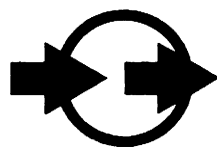


TC-130 PDP-11

LOGIC MANUAL

PN. 130015



western peripherals

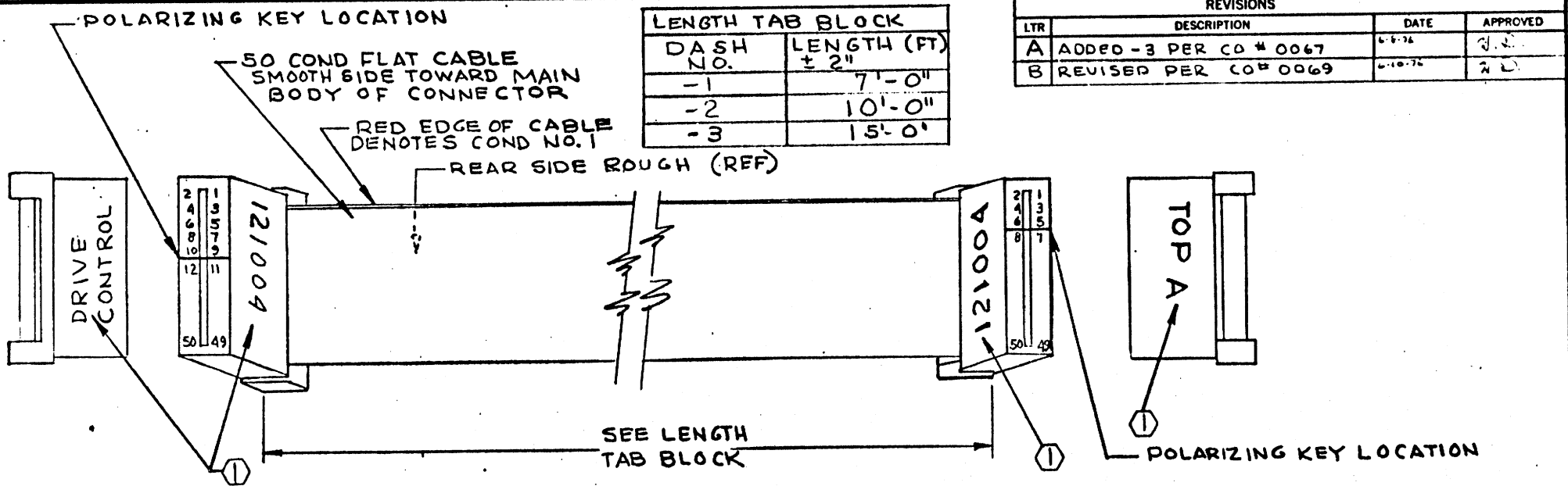
1100 CLAUDINA PLACE
ANAHEIM, CALIFORNIA 92805

TC-130 PDP-11

LOGIC MANUAL

PN. 130015

February 24, 1977



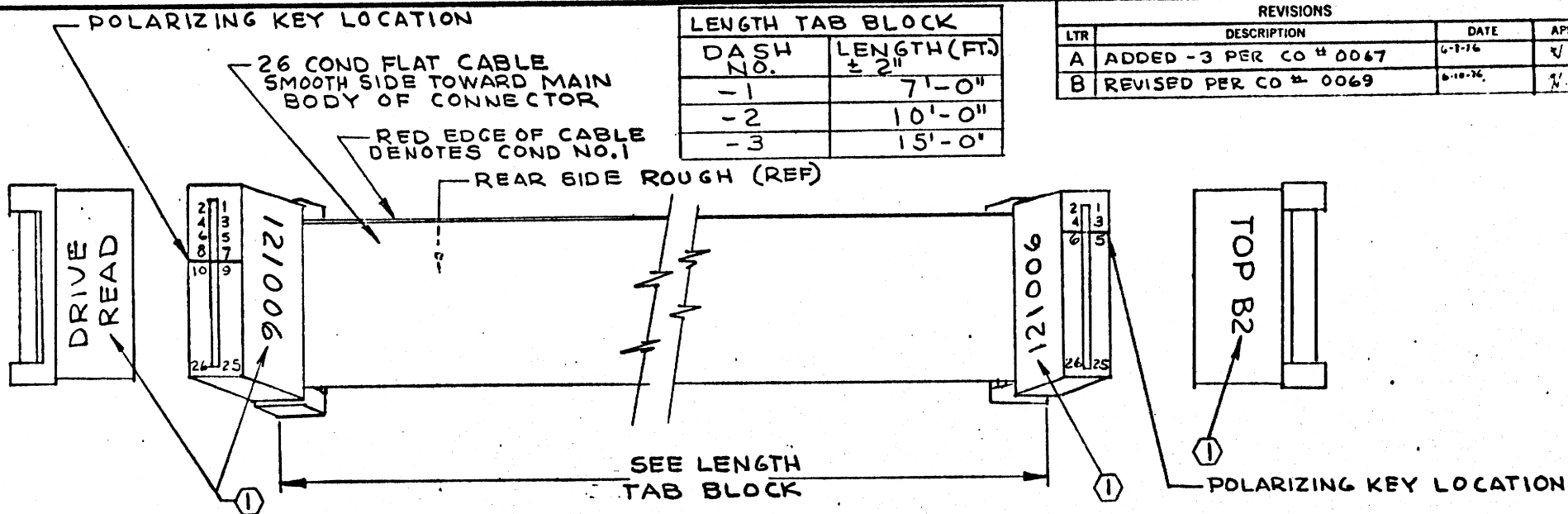
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CD # 0067	6-8-76	J. S.
B	REVISED PER CD # 0069	6-10-76	W. D.

LENGTH TAB BLOCK	
DASH NO.	LENGTH (FT) ± 2"
-1	7'-0"
-2	10'-0"
-3	15'-0"

- NOTES:**
- ① RUBBER STAMP OR BLACK FELT PEN CHARACTERS AS SHOWN
 - 2. ASSEMBLY:
 USE 3M PRESS NO. 3440
 USE LOCATOR PLATE NO. 3443-II
 USE SETTING NO 9 OF GAUGE 3436-1
 CUT CABLE USING SCOTCHFLEX CABLE SHEAR OR EQUIV.
 SEAT CABLE INTO COVER USING SCOTCHFLEX TOOL NO. 3453, CHECK FOR ALIGNMENT
 PLACE BODY ON LOCATOR PLATE
 POSITION COVER AND CABLE OVER CONN BODY
 LOWER HANDLE TO COMPLETE ASSY
 REMOVE BY LIFTING ON CONNECTOR

FOR PARTS SEE PARTS LIST 121004

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA				
± ± ±		ASSEMBLY- CABLE, CONTROL				
APPROVALS	DATE			SCALE	SIZE	DRAWING NO.
DRAWN BY C.H.M.	6-1-76			NONE	B	121004
CHECKED N.D.	6-1-76	DO NOT SCALE DRAWING		SHEET 1 OF 1		



LENGTH TAB BLOCK	
DASH NO.	LENGTH (FT) ± 2"
-1	7'-0"
-2	10'-0"
-3	15'-0"

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CO # 0067	6-1-76	V.D.
B	REVISED PER CO # 0069	6-10-76	V.D.

NOTES:

① RUBBER STAMP OR BLACK FELT PEN CHARACTERS AS SHOWN

2. ASSEMBLY:

USE 3M PRESS NO 3440

USE LOCATOR PLATE NO. 3443-11

USE SETTING NO. 9 OF GAUGE NO. 3436-1

CUT CABLE USING SCOTCHFLEX CABLE SHEAR OR EQUIV.

SEAT CABLE INTO COVER USING SCOTCHFLEX TOOL NO

3453, CHECK FOR ALIGNMENT

PLACE BODY ON LOCATOR PLATE

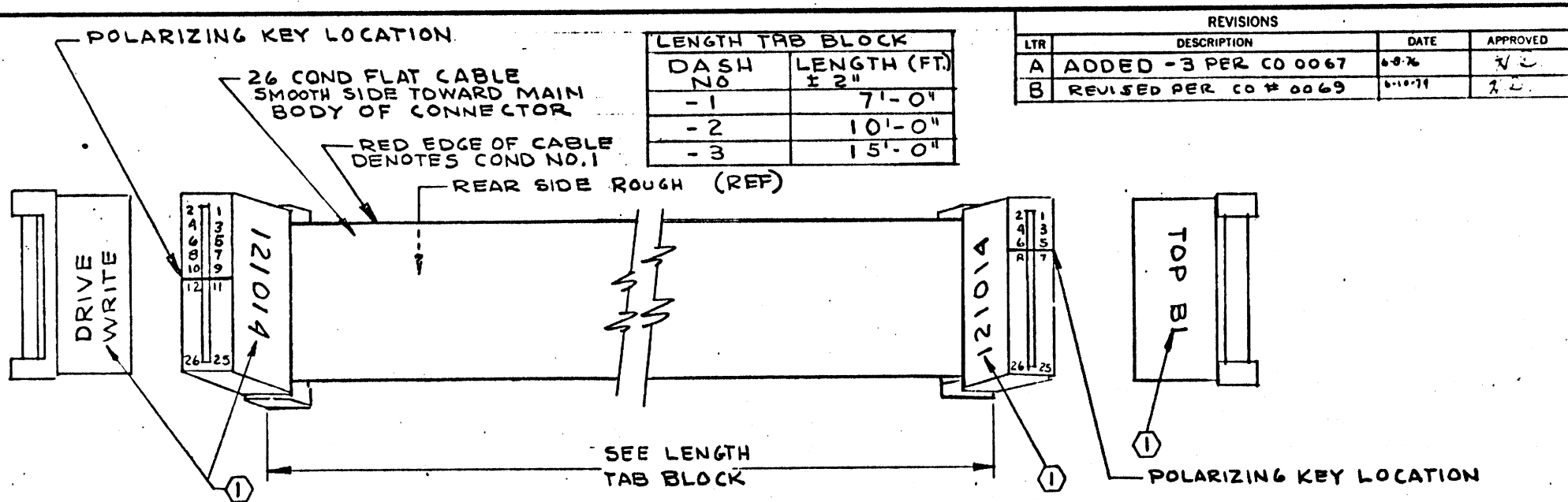
POSITION COVER AND CABLE OVER CONN BODY

LOWER HANDLE TO COMPLETE ASSY

REMOVE BY LIFTING ON CONNECTOR

FOR PARTS SEE PARTS LIST 121006

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS	DEC.	ANAHEIM, CALIFORNIA	
±	±	ASSEMBLY CABLE, READ	
APPROVALS	DATE	SCALE	SIZE
DRAWN	6-1-76	NONE	B
CHECKED	6-1-76	DRAWING NO. 121006	
		DO NOT SCALE DRAWING	
		SHEET 1 OF 1	



LENGTH TAB BLOCK	
DASH NO	LENGTH (FT.)
-1	7'-0"
-2	10'-0"
-3	15'-0"

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CO 0067	6-8-76	[Signature]
B	REVISED PER CO # 0069	6-10-76	[Signature]

NOTE 5:

① RUBBER STAMP OR BLACK FELT PEN CHARACTERS AS SHOWN

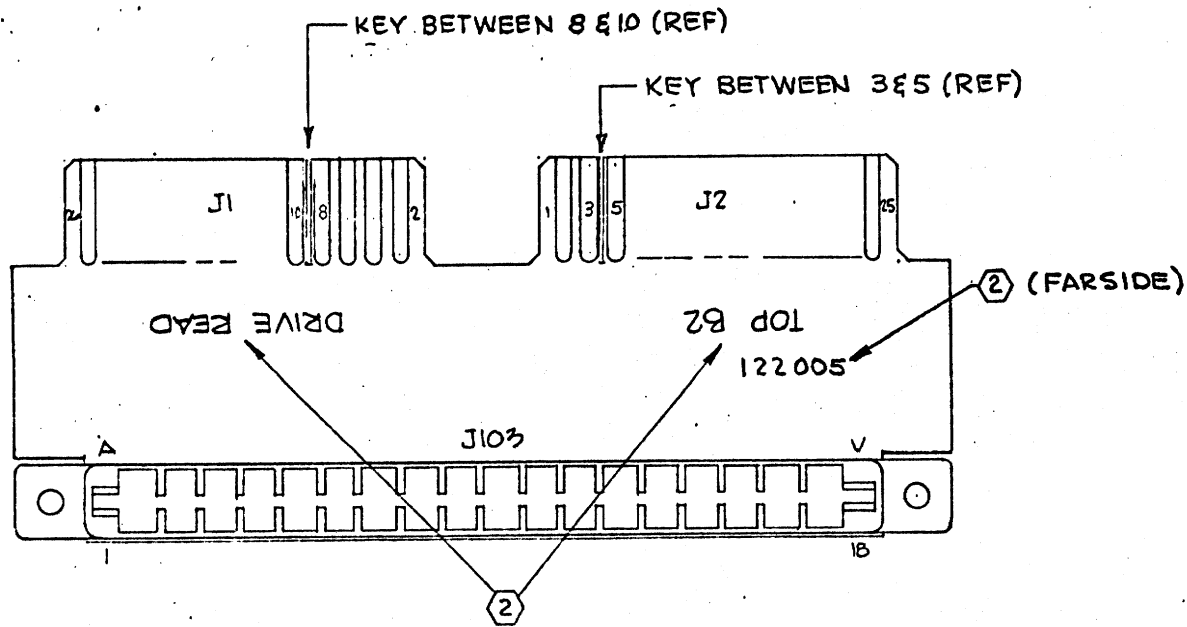
2. ASSEMBLY:

USE 3M PRESS NO. 3440.
 USE LOCATOR PLATE NO 3443-11
 USE SETTING NO 9 OF GAUGE 3436-1
 CUT CABLE USING SCOTCHFLEX CABLE SHEAR OR EQUIV.
 SEAT CABLE INTO COVER USING SCOTCHFLEX TOOL NO 3453, CHECK FOR ALIGNMENT
 PLACE BODY ON LOCATOR PLATE
 POSITION COVER AND CABLE OVER CONN BODY
 LOWER HANDLE TO COMPLETE ASSY
 REMOVE BY LIFTING ON CONNECTOR

FOR PARTS SEE PARTS LIST 121014

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals <small>ANAHEIM, CALIFORNIA</small>	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY- CABLE, WRITE
APPROVALS	DATE	SCALE	
DRAWN [Signature]	6-1-76	NONE	
CHECKED [Signature]	6-1-76	SIZE B	
		DRAWING NO.	121014
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV PER CONO. 0105	9-8-76	

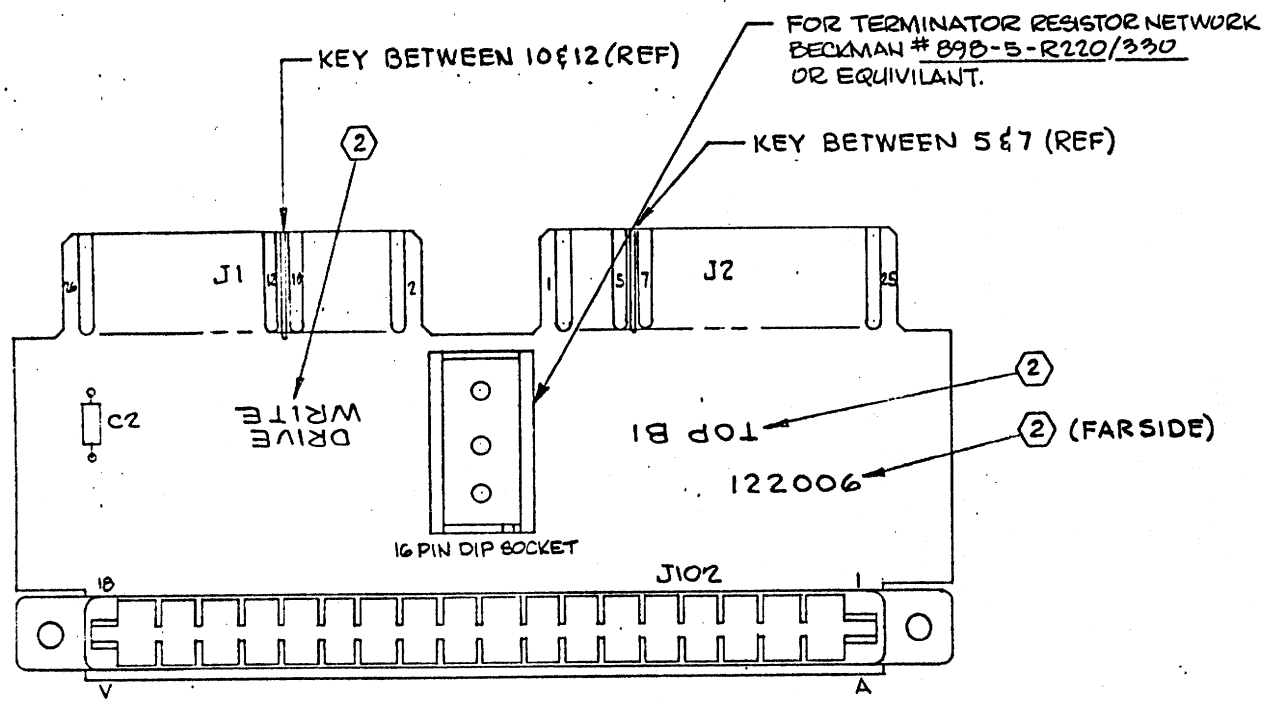


NOTE.

1. REF SCHEMATIC DWG NO. 122022
- ② RUBBER STAMP CHARACTERS SHOWN USING BLK INK
3. FOR MATL SEE P/L 122005

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	ASSEMBLY DWG. ADAPTER, TAPE READ CONNECTOR	
±	±	SCALE	SIZE DRAWING NO.
APPROVALS	DATE	2:1	B 122005
DRAWN HRB	2-13-76		
CHECKED AL	2-25-76		
		DO NOT SCALE DRAWING	
		SHEET 1 OF 1	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

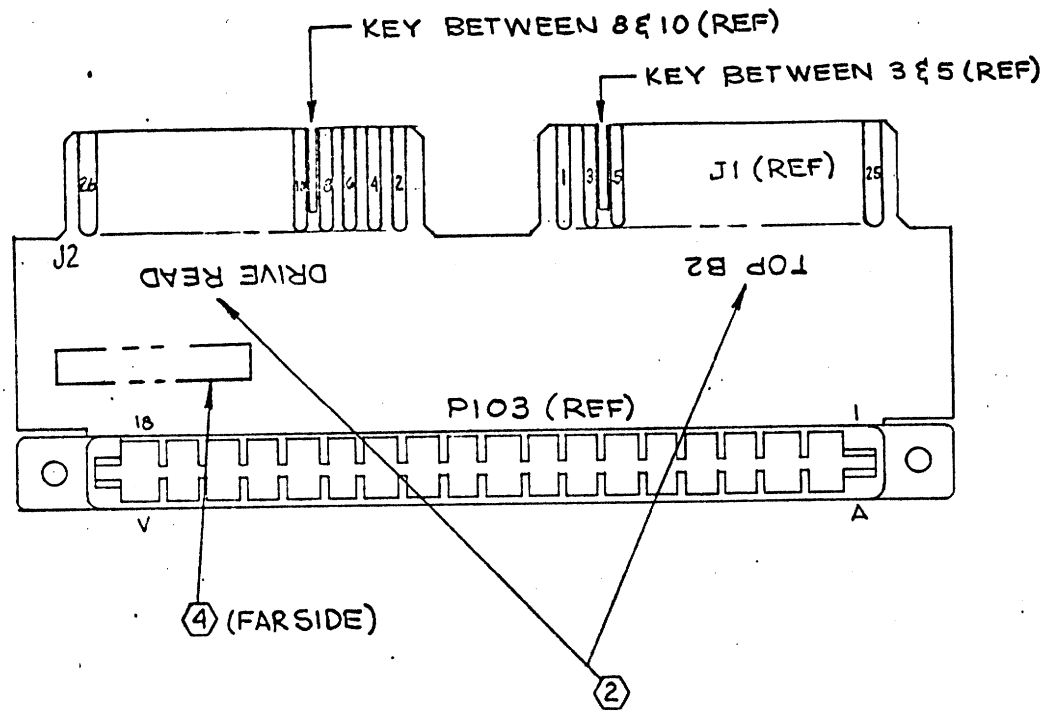


NOTE:

- 1. REF SCHEMATIC DWG. NO. 122021.
- ② RUBBER STAMP CHARACTERS SHOWN USING BLK INK
- 3 FOR MATL SEE P/L 122006

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals <small>ANAHEIM, CALIFORNIA</small>	
APPROVALS		DATE	
DRAWN <i>HRB</i>		2-12-76	
CHECKED <i>RL</i>		2-25-76	
SCALE		SIZE	DRAWN NO.
2:1		B	122006
DO NOT SCALE DRAWING			SHEET 1 of 1

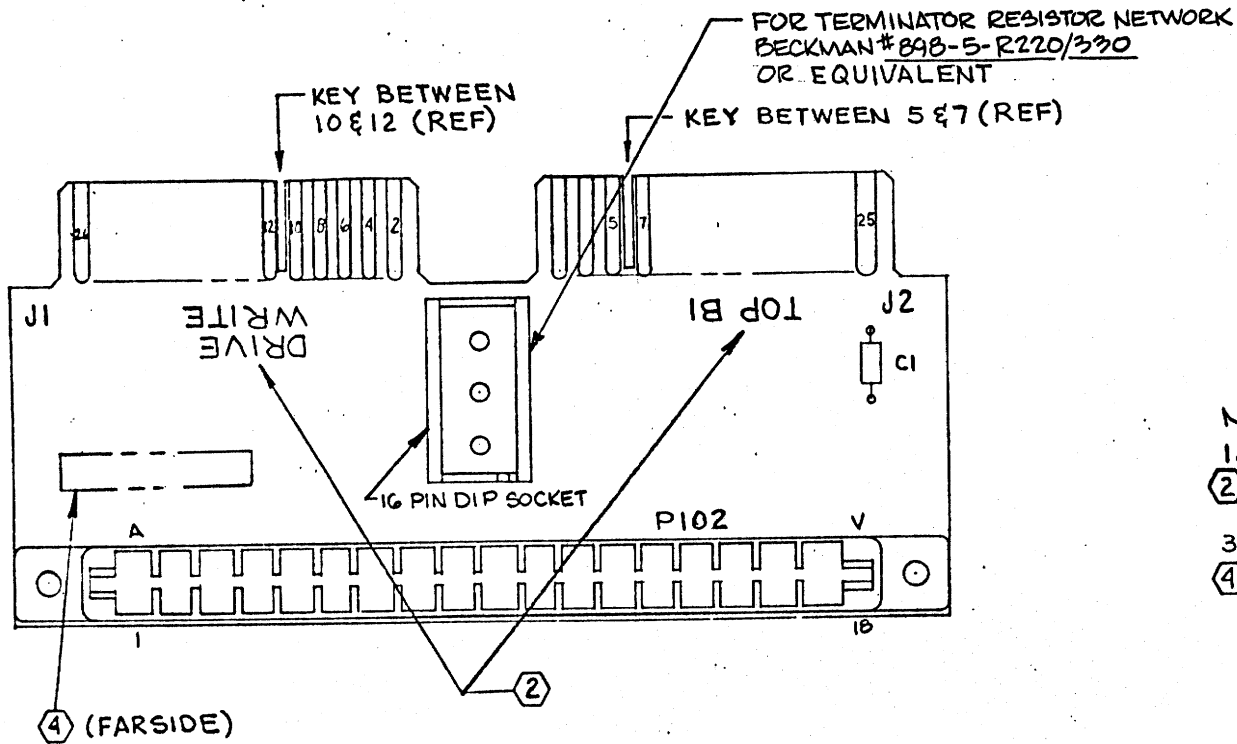
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORP. CO # 0145	7-2	1-21-77



- NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122022
 - ② RUBBER STAMP CHARACTERS SHOWN USING BLK INK
 3. FOR MATERIAL SEE P/L 122018
 - ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN


TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES	
±	±	±	
APPROVALS	DATE	ASSEMBLY DWG. ADAPTER, TAPE READ KENNEDY CYPHER	
DRAWN HRP	2-13-76	SCALE	REV
CHECKED <i>W</i>	2-25-76	2:1	A
		SIZE B	DRAWING NO. 122018
		DO NOT SCALE DRAWING	
		SHEET 1 OF 1	

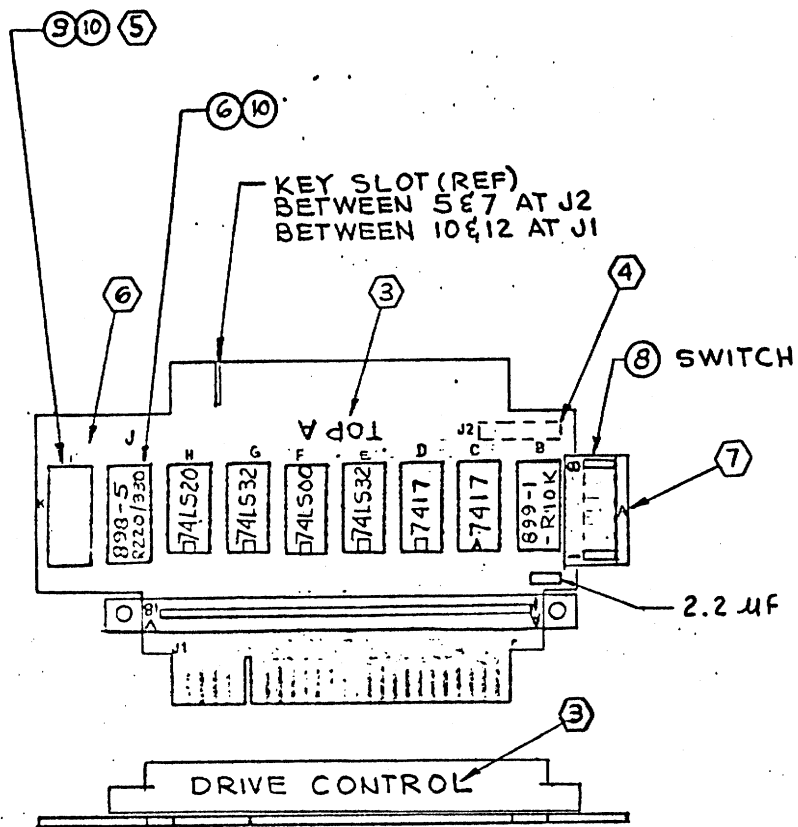
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORPORATE CO # 0146	1-21-77	RL 1-24-77



- NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122022
 - ② RUBBER STAMP CHARACTERS S-DOWN USING BLK INK
 3. FOR MATERIAL SEE P/L 122019
 - ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN


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TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA			
APPROVALS	DATE	ASSEMBLY DWG. ADAPTER TAPE WRITE KENNEDY CYpher			
DRAWN HRB	2-12-76	SCALE 2:1		SIZE B	REV A
CHECKED RL	2-25-76	PART NO. 122019		SHEET 1 OF 1	
		DO NOT SCALE DRAWING			

