

PERKIN-ELMER

**HIGH PERFORMANCE
TAPE DRIVE (HPTD) CONTROLLER**

Installation and Maintenance Manual

47-028 R05

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Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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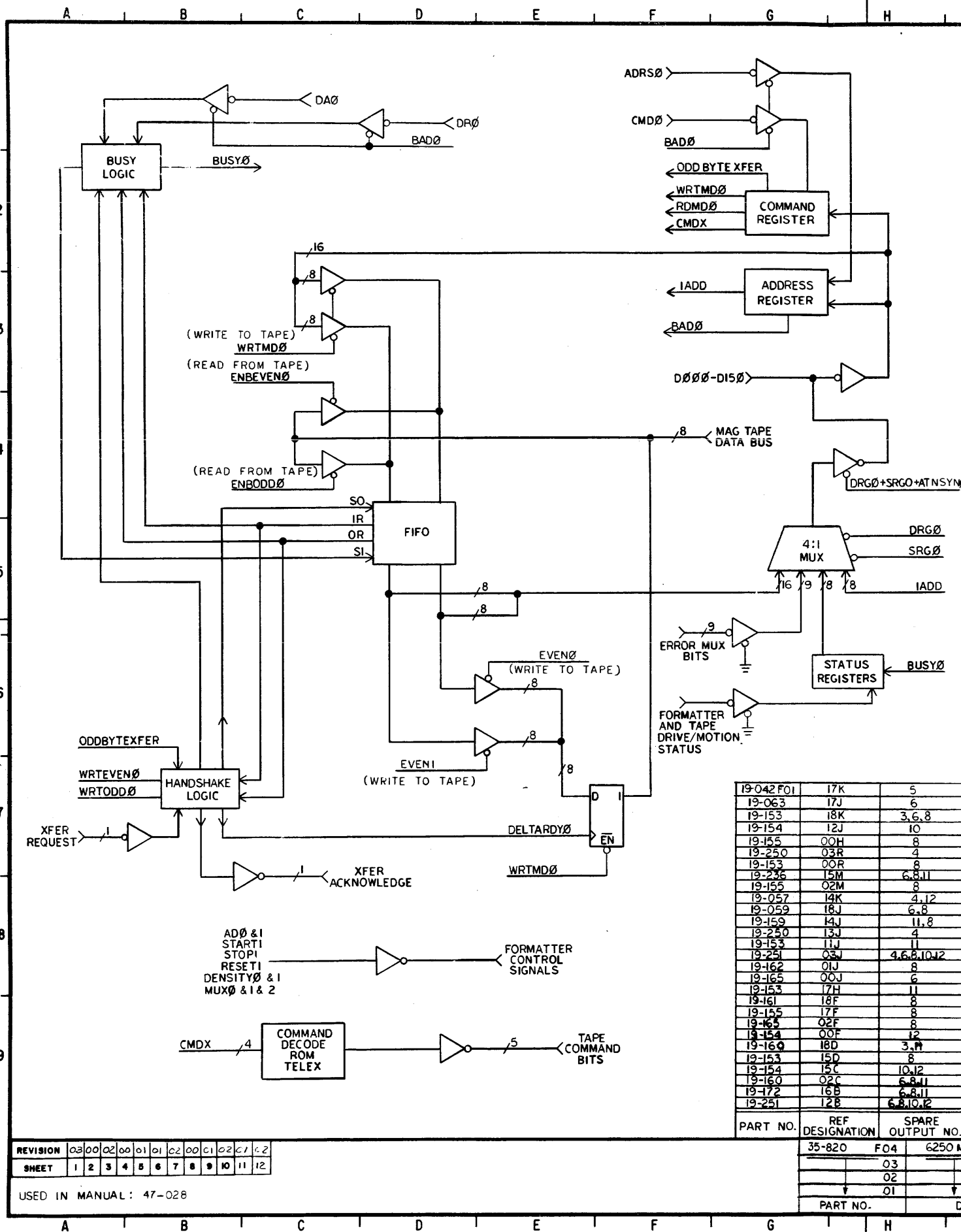
PREFACE

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.

Revisions 03, 04 and 05 correct errors in the functional schematic and call out errors on the assembly drawing. |

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



TERM. NO.	CABLE CONNECTOR MAP		BACK PANEL MAP		TERM. NO.
	2	1	1	2	
41					41
40					40
39					39
38					38
37					37
36					36
35					35
34					34
33					33
32					32
31					31
30					30
29	GND			SWSNS0	29
28					28
27					27
26					26
25					25
24					24
23					23
22					22
21					21
20					20
19					19
18					18
17					17
16					16
15					15
14					14
13					13
12					12
11					11
10					10
09					09
08					08
07					07
06					06
05					05
04					04
03					03
02					02
01					01
00					00
29					41
28					40
27					39
26					38
25					37
24					36
23					35
22					34
21					33
20					32
19					31
18					30
17					29
16					28
15					27
14					26
13					25
12					24
11					23
10					22
09					21
08					20
07					19
06					18
05					17
04					16
03					15
02					14
01					13
00					12
29					41
28					40
27					39
26					38
25					37
24					36
23					35
22					34
21					33
20					32
19					31
18					30
17					29
16					28
15					27
14					26
13					25
12					24
11					23
10					22
09					21
08					20
07					19
06					18
05					17
04					16
03					15
02					14
01					13
00					12
29					41
28					40
27					39
26					38
25					37
24					36
23					35
22					34
21					33
20					32
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17					29
16					28
15					27
14					26
13					25
12					24
11					23
10					22
09					21
08					20
07					19
06					18
05					17
04					16
03					15
02					14
01					13
00					12
29					41
28					40
27					39
26					38
25					37
24					36
23					35
22					34
21					33
20					32
19					31
18					30
17					29
16					28
15					27
14					26
13					25
12					24
11					23
10					22
09					21
08					20
07					19
06					18
05					17
04					16
03					15
02					14
01					13
00					12
29					41
28					40
27					39
26					38
25					37
24					36
23					35
22					34
21					33
20					32
19					31
18					30
17					29
16					28
15					27
14					26
13					25
12					24
11					23
10					22
09					21
08					20
07					19
06					18
05					17
04					16
03					15
02					14
01					13
00					12

