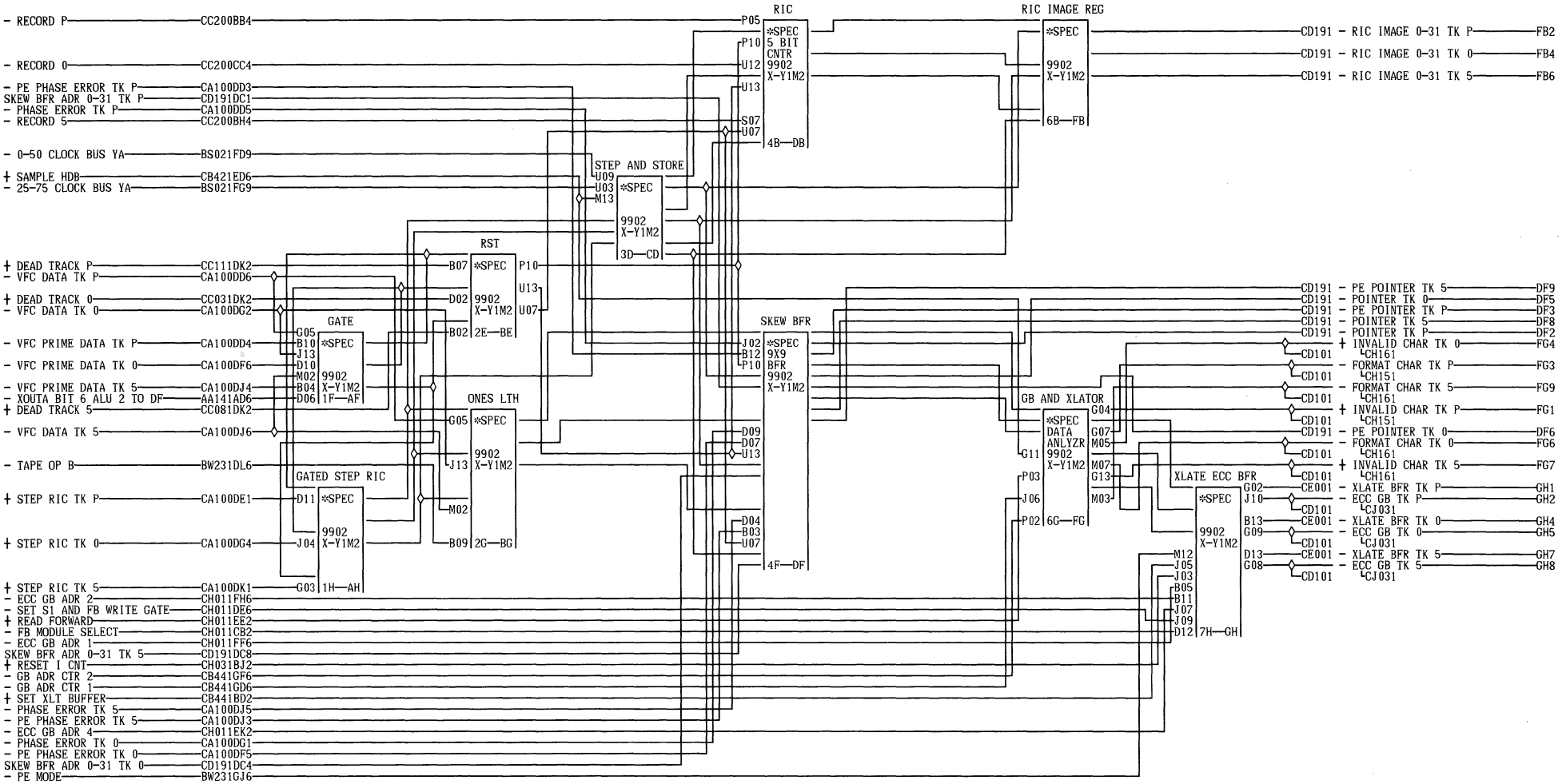
07-17-73 734098

LOAD RESISTORS ZONE 1			
DATE	08-08-73	MACH. 3803-2	
LOG	0052	FRAME	01
		P.N.	2736289
IBM CORP.	CO	BLK.	GN

C D 1 0 1 000

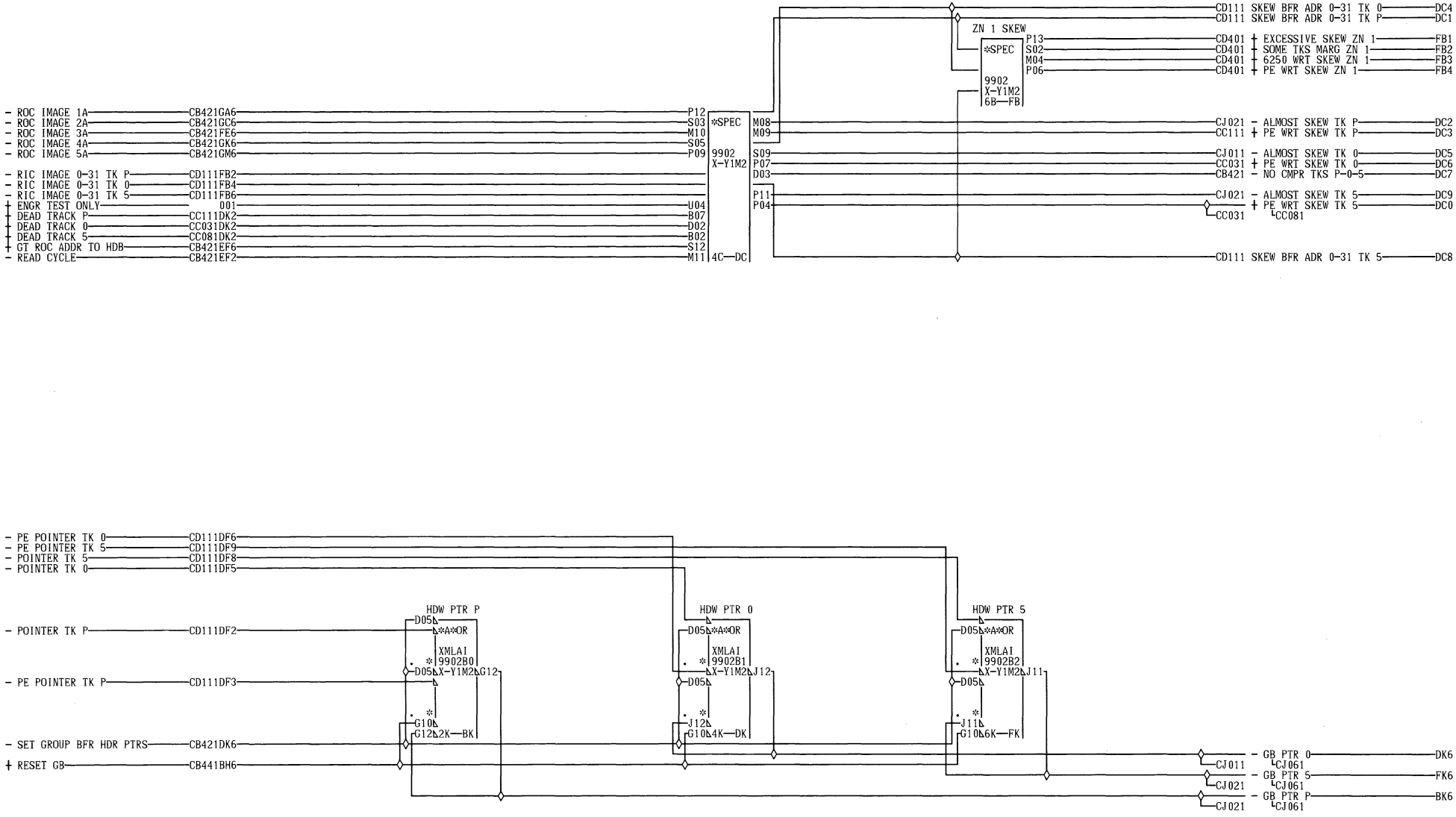
C D 1 0 1 000



07-17-73 734098

SKEW BFR GB XLATER AND ECC GB ZN 1	
DATE 08-08-73 MACH. 3803-2	
LOG 0052 FRAME 01	
P.N. 2736290	
IBM CORP. BLK. GP	

C D 1 1 1 000



07-17-73 734098

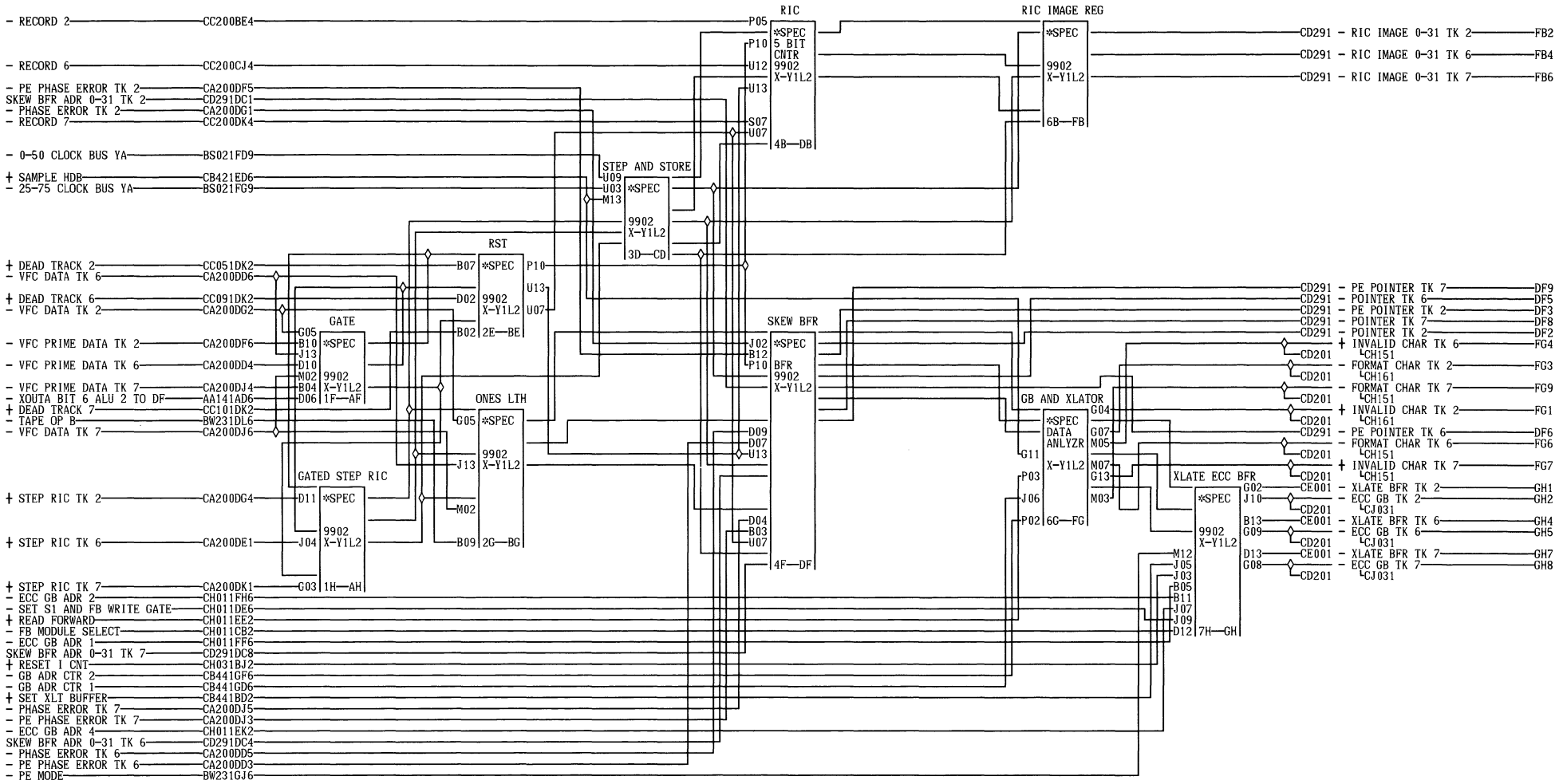
C D 1 9 1 000	PTR ZONE 1 DATE 08-08-73 MACH. 3803-2 LOG 0051 FRAME 01 P.N. 2736291 IBM CORP. CO BLK. GM	C D 1 9 1 000

07-17-73 734098

	ZONE 2		
DATE	08-08-73 MACH. 3803-2		
LOG	0052 FRAME	01	
	P.N.	2736292	
IBM CORP.	CO BLK.	GN	

C D 2 0 1 000

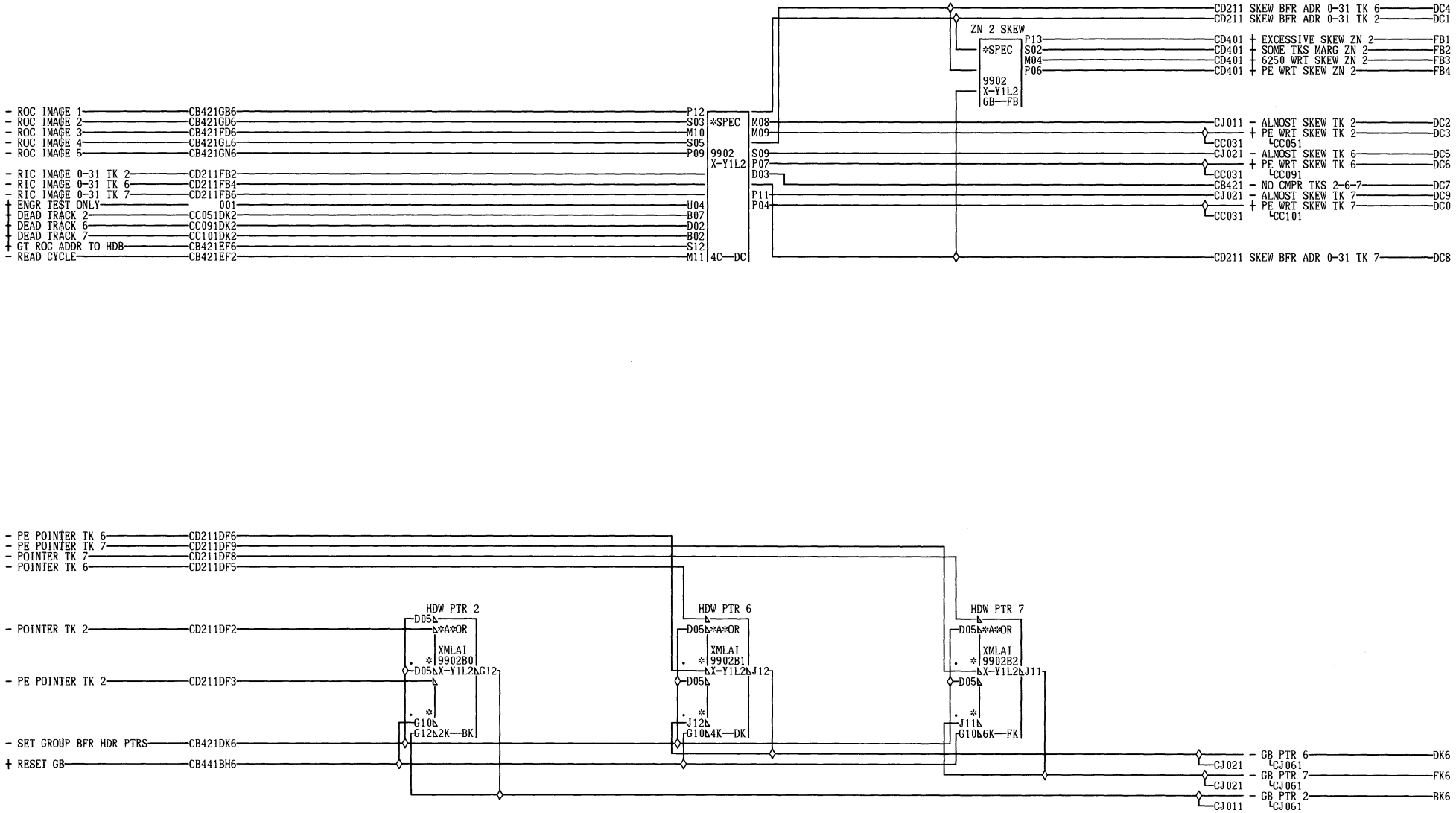
C D 2 0 1 000



07-17-73 734098

SKEW BFR GB XLATER AND ECC GB ZN 2		
DATE 08-14-73	MACH. 3803-2	
LOG 0052	FRAME 01	
	P.N. 2736293	
IBM CORP.	BLK.	GP

C D 2 1 1 000



07-17-73 734098

	PTR ZONE 2		
DATE	08-08-73	MACH. 3803-2	
LOG	0051	FRAME	01
		P.N.	2736294
IBM CORP.	CO	BLK.	GM

CD291 000

CD291 000

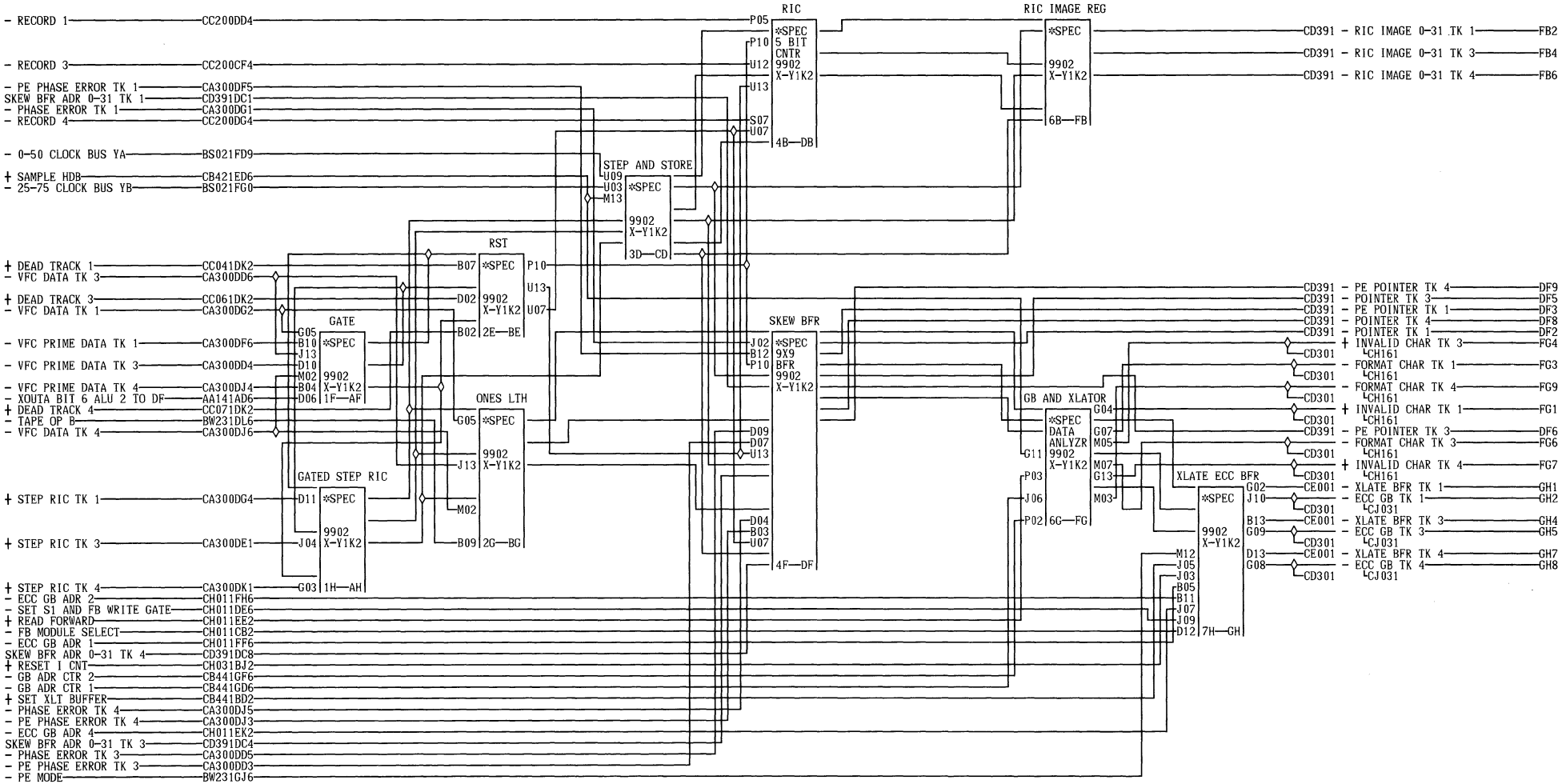
07-17-73 734098

C
D
3
0
1

000

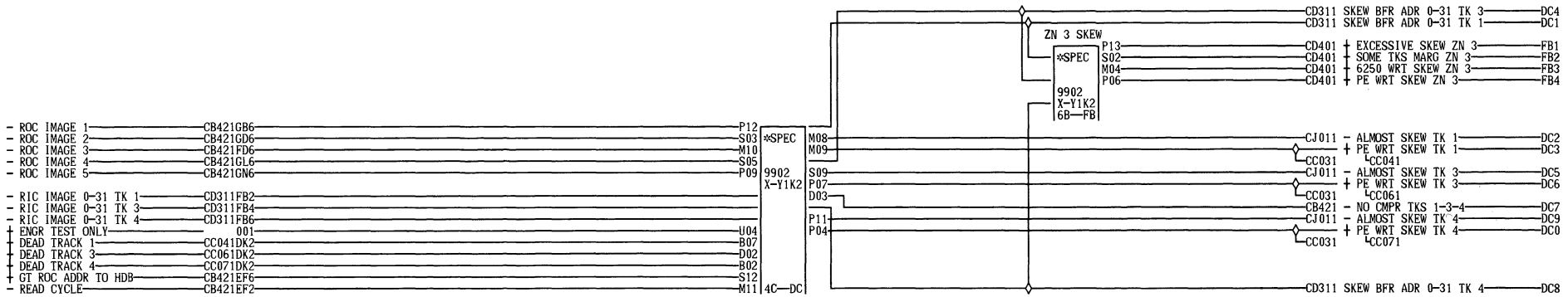
LOAD RESISTORS ZONE 3			
DATE	08-08-73	MACH. 3803-2	
LOG	0066	FRAME	01
		P.N.	2736295
IBM CORP.	CO	BLK.	GN

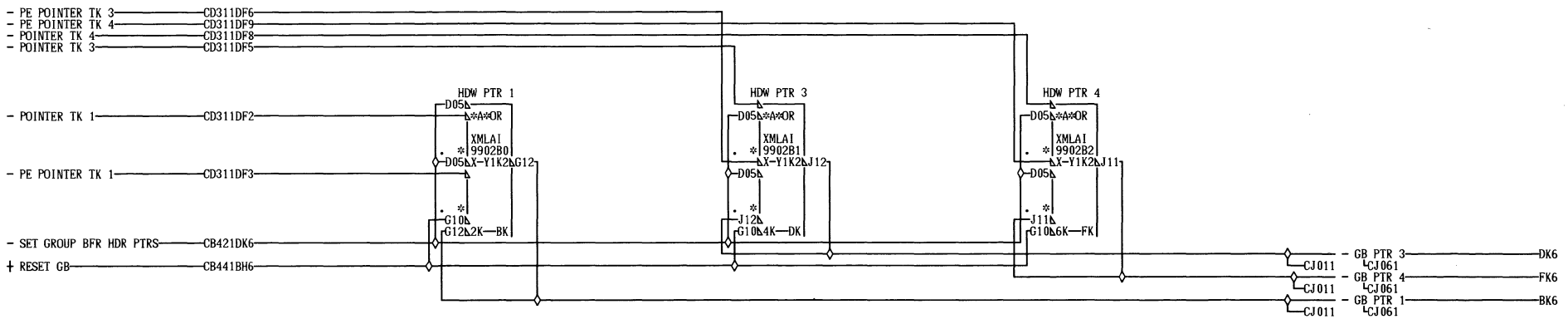
C D 3 0 1 000



07-17-73 734098

C D 3 1 1	SKEW BFR GB XLATER AND ECC GB ZN 3 DATE 08-14-73 MACH. 3803-2 LOG 0066 FRAME 01 P.N. 2736296 IBM CORP. BLK. GP	C D 3 1 1
000		000





07-17-73 734098

C D 3 9 1 000	PTR ZONE 3		C D 3 9 1 000
	DATE 08-21-81	MACH. 3803-2	
	LOG 0051	FRAME 01	
		P.N. 2736297	
	IBM CORP. CO	BLK. GM	

RIC LEAD BY 4

+ PE WRT SKEW ZN 1 — CD191FB4
+ PE WRT SKEW ZN 2 — CD291FB4
+ PE WRT SKEW ZN 3 — CD391FB4

OR
DOT
3B—CB

CB431 + PE WRITE SKEW (CL001) — CB4

RIC LEAD BY 14

+ 6250 WRT SKEW ZN 1 — CD191FB3
+ 6250 WRT SKEW ZN 2 — CD291FB3
+ 6250 WRT SKEW ZN 3 — CD391FB3

OR
DOT
3D—CD

CB431 + 6250 WRITE SKEW (CL011) — CD4

+ SOME TKS MARG ZN 1 — CD191FB2
+ SOME TKS MARG ZN 2 — CD291FB2
+ SOME TKS MARG ZN 3 — CD391FB2
+ END SAMPLE DT — CB431AK6
+ PE SOME TRK MARG — CB431BJ2

OR
DOT
3F—CF

CC021 + SOME TRK MARG — CF4

+ EXCESSIVE SKEW ZN 1 — CD191FB1
+ EXCESSIVE SKEW ZN 2 — CD291FB1
+ EXCESSIVE SKEW ZN 3 — CD391FB1
+ WRITE SKEW ERROR — CB431CC6
+ NRZI WRITE SKEW CHK — CN251CN2

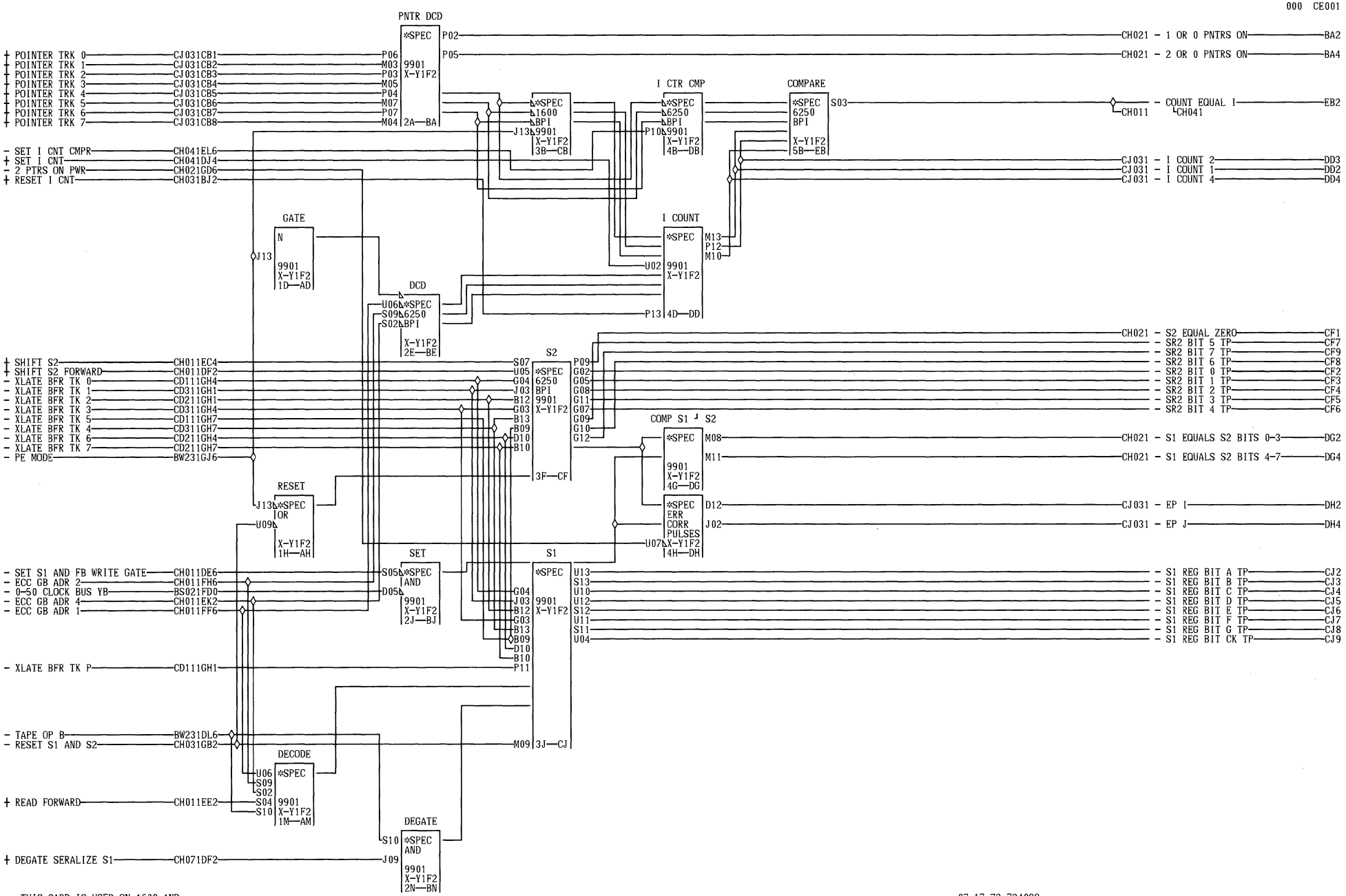
OR
DOT
3H—CH

CB431 + SKEW CHK — CH4

07-17-73 734098

SKEW CHECK DOT ORING			
DATE 08-08-73	MACH. 3803-2		
LOG 0051	FRAME 01		
	P.N. 2736298		
IBM CORP.	BLK. CJ		

C D 4 0 1 000



THIS CARD IS USED ON 1600 AND 6250 ERROR CORR ONLY. THE C SPEC BLOCKS LABELED 1600 AND E 6250 ARE USED ONLY DURING 0 THOSE MODES. UNLABLED BLKS 0 ARE USED FOR BOTH MODES. 1 REFER TO CE011 FOR EXPLANATION OF INPUT AND 000OUTPUT LINES USING ┼SH1FT S2 FOR SYNC.

