

DWG NO. 44P0233

REVISIONS

REV	EN	CHG CODE	DESCRIPTION	DR	APPD
DEV.	82808	—	DEVIATION E.N.	Wm Tell	[Signature]
G	83268	—	REVISED AND REDRAWN ADDING -001 & F/N 34	Wm Tell	[Signature]

CAUTION: EN 83268-01 AFFECTS THIS DWG.

NEXT ASSEMBLY
01P0313; 01P0869

MODEL NO.
620-30



varian data machines / a varian subsidiary
2722 michelson drive / irvine / california / 92664

DR	Charley	9-13-68
CHK	J. Evers	12-4-68
DSGN	Charley	9-13-68
ENGR	Whitcomb	2-4-68
APPD	L.E. Taylor	12-4-68
APPD		

CODE IDENT NO. 21101

THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT, WITHOUT PERMISSION FROM VDM.

TITLE PARTS LIST
9-TRACK MAG TAPE CONTROLLER BOARD NUMBER 2

SIZE	DWG NO.	REV
A	44P0233	G

SHEET 1 OF 4

96A0153 0000

QUANTITY REQ'D PER DASH NO.						PARTS LIST			CODE IDENT: 21101	
					001	000	FIND NO.	PART NUMBER	DESCRIPTION	REMARKS
					Ref	Ref	-	44D0233 E	Assembly	
					Ref	Ref	-	97D0099	Phonomaster	
					-	Ref	-	91C0033 F	Logic Diagram	
					Ref	-	-	91C0483 A	Logic Diagram	
					-	Ref	-	95W0202 H	Wire List	
					Ref	-	-	95W1053 A	Wire List	
					Ref	Ref	-	98A0165	Prod. Perf. Spec.	
					1	1	1	40D0175-000	Board Detail	
					146	154	2	58A0060-000	Socket, 14 Pin	
					10	10	3	71N0200-225	Capacitor 2.2 mf	C1-C10
					206	162	4	58A0062-002	Post	
							5			
					1	1	6	04D0140-000	Cover	
					4	4	7	21A0062-020	Screw, 4-40 x 1.0	
					4	4	8	23A0025-001	Nut, 4-40, Hex	
					4	4	9	22N4401-008	Lockwasher, #4	
					8	8	10	22A0089-004	Washer, Flat #4	
					4	4	11	22A0039-000	Wsh, Flt, Nylon	

NOTES:

DWG NO. 44P0233	REV G
SHEET <u>2</u> OF <u>4</u>	

96A0017-001C

QUANTITY REQ'D PER DASH NO.							PARTS LIST			CODE IDENT: 21101
					001	000	FIND NO.	PART NUMBER	DESCRIPTION	REMARKS
					4	4	12	22A0018-010	Stand-off, Fibre	
							13			
					3	3	14	01C0293-000	Comp. Assy. Resistor	RB1-3
					1	1	15	75A0000-000	XTAL Oscillator	XTAL 1
							16			
					14	14	17	49A0023-000	Int. Ckt.	IC1, 34, 35, 42, 61, 67, 69, 72, 81, 84, 85, 86, 110 and 122
					10	10	18	49A0004-000	Int. Ckt.	IC30, 50, 51, 63, 73, 75, 76, 88, 145 and 147
					32	32	19	49A0008-000	Int. Ckt.	IC3, 4, 9, 13, 14, 15, 20, 25, 26, 37, 38, 43, 45, 46, 47, 59, 60, 70, 71, 95, 96, 105, 112, 116, 123, 125, 128, 131, 133, 134, 141 and 146
					22	22	20	49A0012-000	Int. Ckt.	IC5, 6, 16, 17, 27, 28, 33, 39, 40, 52, 53, 58, 65, 153, 66, 77, 78, 82, 90, 91, 104 and 138,
					20	20	21	49A0002-000	Int. Ckt.	IC7, 10, 18, 21, 29, 32, 41, 44, 54, 79, 89, 92, 94, 99, 100, 103, 108, 111, 124 and 137
					13	13	22	49A0011-000	Int. Ckt.	IC2, IC31, 83, 87, 97, 98, 106, 107, 118, 119, 120, 132 and 144
					2	2	23	49A0022-000	Int. Ckt.	IC11 and 22
					-	17	24	49A0010-000	Int. Ckt.	IC12, 23, 24, 36, 48, 49, 62, 74, 113, 114, 126, 127, 139, 140, 148, 149 and 150

NOTES:

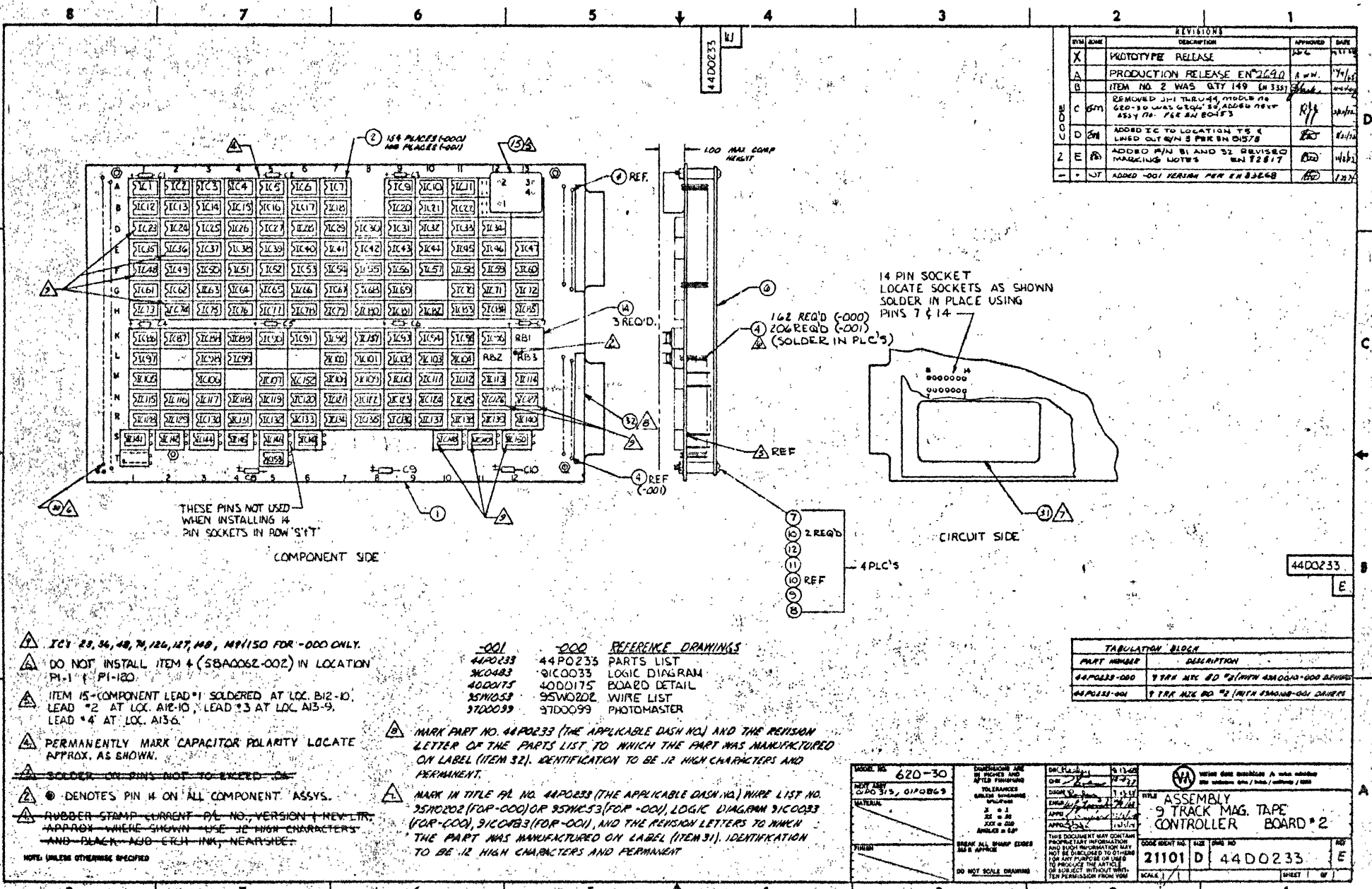
DWG NO. 44P0233	REV G
SHEET <u>3</u> OF <u>4</u>	

96A0017-001C

QUANTITY REQ'D PER DASH NO.							PARTS LIST			CODE IDENT: 21101
					001	000	FIND NO.	PART NUMBER	DESCRIPTION	REMARKS
					19	19	26	49A0009-000	Int. Ckt.	IC55, 56, 64, 68, 151, 93, 101, 102, 109, 115, 121, 129, 130, 135, 136, 142, 117, 152, 57
					1	1	27	49A0007-000	Int. Ckt (SN7400N)	IC80
					0	0	28	53A0333-040	Wire, Solid Kynar Yellow, 30 AWG	
							29			
							30			
					1	1	31	86C 0008-000	Ident Label	
					1	1	32	86C 0015-000	Ident Label	
					9	-	33	49A 0128-001	Int. Ckt.	IC12, 24, 49, 62, 113, 114, 139, 140 and 150
					1	1	34	49A0554-001	INT. CKT.	IC 57

NOTES:	DWG NO.	REV
	44 P0233	G
SHEET 4 OF 4		

96A0017-001C



REVISIONS			
REV. NO.	DESCRIPTION	APPROVED	DATE
X	PROTOTYPE RELEASE	APL	11/1/58
A	PRODUCTION RELEASE EN 2690	A.W.	7/1/59
B	ITEM NO. 2 WAS QTY 149 (IN 335)	Hand	10/1/59
C	REMOVED J11 THROUGH J14, MODEL NO 620-30 WAS QTY 150, ADDRESS NOTE 4557 (N. 762 IN BOX 7)	RJF	10/1/59
D	ADDED IC TO LOCATION T5 (LINED OUT W/N 3 PER EN 2157)	ED	11/1/59
E	ADDED P/N B1 AND B2 REVISED MARKING NOTES EN 12817	ED	4/1/60
F	ADDED -001 VERSION PER EN 83248	ED	1/2/60

- ⚠ IC's 23, 34, 48, 74, 126, 127, 149, 149/150 FOR -000 ONLY.
- ⚠ DO NOT INSTALL ITEM # (SBA006Z-002) IN LOCATION P1-1 (P1-1B2).
- ⚠ ITEM 15-COMPONENT LEAD #1 SOLDERED AT LOC. B12-10, LEAD #2 AT LOC. A12-10, LEAD #3 AT LOC. A13-9, LEAD #4 AT LOC. A13-6.
- ⚠ PERMANENTLY MARK CAPACITOR POLARITY LOCATE APPROX. AS SHOWN.
- ⚠ SOLDER ON PINS NOT TO EXCEED .01"
- ⓪ DENOTES PIN # ON ALL COMPONENT ASSYS.
- ⚠ RUBBER STAMP CURRENT PL. NO., VERSION # KEY LTR. APPROX. WHERE SHOWN. USE .12 HIGH CHARACTERS AND BLACK AND GLEN INK, NEAR SIDE.

-001	-000	REFERENCE DRAWINGS
44P0233	44P0235	PARTS LIST
3K0483	3K0033	LOGIC DIAGRAM
40D0175	40D0175	BOARD DETAIL
35W053	35W0202	WIRE LIST
37D0033	37D0099	PHOTOMASTER

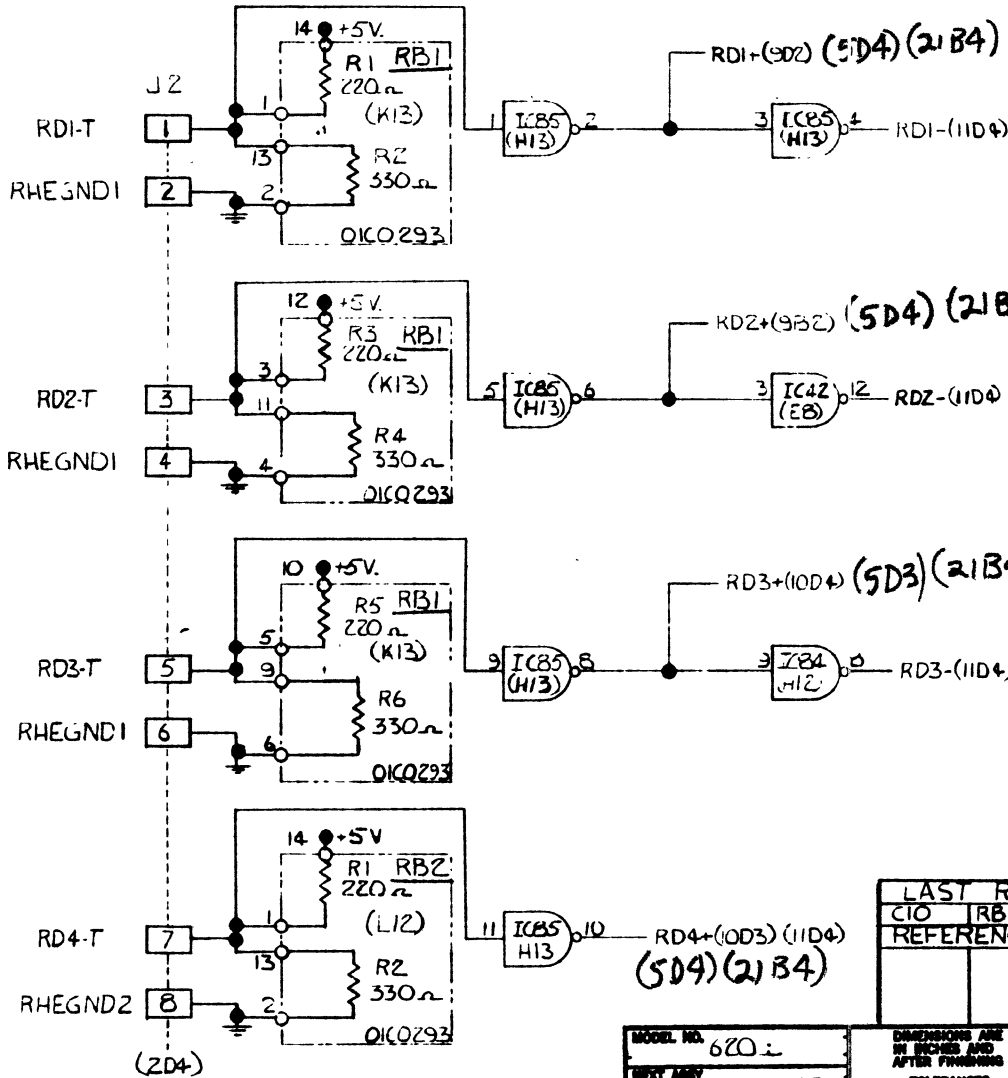
⓪ MARK PART NO. 44P0233 (THE APPLICABLE DASH NO.) AND THE REVISION LETTER OF THE PARTS LIST TO WHICH THE PART WAS MANUFACTURED ON LABEL (ITEM 32). IDENTIFICATION TO BE .12 HIGH CHARACTERS AND PERMANENT.

⓪ MARK IN TITLE PL. NO. 44P0233 (THE APPLICABLE DASH NO.) WIRE LIST NO. 35W0202 (FOR -000) OR 35W053 (FOR -001), LOGIC DIAGRAM 3K0483 (FOR -000), 3K0033 (FOR -001), AND THE REVISION LETTERS TO WHICH THE PART WAS MANUFACTURED ON LABEL (ITEM 31). IDENTIFICATION TO BE .12 HIGH CHARACTERS AND PERMANENT.

TABULATION BLOCK	
PART NUMBER	DESCRIPTION
44P0233-000	9 TRACK MAG. TD #2 (WITH 44A0040-000 DRIVER)
44P0233-001	9 TRACK MAG. TD #2 (WITH 44A0040-001 DRIVER)

MODEL NO. 620-30	ISSUES ARE IN PAGES AND AFTER FINISHING	DATE 11-13-58		THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND INFORMATION THAT IS NOT TO BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USE WITHOUT THE WRITTEN PERMISSION FROM VOM
PARTS LIST: 44P0233, 01P0863 MATERIAL: FINISH:	TOLERANCES UNLESS OTHERWISE SPECIFIED: .1" = .1 .01" = .01 .001" = .001 ANGLES = 45°	DRAWN BY: [Signature] CHECKED BY: [Signature] APPR. BY: [Signature] APPROX. DATE: 11/1/58		TITLE: ASSEMBLY 9 TRACK MAG. TAPE CONTROLLER BOARD #2 EDGE WEIGHT NO. 21101 D SIZE (SHEET NO.) 44D0233 SCALE: 1/1 SHEET 1 OF 1

TRANSPORT INTERFACE



REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE
X		PROTOTYPE RELEASE	11-10-68	
A		PROD. RELEASE PER EN 2671		
B	1004	INPUT IC 40-111 WAS IN USE (40-111) REMOVED IC 40-111 FROM BOARD PER EN 2844		3-19-69
C		REVISED PLY EN 2876		3-20-69
-		IC 11 & 22 ON SHT 11 REDRAWN REMOVED IC 40-111 FROM BOARD PER EN 3173		5-14-69
D	30	REVISED CKT SHT 20, IC 93 EN 4645		8/16/70
E	30	UPDATED PER EN 80453		3/10/72
F	30	REVISED PER EN 81573		12/1/72

91C0033
F

LAST REF. DESIGNATION USED			
C10	RB3	IC53	IC141
REFERENCE DESIGNATIONS NOT USED			
		IC 8	
		IC 19	
		IC 143	

REF. DWGS.	
44PO233	PARTS LIST
44DO233	ASSY.
95W0202	WIRE LIST
40DO175	BOARD DETAIL
91DO099	PHOTOMASTER

MODEL NO.	620
NEXT ASSY	44DO233
APPROVAL	
FINISH	

DIMENSIONS ARE IN INCHES AND AFTER FINISHING

TOLERANCES UNLESS OTHERWISE SPECIFIED

X ± .1
XX ± .05
XXX ± .02

ANGLES ± .5°

BREAK ALL SHARP EDGES .010" APPROX

DO NOT SCALE DRAWING

DR	C. R. R. / 11-10-68
CHK	S. B. / 12-4-68
DOOR	W. S. / 11-10-68
ENGR	W. S. / 11-10-68
APPD	W. S. / 11-10-68

TITLE LOGIC DIAGRAM-PEC 9 TRACK MAG TAPE CONTR-OLLER - BOARD * 2			
DOCUMENT NO.	21101	REV	C
DATE	11-10-68	DWG NO.	91C0033
SCALE		SHEET	OF 22

