

MODEL TC-120/128 TAPE CONTROLLER
LOGIC MANUAL



14321 Myford Road • Tustin, California 92680 • (714) 730-6250 • TWX: 910 595-1775 • Cable: WESPER

4

MODEL TC-120/128 TAPE CONTROLLER
LOGIC MANUAL

PUBLICATION NUMBER

01200203 I

western peripherals

14321 MYFORD ROAD
TUSTIN, CALIFORNIA 92680

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MANUAL SUPPLEMENTS

MANUAL NO. 01200203

PRESENT REVISION I

<u>DATE</u>	<u>SUPPL. NO.</u>	<u>CHANGE DESCRIPTION</u>	<u>AUTH.</u>
11-26-80	3	79000402, 92000140	ER

HOW TO USE LOGIC MANUALS

Logic Manuals Contain:

- Schematics of all boards (for logic troubleshooting).
- Assembly drawings (for assembly identification and parts locating).
- Some manuals also contain: Special modifications, block diagrams, flowcharts, listings and other reference information.

Arrangement of Drawings:

- Drawings are generally arranged in numerical order except where other arrangements provide greater convenience.
(See Table of Contents)

Table of Contents:

- Provides a listing of the drawings as they appear in the manual.

Functional Index (when used):

- Provides lists of drawings, grouping them as they are used in the system.
- Drawing numbers facilitate easy look-up (See Table of Contents).

Thumb Tabs (when used):

- Provides ready access to schematics.

●NOTICE:

CHECK AT THE REAR OF THIS MANUAL FOR:

- Latest Drawing Changes
- Added Drawings
- Notes and Additional Information

HOW TO USE SCHEMATICS

Reference Numbering

*Circled numbers in the lower right-hand corner are used as page numbers for the schematic.

(Drawing sheet numbers may be disregarded)

*Signal sources and destinations are referenced to these page numbers. Example:

Source (from page 3): 3 - READ

Destination (to page 4 & 5): START - 4, 5

Block Diagrams

*Most block diagrams provide page reference numbers in each block which identify the schematic page where the logic may be found.

Signal Levels

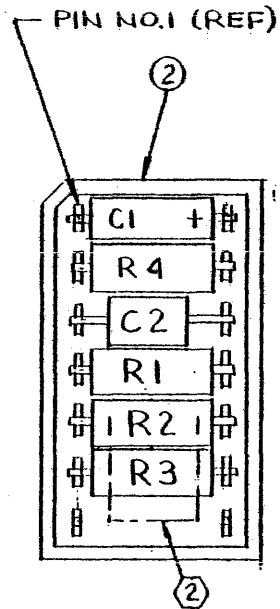
*Normally signals are true when high (+5V) and false when low (0V).

*Signals with bars (WRITE) are true when low and false when high.

Off-Board Connectors

*Small boxes or diamonds are used to identify signals which exit the board. (Where the numbers are in the format BA2, CV1, DR2, etc. The first letter identifies the connector, The second digit identifies the pin of the connector, and the third digit identifies the side of the board where side one is the component side and side two is the solder side).

Schematic Example:



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

- NOTE: UNLESS OTHERWISE SPECIFIED
- FOR MATERIAL SEE P/L 120023
 - AFFIX ADHESIVE LABEL WITH PART NO. APPROPRIATE DASH NO. & LATEST REV LTR (FAR SIDE)
 - COMPONENT VALUES TABULATED ON P/L

PART NO.	OPERATING SPEED (IPS)		
	NOMINAL	MIN	MAX.
120023-1	12.5	4	19
120023-2	25	8	40
120023-3	37.5	12	59
120023-4	45	15	72
120023-5	75	22	100
120023-6	125	47	200

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals <small>ANAHEIM, CALIFORNIA</small>	
APPROVALS DRAWN CHECKED <i>V.L.</i>		DATE 11-11-76 11-11-76	
SCALE 4/1		SIZE B	DRAWING NO. 120023
DO NOT SCALE DRAWING			SHEET 1 OF 1

LIST OF MATERIALS

ITEM	DRAWN	UNITS	PART NUMBER	DESCRIPTION	R: P DESIG	QUANTITY REQUIRED					
						-1	-2	-3	-4	-5	-6
1			120023	ASSY, VCO FILTER CHIP		REF	REF	REF	REF	REF	REF
2			CA-14P-12	DIP PLUG, 14 PIN		1	1	1	1	1	1
3			162D224X9035BC2	CAPACITOR, .22 uF	C1	1	1	1	1	1	1
4			CK12BX102K	1000 PF, 100VDC	C2	1					
5			CK12BX471K	470			1				
6			CK12BX331K	330				1			
7			CK12BX271K	270					1		
8			CK12BX181K	180						1	
9			CK12BX820K	CAPACITOR, 82 PF, 100VDC	C2						1
10			RC07G153J	RESISTOR, 15K, 1/4W, 5%	R1, R2	2					
11			752J	7.5K			2				
12			512J	5.1K				2			
13			432J	4.3K					2		
14			242J	2.4K						2	
15			152J	1.5K	R1, R2						2
16			272J	2.7K	R3	1					
17			132J	1.3K			1				
18			911J	910Ω				1			
19			751J	750Ω					1		
20			431J	430Ω						1	
21			301J	300Ω	R3						1
22			RC07G472J	RESISTOR 4.7K, 1/4W, 5%	R4	1	1	1	1	1	1

DRAWN BY: [] DATE: []
 CHECKED BY: [] DATE: []
 CORUM 11-17-76
 J.D.
 JOB ORDER NO. []
 DATE RELEASED []
 QUANTITY []

SHEET 1 OF 1
 NEXT ASSEMBLY

TITLE VCO FILTER
 CHIP (-1 THRU -6)
 ASSEMBLY NO. 3
 P/L 120023
 I
 REV.

FORM NO. 100-1000 Rev. 1/74

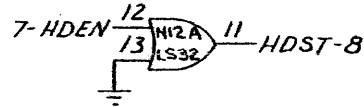
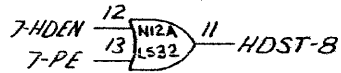
CONFIGURATION "E" SCHEMATIC VARIANCE TO SCHEMATIC 120016 SHEET 7

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
N/C	THIS DWG CREATED BY ECO ⁰⁴²	6/22/77	N.D. 6-23-77

STANDARD (120016)

CONFIGURATION "E" (120016)



FOR REFERENCE ONLY

REWORK INSTRUCTIONS APPLY TO OLDER ASSEMBLIES ONLY

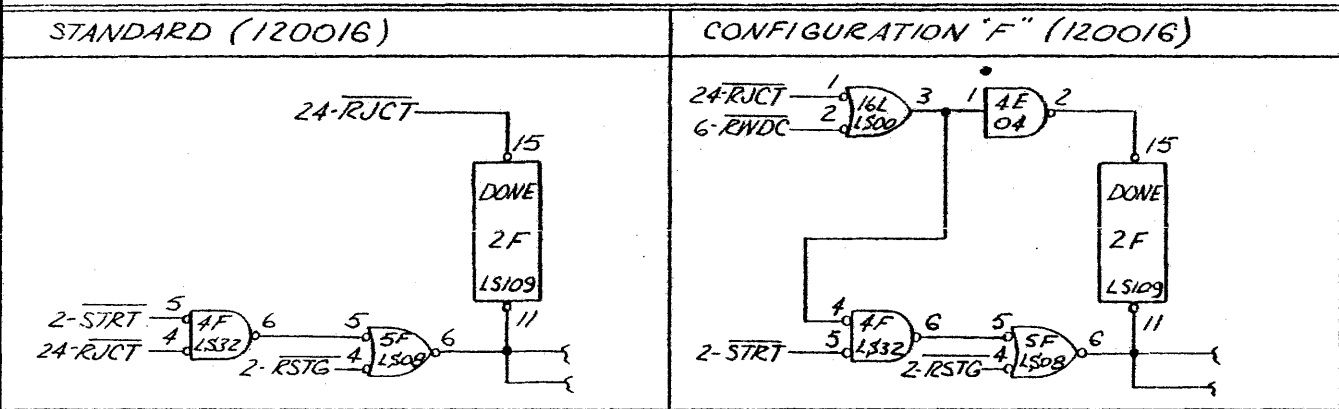
REWORK INSTRUCTIONS:

- (REF ASSY 120024)
 (A) CUT ETCH AT N12A-13 (UNDER IC N12A)
 (B) JUMPER N12A-13 TO N12A-7
 (C) IDENTIFY, AT ASSY NO, WITH "CONF E", USE BLACK INK.

NOTE: THIS DRAWING CHANGES TC-120 TO HAVE LOW DENSITY STATUS WHEN OPERATING PHASE ENCODED.

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	MODIFICATION DRAWING - TC-120, CONFIGURATION "E"
APPROVALS	DATE	SCALE	SIZE
DRAWN <i>[Signature]</i>	6/22/77		B
CHECKED N.D.	6-23-77	DRAWING NO.	120032
DO NOT SCALE DRAWING			SHEET / 00 /

CONFIGURATION "F" SCHEMATIC VARIANCE TO SCHEMATIC 120016 SHEET 3



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
N/C	THIS DWG CREATED BY ECO #3	6-23-77	N.D. 6-23-77

FOR REFERENCE ONLY
REWORK APPLIES TO OLDER
ASSEMBLIES ONLY

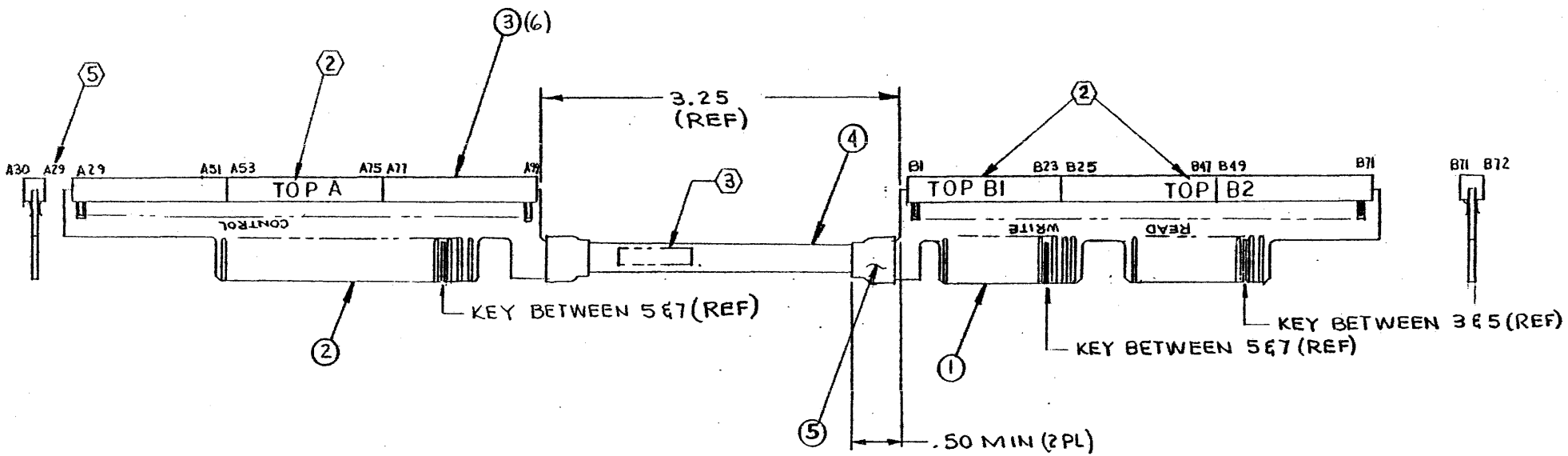
REWORK INSTRUCTIONS:

- (REF ASSY 120024)
- (A) CUT ETCH AT 2F-15, SOLDER SIDE. (RJCT)
 - (B) CUT ETCH AT 4F-4, 2 PLACES, SOLDER SIDE. (STRT)
 - (C) JUMPER 4E-2 TO 2F-15.
 - (D) JUMPER 16L-3 TO 4E-1.
 - (E) JUMPER 4E-1 TO 4F-4.
 - (F) JUMPER 4G-6 TO 16L-1. (RJCT)
 - (G) JUMPER 4C-12 TO 4G-7. (STRT)
 - (H) JUMPER 6D-B-3 TO 16L-2. (RWDC)
 - (I) IDENTIFY, AT ASSY NO, WITH "CONF F," USE BLACK INK.

NOTE: THIS DWG CHANGES TC-120 TO PROVIDE INTERRUPT UPON EXECUTION OF REWIND FOR DDOS COMPATABILITY.

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC. ANGLES	± ± ±	MODIFICATION DRAWING - TC-120, CONFIGURATION "F"	
APPROVALS	DATE	SCALE	SIZE DRAWING NO.
DRAWN <i>[Signature]</i>	6/23/77	—	B 120033
CHECKED N.D.	6-23-77		
		DO NOT SCALE DRAWING	SHEET / OF /

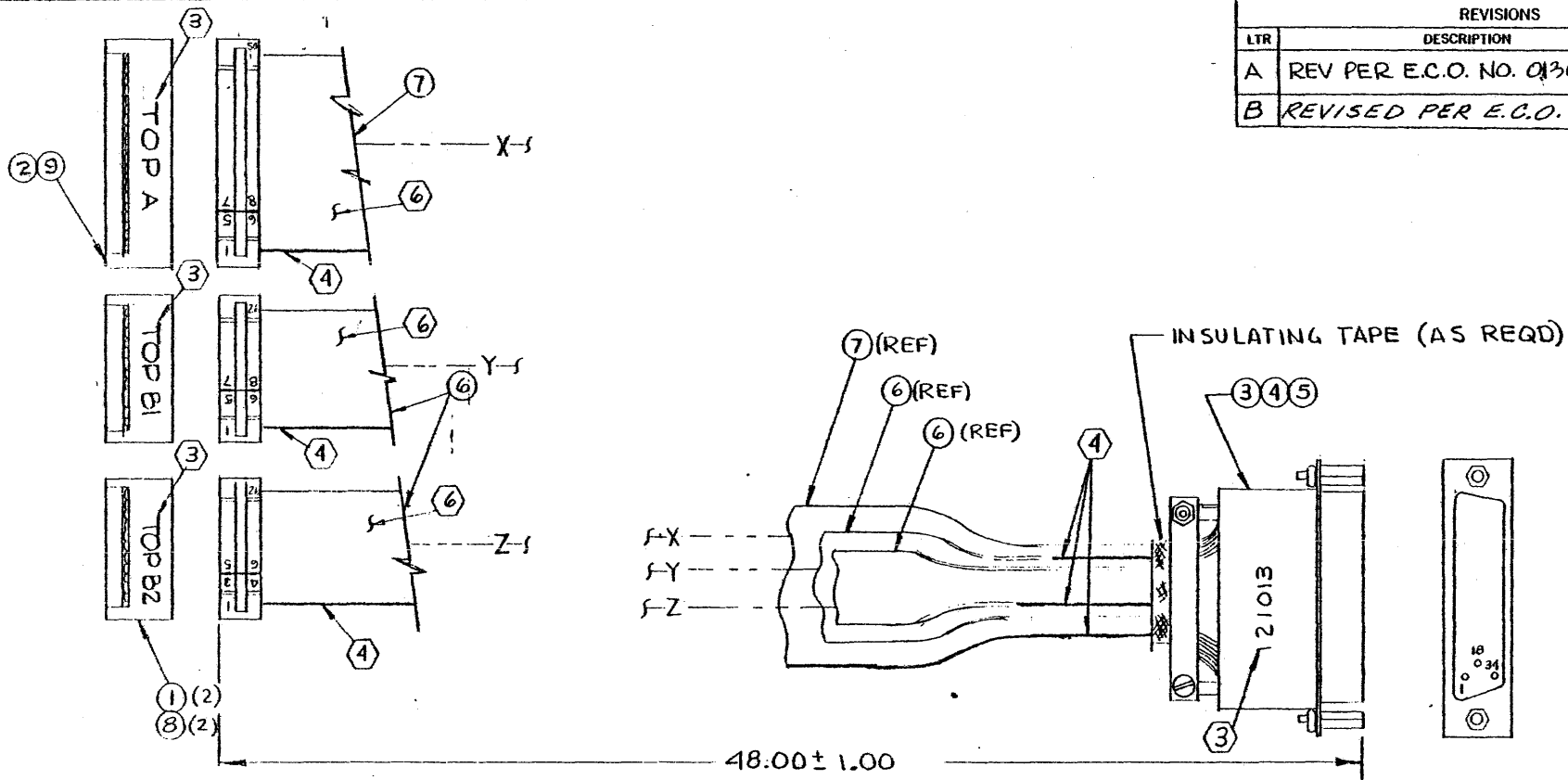
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	(1) REV 6 REDRAWN (2) INC ECO NO. 163	M.T.C 2-10-78	H. Dauterch 2-16-78



- NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122023
 - ② RUBBER STAMP CHARACTERS SHOWN USING WHIT INK APPROX WHERE SHOWN
 - ③ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN USING BLK INK
 4. FOR MATERIAL SEE P/L 121011
 - ⑤ A29 THRU A99 AND B1 THRU B72 ARE FOR REF ONLY AND DO NOT APPEAR ON PART

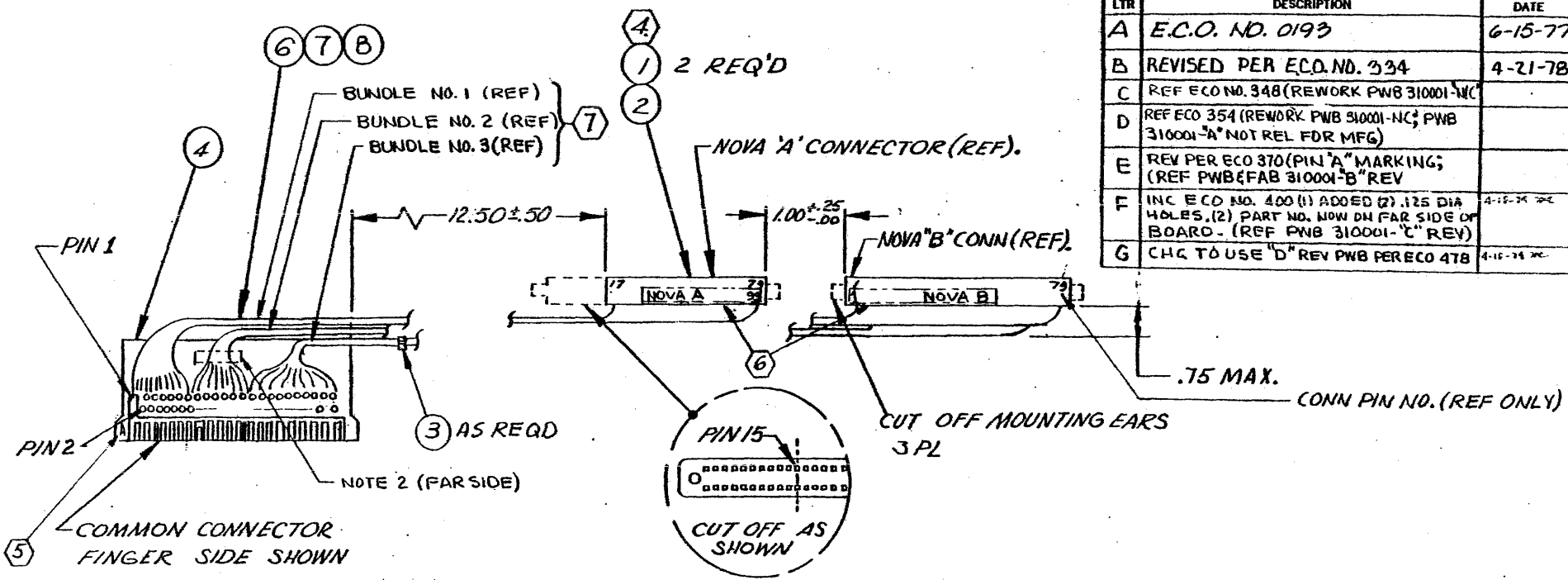
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA			
FRACTIONS DEC.	ANGLES				
±	±	ASSY DWG- ADAPTER, NOVA BACK PLANE			
APPROVALS	DATE				
DRAWN CORUM	2-10-78	SCALE	SIZE	DRAWING NO.	REV
CHECKED H. Dauterch	2-10-78	FULL	B	121011	A
DO NOT SCALE DRAWING				SHEET 1 OF 1	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV PER E.C.O. NO. 0136	7-29-77	N.D. B-1-77
B	REVISED PER E.C.O. 666	4-17-80	(Signature)



- ⑥ SMOOTH SIDE OF CABLE SHOWN THIS VIEW
 - ⑤ ASSEMBLE ITEMS 1 & 2 TO ITEMS 6 & 7 USING 3M PRESS, DIE SETS, AND PROCEDURES
 - ④ RED LINE DENOTES COND (PIN) NO. 1
 - ③ MARK CHARACTERS APPROX WHERE SHOWN USING BLK INK
 - 2 FOR WIRING SEE WIRE LIST 121013
 - 1 FOR MATERIAL SEE P/L 121013
- NOTE: UNLESS OTHERWISE SPECIFIED

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA		
FRACTIONS	DEC.			ANGLES
±	-	±	±	
APPROVALS	DATE	CABLE ASSEMBLY CE5; CONTROLLER		
DRAWN CORUM	7-7-76			
CHECKED		SCALE	SIZE	DRAWING NO.
		NONE	B	121013
DO NOT SCALE DRAWING			SHEET 1 OF 1	



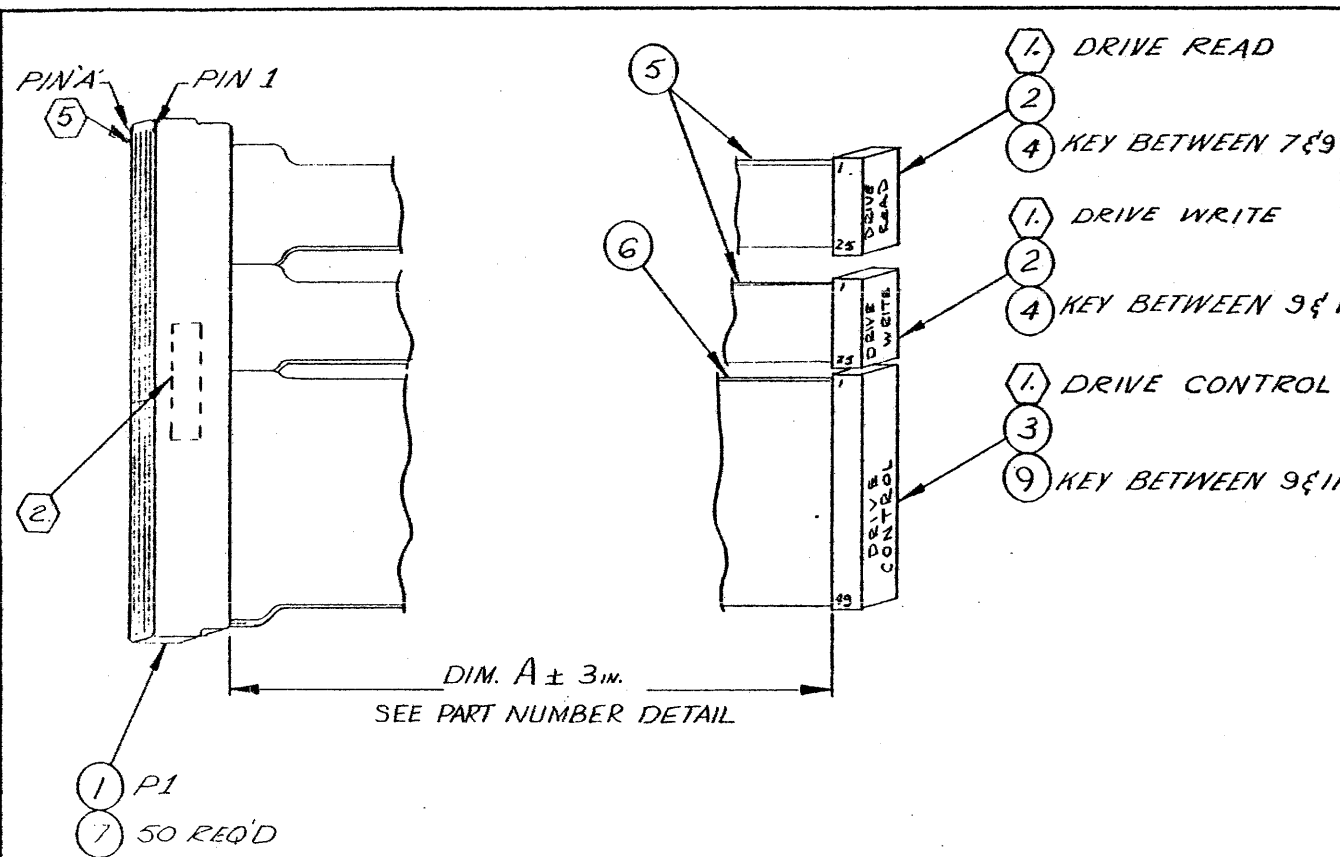
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO. 0193	6-15-77	J.D. 6-15-77
B	REVISED PER E.C.O. NO. 334	4-21-78	J.D. 5-2-78
C	REF E.C.O. NO. 348 (REWORK PWB 310001-NC)		J.D. 11-1-78
D	REF E.C.O. 354 (REWORK PWB 310001-NC; PWB 310001-A* NOT REL FOR MFG)		J.D. 11-1-78
E	REV PER E.C.O. 370 (PIN "A" MARKING; (REF PWB & FAB 310001-B" REV		J.D. 11-1-78
F	INC E.C.O. NO. 400 (1) ADDED (2) .125 DIA HOLES. (2) PART NO. NOW ON FAR SIDE OF BOARD. (REF PWB 310001-C" REV)	4-15-78	
G	CHG TO USE "D" REV PWB PER E.C.O. 478	4-15-78	J.D.

APR 20 1979

- ⑦ WIRES NOTED ARE SEPARATE BUNDLES SECURED WITH ITEM NO. 3 ENTIRE LENGTH FROM ITEM NO. 4 TO ITEM NO. 1
- ⑥ MARK CHARACTERS SHOWN USING CONTRASTING INK AS SHOWN
- ⑤ MARK LTR "A" AS SHOWN (CORRESPONDING TO PIN "A") USING CONTRASTING INK
- ④ USE SAE CRIMP TOOL #MC2500 & EXTRACTOR #ME-2500.
- 3. THIS ASSEMBLY USED IN CONJUNCTION WITH 121022.
- 2. RUBBER STAMP PART NO. ON FAR SIDE OF PADDLEBOARD.
- 1. WIRE PER WIRE LIST 121021.

NOTES: UNLESS OTHERWISE SPECIFIED.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA					
APPROVALS	DATE			ASSEMBLY - ADAPTER BACK PLANE/PADDLE BOARD (ECLIPSE)			
DRAWN	J.D.	CHECKED	J.D.	SCALE	SIZE	DRAWING NO.	
	5-24-77				B	121021	
DO NOT SCALE DRAWING						SHEET 1 of 1	



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV. PER ECO No. 335	4-19-78	N.D. 4-26-78
B	INC ECO 370	7-13-78	N.D. 11-1-78
C	ADVANCE REV. LTR. TO AGREE WITH P/L PER E.C.O. 545	9-5-78	N.D. 10-9-78
D	REVISED PER E.C.O. NO. 666	4-17-80	

- ① P1
- ⑦ 50 REQ'D

PART NUMBER DETAIL

121022 - XX - X

BASIC PART NUMBER _____

DASH NUMBER IN FEET REF. DIM. A _____

(07 FOR 7 FT., 10 FOR 10 FT., ETC.)

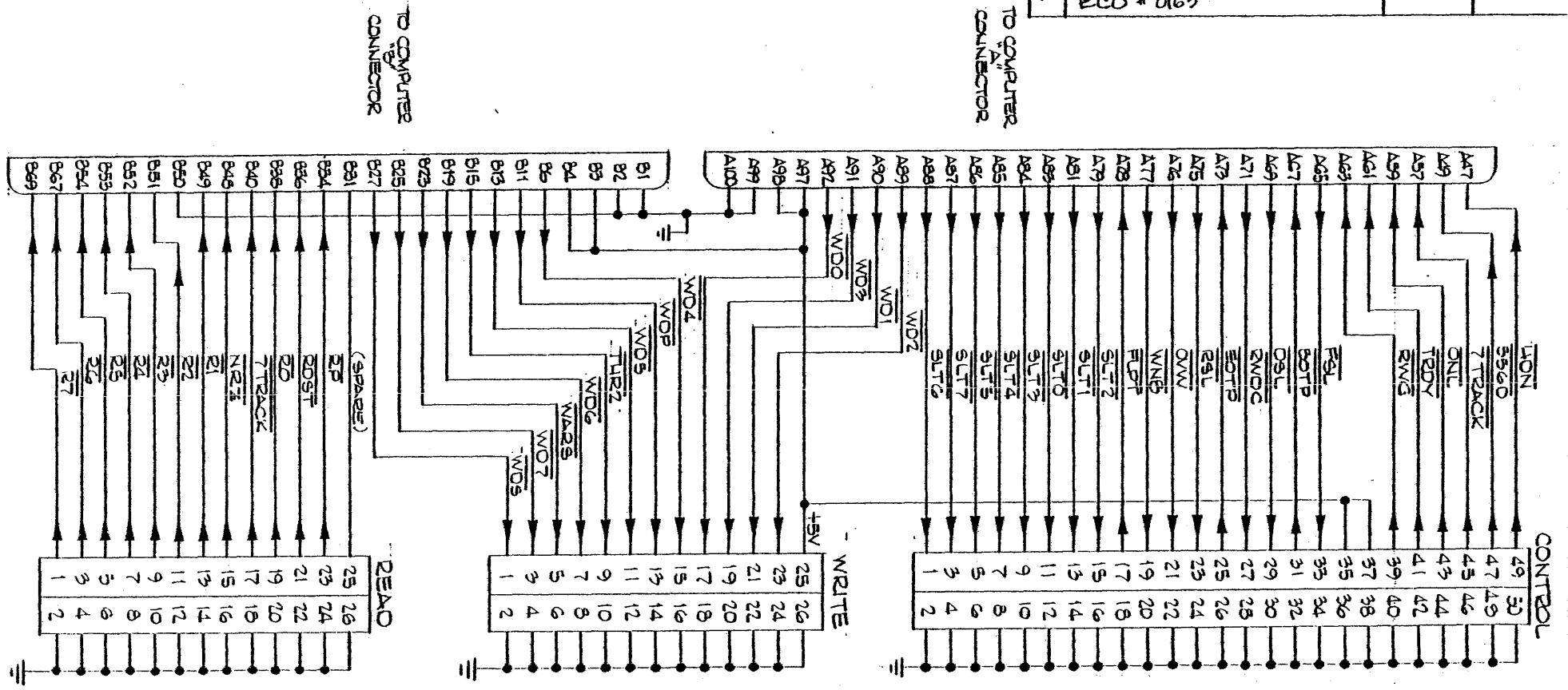
LATEST REVISION LETTER _____

- ⑤ MARK LETTER "A" ON FAR SIDE (CORRESPONDING TO PIN "A") USING CONTRASTING INK
- ④ USE IN CONJUNCTION WITH ADAPTER 121021
- ③ WIRE PER WIRE LIST: WL 121022.
- ② MARK PART NUMBER, DASH NUMBER AND LATEST REV. LTR. APPROX. WHERE SHOWN USING CONTRASTING INK. (SEE PART NUMBER DETAIL)
- ① RUBBER STAMP WITH BLACK INK AS SHOWN.

NOTES: UNLESS OTHERWISE SPECIFIED.

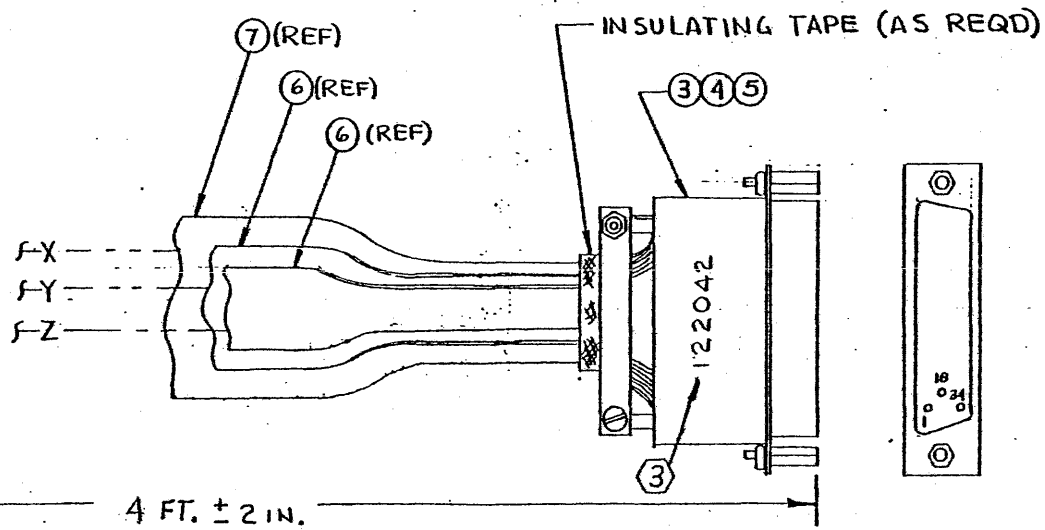
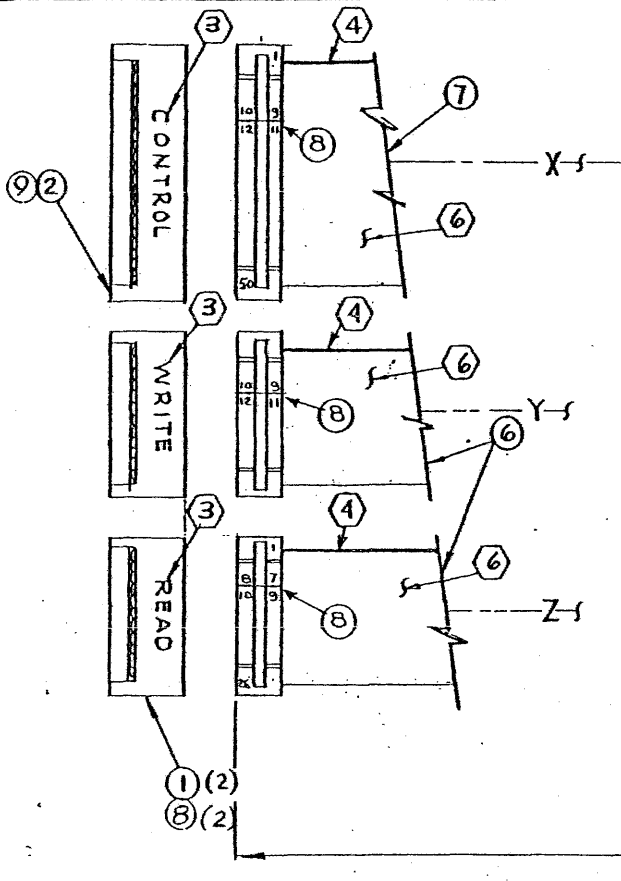
TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA		
FRACTIONS	DEC. ANGLES			
±	±	ASSEMBLY - CABLE TAPE / PADDLEBOARD (ECLIPSE)		
APPROVALS	DATE	SCALE	SIZE	DRAWING NO.
DRAWN				
CHECKED			B	121022
DO NOT SCALE DRAWING			SHEET 1	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED & REDRAWN PER ECO # 0163	12-8-77	H.D. 12-8-77



NOTE:
NEXT ASSY: 121011

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN: <i>HRB</i>		DATE 12-8-77	
CHECKED <i>Z.C. J.L.</i>		DATE 12-8-77	
SCALE		SIZE B	DRAWING NO. 122023
DO NOT SCALE DRAWING			REV A
SHEET			1 OF 1



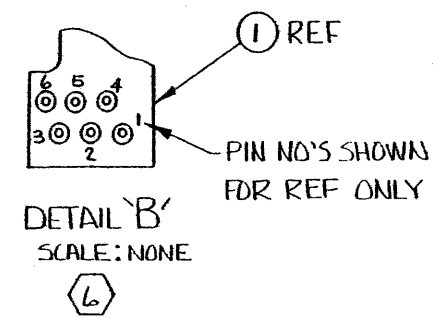
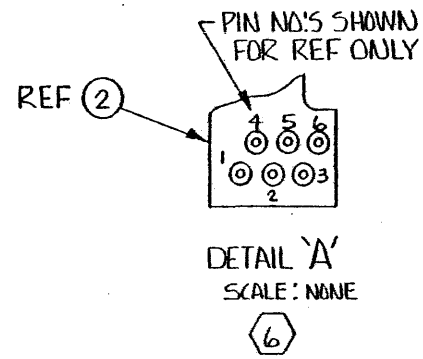
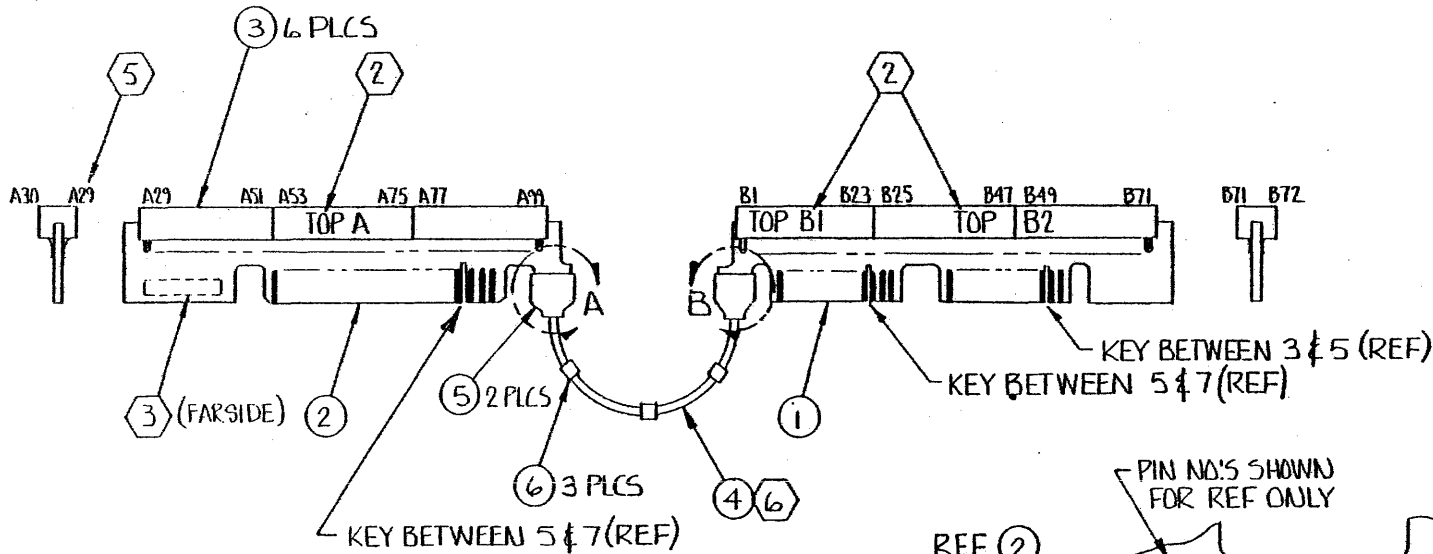
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED PER E.C.O 666	4-17-80	<i>[Signature]</i>

- ⑥ SMOOTH SIDE OF CABLE SHOWN THIS VIEW
- ⑤ ASSEMBLE ITEMS 1 & 2 TO ITEMS 6 & 7 USING 3M PRESS, DIE SETS, AND PROCEDURES
- ④ RED LINE DENOTES COND (PIN) NO. 1
- ③ MARK CHARACTERS APPROX WHERE SHOWN USING BLK INK
- 2 FOR WIRING SEE WIRE LIST 122042
- 1 FOR MATERIAL SEE P/L 122042

NOTE: UNLESS OTHERWISE SPECIFIED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN H. DEUTSCH		3-9-77	
CHECKED <i>[Signature]</i>		3-9-77	
SCALE NONE		SIZE B	DRAWING NO. 122042
DO NOT SCALE DRAWING			SHEET 1 OF 1

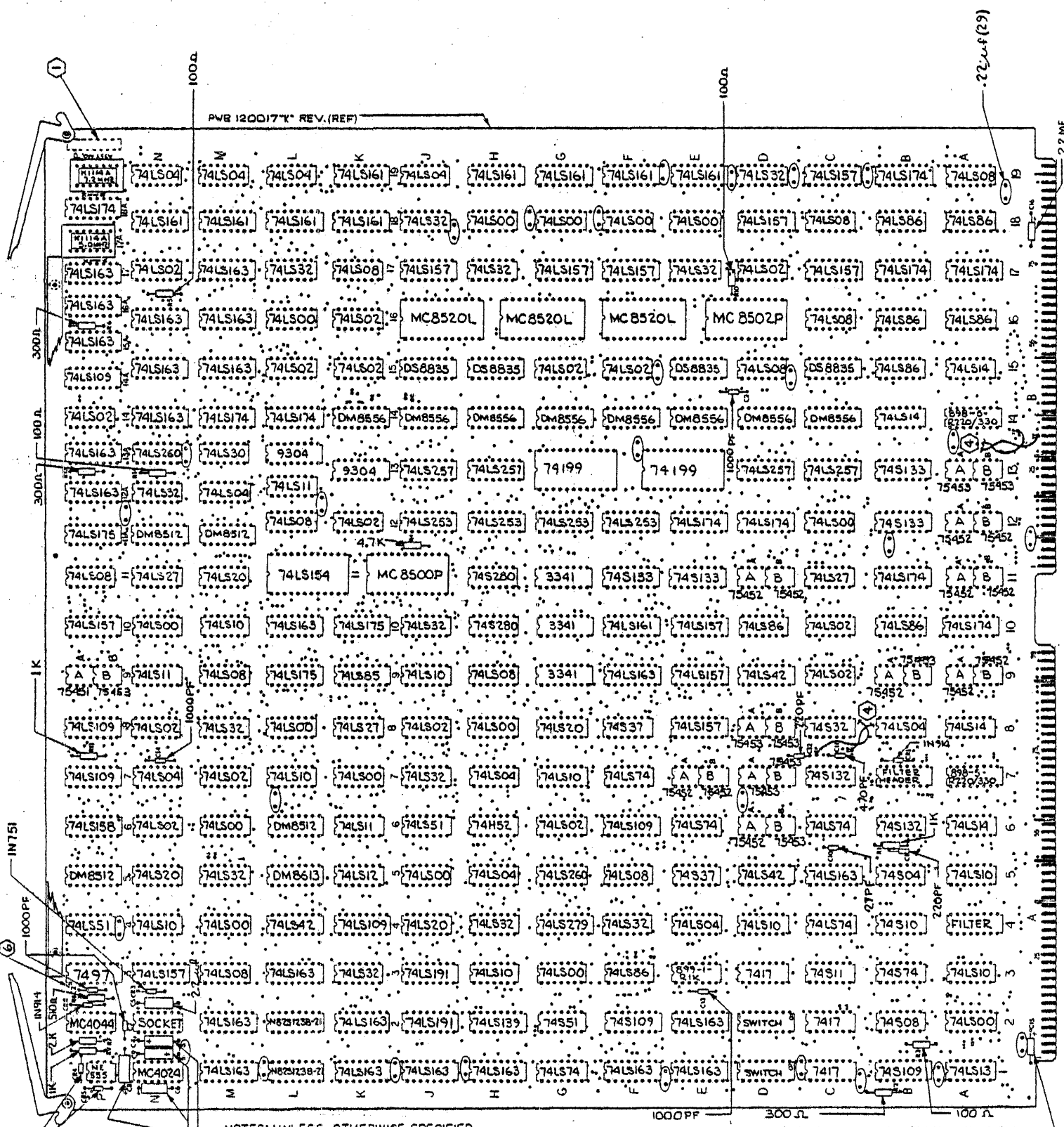
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RELEASE	11-2-79	al



NOTE: UNLESS OTHERWISE SPECIFIED

1. REF. SCHEMATIC DWG NO 122023.
- (2) RUBBER STAMP CHARACTERS SHOWN USING WHIT INK APPROX WHERE SHOWN.
- (3) RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN ON FAR SIDE USING BLK INK.
4. FOR MATERIAL SEE P/L 60000338.
- (5) A29 THRU A99 AND B1 THRU B72 ARE FOR REF ONLY AND DO NOT APPEAR ON PART.
- (6) WIRE PIN TO PIN (REF PIN 1 TO PIN 1, PIN 2 TO PIN 2, ETC.), WIRE LENGTHS TO BE 5 INCHES.