07-17-73 734098

S1 S2 AND I COUNT		
DATE 08-08-73 MACH. 3803-2		C
LOG 0051 FRAME 01		E
	P.N. 2736299	0
		0
		1
IBM CORP. BLK. EC		000

P/N 2736659
ERROR CORRECTION NECESSARY OUTPUTS (CE002)

Certain basic outputs from this card are necessary for proper error correction. These reference pages identify these necessary outputs.

Note: This card is used only for 1600 and 6250 BPI operation.

1600 Bits Per Inch

To do error correction in 1600 BPI, two basic outputs are necessary from this card. They are the binary value of I Count and the -EP I pulse. The binary value of I Count is decoded to determine the failing track. The EP I pulse is the correcting signal for the failing track.

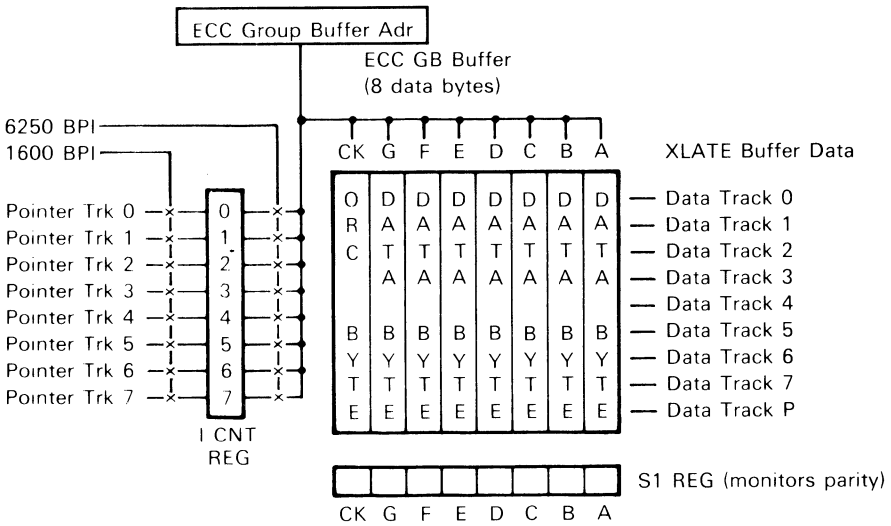
Single Error Correction, 6250 BPI

Same as 1600 BPI.

Double Error Correction, 1600 BPI

The two failing tracks are designated as tracks I and J. EP I and EP J are the error pattern correction pulses for tracks I and J. The outputs from this card that are necessary for correcting track I are the binary value of I Count and EP I.

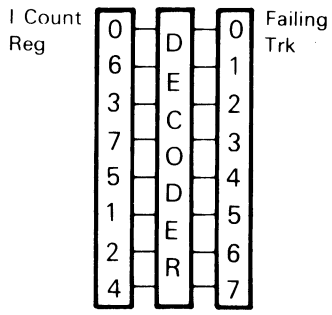
The one output from this card necessary for correcting track J is EP J. Other signals necessary for correcting track J come from other sources.



As the data is inserted into the ECC Group Buffer the S1 register monitors the parity of each byte. A parity error in any byte of the ECC Group Buffer sets the corresponding bit in the S1 register.

In 1600 BPI the pointers are gated into the I Count register. In 6250 BPI the ECC Group Buffer address is gated into the I Count register. The binary value of the I Count register is decoded and the resulting code is the failing track.

I COUNT/FAILING TRACK RELATIONSHIP

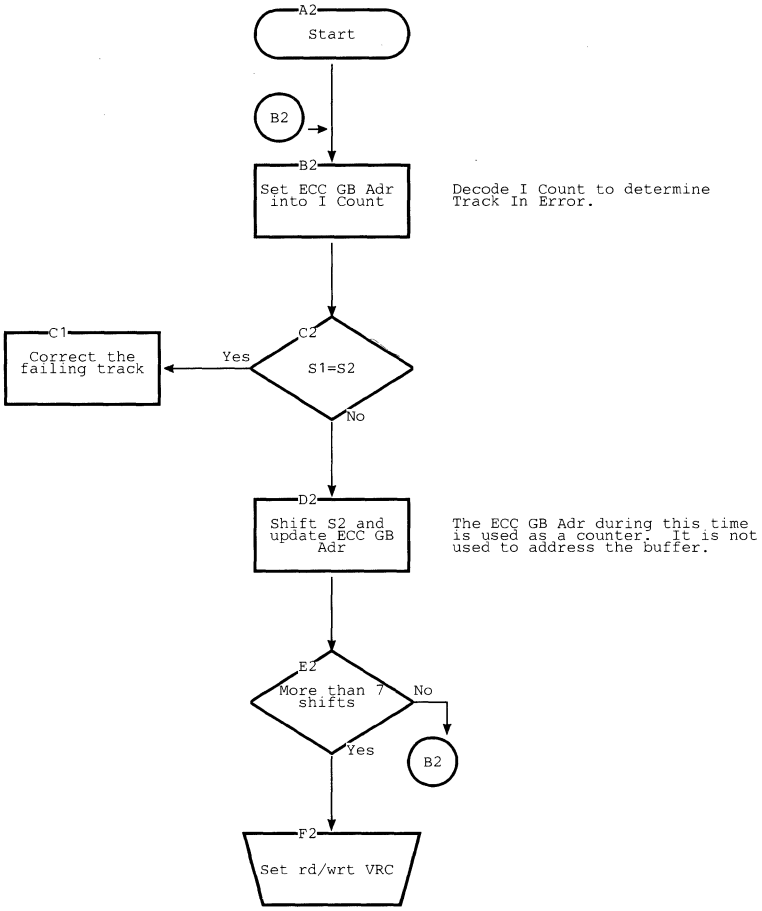


P/N 2736660 OUTPUTS (CE003)	I/O PINS	1600 BPI	3803-2 6250 BPI S=Single Error D=Double Error
-1 or 0 PNTRS ON	P02	Minus if no pointers are active or only one pointer is active.	Same as 1600 BPI
-2 or 0 PNTRS ON	P05	Minus if no pointers are active or only 2 pointers are active.	Same as 1600 BPI
-I COUNT 1 -I COUNT 2 -I COUNT 4	M13 P12 M10	Binary value of I Count decoded to determine the failing track. (See chart below.)	S=Same as 1600 BPI D=Defines the low order track to correct (EP-I).
-COUNT EQUAL I	S03	Not used but output can change.	S=Not used on single error correction but could go active. D=Active after S2 is shifted enough times to determine TRK I (shifts=I CNT).
-S2 EQUAL ZERO	P09	Always minus (-).	This line is data sensitive but the important part of it occurs at B4 Time. It goes active at B4 Time if no error occurs, or if P TRK is the only failure.
-S1 EQUALS S2 BITS 4-7	M11	Active on read backward or LWR if no parity error in XLATE bits.	S=The output will go minus if there is no error at the end of B Time, or if the single track error is correctable.
-S1 EQUALS S2 BITS 0-3	M08	Active on read forward and write if no parity error in XLATE byte during data time.	D=The output will go minus if there is no error at the end of B Time. If double track errors occur, this output is unused and unpredictable.
-EP I	D12	Active only on correctable parity errors of XLATE (requires pointer).	S=Active pulse during ABC Cycle for every byte with parity error. D=This pulse will go active when correction is required, as defined by the low-order pointer (goes active during format, but should be ignored).
-EP J	J02	Always plus(+).	S=Always plus on single track failure D=This pulse will go active when correction is required, as defined by high-order pointer.
-S1 REG BIT A -S1 REG BIT B -S1 REG BIT C -S1 REG BIT D	TPU13 S13 U10 U12	Always plus (+). Always plus (+). Always plus (+). Minus on parity error bkwd (or LWR).	Any S1 register bit active indicates a parity error occurred. The specific line defines the byte within the ECC group that had the parity error (goes active during format but should be ignored).
-S1 REG BIT E	S12	Minus on parity error fwd.	
-S1 REG BIT F -S1 REG BIT GG -S1 REG BIT CHK	U11 S11 U04	Always plus (+). Always plus (+). Always plus (+).	

P/N 2736661

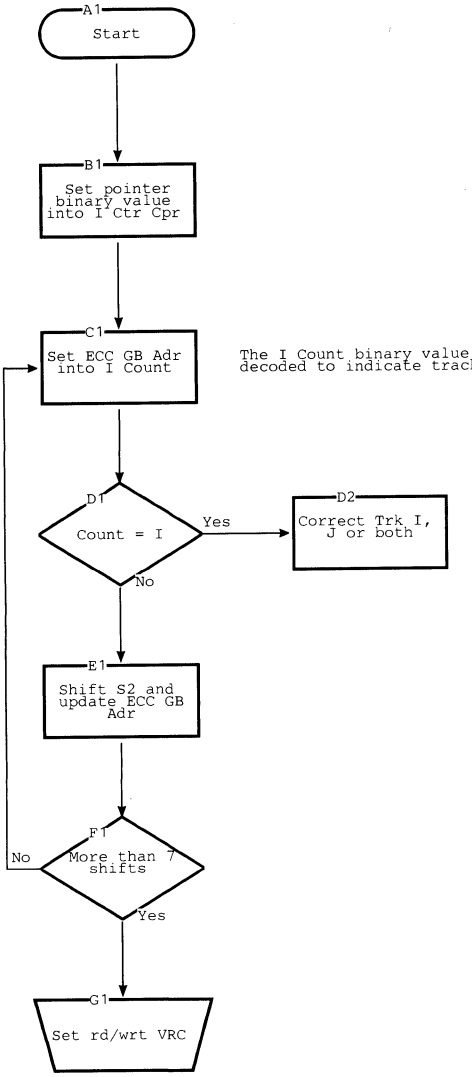
INPUTS (CE004)	I/O PINS	1600 BPI	3803-2 6250 BPI
+PNTR TRACKS 0-7		Any pointer line active indicates a marginal condition that may or may not require correction.	Same as 1600 BPI
-SET I CTR CMPR	P10	Not used and inactive.	Gates the pointer decode register output into a special module early in the A B Cycle. Retained for comparing with I Count Register.
+SET I COUNT	U02	Sets decoded putput of pointer decode register into I COUNT register (Blk 4D) (at A4 Time if error cond. exists).	Sets decoded output of ECC GB ADD1, 2, and 4 into the I Count register (Blk 4D) when S1=S2. This pulse is inactive for the rest of that ECC GROUP.
-PE MODE	J13	Gates pointer decode register.	Gates ECC GB address lines.
-ECC GB ADR 1 -ECC GB ADR 2 -ECC GB ADR 4	U06 S04 S02	Not used but must be at following state Not 1, Not 2 and 4 during data time (A Time).	Contains GB address during A and B Cycles (Blk 2E). It is used as a shift cntr during A B cycles (Blk 1M).
+RST I COUNT	P13	Active at A7 Time	Reset I Count register at B5.
+SHIFT S2	S07	800 nanosecond pulses starting with beginning All Ones Marker and the postamble.	S2 is shifted every time a byte is inserted into the ECC GB. During a correction cycle (AB), S2 is shifted until S2= S1 for single error correction, or until Count=I(Blk 5B) becomes active for double track correction.
+SHIFT S2 FWD	U05	Not used, but active at A Time during a forward read and write (inactive on LWR).	Active during A & B Time of forward read and write.
-XLATE BITS 0-7 (feeding 3F)		Not used - see XLATE BITS feeding Blk 3J.	Data bits feeding correction logic.
-RESET S2	U09	Not used, but active at 07 Time and A7 Time (see -RESET S1).	Active at 07, C7 time. Same for -RESET S1.
-2 PNTRS ON PWR	U07	Not used.	Used to gate -EP-J output. (Blk 4H) on double error correction, but may be active for all cycles (A,B,AB,ABC).
-SET S1	S05	Four 50 nsec pulses/ECC byte.	Active 8 times/ECC Group. Four times during A Cycle, four times during B Cycle
CLK 0-50	D05	50 nsec pulses every 100 nsec gated by TAPE OP.	Same as 1600 BPI
-XLATE BITS P-0-7		Data bits to correction logic (each byte repeated 4 times).	All XLATE storage bytes to correction logic.
+RD FWD	S04	Inverts the decode out of Blk 1M on Read Backward and LWR Mode.	Controls shift direction of S2 on AB Cycles and inverts the decode out of Blk 1M on Read Bkwd.
-TAPE OP	S10	Active during tape motion and gates decode module (Blk 1M).	Same as 1600 BPI
+DEGATE S1	J09	Active with recognition of Ending All Ones to inhibit correction of postamble.	Not used and inactive except in Diagnostic Mode.
-RESET S1	M09	Same as -RESET S2 but is used to reset S1.	Same as -RESET S2.

SINGLE ERROR CORRECTION FLOW



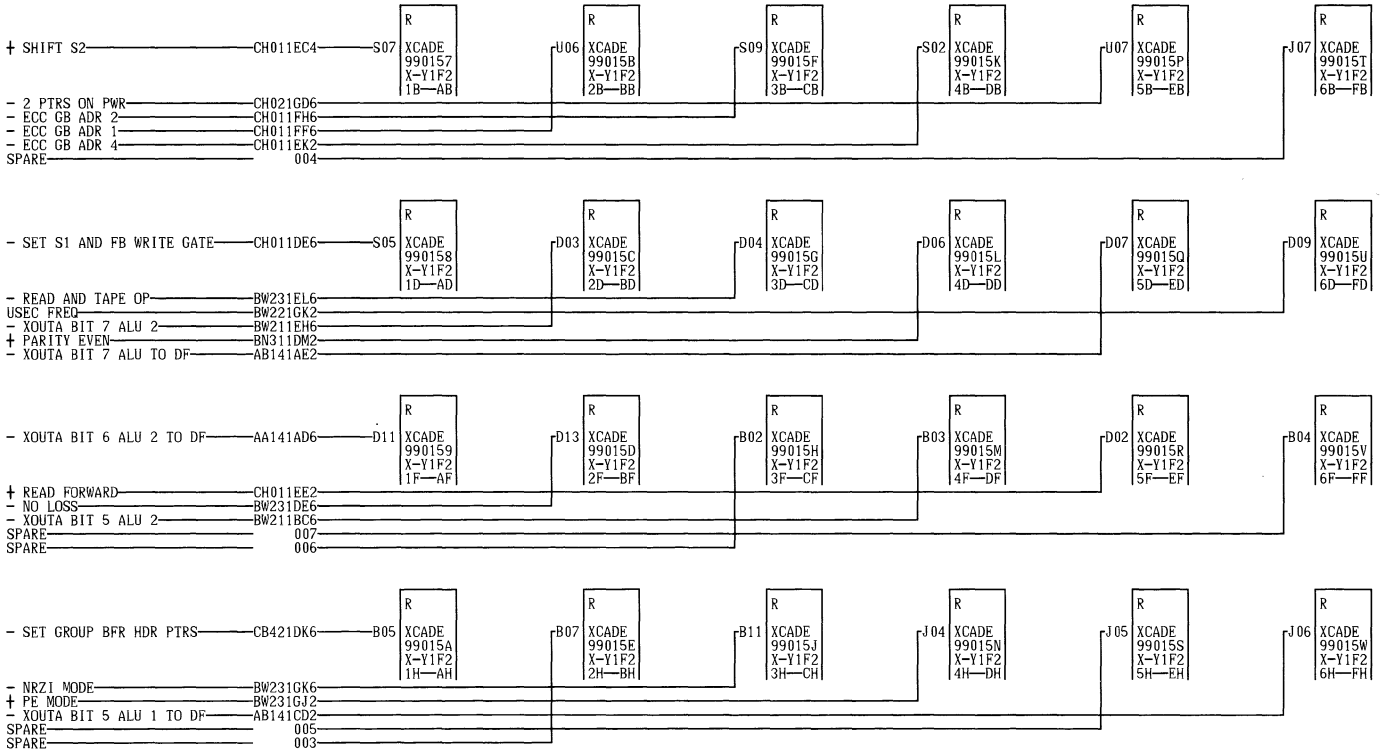
Date	EC Number	Date	EC Number	SINGLE ERROR CORRECTION FLOW
03 Aug 73	734098			PAGE CE005
				IBM Part 2736662 Page CE005

DOUBLE ERROR CORRECTION FLOW



Date	EC Number	Date	EC Number	DOUBLE ERROR CORRECTION FLOW
02 Aug 73	734098			PAGE CE006

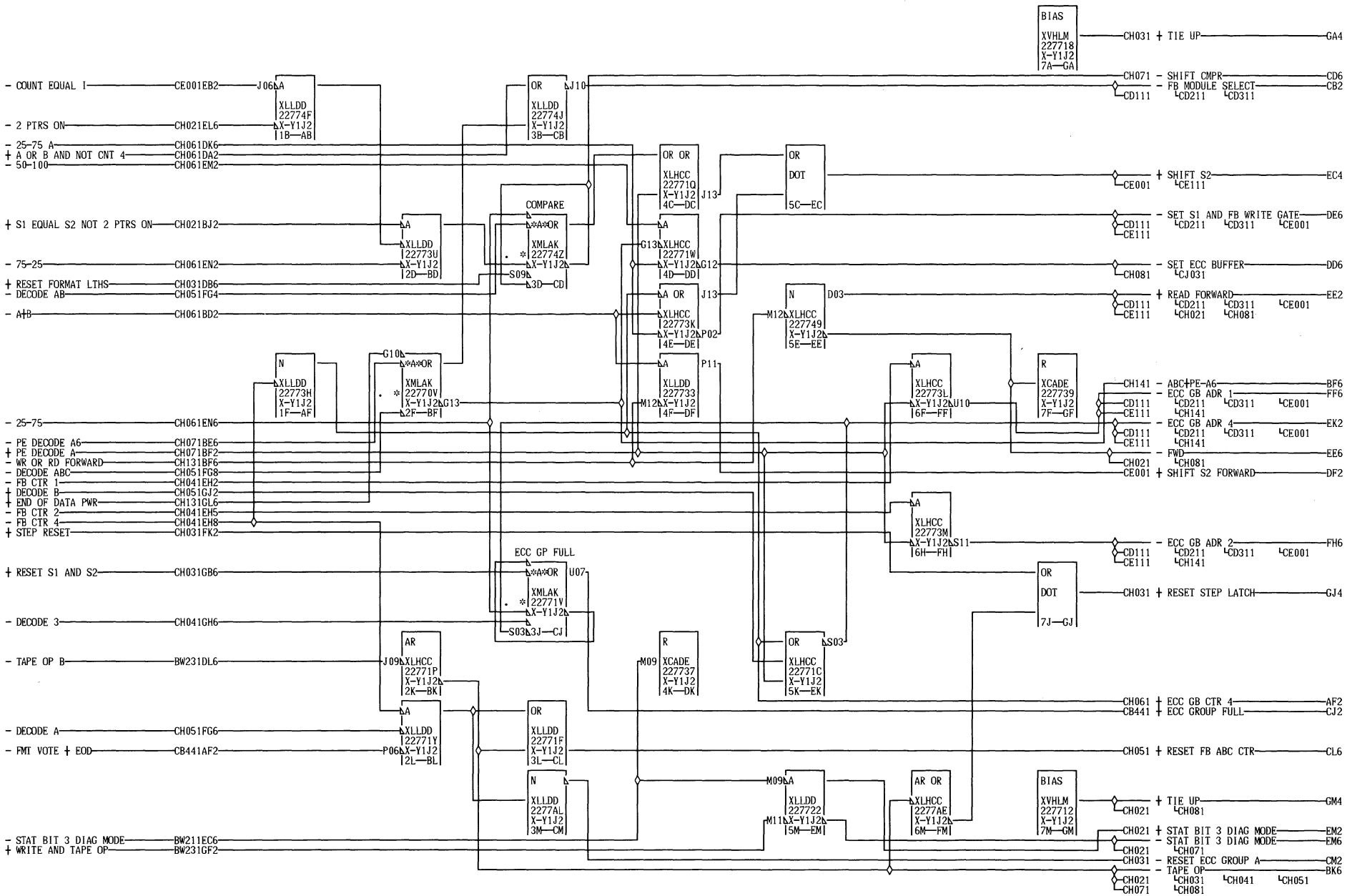
IBM Part 2736663 Page **CE006**



C E 1 1 1 000

LOAD REGISTORS			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736300
IBM CORP.	CO	BLK.	FJ

