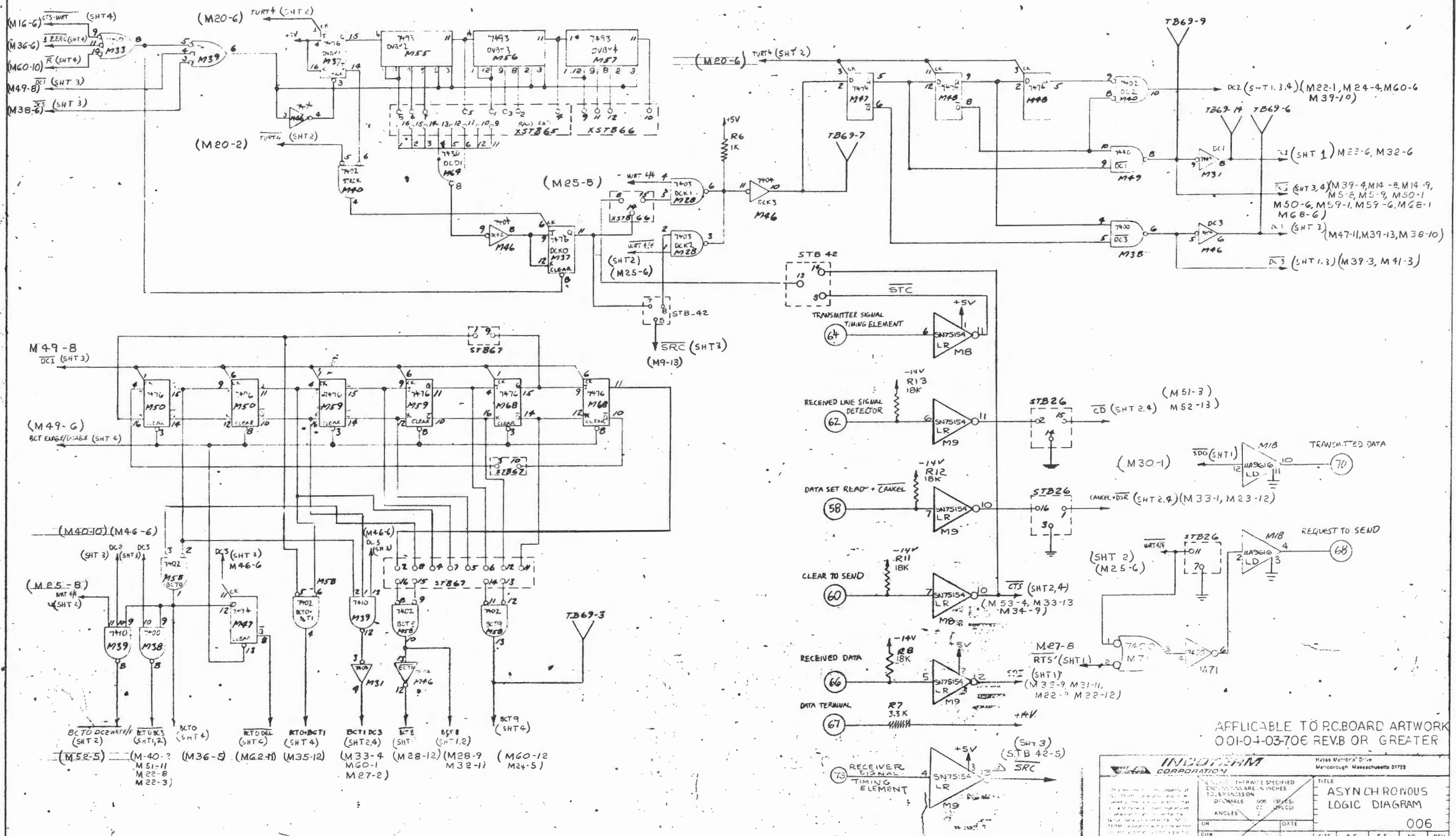


**FIELD ENGINEERING**  
**TECHNICAL MANUAL**  
**SPD™ 10/20**

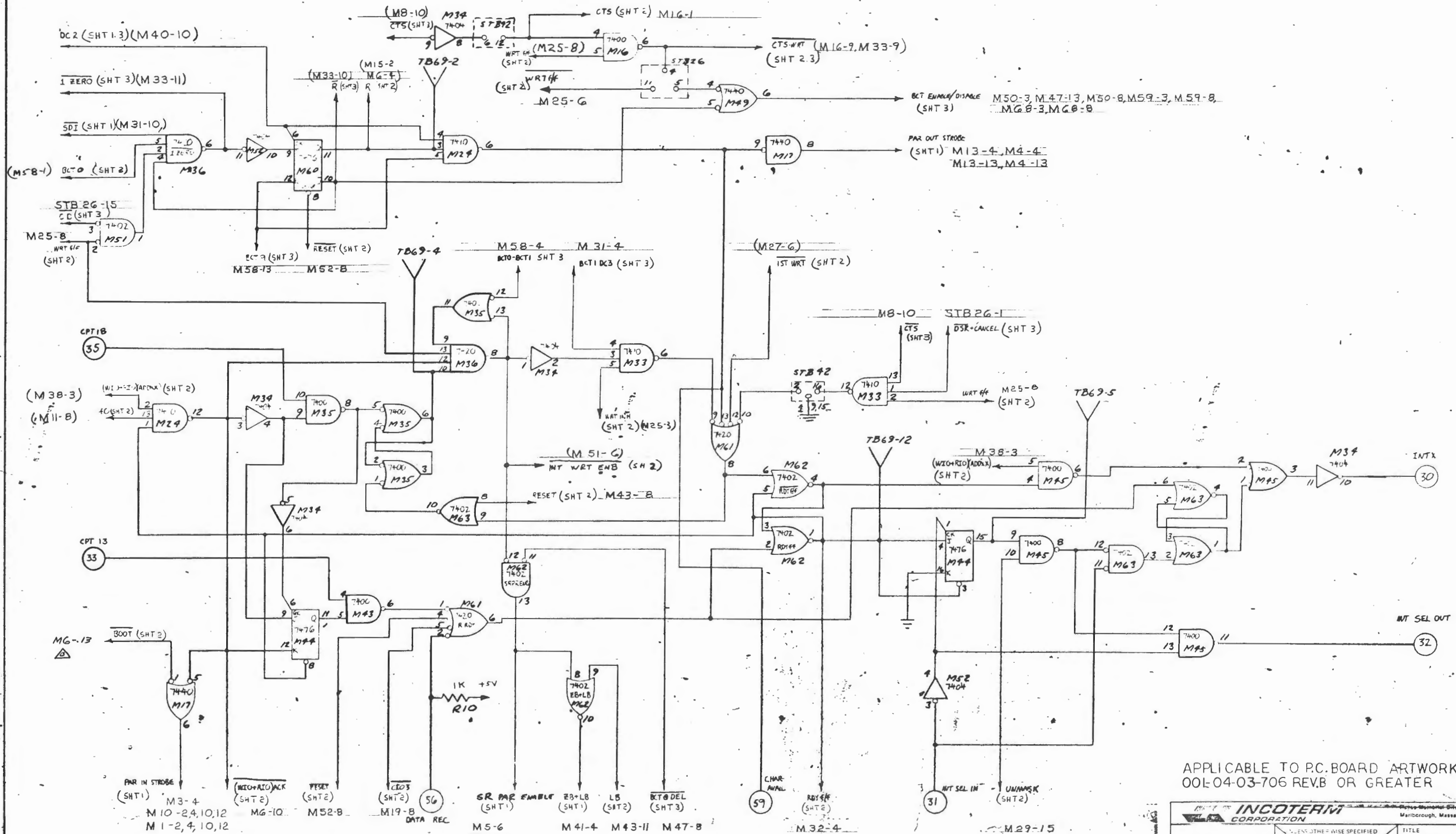
**LOGIC DIAGRAMS**





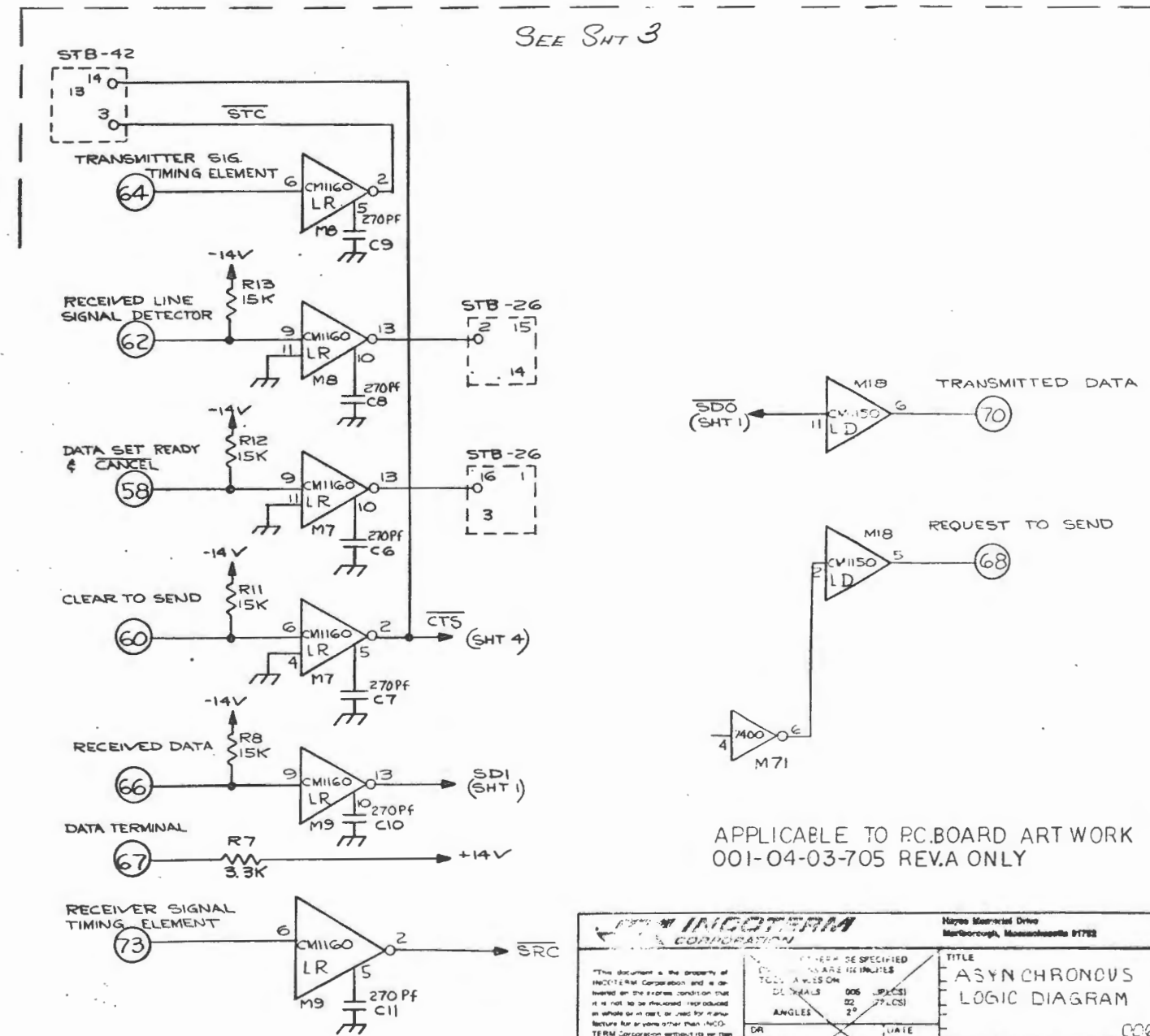
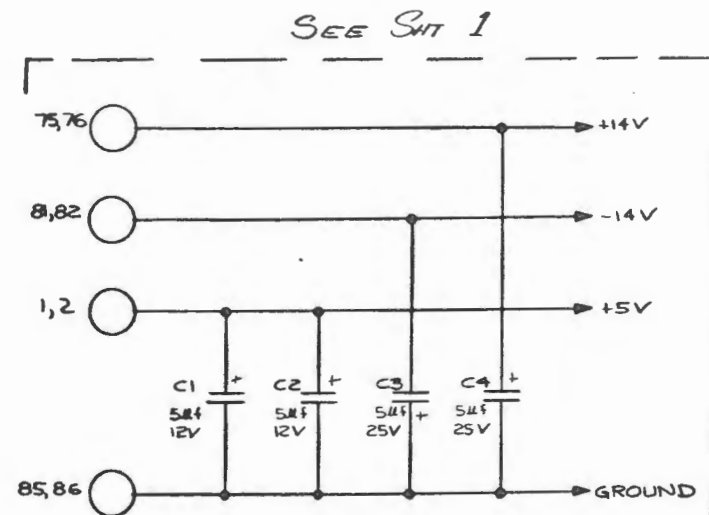
APPLICABLE TO P.C. BOARD ARTWORK  
001-04-03-706 REV B OR GREATER

INDUSTRY CORPORATION		HAYES MEMORIAL DRIVE MARCOROUGH, MASSACHUSETTS 01752	
TOLERANCES UNLESS SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES		TITLE <b>ASYNCHRONOUS LOGIC DIAGRAM</b>	
DR	DATE	SIZE	P C S S NO REV
CHK		D	001-04-01 D
APP		SCALE	SHT 3 OF 5



APPLICABLE TO P.C. BOARD ARTWORK  
001-04-03-706 REV.B OR GREATER

<b>INCOTERM CORPORATION</b> <small>Marlborough, Massachusetts 01752</small>		TITLE <b>ASYNCHRONOUS LOGIC DIAGRAM</b>	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS .005 (3PLCS) ANGLES 25°		006	
DR	DATE	SIZE	P.C. S.S. NO. REV
CHK		D	001-04-01 D
ENG		SCALE	SHT 4 OF 5
APPD			
NEXT ASSY			



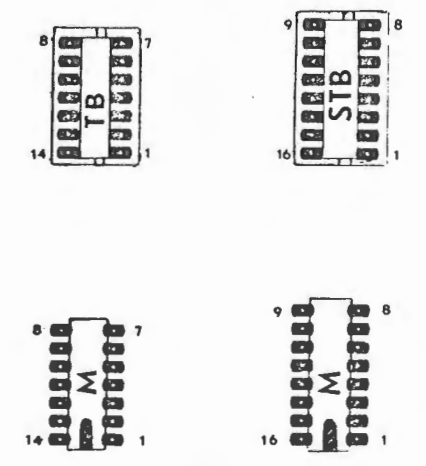
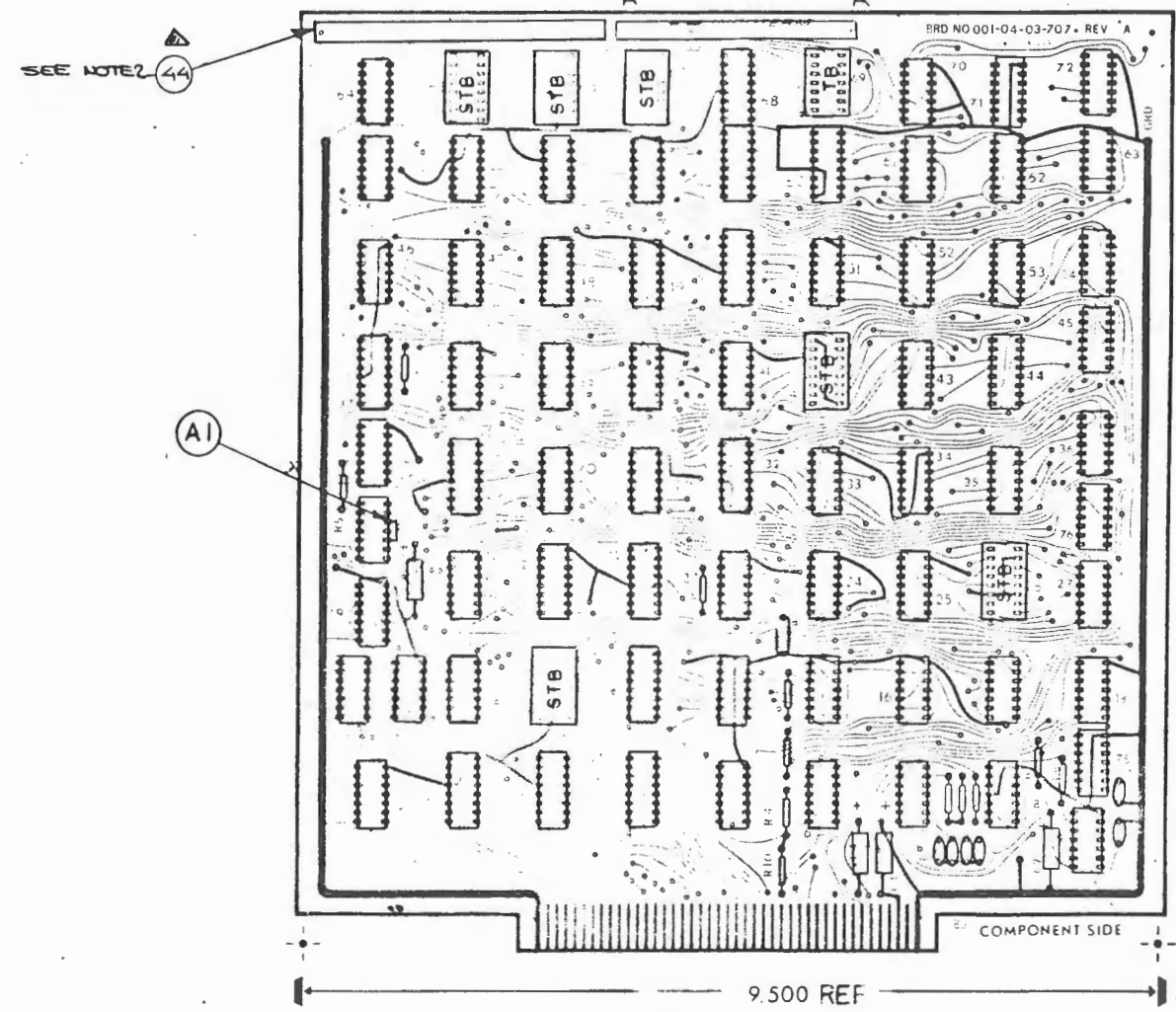
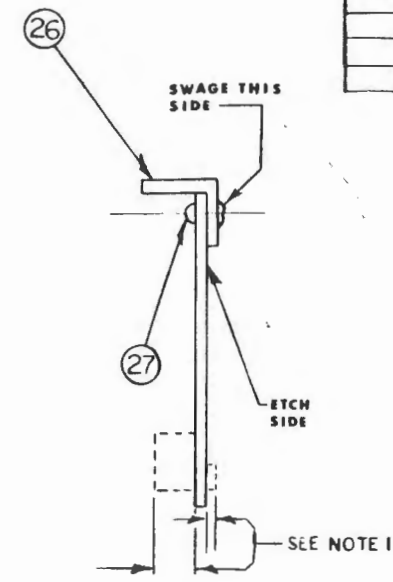
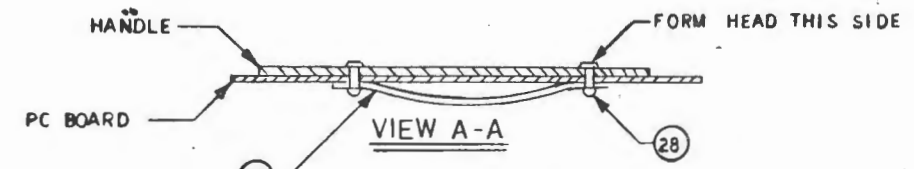
APPLICABLE TO PC BOARD ART WORK  
001-04-03-705 REV.A ONLY

INGRAM CORPORATION		Navya Manufacturing Marlborough, Massachusetts 01752	
<small>This document is the property of INGRAM Corporation and is loaned on the express condition that it is not to be reissued, reproduced in whole or in part, or used for manufacture for any other than INGRAM Corporation without its written consent, and that receipt is granted to design or to use any information obtained in said document. This restriction does not limit the right to use information obtained from another source.</small>		<b>TITLE</b> ASYNCHRONOUS LOGIC DIAGRAM	
PARTS DE SPECIFIED TOTAL PARTS ON DRAWING ANGLES	006 (PACS) 22 (PACS) 2°	DATE DATE DATE	006 SIZE P.C. S.S. NO. REV D 001-04-01 D SCALE SHT 5 OF 5
DR	CHK	ENG	APPD
DR	CHK	ENG	APPD

8 7 6 5 4 3 2 1

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK
A	RELEASED		
B	REVISED/ECO 2043	9/29/72	
B1	REVISED/ECO 2186	12/15/72	
B2	REV CHANGE ONLY/ECO 2279		
B3	REVISED/ECO 2296	2/24/73	
B4	REV. CHANGE ONLY/ECO 2378		
B5	REV. CHANGE ONLY/ECO 2477		

ADD WIRE ITEM 40 FROM  
A1 M73 PIN 3 TO M73 PIN 5



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ITEM NO.	REFERENCE DESIGNATION
37	C6-C11
34	R8,11,12,13
25	
24	C5
23	C3,C4
22	C1,C2
21	
20	R3
19	R1,2,4,5,6,9,10
18	STB 12,26,42,65,66,67
17	TB69
16	M7,8,9
15	M18,75
14	M5,15
13	M55,56,57
12	M22,29,32,37,44,50,59,60,68
11	M 2,3,4,13
10	M 41,47,48,53,70
9	M21
8	M 17,29
7	M64
6	M27,36,61,73
5	M13,24,33,39,45
4	M11,20,31,34,46,52
3	M1,6,10,23,28
2	M30,40,51,58,62,63,71,74,76
1	M15,16,25,35,38,43,54,72

**NOTE:**  
1. HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.  
2. LOCATE IN APPROXIMATE AREA SHOWN REV. LABEL ITEM 44, AND MARK ASSY NO. 001-04-02-707B AND LATEST ASSY REVISION.

ITEM	PART NO	DESCRIPTION	QTY
43	IC SN75154	IC 16 PIN (B11)	0
42	IC UGAP961659X	IC 14 PIN (A39)	0
41	DS1N4148	DIODE	0
40	CB24 SOLWHT	WIRE #24 GA SOLID WHITE	2500
37	CS 5GAT27	CAP. 270 P F 100V = 20%	6
16	ICCM1160	IC 14 PIN (CERMETEX)	3
15	ICCM1150	IC 14 PIN (CERMETEX)	2

ASSY WITH ARTWORK 001-04-03-707 REV A

**INCOTERM CORPORATION**  
Hayes Memorial Drive  
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 2

DATE 2-24-73

DR [Signature]

CHK [Signature]

EN [Signature]

APPD [Signature]

NEXT ASSY 010 10-00

SCALE 1:1

SHT 1 OF 2

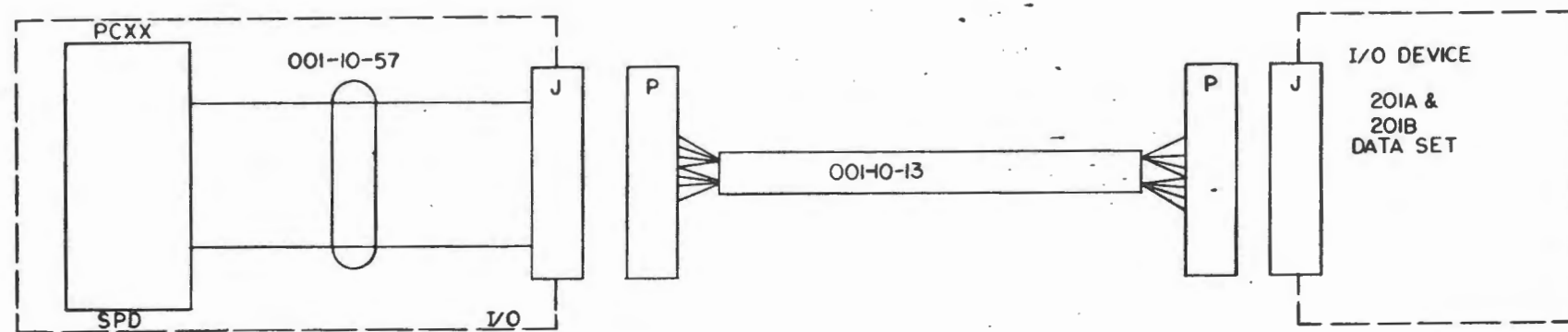
TITLE **P.C. BOARD ASSY ASYNCHRONOUS**

SIZE P C S S NO REV

**D 001-04-02 B5**

8 7 6 5 4 3 2 1

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



SIGNAL NAME (LOGIC)	PCXX → I/O WIRE	I/O CABLE COLOR CODE	DEVICE SIGNAL NAME
TRANSMIT DATA	70	1 BLACK	1 PROTECTIVE GROUND
RECEIVED DATA	66	2 WHITE	2 TRANSMITTED DATA
RTS	68	3 RED	3 RECEIVED DATA
CTS	60	4 GREEN	4 REQUEST TO SEND
DSR	58	5 ORANGE	5 CLEAR TO SEND
		6 BLUE	6 DATA SET READY
		7 WHITE/BLACK	7 SIGNAL GROUND
RCUD LINE SIG DET	62	8 RED/BLACK	8 RECEIVED LINE SIGNAL DETECTOR
		9	9
		10	10
		11	11
		12	12
		13 GREEN/BLACK	13 SPARE (UNASSIGNED)
OPEN CIRCUIT	71	14 ORANGE/BLACK	14 NEW SYNC
TRANSMIT SIG TIMING	64	15 BLUE/BLACK	15 TRANSMITTER SIGNAL TIMING ELEMENT
		16	16
OPEN CIRCUIT	73	17 BLACK/WHITE	17 RECEIVER SIGNAL TIMING ELEMENT
		18	18
OPEN CIRCUIT	63	19 RED/WHITE	19 REMOTE RELEASE
DTR	67	20 GREEN/WHITE	20 DATA TERMINAL READY
OPEN CIRCUIT	65	21 BLUE/WHITE	21 READY
		22	22
		23	23
		24	24
		25	25

SIGNAL NAME (LOGIC)

PCXX → I/O WIRE

I/O CABLE COLOR CODE

DEVICE SIGNAL NAME

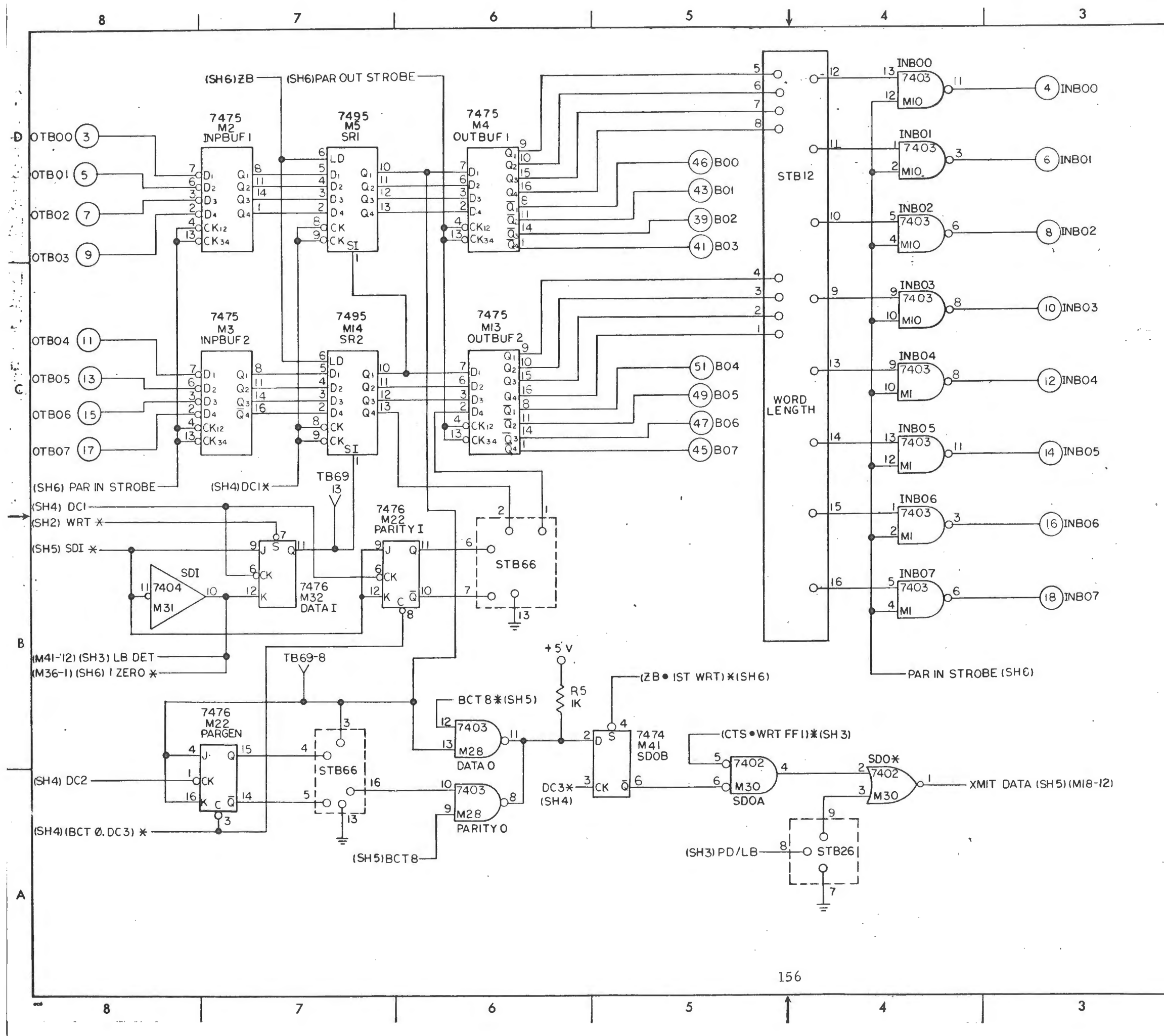
ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707	
			ASSEMBLY QUANTITIES							
<b>INCOTERM CORPORATION</b>			6 STRATHMORE ROAD LAWRENCE, MASSACHUSETTS 01760							
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<small>DRAWN</small> <small>R. BULMER</small>			<small>DATE</small> <small>7/22/73</small>		<small>SCALE</small> <small>1:1</small>		<small>REV</small> <small>DI</small>		<small>REV</small> <small>DI</small>	
<small>CHECKED</small> <small>FCC</small>			<small>DATE</small> <small>7/22/73</small>		<small>SCALE</small> <small>1:1</small>		<small>REV</small> <small>DI</small>		<small>REV</small> <small>DI</small>	
<small>APPROVED</small> <small>[Signature]</small>			<small>DATE</small> <small>7/22/73</small>		<small>SCALE</small> <small>1:1</small>		<small>REV</small> <small>DI</small>		<small>REV</small> <small>DI</small>	
<small>FIRST USED ON</small> <small>001-04-02-707</small>			<small>SCALE</small> <small>1:1</small>		<small>REV</small> <small>DI</small>		<small>REV</small> <small>DI</small>		<small>SHT</small> <small>8 OF 8</small>	

ASYNCHRONOUS CONTROLLER LOGIC DIAGRAM 007

D 001-04-01

SHT 8 OF 8

REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD
DI	REV & REDRAWN/ECO 2548	+	+



JUMPER OPTIONS				
FROM	TO	DESCRIPTION		
STB 12	1	16	8 DATA BITS	
	2	15		
	3	14		
	4	13		
	5	12		
	6	11		
	7	10		
	8	9		
STB 12	1	15	7 DATA BITS	
	2	14		
	3	13		
	4	9		
	8	10		
	7	11		
	6	12		
STB 12	1	14	6 DATA BITS	
	2	13		
	3	9		
	4	10		
	8	11		
STB 12	1	13	5 DATA BITS	
	2	9		
	3	10		
	4	11		
STB 26	9	7	NO PRIORITY DATA OR LINE BREAK	
	9	8		FOR PRIORITY DATA (MUX) OR FOR LINE BREAK (NON-MUX)
STB 66	1	13	NO PARITY CHECK	
	1	1		TRANSPARENT PARITY
	1	7		EVEN PARITY CHECK
	1	6		CDD PARITY CHECK
	16	13		TRANSPARENT PARITY
	16	3		EVEN PARITY GEN
16	4	CDD PARITY GEN		
16	16	PARITY ALWAYS "1"		

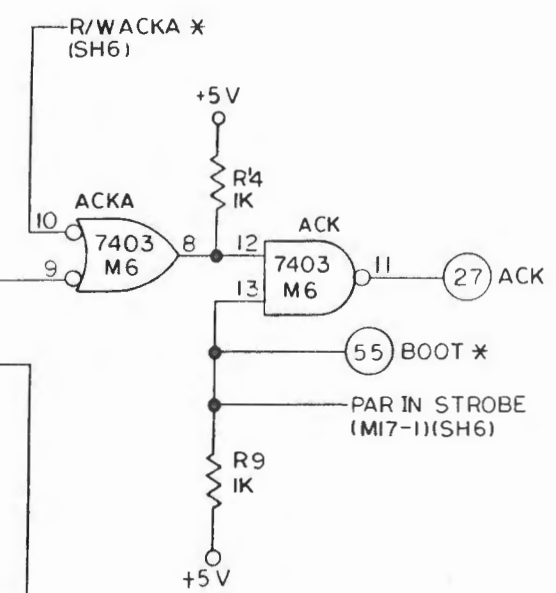
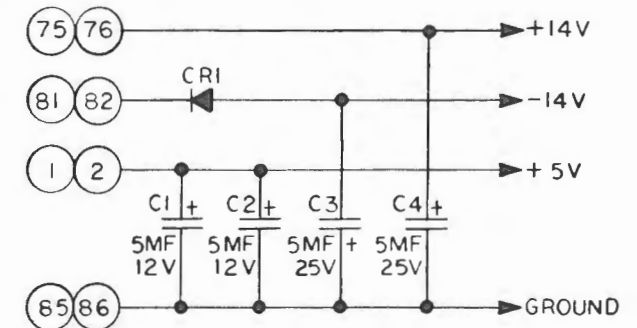
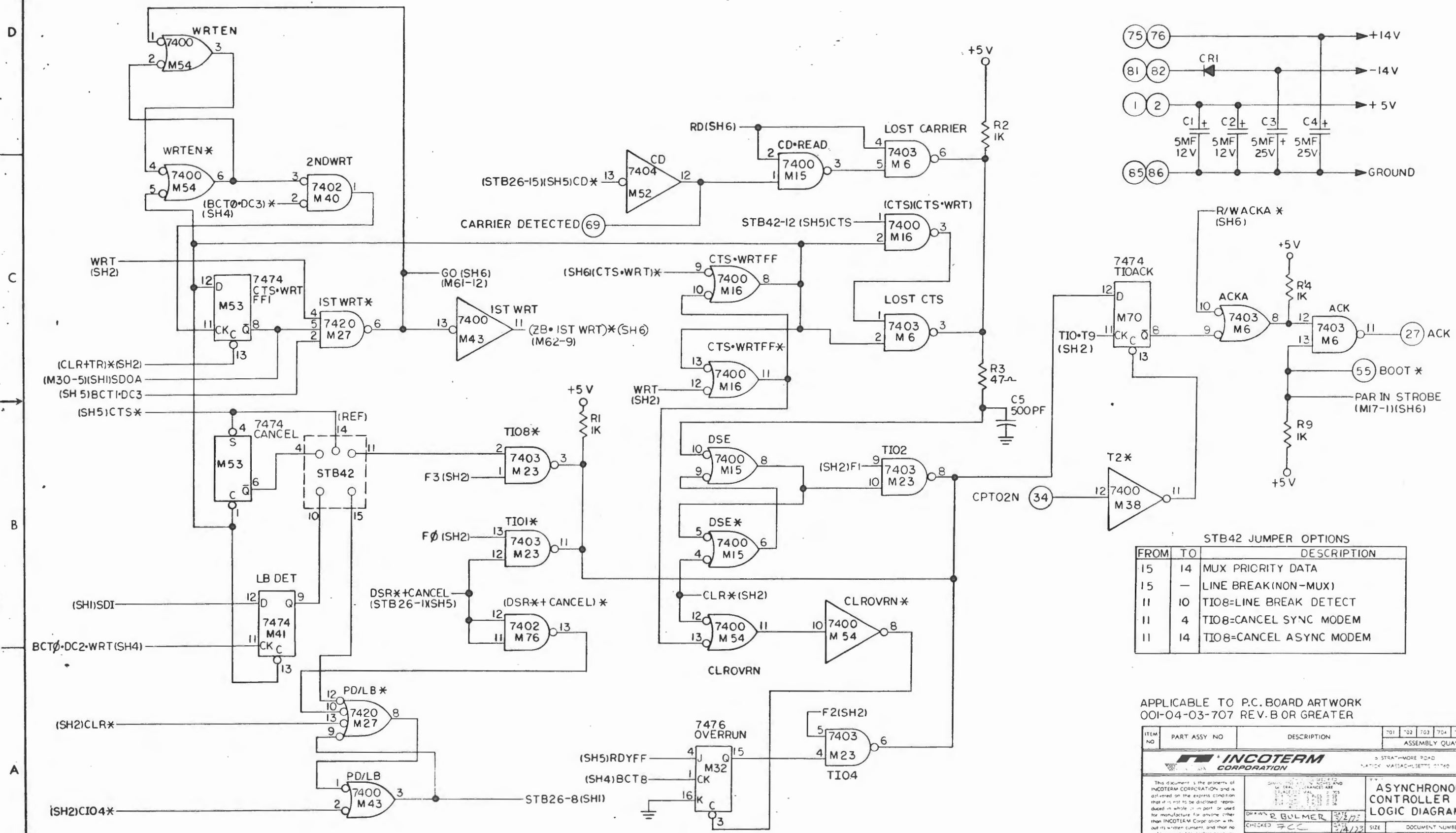
APPLICABLE TO PC BOARD ARTWORK  
001-04-03-707 REV B OR GREATER

ITEM NO.	PART ASSY NO.	DESCRIPTION	701	702	703	704	705	706	707
INCOTERM CORPORATION 3 STRATHMORE ROAD WATUCK, MASSACHUSETTS 01760									
ASYNCHRONOUS CONTROLLER LOGIC DIAGRAM 007									
DRAWN: R. BULMER		DATE: 5/9/73	SIZE:		DOCUMENT NUMBER:		REV:		
CHECKED: FCC		DATE: 5/9/73	SCALE:		D 001-04-01		DI		
APPROVED: [Signature]		DATE: 5/11/73	FIRST USED: 001-04-02-707		SCALE: [Signature]		SHT 1 OF 8		





REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



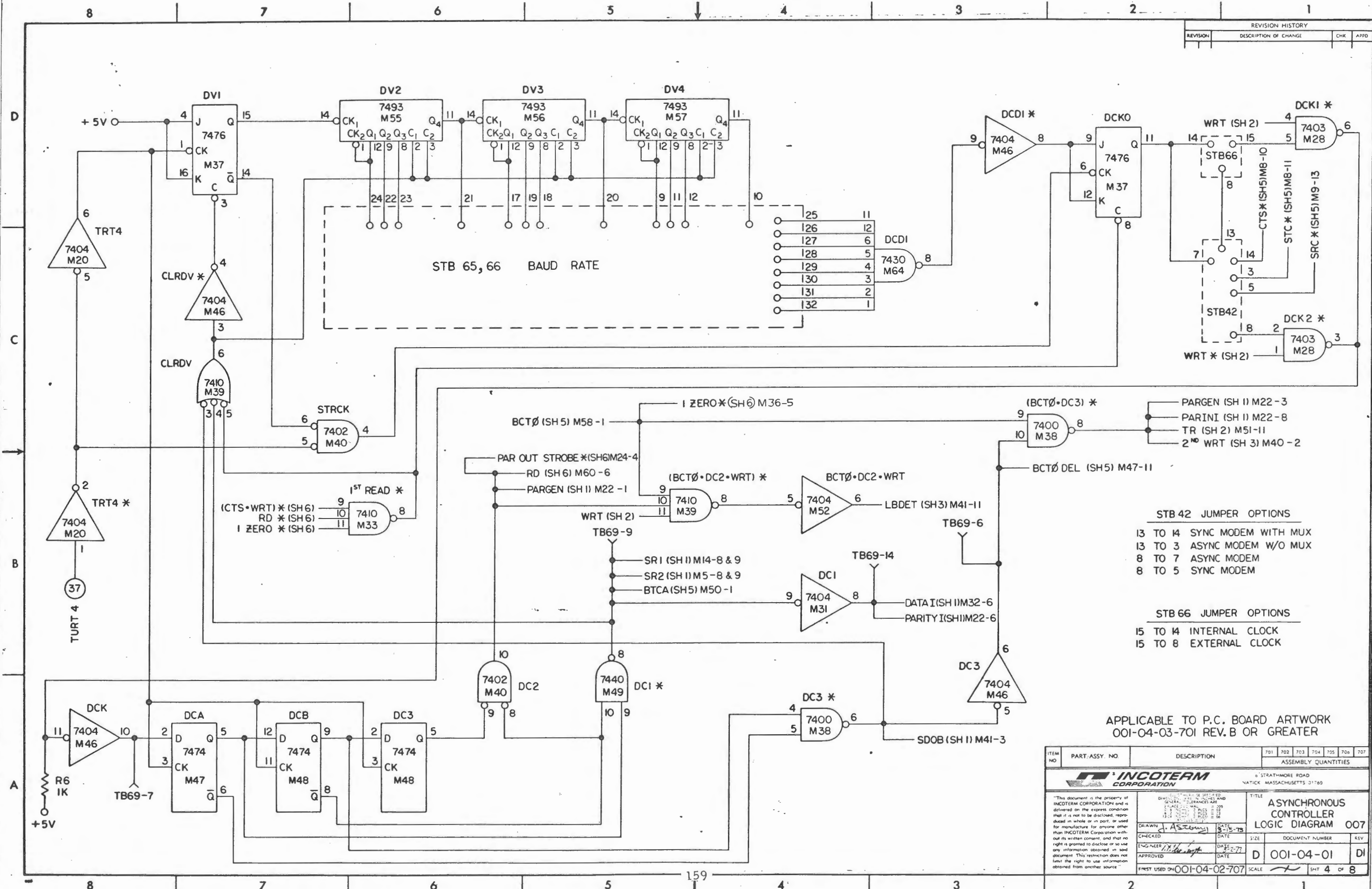
STB42 JUMPER OPTIONS

FROM	TO	DESCRIPTION
15	14	MUX PRIORITY DATA
15	-	LINE BREAK (NON-MUX)
11	10	TIO8=LINE BREAK DETECT
11	4	TIO8=CANCEL SYNC MODEM
11	14	TIO8=CANCEL ASYNC MODEM

APPLICABLE TO P.C. BOARD ARTWORK  
001-04-03-707 REV. B OR GREATER

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
ASSEMBLY QUANTITIES									
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DRAWN: R. BULMER		DATE: 8/8/77			<b>ASYNCHRONOUS CONTROLLER LOGIC DIAGRAM 007</b>				
CHECKED: FCC		DATE: 7/14/77	SIZE:	DOCUMENT NUMBER:	REV:				
ENG. NEER: J. J. ...		DATE: 8-7-77	D: 001-04-01-007		DI				
APPROVED:		DATE:	FIRST USED ON: 001-04-02-707		SCALE: X		SHT 3 OF 8		

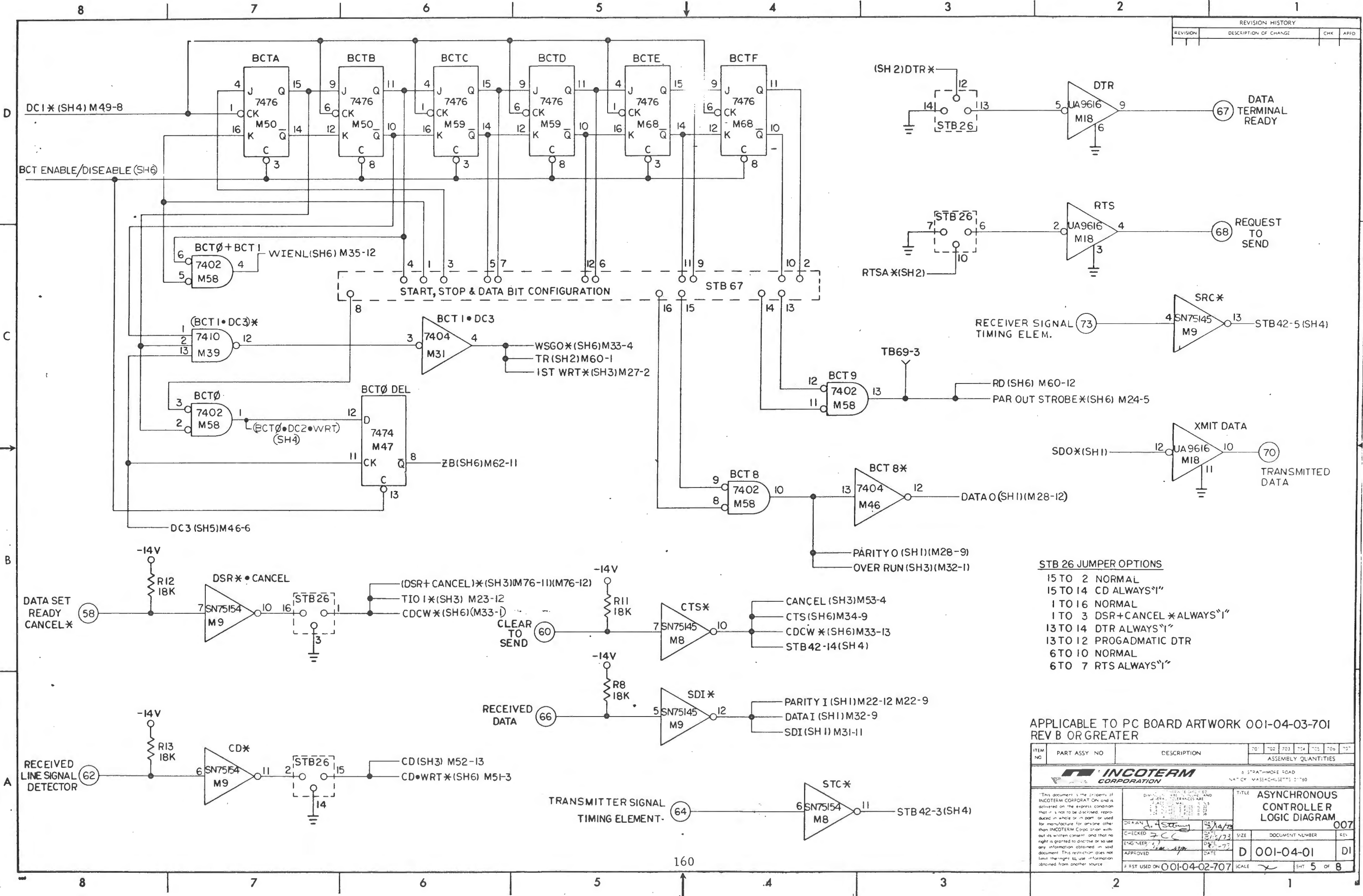
REVISION HISTORY				
REVISION	DESCRIPTION OF CHANGE	CHK	APPD	



- STB 42 JUMPER OPTIONS**
- 13 TO 14 SYNC MODEM WITH MUX
  - 13 TO 3 ASYNC MODEM W/O MUX
  - 8 TO 7 ASYNC MODEM
  - 8 TO 5 SYNC MODEM
- STB 66 JUMPER OPTIONS**
- 15 TO 14 INTERNAL CLOCK
  - 15 TO 8 EXTERNAL CLOCK

APPLICABLE TO P.C. BOARD ARTWORK  
001-04-03-701 REV. B OR GREATER

ITEM NO.	PART. ASSY. NO.	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
<small>INCOTERM CORPORATION, STRATHMORE ROAD, WATICK, MASSACHUSETTS 01789</small>									
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DRAWN: J. Aschmann		DATE: 3-15-75		TITLE: ASYNCHRONOUS CONTROLLER LOGIC DIAGRAM 007		SIZE: D		DOCUMENT NUMBER: 001-04-01	
CHECKED: [Signature]		DATE: 3-22-75		SCALE: 1		SHEET: 4		OF: 8	
ENGINEER: [Signature]		DATE: 3-22-75		SCALE: 1		SHEET: 4		OF: 8	
APPROVED: [Signature]		DATE: 3-22-75		SCALE: 1		SHEET: 4		OF: 8	
FIRST USED ON: 001-04-02-707									



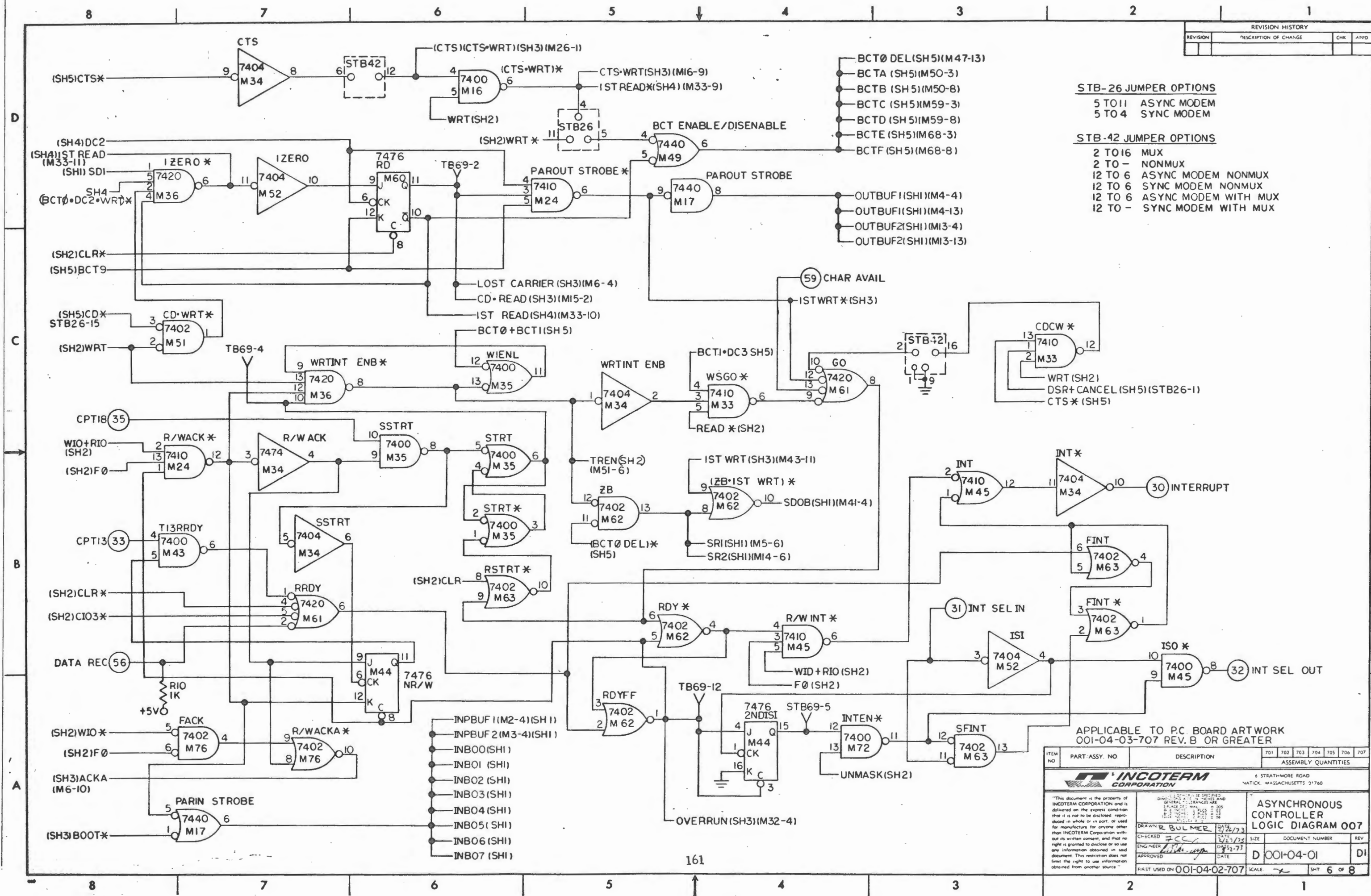
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

- STB 26 JUMPER OPTIONS**
- 15 TO 2 NORMAL
  - 15 TO 14 CD ALWAYS "1"
  - 1 TO 16 NORMAL
  - 1 TO 3 DSR+CANCEL \* ALWAYS "1"
  - 13 TO 14 DTR ALWAYS "1"
  - 13 TO 12 PROGADMATIC DTR
  - 6 TO 10 NORMAL
  - 6 TO 7 RTS ALWAYS "1"

APPLICABLE TO PC BOARD ARTWORK 001-04-03-701  
REV B OR GREATER

ITEM NO	PART ASSY NO	DESCRIPTION	T0	T02	T03	T04	T05	T06	T07
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01908									
DRAWN: J. Stegeman		DATE: 5/14/73		TITLE: ASYNCHRONOUS CONTROLLER LOGIC DIAGRAM		SIZE: 11x17		REV: 007	
CHECKED: J.C.C.		DATE: 5/17/73		DOCUMENT NUMBER: D 001-04-01		REV: DI			
APPROVED: J.C.C.		DATE: 5/17/73		SCALE: X		SHT: 5 OF 8			
FIRST USED ON: 001-04-02-707									

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



**STB-26 JUMPER OPTIONS**  
 5 TO 11 ASYNC MODEM  
 5 TO 4 SYNC MODEM

**STB-42 JUMPER OPTIONS**  
 2 TO 16 MUX  
 2 TO - NONMUX  
 12 TO 6 ASYNC MODEM NONMUX  
 12 TO 6 SYNC MODEM NONMUX  
 12 TO 6 ASYNC MODEM WITH MUX  
 12 TO - SYNC MODEM WITH MUX

APPLICABLE TO P.C. BOARD ARTWORK  
 001-04-03-707 REV. B OR GREATER

ITEM NO	PART-ASSY. NO	DESCRIPTION	ASSEMBLY QUANTITIES							
			701	702	703	704	705	706	707	

INCOTERM CORPORATION  
 6 STRATHMORE ROAD  
 NATICK, MASSACHUSETTS 01760

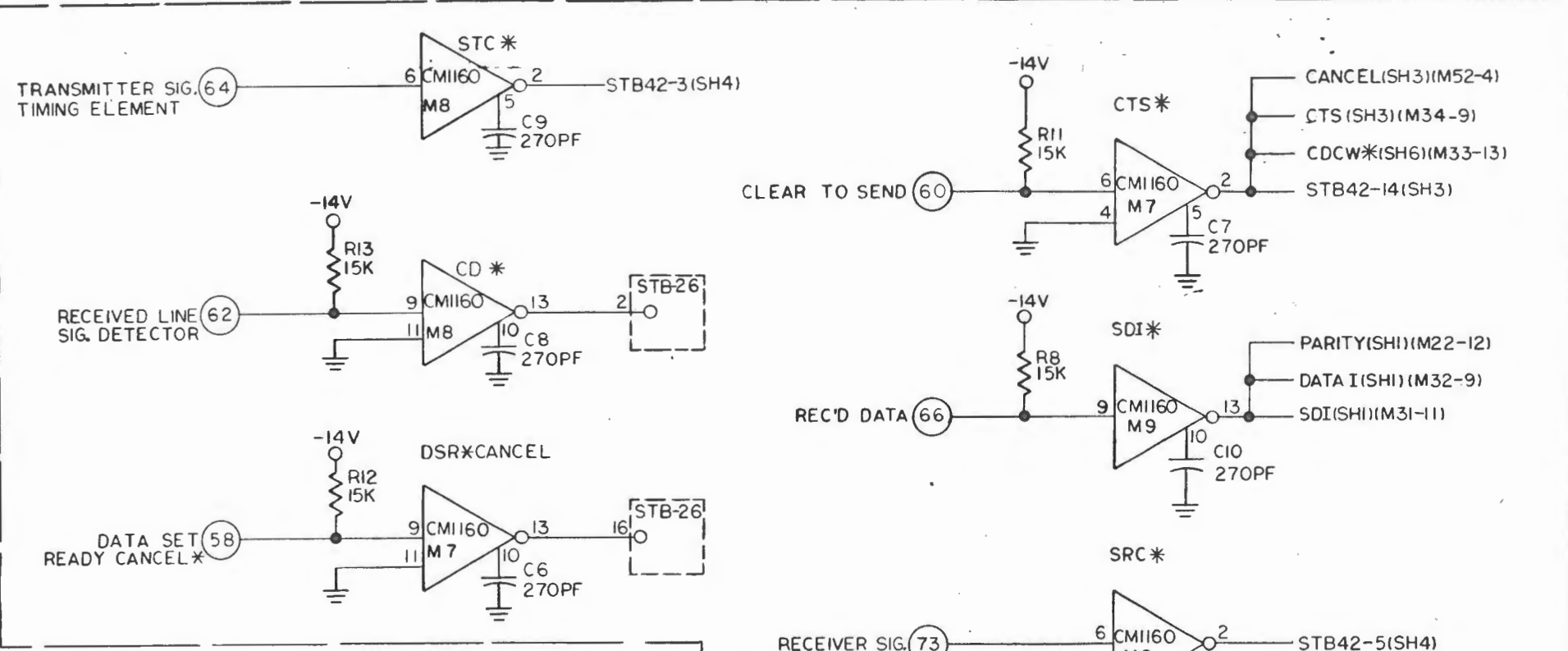
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DRAWN R BULMER	DATE 2/2/73	SIZE	DOCUMENT NUMBER	REV
CHECKED JCC	DATE 2/2/73			
ENGINEER J. J. ...	DATE 2/2/73			
APPROVED	DATE			

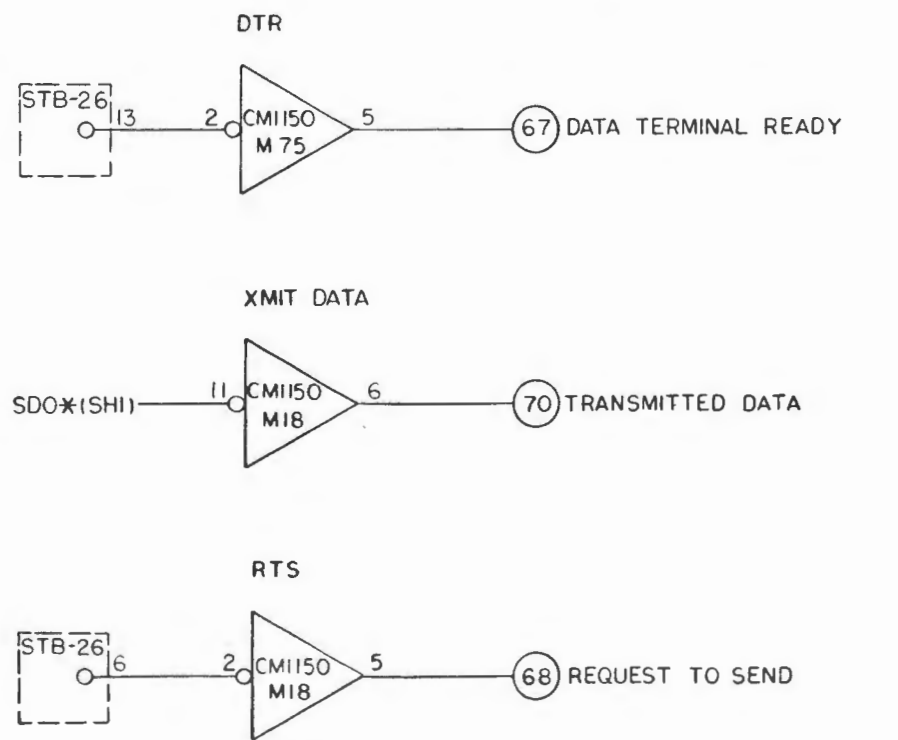
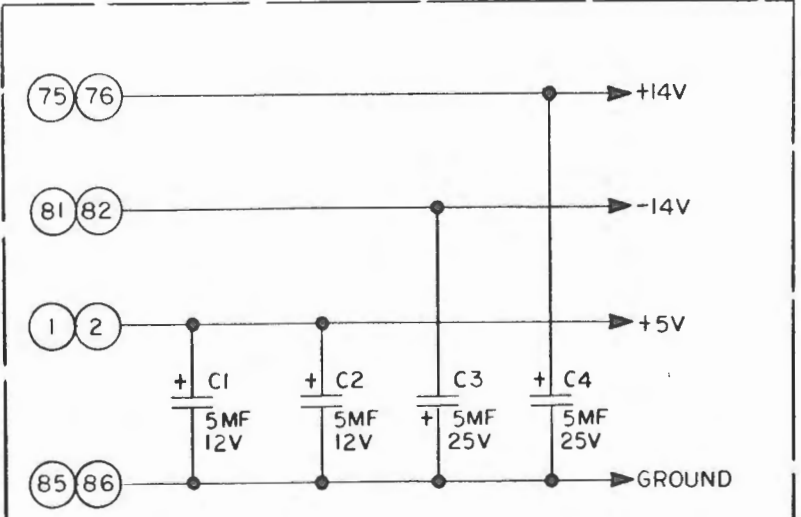
FIRST USED ON 001-04-02-707 SCALE 1:1 SHT 6 OF 8

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

SEE SHEET 5



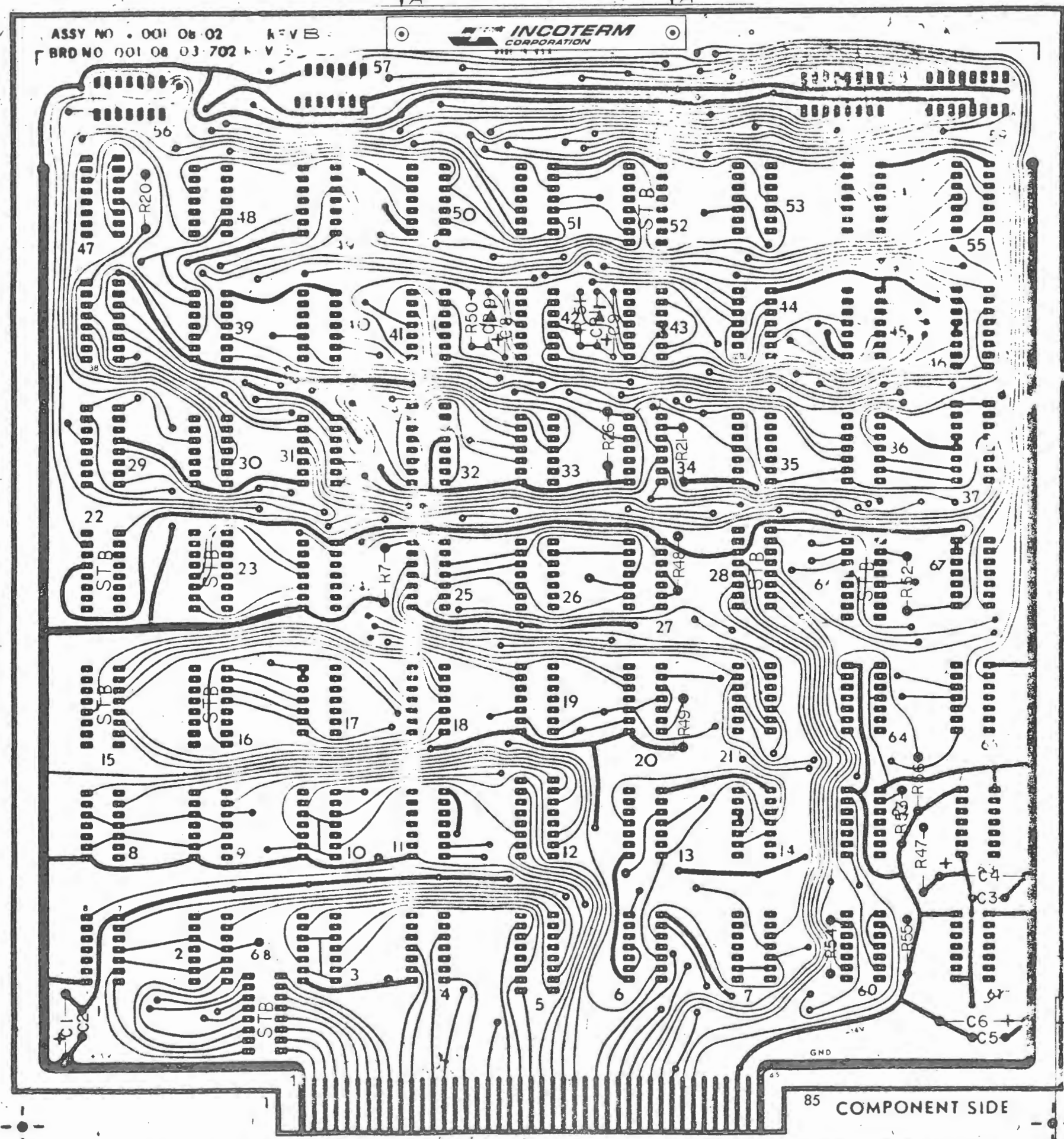
SEE SHEET 3



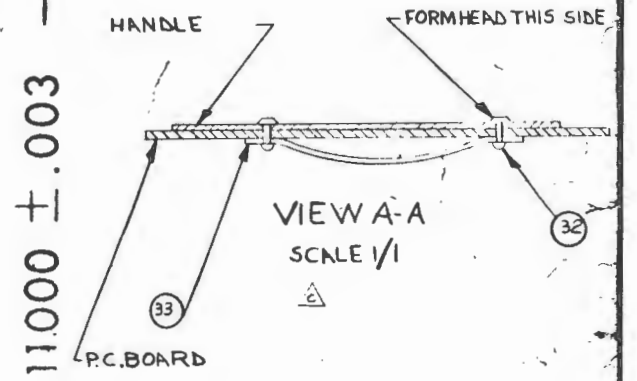
APPLICABLE TO P.C. BOARD ARTWORK  
001-04-03-707 REV. A ONLY

ITEM NO.	PART ASSY NO.	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
		3 STRATHMORE ROAD LATICUS, MASSACHUSETTS 01860							
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CHECKED	DATE	SCALE	DOCUMENT NUMBER		REV				
ENGINEER	DATE	SCALE	D 001-04-01-007		DI				
APPROVED	DATE	SCALE	FIRST USED ON 001-04-02-707		SHT 7 OF 8				

ASSY NO . 001 08-02 K-V-B  
 BRD NO 001 08-03-702 K-V-B



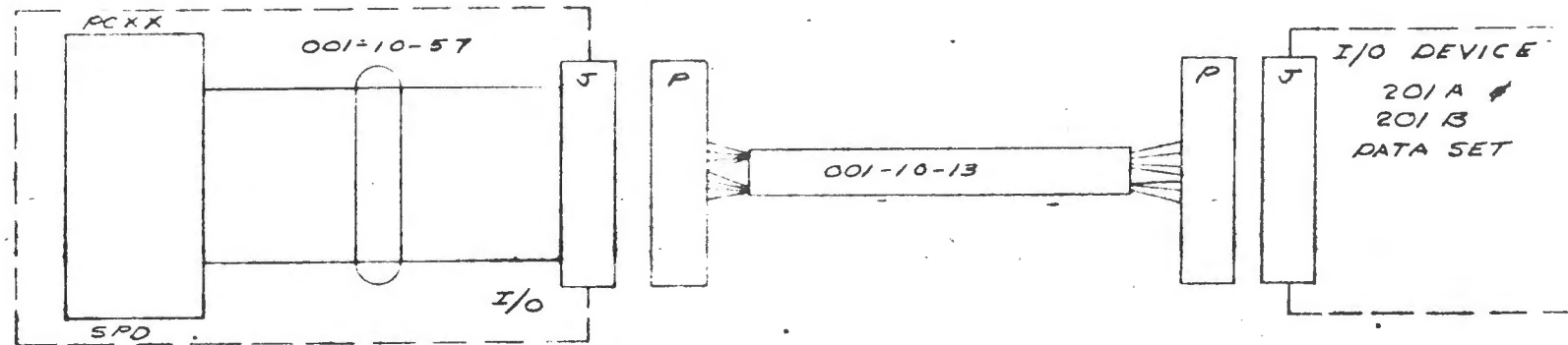
REVISIONS				
REV	DESCRIPTION	APPD	CHK	DATE
B	RELEASED			
C	ECO 1433 5-4-71			
D	REVISED/ECO 1469 5/26/71			
E	REVCHANGE ONLY/ECO 2025			
E1	ECO 2125 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002. SEE SHEET 1 FOR CONTINUING REVISION ASSIGNMENT HISTORY.			



NO.	REFERENCE DESIGNATION
1	K8
2	R51
3	C9
4	R50
5	M61, 63
6	M60, 62, 64
7	M42, 43
8	R53, 54, 55, 56
9	STB15, 16, 22, 23, 28, 52, 66, 68
10	C4, C6
11	C2, C3, C5
12	C1
13	R47
14	R7, 20, 21, 26, 48, 49, 52
15	CR1, CR9
16	M17, 24, 67
17	M51
18	M29, 32, 37, 38, 46, 47, 58, 59
19	M5, 12
20	M1, 2, 7, 8, 9, 50
21	M18
22	M28, 35, 39, 65
23	M4, 5, 11, 37, 40, 45
24	M3, 10, 25, 34
25	M13, 19, 30, 36, 41, 53, 57
26	M14, 20, 21, 27, 33, 44, 48, 49, 54, 55, 56

ASSEMBLE WITH ARTWORK 001-08-03-702 REV.B

INCOTERM CORPORATION		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TITLE	
TOLERANCES ON DECIMALS .005 (2PLCS) .02 (2PLCS)		P.C. BOARD ASSY SYNCHRONOUS MODEM CNTRL	
ANGLES 2°		70	
DR	DATE	SIZE	P.C. E.S. NO. RE
CHK	3-5-71	D	001-08-02
APPD			
NEXT ASSY 001-08-06-702		SHEET 2/1 SHIT 3 OF 3	

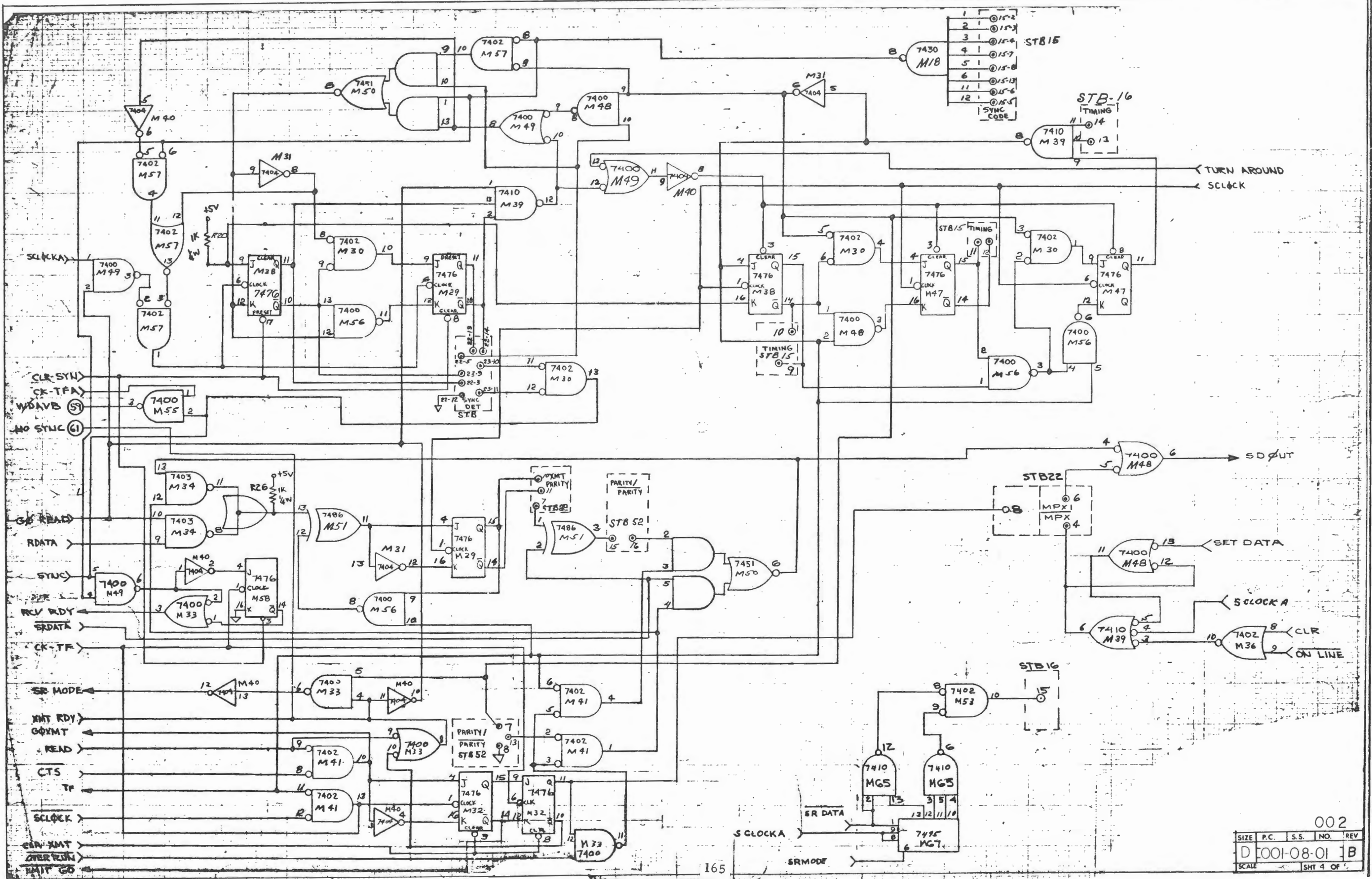


SIGNAL NAME (LOGIC)	PCXX → I/O WIRE	I/O CABLE COLOR CODE	DEVICE SIGNAL NAME
	1	BLACK	1 PROTECTIVE GND
	2	RED	2 TRANSMITTED DATA
70	3	GREEN	3 RECEIVED DATA
66	4	WHITE	4 REQUEST TO SEND
68	5	BROWN	5 CLEAR TO SEND
60	6	BLUE	6 DATA SET READY
58	7	ORANGE	7 SIGNAL GND
	8	YELLOW	8 RECEIVED LINE SIGNAL DETECTOR
62	9		9
	10		10
	11		11
	12		12
	13	VIOLET	13 SPARE (UNASSIGNED)
71	14	GREY	14 NEW SYNC
69	15	WHITE/BLACK	15 TRANSMITTER SIGNAL TIMING ELEMENT
	16		16
73	17	WHITE/RED	17 RECEIVER SIGNAL TIMING ELEMENT
	18		18
63	19	WHITE/ORANGE	19 REMOTE RELEASE
67	20	WHITE/YELLOW	20 DATA TERMINAL READY
65	21	WHITE/GREEN	21 READY
	22		22
	23		23
	24		24
	25		25

SYNCHRONOUS  
CONTROLLER

002

D 001-08-01 B



CLR SYN (5)  
 CK-TFA (5)  
 WDAVB (5)  
 NO SYNC (6)  
 RDATA (9)  
 SYNC (5)  
 RCV RDY (2)  
 SR DATA (3)  
 CK-TF (2)  
 SR MODE (12)  
 XMT RDY (9)  
 GOXMT (9)  
 READ (8)  
 CTS (8)  
 TR (11)  
 SCLKA (2)  
 SR XMT (2)  
 OVER RUN (2)  
 XMT GO (2)

STB15

1	15-2
2	15-3
3	15-4
4	15-7
5	15-8
6	15-13
11	15-13
12	15-6
[ SYNC CODE ]	

STB-16

TIMING

11	14
12	13

STB15 TIMING

1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
10	20
11	21
12	22
13	23
14	24
15	25
16	26
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73	83
74	84
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88	98
89	99
90	100

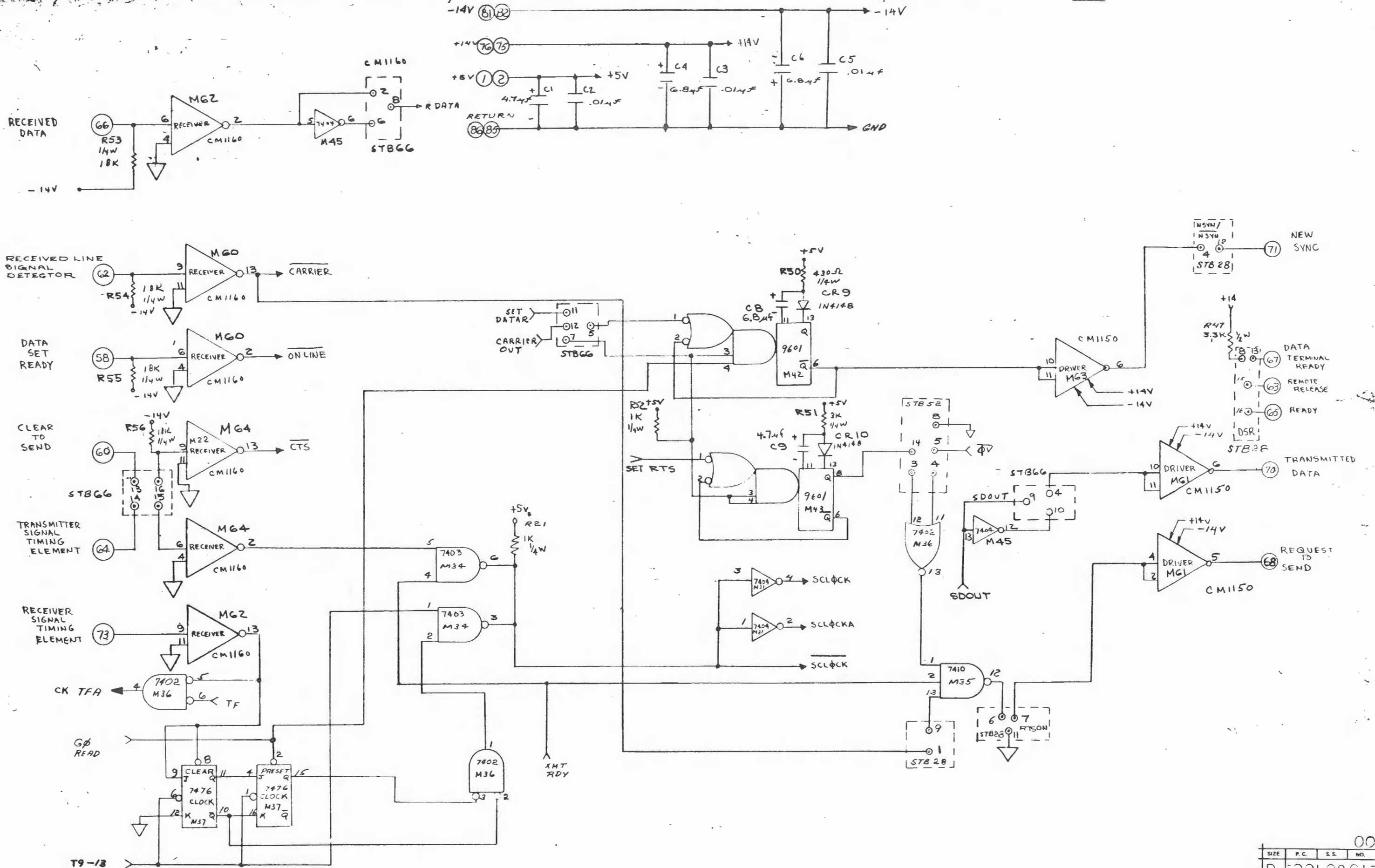
STB22

08	MPX1
04	MPX

002

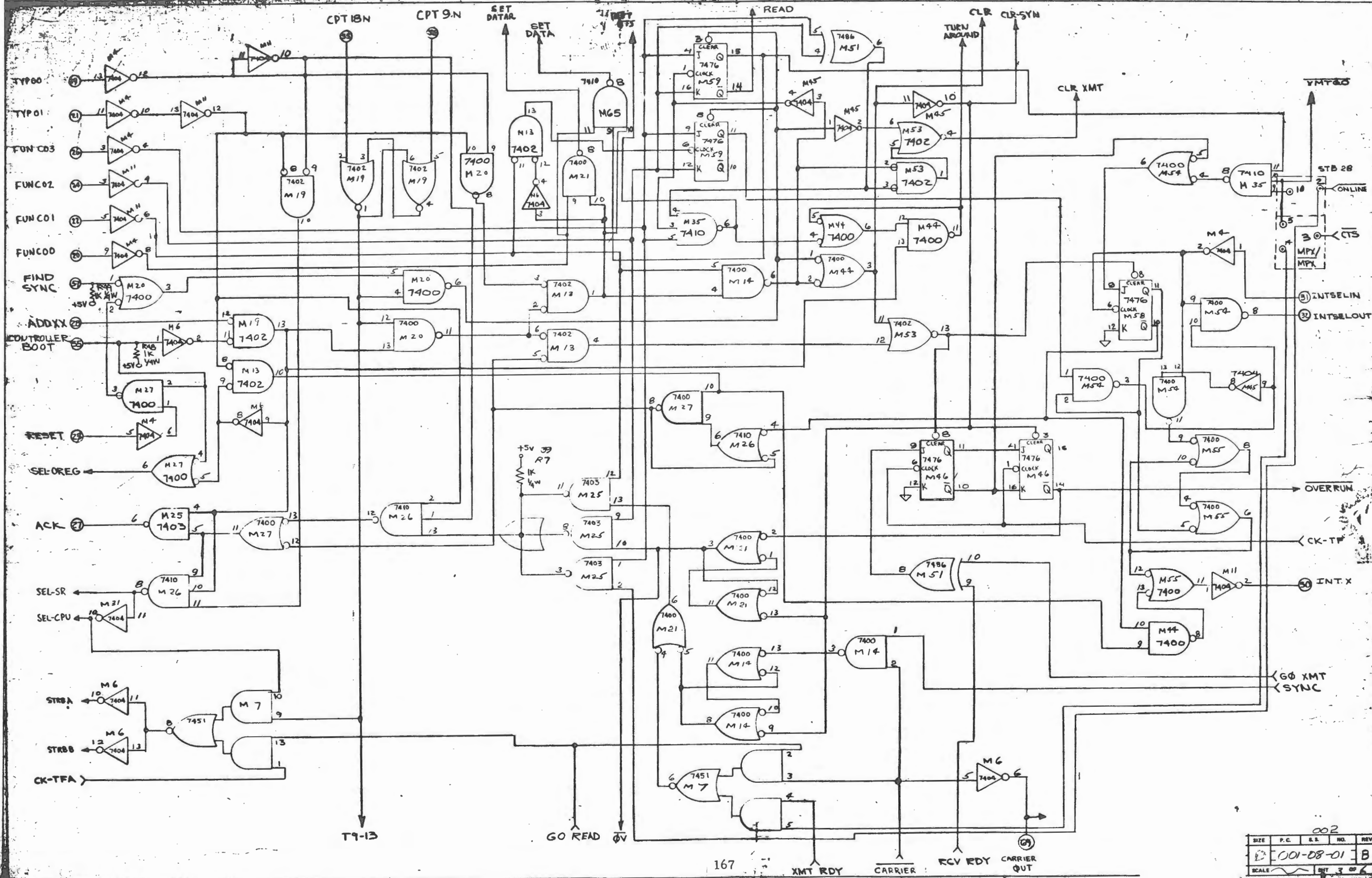
SIZE	P.C.	S.S.	NO.	REV
D	001-08-01		B	
SCALE			SHT 4 OF	





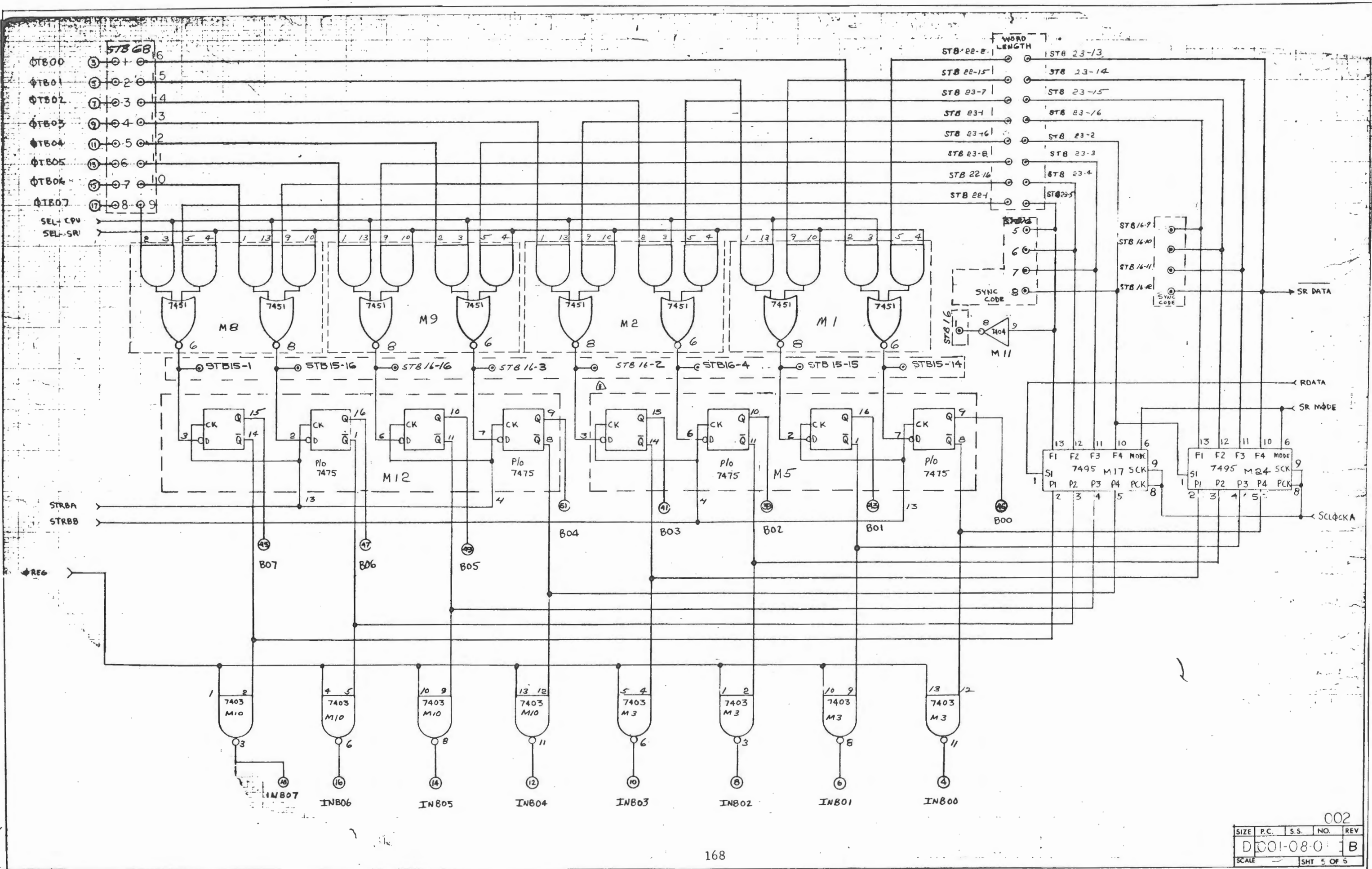
002

SIZE	P.C.	S.S.	NO.	REV
D	001-08-01	B		
SCALE		SHT	2 OF 6	



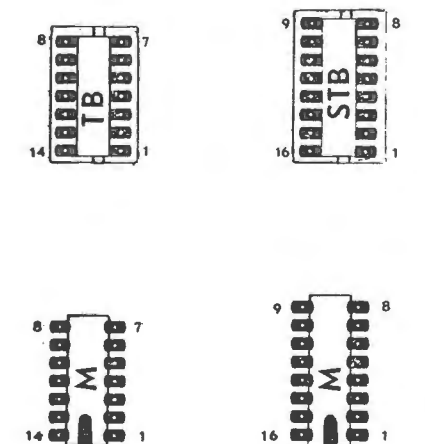
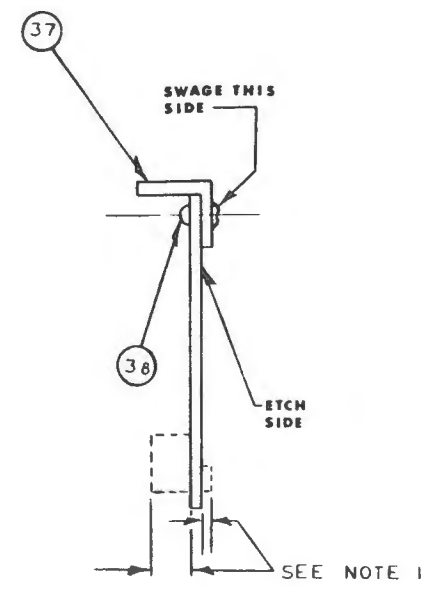
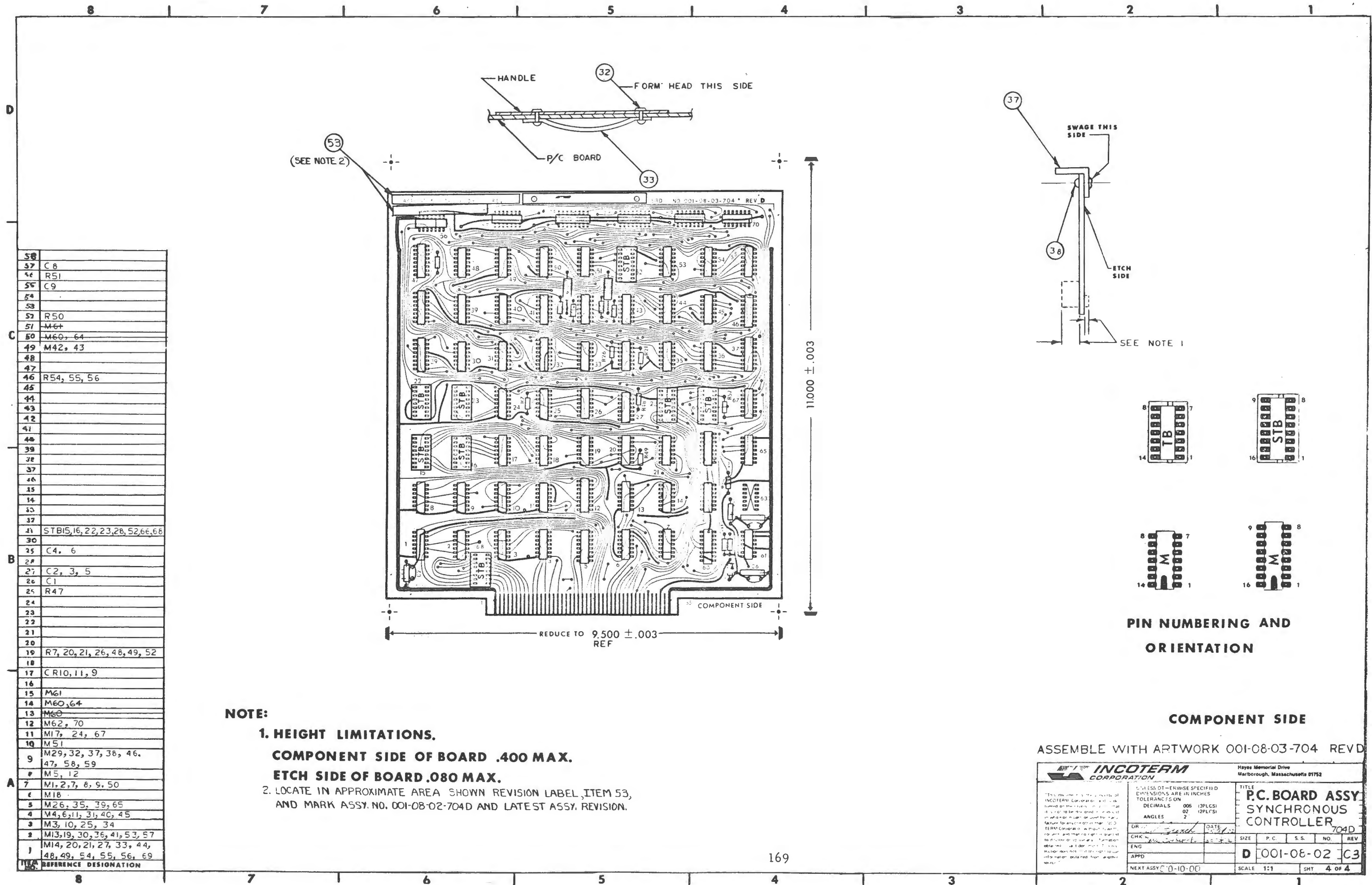
002

SIZE	P.C.	S.S.	NO.	REV.
			001-08-01	B
SCALE				3 OF 6



002

SIZE	P.C.	S.S.	NO.	REV
D	001-08-01			B
SCALE	SHT 5 OF 5			



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

ASSEMBLE WITH ARTWORK 001-08-03-704 REV D

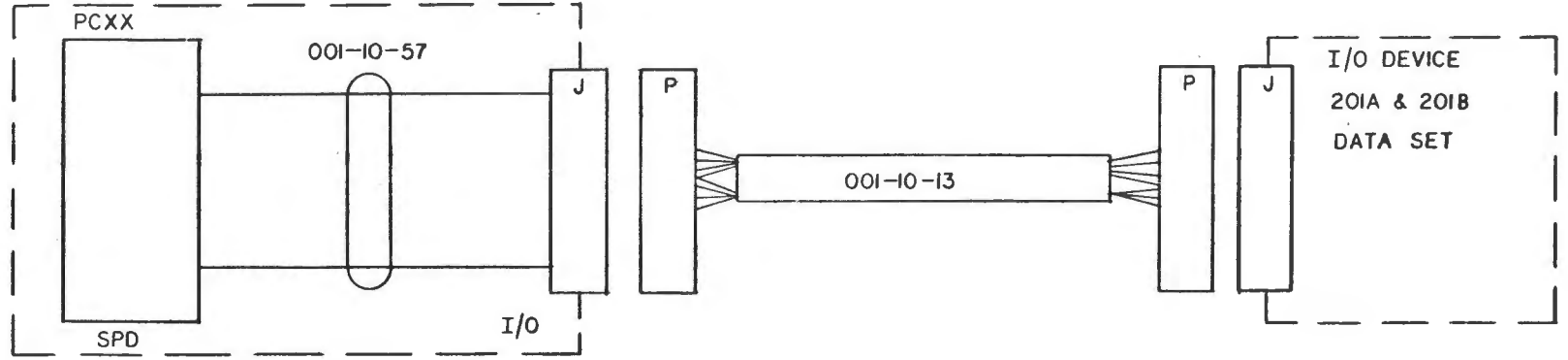
		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) FRACTIONS .02 (2PLFS) ANGLES 2°		TITLE <b>P.C. BOARD ASSY          SYNCHRONOUS          CONTROLLER</b>	
DR. [Signature] ENG. [Signature] APPD. [Signature]	DATE 10/1/70	SIZE <b>D</b>	P.C. S.S. NO. REV 001-08-02 C3
NEXT ASSY: 10-10-00		SCALE: 1:1	SHT: 4 OF 4

58	
57	C 8
56	R51
55	C 9
54	
53	
52	R50
51	M61
50	M60, 64
49	M42, 43
48	
47	
46	R54, 55, 56
45	
44	
43	
42	
41	
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	STB15, 16, 22, 23, 28, 52, 66, 68
30	
29	C4, 6
28	
27	C2, 3, 5
26	C1
25	R47
24	
23	
22	
21	
20	
19	R7, 20, 21, 26, 48, 49, 52
18	
17	C10, 11, 9
16	
15	M61
14	M60, 64
13	M60
12	M62, 70
11	M17, 24, 67
10	M51
9	M29, 32, 37, 38, 46, 47, 58, 59
8	M5, 12
7	M1, 2, 7, 8, 9, 50
6	M18
5	M26, 35, 39, 65
4	M4, 6, 11, 31, 40, 45
3	M3, 10, 25, 34
2	M13, 19, 30, 36, 41, 53, 57
1	M14, 20, 21, 27, 33, 44, 48, 49, 54, 55, 56, 69
0	REFERENCE DESIGNATION

**NOTE:**

- HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
- LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL ITEM 53, AND MARK ASSY. NO. 001-08-02-704D AND LATEST ASSY. REVISION.