PART NO.	REF DESIGNATION	SPARE OUTPUT NO.
19-042	F01	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
19-164	00F	12
19-160	18D	3, 4
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

NO.	TEST POINTS		
00K-10	00K-72	GND	6
00R-02	00R-19	SNS0	6
00R-01	00R-19	SWNS0	6
14K-10	14K-72	TELEX1	5
FROM TO MNEMONIC SHEET			
STRAPPING TABLE			
127-6	03K-15	2	
125-6	GND	2	
117-6	BBSY0	3	
116-6	BWR TMD1	3	
115-6	BRMDI	3	
114-6	TREQ1	7	
113-6	TRACK1	3	
112-6	STOPI	7	
111-6	STARTI	3	
NO. MNEMONIC SHEET			

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

REVISION	03	00	02	00	01	01	02	00	01	02	01	02
SHEET	1	2	3	4	5	6	7	8	9	10	11	12

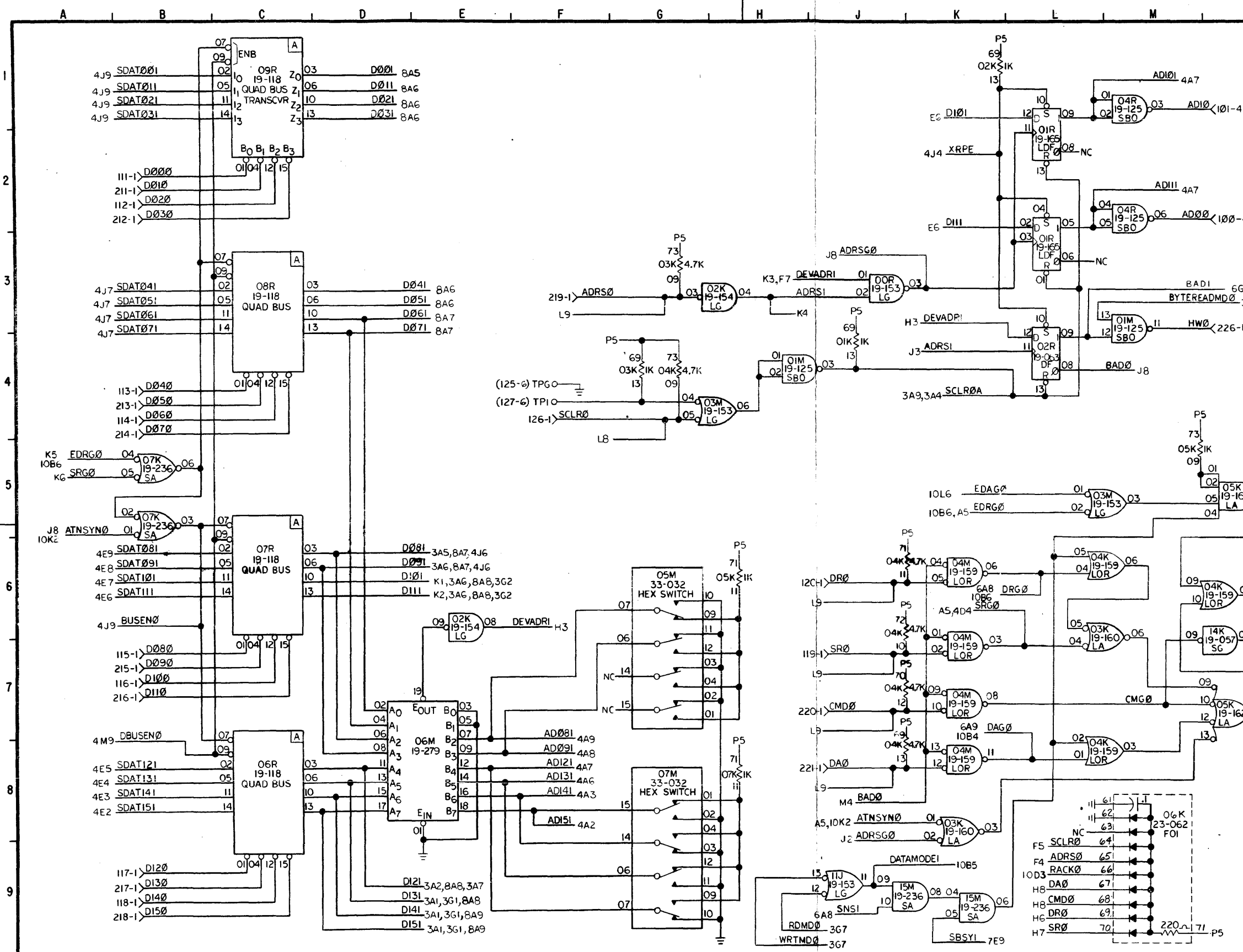
USED IN MANUAL: 47-028

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

BOARD	REV LEVEL	
35-820 F04	RO5	
	03	PC5
	02	RO5
	01	RO5

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

REVISIONS		
PRE PRODUCTION APPROVAL	INIT DATE	
DEV	11/12/82	