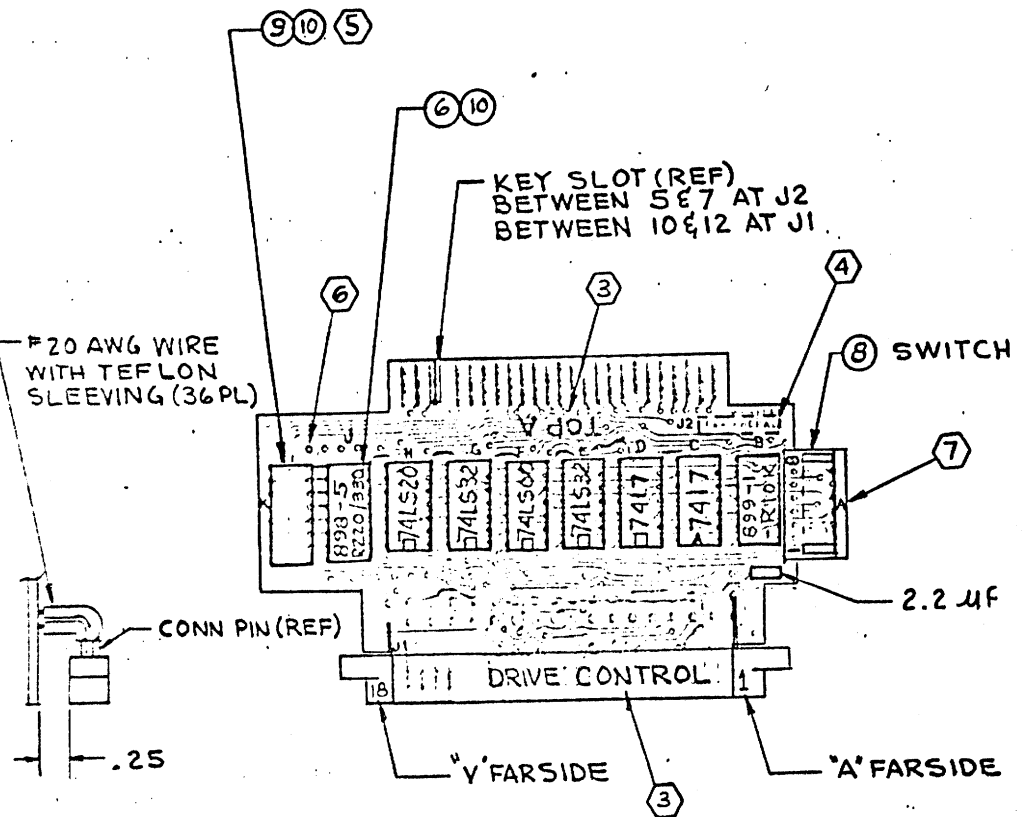


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

- ⑦ "A" AND "K" ARE COMPONENT LOCATION CODE; "B" THRU "J" ARE FOR REF ONLY & DO NOT APPEAR ON PART
- ④ JUMPER POINTS "A" THRU "H"; "J" THRU "N"; "P" & "R"
- ⑤ FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
- ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
- ③ RUBBER STAMP CHARACTER SHOWN USING BLK INK
2. FOR MATERIAL SEE P/L NO. 122037
1. REF SCHEMATIC 122036
- NOTE: UNLESS OTHERWISE SPECIFIED

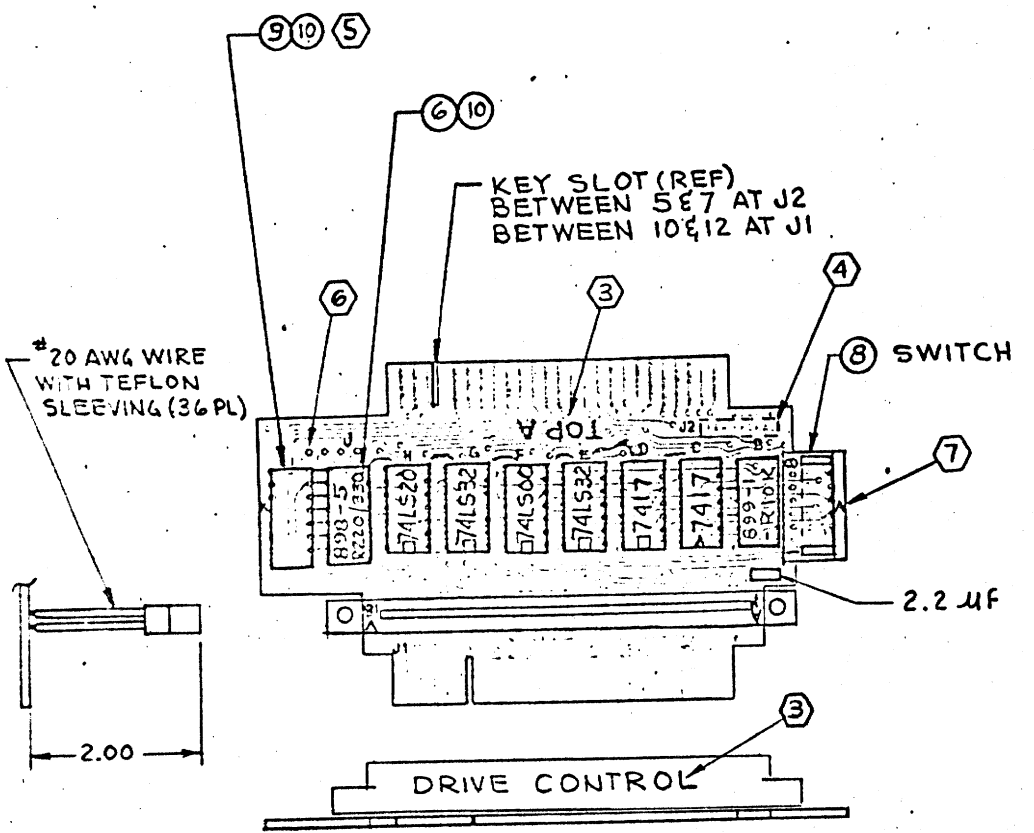
TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals <small>ANACHEM, CALIFORNIA</small>		
FRACTIONS	DEC.			ANGLES
±	±	±	ASSEMBLY ADAPTER TAPE CONTROL CONNECTOR	
APPROVALS	DATE			
DRAWN CORUM	11-8-76			
CHECKED W.D.	12-16-76			
SCALE FULL		SIZE B	DRAWING NO. 122037	REV
DO NOT SCALE DRAWING			SHEET 1 OF 1	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



- ① "A" AND "K" ARE COMPONENT LOCATION CODE; "B" THRU "J" ARE FOR REF ONLY & DO NOT APPEAR ON PART
- ② JUMPER POINTS "A" THRU "H"; "J" THRU "N"; "P" & "R"
- ③ FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
- ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
- ⑤ RUBBER STAMP CHARACTER SHOWN USING BLK INK 2 FOR MATERIAL SEE P/L NO. 122038 1. REF SCHEMATIC 122036
- ⑥ TOLERANCES UNLESS OTHERWISE SPECIFIED

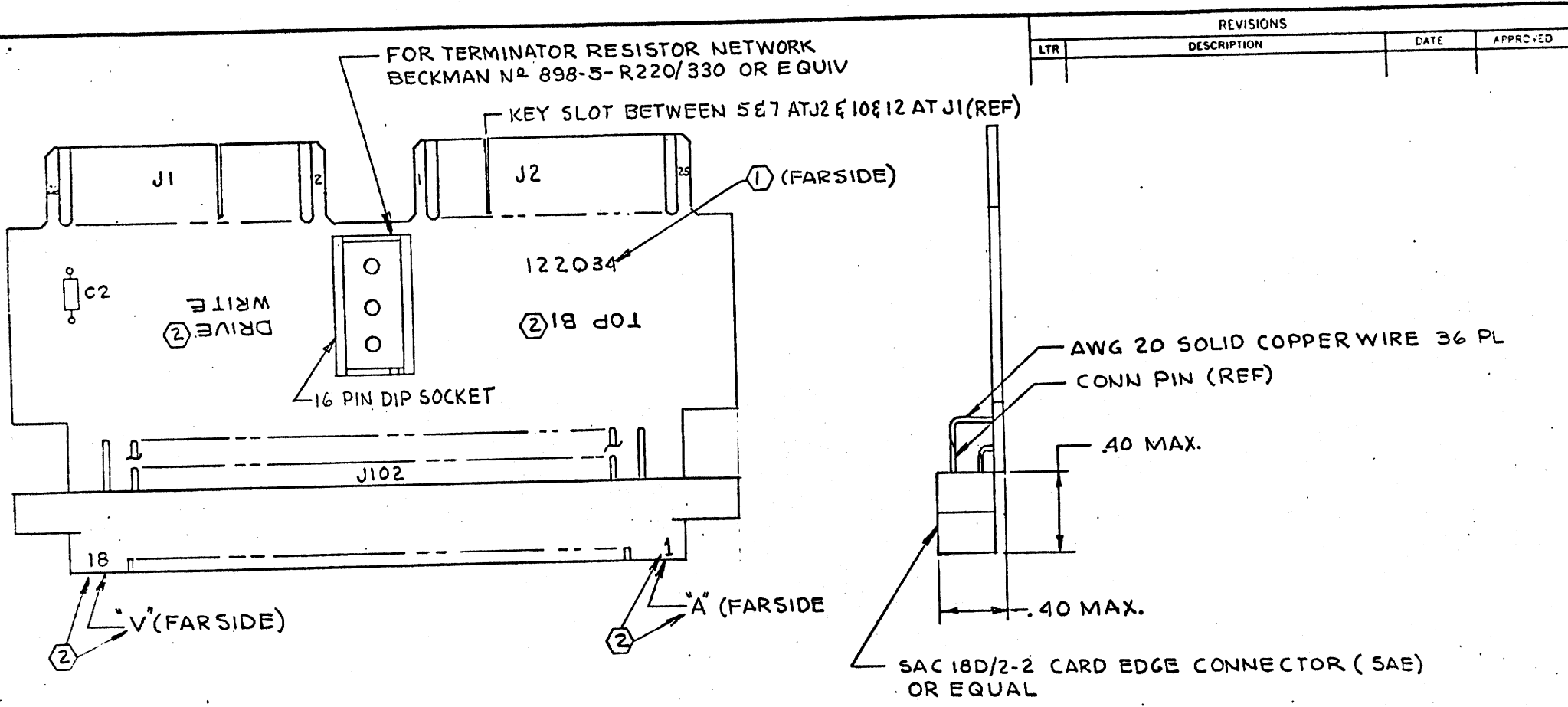
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY - ADAPTER TAPE CONTROL CONNECTOR 90° MOUNTING
APPROVALS	DATE	SCALE	
DRAWN CORUM	11-8-76	SIZE FULL	
CHECKED J.D.	12-16-76	LAYING NO. 122038	
DO NOT SCALE DRAWING			REV SHEET 1 OF 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

- ⑦ "A" AND "K" ARE COMPONENT LOCATION CODE; "B" THRU "J" ARE FOR REF ONLY & DO NOT APPEAR ON PART
- ⑥ JUMPER POINTS "A" THRU "H"; "J" THRU "N"; "P" & "R"
- ⑤ FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
- ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
- ③ RUBBER STAMP CHARACTER SHOWN USING BLK INK
2. FOR MATERIAL SEE P/L NO. 122039
1. REF SCHEMATIC 122036
TOLERANCES UNLESS OTHERWISE SPECIFIED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN CORUM		11-8-76	
CHECKED V.D.		12-6-76	
SCALE FULL		SIZE B	
DRAWING NO. 122039		REV 	
DO NOT SCALE DRAWING			SHEET 1 OF 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

3 FOR MATL SEE P/L 122034

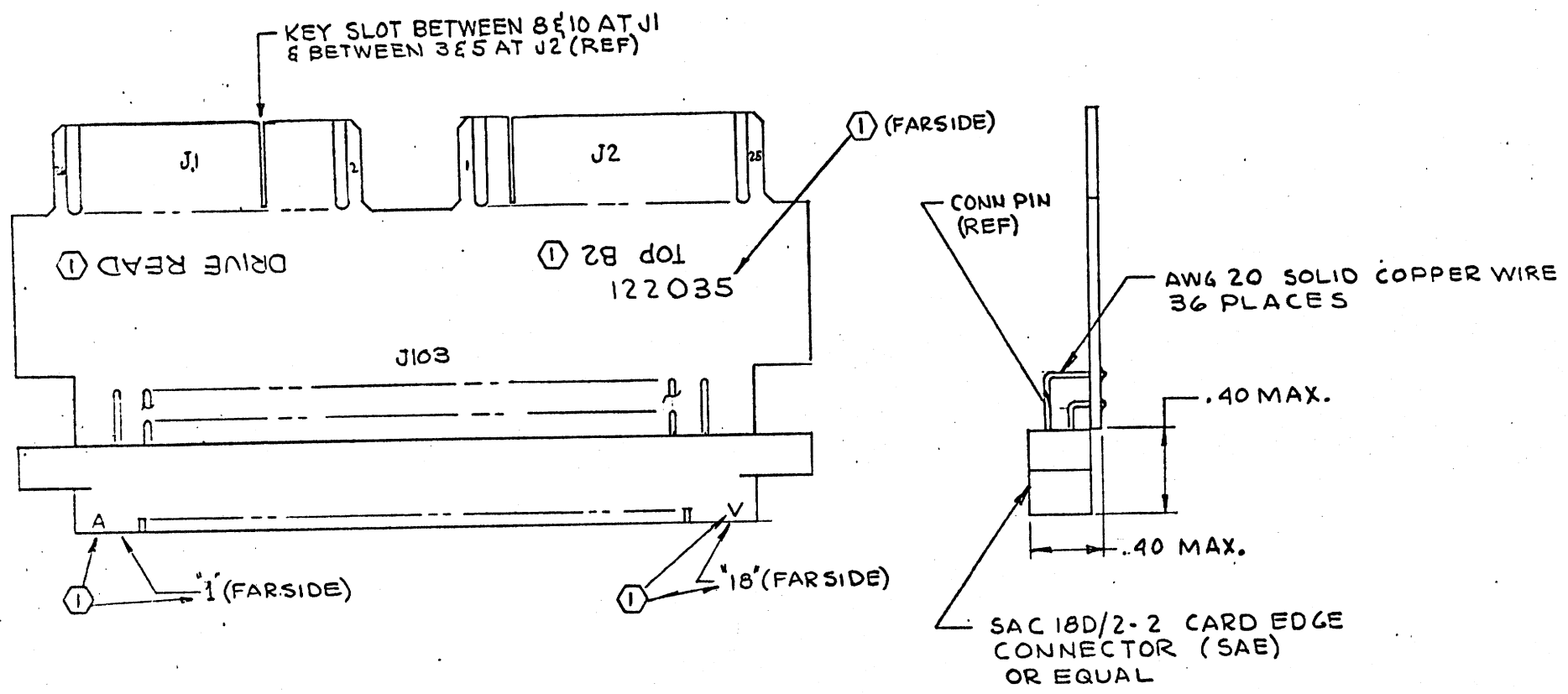
2 RUBBER STAMP CHARACTER SHOWN WITH BLK INK

1 REF SCHEMATIC DWG № 122021

NOTE:

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC. ANGLES		ANAHEIM, CALIFORNIA	
±	±	ASSEMBLY- ADAPTER	
APPROVALS	DATE	TAPE WRITE	
DRAWN	6-11-76	KENNEDY 9800	
CORUM		SCALE	SIZE
CHECKED		2X	B
			122034
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



NOTES:
 ① RUBBER STAMP CHARACTERS SHOWN WITH BLK INK
 2 REF SCHEMATIC DWG NO 122022

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals <small>ANALOG CALIFORNIA</small>	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY-ADAPTER TAPE READ KENNEDY 9800
APPROVALS	DATE	SCALE	
DRAWN	6-11-76	SIZE	
CHECKED		DATE	
2 X B 122035		DO NOT SCALE DRAWING SHEET 1 OF 1	

SWITCH OPERATION DESCRIPTION

1. GRAYHILL - ON = ROCKER DEPRESSED TO NUMBERED SIDE
2. CTS - ON = TOGGLE POSITIONED TO NUMBERED SIDE

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

CONFIGURATION SETTINGS

	DESCRIPTION	SYSTEM CONSIDERATIONS
S-A1 ON	FOR DRIVES THAT REQUIRE REWIND COMMAND REMOVAL PRIOR TO BOT	1. REMOVE ALL PERIPHERAL TERMINATORS IN DAISY CHAIN
S-A1 OFF	FOR DRIVES THAT DO NOT REQUIRE REWIND COMMAND REMOVAL PRIOR TO BOT	2. INSTALL CONTROL TERMINATOR ONLY IN LAST DAISY CHAIN POSITION
S-A2 ON	FOR DRIVES THAT STORE EOT STATUS NOTE: A5 SHOULD BE OFF	3. CORRECTLY IDENTIFY CONFIGURATION & SET SWITCHES ACCORDINGLY
S-A2 OFF	FOR DRIVES THAT DO NOT STORE EOT STATUS NOTE: A5 SHOULD BE ON	
S-A3 ON	FOR 7 TRACK DRIVES	
S-A3 OFF	FOR 9 TRACK DRIVES	
S-A4 ON	FOR 7 TRACK 200/556 BPI DENSITY SELECTIONS OR 9 TRACK SECONDARY SPEED SELECTION	
S-A4 OFF	FOR 7 TRACK 556/600 BPI DENSITY SELECTIONS OR 9 TRACK PRIMARY SPEED SELECTION	
S-A5 ON	FOR DRIVES THAT DO NOT STORE EOT STATUS NOTE: A2 SHOULD BE OFF	
S-A5 OFF	FOR DRIVES THAT STORE EOT STATUS NOTE: A2 SHOULD BE ON	
S-A6 ON	FOR 9 TRACK NRZI DRIVE	
S-A6 OFF	FOR 7 TRACK DRIVES, 9 TRACK 1600 BPI DRIVES, OR 9 TRACK 500/1600 DUAL DENSITY	
S-A7 ON	FOR DRIVES THAT DO NOT PRESENT NRZ STATUS ON DRIVE READ CONNECTOR	
S-A7 OFF	FOR DRIVES THAT DO PRESENT NRZ STATUS ON DRIVE READ CONNECTOR	
S-A8 ON	FOR 7 TRACK DRIVES	
S-A8 OFF	FOR 9 TRACK DRIVES	

NOTES:

1. FOR 7 TRACK DRIVES IN DRIVE DAISY CHAINS, ONLY PRIMARY SPEED SELECTION IS AVAILABLE.
2. REF. ASSY. DWG. 122037, 122038, & 122039.
- ③ 122010 INSTALLED WHEN TRANSPORT HAS 4-POSITION UNIT SELECT SWITCH (SEE EXCEPTION BELOW).
122011 INSTALLED IN 4th TRANSPORT IF MORE THAN 4 TRANSPORTS ARE DAISY CHAINED.
122012 INSTALLED WHEN TRANSPORT DOES NOT HAVE UNIT SELECT SWITCH.
- ④ FOR PERTEC COMPATIBLE UNIT SELECT OPTION:
JUMPER E TO F, G TO H, AND M TO N.
FOR EXTERNALLY CONNECTED UNIT SELECT SWITCH:
CUT ETCH BETWEEN P & R AND CONNECT EXTERNAL SWITCH TO A, B, C, D, & L.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES
± ± ±



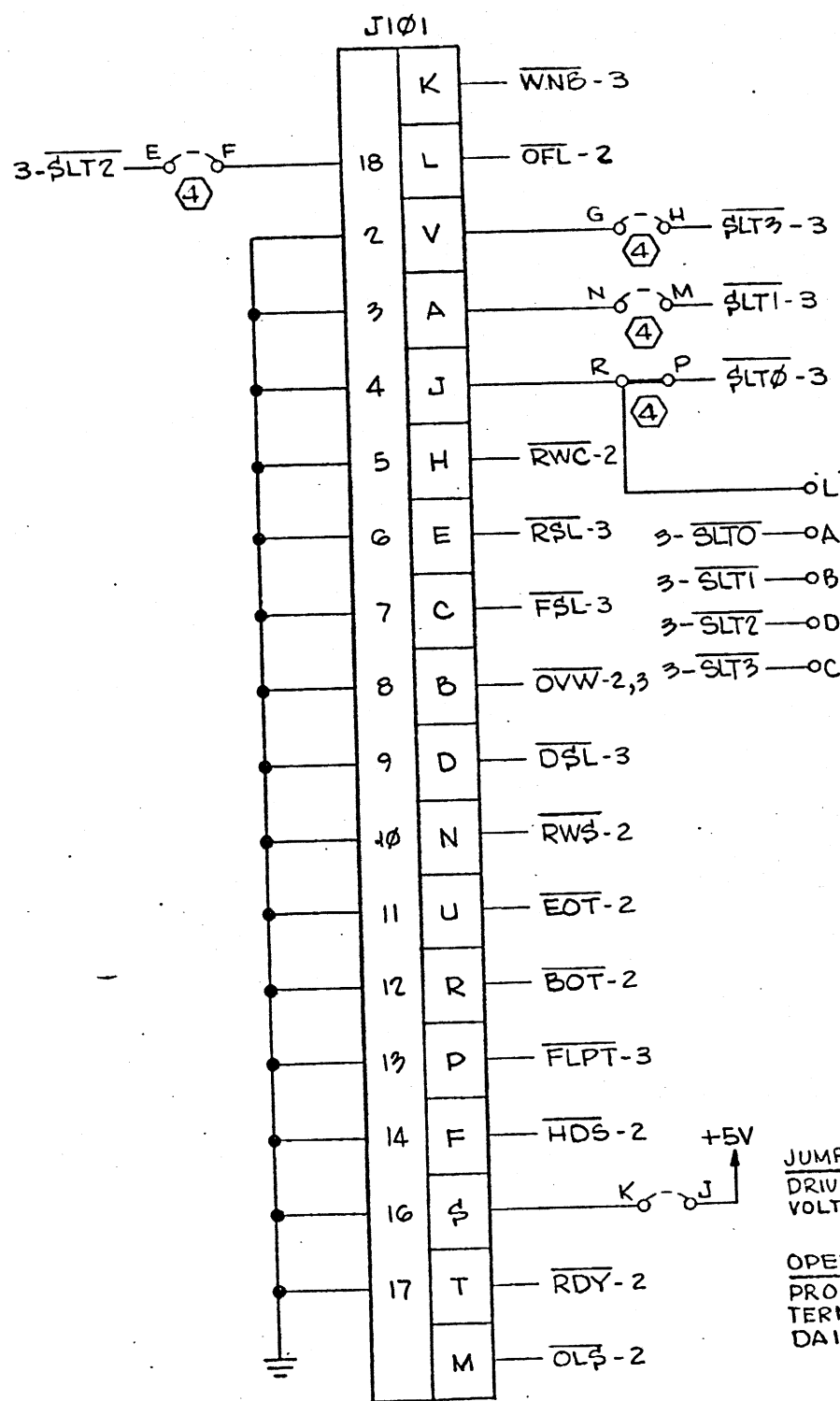
SCHEMATIC —
TAPE CONTROL ADAPTER

APPROVALS DATE
DRAWN HRB 11-1-76

DISC. BY JOHN Pedregon 11-24-76

SCALE — SIZE B DRAWING NO. 122036

REVISIONS	DATE	APPROVED
DESCRIPTION		
LTR		



1

western peripherals
SAN JOSE, CALIFORNIA

TAPE CONNECTOR

TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS DEC. ANGLES =

APPROVALS: DRAWN: HRP DATE: 11-1-76

CHECKED: DATE: 11-24-76

SIZE: B

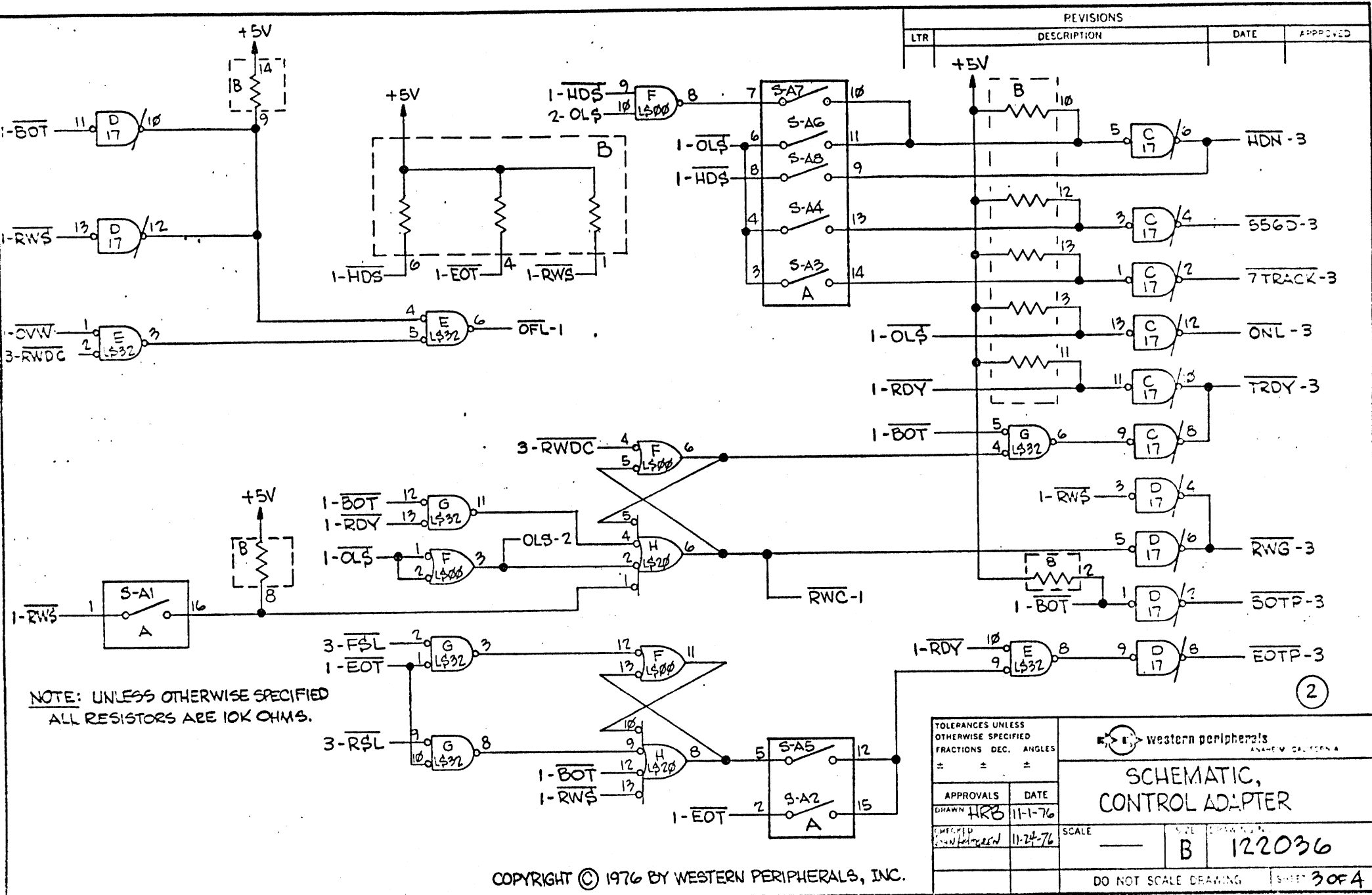
SCALE: 122036

DO NOT SCALE DRAWING SHEET 2 OF 4

SELECT JUMPER TERMINALS AVAILABLE FOR THUMBWHEEL SELECTION ON DRIVES SO EQUIPPED

JUMPER J TO K:
DRIVE SUPPLIES +5V TERMINATOR VOLTAGE TO DAISY CHAIN

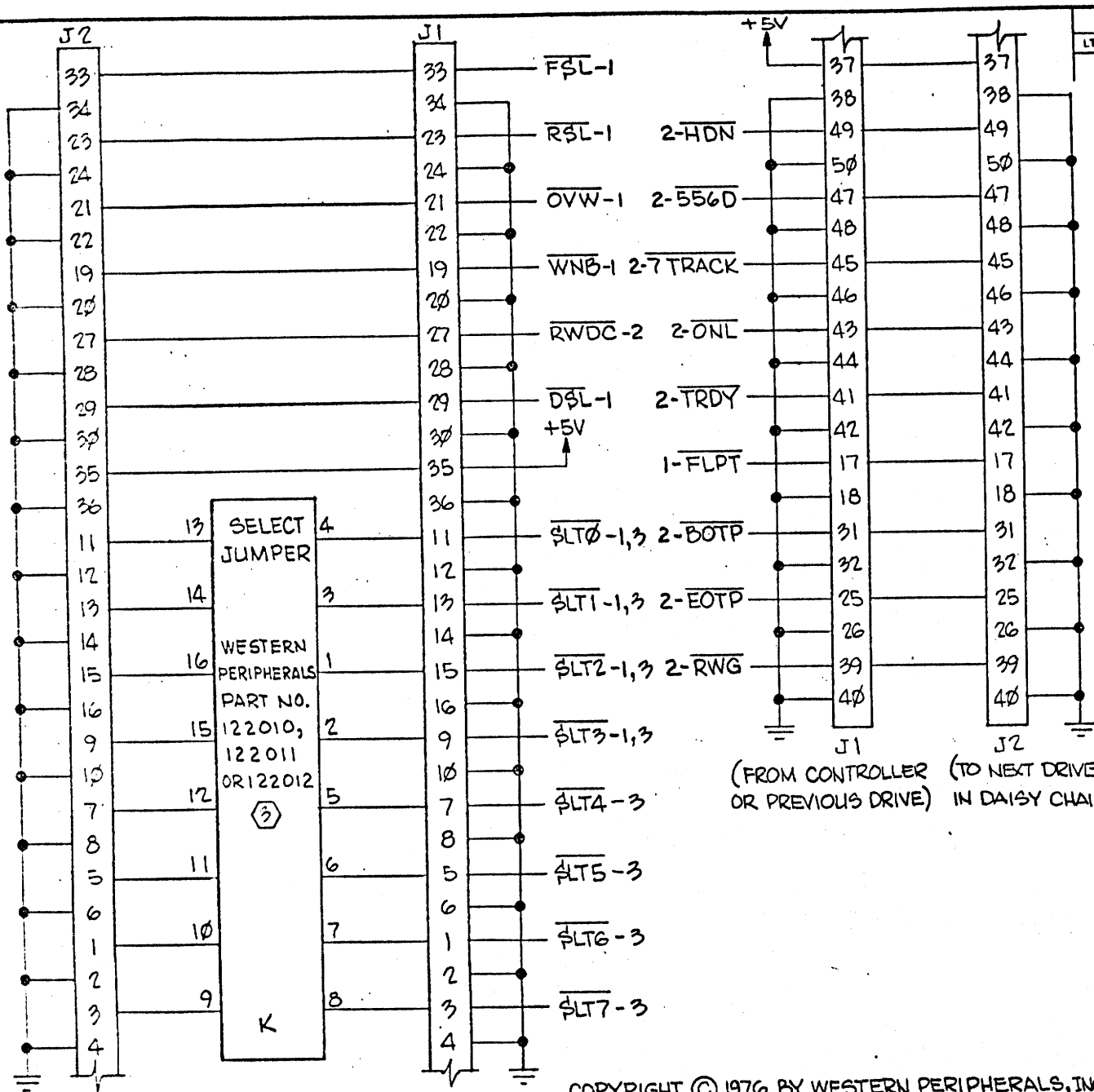
OPEN J TO K:
PROCESSOR SUPPLIES +5V TERMINATOR VOLTAGE TO DAISY CHAIN



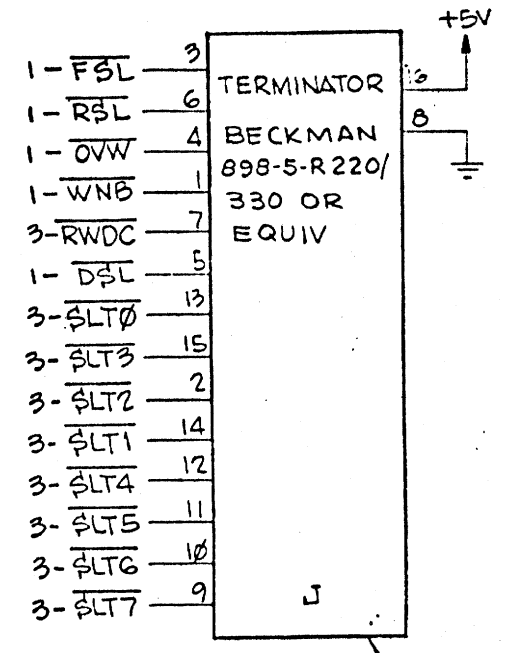
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