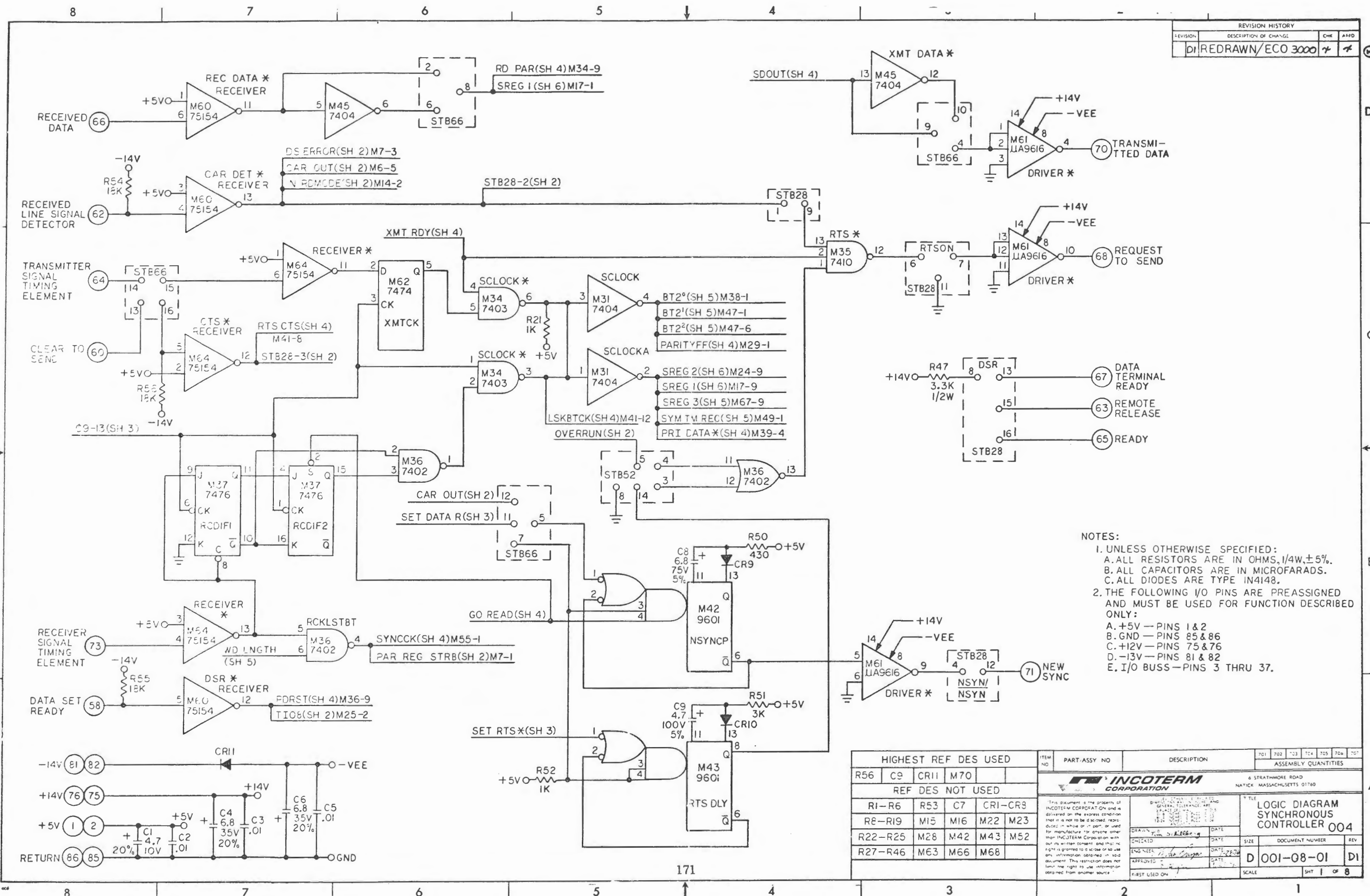
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



SIGNAL NAME (LOGIC)	PCXX → I/O WIRE	I/O CABLE COLOR CODE	DEVICE SIGNAL NAME
70	1	BLACK	1 PROTECTIVE GND
66	2	RED	2 TRANSMITTED DATA
68	3	GREEN	3 RECEIVED DATA
60	4	WHITE	4 REQUEST TO SEND
58	5	BROWN	5 CLEAR TO SEND
62	6	BLUE	6 DATA SET READY
	7	ORANGE	7 SIGNAL GND
	8	YELLOW	8 RECEIVED LINE SIGNAL DETECTOR
	9		9
	10		10
	11		11
	12		12
	13	VIOLET	13 SPARE (UNASSIGNED)
71	14	GREY	14 NEW SYNC
64	15	WHITE/BLACK	15 TRANSMITTER SIGNAL TIMING ELEMENT
	16		16
	17	WHITE/RED	17 RECEIVER SIGNAL TIMING ELEMENT
	18		18
63	19	WHITE/ORANGE	19 REMOTE RELEASE
67	20	WHITE/YELLOW	20 DATA TERMINAL READY
65	21	WHITE/GREEN	21 READY
	22		22
	23		23
	24		24
	25		25

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NATICK MASSACHUSETTS 01740						
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DRAWN	DATE	CHECKED	DATE	ENGINEER	DATE	APPROVED	DATE	REV.	
FIRST USED ON			SCALE		SHT 8 of 8				

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
D1	REDRAWN/ECO 3000	✓	✓



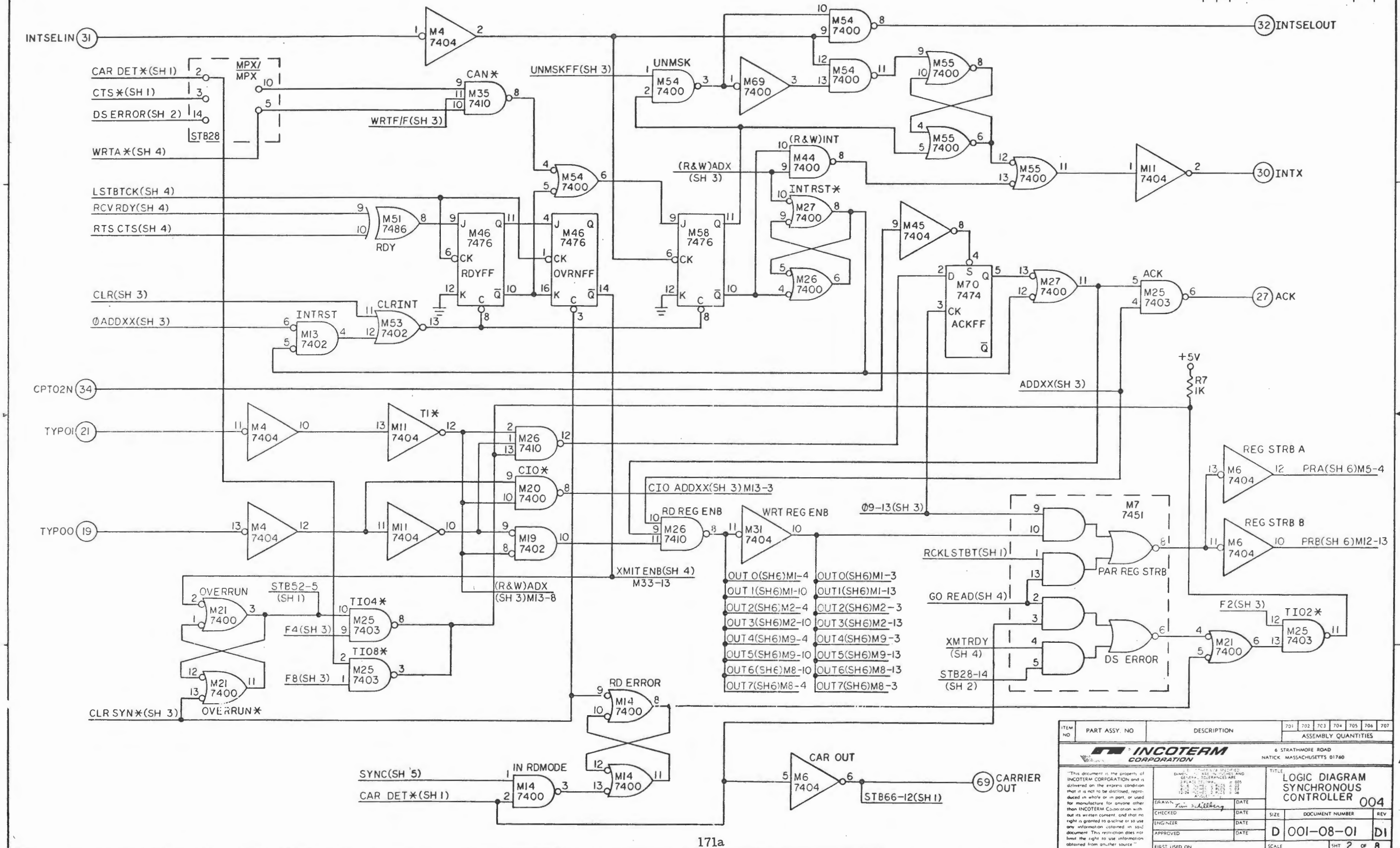
- NOTES:
- UNLESS OTHERWISE SPECIFIED:
    - A. ALL RESISTORS ARE IN OHMS, 1/4W, ±5%.
    - B. ALL CAPACITORS ARE IN MICROFARADS.
    - C. ALL DIODES ARE TYPE IN4148.
  - THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR FUNCTION DESCRIBED ONLY:
    - A. +5V — PINS 1 & 2
    - B. GND — PINS 85 & 86
    - C. +12V — PINS 75 & 76
    - D. -13V — PINS 81 & 82
    - E. I/O BUSS — PINS 3 THRU 37.

HIGHEST REF DES USED				ITEM NO	PART/ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
R56	C9	CR11	M70										
REF DES NOT USED													
RI-R6	R53	C7	CR1-CR3										
R8-R19	M15	M16	M22	M23									
R22-R25	M28	M42	M43	M52									
R27-R46	M63	M66	M68										

		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760	
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DRAWN	DATE	CHECKED	DATE
ENG'NEER	DATE	APPROVED	DATE
FIRST USED ON	SCALE	SHT 1 OF 8	

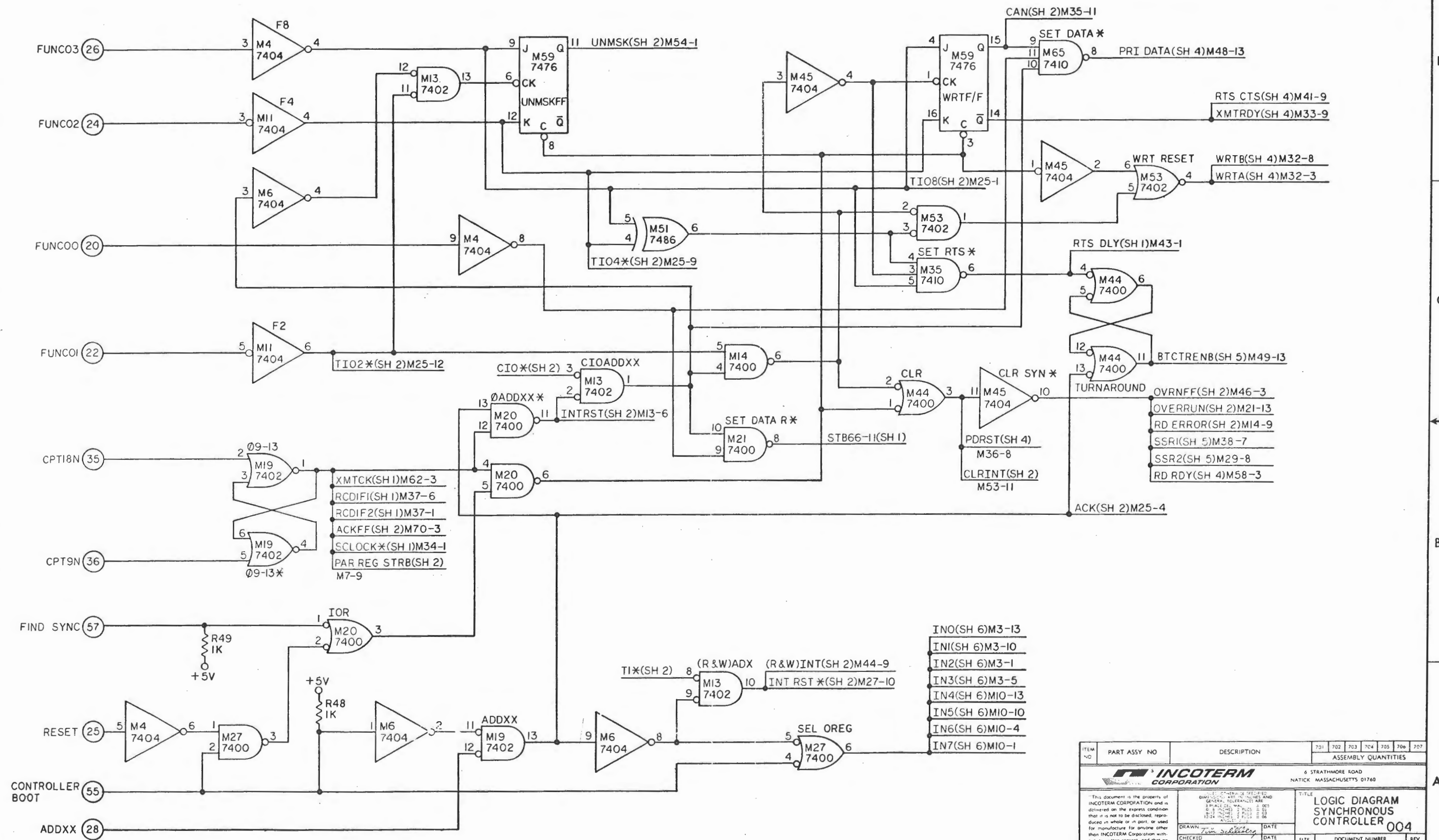
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



171a

ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
<b>INCOTERM CORPORATION</b> 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740									
TITLE <b>LOGIC DIAGRAM          SYNCHRONOUS          CONTROLLER 004</b>									
DRAWN: <i>Tom Schiberg</i> DATE: _____ CHECKED: _____ DATE: _____ ENGINEER: _____ DATE: _____ APPROVED: _____ DATE: _____ FIRST USED ON: _____			SIZE: _____ DOCUMENT NUMBER: <b>D 001-08-01</b> SCALE: _____		REV: <b>DI</b> SHT 2 OF 8				

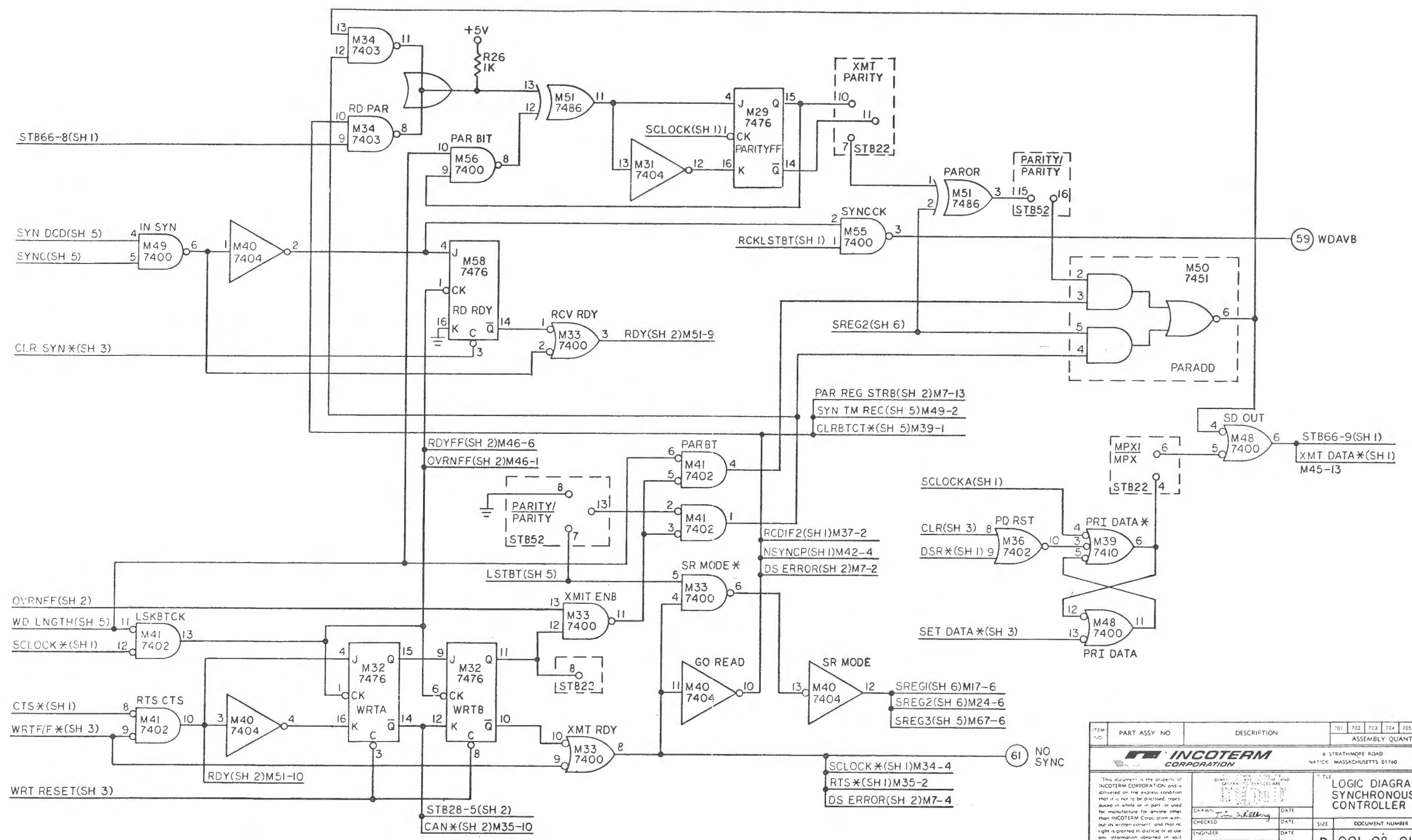
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES							
			701	702	703	704	705	706	707	
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740							
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DRAWN: <i>Tom Schellberg</i>			CHECKED: _____		ENGINEER: _____		APPROVED: _____		DATE: _____	
FIRST USED ON: _____			SCALE: _____		SHT 3 OF 8		DOCUMENT NUMBER D 001-08-01		DATE: _____	

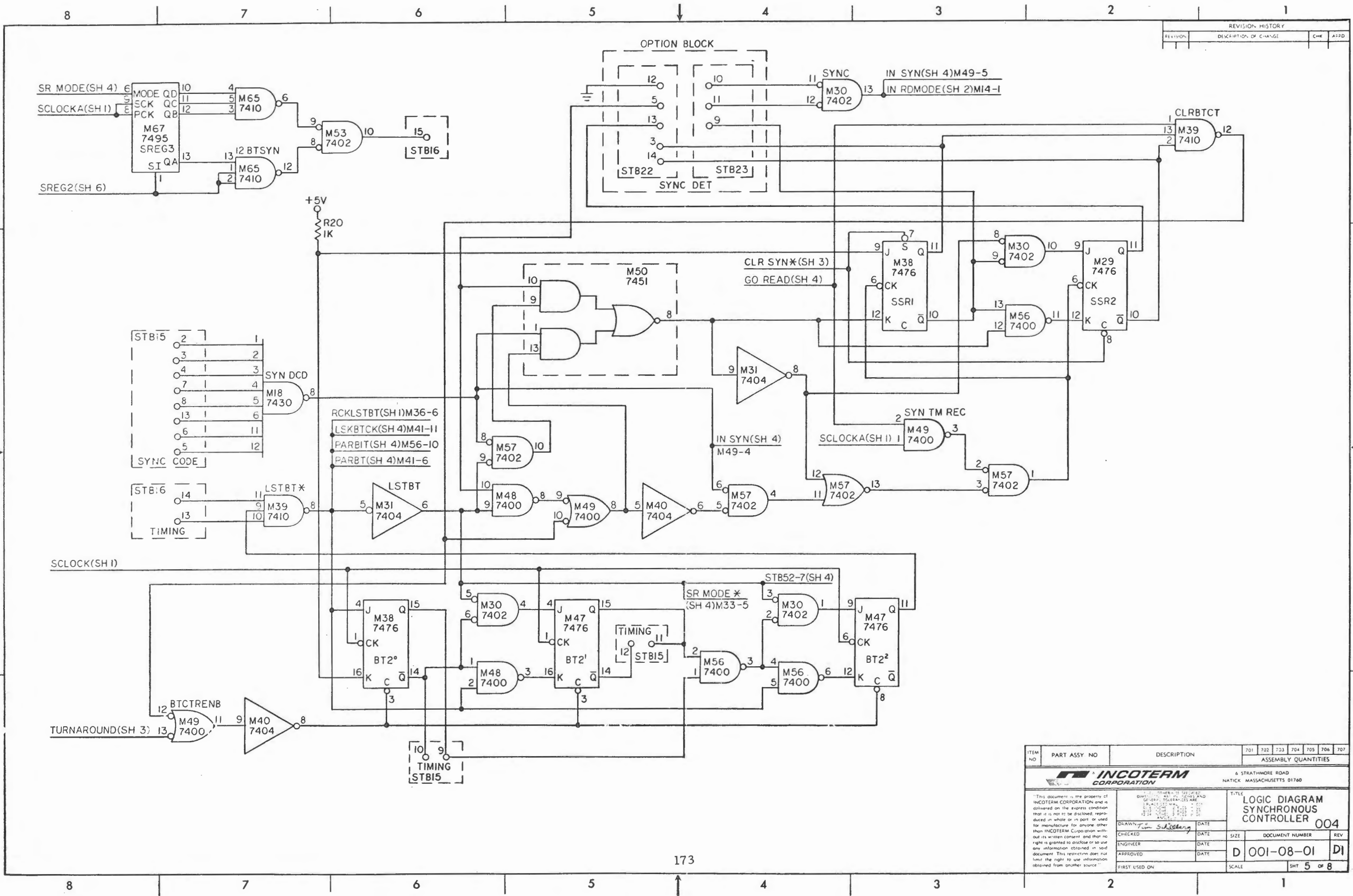


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



172a

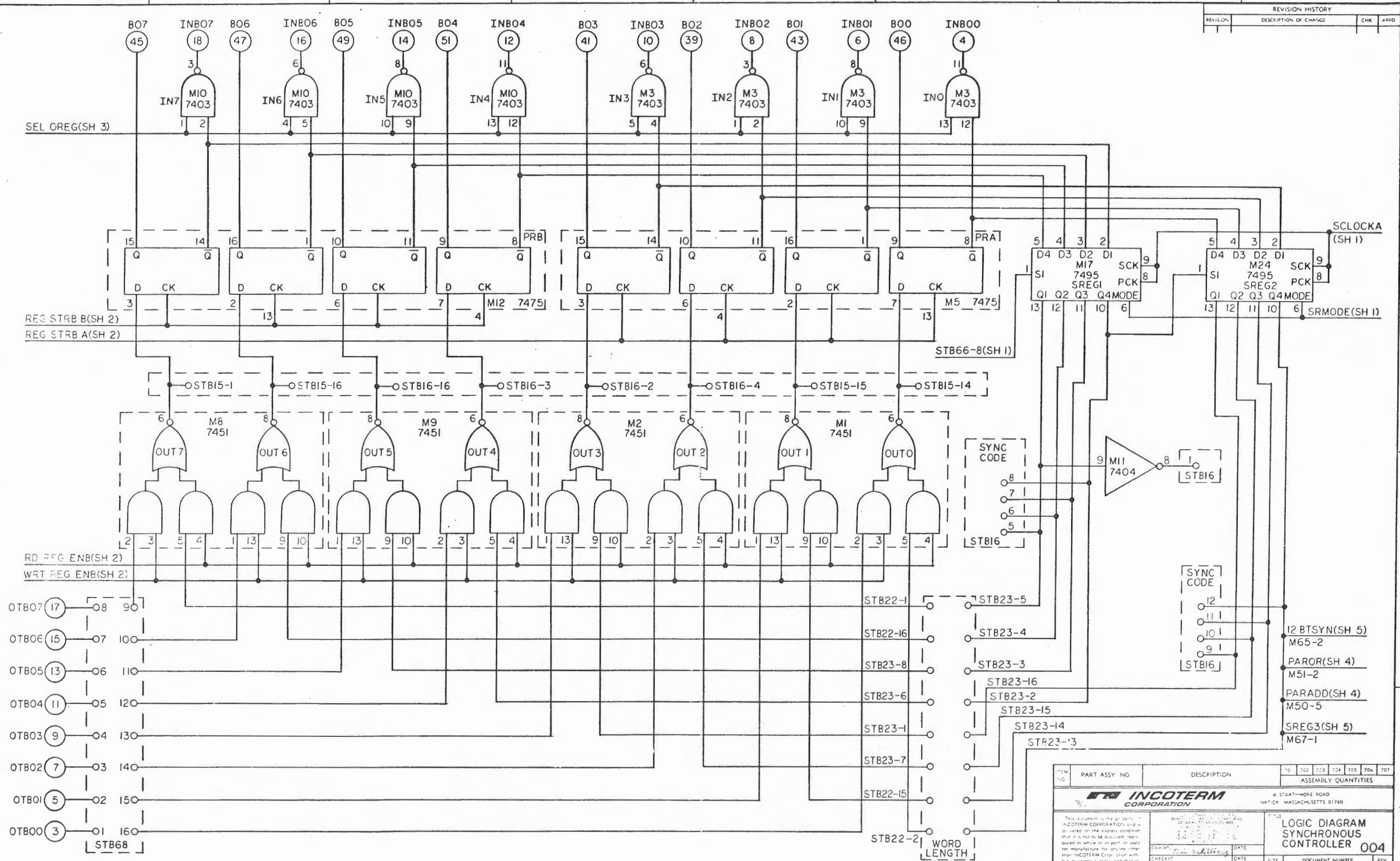
ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
4 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740									
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DRAWN: <i>Shilling</i>		DATE:		TITLE: LOGIC DIAGRAM SYNCHRONOUS CONTROLLER 004		SIZE: D		DOCUMENT NUMBER: 001-08-01	
CHECKED:		DATE:		SCALE: 1:1		REV: D1		SHT 4 OF 8	
ENGINEER:		DATE:		SCALE: 1:1		REV: D1		SHT 4 OF 8	
APPROVED:		DATE:		SCALE: 1:1		REV: D1		SHT 4 OF 8	
FIRST USED ON:		DATE:		SCALE: 1:1		REV: D1		SHT 4 OF 8	



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES					
			701	702	703	704	705	706
			6 STRATHMORE ROAD NATICK MASSACHUSETTS 01760					
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<b>LOGIC DIAGRAM SYNCHRONOUS CONTROLLER 004</b>			<b>001-08-01</b>		<b>D1</b>		<b>5 of 8</b>	

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

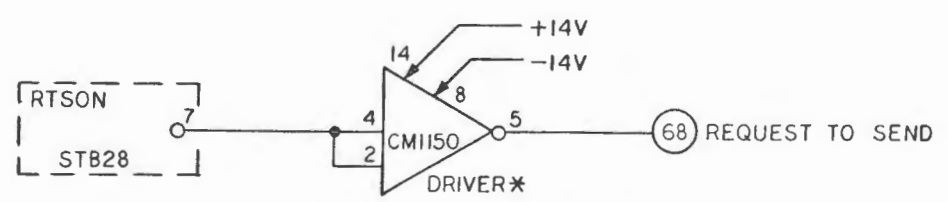
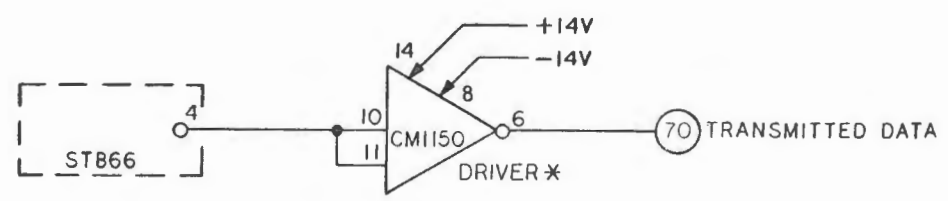
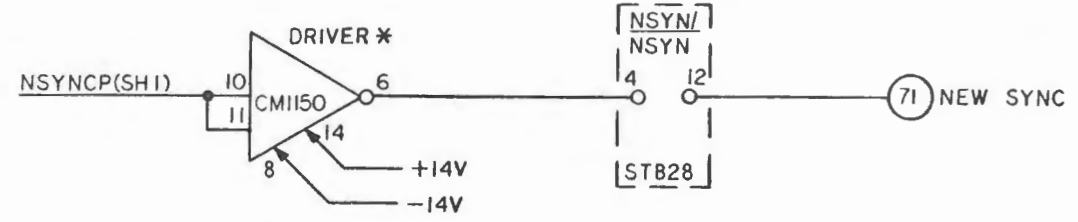
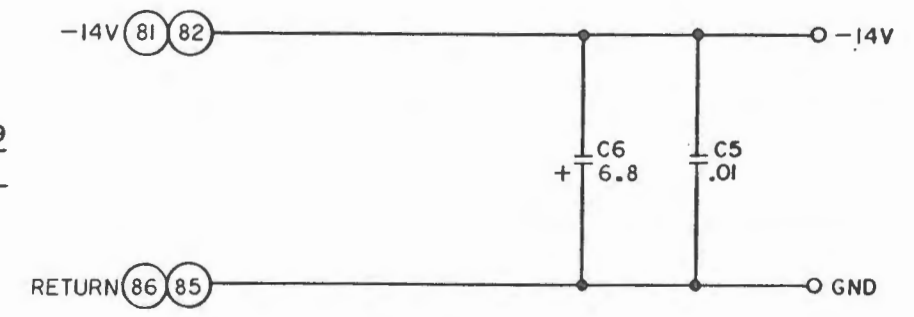
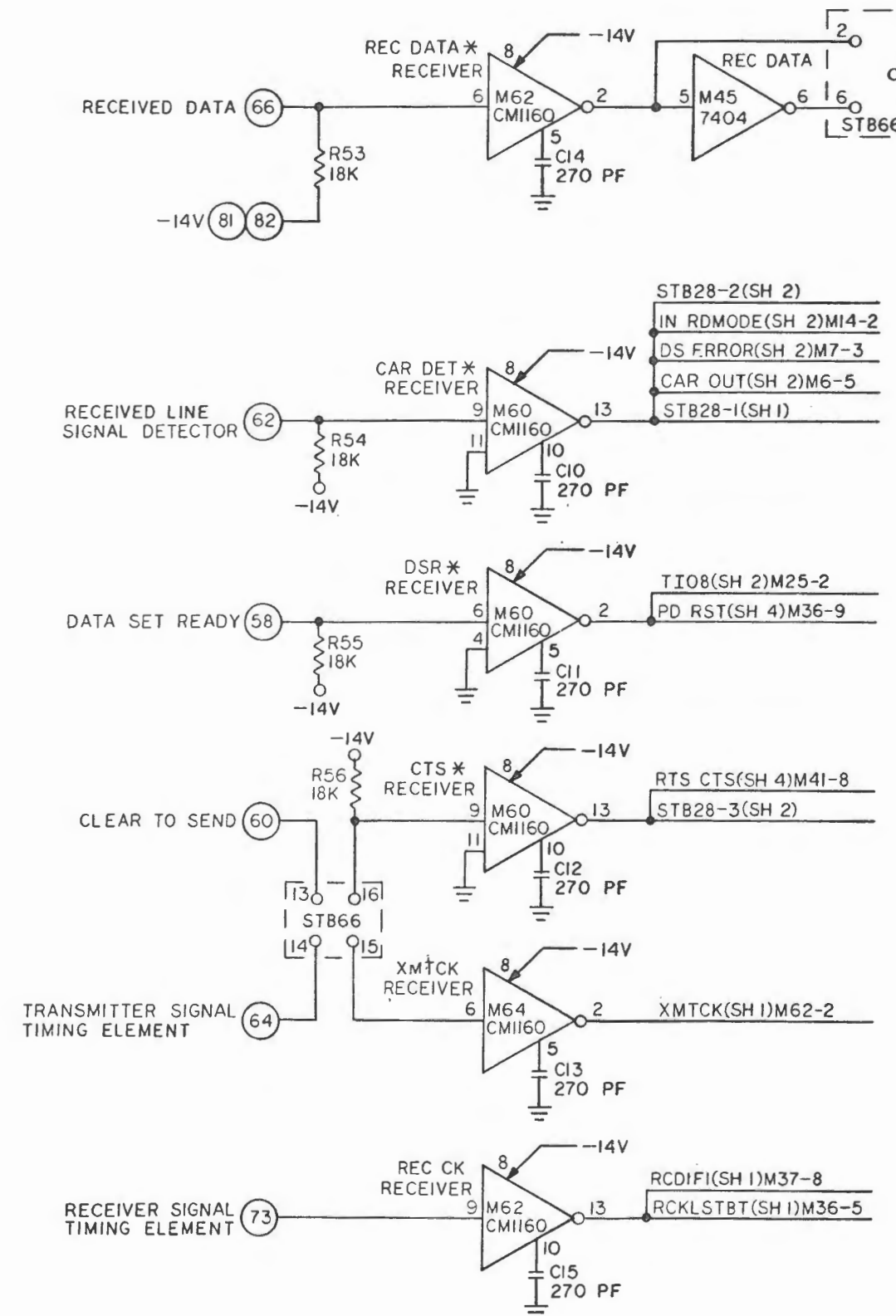


- OTB07 (17) - 08 90
- OTB06 (15) - 07 100
- OTB05 (13) - 06 110
- OTB04 (11) - 05 120
- OTB03 (9) - 04 130
- OTB02 (7) - 03 140
- OTB01 (5) - 02 150
- OTB00 (3) - 01 160

- 12 BSYN(SH 5) M65-2
- PAROR(SH 4) M51-2
- PARADD(SH 4) M50-5
- SREG3(SH 5) M67-1

ITEM NO.	PART ASSY NO.	DESCRIPTION	ASSEMBLY QUANTITIES						
			701	702	703	704	705	706	707
			6 STRATFORD ROAD NATICK, MASSACHUSETTS 01740						
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CHECKED	DATE	SIZE	DATE		DATE		DATE		REV
ENGINEER	DATE	DATE	DATE		DATE		DATE		
APPROVED	DATE	DATE	DATE		DATE		DATE		
FIRST USED ON:	SCALE	SHT 6 of 8							

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

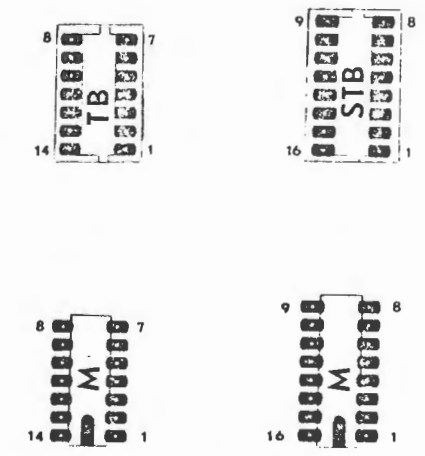
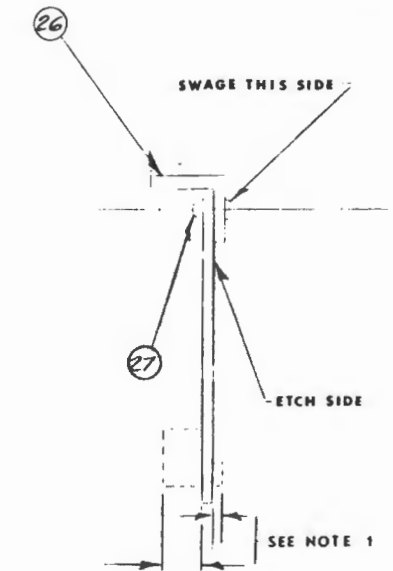
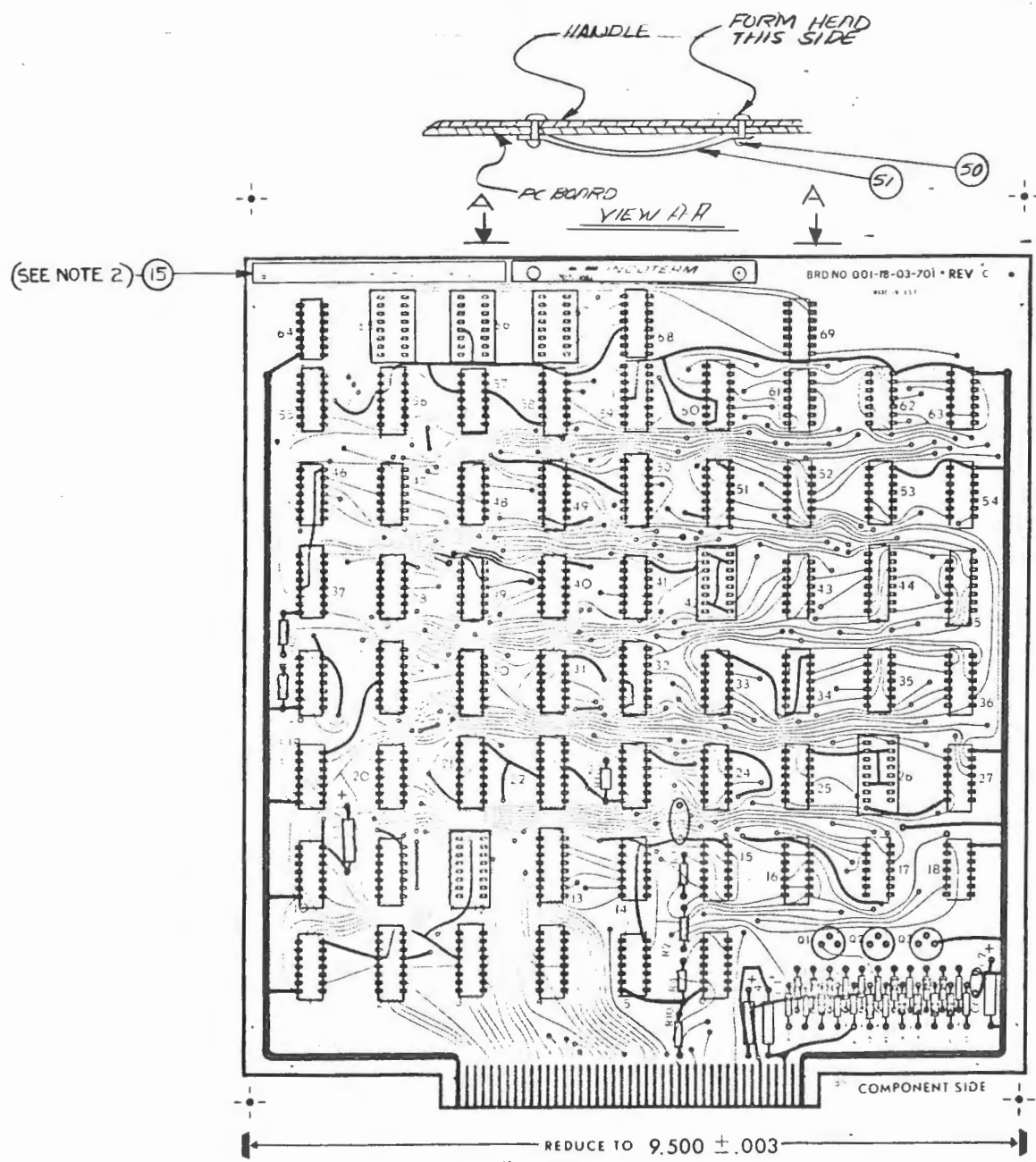


APPLICABLE TO P/C BOARDS USING  
ARTWORK REV A & B ONLY

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
6 STRATHMORE ROAD, NATICK, MASSACHUSETTS 01760									
DRAWN: <i>Tom Schilling</i>		DATE:		TITLE: LOGIC DIAGRAM SYNCHRONOUS CONT 004		SIZE:		REV.:	
CHECKED:		DATE:		DOCUMENT NUMBER: D 001-08-01		SCALE:		REV.:	
ENGINEER:		DATE:		SHT 7 OF 8		SCALE:		REV.:	
APPROVED:		DATE:		SCALE:		SHT 7 OF 8		REV.:	
FIRST USED ON:		DATE:		SCALE:		SHT 7 OF 8		REV.:	

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK
G	RE ASSEMBLY 4/4/72	2/10/72	Ch...
G1	ECO 214 CHANGES THIS DOCUMENT		

STRUCTURE PER PROCEDURE 300-002, FOR CONTINUING ASSIGNMENT HISTORY.



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

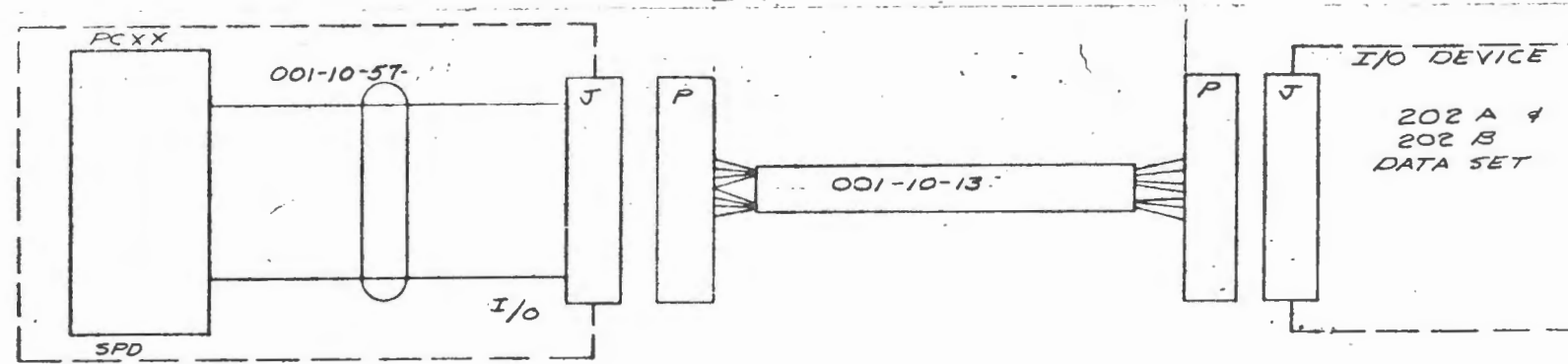
ITEM	REFERENCE DESIGNATION
47	C6
46	Q3
45	Q1,2
44	CR5
43	CR1,2,3,4,6,7,8,9,10,11,12
42	R18
41	R14,16,17
40	R15
39	R12
38	R11
37	PI3
34	R20
24	C5
23	C3,4
22	C1,2
20	R3
19	R1,2,4,5,6,9,10,19
18	STB12,26,42,65,66,67
17	TB69
14	M5,14
13	M55,56,57
12	M22,29,32,37,44,50,59,60,68
11	M2,3,4,13
10	M41,47,48,53
9	M21
8	M17,49
7	M64
6	M27,36,61
5	M19,24,33,39
4	M11,20,31,34,46,52
3	M1,6,10,23,28
2	M30,40,51,58,62,63,54
1	M15,18,25,35,38,43,45

**NOTE:**

- HEIGHT LIMITATIONS.  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
- LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 15, AND MARK ASSY. NO. 001-18-02-701 AND LATEST ASSY REVISION.

ASSEMBLE WITH ART WORK 001-18-03-701 REV C

<b>INCOTERM CORPORATION</b> Hayes Memorial Drive Marblehead, Massachusetts 01952		TITLE <b>P.C. BOARD ASSY PARTY LINE CONTROLLER 701</b>	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 7		DATE DR: B. FREDERICK 3/11/71 CHK: R. BILODEAU 3/14/71 APP: D. UMY DYNE 3/15/71 NEXT ASSY: 001-18-06	SIZE P.C. C.S. NO. REV <b>D 001-18-02 G4</b>
SCALE 1:1		SHEET 5 OF 5	



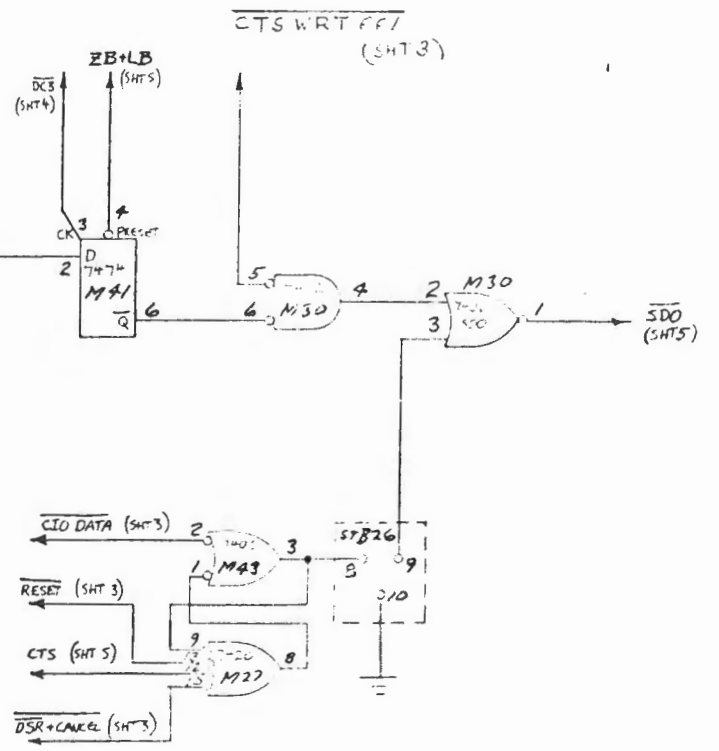
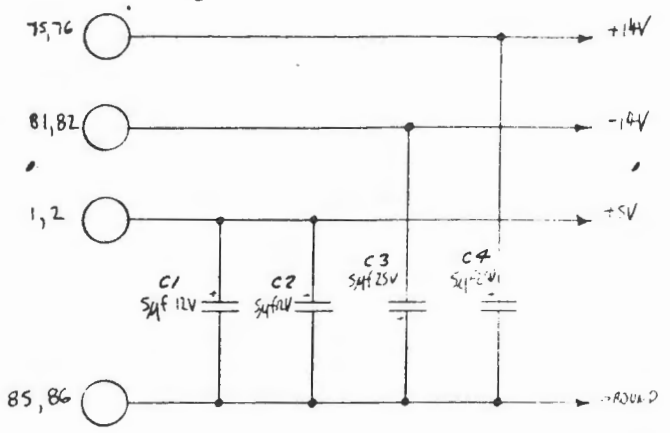
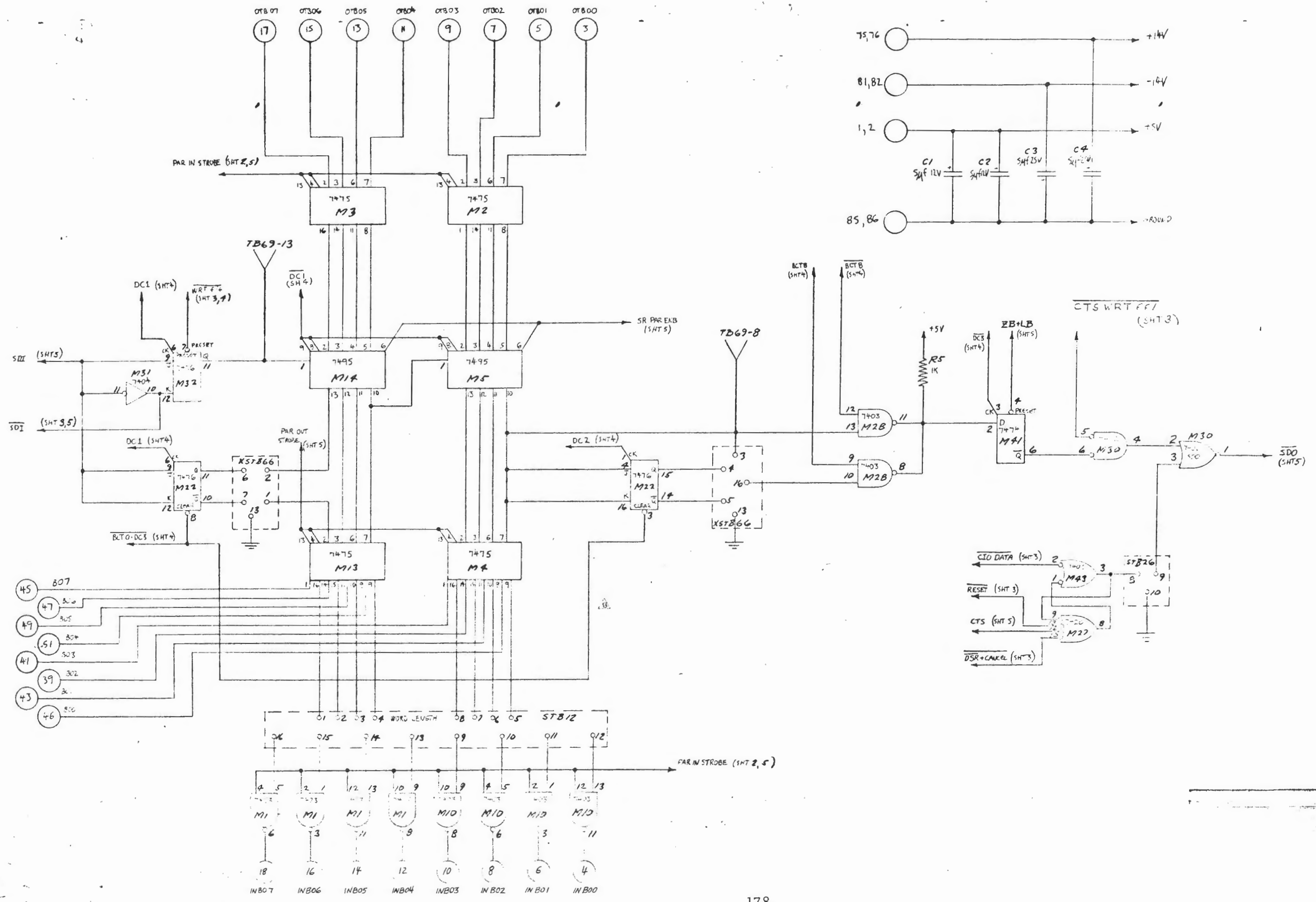
SIGNAL NAME (LOGIC)	PCXX → I/O	I/O CABLE COLOR CODE	DEVICE SIGNAL NAME
70	1	BLACK	1 PROTECTIVE GROUND
66	2	WHITE	2 TRANSMITTED DATA
68	3	RED	3 RECEIVED DATA
60	4	GREEN	4 REQUEST TO SEND
58	5	ORANGE	5 CLEAR TO SEND
	6	BLUE	6 DATA SET READY
	7	WHITE/BLACK	7 SIGNAL GROUND
62	8	RED/BLACK	8 RECEIVED LINE SIGNAL DETECTOR
	9		9
	10		10
	11		11
	12		12
	13	GREEN/BLACK	13 SPARE UNASSIGNED
71	14	ORANGE/BLACK	14 NEW SYNC
64	15	BLUE/BLACK	15 TRANSMITTER SIGNAL TIMING ELEMENT (UNUSED)
	16		16
73	17	BLACK/WHITE	17 RECEIVER SIGNAL TIMING ELEMENT (UNUSED)
	18		18
63	19	RED/WHITE	19 REMOTE RELEASE (UNUSED)
67	20	GREEN/WHITE	20 DATA TERMINAL READY
65	21	BLUE/WHITE	21 READY (UNUSED)
	22		22
	23		23
	24		24
	25		25

**INDOTERM CORPORATION**

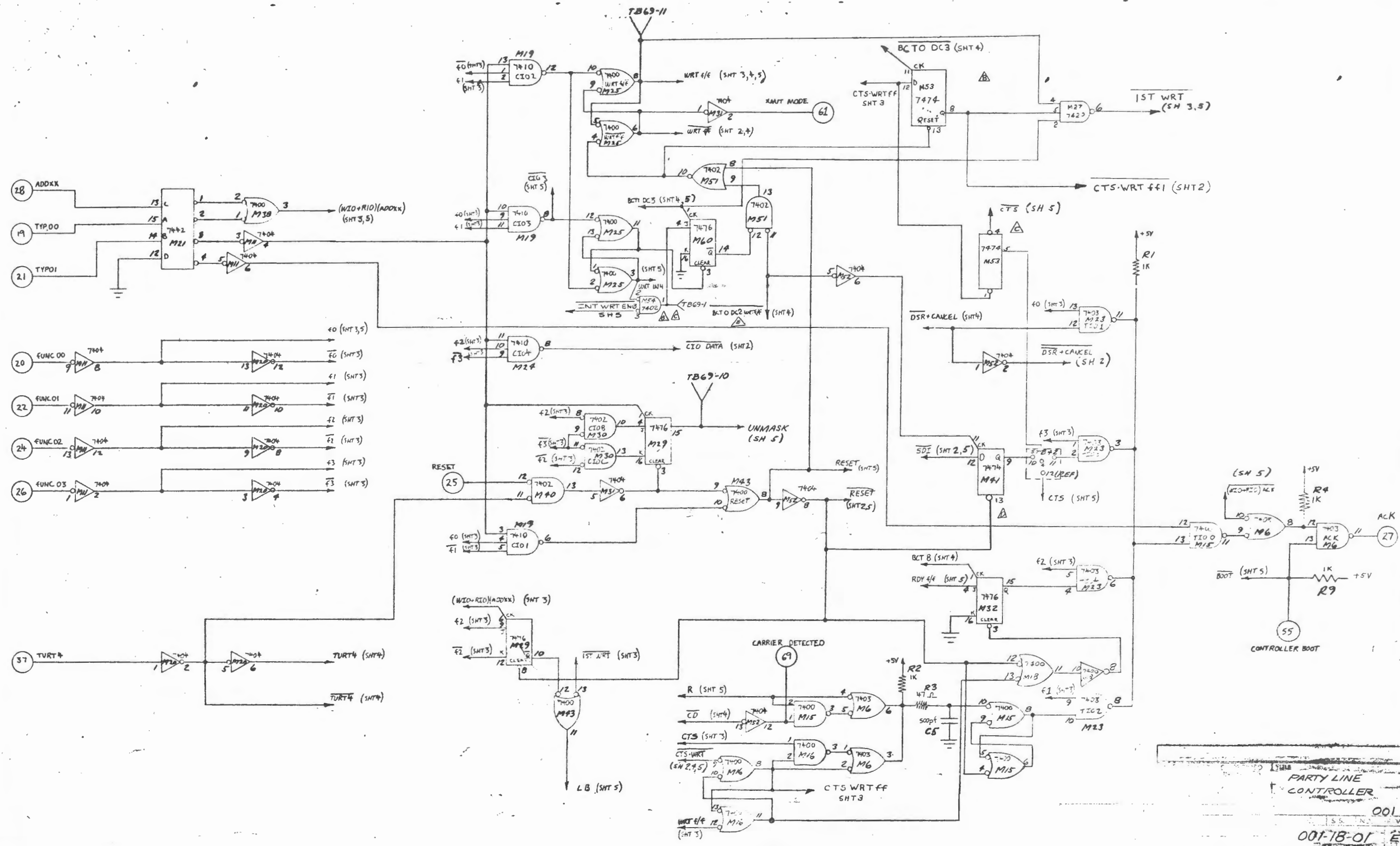
INDOTERM CORPORATION  
 10000 W. 10th Ave.  
 Denver, CO 80202  
 (303) 751-1000

**PARTY LINE CONTROLLER**

00178-01

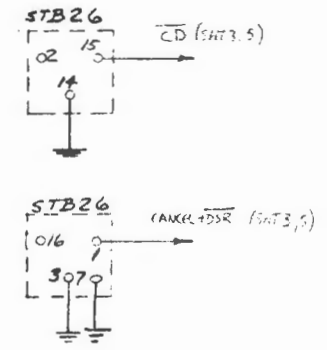
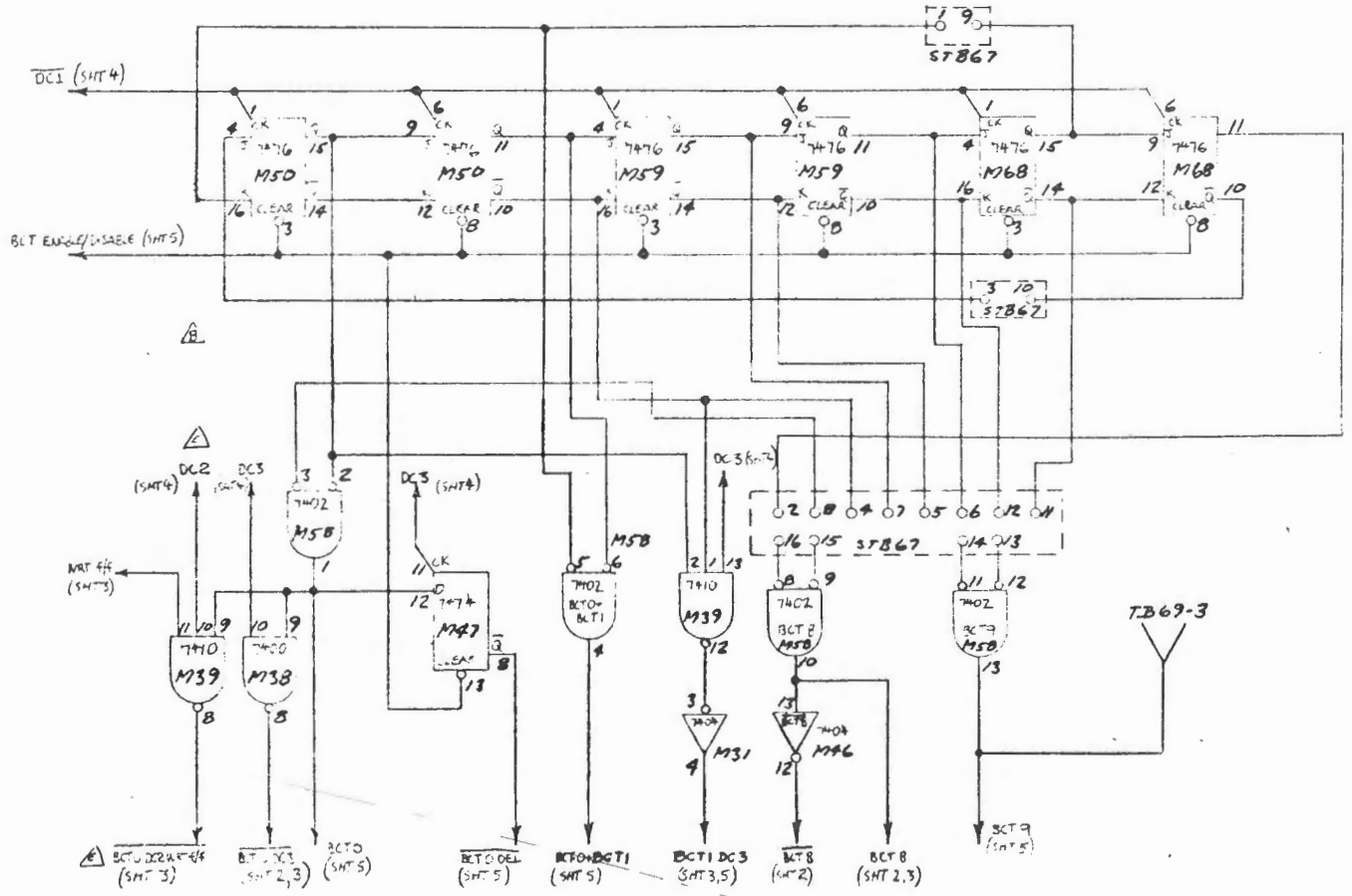
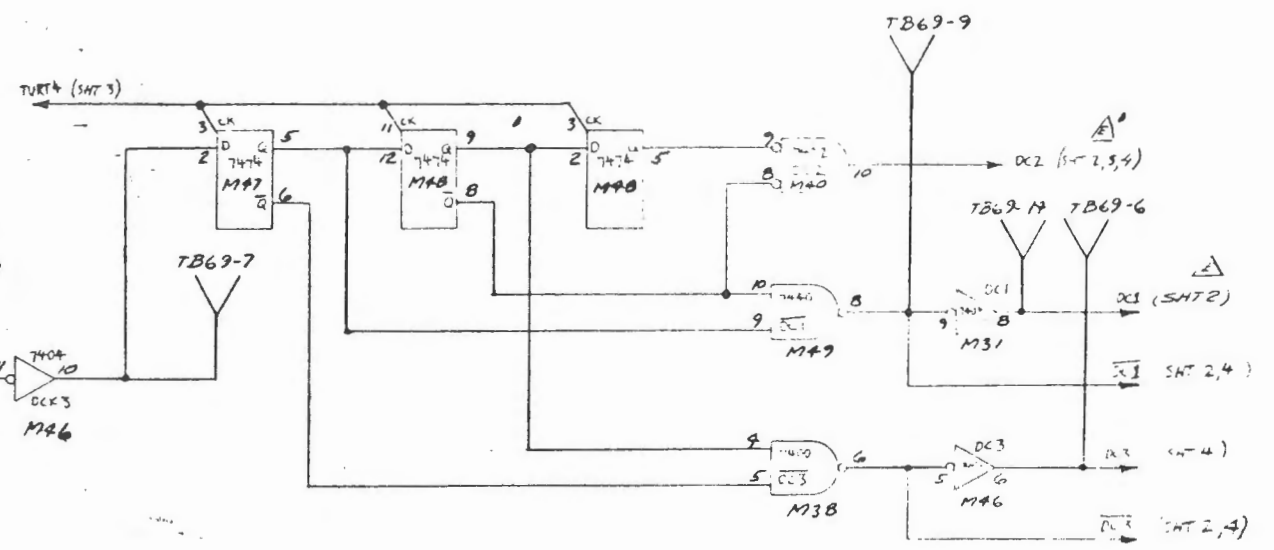
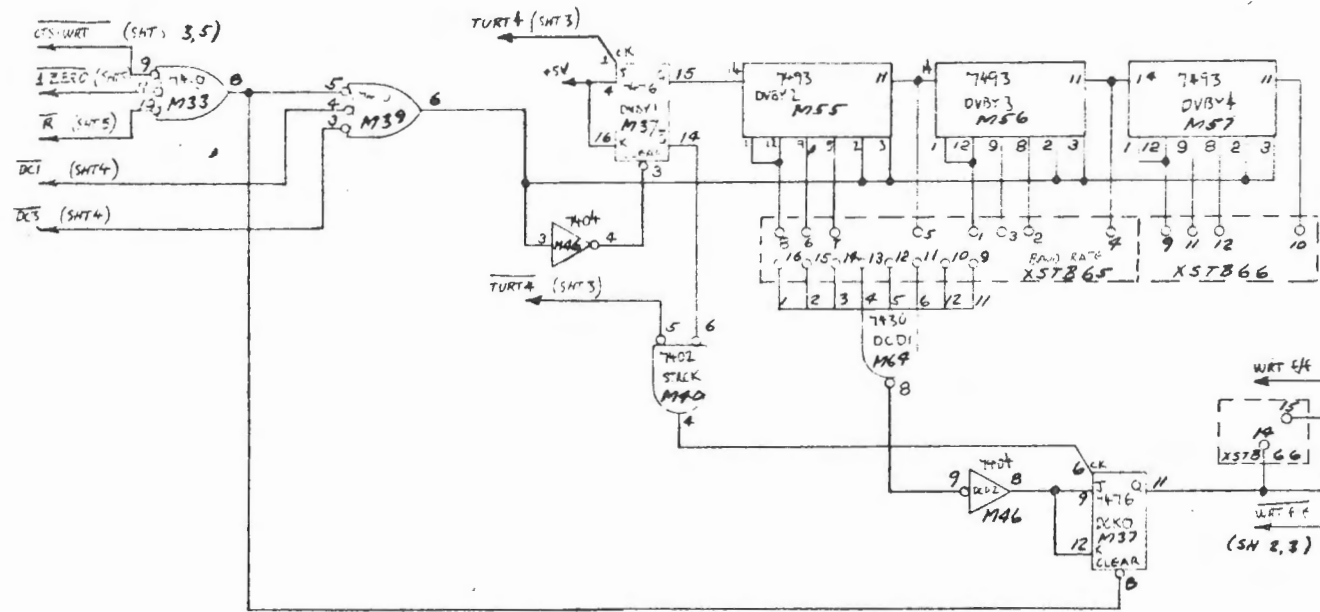


PARTY LINE  
CONTROLLER  
001  
001-18-01 E  
2 OF 6



PARTY LINE  
CONTROLLER  
001-18-01

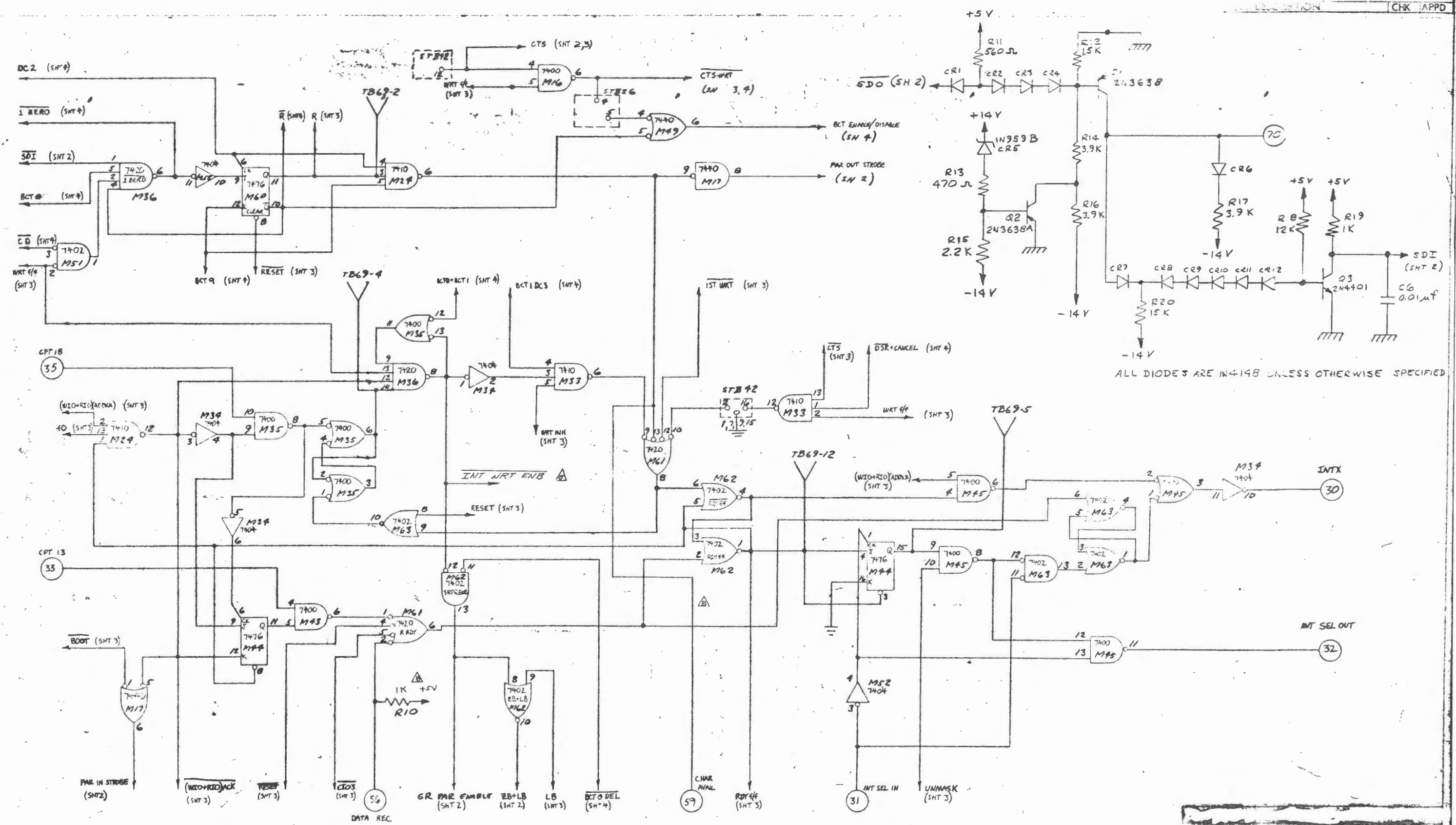




PARTY LINE CONTROLLER

001

001:18-01 E

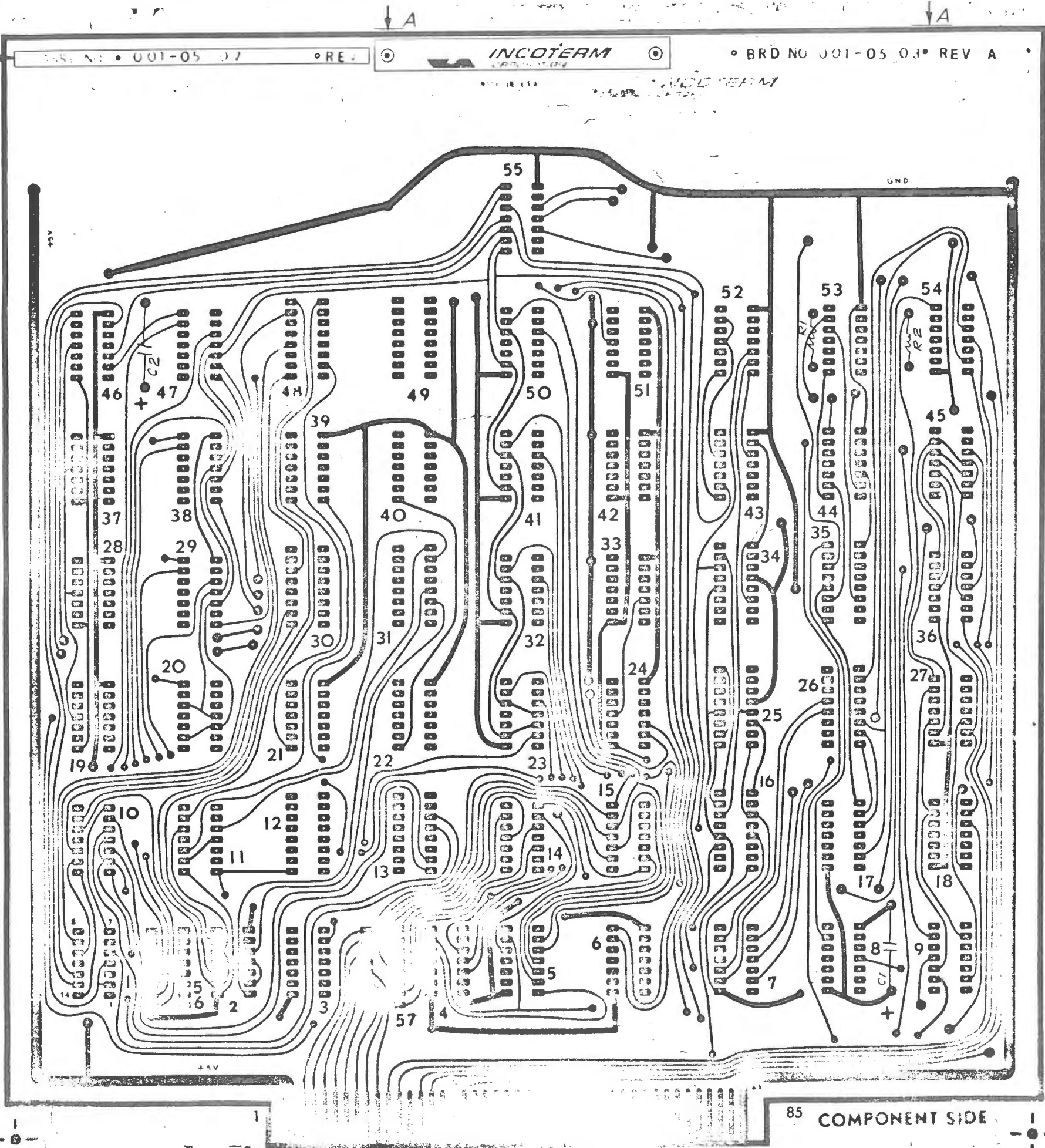


ALL DIODES ARE IN-4148 UNLESS OTHERWISE SPECIFIED

PARTY LINE  
CONTROLLER

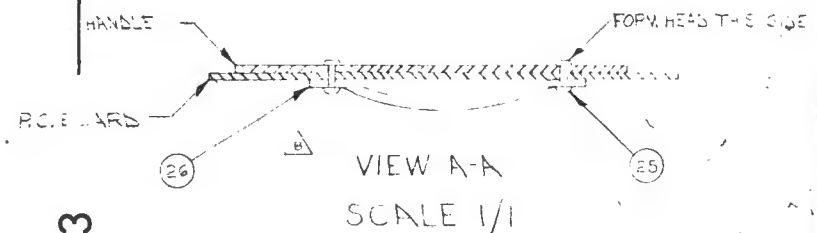
01-18-01 E

SEE NOTE 1 30



NOTES:  
1. LOCATE IN APPROXIMATE AREA SHOWN, REVISION LABEL, ITEM 30, AND MARK ASSY. NO. 001-05-02-701 AND LATEST ASSY. REVISION.

REVISIONS				
REV	DESCRIPTION	DATE	CHK	APPD.
A	RELEASED / L1363	2-1971	N	(M)
B	ECCO 1439 RWF	5-4-71	RSM	(M)
B1	REV CHANGE ONLY / ECCO 2025			(M)
B2	REV CHANGE ONLY / ECCO 2101			(M)
B3	REV CHANGE ONLY / ECCO 2378			(M)
C	REVISED / ECCO 2440	6/28/73	RSM	(M)
C1	REV. CHANGE ONLY / ECCO 2477		RSM	(M)

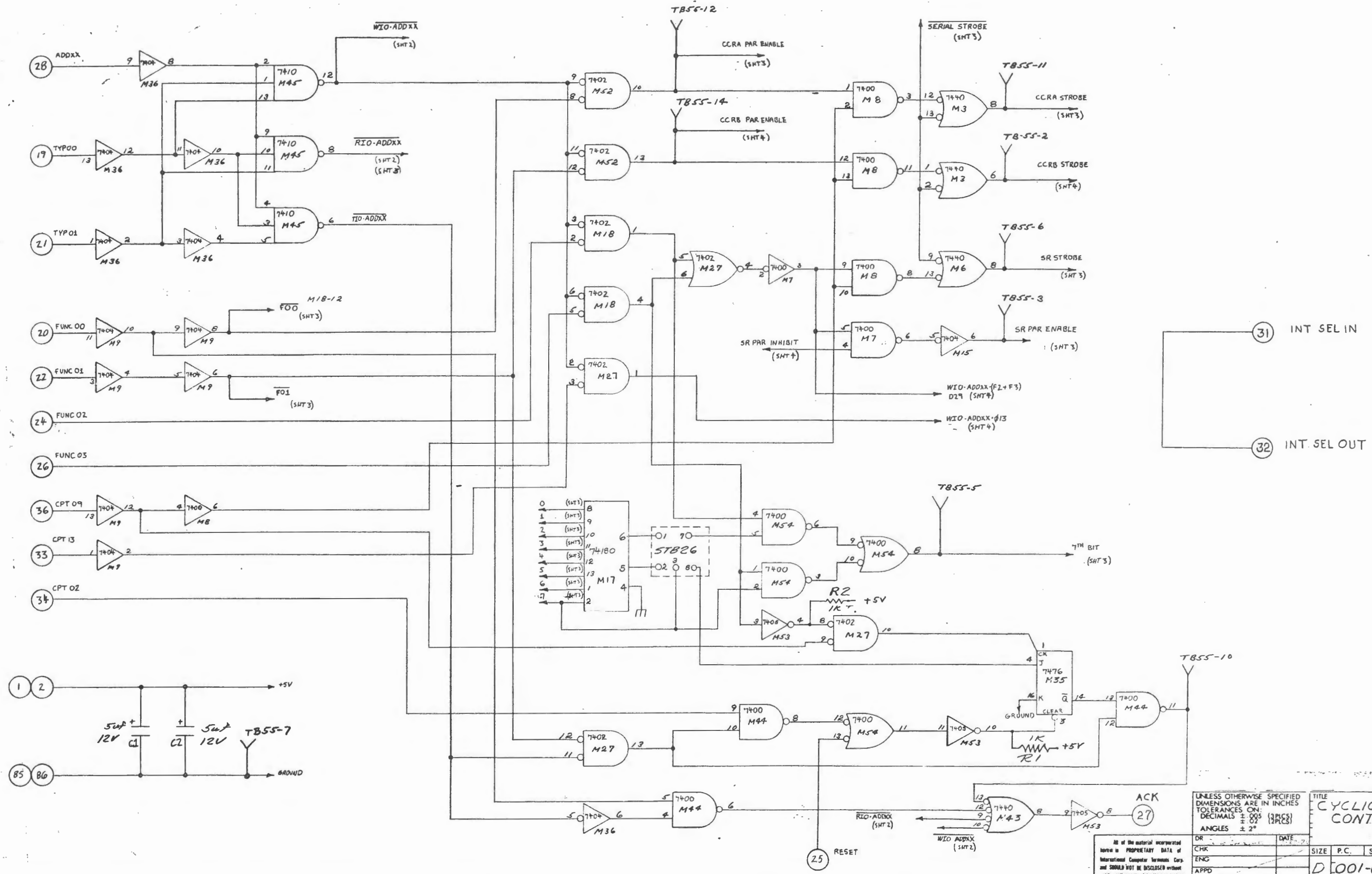


11000 ± .003

23			
22			
21			
20	ICSU74182N	M17	1
19	EC7549	E55	1
18	EC7541	STB 2, 3, 56, 32, 31, 48, 49, 56, 57	9
17			
16			
15			
14	CSTE1127	C1, C2	2
13	RSAC056103	R1, R2	2
12	ICS17495N	M4, 5	2
11	ICSN74582N	M21, 22, 37, 47	4
10	ICSN7476N	M16, 25, 34, 35	4
9	ICSN7474N	M9, 23, 33, 37, 43, 46, 51	8
8	ICSN7454N	M20, 23, 29, 32, 38, 41, 47, 50	5
7	ICSN7440N	M3, 6, 43	3
6	ICSN7412N	M45	1
5	ICSN7425N	M53	1
4	ICSN7404N	M9, 14, 15, 36	4
3	ICSN7403N	M1, 3, 12, 11	4
2	ICSN7422N	M18, 27, 52	3
1	ICSU7400N	M7, 5, 44, 54	4
ITEM NO.	PART NO.	REF DESIGNATION	QTY

ASSEMBLE WITH ARTWORK 001-05-03-701 REV. A

<b>INCOTERM CORPORATION</b> 1000 State Street Marlborough, Massachusetts 01752		TITLE <b>ASSEMBLY          P.C. BOARD          CYCLIC CHECK</b>	
DIMENSIONS ARE IN INCHES DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 2°		DATE 2/19/71 SIZE P.C. S.S. NO. 10	
DRC [Signature] DATE 2/19/71		SCALE 2/1 SHIT 1 OF 1	
NEXT ASSY P.001-05-02		D 001-05-02 C	



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLS) ANGLES ± 2°

DR \_\_\_\_\_ DATE \_\_\_\_\_

CHK \_\_\_\_\_

ENG \_\_\_\_\_

APPD \_\_\_\_\_

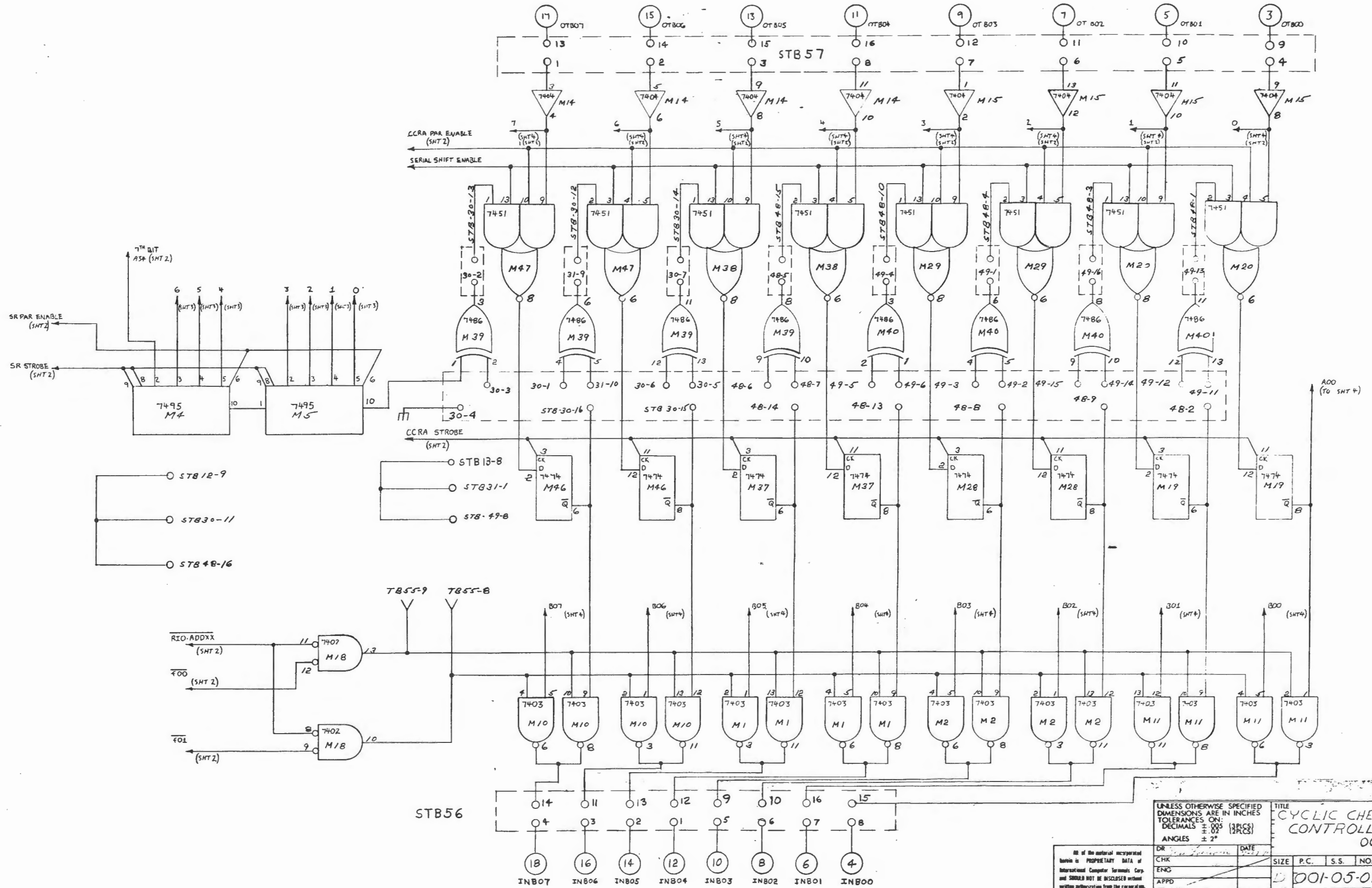
NEXT ASSY \_\_\_\_\_

ALL of the material incorporated herein is PROPRIETARY DATA of International Computer Terminals Corp. and SHOULD NOT BE DISCLOSED without written authorization from the corporation.

TITLE CYCLIC CHECK CONTROLLER 001

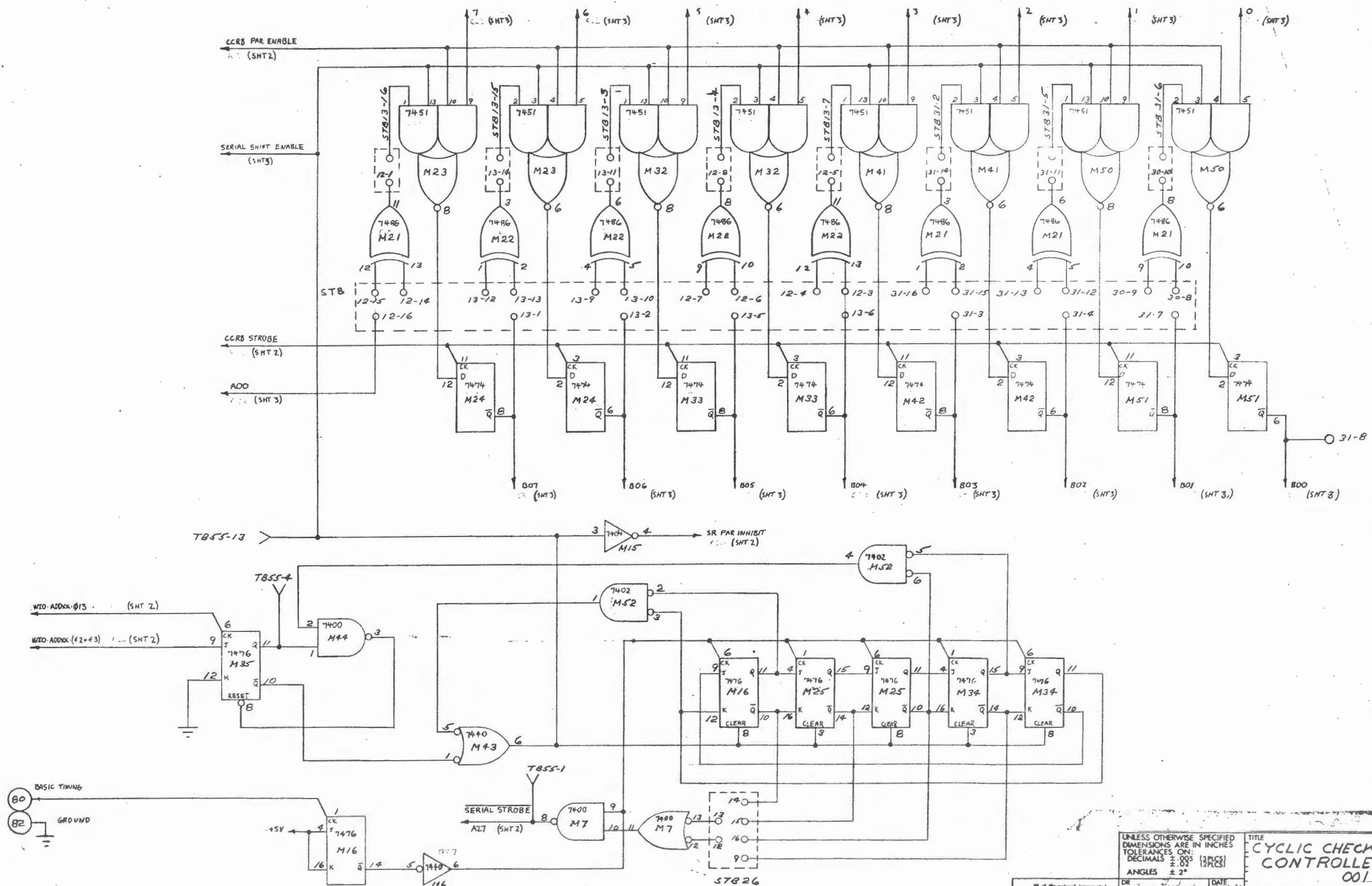
SIZE	P.C.	S.S.	NO.	REV
D	001-05-01		A	

SCALE ~ SHT 2 OF 4



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ANGLES ± 2°		TITLE <b>CYCLIC CHECK CONTROLLER 001</b>			
DR	DATE	SIZE	P.C.	S.S.	NO.
CHK					REV
ENGR					
APPR					
NEXT ASSY					
				SCALE	SHT 3 OF 4

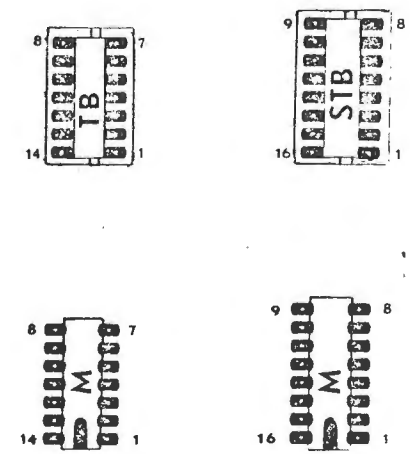
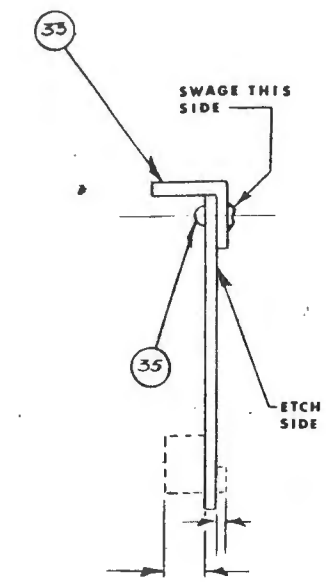
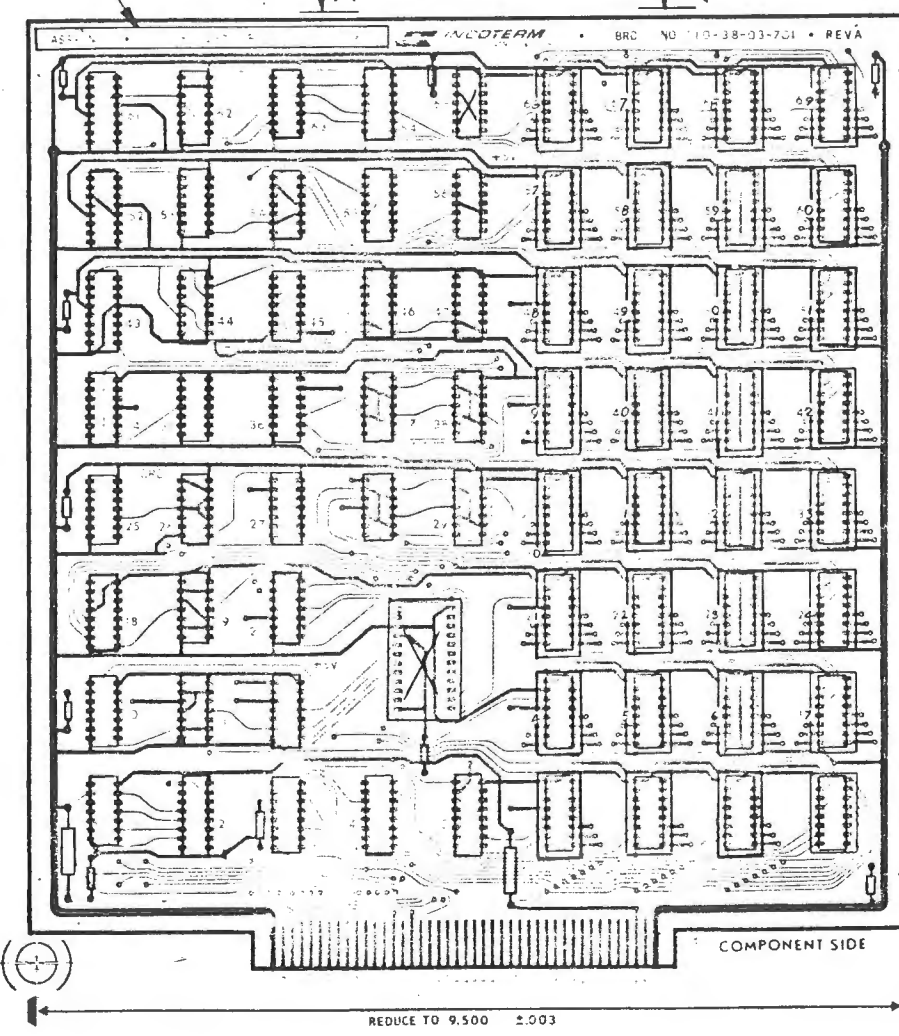
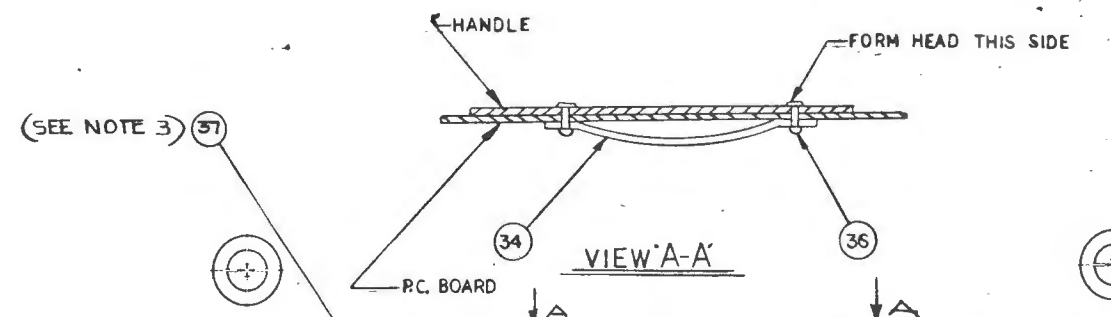
All of the material incorporated herein is PROPRIETARY DATA of International Computer Terminals Corp. and SHOULD NOT BE DISCLOSED without written authorization from the corporation.



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ±.005 (3 DEC) ANGLES ± 2°		TITLE <b>CYCLIC CHECK CONTROLLER 001</b>			
DR	DATE	SIZE	P.C.	S.S.	NO.
CHK					
ENG					
APPD					
NEXT ASSY		SCALE			SHT 4 OF 4
D 001-05-01		A			

All of the material incorporated herein is PROPRIETARY DATA of International Computer Terminals Corp. and SHOULD NOT BE DISCLOSED without written authorization from the corporation.

REVISION HISTORY				
REVISION	DESCRIPTION	RD#	DATE	CHK
A	RELEASED	573		
A1	REV. CHANGE ONLY	ECD 2377		
A2	REV. CHANGE ONLY	ECD 2378		
A3	REV. CHANGE ONLY	ECD 2477		



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

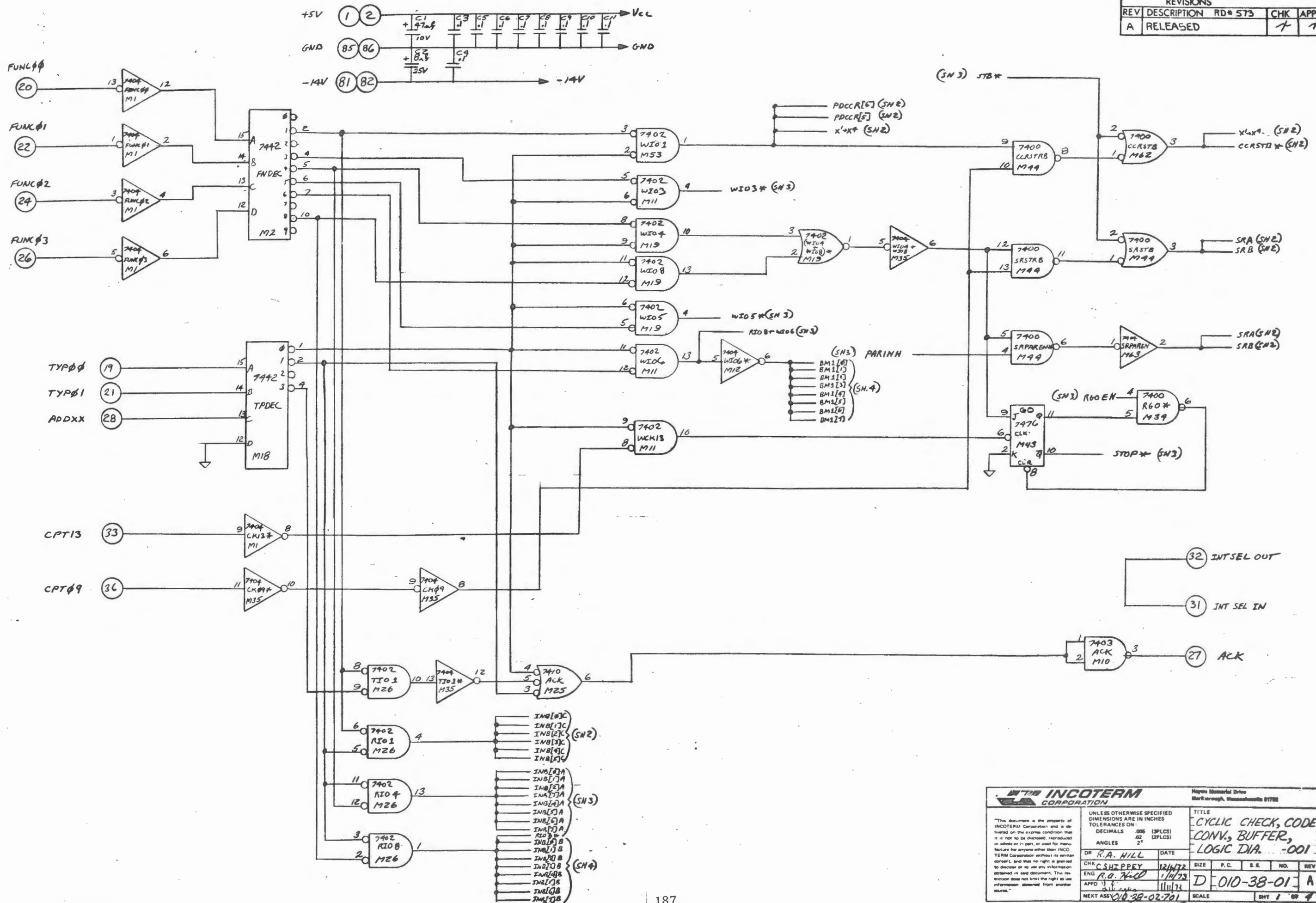
ASSEMBLE WITH ARTWORK 010-38-03-701 REV. A

ITEM NO.	REFERENCE DESIGNATION
30	SOCKET M6-9, 14-17, 21-24, 30-33, 39-42, 48-51, 57-60, 66-69.
29	SOCKET M23
26	C3-C11
25	C1
24	C2
23	R1
19	M6-9, 14-17, 21-24, 30-33, M39-42, 48-51, 57-60, 66-69
18	M3, 4, 5
17	M27, 36, 45
16	M55
15	M43, 52, 61
14	M56
13	M54
12	M2, 18
11	M25
10	M1, 12, 20, 35, 63
9	M10, 28, 29, 37, 38, 46, 47
8	M11, 19, 26, 53
7	M34, 44, 62, 64
6	
5	
4	
3	
2	
1	

- NOTE:**
- HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - PATTERNS MARKED X NOT USED
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 37, AND MARK ASSY. NO. 010-38-02-710A AND LATEST ASSY. REVISION.

