

PERKIN-ELMER
Memory Products Division

SUPER SERIES
(SF AND ST)

MAGNETIC DISK DRIVE

OPERATION AND MAINTENANCE
VOLUME 2

RECORD OF REVISIONS

Revision	Description	Date
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SECTION 1

LOGIC SCHEMATICS

1.1 INTRODUCTION

This volume contains all data essential to understand the logic functions of the SF and ST Disk Drives, as described in Volume 1. The information is presented in the following manner:

- Section 1 Logic Schematics
- Section 2 PWB Assembly Drawings
- Section 3 Master Spare Parts List

1.2 LOGIC DEFINITION AND SYMBOLOGY

DTL and TTL logic of the typical inverting type (NAND – NOR rather than AND – OR) is used, though some AND – OR elements are employed. Although the same device may be used to implement both the NAND and the NOR function, the symbols shown on the logic schematics correspond to the particular functional operation.

In most cases, reference designations are not assigned to the system components. A grid coordinate system is used with the alphabetic coordinates progressing upward across the top of the circuit board from right to left (A in the upper right-hand corner). Numeric coordinates start at the bottom of the circuit board and advance upward. For example: a component having a grid coordinate of A1 will be found in the extreme lower right-hand corner of the board. These alphabetic and numeric reference points are etched on the board.

In the logic schematics, the input/output lines to each device are shown for the true (active) state of the function. A state indicator, shown as a small circle at the input or output of a device, signifies that, if that line is in the true state, it is at a 0-volt potential (low). Lack of a state indicator signifies that, if that line is in the true state, it is at +5 volts (high). An example of a logic symbol with definitions is shown below in Figure 1-1, the symbol depicts a logical NOR element which represents that output D is at +5 volts if either input A, B, or C is at 0-volt.

The numbers within the arrowheads indicate the source or destination of the related signal by logic schematic page number. An arrowhead placed adjacent to a signal line indicates a connection at that point.

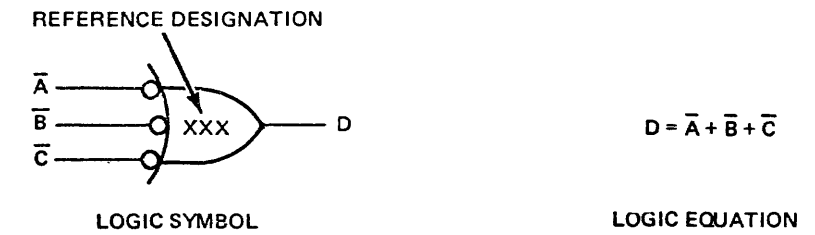


Figure 1-1. Logic Symbol Example



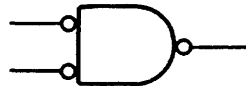

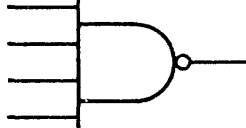
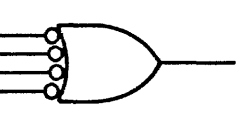
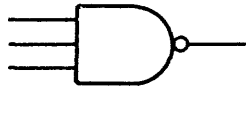
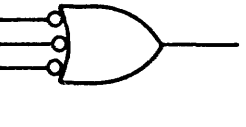
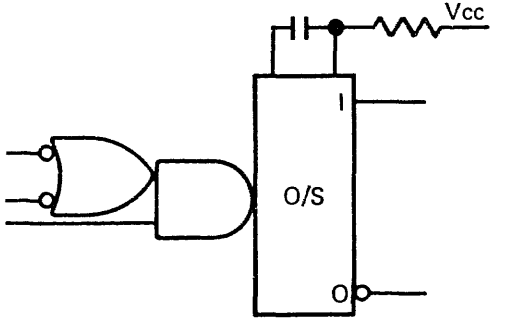
Table 1-1 lists and shows logic symbols used in this manual.

Table 1-1. Logic Symbols

Devices	Symbols	
836, 7414	<p>LOW IN HIGH OUT</p>	<p>HIGH IN LOW OUT</p>
846, 7400 858	<p>BOTH INPUTS HIGH OUTPUT LOW</p>	<p>EITHER OR BOTH INPUTS LOW OUTPUT HIGH</p>
7408, WIRED "OR"	<p>BOTH INPUTS HIGH OUTPUT HIGH</p>	<p>EITHER OR BOTH INPUTS LOW OUTPUT LOW</p>

Table 1-1. Logic Symbols (continued)

0619

Devices	Symbols	
7402	 BOTH INPUTS LOW OUTPUT HIGH	 EITHER OR BOTH INPUTS HIGH OUTPUT LOW
7418	 BOTH INPUTS LOW OUTPUT LOW	 EITHER OR BOTH INPUTS HIGH OUTPUT HIGH
844	 ALL INPUTS HIGH OUTPUT LOW	 ANY OR ALL INPUTS LOW OUTPUT HIGH
862	 ALL INPUTS HIGH OUTPUT LOW	 ANY OR ALL INPUTS LOW OUTPUT HIGH
	ONE-SHOT	POSITIVE-GOING PULSE AT "1" OUTPUT NEGATIVE-GOING PULSE AT "0" OUTPUT INITIATED WHEN INPUT PULSE MAKES TRANSITION TO TRUE STATE

1.3 INTEGRATED CIRCUIT REFERENCE DATA

The following integrated circuit (IC) reference data is provided in part number sequence to assist experienced personnel in maintenance of the equipment. Each IC used in the SF and ST Disk Drives is defined by logic symbol, equation, and package configuration. Block diagrams, truth tables, and detailed descriptions are provided, as required. Reference data for all IC's used in SF and ST Disk Drives are provided.

1.4 LOGIC SCHEMATICS

The following listed logic schematics are provided:

Title	Dwg. No.
Line Terminator PWB . . . . .	.300095
Line Terminator PWB, D31/33 Female . . . . .	.301048
Line Terminator PWB, D31/33 Male . . . . .	.301056
I/O Connector, D31/33 . . . . .	.301063
Line Terminator PWB, D40 Male . . . . .	.301075
Control Interface PWB . . . . .	.301175
Data Electronics PWB . . . . .	.301207
I/O Connector PWB . . . . .	.301292
Data Interface PWB (VFO) . . . . .	.301321
Power Supply . . . . .	.301361
MFM Data Control-2 . . . . .	.301423
Detent Amplifier . . . . .	.301458
Servo Amplifier . . . . .	.301484
Disk Control PWB . . . . .	.301633
Electronics Interconnect PWB . . . . .	.301637
Servo Logic PWB . . . . .	.301688
H.I. Spindle Interconnection Diagram . . . . .	.301691
Spindle Switch PWB . . . . .	.301790
I/O PWB - D40 . . . . .	.301937
I/O Connector With Interrupt Option . . . . .	.301948
Piggyback-I/O Connector With Interrupt Option . . . . .	.301953
Emergency Retract . . . . .	.302065

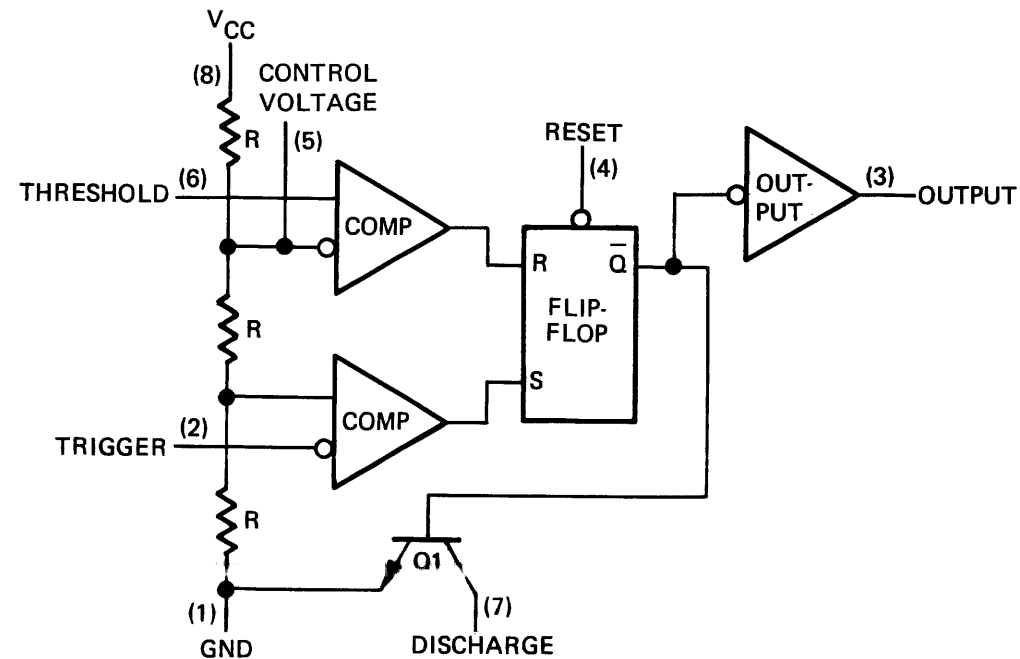
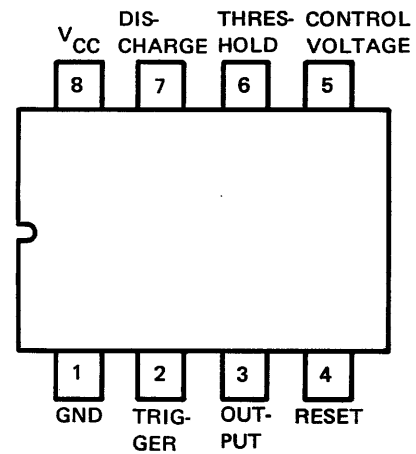
SN52555 (555)

Precision Timer

The SN52555 is a monolithic timing circuit capable of producing an accurate time delay or oscillation.

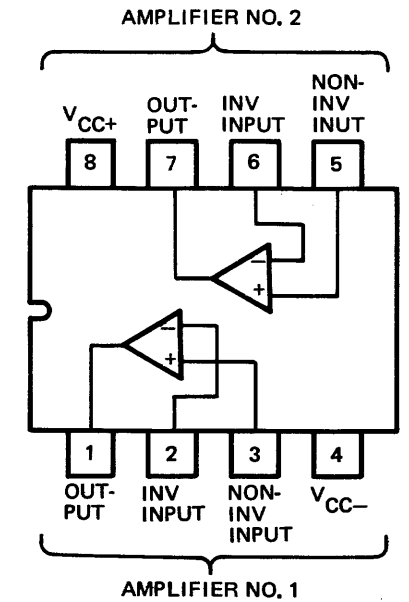
In the time-delay or monostable mode of operation, the timed interval is controlled by a single external resistor and capacitor network. In the astable mode of operation, the frequency and duty cycle may be independently controlled with two external resistors and a single external capacitor.

The threshold and trigger levels are normally two-thirds and one-third, respectively, of V_{CC} . These levels can be altered by use of the control voltage terminal. When the trigger input falls below the trigger level, the flip-flop is set and the output goes high. When the threshold input rises above the threshold level, the flip-flop is reset and the output goes low. The reset input can override all other inputs and can be used to initiate a new timing cycle. When the reset input goes low, the flip-flop is reset and the output goes low. When the output is low, a low-impedance path is provided between the discharge terminal and ground.



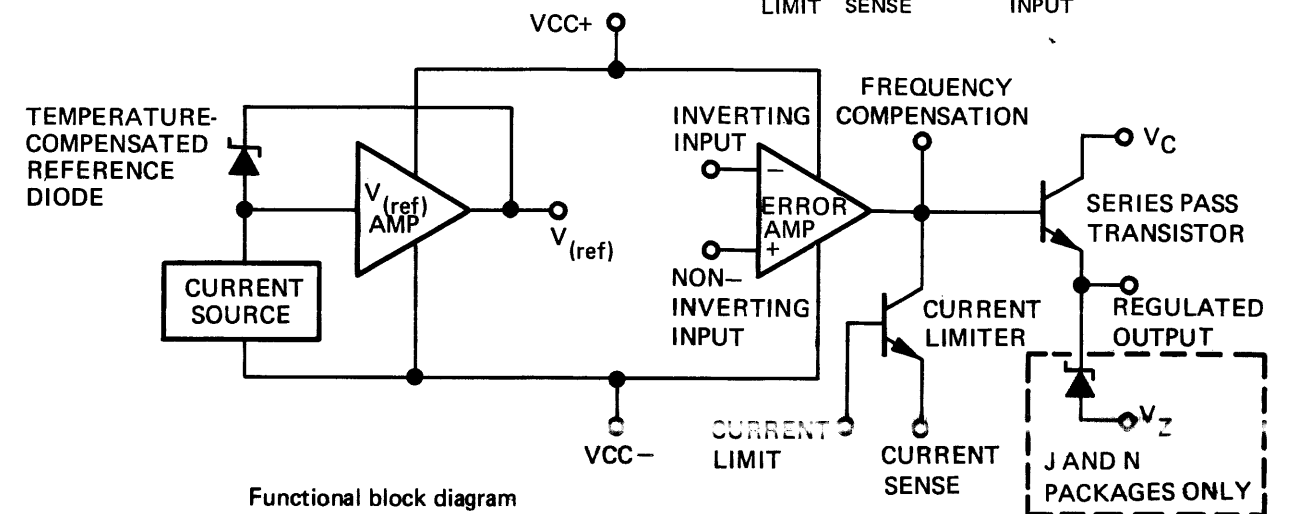
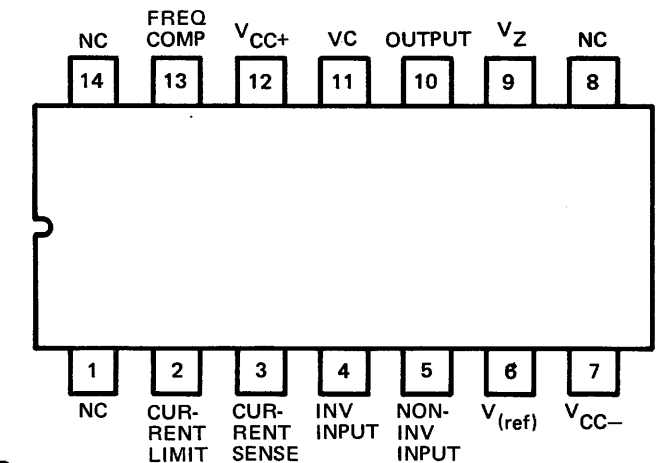
SN52558 (5558)

Dual General-Purpose Operational Amplifiers



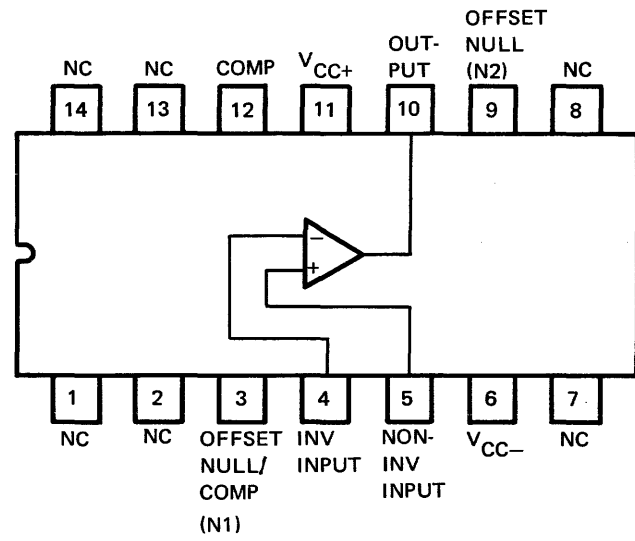
SN52723 (723)

Precision Voltage Regulator



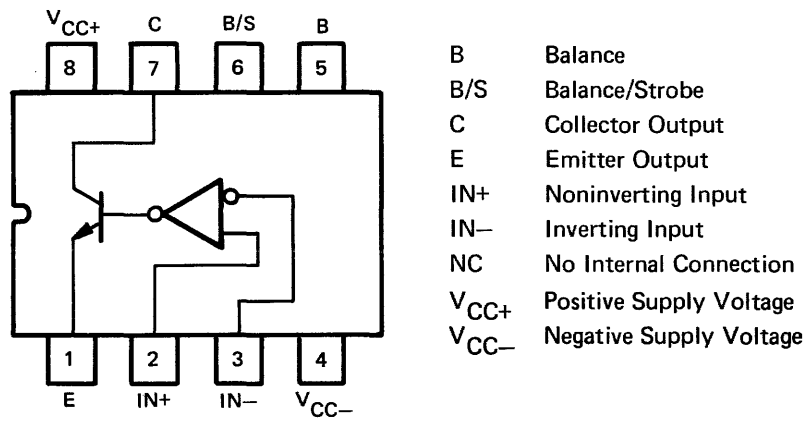
SN72301 (LM301)

High Performance Operational Amplifier.



SN72311 (LM311)

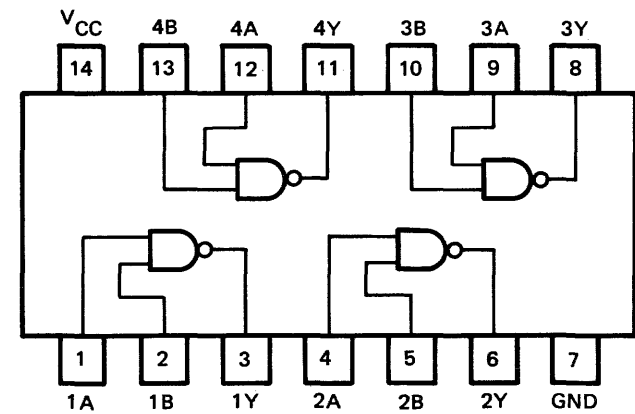
High-Speed Voltage Comparator



7400

Quad 2-Input Positive-Nand Gates

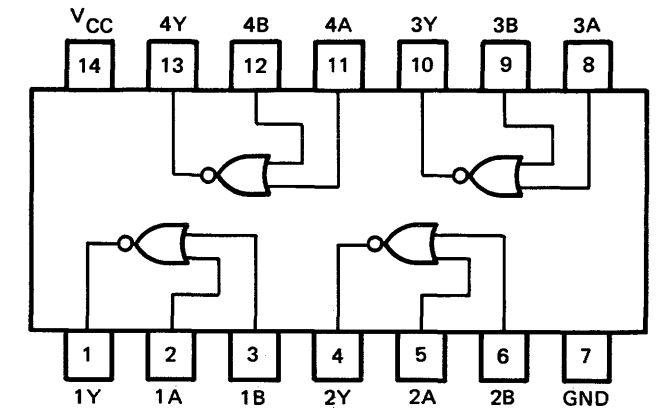
Positive Logic: $Y = \overline{AB}$



7402

Quad 2-Input Positive-Nor Gates

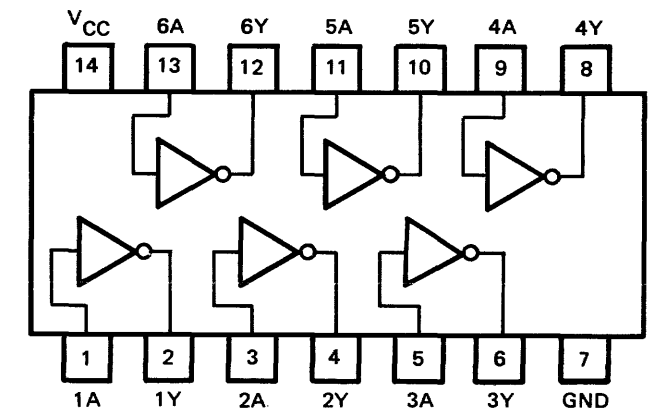
Positive Logic: $Y = \overline{A+B}$



7404

Hex Inverters

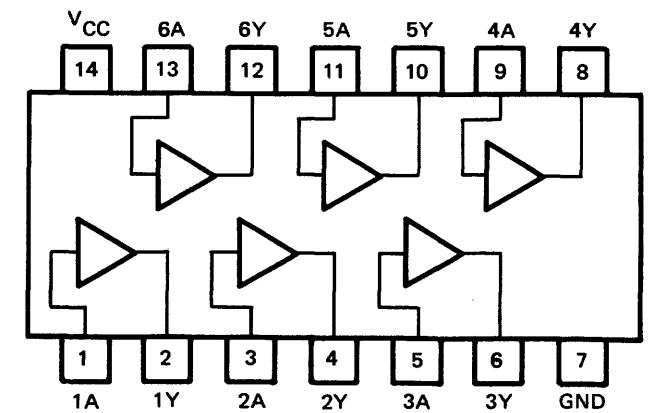
Positive Logic: $Y = \overline{A}$



7407

Hex Buffers/Drivers With Open-Collector High-Voltage Outputs

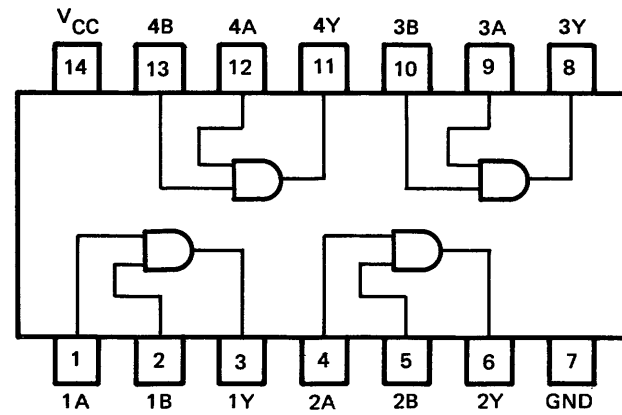
Positive Logic: $Y = A$



7406

Quad 2-Input Positive-And Gates

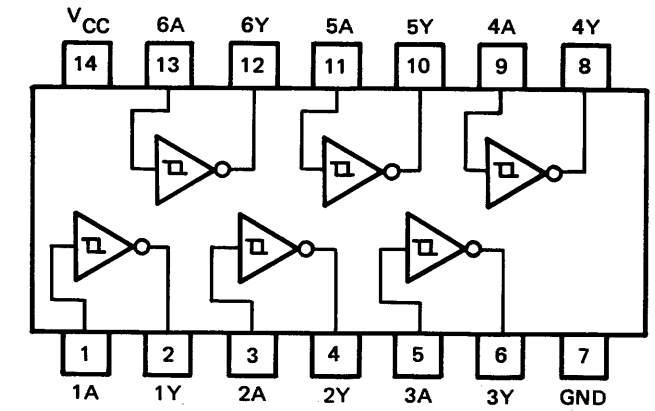
Positive Logic: $Y = AB$



7414

Hex Schmitt-Trigger Inverters

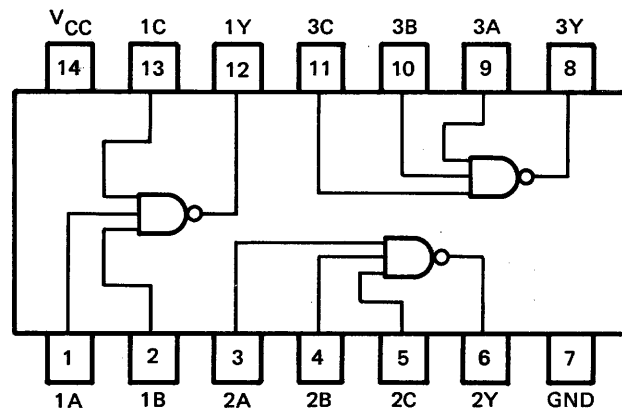
Positive Logic: $Y = \bar{A}$



7410

Triple 3-Input Positive-Nand Gates

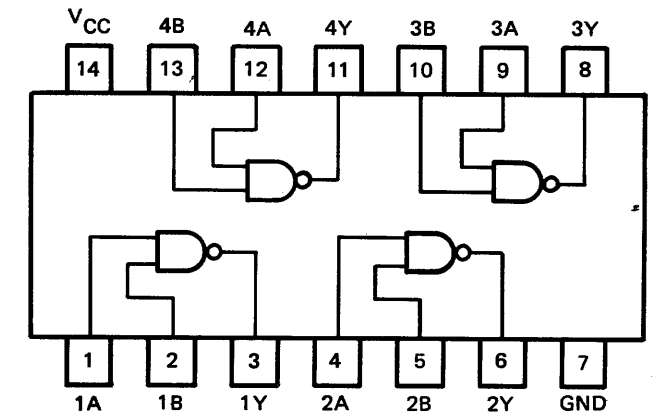
Positive Logic: $Y = \overline{ABC}$



7426

Quad 2-Input High-Voltage Interface Positive-Nand Gates

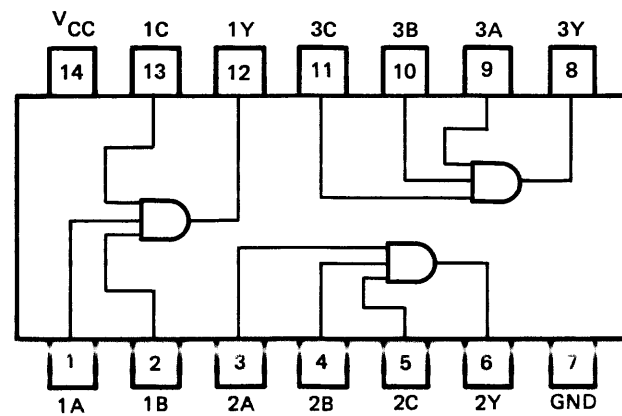
Positive Logic: $Y = \overline{AB}$



7411

Triple 3-Input Positive-And Gates

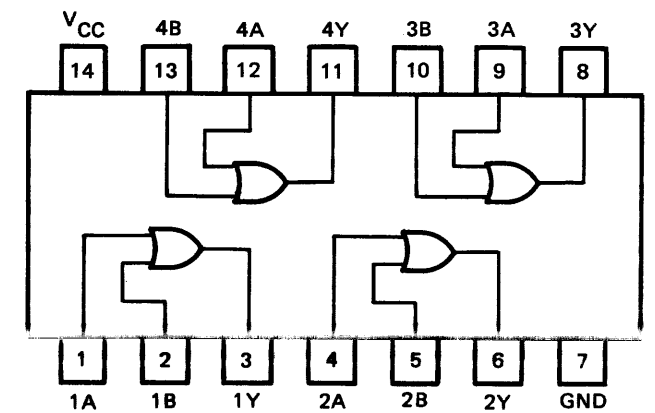
Positive Logic: $Y = ABC$



7432

Quad 2-Input Positive-Or Gates

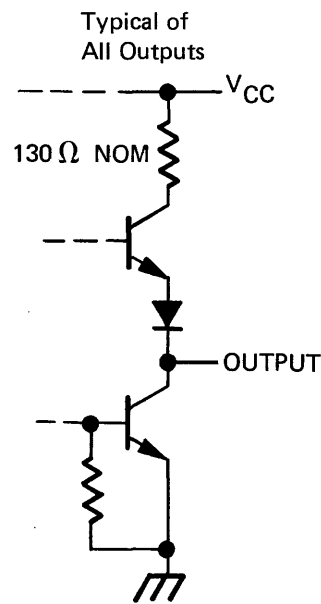
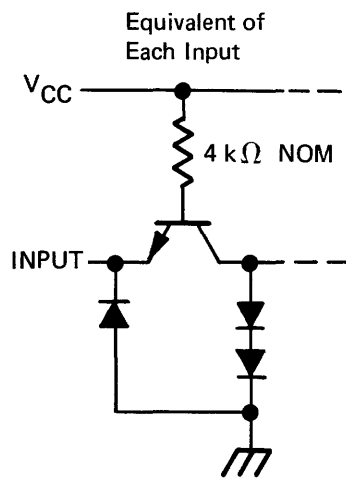
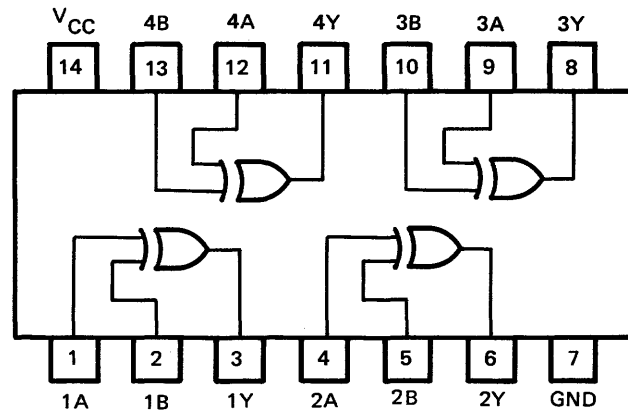
Positive Logic: $Y = A+B$



7486

Quad 2-Input Exclusive-OR Gates

Positive Logic: $Y = A \oplus B = \bar{A}B + A\bar{B}$

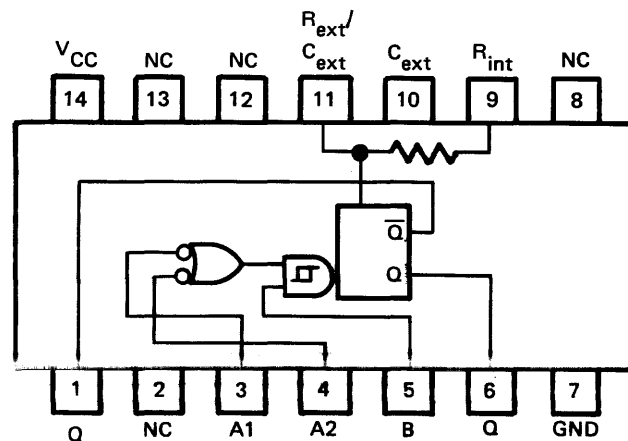


INPUTS		OUTPUT
A	B	Y
L	L	L
L	H	H
H	L	H
H	H	L

74121

Monostable Multivibrators

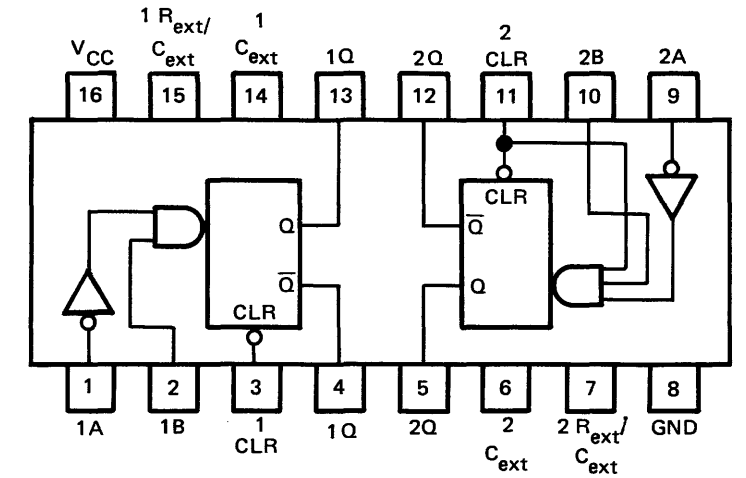
INPUTS			OUTPUTS	
A1	A2	B	Q	\bar{Q}
L	X	H	L	H
X	L	H	L	H
X	X	L	L	H
H	H	X	L	H
H	↓	H	⌋	⌋
↓	H	H	⌋	⌋
↓	↓	H	⌋	⌋
L	X	↑	⌋	⌋
X	L	↑	⌋	⌋



74123

Dual Retriggerable Monostable Multivibrators With Clear

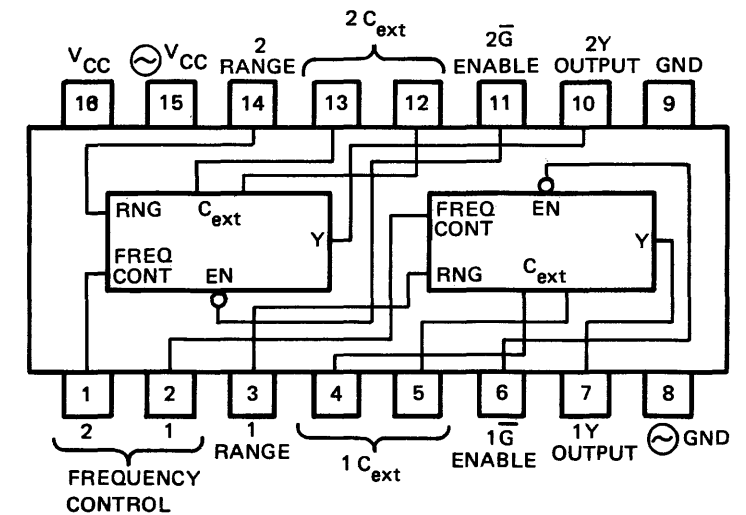
INPUTS			OUTPUTS	
CLEAR	A	B	Q	\bar{Q}
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	⌋	⌋
H	↓	H	⌋	⌋
↑	L	H	⌋	⌋



SN74S124 (4024)

Dual Voltage-Controlled Oscillators

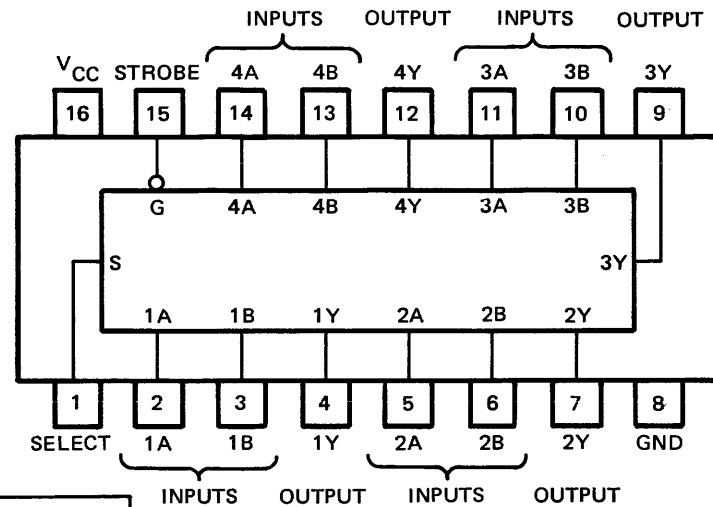
Positive Logic:
While the enable input is low, the output is enabled. While the enable input is high, the output is high.



SN54LS157

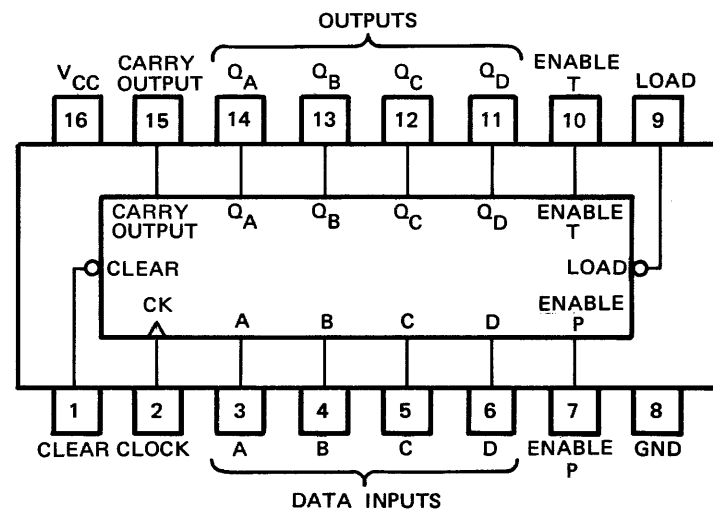
Quad 2 line-to-1 line
Data Selector/Multiplexer

Positive Logic:
Low level at S selects A inputs
High level at S selects B inputs



INPUTS		OUTPUT Y			
STROBE	SELECT	A	B	'157, 'L157, 'LS157, 'S157	'LS158 'S158
H	X	X	X	L	H
L	L	L	X	L	H
L	L	H	X	H	L
L	H	X	L	L	H
L	H	X	H	H	L

SN74161
Synchronous 4-Bit Binary Counter



This synchronous, presettable counter features an internal carry look-ahead for application in high-speed counting schemes. The '161 is a 4-bit binary counter. Synchronous operation is provided by having all flip-flops clocked simultaneously so that the outputs change coincident with each other when so instructed by the count-enable inputs and internal gating. This mode of operation eliminates the output counting spikes which are normally associated with asynchronous (ripple clock) counters. A buffered clock input triggers the four J-K master-slave flip-flops on the rising (positive-going) edge of the clock input waveform.

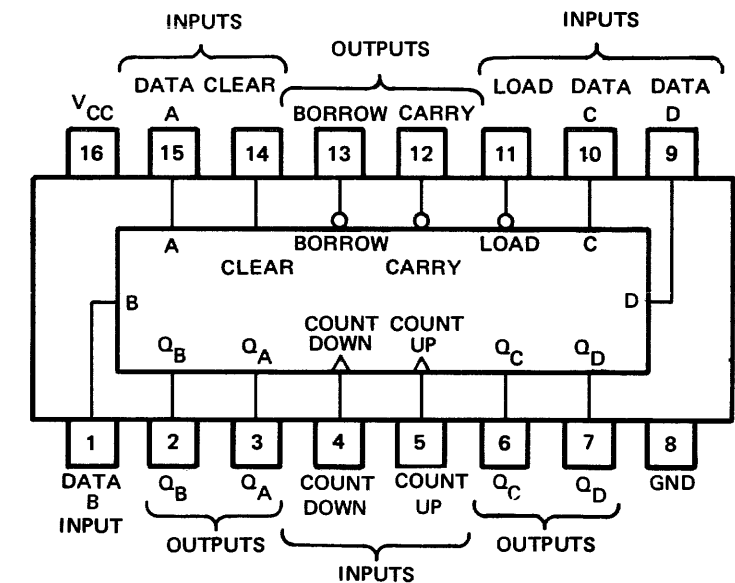
This counter is fully programmable; that is, the outputs may be preset to either level. As presetting is synchronous, setting up a low level at the load input disables the counter and causes the outputs to agree with the setup data after the next clock pulse regardless of the levels of the enable inputs. Low-to-high transitions at the load input should be avoided when the clock is low if the enable inputs are high at or before the transition. The clear function of the '161 is asynchronous and a low level at the clear input sets all four of the flip-flop outputs low regardless of the levels of the clock, load, or enable inputs.

The carry look-ahead circuitry provides for cascading counters for n-bit synchronous applications without additional gating. Instrumental in accomplishing this function are two count-enable inputs and a carry output. Both count-enable inputs (P and T) must be high to count, and input T is fed forward to enable the carry output. The carry output thus enabled will produce a positive output pulse with a duration approximately equal to the positive portion of the QA output. This positive overflow carry pulse can be used to enable successive cascaded stages. High-to-low-level transitions at the enable P or T inputs should occur only when the clock input is high.

SN74192 (9360) (BCD Counter)
SN74193 (9366) (Binary Counter)

Synchronous 4-Bit Up/Down Counters

Logic: Low input to load sets $Q_A = A$
 $Q_B = B$, $Q_C = C$, and $Q_D = D$



Synchronous operation is provided by having all flip-flops clocked simultaneously so that the outputs change coincidentally with each other when so instructed by the steering logic. This mode of operation eliminates the output counting spikes which are normally associated with asynchronous (ripple-clock) counters.

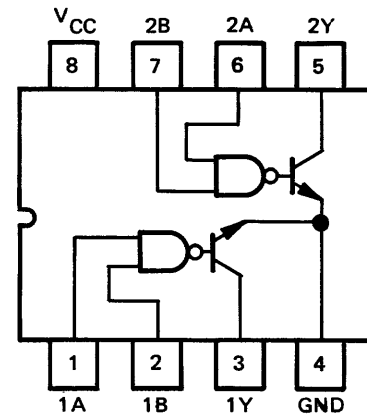
The outputs of the four master-slave flip-flops are triggered by a low-to-high-level transition of either count (clock) input. The direction of counting is determined by which count inputs is pulsed while the other count input is high.

All four counters are fully programmable; that is, each output may be preset to either level by entering the desired data at the data inputs while the load input is low. The output will change to agree with the data inputs independently of the count pulses. This feature allows the counters to be used as modulo-N dividers by simply modifying the count length with the preset inputs.

75451

Dual Peripheral Positive
-AND Driver

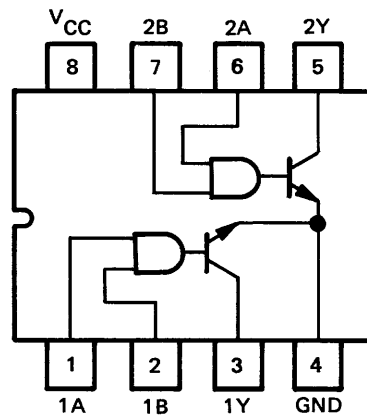
A	B	Y
L	L	L (on state)
L	H	L (on state)
H	L	L (on state)
H	H	H (off state)



75452

Dual Peripheral Positive
-NAND Driver

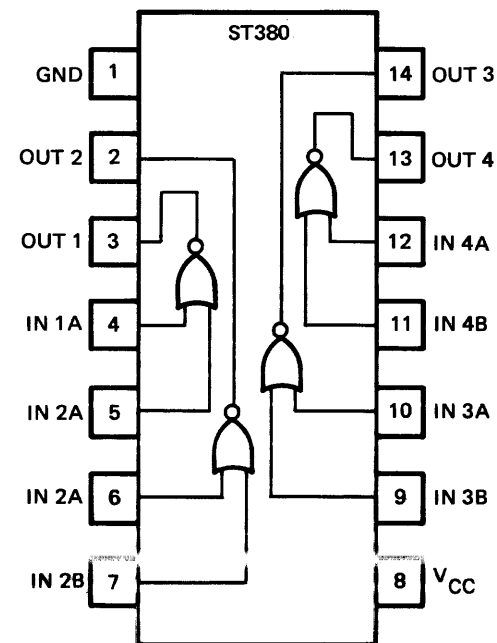
A	B	Y
L	L	H (off state)
L	H	H (off state)
H	L	H (off state)
H	H	L (on state)



8T380

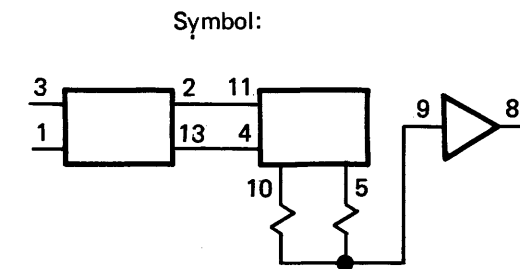
Quad 2-Input Bus Receiver

The 8T380 is a quad 2-input bus receiver with hysteresis for use in I/O, data, and memory busses. Built-in hysteresis provides maximum noise immunity and a power-up or power-down sequence on the receiver will not affect the bus. Low input current allows several drivers and receivers to communicate over a common bus in "Party Line" fashion. The receiver has been designed to be pin-compatible with the Signetics Utilogic II SP 380 gate and provides increased noise immunity as well as lower input current. The 8T380 is ideal as a Schmitt Trigger in analog interfaces that cannot tolerate the non-linear input impedance characteristics of standard TTL. Further, the low input requirements allow the 8T380 to be used as a CMOS to TTL interface. All inputs have clamping diodes to simplify systems design.

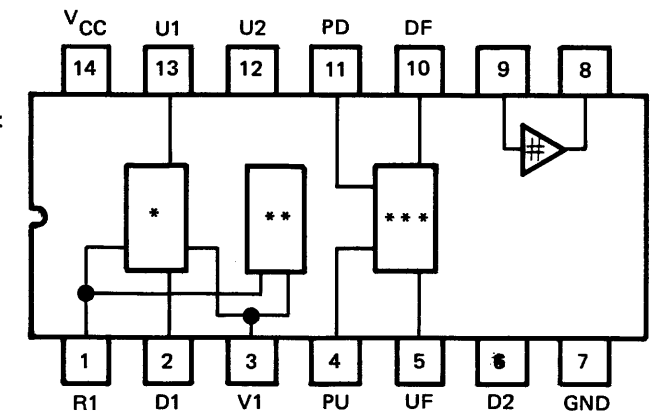


4044

Phase-Frequency Detector



Package:



- * Phase Frequency Detector 1
- ** Phase Frequency Detector 2
- *** Charge Pump # Amplifier

Description:

This device contains two digital phase detectors and a charge pump circuit which converts MTTL inputs to a dc voltage level for use in frequency discrimination and phase-locked loop applications.

The two phase detectors have common inputs. Phase-frequency detector 1 is locked in (indicated by both outputs high) when the negative transitions of the variable input (V1) and reference input (R1) are equal in frequency and phase. If the variable input is lower in frequency or lags in phase, the U1 (up) goes low; conversely the D1 (down) output goes low when the variable input is higher in frequency or leads the reference input in phase. It is important to note that the duty cycles of the variable input and the reference input are not important since negative transitions control system operation.

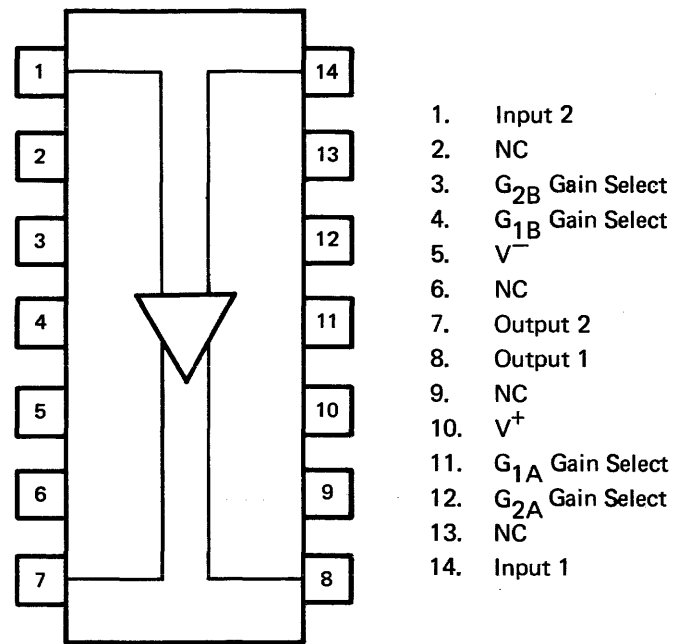
Phase detector 2 is locked when the variable input phase lags the reference phase by 90° (indicated by the U2 and D2 outputs alternately going low with equal pulse widths). If the variable input phase lags by more than 90° , U2 will remain low longer than D2, and conversely, if the variable input phase lags the reference phase by less than 90° , D2 remains low longer. In this phase detector the variable input and the reference must have 50% duty cycles.

The charge pump accepts the phase detector outputs (U1 or U2 applied to PU and D1 or D2 applied to PD) and converts them to fixed amplitude positive and negative pulses at the UF and DF outputs respectively. These pulses are applied to a lag-lead active filter, which incorporates external components, as well as the amplifier provided in the MC4344/4044 circuit. The filter provides a dc voltage proportional to the phase error.

592

Video Amplifier

The SE/NE 592 is a monolithic, two stage, differential output, wideband video amplifier. It offers fixed gains of 100 and 400 without external components and adjustable gains from 400 to 0 with one external resistor. The input stage has been designed so that with the addition of a few external reactive elements between the gain select terminals, the circuit can function as a high pass, low pass, or band pass filter. This feature makes the circuit ideal for use as a video or pulse amplifier in communications, magnetic memories, display and video recorder systems. The 592 is a pin-for-pin replacement for the μ A733.

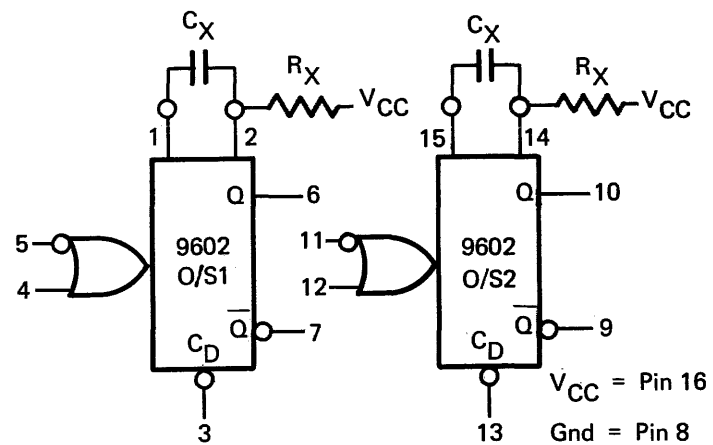


9602

Multivibrator

9602 is DC level sensitive retriggerable monostable multivibrators which provides an output pulse whose duration and accuracy is a function of external timing components.

The inputs are D.C. coupled making triggering independent of input transition times. If the input signal is applied to an active high input, triggering will occur on the rising edge of the waveform. By applying the input signal to an active low input, triggering will occur on the falling edge of the waveform.

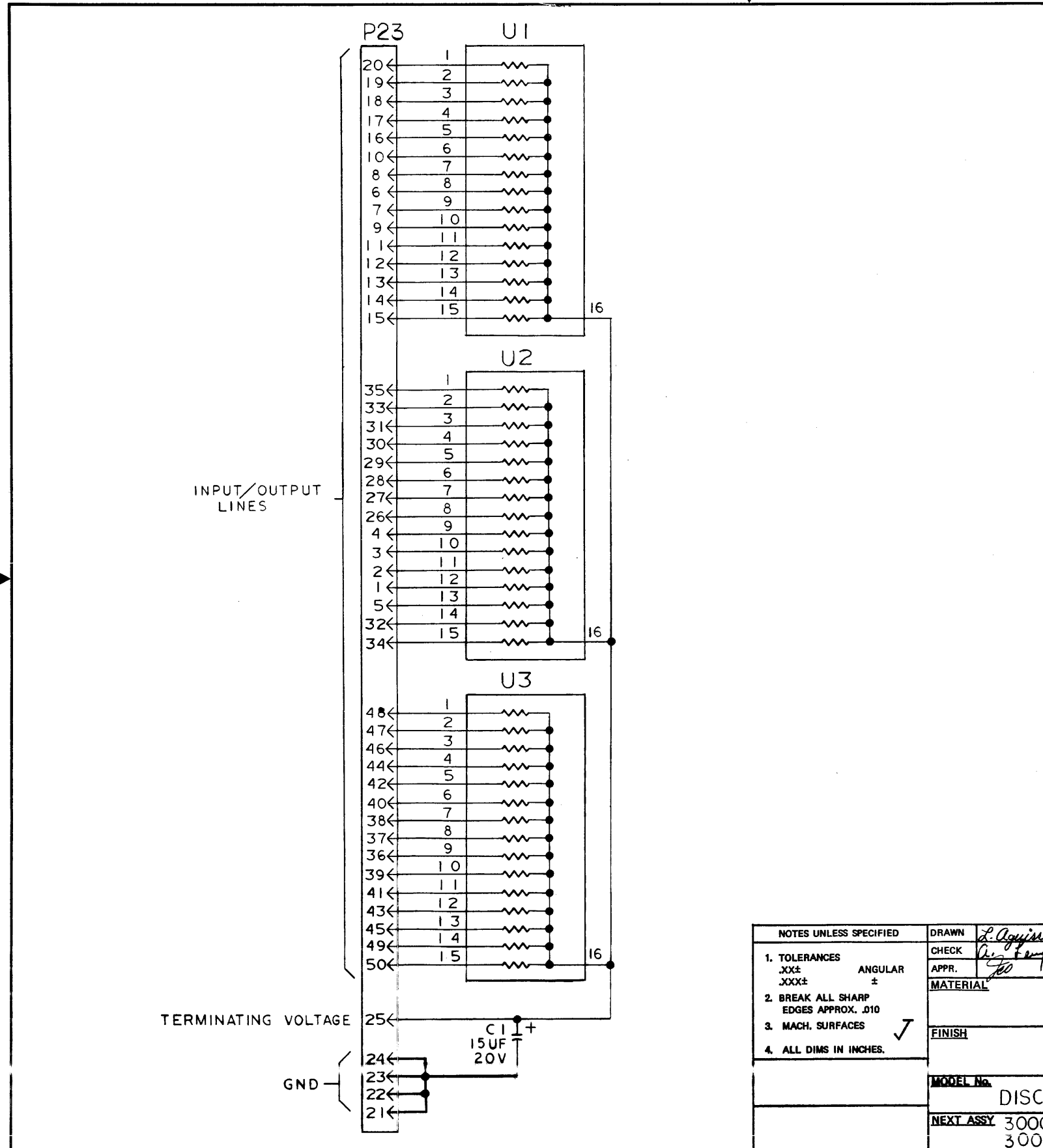


The input conditions to be satisfied for triggering are indicated by the external logic symbols.