IN AREA A9 ADD REV LEVELS OF SHEETS 1 THRU 12. IN AREA N9 REV LEVELS OF 35-820 F01, F02, F03 & F04 WERE TOO. REVISED SHEET 3. ON CABLE CONNE: TOR MAP, CONN 4, 120-1 WAS MUX00, 121-1 WAS MUX10, 122-1 WAS DS00, 106-1 WAS DS10.		
RELEASED FOR PRODUCTION		
ENG. W. RICE	DATE 5/21/82	
ADDED MNEMONIC "RECVO" TO 111-3 & "OPINC0" TO 113-3. REVISED SHTS 1, 7, 10, 12. DELETED 17J06 (19-063) & 15M 11 FROM SPARC GATE LIST. REVISED SHTS 1, 3, 5, 6, 7, 9, 10, 11 & 12.		
UNLESS OTHERWISE SPECIFIED		
SCALE:	TOLERANCE:	
DIMENSIONS ARE IN INCHES	.XXX ± .005 .XX ± .02 ANGLES ± 1°	
NAME	TITLE	DATE
V. TAHAMONT	DES/DFT	6-11-81
R. CERD	SUPV	
E. GREENSTEIN	TFST	
CHREPTA/HULL	ENG	
W. RICE	MGR	
R.A. BARKER	QC	
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TITLE SCHEMATIC 6250 M.T.I.		
TASK 03192	SHT	
DWG 35-820 RO3 D08	1-12	



REVISIONS				
	AD0	AD1	TU	
C5	1	1		0
D5	0	1		1
E5	1	0		2
F5	0	0		3

NOTES PREFERRED ADDRESS IS X85

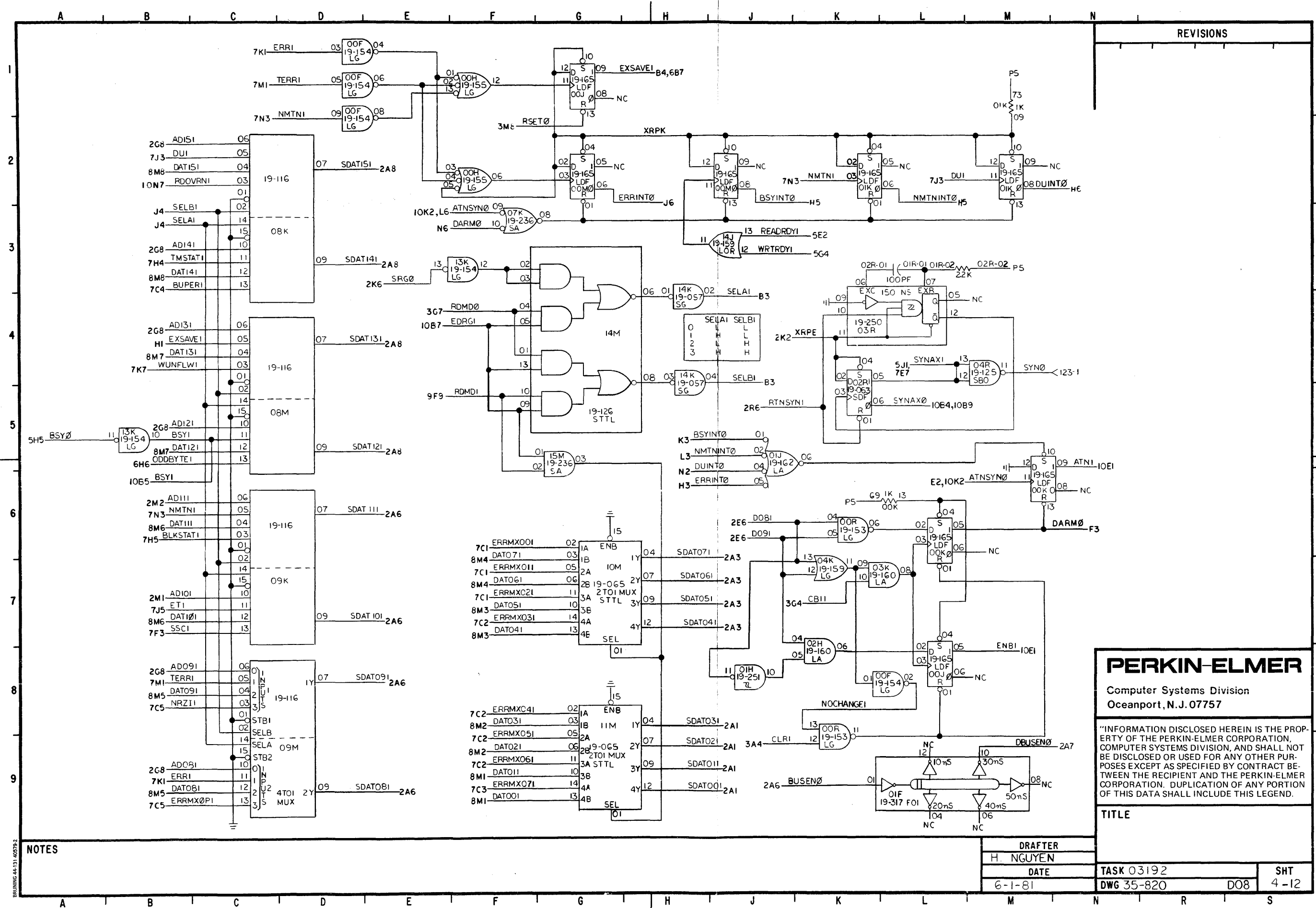
DRAFTER		TASK 03912	
V TAHAMONT		DWG 35-820	
DATE		SHT	
6-4-81		2-12	

