PERKIN-ELMER

HIGH PERFORMANCE TAPE DRIVE (HPTD) CONTROLLER

Installation and Maintenance Manual

47-028 R02

The Perkin-Elmer Corporation, Data Systems Group, 2 Crescent Place, Oceanport, New Jersey 07757

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DRAWINGS

PREFACE

This manual provides the technician with the information necessary to install and maintain the High Performance Tape Drive (HPTD) Controller.

Chapter 1 provides an introduction and general information for the controller. Chapter 2 describes the installation of the controller including unpacking, power requirements, configuration, strap options, and testing. Chapter 3 describes the operation and maintenance of the controller.

The following related manuals provide additional detailed information on the controller and the magnetic tape units and formatters:

MANUAL TITLE	PUBLICATION NUMBER
Magnetic Tape Unit Maintenance Manual (STC)	47-024
Formatter Control Unit Maintenance Manual (STC)	47-026
32-Bit Systems User Documentation Summary	50-003
High Performance Tape Drive (HPTD) Programming Manual	50-009
Magnetic Tape Unit Maintenance Manual (TELEX)	51-001
Formatter Control Unit Maintenance Manual (TELEX)	51-002

For further information on the contents of all Perkin-Elmer 32-bit manuals, see the 32-Bit Systems User Documentation Summary.

Revision 02 corrects errors in the Functional Schematic.

The RECVO and OPINCO signals have been reterminated to eliminate possible failures and Pin 03 has been redrawn as an inverter.

CHAPTER 3
OPERATION AND MAINTENANCE

3.1 INTRODUCTION

This chapter provides the information necessary to maintain the HPTD controller. Included are block diagram analysis, controller timing, functional operation, control lines, and functional schematic analysis.

3.2 FORMATTER INFORMATION

The 1935 FCU is a self-contained electronics package for interfacing the controller and from 1 to 4 STC Model 1900 Series MTUs. The FCU is capable of formatting information in NRZI, PE, and GCR formats at speeds of 125 inches per second (IPS) during read and write modes.

The 1935 FCU, when operated in the 1935 magnetic tape system, will read and write ANZI compatible 9-track tapes.

3.3 TAPE UNIT SELECTION

The controller always responds to four sequential addresses. If the hexadecimal address switches at locations 05M and 07M are set up for address X'85', the controller will respond to addresses X'85', X'95', X'A5', and X'B5'. Each address selects a different tape unit as shown in Table 3-1.

TABLE 3-1 TAPE UNIT ADDRESSES

ADDRESS				TAPE UNIT SELECTED
X'0X'	X'4X'	X'8X'	X'CX'	TU 0
X'1X'	X'5X'	X'9X'	X'DX'	TU 1
X'2X'	X'6X'	X'AX'	X'EX'	TU 2
X'3X'	X'7X'	X'BX'	X'FX'	TU 3

X = don't care

It should be noted that the controller address switch at location 05M is designed to respond to four sequential addresses to the interface, but the most significant four bits of that address should be 0, 4, 8, or C. This is shown in Table 3-1.

Once a tape unit has been selected (flip-flop at 01R), it stays addressed until another tape unit is selected.

3.4 CONTROLLER OPERATION

A block diagram of the controller is shown in Figure 3-1. At the top of the figure is the private multiplexor (PMUX) bus, which interfaces to the 3200 SELCH with 16 bits of data and 12 control signals. At the bottom of the figure is the controller bus, which interfaces to the FCU with 8 bits of data, a parity bit, 15 control signals, and 9 bits of multiplexed error status. Data transfers, whether written from the processor or read from the controller bus, are loaded into the first-in/first-out (FIFO) memory via the input multiplexor.

Commands to the controller are stored in latches on the controller. When a motion-type command is issued - for example, Forward File - the controller stores this command and asserts START. The FCU upon receiving a START accepts the desired command and asserts FBUSY, which in turn resets START. The command process is carried out by the FCU until completed, FBUSY is reset, and ready status (RDYS) is set. No motion (NMTN) set signifies that the tape unit is stopped and ready for another command. Overlapping commands are nct allowed and are ignored. The one exception is a rewind operation. During a rewind, FBUSY is asserted until the command is accepted. Operation to other tape units is allowed approximately 150ns after FBUSY is reset on rewinds.

During write-type operations, the controller calculates and sets the parity bit for odd parity and sends it with eight bits of data onto the controller bus. When a halfword cf data reaches the FIFO output, the controller sends a delayed START signal to the FCU, which in turn causes the FCU to request data from the controller. The controller sends the data, a byte at a time, until the FIFO is empty. In read operations, the controller signals the processor of available data via the busy status bit. Parity is checked by the parity checker and the formatter during read operations.

3325

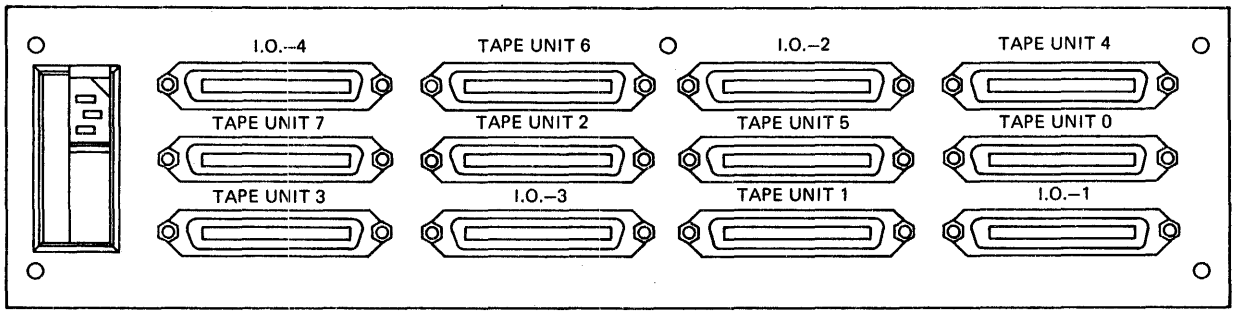


Figure 3-3 Connector Panel Detail for the TELEX Formatter

The I/O signals for the STC controller are shown in Tables 3-2 and 3-3.