<b>INCOTERM CORPORATION</b> Haynes Memorial Drive Mayborough, Massachusetts 01752		TITLE <b>P.C. BOARD ASSY</b> CYCLIC CHECK CODE CONVERTER BUFFER	
USE UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) ANGLES .02 (2PLCS)	DR. <i>Santhiramparan</i> 11/27/73 CHK. <i>Chakraborty</i> 11/19/73 ENG. <i>P. R. Hood</i> 11/17/73 APPD. <i>[Signature]</i> 11/17/73 NEXT ASSY. 010-10-00701	SIZE P C S S NO REV <b>D 010-38-02 A3</b>	SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	RD#	CHK APPD
A	RELEASED	573	✓ ✓



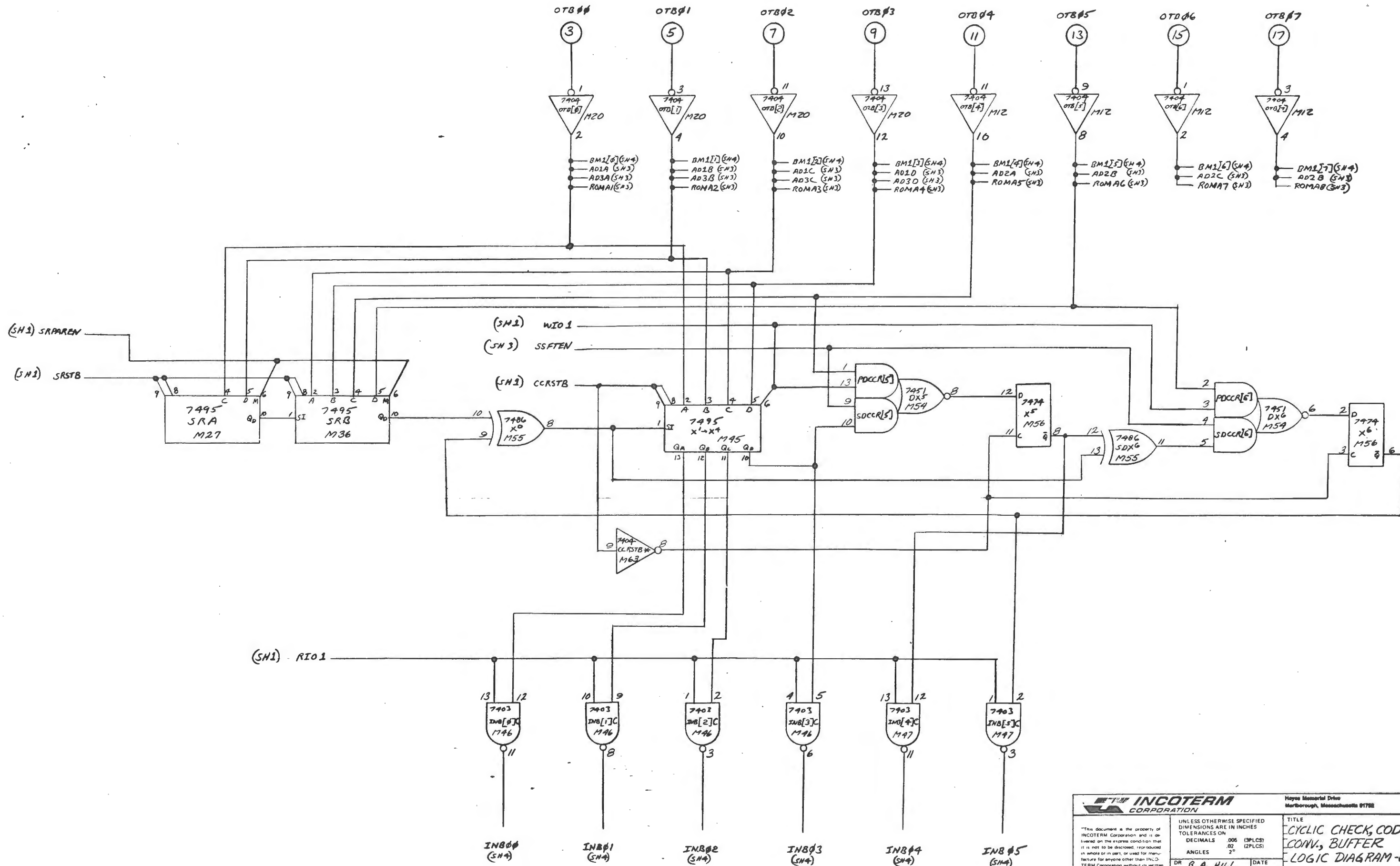
**INCOTERM CORPORATION**  
 High Speed Memory Drive  
 Marlborough, Massachusetts 01758

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
 TOLERANCES ON:  
 DECIMALS .005 (3PLCS)  
 .002 (2PLCS)  
 ANGLES .5°

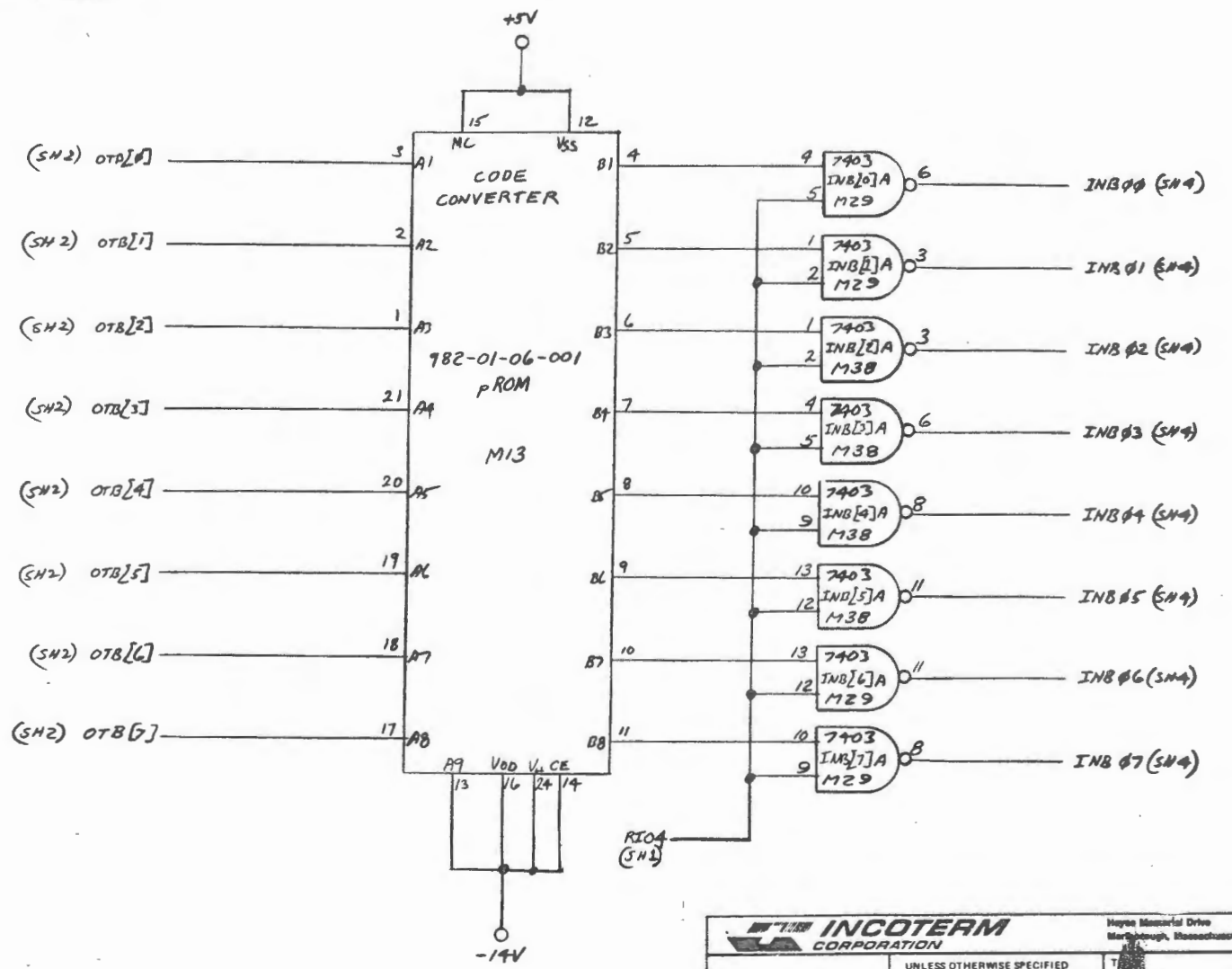
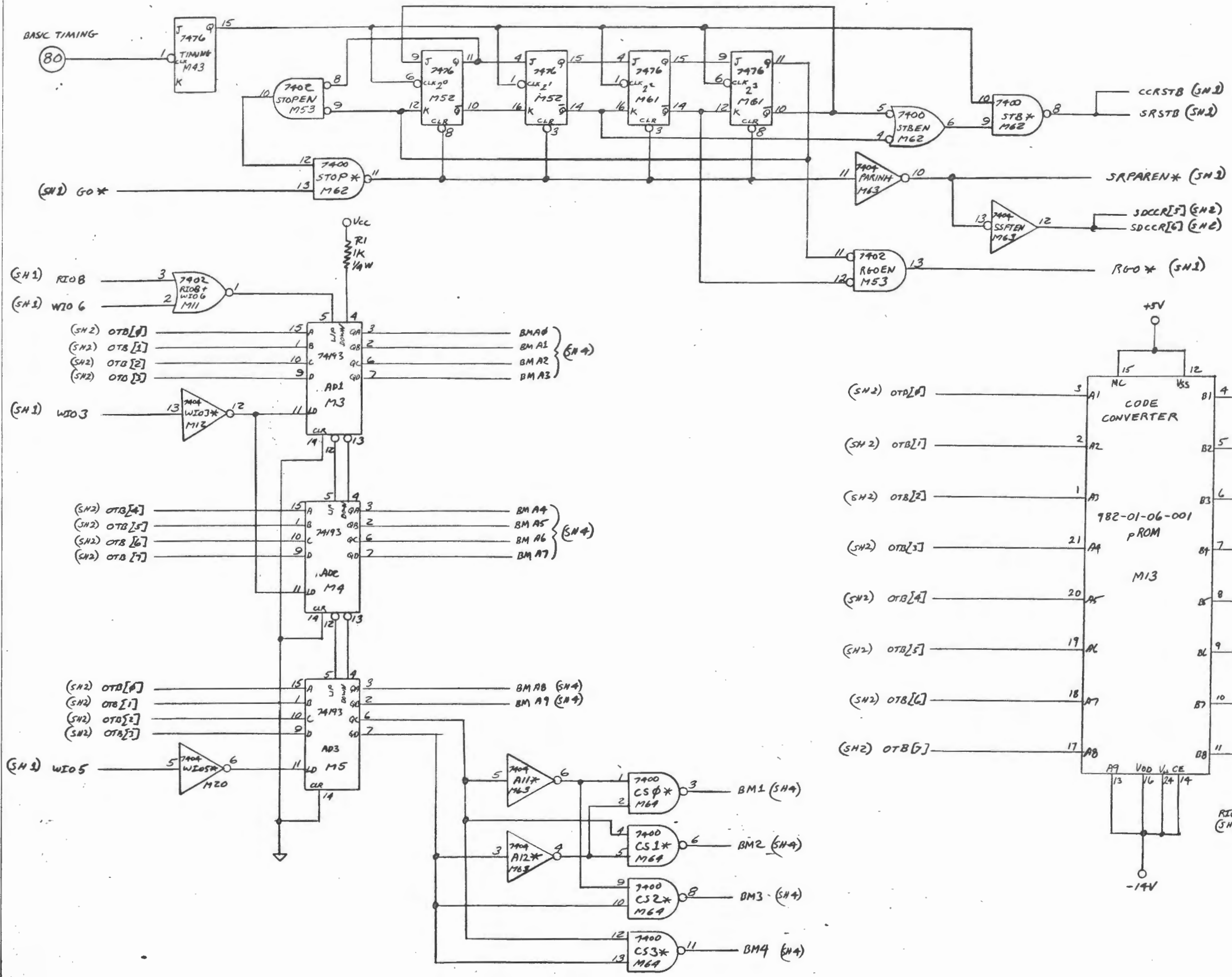
TITLE  
**CYCLIC CHECK, CODE CONV., BUFFER, LOGIC DIA. -001**

DR	R.A. HILL	DATE		SIZE	P.C.	S.E.	NO.	REV
CHK	C. SHIPPY	12/1/72		D			010-38-01	A
ENG	R.D. Hill	1/11/73						
APPD		11/11/73						
NEXT ASSY	010-38-02-201			SCALE				

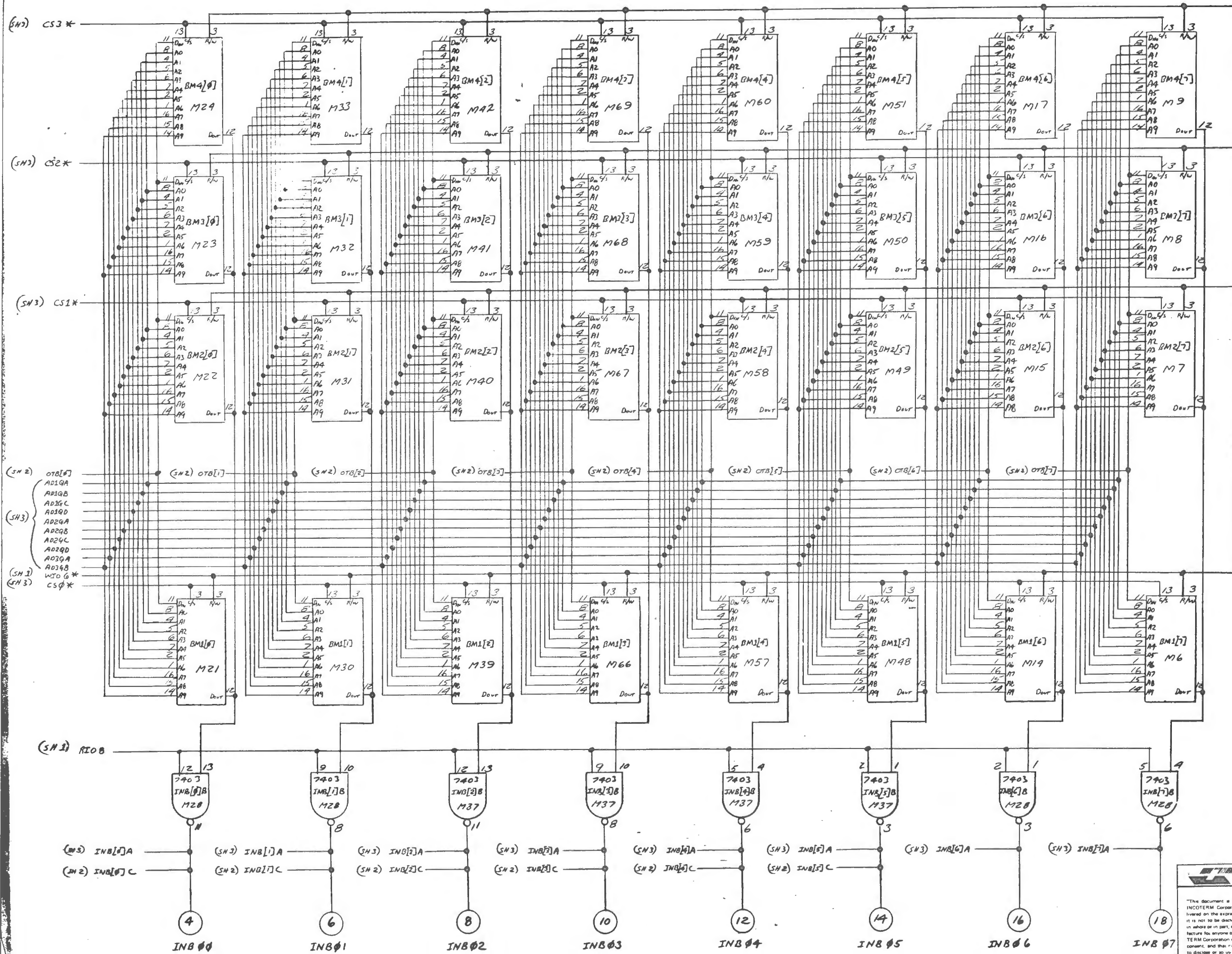




		Hayes Memorial Drive Marlborough, Massachusetts 01758	
<small>           "This document is the property of INCOTERM Corporation and is loaned on the express condition that it is not to be disclosed, reproduced in whole or in part, or used for manufacture for anyone other than INCOTERM Corporation without its written consent, and that no right is granted to disclose or so use any information obtained in this document. This restriction does not limit the right to use information obtained from another source."         </small>		TITLE <b>CYCLIC CHECK CODE          CONV. BUFFER          LOGIC DIAGRAM-001</b>	
DR	R. A. HILL	DATE	
CHK		SIZE	P. C. S. S. NO. REV
ENG		D	010-38-01 A
APPD		SCALE	SHT 2 OF 9



<b>INCOTERM CORPORATION</b> <small>Hoyes Memorial Drive          Marlborough, Massachusetts 01752</small>		<b>CYCLIC CHECK, CODE CONV., BUFFER, LOGIC DIAGRAM-001</b>	
<small>"This document is the property of INCOTERM Corporation and is loaned on the express condition that it is not to be disclosed, reproduced in whole or in part, or used for manufacture for anyone other than INCOTERM Corporation without its written consent, and that no right is granted to disclose or to use any information obtained in said document. This restriction does not limit the right to use information obtained from another source."</small>		<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES          TOLERANCES ON:          DECIMALS .005 (3PLCS)          ANGLES 2°</small>	
DR	R.A. HILL	DATE	
CHK		SIZE	P.C. S.B. NO. REV
ENG		D	010-38-01 A
APPD		SCALE	SHT 3 OF 4
NEXT ASSY			

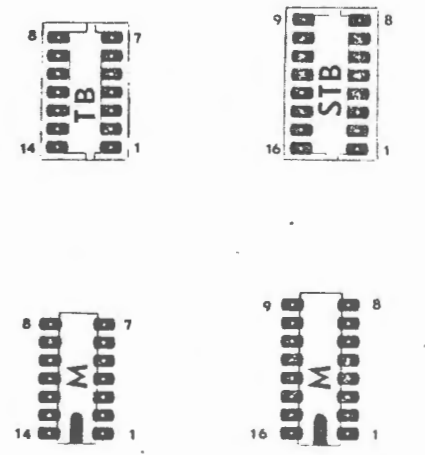
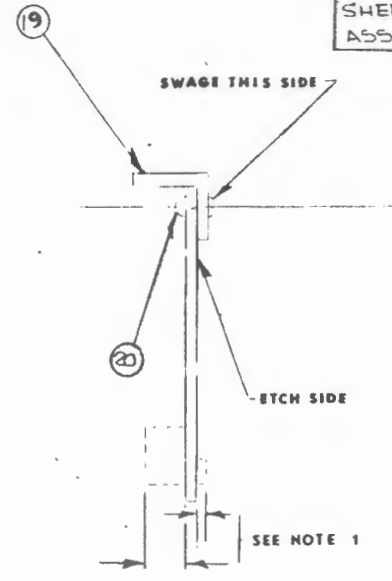
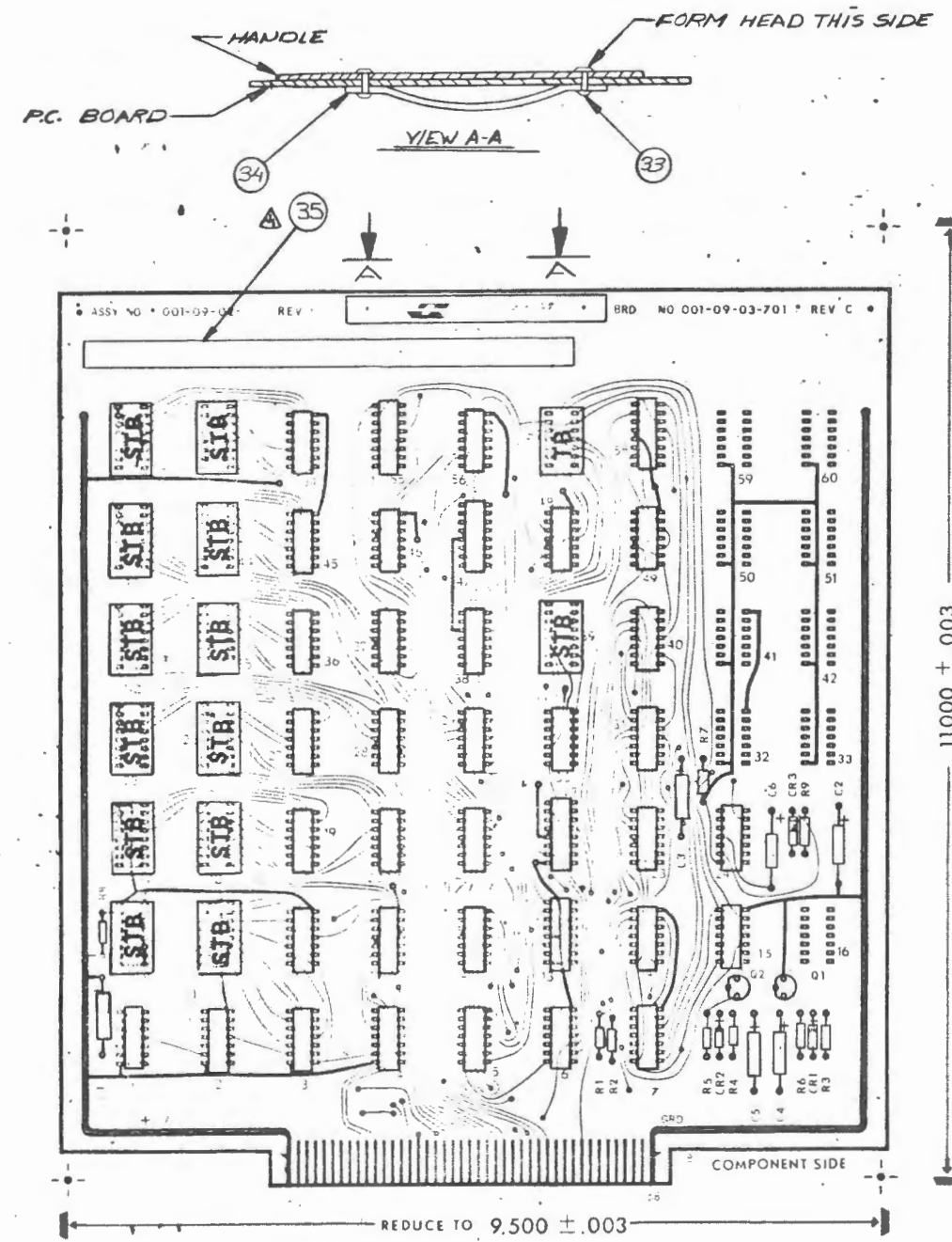


NOTE  
 IC'S M6 THRU M9, M14 THRU M17,  
 M48 " M51, M57 " M60,  
 M66 " M69, M39 " M42,  
 M30 " M33, M21 " M24  
 ARE RAM'S PER SPECIFICATION  
 NUMBER 902-01-07-001.

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
		TITLE <b>CYCLIC CHECK, CODE          CONV., BUFFER          LOGIC DIAGRAM-001</b>	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) ANGLES .02 (2PLCS)		DR R.A. HILL DATE CHK SIZE P.C. E.S. NO. REV ENG D 010-38-01 A APPD NEXT ASSY SCALE BHT 4 OF 9	

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK
J	REVISED/REBORN <sup>ENG</sup> 1753	2/24/72	Ch
J1	ECO 1976	8/3/72	

CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002 SEE SHEET 1 FOR CONTINUING REVISION ASSIGNMENT HISTORY



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

**NOTE:**  
**1. HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**

ITEM NO.	REFERENCE DESIGNATION
31	R9
30	C4,5,6
29	M24
23	TB57 39,43,44,52,53
22	STB8,9,17,18,25,26,34,35
21	
20	
19	
18	Q1,Q2
17	CRI,2,3
16	R7
15	
14	R3,R4
13	RI,2,5,6,8
12	
11	C1,C2,C3
10	M31
9	M38
8	M13,22,47,55,58
7	M7,19,27,36,45,54
6	M30
5	M6,15,21,23,48,56
4	M11,14,20,28,29,37
3	M1,2,3,5,10
2	M4,12,40,49
1	M46

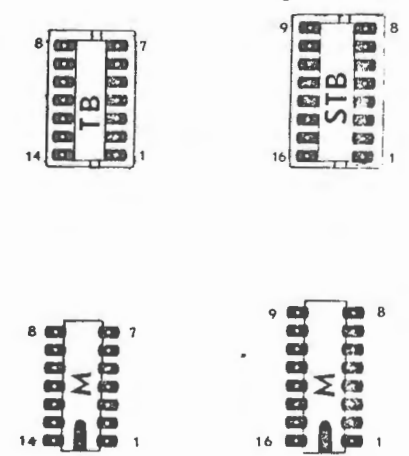
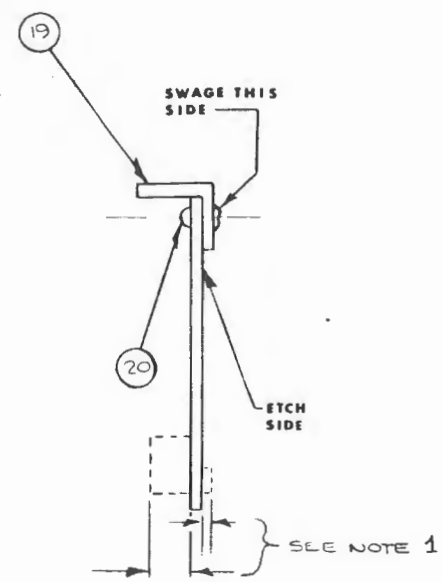
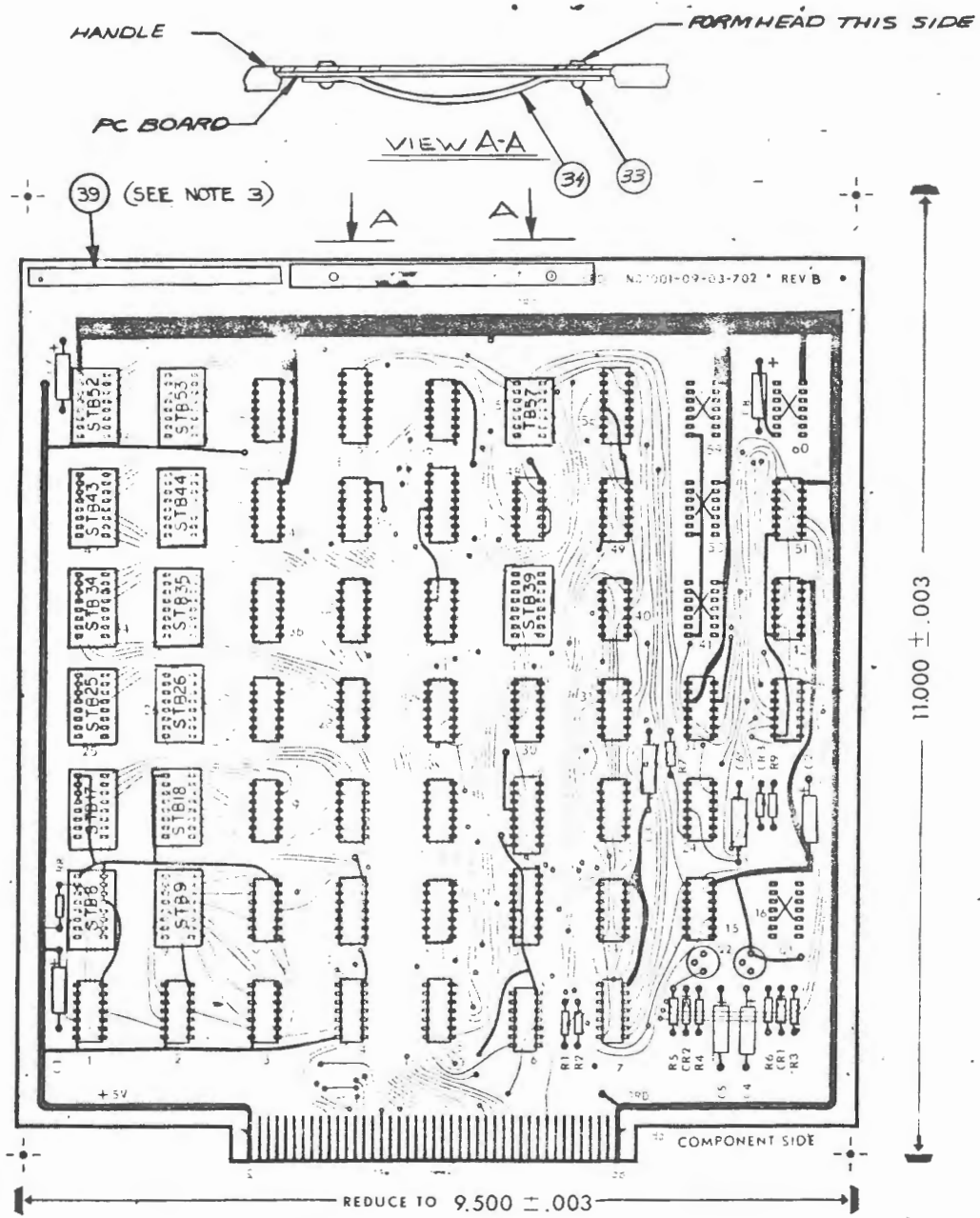
ASSY WITH ARTWORK 001-09-03-701 REV C

**INCOTERM CORPORATION**  
 Hayes Memorial Drive  
 Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 13PLCSI ANGLES 2	TITLE <b>P.C. BOARD ASSY      BOOT      CONTROLLER 701</b>
DR. FREDERICKS CHY. R. BILLOREAU ENG. LABLOREAU APP. L. BERGENT NEXT ASSY 001-09-06	SIZE P.C. C.S. NO. REV. <b>D 001-09-02 J4</b>

SCALE 1:1 SHT 3 OF 3

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

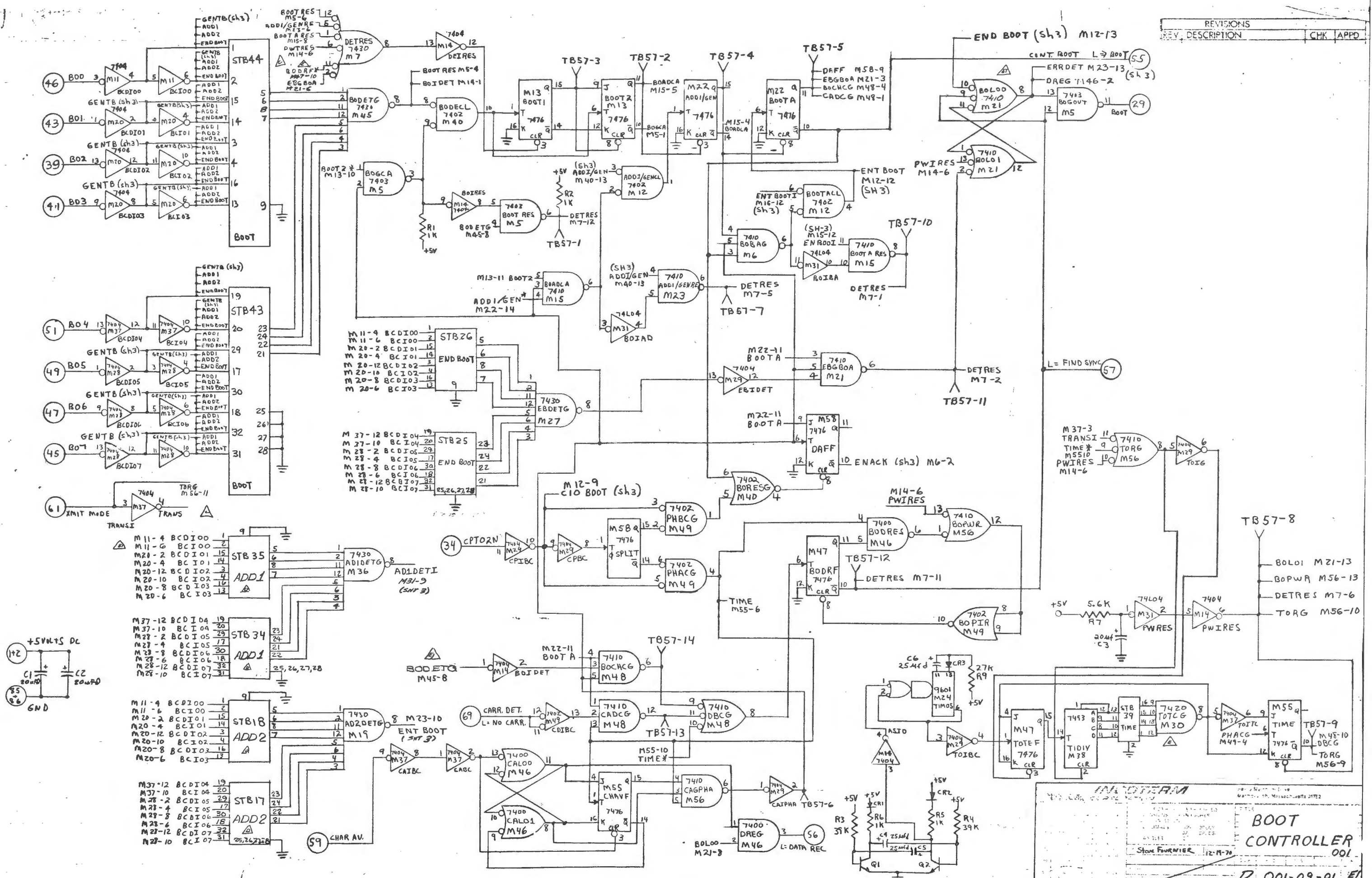
ITEM NO.	REFERENCE DESIGNATION
31	R9
30	C4, 5, 6
29	M24
28	
27	
26	
25	
24	
23	TB57
22	STB8, 9, 13, 14, 20, 28, 29, 37, 43, 44, 55, 58
21	
20	
19	
18	Q1, Q2
17	CR1, 2, 3
16	R7
15	
14	R3, 4
13	R1, 2, 5, 6, 8
12	M42
11	C1, 2, 3, 7, 8
10	M31
9	M32, 38
8	M13, 22, 47, 55, 58
7	M7, 19, 27, 36, 45, 54
6	M30
5	M6, 15, 21, 23, 48, 51, 56
4	M11, 14, 20, 28, 29, 37
3	M1, 2, 3, 5, 10
2	M4, 12, 40, 49
1	M33, 46

- NOTE:**
- HEIGHT LIMITATIONS.**  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - X INDICATES NO COMPONENT MOUNTED AT THIS LOCATION.
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION STATUS LABEL ITEM 39 AND MARK ASSY. NO. 001-09-02-702 AND LATEST ASSY. REVISION.

(ASSY WITH ARTWORK 001-09-03-702 REV B)

<b>INCOTERM CORPORATION</b> <small>Hayes Memorial Drive Marlborough, Massachusetts 01752</small>		<b>TITLE</b> <b>P.C. BOARD ASSY</b> <b>BOOT CONTROLLER</b> <b>702</b>	
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 13PLCSI .02 2PLCSI</small>	<small>ANALOG</small>	<small>DATE</small>	<small>NO</small>
<small>DR</small>	<small>CHK</small>	<small>APPD</small>	<small>REV</small>
<small>SIZE</small>	<small>P.C.</small>	<small>S.S.</small>	<small>NO</small>
<small>SCALE</small>	<small>1:1</small>	<small>SHT</small>	<small>6 OF 6</small>

REV	DESCRIPTION	CHK	APPD

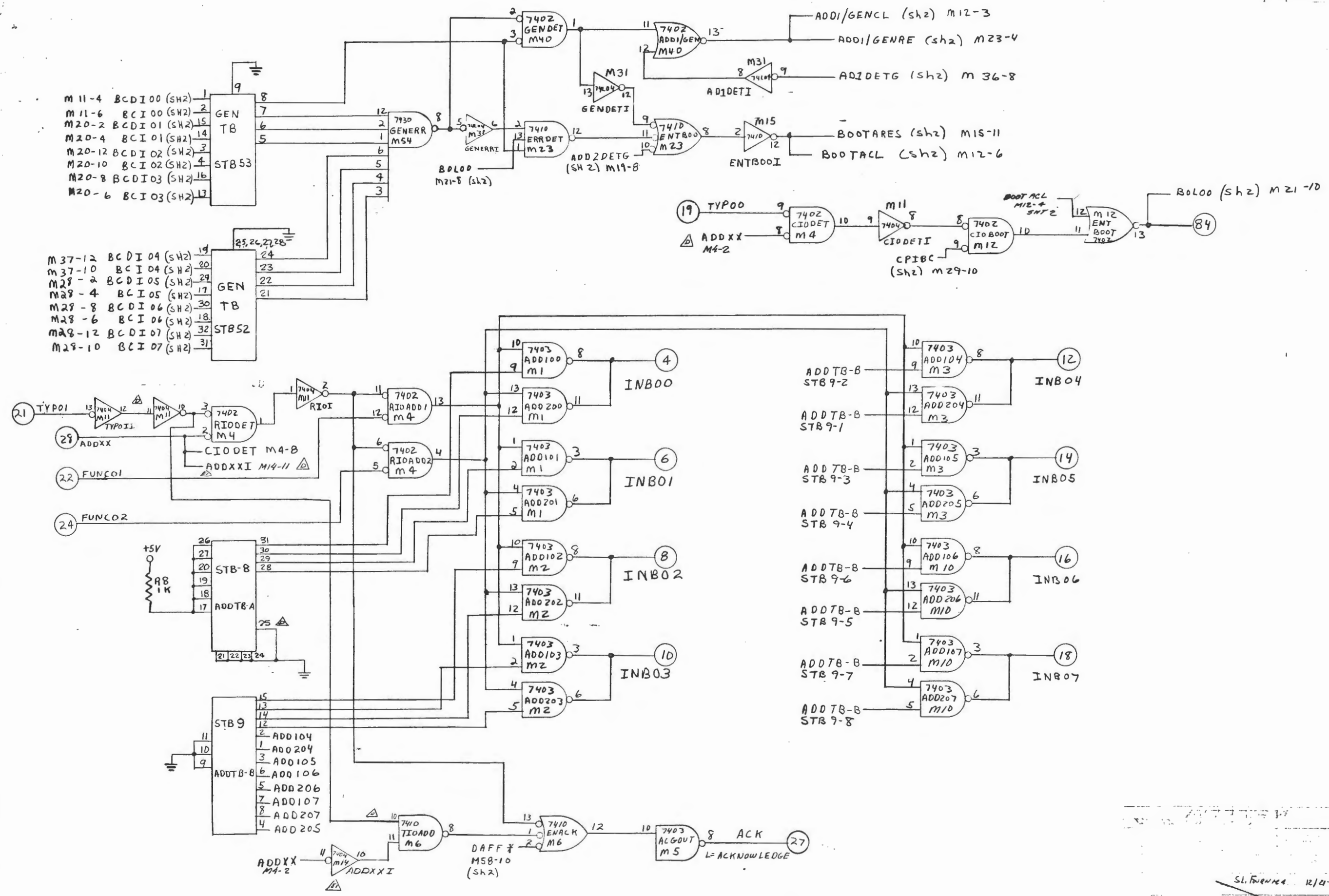


**BOOT CONTROLLER**  
001

D 001-09-01

Shore FOURNIER 12-M-70

REVISIONS		CHK	APPD
REV	DESCRIPTION		

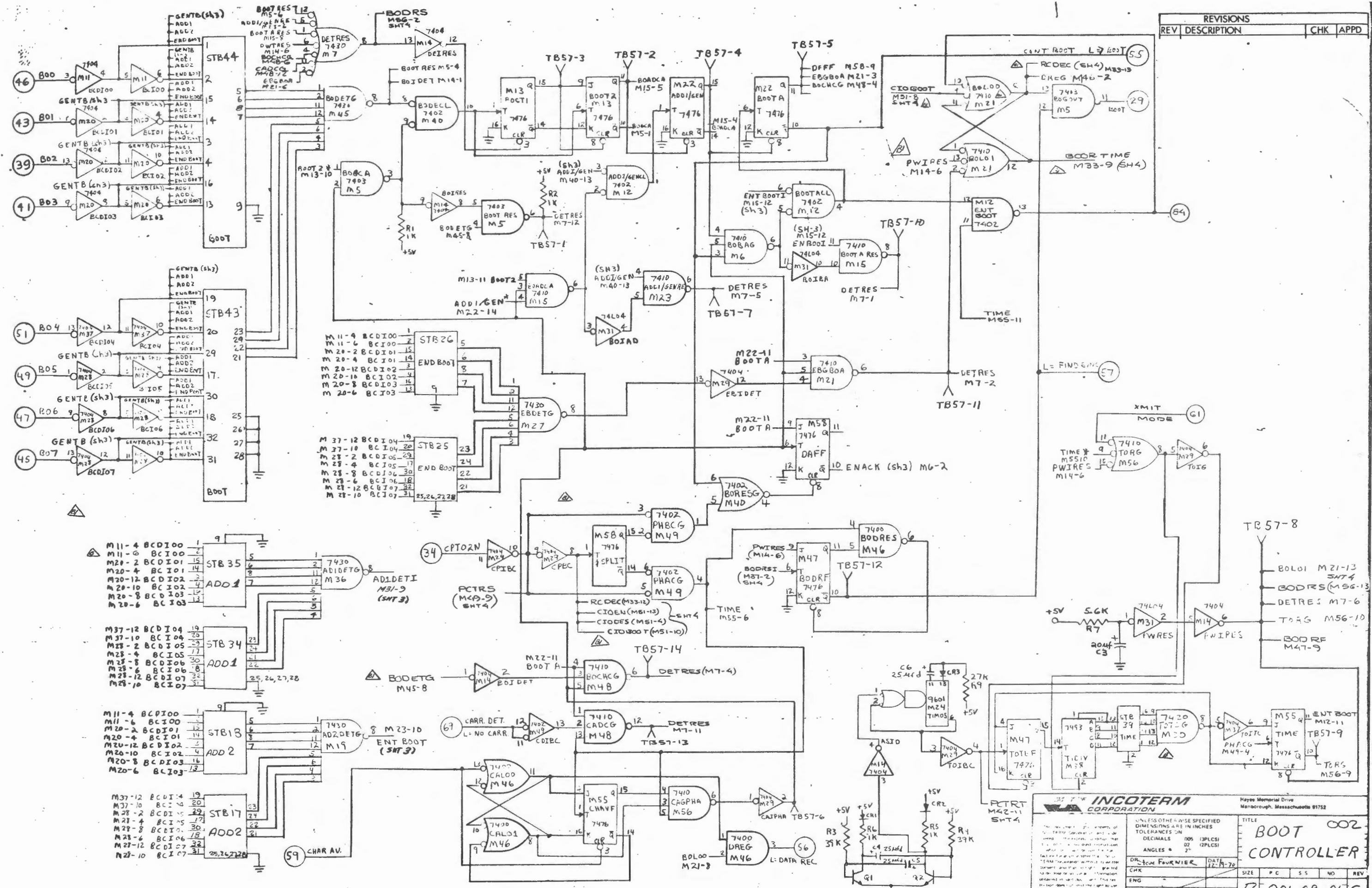


BOOT  
CONTROLLER

SL. Review 12/21/70

D 001-09-01 EI  
3 2

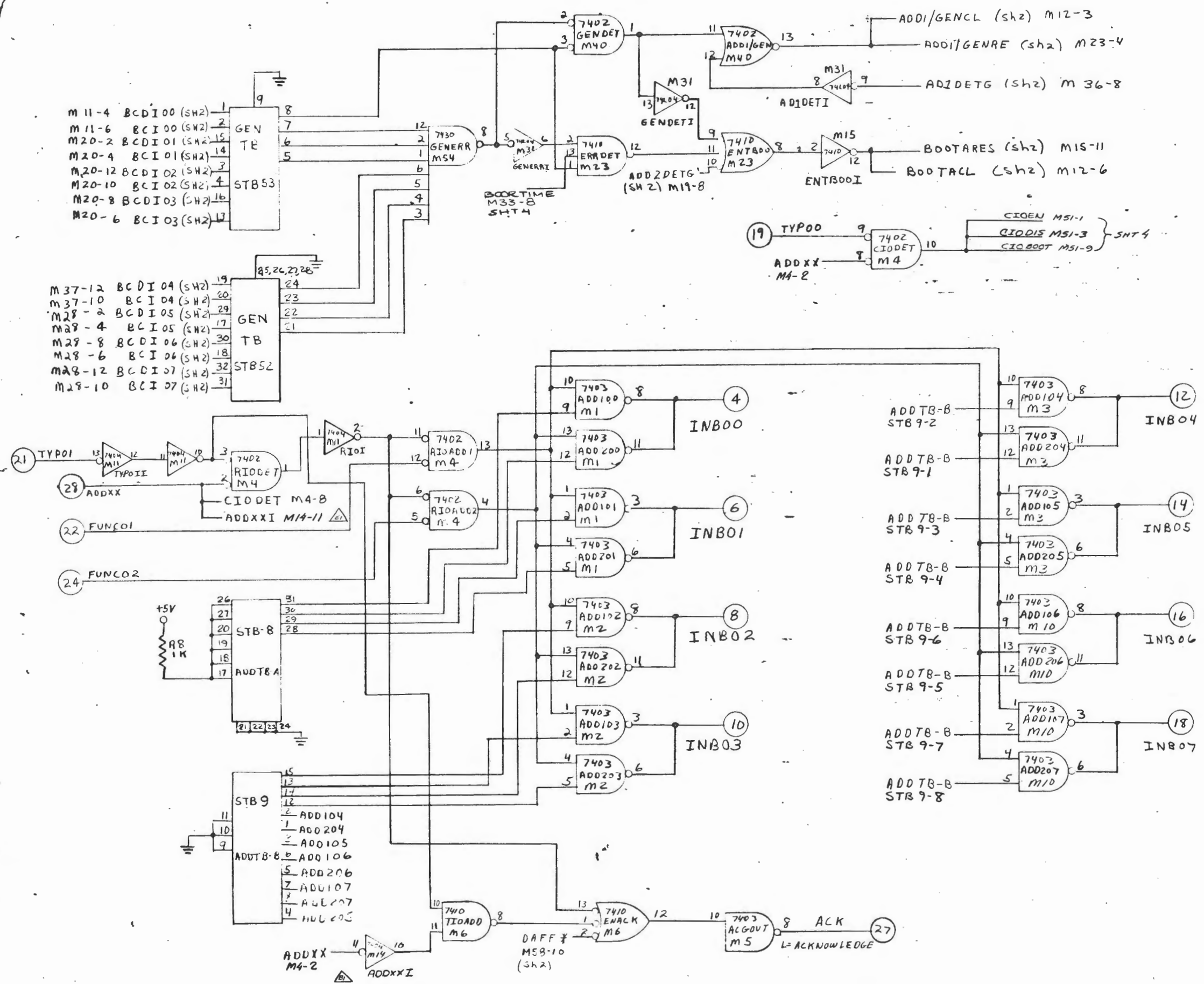
REVISIONS		CHK	APPD
REV	DESCRIPTION		



<b>INCOTERM CORPORATION</b> Hayes Memorial Drive Mansborough, Massachusetts 01752		TITLE <b>BOOT CONTROLLER</b>	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE DECIMALS .005 (3PLCS) ANGLES .2°		DR. FOURNIER DATE 12-9-70	SCALE 1/8" = 1"
CHK ENG APPD NEXT ASSY	SIZE P C S S NO REV	D 001-09-01 C SHT 2 OF 4	

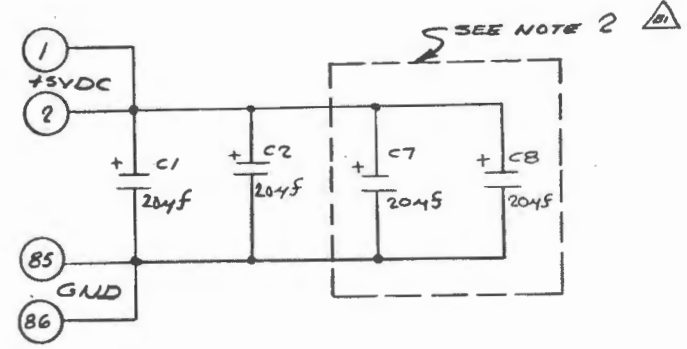
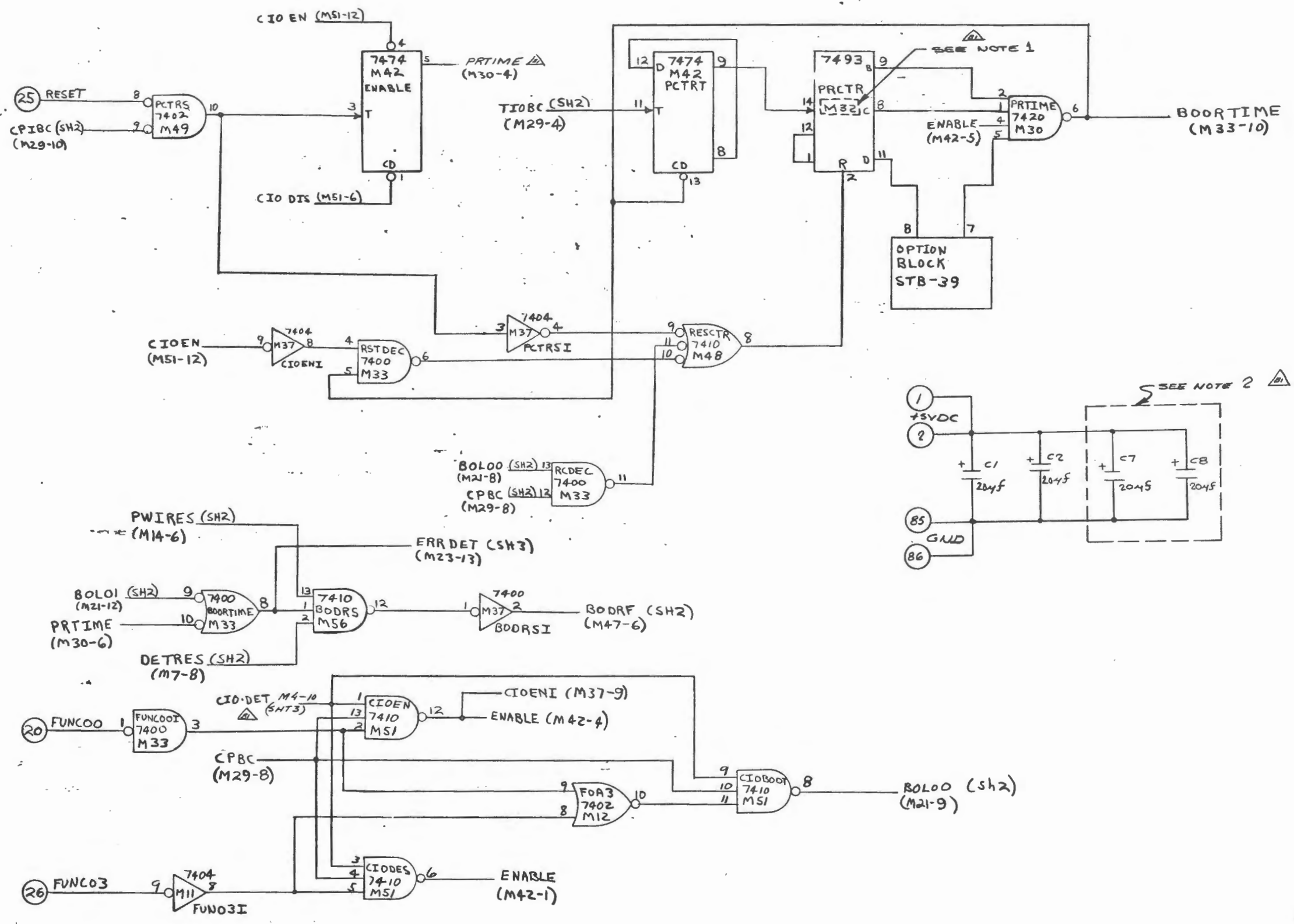


REVISIONS			
REV	DESCRIPTION	CHK	APPD



<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION          1000 WASHINGTON STREET          MARLBOROUGH, MASSACHUSETTS 01752</small>		TITLE <b>BOOT 002          CONTROLLER</b>	
<small>UNLESS OTHERWISE SPECIFIED          DIMENSIONS ARE IN INCHES          TOLERANCES ARE:          DECIMALS .000 (3PLCS)          FRACTIONS 1/32 (12PLCS)          ANGLES .2°</small>		DATE 1/17/74	
DR. <i>St. Francis</i>	SIZE ENG APPD NEXT ASSY	P.C. S.S. W.O. REV	SCALE SHEET 8 OF 9

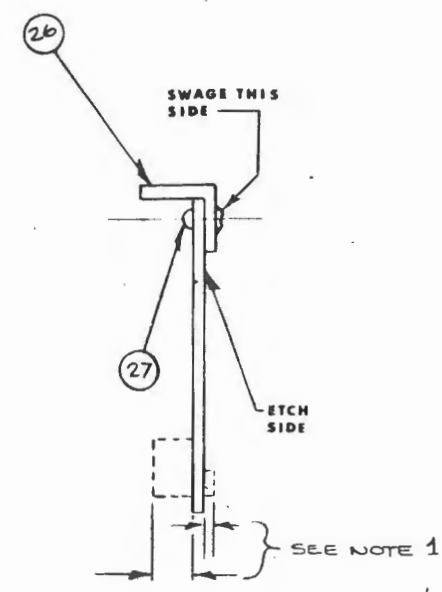
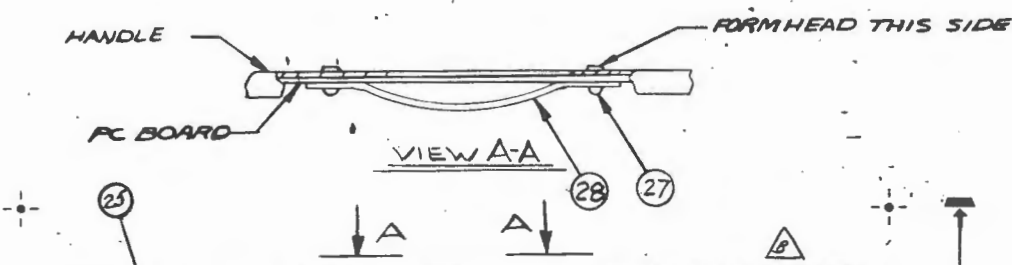
REVISIONS			
REV	DESCRIPTION	CHK	APPD



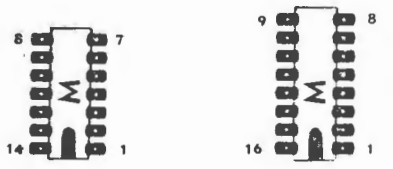
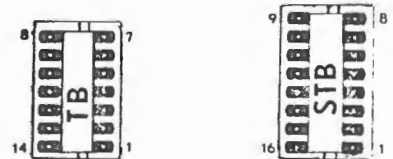
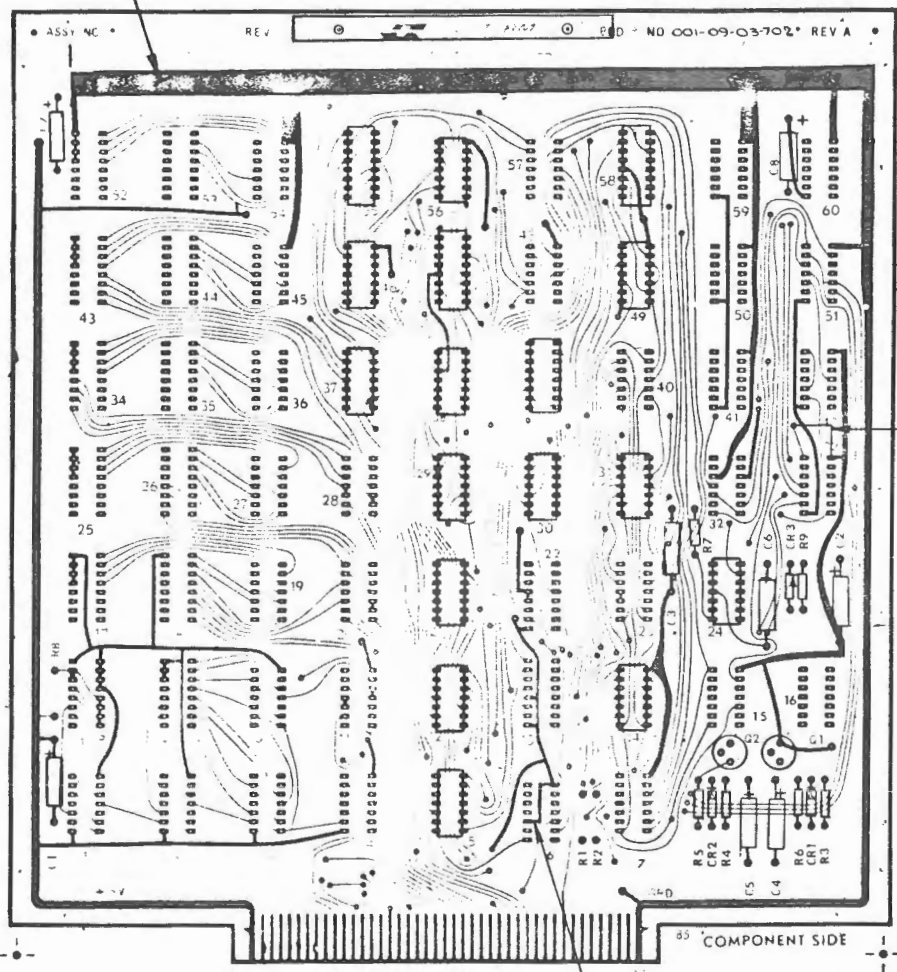
- NOTES:
- ASSEMBLYS USING BOARD NO. 001-09-03-701 REV. B IC DESIGNATION SHALL BE MIG
  - ASSEMBLYS USING BRD NO. 001-09-03-701 REV. B C7 & C8 ARE NOT USED

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<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:</small> DECIMALS .005 (3PLCS) ANGLES 2° (2PLCS)		<b>TITLE</b> <b>BOOT CONTROLLER</b>	
DR: <b>S FOURNIER</b> CHK: <b>S FOURNIER</b> ENG: <b>S FOURNIER</b> APPD: <b>S FOURNIER</b> NEXT ASSY:	DATE: <b>11-27-71</b>	NO. <b>002</b>	REV. <b>C</b>
SIZE: <b>D</b>		P.C. <b>001-09-01</b>	S.S. <b>C</b>
SCALE:		SHT <b>4</b> OF <b>4</b>	

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



ADD JUMPER WIRE ITEM 29	
A1	M6 PIN 7 TO M6 PIN 12
B1	M33 PIN 8 TO EYELET



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

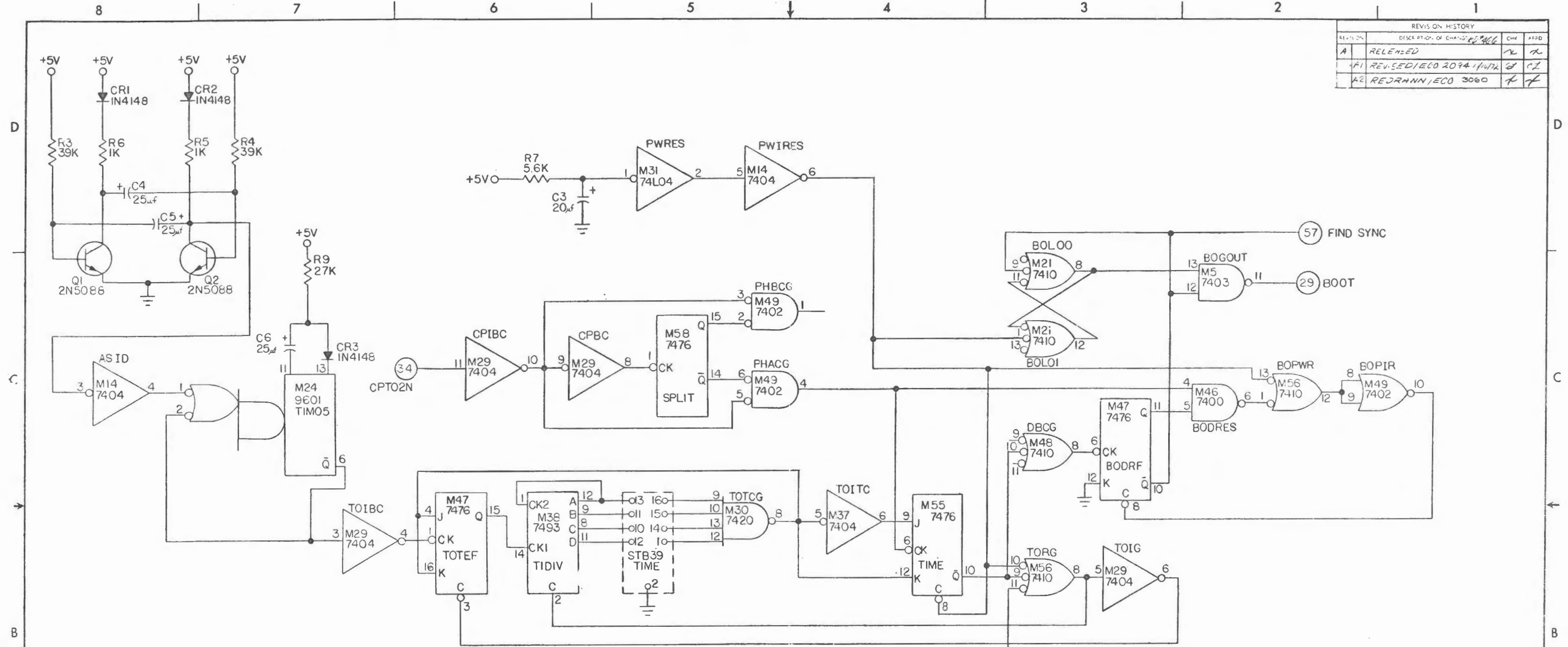
**NOTE:**  
**1. HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**  
**2. X INDICATES NO COMPONENT MOUNTED AT THIS LOCATION.**

	REFERENCE DESIGNATION
31	
30	
29	
28	
27	
26	
25	
24	
23	
22	
21	
20	STB39
19	
18	Q1, Q2
17	CR1, CR2, CR3
16	C4, C5, C6
15	C1, C2, C3, C7, C8
14	R3, R4
13	R9
12	R7
11	R5, R6
10	M24
9	M31
8	M38
7	M47, M55, M58
6	M30
5	M21, M56
4	M14, M29, M37
3	M5
2	M12, M49
1	M46

(ASSY WITH ARTWORK 001-03-03-702 REV A)

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
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<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</small> TOLERANCES ON DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES $\pm 1/2$	DR <i>Baumgardner</i> DATE <i>5/15/72</i> CHK <i>A. J. ...</i> ENG <i>A. J. ...</i> APPD	SIZE P C S S NO REV <b>D</b> 010-30-02 C2	701 3 OF 3
NEXT ASSY 010-10-00	SCALE 1:1	SHT 3 OF 3	

REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD
A	RELEASED	RL	RL
A1	REVISED/ECO 2094/1/07K	SL	SL
A2	REJRNWN/ECO 3060	SL	SL

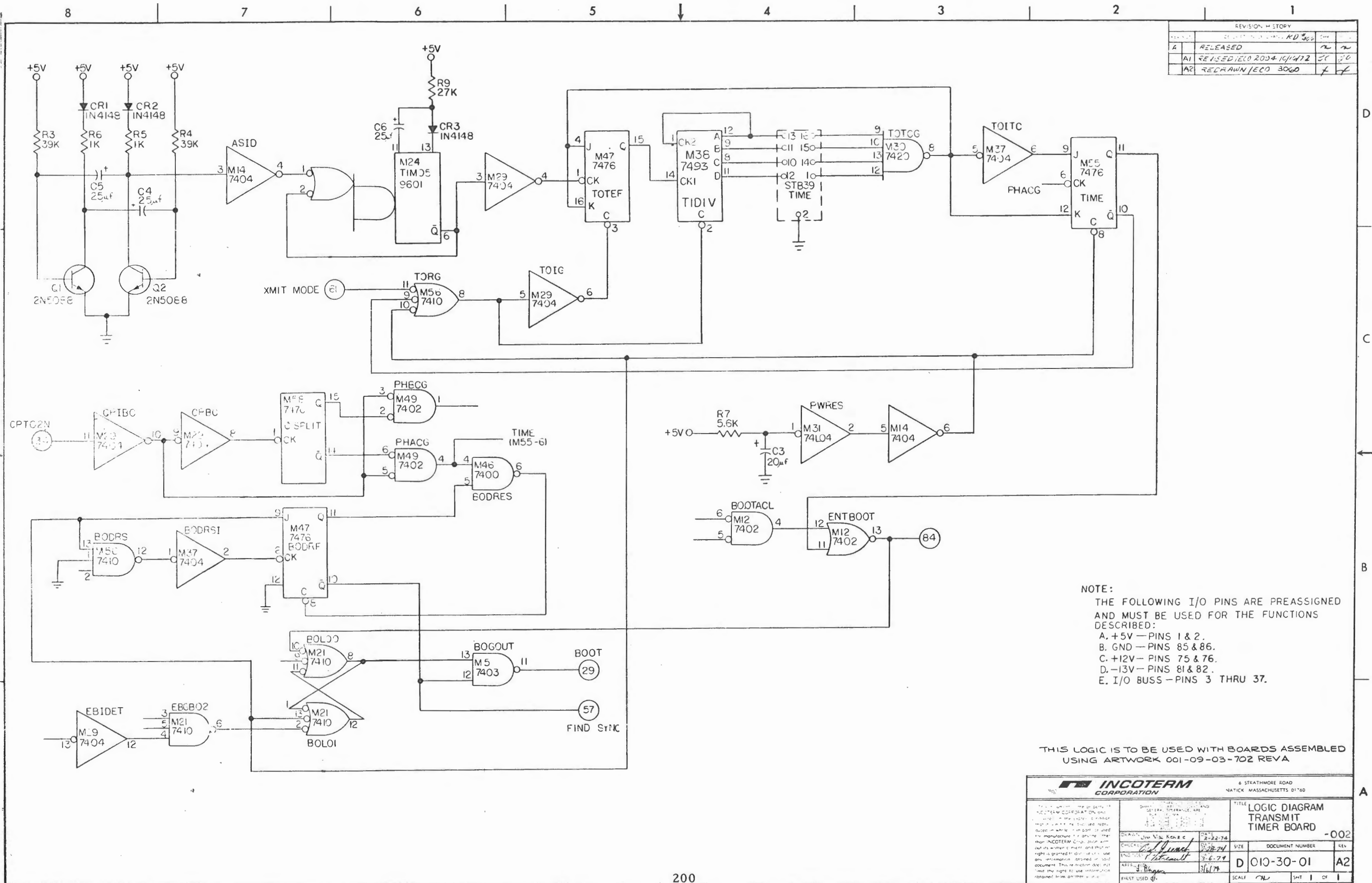


NOTE:  
 THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED:  
 A. +5V - PINS 1 & 2.  
 B. GND - PINS 85 & 86.  
 C. +12V - PINS 75 & 76.  
 D. -13V - PINS 81 & 82.  
 E. I/O BUSS - PINS 81 THRU 37.

THIS LOGIC IS TO BE USED WITH BOARDS ASSEMBLED USING ARTWORK 001-09-03-701 REV.B

		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760	
<small>This document is the property of INCOTERM CORPORATION and is loaned to you on the condition that it is not to be disclosed, reproduced in whole or in part, or used for manufacture for anyone other than INCOTERM Corporation without its written consent, and that no right is granted to disclose or to use any information obtained in said document. This restriction does not limit the right to use information obtained from another source.</small>		<b>LOGIC DIAGRAM          TRANSMIT          TIMER BOARD</b>	
DRAWN: Jim MacKewie CHECKED: [Signature] ENGINEER: [Signature] APPROVED: [Signature] FIRST USED ON:	DATE: 1-19-74 DATE: 3-25-74 DATE: 3-26-74 DATE: 3/1/74	SIZE: [Blank] DOCUMENT NUMBER: D 010-30-01 SCALE: [Blank]	REV: [Blank] REV: A2 SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED		
A1	REVISED I/O 2034 10/14/72	30	30
A2	REDRAWN I/O 3060		

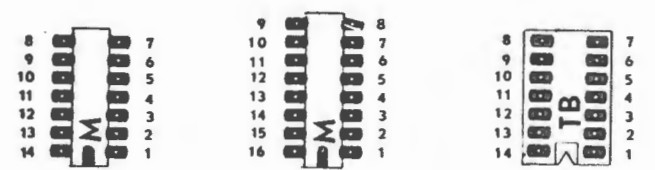
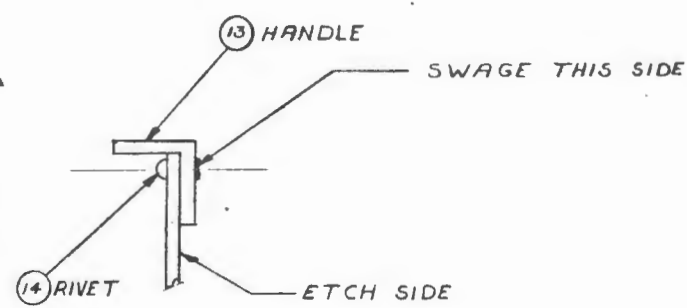
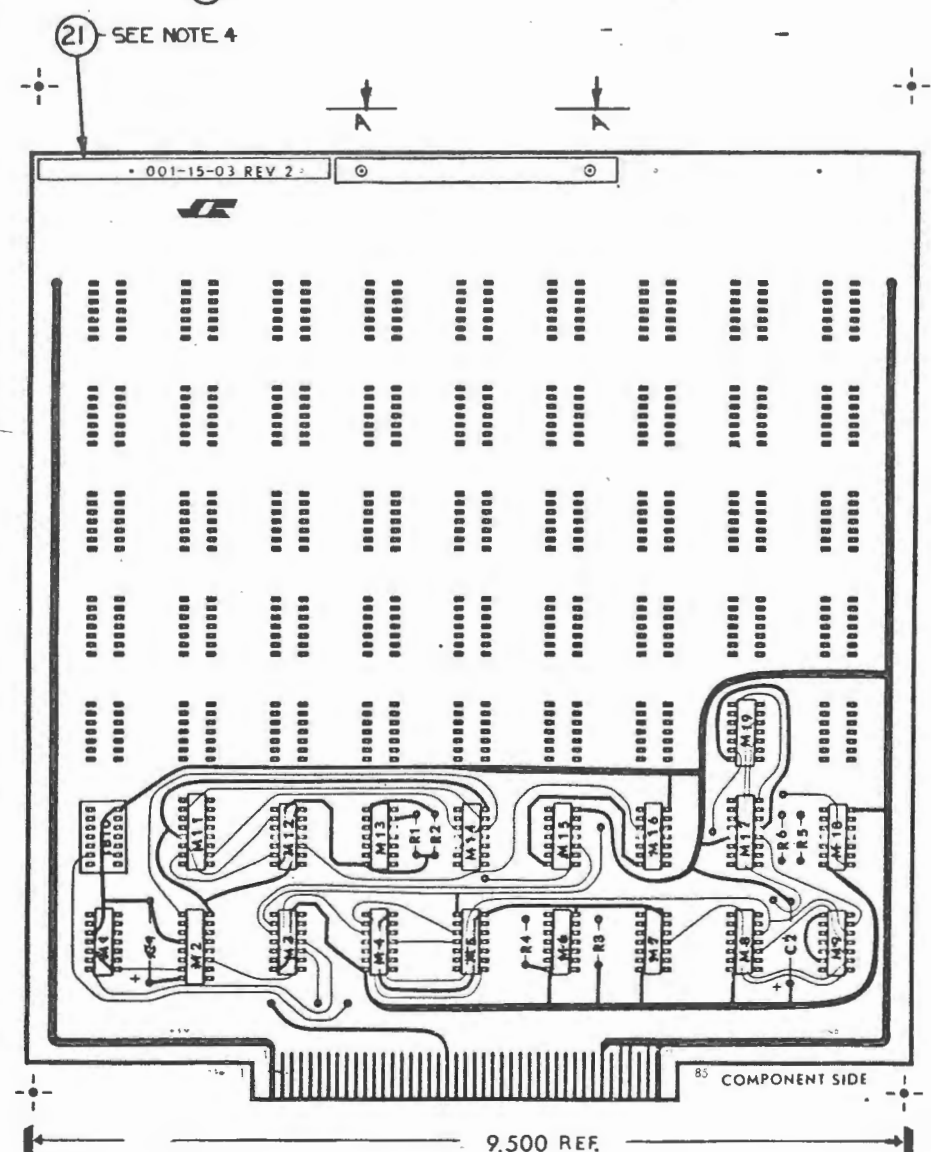
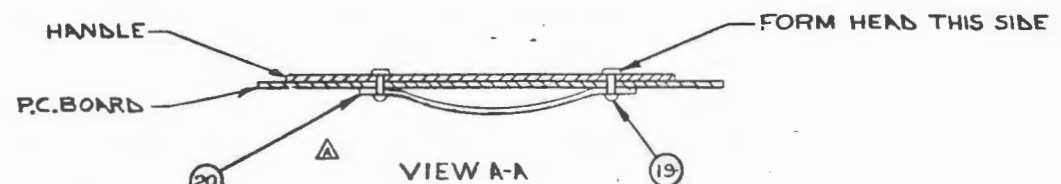


NOTE:  
 THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED:  
 A. +5V — PINS 1 & 2.  
 B. GND — PINS 85 & 86.  
 C. +12V — PINS 75 & 76.  
 D. -13V — PINS 81 & 82.  
 E. I/O BUSS — PINS 3 THRU 37.

THIS LOGIC IS TO BE USED WITH BOARDS ASSEMBLED USING ARTWORK 001-09-03-702 REVA

		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740	
TITLE <b>LOGIC DIAGRAM          TRANSMIT          TIMER BOARD</b>		-002	
DATE 2-22-74	SIZE D	DOCUMENT NUMBER 010-30-01	REV A2
CHECKED BY J. Blagov	DATE 3-6-74	SCALE 1/1	SHEET 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
4	RELEASED RRF 8-11-70		
A	ECO 1439 5-4-71 RNF		
B	REVISED/ECO 2321		
B1	REV. CHANGE ONLY/ECO 2378		
B2	REV. CHANGE ONLY/ECO 2477		



PIN NUMBERING AND ORIENTATION

3. COMPONENT TERMINATING LEADS TO BE CLINCHED OR NON CLINCHED PRIOR TO SOLDERING.
2. MAXIMUM HEIGHT OF LEAD PROTUSIONS CLINCHED OR NON-CLINCHED TO BE .080 MAX.
1. COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUG, ETC.

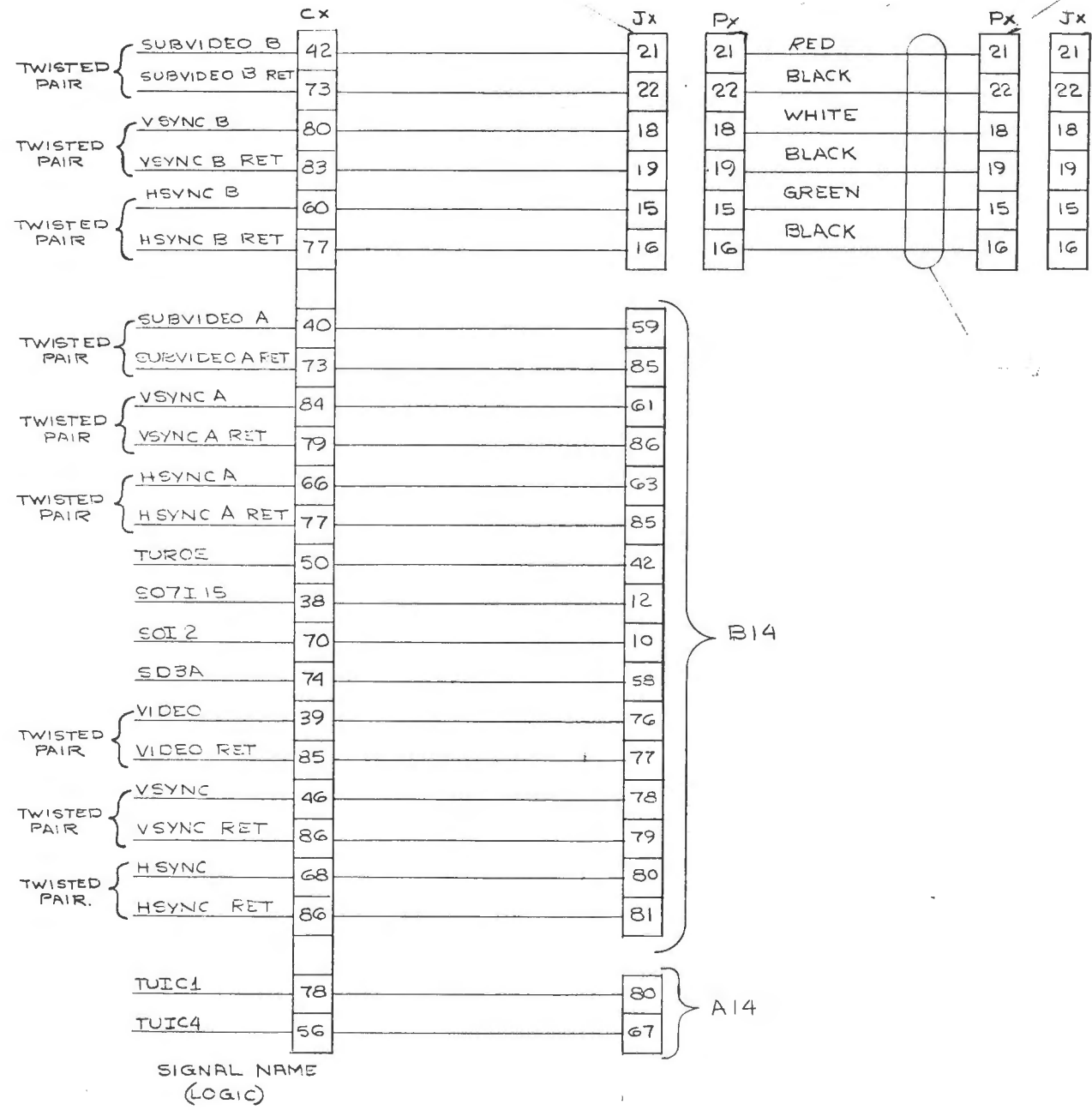
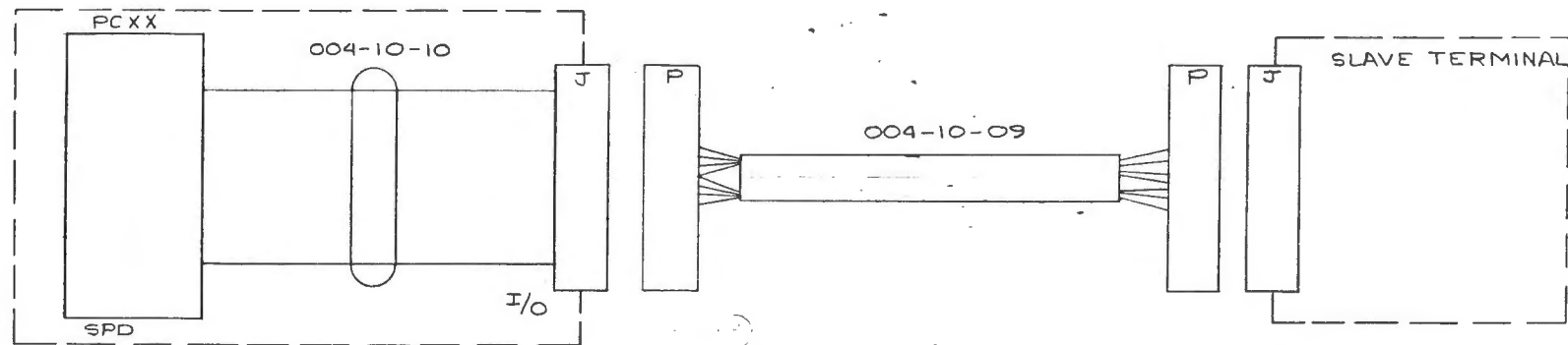
NOTES: 4. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL ITEM 21, AND MARK ASSY. NO. 001-15-02-701 AND LATEST ASSY. REVISION.

18	CSTE1127	C1, C2
17	ECE384-235-5	TB10
10	RSRC07GF181J	R1-R6
9	ICSN7493N	M1
8	ICSN7476N	M11,17
7	ICSN7451N	M15
6	ICSN7442N	M2
5	ICSN7440N	M6,13,18
4	ICSN7410N	M4
3	ICSN7404N	M3,5,7,8
2	ICSN7402N	M14
1	ICSN7400N	M9,12,16,19

ASSEMBLE WITH ARTWORK 001-15-03-701 REV. 2

701

INCOTERM CORPORATION		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PCS) ± .02 (2PCS) ANGLES ± 2°		TITLE <b>P.C. BOARD ASSY SPLIT SCREEN CONTROLLER</b>	
DR. <i>R. B. Blodgett</i>	DATE 8-11-70	SIZE	P.C. S.S. NO. REV
CHK. <i>R. B. Blodgett</i>	8-11-70	D	001-15-02 B2
APPD.		NEXT ASSY	001-15-06
		SCALE	1:1
			SHT 1 OF 2



NOTES:

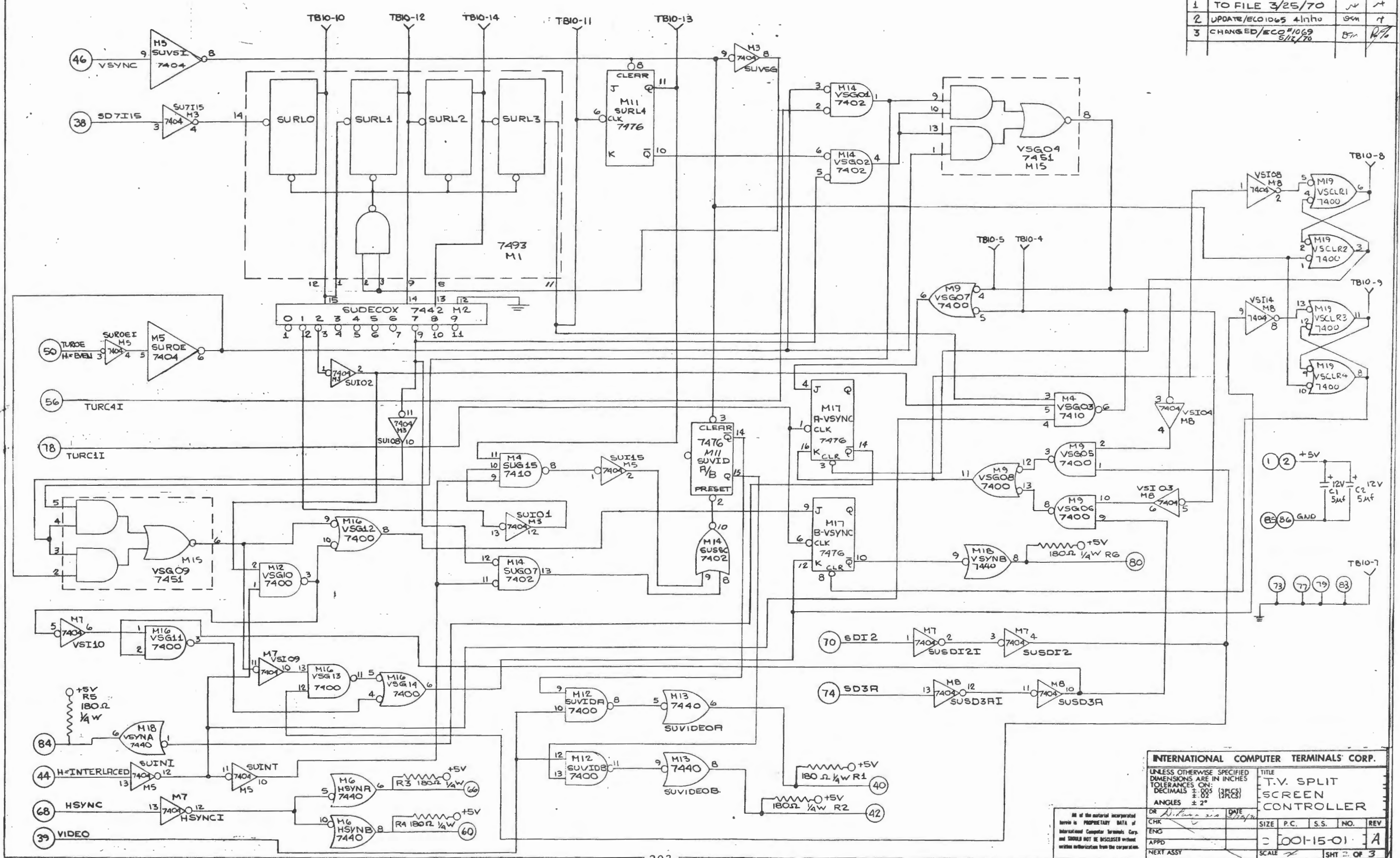
- BEFORE WIRING; REMOVE WIRES  
 B14-76 TO B14-59  
 B14-78 TO B14-61  
 B14-80 TO B14-63

**SPLIT SCREEN CONTROLLER**

*David Langley 10/6/70*  
*Libby 10/23/70*  
*De Morgan 10/29/70*  
 D.C. Field 11/27/70

D 001-15-01 A  
 3 3

REVISIONS			
REV	DESCRIPTION	CHK	APPD
1	TO FILE 3/25/70	JK	JK
2	UPDATE/ECO 1065 4/17/70	GM	JK
3	CHANGED/ECO #1069 5/12/70	BR	JK

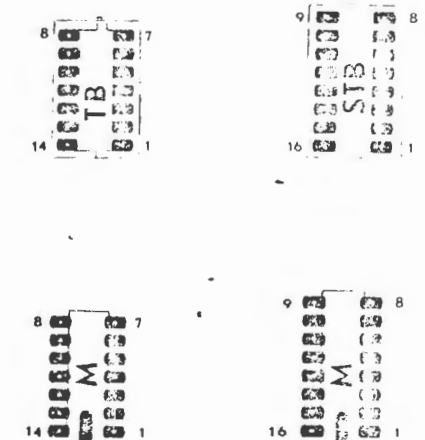
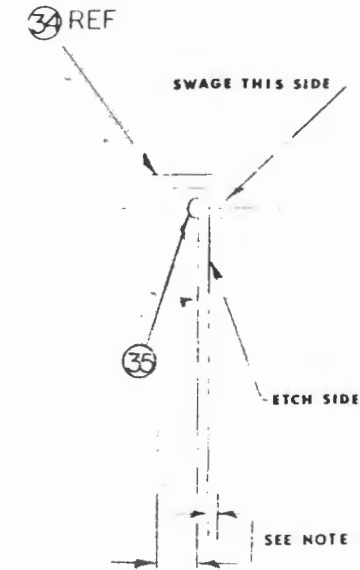
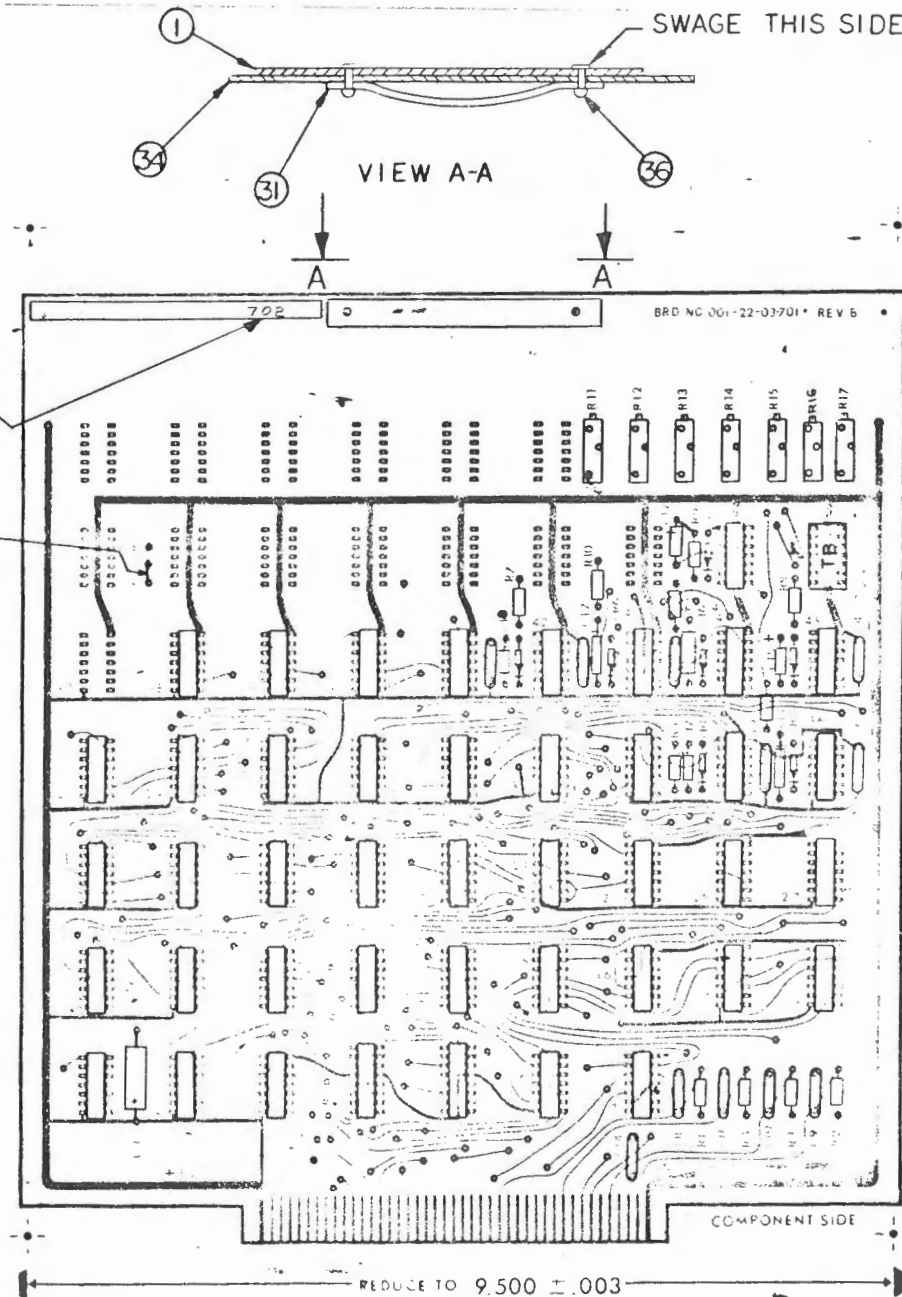


INTERNATIONAL COMPUTER TERMINALS CORP.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TITLE	
TOLERANCES ON:		T.V. SPLIT	
DECIMALS ± .005 (3PLS)		SCREEN	
ANGLES ± 2°		CONTROLLER	
DR	DATE	SIZE	P.C. S.S. NO. REV
CHK			
ENG			
APPD			
NEXT ASSY			

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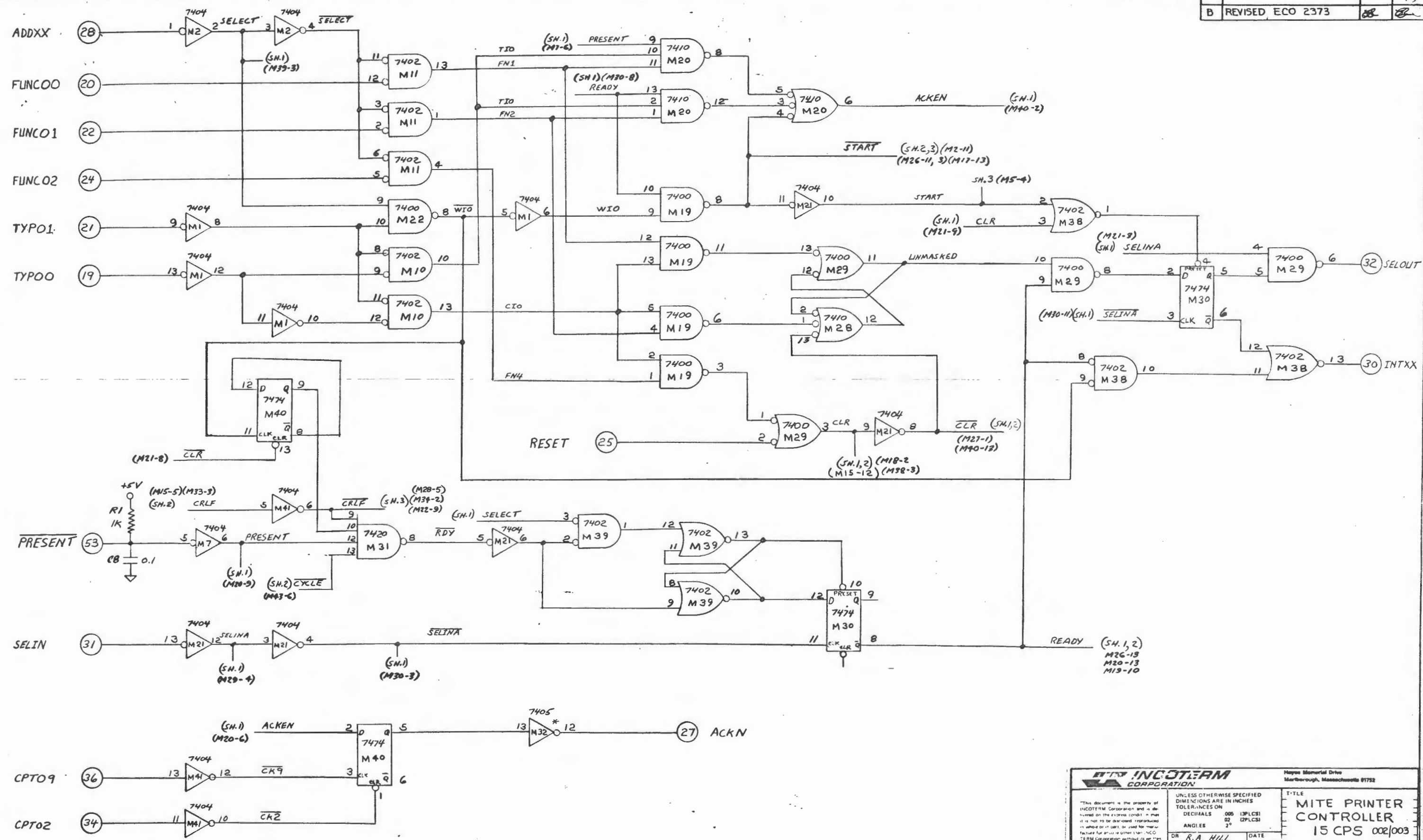
REV. SIONS			
REV	DESCRIPTION	RD#	CHK APPD
A	RELEASED	11-22-71	✓ ✓
A1	REVISED ECO#2351		✓ ✓
A2	REV. CHANGE ONLY/ECO 2373		✓ ✓
A3	REV. CHANGE ONLY/ECO 2477		✓ ✓



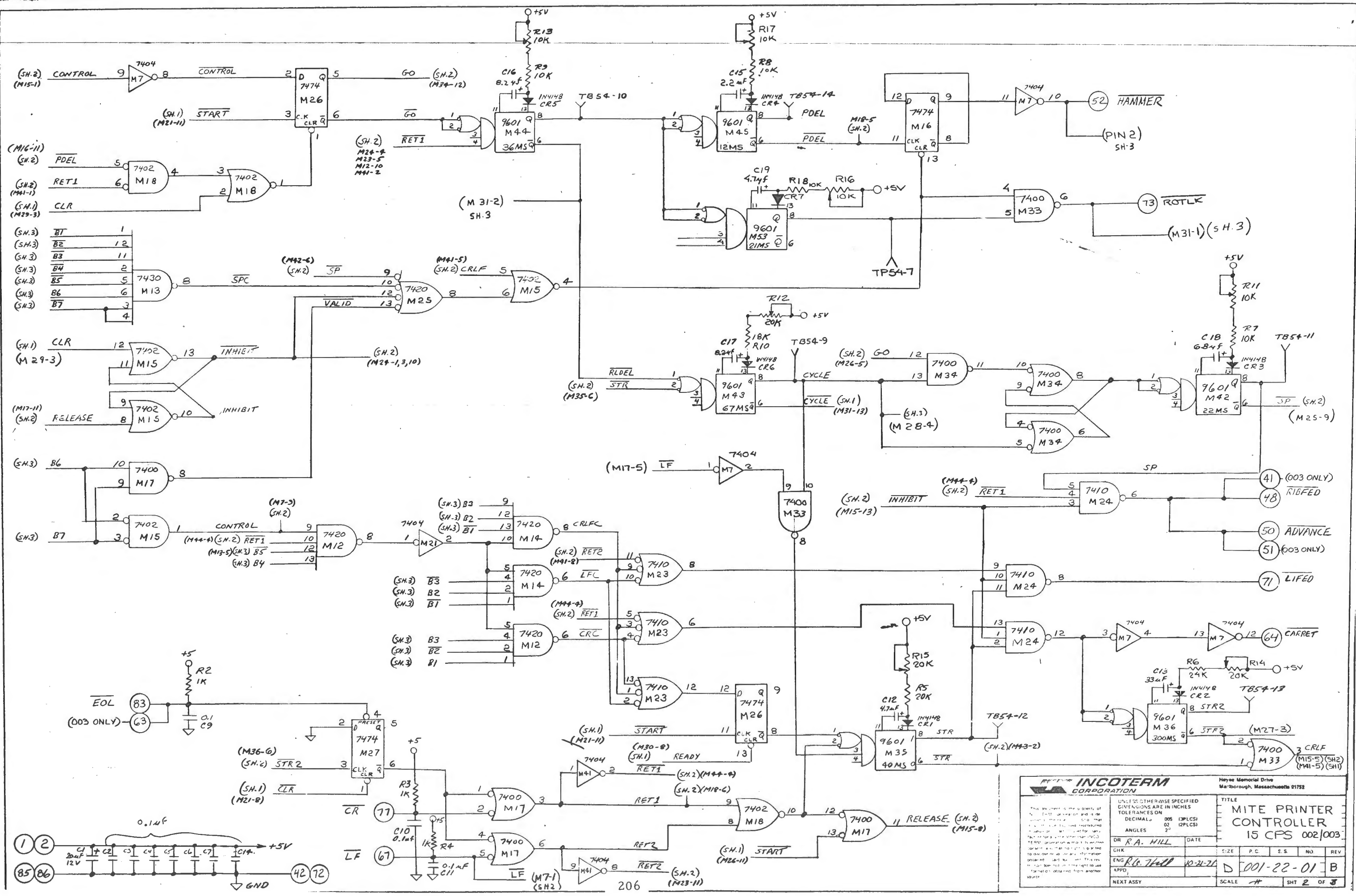
- NOTE:**
- HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 38, AND MARK ASSY. NO. 001-22-02-702, AND LATEST ASSY. REVISION.