TOLERANCES UNLESS OTHERWISE SPECIFIED			western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES		
±	±	±	ASSY-ADAPTER, NOVA BACKPLANE WIRE INTERCONNECT	
APPROVALS	DATE	SCALE		
DRAWN J. DANSON	8-15-79	NONE	B	60000338
CHECKED H. DEUTSCH	10-26-79	DO NOT SCALE DRAWING		
				SHEET 1 OF 1



- NOTES: UNLESS OTHERWISE SPECIFIED
- ① RUBBER STAMP ASSY. NO. WITH LATEST REVISION LETTER WITH BLACK ETCHING INK APPROX. WHERE SHOWN.
 2. FOR MATERIAL SEE ϕ L 60000411
 3. MAX. HEIGHT OF COMPONENTS FROM SURFACE OF BOARD TO BE .350.
 - ④ INSTALL TWISTED PAIR JUMPER USING NO.30 AWG WIRE WRAP WIRE.
SIGNAL WIRE: FROM PAD "TF" AT CONN. E33 TO PAD "TP" AT 7C-13.
RETURN WIRE: FROM GND. PAD "TF" BY 14A-8 TO PAD "TP" BY 8C-7.
 5. SEE "A" SIZE SHT NO.2 OF THIS DWG FOR ADDITIONAL REWORK.
 - ⑥ SILKSCREENED "C2" IN ERROR, SHOULD BE "C3"

western peripherals
ANAHEIM, CALIFORNIA

ASSEMBLY DRAWING TC120 TAPE CONTROLLER

SIZE	CODE IDENT NO.	DRAWING NO.
D		60000411 - B E
SCALE 1:1	SHEET 1 OF 2	

C OK
D OK
E OK

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
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REWORK INSTRUCTIONS

A.) MAKE THE FOLLOWING ETCH CUTS ;

1. ON COMPONENT SIDE AT 11F-2.
2. ON SOLDER SIDE AT 7H-2
3. ON SOLDER SIDE BETWEEN PINS 2 & 3 OF 4G.

B.) ADD THE FOLLOWING JUMPERS ;

1. 11E-13 TO 7F-9.
2. 7F-8 TO FEED-THRU AT 16J-7.
3. 7H-1 TO 7F-12.
4. 7F-11 TO 5E-8.
5. 7F-1 TO 7F-13.
6. 7F-4 TO 7F-10.
7. 4G-2 TO 1G-10.
8. ~~17N-13 TO 17F-9~~
9. ~~18C-11 TO FEED THRU BY 19C-1 & 16 (FEED THRU CONNECTS TO 19K-13)~~

SCALE	SIZE A	DRAWING NO. 60000411
DO NOT SCALE DRAWING		SHEET 2 OF 2

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
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REWORK INSTRUCTIONS

A.) MAKE THE FOLLOWING ETCH CUTS;

1. ON COMPONENT SIDE AT 11F-2.
2. ON SOLDER SIDE AT 7H-2.
3. ON SOLDER SIDE BETWEEN PINS 2 & 3 OF 4G.

B.) ADD THE FOLLOWING JUMPERS;

1. 11E-13 TO 7F-9.
2. 7F-8 TO FEED-THRU AT 16J-7.
3. 7H-1 TO 7F-12.
4. 7F-11 TO 5E-8.
5. 7F-1 TO 7F-13
6. 7F-4 TO 7F-10
7. 4G-2 TO 1G-10

~~8. 17N-13 TO 17P-9~~~~9. 19G-11 TO FEED THRU BY 19G-12 (LED THRU CONNECTS TO 19K-13)~~

SCALE

SIZE

DRAWING NO.

A

60000429

DO NOT SCALE DRAWING

SHEET 2 of 2

CONTROLLER SCHEMATIC

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SPEED SELECT SWITCH OPERATION : ON= TOGGLE TO NUMBER SIDE


SWITCH POS. 1D&2D	SPEED SETTING							
	6.25 IPS	12.5 IPS	18.75 IPS	25 IPS	37.5 IPS	45 IPS	75	125
1	ON	ON	ON	OFF	ON	OFF	OFF	OFF
2	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
3	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
4	OFF	ON	ON	ON	ON	ON	ON	ON
5	ON	ON	ON	OFF	ON	ON	OFF	OFF
6	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
7	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
8	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

NOTE : UNLESS OTHERWISE SPECIFIED,

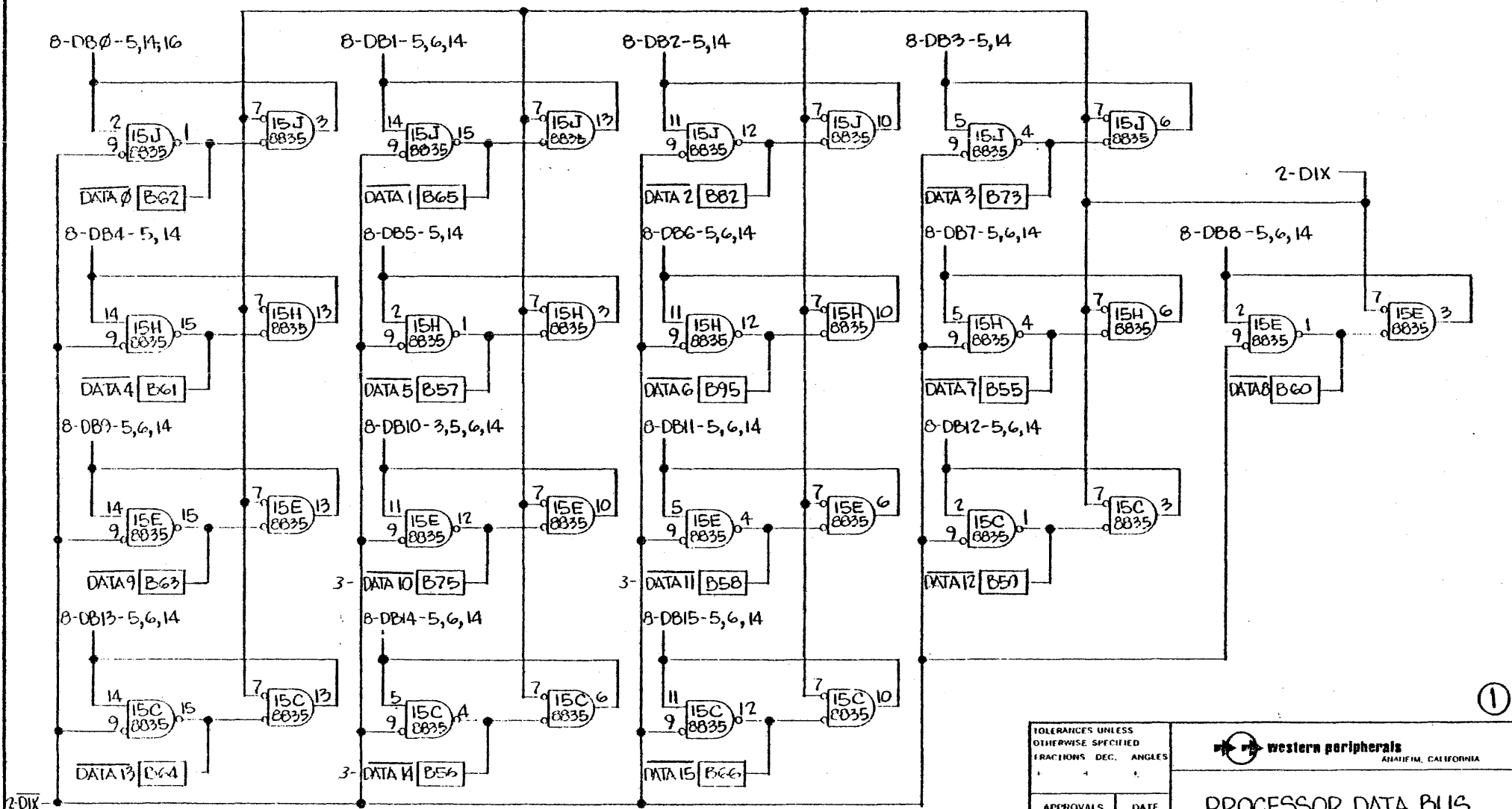
1. 1D IS PRIMARY SPEED SELECTION.
2. REF. TC120 ASSY 60000411, TC128 ASSY 60000429.
- ③ CUTTING ETCH FROM M TO N CONFIGURES PROCESSOR INTERFACE FOR DEVICE CODE 62. SHOWN CONFIGURED FOR DEVICE CODE 22 (STANDARD).
- ④ CUTTING ETCH C TO D AND JUMPERING D TO E MAKES WORD COUNT 16 BITS SHOWN IN 12 BIT WORD COUNT REG. CONFIGURATION (STANDARD).
- ⑤ CUT ETCH FROM A TO B AND G TO F, ADD JUMPER FROM F TO H FOR 16 BIT ADDRESS REG. CONFIGURATION. SHOWN IN 15 BIT ADDRESS REG. CONFIGURATION (STANDARD).
- ⑥ CUT ETCH FROM J TO K, ADD JUMPER K TO L CONFIGURES FOR .3" GAP 7 TRACK HEAD. SHOWN CONFIGURED FOR .15" GAP TAPE HEAD FOR 7 TRACK TRANSPORT (STANDARD).
- ⑦ FILTER COMPONENT VALUES VARY WITH SPEED OF TRANSPORT. SEE MANUAL FOR FURTHER INFORMATION.
8. LOGIC ELEMENTS SHADED IN THIS MANNER DO NOT EXIST ON THE TC128 (NRZ ONLY)
- ⑧ JUMPER POINTS SHOWN ON LOGIC SHT. ④ ARE RESERVED FOR SPECIAL USE.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RELEASE	12-11-79	<i>[Signature]</i>

DEC 11 1979

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES ± ± ±		 western peripherals ™ TUSTIN, CALIFORNIA	
APPROVALS DRAWN <i>P. CHAPMAN</i>		DATE 12-11-79	
CHECKED <i>[Signature]</i>		DATE 12-11-79	
SCALE —		SIZE B	DRAWING NO. 75000414
DO NOT SCALE DRAWING			SHEET 1 of 37

REVISIONS			
LIR	DESCRIPTION	DATE	APPROVED



GND. [B50] ISOL. GND. (TO PIN 8 OF ALL 8835 ON THIS SHEET.)

TOLERANCES UNLESS OTHERWISE SPECIFIED
 FRACTIONS DEC. ANGLES

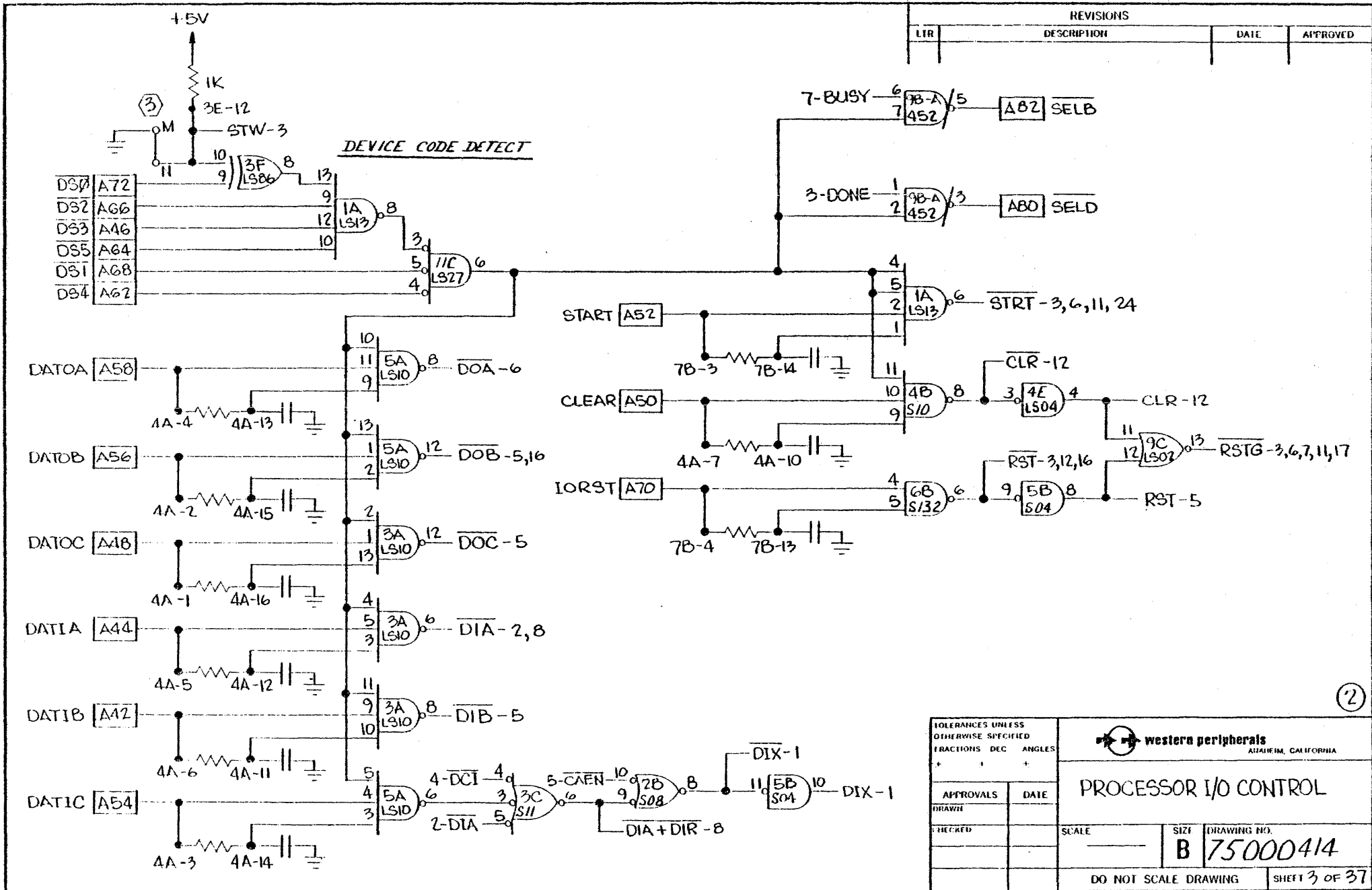


PROCESSOR DATA BUS INTERFACE

APPROVALS	DATE
DRAWN	
CHECKED	

SCALE	SIZE	DRAWING NO.
	B	75000414
DO NOT SCALE DRAWING		SHEET 2 OF 37

①



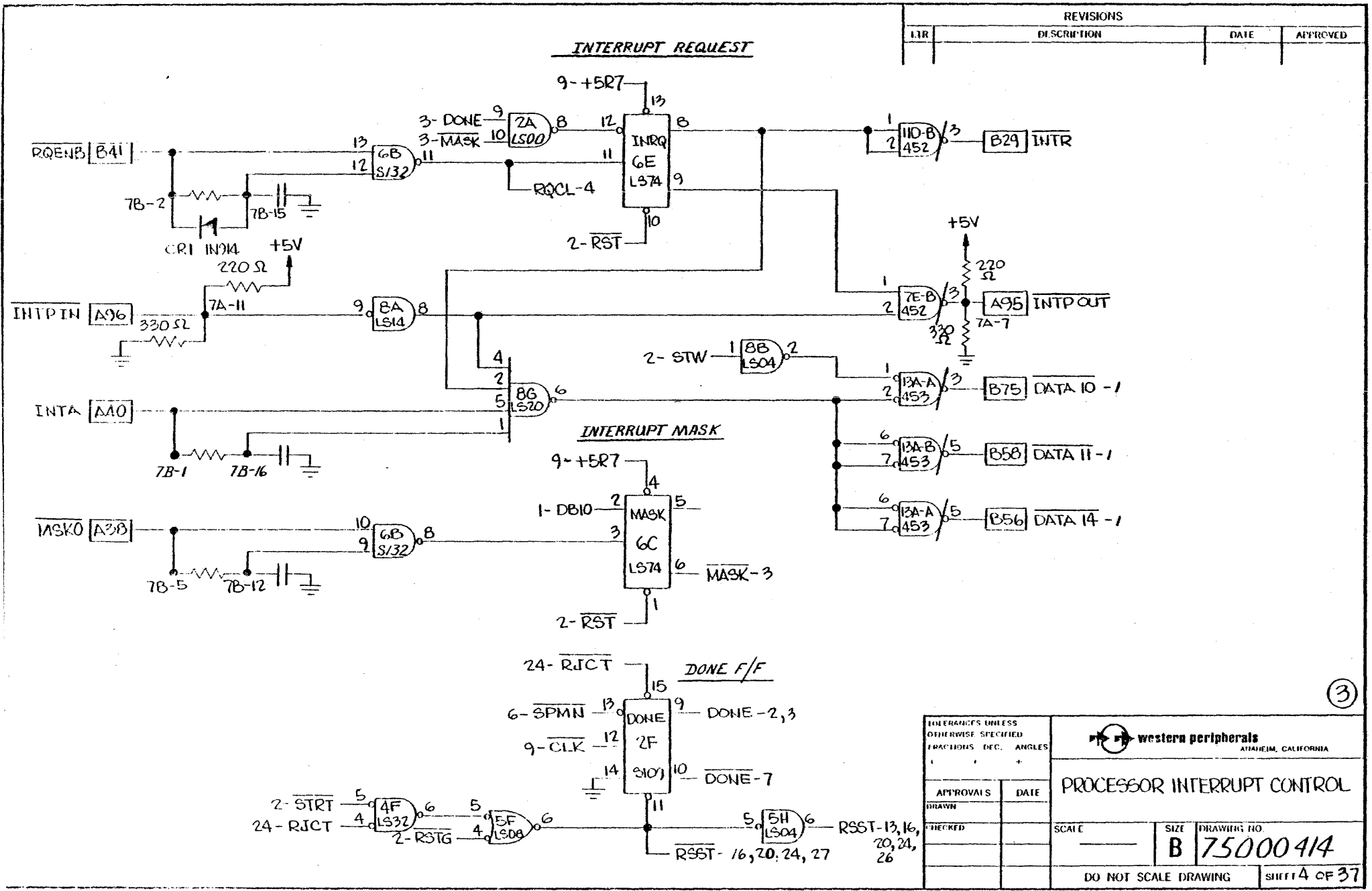
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

APPROVALS		DATE
DRAWN		
CHECKED		

western peripherals
ANAHEIM, CALIFORNIA

PROCESSOR I/O CONTROL

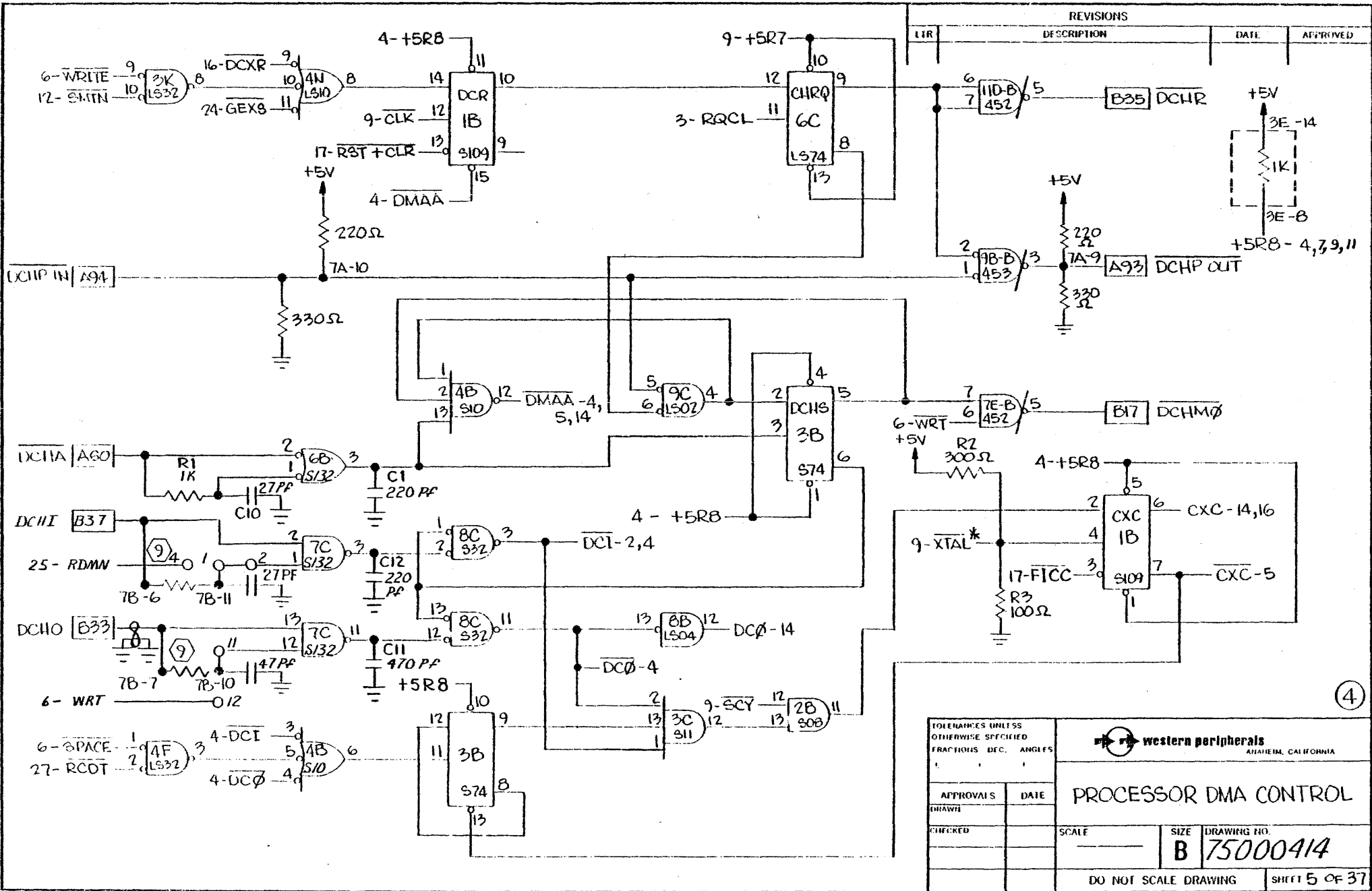
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DO NOT SCALE DRAWING			SHEET 3 OF 37




REVISIONS			
LIR	DESCRIPTION	DATE	APPROVED

③

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES		western peripherals ANAHEIM, CALIFORNIA		
APPROVALS	DATE			PROCESSOR INTERRUPT CONTROL
DRAWN		SCALE	SIZE	DRAWING NO.
CHECKED			B	75000414
DO NOT SCALE DRAWING			SHEET 4 OF 37	



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


western peripherals
 ANAHEIM, CALIFORNIA

PROCESSOR DMA CONTROL

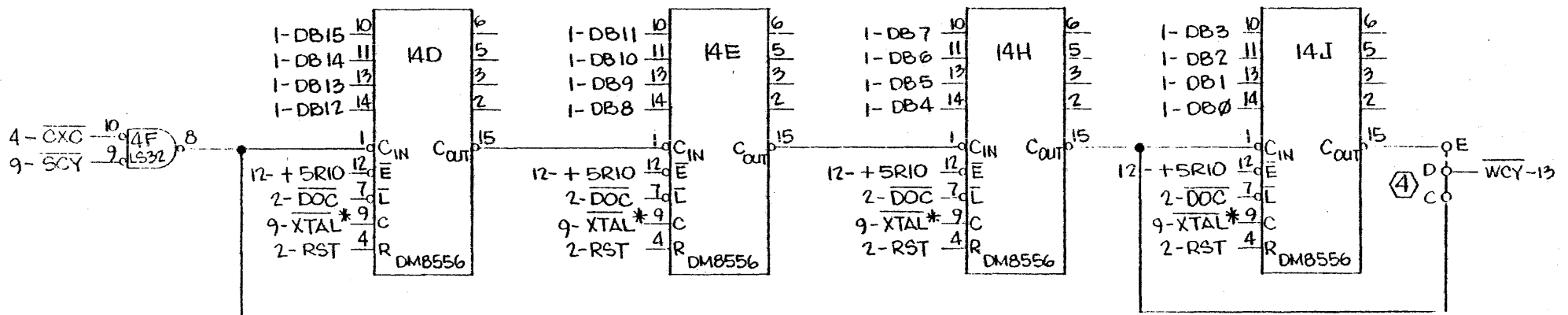
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DO NOT SCALE DRAWING SHEET 5 OF 37

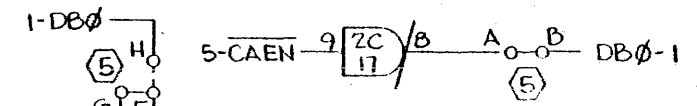
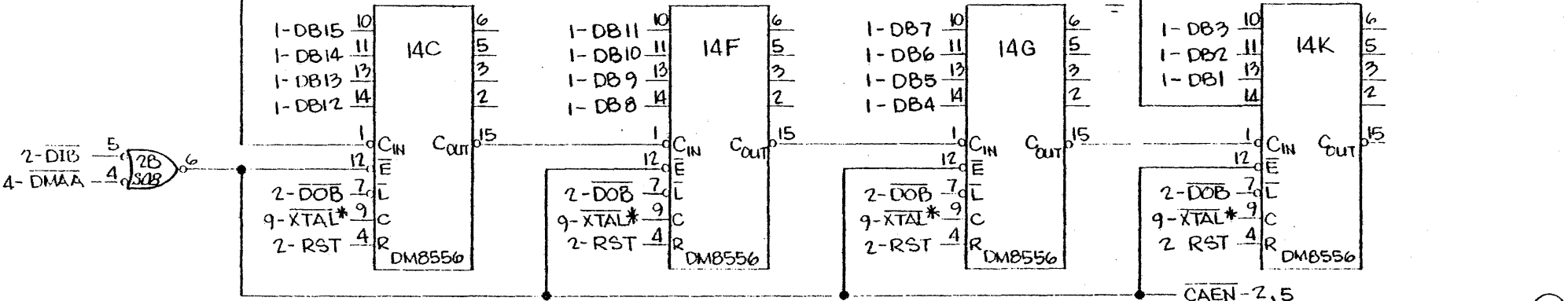
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DMA WORD COUNT REGISTER

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

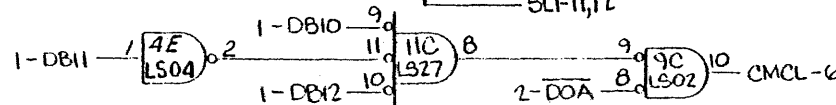
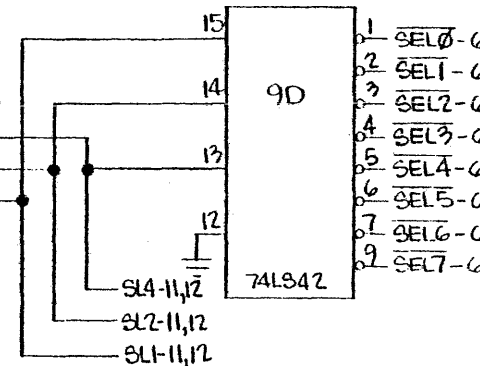
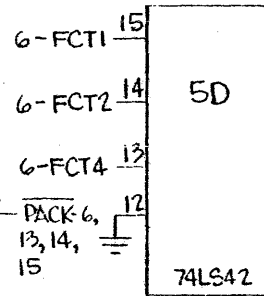
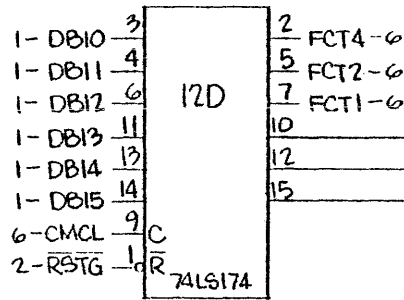
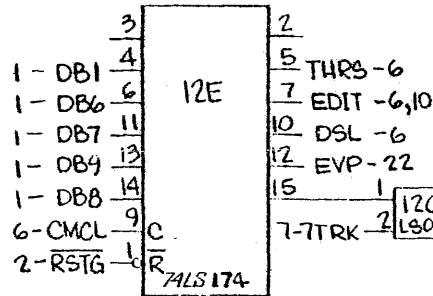
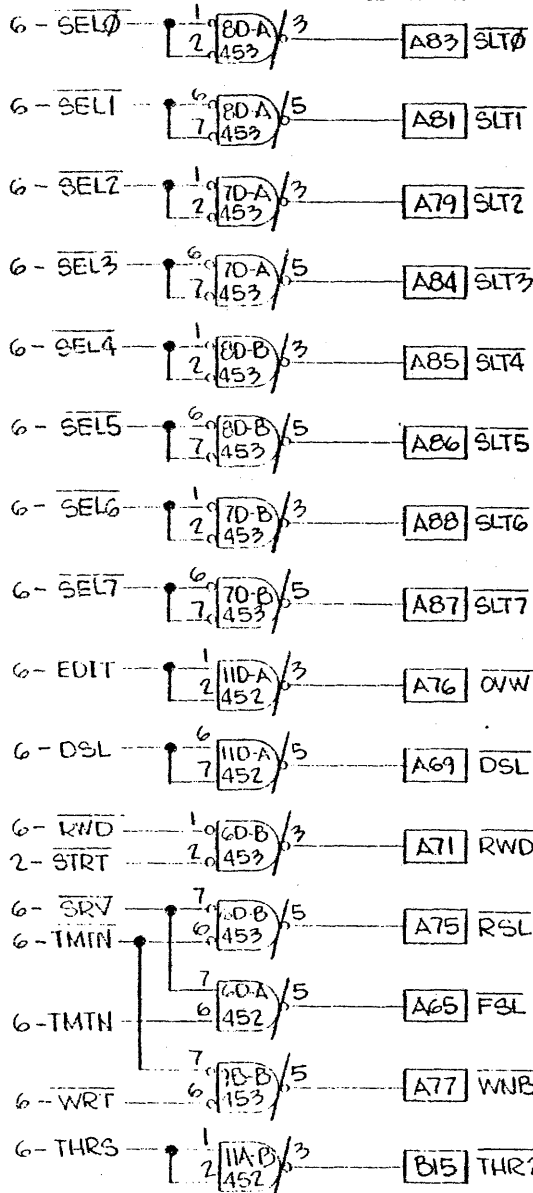


DMA ADDRESS REGISTER

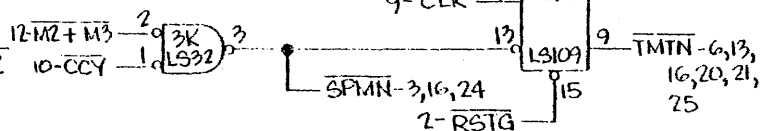


TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC. ANGLES			
APPROVALS	DATE	DMA ADDRESS AND WORD COUNT REGISTERS	
DRAWN			
CHECKED		SCALE	SIZE
			DRAWING NO.
			B 75000414
DO NOT SCALE DRAWING			SHEET 6 OF 37

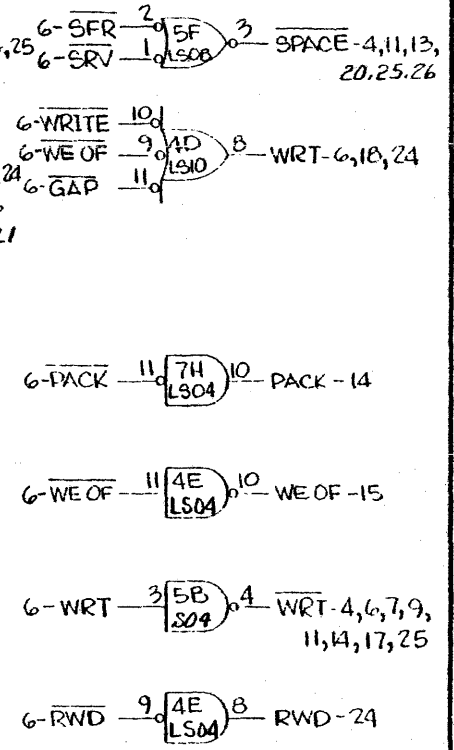
CONTROL



TAPE MOTION

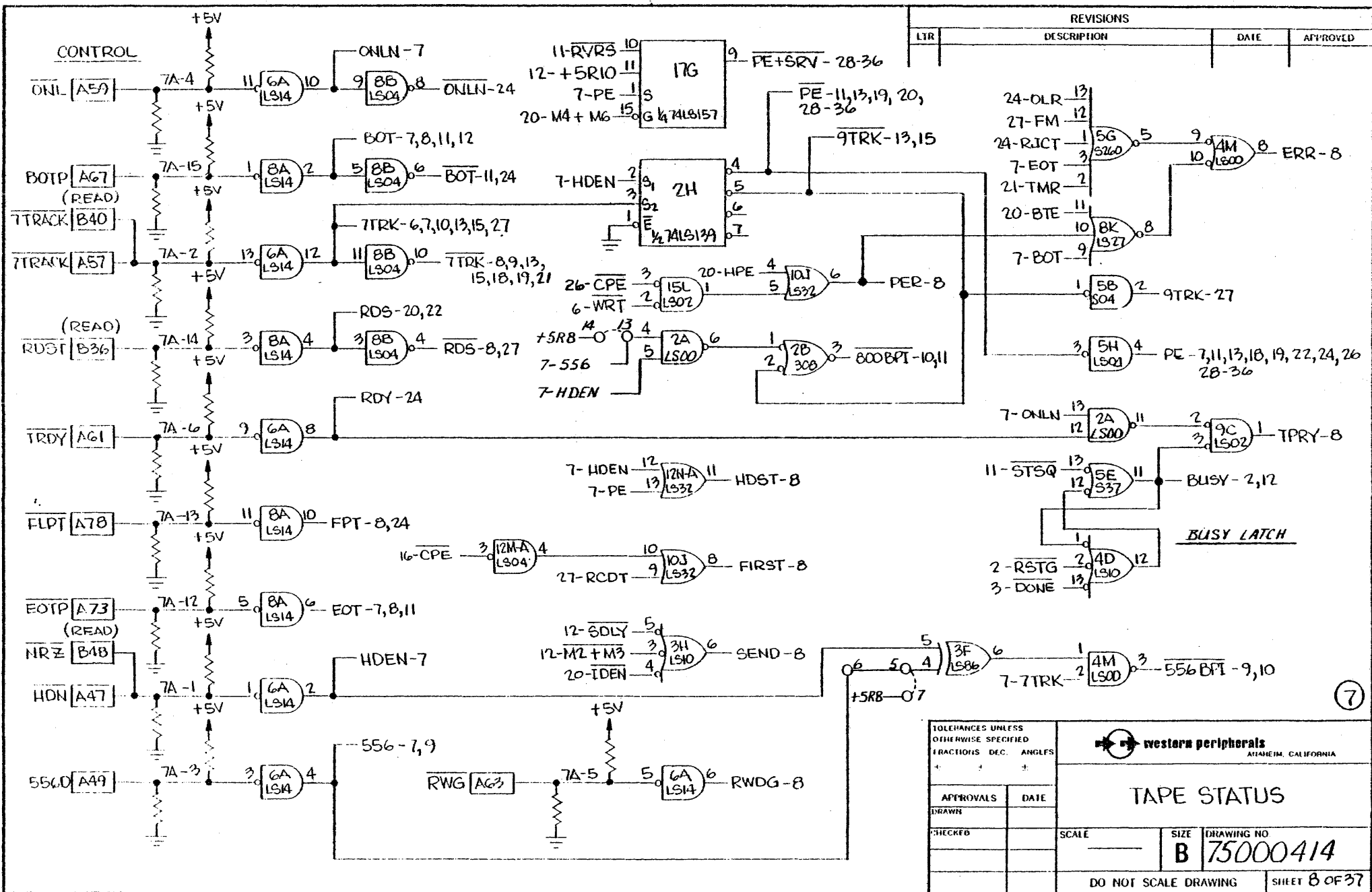


REVISIONS			
ITR	DESCRIPTION	DATE	APPROVED

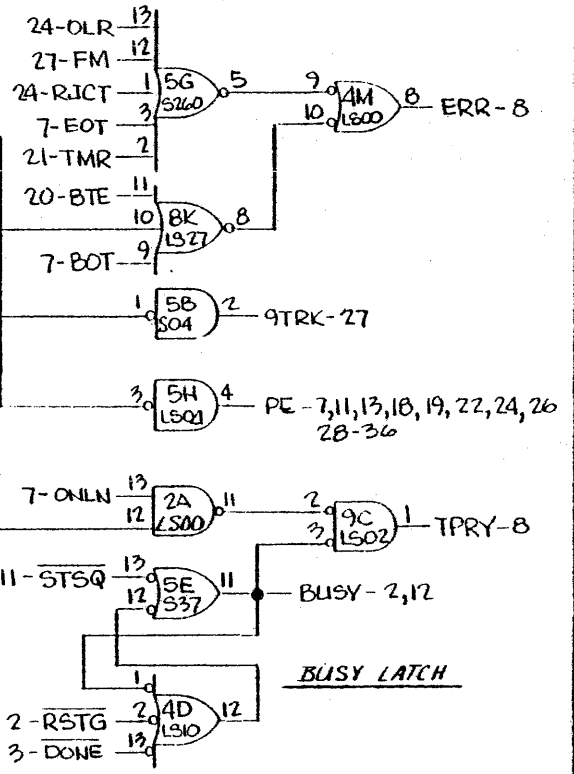


(6)

OPERATIVES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
TAPE COMMAND REGISTER			
APPROVALS	DATE	SCALE	SIZE
DRAWN			B
CHECKED			DRAWING NO.
			75000414
DO NOT SCALE DRAWING			SHEET 7 OF 37