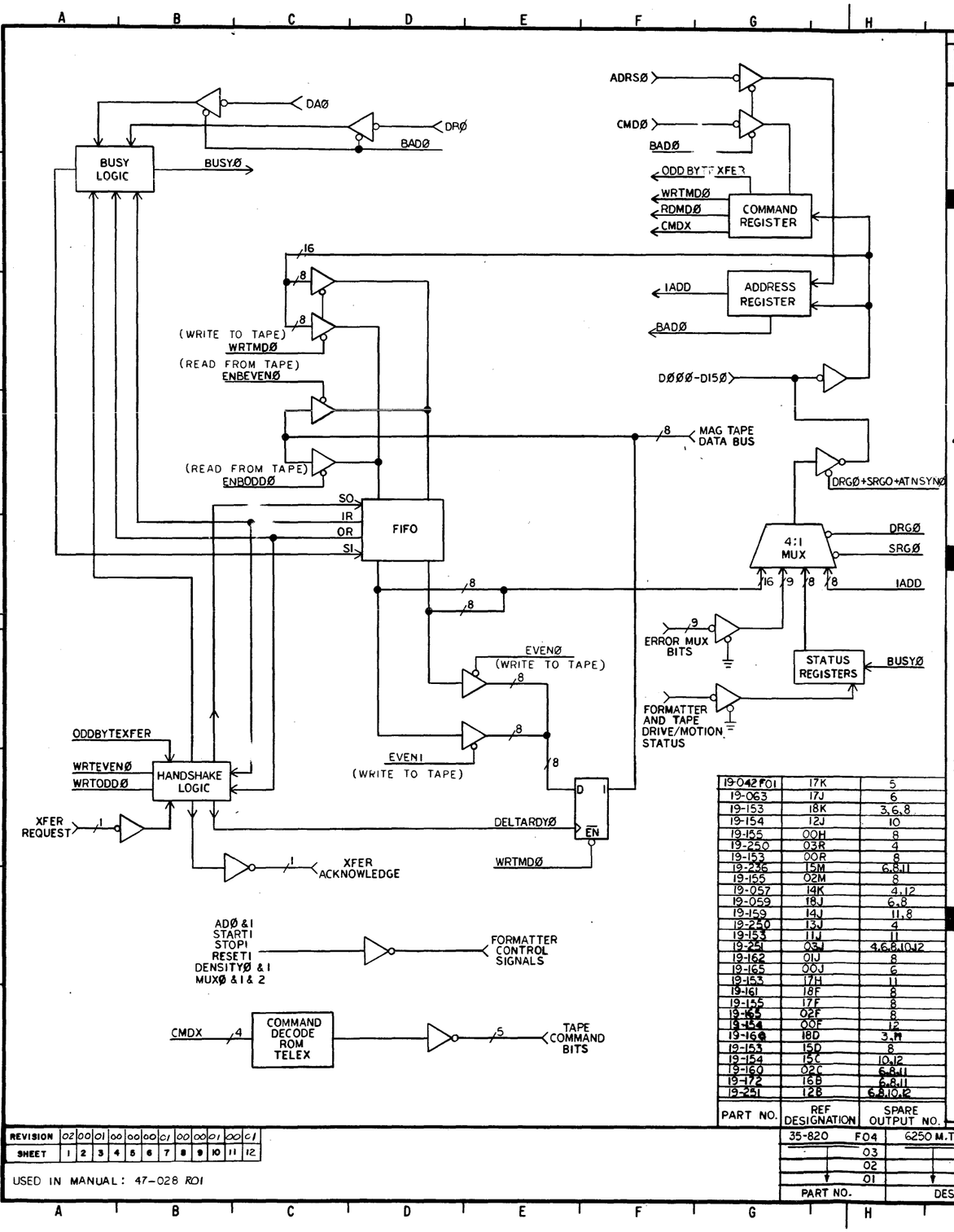
External I/O adapter connections for the TELEX formatter are given in Table 3-4.

TABLE 3-2 INPUT SIGNALS FOR THE STC CONTROLLER

DESCRIPTION	MNEMONIC	NO.	FCU CONNECTOR SIGNAL PIN	FCU CONNECTOR GROUND PIN	TERMINATION RESISTANCE LOCATION
MTU Address 0	AD0	A4	A01	B01	FCU
MTU Address 1	AD1	A4	A02	B02	FCU
Command Select 0	CMD0	A4	A03	B03	FCU
Command Select 1	CMD1	A4	A04	B04	FCU
Command Select 2	CMD2	A4	A05	B05	FCU
Command Select 3	CMD3	A4	A06	B06	FCU
Density Select 0	DS0	A4	A07	B07	FCU
Initiate Command	START	A4	A08	B08	FCU
Terminate Command	STOP	A4	A09	B09	FCU
Transfer Acknowledge	TRAK	A4	A10	B10	FCU
Bi-Directional Data P	DATA-P	A4	A11	B11	BOTH
Bi-Directional Data 0	DATA-0	A4	A12	B12	BOTH
Bi-Directional Data 1	DATA-1	A4	A13	B13	BOTH
Bi-Directional Data 2	DATA-2	A4	A14	B14	BOTH
Bi-Directional Data 3	DATA-3	A4	A15	B15	BOTH
Bi-Directional Data 4	DATA-4	A4	A16	B16	BOTH
Bi-Directional Data 5	DATA-5	A4	A17	B17	BOTH
Bi-Directional Data 6	DATA-6	A4	A18	B18	BOTH
Bi-Directional Data 7	DATA-7	A4	A19	B19	BOTH
System Reset	RESET	A4	A20	B20	BOTH
Select Multiplex 1	SLX1	A4	A21	B22	FCU
Select Multiplex 0	SLX0	A4	A22	B21	FCU
Density Select 1	DS1	A4	A23	B23	FCU
Select Multiplex 2	SLX2	A4	A24	B24	FCU

TABLE 3-3 OUTPUT LINES FROM THE STC CONTROLLER

DESCRIPTION	MNEMONIC	NO.	FCU CONNECTOR SIGNAL PIN	FCU CONNECTOR GROUND PIN	TERMINATION RESISTANCE LOCATION
Slave Status Change	SSC	A4	A25	B25	USER
Oscillator	OSC	A4	A26	B26	USER
End of Tape Status	EOTS	A4	A27	B27	USER
Beginning of Tape Status	BOTS	A4	A28	B28	USER
File Protect Status	FPTS	A4	A29	B29	USER
Rewinding Status	REWS	A4	A30	B30	USER
Error Multiplex-P	ERRMX-P	B4	A1	B1	USER
Error Multiplex-0	ERRMX-0	B4	A2	B2	USER
Error Multiplex-1	ERRMX-1	B4	A3	B3	USER
Error Multiplex-2	ERRMX-2	B4	A4	B4	USER
Error Multiplex-3	ERRMX-3	B4	A5	B5	USER
Error Multiplex-4	ERRMX-4	B4	A6	B6	USER
Error Multiplex-5	ERRMX-5	B4	A7	B7	USER
Error Multiplex-6	ERRMX-6	B4	A8	B8	USER
Error Multiplex-7	ERRMX-7	B4	A9	B9	USER
Formatter Busy	BUSY	B4	A10	B10	USER
Transfer Request	TREQ	B4	A11	B11	USER
Expecting Data	RECV	B4	A12	B12	USER
Identification Burst	ID BRST	B4	A13	B13	USER
Operation Incomplete	OP INC	B4	A14	B14	USER
End of Data Pulse	ENDATP	B4	A15	B15	USER
Tape Mark Status	TMS	B4	A16	B16	USER
Command Reject	REJECT	B4	A17	B17	USER
Overrun Status	OVRNS	B4	A18	B18	USER
Data Check	DATA CHK	B4	A19	B19	USER
ROM Parity Error	ROMPS	B4	A20	B20	USER
Corrected Error	CRERR	B4	A21	B21	USER
Block Sensed	BLOCK	B4	A22	B22	USER
NRZI Status	NRZI	B4	A23	B23	USER
Data Bus Parity Error	BUPER	B4	A24	B24	USER
Online Status	ONLS	B4	A25	B25	USER
High Density Status	HDENS	B4	A26	B26	USER
Ready Status	RDYS	B4	A27	B27	USER
Write Status	WRTS	B4	A28	B28	USER
Reserved		B4	A29	B29	
Reserved		B4	A30	B30	



PART NO.	REF DESIGNATION	SPARE OUTPUT NO.
19-042 F01	17K	5
19-063	17J	6
19-153	18K	3,6,8
19-154	12J	10
19-155	00H	8
19-250	03R	4
19-153	00R	8
19-236	15M	6,8,11
19-155	02M	8
19-057	14K	4,12
19-059	18J	6,8
19-159	14J	11,8
19-250	13J	4
19-153	11J	11
19-251	03J	4,6,8,10,12
19-162	01J	8
19-165	00J	6
19-153	17H	11
19-161	18F	8
19-155	17F	8
19-165	02F	8
19-154	00F	12
19-160	18D	3,11
19-153	15D	8
19-154	15C	10,12
19-160	02C	6,8,11
19-172	16B	6,8,11
19-251	12B	6,8,10,12