NOTE: UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 10K OHMS.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANHEIM, CALIFORNIA	
APPROVALS DRAWN HRB		DATE 11-1-76	
		CHECKED [Signature] 11-24-76	
SCALE		SIZE	DATE
		B	122036
DO NOT SCALE DRAWING			SHEET 3 OF 4



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



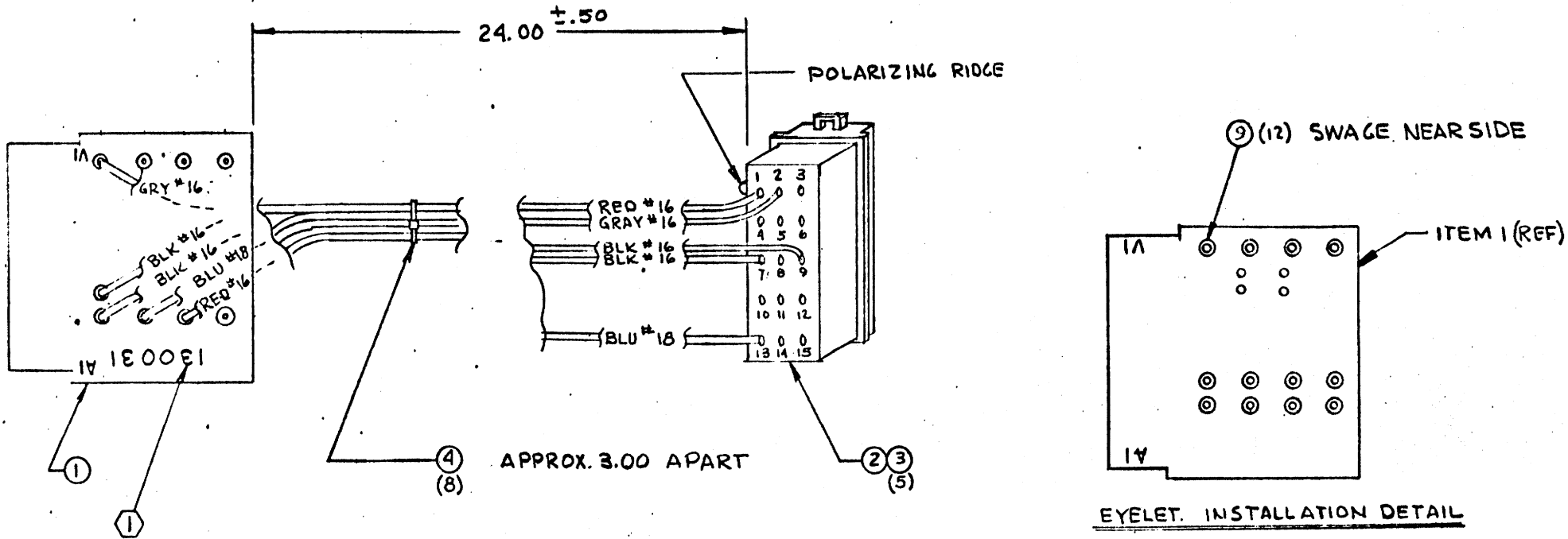
(FROM CONTROLLER OR PREVIOUS DRIVE) (TO NEXT DRIVE IN DAISY CHAIN)

INSTALLED FOR SINGLE TRANSPORT OR LAST UNIT IF UNITS ARE DAISY CHAINED

3

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIF. 92701	
±	±	CONTROL CONNECTOR RIBBON CABLE	
APPROVALS	DATE	SCALE	SIZE
DRAWN HRO	11-1-76	—	B
CHECKED SCANTLORCHEN	11-24-76		122036
DO NOT SCALE DRAWING			SHEET 4 OF 4

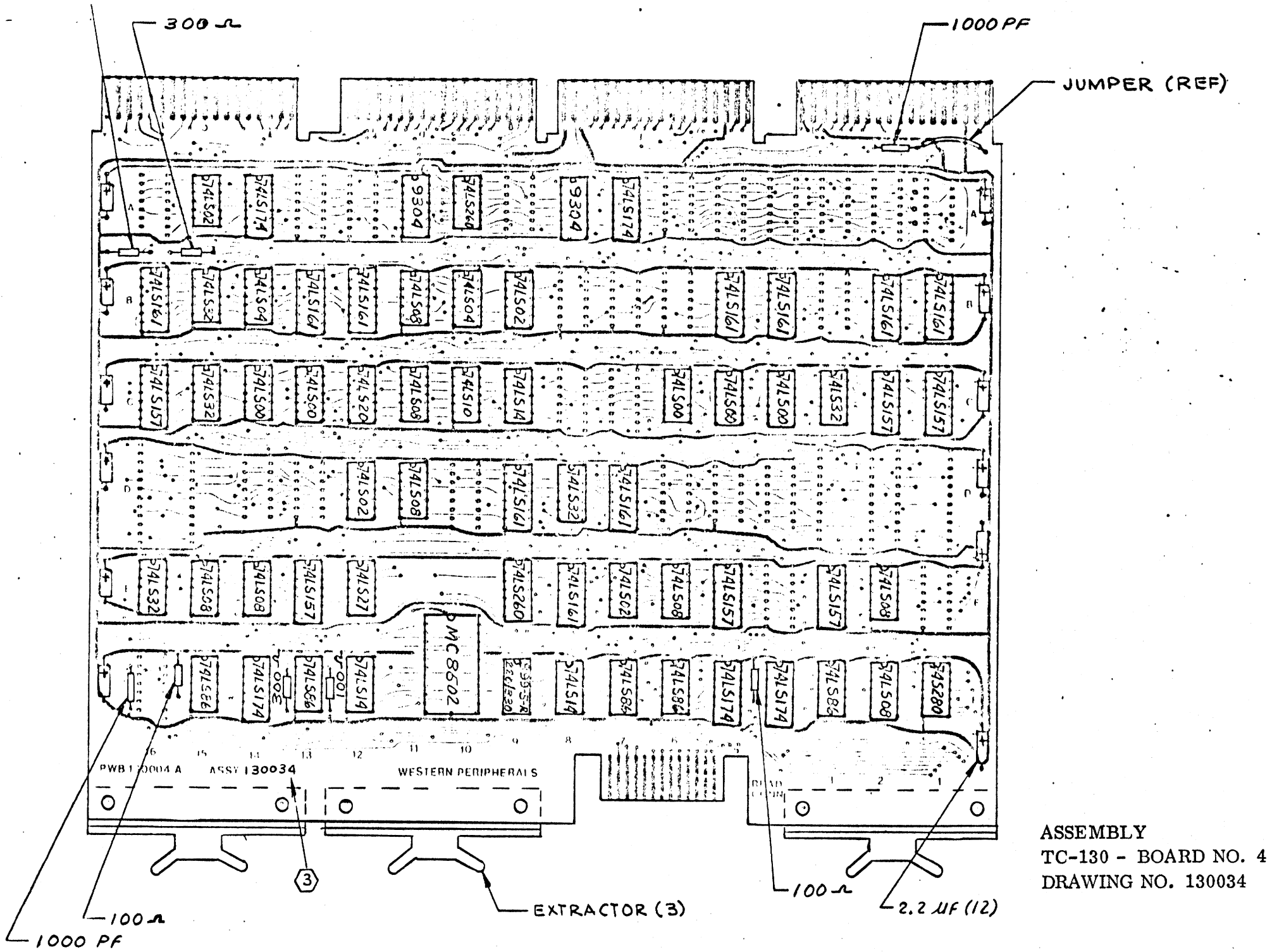
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



NOTE:
 ① RUBBER STAMP PART NO WHERE SHOWN USING BLK INK

FOR MATERIAL SEE P/L 130031

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
±	±	±	
APPROVALS	DATE	ASSY- CABLE PDP-11 POWER	
DRAWN C.C. M.	6-17-76	SCALE FULL	SIZE B
CHECKED J.L.	6-22-76	DRAWING NO. 130031	
		DO NOT SCALE DRAWING	
		SHEET 1 OF 1	



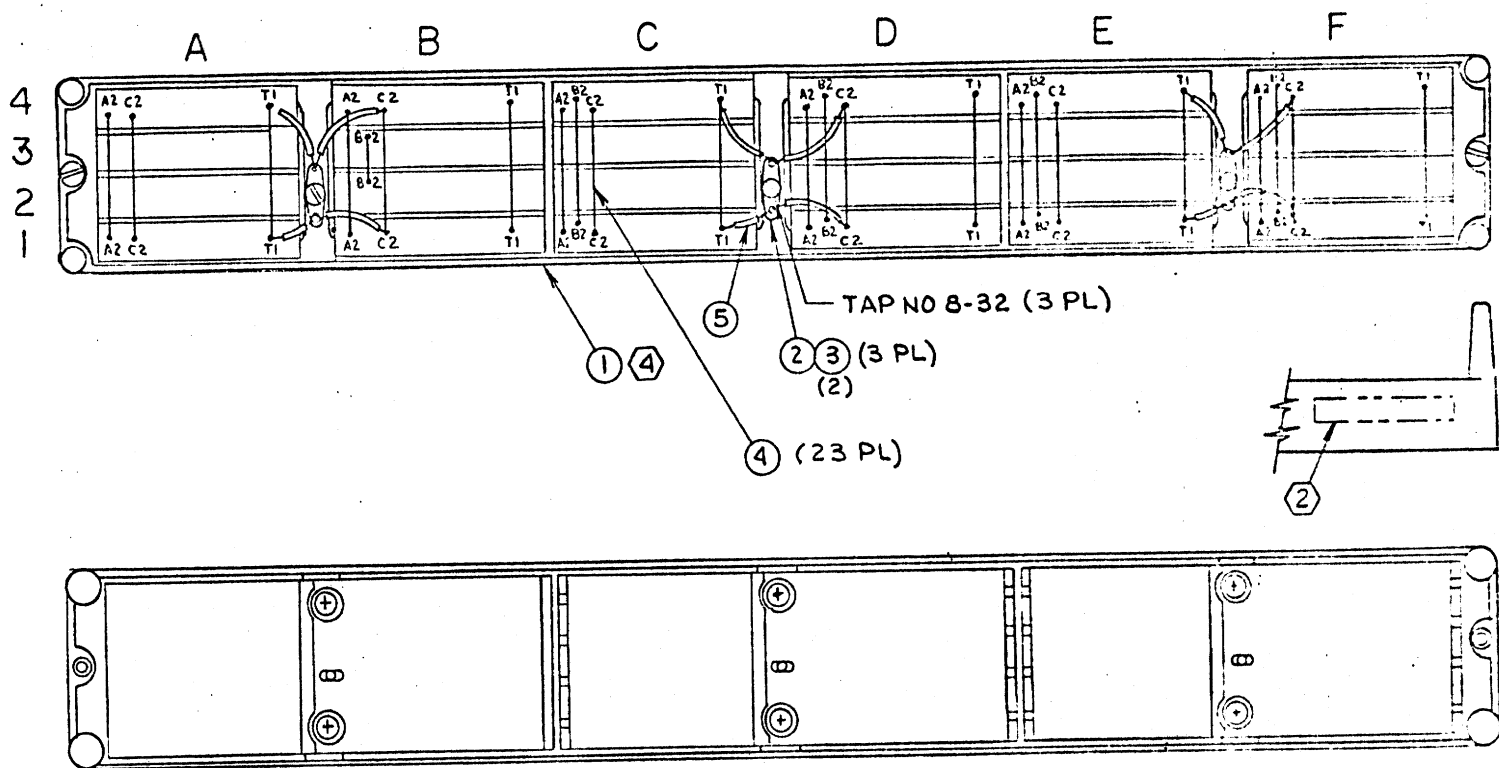
ASSEMBLY
 TC-130 - BOARD NO. 4
 DRAWING NO. 130034

NOTE: UNLESS OTHERWISE SPECIFIED
 1. FOR MATERIAL SEE P/L 131001
 2. RUBBER STAMP ASSY NUMBER WITH
 LATEST REVISION LETTER LOCATED
 APPROX WHERE SHOWN
 3. WIRE PER WIRE LIST 131001 IF ITEM
 NO.1 IS SUPPLIED, WIRE PER WIRE
 LIST 131004 IF ITEM NO.8 IS
 SUPPLIED IN LIEU OF ITEM NO.1
 AND REMOVE THE FOLLOWING
 BB11 WIRES:

- B S1E2 TO BS4E2 (BG4H)
- B S1B1 TO BS4B1 (BG5H)
- B S1A1 TO BS4A1 (BG6H)
- A S1V1 TO AS4V1 (BG7H)
- A S1U1 TO AS4U1 (NPGH)

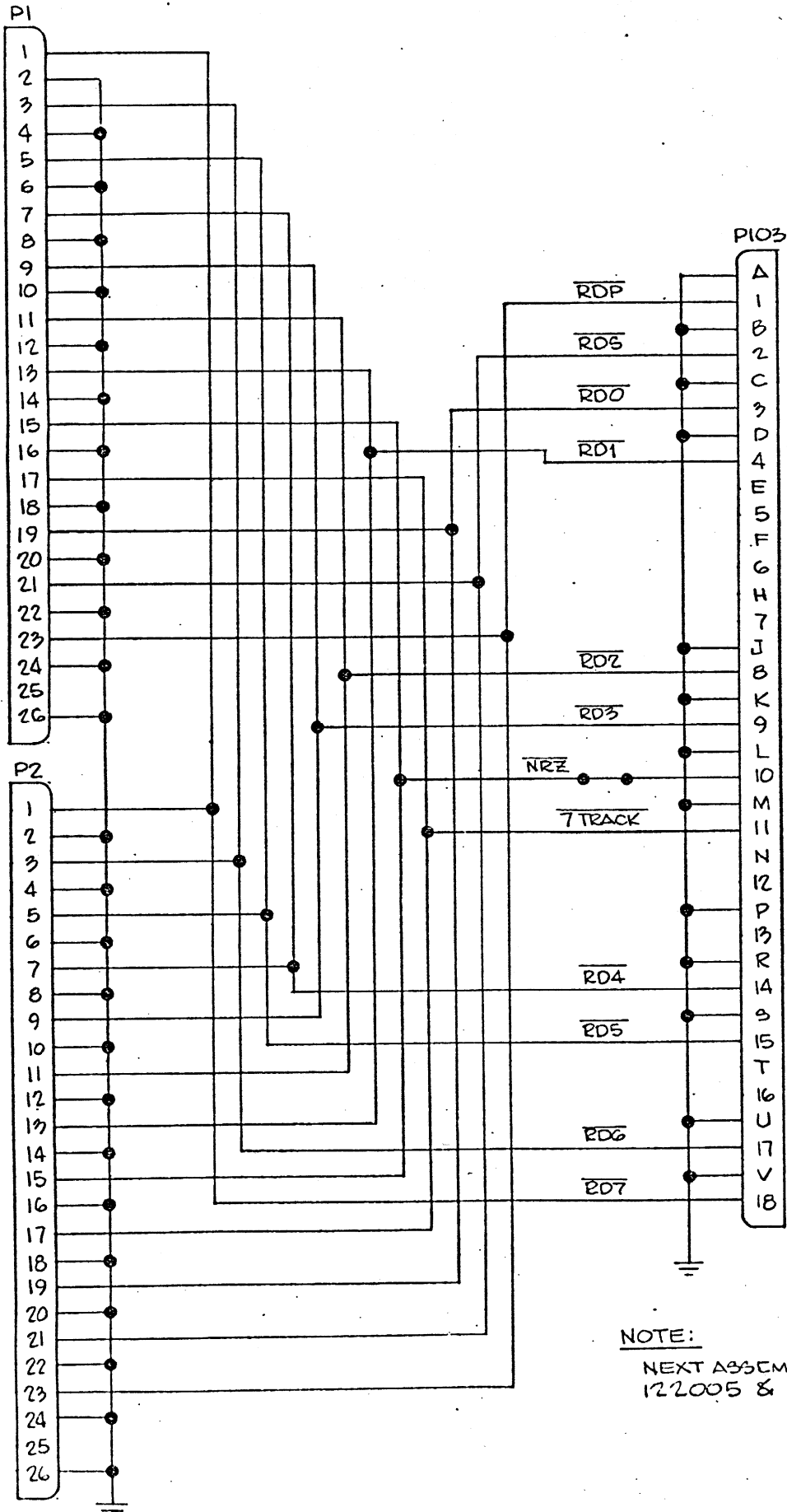
4. IF ITEM NO.8 IS USED IN LIEU OF
 ITEM NO.1 ITEMS 2,3,4 & 5
 ALREADY EXIST & NEED NOT
 BE SUPPLIED

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
C	REVISED & REDRAWN PER CO. 0109	8-25-76	[Signature]



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA		
APPROVALS		DATE		
DESIGN CORUM		8-24-76		
CHECKED H.O.		8-25-76		
SCALE		SIZE	DRAWING NO	REV
NONE		B	131001	C
DO NOT SCALE DRAWING				SHEET OF

LTR	REVISIONS	DATE	APPROVED
	DESCRIPTION		



NOTE:
NEXT ASSEMBLY NO.
122005 & 122018.


 western peripherals ANAHEIM CALIFORNIA	SCHEMATIC ADPTR., TAPE READ CONNECTOR		SIZE B DRAWING NO. 122022	SHEET 1 OF 1
	TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES	APPROVALS DRAWN HRP 1-13-76 CHECKED LL 1-26-76	DATE 1-13-76	SCALE NONE

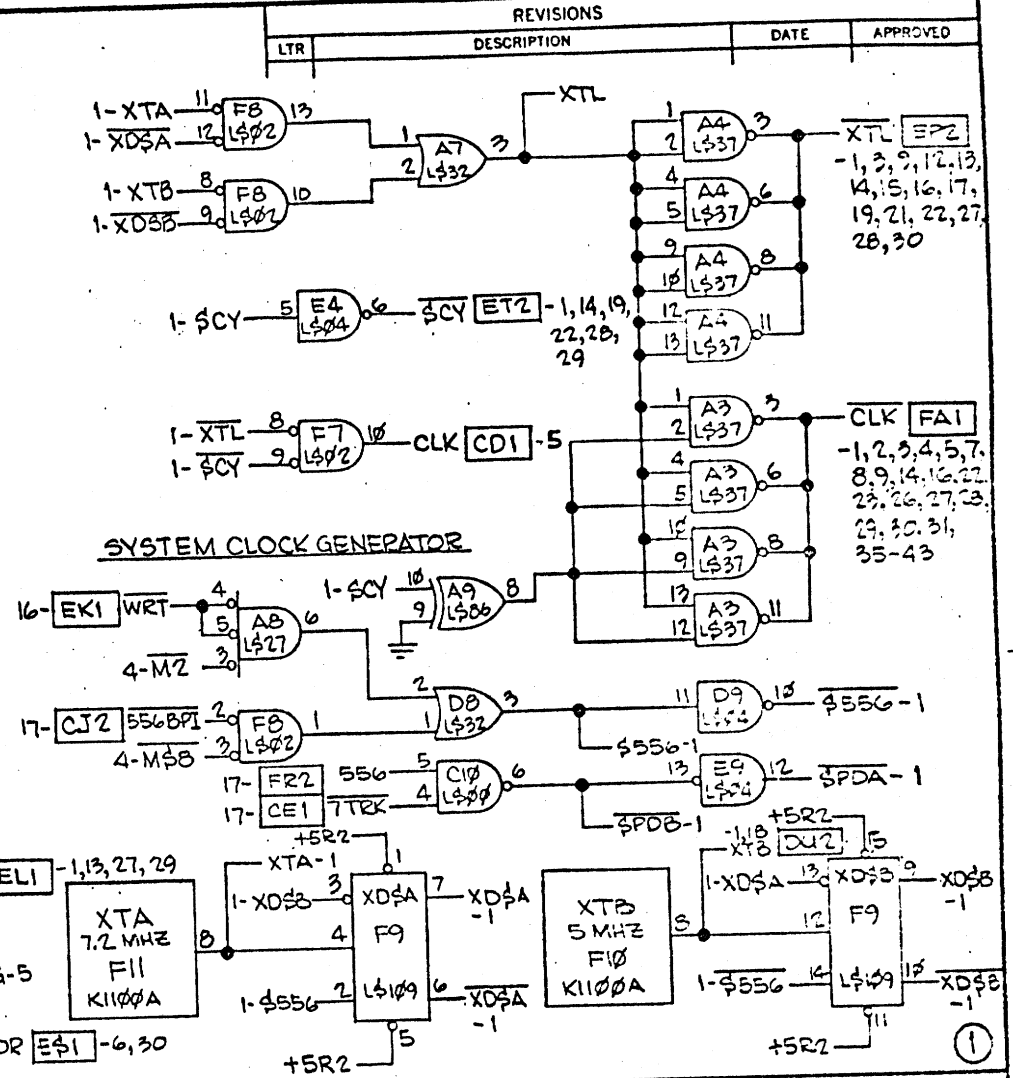
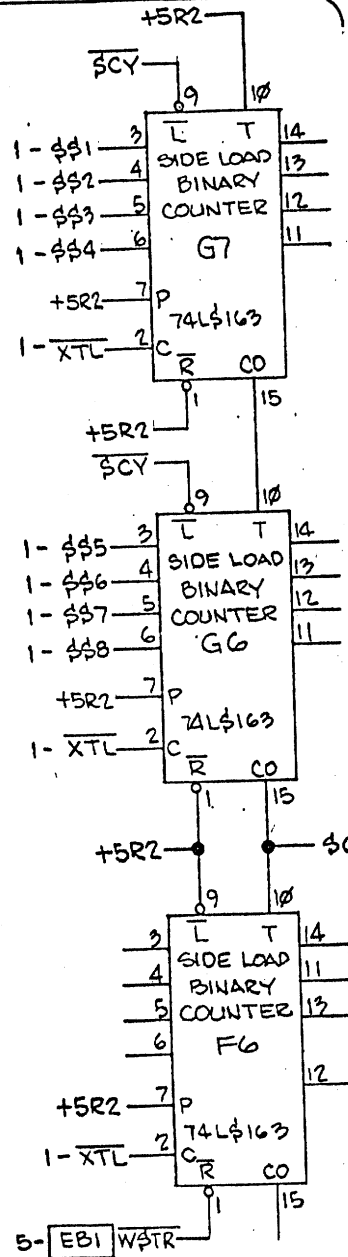
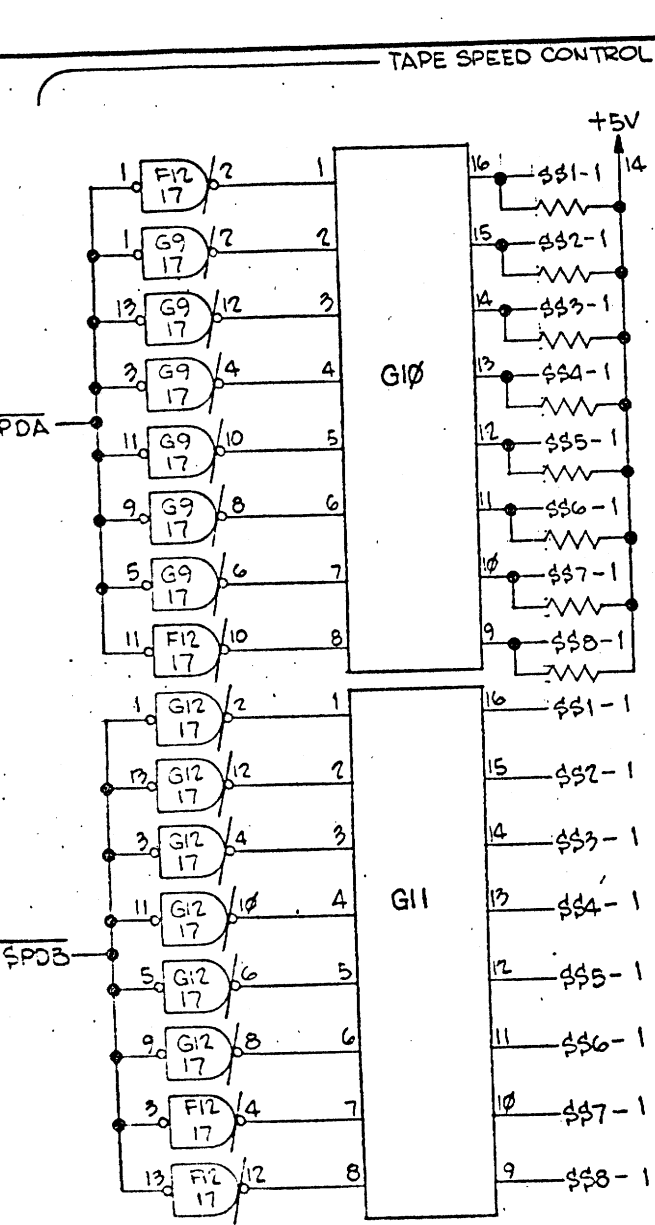
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ECO# 0131, ITEMS 2 & 5	1-4-77	HRD

SPEED SWITCH SETTINGS

SWITCH POSITIONS 10G & 11G	S P E E D					
	12.5IPS	25IPS	37.5IPS	45IPS	75IPS	125IPS
1	ON	OFF	ON	OFF	OFF	OFF
2	OFF	OFF	OFF	OFF	ON	OFF
3	OFF	ON	ON	OFF	ON	OFF
4	ON	ON	ON	ON	ON	ON
5	ON	OFF	ON	ON	OFF	OFF
6	OFF	ON	OFF	OFF	OFF	OFF
7	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	OFF	OFF	OFF