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TITLE

DRAWING 44-131-405782



REVISIONS	

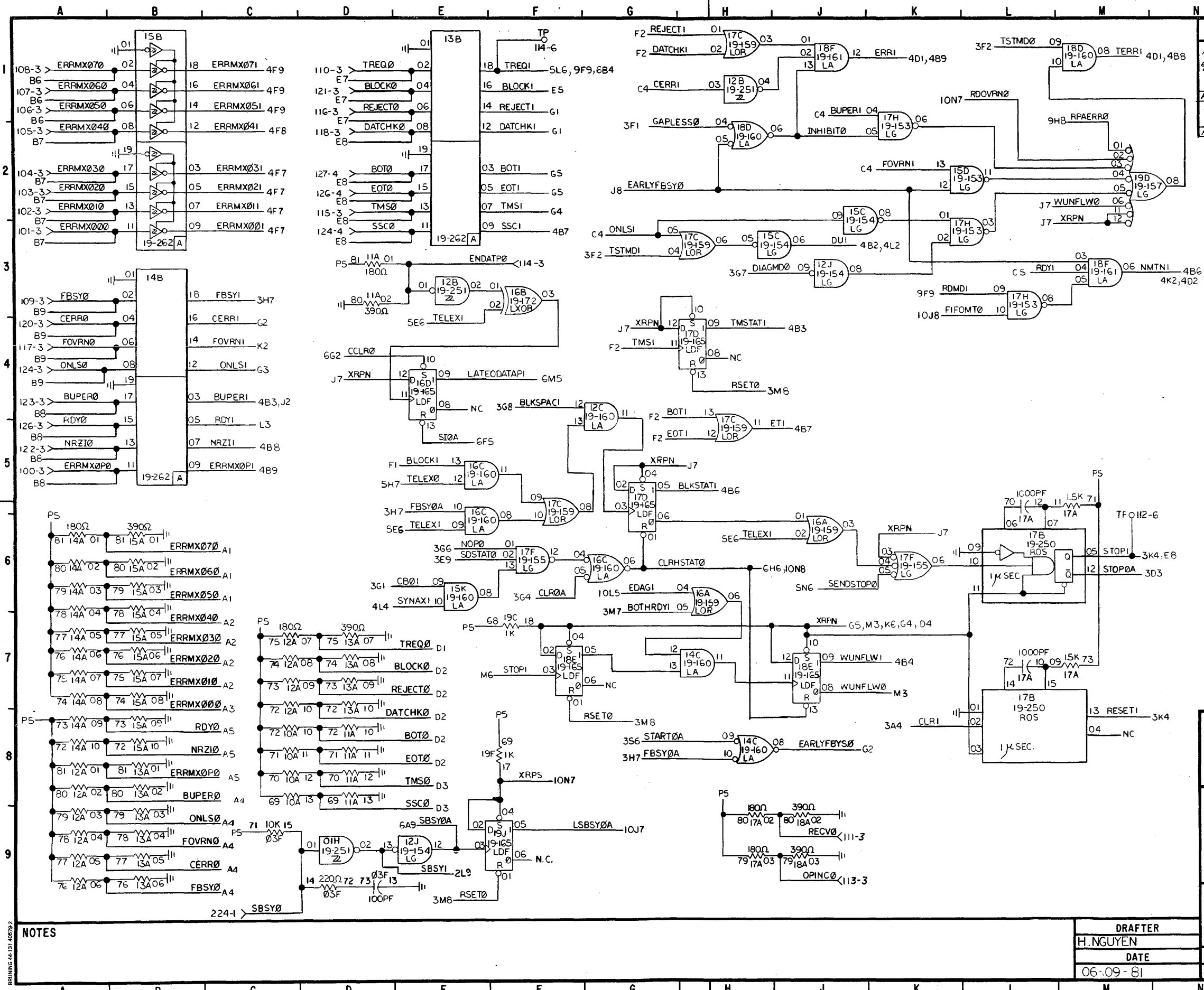
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TITLE	
DRAFTER	
H. NGUYEN	
DATE	
6-1-81	
TASK 03192	SHT
DWG 35-820	4-12

NOTES

BRUNING 44-131 405782



REVISIONS				
AREA J9, ADDED 4 RESISTORS (7A 48A) & P5 GND				
KR 11	5149	M	8-18-82	RO1
AREA F6, 16C05, ADDED "A" TO "CLR0A"				
KR 11	5340	MS	8-15-83	RO2

