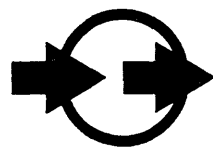


**MODEL TC-140/148 TAPE CONTROLLER
LOGIC MANUAL**



western peripherals

1100 CLAUDINA PLACE
ANAHEIM, CALIFORNIA 92805

2

**MODEL TC-140/148 TAPE CONTROLLER
LOGIC MANUAL**

**Publication Number
140021A**

WESTERN PERIPHERALS, INC.
1100 Claudina Place
Anaheim, California 92805

TABLE OF CONTENTS

TITLE	DRAWING NO.
Schematic - Adapter, Tape Control Connector, Non-mult. Select	110005
Assembly - Adapter, Control Connector, Non-Multiple Select	110008
Modification Drawing, Tape Control Adapter (Config. "S")	112001
Assembly - VCO Filter Chip	120023
Parats List - VCO Filter Chip	120023
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, 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

TABLE OF CONTENTS (Continued)

TITLE	DRAWING NO.
Modification Drawing, Tape Control Adapter (Config. "N")	122044
Assembly, TC-140 Tape Controller	60000023
Assembly, TC-148 Tape Controller	60000130
Schematic, TC-140 Tape Controller	75000026
Modification Drawing, TC-140, Configuration "R"	79000014
Modification Drawing, TC-140, Configuration "U"	79000022
Modification Drawing, TC-140, Configuration "W"	79000030
Modification Drawing, TC-140, Configuration "Z"	79000048

FUNCTIONAL INDEX

	DRAWING NO.
I. CONTROLLER	
Schematic, TC-140 Tape Controller	75000026
Assembly, TC-140 Tape Controller	60000023
Assembly, TC-148 Tape Controller	60000130
II. VCO SPEED CHIP	
Assembly - VCO Filter Chip	120023
Parts List - VCO Filter Chip	120023
III. RIBBON CABLES	
Assembly - Cable, Control	121004
Assembly - Cable, Read	121006
Assembly - Cable, Write	121014
IV. ADAPTER PADDLEBOARDS	
1. SCHEMATICS	
Schematic - Tape Control Adapter	122036
Schematic - Adapter, Tape Write Connector	122021
Schematic - Adapter, Tape Read Connector	122022
Schematic - Control Adapter, Non-Multiple Select	110005
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
Assembly - Control Adapter, Non-Multiple Select	110008

FUNCTIONAL INDEX (Continued)


	DRAWING NO.
b. WRITE	
Assembly Drawing - Tape Write Connector (Standard)	122006
Assembly Drawing - Adapter, Tape Write (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, Non-Select Switch Option	122012
V. SPECIAL FEATURE MODIFICATIONS	
Modification Drawing, Tape Control Adapter Configuration "N"	122044
Modification Drawing, TC-140, Configuration "R"	79000014
Modification Drawing, TC-140, Configuration "U"	79000022
Modification Drawing, TC-140, Configuration "W"	79000030
Modification Drawing, TC-140, Configuration "Z"	79000048

Drawings to be provided:

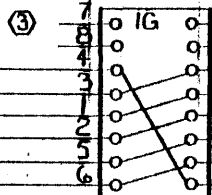
60000130

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

SWITCH 1A	DESCRIPTION	SYSTEM CONSIDERATIONS
1	ON FOR DRIVES THAT REQUIRE REWIND COMMAND REMOVAL PRIOR TO BOT	1. REMOVE ALL INTERFACE TERMINATORS FROM TRANSPORT(S)
	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	2. INSTALL CONTROL TERMINATOR ONLY IN LAST DAISY CHAIN POSITION
	OFF FOR DRIVES THAT DO NOT STORE EOT STATUS NOTE: A5 SHOULD BE ON	
3	ON FOR 7 TRACK DRIVES	3. CORRECTLY IDENTIFY CONFIGURATION AND SET SWITCHES ACCORDINGLY
	OFF FOR 9 TRACK DRIVES	
4	ON FOR 7 TRACK 55%/800 BPI DENSITY SELECTIONS OR 9 TRACK SECONDARY SPEED (SELECTION B)	NOTES: 1. FOR 7 TRACK DRIVES IN DRIVE DAISY CHAINS, ONLY PRIMARY SPEED SELECTION IS AVAILABLE. 2. REF ASSY. DWG. 110004 & 110008. 3. 122010 INSTALLED WHEN TRANSPORT HAS 4-POSITION UNIT SELECT SWITCH (SEE EXCEPTION BELOW). 110006 INSTALLED IN 4 TH TRANSPORT IF MORE THAN 4 TRANSPORTS ARE DAISY CHAINED. 110007 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 PER 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.
	OFF FOR 7 TRACK 200/55% 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	

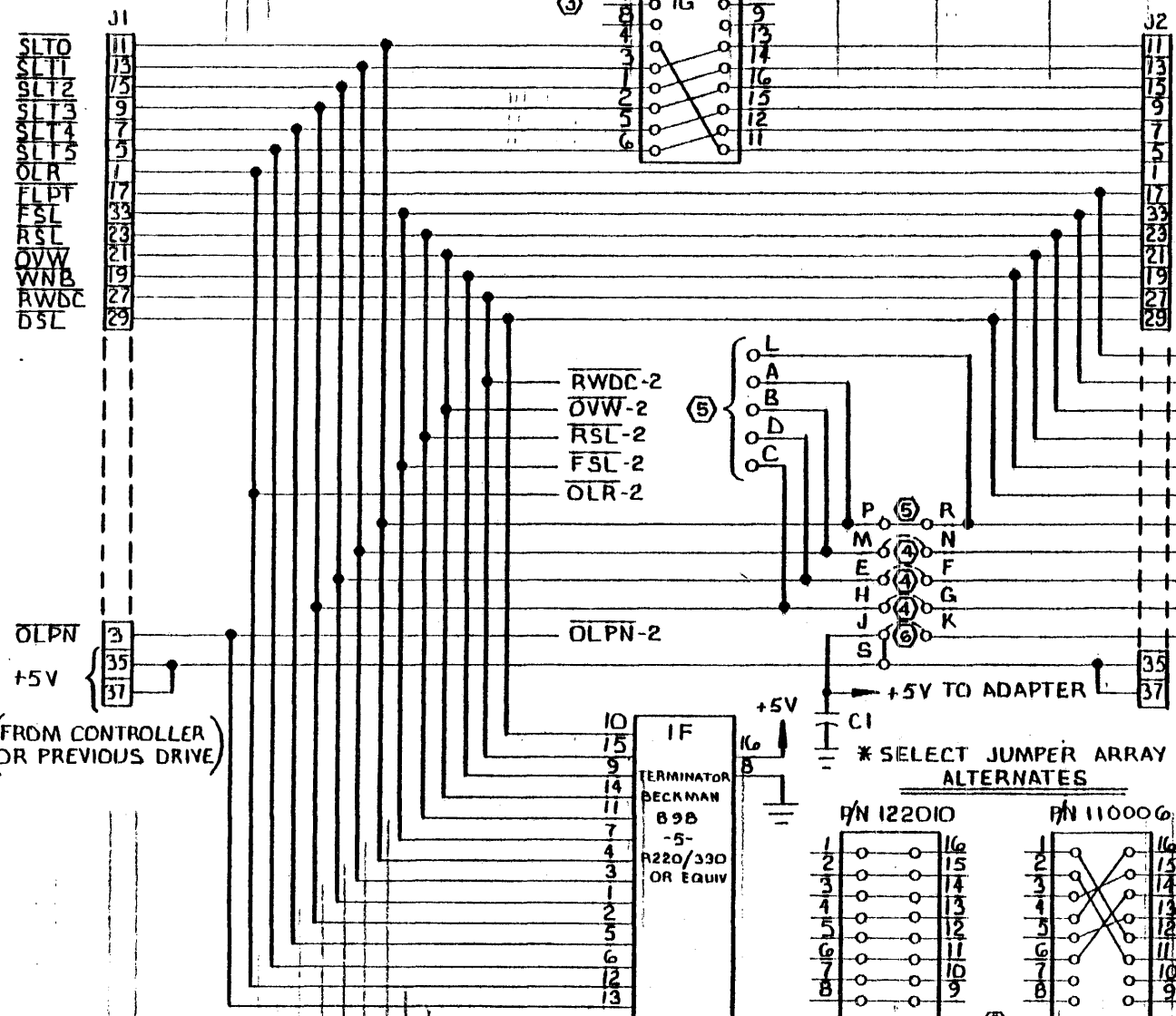
TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals <small>ANAHEIM, CALIFORNIA</small>	
FRACTIONS	DEC.	ANGLES	SCHEMATIC - TAPE CONTROL ADAPTER, NON-MULTIPLE SELECT
±	±	±	
APPROVALS	DATE	SCALE	
DRAWN T.M.	1-16-78	SIZE DRAWING NO.	
CHECKED <i>AL</i>	2-11-78	B 110005	
DO NOT SCALE DRAWING			SHEET 1 OF 3

* SELECT JUMPER ARRAY P/N 110007



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

(TO NEXT DRIVE
IN DAISY CHAIN)



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

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

TOLERANCES UNLESS
OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES
± ± ±



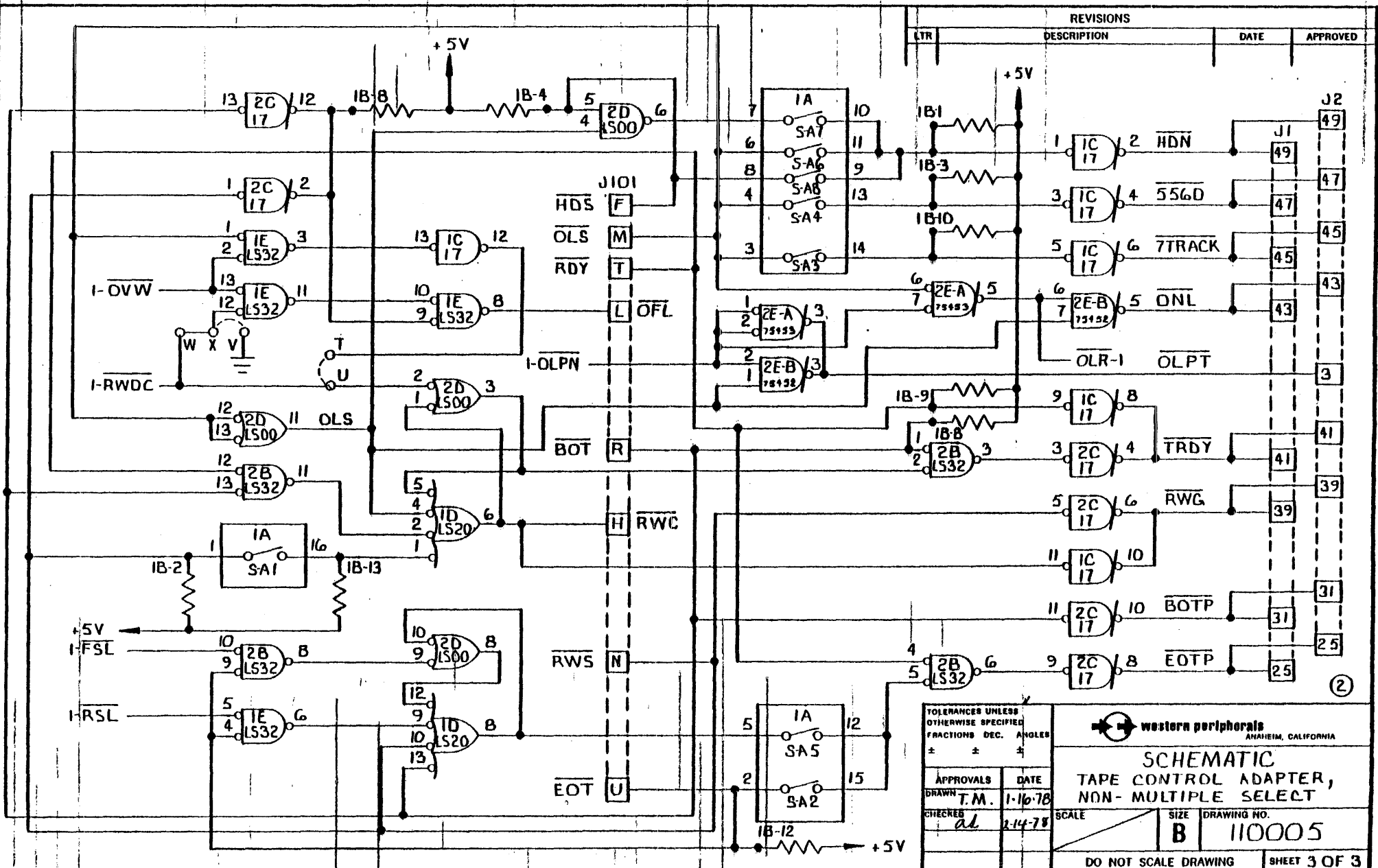
SCHEMATIC
TAPE CONTROL ADAPTER,
NON - MULTIPLE SELECT

APPROVALS
DRAWN T.M.
CHECKED *ab*

DATE
1-16-78
2-14-78

SCALE
SIZE B
DRAWING NO. 110005

DO NOT SCALE DRAWING SHEET 2 OF 3



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED
 FRACTIONS DEC. ANGLES
 ± ± ±

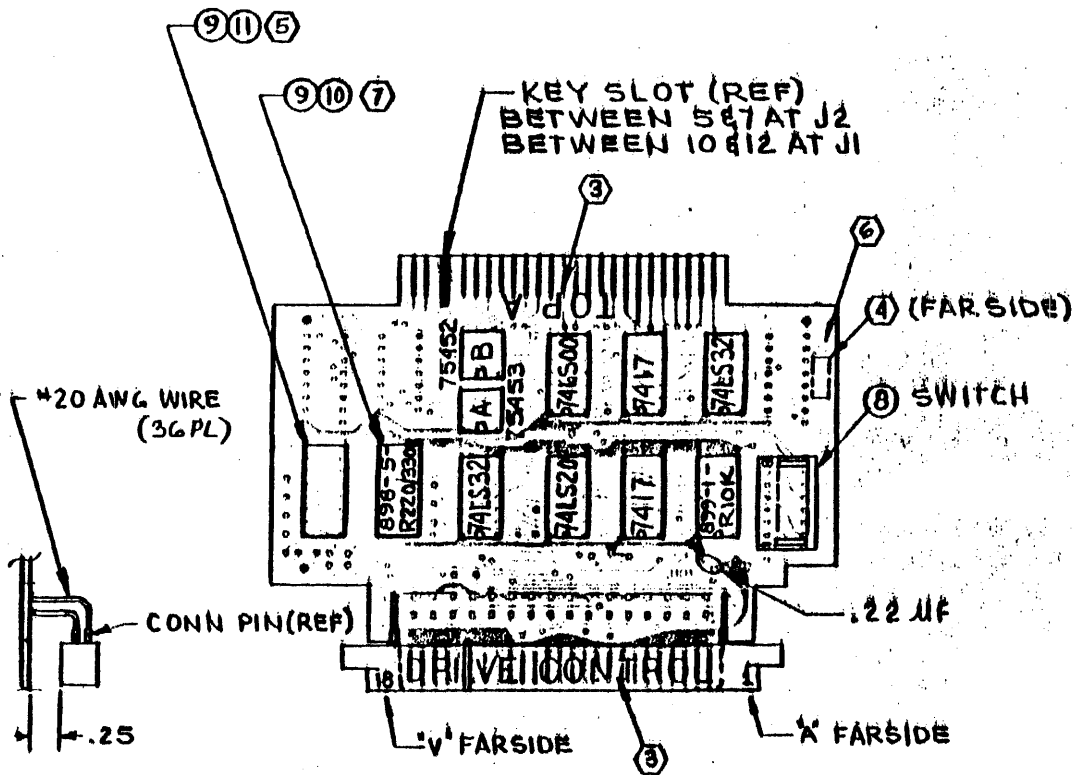
APPROVALS
 DRAWN T.M. 1-16-78
 CHECKED al 2-14-78

western peripherals
ANAHEIM, CALIFORNIA

SCHEMATIC TAPE CONTROL ADAPTER, NPN-MULTIPLE SELECT

SCALE: SIZE: **B** DRAWING NO.: **110005**

DO NOT SCALE DRAWING SHEET 3 OF 3



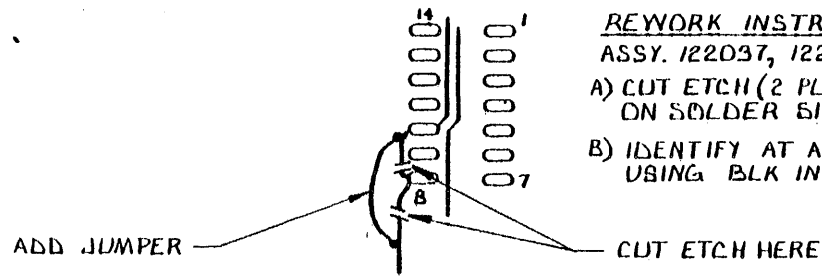
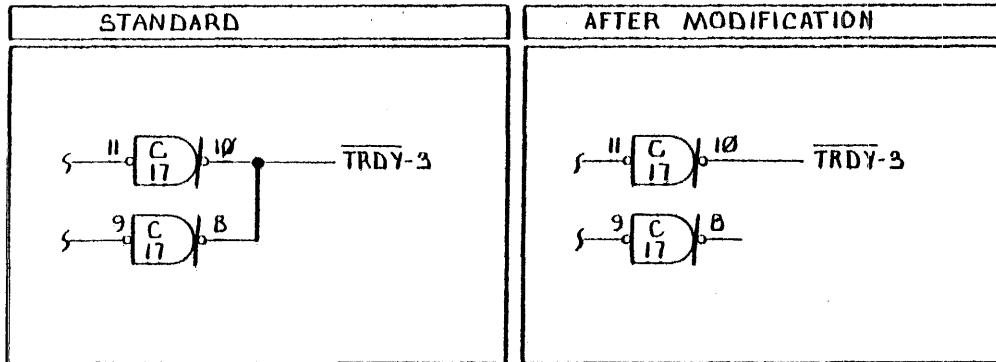
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	DELETED REQUIREMENT FOR SLEEVING WIRE AT CONNECTOR. RECORD CHNG ONLY	3-21-78 IMTAL/la	N.D. 3-21-78

- NOTE: UNLESS OTHERWISE SPECIFIED
1. FOR MATERIAL SEE P/L NO. 110008
 2. REF SCHEMATIC 110005
 - ③ RUBBER STAMP CHARACTER SHOWN USING BLACK INK
 - ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN USING BLK INK
 - ⑤ FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAY REFER TO J.O.A. AND SCHEMATIC
 - ⑥ COMPONENT LOCATION CODE IATHRUIG AND 2ATHRU 2G (REF ITEMS 1 THRU 11 OF P/L 110008
 - ⑦ REFER TO J.O.A. AND/OR SCHEMATIC FOR APPLICATION OF RESISTOR PAK (ITEM NO.10)

<small>OPERATION UNLESS OTHERWISE SPECIFIED</small> <small>FRONTING, DEC ANGLES</small>		 western peripherals <small>ANALOG DIVISION CALIFORNIA</small>	
ASSY-TAPE CONTROL ADAPTER, NON-MULTIPLE SELECT 90° MOUNTING			
APPROVALS	DATE	SCALE	SIZE
<small>DESIGN</small> <small>CHECKED</small> <small>DATE</small> <i>ad</i>	2-10-78 2-17-78	FULL	B
		DRAWING NO 110008	
(X) NOT SCALE DRAWING			SHEET (OF)

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

CHANGES TO SCHEMATIC 122036.



REWORK INSTRUCTIONS FOR
 ASSY. 122037, 122038, OR 122039.

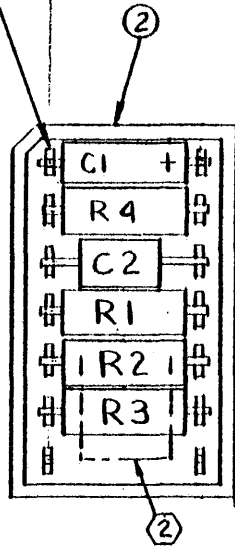
A) CUT ETCH (2 PLACES) AND ADD JUMPER ON SOLDER SIDE OF 'C' CHIP AS SHOWN.

B) IDENTIFY AT ASSY. NO. WITH 'CONF S' USING BLK INK.

THIS MODIFICATION REQUIRED FOR CONTROL OF QUANTEX TAPE DRIVES.

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANATEM, CALIFORNIA	
FRACTIONS DEC.	ANGLES	MODIFICATION DWG. —	
±	±	TAPE CONT. ADAPTER, CONF "S"	
APPROVALS	DATE	SCALE	SIZE DRAWING NO.
DRAWN L.M. TAG	3-28-78		B 112001
CHECKED W.D. tech	3-29-78		
DO NOT SCALE DRAWING			SHEET 1 OF 1


PIN NO.1 (REF)



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		DATE	
DRAWN CORUM		11-11-76	
CHECKED W.P.		11-17-76	
SCALE 4/1		SIZE B	DRAWING NO. 120023
DO NOT SCALE DRAWING			SHEET 1 OF 1

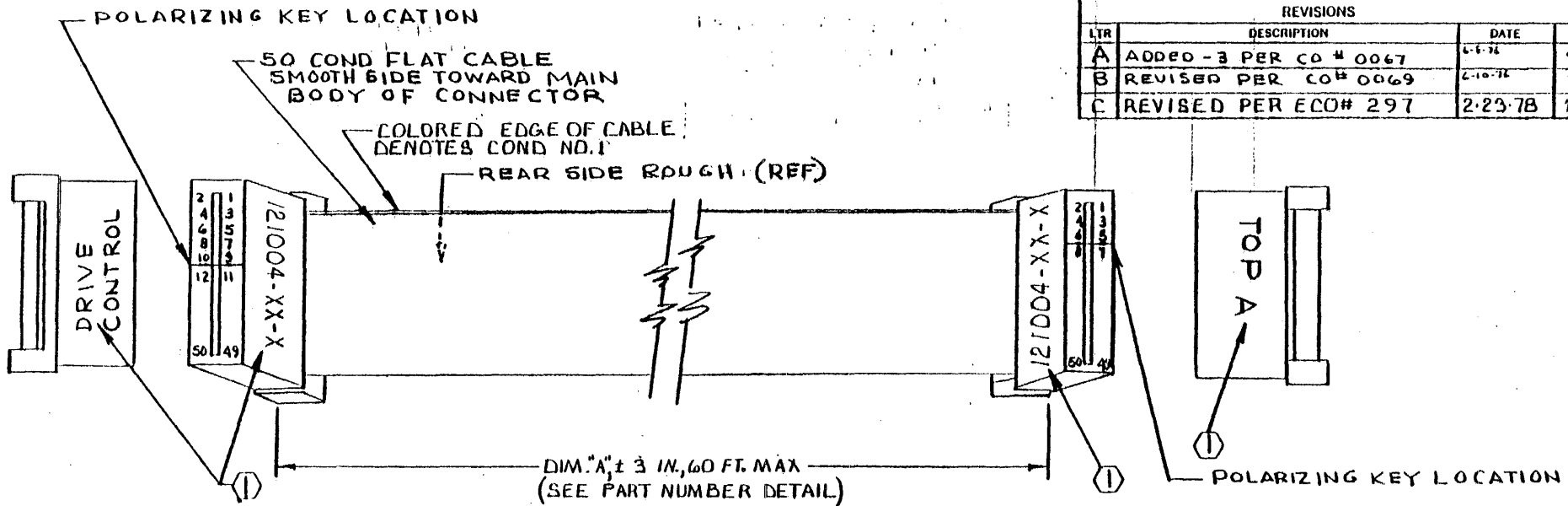
LIST OF MATERIALS

ITEM	UNITS	PART NUMBER	DESCRIPTION	REF 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

DRW# 11
 DATE 11-17-76
 CHECKED BY J.D.
 DATE 11-17-76
 JOB ORDER NO.
 DATE RELEASED
 QUANTITY

SHEET 1 OF 1
 NEXT ASSEMBLY

TITLE VCO FILTER
 CH1D (-1 THRU -6)
 ASSEMBLY NO. P/L 120023
 I REV.
 *



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED - 3 PER CO # 0067	6-1-76	N.D.
B	REVISED PER CO# 0069	6-10-76	N.D.
C	REVISED PER ECO# 297	2-23-78	N.D., 9-76

PART NUMBER DETAIL

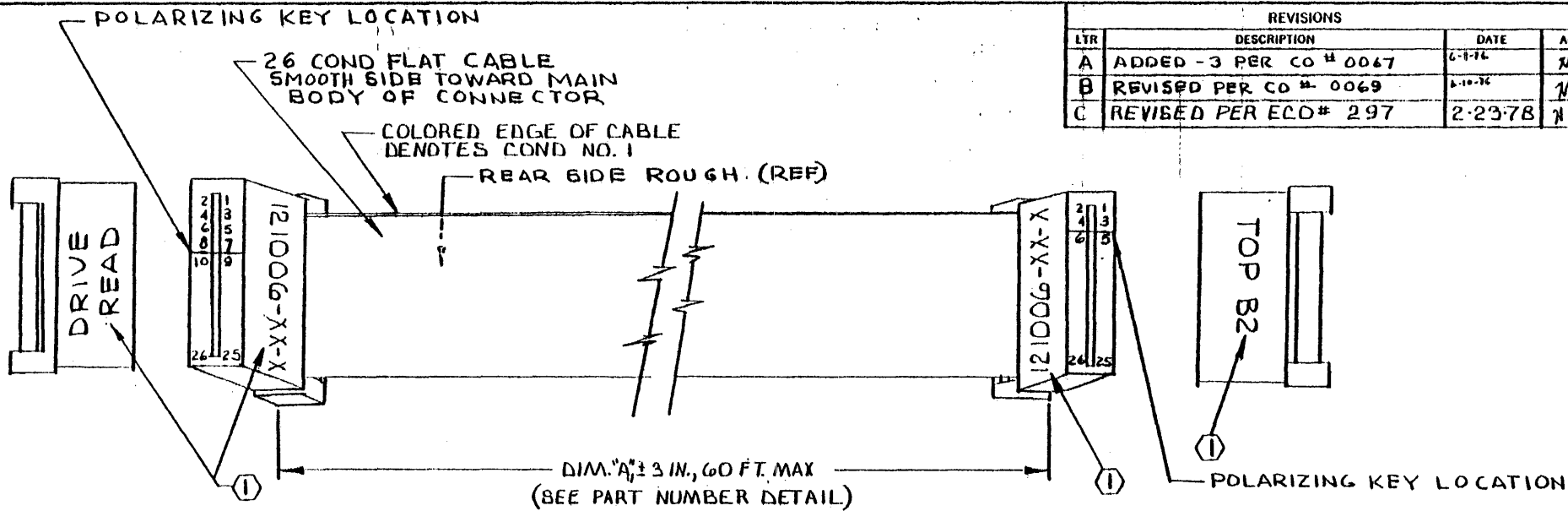
121004-XX-X	
BASIC PART NUMBER	_____
DASH NUMBER IN FEET (REF. DIM. 'A')	_____
(-07 FOR 7 FT., -10 FOR 10 FT., ETC.)	_____
LATEST REVISION LETTER	_____

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

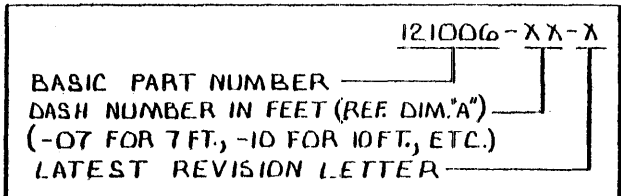
FOR PARTS SEE PARTS LIST 121004

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



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	ADDED -3 PER CO # 0067	6-1-76	N.D.
B	REVISED PER CO # 0069	8-10-76	N.D.
C	REVISED PER ECO# 297	2-23-78	N.D. 3-9-78

PART NUMBER DETAIL

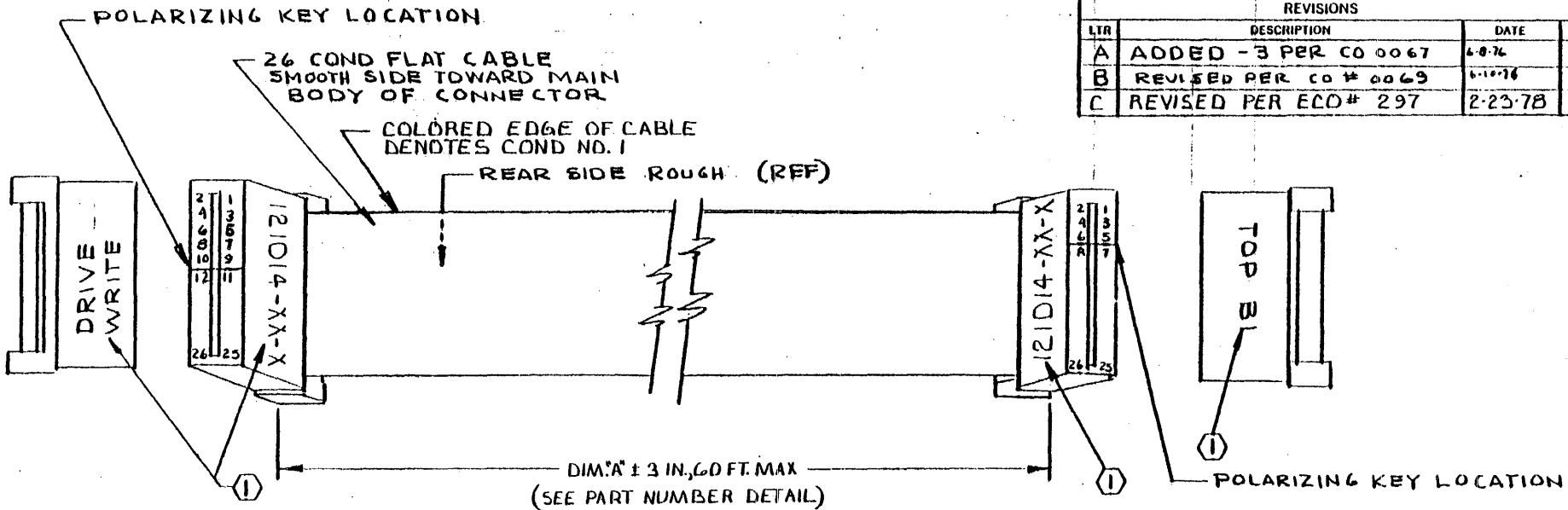


NOTES:
 ① MARK CHARACTERS SHOWN USING CONTRASTING COLOR INK.
 SEE PART NUMBER DETAIL FOR MARKING OF VARIABLE CHARACTERS (X's).

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

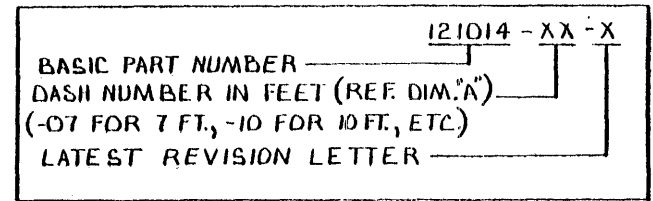
FOR PARTS SEE PARTS LIST 121006

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



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.

PART NUMBER DETAIL



NOTE 6:

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

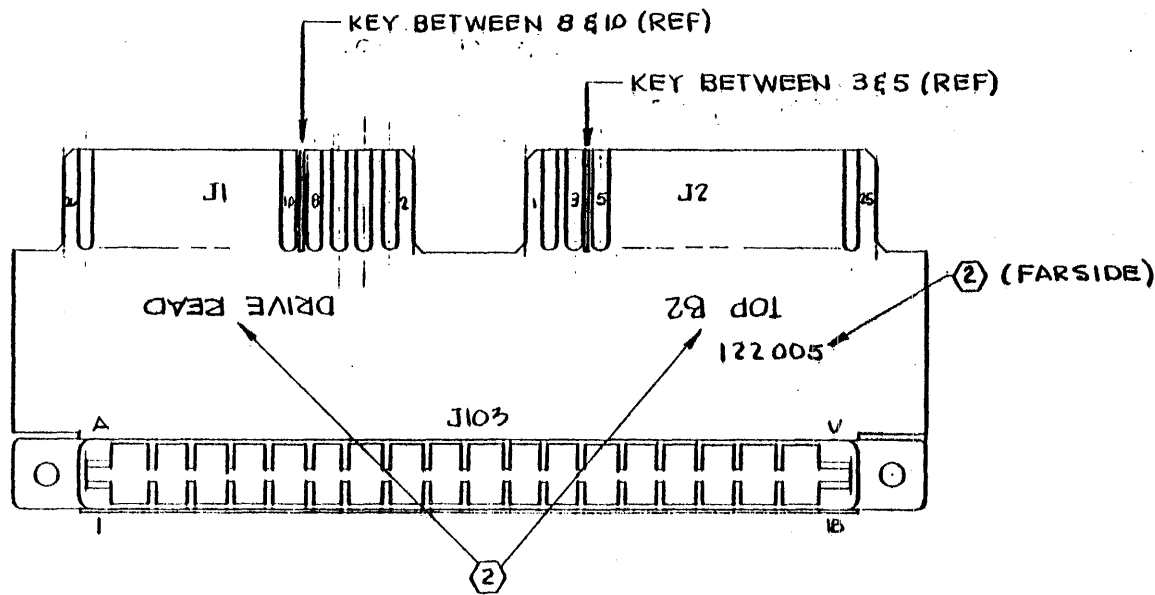
2. ASSEMBLY:

- 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 121014

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

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV PER CONO. 0105	9-8-76	
B	E.C.O NO.-0190	6-6-77	<i>H.D.</i> -11-77



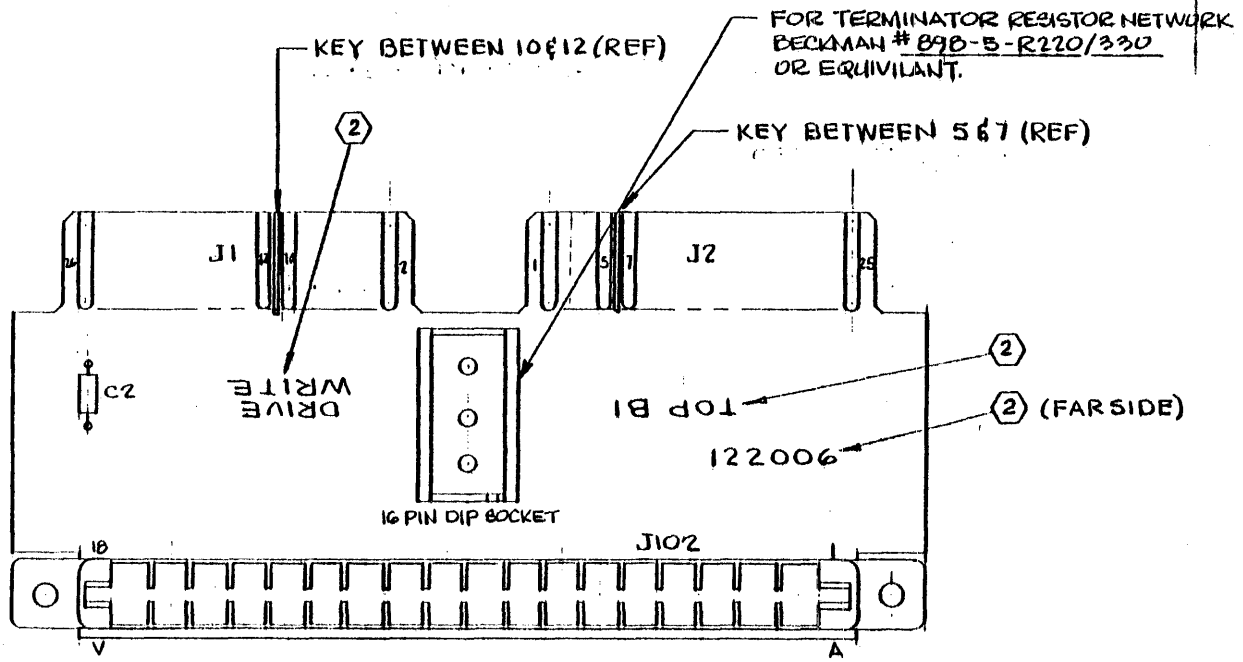
NOTE.

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

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

COPYRIGHT © 1976 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LT#	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO. 0190	6-6-77	JD 6-11-77

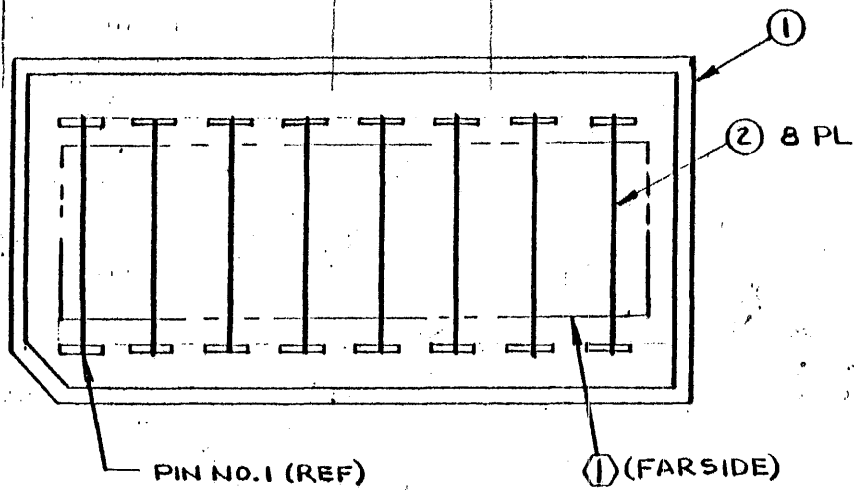


NOTE:

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

COPYRIGHT © 1976 BY WESTERN PERIPHERALS, INC.