CONN	TERM. NO.	CABLE CONNECTOR MAP ROW 2	CABLE CONNECTOR MAP ROW 1	BACK PANEL MAP ROW 1	BACK PANEL MAP ROW 2	TERM. NO.	CONN
				P5	GND	41	
				GND	GND	40	
						39	
						38	
						37	
						36	
						35	
						34	
						33	
						32	
						31	
	29	GND				30	
	28				SWSNSØ	29	
	27		BOTØ			28	
	26		EOTØ			27	
	25			SCLRØ	HWØ	26	
	24		SSCØ		SCHKØ	25	
	23		MUXCMDØ	SNSØ	SBSYØ	24	
	22		DSIØ	SYNØ	ATNØ	23	
	21		MUXØØ	RACKØ	TACKØ	22	
	20		MUXIØ		DAØ	21	
	19		RESETØ	DRØ	CMDØ	20	
	18		DOT07Ø	SRØ	ADRSØ	19	
	17		DOT06Ø	DI4Ø	DI5Ø	18	
	16		DOT05Ø	DI2Ø	DI3Ø	17	
	15		DOT04Ø	DIØØ	DIIØ	16	
	14		DOT03Ø	DØ8Ø	DØ9Ø	15	
	13		DOT02Ø	DØ6Ø	DØ7Ø	14	
	12		DOT01Ø	DØ4Ø	DØ5Ø	13	
	11		DOTØØØ	DØ2Ø	DØ3Ø	12	
	10		PAROTPEØ	DØØØ	DØIØ	11	
	09		TRACKØ			10	
	08		STOPØ			09	
	07		STARTØ			08	
	06		DSØØ			07	
	05		CMDØ3Ø			06	
	04		CMDØ2Ø			05	
	03		CMDØIØ			04	
	02		CMDØØØ			03	
	01		ADIØ			02	
	00	GND	ADØØ	GND	GND	01	
				P5	GND	00	
	29	GND		P5	GND	41	
	28			GND	GND	40	
	27					39	
	26		RDYØ			38	
	25					37	
	24		ONLSØ			36	
	23		BUPERØ			35	
	22		NRZIØ			34	
	21		BLOCKØ			33	
	20		CERRØ			32	
	19					31	
	18		DATCHKØ			30	
	17		FOVRNØ			29	
	16		REJECTØ			28	
	15		TMSØ			27	
	14		ENDATPØ			26	
	13		OPINCØ			25	
	12					24	
	11		RECVØ			23	
	10		TREQØ			22	
	09		FBSYØ			21	
	08		ERRMX07Ø			20	
	07		ERRMX06Ø			19	
	06		ERRMX05Ø			18	
	05		ERRMX04Ø			17	
	04		ERRMX03Ø			16	
	03		ERRMX02Ø			15	
	02		ERRMX01Ø			14	
	01		ERRMXØØØ			13	
	00	GND	ERRMX0P0			12	
						11	
						10	
						09	
						08	
						07	
						06	
						05	
						04	
						03	
						02	
				GND	GND	01	
				P5	GND	00	

FROM	TO	MNEMONIC	SHEET
00K-10	00K-72	GND	6
00R-02	00R-19	SNSO	6
00R-01	00R-19	SWNSO	6
14K-10	14K-72	TELEXI	5

STRAPPING TABLE

NO.	MNEMONIC	SHEET
127-6	03K-13	2
125-6	GND	2
117-6	BBSYI	3
116-6	BWRTMDI	3
115-6	BRDMDI	3
114-6	TREQI	7
113-6	TRACKI	3
112-6	STOPI	7
111-6	STARTI	3

TEST POINTS

THE REVISION LEVEL OF THIS SHEET IS CONSIDERED TO BE THE REVISION LEVEL OF THE DOCUMENT.

BOARD	REV LEVEL
35-820 F04	R03
03	RC3
02	R03
01	R03

BOARDS AGREEING WITH THIS SCHEMATIC MUST BE AT LEAST THE FOLLOWING REVISION LEVEL.

REVISION	02	00	01	00	00	00	01	00	00	01	00	01
SHEET	1	2	3	4	5	6	7	8	9	10	11	12

USED IN MANUAL: 47-028 R01

PART NO.	DESCRIPTION	FOR VARIATION SEE SHEET
35-820 F04	6250 M.T.I. TELEX W/ IK OPTION	5,6,8
03	S.T.C. W/ IK OPTION	5,6,8
02	TELEX W/O IK OPTION	5,6,8
01	S.T.C. W/O IK OPTION	5,6,8

REVISIONS

	INIT	DATE
PRE PRODUCTION APPROVAL		
DEV	[illegible]	1/12/82
PROD	MJQ	1/12/82

IN AREA A9 ADD REV LEVELS OF SHEETS 1 THRU 12. IN AREA N9 REV LEVELS OF 35-820 F01, F02, F03 & F04 WERE R00. REVISED SHEET 3. ON CABLE CONNECTOR MAP, CONN 4, 120-1 WAS MUXØØ, 121-1 WAS MUXIØ, 122-1 WAS DSØØ, 106-1 WAS DSIØ.

VAP	5075	M	5-4-82	R01

RELEASED FOR PRODUCTION

ENG. W. Rice DATE 5/21/82

ADDED MNEMONIC "RECVØ" TO 111-3 & "OPINCØ" TO 113-3. REVISED SHTS 1, 7, 10 & 12

KR	511	5149	M	6-18-82	R02

UNLESS OTHERWISE SPECIFIED

SCALE:	TOLERANCE:
DIMENSIONS ARE IN INCHES	.XXX ± .005 .X ± .03 .XX ± .02 ANGLES ± 1°

NAME		TITLE	DATE
	V. TAHAMONT	DES/DFT	6-11-81
R. CERO		SUPV	
E. GREENSTEIN		TEST	
CHREPTA/HULL		ENG	
W. RICE		MGR	
R.A. BARKER		QC	