ITEM NO.	REFERENCE DESIGNATION
22	C16, C17
21	R10
32	TB 54
29	C18
28	C15
27	C2 THRU C14
26	C1
25	—
24	C13
23	C12, C19
20	CRI THRU CR7
19	R12, 14, 15
18	R11, 16, 17, 13
17	R6
16	—
15	R5
14	R7, 8, 18, 9
13	R1, 2, 3, 4
12	M35, 36, 42, 43, 44, 45, 53
11	M4, 5
10	M16, 25, 27, 30, 40
9	M13
8	M12, 14, 25, 31
7	M20, 23, 24, 28
6	M32
5	M1, 2, 3, 6, 7, 21, 41
4	M10, 11, 15, 18, 38, 39
3	M17, 19, 22, 29, 33, 34

REV. SONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 11-22-71	TH	TS
B	REVISED ECO 2373	BR	BR



		Hayes Memorial Drive Marlborough, Massachusetts 01752	
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS .005 (3PLCS) ANGLES 2° (2PLCS)	TITLE <b>MITE PRINTER          CONTROLLER          15 CPS 002/003</b>	DR. <b>R.A. HILL</b> ENG. <b>R.A. HILL</b> APPD. <b>D.O. [Signature]</b> NEXT ASSY 001-22-02-701	DATE <b>10-21-71</b> SCALE <b>#</b> SHEET <b>1</b> OF <b>3</b>
CHK. <b>R.A. HILL</b> DATE <b>10-21-71</b> NO. <b>001-22-01</b> REV. <b>B</b>	SIZE <b>D</b> P.C. <b>#</b> S.S. <b>#</b> NO. <b>#</b> REV. <b>B</b>	DATE <b>10-21-71</b> SCALE <b>#</b> SHEET <b>1</b> OF <b>3</b>	TITLE <b>MITE PRINTER CONTROLLER 15 CPS 002/003</b>



**INCOTERM CORPORATION**  
 Rayne Memorial Drive  
 Marlborough, Massachusetts 01752

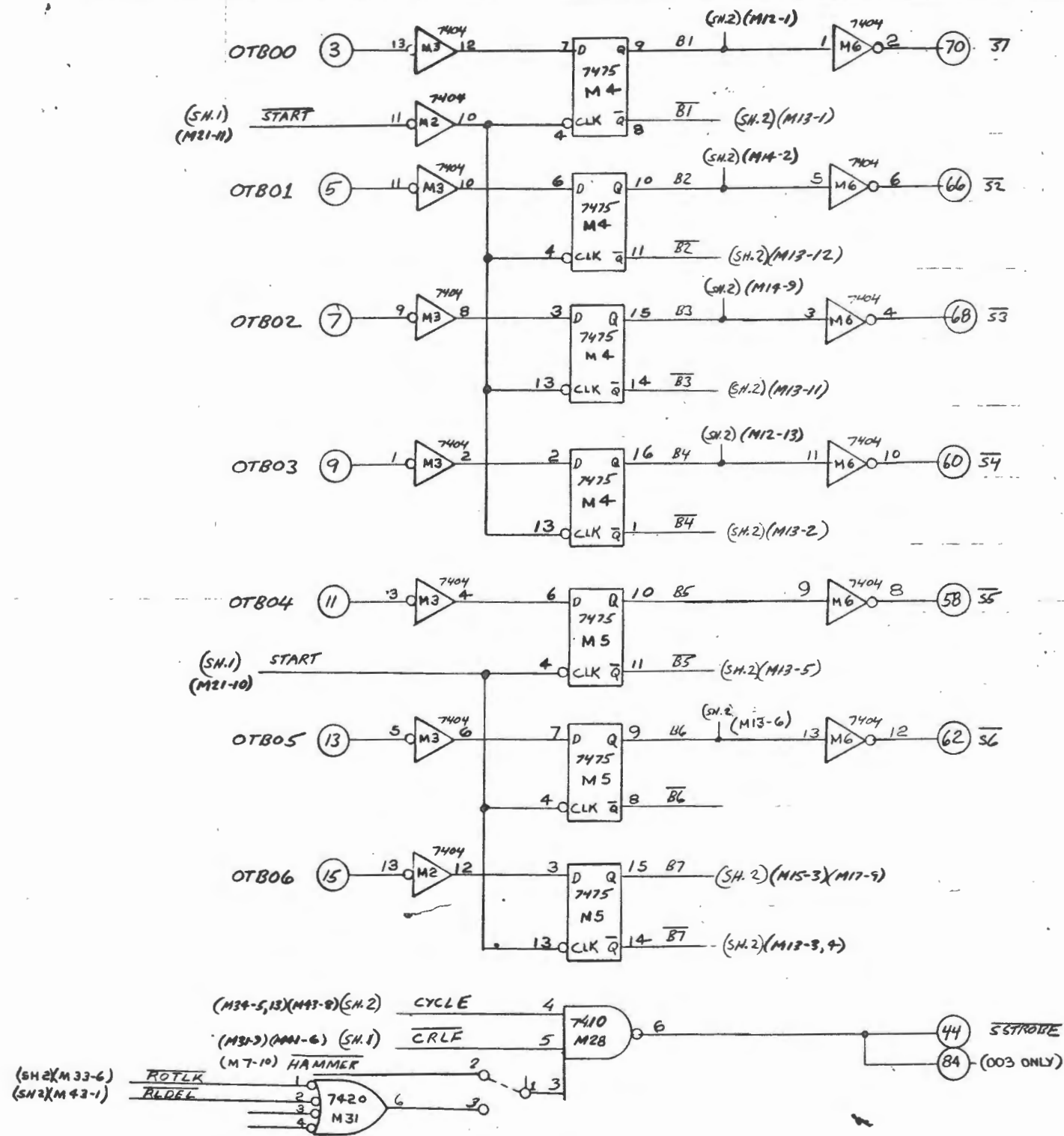
UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES ON  
 DECIMALS .005 (3PLCS)  
 ANGLES 20° (2PLCS)

DR R.A. HILL DATE  
 ENG R.A. Hill 10-21-74  
 APPD  
 NEXT ASSY

TITLE  
**MITE PRINTER  
 CONTROLLER**  
 15 CPS 002/003

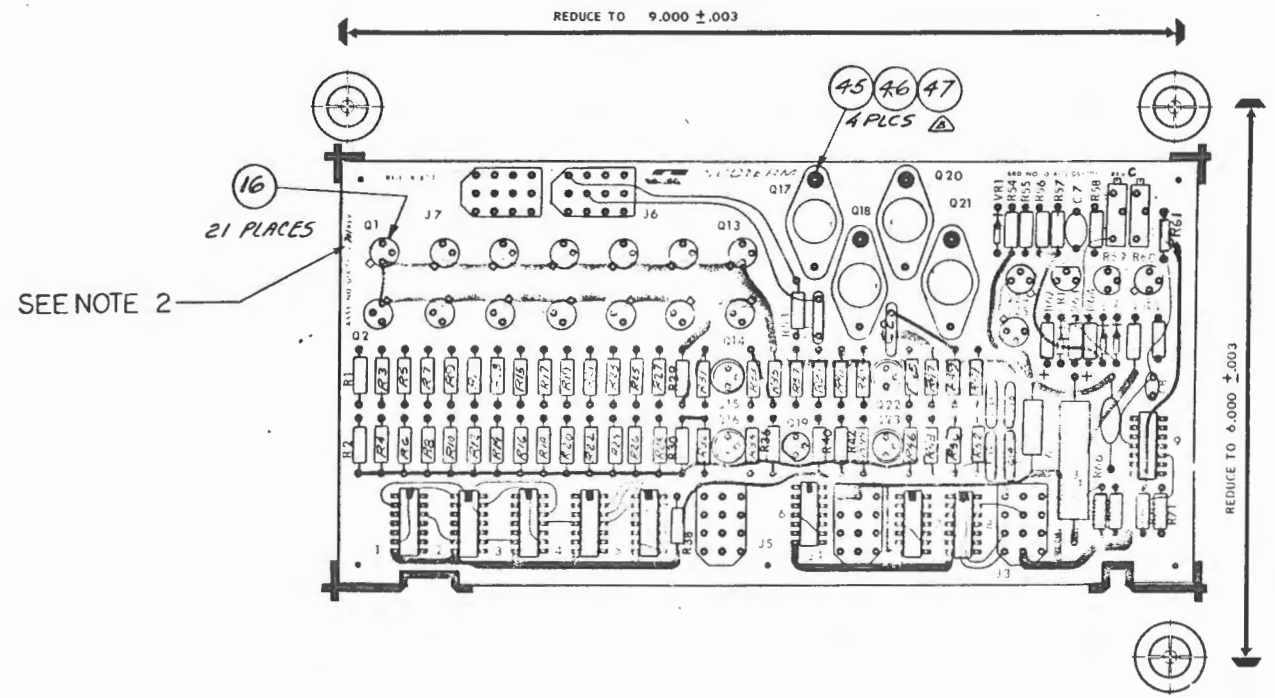
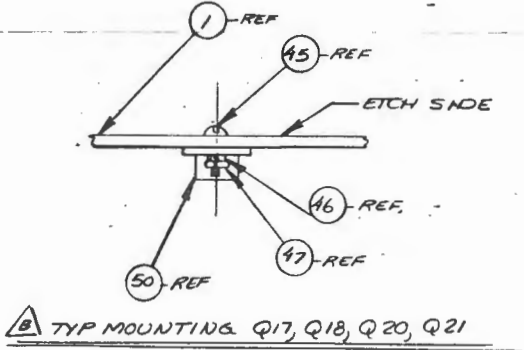
SIZE P.C. S.S. NO. REV  
 D 001-22-01 B

SCALE # SHT 2 OF 3



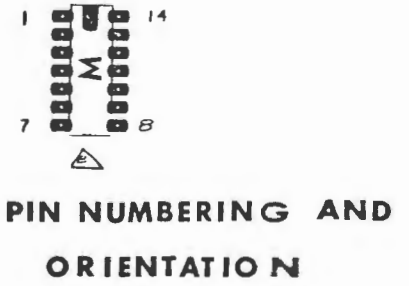
JUMPER OPTIONS  
1 TO 2 FOR 15 CPS PRINTER MODEL #150

<b>INCOTERM CORPORATION</b> 1000 Worcester Drive Marlborough, Massachusetts 01752		TITLE <b>MITE PRINTER CONTROLLER</b> 15CPS 002/003	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) ANGLES 2°		DR <b>R.A. HILL</b> DATE CHK ENG <b>R.L. Hill</b> 10-27-70 APPD NEXT ASSY	SIZE P.C. S.S. NO. REV <b>D 001-22-01</b> B SCALE # SH 3 OF 3



60	R37
59	R49-R53
58	R29, 33, 35, 41, 45, 47
57	R31, 43
56	Q18, 16, 22, 23
55	R30, 36, 42, 48
54	R1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27
53	M8
52	M2, 4, 6, 7
51	M1, 3, 5
50	Q17, 18, 20, 21
49	Q19
48	Q1-Q14 Q25, Q28
44	J3
43	J4
42	J5
41	J6
40	J7
37	R59
36	R60
35	R57, 64
33	R70
32	R61, 68, 69
31	R55
30	R66
29	R65
28	R63
27	R62
26	R54
25	R56
24	R67
23	R58
22	R71
21	C6
20	C7
18	C5
17	C8
15	VR1
14	VR2
13	CR1, CR2
12	C1, 2, 11, 12, 13, 14
11	R2, 4, 6, 8, 10, 12, 14, 16, 18, 20 22, 24, 26, 28, 32, 34, 38, 44, 46
10	M9
9	Q27
7	Q26
5	R37
4	R40
3	Q24
NO.	REFERENCE DESIGNATION

**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.  
 2. MARK BOARD 701 AND REVISION OF BOARD  
 AS SHOWN.



**COMPONENT SIDE**

ASSEMBLE WITH ARTWORK REV C

<b>INCOTERM CORPORATION</b> 100 Memorial Drive Woburn, Massachusetts 01752		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 2	<b>P.C. BOARD ASSY</b> MITE PRINTER POWER SUPPLY 701
DR: [Signature] ENR: [Signature] ENG: [Signature] APPD: [Signature]	DATE: 11/11/71 NO: P C S S NO REV D-014-13-02C4	1:1 SHT 2 OF 2	NEXT ASSY: 14-12-12-12

REVISIONS				
REV	DESCRIPTION	RD#	CHK	APPD
1	TO FILE	RD#371		
2	UPDATED PER ENG MARKED UP BLUE LINE DRAWING			
A	RELEASED			
B	REVISED/ECO P21 9/8/72			

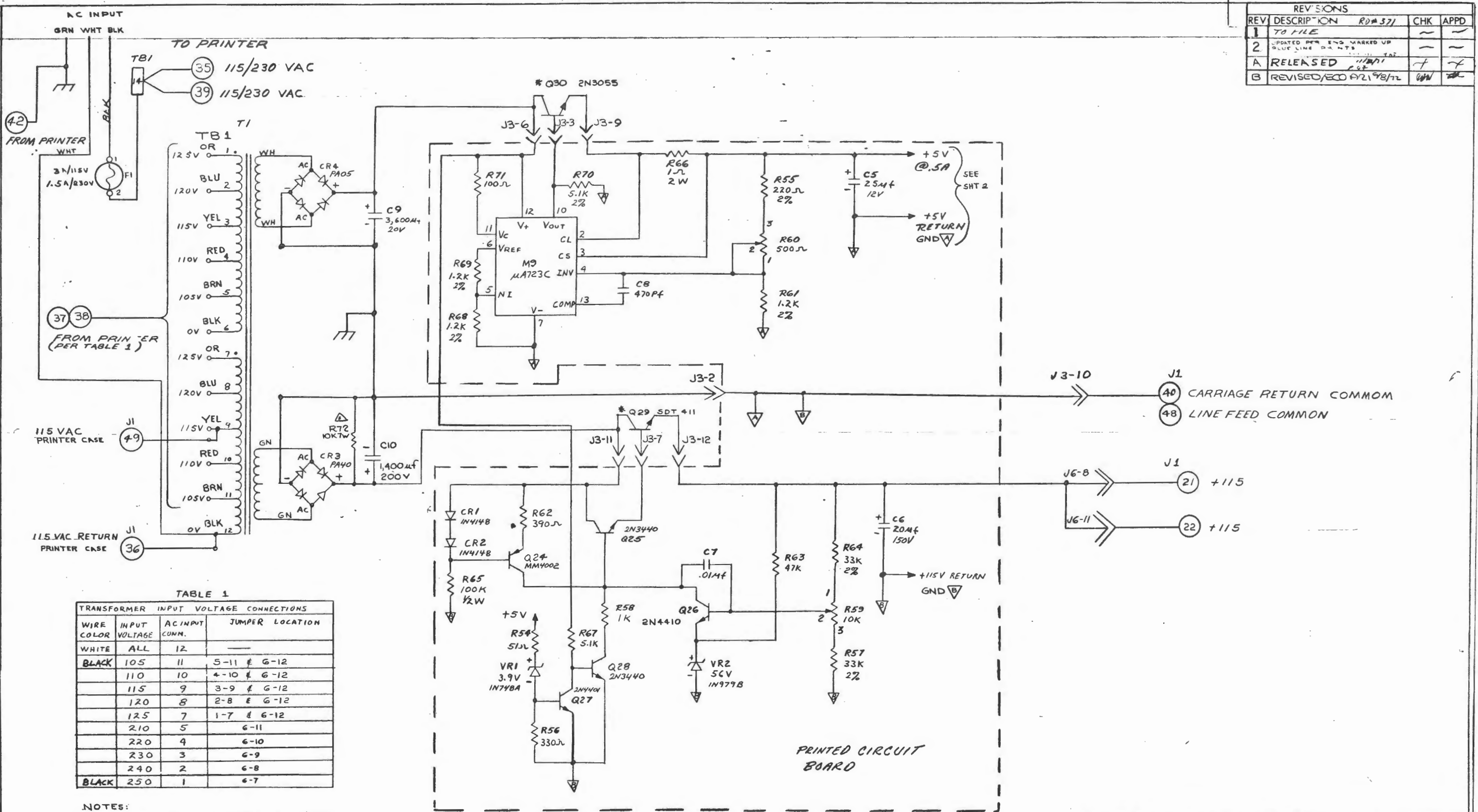


TABLE 1

TRANSFORMER INPUT VOLTAGE CONNECTIONS			
WIRE COLOR	INPUT VOLTAGE	AC INPUT CONN.	JUMPER LOCATION
WHITE	ALL	12	---
BLACK	105	11	5-11 & 6-12
	110	10	4-10 & 6-12
	115	9	3-9 & 6-12
	120	8	2-8 & 6-12
	125	7	1-7 & 6-12
	210	5	6-11
	220	4	6-10
	230	3	6-9
	240	2	6-8
BLACK	250	1	6-7

NOTES:  
 1. ALL RESISTORS ON SHT 1 ARE 1/4W UNLESS OTHERWISE SPECIFIED.  
 2. ALL RESISTORS ON SHT 2 ARE 1/2W UNLESS OTHERWISE SPECIFIED.  
 3. \* INDICATES TRANSISTORS MOUNTED ON HEAT SINK

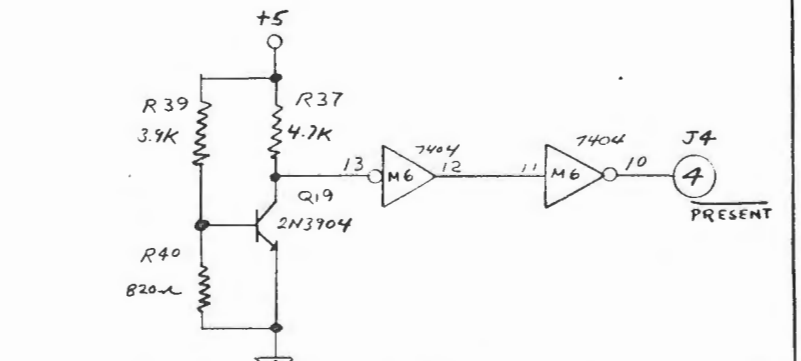
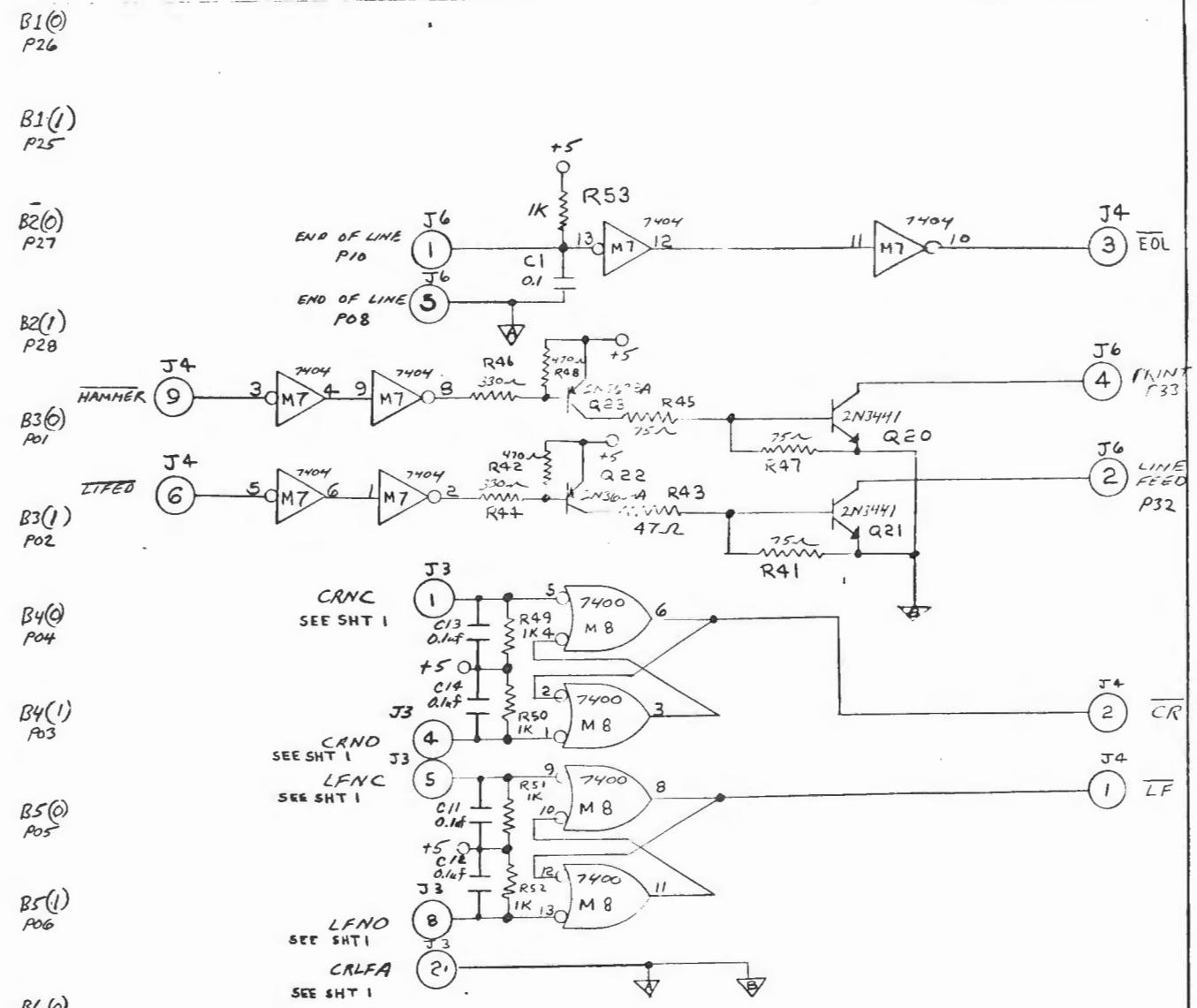
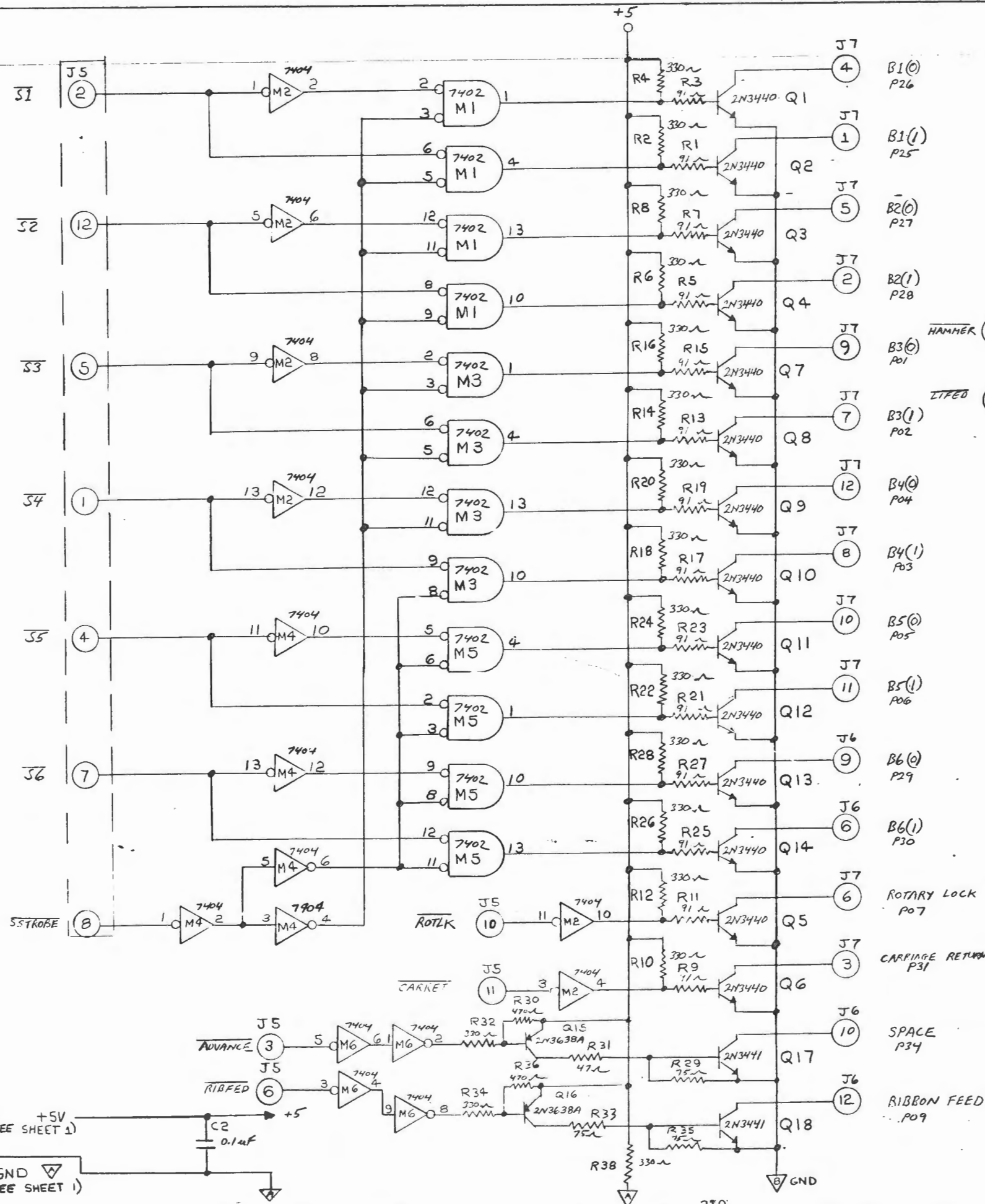
**INCOTERM CORPORATION**  
 Mayes Memorial Drive  
 Marlborough, Massachusetts 01752

TITLE: **MITE PRINTER POWER SUPPLY**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 2°

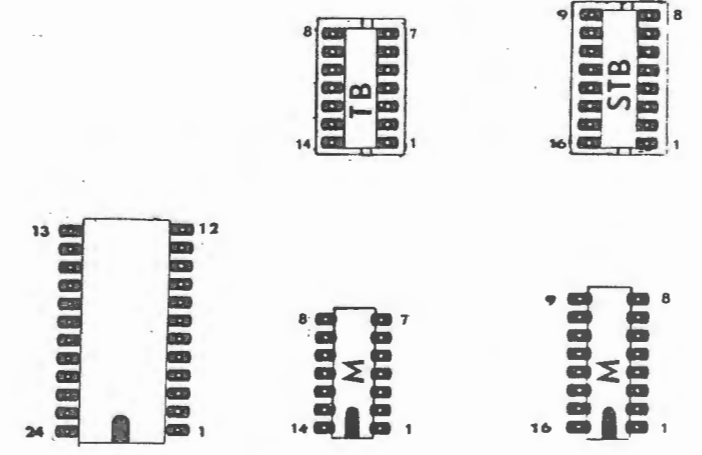
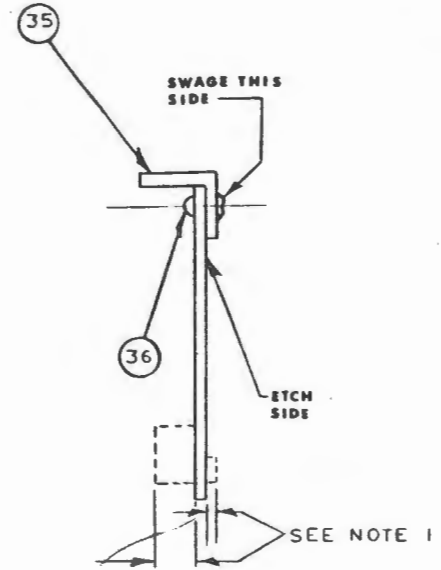
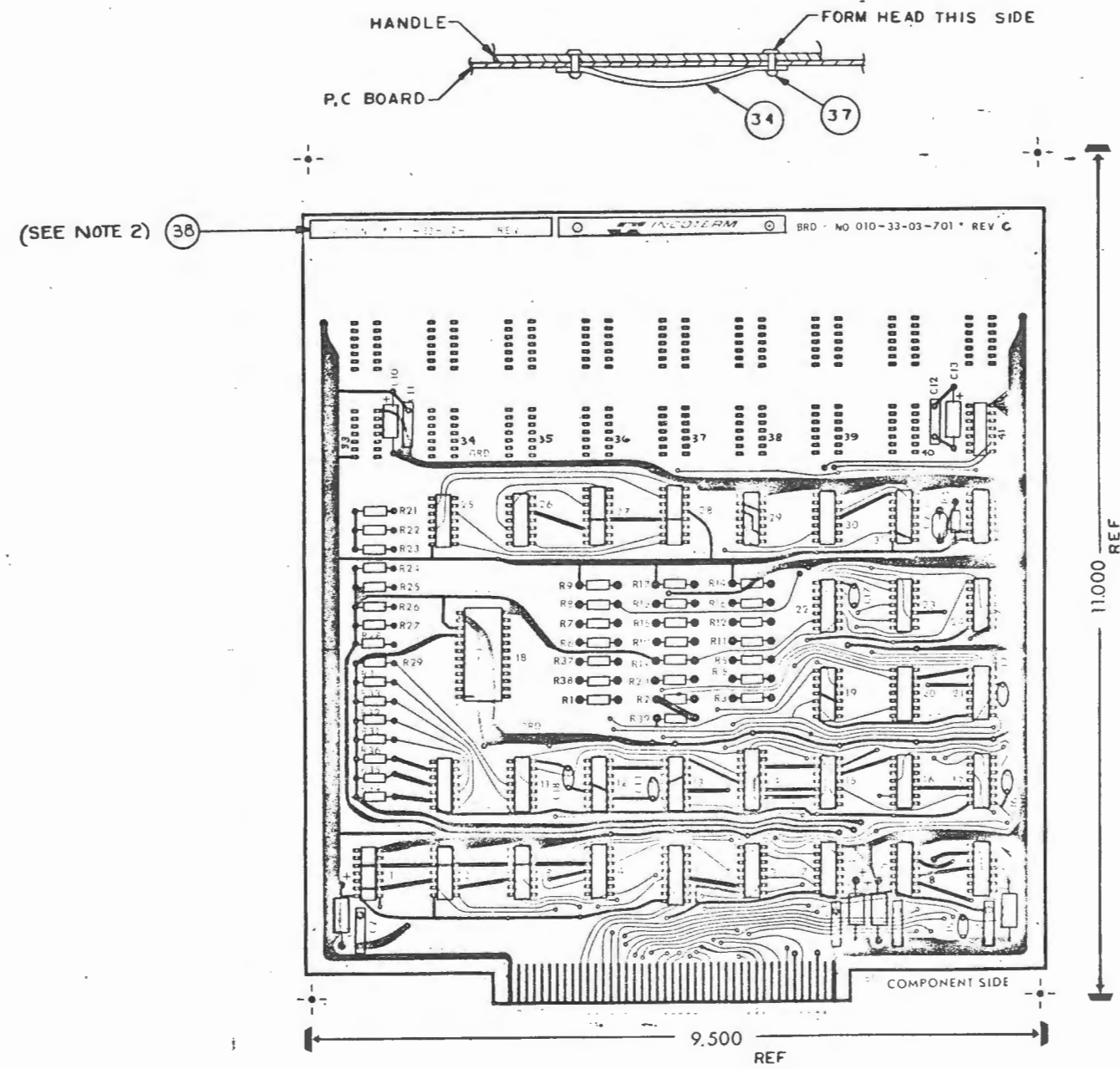
DR: *Tom P. Red* DATE: 8-20-72  
 CHK: *[Signature]* P.C. S.S. NO. REV.  
 ENG: *[Signature]* 10-20-72  
 APPD: *[Signature]* 8/23/72

SCALE: # SHT 1 OF 2



INCOTERM CORPORATION		Wayne Memorial Drive Marlborough, Massachusetts 01752	
DATE	DATE	DATE	DATE
001			
D 014-13-01		B	
SHT 2 OF 2			

REVISION HISTORY				
REVISION	DESCRIPTION	RD #	DATE	CHK
A	RELEASE	552	7	7
A1	REV. CHANGE ONLY/ECO2378			
A2	REV. CHANGE ONLY/ECO2515			



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**  
ASSEMBLE WITH ARTWORK 010-33-03-701 REV. C

- NOTE:**
- HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 38, AND MARK ASSY. NO. 010-33-02-701C AND LATEST ASSY. REVISION.

ITEM NO.	REFERENCE DESIGNATION
29	
28	C14-19
27	C9
26	C2, 3, 6, 7, 11, 12
25	C4, 5
24	C1, 8, 10, 13
23	R20
22	R29-36
21	R21-28
20	R19
19	R1-R3, 5, 18, 37, 38
18	R4
17	R6-R9, 10-17, 39
16	
15	
14	M16
13	M32
12	
11	M14
10	M27, 28
9	M8, 9, 12, 16, 22, 31
8	M5
7	M24
6	M25, 26
5	M29, 30
4	M6, 10, 11, 21
3	M1, 2, 3, 4, 19
2	M7, 13, 20, 41
1	M15, 17, 23

**INCOTERM CORPORATION**  
Hayes Memorial Drive  
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
TOLERANCES ON  
DECIMALS .005 (3PLCS) .01 (2PLCS)  
ANGLES 2°

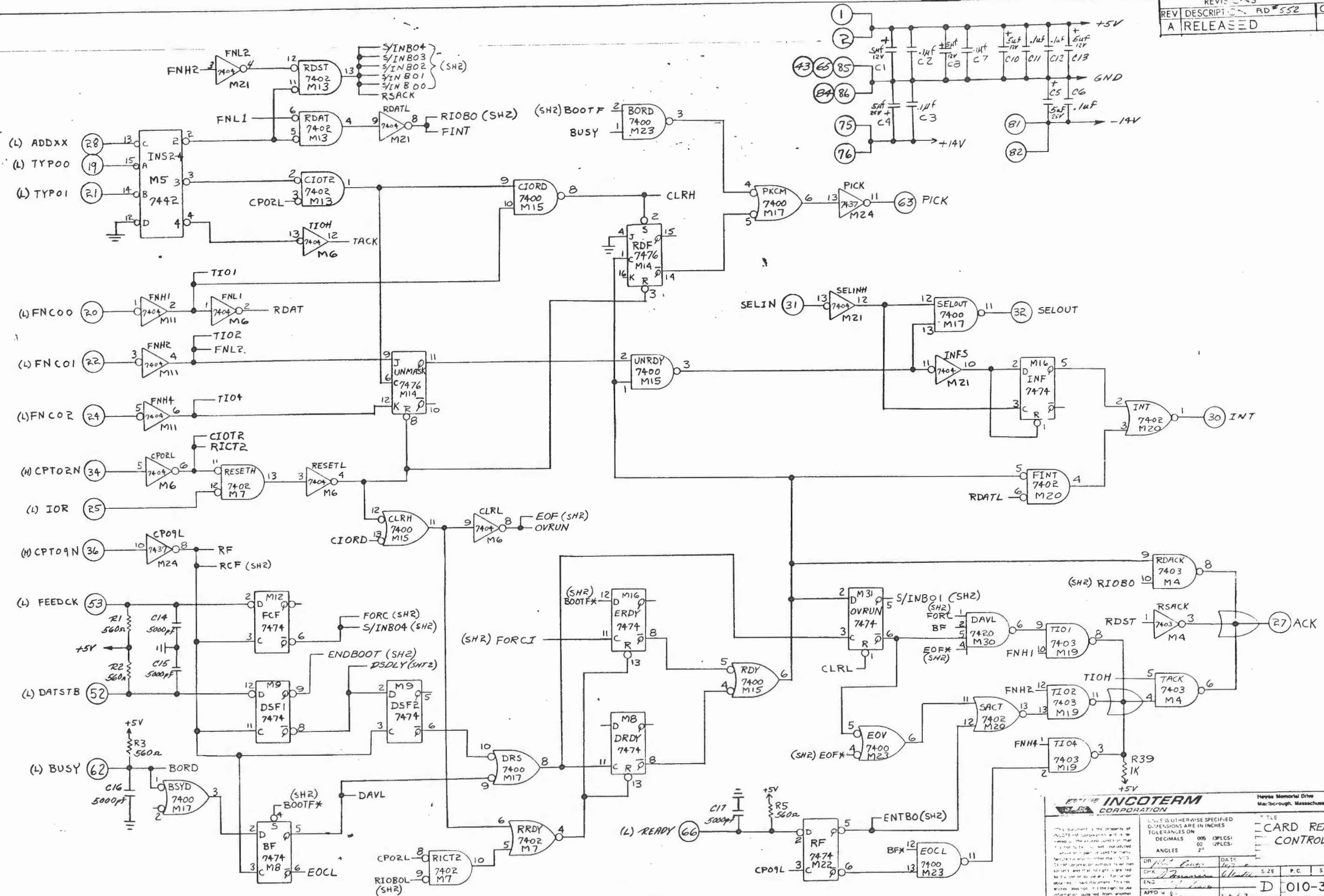
**P.C. BOARD ASSY**  
CARD READER  
CONTROLLER TDIC

DR	DATE	SIZE	P.C.	SS	NO.	REV.
CHK	2/27/72					
ENG						
APPD						
NEXT ASSY 010-33-02-701		SCALE 1:1	SHT 1 OF 1			

APPD: [Signature] DATE: 2/27/72  
D 010-33-02-A2



REVISIONS			
REV	DESCRIPTION	RD#	CHK APPD
A	RELEASED	552	+ +



**INCOTERM CORPORATION**  
 Hayes Memorial Drive  
 Marlborough, Massachusetts 01752

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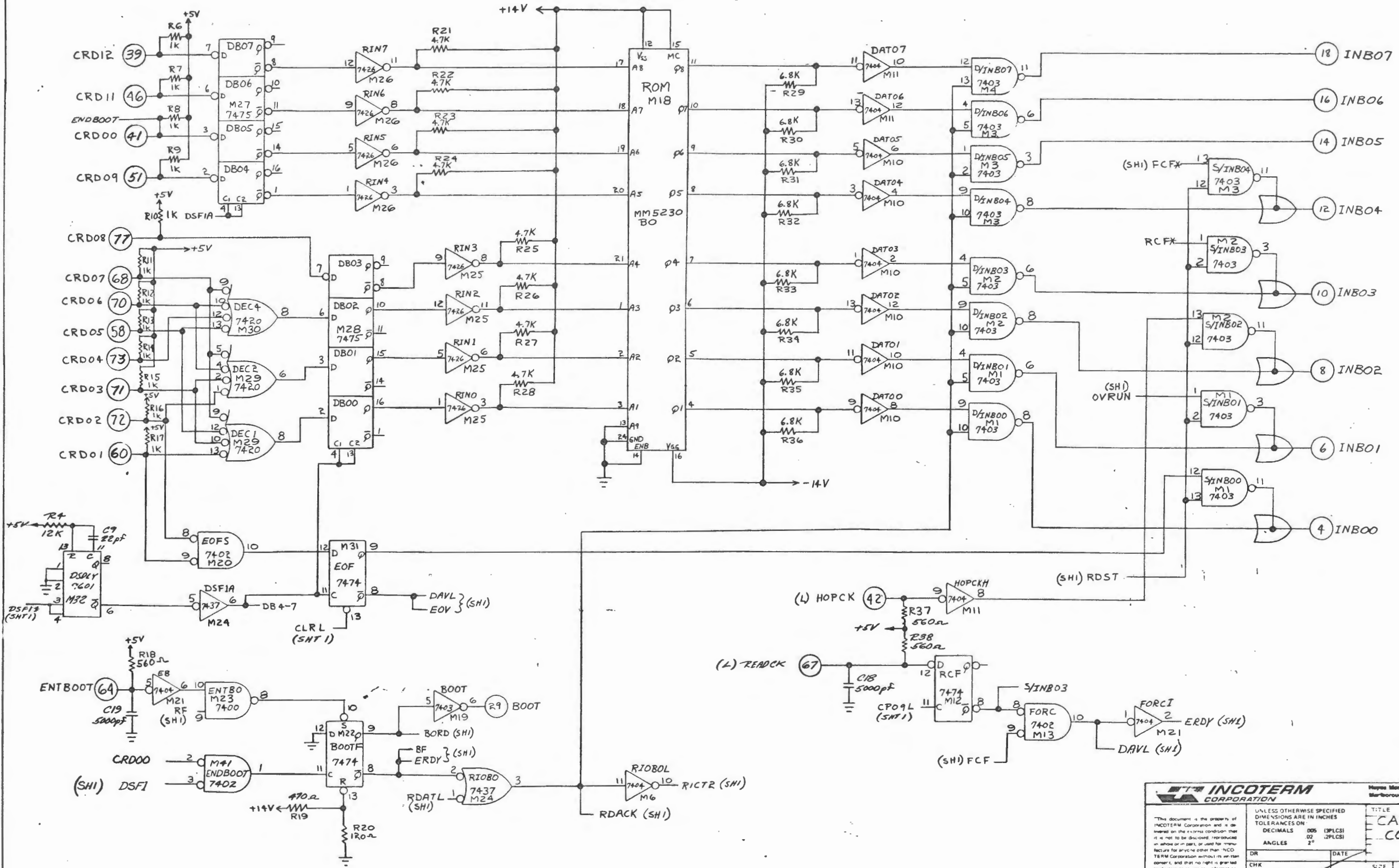
DATE: 10/27/72  
 DR: [Signature]  
 ENG: [Signature]  
 APPD: [Signature]

SCALE: 1/8" = 1"

SHT 1 OF 2

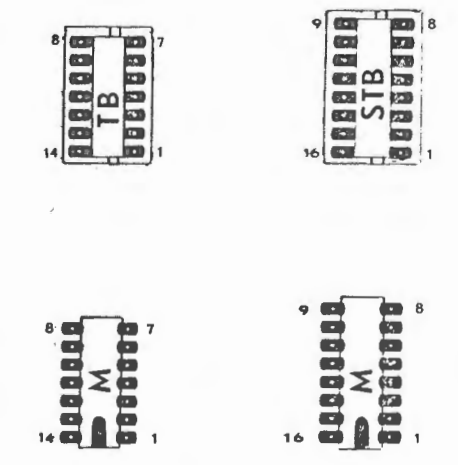
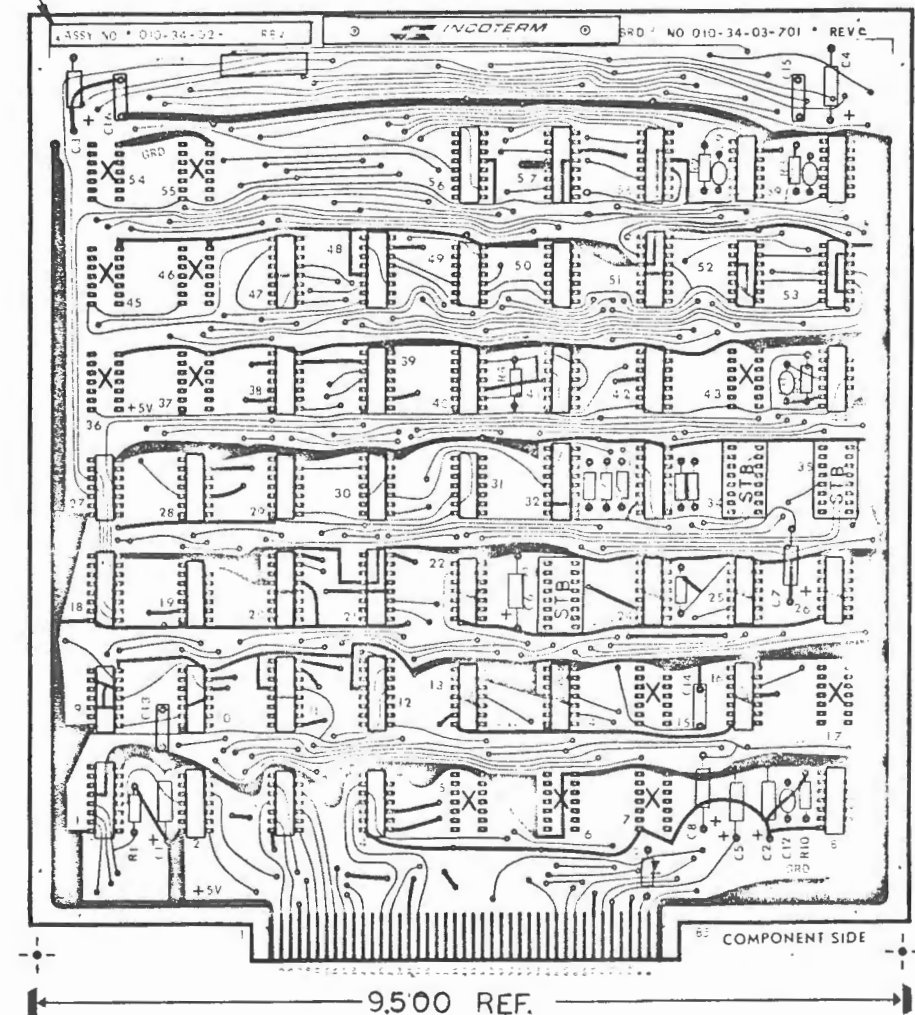
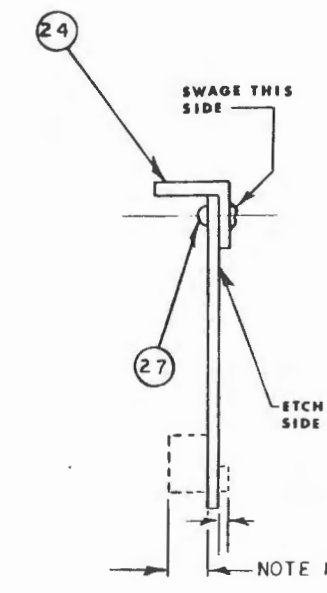
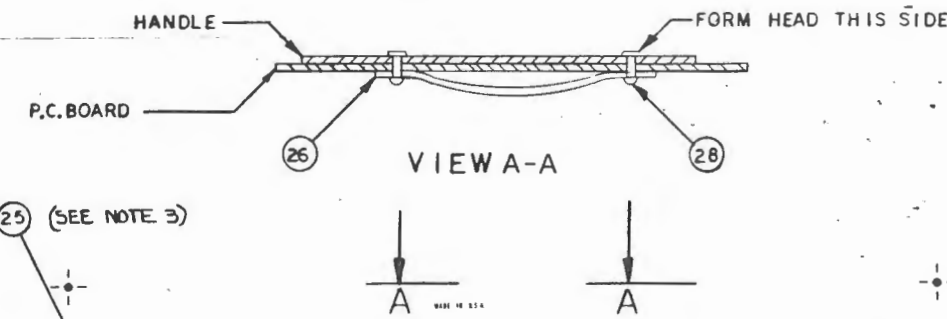
001

010-33-01 A



		TITLE <b>CARD READER CONTROLLER</b>				
		001				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) ANGLES .02 (2PLCS)	DATE	SIZE	P.C.	S.S.	NO.	REV
DR	CHK	ENG	APPD	D	010-33-01	A
PART ASSY		SCALE	SHT	2	OF	2

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

REV. C

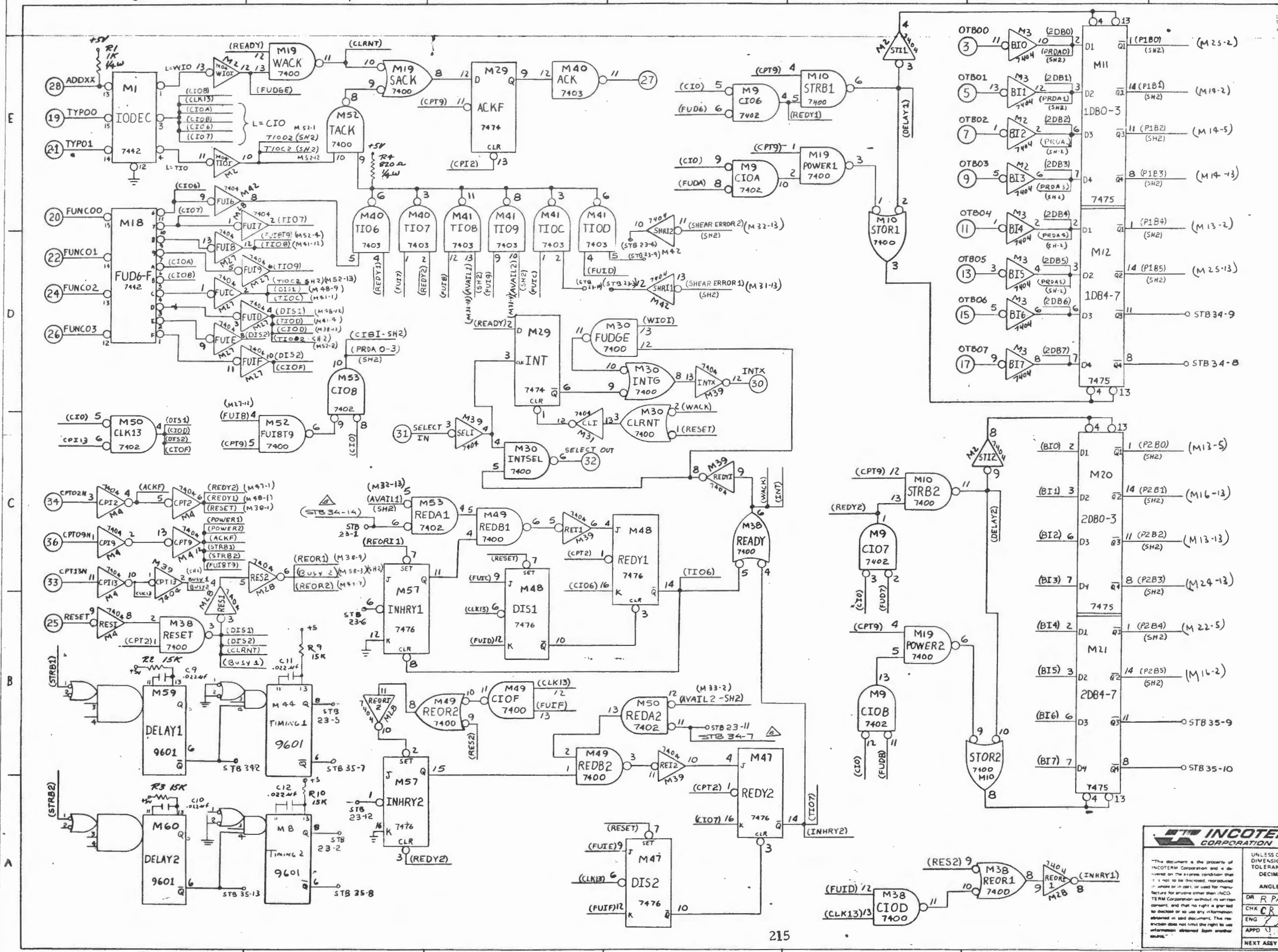
ASSEMBLE WITH ARTWORK NO 0103403-701

<b>INCOTERM CORPORATION</b>		<small>Process Memorial Drive Marlborough, Massachusetts 01752</small>	
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS)                   .02 (2PLCS) ANGLES 2°</small>			
<small>THIS DOCUMENT IS THE PROPERTY OF INCOTERM CORPORATION. IT IS TO BE RETURNED TO THE COMPANY AT THE TIME OF DISCONTINUATION OF WORK AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF INCOTERM CORPORATION.</small>		<b>P.C. BOARD ASSY</b> <b>DUAL PRINTER</b> <b>(PRINTEC) 701C</b>	
<small>OR</small> <small>CHK</small> <small>ENG</small> <small>APPD</small>	<small>DATE</small> <small>BY</small> <small>DATE</small> <small>BY</small>	<small>SIZE</small> <small>PC</small> <small>SS</small> <small>NO</small> <small>REV</small>	<b>D</b> 01034-02 C4 <small>SCALE 1:1</small> <small>SHT 3 OF 3</small>

ITEM NO.	REFERENCE DESIGNATION
35	M 32, 33
34	M 13, 14, 16, 22, 24, 25, 26
33	CR 1
25	
24	
23	
22	C 13 - C 16
21	C 1 - C 4
20	C 5 - C 8
19	C 9 - C 12
18	R 2, 3, 9, 10
17	R 4
16	R 1
15	R 5, 6, 7, 8, 11, 12
14	STB 2, 3, 34, 35
13	
12	
11	M 8, 44, 59, 60
10	M 47, 48, 57, 58
9	M 11, 12, 20, 21, 51, 56
8	M 29
7	M 1, 18
6	M 2, 3, 4, 27, 28, 31, 39, 42
5	M 40, 41
4	M 9, 50, 53
3	M 10, 19, 30, 38, 49, 52
2	
1	

- NOTE:**
- HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - PATTERN MARKED "X" NOT USED.
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 25, AND MARK ASSY. NO. 010-34-02-701C AND LATEST ASSY. REVISION.

REVISIONS			
REV	DESCRIPTION	CHK	APPD
1	RELEASED TO FILE	-	-
A	RELEASED RD 537 10/27/72	-	-
B	REVISED/ECO 2188 1/5/73	-	-

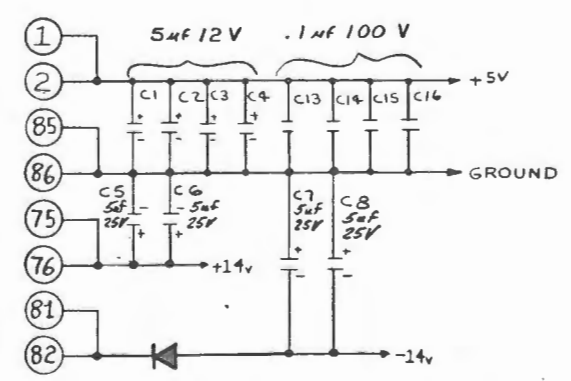
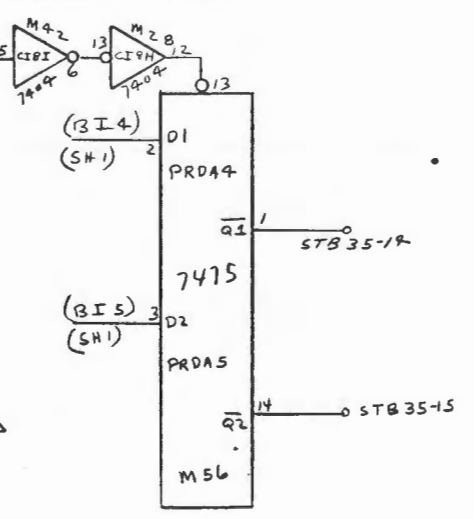
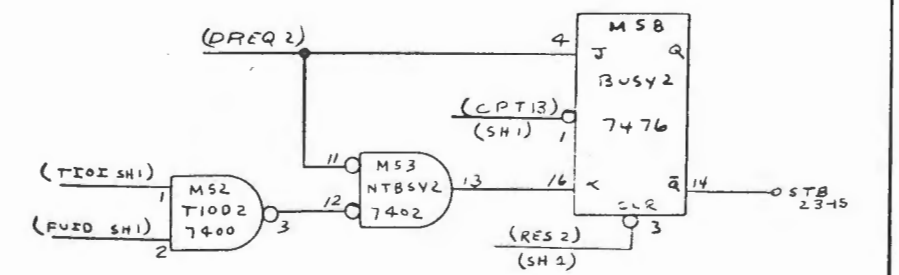
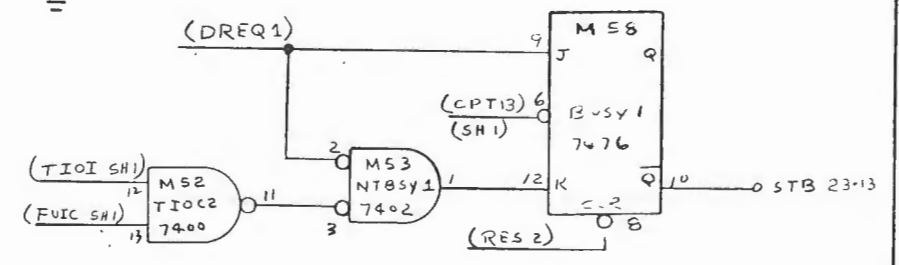
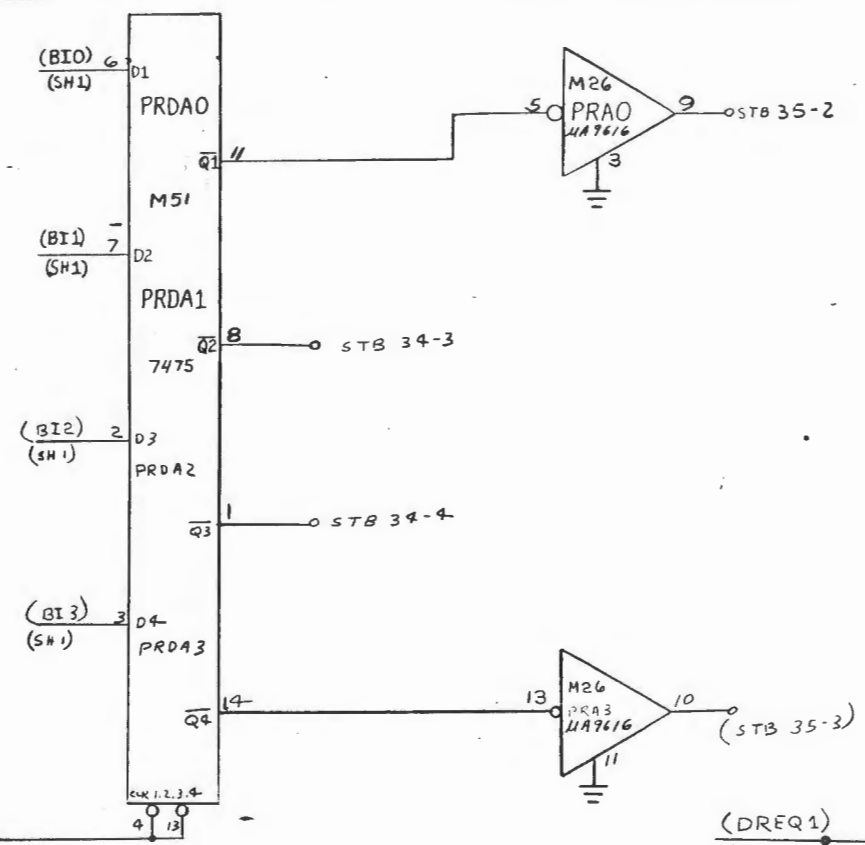
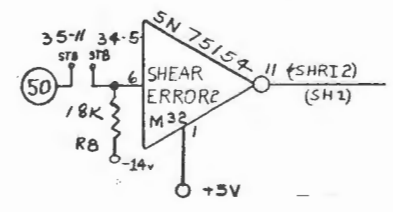
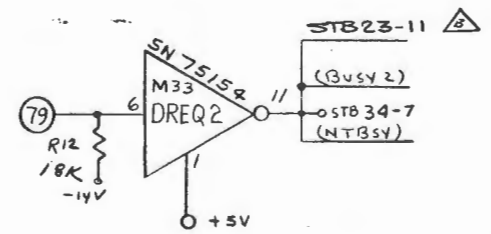
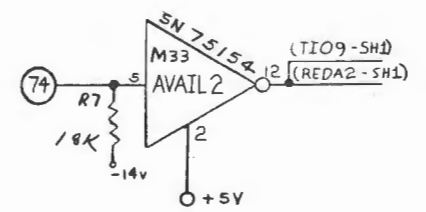
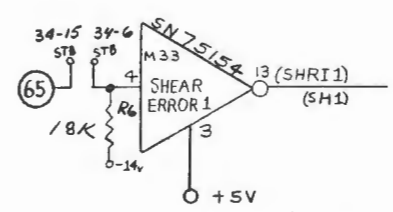
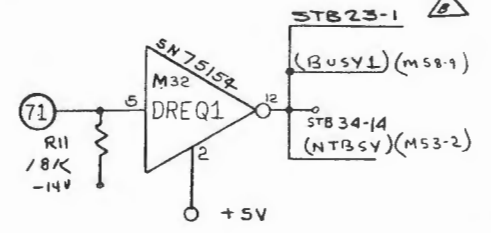
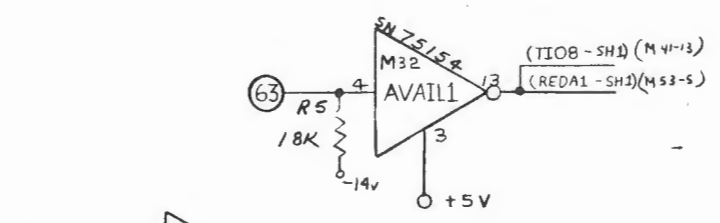
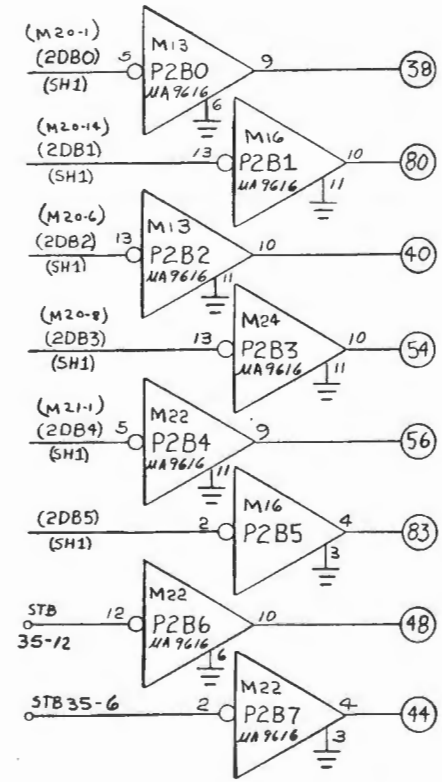
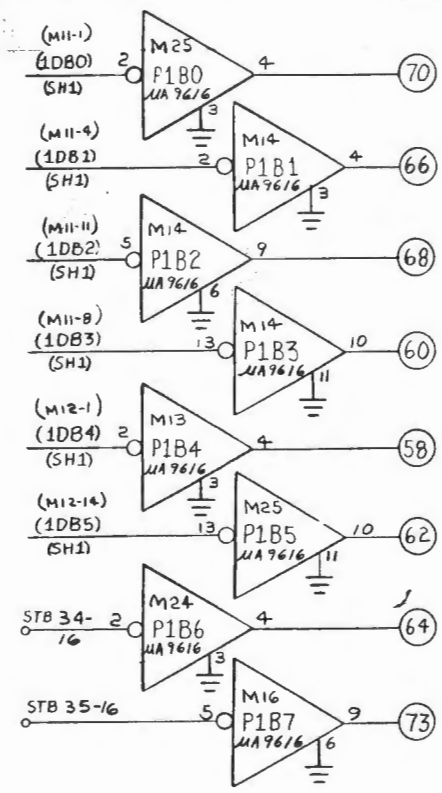


**INCOTERM CORPORATION**  
 Maypole Memorial Drive  
 Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES ON:  
 DECIMALS .005 (3PLCS)  
 FRACTIONS .02 (2PLCS)  
 ANGLES 2°

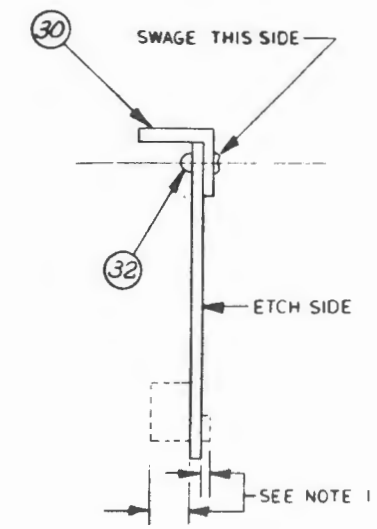
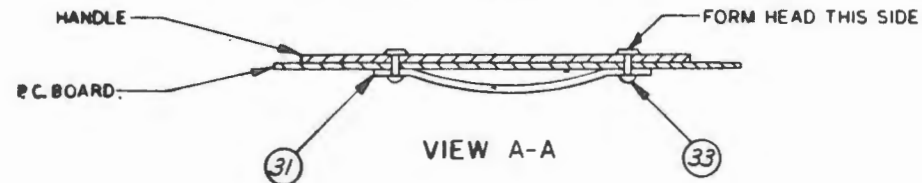
TITLE  
**LOGIC DIAGRAM  
 DUAL (PRINTEC)  
 PRINTER CONTROLLER**

DR R PARKER	DATE	SIZE	P.C.	S.S.	NO.	REV
CHK CR Shippy						
ENG J. [unclear]	12/1/72					
APPD [unclear]	12-172					
NEXT ASSY J1010-34-02		SCALE NONE		SHT 1 OF 2		

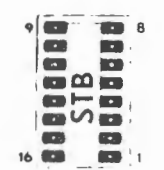
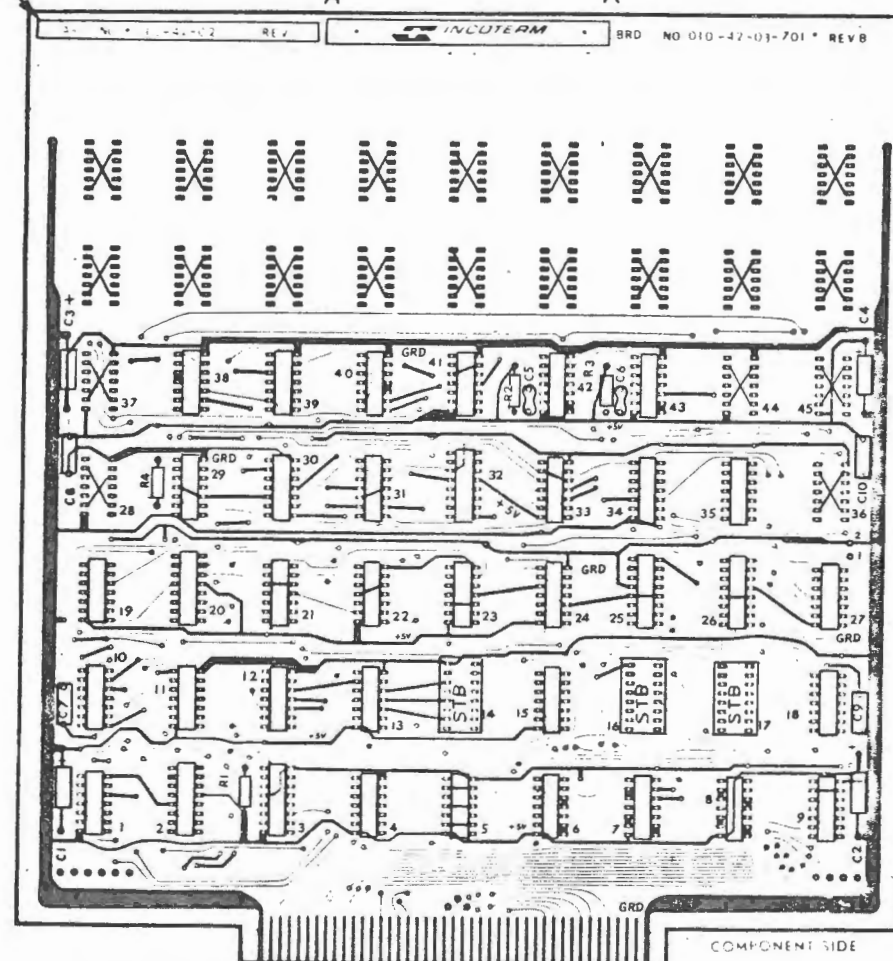


<b>INCOTERM CORPORATION</b> Hersey Memorial Drive Marlborough, Massachusetts 01752		001
LOGIC DIAGRAM DUAL (PRINTC)		PRINTER CONTROLLER
CHECKED DATE	DESIGNED BY DATE	REVISED BY DATE
APP'D DATE	SCALE IN INCHES	SHEET 2 OF 2

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



34 SEE NOTE 2



**PIN NUMBERING AND ORIENTATION**

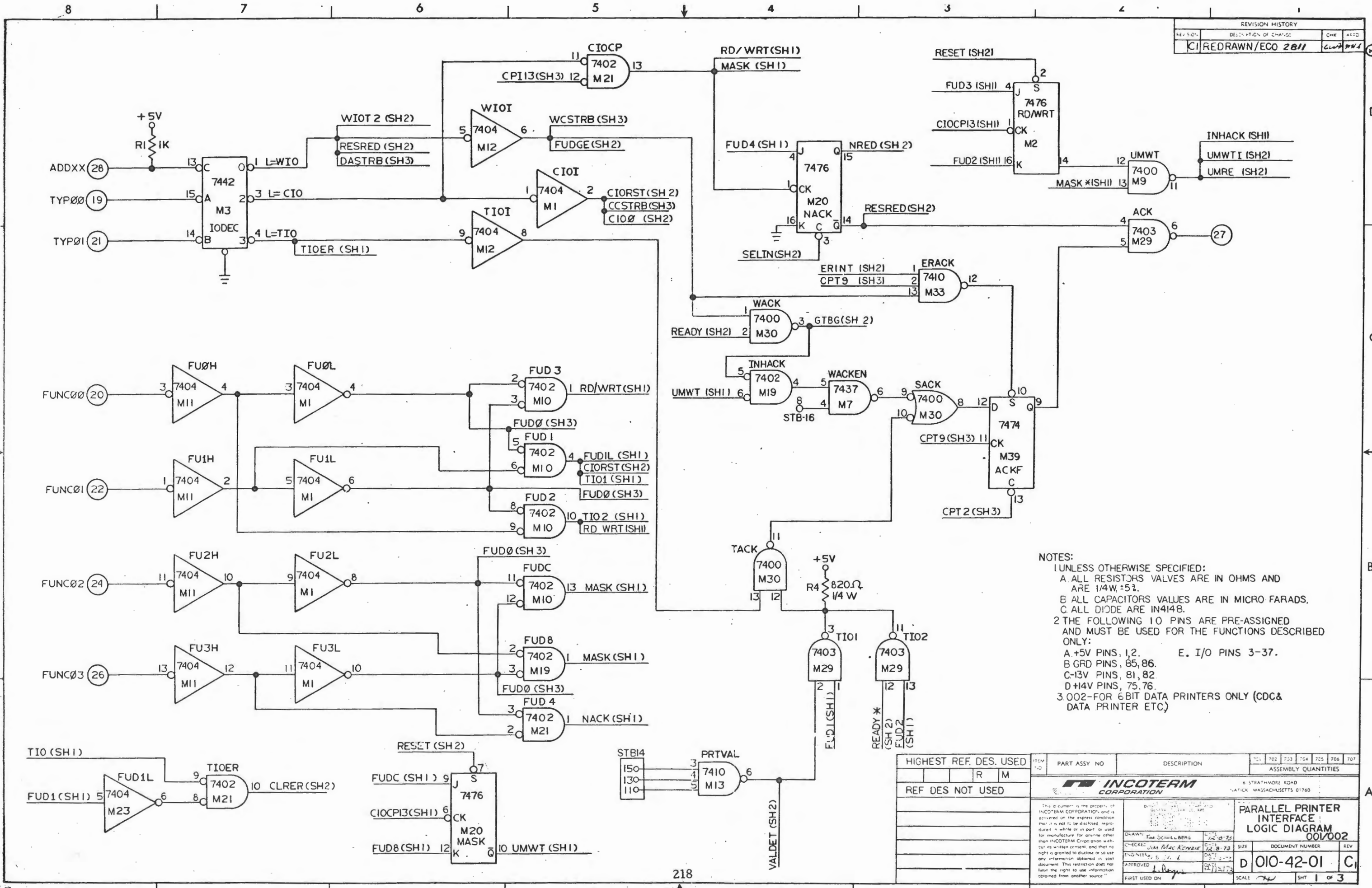
**COMPONENT SIDE**

ASSEMBLE WITH ARTWORK 010-42-03-701 REV B

- NOTE:**
1. HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  2. LOCATE IN APPROXIMATE AREA SHOWN, REVISION LABEL ITEM 34, AND MARK ASSY. NO. 010-42-02-701 AND LATEST ASSY. REVISION.

ITEM NO.	REFERENCE DESIGNATION
28	C5, 6
27	C7, 8, 9, 10
26	C1, 2, 3, 4
25	
24	R1
23	R4
22	R2, 3
21	
20	STB14, 16, 17
19	M42, 43
18	M2, 20, 32
17	M25, 26
16	M22, 39
15	M3
14	M6, 7, 8
13	M27
12	M4, 18
11	M13, 33
10	M1, 5, 11, 12, 23, 34, 35
9	M29
8	M10, 15, 19, 21, 31, 38, 41
7	M9, 24, 30, 40
6	
5	
4	
3	
2	
1	

		6 STRATHMORE ROAD WATUCK, MASSACHUSETTS 01900	
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DRAWN: <i>John G. Lopez</i> CHECKED: <i>John G. Lopez</i> ENGINEER: <i>John G. Lopez</i> APPROVED: FIRST USED ON: 010-10-00	DATE: 8-27-79 DATE: 8-23-79 DATE:	SIZE: DOCUMENT NUMBER: REV:	SCALE: 1:1 SHEET: 3 OF 3
D 010-42-02 B1		3 OF 3	



REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	ASD
CI	REDRAWN/ECO 2811	CLW	RVA

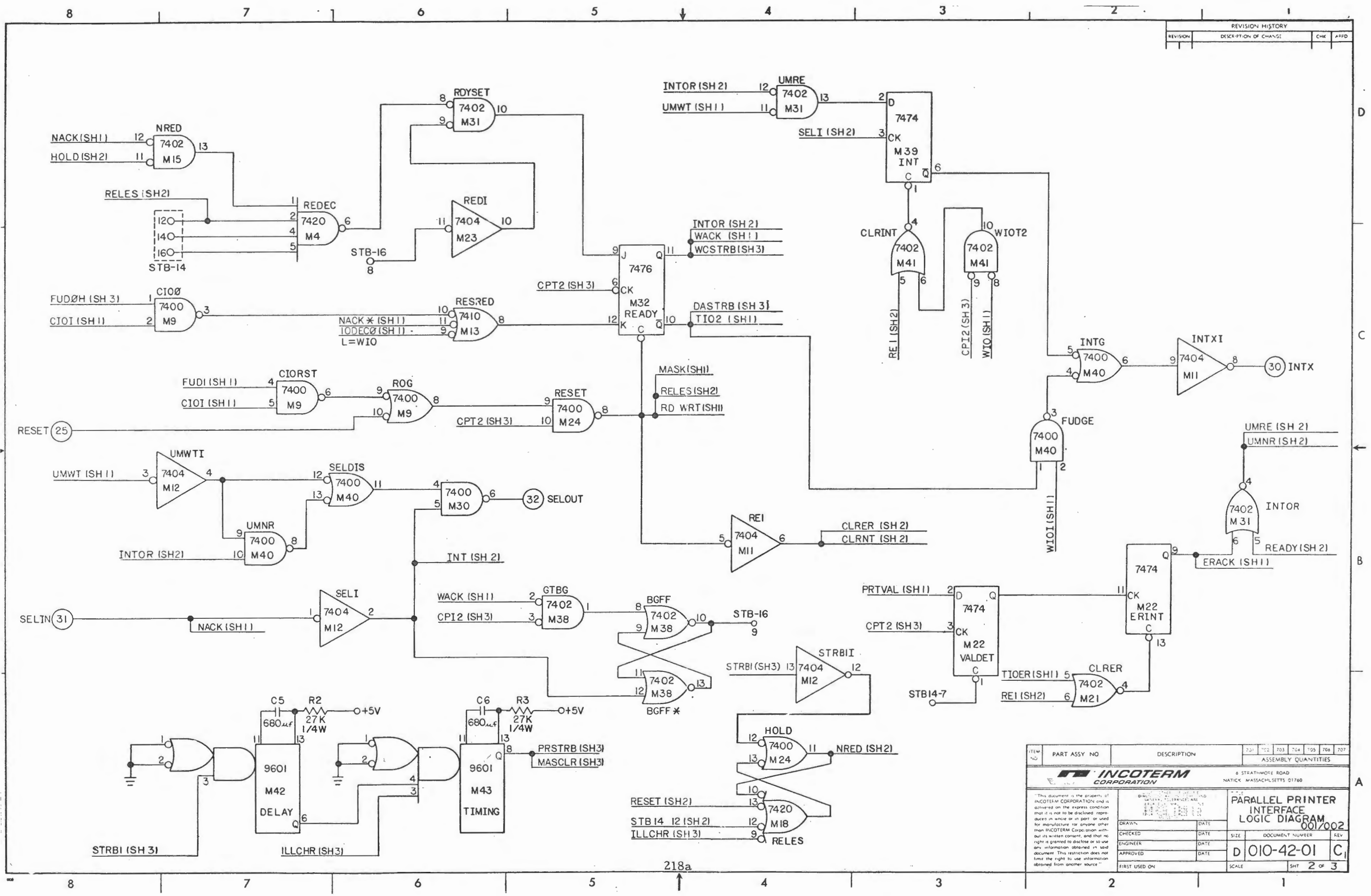
- NOTES:
- UNLESS OTHERWISE SPECIFIED:
    - A. ALL RESISTORS VALUES ARE IN OHMS AND ARE 1/4W, ±5%.
    - B. ALL CAPACITORS VALUES ARE IN MICRO-FARADS.
    - C. ALL DIODE ARE IN4148.
  - THE FOLLOWING 10 PINS ARE PRE-ASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED ONLY:
    - A. +5V PINS, 1,2.
    - B. GRD PINS, 85,86.
    - C. -13V PINS, 81,82
    - D. +14V PINS, 75,76.
    - E. I/O PINS 3-37.
  - 002-FOR 6BIT DATA PRINTERS ONLY (CDC& DATA PRINTER ETC)

HIGHEST REF. DES. USED	ITEM NO.	PART ASSY NO	DESCRIPTION	T01	T02	T03	T04	T05	T06	T07
REF DES NOT USED										

		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760	
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DRAWN: TIM SCHILLBERG CHECKED: JIM MAC KENZIE ENGINEER: J. S. L. APPROVED: J. Beggs FIRST USED ON:	DATE: 12-8-73 DATE: 12-8-73 DATE: 12/12/73	SIZE: D DOCUMENT NUMBER: 010-42-01 SCALE: 1/1	REV: C1 SHT 1 of 3

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

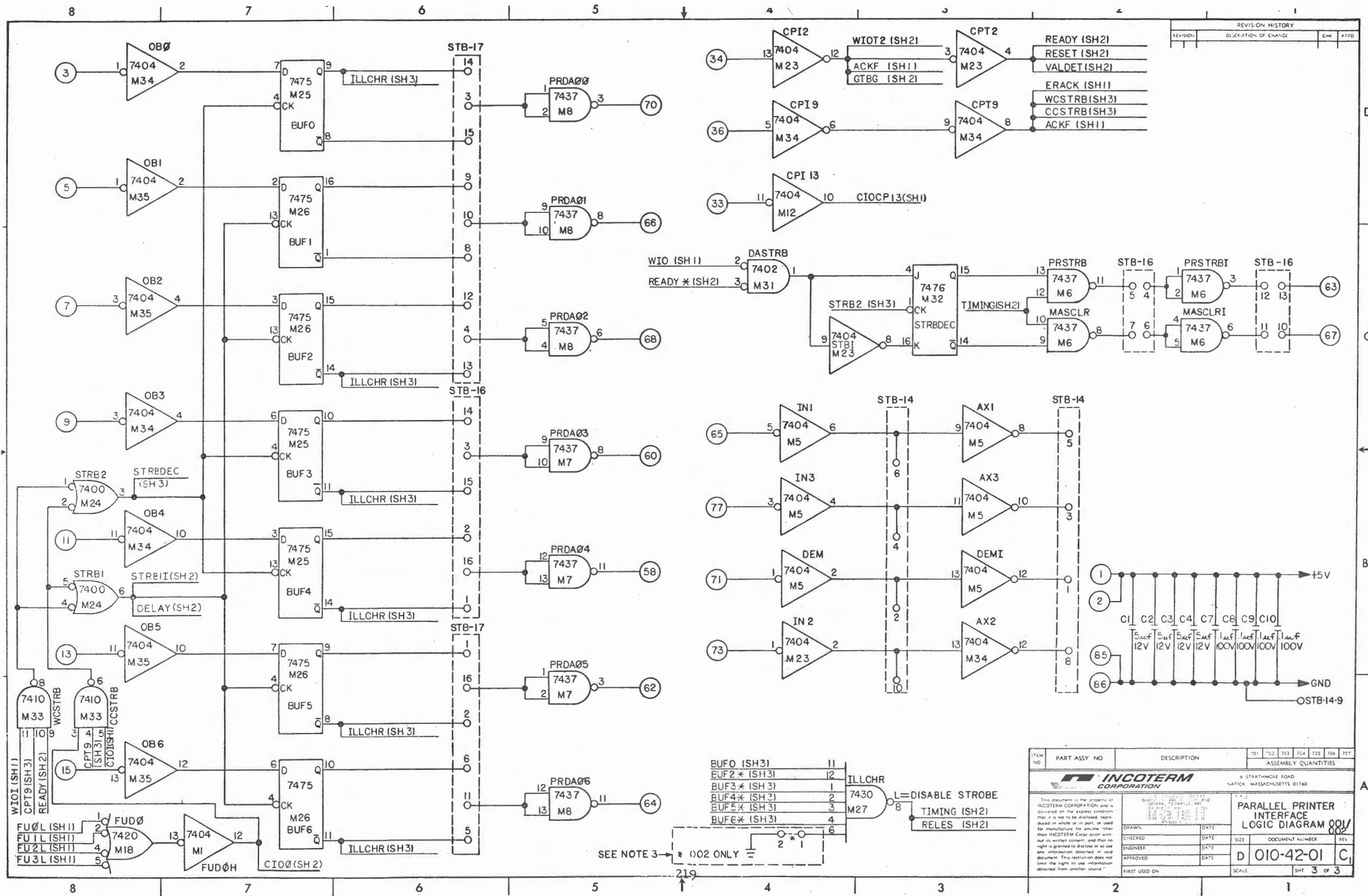


ITEM NO	PART ASSY NO	DESCRIPTION	201	202	203	204	205	206	207
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
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DRAWN	DATE	SIZE	DOCUMENT NUMBER	REV					
ENGINEER	DATE								
APPROVED	DATE								
FIRST USED ON	SCALE	SHT 2 OF 3							

**PARALLEL PRINTER  
INTERFACE  
LOGIC DIAGRAM**

001/002



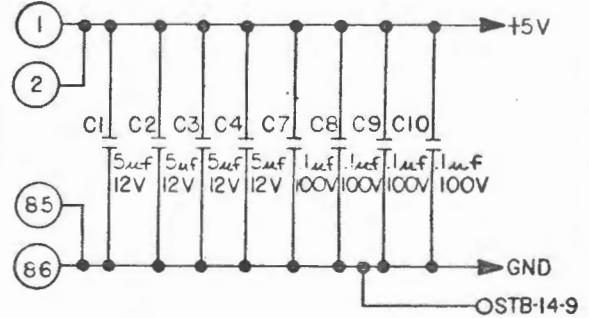


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

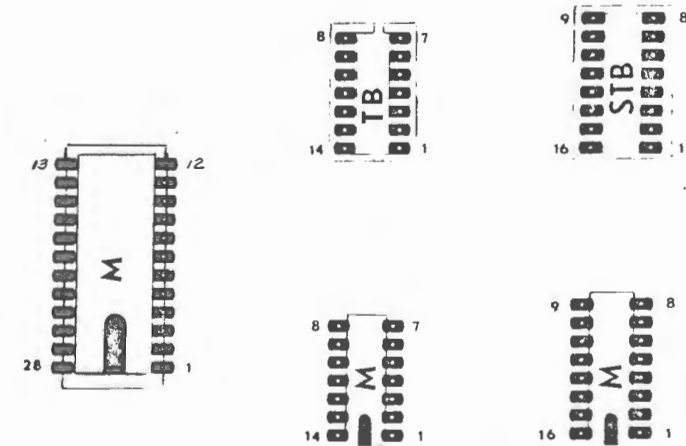
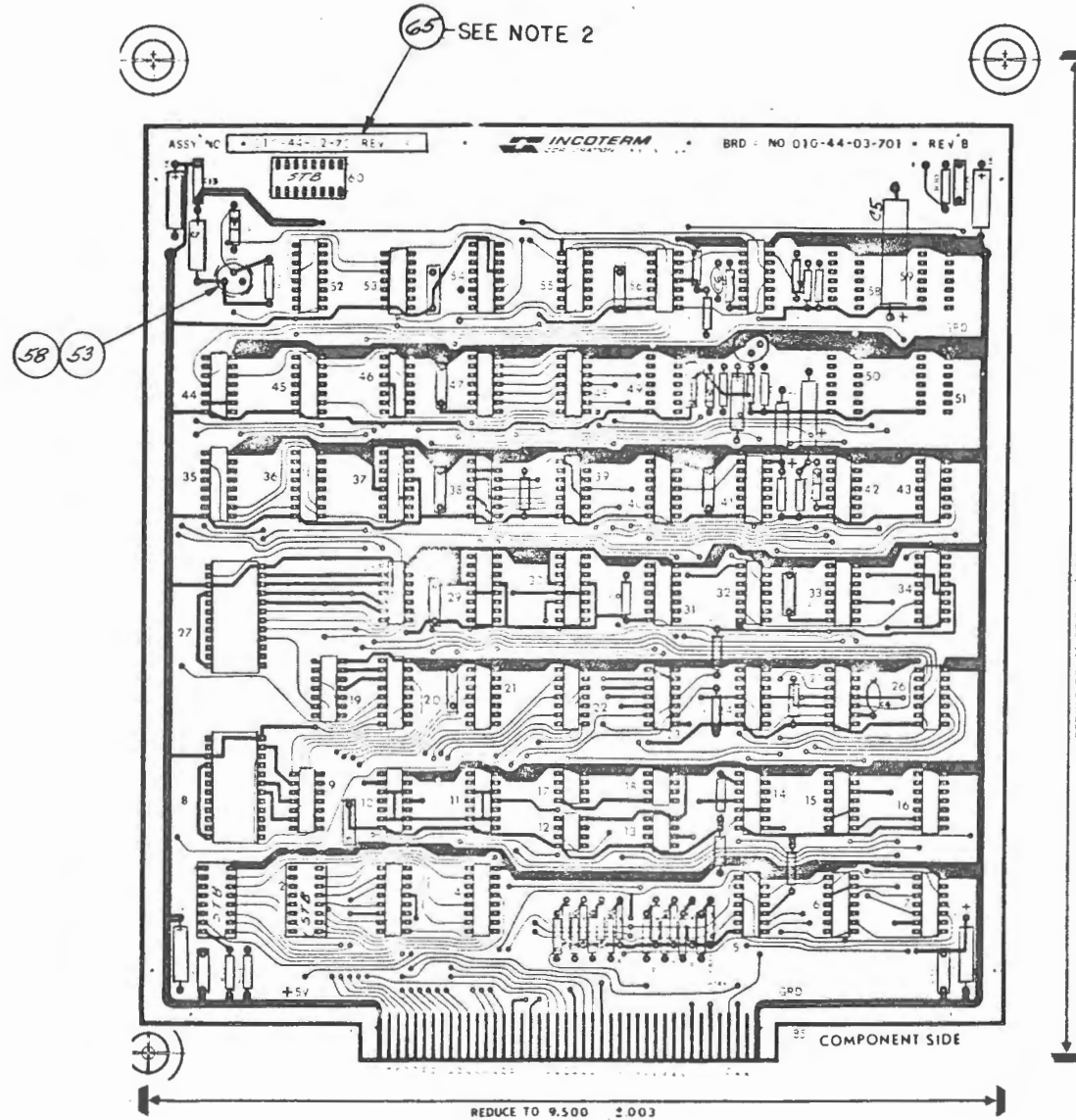
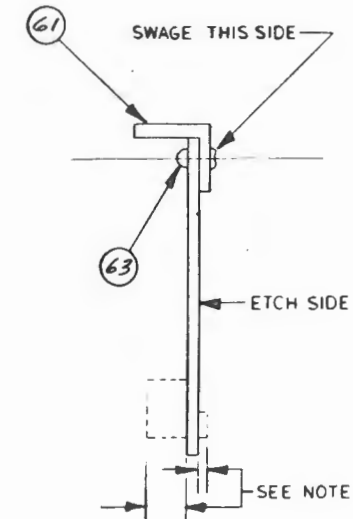
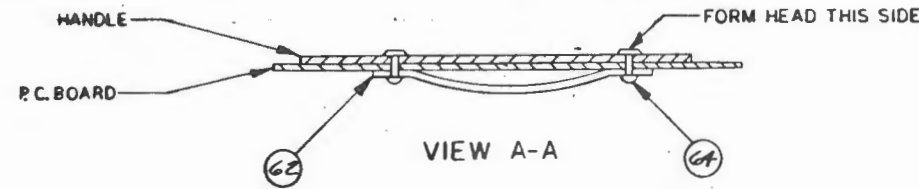
ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
INCOTERM CORPORATION			ASSEMBLY QUANTITIES						
PARALLEL PRINTER INTERFACE LOGIC DIAGRAM 001/002									
DRAWN	DATE	SIZE	DOCUMENT NUMBER		REV				
ENGINEER	DATE		D 010-42-01		C1				
APPROVED	DATE								
FIRST USED ON									

BUFO (SH3)	11	7430 M27	L=DISABLE STROBE
BUF2*(SH3)	12		
BUF3*(SH3)	1		
BUF4*(SH3)	2		
BUF5*(SH3)	3		
BUF6*(SH3)	4		
ILLCHR	8	TIMING (SH2)	
RELES (SH2)	6		

SEE NOTE 3 → \* (002 ONLY)



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
A	RELEASED/RD# 736	K	K



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

56	STB1,2,60
55	—
54	02
53	Q1
52	—
51	VR1
50	CR1-CR11
49	—
48	9,10,11,13,15,17 THRU 25
47	C8,12,C14,C16
46	C7
45	C6
44	C5
43	C4
42	C3
41	C2
40	C1
39	—
38	—
37	R27
36	R26,28
35	R25,24
34	R21
33	R13-20
32	R9
31	R6
30	R5
29	R4
28	R3,25
27	R1,2,7,8,10,11,12,22,29,30
26	—
25	M8,27
24	M42
23	M12,13,17,18
22	M35,36,52
21	M3,4,20
20	M41,57
19	—
18	M34,37,54
17	M29,30
16	M31,43,46
15	M6,26,28,32,55
14	M7,56
13	M23,24
12	M7,14,19,21,22,33,38,45,47
11	M10,11,5
10	M25,39,44
9	M5,16,40,48,53
ITEM NO.	REFERENCE DESIGNATION

**NOTE:**

**1. HEIGHT LIMITATIONS.**

**COMPONENT SIDE OF BOARD .400 MAX.**

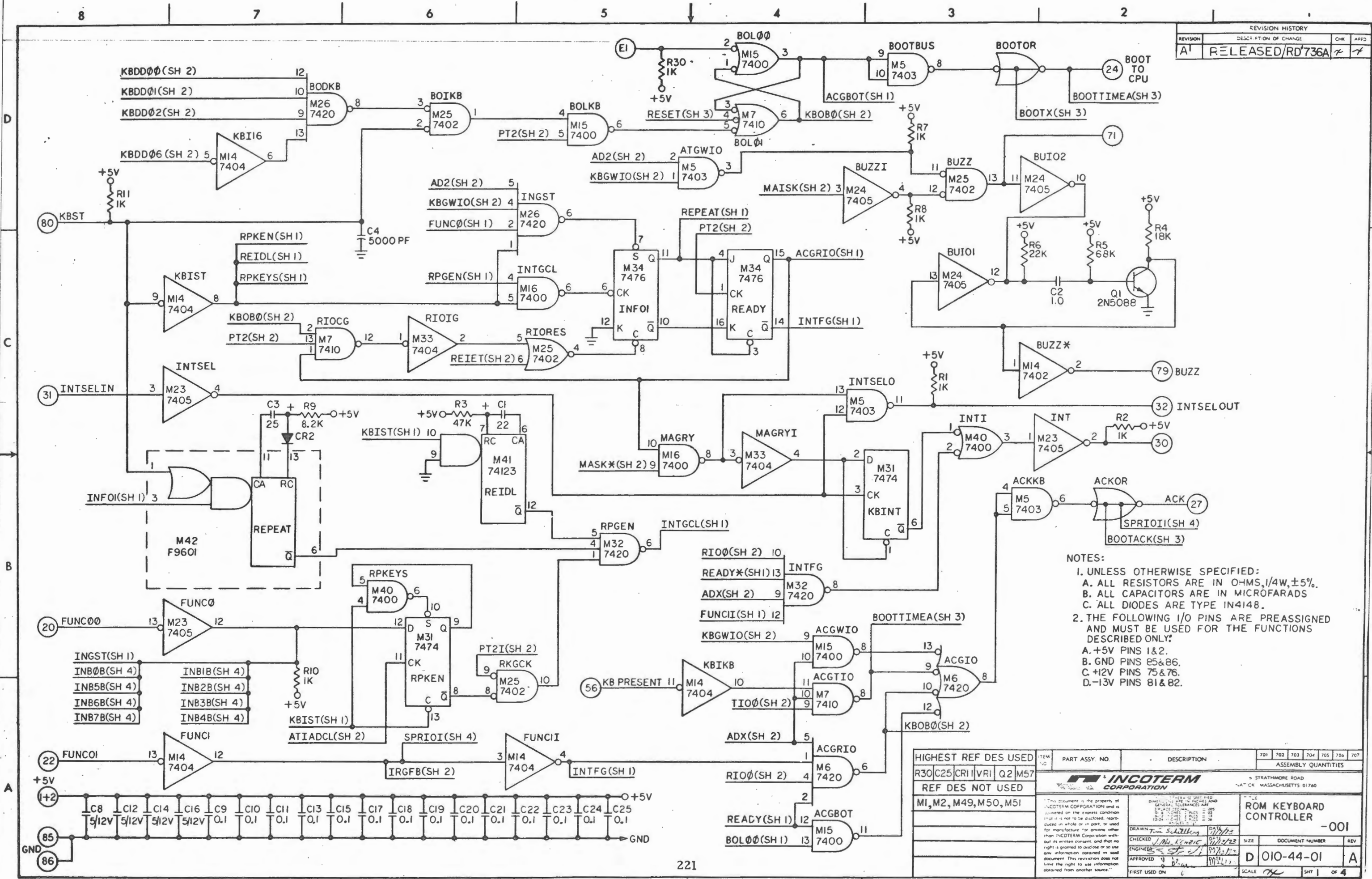
**ETCH SIDE OF BOARD .080 MAX.**

2. LOCATE IN APPROXIMATE AREA AS SHOWN, REV LABEL, ITEM 65. AND MARK 'ASSY. NO. 010-44-02-701 AND LATEST ASSY REV.

ASSEMBLE WITH ARTWORK 010-44-03-701B

INCOTERM CORPORATION		PC BRD ASSY ROM KEYBOARD 701B	
DATE	5/20/77	SIZE	DOCUMENT NUMBER
CHECKED	<i>R. B. Lopez</i>	APPROVED	D 010-44-02 A
ENG. REPR	<i>R. B. Lopez</i>	FIRST USE ON	1/1

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
A1	RELEASED/RD736A	✓	✓



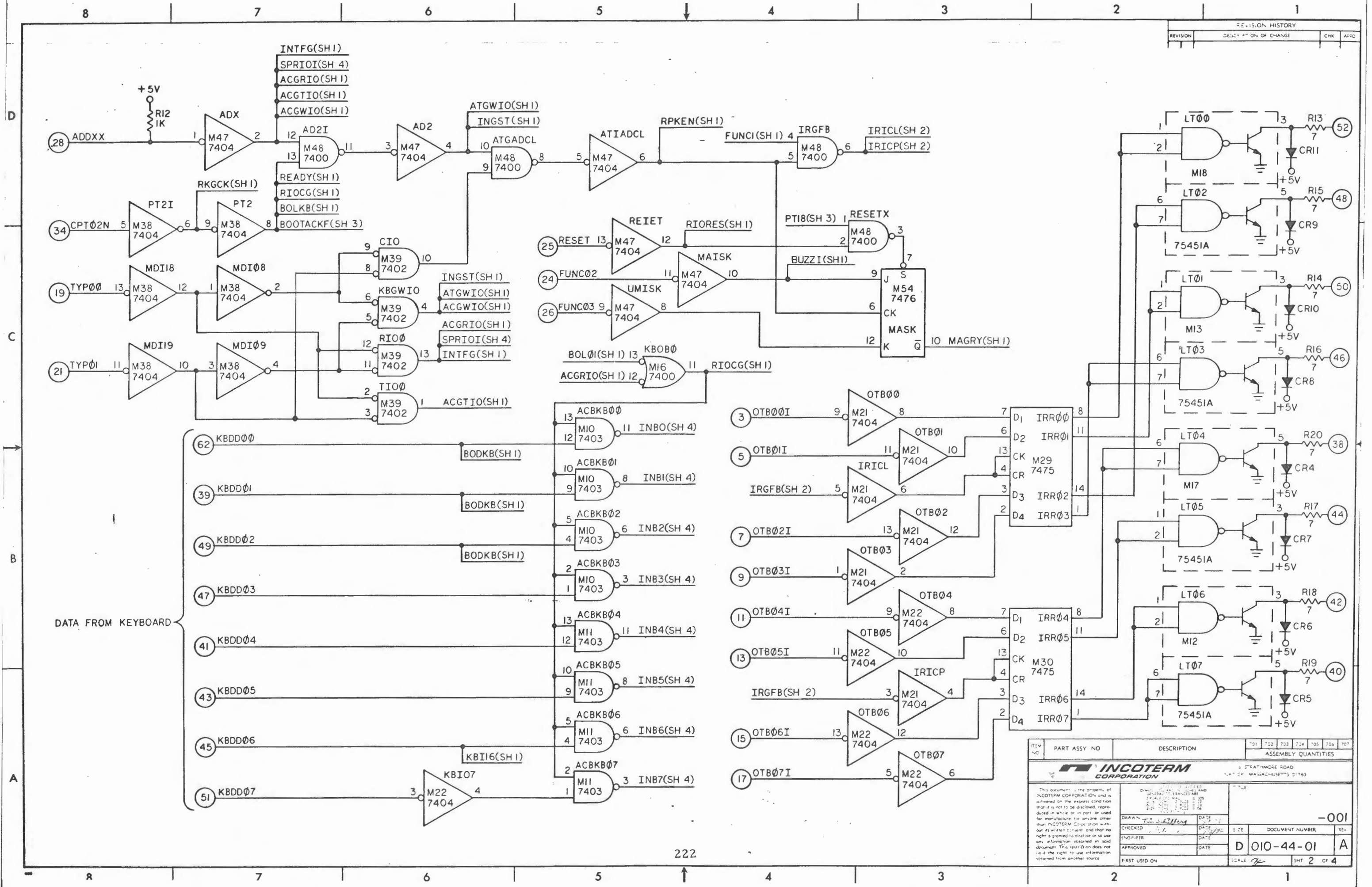
- NOTES:
- UNLESS OTHERWISE SPECIFIED:
    - ALL RESISTORS ARE IN OHMS, 1/4W, ±5%.
    - ALL CAPACITORS ARE IN MICROFARADS
    - ALL DIODES ARE TYPE IN4148.
  - THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED ONLY:
    - +5V PINS 1 & 2.
    - GND PINS 85 & 86.
    - +12V PINS 75 & 76.
    - 13V PINS 81 & 82.