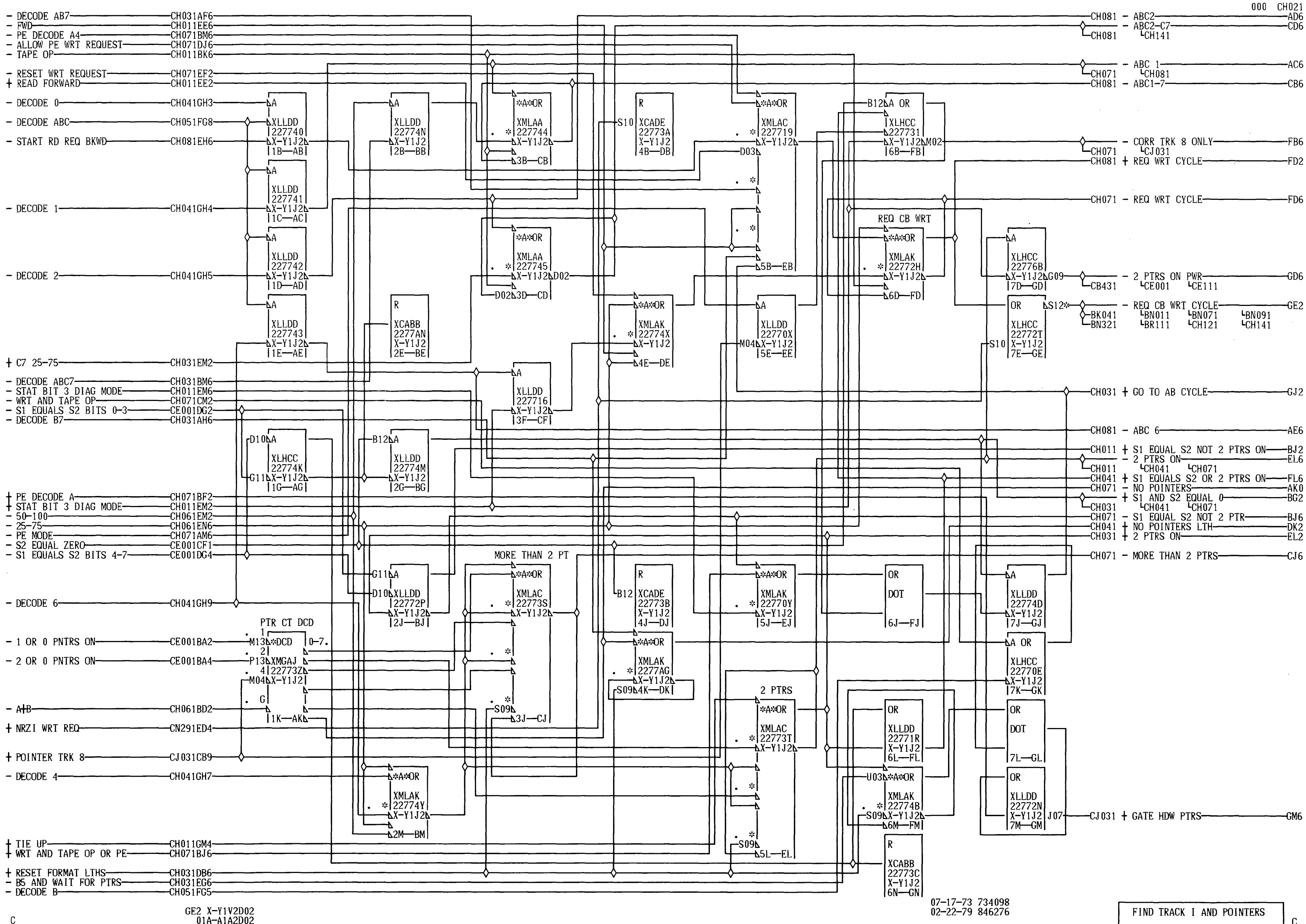
C E 1 1 1 000



07-17-73 734098
02-22-79 846276

ECC GROUP BUFFER CONTROLS	
DATE 08-21-81 MACH. 3803-2	
LOG 1836 FRAME 01	
P.N. 2736301	
IBM CORP. CO BLK. GN	

C H 0 1 1 000



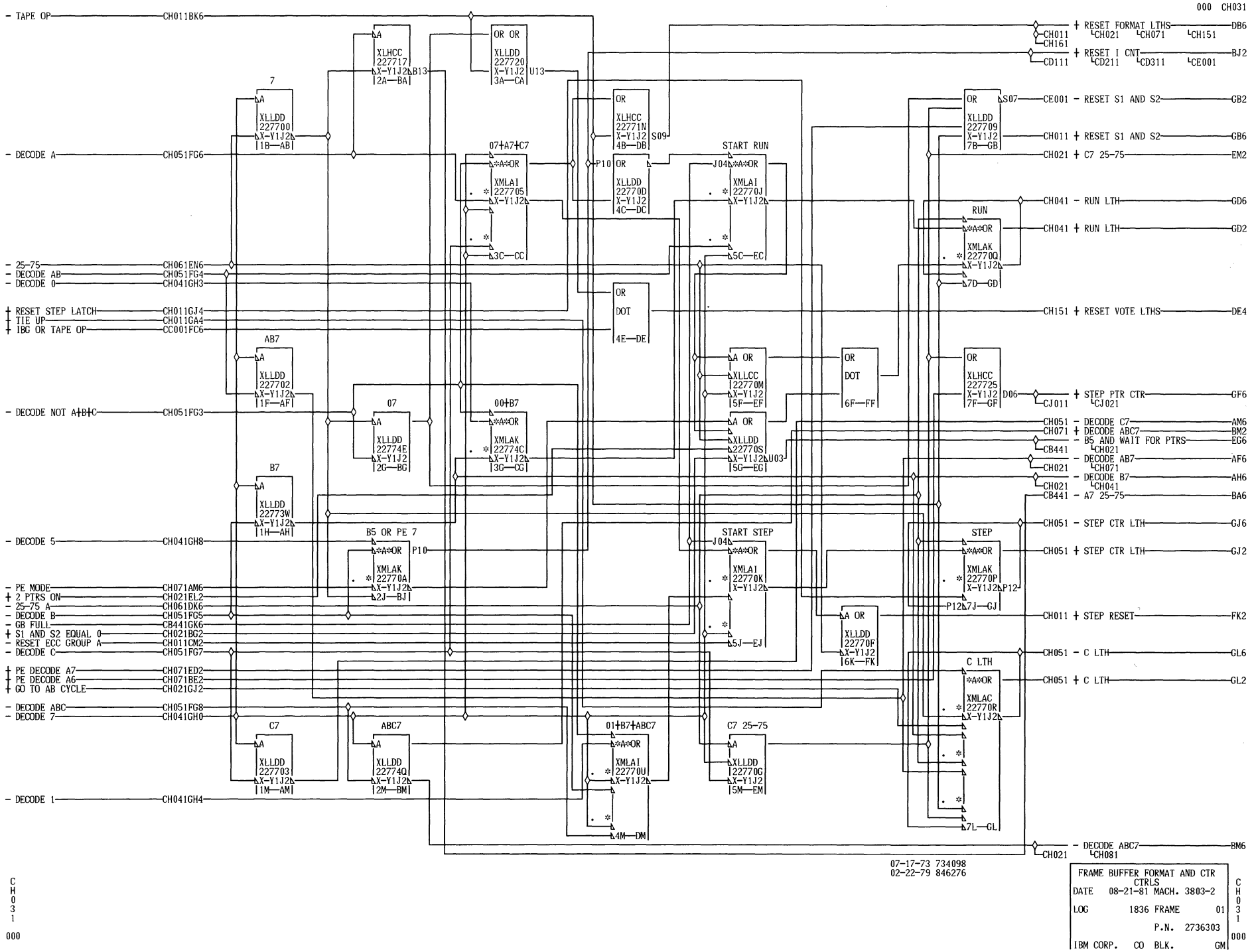
GE2 X-Y1V2D02
01A-A1A2D02

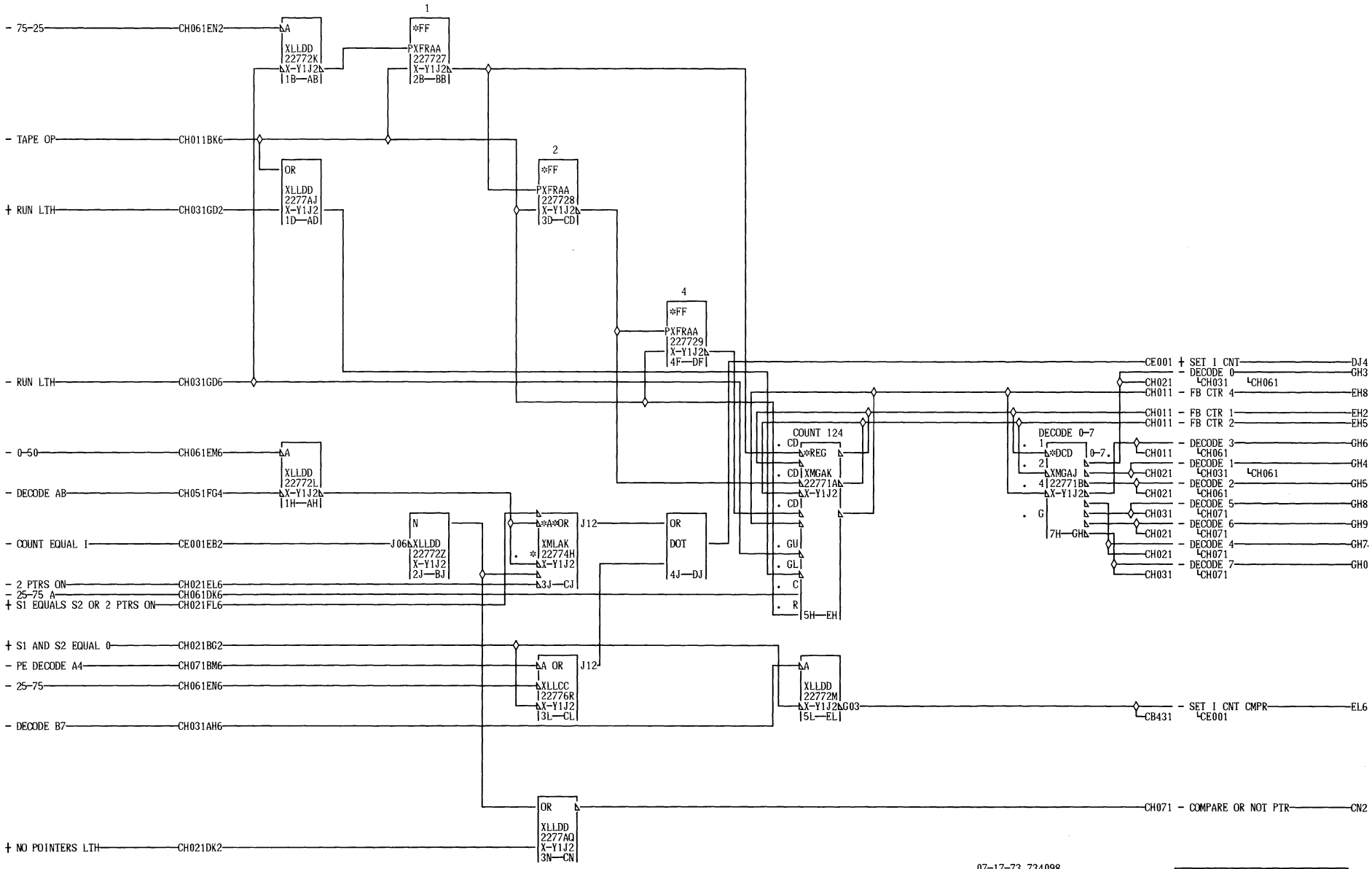
07-17-73 734098
02-22-79 846276

CH021
000

FIND TRACK I AND POINTERS		
DATE 08-21-81	MACH. 3803-2	
LOG 1836	FRAME 01	
	P.N. 2736302	
IBM CORP.	CO BLK.	GP

CH021
000

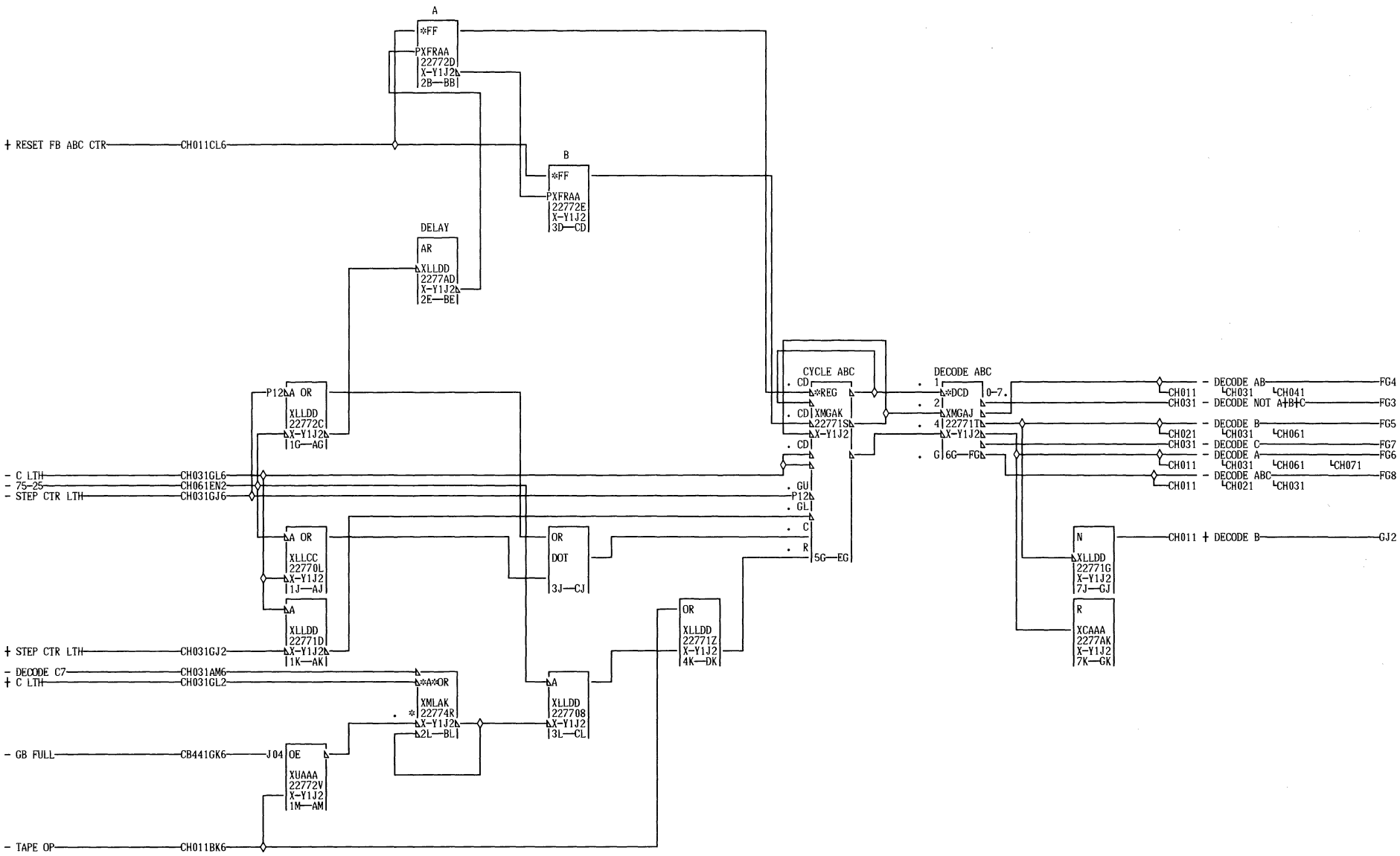

000 CH031
- TAPE OP CH011BK6
- DECODE A CH051FG6
- 25-75 CH061EN6
- DECODE AB CH051FG4
- DECODE 0 CH041GH3
+ RESET STEP LATCH CH011GJ4
+ TIE UP CH011GA4
+ IBG OR TAPE OP CC001FC6
- DECODE NOT A+B+C CH051FG3
- DECODE 5 CH041GH8
- PE MODE CH071AM6
+ 2 PTRS ON CH021EL2
- 25-75 A CH061DK6
- DECODE B CH051FG5
- GB FULL CB441GK6
+ S1 AND S2 EQUAL 0 CH021BG2
- RESET ECC GROUP A CH011CM2
- DECODE C CH051FG7
+ PE DECODE A7 CH071ED2
+ PE DECODE A6 CH071BE2
+ GO TO AB CYCLE CH021GJ2
- DECODE ABC CH051FG8
- DECODE 7 CH041GH0
- DECODE 1 CH041GH4
7
AB7
B7
C7
07
00+B7
B5 OR PE 7
ABC7
07+A7+C7
01+B7+ABC7
START RUN
START STEP
C7 25-75
RUN
STEP
C LTH
XLHCC 227717 X-Y1J2 2A—BA B13
OR OR XLLDD 227720 X-Y1J2 3A—CA U13
XLLDD 227700 X-Y1J2 1B—AB
XLLDD 227702 X-Y1J2 1F—AF
XLLDD 22773W X-Y1J2 1H—AH
XLLDD 227703 X-Y1J2 1M—AM
XLLDD 22774E X-Y1J2 2G—BG
XLLDD 22774Q X-Y1J2 2M—BM
XMLAK 22770A X-Y1J2 2J—BJ P10
XMLAK 22774C X-Y1J2 3C—CG
XMLAI 227705 X-Y1J2 3C—CC
OR XLHCC 22771N X-Y1J2 4B—DB S09
OR XLLDD 22770D X-Y1J2 4C—DC P10
OR DOT 4E—DE
XMLAI 22770U X-Y1J2 4M—DM
XMLAI 22770J X-Y1J2 5C—EC J04
A OR XLLCC 22770M X-Y1J2 5F—EF
A OR XLLDD 22770S X-Y1J2 5G—EG U03
XMLAI 22770K X-Y1J2 5J—EJ J04
XLLDD 22770G X-Y1J2 5M—EM
OR DOT 6F—FF
A OR XLLDD 22770F X-Y1J2 6K—FK
OR XLHCC 227725 X-Y1J2 7F—GF D06
OR XLLDD 227709 X-Y1J2 7B—GB S07
XMLAK 22770Q X-Y1J2 7D—GD
XMLAK 22770P X-Y1J2 P12
XMLAC 22770R X-Y1J2 7L—GL
+ RESET FORMAT LTHS DB6
CH011 CH021 CH071 CH151 CH161
+ RESET I CNT BJ2
CD111 CD211 CD311 CE001
CE001 - RESET S1 AND S2 GB2
CH011 + RESET S1 AND S2 GB6
CH021 + C7 25-75 EM2
CH041 - RUN LTH GD6
CH041 + RUN LTH GD2
CH151 + RESET VOTE LTHS DE4
CJ011 + STEP PTR CTR GF6
CJ021
CH051 - DECODE C7 AM6
CH071 + DECODE ABC7 BM2
- B5 AND WAIT FOR PTRS EG6
CB441 CH021
- DECODE AB7 AF6
CH021 CH071
- DECODE B7 AH6
CH021 CH041
CB441 - A7 25-75 BA6
CH051 - STEP CTR LTH GJ6
CH051 + STEP CTR LTH GJ2
P12 7J—GJ
CH011 + STEP RESET FK2
CH051 - C LTH GL6
CH051 + C LTH GL2
7L—GL
- DECODE ABC7 BM6
CH021 CH081
07-17-73 734098
02-22-79 846276
FRAME BUFFER FORMAT AND CTR CTRLS
DATE 08-21-81 MACH. 3803-2
LOG 1836 FRAME 01
P.N. 2736303
IBM CORP. CO BLK. GM
CH031 000