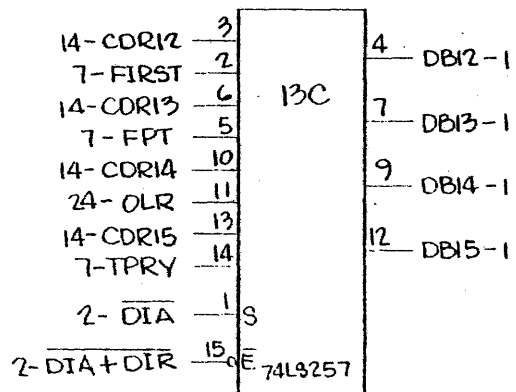
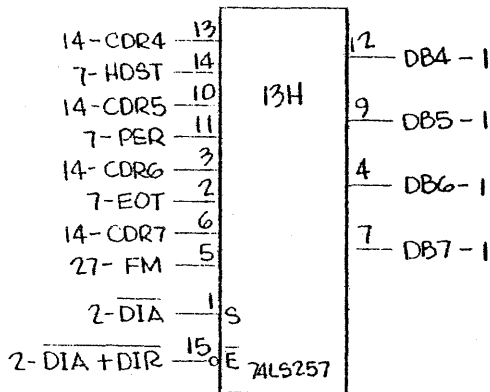
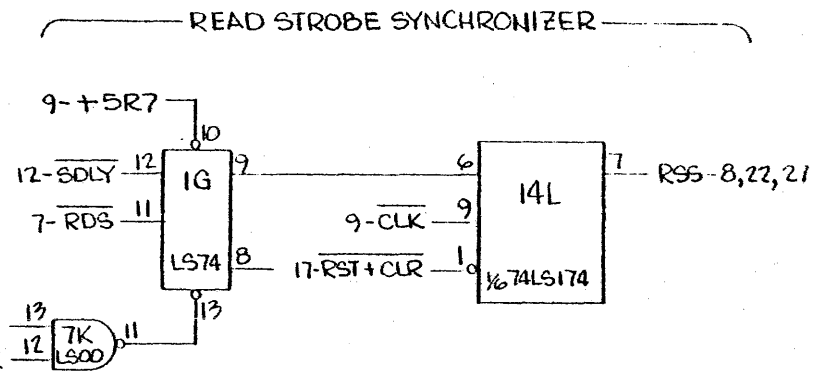
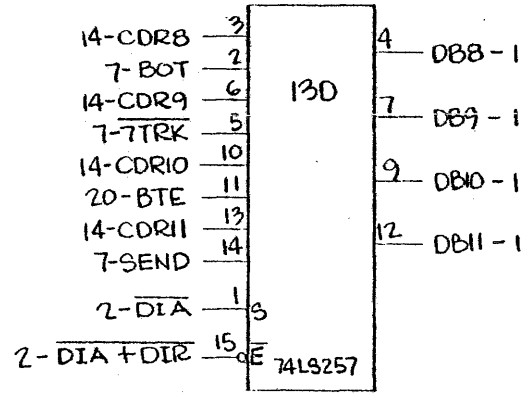
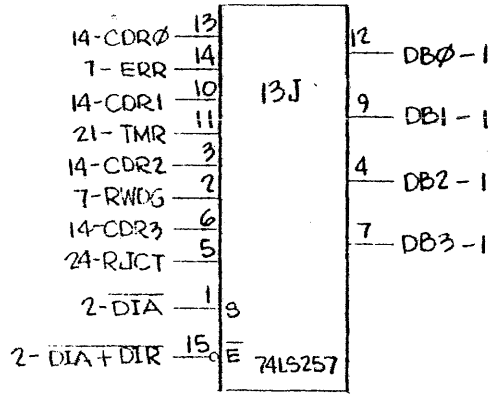


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + + +		 western peripherals ATANEIM, CALIFORNIA		
APPROVALS	DATE			TAPE STATUS SCALE _____ SIZE B DRAWING NO. 75000414
DRAWN		SCALE	DO NOT SCALE DRAWING	
CHECKED				

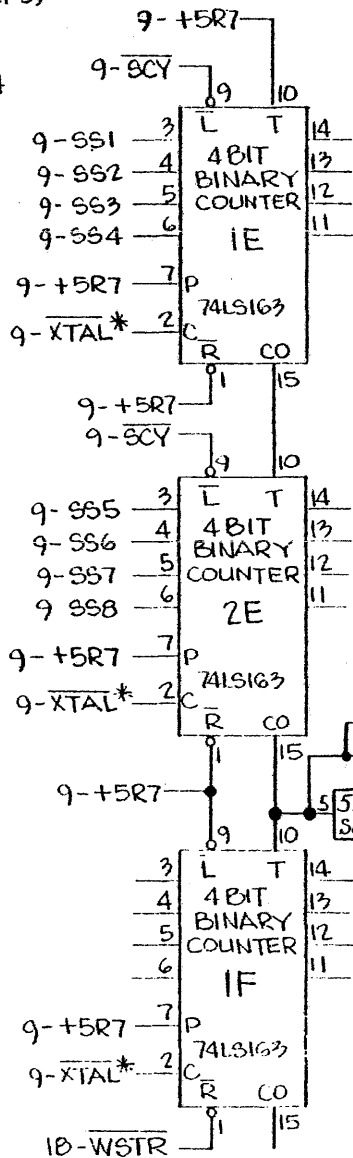
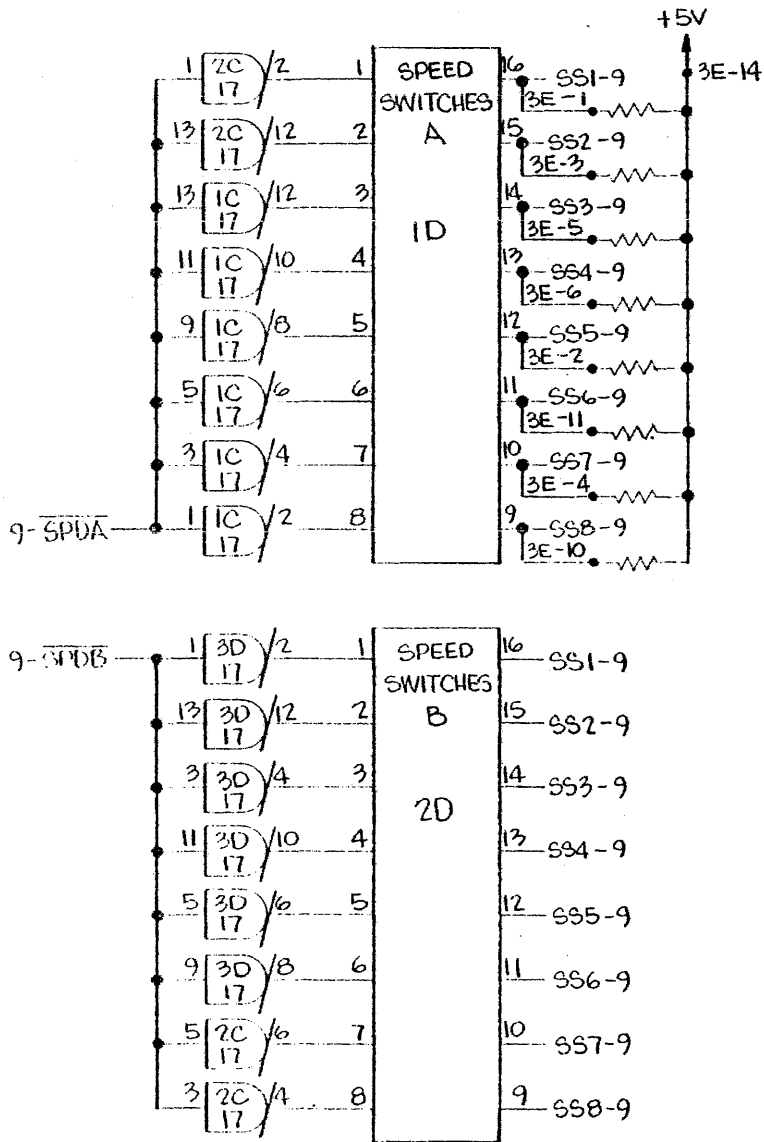
REVISIONS			
LT#	DESCRIPTION	DATE	APPROVED



(8)

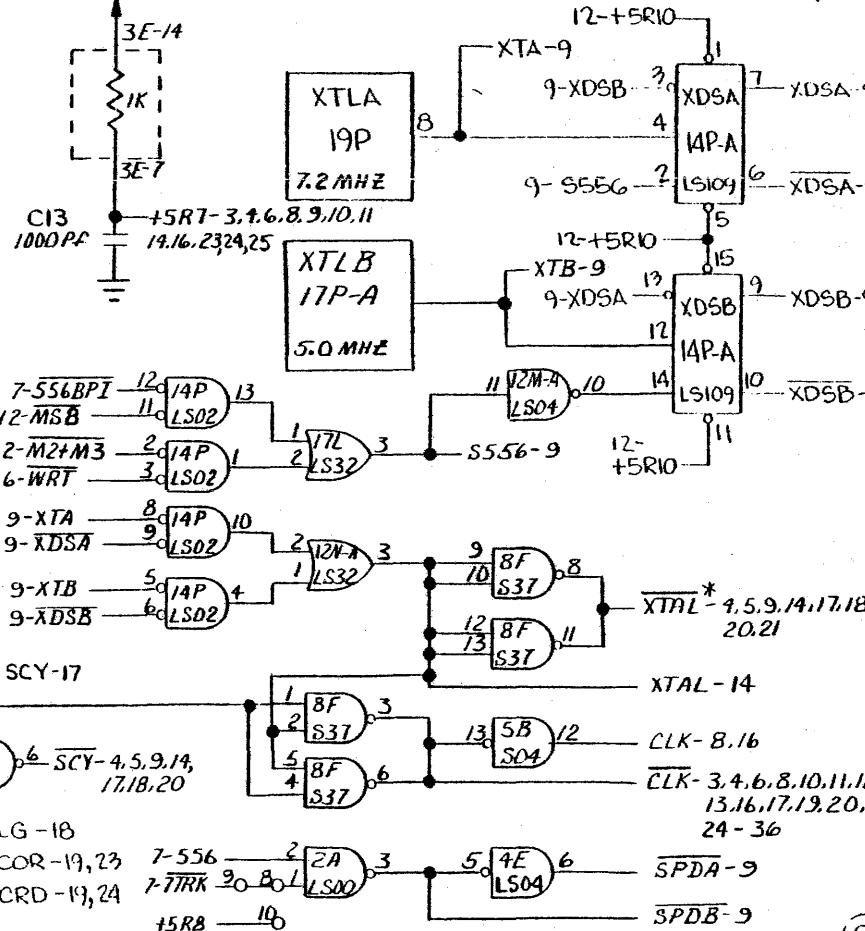
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + - +		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN			
CHECKED		SCALE	SIZE
			B
		DRAWING NO. 75000414	
DO NOT SCALE DRAWING			SHEET 1 OF 37

SPEED CLOCK GENERATOR
 FREQ = 6400 x SPEED (IPS)



REVISIONS			
LT#	DESCRIPTION	DATE	APPROVED

SYSTEM CLOCK GENERATOR



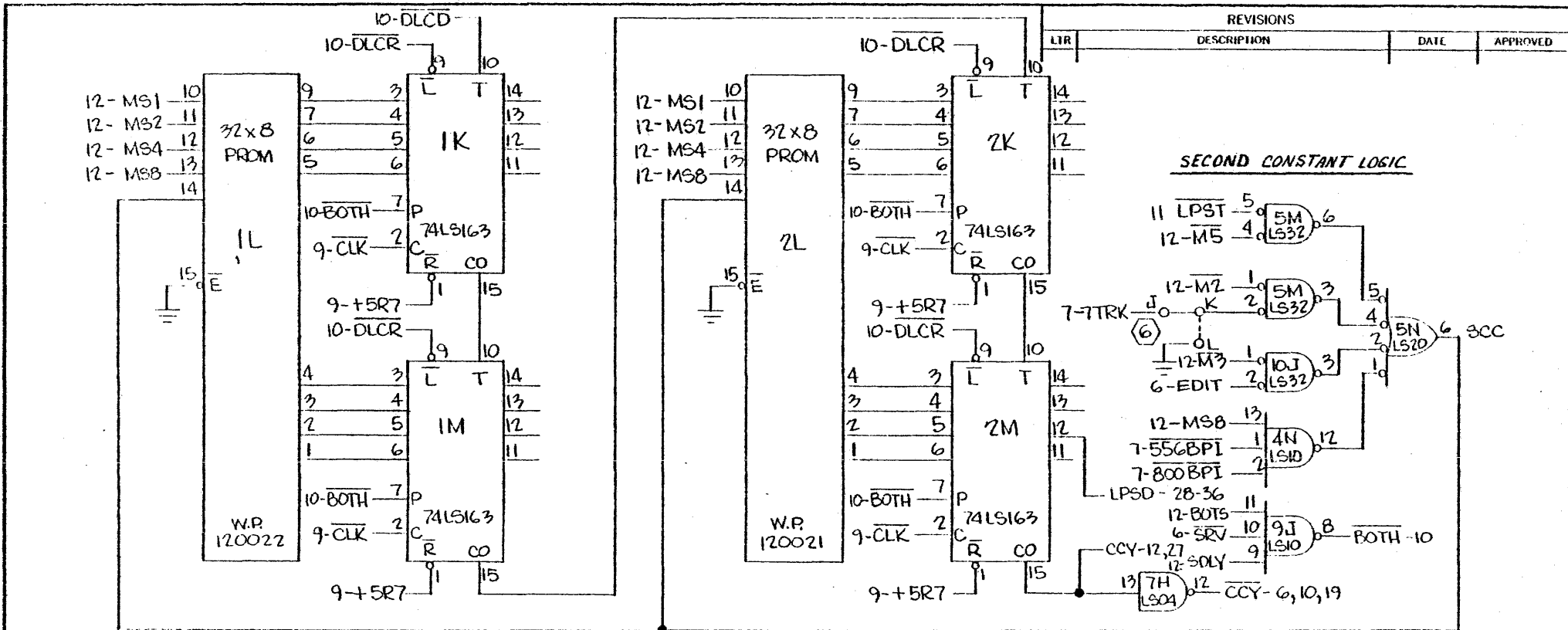
APPROVALS	DATE
INCHES	
FRAC	
THICK	

western peripherals
 ANAHEIM, CALIFORNIA

CLOCK GENERATOR AND SPEED CONTROL

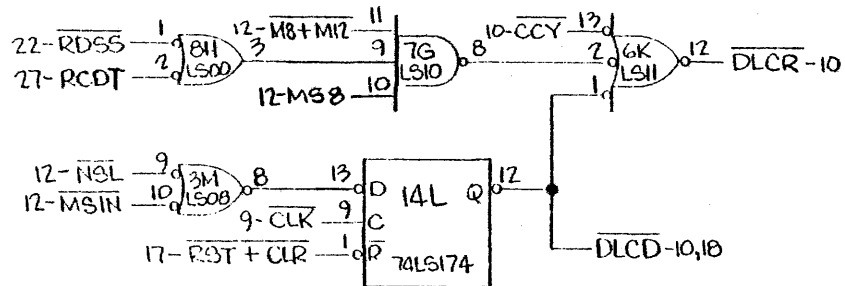
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DO NOT SCALE DRAWING SHEET 10 OF 37



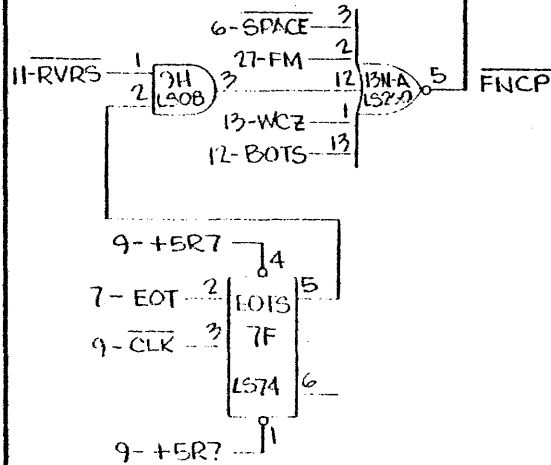
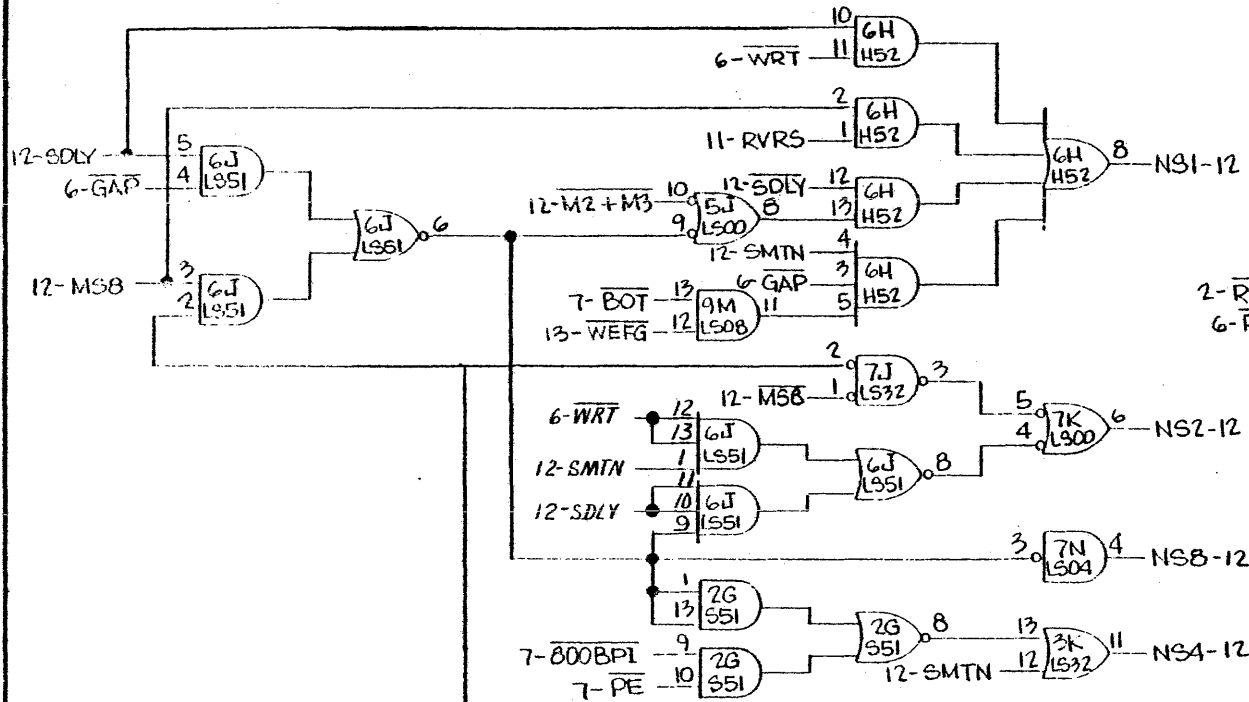
REVISIONS			
LIR	DESCRIPTION	DATE	APPROVED

SECOND CONSTANT LOGIC

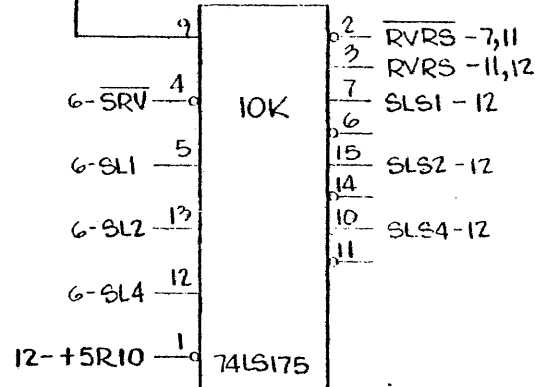


TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	DELAY GENERATOR	
DRAWN			
CHECKED		SCALE	SIZE B DRAWING NO. 75000414
		DO NOT SCALE DRAWING	
		SHEET 11 OF 37	

STATE CHANGE CONTROL



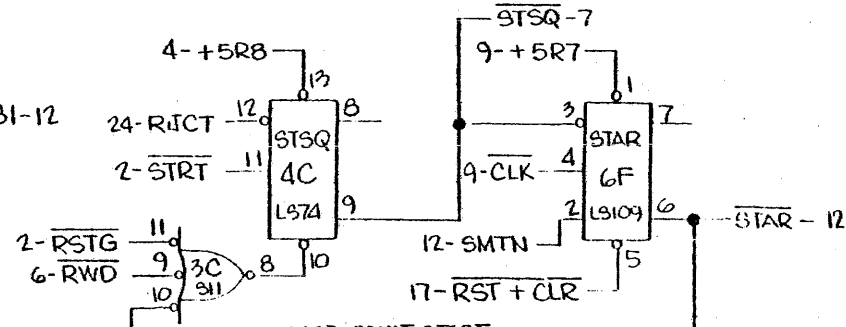
AUTOMATIC NON-STOP CONTROL



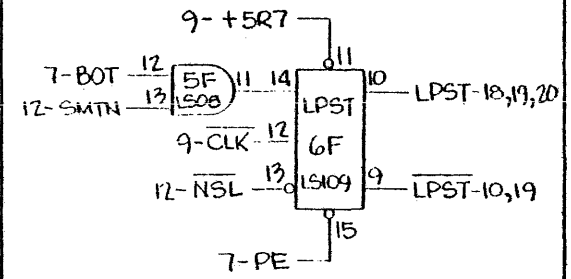
REVISIONS

LR	DESCRIPTION	DATE	APPROVED

START SYNCHRONIZER



LOAD POINT START



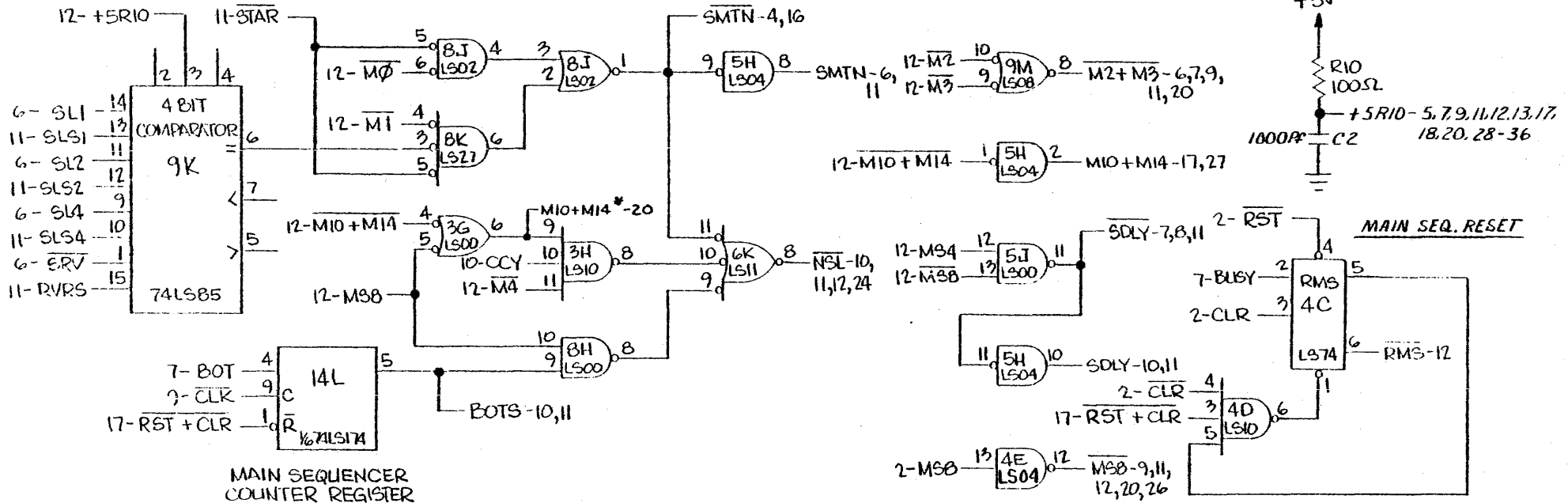
(11)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA		
APPROVALS	DATE			<h2 style="text-align: center;">MAIN SEQUENCER</h2>
DRAWN		SCALE	SIZE	
CHECKED			B	75000414
DO NOT SCALE DRAWING			SHEET 12 OF 37	

AUTOMATIC NON-STOP CONTROL

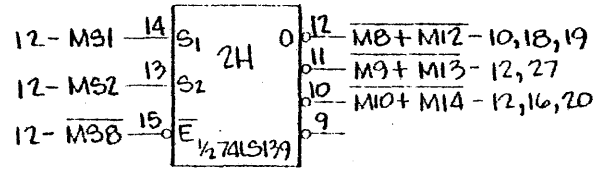
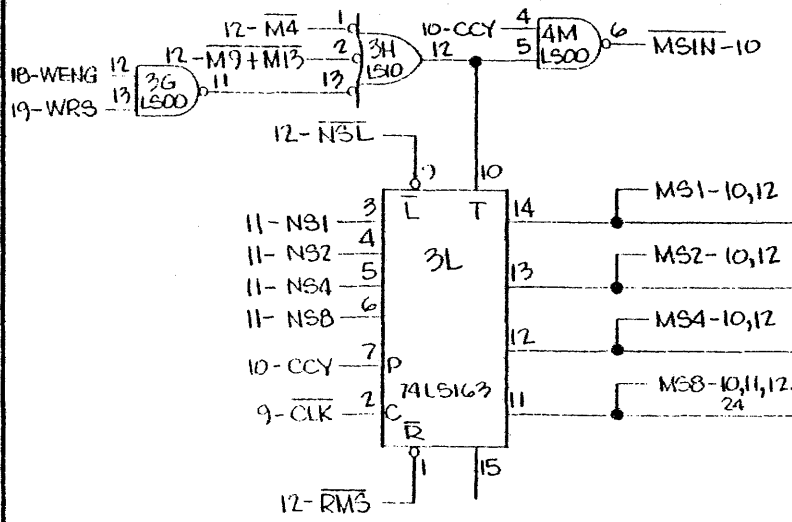
MAIN SEQUENCER CHANGE CONTROL

REVISIONS			
ITER	DESCRIPTION	DATE	APPROVED



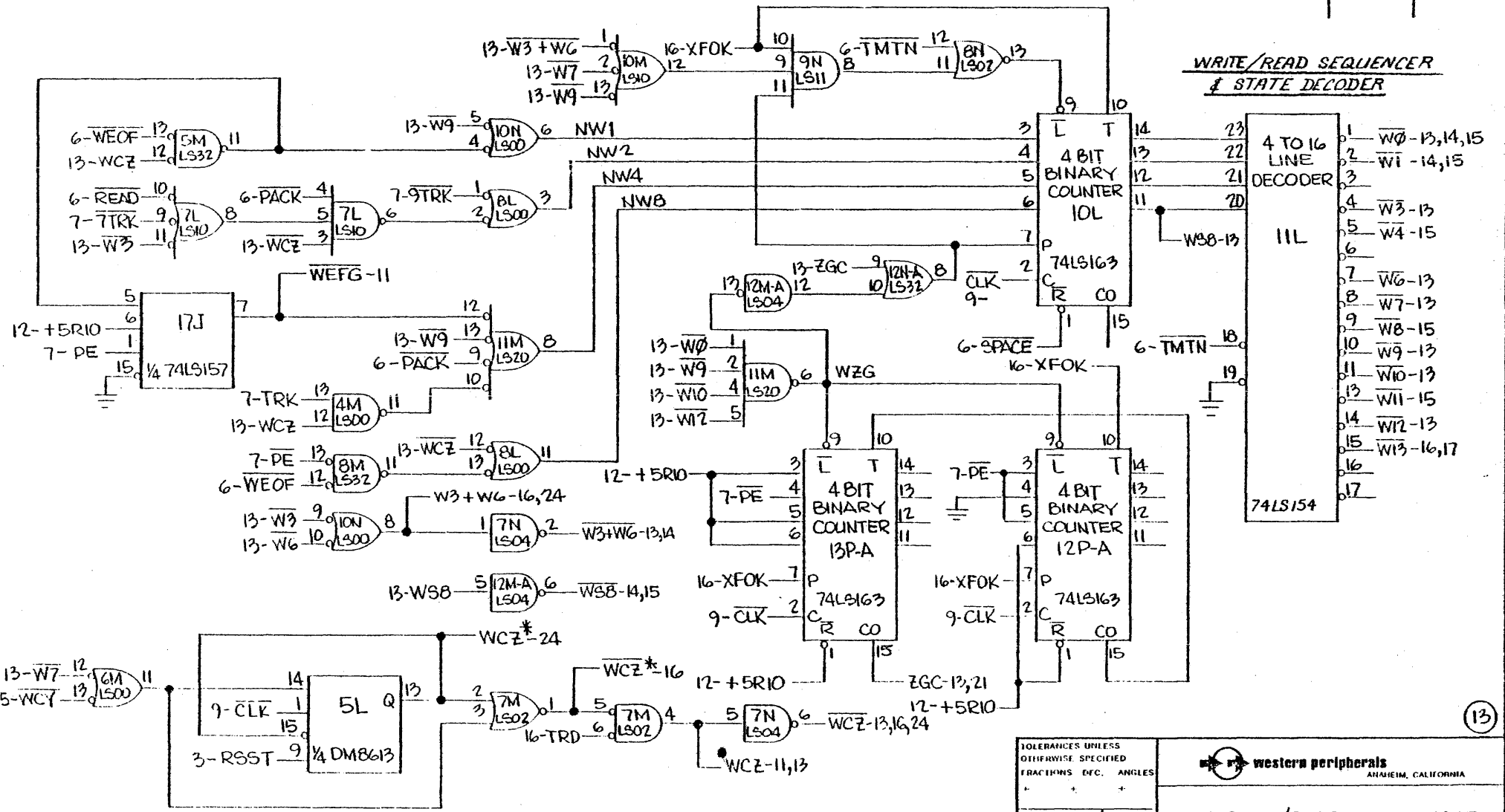
MAIN SEQUENCER COUNTER REGISTER

MAIN SEQUENCER STATE DECODERS



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN		DATE	
CHECKED		SCALE	SIZE B
		DRAWING NO. 75000414	
DO NOT SCALE DRAWING			SHEET 13 OF 37

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



**WRITE/READ SEQUENCER
& STATE DECODER**

4 TO 16 LINE DECODER	11L	74LS154
1	$\overline{W0}$ -13,14,15	1
2	$\overline{W1}$ -14,15	2
3		3
4	$\overline{W3}$ -13	4
5	$\overline{W4}$ -15	5
6		6
7	$\overline{W6}$ -13	7
8	$\overline{W7}$ -13	8
9	$\overline{W8}$ -15	9
10	$\overline{W9}$ -13	10
11	$\overline{W10}$ -13	11
12	$\overline{W11}$ -15	12
13	$\overline{W12}$ -13	13
14	$\overline{W13}$ -16,17	14
15		15
16		16
17		17

WORD COUNT ZERO

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

western peripherals
ANNEM, CALIFORNIA

WRITE/READ SEQUENCER

SCALE	SIZE	DRAWING NO.
	B	75000414
DO NOT SCALE DRAWING		SHEET 14 OF 37

COMPUTER DATA REGISTER

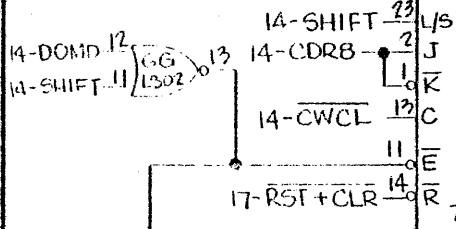
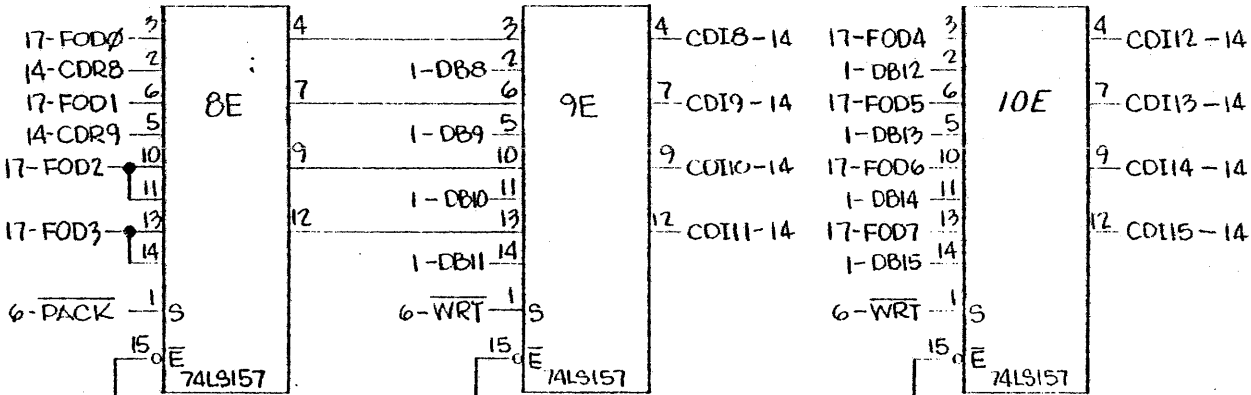
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

COMPUTER DATA REGISTER INPUT GATING

1-DB0 22
 1-DB1 20
 1-DB2 18
 1-DB3 16
 1-DB4 9
 1-DB5 7
 1-DB6 5
 1-DB7 3

8BIT SHIFT REG 13G

21 CDR0-8,15
 19 CDR1-8,15
 17 CDR2-8,15
 15 CDR3-8,15
 10 CDR4-8,15
 8 CDR5-8,15
 6 CDR6-8,15
 4 CDR7-8,15



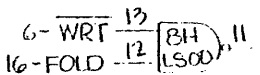
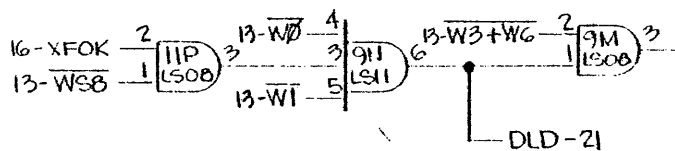
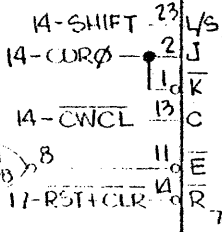
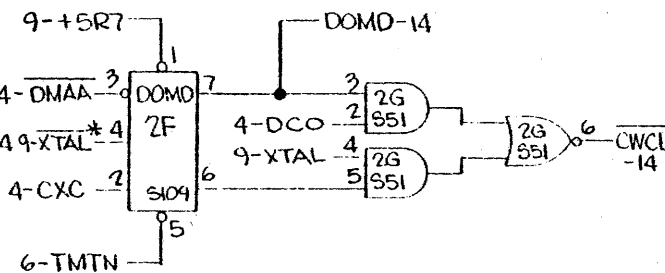
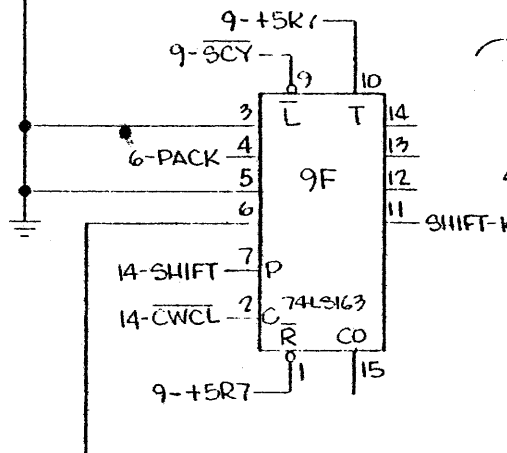
14-CDI8 22
 14-CDI9 20
 14-CDI10 18
 14-CDI11 16
 14-CDI12 9
 14-CDI13 7
 14-CDI14 5
 14-CDI15 3

8BIT SHIFT REG 13F

21 CDR8-8,14
 19 CDR9-8,14
 17 CDR10-8
 15 CDR11-8
 10 CDR12-8
 8 CDR13-8
 6 CDR14-8,15
 4 CDR15-8,15

PACK SHIFT CONTROL

COMPUTER DATA REGISTER CLOCK CONTROL

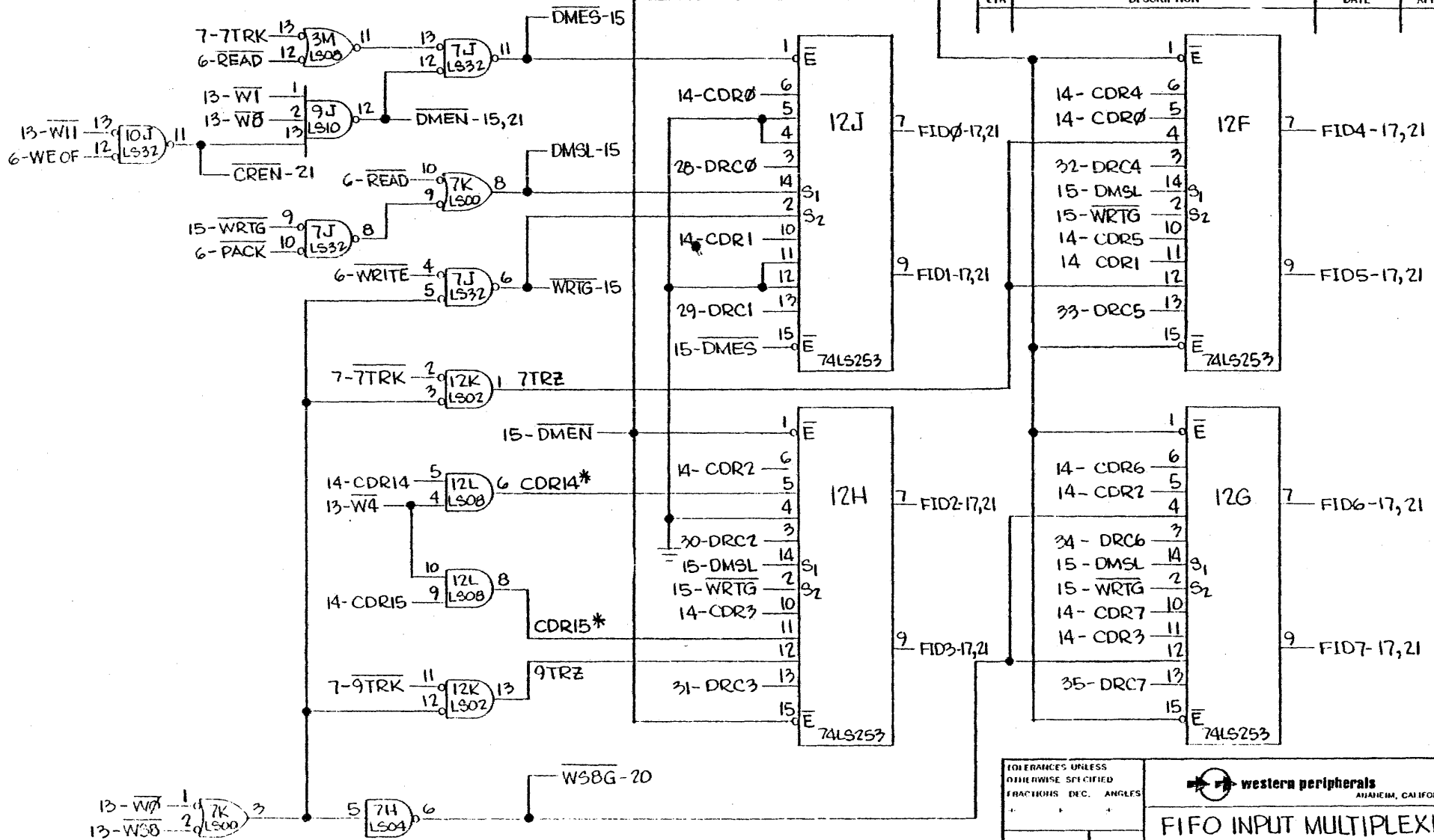


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TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES		western peripherals ANAHEIM CALIFORNIA	
PROCESSOR DATA REGISTER AND CONTROL			
APPROVALS	DATE	SCALE	SIZE B DRAWING NO. 75000414
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DO NOT SCALE DRAWING			SHEET 15 OF 37

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED

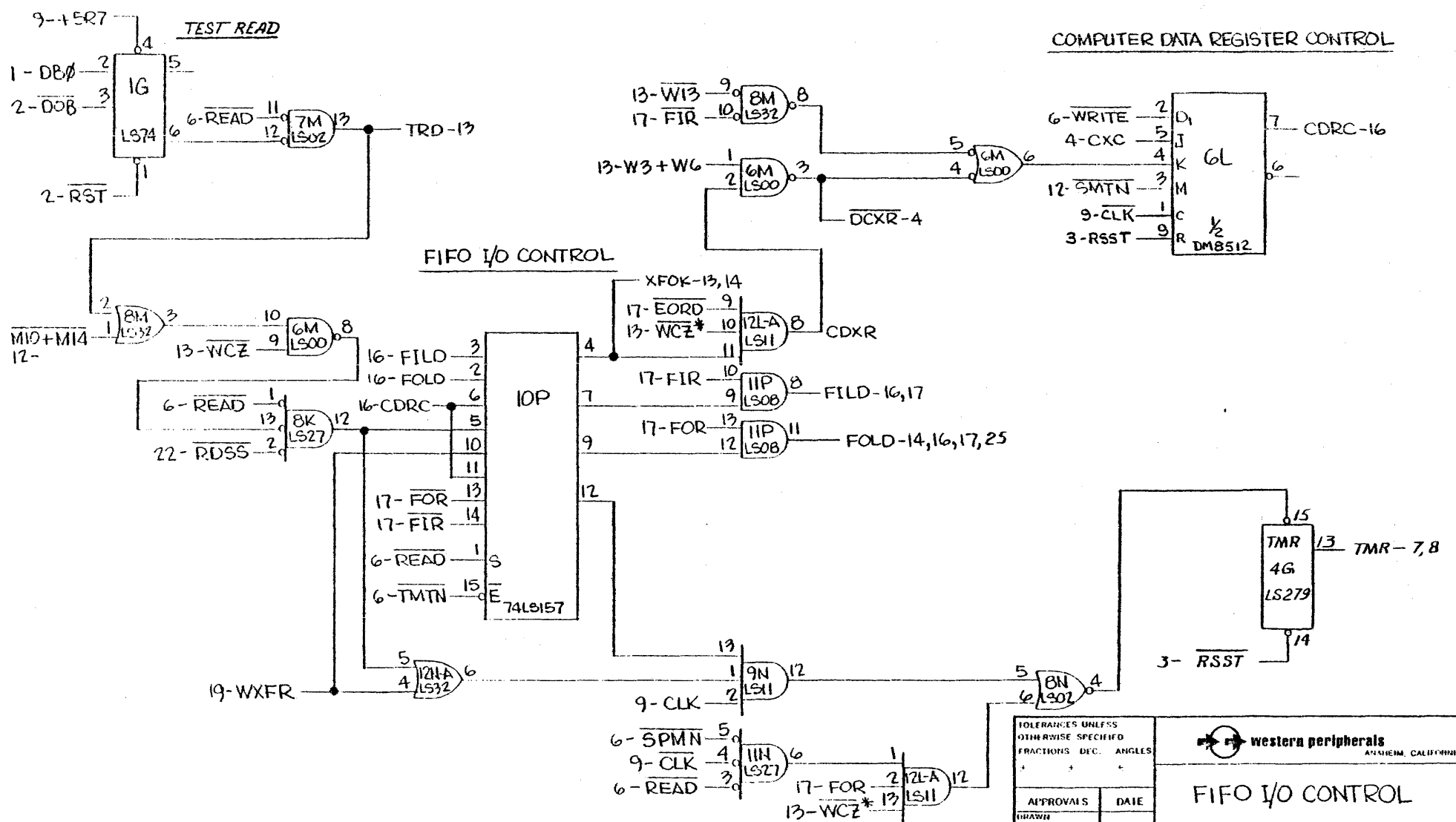


(15)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES * * *		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN _____ CHECKED _____		DATE _____ SCALE _____ SIZE B DRAWING NO. 75000414	
DO NOT SCALE DRAWING		SHEET 16 OF 37	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