PERKIN-ELMER

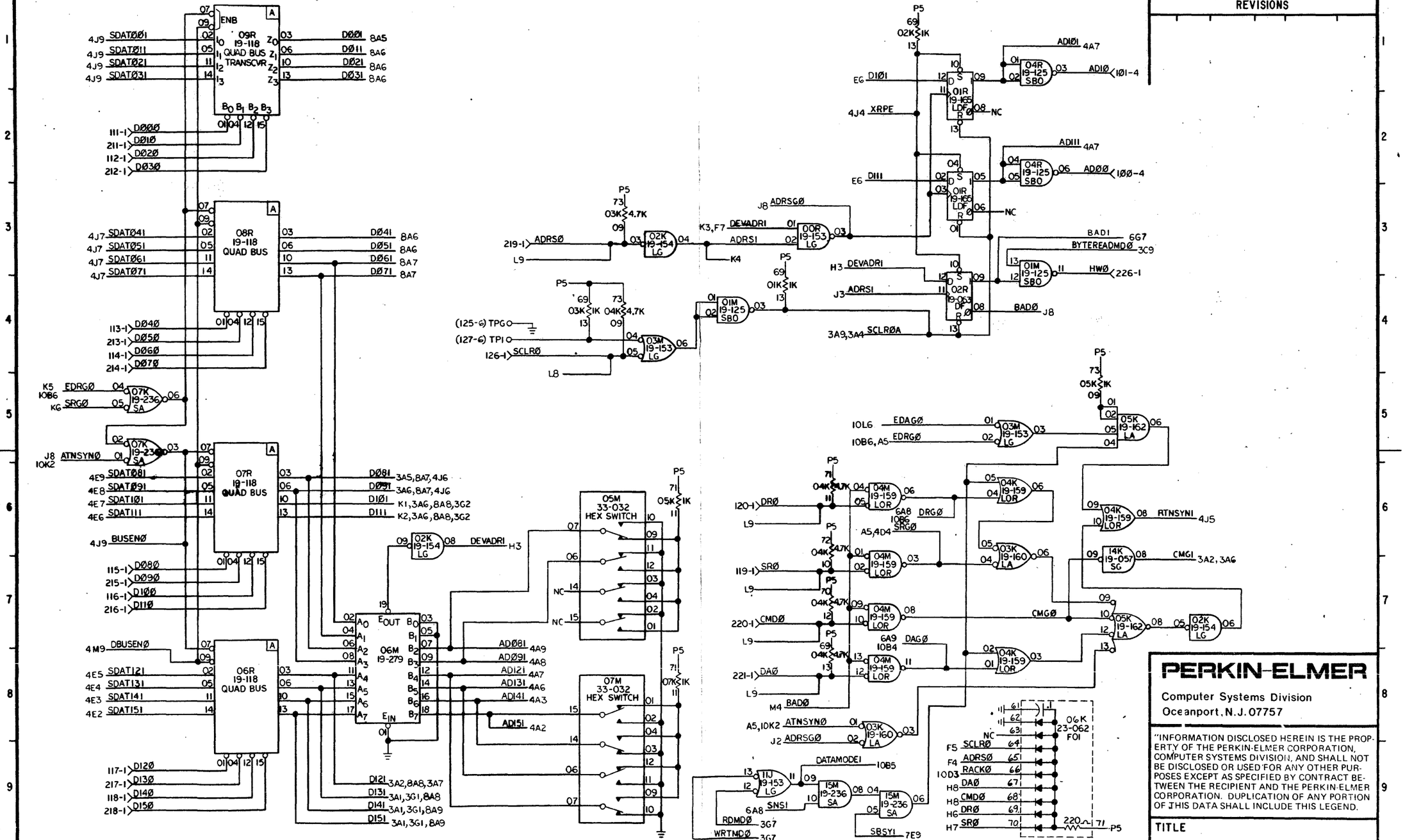
Computer Systems Division
Oceanport, N.J. 07757

TITLE SCHEMATIC

6250 M.T.I.

TASK	SHT
03192	
DWG 35-820 R02 D08	1-12

REVISIONS



NOTES PREFERRED ADDRESS IS X85

BRUNING 44-131 60579-2

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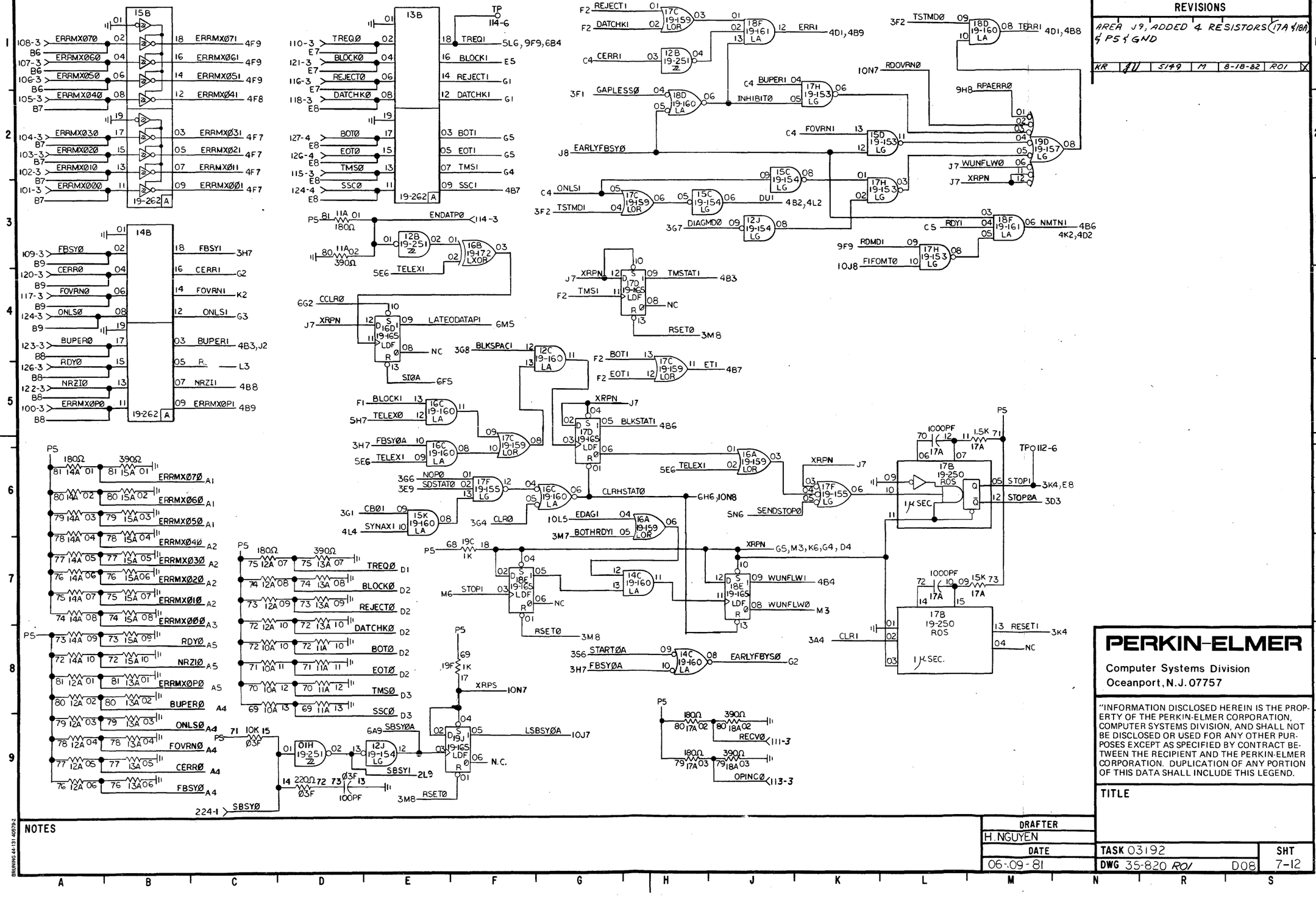
TITLE