HIGHEST REF DES USED	ITEM NO.	PART ASSY. NO.	DESCRIPTION	701	702	703	704	705	706	707
R30, C25, CRI, VRI, Q2, M57										
REF DES NOT USED										
M1, M2, M49, M50, M51										

		STRATHMORE ROAD MASSACHUSETTS 01760	
ROM KEYBOARD CONTROLLER -001			
DRAWN: J. Schiller DATE: 11/17/73	CHECKED: J. Kenic DATE: 11/17/73	SIZE:	DOCUMENT NUMBER:
ENGINEER:	DATE:	SCALE:	REV:
APPROVED:	DATE:	D 010-44-01	A
FIRST USED ON:	SCALE:	SHEET:	OF 4

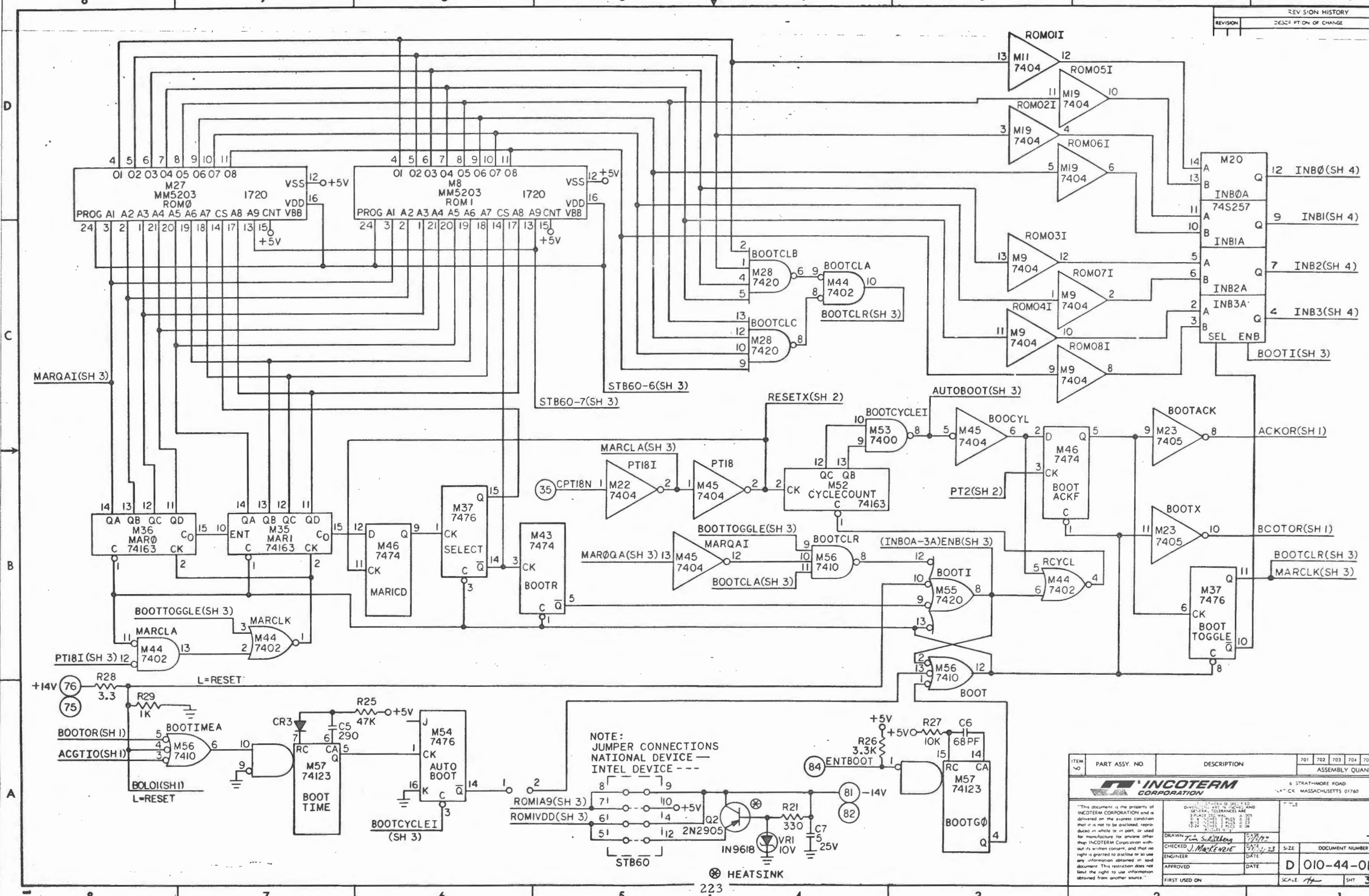
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



DATA FROM KEYBOARD

ITEM NO.	PART ASSY NO.	DESCRIPTION	ASSEMBLY QUANTITIES							
			701	702	703	704	705	706	707	
 INCOTERM CORPORATION 5 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740										
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DRAWN: <i>Tom Sullivan</i>		DATE: <i>11/1/77</i>								
CHECKED: <i>[Signature]</i>		DATE: <i>11/1/77</i>	SIZE: <i> </i>	DOCUMENT NUMBER: <i>D 010-44-01</i>		REV: <i>A</i>				
ENGINEER: <i>[Signature]</i>		DATE: <i> </i>								
APPROVED: <i>[Signature]</i>		DATE: <i> </i>								
FIRST USED ON: <i> </i>		SCALE: <i> </i>								

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



NOTE:  
 JUMPER CONNECTIONS  
 NATIONAL DEVICE ---  
 INTEL DEVICE ---

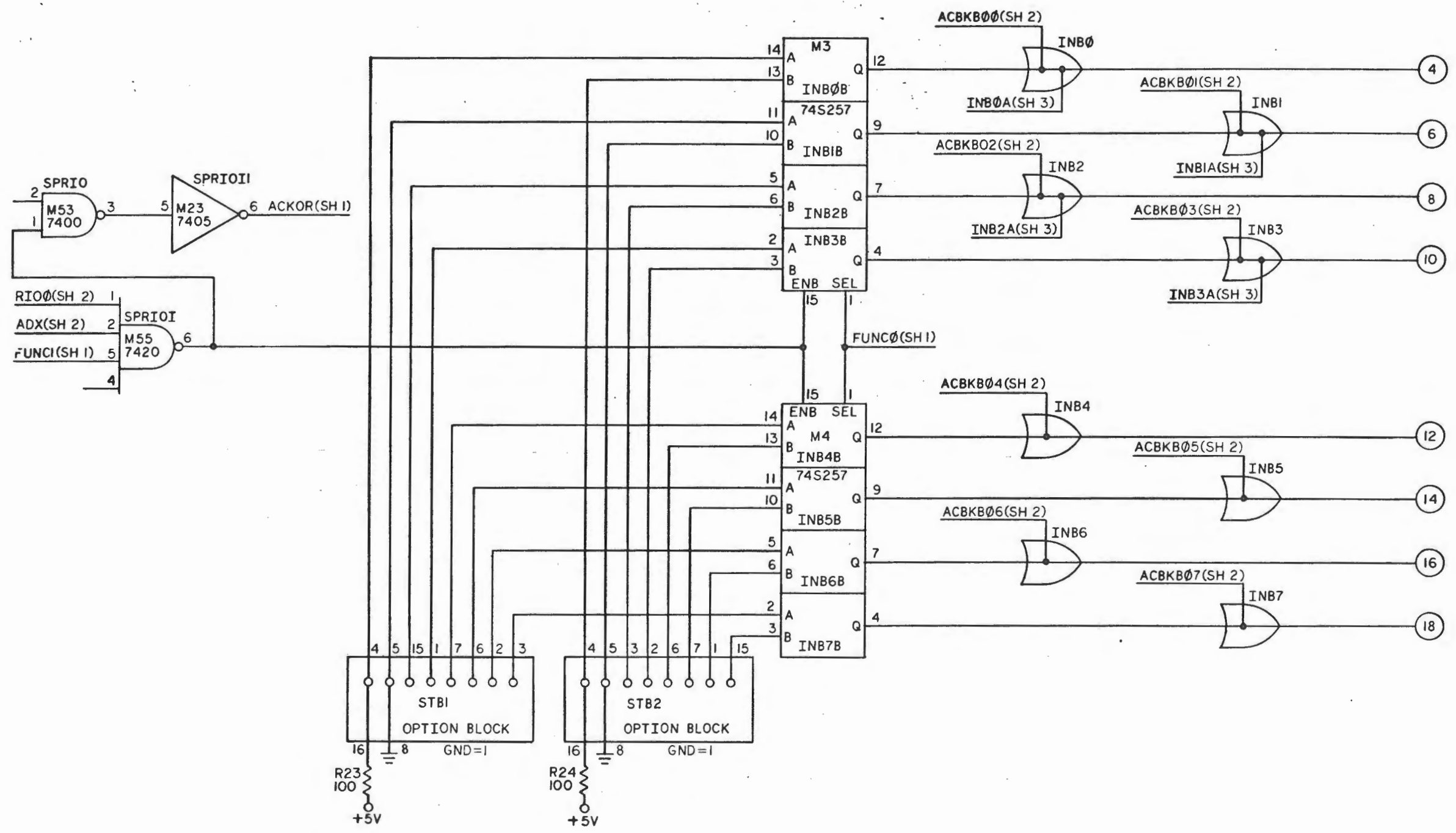
ITEM NO	PART ASSY. NO.	DESCRIPTION	701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b>									
5 STRATHMORE ROAD LITTLE ROCK, MASSACHUSETTS 01760									
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DRAWN	J. Schilling	DATE	5/7/72	SIZE		DOCUMENT NUMBER		REV	
CHECKED	J. McKenzie	DATE	5/12/72						
APPROVED		DATE				D 010-44-01		A	
FIRST USED ON		SCALE	As	SHT	3	OF 4			

-001

HEATSINK

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHE	AFD

D  
C  
B  
A



ITEM NO	PART/ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NATTICK, MASSACHUSETTS 01760						
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DRAWN <i>J. Schlegel</i>		DATE	SIZE	DOCUMENT NUMBER	REV				
CHECKED		DATE	D 010-44-01		A				
ENGINEER		DATE							
APPROVED		DATE							
FIRST USED ON		SCALE	SHT 4 OF 4						

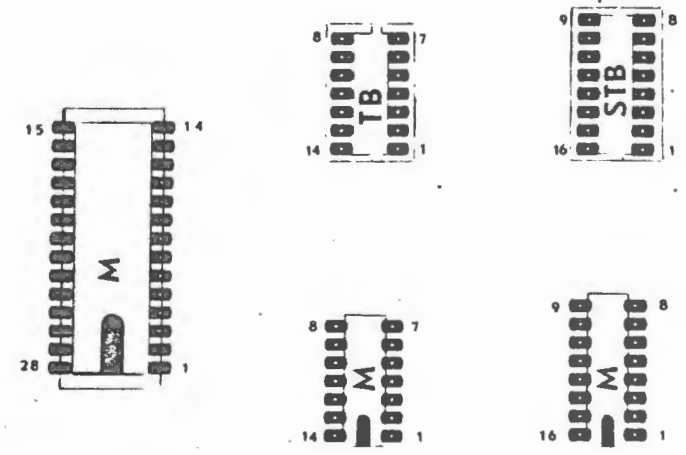
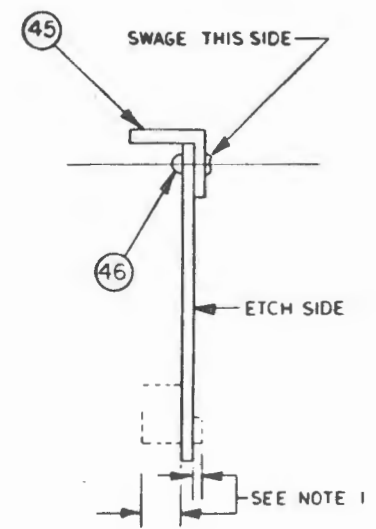
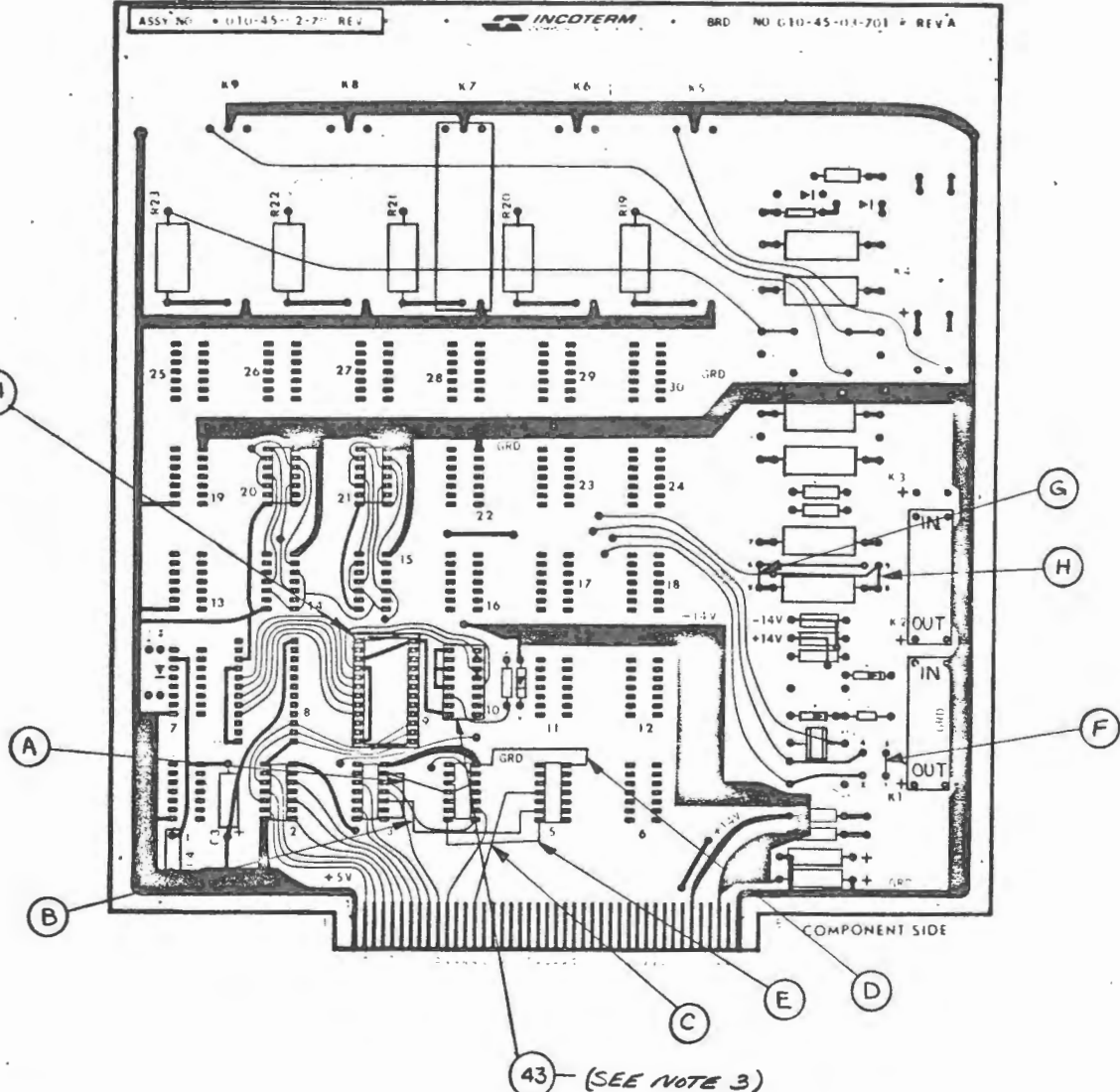
ADD WIRE ITEM 41 FROM	
A	M3-6 TO M3-1
B	M3-3 TO M5-13
C	M5-11 TO PIN 27
D	M4-7 TO M5-7
E	M4-14 TO M5-14
F	EYELET 1 TO EYELET 3
G	EYELET 5 TO EYELET 6
H	EYELET 8 TO EYELET 9

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHEK	APPR
A	RELEASED / RD # 697A		
B	REVISED / ECO 2634		
C	REVISED / ECO 2694		

ITEM NO.	REFERENCE DESIGNATION
39	SVP2
38	
37	
36	K7
35	K1 2
34	
33	C4
32	C3
31	C1 2
30	
29	
28	CR5
27	CR1 2
26	
25	
24	
23	R17
22	R6 8 16
21	R4 10 12
20	R3 9 11 19-23
19	R2 13
18	R1 5 7 14 15
17	
16	
15	
14	
13	M9
12	M2
11	M20, 21, 5
10	M4
9	M3
8	
7	
6	
5	
4	
3	
2	
1	

47 SEE NOTE 2

44



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

**NOTE:**

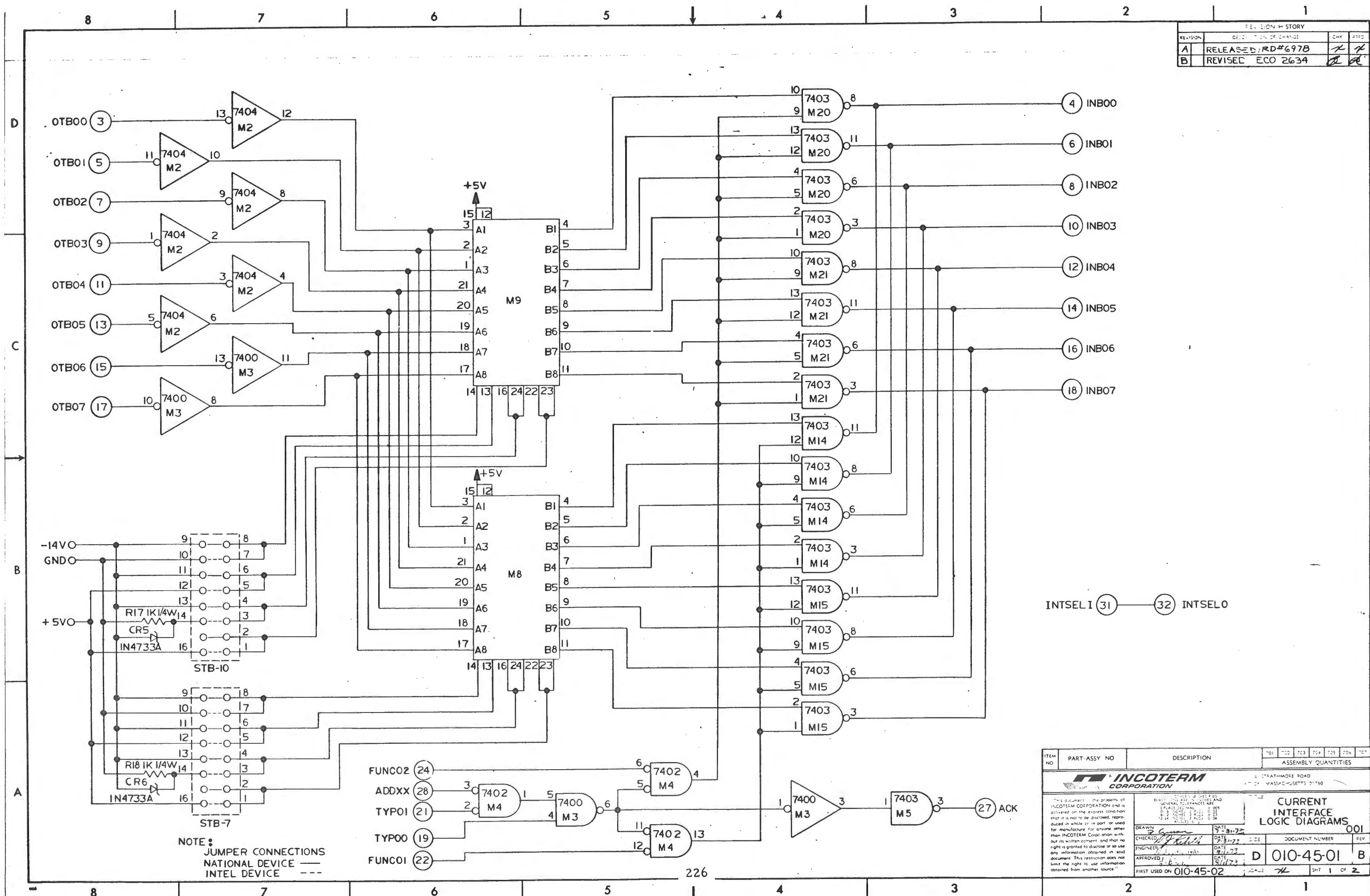
- HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .700 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
- LOCATE IN APPROXIMATE AREA SHOWN, REV LABEL, ITEM 47, AND MARK ASS'Y NO. 010-45-02-701 AND LATEST ASS'Y REV
- IF A NATIONAL DEVICE (ITEM 13) IS USED HEADER (ITEM 48) MUST BE WIRED AS AN 001-11-01-937 IF A INTEL DEVICE (ITEM 13) IS USED HEADER (ITEM 49) MUST BE WIRED AS AN 001-11-01-938.

ALL INTEL DEVICES ARE SWAGED BY THE LETTER "A" ON THE IDENTIFICATION NUMBER (701A, 702A---XXXA).

ASSEMBLE WITH ARTWORK 010-45-03-701 REV A

<b>INCOTERM CORPORATION</b>		8 STRATHMORE ROAD NATICK, MASSACHUSETTS 01908	
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DRAWN	7/13/73	DATE	7/13/73
CHECKED	7/13/73	DATE	7/13/73
ENGINEER	7/13/73	DATE	7/13/73
APPROVED	7/13/73	DATE	7/13/73
FIRST USED ON	010-10-00-001	SCALE	1/1 SHT 1 OF 2
P. C. BOARD ASS'Y CURRENT INTERFACE		DOCUMENT NUMBER	REV
		D 010-45-02	C

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
A	RELEASED: RD#697B	X	X
B	REVISED ECO 2634	X	X



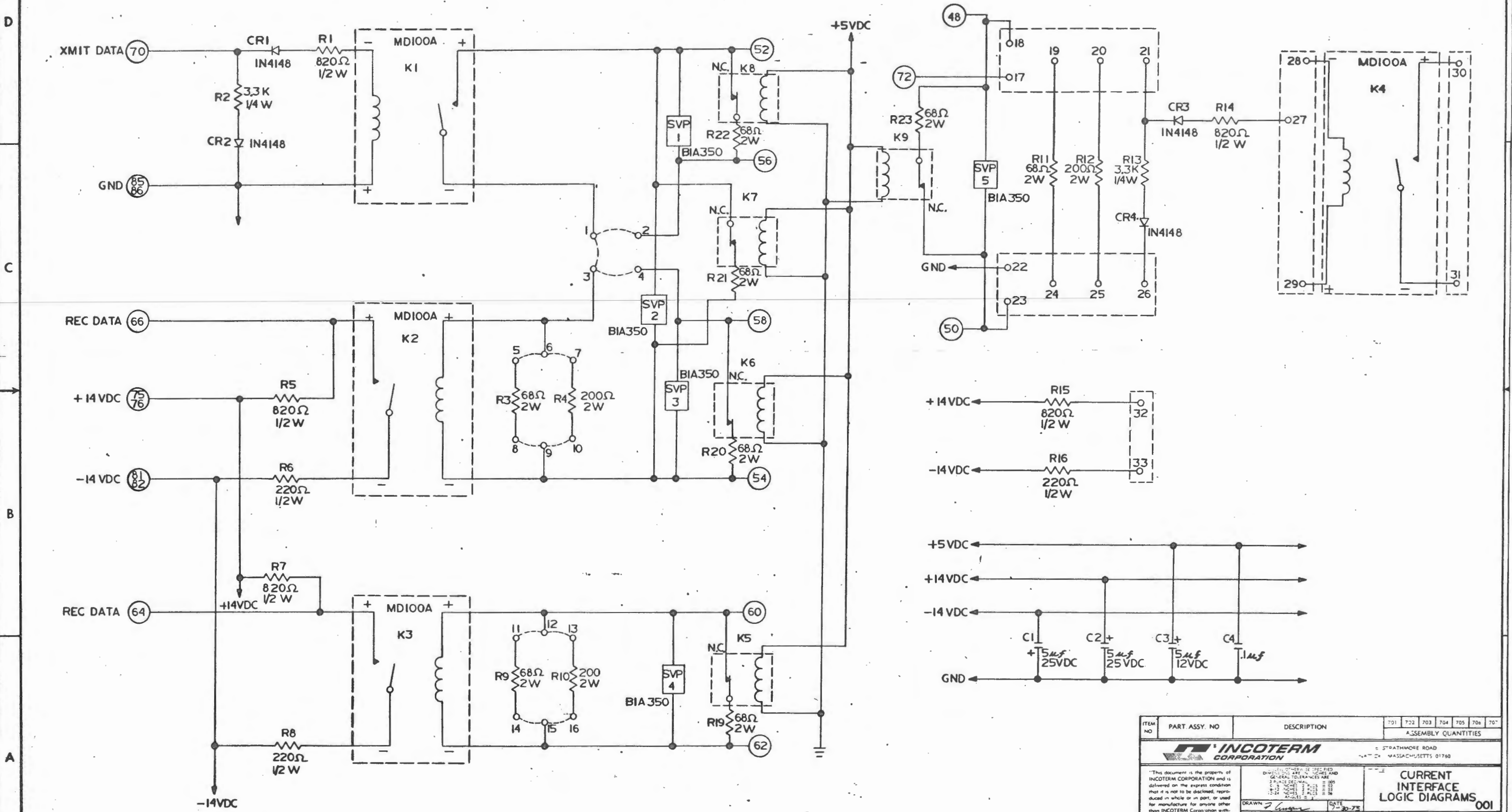
NOTE:  
 JUMPER CONNECTIONS  
 NATIONAL DEVICE ———  
 INTEL DEVICE - - -

INTSELI (31) — (32) INTSELO

ITEM NO.	PART ASSY NO.	DESCRIPTION	ASSEMBLY QUANTITIES						
			701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b>									
100 WASHINGTON ROAD MILFORD, MASSACHUSETTS 01750									
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DRAWN	DATE	7-31-72	DOCUMENT NUMBER		001				
CHECKED	DATE	9-3-72	DOCUMENT NUMBER		REV				
ENGINEER	DATE	8-1-72	DOCUMENT NUMBER		REV				
APPROVED	DATE	8/1/72	DOCUMENT NUMBER		REV				
FIRST USED ON 010-45-02			D 010-45-01		B				
			SHT 1 OF 2						

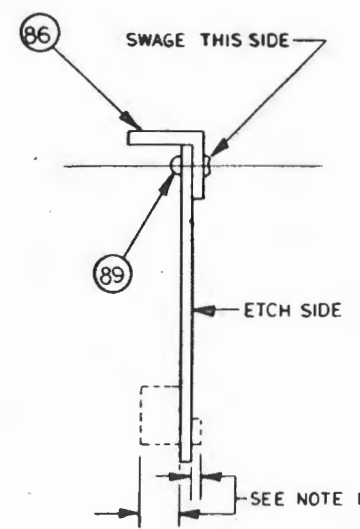
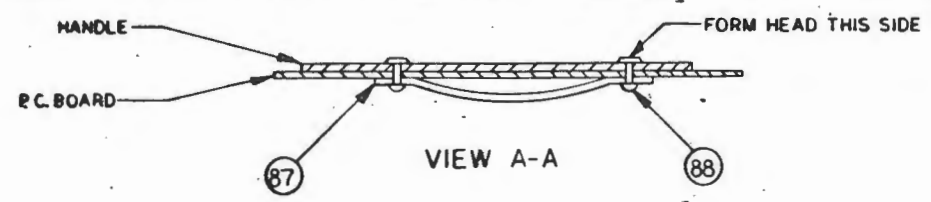


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



227

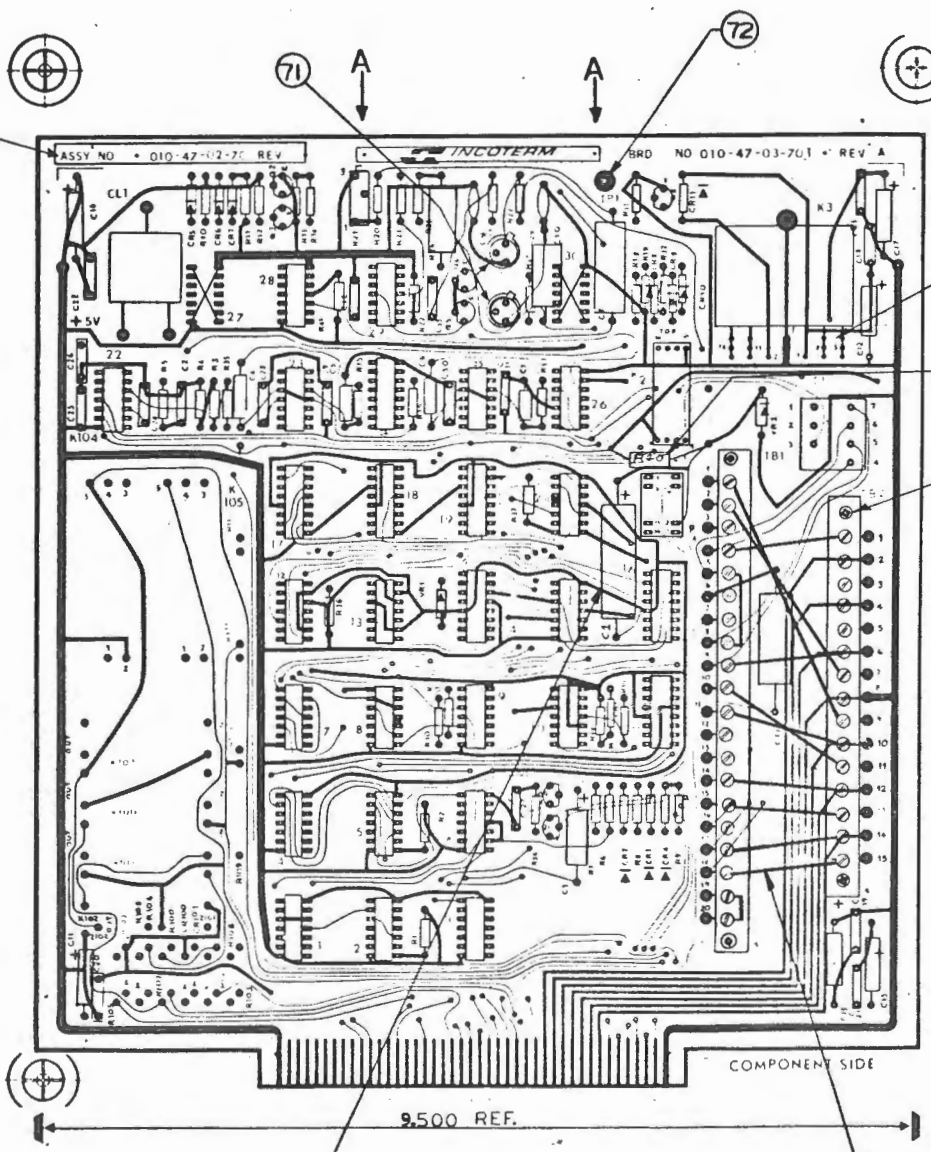
ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			5 STRATHMORE ROAD WILMINGTON, MASSACHUSETTS 01790						
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FIRST USED ON			SCALE: <i>TL</i>		SHT 2 OF 2				



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
A	MC JE RESISTOR (R40) DELETE INCORRECT PIN MARKINGS ON K3		
B	RELEASED/RD# 738		
C	REVISED/ECO 2617		

ITEM NO.	REFERENCE DESIGNATION
70	M22
69	M23,25,29
68	M6
67	M10
66	M24
65	M12,13
64	M11,14,16-19
63	M9,26
62	M4,28
61	M3
60	M1,7,15
59	M8
58	M2,5,20
57	
56	C2,C18-C33
55	C12,13
54	C14-17
53	C34
52	
51	T1
50	CL1
49	TB2
48	TB1
47	K3
46	K2
45	K1
44	
43	
42	Q7
41	Q6
40	Q4
39	Q1,2,3,5,8,9
38	VR1
37	CR1-I1
36	VR2
35	
34	
33	CI
32	C9,10
31	C8
30	C5,7
29	C4,6
28	C3
27	C24
26	
25	
24	R40
23	R35
22	R33
21	R32
20	R31
19	R27,28
18	R26,29
17	R24,25,30
16	R23
15	R22
14	R21
13	R19,34,38
12	R18
11	R14,15,16,17
10	R7
9	R39
8	R3,4,5
7	R1,2,6,8-13,20,36,37,41

90  
SEE NOTE 2

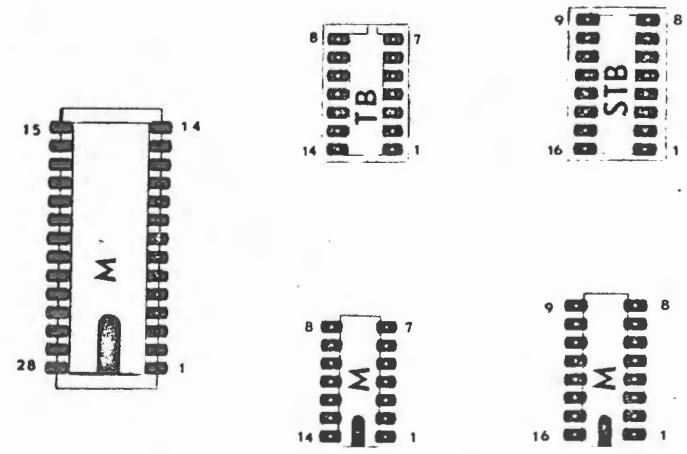


DELETE NO 4,6,7,9,  
10,12,13,15  
RELOCATE R40  
AS SHOWN

11,000 REF.

9,500 REF.

98 12 PLACES



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

**NOTE:**

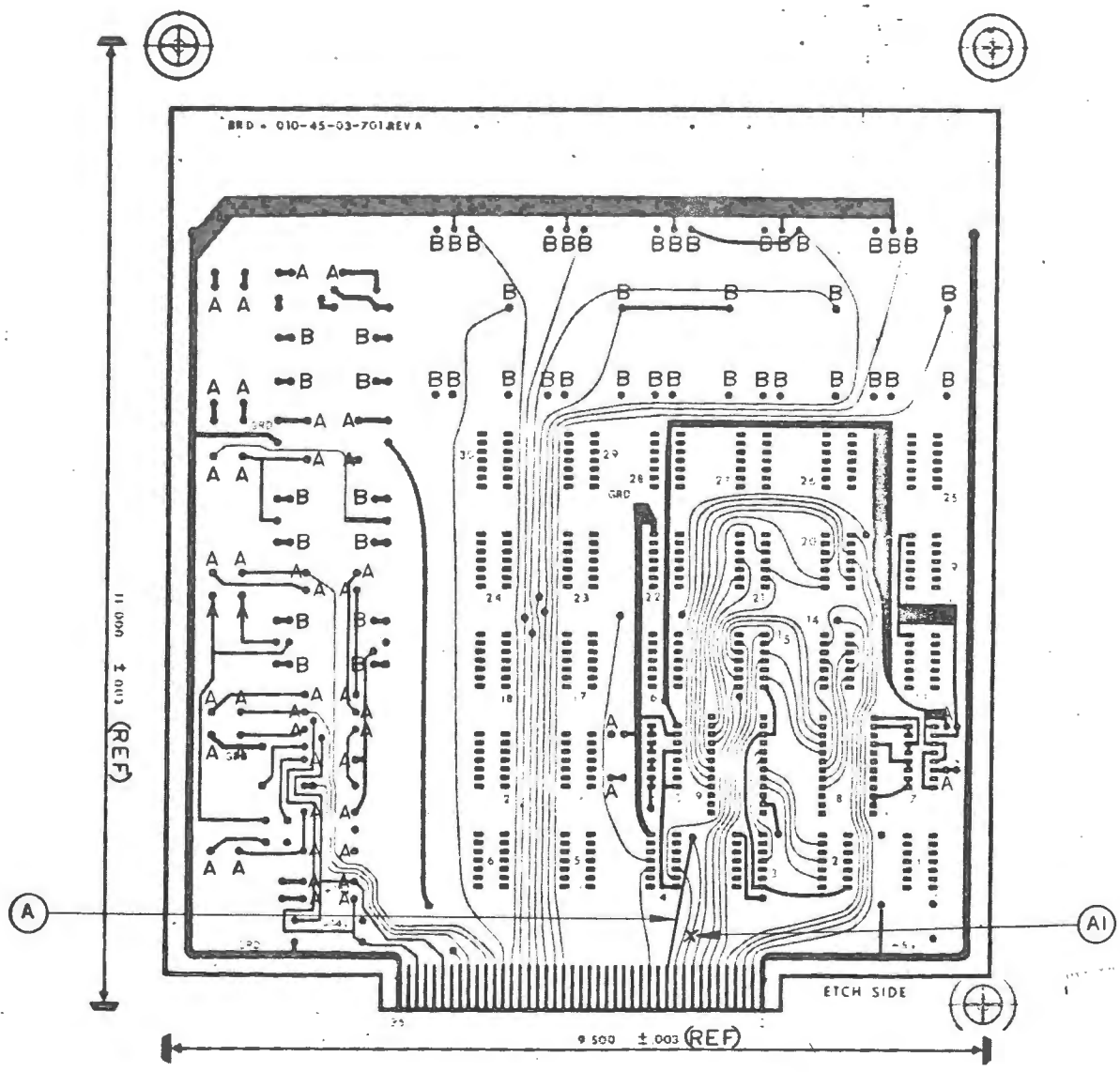
1. HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
2. LOCATE IN APPROXIMATE AREA SHOWN, REV STATUS LABEL, ITEM NO.90 AND MARK ASSY. NO. 010-47-02-701 AND LATEST ASSY. REV.

ASSEMBLE WITH ARTWORK 010-47-03-701 REV A

		6 STATHWORE ROAD NATICK, MASSACHUSETTS 01760	
This document is the property of INCOTERM CORPORATION and is delivered on the express condition that it is not to be disclosed, reproduced in whole or in part or used for manufacture for anyone other than INCOTERM Corporation without its written consent.		P.C. BOARD ARTWORK RADIO INTERFACE 701	
DRAWN: <i>Rose</i> CHECKED: <i>...</i> ENGR: <i>...</i> APPROVED: <i>...</i> DATE: 11/11/73	DATE: 8/15/73 DATE: 8/17/73 DATE: 11/11/73	SIZE: D DOCUMENT NUMBER: 010-47-02 REV: C	SCALE: 1/1 SHEET: 1 OF 2

CUT ETCH FROM
AI PIN 20 TO EYELET

ADD WIRE (ITEM 41) FROM
A PIN 24 TO EYELET -

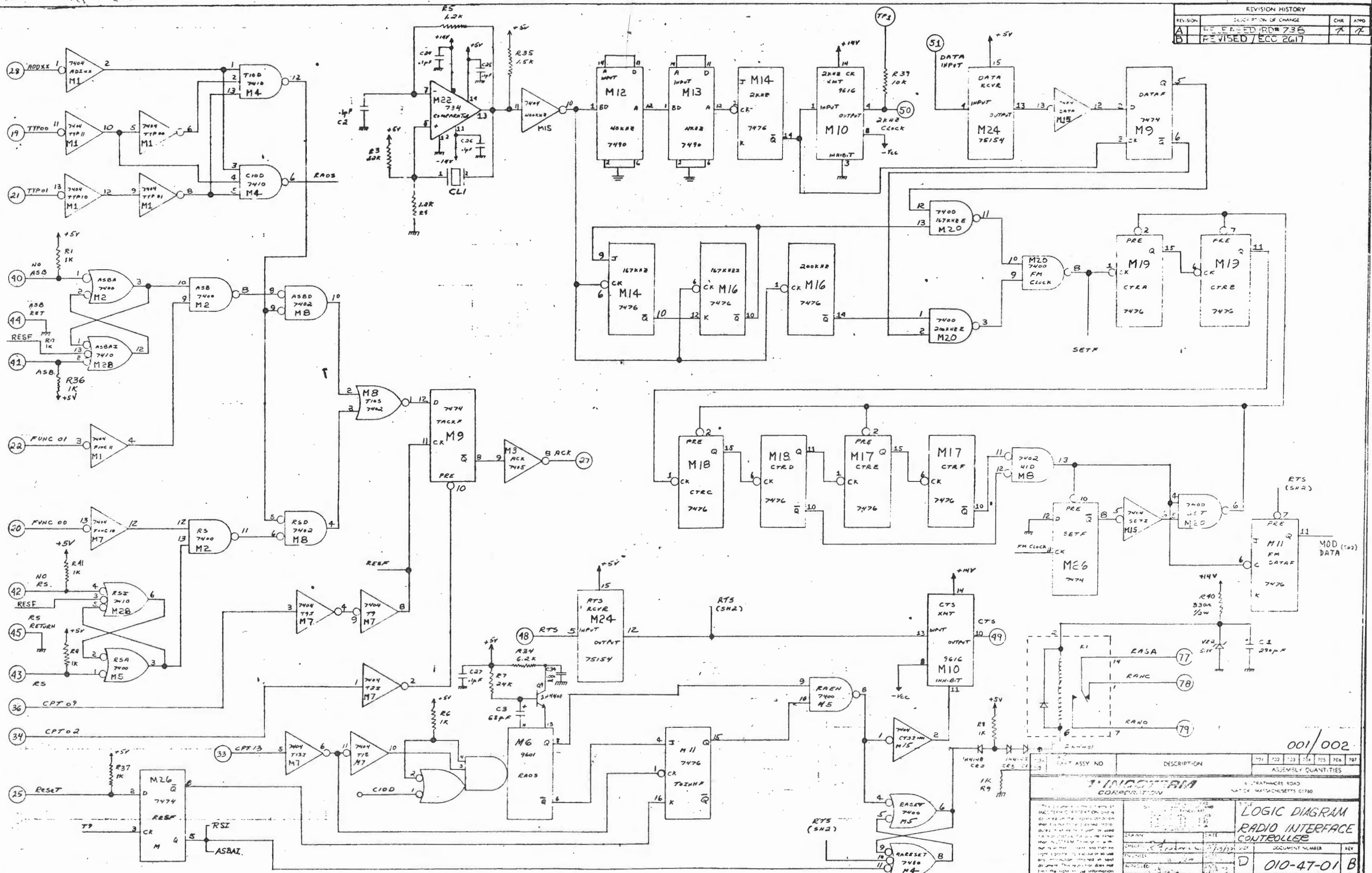


ETCH SIDE

ASSEMBLE WITH ARTWORK 010-45-03-701 REV. A

		<b>P.C. BOARD ASSY. CURRENT INTERFACE CONTROLLER - 701</b>	
<small>DESIGNED BY</small> <small>DATE</small> <small>APPROVED BY</small> <small>DATE</small>	<small>CHECKED BY</small> <small>DATE</small> <small>APPROVED BY</small> <small>DATE</small>	<small>REV.</small> <small>DESCRIPTION</small> <small>DATE</small>	<b>D 010-45-02</b>
<small>EST. USED ON 010-45-02-701</small>		<small>SCALE</small>	<b>2 2</b>

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
A	RELEASED / RD# 735	T	T
B	REVISED / ECC 2617	T	T

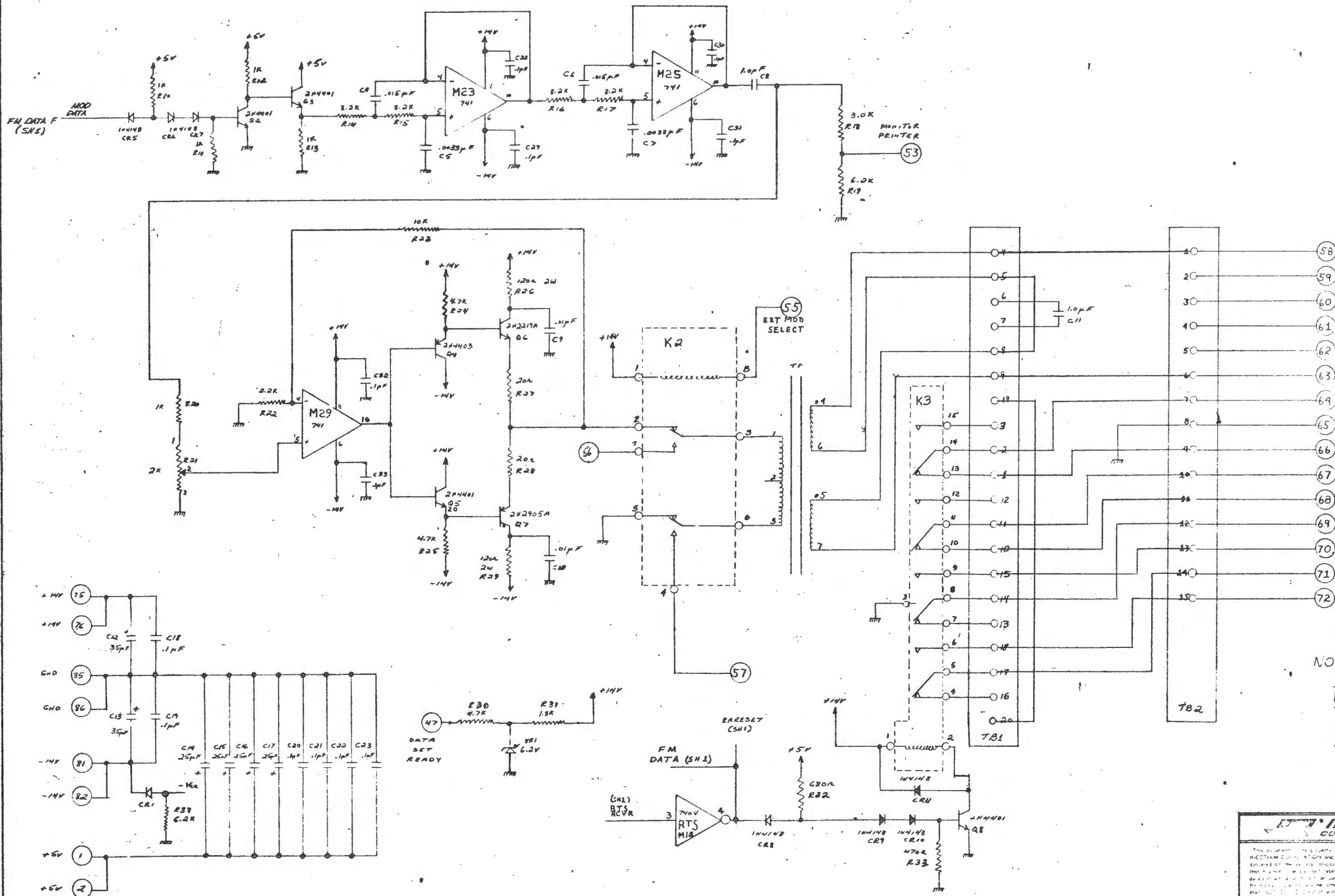


001/002

ASSEMBLY QUANTITIES	
QTY	DESCRIPTION
1	LOGIC DIAGRAM RADIO INTERFACE CONTROLLER

D 010-47-01 B

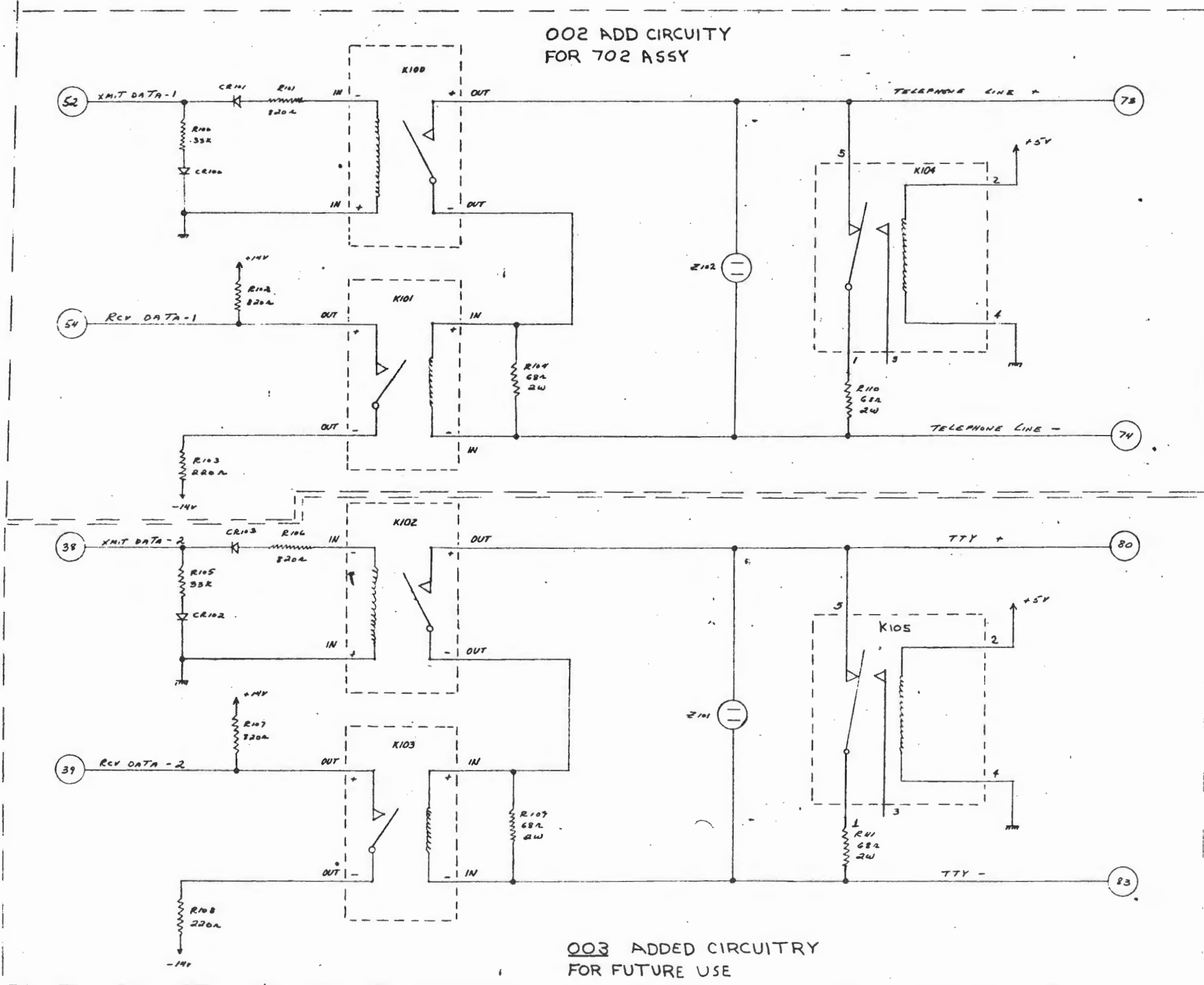
REV 1 of 3



NOTE:  
 JUMPER ARRANGEMENT SHOWN  
 ARE FOR TEST PURPOSES ONLY.  
 THE JUMPERS MAY BE REARRANGED  
 IN THE FIELD BY CUSTOMER  
 FOR EACH UNIQUE APPLICATION.

001/002

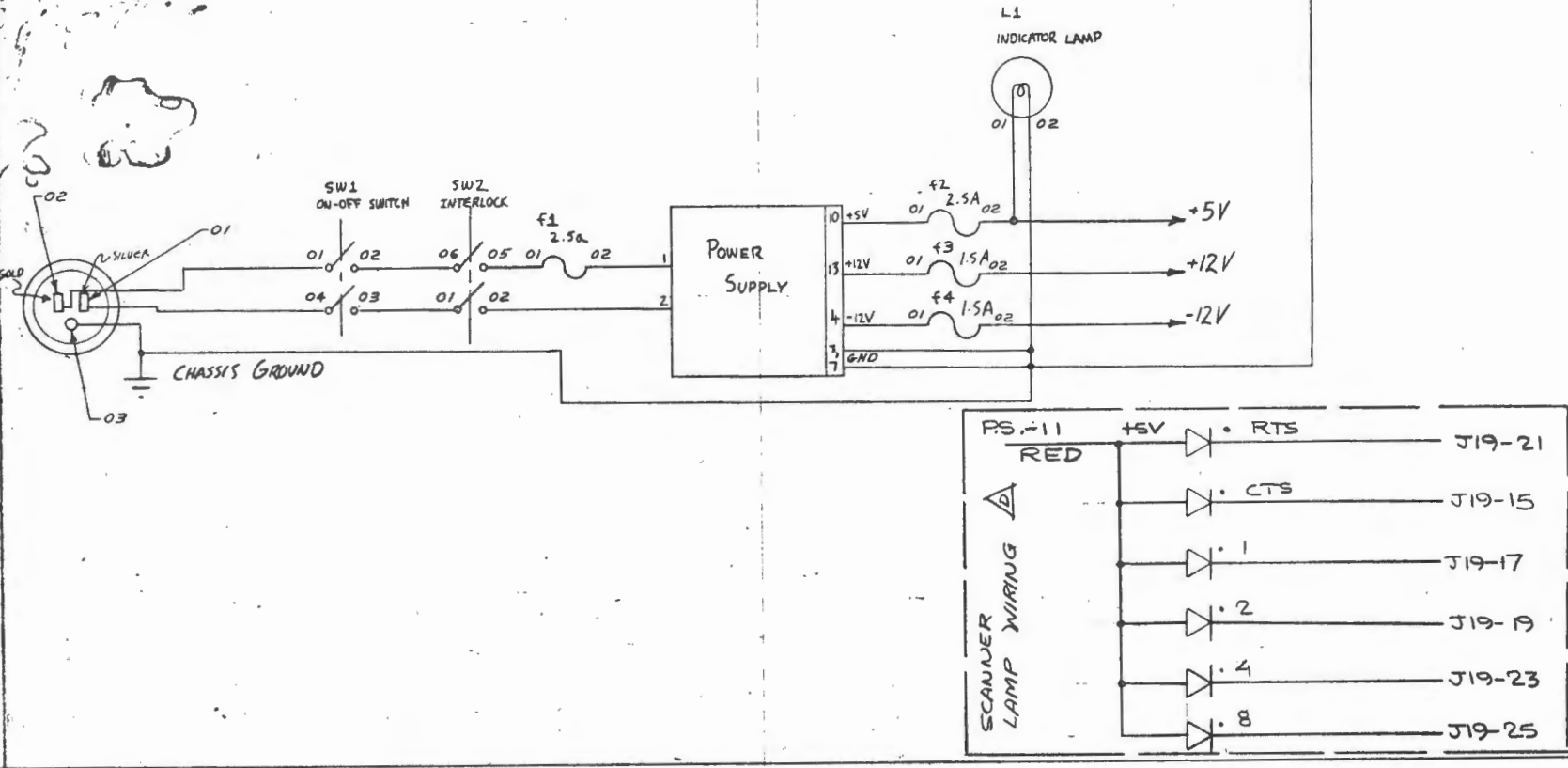
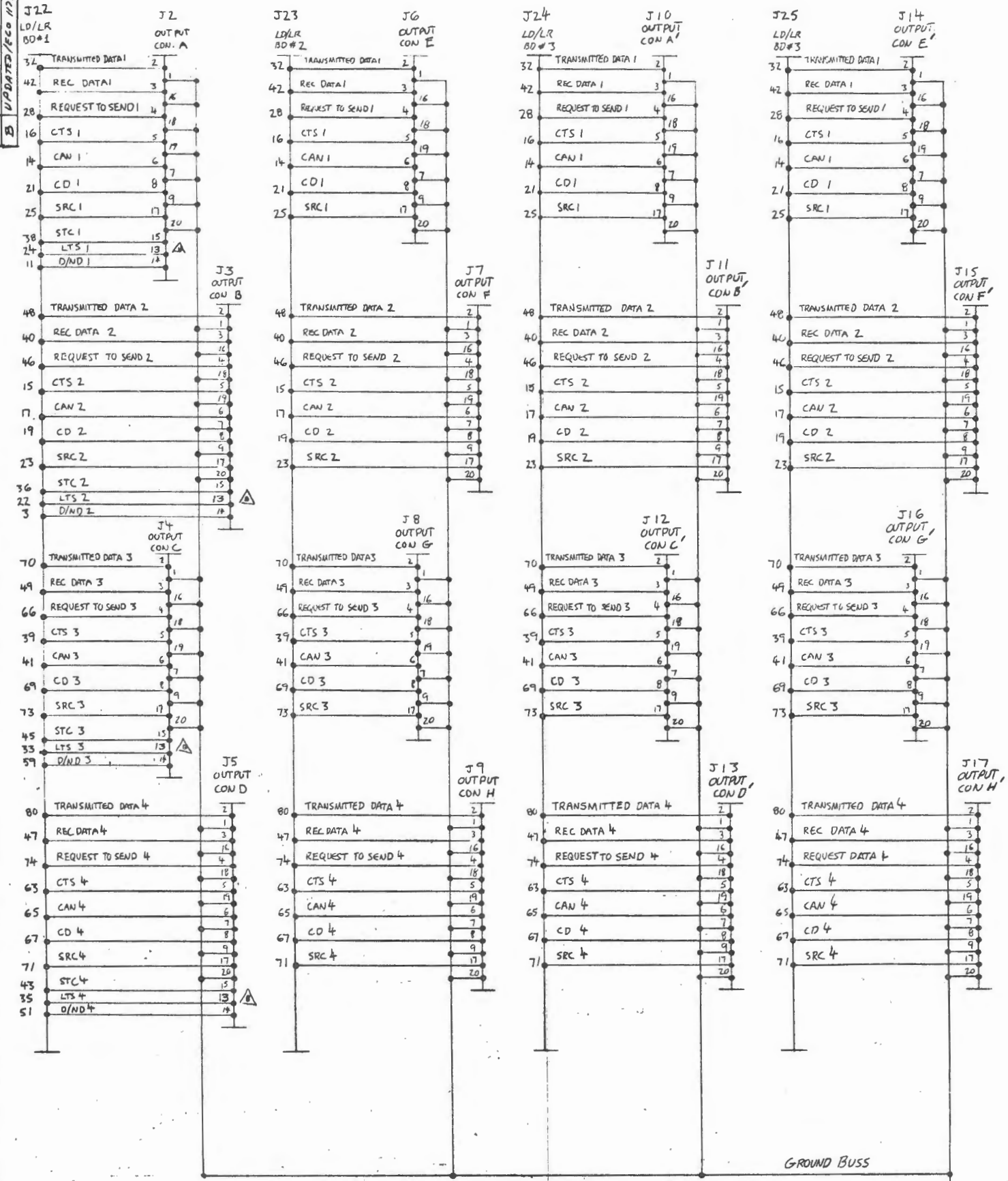
<b>ITT INCOTERM CORPORATION</b> <small>6 STRATHMORE ROAD        HATFIELD, MASSACHUSETTS 01780</small>		<b>RADIO INTERFACE CONTROLLER LOGIC DIAGRAM</b>	
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<small>FIRST USED ON</small>	<small>SCALE</small>	<small>SHT 2 OF 3</small>	

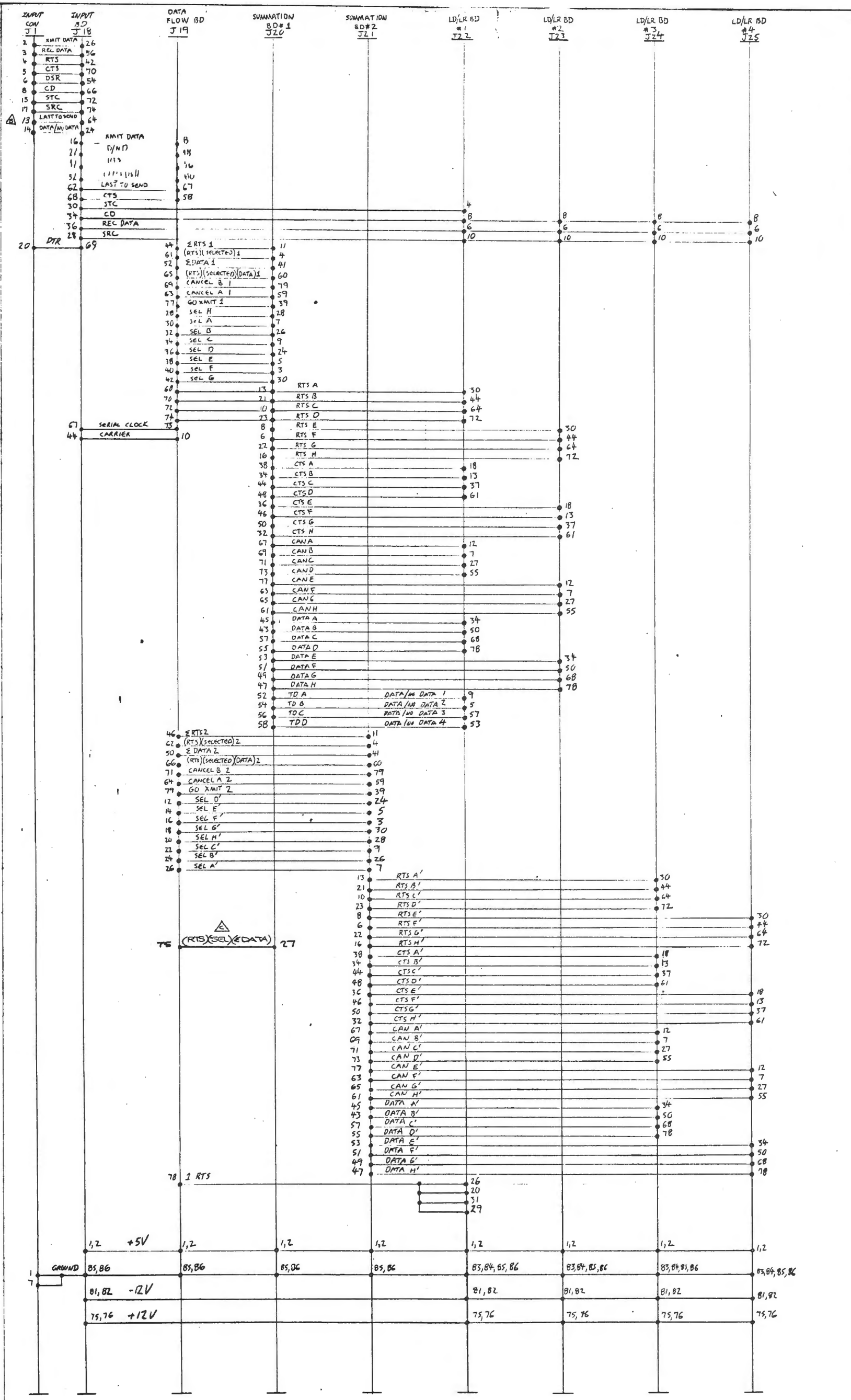


ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES																																										
			701	702	703	704	705	706	707																																				
<b>INCOTERM CORPORATION</b> <small>8 STRATHMORE ROAD            NATICK, MASSACHUSETTS 01916</small>																																													
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<small>THIS IS UNCLASSIFIED            DATE 08-11-2011 BY 60322 UCBAW/SJS</small>	<b>TELEPHONE INTERFACE CONTROLLER WIRING DIAGRAM</b> 002-003																																												
<small>DRAWN</small> _____	<small>DATE</small> _____	<small>SIZE</small> D	<small>DOCUMENT NUMBER</small> 010-47-01	<small>REV</small> B																																									
<small>CHECKED</small> _____	<small>DATE</small> _____																																												
<small>ENGINEER</small> _____	<small>DATE</small> _____																																												
<small>APPROVER</small> _____	<small>DATE</small> _____																																												
<small>FIRST USED ON</small> _____	<small>SCALE</small> _____			<small>SHT 3 OF 3</small>																																									

REV	DESCRIPTION	CHK	APPD
A	RELEASED 01/12/70	JK	LSM
B	UPDATED 02/01/72	LSM	LSM
C	REVISED 02/16/80	LSM	LSM
D	REVISED 02/17/82	LSM	LSM

INTERNATIONAL COMPUTER TERMINALS CORP.	
TITLE: MULTIPLEXER WIRING DIAGRAM	
UNLESS OTHERWISE SPECIFIED	DATE: 00/
TOLERANCES UNLESS OTHERWISE SPECIFIED	SIZE: 1/16"
DECIMALS ± .005 (RCS)	P.C. NO.:
ANGLES ± 2°	S.S. NO.:
DR:	NO.:
CHK:	REV:
ENG:	007-10-39
APPD:	SCALE:
NEXT ASSY:	SHT 1 OF 2

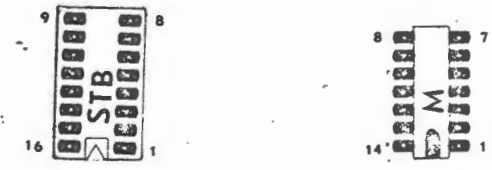
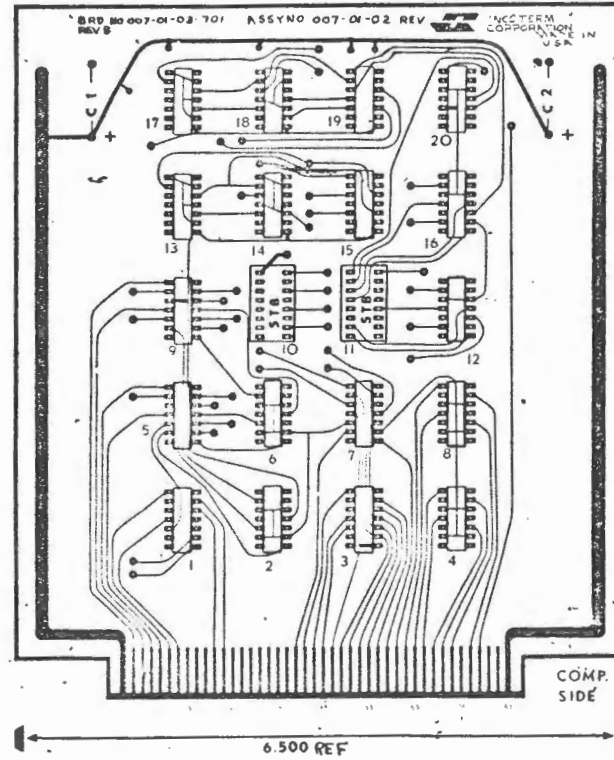




INTERNATIONAL COMPUTER TERMINALS CORP.  
 TITLE: MULTIPLEXER WIRING DIAGRAM  
 UNLESS OTHERWISE SPECIFIED - TOLERANCES ARE IN INCHES - DECIMALS ± .005 (FRACTIONS) ANGLES ± 2°  
 DR: DATE: 001  
 CHK: SIZE: P.C.: S.S. NO.: REV: 007-10-39 D  
 ENG: SCALE: SHT 2 OF 2  
 APPD: NEXT ASSY:



REVISIONS			
REV	DESCRIPTION	CHK	APPD
C	REDESIGN - REVISED PER ECO 1566 7/20/71	RUB	RUB
D	REV CHANGE ONLY/ECO 2025 8/1/72	Y	
DI	ECO 2106 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002. SEE SHEET 1 FOR CONTINUING REVISION HISTORY.		



PIN NUMBERING AND ORIENTATION

NOTES:

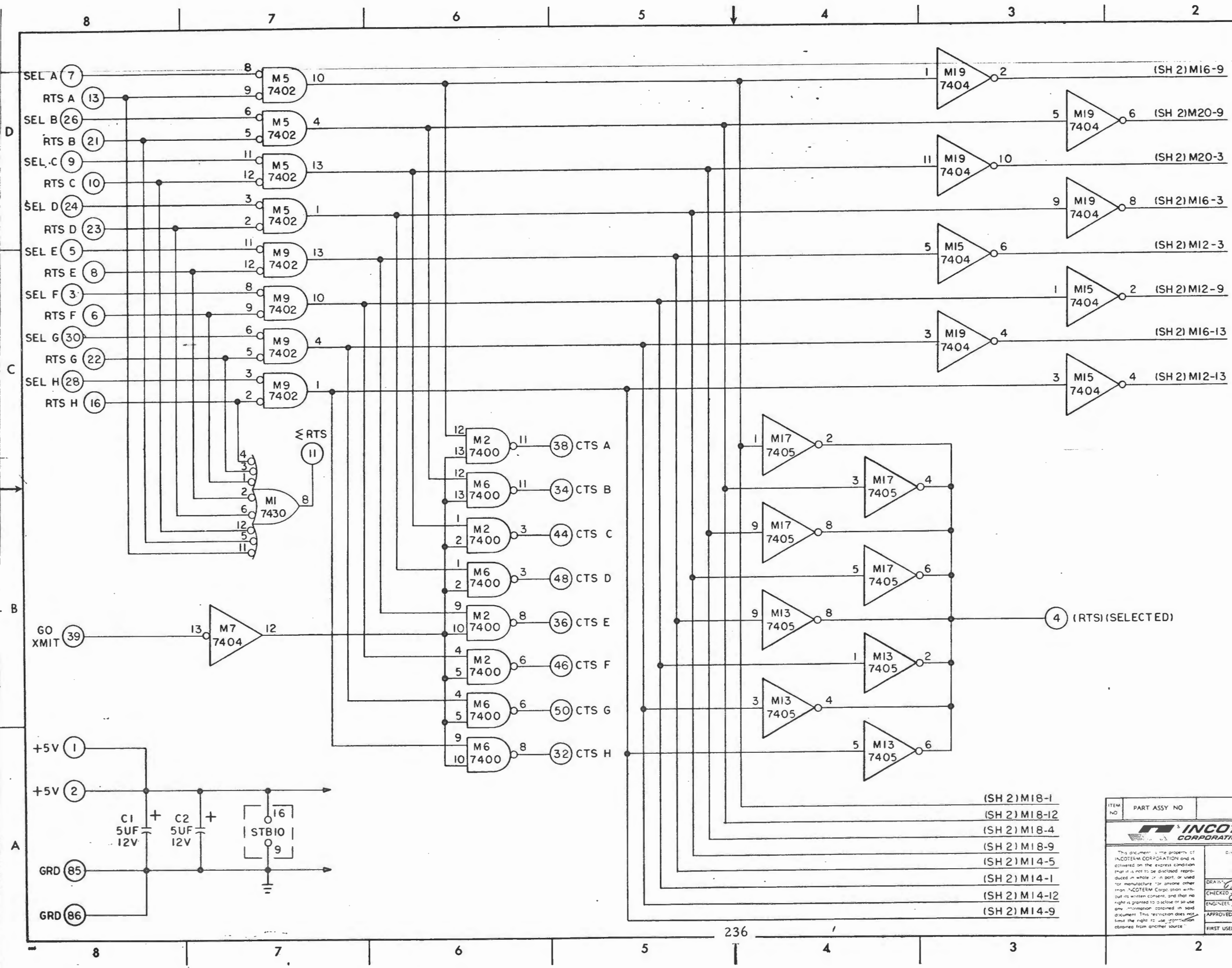
- HEIGHT LIMITATIONS  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX

ITEM	PART NUMBER	DESIGNATION
9	EC 7541	STB 10,11
8	CSTE 1127	C1,C2
7	ICSN 7430N	M1,3
6	ICSN 7410N	M12,16,20
5	ICSN 7405N	M13,17
4	ICSN 7404N	M7,15,19
3	ICSN 7403N	M14,18
2	ICSN 7402N	M5,9
1	ICSN 7400N	M2,4,6,8

ASSEMBLE WITH ARTWORK 007-01-03-701 REV.B

INCOTERM CORPORATION		Marlborough, Massachusetts 01752	
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DATE	8-28-72	TITLE	PC BOARD ASSY
CHKD	A. S. DRAV	SIZE	P.C. S.S. NO. REV.
ENGR	A. S. DRAV	DATE	8-28-72
APPD	A. S. DRAV	NO.	007-01-02
NEXT ASSY	007-10-01	SCALE	1:1
		SHT	2 OF 2

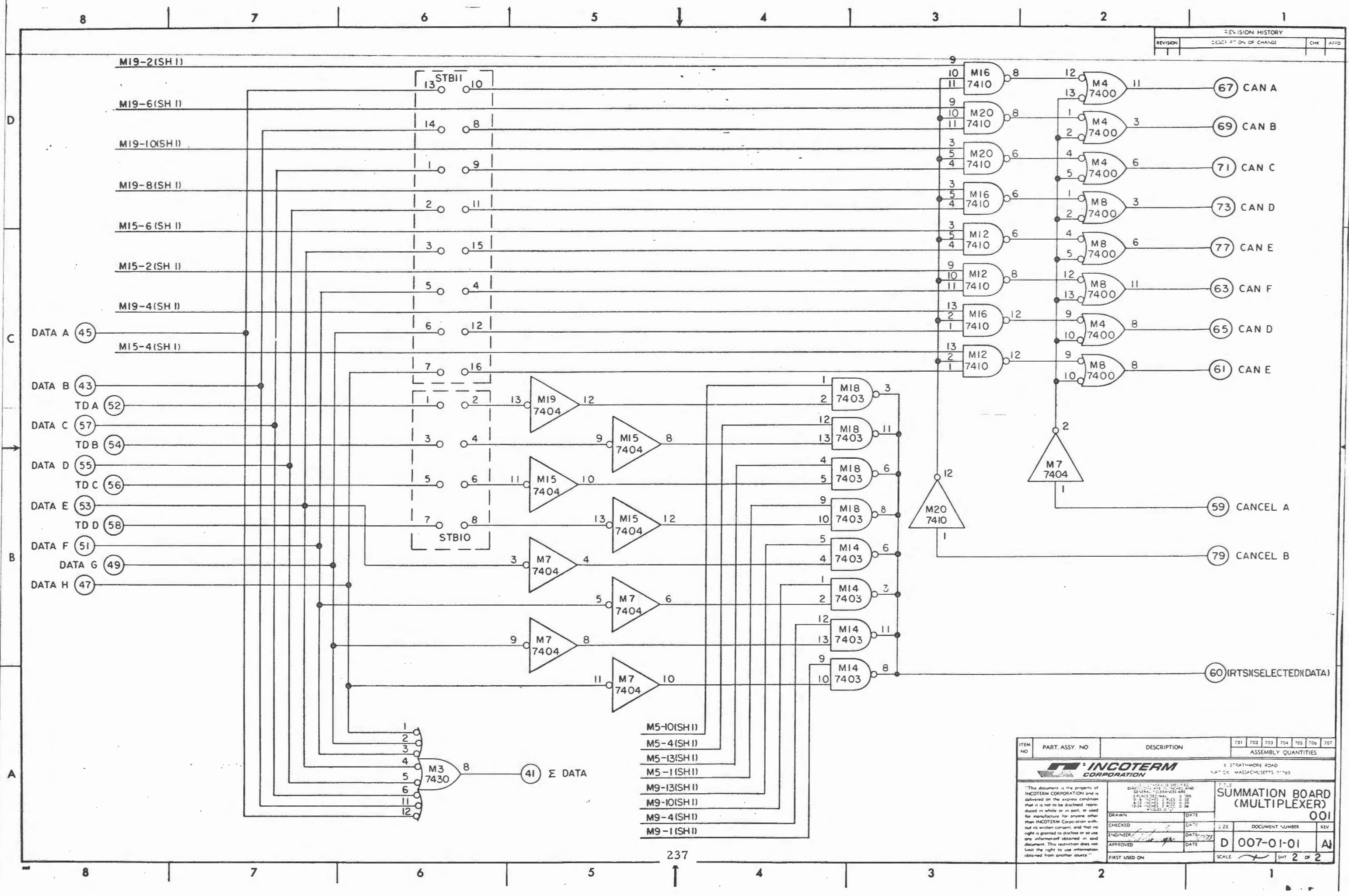
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
AI	REV. & REDRAWN/ECO 2471	R/A	R/A



- (SH 2) M18-1
- (SH 2) M18-12
- (SH 2) M18-4
- (SH 2) M18-9
- (SH 2) M14-5
- (SH 2) M14-1
- (SH 2) M14-12
- (SH 2) M14-9

ITEM NO.	PART ASSY NO.	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
<b>INCOTERM CORPORATION</b>			8 STRATHMORE ROAD LAWRENCE, MASSACHUSETTS 01840						
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APPROVED: [Signature] DATE: 5/17/73			SCALE: 7			DOCUMENT NUMBER: D 007-01-01		REV: AI	
FIRST USED ON 007-01-02-701			SHEET 1 OF 2						

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



- M5-10(SH I)
- M5-4(SH I)
- M5-13(SH I)
- M5-1(SH I)
- M9-13(SH I)
- M9-10(SH I)
- M9-4(SH I)
- M9-1(SH I)

ITEM NO	PART, ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NANTUCKET, MASSACHUSETTS 01760						
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DRAWN: [Signature] CHECKED: [Signature] ENGINEER: [Signature] APPROVED: [Signature]			DATE: [Blank] DATE: 7/77 DATE: [Blank]			SCALE: [Blank] SHEET: 2 OF 2			

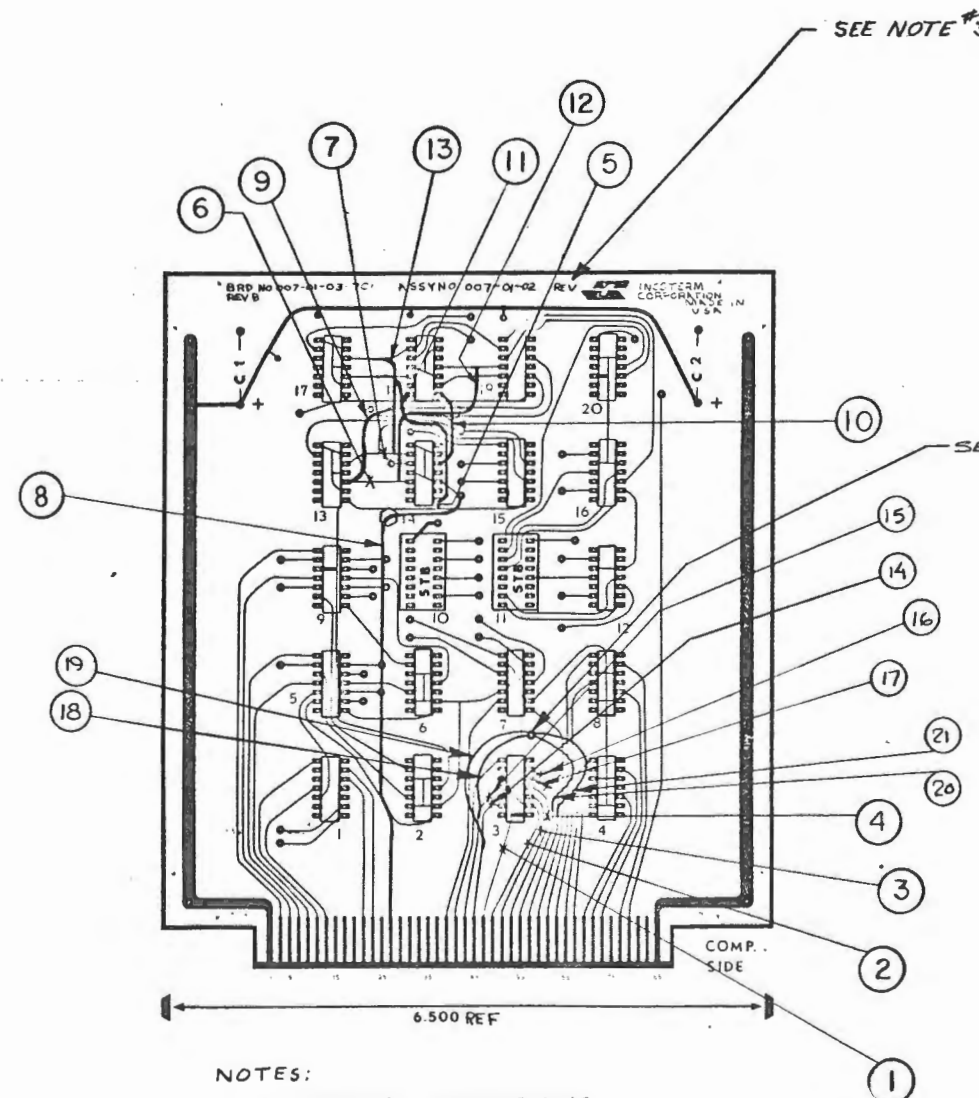
REVISIONS				
REV	DESCRIPTION	DATE	CHK	APPD
A	RELEASED	11-19-71	W	W
B	REVISED/ELD	12/2/71	W	W

CUT ETCH FROM	
1	M3-1 TO PIN 47
2	M3-2 TO PIN 49
3	M3-3 TO PIN 51
4	M3-4 TO PIN 53
5	M14-1 TO PC FROM M15-1 TO M13-1
6	M14-12 TO M13-3
7	M14-9 TO JUNCTION

ADD JUMPER WIRE FROM	
8	M14-3 EYELET TO PIN 27
9	M13-3 TO EYELET GOING TO M19-3
10	M18-1 TO M14-5
11	M18-12 TO M14-1
12	M18-4 TO M14-12
13	M18-9 TO M14-9

CUT ETCH FROM	
14	M3-12 TO PIN 45
15	M3-11 TO PIN 43
16	M3-6 TO PIN 57
17	M3-5 TO PIN 55

ADD JUMPER WIRE FROM	
18	PIN 43 THRU HOLE TO STB11-14
19	PIN 45 " " " STB11-13
20	PIN 55 " " " STB11-2
21	PIN 57 " " " STB11-1



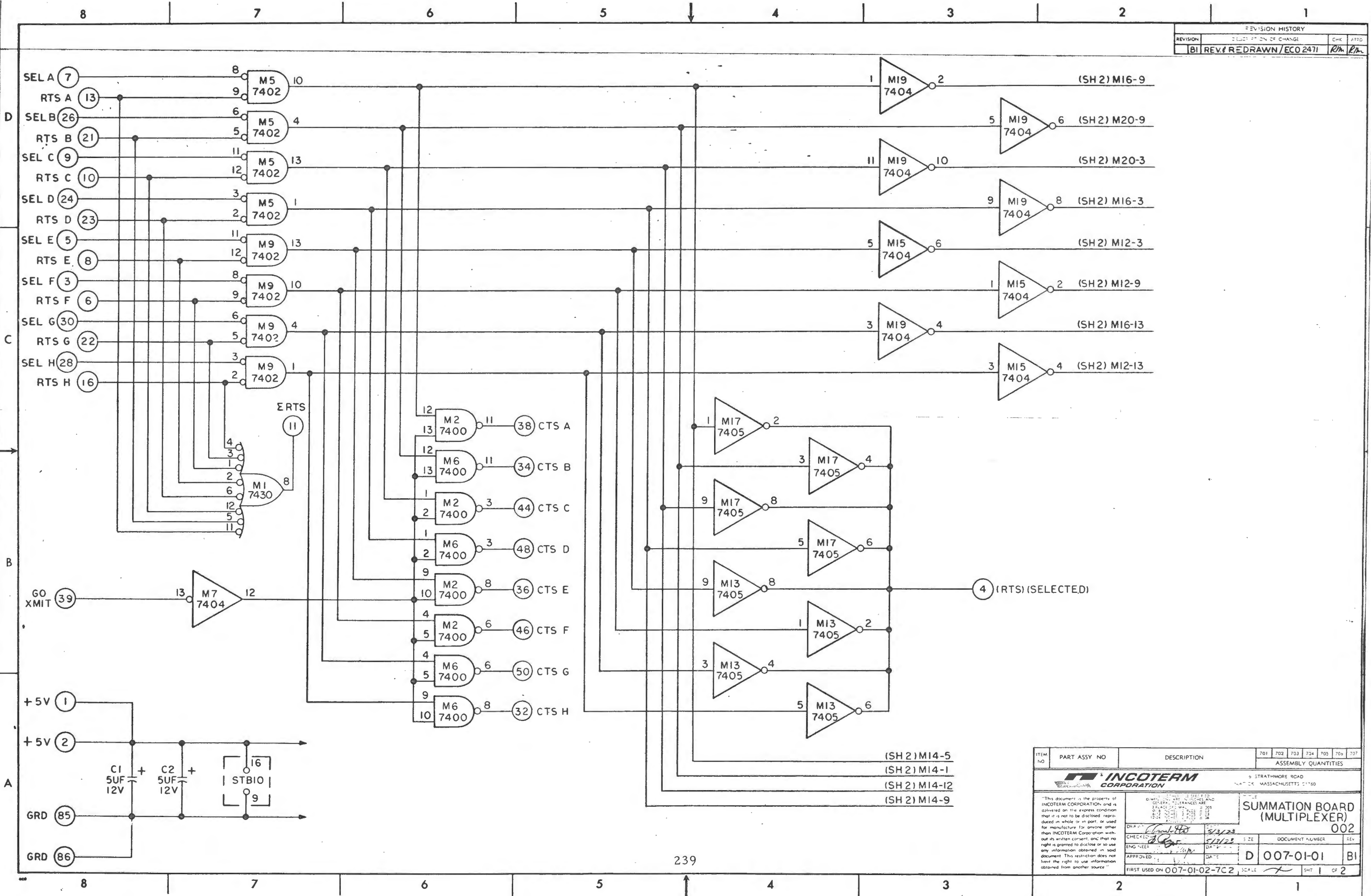
PIN NUMBERING AND ORIENTATION

NOTES:

- HEIGHT LIMITATIONS  
COMPONENT SIDE OF BOARD .400 MAX  
ETCH SIDE OF BOARD .080 MAX
- ALL JUMPER WIRES ARE TO BE FASTENED TO BOARD USING ITEM 4, 3 PLACES MARKED (O)
- MARK AS SHOWN IN 1/8 HIGH VERTICAL GOTHIC CHARACTERS (BLACK) NEW ASSY NO & REV DELETE EXISTING BVD ASSY NUMBER AND REV
- DRILL HOLE USING NO. 50 DRILL (.070 DIA.) IN AREA SHOWN

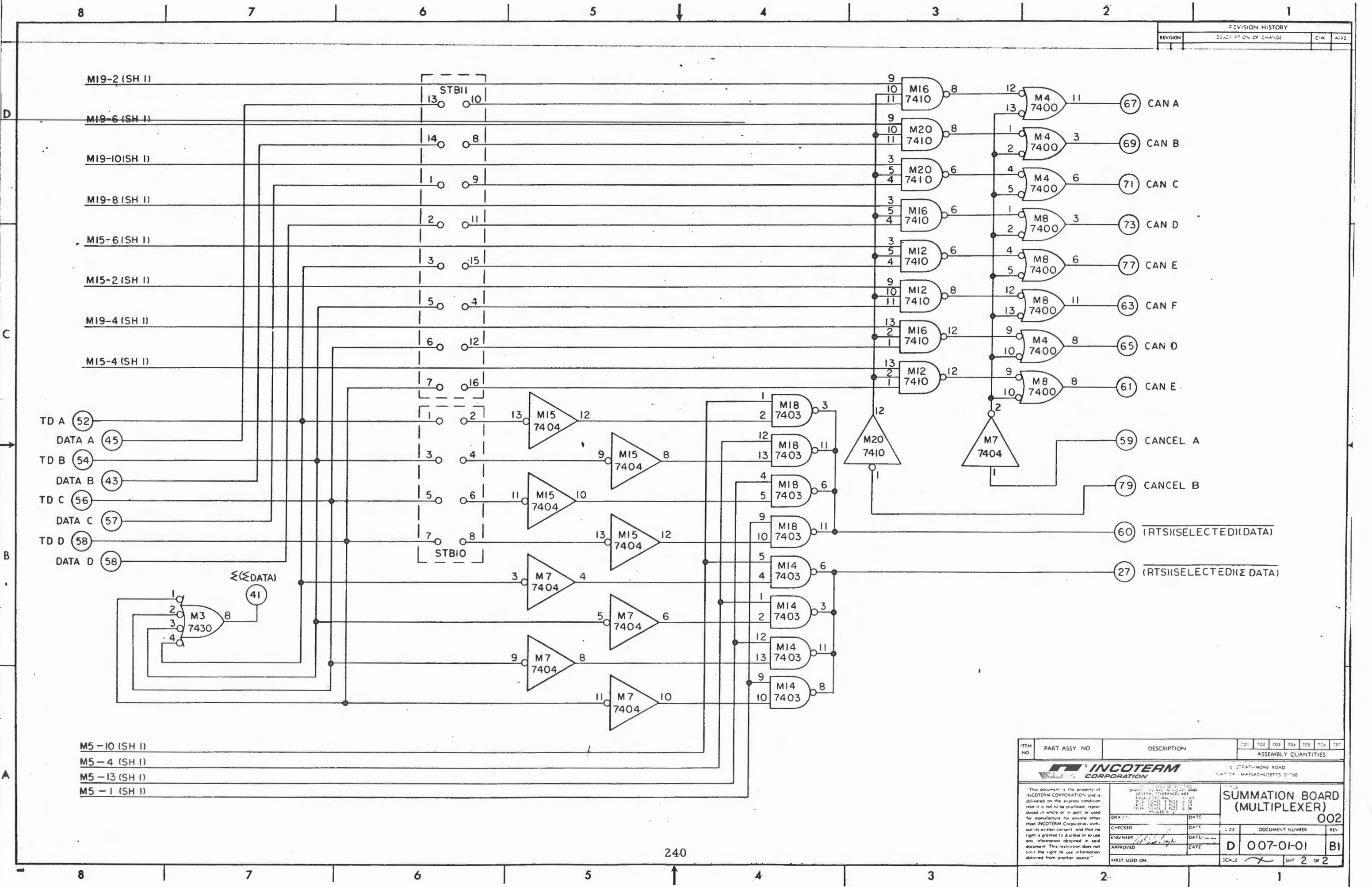
INCOTERM CORPORATION		Plymouth Memorial Drive Weymouth, Massachusetts 01972	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		P.C. BOARD ASSY	
TOLERANCES ON:		SUMMATION	
DECIMALS	.005 (3PLCS)	MULTIPLEXER	
ANGLES	.02 (2PLCS)	702	
DR	DATE 12-10-71	REV	702
CHK	11-18-71	REV	702
ENG		REV	702
APPD		REV	702
NEXT ASSY	007-10-01	SCALE	1:1
		SHT	1 OF 2

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
B1	REVISED DRAWN/ECO 2471	Ra	Ra



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707	
			ASSEMBLY QUANTITIES							
<b>INCOTERM CORPORATION</b> 5 STRATHMORE ROAD BOSTON, MASSACHUSETTS 02140										
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SUMMATION BOARD (MULTIPLEXER) 002										
CHECKED: [Signature] DATE: 5/31/73 ENGINEER: [Signature] DATE: [Blank] APPROVED: [Signature] DATE: [Blank]										
FIRST USED ON: 007-01-02-7C2 SCALE: [Blank] SHT 1 OF 2										

239

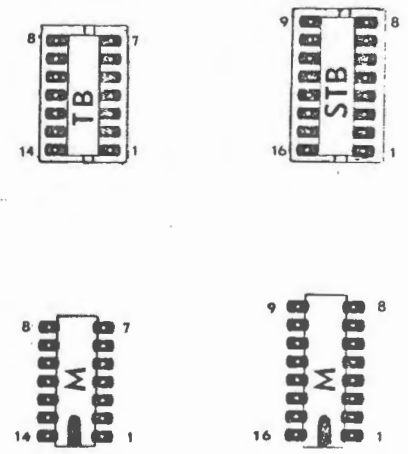
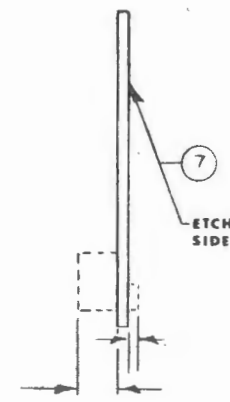
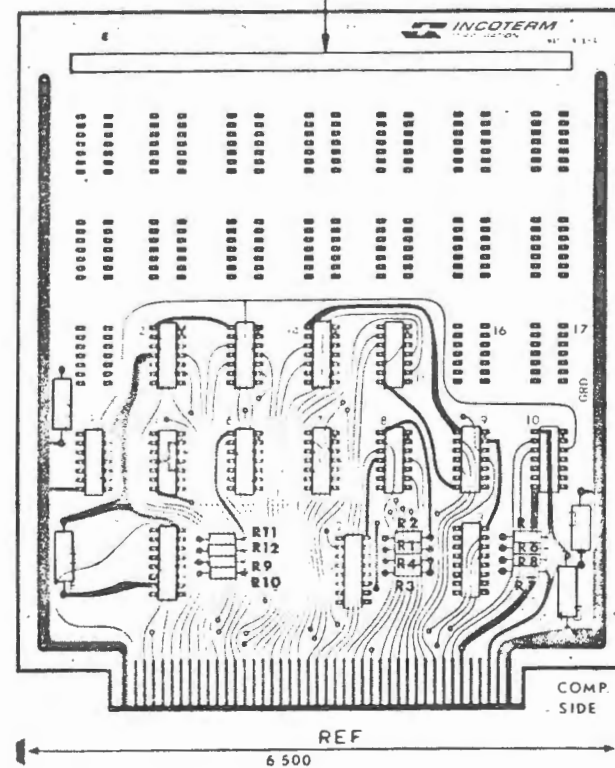


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			5 STATE-WARE ROAD WATERTOWN, MASSACHUSETTS 01100						
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<b>SUMMATION BOARD (MULTIPLEXER)</b> 002			DOCUMENT NUMBER <b>D 007-01-01</b>		REV <b>BI</b>		SCALE: _____ SHT 2 of 2		

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK

16 (SEE NOTE 2)



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

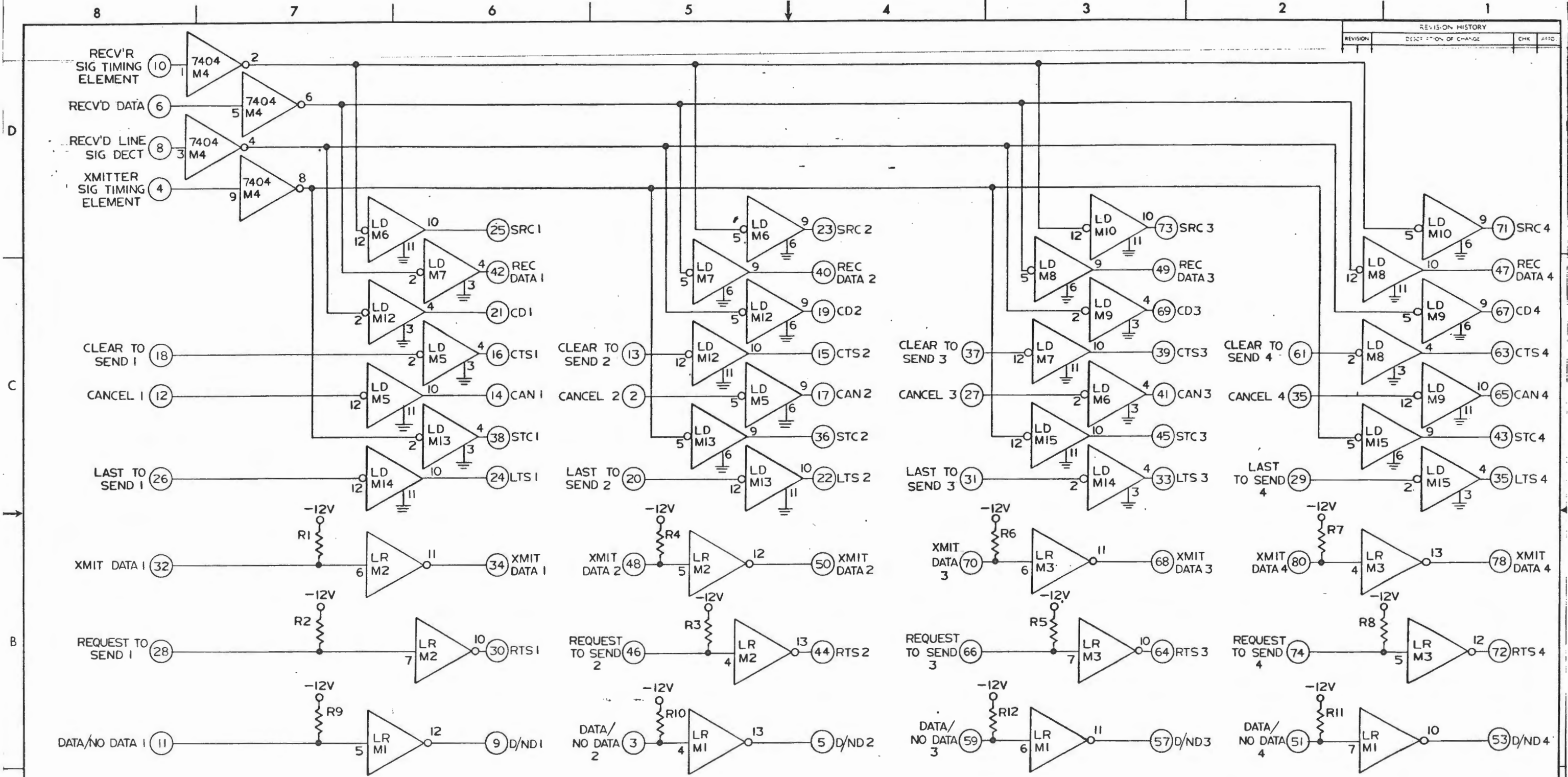
- NOTE:**
1. HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  2. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 16, AND MARK ASSY. NO. 007-03-02-701E AND LATEST ASSY REVISION.