2. ALL CAPACITORS ARE 2.2 μF, 20V.

~~1. ALL IC'S ARE 49A0000B (246)~~

NOTE: UNLESS OTHERWISE SPECIFIED

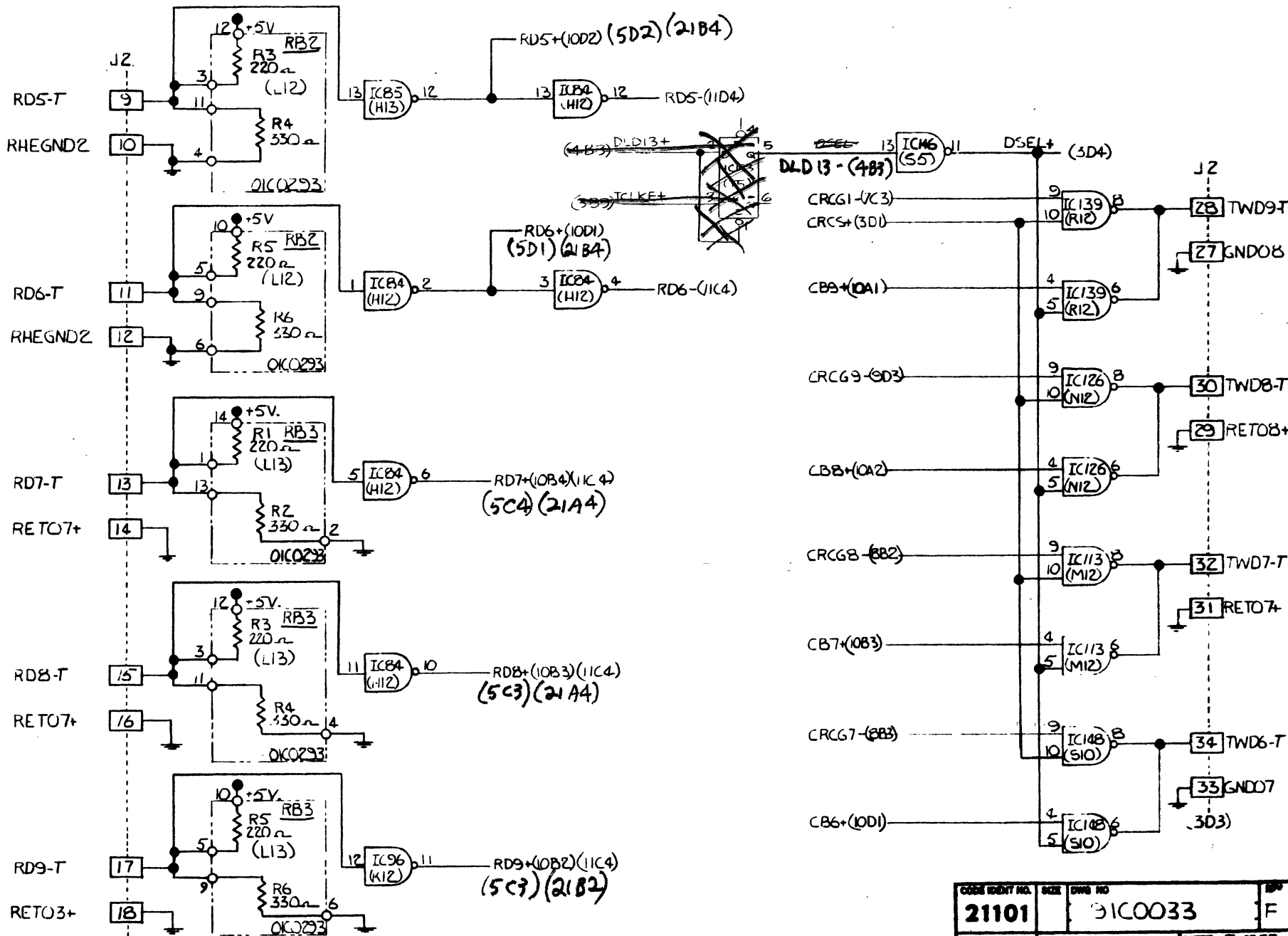
TRANSPORT INTERFACE

D

C

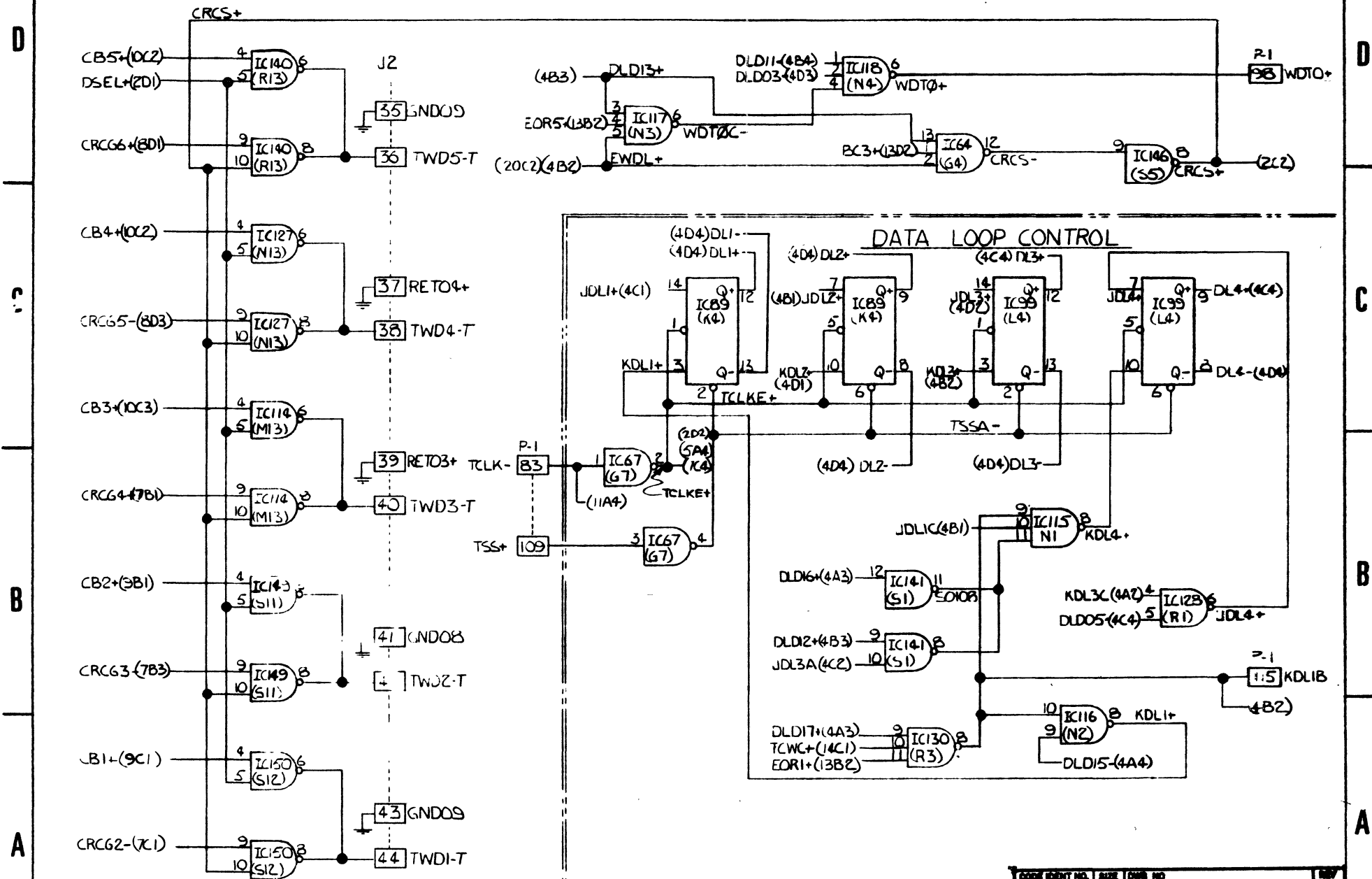
B

A



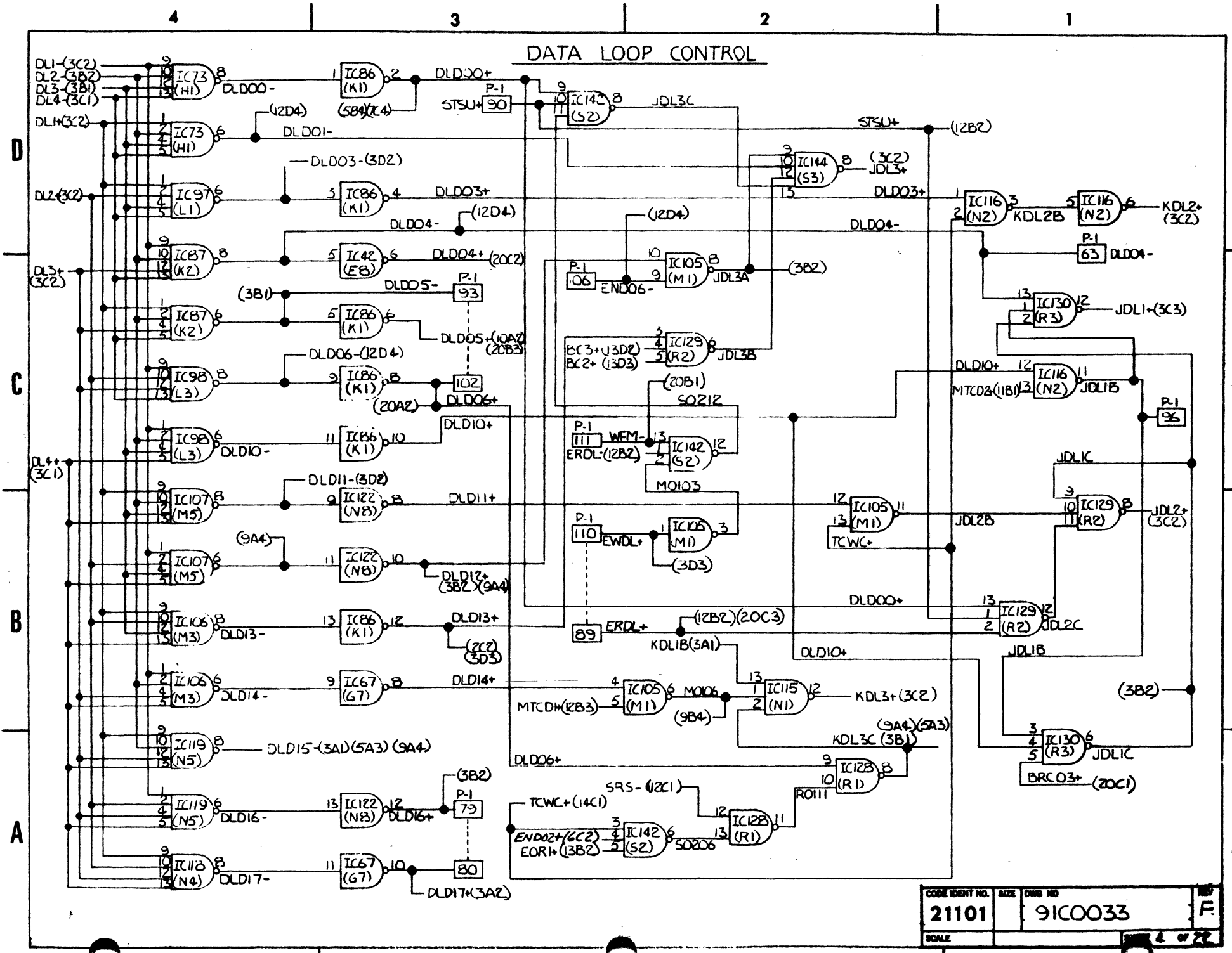
CODE IDENT NO.	SIZE	QWG NO.	REV.
21101		31C0033	F
SCALE			2 OF 22

TRANSPORT INTERFACE

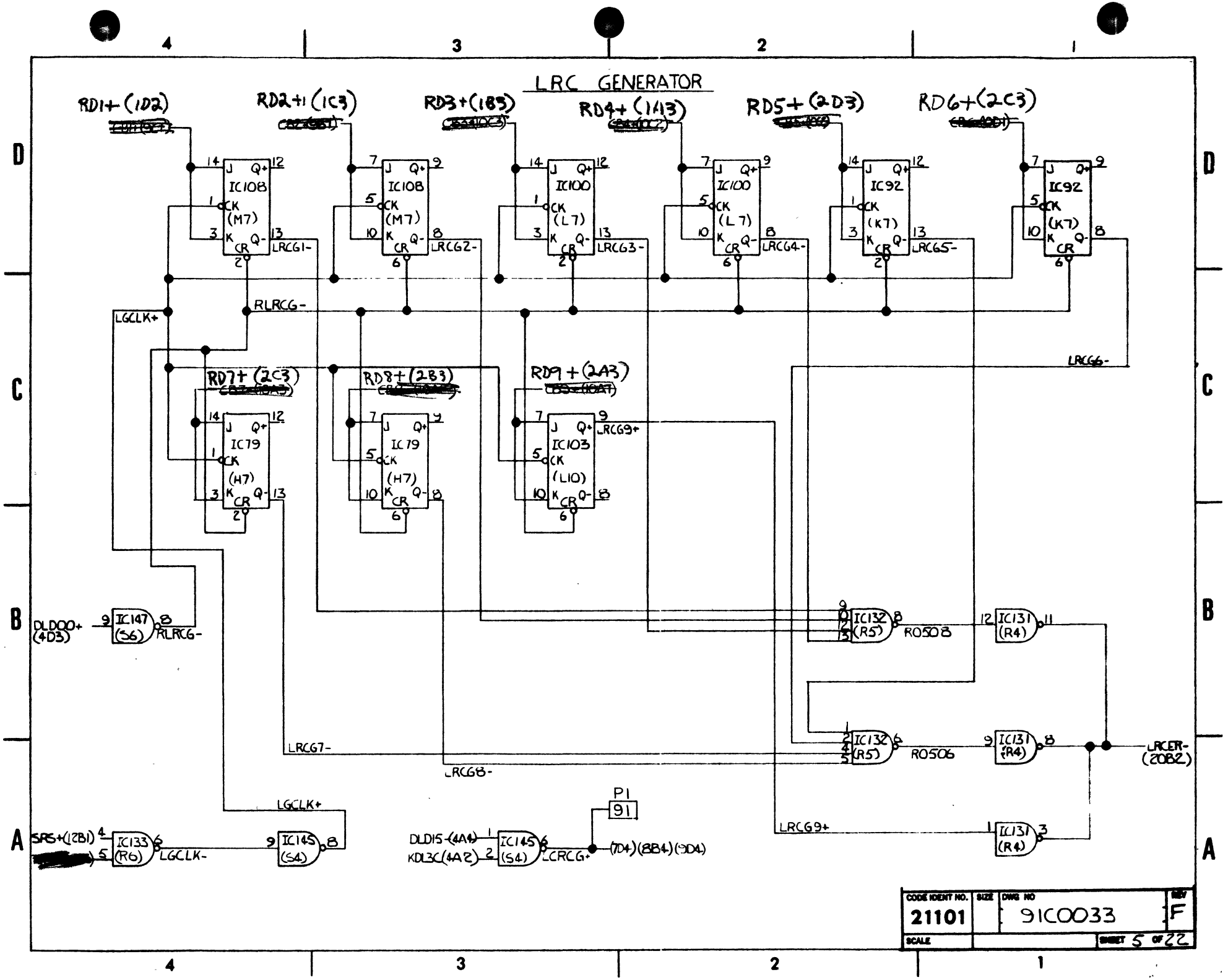


CODE IDENT NO.	SIZE	DWG NO.	REV
21101		91C0033	F
SCALE	SHEET 3 OF 22		

DATA LOOP CONTROL

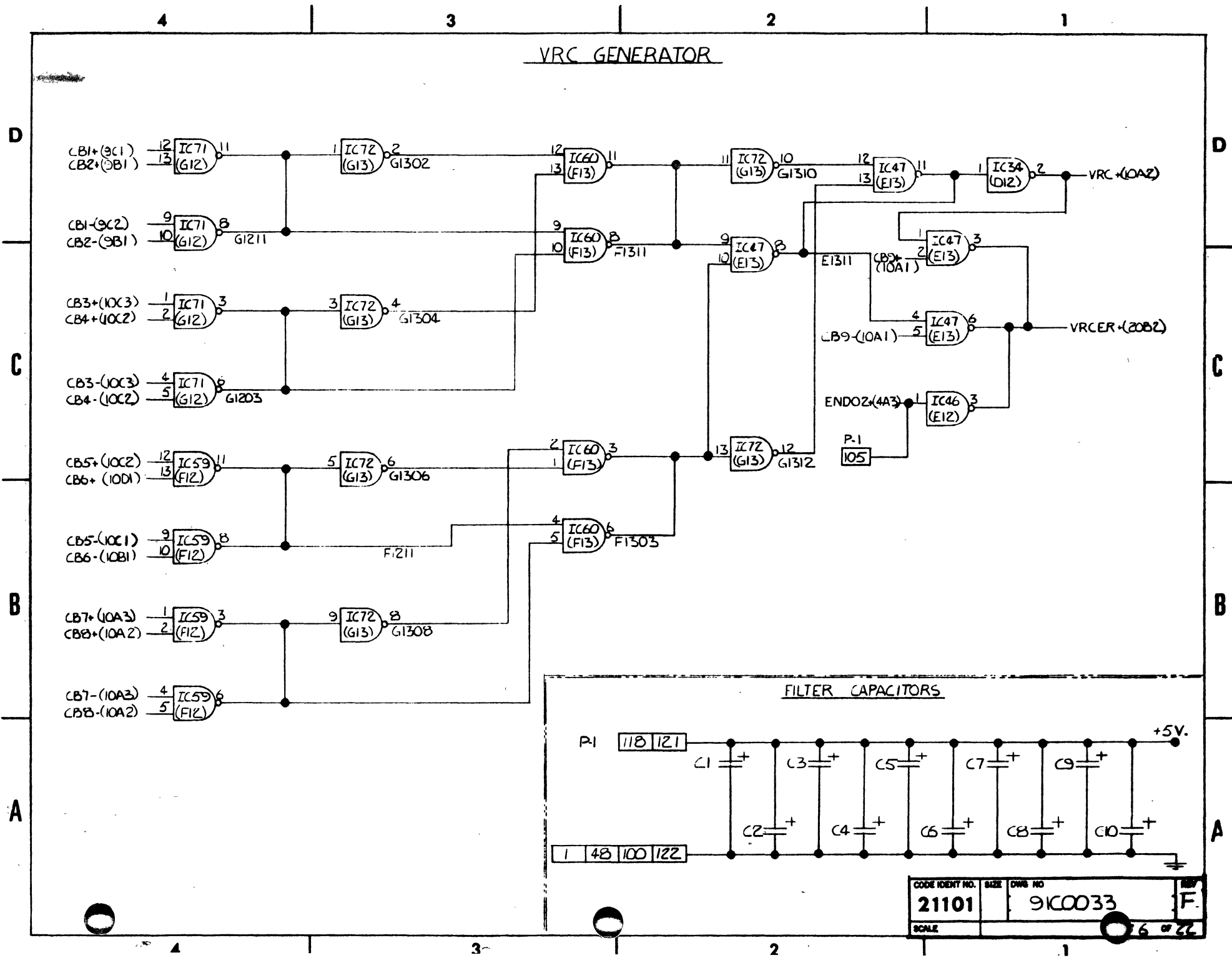


CODE IDENT NO.	SIZE	DWG NO.	REV.
21101		91C0033	F
SCALE			4 of 22



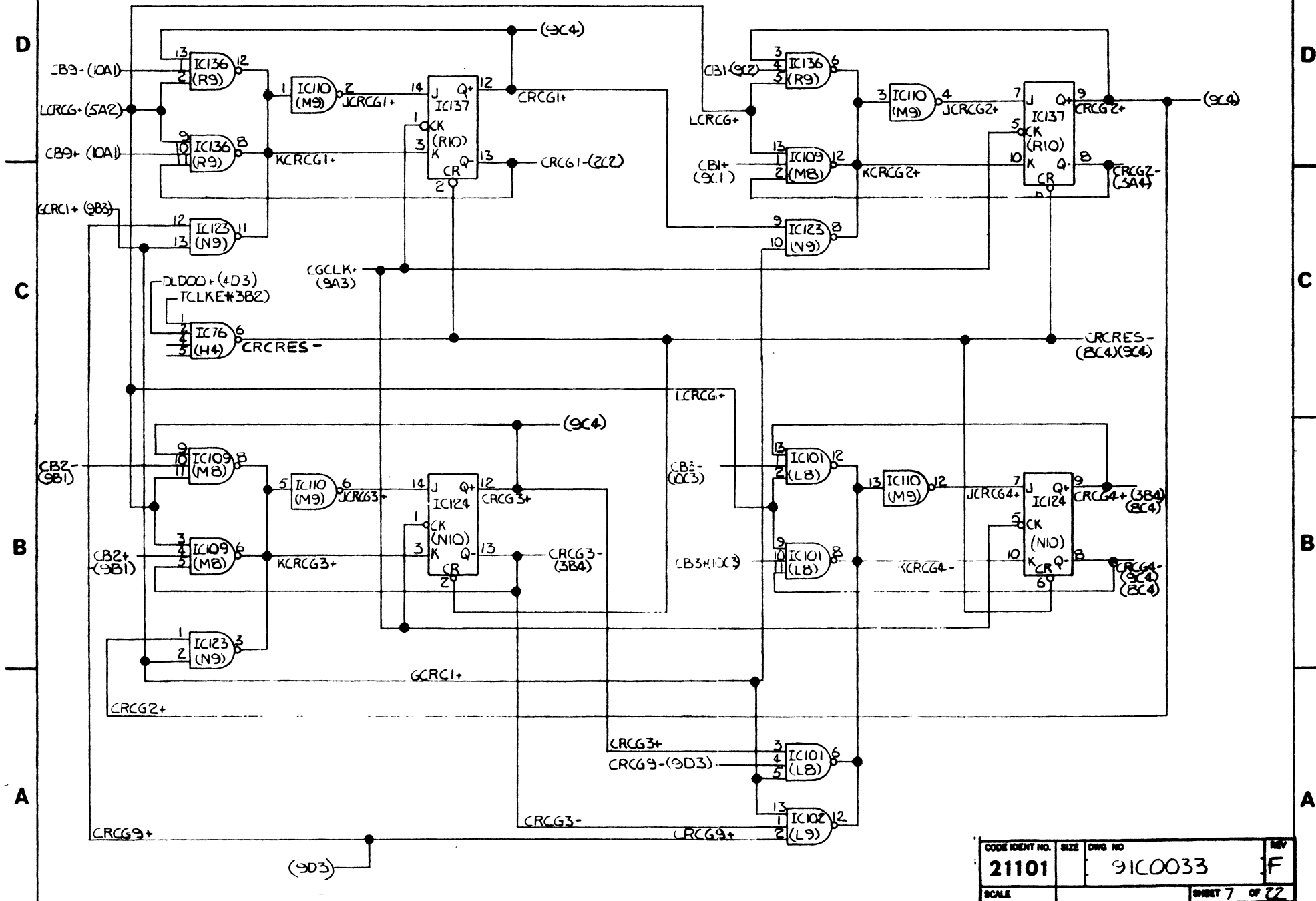
CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0033	F
SCALE	SHEET 5 OF 22		

VRC GENERATOR



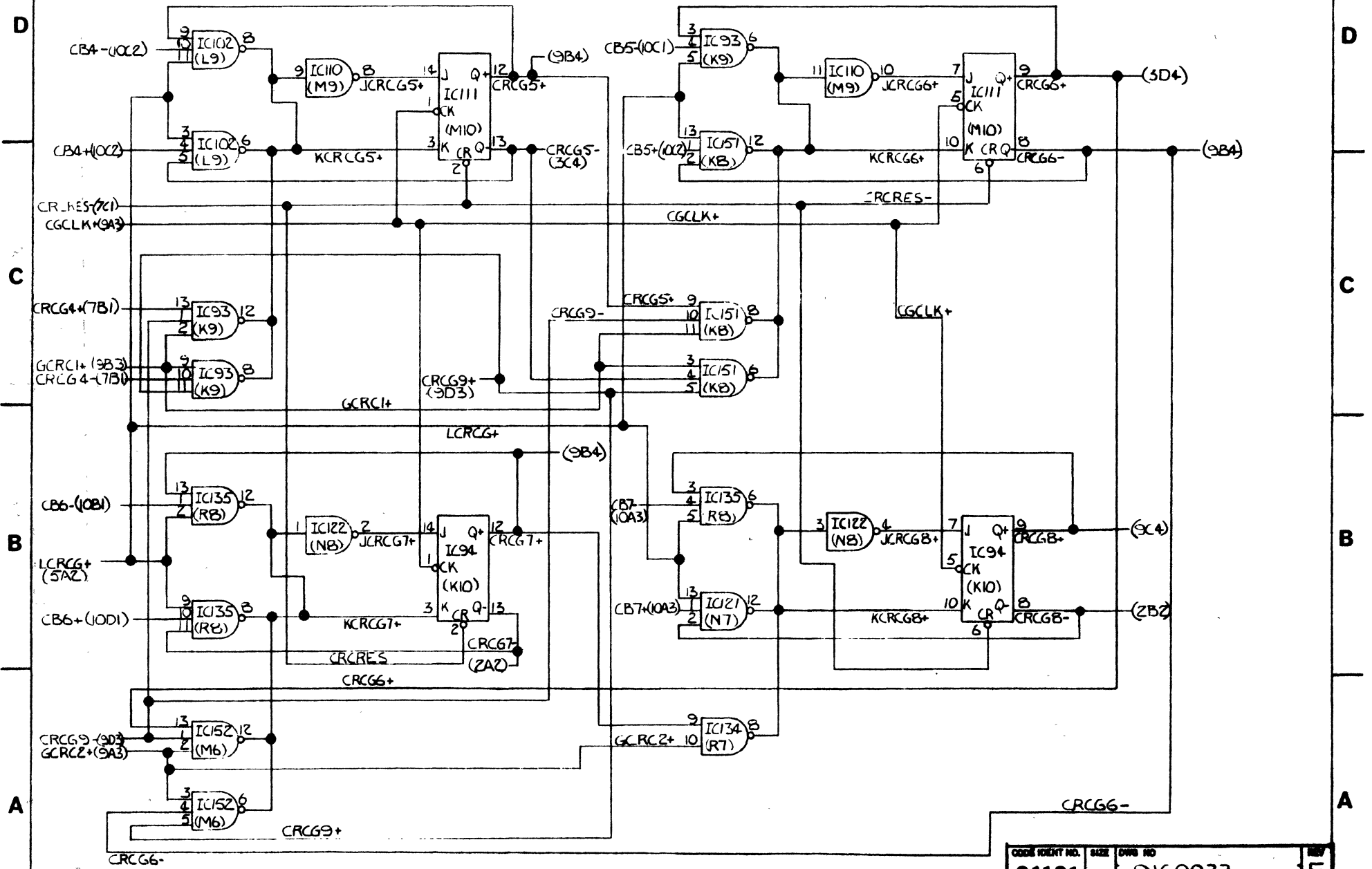
CODE IDENT NO.	SIZE	DWG NO.	REV
21101	9K0033		F
SCALE	1/6 of 22		

CRC GENERATOR



CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0033	F
SCALE		SHEET 7 OF 22	