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



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

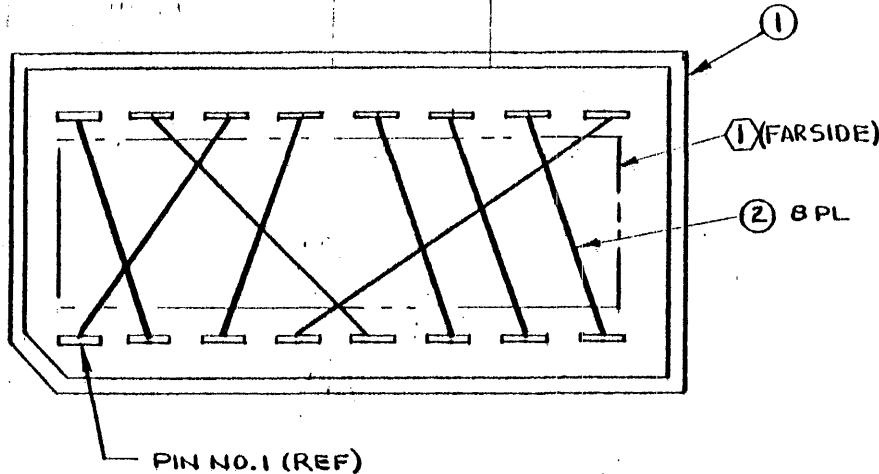
NOTE: UNLESS OTHERWISE SPECIFIED
 ① AFFIX ADHESIVE LABEL WITH PART NO. & LATEST REV LTR WHERE SHOWN

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		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSY, JUMPER ARRAY, SELECT SWITCH OPTION
APPROVALS	DATE	SCALE	
DRAWN CORUM	11-18-76	NONE	SIZE B
CHECKED W.D.	11-18-76	DRAWING NO. 122010	
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

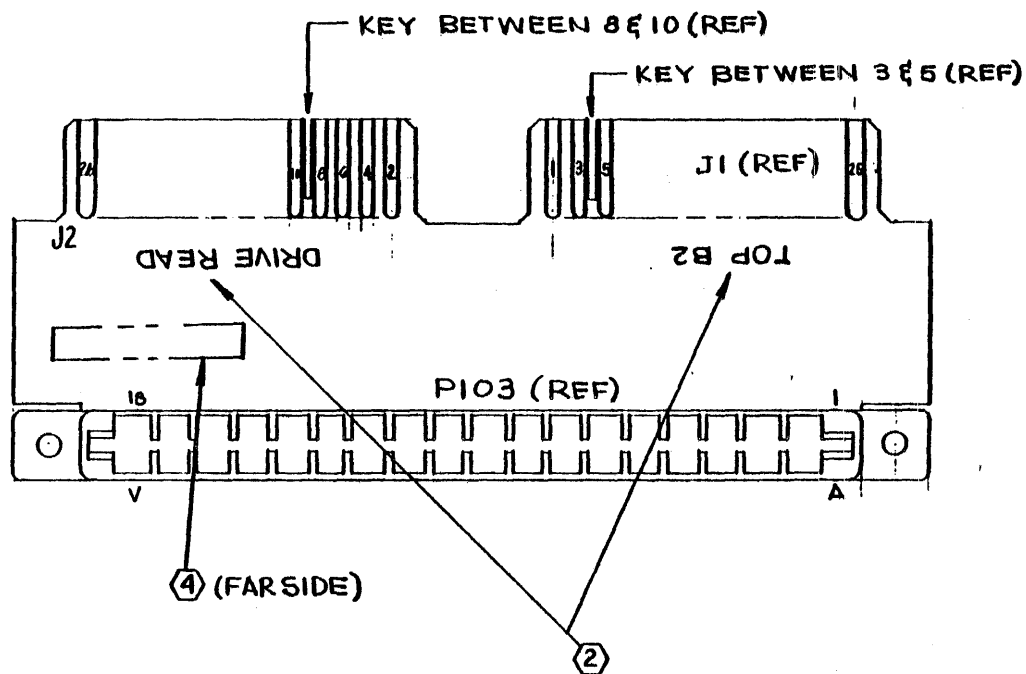
NOTE: UNLESS OTHERWISE SPECIFIED
 ① AFFIX ADHESIVE LABEL WITH PART NO. & LATEST REV LTR WHERE SHOWN

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		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	ASSY, JUMPER ARRAY, NON-SELECT SWITCH OPTION
APPROVALS	DATE		
DRAWN COR. U.S.	11-18-76	SCALE	SIZE
CHECKED J.D.	11-18-76	NONE	B
		DRAWING NO. 122012	
DO NOT SCALE DRAWING			SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORP. CO # 0145 <i>mc</i>	1-21-77	<i>H.D. 1-24-77</i>
B	E.C.O. NO. - 0190	6-6-77	<i>H.D. 6-11-77</i>

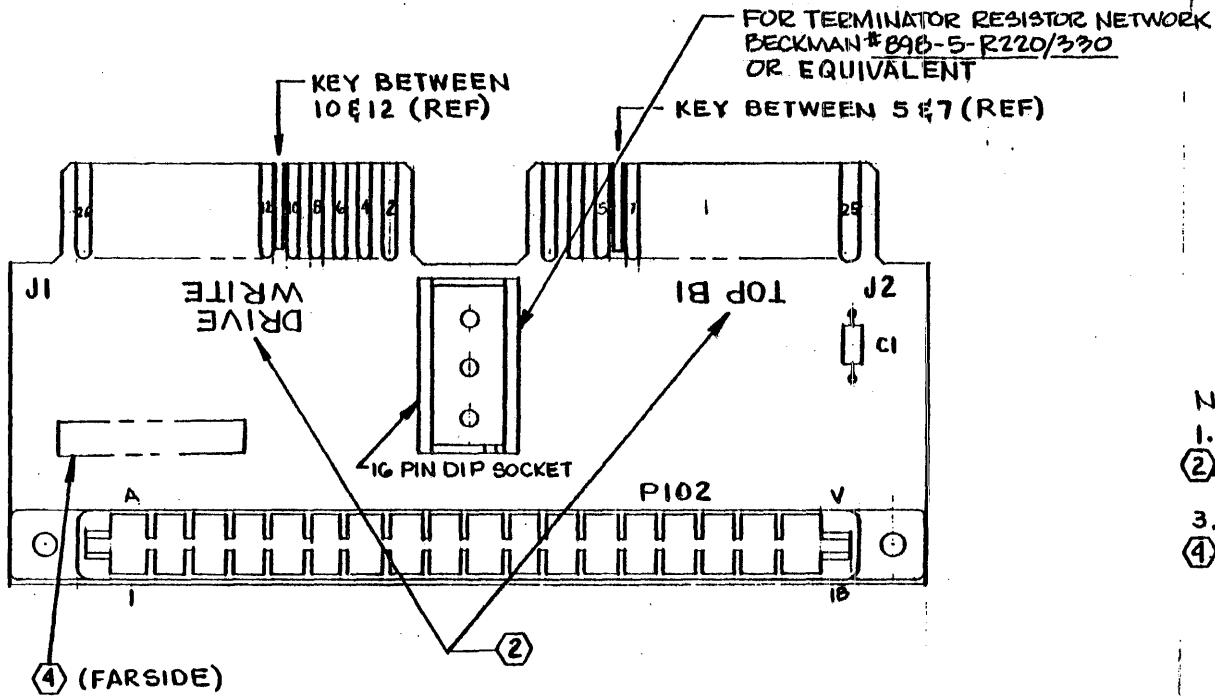


- NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122022
 - ② RUBBER STAMP CHARACTERS SHOWN USING BLK INK
 3. FOR MATERIAL SEE P/L 122018
 - ④ RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals <small>ANAHEIM, CALIFORNIA</small>			
FRACTIONS DEC.	ANGLES				
±	±	ASSEMBLY DWG. ADAPTER, TAPE READ KENNEDY-CIPHER			
APPROVALS	DATE				
DRAWN <i>HRB</i>	2-13-76	SCALE	SIZE	DRAWING NO.	REV
CHECKED <i>HRB</i>	2-25-76				
		DO NOT SCALE DRAWING		SHEET 1 of 1	

COPYRIGHT © 1976 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	INCORPORATE CO # 0146 ⁷²	1-21-77	N.D. 1-24-77
B	INCORP. ECO 172	5/11/77	N.D. 5-11-77
C	INCORP. ECO. NO. -0190	6-6-77	N.D. 6-11-77

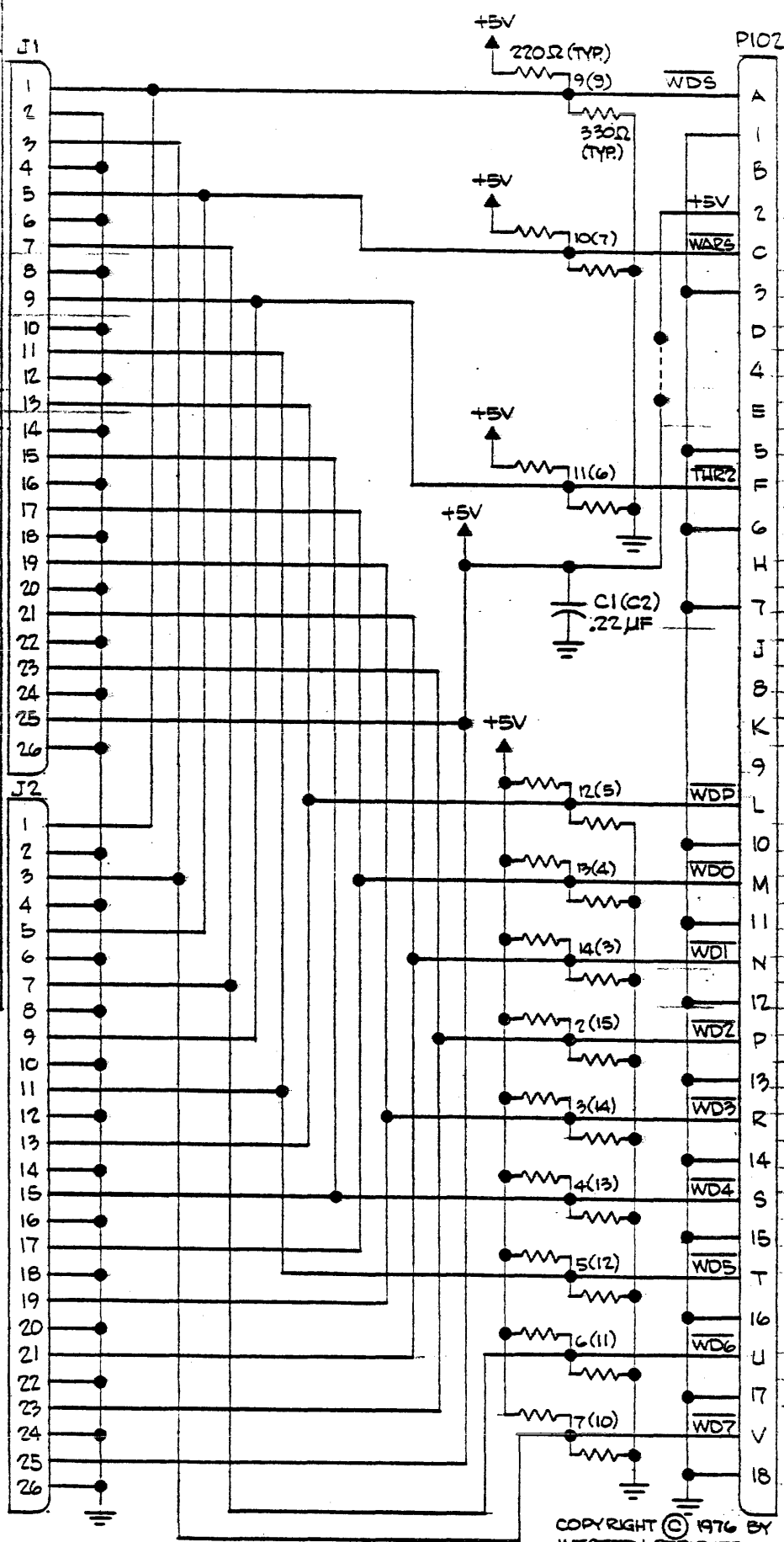


- NOTE: UNLESS OTHERWISE SPECIFIED
1. REF SCHEMATIC DWG NO. 122021
 - (2) RUBBER STAMP CHARACTERS SHOWN USING BLK INK
 3. FOR MATERIAL SEE P/L 122019
 - (4) RUBBER STAMP ASSY NO. WITH LATEST REV LTR APPROX WHERE SHOWN

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

COPYRIGHT © 1976 BY WESTERN PERIPHERALS, INC.

REVISIONS	DATE	APPROVED
	3-30-77	N.D.
DESCRIPTION	ECO-0147	
	A	
MTR	N.D.	
	5/14/77	
B INCORP ECO172		



Western Peripherals
 ANAHEIM, CALIFORNIA

**SCHMATIC
 ADPT. TAPE WRITE
 CONNECTOR**

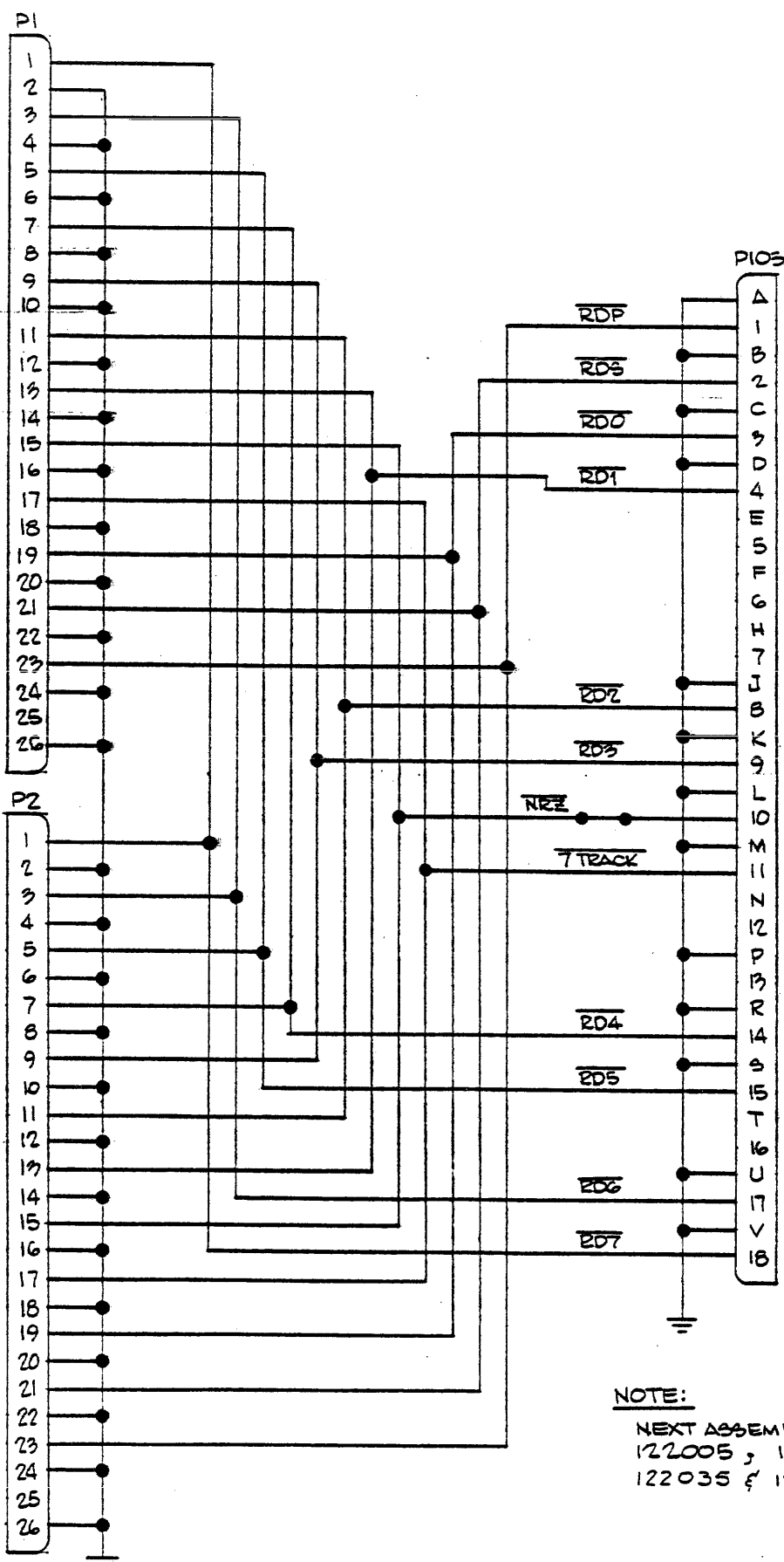
SIZE **B** DRAWING NO. **122021-B**

SCALE NONE DO NOT SCALE DRAWING SHEET 1 OF 1

TOLERANCES UNLESS OTHERWISE SPECIFIED	FRACTIONS DEC.	ANGLES	±
APPROVALS	DATE		
DRAWN 428	1-12-76		
CHECKED ZL	1-26-76		

- NOTES:**
- NEXT ASSY. NO. 122006, 122019, 122034
 - PIN NUMBERS AND REFERENCE DESIGNATIONS SHOWN IN PARENTHESES APPLY TO ASSY. 122006, 122034.

REVISIONS	DATE	APPROVED
DESCRIPTION		
LTR		

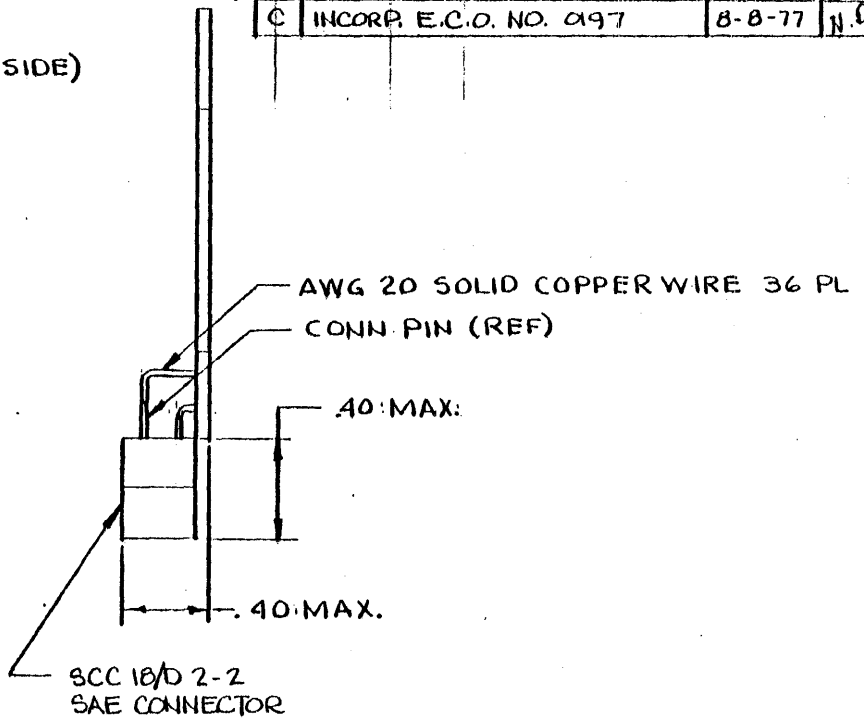
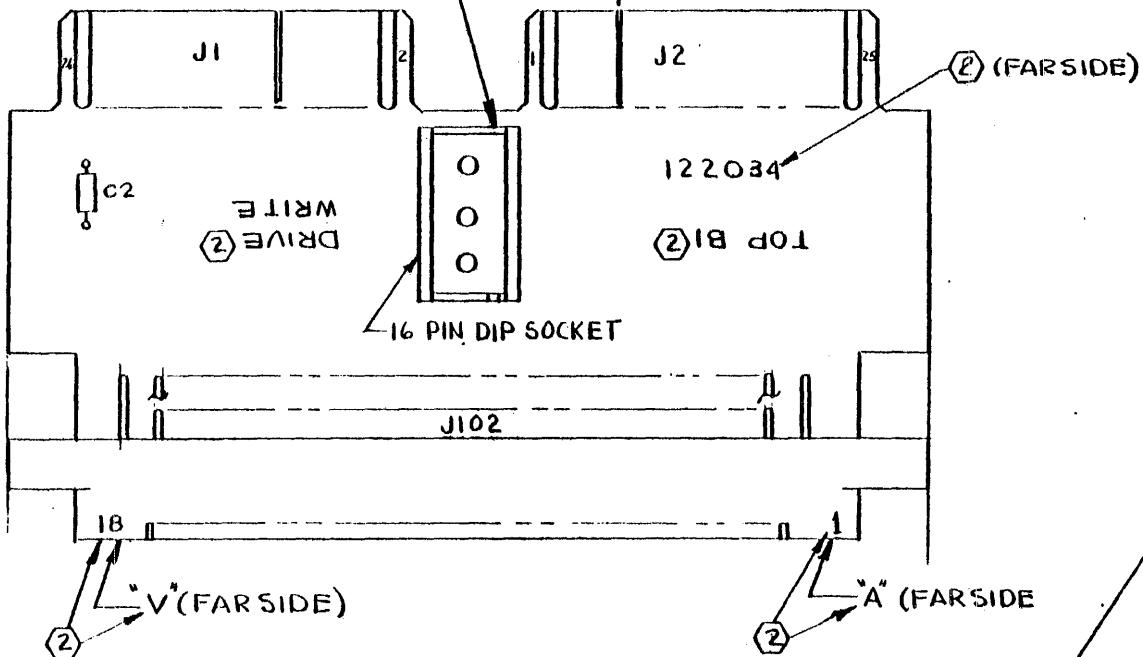


NOTE:
 NEXT ASSEMBLY NO.
 122005, 122018,
 122035 & 122043.

western peripherals ANAHEIM, CALIFORNIA	
SCHEMATIC ADPTR. TAPE READ CONNECTOR	
SCALE NONE	DRAWING NO. B 122022
DO NOT SCALE DRAWING	
TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS DEC. ANGLES	APPROVALS DRAWN HRB CHECKED JLL
DATE 1-13-76	DATE 1-26-76
SHEET OF	

FOR TERMINATOR RESISTOR NETWORK
BECKMAN N^o 898-5-R220/330 OR EQUIV

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

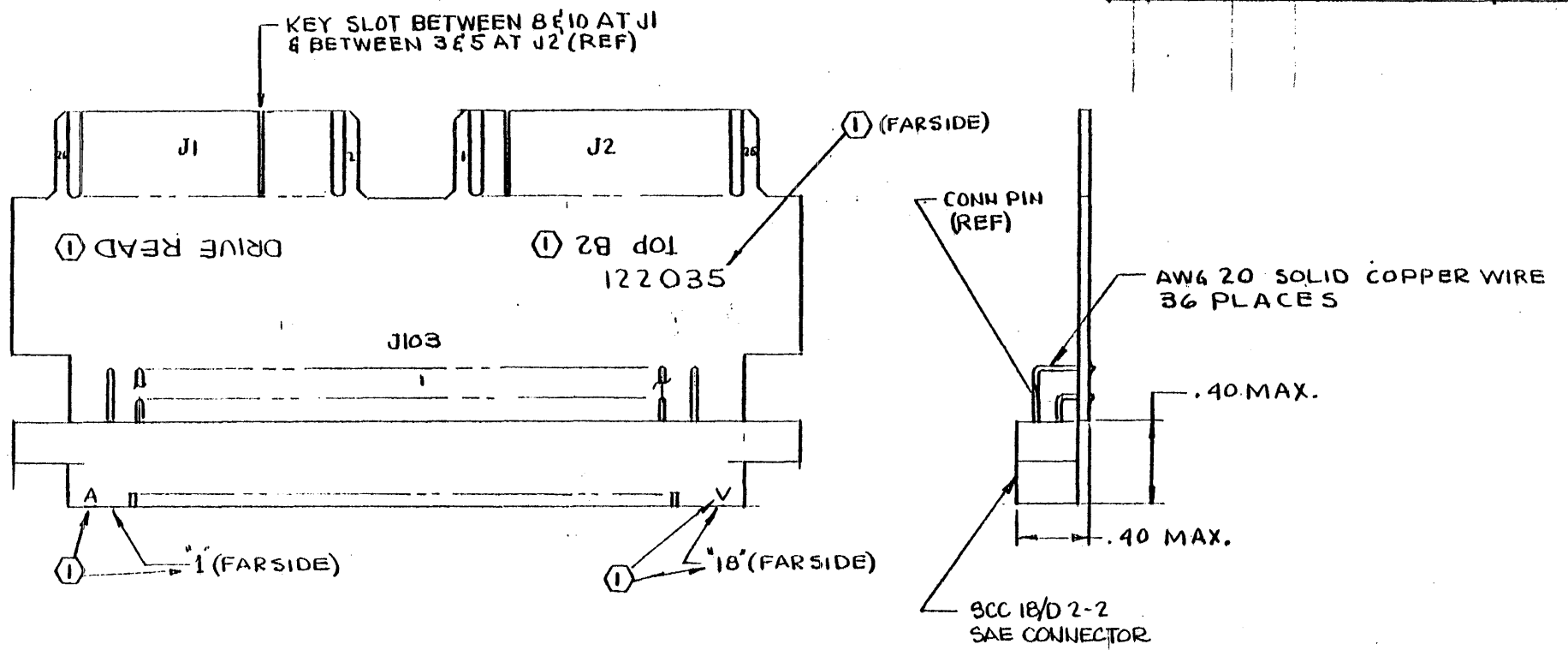


REVISIONS			
LR	DESCRIPTION	DATE	APPROVED
A	INCRP ECO 172	5-11-77	N.D. 5-11-77
B	INCRP E.C.O. NO. 0190	6-6-77	N.D. 6-11-77
C	INCRP E.C.O. NO. 0197	8-8-77	N.D. 8-9-77

3 FOR MATL SEE P/L 122034
 ② RUBBER STAMP CHARACTER SHOWN WITH BLK INK
 1 REF SCHEMATIC DWG N^o 122021
 NOTE:

TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.		
±	±	±	
APPROVALS	DATE	ASSEMBLY- ADAPTER TAPE WRITE KENNEDY 9800	
DRAWN CORUM	6-11-76		
CHECKED			
SCALE 2X		SIZE B	DRAWING NO. 122034-C
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



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

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS DEC.	ANGLES
± ± ±	±
APPROVALS	DATE
DRAWN C O S U M	6-11-76
CHECKED JAL	

western peripherals
 ANAHEIM, CALIFORNIA

**ASSEMBLY-ADAPTER
 TAPE READ
 KENNEDY 9800**


SCALE 2 X	SIZE B	DRAWING NO. 122035-B
DO NOT SCALE DRAWING		SHEET 1 OF 1

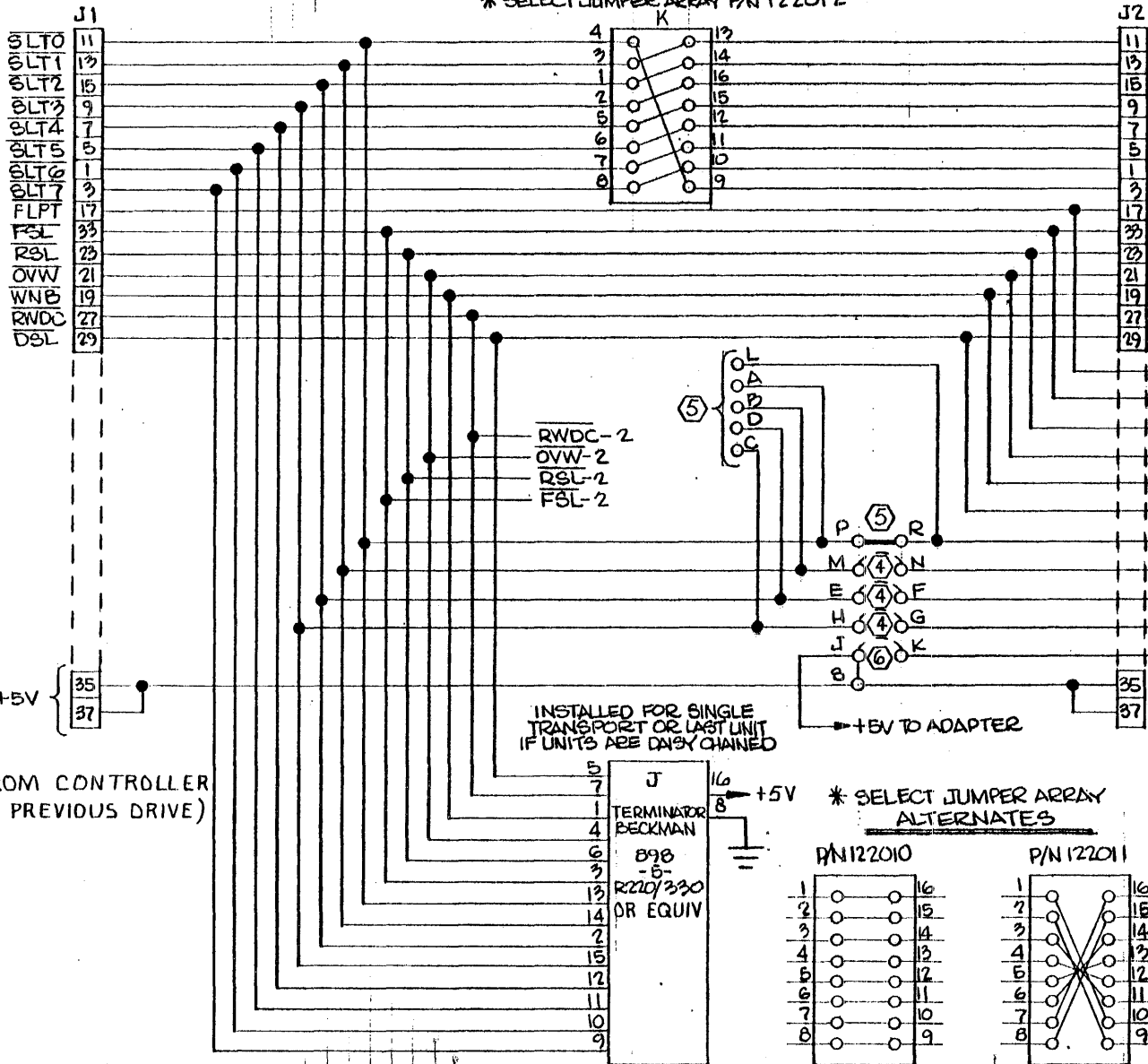
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	CORRECTED SWITCH SETTINGS CHART FOR SA4 PER ECO 178.	5-4-77	
B	REDRAWN PER ECO 236.	5-16-78	J.D. 5-16-78

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 FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN T.M.		DATE 2-15-78	
CHECKED J.D.		DATE 5-16-78	
SCALE		SIZE B	
DRAWING NO. 122036		DO NOT SCALE DRAWING	
SHEET 1 OF 3			



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

(TO NEXT DRIVE
IN DAISY CHAIN)

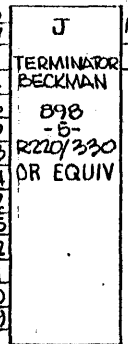
J101	Signal
P	FLPT
C	FSL
E	RSL
B	OVW
K	WNB
D	DSL
J	
A	
B	
V	
S	

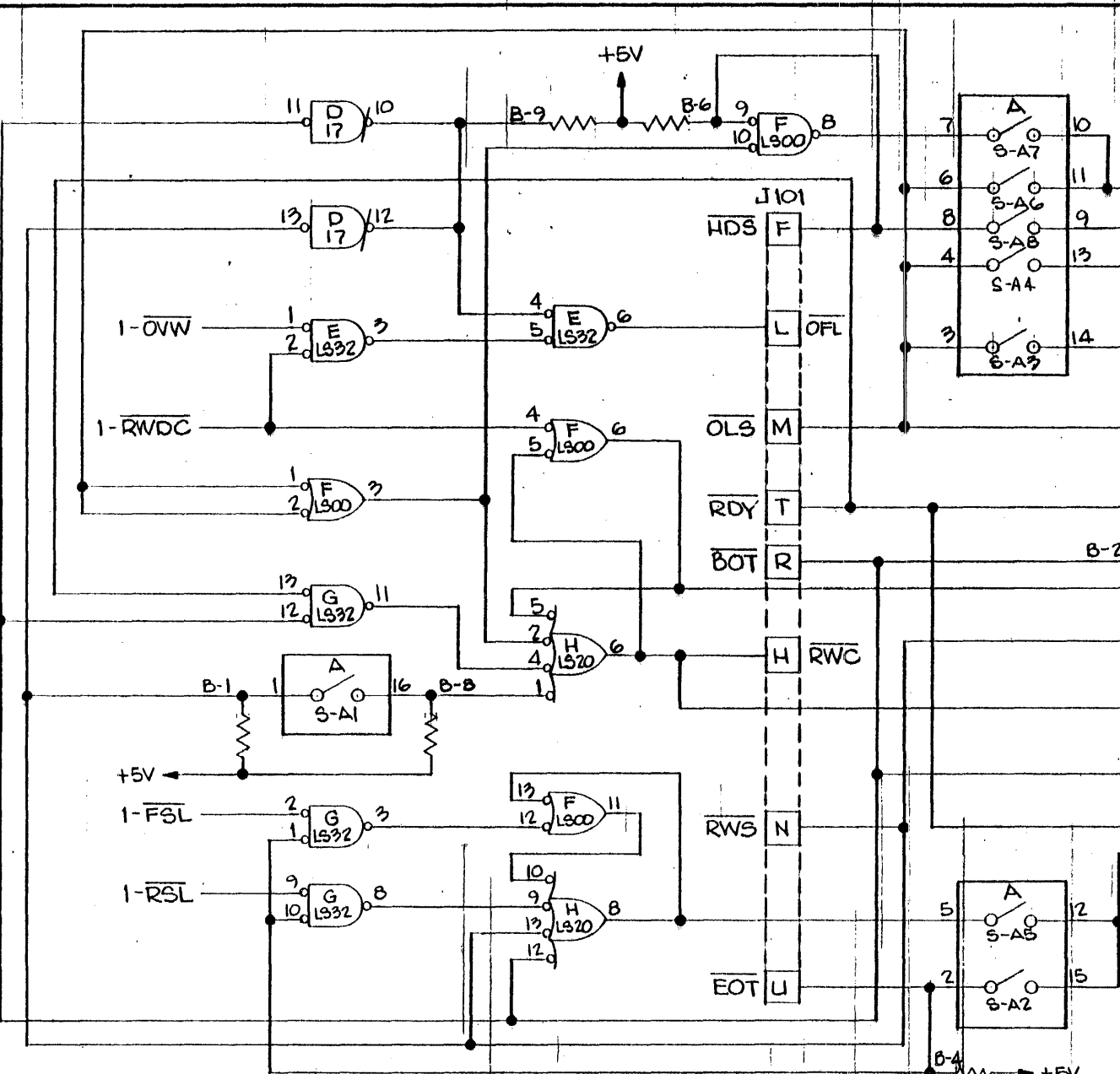
- NOTES: UNLESS OTHERWISE SPECIFIED
- J1 & J2 HAVE ALL EVEN NUMBERED GROUND PINS.
 - J101 GROUND PINS ARE 2-14, 16 & 17.
 - ALL RESISTORS ARE 10K OHMS.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN <i>HRD</i>			
CHECKED		SCALE	SIZE B
		DRAWING NO. 122036	
DO NOT SCALE DRAWING			SHEET 2 OF 3