DRAFTER	
V TAHAMONT	
DATE	
6-4-81	
TASK 03912	SHT 2 - 12
DWG 35-820	D08



REVISIONS

AREA J9, ADDED 4 RESISTORS (17A & 18A) & PS & GND						
KR	811	5149	M	8-18-82	R01	X

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TITLE

NOTES

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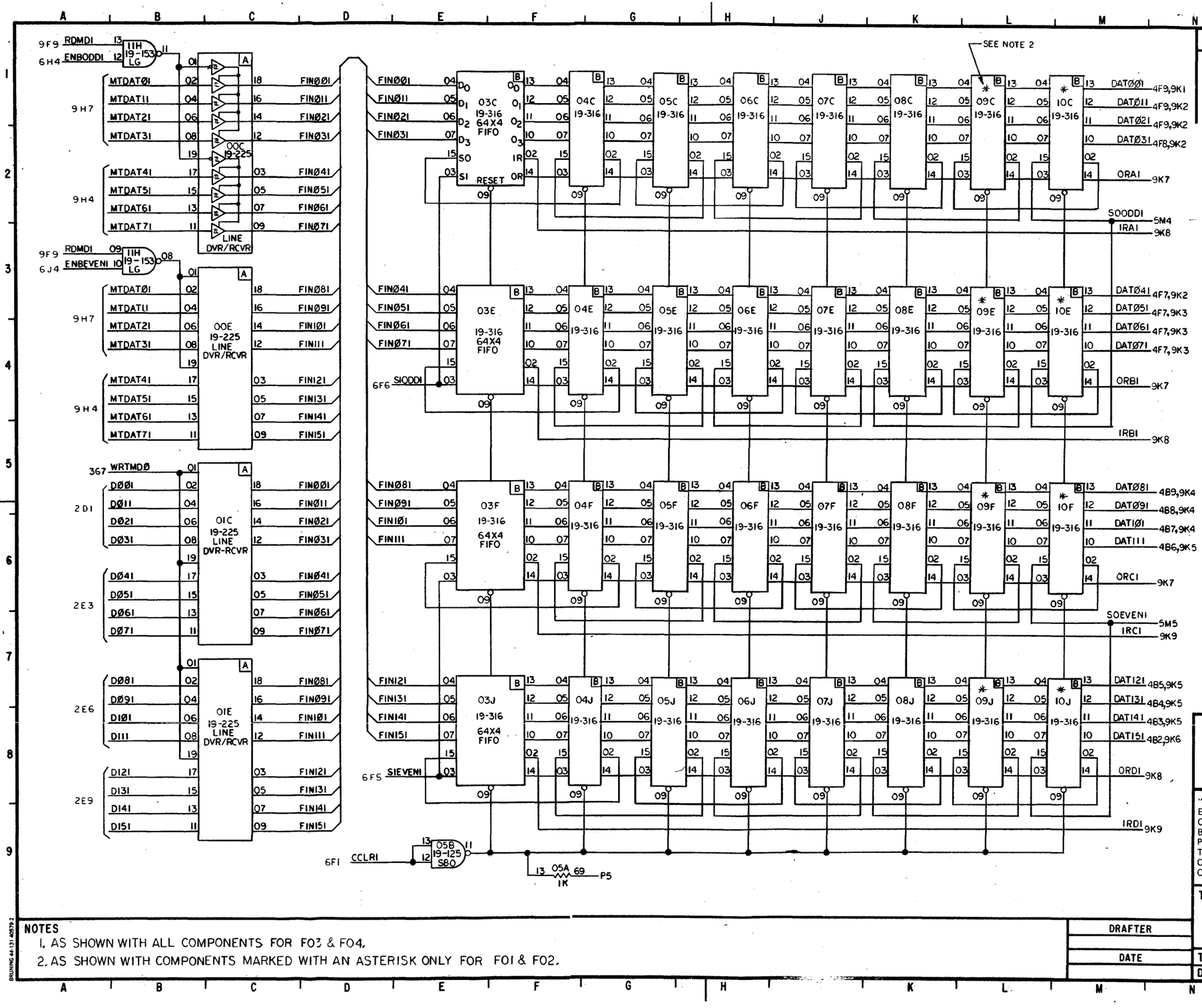
DATE	06-09-81
TASK	03192
DWG	35-820 R01 D08
SHT	7-12



NOTES
1. AS SHOWN WITH ALL COMPONENTS FOR FO3 & FO4.
2. AS SHOWN WITH COMPONENTS MARKED WITH AN ASTERISK ONLY FOR FO1 & FO2.