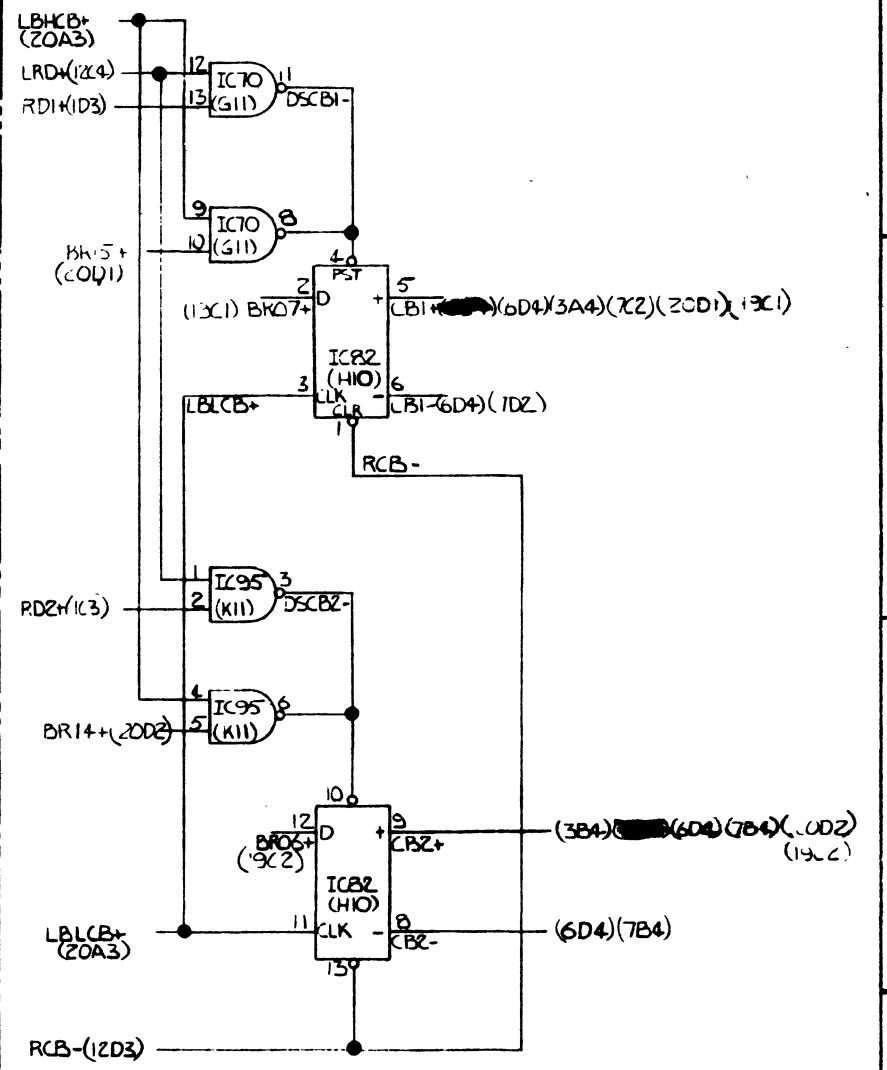
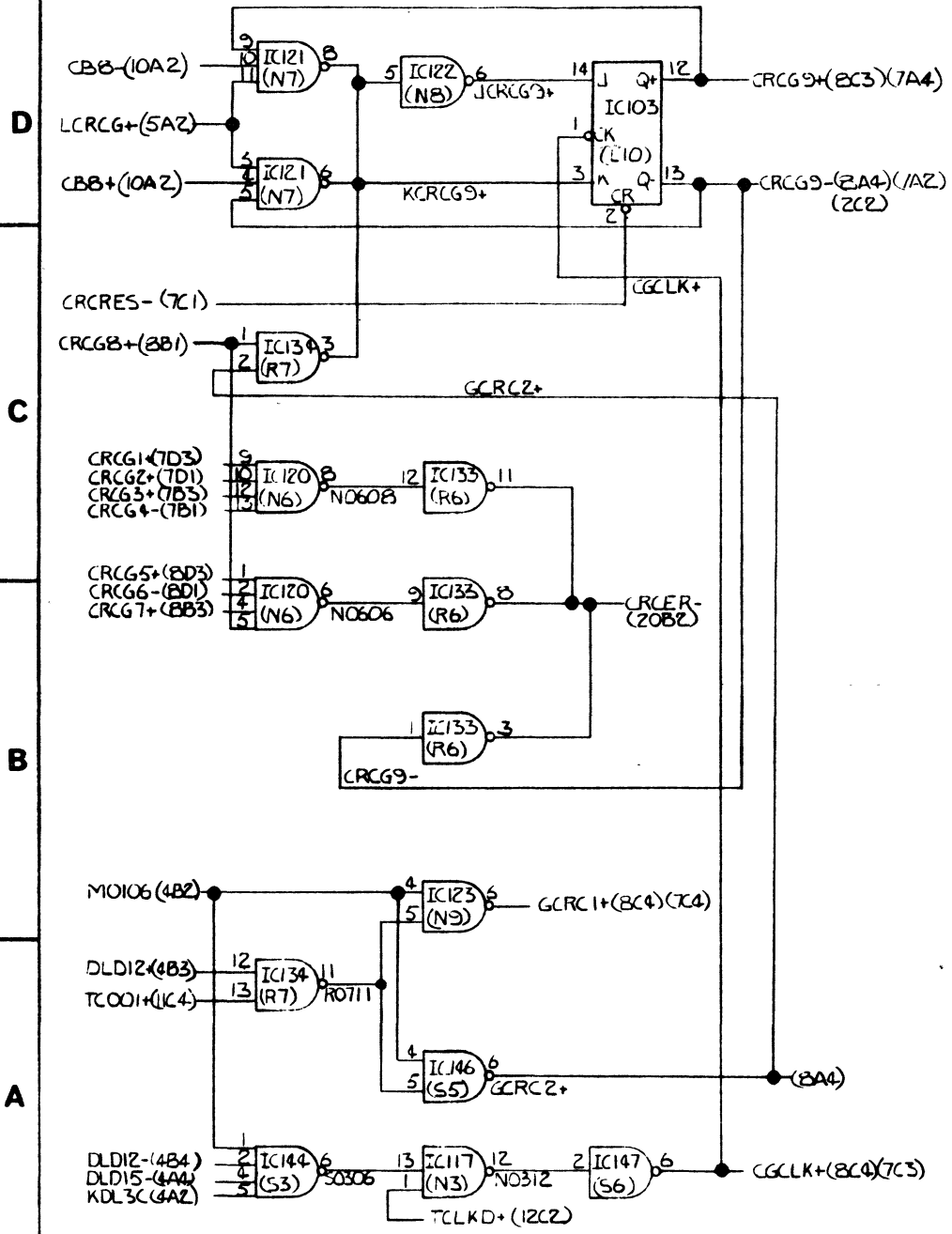
CRC GENERATOR



CODE IDENT NO.	SIZE	DWG NO.	REV
21101		91C0033	F
SCALE		SHEET 8 OF 22	

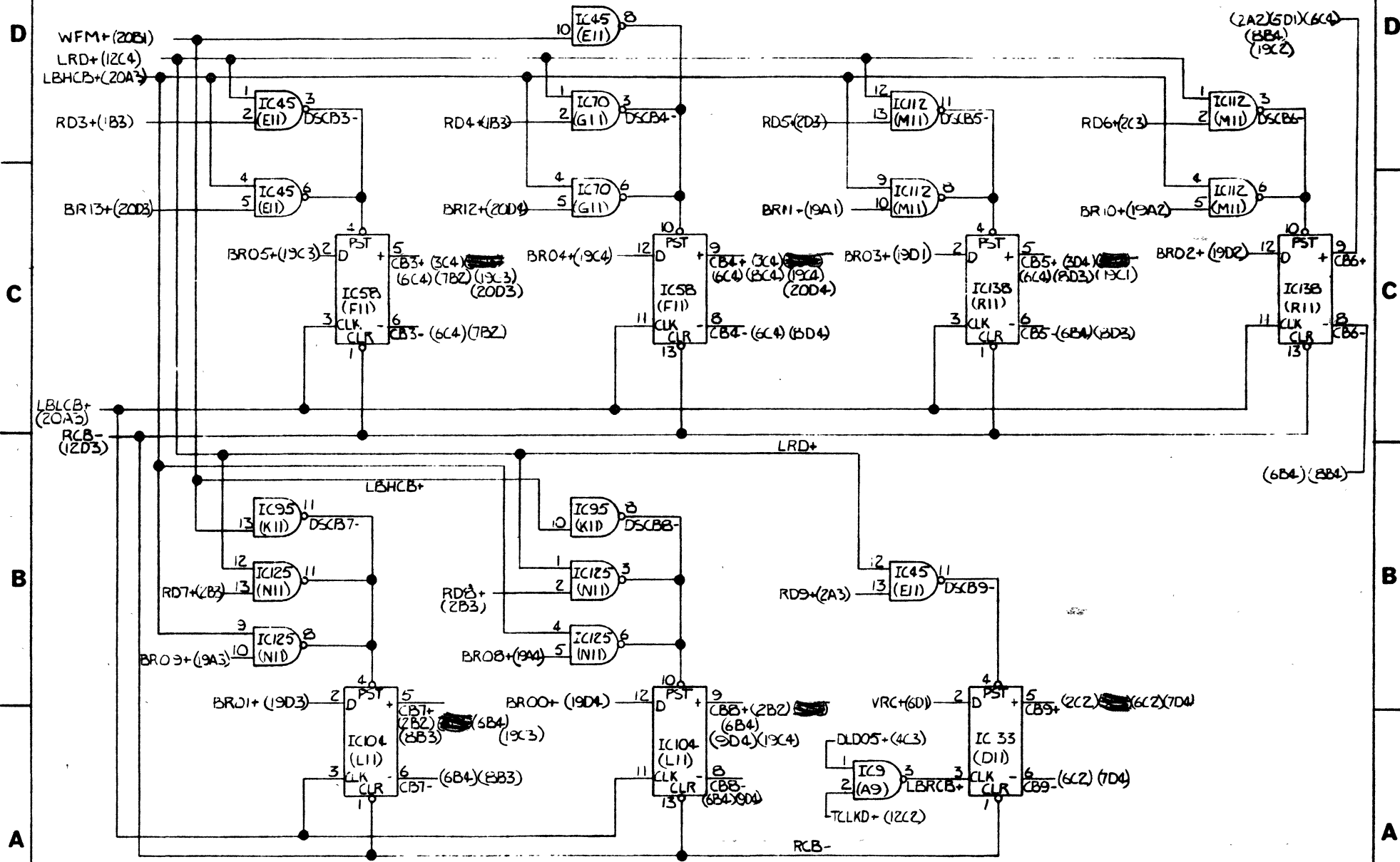
CRC GENERATOR

CHARACTER BUFFER REGISTER



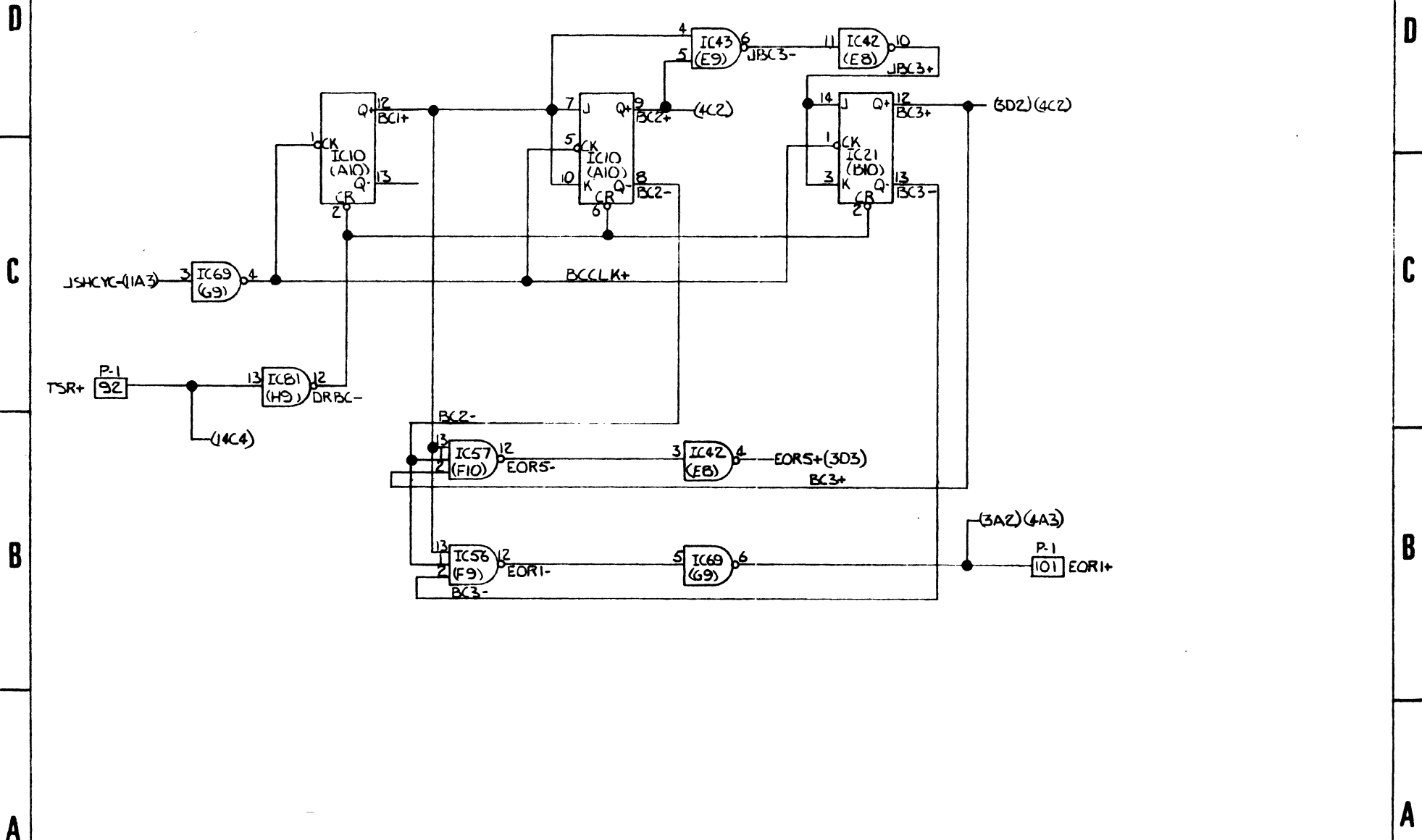
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21101		91C0033	F
SCALE		SHEET 9 OF 22	

CHARACTER BUFFER REGISTER

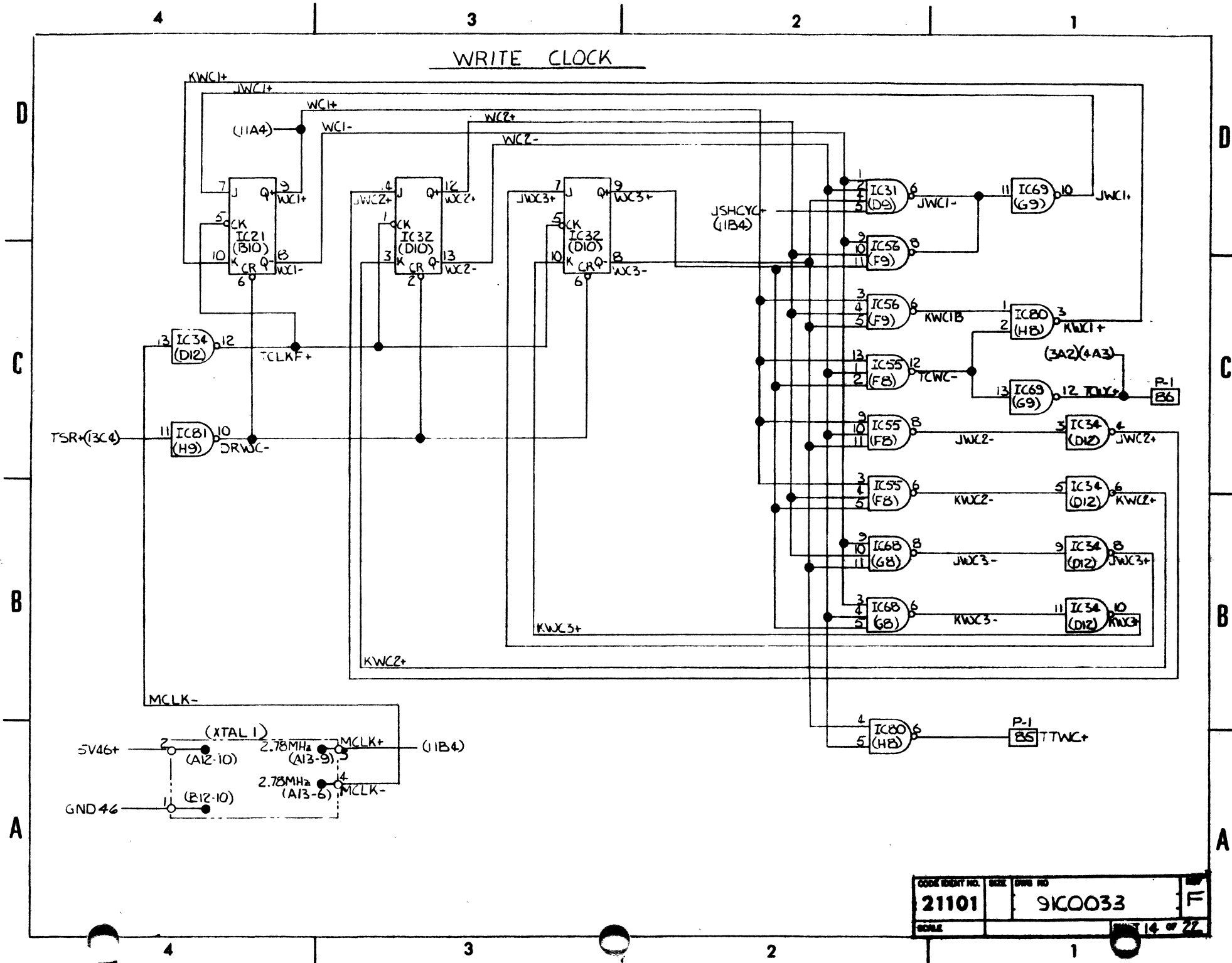


CODE IDENT NO.	SIZE	DWG NO.	REV
21101		910033	F
SCALE			10 of 22

BIT COUNTER

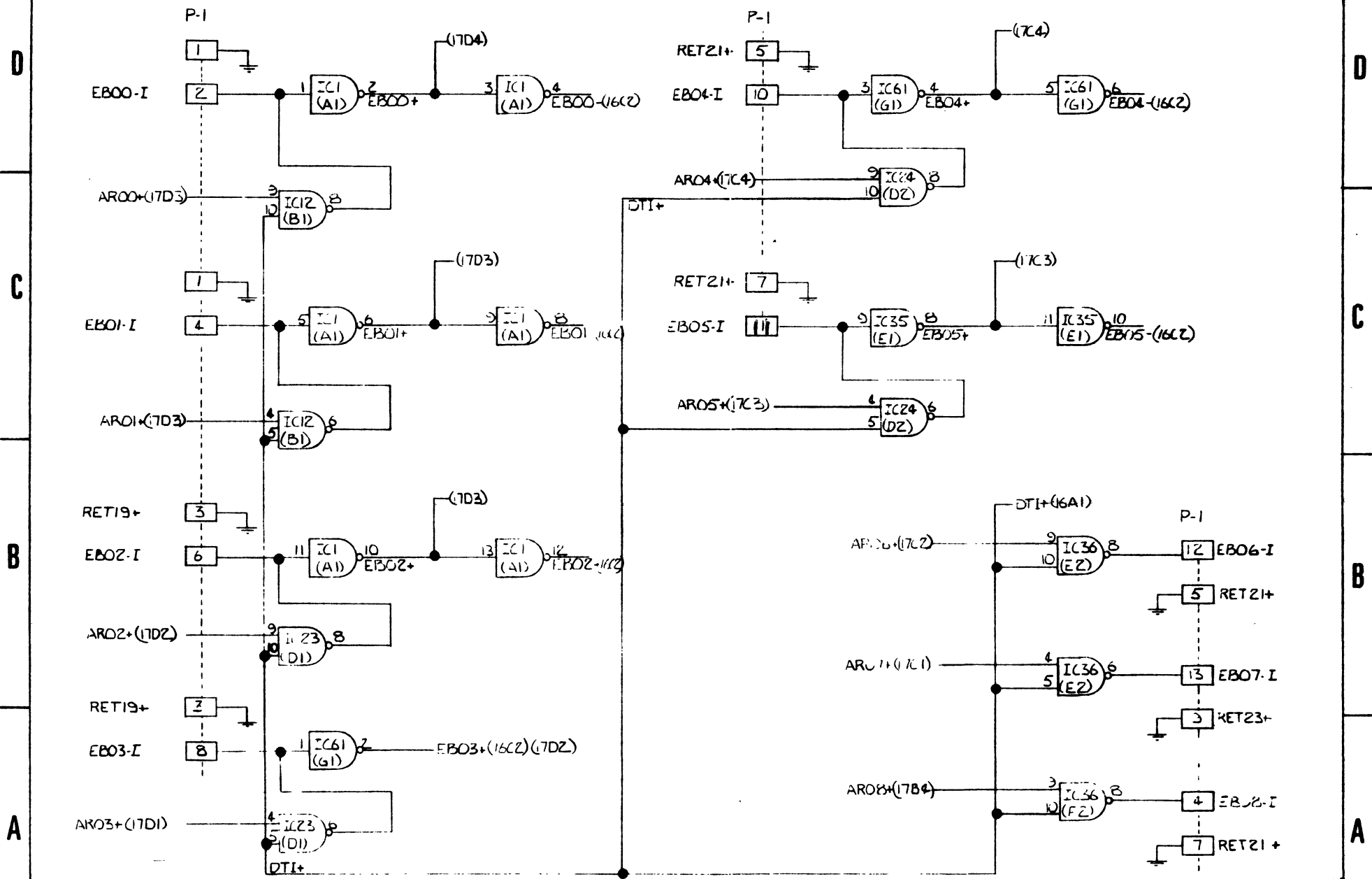


CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0033	F
SCALE	SHEET 13 OF 22		



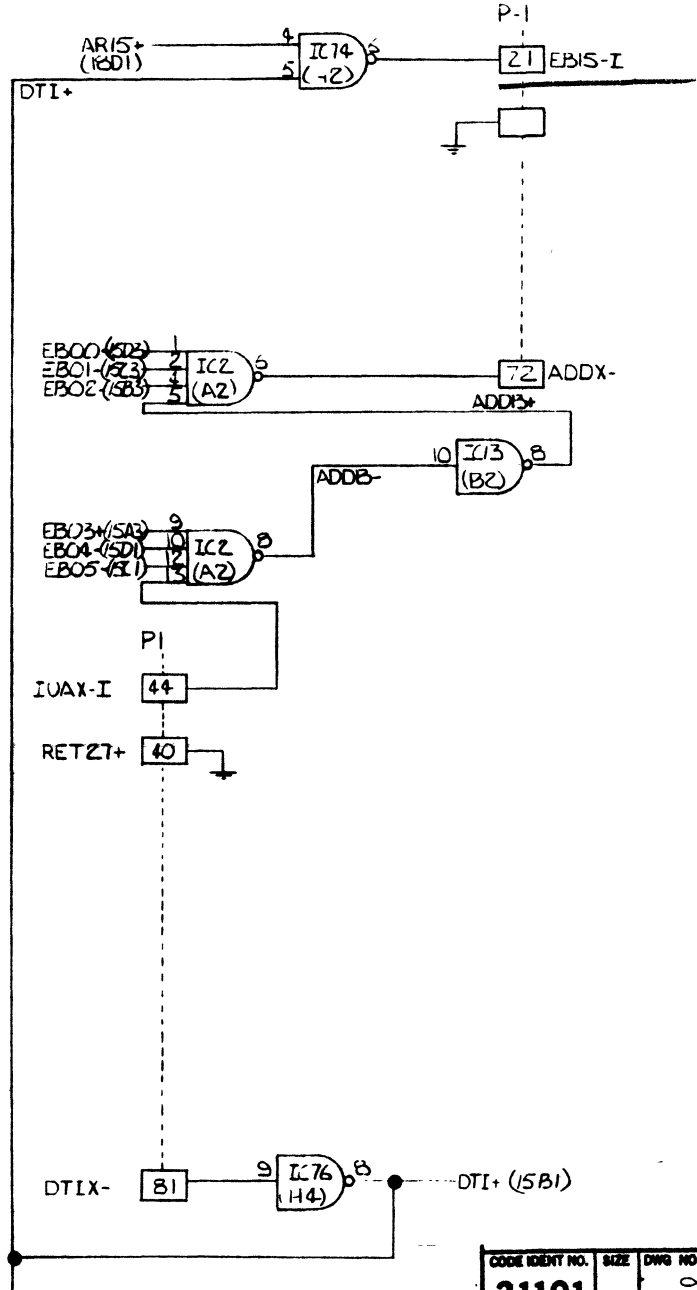
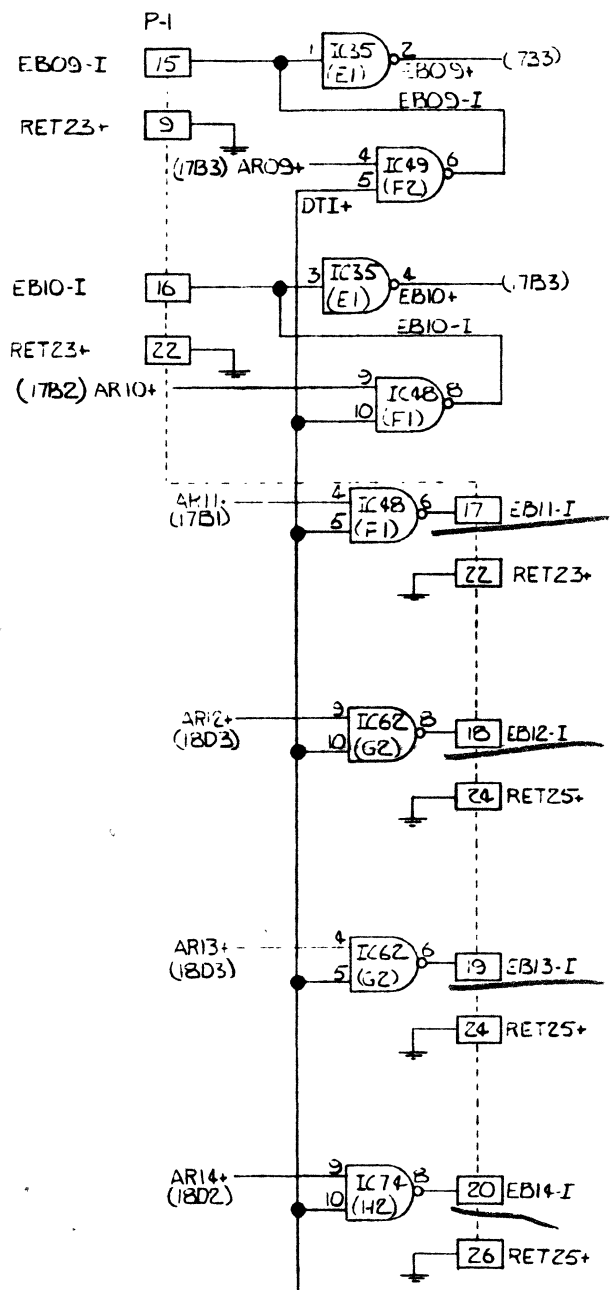
CODE IDENT NO.	SIZE	DRW NO.	F
21101		9K0033	
SCALE			14 of 22