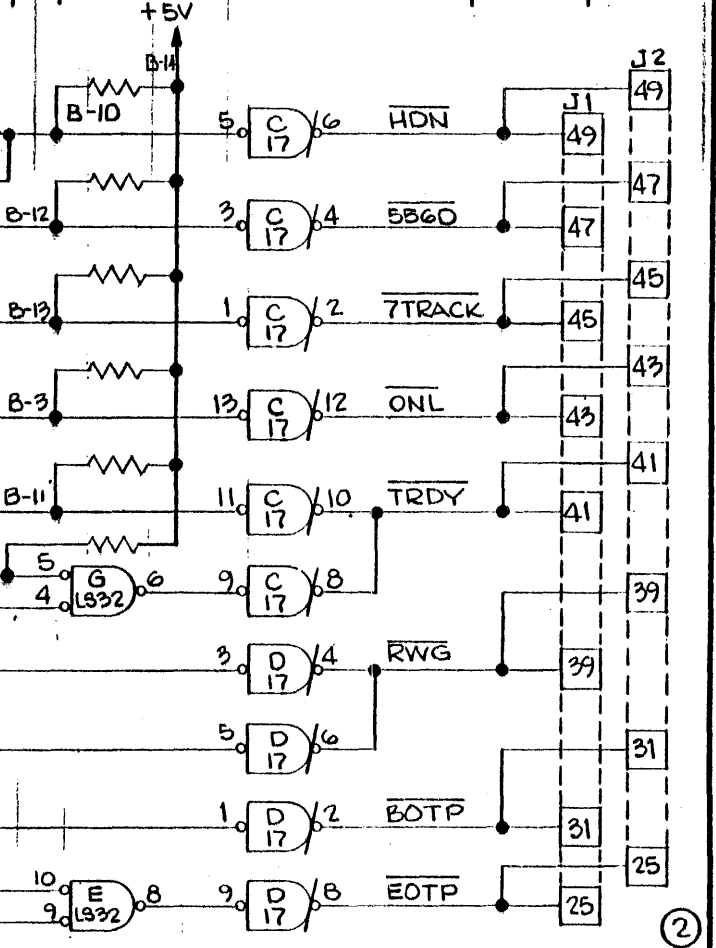
+5V { 35 37 }
(FROM CONTROLLER OR PREVIOUS DRIVE)

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





REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

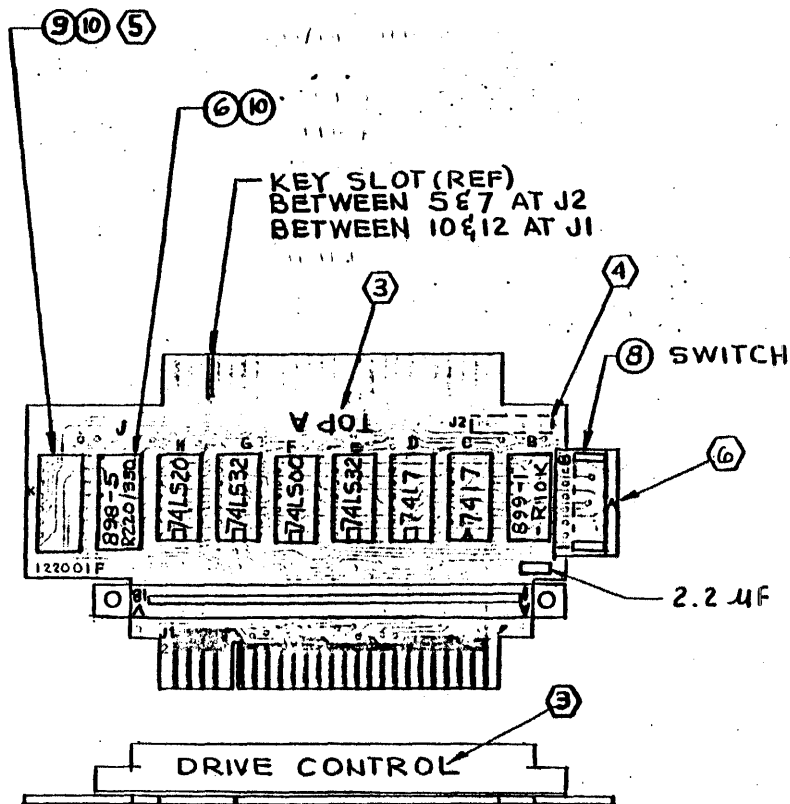


TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS DEC.	ANGLES
± ± ±	± ± ±
APPROVALS	DATE
DRAWN HRO	
CHECKED	

western peripherals
 ANAHEIM, CALIFORNIA

SCHEMATIC - TAPE CONTROL ADAPTER

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



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. 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)	9-26-77	N.D. 9-26-77
	RECORD CHG: ADD SH NO. 2 (ASSEMBLY NO. CHG TO BASIC BD SEE ECO # 0254 (NO REV LTR REQD))	11-16-77	N.D. 11-22-77
	E.C.O # 2 99 (NO REV. LTR. CHANGE)	3-8-78	N.D. 3-9-78
C	USE "F" REV. PWB, REF. ECON. 236A	5-16-78 PAUL CHAPMAN	N.D. 5-16-78

- 1. FOR CONFIGURATION "S" SEE DWG. 112001
- 2. FOR CONFIGURATION "N" SEE DWG 122044
- 3. FOR CONFIGURATION "L" SEE DWG. 130047
- 4. "A" AND "K" ARE COMPONENT LOCATION CODE; "B" THRU "J" ARE FOR REF ONLY & DO NOT APPEAR ON PART

- 5. FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
- 6. RUBBER STAMP ASSY NO. WITH LATEST REV LTR AND DASH NO. (IF REQD) APPROX WHERE SHOWN (FAR SIDE)
- 7. RUBBER STAMP CHARACTER SHOWN USING BLK INK
- 8. FOR MATERIAL SEE P/L NO. 122037
- 9. REF SCHEMATIC 122036
- NOTE: UNLESS OTHERWISE SPECIFIED

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

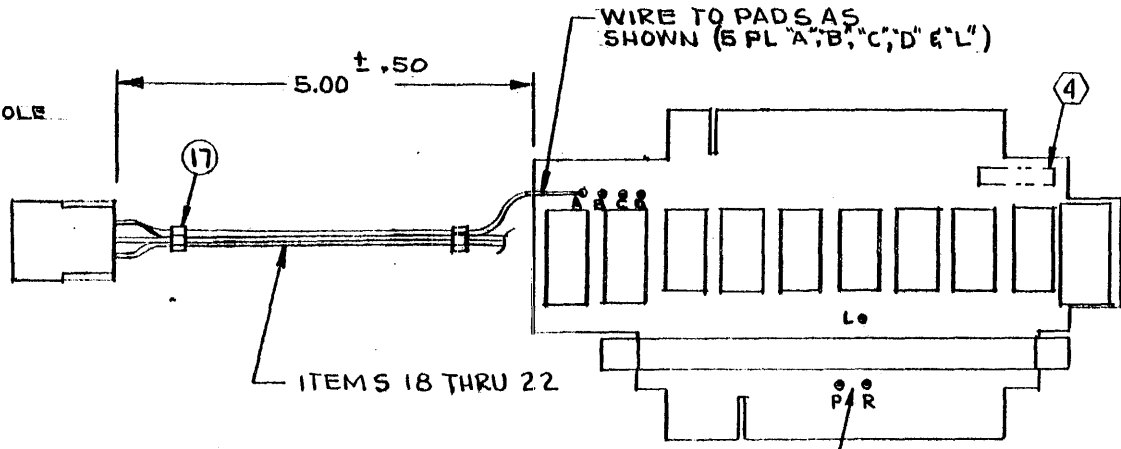
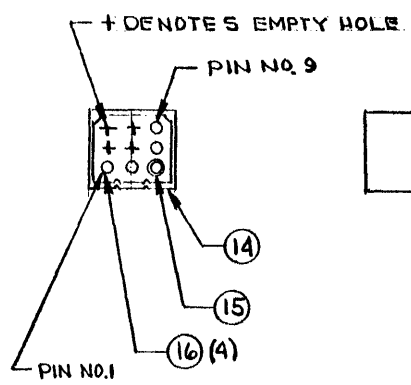
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
±	±	±	
APPROVALS		DATE	
DRAWN COLUM		11-8-76	
CHECKED D.		12-16-76	
SCALE FULL		SIZE B	DRAWING NO. 122037
DO NOT SCALE DRAWING		REV C	
		SHEET 1 OF 2	

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

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

120037-1 WIRING DIAGRAM

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

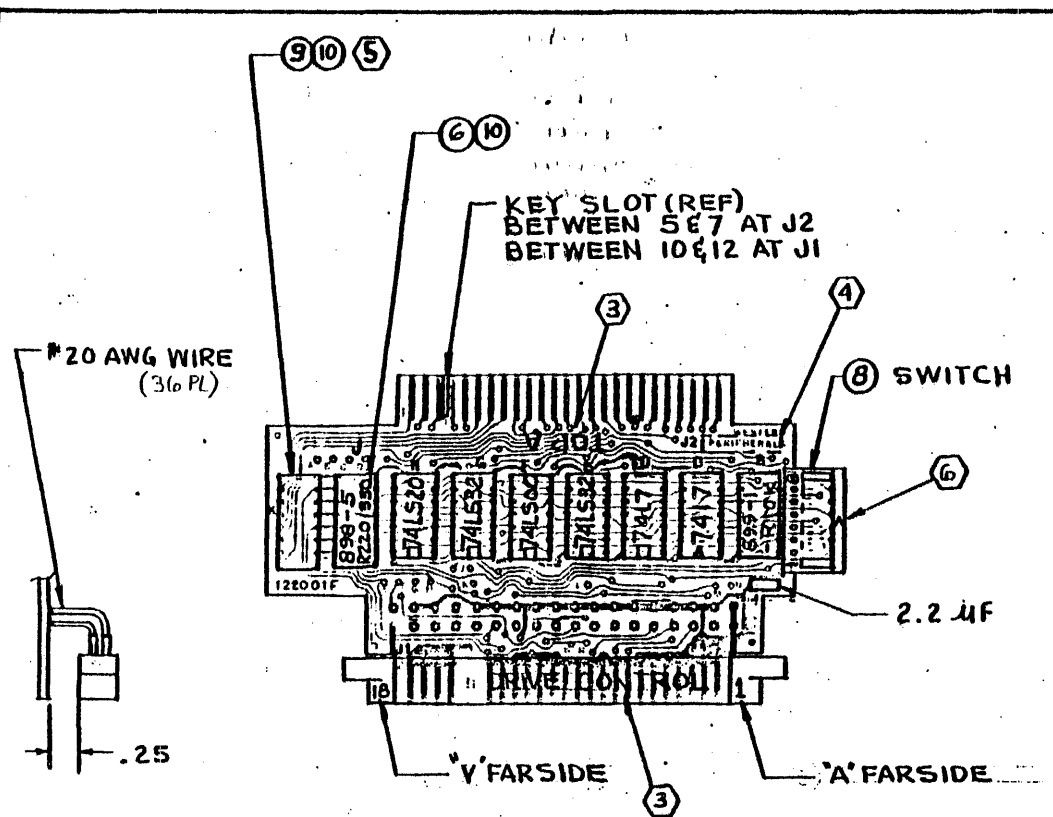


CUT ETCH BETWEEN "P" AND "R" PADS

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

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

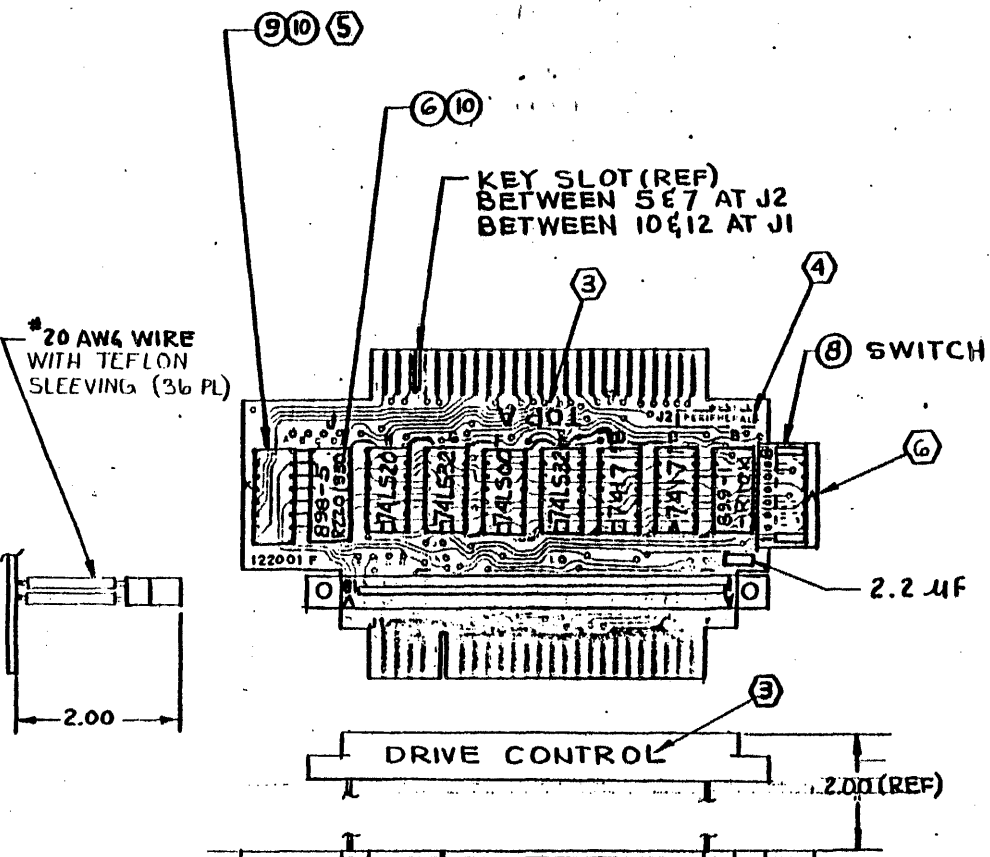
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
±	±	±	
APPROVALS	DATE	SCALE	SIZE
DRAWN CORUM	11-19-77	FULL	B
CHECKED		DRAWING NO.	REV
		122037	C
DO NOT SCALE DRAWING			SHEET 2 OF 2



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	N.D. 3-9-78
	ADDED NOTE 7 PER E.C.O. 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

- 3. FOR CONFIGURATION "S" SEE DWG. 112001
 - 7. FOR CONFIGURATION "N" SEE DWG. 122044
 - 2. "A" AND "K" ARE COMPONENT LOCATION CODE; "B" THRU "J" ARE FOR REF ONLY & DO NOT APPEAR ON PART
 - 5. FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
 - 4. RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
 - 3. RUBBER STAMP CHARACTER SHOWN USING BLK INK
 - 2. FOR MATERIAL SEE P/L NO. 122036
 - 1. REF SCHEMATIC 122036
- NOTE: UNLESS OTHERWISE SPECIFIED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA			
±	±			ASSEMBLY ADAPTER TAPE CONTROL CONNECTOR 90° MOUNTING	
APPROVALS	DATE	SCALE	SIZE	DRAWING NO.	REV
DRAWN CORUM	11-8-76	FULL	B	122038	D
CHECKED V.D.	12-18-76	DO NOT SCALE DRAWING		SHEET 1 OF 1	



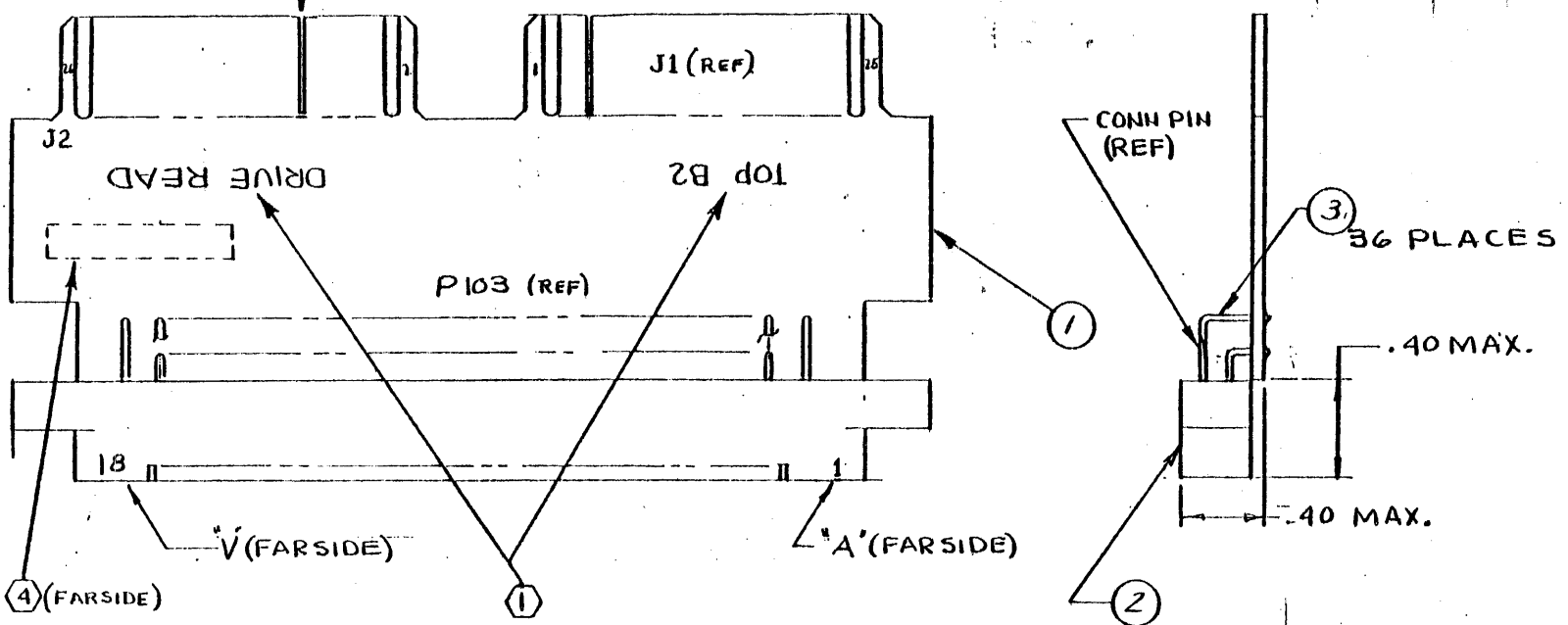
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	E.C.O. NO.-0143	1-18-77	
B	E.C.O. NO.-0190	6-3-77	N.D. 6-11-77
C	E.C.O. NO.-0197	8-8-77	N.D. 8-9-77
	E.C.O. NO.-299 (NO REV. LTR. CHG.)	3-8-78	N.D. 3-9-78
	ADDED NOTE 7. PER E.C.O. 257.	3-21-78	N.D. 3-21-78
D	USE 'F' REV. PWB, REF. ECO No. 236A	5-16-78	N.D. 5-16-78

- 3. FOR CONFIGURATION 'S' SEE DWG 112001
- 1. FOR CONFIGURATION 'N' SEE DWG 122044
- 2) 'A' AND 'K' ARE COMPONENT LOCATION CODE; 'B' THRU 'J' ARE FOR REF ONLY & DO NOT APPEAR ON PART
- 3) FOR OPTIONAL JUMPERING AND/OR JUMPER ARRAYS, REF J.O.A. & SCHEMATIC
- 4) RUBBER STAMP ASSY NO. WITH LATEST REV LTR LOCATED APPROX WHERE SHOWN (FAR SIDE)
- 5) RUBBER STAMP CHARACTER SHOWN USING BLK INK
- 2. FOR MATERIAL SEE P/L NO. 122039
- 1. REF SCHEMATIC 122036
- NOTE: UNLESS OTHERWISE SPECIFIED

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA			
±	±	±			
APPROVALS	DATE	ASSEMBLY: ADAPTER TAPE CONTROL CONNECTOR 2 INCH STAND OFF			
DRAWN CORUM	11-8-76				
CHECKED V.D.	12-16-76	SCALE FULL	SIZE B	DRAWING NO. 122039	REV D
DO NOT SCALE DRAWING					SHEET 1 OF 1

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

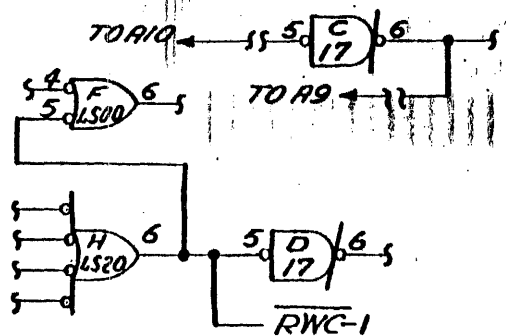
KEY SLOT BETWEEN 8 & 10 AT J2
& BETWEEN 3 & 5 AT J1 (REF)



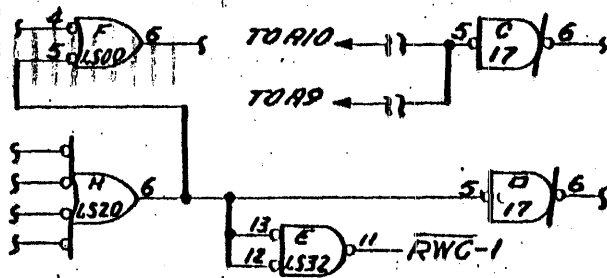
- NOTE \$:
- ① RUBBER STAMP CHARACTERS SHOWN WITH BLK INK.
 - ② REF SCHEMATIC DWG NO 122022.
 - ③ SEE P/L 122043.
 - ④ RUBBER STAMP ASSY. NO. WITH LATEST REV. LTR. APPROX. WHERE SHOWN.

TOLERANCES UNLESS OTHERWISE SPECIFIED			western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES		
±	±	±	ASSEMBLY-ADAPTER, TAPE READ, REVERSE IMAGE, 90°	
APPROVALS	DATE	SCALE		
DRAWN 7.2	6/7/77	2X	SIZE B	DRAWING NO. 122043
CHECKED 7.2	6-11-77		DO NOT SCALE DRAWING	
				SHEET 1 OF 1

STANDARD CONTROL ADAPTER BD.

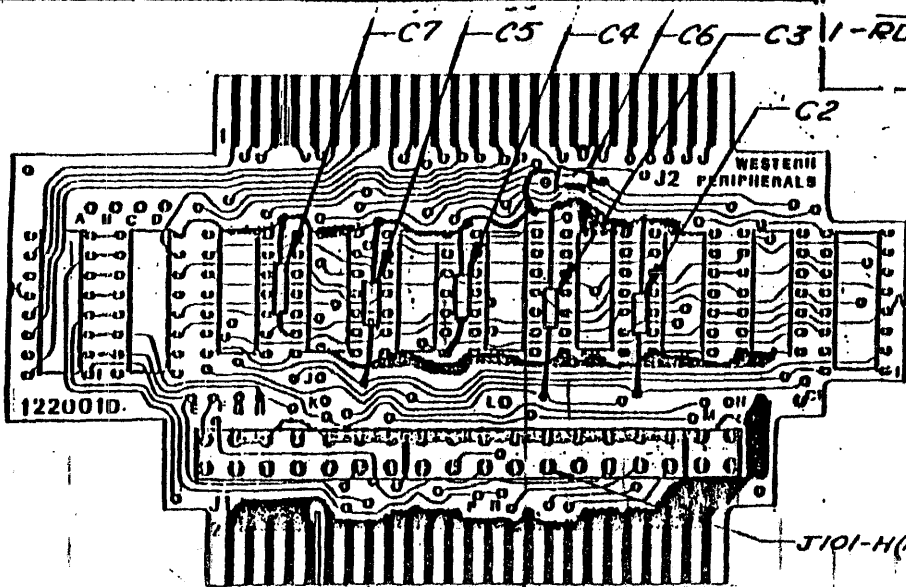
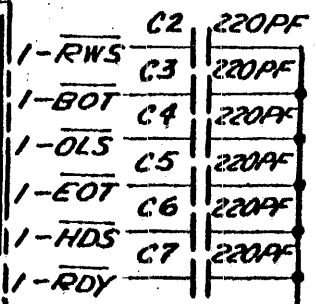


CONFIGURATION "N" CONTROL ADAPTER BD



CAPACITOR INSTALLATION CHART

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



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED & REDRAWN PER E.C.O. 0237	10-27-77 CND	N.D. 10-27-77
B	REVISED PER E.C.O. # 257	3-21-78	N.D. 3-21-78
C	SHEET CHANGED TO APPLY TO "F" REV BOARD INSTEAD OF "E" PER E.C.O. 236-A	5-16-78	N.D. 5-16-78

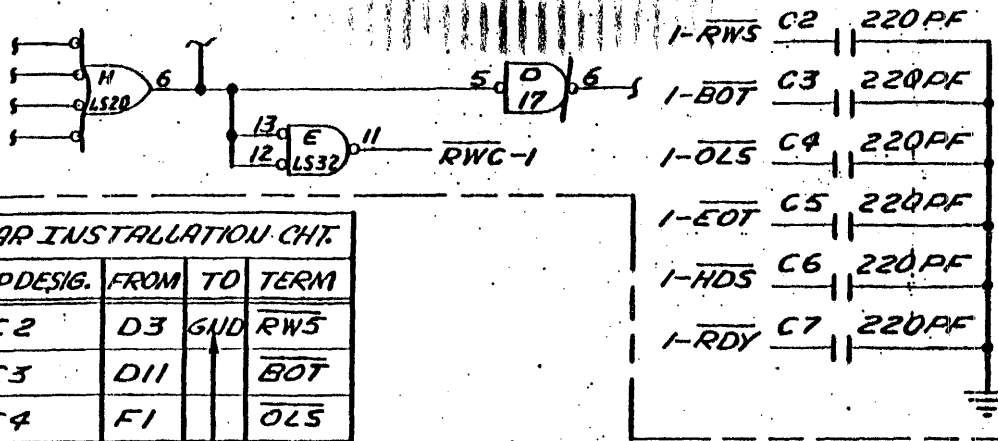
CONF "N" BOARD MOD PROCEDURES:
(MODIFICATIONS NOTED APPLY TO ASSY'S 122037, 122038 & 122039)

1. MODIFY CIRCUIT
 - A. CUT ETCH (SOLDER SIDE) AT J101-H
 - B. JUMPER H6 TO E12
 - C. JUMPER E12 TO E13
 - D. JUMPER E11 TO J101-H
 - E. CUT ETCH (COMPONENT SIDE) AT A9
 - F. JUMPER A9 TO A10
2. COMPONENT ADDITION & MARKING
 - A. ADD (6) 220PF CAPACITORS (C2 THRU C7) AT LOCATIONS SHOWN
 - B. IDENTIFY AS CONF "N" AT ASSY. NO. USING BLK INK.
3. THIS MOD PROVIDES ISOLATION & FILTERING FOR ADAPTER ELECTRONICS
4. MATERIAL REQUIREMENTS:
 - A. BOARD ASSY. AS NOTED IN PROCEDURES ABOVE (1 REQD)
 - B. CK12BX221K, 220PF CAP (6 REQD)
5. VERIFY PROPER CAPACITOR INSTALLATION BY PERFORMING CONTINUITY CHECK PER THE CAPACITOR INSTALLATION CHART.
6. REFERENCE SCHEMATIC 122036

THIS SHEET APPLIES TO "D" REV. PWB ONLY

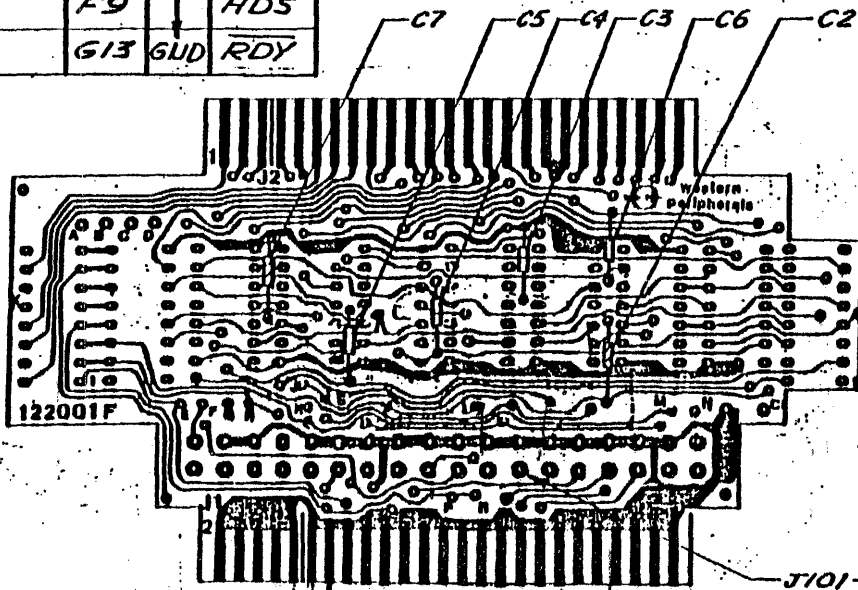
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DATE 10-27-77		MODIFICATION DRAWING TAPE CONTROL ADAPTER (CONFIGURATION "N")	
SCALE NONE		SIZE B	DRAWING NO. 122044
DO NOT SCALE DRAWING		SHEET 1 OF 2	

CONFIGURATION "N" CONTROL ADAPTER BD.



CAP INSTALLATION CHT.			
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

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



J101-H (REF. NOTES 1A & 1C)

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

CONF "N" BOARD MOD PROCEDURES:
(MODIFICATIONS NOTED APPLY TO ASSY'S 122037, 122038 & 122039)

1. MODIFY CIRCUIT
 - A. CUT ETCH (SOLDER SIDE) AT J101-H
 - B. JUMPER F6 TO E12 & 13 (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 NO. USING BLK INK
3. THIS MOD PROVIDES ISOLATION & FILTERING FOR ADAPTER ELECTRONICS
4. MATERIAL REQUIREMENTS:
 - A. BOARD ASSY AS NOTED IN PROCEDURES ABOVE (1 REQD)
 - B. CK12BX221K, 220PF CAP (6 REQD)
5. VERIFY PROPER CAPACITOR INSTALLATION BY PERFORMING CONTINUITY CHECK PER THE CAPACITOR INSTALLATION CHART.
6. REFERENCE SCHEMATIC 122036

THIS SHEET APPLIES TO "F" (OR LATER) REV. PWB ONLY

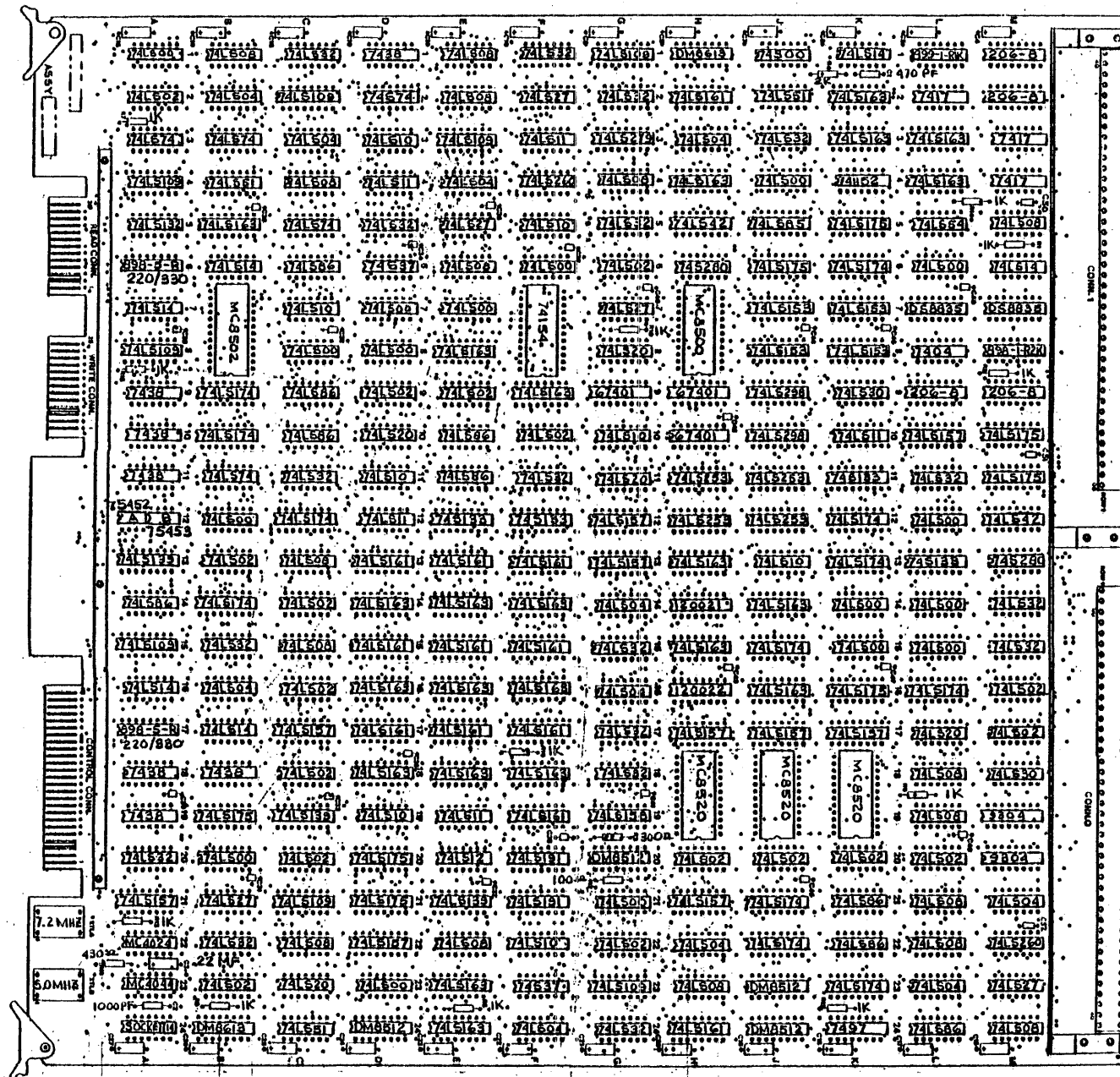
TOLERANCES UNLESS OTHERWISE SPECIFIED	
±	±
APPROVALS	DATE
CHECKED	1/10/71

western peripherals
SAN DIEGO, CALIFORNIA

MODIFICATION DRAWING
TAPE CONTROL ADAPTER
(CONFIGURATION "N")

SCALE	SIZE	DRAWING NO.
NONE	B	122044

DO NOT SCALE DRAWING SHEET 2 OF 2



Model TC-140 Tape Controller

SWITCH POSITIONS 1M & 2M	SPEED SETTINGS					
	12.5 IPS	25 IPS	37.5 IPS	45 IPS	75 IPS	125 IPS
1	ON	OFF	ON	OFF	OFF	OFF
2	OFF	OFF	OFF	OFF	ON	OFF
3	OFF	ON	ON	OFF	ON	OFF
4	ON	ON	ON	ON	ON	ON
5	ON	OFF	ON	ON	OFF	OFF
6	OFF	ON	OFF	OFF	OFF	OFF
7	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	OFF	OFF	OFF


NOTES: UNLESS OTHERWISE SPECIFIED

- ① 1M IS PRIMARY SPEED SELECTION.
- ② FILTER COMPONENT VALUES VARY WITH SPEED OF TRANSPORT.
SEE MANUAL FOR FURTHER INFORMATION.
- ③ TO CONFIGURE FOR .3 INCH GAP 7 TRACK HEAD, CUT ETCH BETWEEN PADS A & B AND JUMPER PAD A TO C. CIRCUIT ON SHT. ⑩ IS SHOWN FOR STANDARD .15 INCH GAP 7 TRACK HEAD.
4. REF ASSY. DWG. 60000023.
5. FOR CONFIGURATION "R" SEE DWG. 79000014
FOR CONFIGURATION "U" SEE DWG. 79000022
FOR CONFIGURATION "W" SEE DWG. 79000030
FOR CONFIGURATION "Z" SEE DWG. 79000048

6. LOGIC ELEMENTS SHADED IN THIS MANNER DO NOT EXIST ON THE TC148 (NRZ ONLY).

⑦ JUMPER PAD D TO E FOR TC148 (REF. SHT. ⑰)

REVISIONS			
LYR	DESCRIPTION	DATE	APPROVED
A	PROD. RELEASE	10-18-78	J.D. 10-18-78
B	REVISED PER E.C.O. 440	1-18-79	J.D. 1-18-79
C	REV. PER ECO Nos 446, 447, 449	2-1-79	J.D. 2-1-79

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN P. CHAPMAN CHECKED J.D. 10-18-78		DATE 10-4-78	
SCALE		SIZE B	DRAWING NO. 75000026
DO NOT SCALE DRAWING			SHEET 1 OF 38

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

SPARE CIRCUITS

TYPE	LOCATION	PIN NUMBER
74LS02	2A	4,5,6
	20C	1,2,3
** 74LS04	23L	1,2
** 74LS08	1E	1,2,3
	4G	4,5,6, & 11,12,13
** 74LS10	11D	3,4,5,6
** 74LS14	7A	1,2
	1K	1,2,3,4 & 12,13,56 & 8,9
	7G	1,2,12,13
	21B	1,2,12,13
	23M	3,4,5,6
** 74LS32	22B	1,2,3,4,5,6 & 8,9,10 & 11,12,13
	7438	1D
	4B	1,8,9,10,11,12,13
	74LS86	14A
	24L	4,5,6
	74LS139	13A
	19C	1-7
	21E	1-7
** 74LS157	12G	9,10,11
	13G	12,13,14
	17C	2,3,4
	17H	9,10,11
	21A	2,3,4 & 5,6,7 & 12,13,14
	21H	2,3,4
** 74LS174	12C	2,3,6,7,10,11
	14B	2,3 & 14,15
	15J	6,7,10,11 & 12,13
** 74LS260	22M	4,6,8,9,10,11
	74LS279	3G
	DMB613	1H
	24B	5,6,7
	1L	8,9,10,11,12
	8M	3,4,5,6,7,8 & 13
	6A	5,6,7,9
	17A	4,5,6,7,9
** 74LS74	11B	8-13

ADDRESSES FOR MAGNETIC TAPE DRIVES ARE SELECTABLE IN BLOCKS OF FOUR. THE FIRST ADDRESS OF THE BLOCK MUST BE USED FOR SINGLE DRIVE SYSTEMS, THE FIRST TWO ADDRESSES FOR 2-DRIVE SYSTEMS, ETC. THE FIRST ADDRESS OF EACH BLOCK MAY BE SELECTED FROM ANY OF THE FOLLOWING.

