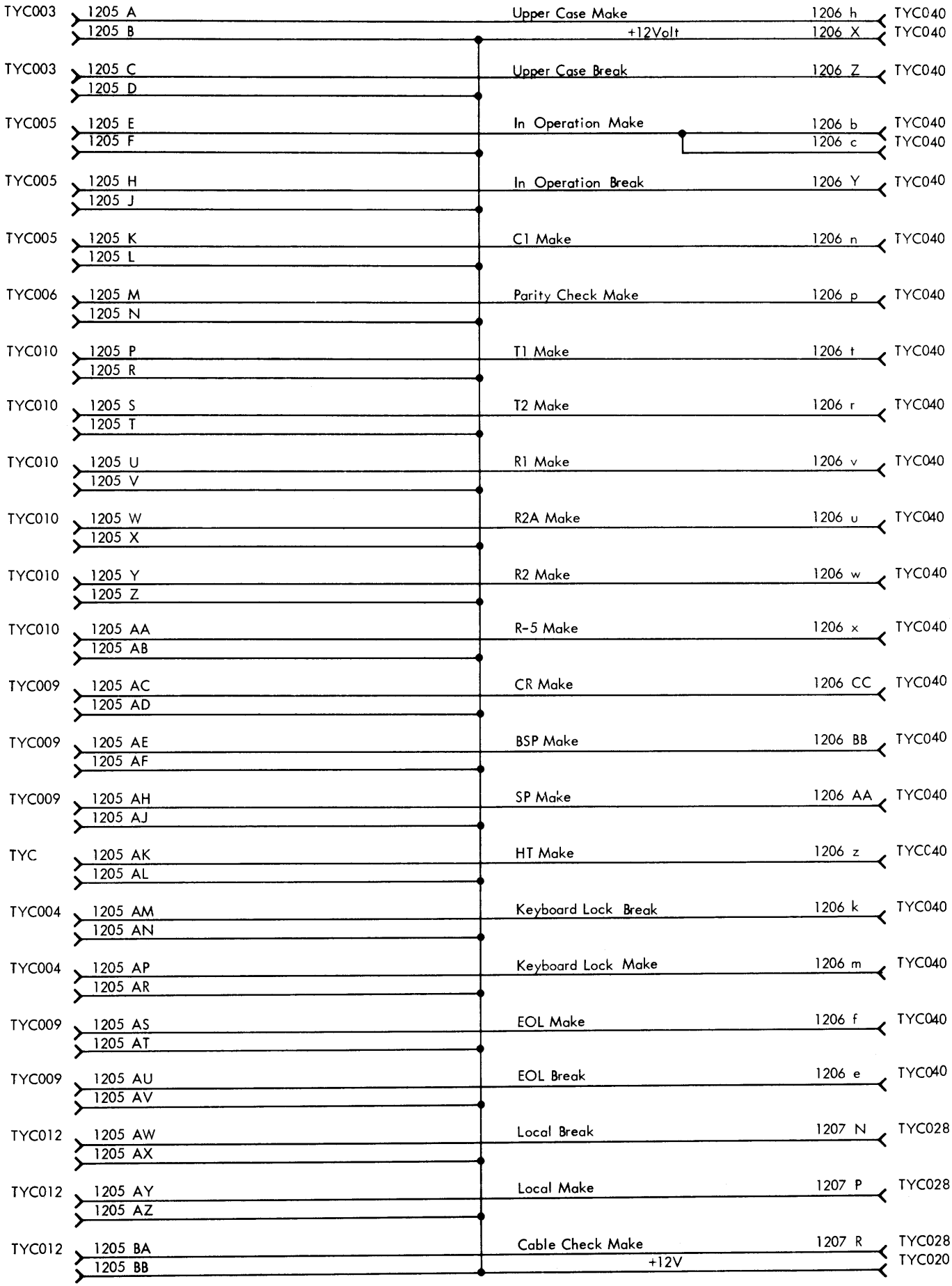
RC4000

V10921

CROSS WIRING PLUG 1204 -1206

Logic Diagram

TYC017



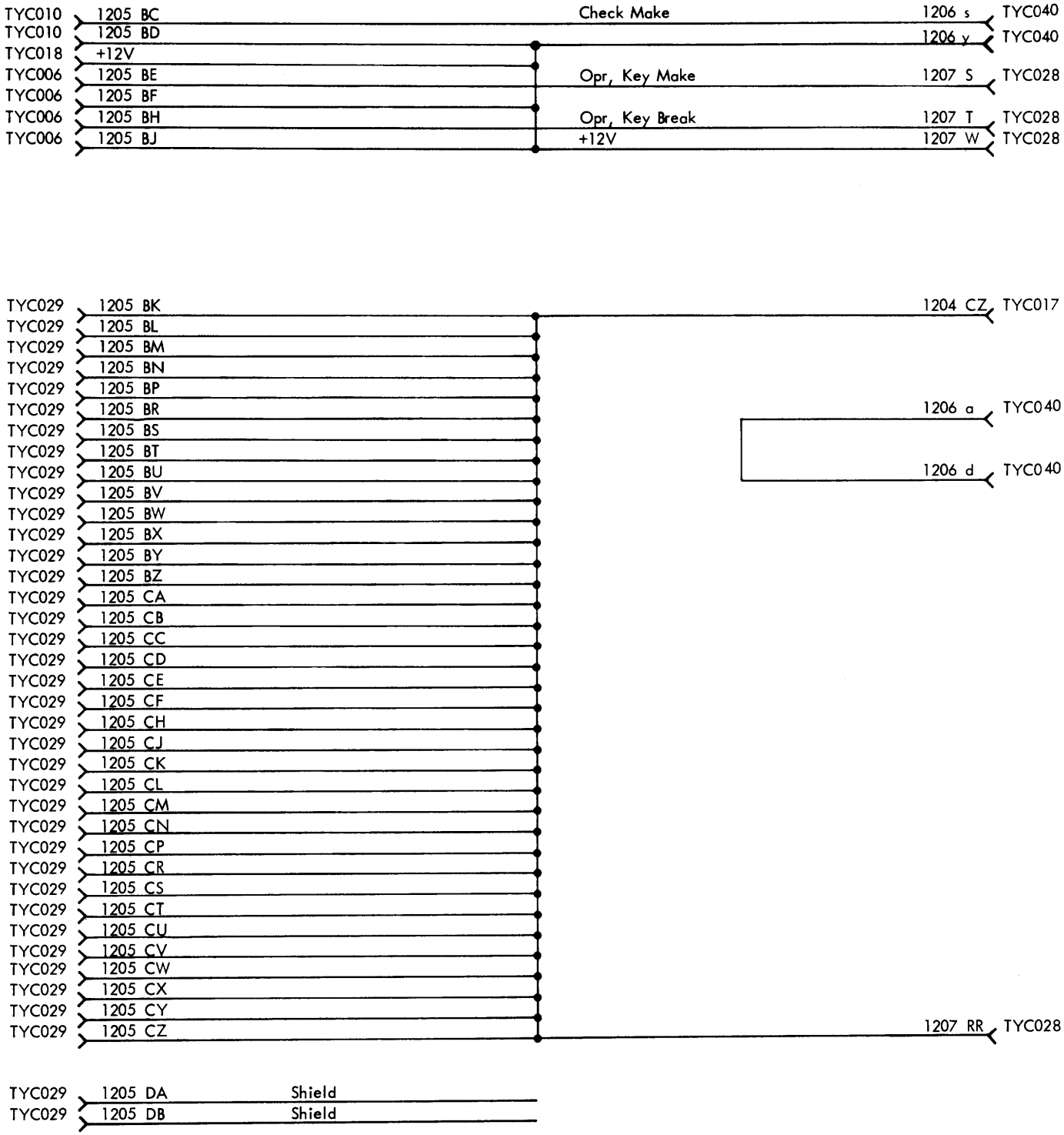
RC4000

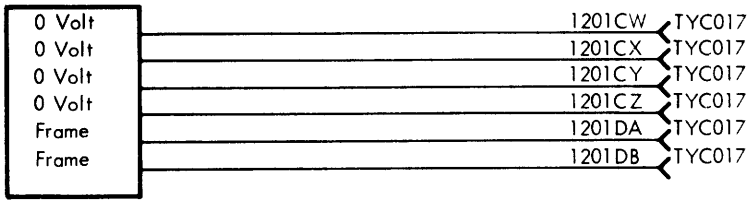
CROSS WIRING PLUG 1205 - 1206

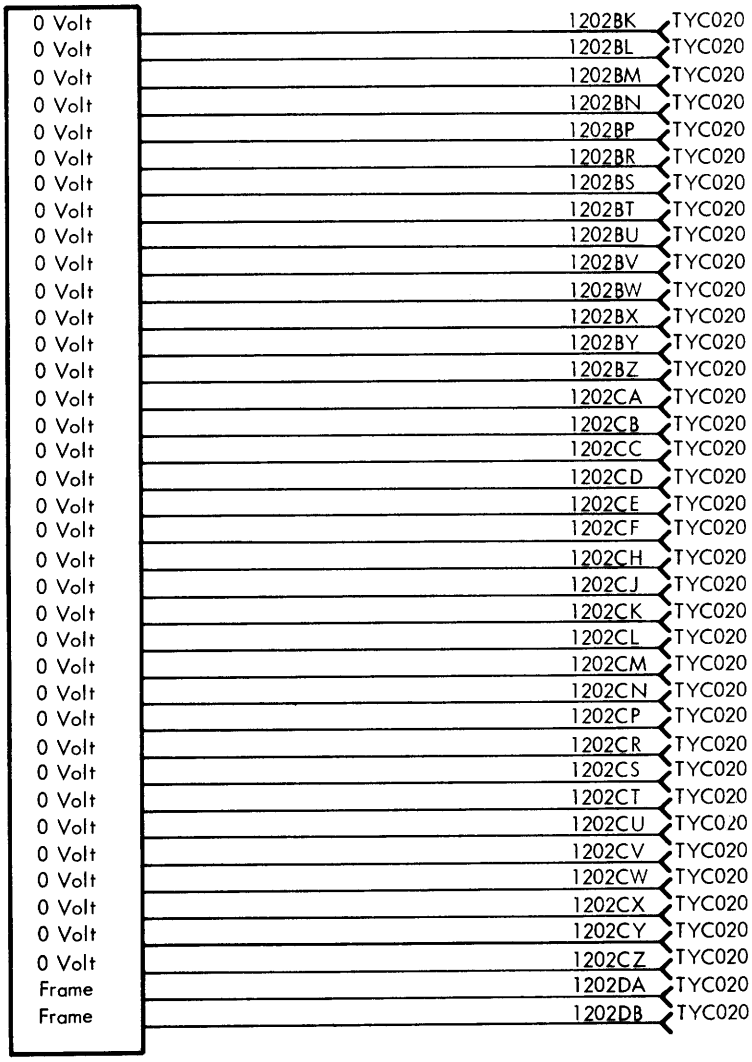
TYC018

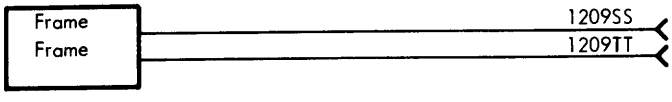
V10922

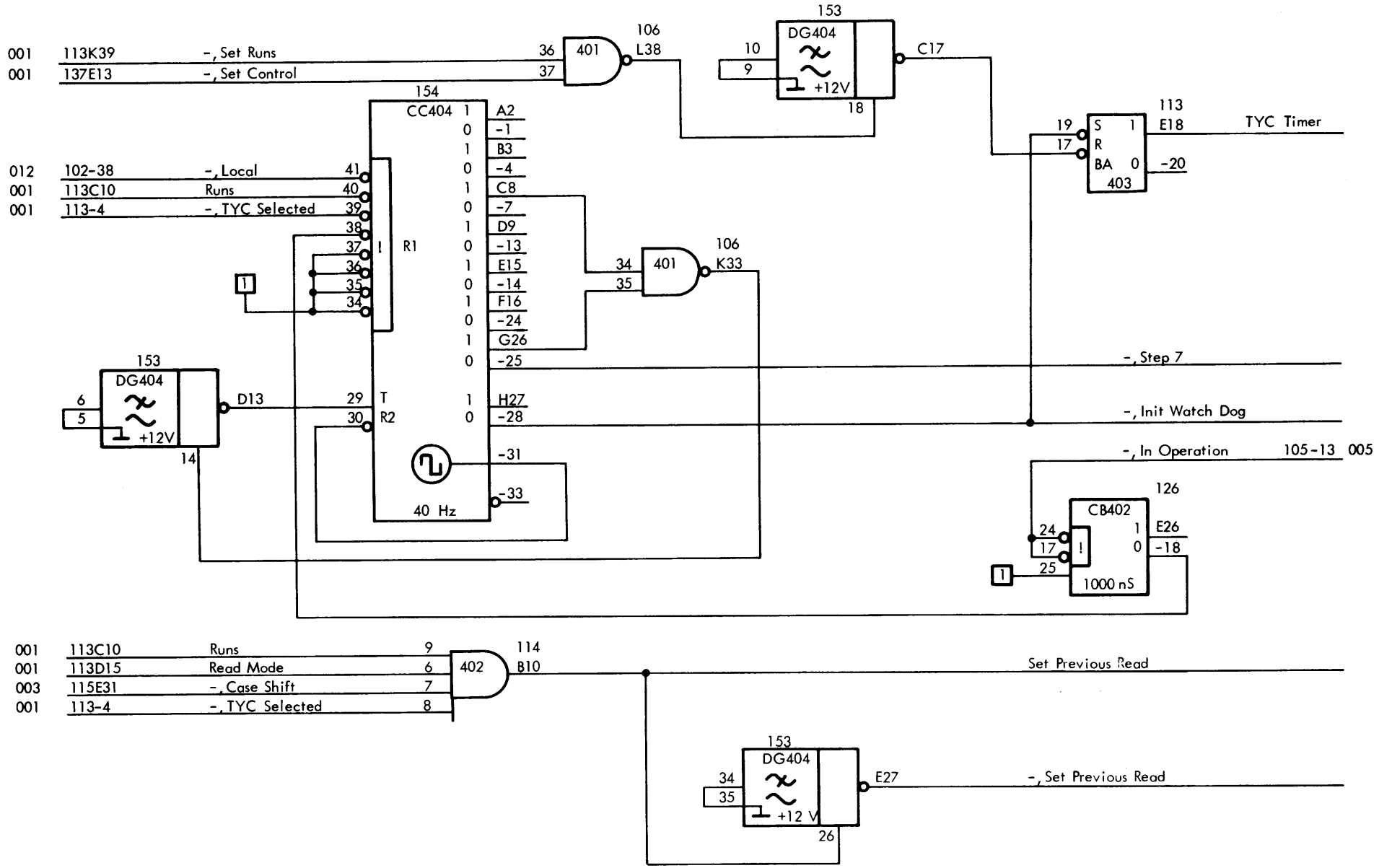
Logic Diagram


TYC010 1205 BC
TYC010 1205 BD
TYC018 +12V
TYC006 1205 BE
TYC006 1205 BF
TYC006 1205 BH
TYC006 1205 BJ
Check Make
Opr, Key Make
Opr, Key Break
+12V
1206 s TYC040
1206 y TYC040
1207 S TYC028
1207 T TYC028
1207 W TYC028
TYC029 1205 BK
TYC029 1205 BL
TYC029 1205 BM
TYC029 1205 BN
TYC029 1205 BP
TYC029 1205 BR
TYC029 1205 BS
TYC029 1205 BT
TYC029 1205 BU
TYC029 1205 BV
TYC029 1205 BW
TYC029 1205 BX
TYC029 1205 BY
TYC029 1205 BZ
TYC029 1205 CA
TYC029 1205 CB
TYC029 1205 CC
TYC029 1205 CD
TYC029 1205 CE
TYC029 1205 CF
TYC029 1205 CH
TYC029 1205 CJ
TYC029 1205 CK
TYC029 1205 CL
TYC029 1205 CM
TYC029 1205 CN
TYC029 1205 CP
TYC029 1205 CR
TYC029 1205 CS
TYC029 1205 CT
TYC029 1205 CU
TYC029 1205 CV
TYC029 1205 CW
TYC029 1205 CX
TYC029 1205 CY
TYC029 1205 CZ
1204 CZ TYC017
1206 a TYC040
1206 d TYC040
1207 RR TYC028
TYC029 1205 DA Shield
TYC029 1205 DB Shield


0 Volt
0 Volt
0 Volt
0 Volt
Frame
Frame
1201CW TYC017
1201CX TYC017
1201CY TYC017
1201CZ TYC017
1201DA TYC017
1201DB TYC017


0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
0 Volt
Frame
Frame
1202BK TYC020
1202BL TYC020