"E" BUS INTERFACE



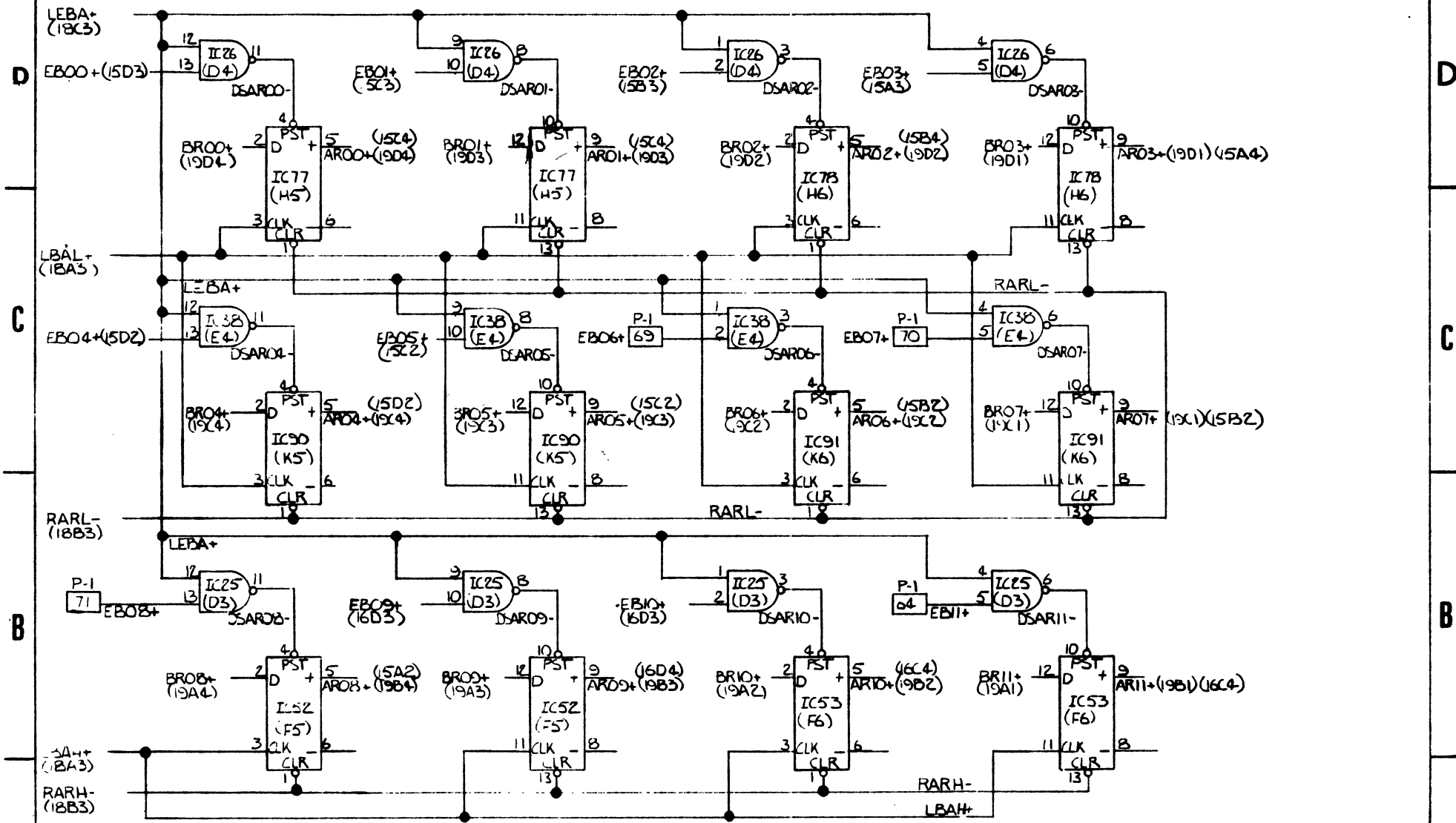
CODE IDENT NO.	SIZE	DWG NO.	REV
21101		91C0033	F
SCALE	SHEET 15 OF 22		

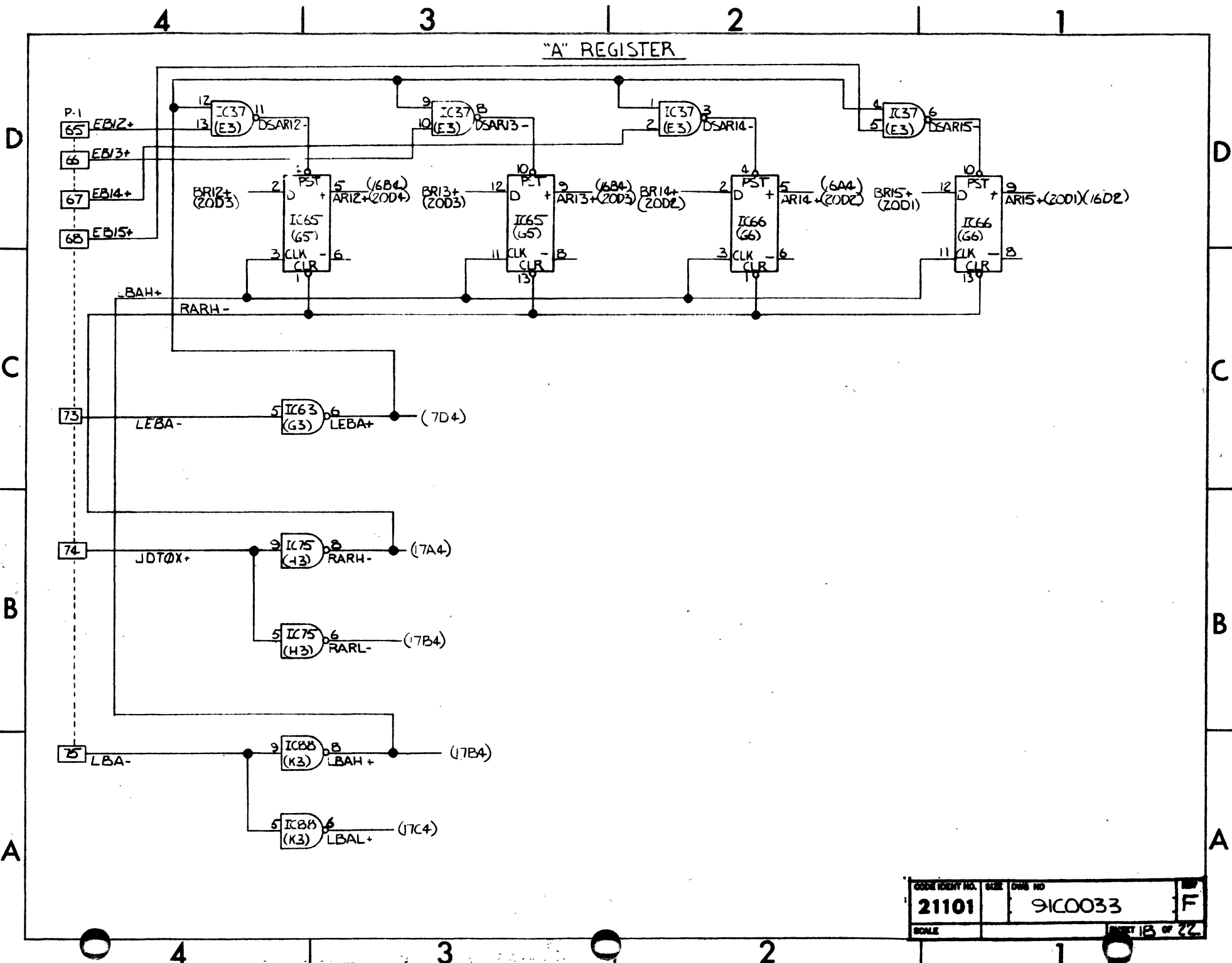
"E" BUS INTERFACE



CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0033	F
SCALE			16 of 22

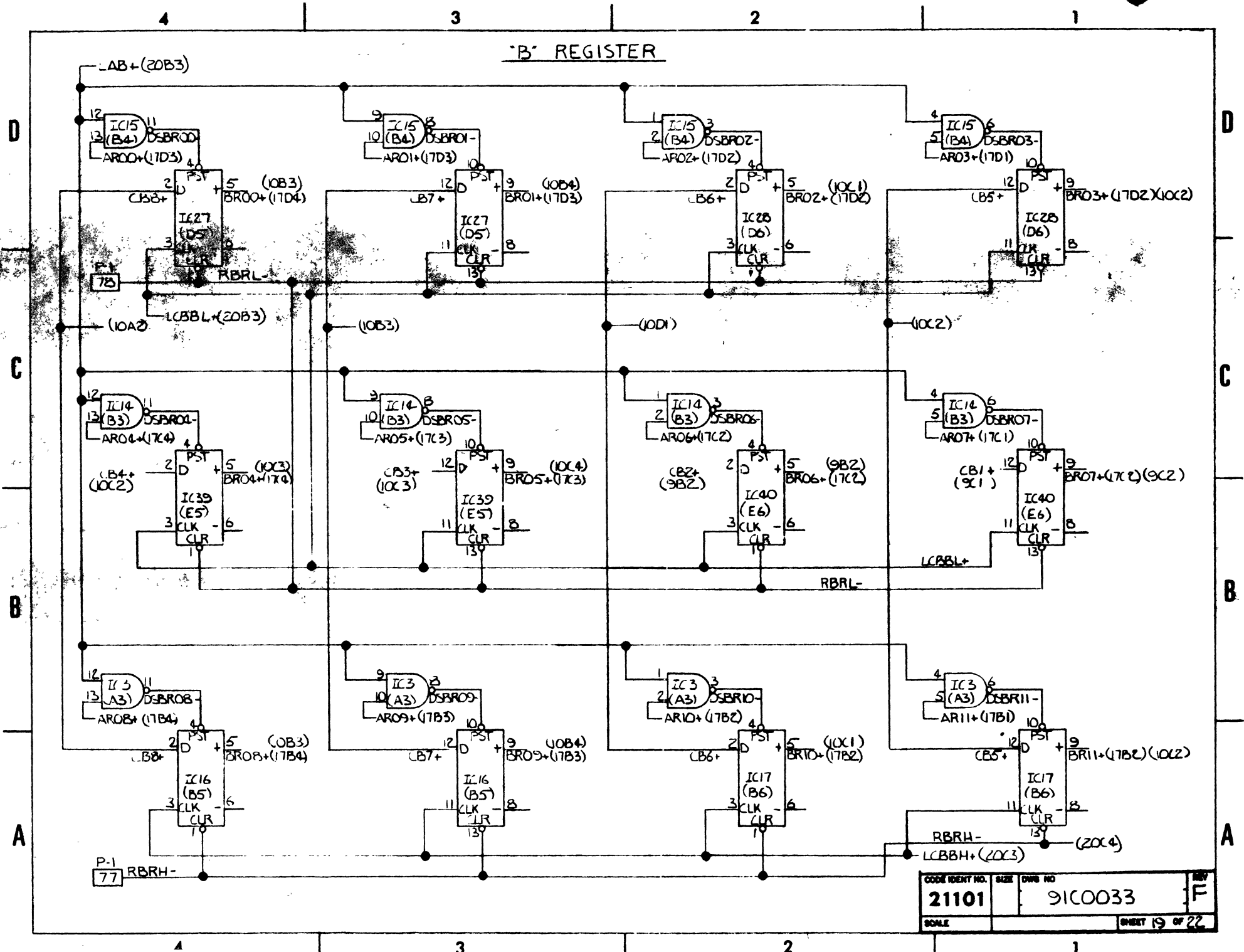
A REGISTER





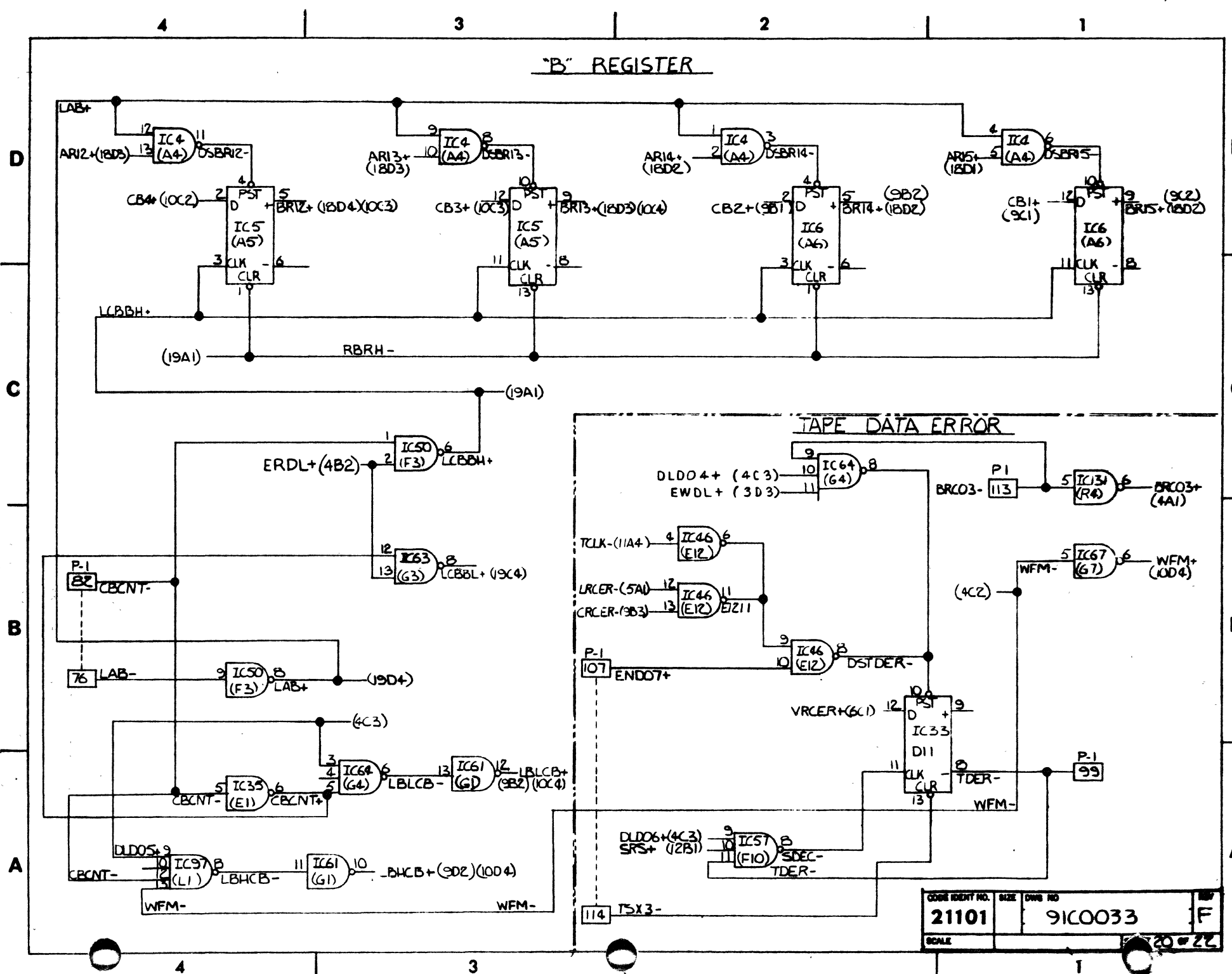
CODE IDENT NO.	SIZE	QWG NO.	
21101		91C0033	F
SCALE			SHEET 18 OF 22

"B" REGISTER



CODE IDENT NO.	SIZE	DWG NO.	REV
21101		91C0033	F
SCALE	SHEET 19 OF 22		

"B" REGISTER



CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0033	F
SCALE			20#22

P1

1	GND. (6B2)	26	RET25+ (6A3)	51	_____
2	EBOO-I (15D4)	27	_____	52	_____
3	RET19+ (15B4)	28	_____	53	_____
4	EBOI-I (15C4)	29	_____	54	_____
5	RET21+ (15B1)	30	_____	55	_____
6	EBOZ-I (15B4)	31	_____	56	_____
7	RET21+ (15A1)	32	_____	57	_____
8	EBOZ-I (15A4)	33	_____	58	_____
9	RET23+ (15A1)	34	_____	59	_____
10	EBOA-I (15D2)	35	_____	60	_____
11	EBOZ-I (15C2)	36	_____	61	_____
12	EBOZ-I (15B1)	37	_____	62	_____
13	EBOZ-I (15B1)	38	_____	63	DLDO4 (4D1)
14	EBOZ-I (15A1)	39	_____	64	EB11+ (17B2)
15	EBOZ-I (16D4)	40	RET27+ (16B2)	65	EB12+ (18D4)
16	EB10-I (16C4)	41	_____	66	EB13+ (18D4)
17	EB11-I (16C3)	42	_____	67	EB14+ (18D4)
18	EB12-I (16B3)	43	_____	68	EB15+ (18D4)
19	EB13-I (16B3)	44	IUAX-I (16B2)	69	EBO6+ (17C3)
20	EB14-I (16A3)	45	_____	70	EBO7+ (17C2)
21	EB15-I (16D1)	46	_____	71	EBOZ+ (17B4)
22	RET23+ (16C4)	47	_____	72	ADDX- (16C1)
23	_____	48	GND (6B2)	73	LEBA- (18C4)
24	RET25+ (6B3)	49	_____	74	JDTOX+ (18B4)
25	_____	50	_____	75	BA- (18A4)

SYN		REVISIONS		APPROVED	DATE
ZONE	DESCRIPTION				
6	LAB- (20B4)				
7	RBRH- (19A4)				
8	RBRL- (19C4)				
9	DLDI6+ (4A3)	101	EOR1+ (13D2)		
10	DLDI7+ (4A3)	102	DLDO6+ (4C3)		
11	DTIX- (6A2)	103	_____		
12	CBCNT- (20B4)	104	_____		
13	TCLK- (3B3)	105	END02+ (6C2)		
14	SRS- (12C1)	106	END06- (4C3)		
15	TTWC+ (14A1)	107	END07+ (20B3)		
16	TCWC+ (14C1)	108	MCLK+ (11B4)		
17	RSYNC+ (11A4)	109	TSS+ (3B3)		
18	RDSIB+ (12C4)	110	EWDL+ (4B3)		
19	ERDL+ (4B3)	111	WFM- (4C3)		
20	STSU+ (4D3)	112	_____		
21	LCRCG+ (5A3)	113	BRC03- (20C1)		
22	TSR+ (13C4)	114	TSR- (13C4)		
23	DLDO5- (4C3)	115	WFE3- (21D2)		
24	_____	116	_____		
25	_____	117	_____		
26	JDLIB (4C1)	118	+5V (6B2)		
27	FMCD+ (1K3)	119	_____		
28	WDT0+ (3D1)	120	_____		
29	TDER- (20A1)	121	+5V (6B2)		
30	GND (6B2)	122	GND (6B2)		

CODE IDENT NO.	SIZE	DWG NO.
21101		91C0033
SCALE		

DWG NO. 44-055

REVISIONS

REV	EN	CHG CODE	DESCRIPTION	DR	APPD
3	337		UPDATED REV LTR OF W/L IS C WAS B	<i>[Signature]</i>	<i>[Signature]</i>
4	83247		ADDED -001 VERSION, ADDED FIN 31	GAT	<i>[Signature]</i>
5	8354		REV LTR OF 95W1055 WAS A	POH	<i>[Signature]</i>

NEXT ASSEMBLY

01/455

MODEL NO

610-32



varian data machines / a van der Grinten company
2122 michelson drive / Irvine / California / 92614

DR *MARSHALL* 1/72

CODE IDENT NO. **21101**

TITLE PARTS LIST
ASSY-9 TRACK MAG
TAPE CONT. ED # 2

CHK *DAN* 1/72

DSGN

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ENGR CARPENTER 1/72

SIZE DWG NO

APPD

A 44-055

APPD

SHEET 1 OF 3

2015

QUANTITY REQ'D PER DASH NO.					PARTS LIST			CODE IDENT	21101	
					QDI	QOO	FIND NO.	PART NUMBER	DESCRIPTION	REMARKS
					REF	REF	-	44D0658 C	ASSEMBLY	
					-	REF	-	91C0237 B	LOGIC DIAGRAM	
					-	REF	-	95W0935 C	WIRE LIST	
					REF	REF	-	97D0099	ARTWORK	
					REF	-	-	95W1055 B	WIRE LIST	
					REF	-	-	91C0485 A	LOGIC DIAGRAM	
					1	1	1	40D0175-000	BOARD DETAIL	
					1	1	2	01P1445-000	COMP BD. ASSY	A4
					3	3	3	01PC0293-000	COMP BD. ASSY	A1-3
					15	15	4	49A0040-000	INTEGRATED CIRCUIT	
					10	10	5	49A0004-000		
					35	35	6	49A0008-000		
					22	22	7	49A0012-000		
					21	21	8	49A0002-000		
					14	14	9	49A0011-000		
					2	2	10	49A0022-000		
					-	17	11	49A0010-000		
					18	18	12	49A0009-000		
					1	1	13	49A0007-000		
					2	2	14	49A0524-000	INTEGRATED CIRCUIT	
							15			

NEXT ASSY 01P455			MODEL NO. 620-32			APPD <i>Orl Carpenter</i>			TITLE: PARTS LIST		
REV A B									ASSY-9 TRACK MAG TAPE CONT BOARD #2		
EN NO. 91563 81573									DWG NO. 44D0658		
DATE 7-16-72 7-20-72									REV E		
DR SWM SWM									SHEET 2 OF 3		
CHK <i>[Signature]</i> <i>[Signature]</i>											

44D0658-000C

QUANTITY REQ'D PER DASH NO.							PARTS LIST			CODE IDENT. 21101
					001 000	FIND NO.	PART NUMBER	DESCRIPTION	REMARKS	
					1	16	75A0000-000	XTAL OSCILLATOR	XTAL 1	
					155	17	58A0060-000	SOCKET, 14 PIN		
					10	18	71N0200-225	CAP. 2.2 uF, 20V	C1-10	
					206	19	58A0062-002	POST		
					1	20	04D0140-000	COVER ASSY		
					4	21	21A0062-020	SCREW	4-40 X 1-0	
					4	22	23A0025-001	NUT, HEX	4-40	
					4	23	22N4401-002	LOCK WASHER	#4	
					8	24	22A0089-004	WASHER, FLAT	#4	
					4	25	22A0039-000	WASHER, FLAT NYLON		
					4	26	22A0018-010	STAND OFF FIBRE		
					1	27	86C0008-000	LABEL, IDENT		
					1	28	86A0015-000	LABEL, IDENT		
					0	29	53A0333-060	WIRE SOLID KYNAR	BLUE 30 AWG	
					9	30	71A0004-100	CAP. .1 uF 50V	C11-C19	
					9	31	49A0128-001	INTEGRATED CIRCUIT		
					1	32	49A0554-000	INTEGRATED CIRCUIT		