Each time the input conditions for triggering are met, the external capacitor is discharged and a new cycle is started. Successive inputs with a period shorter than the delay time retrigger the monostable resulting in a continuous true output. Retriggerring may be inhibited by tying the negation (\bar{Q}) output back to an active level low input.

9602 has an active low reset input (\bar{CD}) which allows the one shot to be reset.

REVISIONS				300095	D ₁
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
1	SEE SHT. 3 OF 3		1/2/73	[Signature]	



INPUT/OUTPUT LINES

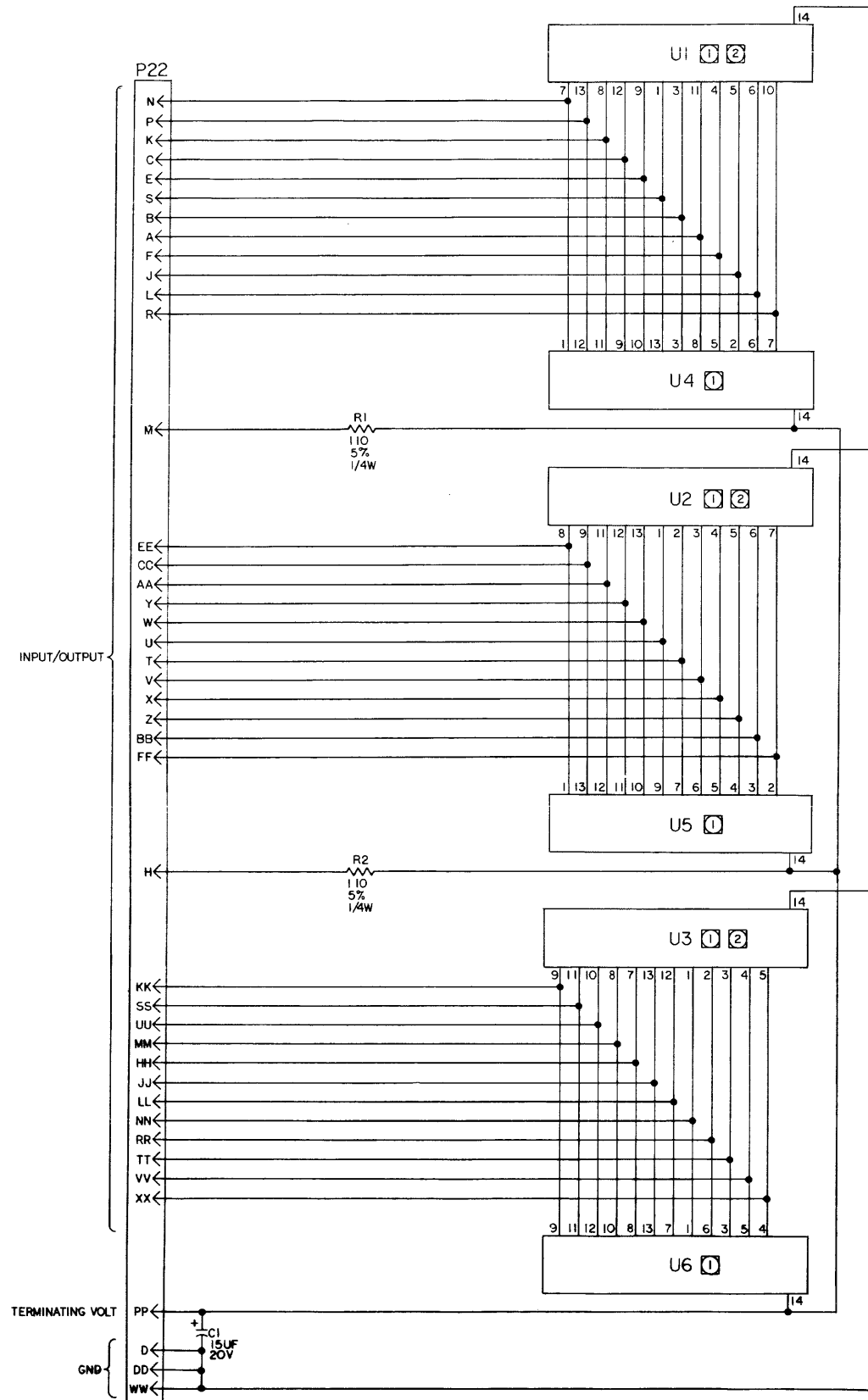
TERMINATING VOLTAGE

GND

ALL RESISTORS 110 OHMS.
UNLESS OTHERWISE SPECIFIED:

NOTES UNLESS SPECIFIED		DRAWN	1-13-73	PERKIN-ELMER Memory Products Division THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION	CODE		
1. TOLERANCES	ANGULAR ±	CHECK	4-2-73		SCHMATIC LINE TERMINATOR	D	
2. BREAK ALL SHARP EDGES APPROX. .010		APPR.	1/2/73			108	
3. MACH. SURFACES	✓	MATERIAL			QTY. REQ'D.		
4. ALL DIMS IN INCHES.		FINISH					
		MODEL No.	DISC	SCALE	SIZE	300095	D ₁
		NEXT ASSY	300050 300250	DO NOT SCALE THIS DRAWING	WEIGHT		SHEET 2 OF 3

REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT RELEASE		7/11/71
A	MFG REL. NO CHGE		



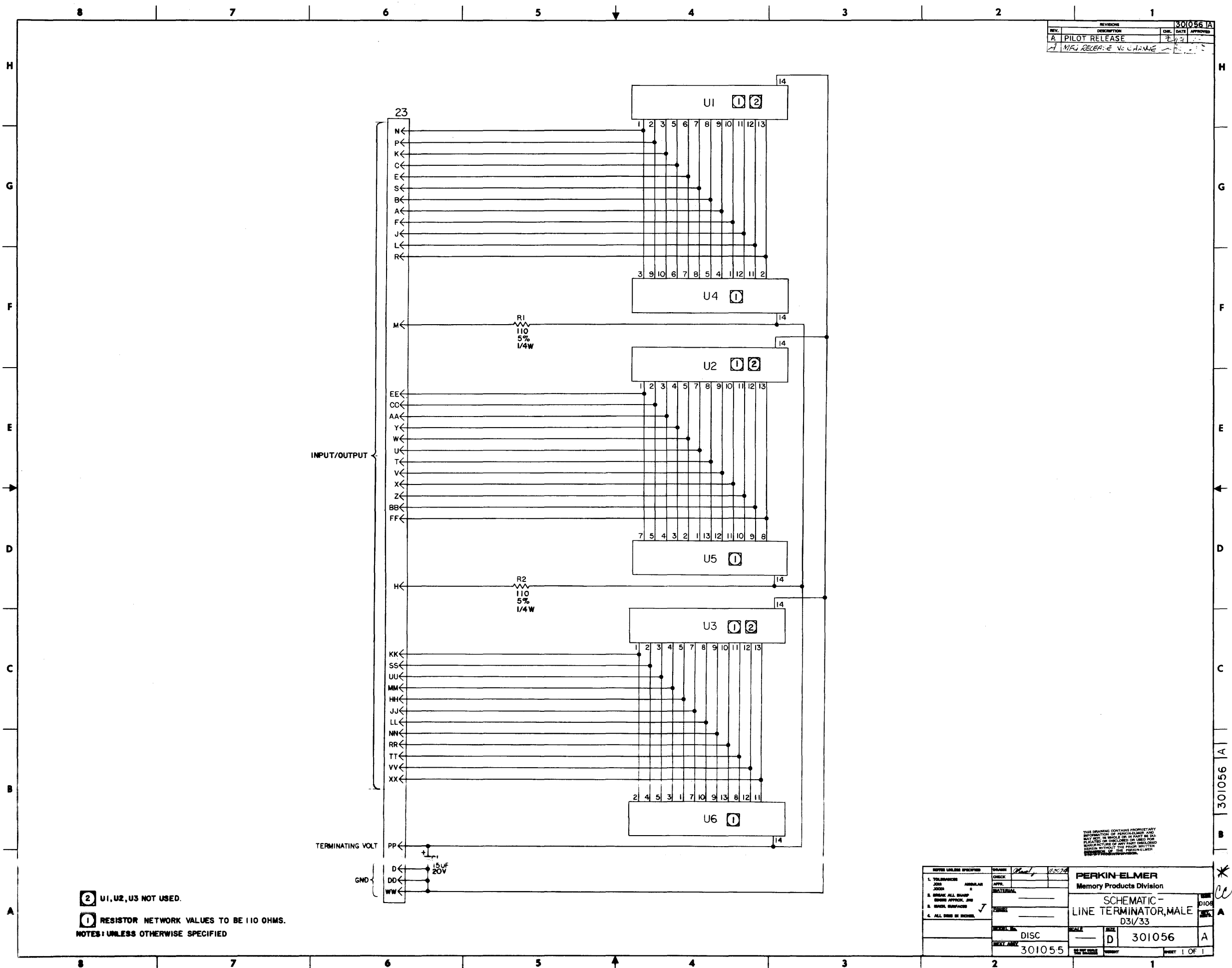
② U1, U2, U3 NOT USED
 ① RESISTOR NETWORK VALUES TO BE 110 OHMS.
 NOTES: UNLESS OTHERWISE SPECIFIED

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY BE DISCLOSED OR IN PART BE DISCLOSED OR REPRODUCED OR USED FOR MANUFACTURE OF ANY PART OR COMPONENT THEREOF WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.

NOTES UNLESS SPECIFIED	DRAWN: <i>[Signature]</i>	DATE: 4/25/71	PERKIN-ELMER Memory Products Division	
1. TOLERANCES JOBS: ANGULAR ± JOOR: ±	CHECK: <i>[Signature]</i>	APPL: <i>[Signature]</i>	MATERIAL: <i>[Signature]</i>	DATE: 7/11/71
2. BREAK ALL SHARP CORNER APPROX. .010	3. WASH SURFACES	4. ALL DIMS IN INCHES	SCALE: D	301048
	REV. DISC	REV. DISC	REV. DISC	REV. DISC
	301047	301047	301048	301048
				1 OF 1

301048

REVISIONS		CHK.	DATE	APPROVED
REV.	DESCRIPTION			
A	PILOT RELEASE		7/2	
	MFR RELEASE NO CHANGE			

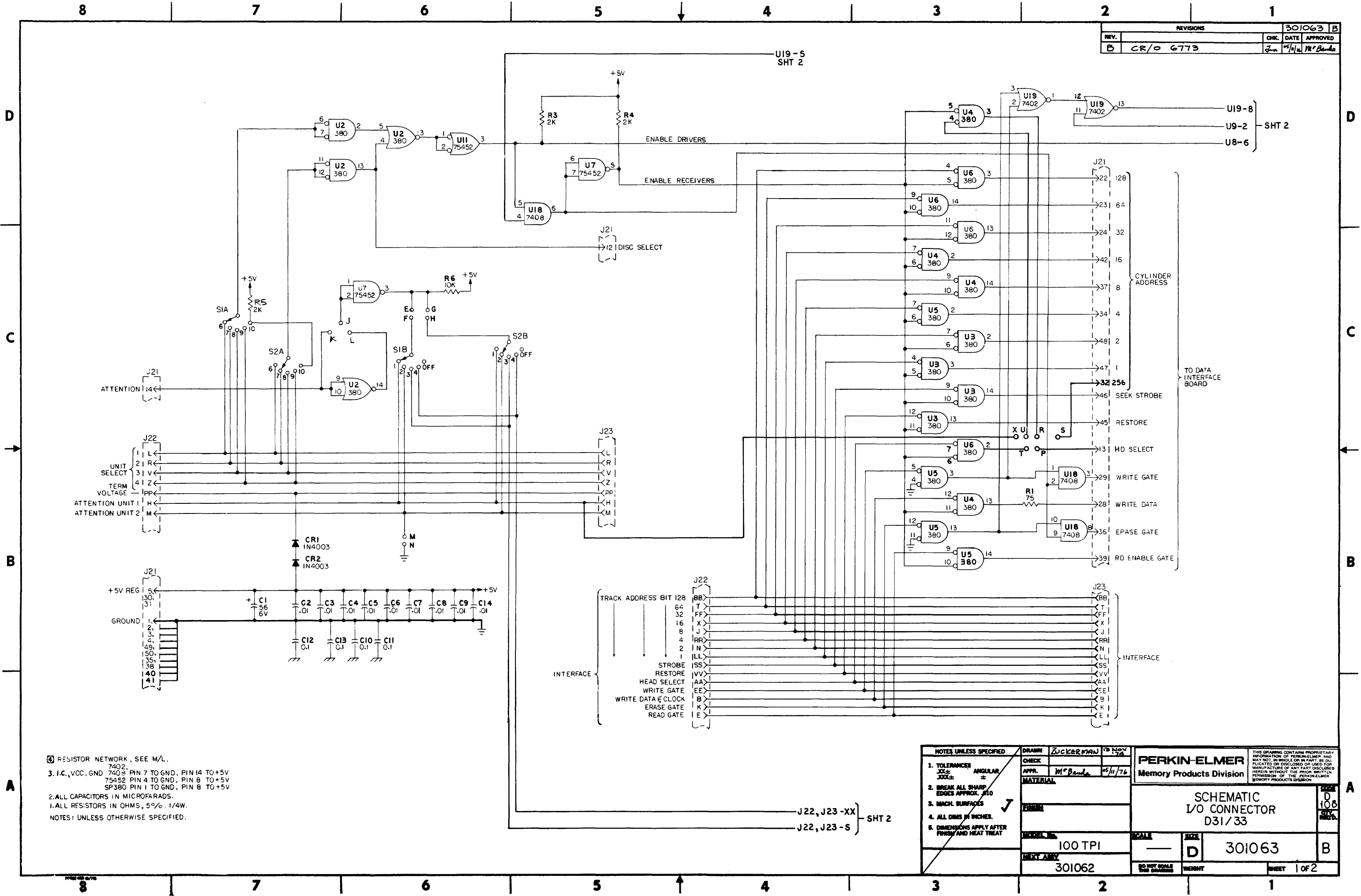


② U1, U2, U3 NOT USED.
 ① RESISTOR NETWORK VALUES TO BE 110 OHMS.
 NOTES: UNLESS OTHERWISE SPECIFIED

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER CORPORATION.

1. TOLERANCES UNLESS SPECIFIED 2. BREAK ALL SHARP CORNERS 3. DIMENSIONS TO CENTER UNLESS OTHERWISE SPECIFIED 4. ALL DIMS IN INCHES		DRAWN: <i>[Signature]</i> CHECKED: <i>[Signature]</i> DATE: 1/25/74	PERKIN-ELMER Memory Products Division
SCHEMATIC - LINE TERMINATOR, MALE D31/33		DISC 301055	SCALE: D SIZE: 301056 SHEET 1 OF 1

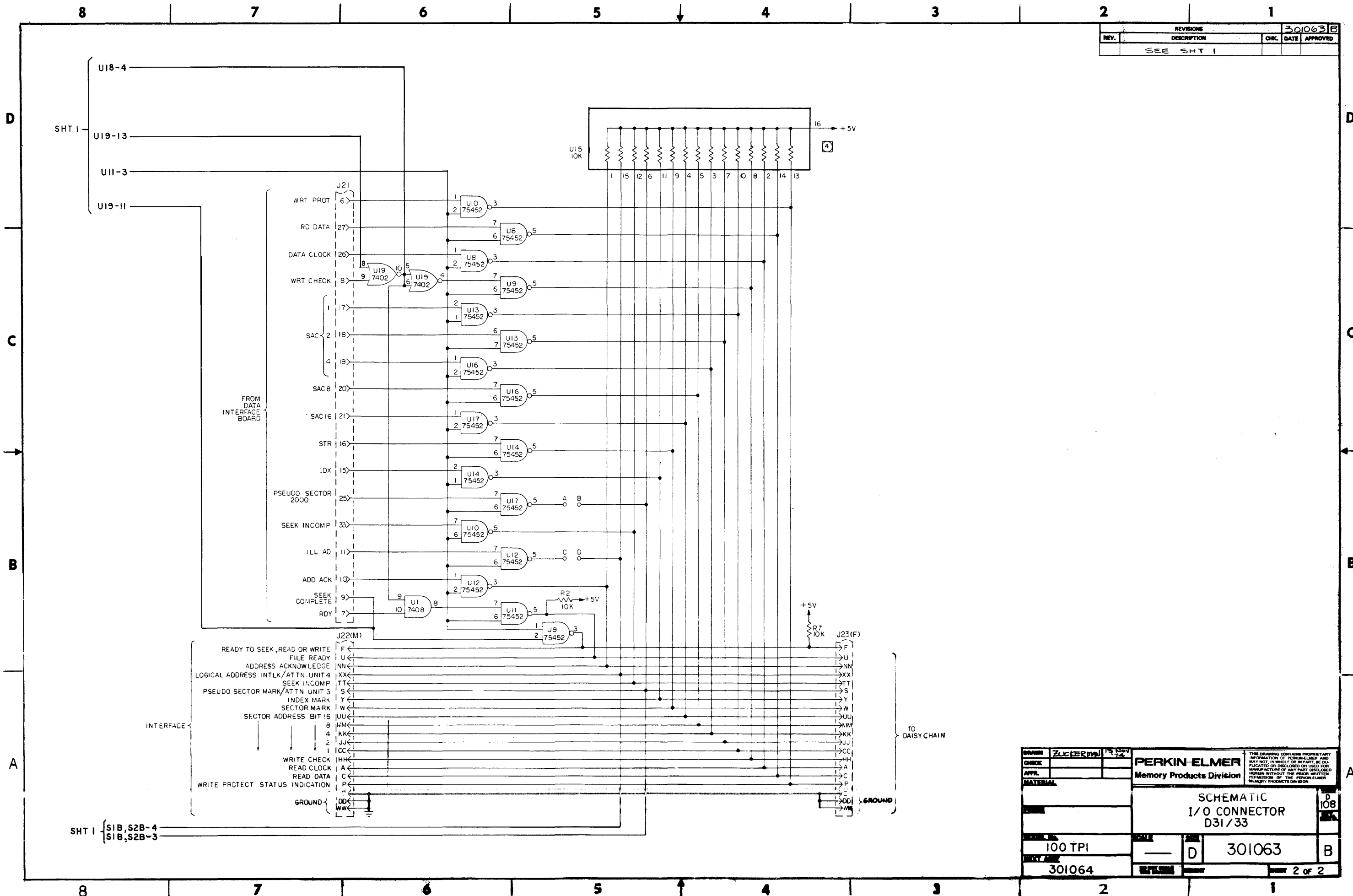
REVISIONS			301063	B
REV.	CHK.	DATE	APPROVED	
B	CR/O	6773	Jan 76	M. Banda



- RESISTOR NETWORK, SEE M/L.
 7402
 3. I.C., VCC, GND 7402 PIN 7 TO GND, PIN 14 TO +5V
 75452 PIN 4 TO GND, PIN 8 TO +5V
 SP380 PIN 1 TO GND, PIN 8 TO +5V
 2. ALL CAPACITORS IN MICROFARADS.
 1. ALL RESISTORS IN OHMS, 5% 1/4W.
 NOTES: UNLESS OTHERWISE SPECIFIED.

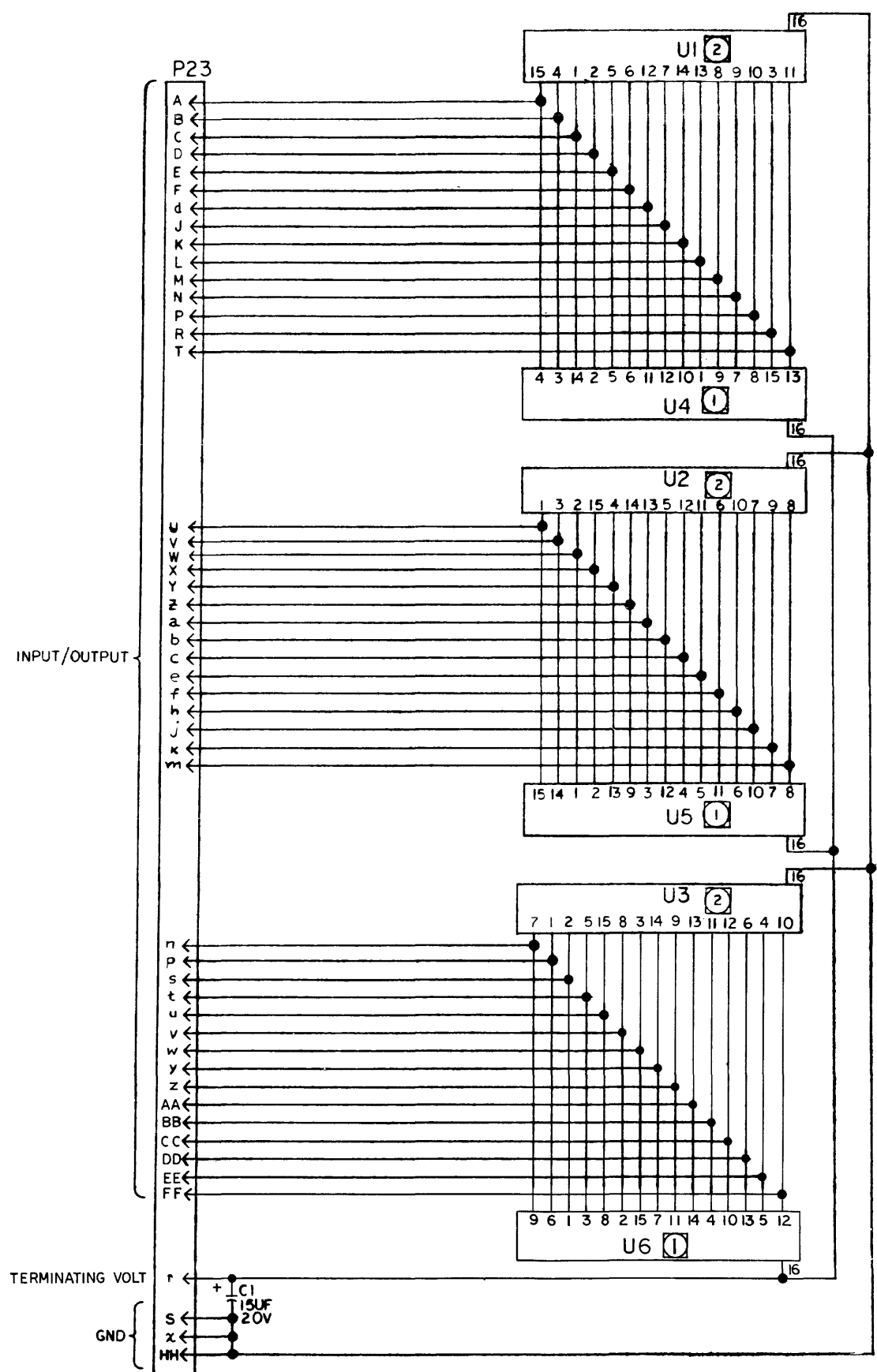
NOTES UNLESS SPECIFIED 1. TOLERANCES XX± ANGULAR XXX± ± 2. BREAK ALL SHARP EDGES APPROX. #10 3. MACH. SURFACES 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN ZUCKERMAN 17 NOV 75 CHECK APPR. M. Banda 25 JUN 76 MATERIAL	PERKIN-ELMER Memory Products Division SCHEMATIC I/O CONNECTOR D31/33 100 TPI 301062	DRAWN D 108 SHEET 1 OF 2
	MODEL NO. NEXT ARMY		SCALE SIZE D WEIGHT SHEET 1 OF 2
	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE REPRODUCED OR IN ANY PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION		
	DO NOT SCALE THIS DRAWING		

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
	SEE SHT 1		301063 B



DRW	ZUCKERMAN	14 NOV 74	PERKIN-ELMER Memory Products Division	SCHEMATIC I/O CONNECTOR D31/33	D 108
CHK					
APP					
MATERIAL					
	100 TPI		D	301063	B
	301064				2 of 2

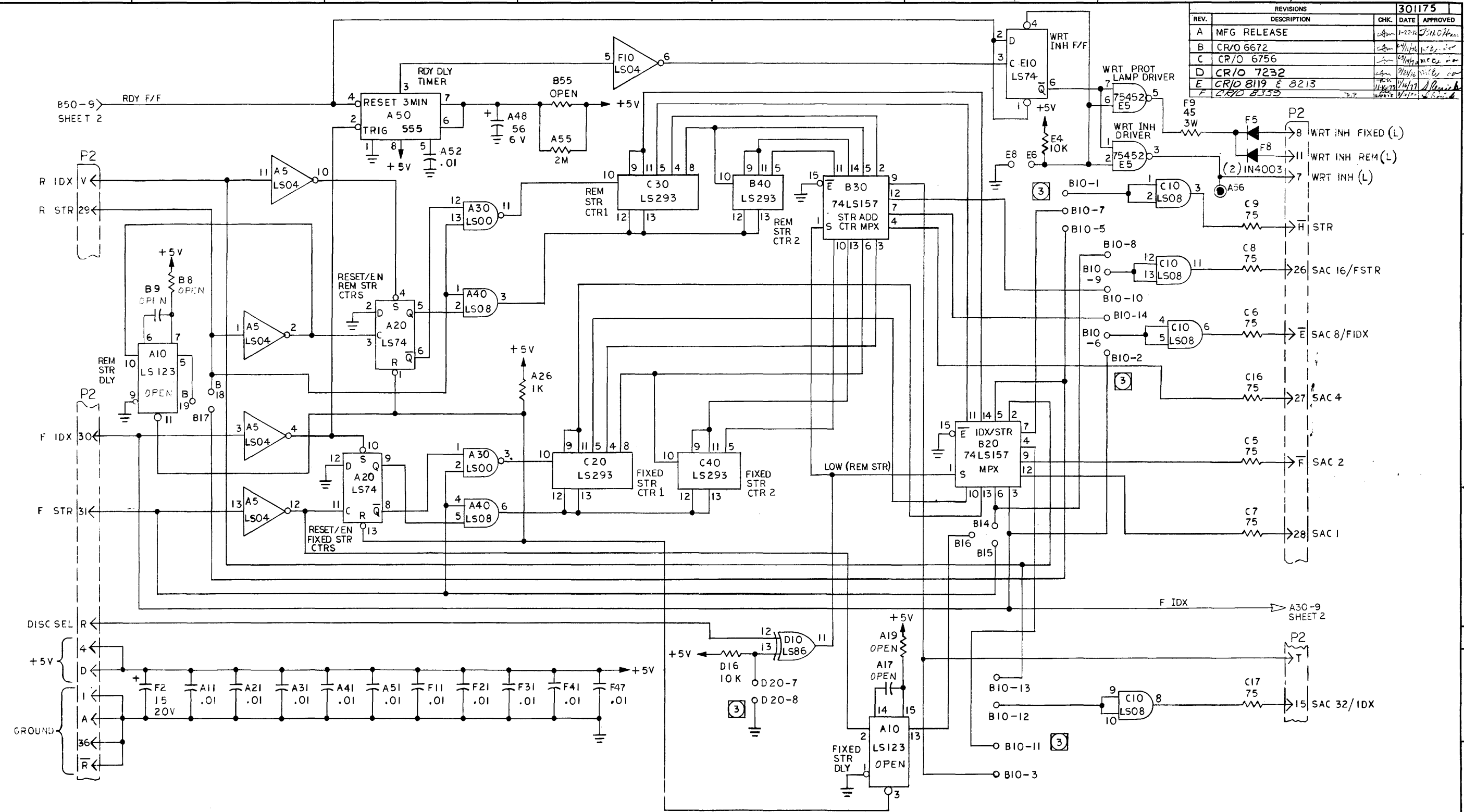
REVISIONS			301075
REV.	DESCRIPTION	CHK.	DATE
A	PILOT RELEASE		
A	MFG RELEASE, NO CHANGE		
B	CR O 6118		



② U1, U2, U3, NOT USED.
 ① RESISTOR NETWORK VALUES TO BE 110 OHMS.
 NOTES UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED 1. TOLERANCES JOCK ANGULAR ± JOCK ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH SURFACES ✓ 4. ALL DIMS IN INCHES.	DRAWN <i>R. DROVER</i> 4-22-75 CHECK <i>F.M. O'Hara</i> 5-1-75 APPR. <i>J. Allen</i> 5/1/75	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.	
	MODEL No. 100/200 TPI-F&T		SIZE D		PART NO. 301075
	NEXT ASSY. 301074		DO NOT SCALE THIS DRAWING		SHEET 1 OF 1
	SCHEMATIC, PWB LINE TERMINATOR, MALE D40				

REVISIONS				301175	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	MFG RELEASE		1-22-76	J. P. O'Hara	
B	CR/O 6672		2/11/76	J. P. O'Hara	
C	CR/O 6756		2/11/76	J. P. O'Hara	
D	CR/O 7232		11/20/76	J. P. O'Hara	
E	CR/O 8119 E 8213		11/20/76	J. P. O'Hara	
F	CR/O 8353		11/20/76	J. P. O'Hara	



4. ALL I.C. NUMBERS WITH LS DESIGNATION ARE 74LS TYPE. EXCEPTION IS NO. 555.

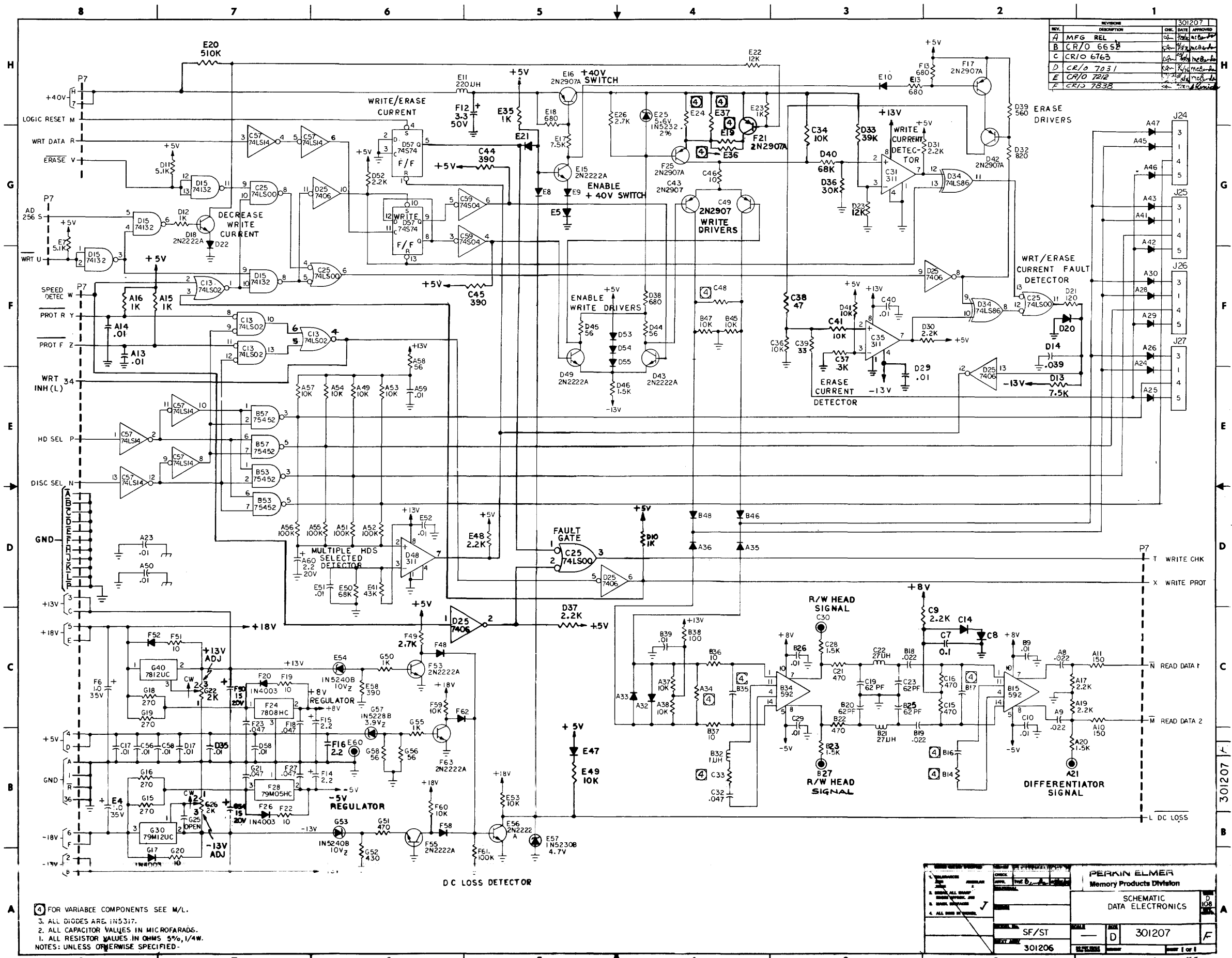
③ FOR JUMPER LOCATIONS AND VARIABLE COMPONENTS SEE M/L.

2. ALL CAPACITORS IN MICROFARADS.

1. ALL RESISTORS IN OHMS, 5%, 1/4 W.

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED		DRAWN <i>J. P. O'Hara</i> 8/15/75	PERKIN-ELMER Memory Products Division	
1. TOLERANCES DIM. ANGULAR XXX ±	CHECK	APPR. <i>J. P. O'Hara</i> 1-23-76	SCHEMATIC, PWB - CONTROL INTERFACE	
2. BREAK ALL SHARP EDGES APPROX. 0.10	MATERIAL	FINISH	MODEL No. SF - ST	SCALE
3. MACH. SURFACES			NEXT ASSY 301174	SIZE D
4. ALL DIMS IN INCHES.				301175
				DO NOT SCALE THIS DRAWING
				WEIGHT
				SHEET 1 OF 2

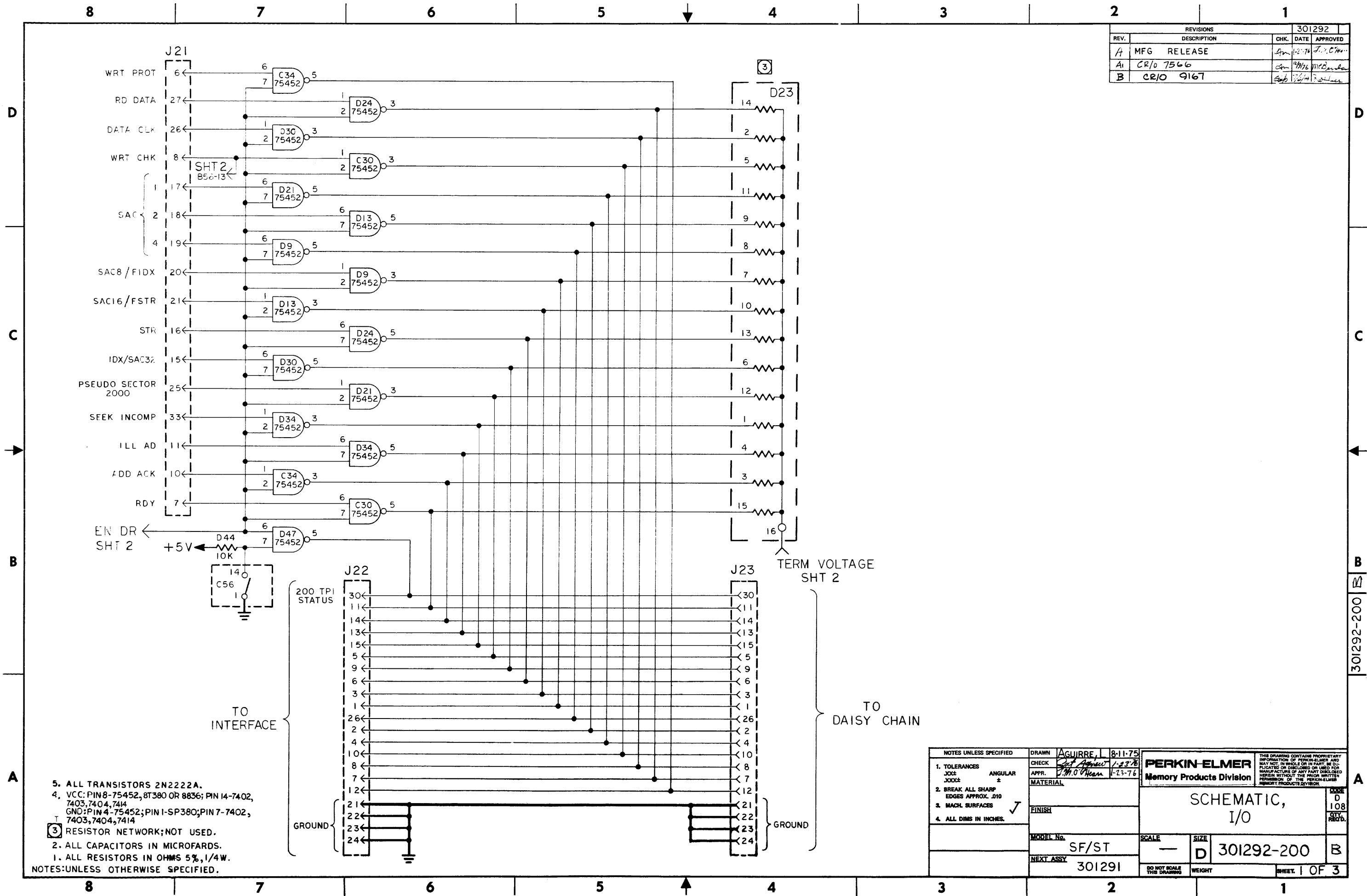


REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	MFG REL			
B	CR/O 6658			
C	CR/O 6763			
D	CR/O 7031			
E	CR/O 7212			
F	CR/O 7838			

- ④ FOR VARIABLE COMPONENTS SEE M/L.
 3. ALL DIODES ARE 1N5317.
 2. ALL CAPACITOR VALUES IN MICROFARADS.
 1. ALL RESISTOR VALUES IN OHMS 5%, 1/4W.
 NOTES: UNLESS OTHERWISE SPECIFIED.

PERKIN ELMER Memory Products Division	
SCHEMATIC DATA ELECTRONICS	
SF/ST	301207
301206	1 of 1

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
A	MFG RELEASE	Jan 1-2-76	J. C. ...
A1	CR/O 7566	Jan 1976	McCombs
B	CR/O 9167	Feb 1976	...



5. ALL TRANSISTORS 2N2222A.
 4. VCC: PIN 8-75452, 8T380 OR 8836; PIN 14-7402, 7403, 7404, 7414
 GND: PIN 4-75452; PIN 1-SP380; PIN 7-7402, 7403, 7404, 7414
 3. RESISTOR NETWORK; NOT USED.
 2. ALL CAPACITORS IN MICROFARADS.
 1. ALL RESISTORS IN OHMS 5%, 1/4W.
 NOTES: UNLESS OTHERWISE SPECIFIED.

TO INTERFACE

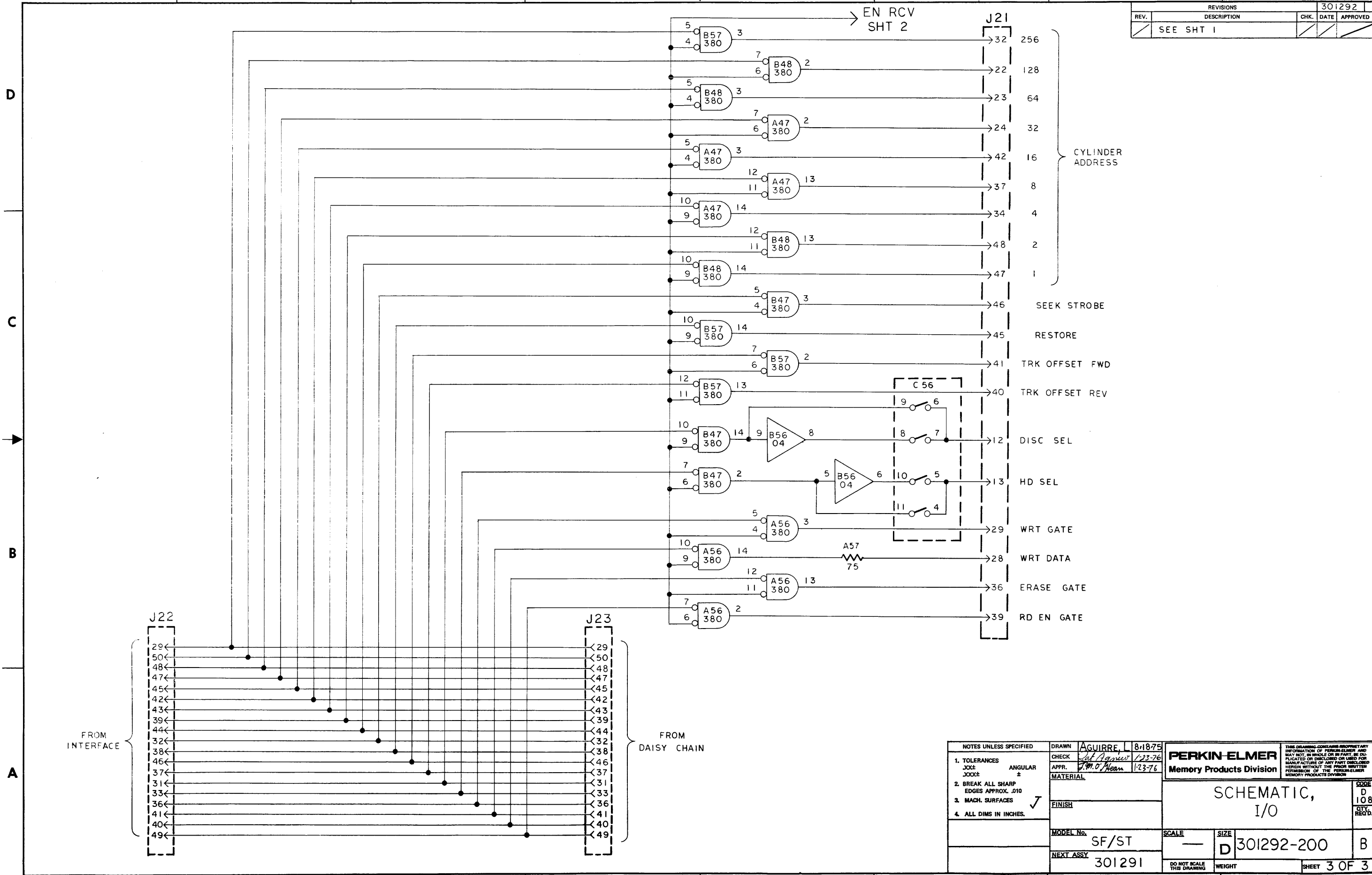
TO DAISY CHAIN

TERM VOLTAGE SHT 2

NOTES UNLESS SPECIFIED	DRAWN	AGUIRRE, L	8-11-75	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DISSEMINATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.
1. TOLERANCES X.XXX ANGULAR ±	CHECK	...	...
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	...	...
3. MACH. SURFACES	MATERIAL			
4. ALL DIMS IN INCHES.	FINISH			PERKIN-ELMER Memory Products Division SCHEMATIC, I/O CODE D 108 CITY REVD.
	MODEL No.	SF/ST	SCALE — SIZE D	
	NEXT ASSY	301291	DO NOT SCALE THIS DRAWING WEIGHT SHEET 1 OF 3	

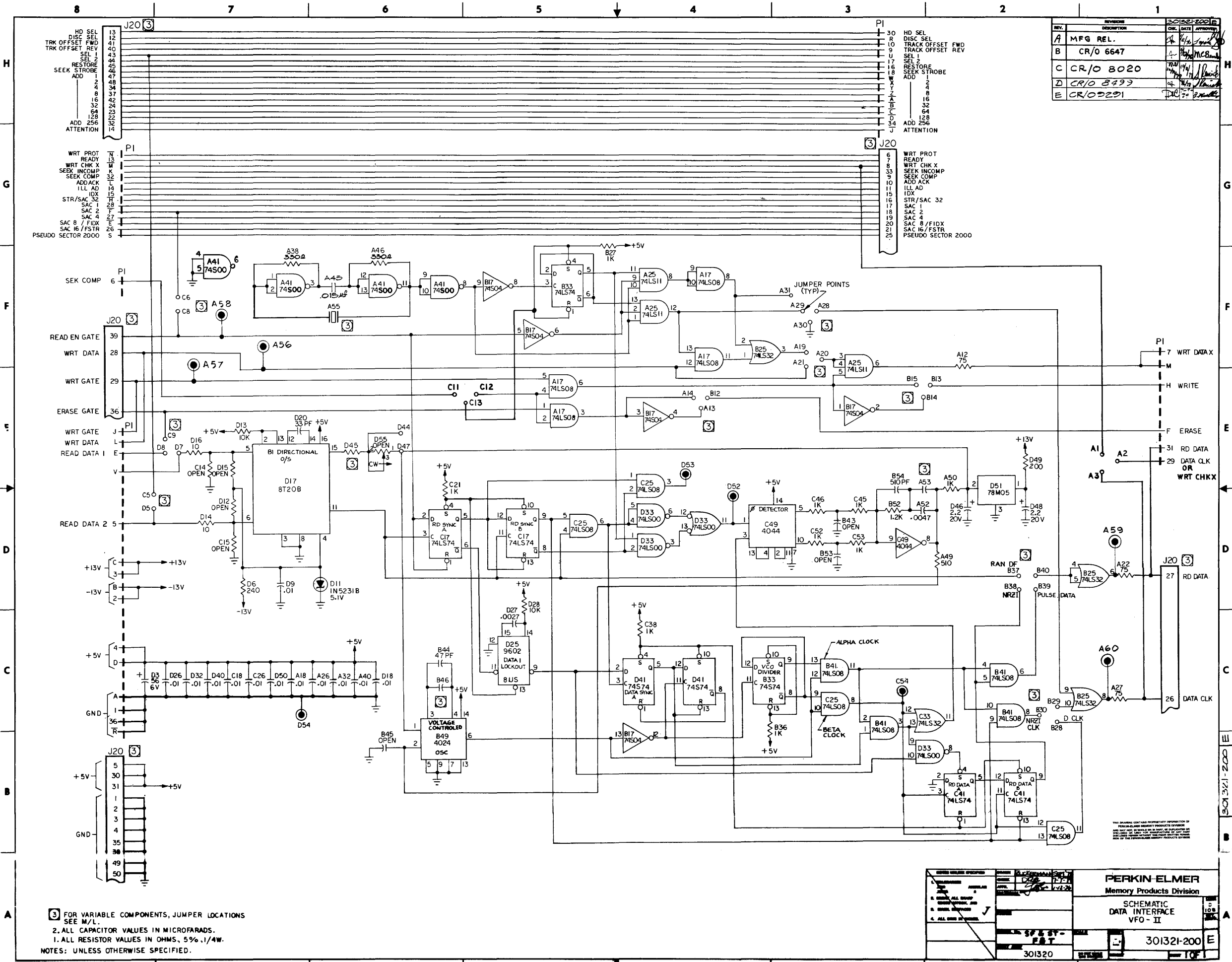
301292-200

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
1	SEE SHT 1		



301292-200 B B B A

NOTES UNLESS SPECIFIED 1. TOLERANCES .XX± ANGULAR ± .XXX± ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES 4. ALL DIMS IN INCHES.	DRAWN	AGUIRRE, L 8/18/75	PERKIN-ELMER Memory Products Division THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE REPRODUCED OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PARTS DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION	
	CHECK	<i>Sat Aguirre</i> 1/23-76		
	APPR.	<i>P.M.O. Mean</i> 1-23-76		
	MATERIAL			
	FINISH		SCHEMATIC, I/O CODE D 108 QTY. REQ'D.	
	MODEL No.	SF/ST	SCALE	SIZE D 301292-200
	NEXT ASSY	301291	DO NOT SCALE THIS DRAWING	WEIGHT
				SHEET 3 OF 3

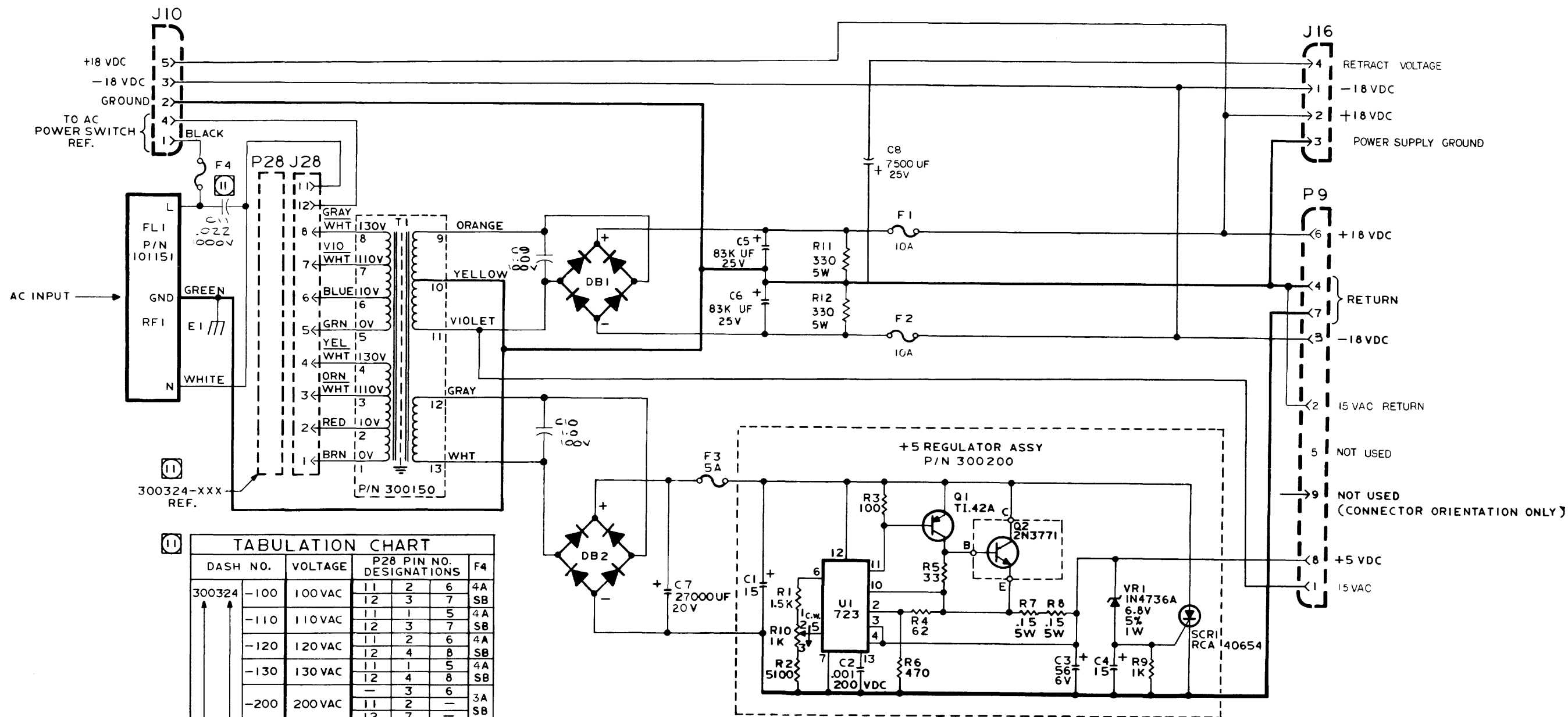


REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	MFG REL.			
B	CR/O 6647			
C	CR/O 8020			
D	CR/O 8499			
E	CR/O 8921			

③ FOR VARIABLE COMPONENTS, JUMPER LOCATIONS SEE M/L.
 2. ALL CAPACITOR VALUES IN MICROFARADS.
 1. ALL RESISTOR VALUES IN OHMS, 5%, 1/4W.
 NOTES: UNLESS OTHERWISE SPECIFIED.