1202BM TYC020
1202BN TYC020
1202BP TYC020
1202BR TYC020
1202BS TYC020
1202BT TYC020
1202BU TYC020
1202BV TYC020
1202BW TYC020
1202BX TYC020
1202BY TYC020
1202BZ TYC020
1202CA TYC020
1202CB TYC020
1202CC TYC020
1202CD TYC020
1202CE TYC020
1202CF TYC020
1202CH TYC020
1202CJ TYC020
1202CK TYC020
1202CL TYC020
1202CM TYC020
1202CN TYC020
1202CP TYC020
1202CR TYC020
1202CS TYC020
1202CT TYC020
1202CU TYC020
1202CV TYC020
1202CW TYC020
1202CX TYC020
1202CY TYC020
1202CZ TYC020
1202DA TYC020
1202DB TYC020


Frame
Frame
1209SS
1209TT


001 113K39 -, Set Runs 36
001 137E13 -, Set Control 37
401 106 L38
153 DG404 10 9 +12V 18 C17
154 CC404 A2 -1 B3 -4 C8 -7 D9 -13 E15 -14 F16 -24 G26 -25 H27 -28 -31 -33
012 102-38 -, Local 41
001 113C10 Runs 40
001 113-4 -, TYC Selected 39
38 37 36 35 34 I R1 T R2
1
34 35 401 106 K33
153 DG404 6 5 +12V 14 D13 29 30
40 Hz
113 E18 TYC Timer
19 17 S R BA 403 -20
-, Step 7
-, Init Watch Dog
-, In Operation 105-13 005
126 CB402 24 17 25 1000 nS E26 -18
001 113C10 Runs 9
001 113D15 Read Mode 6
003 115E31 -, Case Shift 7
001 113-4 -, TYC Selected 8
402 114 B10
Set Previous Read
153 DG404 34 35 +12 V 26 E27
-, Set Previous Read

TYC				REG(17)	0	0	0	0	1	1	1	1
				REG(18)	0	0	1	1	0	0	1	1
				REG(19)	0	1	0	1	0	1	0	1
REG (20)	REG (21)	REG (22)	REG (23)	ROW \ Column	0	1	2	3	4	5	6	7
0	0	0	0	0 16	0 z 0101111	8 t 0010111	16 - 1011010	24 j 0101011	32 Z 0101101	40 T 0010101	48 = 1011110	56 J 0101001