COMPUTER DATA REGISTER CONTROL



western peripherals
ANN ARBOR, CALIFORNIA

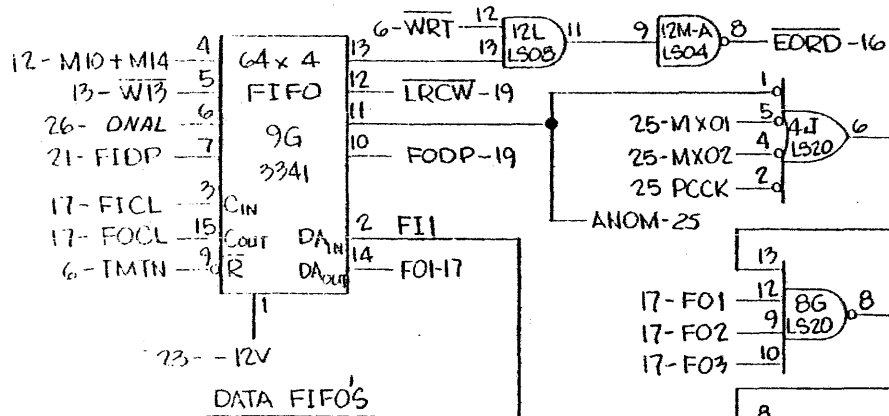
FIFO I/O CONTROL

APPROVALS	DATE
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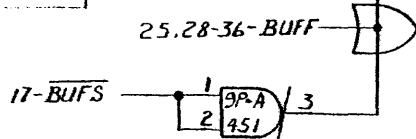
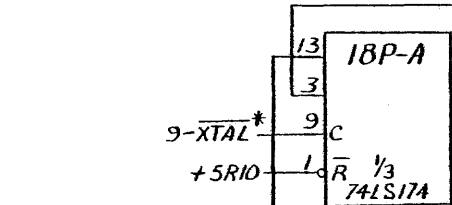
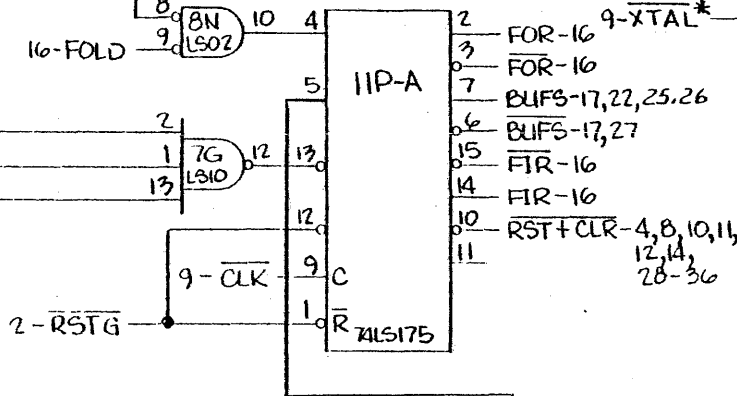
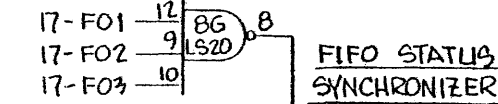
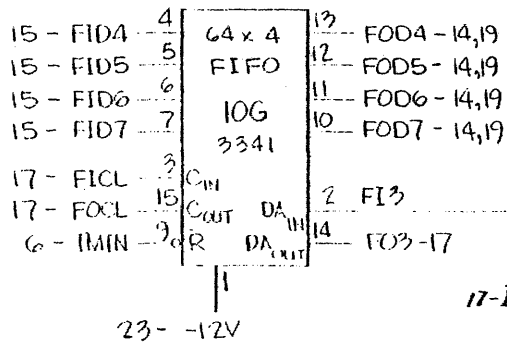
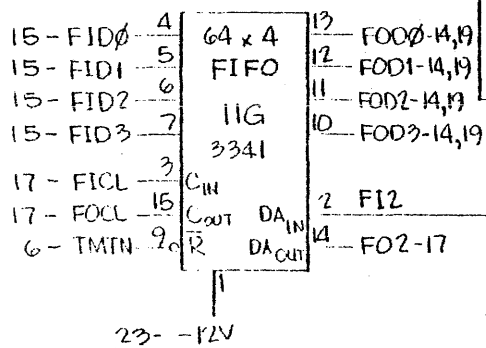
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES	
SCALE	SIZE
	B
DRAWING NO.	75000414
DO NOT SCALE DRAWING	
SHEET 17 OF 37	

(16)

CONTROL FIFO



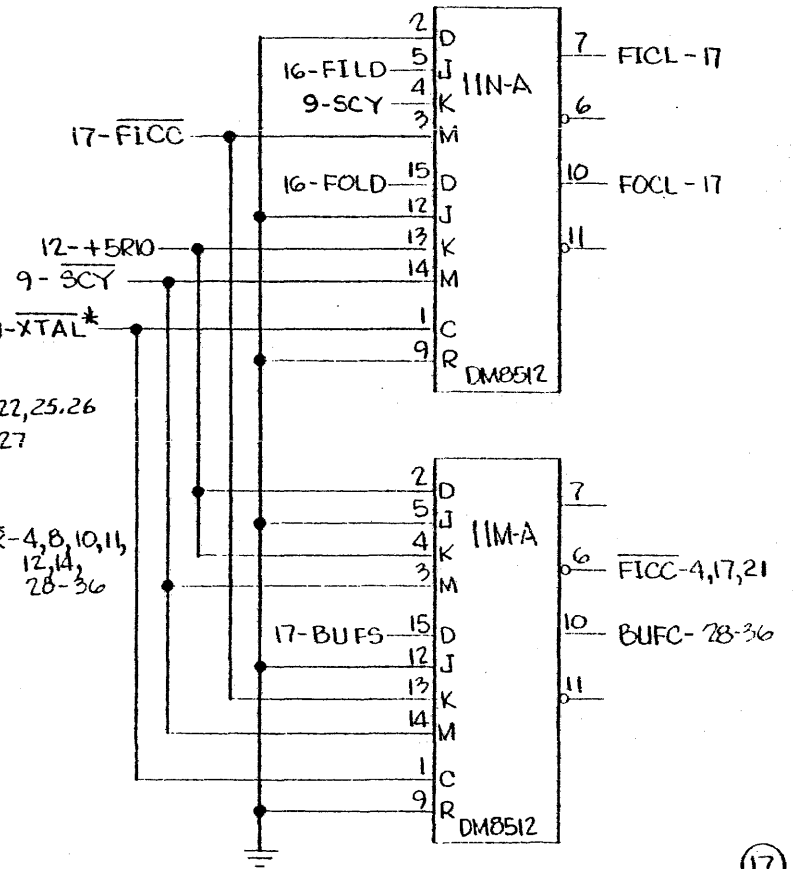
DATA FIFO'S



NOTE: BUFF GROUNDED FOR TC128(NRZ ONLY)

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

FIFO CLOCK GENERATOR

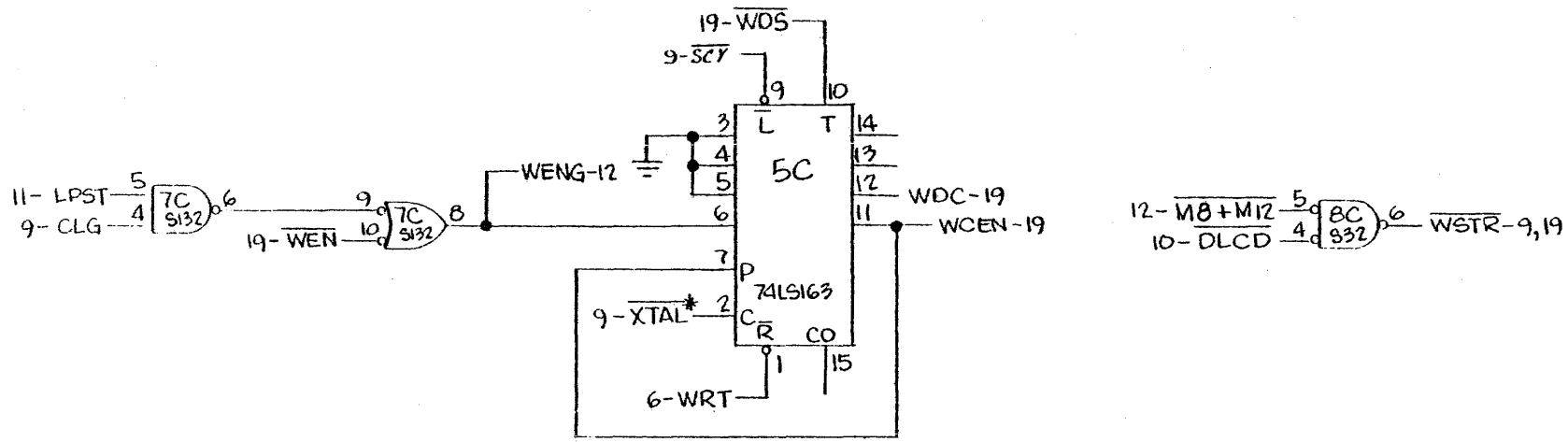


17

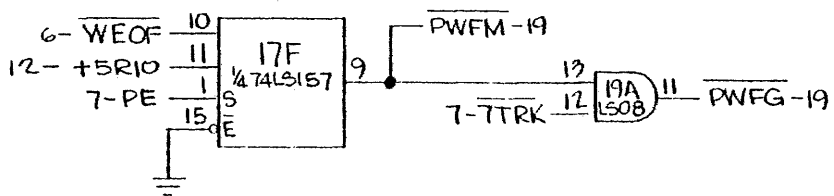
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC. ANGLES		FIFO	
APPROVALS	DATE		
DRAWN		SCALE	SIZE B
CHECKED		DRAWING NO. 75000414	
		DO NOT SCALE DRAWING	
		SHEET 18 OF 37	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

WRITE DATA CLOCK GENERATOR



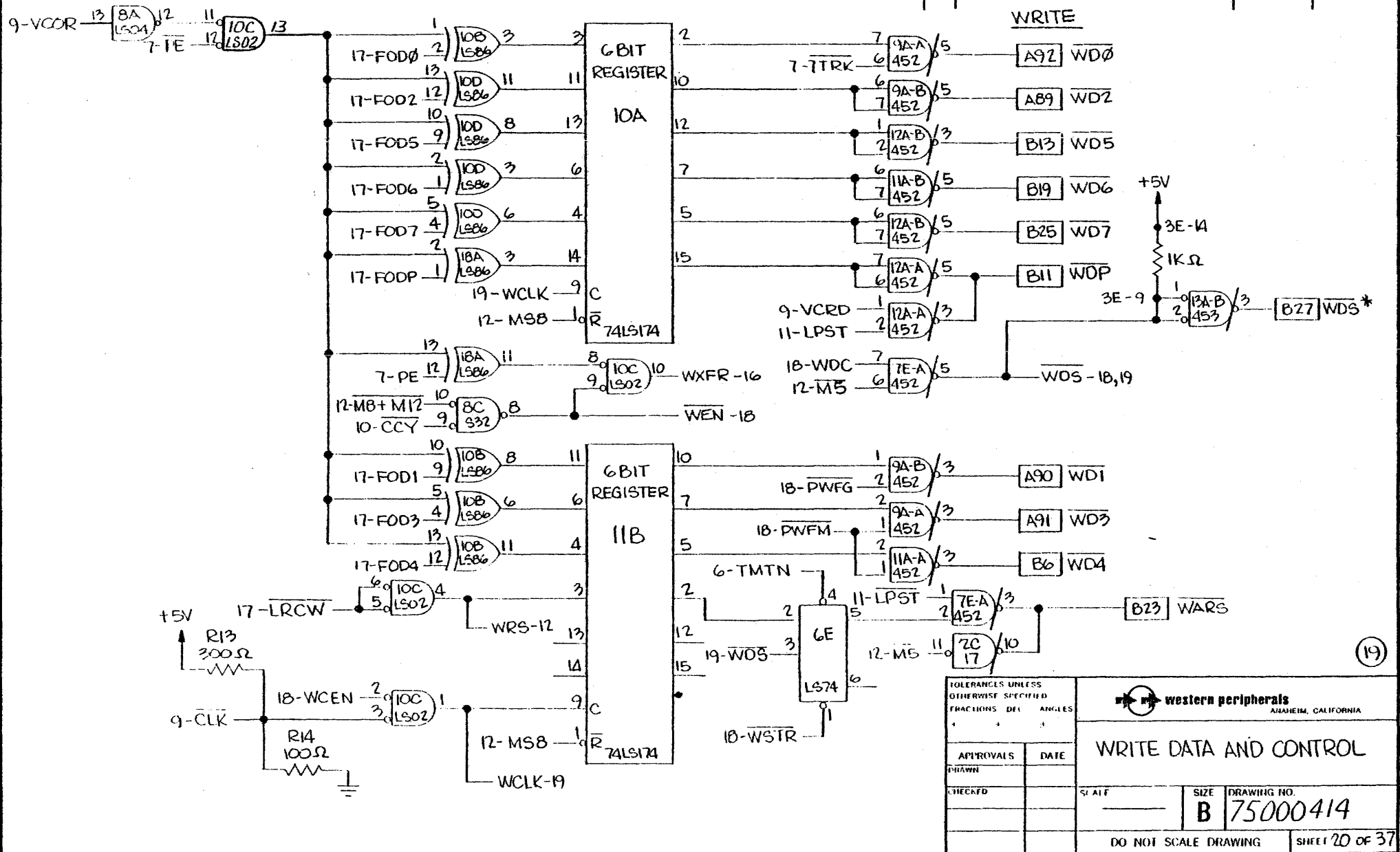
TRACK DISABLE



(18)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + *		western peripherals ANAHEIM, CALIFORNIA	
WRITE DATA AND CONTROL			
APPROVALS	DATE	SCALE	SIZE DRAWING NO.
DRAWN			B 75000414
CHECKED			
DO NOT SCALE DRAWING			SHEET 19 OF 37

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



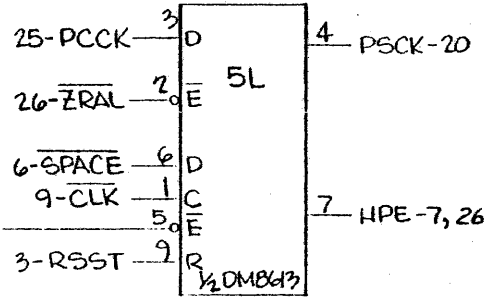
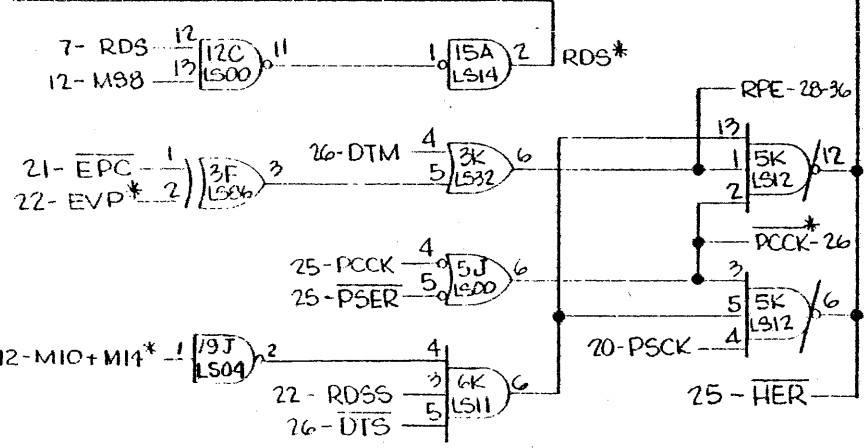
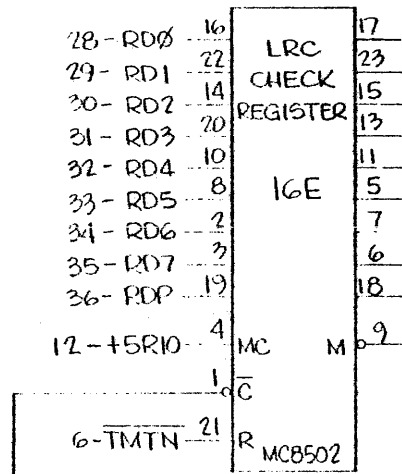
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEL ANGLES

western peripherals
ANAHEIM, CALIFORNIA

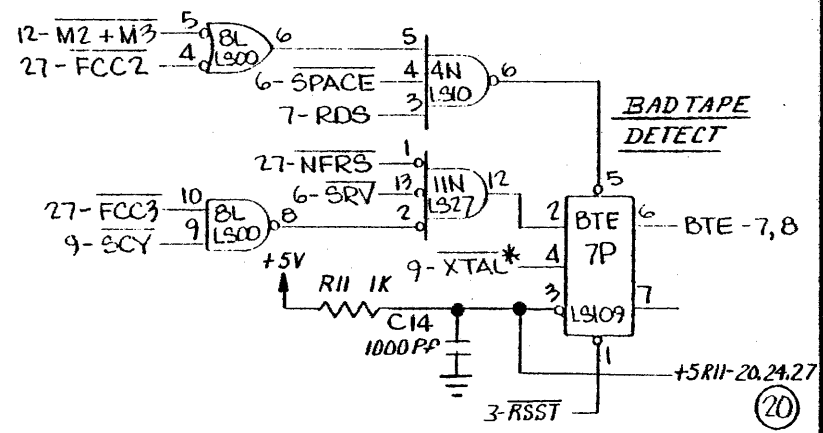
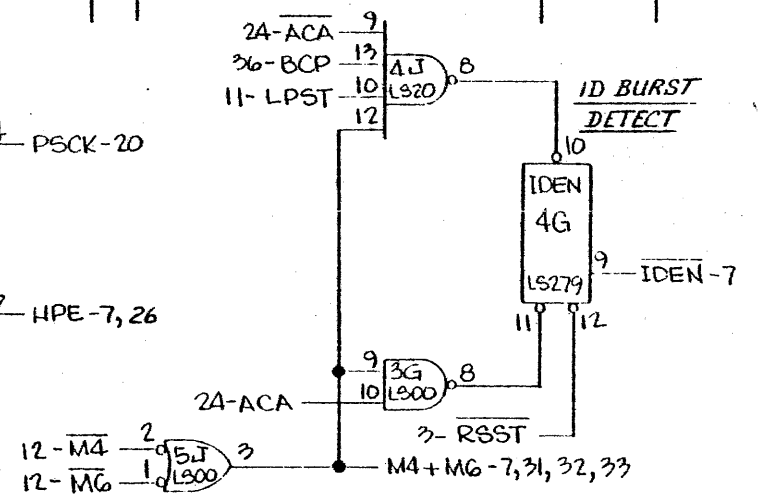
WRITE DATA AND CONTROL

APPROVALS	DATE	SCALE	SIZE	DRAWING NO.
DRAWN				
CHECKED		DO NOT SCALE DRAWING		SHEET 20 OF 37

(19)




REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES
+ + +

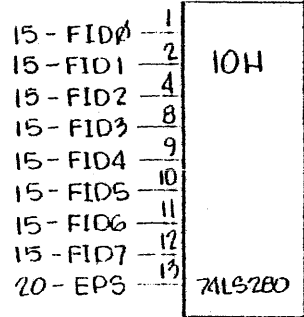
APPROVALS	DATE
DRAWN	
CHECKED	


western peripherals
 ANAHEIM CALIFORNIA

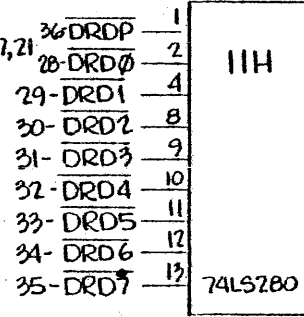
PARITY CHECK

SCALE	SIZE	DRAWING NO.
	B	75000414
DO NOT SCALE DRAWING		SHEET 21 OF 37

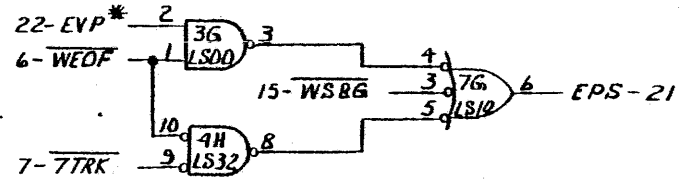
PARITY GENERATOR



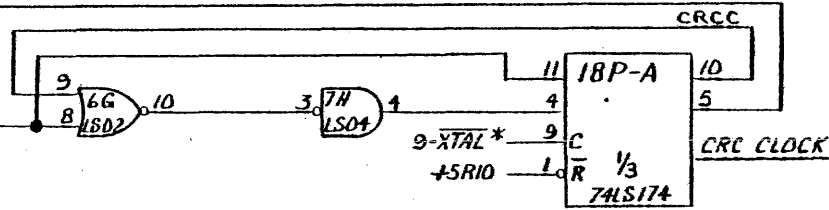
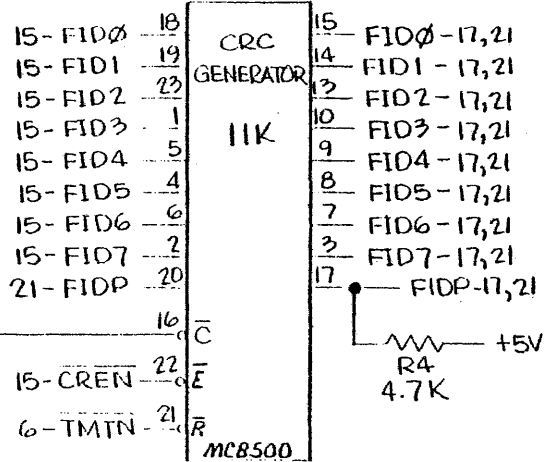
PARITY CHECKER



REVISIONS			
LT#	DESCRIPTION	DATE	APPROVED



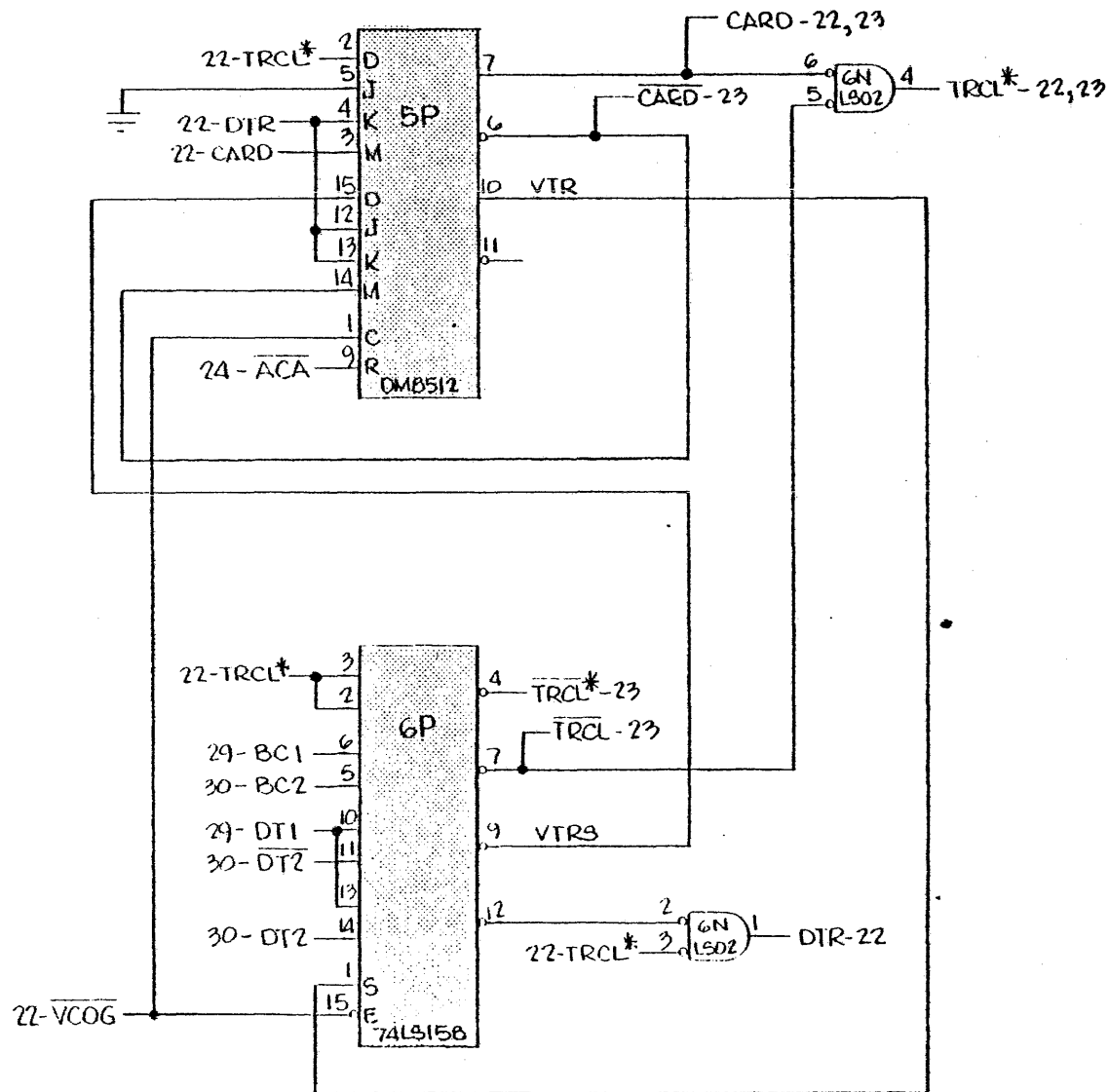
CRC GENERATOR



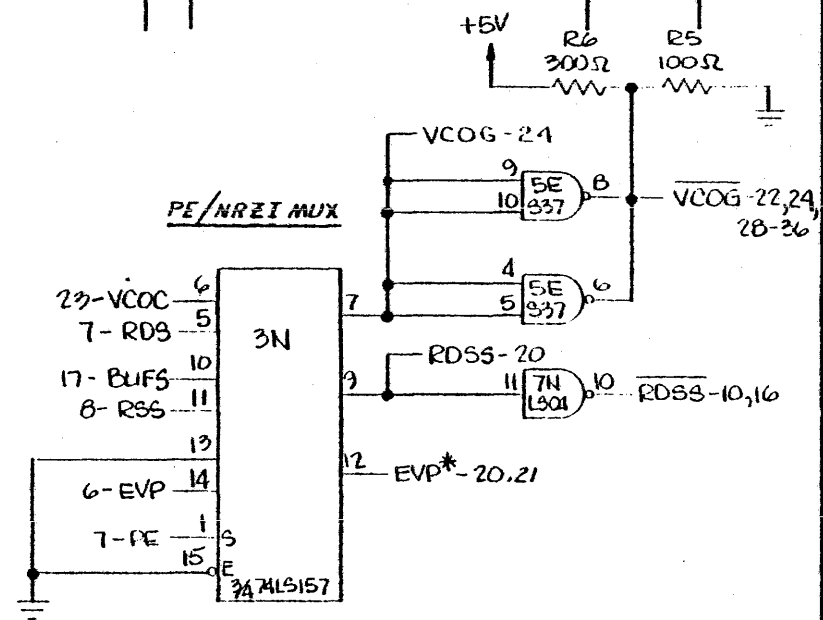
(21)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN CHECKED		DATE SCALE SIZE DRAWING NO. B 75000414	
DO NOT SCALE DRAWING		SHEET 22 OF 37	

REFERENCE TRACK SELECT



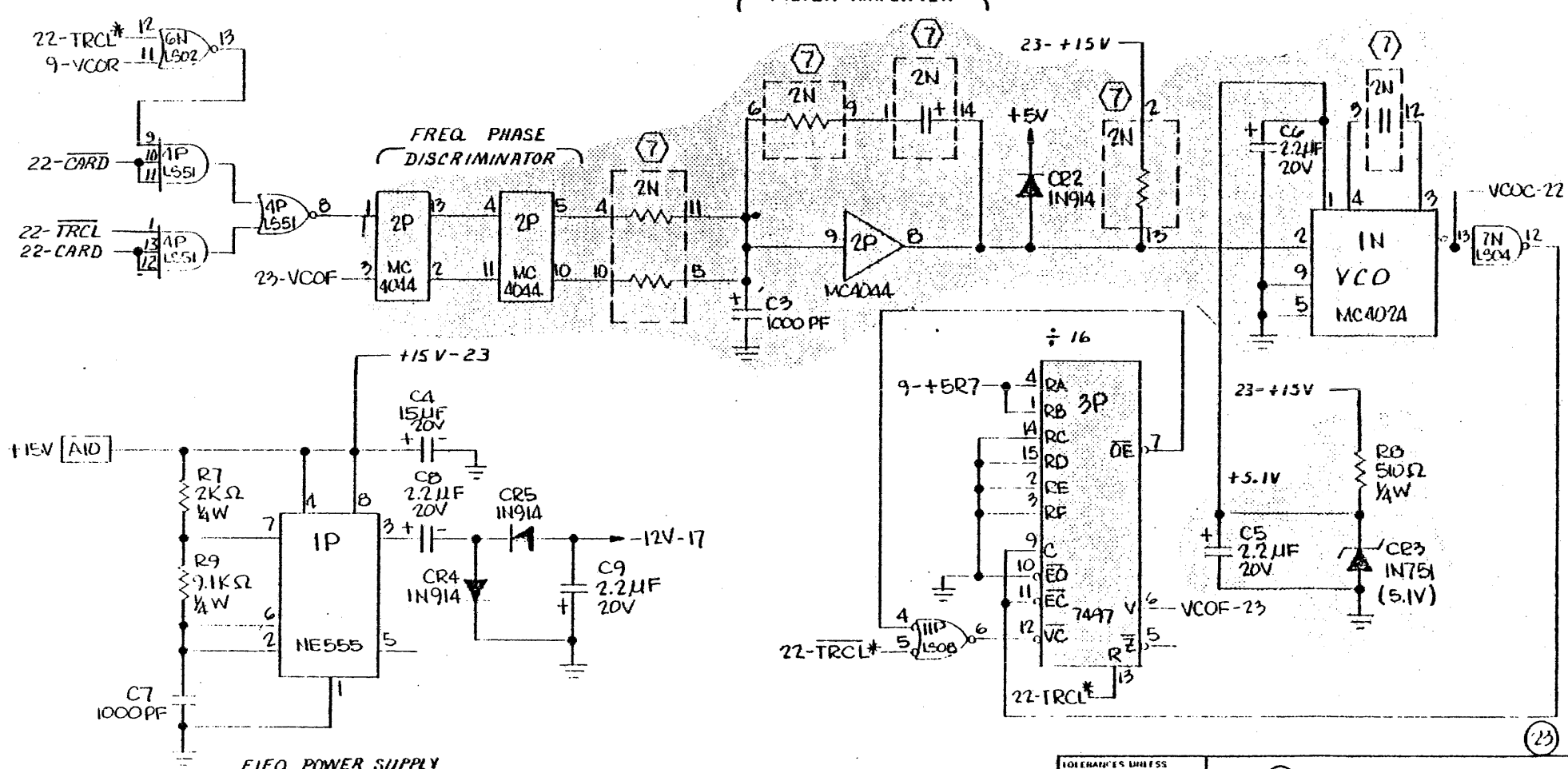
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



(72)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ALHAMBRA, CALIFORNIA	
APPROVALS		DATE	
DRAWN		SCALE	
CHECKED		SIZE	DRAWING NO.
		B	75000414
DO NOT SCALE DRAWING			SHEET 23 OF 27

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



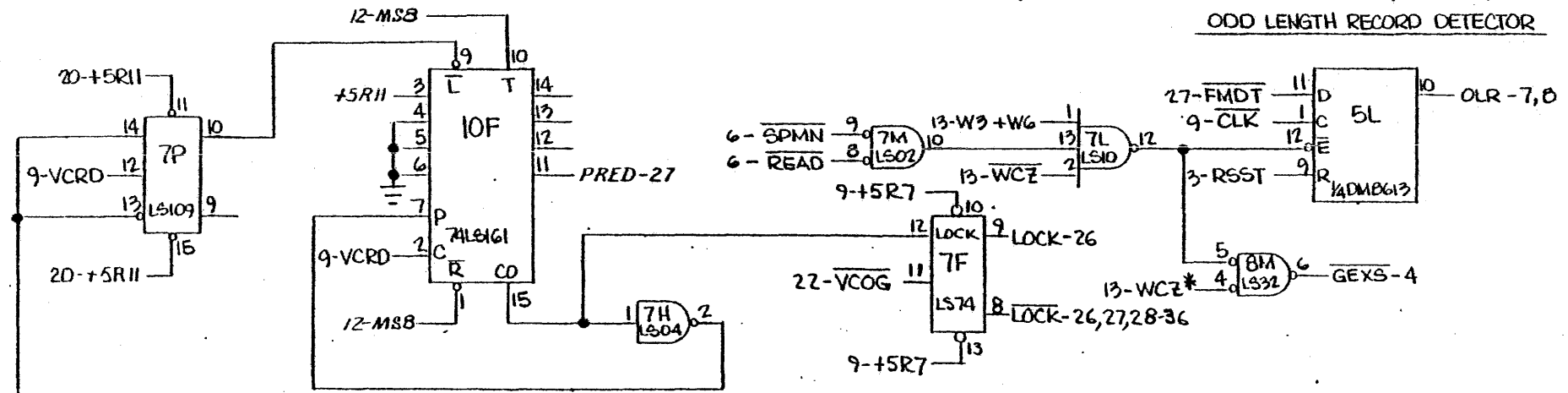
(23)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN CHECKED			
DO NOT SCALE DRAWING		SHEET 2A OF 37	

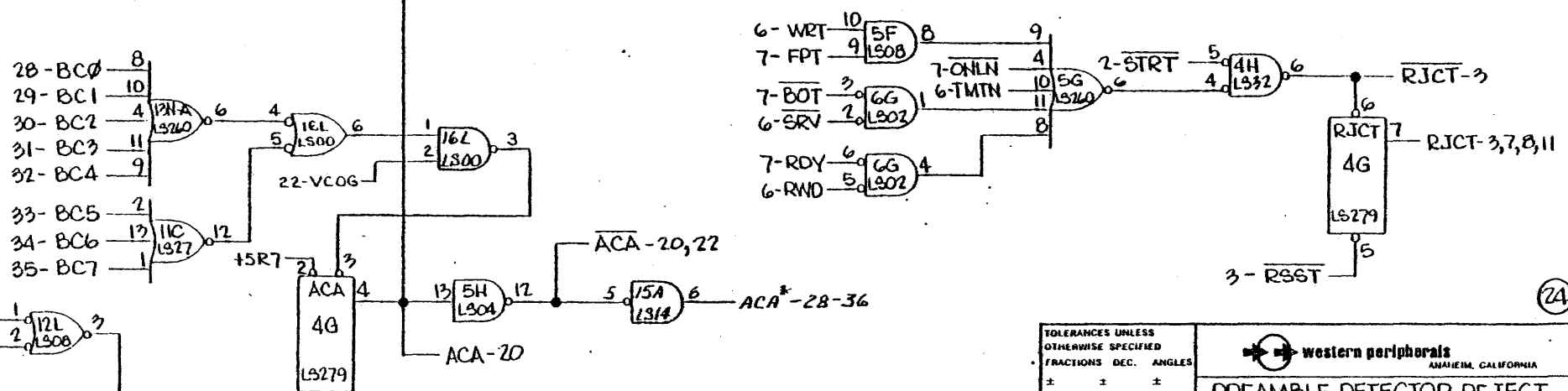
PREAMBLE DETECTOR

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

ODD LENGTH RECORD DETECTOR



REJECT CONTROL

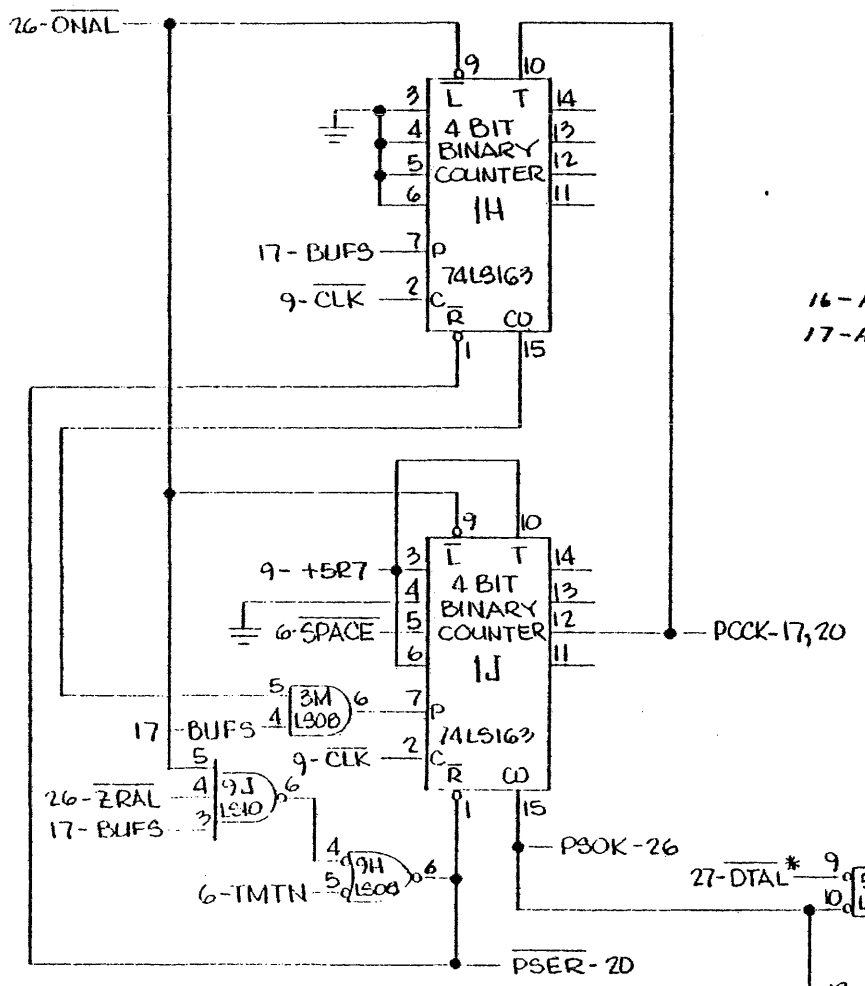


ANY CHANNEL ACTIVE DETECTOR

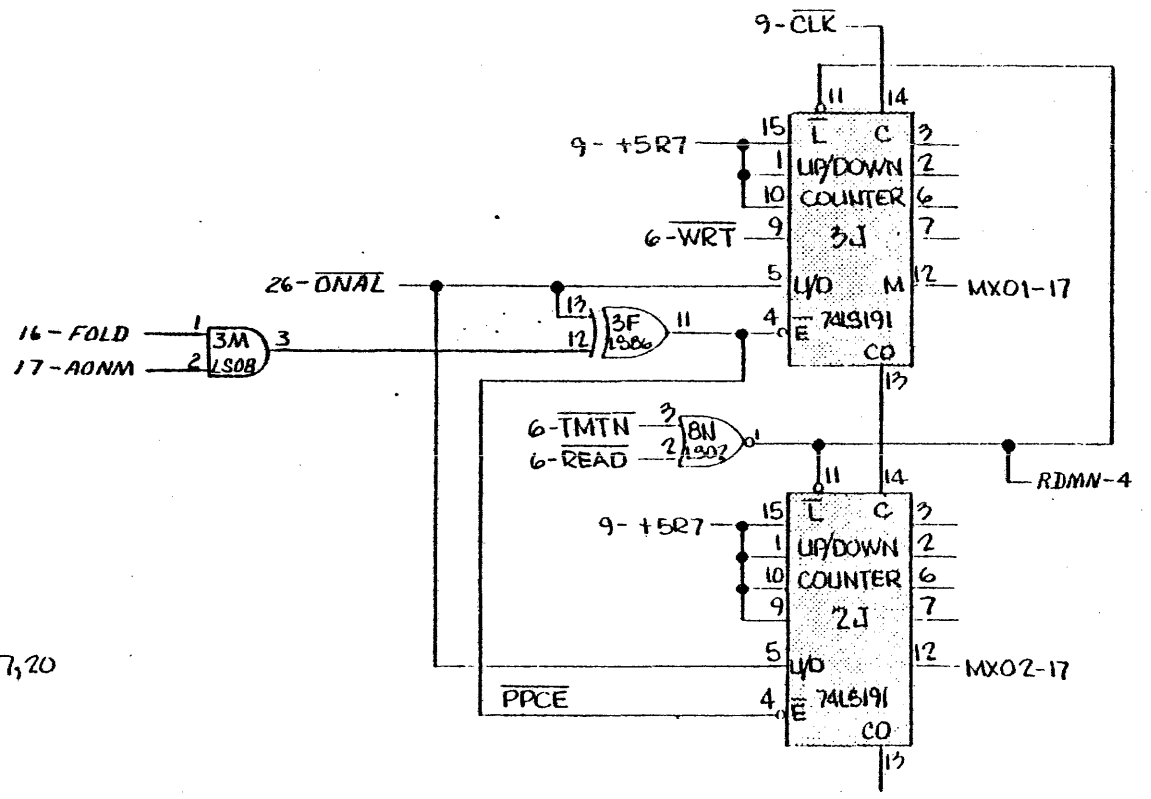
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES		
±	±	PREAMBLE DETECTOR REJECT AND ODD LENGTH RECORD DETECTOR	
APPROVALS	DATE	SCALE	SIZE
DRAWN			DRAWING NO.
CHECKED			B 75000414
DO NOT SCALE DRAWING		SHEET 25 OF 37	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