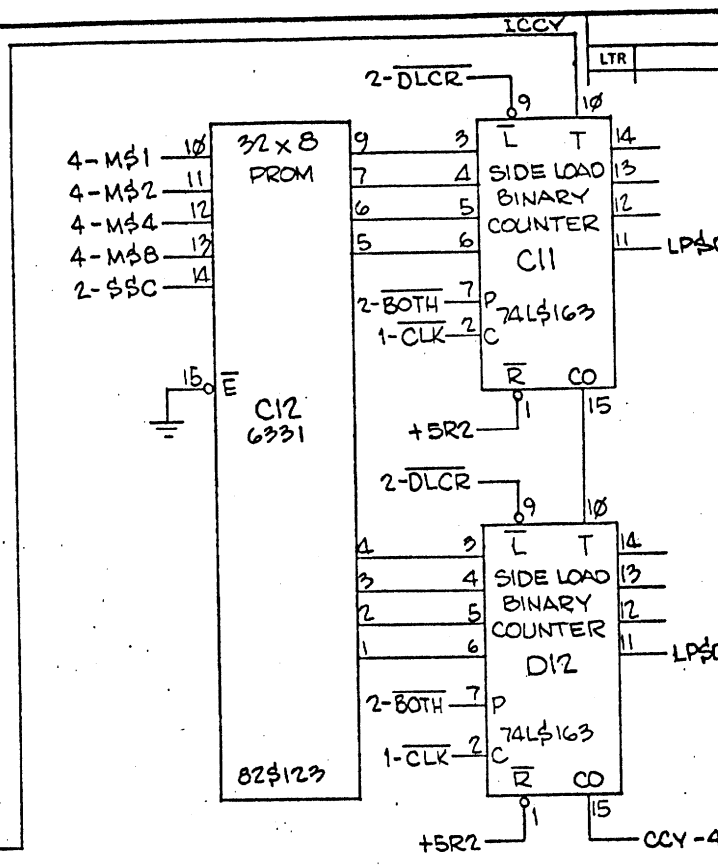
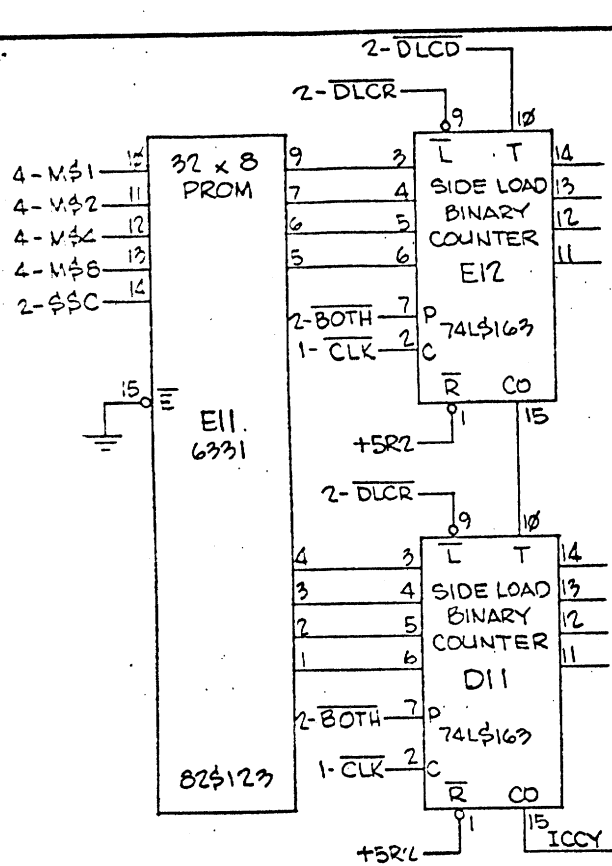
NOTE:
G10 IS PRIMARY SPEED SELECTION.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS _____ DATE _____ DRAWN HRD		SCHMATIC TC130 TAPE CONTROLLER BOARD NO. 1-ASSY NO. 130017	
CHECKED _____	SCALE _____	SIZE B	DRAWING NO. 130026
DO NOT SCALE DRAWING			SHEET 1 OF 10

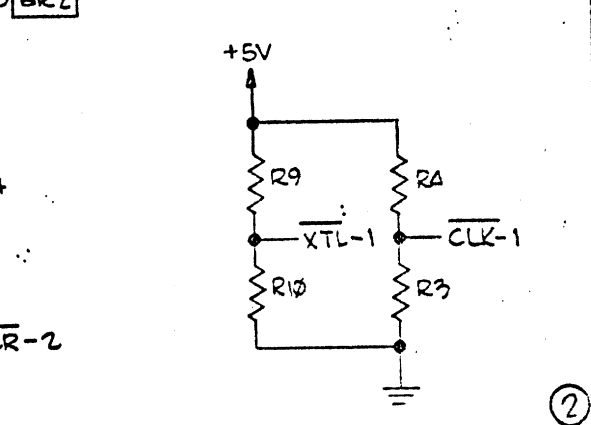
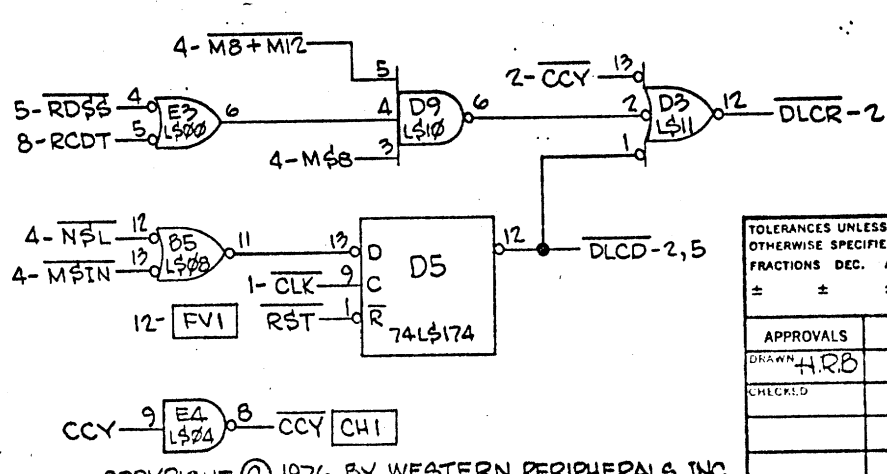
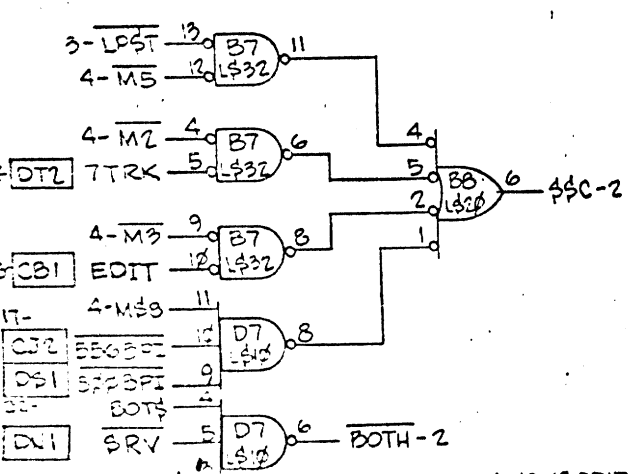
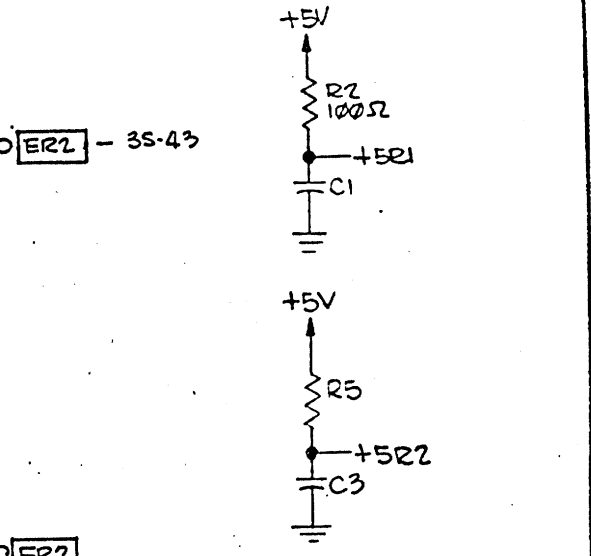


REVISIONS		DATE	APPROVED
LTR	DESCRIPTION		

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC. ANGLES		ANA-EM, CALIFORNIA	
±	±	±	
APPROVALS	DATE	CLOCK GENERATOR	
DRAWN H.R.B.		SCALE	SIZE B DRAWING NO. 130026
CHECKED		DO NOT SCALE DRAWING	SHEET 2 OF 10



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



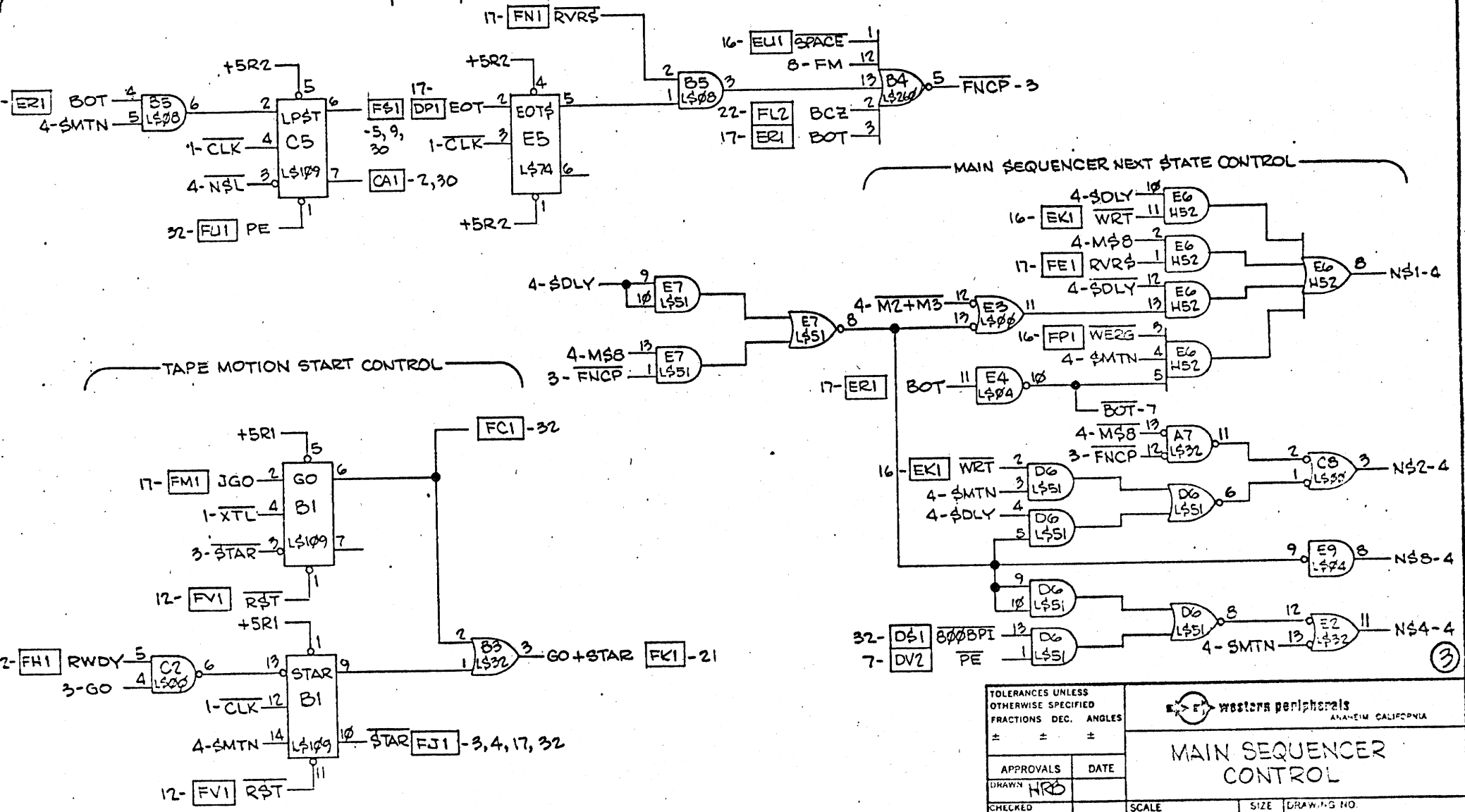
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC.	ANGLES	ANAHEIM, CALIFORNIA	
±	±		
APPROVALS	DATE	DELAY COUNTER	
DRAWN H.R.B.		SCALE	SIZE B DRAWING NO. 130026
CHECKED		DO NOT SCALE DRAWING	SHEET 30=10

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

PE IDEN STATUS CONTROL

SPACE OPERATION CONTROL

MAIN SEQUENCER NEXT STATE CONTROL



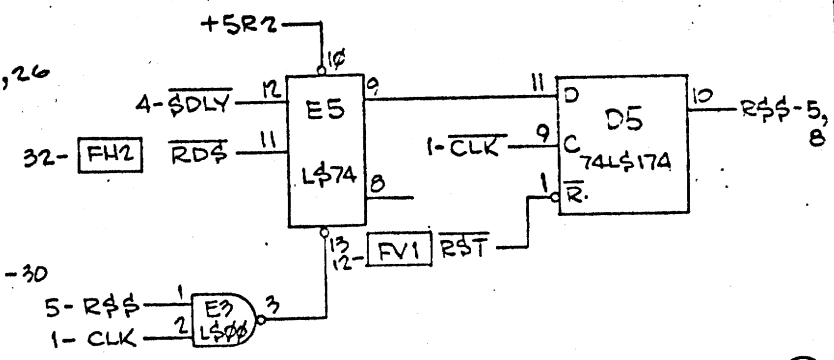
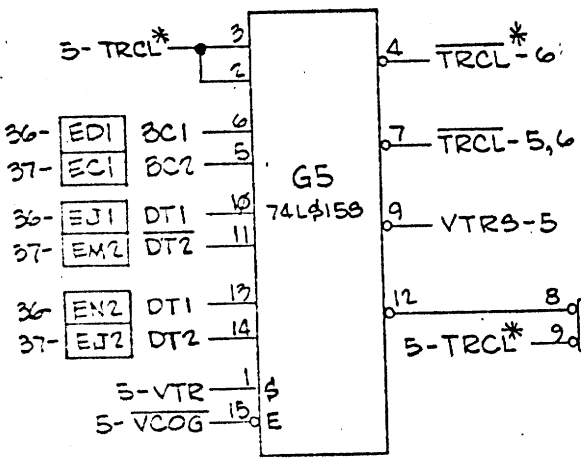
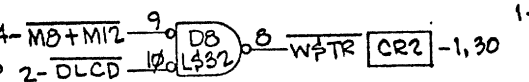
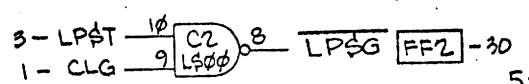
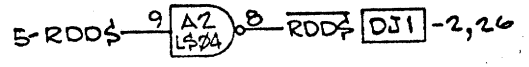
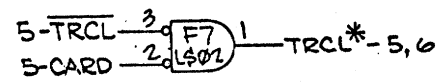
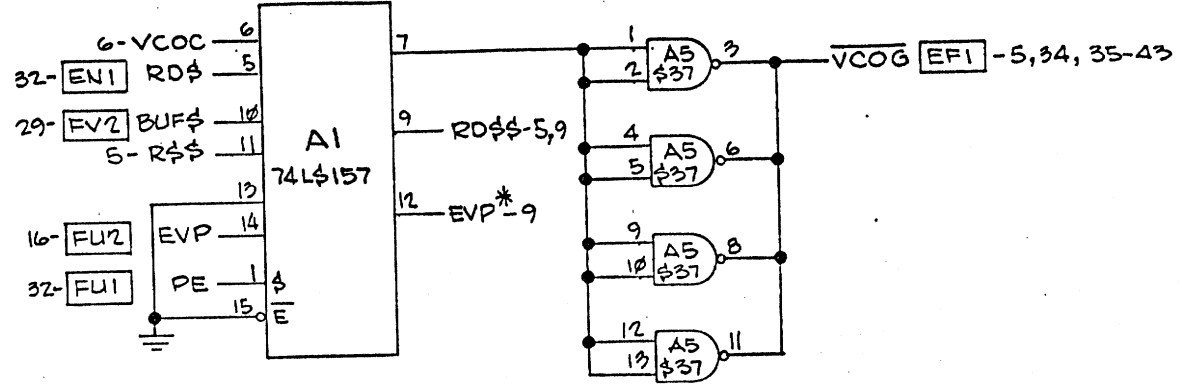
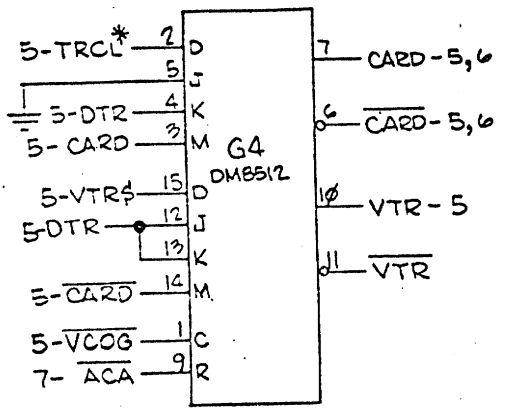
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS DEC. ANGLES	
± ± ±	
APPROVALS	DATE
DRAWN HRB	
CHECKED	

western peripherals
ANAHEIM CALIFORNIA

MAIN SEQUENCER CONTROL

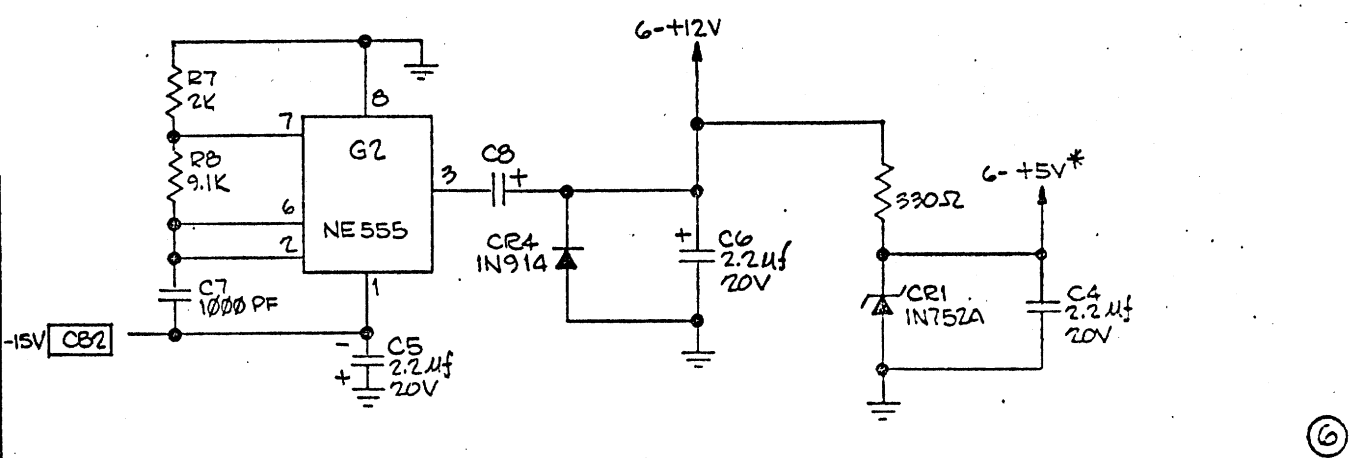
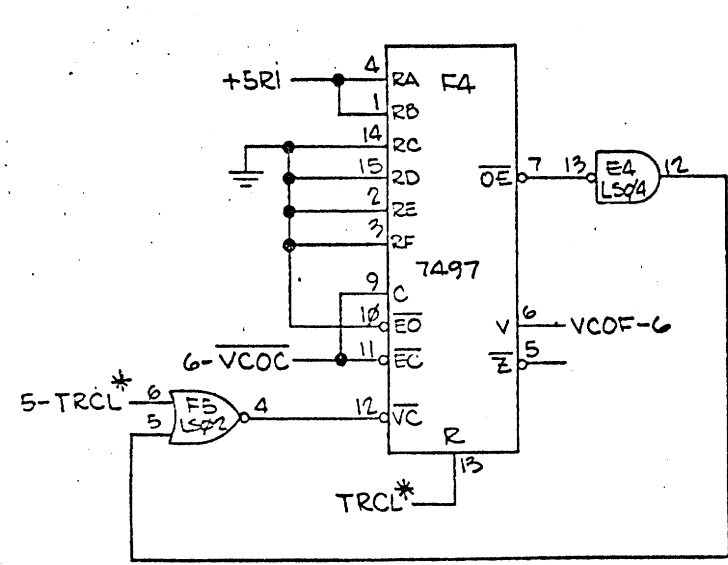
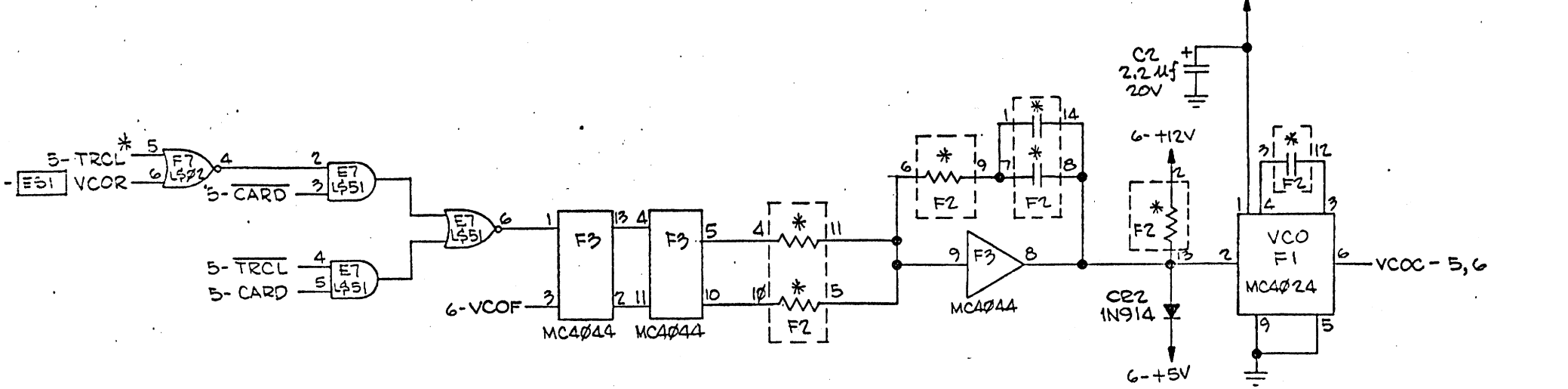
SCALE	SIZE	DRAWING NO.
	B	130026
DO NOT SCALE DRAWING		SHEET 4 OF 10

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN: <i>NEB</i>			
CHECKED		SCALE	SIZE B
		DRAWING NO. 130026	
		DO NOT SCALE DRAWING	
		SHEET 6 OF 10	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
	6-+5V*		




TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANALOG DIVISION LOS ANGELES, CALIFORNIA	
APPROVALS		DATE	
DRAWN <i>HRB</i>			
CHECKED		SCALE	SIZE B
		DRAWING NO. 130026	
		DO NOT SCALE DRAWING	
		SHEET 7 OF 10	

BUS SWITCH SETTINGS

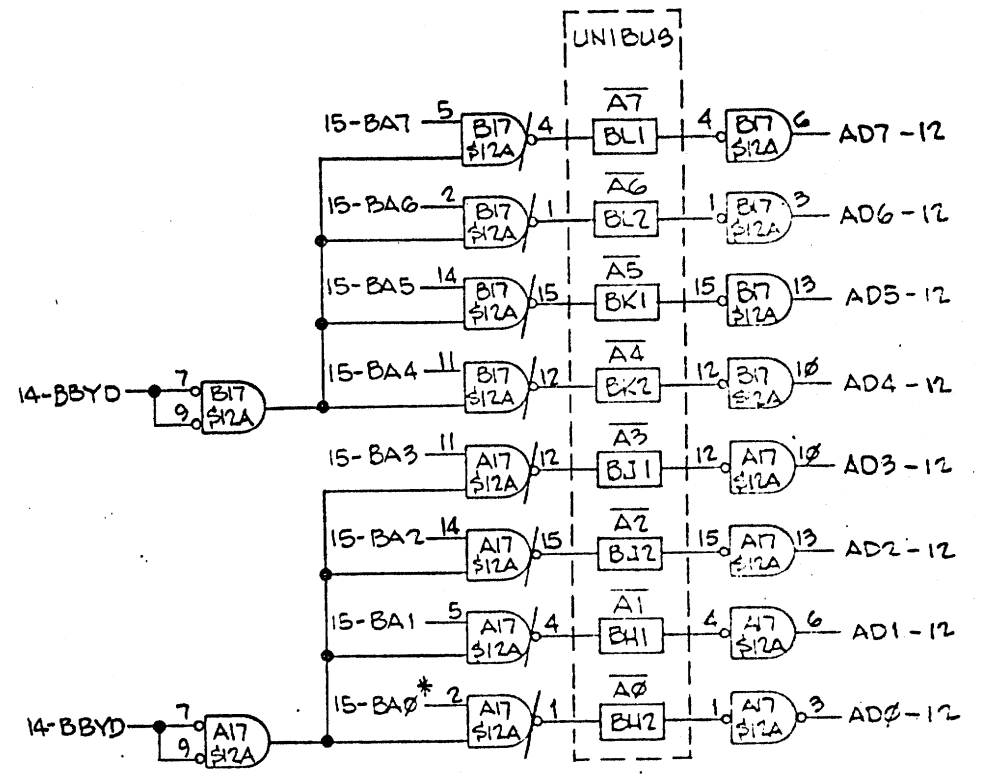
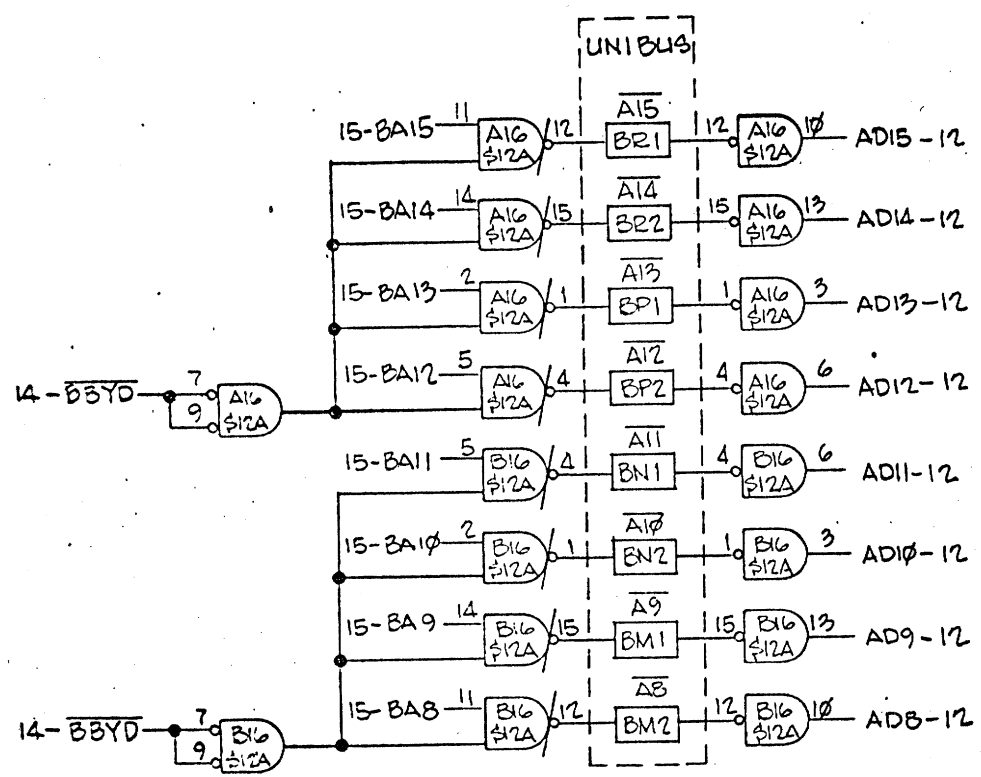
SWITCH POS. NUMBERS SWITCH A/B	INTERRUPT BUS LEVEL			
	4	5	6	7
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	ON	OFF	OFF
4	ON	OFF	OFF	OFF
5	OFF	OFF	OFF	ON
6	OFF	OFF	ON	OFF
7	OFF	ON	OFF	OFF
8	ON	OFF	OFF	OFF
SWITCH POS. NUMBERS SWITCH B/B	4	5	6	7
1	ON	ON	ON	OFF
2	ON	ON	OFF	ON
3	ON	OFF	ON	ON
4	OFF	ON	ON	ON
5	OFF	OFF	OFF	ON
6	OFF	OFF	ON	OFF
7	OFF	ON	OFF	OFF
8	ON	OFF	OFF	OFF