0	0	0	1	1 17	1 2 0100110	9 n 0111011	17 . 0111010	25 ϕ 0011111	33 " 0100010	41 N 0111001	49 > 0111110	57 Ø 0011101
0	0	1	0	2 18	2 SP 0000010	10	18	26	34 SP 0000010	42	50	58
0	0	1	1	3 19	3 BS 0001000	11	19	27	35 BS 0001000	43	51	59
0	1	0	0	4 20	4 5 1010110	12 e 1010011	20 œ 1101111	28 p 0000111	36 % 1010010	44 E 1010001	52 Æ 1101101	60 P 0000101
0	1	0	1	5 21	5 6 0110110	13 k 1101011	21 i 1001011	29 q 1000111	37 & 0110010	45 K 1101001	53 I 1001001	61 Q 1000101
0	1	1	0	6 22	6 0 0000110	14 h 0001011	22 s 1100111	30 y 1001111	38 11̄1101	46 H 0001001	54 S 1100101	62 Y 1001101
0	1	1	1	7 23	7 9 1001110	15 b 0100011	23 w 1110111	31 / 1111010	39) 1001010	47 B 0100001	55 W 1110101	63 ? 1111110
1	0	0	0	0 24	0 1 1000110	8 x 0001111	16 m 1011011	24 g 1110011	32 ! 1000010	40 X 0001101	48 M 1011001	56 G 1110001
1	0	0	1	1 25	1 3 1100110	9 u 1010111	17 v 0110111	25 f 0110011	33 : 0101110	41 U 1010101	49 V 0110101	57 F 0110001
1	0	1	0	2 26	2 HT 1001000	10	18	26	34 HT 1001000	42	50	58
1	0	1	1	3 27	3 NL 0101000	11	19	27	35 NL 0101000	43	51	59
1	1	0	0	4 28	4 7 1110110	12 d 0010011	20 r 0100111	28 ; 1101110	36 ´ 1110010	44 D 0010001	52 R 0100101	60 + 1101010
1	1	0	1	5 29	5 8 0001110	13 c 1100011	21 a 1000011	29 , 0011010	37 (0001010	45 C 1100001	53 A 1000001	61 < 0011110
1	1	1	0	6 30	6 4 0010110	14 l 0011011	22 o 1111011	30 å 1011111	38 * 0101010	46 L 0011001	54 O 1111001	62 Å 1011101
1	1	1	1	7 31	7	15	23	31	39	47	55	63

REG: (23) (22) (21) (20) (19) (18) (17)

Selection Cont. R1 R2A R2 R-5 T1 T2 TWUC.