NOTES

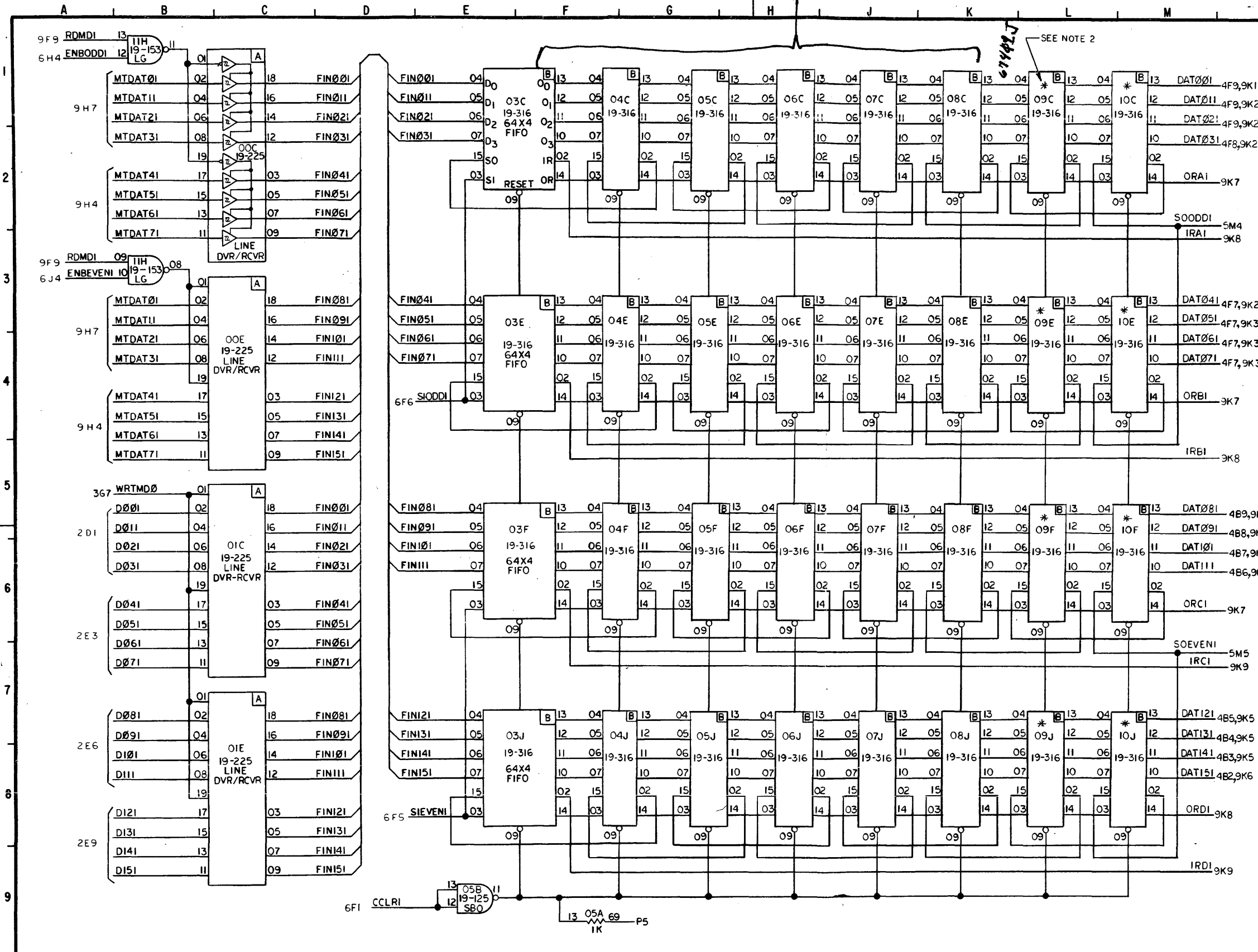
BRUNING 44-131-40272

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TITLE	
DRAFTER	H. NGUYEN
DATE	06-09-81
TASK	03192
DWG	35-820 RO2
SHT	7-12