PERKIN-ELMER
 Memory Products Division
 SCHEMATIC DATA INTERFACE VFO-II
 301321-200
 1 OF 1

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
1	SEE SHT 5		30/361



11

TABULATION CHART					
DASH NO.	VOLTAGE	P28 PIN NO. DESIGNATIONS		F4	
300324	-100	11	2	6	4A
		12	3	7	SB
	-110	11	1	5	4A
		12	3	7	SB
	-120	11	2	6	4A
		12	4	8	SB
	-130	11	1	5	4A
		12	4	8	SB
	-200	-	3	6	3A
		-	3	5	SB
	-220	11	1	-	3A
		12	7	-	SB
	-230	-	3	5	3A
		11	2	-	SB
	-240	11	2	-	3A
		12	8	-	SB
	-250	11	1	-	3A
		12	8	-	SB
	-260	-	4	5	3A
		11	1	-	SB

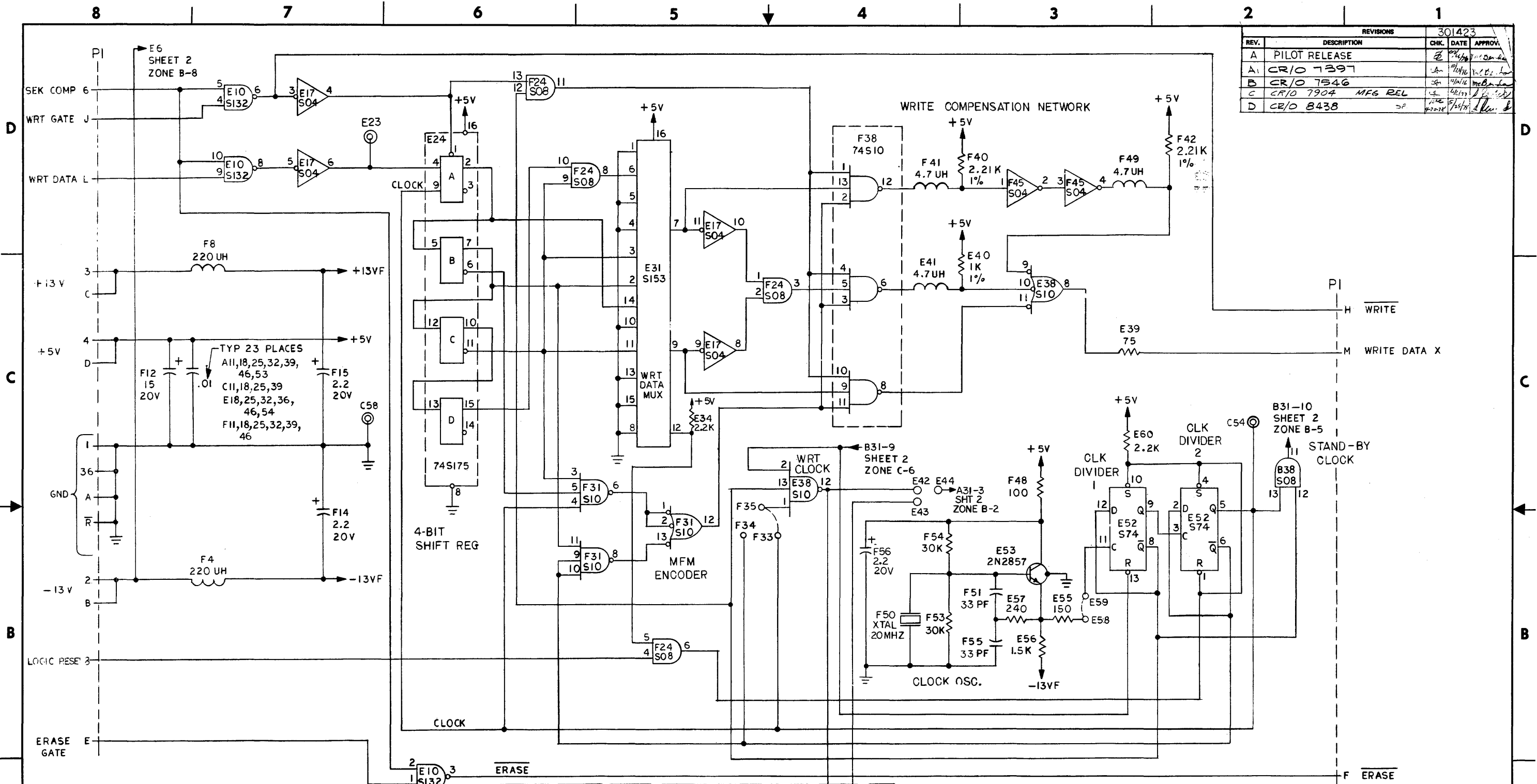
REFERENCE DESIGNATIONS	
HIGHEST USED	DELETED
C11	
DB2	
E1	
FL1	
F4	
J28	
PS	
Q2	
R12	
SCR1	
T1	
UI	
VRI	

11 SEE TABULATION FOR VOLTAGE PLUG CONFIGURATION, AND LINE FUSE TYPE.
 10. ALL CAPACITORS IN MICROFARADS, 20V, 10%.
 9. ALL RESISTORS IN OHMS, 5% 1/4W;
 UNLESS OTHERWISE SPECIFIED:

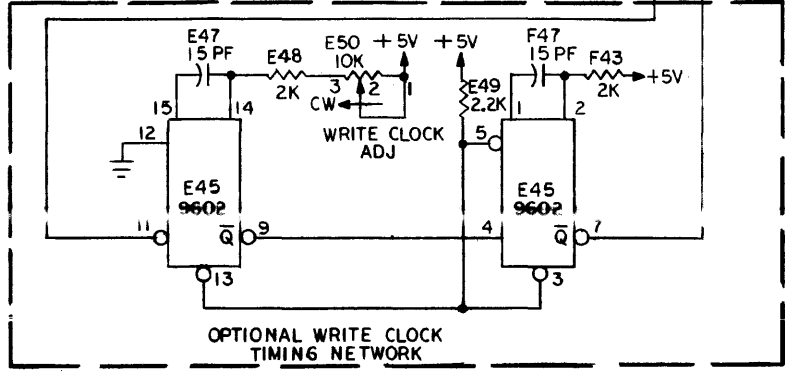
NOTES UNLESS SPECIFIED	DRAWN	ELBREW	0-4-75	PERKIN-ELMER Memory Products Division	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE REPRODUCED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PARTS OR EQUIPMENT WITHOUT THE WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.
1. TOLERANCES JOBS ANGULAR JOBS ±	CHECK	P. NEW	7-13-76		
2. BREAK ALL SHARP EDGES APPROX. .010	MATERIAL			SCHEMATIC, POWER SUPPLY	D108
3. HAZ. SURFACES	FINISH				
4. ALL DIMS IN DIMS.	SCALE			D	301361-100
				3 OF 3	CC

301361-100

REV. NO.		DESCRIPTION	CHK.	DATE	APPROV.
301423					
A		PILOT RELEASE			
A1		CR/O 7397			
B		CR/O 7546			
C		CR/O 7904 MFG REL			
D		CR/O 8438			



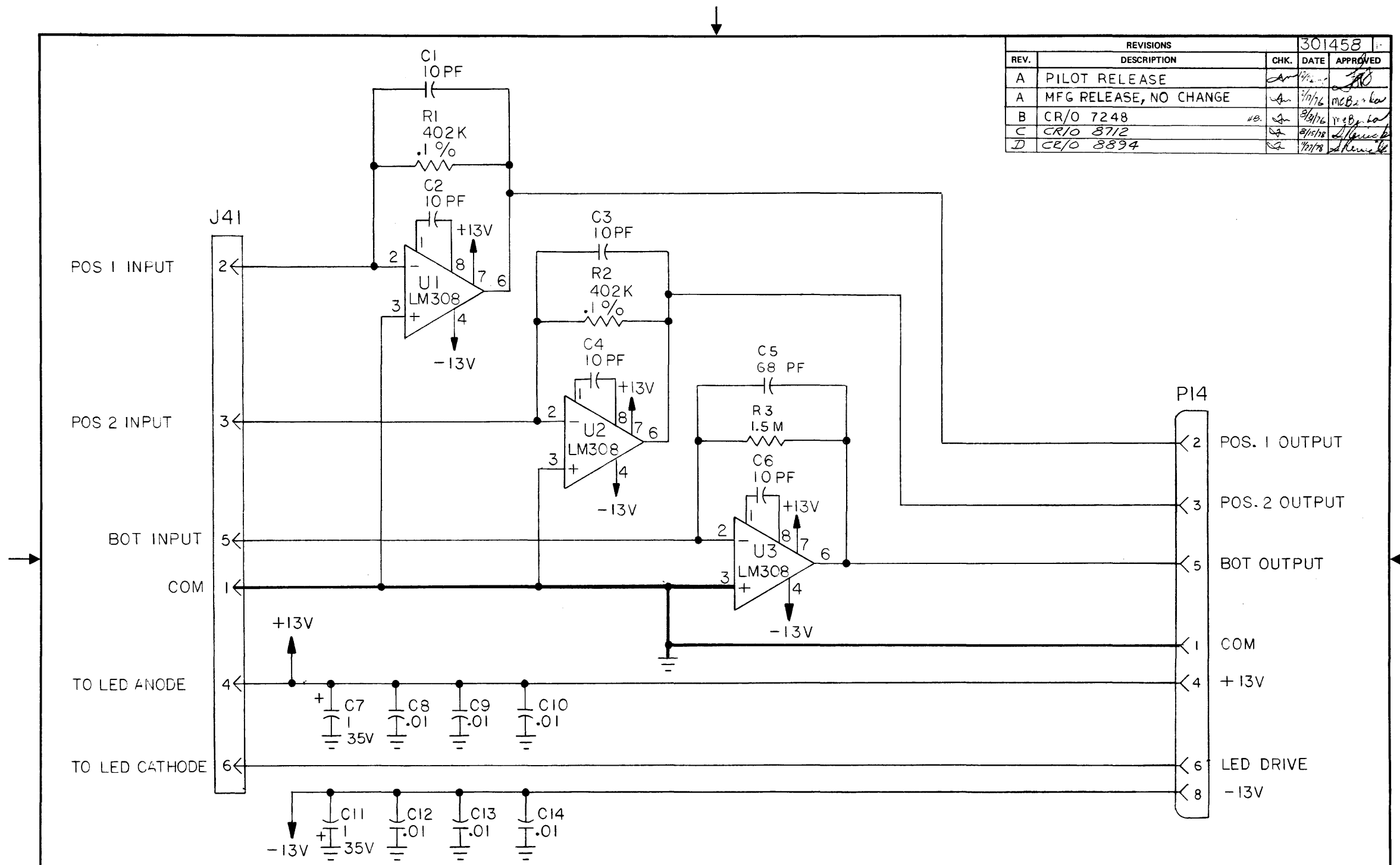
4. ALL DIODES TO BE IN4003.
 3. ALL IC'S ARE 74 SERIES PART NUMBERS.
 2. ALL RESISTOR VALUES ARE IN OHMS, 5%, 1/4 W.
 1. ALL CAPACITOR VALUES ARE IN MICROFARADS.
- NOTES: UNLESS OTHERWISE SPECIFIED



PART NUMBER 301423-001

NOTES UNLESS SPECIFIED	DRAWN <i>[Signature]</i> 4/2/76	PERKIN-ELMER Memory Products Division	SCHEMATIC, MFM DATA CONTROL	108 REV. 0
1. TOLERANCES XX± XXX±	CHECK			
2. BREAK ALL SHARP EDGES APPROX. 0.10	APPR. <i>[Signature]</i> 07/4/76	SCALE		
3. MACH. SURFACES	MATERIAL	SIZE		
4. ALL DIMS IN INCHES	FINISH	D 301423		
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL No. SF/ST	D		
	NEXT ASSY 301422	SHEET 1 OF 2		

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT RELEASE		1/22/75	
A	MFG RELEASE, NO CHANGE		1/17/76	MCB
B	CR/O 7248	MB	3/19/76	MB
C	CR/O 8712	MB	8/15/78	MB
D	CE/O 8894	MB	1/17/78	MB



REFERENCE DESIGNATIONS	
LAST USED	DELETED
U3	
C14	
R3	

- NOTES UNLESS SPECIFIED
- TOLERANCES
.XX± ANGULAR
.XXX±
 - BREAK ALL SHARP EDGES APPROX. .010
 - MACH. SURFACES ✓
 - ALL DIMS IN INCHES.

DRAWN	E. J. ...	11/11/75
CHECK		
APPR.	McB	02-19-76
MATERIAL		
FINISH		
MODEL No.	SF&ST	
NEXT ASSY	301457	

PERKIN-ELMER
Memory Products Division

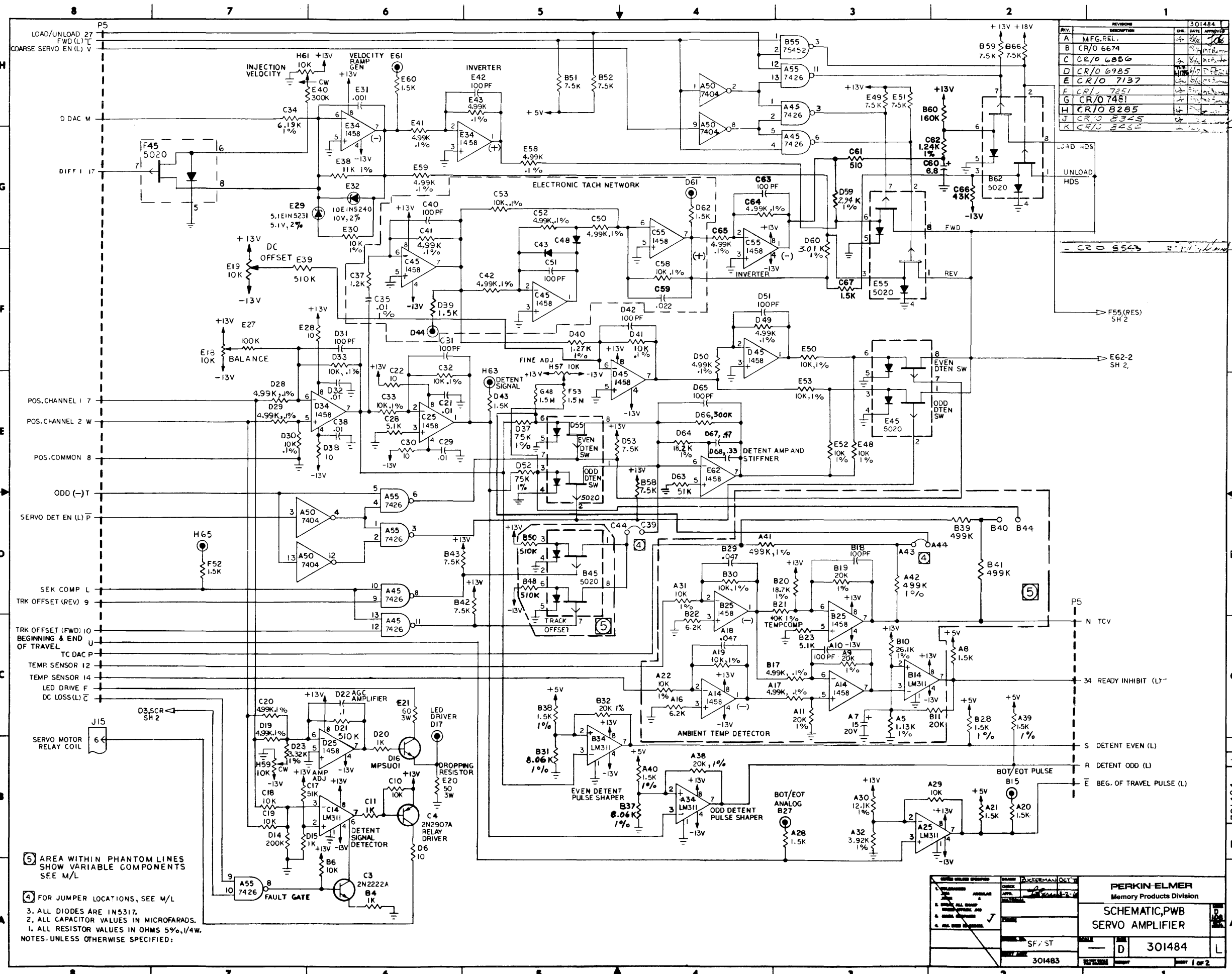
THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION

SCHEMATIC, PWB,
DETENT AMP

CODE	D
QTY	108
REQ'D.	

SCALE		SIZE	C	301458	D
DO NOT SCALE THIS DRAWING	WEIGHT		SHEET	1 OF 1	

2. ALL CAPACITOR VALUES IN MICROFARADS
1. ALL RESISTOR VALUES IN OHMS, 5%, 1/4W
NOTES: UNLESS OTHERWISE SPECIFIED



REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	MFG. REL.			
B	CR/O 6674			
C	CR/O 6856			
D	CR/O 6985			
E	CR/O 7137			
F	CR/O 7251			
G	CR/O 7481			
H	CR/O 8285			
J	CR/O 8325			
K	CR/O 8232			

⑤ AREA WITHIN PHANTOM LINES SHOW VARIABLE COMPONENTS SEE M/L

④ FOR JUMPER LOCATIONS, SEE M/L

3. ALL DIODES ARE 1N5317.

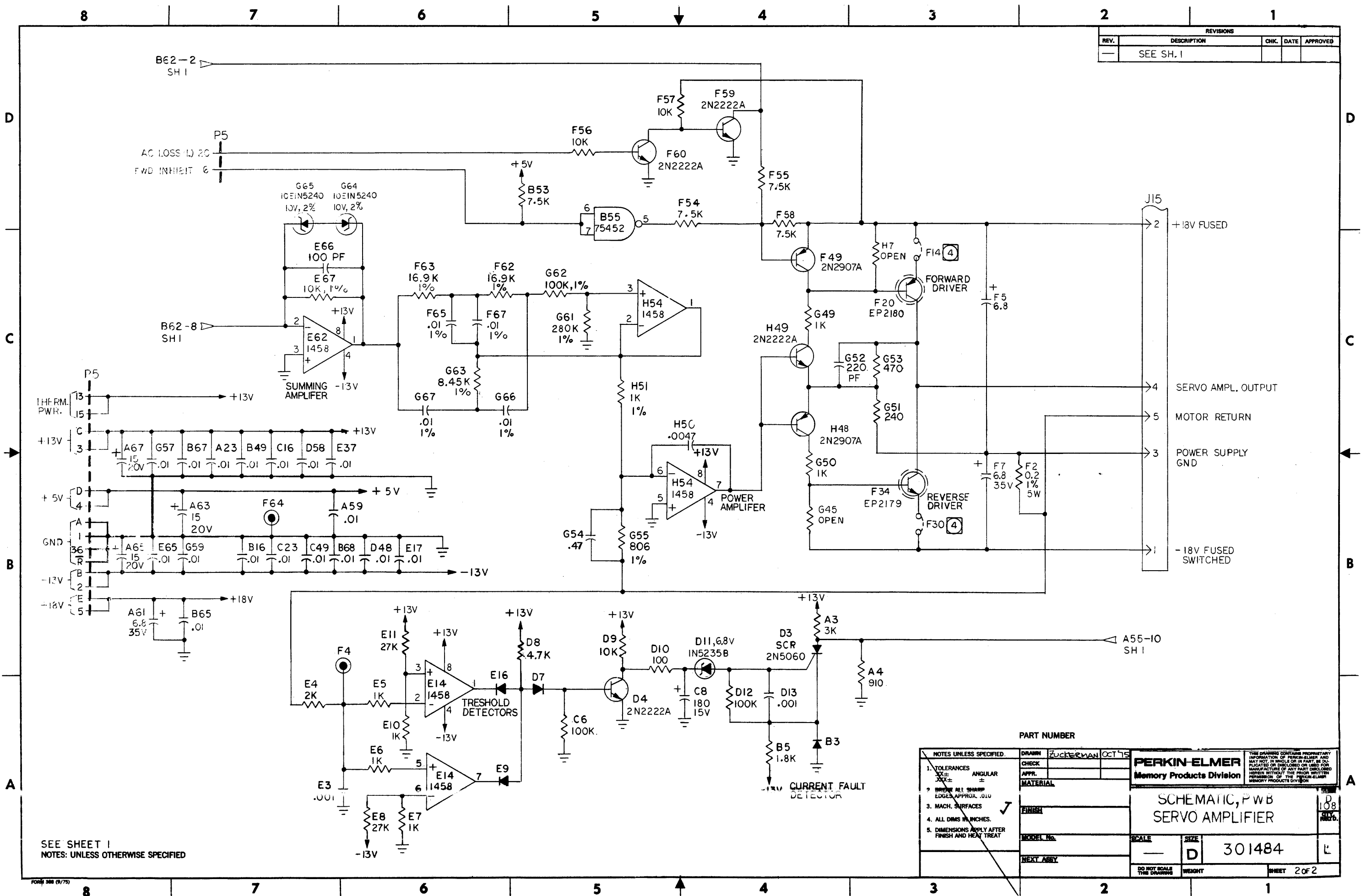
2. ALL CAPACITOR VALUES IN MICROFARADS.

1. ALL RESISTOR VALUES IN OHMS 5%, 1/4W.

NOTES-UNLESS OTHERWISE SPECIFIED:

PERKIN-ELMER Memory Products Division	
SCHEMATIC, PWB	
SERVO AMPLIFIER	
SF/ST	301484
301483	1 of 2

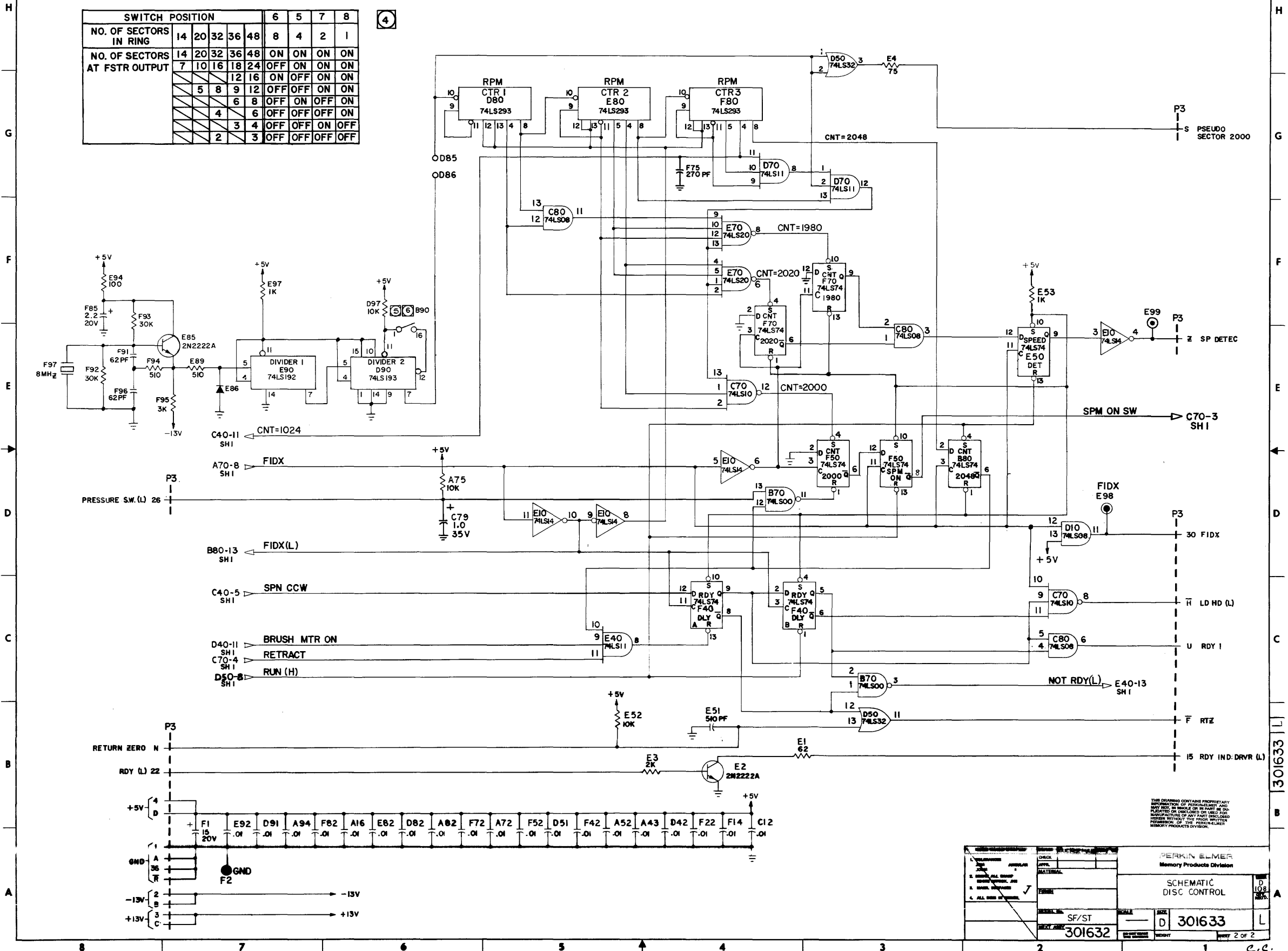
REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
—	SEE SH. 1		



SEE SHEET 1
NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED		DRAWN		ZUCKERMAN OCT 75		PART NUMBER	
1. TOLERANCES	XXX±	ANGULAR	±			PERKIN-ELMER Memory Products Division	
2. SHOW ALL SHARP EDGES APPROX. .01U						SCHEMATIC, PWB SERVO AMPLIFIER	
3. MACH. SURFACES						SCALE	
4. ALL DIMS IN INCHES.						SIZE	
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT						D 301484	
DO NOT SCALE THIS DRAWING		WEIGHT		SHEET		2 OF 2	

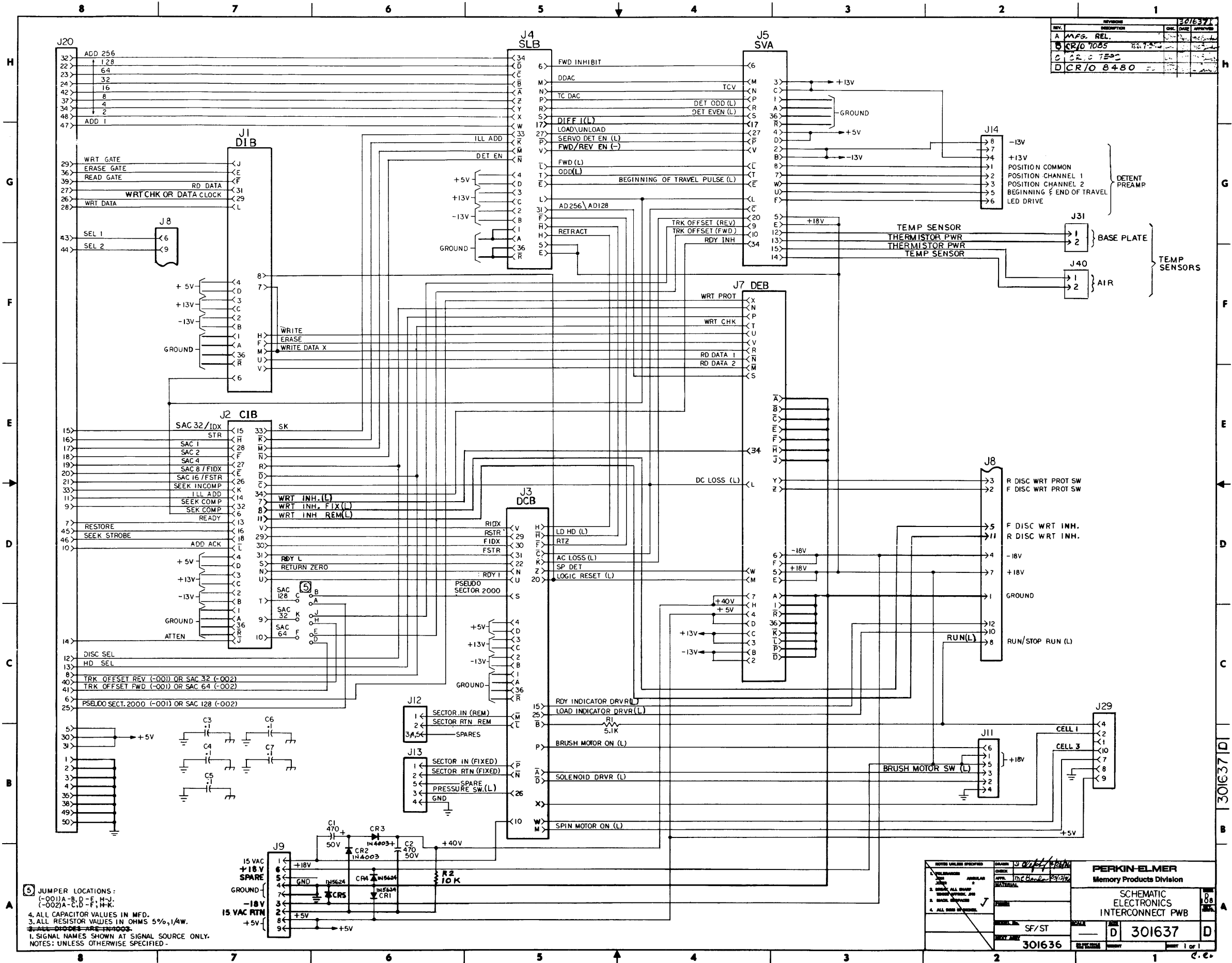
SWITCH POSITION		6	5	7	8
NO. OF SECTORS IN RING	14 20 32 36 48	8	4	2	1
NO. OF SECTORS AT FSTR OUTPUT	14 20 32 36 48	ON	ON	ON	ON
	7 10 16 18 24	OFF	ON	ON	ON
	5 8 9 12	OFF	OFF	ON	ON
	6 8	OFF	ON	OFF	ON
	4 6	OFF	OFF	OFF	ON
	3 4	OFF	OFF	ON	OFF
	2 3	OFF	OFF	OFF	OFF



THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF PERKIN-ELMER MEMORY PRODUCTS DIVISION.

DESIGNER	DATE	APPROVED	DATE
MATERIAL			
PERKIN-ELMER			
Memory Products Division			
SCHEMATIC		DISC CONTROL	
MODEL NO.	SF/ST	SIZE	D
301632			301633
REV. 2 OF 2			

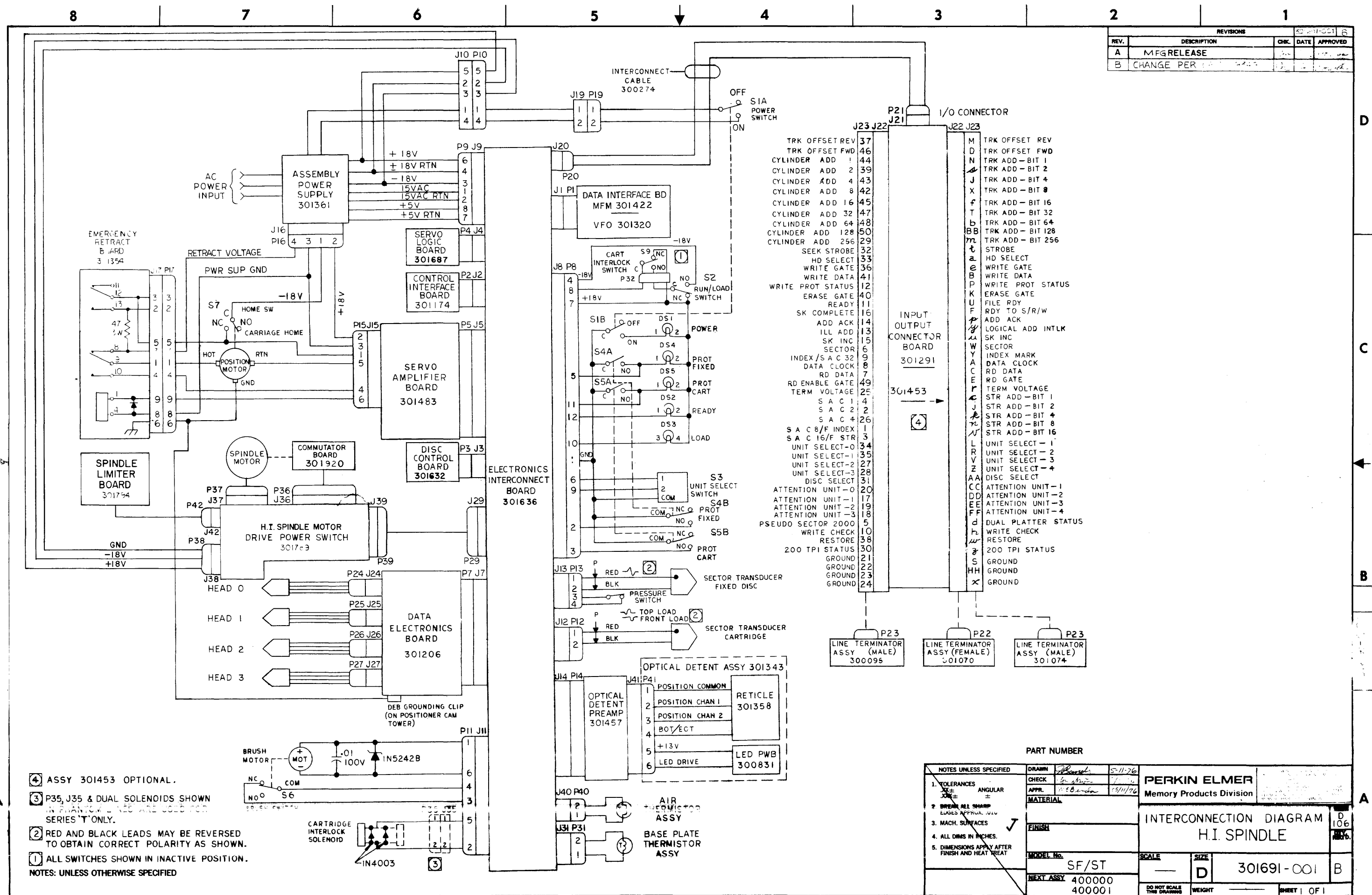
REV.	DESCRIPTION	CHK.	DATE	APPROV.
A	MFG. REL.			
B	CR/D 7085			
C	CR/D 7500			
D	CR/D 8480			



5 JUMPER LOCATIONS:
 (-001)A-B,D-E,H,J;
 (-002)A-C,D-F,H,K.
 4. ALL CAPACITOR VALUES IN MFD.
 3. ALL RESISTOR VALUES IN OHMS 5%, 1/4W.
 1. SIGNAL NAMES SHOWN AT SIGNAL SOURCE ONLY.
 NOTES: UNLESS OTHERWISE SPECIFIED.

PERKIN-ELMER Memory Products Division	
SCHEMATIC ELECTRONICS INTERCONNECT PWB	
301636	301637
SF/ST	D
1 of 1	

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
A	MFG RELEASE		
B	CHANGE PER		

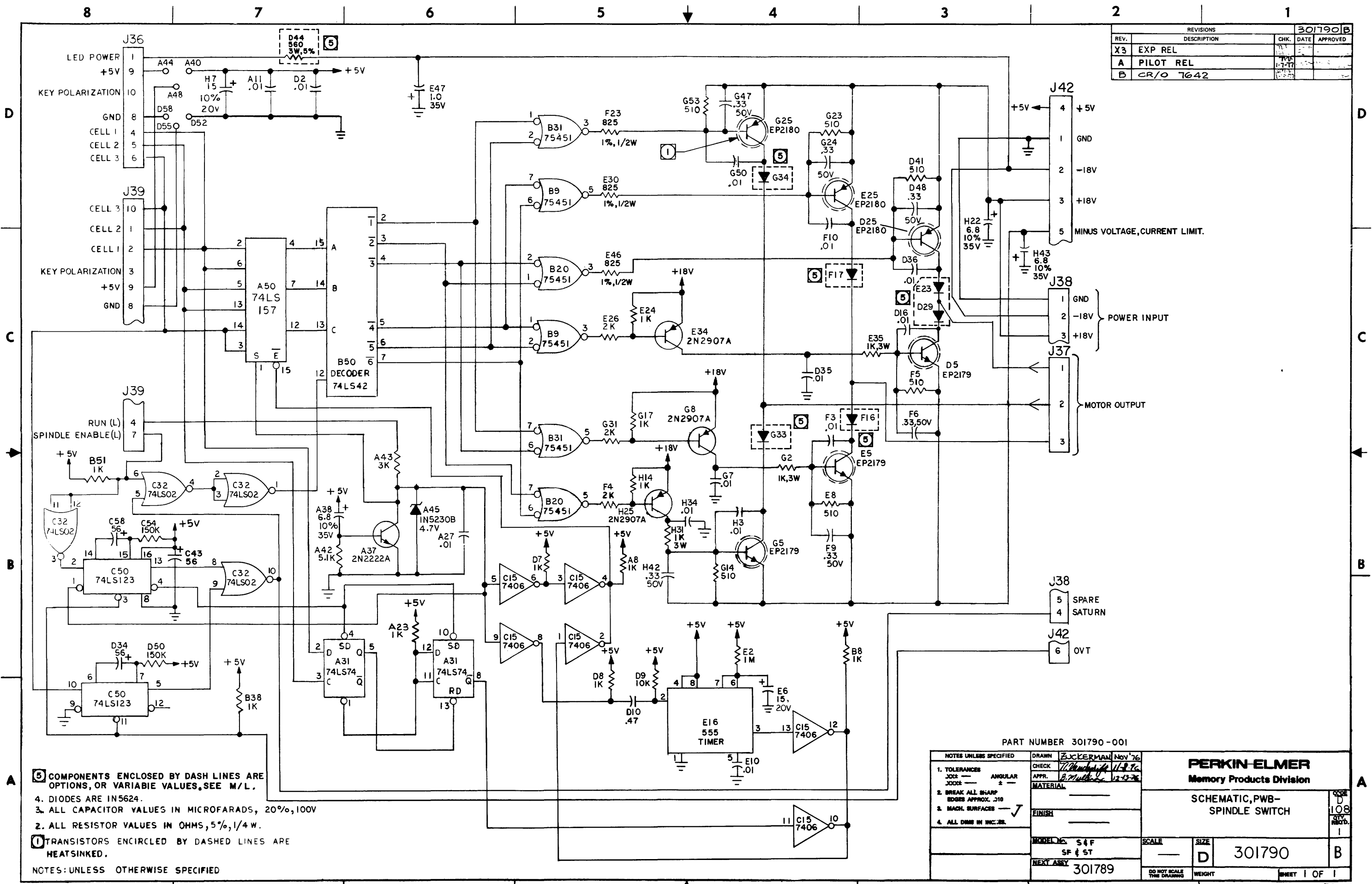


TRK OFFSET REV	37	M	TRK OFFSET REV
TRK OFFSET FWD	46	D	TRK OFFSET FWD
CYLINDER ADD 1	44	N	TRK ADD - BIT 1
CYLINDER ADD 2	39	J	TRK ADD - BIT 2
CYLINDER ADD 4	43	X	TRK ADD - BIT 4
CYLINDER ADD 8	42	f	TRK ADD - BIT 8
CYLINDER ADD 16	45	T	TRK ADD - BIT 16
CYLINDER ADD 32	47	b	TRK ADD - BIT 32
CYLINDER ADD 64	48	BB	TRK ADD - BIT 64
CYLINDER ADD 128	50	m	TRK ADD - BIT 128
CYLINDER ADD 256	29	t	TRK ADD - BIT 256
SEEK STROBE	32	a	STROBE
HD SELECT	33	e	HD SELECT
WRITE GATE	36	B	WRITE GATE
WRITE DATA	41	P	WRITE DATA
WRITE PROT STATUS	12	K	WRITE PROT STATUS
ERASE GATE	40	U	ERASE GATE
READY	11	F	FILE RDY
SK COMPLETE	16	y	RDY TO S/R/W
ADD ACK	14	u	ADD ACK
ILL ADD	13	W	LOGICAL ADD INTLK
SK INC	15	A	SK INC
SECTOR	6	C	SECTOR
INDEX/S A C 32	9	E	INDEX MARK
DATA CLOCK	8	R	DATA CLOCK
RD DATA	7	V	RD DATA
RD ENABLE GATE	49	Z	RD GATE
TERM VOLTAGE	25	AA	TERM VOLTAGE
S A C 1 4	4	CC	STR ADD - BIT 1
S A C 2 2	2	DD	STR ADD - BIT 2
S A C 4 26	26	EE	STR ADD - BIT 4
S A C 8/F INDEX	1	FF	STR ADD - BIT 8
S A C 16/F STR	3	d	STR ADD - BIT 16
UNIT SELECT-0	34	h	UNIT SELECT - 1
UNIT SELECT-1	35	w	UNIT SELECT - 2
UNIT SELECT-2	27	S	UNIT SELECT - 3
UNIT SELECT-3	28	HH	UNIT SELECT - 4
DISC SELECT	31	X	DISC SELECT
ATTENTION UNIT-0	20		ATTENTION UNIT-1
ATTENTION UNIT-1	17		ATTENTION UNIT-2
ATTENTION UNIT-2	19		ATTENTION UNIT-3
ATTENTION UNIT-3	18		ATTENTION UNIT-4
PSEUDO SECTOR 2000	5		DUAL PLATTER STATUS
WRITE CHECK	10		WRITE CHECK
RESTORE	38		RESTORE
200 TPI STATUS	30		200 TPI STATUS
GROUND	21		GROUND
GROUND	22		GROUND
GROUND	23		GROUND
GROUND	24		GROUND

- ④ ASSY 301453 OPTIONAL.
 - ③ P35, J35 & DUAL SOLENOIDS SHOWN IN PHANTOM LINE AND GOLD FOR SERIES "T" ONLY.
 - ② RED AND BLACK LEADS MAY BE REVERSED TO OBTAIN CORRECT POLARITY AS SHOWN.
 - ① ALL SWITCHES SHOWN IN INACTIVE POSITION.
- NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED		DRAWN: <i>[Signature]</i> 5-11-76		PERKIN ELMER	
1. TOLERANCES		CHECK: <i>[Signature]</i>		Memory Products Division	
2. BREAK ALL SHARP EDGES APPROX. .010		APPR. <i>[Signature]</i> 5/11/76		INTERCONNECTION DIAGRAM	
3. MACH. SURFACES		MATERIAL:		H.I. SPINDLE	
4. ALL DIMS IN INCHES.		FINISH:		D 106	
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT		MODEL No. SF/ST		301691-001 B	
		NEXT ASSY 400000		SCALE: — SIZE: D	
		400001		WEIGHT: — SHEET 1 OF 1	

REVISIONS				301790 B	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
X3	EXP REL				
A	PILOT REL				
B	CR/O 7642				



- 5 COMPONENTS ENCLOSED BY DASH LINES ARE OPTIONS, OR VARIABLE VALUES, SEE M/L.
4. DIODES ARE IN5624.
3. ALL CAPACITOR VALUES IN MICROFARADS, 20%, 100V
2. ALL RESISTOR VALUES IN OHMS, 5%, 1/4 W.
- 1 TRANSISTORS ENCIRCLED BY DASHED LINES ARE HEATSINKED.
- NOTES: UNLESS OTHERWISE SPECIFIED

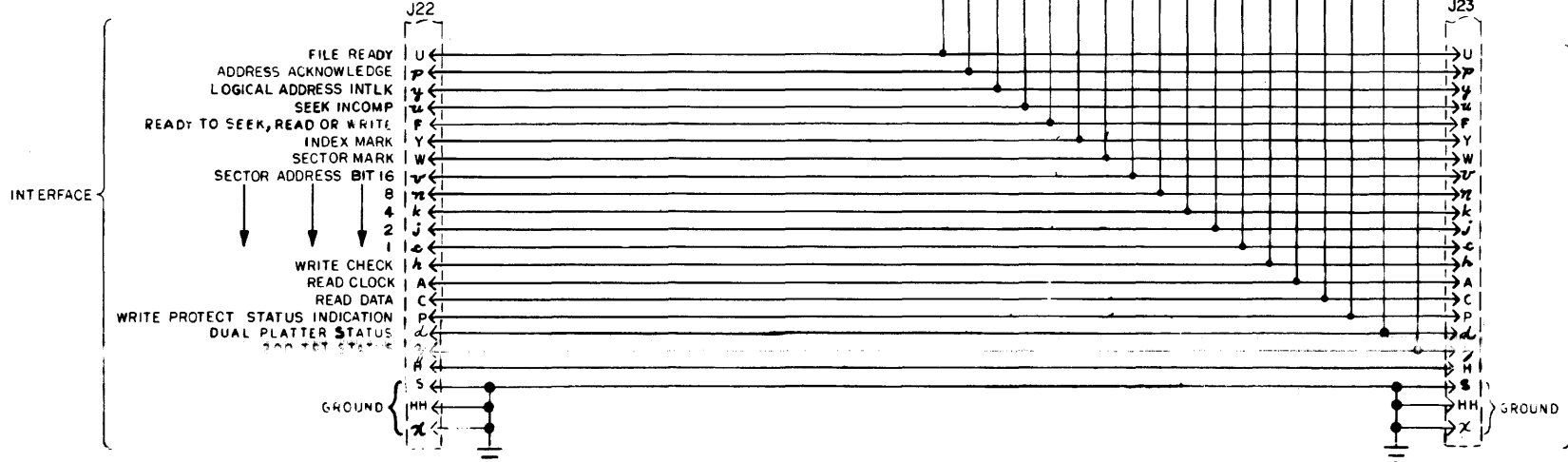
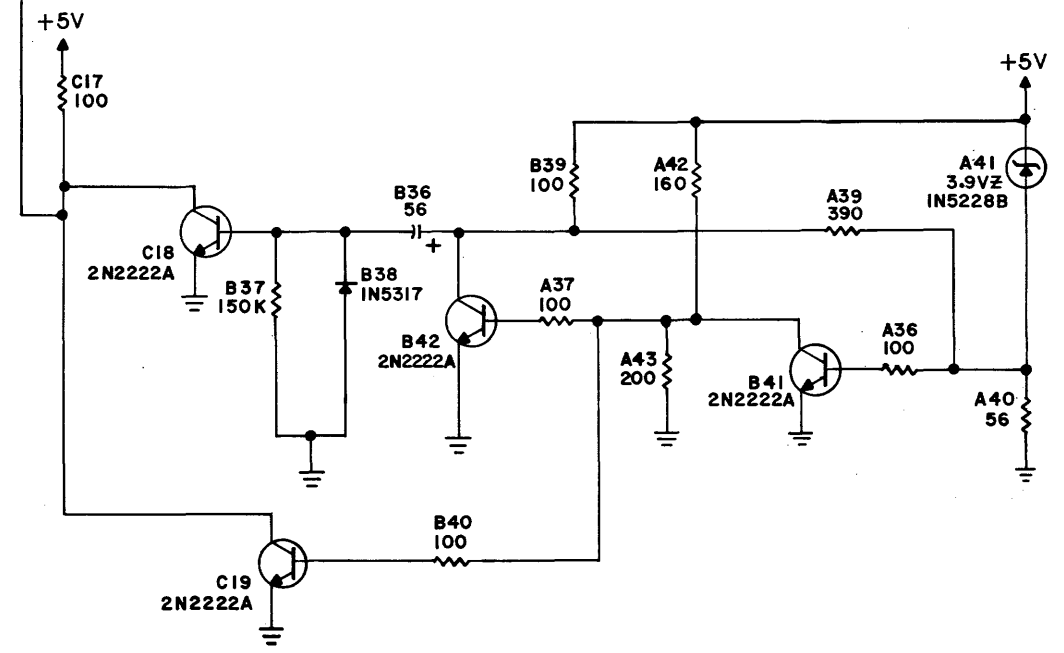
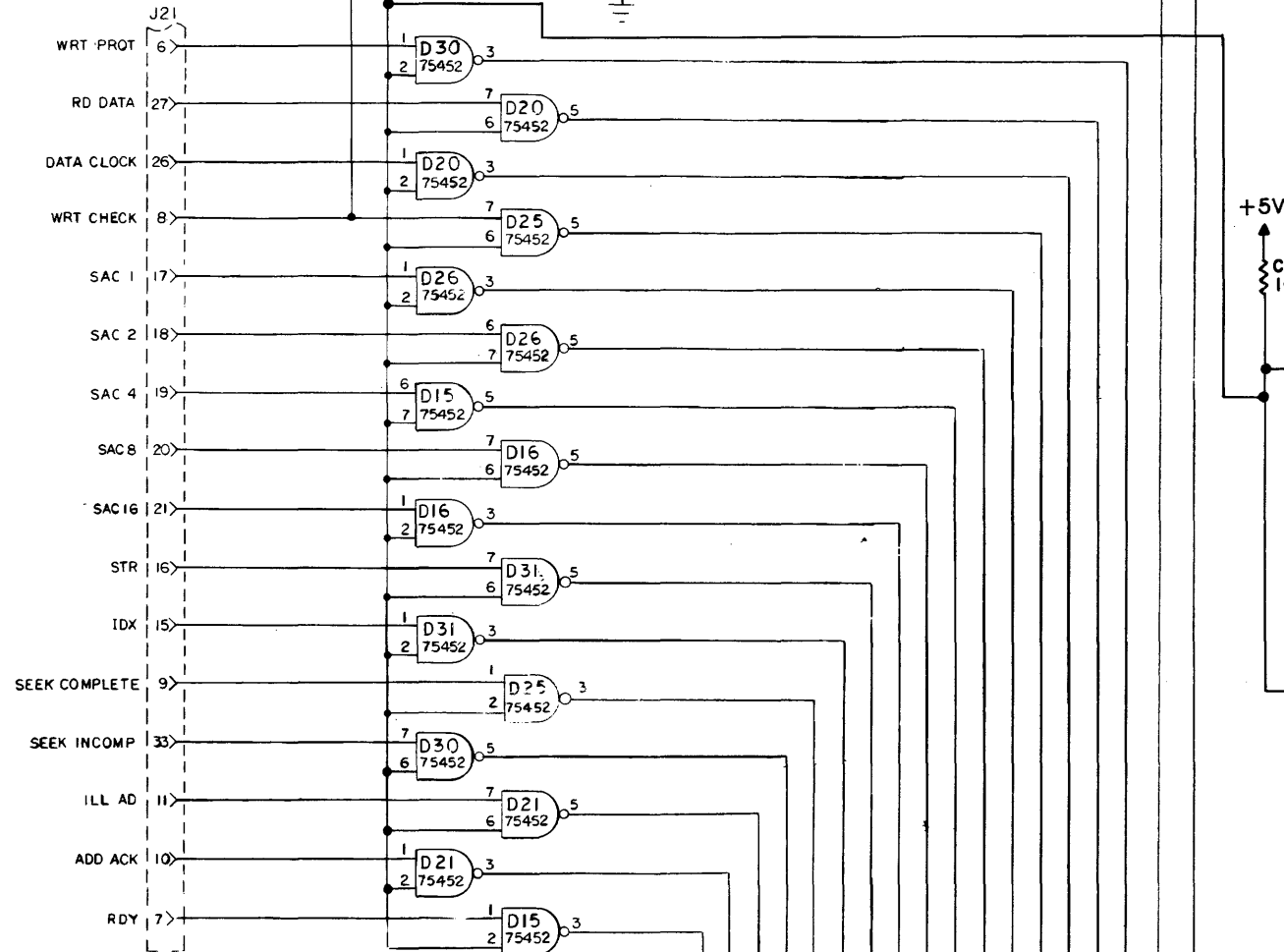
PART NUMBER 301790-001

NOTES UNLESS SPECIFIED	DRAWN ZUCKERMAN Nov '76	PERKIN-ELMER Memory Products Division SCHEMATIC, PWB- SPINDLE SWITCH MODEL NO. S & F SF & ST NEXT ASSY 301789	SCALE	SIZE	301790	CODE D 108	
1. TOLERANCES JOCK — JOCK — ANGULAR JOCK ±	CHECK [Signature]		FINISH		D	B	
2. BREAK ALL SHARP EDGES APPROX. .010	APPR. [Signature]		DO NOT SCALE THIS DRAWING				
3. MACH. SURFACES — ✓							
4. ALL DIMS IN INC. IN.							