TW => ISO

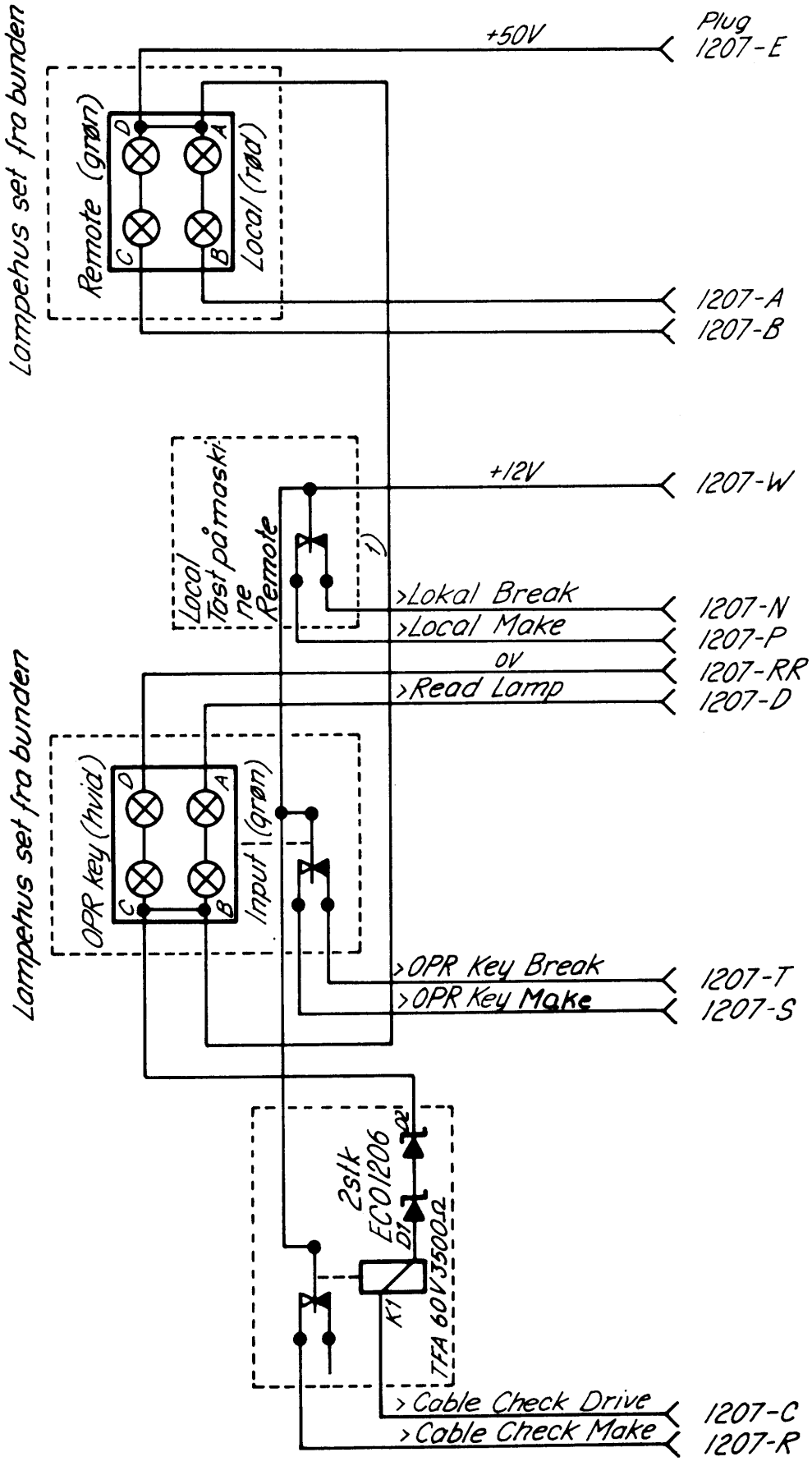
ISO TO TYPEWRITER CODE

Logic Diagram

TYC				REG(17)	0	0	0	0	1	1	1	1
				REG(18)	0	0	1	1	0	0	1	1
				REG(19)	0	1	0	1	0	1	0	1
REG (20)	REG (21)	REG (22)	REG (23)	ROW \ Column	0	1	2	3	4	5	6	7
0	0	0	0	0 0	0	8	16 SP 100000000	24 0 111000001	32	40 P 001100111	48	56 P 001100101
0	0	0	1	1 1	1	9	17 ! 111111111	25 1 111111101	33 A 100101011	41 Q 000100011	49 a 100101001	57 q 000100001
0	0	1	0	2 2	2	10	18 " 110110111	26 2 110110101	34 B 010000011	42 R 101101111	50 b 010000001	58 r 101101101
0	0	1	1	3 3	3	11	19	27 3 110111001	C 010101011	43 S 101000111	51 c 010101001	59 s 101000101
0	1	0	0	4 4	4	12	20	28 4 111001101	36 D 011101111	44 T 011110111	52 d 011101101	60 t 011110101
0	1	0	1	5 5	5	13	21 % 111100111	29 5 111100101	37 E 011100011	45 U 010111111	53 e 011100001	61 u 010111101
0	1	1	0	6 6	6	14	22 & 110100011	30 6 110100001	38 F 000111011	46 V 100111111	54 f 000111001	62 v 100111101
0	1	1	1	7 7	7	15	23 111101011	31 7 111101001	39 G 001111111	47 W 100000011	55 g 001111101	63 w 100000001
1	0	0	0	0 8	0 BS 010000000	8	16 (110101111	24 8 110101101	32 H 011000111	40 X 011111011	48 h 011000101	56 x 011111001
1	0	0	1	1 9	1 HT 001000000	9	17) 110000111	25 9 110000101	33 I 100100111	41 Y 001000011	49 i 100100101	57 y 001000001
1	0	1	0	2 10	2 NL 000100000	10	18 * 111001111	26 : 110111011	34 J 001110011	42 Z 111110011	50 j 001110001	58 z 111110001
1	0	1	1	3 11	3	11	19 + 001101011	27 ; 001101001	35 K 010100111	43 Æ 101100011	51 k 010100101	59 æ 101100001
1	1	0	0	4 12	4	12	20 , 000101101	28 < 000101111	36 L 011001011	44 Ø 000110111	52 l 011001001	60 ø 000110101
1	1	0	1	5 13	5	13	21 - 101110101	29 = 101110111	37 M 101111011	45 Å 001001111	53 m 101111001	61 å 001001101
1	1	1	0	6 14	6	14	22 . 100110001	30 > 100110011	38 N 010110011	46	54 n 010110001	62
1	1	1	1	7 15	7	15	23 / 000000101	31 ? 000000111	39 O 101001011	47 $\overline{111000011}$	55 o 101001001	63

REG:	(23)	(22)	(21)	(20)	(19)	(18)	(17)	Code UC	Print
Selection Magnet	T1	T2	R1	R2A	R2	R-5	Check		
Function Magnet	SP	BS	HT	NL					