Platform



REVISIONS

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

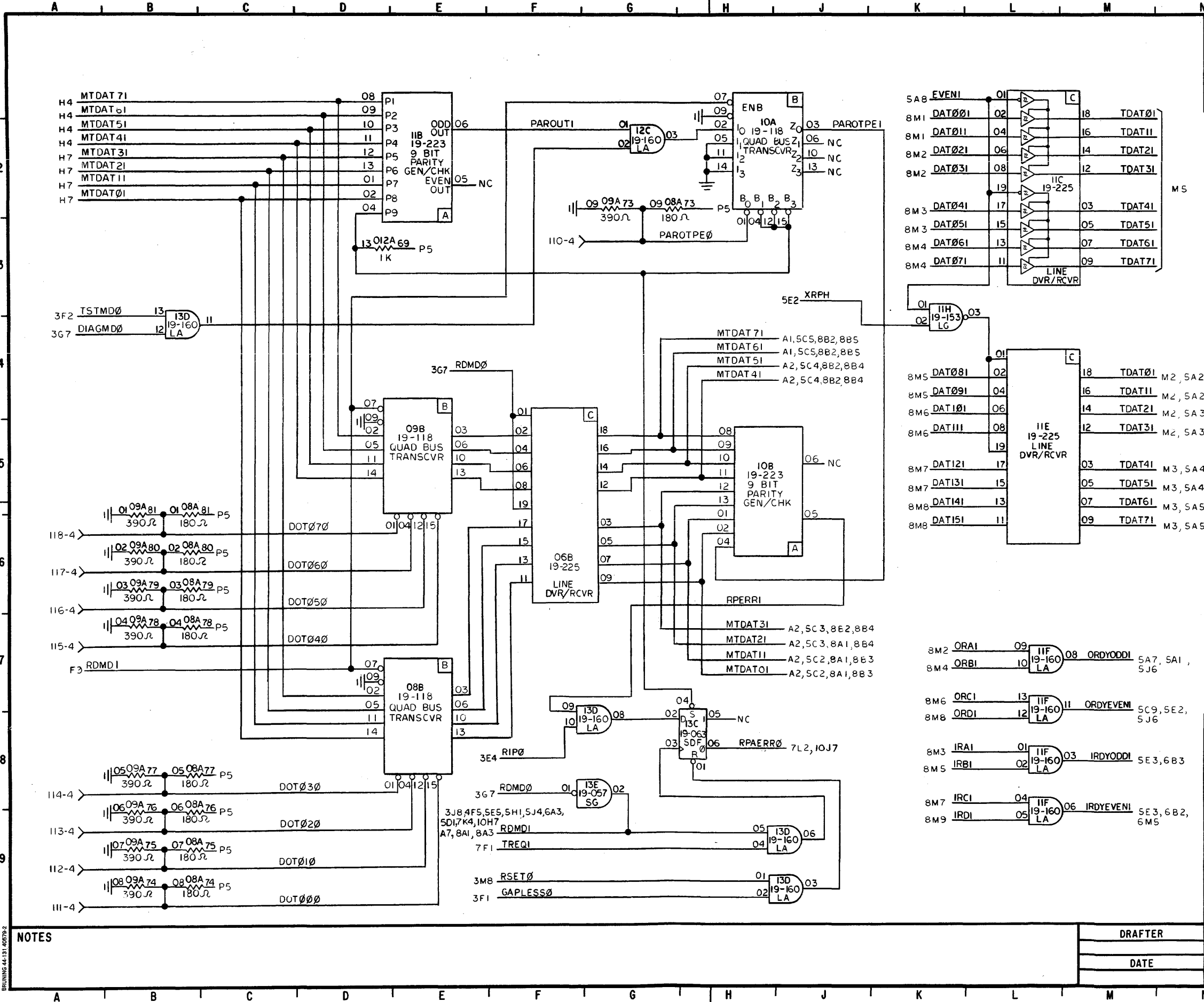
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TITLE	
DRAFTER	TASK
DATE	DWG 35-820
SHT	8-12

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

BRUNING 44-131-40579-2



REVISIONS	
AREA 48, 13D10 WAS CONNECTED TO GAPLESS0 (13D02) IN AREA 49.	
KR	5346 MS B-12-83 ROI

NOTES

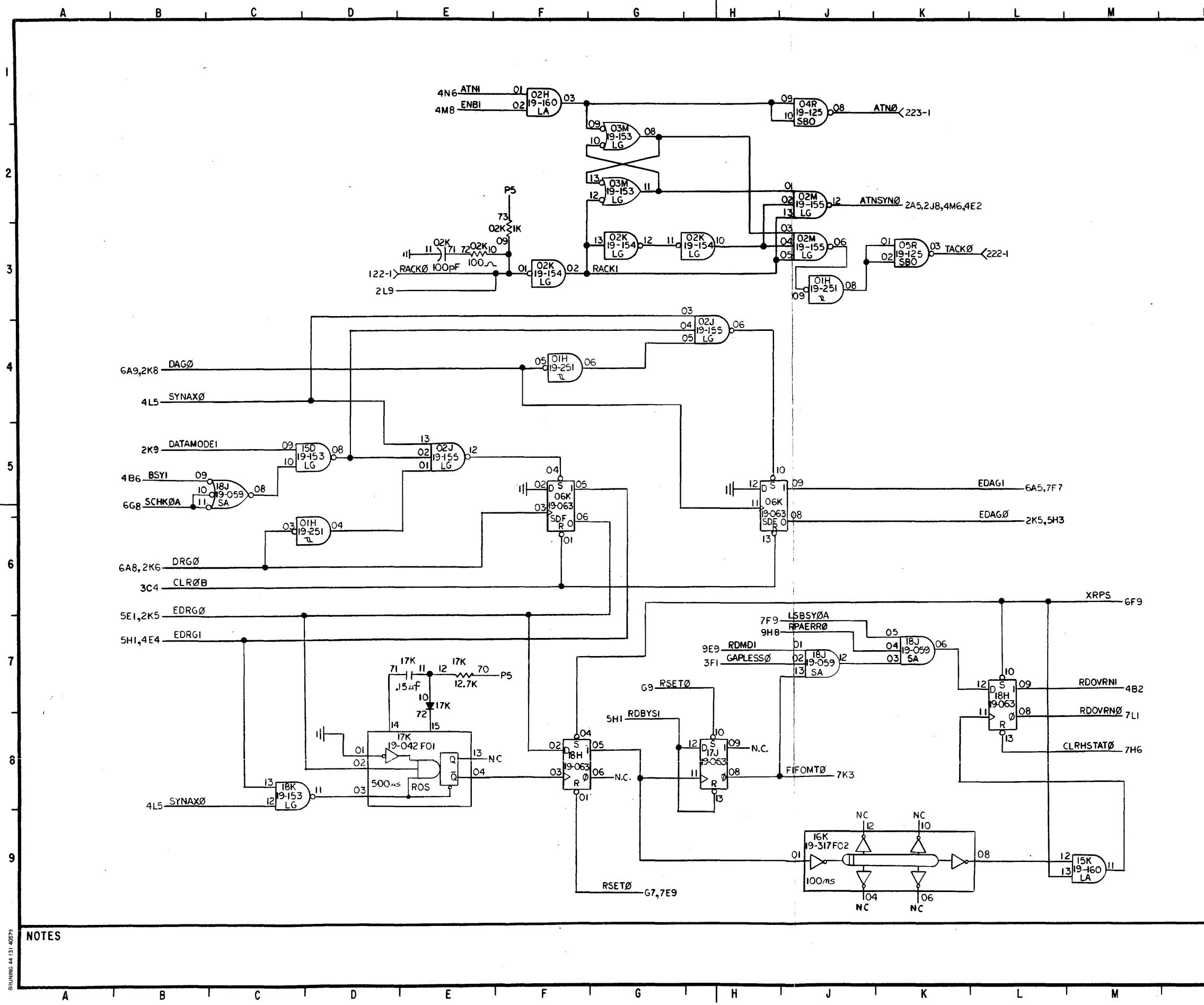
BRUNING 44-131-40579-2

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TITLE SCHEMATIC
 6250 BPI
 MAG TAPE INTERFACE