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

NOTE:
BUS SWITCH SETTINGS ARE NORMALLY
SET AT LEVEL 5.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN <u>HEB</u>		SCHEMATIC TC130 TAPE CONTROLLER BOARD NO. 2 - ASSY. NO. 13001B	
CHECKED		SCALE	SIZE DRAWING NO.
		—	B 130027
DO NOT SCALE DRAWING			SHEET 1 OF 13

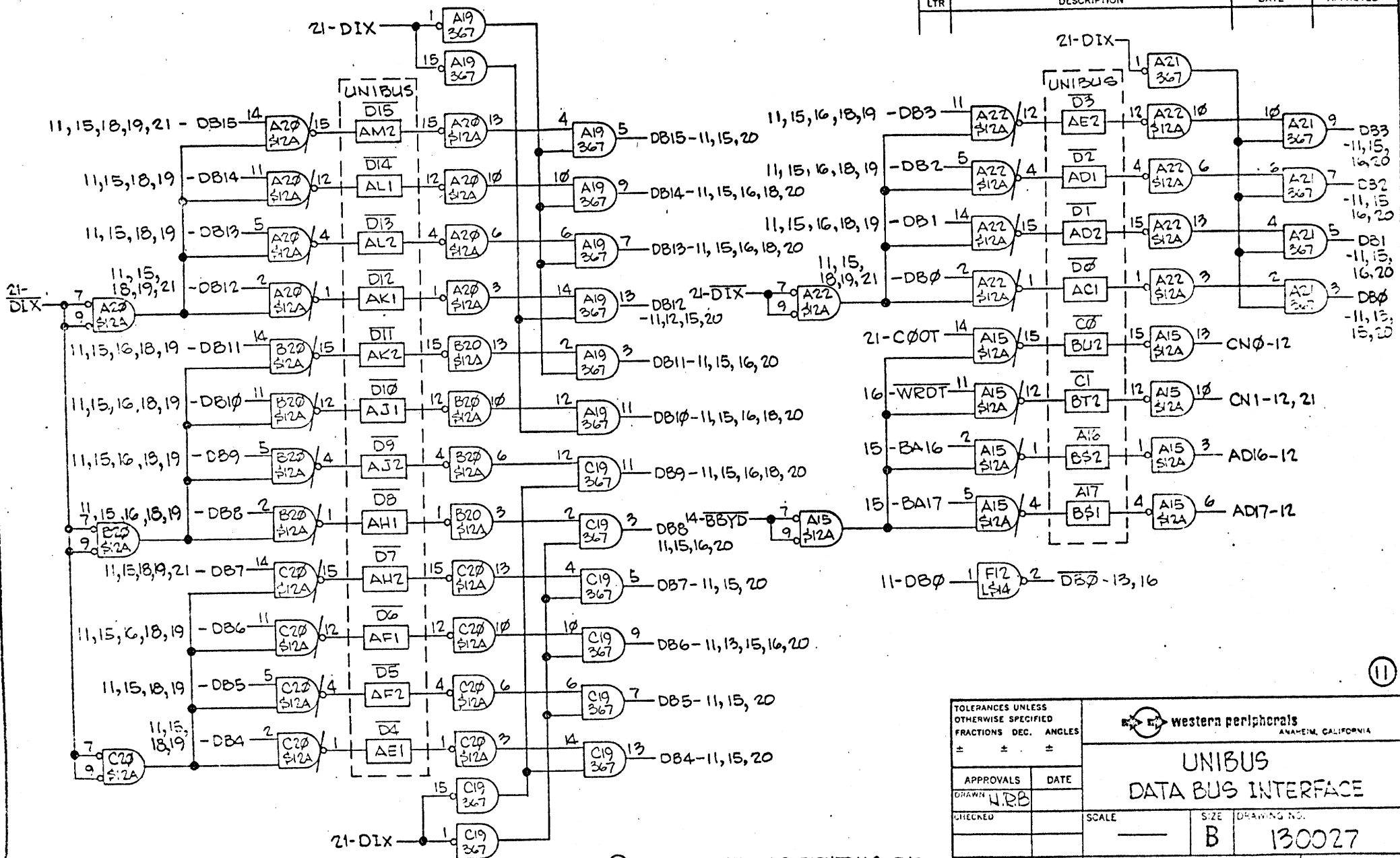
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



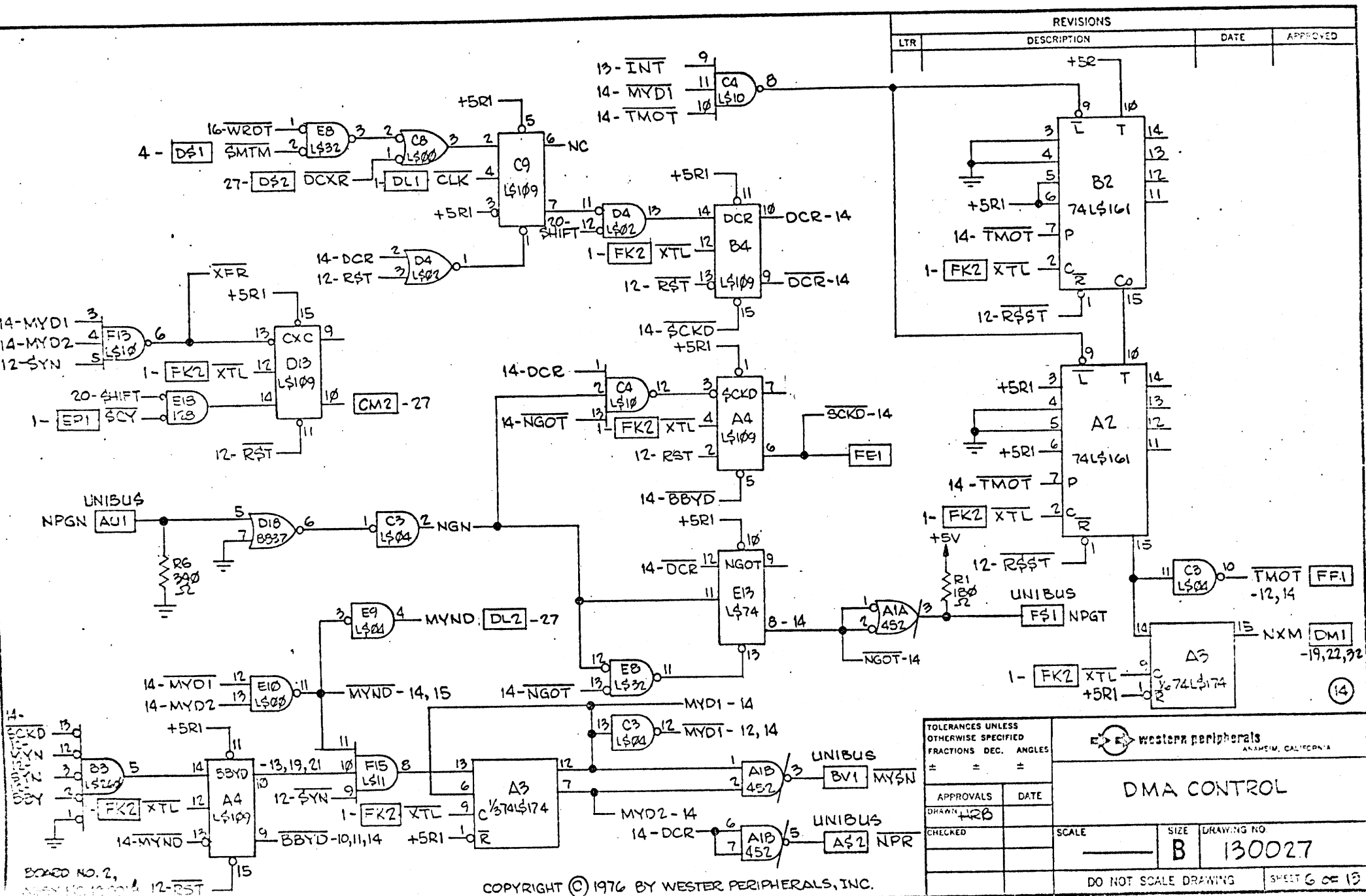
10

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		UNIBUS ADDRESS INTERFACE	
DRAWN HRB		DRAWING NO. 130027	
CHECKED		SCALE	SIZE B
		DO NOT SCALE DRAWING	
		SHEET 2 OF 2	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	UNIBUS DATA BUS INTERFACE	
± ± ±	±		
APPROVALS	DATE	SCALE	SIZE
DRAWN: W.R.B.		—	B
CHECKED		DRAWING NO.	130027
		DO NOT SCALE DRAWING	SHEET 3 OF 13



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES
± = =

APPROVALS DATE
DRAWN: HRB
CHECKED:

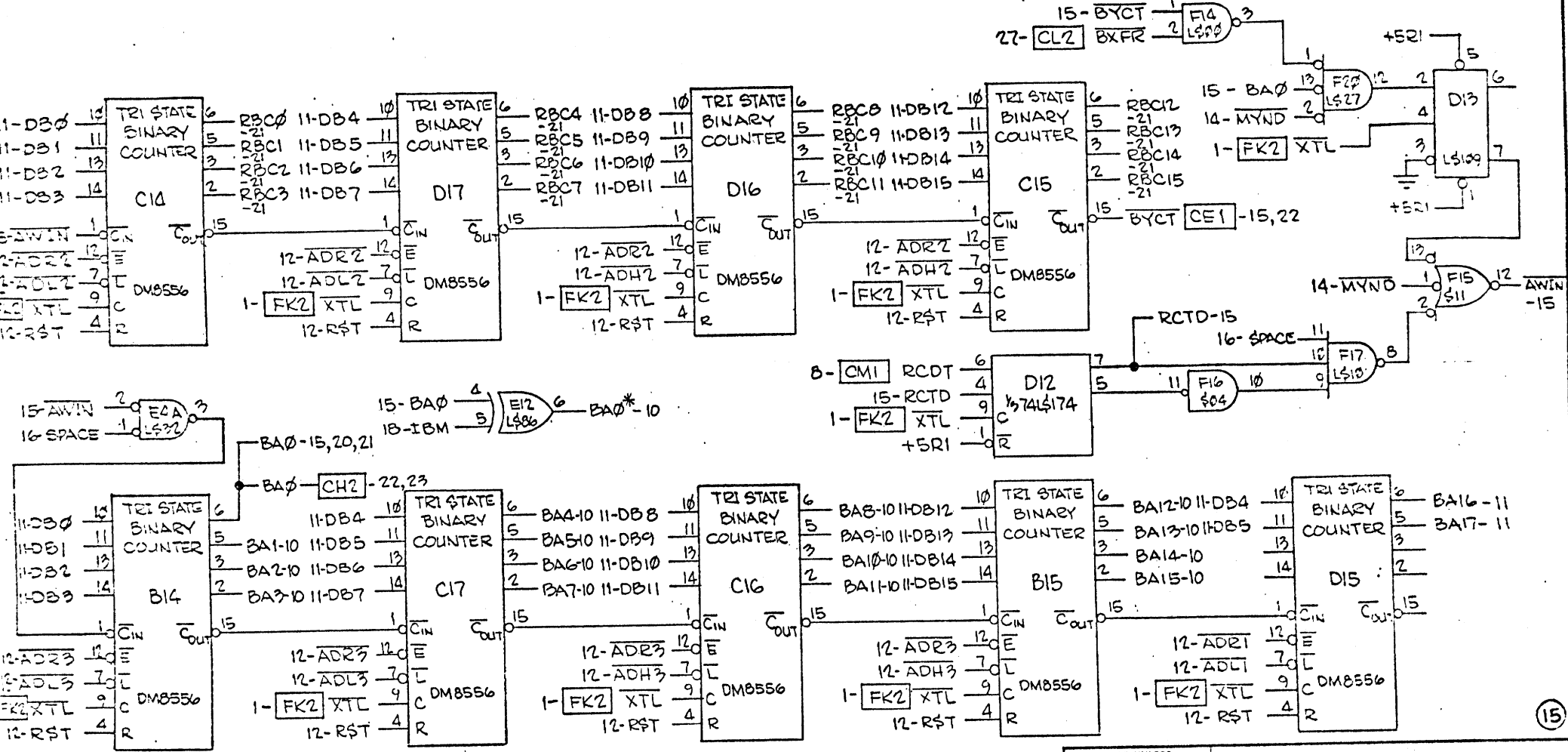
SCALE SIZE DRAWING NO.
B 130027

DO NOT SCALE DRAWING SHEET 6 OF 13

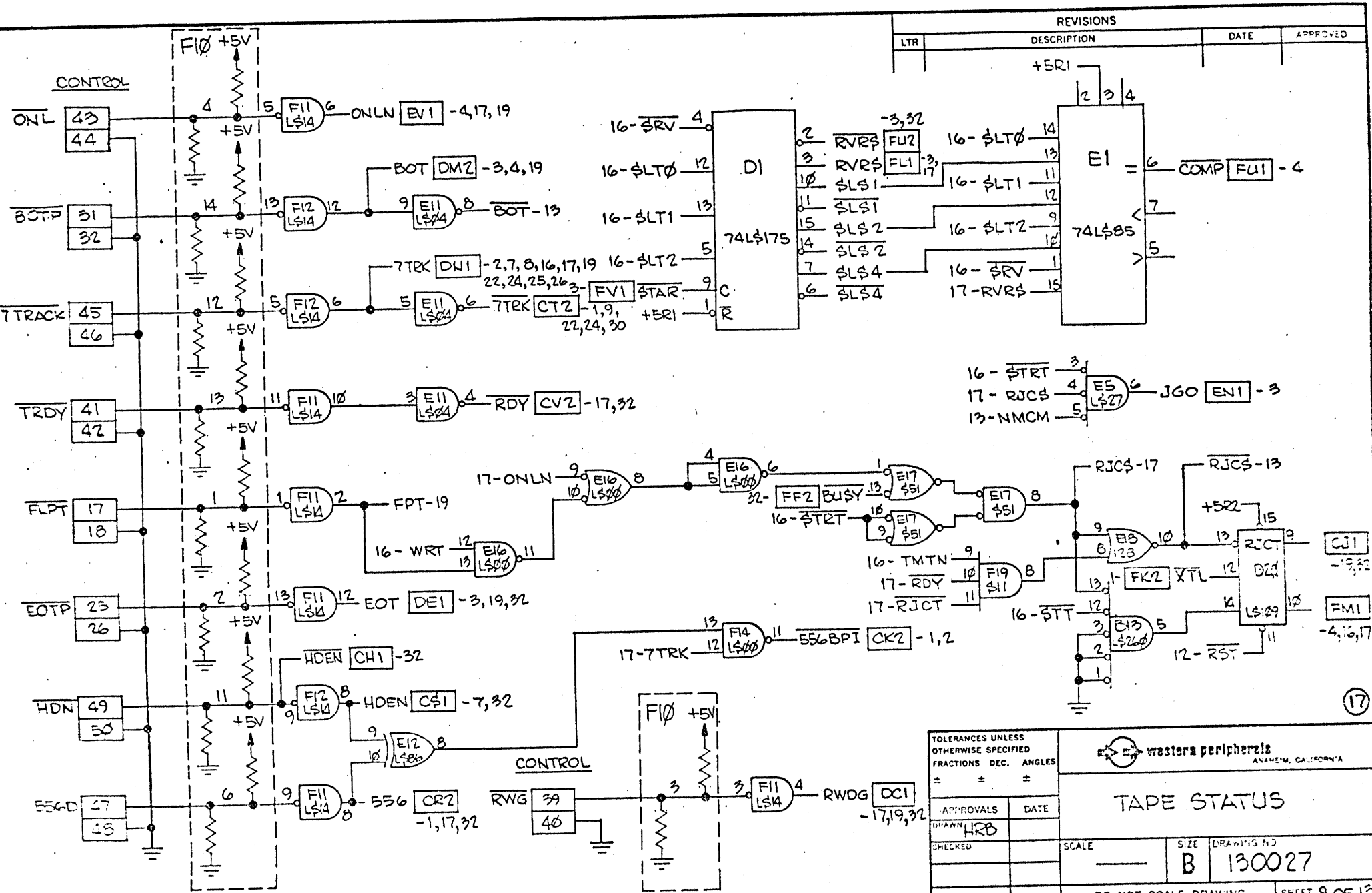
Western Peripherals
ANAHEIM, CALIFORNIA

DMA CONTROL

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	ADDRESS AND BYTE COUNTER REGISTERS	
±	±		
APPROVALS	DATE	SCALE	SIZE
DRAWN: HEP		—	B
CHECKED		DRAWING NO. 130027	
		DO NOT SCALE DRAWING	
		SHEET 7 OF 13	



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
	+5R1		

western peripherals
ANAHEIM, CALIFORNIA

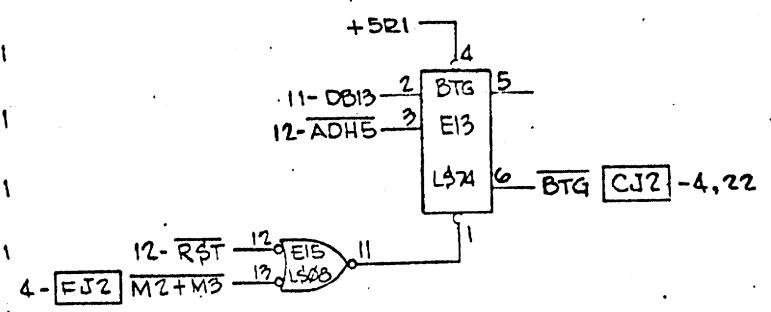
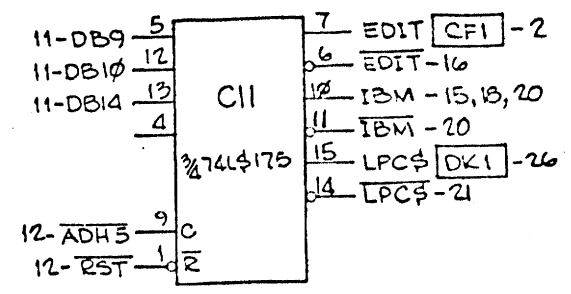
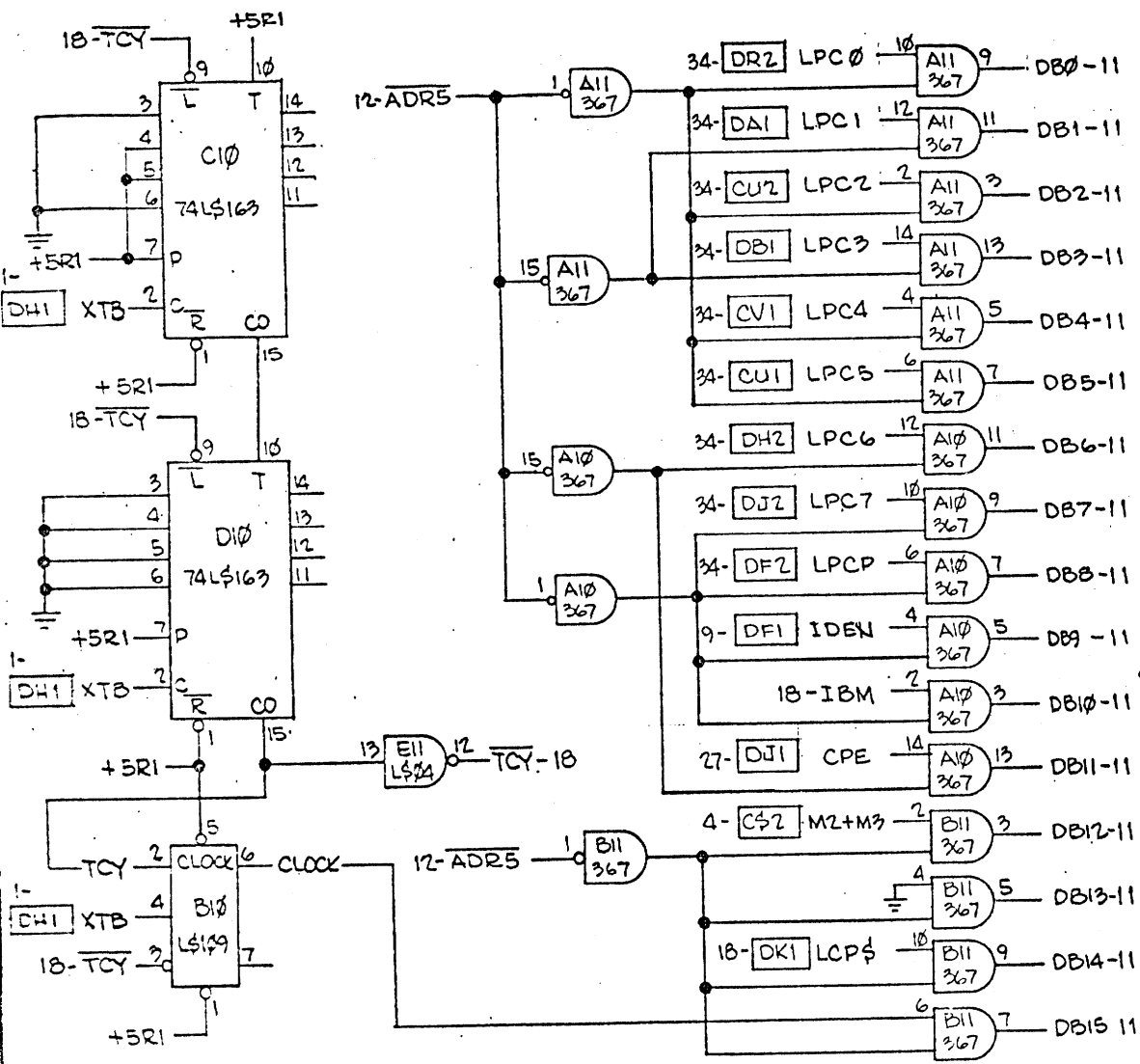
TAPE STATUS

APPROVALS	DATE
DRAWN HRB	
CHECKED	

SCALE: _____ SIZE: **B** DRAWING NO: **130027**

DO NOT SCALE DRAWING SHEET 9 OF 13

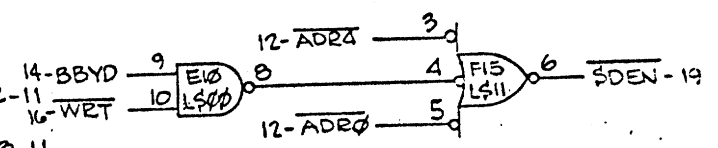
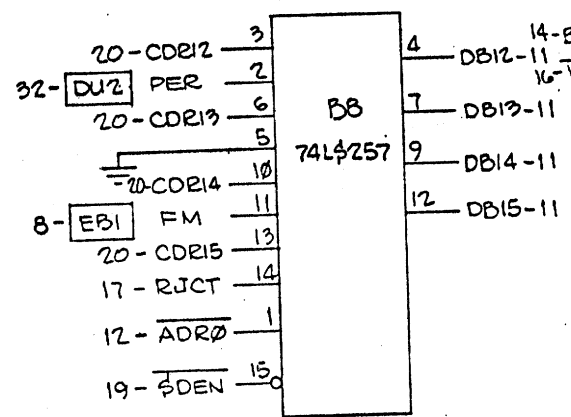
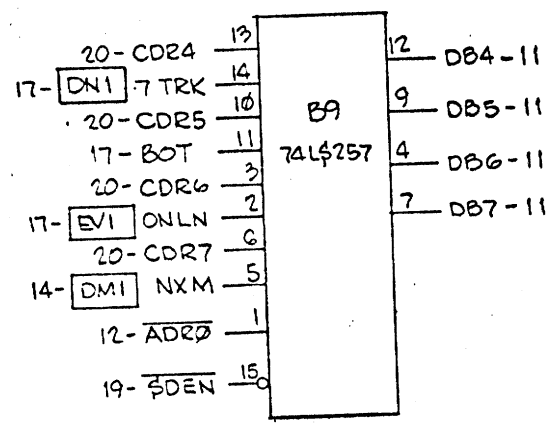
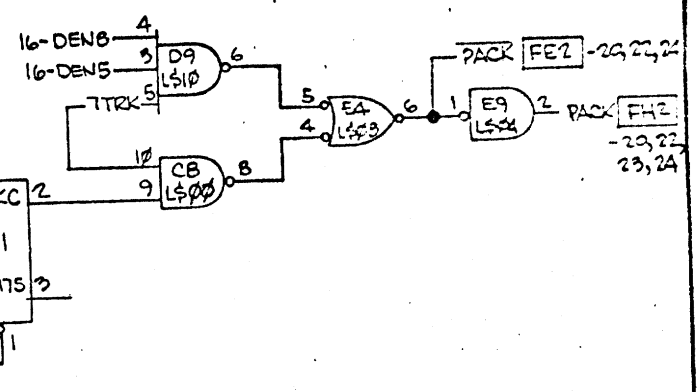
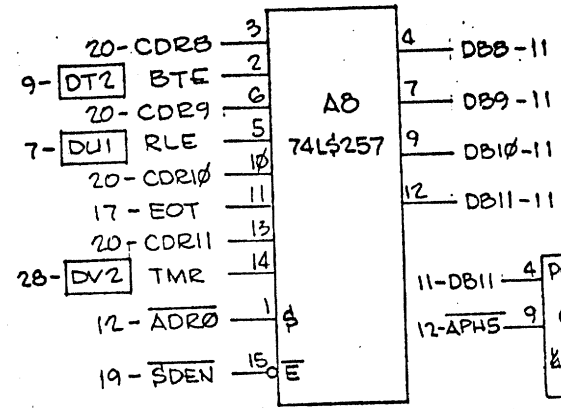
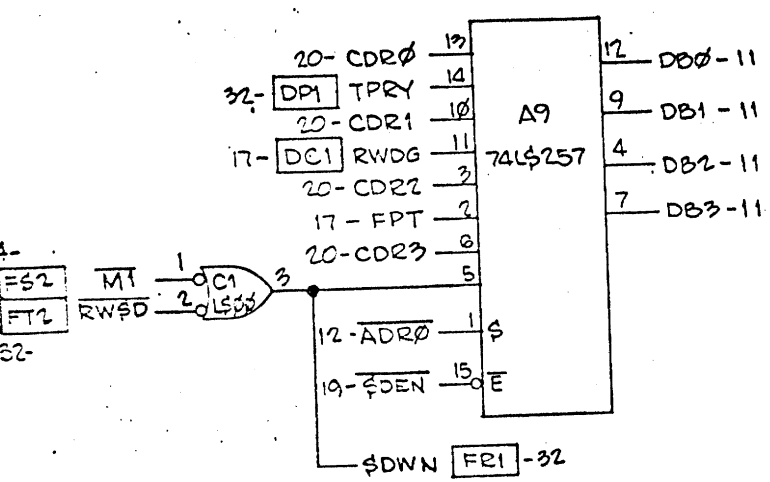
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