ISO => TW



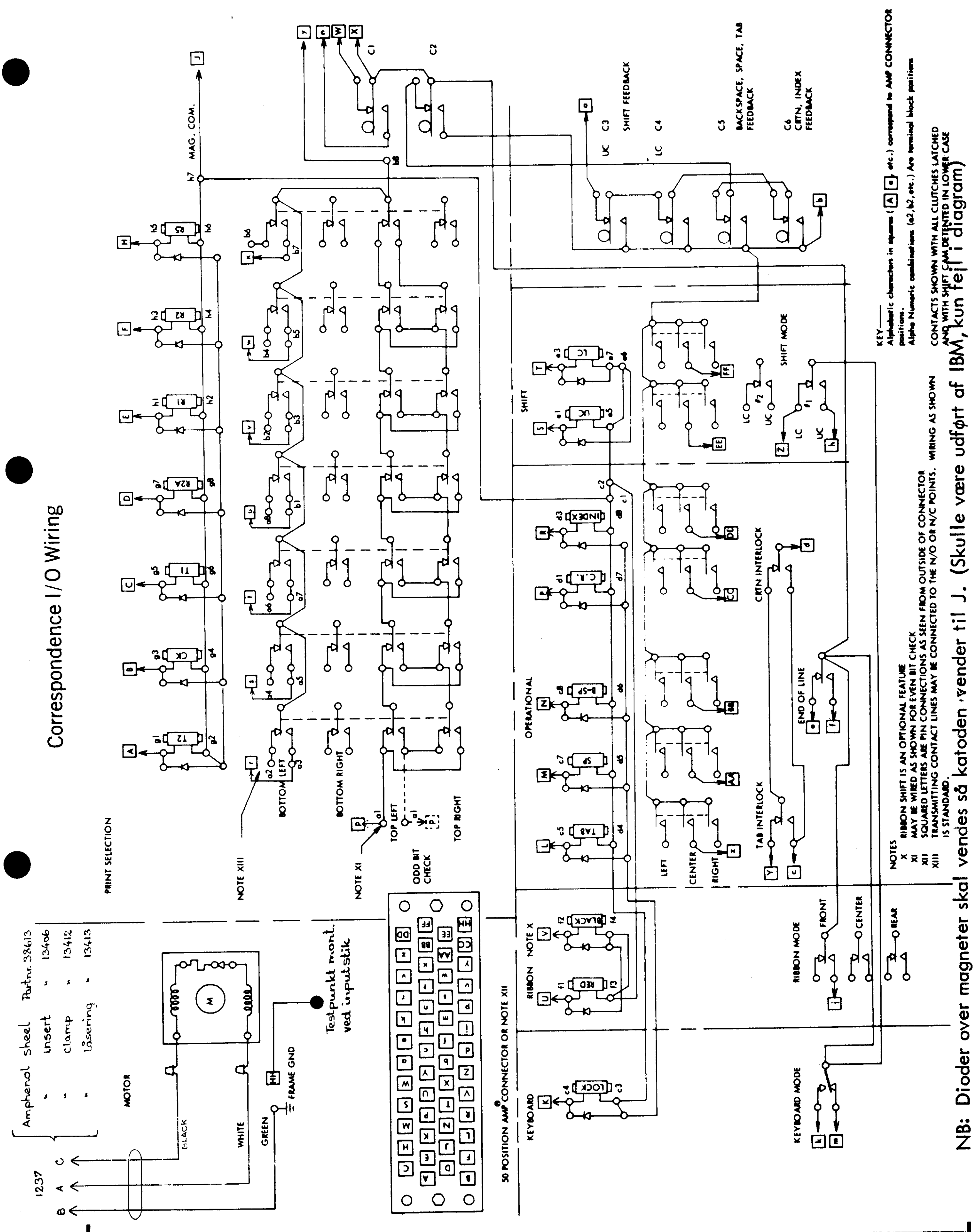
1) Bulgin omskifter S270 monteres hvor afbryder for motor har sidder og forbindes til Local/Remote tast på skrivemaskine.