07-17-73 734098
02-22-79 846276

FRAME BUFFER COUNTER			
DATE	08-21-81	MACH. 3803-2	
LOG	1836	FRAME	01
		P.N.	2736304
IBM CORP.	CO	BLK.	GN

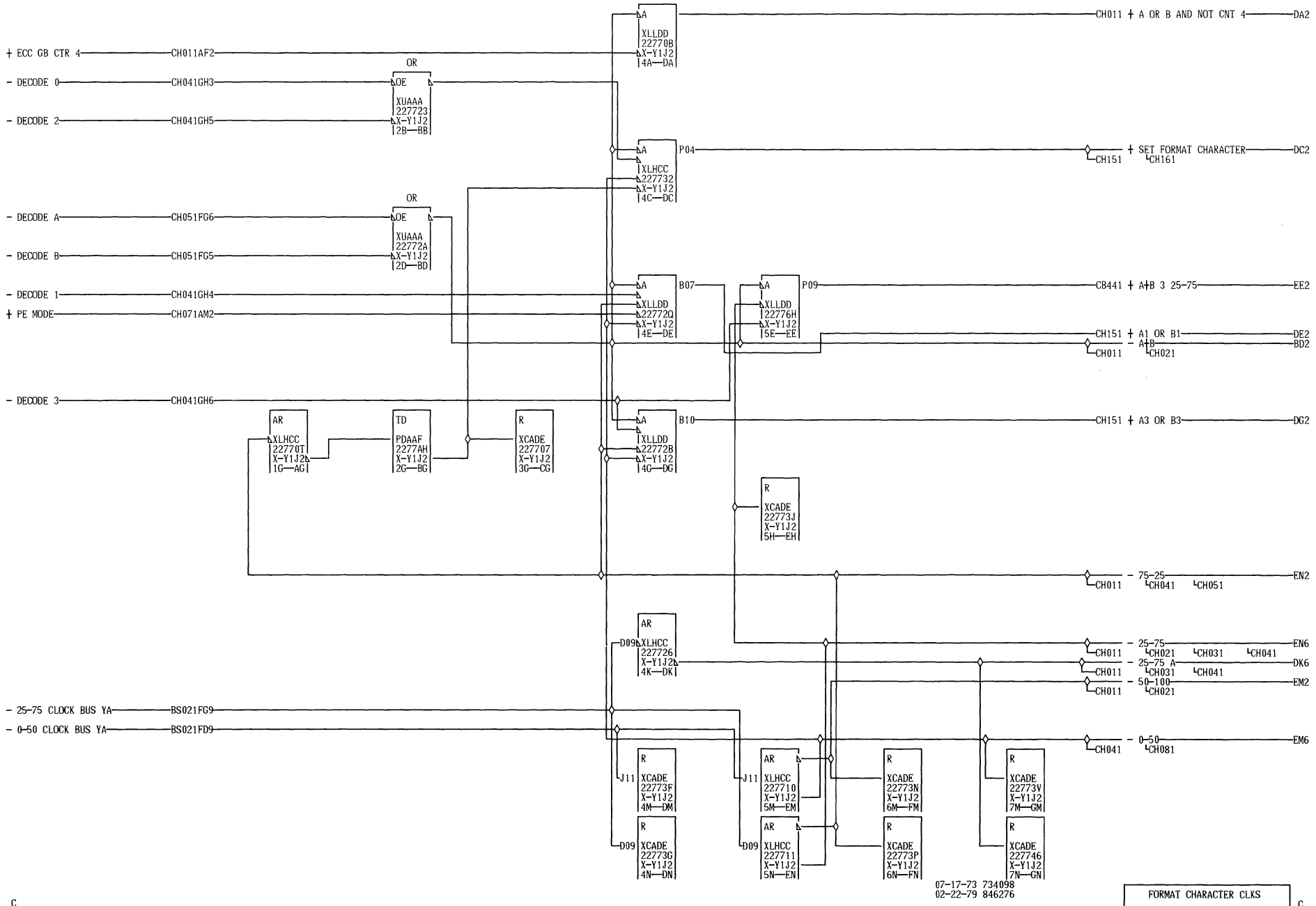
CH041 000

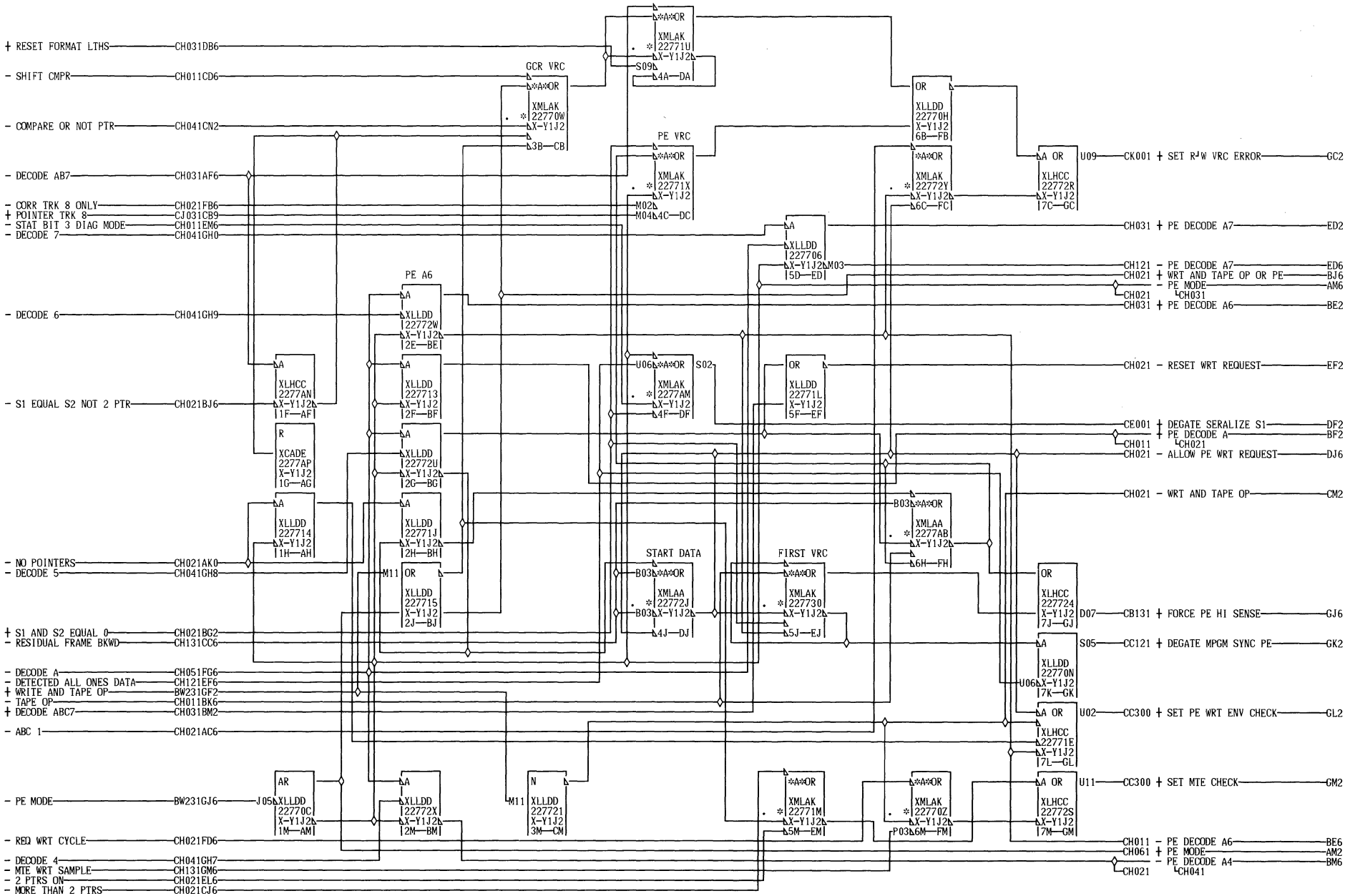


07-17-73 734098
02-22-79 846276

FRAME BUFFER FORMAT COUNTER	
DATE 08-21-81 MACH. 3803-2	
LOG 1836 FRAME 01	
P.N. 2736305	
IBM CORP. CO BLK. GL	

C H 0 5 1 000

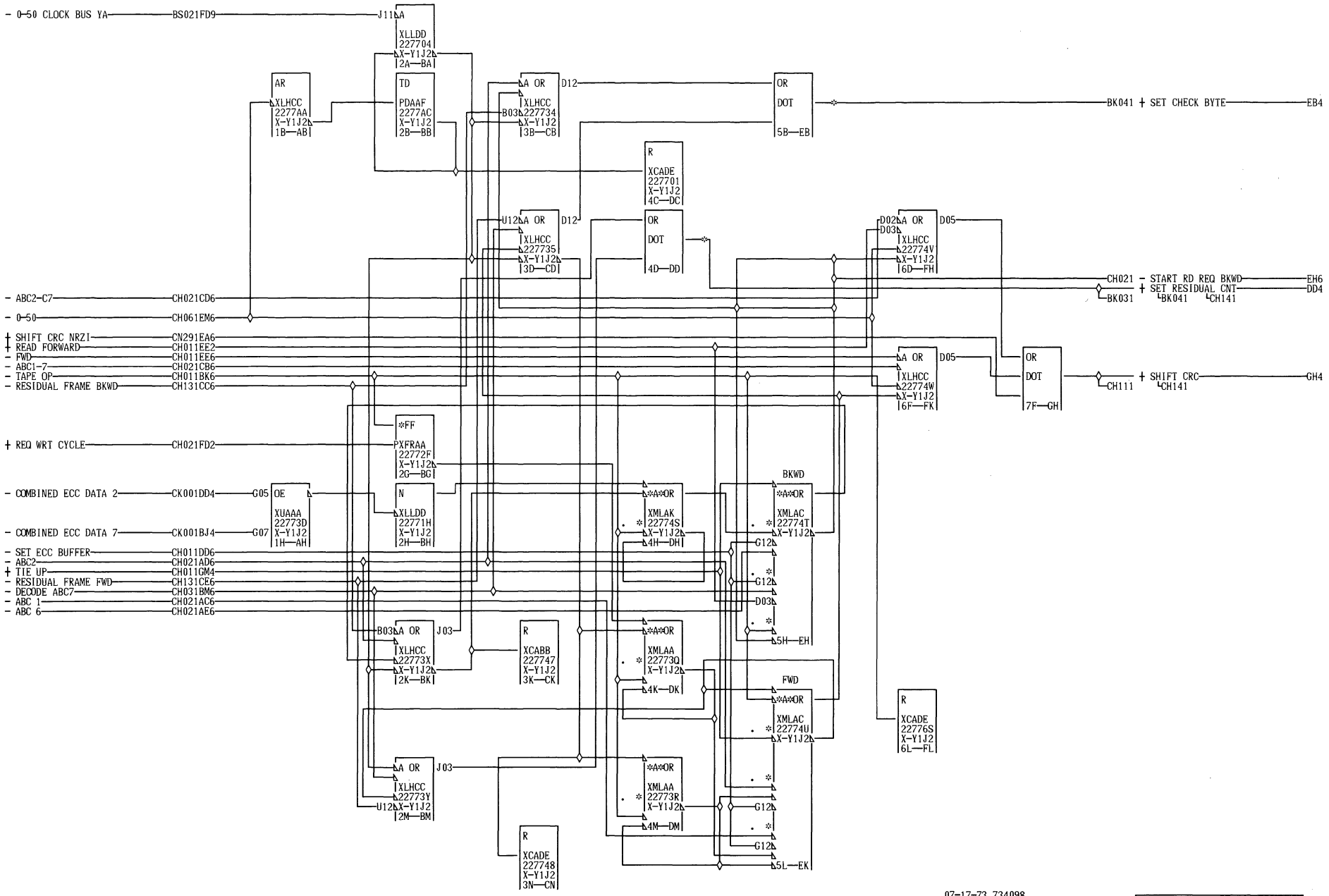

+ ECC GB CTR 4
CH011AF2
- DECODE 0
CH041GH3
- DECODE 2
CH041GH5
OR
OE
XUAAA
227723
X-Y1J2
2B—BB
- DECODE A
CH051FG6
- DECODE B
CH051FG5
OR
OE
XUAAA
22772A
X-Y1J2
2D—BD
- DECODE 1
CH041GH4
+ PE MODE
CH071AM2
- DECODE 3
CH041GH6
- 25-75 CLOCK BUS YA
BS021FG9
- 0-50 CLOCK BUS YA
BS021FD9
A
XLLDD
22770B
X-Y1J2
4A—DA
CH011 + A OR B AND NOT CNT 4
DA2
A
P04
XLHCC
227732
X-Y1J2
4C—DC
CH151
+ SET FORMAT CHARACTER
CH161
DC2
A
B07
XLLDD
22772Q
X-Y1J2
4E—DE
A
P09
XLLDD
22776H
X-Y1J2
5E—EE
CB441 + A+B 3 25-75
EE2
CH151 + A1 OR B1
DE2
CH011
- A+B
CH021
BD2
A
B10
XLLDD
22772B
X-Y1J2
4G—DG
CH151 + A3 OR B3
DG2
AR
XLHCC
227701
X-Y1J2
1G—AG
TD
PDAAF
2277AH
X-Y1J2
2G—BG
R
XCADE
227707
X-Y1J2
3G—CG
R
XCADE
22773J
X-Y1J2
5H—EH
CH011
- 75-25
CH041
CH051
EN2
AR
D09
XLHCC
227726
X-Y1J2
4K—DK
CH011
- 25-75
CH021
CH031
CH041
EN6
CH011
- 25-75 A
CH031
CH041
DK6
CH011
- 50-100
CH021
EM2
CH041
- 0-50
CH081
EM6
R
J11
XCADE
22773F
X-Y1J2
4M—DM
R
D09
XCADE
22773G
X-Y1J2
4N—DN
AR
J11
XLHCC
227710
X-Y1J2
5M—EM
AR
D09
XLHCC
227711
X-Y1J2
5N—EN
R
XCADE
22773N
X-Y1J2
6M—FM
R
XCADE
22773P
X-Y1J2
6N—FN
R
XCADE
22773V
X-Y1J2
7M—GM
R
XCADE
227746
X-Y1J2
7N—GN
07-17-73 734098
02-22-79 846276
FORMAT CHARACTER CLKS
DATE 08-21-81 MACH. 3803-2
LOG 1836 FRAME 01
P.N. 2736306
IBM CORP. CO BLK. GP
CH061 000
CH061 000



07-17-73 734098
03-18-74 736699
05-13-74 736701
08-22-74 737145
02-22-79 846276

PE ERROR DETECTION AND CONTROL	
DATE 08-21-81 MACH. 3803-2	
LOG 1836 FRAME 01	
P.N. 2736307	
IBM CORP. CO BLK. GN	

C H 0 7 1 000



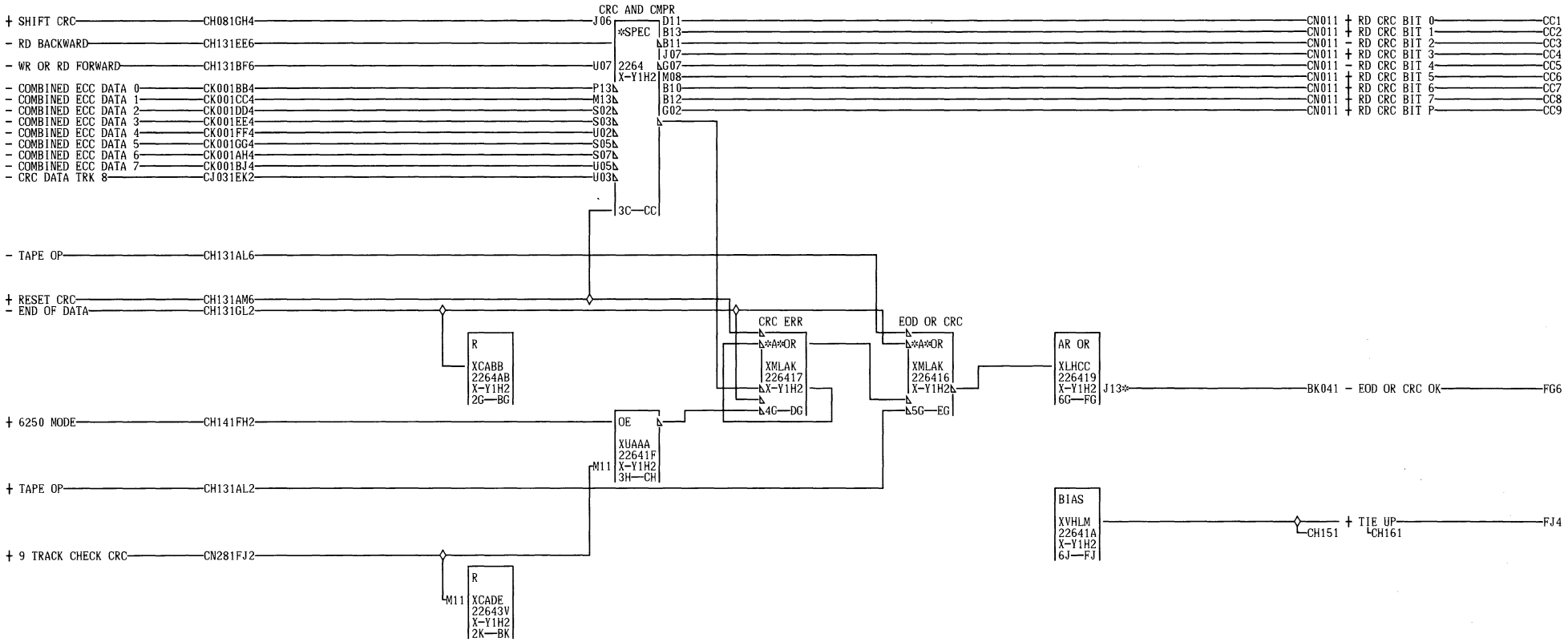
DD4 X-Y1V4B12
01A-A1B4B12
EB4 X-Y1T6D04
01A-A1E1C13

07-17-73 734098
02-22-79 846276

RESIDUAL FRAME CONTROLS			
DATE	08-21-81	MACH.	3803-2
LOG	1836	FRAME	01
		P.N.	2736308
IBM CORP.	CO	BLK.	GL

CH081 000

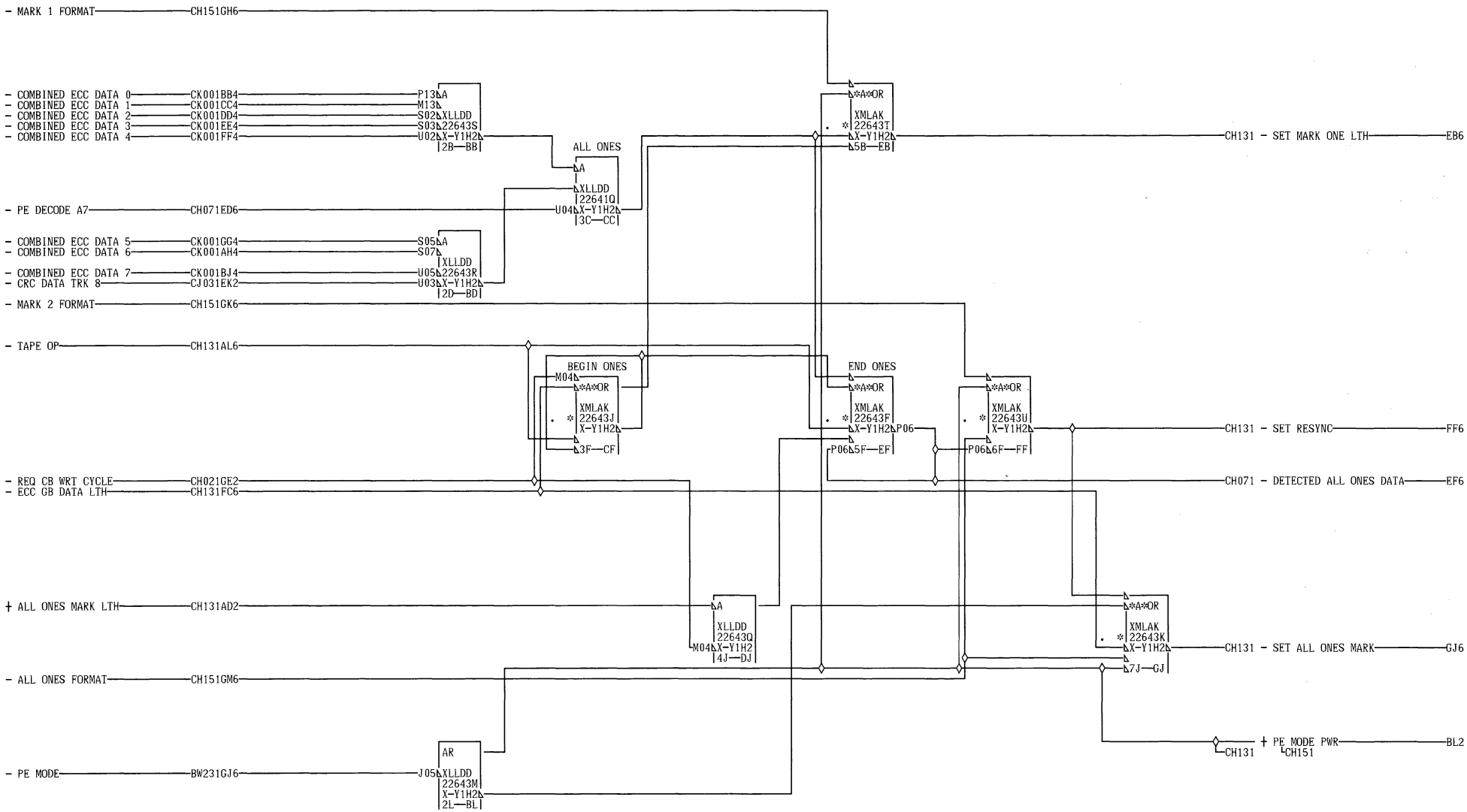
CH081 000



FG6 X-Y1V2D06
01A-A1A2D06

07-17-73 734098

C H 1 1 1 000	READ CRC GEN AND CMPR DATE 08-08-73 MACH. 3803-2 LOG 0051 FRAME 01 P.N. 2736309 IBM CORP. BLK. GN	C H 1 1 1 000

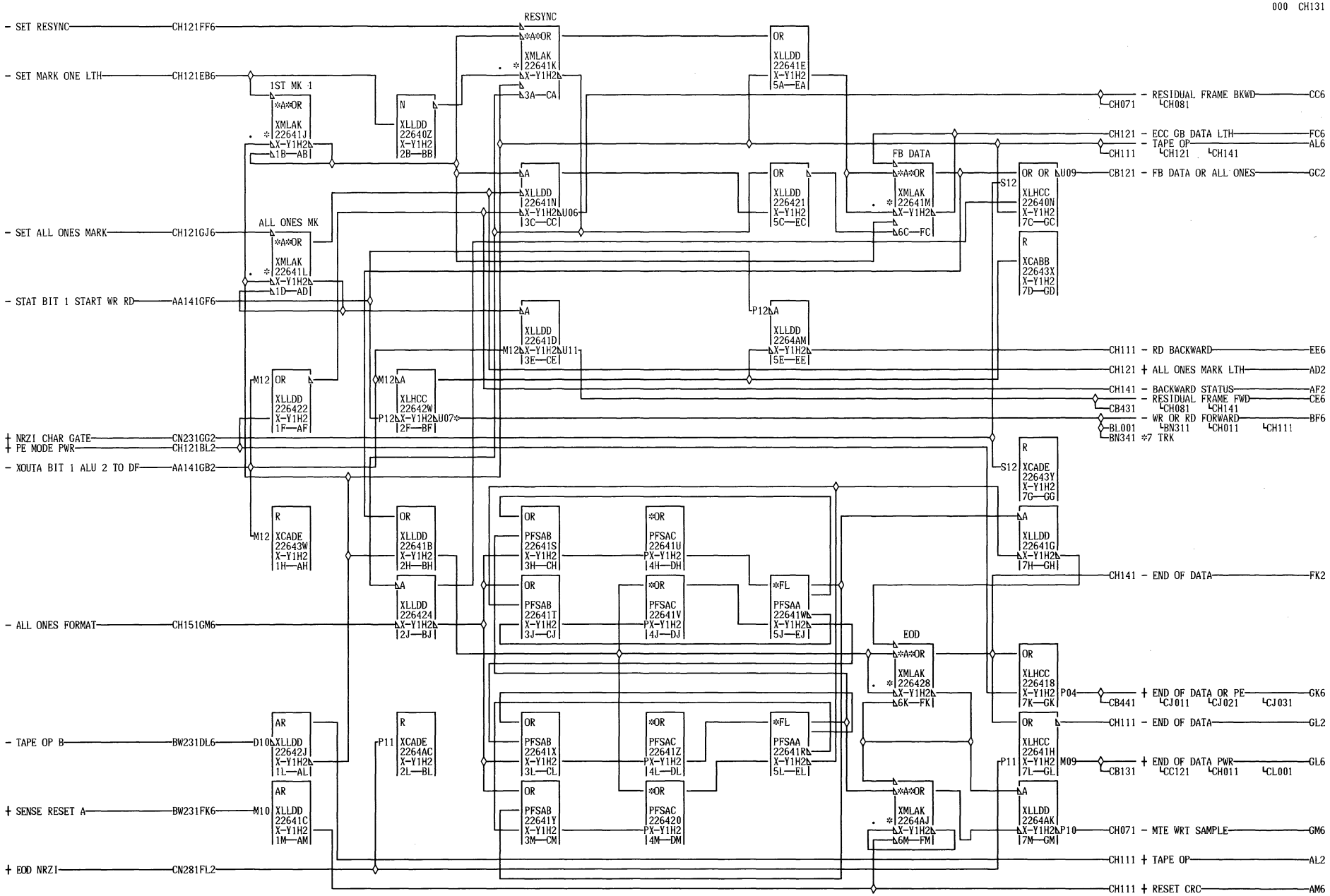


07-17-73 734098

PHASE ENCODED DATA FORMAT CONTROLS			
DATE	08-08-73	MACH. 3803-2	
LOG	0051	FRAME	01
		P.N.	2736310
IBM CORP.	CO	BLK.	GK

CH121 000

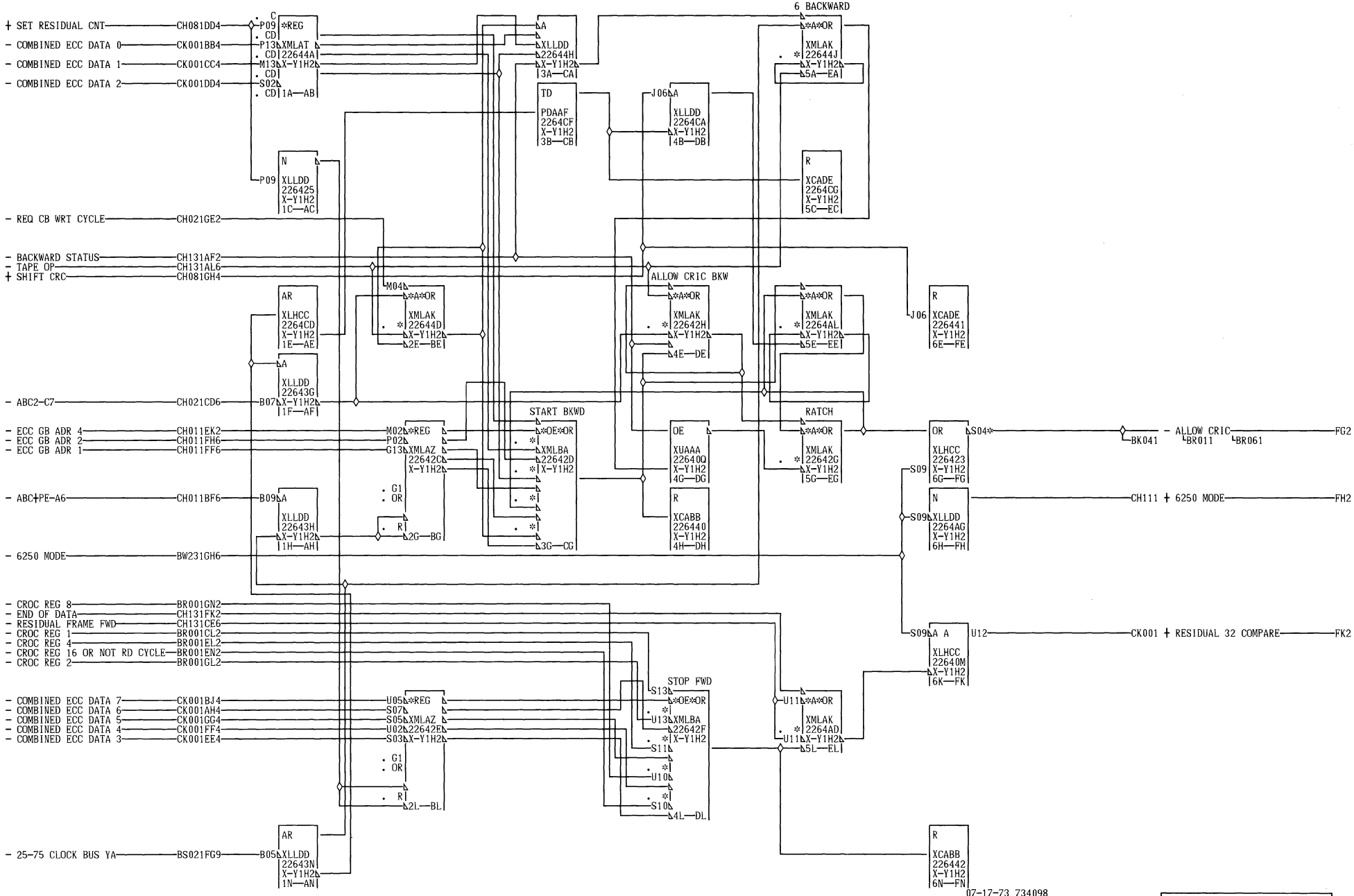
CH121 000



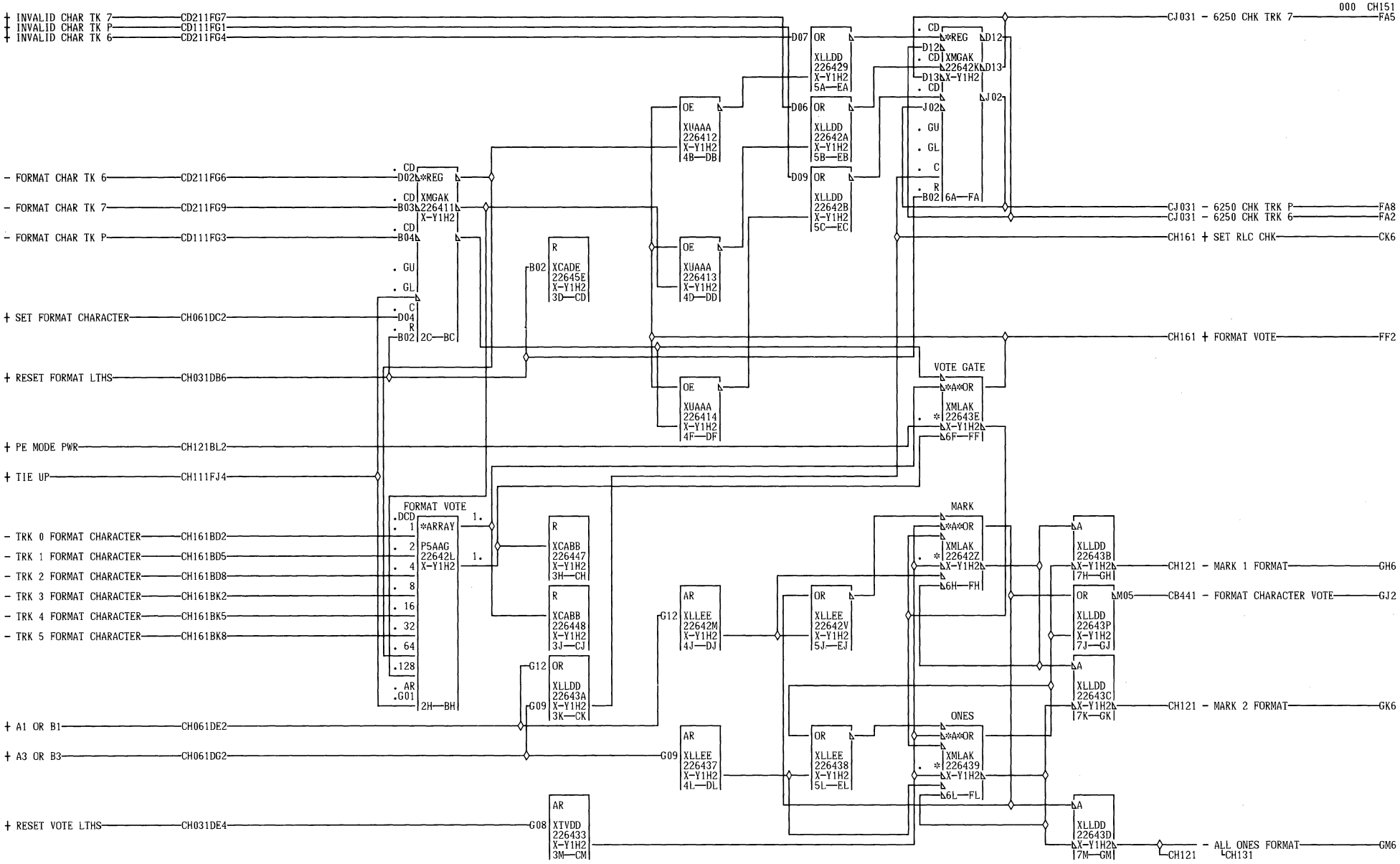
BF6 X-Y1U6B04
01A-A1F1A13

07-17-73 734098
02-22-79 846276

C H 1 3 1 000	RESYNC - RESIDUAL FRAME - END OF DATA DATE 08-21-81 MACH. 3803-2 LOG 6829 FRAME 01 P.N. 2736311 IBM CORP. CO BLK. GN		C H 1 3 1 000