SHEET 1 OF 1

REVISIONS				301937	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
XI	EXP REL		12-6-76		
A	PILOT REL				
B	MFG REL CR/D 7902	TN			
C	CR/D 8265				
D	CR/D 8545				

D10-3
SH1 2
E15-9
SHT 2

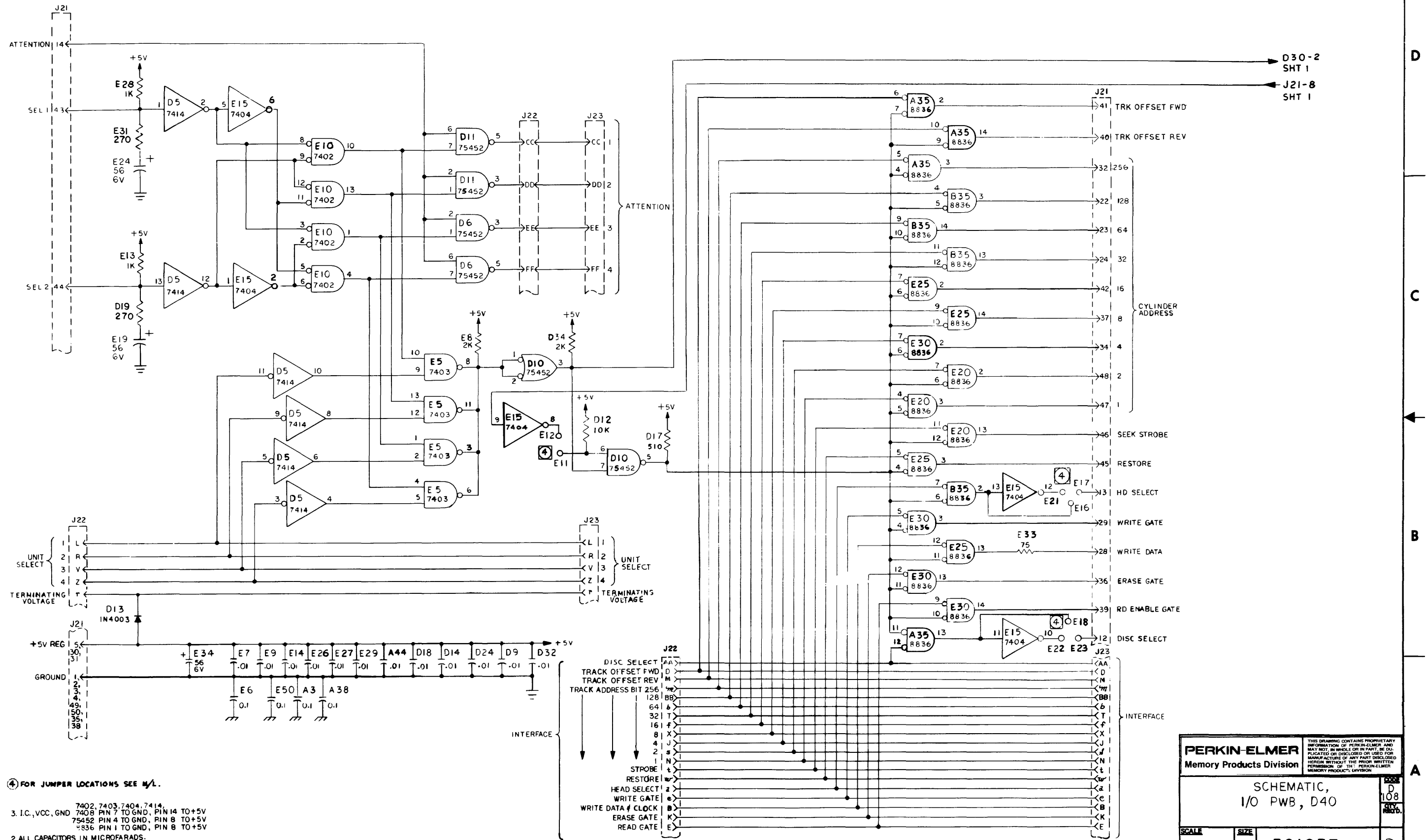


FOR NOTES SEE SH 2

TO DAISY CHAIN

NOTES UNLESS SPECIFIED		DRAWN <i>[Signature]</i> 6-26-76		PART NO. 301937-001	
1. TOLERANCES	ANGULAR	CHECK	<i>[Signature]</i> 12-6-76	PERKIN-ELMER	
2. BREAK ALL SHARP EDGES APPROX. .010		APPR.	<i>[Signature]</i> 12-6-76	Memory Products Division	
3. MACH. SURFACES		MATERIAL		SCHEMATIC, I/O PWB, D40	
4. ALL DIMS IN INCHES.		FINISH		D 108	
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT		MODEL No.	SF-ST	301937	
		NEXT ARMY	301936	SHEET 1 OF 2	

REVISIONS				301937
REV	DESCRIPTION	CHK	DATE	APPROVED
—	SEE SHEET 1			



④ FOR JUMPER LOCATIONS SEE M/L.

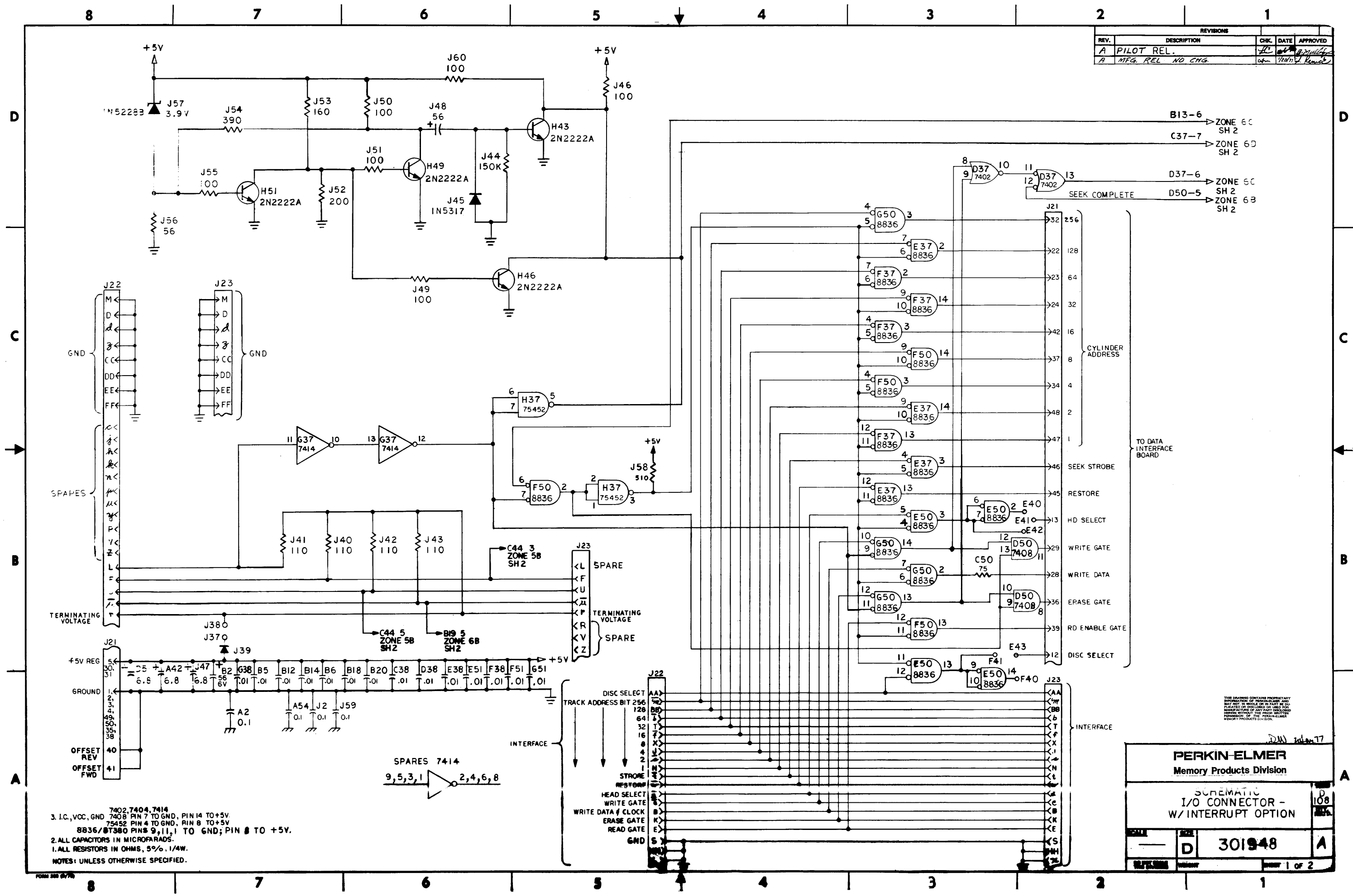
7402, 7403, 7404, 7414,
 3. I.C., VCC, GND 7408 PIN 7 TO GND, PIN 14 TO +5V
 75452 PIN 4 TO GND, PIN 8 TO +5V
 8836 PIN 1 TO GND, PIN 8 TO +5V

2. ALL CAPACITORS IN MICROFARADS.
 1. ALL RESISTORS IN OHMS, 5% .1/4W.

NOTES: UNLESS OTHERWISE SPECIFIED.

PERKIN-ELMER Memory Products Division		<small>THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE REPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION</small>	
SCHEMATIC, I/O PWB, D40		D 108	D 108
SCALE —	SIZE D	301937	D
<small>DO NOT SCALE THIS DRAWING</small>	WEIGHT	PART 2 OF 2	

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT REL.	JL	1/11/77	[Signature]
A	MFG. REL. NO CHG.	cm	1/20/77	[Signature]



7402, 7404, 7414
 3. I.C., VCC, GND 7408 PIN 7 TO GND, PIN 14 TO +5V.
 75452 PIN 4 TO GND, PIN 8 TO +5V
 8836/BT380 PINS 9, 11, 1 TO GND; PIN 8 TO +5V.
 2. ALL CAPACITORS IN MICROFARADS.
 1. ALL RESISTORS IN OHMS, 5%, 1/4W.
 NOTES: UNLESS OTHERWISE SPECIFIED.

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE REPRODUCED OR IN ANY MANNER WITHOUT THE EXPRESS PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.

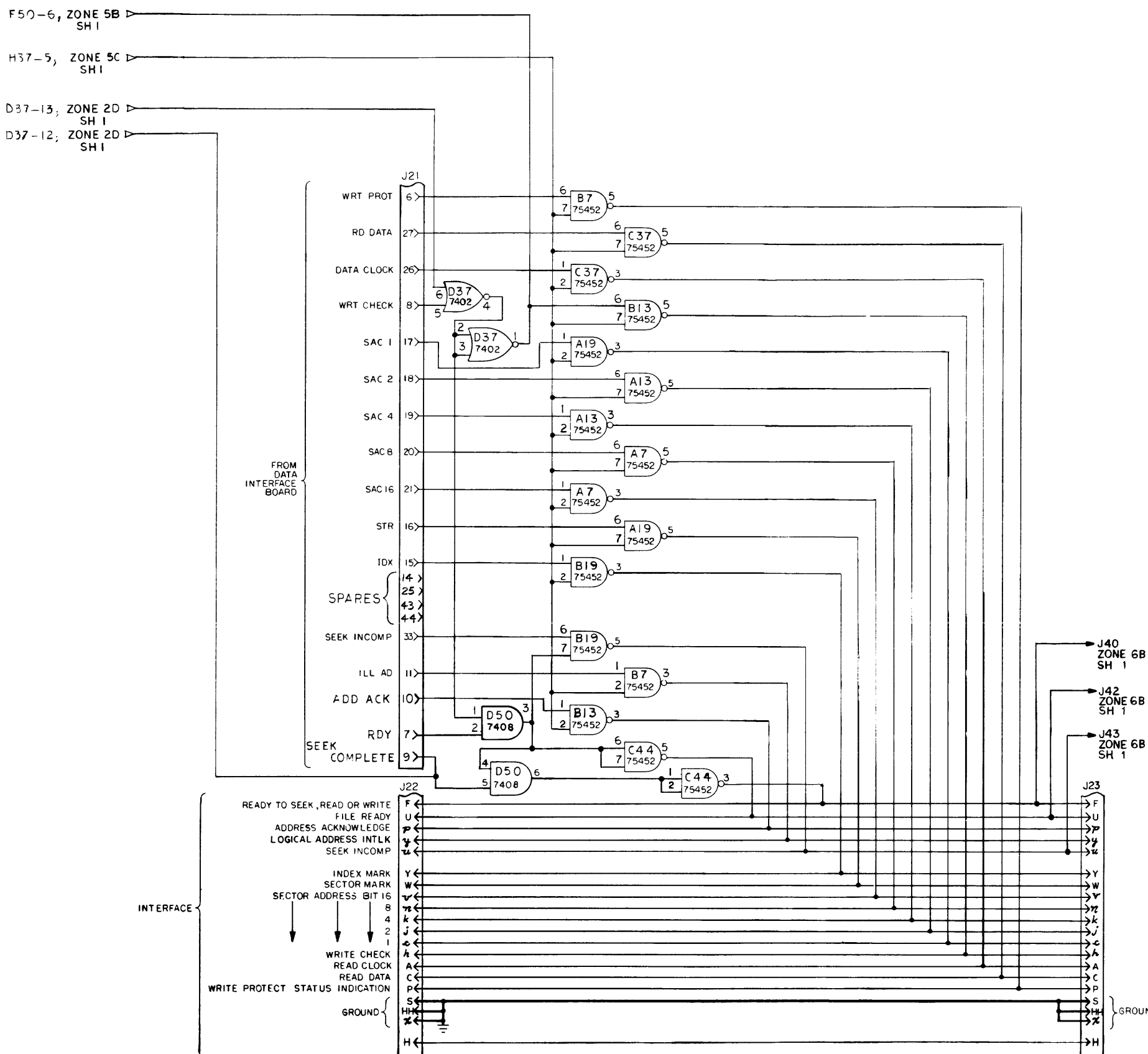
PERKIN-ELMER
 Memory Products Division

SCHEMATIC
 I/O CONNECTOR -
 W/ INTERRUPT OPTION

D 301948 A

1 of 2

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
	SEE SH. 1			



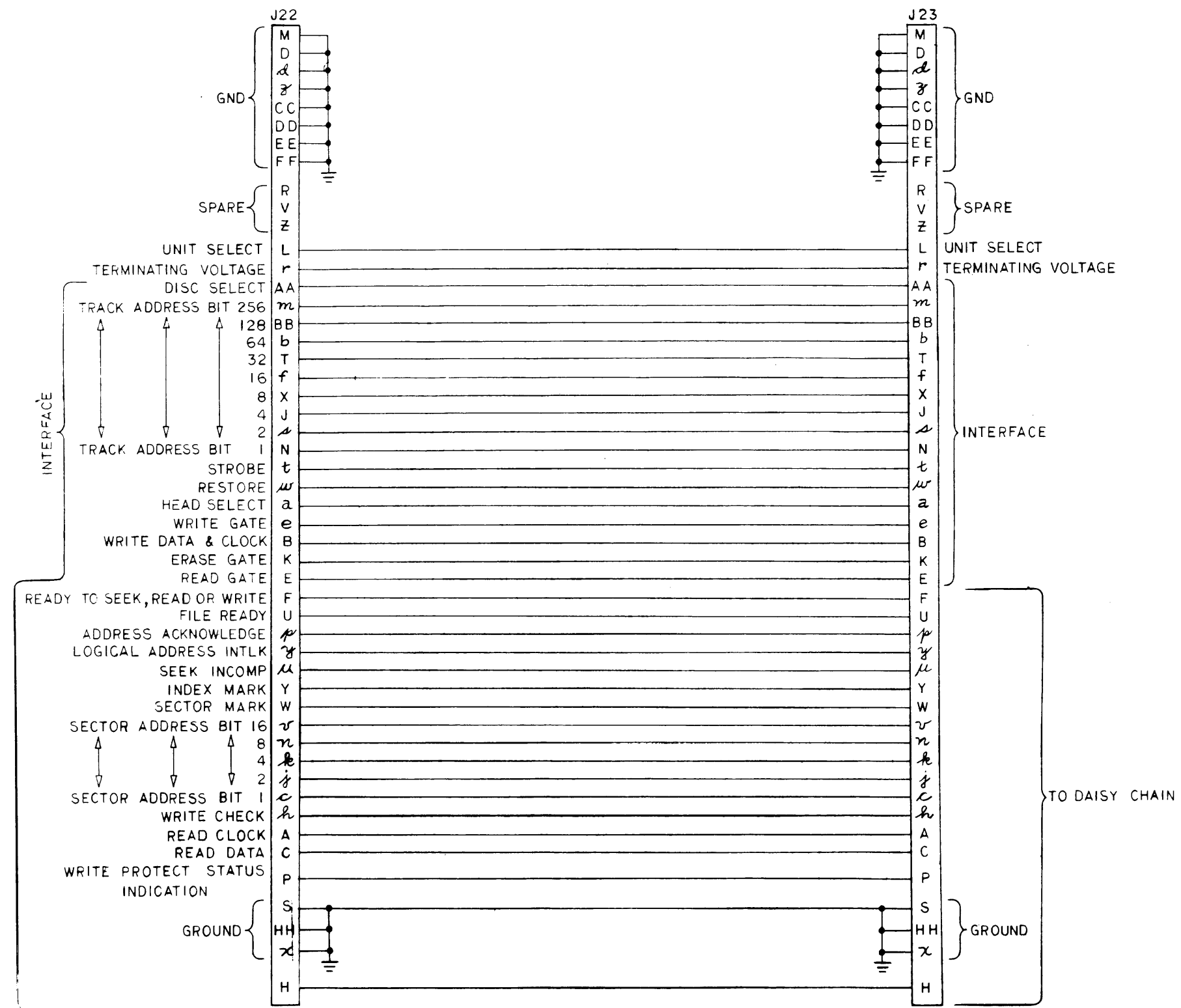
- NOTES UNLESS SPECIFIED
- TOLERANCES
XX±
XXX±
 - BREAK ALL SHARP EDGES APPROX. .010
 - MACH. SURFACES
 - ALL DIMS IN INCHES.
 - DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT

NOTES UNLESS SPECIFIED	DRAWN	DATE
	<i>Don Chaffey</i>	11/29/76
	CHK	DATE
	<i>T. Nakatani</i>	2-6-76
	APPR.	DATE
	<i>B. Smith</i>	12-6-76
	MATERIAL	
	FINISH	
	MODEL No.	SIZE
	SF/ST	D
	NEXT ASSY	WEIGHT
	301947	

PART NUMBER			
<i>J.W. Zelen</i>			
PERKIN-ELMER			
Memory Products Division			
SCHEMATIC			D
I/O CONNECTOR -			108
W/INTERRUPT OPTION			REV. 12/76
SCALE		SIZE	
—		D	
301948		A	
DO NOT SCALE THIS DRAWING		WEIGHT	
SHEET 2 OF 2		c.e.	

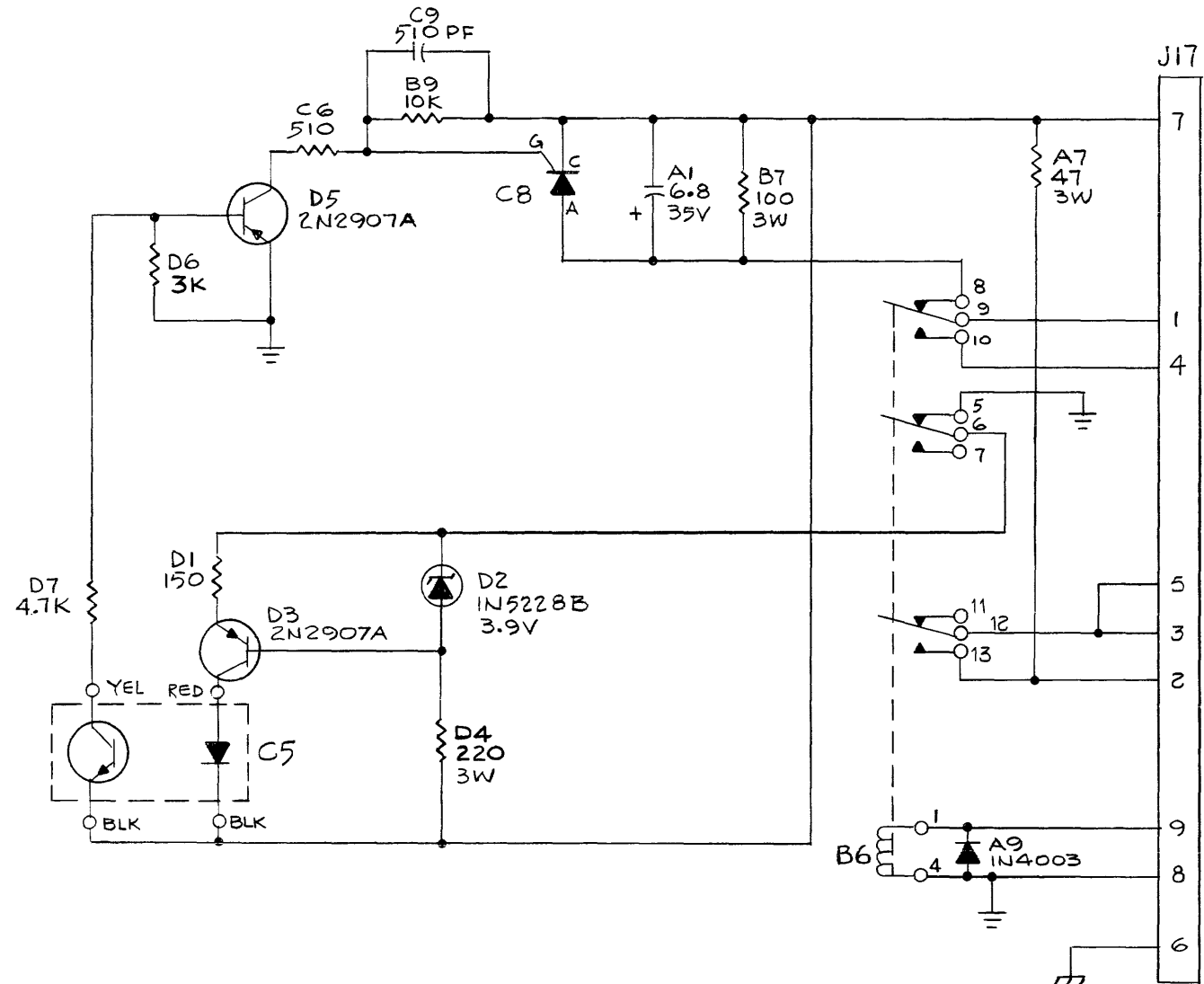
THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
X1	EXP. RELEASE			
A	PILOT RELEASE		11/11/76	
A	MEG. RELEASE N/C. HG.		11/11/76	



<table border="1"> <tr> <td>DRWN</td> <td>Doc 3166 11/11/76</td> </tr> <tr> <td>CHKD</td> <td>J. DeKor 12-11-76</td> </tr> <tr> <td>APPR</td> <td>McB 12-11-76</td> </tr> <tr> <td>MATERIAL</td> <td></td> </tr> </table>	DRWN	Doc 3166 11/11/76	CHKD	J. DeKor 12-11-76	APPR	McB 12-11-76	MATERIAL		<p>PERKIN-ELMER Memory Products Division</p> <p>THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE WHOLE OR IN PART, REPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.</p>
DRWN	Doc 3166 11/11/76								
CHKD	J. DeKor 12-11-76								
APPR	McB 12-11-76								
MATERIAL									
<p>SCHMATIC, PIGGYBACK - I/O CONN. WITH INTERRUPT OPTION</p>									
<p>F & T</p>	<p>D 301953 A</p>								
<p>301952</p>	<p>1 OF 1</p>								

REVISIONS					
REV.	DESCRIPTION	DFTG	CHK.	DATE	APPROVED
XI	EXP REL.			4-12-77	
A	MFG REL.			4-29-77	
B	CR/O 9349			7-22-79	



PART NUMBER 302065-200

NOTES UNLESS SPECIFIED 1. TOLERANCES XX ± ANGULAR ± .XX ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN ZUCKERMAN APR 77 CHECK <i>[Signature]</i> 4-8-77 APPR. <i>[Signature]</i> 4-27-77	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION CODE D 108 QTY. REQ'D. B	
	MATERIAL	SCHEMATIC			
	FINISH	EMERGENCY RETRACT			
	MODEL No. ST (20MB)	SCALE	SIZE C		302065-200
	NEXT ASSY 302064	DO NOT SCALE THIS DRAWING	WEIGHT		SHEET 1 OF 1

2. ALL CAPACITOR VALUES IN MICROFARADS.
 1. ALL RESISTOR VALUES IN OHMS, 5%, 1/4W
 NOTES: UNLESS OTHERWISE SPECIFIED

SECTION 2

PWB ASSEMBLY DRAWINGS

2.1 INTRODUCTION

This section contains the assembly drawings and material lists for all PWB assemblies in the SF and ST Disk Drives. These documents are identified in the Index. Logic schematics and power supply schematics are provided in Section 1 of this volume.

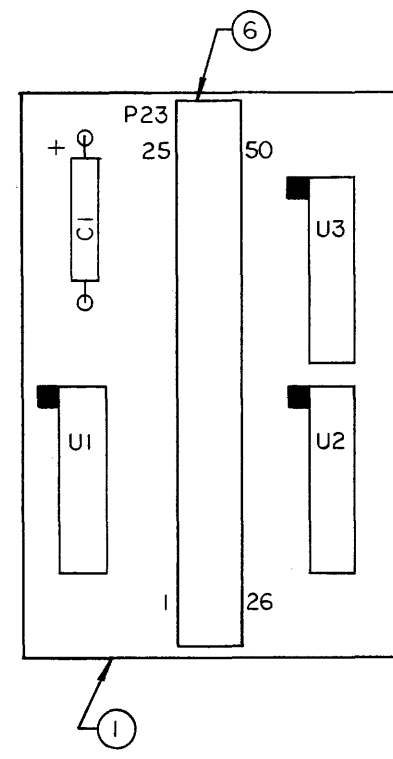
The assembly drawings identify every part on any given PWB assembly. Parts are identified either by item number (e.g., 1, 2, 3, etc.), or by circuit reference number (e.g., R1, C1, U1, etc.), or by coordinate locators (e.g., H2, B23, M35, etc.). The associated material lists incorporate these identification numbers, together with the part description, PERKIN-ELMER part number, and part quantity, i.e., the quantity of a particular part required for the given assembly.

2.2 PWB ASSEMBLY DRAWINGS

The following PWB assembly drawings are provided in numerical sequence, as listed. Included are related material lists.

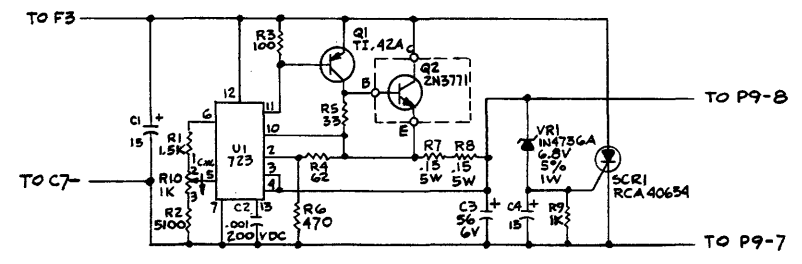
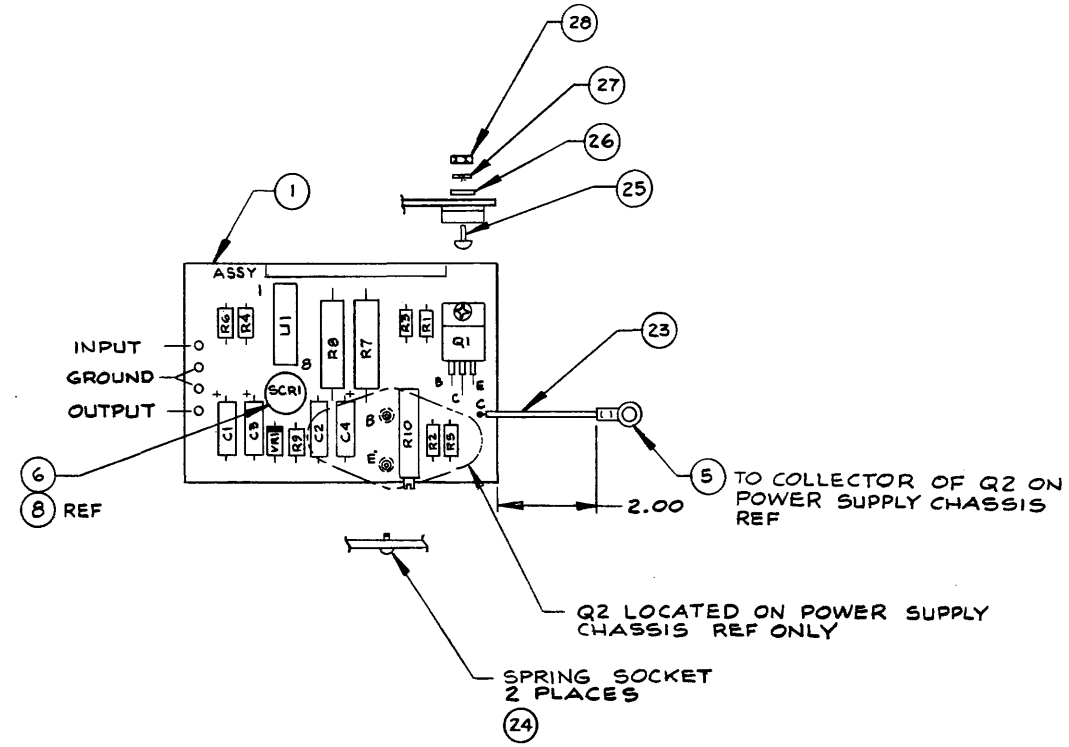
Title	Dwg. No.
Line Terminator PWB	300095
+5V Regulator PWB and Schematic	300200
Line Terminator PWB, D31/33 Female	301047
Line Terminator PWB, D31/33 Male	301055
I/O Connector PWB, D31/33 (100 TPI Only)	301062
Line Terminator PWB, D40 Female	301070
Line Terminator PWB, D40 Male	301074
Control Interface PWB	301174
Data Electronics PWB	301206
I/O Connector PWB	301291
Data Interface PWB (VFO)	301320
Emergency Retract PWB and Schematic	301354
Power Supply	301361
MFM Data Control PWB	301422
Detent Amplifier PWB	301457
Servo Amplifier PWB	301483
Disk Control PWB	301632
Electronics Interconnect PWB	301636
Servo Logic PWB	301687
Spindle Switch PWB	301789
Spindle Limiter/5V Drive and Schematic	301794
Commutator Board, PWB and Schematic	301920
I/O PWB, D40	301936
PWB I/O Connector With Interrupt Option	301947
Emergency Retract PWB	302064

REVISIONS				300095	D ₁
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	ENG. REL.		1/24/73	Jeo	
B	CI VALUE FROM 68UF TO 15UF ADD CALLOUTS TO PINS	RB	1/31/73	J. B.	
C	CHANGED J1 CALLOUT TO P23	RB	3/27/73	a. Long	
D	MFG. REL. NO CHG. SEE E.O. REDRAWN FOR CLARITY	RB	4/6/73	Jeo & J.B.	
D1	CR10 B376	J.B.	4-20-78	A. Lemick	



NOTES UNLESS SPECIFIED 1. TOLERANCES .XX± ANGULAR .000± ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES.	DRAWN	M. Miyasato	7/18/73	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DU- PLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION	CODE	D		
	CHECK			ASSEMBLY, P.W.B. LINE TERMINATOR			QTY	100		
	APPR.			SCALE	2:1		SIZE	C	300095	D ₁
	MATERIAL			MODEL No.	DISC		WEIGHT		SHEET 3 OF 3	
			FINISH							
			NEXT ASSY	300050 300250						

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
N	CR/D 6831	Ch	7/16	McBride
N ₁	CR/D 8098	TLS	10/4/77	J. Kimb
N ₂	CR/D 9189A D. V110A	EP	11-23-77	B. Smith



SCHMATIC

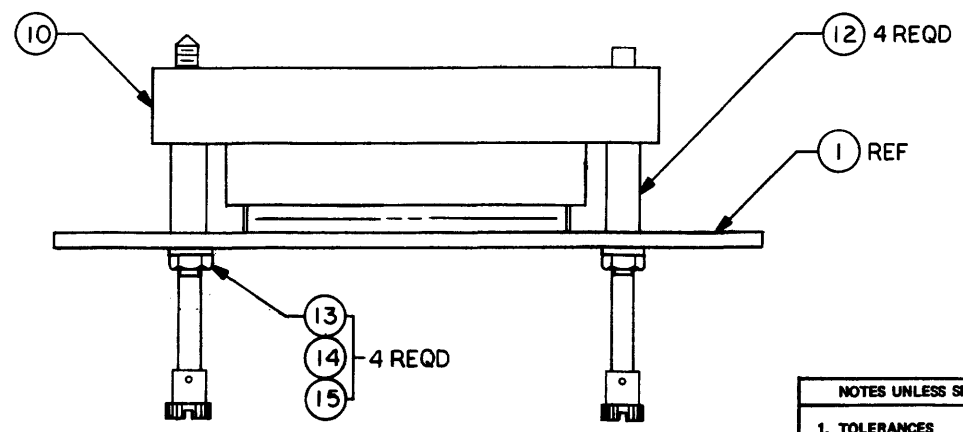
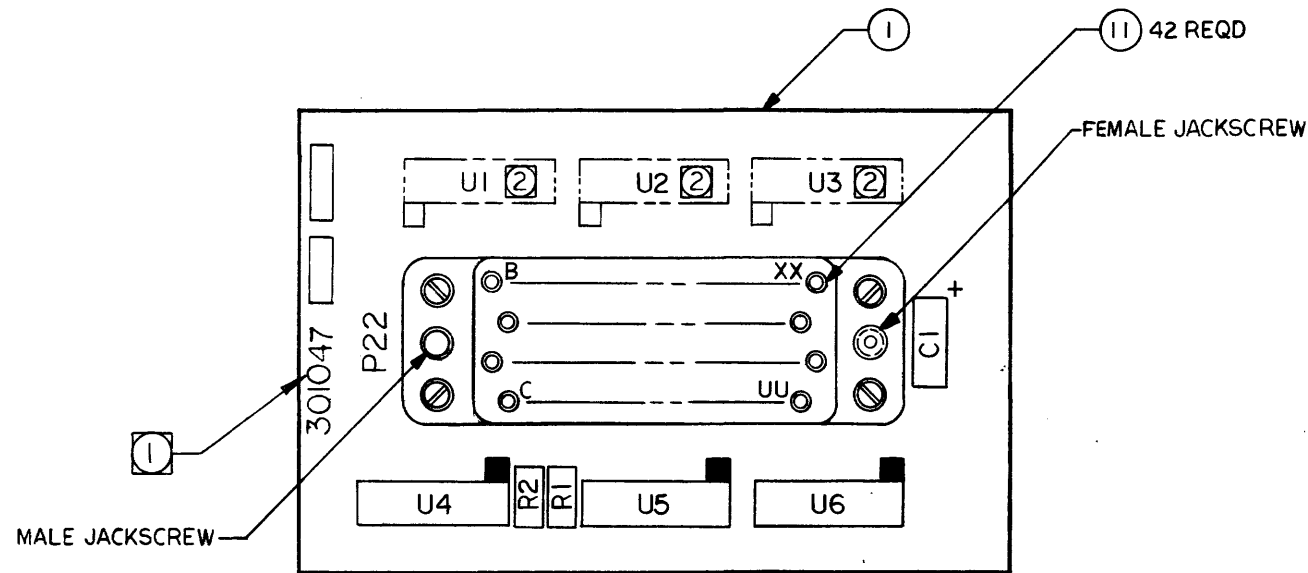
PART NUMBER 300200 - 001

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED 1. TOLERANCES XX ± .25 ANGULAR .XXX ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN <i>VARRY AGUIRRE</i> 3-26-78 CHECK <i>A. Levy Ron Hall</i> 4-2-73 APPR. <i>TERRY O'BRIAN</i> 1-24-73	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION
	MATERIAL			CODE D
	FINISH			120 QTY. REQ'D.
	MODEL No. SERIES F#T NEXT ASSY 301361 300346			SCALE NONE SIZE C 300200 SHEET 2 OF 2

REV.		/ 2		CODE		0120	
PART NUMBER		300200-001		PART NUMBER		300200-001	
DATE		5/14/75		REV.		/ 2	
PERKIN-ELMER				MATERIAL LIST			
Memory Products Division				100/200TP1			
TITLE ASSY. PWB. +5V REGULATOR.				MODEL F 4 T			
				DATE 5/14/75 SHEET 1 OF 2			
ITEM NO.	DESCRIPTION	PART NO.	QTY	MIN. REV.	ACT. REV.	REMARKS	
						NEXT ASSEMBLY USED ON	
						300346-001	
1	Board, Processed.	300199-001	1	F			
2							
3							
4	IC, Voltage Regulator 723	100103-001	1			U1.	
5	Terminal, Ins. Ring Torque	100257-004	1				
6	Insulator, Transistor.	100223-001	1				
7	Transistor, Pwr. TI.P42A	101043-001	1			Q1.	
8	Thyristor. S2600B	100152-001	1			SCR1.	
9	Diode, Zener, 6.3V 1W/36A	100161-001	1			V01.	
10	Capacitor, Polyfilm .001uf	101005-102	1			C2.	
11	Capacitor, 1%, 27W 15uf	101002-156	2			C1, C4.	
12	Capacitor, " 4V 5uf	101001-566	1			C3.	
13							
14	Resistor, Variable. 1K	101006-102	1			R10.	
15	Resistor, W.W., 5%, 5W. .15	100111-002	2			R7, 8.	
16	Resistor, 5%, W. 33	101156-330	1			R5.	
17	Resistor, " " 62	-620	1			R4.	
18	Resistor, " " 100	-101	1			R3.	
19	Resistor, " " 470	-471	1			R6.	
20	Resistor, " " 1K	-102	1			R9.	
21	Resistor, " " 1.5K	-152	1			R1.	
22	Resistor, " " 5.1K	-512	1			R2.	
23	Wire, Insulated.	101090-910	A/B				
24	Socket, Spring-Assy.	101142-001	2				
25	Screw, Pan Head.	100036-200	1			4-40 x 5/16"	
26	Washer, Flat.	100047-200	1			No. 4.	
27	Washer, Split Lock.	100042-200	1			No. 4.	
28	Nut.	100043-200	1			4-40.	
29							
30							
31							
32	A/W Hammer	300198-001	0	F			

REVISIONS				301047
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT RELEASE	EB	11/71	AB
A	MFG RELEASE, NO CHGE	SM	7/6/76	AB
B	CR/O 7292	SM	9/8/76	DMIS
C	CR/O 7624	SM	4/6/77	HP
C	CR/O 8222	SM	7/8/77	J. Powell



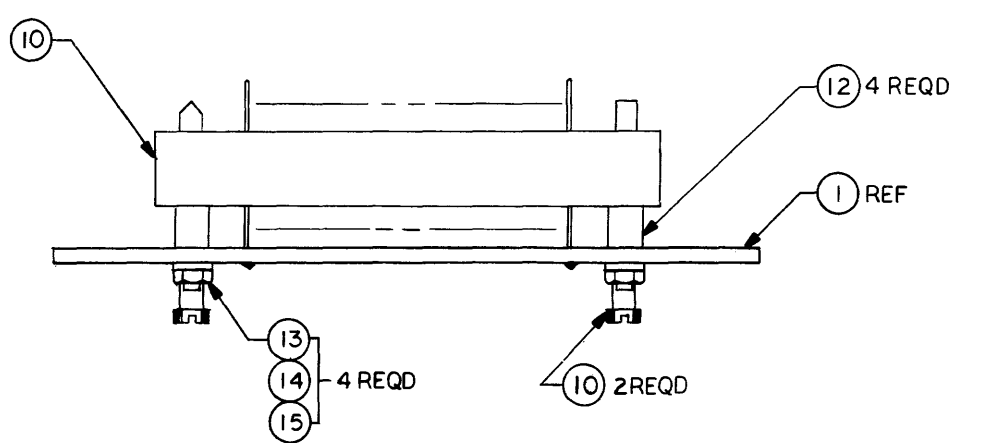
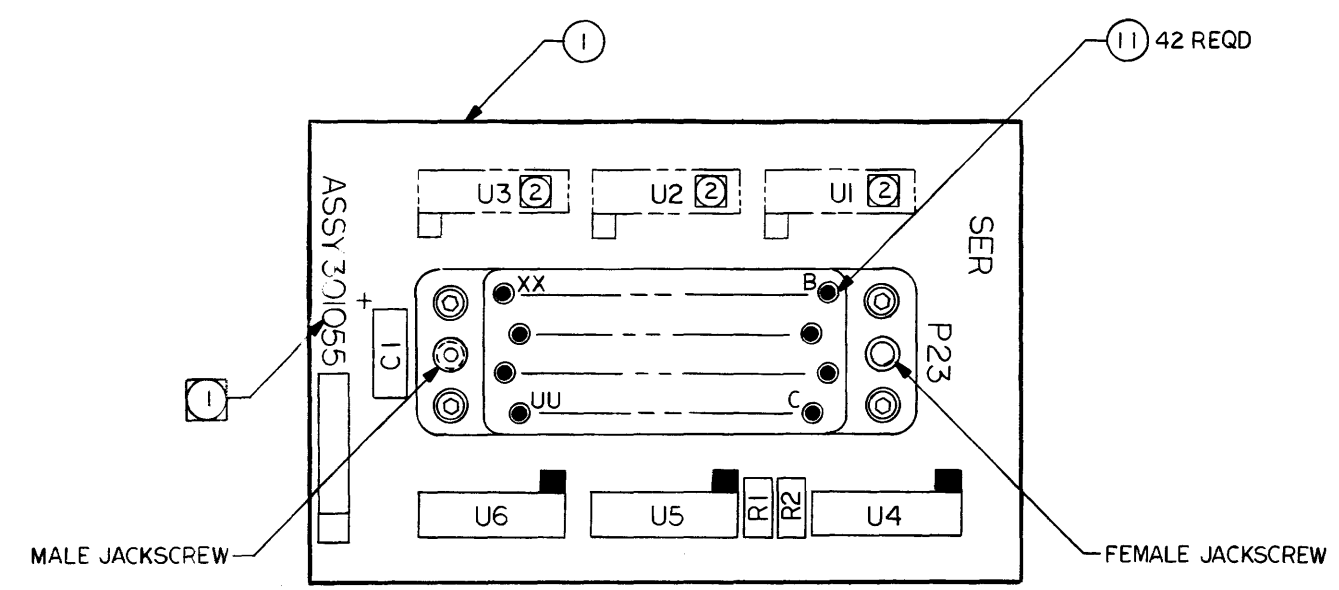
3. FOR SCHEMATIC REF DWG 301048
- ② COMPONENTS SHOWN IN PHANTOM LINES ARE NOT USED.
- ① MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER, 12 HIGH WHITE CHARACTERS PER VP-E SPEC 10003Z.
- NOTES: UNLESS OTHERWISE SPECIFIED

PART NO. 301047-001 ASSY

NOTES UNLESS SPECIFIED 1. TOLERANCES .XX± ANGULAR .XXX± ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES J 4. ALL DIMS IN INCHES.	DRAWN	<i>gBarth</i>	<i>LISA</i>	PERKIN-ELMER Memory Products Division ASSEMBLY, PWB - LINE TERMINATOR D31/33 FEMALE 301047 C ₁	CODE	D120		
	CHECK	<i>gBarth</i>	<i>LISA</i>		QTY. REQD.	1		
	APPR.	<i>LISA</i>	2-6-76		SCALE	2:1	SIZE	C
	MATERIAL				WEIGHT		SHEET	2 OF 2
	FINISH			DO NOT SCALE THIS DRAWING				
	MODEL No.	<i>FET</i>						
	NEXT ASSY	301062						

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION

REVISIONS				301055	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	PILOT RELEASE	FB	11/12	J. J. J.	
B	SEE CR 10 5203	FB	4/7/75	J. J. J.	
B	MFG RELEASE NO CHANGE	dm	7/2/76	J. J. J.	
C	CR 10 7624	dm	1/26/77	J. J. J.	