OX, 4X, 8X, OR CX WHERE X MAY BE ANY HEXADECIMAL DIGIT

THE 2ND, 3RD, AND 4TH ADDRESSES OF EACH BLOCK ARE OBTAINED BY ADDING X'0, X'20, OR X'30 TO THE STARTING ADDRESS. THUS, IN A 4-DRIVE SYSTEM THE ADDRESSES MAY BE:

OX, 1X, 2X, OR 3X; 4X, 5X, 6X, OR 7X; 8X, 9X, AX, OR BX; CX, DX, EX, OR FX.

THE ADDRESSES ARE SELECTED AS FOLLOWS:


ADDRESS	SWITCH 9M							
	S5	S6	S1	S2	S3	S4	S7	S8
X0		ON		ON		ON		ON
X1		ON		ON		ON	ON	
X2		ON		ON	ON			ON
X3		ON		ON	ON		ON	
X4		ON	ON			ON		ON
X5		ON	ON			ON	ON	
X6		ON	ON		ON			ON
X7		ON	ON		ON		ON	
X8	ON			ON		ON		ON
X9	ON			ON		ON	ON	
XA	ON			ON	ON			ON
XB	ON			ON	ON		ON	
XC	ON		ON			ON		ON
XD	ON		ON			ON	ON	
XE	ON		ON		ON			ON
XF	ON		ON		ON		ON	

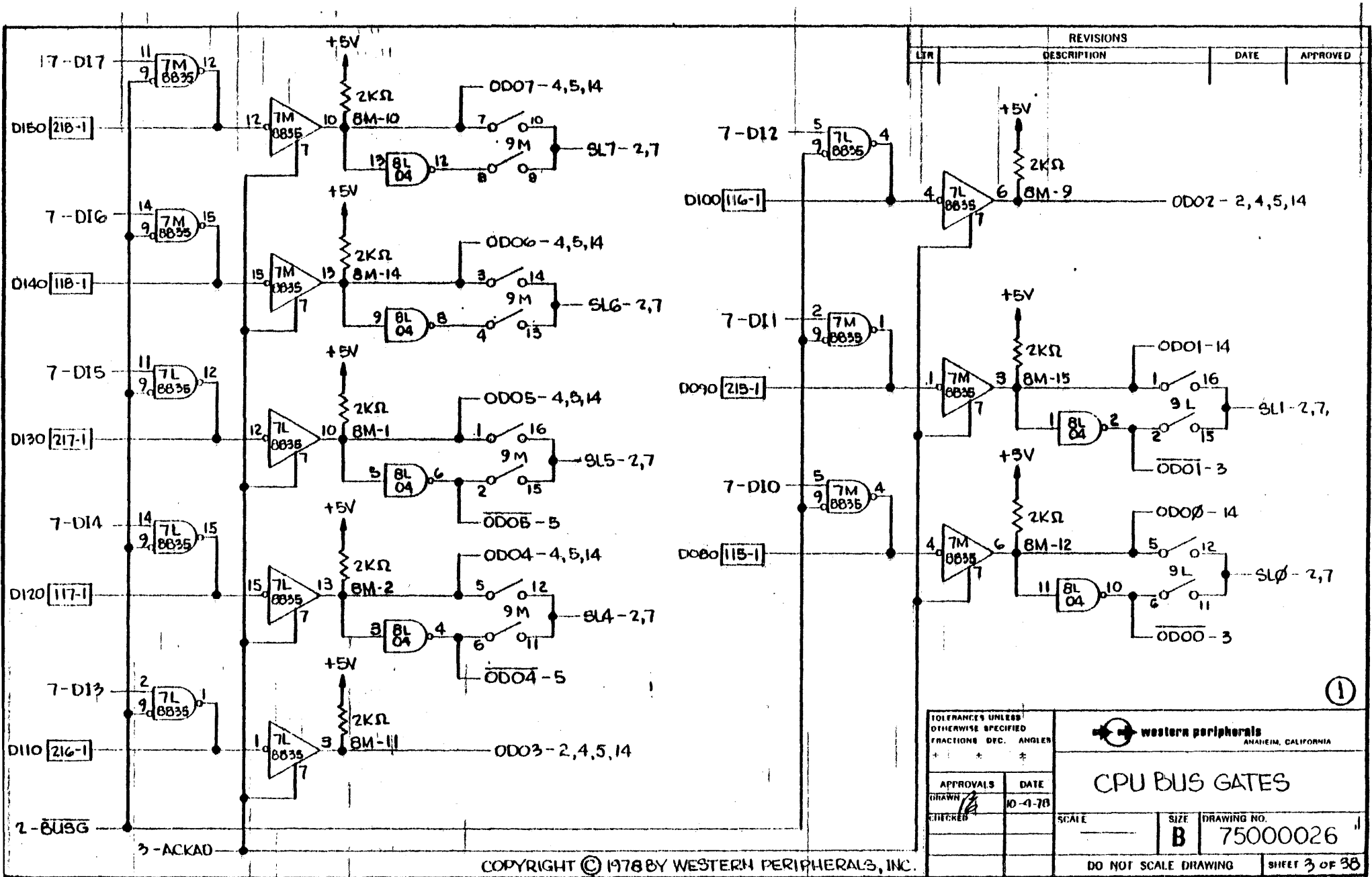
ADDRESS	SWITCH 9L							
	S7	S8	S3	S4	S5	S6	S1	S2
OX						ON		ON
4X	NOT USED, SETTING						ON	ON
8X	IRRELEVANT					ON		ON
CX	IRRELEVANT					ON		ON

NOTE: ANY SWITCH NOT DESIGNATED AS "ON" MUST BE OFF.

* LIMITED USAGE, CONTROL FUNCTIONS ALREADY DETERMINED (IE: CLK, RST, ETC.)

** OUTLINED PINS USED FOR CONFIGURATION "R"
*** OUTLINED PINS USED FOR CONFIGURATION "W"

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals <small>ANAHEIM, CALIFORNIA</small>	
APPROVALS	DATE	SCHEMATIC	
DRAWN BY CHAPMAN	10-4-78	TC140 TAPE CONTROLLER	
CHECKED		SCALE	SIZE B
			DRAWING NO. 75000026
DO NOT SCALE DRAWING			SHEET 2 OF 38



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + * *	
APPROVALS	DATE
DRAWN	10-4-78
CHECKED	

①

western peripherals
ANAHEIM, CALIFORNIA

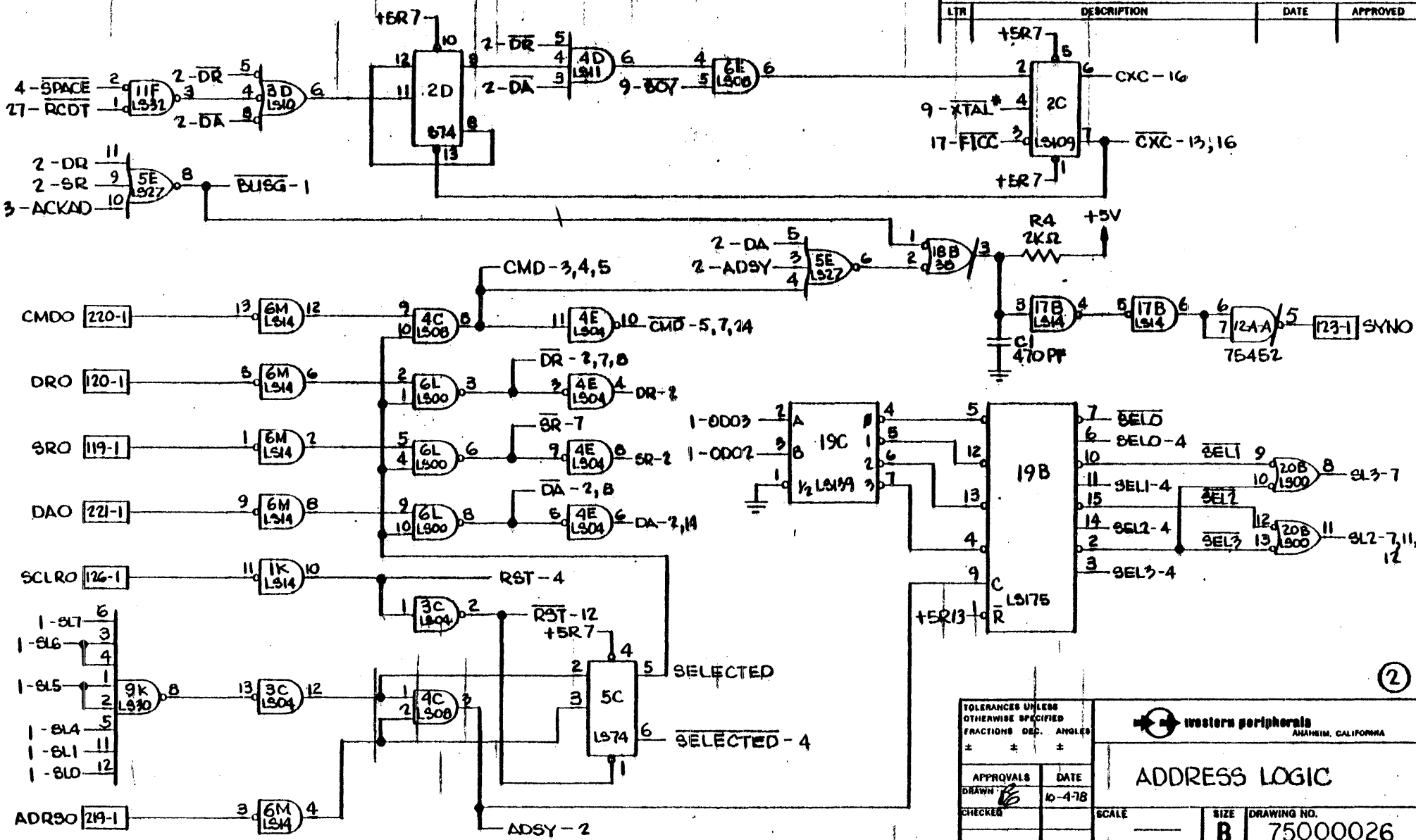
CPU BUS GATES

SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 3 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

BISHOP GRAPHICS/ACCUPRESS
REPRINTING NO. A 501

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

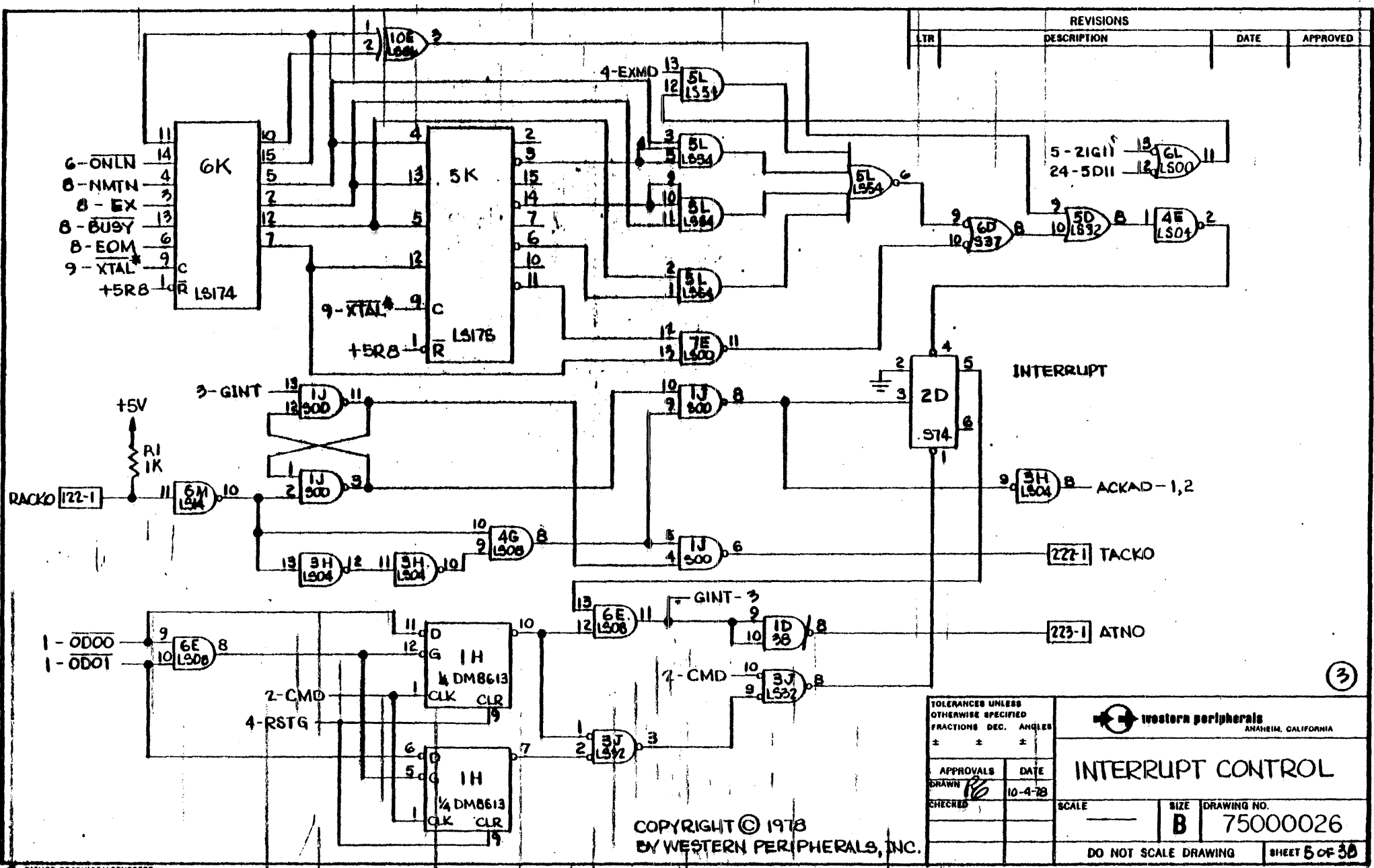
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

western peripherals
ANAHEIM, CALIFORNIA

ADDRESS LOGIC

SCALE	SIZE	DRAWING NO.
	B	75000026

DO NOT SCALE DRAWING SHEET 4 OF 30



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

3

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES
± ± ±

APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

western peripherals
ANAHEIM, CALIFORNIA

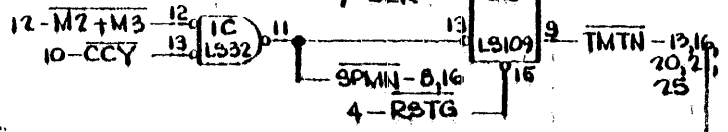
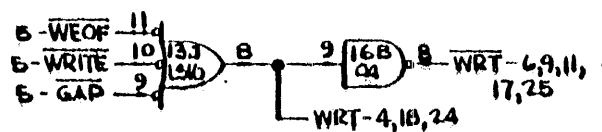
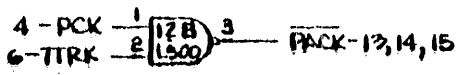
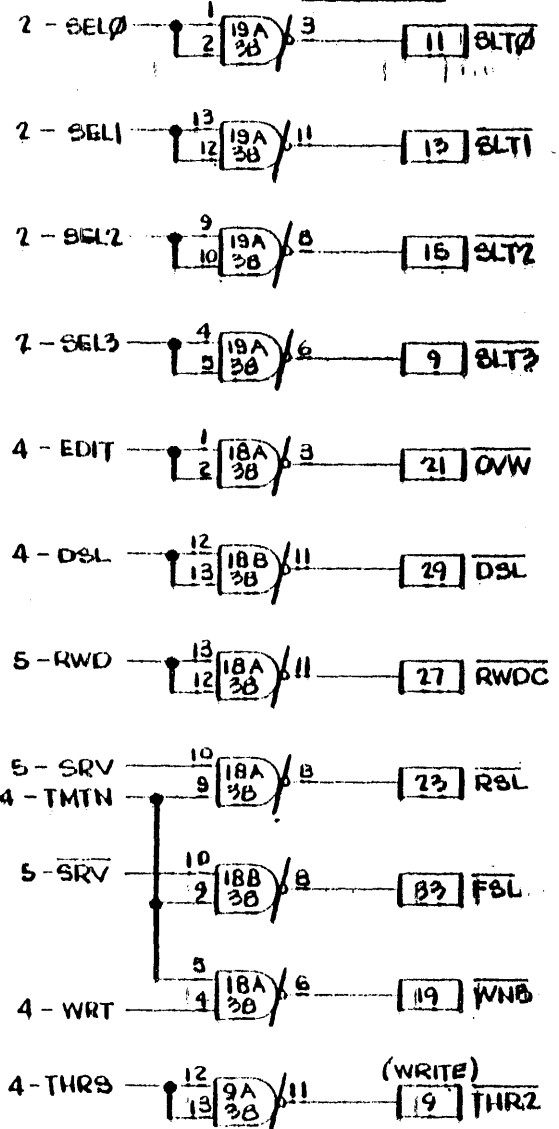
INTERRUPT CONTROL

SCALE	SIZE	DRAWING NO.
	B	75000026

DO NOT SCALE DRAWING SHEET 5 OF 30

COPYRIGHT © 1978
BY WESTERN PERIPHERALS, INC.

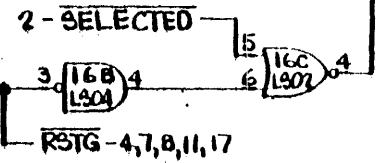
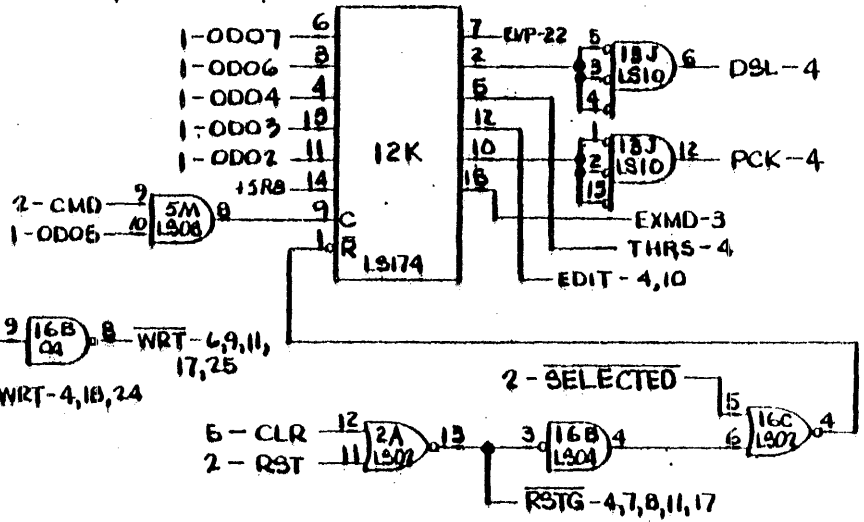
CONTROL



REVISIONS

LT#	DESCRIPTION	DATE	APPROVED

MODE COMMAND REGISTER



TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC. ANGLES

APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

(4)

western peripherals
ANAHEIM, CALIFORNIA

COMMAND REGISTER

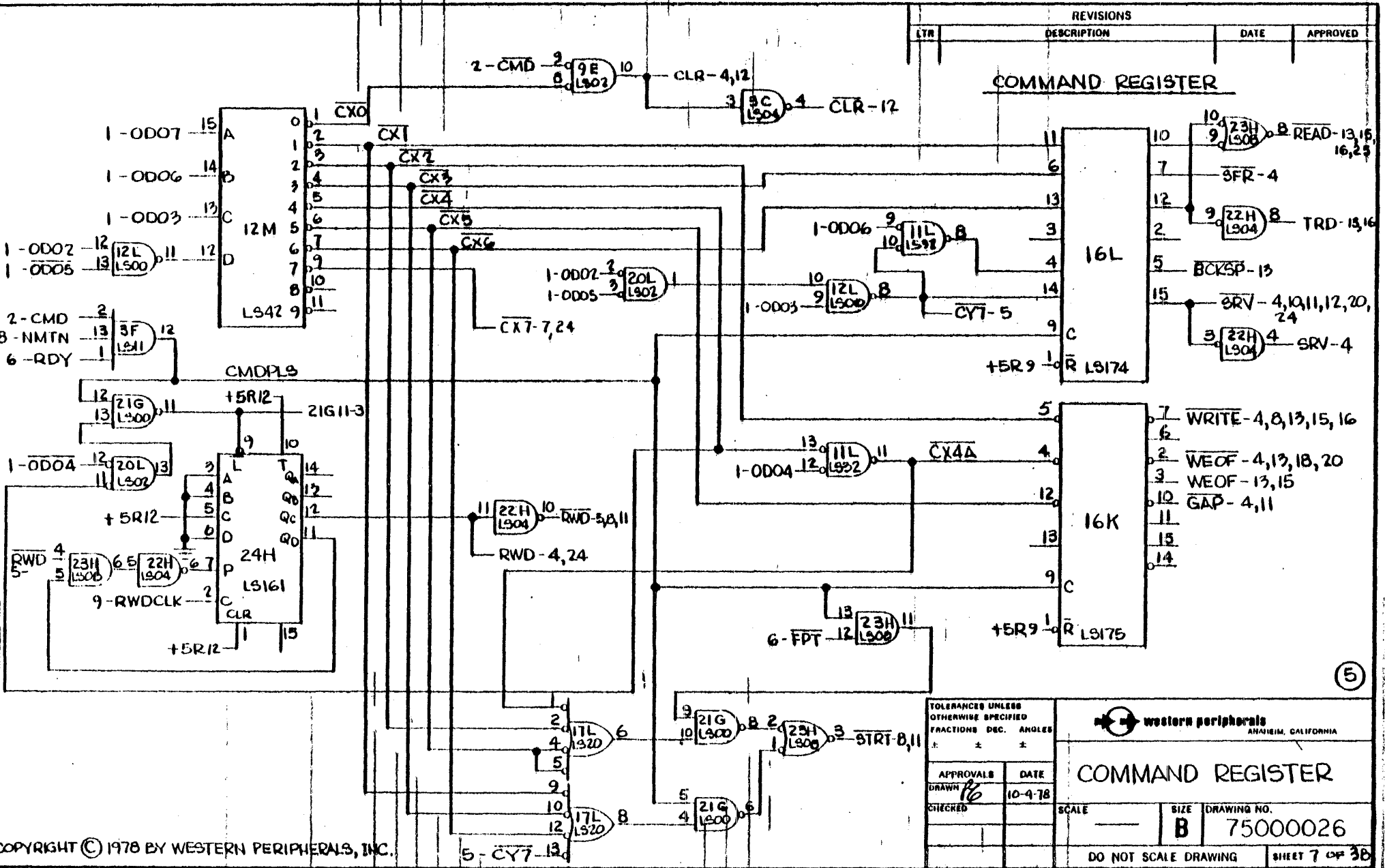
SCALE	SIZE	DRAWING NO.
	B	75000026

DO NOT SCALE DRAWING SHEET 6 OF 30

BISHOP GRAPHICS/ACQUIPRESS
RENDERING NO. 2 1/2" x 11"

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

COMMAND REGISTER



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±

APPROVALS	DATE
DRAWN <i>FB</i>	10-4-78
CHECKED	

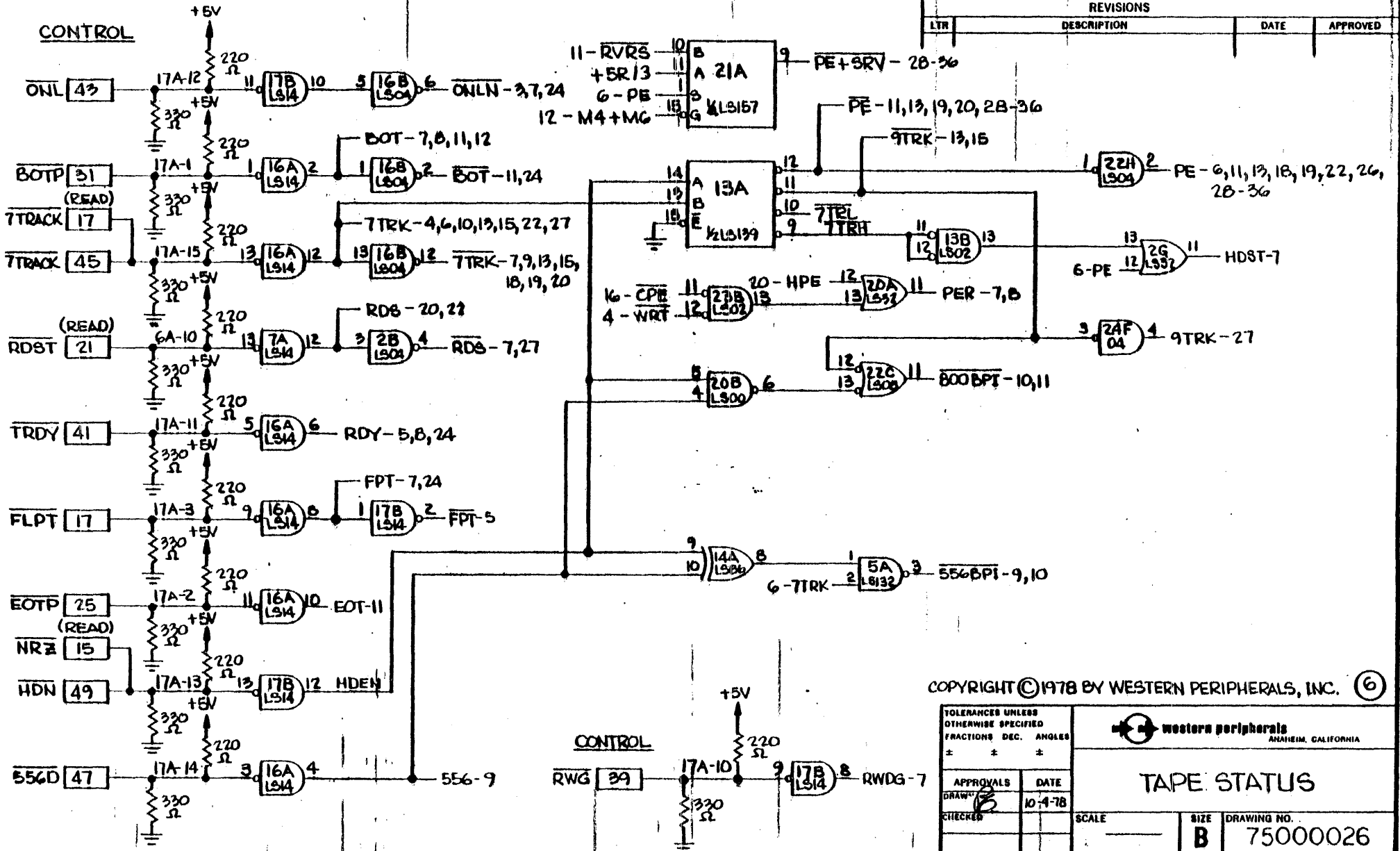
western peripherals
ANAHEIM, CALIFORNIA

COMMAND REGISTER

SCALE	SIZE	DRAWING NO.
	B	75000026

DO NOT SCALE DRAWING SHEET 7 OF 38

CONTROL



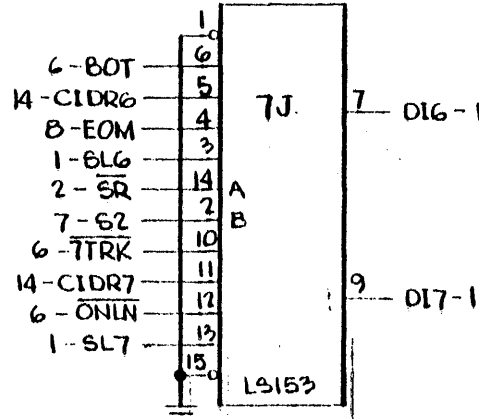
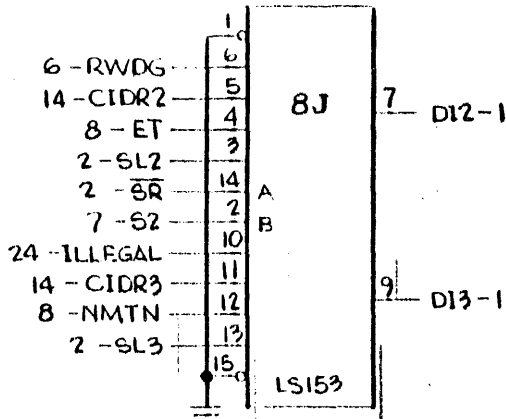
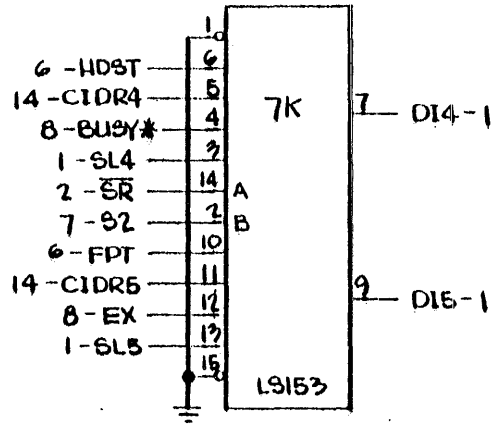
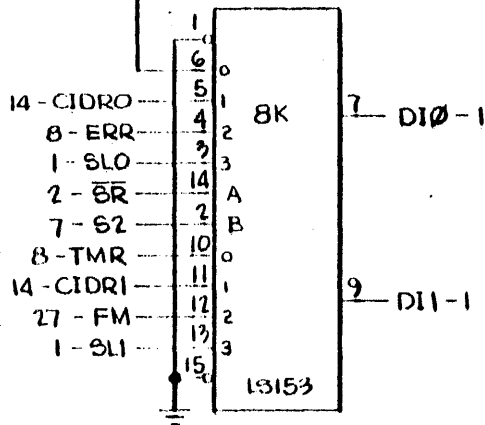
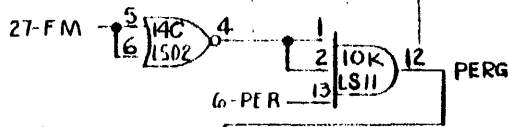
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC. (6)

western peripherals
ANAHEIM, CALIFORNIA

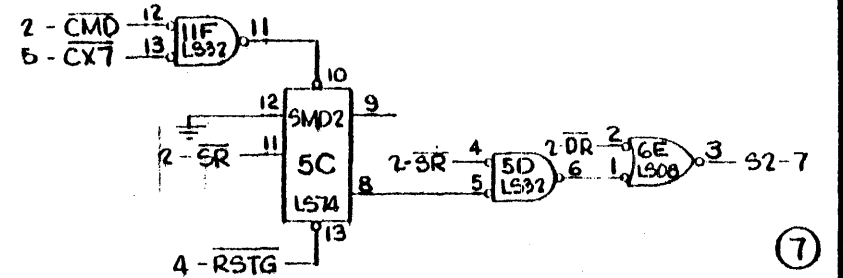
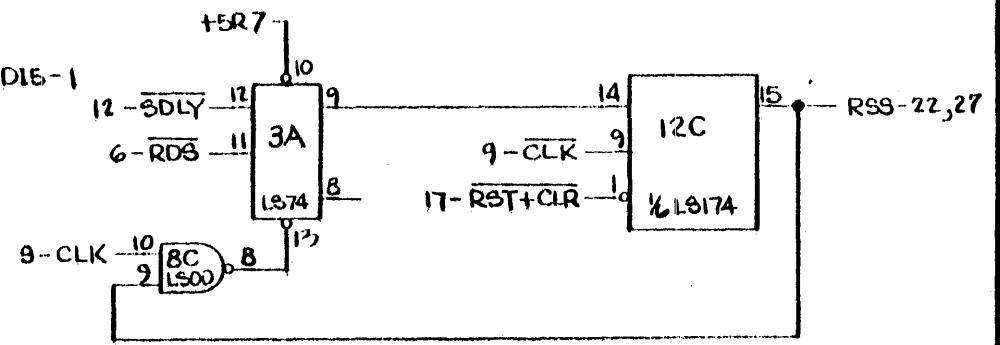
TAPE STATUS

TOLERANCES UNLESS OTHERWISE SPECIFIED	FRACTIONS DEC. ANGLES	± * *
APPROVALS	DATE	
DRAWN <i>(Signature)</i>	10-4-78	
CHECKED		
SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 8 OF 38



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

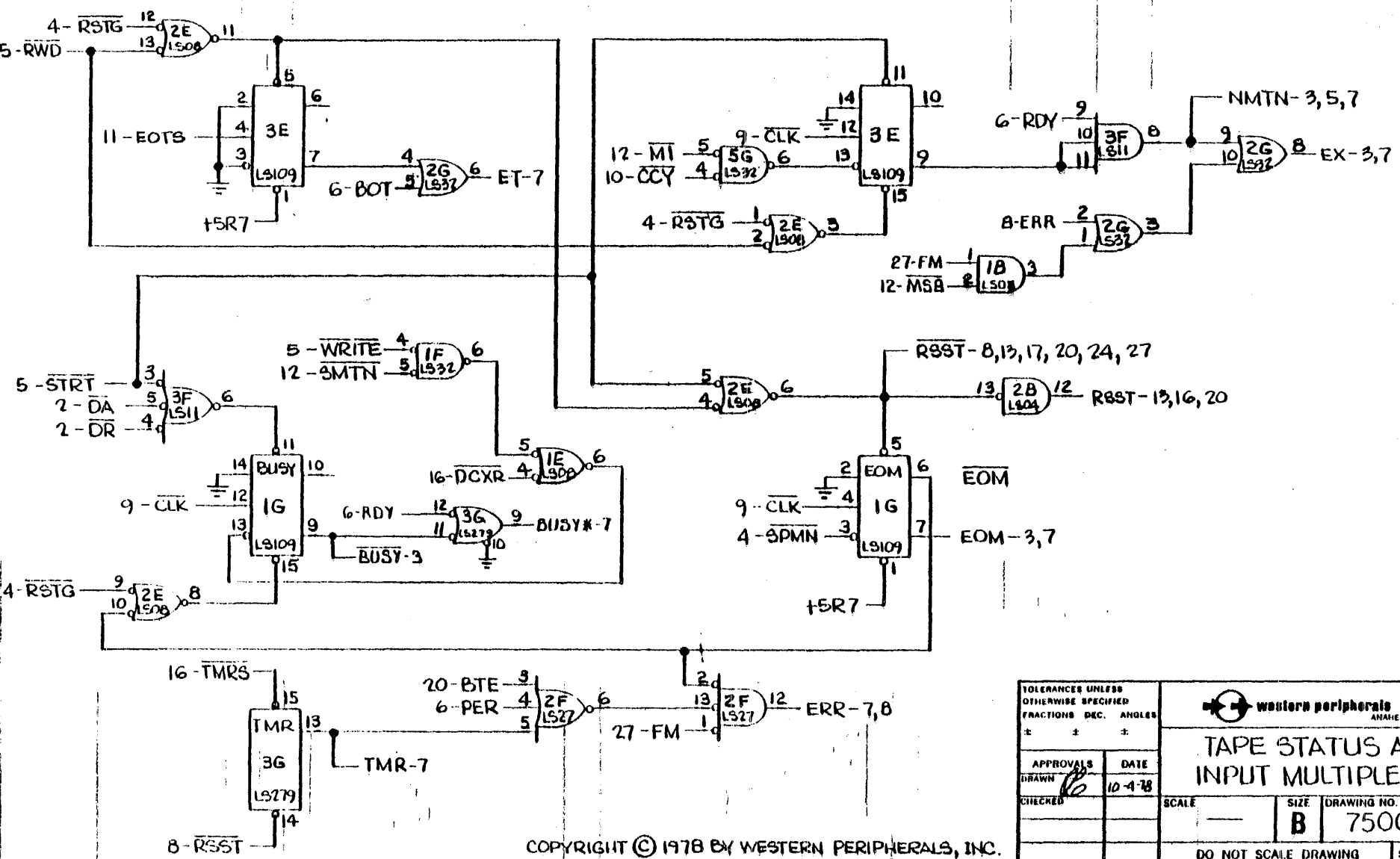
READ STROBE SYNCHRONIZER



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES + * *		western peripherals ANAHEIM, CALIFORNIA		
TAPE STATUS AND INPUT MULTIPLEXER				
APPROVALS	DATE	SCALE	SIZE	DRAWING NO.
DRAWN <i>16</i>	10-4-78		B	75000026
CHECKED				
DO NOT SCALE DRAWING			SHEET 9 OF 38	