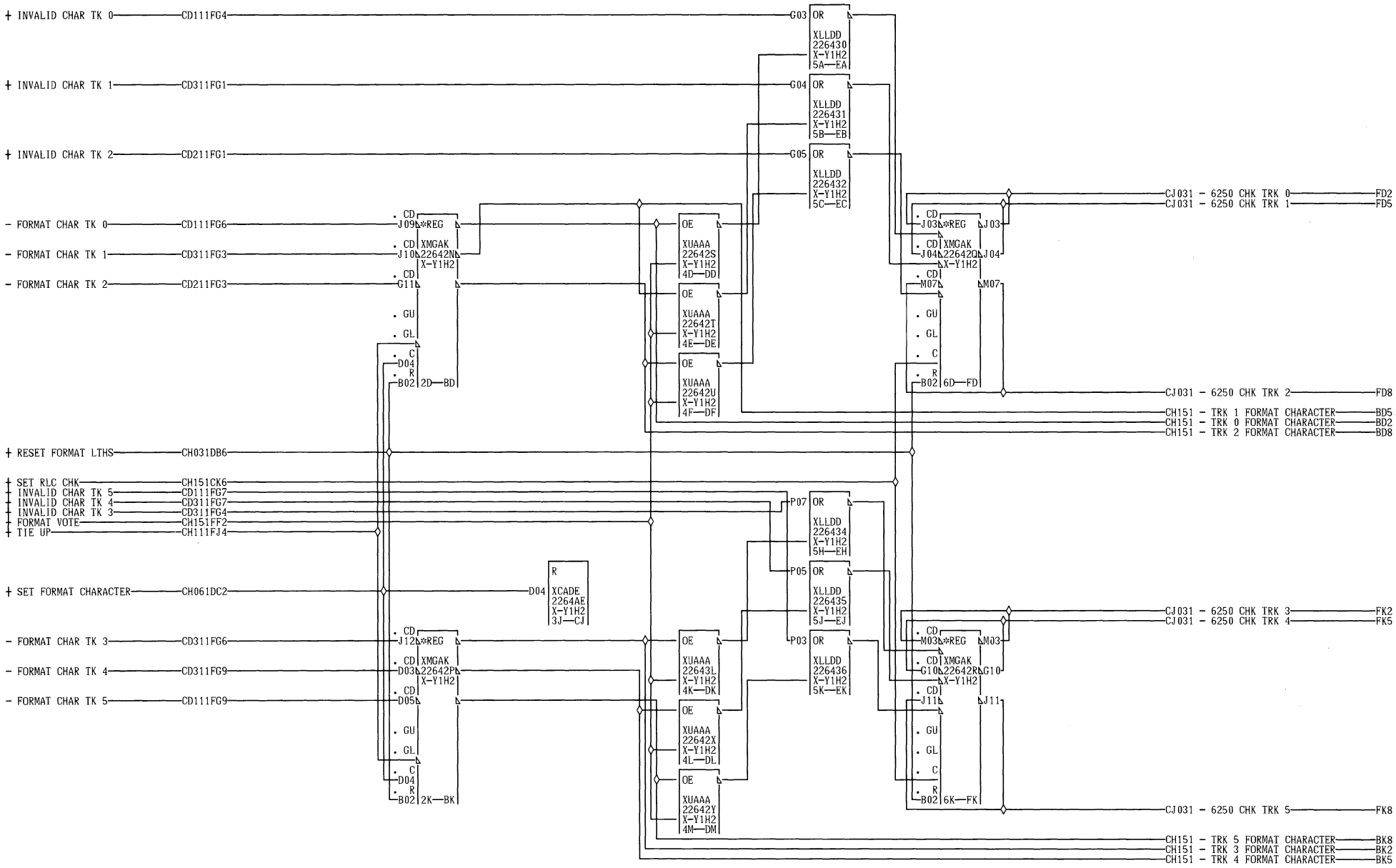


MODULAR 7 RESIDUE COMPARE EQUAL	
DATE 08-08-73 MACH. 3803-2	
LOG 0051 FRAME 01	
P.N. 2736312	
IBM CORP. CO BLK. GN	



07-17-73 734098

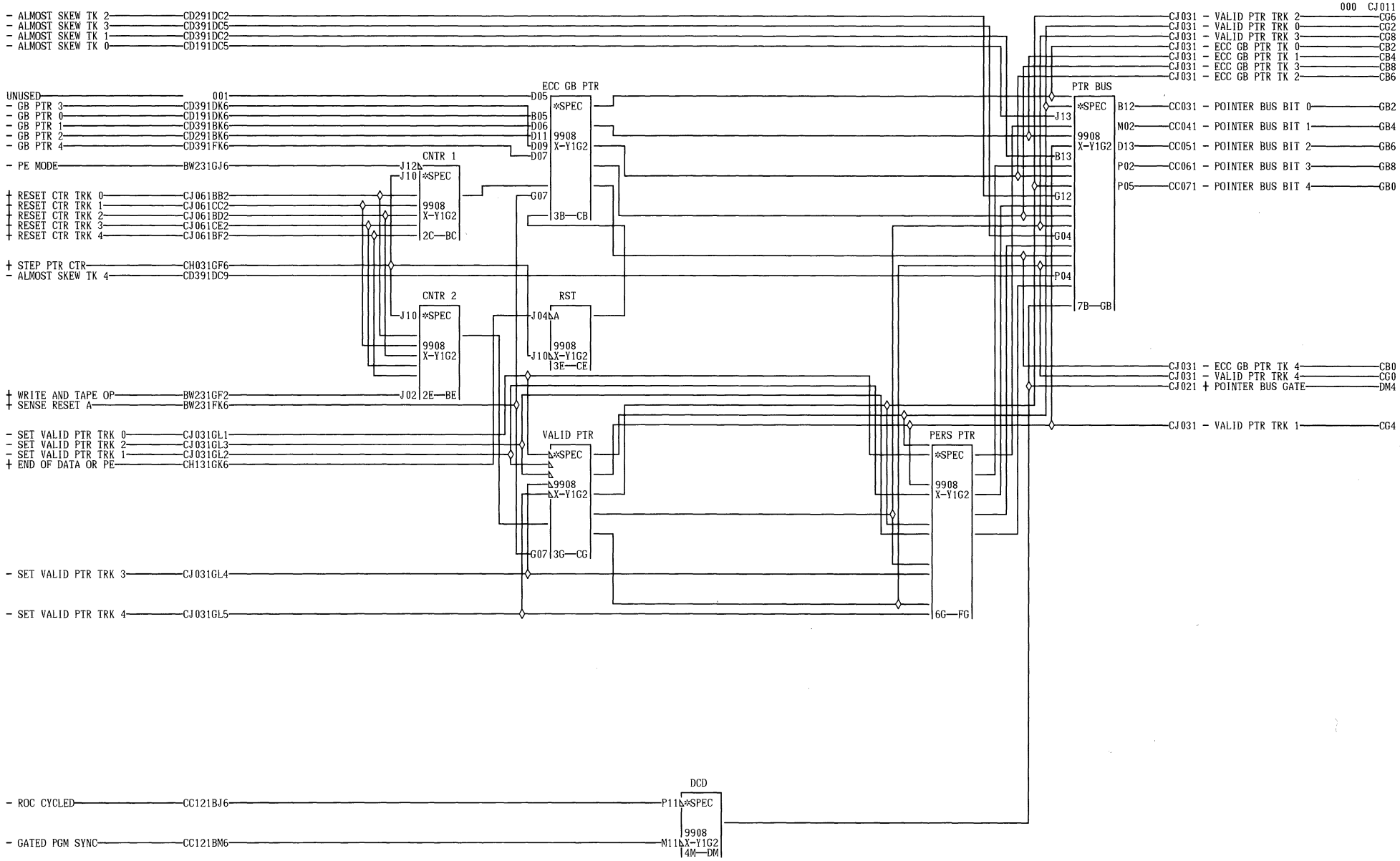
C H 1 5 1	FORMAT CHARACTER AND 6250 ERROR DETECTION		C H 1 5 1
	DATE 08-08-73 MACH. 3803-2		
	LOG 0051 FRAME 01		
	P.N. 2736313		
000	IBM CORP. CO BLK. GN		000



07-17-73 734098

FORMAT CHARACTER AND 6250 DETECTION	
DATE 08-08-73 MACH. 3803-2	
LOG 0051 FRAME 01	
P.N. 2736314	
IBM CORP. CO BLK. FL	

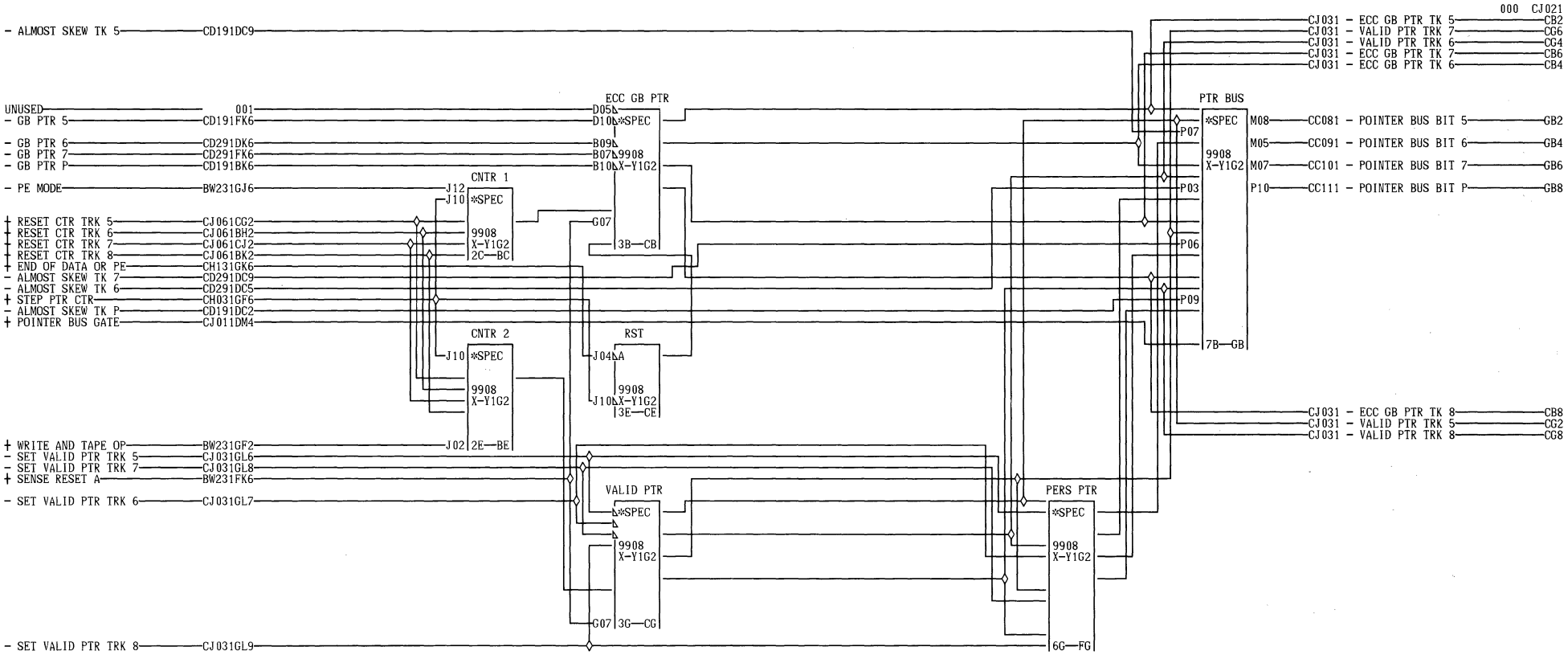
CH161 000



07-17-73 734098

POINTERS AND POINTER BUS TRACKS 0-4			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736315
IBM CORP.		BLK.	GC

C J 0 1 1 000

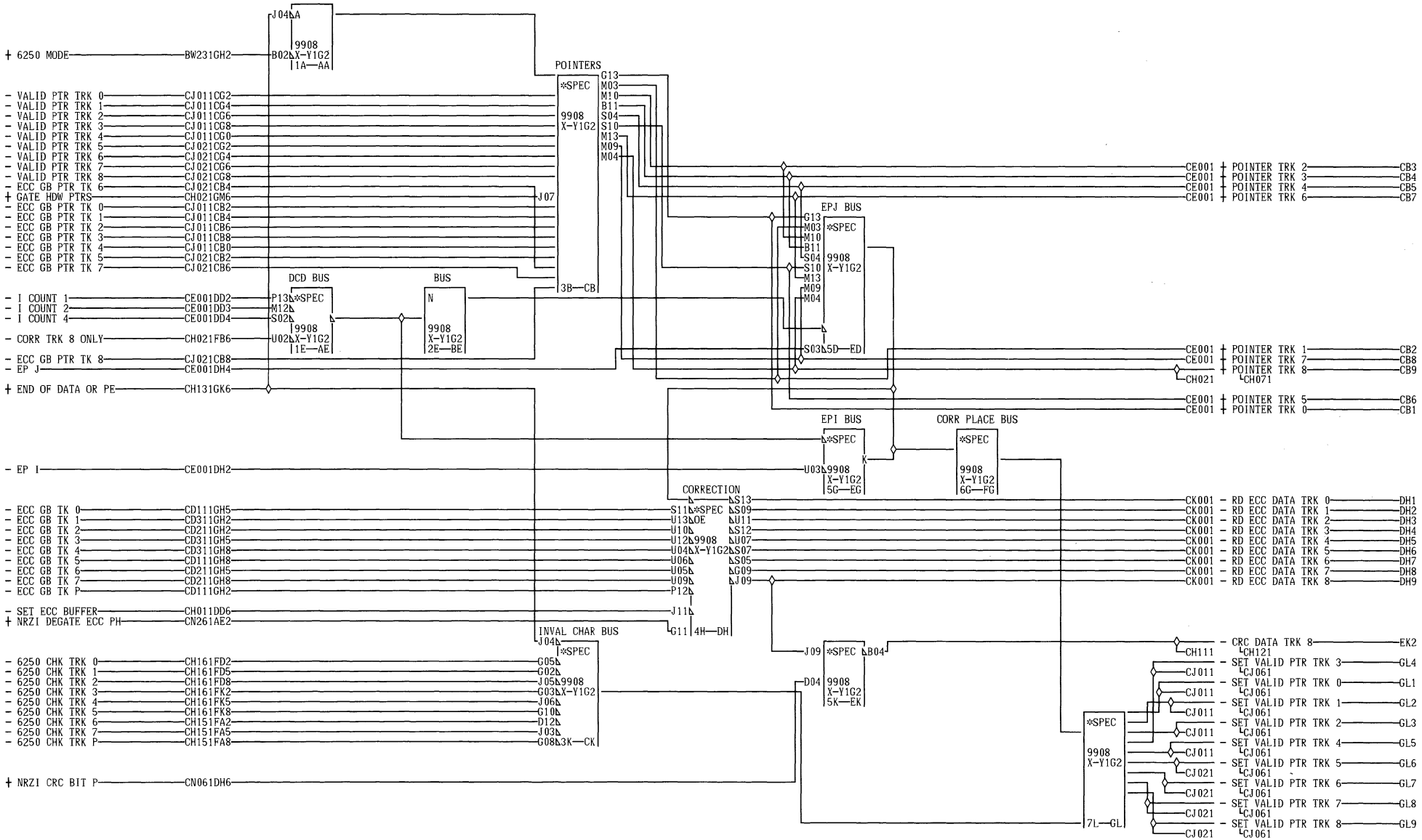


07-17-73 734098

C J 0 2 1	POINTERS AND POINTER BUS TRACKS 5-P		C J 0 2 1
	DATE 08-08-73	MACH. 3803-2	
	LOG 0051	FRAME 01	
		P.N. 2736316	
000	IBM CORP.	BLK. GL	000

Output Lines (CJ011 & CJ021)	I/O Pins	Function During 1600 BPI Mode	Function During 6250 BPI Mode
-EC GB Pointer Tracks 0-P	N/A	Active after a phase error. Stays active for a minimum of 8 bytes. Resets when counter 1 counts to 8 or when Sense RESET is active.	Active after a phase error. Resets every C7 time.
-Pointer Bus Bit 0-P	B12 Track 0	Active state indicates 4 possible conditions which depend on the output of the decode block at the bottom of the page (Block DM). DECODE Contents of Pointer Bus 0 ECC GB Pointers 1 Valid Pointers 2 Almost Skew 3 Persistent Ptrs.	Same as 1600 BPI Mode
-Valid Pointer 0-8	N/A	Active after a track correction. Once active, it remains active during Write OP. During Read OP it remains active for a minimum of 8 ECC groups. It resets on Read OP when counter 2 counts to 8 or at the end of the record at SENSE RESET time.	Active state indicates 2 possible conditions: 1. Error correction made on a track. (Same as 1600 BPI Mode). 2. An invalid character detected by the translator. This line remains active and resets similar to 1600 BPI Mode.
+Pointer Bus Gate	N/A	Active state represents 1 of 4 possible conditions: Active state (0-3) gates the pointer bus. See -Pointer Bus Bit 0-P above for details.	Same as 1600 BPI Mode.

Input Lines (CJ011 & CJ021)	I/O Pins	Function During 1600 BPI Mode	3803-2 Function During 6250 BPI Mode
Unused	D05	Gates the GB pointers into the ECC GB pointer latches. Always Active.	Same as 1600 BPI Mode.
-GB Pointer 0-P	B05 (Track 0)	A phase error occurred.	Same as 1600 BPI Mode.
-PE Mode	J12	Gates counter 1.	Inactive.
+Step Pointer Counter	J10	Steps counter 1 & 2 at A7 time.	Steps counter 2 at C7 time and resets ECC GB pointer latches during data.
+Reset Counter	N/A (Track 0-8)	This line is active on first error indication Counter 1 & 2 reset to 0 on first error. -SET VALID POINTER TRACK X or -GB POINTER X lines are active. The counters start counting and are reset with each error. When counters 1 & 2 reach a count of 8, the ECC GB pointer latches and valid pointer latches are reset.	Same as 1600 BPI Mode.
+End of Data or PE	J04	Blocks the reset to ECC GB pointer latches.	Gates the reset to the ECC GB pointer latches during data.
+Sense Reset	G07	Resets everything at end of record.	Same as 1600 BPI Mode.
+Wrt and Tape Op	J02	Degates counter 2.	Same as 1600 BPI Mode.
-Almost Skew Track 0-P	J13 Track 0	Active with ALMOST SKEW condition (14 bytes).	Active with ALMOST SKEW condition (28 bytes).
-Set Valid pointer Track 0-P		See page CJ034.	See page CJ034.
-ROC Cycled	P11	Active with first readout cycle from skew buffers.	Same as 1600 BPI Mode.
-Gated Program Sync	M11	Active during data. Not active after "FF" character if an error occurs.	Active during PREAMBLE and RESYNC bursts.



ALL THE BUSSES SHOWN HERE
ARE NINE LINES ONE
C PER TRACK.
J
0
3
1

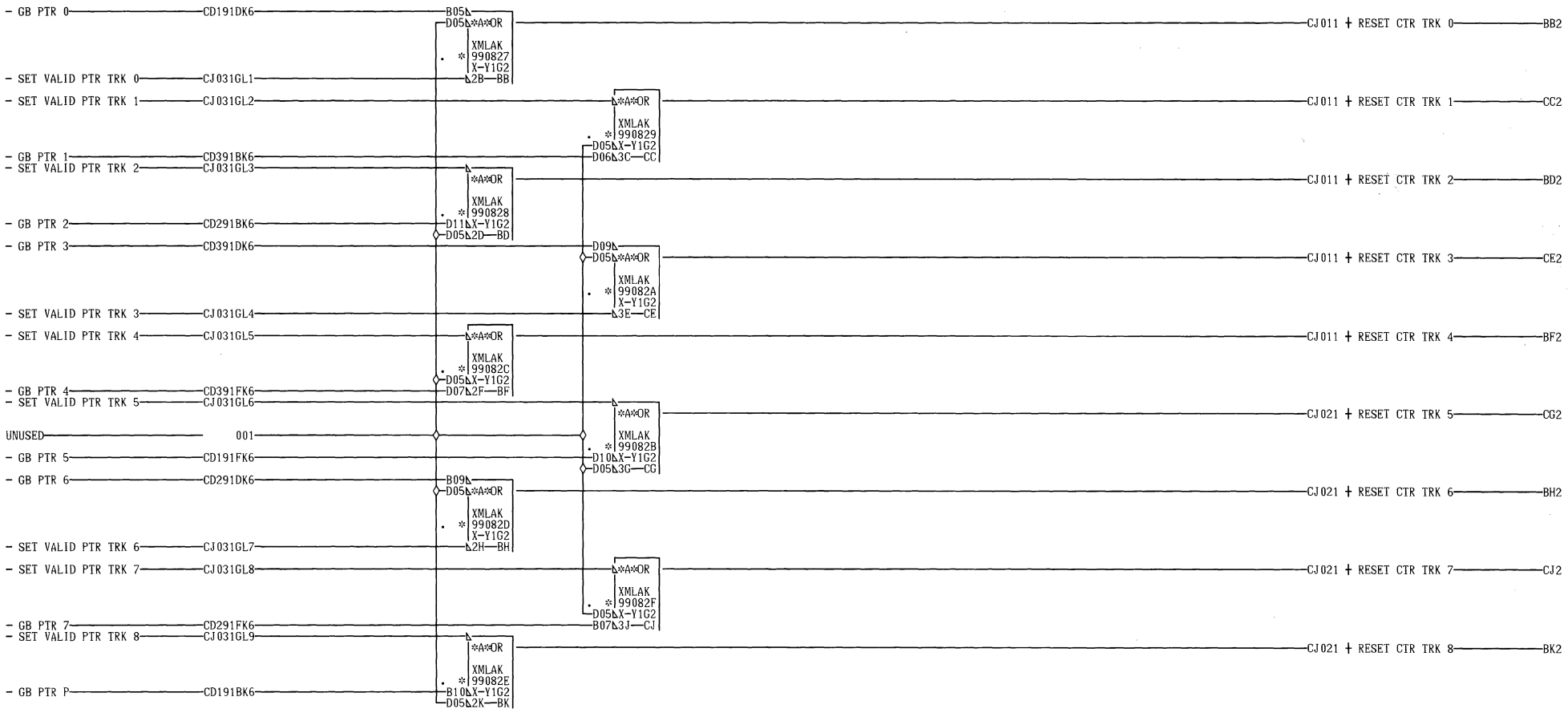
000

07-17-73 734098

CORRECTION AND CORRECTED DATA		C
DATE 08-08-73 MACH. 3803-2		J
LOG 0051 FRAME 01		0
		3
P.N. 2736317		1
IBM CORP. BLK. GM		000

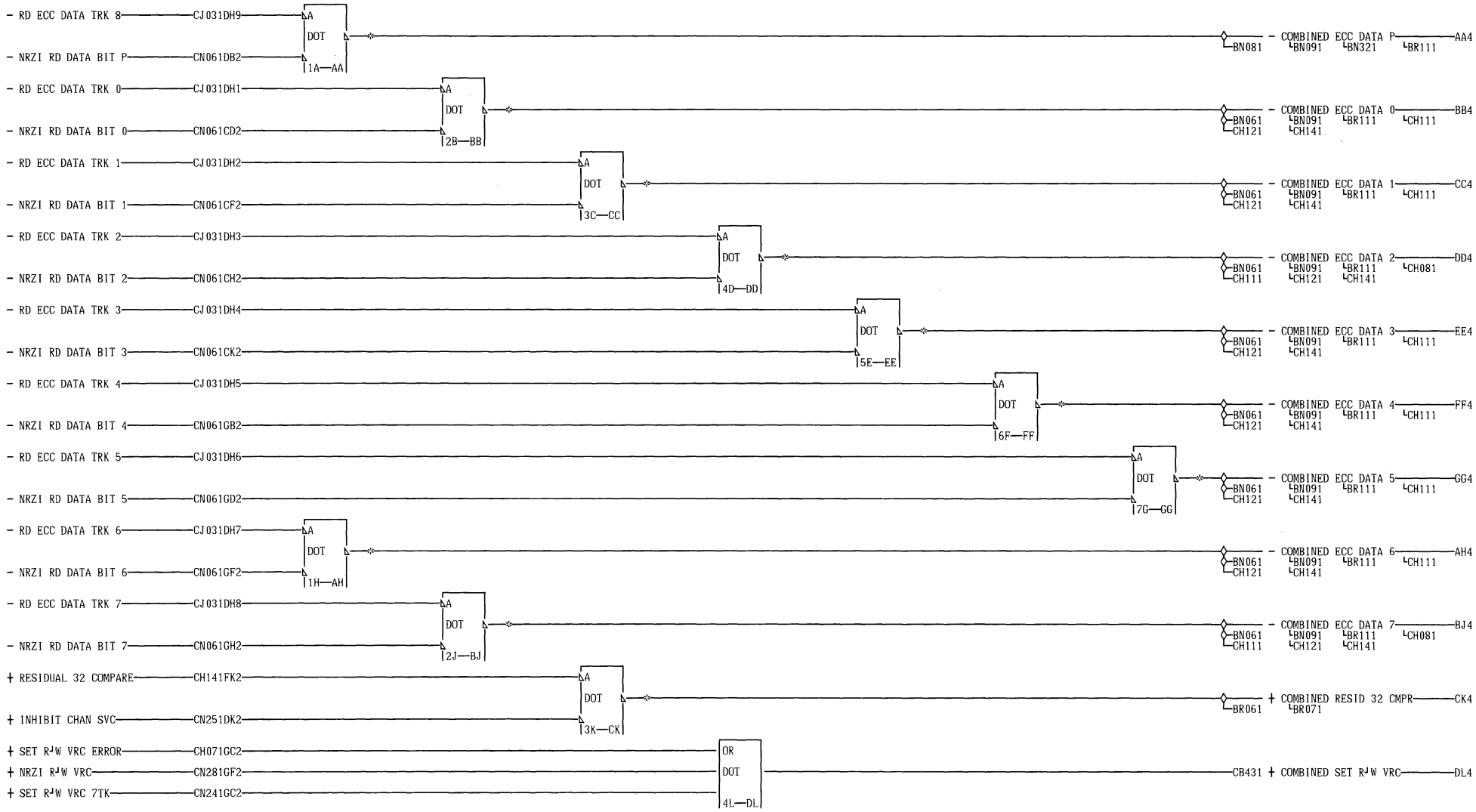
Input Lines (CJ031)	I/O Pins	1600 BPI	6250 BPI
+End of Data or PE	J04	Active during EOD or PE Mode. Gates the valid pointers to the pointer latches (Blk CB). This is the gate for the top half inputs of Blk CB.	The inactive state of this line gates the "6250 CHKS" (invalid characters) to the invalid character latches (Blk CK).
+6250 Mode	B02	Inactive.	Active during 6250 BPI Mode. Gates the valid pointers to the pointer latches.
-Valid Pointer Track 0-8	N/A	See logic page CJ022 for description.	See logic page CJ022 for description.
+Gate Hdw Pointers	J07	Active during every "A" cycle. Gates the lower half inputs to Blk CB.	Active during B5 time and not two pointers on, or during every "B" cycle of a write op.
-ECC GB Pointer Track 0-8	N/A	See logic page CJ022 for description.	See logic page CJ022 for description.
-I Count 1 2 4	P13 M12 S02	See logic page CE003 for description.	See logic page CE003 for description.
-Correct Trk 8 Only	U02	Active only when P track is in error.	Same as 1600 BPI.
-EP J	S03	See logic page CE003 for description.	See logic page CE003 for description.
-EP I	U03	See logic page CE003 for description.	See logic page CE003 for description.
-ECC GB Track 0-8	S11 (Track 0)	Data from the ECC group buffer.	Same as 1600 BPI.
-Set ECC	J11	Active for 25 nsec during A6 time. Gates the ECC GB data to the correction module. This correction module performs "Exclusive OR" operation with the pulses from EPI & EPJ Bus and correct any track in error.	Active during ABC cycle for 25 nsec. Gates the ECC GB data to the correction module. Correction of data is done the same way as in 1600 BPI Mode.
+NRZI Degate ECC PH	G11	Active during NRZI Mode only. The active state forces all outputs from correction module to (-) level.	Same as 1600 BPI.
+NRZI CRC Bit P	D04	Active only during NRZI Mode, if the CRC contains a P Bit.	Same as 1600 BPI.
+End of Data or PE	J04	Active during EOD or PE Mode. The active state degates the inputs (6250 CHKS) to the invalid character latches (Blk CK).	This line is inactive during 6250 mode. It gates the 6250 CHKS to the invalid character latches.
-6250 Chk Track 0-P	G05 (Track 0)	Not used and always (+).	Active state means that the translator detected the invalid character.