POSSIBLE POSTAMBLE DETECTOR

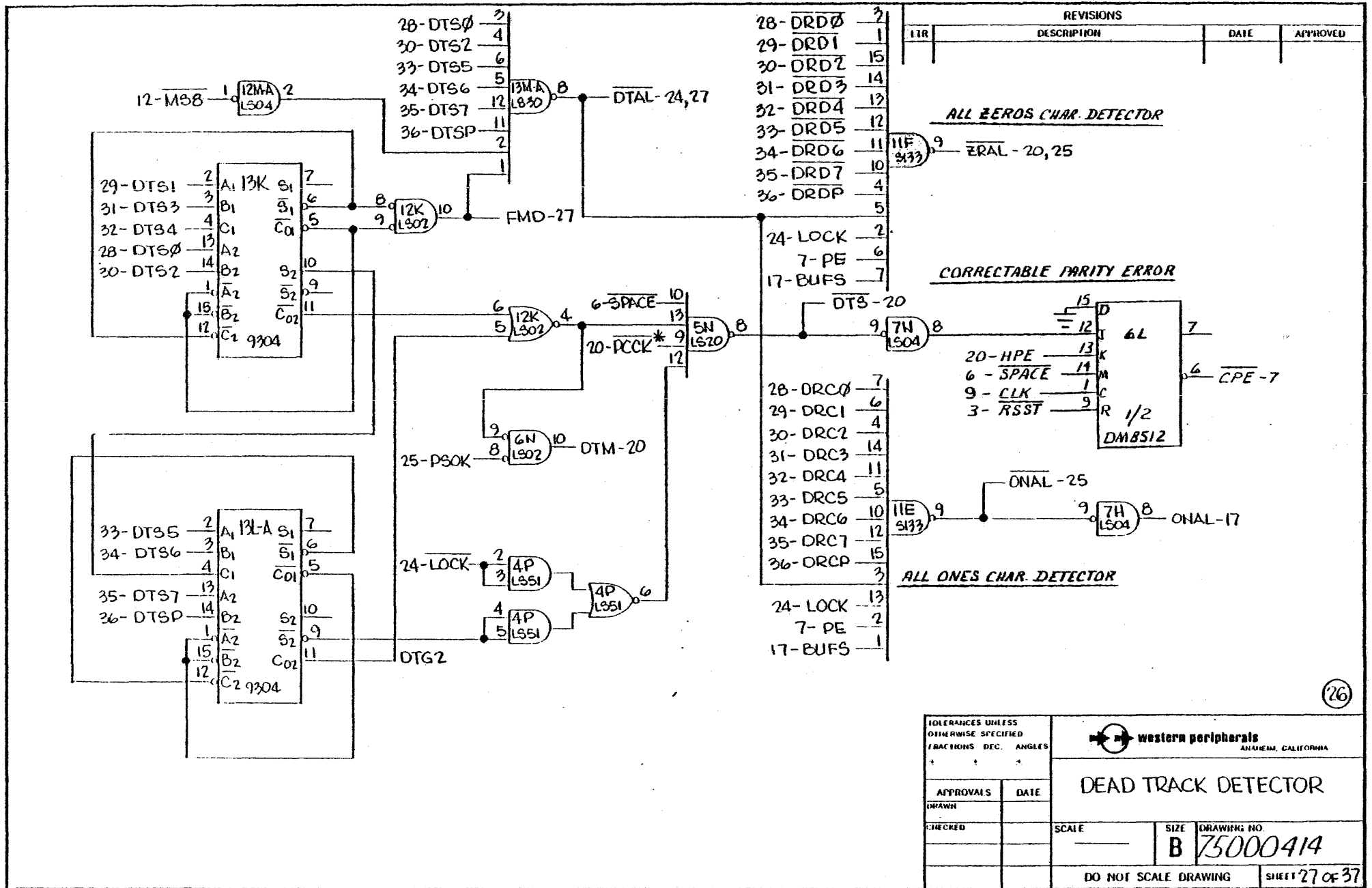


POSSIBLE POSTAMBLE COUNTER



(25)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + + +		 western peripherals ANAHEIM, CALIFORNIA		
APPROVALS	DATE			POSTAMBLE DETECTOR
DRAWN		SCALE	SIZE	DRAWING NO.
CHECKED			B	75000414
DO NOT SCALE DRAWING			SHEET 26 OF 37	



REVISIONS			
ITR	DESCRIPTION	DATE	APPROVED

ALL ZEROS CHAR. DETECTOR

CORRECTABLE PARITY ERROR

ALL ONES CHAR. DETECTOR

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

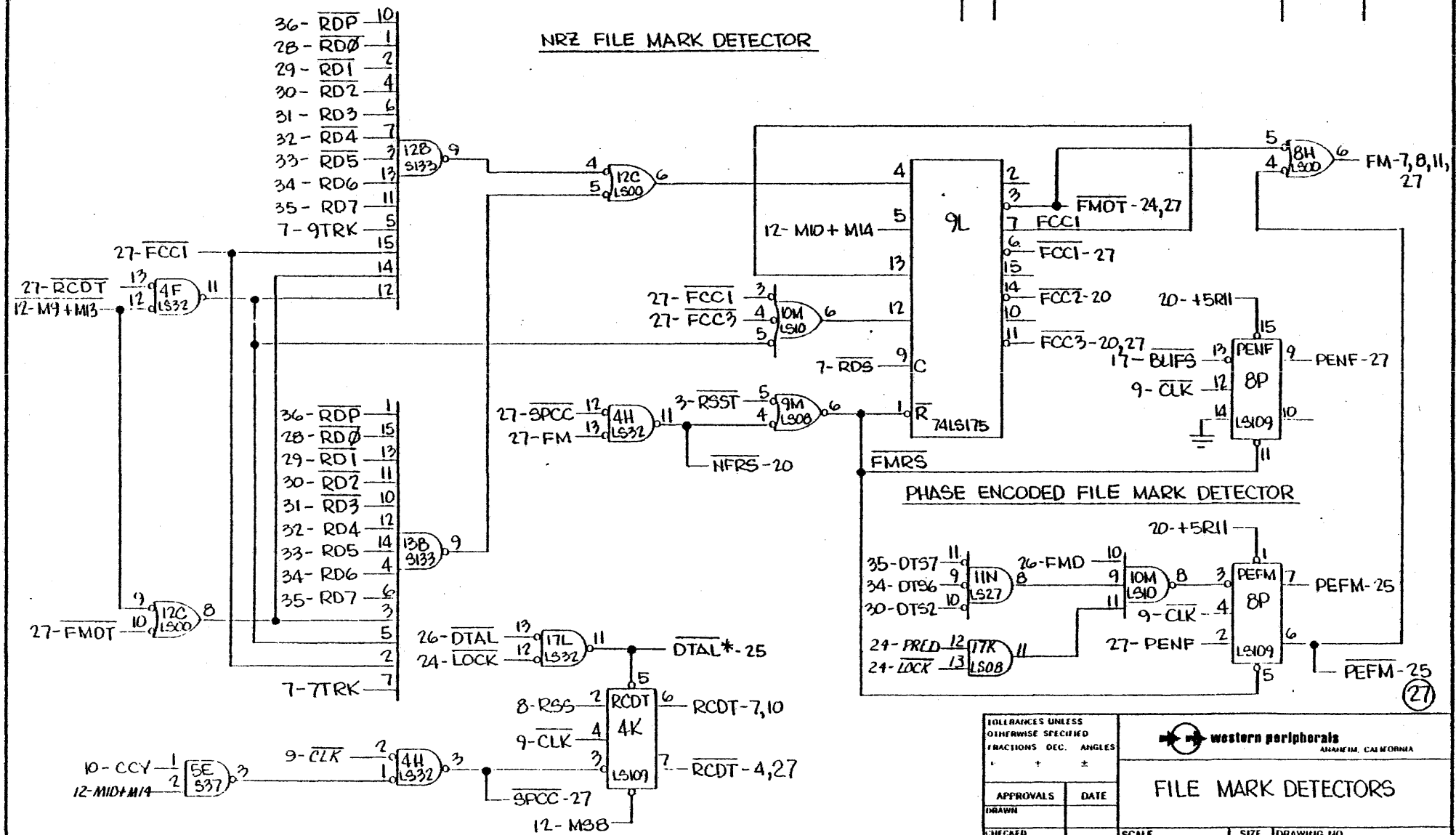
western peripherals
ANAHEIM, CALIFORNIA

DEAD TRACK DETECTOR

SCALE: _____ SIZE: **B** DRAWING NO.: **75000414**

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

NRZ FILE MARK DETECTOR



TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC.
°	′
°	′
APPROVALS	DATE
DRAWN	
CHECKED	

western peripherals
ANAHIM, CALIFORNIA

FILE MARK DETECTORS

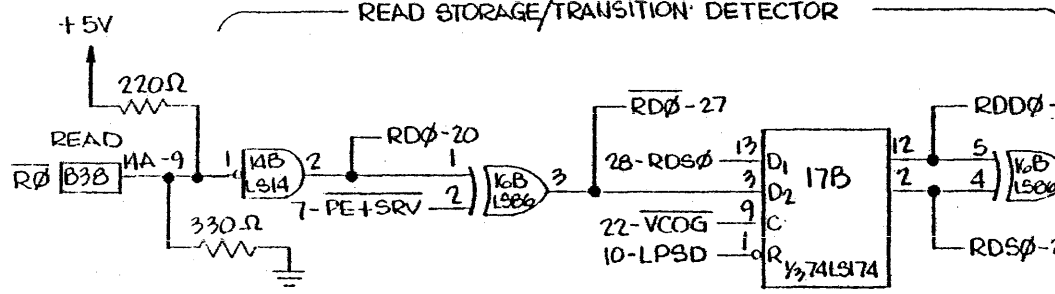
SCALE	SIZE	DRAWING NO.
	B	75000414

DO NOT SCALE DRAWING SHEET 28 OF 37

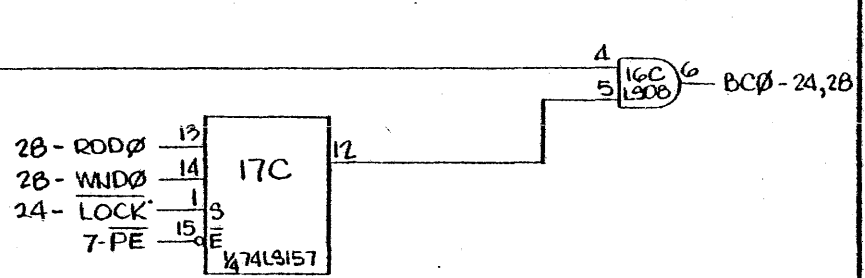
REVISIONS

LTR	DESCRIPTION	DATE	APPROVED

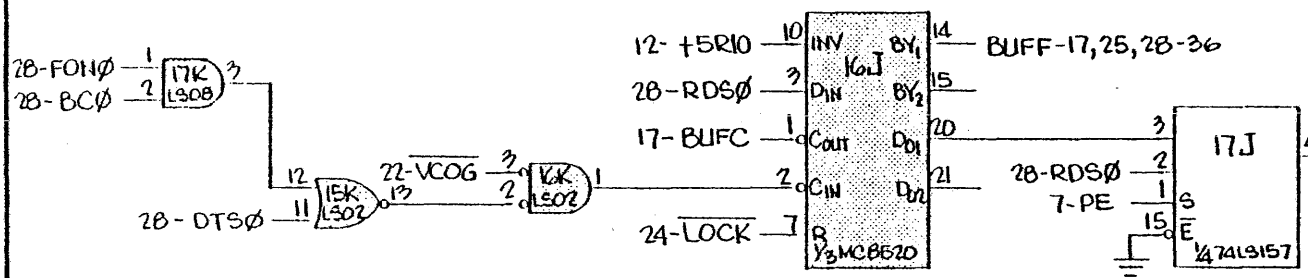
READ STORAGE/TRANSITION DETECTOR



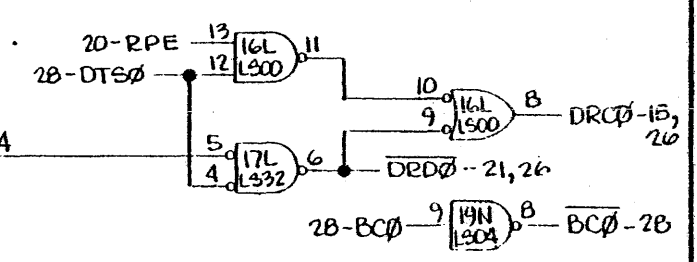
READ TRANSITION GATE



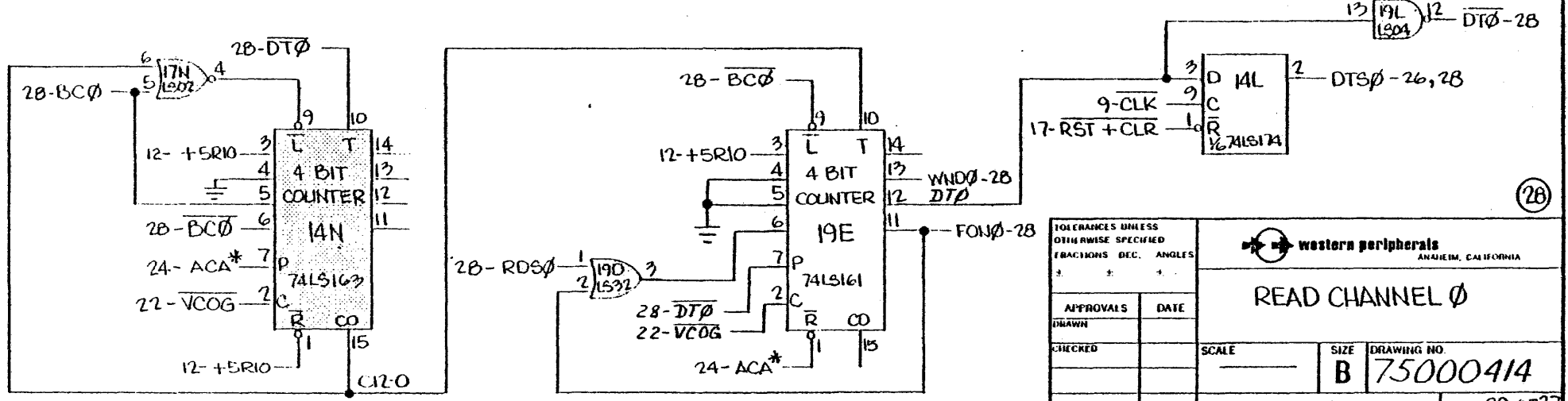
DESKEW BUFFER



ERROR CORRECTION GATING



WINDOW GENERATOR



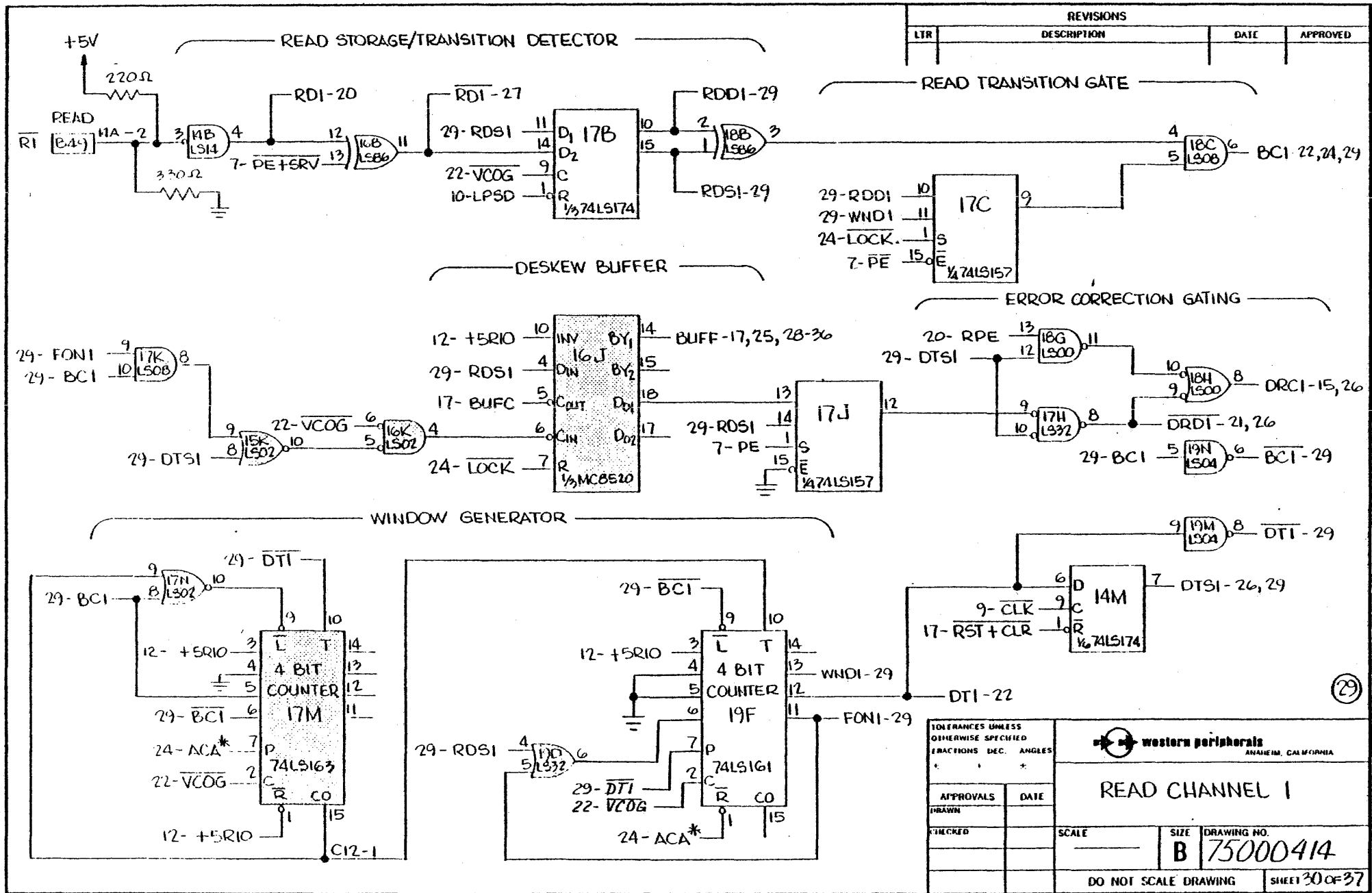
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES



READ CHANNEL Ø

APPROVALS	DATE
DRAWN	
CHECKED	

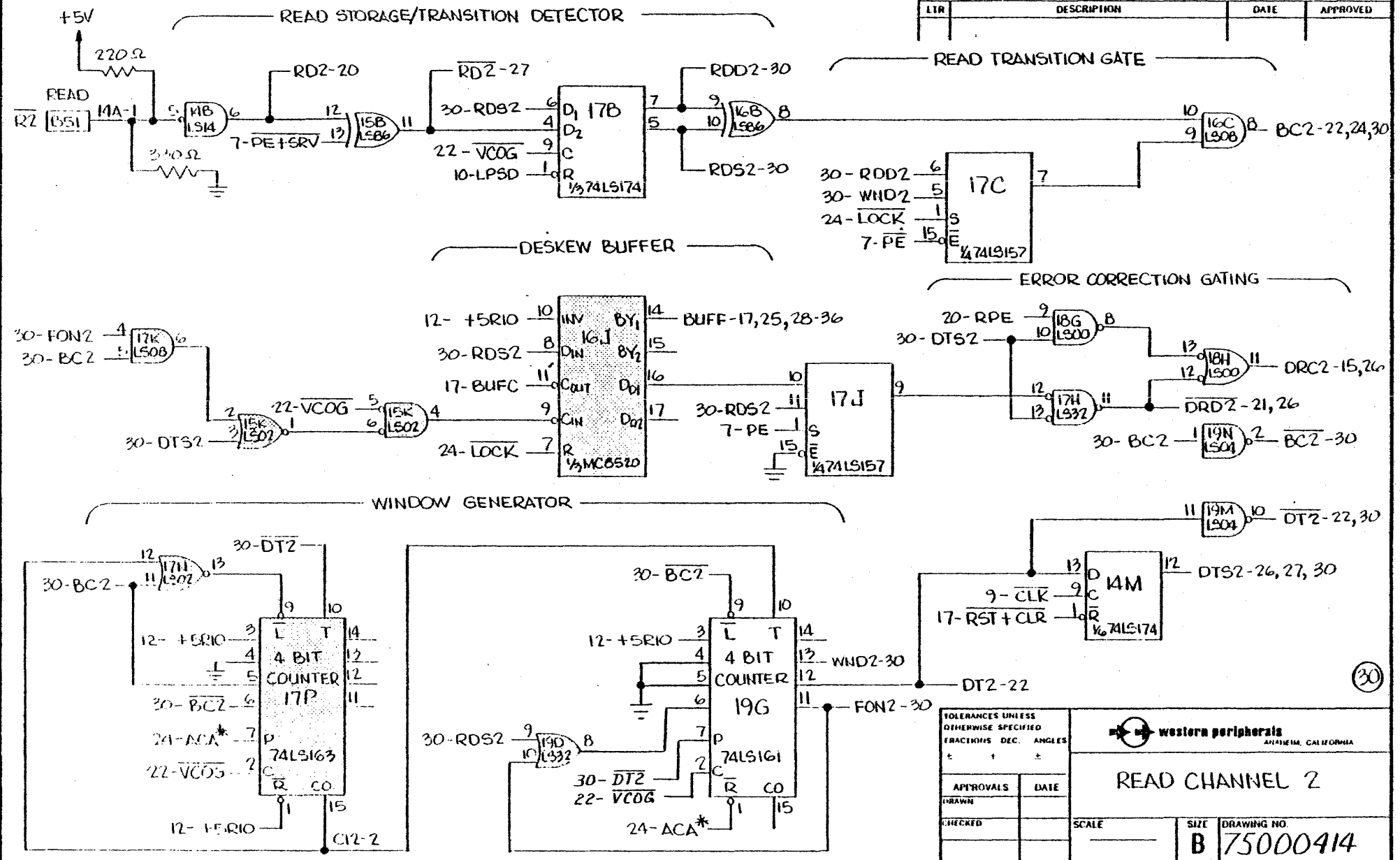
SCALE	SIZE	DRAWING NO.
	B	75000414
DO NOT SCALE DRAWING		SHEET 29 OF 37



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
<h2>READ CHANNEL I</h2>			
APPROVALS	DATE	SCALE	SIZE
DRAWN			B
CHECKED			DRAWING NO.
			75000414
DO NOT SCALE DRAWING			SHEET 30 OF 37

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



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

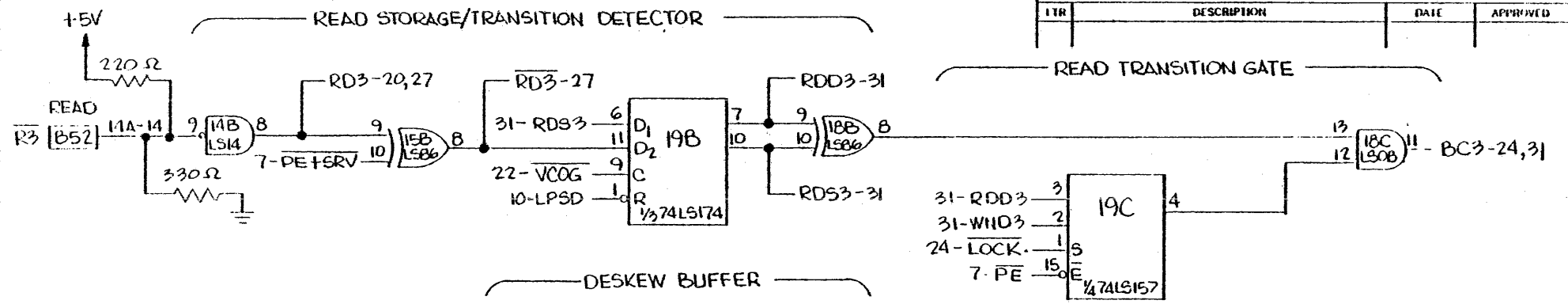
western peripherals
ANIMEM, CALIFORNIA

READ CHANNEL 2

SCALE: _____ SIZE: **B** DRAWING NO: **75000414**

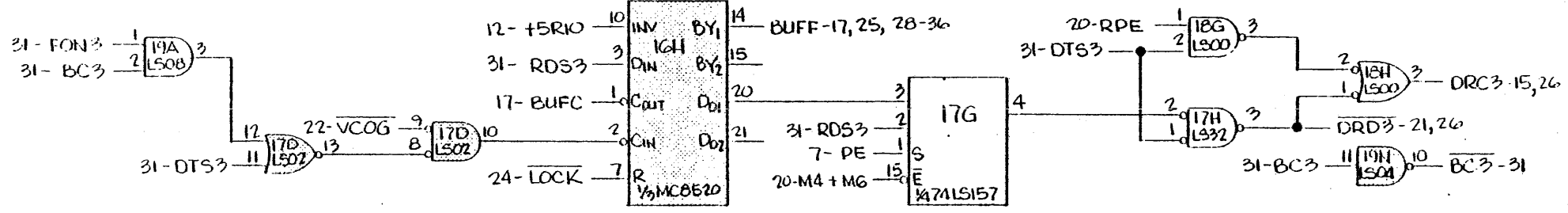
DO NOT SCALE DRAWING SHEET 31 OF 37

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

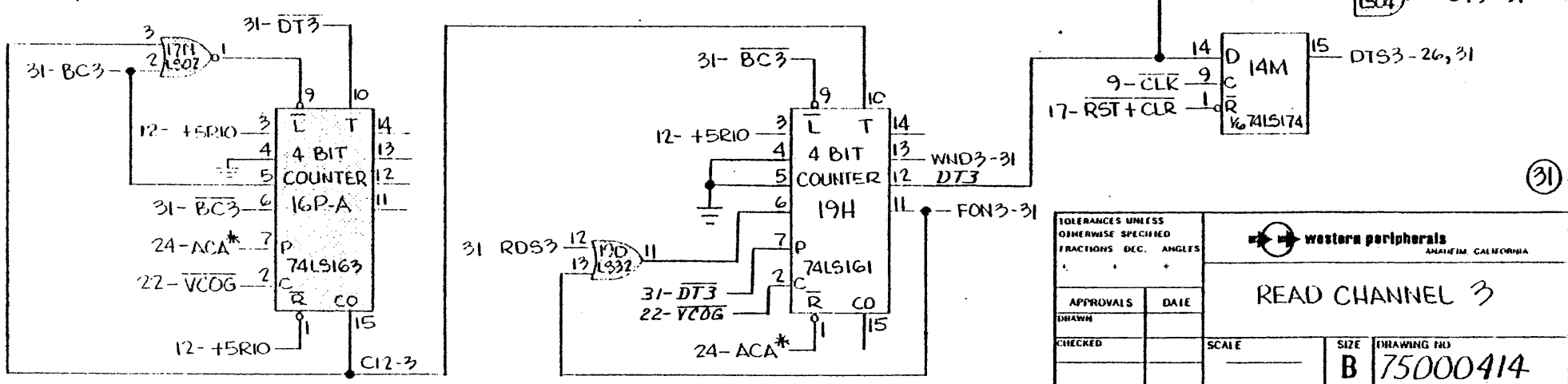


DESKEW BUFFER

ERROR CORRECTION GATING



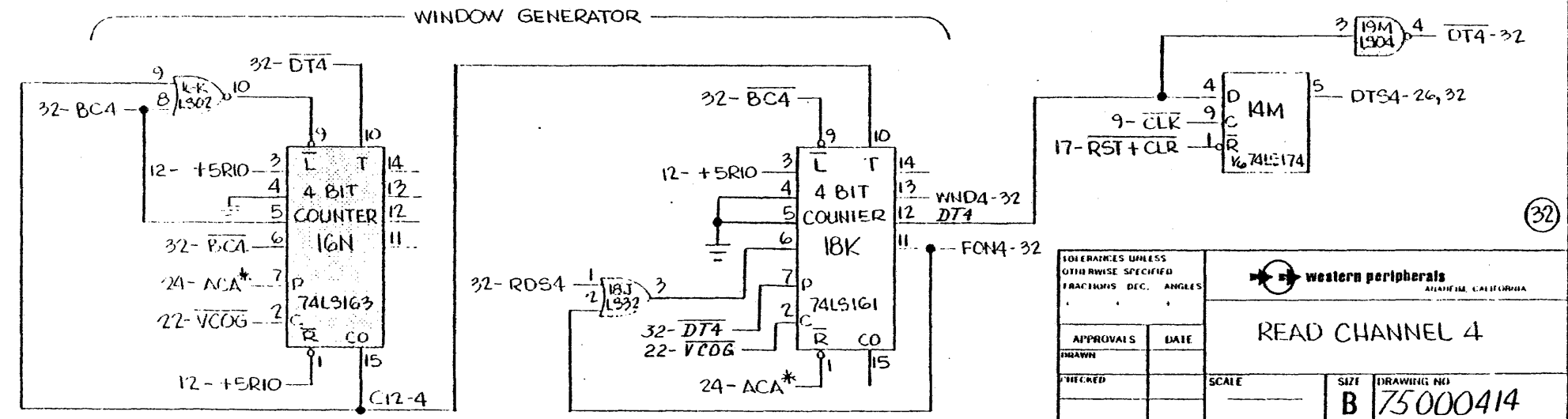
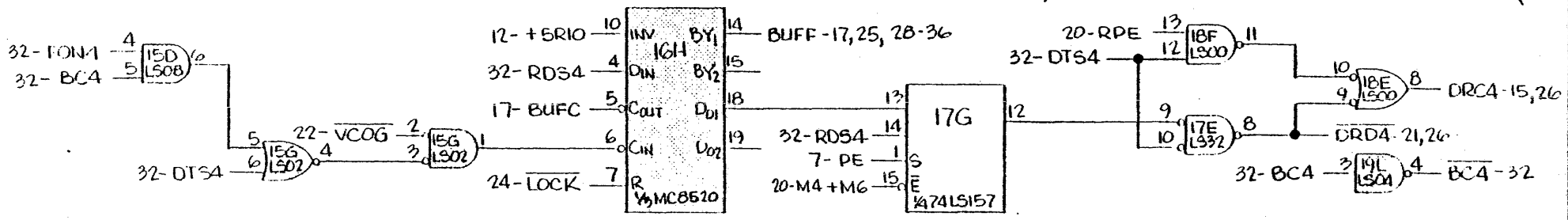
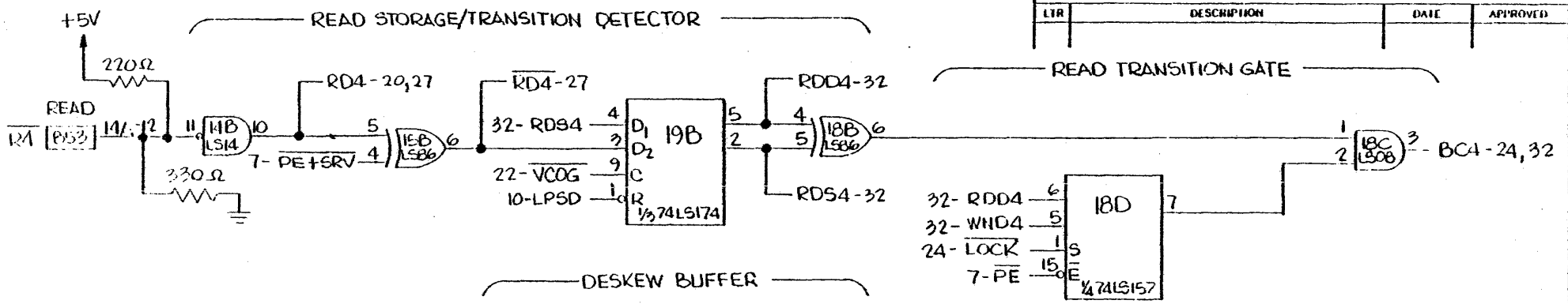
WINDOW GENERATOR



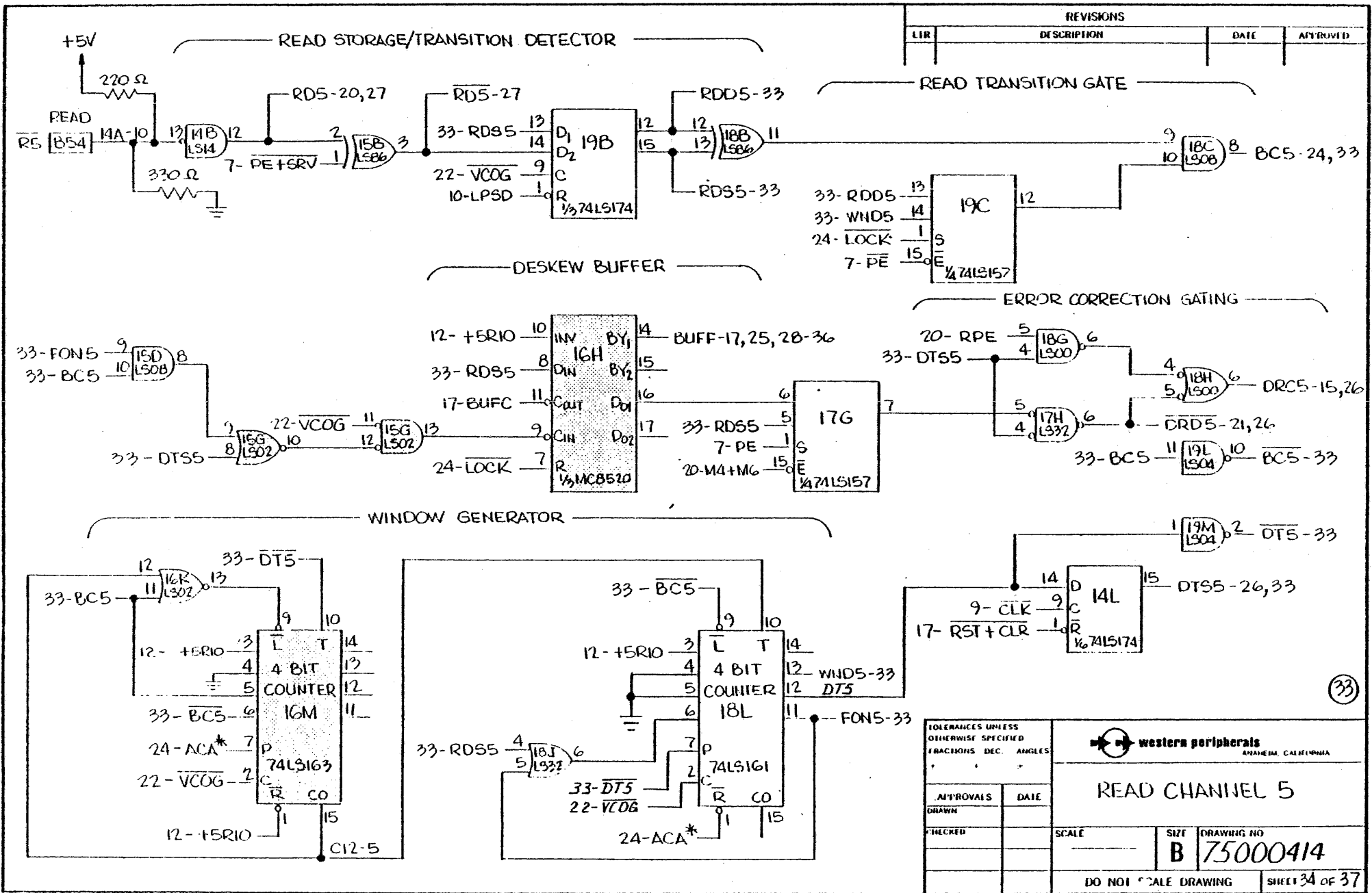
(31)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN		READ CHANNEL 3	
CHECKED		SCALE	SIZE B
		DRAWING NO.	75000414
		DATE	DO NOT SCALE DRAWING
			SHEET 32 OF 37

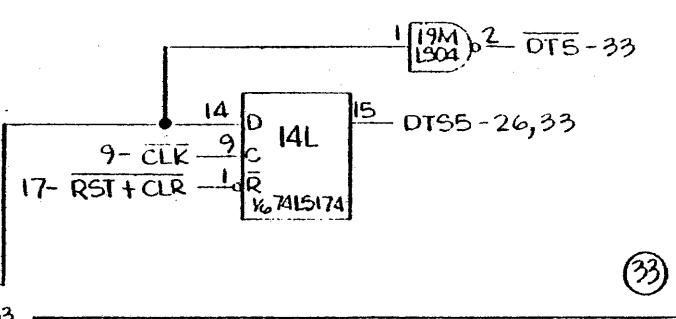
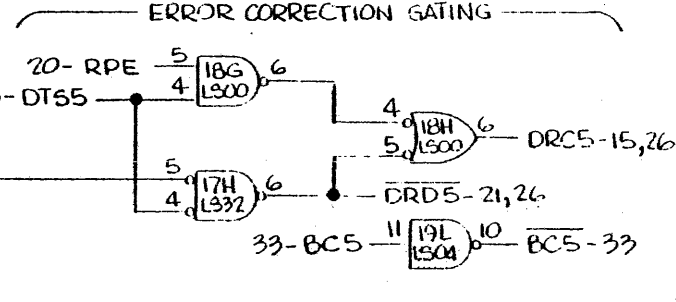
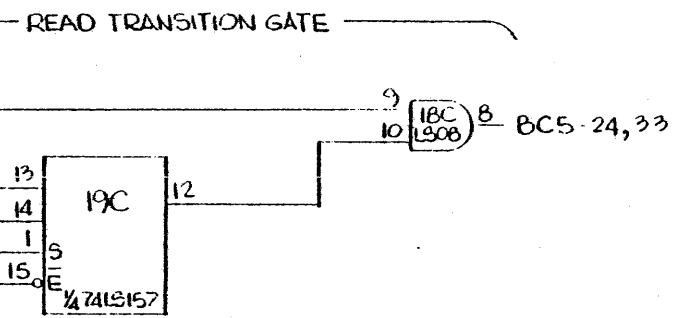
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ALHAMBRA, CALIFORNIA	
APPROVALS	DATE	READ CHANNEL 4	
DRAWN		SCALE	SIZE DRAWING NO B 75000414
CHECKED		DO NOT SCALE DRAWING	SHEET 33 OF 37