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



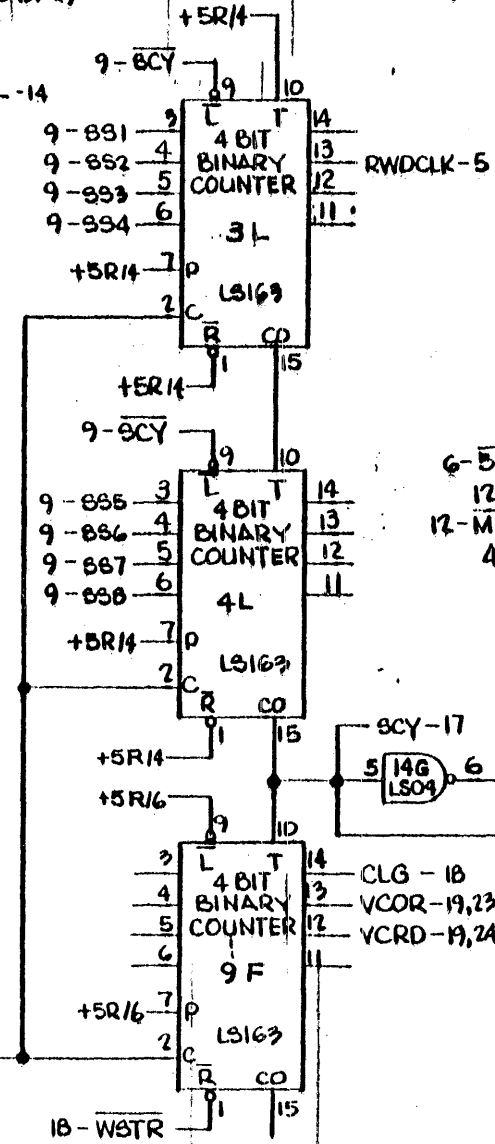
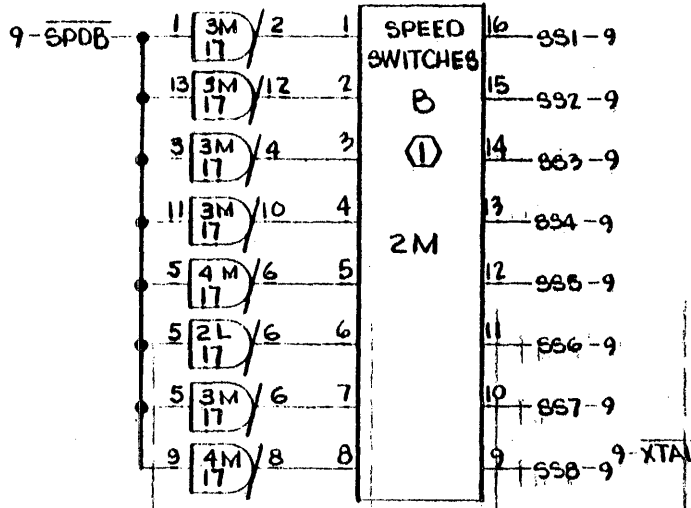
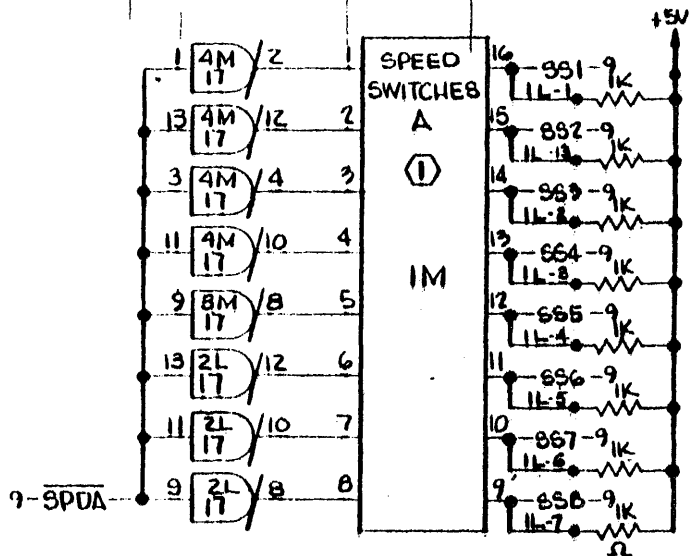
(8)

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

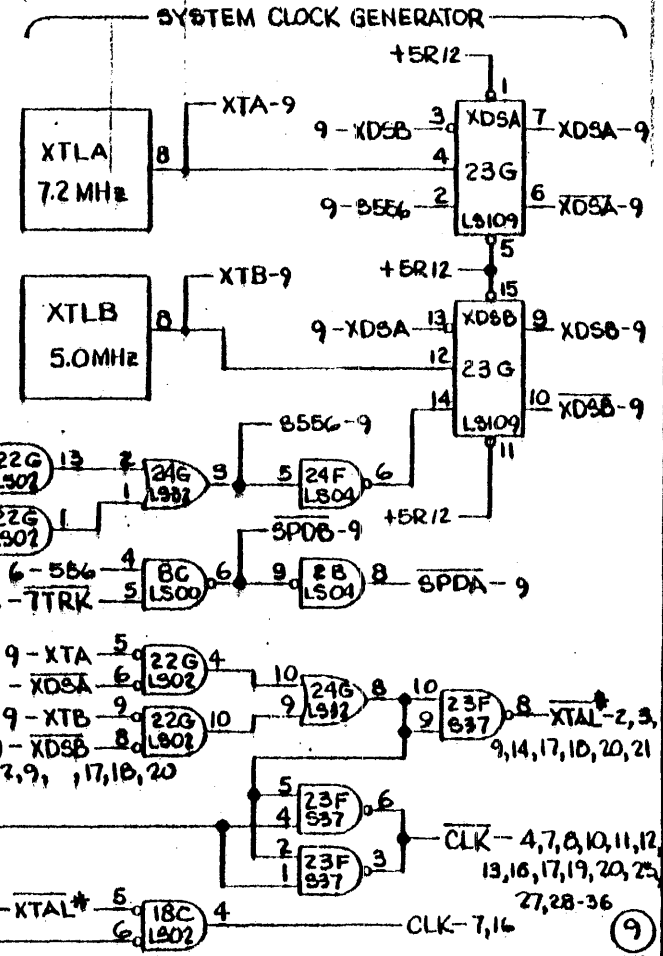
 western peripherals ANAHEIM, CALIFORNIA		
TAPE STATUS AND INPUT MULTIPLEXER		
SCALE	SIZE	DRAWING NO.
—	B	75000026
DO NOT SCALE DRAWING		SHEET 10 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

SPEED CLOCK GENERATOR
FREQ = 6400 x SPEED (IPS)



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

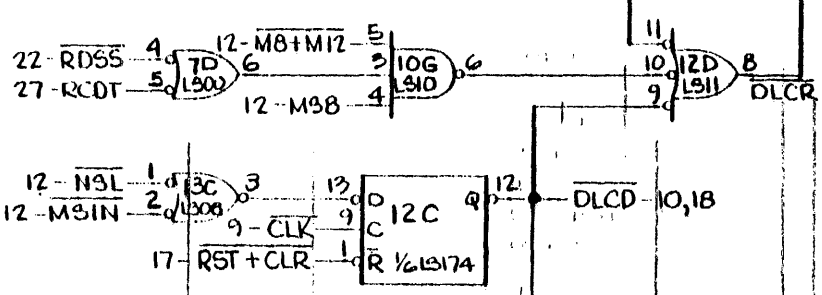
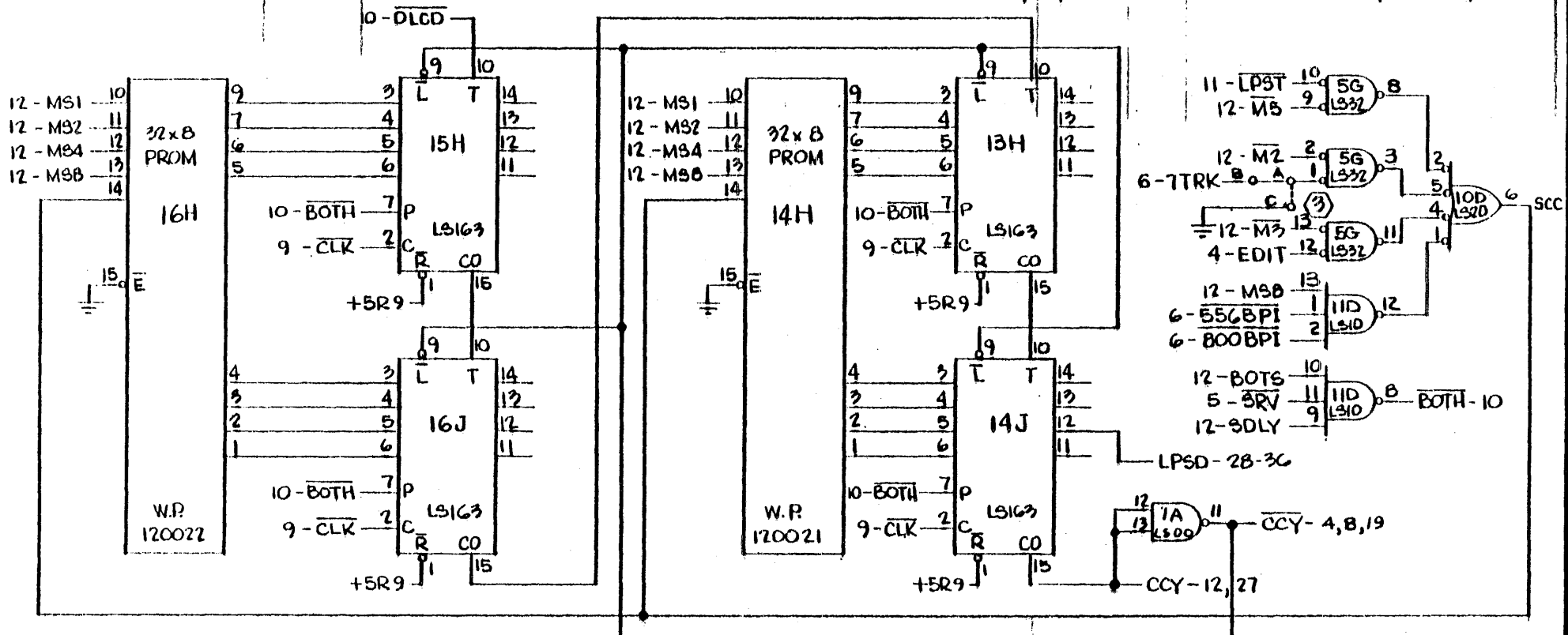


COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA		
APPROVALS	DATE			CLOCK GENERATOR & SPEED CONTROL
DRAWN	10-4-78	SCALE	SIZE	
CHECKED			B	75000026
		DO NOT SCALE DRAWING		SHEET 11 OF 30

REVISIONS

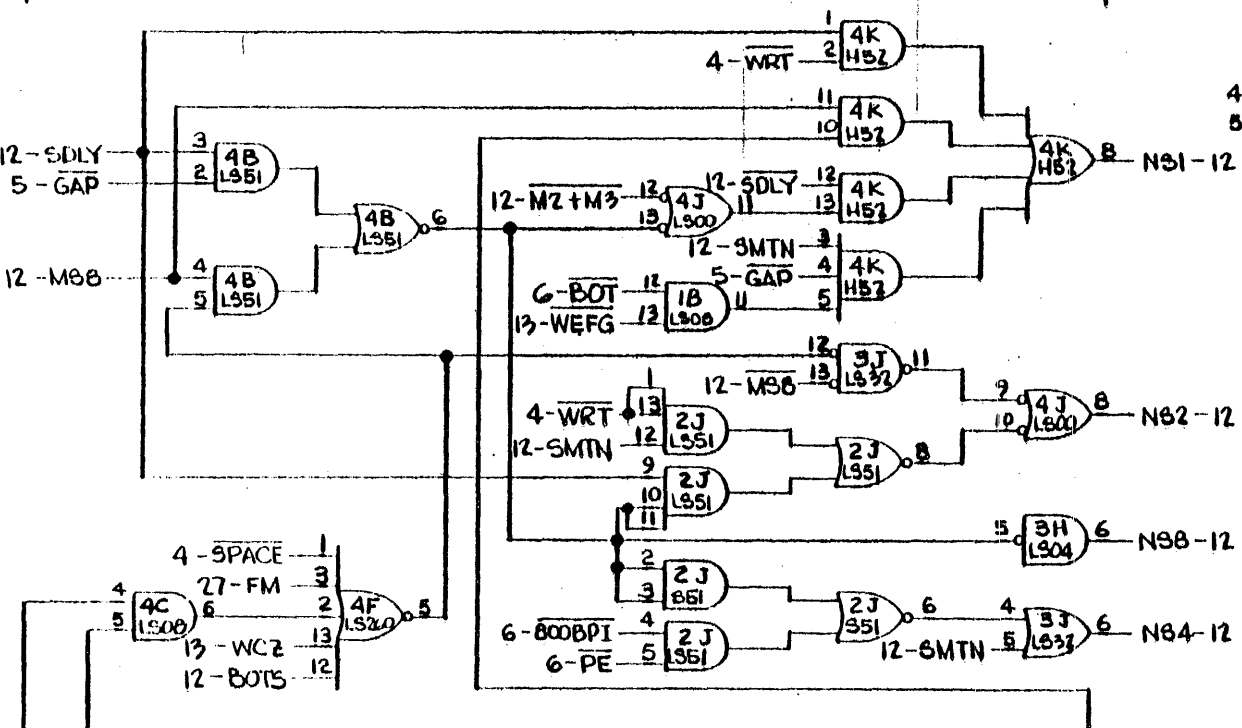
CTR	DESCRIPTION	DATE	APPROVED



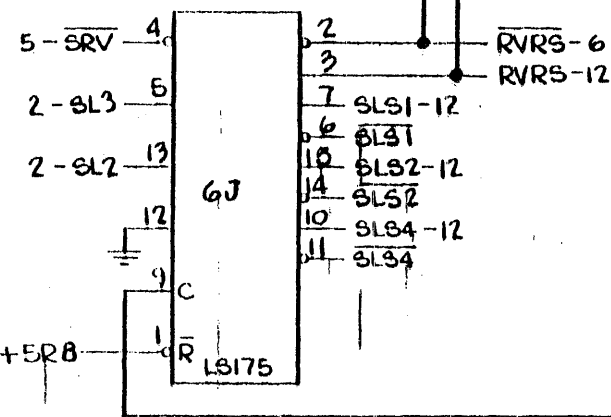
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	<h2>DELAY GENERATOR</h2>	
DRAWN	10-4-78	SCALE	SIZE B DRAWING NO. 75000026
CHECKED		DO NOT SCALE DRAWING SHEET 12 OF 30	

STATE CHANGE CONTROL

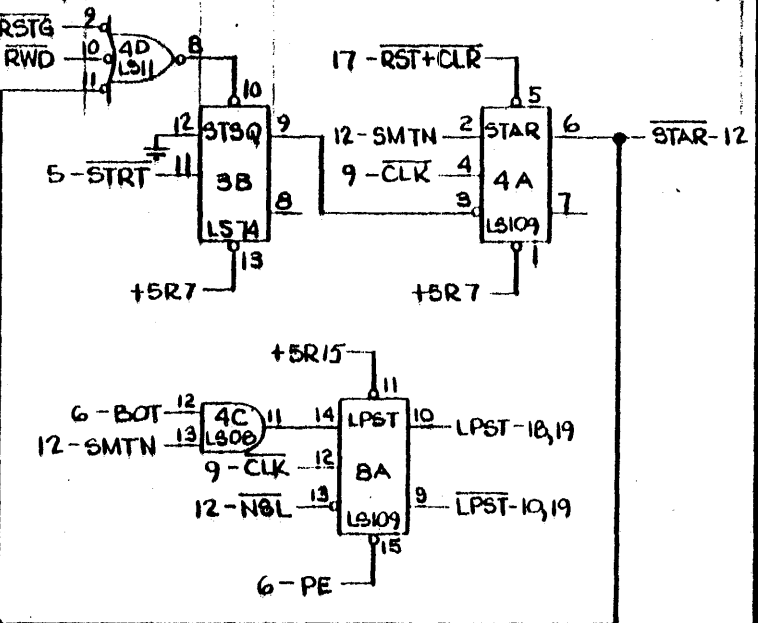


AUTOMATIC NON-STOP CONTROL



REVISIONS			
ITER	DESCRIPTION	DATE	APPROVED

START SYNCHRONIZER



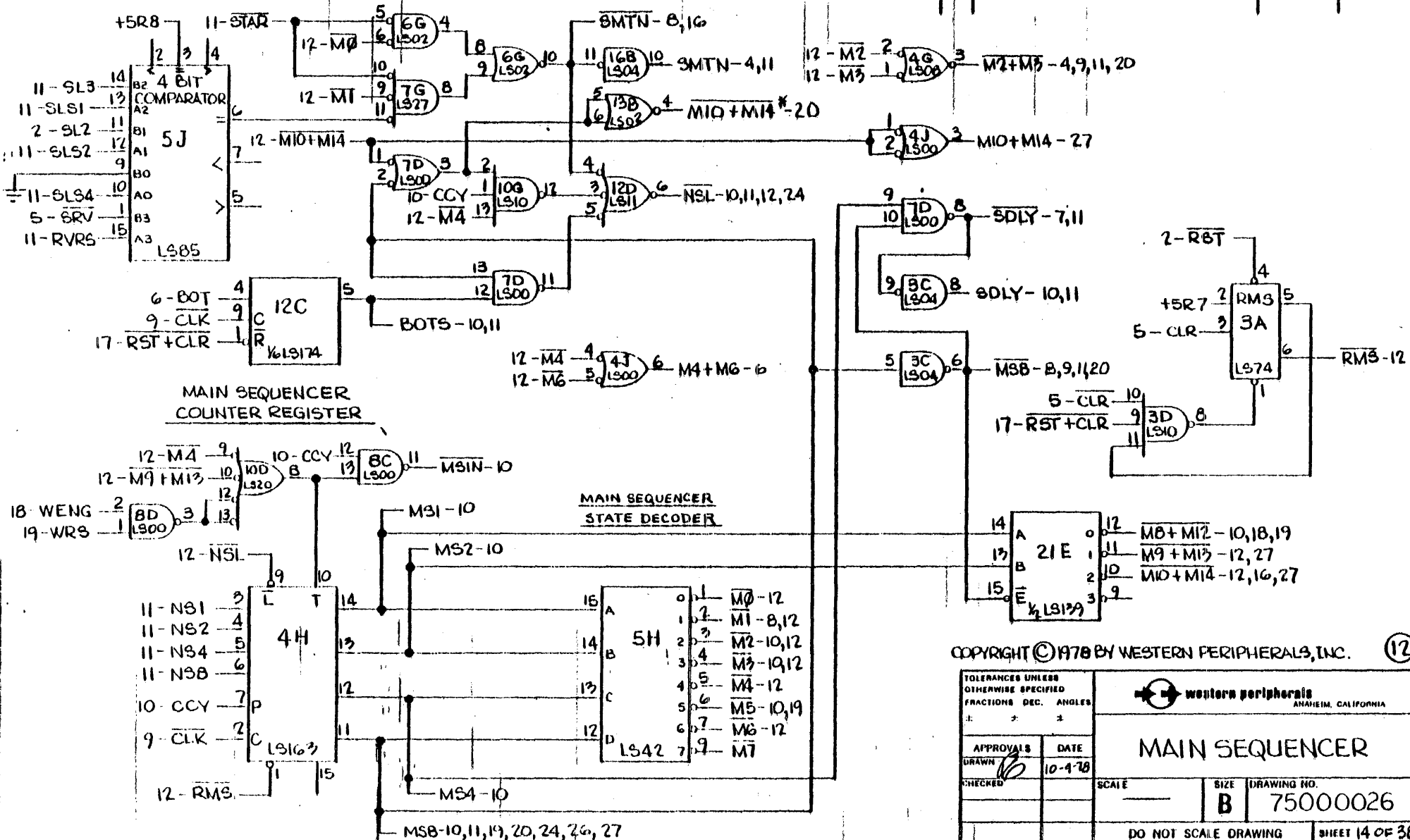
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	MAIN SEQUENCER	
CHECKED	10-1-78	SCALE	SIZE B DRAWING NO. 75000026
DO NOT SCALE DRAWING		SHEET 13 OF 28	

AUTOMATIC NON-STOP CONTROL

MAIN SEQUENCER CHANGE CONTROL

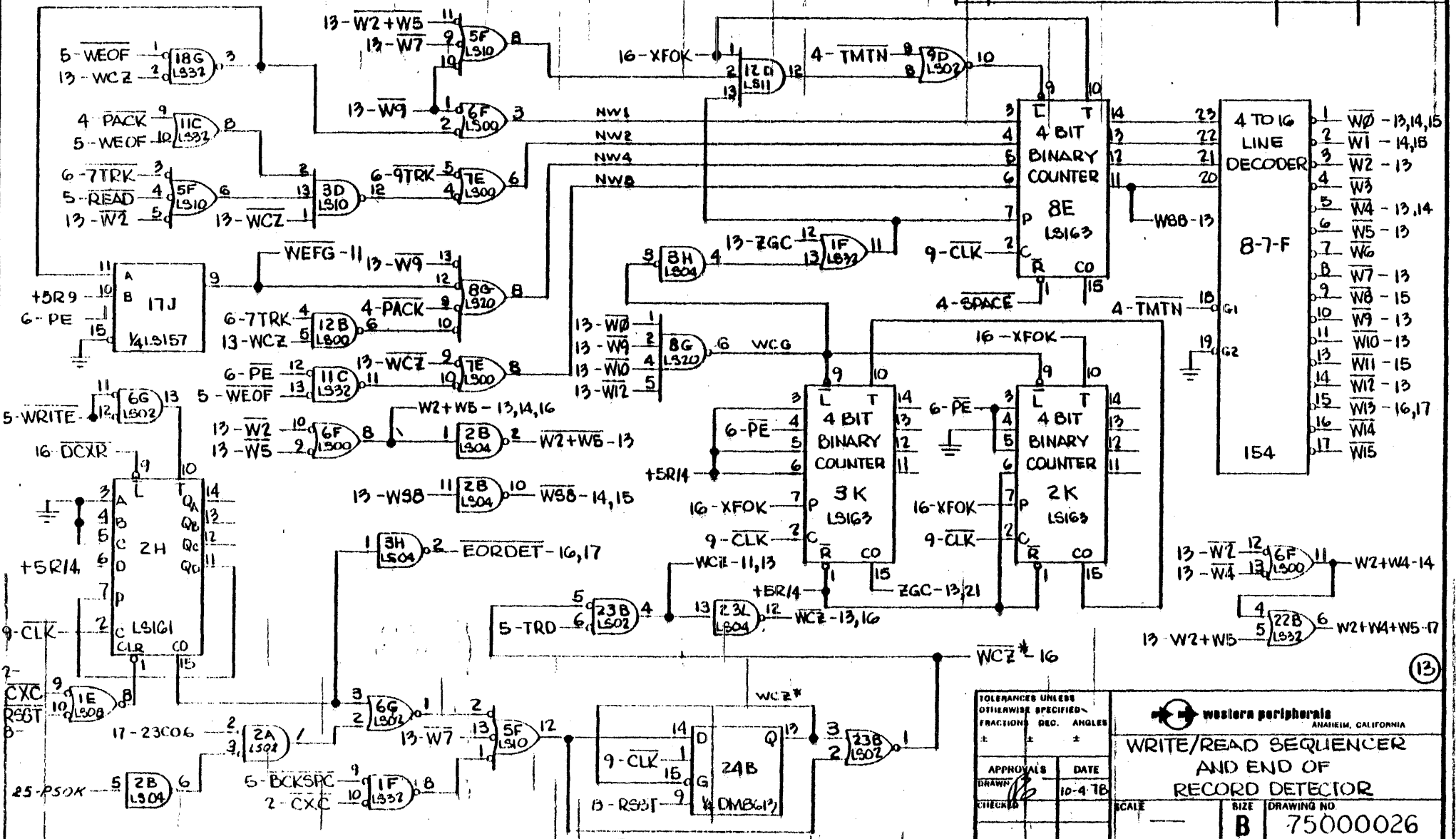
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC. (12)

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN CHECKED		DATE 10-4-78	
SCALE		SIZE B	DRAWING NO. 75000026
DO NOT SCALE DRAWING		SHEET 14 OF 38	

REVISIONS			
STR	DESCRIPTION	DATE	APPROVED



(13)

TOLERANCES UNLESS OTHERWISE SPECIFIED - FRACTIONS DEC. ANGLES ± ± ±

western peripherals
ANAHEIM, CALIFORNIA

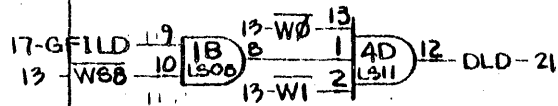
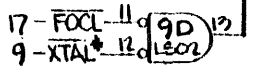
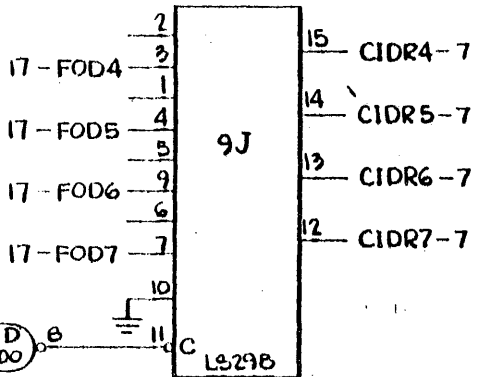
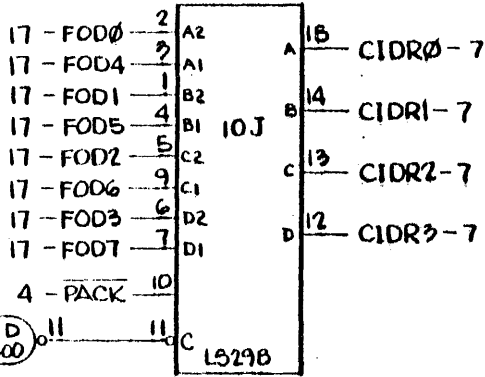
**WRITE/READ SEQUENCER
AND END OF
RECORD DETECTOR**

APPROVALS DRAWN	DATE 10-4-78	SCALE	SIZE B	DRAWING NO. 75000026
CHECKED				

DO NOT SCALE DRAWING SHEET 15 OF 28

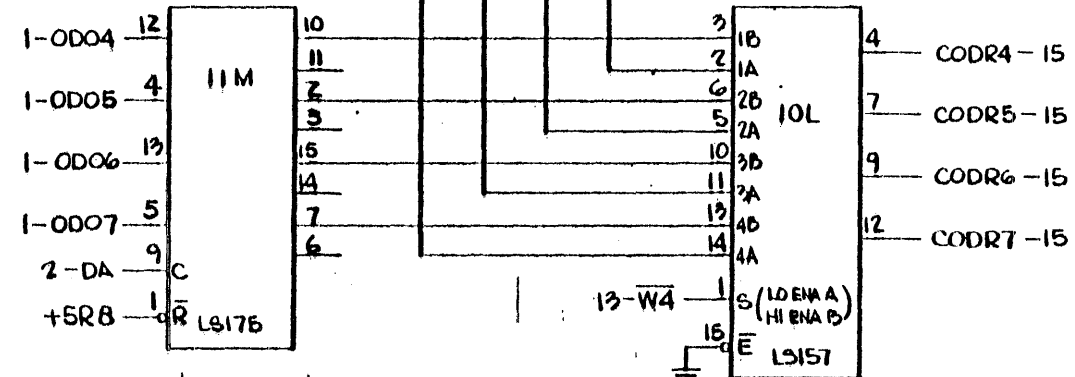
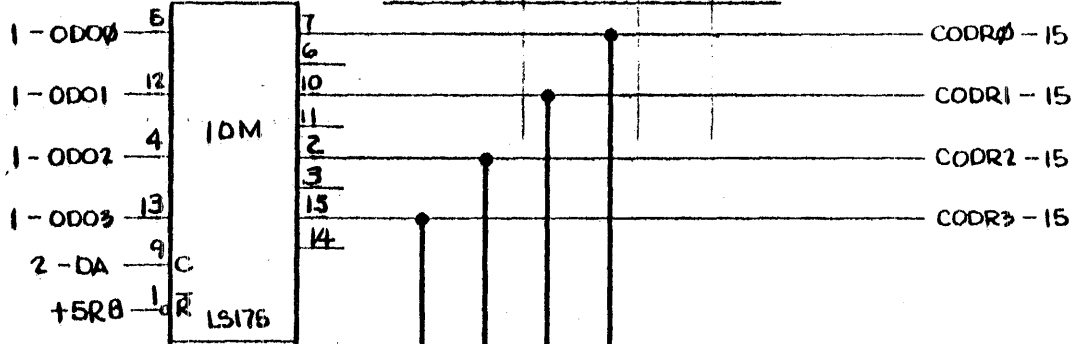
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

COMPUTER INPUT REGISTER



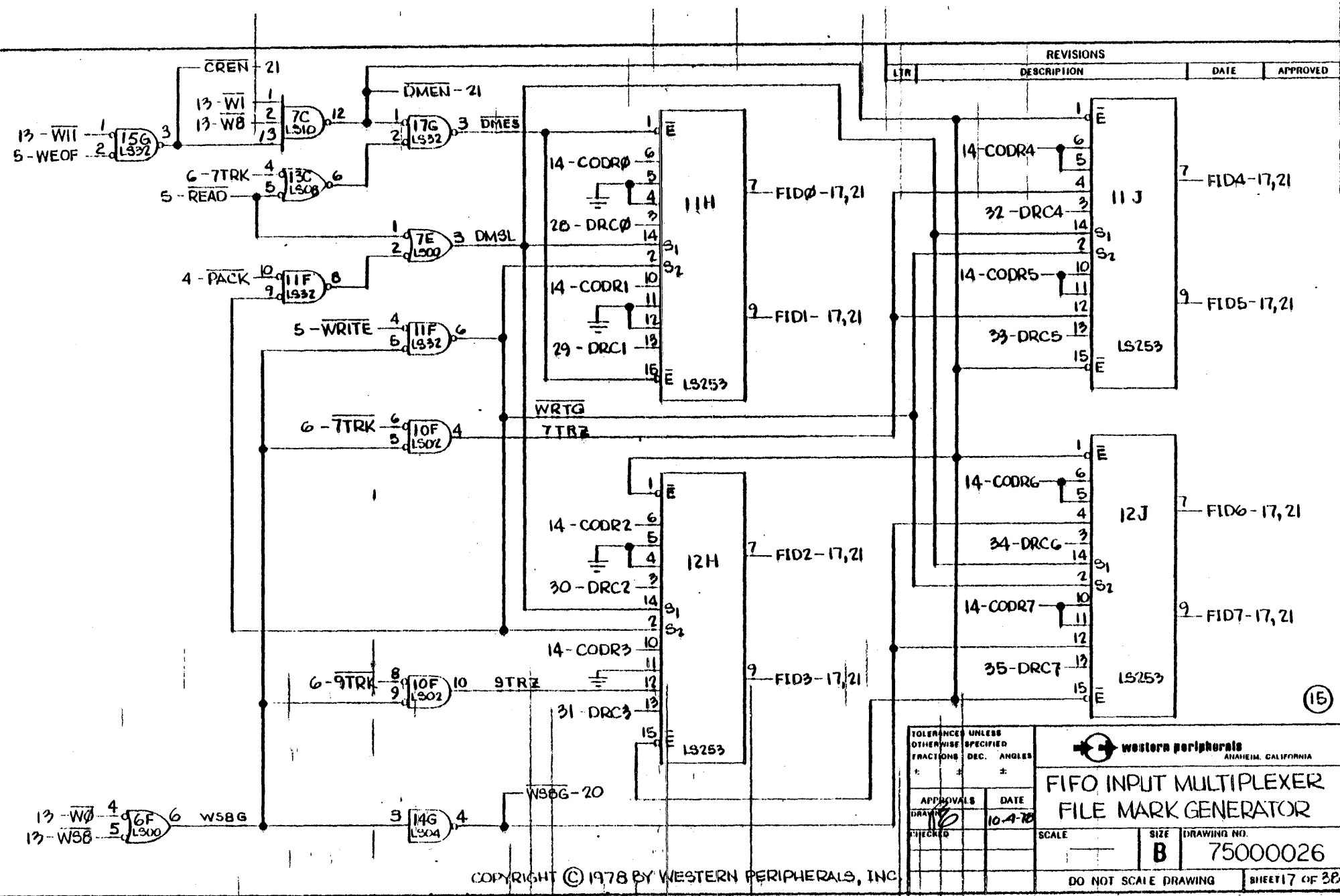
REVISIONS			
CTR	DESCRIPTION	DATE	APPROVED


COMPUTER OUTPUT REGISTER



(14)

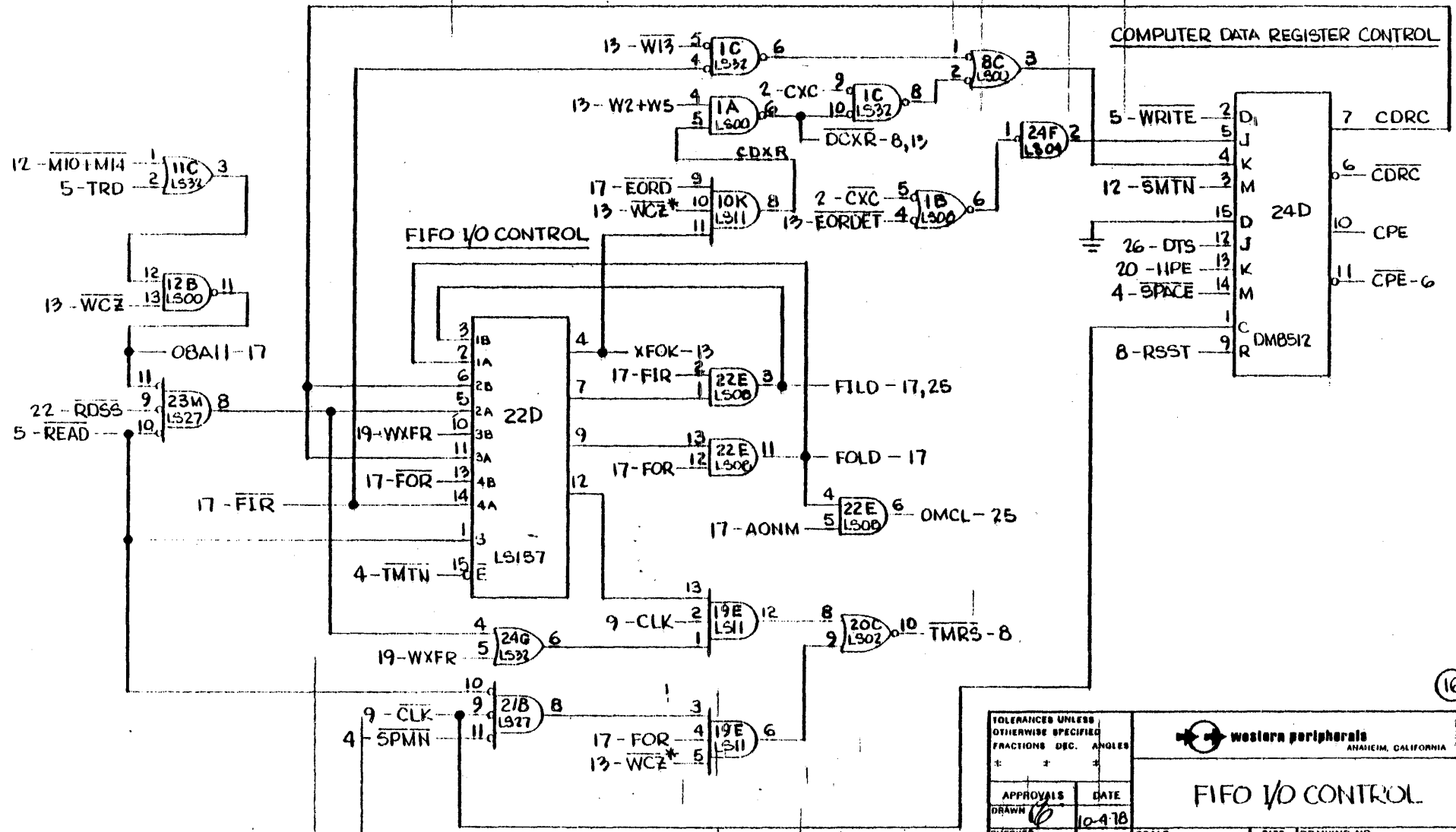
TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES	
±	±	±	
APPROVALS	DATE	COMPUTER INPUT/OUTPUT REGISTER	
DRAWN	10-4-78	SCALE	SIZE B
CHECKED		DRAWING NO.	75000026
		DO NOT SCALE DRAWING	
		SHEET 16 OF 38	



TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC. ANGLES		
APPROVALS	DATE	FIFO INPUT MULTIPLEXER FILE MARK GENERATOR	
DRAWN	10-4-78		
CHECKED			
SCALE	SIZE	DRAWING NO.	
	B	75000026	
DO NOT SCALE DRAWING			SHEET 17 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



(16)

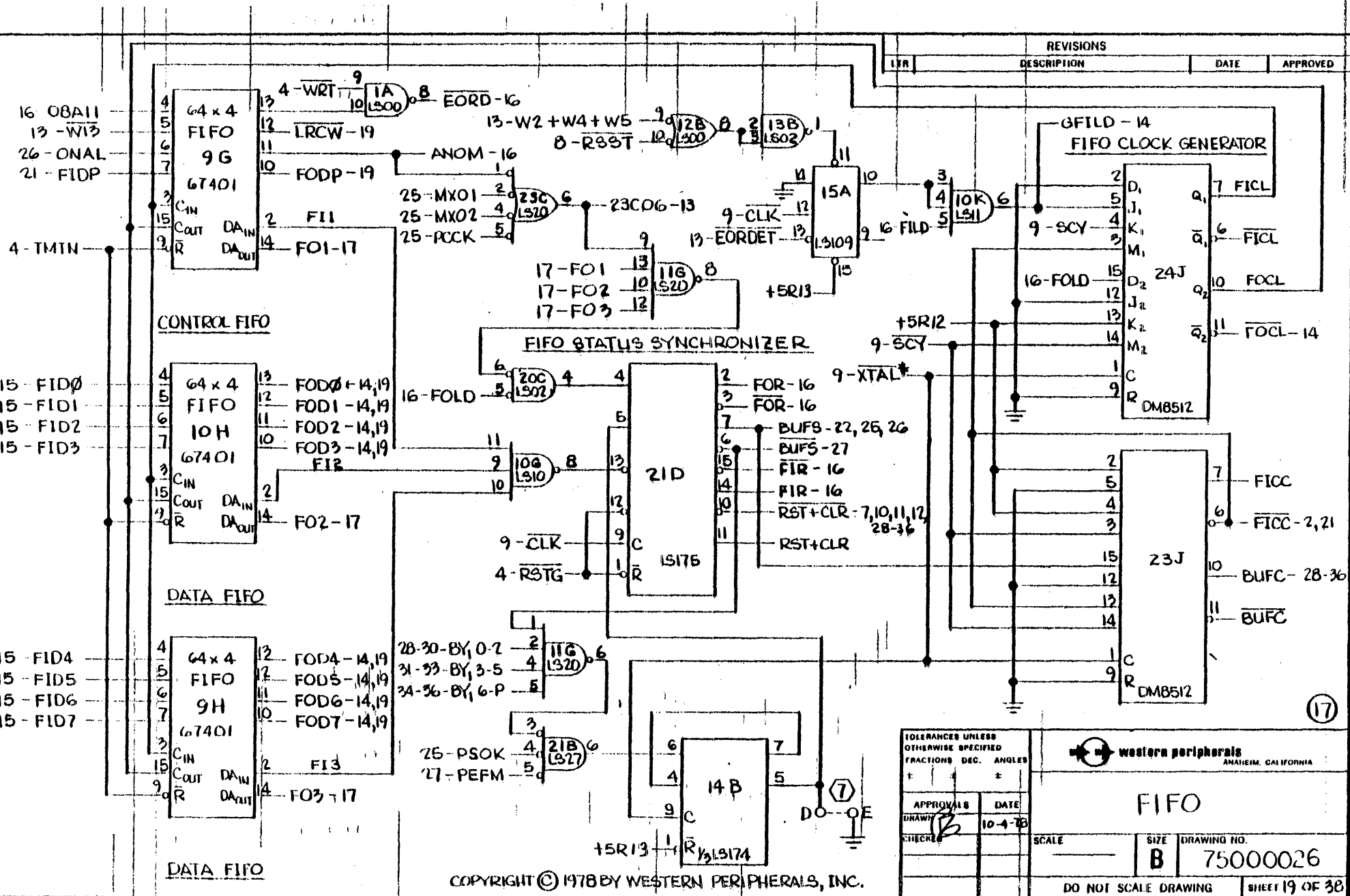
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC.
±	±
ANGLES	±
APPROVALS	DATE
DRAWN	10-4-78
CHECKED	

western peripherals
ANAHEIM, CALIFORNIA

FIFO I/O CONTROL

SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 18 OF 30

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.