ITEM NO.	REFERENCE DESIGNATION
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	M5-10, 12-15
14	M1,2,3
13	
12	R1-R12
11	
10	
9	
8	
7	
6	
5	C3, C4
4	C1, C2
3	
2	
1	M4

ASSY. WITH ARTWORK 007-03-03-701 REV E MASTER 701E

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) .02 (12PLCS) ANGLES 2°		<b>TITLE</b> <b>P.C. BOARD ASSY</b> LINE DRIVER/RECEIVER OUTPUT MULTIPLEXER	
DR.:	DATE:	SIZE:	P.C. S.S. NO. REV.
CHK R BILODEAU	6/23/70	D	007-03-02 62
ENG R BILODEAU	5/25/70		
APPD F LONDRES	5/28/70		
NEXT ASSY 007-10-01		SCALE 1:1	SHT 6 OF 6

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



**\*NOTES**

1. LR=LINE RECEIVER SN75154.
2. LD=LINE DRIVER JA9616.
3. LR "DATA NO/DATA" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
4. LD "LAST TO SEND" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
5. LD "XMITTER SIG TIMING ELEMENT" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
6. RESISTORS ARE 1/4W, 15K.

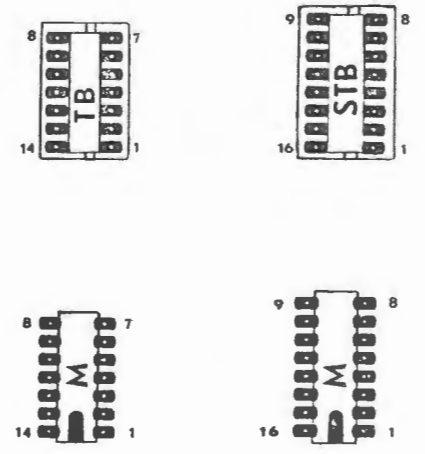
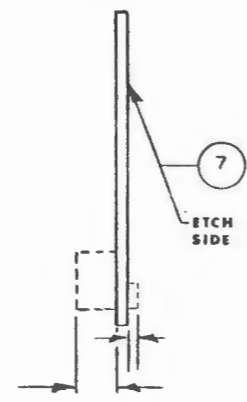
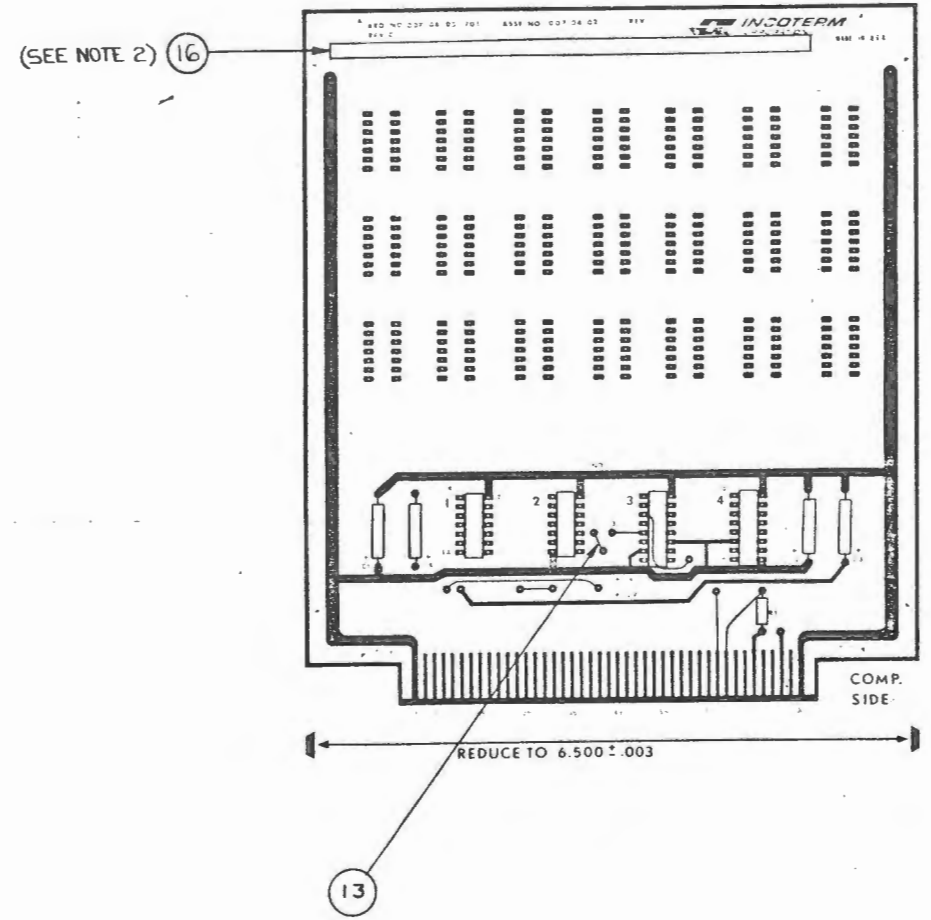
APPLICABLE TO P.C. BOARDS USING  
ARTWORK 007-03-03-701 REV D OR GREATER.

001

ITEM NO.	PART ASSY NO.	DESCRIPTION	701	702	703	704	705	706	707
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
117 STRAT-MORE ROAD LITTLETON, MASSACHUSETTS 01760									
LD-LR OUTPUT MULTIPLEXER LOGIC DIAGRAM									
DRAWN: R. Machado		DATE: 5-2-72		SCALE: 1:1		DOCUMENT NUMBER: D 007-03-01		REV: E1	
CHECKED: J.C.C.		DATE: 5-2-72		SCALE: 1:1		DOCUMENT NUMBER: D 007-03-01		REV: E1	
ENGINEER: J.P. [Signature]		DATE: 5-2-72		SCALE: 1:1		DOCUMENT NUMBER: D 007-03-01		REV: E1	
APPROVED: [Signature]		DATE: 5-2-72		SCALE: 1:1		DOCUMENT NUMBER: D 007-03-01		REV: E1	
FIRST USED ON: [Blank]		DATE: [Blank]		SCALE: 1:1		DOCUMENT NUMBER: D 007-03-01		REV: E1	



REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

- NOTE:**
1. HEIGHT LIMITATIONS.  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
  2. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 16, AND MARK ASSY. NO. 007-04-02-701C AND LATEST ASSY. REVISION.

ITEM	REFERENCE DESIGNATION
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	M1
14	M3, 4
13	
12	R1
11	
10	
9	
8	
7	
6	
5	C3, C4
4	C1, C2
3	
2	
1	M2

ASSY WITH ARTWORK 007-04-03-701 REV C 701C

**INCOTERM CORPORATION**  
 Hayes Memorial Drive  
 Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
 TOLERANCES ON  
 DECIMALS .005 (3PLS)  
 .02 (2PLS)  
 ANGLES 2°

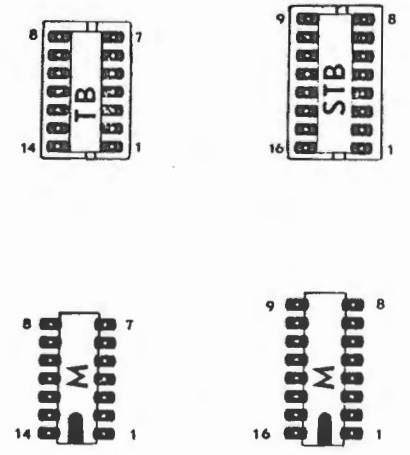
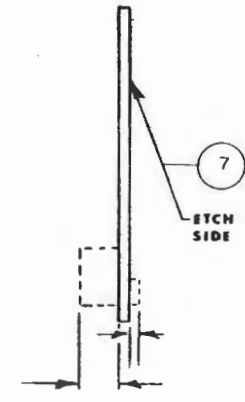
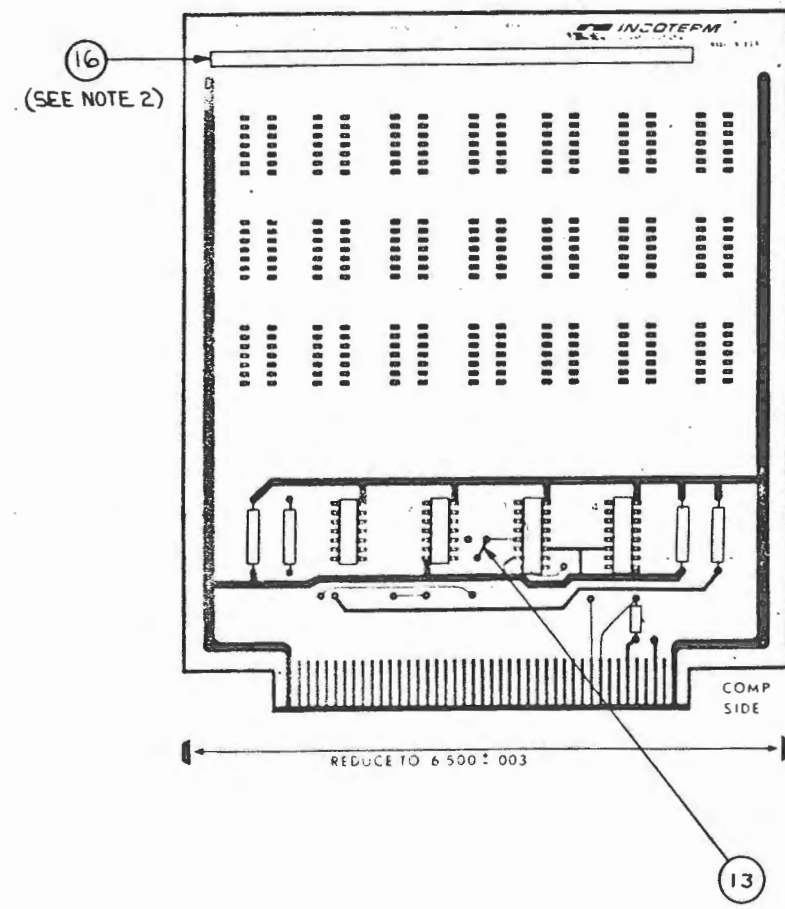
**P.C. BOARD ASSY**  
 LINE DRIVER/RECEIVER  
 INPUT MULTIPLEXER

DR: *W. Branch* DATE: *7/22/72*

CHK	SIZE	P.C.	S.S.	NO.	REV.
ENG					
APPD		<b>D</b>		007-04-02	03

NEXT ASSY 007-10-01 SCALE 1:1 SHT 3 OF 3

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

- NOTE:**
- HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 16, AND MARK ASSY. NO. 007-04-02-703C AND LATEST ASSY. REVISION.

NO.	REFERENCE DESIGNATION
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	M1
14	M3, 4
13	
12	R1
11	
10	
9	
8	
7	
6	
5	C3, C4
4	C1, C2
3	
2	
1	M2

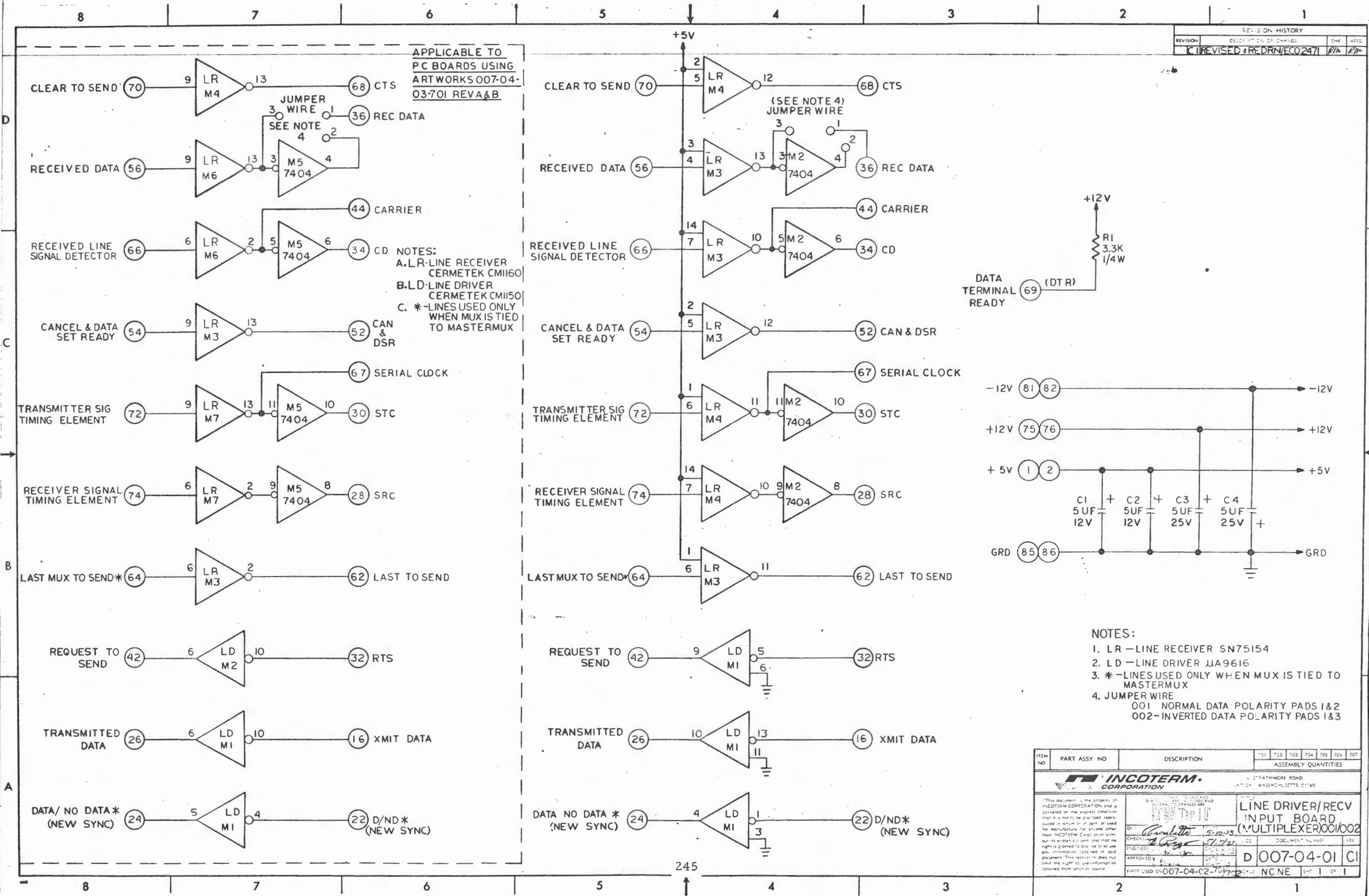
ASSY WITH ARTWORK 007-04-03-701 REV C. 703C

<b>INCOTERM CORPORATION</b> <small>Hayes Memorial Drive Marlborough, Massachusetts 01752</small>		<b>TITLE</b> <b>P.C. BOARD ASSY</b> LINE DRIVER/RECEIVER INPUT MULTIPLEXER	
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES          TOLERANCES ON          DECIMALS .005 (3PLCS)          .02 (2PLCS)          ANGLES 2°</small>		SIZE P.C. S.S. NO. REV <b>D 007-04-02 C3</b>	SCALE 1:1 SHT 4 OF 4
DR <i>Cutlauch</i> 9/23/72 CHK ENG APPD NEXT ASSY 007-10-01-	OR DATE BY DATE BY DATE BY	TITLE P.C. BOARD ASSY LINE DRIVER/RECEIVER INPUT MULTIPLEXER	SIZE P.C. S.S. NO. REV <b>D 007-04-02 C3</b>

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
1	REVISED #REDR/ECO2471	R/M	R/P

APPLICABLE TO  
PC BOARDS USING  
ARTWORKS 007-04-  
03-701 REVA&B

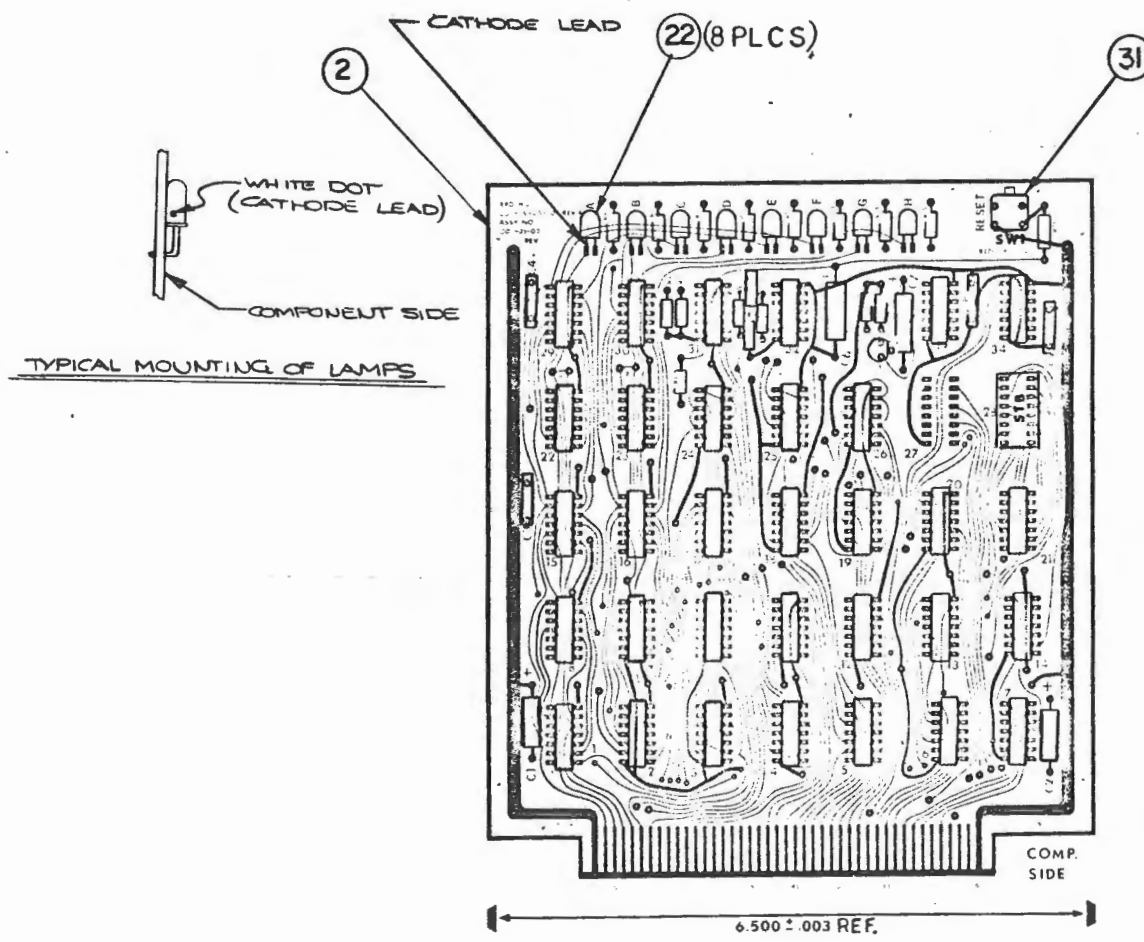
NOTES:  
A. LR-LINE RECEIVER  
CERMETEK CM1160  
B. LD-LINE DRIVER  
CERMETEK CM1150  
C. \*-LINES USED ONLY  
WHEN MUX IS TIED  
TO MASTERMUX



- NOTES:
1. LR - LINE RECEIVER SN75154
  2. LD - LINE DRIVER UA9616
  3. \*-LINES USED ONLY WHEN MUX IS TIED TO MASTERMUX
  4. JUMPER WIRE  
001 - NORMAL DATA POLARITY PADS 1 & 2  
002 - INVERTED DATA POLARITY PADS 1 & 3

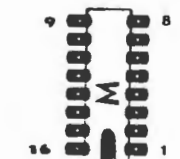
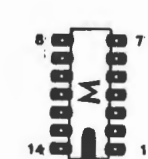
ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b>									
37 FAITHMORE ROAD LITTLE MASSACHUSETTS 01769									
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DATE: <i>5-10-75</i> CHECKED BY: <i>R. Page</i> APPROVED BY: <i>[Signature]</i> FIRST USED ON: <i>007-04-02-701</i>		<b>LINE DRIVER/RCV INPUT BOARD (MULTIPLEXER) 001/002</b> DOCUMENT NUMBER: <b>D 007-04-01 CI</b> NC NE INT 1 OF 1							

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK
A	RELEASED	5-3-72	H
A1	REVISED, ECD 1969 5/20/72	RBN	1-9-74
B	REVISED, ECD 1973 4/2/72	RBN	1-9-74
B1	REV. CHANGE ONLY/ECD 2477	R12	R12



13	R7	△
31	SW1	△
28	STB 28	△
27	C6 C7	△
26	C5	
25	C3, C4, C8, C9	
24	C1, C2	
22	A-11	
21	Q1	
20	CR1	
18	R6	
17	R16	
16	R5	
15	R1-R4	
14	R3-R15	△
11	M33	
10	M22, 23, 29, 30, 32	
9	M10, 21	
8	M13, 14, 20	
7	M24, 31	
6	M5, 11, 12, 17, 34	
5	M25, 26	
4	M12	
3	M3, 4, 6, 7, 8, 9, 15, 16, 18, 19	
1	REFERENCE DESIGNATION	

**NOTE:**  
**1. HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

**INCOTERM CORPORATION**  
 1000 Memorial Drive  
 Marlborough, Massachusetts 01752

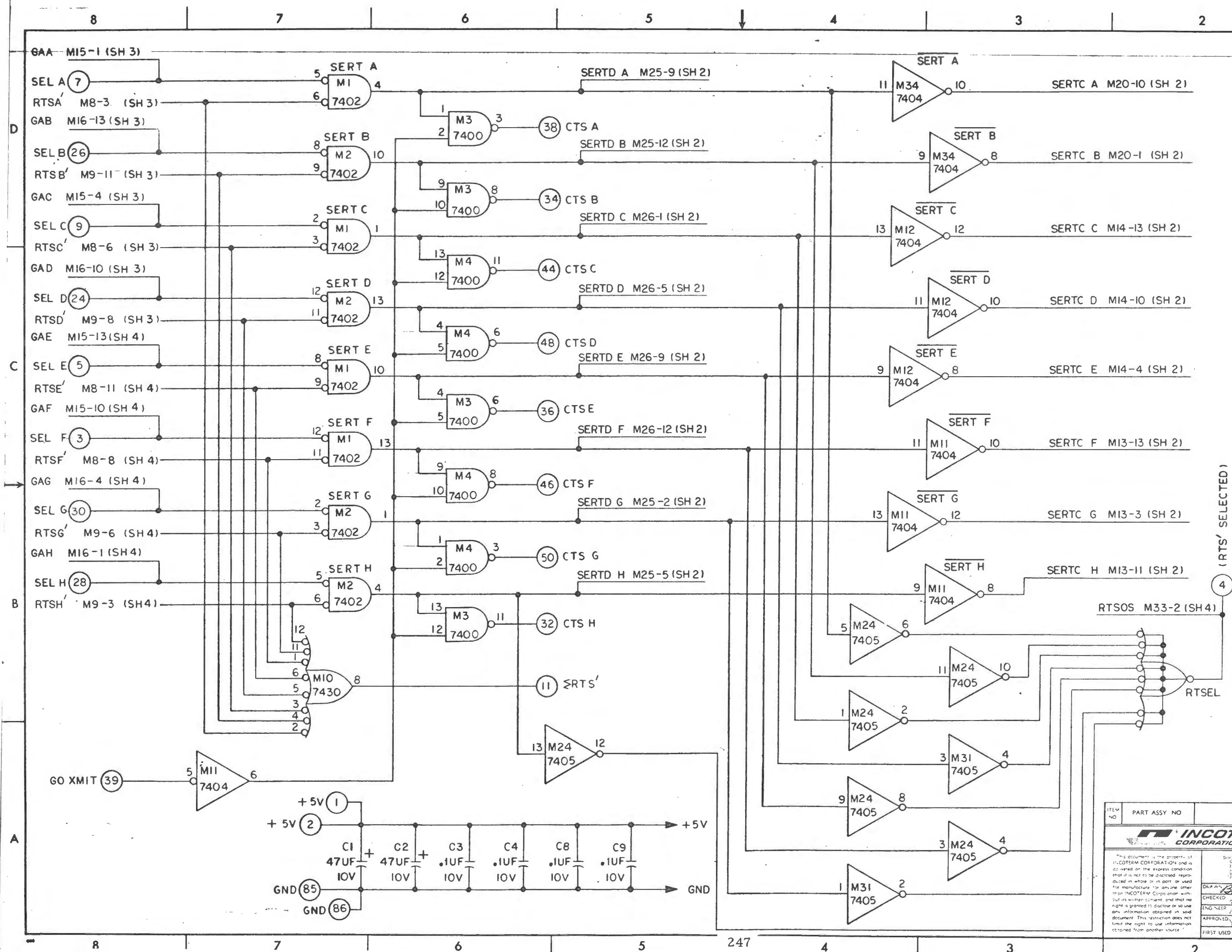
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
 TOLERANCES ON  
 DECIMALS .005 (3PLCS)  
 .02 (12PLCS)  
 ANGLES 2°

**P.C. BOARD ASSY**  
**SUMMATION BRD**  
**RTS TIMER ASSY**  
**MUX 701**

DRN	Rosen	DATE	5-2-72	SIZE	P.C.	S.S.	NO.	REV.
CHKD	Rosen	DATE	5-2-72					
ENG	Rosen	DATE	5-2-72					
APPD	A.B.	DATE	5-2-72					

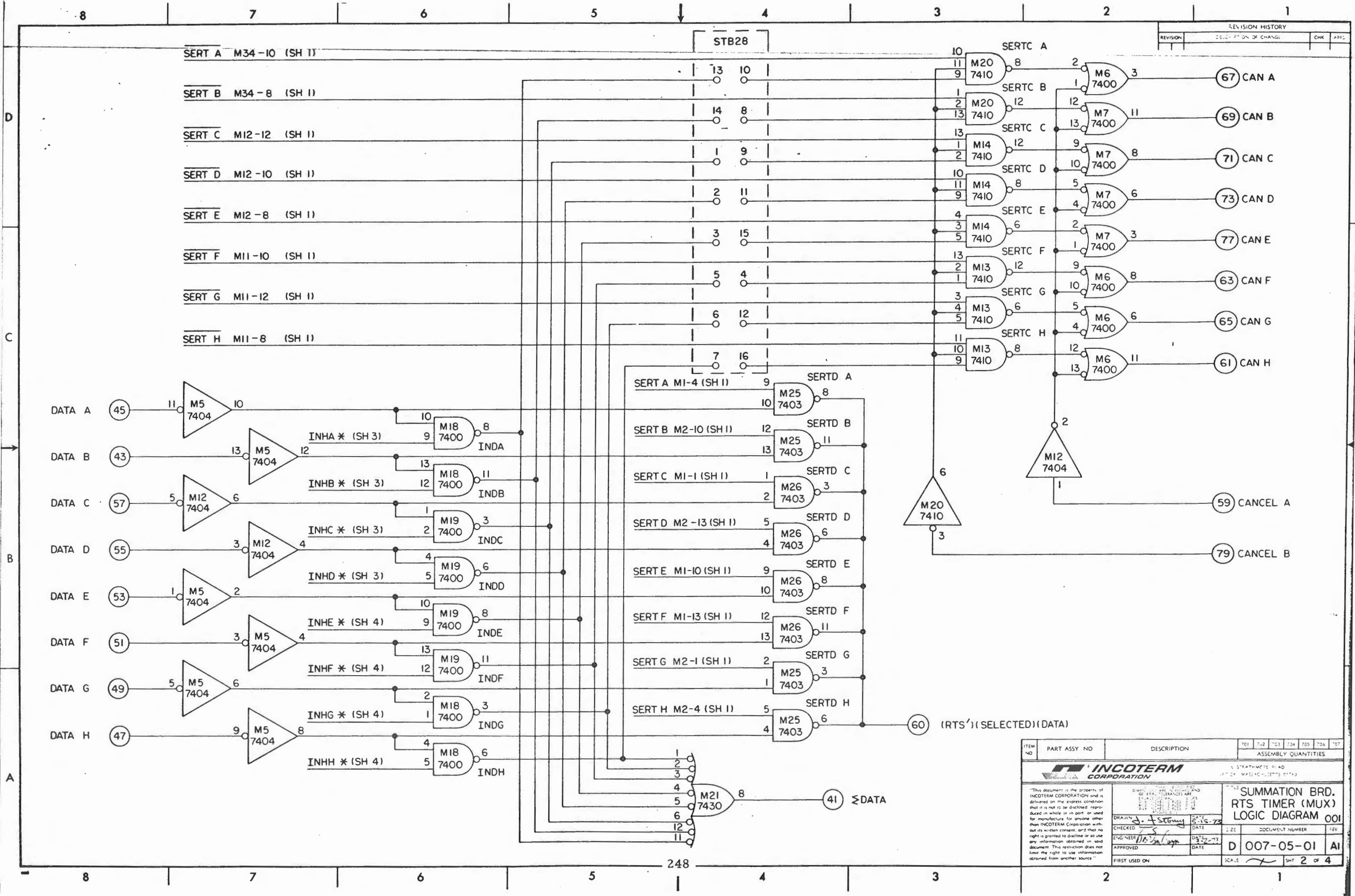
NEXT ASSY C10-0-00 SCALE 1:1 SHT 1 OF 1

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
1	REVISED DRAWING/ECO 2548	T	T



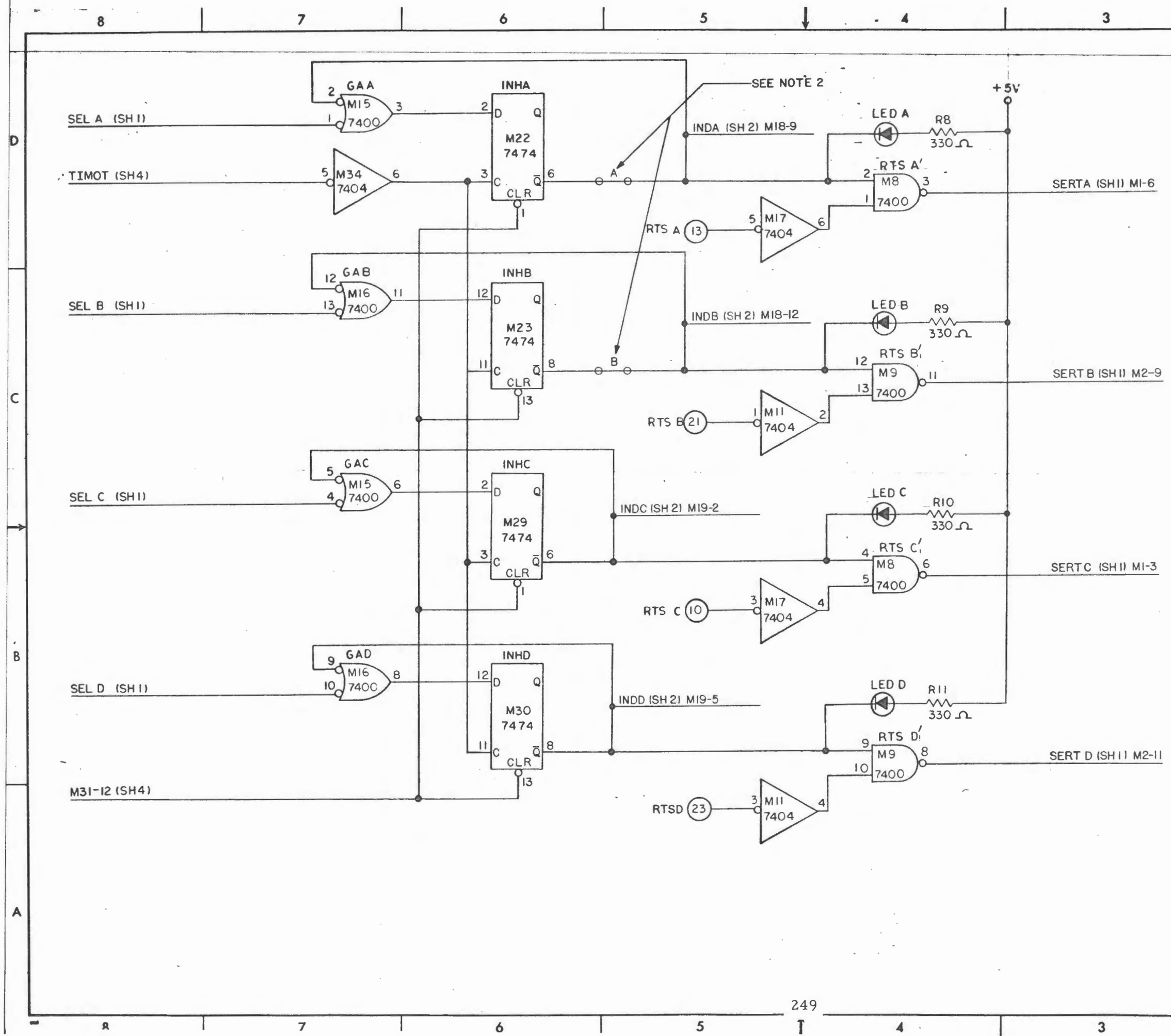
NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL RESISTOR VALUES ARE IN OHMS, ±5% AND ARE 1/4 WATT.  
 2. A & B ARE ETCH CUT OPTIONS.

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			100 WATSON ROAD WATSON, MASSACHUSETTS 01140						
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			DATE	SIZE	DOCUMENT NUMBER	REV			
			D	007-05-01	A				
			SCALE	SHT 1		OF 4			



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b>									
<b>SUMMATION BRD. RTS TIMER (MUX) LOGIC DIAGRAM 001</b>									
DRAWN: <i>J. J. Stoney</i>		DATE: 5-15-78		CHECKED: <i>S</i>		DATE: 5-22-78		DOCUMENT NUMBER: D 007-05-01	
ENGINEER: <i>D. J. Smith</i>		DATE: 5-22-78		APPROVED: <i>D. J. Smith</i>		DATE: 5-22-78		REV: AI	
FIRST USED ON:		SCALE: <i>1</i>		SHT: 2 OF 4					

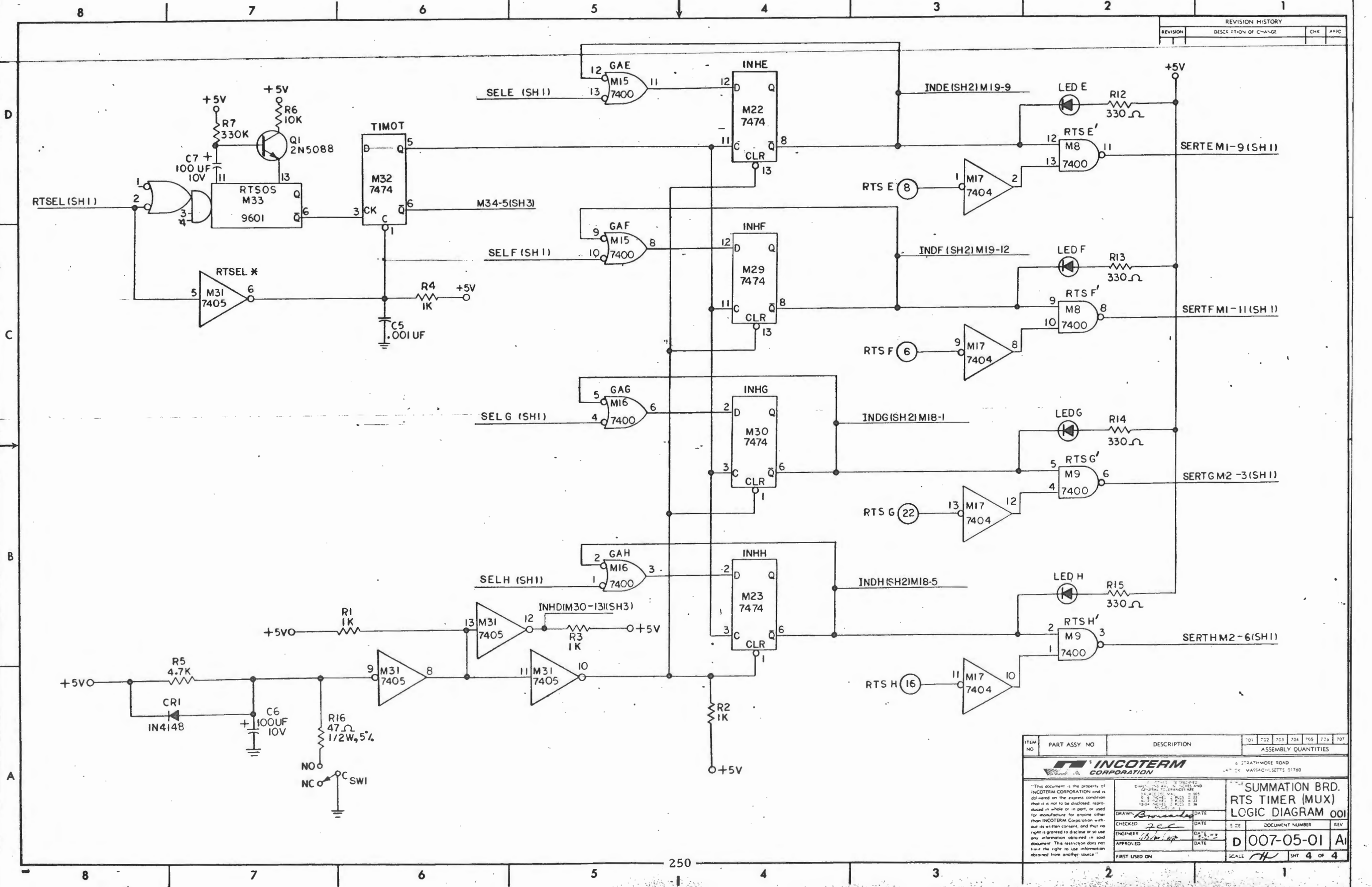
REVISION HISTORY						
REVISION	DESCRIPTION OF CHANGE	CHK	APPD			



SEE NOTE 2

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			5 STRATHMORE ROAD WATUCK, MASSACHUSETTS 01780						
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DRAWN	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
CHECKED	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
ENGINEER	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
APPROVED	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
FIRST USED ON	SCALE	SHT	3 OF 4						

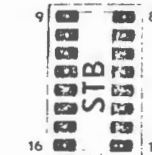
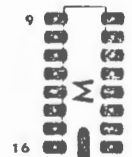
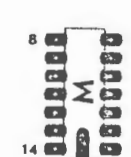
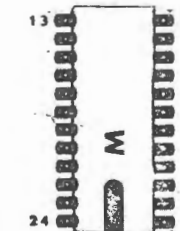
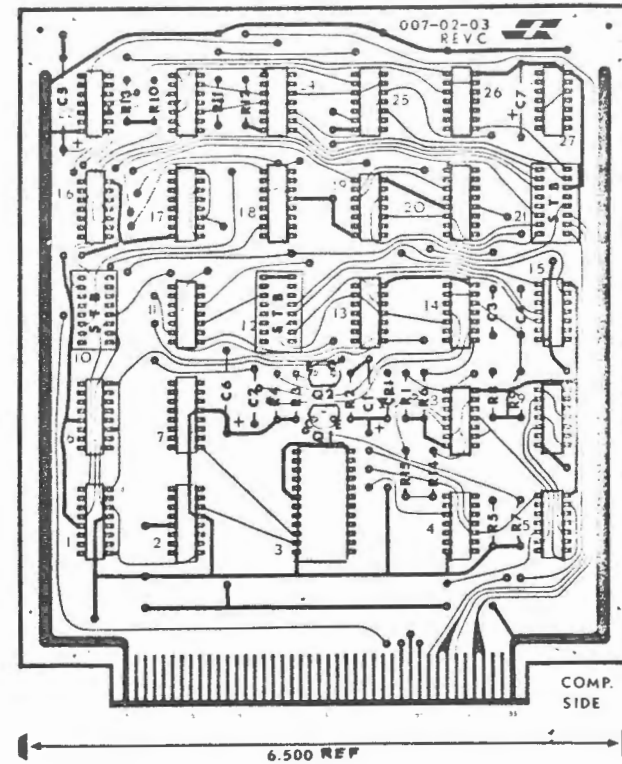
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
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DRAWN: <i>Bromberg</i>		DATE: 5-2-73		SUMMATION BRD. RTS TIMER (MUX) LOGIC DIAGRAM 001		DOCUMENT NUMBER: D 007-05-01		REV: A1	
CHECKED: <i>JCC</i>		DATE: 5-2-73		SCALE: <i>1/8"</i>		SHT 4 OF 4			
ENGINEER: <i>JCC</i>		DATE: 5-2-73							
APPROVED: <i>JCC</i>		DATE: 5-2-73							
FIRST USED ON:									



REVISIONS			
REV	DESCRIPTION	CHK	APPD
G	ECO 1288		
H	REVISED/ECO 1655 M41,		
J	REV CHANGES TO EC 1288		
J1	ECO 2105 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002. SEE SHEET 1 FOR CONTINUING REVISION ASSIGNMENT HISTORY		



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

ASSEMBLE WITH ARTWORK 007-02-03-701 REV. C

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
DIMENSIONS UNLESS SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .015 (3PLCS) .02 (2PLCS) ANGLES 3		TITLE <b>P.C. BOARD ASSY</b> <b>LOGIC DATA FLOW</b> <b>MULTIPLEXER</b> <b>701</b>	
DR. <i>P. J. Sullivan</i> (6-71) CH. <i>P. J. Sullivan</i> (4-71) ENG. <i>P. J. Sullivan</i> (7-71) APP. <i>P. J. Sullivan</i> (8-71)	S-ZE P.C. S.S. NO. REV <b>D</b> 007-02-02 J3	SCALE 1:1	SHT 5 OF 6
NEXT ASSY 007-10-01			

REFERENCE DESIGNATION	
24	CR1
23	STB 10, 12, 21
22	Q2
21	Q1
20	C1
19	C2
18	C5
17	C3, C4
16	C6, C7
15	R2
14	R3
13	R12
12	R6, 9
11	R1, R4, R5, R6, R7, R10, R11, R13, R14, R15
10	M3
9	M1, 2, 6, 7, 17, 18, 20
8	M27
7	M26
6	M19, 24
5	M8
4	M4, 11, 14
3	M23
2	M9, 15, 16
1	M5, 13, 25, 22

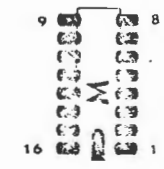
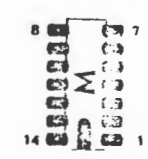
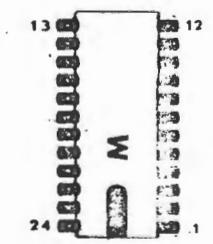
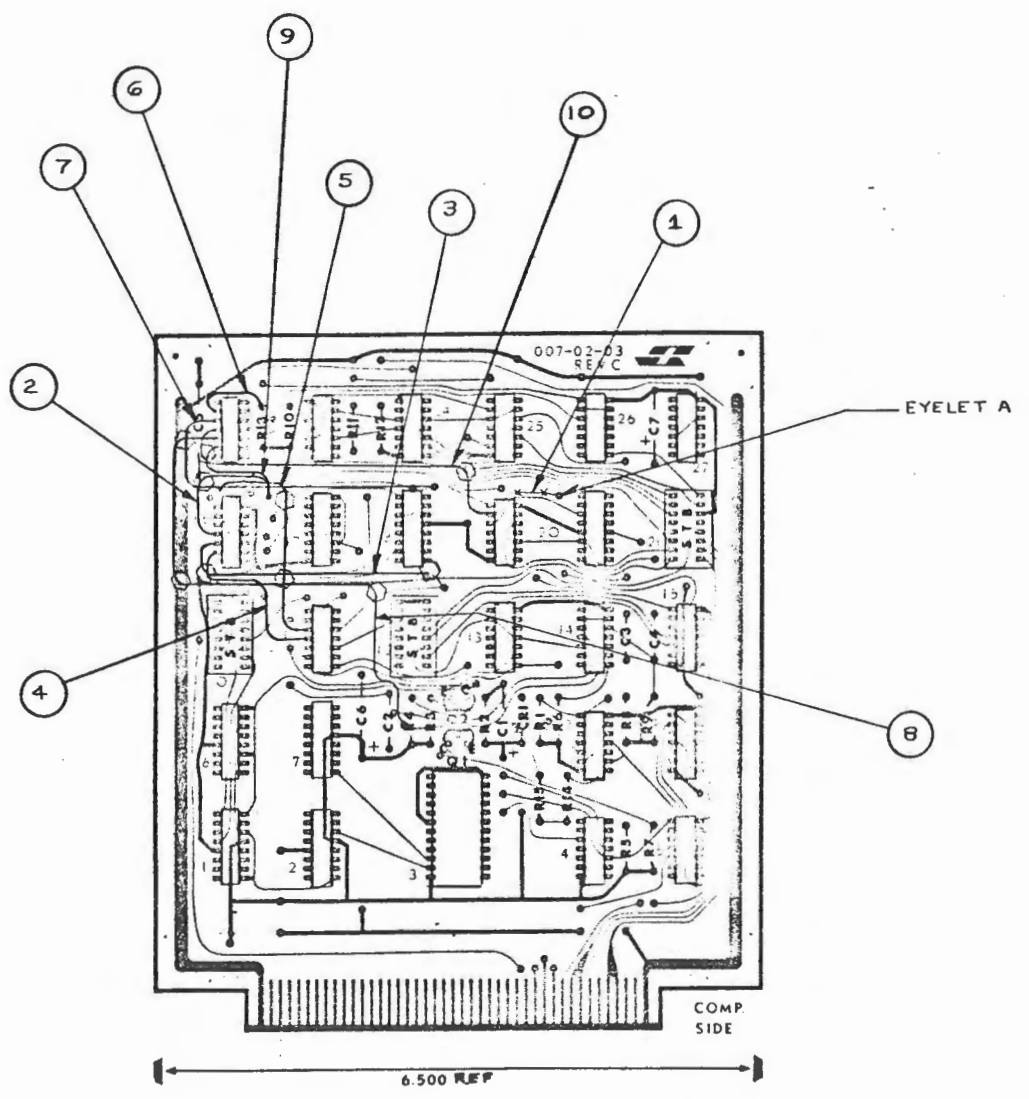
**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.

REV. SIGNS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 3/31/71	T	T

CUT ETCH  
1 MI9 PIN 9 TO EYELET A

ADD WIRE

2	M16 PIN 11 TO EYELET LEADING TO MI9 PIN 8
3	M16 PIN 12 TO EYELET LEADING TO M18 PIN 4
4	M16 PIN 13 TO M11 PIN 11
5	M11 PIN 10 TO EYELET LEADING TO M22 PIN 1
6	M22 PIN 9 TO EYELET LEADING TO M23 PIN 8
7	M22 PIN 10 TO EYELET LEADING TO M18 PIN 11
8	M22 PIN 12 TO EYELET LEADING TO STB 12 PIN 6
9	M22 PIN 13 TO EYELET LEADING TO MI9 PIN 8
10	M22 PIN 11 TO MI9 PIN 9



NOTE:  
1 ALL JUMPER WIRES ARE TO BE FASTEN TO BOARD USING ITEM 4, 10 PLACES MARKED (O)

NOTE:  
1. HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.

PIN NUMBERING AND ORIENTATION

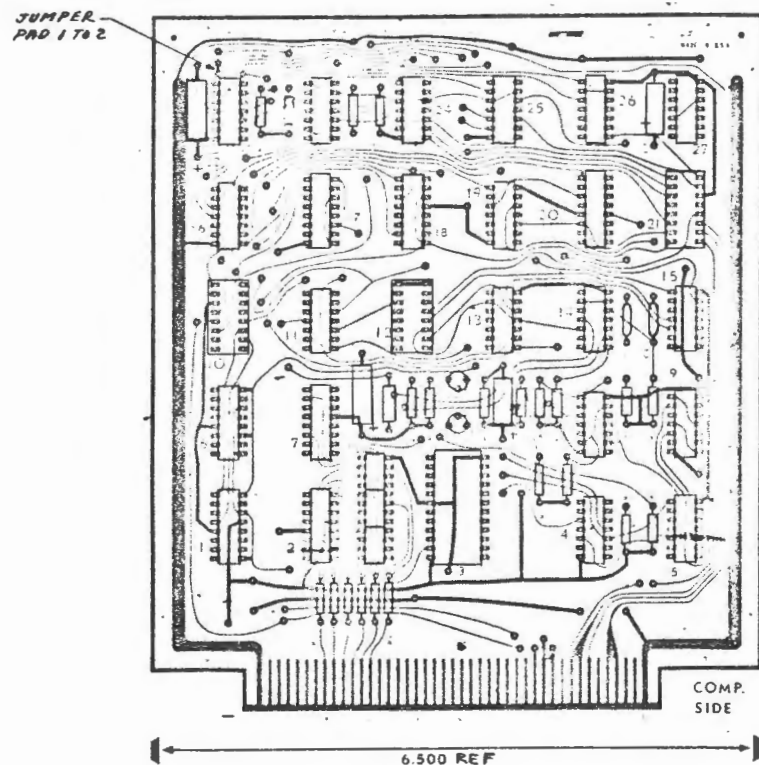
COMPONENT SIDE

24	CR1
23	STB 10, 12, 21
22	R2
21	Q1
20	C1
19	C2
18	C5
17	C3, C4
16	C6, C7
15	R2
14	R3
13	R12
12	R8, 9
11	R1, R4, R5, R6, R7, R10, R11, R13, R14, R15
10	M3
9	M1, 2, 6, 7, 17, 18, 20
8	M27
7	M26
6	M19, 24
5	M8
4	M4, 11, 14
3	M23
2	M9, 15, 16
1	M5, 13, 25, 22
ITEM	REFERENCE DESIGNATION

702

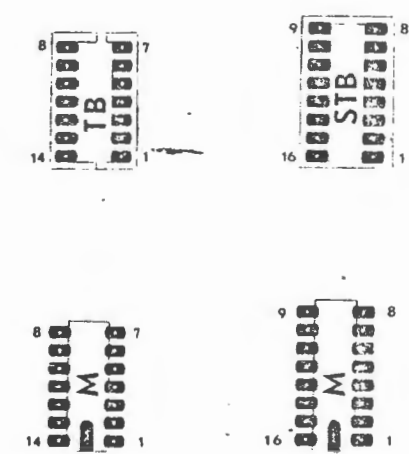
INCOTERM CORPORATION		Hayes Memorial Drive Marlborough, Massachusetts 01752	
DATE	12-29-71	REV	702
APPD	DO [Signature]	CHK	SS
P.C. BOARD ASSY		LOGIC DATA FLOW	
MULTIPLEXER		702	
D 007-02-02		A	
NEXT ASSY: 006-009		1 of 2	

REVISIONS				
REV	DESCRIPTION	DATE	CHK	APPD
A	REVISED/ECO 7/24/71	7/24/71	4	4
B	REVISED/ECO 1655 4/71	4/71	2	2
B1	REV. CHANGE ONLY/ECO 2378		2	2
B2	REV. CHANGE ONLY/ECO 2477		KIA	KIA



REF. DESIGNATION	DESCRIPTION
33	R16,17,18,19,20,21
32	M28,29,30
24	CR1
23	STB10,12,21
22	R2
21	A1
20	C1
19	C2
18	C5
17	C3,C4
16	C6,C7
15	R2
14	R3
13	R12
12	R8,9
11	R1,4,5,6,7,10,11,13,14,15
10	M3
9	M1,2,6,7,17,18,20
8	M27
7	M26
6	M19,24
5	M8
4	M4,11,14
3	M23
2	M9,15,16
1	M5,13,22,25

**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.

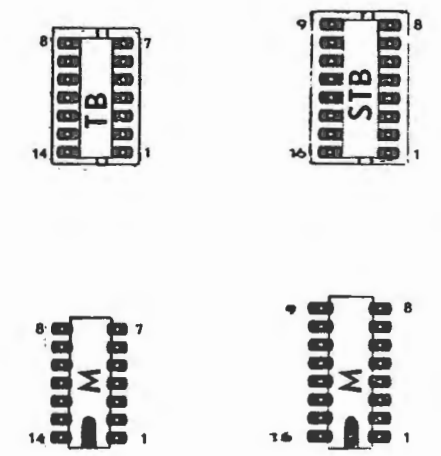
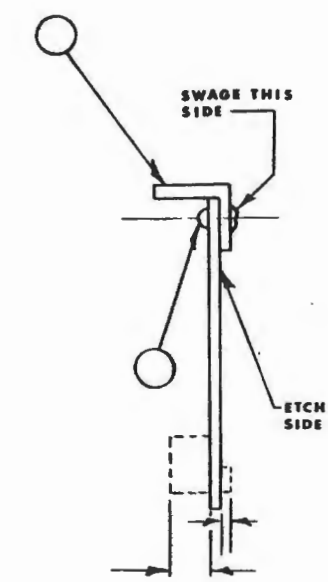
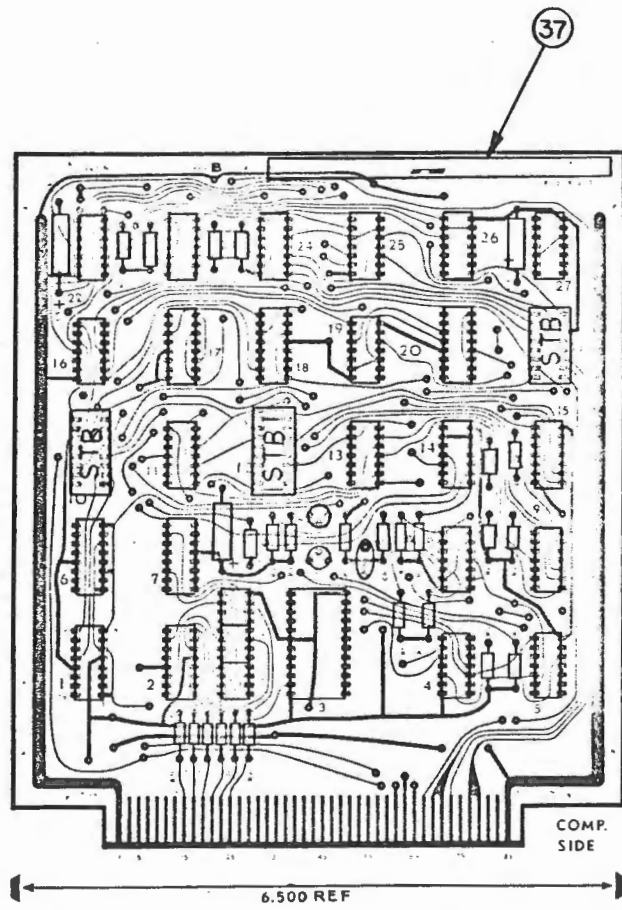


**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

<b>INCOTERM CORPORATION</b>		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DIMENSIONS .005 .015 .030 .060 .125 .250 .500 ANGLES 7	TITLE <b>P.C. BOARD ASSY DATA FLOW BRD MULTIPLEXER 703</b>		
DR. R. FLETCHER CHK. R. BILLORE ENG. D. VANDYNE APPD. D. KENDRICK NEXT ASSY 007-10-01	DATE 1-2-71 1-2-71 1-7-71 1-8-71	SIZE P.C. S.S. NO. REV.	D 007-02-02 B2
SCALE 1:1		SHT 1 OF 1	

REVISION HISTORY			
REVISION	DESCRIPTION	DATE	CHK



**PIN NUMBERING AND ORIENTATION**

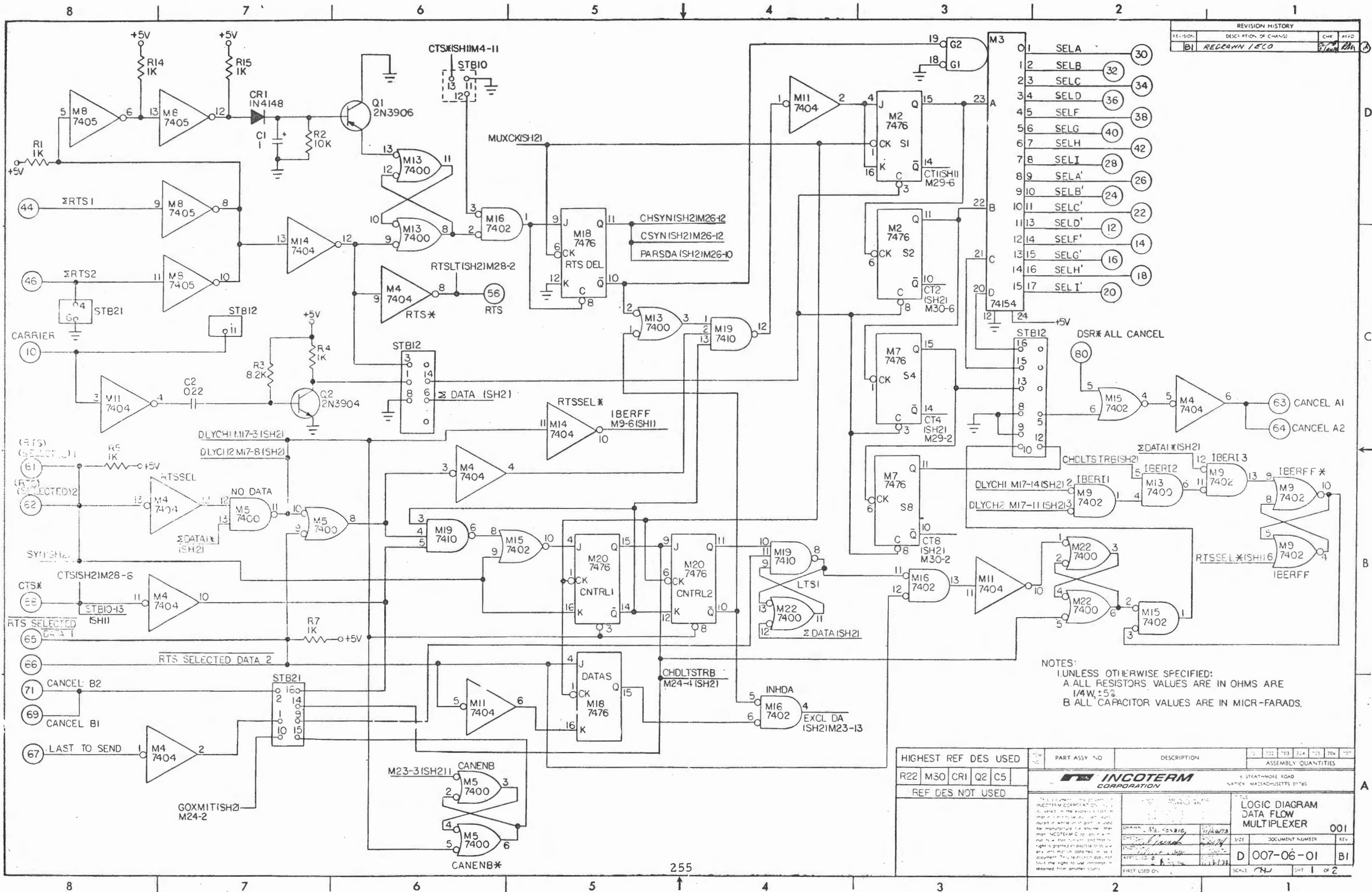
**COMPONENT SIDE**

**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.  
 2. LOCATE IN APPROXIMATE AREA SHOWN,  
 REVISION LABEL, ITEM 37 AND MARK  
 ASSY NO. 007-06-02-701 AND LATEST  
 ASSEMBLY REVISION.

ASSEMBLE WITH ARTWORK 007-06-03-701 REV. B

ITEM NO.	REFERENCE DESIGNATION
33	R16,17,18,19,20,21
32	M28,29,30
24	CR1
23	STB10,12,21
22	Q2
21	Q1
20	C1
19	C2
18	C5
17	C3,4
16	C6,7
15	R2
14	R3
13	R12
12	R8,9
11	R1,4,5,6,7,10,11,13,14,15
10	M3
9	M1,2,6,7,17,18,20
8	M27
7	M26
6	M19,24
5	M8
4	M4,11,14
3	M23
2	M9,15,16
1	M5,13,22,25

		800 Memorial Drive Needham Heights, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS .005 (3PLCS) ANGLES 2°		<b>P.C. BOARD ASSY</b> DATA FLOW BOARD MULTIPLEXER 701B	
DR	DATE	SIZE	PC SS NO. REV
CHK			
ENG			
APPD			
NEXT ASSY 010-10-06-11		SCALE 1:1	SHT 5 OF 5



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHEK	APPRO
B1	REDRAWN 1/60		

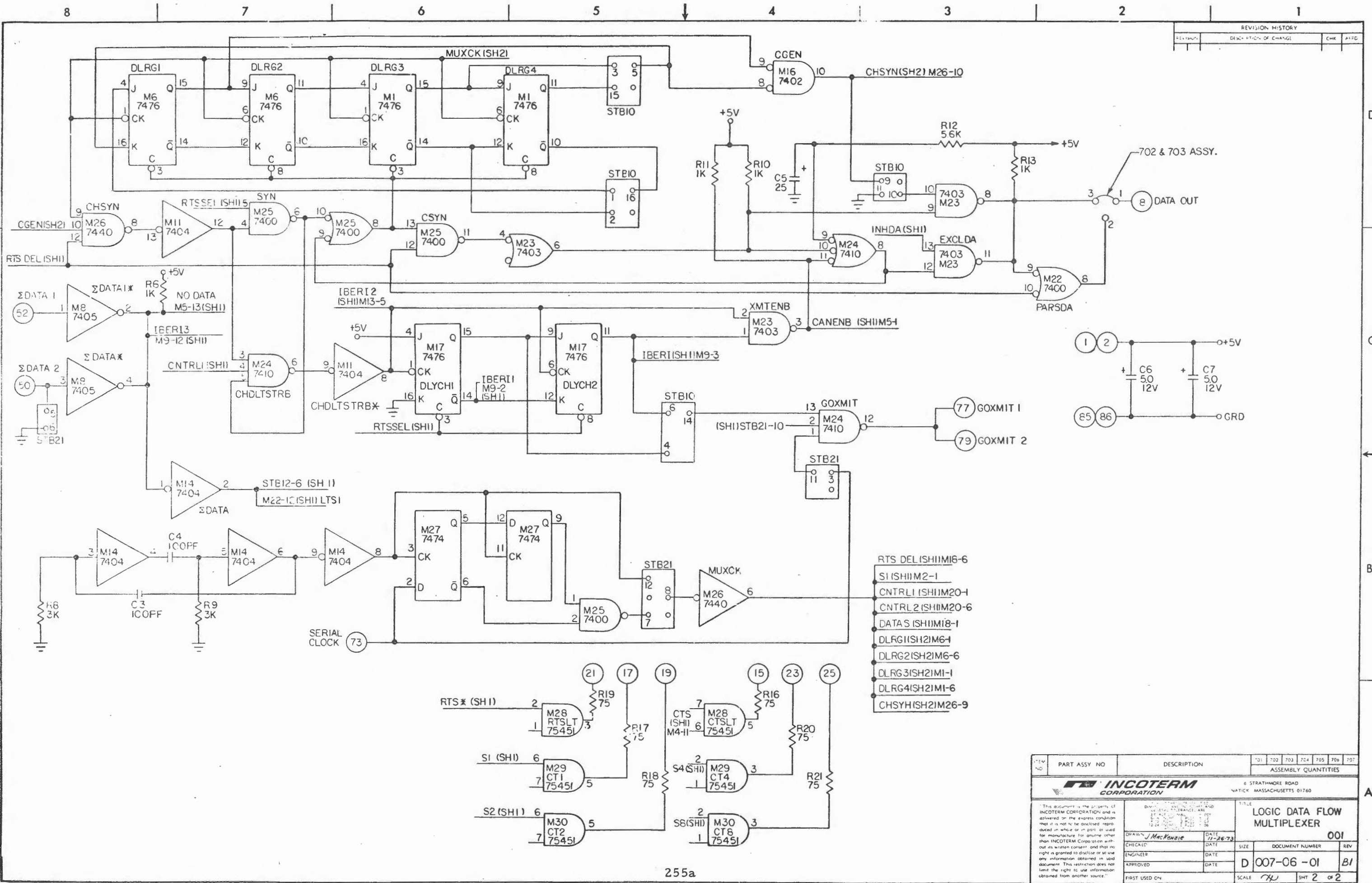
NOTES:  
 1. UNLESS OTHERWISE SPECIFIED:  
 A. ALL RESISTOR VALUES ARE IN OHMS ARE 1/4W ±5%  
 B. ALL CAPACITOR VALUES ARE IN MICR-FARADS.

HIGHEST REF DES USED	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES						
R22 M30 CRI Q2 C5			10	200	103	204	205	206	207
REF DES NOT USED									

INCOTERM CORPORATION		5 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760	
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DRAWN: M. J. KANE DATE: 11/16/73	CHECKED: [Signature] DATE: 11/17/73	SIZE: [Blank] DOCUMENT NUMBER: D 007-06-01	REV: B1 SHEET: 1 of 2

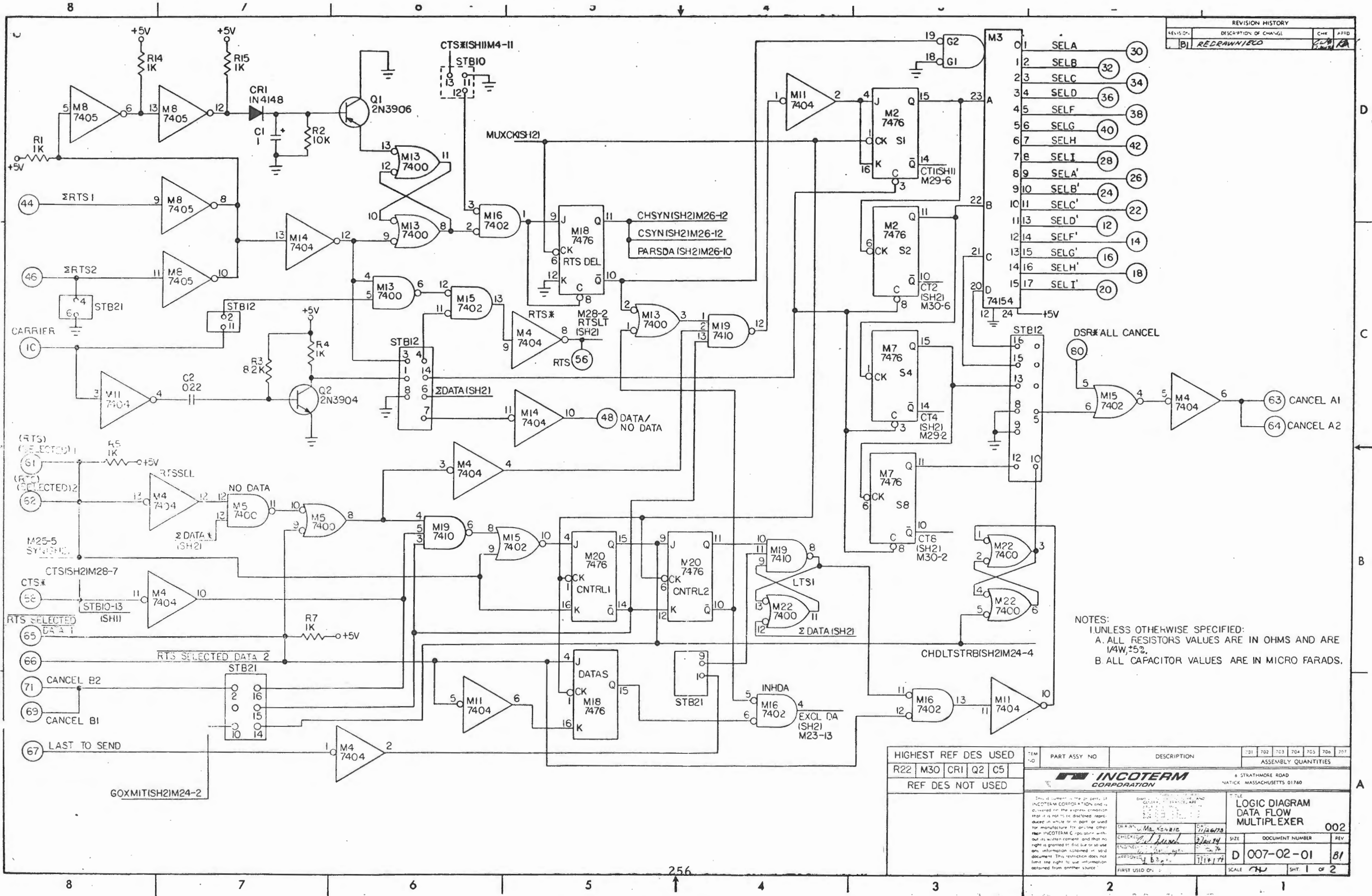
REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHKD.	DATE



- RTS DEL ISH11M16-6
- SI ISH11M2-1
- CNTRL1 ISH11M20-1
- CNTRL2 ISH11M20-6
- DATA5 ISH11M18-1
- DLRG1 ISH21M6-1
- DLRG2 ISH21M6-6
- DLRG3 ISH21M1-1
- DLRG4 ISH21M1-6
- CHSYH ISH21M26-9

ITEM NO.	PART ASSY NO.	DESCRIPTION	701	702	703	704	705	706	707
		INCOTERM CORPORATION 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760							
		TITLE <b>LOGIC DATA FLOW MULTIPLEXER</b>		ASSEMBLY QUANTITIES					
		DRAWN: J. MacKenzie		DATE: 7-26-73		SCALE: 1/1			
		CHECKED:		DATE:		SIZE: D		DOCUMENT NUMBER: 007-06-01	
		ENGINEER:		DATE:		REV: B1		SHT 2 of 2	
		APPROVED:		DATE:		FIRST USED ON:			

255a



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
B1	REDRAWN/ECO		

01	SELA	30
12	SELB	32
23	SELC	34
34	SELD	36
45	SELF	38
56	SELG	40
67	SELH	42
78	SELI	28
89	SELA'	26
910	SELB'	24
1011	SELC'	22
1113	SELD'	12
1214	SELF'	14
1315	SELG'	16
1416	SELH'	18
1517	SELI'	20

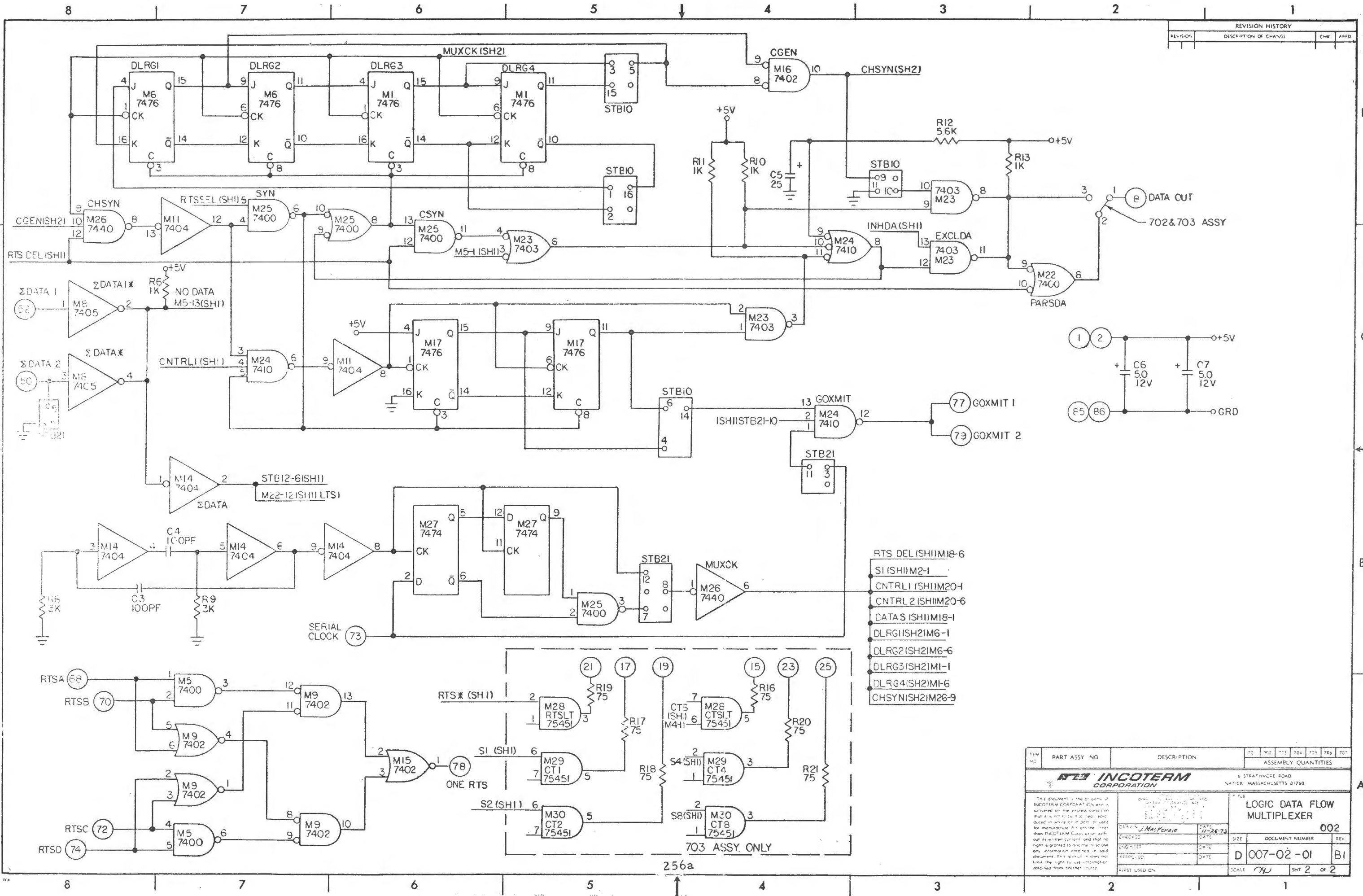
NOTES:  
 1. UNLESS OTHERWISE SPECIFIED:  
 A. ALL RESISTORS VALUES ARE IN OHMS AND ARE 1/4W, ±5%.  
 B. ALL CAPACITOR VALUES ARE IN MICRO FARADS.

HIGHEST REF DES USED		TEAM NO	PART ASSY NO	DESCRIPTION	Q31	Q2	Q3	Q4	Q5	Q6	Q7
R22	M30	CRI	Q2	C5							
REF DES NOT USED											

		8 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740	
TITLE <b>LOGIC DIAGRAM          DATA FLOW          MULTIPLEXER</b>		002	
CHECKED BY: <i>[Signature]</i> DATE: 11/26/78	SIZE:	DOCUMENT NUMBER:	REV:
FIRST USED ON:	SCALE:	SHEET: 1 OF 2	

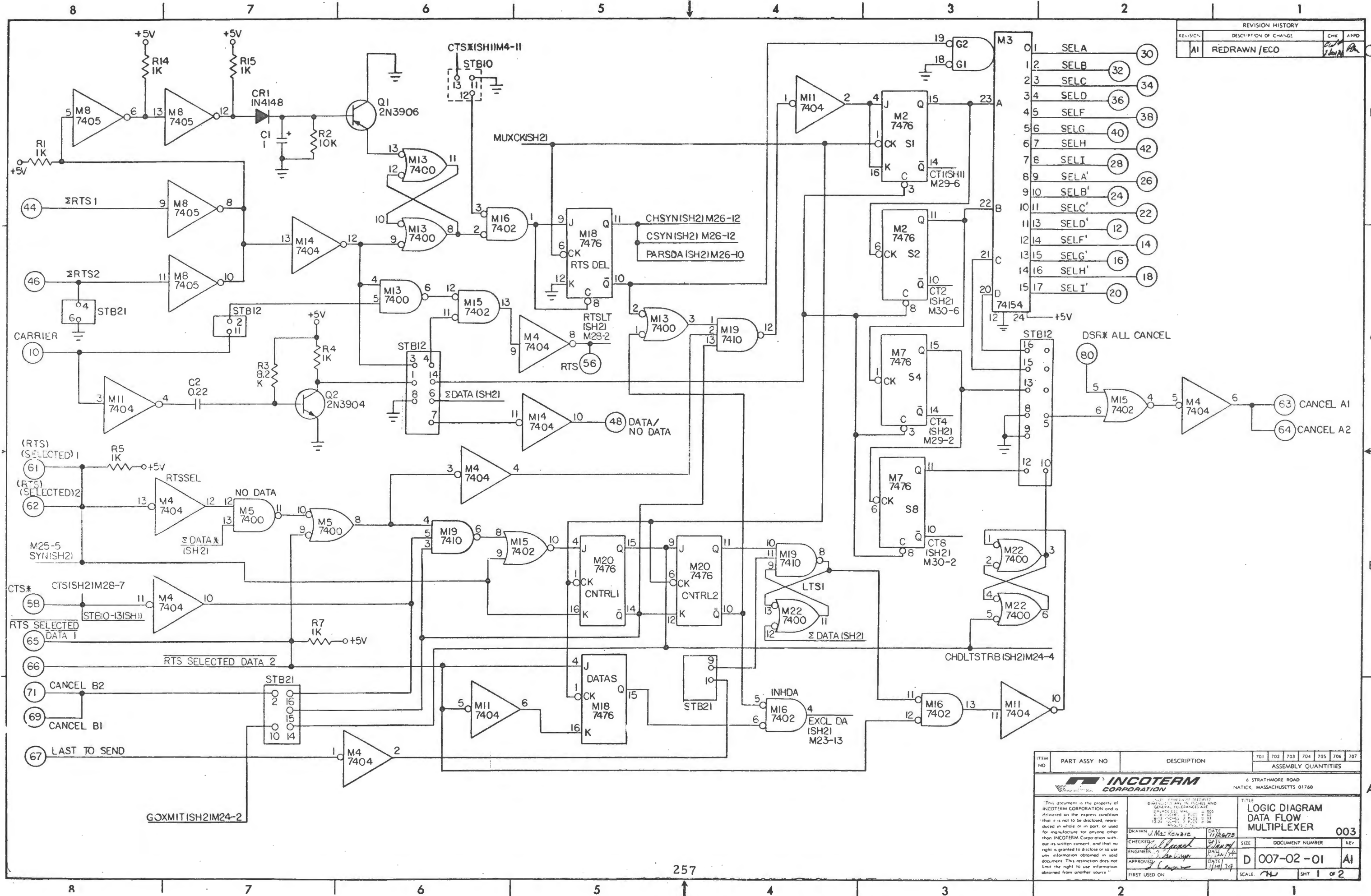
REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD



- RTS DEL (SH1) M18-6
- SI (SH1) M2-1
- CNTRL1 (SH1) M20-1
- CNTRL2 (SH1) M20-6
- DATA S (SH1) M18-1
- DLRG1 (SH2) M6-1
- DLRG2 (SH2) M6-6
- DLRG3 (SH2) M1-1
- DLRG4 (SH2) M1-6
- CHSYN (SH2) M26-9

REV. NO.	PART ASSY NO.	DESCRIPTION	ASSEMBLY QUANTITIES						
			70	702	703	704	705	706	707
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740						
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CHECKED: J. MacFenise ENGINEER:		DATE: 7/1-26-73		SIZE:		DOCUMENT NUMBER:		REV:	
APPROVED:		DATE:		SCALE: 7/1		SHT 2 OF 2		BI	
FIRST USED ON:			SCALE: 7/1		SHT 2 OF 2		BI		

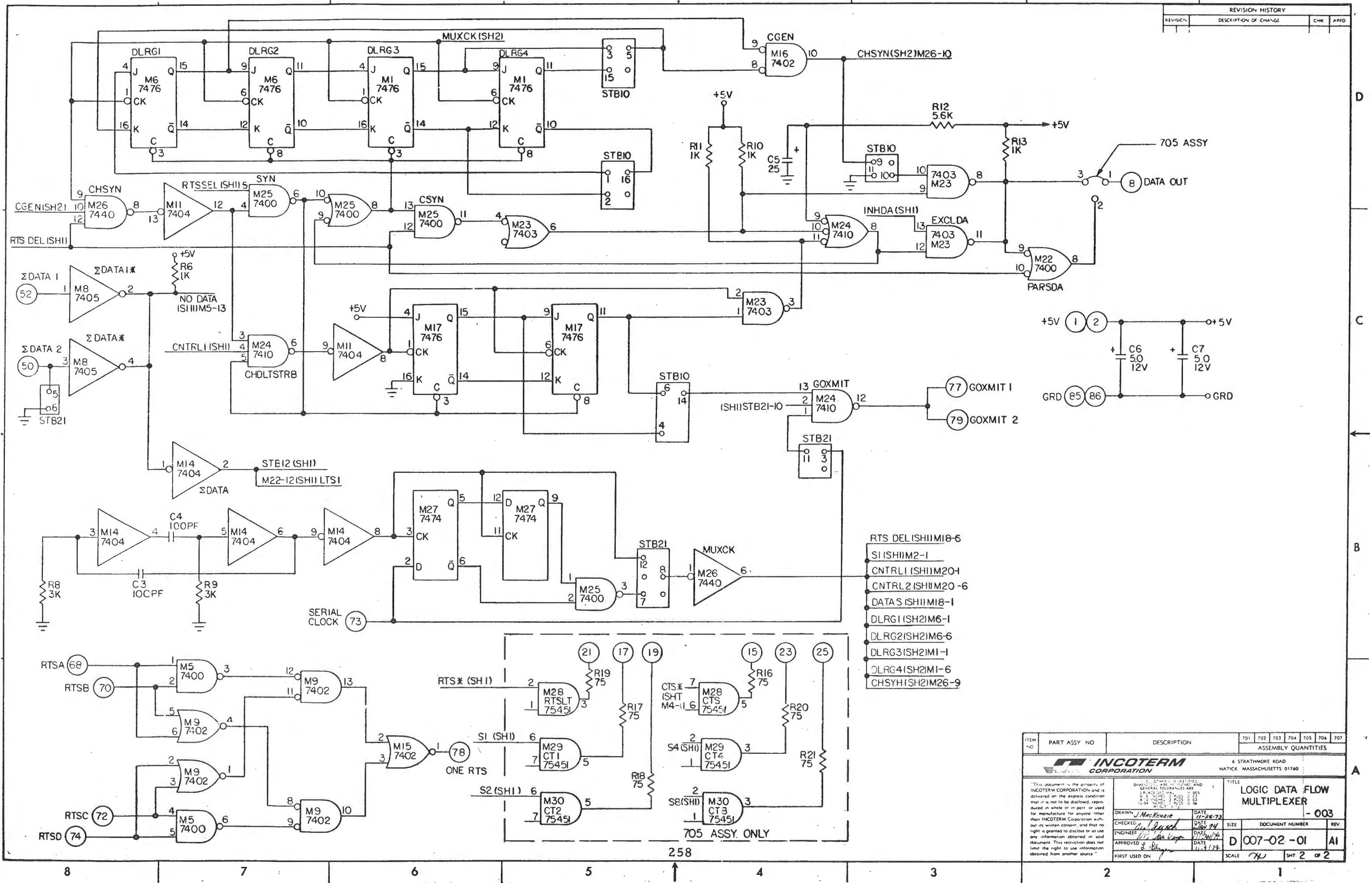




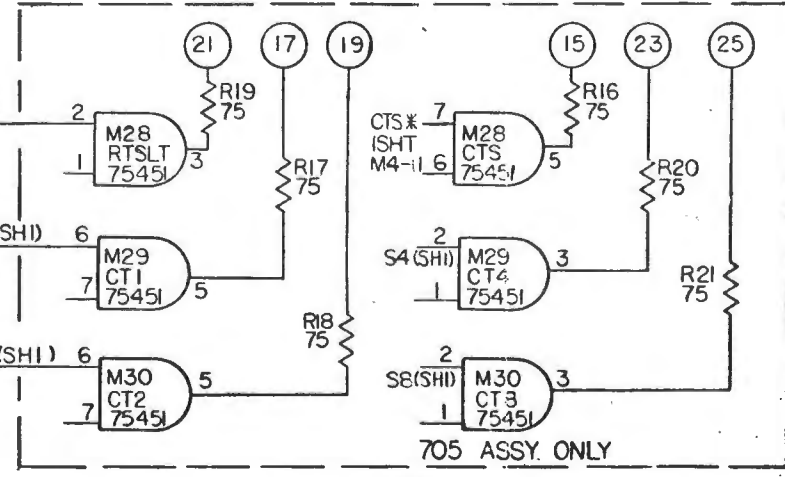
REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD
A1	REDRAWN / ECO	J. MacKenzie	[Signature]

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD, NATICK, MASSACHUSETTS 01760						
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<small>DRAWN: J. MacKenzie</small> <small>CHECKED: [Signature]</small> <small>ENGINEER: [Signature]</small> <small>APPROVED: [Signature]</small> <small>FIRST USED ON: 1/18/78</small>	<small>DATE: 1/18/78</small> <small>SIZE: 11x17</small> <small>DOCUMENT NUMBER: 003</small>	<small>DATE: 1/18/78</small> <small>SIZE: 11x17</small> <small>DOCUMENT NUMBER: 003</small>							

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

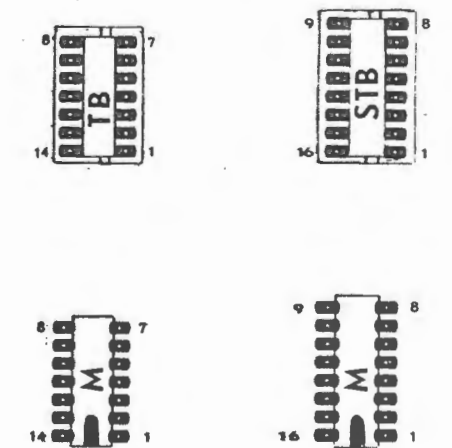
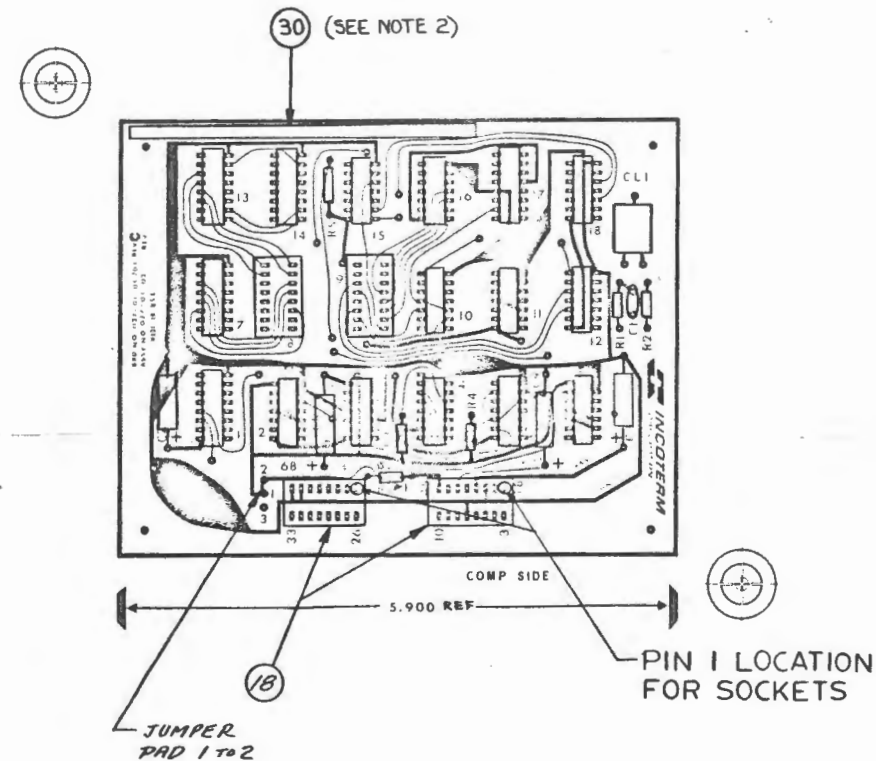


- RTS DEL ISH1 M18-6
- SI ISH1 M2-1
- CNTRL1 ISH1 M20-1
- CNTRL2 ISH1 M20-6
- DATA S ISH1 M18-1
- DLRG1 ISH2 M6-1
- DLRG2 ISH2 M6-6
- DLRG3 ISH2 M1-1
- DLRG4 ISH2 M1-6
- CHSYH ISH2 M26-9



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760						
TITLE <b>LOGIC DATA FLOW MULTIPLEXER</b>			- 003						
DRAWN: J. MacKenzie CHECKED: [Signature] ENGINEER: [Signature] APPROVED: [Signature]			DATE: 11-26-73		SIZE:		DOCUMENT NUMBER:		REV:
FIRST USED ON:			DATE: 11-29-74		SCALE: 7/8		SHEET: 2 of 2		AI

8 7 6 5 4 3 2 1



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**  
ASSEMBLE WITH ARTWORK 027-01-02-703C REV C

- NOTE:**
- HEIGHT LIMITATIONS.**  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
  - LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 30, AND MARK ASSY. NO. 027-01-02-703C AND LATEST ASSY. REVISION.
  - THIS ASSEMBLY DRAWING REPLACES THE ASSEMBLY DRAWING USING REVISION 'B' ARTWORK. (BOARDS NEVER PURCHASED AT ARTWORK REVISION 'B')

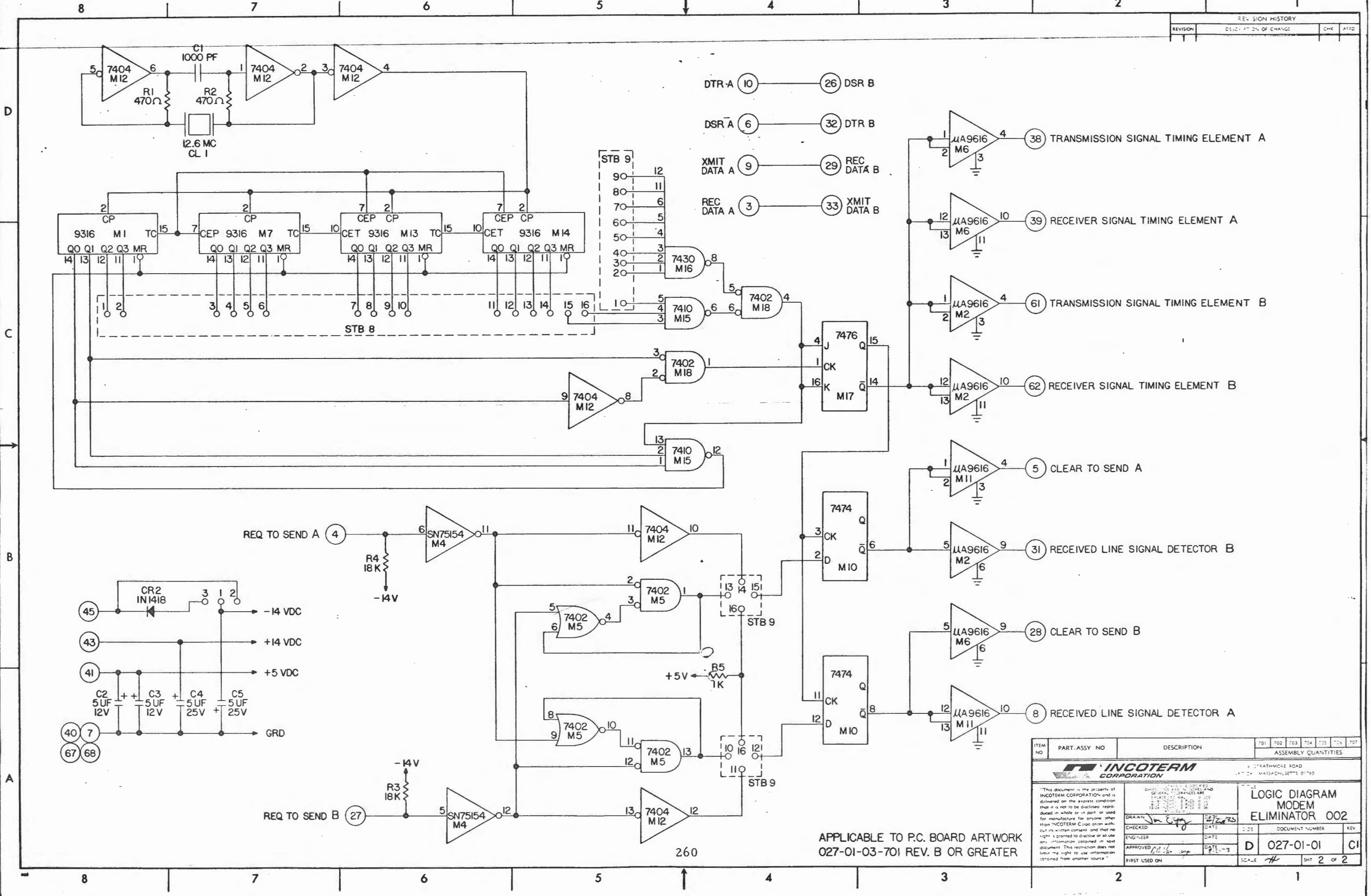
29	R3,R4
28	CR2
27	M4
26	M2,M6,M11
25	
24	
23	C4,C5
22	C2,C3
21	CI
20	CR1
19	Q1
18	STB8, STB9
17	R6
16	P5
15	R3,R4
14	R1,R2
13	CL1
12	M1,M7,M13,M14
11	M4
10	M2,M3,M6,M11
9	M17
8	M10
7	M16
6	M15
5	M12
4	M5,M18
3	
2	
1	

100 REFERENCE DESIGNATION

		Papee Memorial Drive Warborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) ANGLES .02 (2PLCS)		P.C. BOARD ASSY MODEM ELIMINATOR	
DR	DATE	SIZE	NO.
ENG	DATE	D	703C
APPD	DATE	027-01-02	A6
NEXT ASSY 027-10-D-703		SCALE 1:1	SHT 2 OF 2

8 7 6 5 4 3 2 1

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



APPLICABLE TO P.C. BOARD ARTWORK  
027-01-03-701 REV. B OR GREATER

ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES					
			701	702	703	704	705	707
			17 BATHMOORE ROAD LYNN, MASSACHUSETTS 01904					
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DRAWN	DATE	CHECKED	DATE	ENGINEER	DATE	APPROVED	DATE	FIRST USED ON
<i>Jim City</i>	2/27/73							
D 027-01-01			CI		260			

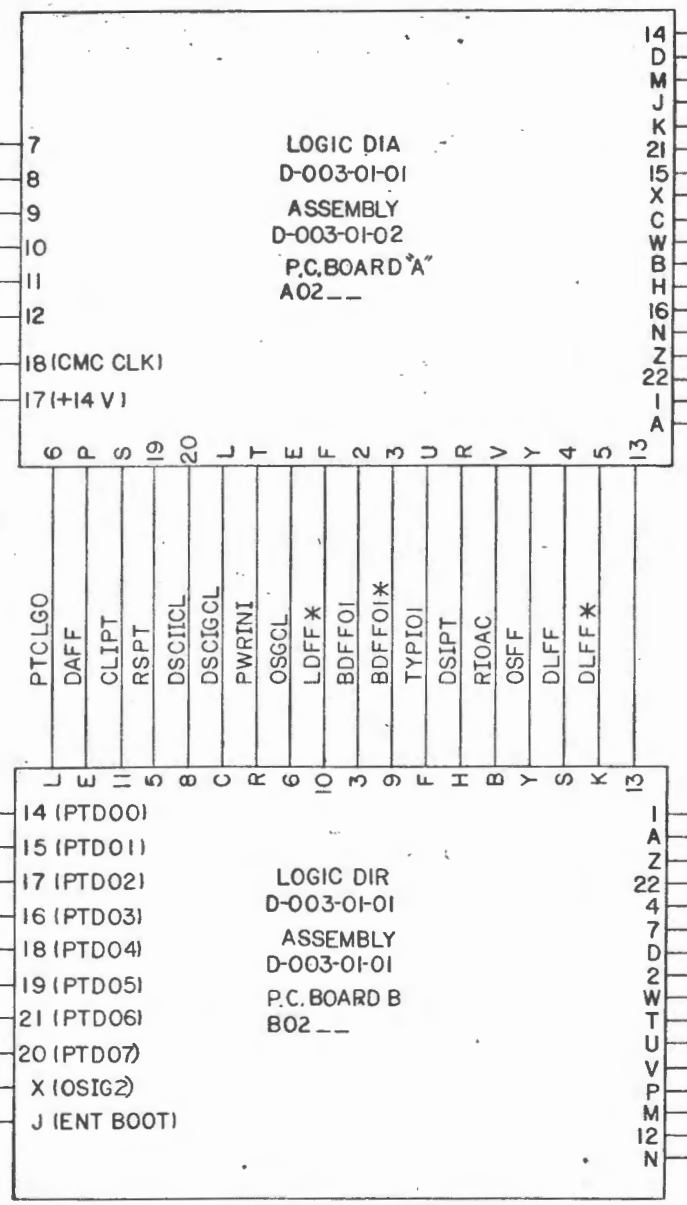
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
1A1	REV. & REDRAWN/ECO 2643		

50 PIN CONNECTOR  
D01 --

- 35 018N.
- 36 C9
- 34 CPT02N
- 19 TYP00
- 21 TYP01
- 37 TURT4
- 24 FUNC02
- 26 FUNC03
- 31 INTSELIN
- 27 ACKNOWLEDGE
- 32 INTSELOUT
- 30 INTX
- 38 +14V
- 28 XX
- 40 GND
- 2 GND
- 1 +5V
- 3
- 5
- 7
- 9
- 11
- 13
- 15
- 17
- 23
- 33
- 39
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 41 GND
- 25 RESET
- 20 FUNC00
- 22 FUNC01
- 29 BOOT
- 4 INBO0
- 6 INBO1
- 8 INBO2
- 10 INBO3
- 12 INBO4
- 14 INBO5
- 16 INBO6
- 18 INBO7

SPARE PINS

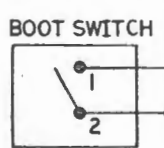
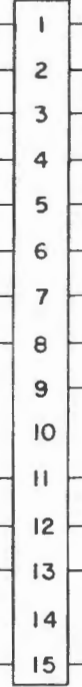
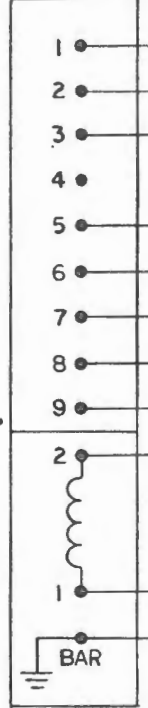
B0223  
CHASSIS GND



SPARE PINS

PAPER TAPE READER

C02 --  
MOLEX  
CONN.