DRAFTER	
DATE	TASK 03192
DWG 35-820 ROI	D08 9-12



REVISIONS					
AREA C6, OIH PIN 03 WAS NOT SHOWN AS A INVERTER.					
KR	5149	M	8-18-82	RO1	X
AREA B6 "CLRØB" WAS "CLRØ" WITH CROSS REF 3A9. AREA J7, 18JØ4 WAS CONNECTED TO 18JØ5.					
KR	5346	MS	8-12-83	RO2	X

UNLESS OTHERWISE SPECIFIED		
SCALE:	TOLERANCE:	
DIMENSIONS ARE IN INCHES	.XXX ±.005	.X ±.03
	.XX ±.02	ANGLES ±1°
NAME	TITLE	DATE
	DES / DFT	
	SUPV	
	CHK	
	ENG	
	MGR	
	QC	

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TITLE	
TASK 03912	SHT
DWG 35-820 RO2	D08 10-12

NOTES

DRAWING 44-131-40570

NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT	NET	MNEMONIC	SHT
0445	DAT001	08	0501	ERRMX010	07	0557	GND09H	04	0613	ORA1	08	0668	SELA1	04	0723	WRTMDO	03						
0446	DAT011	08	0502	ERRMX011	07	0558	GND10A	09	0614	ORB1	08	0669	SELB1	04	0724	WRTMDO	03						
0447	DAT021	08	0503	ERRMX020	07	0559	GND10K	03	0615	ORC1	08	0670	SENDSTOPO	05	0725	WRTODDBYTE0	03						
0448	DAT031	08	0504	ERRMX021	07	0560	GND10M	04	0616	ORD1	08	0671	SHIFTPULS1	05	0726	WRTODDBYTE1	03						
0449	DAT041	08	0505	ERRMX030	07	0561	GND10R	03	0617	ORDYEVEN1	09	0672	SIO	06	0727	WRTEDI1	05						
0450	DAT051	08	0506	ERRMX031	07	0562	GND11M	04	0618	ORDYODD1	09	0673	SIOA	06	0728	WUNFLW0	07						
0451	DAT061	08	0507	ERRMX040	07	0563	GND12H	06	0619	PAROTPE0	09	0674	SI1	06	0729	WUNFLW1	07						
0452	DAT071	08	0508	ERRMX041	07	0564	GND13B	07	0620	PAROTPE1	09	0675	SIEVEN1	06	0730	XRPE	02						
0453	DAT081	08	0509	ERRMX050	07	0565	GND13F	05	0621	PAROUT1	09	0676	SIODD1	06	0731	XRPF	06						
0454	DAT091	08	0510	ERRMX051	07	0566	GND13J	05	0622	RACK0	10	0677	SNS0	06	0732	XRPH	05						
0455	DAT101	08	0511	ERRMX060	07	0567	GND14B	07	0623	RACK1	10	0678	SNS0A	06	0733	XRPK	04						
0456	DAT111	08	0512	ERRMX061	07	0568	GND14D	06	0624	EDBSY1	05	0679	SNS1	06									
0457	DAT121	08	0513	ERRMX070	07	0569	GND14R	03	0625	EDNDO	03	0680	SO1	05	0734	XRPN	07						
0458	DAT131	08	0514	ERRMX071	07	0570	GND15B	07	0626	EDNDO	03	0681	SOEVEN1	05									
0459	DAT141	08	0515	ERRMX0P0	07	0571	GND15E	05	0627	EDND1	09	0682	SOODD1	05	0735								
0460	DAT151	08	0516	ERRMXOP1	07	0572	GND16H	05	0627	EDND1	09	0683	SRO	02	0736								
0461	DATANODE1	02	0517	ET1	07	0573	GND17B	07	0628			0684	SRG0	02	0737	IRPQ	03						
0462	DATCHK0	07	0518	EVEN1	05	0574	GND17K	10	0629	EDOVEN0	10	0685	SSC0	07	0738	IRPR	03						
0463	DATCHK1	07	0519	EXSAVE1	04	0575	HWO	02	0630	EDOVEN1	10	0686	SSC1	07	0739	IRPS	07						
0464	DBUSENO	02	0520	FBSY0	07	0576	INHIBITO	07	0631	EDTREQ0	06	0687	START0	03	0740	IRPY	05						
0465	DCLRO	03	0521	FBSY0A	03	0577	IRA1	08	0632	RDY0	07	0688	START0A	03	0741	RECVØ	07						
0466	DELTA100	05	0522	FBSY1	07	0578	IRB1	08	0633	EDTOA	06	0689	START1	03	0742	OPINCØ	07						
0467	DEVADRO	02	0523	FIFOMTO	07	0579	IRC1	08	0634	BDI1	07	0690	STOCLRO	03	0743	GND	07						
0468	DEVADR1	02	0524	FIN01	08	0580	IRD1	08	0635	READRDI1	05	0691	STOPO	03	0744	P5	07						
0469	DIAGNDO	03	0525	FIN101	08	0581	IRDYEVEN1	09	0636	REJECT0	07	0692	STOP0A	07	0745	RIPØ	03						
0470	DOT000	09	0526	FIN11	08	0582	IRDYODD1	09	0637	REJECT1	07	0693	STOP1	07	0746	CLRØB	03						
0471	DOT010	09	0527	FIN111	08	0583	LAST10	06	0638	RESETO	03	0694	SWSNS0	06	0747	10R09	03						