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Ocean port, N.J. 07757

TITLE

DRAFTER

DATE

TASK

DWG 35-820 D08

SHT 8 -12

NET	MNEMONIC	SHT
0001	00F02	04
0002	00F04	04
0003	00F06	04
0004	00F08	04
0005	00H06	04
0006	00K13	04
0007	00R06	04
0008	00R11	04
0009	01H04	10
0010	01H06	10
0011	01H08	10
0012	01H09	10
0013	01H10	04
0014	01J06	04
0015	01M08	06
0016	02C03	06
0017	02F05	06
0018	02H03	10
0019	02H06	04
0020	02H08	06
0021	02J06	10
0022	02J12	10
0023	02K06	02
0024	02K10	10
0025	02K12	10
0026	02K71	10
0027	03C10	08
0028	03C11	08
0029	03C12	08
0030	03C13	08
0031	03C14	08
0032	03C15	08
0033	03E10	08
0034	03E11	08
0035	03E12	08
0036	03E13	08
0037	03E14	08
0038	03E15	08
0039	03F10	08
0040	03F11	06
0041	03F11	08
0042	03F12	08
0043	03F13	08
0044	03F14	08
0045	03F15	08
0046	03F72	07
0047	03J10	08
0048	03J11	08
0049	03J12	08
0050	03J13	08
0051	03J14	08
0052	03J15	08
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0054	03K06	02
0055	03K08	04
0056	03K11	06
0057	03M03	02
0058	03M06	02
0059	03M08	10
0060	03M11	10
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0062	03R07	04
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0066	04C12	08
0067	04C13	08
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0069	04C15	08
0070	04E10	08
0071	04E11	08
0072	04E12	08
0073	04E13	08
0074	04E14	08
0075	04E15	08
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0077	04F11	08
0078	04F12	08
0079	04F13	08
0080	04F14	08
0081	15	08
0082	10	08
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0087	04J15	08
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0090	04K08	02
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0095		
0096	05C10	08
0097	05C11	08
0098	05C12	08
0099	05C13	08
0100	05C14	08
0101	05C15	08
0102	05E10	08
0103	05E11	08
0104	05E12	08
0105	05E13	08
0106	05E14	08
0107	05E15	08
0108	05F10	08
0109	05F11	08
0110	05F12	08
0111	05F13	08
0112	05F14	08
0113	05F15	08
0114	05J10	08
0115	05J11	08
0116	05J12	08
0117	05J13	08
0118	05J14	08
0119	05J15	08
0120	05K01	02
0121	05K06	02
0122	05K08	02
0123	05K11	02
0124	06C10	08
0125	06C11	08
0126	06C12	08
0127	06C13	08
0128	06C14	08
0129	06C15	08
0130	06E10	08
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0135	06E15	08
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0138	06F12	08
0139	06F13	08
0140	06F14	08
0141	06F15	08
0142	06J10	08
0143	06J11	08
0144	06J12	08
0145	06J13	08
0146	06J14	08
0147	06J15	08
0148	07C10	08
0149	07C11	08
0150	07C12	08
0151	07C13	08
0152	07C14	08
0153	07C15	08
0154	07E10	08
0155	07E11	08
0156	07E12	08
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0159	07E15	08
0160	07F10	08
0161	07F11	08
0162	07F12	08
0163	07F13	08
0164	07F14	08
0165	07F15	08
0166	07J10	08
0167	07J11	08
0168	07J12	08
0169	07J13	08
0170	07J14	08
0171	07J15	08
0172	07K06	02
0173	07K08	04
0174	07K11	02
0175	08B03	09
0176	08B06	09
0177	08B10	09
0178	08B13	09
0179	08C10	08
0180	08C11	08
0181	08C12	08
0182	08C13	08
0183	08C14	08
0184	08C15	08
0185	08E10	08
0186	08E11	08
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0191	08F10	08
0192	08F11	08
0193	08F12	08
0194	08F13	08
0195	08F14	08
0196	08F15	08
0197	08J10	08
0198	08J11	08
0199	08J12	08
0200	08J13	08
0201	08J14	08
0202	08J15	08
0203	09B03	09
0204	09B06	09
0205	09B10	09
0206	09B13	09
0207	09C10	08
0208	09C11	08
0209	09C12	08
0210	09C13	08
0211	09C14	08
0212	09C15	08
0213	09E10	08
0214	09E11	08
0215	09E12	08
0216	09E13	08
0217	09E14	08
0218	09E15	08
0219	09F10	08
0220	09F11	08
0221	09F12	08
0222	09F13	08
0223	09F14	08
0224	09F15	08
0225	09J10	08
0226	09J11	08
0227	09J12	08
0228	09J13	08
0229	09J14	08
0230	09J15	08
0231	10K09	03
0232	10K10	03
0233	10K11	03
0234	10K12	03
0235	10R11	03
0236	10R12	03
0237	10R13	03
0238	10R14	03
0239	11H03	09
0240	11H08	08
0241	11H11	08
0242	11J03	06
0243	11J06	06
0244	11J08	06
0245	11K08	03
0246	12A13	09
0247	12B02	07
0248	12B04	07
0249	12C03	09
0250	12C06	06
0251	12C08	06
0252	12C11	07
0253	12D08	06
0254	12E06	06
0255	12E08	06
0256	12J08	07
0257	12R02	03
0258	12R07	03
0259	12R10	03
0260	12R15	03
0261	13C08	06
0262	13D03	09
0263	13D06	09
0264	13D08	09
0265	13D11	09
0266	13E06	06
0267	13E08	06
0268	13F04	05
0269	13F14	05
0270	13F15	05
0271	13J06	05
0272	13J07	05
0273	13K06	03
0274	13K12	04
0275	14C03	06
0276	14C11	07
0277	14D04	03
0278	14D06	06
0279	14D07	06
0280	14D14	03
0281	14D15	03
0282	14F03	05
0283	14F06	05
0284	14F08	05
0285	14F11	05
0286	14J03	05
0287	14J06	05
0288	14J11	04
0289	14K10	03
0290	14M06	04
0291	14M08	04
0292	14R10	03
0293	14R11	03
0294	14R12	03
0295	14R14	03
0296	15C08	07
0297	15C12	05
0298	15D08	10
0299	15D11	07
0300	15E06	05
0301	15E08	05
0302	15F03	05
0303	15F06	05
0304	15F08	05
0305	15F11	05
0306	15J06	05
0307	15J08	05
0308	15K03	03
0309	15K06	03
0310	15K08	07
0311	15K11	10
0312	15M03	04
0313	15M06	02
0314	15M08	02
0315	16A03	07
0316	16A06	07
0317	16B03	07
0318	16C03	03
0319	16C08	07
0320	16C11	07
0321	16D05	03
0322	16E06	03
0323	16E08	03
0324	16F08	05
0325	16J03	05
0326	16J06	05
0327	16J11	05
0328	16K08	10
0329	17B06	07
0330	17B07	07
0331	17B14	07
0332	17B15	07
0333	17C03	07
0334	17C06	07
0335	17C08	07
0336	17D06	07
0337	17E06	03
0338	17F06	07
0339	17F12	07
0340	17H03	07
0341	17H06	07
0342	17H08	07
0343	17H11	05
0344	17K04	10
0345	17K11	10
0346	17K14	10
0347	17K15	10
0348	18E05	07
0349	18F08	06
0350	18H05	10
0351	18J06	10
0352	18J08	10
0353	18K11	10
0354	19D08	07
0355	19J09	03
0356	AD00	02
0357	AD081	02
0358	AD091	02
0359	AD10	02
0360	AD101	02
0361	AD111	02
0362	AD121	02
0363	AD131	02
0364	AD141	02
0365	AD151	02
0366	ADRS0	02
0367	ADRS1	02
0368	ADRSG0	02
0369	ATN0	10
0370	ATN1	04
0371	ATNSYN0	10
0372	BAD0	02
0373	BAD1	02
0374	BBSY1	03
0375	BLKSPAC1	03
0376	BLKSTAT1	07
0377	BLOCK0	07
0378	BLOCK1	07
0379	BOT0	07
0380	BOT1	07
0381	BOTHRDY1	05
0382	BRDM1	03
0383	BSY0	05
0384	BSY1	04
0385	BSYINT0	04
0386	BUPER0	07
0387	BUPER1	07
0388	BUSEN0	02
0389	BWRTND1	03
0390	BYTEREADMD0	03
0391	CB00	03
0392	CB01	03
0393	CB11	03
0394	CCLR0	06
0395	CCLR1	06
0396	CERR0	07
0397	CERR1	07
0398	CLR0	03
0398	CLR0	03
0399		
0400	CLR1	03
0401	CLRCMD0	03
0402	CLRHSTAT0	07
0403	CMD0	02
0404	CMD000	03
0405	CMD010	03
0406	CMD020	03
0407	CMD030	03
0408	CMG0	02
0409	CMG1	02
0410	D000	02
0411	D001	02
0412	D010	02
0413	D011	02
0414	D020	02
0415	D021	02
0416	D030	02
0417	D031	02
0418	D040	02
0419	D041	02
0420	D050	02
0421	D051	02
0422	D060	02
0423	D061	02
0424	D070	02
0425	D071	02
0426	D080	02
0427	D081	02
0428	D090	02
0429	D091	02
0430	D100	02
0431	D101	02
0432	D110	02
0433	D111	02
0434	D120	0
0435	D121	02
0436	D130	02
0437	D131	02
0438	D140	02
0439	D141	02
0440	D150	02
0441	D151	02
0442	DA0	02
0443	DAG0	02
0444	DARM0	04