- 3. FOR SCHEMATIC REF DWG 301056.
 - ② COMPONENTS SHOWN IN PHANTOM LINES ARE NOT USED.
 - ① MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER .12 HIGH WHITE CHARACTERS PER P-E SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

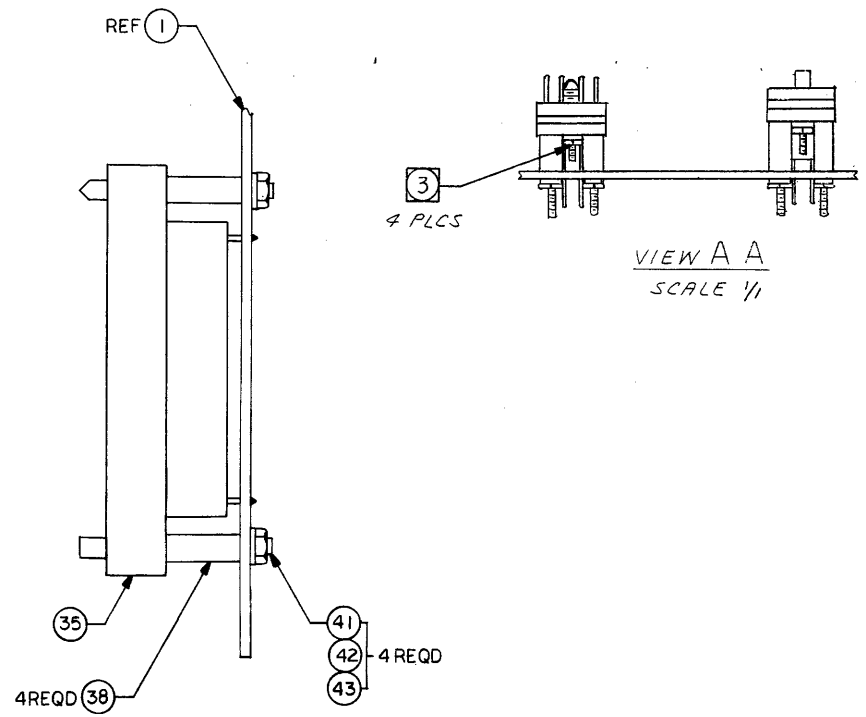
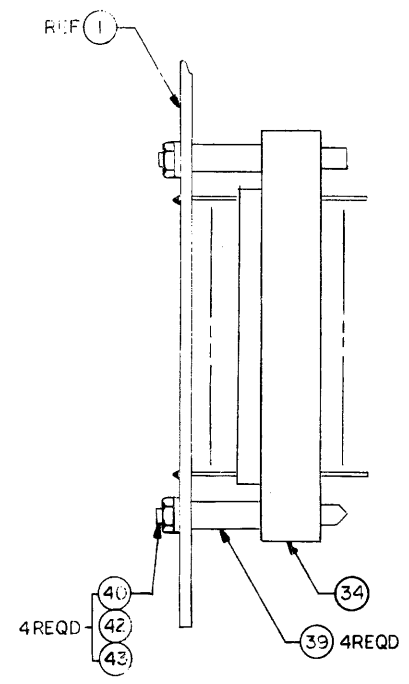
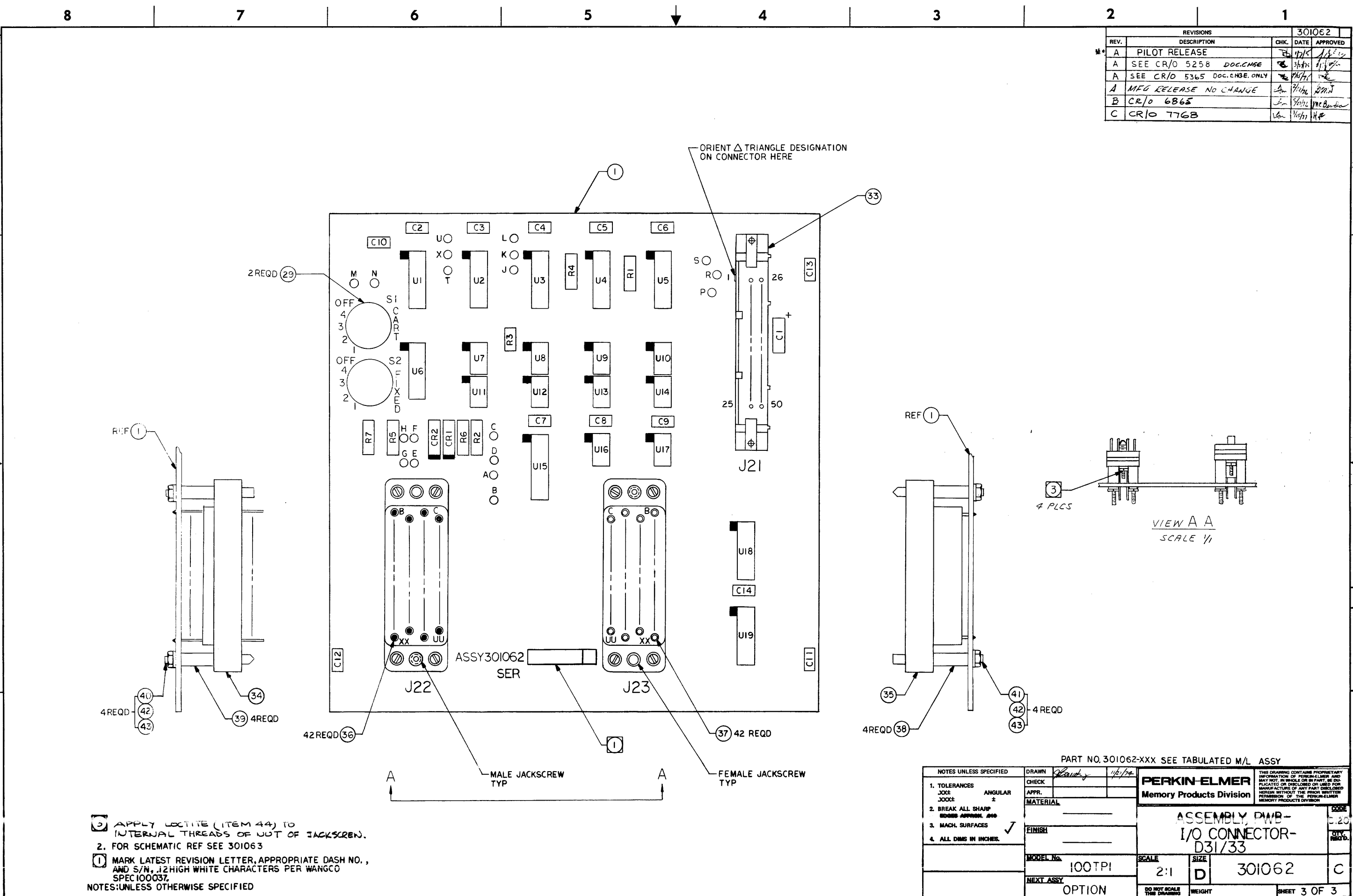
PART NO. 301055-001 ASSY

NOTES UNLESS SPECIFIED	DRAWN	1-15-75	PERKIN-ELMER Memory Products Division ASSEMBLY, PWB-LINE TERMINATOR D31/33 MALE 301055	CODE
1. TOLERANCES .XX± ANGULAR .XXX± ±	CHECK			D120
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.			QTY
3. MACH. SURFACES ✓	MATERIAL			1
4. ALL DIMS IN INCHES	FINISH			
	MODEL No.	F & T	SCALE	SIZE
	NEXT ASSY		2:1	C
			DO NOT SCALE THIS DRAWING	WEIGHT
				SHEET 2 OF 2

301055

REVISIONS				301062	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	PILOT RELEASE		1/18/72		
A	SEE CR/O 5258 DOC.CHGSE		3/1/72		
A	SEE CR/O 5365 DOC.CHGSE ONLY		4/1/72		
A	MFG RELEASE NO CHANGE		5/1/72		
B	CR/O 6865		5/1/72		
C	CR/O 7768		5/1/72		

D
C
B
A



- 1. APPLY LOCITE (ITEM 44) TO INTERNAL THREADS OF UJT OF JACKSCREW.
 - 2. FOR SCHEMATIC REF SEE 301063
 - 3. MARK LATEST REVISION LETTER, APPROPRIATE DASH NO., AND S/N, .12 HIGH WHITE CHARACTERS PER WANGCO SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

PART NO. 301062-XXX SEE TABULATED M/L ASSY

NOTES UNLESS SPECIFIED	DRAWN <i>Blanchy</i> 1/12/72	PERKIN-ELMER Memory Products Division	THE DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE WHOLE OR IN PART, REPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION
1. TOLERANCES JOCK: ANGULAR ± JOCK: ± 2. BREAK ALL SHARP EDGES APPROX. .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES.	CHECK			ASSEMBLY, PWB-I/O CONNECTOR-D31/33
	MATERIAL	MODEL No. 100TPI NEXT ASSY OPTION	SCALE 2:1 SIZE D 301062 SHEET 3 OF 3

D
C
B
A

8 7 6 5 4 3 2 1

D120

REV.	DRAWING NO.	REV.	CODE
U	301062-000	C	D120

MATERIAL LIST

PERKIN-ELMER
Memory Products Division

ASSY. PWB (SF&ST 100TPI Only)
DRAWING TITLE I/O CONNECTOR D31/33 MODEL NO. (F&T) DATE 11/27/74 SHEET 1 OF 3

Item No.	Drawing Title	Dwg. No.	Rev.	Qty.	Remarks on Ckt. Desig.
1	Board, Processed.	301061-001	C	1	
2					
3					
4	I.C. 7402	100329-001		1	U19.
5	I.C. 8T380 or 0836	100347-001		5	U2,U3,U4,U5,U6.
6	I.C. 75452	101031-001		10	U7, U8, U9, U10, U11, U12, U13, U14, U16, U17.
7					
8	I.C. 7402	100332-001		2	U18, U1
9	I.C. Resistor Network. 10K	142004-103		1	U15.
10					
11					
12	Capacitor Cer. 20, 100V, .01uf	101042-103		8	C2,C3,C4,C5,C6,C7,C8,C9.
13					
14	Capacitor Cer. 20, 50V, .1uf	101087-104		4	C10,C11,C12,C13.
15	Capacitor Tant 10, 20V, .56uf	101002-566		1	C1.
16					
17					
18					
19	Diode, Rectifier 1N4003	100127-001		2	CR1,CR2.
20					
21					
22					
23	Resistor, 5, 1W.	101156-202		3	R3,R4,R5.
24	Resistor, 5, 10K	-103		3	R2,R6,R7.
25	Resistor, 5, 75	101156-750		1	R1.
26					
27					
28					
29	Switch, Rotary Selector.	149004-001		2	S1,S2.
30					
31	Pin, Wire Wrap.	100360-003		19	Jumper Points, A,B,C,D,E,F, G,H,J,K,L,M,N,P,R,S,T,U,X
32					

FORM 209 (5/74)

D120

REV.	DRAWING NO.	REV.	CODE
C	301062-000	C	D120

MATERIAL LIST

PERKIN-ELMER
Memory Products Division

ASSY. PWB (SF&ST 100TPI Only)
DRAWING TITLE I/O CONNECTOR D31/33 MODEL NO. (F&T) DATE 11/27/74 SHEET 2 OF 3

Item No.	Drawing Title	Dwg. No.	Rev.	Qty.	Remarks on Ckt. Desig.
33	Connector, Male. 50 Pin.	101040-001		1	J21.
34	Connector, Male. 42 Pin.	105010-001		1	J22.
35	Connector, Female. 42 Pin.	" -002		1	J23.
36	Contact Pin Male.	106002-002		42	
37	Contact Pin Female.	" -001		42	
38	Spacer, Fibre.	100391-014		4	
39	Spacer, "	" -002		4	
40	Screw, Fillister Head.	145003-212		4	4-40 x 3/4"
41	Screw, "	" -214		4	4-40 x 7/8"
42	Washer, Lock, Int. Tooth.	100059-200		8	No. 4.
43	Nut, Hex.	100043-200		8	No. 4.
44	Cement, Loctite	100303-004		A/R	
45					
46	Schematic.	301063-001	B	0	
47	Printed Master.	301060-001	A	0	

FORM 209 (5/74)

STANDARD (NO ATTENTION) HD SEL INVERTED

REV.	DRAWING NO.	REV.	CODE
A	301062-101	A	D120

MATERIAL LIST

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB. (SF,ST 100 TPI)
DRAWING TITLE I/O CONNECTOR, D31/33 MODEL 100 TPI DATE 1-27-77 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301062-000		B		NEXT ASSEMBLY/USED ON
1	Wire, Jumper	300648-001	A/R			Jumper J1 from A to B Jumper J2 from C to D Jumper J6 " M to N Jumper J7 " T to U Jumper J8 " R to P

DATE 1-27-77
APPROVED [Signature]

FORM 209 (R.12/74)

NEGATIVE ATTENTION, HEAD SELECT INVERTED

REV.	DRAWING NO.	REV.	CODE
A	301062-102	A	D120

MATERIAL LIST

PERKIN-ELMER
Memory Products Division

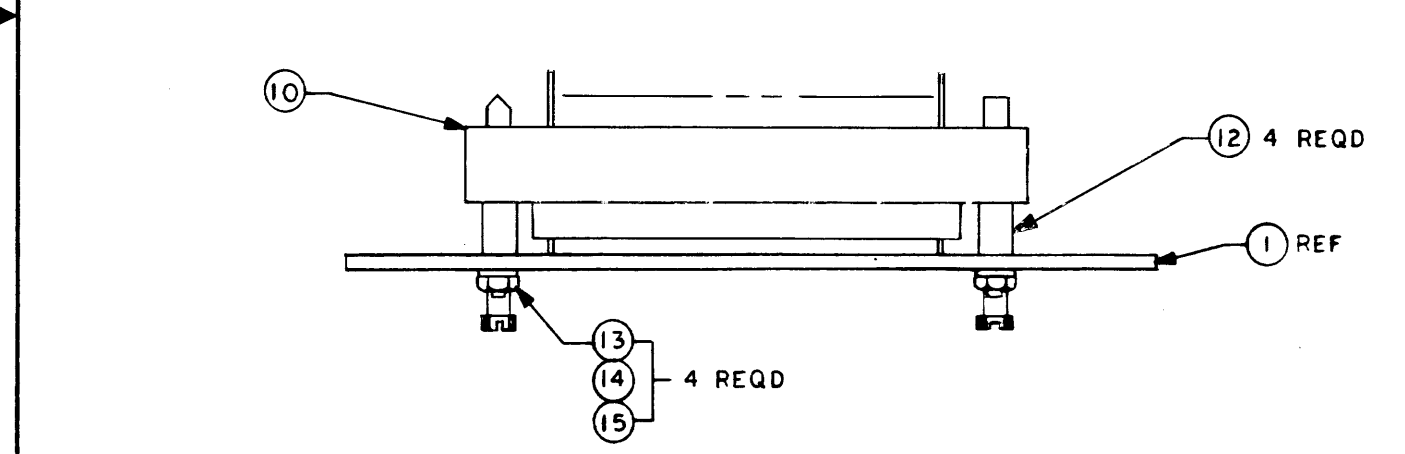
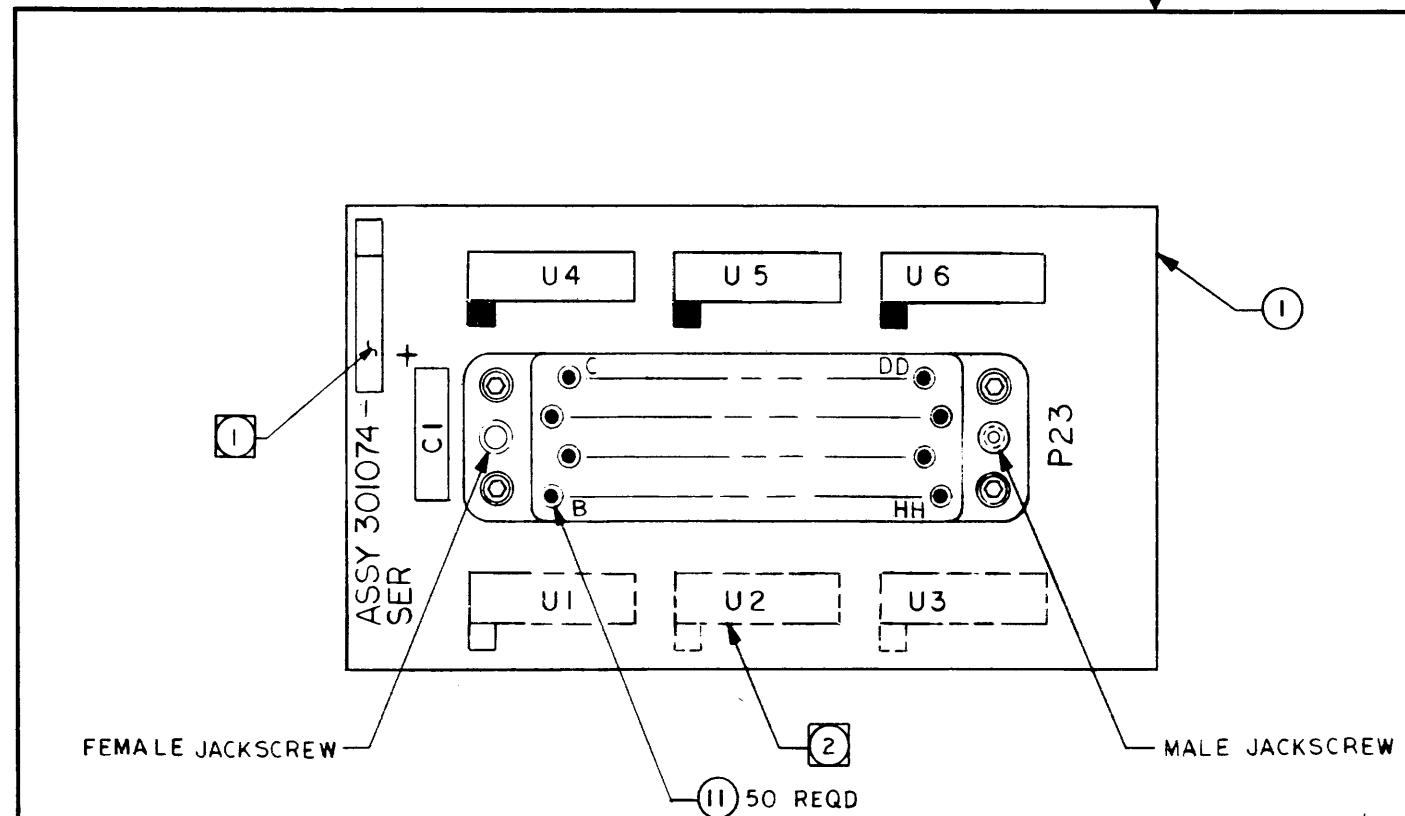
ASSEMBLY, PWB. (SF,ST 100 TPI)
DRAWING TITLE I/O D31/33 MODEL 100 TPI DATE 5-6-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
	USE MATERIAL LIST AND ADD THE FOLLOWING ITEMS:	301062-000		/		NEXT ASSEMBLY/USED ON
50	Jumper, Insulated	300648-001	S			Jumper J3 from E to F. Jumper J4 " G to H. Jumper J5 " J to L. Jumper J7 " T to U Jumper J8 " R to P

DATE 5-6-76
APPROVED [Signature]

FORM 209 (R.12/74)

REVISIONS				301074	C1
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	PILOT RELEASE	FB	5/1/75	J. O'Hara	
A	MFG RELEASE, NO CHANGE	FB	10/22	J. O'Hara	
B	CR/O 6119	FB	11/6/75	J.M. O'Hara	
C	CR/O 7922	FB	11/17/75	H.F.	
C1	CR/O 8342	FB	2-1-78	C.A.C.	



3. FOR SCHEMATIC SEE REF DWG 301075.

② COMPONENTS SHOWN IN PHANTOM LINES ARE NOT USED.

① MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER .12 HIGH WHITE CHARACTERS PER SPEC, 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED		DRAWN	P. TR. 5-1-75	PART NO. 301074 - 001 ASSY	
1. TOLERANCES DIMS ± .005 ANGULAR ± .005		CHECK	J.M. O'Hara 5-1-75	PERKIN-ELMER Memory Products Division	
2. BREAK ALL SHARP EDGES APPROX. .010		APPR.	J.R. 5/1/75	ASSEMBLY, PWB LINE TERMINATOR, MALE D40	
3. BREAK SURFACES		MATERIAL		SCALE	2:1
4. ALL DIMS IN INCH.		FINISH		SIZE	C
		MODEL No.	100/200 TPI F & T	301074	C1
		NEXT ANGLE		WEIGHT	
				2 OF 2	

301074 C1

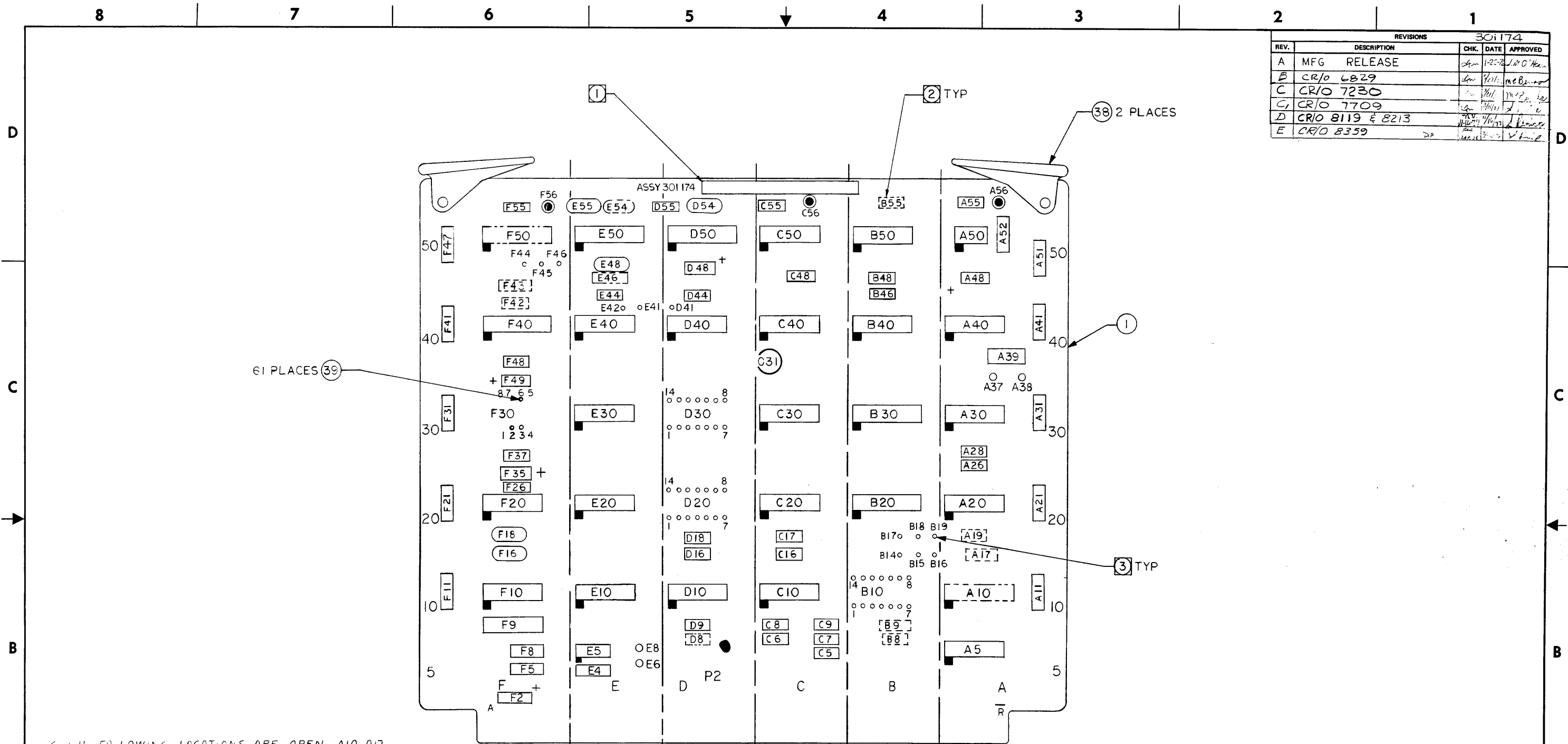
REV.		PART NUMBER		CODE	
		301074-001		0127	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
ASSEMBLY, PWB, LINE TERMINATOR, MALE D40		MODEL 100/20/TP1 F & T		DATE 2/13/75 SHEET 1 OF 2	
TITLE		PART NO.		REV.	
		301074-001		C	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
1	Board, Processed	301074-001	1		ET
2					
3	Capacitor, 10%, 20V 10uf	101002-150	1		21.
4					
5	Resistor, Network 110	101000-001	3		9, 5, 6.
6					
7					
8					
9					
10	Connector, Male, 40 Pin	105010-012	1		823.
11	Contact Pin Male	101002-002	20		
12	Spacers, Fibre	101391-015	2		
13	Screws, Cap, Socket Hd.	100041-203	4		4x7/8 x 1/2"
14	Washer, Lock	100042-200	4		No. 4.
15	Nut, Hex, Small Pattern	101103-003	4		No. 4.
16					
17					
18					
19	Schematic	301074-001	0		B
20	Printed Master	301074-001	0		

FORM 209 (R.12/74)

REV.		PART NUMBER		CODE	
		301074-002		120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
ASSEMBLY, PWB, LINE TERMINATOR, MALE D40		MODEL SF & ST F&T		DATE 12-9-76 SHEET 1 OF 1	
TITLE		PART NO.		REV.	
		301074-002		A	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301074-001			B
	Rework				Cut and Remove the following pins: U4 - Pin 1 U4 - Pin 6 U5 - Pin 15 U6 - Pin 8

FORM 209 (R.12/74)

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
A	MFG RELEASE		1-22-76
B	CR/O 6829		1-22-76
C	CR/O 7230		1-22-76
D	CR/O 7709		1-22-76
E	CR/O 8119 & 8213		1-22-76
	CR/O 8359		1-22-76



6. THE FOLLOWING LOCATIONS ARE OPEN. A10, A17, A19, B8, B9, F42, F43, F50.
 5. FOR SCHEMATIC REF SEE DWG 301175.

4. MAX. HEIGHT OF ALL COMPONENTS WITHIN AREA OF DOTTED LINES TO BOARD EDGE SHALL BE 5/16 MAX. DISC TYPE CAPACITORS MOUNTED IN THIS AREA SHALL BE ASSEMBLED LEANING AWAY FROM EDGES OF BOARD.

3. FOR JUMPER LOCATIONS SEE M/L.

2. COMPONENTS SHOWN IN PHANTOM ARE VARIABLE. SEE M/L FOR VALUES.

1. MARK APPROPRIATE DASH NUMBER, S/N, AND LATEST REVISION LETTER .12 HIGH CHARACTERS COLOR WHITE, PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301174-XXX ASSY SEE TABULATED M/L

NOTES UNLESS SPECIFIED	DRAWN <i>See Dechy</i> 1/24/75	PERKIN-ELMER Memory Products Division	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.
1. TOLERANCES XX± — ANGULAR XXX± — ± —	CHECK <i>S. Andrews</i> 1-23-76 APPR. <i>J.M. Chan</i> 1-22-76			ASSEMBLY, PWB — CONTROL INTERFACE	D 120 100% RECD.
2. WHERE NOT SHARP EDGES APPROX. .010	MATERIAL	MODEL No. SF-ST NEXT ASSY	SCALE 2:1 SIZE D 301174 CHARTED SHEET 3 OF 3
3. MACH. SURFACES — ✓	FINISH	DO NOT SCALE THIS DRAWING	WEIGHT
4. ALL DIMS IN INCHES.			
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT			

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-000		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL SF, ST DATE 10/3/75 SHEET 1 OF 2					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
1	Board, Processed.	301173-001	1		
2					
3	I.C. 555	101023-001	1		A50.
4	I.C. 74LS00	123029-001	1		A30.
5	I.C. 74LS02	123030-001	1		D40.
6	I.C. 74LS04	123031-001	2		A5, F10.
7	I.C. 74LS08	123032-001	5		A40,C10,C50,E40,F20.
8	I.C. 74LS32	123035-001	1		E20.
9	I.C. 74LS74	123036-001	4		A20,B50,E30,E10
10	I.C. 74LS86	123038-001	1		D10.
11	I.C. 74LS123	123039-001	3		D50,E50,F40.
12	I.C. 74LS157	123040-001	2		B20,B30.
13	I.C. 74LS293	123042-001	4		B40,C20,C30,C40.
14	I.C. 75452	101031-001	1		E5
15	Diode 1N4003	100127-001	2		F5,8
16	Capacitor, Mica. 100pf	100243-101	2		D54,E48
17	Capacitor, " 200pf	-201	3		E55,F16,F18.
18	Capacitor, Poly. .0015uf	101005-152	1		F49
19					
20	Capacitor, Ceramic 50V .01uf	101042-103	11		A11,A21,A31,A41,A51,A52,F11 F21,F31,F41,F47
21	Capacitor, Tant. 35V 1uf	101003-105	1		D48.
22	Capacitor, " 20V 2.2uf	101002-225	1		F35.
23	Capacitor, " 20V 15uf	-156	1		F2
24	Capacitor, " 6V 56uf	101001-566	1		A48.
25	Resistor, Variable 10K	101148-103	1		C31
26	Resistor, 3 .3W	45	1		F9
27	Resistor, 5%, 1/4W	75	7		C5,C6,C7,C8,C9,C16,C17.
28					
29	Resistor, " " 1K	-102	4		A26,B48,D55,F26.
30	Resistor, " " 5.1K	-512			D44
31	Resistor, " " 7.5K	-752			C55

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-000		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL SF, ST DATE 1/23/76 SHEET 2 OF 2					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
32	Resistor, 5%, 1/4W	10K 101156-103	9		A28, B46, C48, D9,D16, D18, E44, F55, E4
33	Resistor, " " 20K	-203	2		F48, A39
34					
35	Resistor, " " 240K	-244	1		F37
36	Resistor, " " 2.0 meg	-205	1		A55
37					
38	Extractor, Card.	107901-001	2		
39	Pin, Wire Wrap.	100360-001	64		B10-1,2,3,4,5,6,7,8,9,10,11 12,13,14,B14,B15,B16,B17, B18,B19,D20-1,2,3,4,5,6,7,8, 9,10,11,12,13,14,D30-1,2,3, 4,5,6,7,8,9,10,11,12,13,14, F30-2,3,6,E6,8,A37,38,56, F44,45,46,D41,E41,42,C56,F56
40					
41					
	Schematic	301175-001	0		E
	Printed Master.	301172-001	0		
	Specification	301437-001	0		
	Test Procedure	900106-001	0		
	Test Specification	900107-001	0		

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-001		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL SF & ST DATE 1-13-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51	Capacitor, Poly .001uf	101005-102	1		E54
52	Capacitor, Poly .0068uf	101004-682	1		E46
53					
54					
55					
56					
57	Wire, Jumper	300648-001	20		Jumper J1 B14 to B15 J2 B17 to B18 J3 D20-7 to D20-8 J4 F30-3 to F30-6 J5 D30-6 to D30-7 J6 D20-5 to D20-10 J7 D30-8 to D30-10 J8 D30-9 to D30-11 J9 D20-3 to D20-12 J10 D30-1 to D30-14 J11 D30-3 to D30-13 J12 D20-6 to D20-9 J13 D20-13 to D20-14 J14 B10-11 to B10-12 J15 B10-1 to B10-7 J16 B10-9 to B10-10 J17 B10-6 to B10-14 J18 E6 to E8 J19 D41 to E41 J20 F45 to F46

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-101		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL 200TP1 SF & ST DATE 5-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51	Capacitor, Poly .001uf	101005-102	1		E54
52	Capacitor, Poly .0068uf	101004-682	1		E46
53					
54					
55					
56					
57	Jumper, Insulated	300648-001	20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-102		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL 200TP1 SF&ST DATE 5-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51					
52					
53					
54					
55					
56					
57	Jumper, Insulated	300648-001	20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-103		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL 200TP1 SF & ST DATE 5-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51	Capacitor, Poly .001uf	101005-102	1		E54
52	Capacitor, Poly .0068uf	101004-682	1		E46
53					
54					
55					
56					
57	Jumper, Insulated	300648-001	20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-4 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-2 to F30-6 D41 to E41 F45 to F46

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-104		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL 200TP1 SF & ST DATE 5-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51	Capacitor, Poly .001uf	101005-102	1		E54
52	Capacitor, Poly .0068uf	101004-682	1		E46
53					
54					
55					
56					
57	Jumper, Insulated	300648-001	20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-9 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-5 to D30-7 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

REV		PART NUMBER		CODE	
REV		PART NUMBER		CODE	
1		301174-105		D120	
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
TITLE ASSY. PWB. CONTROL INTERFACE. MODEL 200 TP1 SF & ST DATE 5-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST 301174-000					
AND ADD THE FOLLOWING:					
50					
51	Capacitor, Poly .001uf	101005-102	1		E54
52	Capacitor, Poly .0068uf	101004-682	1		E46
53					
54					
55					
56					
57	Jumper, Insulated	300648-001	20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

C300/200 NO SECTOR COUNTER - INDIVIDUAL LINES-WRITE INHIBIT

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-106 REV. F

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200 TPI SF & ST DATE 5-21-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51	Capacitor, Poly .001uf	101005-102	1			E54
52	Capacitor, Poly .0068uf	101004-682	1			E46
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-4 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-2 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

D-40 NO SECTOR COUNTER - INDIVIDUAL LINES WRITE INHIBIT

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-107 REV. E

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-8 to B10-9 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

D-40 PULSE ILL. ADD. SECTOR COUNTER MULTIPLEXED WRITE INHIBIT

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-109 REV. E

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

ILL. ADD. = LEVEL D-40 SECTOR COUNTER MULTIPLEXED WRITE INHIBIT

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-111 REV. E

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-13 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

D-40 SECTOR COUNTER MULTIPLEXED NEGATIVE ATTENTION

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-112 REV. F

TITLE ASSY. PWB. CONTROL INTERFACE MODEL SF & ST DATE 5-24-76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:-	301174-000				NEXT ASSEMBLY/USED ON
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

SPECIAL: SFENA

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-114 REV. E

TITLE ASSY. PWB. CONTROL INTERFACE MODEL SF, 200 TPI DATE 12/21/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:-	301174-000				NEXT ASSEMBLY/USED ON
51	Capacitor, Mica 100pf	100243-101	1			E54
52	Capacitor, Mica 470pf	-471	1			E46
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-12 D30-4 to D30-7 D30-8 to D30-10 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

SECTOR COUNTER MULTIPLEXED WRITE INHIBIT (SPECIAL T-A)

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-115 REV. F

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200 TPI SF & ST DATE 2-9-77 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51	Capacitor, Poly .001uf	101005-102	1			E54
52	Capacitor, Poly .0068uf	101004-682	1			E46
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-12 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

SPECIAL: CTM D-30 NO SECTOR COUNTER-INDIVIDUAL LINES WRITE INHIBIT

PERKIN-ELMER Memory Products Division

MATERIAL LIST

PART NUMBER 301174-120 REV. C

TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200 TPI SF & ST DATE SHEET 1 OF 1

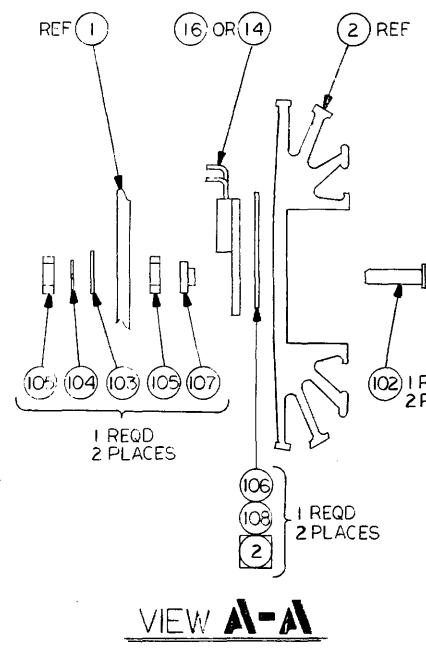
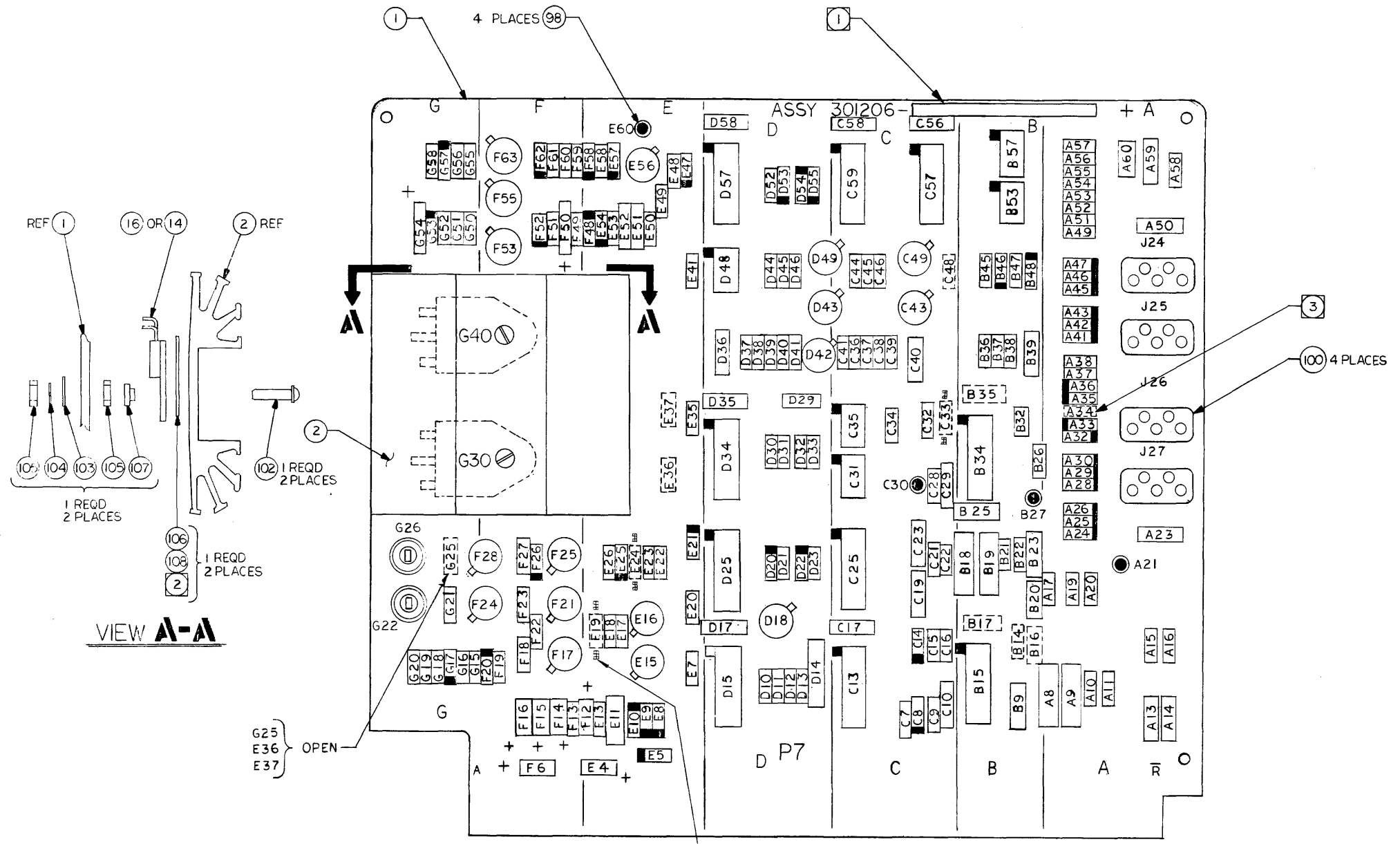
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
50	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000				NEXT ASSEMBLY/USED ON
51	Capacitor, Poly. .001uf	101005-102	1			E54
52	Capacitor, Poly .0068uf	101004-682	1			E46
53						
54						
55						
56						
57	Jumper, Insulated.	300648-001	20			Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-2 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 F30-3 to F30-6 D41 to E41 F45 to F46

FORM 208 (R.12/74)

REV.		PART NUMBER		MATERIAL LIST		PART NUMBER		REV.	
301174-209		301174-209		301174-209		301174-209		/	
DATE		APPROVED		TITLE		MODEL		DATE	
				ASSY. PWB. CONTROL INTERFACE		200TP1 SF & ST		6-14-76 SHEET 1 OF 1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REQD.
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000		/	NEXT ASSEMBLY/USED ON		USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	
50						50			
51						51			
52						52			
53						53			
54						54			
55						55			
56					A37 to A38	56			
57	Jumper, Insulated	300648-001	21		Jumper B14 to B15	57	Jumper, Insulated	300648-001	20
					B17 to B18				
					B10-1 to B10-7				
					B10-6 to B10-14				
					B10-9 to B10-10				
					B10-11 to B10-12				
					D20-3 to D20-12				
					D20-5 to D20-10				
					D20-6 to D20-9				
					D20-7 to D20-8				
					D20-13 to D20-14				
					D30-1 to D30-14				
					D30-3 to D30-13				
					D30-6 to D30-7				
					D30-8 to D30-10				
					D30-9 to D30-11				
					E6 to E8				
					F30-3 to F30-6				
					D41 to E41				
					F45 to F46				

REV.		PART NUMBER		MATERIAL LIST		PART NUMBER		REV.	
301174-212		301174-212		301174-212		301174-212		/	
DATE		APPROVED		TITLE		MODEL		DATE	
				ASSY PWB. CONTROL INTERFACE		SF & ST		10-25-76 SHEET 1 OF 1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REQD.
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000		/	NEXT ASSEMBLY/USED ON		USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	
50						50			
51						51			
52						52			
53						53			
54						54			
55						55			
56					A37 to A38	56			
57	Jumper, Insulated	300648-001	20		Jumper B14 to B15	57	Jumper, Insulated	300648-001	20
					B17 to B18				
					B10-1 to B10-7				
					B10-6 to B10-14				
					B10-9 to B10-10				
					B10-11 to B10-12				
					D20-1 to D20-14				
					D20-3 to D20-12				
					D20-6 to D20-9				
					D20-7 to D20-8				
					D30-1 to D30-14				
					D30-3 to D30-13				
					D30-6 to D30-7				
					D30-8 to D30-10				
					D30-9 to D30-11				
					E6 to E8				
					F30-3 to F30-6				
					D41 to E41				
					F45 to F46				

REVISIONS				301206	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	MFG RELEASE				
B	CR/O 6764				
C	CR/O 6812				
D	CR/O 7029				
E	CR/O 713B				
F	CR/O 7210				
G	CR/O 7377				
G1	CR/O 7661				
H	CR/O 7838				
J	CR/O 3049				
J1	CR/O 3191				
K	CR/O 3615				



- 4. FOR SCHEMATIC REF DWG 301207.
 - 3 COMPONENTS OUTLINED IN PHANTOM TO BE VARIARI F SEE M/L DASH VERSION FOR VALUES.
 - 2 APPLY SILICON GREASE TO BOTH SIDES OF MICA WASHER.
 - 1 MARK APPROPRIATE DASH NO. AND LATEST REVISION LETTER WHERE SHOWN, .12 HIGH CHARACTERS, COLOR WHITE PER P-E SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301206-XXX SEE TABULATED M/L

NOTES UNLESS SPECIFIED 1. TOLERANCES .XX± ANGULAR ± .XXX± ± 2. BREAK ALL SHARP EDGES APPROX .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN <i>David J. 10/27/73</i>	PERKIN-ELMER Memory Products Division ASSEMBLY, PWB., DATA ELECTRONICS	DATE
	CHECK		DRAWN
	APPR. <i>meb, ta 04/06/76</i>		DATE
	MATERIAL		FINISH
	MODEL No. SF/ST	SCALE	SIZE D
	NEXT ASSY 40000 40001	DO NOT SCALE THIS DRAWING	WEIGHT
			SHEET 5 OF 5

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-000		K			
ASSY. PWB. DATA ELECTRONICS. MODEL SF,ST DATE 10/2/75 SHEET 1 OF 5					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
1	Board, Processed.	301205-001	1	J	
2	Heat Sink	300135-001	1		
3	I.C.	101022-001	3		C31,C35,D48.
4	I.C.	592	101032-001	2	B15,B34.
5	I.C.	74LS00	123029-001	1	C25.
6	I.C.	7406	100331-001	1	D25.
7	I.C.	74LS14	123047-001	1	C57.
8	I.C.	74LS86	123038-001	1	D34.
9	I.C.	74S132	123067-001	1	D15.
10	I.C.	74S04	123046-001	1	C59.
11	I.C.	74S74	123023-001	1	D57.
12	I.C.	75452	101031-001	2	B53,B57.
13	I.C.	7809HC	125005-008	1	F24.
14	I.C.	7812HC	125006-012	1	G40.
15	I.C.	79M05UC	125007-005	1	F28.
16	I.C.	79M12UC	125008-012	1	G30.
17	I.C.	74LS02	123030-001	1	C13.
18					
19					
20	Transistor.	2N2222A	101052-001	8	D18,D43,D49,E15,E56,F53,F55 F63.
21					
22	Transistor.	2N2907A	101053-001	7	C43,C49,D42,E16,F17,F21,F25
23					
24					
25	Diode, Rect.	1N4003	100127-001	3	F20,F26, G17.
26					
27	Diode.	1N5317	101034-001	35	A24,A25,A26,A28,A29,A30,A32 A33,A35,A36,A41,A42,A43,A45 A46,A47,B46,B48,C8,C14,D53, D54,D55,D22,D20,E8,E9,E10, F48,F62,F58,E5,E47,E21, F52

FORM 209 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-000		K			
ASSY. PWB. DATA ELECTRONICS. MODEL SF,ST DATE 10/2/75 SHEET 2 OF 5					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
28					
29	Diode, Zener.3.9V	1N5228B	101058-003	1	G57.
30	Diode, " 4.7V	1N5230B	-005	1	E57.
31	Diode, " 5.6V	1N5232 2%	107041-001	1	E25.
32	Diode, " 10V	1N5240B	101058-015	2	E54,G53.
33					
34					
35					
36	Capacitor, Mica.	62pf	100243-620	4	B20,B25,C19,C23.
37					
38					
39					
40	Capacitor, Ceramic	.1uf	101086-104	1	C7
41	Capacitor, Ceramic.	.01uf	101042-103	20	A23,A50,A59,B9, B39,C10, C17,C40,C29,C56,C58,D17, D58,E51,E52,A13,A14,B26,D35 D29.
42					
43	Capacitor.	.022uf	101004-223	4	A8,A9,B18,B19,
44	Capacitor.	.039uf	-393	1	D14
45	Capacitor.	.047uf	101086-473	5	G21,C32,F18,F23,F27.
46					
47	Capacitor, Tant.	20V 2.2uf	101002-225	4	A60,F14,F15,F16
48	Capacitor, " 50V	3.3uf	100284-335	1	F12.
49	Capacitor, " 35V	1uf	101003-105	2	E4,F6.
50	Capacitor, " 20V	15uf	101002-156	2	F50,B54
51					
52					
53	Inductor.	1uh	101074-010	1	B32.
54	Inductor.	27uh	-270	2	B21,C22.
55	Inductor.	220uh.	122500-001	1	E11.
56					
60					

FORM 209 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-000		K			
ASSY. PWB. DATA ELECTRONICS. MODEL SF,ST DATE 10/2/75 SHEET 3 OF 5					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
61					
62					
63	Resistor, Variable.	2K	138000-202	2	G26,G22
64					
65	Resistor, 5%, 1/4W	47	-470	1	C38
66	Resistor, 5% 1/4W.	10	101156-100	7	B36,B37,C46,F19,F51,G20,F22
67	Resistor, " "	33	-330	1	C39
68	Resistor, " "	56	-560	5	A58,D44,D45,G56,G58.
69	Resistor, " "	100	-101	1	B38
70	Resistor, " "	120	-121	1	D21.
71	Resistor, " "	150	-151	2	A10,A11.
72	Resistor, " "	270	-271	4	G15,G16,G18,G19.
73	Resistor, " "	390	-391	3	C44,C45,E58.
74	Resistor, " "	430	-431	1	G52.
75	Resistor, " "	470	-471	5	B22,C15,C16,C21,G51.
76	Resistor, " "	560	-561	1	D39.
77	Resistor, " "	680	-681	4	D38,E13,E18,F13
78	Resistor, " "	820	-821	1	D32.
79	Resistor, " "	1K	-102	8	E23, E35,D12,D10, G50,G55,A15,A16
80	Resistor, 5% 1/4W.	1.5K	101156-152	4	A20, C28,D46,B23
81	Resistor, " "	2.2K	-222	8	A17,A19,C9,D30,D31,D52,D46
82	Resistor, " "	2.7K	-272	2	E26,F49
83	Resistor, " "	5.1K	-512	2	D11,E7.
84	Resistor, " "	7.5K	-752	2	E17,D13
85	Resistor, " "	10K	-103	16	A37,A38,A49,A53,A57,B45, B47,C36,C41,C34,E53 F59,F60, A54,D41,E49
86	Resistor, 5% 1/4W.	12K	101156-123	2	D23,E22.
87					
88	Resistor, " "	30K	-303	1	D36
89	Resistor, " "	39K	-393	1	D33

FORM 209 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-000		K			
ASSY. PWB. DATA ELECTRONICS. MODEL SF,ST DATE 10/2/75 SHEET 4 OF 5					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
90	Resistor, 5%, 1/4W.	43K	101156-433	1	E41.
91					
92	Resistor, " "	.68K	-683	2	E50,D40
93	Resistor, " "	100K	-104	5	A51,A52,A55,A56,F61.
94	Resistor, 5%, 1/4W	3K	-302	1	C37
95					
96	Resistor, " "	510K	-514	1	E20
97					
98	Pin, Wire Wrap		100360-001	4	A21,B27,C30,E60
99	Pin		100377-002	6	E19,24 C33
100	Connector.		101133-001	4	J24,J25,J26,J27.
101					
102	Screw, Pan Hd.		100036-208	2	4-40 X 1/2
103	Washer.		100047-200	2	No. 4.
104	Washer, Spring Lock.		100042-200	2	No. 4.
105	Nut.		100043-200	4	4-40.
106	Insulator, Mica.		100147-001	2	Use with G30, G40.
107	Washer, Nylon Shoulder.		100063-014	2	Use with G30, G40.
108	Silicon Grease.		120100-001	A/R	Apply to both sides of item. 106.
109					
110	Rework Instructions		301770-001	0	REV. P, C, D *R.C. RD.
	Printed Master.		301204-001	0	H
	Schematic.		301207-001	0	E
	Specification		301442-001	0	
	Test Procedure		900101-001	0	
	Test Specification		900116-001	0	

FORM 209 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-001		K			
ASSY. PWB. DATA ELECTRONICS. MODEL 200 TPI SF,ST DATE 10/2/75 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
110	Resistor, 1%, 1/4W.	302075-002	1	J	E24. Test Select (150 to 243)
111	Resistor, 1%, 1/4W.	302075-003	1		E19. Test Select (316 to 825)
112	Resistor, 5%, 1/4W.	1.8K	101156-182	1	C48.
113	Resistor, 5%, 1/4W.	5100	101156-512	1	A34.
114	Resistor, 5%, 1/4W.	330	101156-331	1	B14.
115	Capacitor.	100pf	100243-101	1	B16.
116	Capacitor.	100pf	100243-101	1	B17.
117					
118	Resistor	302075-001	1		C33 test select (1.00 to 50A)

FORM 208 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-002		K			
ASSY. PWB. DATA ELECTRONICS. MODEL 200 TPI SF,ST DATE 10/2/75 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
110	Resistor, 1%, 1/4W.	302075-002	1	J	E24. Test Select (150 to 243)
111	Resistor, 1%, 1/4W.	302075-003	1		E19. Test Select (316 to 825)
112	Resistor, 5%, 1/4W.	1.8K	101156-182	1	C48.
113	Resistor, 5%, 1/4W.	3K	101156-302	1	A34.
114	Resistor, 5%, 1/4W.	330	101156-331	1	B14.
115	Capacitor, Mica.	68pf	100243-680	1	B16.
116	Capacitor, Mica.	100pf	100243-101	1	B17.
117					
118	Resistor	302075-001	1		C33.test select(1.00 to 50A)

FORM 208 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-004		J			
ASSY. PWB. DATA ELECTRONICS. MODEL SF & ST DATE 10/2/75 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
110	Resistor, 1%, 1/4W.	302075-002	1	J	E24.test select(150 to 243)
111	Resistor, 1%, 1/4W.	302075-003	1		E19.test select(316 to 825A)
112	Resistor, 5%, 1/4W.	1500	101156-152	1	C48.
113	Resistor, 5%, 1/4W.	5100	101156-512	1	A34.
114	Resistor, 5%, 1/4W.	56	101156-560	1	B14.
115	Capacitor, Mica.	68pf	100243-680	1	B16.
116	Capacitor, Mica.	68pf	100243-680	1	B17.
117	Capacitor, Mica.	15pf	100243-150	1	B35.
118	Resistor	302075-001	1		C33.test select(1.00 to 50A)

FORM 208 (R.12/74)

REV.		CODE			
D120		D120			
PERKIN-ELMER Memory Products Division					
MATERIAL LIST					
PART NUMBER		REV.			
301206-005		K			
ASSY. PWB. DATA ELECTRONICS. MODEL 100TPI SF, ST DATE 3-12-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	RECD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
110	Resistor, 1%, 1/4W	302075-002	1	J	E24. Test Select (150 to 243)
111	Resistor, 1%, 1/4W	302075-005	1		E19. Test Select (308 to 1100)
112	Resistor, 5%, 1/4W	1.8K	101156-182	1	C48.
113	Resistor, 5%, 1/4W	3K	101156-302	1	A34.
114	Resistor, 5%, 1/4W	330	101156-331	1	B14.</

REV.		PART NUMBER		CODE	
K		301206-006		D120	
PEPPER-ELMER Memory Products Division					
MATERIAL LIST					
ASSY. PWB. DATA ELECTRONICS					
TITLE		MODEL		DATE	
2200 BPI - 2400 BPM		100 TPI, SF,ST		3-12-76	
SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
400000 & 400001					
110	Resistor, 1%, 1/4W	302075-002	1	J	E24. Test Select (150 to 243)
111	Resistor, 1%, 1/4W	302075-003	1		E19. Test Select (316 to 825)
112	Resistor, 5%, 1/4W	1.8K 101156-182	1		C48.
113	Resistor, 5%, 1/4W	3K 101156-302	1		A34.
114	Resistor, 5%, 1/4W	330 101156-331	1		B14.
115	Capacitor, Mica	68pf 100243-680	1		B16.
116	Capacitor, Mica	100pf 100243-101	1		B17.
117	Capacitor, Mica	15pf 100243-150	1		B35.
118	Resistor	302075-001	1		C33. test select(1.00 to 50A)

FORM 209 (R.12/74)

REV.		PART NUMBER		CODE	
K		301206-008		D120	
PEPPER-ELMER Memory Products Division					
MATERIAL LIST					
ASSY. PWB. DATA ELECTRONICS					
TITLE		MODEL		DATE	
2200 BPI - 2400RPM		200TPI SF&ST		5-26-76	
SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
400000					
110	Resistor, 1%, 1/4W	302075-004	1	J	E24. test select(127 to 154A)
111	Resistor, 1%, 1/4W	302075-005	1		E19. test select(287 to 1.1K)
112	Resistor, 5%, 1/4W	910 101156-911	1		C48.
113	Resistor, 5%, 1/4W	2K 101156-202	1		A34.
114	Resistor, 5%, 1/4W	330 101156-331	1		B14.
115	Capacitor, Mica	68pf 100243-680	1		B16.
116	Capacitor, Mica	100pf 100243-101	1		B17.
117					
118	Resistor	302075-001	1		C33. test select(1.00 to 50A)

FORM 209 (R.12/74)

REV. J.		PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER 301291-001		REV. E		CODE D120	
DATE		TITLE ASSY. PWB. I/O		MODEL SF,ST		DATE 1-16-76		SHEET 1		OF 3	
APPROVED		ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS			
		NEXT ASSEMBLY/USED ON									
		1	Board, Processed	301290-001	1		E				
		2	Retainer, Connector-Bottom	300589-001	2			Use with item 28 and 29			
		3	I.C.	7402	100329-001	1		D57			
		4	I.C.	7404	100330-001	1		B56			
		5	I.C. 8T 380 or	8836	100347-001	5		A47, A56, B47, B48, B57			
		6	I.C.	7403	101007-001	1		D56			
		7	I.C.	75452	101031-001	12		C30, C34, C43, C47, D9, D13, D21, D24, D34, D30, D43, D47			
		8	I.C.	7414	123001-001	1		C48			
		9	I.C.	74LS08	123032-001	1		D48			
		10	Diode, Rectifier	1N4003	100127-001	1		D36			
		11	I.C.	75451	101139-001	1		C52			
		12									
		13	Capacitor, Tant. 6v	56uf	101001-566	3		B49, C59, B39			
		14	Capacitor, Tant. 20v	15uf	101002-156	1		A55			
		15	Capacitor, Cer. 50v	0.1uf	101087-104	4		A7, A54, D5, D55			
		16	Capacitor, Cer. 100v	0.01uf	101042-103	10		B58, B59, B60, C50, C58, C60			
		17						D19, D58, D59			
		18	RESISTOR, 5% 1/4W	56	101156-560	1		C32			
		19	Resistor, 5%, 1/4W	75	101156-750	1		A57			
		20	Resistor, 5%, "	510	-511	1		B44			
		21	Resistor, 5%, "	1K	-102	4		B54, B55, D38, D51, C57			
		22	Resistor, 5%, "	10K	-103	7		D35, D37, D39, C44, D44, C45, D49			
		23	RESISTOR, 5%, "	100	-101	4		C38, C33, B35, B38			
		24	RESISTOR, 5%, "	160	-161	2		B37, C35			
		25	RESISTOR, 5%, "	390	-391	1		B32			
		26	Switch, Rocker, DIP		149002-007	1		C56			
		27									
		28	Connector, Male	50 pin	101036-001	1		J22			
		29	Connector, Female	50 pin	101037-001	1		J23			

FORM 209 (R.12/74)

REV. B		PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER 301291-001		REV. B		CODE D120	
DATE		TITLE ASSY. PWB. I/O		MODEL SF,ST		DATE 1-16-76		SHEET 2		OF 3	
APPROVED		ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS			
		NEXT ASSEMBLY/USED ON									
		30	Connector, Male	50 pin	101040-001	1		J21			
		31	DIODE, ZENER	1N5228	101058-003	1		B33			
		32	DIODE	1N5317	10134-001	1		C37			
		33	TRANSISTOR	2N2222A	101052-001	3		C54, C39, C56			
		34	Spacer		100093-030	4					
		35									
		36	Screw, Flat Head	82°	100040-106	4		2-56 x 3/8"			
		37									
		38	Nut, Hex		100043-100	4		2-56			
		39	Washer, Flat		100047-100	4		No. 2			
		40									
		41									
		42									
			Schematic		301292-001	0	B				
			Printed Master		301289-001	0	B				
			Specification		301440-001	0					
			Test Procedure		900112-001	0					
			Test Specification		900113-001	0					

FORM 209 (R.12/74)

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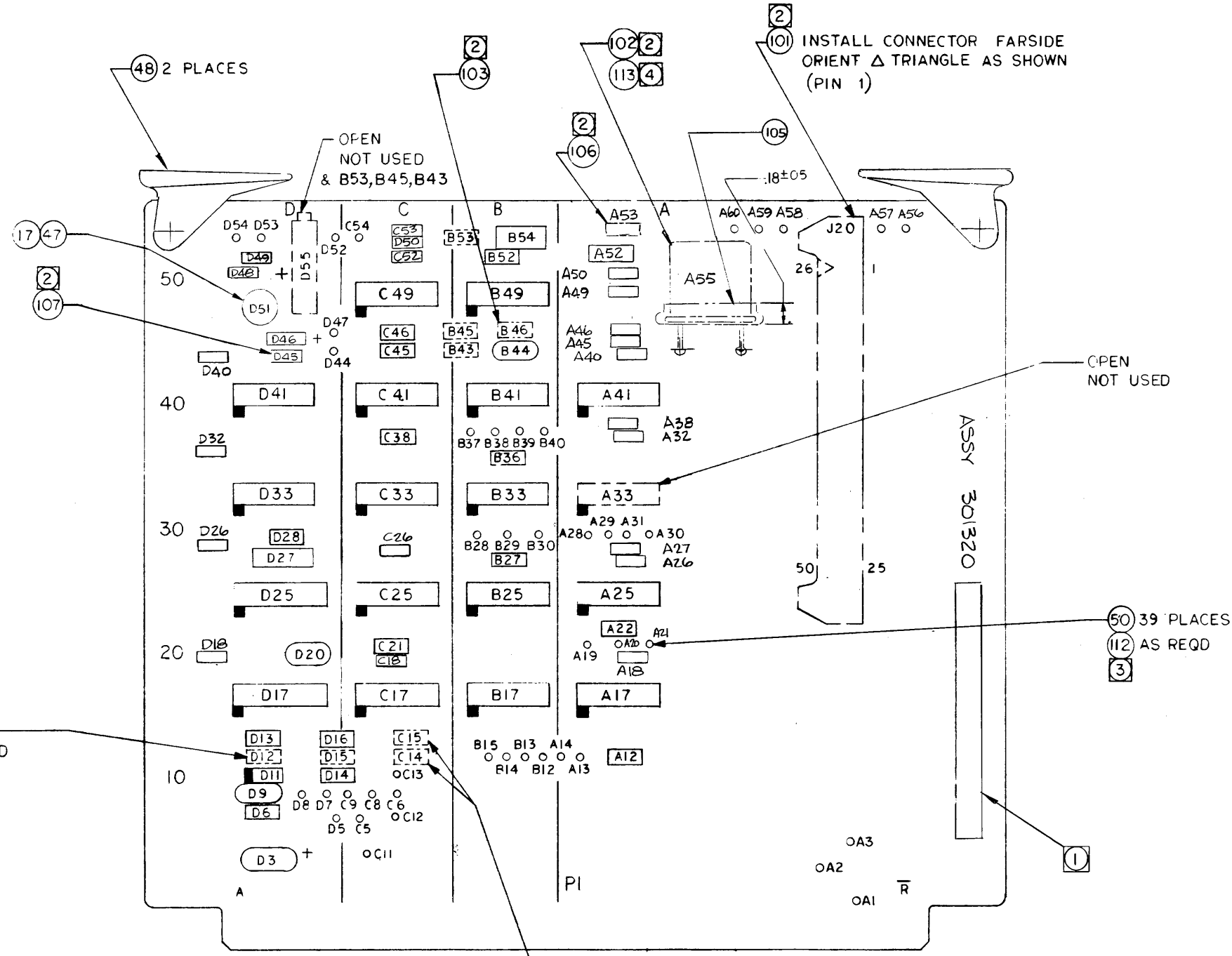
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REVISIONS		DATE	BY	APPROVED
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	MFG RELEASE			
B	CR/O 6384			
C	CR/O 6645			
D	CR/O 7285			
XI	EXP.			
D1	CR/O 8020			
E	CR/O 8499			
E1	CR/O 8462			
F	CR/O 9291			

5. FOR SCHEMATIC REFERENCE SEE DWG 301321-200.

④ SOLDER HOLD DOWN WIRE, ITEM 113, TO CASE OF CRYSTAL, ITEM 102, AND TO PLATED HOLE AS INDICATED.