NOTES:

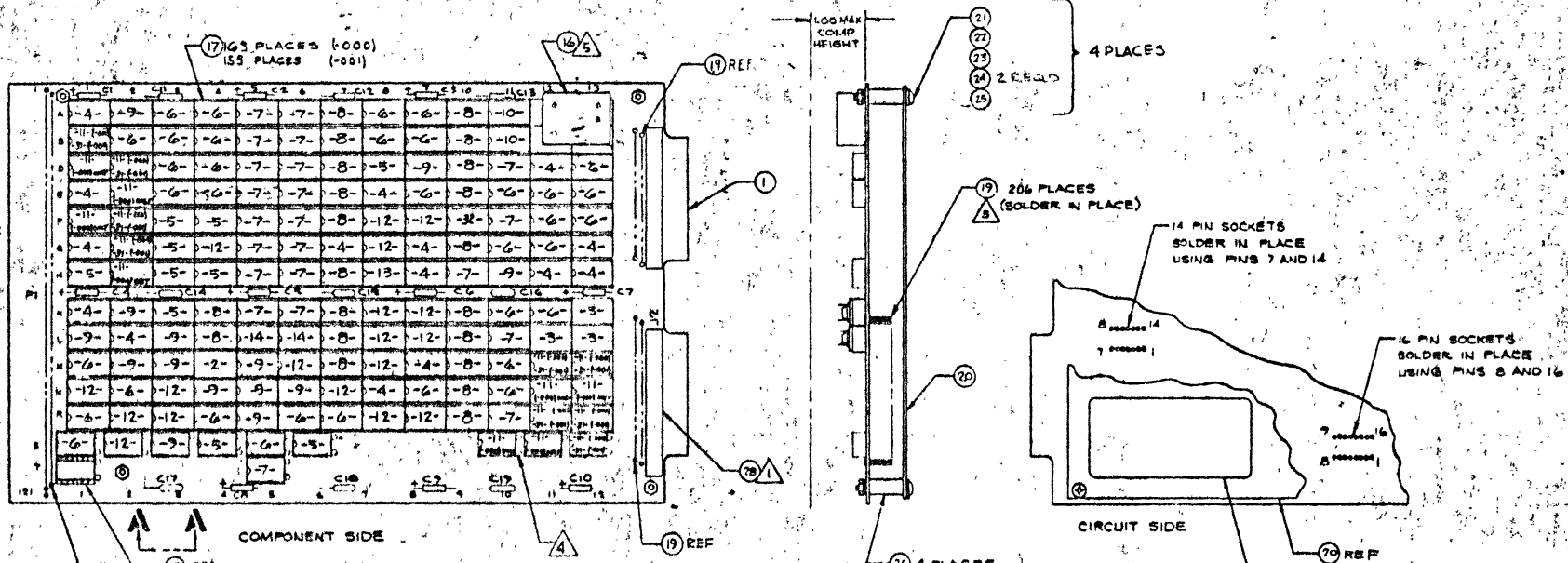
DWG NO. 44P0658

REV E

SHEET 3 OF 3

44A0017-001C

REVISONS		APPROVED	DATE
A	8156	PRODUCTION RELEASE PER EN	1/12/52
B	81573	ADDED TO LOCATION 7-8 PER EN	11/12/52
C	83947	ADDED -001 INFRONT OF PIN 12	11/12/52



COMPONENT SIDE
VIEW A-A
TYP MTS C11-C15

SLOT
C10
CONNECT
Bottom

- ⚠ ITEM 16 COMPONENT LEAD #1 SOLDER AT LOCATION B12-10 LEAD #2 AT LOCATION A12-10, LEAD #3 AT LOCATION A13-9 LEAD #4 AT LOCATION A13-6
- ⚠ PINS 2, 4, 9 NOT USED WHEN INSTALLING 14 PIN SOCKETS IN BOW #3 AND #4
- ⚠ ITEM 19 NOT TO BE INSTALLED AT LOCATIONS M-1 AND M-120
- ⚠ MARK IN TITLE, PART NO 44DO658, THE APPROPRIATE DASH NO, THE LIST NO 95W035 FOR -000, OR -001 DASHES FOR -001, LOGIC DIAGRAM NUMBER FOR -001, OR 150083 FOR -001, AND THE REVISION LETTER TO WHICH THE PART WAS MANUFACTURED ON LABEL (ITEM 27) IDENTIFICATION TO BE IN HIGH CHARACTERS AND PERMANENT.
- ⚠ ANY PART NO 44DO658, THE APPROPRIATE DASH NO, AND THE REVISION LETTER OF THE PARTS LIST TO WHICH THE PART WAS MANUFACTURED ON LABEL (ITEM 27), IDENTIFICATION TO BE IN HIGH CHARACTERS AND PERMANENT.

NOTE: UNLESS OTHERWISE SPECIFIED

- REFERENCE DRAWINGS
- 4000115 ... BOARD DETAIL
 - 95W0353 ... WIRE LIST (-000)
 - 91C0237 ... LOGIC DIAGRAM (-000)
 - 91D0099 ... PHOTOMASTER
 - 95W0355 ... WIRE LIST (-001)
 - 91C0283 ... LOGIC DIAGRAM (-001)

TABULATION BLOCK	
PART NUMBER	DESCRIPTION
44DO658-000	9 TRACK MAG TAPE CONT. BOW WITH 44DO658-000 BOWS
44DO658-001	9 TRACK MAG TAPE CONT. BOW WITH 44DO658-001 BOWS

FOR PARTS LIST SEE 44DO658

DRAWING NO. 44DO658-000 REV. NO. 0111155 MATERIAL FINISH	QUANTITY 1 CHECK ALL GROUP FIGURES AND APPROVALS	DATE 12-11-52 DRAWN BY J. H. B.	TITLE 9 TRACK MAG TAPE CONT. BOW #2
THIS DOCUMENT MAY CONTAIN TECHNICAL INFORMATION WHICH IS UNCLASSIFIED EXCEPT WHERE INDICATED OTHERWISE. IT IS TO BE CONTROLLED AND NOT RELEASED WITHOUT AUTHORITY OF THE TECHNICAL STAFF.	DRAWN BY J. H. B.	CHECKED BY J. H. B.	DATE 12-11-52
DRAWING IDENTIFICATION DRAWING NO. 44DO658-000 REVISION NO. 0111155		DRAWING IDENTIFICATION DRAWING NO. 44DO658 REVISION NO. 0111155	DRAWING IDENTIFICATION DRAWING NO. 44DO658 REVISION NO. 0111155

4

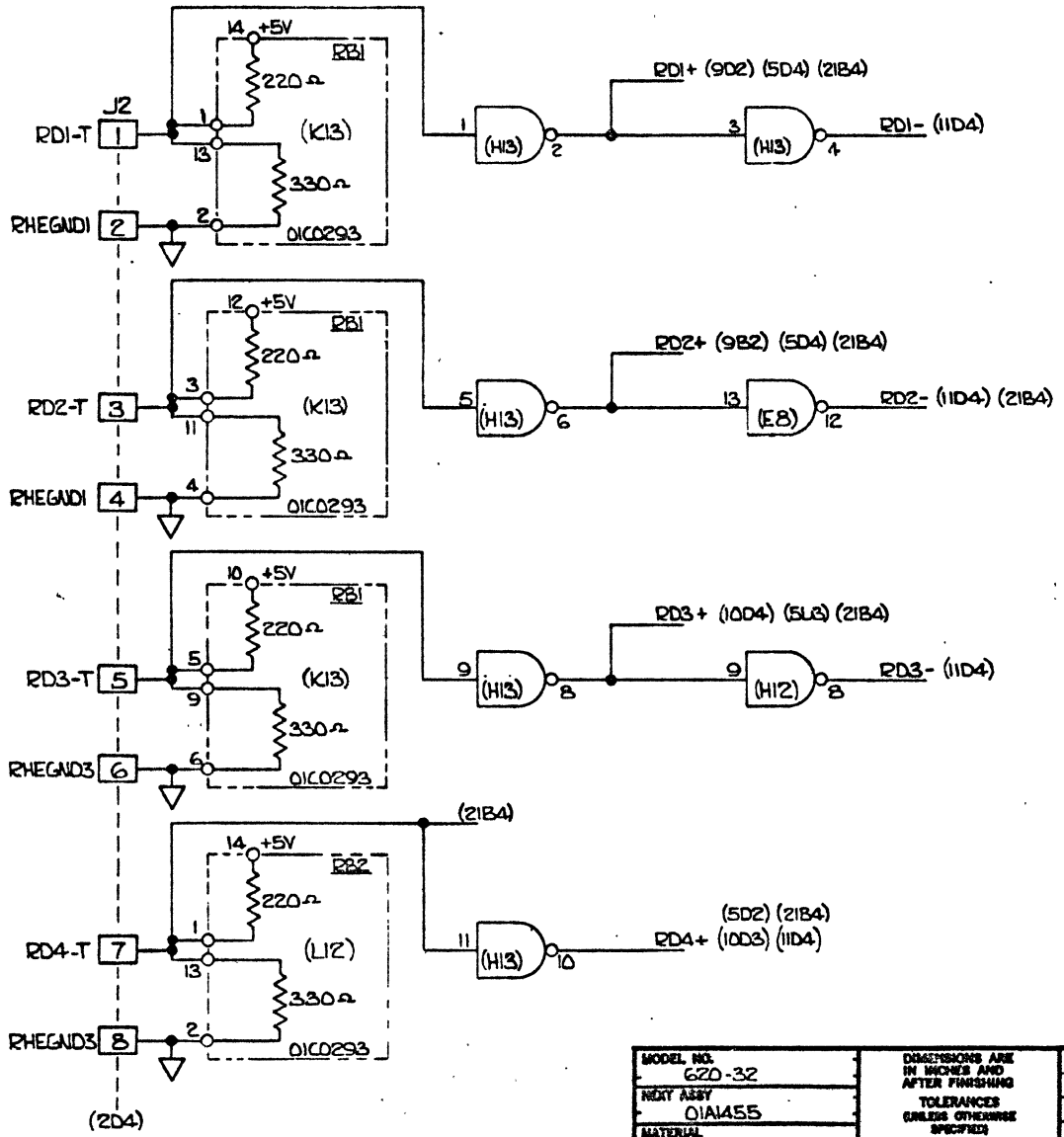
3

2

1

TRANSPORT INTERFACE

REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE
A		PRODUCTION RELEASE PER EN 21563	<i>[Signature]</i>	1/18/73
B	<i>[Signature]</i>	DELETED ALL IC NOS & REVISED SMT'S 2 & 3 PER EN 01573	<i>[Signature]</i>	1/21/73



91C0237
B

1. ALL CAPACITORS ARE 2% ± F, 20V.
NOTES: (UNLESS OTHERWISE SPECIFIED)

MODEL NO. 620-32	DIMENSIONS ARE IN INCHES AND AFTER FINISHING TOLERANCES UNLESS OTHERWISE SPECIFIED: X ± .1 YX ± .05 YXX ± .010 ANGLES ± .5°	DR. CML/AM/MS	4-21-72	varian data machines / v w w w subsidiary 2722 schacter drive / irvine / california / 92604	TITLE
NEXT ASSY 01A155		CHK <i>[Signature]</i>	1/17/72		LOGIC DIAGRAM - 9 TRK READ AFTER WRITE MAG TAPE CONT. BOARD #2
MATERIAL		ENGR <i>[Signature]</i>	1/21/73		
FINISH		APPR <i>[Signature]</i>	1/21/73		
	BREAK ALL SHARP EDGES .010" APPROX	THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT, WITHOUT WRIT- TEN PERMISSION FROM VDM		CODE IDENT NO.	REV
	DO NOT SCALE DRAWING	21101	C	91C0237	B
		SCALE		SHEET	1 OF 23

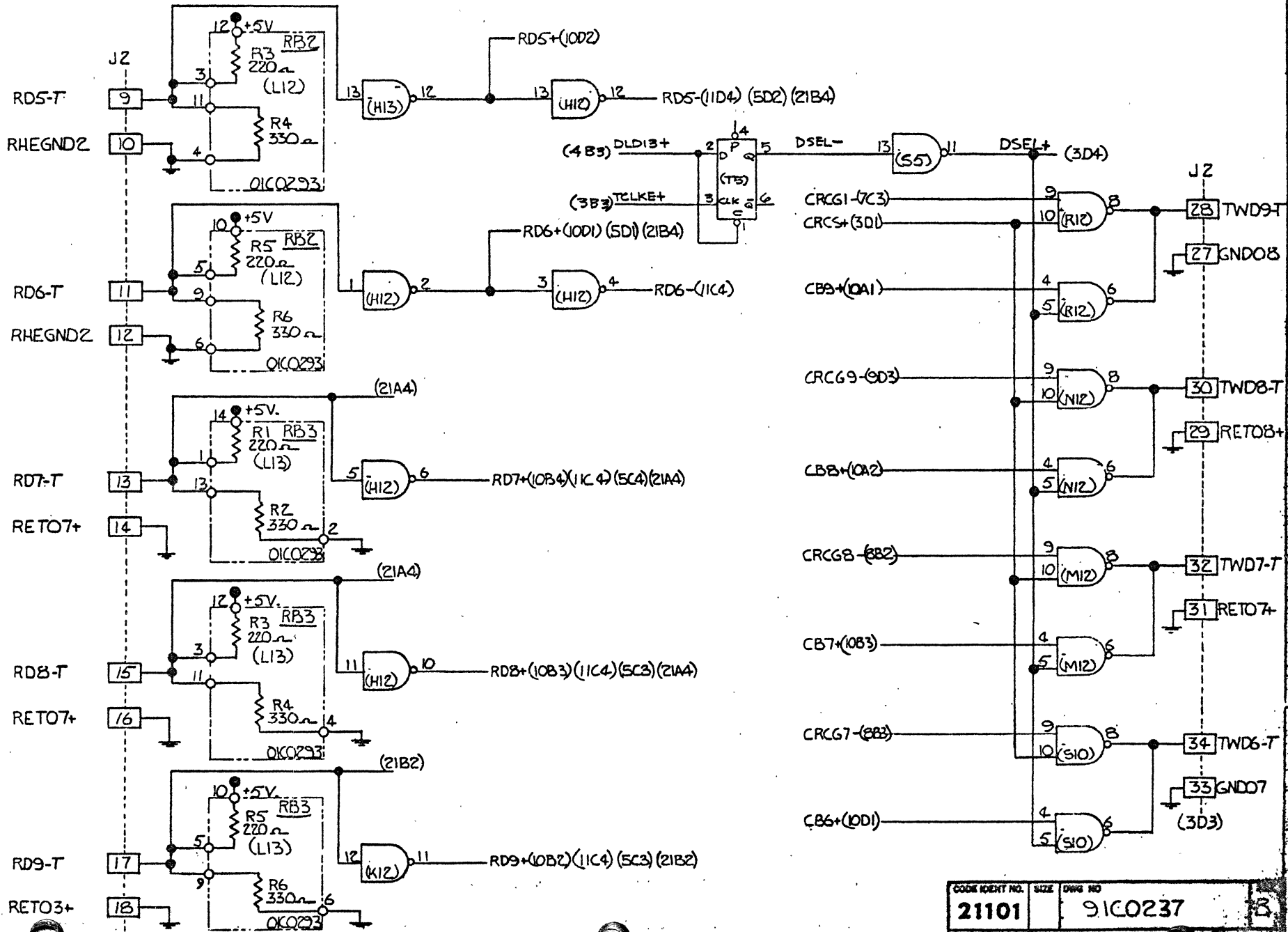
4

3

2

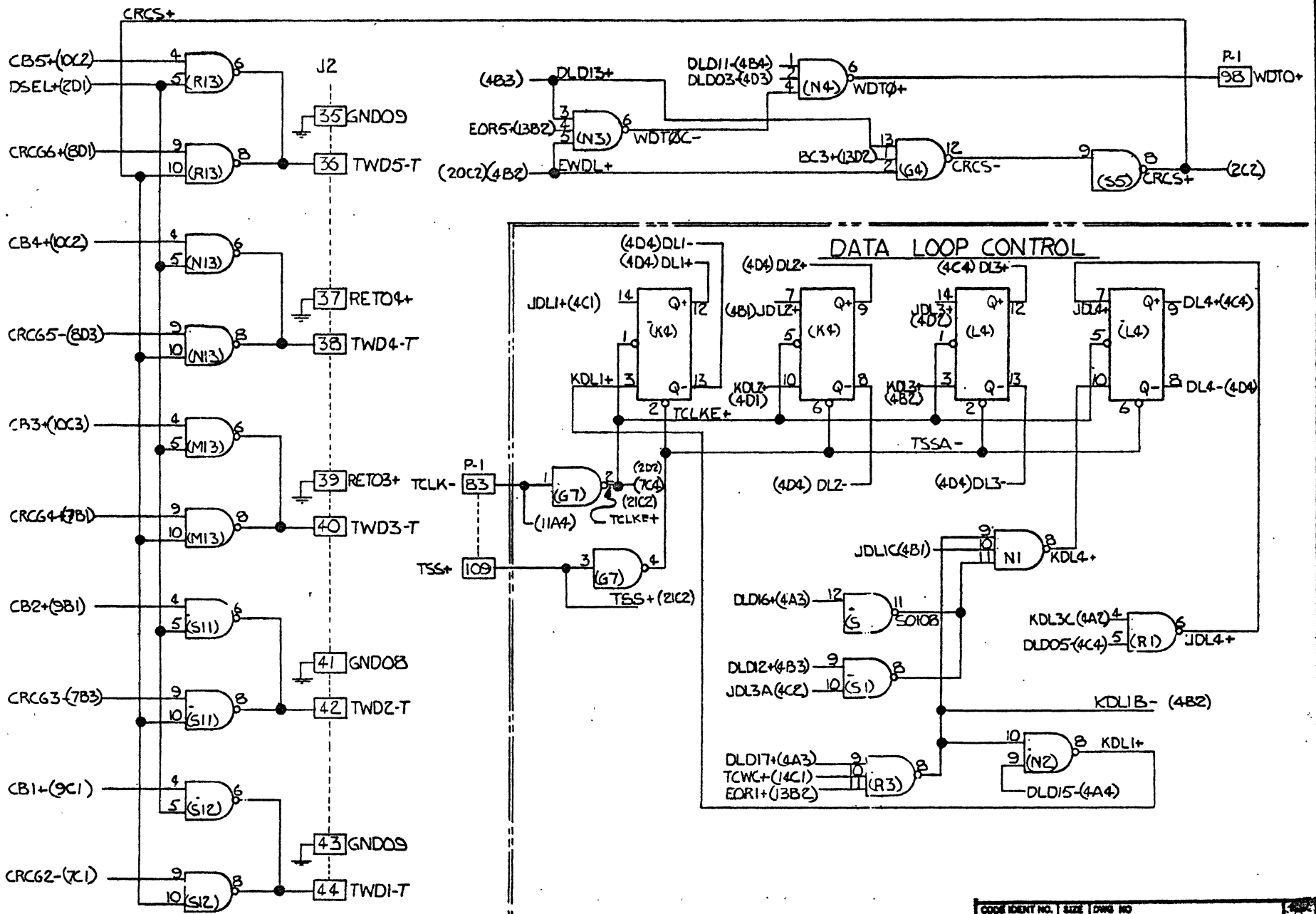
1

TRANSPORT INTERFACE



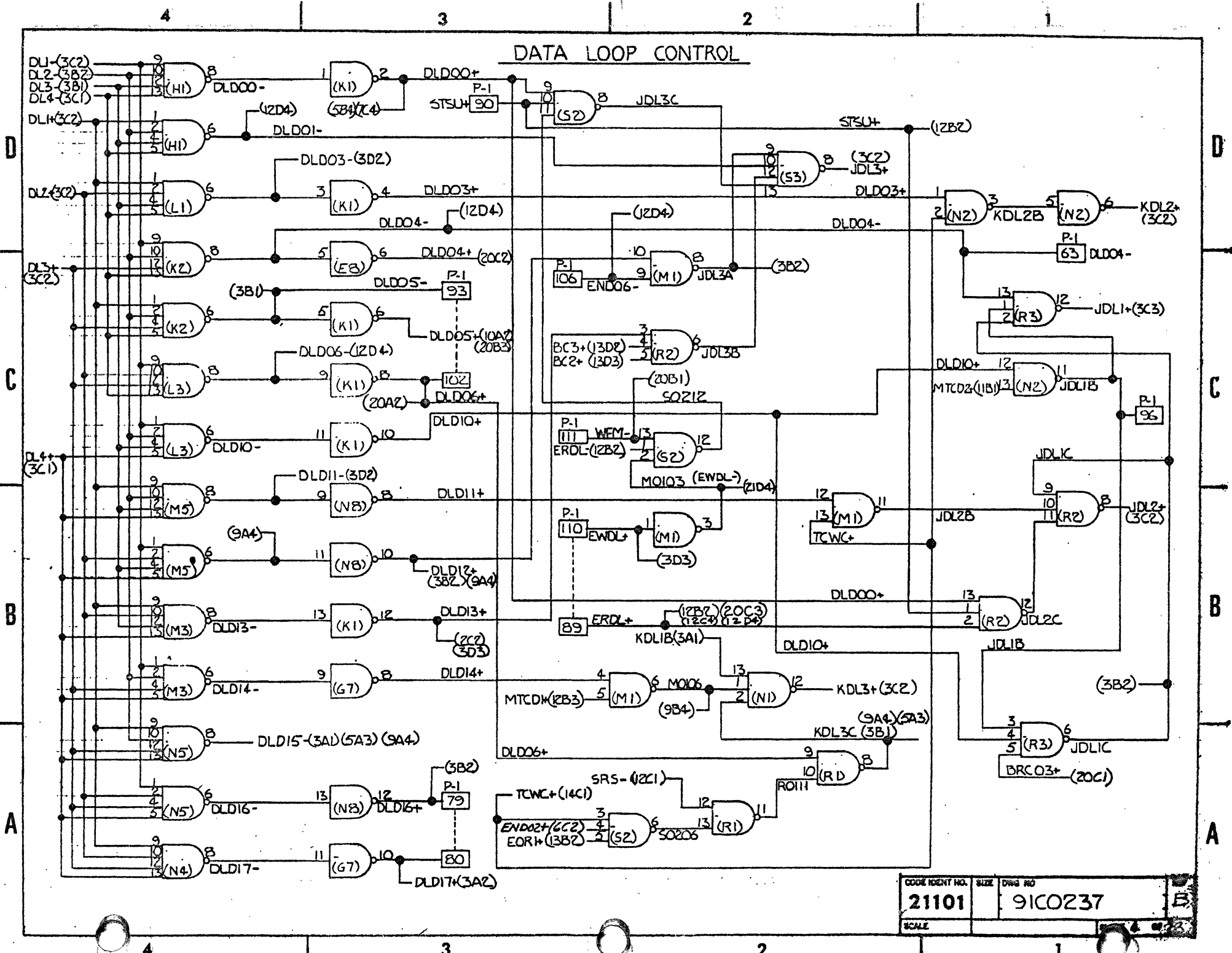
CODE IDENT NO.	SIZE	DWG NO.	
21101		91C0237	3
SCALE			