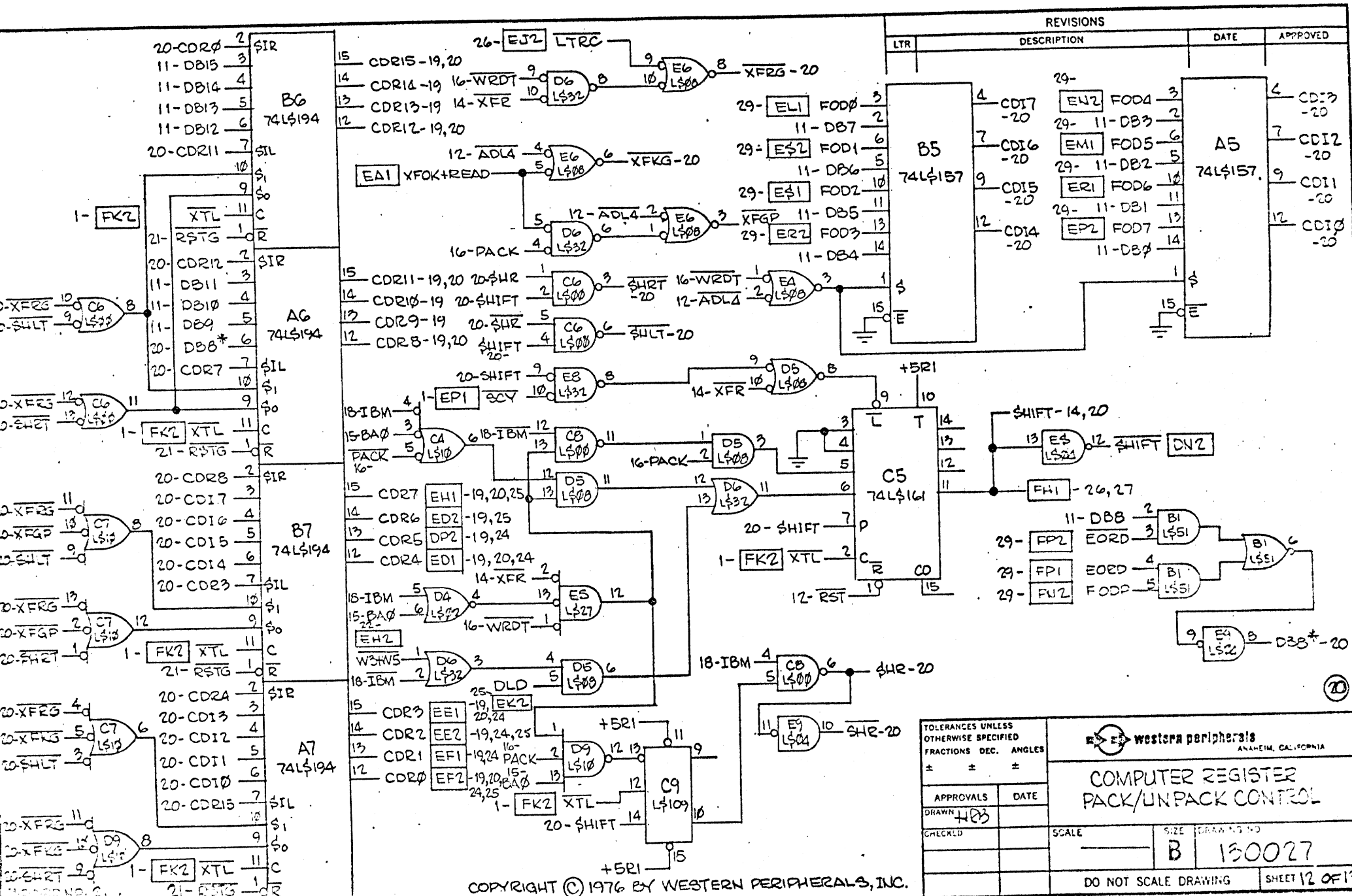
(18)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
±	±	TUI REGISTER	
APPROVALS	DATE	SCALE	SIZE
DRAWN HRS			B
CHECKED		DRAWING NO.	130027
		DO NOT SCALE DRAWING	
		SHEET 10 OF 13	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN HRO			
CHECKED		SCALE	SIZE B DRAWING NO. 130027
		DO NOT SCALE DRAWING	
		SHEET 11 OF 12	



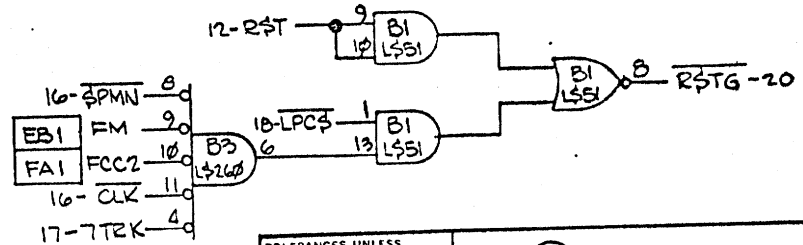
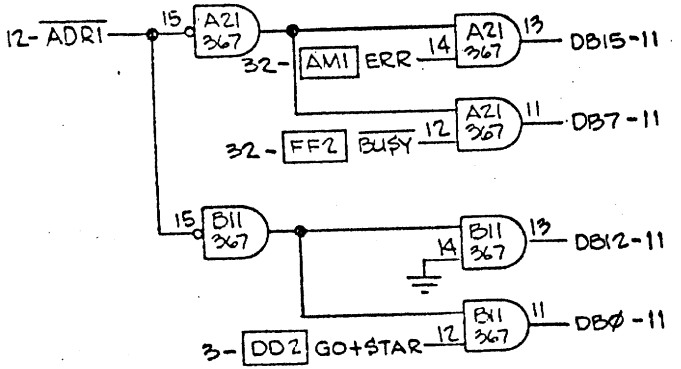
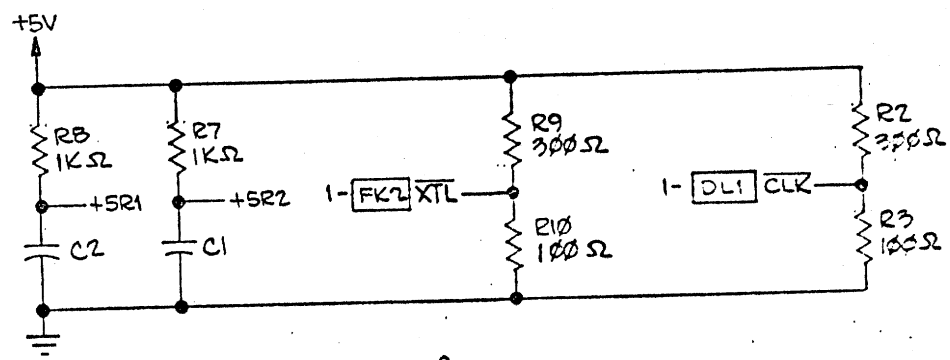
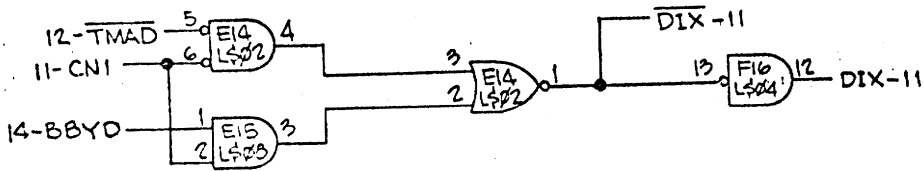
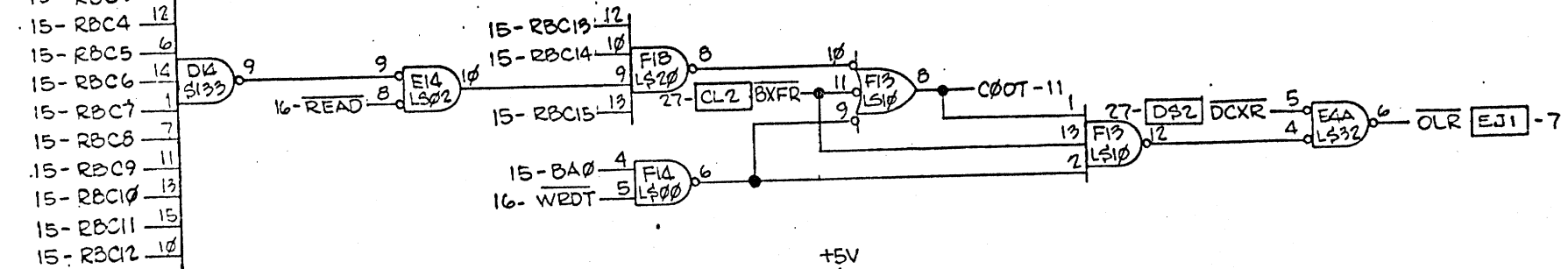
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
	29- EN2 FOD4		4 CD17 -20
	29- 11-DB7		29- 11-DB3 -20
	29- E52 FOD1		6 EMI FOD5 -20
	29- E51 FOD2		11-DB2 -20
	29- ER2 FOD3		10 ERI FOD6 -20
	11-DB4		11-DB1 -20
	11-DB5		13 EP2 FOD7 -20
	11-DB6		14
	11-DB8		12 CD14 -20
			1 CD13 -20
			7 CD12 -20
			9 CD11 -20
			12 CD10 -20

TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES	
±	±	±	±
APPROVALS		DATE	
DRAWN HRB			
CHECKED		SCALE	SIZE
			B 130027
DO NOT SCALE DRAWING			SHEET 12 OF 13

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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED


- 15-RBC0 2
- 15-RBC1 3
- 15-RBC2 4
- 15-RBC3 5
- 15-RBC4 12
- 15-RBC5 6
- 15-RBC6 14
- 15-RBC7 1
- 15-RBC8 7
- 15-RBC9 11
- 15-RBC10 13
- 15-RBC11 15
- 15-RBC12 10



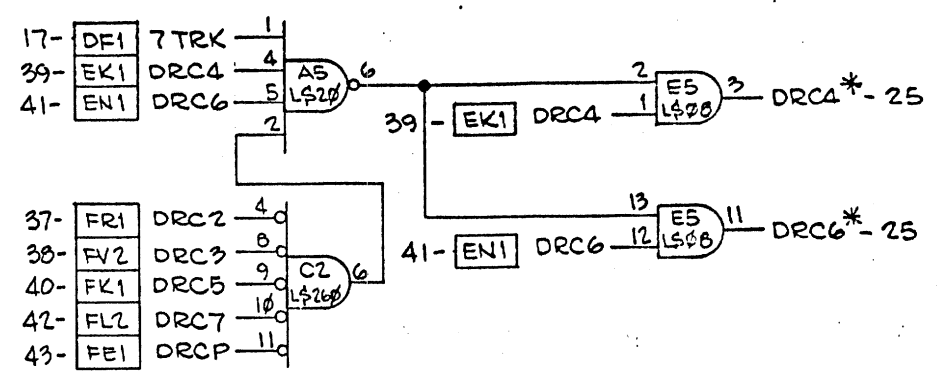
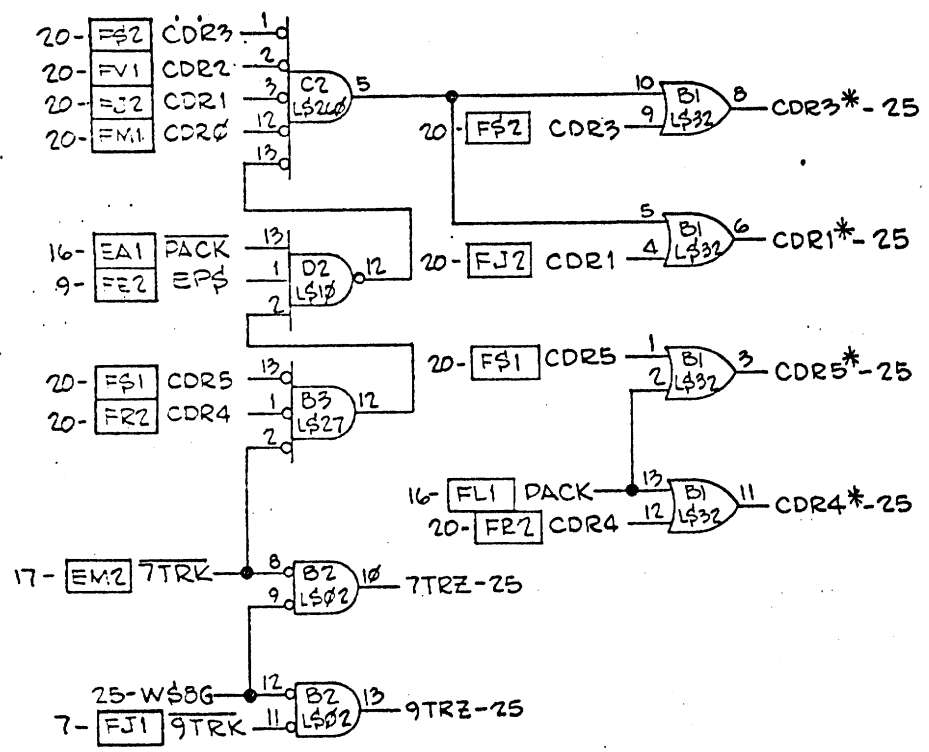
(21)

TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES	
±	±	±	±
APPROVALS		DATE	
DRAWN JRB			
CHECKED		SCALE	SIZE DRAWING NO.
			B 130027
DO NOT SCALE DRAWING			SHEET 13 OF 13

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals <small>ANAHEIM, CALIFORNIA</small>	
APPROVALS		DATE	
DRAWN NRB		SCHEMATIC TC130 TAPE CONTROLLER BOARD NO. 3 - ASSY NO. 130019	
CHECKED	SCALE	SIZE	DRAWING NO.
		B	130028
DO NOT SCALE DRAWING			SHEET 1 OF 11

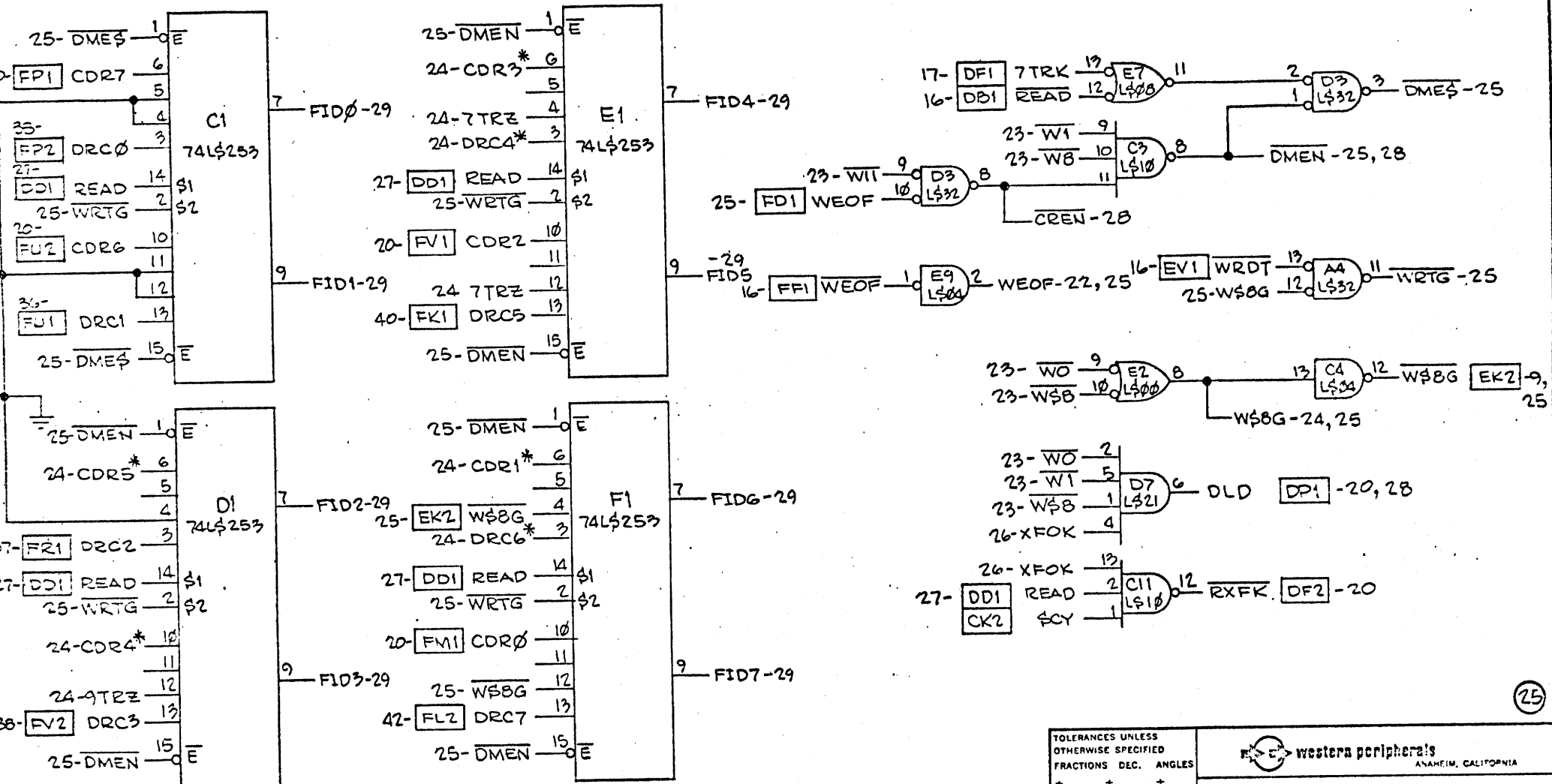
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



24

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	0 → 12 CODE CONVERTER	
± ± ±	±	12 → 0 CODE CONVERTER	
APPROVALS	DATE	SCALE	SIZE
DRAWN HRB			B
CHECKED		DRAWING NO	130028
		DO NOT SCALE DRAWING	
		SHEET 4 OF 11	

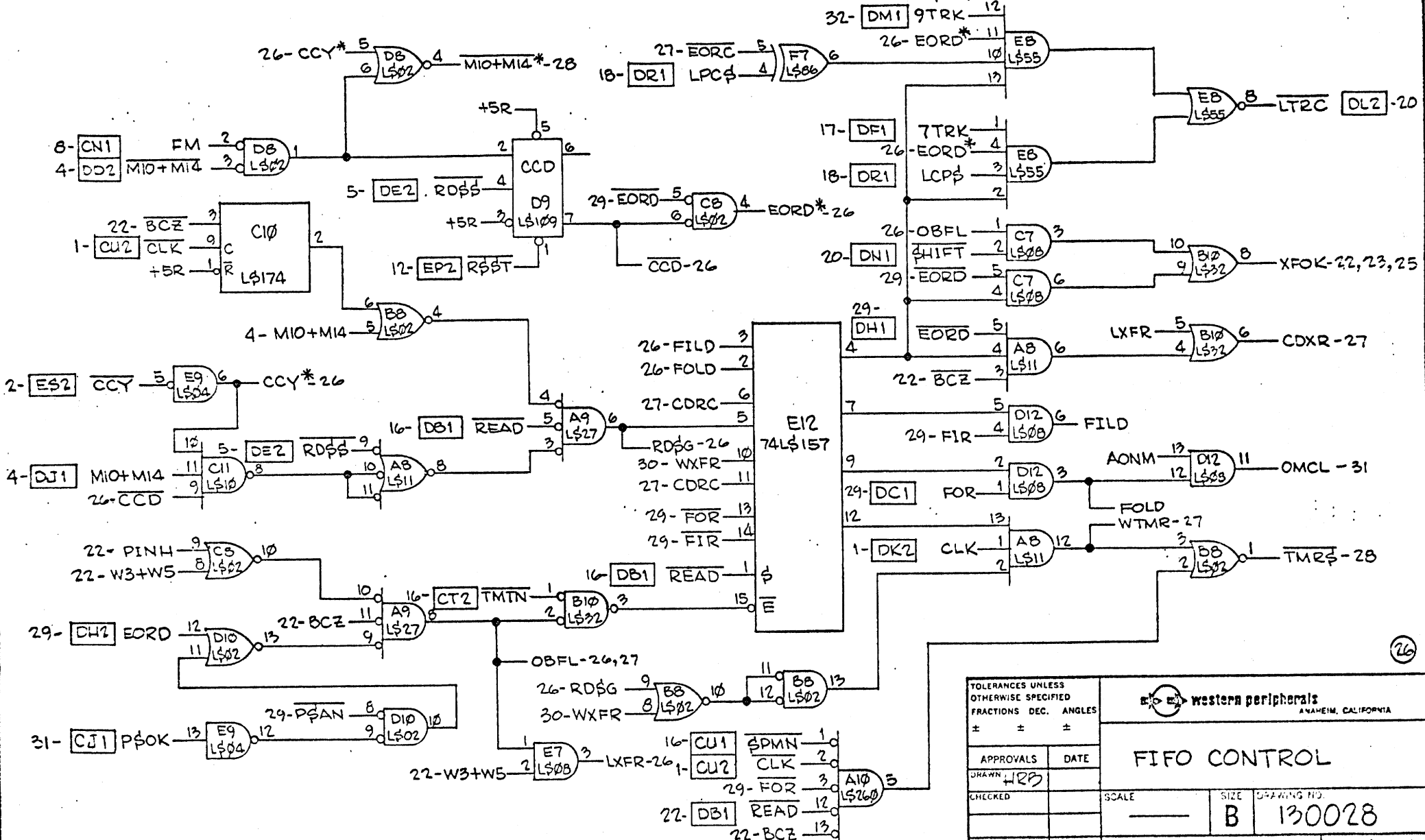
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



(25)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN HRB			
CHECKED		SCALE	SIZE B
		DRAWING NO. 130028	
DO NOT SCALE DRAWING			SHEET 5 OF 11

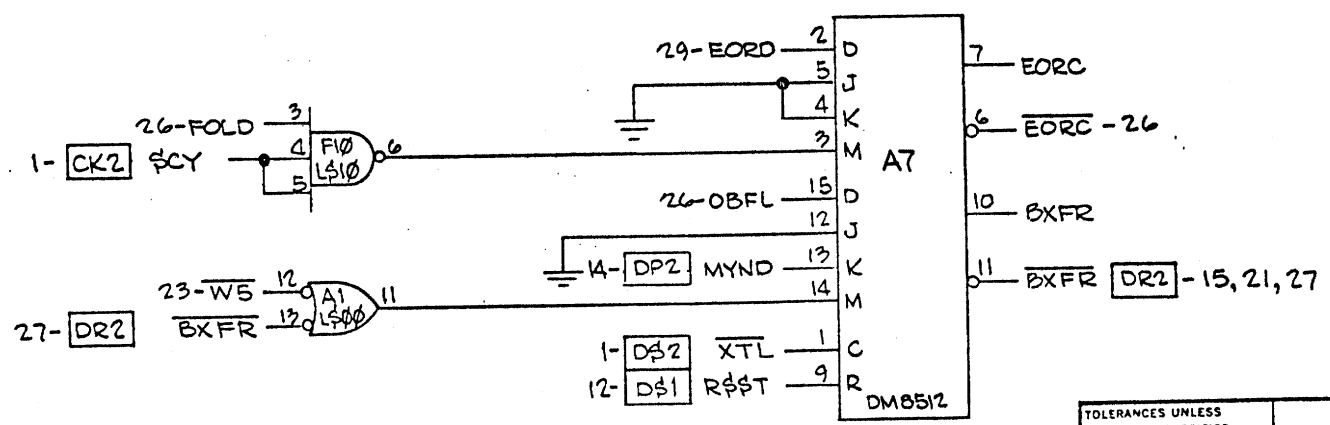
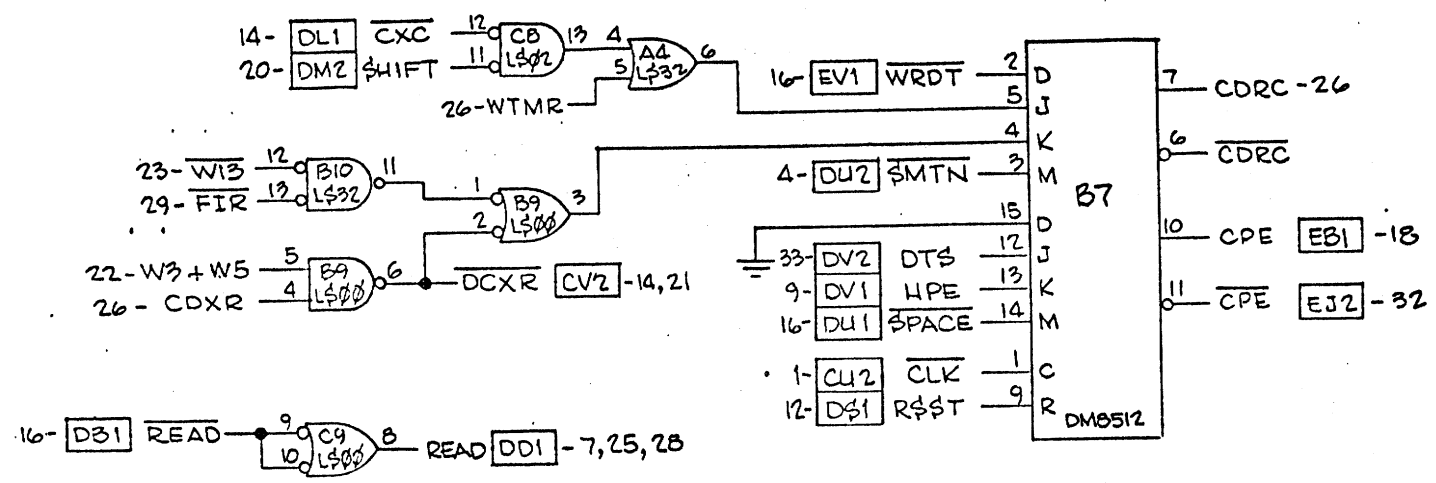
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



26

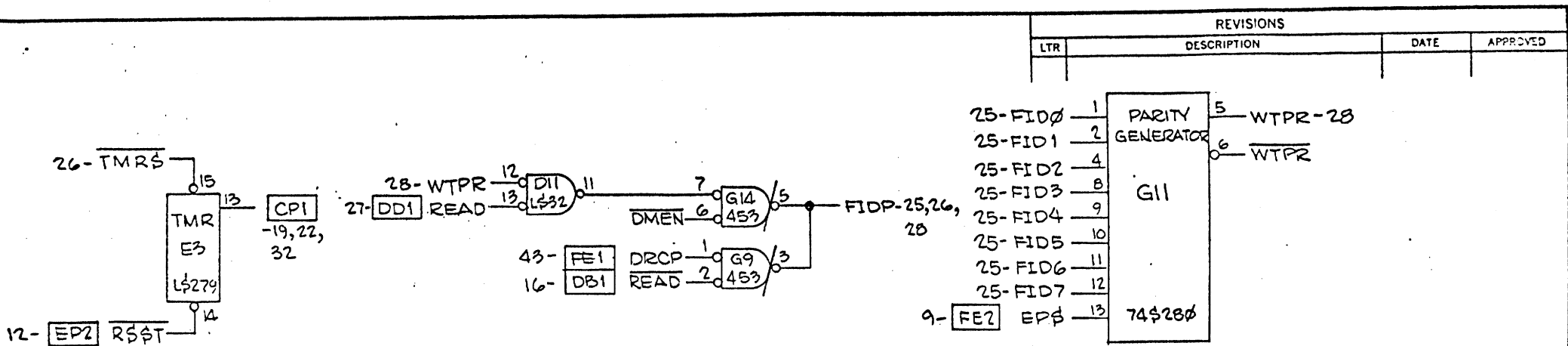
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC. ANGLES		ANAHEIM, CALIFORNIA	
±	±	±	±
APPROVALS	DATE	FIFO CONTROL	
DRAWN	HRB	SCALE	SIZE B
CHECKED		DRAWING NO.	130028
		DO NOT SCALE DRAWING	SHEET 6 OF 11

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

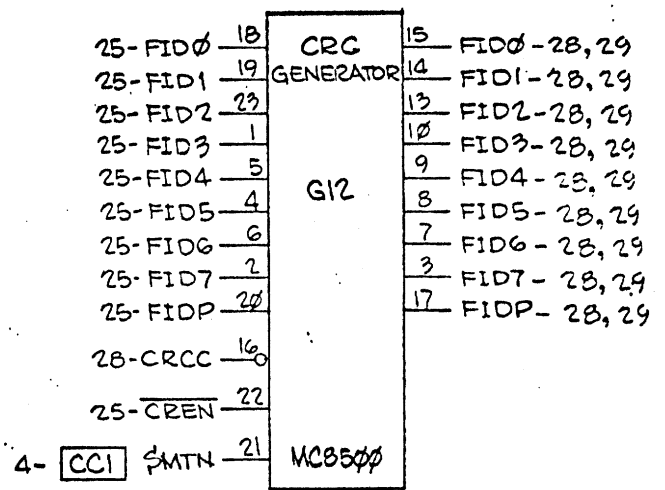
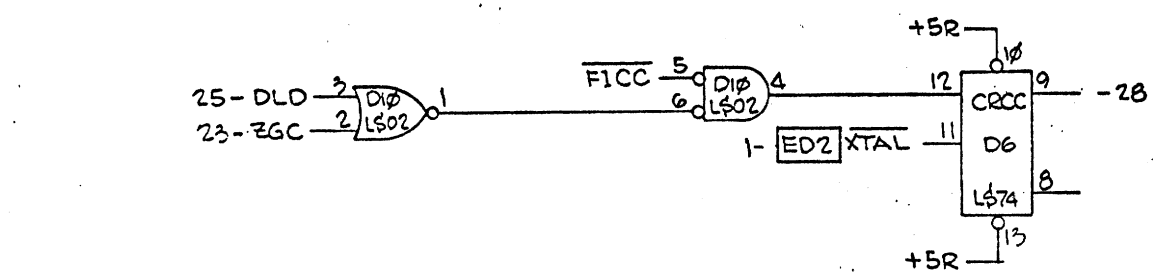
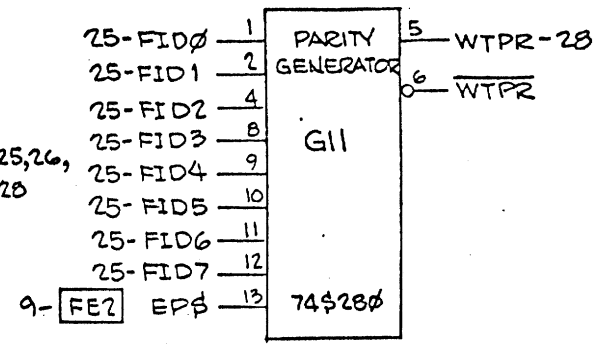