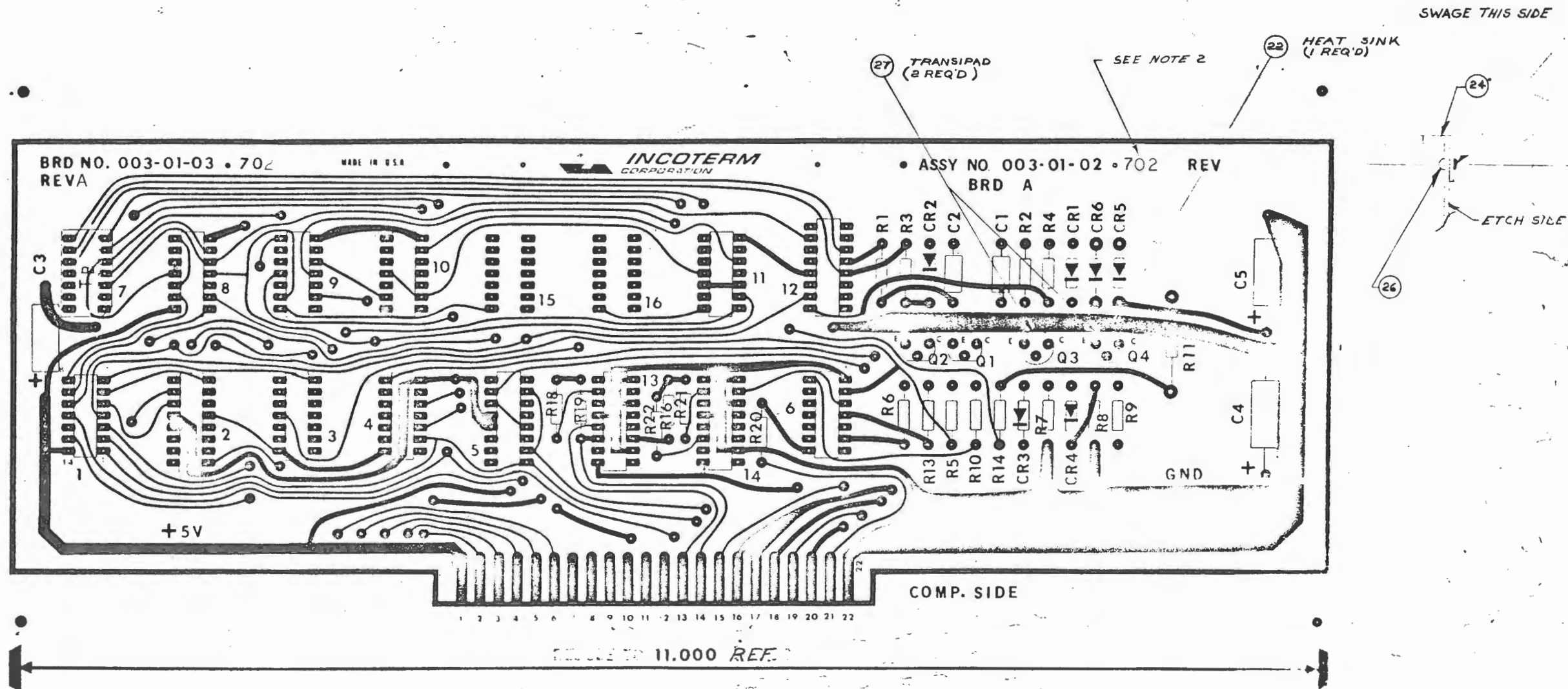


WIRE LIST  
A-003-10-23

NOTES:  
1. UNLESS OTHERWISE SPECIFIED ALL RESISTORS 1/4W

ITEM NO	PART/ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
INCOTERM CORPORATION 4 STRATHMORE ROAD WATICK, MASSACHUSETTS 01780									
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DRAWN W AMES		DATE 9-9-75		TITLE PAPER TAPE INPUT UNIT 002		SCALE NONE		SHT 1 OF 4	
CHECKED JCC		DATE 9-9-75		DOCUMENT NUMBER D 003-01-01		REV A1		FIRST USED ON	

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 7-29-71 RD# 238		
A1	REV. CHANGE ONLY/ECO 2378		
A2	REV. CHANGE ONLY/ECO 2477		

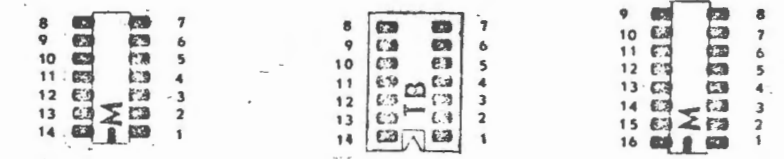
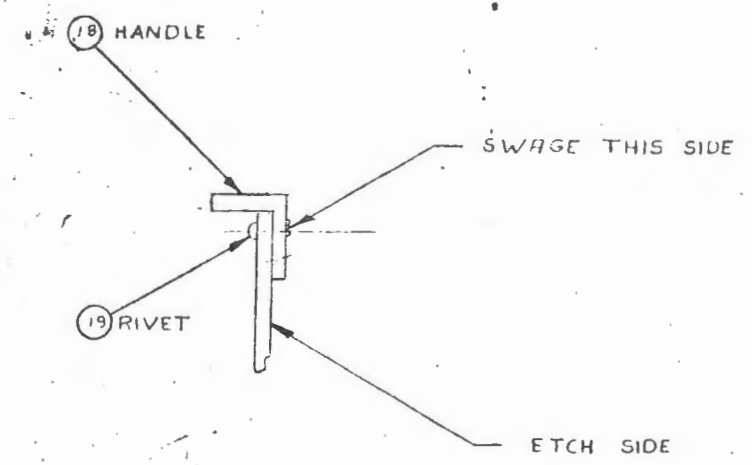
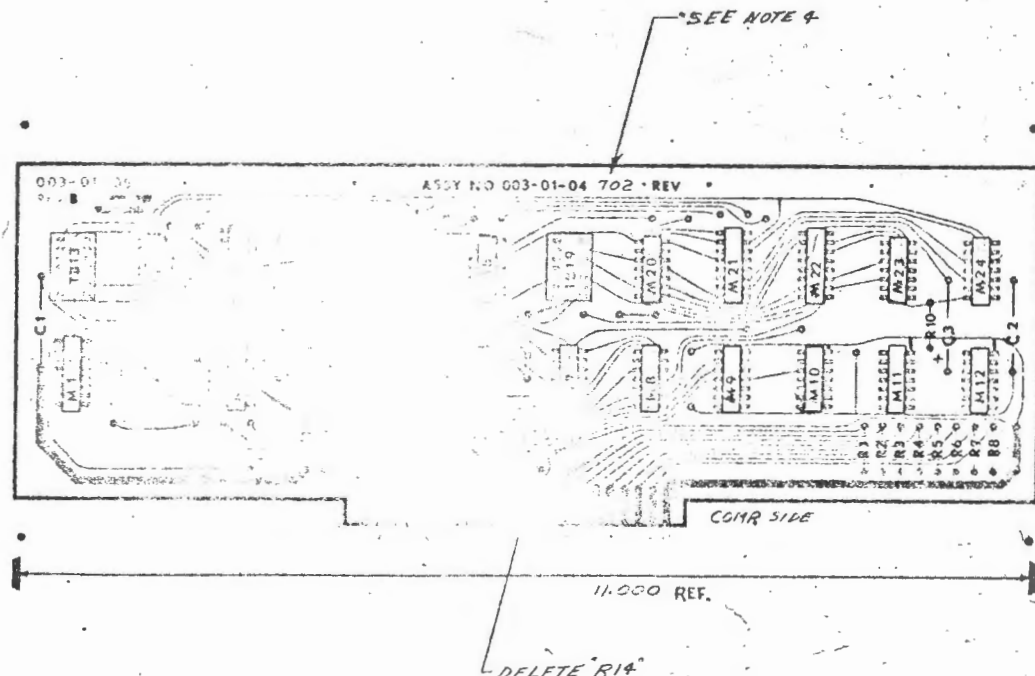


NO	DESIGNATION
32	M13, M14
31	R16, R19, R20, R21, R22
27	TRANSIPAD (Q3, Q4)
22	HEAT SINK (Q4)
21	C5
20	C1, C2
19	C3, C4
17	R11
16	R10
15	R3, R4
14	R1, R2
13	R5-R9, R13, R14
12	CR6
11	CR5
10	CR1-CR4
9	Q3, Q4
8	Q1, Q2
7	TB7
6	M2, 5, 12
5	M10, 11
4	M6
3	M3, 4
2	M9
1	M1, 8

NOTE:  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.  
 2. MARK .12 HIGH VERTICAL GOTHIC CHARACTERS  
 (BLACK) USING ACRYLIC BASE INK.

INCOTERM CORPORATION		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (2PLCS) .02 (2PLCS) ANGLES 2°		TITLE P.C. BOARD ASSY PAPER TAPE BOARD "A" 702	
DR	DATE	SIZE	P.C. S.S. NO. REV
CHK	DATE	D	003-01-02 A2
ENG	DATE		
APPD	DATE		
NEXT ASSY 10-31-202		SCALE 2:1	SHT 1 OF 1

REVISIONS				
REV	DESCRIPTION	238	CHK	APPD
A	RELEASED 4-29-71			
AI	ECO 2113 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-DD2. SEE SHEET 1 FOR CONTINUING REVISION ASSIGNMENT HISTORY.			



- NOTES:
- MARK .12 HIGH VERTICAL GOTHIC (BLACK) CHARACTERS USING ACRYLIC BASE INK.
  - COMPONENT TERMINATING LEADS TO BE CLINCHED OR NON-CLINCHED PRIOR TO SOLDERING.
  - MAXIMUM HEIGHT OF LEAD PROTRUSIONS CLINCHED OR NON-CLINCHED TO BE .080 MAX.
  - COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUGS, ETC.

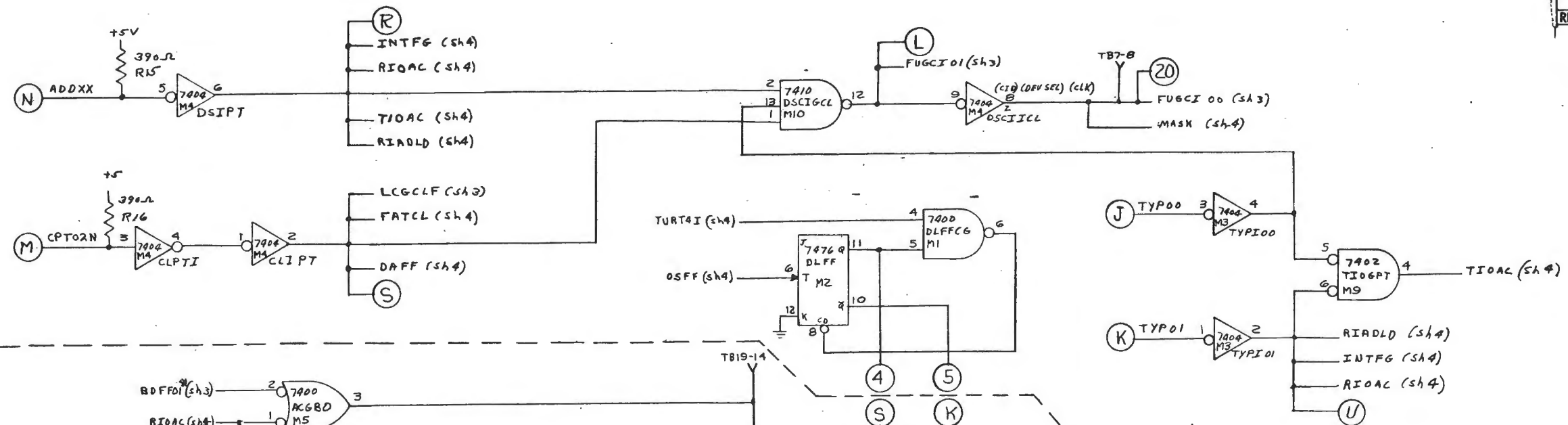
1	STE 1130	C1, C2, C3
2	PERCOTGF 562J	R10
3	RSPCOTGF 102J	R11, R12, R13
4	PERCOTGF 104J	R1-R8
5	EC6354-235-5	TB13, TB19
6	ICSN 7476N	M1, M2, M15
7	ICSN 7475N	M3, M8
8	ICSN 7420N	M9, M20
9	ICSN 7410N	M6, M4, M17
10	ICSN 7405N	M5
11	ICSN 74104N	M11, M12
12	ICSN 74014N	M3, M7, M22, M24
13	ICSN 7402N	M9, M10
14	ICSN 7405	M16
15	ICSN 7405N	M4, M5
16	ICSN 7405N	M4, M5

MAKE FROM 003-01-04-701 BY REMOVING R14

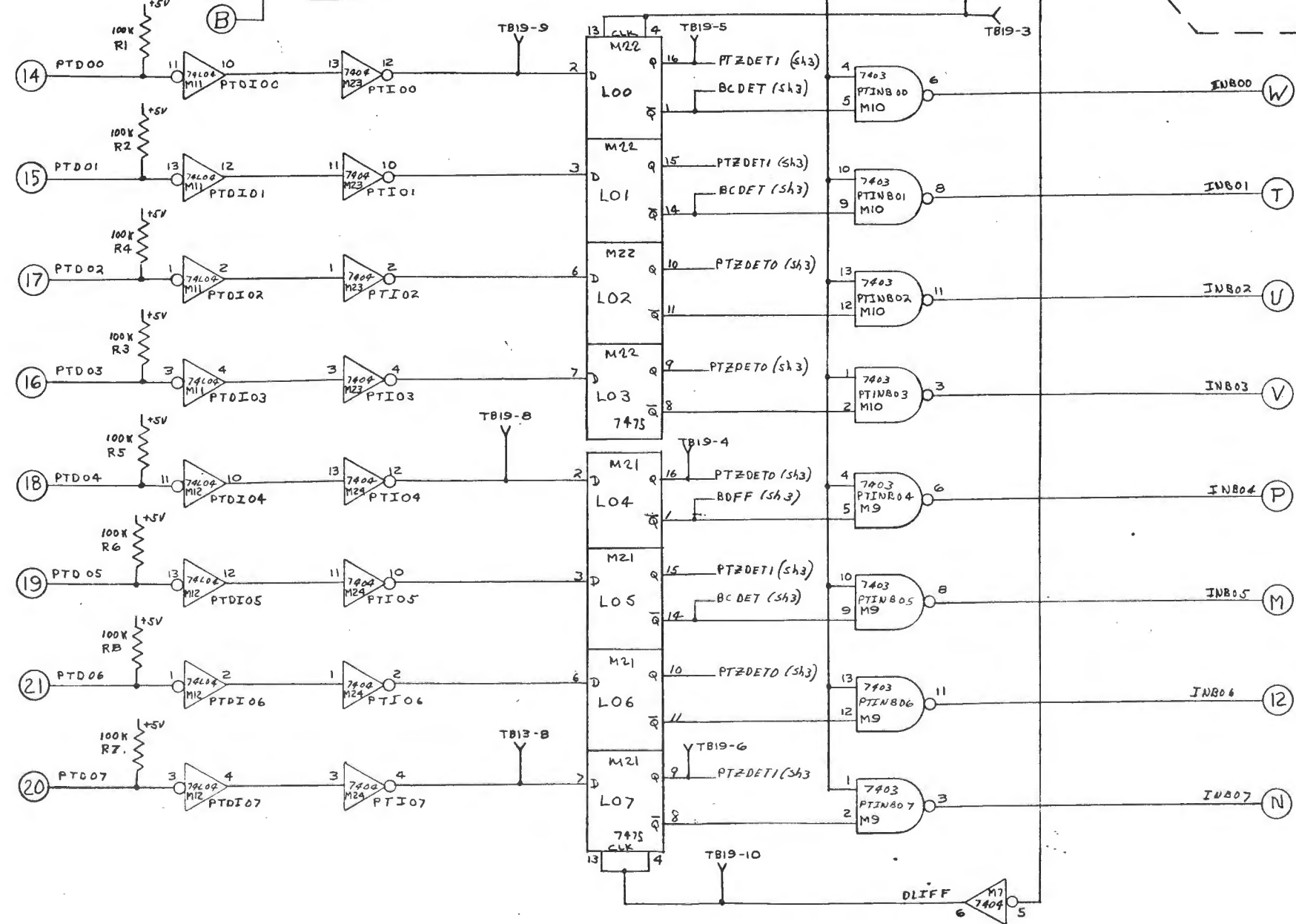
ASSEMBLE WITH ARTWORK 003-01-05-701 REV. B

INTERNATIONAL COMPUTER TERMINALS CORP.		TITLE			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TO 3 DECIMALS ± .005 (3 PLCS) ANGLES ± 2°		PC BRD ASSY BOARD B PAPER TAPE 702			
DR	DATE	SIZE	P.C.	S.S.	NO. REV
CHK		D			003-01-04 AS
ENG					
APPR					
DATE TEST	003-01-01-002	SCALE	1:1	SHT	2 OF 2

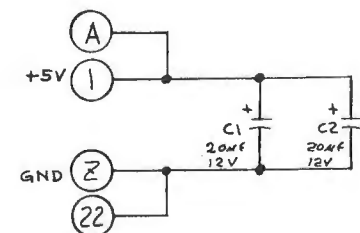
REVISIONS			
REV	DESCRIPTION	CHK	APPD



BOARD "A"



BOARD "B"

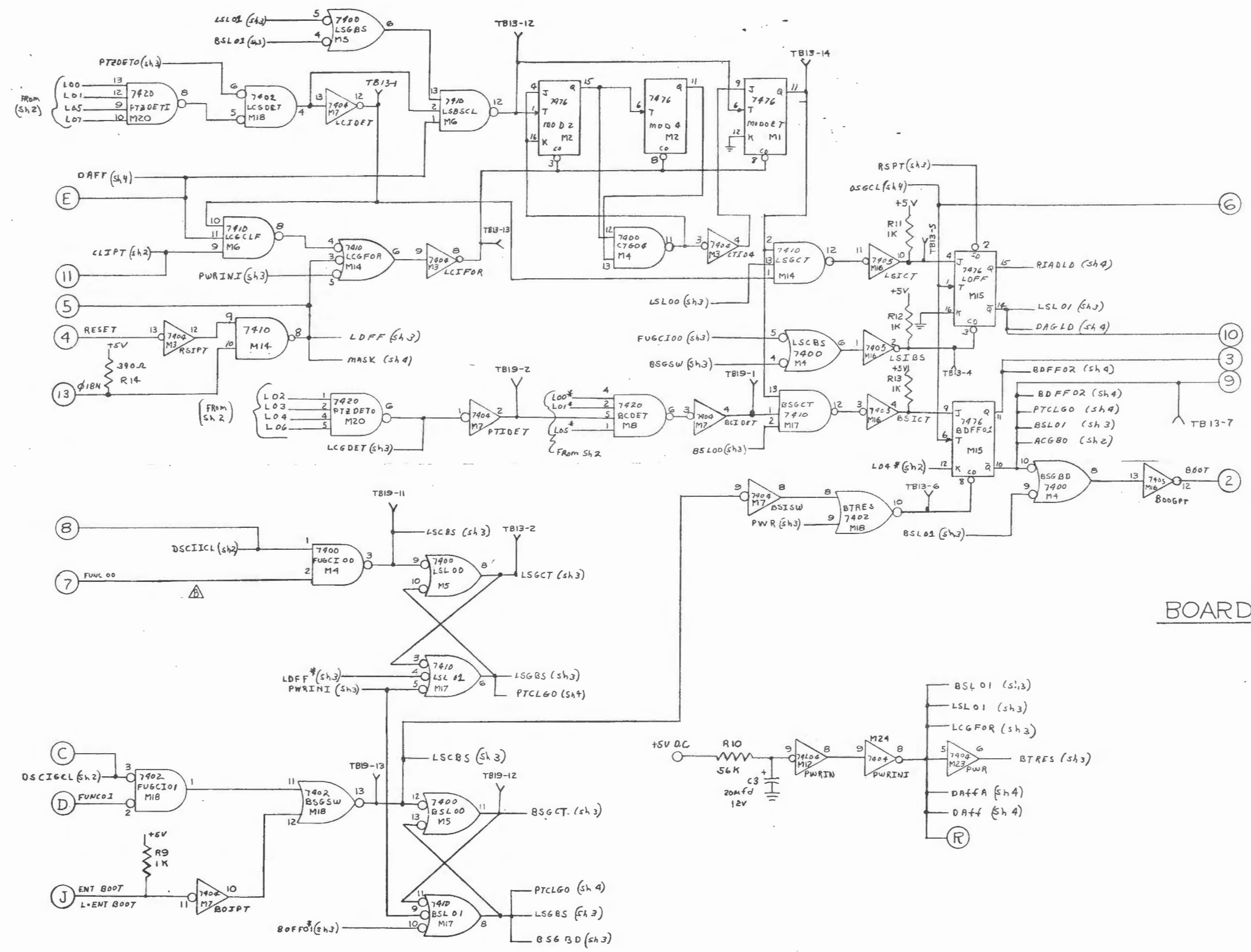


INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ANGLES ± 2°			TITLE PAPER TAPE INPUT UNIT 001		
DR	DATE	SIZE	P.C.	S.S.	NO.
CHK					
ENG					
APPD		D	003-01-01	B	
NEXT ASSY		SCALE	1/1	SHT	2 OF

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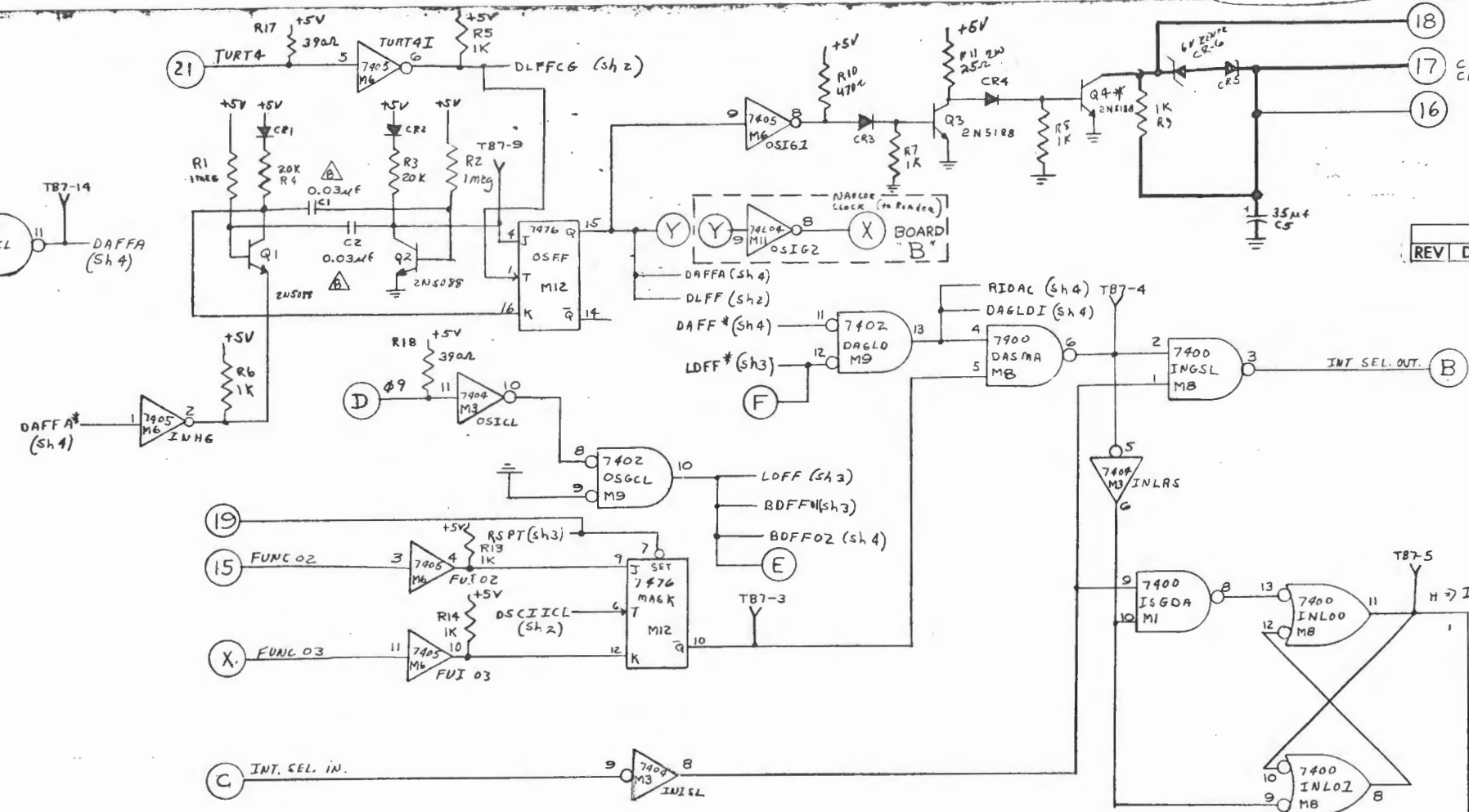
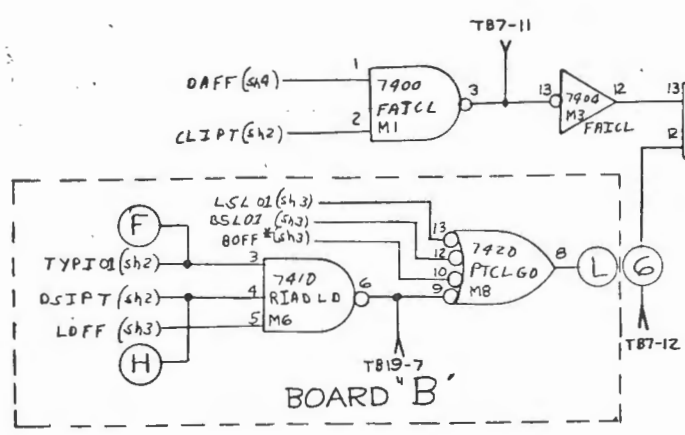
REVISIONS			
REV	DESCRIPTION	CHK	APPD



BOARD "B"

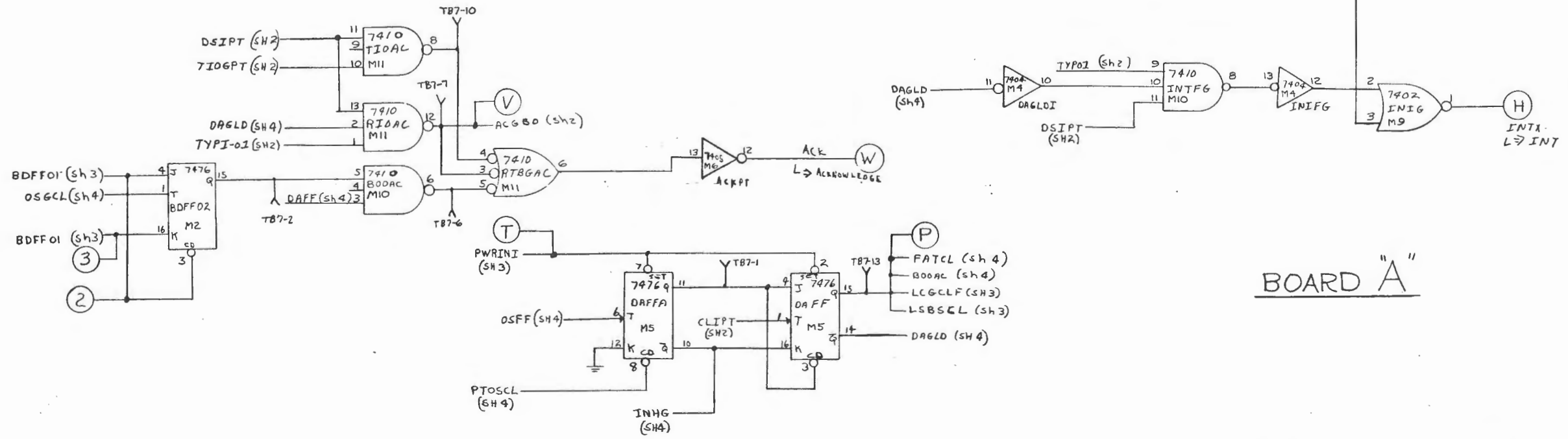
INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:			TITLE		
DECIMALS ± .005 (3PLCS)			PAPER TAPE		
ANGLES ± 2°			INPUT UNIT		
DR	DATE	NO.	REV	001	
CHK	ENG	SIZE	P.C.	S.S.	NO.
APPD		D	003-01-01	B	
NEXT ASSY	SCALE	SHT 3 OF 4			

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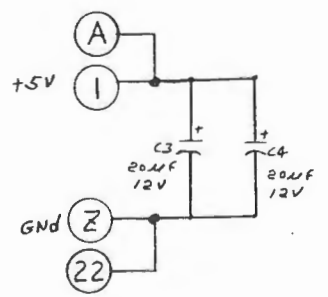


REVISIONS			
REV	DESCRIPTION	CHK	APPD

\* This TRANSISTOR REQUIRES A HEAT SINK

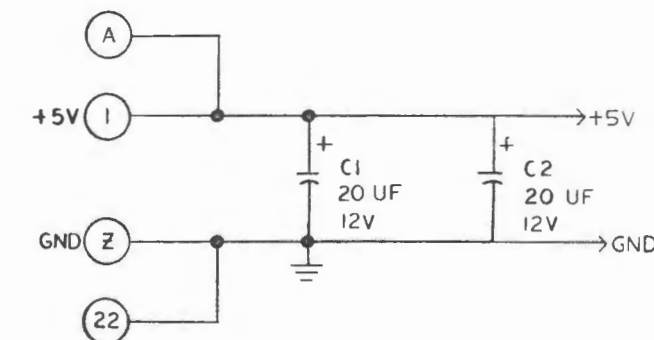
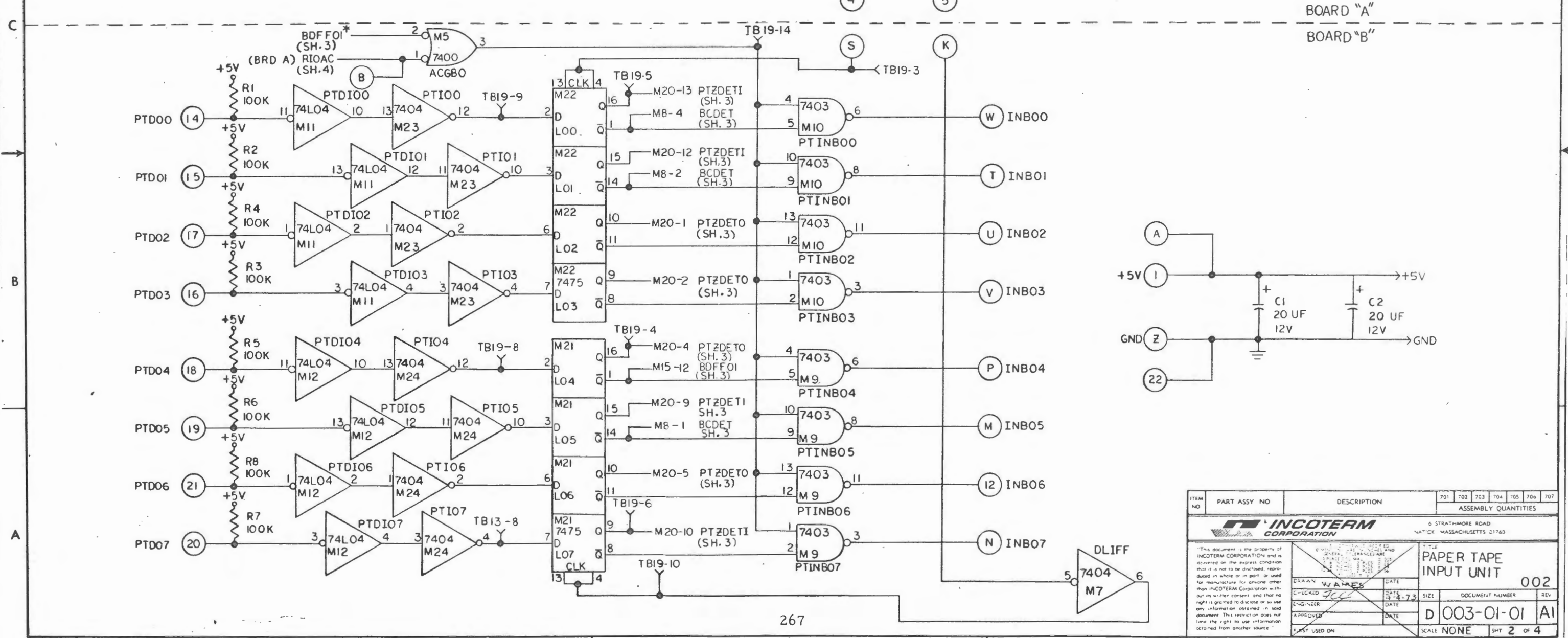
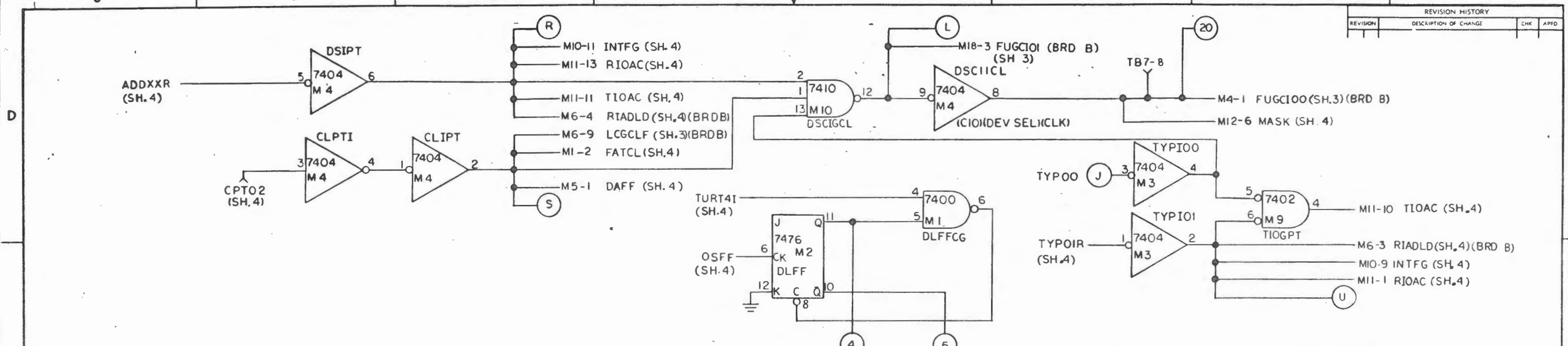


BOARD "A"



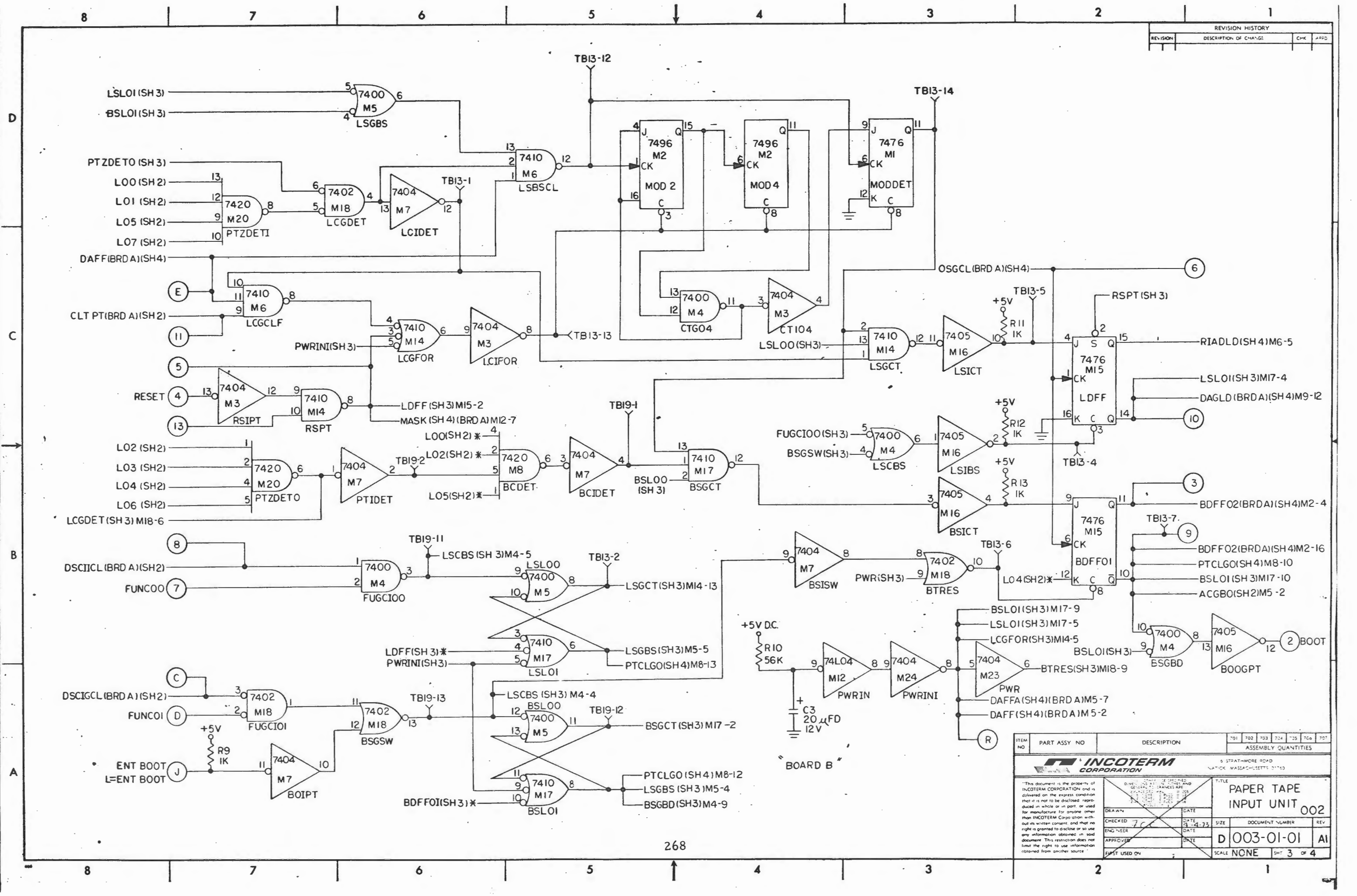
INTERNATIONAL COMPUTER TERMINALS CORP.							
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				TITLE			
TOLERANCES ON:				PAPER TAPE			
DECIMALS ± .005 (3 PLS)				INPUT UNIT			
ANGLES ± 2°				001			
DR	DATE	SIZE	P.C.	S.S.	NO.	REV	
CHK							
ENG							
APPD							
NEXT ASSY							

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



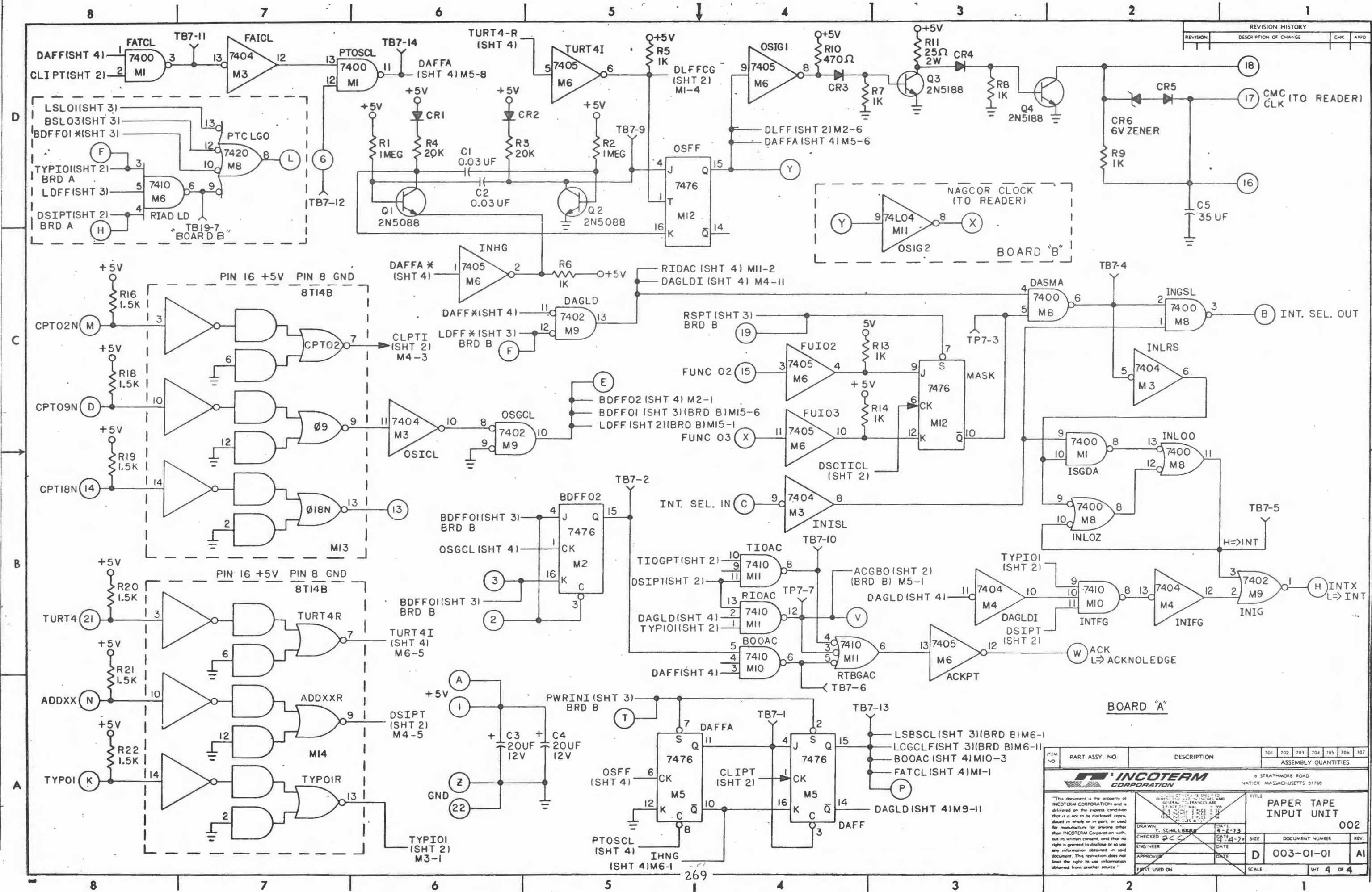
ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b>									
6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
DRAWN <i>WAMES</i>		DATE	FILE						
CHECKED <i>JCL</i>		DATE	PAPER TAPE INPUT UNIT						
APPROVED		DATE	SIZE	DOCUMENT NUMBER	REV	002			
FIRST USED ON		DATE	D 003-01-01		AI	SCALE NONE SHT 2 OF 4			

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



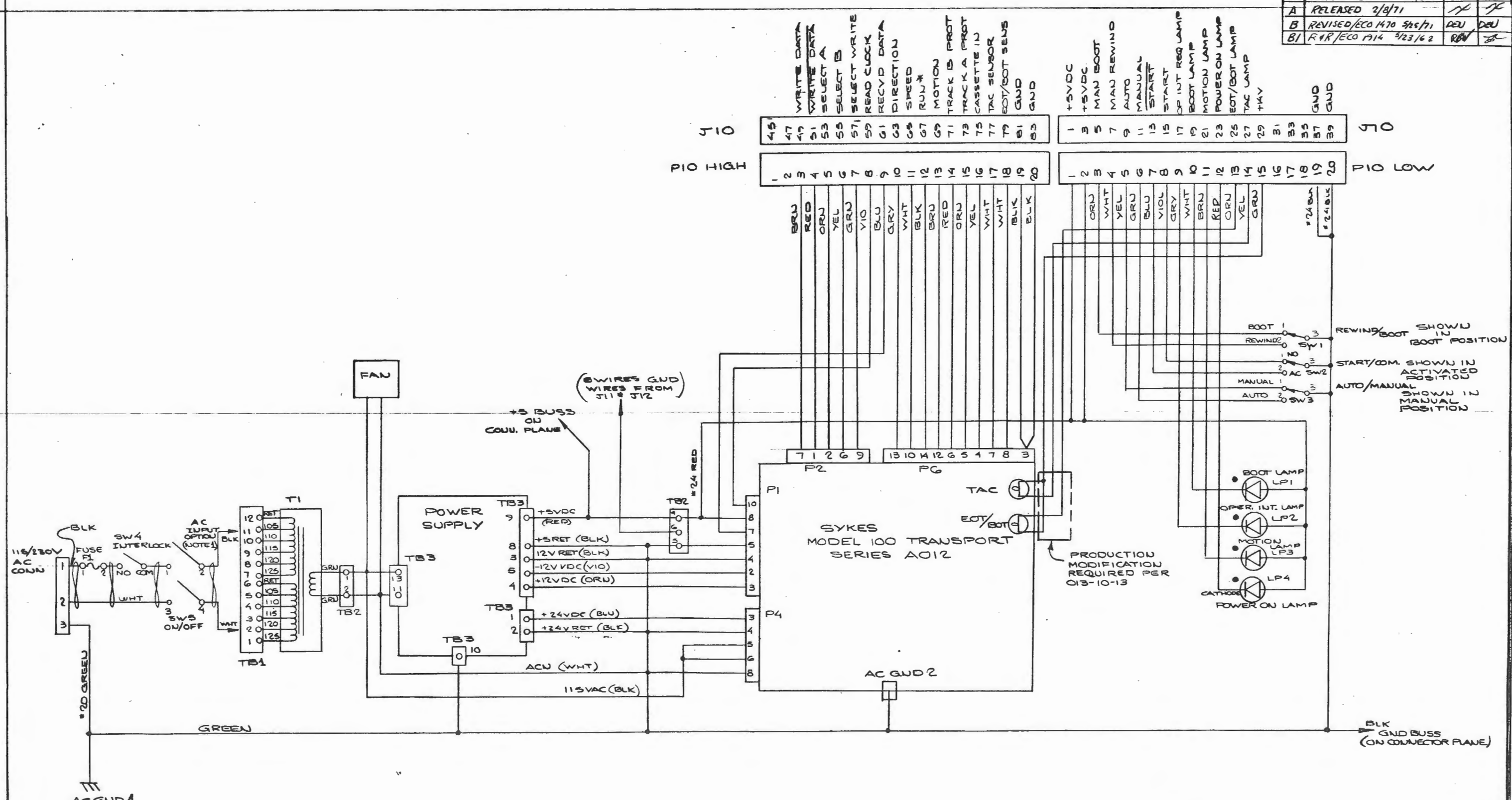
ITEM NO.	PART ASSY NO.	DESCRIPTION	ASSEMBLY QUANTITIES						
			701	702	703	704	705	706	707
			5 SPAT-MORE ROAD NATICK, MASSACHUSETTS 01453						
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DRAWN <b>7C</b>			CHECKED <b>7C</b>		DATE <b>7-4-75</b>		DATE <b>7-4-75</b>		REV <b>A1</b>
APPROVED <b>[Signature]</b>			DATE <b>7-4-75</b>		DATE <b>7-4-75</b>		DATE <b>7-4-75</b>		SCALE <b>NONE</b>
FIRST USED ON <b>[Blank]</b>			DATE <b>7-4-75</b>		DATE <b>7-4-75</b>		DATE <b>7-4-75</b>		SHIT <b>3 of 4</b>

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY. NO.	DESCRIPTION	701	702	703	704	705	706	707
INCOTERM CORPORATION 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
PAPER TAPE INPUT UNIT									
002									
DRAWN	T. SCHILLER	DATE	4-2-73	SIZE		DOCUMENT NUMBER		REV.	
CHECKED	ACC	DATE	4-4-73	D		003-01-01		AI	
ENGINEER		DATE		SCALE		SHT 4 OF 4			
APPROVED		DATE							
FIRST USED ON									

REVISIONS				
REV	DESCRIPTION	RDG	CHK	APPD
A	RELEASED 2/8/71		JK	JK
B	REVISED/ECO 1470 9/25/71		DEU	DEU
B1	R4R/ECO 1914 3/23/62		RBV	RBV



P10 HIGH		P10 LOW	
45	WRITE DATA	1	+5VDC
47	WRITE DATA	3	+5VDC
49	WRITE DATA	5	MAN BOOT
51	SELECT A	7	MAN REWIND
53	SELECT B	9	AUTO
55	SELECT WRITE	11	MANUAL
57	READ CLOCK	13	START
59	RECYD DATA	15	OP INT REQ LAMP
61	DIRECTION	17	BOOT LAMP
63	SPEED	19	MOTION LAMP
65	RUN*	21	POWER ON LAMP
67	MOTION	23	EOT/BOT LAMP
69	TRACK B PROT	25	TAC LAMP
71	TRACK A PROT	27	TAC LAMP
73	CASSETTE IN	29	TAC LAMP
75	TAC SENSOR	31	GND
77	EOT/BOT SENS	33	GND
79	GND	35	GND
81	GND	37	GND
83	GND	39	GND

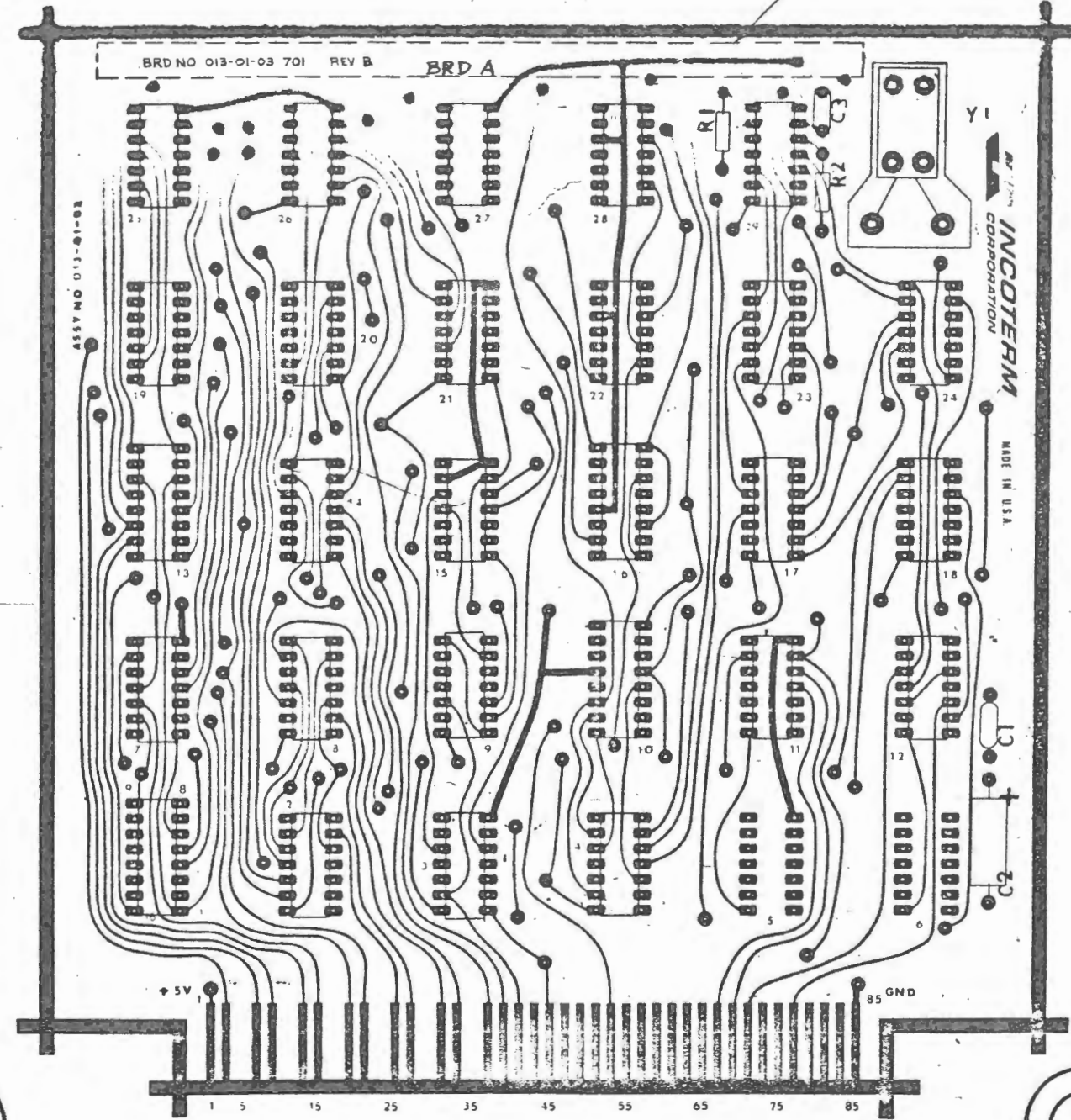
NOTES:  
 1. AC INPUT IS WIRED TO TB1 PER TABLE 1  
 Dwg 013-10-01-701

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (PLCS) ANGLES 2°		TITLE <b>SCHEMATIC          TAPE          CASSETTE</b>	
DR. DAWSON CHK. NORQUIST ENG. D. NORQUIST APP. J. DROUG	DATE 2/5/71 2/5/71 2/1/71	SIZE D	P.C. NO. REV 001 013-10-29 B1
NEXT ASSY 013-18-01		SCALE 1	SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
D	REVISED	JAB	KCM
01	ECC 1990		

CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002. SEE SHEET 1 FOR CONTINUING REVISION ASSIGNMENT HISTORY.

24 (OPPOSITE SIDE OF BOARD)



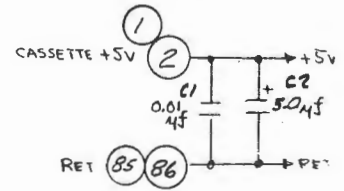
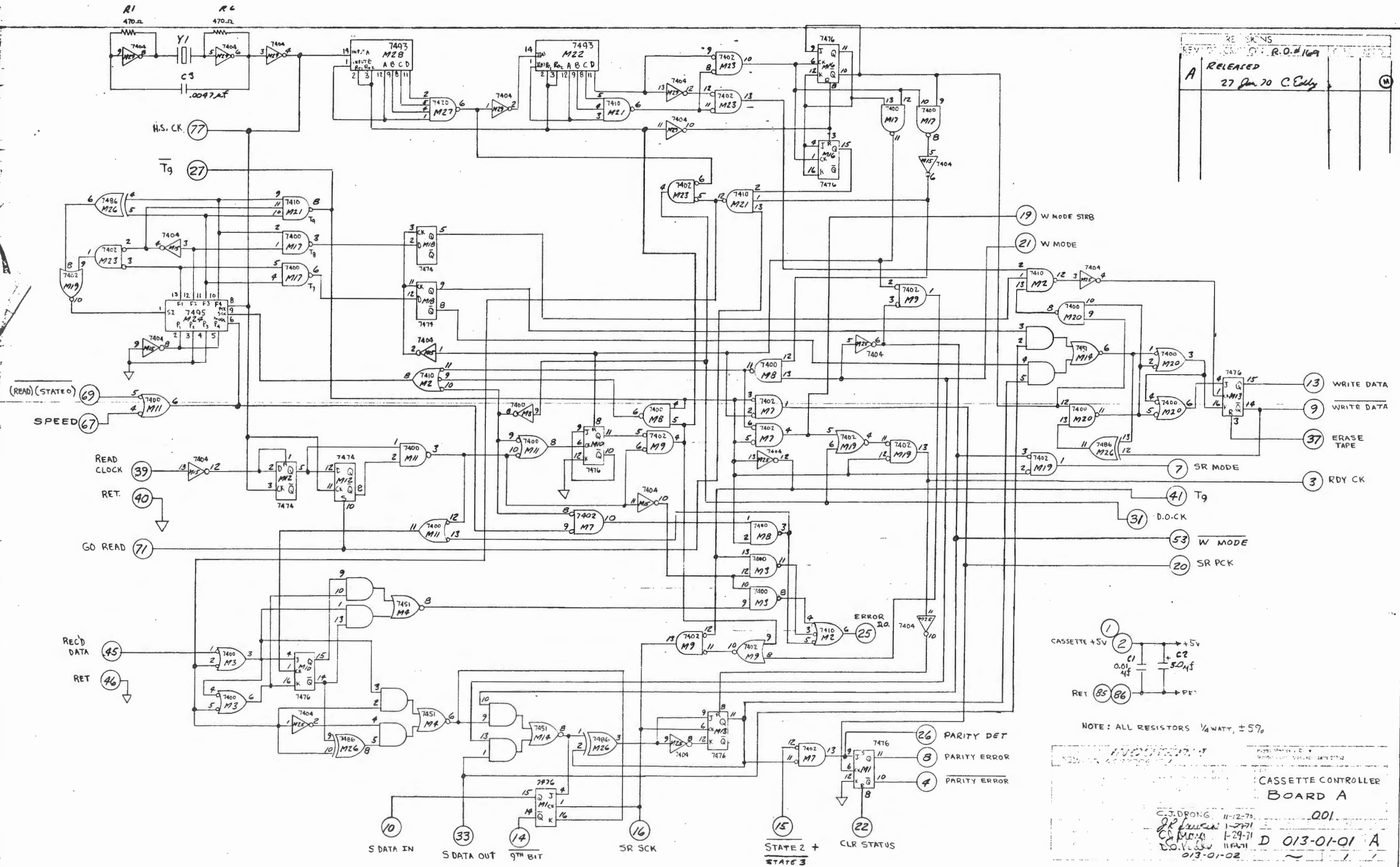
ITEM	DESIGNATION
23	C3
16	Y1
15	R1, 2
13	C2
12	C1
11	M24
10	M22, 28
9	M26
8	M1, 10, 13, 16
7	M12, 18
6	M6, 14
5	M27
4	M2, 21
3	M15, 25, 29
2	M7, 9, 19, 23
1	M3, 8, 11, 17, 20

COMPONENT SIDE

ASSY WITH ARTWORK 013-01-03-701 REV B 701

		Hayes Memorial Drive Marlborough, Massachusetts 01752	
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TITLE <b>PC BOARD ASSY          BOARD A          TAPE CASSETTE</b>		SIZE 11.0 x 17.0	P.C. S.S. NO. REV. D 013-01-02 D2
NEXT FILE 013-01-03		SCALE 2/1	SHT 3 OF 3

REVISIONS  
 REV. 1  
 R.O. # 169  
 A  
 RELEASED  
 27 Jan 70 C. Eddy



NOTE: ALL RESISTORS 1/4 WATT, ±5%

CASSETTE CONTROLLER BOARD A  
 C.J. DRONG 11-12-70  
 J.P. FURMAN 1-27-71  
 C.M. MOY 1-29-71  
 D.O. VICKI 11-24-71  
 013-01-02  
 001  
 D 013-01-01 A

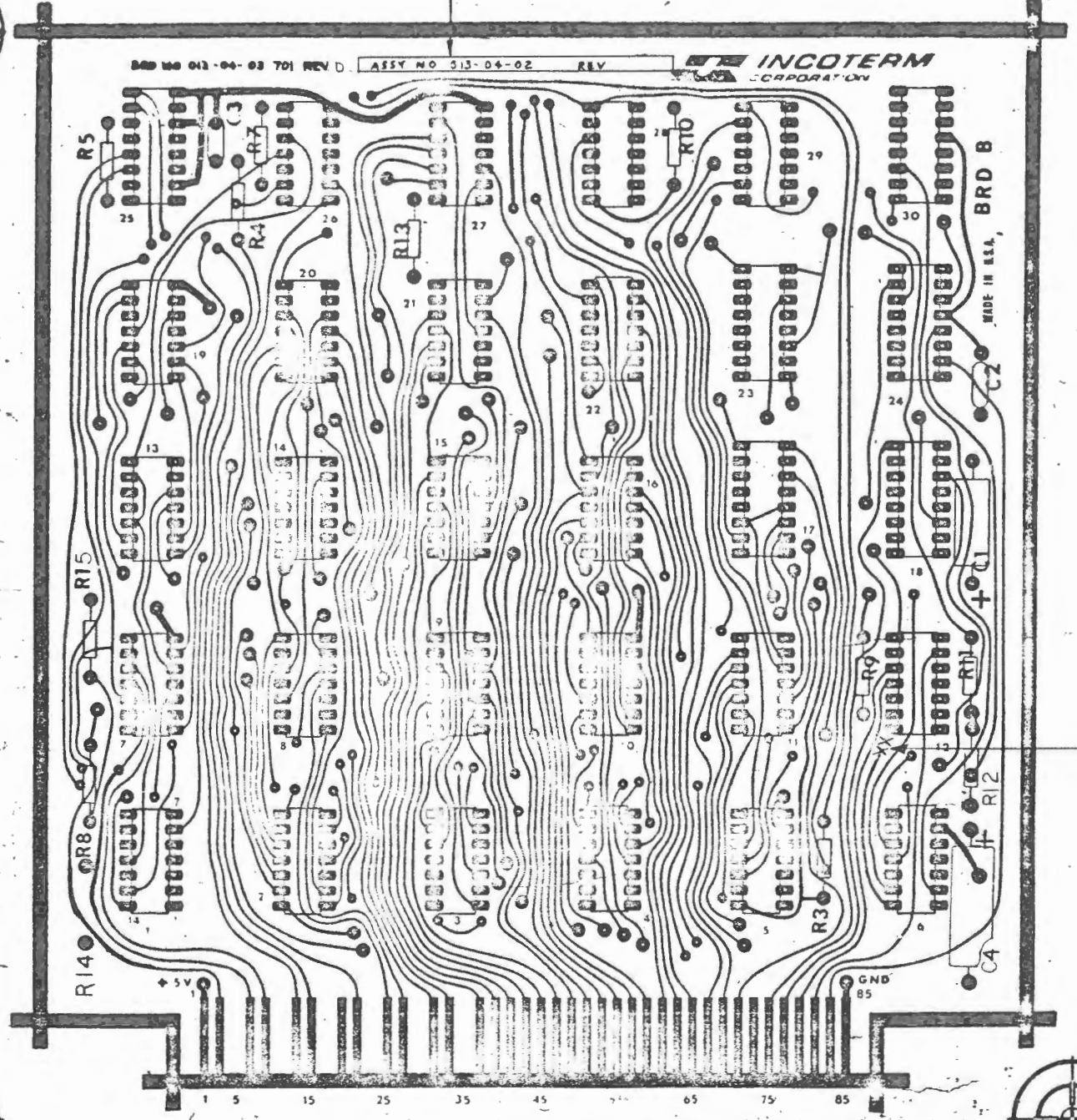


REVISIONS				
REV	DESCRIPTION	CHK	APPD	
F	REDRAWN & REVISED ECO 1728 RAE 7-1-71	EJZ	RJA	
G	REVISED/ECO 1695 NO CHANGE 11/4/71			SAS
G1	REVISED/ECO 1623 10-21-72			RJA

ECO 2093 CHANGES THIS DOCUMENT  
STRUCTURE TO PROCEDURE 310-002  
SEE SHT 4 FOR CONTINUING REVISION  
HISTORY.

30 SEE NOTE 1

REDUCE TO 1 000 ± 003



29	R15
28	R8
27	C4
26	C3
23	
22	M5
21	R4, 5
20	R7
18	R14
13	R3, 9 THRU 13
12	C1
11	C2
10	M17, 18, 23, 24, 30
9	M5
8	M3
7	M8, 16
6	M14, 22
5	M29
4	M2, 4, 27
3	M6, 9, 15, 21
2	M1, 7, 11, 13, 19, 28
1	M10, 12, 20, 26
ITEM	DESIGNATION

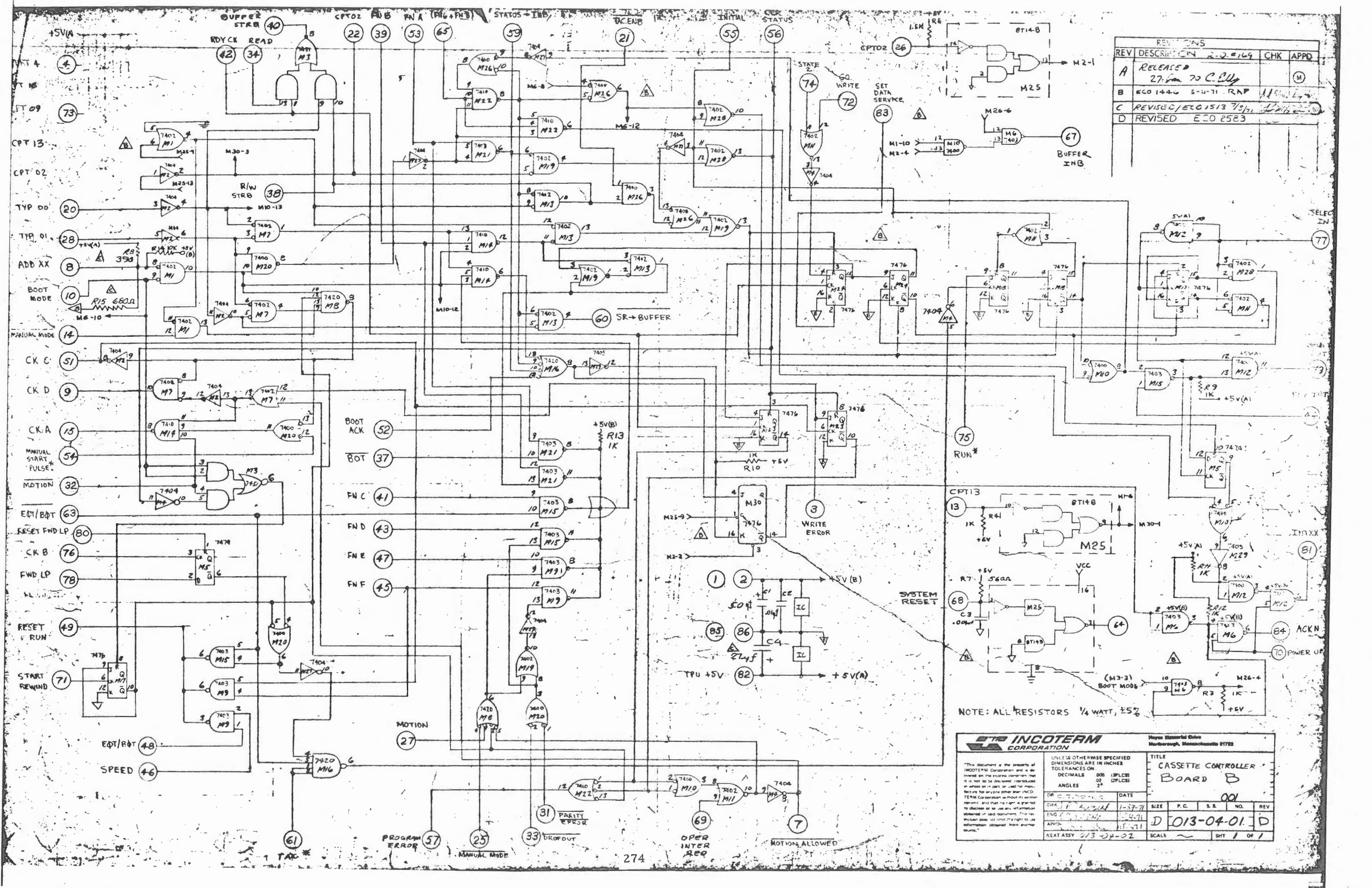
COMPONENT SIDE

NOTES:  
1. LOCATE IN APPROXIMATE AREA SHOWN, REVISION LABEL, ITEM 30, AND MARK ASSEMBLY NO. 013-04-02-701D AND LATEST ASSY. REVISION.

ASSY WITH ARTWORK 013-04-03-701 REV D

701D

INCOTERM CORPORATION		TITLE	
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DATE	REV	DATE	REV
013-04-02	1H		



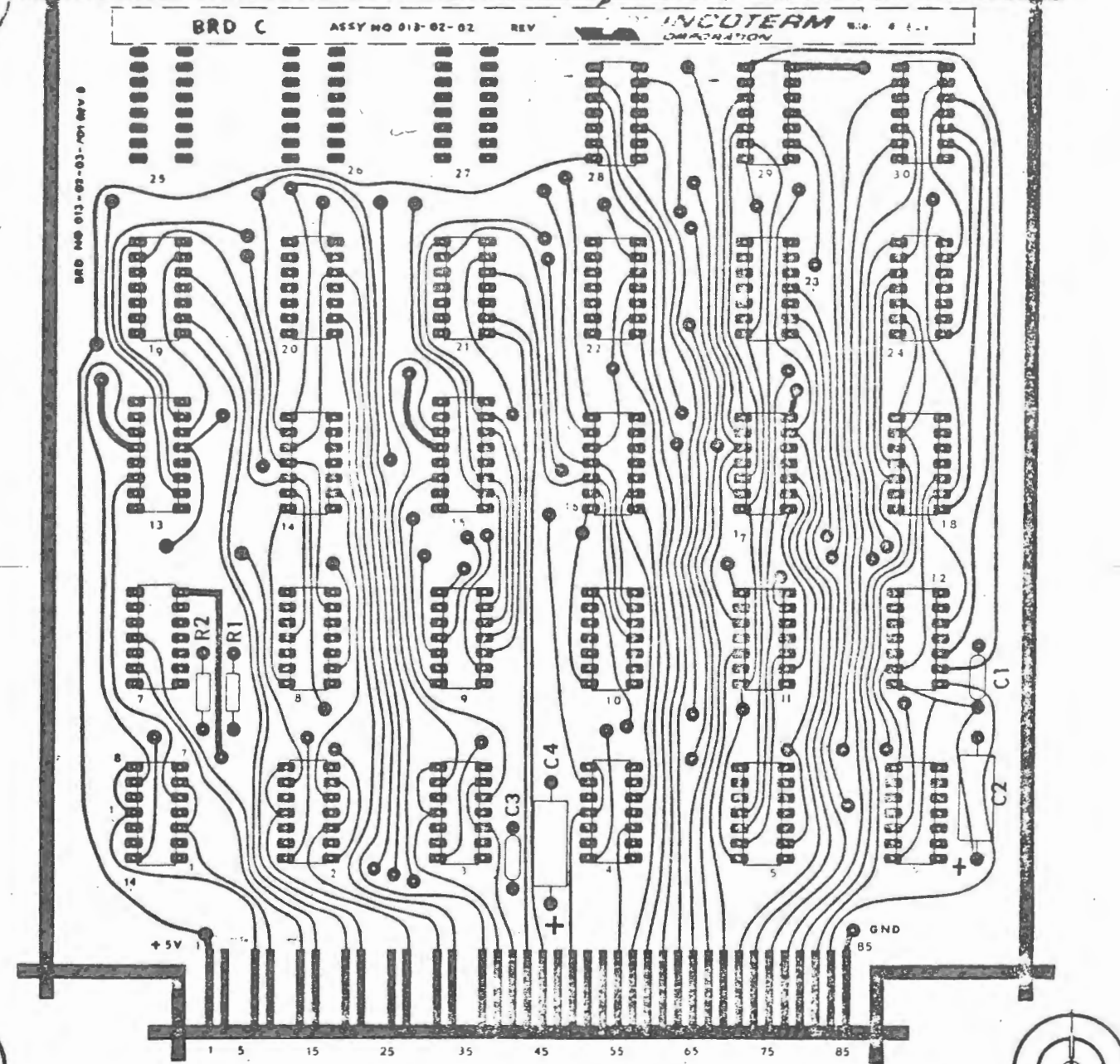
REV	DESCRIPTION	CHK	APPD
A	RELEASED 27 Jan 70 C. C. J.		(M)
B	ECO 1446 5-11-71 RNP		
C	REVISED/ECO 1513 7/9/71		
D	REVISED ECO 2583		

INCOTERM CORPORATION		Hoya Material Data Marlborough, Massachusetts 01752	
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<small>DR DATE</small> <small>CHK BY DATE</small> <small>APPD BY DATE</small> <small>NEXT ASSY</small>		<small>TITLE</small> <b>CASSETTE CONTROLLER BOARD B</b> <small>001</small> <small>DATE</small> <small>SIZE</small> <small>P.C.</small> <small>S.S.</small> <small>NO.</small> <small>REV</small> <b>D 013-04-01 D</b> <small>SCALE</small> <small>SHT 1 OF 1</small>	

REVISIONS			
REV	DESCRIPTION	CHK	APPD
C	REDRAWN & REVISED/9906	Kab	Kab
C1	ECD 1991		

CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002. SHEET 1 FOR CONTINLING REVISION ASSIGNMENT HISTORY

(21) - OPPOSITE SIDE OF BOARD



ITEM	DESIGNATION
13	R1, R2
12	C2, C4
11	C1, C3
10	M14, 16, 24
9	M13, 15
8	M19, 20, 21, 22
7	M8, 9, 10
6	M6, 29
5	M17, 28
4	M7, 23, 30
3	M1, 2, 3, 4
2	M11, 18
1	M5, 12

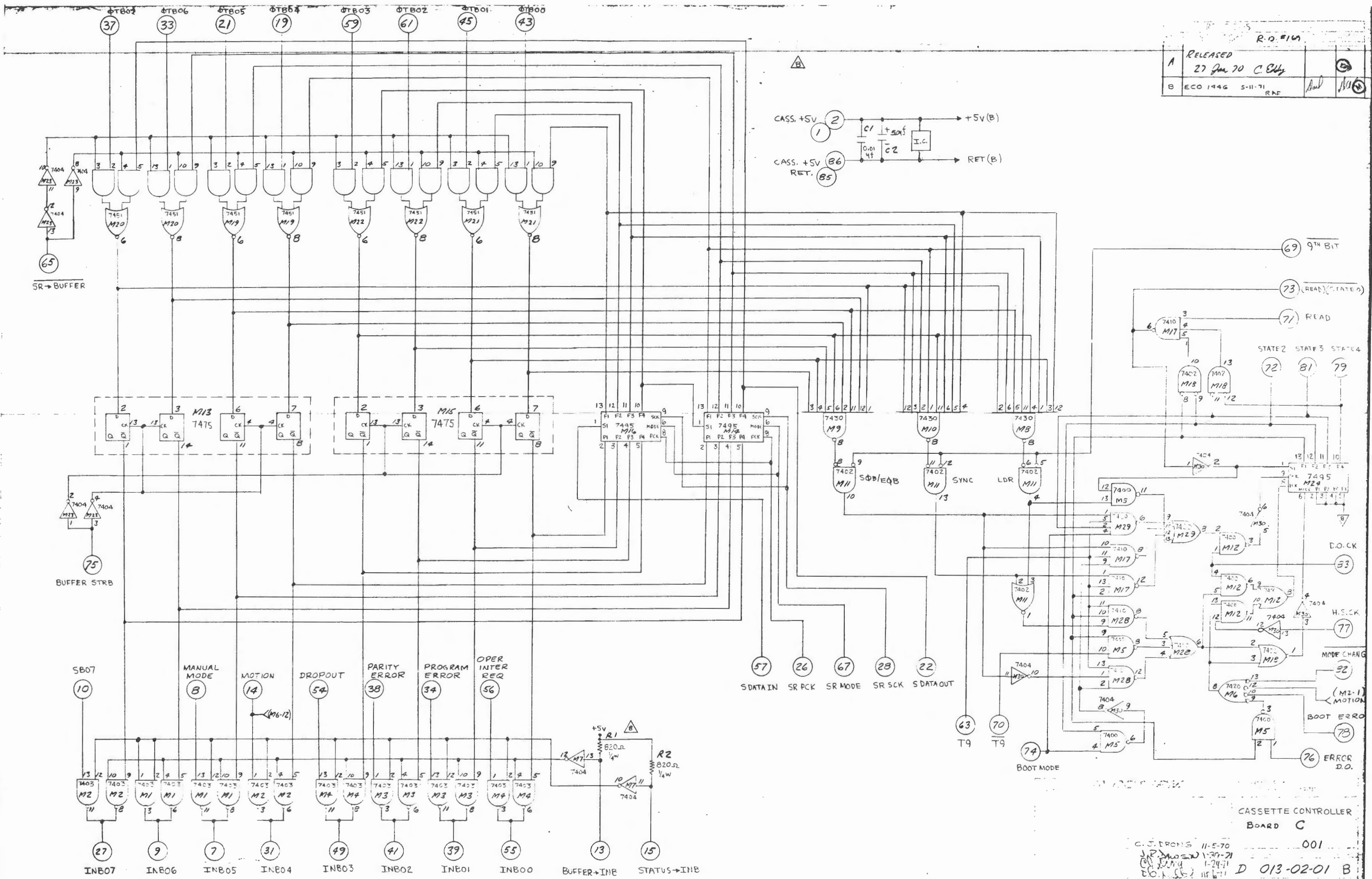
COMPONENT SIDE

ASSY WITH ARTWORK 013-02-03-701 REV B 701.

INCOTERM CORPORATION		TITLE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) .01 (2PLCS) ANGLES 2°		P.C. BOARD ASSY BOARD C TAPE CASSETTE	
DR C EDDY	DATE	SIZE	P.C. S.S. NO. REV
CHK R BLODGEAU	2-8-71		
ENG C J LEEONG	2-18-71		
APPD D O. KENDRICK	2-19-71		
NEXT ASSY 013-10-01	SCALE 2/1	SHT 3 OF 3	

R.D.#14

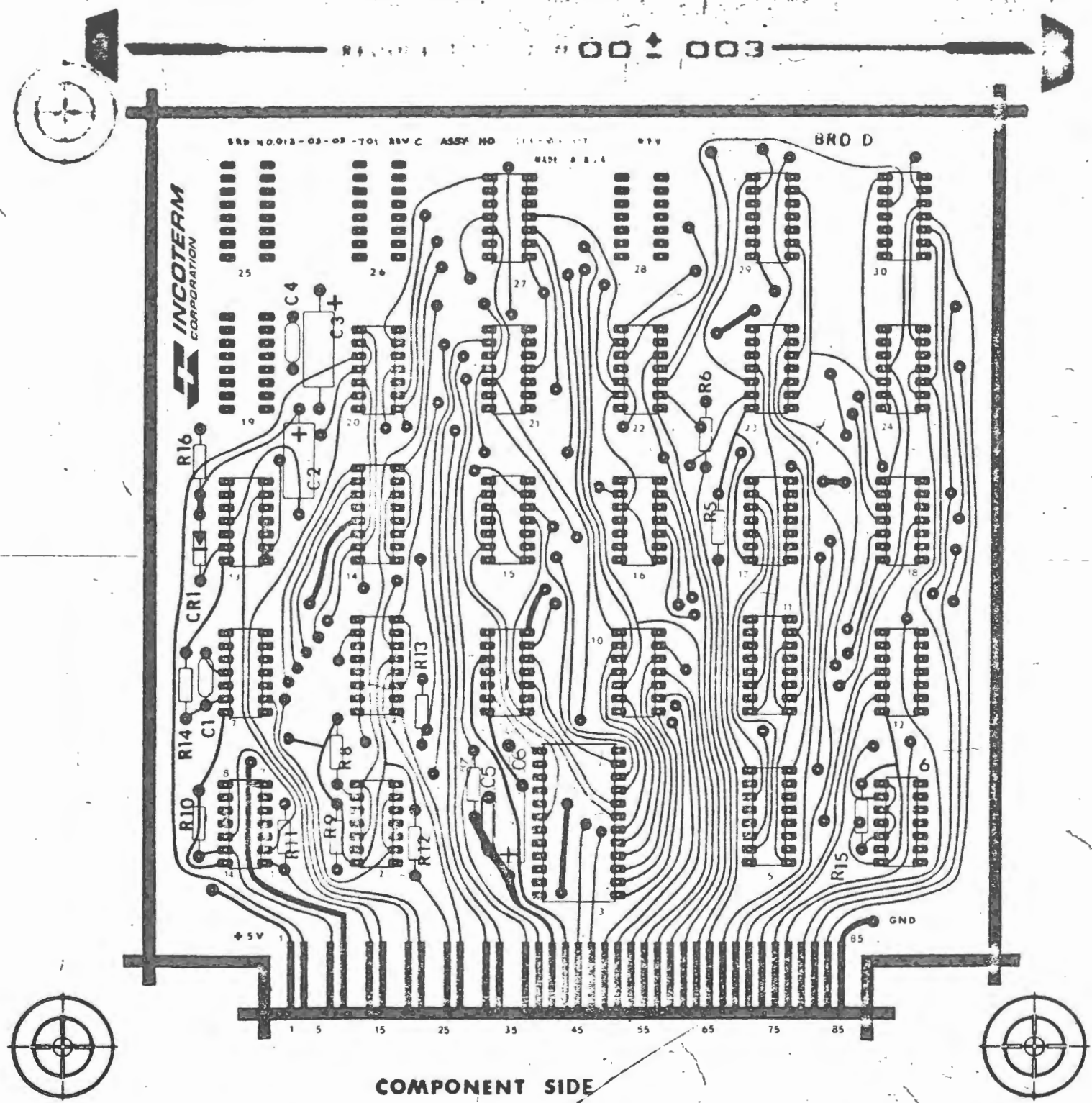
A	RELEASED	27 Jan 70	C. Elly	
B	ECO 1446	5-11-71	RAF	



CASSETTE CONTROLLER BOARD C

C. J. FRONS 11-5-70  
 J. P. DUNN 1-24-71  
 D. O. 013-02-01 B  
 23-02-02

REVISIONS			
REV	DESCRIPTION	CHK	APPD
F	REDRAWING REVISED ECO 1869 5/1/72	PPA	PPA
F1	REV CHANGE ONLY ECO 1869 5/1/72	PPA	PPA
F2	ECO 2091 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 300-002 SEE SHIT 1 FOR CONTINUING REVISION HISTORY ASSIGNMENT.	PPA	PPA

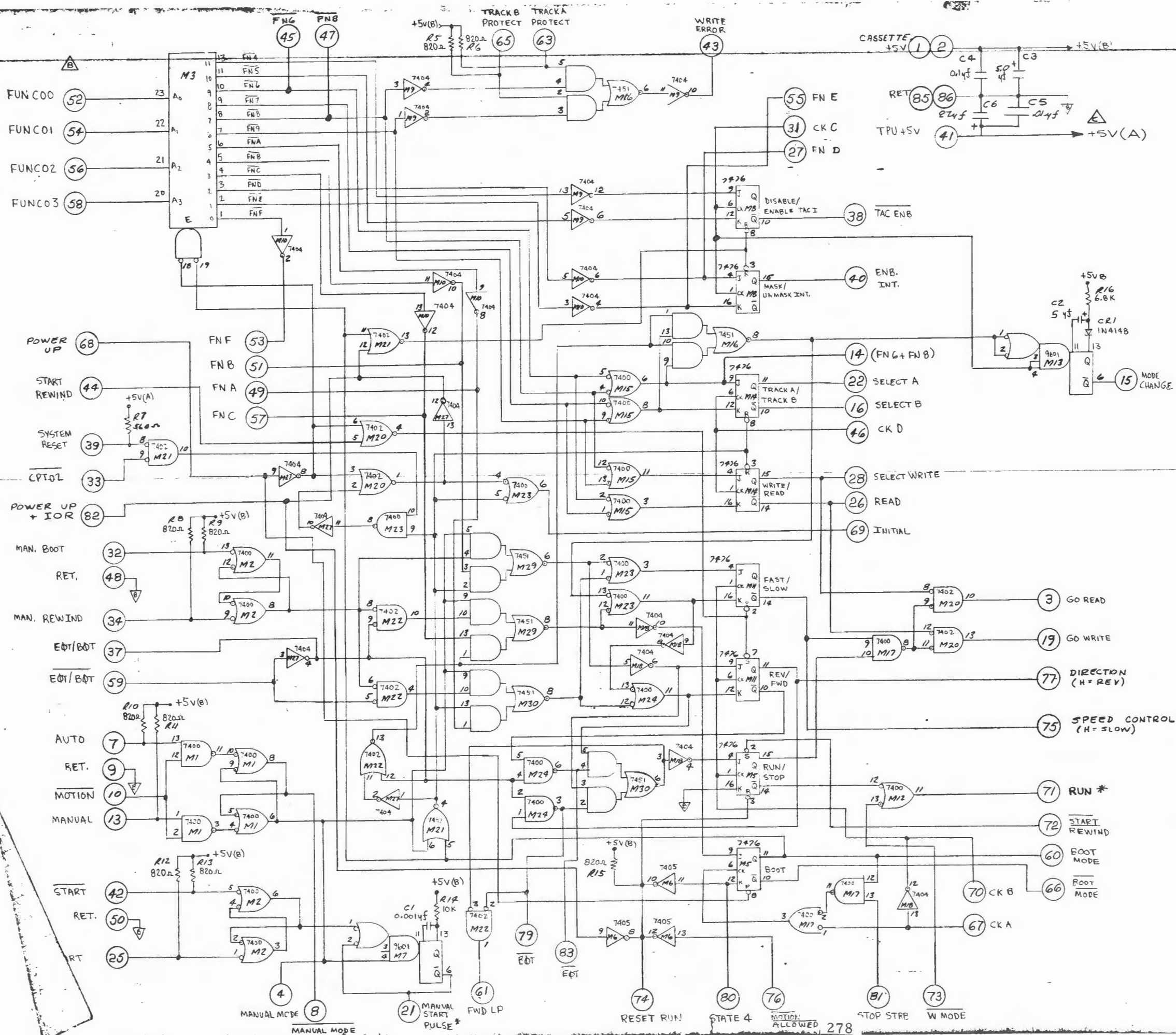


ITEM	DESIGNATION
23	C6
21	C5
16	R7
15	R4
14	R16
13	R5,6,8,9,10,11,12,13,15
12	CR1
11	C1
10	C2, C3
9	C4
8	M7,13
7	M3
6	M5,8,11,14
5	M16,29,30
4	M6
3	M9,10,18,27
2	M20,21,22
1	M12,12,15,17,23,24

COMPONENT SIDE

ASSY. WITH ARTWORK 013-03-03-701 REV. C 701

		Wayne Mansfield Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 (3PLCS) .01 (2PLCS) ANGLES 3°		TITLE <b>P.C. BOARD ASSY</b> <b>BOARD D</b> <b>TAPE CASSETTE</b>	
DR	C Eddy	DATE	
CHK	R. BILLOEAU	2-16-71	SIZE P.C. S.S. NO. REV.
ENG	J. DRONG	2-16-71	D 013-03-02 F4
APPD	D. O. KENDRICK	2-19-71	
NEXT ASSY 013-10-01		SCALE 2/1	SHT 1 OF 1



R.D. #169

A	RELEASED	10 FEB 1971	C. Colby	10/	50/
B	ECC 1446	5-11-71	RNF	10/	50/
C	REVISED/ECC 1513	7/6/71		10/	50/

NOTE: ALL RESISTORS 1/4w, ±5%

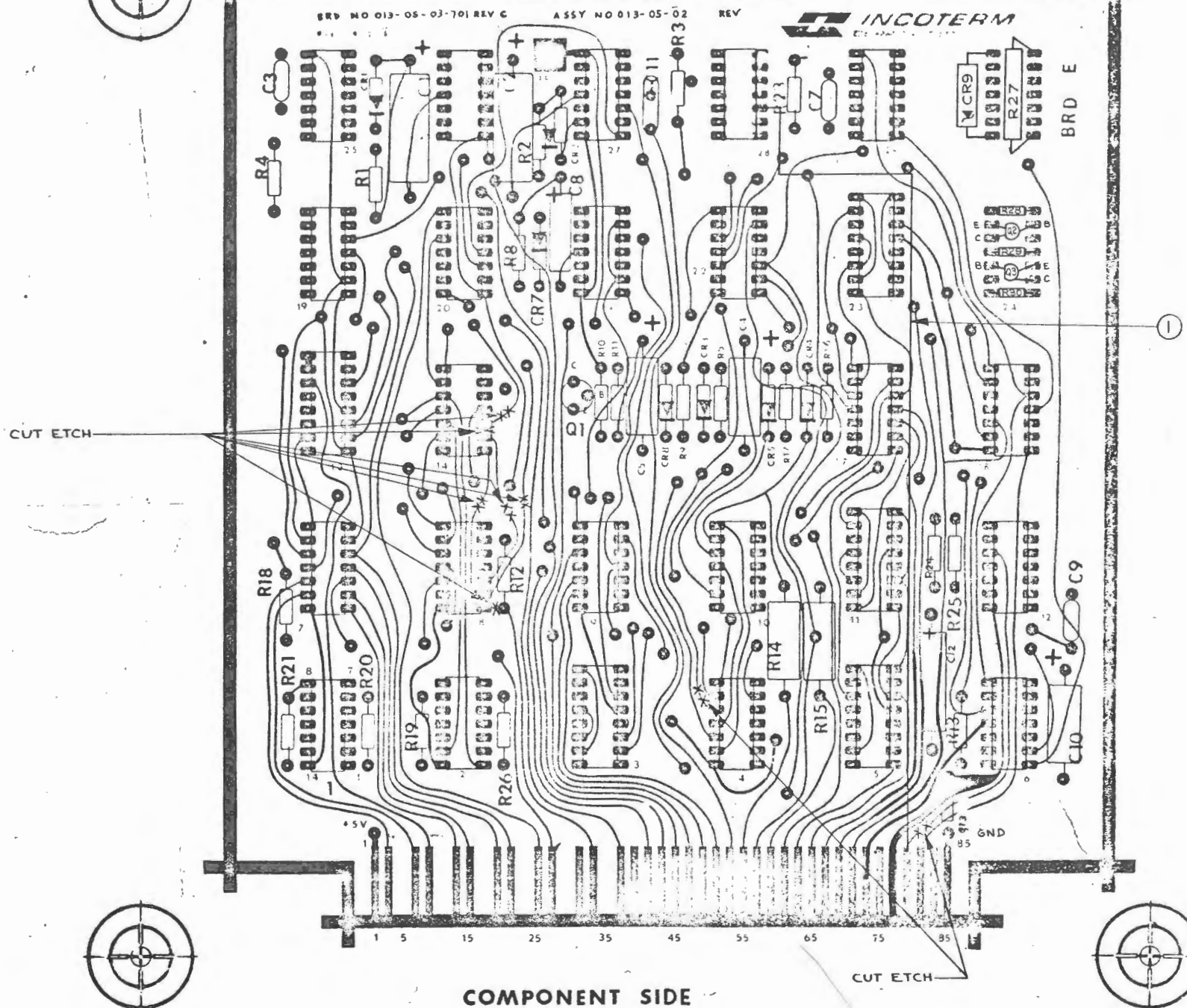
CASSETTE CONTROLLER BOARD D

C. J. EPONG 11-10-70  
 J. R. DAWSON 1-29-71  
 C. J. MUMFORD 1-24-71  
 J. B. HENDERSON 11-16-71  
 013-03-02

001  
 D 013-03-01 C

REVISIONS			
REV	DESCRIPTION	CHK	APPD
H	RE-DRAWN & REVISED		
J	REV CHANGE DATED 11-1-72		
J1	REVISED ECO 2556 11-1-72		
	ECO 2076 CHANGES THIS DOCUMENT STRUCTURE PER PROCEDURE 200-007 SEE SHT. 1 FOR COMPT. REVISION HISTORY ASSIGNMENT.	RM	RM

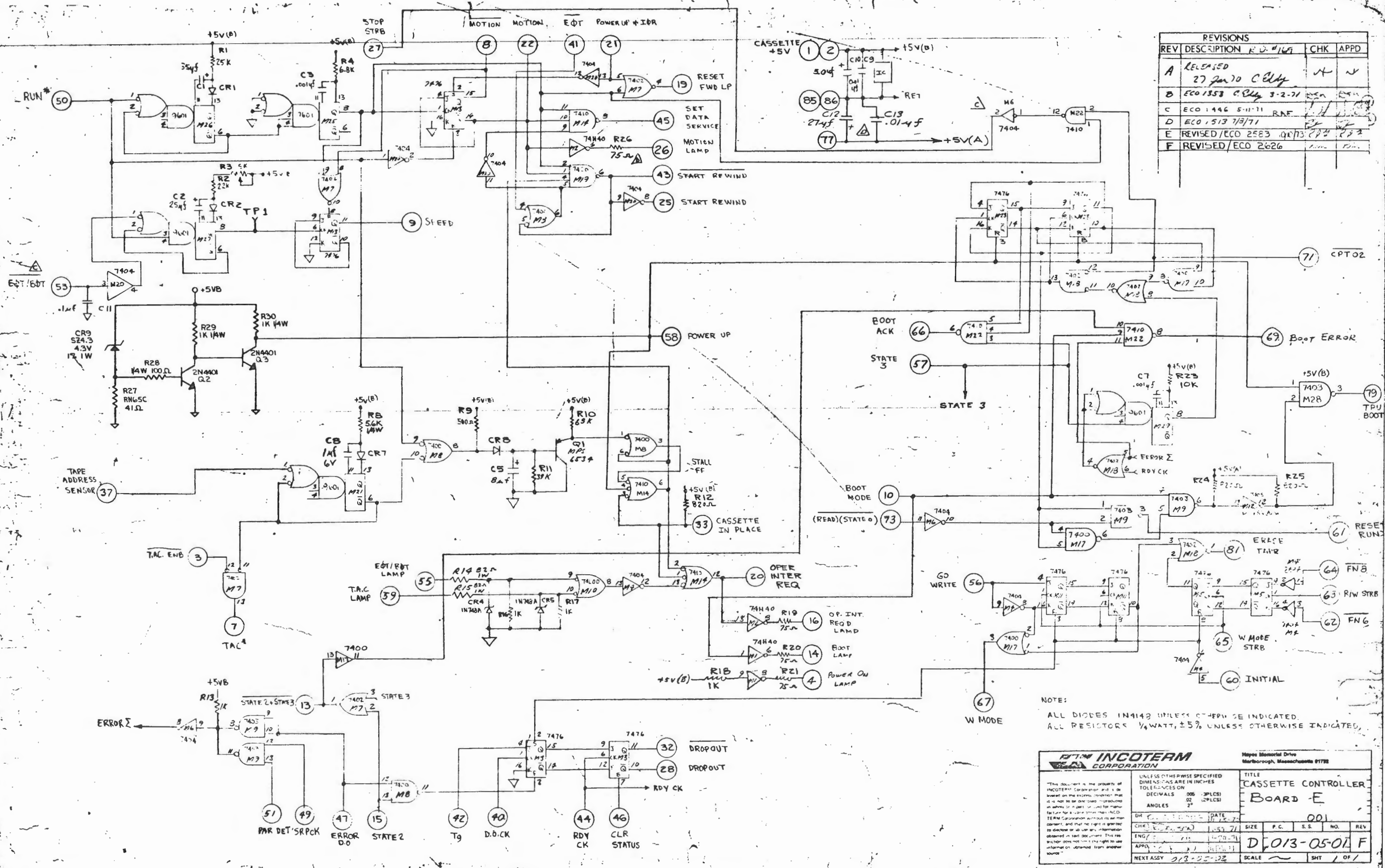
ITEM	DESIGNATION
29	RB
19	CB
53	Q2,3
52	R2B
51	CR9
50	R27
49	
48	C12
45	C11
44	R19, 20, 21, 26
43	R14, 15
35	R3
33	R10
32	R11
31	R1
30	R2
28	R5, 23
27	R4
26	R13, 16, 17, 18, 29, 30
25	R12, 24, 25
24	R9
23	Q1
22	CR4, 5
21	CR1, 2, 3, 7, 8
20	C5
18	C1
17	C2
16	C4
15	C10
14	
13	C9, C13
12	C3, 7
11	M2, 25, 26, 27, 29
10	M1, 2
9	M10
8	M3, 5, 11, 13, 23
7	M19
6	M14, 22
5	M12
4	M4, 6, 20
3	M9, M2B
2	M7, 18
1	M8, 17



ASSY WITH ARTWORK 013-05-03-701 REV C

701

INCOTERM CORPORATION		TITLE	
<small>This document is the property of INCOTERM Corporation and is loaned on the express condition that it is not to be disclosed, reproduced, or used in part or used for manufacture for anyone other than INCOTERM Corporation without its written consent, and that no right is granted to disclose or use any information obtained in this document. This restriction does not limit the right to use information obtained from another source.</small>		<b>P.C. BOARD ASSY BOARD E TAPE CASSETTE</b>	
DR C Eddy	DATE	SIZE	P.C. E.S. NO. REV
CHK R Blodreau	2-16-71		
ENG J. J. D'Amico	2-19-71		
APPD D. C. Ruck	2-19-71		
NEXT ASSY 013-10-01	SCALE 2/1	SHT 5 OF 6	



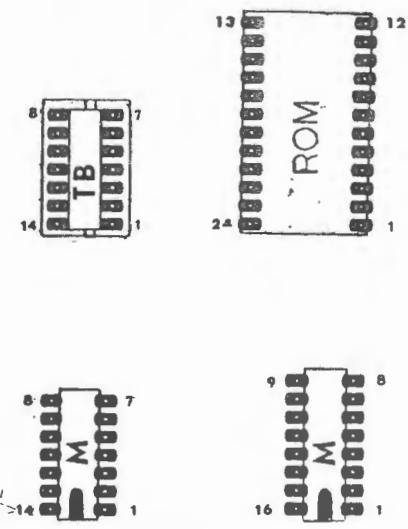
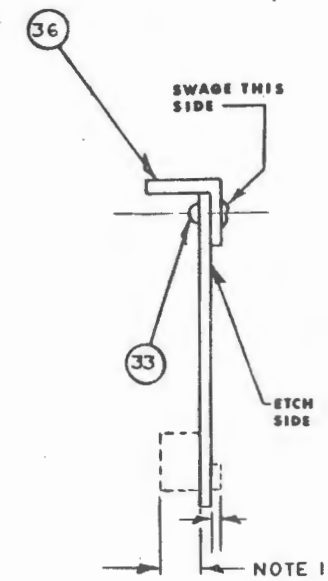
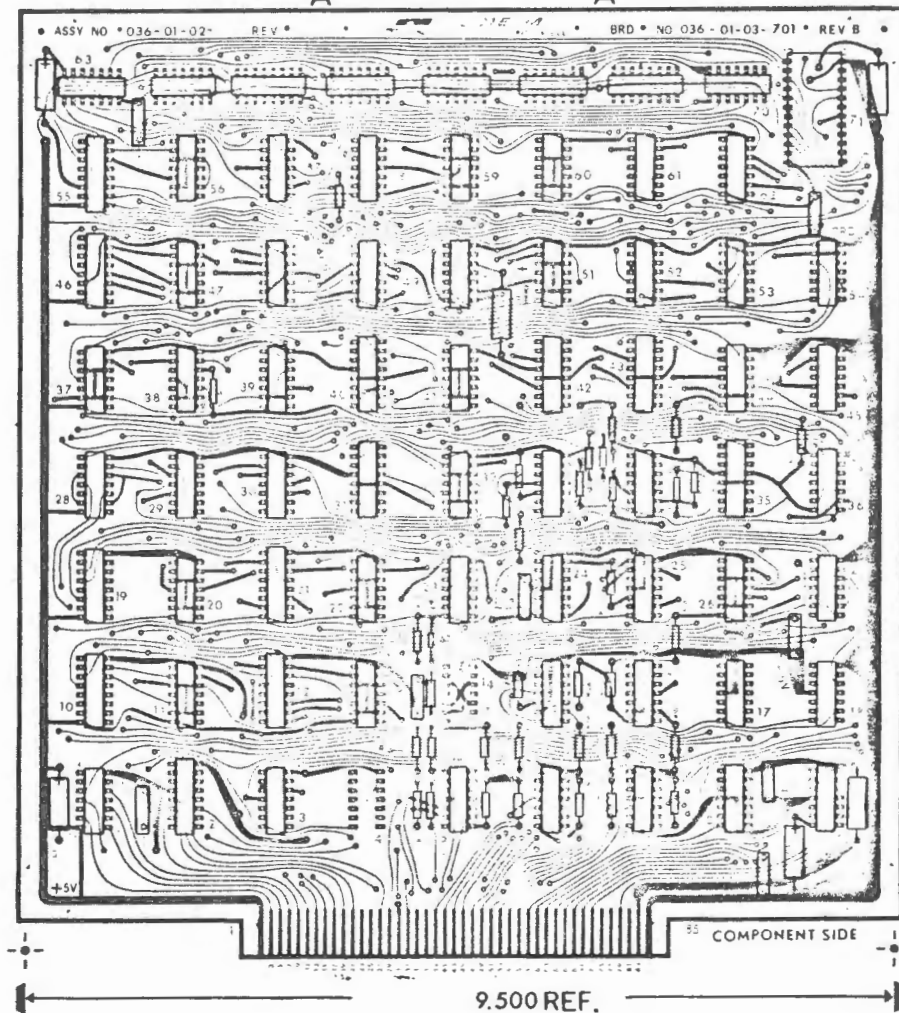
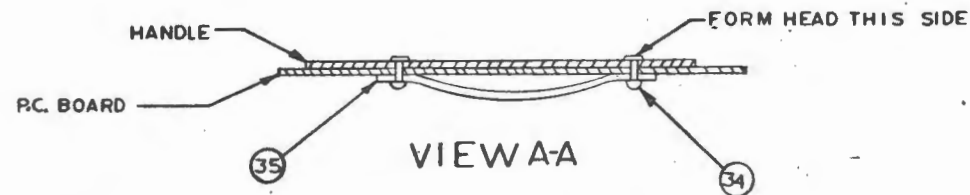
REVISIONS				
REV	DESCRIPTION	R.D.#	CHK	APPD
A	RELEASED	27 Jan 70	C. Elly	
B	ECO 1558	C. Elly	3-2-71	
C	ECO 1446	5-11-71	R.N.F.	
D	ECO 1513	7/3/71		
E	REVISED/ECO 2583	10/13/71		
F	REVISED/ECO 2626			

NOTE:  
 ALL DIODES 1N4148 UNLESS OTHERWISE INDICATED.  
 ALL RESISTORS 1/4 WATT, ±5% UNLESS OTHERWISE INDICATED.