TRANSPORT INTERFACE



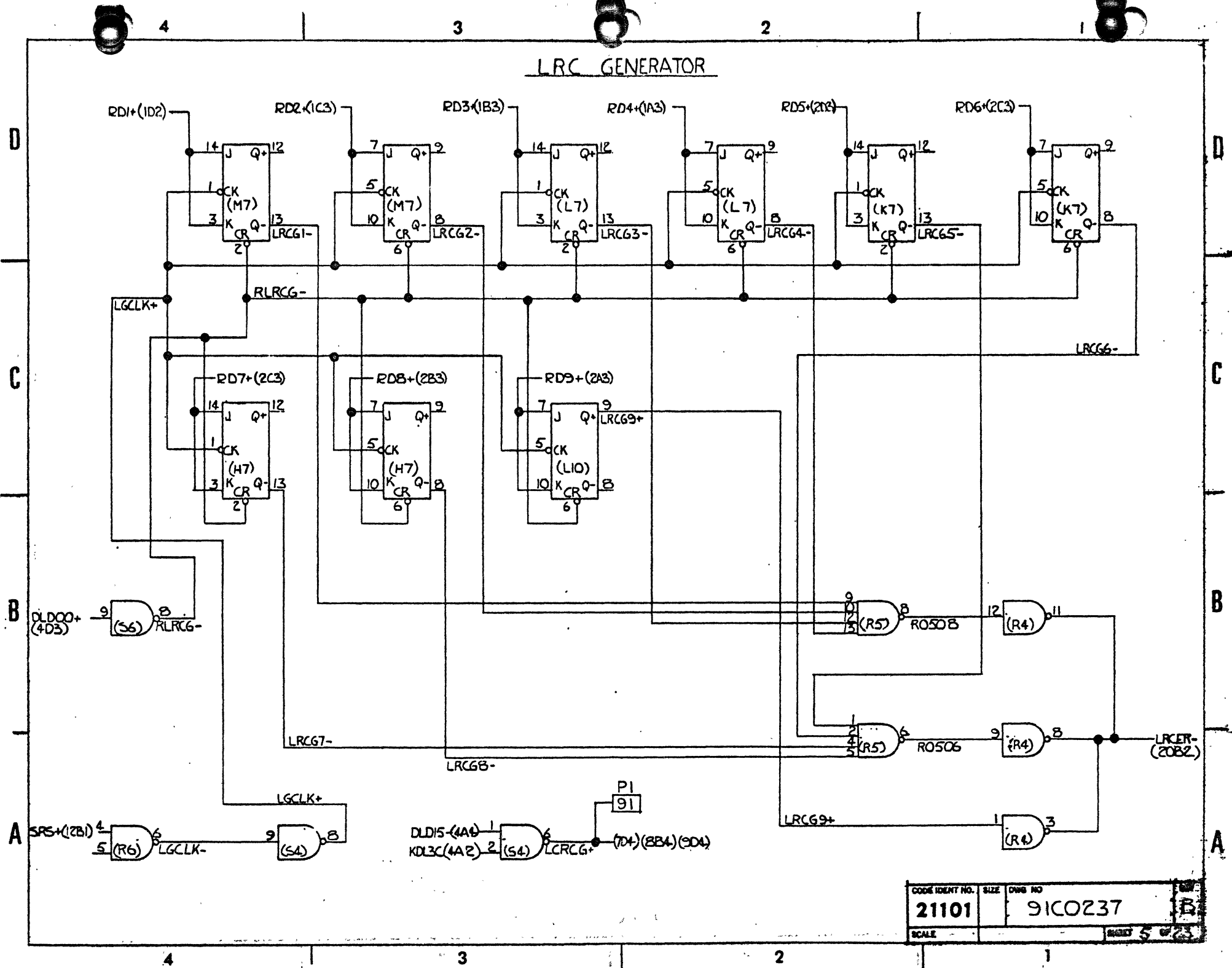
CODE IDENT NO.	SIZE	DWG NO.	
21101		91C0237	B
SCALE		SHEET 3 OF 22	

DATA LOOP CONTROL



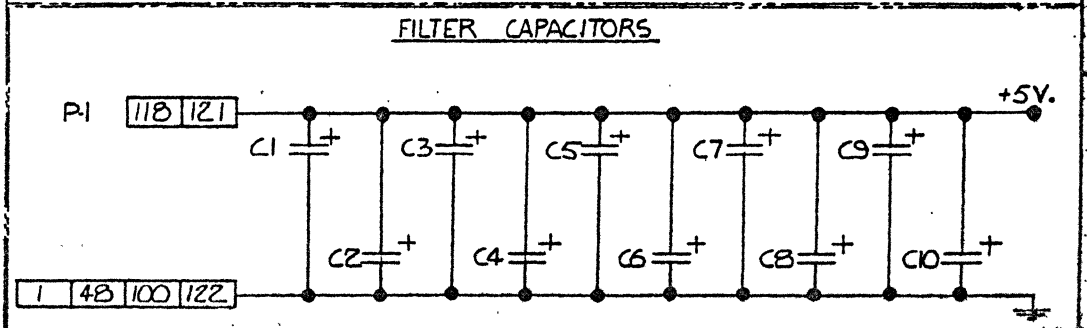
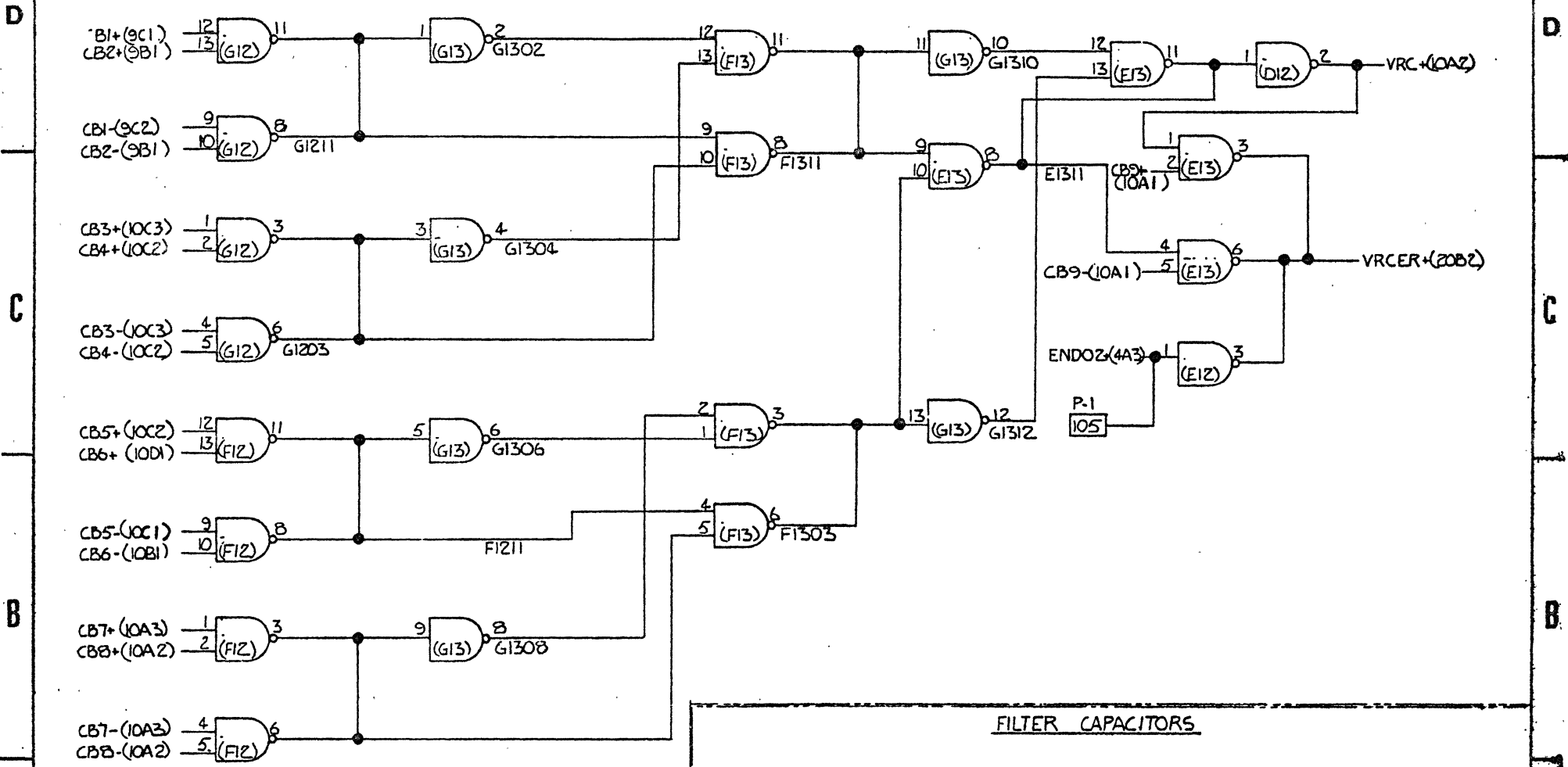
CODE IDENT NO.	SIZE	DWG NO.
21101		91C0237
SCALE		

LRC GENERATOR



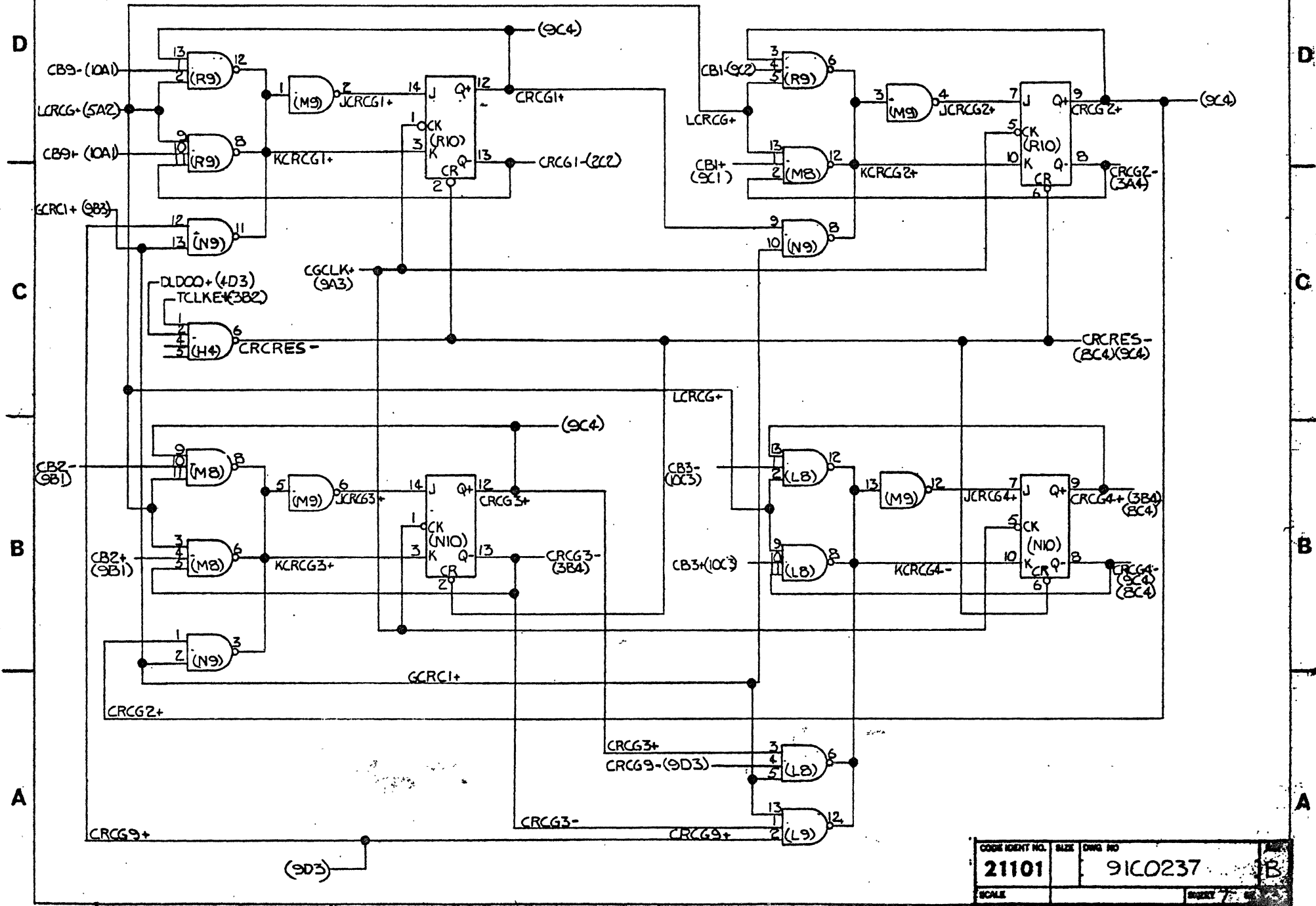
CODE IDENT NO.	SIZE	DWG NO.	
21101		910237	
SCALE		SHEET 5 OF 23	

VRC GENERATOR



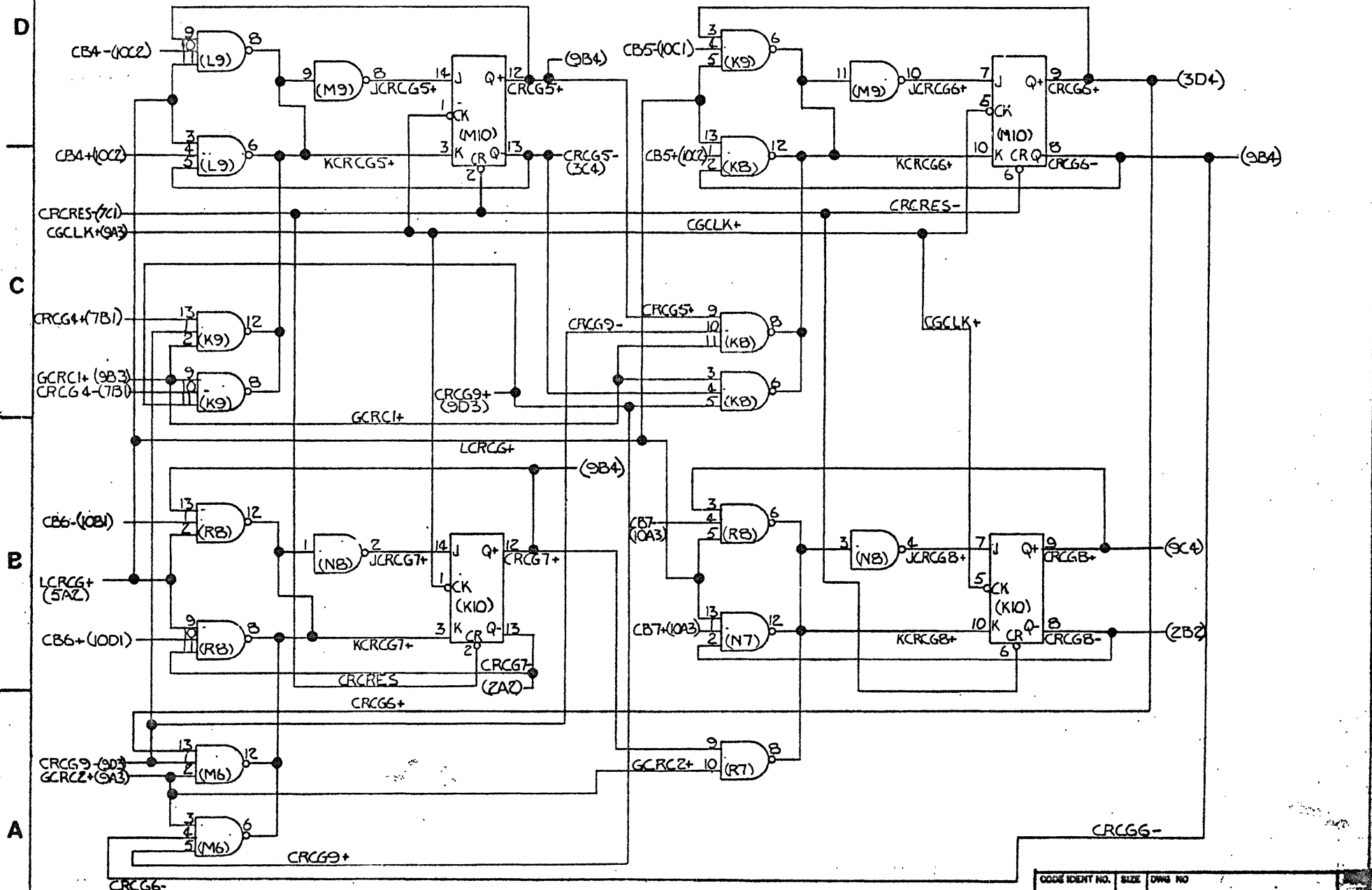
CODE IDENT NO.	SIZE	DWG NO.	B
21101		9K0237	
SCALE			

CRC GENERATOR



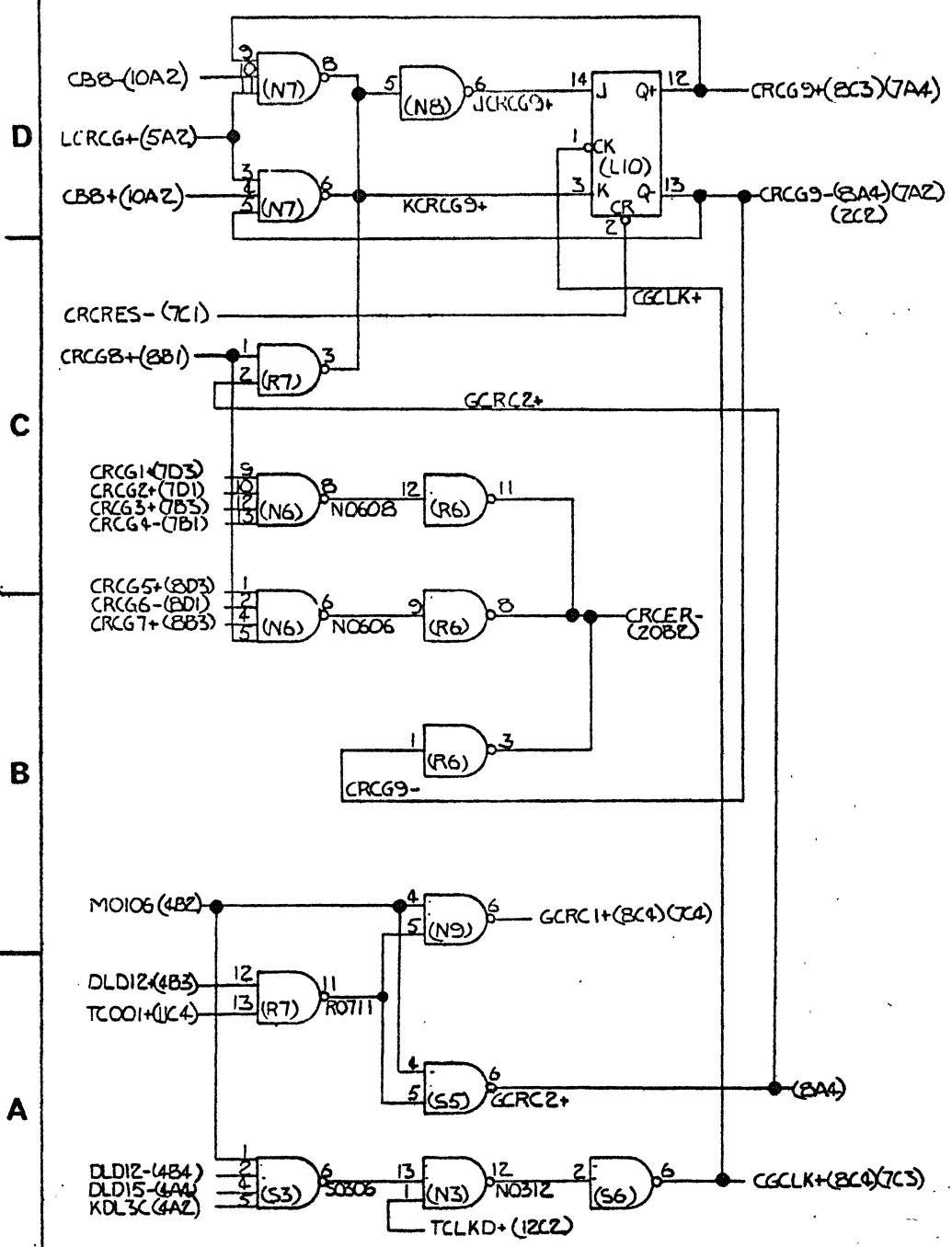
CODE IDENT NO.	SIZE	DWG NO.	
21101		91C0237	B
SCALE			