RC315

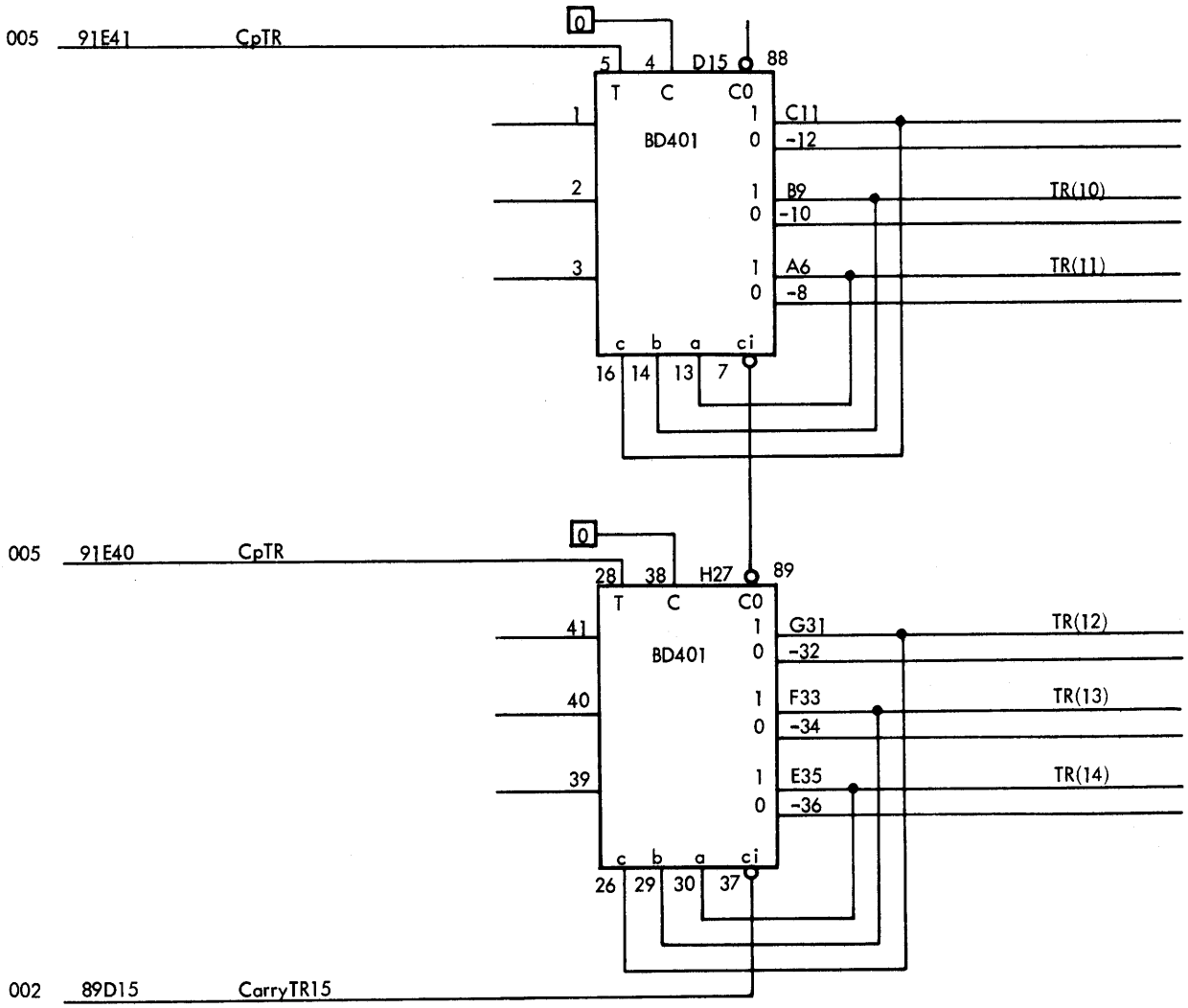
V20805

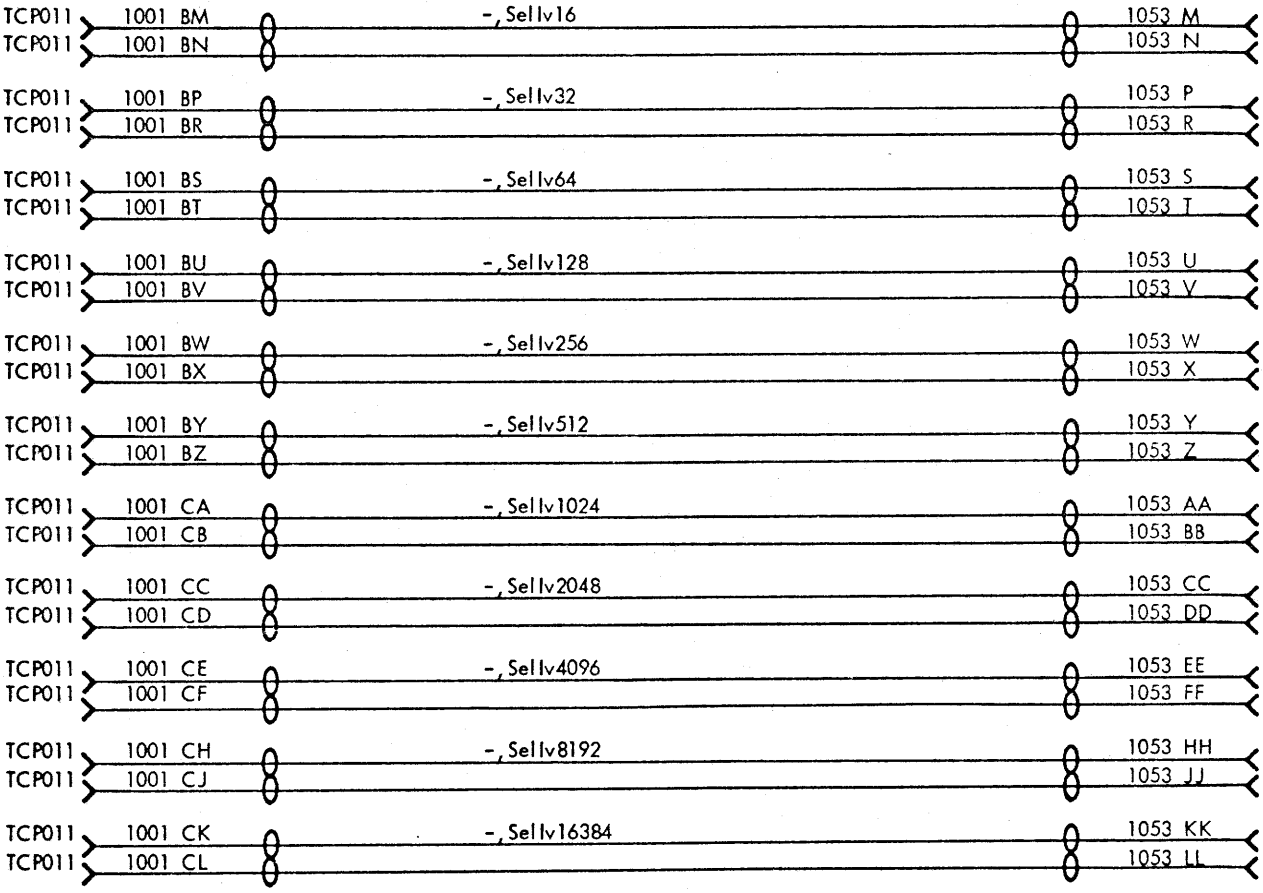
Opr. Key/Input lampe og
Local/Remote lampe