③ FOR JUMPER LOCATIONS SEE M/L.

② COMPONENTS SHOWN IN PHANTOM ARE VARIABLE. SEE M/L FOR REQUIREMENTS.

① MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER .12 HIGH CHARACTERS COLOR WHITE, PER PERKIN-ELMER SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED:		DRAWN	DATE	PERKIN-ELMER
1. TOLERANCES	XX±	DR	1-22-76	Memory Products Division
ANGULAR	XXX±	CHK		
2. BREAK ALL SHARP EDGES APPROX. .010		APPR.	1-14-76	ASSEMBLY, PWB- DATA INTERFACE VFO II
3. MACH. SURFACES		MATERIAL		
4. ALL DIMS IN INCHES.				SCALE: 2:1
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT				
				SIZE: D
				301320-100
				REV: 1

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSEMBLY, PWB. DATA INTERFACE, VFO II		MODEL SF&ST, F&T		301320-000	F	
TITLE		DATE 9/4/75		SHEET 1 OF 2		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
1	Board, Processed.	301319-001	1			
2						
3						
4	I.C.	9602	100234-001	1		D25.
5	I.C.	74500	123028-001	1		A41.
6	I.C.	4024	100344-001	1		B49.
7	I.C.	4944	100345-001	1		C49.
8	I.C.	8T20B	101024-001	1		D17.
9	I.C.	74S74	123023-001	1		D41.
10	I.C.	74LS00	123029-001	1		D33.
11	I.C.	74S04	123046-001	1		D17.
12	I.C.	74LS08	123032-001	2		B41, C25.
13	I.C.	74LS11	123034-001	1		A25.
14	I.C.	74LS32	123036-001	2		B25, C33.
15	I.C.	74LS74	123036-001	3		B33, C17, C41.
16	I.C.	74S08	123050-001	1		A17.
17	I.C.	79M05	125005-005	1		D51.
18						
19						
20	Diode, Zener	1N5231B	101058-006	1		D11.
21						
22						
23	Capacitor, Mica.	33pf	100243-330	1		D20.
24	Capacitor, Mica.	47pf	-470	1		B44.
25	Capacitor, Mica.	510pf	-511	1		B54.
26						
27	Capacitor	.015uf	100078-562	1		A45.
28	Capacitor, Poly.	.0027uf	100165-272	1		D27.
29	Capacitor, Poly.	.0047uf	-472	1		A52.
30	Capacitor, Poly.	.01uf	101042-103	12		A18, A26, A32, A40, C18, C26, D9, D18, D26, D32, D40, D50.
32	Capacitor, 20v.	2.2uf	101002-225	2		D46, D48.
33	Capacitor, 6v.	56uf	101001-566	1		D3.

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSEMBLY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST, F&T		301320-000	F	
TITLE		DATE 9/4/75		SHEET 2 OF 2		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
34	Resistor, 5%, 1/4W.	10	101156-100	2		D14, D16.
35	Resistor, " "	75	-750	3		A12, A22, A27.
36						
37	Resistor, " "	240	-241	1		D6.
38	Resistor, " "	200	-201	1		D49.
39	Resistor, " "	330	-331	2		A38, A46.
40	Resistor, " "	1K	-102	9		A50, B27, B36, C21, C38, C45, C46, C52, C53.
42	Resistor, 5%, 1/2W.	1.2K	101156-122	1		B52.
43						
44	Resistor, " "	10K	-103	2		D13, D28.
45	Resistor " "	510	-511	1		A49.
46						
47	Pad Transistor	100223-001	1			Used with Item 17.
48	Extractor, Card.	107901-001	2			
49						
50	Pin Connector	.02550	100360-001	44		A1, 2, 3, 13, 14, 19, 20, 21, 28, A29, 30, 31, 56, 57, 58, 59, 60, B12, 13, 14, 15, 28, 29, 30, 37, B38, 39, 40, C5, 6, 8, 9, 11, 12, C13, 54, D5, 7, 8, 44, 47, 52, 63, D54.
56	Schematic	301321-200	0			
57	Printed Master	301318-001	0			
58	Test Procedure	900104-001	0			
59	Test Specification	900105-001	0			
60	Specification	301431-001	0			

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST		301320-001	E	
TITLE		DATE 9/4/75		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal	101059-002	1			A55.
103	Capacitor.	20pf	100243-200	1		B46.
105	Tubing, Thermofit	100185-009	A/R			Use with item 102.
106	Capacitor.	.0027uf	101004-272	1		A53.
107	Resistor, 1%, 1/4W.	6.34K	100155-366	1		D45.
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A20 to A21. Jumper B39 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3 Jumper C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.
114	Rework Inst.	301777-001	0			

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST		301320-002	E	
TITLE		DATE 9/4/75		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal	101059-002	1			A55.
103	Capacitor.	20pf	100243-200	1		B46.
105	Tubing, Thermofit	100185-009	A/R			Use with item 102.
106	Capacitor.	.0027uf	101004-272	1		A53.
107	Resistor, 1%, 1/4W.	6.34K	100155-366	1		D45.
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A20 to A21. Jumper B38 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3 Jumper C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.
114	Rework Inst.	301777-001	0			

REV. 1		BASIC		CODE D120		
WANGCO		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA INTERFACE, VFO II		MODEL SF & ST		301320-003	E	
TITLE		DATE 9/5/75		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal.	101059-002	1			A55.
103	Capacitor.	20pf	100243-200	1		B46.
105	Tubing, Thermofit.	100185-009	A/R			Use with item 102.
106	Capacitor.	.0027uf	101004-272	1		A53.
107	Resistor, 1%, 1/4W.	6.34K	100155-366	1		D45.
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A19 to A20. Jumper A23 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper D44 to D47. Jumper A2 to A3 Jumper C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.
114	Rework Inst.	301777-001	0			

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST		301320-005	E	
TITLE		DATE 9/5/75		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal.	101059-002	1			A55.
103	Capacitor.	20pf	100243-200	1		B46.
105	Tubing, Thermofit.	100185-009	A/R			Use with item 102.
106	Capacitor.	.0027uf	101004-272	1		A53.
107	Resistor, 1%, 1/4W.	6.34K	100155-366	1		D45.
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper D44 to D47. Jumper A2 to A3 Jumper C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.
114	Rework Inst.	301777-001	0			

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST		301320-006	E	
TITLE		DATE 1-18-77		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal	101059-002	1			A55.
103	Capacitor	20pf	100243-200	1		B46.
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102.
106	Capacitor	.0027uf	101004-272	1		A53.
107	Resistor, 1%, 1/4W	6.34K	100155-366	1		D45.
112	Wire, Solid Insulated	300648-001	12			Jumper A20 to A21 B37 to B40 B28 to B29 A28 to A30 D44 to D47 B13 to B14 B12 to A13 C6 to C8 C9 to D8 C5 to D5 A2 to A3 C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.

REV. 1		BASIC		CODE D120		
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.	
ASSY, PWB. DATA, INTERFACE, VFO II		MODEL SF & ST		301320-007	E	
TITLE		DATE 9/5/75		SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:-						
102	Crystal.	101059-003	1			A55.
105	Tubing, Thermofit.	100185-009	A/R			Use with item 102.
107	Resistor, 1%, 1/4W.	4.12K	100155-348	1		D45.
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper D44 to D47. Jumper A2 to A3 Jumper C11 to C12.
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102.
114	Rework Inst.	301777-001	0			

2400 RPM. WRITE - DF, READ - NRZI 'C' CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO II MODEL SF & ST DATE 9/5/75 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
102		101059-003	Crystal.	1			A55.
105		100185-009	Tubing, Thermofit.	A/R			Use with item 102.
107		100155-349	Resistor, 1%, 1/4W. 4.12K	1			D45.
112		300648-001	Wire, Solid Insulated.	A/R			Jumper A20 to A21. Jumper B39 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3. Jumper B11 to B12.
113		100051-024	Wire, Solid	A/R			Hold Down Wire for Item 102
114		301777-001	Rework Inst.	0			

FORM 209 (R.12/74)

2400 RPM. WRITE - DF, READ - PULSE 'D' CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO II MODEL SF & ST DATE 9/5/75 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
102		101059-003	Crystal.	1			A55.
105		100185-009	Tubing, Thermofit.	A/R			Use with item 102.
107		100155-349	Resistor, 1%, 1/4W. 4.12K	1			D45.
112		300648-001	Wire, Solid Insulated.	A/R			Jumper A20 to A21. Jumper B39 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3. Jumper B11 to B12.
113		100051-024	Wire, Solid	A/R			Hold Down Wire for Item 102
114		301777-001	Rework Inst.	0			

FORM 209 (R.12/74)

2400 RPM. WRITE - DF, READ - PULSE 'D' CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO II MODEL SF, ST DATE 5/2/76 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
1		301320-000	Assy, PWB, Data Inter. VFO II - Basic				REV E
28		100165-272	Capacitor, Poly .0027uf	D27			Delete
28		101004-562	Capacitor, Poly .0056uf	D27			Add
102		101059-003	Crystal				A55 Add
105	A/R	100185-009	Tubing, Thermofit				Use with item 102
107		100155-348	Resistor, 1%, 1/4W 4.12K	D45			Add
112	12	300648-001	Jumper, Insulated				Jumper A2 to A3 Add A20 to A21 A28 to A30 B12 to A13 B13 to B14 B28 to B29 B39 to B40 C5 to D5 C6 to C8 C9 to D8 C11 to C12 D44 to D47 Add
113	A/R	100051-024	Wire, Solid				Hold Down Wire for Item 102
114	0	301777-001	Rework Inst.				

FORM 209 (R.3/77)

2400 RPM. WRITE - DF, READ - UNDISCRIMINATED CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO MODEL SF&ST DATE 7-26-76 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101		101059-003	Crystal	1			A55
105		100185-009	Tubing, Thermofit.	A/R			Use with item 102.
107		100155-348	Resistor, 1%, 1/4W 4.12K	1			D45
112		300648-001	Jumper, Insulated	12			Jumper A2 to A3 A13 to B12 A21 to A20 A28 to A30 B13 to B14 B29 to B28 B37 to B40 C5 to D5 C6 to C8 C9 to D8 D44 to D47
113		100051-024	Wire Solid	A/R			Use with Item 102, A55.
114		301777-001	Rework Inst.	0			

FORM 209 (R.12/74)

1500RPM. WRITE - DF, READ - PULSE 'D' POSITIONER CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO II MODEL SF & ST DATE 10/31/77 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
1		301320-000	Assy, Pwb, Data Interface, VFO II-Bsc				REV E
102		101059-008	Crystal				A55
103		100243-200	Capacitor. 20pf	B46			
105	A/R	100185-009	Tubing, Thermofit				Use with Item 102
106		101004-272	Capacitor. .0027uf	A53			
107		100155-366	Resistor, 1%, 1/4W 6.34K	D45			
112	A/R	300648-001	Wire, Solid Insulated				Jumper A2 to A3 A20 to A21 A28 to A30 B12 to A13 B13 to B14 B28 to B29 B39 to B40 C5 to D5 C6 to C8 C9 to D8 C11 to C12 D44 to D47
113	A/R	100051-024	Wire, Solid				Hold Down Wire for Item 102
114	0	301777-001	Rework instruction				

FORM 209 (R.3/77)

1500RPM. WRITE - DF, READ - PULSE 'D' POSITIONER CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO. MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101		101040-002	Connector.	1			J20.
102		101059-002	Crystal	1			A55.
103		100243-200	Capacitor. 20pf	1			B46.
105		100185-009	Tubing, Thermofit	A/R			Use with Item 102
106		101004-272	Capacitor. .0027uf	1			A53.
107		100155-366	Resistor, 1%, 1/4W. 6.34K	1			D45.
112		300648-001	Wire, Solid Insulated.	A/R			Jumper A20 to A21. Jumper B39 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.
113		100051-024	Wire, Solid	A/R			Hold Down Wire for Item 102 Jumper A1 to A2 E11 to E12
		301777-001	Rework instructions	0			

FORM 209 (R.12/74)

1500RPM. WRITE - DF, READ - NRZI 'C' POSITIONER CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO. MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101		101040-002	Connector.	1			J20.
102		101059-002	Crystal	1			A55.
103		100243-200	Capacitor. 20pf	1			B46.
105		100185-009	Tubing, Thermofit	A/R			Use with Item 102
106		101004-272	Capacitor. .0027uf	1			A53.
107		100155-366	Resistor, 1%, 1/4W. 6.34K	1			D45.
112		300648-001	Wire, Solid Insulated.	A/R			Jumper A20 to A21. Jumper B38 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.
113		100051-024	Wire, Solid	A/R			Hold Down Wire for Item 102 Jumper A1 to A2 C11 to C12

FORM 209 (R.12/74)

1500RPM. WRITE - NRZI, READ - NRZI 'C' POSITIONER CODE D120

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1

ITEM NO.	RECD	PART NO.	DESCRIPTION	RECD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101		101040-002	Connector	1			J20.
102		101059-002	Crystal	1			A55.
103		100243-200	Capacitor. 20pf	1			B46.
105		100185-009	Tubing, Thermofit	A/R			Use with Item 102
106		101004-272	Capacitor. .0027uf	1			A53.
107		100155-366	Resistor, 1%, 1/4W. 6.34K	1			D45.
112		300648-001	Wire, Solid Insulated.	A/R			Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.
113		100051-024	Wire, Solid	A/R			Hold Down Wire for Item 102 Jumper A1 to A2 D44 to C48
		301777-001	Rework instructions	0			

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
1500RPM		WRITE - NRZI READ - NRZI 'C'		POSITIONER		D120	
301320-105		301320-105		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-003	1			A55.	
103	Capacitor 20pf	100243-200	1			B46.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
106	Capacitor .0027uf	101004-272	1			A53.	
107	Resistor, 1%, 1/4W, 6.34K	100155-366	1			D45.	
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102	
						Jumper A1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
1500RPM		WRITE - DF READ - UNDISCRIMINATED		POSITIONER		D120	
301320-106		301320-106		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO. MODEL 100 & 200 TPI DATE 1-15-76 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-002	1			A55.	
103	Capacitor 20pf	100243-200	1			B46.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
106	Capacitor .0027uf	101004-272	1			A53.	
107	Resistor, 1%, 1/4W, 6.34K	100155-366	1			D45.	
112	Jumper, Insulated	300648-001	8			Jumper A20 to A21. Jumper B37 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R			Use with Item 102, A55.	
						Jumper A 1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
2400RPM		WRITE - NRZI READ - NRZI 'C'		POSITIONER		D120	
301320-107		301320-107		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFECE, VFO. MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-003	1			A55.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
107	Resistor, 1%, 1/4W, 4.12K	100155-348	1			D45.	
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102	
						Jumper A1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
2400 RPM		WRITE - DF READ - NRZI 'C'		POSITIONER		D120	
301320-109		301320-109		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO. MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-003	1			A55.	
107	Resistor, 1%, 1/4W, 4.12K	100155-348	1			D45.	
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A20 to A21. Jumper B38 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102	
						Jumper A1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
2400RPM		WRITE - DF READ - PULSE 'D'		POSITIONER		D120	
301320-110		301320-110		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-003	1			A55.	
107	Resistor, 1%, 1/4W, 4.12K	100155-348	1			D45.	
112	Wire, Solid Insulated.	300648-001	A/R			Jumper A20 to A21. Jumper B39 to B40. Jumper B29 to B29. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102	
						Jumper A1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
2400RPM		WRITE - DF READ - UNDISCRIMINATED		POSITIONER		D120	
301320-113		301320-113		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 1-15-76 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING:-							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-003	1			A55.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
107	Resistor, 1%, 1/4W, 4.12K	100155-348	1			D45.	
112	Jumper, Insulated	300648-001	8			Jumper A21 to A20. Jumper A28 to A30. Jumper B37 to B40. Jumper B29 to B28. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R			Use with Item 102, A55.	
						Jumper A1 to A2 C11 to C12	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
2400 RPM		WRITE - DF READ - PULSE 'D'		POSITIONER		D120	
301320-116		301320-116		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO II MODEL F&T DATE 6-2-76 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD/DELETE THE FOLLOWING:							
28	Capacitor, Poly .0027uf	100165-272	1			D27 Delete	
28	Capacitor, Poly .0056uf	101004-562	1			D27 Add.	
101	Connector	101040-002	1			J20 Add.	
102	Crystal	101059-003	1			A55 Add.	
107	Resistor, 1%, 1/4W, 4.12K	100155-348	1			D45 Add.	
112	Jumper, Insulated	300648-001	10			Jumper A20 to A21 Add. Jumper B39 to B40 Add. Jumper B28 to B29 Add. Jumper A28 to A30 Add. Jumper D7 to D8 Add. Jumper D44 to D47 Add. Jumper B13 to B15 Add. Jumper A14 to B12 Add. Jumper A1 to A2 Add. Jumper C11 to C12 Add.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102 Add	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
DATE		PART NUMBER		REV.		CODE	
1500 RPM		WRITE - DF READ - PULSE 'D'		POSITIONER		D120	
301320-117		301320-117		E		D120	
PERKIN-ELMER Memory Products Division MATERIAL LIST							
ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200TPI DATE 7-12-76 SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	
USE MATERIAL LIST AND ADD THE FOLLOWING: -							
101	Connector	101040-002	1			J20.	
102	Crystal	101059-008	1			A55.	
103	Capacitor 20pf	100243-200	1			B46.	
105	Tubing, Thermofit	100185-009	A/R			Use with Item 102	
106	Capacitor .0027uf	101004-272	1			A53.	
107	Resistor, 1%, 1/4W, 6.34K	100155-366	1			D45.	
112	Wire, Solid Insulated	300648-001	A/R			Jumper A20 to A21 " B39 to B40 " B28 to B29 " A28 to A30 " D7 to D8 " D44 to D47 " B13 to B15 " A14 to B12 A1 to A2 C11 to C12	
113	Wire, Solid	100051-024	A/R			Hold Down Wire for Item 102	
	Rework instructions	301777-001	0				

FORM 209 (R.12/74)

1500RPM WRITE - DF READ - NRZI 'C' 1562KHz Special: HARRIS DALLAS GENERAL AUTOMATION

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 2-13-78 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	Assy. Pwb., Data Interface - Basic	REV E
101	1	101040-002	Connector	J20
102	1	101059-002	Crystal	A55
103	1	100243-200	Capacitor	20pf B46
105	A/R	100185-009	Tubing, Thermofit	Use with item 102
106	1	101004-272	Capacitor	.0027uf A53
107	1	100155-366	Resistor, 1%, 1/4W	6.34K D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A1 to A2 A14 to B12 A20 to A21 A28 to A30 B13 to B15 B28 to B29 B39 to B40 C12 to C13 D7 to D8 D44 to D47
113	A/R	100051-024	Wire, Solid	Hold down wire for item 102

FORM 209 (R 9/77)

2400RPM WRITE - DF READ - NRZI 'C' 1562KHz Special: HARRIS DALLAS GENERAL AUTOMATION

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 3-29-76 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:				
101	1	101040-002	Connector	J20
102	1	101059-002	Crystal	A55
103	1	100243-200	Capacitor	20pf B46
105	A/R	100185-001	Tubing, Thermofit	Use with Item 102
106	1	101004-272	Capacitor	.0027uf A53
107	1	100155-366	Resistor, 1%, 1/4W	6.34K D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B38 to B40 B29 to B30 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	A/R	100051-024	Wire, Solid	Hold Down Wire for Item 102
		301614-001	Rework Instructions	0

FORM 209 (R 12/74)

2400RPM WRITE - NRZI READ - NRZI INFOMAG POSITIONER

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO. MODEL F & T DATE 6/16/77 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:				
1	1	301320-000	Assy., PWB, Trans. Elec. - Basic	REV E
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
103				
104				
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
106				
107	1	100155-348	Resistor, 1%, 1/4W	4.12K D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A19 to A20 A28 to A29 B38 to B40 B29 to B30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	A/R	100051-024	Wire, Solid	Hold Down Wire for Item 102

FORM 209 (R 3/77)

2400RPM WRITE - DF READ - NRZI 'C' INFOMAG POSITIONER

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO. MODEL 100 & 200 TPI DATE 10-26-76 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:				
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
107	1	100155-348	Resistor, 1%, 1/4W	4.12K D45
112	10	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B38 to B40 B29 to B30 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
113	A/R	100051-024	Wire, Solid	Hold Down Wire for Item 102
		301614-001	Rework Instructions	0

FORM 209 (R 12/74)

2400RPM WRITE - DF READ - PULSE 'D' INFOMAG POSITIONER Special: Harris Florida

PERKIN-ELMER Memory Products Division MATERIAL LIST

ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 3-29-76 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:				
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
107	1	100155-348	Resistor, 1%, 1/4W	4.12K D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B29 to B40 B28 to B29 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	A/R	100051-024	Wire, Solid	Hold Down Wire for Item 102
		301614-001	Rework Instructions	0

FORM 209 (R 12/74)

2400RPM WRITE - DF READ - PULSE 'D' INFOMAG POSITIONER Special: Harris Florida

PERKIN-ELMER Memory Products Division MATERIAL LIST

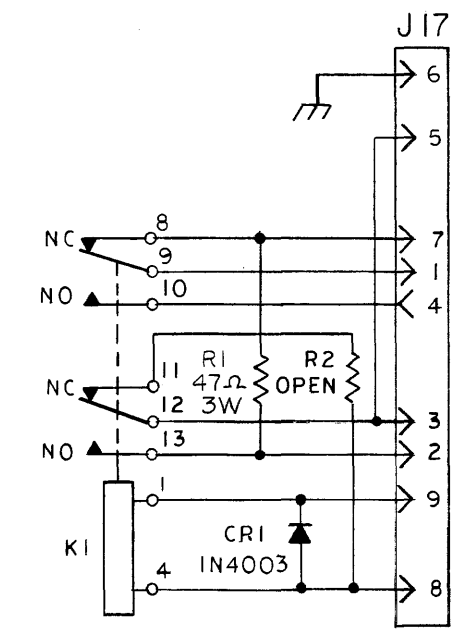
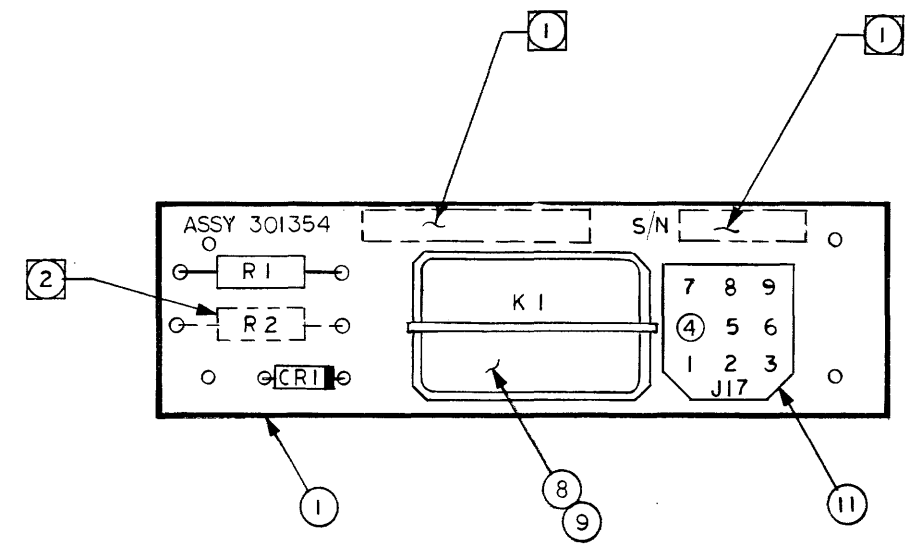
ASSY. PWB. DATA INTERFACE, VFO MODEL SF & ST DATE 5/1/79 SHEET 1 OF 1

ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:				
102	1	101059-008	Crystal	A55
103	1	100243-200	Capacitor	20pf B46
105	A/R	100185-009	Tubing, Thermofit	Use with Item 2
106	1	101004-272	Capacitor	.0027uf A53
107	1	100155-366	Resistor, 1%, 1/4W	6.34K D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A20 to A21 " B39 to B40 " B28 to B29 " A28 to A30 " C6 to C8 " D7 to D8 " D44 to D47 " B13 to B15 " A14 to B12 " A3 to A2 " C11 to C12 " D5 to D6 " C9 to D8
113	A/R	100051-024	Wire, Solid	Hold Down Wire for Item 102
		301777-001	Rework Instructions	0

FORM 209 (R 3/77)



REVISIONS				301354-100 B	
REV.	DESCRIPTION	CHK.	DATE	APPROVED	
A	PILOT RELEASE	EB	8/29/75	SMB	
A	MFG REL. NO CHANGE	Am	9/25/76	SMB	
X1	EXP AUTO INSERTION				
A1	CR/O 8343		1/31/78	CAC	
A2	CR/O 8485		4/1/78	Lewis	
B	CR/O 9349	DD	7-2-77	SMB	



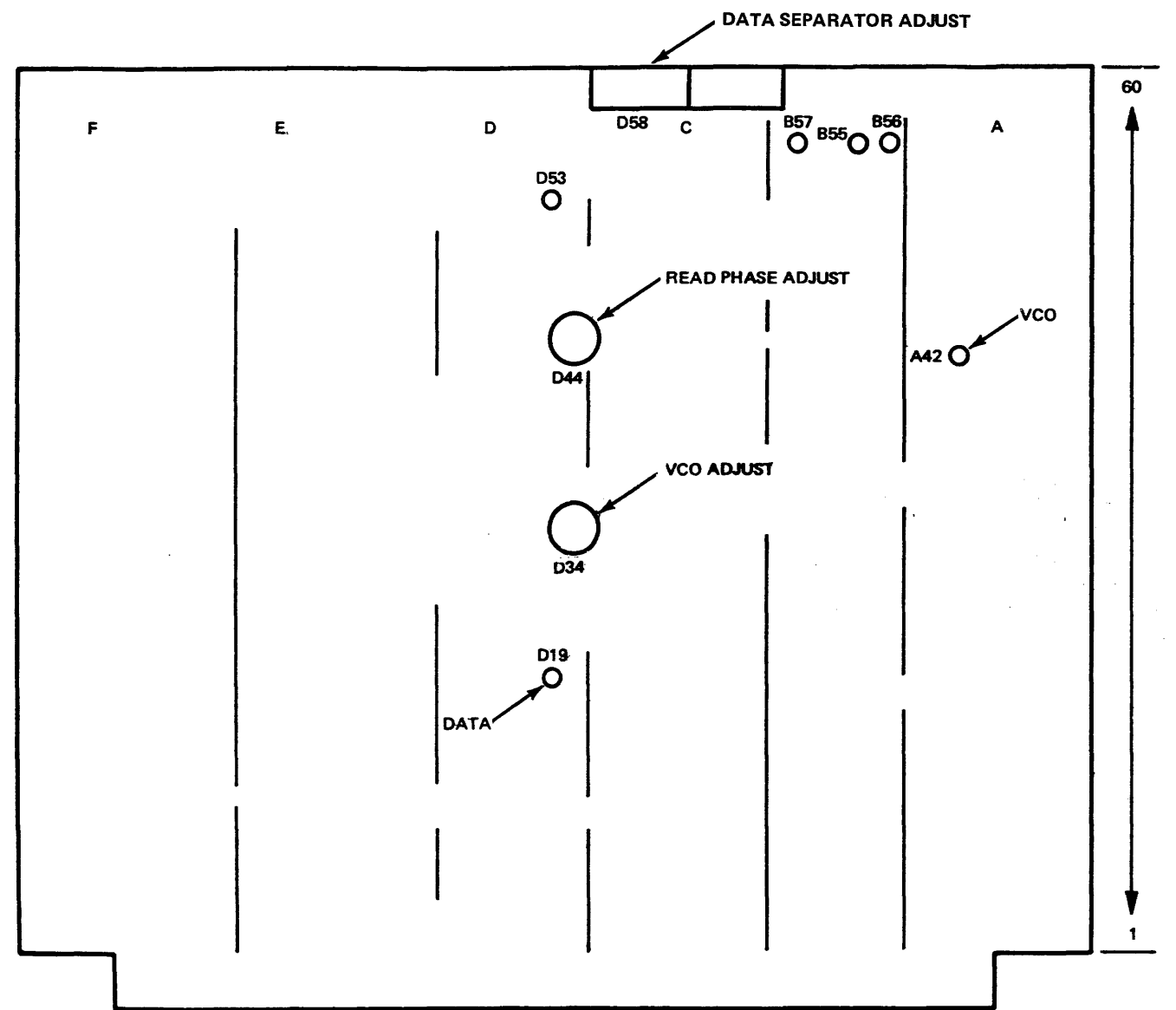
② RESISTOR R2 NOT USED ON THIS ASSEMBLY.

① MARK APPROPRIATE DASH NUMBER, LATEST REVISION LEVEL AND S/N .12 HIGH BLACK CHARACTERS PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED;

NOTES UNLESS SPECIFIED		DRAWN <i>S. Olefsky</i> 8/22/75	PART NO. 301354-100	
1. TOLERANCES .XX± — ANGULAR .XXX± — ± —		CHECK <i>DEC</i> 7-2-77	PERKIN-ELMER Memory Products Division	
2. BREAK ALL SHARP EDGES APPROX. .010		APPR. <i>P. M. ...</i> 7-12-77	ASSEMBLY, PWB - EMERGENCY RETRACT M2	
3. MACH. SURFACES -√		MATERIAL	SCALE	SIZE
4. ALL DIMS IN INCHES.		FINISH	2:1	C
		MODEL No.	SF, ST	301354-100 B
		NEXT ASSY	400000 400001	DO NOT SCALE THIS DRAWING
		WEIGHT		SHEET 1 OF 1

CODE D
120
QTY. REQ'D. 1



MFM DATA CONTROL PWB

301422

REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
6	301422-000	Board, Processed	301421-001	1	F	
7		I.C.	9602 100234-001	1		C38,
8		I.C.	8T20 101024-001	2		C10,D17
9		I.C.	74574 123023-001	5		A10,45,52,C17,E52
10		I.C.	74500 123028-001	1		B17
11		I.C.	74504 123046-001	3		C24,F17,F45
12		I.C.	74508 123050-001	3		A24,B38,F24
13		I.C.	745132 123067-001	2		B10,E10
14		I.C.	74510 123068-001	6		A31,38,B31,E38,F31,38
15		I.C.	745124 123069-001	1		D38
16		I.C.	745153 123070-001	1		E31
17		I.C.	745175 123071-001	1		E24
18		I.C.	79M05 125007-005	1		E7
19		I.C.	2515 125010-001	1		D33
20		I.C.	78M05 125002-001	1		D53
21		Capacitor, Mica	20pf 100243-200	2		C12,D18
22		Capacitor, "	22pf " -220	1		D36
23		Capacitor, "	27pf " -270	2		C36,42
24		Capacitor, "	56pf " -560	1		B14
25		Capacitor, "	33pf " -330	2		F51,55
26		Capacitor, "	100pf " -101	1		D35
29		Capacitor,Tant. 20V	2.2uf 101002-225	7		C6,43,D45,F6,14,15,56
30		Capacitor, "	15uf " -156	1		F12
32		Capacitor, Poly	.015uf 101004-153	1		C35

REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
34		Capacitor, Ceramic	.01uf 101042-103	30		A11,18,25,32,39,46,53,C11, C18,25,39,05,11,29,31,32, E11,18,25,32,36,37,46,54, F11,18,25,32,39,46.
35		Crystal	20 Mhz 106500-002	1		F50
36		Diode	1N4003 100127-001	2		E4,C44
39		Wire, (Bare)	24 AG 100051-024	A/R		Hold Down for F50
42		Inductor	4.7uh 122500-006	3		F41,F41,49
43		Inductor	220uh " -001	2		F4,8
45		Resistor, Variable	10K 100163-103	1		D58
46		Resistor, Variable	20K 138000-203	1		D44
47		Resistor, Variable	1K " -102	1		D34
50		Resistor, 5%,3W	39 100068-390	1		D48
53		Resistor, 1%,1/4W	1K 100155-289	1		E40
54		Resistor, " "	2.21K " -322	2		F40,42
55		Resistor, " "	2.37K " -325	1		D12
56		Resistor, " "	10K " -385	2		C30,31
58		Resistor, 5%,1/4W	10 101156-100	2		D4, D6
59		Resistor, " "	75 " -750	3		A28,B5,E39
60		Resistor, " "	100 " -101	2		D42,F48
61		Resistor, " "	150 " -151	3		B13,E6,55
62		Resistor, " "	510 " -511	1		D37

REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
63		Resistor, 5%,1/4W	1K 101156-102	5		C32,D3,9,47, 25
65		Resistor, " "	2K " -202	2		C40,47,
66		Resistor, " "	2.2K " -222	12		A48,B11,41,42,43,C13,20, C37,D41,E13,34,60.
68		Resistor, 5%,1/4W	1.5K 101156-152	1		E56
69		Resistor, " "	6.8K " -682	1		E12
70		Resistor, " "	82K " -823	1		D26
71		Resistor, " "	30K " -303	2		F53,54
72		Resistor, " "	3.9K " -392	1		D28
73		Resistor, " "	240 " -241	1		E57
76		Transistor	2N2857 151006-001	1		E53
81		Pin, Wire Wrap	100360-001	26		A35,36,37,40,41,42,43,47,49 A50,B55,56,57,C34,54,58,D19 E23,42,43,44,58,59,F33,34, F35
83		Wire, Jumper, Insulated	300648-001	1		Jumper E58 to E59
84		Screw, Pan Hd.	100036-206	1		4-40 x 3/8"
85		Washer, Flat	100047-200	1		No. 4
86		Washer, Spring Lock	100042-200	1		No. 4
87		Nut, Hex.	100043-200	2		4-40
		Printed Master	301420-001	0	F	-
		Schematic	301423-001	0	D	-
		Specification		0		-
		Test Procedure		0		-

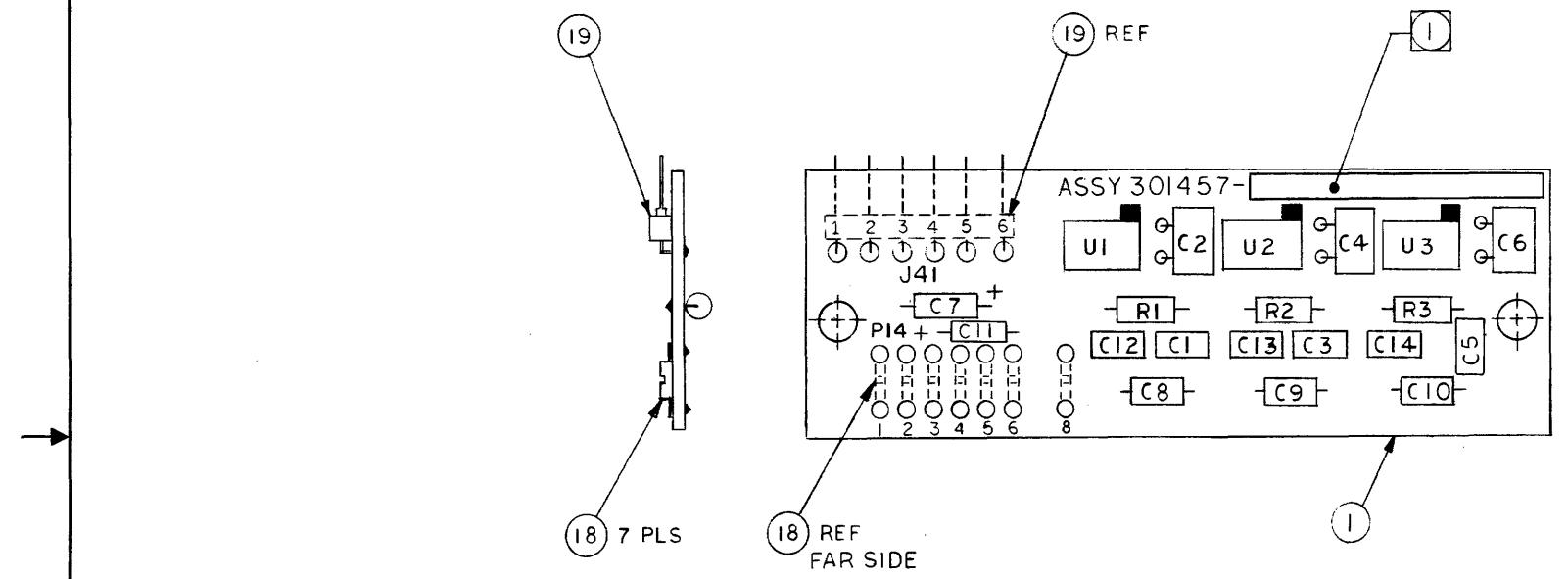
REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
90		Jumper, Insulated	300648-001	4		Jumper: A35 to A36 A49 to A47 F35 to F33 E42 to E44

REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
1	301422-000	Assy, Pwb., MFM Data Control - Basic				
90	100234-001	I.C.	9602	B50, E45		
91	100243-150	Capacitor, Mica	15pf	C45,50,E47,F47		
92	138000-103	Resistor, Variable	10K	C53,E50		
93	101156-202	Resistor, 5%, 1/4W	2K	C52,E48		
94	101156-222	Resistor, 5%, 1/4W	2.2K	B53,E49		
95	101156-562	Resistor, 5%, 1/4W	5.6K	B54,F43		
96	300648-001	Jumper, Insulated		Jumper A36 to A37 A49 to A50 E43 to E44 F35 to F34		

REV.	PART NUMBER	DESCRIPTION	PART NO.	QTY.	ACT. REV.	REMARKS
1	301422-000	Assy, Pwb., MFM Data Control - Basic				REV G
90						
91						
92						
93						
94						
95	300648-001	Jumper, Insulated		Jumper A35 to A36 A49 to A47 F35 to F33 E42 to E44		

cc

REVISIONS				301457
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT RELEASE	lm	1/1/76	[Signature]
B	CR/O 6419	lm	7/9/76	[Signature]
B	MFG RELEASE, NO CHANGE	lm	7/17/76	McB...
B	CR/O 6585	lm	7/14/76	[Signature]
C	CR/O 7247	lm	8/17/76	[Signature]
X1	EXP AUTO-INSERTION			
C1	CR/O 8120	M.V.	11/10/77	[Signature]
C2	CR/O 8712	J.B.	11/10/77	[Signature]
C3	CR/O 9034	J.Y.	3-22-79	[Signature]



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PART NO. 301457-001 ASSY

PERKIN-ELMER
Memory Products Division

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ASSEMBLY, P.W.B.
DETENT AMPLIFIER

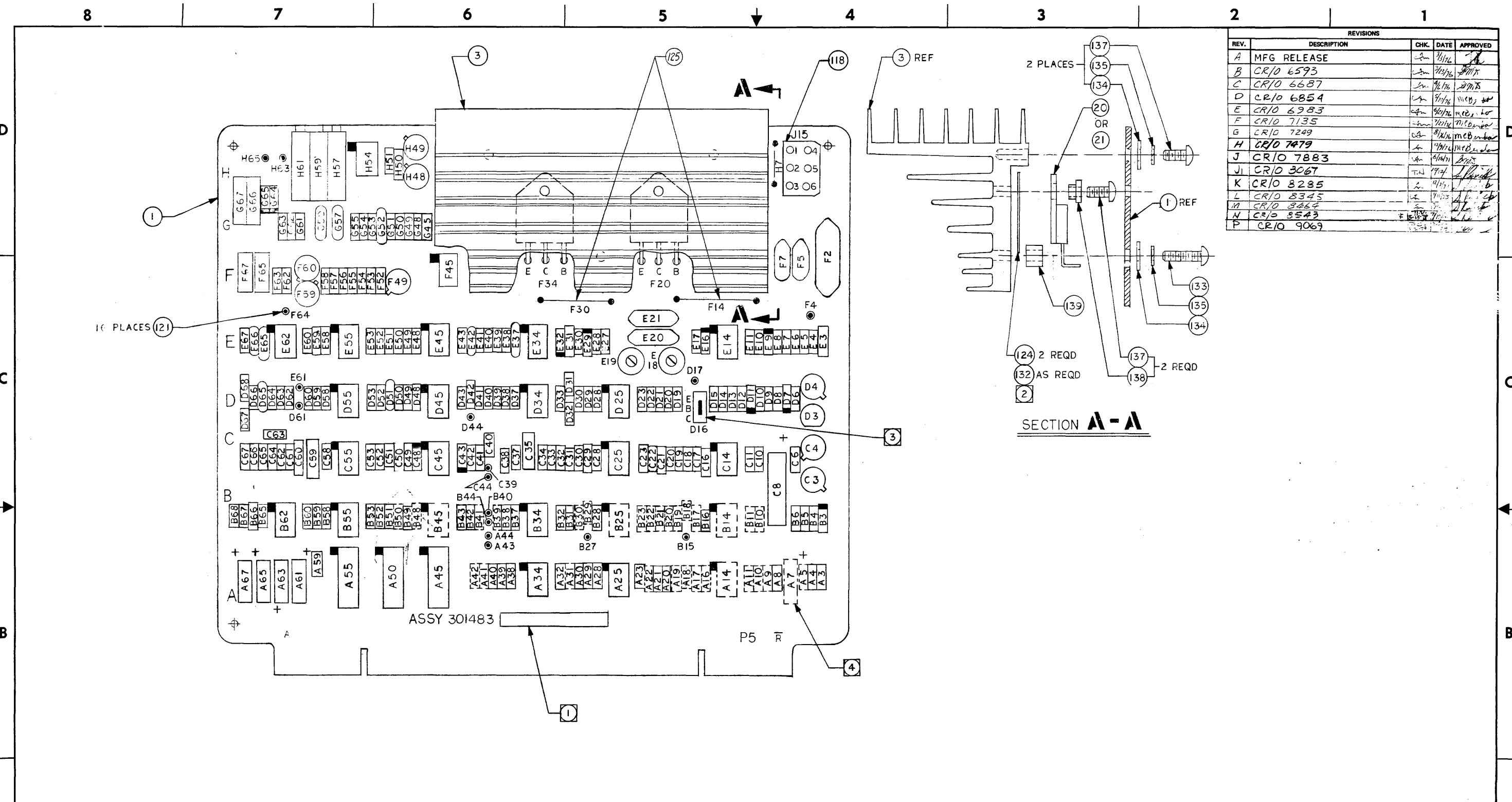
CODE
D
120
QTY.
REQ'D.