CRC GENERATOR

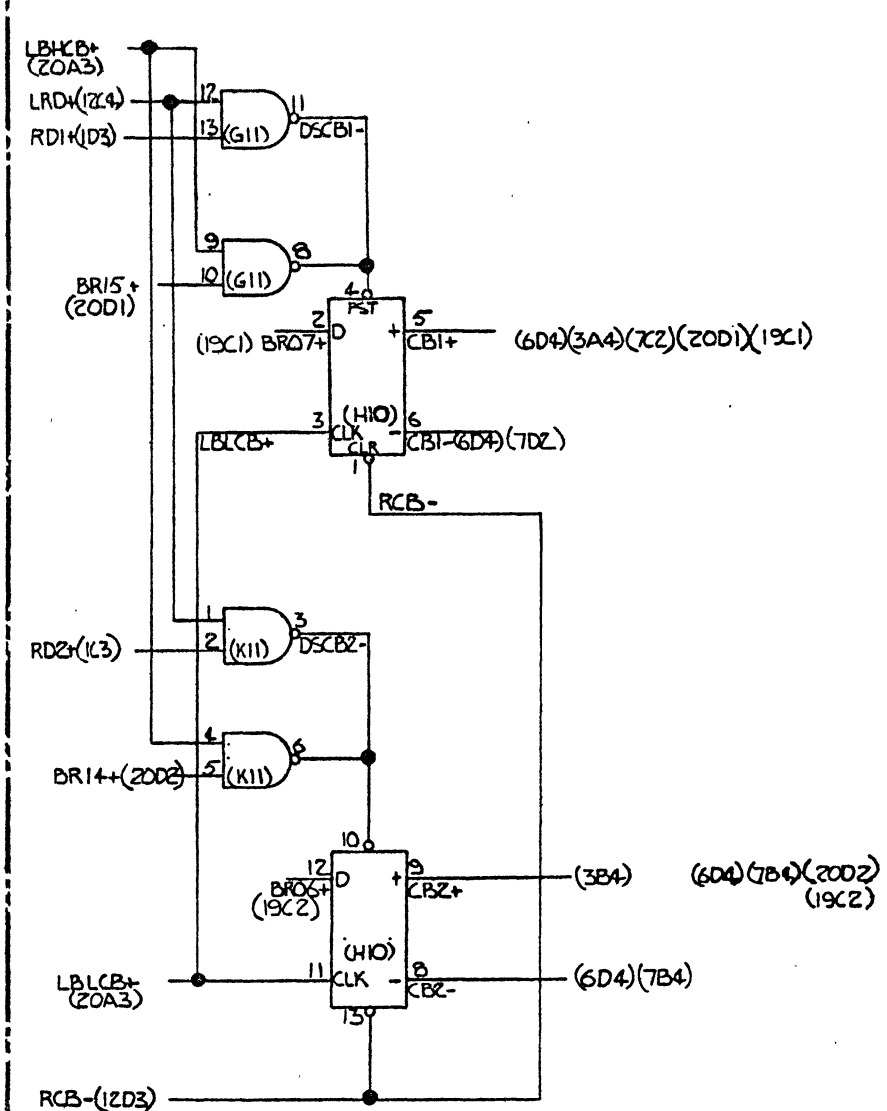


CODE IDENT NO.	SIZE	DWG NO.	
21101		910237	B
SCALE			SHEET 6

CRC GENERATOR

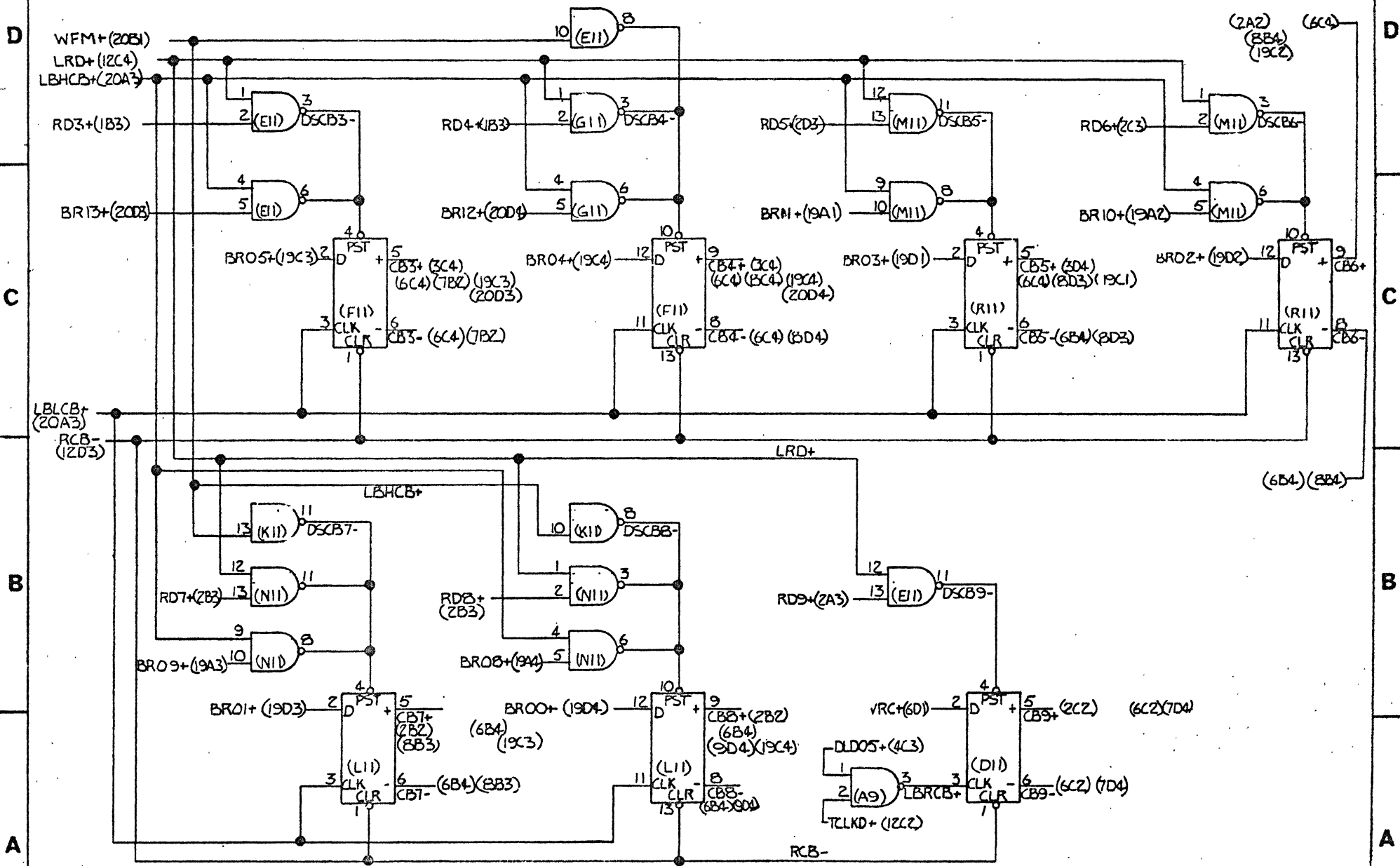


CHARACTER BUFFER REGISTER



CODE IDENT NO.	SIZE	DWG NO.
21101		910237
SCALE		SHEET 9

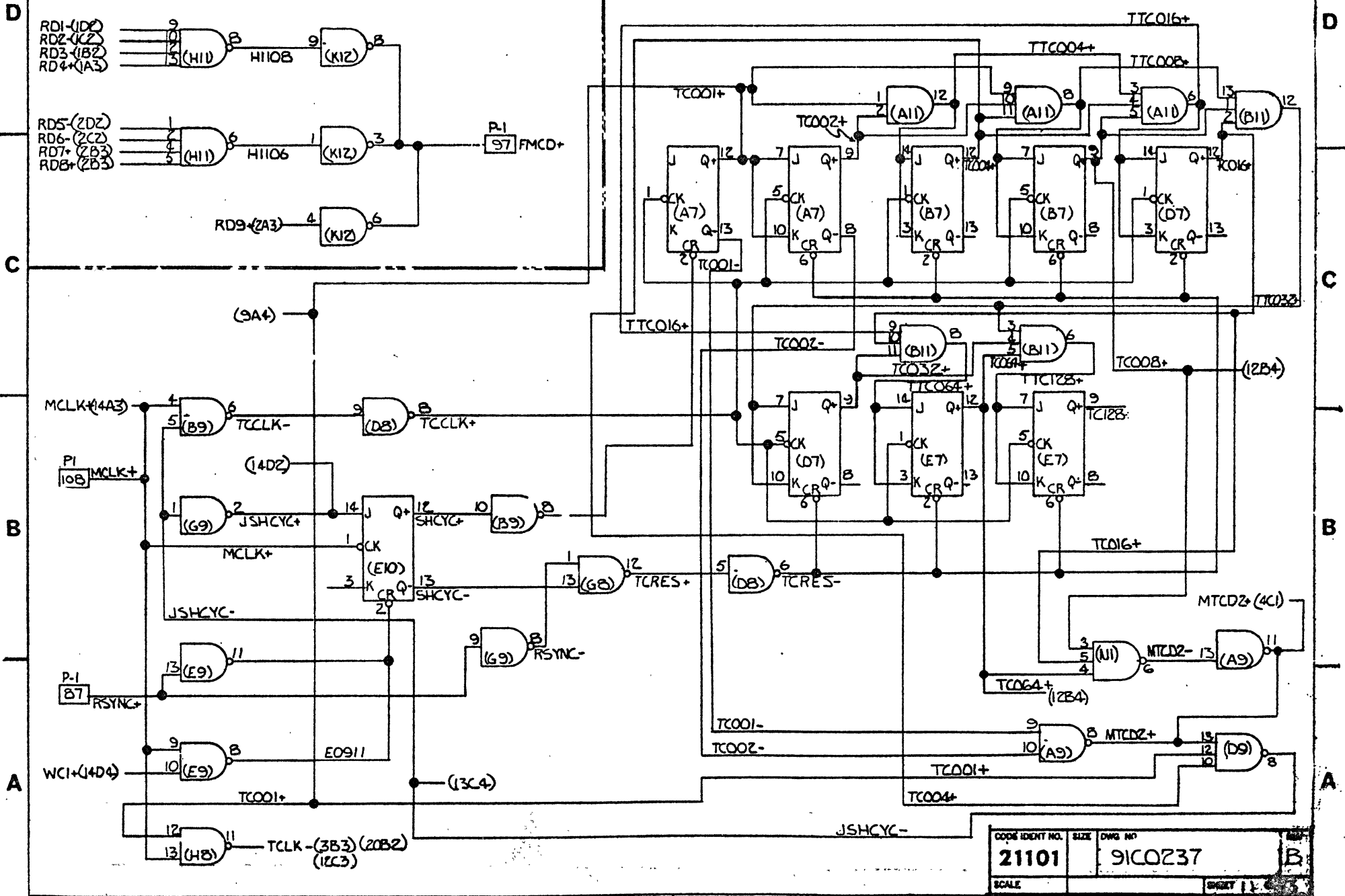
CHARACTER BUFFER REGISTER



CODE IDENT NO.	SIZE	DWG NO.	REV.
21101		91CQZ37	B
SCALE			10 # 22

FILE MARK CHARACTER DETECT

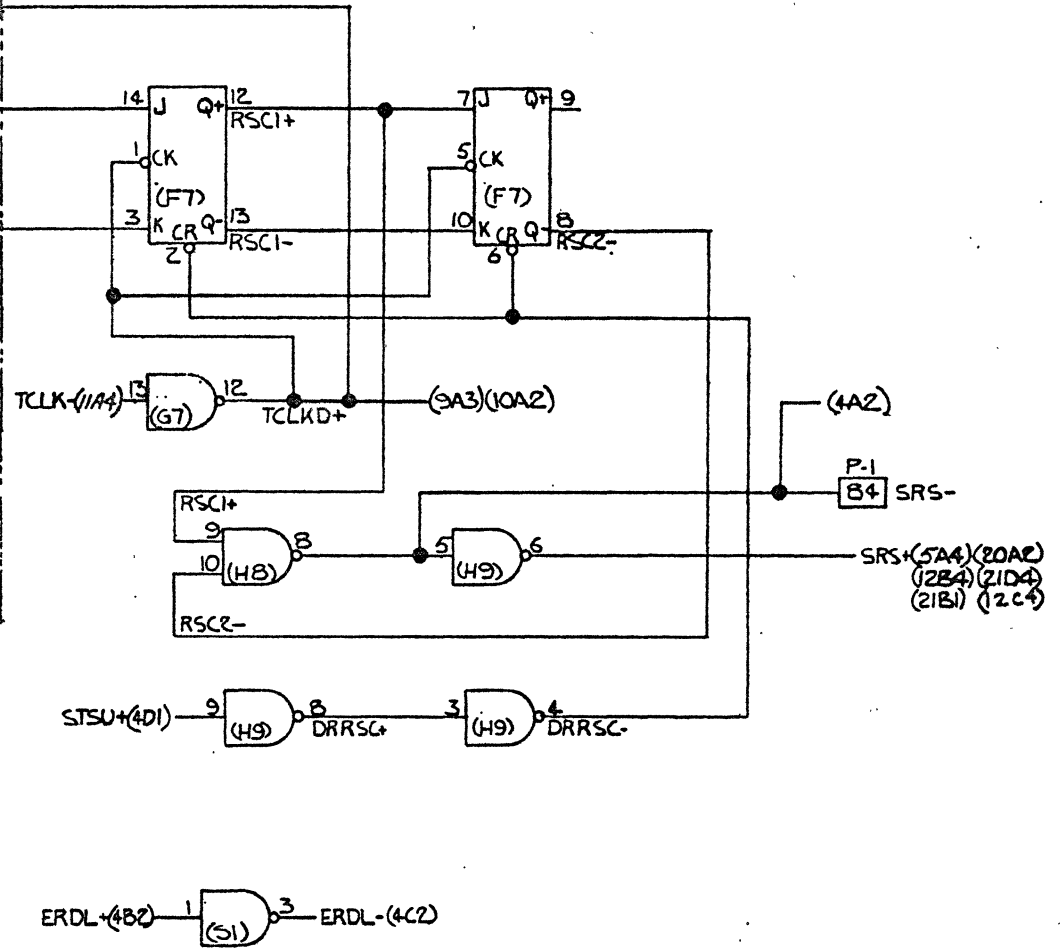
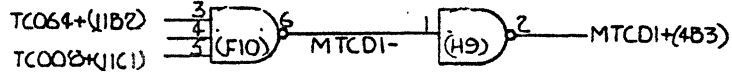
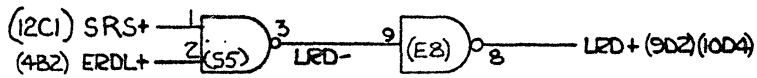
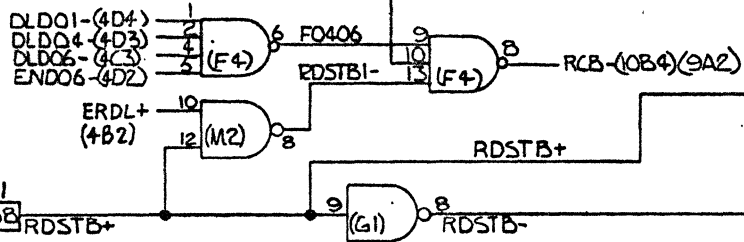
TAPE CONTROLLER CLOCK



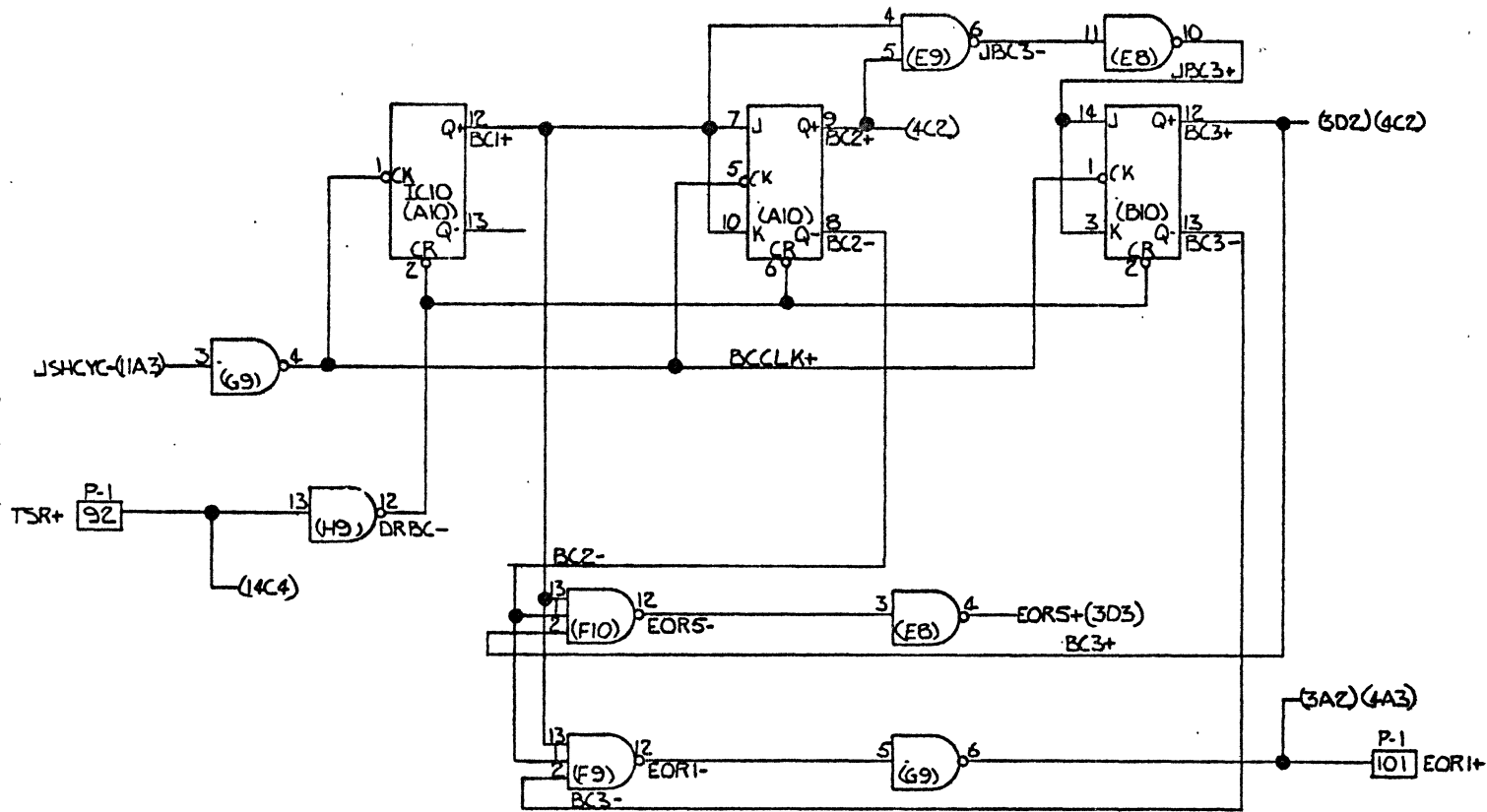
CODE IDENT NO.	SIZE	DWG NO.	SHEET
21101		91C0237	B
SCALE			

CHARACTER BUFFER REGISTER

SYNCHRONIZED READ STROBE



BIT COUNTER

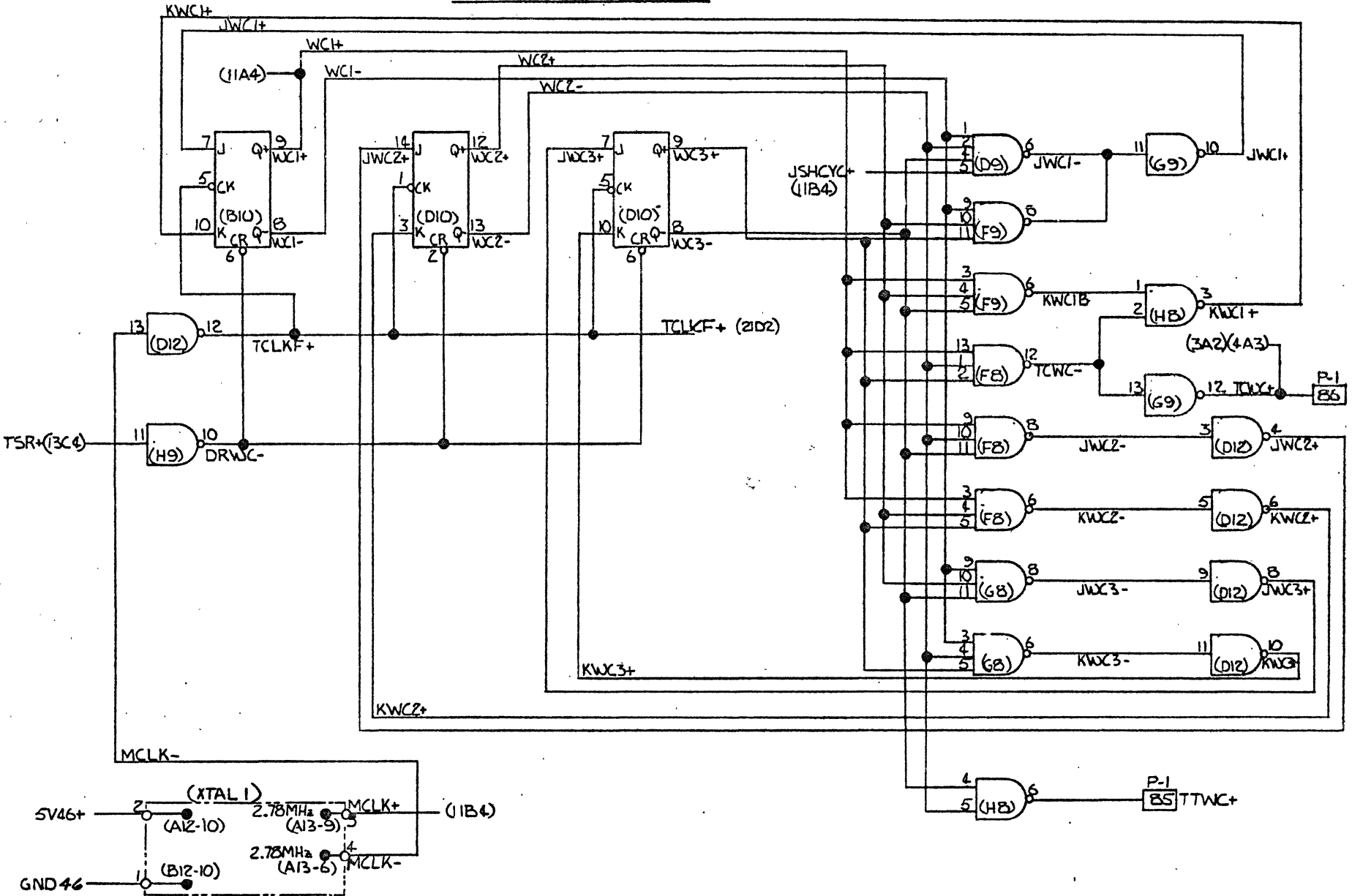


CODE IDENT NO.	SIZE	DRWG NO.	
21101		910237	8
SCALE			SHEET 13 OF 25

WRITE CLOCK

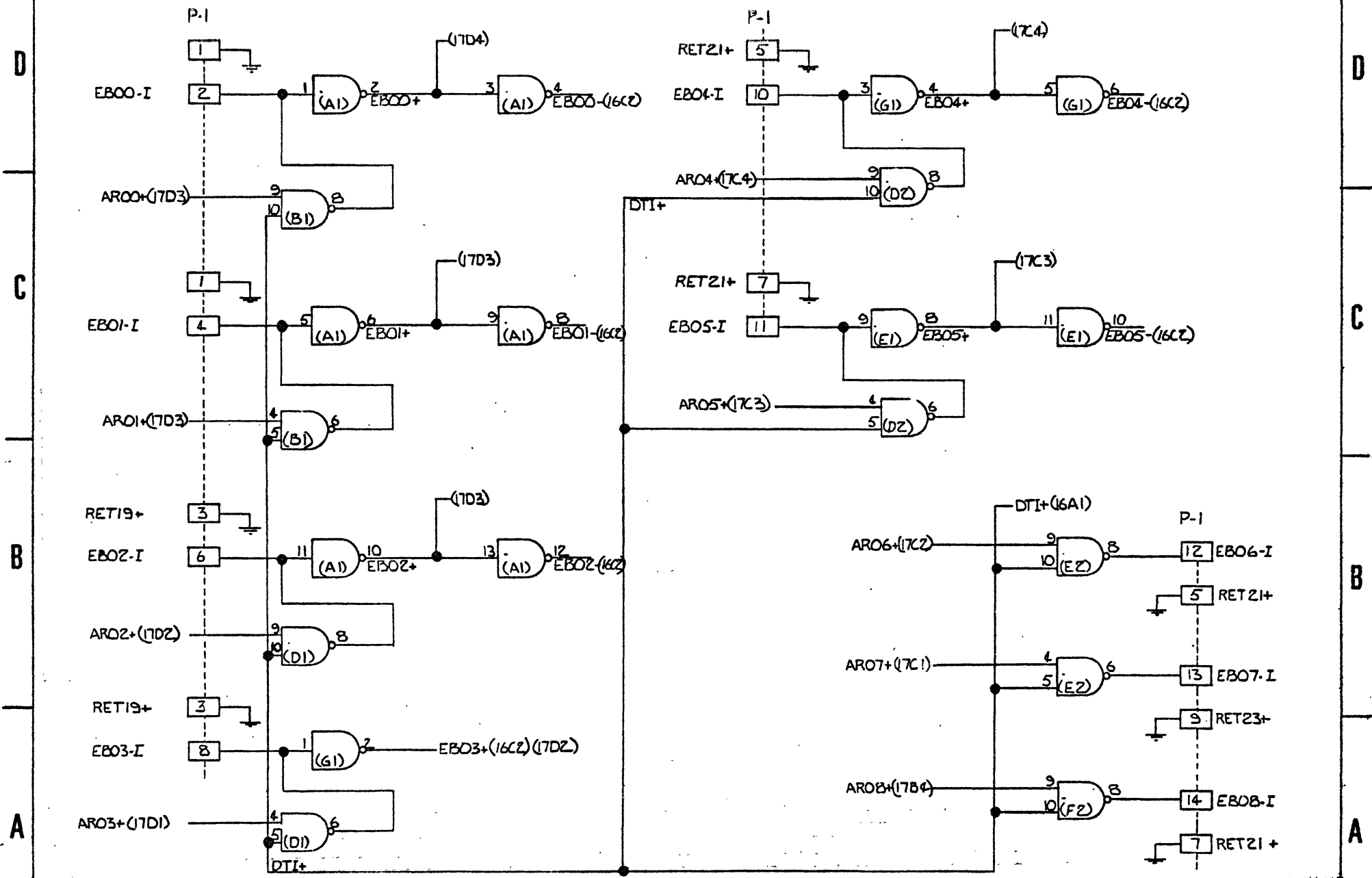
D
C
B
A

D
C
B
A



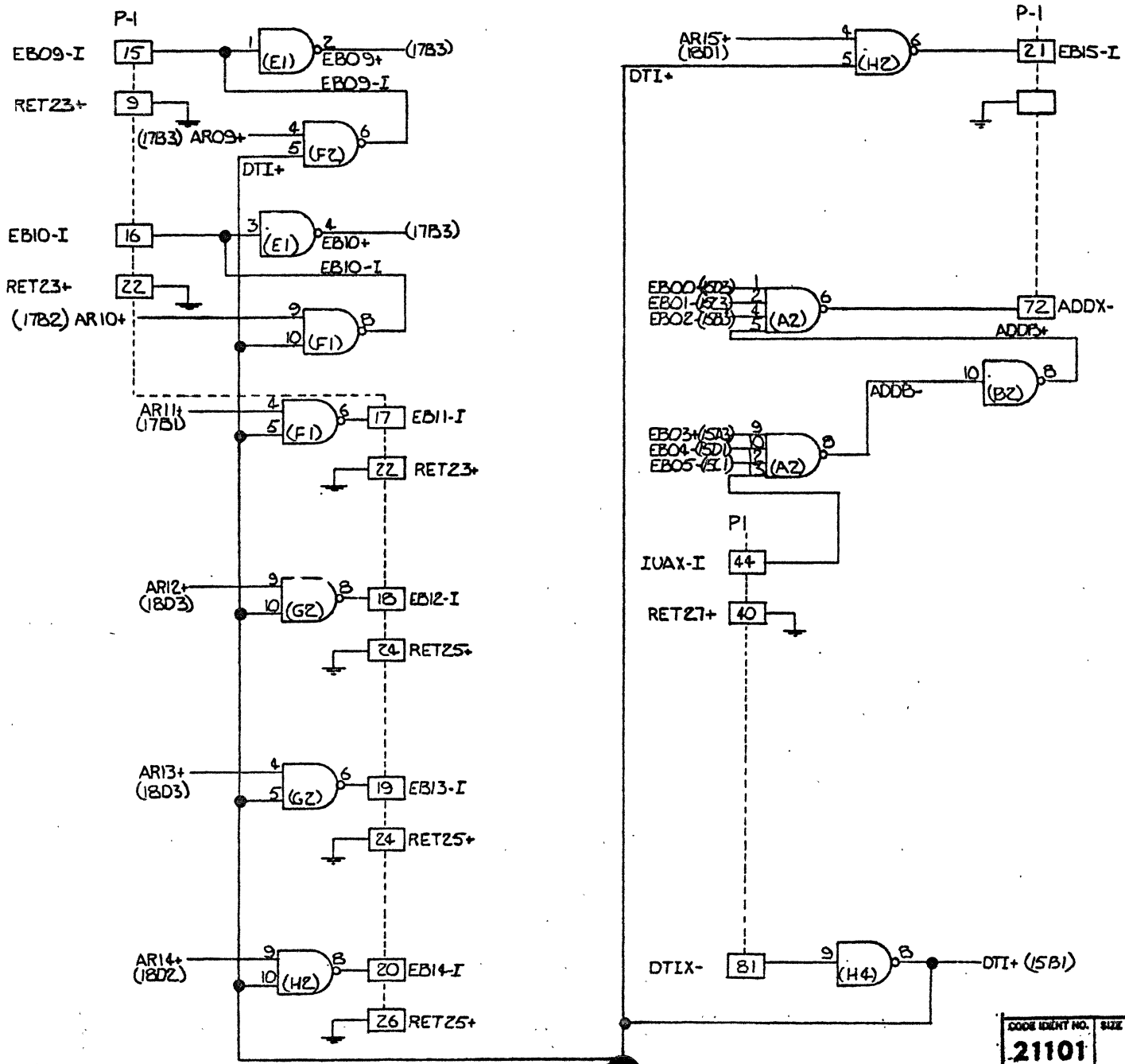
CODE IDENT NO.	SIZE	DWG NO.
21101		91C0237
SCALE		14