REVISIONS			
IFR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>B</i>	10-4-78
CHECKED	

western peripherals
ANAHEIM, CALIFORNIA

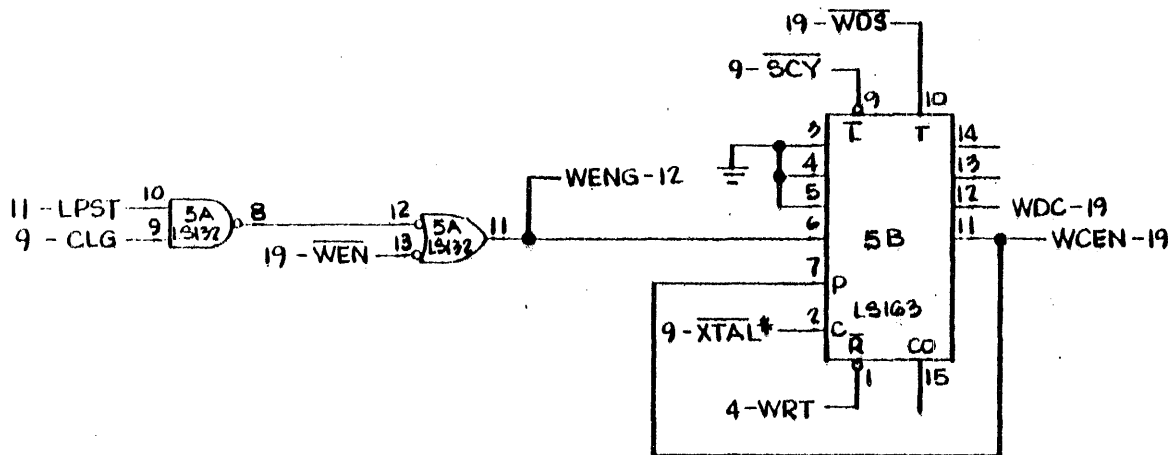
FIFO

SCALE: _____ SIZE: **B** DRAWING NO.: **75000026**

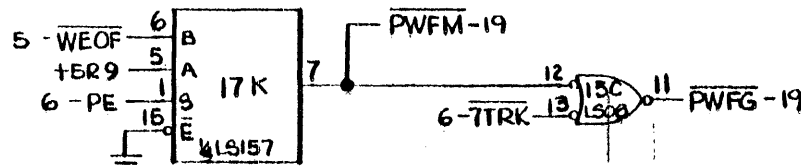
DO NOT SCALE DRAWING SHEET 19 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

(17)



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

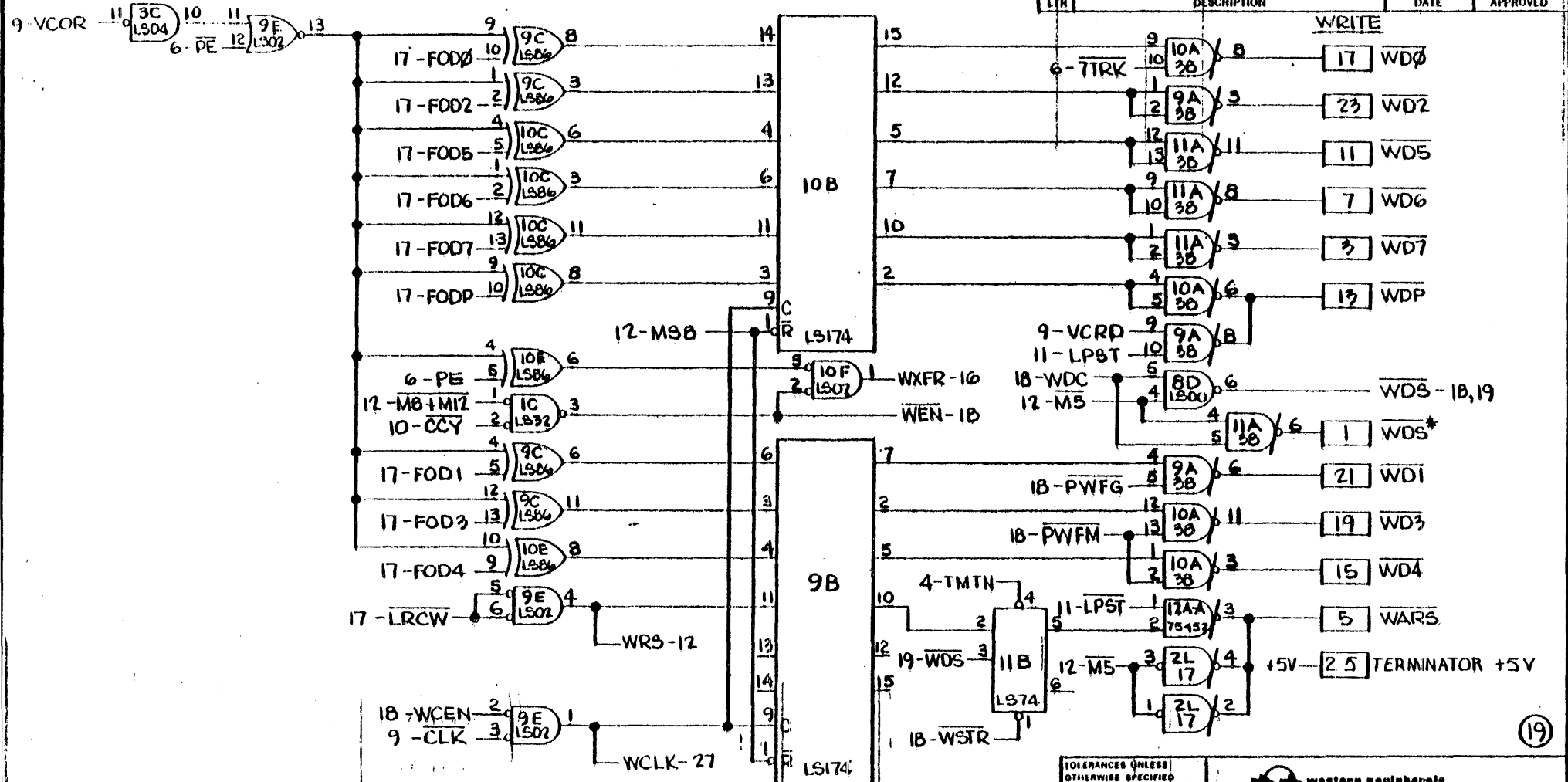


(18)


TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	WRITE DATA & CONTROL	
DRAWN <i>[Signature]</i>	10-4-78	SCALE	SIZE B DRAWING NO. 75000026
CHECKED		DO NOT SCALE DRAWING	
		SHEET 20 OF 38	

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN	10-1-78
CHECKED	

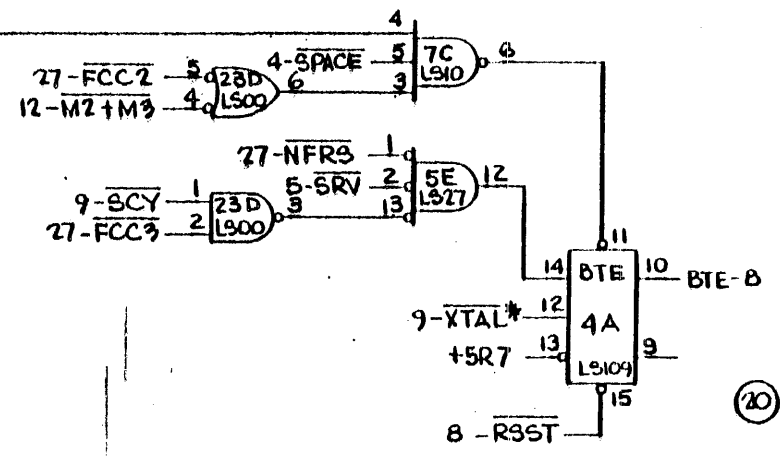
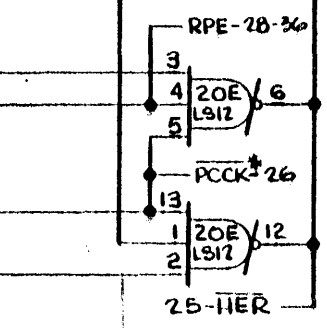
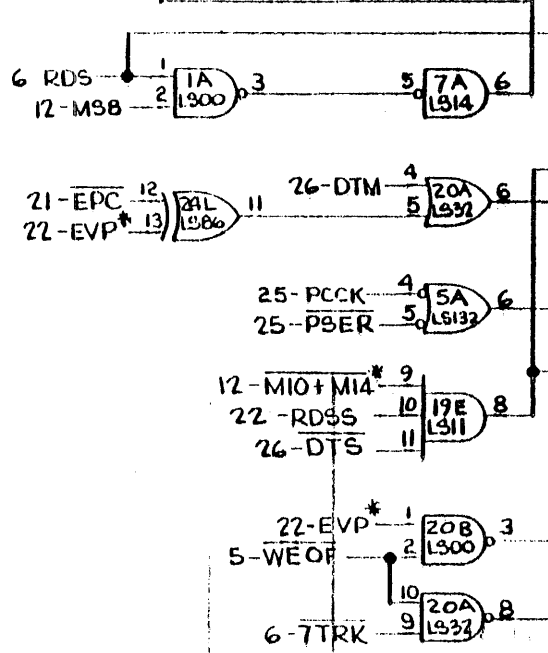
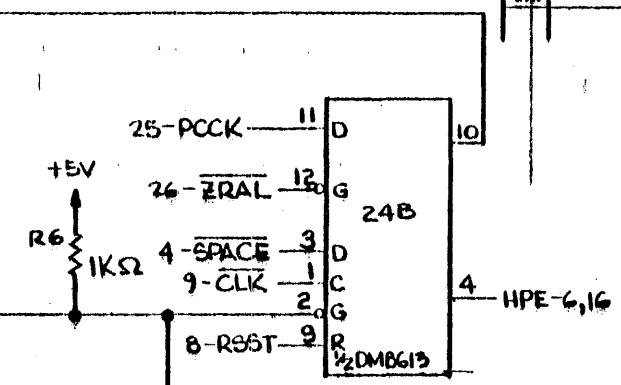
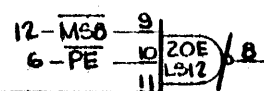
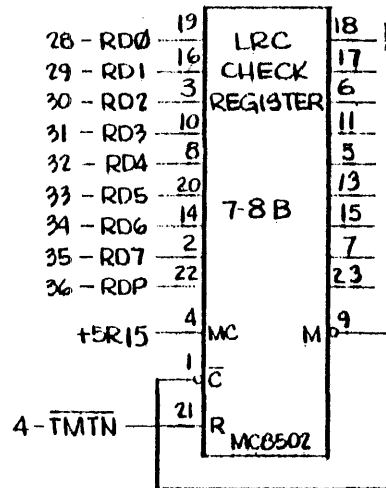

western peripherals
 ANAHEIM, CALIFORNIA

WRITE DATA & CONTROL

SCALE: _____ SIZE: **B** DRAWING NO.: **75000026**

DO NOT SCALE DRAWING SHEET 21 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.



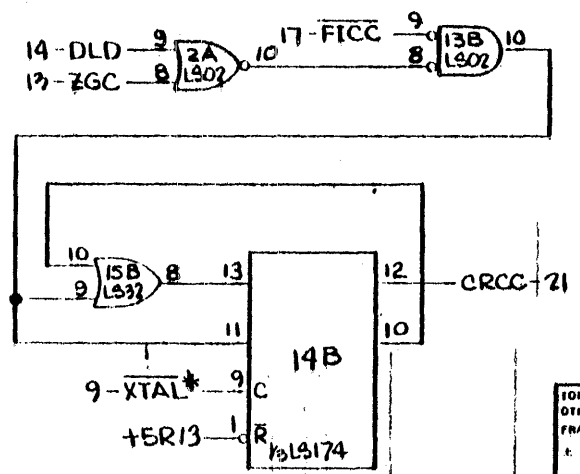
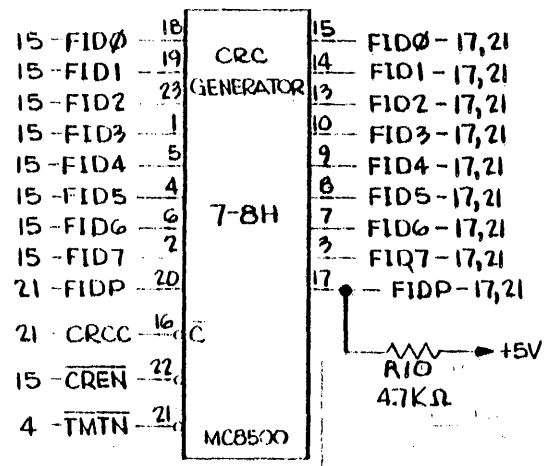
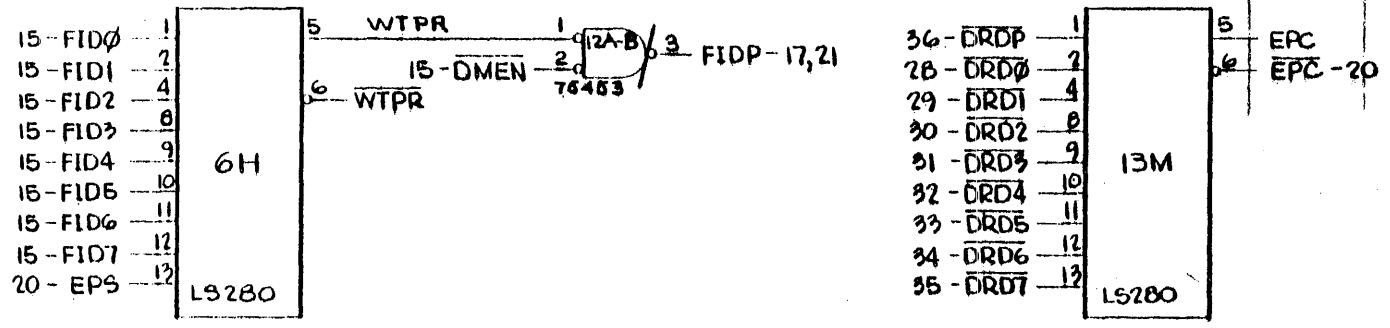
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS DEC.	ANGLES
±	±
APPROVALS	DATE
DRAWN	10-4-78
CHECKED	

western peripherals ANAHEIM, CALIFORNIA		
<h2>PARITY GENERATOR</h2>		
SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 22 of 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

(21)

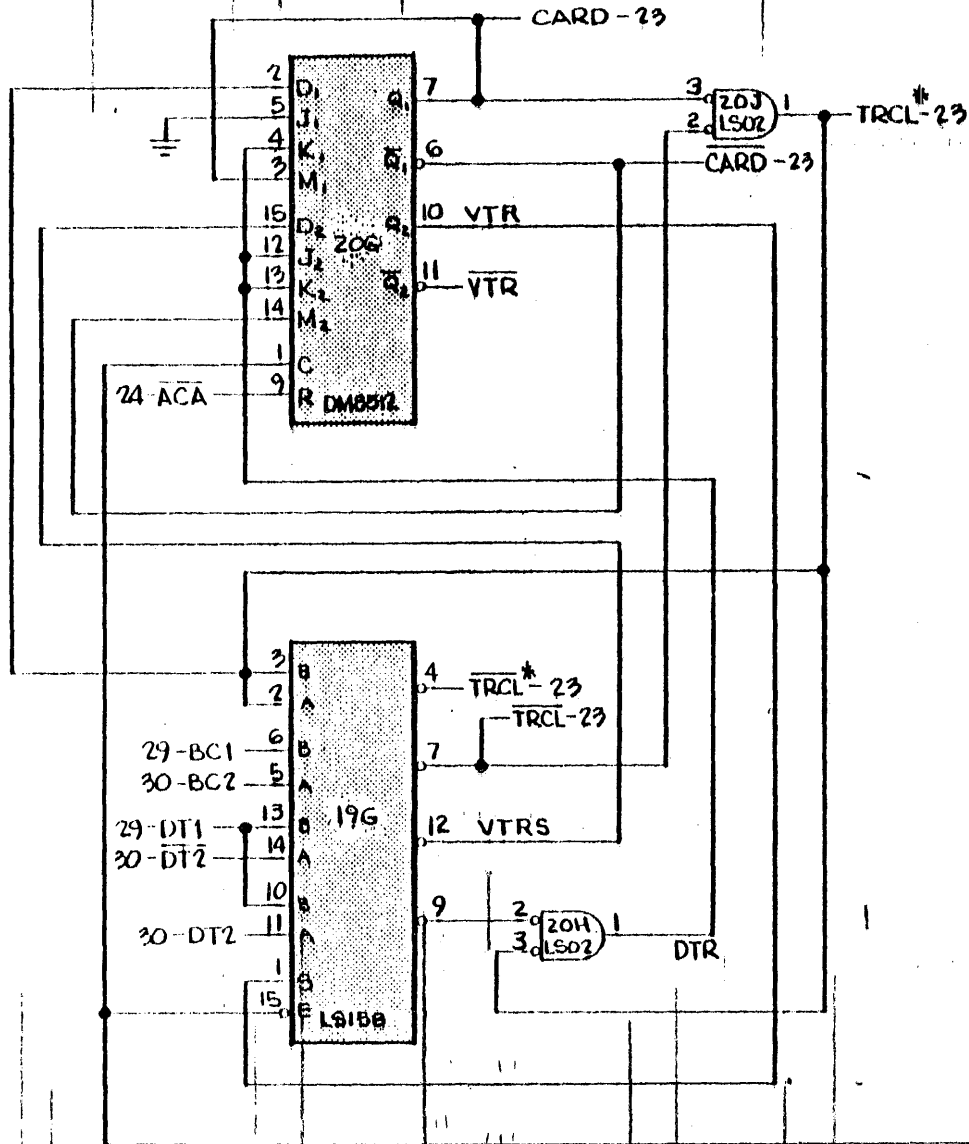
western peripherals
ANAHEIM, CALIFORNIA

PARITY GENERATOR

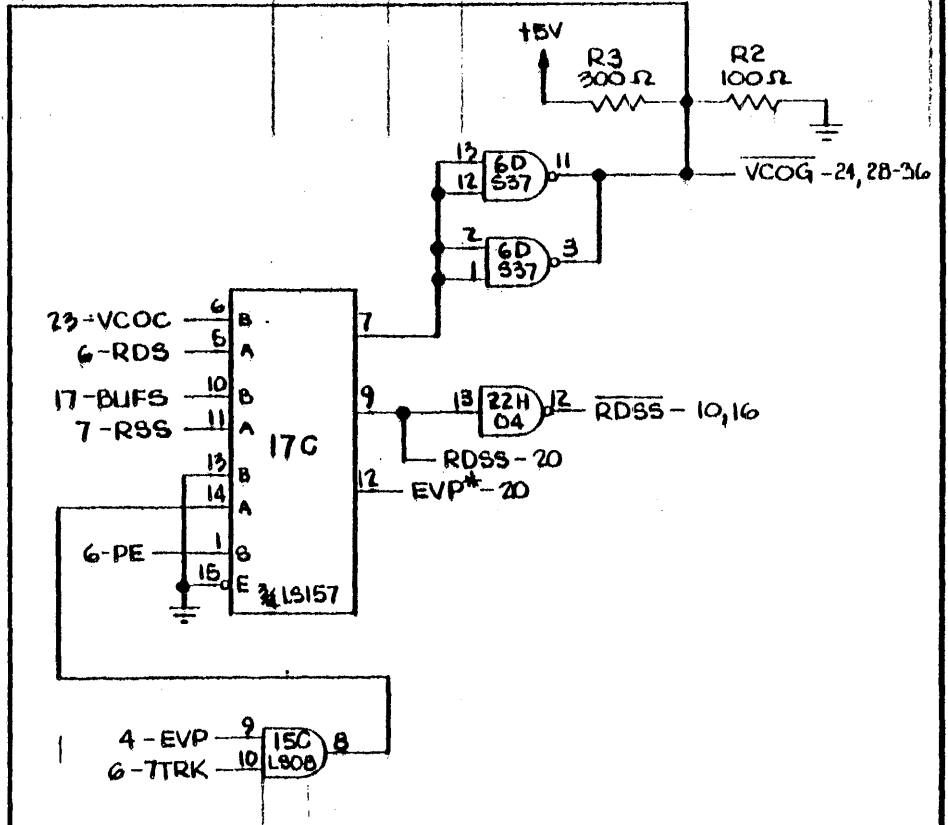
SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 23 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REFERENCE TRACK SELECT



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



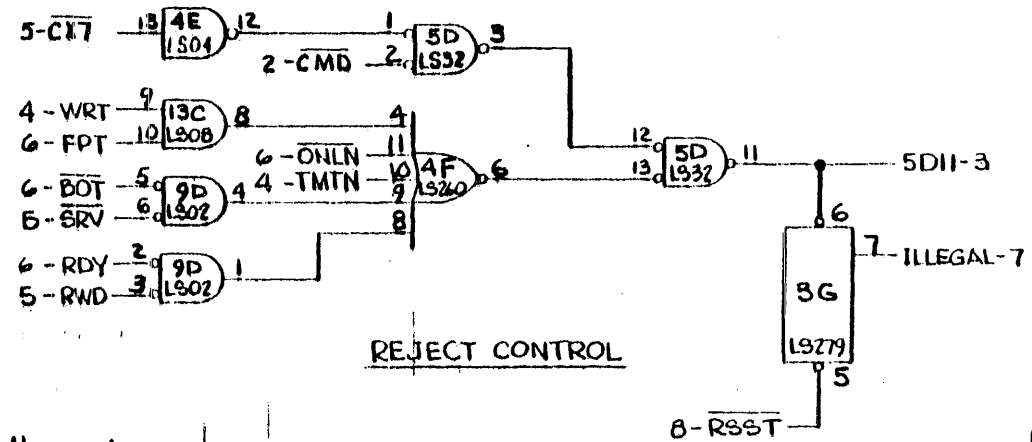
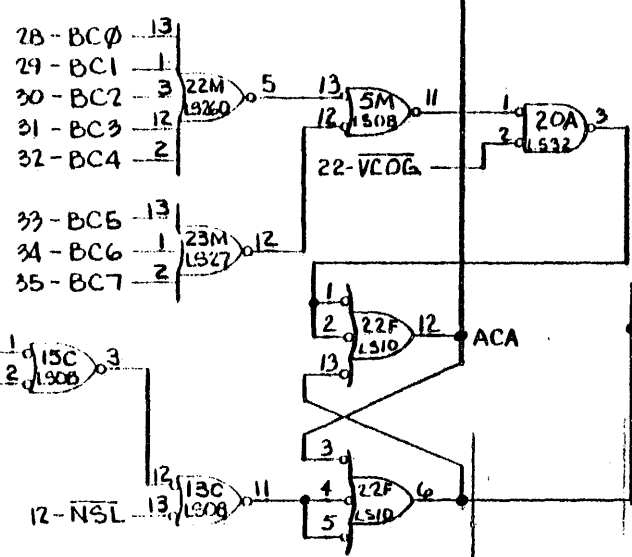
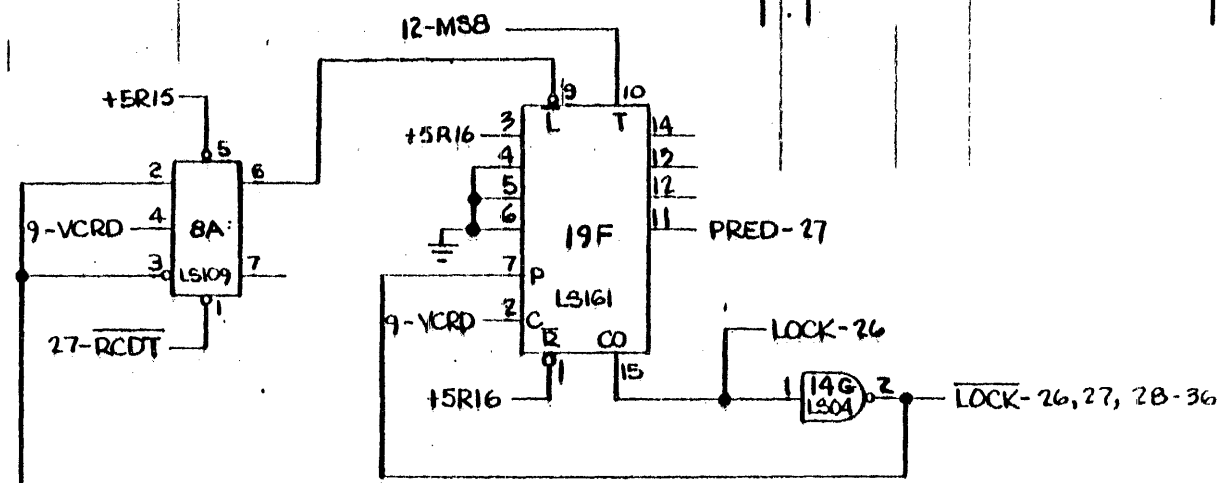
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	VCO CONTROL	
DRAWN	10-4-78	SCALE	SIZE B DRAWING NO. 75000026
CHECKED		DO NOT SCALE DRAWING SHEET 24 OF 38	

(22)

PREAMBLE DETECTOR

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



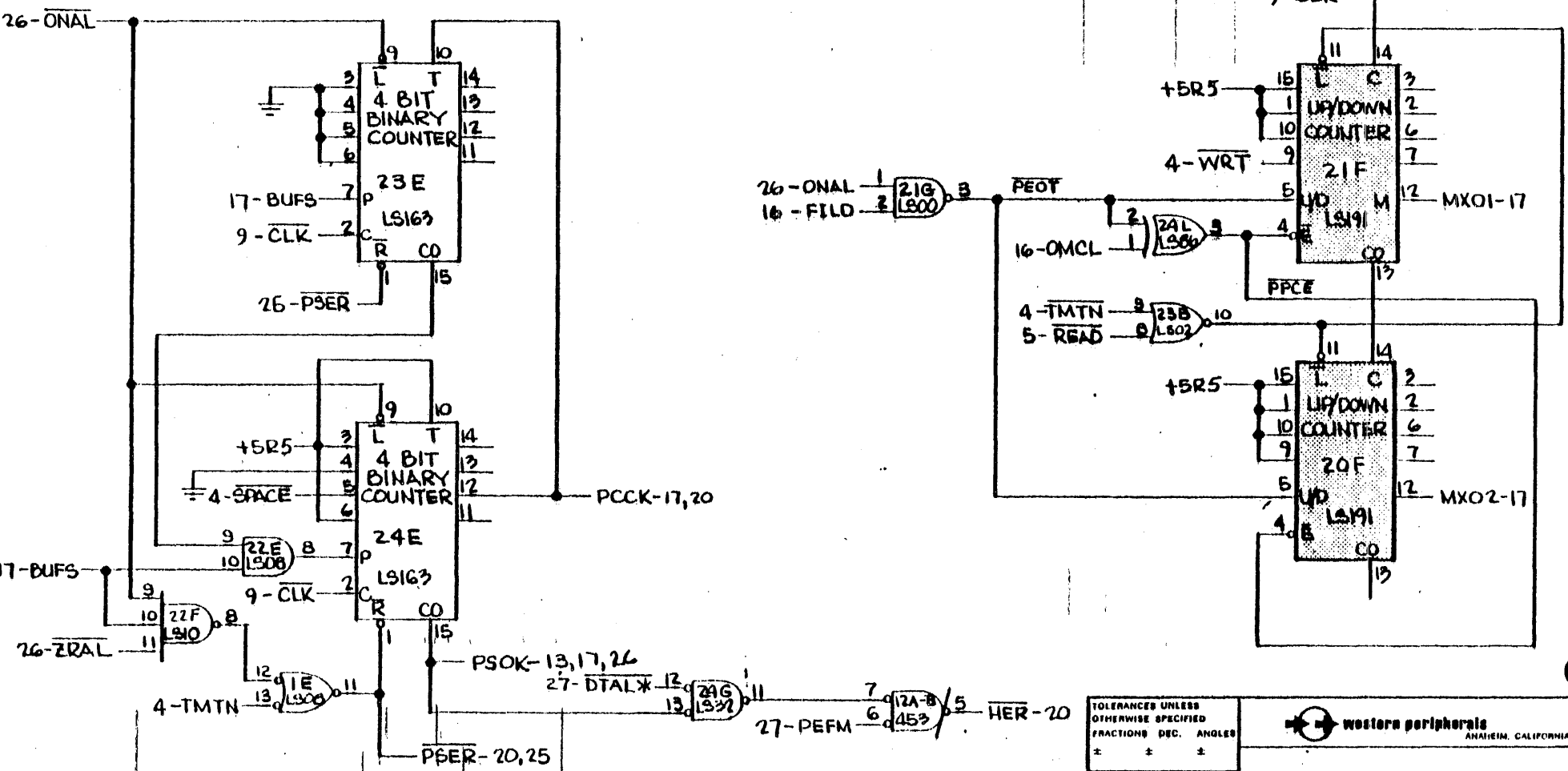
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN <i>[Signature]</i> CHECKED		DATE 10-4-78	
SCALE _____		SIZE B	
DRAWING NO. 75000026		SHEET 26 OF 30	
DO NOT SCALE DRAWING			

POSSIBLE POSTAMBLE DETECTOR

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

POSSIBLE POSTAMBLE COUNTER



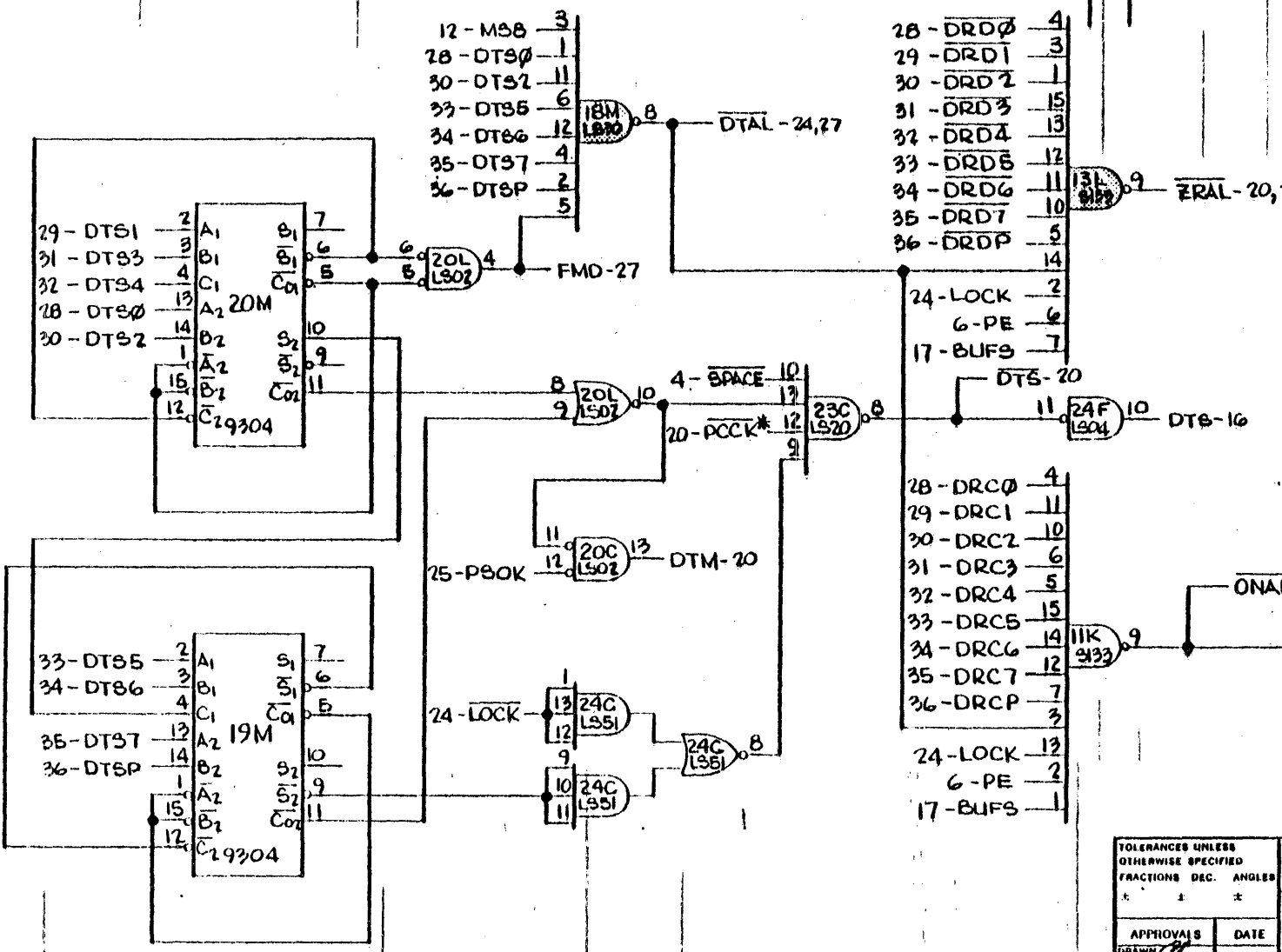
(25)

TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN <i>[Signature]</i>	10-4-78
CHECKED	

western peripherals ANAHEIM, CALIFORNIA		
POSTAMBLE DETECTOR		
SCALE	SIZE	DRAWING NO.
	B	75000026
DO NOT SCALE DRAWING		SHEET 27 OF 30