NOTES UNLESS SPECIFIED	DRAWN	S. Olepky	11/20/75
1. TOLERANCES XX± ANGULAR XXX± ±	CHECK	[Signature]	2-5-76
2. BREAK ALL SHARP EDGES APPROX. .010	MATERIAL		
3. MACH. SURFACES ✓	FINISH		
4. ALL DIMS IN INCHES.	MODEL No.	SF & ST	
	NEXT ASSY	400000	
		400001	

SCALE	SIZE	301457	C3
2:1	C		
DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 3 OF 3	

2. SCHEMATIC REF 301458.
 1 MARK APPROPRIATE DASH NO., S/N, AND LATEST REVISION LETTER .12 HIGH CHARACTERS PER SPEC 100037.
 NOTES: UNLESS OTHERWISE SPECIFIED

REV. C3		PERKIN ELMER		MATERIAL LIST		PART NUMBER		REV. C3		CODE	
301457-001		Memory Products Division				301457-001				D120	
ASSEMBLY, PWB		TITLE		MODEL		DATE		SHEET		OF	
DETENT AMPLIFIER		SF & ST						1		3	
ITEM NO.	DESCRIPTION	PART NO.	RECD.	REV.	ACT. REV.	REMARKS					
						NEXT ASSEMBLY/USED ON					
						400000, 400001					
1	Board, Processed	301456-001	1								
2											
3											
4	IC.	LM308	125009-001	3		U1,2,3					
5											
6											
7	Capacitor, Mica	10PF	100243-100	5		C1,2,3,4,6					
8	Capacitor, Mica	68PF	-680	1		C5					
9	Capacitor, Ceramic	.01UF	101042-103	6		C8,9,10,12,13,14					
10	Capacitor, Tantl 35V	1UF	101003-105	2		C7,11					
11											
12											
13	Resistor, 0.1%, 1/4W	402K	142006-539	2		R1,2					
14	Resistor, 5%, "	1.5MEG	101156-155	1		R3					
15											
16											
17											
18	Contact FEM PWB MTG		106005-001	7		P14					
19	Connector	6 Pin	120907-006	1		J41					
20											
21											
22											
23											
24											
25											
	Printed Master	301455			REF						
	Schematic	301458			REF						
	Specification	301487			REF						
	Test Procedure.	900128			REF						



REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	MFG RELEASE		3/2/76	
B	CR/O 6593		3/2/76	
C	CR/O 6687		3/2/76	
D	CR/O 6854		3/2/76	
E	CR/O 6983		3/2/76	
F	CR/O 7135		3/2/76	
G	CR/O 7249		3/2/76	
H	CR/O 7479		3/2/76	
J	CR/O 7883		3/2/76	
K	CR/O 8285		3/2/76	
L	CR/O 8345		3/2/76	
M	CR/O 8464		3/2/76	
N	CR/O 8543		3/2/76	
P	CR/O 9069		3/2/76	

SECTION A-A

- 5. FOR SCHEMATIC SEE DWG 301484.
 - 4 COMPONENTS OUTLINED IN PHANTOM ARE VARIABLE. SEE M/L.
 - 3 CLIP OFF MOUNTING TAB PRIOR TO INSTALLATION.
 - 2 APPLY SILICON GREASE TO BOTH SIDES OF MICA WASHER.
 - 1 MARK APPROPRIATE DASH NUMBER, S/N, AND LATEST REVISION LETTER .12 HIGH CHARACTERS PER P-E SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301483-XXX ASSY, SEE TABULATED M/L

NOTES UNLESS SPECIFIED 1. TOLERANCES .XX± ANGULAR .XXX± 2. GROUND SURFACES EDGES APPROX. .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN <i>[Signature]</i> 3/2/76 CHECK APPR. <i>[Signature]</i> 3/2/76 MATERIAL	PERKIN-ELMER Memory Products Division ASSY, PWB-SERVO AMP SCALE 2:1 SIZE D 301483 CHARTED P SHEET 7 OF 7	
	FINISH MODEL No. 100-200 SF/ST NEXT ASSY		DO NOT SCALE THIS DRAWING WEIGHT
	40000D, +00001		P
	D 120 REV.		P
	P		P

REV. N		PERKIN-ELMER Memory Products Division		MATERIAL LIST		ASSEMBLY PART NUMBER 301483-002	REV. N	CODE D120
TITLE		200 TPI SF/ST		DATE 3/23/76		SHEET 4 OF 6		
ITEM	RECD	PART NO.	DESCRIPTION	REMARKS				
91	1	101156-182	Resistor, 5%, 1/8W	1.8K B5				
92	1	-202	Resistor, " "	2K E4				
93	1	-203	Resistor, " "	20K B11				
94	1	-204	Resistor, " "	200K D14				
95	2	-622	Resistor, " "	6.2K A16,B22				
96	2	-273	Resistor, " "	27K E8,11				
97	1	-302	Resistor, " "	3K A3				
98	2	-304	Resistor, " "	300K D66,E40				
99	1	-472	Resistor, " "	4.7K D8				
100	2	-512	Resistor, " "	5.1K B23,C28				
101	2	-513	Resistor, " "	51K C17,D63				
102	4	-514	Resistor, " "	510K B48,50,E39,D21				
103	1	-433	Resistor, " "	43K C66				
104	14	-752	Resistor, " "	7.5K B42,43,51,52,53,58,59,66,D53, E49,51,F54,55,58				
105	1	100155-294	Resistor, 1%, 1/8W	1.13K A5				
106	1	-411	Resistor, " "	18.7K B20				
107	1	-425	Resistor, " "	26.1K B10				
108	2	101156-155	Resistor, 5%, 1/8W	1.5Meg F53,G48				
109	1	142000-051	Resistor, 1%, 5W	0.2 1/8W F2				
110	1	101156-911	Resistor, 5%, 1/8W	910 A4				
111	4	100155-548	Resistor, 1%, 1/8W	499K A41,42,B39,41				
112	18	142006-356	Resistor, .1%, 1/8W	4.99K A17,B17,C20,41,42,50,52,64, C65,D19,28,29,49,50,E41,43, E58,59				
113								
114								
115	7	142006-385	Resistor, .1%, 1/8W	10K C32,33,53,58,D30,33,41				
116								
117								
118	1	100247-013	Connector	6 Pin J15				

FORM 209 (R 3/77)

REV. N		PERKIN-ELMER Memory Products Division		MATERIAL LIST		ASSEMBLY PART NUMBER 301483-002	REV. N	CODE D120
TITLE		200 TPI SF/ST		DATE 3/23/76		SHEET 5 OF 6		
ITEM	RECD	PART NO.	DESCRIPTION	REMARKS				
119								
120								
121	16	100360-001	Pin, Wire Wrap	A43,44,B15,27,40,44,C39,44, D17,44,61,E61,F4,64,H63,65				
122								
123								
124	2	100147-001	Insulator, Mica	Use with F20,F34				
125	A/R	100248-922	Wire, Insulated 22GA	Jumper Across F14, F30				
126								
127	3	300648-001	Jumper, Insulated	Jumper J2 A43 to A44 J3 B40 to B44 J4 C39 to C44				
128								
129								
130								
131								
132	A/R	120100-001	Grease - Thermal Joint	Apply both sides of item 124				
133	1	100036-208	Screw, Pan Hd	4-40 X 7/16"				
134	3	100251-200	Washer, Flat, Reduced O.D.	No. 4				
135	3	100042-200	Washer, Spring Lock	No. 4				
136								
137	4	100036-204	Screw, Pan Hd	4-40 X 1/2"				
138	2	100063-014	Washer, Nylon Shoulder	Use with F20, F34				
139	1	100093-032	Spacer	Use with Heatsink Support Screw				
		0 301441-001	Specification					
		0 301481-001	Printed Master					
		0 301484-001	Schematic					
		0 900114-001	Test Procedure					
		0 900115-001	Test Specification					
		0 301965-001	Rework Instructions					
		0 302378-001	Rework Instructions					

FORM 209 (R 3/77)

REV. N		PERKIN-ELMER Memory Products Division		MATERIAL LIST		ASSEMBLY PART NUMBER 301483-003	REV. N	CODE D120
TITLE		200 TPI SF/ST		DATE 3/23/76		SHEET 1 OF 6		
ITEM	RECD	PART NO.	DESCRIPTION	REMARKS				
1	1	301482-001	Board Processed					
2								
3	1	301698-001	Heat Sink					
4								
5								
6	1	100330-001	I.C.	7404 A50				
7	2	101011-001	I.C.	7426 A45,55				
8	5	101022-001	I.C.	311 A25,34,B14,34,C14				
9	10	101026-001	I.C.	1458 A14,B25,C25,45,55,D25,45, E14,34,62				
10								
11								
12	5	101029-003	I.C.	5020 B62,D55,E45,55,F45				
13	1	101031-001	I.C.	75452 B55				
14	2	101026-002	I.C.	Lowbias 1458 D34, H54				
15								
16								
17	5	101052-001	Transistor	2N2222A C3,D4,F59,60,H49				
18	3	101053-001	Transistor	2N2907A C4,F49,H48				
19	1	151002-001	Transistor	MPS-U01A D16				
20	1	151003-001	Transistor	EP2179 F34				
21	1	151004-001	Transistor	EP2180 F20				
22								
23								
24	6	101034-001	Diode	1N5317 B3,C43,48,07,E9,16				
25								
26	1	107041-002	Diode, Zener 5.1V ± 2%	E29				
27	1	101058-010	Diode, Zener 6.8V 1N5235B	D11				
28	3	107041-003	Diode, Zener 10.0V ± 2%	E32,G64,65				
29	1	161000-001	Diode, SCR	2N5060 D3				
30								
31	12	100243-101	Capacitor, Mica	100pf A10,B18,C31,40,51,63,D31,42, D51,65,E42,66				
		0 301441-001	Specification					
		0 301481-001	Printed Master					
		0 301484-001	Schematic					
		0 900114-001	Test Procedure					
		0 900115-001	Test Specification					
		0 301965-001	Rework Instructions					
		0 302378-001	Rework Instructions					

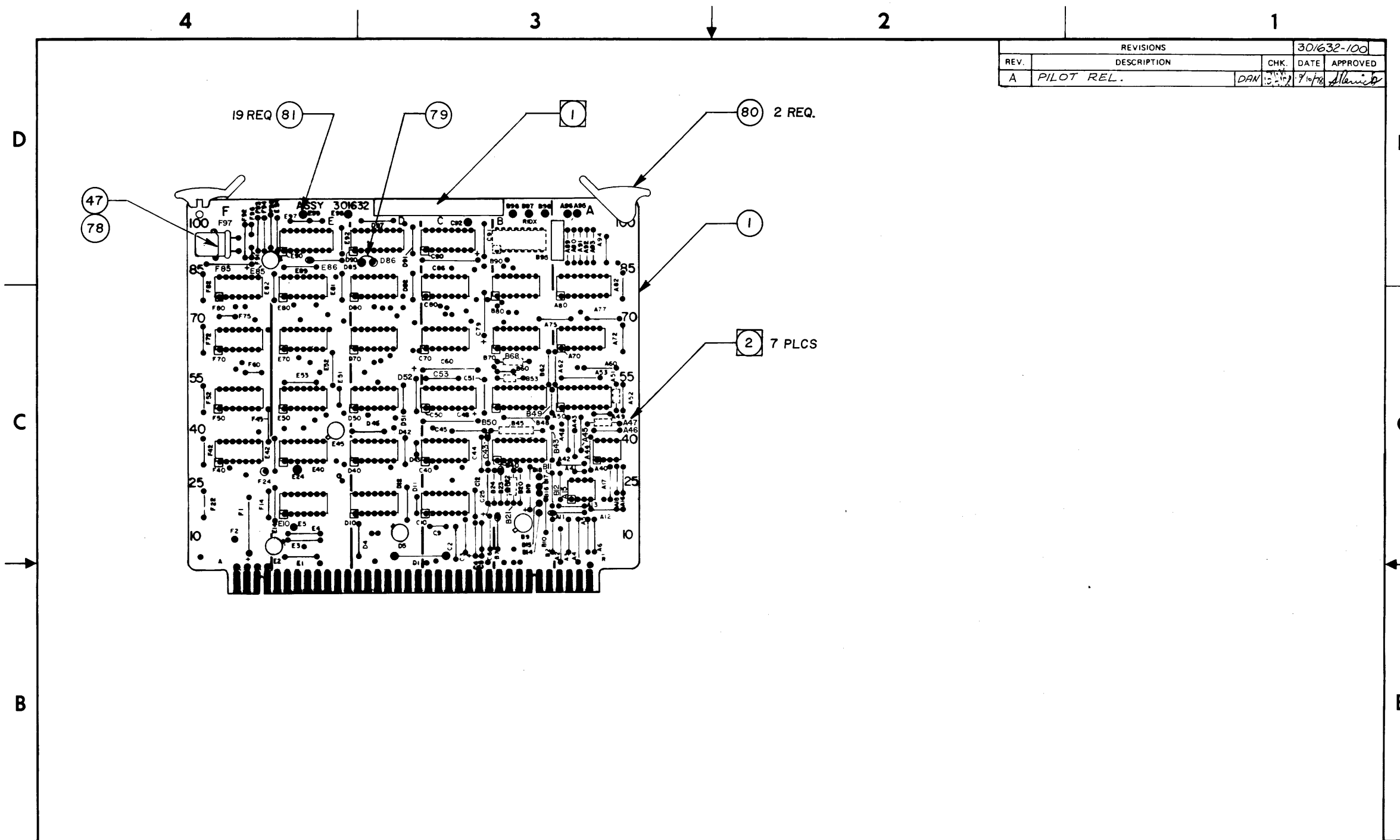
FORM 209 (R 3/77)

REV. N		PERKIN-ELMER Memory Products Division		MATERIAL LIST		ASSEMBLY PART NUMBER 301483-003	REV. N	CODE D120
TITLE		200 TPI SF/ST		DATE 3/23/76		SHEET 2 OF 6		
ITEM	RECD	PART NO.	DESCRIPTION	REMARKS				
32	1	100243-221	Capacitor, Mica	220pf G52				
33	4	101002-156	Capacitor, Tant 20V	15uf A7,63,65,67				
34	3	101003-685	Capacitor, " "	35V 6.8uf A61,F5,7				
35	1	101004-223	Capacitor, Poly	.022uf C59				
36	1	-472	Capacitor, " "	.0047uf H50				
37	3	101005-102	Capacitor, " "	.001uf D13,E3,31				
38	21	101042-103	Capacitor, Ceramic	.01uf A23,59,B16,49,65,67,68,C16,21, C23,29,38,49,D32,48,58,E17,37, E65,G57,59				
39								
40								
41								
42	2	101085-473	Capacitor, Ceramic	.047uf A18,B29				
43	2	101086-474	Capacitor, " "	.47uf D67,G54				
44	5	102701-103	Capacitor, Poly 1%	.01uf C35,F65,67,666,67				
45	1	101001-685	Capacitor, Tant 6V	6.8uf C60				
46	1	102761-187	Capacitor, " "	15V 180uf C8				
47								
48	1	101086-334	Capacitor, Ceramic	.33uf D68				
49	1	101086-104	Capacitor, " "	.1uf D22				
50	3	100163-103	Resistor, Variable	10K H57,59,61				
51	2	138000-103	Resistor, Variable	10K E18,19				
52								
53								
54	1	100155-280	Resistor, 1%, 1/8W	806 G55				
55	1	-289	Resistor, " "	1K H51				
56	1	-299	Resistor, " "	1.27K D40				
57	1	-334	Resistor, " "	2.94K D59				
58	1	-339	Resistor, " "	3.32K D23				
59	1	-346	Resistor, " "	3.92K C34				
60	1	-365	Resistor, " "	6.19K A32				
61	2	100155-376	Resistor, 1%, 1/8W	8.06K B31,37				

FORM 209 (R 3/77)

REV. N		PERKIN-ELMER Memory Products Division		MATERIAL LIST		ASSEMBLY PART NUMBER 301483-003	REV. N	CODE D120
TITLE		200 TPI SF/ST		DATE 3/23/76		SHEET 3 OF 6		
ITEM	RECD	PART NO.	DESCRIPTION	REMARKS				
62	1	100155-378	Resistor, 1%, 1/8W	8.45K G63				
63	11	-385	Resistor, " "	10K A19,22,31,B21,30,E30,48,50, E52,53,67				
64	1	100155-389	Resistor, 1%, 1/8W	11K E38				
65	1	-393	Resistor, " "	12.1K A30				
66	1	-410	Resistor, " "	18.2K D64				
67	2	-407	Resistor, " "	16.9K F62,63				
68	2	-469	Resistor, " "	75K D37,52				
69	1	-481	Resistor, " "	100K G62				
70	4	-306	Resistor, " "	1.5K A39,40,B28,38				
71	5	-414	Resistor, " "	20K A9,11,38,B19,32				
72	1	100155-524	Resistor, 1%, 1/8W	280K G61				
73	1	100155-335	Resistor, 1%, 1/8W	3.01K D60				
74	1	101156-511	Resistor, 5%, 1/8W	510 C61				
75	1	101084-004	Resistor, 3%, 3W	50 E20				
76	1	-023	Resistor, " "	60 E21				
77	1	101156-241	Resistor, 5%, 1/8					

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT REL.	DAN	12/14/78	Alan



- 3. FOR SCHEMATIC SEE 301633.
- 2 COMPONENTS OUTLINED IN PHANTOM ARE VARIABLE SEE M/L.
- 1 MARK APPROPRIATE DASH NUMBER AND LATEST REVISION LETTER .12 WHITE CHARACTERS PER PART SPEC.100037

NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER SEE SEPARATE MATERIAL LIST.

NOTES UNLESS SPECIFIED 1 TOLERANCES XX ANGULAR XXX 2 BREAK ALL SHARP EDGES APPROX .010 3 MATH SURFACES ✓ 4 ALL DIMS IN INCHES 5 DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN DAN SIERRA 9-28-78 CHECK <i>[Signature]</i> 10/14/78 APPR. <i>[Signature]</i> 11/14/78	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION	
	MATERIAL	ASSEMBLY PWB DISC CONTROL		CODE D 120 QTY REQ'D	
	FINISH	MODEL No. SUPER F & T	SCALE ---	SIZE c	REV. A
	NEXT ASSY	301632-100		DO NOT SCALE THIS DRAWING CODE IDENT 52465	SHEET 1 OF 1

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-000		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-000		ASSY. PWB. DISC CONTROL		SUPER F&T		4-22-76		1		3	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
400000, 400001											
1	Board, Processed	301631-001									
2											
3	I.C.	311	1			A40					
4											
5	I.C.	1458	1			A15					
6	I.C.	74LS00	1			B70					
7	I.C.	74LS02	1			D40					
8	I.C.	74LS08	3			A70,C80,D10					
9	I.C.	74LS10	1			C70					
10	I.C.	74LS11	2			D70,E40					
11	I.C.	74LS32	1			D50					
12	I.C.	74LS74	6			B80,C40,E50,F40,50,70					
13	I.C.	74LS123	3			B40,C50,90					
14	I.C.	74LS193	2			A80,D90					
15	I.C.	74LS293	3			D80,E80,F80					
16	I.C.	74LS221	1			A50					
17	I.C.	74LS14	2			C10,E10					
18	I.C.	74LS20	1			E70					
19	I.C.	74LS192	1			E90					
20	I.C.	74221	1			B50					
21											
22	Transistor	2N2222A	5			B9,05,E2,45,85					
23											
24											
25	Diode	1N5317	2			A11,E86					
26	Diode, Zener 4.7V	1N5230B	2			B7,C43					
27	Diode, Zener 5.1V	1N5231B	1			B23					
28	Capacitor, Mica	62pf	2			F91,96					
29	Capacitor, "	270pf	5			A49,860,C9,D11,F75					
30	Capacitor, "	510pf	1			E51					
31	Capacitor, "	620pf	1			F60					
32	Capacitor, Mica	120pf	1			A41					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-000		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-000		ASSY. PWB. DISC CONTROL		SUPER F&T		4-22-76		2		3	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
33	Capacitor, Poly	.0022uf	1			A2					
34	Capacitor, "	.0047uf	1			B11					
35	Capacitor, "	.0068uf	1			A53					
36	Capacitor, Cer. 100V	.01uf	23			A16,18,43,46,52,72,82,94, B49,C12,D42,D51,82,91,E81, E82,92,F14,22,42,52,72,82					
37	Capacitor, Poly.	.015uf	1			A4					
38	Capacitor, "	.033uf	1			B48					
39											
40	Capacitor, Cer. 50V	.1uf	1			B22					
41	Capacitor, Tant. 35V	.1uf	2			C3,79					
42	Capacitor, "	20V 2.2uf	2			C6,F85					
43	Capacitor, "	6V 6.8uf	1			B19					
44	Capacitor, "	20V 15uf	1			F1					
45	Capacitor, "	6V 56uf	3			C48,60,86					
46	Capacitor, Mica. 500V	82pf	1			D43					
47	Crystal	8.00MHz	1			F97					
48											
49	Resistor, Variable	50K	1			B95					
50											
51	Resistor, 3%, 3W	10	1			D1					
52	Resistor, 5%, 1/2W	62	2			C2,E1					
53	Resistor, "	75	1			E4					
54	Resistor, "	100	2			B2,E94					
55	Resistor, "	510	3			A12, E89,F94					
56	Resistor, "	1K	4			A45,E53,97,C5					
57	Resistor, "	1.5K	1			D4					
58	Resistor, "	2K	4			A6,60,D45,E3					
59	Resistor, "	3K	1			F95					
60	Resistor, "	4.3K	1			A13					
61	Resistor, "	5.1K	3			A3,B43,C44					
62	Resistor, 5%, 1/2W	8.2K	1			A5					
62A	Resistor, 5%, 1/2W	150	1			D12					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-000		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-000		ASSY. PWB. DISC CONTROL		SUPER F&T		5-12-76		3		3	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
63	Resistor, 5%, 1/2W	10K	12			A75,77,89,90,91,92,93,C4, D97,E14,42,52 B24,C25					
64	Resistor, 5%, 1/2W	430	2			-431					
65	Resistor, "	12K	1			-123					
66	Resistor, "	18K	1			-183					
67	Resistor, "	30K	4			-303					
68	Resistor, "	150K	3			-154					
69	Resistor	47K	1			-473					
70	Resistor, 1%, 1/2W	511	2			100155-261					
71	Resistor, "	13K	1			-396					
72	Resistor, "	22.1K	1			-418					
73	Resistor, "	39.2K	1			-442					
74	Resistor, "	61.9K	1			-461					
75	"	5%, 1/2W	270			101156-271					
76											
77											
78	Wire, Solid	100051-024	A/R								
79	Jumper, Insulated	300648-001	1								
80	Extractor, Card	107901-001	2								
81	Pin, Wire Wrap	100360-001	19			A95,96,B14,15,16,17,18,96, B97,98,C92,D85,96,E5,24, E98,99,F2,24					
82											
83	Schematic	301633				K					
84	Printed Master	301630									
85	Specification	301438									
86	Test Procedure	900108									
87	Test Specification	900109									
88											
89	Rework Inst.	301776-001	0								
90	Rework Inst.	302364-001	0								
91	REWORK INST	302316-001	0								

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-001		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-001		ASSY. PWB. DISC CONTROL		SF		4-28-76		1		1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
USE MATERIAL LIST AND ADD THE FOLLOWING:-											
81											
82	Resistor, " "	3K	2			A51,B53					
83											
84	Capacitor, Poly.	.0022uf	2			A47,B68					
85	Capacitor, Poly	.068uf	1			B45					
86											
87	Wire, Jumper	300648-001	1			Jumper J1 B14 to B15					
95	Switch, Rocker	149002-008	1			B90					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-002		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-002		ASSY. PWB. DISC CONTROL		SF		4-28-76		1		1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
USE MATERIAL LIST AND ADD THE FOLLOWING:-											
81											
82	Resistor, " "	3K	2			A51,B53					
83											
84	Capacitor, Poly.	.0022uf	2			A47,B68					
85	"	.068uf	1			B45					
86											
87	Wire, Jumper	300648-001	2			Jumper J1 B14 to B15 J2 B17 to B18					
95	Switch, Rocker	149002-008	1			B90					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-003		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-003		ASSY. PWB. DISC CONTROL		ST		4-28-76		1		1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
USE MATERIAL LIST AND ADD THE FOLLOWING:-											
81											
82	Resistor, " "	3K	2			A51,B53					
83											
84	Capacitor, Poly	.0022uf	2			A47,B68					
85	"	.068uf	1			B45					
86											
87	Wire, Jumper	300648-001	2			Jumper J1 B15 to B16 J2 B17 to B18					
95	Switch, Rocker	149002-008	1			B90					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-004		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-004		ASSY. PWB. DISC CONTROL		SF		4-28-76		1		1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
USE MATERIAL LIST AND ADD THE FOLLOWING:-											
81											
82	Resistor, " "	3K	2			A51,B53					
83											
84											
85	Capacitor, Poly	.068uf	1			B45					
86											
87	Wire, Jumper	300648-001	1			Jumper J1 B14 to B15					
95	Switch, Rocker	149002-008	1			B90					

REV.		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		Memory Products Division				301632-005		L		D120	
DATE		TITLE		MODEL		DATE		SHEET		OF	
301632-005		ASSY. PWB. DISC CONTROL		SF		4/28/76		1		1	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS					
NEXT ASSEMBLY USED ON											
USE MATERIAL LIST AND ADD THE FOLLOWING:-											
81	</										

TOP LOAD. 5440 TYPE CARTRIDGE
2400 RPM 500 ns Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-006 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .068uf	101004-683	1			B45
85						
86						
87	Wire, Jumper.	300648-001	2			Jumper J1 B15 to B16. J2 B17 to B18.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
1500 RPM 10 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-007 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .0039uf	101004-392	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, List.	300648-001	1			Jumper J1 B14 to B15.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
2400 RPM 10 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-008 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .0039uf	101004-392	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	2			Jumper J1 B14 to B15. J2 B17 to B18.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
2400 RPM 10 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-009 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .0039uf	101004-392	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	2			Jumper J1 B15 to B16. J2 B17 to B18.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
1500 RPM 40 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-010 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .018uf	101004-183	2			A47,B68
85	Capacitor, " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	1			Jumper J1 B14 to B15.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
2400 RPM 40 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-011 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .018uf	101004-183	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	2			Jumper J1 B14 to B15. J2 B17 to B18.
	Rework Instructions	302171-001	0			
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
2400 RPM 40 us Index and Sector Pulse Width.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-012 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .018uf	101004-183	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	2			Jumper J1 B15 to B16. J2 B17 to B18.
	Rework Instructions	302171-001	0			
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
1500 RPM 5 us Index and Sector Pulse Width 48 or 50 Sector Cartridge.

PERKIN-ELMER MATERIAL LIST
Memory Products Division

PART NUMBER 301632-013 REV. L

TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1

ITEM NO.	DESCRIPTION	PART NO.	REQD.	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:						
81		301632-000				NEXT ASSEMBLY/USED ON
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .0022uf	101004-222	2			A47,B68
85						
86	Capacitor, Poly. .033uf	101004-333	1			B45
87	Wire, Jumper.	300648-001	1			Jumper J1 B15 to B16.
95	Switch, Rocker	149002-008	1			B90

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-014				D120	
TOP LOAD, 2400 RPM 5 us Index and Sector Pulse Width 48 to 50 Sector Cartridge.							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
81							
82	Resistor, " "	3K	101156-302	2		A51,B53	
83							
84	Capacitor, Poly.	.0022uf	101004-222	2		A47,B68	
85	" "	.068uf	-683	1		B45	
86	Capacitor, Poly	.033uf	-333	1		B45	
87	Wire, Jumper.		300648-001	2		Jumper J1 B15 to B16 J2 B17 to B18	
95	Switch, Rocker		149002-008	1		B90	

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-015				D120	
TOP LOAD, 5440 TYPE CARTRIDGE 1500 5 us Index and Sector Pulse Width.							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
81							
82	Resistor, " "	3K	101156-302	2		A51,B53	
83							
84	Capacitor, Poly.	.0022uf	101004-222	2		A47,B68	
85	" "	.068uf	-683	1		B45	
86							
87	Wire, Jumper.		300648-001	1		Jumper J1 B15 to B16	
95	Switch, Rocker		149002-008	1		B90	

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-016				D120	
TOP LOAD, 5440 TYPE CARTRIDGE 1500 RPM 500 ns Index and Sector Pulse Width.							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
81							
82	Resistor, " "	3K	101156-302	2		A51,B53	
83							
84	Capacitor, Poly.	.0022uf	101004-222	2		A47,B68	
85	" "	.068uf	-683	1		B45	
86	Capacitor, Poly	.068uf	101004-683	1		B45	
87	Wire, Jumper.		300648-001	1		Jumper J1 B15 to B16	
95	Switch, Rocker		149002-008	1		B90	

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-017				D120	
TOP LOAD, 5440 TYPE CARTRIDGE 1500 10 us Index and Sector Pulse Width.							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
81							
82	Resistor, " "	3K	101156-302	2		A51,B53	
83							
84	Capacitor, Poly.	.0039uf	101004-392	2		A47,B68	
85	" "	.068uf	-683	1		B45	
86							
87	Wire, Jumper.		300648-001	1		Jumper J1 B15 to B16	
95	Switch, Rocker		149002-008	1		B90	

FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-018				D120	
TOP LOAD, 5440 TYPE CARTRIDGE 1500 RPM 40 us Index and Sector Pulse Width.							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
81							
82	Resistor, " "	3K	101156-302	2		A51,B53	
83							
84	Capacitor, Poly.	.018uf	101004-183	2		A47,B68	
85	" "	.068uf	-683	1		B45	
86							
87	Wire, Jumper.		300648-001	1		Jumper J1 B15 to B16	
95	Switch, Rocker		149002-008	1		B90	

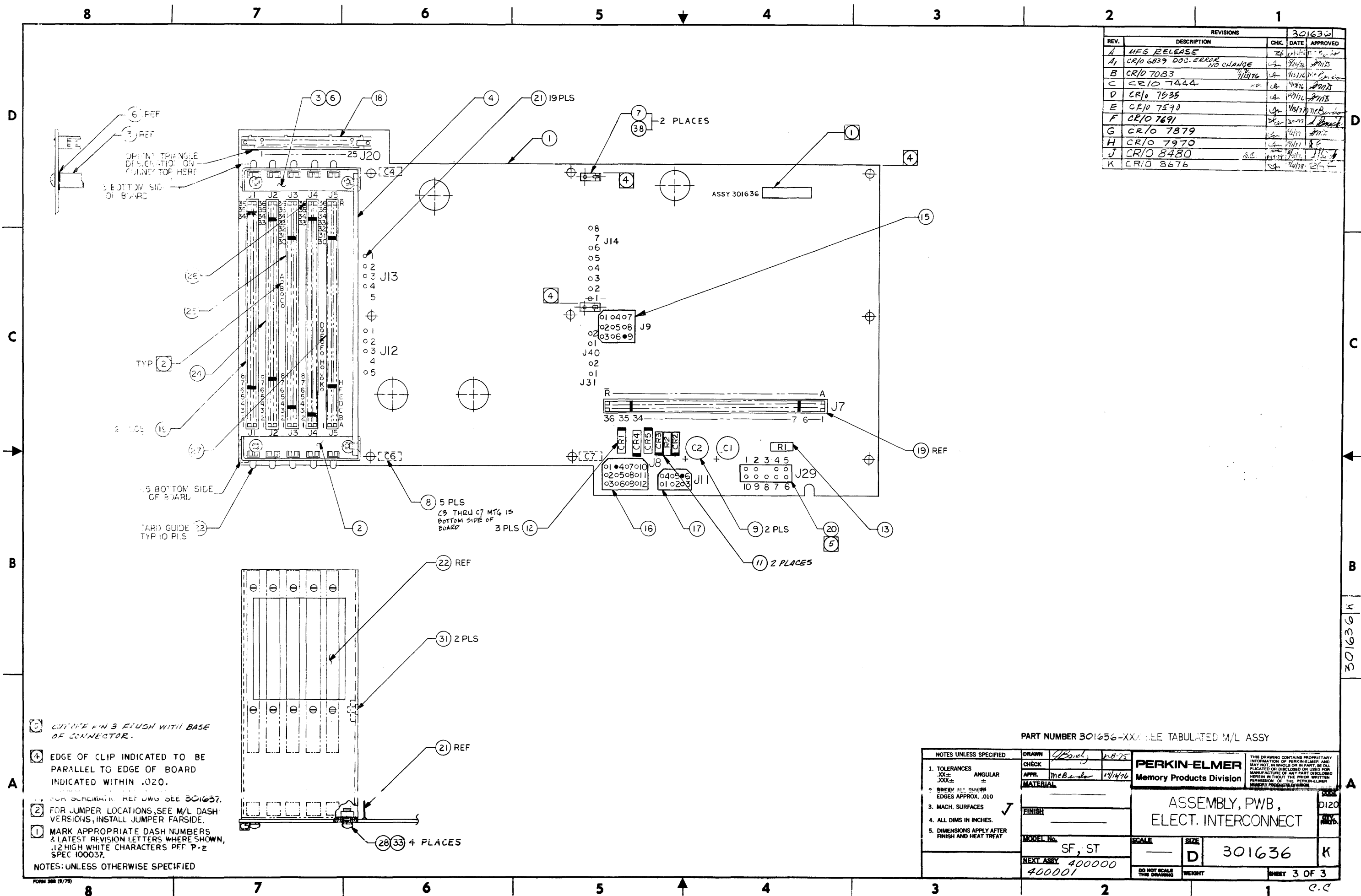
FORM 209 (R.12/74)

REV.		PART NUMBER		REV.		CODE	
		301632-021				D120	
TOP LOAD, 2400 RPM 5us Index & Sector Pulse Width 48 to 50 Sector Cartridge ASSY., PWB, DISC CONTROL							
PERKIN-ELMER MATERIAL LIST Memory Products Division							
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 3/15/78 SHEET 1 OF 1							
USE MATERIAL LIST 301632-000 AND ADD THE FOLLOWING:							
1	1	301632-000	Assy, Pwb., Disc Control - Basic				
81							
82	2	101156-302	Resistor, 5%, 1/4W 3K			A51,B53	
83							
84	2	101004-222	Capacitor, Poly. .0022uf			A47,B68	
85							
86	1	101004-333	Capacitor, Poly. .033uf			B45	
87	2	300648-001	Wire, Jumper			Jumper J1 B15 to B16 J2 B17 to B18	
95	1	120909-001	Header, Programmed			B90	
96	1	120910-061	Cover, Header				

FORM 209 (R.9/77)

cc

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
			301636
A	MFG RELEASE		
A1	CR/O 6839 DOC. ERROR NO CHANGE		
B	CR/O 7083		
C	CR/O 7444		
D	CR/O 7535		
E	CR/O 7590		
F	CR/O 7691		
G	CR/O 7879		
H	CR/O 7970		
J	CR/O 8480		
K	CR/O 8676		



- [C] CUT OFF PIN 3 FLUSH WITH BASE OF CONNECTOR.
 [4] EDGE OF CLIP INDICATED TO BE PARALLEL TO EDGE OF BOARD INDICATED WITHIN .020.
 [2] FOR JUMPER LOCATIONS, SEE M/L DASH VERSIONS, INSTALL JUMPER FAR SIDE.
 [1] MARK APPROPRIATE DASH NUMBERS & LATEST REVISION LETTERS WHERE SHOWN, .12 HIGH WHITE CHARACTERS PFF P-E SPEC 100037.
 NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301636-XX/ SEE TABULATED M/L ASSY

NOTES UNLESS SPECIFIED	DRAWN <i>W. B. 75</i>	PERKIN-ELMER Memory Products Division		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE WHOLE OR IN PART, REPRODUCED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.
1. TOLERANCES XX± ANGULAR XXX± ±	CHECK <i>McB...</i>	ASSEMBLY, PWB, ELECT. INTERCONNECT		DATE D120
2. BURN ALL SHARP EDGES APPROX. .010	APPR. <i>McB...</i> 1/14/76	SCALE SF, ST		SIZE D
3. MACH. SURFACES	MATERIAL	FINISH		301636
4. ALL DIMS IN INCHES.	MODEL No.	DO NOT SCALE THIS DRAWING		WEIGHT
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	NEXT ASSY 400000 400001	SHEET 3 OF 3		K

REV.		PART NUMBER		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		301636-000		Memory Products Division				301636-000		K		D120	
ASSEMBLY, PWB.		ELECTRONICS INTERCONNECT		MODEL SF & ST		DATE 4-15-76		SHEET 1		OF 3			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS							
NEXT ASSEMBLY/USED ON													
1	Board, Processed	301635-001	1										
2	End, Card Cage	30211-001	1										
3	End, " "	-002	1										
4	Insulator, Card Cage	301447-001	2										
5	Clip, Retaining - PWB	301575-001	2										
6	Capacitor .1 uf	101087-104	5			C3,4,5,6,7							
7	Capacitor 470 uf	102600-001	2			C1,C2							
8	Diode 1N4003	100127-001	2			CR2,3							
9	Diode 1N5624	107026-001	3			CR1,4,5							
10	Resistor, 5%, 1/4W 5.1K	101156-512	1			R1							
11	Resistor, 5%, 1/4W 10K	101156-103	1			R2							
12	Connector, 9 Pin	100247-001	1			J9							
13	Connector, 12 "	-012	1			J8							
14	Connector, 6 "	-013	1			J11							
15	Connector, 50 "	101040-001	1			J20							
16	Connector, 72 "	105024-001	2			J1,7							
17	Connector, Header, 10 Pin	120905-001	1			J29							
18	Pin, Wire Wrap	100360-003	19			J12,13,14,31,40							
19	Guide, Card	101064-001	10										
20	Connector 72 Pins	105024-002	1			J2							
21	Connector 72 Pins	-006	1			J3							
22	Connector 72 Pins	-007	1			J4							
23	Connector 72 Pins	-008	1			J5							
24	Screw, Pan Head	100036-305	4			6-32 x 5/16"							
25													
26													
27													
28	Screw, Flat Head, 82°	100040-304	2			6-32 x 1/4"							
29													
30													
31													
32													

FORM 208 (R.12/74)

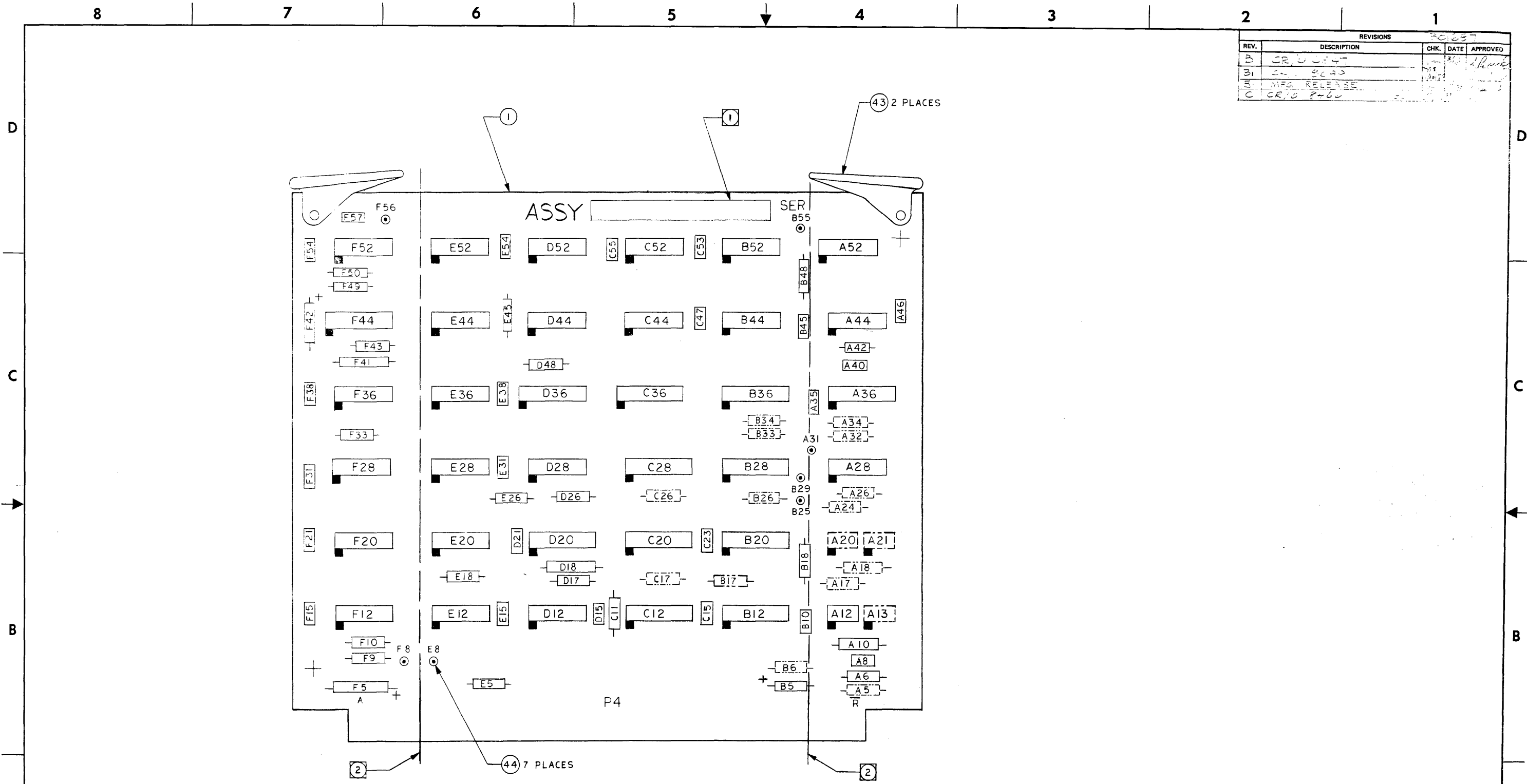
REV.		PART NUMBER		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		301636-000		Memory Products Division				301636-000		K		D120	
ASSEMBLY, PWB.		ELECTRONICS INTERCONNECT		MODEL SF & ST		DATE 4-15-76		SHEET 2		OF 3			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS							
NEXT ASSEMBLY/USED ON													
33	Washer, Split Lock	100042-300	4			No. 6							
34													
35													
36													
37													
38	Rivet, c'snk Hd, 100° Copper	144505-202	2										
39	Rework Instructions	301641-001	0			A							
40	Rework Instructions	301734-001	0			A							
	Printed Master	301634-001	0										
	Schematic	301637-001	0			D							
	Procedure, Test	900159-001	0										

FORM 208 (R.12/74)

REV.		PART NUMBER		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV.		CODE	
		301636-001		Memory Products Division				301636-001		H		D120	
ASSEMBLY, PWB.		ELECTRONICS INTERCONNECT		MODEL SF & ST		DATE 4-15-76		SHEET 1		OF 1			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS							
NEXT ASSEMBLY/USED ON													
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301636-000				K							
41	Wire, Solid, Insulated	100383-930	A/R			Jumper		A to B		D to E		H to J	

FORM 208 (R.12/74)

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE
B	CRG 8-67		
B1	CRG 8-67		
B	MFG RELEASE		
C	CRG 8-67		



- SCHEMATIC REF 301688
- ② COMPONENTS SHOWN IN PHANTOM LINES ARE VARIABLE; SEE M.P.L.
 - ③ MAX HEIGHT OF ALL COMPONENTS WITHIN AREA OF DOTTED LINES TO BOARD EDGE SHALL BE 5/16 MAX. DISC TYPE CAPACITORS MOUNTED IN THIS AREA SHALL BE ASSEMBLED LEANING AWAY FROM EDGES OF BOARD.
 - ① MARK APPROPRIATE DASH NO., S/N, AND LATEST REVISION LETTER .12 HIGH CHARACTERS PER P-E SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301687-XXX SEE TABULATED M.P.L.

NOTES UNLESS SPECIFIED	DRAWN ZUCKERMAN APP 76	PERKIN-ELMER Memory Products Division	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION
1. TOLERANCES .XX± ANGULAR .XXX± =	CHECK <i>[Signature]</i> 3-10-77		
2. BREAK ALL DIMENSIONS EDGES APPROX. .010	APPR. <i>[Signature]</i> 3-10-77	ASSEMBLY, PWB SERVO LOGIC	
3. MACH. SURFACES ✓	MATERIAL	MODEL No. SF/ST	SCALE 4:1
4. ALL DIMS IN INCHES.	FINISH	NEXT ASSY 400001	SIZE D
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT			301687
			CHARTED
			DO NOT SCALE THIS DRAWING
			WEIGHT
			SHEET 3 OF 3

REV. C		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. C		CODE	
		Memory Products Division				301687-000				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 1 OF 3	
APPROVED		ASSY. PWB. SERVO LOGIC						4-29-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
1	Board, Processed	301686-001	1								
2											
3	I.C.	1458	101026-001	1		A12.					
4	I.C.	1406	101088-001	1		A44.					
5	I.C.	74LS00	123029-001	1		D28.					
6	I.C.	74LS02	123030-001	1		E28.					
7	I.C.	74LS04	123031-001	2		D12,E44.					
8	I.C.	74LS08	123032-001	4		A52,C52,E52,F12.					
9	I.C.	74LS10	123033-001	1		E12.					
10	I.C.	74LS11	123034-001	3		B52,O52,F20.					
11	I.C.	74LS32	123035-001	2		A28,F52.					
12	I.C.	74LS74	123036-001	4		D44,L20,F28,F36.					
13	I.C.	74LS86	123038-001	3		B44,C44,E36.					
14	I.C.	74LS123	123039-001	2		D20,F44.					
15	I.C.	74LS157	123040-001	2		B12,C12.					
16	I.C.	74LS193	123041-001	3		B36,C36,D36.					
17	I.C.	74LS283	123044-001	3		A36,B28,C28.					
18	I.C.	74LS175	123045-001	2		B20,C20.					
19											
20											
21	Capacitor, Mica	33pf	100243-330	1		B45.					
22	Capacitor, "	470pf	-471	1		F57.					
23	Capacitor, Poly	.0015uf	101005-152	1		F41.					
24	Capacitor, "	.0047uf	101004-472	1		D18.					
25	Capacitor, "	.01uf	-103	1		A10.					
26	Capacitor, Ceramic 100V	.01uf	101042-103	20		A8,35,40,46,B10,C15,23,47, C53,55,D15,E15,31,38,54, F15,21,31,38,54					
27	Capacitor, Ceramic 50V	.1uf	101006-104	1		D21.					
28	Capacitor, Tant. 70V	2.2uf	101002-225	1		F42.					
29	Capacitor, "	20V	101002-156	1		B5.					

FORM 209 (R.12/74)

REV. C		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. C		CODE	
		Memory Products Division				301687-000				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 2 OF 3	
APPROVED		ASSY. PWB. SERVO LOGIC						4-29-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
30	Capacitor, Tant. 6V 56uf	101001-566	1			F5.					
31											
32	Resistor, 5%, 1K	101156-102	1			E45.					
33	Resistor, " "	2.2K	-222	1		F43.					
34	Resistor, 1%, 3.48K	100155-341	1			B48.					
35	Resistor, " "	4.64K	-353	1		A6.					
36	Resistor, 5%, 10K	101156-103	8			C11,026,48,E18,26,F10,33,50					
37	Resistor, 1%, 12.7K	100155-395	2			A42,E5.					
38	Resistor, 5%, 15K	101156-153	1			F49.					
39	Resistor, " "	20K	-203	1		D17.					
40											
41											
42	Wire, Solid Insulated	100248-924	A/R			Jumper Across B18					
43	Extractor, Card	107901-001	2								
44	Pin Wire Wrap	100360-001	7			A31,B25,B29,B55,t8,F8,F56					
45											
46											
	Schematic	301688-001	0								
	Printed Master	301685-001	0								
	Specification	301439-001	0								
	Test Procedure	900110-001	0								
	Test Specification	900111-001	0								

FORM 209 (R.12/74)

REV. E		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. E		CODE	
		Memory Products Division				301687-001				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 1 OF 1	
APPROVED		ASSY. PWB. SERVO LOGIC						5-3-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301687-000									
50	I.C.	5020	101029-003	3		A13,A20,A21.					
51											
52	Resistor, 5%, 7.5K	101156-752	6			B17,B26,B33,B34,C17,C26.					
53	Resistor, 1%, 49.9K	100155-452	1			A5.					
54	Resistor, " "	63.4K	-462	1		A17.					
55	Resistor, " "	100K	-481	1		B6.					
56	Resistor, " "	200K	-510	1		A26.					
57	Resistor, " "	402K	-539	1		A24.					
58	Resistor, 5%, 820K	101156-824	1			A32.					
59	Resistor, " "	1.6M	-165	1		A34.					
60											
61	Capacitor, Poly. .01uf	101004-103	1			A18.					
62											
63	Wire, Jumper	300648-001	1			Jumper A31 to B25.					

FORM 209 (R.12/74)

REV. F		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. F		CODE	
		Memory Products Division				301687-002				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 1 OF 1	
APPROVED		ASSY. PWB. SERVO LOGIC						5-3-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301687-000									
50	I.C.	5020	101029-003	3		A13,A20,A21.					
51											
52	Resistor, 5%, 7.5K	101156-752	6			B17,B26,B33,B34,C17,C26.					
53	Resistor, 1%, 49.9K	100155-452	1			A5.					
54	Resistor, " "	63.4K	-462	1		A17.					
55	Resistor, " "	100K	-481	1		B6.					
56	Resistor, " "	200K	-510	1		A26.					
57	Resistor, " "	402K	-539	1		A24.					
58	Resistor, 5%, 820K	101156-824	1			A32.					
59	Resistor, " "	1.6M	-165	1		A34.					
60											
61	Capacitor, Poly. .01uf	101004-103	1			A18.					
62											
63	Wire, Jumper	300648-001	1			Jumper A31 to B29.					

FORM 209 (R.12/74)

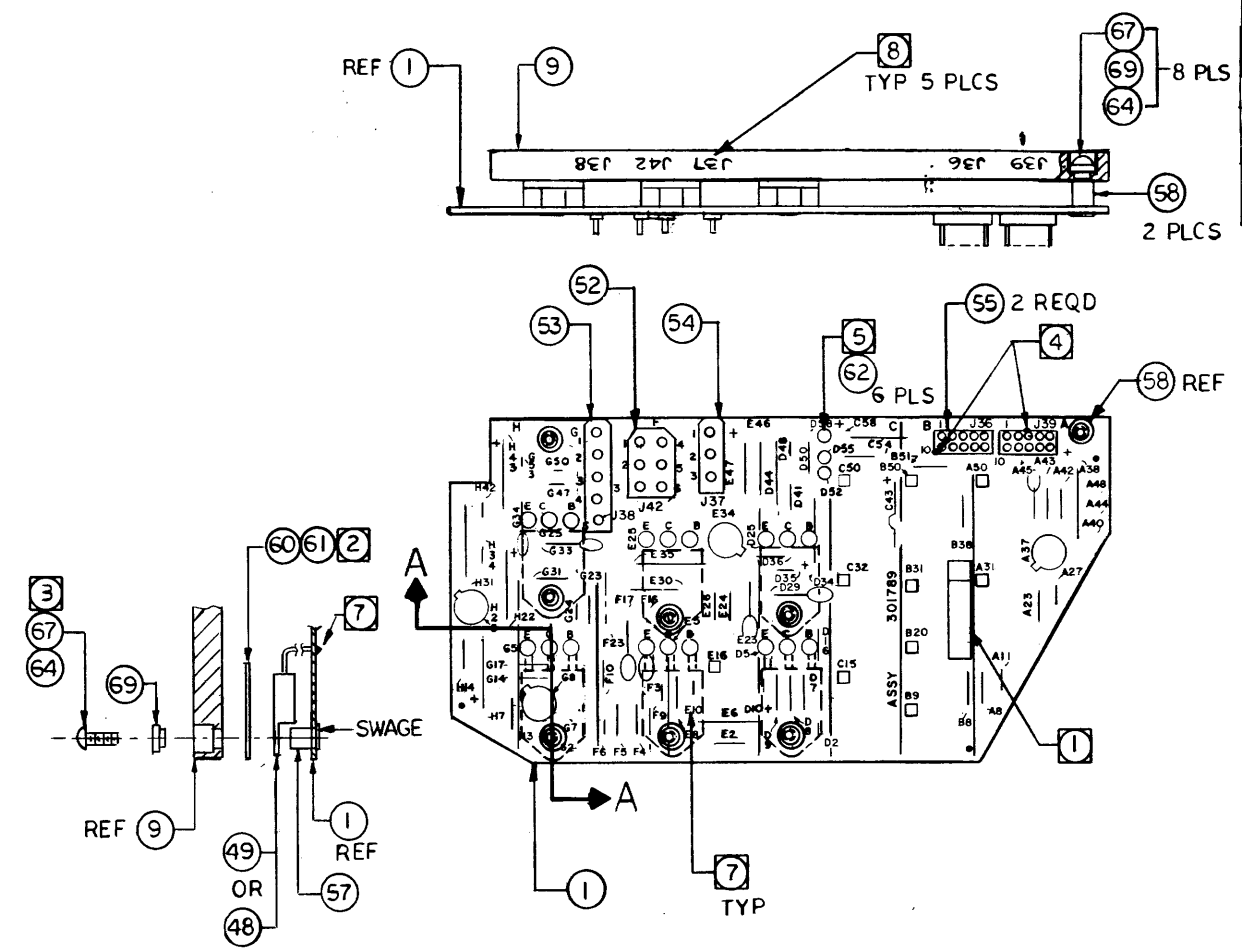
REV. J		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. J		CODE	
		Memory Products Division				301687-003				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 1 OF 1	
APPROVED		ASSY. PWB. SERVO LOGIC						5-3-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301687-000									
63	Wire, Jumper	300648-001	2			Jumper A31 to B25. Jumper E8 to F8.					
64	Wire, Solid Insulated	100248-924	A/R			Jumper Across A17.					

FORM 209 (R.12/74)

REV. E		PERKIN-ELMER		MATERIAL LIST		PART NUMBER		REV. E		CODE	
		Memory Products Division				301687-004				D120	
DATE		TITLE		MODEL		SF/ST		DATE		SHEET 1 OF 1	
APPROVED		ASSY. PWB. SERVO LOGIC						5-3-76			
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY USED ON				
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301687-000									
63	Wire, Jumper	300648-001	2			Jumper A31 to B29. Jumper E8 to F8.					
64	Wire, Solid Insulated	100248-924	A/R			Jumper Across A17.					

FORM 209 (R.12/74)

REVISIONS				301789
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT RELEASE	Am	01-12-77	McB...
B	CR/O 7640	Am	1/20/77	McB...
C	CR/O 7723	Am	3/1/77	Kenick
D	CR/O 8220	Am	1/8/77	Kenick
E	CR/O 8444 MFG REL	Am	3/3/78	Kenick
D	CR/O 8631	M.E.	11-20-78	Kenick
E	CR/O 8841	J.B.	11-13-78	Kenick



SECTION A-A
TYP 6 PLCS
SCALE - NONE

- 8 MARK J (CONNECTOR) NUMBERS, J36, J37, J38, J39, J42, IN RESPECTIVE POSITIONS WITH WHITE EPOXY INK 1/8 HIGH CHARACTERS ON HEAT SINK
- 7 TRIM LEADS ON ALL COMPONENTS LOCATED OVER TRANSISTORS D5, D25, E5, E25, G5 & G25 TO .015 MAX PROTRUSION ON DIP SIDE. TRIM TRANSISTOR LEADS TO SAME.
- 6. FOR SCHEMATIC SEE DWG NO 301790.
- 5 FOR JUMPER LOCATIONS SEE TABULATED M/L.

- 4 FOR POLARIZATION OF CONNECTORS, CUT FOLLOWING PINS FLUSH WITH BASE NEARSIDE: J36-10 AND J39-3.
- 3 INSERT AND TIGHTEN SCREW, ITEM 67, APPLYING 6 INCH POUNDS OF TORQUE.
- 2 APPLY THERMAL JOINT GREASE ON BOTH SIDES OF MICA WASHER.
- 1 MARK APPROPRIATE DASH NUMBER, LATEST REVISION LETTER AND SERIAL NUMBER WHERE SHOWN, 1/2 HIGH CHARACTERS, COLOR WHITE, PER P-F SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED.