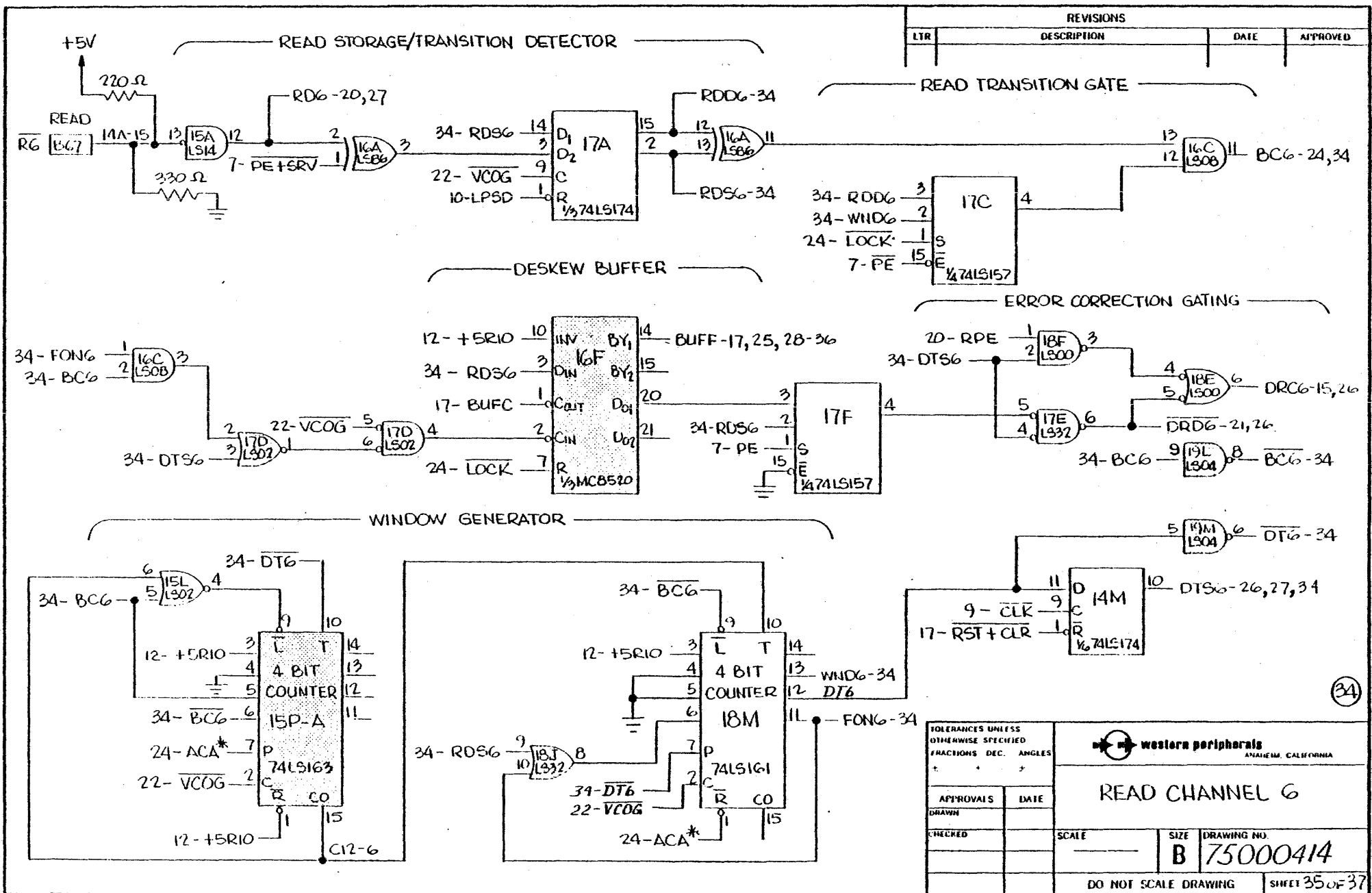


REVISIONS			
LIR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals IRVINE, CALIFORNIA	
APPROVALS		DATE	
DRAWN		SCALE	
CHECKED		SIZE	
		DRAWING NO.	
		B 75000414	
DO NOT SCALE DRAWING		SHEET 34 of 37	

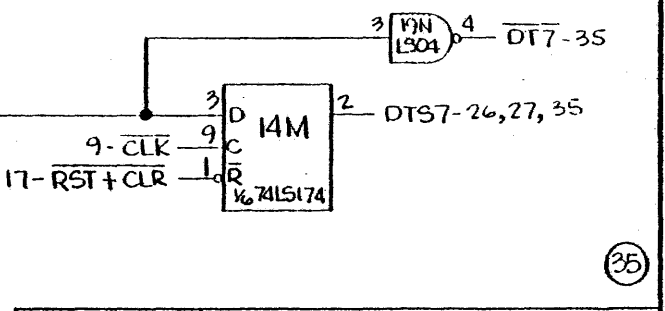
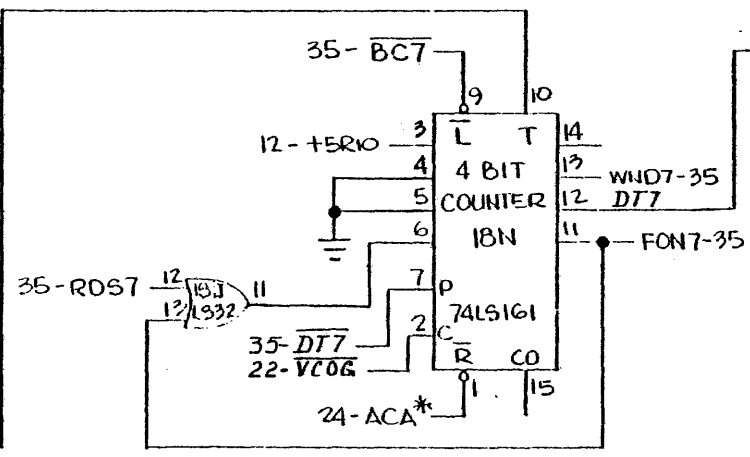
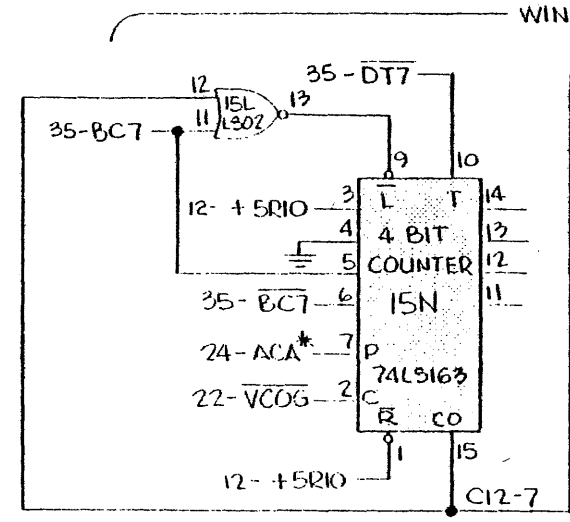
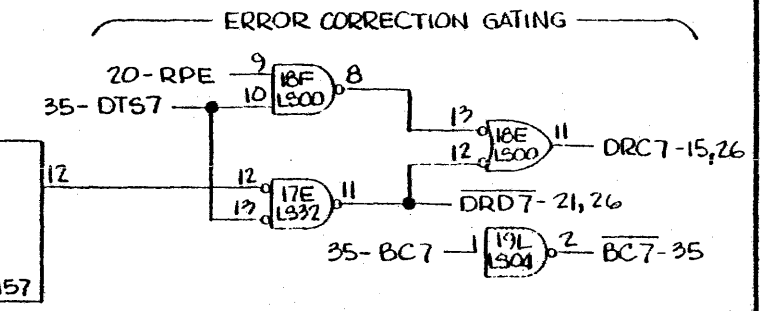
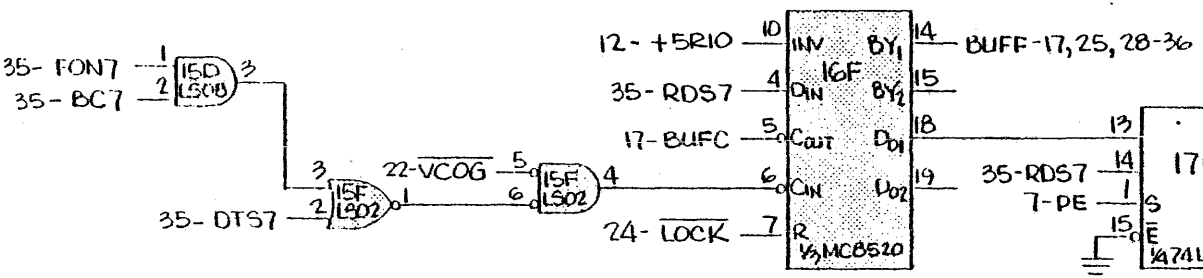
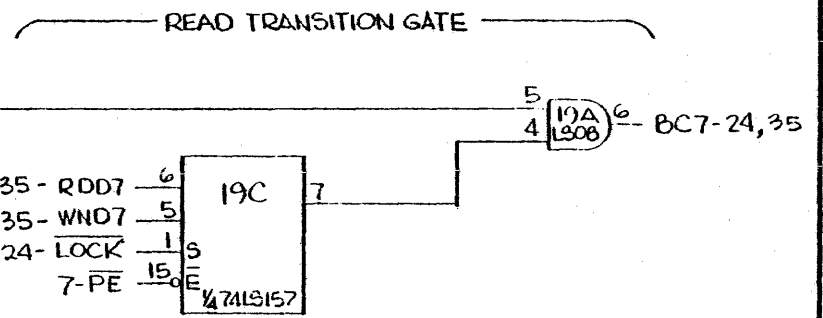
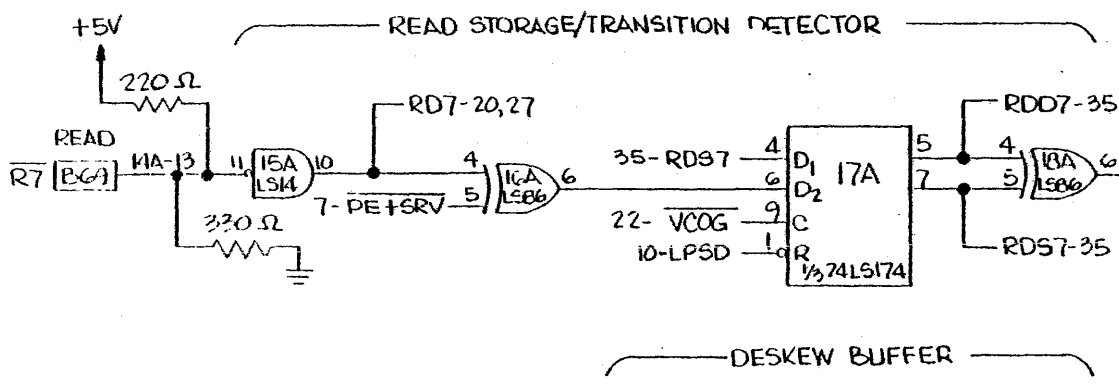
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



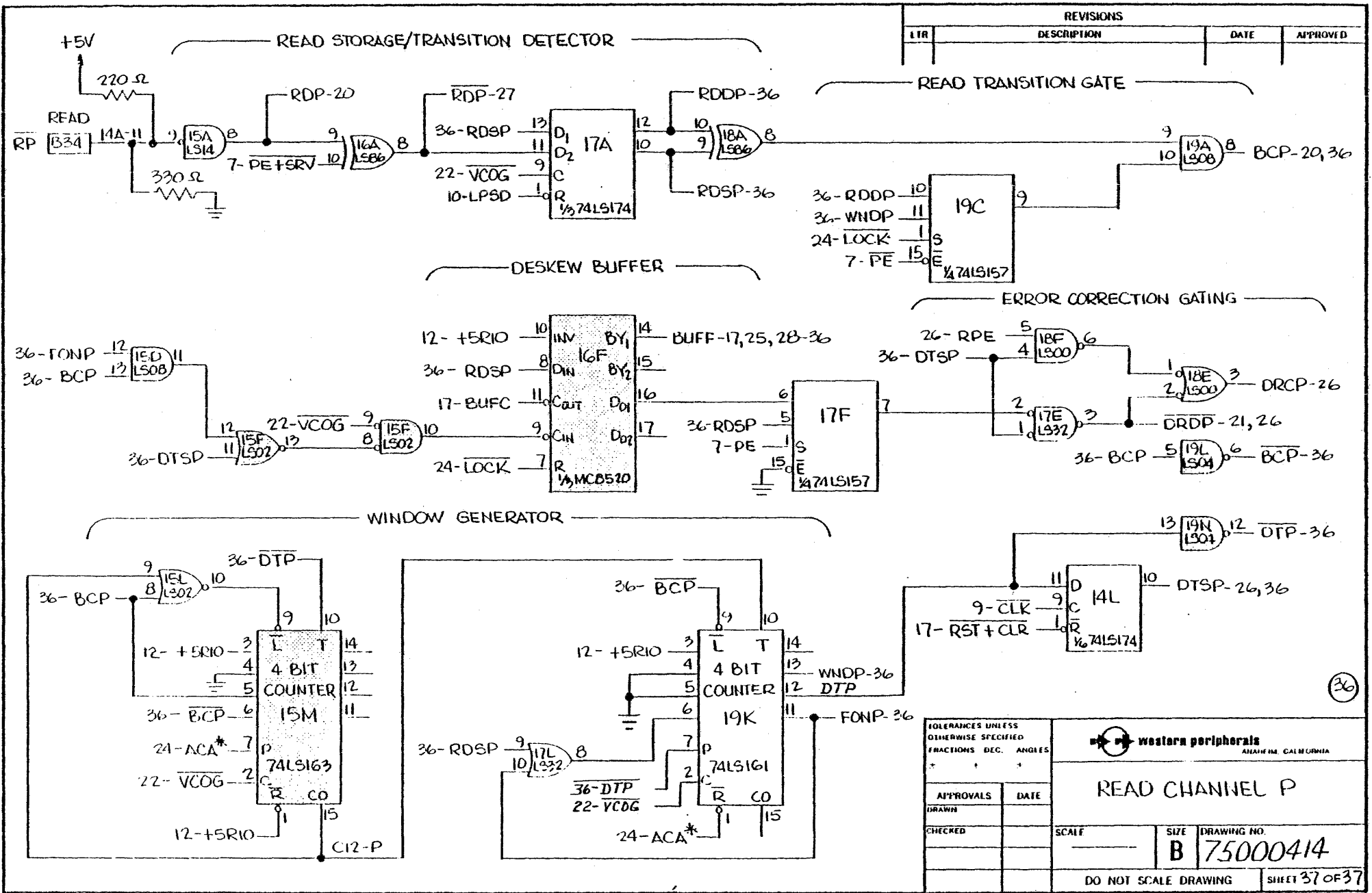
(34)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN		SCALE	
CHECKED		SIZE	DRAWING NO.
		B	75000414
DO NOT SCALE DRAWING			SHEET 35 OF 37

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES	
APPROVALS		DATE	
DRAWN			
CHECKED		SCALE	
		SIZE	
		DRAWING NO	
		B 75000414	
DO NOT SCALE DRAWING			SHEET 26 OF 37



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC. ANGLES		ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN		SCALE	
CHECKED		SIZE	
		DRAWING NO.	
		B 75000414	
DO NOT SCALE DRAWING		SHEET 37 OF 37	

(36)

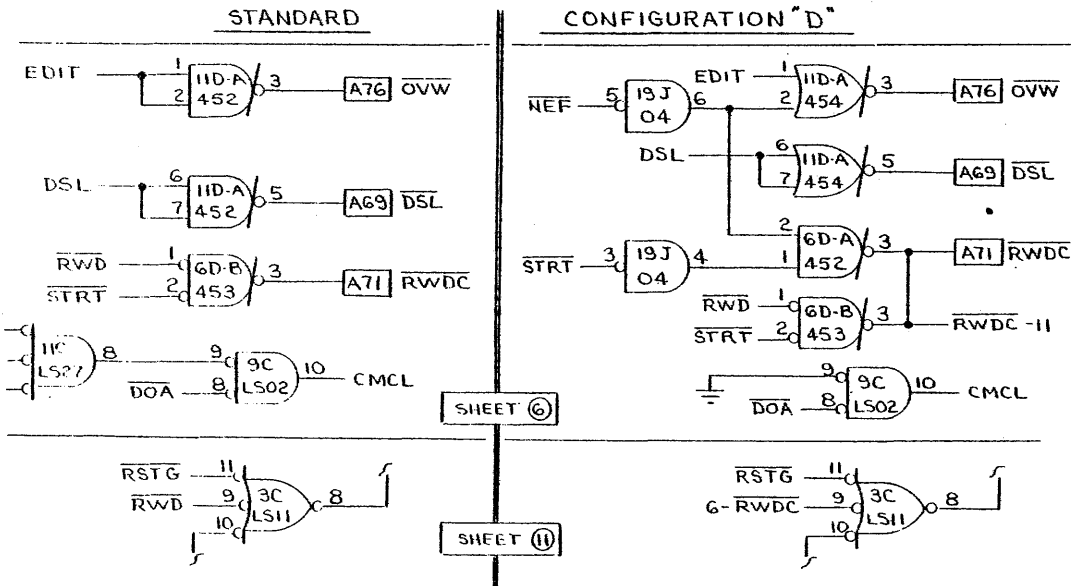
THIS MODIFICATION CHANGES THE TC120 (OR TC128) TO IMPLEMENT OFF-LINE COMMAND WITH "NO EFFECT" COMMAND FUNCTION.

TO INSTALL THIS MODIFICATION, REWORK TC120 ASSEMBLIES 60000148 OR 60000411 OR TC128 ASSEMBLIES 60000122 OR 60000129 AS FOLLOWS;

1. CUT ETCH ON SOLDER SIDE BETWEEN IID-A-1 & IID-A-2
2. CUT ETCH ON COMPONENT SIDE AT 3C-9
3. CUT ETCH ON COMPONENT SIDE AT 9C-9
4. REMOVE 75452 AT IID-A AND REPLACE WITH 75454
5. ADD THE FOLLOWING JUMPERS;
 - A.) IID-A-2 TO 19J-6
 - B.) 6D-A-2 TO 19J-6
 - C.) 6D-B-2 TO 19J-3
 - D.) 6D-A-1 TO 19J-4
 - E.) 5D-3 TO 19J-5
 - F.) 6D-A-3 TO 6D-B-3
 - G.) 6D-B-3 TO 3C-9
 - H.) 9C-7 TO 9C-9
6. IDENTIFY AT ASSY NO. WITH "CONF D" USING BLK INK

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10-2-79	<i>[Signature]</i>
B	ADDED ASSY 60000411 & 60000129 TO REWORK PREFACE PER E.C.O. 647	3-5-80	<i>[Signature]</i>

CONFIGURATION "D" WILL ALTER SCHEMATIC 75000133 AS DEPICTED BELOW;



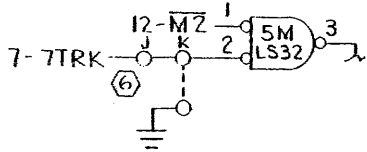
NOTES:

1. THIS DWG SUPERSEDES DWG 120031 WHICH IS APPLICABLE TO OLDER ASSEMBLIES 120024 AND 120025.

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals <small>ANAHEIM, CALIFORNIA</small>		
FRACTIONS DEC.	ANGLES			
±	±	MODIFICATION DRAWING - TC120 CONFIGURATION "D" (SECOND VERSION)		
APPROVALS	DATE	SCALE	SIZE	DRAWING NO.
DRAWN H. DEUTSCH	9-24-79			
CHECKED		DO NOT SCALE DRAWING		SHEET 1 of 1

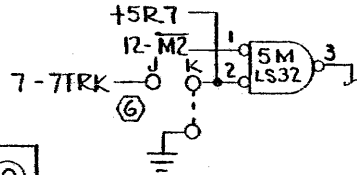
SCHEMATIC 75000133 IS ALTERED AS OUTLINED BELOW

STANDARD

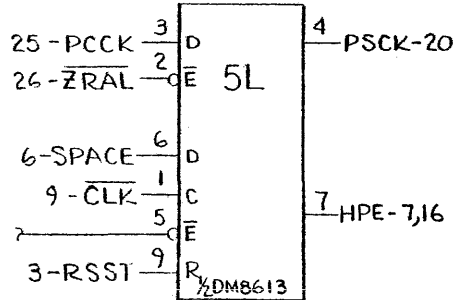


REF. SHT. (10)

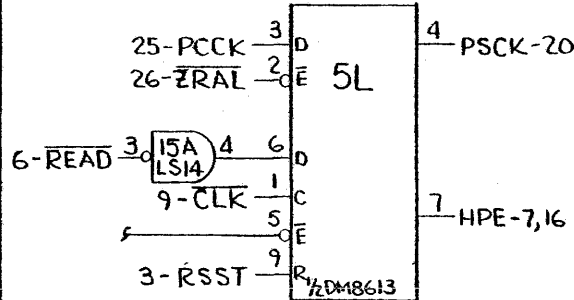
CONFIGURATION "G"



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RELEASE	12-10-79	<i>[Signature]</i>



REF. SHT. (20)



REWORK INSTRUCTIONS (ASSY 60000122, PWB 120017-6)

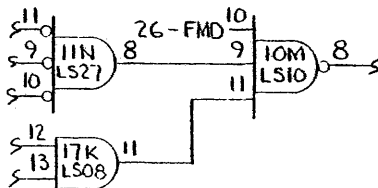
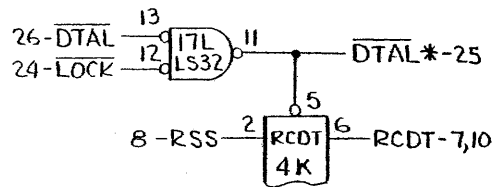
- A.) MAKE THE FOLLOWING ETCH CUTS;
1. SOLDER SIDE, ETCH FROM 4K-5 (AFTER FEED-THRU)
 2. SOLDER SIDE, AT 10M-10
 3. SOLDER SIDE, AT 10M-11
 4. COMPONENT SIDE, AT 5L-6
 5. COMPONENT SIDE, AT 10M-9
 6. COMPONENT SIDE BETWEEN PADS J&K (NEAR 5M)

B.) ADD THE FOLLOWING JUMPERS

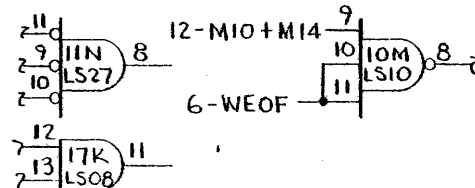
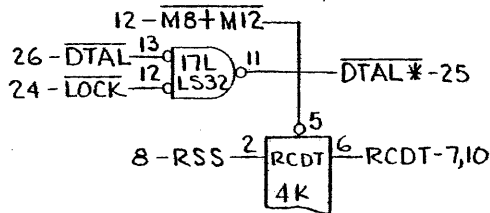
1. 4K-5 TO 2H-12
2. 10J-12 TO 10M-10
3. 10M-10 TO 10M-11
4. 10M-9 TO 9L-5
5. 15A-3 TO 5D-1
6. 15A-4 TO 5L-6
7. 5M-2 TO 2M-1

DEC 11 1979

C.) MARK "CONF. G" NEAR ASSY NUMBER USING BLK. INK.



REF. SHT. (27)



PURPOSE THIS MODIFICATION PROVIDES FOR CONTROL OF TAPE DRIVE WITH SINGLE GAP HEAD.

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals™ TUSTIN, CALIFORNIA	
FRACTIONS	DEC	ANGLES	
±	±	±	
APPROVALS	DATE	MODIFICATION DRAWING- TC128 CONFIGURATION "G"	
DRAWN P. CHAPMAN	12-10-79	SCALE	SIZE B
CHECKED [Signature]	12-10-79	DRAWING NO. 79000196	
		DO NOT SCALE DRAWING	SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	PROD. RLSE	8-29-80	<i>[Signature]</i>
B	REVISE "PURPOSE" PER E.C.O. 830	1-21-81	<i>[Signature]</i>

PURPOSE:

PROVIDES COMPATABILITY WITH C.D.C. OR OTHER TAPE DRIVES WITH 2.75 INCH SPACING FROM LOAD POINT SENSOR TO READ/WRITE HEAD. (DOES NOT APPLY TO C.D.C 92149)

GENERAL DESCRIPTION:

PROM (PART NO. 120021-A) WHICH USUALLY CONTROLS BOT GAP SPACING MUST BE REPLACED WITH PROM NO. 120028. THE DIFFERENCE IN CONTENT OF ADDRESSES 48 AND 68 IS SHOWN BELOW;

STANDARD (PROM 120021-A)		CONF. "C" (PROM 120028)
ADD 48	10001111	01110000
ADD 68	11110011	10111011

IMPLEMENTATION:


THE PROM LOCATIONS REQUIRING THE 120028 IN LIEU OF THE 120021-A ARE AS FOLLOWS AND APPLY TO NRZ1 ONLY. UNITS AS WELL;

- TC120 (REF. ASSY. 60000411 OR 60000429) LOCATION 2L
- TC130, BD#1 (REF. ASSY. 130017) LOCATION 12C
- TC140 (REF. ASSY. 60000023 OR 60000130) LOCATION 14H
- TC150, BD#1 (REF. ASSY. 60000080) LOCATION 12C

NOTE:

PROM NUMBERS 120021-A AND 120028 ARE LISTED AS P17009507 AND P17009606 RESPECTIVELY UNDER NEW COMPUTER PART NUMBERING SYSTEM.

JAN 21 1981


TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals™ TUSTIN, CALIFORNIA	
APPROVALS		DATE	
DRAWN <i>[Signature]</i> DENNIS ANDERSEN		8-29-80	
CHECKED <i>[Signature]</i>		8-29-80	
SCALE		SIZE	DRAWING NO.
		A	79000402
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RLSE	10-23-80	<i>Cashell</i>

1. Load accumulator \emptyset with 2 \emptyset .
2. Deposit 61122 at Location 10000.
3. Examine Location 10000 to verify proper content (61122).
4. Push "INSTRUCTION STEP" with tape positioned at load point marker and drive on-line. Drive should go off-line.
5. Position tape forward from load point marker and have drive on-line.
6. Examine Location 10000 to verify proper content (61122).
7. Push "INSTRUCTION STEP". The drive should rewind to load point and go off-line.
8. Rerun diagnostic to insure that installation of configuration "D" has not caused any problems due to improper installation.

REFERENCE MODIFICATION DWG. 79000154

OCT 24 1980

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES \pm \pm \pm		 western peripherals TM TUSTIN, CALIFORNIA	
APPROVALS DATE DRAWN L. CRAWFORD 10-23-80		TEST PROCEDURE - TC-120 CONFIGURATION "D"	
CHECKED <i>H. Deutch</i> 10-23-80		SCALE	SIZE DRAWING NO. A 92000140
		DO NOT SCALE DRAWING	
		SHEET OF	

19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
18A LS08 18,31,35, 36	18A LS86 19,35,36	17A LS174 34-36	16A LS86 34-36	15A LS14 20,24, 34-36	14A TERM. 28-36	13A-B 453 3,7 13A-A 453 3	12A-B 452 19 12A-A 452 19	11A-B 452 6,19 11A-A 452 19	10A LS174 19	9A-B 452 19 9A-A 452 19	8A LS14 3,7,19	7A NTWK 3,4,7	6A LS14 7	5A LS10 2	4A NTWK 2	3A LS10 2	2A LS08 3,7,9	1A LS13 2 LS109 4
18B LS174 31-33	18B LS86 29,31-33	17B LS174 28-30	16B LS86 28,29,30	15B LS86 30-33	14B LS14 28-33	13B S 133 27	12B S 133 27	11B LS174 19	10B LS86 19	9B-A 452 2 9B-B 453 4,6	8B LS04 3,4,7	7B NTWK 2,3,4	6B S132 2,3,4	5B S04 2,6,7,9	4B S10 2,4	3B S74 4	2B S08 2,4,5,7	1C LS17 9
18C LS157 31,33,35, 36	18C LS08 29,31-33	17C LS157 28-30,34	16C LS08 28,30,34	15C 8835 1	14C DM8556 5	13C LS257 8	12C LS04 6,20,27	11C LS27 2,6,24	10C LS02 19	9C LS02 2,4,6,7	8C S32 4,8	7C S132 4,8	6C LS74 3,4	5C 18 LS163	4C LS74 11,12	3C S11 2,7,11	2C S,9,19	1D LS17 9
18D LS32 28-31	18D LS157 32	17D LS02 31,34	16E MC8502P 20	15D LS08 32,33 35,36	14D DM8556 5	13D LS257 8	12D LS174 6	11D-A 452 6 11D-B 452 3,4	10D LS86 19	9D LS42 6	8D-B 453 6 8D-A 453 6	7D-B 453 6 7D-A 453 6	6D-B 452 6 6D-A 453 6	5D LS42 6	4D LS10 6,7,12	3D 17 9	2D SW SPO B 9	1E SW SPDA 9
18E LS161 28	18E LS08 32,34-36	17E LS32 32,34-36	LRC 16F MC852DL	15E 8835 1	14E DM8556 5	13F 199 14	12E LS174 6	11E S133 26	10E LS157 14	9E LS157 14	8E LS157 14	7E-B 452 3,4 7E-A 452 19	6E LS74 3,19	5E S37 7,22,27	4E LS04 2,6,9,12	3E RES 7,9	2E LS163 9	1F LS163 9
18F LS161 19F	18F LS08 32,34-36	17F 18,34-36 LS157	DESREW	15F LS02 35,36	14F DM8556 5	13G 199	12F LS253 15	11F S133 26	10F LS161 24	9F LS163 14	8F S37 9	7F LS74 11,24	6F LS109 11	5F LS08 3,6,11,24	4F LS32 3,4,5,27	3F LS86 2,7,20,25	2F S109 3,14	1G LS163 9
18G LS161 30	18G LS08 29-31,33	17G LS157 31-33	16H MC8520L 31,32,33	15G-LS02 32,33	14G DM8556 5	14	12G LS253 15	11G 3341 FIFO 17	10G 3341 FIFO 17	9G 3341 FIFO 17	8G LS20 3,17	7G LS10 10,17,21	6G LS02 14,21, 24	5G S260 7,24	4G LS279 16,20,24	3G LS08 12,20,21	2G S51 11,14	1H LS74 8,16
18H LS161 31	18H-LS08 29,31,33	17H LS32 29-31,33	DESREW 16J	15H 8835 1	14H DM8556 5	13H LS257 8	12H LS253 15	11H LS280 21	10H LS280 21	9H LS08 11,14,24	8H LS08 10,12,14, 27	7H LS04 6,10,15, 21,24,26	6H 452 11	5H LS04 3,7,12,24	4H LS32 21,24, 27	3H LS10 7,12	2H LS139 12	1I LS163 25
18J LS04 20	18J LS32 32-35	17J LS157 13,28-30	MC8520L DESREW	15J 8835 1	14J DM8556 5	13J LS257 8	12J LS253 15	11K MC8520 21	10J LS32 7,10,15	9J LS10 10,19,25	8J LS02 12,21	7J LS32 11,15	6J LS51 11	5J LS08 11,12,20	4J LS20 17,20	3J LS191 25	2J LS191 25	1J LS163 25
18K LS161 36	18K LS161 32	17K LS08 27-30	16K LS02 28,29,32, 33	15K LS02 28-30	14K DM8556 5	13K 9304 26	12K LS02 15,26	CRC 11 13 LS154 DECIDER (W/ASE)	10K LS175 11	9K LS85 12	8K LS27 7,12,16	7K LS08 8,11,15	6K LS11 10,12,20	5K LS12 20	4K LS109 6,27	3K LS32 4,6,11,20	2K LS163 10	1K LS163 10
18L LS04 832-36	18L LS161 33	17L LS32 9,27,28, 36	16L LS08 24,28	15L LS02 7,34- 36	14L LS174 8,10,12, 28,33,36	13L-A 9304 LS11 16,24	12L- LS08 15,17,24	LS154 DECIDER (W/ASE)	10L LS163 13	9L LS175 27	8L LS08 13,20	7L LS10 13,24	6L 16,26 DM8512	5L DM8613 13,20,24	4L LS42 12	3L LS163 12	2L PROM 10	1L PROM 10
18M LS04 29-34	18M LS161 34	17M LS163 29	16M LS163 33	15M LS163 36	14M LS174 29-32, 34,35	13M-A LS30 26	12M-A LS04 7,9,13, 17,26	11M-A DM8512 LS20 13	10M LS10 13,27	9M LS02 11,12,14, 27	8M LS32 13,16,24	7M LS02 13,16,24	6M LS08 13,16	5M LS32 10,13,25	4M LS08 7,12,13	3M LS08 10,15,25	2M LS163 10	1M LS163 10
18N LS04 28-31, 35,36	18N LS161 35	17N LS02 28-31	16N LS163 32	15N LS163 35	14N LS163 28	13N-A LS260 11,24	12N-A LS32 7,9,13 16	11N-A DM8512 LS27 16,20 27	10N LS08 13,25	9N LS11 13,14,16	8N LS02 13,16,17, 25	7N LS04 11,13,22, 23,26	6N LS02 22,23,26	5N LS20 10,26	4N LS10 4,10,20	3N LS157 22,25	2N 23 SPEED CHIP	1N ML4024 23
18P TLA 17,21	18P-A LS174 XTLB 9	17P LS163 30	16P-A LS163 31	15P-A LS163 34	14P LS109 9	13P-A 13 LS163	12P-A 13 LS163	11P-A LS175 17	10P LS157 16	9P-B 453 21,25 9P-A 451 17,25	8P LS109 27	7P LS109 20,24	6P LS158 22	5P DM8512 22	4P LS51 23,26	3P 7497 23	2P MC4044 23 PLL	1P NE555 23

NOTES

TC-120 CABLES (Controller-To-Drive)

<u>Computer Type</u>	<u>Backplane Connector</u>	<u>Cables to First Drive</u>
Standard DG-Type	121011	{ 121004 121006 121014
Eclipse	121021	121022
Eclipse - S 250	60000338	{ 121004 121006 121014
(E.D.S.) (C.E.S.)	121013	122042

For Drive Daisy - Chaining: 121004, 121006, 121014
(One set of 3, per drive)
Also see adapter paddleboards

NOTES

HISTORY

Documentation is available for the following assembly configurations which are not currently in production:

<u>DESCRIPTION</u>	<u>ASSEMBLY</u>	<u>SCHEMATIC</u>
TC-120 ORIGINAL BOARD	120015	120016
TC-120	120024	120016
TC-128	120025	120016
TC-128 ARTWORK REV D	60000122	75000133
TC-120 ARTWORK REV D	60000148	75000133
TC-120 ARTWORK REV J	60000411	75000414 *
TC-128 ARTWORK REV J	60000429	75000414 *

* CURRENT PRODUCTION



APPENDIX A

STANDARD TAPE DRIVE
CABLES AND ADAPTERS

TABLE OF CONTENTS

TITLE	DRAWING NO.
Modification Drawing, Tape Control Adapter (Config. "S")	112001
Assembly - Cable, Control	121004
Assembly - Cable, Read	121006
Assembly - Cable, Write	121014
Assembly Drawing - Adapter, Tape Read Connector	122005
Assembly Drawing - Tape Write Connector	122006
Assembly, Jumper Array, Select Switch Option	122010
Assembly, Jumper Array, Select Switch Option, Special	122011
Assembly, Jumper Array, Non-Select Switch Option	122012
Assembly Drawing - Adapter, Tape Read, Kennedy, Cipher	122018
Assembly Drawing - Adapter, Tape Write, Kennedy, Cipher	122019
Schematic - Adapter, Tape Write Connector	122021
Schematic - Adapter, Tape Read Connector	122022
Assembly, Adapter, Tape Write, Kennedy 9800	122034
Assembly, Adapter, Tape Read, Kennedy 9800	122035
Schematic - Tape Control Adapter	122036
Assembly - Adapter, Tape Control Connector	122037
Assembly - Adapter, Tape Control Connector, 90° Mounting	122038
Assembly - Adapter, Tape Control Connector, 2-inch Standoff	122039
Assembly - Adapter, Tape Read, Reverse Image, 90°	122043
Modification Drawing, Tape Control Adapter (Config. "N")	122044

FUNCTIONAL INDEX

		DRAWING NO.
I.	RIBBON CABLES AND BACKPLANE CONNECTORS	
	Assembly - Cable, Control	121004
	Assembly - Cable, Read	121006
	Assembly - Cable, Write	121014
II.	ADAPTER PADDLEBOARDS	
I.	SCHEMATICS	
	Schematic - Tape Control Adapter	122036
	Schematic - Adapter, Tape Write Connector	122021
	Schematic - Adapter, Tape Read Connector	122022
2.	ASSEMBLY DRAWINGS	
	a. CONTROL	
	Assembly - Adapter, Tape Control Connector (Standard)	122037
	Assembly - Adapter, Tape Control Connector (90° Mount)	122038
	Assembly - Adapter, Tape Control Connector (2-inch Standoff)	122039
	b. WRITE	
	Assembly Drawing - Tape Write Connector (Standard)	122006
	Assembly Drawing - Adapter, Tape Writer (Reverse Image)	122019
	Assembly - Adapter, Tape Write (90° Mount)	122034
	c. READ	
	Assembly Drawing - Adapter, Tape Read Connector	122005
	Assembly Drawing - Adapter, Tape Read (Reverse Image)	122018
	Assembly - Adapter, Tape Read (90° Mount)	122035
	Assembly - Adapter, Tape Read (Reverse Image 90° Mount)	122043
	d. DRIVE SELECT JUMPERS	
	Assembly, Jumper Array, Select Switch Option	122010
	Assembly, Jumper Array, Select Switch Option (4th Drive)	122011
	Assembly, Jumper Array, Non-Select Switch Option	122012
III.	SPECIAL FEATURE MODIFICATIONS	
	Modification Drawing, Tape Control Adapter Configuration "S"	112001
	Modification Drawing - Tape Control Adapter Configuration "N"	122044

MANUAL SUPPLEMENTS

MANUAL NO. APPENDIX A STD TAPE DRIVE PRESENT REVISION

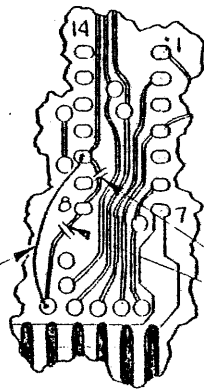
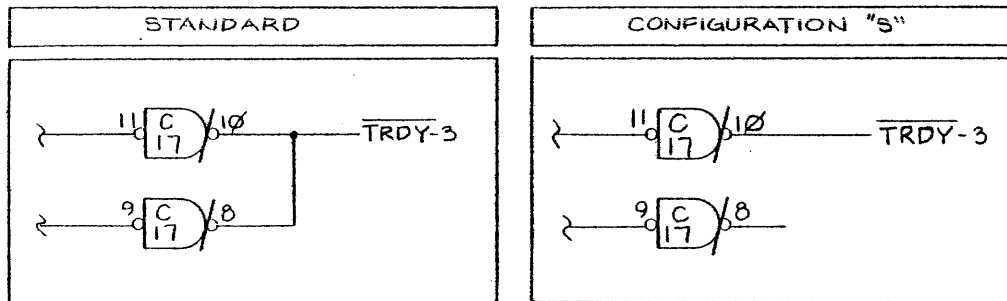
<u>DATE</u>	<u>SUPL. NO.</u>	<u>CHANGE DESCRIPTION</u>	<u>AUTH.</u>
11-26-80		79000410 ADDED	ER
1.7-81		79000642 ADDED	

PURPOSE:

THIS MODIFICATION REQUIRED FOR CONTROL OF QUANTEX TAPE DRIVES.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REDRAWN TO CORRECT DETAIL FOR E OR F ARTWORK (REF E.C.Q 780)	10-2-80	<i>Riper</i>

SHEET (2) OF SCHEMATIC 122036 IS ALTERED AS OUTLINED BELOW.



JUMPER

CUT

SOLDER SIDE VIEW
IC. LOCATION "C"

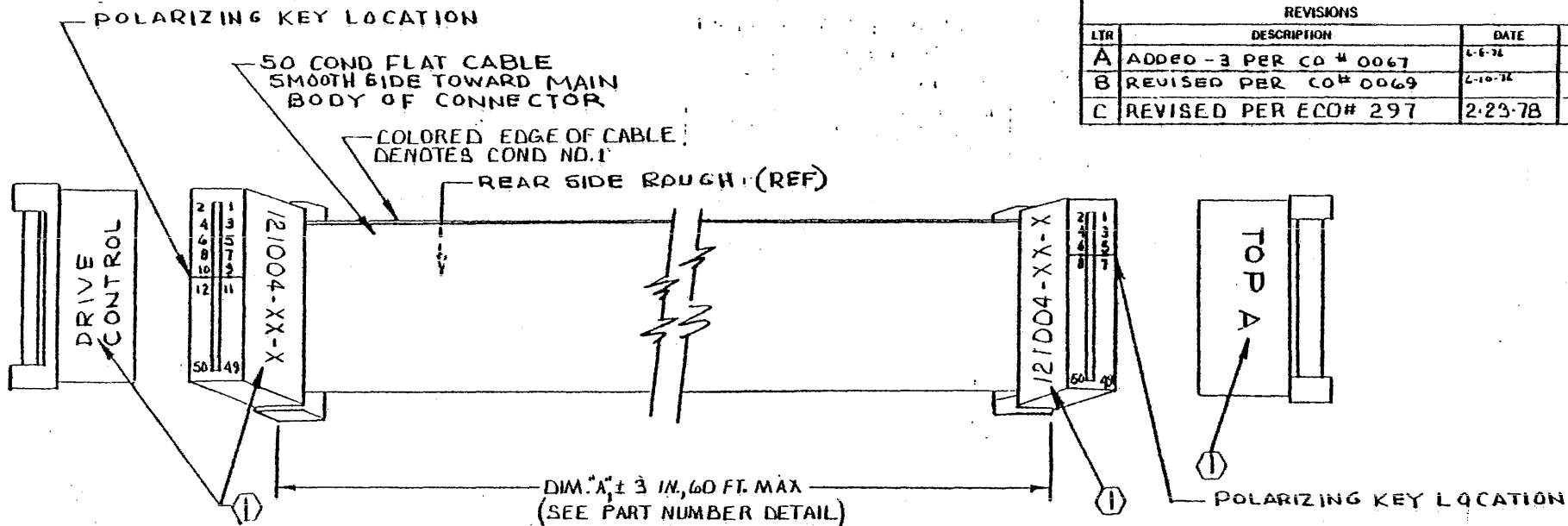
REWORK INSTRUCTIONS:

FOR ASSY. 122037, 122038, 122039

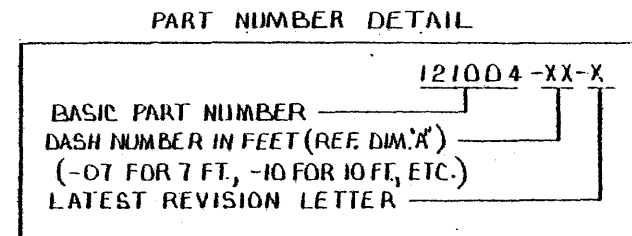
- CUT ETCH 2 PLCS AT C-8 (SOLDER SIDE)
- ADD JUMPER FROM C-10 TO FEED-THRU ON ETCH THAT WAS CONNECTED TO C-8
- IDENTIFY AT ASSY NO. WITH "CONF 5" USING BLACK INK.