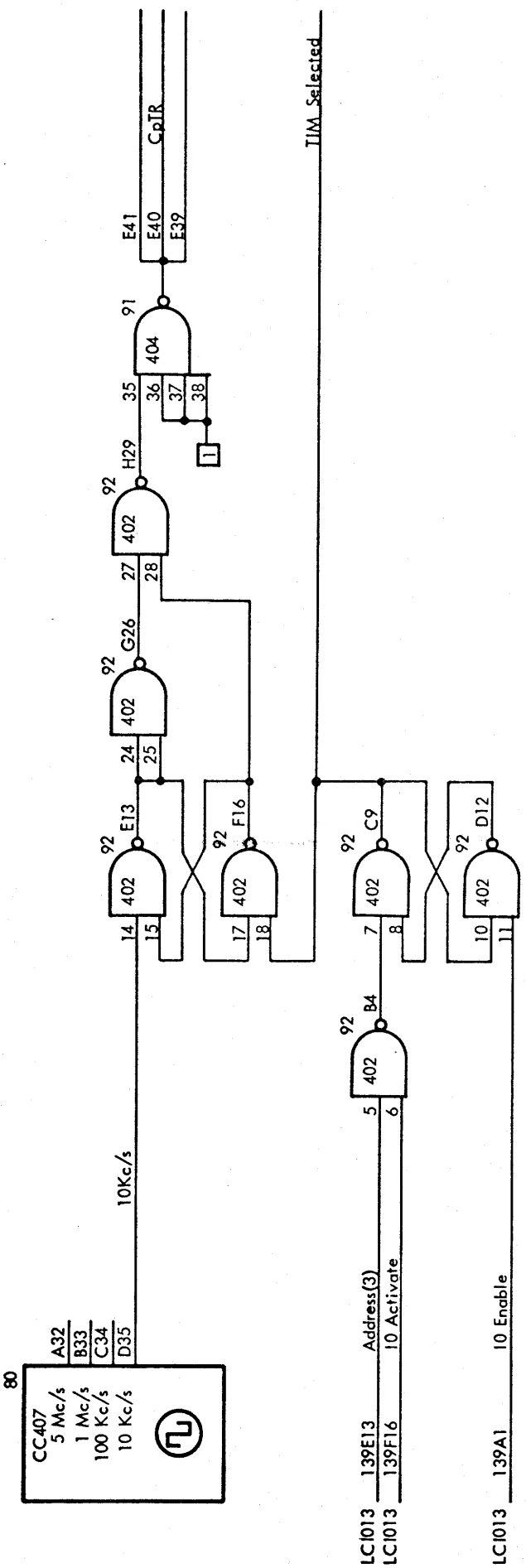
TYC 039

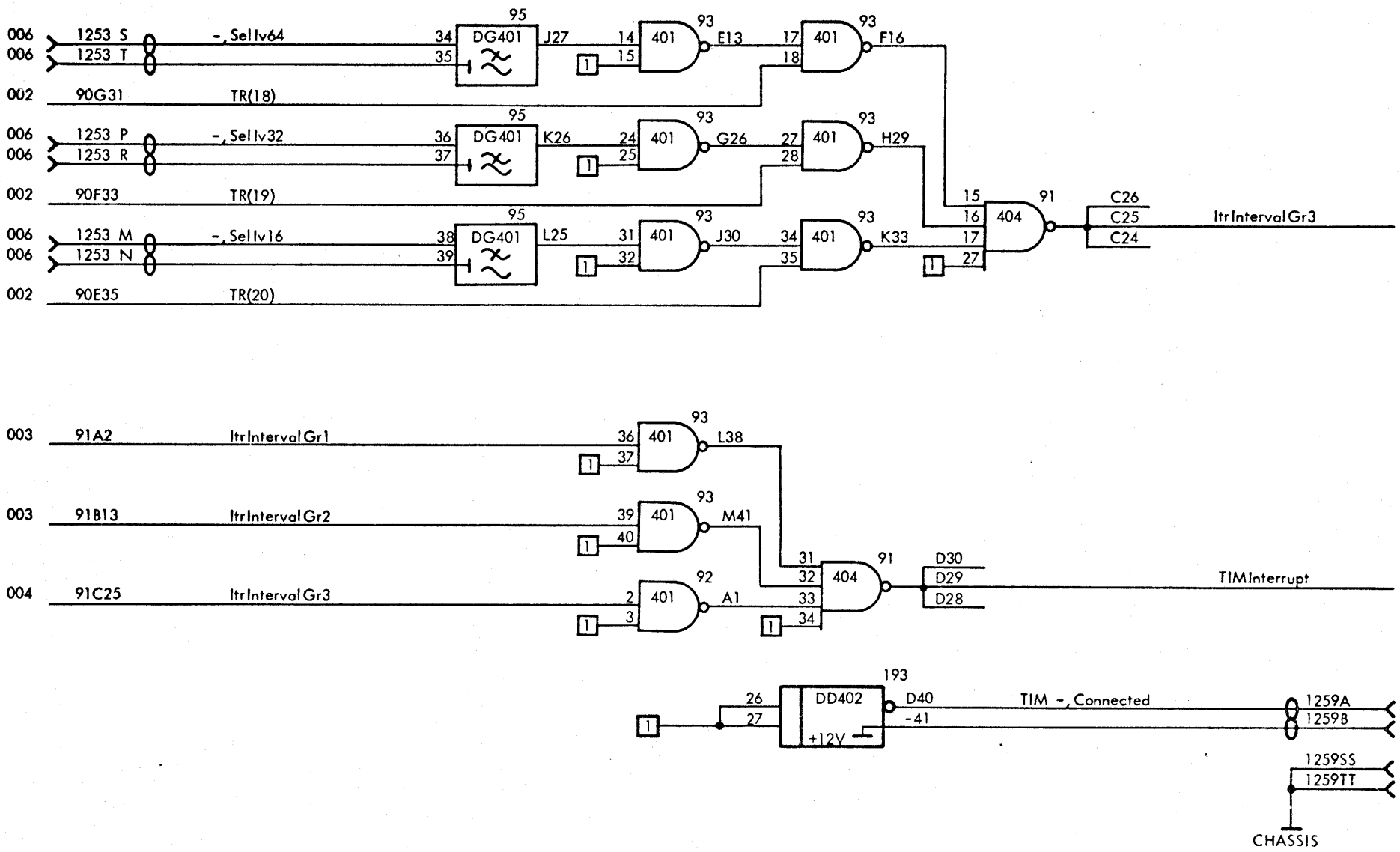

Correspondence I/O Wiring
PRINT SELECTION
NOTE XIII
NOTE XI
ODD BIT CHECK
BOTTOM LEFT
BOTTOM RIGHT
TOP LEFT
TOP RIGHT
MAG. COM.
SHIFT FEEDBACK
BACKSPACE, SPACE, TAB FEEDBACK
CRTN, INDEX FEEDBACK
SHIFT
OPERATIONAL
SHIFT MODE
CRTN INTERLOCK
TAB INTERLOCK
END OF LINE
LEFT
CENTER
RIGHT
RIBBON NOTE X
RIBBON MODE
FRONT
CENTER
REAR
KEYBOARD
KEYBOARD MODE
50 POSITION AMP CONNECTOR OR NOTE XII
MOTOR
BLACK
WHITE
GREEN
FRAME GND
Testpunkt mont. ved inputstik
Amphenol sheel Partnr. 38613
insert 13406
clamp 13412
låsering 13413
1237
KEY
Alphabetic characters in squares etc.) correspond to AMP CONNECTOR positions.
Alpha Numeric combinations (a2, b2, etc.) Are terminal block positions
CONTACTS SHOWN WITH ALL CLUTCHES LATCHED AND WITH SHIFT CAM DETENTED IN LOWER CASE
NOTES
X RIBBON SHIFT IS AN OPTIONAL FEATURE
XI MAY BE WIRED AS SHOWN FOR EVEN BIT CHECK
XII SQUARED LETTERS ARE PIN CONNECTIONS AS SEEN FROM OUTSIDE OF CONNECTOR
XIII TRANSMITTING CONTACT LINES MAY BE CONNECTED TO THE N/O OR N/C POINTS. WIRING AS SHOWN IS STANDARD.
NB: Dioder over magneter skal vendes så katoden vender til J. (Skulle være udført af IBM, kun fejl i diagram)

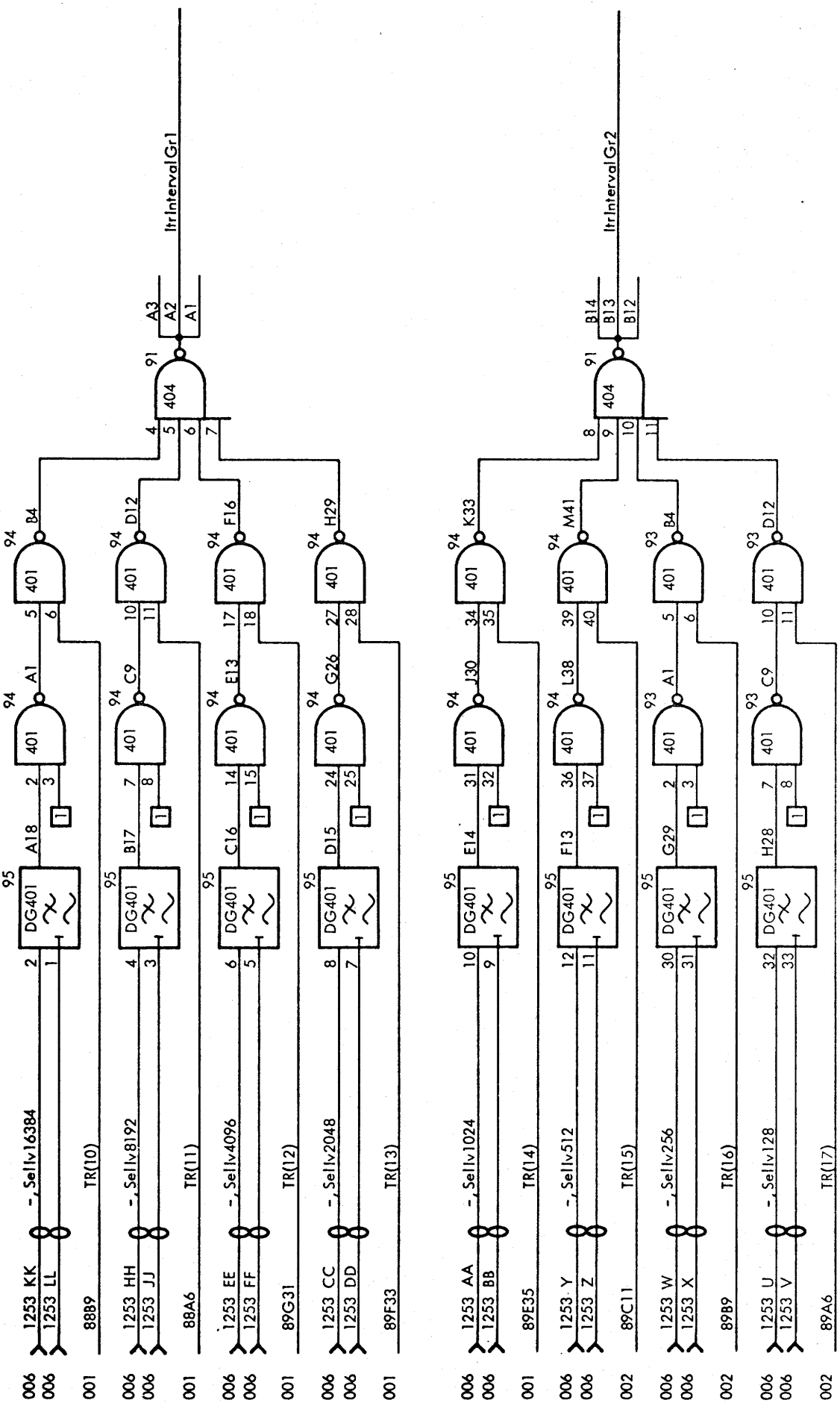
Unit: RC315	Designed 180369 LPH	TYC040	Drawing No V20793
	Approved	Diagram efter ændring i correspondence I/O wiring	Drawn by
A/S REGNECENTRALEN	Checked 110270 PA		Checked
	Last Revision 141069		____ Sheets / Sheet ____