PART NUMBER 301789-XXX ASSY SEE TABULATED M/L

NOTES UNLESS SPECIFIED 1. TOLERANCES XX± ANGULAR XXX± ± 2. BREAK ALL SHARP EDGES APPROX .010 3. MACH. SURFACES ✓ 4. ALL DIMS IN INCHES. 5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN	ZUCKERMAN	JAN 77	PERKIN-ELMER Memory Products Division ASSEMBLY, PWB SPINDLE SW SCALE 1:1 SIZE C 301789 SHEET 5 OF 5	D 120 E
	CHECK	McB...	01-12-77		
	APPR	McB...	01-12-77		
	MATERIAL				
	FINISH				
MODEL No	FET SF/ST				
NEXT ASSY	300000, 300001 400000, 400001				

REV. 1		CODE D120				
PART NUMBER 301794-000		REV. F				
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
ASSY. PWB. SPINDLE DRIVE		F&T				
LIMITER & 5V DRIVE		SF, ST				
TITLE		DATE 12-13-76 SHEET 1 OF 3				
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REVISION	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
300000,300001,400000,400001						
1	Board, Processed	301793-001	1			
2	Heat Sink	301693-001	1			
3	Thermistor-Precision	101193-001	1			RT1
4						
5	IC 7805	125006-005	1			VR1
6	IC 311	101022-001	1			U1
7						
8						
9	Capacitor, Tant. 2W 15uf	101002-156	1			C3
10	" " 35V 6.0uf	101003-685	1			C1
11	" Cer. .47uf	101086-474	1			C2
12	" Tant. 56uf	101001-566	1			C4
13						
14						
15	Diode 1N4003	100127-001	1			CR1
16						
17						
18						
19	Resistor, 5 W 1.2K	100064-122	1			R5
20	" 3W W.W.+5 45	100068-450	1			R6
21						
22	Resistor, 5 W 100	101156-101	1			R7
23	" " 510	-511	1			R9
24	" " 1K	-102	2			R10,11
25	" " 1.8K	-182	1			R8
26	" 20W W.W.+5 10	142008-100	2			R2,R3
27						
28						
29	Transistor 2N2222A	101052-001	1			Q1
30	" EP2179	151003-001	1			Q2
31						
32						
33						

FORM 209 (R.12/74)

REV. 1		CODE D120				
PART NUMBER 301794-000		REV. F				
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
ASSY. PWB. SPINDLE DRIVE		F&T				
LIMITER & 5V DRIVE		SF, ST				
TITLE		DATE 12-13-76 SHEET 2 OF 3				
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REVISION	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
34	Connector 6 Pin	100010-020	1			P42
35						
36						
37	Pin, Female, Snap-Lock	100021-004	5			
38	Pin, Male, Snap-Lock	-010	1			
39						
40	Strap, Cable (TY-RAP)	100171-001	A/R			
41						
42						
43	Standoff, Swage Threaded	101136-001	4			
44	" " Hollow	147005-004	2			
45						
46						
47	Wire, Insulated, Stranded	100053-920	A/R			
48	" S.S. Safety Lock	164002-001	A/R			
49						
50						
51	Insulator, Transistor	100147-001	1			Use with Item 30
52	Insulator, Transistor-Power	122700-001	1			" " " 5
53	Silicone Grease	120100-001	A/R			
54						
55	Screw, Pan Head	100036-308	2			6-32 x 1/2 LG
56	Screw, Pan Head	100036-204	2			4-40 x 1/4 LG
57						
58	Washer, Split Lock	100042-300	2			No. 6.
59	" Shoulder, Nylon	100063-014	2			No. 4.
60	" Flat-Reduced O. D.	100251-300	2			No. 6.
61						
62						
	Printed Master	301792	Ref			
	Schematic	301794	Ref			(Appears on Assy. Dwg.)
	Specification		Ref			
	Test Procedure		Ref			

FORM 209 (R.12/74)

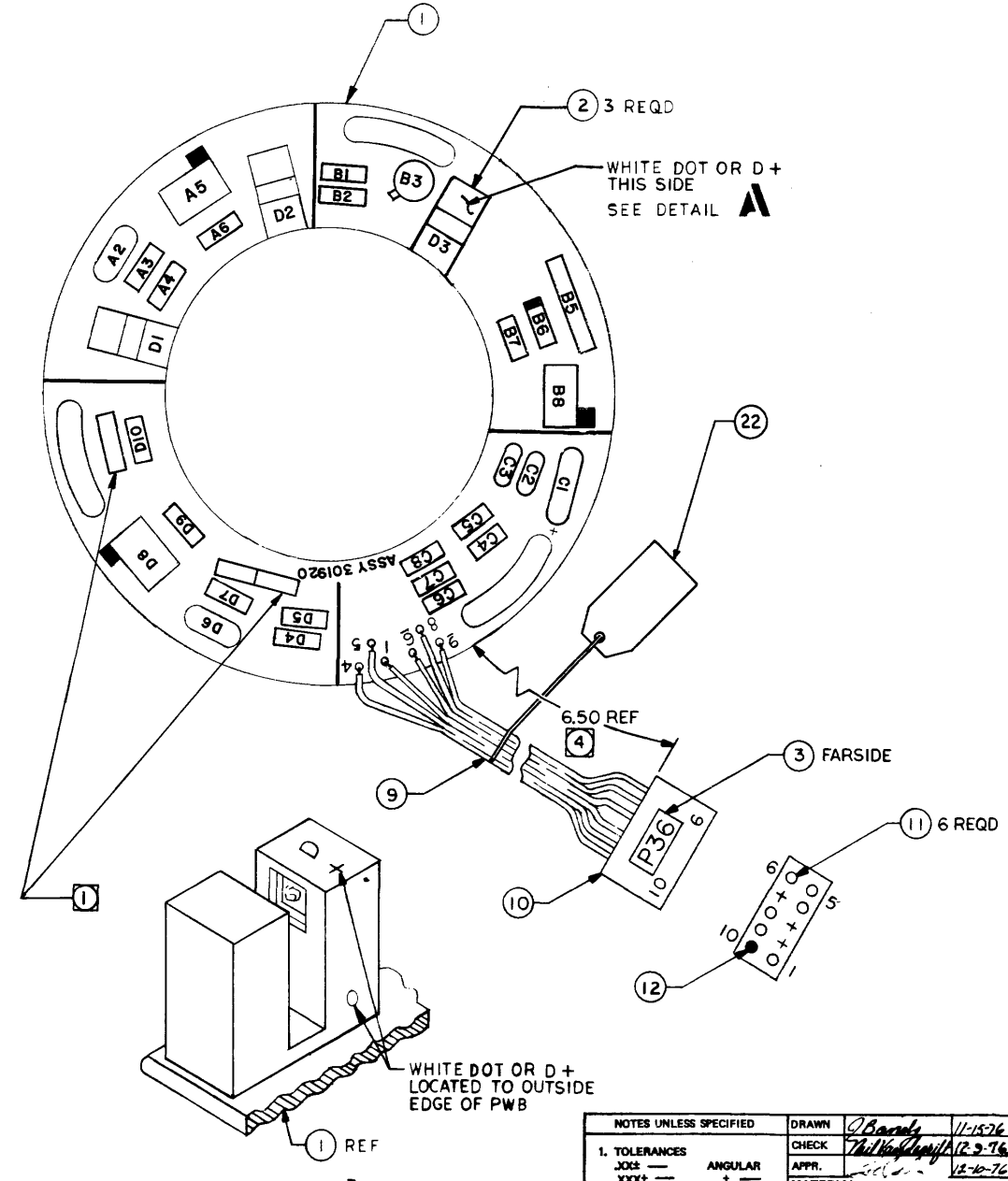
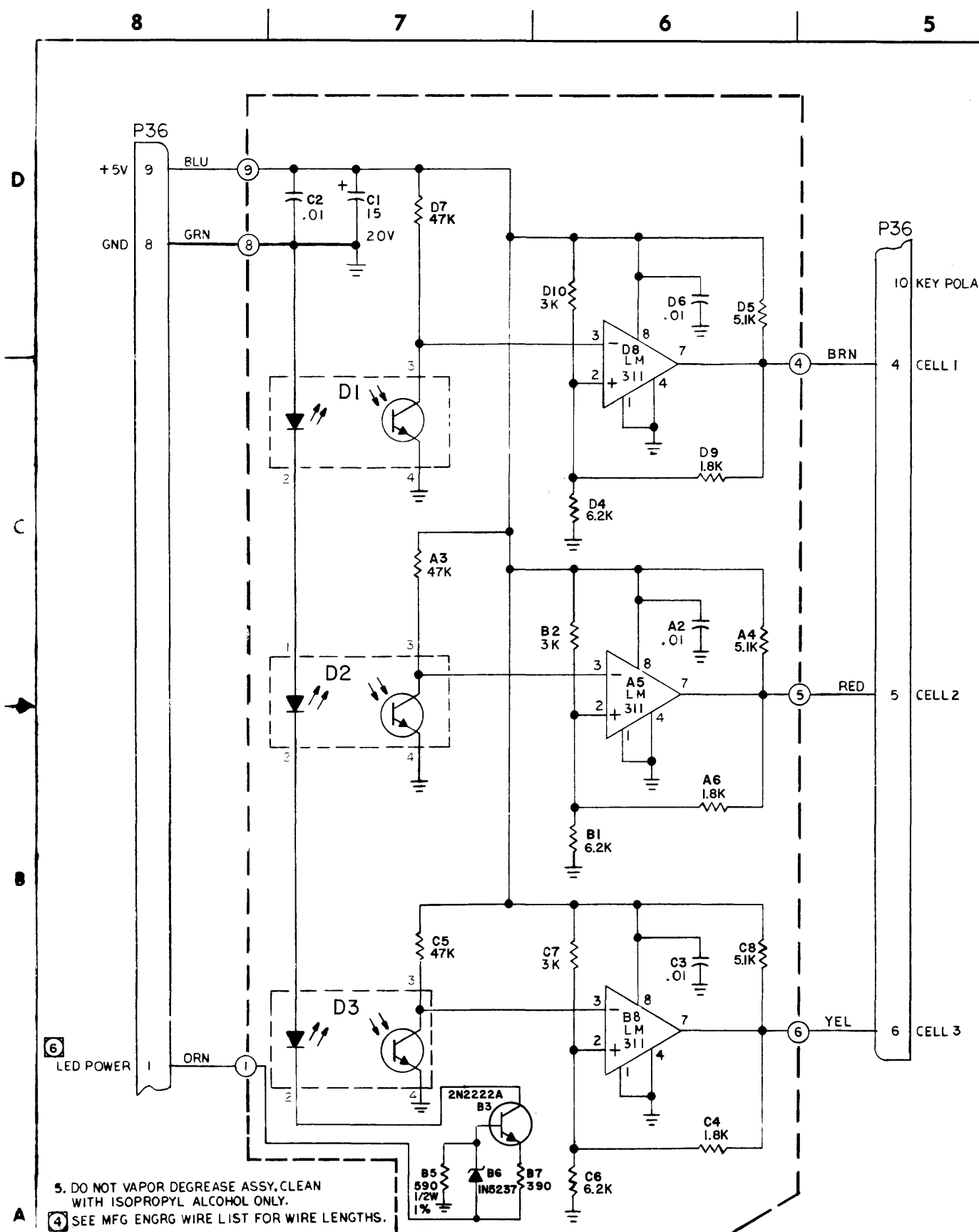
REV. 5		CODE D120				
PART NUMBER 301794-001		REV. S				
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
ASSY. PWB. SPINDLE DRIVE		F&T				
LIMITER & 5V DRIVE		SF, ST				
TITLE		DATE 1-10-77 SHEET 1 OF 1				
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REVISION	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING: 301794-000 400000 & 400001						
50	Resistor, 5W W.W. ±1% .15	142000-053	1			R1

FORM 209 (R.12/74)

REV. 2		CODE D120				
PART NUMBER 301794-002		REV. S				
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
ASSY. PWB. SPINDLE DRIVE		F&T				
LIMITER & 5V DRIVE		SF, ST				
TITLE		DATE 1-10-77 SHEET 1 OF 1				
ITEM NO.	DESCRIPTION	PART NO.	REQD.	REVISION	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING: 301794-000 400000 & 400001						
50	Resistor, 5W W.W. ±1% .1	142000-052	1			R1
51	Resistor, 20W W.W. ±5% 10	142008-100	1			R4

FORM 209 (R.12/74)

REVISIONS				301920
REV.	DESCRIPTION	CHK.	DATE	APPROVED
XI	EXP RELEASE		12-10-76	B. Sullivan
A	PILOT RELEASE		12-10-76	
B	CR/O 7738 MFG. REL.			
C	CR/O 7847			
C1	CR/O 7847			
C2	CR/O 7847			
C3	CR/O 7847			



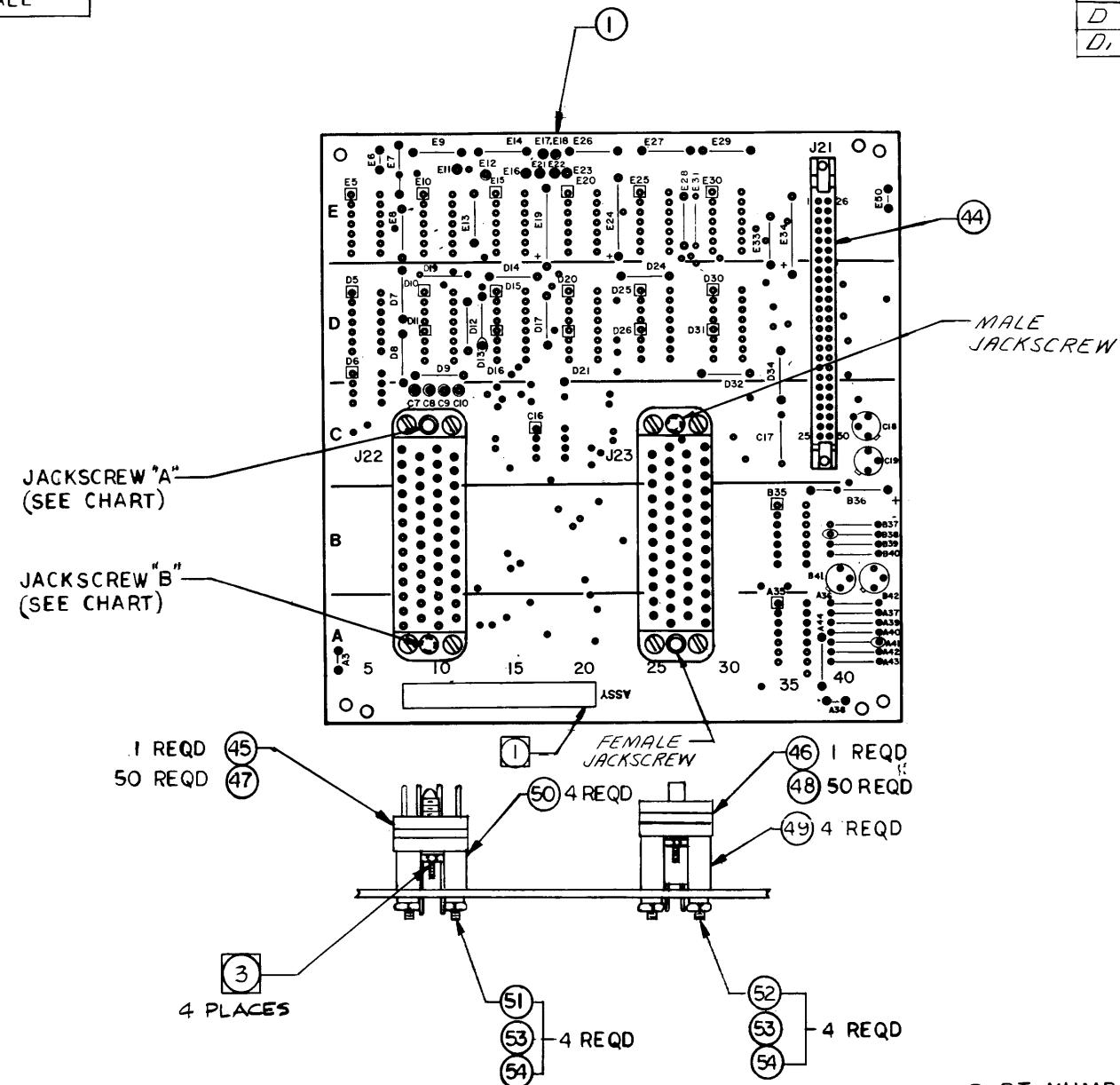
- 5. DO NOT VAPOR DEGREASE ASSY. CLEAN WITH ISOPROPYL ALCOHOL ONLY.
- 4. SEE MFG ENGRG WIRE LIST FOR WIRE LENGTHS.
- 3. ALL CAPACITOR VALUES IN MICROFARADS.
- 2. ALL RESISTOR VALUES IN OHMS. 5%, 1/4W.
- 1. MARK APPROPRIATE DASH NO. OR NO'S & LATEST REVISION LETTER WHERE SHOWN (IN DOUBLE BLOCK) & DATE IN SINGLE BLOCK. USE .12 HIGH CHARACTERS COLOR WHITE, PER P-2 SPEC 100037.
- 6. 560Ω RESISTOR ON SWITCH BOARD MUST BE REPLACED WITH JUMPER WIRE.

NOTES UNLESS SPECIFIED		1. TOLERANCES HOLE — ANGULAR ±	2. BREAK ALL SHARP EDGES APPROX. .010	3. MACH SURFACES ✓	4. ALL DIMS IN INCHES.
DRAWN: <i>J. Barbery</i> 11-15-76		CHECK: <i>Th. Sullivan</i> 12-2-76	PERKIN-ELMER Memory Products Division		
MATERIAL		FINISH	MODEL NO. SF&ST	SCALE 2:1	SIZE D
NEXT ASSY 301690 301217		ASSEMBLY, PWB, COMMUTATOR BOARD		301920	C3
DO NOT SCALE THIS DRAWING		WEIGHT		SHEET 2 OF 2	

1971

TABULATION CHART		
PART NO.	JACKSCREW	
	"A"	"B"
301936 - OXX	MALE	FEMALE
301936 - IXX	FEMALE	MALE

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT REL	ca	01-10-77	McBride
A ₁	CR/O 7721	ca	7/25/77	J. Renick
B	CR/O 7768	ca	7/25/77	H.P.
C	MFG. REL. CR/O 7902	ca	7-7-77	J. Renick
D	CR/O 8427	ca	3/5/78	J. Renick
D ₁	CR/O 8545	ca	30MAY78 PRC	J. Renick



PART NUMBER 301936-XXXASSY

3 APPLY LOCTITE (ITEM 55) TO INTERNAL THREADS OF NUT OF JACKSCREW.
 2. FOR SCHEMATIC REF, SEE 301937.

1 MARK APPROPRIATE DASH NO., LATEST REVISION LETTER AND S/N, J2 HIGH WHITE CHARACTERS PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED	DRAWN ZUCKERMAN JAWTT	PERKIN-ELMER Memory Products Division	ASSEMBLY I/O CONNECTOR D40	D 120
1 TOLERANCES XX ANGULAR XXX	CHECK T. Nakagawa/awtt			
2 BREAK ALL SHARP EDGES APPROX .010	APPR. McBride 01-10-77	MATERIAL	SCALE 1:1	SIZE C
3 MACH SURFACES ✓				
4 ALL DIMS IN INCHES		MODEL No. SF & ST	PART NO. 301936	D ₁
5 DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT		NEXT ASSY		
			4 OF 4	

REV.		PART NUMBER		CODE		
301936-000		301936-000		D120		
PERKIN-ELMER Memory Products Division						
MATERIAL LIST						
TITLE ASSY. PWB I/O D40 MODEL SF & ST DATE 11-17-76 SHEET 1 OF 4						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
1	Board, Processed	301935-001	1			
2						
3	I.C. 7402	100329-001	1			E10
4	I.C. 7404	100330-001	1			E15
5	I.C. 7403	101007-001	1			E5
6	I.C. 75452	101031-001	12			C16,06,10,11,15,16,20,21,25 D26,30,31
7	I.C. 7414	123001-001	1			D5
8	I.C. 8T380 or 8836	100347-001	5			A35, B35, E20, 25, 30
9						
10						
11						
12	Capacitor, Cer. 20%, 100V, .01uf	102662-001	11			A44, 09, 14, 24, 32, E7, 9, 14, 26, E27, 29
13						
14						
15	Capacitor, Cer. 20%, 50V, .1uf	101087-104	4			A3, 38, E6, 50
16						
17	Capacitor, Tant, 6V, 56uf	101001-566	4			B36, E19, 24, 34
18						
19						
20	Diode, Rectifier 1N4003	100127-001	1			D13
21	Diode, Zener 3.9V 1N5228B	101058-003	1			A41
22	Diode 1N5317	101034-001	1			B38
23						
24						
25	Resistor, 5%, 1/4W 56	101156-560	1			A40
26	" " " 75	-750	1			E33
27	" " " 100	-101	5			A36, 37, B39, 40, C17
28	" " " 160	-161	1			A42
29	" " " 200	-201	1			A43
30	" " " 390	-391	1			A 39
31	Resistor, 5%, 1/4W 510	101156-511	1			D17

FORM 209 (R.12/74)

REV.		PART NUMBER		CODE		
301936-000		301936-000		D120		
PERKIN-ELMER Memory Products Division						
MATERIAL LIST						
TITLE ASSY. PWB I/O D40 MODEL SF & ST DATE 11-17-76 SHEET 2 OF 4						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
32	Resistor, 5%, 1/4W 1K	101156-102	2			E13, 28
33	" " " 2K	-202	2			D34, E8
34	" " " 10K	-103	3			D7, 8, 12
35	Resistor, 5%, 1/4W 150K	101156-154	1			B37
36	Resistor, " " 270	101156-271	2			D19, E31
37						
38	Pin, Wire Wrap	100360-003	12			C7, 8, 9, 10, E11, 12, 16, 17, 18, E21, 22, 23
39						
40						
41	Transistor 2N2222A	101052-001	4			B41, 42, C18, 19
42						
43						
44	Connector, Male 50 Pin	101040-001	1			J21
45	" " " " "	105010-003	1			J22
46	" Female " " "	-004	1			J23
47	Contact, Pin - Male	106002-002	50			
48	" " Female	-001	50			
49	Spacer, Fibre	100391-014	4			
50	Spacer, " "	-002	4			
51	Screw, Fillister Head	145003-212	4			4-40 x 3/4
52	Screw, " "	-214	4			4-40 x 7/8
53	Washer, LK, Int. Tooth	100059-200	8			No. 4
54	Nut, Hex	100043-200	8			No. 4
55	Cement, Loctite	100303-004	A/R			
	Printed Master	301934-001	0			
	Schematic	301937-001	0			
	Test Spec.	301938-001	0			
	Rework Instructions	302116-001	0			

FORM 209 (R.12/74)

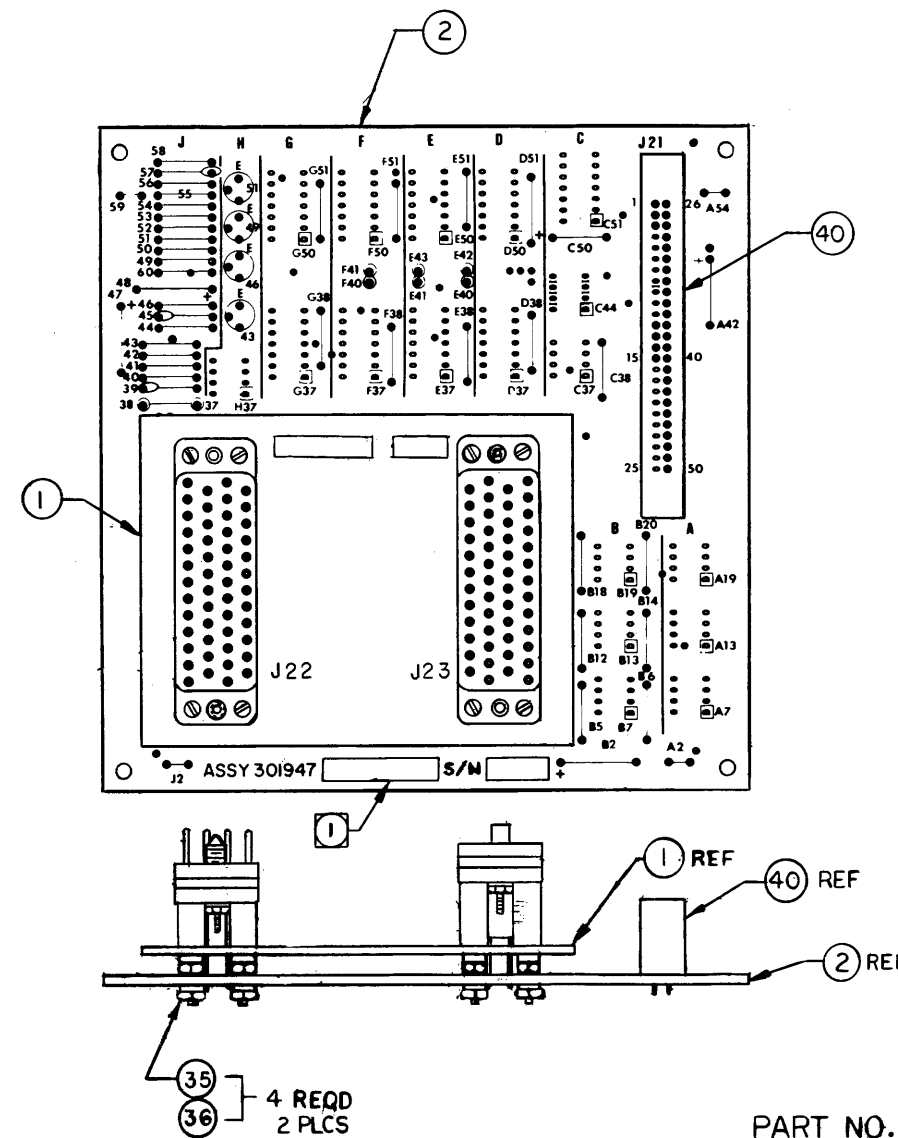
REV.		PART NUMBER		CODE		
301936-001		301936-001		D120		
PERKIN-ELMER Memory Products Division						
MATERIAL LIST						
TITLE ASSY., PWB. I/O D40 MODEL SF & ST DATE 12/21/76 SHEET 1 OF 2						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:						
50	Jumper, Insulated	300648-001	3			Jumper J1 E23 to E22 J2 E17 to E 21 J3 E11 to E 12

FORM 209 (R.12/74)

REV.		PART NUMBER		CODE		
301936-002		301936-002		D120		
PERKIN-ELMER Memory Products Division						
MATERIAL LIST						
TITLE ASSY., PWB. I/O - D40 MODEL SF & ST DATE 12/21/76 SHEET 1 OF 2						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST AND ADD THE FOLLOWING:						
50	Jumper, Insulated	300648-001	4			Jumper J1 E23 to C8 J2 E17 to E21 J3 E11 to E12 J4 C9 to C10

FORM 209 (R.12/74)

REVISIONS 301947				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
A	PILOT REL	AK	1-4-77	B. Muller
A	MFG REL NO CHG	AK	1/20/77	B. Muller
A1	CR/O 90151A	AK	4-20-79	B. Muller



THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART BE REPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.

2. FOR SCHEMATIC REFS, SEE 301953, 301948.
- (1) MARK APPROPRIATE DASH NO., REVISION LETTER & S/N WHERE SHOWN, .12 HIGH CHARACTERS, COLOR WHITE PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

PART NO. 301947-001 ASSY

DW 2/2/77

NOTES UNLESS SPECIFIED 1 TOLERANCES .XX - ANGULAR .XXX - 2 BREAK ALL SHARP EDGES APPROX .010 3 MACH. SURFACES ✓ 4 ALL DIMS IN INCHES 5 DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	DRAWN ZUCKERMAN DEC 76 CHECK <i>Paul Handberg</i> 1-3-77 APPR. <i>B. Muller</i> 1-4-77	PERKIN-ELMER Memory Products Division			D 120
	MATERIAL _____ FINISH _____ MODEL No. FET NEXT ASSY _____					ASSEMBLY, PWB I/O CONNECTOR W/INTERRUPT OPTION		A1
	SCALE 1:1 WEIGHT _____	PART NO. 301947	4 OF 4		
	DO NOT CHANGE THIS DRAWING	WEIGHT _____	4 OF 4	CC	

REV. A		PART NUMBER 301947-000		CODE D120		
PERKIN-ELMER Memory Products Division MATERIAL LIST						
ASSY., I/O CONNECTOR W/INTERRUPT OPTION MODEL F/T DATE 11-16-76 SHEET 1 OF 4						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
1	Piggy Back I/O Connector -Assy	301952-001	1	A		
2	Board, Process	301946-001	1	A		
3						
4	I.C. 75452	101031-001	9			A7,13,19,87,13,19,C37,44,H37
5	I.C. 7402	100329-001	1			D37
6	I.C. 7408	100332-001	1			D50
7	I.C. 7414	123001-001	1			G37
8	I.C. 8T380 or DM8836	100347-001	5			E37,50,F37,50,G50
9						
10						
11	Transistor 2N2222A	101052-001	4			H43,46,49,51
12						
13						
14	Diode, Rect. 1N4003	100127-001	1			J39
15	Diode, 1N5317	101034-001	1			J45
16	Diode, Zener 3.9V 1N52288	101058-003	1			J57
17						
18						
19	Capacitor, Cer. 100V .01 uf	102662-001	14			B5,6,12,14,18,20,C38,D38, E38,51,G38,51,F38,51
20						
21	Capacitor, Cer. 50V .1uf	101087-104	4			A2,54,J2,59
22	Capacitor, Tant. 35V 6.8uf	101003-685	3			A42,D51,J47
23	Capacitor, Tant. 6V 56uf	101001-566	2			B2,J48
24						
25						
26	Resistor, 5%,W 56	101156-560	1			J56
27	" " " 75	-750	1			G50
28	" " " 100	-101	6			J46,49,50,51,55,60
29	" " " 110	-111	4			J40,41,42,43
30	" " " 160	-161	1			J53
31	" " " 200	-201	1			J52

FORM 209 (R.12/74)

REV. A		PART NUMBER 301947-000		CODE D120		
PERKIN-ELMER Memory Products Division MATERIAL LIST						
ASSY., I/O CONNECTOR W/INTERRUPT OPTION MODEL F/T DATE 11-16-76 SHEET 2 OF 4						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
32	Resistor, 5%,W 390	101156-391	1			J54
33	" " " 510	-511	1			J58
34	" " " 150K	-154	1			J44
35	Washer,Lk. Int. Tooth	100059-200	8			
36	Nut, Hex.	100043-200	8			
37						
38	Pin,Wire Wrap .025 Sq.	100360-001	8			E40,41,42,43,F40,41, J37,38
39	Jumper, Insulated	300648-001	1			Jumper J37 to J38
40	Connector, Male 50 Pin	101040-001	1			J21
	Printed Master	301945-001	Ref	A		
	Schematic	301948-001	Ref	A		
	Specification	301949-001	Ref			

FORM 209 (R.12/74)

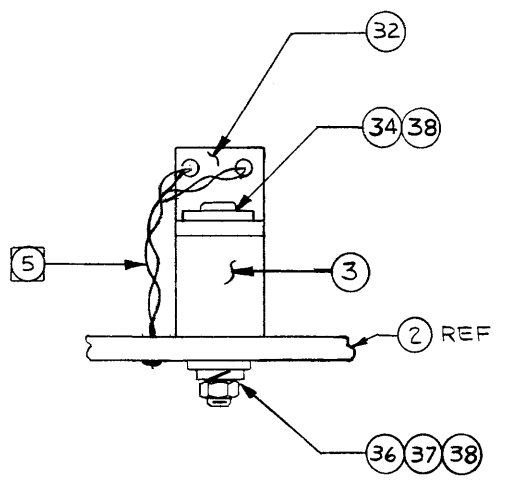
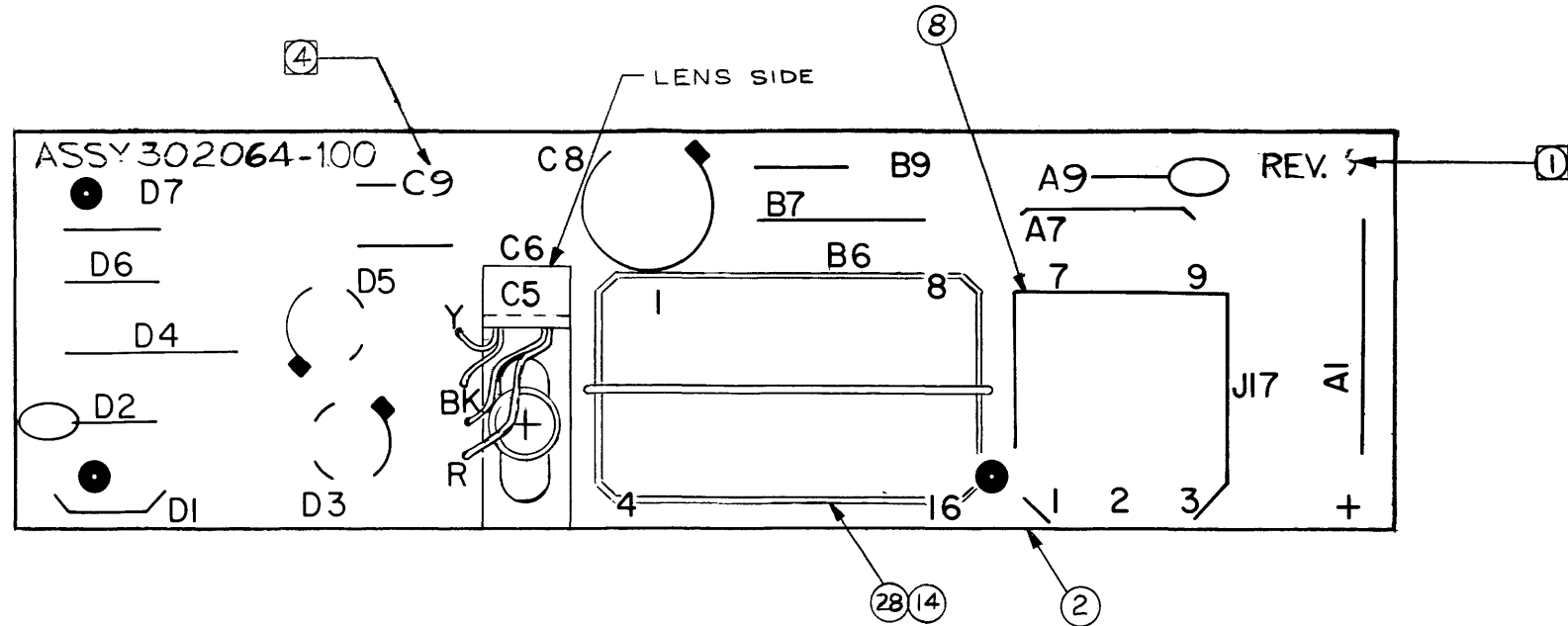
REV. A		PART NUMBER 301947-001		CODE D120		
PERKIN-ELMER Memory Products Division MATERIAL LIST						
HD SEL STANDARD DISC SEL STANDARD ASSY., I/O CONNECTOR W/INTERRUPT OPTION MODEL F&T DATE 12-8-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST 301947-000 AND ADD THE FOLLOWING: A						
39	Jumper, Insulated	300648-001	2			Jumper E42 to E41 F41 to E43

FORM 209 (R.12/74)

REV. A		PART NUMBER 301947-002		CODE D120		
PERKIN-ELMER Memory Products Division MATERIAL LIST						
HD SEL INVERTED DISC SEL INVERTED ASSY., I/O CONNECTOR W/INTERRUPT OPTION MODEL SF & ST DATE 12-8-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
USE MATERIAL LIST 301947-000 AND ADD THE FOLLOWING: A						
39	Jumper, Insulated	300648-001	2			Jumper E40 to E41 F40 to E43

FORM 209 (R.12/74)

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
X1	EXP. REL.			
A	PILOT REL.			
B	MFG REL PER CRO 9349			



- 5 SOLDER LEADS PER COLOR CODE DEFINED ON SILKSCREEN. SERVICE LOOP NOT TO EXTEND IN FRONT (LENS SIDE) OF C5 (ITEM 32).
- 4 BODY OF CAPACITOR C9 MAY NOT BE CLOSER THAN .075 TO EDGE OF BOARD.
- 3-DO NOT VAPOR DEGREASE ASSY IF ITEM 32 IS INSTALLED. CLEAN ITEM 32 WITH ISOPROPYL ALCOHOL ONLY.
- 2. FOR SCHEMATIC SEE 302065-200
- 1 MARK LATEST REVISION LEVEL, WHERE SHOWN, COLOR WHITE, .12 HIGH MAX. CHARACTER PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 302064-100

NOTES UNLESS SPECIFIED		DRAWN	<i>A. J. Dube</i>	4-11-76	PERKIN-ELMER Memory Products Division <small>THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.</small>
1. TOLERANCES XX-- ANGULAR .XXX--	CHECK	<i>T. J. Bunn</i>	4-12-76		
2. BREAK ALL SHARP EDGES	APPR.	<i>A. J. Dube</i>	7-4-77		ASSEMBLY, PWB EMERGENCY RETRACT
3. MACH. SURFACES	MATERIAL				
4. ALL DIMS IN INCHES.	FINISH				SCALE 4:1 SIZE D 302064-100 B
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL No.				
	NEXT ASSY				DO NOT SCALE THIS DRAWING WEIGHT SHEET 1 OF 1

SECTION 3

MASTER SPARE PARTS LIST

3.1 RECOMMENDATIONS

The recommended spare parts for the Perkin-Elmer SF and ST Disk Drives are listed in the following Master Spare Parts list.

3.2 COMPONENT VARIANCE

For resistors, capacitors, small hardware, and other items not included in the list, equivalents in type, value, size, tolerance, and quality may be substituted.

3.3 INTEGRATED CIRCUITS

For integrated circuits where the manufacturer is not specifically listed, any manufacturer's device of the specific type may be used.

MASTER SPARES LIST							
PERKIN-ELMER Memory Products Division						PART NUMBER	REV.
MATERIAL LIST							
TITLE SUPER SERIES		MODEL SF & ST		DATE		SHEET 1 OF	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
SUB-ASSEMBLIES:							
1	Assy. Power Supply	301361-001	1			F & T	
2	Assy. Positioner	301344-001	1			2200 BPI	
	Assy. Positioner	" -002	1			4400 BPI	
3	Assy. Spindle Motor	301690-007	1			100 or 200 TPI, 1500 RPM	
	Assy. Spindle Motor	" -009	1			100 or 200 TPI, 2400 RPM	
	Assy. Spindle Motor	" -006	1			100 TPI, 1500 RPM	
	Assy. Spindle Motor	" -008	1			100 TPI, 2400 RPM	
4	Assy. OCP	301350-001	1				
5	Assy. Transducer, Fixed	301357-001	1				
6	Assy. Filter	301742-002	1				
7	Assy. Thermistor, Base	301362-001	1			200 TPI Only	
8	Assy. Thermistor, Air	301587-001	1			200 TPI Only	
9	Assy. Sector Transducer, Removable	300606-001	1			Series T Only	
10	Assy. Door Latch Solenoid	300388-001	1			Series T	
11	Assy. Door Latch Solenoid	300433-001	1			Series F Only	
12	Assy. Brush Motor	300323-001	1			Disc Cleaning	

MASTER SPARES LIST							
PERKIN-ELMER Memory Products Division						PART NUMBER	REV.
MATERIAL LIST							
TITLE SUPER SERIES		MODEL SF & ST		DATE		SHEET 2 OF	
ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
MISCELLANEOUS ITEMS:							
1	Magnetic Recording Head	300132-001	2			100TPI, 1500RPM, 2200BPI upper	
		-002	2			100TPI, 1500RPM, 2200BPI lower	
		-003	2			100TPI, 2400RPM, 2200BPI upper	
		-004	2			100TPI, 2400RPM, 2200BPI lower	
		300397-001	2			200TPI, 1500RPM, 2200BPI upper	
		-002	2			200TPI, 1500RPM, 2200BPI lower	
		301489-003	2			200TPI, 2400RPM, 2200BPI upper	
		-004	2			200TPI, 2400RPM, 2200BPI lower	
		301489-005	2			200TPI, 2400RPM, 4400BPI upper	
		-006	2			200TPI, 2400RPM, 4400BPI lower	
2	Air Filter	300387-002	1			Pre-filter on 301742-002	
3	Shipping Restraint	300790	1			Positioner Carriage	
4	Key, Polarization	101127	10			Used on 301636	
5	'O' Ring	100410-001	1			2400RPM, Black	
		-004	1			1500RPM, White	
6	Brush, Disc Cleaning	101095-001	1			Upper	
		-002	1			Lower	
7	Brush, Ground	101701-001	3			Used on 301690	
8	Clip, Hitch Pin	101121	1			Used with 101095	
9	Sector Transducer	300679-001	1			Series F Only	

MASTER SPARES LIST							
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ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
PRINTED WIRING BOARDS:							
1	Assy. DIB (MFM) PWB	301422-001	1			2400RPM, 4400 BPI	
	Assy. DIB (VFO) PWB	301320-001	1			1500RPM, Write Dbl. Freq.	
						Read Pulse "D".	
		-002	1			1500RPM, Wrt. Dbl. Freq., Rd. NRZI	
		-004	1			1500RPM, Wrt. NRZI, Rd. NRZI	
		-005	1			1500RPM, Wrt. NRZI, 1588.5,	
						Read NRZI	
		-007	1			2400RPM, Wrt. NRZI, Rd. NRZI	
		-009	1			2400RPM, Wrt. Dbl. Freq., Read	
						NRZI	
		-010	1			2400RPM, Write Dbl. Freq.,	
						Read Pulse "D"	
2	Assy. Control Interface PWB	301174-001	1			D-30 Sector Counter, Multiplexed	
						III Add-Pulse.	
		-002	1			D-40 Sector Counter, Multiplexed,	
						III. Add-Pulse	
	NOTE: -1XX Series has Temperature						
	Control Write Lockout for use on	-003	1			C-300/200 Sector Counter, Mult.	
	200 TPI.	-004	1			P3000 Sector Ctr., Multiplexed	
		-005	1			D-30 No Sector Ctr.-Ind. Lines	
		-006	1			C-300/200 No Sector Counter	
						Ind. Lines	
		-007	1			D-40 No Sector Counter-Ind. Lines	
						III. Add-Level	
		-008	1			GA-Caelus Sector Counter Mult.	
		-009	1			D40 Sector Counter Multiplexed	
						III. Add-Pulse	

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ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
PRINTED WIRING BOARDS:							
3	Assy. Servo Logic PWB	301687-001	1			200 TPI, 406 Tracks	
		-002	1			200 TPI, 408 Tracks	
		-003	1			100 TPI, 203 Tracks	
		-004	1			100 TPI, 204 Tracks	
4	Assy. Data Electronics PWB	301206-001	1			2200BPI, 1500RPM, 200 TPI	
		-004	1			4400BPI, 2400RPM, 200 TPI	
		-005	1			2200BPI, 1500RPM, 100 TPI	
		-006	1			2200BPI, 2400RPM, 100TPI	
		-008	1			2200BPI, 2400RPM, 200 TPI	
5	Assy. Servo Amplifier PWB	301483-001	1			100 TPI	
		-002	1			200 TPI with Track Offset	
		-003	1			200 TPI No Track Offset	
6	Assy. Disc Control PWB (con't)	301632-001	1			Front 1500RPM, 5us Index	
		-002	1			Front 2400RPM, 5us index	
		-003	1			Top 2400RPM 5us Index	
		-004	1			Front 1500RPM, 500ns Index	
		-005	1			Front 2400RPM 500ns Index	
		-006	1			Top 2400RPM, 500ns Index	
		-007	1			Front 1500RPM, 10us index	
		-008	1			Front 2400RPM, 10us Index	
		-009	1			Top 2400RPM, 10us Index	
		-010	1			Front 1500RPM, 40us Index	
		-011	1			Front, 2400RPM, 40us Index	
		-012	1			Top 2400RPM, 40us Index	
		-013	1			Top 1500RPM, 5us Index with	
						48 or 50 Sector Cartridge	

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ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
PRINTED WIRING BOARDS:							
6	Assy. Disc Control PWB (concluded)	301632-014	1			Top 2400RPM, 5us Index with	
						48 or 50 Sector Cart.	
		-015	1			Top 1500RPM, 5us Index	
		-016	1			Top 1500RPM, 500ns Index	
		-017	1			Top 1500RPM, 10us Index	
		-018	1			Top 1500RPM, 40us Index	
7	Assy. I/O Connector PWB	301291-001	1			Internal Term. Voltage	
		-002	1			External Term. Voltage	
		301453-001	1			D-40 Connector	
		301062-1XX	1			D-30 Connector (100TPI Only)	
8	Assy. Line Terminator PWB	300095-001	1			Use with 301291	
		MALE 301055-001	1			Use with 301062	
		FEMALE 301047-001	1			Use with 301062	
		MALE 301074-001	1			Use with 301453	
		FEMALE 301070-001	1			Use with 301453	

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ITEM NO.	DESCRIPTION	PART NO.	REQD.	MIN. REV.	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON							
POWER SUPPLY & OCP ITEMS:							
1	Fuse	5 amp	100028-020	1		Used on 301361	
2	Fuse	10 amp	100028-027	2		" " "	
3	Bridge, Diode	MDA-980-1	101033-002	2		" " "	
4	Rocker Switch		101077-001	3		Used on 301350 OCP	
			-002	1		" " "	
5	Bezel, Switch		101078	4		" " "	
6	Lens, "POWER"		101079-001	1		" " "	
7	Lens, "RUN/LOAD"		-002	1		" " "	
8	Lens, "PROTECT CART"		-003	1		" " "	
9	Lens, "PROTECT FIXED"		-004	1		" " "	
10	Lens, "READY/LOAD"		101081-001	1		" " "	
11	Lamp, 28V		101082-003	3		Used with Items 6 - 9.	
12	Lamp, 28V		101083-002	2		Used with Item 10.	
13	Switch, Thumbwheel		101137	1			

MASTER SPARES LIST						
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
TITLE SUPER SERIES MODEL SF & ST DATE SHEET 7 OF						
ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
ELECTRONIC COMPONENTS (cont.)						
1	IC. Dual Monostable	9602	100234	1		Used on 301320
2	IC. Quad 2 Input NOR	7402	100329	1		" " 301062
				1		" " 301453
3	IC. Hex Inverter	7404	100330	1		" " 301483
				1		" " 301453
4	IC. Hex Inverter	7406	100331	1		" " 301653
				1		" " 301206
5	IC. Quad 2 Input AND	7408	100332	2		" " 301062
6	IC. Quad 2 Input NOR	SP380	100347	5		" " 301062
7	IC. Quad 2 Input NAND	7403	101007	1		" " 301453
8	IC. Quad 2 Input NAND	7426	101011	2		" " 301483
9	IC. Voltage Comp.	311	101022	5		" " 301483
				3		" " 301206
				1		" " 301632
				3		" " 301170
10	IC. Timer	555V	101023	1		" " 301653
				1		" " 301174
11	IC. Bl. Direct One Shot.	8T20B	101024	1		" " 301320
12	IC. Dual Op. Amp.	5558	101026	12		" " 301483
				1		" " 301687
				1		" " 301632
13	IC. Analog Sw.	1H5020	101029-003	4		" " 301483
				3		" " 301687
14	IC. Dual NAND Driver	75452	101031	1		" " 301483
				2		" " 301206
				10		" " 301062
				12		" " 301453
15	IC. Video Amp.	592	101032	2		" " 301206
16	IC. D/A Converter	1406	101088	1		" " 301687
17	IC. Dual AND Driver	75451	101139	3		" " 301653
18	IC. Hex Inverter	7414	123001	1		" " 301453
19	IC. Dual D Flip-Flop	74S74	123023	1		" " 301206

MASTER SPARES LIST						
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
TITLE SUPER SERIES MODEL SF & ST DATE SHEET 8 OF						
ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
ELECTRONIC COMPONENTS (cont.)						
19	IC. Dual D Flip-Flop	74S74	123023	1		Used on 301320
20	IC. Quad 2-Input NAND	74LS00	123029	1		" " 301632
				1		" " 301687
				1		" " 301320
				1		" " 301174
				1		" " 301206
21	IC. Quad 2-Input AND	74LS08	123032	4		" " 301687
				2		" " 301320
				5		" " 301174
				3		" " 301632
22	IC. Triple 3-Input AND	74LS11	123034	3		" " 301687
				1		" " 301320
				2		" " 301632
23	IC. Quad 2-Input OR	74LS32	123035	2		" " 301687
				1		" " 301174
				2		" " 301320
				1		" " 301632
24	IC. Quad D Flip-Flop	74LS74	123036	3		" " 301174
				3		" " 301320
				6		" " 301632
				1		" " 301653
				4		" " 301687
25	IC. 4-Line to 10-Line Decoder		123037	1		" " 301653
26	IC. Quad 2-Input Mux.	74LS157	123040	2		" " 301653
				2		" " 301174
27	IC. Hex Inverter	74S04	123046	1		" " 301206
				1		" " 301320
28	IC. Quad 2-Input AND	74S08	123050	1		" " 301320
29	IC. Voltage Reg.	78M05	125005-005	1		" " 301320
				-008		" " 301206
30	IC. Op-Amp. Precision	LM308	125009	3		" " 301457
31	Transistor, NPN	2N2222A	101052	5		" " 301483

MASTER SPARES LIST						
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
TITLE SUPER SERIES MODEL SF & ST DATE SHEET 9 OF						
ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
ELECTRONIC COMPONENTS (cont.)						
31	Transistor, NPN	2N2222A	101052	1		Used on 301650
				1		" " 301653
				8		" " 301206
				5		" " 301632
32	Transistor, PNP	2N2907A	101053	3		" " 301483
				3		" " 301653
				7		" " 301206
33	Transistor, NPN		151003	3		" " 301653
				1		" " 301483
				1		" " 301650
34	Transistor, PNP		151004	1		" " 301483
				3		" " 301653
35	Diode-Rect. .200V.	1N4003	100127	1		" " 301354
				3		" " 301206
				1		" " 301354
				5		" " 301636
				1		" " 301650
				1		" " 301291
				2		" " 301062
				1		" " 301453
36	Diode, Signal	1N5317	101034	36		" " 301206
				2		" " 301632
37	Diode, Zener. 6.8V.	1N5235B	101058-010	1		" " 301483
				-015		" " 301483
				2		" " 301206
				1		" " 301483
				1		" " 301320
				1		" " 301632
				2		" " 301632
				1		" " 301653
				1		" " 301206
38	Inductor, 5%	220uh	122500-001	1		" " 301206

MASTER SPARES LIST						
PERKIN-ELMER MATERIAL LIST						
Memory Products Division						
TITLE SUPER SERIES MODEL SF & ST DATE SHEET 10 OF						
ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
ELECTRONIC COMPONENTS (cont.)						
39	Inductor, 5%	1.5uh	101074-010	1		Used on 301206
				2		" " 301206
40	Resistor, Variable	10K	100163-103	2		" " 301483
				5K		" " 301632
41	Resistor, Variable	10K	138000-103	2		" " 301483
				-202		" " 301206
42	IC. Quad 2 Input NAND	74S00	123028	1		" " 301320
43	IC. Hex Inverter	74LS04	123030	1		" " 301206
				1		" " 301687
				1		" " 301174
				1		" " 301632
44	IC. Hex Inverter	74LS04	123031	1		" " 301687
				2		" " 301174
45	IC. Triple 3-Input NAND	74LS10	123033	1		" " 301687
				1		" " 301632
46	IC. Quad 2-Input Exclusive OR	74LS86	123038	1		" " 301174
				3		" " 301687
				1		" " 301206
47	IC. Dual Re-Triggerable One Shot	74LS123	123039	4		" " 301174
				2		" " 301687
				3		" " 301632
48	IC. 4-Bit Binary Counter	74LS193	123041	2		" " 301632
				3		" " 301687
49	IC. 4-Bit Binary Counter	74LS293	123042	3		" " 301632
				4		" " 301174
50	IC. 4-Bit Full Adder	74LS283	123033	3		" " 301687
51	IC. Dual Non-Triggerable One Shot	74LS221	123043	2		" " 301632
52	IC. Quad 4-Bit Counter	74LS175	123045	2		" " 301687
53	IC. Hex Schmidt-Trigger Inverter	74LS14	123047	2		" " 301632
				1		" " 301206
54	IC. Dual 4 Input NAND	74LS20	123048	1		" " 301632

MASTER SPARES LIST						
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TITLE SUPER SERIES MODEL SF & ST DATE SHEET 11 OF						
ITEM NO.	DESCRIPTION	PART NO.	RECD	MIN. REV.	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON						
ELECTRONIC COMPONENTS (concluded)						
55	IC. Up-Down Counter	74LS192	123049	1		Used on 301632
56	IC. Quad 2-Input Schmidt-Trigger NAND	74LS132	123067	1		" " 301206
57	IC. Voltage Regulator	7805	125006-005	1		" " 301650
58	IC. Voltage Regulator	7812HC	125006-012	1		" " 301206
59	IC. Voltage Regulator	79M05UC	125007-005	1		" " 301206
60	IC. Voltage Regulator	79M12UC	125008-012	1		" " 301206