Output Lines (CJ031)	I/O Pins	1600 BPI	3803-2 6250 BPI
+Pointer Track 0-8	N/A	Active line means that a valid pointer or ECC GB pointer existed. This is only a marginal condition indicator and the track may or may not require correction.	The pointers are used on logic page CJ031 for double track correction. Four signals needed are: 1. Pointers (two) 2. EP I 3. EP J 4. I Count
-Rd ECC Data Track 0-8	S13 (Track 0)	This is the corrected data going to the Channel Buffer.	Same as 1600 BPI.
-CRC Data Track 8	B04	CRC character Bit P	Same as 1600 BPI.
-Set Valid Pointer Track 0-8	N/A	Active state indicates that correction took place. This line sets the valid pointer latch on logic page CJ011.	Active state indicates: 1. Some correction took place. 2. The translator detected an invalid character. This line (or lines) set the valid pointer latches on logic page CJ011.



COUNTER RESETS			
DATE	08-08-73	MACH. 3803-2	
LOG	0051	FRAME	01
		P.N.	2736318
IBM CORP.	CO	BLK.	FJ

CJ061 000



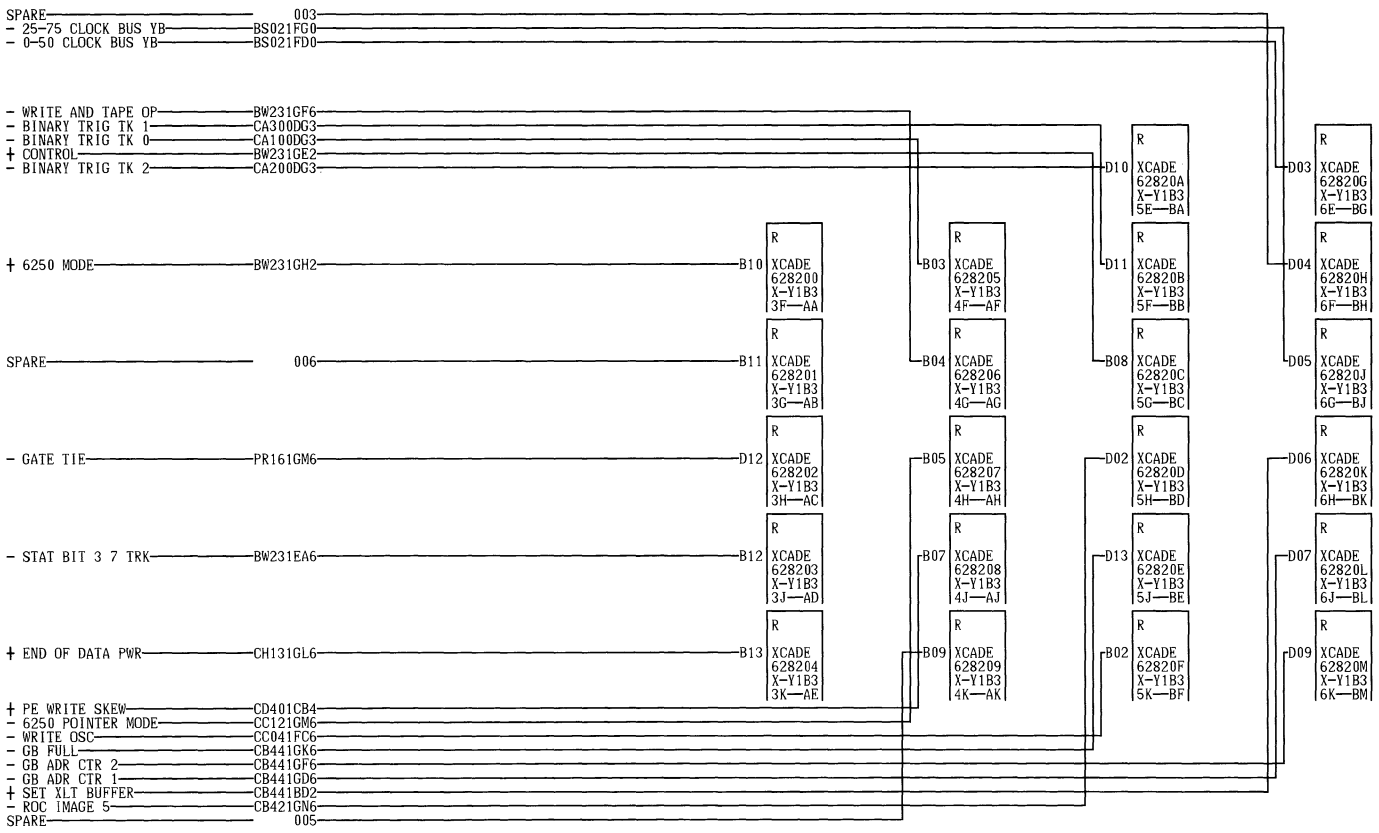
C K 0 0 1 000

AA4 X-Y1V2B02 01A-A1A2B05 GG4 X-Y1V2B10
01A-A1A2B02 CK4 X-Y1U6A02 01A-A1A2B10
AH4 X-Y1V2B12 01A-A1E1E11
01A-A1A2B12 DD4 X-Y1V2B06
BB4 X-Y1V2B04 01A-A1A2B06
01A-A1A2B04 EE4 X-Y1V2B08
BJ4 X-Y1V2B13 01A-A1A2B08
01A-A1A2B13 FF4 X-Y1V2B09
CC4 X-Y1V2B05 01A-A1A2B09

07-17-73 734098

6250-NRZI DATA ORING
DATE 08-08-73 MACH. 3803-2
LOG 0051 FRAME 01
P.N. 2736319
IBM CORP. CO BLK. GH

C K 0 0 1 000



07-17-73 734098

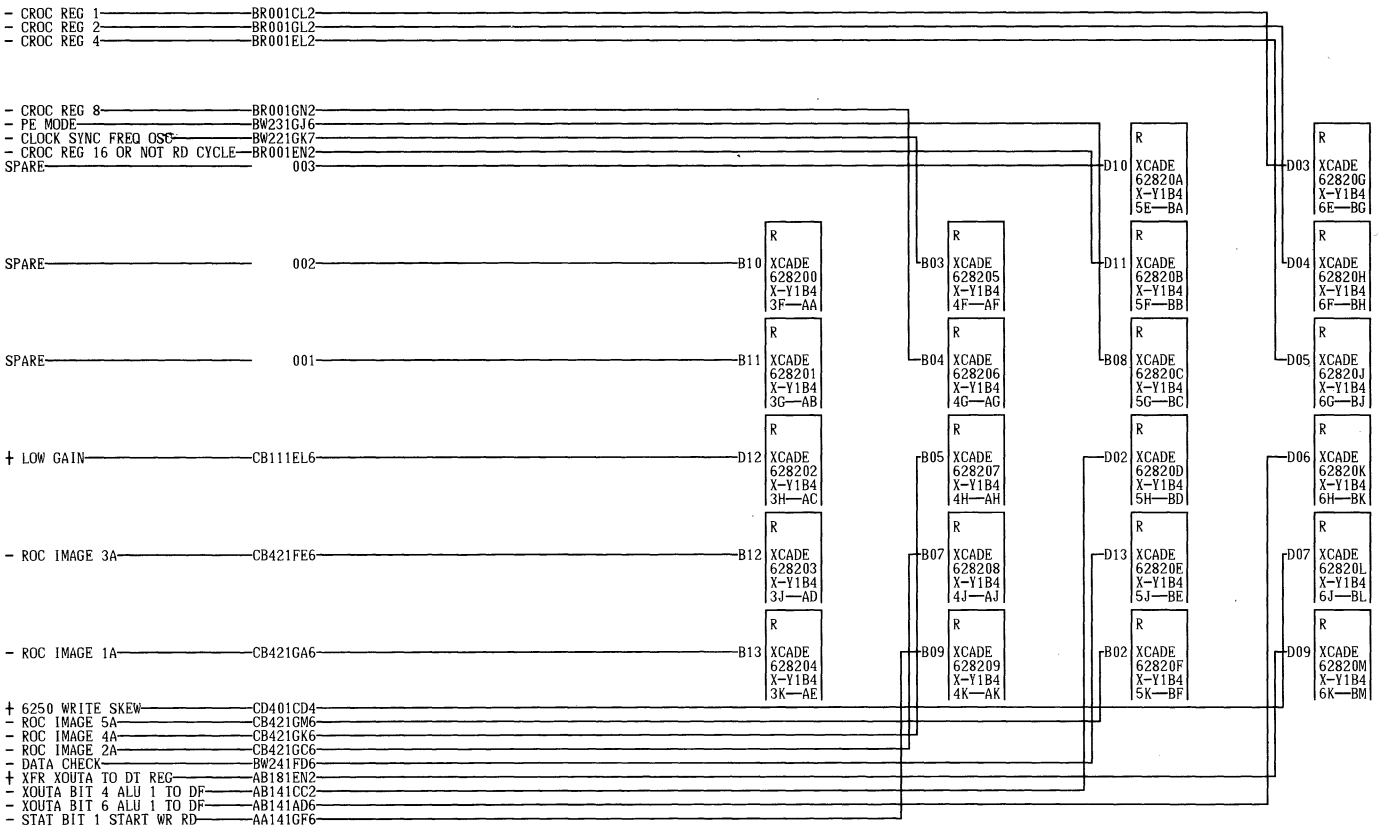
C L 0 0 1

000

TLD TERMINATOR CARD			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736320
IBM CORP.	SDD	BLK.	BN

C L 0 0 1

000



07-17-73 734098

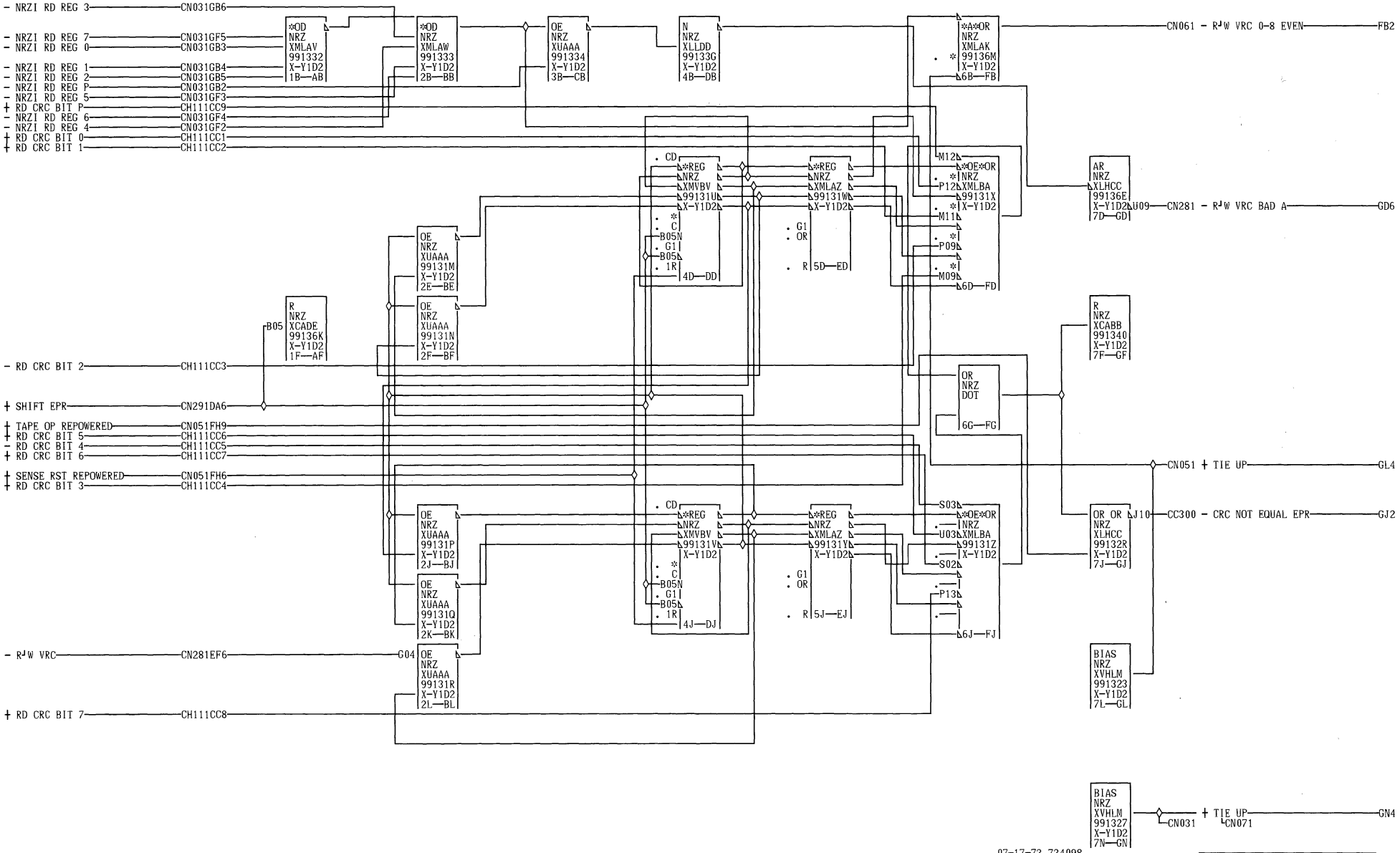
C L 0 1 1

000

TLD TERMINATOR CARD			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736321
IBM CORP.	SDD	BLK.	BN

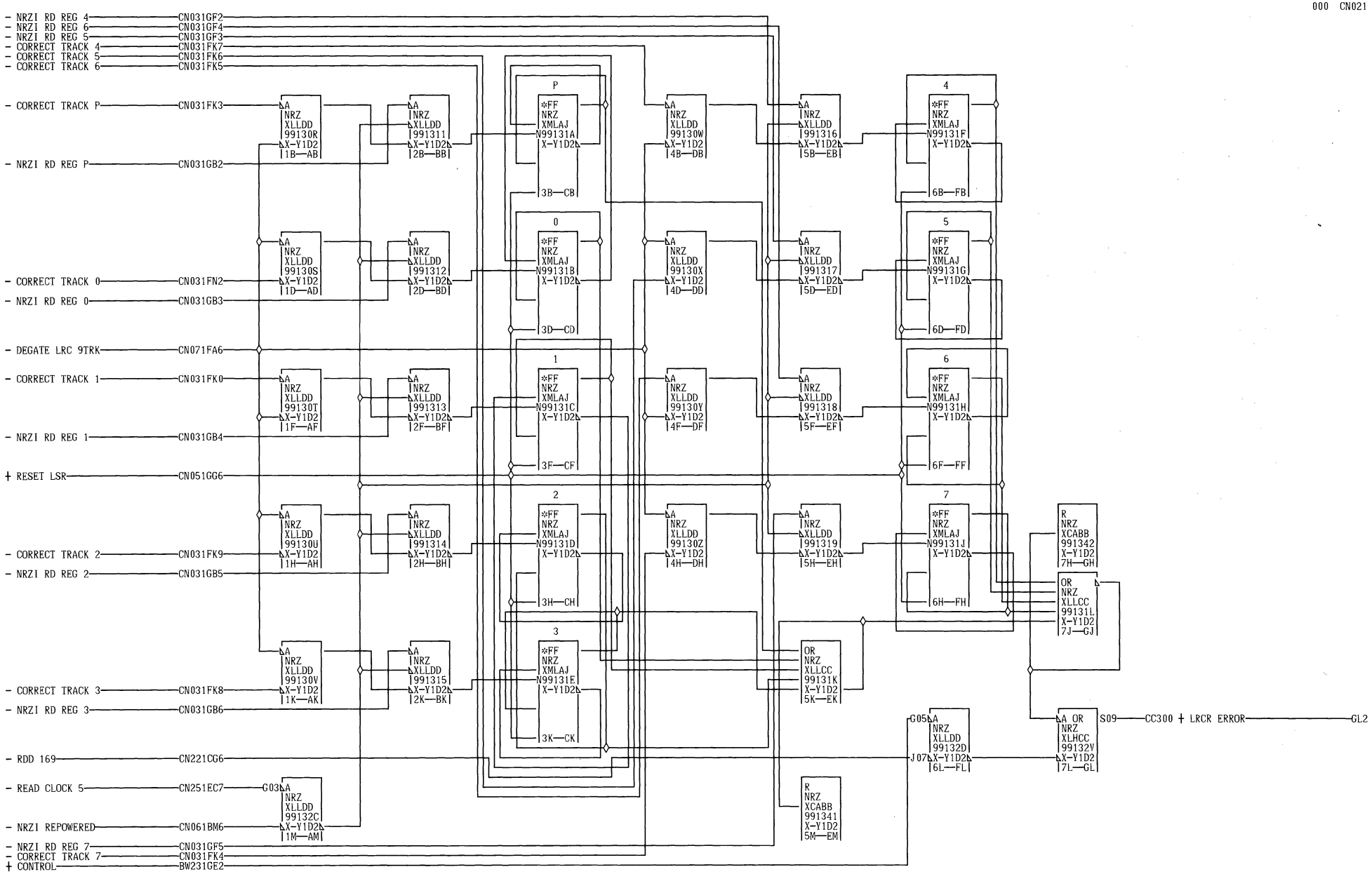
C L 0 1 1

000



ERROR PATTERN REGISTER			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736322
IBM CORP.	CO	BLK.	GP