REVISIONS

NOTES

DRAFTER

DATE

PERKIN-ELMER

Computer Systems Division
Oceanport, N.J. 07757

TITLE

TASK 03192

DWG 35-820 D08

SHT 11-12

NET	MNEMONIC	SHT
0445	DAT001	08
0446	DAT011	08
0447	DAT021	08
0448	DAT031	08
0449	DAT041	08
0450	DAT051	08
0451	DAT061	08
0452	DAT071	08
0453	DAT081	08
0454	DAT091	08
0455	DAT101	08
0456	DAT111	08
0457	DAT121	08
0458	DAT131	08
0459	DAT141	08
0460	DAT151	08
0461	DATAMODE1	02
0462	DATCHK0	07
0463	DATCHK1	07
0464	DBUSEN0	02
0465	DCLR0	03
0466	DELTA100	05
0467	DEVADR0	02
0468	DEVADR1	02
0469	DIAGMD0	03
0470	DOT000	09
0471	DOT010	09
0472	DOT020	09
0473	DOT030	09
0474	DOT040	09
0475	DOT050	09
0476	DOT060	09
0477	DOT070	09
0478	DRQ	02
0479	DRQ0	02
0480	DS00	03
0481	DS01	03
0482	DS10	03
0483	DS11	03
0484	DU1	07
0485	DUINT0	04
0486	EARLYPBSY0	07
0487	EDAG0	10
0488	EDAG1	10
0489	EDRG0	10
0490	EDRG1	10
0491	ENB1	04
0492	ENBEVEN1	06
0493	ENBODD1	06
0494	ENDATP0	07
0495	EOT0	07
0496	EOT1	07
0497	ERR1	07
0498	ERRINT0	04
0499	ERRNX000	07
0500	ERRNX001	07
0501	ERRNX010	07
0502	ERRNX011	07
0503	ERRNX020	07
0504	ERRNX021	07
0505	ERRNX030	07
0506	ERRNX031	07
0507	ERRNX040	07
0508	ERRNX041	07
0509	ERRNX050	07
0510	ERRNX051	07
0511	ERRNX060	07
0512	ERRNX061	07
0513	ERRNX070	07
0514	ERRNX071	07
0515	ERRNXOP0	07
0516	ERRNXOP1	07
0517	ET1	07
0518	EVEN1	05
0519	EXSAVE1	04
0520	FBSY0	07
0521	FBSY0A	03
0522	FBSY1	07
0523	FIFONT0	07
0524	FIN01	08
0525	FIN101	08
0526	FIN11	08
0527	FIN111	08
0528	FIN121	08
0529	FIN131	08
0530	FIN141	08
0531	FIN151	08
0532	FIN21	08
0533	FIN31	08
0534	FIN41	08
0535	FIN51	08
0536	FIN61	08
0537	FIN71	08
0538	FIN81	08
0539	FIN91	08
0540	FIVE0	03
0541	FOVRN0	07
0542	FOVRN1	07
0543	GAPLESS0	03
0544	GND00K	04
0545	GND03E	04
0546	GND05E	02
0547	GND06A	03
0548	GND06K	02
0549	GND06M	02
0550	GND07A	03
0551	GND07M	02
0552	GND08B	09
0553	GND08K	04
0554	GND08M	04
0555	GND09B	09
0556	GND09K	04
0557	GND09M	04
0558	GND10A	09
0559	GND10K	03
0560	GND10M	04
0561	GND10R	03
0562	GND11M	04
0563	GND12M	06
0564	GND13B	07
0565	GND13F	05
0566	GND13J	05
0567	GND14B	07
0568	GND14D	06
0569	GND14R	03
0570	GND15B	07
0571	GND15E	05
0572	GND16M	05
0573	GND17B	07
0574	GND17K	10
0575	HW0	02
0576	INHIBIT0	07
0577	IRA1	08
0578	IRB1	08
0579	IRC1	08
0580	IRD1	08
0581	IRDIEVEN1	09
0582	IRDIODD1	09
0583	LAST10	06
0584	LATEODATAP1	07
0585	LATREQ1	05
0586	LSBSY0A	07
0587	MSB1	03
0588	MTDAT01	09
0589	MTDAT11	09
0590	MTDAT21	09
0591	MTDAT31	09
0592	MTDAT41	09
0593	MTDAT51	09
0594	MTDAT61	09
0595	MTDAT71	09
0596	MUI00	03
0597	MUI10	03
0598	MUICMD0	03
0599	MI001	03
0600	MI011	03
0601	MI021	03
0602	MICMD1	05
0603	MNTN1	07
0604	MNTNINT0	04
0605	MOP0	03
0606	NRZ10	07
0607	NRZ11	07
0608	ODD1	05
0609	ODDBYTE1	06
0610	ONLS0	07
0611	ONLS1	07
0612	OOH12	04
0613	OBA1	08
0614	OBB1	08
0615	OBC1	08
0616	OBD1	08
0617	OBDIEVEN1	09
0618	OBDIODD1	09
0619	PAROTPE0	09
0620	PAROTPE1	09
0621	PAROUT1	09
0622	RACK0	10
0623	RACK1	10
0624	RDBST1	05
0625	RDMD0	03
0626	RDMD0	03
0627	RDMD1	09
0627	RDMD1	09
0628		
0629	RDOVRN0	10
0630	RDOVRN1	10
0631	RDTREQ0	06
0632	RDI0	07
0633	RDI0A	06
0634	RDI1	07
0635	READRDY1	05
0636	REJECT0	07
0637	REJECT1	07
0638	RESET0	03
0639	RESET1	07
0640	RPAERR0	09
0641	RPERR1	09
0642	RSET0	03
0643	RSET0	03
0644	SBSY0	07
0645	SBSY0A	07
0646	SBSY1	07
0647	SCHK0	06
0648	SCHK0A	06
0649	SCLR0	02
0650	SCLR0A	02
0651	SDAT001	04
0652	SDAT011	04
0653	SDAT021	04
0654	SDAT031	04
0655	SDAT041	04
0656	SDAT051	04
0657	SDAT061	04
0658	SDAT071	04
0659	SDAT081	04
0660	SDAT091	04
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0662	SDAT111	04
0663	SDAT121	04
0664	SDAT131	04
0665	SDAT141	04
0666	SDAT151	04
0667	SDSTAT0	03
0668	SELA1	04
0669	SELB1	04
0670	SENDSTOP0	05
0671	SHIFTPULS1	05
0672	SIO	06
0673	SIOA	06
0674	SI1	06
0675	SIEVEN1	06
0676	SIODD1	06
0677	SMS0	06
0678	SMSOA	06
0679	SMS1	06
0680	SO1	05
0681	SOEVEN1	05
0682	SOODD1	05
0683	SRO	02
0684	SRG0	02
0685	SSC0	07
0686	SSC1	07
0687	START0	03
0688	STARTOA	03
0689	START1	03
0690	STOCLR0	03
0691	STOP0	03
0692	STOPOA	07
0693	STOP1	07
0694	SWSMS0	06
0695	SYN0	04
0696	SYNAI0	04
0697	SYNAI1	04
0698	TACK0	10
0699	TACK1A	05
0700	TDAT01	09
0701	TDAT11	09
0702	TDAT21	09
0703	TDAT31	09
0704	TDAT41	09
0705	TDAT51	09
0706	TDAT61	09
0707	TDAT71	09
0708	TELEX0	05
0709	TELEX1	05
0710	TERR1	07
0711	THS0	07
0712	THS1	07
0713	THSTAT1	07
0714	TP1	02
0715	TRACK0	03
0716	TRACK1	03
0717	TREQ0	07
0718	TREQ1	07
0719	TSTMD0	03
0720	TSTMD1	03
0721	WRTBSY1	05
0722		
0723	WRTMD0	03
0723	WRTMD0	03
0724	WRTMD1	03
0725	WRTODDBYTE0	03
0726	WRTODDBYTE1	03
0727	WRTRDY1	05
0728	WUNFLW0	07
0729	WUNFLW1	07
0730	XRPE	02
0731	XRPF	06
0732	XRPH	05
0733	XRPK	04
0734	XRPM	07
0735		
0736		
0737	XRPQ	03
0738	XRPR	03
0739	XRPS	07
0740	XRPY	05
0741	RECVØ	07
0742	OPINCØ	07
0743	GND	07
0744	P5	07