0472	DOT020	09	0528	FIN121	08	0584	LATEODATAP1	07	0639	RESET1	07	0695	SINO	04									
0473	DOT030	09	0529	FIN131	08	0585	LATREQ1	05	0640	RPAERRO	09	0696	SYMAX0	04									
0474	DOT040	09	0530	FIN141	08	0586	LSBSY0A	07	0641	RPERR1	09	0697	SYMAX1	04									
0475	DOT050	09	0531	FIN151	08	0587	MSB1	03	0642	RSET0	03	0698	TACK0	10									
0476	DOT060	09	0532	FIN21	08	0588	MTDAT01	09	0643	RSET0	03	0699	TACK1A	05									
0477	DOT070	09	0533	FIN31	08	0589	MTDAT11	09	0644	SBSY0	07	0700	TDAT01	09									
0478	DR0	02	0534	FIN41	08	0590	MTDAT21	09	0645	SBSY0A	07	0701	TDAT11	09									
0479	DRG0	02	0535	FIN51	08	0591	MTDAT31	09	0646	SBSY1	07	0702	TDAT21	09									
0480	DS00	03	0536	FIN61	08	0592	MTDAT41	09	0647	SCHK0	06	0703	TDAT31	09									
0481	DS01	03	0537	FIN71	08	0593	MTDAT51	09	0648	SCHK0A	06	0704	TDAT41	09									
0482	DS10	03	0538	FIN81	08	0594	MTDAT61	09	0649	SCLR0	02	0705	TDAT51	09									
0483	DS11	03	0539	FIN91	08	0595	MTDAT71	09	0650	SCLROA	02	0706	TDAT61	09									
0484	DU1	07	0540	FIVE0	03	0596	HUX00	03	0651	SDAT001	04	0707	TDAT71	09									
0485	DUIWTO	04	0541	FOVRN0	07	0597	HUX10	03	0652	SDAT011	04	0708	TELEX0	05									
0486	EARLYFBSTO	07	0542	FOVRN1	07	0598	HUXICND0	03	0653	SDAT021	04	0709	TELEX1	05									
0487	EDAGO	10	0543	GAPLESS0	03	0599	HX001	03	0654	SDAT031	04	0710	TERR1	07									
0488	EDAG1	10	0544	GND00K	04	0600	HX011	03	0655	SDAT041	04	0711	TMS0	07									
0489	EDRGO	10	0545	GND03R	04	0601	HX021	03	0656	SDAT051	04	0712	TMS1	07									
0490	EDRG1	10	0546	GND05H	02	0602	HXCND1	05	0657	SDAT061	04	0713	TRSTAT1	07									
0491	ENB1	04	0547	GND06A	03	0603	NMTN1	07	0658	SDAT071	04	0714	TP1	02									
0492	ENBEVEN1	06	0548	GND06K	02	0604	NMTNINT0	04	0659	SDAT081	04	0715	TRACK0	03									
0493	ENBODD1	06	0549	GND06H	02	0605	NOPO	03	0660	SDAT091	04	0716	TRACK1	03									
0494	ENBDATP0	07	0550	GND07A	03	0606	NRZ10	07	0661	SDAT101	04	0717	TREQ0	07									
0495	EOTO	07	0551	GND07H	02	0607	NRZ11	07	0662	SDAT111	04	0718	TREQ1	07									
0496	EOT1	07	0552	GND08B	09	0608	ODD1	05	0663	SDAT121	04	0719	TSTMDO	03									
0497	ERR1	07	0553	GND08K	04	0609	ODDBYTE1	06	0664	SDAT131	04	0720	TSTMD1	03									
0498	ERRINTO	04	0554	GND08M	04	0610	ONLS0	07	0665	SDAT141	04	0721	WRTBSY1	05									
0499	ERRMX000	07	0555	GND09B	09	0611	ONLS1	07	0666	SDAT151	04	0722											
0500	ERRMX001	07	0556	GND09K	04	0612	OOH12	04	0667	SDSTAT0	03	0723	WRTMDO	03									

REVISIONS					
ADDED NETS 741-744					
KR	41	5149	M	8/26/82	RO1
ADDED NETS 745-747					
KR	41	5346	MS	8-12-83	RO2

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

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NOTES														
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MANUAL UPDATE PACKAGE COVER SHEET

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

PUBLICATION NUMBER: 47-028 OLD REVISION LEVEL: R02

ECN NUMBERS: 5211 NEW REVISION LEVEL: R03
5346 R04
5418 R05

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

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Sheet ii, R02	Sheet ii, R02
Sheet iii, R02	Sheet iii, R05
Sheet v, R02	Sheet v, R05
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35-820 R01 D08, Sheet 3	35-820 R02 D08, Sheet 3
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