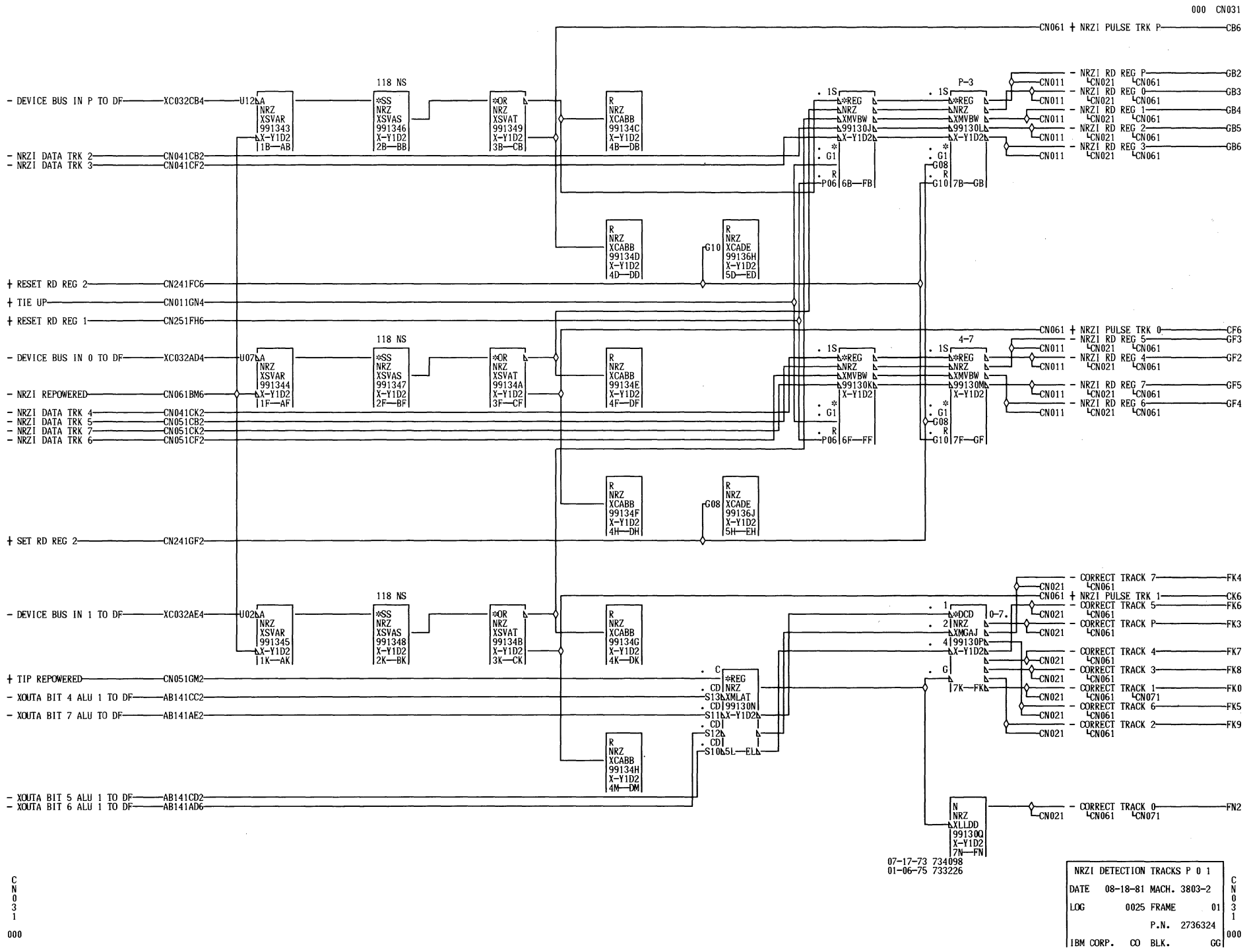
C N 0 1 1 000

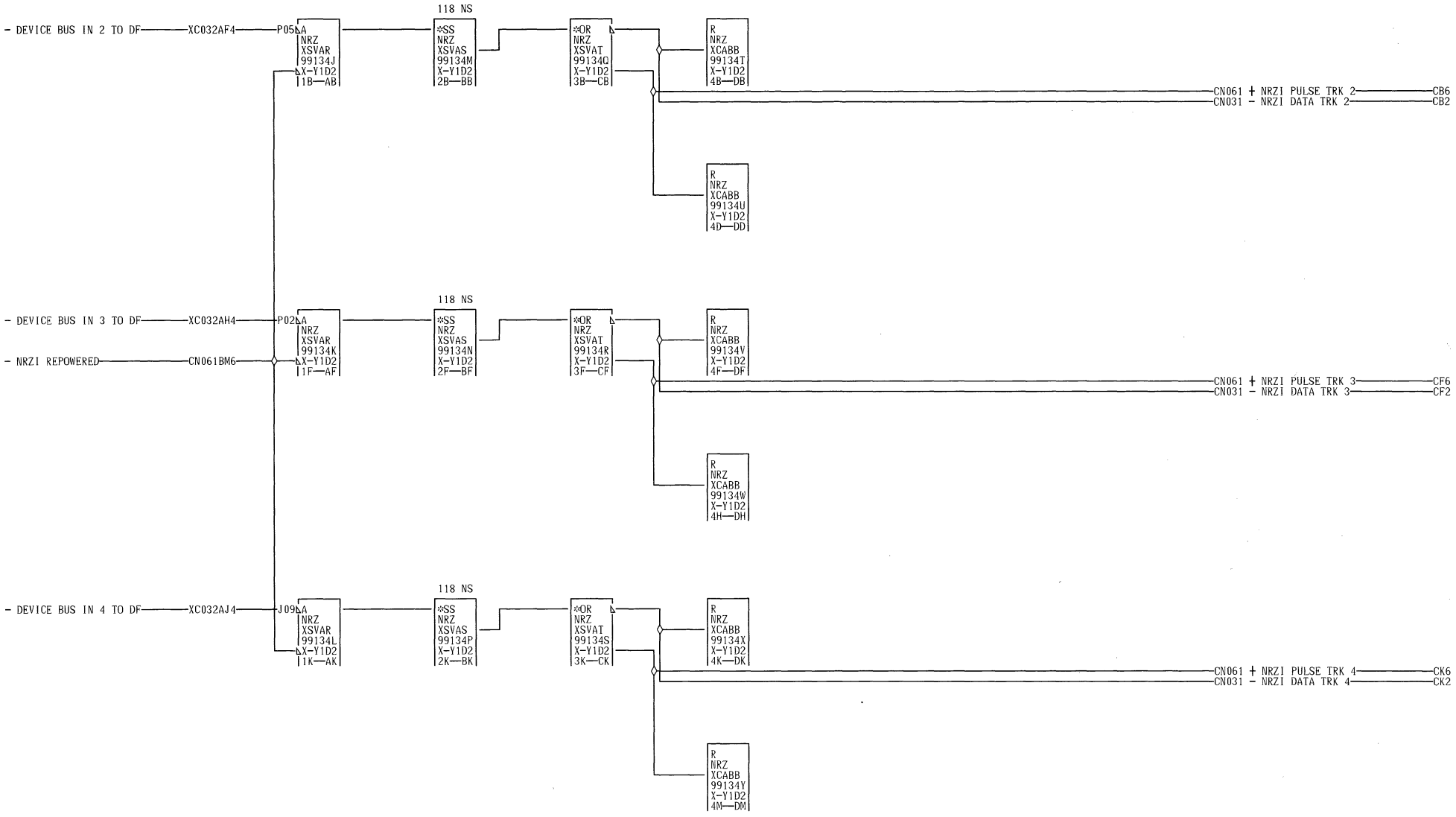


07-17-73 734098

LRCR REGISTER			
DATE	08-08-73	MACH.	3803-2
LOG	0051	FRAME	01
		P.N.	2736323
IBM CORP.	CO	BLK.	GM

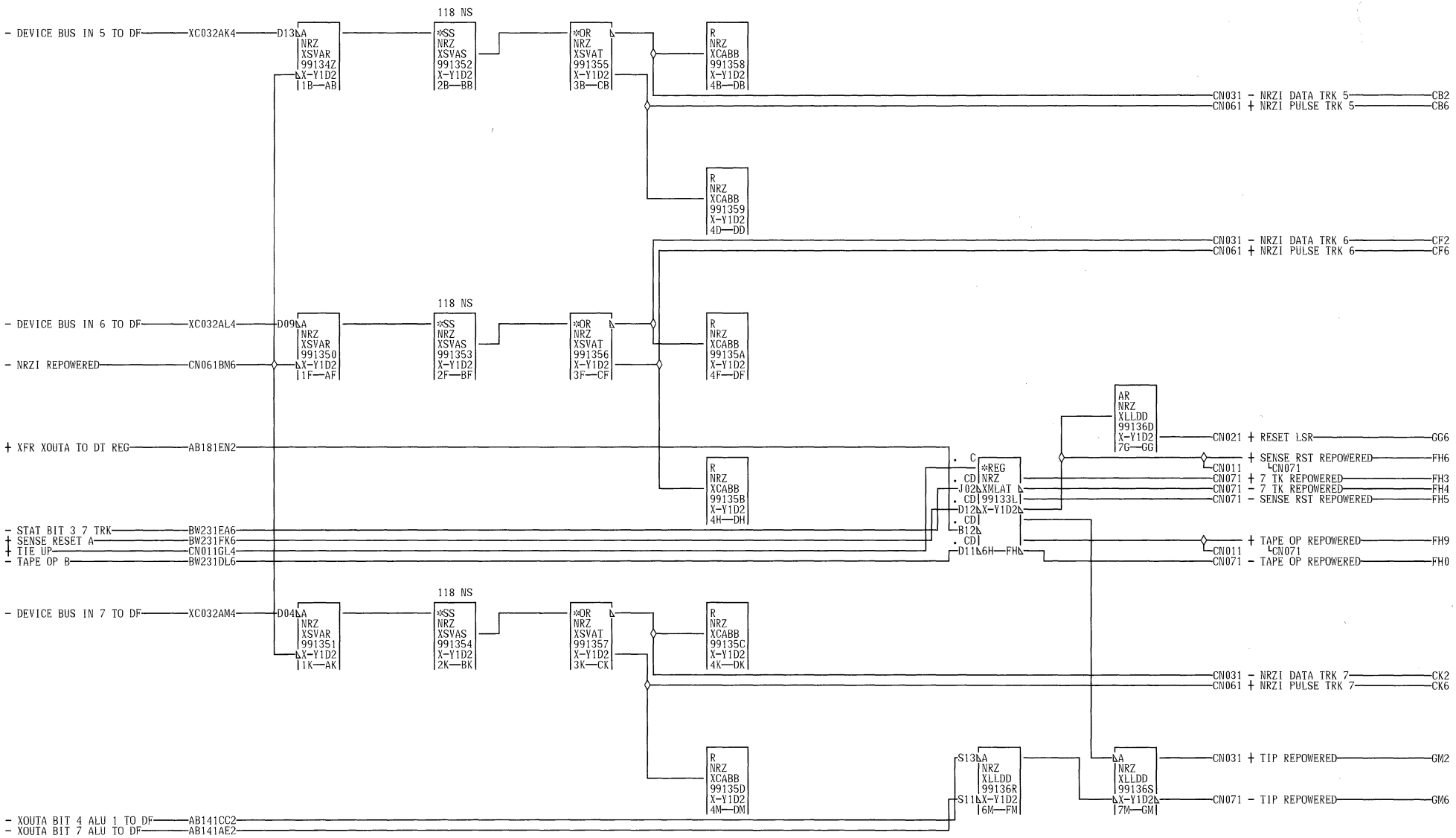
CN021 000


000 CN031
CN061 ┼ NRZI PULSE TRK P CB6
- DEVICE BUS IN P TO DF XC032CB4
U12 A NRZ XSVAR 991343 X-Y1D2 1B—AB
118 NS
*SS NRZ XSVAS 991346 X-Y1D2 2B—BB
*OR NRZ XSVAT 991349 X-Y1D2 3B—CB
R NRZ XCABB 99134C X-Y1D2 4B—DB
- NRZI DATA TRK 2 CN041CB2
- NRZI DATA TRK 3 CN041CF2
P-3
- NRZI RD REG P GB2
- NRZI RD REG 0 GB3
- NRZI RD REG 1 GB4
- NRZI RD REG 2 GB5
- NRZI RD REG 3 GB6
R NRZ XCABB 99134D X-Y1D2 4D—DD
R NRZ XCADE 99136H X-Y1D2 5D—ED
G10
┼ RESET RD REG 2 CN241FC6
┼ TIE UP CN011GN4
┼ RESET RD REG 1 CN251FH6
CN061 ┼ NRZI PULSE TRK 0 CF6
- NRZI RD REG 5 GF3
- NRZI RD REG 4 GF2
- NRZI RD REG 7 GF5
- NRZI RD REG 6 GF4
4-7
- DEVICE BUS IN 0 TO DF XC032AD4
U07 A NRZ XSVAR 991344 X-Y1D2 1F—AF
118 NS
*SS NRZ XSVAS 991347 X-Y1D2 2F—BF
*OR NRZ XSVAT 99134A X-Y1D2 3F—CF
R NRZ XCABB 99134E X-Y1D2 4F—DF
- NRZI REPOWERED CN061BM6
- NRZI DATA TRK 4 CN041CK2
- NRZI DATA TRK 5 CN051CB2
- NRZI DATA TRK 7 CN051CK2
- NRZI DATA TRK 6 CN051CF2
R NRZ XCABB 99134F X-Y1D2 4H—DH
R NRZ XCADE 99136J X-Y1D2 5H—EH
G08
┼ SET RD REG 2 CN241GF2
- CORRECT TRACK 7 FK4
CN061 ┼ NRZI PULSE TRK 1 CK6
- CORRECT TRACK 5 FK6
- CORRECT TRACK P FK3
- CORRECT TRACK 4 FK7
- CORRECT TRACK 3 FK8
- CORRECT TRACK 1 FK0
- CORRECT TRACK 6 FK5
- CORRECT TRACK 2 FK9
- DEVICE BUS IN 1 TO DF XC032AE4
U02 A NRZ XSVAR 991345 X-Y1D2 1K—AK
118 NS
*SS NRZ XSVAS 991348 X-Y1D2 2K—BK
*OR NRZ XSVAT 99134B X-Y1D2 3K—CK
R NRZ XCABB 99134G X-Y1D2 4K—DK
┼ TIP REPOWERED CN051GM2
- XOUTA BIT 4 ALU 1 TO DF AB141CC2
- XOUTA BIT 7 ALU TO DF AB141AE2
*REG NRZ XMLAT 99130N X-Y1D2
S13 S11 S12 S10 5L—EL
R NRZ XCABB 99134H X-Y1D2 4M—DM
- XOUTA BIT 5 ALU 1 TO DF AB141CD2
- XOUTA BIT 6 ALU 1 TO DF AB141AD6
*DCD NRZ XMGAJ 99130P X-Y1D2
0-7.
7K—FK
N NRZ XLLDD 99130Q X-Y1D2 7N—FN
- CORRECT TRACK 0 FN2
07-17-73 734098
01-06-75 733226
NRZI DETECTION TRACKS P 0 1
DATE 08-18-81 MACH. 3803-2
LOG 0025 FRAME 01
P.N. 2736324
IBM CORP. CO BLK. GG
CN031
000



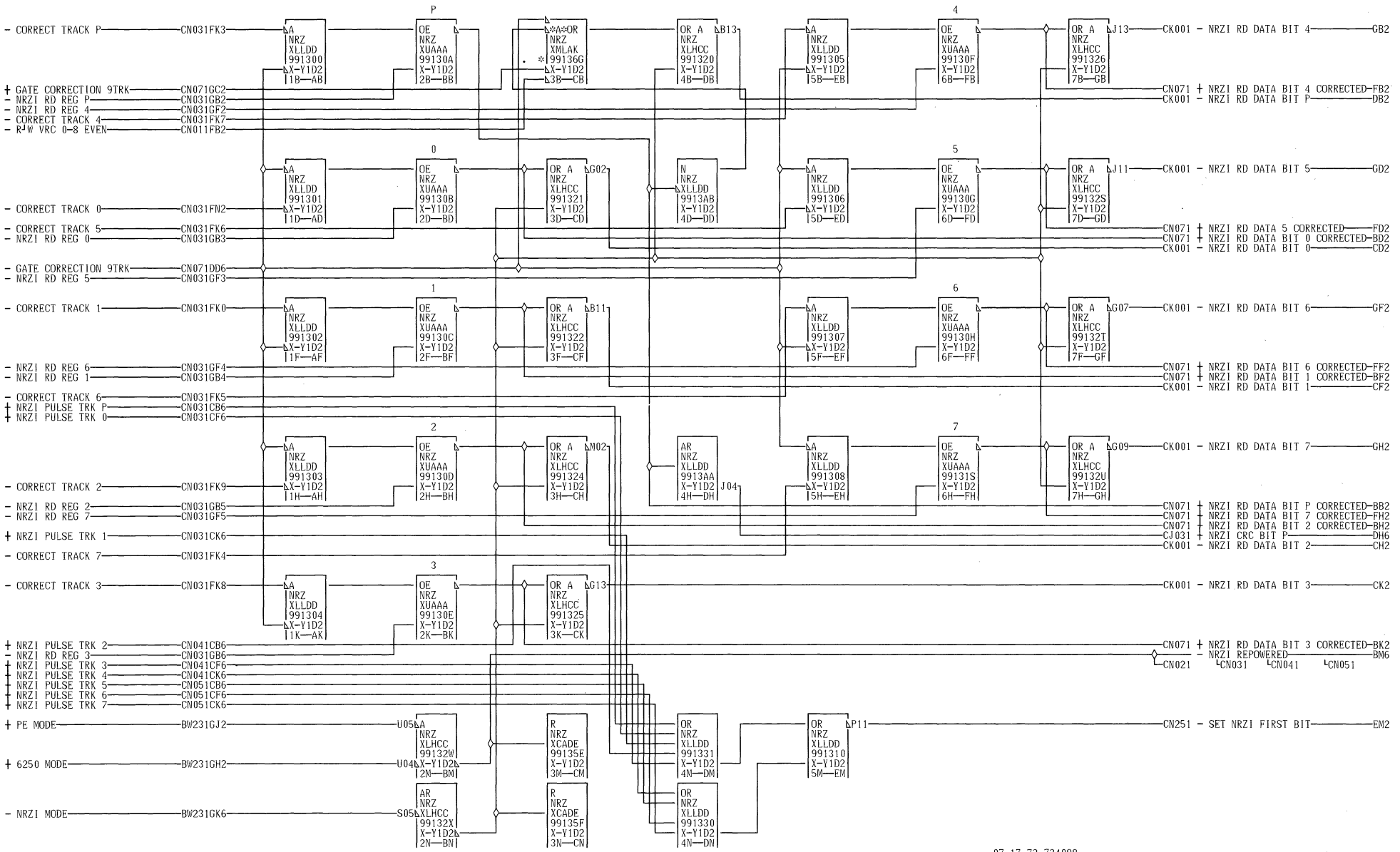
07-17-73 734098

C N 0 4 1 000	NRZI DETECTION TRACKS 2 3 4		C N 0 4 1 000
	DATE 08-08-73 MACH. 3803-2		
	LOG 0051 FRAME 01		
	P.N. 2736325		
	IBM CORP. CO BLK. DN		



07-17-73 734098
01-06-75 733226

C N 0 5 1 000	NRZI DETECTION TRACKS 5 6 7 DATE 01-08-75 MACH. 3803-2 LOG 0025 FRAME 01 P.N. 2736326 IBM CORP. CO BLK. GN	C N 0 5 1 000

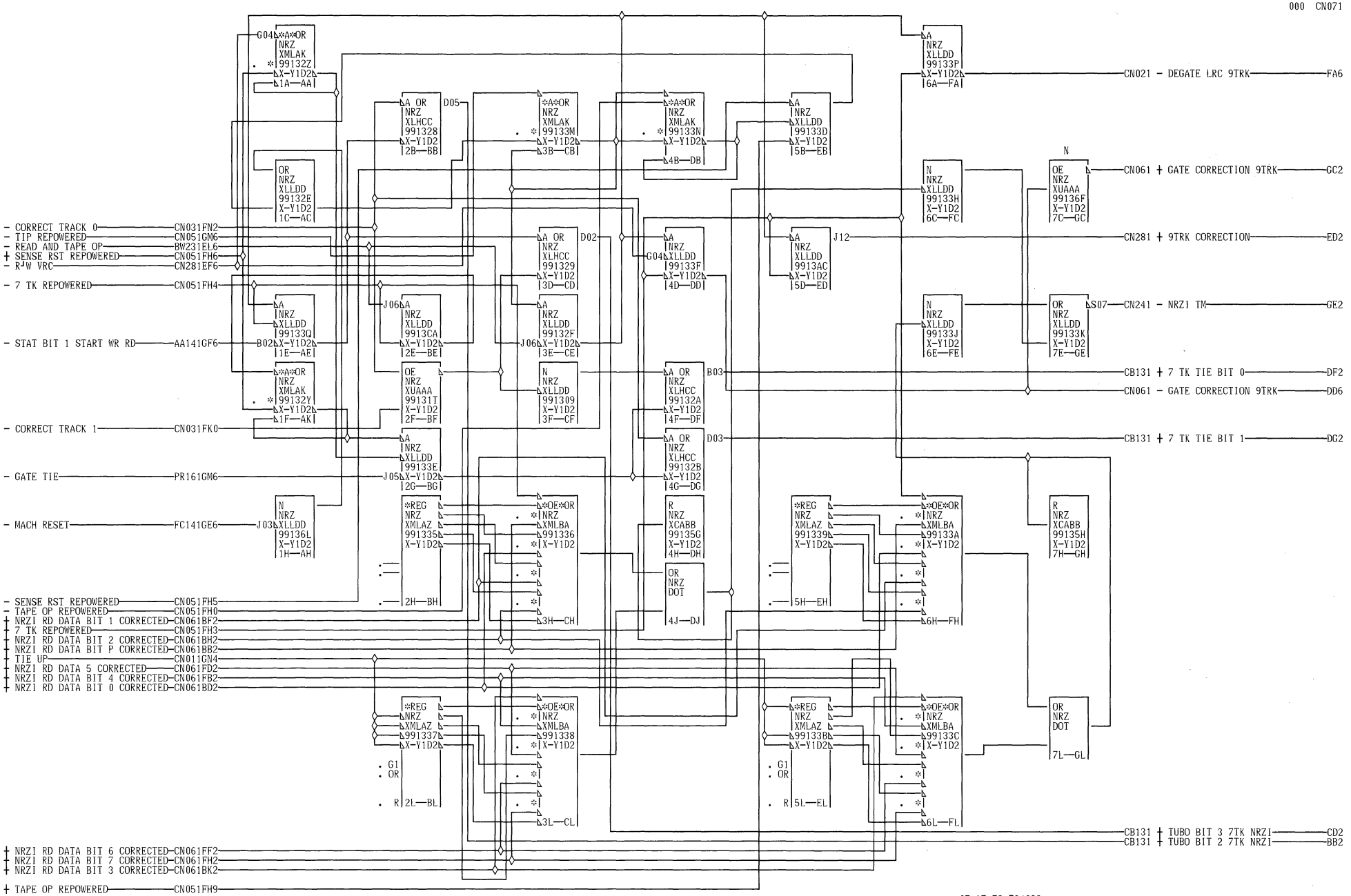


07-17-73 734098

NRZI RD DATA	
DATE 08-08-73 MACH. 3803-2	
LOG 0051 FRAME 01	
P.N. 2736327	
IBM CORP. CO BLK. GJ	

C N 0 6 1 000

C N 0 6 1 000

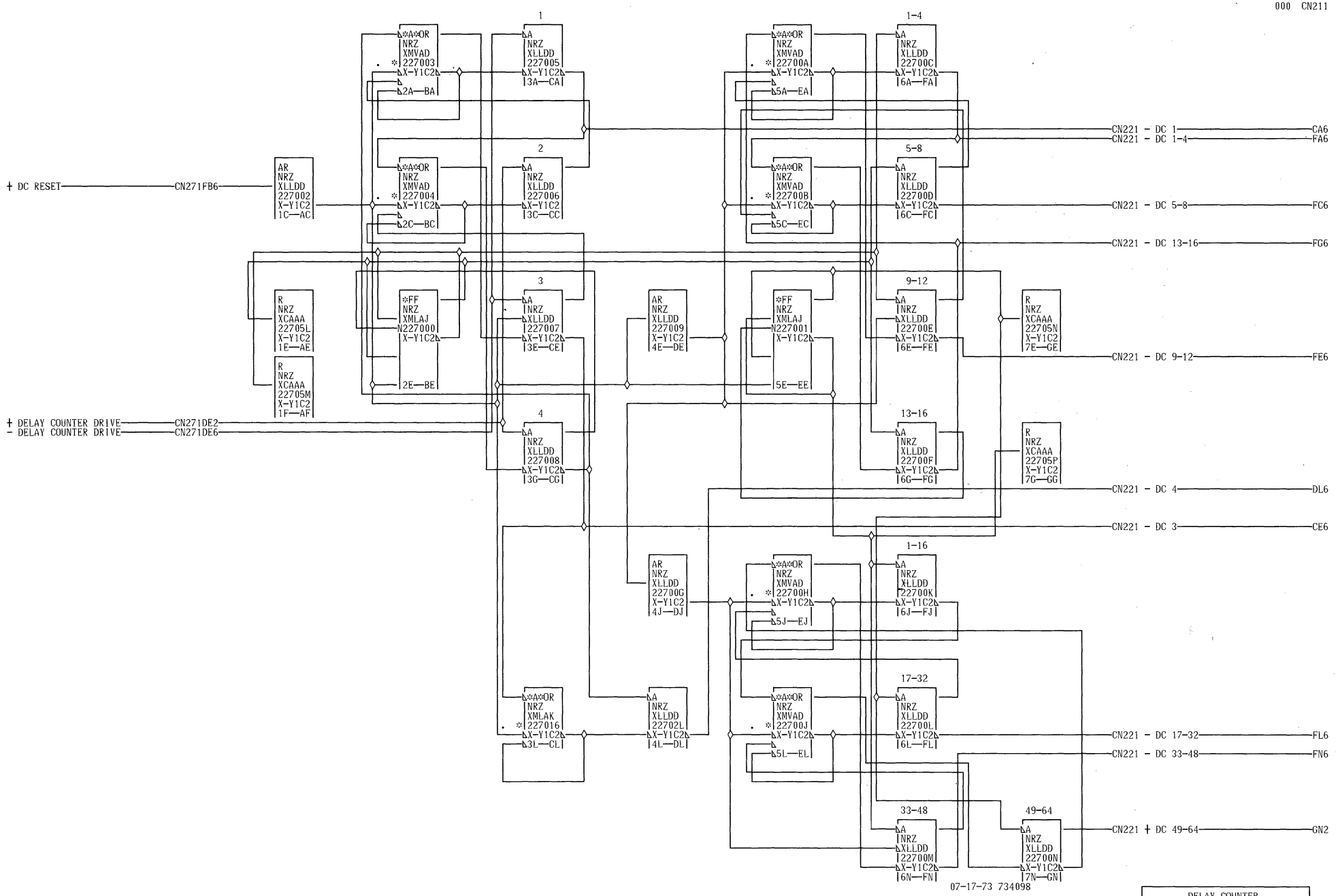


07-17-73 734098
01-06-75 733226

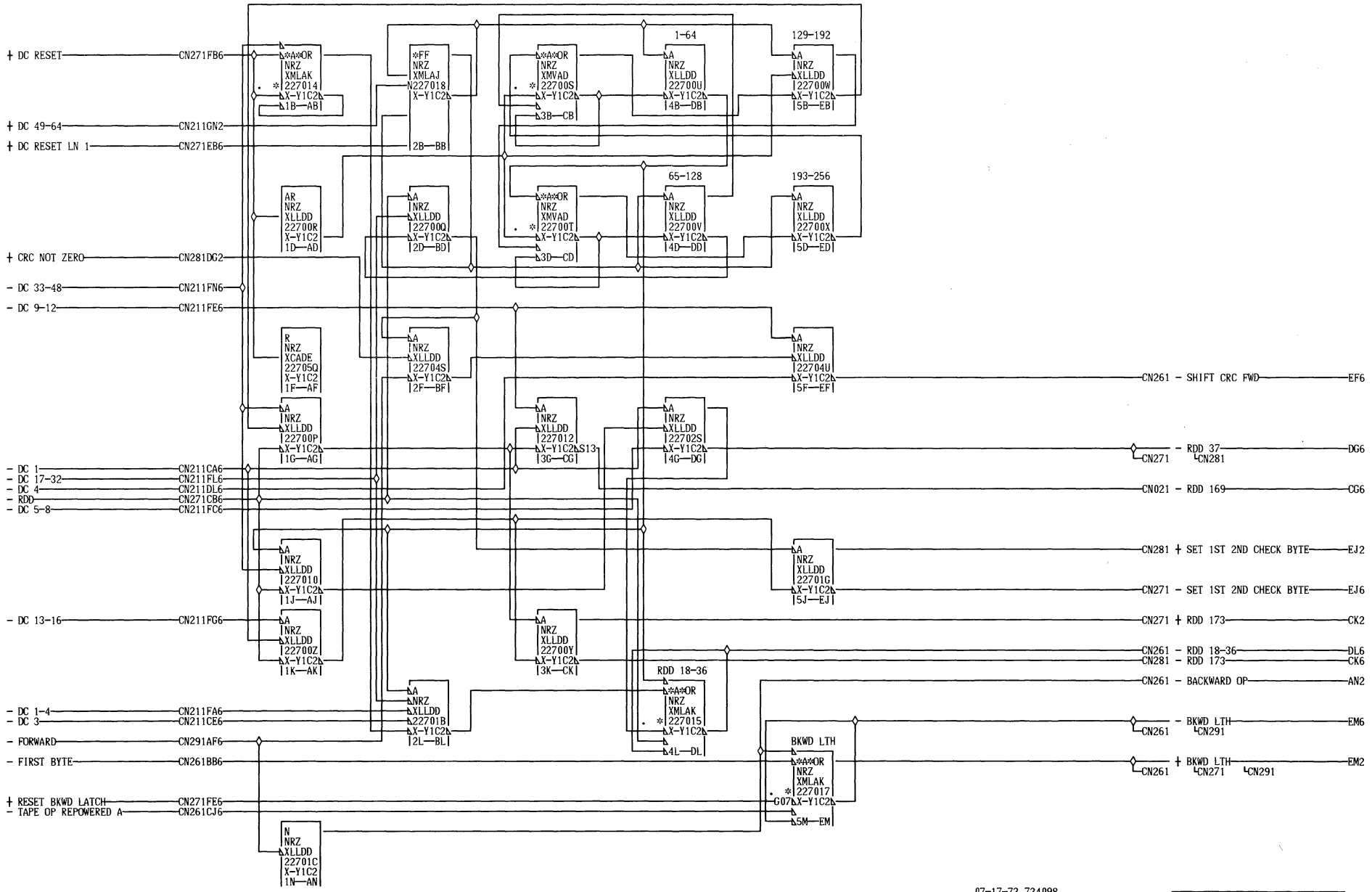
CN071

000

7 TK CLIP LEVEL			
DATE	01-08-75	MACH. 3803-2	CN071
LOG	0025	FRAME 01	
		P.N. 2736328	000
IBM CORP.	CO	BLK. GM	



DELAY COUNTER	
DATE 08-08-73 MACH. 3803-2	
LOG 0051 FRAME 01	
P.N. 2736329	
IBM CORP. CO BLK. GP	



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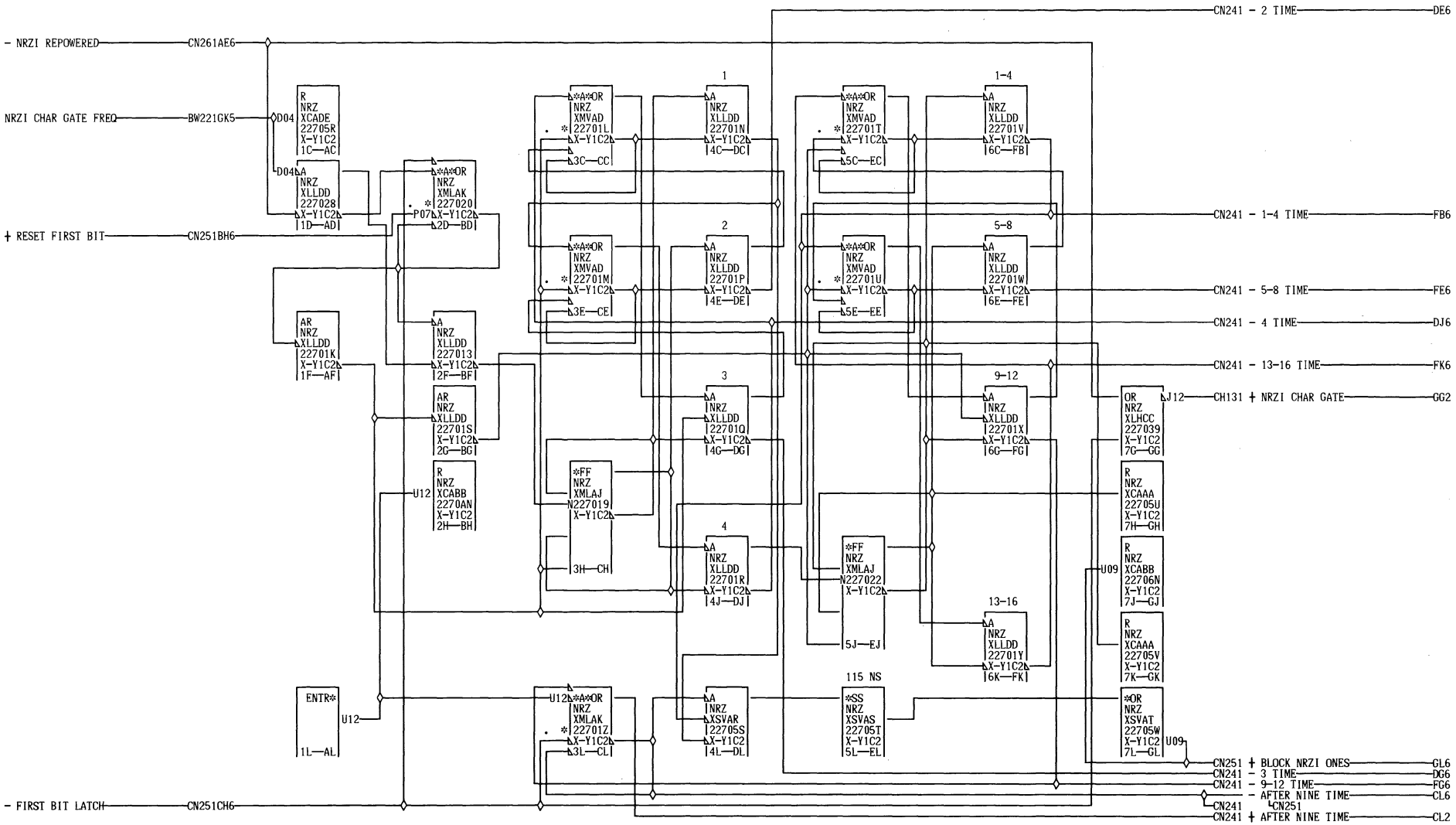
	DELAY COUNTER GATING		
C N 2 2 1	DATE 08-18-81 MACH. 3803-2		C N 2 2 1
	LOG 0051 FRAME 01		
	P.N. 2736330		
000	IBM CORP. CO BLK. GC		000