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

REVISIONS			
TR	DESCRIPTION	DATE	APPROVED



- 28 - DRD0 4
- 29 - DRD1 3
- 30 - DRD2 1
- 31 - DRD3 15
- 32 - DRD4 13
- 33 - DRD5 12
- 34 - DRD6 11
- 35 - DRD7 10
- 36 - DRD8 5
- 24 - LOCK 2
- 6 - PE 6
- 17 - BUFS 7
- DTS - 20
- 24F LS04 DTS-16
- 28 - DRC0 4
- 29 - DRC1 11
- 30 - DRC2 10
- 31 - DRC3 6
- 32 - DRC4 5
- 33 - DRC5 15
- 34 - DRC6 14
- 35 - DRC7 12
- 36 - DRC8 3
- 24 - LOCK 13
- 6 - PE 2
- 17 - BUFS 1

TR	DESCRIPTION	DATE	APPROVED
	ZRAL-20,25		
	ONAL-25		
	ONAL-17,25		

(26)

TOLERANCES UNLESS OTHERWISE SPECIFIED
 FRACTIONS DEC. ANGLES
 * ± *

western peripherals
 ANAHEIM, CALIFORNIA

DEAD TRACK DETECTOR

APPROVALS	DATE
DRAWN	10-4-78
CHECKED	

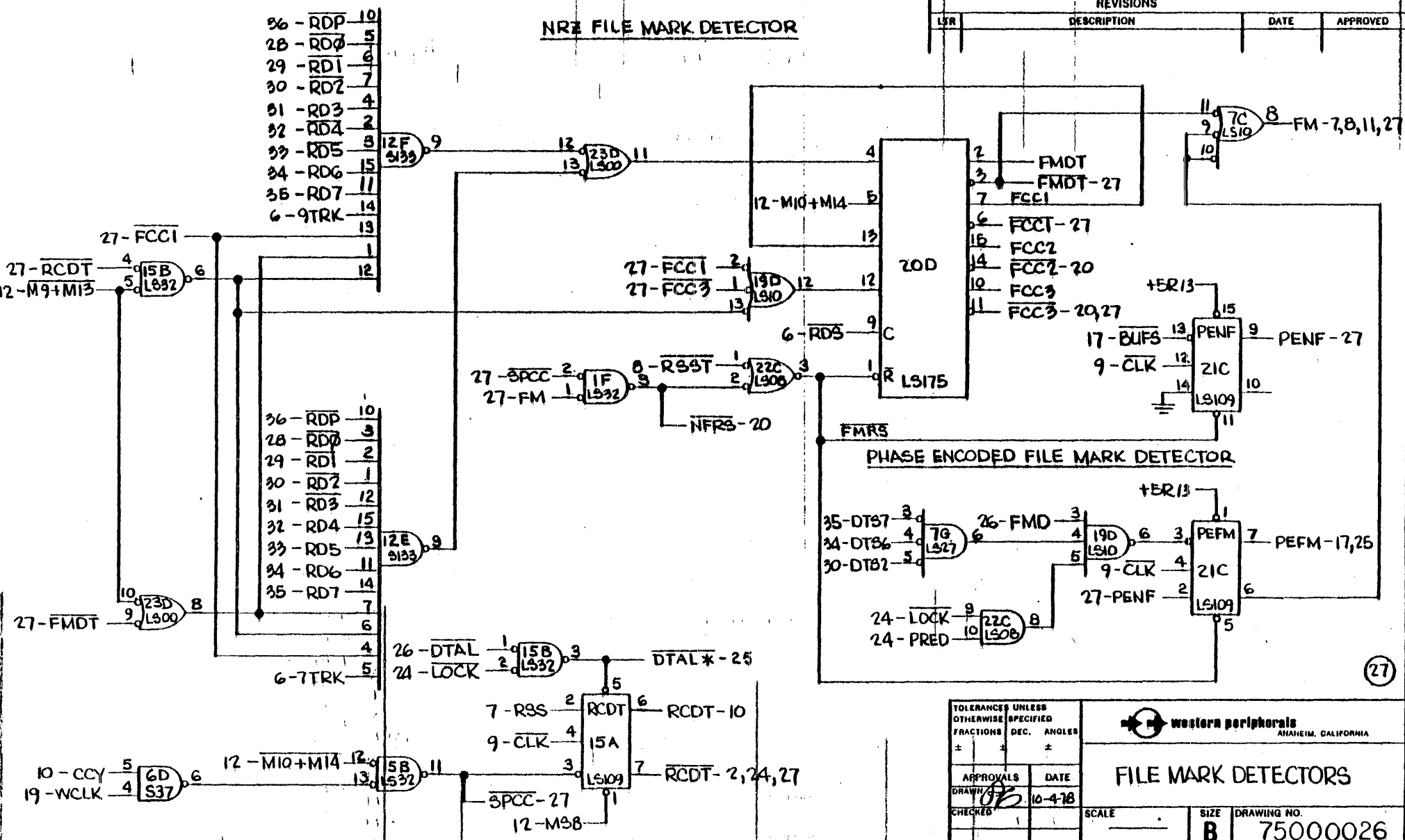
SCALE	SIZE	DRAWING NO.
	B	75000026

DO NOT SCALE DRAWING SHEET 28 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

NRZ FILE MARK DETECTOR

REVISIONS			
LSR	DESCRIPTION	DATE	APPROVED



COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

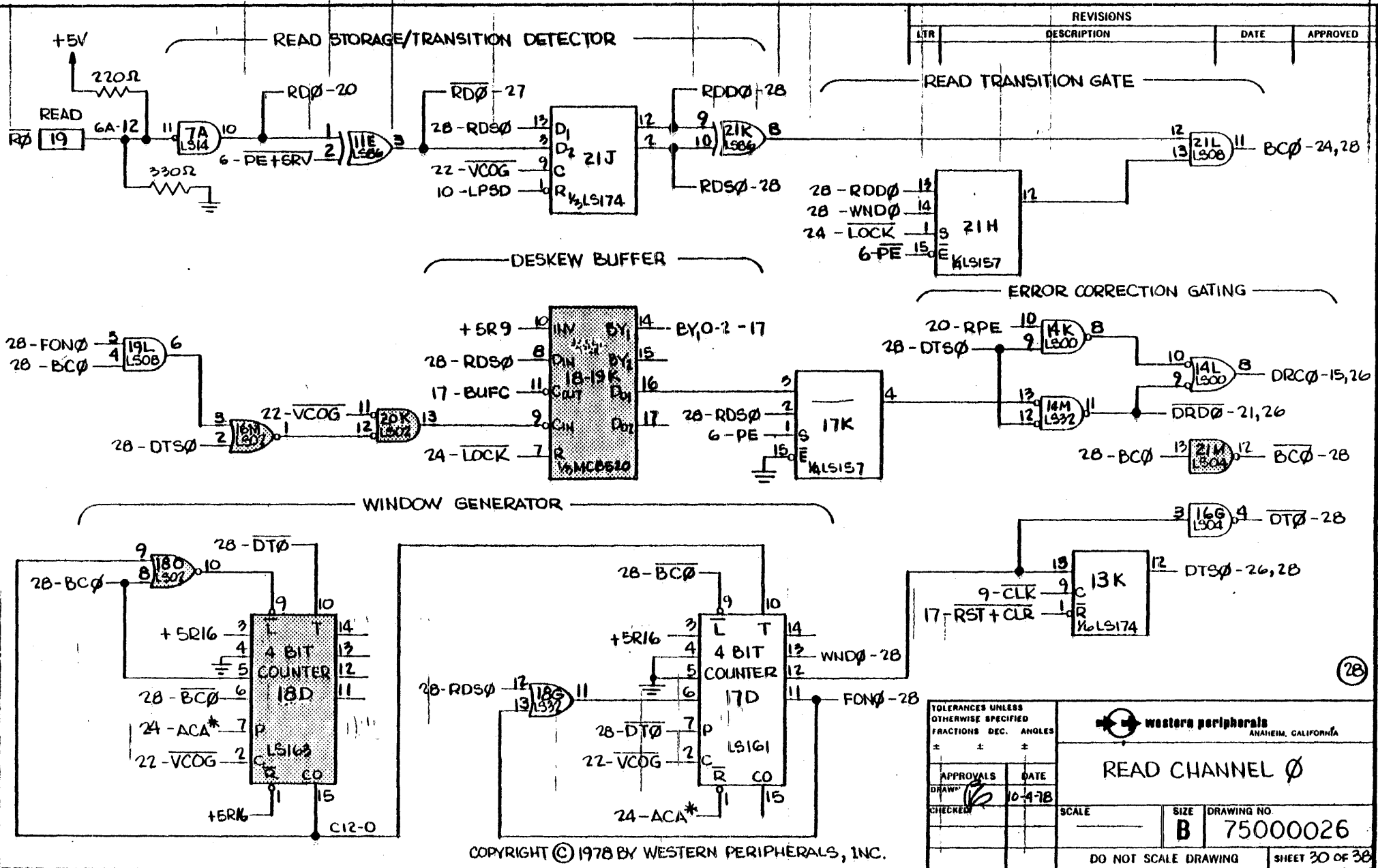
TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS	DEC. ANGLES
±	±
APPROVALS	DATE
DRAWN	10-4-78
CHECKED	SCALE

western peripherals
ANAHEIM, CALIFORNIA

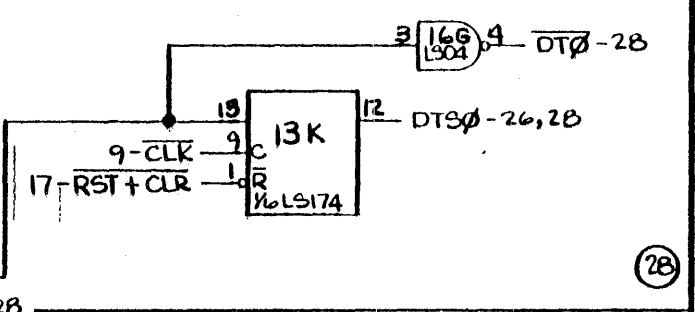
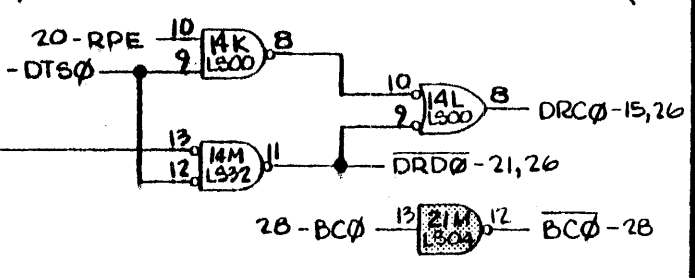
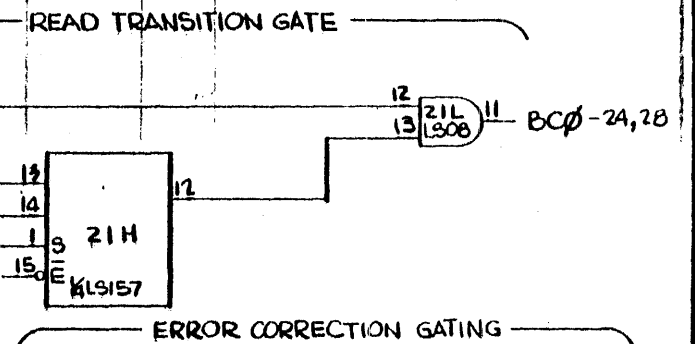
FILE MARK DETECTORS

SIZE	DRAWING NO.
B	75000026
DO NOT SCALE DRAWING	

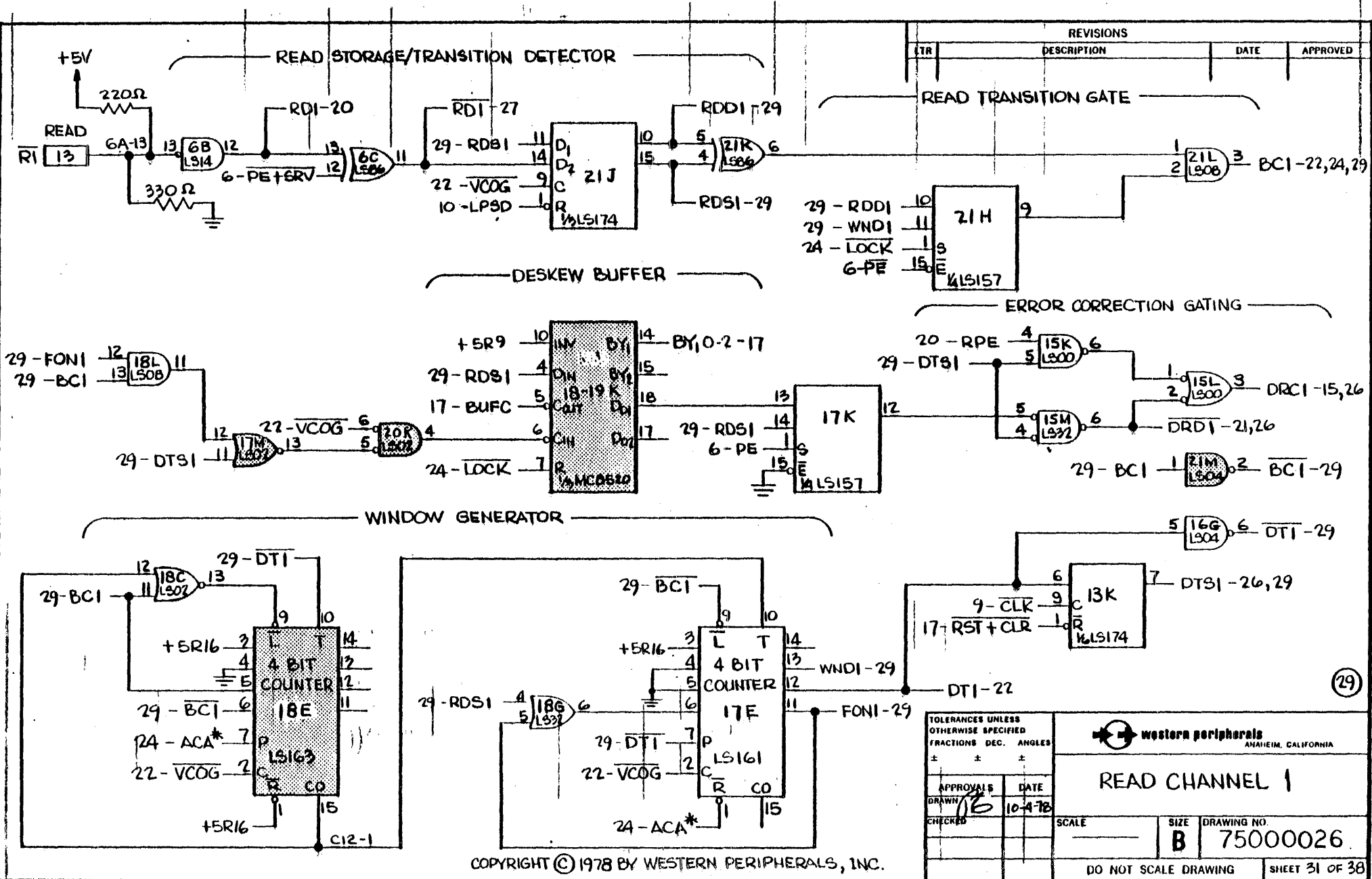
27



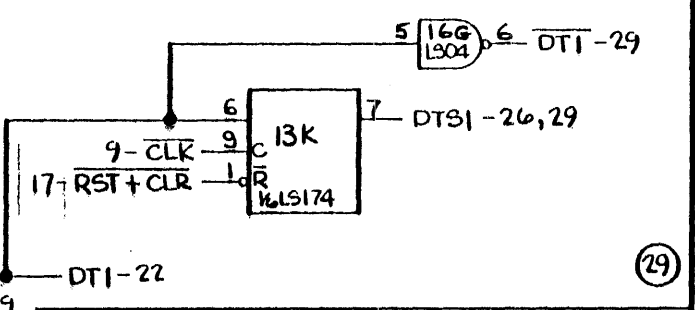
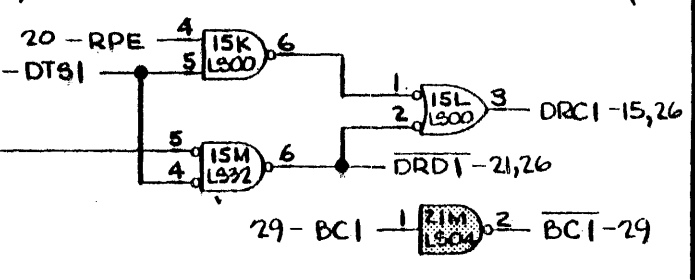
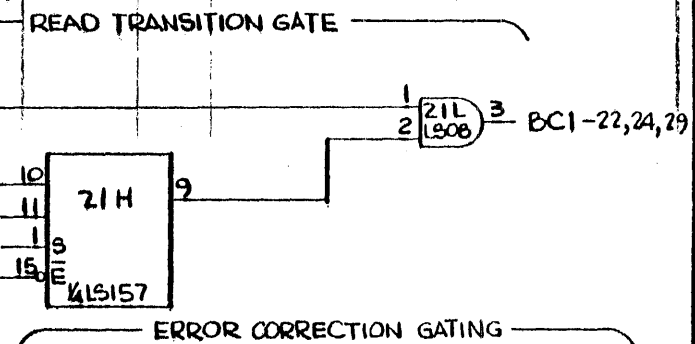
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA		
FRACTIONS DEC.	ANGLES			
± ± ±	± ± ±	READ CHANNEL Ø		
APPROVALS	DATE			
DRAWN	10-4-78	SCALE	SIZE	DRAWING NO.
CHECKED			B	75000026
DO NOT SCALE DRAWING				SHEET 30 OF 38

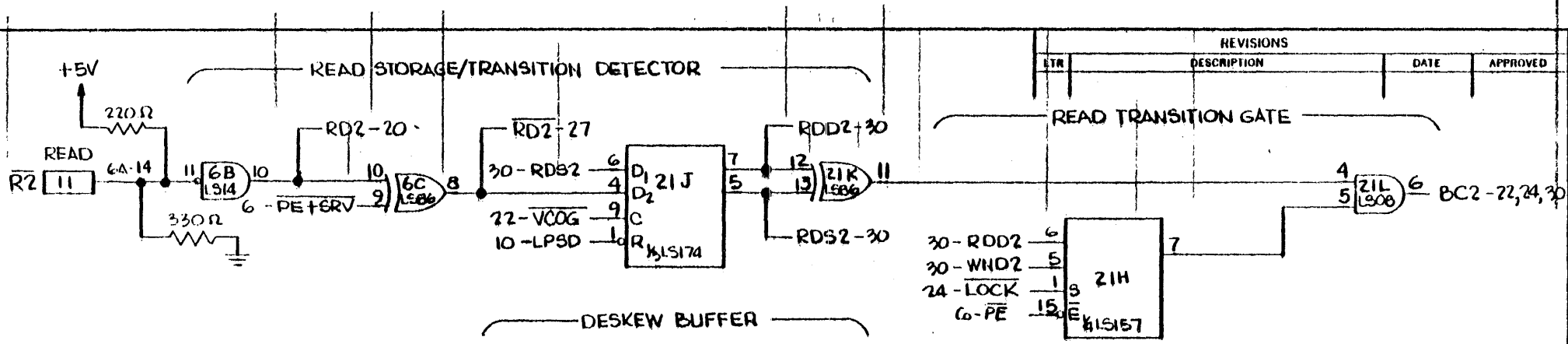


REVISIONS			
STR	DESCRIPTION	DATE	APPROVED

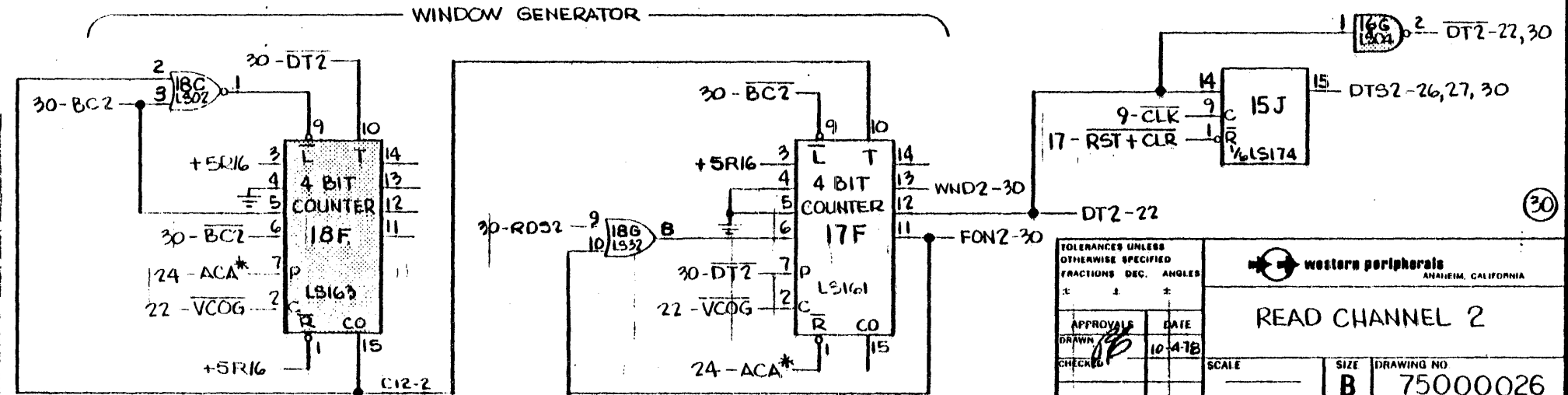
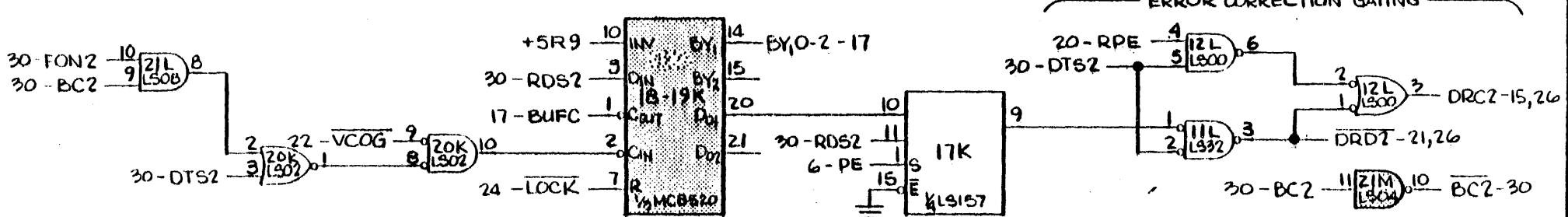


TOLERANCES UNLESS OTHERWISE SPECIFIED		 western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC. ANGLES			
±	±	READ CHANNEL 1	
APPROVALS	DATE	SCALE	SIZE
DRAWN <i>JB</i>	10-4-78		B
CHECKED			DRAWING NO. 75000026
DO NOT SCALE DRAWING			SHEET 31 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

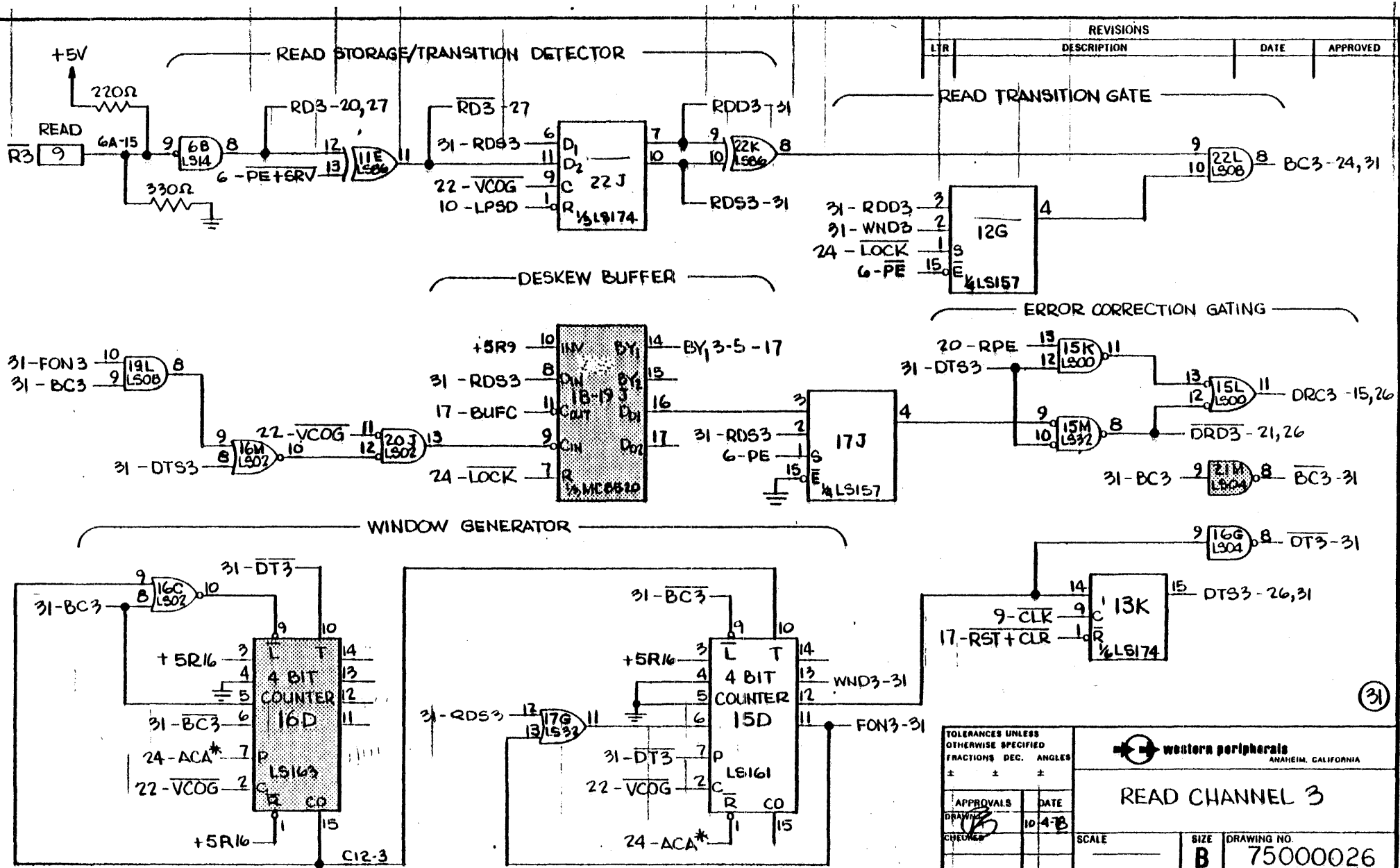


REVISIONS			
ITER	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
READ CHANNEL 2			
APPROVAL DRAWN CHECKED	DATE 10-4-78	SCALE	SIZE B
		DRAWING NO 75000026	
DO NOT SCALE DRAWING			SHEET 32 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

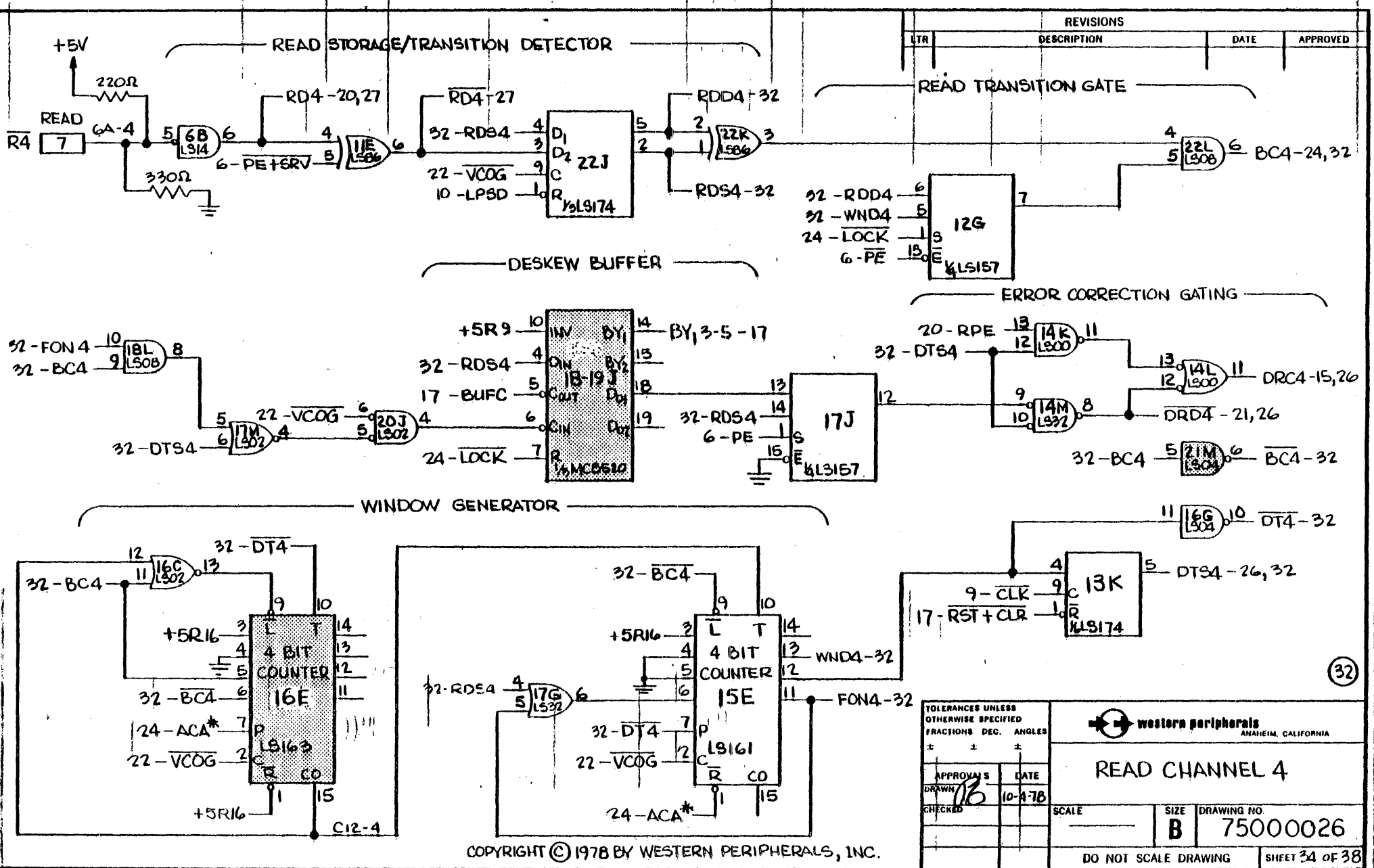


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

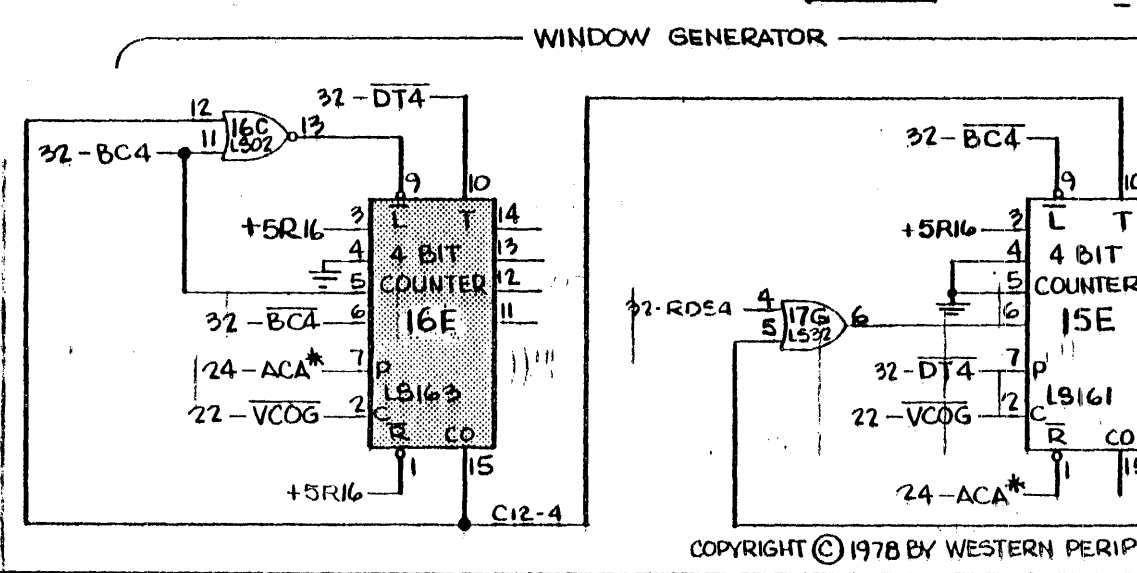
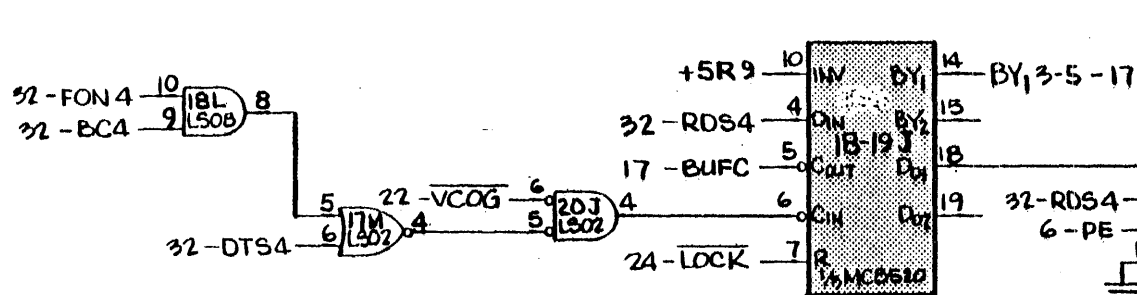
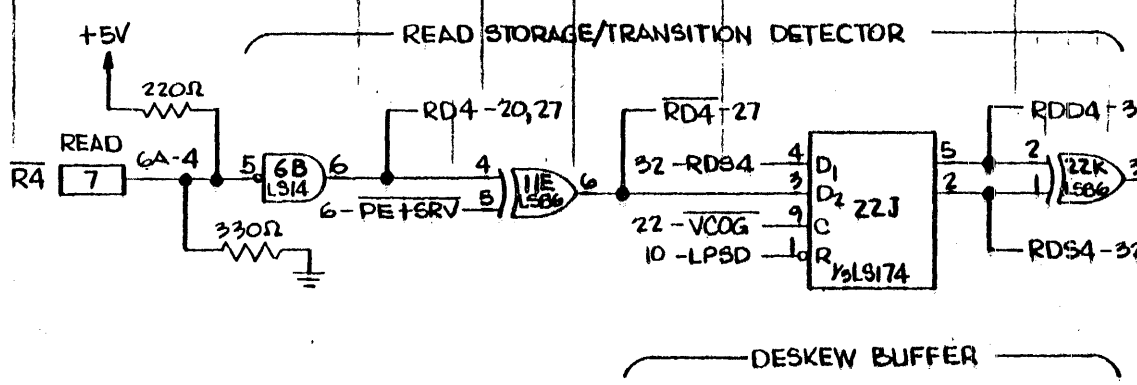
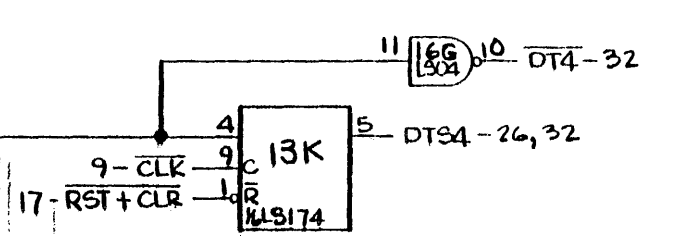
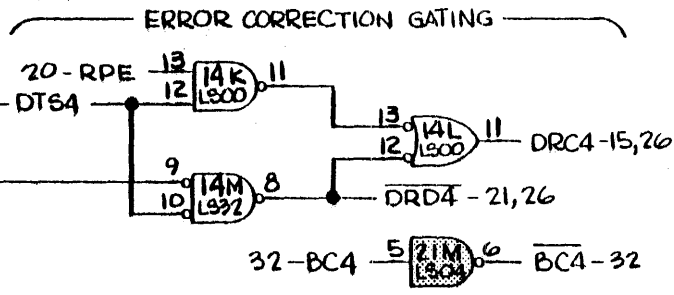
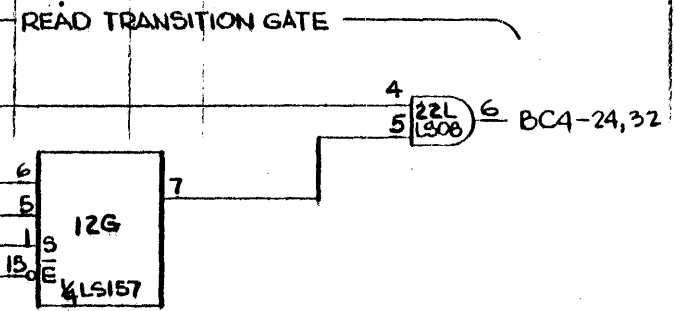
ERROR CORRECTION GATING