REVISIONS

ADDED NETS 741- 744

KR	AV	5149	M	8/26/82	R01	X

NOTES

PERKIN-ELMER

Computer Systems Division
Oceanport, N.J. 07757

DRAFTER

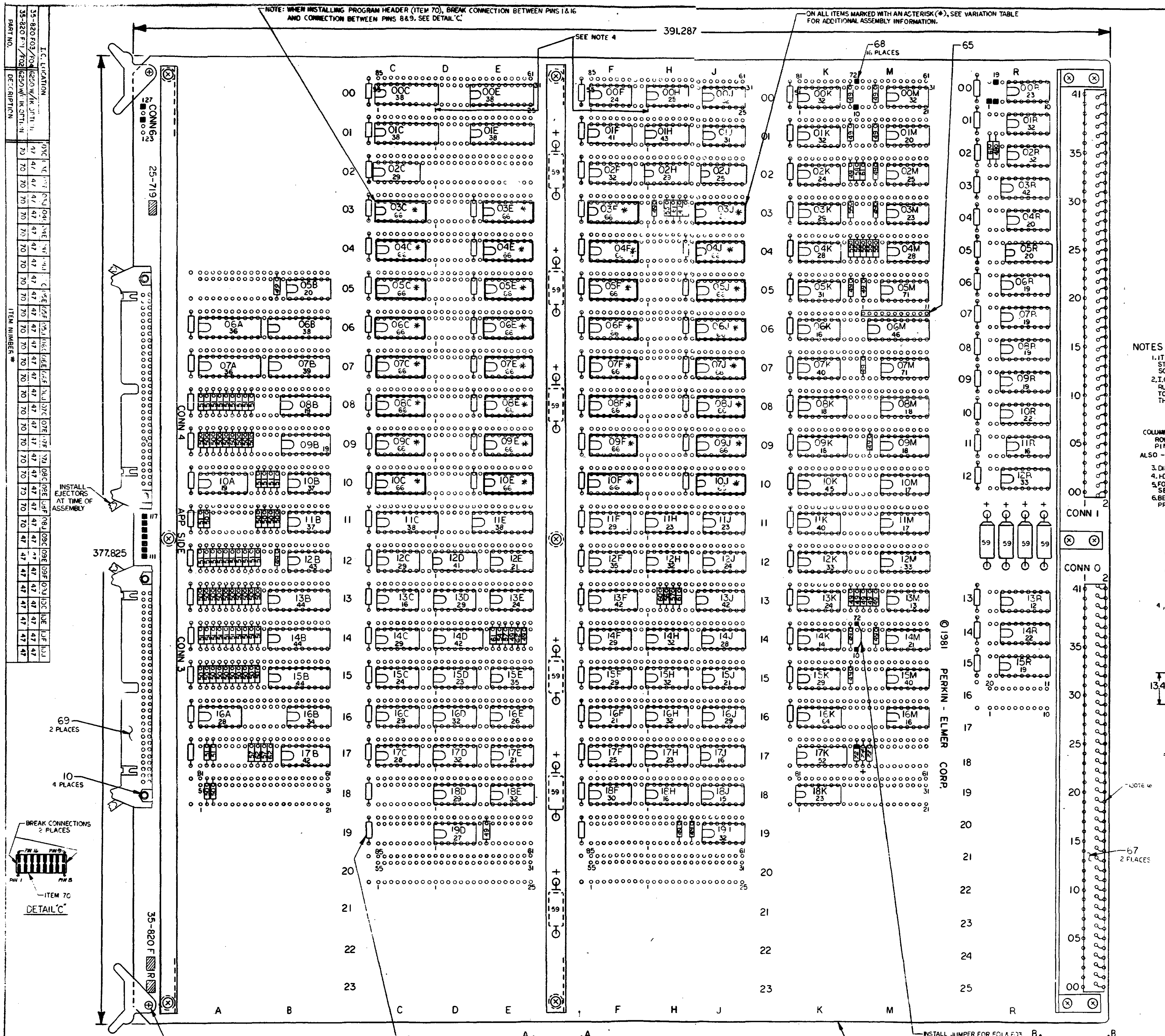
DATE

TITLE

TASK 03192

DWG 35-820 R01 D08

SHT 12-12



MILLIMETER	INCH
1.57	.062
3.18	.125
13.46	.530
377.825	14.875
391.287	15.40

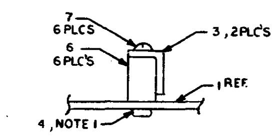
USED IN MANUAL 47-028

NOTES

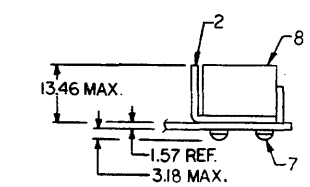
1. ITEM 4 (PHN SCREW) TO BE MOUNTED TO CENTER STANDOFF OF FRONT & MIDDLE STIFFENERS ON SOLDER SIDE ONLY.
2. I.C. PACK LOCATIONS ARE GIVEN ON THE WIRE RUN LIST AS ROW A C F K OR R ONLY. TRANSLATE TO ACTUAL POSITIONS ON THIS ASSY BY USING THE FOLLOWING EXAMPLE;

RUN LIST LOCATION		SCHEMATIC ASSY LOCATION
00F13 (COLUMN, ROW, PIN)	=	00H03
ALSO -	=	

3. DIMENSIONS ARE IN MILLIMETERS.
4. ⊢ DENOTES PIN 1 IN COLUMNS D & H.
5. FOR MOUNTING OF STANDARD HARDWARE SEE 16-642 D12.
6. BEND PINS CLOSEST TO EDGE OF BOARD INWARD PRIOR TO SOLDERING.



PARTIAL VIEW A-A
TYPICAL 2 PLCS



PARTIAL VIEW B-B
TYPICAL 3 PLACES

REVISIONS

PRE PRODUCTION APPROVAL	INIT	DATE
DEV		
PROD		

CALLOUT FOR ITEM 63 SPECIFIED 99 PLACES. IN VIEW B-B CALLOUTS FOR ITEMS 2, 7 & 8 WERE NOT SPEC. NOTE FOR EJECTORS ON ITEM 69 WAS NOT SPEC

UJP		5075	M	5-4-82	R01

RELEASED FOR PRODUCTION
MFG. ENG. ________ DATE ________

ADDED 4 RESISTORS, 2 ITEM 51 AT 17A AND 2 ITEM 50 AT 18A.

KR		5149	M	8-18-82	R02

ADDED RESI... ITEM 49 ... (11-11).

JAH		5211	M	11-2-82	R03

UNLESS OTHERWISE SPECIFIED	
SCALE: 2:1	TOLERANCE:
DIMENSIONS (SEE NOTE 3)	.XXX ± .005 .X ± .03 .XX ± .02 ANGLES ± 1°

NAME		TITLE	DATE
V. PERRI	H. NGUYEN	DES/DFT	
R. CERO		SUPV	
		CHK	
S. CHREFTA		ENG	
W. RICE		MGR	
R.A. BARKER		QC	

PERKIN-ELMER
Computer Systems Division
Oceanport, N.J. 07757

TITLE ASSEMBLY 6250 M.T.I (256 POSITION)

TASK 03192	SHT
DWG 35-820 R03 E03	1-1

MANUAL UPDATE PACKAGE COVER SHEET

MANUAL TITLE: HIGH PERFORMANCE TAPE DRIVE (HPTD) CONTROLLER
Installation and Maintenance Manual

PUBLICATION NUMBER: 47-028

OLD REVISION LEVEL: R01

ECN NUMBERS: 5149

NEW REVISION LEVEL: R02

This package updates the old pages of the subject manual with the new pages. Please discard old pages.

OLD PAGES	NEW PAGES
Title Sheet, R00	Title Sheet/Disclaimer, R02
Sheet i, R01	Sheet i, R02
Sheet ii, R00	Sheet ii, R02
Sheet iii, R01	Sheet iii, R02
Sheet v, R01	Sheet v, R02
Sheet 3-1, R00	Sheet 3-1, R02
Sheet 3-2, R00	Sheet 3-2, R00
Sheet 3-5, R00	Sheet 3-5, R02
Sheet 3-6, R00	Sheet 3-6, R00
35-820 R01D08, Sheets 1, 2, 7, 8, 11, 12	35-820 R02D08, Sheets 1, 2, 7, 8, 11, 12
35-820 R01E03, Sheet 1 of 1	35-820 R02E03, Sheet 1 of 1