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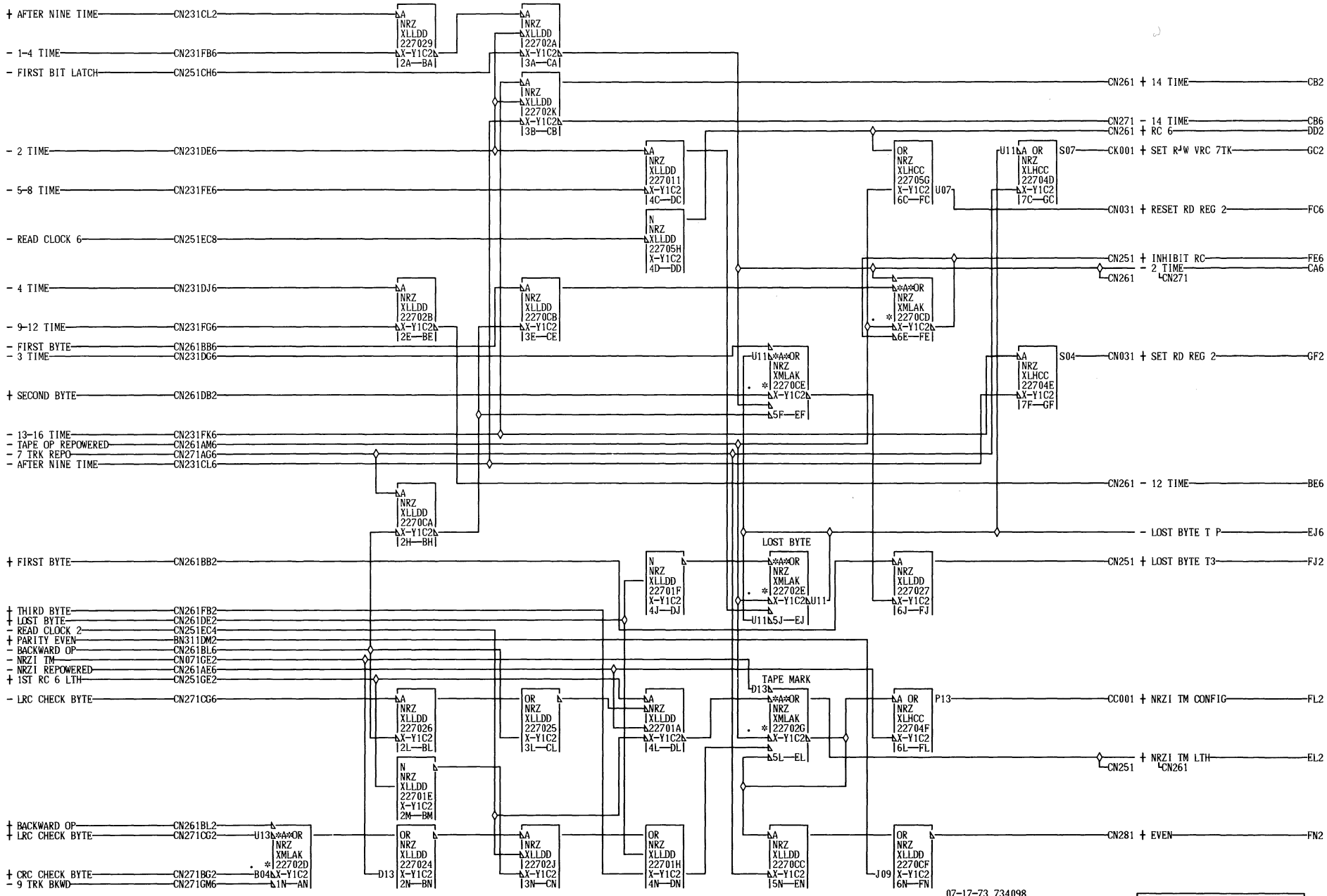
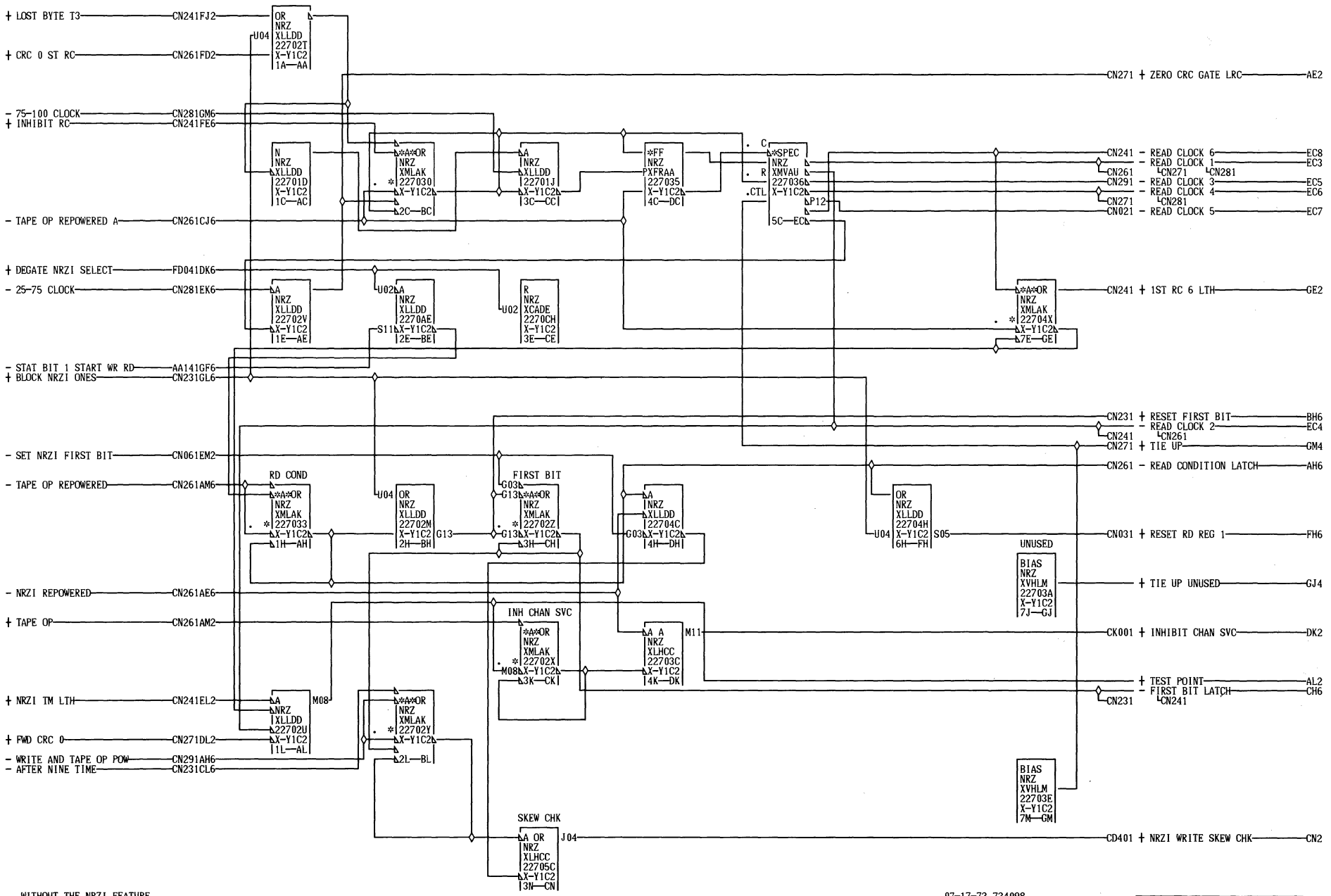
NRZI CHAR GATE			
DATE	08-18-81	MACH. 3803-2	
LOG	0051	FRAME	01
		P.N.	2736331
IBM CORP.	CO	BLK.	GP

CN231 000



TAPEMARK AND LOST BYTE			
DATE 08-18-81	MACH. 3803-2		
LOG 0051	FRAME 01		
	P.N. 2736332		
IBM CORP. CO	BLK. GG		

CN241 000



WITHOUT THE NRZI FEATURE INSTALLED X-Y1C2U02 IS TIED DOWN TO X-Y1C2S06 WITH P/N 2520942

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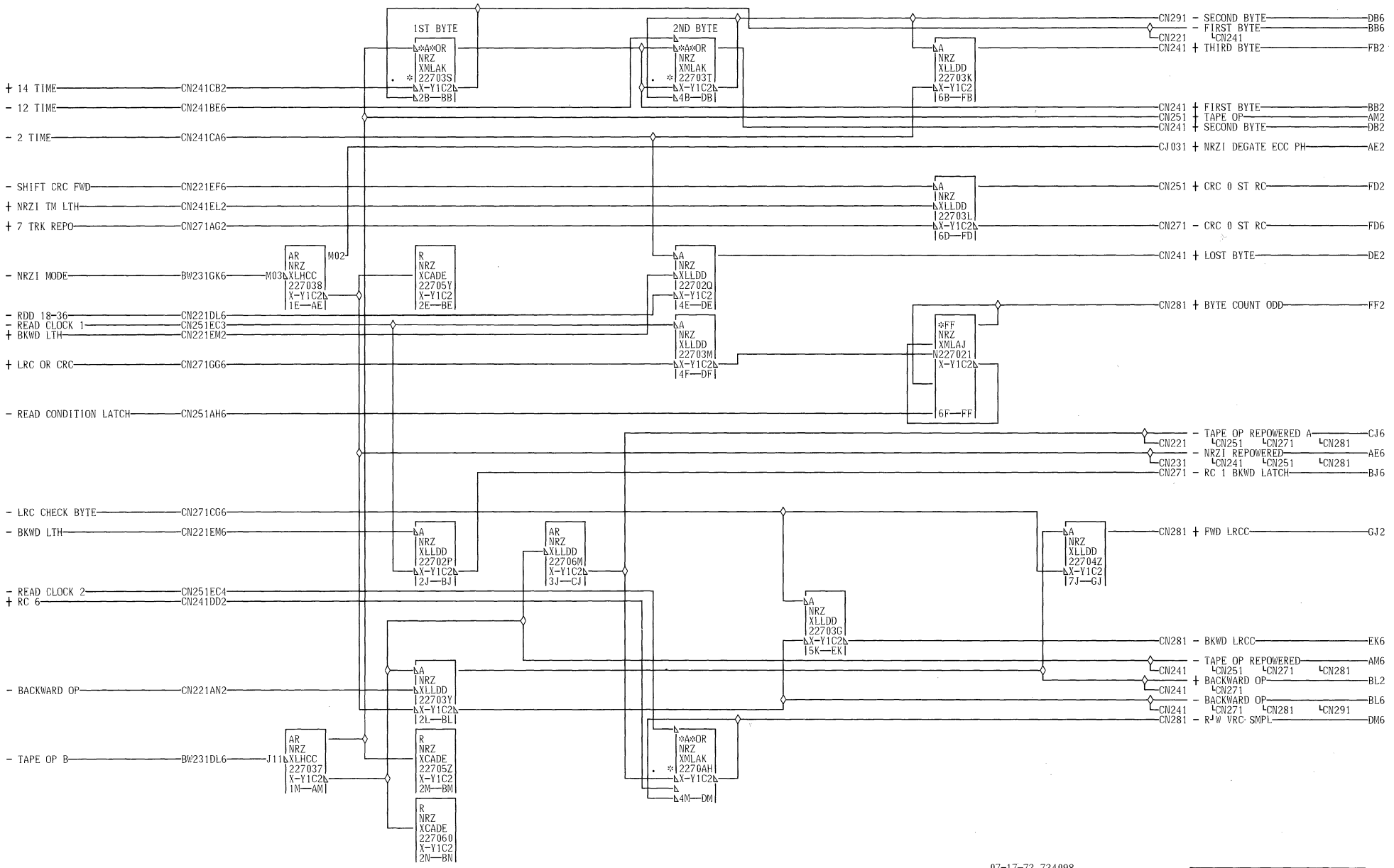
07-17-73 734098
03-18-74 736699

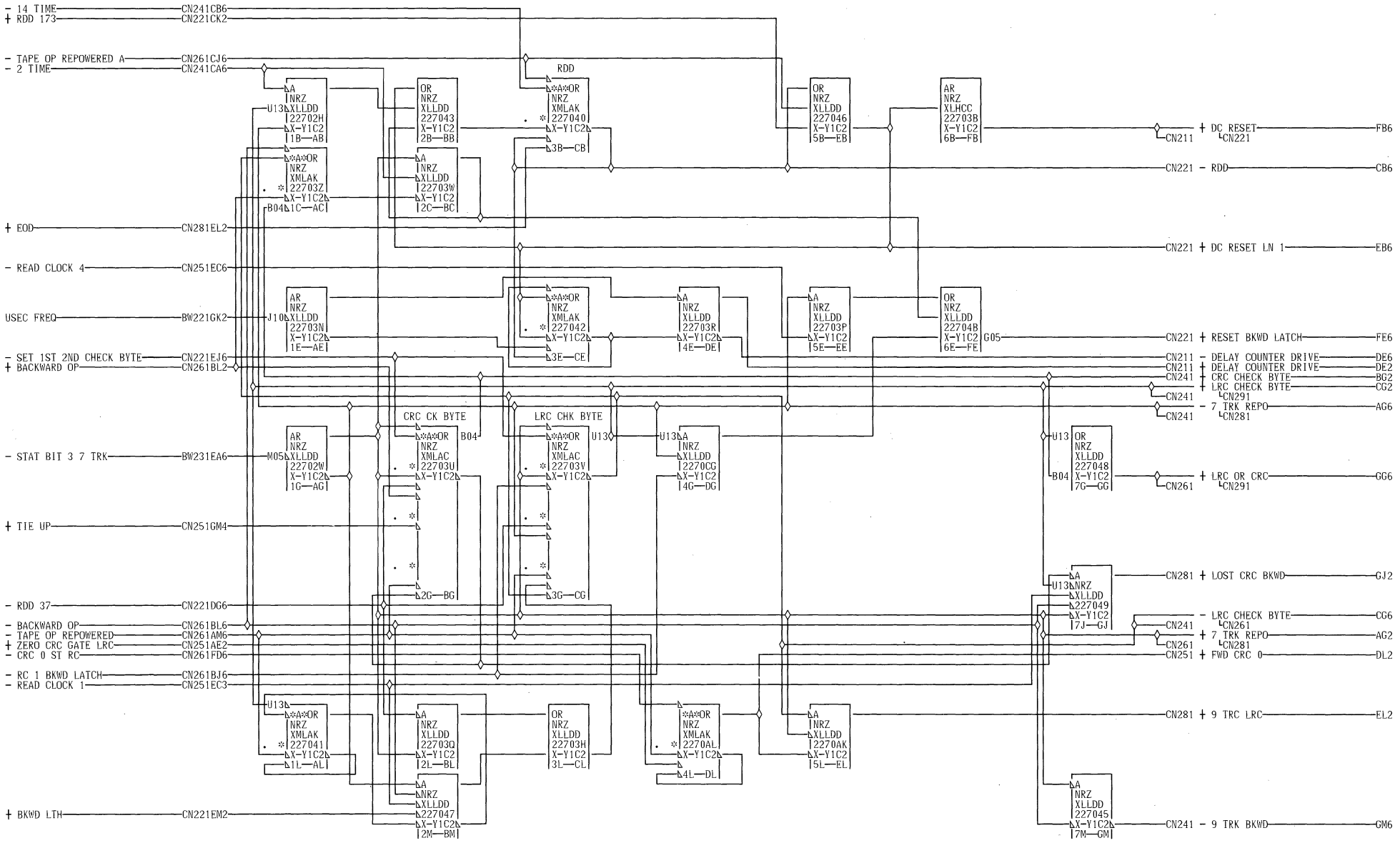
FIRST BIT AND RESTART	
DATE 08-18-81 MACH. 3803-2	
LOG 0J20 FRAME 01	
P.N. 2736333	
IBM CORP. CO BLK. GN	000



07-17-73 734098

1ST AND 2ND BYTE LATCHES	
DATE 08-08-73 MACH. 3803-2	
LOG 0051 FRAME 01	
P.N. 2736334	
IBM CORP. CO BLK. GK	

CN261 000



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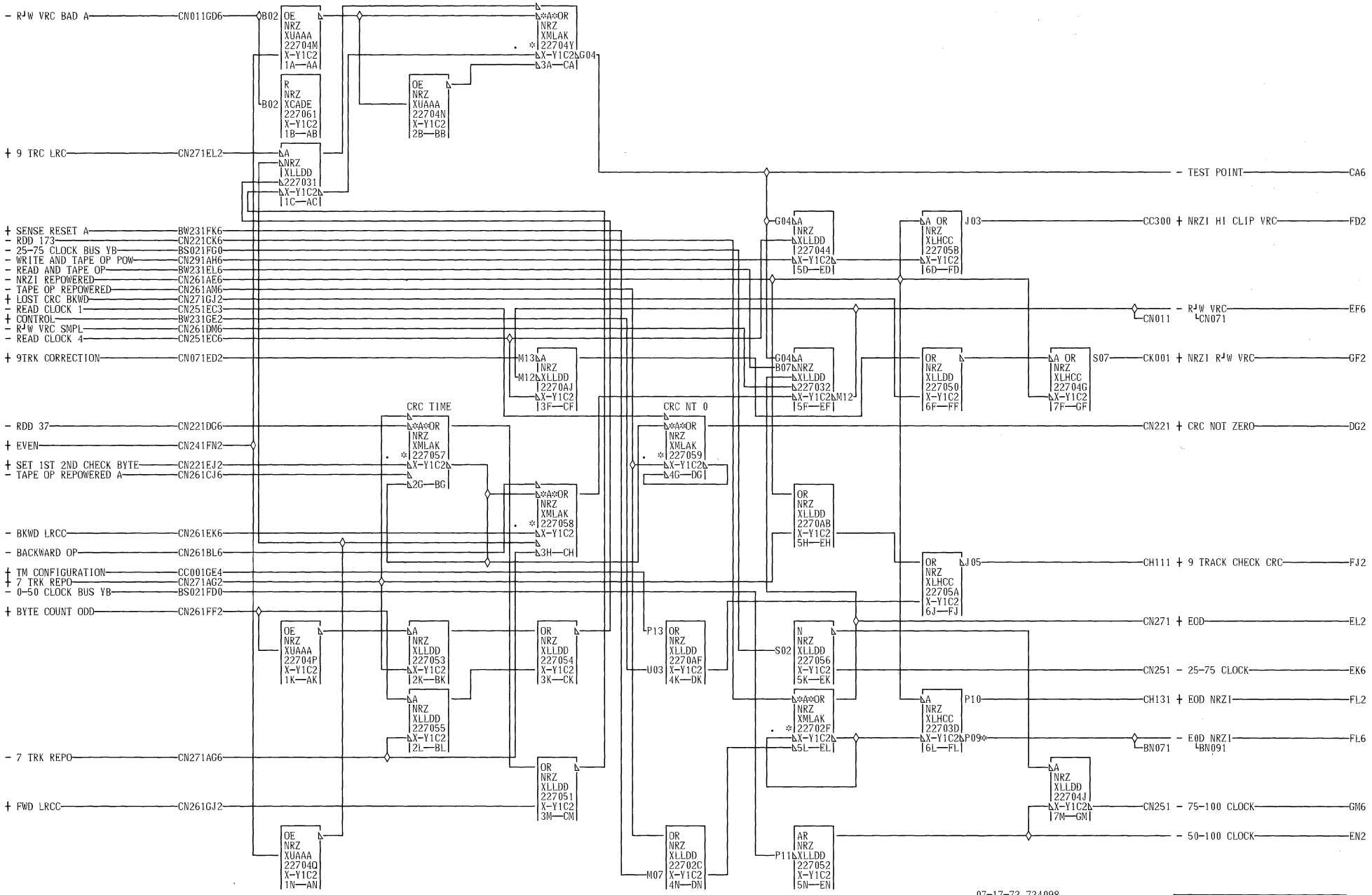
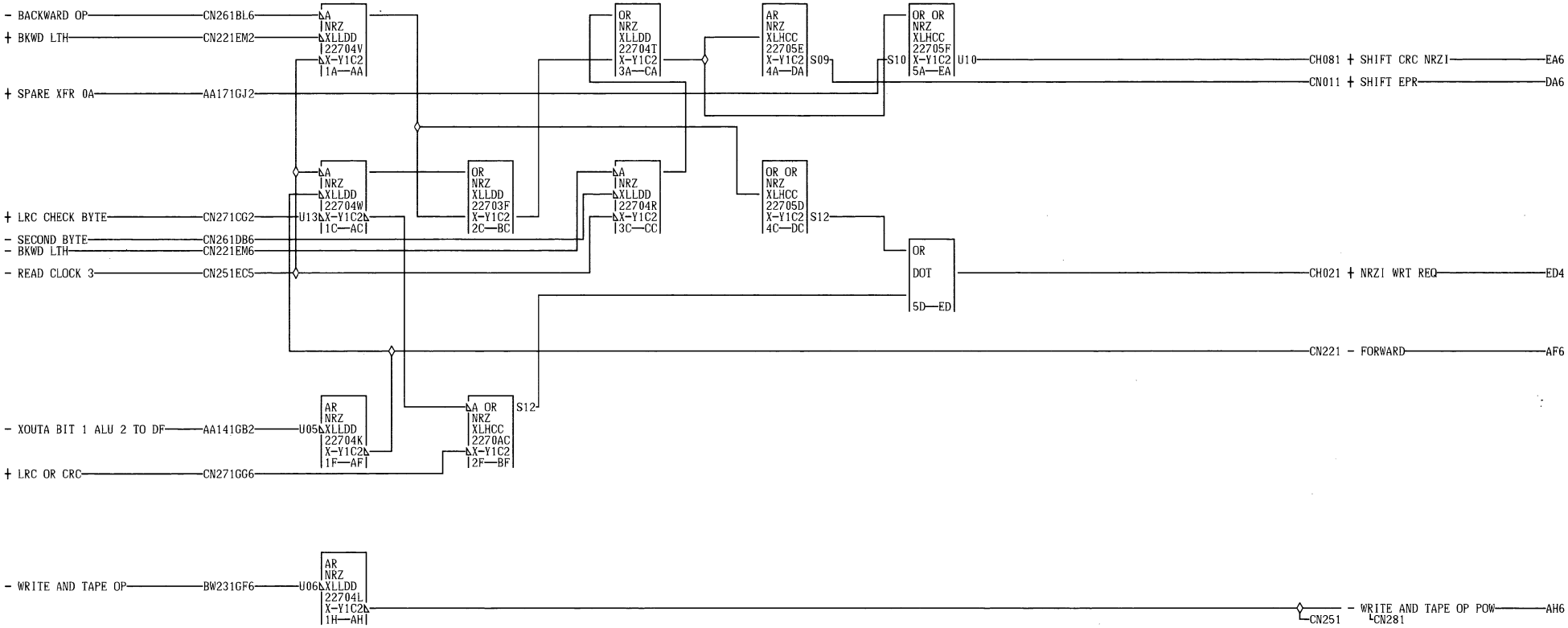
CHECK BYTE LATCHES AND RDD			
DATE 08-08-73	MACH. 3803-2		
LOG 0051	FRAME	01	
	P.N. 2736335		
IBM CORP. CO	BLK.	GN	

CN271 000


- RJW VRC BAD A
CN011GD6
+ 9 TRC LRC
CN271EL2
+ SENSE RESET A
BW231FK6
- RDD 173
CN221CK6
- 25-75 CLOCK BUS YB
BS021FG0
- WRITE AND TAPE OP POW
CN291AH6
- READ AND TAPE OP
BW231EL6
- NRZI REPOWERED
CN261AE6
- TAPE OP REPOWERED
CN261AM6
+ LOST CRC BKWD
CN271GJ2
- READ CLOCK 1
CN251EC3
+ CONTROL
BW231GE2
- RJW VRC SMPL
CN261DM6
- READ CLOCK 4
CN251EC6
+ 9TRK CORRECTION
CN071ED2
- RDD 37
CN221DG6
+ EVEN
CN241FN2
+ SET 1ST 2ND CHECK BYTE
CN221EJ2
- TAPE OP REPOWERED A
CN261CJ6
- BKWD LRCC
CN261EK6
- BACKWARD OP
CN261BL6
+ TM CONFIGURATION
CC001GE4
+ 7 TRK REPO
CN271AG2
- 0-50 CLOCK BUS YB
BS021FD0
+ BYTE COUNT ODD
CN261FF2
- 7 TRK REPO
CN271AG6
+ FWD LRCC
CN261GJ2
CRC TIME
CRC NT 0
- TEST POINT
CA6
+ NRZI HI CLIP VRC
FD2
CC300
- RJW VRC
EF6
CN011
CN071
+ NRZI RJW VRC
GF2
CK001
+ CRC NOT ZERO
DG2
CN221
+ 9 TRACK CHECK CRC
FJ2
CH111
+ EOD
EL2
CN271
- 25-75 CLOCK
EK6
CN251
+ EOD NRZI
FL2
CH131
- EOD NRZI
FL6
BN071
BN091
- 75-100 CLOCK
GM6
CN251
- 50-100 CLOCK
EN2
FL6 X-Y1U1E11
01A-A1C1C11
07-17-73 734098
NRZI HD CLIP AND READ VRC
DATE 08-08-73 MACH. 3803-2
LOG 0051 FRAME 01
P.N. 2736336
IBM CORP. CO BLK. GN
CN2811
000



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SHIFT CRC EPR CONTROL			
DATE	08-14-73	MACH. 3803-2	
LOG	0051	FRAME	01
		P.N.	2736337
IBM CORP.	CO	BLK.	EE

CN291 000