(27)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	FIFO CONTROL	
DRAWN HEB			
CHECKED		SCALE	SIZE B
			DRAWING NO. 130028
DO NOT SCALE DRAWING			SHEET 7 OF 11

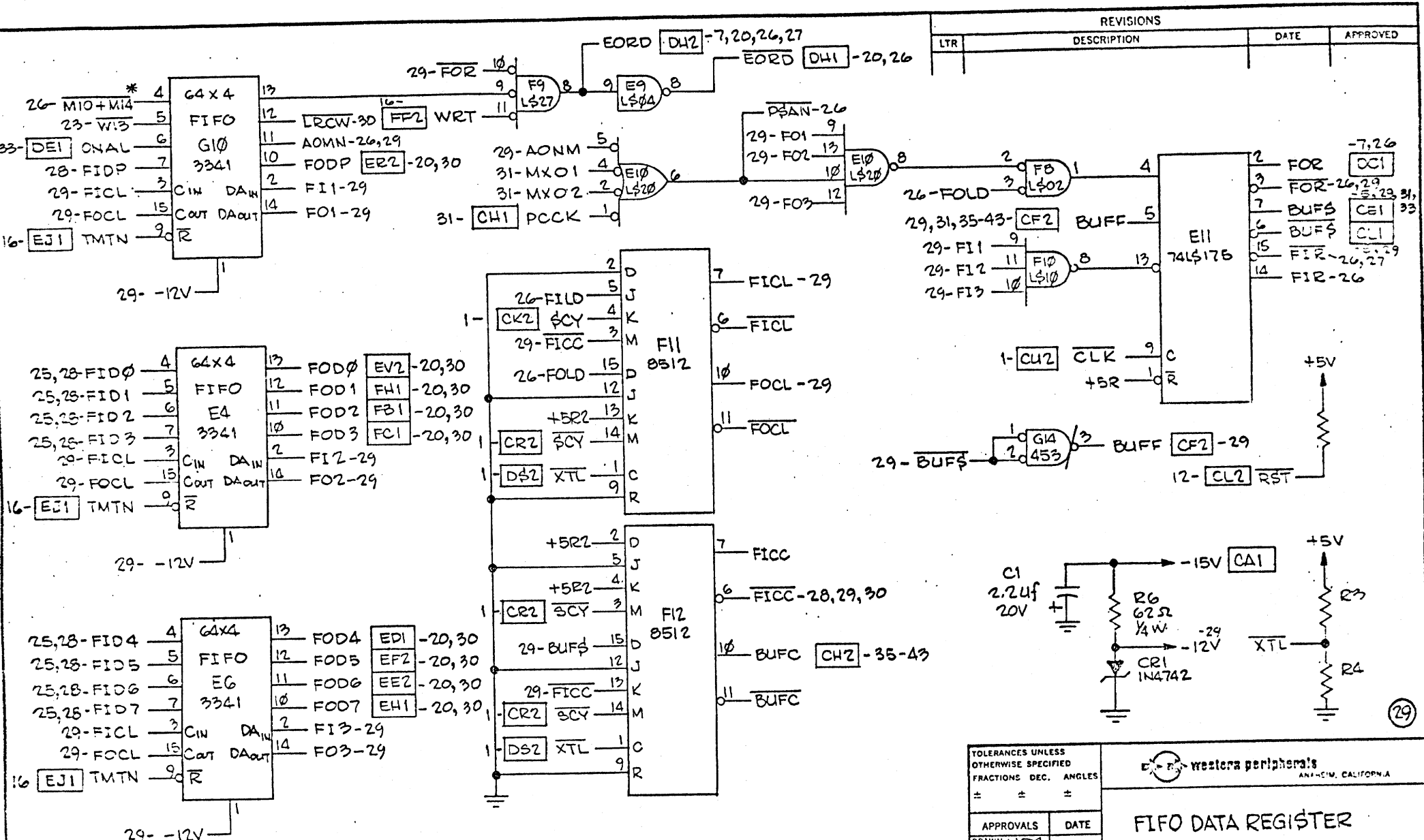


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

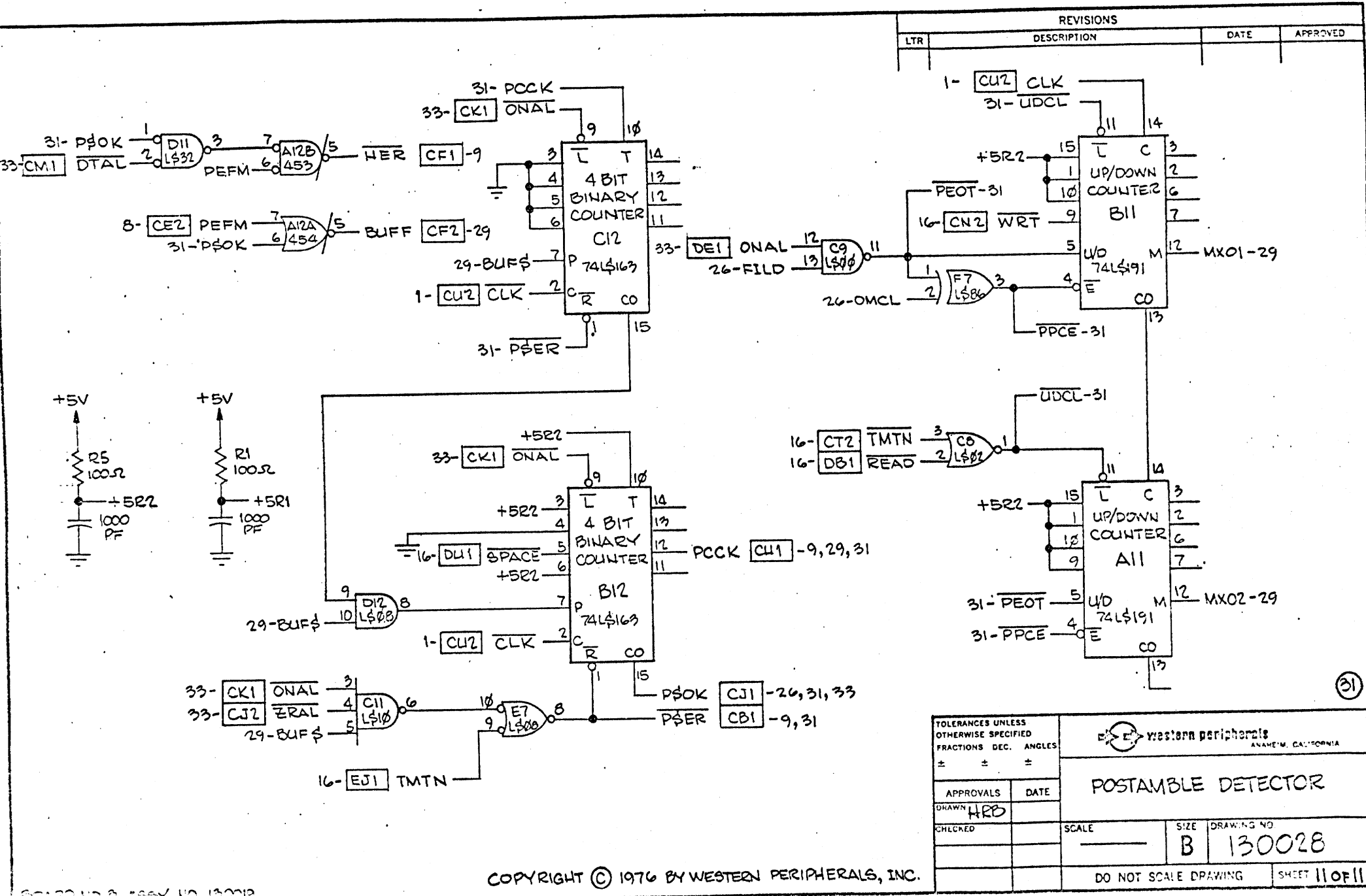


(28)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES = = . ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	PARITY & CRC GENERATOR	
DRAWN	HRB	SCALE	SIZE B
CHECKED		DRAWING NO.	130028
		DO NOT SCALE DRAWING	SHEET 8 OF 11




TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN HRB		DATE	
CHECKED		SCALE	SIZE B
		DRAWING NO. 130028	
DO NOT SCALE DRAWING			SHEET 9 OF 11

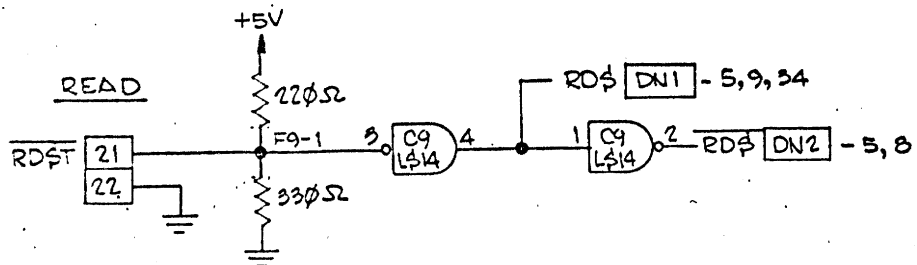


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TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		WESTERN PERIPHERALS ANAHEIM, CALIFORNIA	
APPROVALS		POSTAMBLE DETECTOR	
DRAWN HRB		SCALE	SIZE B
CHECKED		DRAWING NO. 130028	SHEET 11 OF 11
		DO NOT SCALE DRAWING	

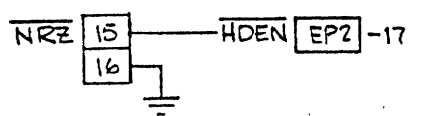
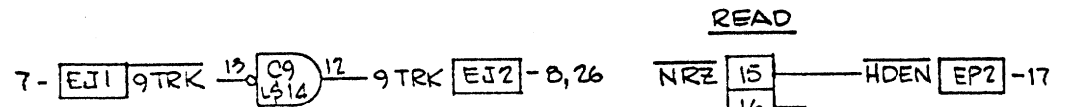
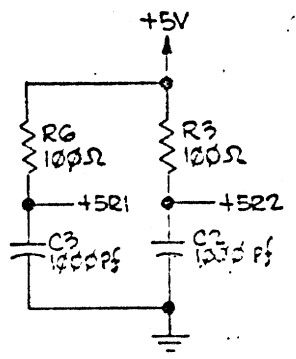
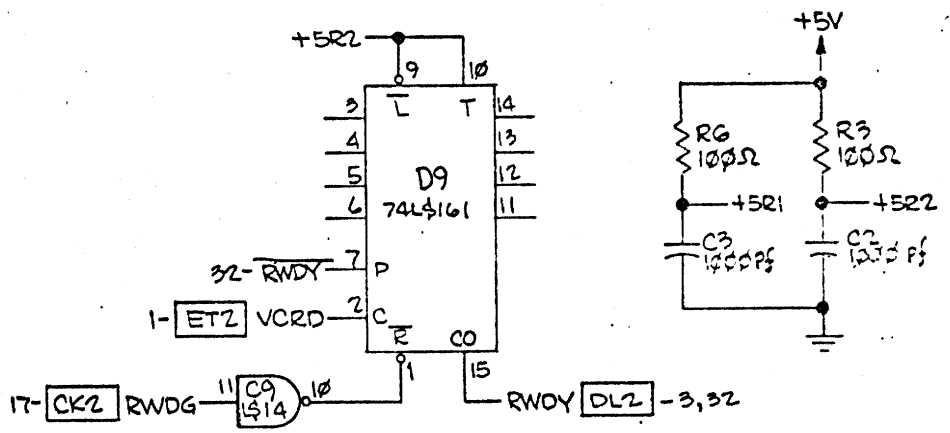
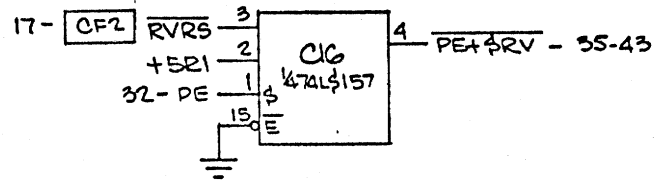
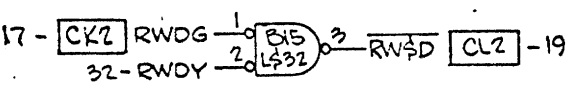
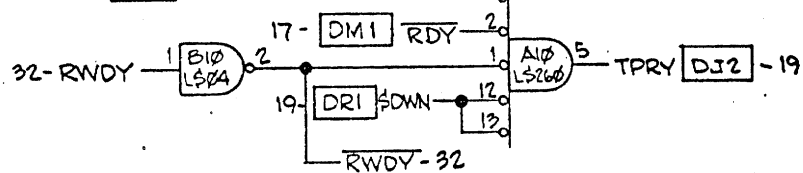
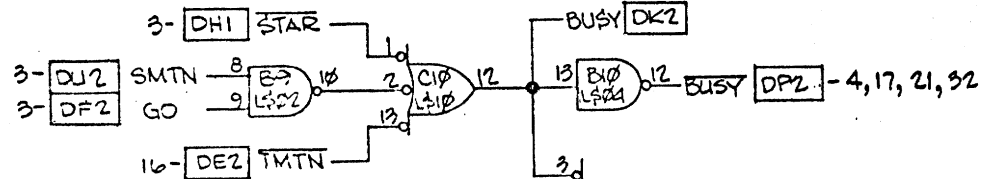
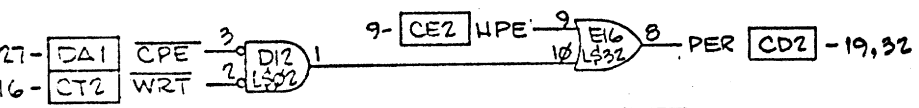
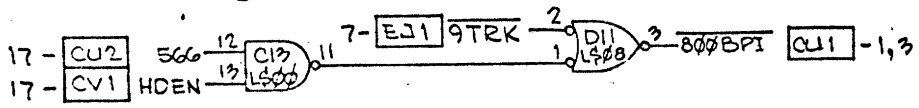
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ECO-NO. 0131, ITEM 1.	1-4-77	HRB

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals <small>ANAHEIM, CALIFORNIA</small>	
APPROVALS		DATE	
DRAWN HRB			
CHECKED		SCALE	SIZE DRAWING NO.
		—	B 130029
DO NOT SCALE DRAWING			SHEET 1 OF 17



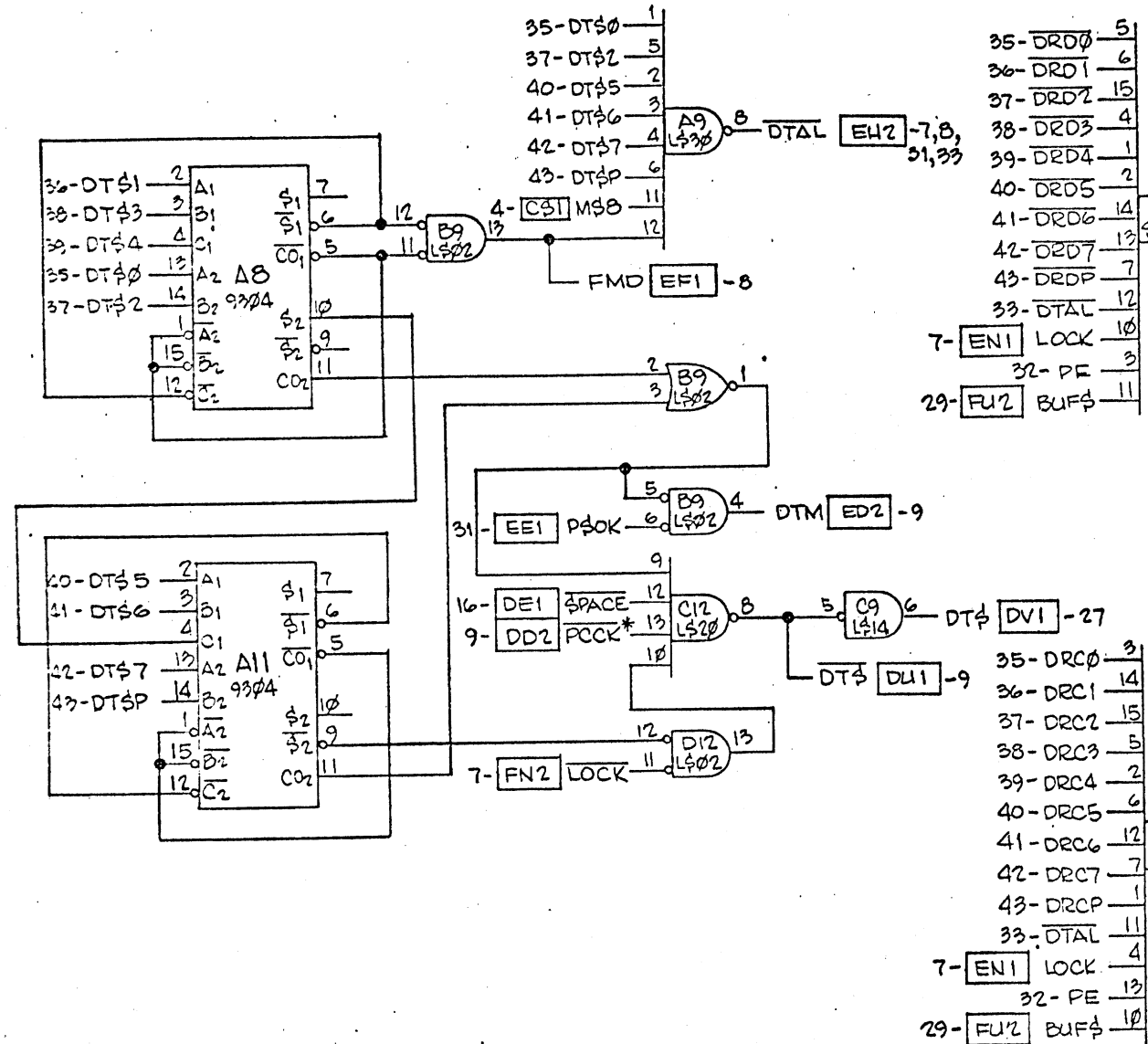
- 7- ED1 RLE 8
- 8- EE2 FM 9
- 17- DM2 RJCT 10
- 17- DR2 EOT 11
- 28- DK1 TMR 4
- 9- CM2 BTE 3
- 32- PER 4
- 14- CS2 NXM 5

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
TAPE STATUS			
APPROVALS	DATE	SCALE	SIZE
DRAWN HED			DRAWING NO.
CHECKED			B 130029
DO NOT SCALE DRAWING			SHEET 2 OF 13

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



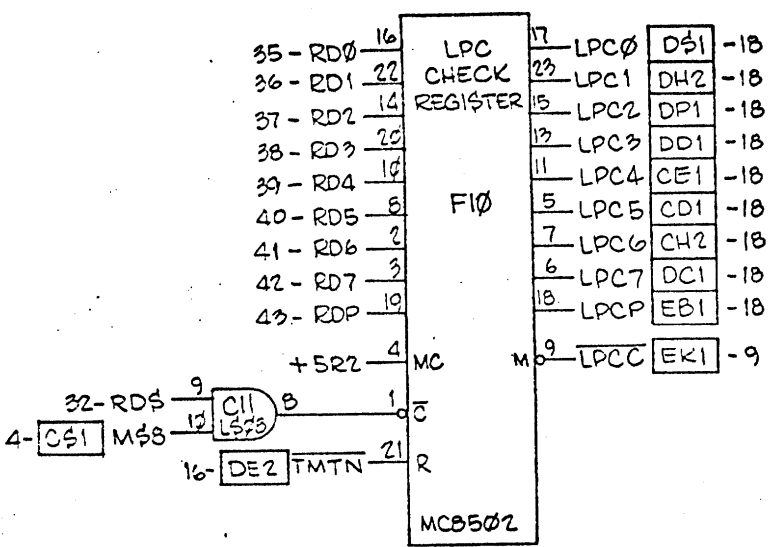
- 35-DT\$0 1
- 37-DT\$2 5
- 40-DT\$5 2
- 41-DT\$6 3
- 42-DT\$7 4
- 43-DT\$P 6
- 35-DRD0 5
- 36-DRD1 6
- 37-DRD2 15
- 38-DRD3 4
- 39-DRD4 1
- 40-DRD5 2
- 41-DRD6 14
- 42-DRD7 12
- 43-DRDP 7
- 33-DTAL 12
- 7-ENI LOCK 10
- 32-PE 3
- 29-FU2 BUF\$ 11
- 31-EE1 P\$OK 4
- 16-DE1 \$PACE 12
- 9-DD2 P\$CK* 13
- 7-FN2 LOCK 11
- 35-DRC0 3
- 36-DRC1 14
- 37-DRC2 15
- 38-DRC3 5
- 39-DRC4 2
- 40-DRC5 6
- 41-DRC6 12
- 42-DRC7 7
- 43-DRCP 1
- 33-DTAL 11
- 7-ENI LOCK 4
- 32-PE 13
- 29-FU2 BUF\$ 10

- 33-BC0 10
- 36-BC1 11
- 37-BC2 9
- 38-BC3 8
- 39-BC4 4
- 40-BC5 11
- 41-BC6 2
- 42-BC7 13

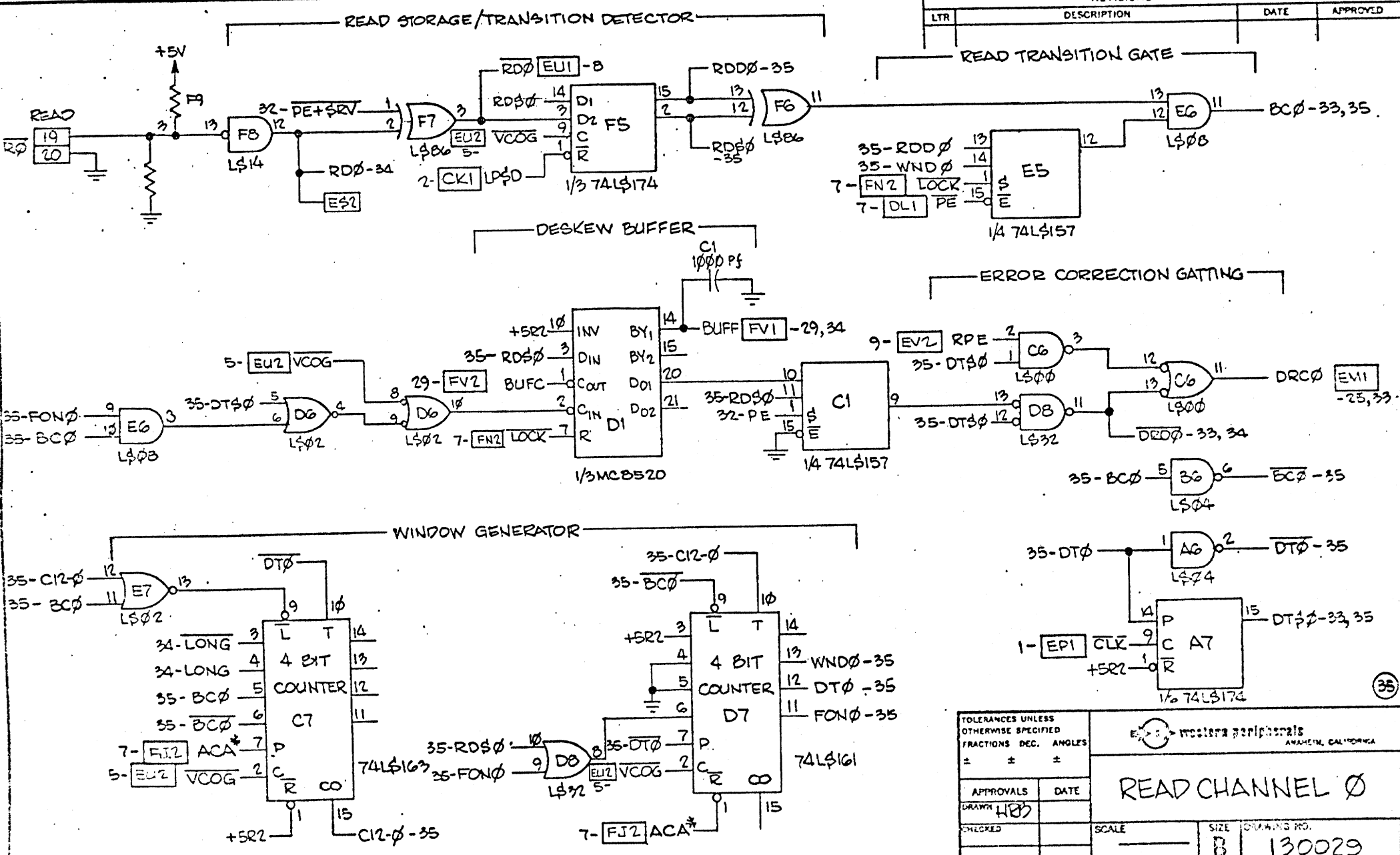
33

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	<h2>DEAD TRACK DETECTOR</h2>	
DRAWN HRB			
CHECKED	SCALE	SIZE	DRAWING NO.
		B	130029
DO NOT SCALE DRAWING			SHEET 3 OF 13

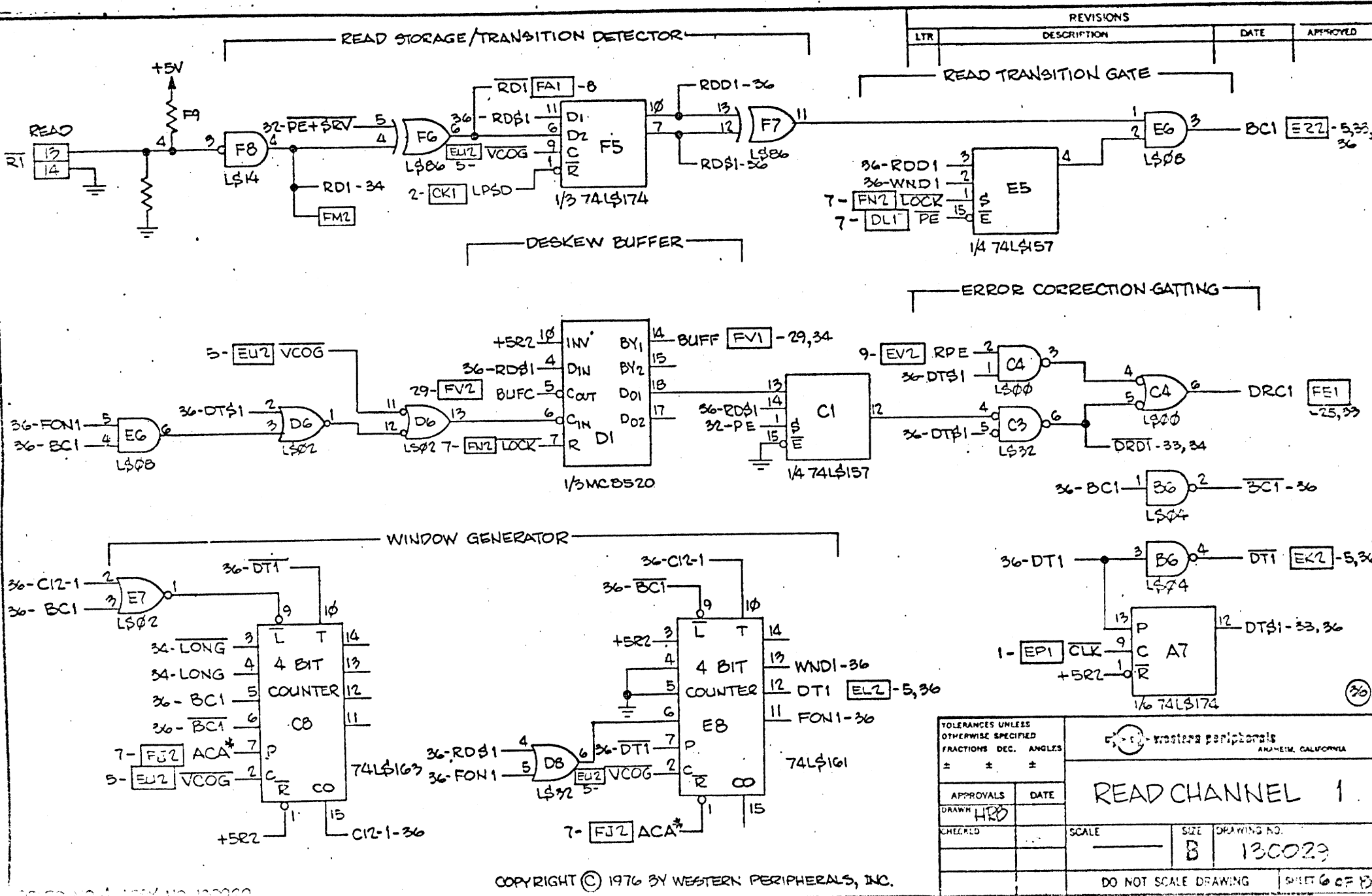
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