"E" BUS INTERFACE



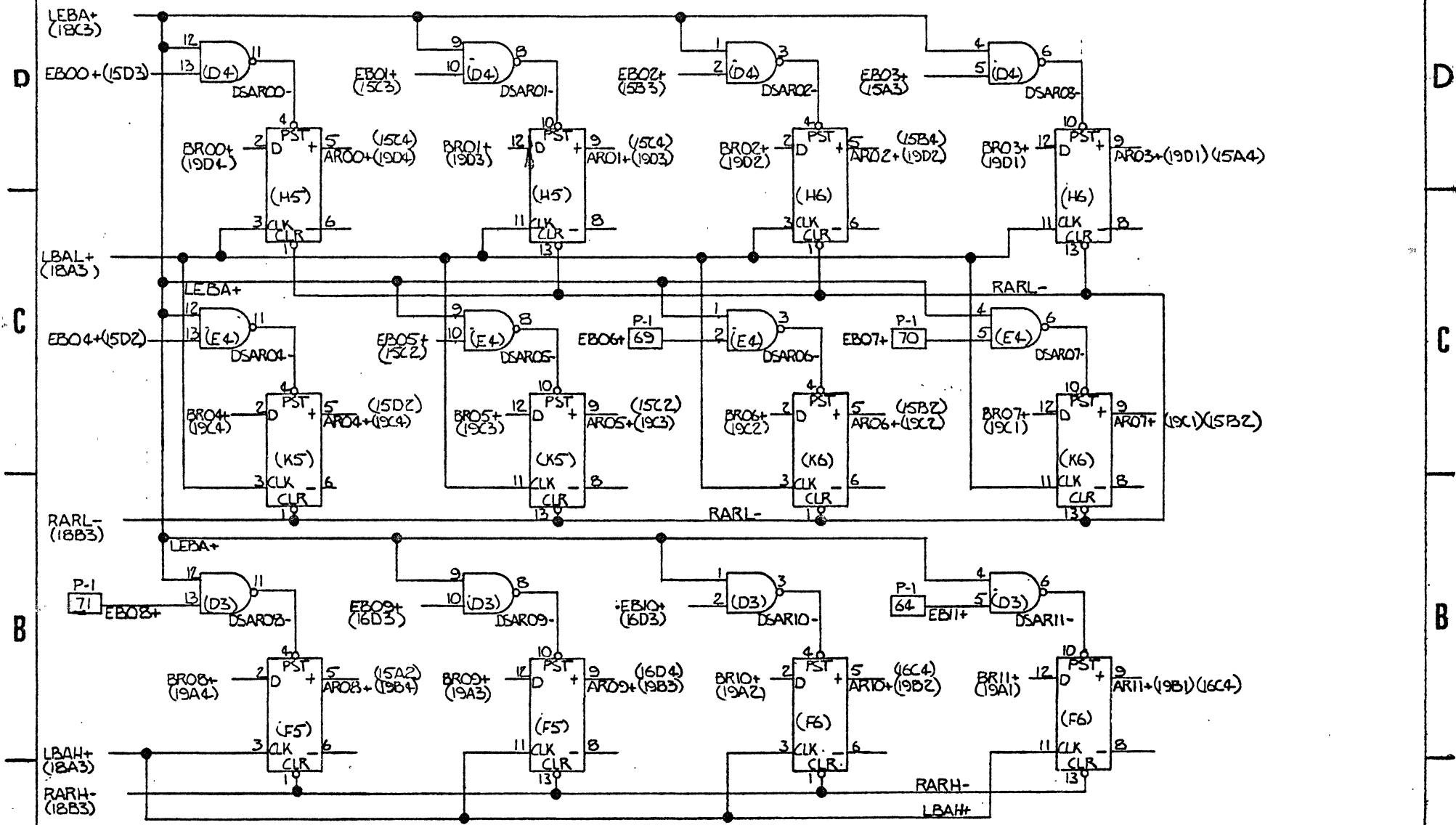
CODE IDENT NO.	SIZE	DWG NO.	REV
21101		91C0237	B
SCALE		SHEET	5 OF 23

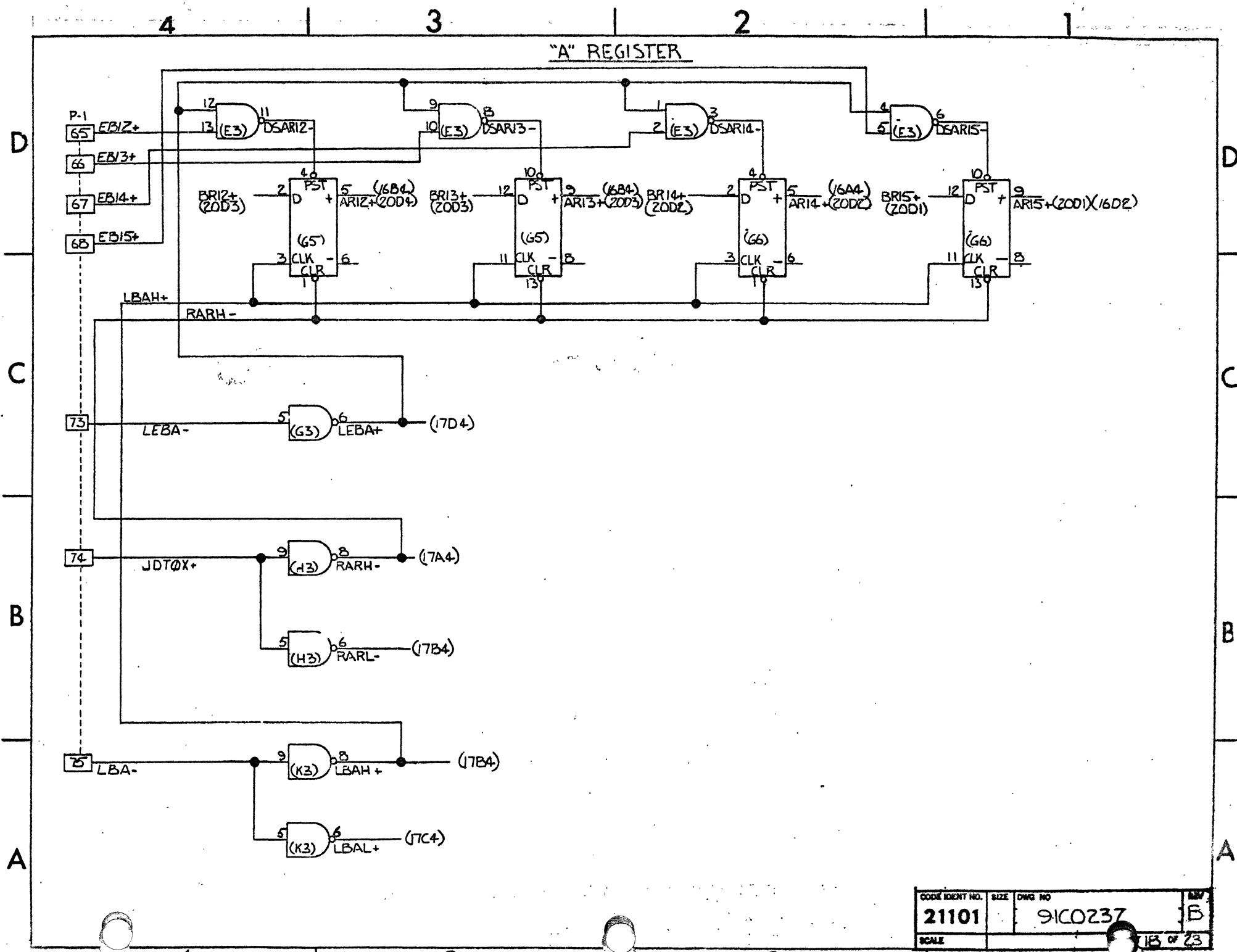
"E" BUS INTERFACE



CODE IDENT NO.	SIZE	DWG NO.	
21101		91C0237	B
SCALE			

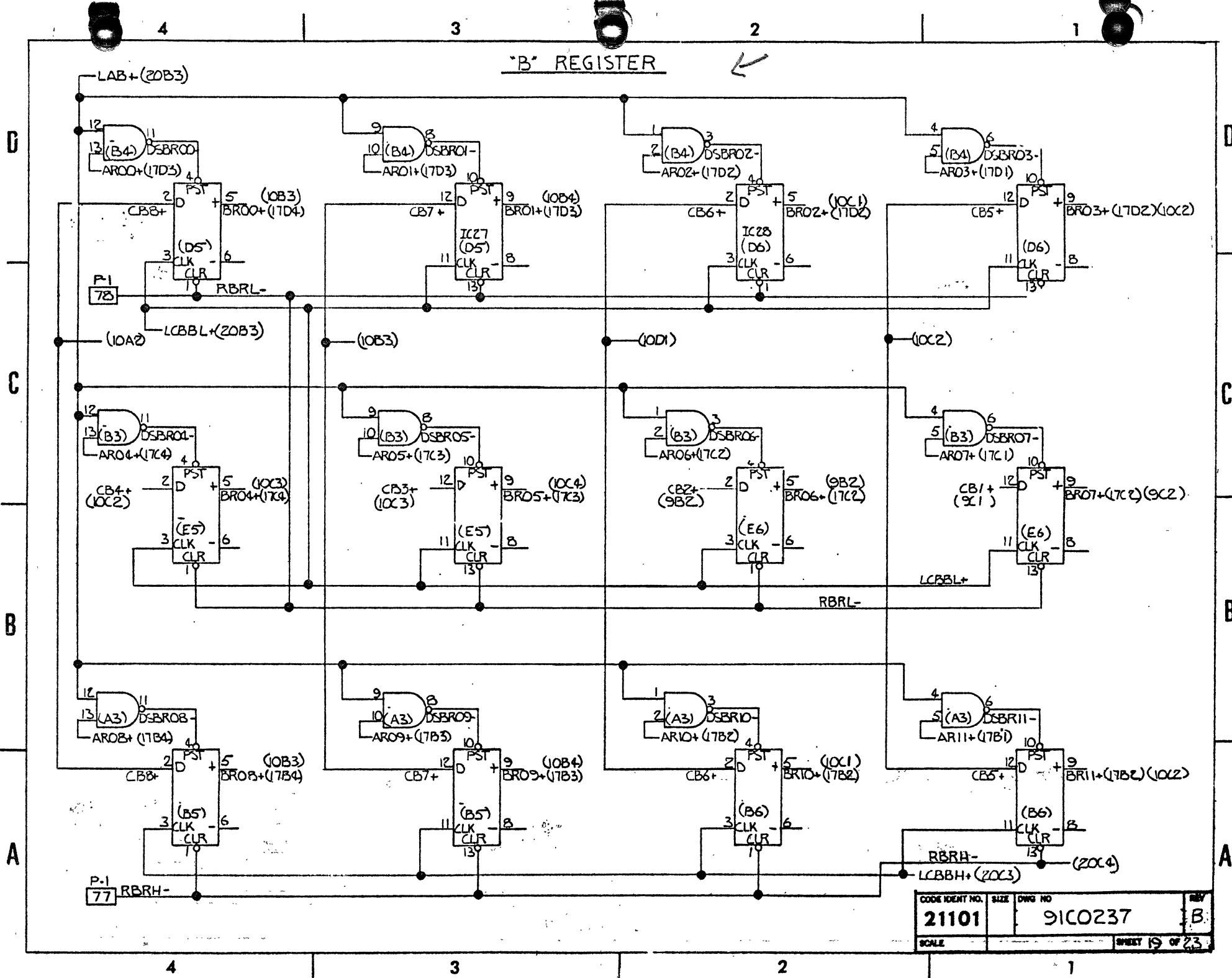
← 'A REGISTER





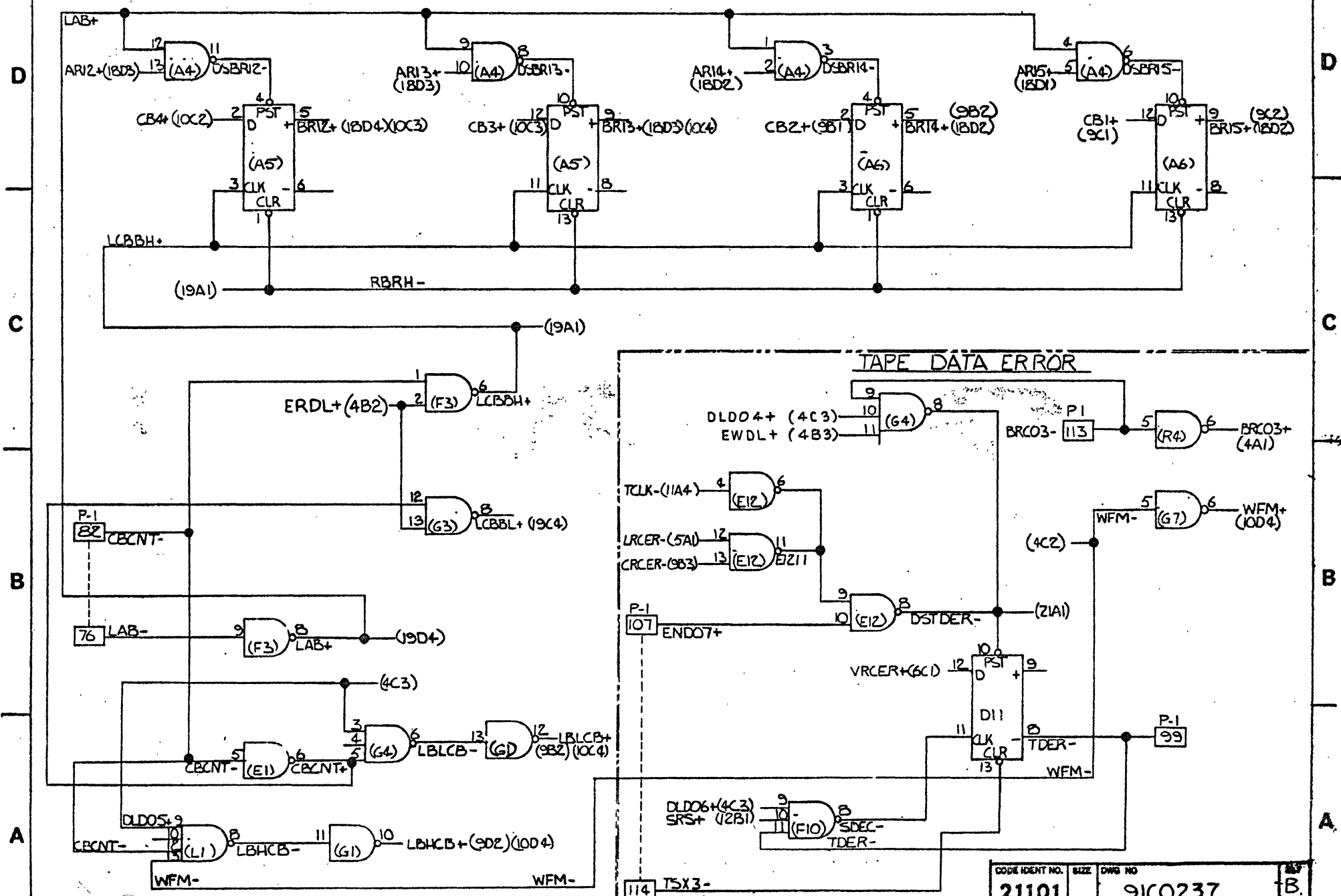
CODE IDENT NO.	SIZE	DWG NO.	REV.
21101		91C0237	B
SCALE			13 of 23

"B" REGISTER



CODE IDENT NO.	SIZE	DWG NO	REV
21101		910237	B
SCALE		SHEET 19	OF 23

"B" REGISTER



CODE IDENT NO.	SIZE	DWG NO	REV
21101		91C0237	B.
SCALE		20 of 23	

P1

- 1 GND. (6B2)
- 2 EBOO-I (15D4) ←
- 3 RET19+ (15B4)
- 4 EBOI-I (15C4) ←
- 5 RET21+ (15B1)
- 6 EBOZ-I (15B4) ←
- 7 RET21+ (15A1)
- 8 EBO3-I (15A4) ←
- 9 RET23+ (15A1)
- 10 EBO4-I (15D2) ←
- 11 EBO5-I (15C2) ←
- 12 EBO6-I (15B1) ←
- 13 EBO7-I (15B1) ←
- 14 EBO8-I (15A1) ←
- 15 EBO9-I (16D4) ←
- 16 EB10-I (16C4) ←
- 17 EB11-I (16C3) ←
- 18 EB12-I (1633) ←
- 19 EB13-I (16B3) ←
- 20 EB14-I (16A3) ←
- 21 EB15-I (16D1) ←
- 22 RET23+ (16C4)
- 23 _____
- 24 RET25+ (6B3)
- 25 _____
- 26 RET25+ (6A3)
- 27 _____
- 28 _____
- 29 _____
- 30 _____
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- 38 _____
- 39 _____
- 40 RET27+ (16B2)
- 41 _____
- 42 _____
- 43 _____
- 44 IUAX-I (16B2)
- 45 _____
- 46 _____
- 47 _____
- 48 GND (6B2)
- 49 _____
- 50 _____

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- 62 _____
- 63 DLDO4 (4D1)
- 64 EB11+ (17B2)
- 65 EB12+ (18D4)
- 66 EB13+ (18D4)
- 67 EB14+ (18D4)
- 68 EB15+ (18D4)
- 69 EBO6+ (17C3)
- 70 EBO7+ (17C2)
- 71 EBO8+ (11B4)
- 72 ADDX- (16C1)
- 73 LEBA- (18C4)
- 74 JDT0X- (18B4)
- 75 LBA- (18A4)

- 76 LAB- (20B4)
- 77 RBRH- (19A4)
- 78 RBRL- (19C4)
- 79 DLDO16+ (4A3)
- 80 DLDO17+ (4A3)
- 81 DTIX- (6A2)
- 82 CBCNT- (20B4)
- 83 TCLK- (3B3)
- 84 SRS- (12C1)
- 85 TTWC+ (14A1)
- 86 TCWC+ (14C1)
- 87 RSYNK+ (11A4)
- 88 RDSIB+ (12C4)
- 89 ERDL+ (4B3)
- 90 STSU+ (4D3)
- 91 LCRCG+ (5A3)
- 92 TSR+ (13C4)
- 93 DLDO5- (4C3)
- 94 _____
- 95 _____
- 96 JDLIB (4C1)
- 97 FMCD+ (1K3)
- 98 WDT0+ (3D1)
- 99 TDER- (20A1)
- 100 GND (6B2)

- 101 EOR1+ (13B2)
- 102 DLDO6+ (4C3)
- 103 _____
- 104 _____
- 105 ENDO2+ (6C2)
- 106 ENDO6- (4C3)
- 107 ENDO7+ (20B3)
- 108 MCLK+ (11B4)
- 109 TSS+ (3B3)
- 110 EWD1+ (4B3)
- 111 WFM- (4C3)
- 112 _____
- 113 BRCO3- (20C1)
- 114 TSX3- (20A3)
- 115 WFF3- (2K1)
- 116 _____
- 117 _____
- 118 +5V (6B2)
- 119 _____
- 120 _____
- 121 +5V (6B2)
- 122 GND (6B2)

REV		DESCRIPTION	APPROVED	DATE

Slut
10
MT-2

CODE IDENT NO.	SIZE	DRWG NO.	REV
21101		91C0237	B
SCALE			23

J-1
 1
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J-1
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 44

J-2
 1 RDI-T (1D4)
 2 RHEGND1 (1D4)
 3 RD2-T (1C4)
 4 RHEGND1 (1C4)
 5 RD3-T (1B4)
 6 RHEGND1 (1B4)
 7 RD4-T (1B4)
 8 RHEGND2 (1A4)
 9 RD5-T (2D4)
 10 RHEGND2 (2D4)
 11 RD6-T (2C4)
 12 RHEGND2 (2C4)
 13 RD7-T (2B4)
 14 RET07+ (2B4)
 15 RDB-T (2B4)
 16 RET07+ (2B4)
 17 RD9-T (2A4)
 18 RET03+ (2A4)
 19
 20
 21
 22

J-2
 23
 24
 25
 26
 27 GND08 (2C1)
 28 TWD9-T (2C1)
 29 RET08+ (2C1)
 30 TWD8-T (2C1)
 31 RET07+ (2B1)
 32 TWD7-T (2B1)
 33 GND07 (2A1)
 34 TWD6-T (2A1)
 35 GND09 (3D3)
 36 TWD5-T (3D3)
 37 RET04+ (3C3)
 38 TWD4-T (3C3)
 39 RET03+ (3B3)
 40 TWD3-T (3B3)
 41 GND08 (3B3)
 42 TWD2-T (3B3)
 43 GND09 (3A3)
 44 TWD1-T (3A3)

REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE



MT-2
 SWT
 10