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals	
FRACTIONS DEC. ANGLES		ANAHEIM, CALIFORNIA	
± ± ±		READ CHANNEL 3	
APPROVALS	DATE	SCALE	SIZE
DRAWN	10-4-78		B
CHECKED			DRAWING NO.
			75000026
DO NOT SCALE DRAWING			SHEET 33 OF 38

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

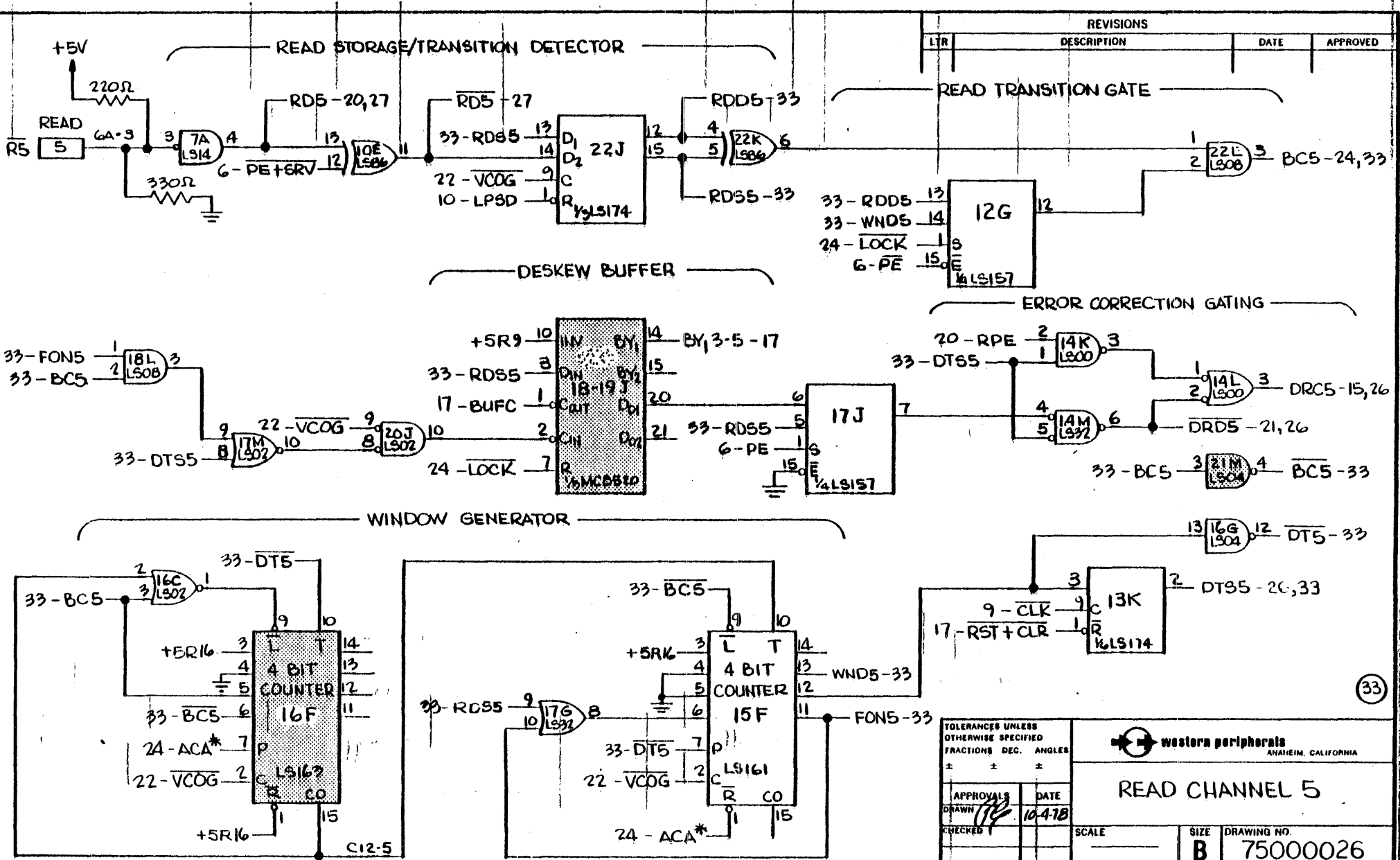


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

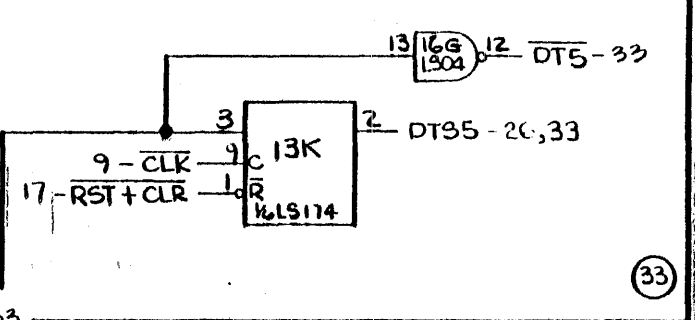
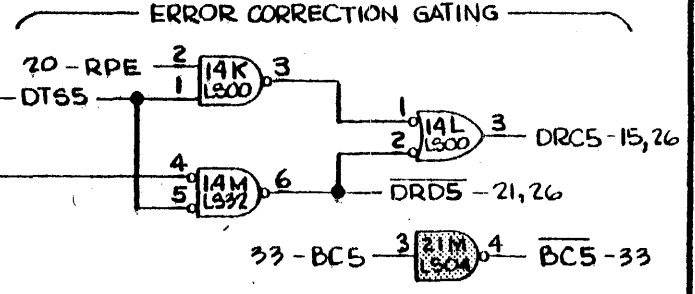
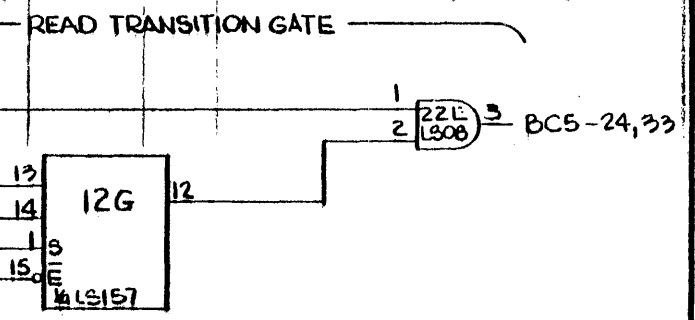


TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN CHECKED		DATE 10-9-78	
SCALE		SIZE B	
DRAWING NO. 75000026		SHEET 34 OF 38	

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

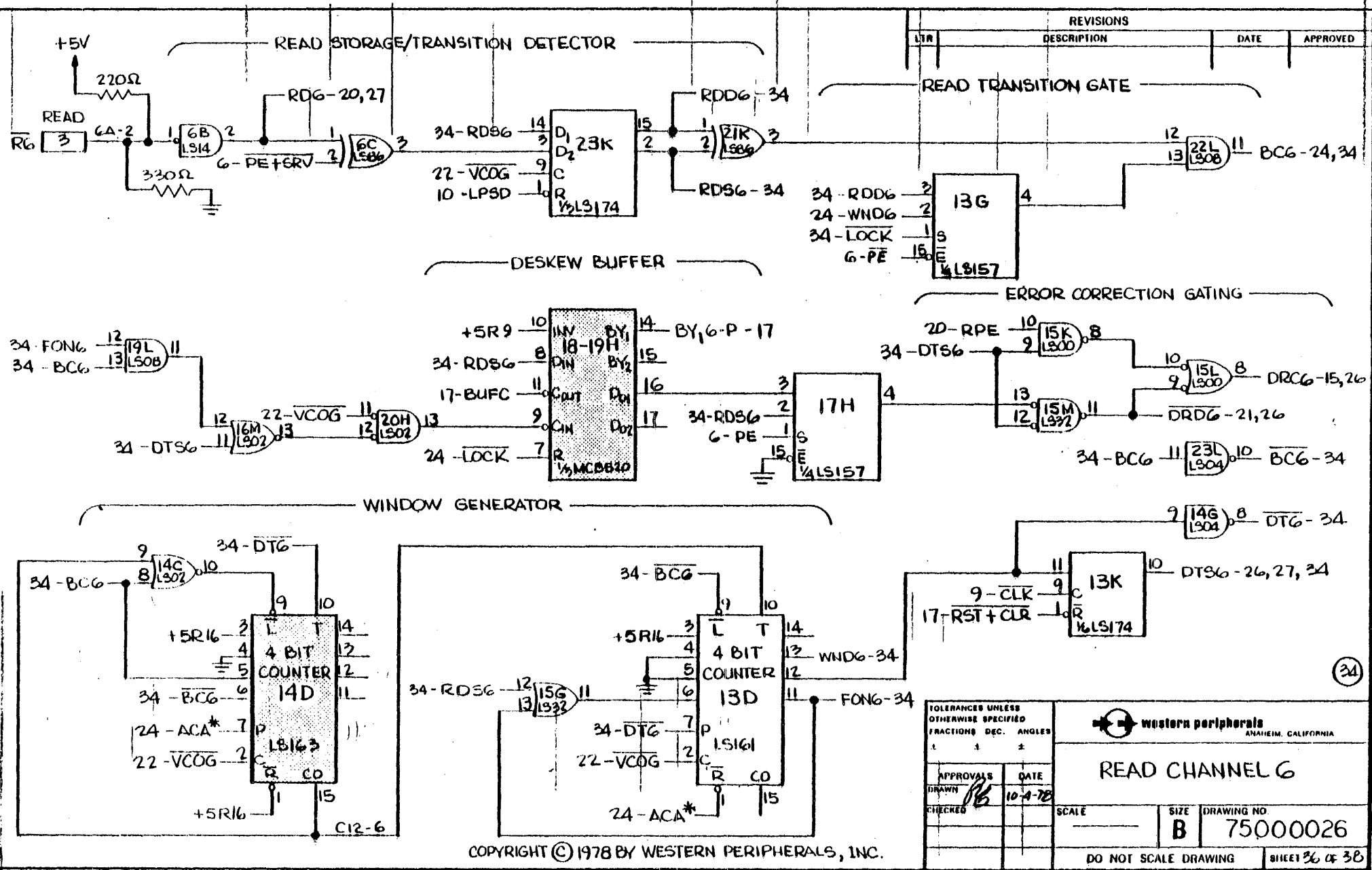


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS DEC. ANGLES		READ CHANNEL 5	
APPROVALS	DATE	SCALE	SIZE
DRAWN <i>[Signature]</i>	10-4-78		B
CHECKED		DRAWING NO.	75000026
		DO NOT SCALE DRAWING	SHEET 35 OF 38

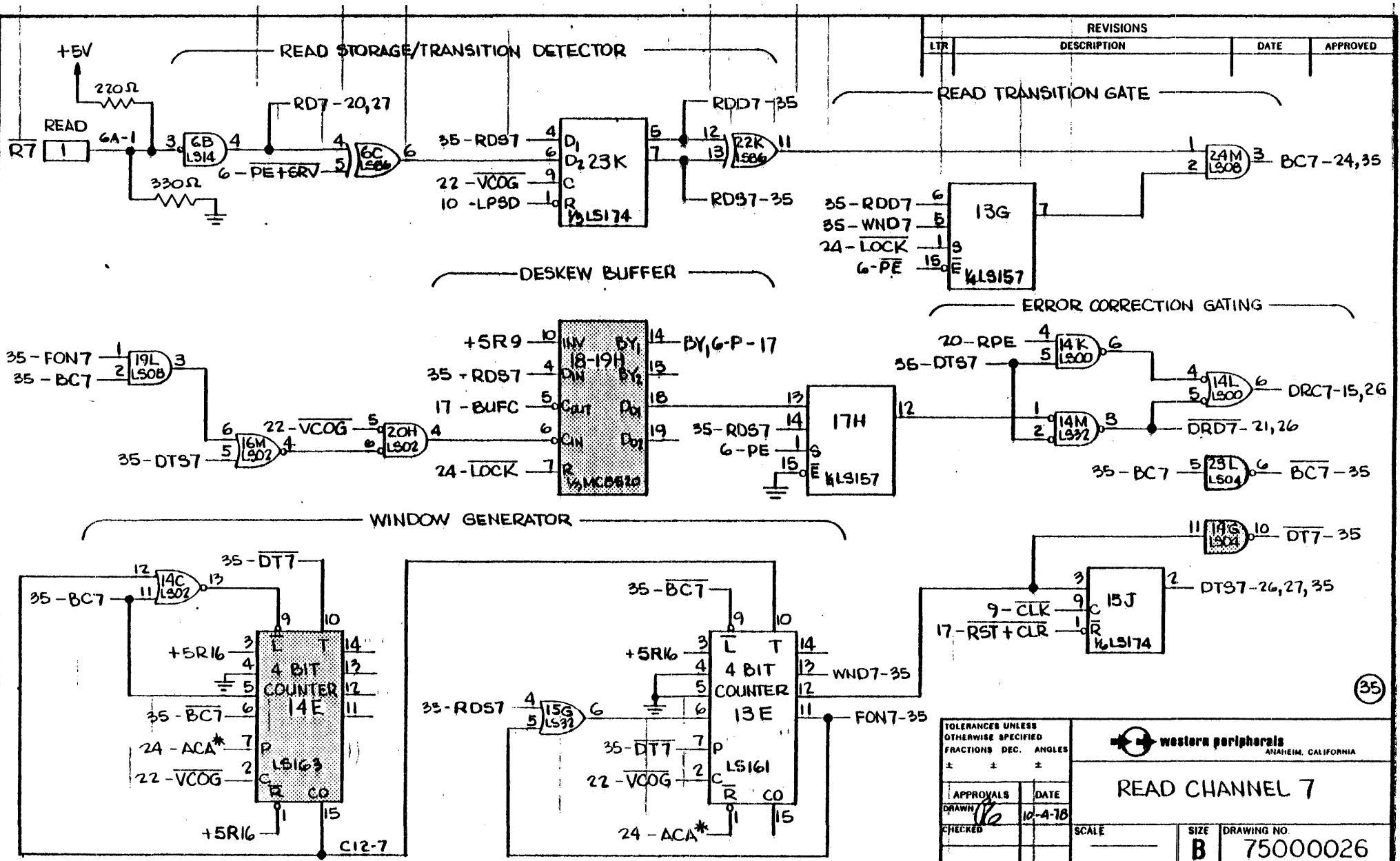
COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.



REVISIONS			
LTN	DESCRIPTION	DATE	APPROVED

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		western peripherals ANAHEIM, CALIFORNIA	
APPROVALS DRAWN: <i>[Signature]</i> CHECKED:		DATE: 10-4-78 SCALE: _____ SIZE: B DRAWING NO.: 75000026	
DO NOT SCALE DRAWING		SHEET 36 OF 38	



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

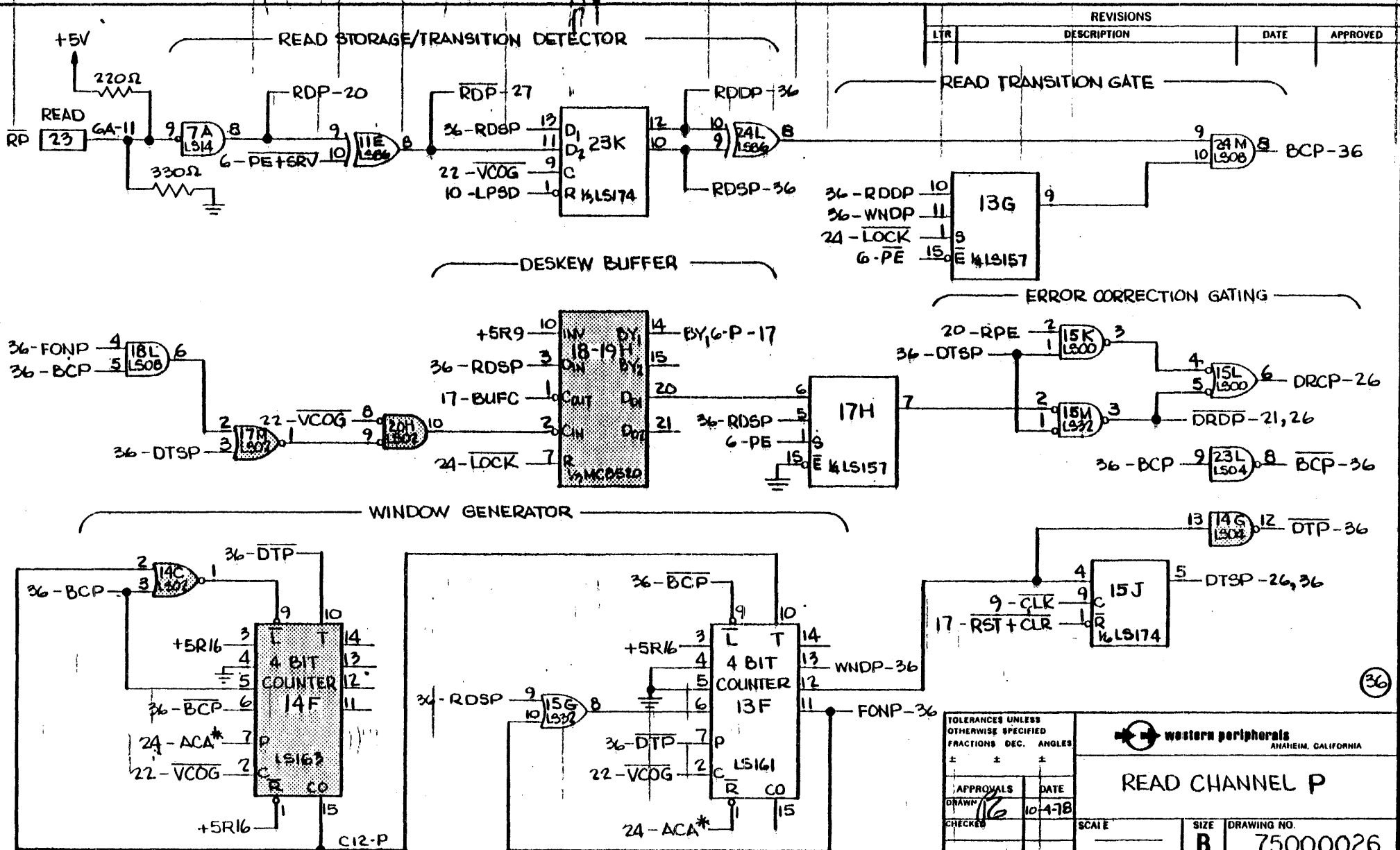
READ TRANSITION GATE

DESKEW BUFFER

ERROR CORRECTION GATING

WINDOW GENERATOR

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS	DATE	READ CHANNEL 7	
DRAWN <i>[Signature]</i>	10-4-78	SCALE	SIZE B DRAWING NO. 75000026
CHECKED		DO NOT SCALE DRAWING	SHEET 37 OF 38



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES		 western peripherals ANALHEIM, CALIFORNIA	
APPROVALS	DATE	<h2 style="text-align: center;">READ CHANNEL P</h2>	
DRAWN <i>16</i>	10-4-78	SCALE	SIZE B
CHECKED		DRAWING NO.	75000026
		DO NOT SCALE DRAWING	
		SHEET 38 OF 38	

COPYRIGHT © 1978 BY WESTERN PERIPHERALS, INC.

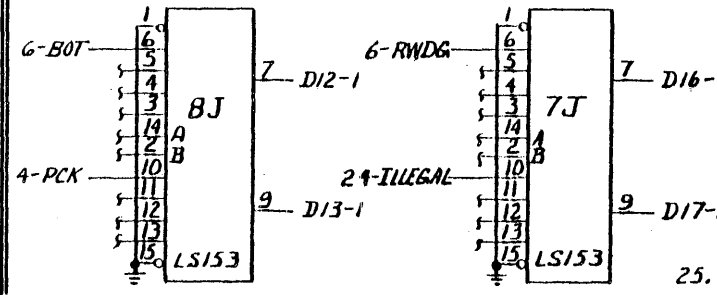
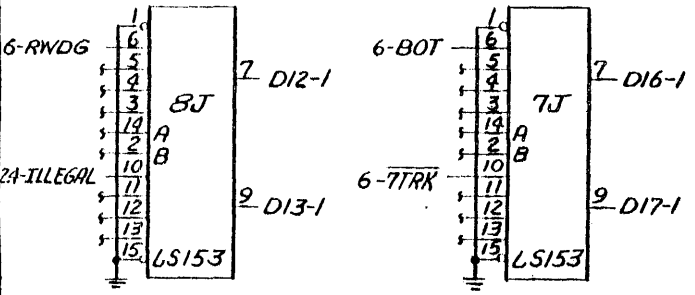
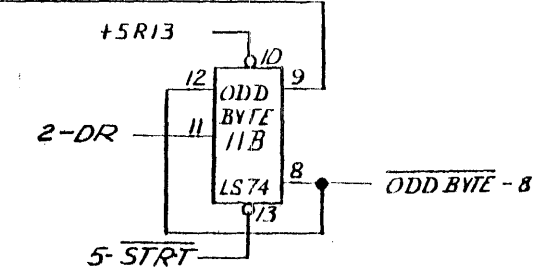
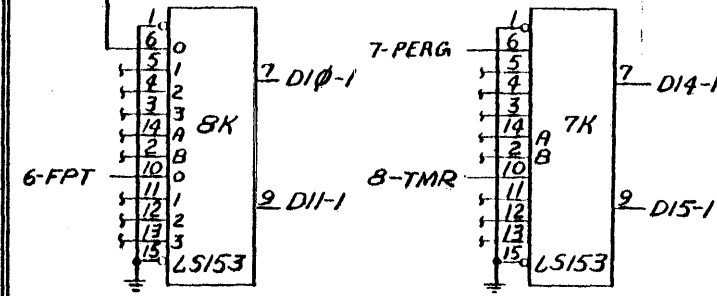
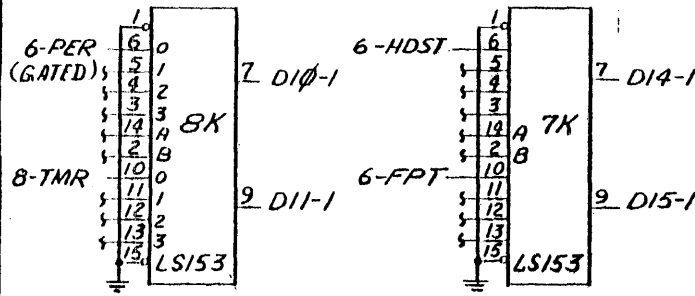
PURPOSE: THIS CONFIGURATION PROVIDES AN ALTERNATE BIT PATTERN IN THE EXTENDED STATUS WORD AS SHOWN IN THE SCHEMATIC CHANGE.

SHEET (7) OF SCHEMATIC 75000026 IS ALTERED AS SHOWN BELOW.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

STANDARD

MODIFIED FOR CONF "R"



**PRELIMINARY RELEASE
NOT UNDER REV. CONTROL**

REWORK INSTRUCTIONS (ASSY 6000023)

- CUT ETCH AT 7K-6 COMPONENT SIDE (HDST)
- CUT ETCH AT 8K-10 SOLDER SIDE (TMR)
- CUT ETCH AT 8K-6 SOLDER SIDE (PER)
- CUT ETCH AT 7K-10 SOLDER SIDE (FPT)
- CUT ETCH AT 8J-6 SOLDER SIDE (RWDG)
- CUT ETCH AT 8J-10 SOLDER SIDE (ILLEGAL)
- CUT ETCH AT 7J-6 COMPONENT SIDE (BOT)
- CUT ETCH AT 7J-10 COMPONENT SIDE (TRK)
- CUT ETCH AT 1E-6 SOLDER SIDE
- ADD WIRE FROM 8K-10 TO 13C-10 (FPT)
- ADD WIRE FROM 7K-6 TO 10K-12 (PERG)
- ADD WIRE FROM 7K-10 TO 3G-13 (TMR)
- ADD WIRE FROM 8J-6 TO 2G5 (BOT)
- ADD WIRE FROM 8J-10 TO 13J12 (PCK)
- ADD WIRE FROM 7J-6 TO 17B-8 (RWDG)
- ADD WIRE FROM 7J-10 TO 3G-7 (ILLEGAL)
- ADD WIRE FROM 11B-8 TO 11B-12 (ODD BYTE)
- ADD WIRE FROM 11B-12 TO 22M-11 (ODD BYTE)
- ADD WIRE FROM 11B-10 TO 14B-1 (+5R13)
- ADD WIRE FROM 11B-13 TO 3B-11 (STRT)
- ADD WIRE FROM 11B-11 TO 5E-11 (DR)
- ADD WIRE FROM 8K-6 TO 11B-9 (ODD BYTE)
- ADD WIRE FROM 1E-6 TO 1E-1
- ADD WIRE FROM 1E2 TO 23L-2

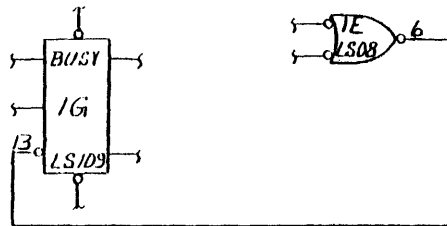
- ADD WIRE FROM 22M-6 TO 23L-1
- ADD WIRE FROM 22M-8 TO 22M-7 (GND)
- ADD WIRE FROM 22M-11 TO 11B-8 (ODD BYTE)
- ADD WIRE FROM 22M-10 TO 12D-11 (CCY)
- ADD WIRE FROM 22M-9 TO 21E-10 (MID+M14)
- ADD WIRE FROM 22M-4 TO 23M-10 (READ)
- ADD WIRE FROM 1E-3 TO 1E-13

TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC. ANGLES		 western peripherals ANAHEIM, CALIFORNIA
±	±	±	±	
APPROVALS		DATE		MODIFICATION DWG — TC 140 CONFIGURATION "R" SCALE: / SIZE: B DRAWING NO. 79000014
DRAWN		DATE		
CHECKED		DATE		DO NOT SCALE DRAWING
				SHEET 1 OF 2

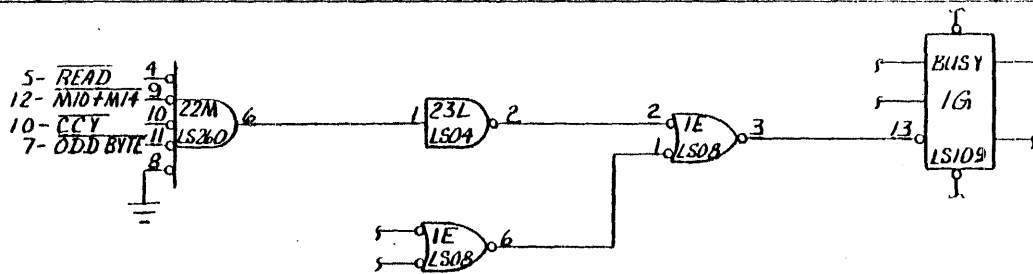
SHEET (8) OF SCHEMATIC 75000026 IS ALTERED.
AS SHOWN BELOW

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

STANDARD



MODIFIED FOR CONF "R"



NOTE:

AFTER MODIFICATION, RUBBER STAMP "CONF. R"
NEAR ASSY NUMBER USING BLACK INK.

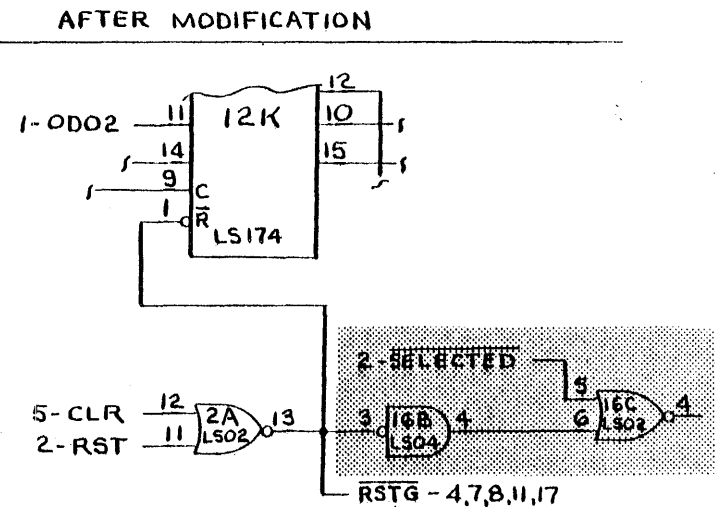
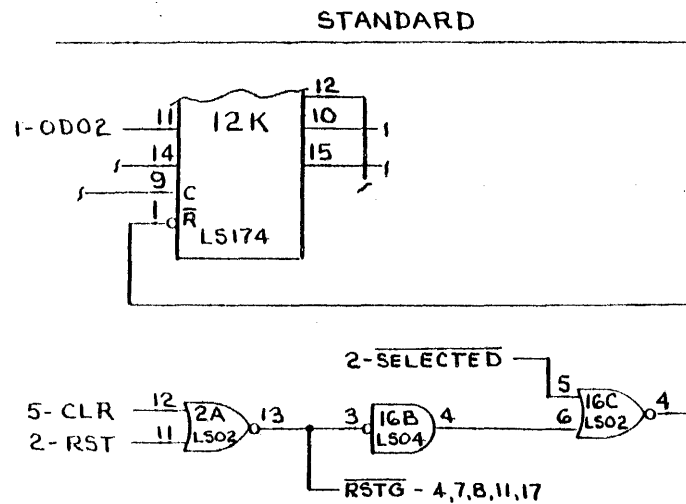
**PRELIMINARY RELEASE
NOT UNDER REV. CONTROL**

TOLERANCES UNLESS OTHERWISE SPECIFIED			western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC.	ANGLES		
±	±	±	MODIFICATION DWG —	
APPROVALS	DATE	TC 140 CONFIGURATION "R"		
DRAWN <i>[Signature]</i>	<i>[Date]</i>	SCALE	SIZE B	DRAWING NO. 79000014
CHECKED			DO NOT SCALE DRAWING	
			SHEET 2 OF 2	

THE PURPOSE OF THIS MODIFICATION IS TO PREVENT
AUTOMATIC RESET OF THE MODE COMMAND REGISTER
WHEN ANOTHER DEVICE IS SELECTED.

SHEET (4) OF SCHEMATIC 75000026 IS ALTERED AS SHOWN BELOW;

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



NOTE:
GATES IN SHADED AREA NOT
FUNCTIONAL SINCE 16C-4 IS
NO LONGER CONNECTED TO 12K-1

REWORK INSTRUCTIONS (ASSY 6000023)

- CUT ETCH ON COMPONENT SIDE AT 16C-4.
- ADD JUMPER FROM FEED-THRU JUST ISOLATED AT 16C-4 TO 16B-3.
- IDENTIFY AT ASSY. NO. WITH "CONF U" USING BLK INK.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES ± ± ±		 western peripherals ANAHEIM, CALIFORNIA	
APPROVALS		DATE	
DRAWN H. DEUTSCH		12-7-78	
CHECKED		SCALE	
Eng. H.H.		12-7-78	
MODIFICATION DWG. - TC 140 CONFIGURATION "U"		SIZE B	DRAWING NO. 79000022
DO NOT SCALE DRAWING			SHEET 1 OF 1

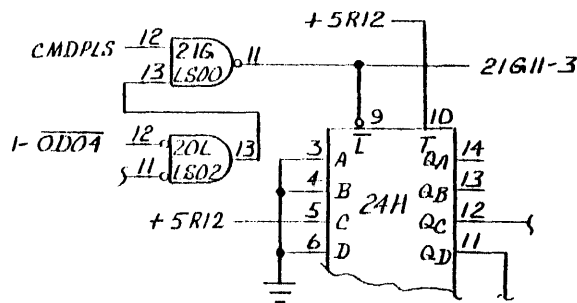
THE PURPOSE OF THIS MODIFICATION IS TO CHANGE THE "EDIT" COMMAND TO AN "OFF-LINE/REWIND" COMMAND.

IT IS ACCOMPLISHED BY BREAKING A SIGNAL LINE BETWEEN 20L-13 AND 21G-13 INSERTING ADDITIONAL GATING AS SHOWN BELOW.

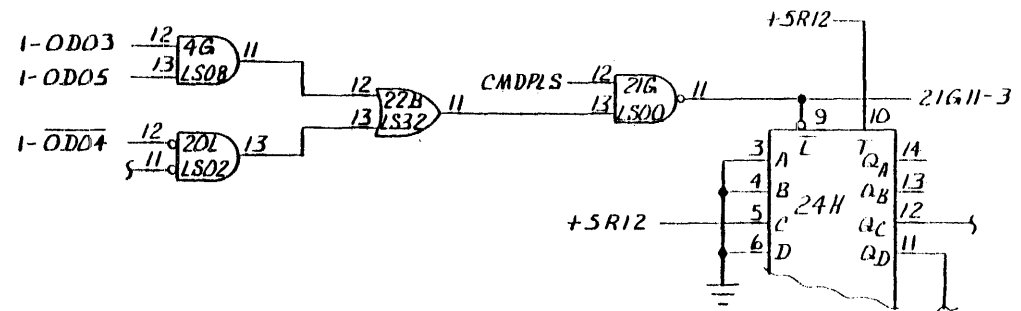
(REFERENCE SHEET ⑤ OF SCHEMATIC 75000026)

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

STANDARD



AFTER MODIFICATION



REWORK INSTRUCTIONS (ASSY 60000023)

1. CUT ETCH AT 21G-13 (SOLDER SIDE)
2. ADD WIRE FROM 22B 11 TO 21G-13
3. ADD WIRE FROM 22B-12 TO 4G-11
4. ADD WIRE FROM 22B-13 TO 20L-13
5. ADD WIRE FROM 1G-12 TO 7L-3 (OD03)
6. ADD WIRE FROM 4G-13 TO 7L-10 (OD05)
7. AFTER MODIFICATION, IDENTIFY WITH "CONF. W" NEAR ASSY NUMBER USING BLACK INK.

**PRELIMINARY RELEASE
NOT UNDER REV. CONTROL**

TOLERANCES UNLESS OTHERWISE SPECIFIED		western peripherals ANAHEIM, CALIFORNIA	
FRACTIONS	DEC. ANGLES		
±	± ±	MODIFICATION DWG—	
APPROVALS	DATE	TC 140 CONFIGURATION W	
DRAWN <i>Steve J. [Signature]</i>	<i>11/14/78</i>	SCALE	SIZE DRAWING NO.
CHECKED <i>[Signature]</i>	<i>12-1-78</i>		B 79000030
		DO NOT SCALE DRAWING	SHEET 1 OF 1

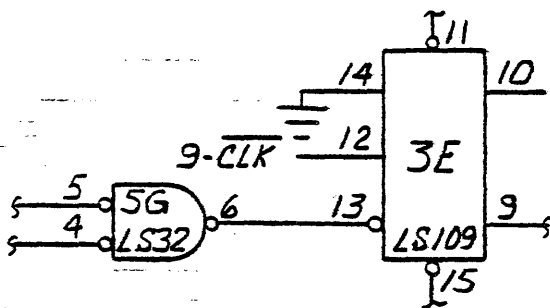
REVISIONS

LTR	DESCRIPTION	DATE	APPROVED

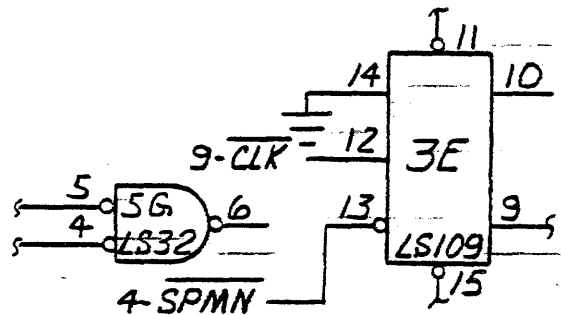
THIS MODIFICATION PROVIDES THE CAPABILITY TO WRITE ON-THE-FLY

SHEET (8) OF SCHEMATIC 75000026 IS ALTERED AS SHOWN BELOW:

STANDARD



MODIFIED FOR CONF. "Z"



NOTE: INPUTS AT 5G-4 & 5 STILL CONNECTED

REWORK INSTRUCTIONS (ASSY 60000023)

1. CUT ETCH AT 3E-13 (COMPONENT SIDE),
2. ADD WIRE FROM 3E-13 TO 2C-13 (SPMN),
3. AFTER MODIFICATION, IDENTIFY WITH "CONF. Z" NEAR ASSY NUMBER USING BLACK INK.

**PRELIMINARY RELEASE
NOT UNDER REV. CONTROL**

TOLERANCES UNLESS OTHERWISE SPECIFIED		
FRACTIONS	DEC.	ANGLES
±	±	±



western peripherals
ANAHEIM, CALIFORNIA

MODIFICATION DWG

TC 140 CONFIGURATION Z

APPROVALS	DATE
DRAWN <i>[Signature]</i>	11/21/78
CHECKED <i>[Signature]</i>	12-1-78

SCALE	SIZE	DRAWING NO.
	A	79000048