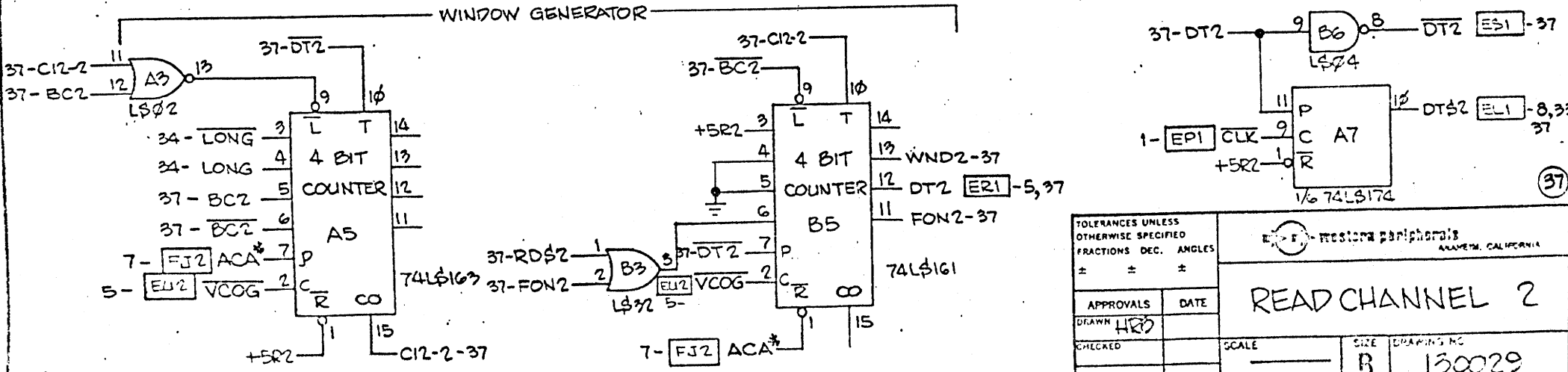
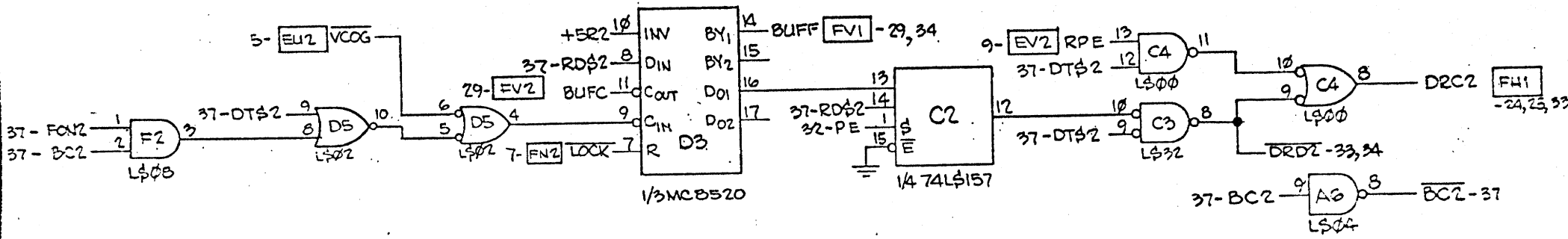
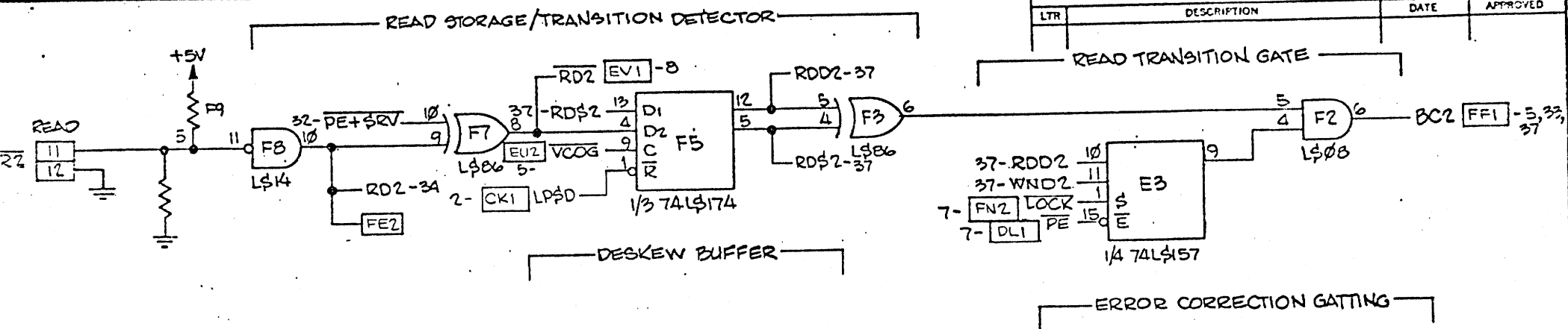
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES	
±	±	±	±
APPROVALS	DATE	WESTERN PERIPHERALS ANAHEIM, CALIFORNIA <h1>READ CHANNEL Ø</h1>	
DRAWN			
CHECKED			
SCALE	SIZE	DRAWING NO.	
	B	130029	
DO NOT SCALE DRAWING		SHEET 5 OF 13	

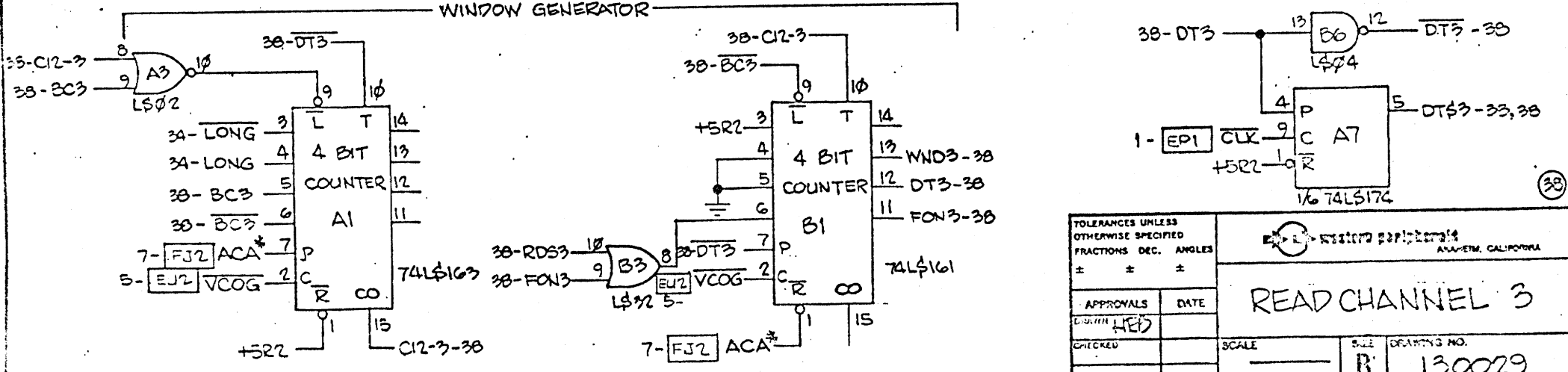
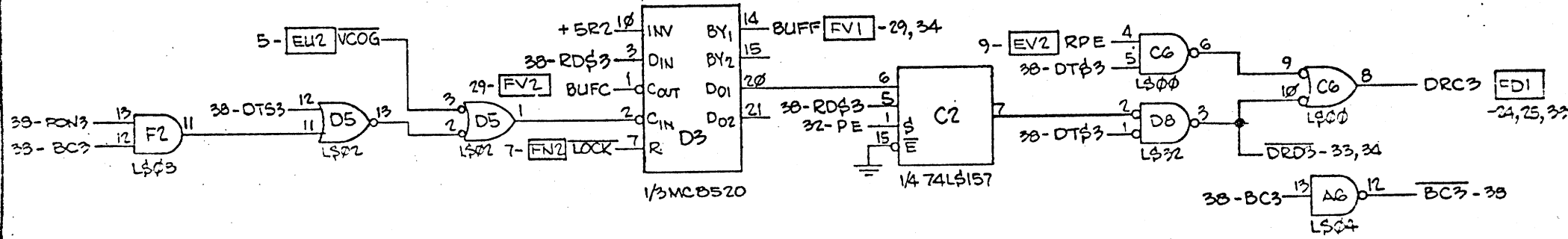
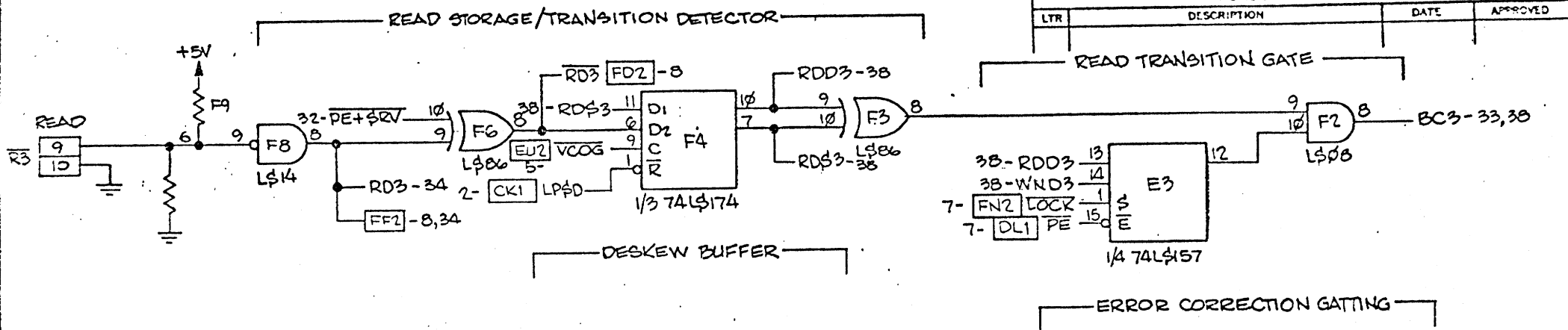


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

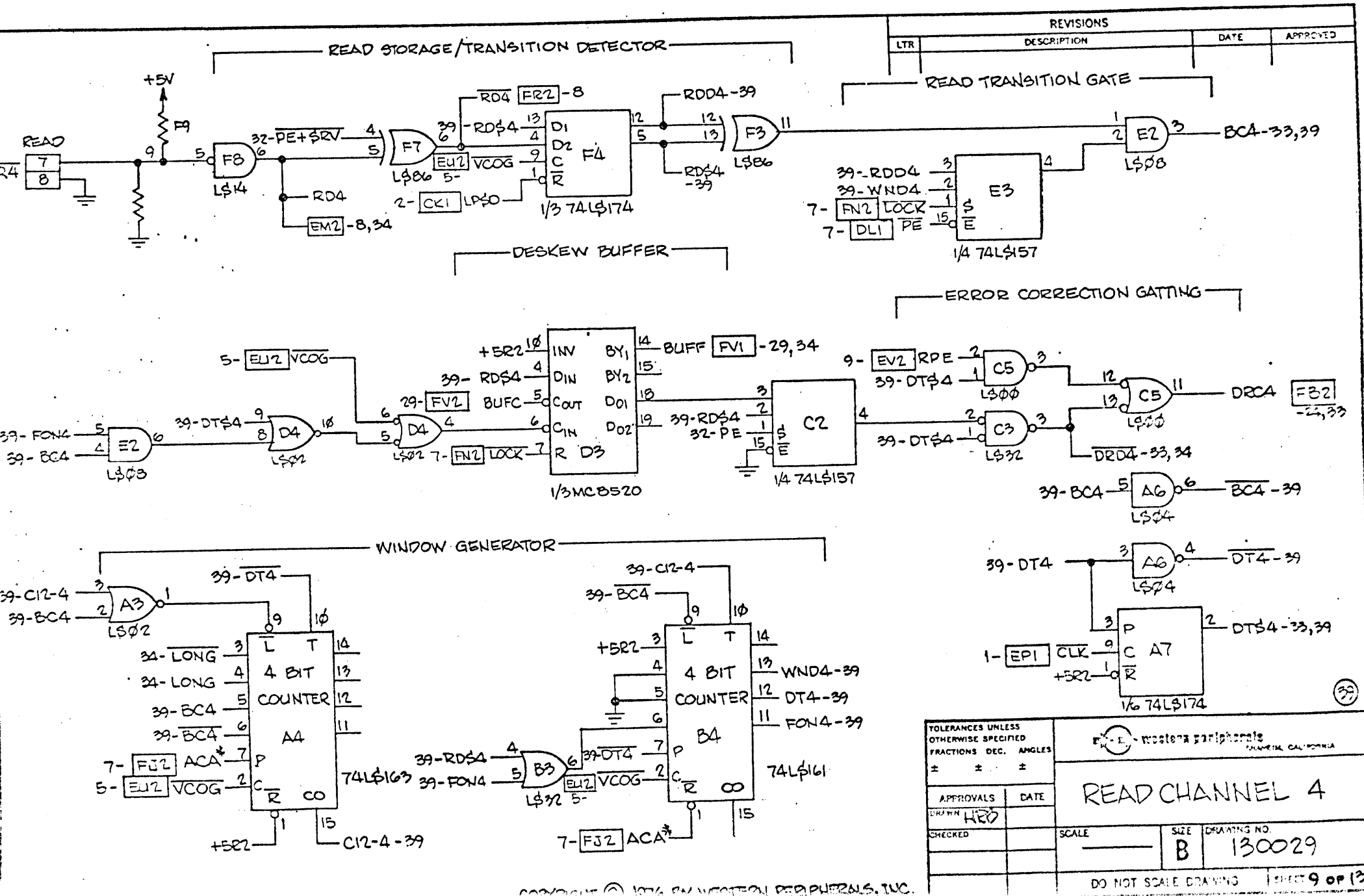


TOLERANCES UNLESS OTHERWISE SPECIFIED		FERRIS PERIPHERALS	
FRACTIONS	DEC.	ANGLES	ANAHEIM, CALIFORNIA
±	±	±	
APPROVALS	DATE	READ CHANNEL 2	
DRAWN			
CHECKED			
SCALE		SIZE	DRAWING NO.
		B	130029
DO NOT SCALE DRAWING			

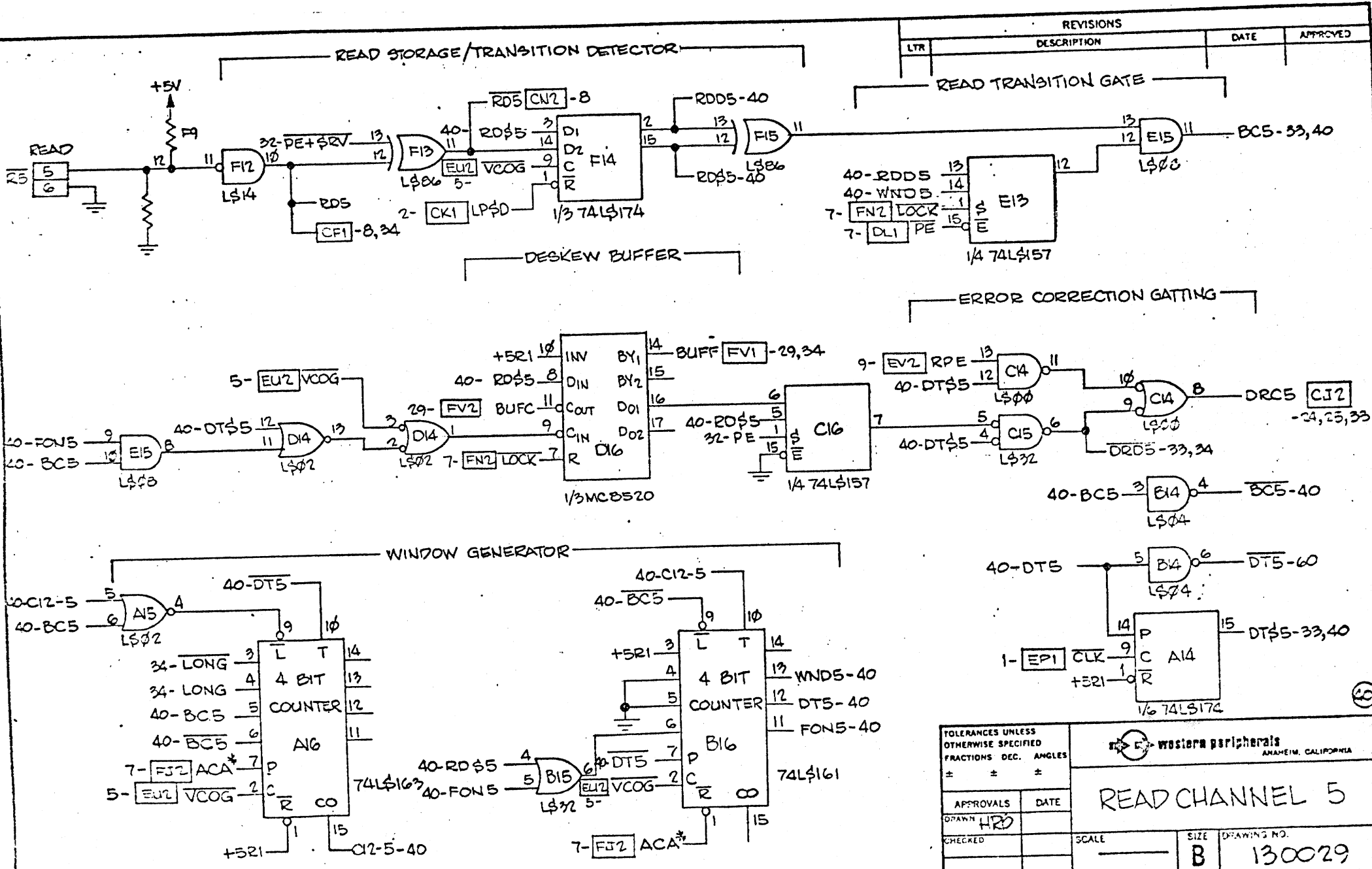
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES	
±	±	±	±
APPROVALS	DATE	 READ CHANNEL 3	
CHECKED			
SCALE	B	DRAWING NO.	130029
DO NOT SCALE DRAWING		PAGE 8 OF 13	



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		Western peripherals SUNNYVALE, CALIFORNIA	
APPROVALS DRAWN: <i>HERD</i>		DATE	
CHECKED		SCALE	SIZE: B DRAWING NO.: 130029
		DO NOT SCALE DRAWING	
		SHEET 9 of 13	



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

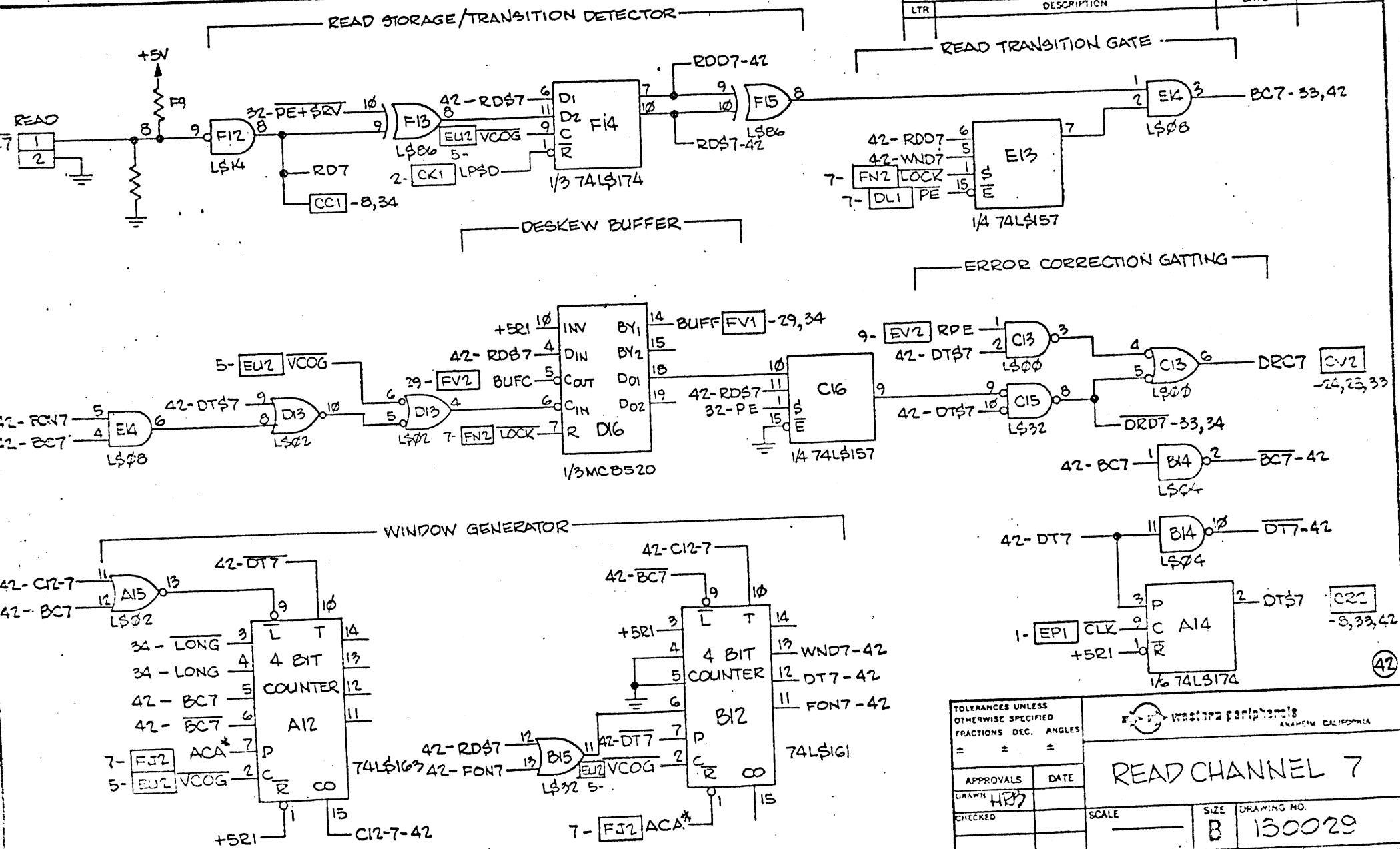
READ TRANSITION GATE

ERROR CORRECTION GATING

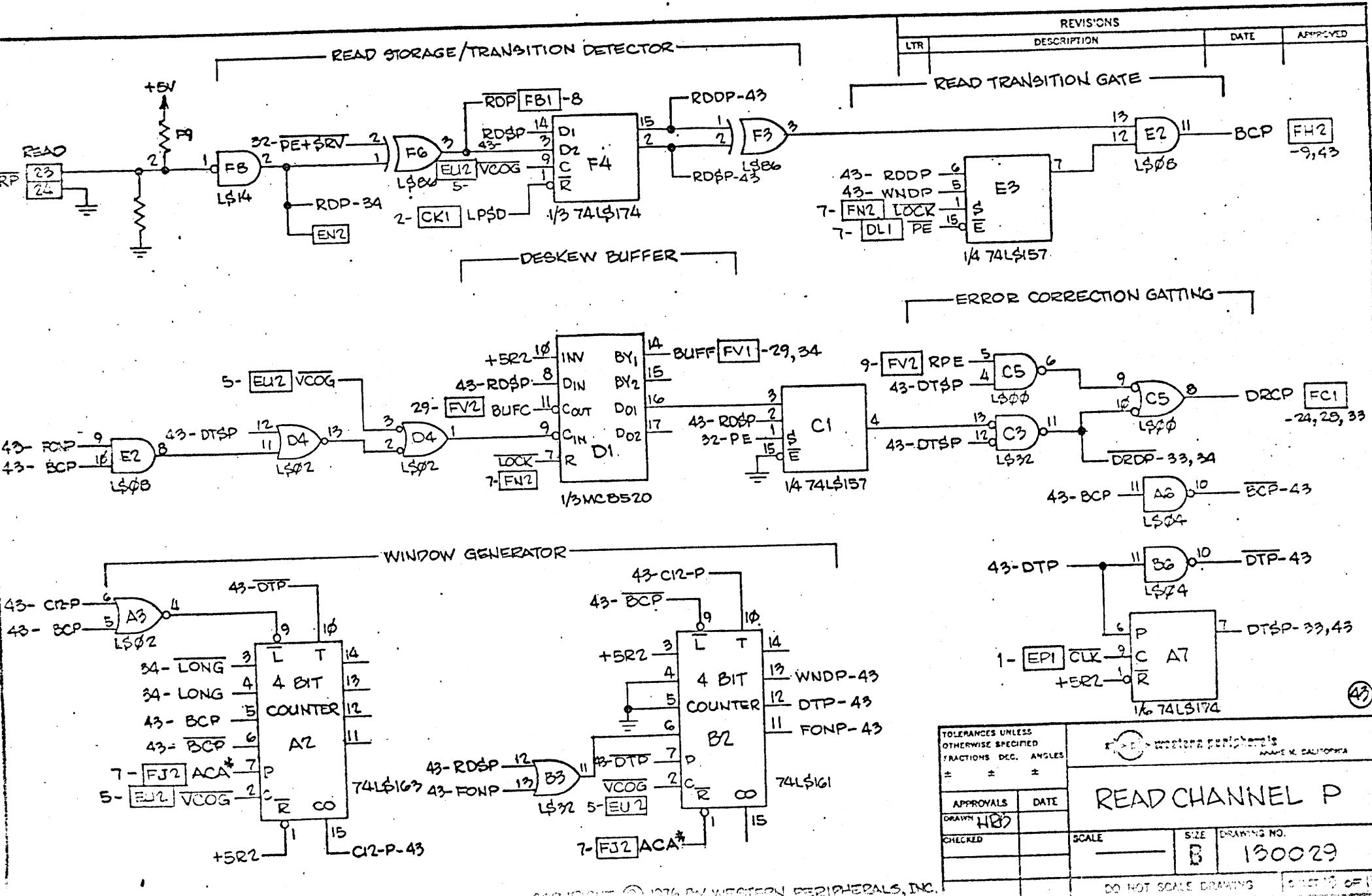
WINDOW GENERATOR

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN HRD		DATE	
CHECKED		SCALE	SIZE B
DO NOT SCALE DRAWING		DRAWING NO. 130029	
		SHEET 10 OF 11	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		WESTERN PERIPHERALS	
FRACTIONS DEC. ANGLES		ANALOG CALIFORNIA	
= = =			
APPROVALS	DATE	READ CHANNEL 7	
DRAWN			
CHECKED			
SCALE		SIZE	DRAWING NO.
		B	130029
DO NOT SCALE DRAWING			SHEET 12 OF 13



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

READ TRANSITION GATE

ERROR CORRECTION GATING

43- BCP → A6 → BCP-43

43- DTP → B3 → DTP-43

43- DTP → A7 → DTP-33, 43

TOLERANCES UNLESS OTHERWISE SPECIFIED		WESTERN PERIPHERALS	
FRACTIONS	DEC.	SAN JOSE, CALIFORNIA	
±	±	±	
APPROVALS		DATE	
DRAWN HBS			
CHECKED		SCALE	SIZE B
		DRAWING NO. 130029	
DO NOT SCALE DRAWING			SHEET 10 OF 11