OCT 2 1980

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals™ TUSTIN, CALIFORNIA	
FRACTIONS	DEC		
±	±	±	
APPROVALS	DATE	MODIFICATION DWG- TAPE CONT. ADAPTER, CONF "5"	
DRAWN BY A. N. Z. S. S. J.	10-1-80		
CHECKED H. V. S. S. J.	10-2-80	SCALE	SIZE B
			DRAWING NO. 112001
DO NOT SCALE DRAWING			SHEET 1 OF 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED - 3 PER CO # 0067	6-6-76	J.D.
B	REVISED PER CO# 0069	2-10-76	J.D.
C	REVISED PER ECO# 297	2-23-78	J.D., 9-78



NOTES.

① MARK CHARACTERS SHOWN USING CONTRASTING COLOR INK. SEE PART NUMBER DETAIL FOR MARKING OF VARIABLE CHARACTERS (X's).

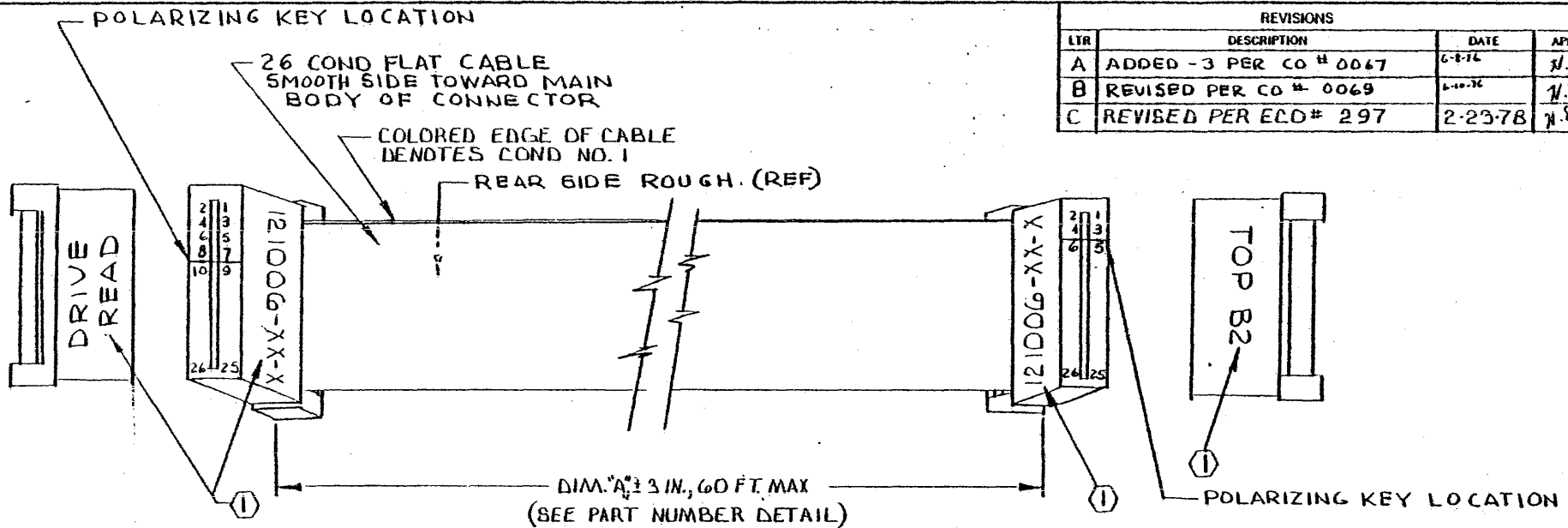
2. ASSEMBLY:

- 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

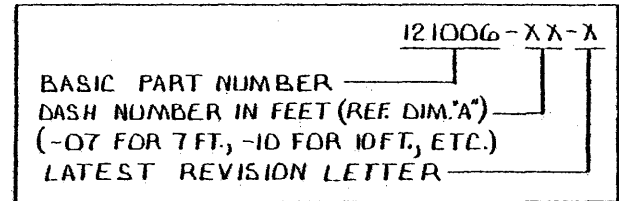
FOR PARTS SEE PARTS LIST 121004

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY- CABLE, CONTROL
APPROVALS	DATE	SCALE	
DRAWN CORUM	6-1-76	NONE	
CHECKED J.D.	6-1-76	SIZE B	
		DRAWING NO.	121004
DO NOT SCALE DRAWING			SHEET

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CO # 0067	6-8-76	J.D.
B	REVISED PER CO # 0069	6-10-76	J.D.
C	REVISED PER ECD# 297	2-23-78	J.D., 9-78



PART NUMBER DETAIL



NOTES:

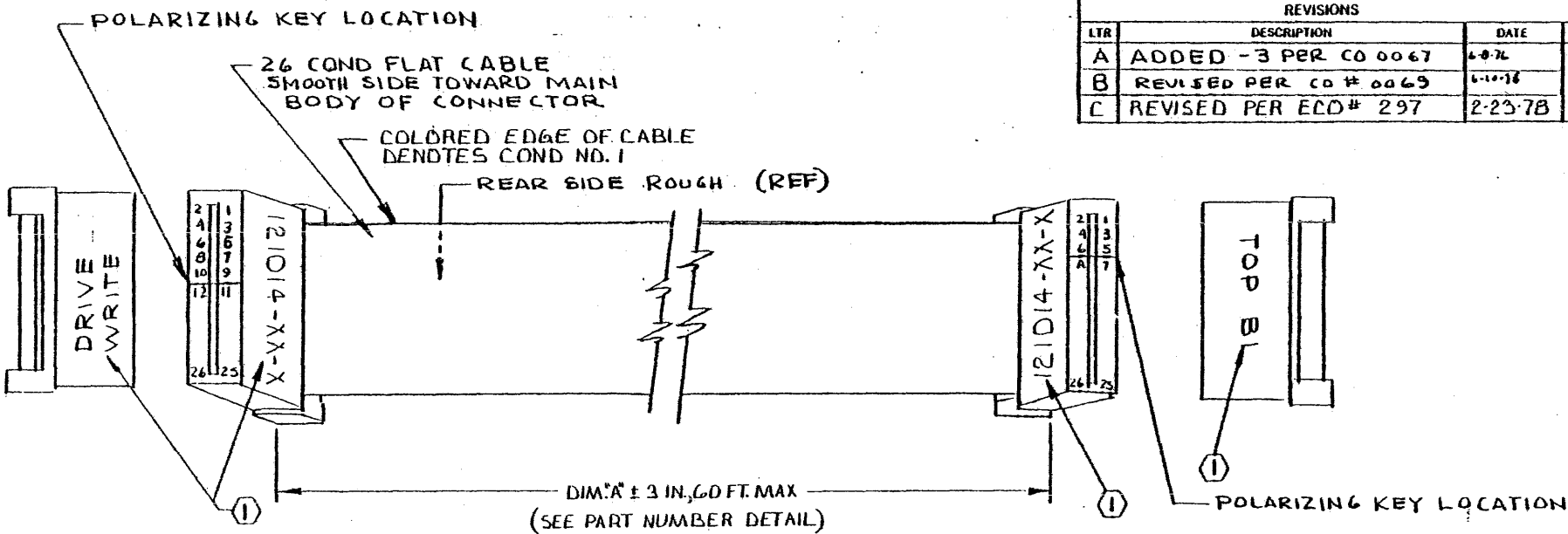
① MARK CHARACTERS SHOWN USING CONTRASTING COLOR INK.
SEE PART NUMBER DETAIL FOR MARKING OF VARIABLE CHARACTERS (X's).

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.
- FEED 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 ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY CABLE, READ SCALE NONE SIZE B DRAWING NO. 121006 DO NOT SCALE DRAWING SHEET
APPROVALS	DATE		
DRAWN CORUM	6-1-76		
CHECKED J.D.	6-1-76		



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CO 0067	6-8-76	N.D.
B	REVISED PER CO # 0069	6-10-76	N.D.
C	REVISED PER ECO# 297	2-23-78	N.D., 4-78

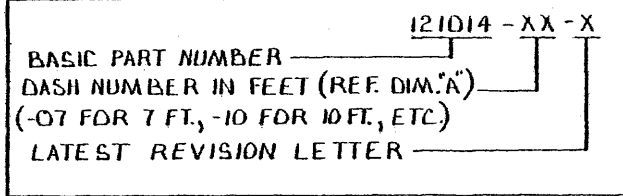
NOTES:

① MARK CHARACTERS SHOWN USING CONTRASTING COLOR INK.
SEE PART NUMBER DETAIL FOR MARKING OF VARIABLE CHARACTERS (X's).

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

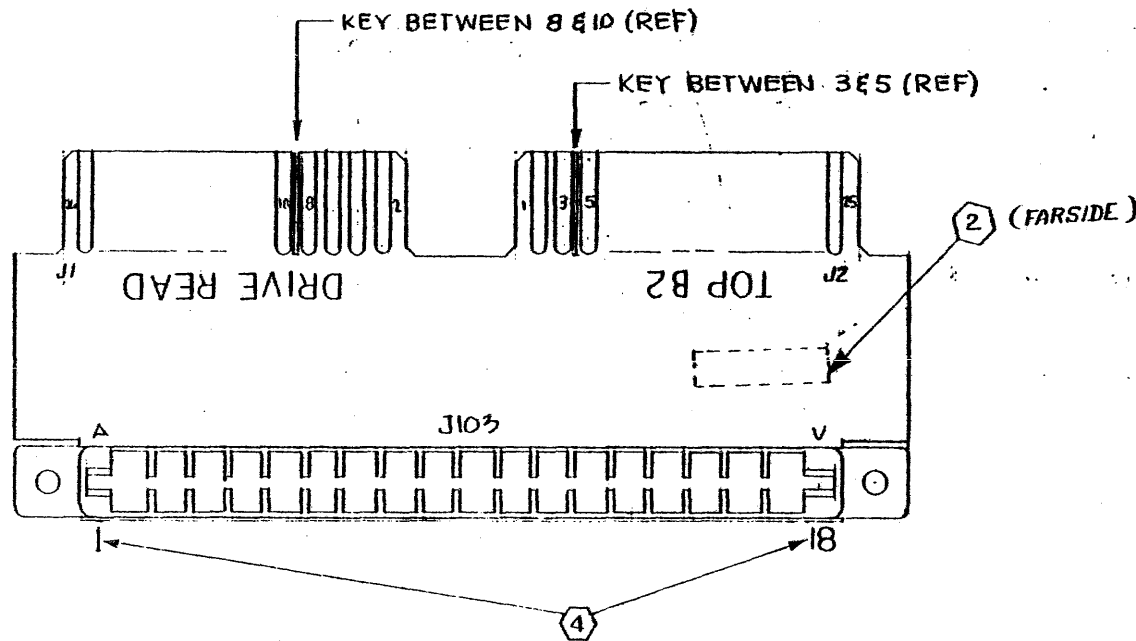
PART NUMBER DETAIL



FOR PARTS SEE PARTS LIST 121014

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES		
±	±	ASSEMBLY- CABLE, WRITE	
APPROVALS	DATE		
DRAWN CORUM	6-1-76		
CHECKED N.D.	6-1-76		
SCALE	SHEET	DRAWING NO.	
NONE	B	121014	
DO NOT SCALE DRAWING			SHEET

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV PER CO NO. 0105	9-8-76	
B	E.C.O NO. -0190	6-6-77	<i>N.D.</i> 11-77
C	REVISED NOTE 2 PER ECO. #415	2/2/79	<i>[Signature]</i> 2-2-79
D	ADDED NOTE (4) PER ECO # 504	6-20-79	<i>[Signature]</i> 6-20-79



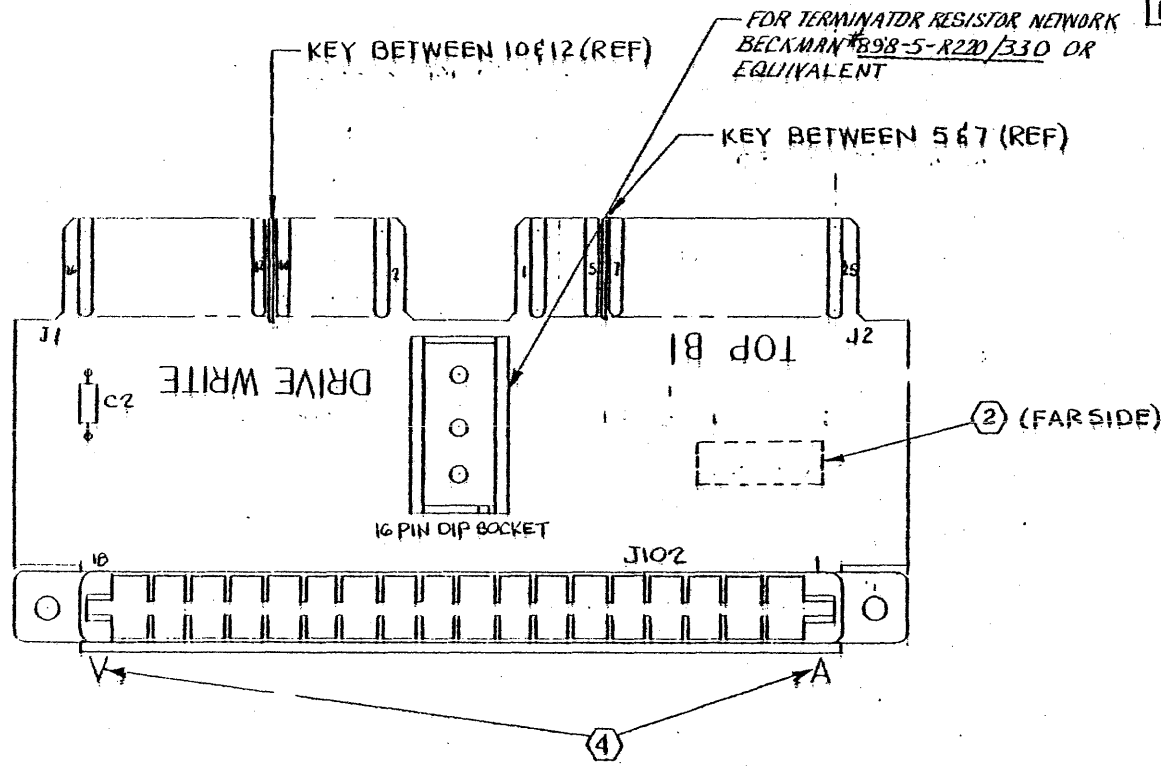
NOTE.

1. REF SCHEMATIC DWG NO. 122022
2. RUBBER STAMP ASSY NO. WITH LATEST REV. LTR ATTACH WHERE SHOWN USING BLK INK.
3. FOR MATL SEE P/L 122005
4. MARK CHARACTERS SHOWN (1 & 18) ON SIDE OF CONNECTOR USING CONTRASTING INK.

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

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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO.-0190	6-6-77	J.D. 6-11-77
B/C	ADVANCED REV LTR TO AGREE WITH P/L	2/1/79 J.D.	N.H.N. 2-6-79
D	REVISED NOTE 2 PER ECO# 416	2/6/79 J.D.	N.H.N. 2-6-79
E	ADDED NOTE (4) PER ECO# 504	6-20-79 J.D.	K.H.D. 6-20-79

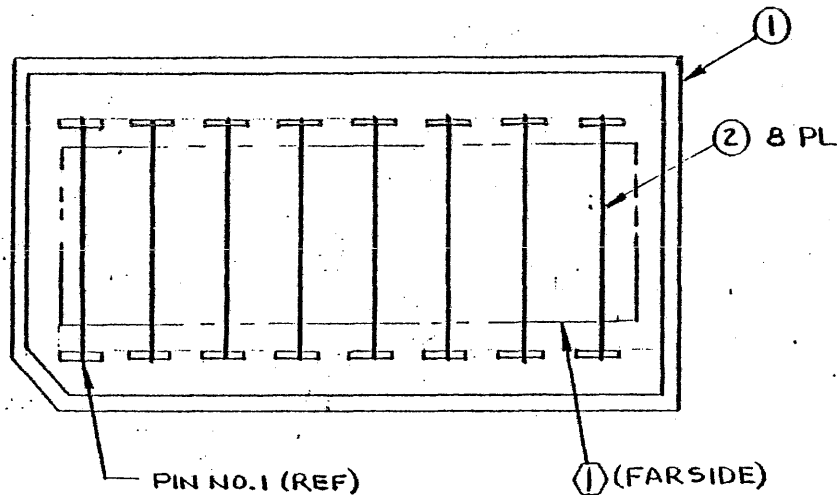


NOTE:

1. REF SCHEMATIC DWG. NO. 122021.
- (2) RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX. WHERE SHOWN USING BLK INK.
3. FOR MATL SEE P/L 122006
- (4) MARK CHARACTERS SHOWN (A&V) ON SIDE OF CONNECTOR USING CONTRASTING INK.

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TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY DWG. ADAPTER, TAPE WRITE CONNECTOR
APPROVALS	DATE	SCALE	
DRAWN HRB	2-12-76		
CHECKER J.D.	2-25-76	SIZE B	DRAWING NO. 122006
DO NOT SCALE DRAWING			SHEET 1 of 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

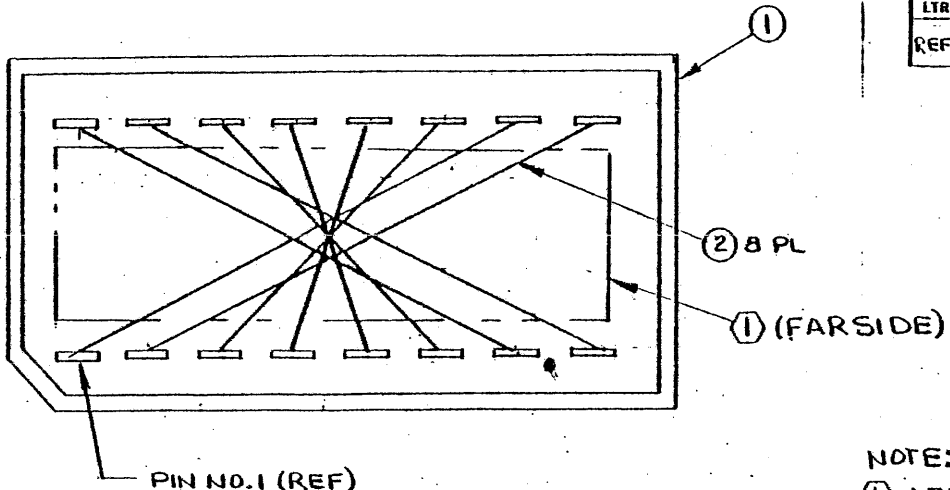
NOTE: UNLESS OTHERWISE SPECIFIED
 ① AFFIX ADHESIVE LABEL WITH PART NO. & LATEST REV LTR WHERE SHOWN

WIRE LIST		
WIRE NO.	FROM PIN NO.	TO PIN NO.
1	1	16
2	2	15
3	3	14
4	4	13
5	5	12
6	6	11
7	7	10
8	8	9

BILL OF MATERIALS

ITEM	NO. REQD	PART NO.	DESCRIPTION	REMARKS
1	1	CA-16P-12	DIP PLUG, 16 PIN	CIRCUIT ASSY. OR EQUIV.
2	A/R		WIRE, INSULATED, #30 AWG SOLID	WIRE WRAP WIRE

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN CORUM		11-18-76	
CHECKED W.D.		11-18-76	
SCALE NONE	SIZE B	DRAWING NO. 122010	
DO NOT SCALE DRAWING			SHEET 1 OF 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
REF	REC. CHG: ADD FAR SIDE TO (1) (ALL PARTS MADE CONFORM)		

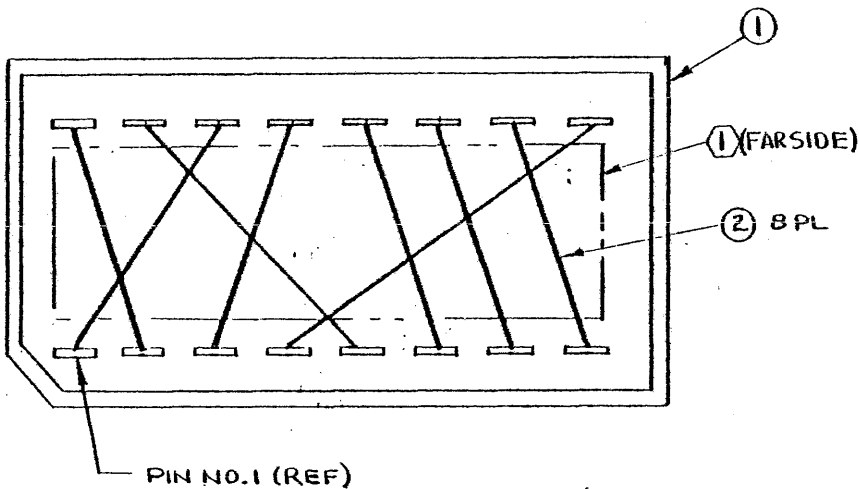
WIRE NO.	FROM PIN NO.	TO PIN NO.
1	1	10
2	2	9
3	3	11
4	4	12
5	5	13
6	6	14
7	7	16
8	8	15

NOTE: UNLESS OTHERWISE SPECIFIED
 (1) AFFIX ADHESIVE LABEL WITH PART NO. &
 LATEST REV LTR WHERE SHOWN

BILL OF MATERIALS

ITEM	NO. REQD	PART NO.	DESCRIPTION	REMARKS
1	1	CA-16P-12	DIP PLUG, 16-PIN	CIRCUIT ASSY OR EQUIV
2	A/R		WIRE, INSULATED, #30 AWG SOLID	WIRE WRAP WIRE

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSY, JUMPER ARRAY, SELECT SWITCH OPTION, SPECIAL (4TH TRANSPORT)
APPROVALS	DATE	SCALE	
DRAWN CORUM	11-18-76	NONE	
CHECKED V.D.	11-18-76	SIZE B	
		DRAWING NO.	122011
DO NOT SCALE DRAWING			SHEET 1 OF 1



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

WIRE NO.	FROM PIN NO.	TO PIN NO.
1	1	14
2	2	16
3	3	13
4	4	9
5	5	15
6	6	12
7	7	11
8	8	10

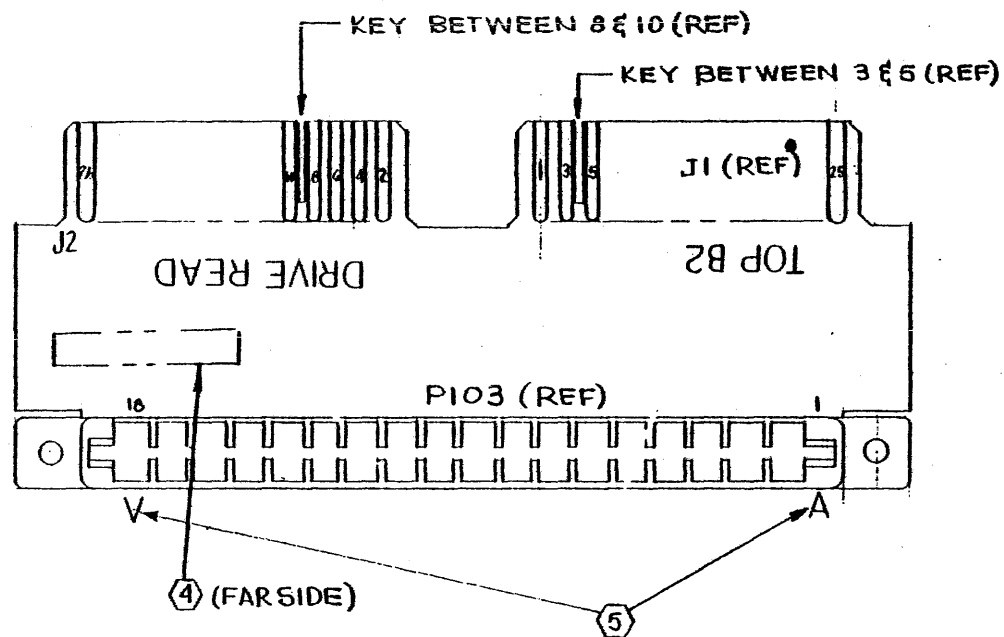
NOTE: UNLESS OTHERWISE SPECIFIED
 ① AFFIX ADHESIVE LABEL WITH PART NO. & LATEST REV LTR WHERE SHOWN

BILL OF MATERIALS

ITEM	NO. REQD	PART NO.	DESCRIPTION	REMARKS
1	1	CA-16P-12	DIP PLUG , 16-PIN	CIRCUIT ASSY OR EQUIV
2	A/R		WIRE, INSULATED, #30 AWG SOLID	WIRE WRAP WIRE

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS			
DRAWN CORUM	11-18-76	ASSY, JUMPER ARRAY, NON-SELECT SWITCH OPTION	
CHECKED J.D.	11-18-76		
SCALE NONE		SIZE B	DRAWING NO. 122012
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	IN CORP. CO # 0145 <i>TRC</i>	1-21-77	<i>N.D. 1-24-77</i>
B	E.C.O. NO. - 0190	6-6-77	<i>N.D. 6-11-77</i>
C	DELETED NOTE 2 PER E.C.O. #417	<i>11/1/79</i>	<i>7/17/79</i>
D	ADDED NOTE ⑤ PER ECO #504	6-20-79	<i>6/20/79</i>




NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122022

2.

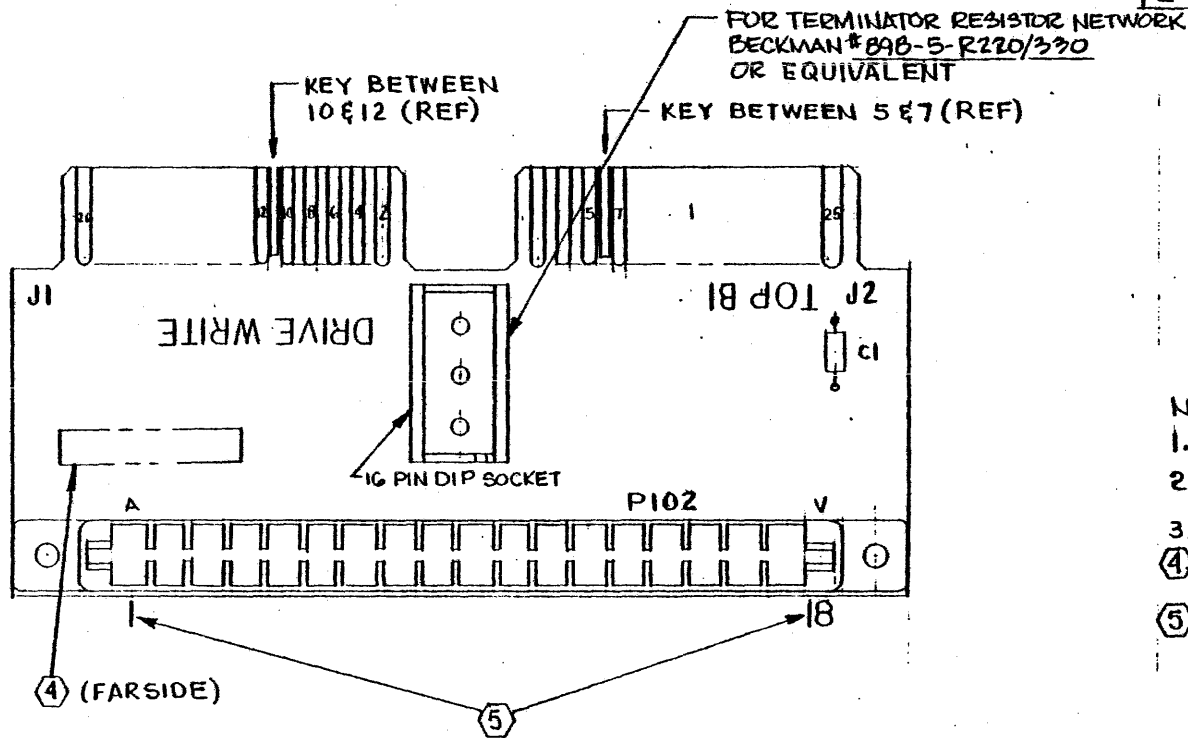
3. FOR MATERIAL SEE P/L 122018

④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN USING BLK INK.

⑤ MARK CHARACTERS SHOWN (A&V) ON SIDE OF CONNECTOR USING CONTRASTING INK.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN <i>HRB</i>		2-15-76	
CHECKED <i>al</i>		2-15-76	
SCALE		SIZE	DRAWING NO.
2:1		B	122018
DO NOT SCALE DRAWING			SHEET 1 OF 1

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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORPORATE CO # 0146	1-11-77	M.D. 1-24-77
B	INCORP ECO 172	5/11/77	M.D. 5-11-77
C	INCORP ECO. NO. -0190	6-6-77	M.D. 6-11-77
D	DELETED NOTE 2 & CALLOUT PER ECO 418	11/24/79	M.D. 11-24-79
E	ADDED NOTE (5) PER ECO # 504	6-20-79	M.D. 6-20-79

- NOTE: UNLESS OTHERWISE SPECIFIED
- REF SCHEMATIC DWG NO. 122021
 -
 - FOR MATERIAL SEE P/L 122019
 - RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN
 - MARK CHARACTERS (1 & 18) ON SIDE OF CONNECTOR USING CONTRASTING INK.

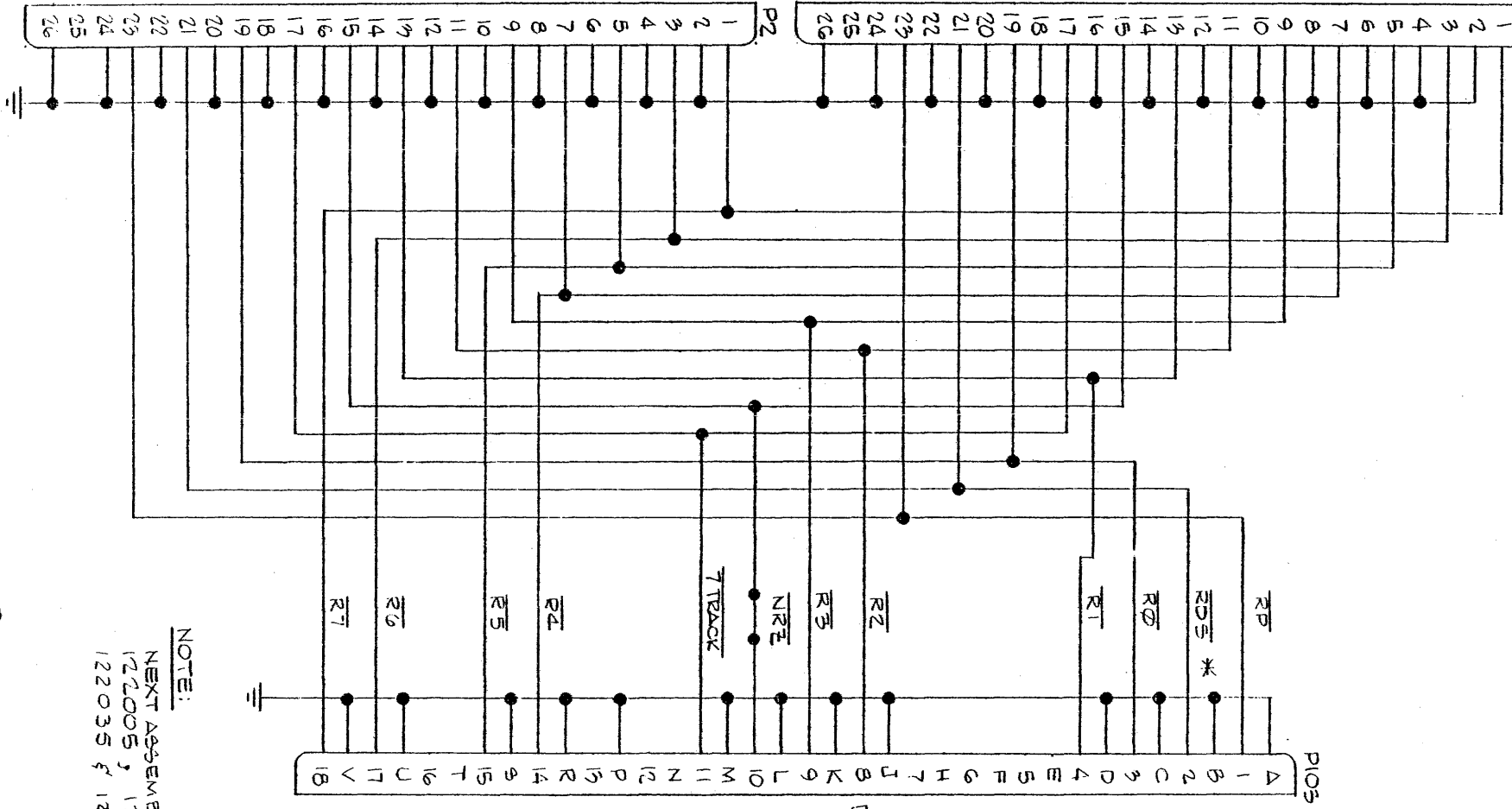
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals IRVINE, CALIFORNIA	
APPROVALS		DATE	
DRAWN <i>HRB</i>		2-12-76	
CHECKED <i>RL</i>		2-15-76	
SCALE		SIZE	DRAWING NO.
2:1		B	122019
DO NOT SCALE DRAWING			SHEET 1 OF 1

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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	IDENTIFIED SIGNALS AND CONNECTORS PER E.C.O. 7/69	9-18-80	<i>[Signature]</i>

DAISY-CHAIN TO NEXT TAPE DRIVE

PI-FROM CONTROLLER OF PREVIOUS DRIVE



NOTE:

NEXT ASSEMBLY NO.
 122005, 122018,
 122035 & 122043.

TOLERANCES UNLESS OTHERWISE SPECIFIED		
FRACTIONS	DEC.	ANGLES
±	±	±
APPROVALS	DATE	
DRAWN <i>HRB</i>	1-13-76	
CHECKED <i>PL</i>	1-26-76	



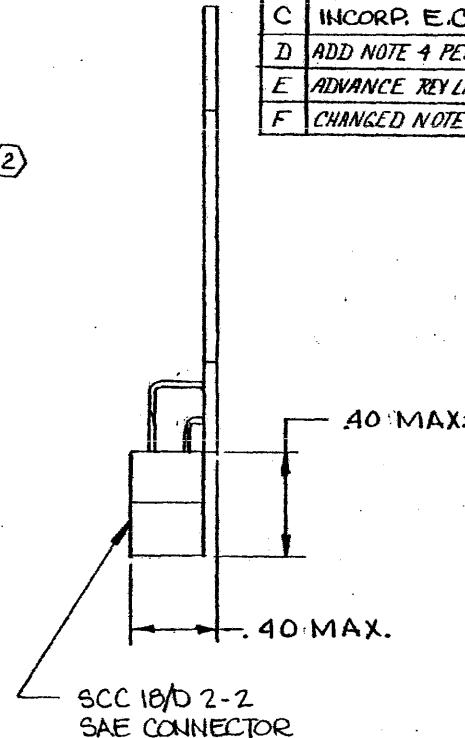
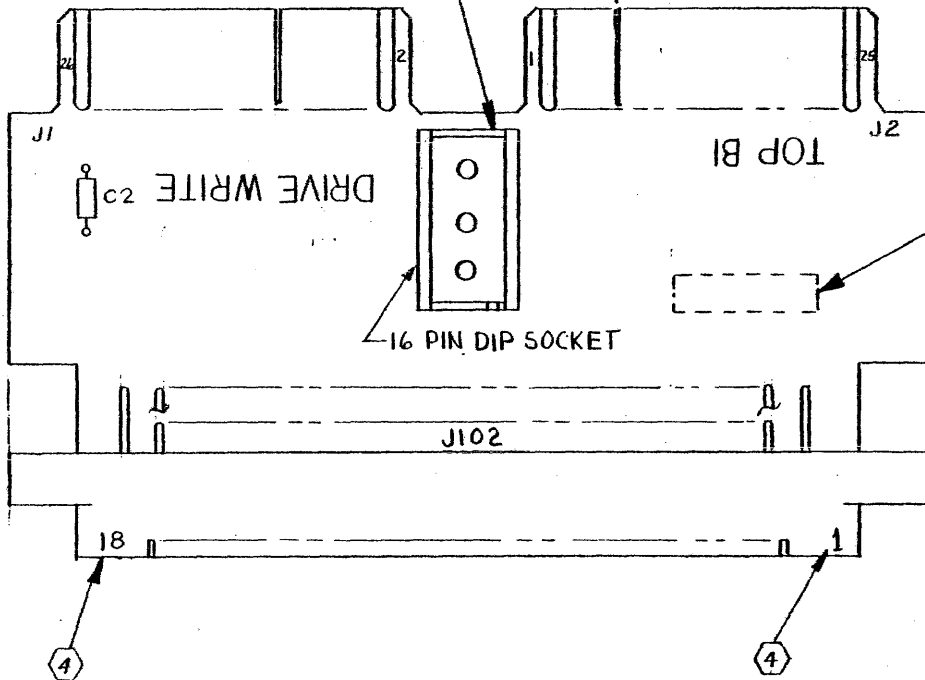
**SCHEMATIC
 ADPTR., TAPE READ
 CONNECTOR**

SCALE NONE	SIZE B	DRAWING NO. 122022
---------------	-----------	-----------------------

DO NOT SCALE DRAWING SHEET 1 OF 1

FOR TERMINATOR RESISTOR NETWORK
BECKMAN № 898-5-R220/330 OR EQUIV

KEY SLOT BETWEEN 5 & 7 AT J2 & 10 & 12 AT J1 (REF)



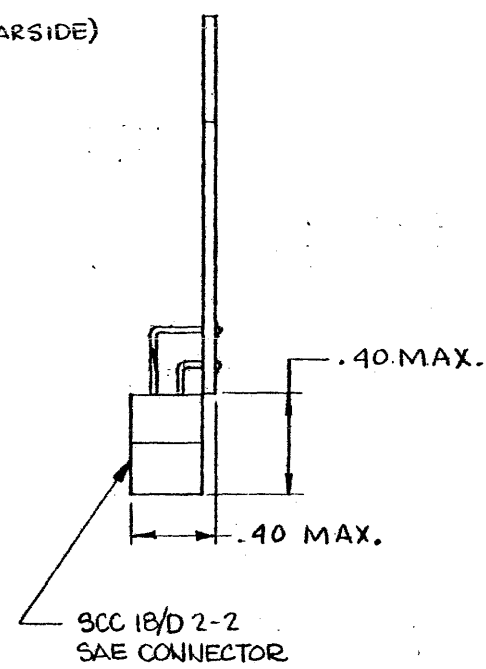
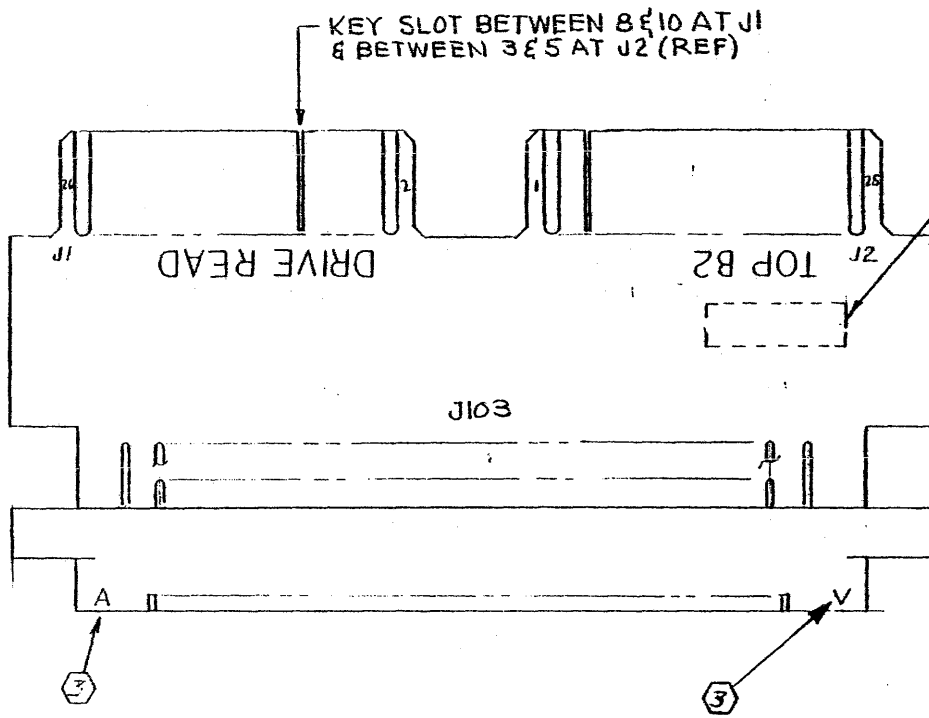
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORP ECO 172	5-11-77	N.D. 5-11-77
B	INCORP E.C.O. NO. 0190	6-6-77	N.D. 6-11-77
C	INCORP. E.C.O. NO. 0197	8-8-77	N.D. 8-9-77
D	ADD NOTE 4 PER ECO 355	11/1/79	N.D. 11-1-79
E	ADVANCE REV LTR TO AGREE WITH P/L	11/1/79	N.D. 11-1-79
F	CHANGED NOTE 2 PER ECO 416	11/1/79	N.D. 11-1-79

JUN 22 1979

- ④ RUBBER STAMP CHARACTERS SHOWN USING WHITE INK.
 - ③ FOR MATERIAL LIST SEE P/L 122034.
 - ② RUBBER STAMP ASSY NO. & LATEST REV LTR APPROX WHERE SHOWN USING BLK INK.
 - 1. REF. SCHEMATIC DWG NO. 122021.
- NOTE : UNLESS OTHERWISE SPECIFIED.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	ASSEMBLY- ADAPTER TAPE WRITE KENNEDY 9800	
DRAWN CDRUM	6-11-74	SCALE 2X	SIZE B
CHECKED		DRAWING NO. 122034	
		DO NOT SCALE DRAWING	SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO.-0190	6-6-77	N.D. 6-11-77
B	E.C.O. NO.-0197	8-8-77	N.D. 8-9-77
C	ADDED NOTE 3 PER ECO #355	2/1/79	N.H. 2-6-79
D	ADVANCED REV LTR TO AGREE WITH P/L	2/1/79	N.H. 2-6-79
E	CHANGED NOTE 1 PER ECO #415	2/1/79	N.H. 2-6-79



JUN 22 1979

- ③ RUBBER STAMP CHARACTERS SHOWN USING WHITE INK.
2. REF SCHEMATIC DWG NO. 122022.
- ① RUBBER STAMP ASSY NO. & LATZ ST REV LTR
APPROX WHERE SHOWN USING BLK INK.