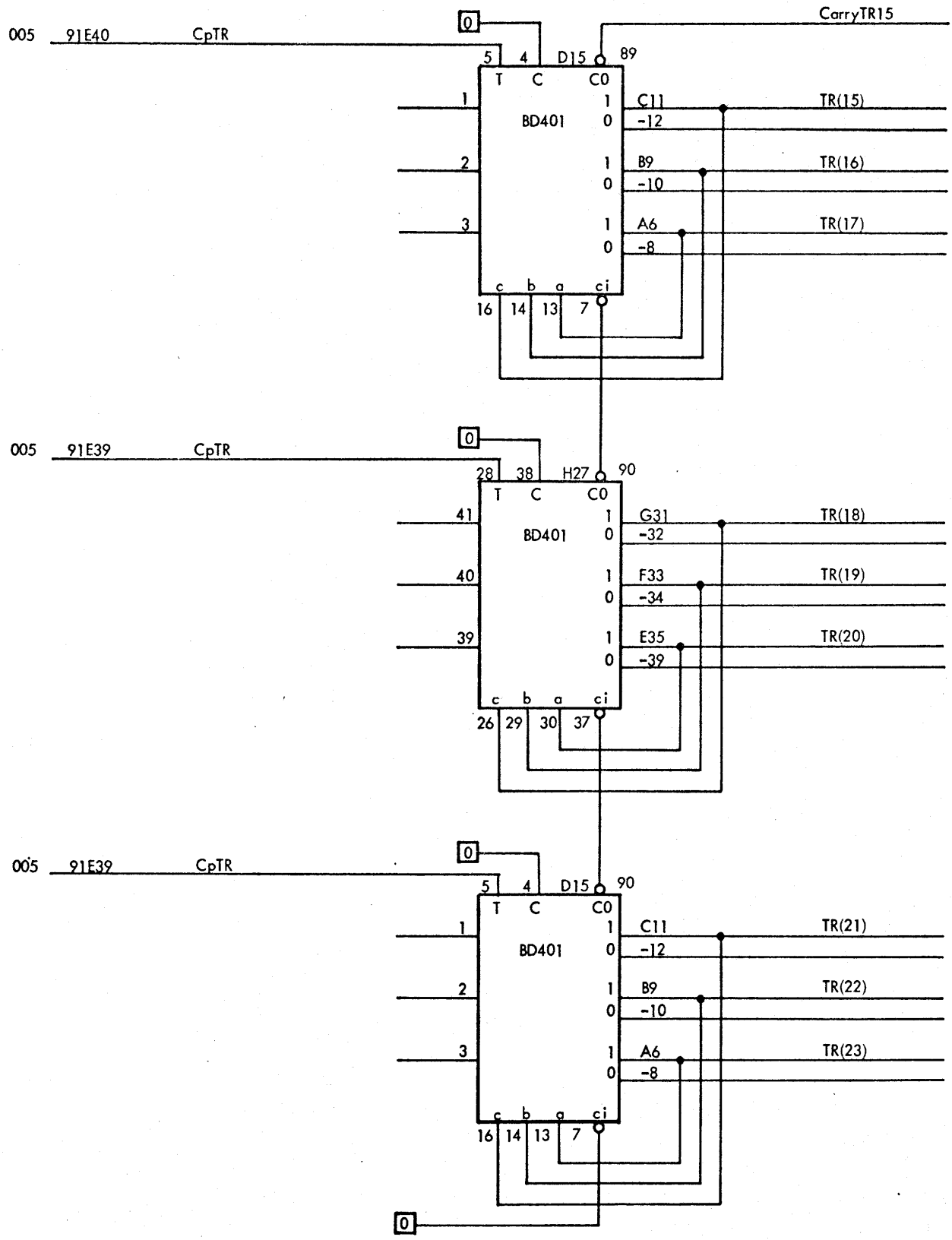

005 91E41 CpTR
0
5 4 D15 88
T C C0
1 C11
BD401 0 -12
2 1 B9 TR(10)
0 -10
3 1 A6 TR(11)
0 -8
c b a ci
16 14 13 7
005 91E40 CpTR
0
28 38 H27 89
T C C0
41 1 G31 TR(12)
BD401 0 -32
40 1 F33 TR(13)
0 -34
39 1 E35 TR(14)
0 -36
c b a ci
26 29 30 37
002 89D15 CarryTR15

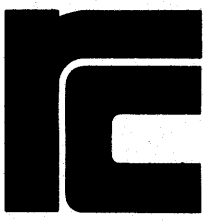

TCP011 1001 BM
TCP011 1001 BN
-,SelIv16
1053 M
1053 N
TCP011 1001 BP
TCP011 1001 BR
-,SelIv32
1053 P
1053 R
TCP011 1001 BS
TCP011 1001 BT
-,SelIv64
1053 S
1053 T
TCP011 1001 BU
TCP011 1001 BV
-,SelIv128
1053 U
1053 V
TCP011 1001 BW
TCP011 1001 BX
-,SelIv256
1053 W
1053 X
TCP011 1001 BY
TCP011 1001 BZ
-,SelIv512
1053 Y
1053 Z
TCP011 1001 CA
TCP011 1001 CB
-,SelIv1024
1053 AA
1053 BB
TCP011 1001 CC
TCP011 1001 CD
-,SelIv2048
1053 CC
1053 DD
TCP011 1001 CE
TCP011 1001 CF
-,SelIv4096
1053 EE
1053 FF
TCP011 1001 CH
TCP011 1001 CJ
-,SelIv8192
1053 HH
1053 JJ
TCP011 1001 CK
TCP011 1001 CL
-,SelIv16384
1053 KK
1053 LL


TIM Selected
CpTR
E41
E40
E39
91
404
35
36
37
38
1
H29
92
402
27
28
G26
92
402
24
25
92
E13
402
14
15
92
F16
402
17
18
92
C9
402
7
8
92
D12
402
10
11
92
B4
402
5
6
80
CC407
5 Mc/s
1 Mc/s
100 Kc/s
10 Kc/s
A32
B33
C34
D35
10Kc/s
LC1013 139E13 Address(3)
LC1013 139F16 10 Activate
LC1013 139A1 10 Enable


006 1253 S
006 1253 T
-, Sellv64
95
34
35
DG401
J27
14
15
1
93
401
E13
17
18
93
401
F16
002 90G31
TR(18)
006 1253 P
006 1253 R
-, Sellv32
95
36
37
DG401
K26
24
25
1
93
401
G26
27
28
93
401
H29
002 90F33
TR(19)
006 1253 M
006 1253 N
-, Sellv16
95
38
39
DG401
L25
31
32
1
93
401
J30
34
35
93
401
K33
17
27
15
16
91
404
C26
C25
C24
ItrIntervalGr3
002 90E35
TR(20)
003 91A2
ItrIntervalGr1
93
36
37
1
401
L38
003 91B13
ItrIntervalGr2
93
39
40
1
401
M41
004 91C25
ItrIntervalGr3
92
2
3
1
401
A1
31
32
33
34
1
91
404
D30
D29
D28
TIMInterrupt
193
1
26
27
DD402
+12V
D40
-41
TIM -, Connected
1259A
1259B
1259SS
1259TT
CHASSIS


ItrIntervalGr1
ItrIntervalGr2
DG401
401
404
-,SelIv16384
-,SelIv8192
-,SelIv4096
-,SelIv2048
-,SelIv1024
-,SelIv512
-,SelIv256
-,SelIv128
1253 KK
1253 LL
1253 HH
1253 JJ
1253 EE
1253 FF
1253 CC
1253 DD
1253 AA
1253 BB
1253 Y
1253 Z
1253 W
1253 X
1253 U
1253 V
8889
88A6
89G31
89F33
89E35
89C11
89B9
89A6
TR(10)
TR(11)
TR(12)
TR(13)
TR(14)
TR(15)
TR(16)
TR(17)


005 91E40 CpTR
CarryTR15
D15
89
T C C0
BD401
C11
-12
B9
-10
A6
-8
TR(15)
TR(16)
TR(17)
c b a ci
16 14 13 7
005 91E39 CpTR
H27
90
G31
-32
F33
-34
E35
-39
TR(18)
TR(19)
TR(20)
26 29 30 37
005 91E39 CpTR
D15
90
C11
-12
B9
-10
A6
-8
TR(21)
TR(22)
TR(23)
16 14 13 7



A/S REGNECENTRALEN

SCANDINAVIAN INFORMATION PROCESSING SYSTEMS

FALKONERALLE 1 · DK 2000 COPENHAGEN F
DENMARK – TELEPHONE: (01) 10 53 66
CABLES: REGNECENTRALEN · TELEX: 6282 RC HQ DK