NOTE : UNLESS OTHERWISE SPECIFIED.


TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	
APPROVALS	DATE	ASSEMBLY-ADAPTER TAPE READ KENNEDY 9800	
DRAWN C.B.RUM	6-11-76		
CHECKED M.C.			
SCALE		SIZE	DRAWING NO.
2 X		B	122035
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	CORRECTED SWITCH SETTING CHART FOR SA4 PER ECO 178.	5-4-77	
B	REDRAWN PER ECO 236.	5-16-78	<i>N.D.</i> 5-16-78
C	CHANGED I.C. LOC'H PER ECO 806	12-9-90	<i>Revised</i>

SWITCH A	SWITCH SETTINGS	SYSTEM CONSIDERATIONS
1	ON	FOR DRIVES THAT REQUIRE REWIND COMMAND REMOVAL PRIOR TO BOT
	OFF	FOR DRIVES THAT DO NOT REQUIRE REWIND COMMAND REMOVAL PRIOR TO BOT
2	ON	FOR DRIVES THAT STORE EOT STATUS NOTE: A5 SHOULD BE OFF
	OFF	FOR DRIVES THAT DO NOT STORE EOT STATUS NOTE: A5 SHOULD BE ON
3	ON	FOR 7 TRACK DRIVES
	OFF	FOR 9 TRACK DRIVES
4	ON	FOR 7 TRACK 556/800 BPI DENSITY SELECTIONS OR 9 TRACK SECONDARY SPEED (SELECTION B)
	OFF	FOR 7 TRACK 200/556 BPI DENSITY SELECTIONS OR 9 TRACK PRIMARY SPEED (SELECTION A)
5	ON	FOR DRIVES THAT DO NOT STORE EOT STATUS NOTE: A2 SHOULD BE OFF
	OFF	FOR DRIVES THAT STORE EOT STATUS NOTE: A2 SHOULD BE ON
6	ON	FOR 9 TRACK NRZI ONLY DRIVE
	OFF	FOR 7 TRACK DRIVES, 9 TRACK 1600 BPI DRIVES, OR 9 TRACK 800/1600 DUAL DENSITY
7	ON	FOR DUAL DENSITY 9 TRACK DRIVES THAT DO NOT PRESENT NRZ STATUS ON DRIVE READ CONNECTOR
	OFF	FOR DUAL DENSITY 9 TRACK DRIVES THAT DO PRESENT NRZ STATUS ON DRIVE READ CONNECTOR
8	ON	FOR 7 TRACK DRIVES
	OFF	FOR 9 TRACK DRIVES

NOTES:

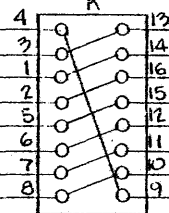
1. FOR 7 TRACK DRIVES IN DRIVE DAISY CHAINS, ONLY PRIMARY SPEED SELECTION IS AVAILABLE.
2. REF. ASSY. DWG. 122037, 122038, & 122039.
- ③ 122010 INSTALLED WHEN TRANSPORT HAS 4- POSITION UNIT SELECT SWITCH (SEE EXCEPTION BELOW).
122011 INSTALLED IN 4TH TRANSPORT IF MORE THAN 4 TRANSPORTS ARE DAISY CHAINED.
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.
- ⑤ FOR EXTERNALLY CONNECTED UNIT SELECT SWITCH: CUT ETCH BETWEEN P & R AND CONNECT EXTERNAL SWITCH TO A, B, C, D, & L.
- ⑥ TO POWER ADAPTER FROM TAPE TRANSPORT, CUT ETCH BETWEEN J & S AND JUMPER J TO K.
7. FOR CONFIGURATION "L" SEE DWG. 130047.
8. FOR CONFIGURATION "N" SEE DWG. 122044.
9. FOR CONFIGURATION "S" SEE DWG. 112001.

TOLERANCES UNLESS OTHERWISE SPECIFIED			 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES		
±	±	±	SCHEMATIC — TAPE CONTROL ADAPTER	
APPROVALS	DATE			
DRAWN <i>T.M.</i>	2-15-78		SCALE: SIZE: B DRAWING NO. 122036	
CHECKED <i>N.D.</i>	5-16-78			
DO NOT SCALE DRAWING			SHEET 1 OF 3	

* SELECT JUMPER ARRAY P/N 122012

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

- J1
- SLT0 11
- SLT1 13
- SLT2 15
- SLT3 9
- SLT4 7
- SLT5 5
- SLT6 1
- SLT7 3
- FLPT 17
- FSL 33
- RSL 23
- OVW 21
- WNB 19
- RWDC 27
- DSL 29

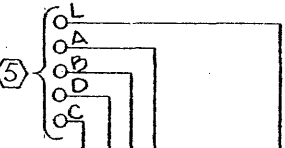


- J2
- 11
- 13
- 15
- 9
- 7
- 5
- 1
- 3
- 17
- 33
- 23
- 21
- 19
- 27
- 29

(TO NEXT DRIVE
IN DAISY CHAIN)

- J101
- P FLPT
- C FSL
- E RSL
- B OVW
- K WNB
- D DSL
- J
- A
- V
- S

- RWDC-2
- OVW-2
- RSL-2
- FSL-2

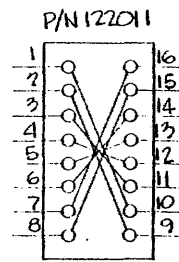
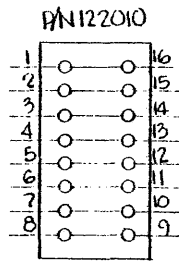
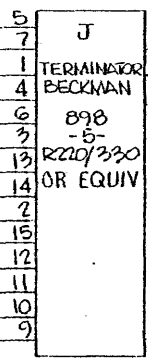


+5V

(FROM CONTROLLER
OR PREVIOUS DRIVE)

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

* SELECT JUMPER ARRAY
ALTERNATES



- NOTES: UNLESS OTHERWISE SPECIFIED
- J1 & J2 HAVE ALL EVEN NUMBERED GROUND PINS.
 - J101 GROUND PINS ARE 2-14, 16 & 17.
 - ALL RESISTORS ARE 10K OHMS.

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

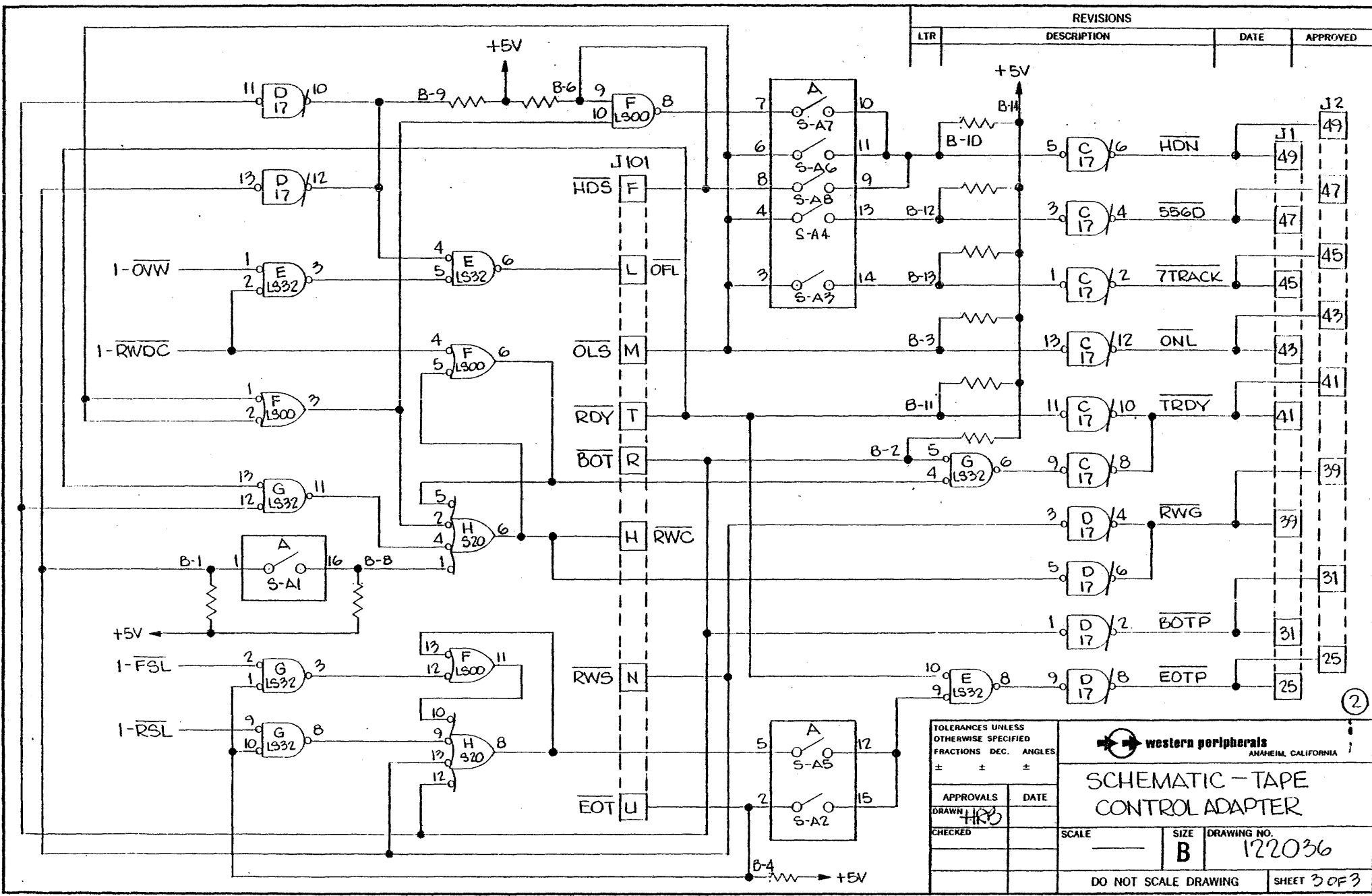
①

western peripherals
ANAHEIM, CALIFORNIA

SCHEMATIC - TAPE CONTROL ADAPTER

SCALE	SIZE	DRAWING NO.
—	B	122036

DO NOT SCALE DRAWING SHEET 2 OF 3



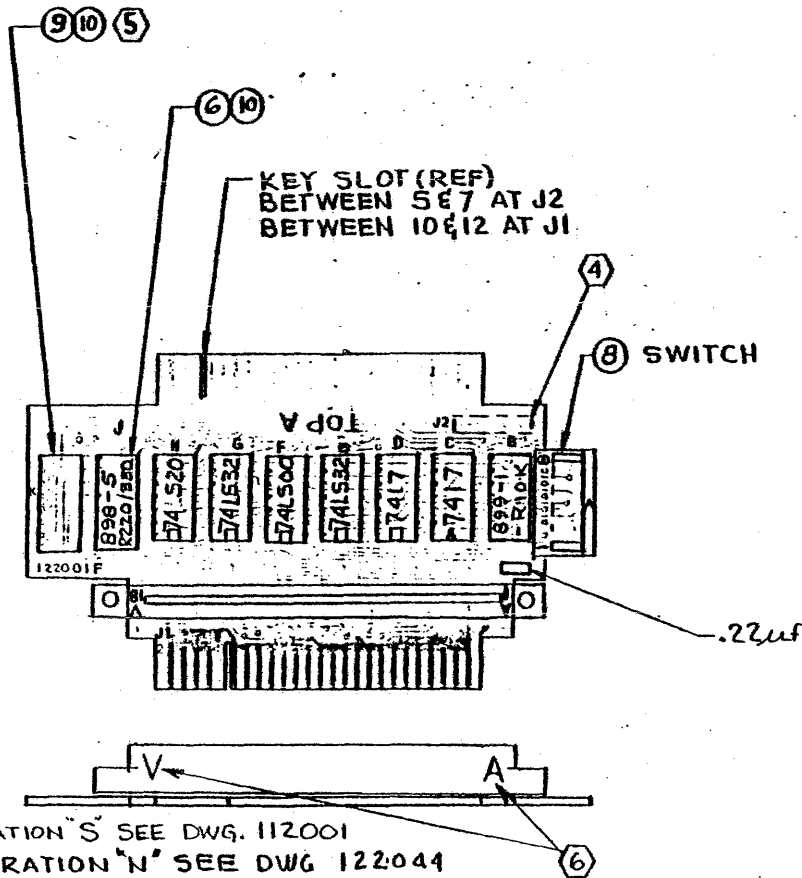
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>HR</i>	
CHECKED	

western peripherals
ANAHEIM, CALIFORNIA

SCHMATIC - TAPE CONTROL ADAPTER

SCALE	SIZE	DRAWING NO.
	B	122036
DO NOT SCALE DRAWING		SHEET 3 OF 3



9. FOR CONFIGURATION "S" SEE DWG. 112001
 8. FOR CONFIGURATION "N" SEE DWG 122044
 7. FOR CONFIGURATION "L" SEE DWG. 130047

6. MARK CHARACTERS SHOWN (A & V) ON SIDE OF CONNECTOR USING CONTRASTING INK.
 5. FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
 4. RUBBER STAMP ASSY NO. WITH LATEST REV LTR AND DASH NO. (IF REQD) APPROX WHERE SHOWN (FAR SIDE)
 3.
 2. FOR MATERIAL SEE P/L NO. 122037
 1. REF SCHEMATIC 122036
 NOTE: UNLESS OTHERWISE SPECIFIED

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO.-0143	1-18-77	
B	E.C.O. NO.-0190	6-3-77	N.D. 6-11-77
	RECORD CHANGE: ADD CONF. "L" (REV. LTR. CHANGE NOT REQD.)	8-9-77	N.D. 8-9-77
	RECORD CHG; ADD CONF "N" (REV LTR CHG NOT REQD)	9-15-77	N.D. 9-25-77
	RECORD CHG; ADD SH NO. 2 (CLASSY) NO CHG TO BASIC 80 SEE ECO # 0254 (NO REV LTR REQD)	11-16-77	N.D. 11-22-77
	E.C.O #299 (NO REV. LTR. CHANGE)	3-5-78	N.D. 3-7-78
C	USE "F" REV. PWB, REF. ECON. 236A	5-16-78	N.D. 5-16-78
D	DELETED NOTES 3 & 6 PER ECO 411	11/21/79	N.D. 11-21-79
E	CORRECT VALUE SHOWN FOR CAPACITOR PER ECO No. 460	3-6-79	N.D. 3-2-79
F	ADDED NOTE 9 PER ECO # 504	6-20-79	N.D. 6-20-79

G IC "H" S/B 74520 ECO 806

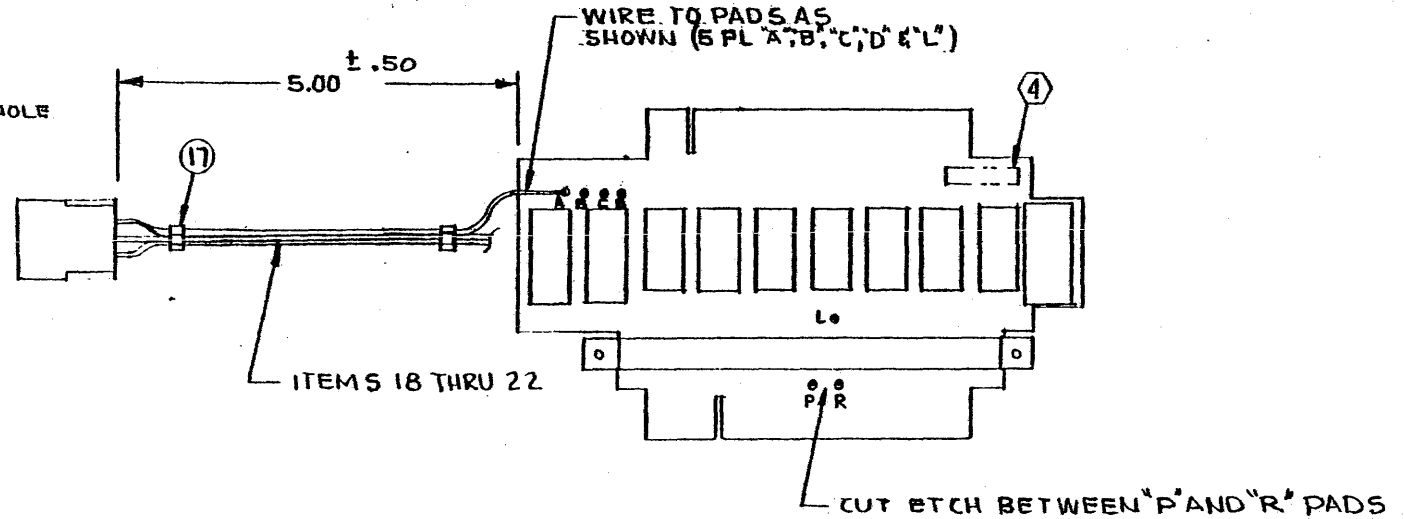
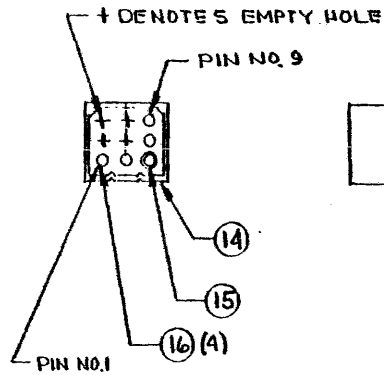
BASIC ASSY SHOWN
 FOR -1 ASSY SEE SH NO. 2

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	ASSEMBLY ADAPTER TAPE CONTROL CONNECTOR	
± ± ±		SCALE	SIZE DRAWING NO.
APPROVALS	DATE	FULL	B 122037
DRAWN CORUM	11-8-76		
CHECKED 7-D.	12-76-2		
		DO NOT SCALE DRAWING	
		SHEET 1 OF 2	

0	3	YEL	(A)	122037-1
1	6	RED	(B)	
2	9	GRN	(D)	
3	2	ORG	(C)	
COM	1	BRN	(L)	

120037-1 WIRING DIAGRAM

ITEM NO.14
(9 PIN MOLEX PLUG, REF)



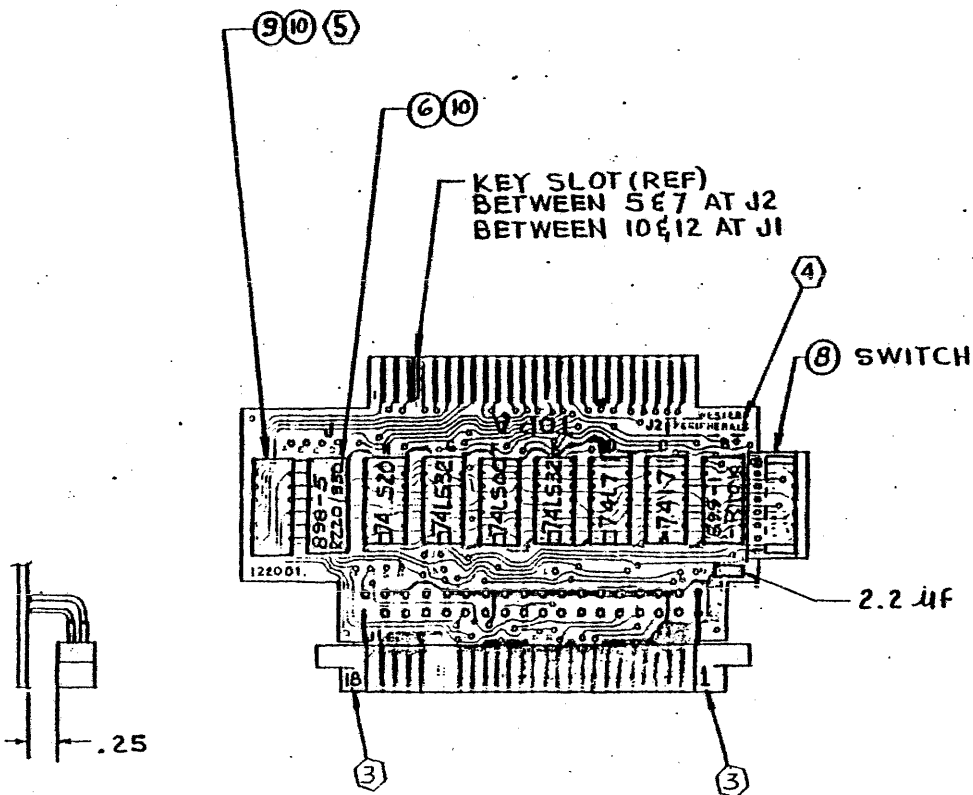
NOTE:

THE -1 ASSY IS USED ON PERTEC T9000 SERIES WITH OPTIONAL UNIT SELECT THUMBWHEEL SWITCH TERMINATED IN MOLEX CONNECTOR. COMPONENT REQUIREMENTS & MARKINGS ARE THE SAME AS FOR BASIC ASSY

-1 ASSY SHOWN
FOR BASIC ASSY SEE SH NO.1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES	
±	±	±	
APPROVALS		DATE	
DRAWN		11-19-77	
CORUM			
CHECKED			
SCALE		SIZE	DRAWING NO.
FULL		B	122037
DO NOT SCALE DRAWING			SHEET 2 OF 2

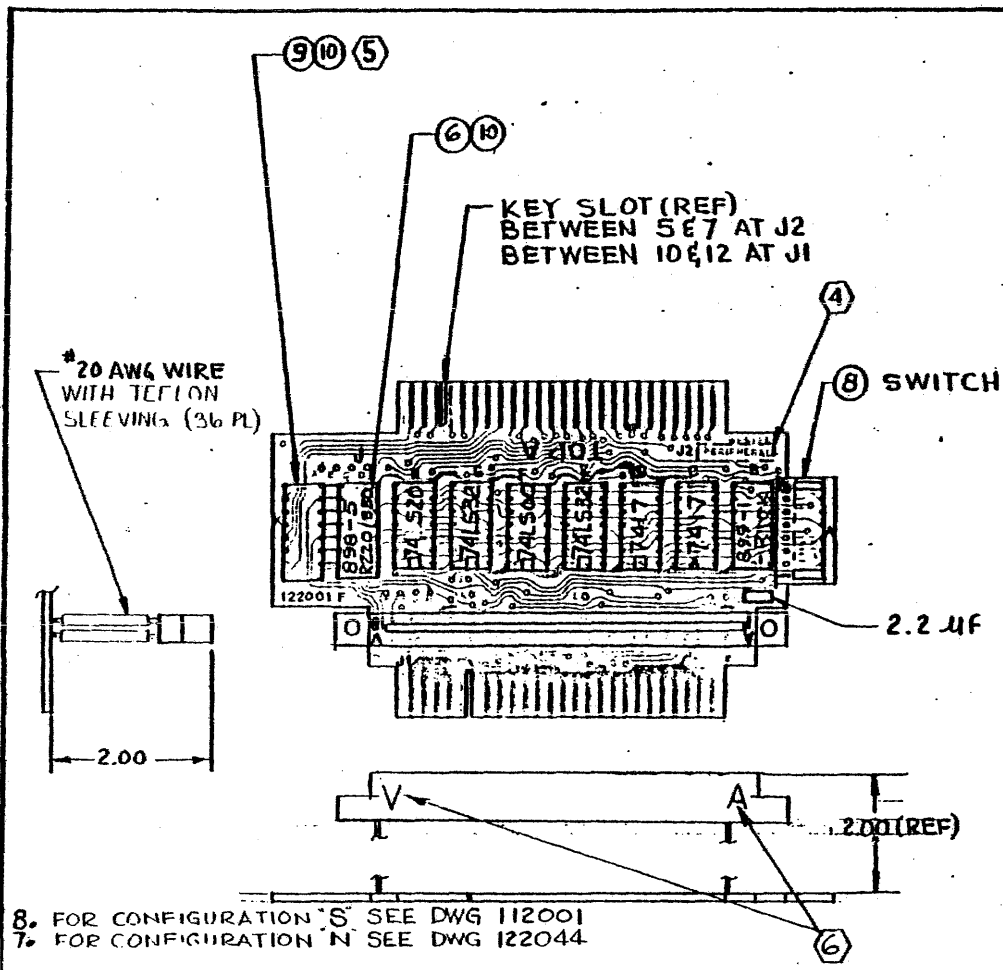


8. FOR CONFIGURATION "S" SEE DWG. 112001
 7. FOR CONFIGURATION "N" SEE DWG. 122044
 6.
 5) FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
 4) RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
 3) RUBBER STAMP CHARACTER SHOWN USING WHITE INK
 2. FOR MATERIAL SEE P/L NO. 122038
 1. REF SCHEMATIC 122036
 NOTE: UNLESS OTHERWISE SPECIFIED

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO. - 0143	1-18-77	
B	E.C.O. NO. - 0190	6-3-77	N.D. 6-11-77
C	E.C.O. NO. - 0197	8-8-77	N.D. 8-9-77
	E.C.O. NO. - 299 (NO REV. LTR. CHG.)	3-8-78 _{rm}	N.D. 3-9-78
	ADDED NOTE 7 PER E.C.D. 257 AND DELETED REQUIREMENT FOR SLEEVING WIRE AT CONNECTOR	3-21-78	N.D. 3-21-78
D	USE "F" REV. PWB, REF. ECO No. 236A	5-16-78	N.D. 5-16-78
E	REVISED NOTE 3 PER E.C.D. 355	11/24/79	N.D. 11-24-79
F	DELETED NOTE 6 PER ECO #414	11/24/79	N.D. 11-24-79
G I.C. "H" S/R 74520 ECD 906			

FFR 7 1979

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



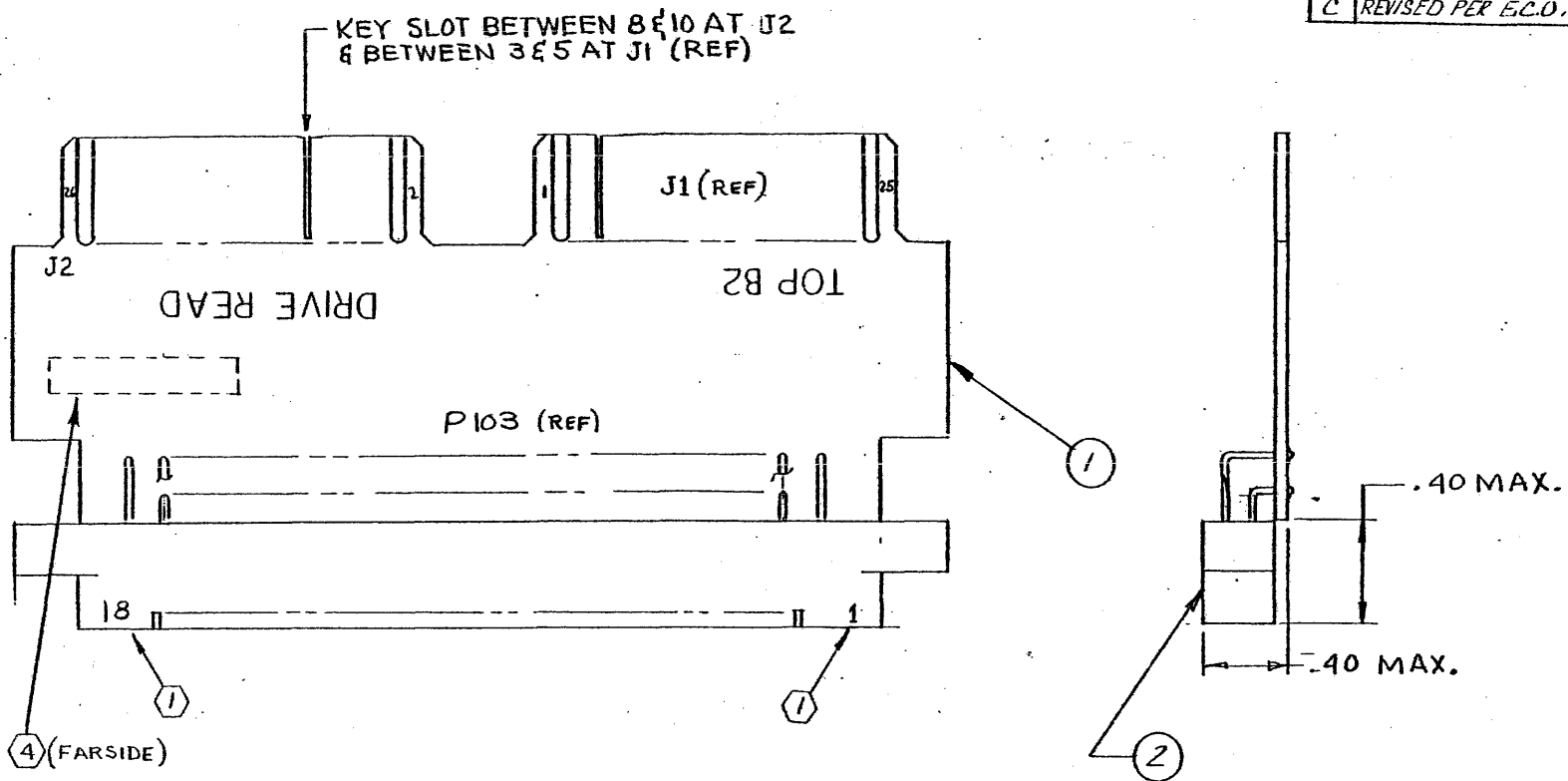
8. FOR CONFIGURATION "S" SEE DWG 112001
 7. FOR CONFIGURATION "N" SEE DWG 122044

- ⑥ MARK CHARACTERS SHOWN (A&V) ON SIDE OF CONNECTOR USING CONTRASTING INK.
 - 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.
 - 2. FOR MATERIAL SEE P/L NO. 122039
 - 1. REF SCHEMATIC 122036
- NOTE: UNLESS OTHERWISE SPECIFIED

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO.-0143	1-18-77	
B	E.C.O. NO.-0190	6-3-77	H.D. 6-11-77
C	E.C.O. NO.-0197	8-8-77	H.D. 8-9-77
	E.C.O. NO.-299 (NO REV. LTR. CHG.)	3-8-78	H.D. 3-9-78
	ADDED NOTE 7. PER E.C.O. 257	3-21-78	H.D. 3-21-78
D	USE "F" REV. PWB, REF. ECO NO. 236A	5-16-78	H.D. 5-16-78
E	DELETED NOTES 3 & 6 PER ECO #14	11/21/79	2/2/80
F	ADDED NOTE ⑥ PER ECO #504	6-20-79	6/20/79
6 I.C. "H" S/B 74520		ELD 806	

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	ASSEMBLY ADAPTER TAPE CONTROL CONNECTOR 2 INCH STAND OFF	
± ± ±	±	APPROVALS	DATE
		DRW	11-8-78
		COR	
		CHEK	12-8-78
		V.D.	
SCALE	SIZE	DRAWING NO.	
FULL	B	122039	
DO NOT SCALE DRAWING		SHEET 1 OF 1	

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED NOTE 1 PER E.C.O.#355	11/22/79	W.H.P. 2-9-79
B	ADVANCED REV LTR TO AGREE WITH P/L	11/22/79	W.H.P. 2-9-79
C	REVISED PER E.C.O.#417	11/22/79	W.H.P. 2-9-79



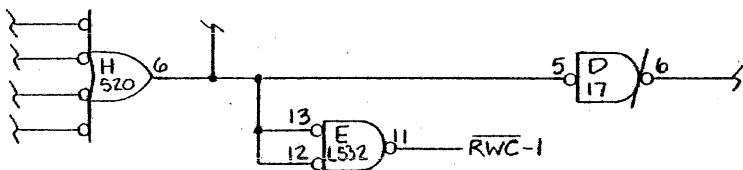
OCT 22 1979

- ④ RUBBER STAMP ASSY. NO. WITH LATEST REV LTR APPROX WHERE SHOWN.
- 3. SEE P/L 122043.
- 2. REF. SCHEMATIC DWG NO. 122022.
- ① RUBBER STAMP CHARACTERS SHOWN WITH WHITE INK.

NOTE : UNLESS OTHERWISE SPECIFIED.

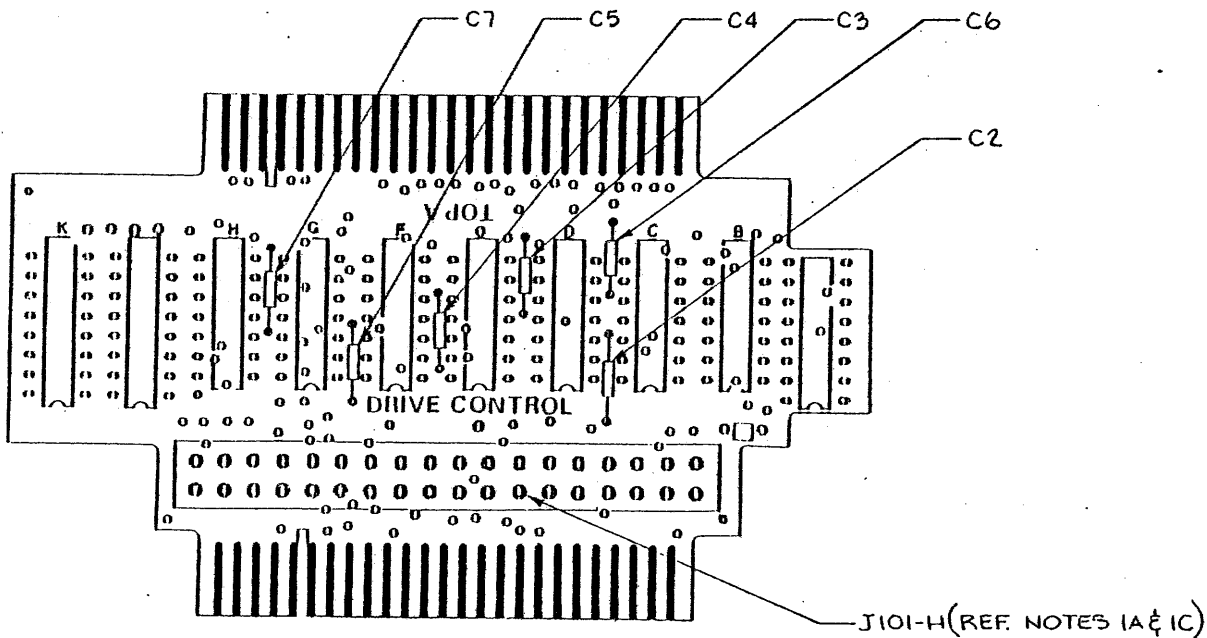
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSEMBLY-ADAPTER, TAPE READ, REVERSE IMAGE, 90°
APPROVALS	DATE		
DRAWN	6/7/77		
CHECKED	6-11-77		
SCALE		SIZE	DRAWING NO.
2X		B	122043
DO NOT SCALE DRAWING			SHEET 1 OF 1

CONFIGURATION "N" CONTROL ADAPTER BOARD



1-RWS	C2	220PF
1-BOT	C3	220PF
1-OLS	C4	220PF
1-EOT	C5	220PF
1-HDS	C6	220PF
1-RDY	C7	220PF

CAP DESIG.	FROM	TO	TERM
C2	D3	GND	RWS
C3	D11		BOT
C4	F1		OLS
C5	G1		EOT
C6	F9		HDS
C7	G13	GND	RDY



REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REDRAWN PER E.C.O. 237	10-27-77	
B	REVISE PER E.C.O. 257	3-21-78	
C	REVISE PER E.C.O. 236-A	5-16-78	
D	DELETE REWORK FOR "D" REV PWB PER E.C.O. 781	10-15-80	<i>[Signature]</i>
E	CHANGED I.C. LOC "H" PER E.C.O. 806	12-9-80	<i>[Signature]</i>

REWORK INSTRUCTIONS: (REF ASSY'S 122037, 122038 & 122039)

- 1) MODIFY CIRCUIT
 - A. CUT ETCH (SOLDER SIDE) AT J101-H
 - B. JUMPER F5 TO E12 & I3 (SOLDER SIDE)
 - C. JUMPER E11 TO J101-H (SOLDER SIDE)
- 2) COMPONENT ADDITION & MARKING
 - A. ADD (6) 220PF CAPACITORS (C2 THRU C7) AT LOCATIONS SHOWN
 - B. IDENTIFY AS "CONF N" AT ASSY NUMBER USING BLACK INK
- 3) THIS MOD PROVIDES ISOLATION & FILTERING FOR ADAPTER ELECTRONICS
- 4) MATERIAL REQUIREMENTS:
 - A. (1 REQ.) BOARD ASSY. AS NOTED IN PROCEDURES ABOVE
 - B. (6 REQ.) 220PF CAPACITORS (WP15000135)
- 5) VERIFY PROPER CAPACITOR INSTALLATION BY PERFORMING CONTINUITY CHECK PER THE CAPACITOR INSTALLATION CHART
- 6) REF SCHEMATIC 122036
- 7) APPLICABLE TO "F" (OR LATER) REV PWB ONLY. TO RETROFIT OLDER ASSEMBLIES WITH "D" REV PWB, REFER TO "C" REV HISTORY COPY OF THIS DRAWING

DEC 24 1980

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES		western peripherals™ TUSTIN, CALIFORNIA	
±	±	±	
APPROVALS	DATE	MODIFICATION DWG- TAPE CONTROL ADAPTER CONFIGURATION "N"	
DRAWN BY A.M. EKSEN	10-16-80	SCALE	SIZE B
CHECKED C.S. WALKER	10-16-80	DRAWING NO.	122044
		DO NOT SCALE DRAWING	SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9-15-80	<i>[Signature]</i>


PURPOSE: TO PROVIDE START-UP AT 1600 B.P.I.

In order to initialize in the 1600 B.P.I. mode of operation, PROM's U45 and U56 in the upper-left corner of the Control Board must be of the proper type. A jumper must be installed.

1. The Prom Part Numbers can be 754013810 and 754013811 with revision levels of "G" or higher, or they may have part numbers beginning with 154 with any revision level.
2. A jumper must be installed between Pads "BP" and "BR" which are located below the PROMs and directly above U55.
3. After modification, install an adhesive label inside the front panel of the drive near the upper reel motor and Cipher label. The adhesive label should read: "Modified per Western Peripherals Configuration "A", Dwg. 79000410.

TAPE DRIVE MODIFICATION

SEP 15 1980

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ™ TUSTIN, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	
APPROVALS		DATE	
DRAWN H. DEUTSCH		9-15-80	
CHECKED <i>D. Stally</i>		9-15-80	
		SCALE	SIZE A
		DRAWING NO. 79000410	
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	12-30-80	

PURPOSE: TO ELIMINATE WRITE AND/OR READ ERRORS WHEN TAPE IS AT B.O.T. AND DRIVE IS OFF-LINE.

When Cipher 900X Tape Drives are received from vendor, they have the jumpers set in such a way that if the drive is off-line and at B.O.T., the computer receives a tape unit ready status and Write/Read errors are detected if the CPU attempts any Write/Read operation.

1. To prevent the above from happening, remove jumper BD to BC and install jumper BA to BB located in the vicinity of IC U52 on the Control/Servo PCB of the Cipher 900X type drive.
2. After modification, install an adhesive label inside the front panel of the drive near the upper reel motor and Cipher label. The adhesive label should read: Modified per Western Peripherals Configuration "B", Dwg. 79000642.
3. Reference Cipher Control/Servo Schematic 355012-300.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES \pm \pm \pm		western peripherals ™ TUSTIN, CALIFORNIA		
APPROVALS DATE DRAWN <i>E. Furze</i> 12-30-80		MODIFICATION DRAWING - CIPHER 900X, CONFIGURATION "B"		
CHECKED <i>H. Deutch</i> 12-30-80				
		SCALE	SIZE A	DRAWING NO. 79000642
		DO NOT SCALE DRAWING		SHEET 1 of 1

NOTES

INSTALLATION CHECKLIST - CIPHER 100X

1. Open carton.
2. Turn over and lift off carton.
3. Remove corner pads.
4. Open inner carton.
5. Turn over and lift off carton from drive.
6. Locate manual and mounting hardware.
7. Inspect the drive - Contact the carrier if any concealed shipping damage is discovered.
8. On some cabinets, a mounting frame is required to mount the drive because the door swings against the edge of the cabinet. Mount the extender frame at the appropriate location in the cabinet. Be sure the hinge holes are on the correct side.
9. Refer to the tape drive manual.
10. Mount the tape drive hinges at an appropriate location on the cabinet. Place the longer hinge at the top. Place nylon washers on hinge pins.
11. Place drive on its back and remove screw from shipping frame.
12. Mount drive on hinges and secure with hinge safety block. Secure drive latch.

NOTES

ADDITIONAL NOTES PRECEEDING APPENDIX