		Mayes Memorial Drive Marlborough, Massachusetts 01752	
TITLE <b>CASSETTE CONTROLLER BOARD - E</b>			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 .015 .030 .050 .100 .150 .200 .300 .400 .500 .750 1.000 1.500 2.000 3.000 4.000 5.000 7.500 10.000 ANGLES 2°			
DR	DATE	SIZE	P.C. S.S. NO. REV
CHK	DATE	SIZE	P.C. S.S. NO. REV
ENG	DATE	SIZE	P.C. S.S. NO. REV
APPR	DATE	SIZE	P.C. S.S. NO. REV
NEXT ASSY 013-05-02		SCALE	SHT 1 OF 1



REVISION HISTORY				
REVISION	DESCRIPTION	DATE	CHK	CHK
A	RELEASED	9-8-72	✓	✓
A1	REV. CHANGE ONLY/ECO 207		✓	✓
A2	REV. CHANGE ONLY/ECO 237B		✓	✓



**PIN NUMBERING AND ORIENTATION**

**COMPONENT SIDE**

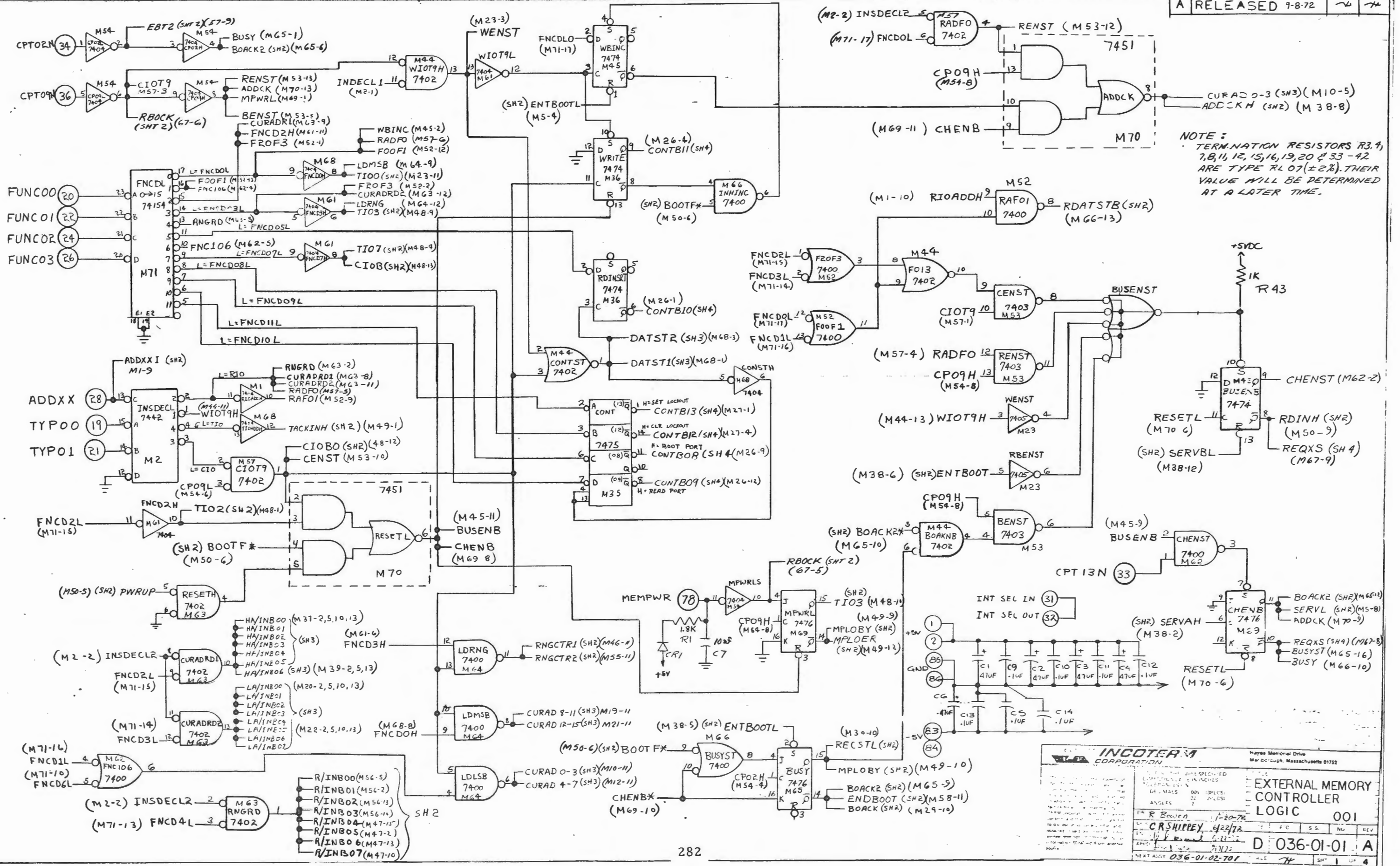
ASSEMBLE WITH ARTWORK REV B

		Maynard Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) ANGLES .02 (2PLCS)		TITLE <b>P.C. BOARD ASSY</b> EXTENDED MEMORY CONTROLLER 701	
DR	DATE	SIZE	REV
CHK	APP'D	DATE	NO.
ENG	DATE	SCALE	REV
APP'D	DATE	SCALE 1:1	SHT 1 OF 1
NEXT ASSY	010-10-00		

REFERENCE DESIGNATION	DESCRIPTION
27	C5,9-14
26	C1,2,3,4,6
25	C7
24	C8
23	CR1
22	R3,4,7,8,11,12,15,16,19,20, R33-42
21	R1
20	R2,9,14,18,22,24,26,28,30,32
19	R5,6,10,43
18	
17	M6,7,8,9,17,18,24,25
16	M5
15	M15,16,33,34
14	M12,19,21,46,55,10
13	M71
12	M65,69
11	M31,35,42,43,40
10	M36,45
9	M70
8	M2
7	M58
6	M50
5	M23
4	M1,3,38,54,61,68
3	M20,22,29,37,39,47,48,51,53,56,59,60
2	M44,57,63,67
1	M11,13,26,27,28,30,32,41,49,52,62,64,66

**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.  
 2."X" INDICATES NO COMPONENT

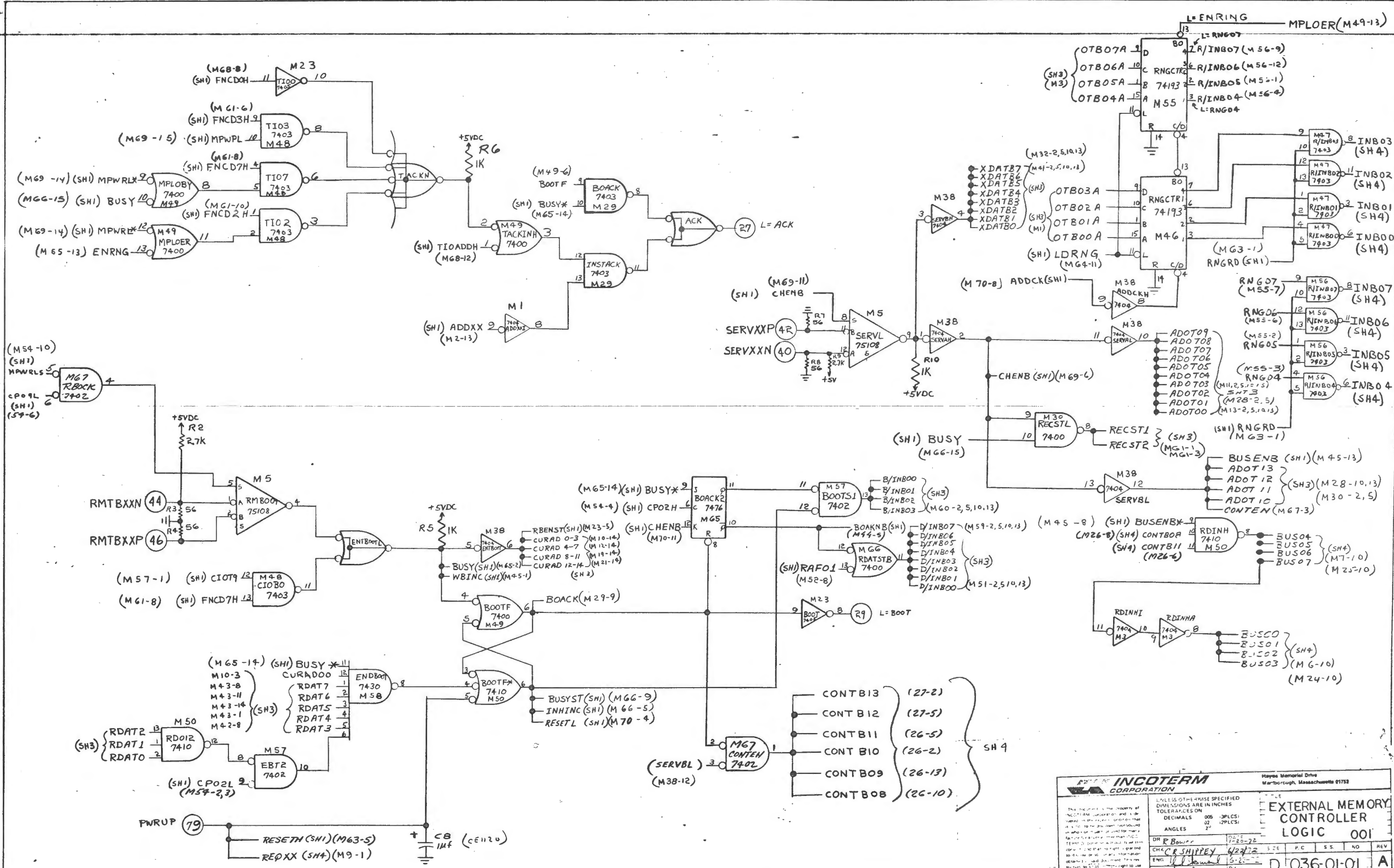
REV	DESCRIPTION	DATE	CHK	APPD
A	RELEASED	9-8-72		



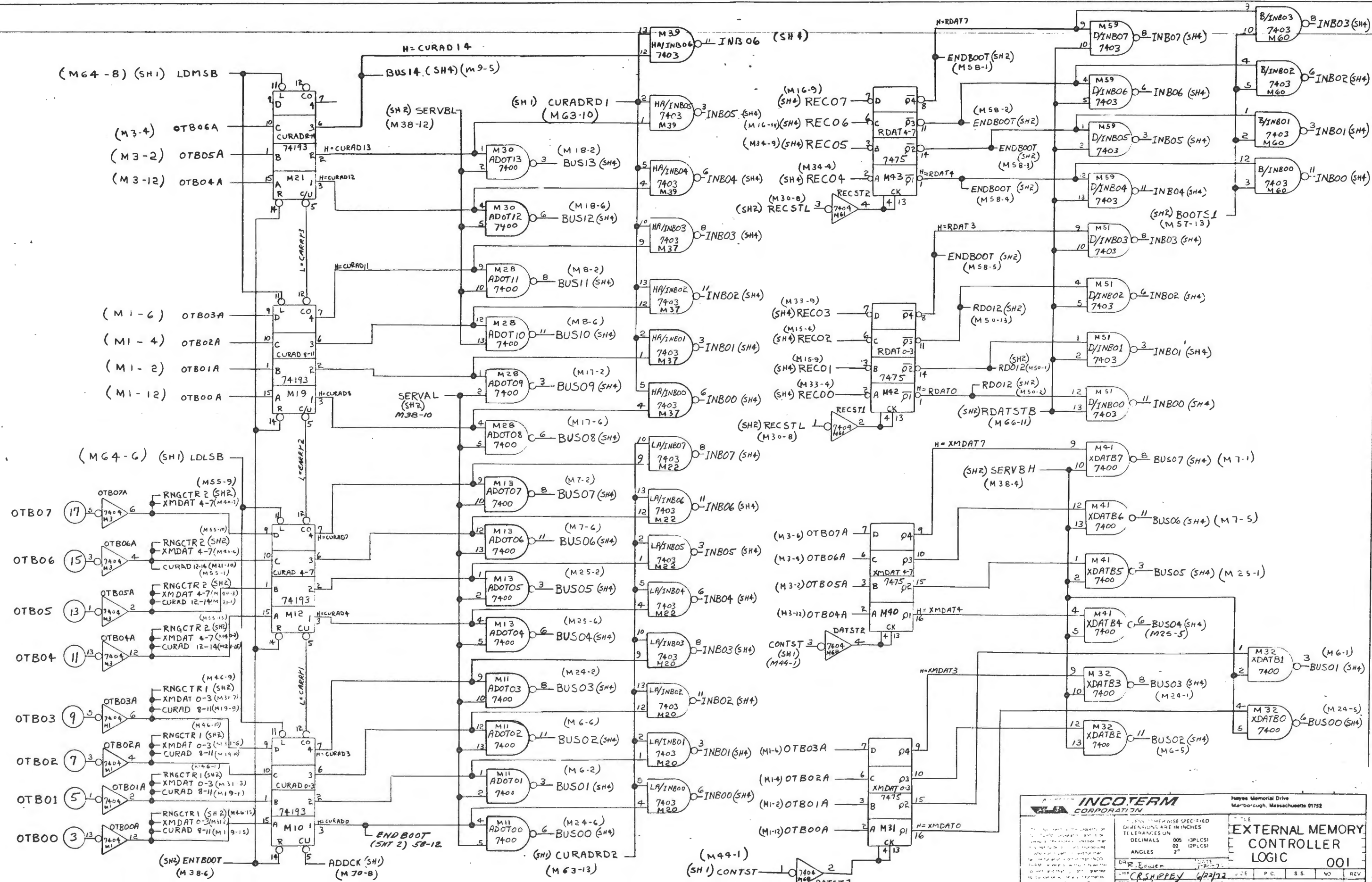
**INCOTERM CORPORATION**  
 Hayes Memorial Drive  
 Marlborough, Massachusetts 01752

EXTERNAL MEMORY CONTROLLER LOGIC 001

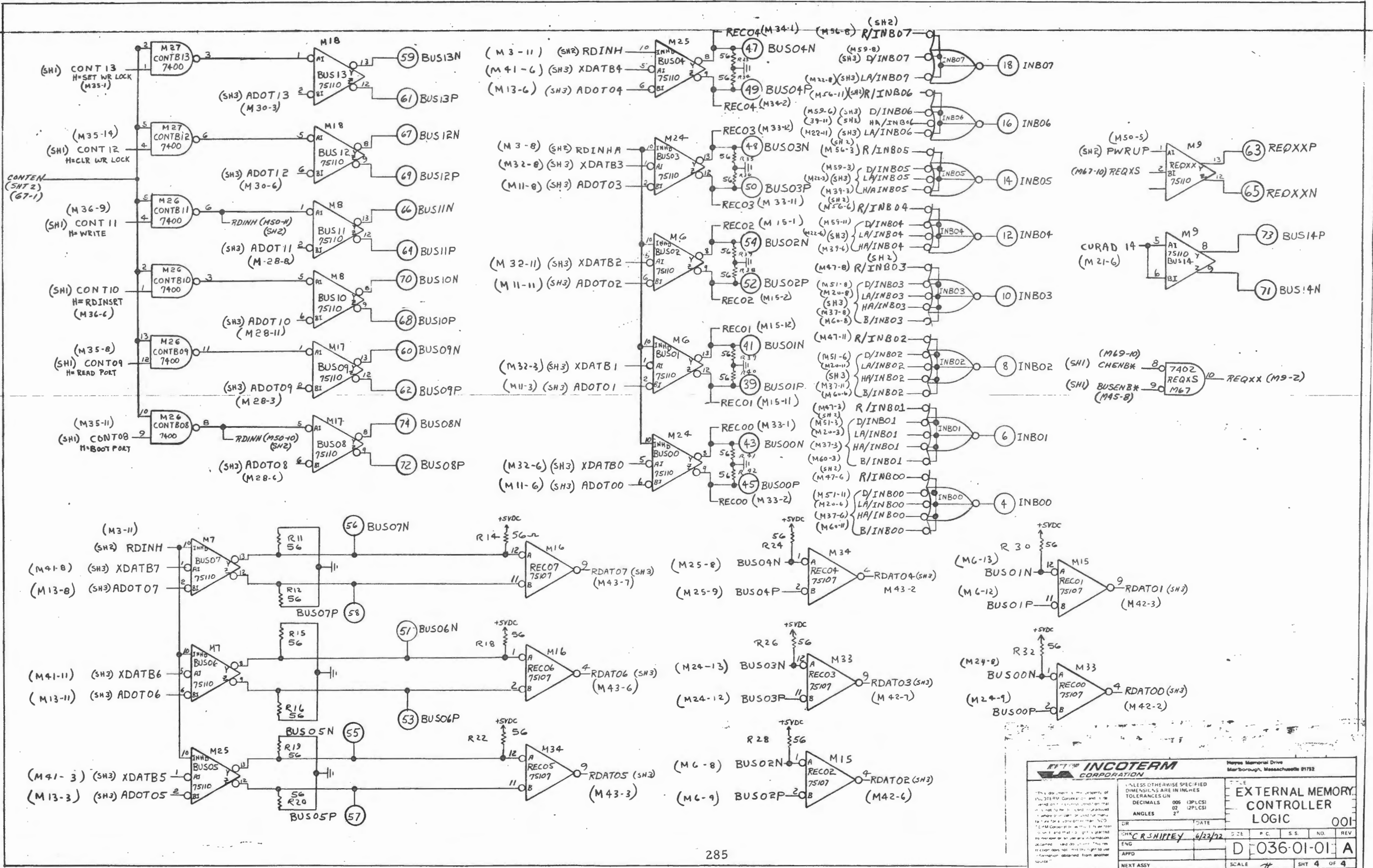
REV: 036-01-01 A



<b>INCOTERM CORPORATION</b>		Havens Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON	DECIMALS .005 (3PLCS) ANGLES 20° (2PLCS)	<b>EXTERNAL MEMORY CONTROLLER LOGIC 001</b>	
DRAWN BY CHKD BY ENG BY APPD BY	DATE 6/22/72 5-25-72	SIZE PC	SS NO REV A
NEXT ASSY		SCALE	SHT 2 OF 4



<b>INCOTERM CORPORATION</b> PLYMOUTH DRIVE MALDENBOROUGH, MASSACHUSETTS 01752		FILE NO. _____ <b>EXTERNAL MEMORY CONTROLLER LOGIC</b> 001	
DIMENSIONS ARE IN INCHES DECIMALS 005 (3PLCS) ANGLES 2°	DATE 4/23/72 DESIGNED BY CR SHIPPEY CHECKED BY [Signature] APPROVED BY [Signature]	P.C. S.S. NO. REV. D. 036-01-01 A	SHEET 3 OF 4



INCOTERM CORPORATION		Noyes Memorial Drive Marlborough, Massachusetts 01752	
This document is the property of INCOTERM Corporation and is loaned to the user on the condition that it will be returned to the originator. It is not to be distributed outside the user's organization. No part of this document may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of INCOTERM Corporation.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES UNLESS OTHERWISE SPECIFIED		DECIMALS UNLESS OTHERWISE SPECIFIED	
ANGLES UNLESS OTHERWISE SPECIFIED		2° UNLESS OTHERWISE SPECIFIED	
DR	DATE	TITLE	
CHK	DATE	EXTERNAL MEMORY CONTROLLER LOGIC	
APPD	DATE	001	
NEXT ASSY	SCALE	D 036-01-01 A	
		SHT 4 OF 4	

REVISION HISTORY				
REVISION	DESCRIPTION	DATE	CHK	APP
A	RELEASED	1-8-72	J	J
AI	REVISED ECD 2417		J	J
A2	REV.CHANGE ONLY/ECD 2477		RJA	KJA

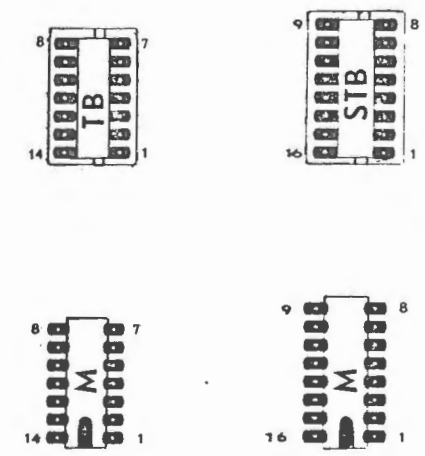
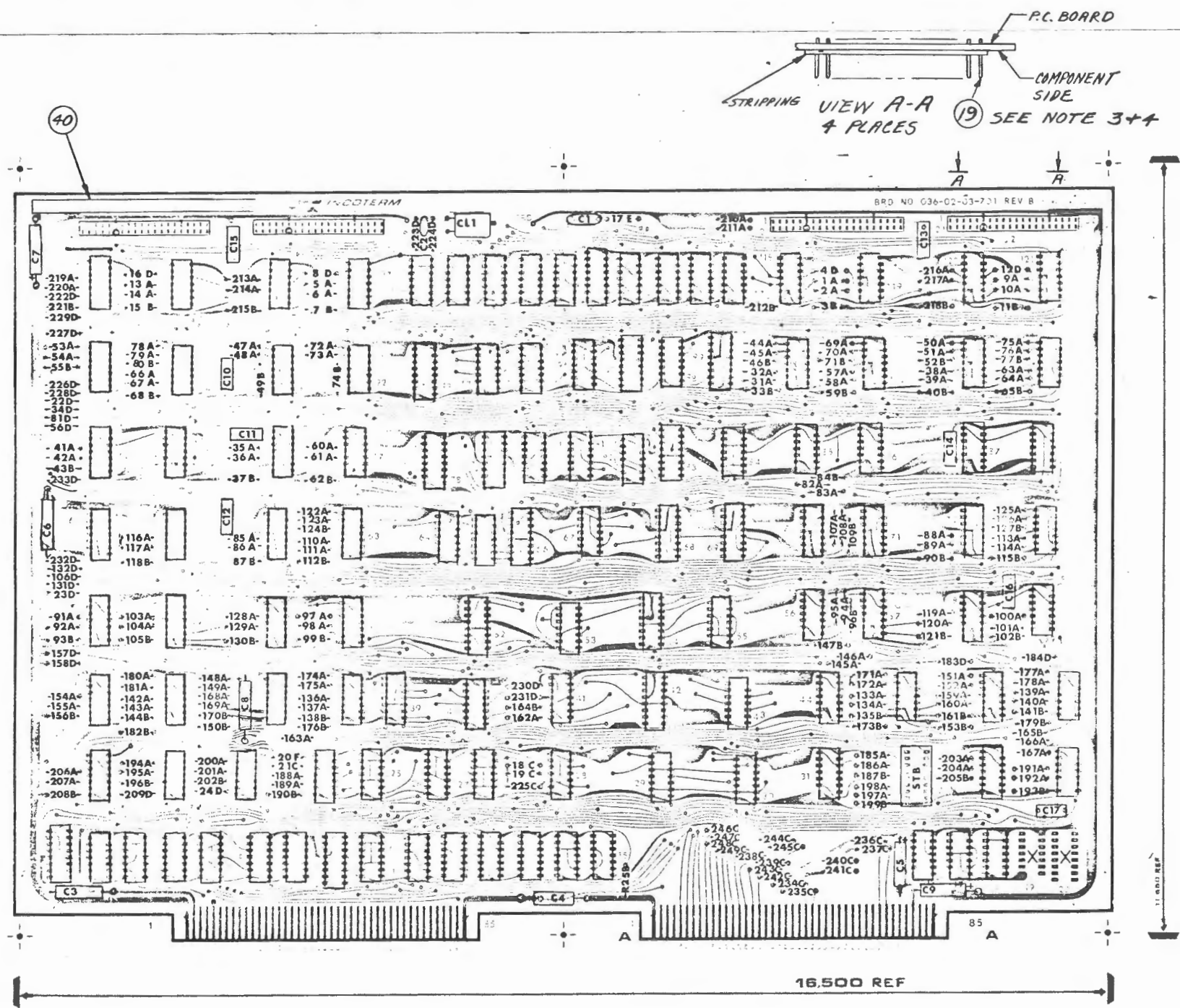
**MARKED "A"**  
 21, 2, 5, 6, 9, 10, 13, 14, 31, 32, 35, 36  
 38, 39, 41, 42, 44, 45, 47, 48, 50, 51  
 53, 54, 57, 58, 60, 61, 63, 64, 66, 67  
 69, 70, 72, 73, 75, 76, 78, 79, 82, 83, 85  
 86, 88, 89, 91, 92, 94, 95, 97, 98, 100  
 101, 103, 104, 107, 108, 110, 111, 113, 114  
 116, 117, 119, 120, 122, 123, 125, 126, 128  
 129, 133, 134, 136, 137, 139, 140, 142, 143  
 145, 146, 148, 149, 151, 152, 154, 155, 159  
 160, 162, 163, 166, 167, 168, 169, 171, 172  
 174, 175, 177, 178, 180, 181, 185, 186, 188  
 189, 191, 192, 194, 195, 197, 198, 200  
 201, 203, 204, 206, 207, 210, 211, 213  
 214, 216, 217, 219, 220

**MARKED "B"**  
 23, 7, 11, 15, 25, 33, 37, 40, 43, 46, 49, 52, 55, 59  
 62, 65, 68, 71, 74, 77, 80, 84, 87, 90, 93, 96  
 99, 102, 105, 108, 112, 115, 118, 121, 124  
 127, 130, 135, 138, 141, 144, 147, 150, 153  
 156, 161, 164, 165, 170, 173, 176, 179  
 182, 187, 190, 193, 196, 199, 202, 205  
 208, 212, 215, 218, 221

**MARKED "C"**  
 218, 19, 21, 225, 234, 235, 236, 237, 238  
 239, 240, 241, 242, 243, 244, 245  
 246, 247, 248, 249

**MARKED "D"**  
 24, 8, 12, 16, 22, 23, 24, 34, 56, 81, 106  
 131, 132, 157, 158, 183, 184, 209, 222  
 223, 224, 226, 227, 228, 229, 230  
 231, 232, 233

ITEM NO.	REFERENCE DESIGNATION
37	RESISTOR "MKD F" (R20)
36	RESISTORS "MKD C"
35	RESISTOR "MKD E" (R17)
34	RESISTORS "MKD D"
33	RESISTORS "MKD B"
32	RESISTORS "MKD A"
31	STB32
25	
24	CL1
23	C1
22	C2
21	C10, C11, C12, C13, C14, C15, C16, C17
20	C3, C4, C5, C6, C7, C8, C9
19	CONTACT PINS
18	60-63, 70-73, 89-92, 100-103, 105, 107, 110, 121
17	21, 23, 31, 33, 35-38, 44-47, 48-51, 56-59, 78-77, 85-88, 104, 106, 118, 120
16	93
15	113
14	1, 79
13	8, 42, 52, 54, 66, 68, 69, 83, 97, 99
12	15
11	78
10	13, 17, 95
9	34, 65, 87
8	16, 24, 94, 102
7	28, 82
6	6, 40, 43, 64, 98, 108, 110
5	22, 27, 29, 30, 41, 53, 55, 67, 81, 82, 96, 112
4	2, 3, 5, 9, 12, 14, 15, 22, 25, 39, 113, 115, 116, 117
3	4, 7, 10, 11, 111
2	
1	



**PIN NUMBERING AND ORIENTATION**

**NOTE:**  
 1. HEIGHT LIMITATIONS.  
 COMPONENT SIDE OF BOARD .400 MAX.  
 ETCH SIDE OF BOARD .080 MAX.  
 2. "X" INDICATES NOT USED.  
 3. REMOVE STRIPPING FROM PINS-ITEM 19 AFTER WAVE SOLDER.  
 4. DO NOT INSTALL PIN 26 (4 PLACES) MKD O

ASSEMBLE WITH ARTWORK REV B

**INCOTERM CORPORATION**  
 100 Memorial Drive  
 Woburn, Massachusetts 01752

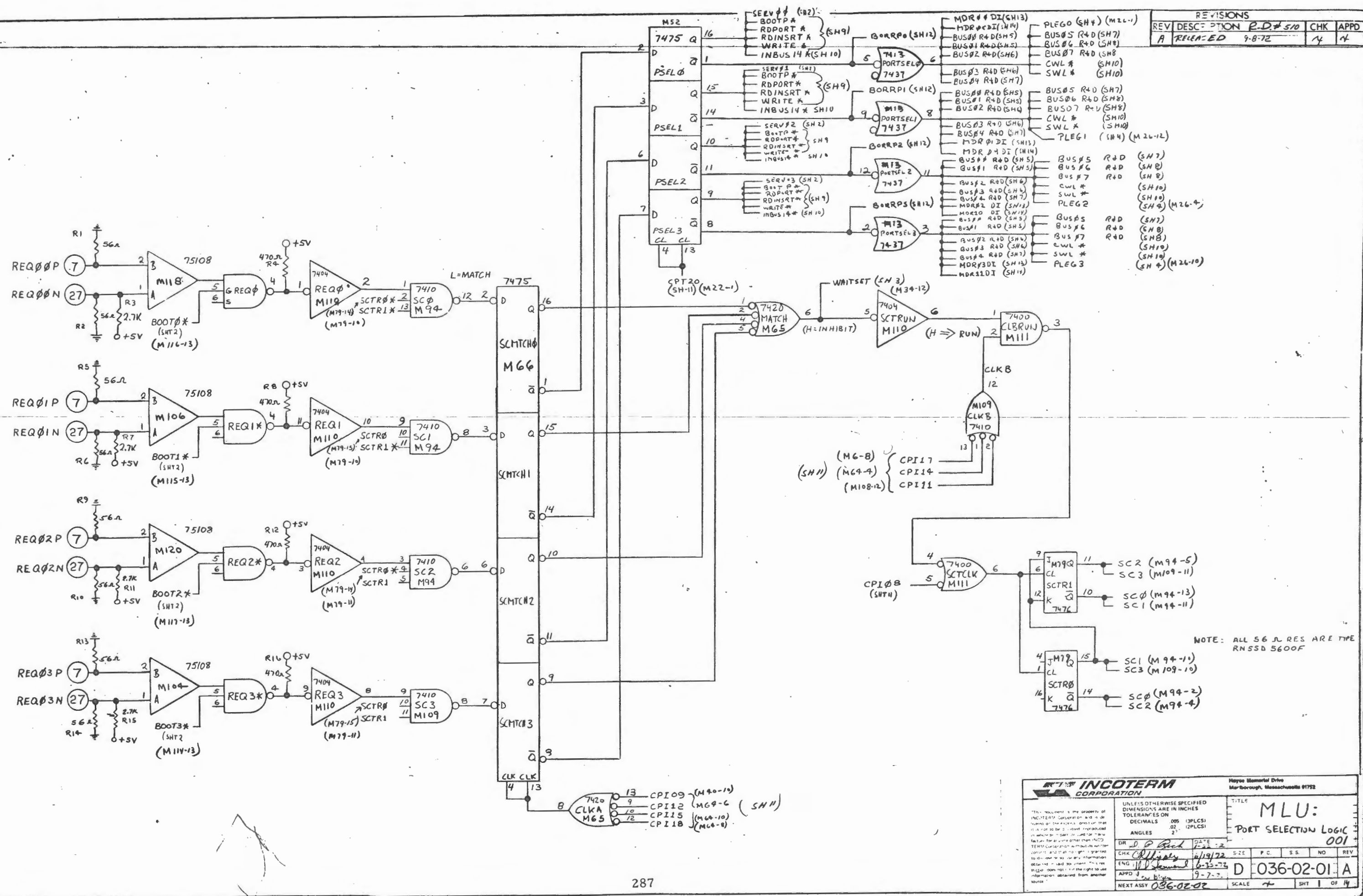
**P.C. BOARD ASSY MLU -701**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
 DECIMALS .005 (13PLCS)  
 .010 (12PLCS)  
 ANGLES 2

DR	J. S. [Signature]	DATE	1/12/72	REV	1
CHK	[Signature]	DATE	1/12/72	REV	1
ENG	[Signature]	DATE	1/12/72	REV	1
APPD	[Signature]	DATE	1/12/72	REV	1

SCALE 1:1 SHT 1 OF 1

REVISIONS				
REV	DESCRIPTION	P-D#	CHK	APPD
A	RELEASED	9-8-72	14	14



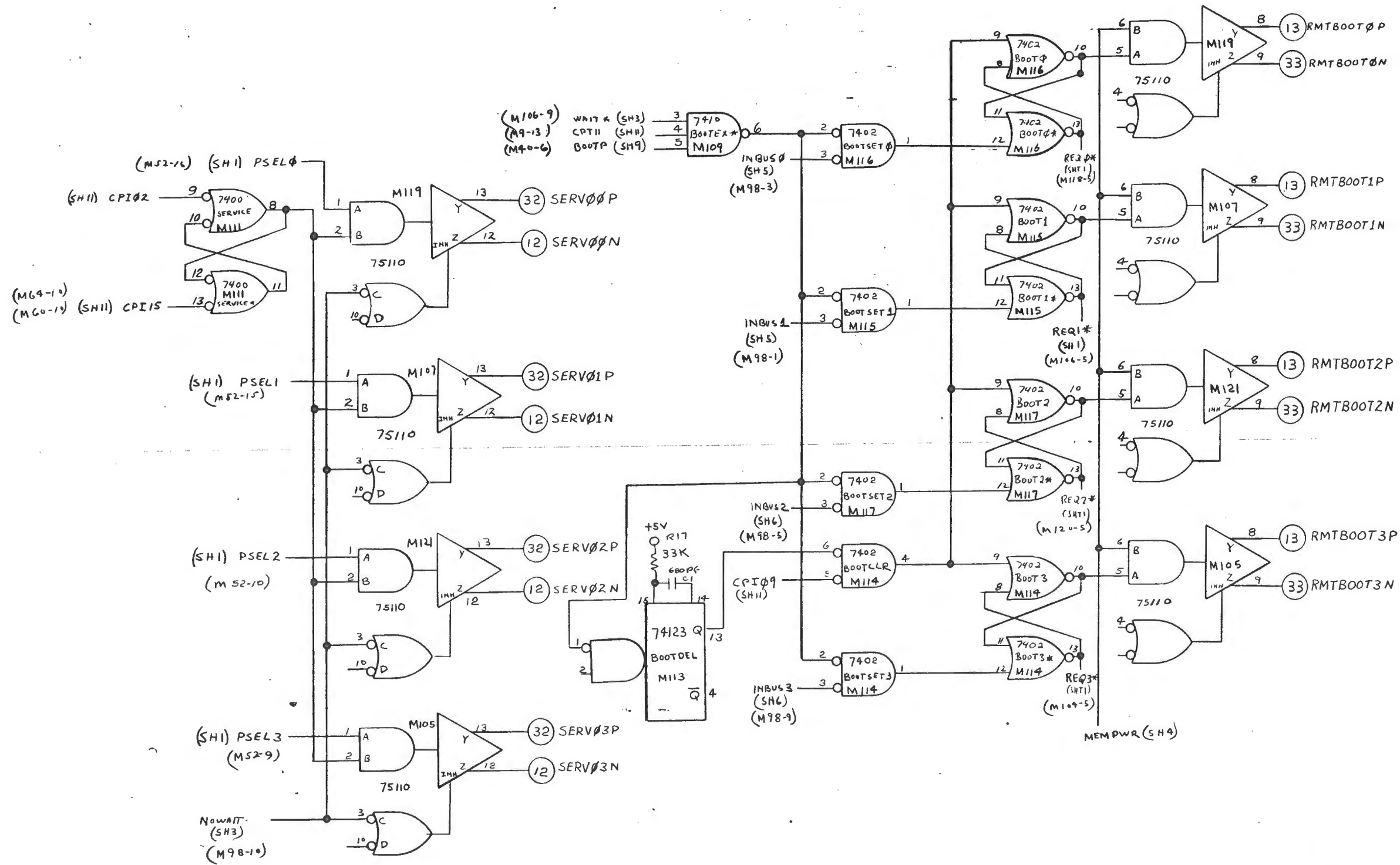
NOTE: ALL 56 OHM RES ARE TYPE RN55D 5600F

**INCOTERM CORPORATION**  
 TITLE: **MLU: PORT SELECTION LOGIC 001**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 (3PLCS) .02 (2PLCS) ANGLES 2°

DR	D. P. Beck	DATE	12-22-72	S-22	P.C.	S.S.	NO	REV
CHK	W. J. Kelly	6/19/72						
ENG	J. J. Steward	6-22-72						
APPD	J. J. Steward	9-7-72						

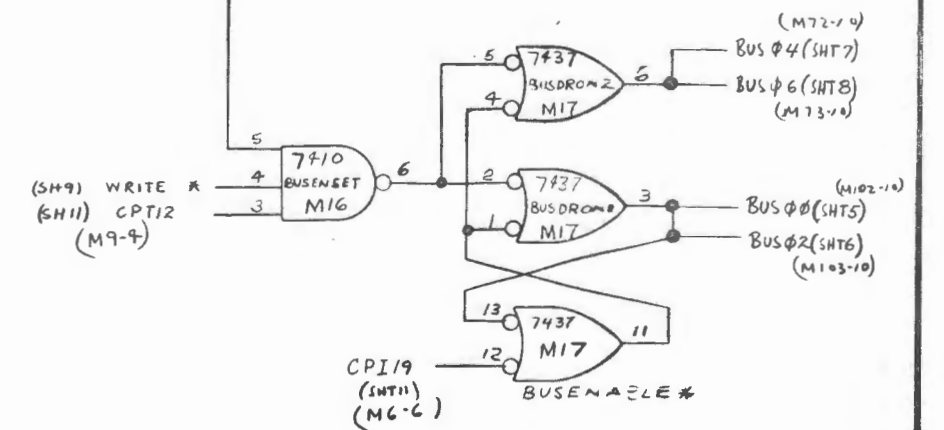
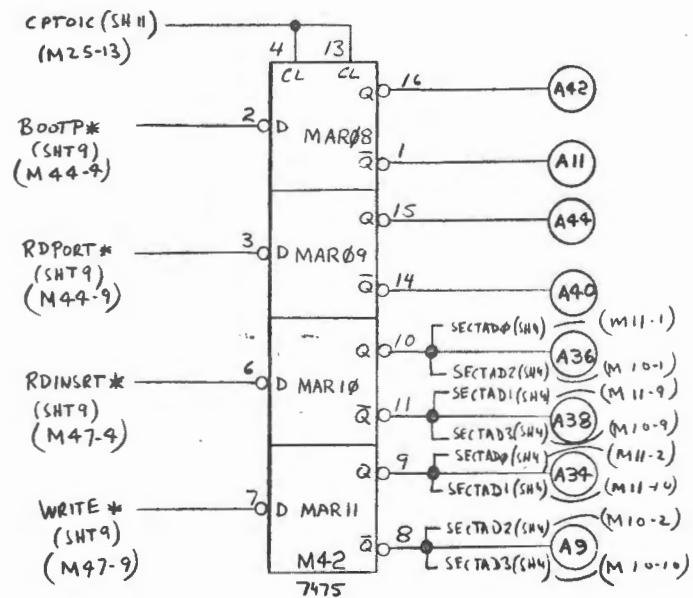
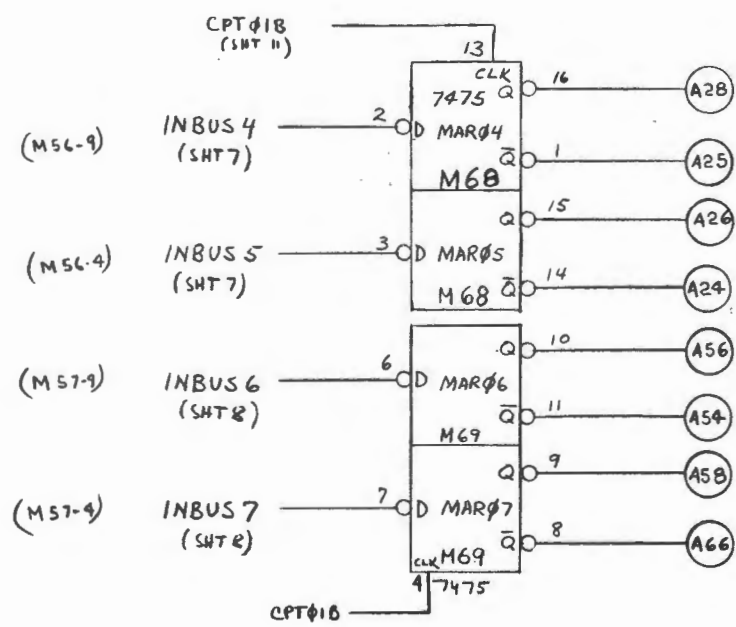
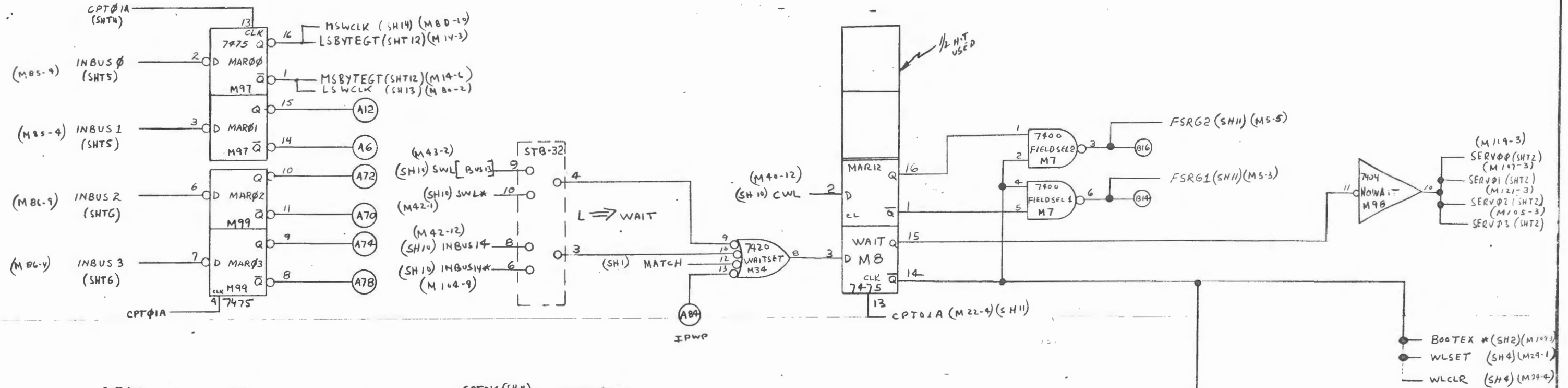
NEXT ASSY: 036-02-02 SCALE: 1:1 SHT 1 OF 14



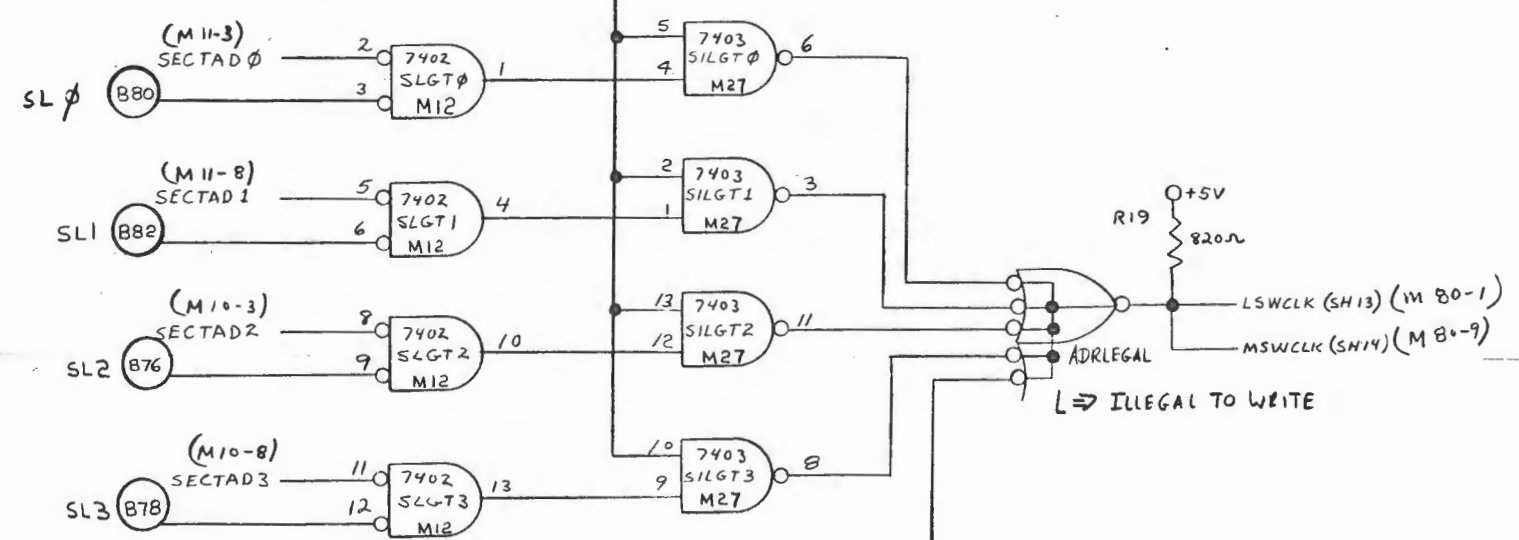
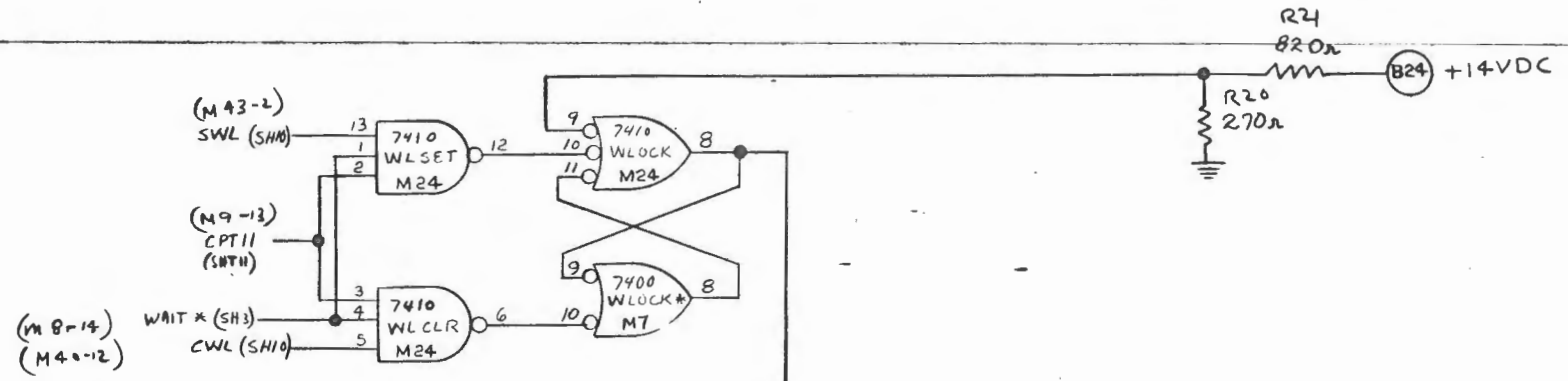
NOTE: SN75110 D L D - INH D, PIN 10, 15  
COMMON INPUT TO BOTH DRIVERS.

<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION          1000 Main Street          Marlborough, Massachusetts 01752</small>		Hapies Memorial Drive Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES UN DECIMALS .005 (3PLCS) ANGLES 2° (2PLCS)		<b>MLU:</b> <b>SERVICE AND BOOTP</b> <b>LOGIC</b>	
DR <i>D Reed</i> CHA ENG APPD NEXT ASSY	DATE <i>7-21-72</i> P C S S NO. REV <b>D 036-02-01 A</b>	SCALE	SHT <b>2</b> OF <b>14</b>

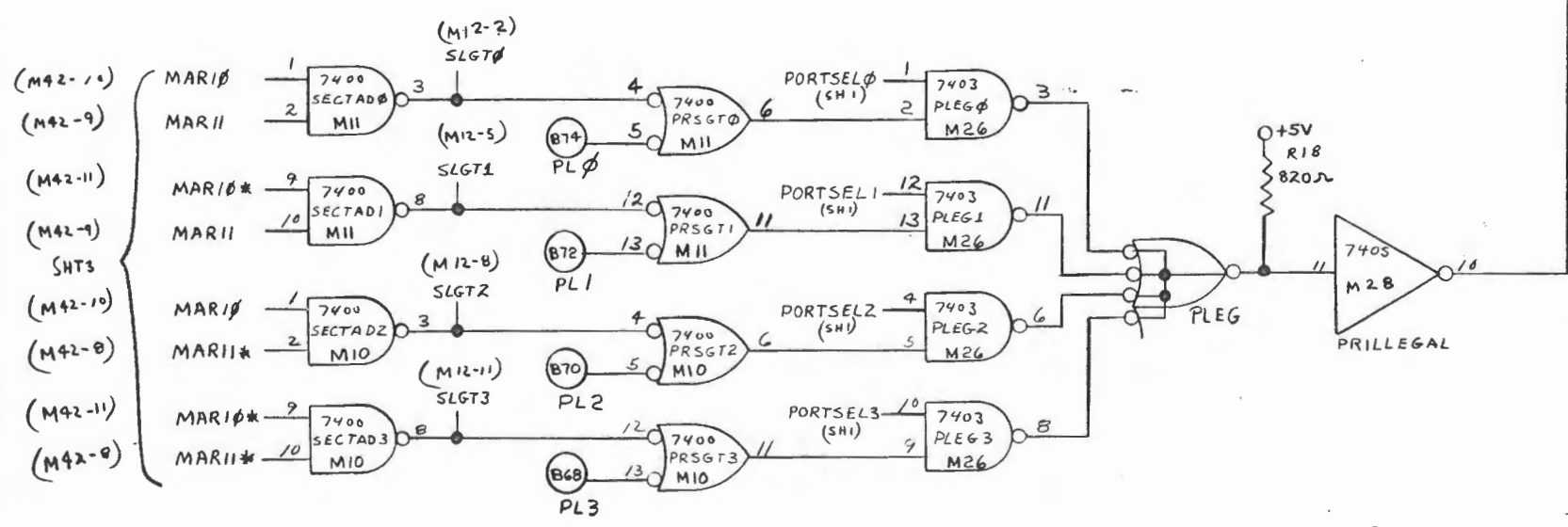




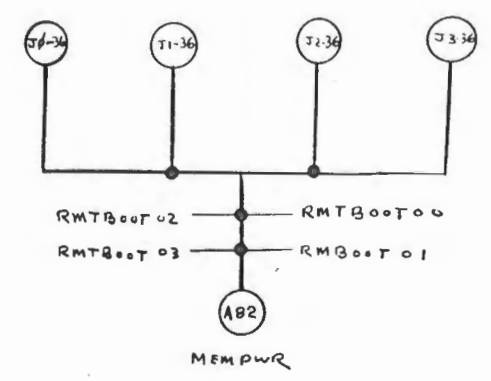
<b>INCOTERM CORPORATION</b> Hayes Memorial Drive Waltham, Massachusetts 01782		<b>MLU:</b> MEMORY ADDRESS REGISTER	
This document is the property of INCOTERM Corporation and is loaned on the express understanding that it is not to be distributed outside the organization to which loaned. If you are not an authorized recipient, please return this document to the source.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCH : DECIMALS .005 (1/32) (1/32) ANGLES 2°	
DR. D. P. B. C.	DATE: 1-24-72	CHK: [ ]	REV: [ ]
APPD: [ ]	SCALE: [ ]	P.C. [ ]	NO. [ ]
NEXT ASSY: [ ]		SHT 3 OF 14	



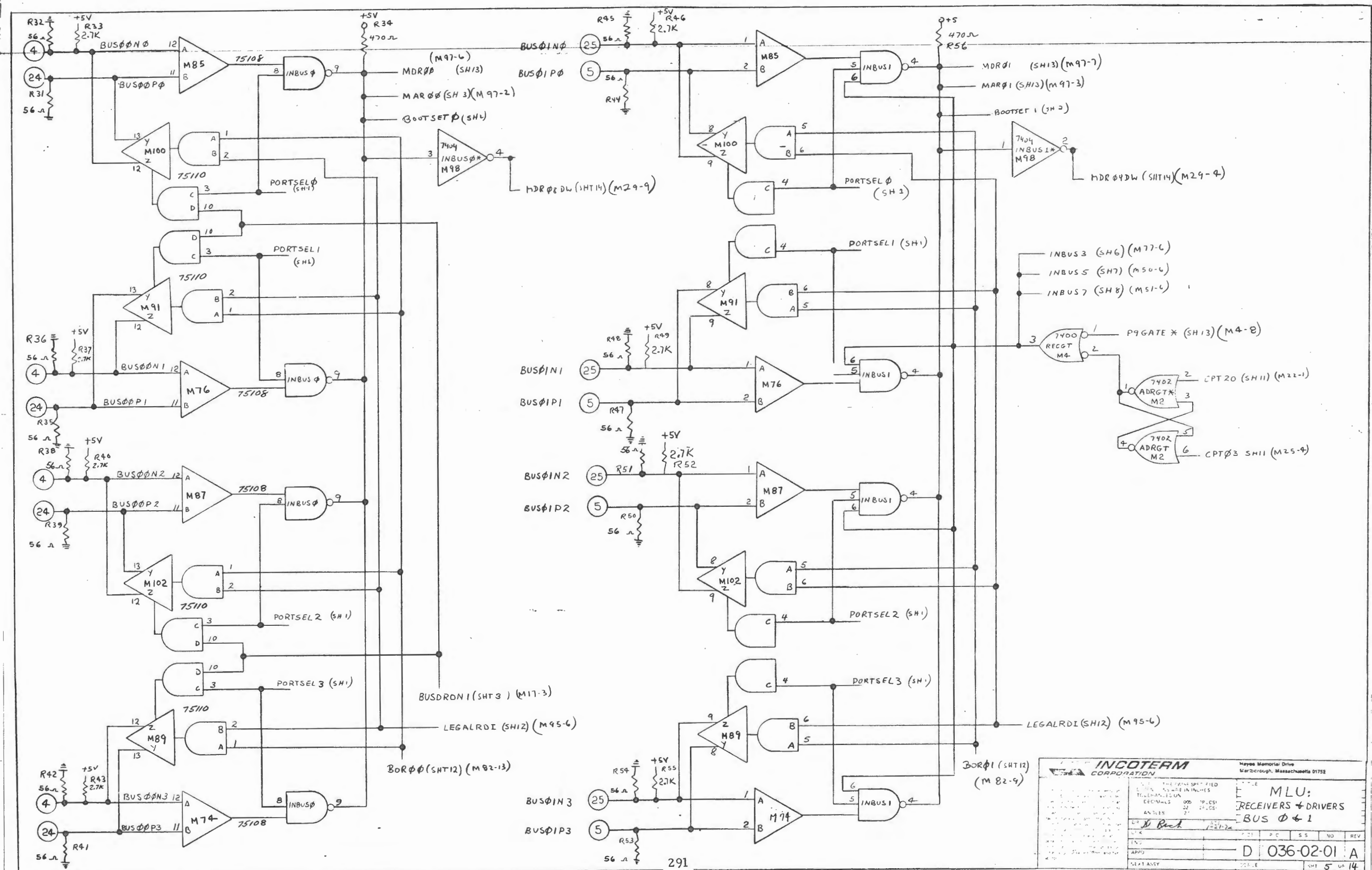
SL<sub>n</sub> = GROUND IF WRITING PROHIBITED IN THIS SECTOR



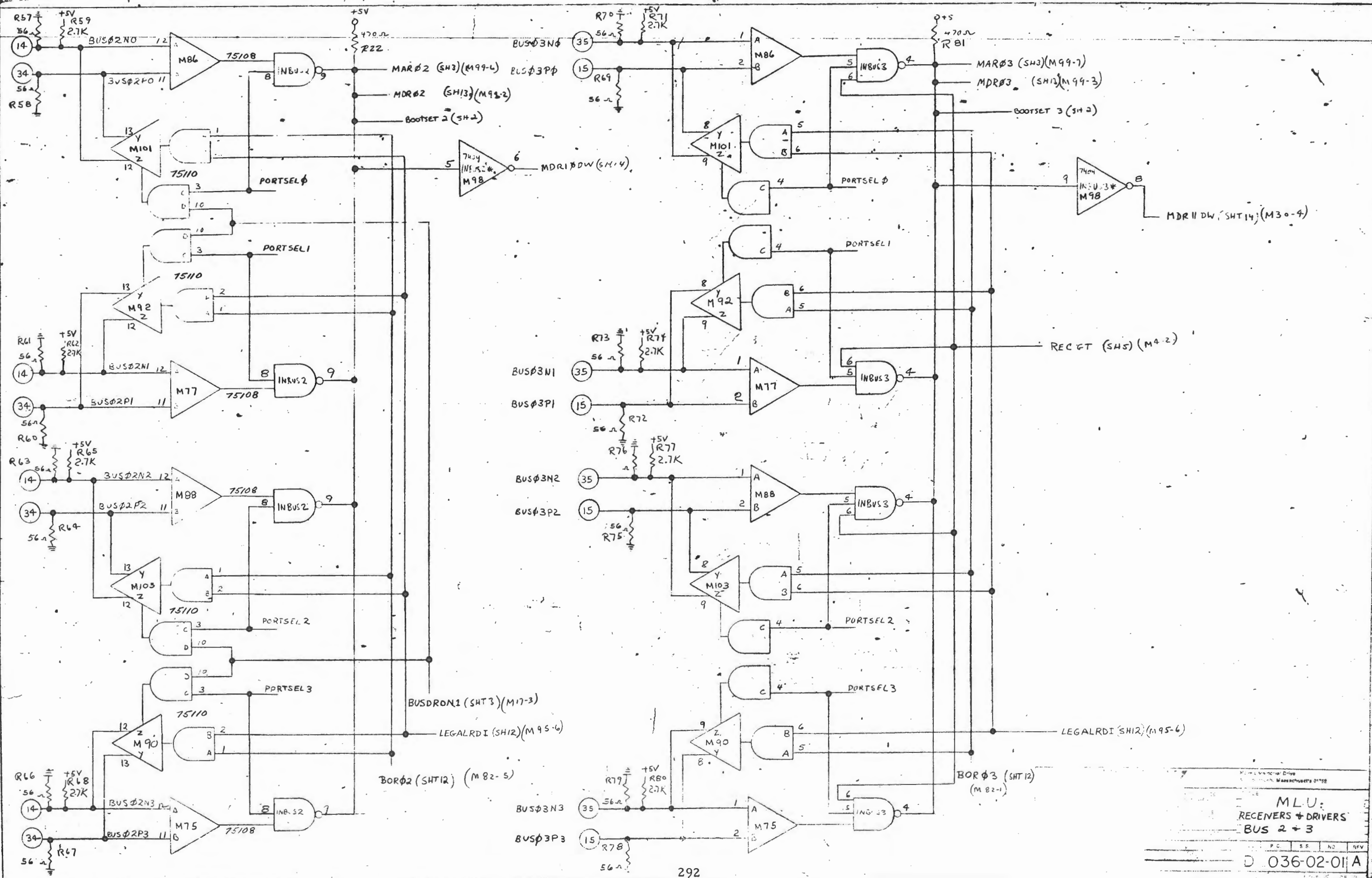
PL<sub>n</sub> OPEN IF WRITING RESTRICTED TO SECTOR *n* WHEN PORT *n* IS SELECTED



<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION, 1000 Main Street, Boston, Massachusetts 02111</small>		<small>Hayes Memorial Drive          Marlborough, Massachusetts 01752</small>	
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .005 .3PLCS1 ANGLES 2°</small>		<b>MLU</b> <b>WRITE LOCK</b>	
DR <i>B.P. Rich</i> CHK ENGR APPD NEXT ASSY	DATE <i>7-24-72</i>	SIZE P.C. S.S. NO.	REV <b>D 036-02-01 A</b> SCALE SHT 4 OF 14



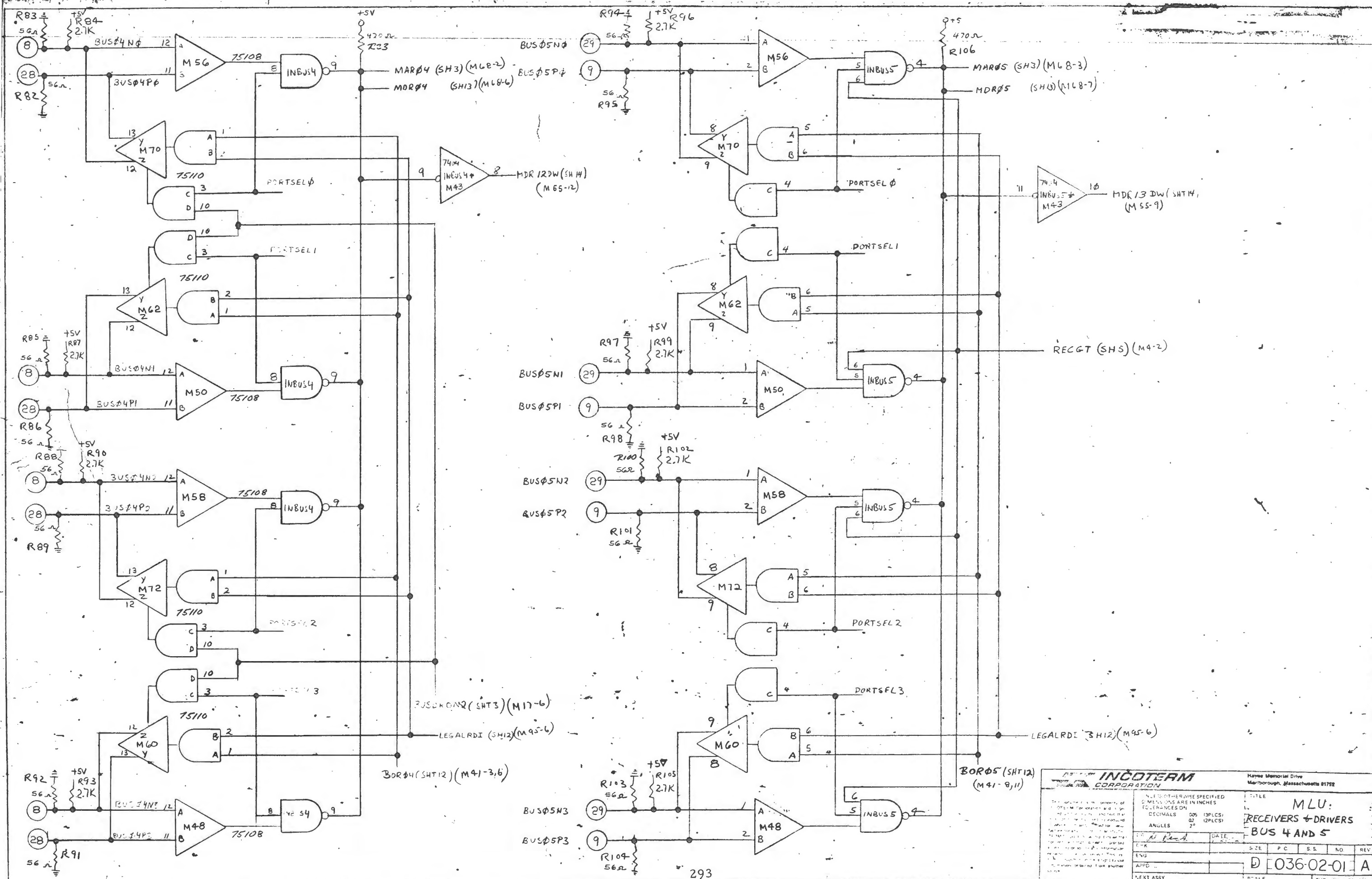
INCOTERM CORPORATION		Hoyes Memorial Drive Marzborough, Massachusetts 01752	
DATE	REV	DESCRIPTION	REV
1/21/74	1	MLU: RECEIVERS & DRIVERS BUS 0 & 1	
BY	APPD	DATE	REV
D. Buck		1/21/74	
CHKD	APPD	DATE	REV
DRAWING NO. 036-02-01		REV. A	
SHEET 5 OF 14			



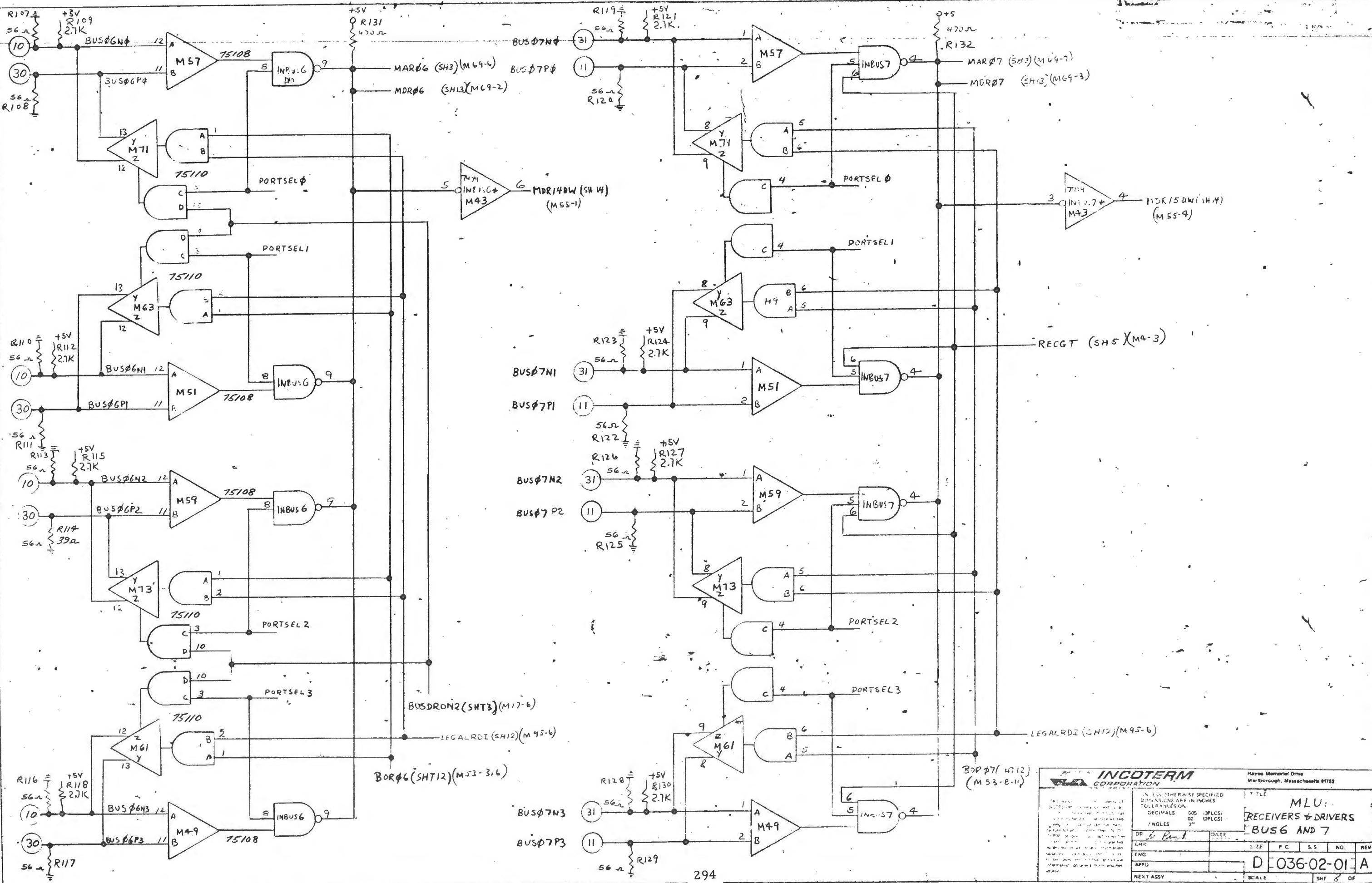
MLU:  
 RECIVERS + DRIVERS  
 BUS 2 + 3

REV	NO	SS	PC
1			

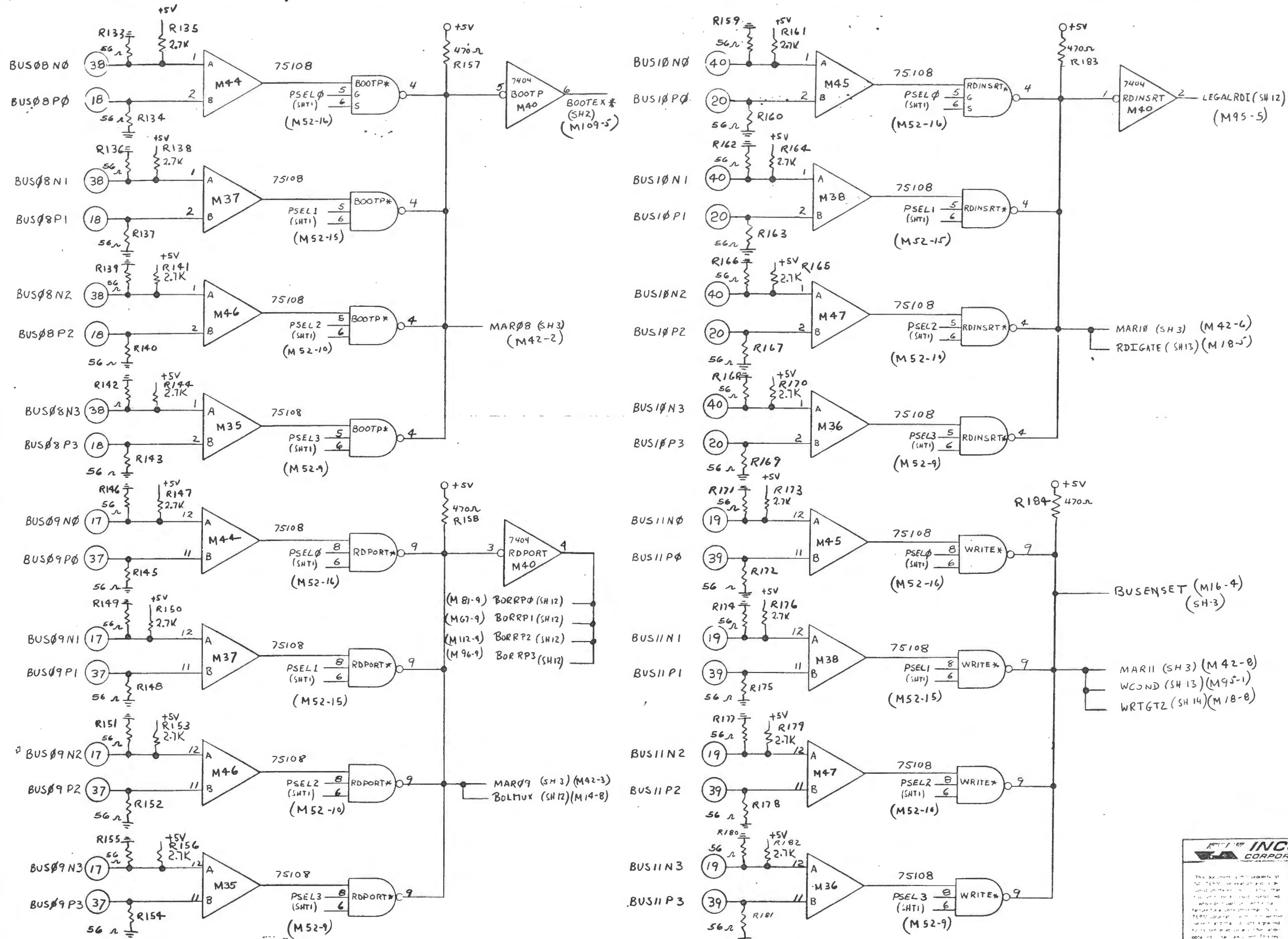
D 036-02-01A



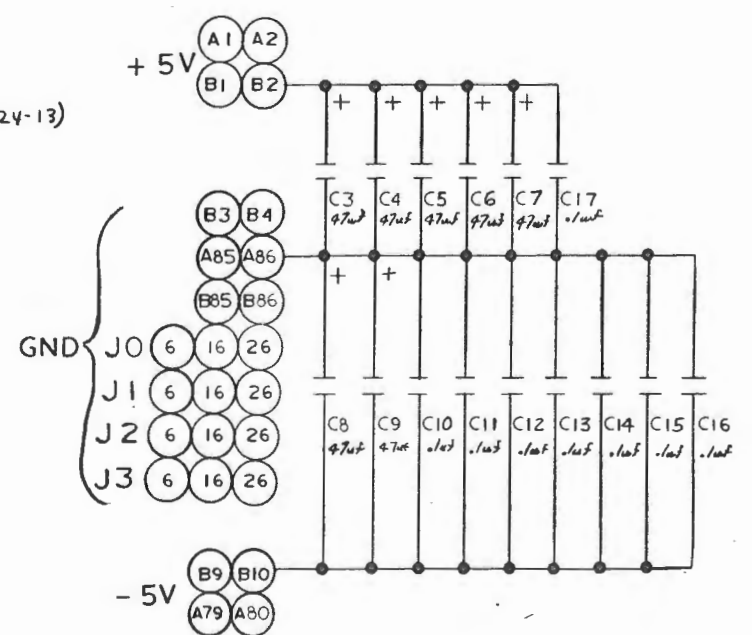
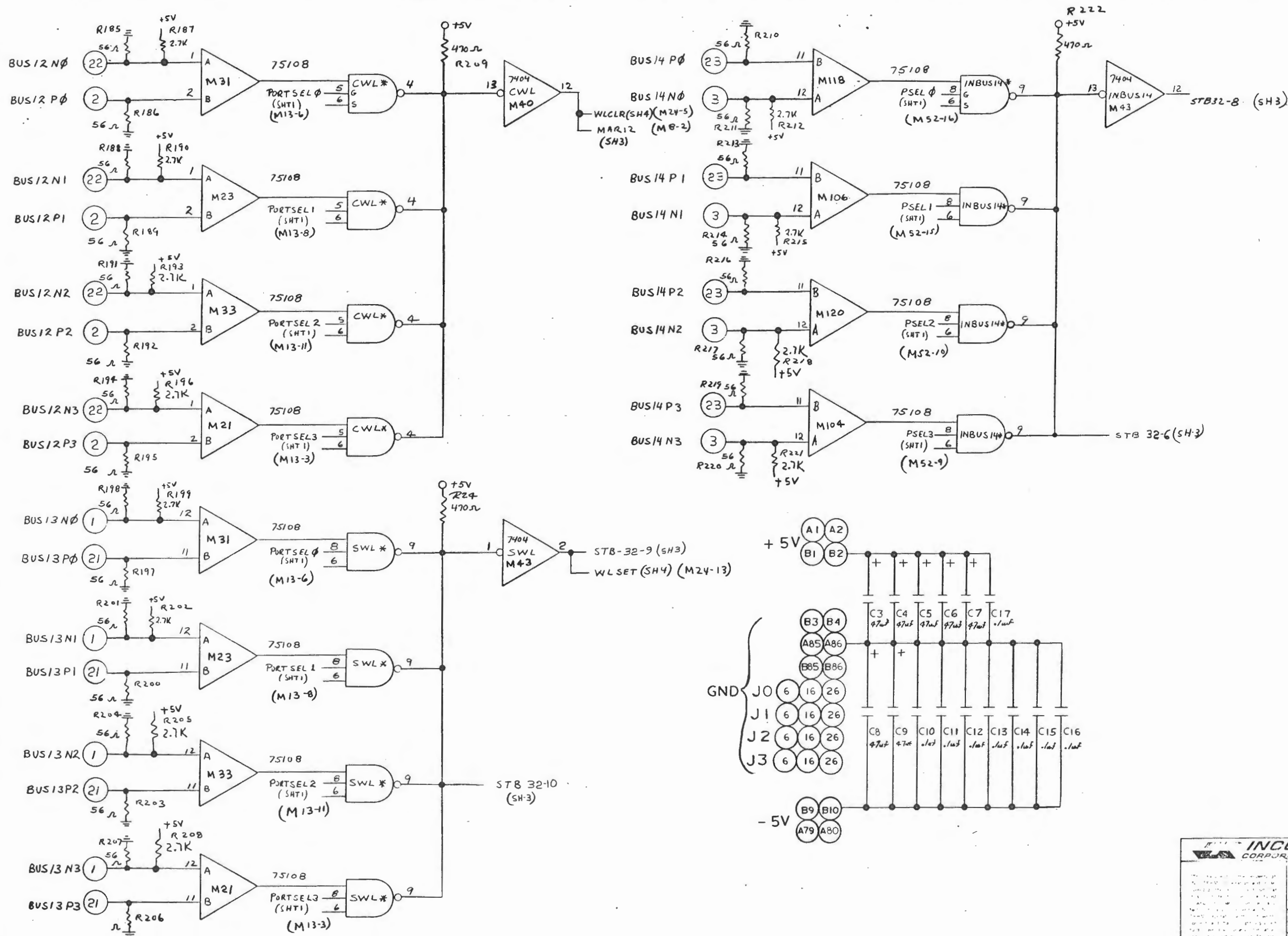
<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION          1000 North Main Street          Marlborough, Massachusetts 01752</small>		TITLE <b>MLU:          RECEIVERS + DRIVERS          BUS 4 AND 5</b>	
<small>UNLESS OTHERWISE SPECIFIED          DIMENSIONS ARE IN INCHES          TOLERANCES ON          DECIMALS .005 (3PLCS)          ANGLES .02 (2PLCS)          25°</small>		DATE: BY: <i>R. Reed</i> CHK: ENG: APPD: NEXT ASSY:	
SIZE: <b>D</b>		P.C. <b>036-02-01</b>	
NO. <b>A</b>		REV. <b>7</b> OF <b>14</b>	



<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION          1000 WEST 12TH AVENUE          DENVER, COLORADO 80202          (303) 733-1000</small>		<small>Hayes Memorial Drive          Marlborough, Massachusetts 01752</small>	
<small>UNLESS OTHERWISE SPECIFIED          DIMENSIONS ARE IN INCHES          TOLERANCES ON          DECIMALS .005 (3PLCS)          / ANGLES .02 (2PLCS)          2°</small>		TITLE <b>MLU:          RECEIVERS &amp; DRIVERS          BUS 6 AND 7</b>	
DR: <i>John P. ...</i> ENG: APPD: NEXT ASSY:	DATE: SCALE:	SIZE: <b>D</b> P.C.: <b>036-02-01</b> S.S.: <b>A</b> NO.: REV:	SHEET: <b>8</b> OF

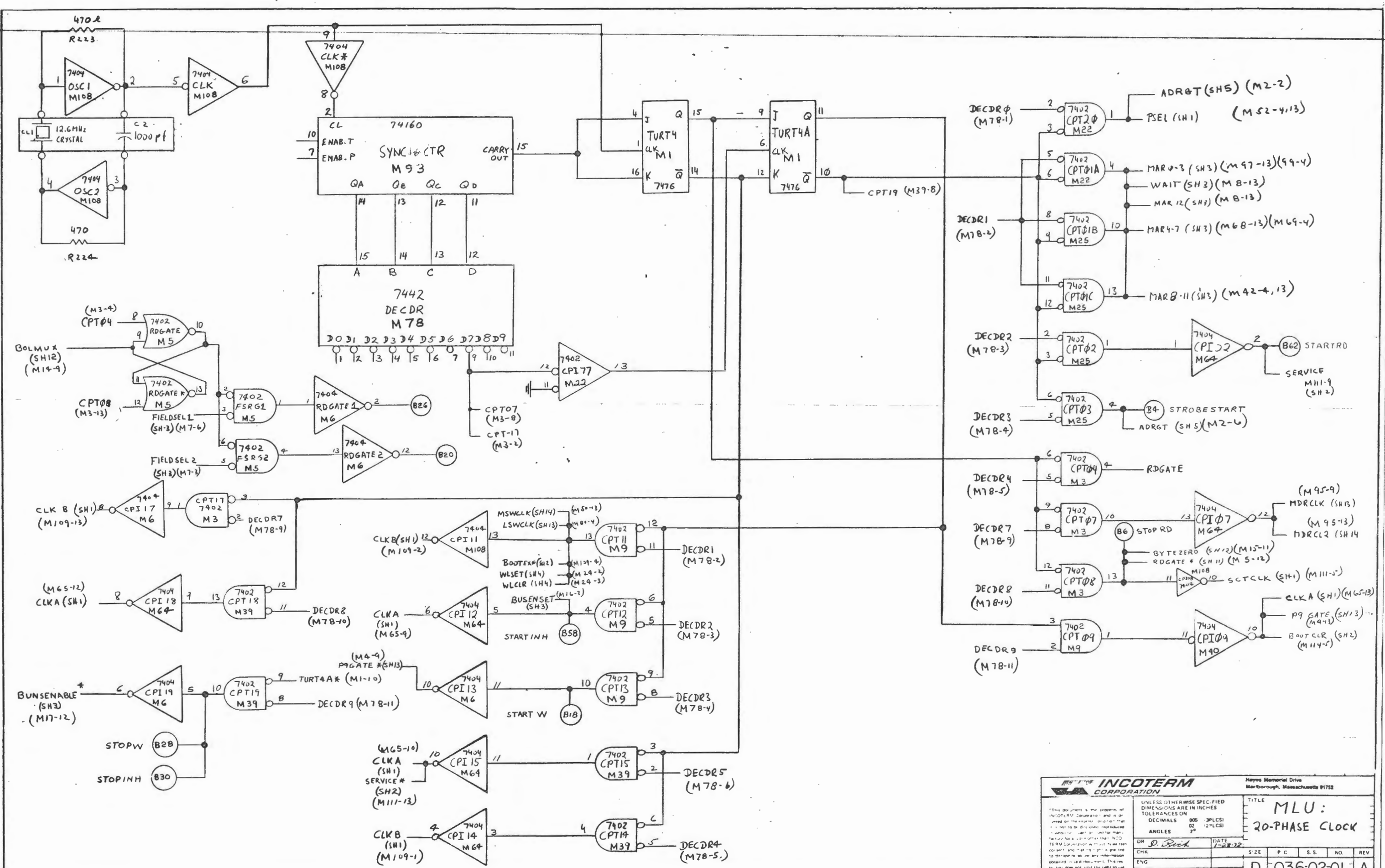


<b>INCOTERM CORPORATION</b>		Plymouth Memorial Drive Mansfield, Massachusetts 01752	
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CHK	DES	P.C.	SS
ENG		D 036-02-01 A	
APPD			
NEXT ASSY	SCALE	SHT	9 OF 14

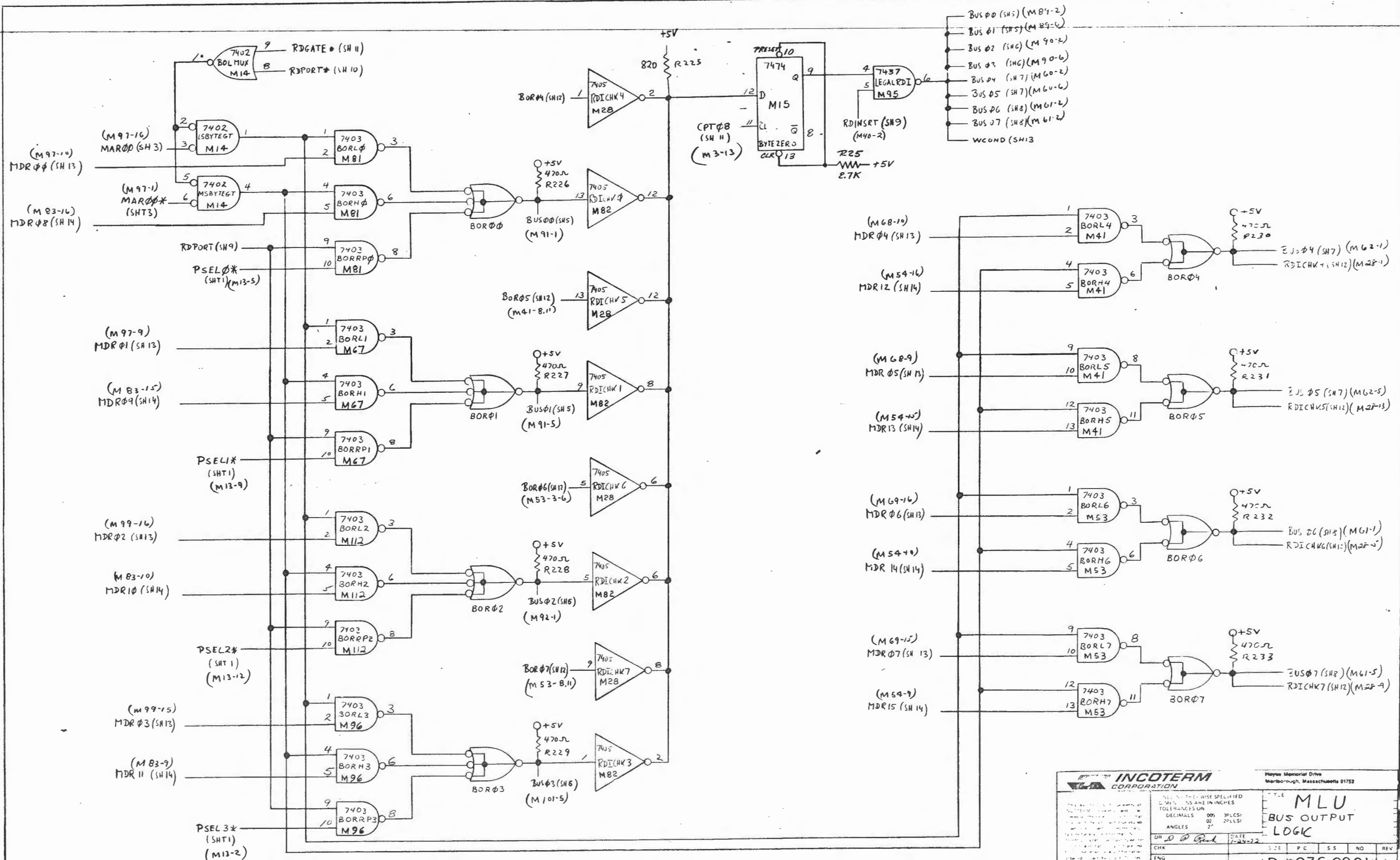


<b>INCOTERM CORPORATION</b> Haynes Memorial Drive Marlborough, Massachusetts 01752		TITLE <b>MLU:</b> <b>RECEIVERS + DRIVERS</b> <b>FOR BUS 12, 13, 14</b>	
THIS DRAWING IS THE PROPERTY OF INCOTERM CORPORATION AND IS TO BE USED ONLY FOR THE PROJECT AND QUANTITY SPECIFIED. IT IS TO BE RETURNED TO INCOTERM CORPORATION UPON COMPLETION OF THE PROJECT. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.	ALL DIMENSIONS SPECIFIED UNLESS OTHERWISE NOTED ARE IN INCHES. DECIMALS: 0/16, 3/16, 1/2, 5/8, 3/4, 7/8 ANGLES: 2°	DATE D.P. Beck 7-26-72	SIZE P.C. S.S. NO. REV.
DRG. NO. 036-02-01	REV. A	SHEET NO. 10 OF 14	SCALE

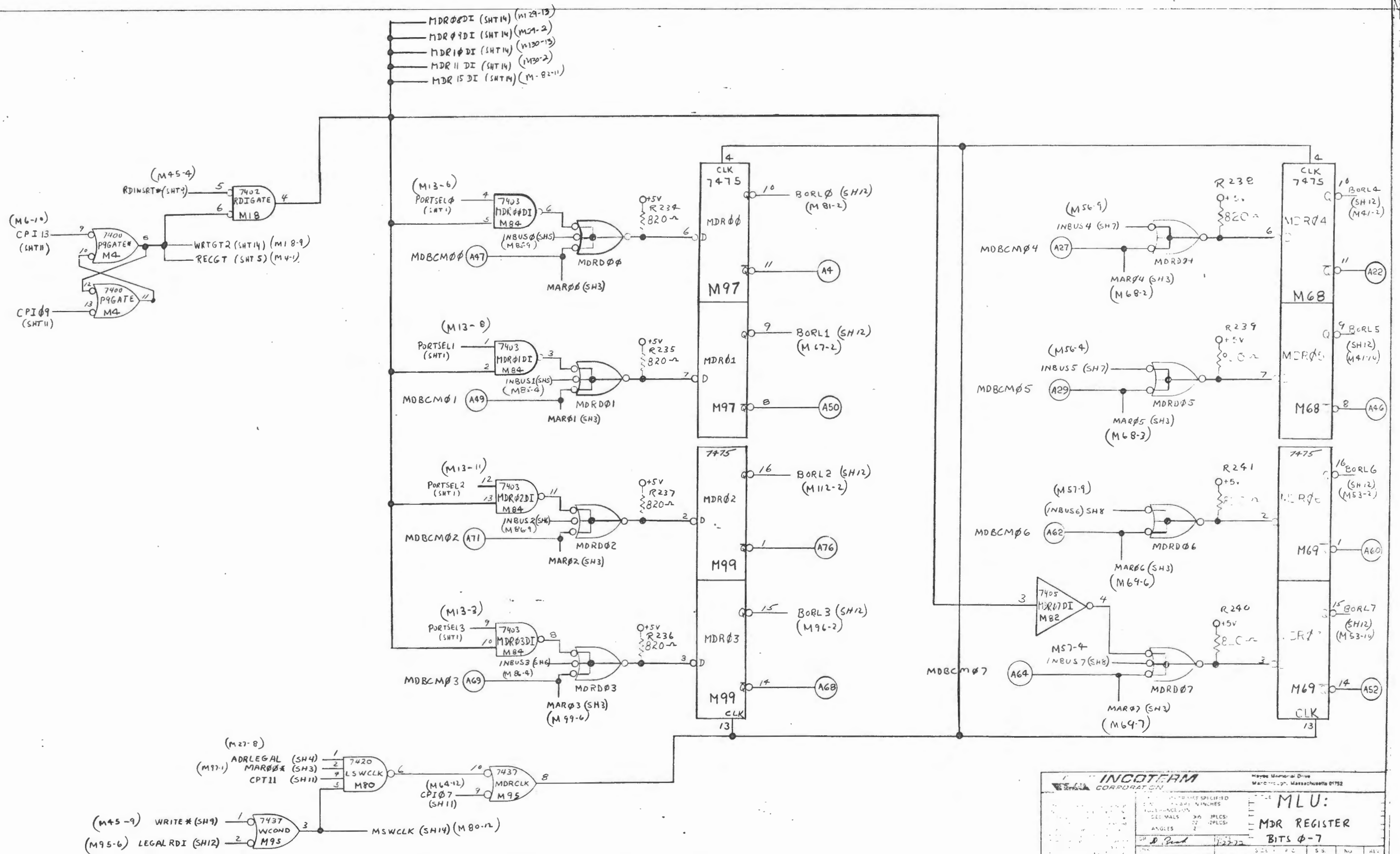




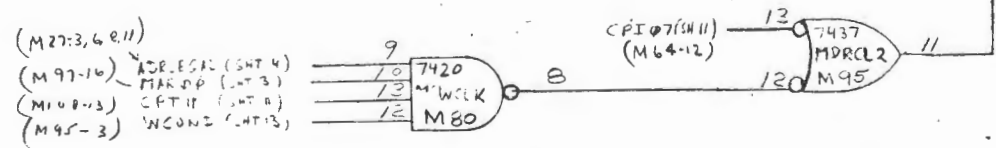
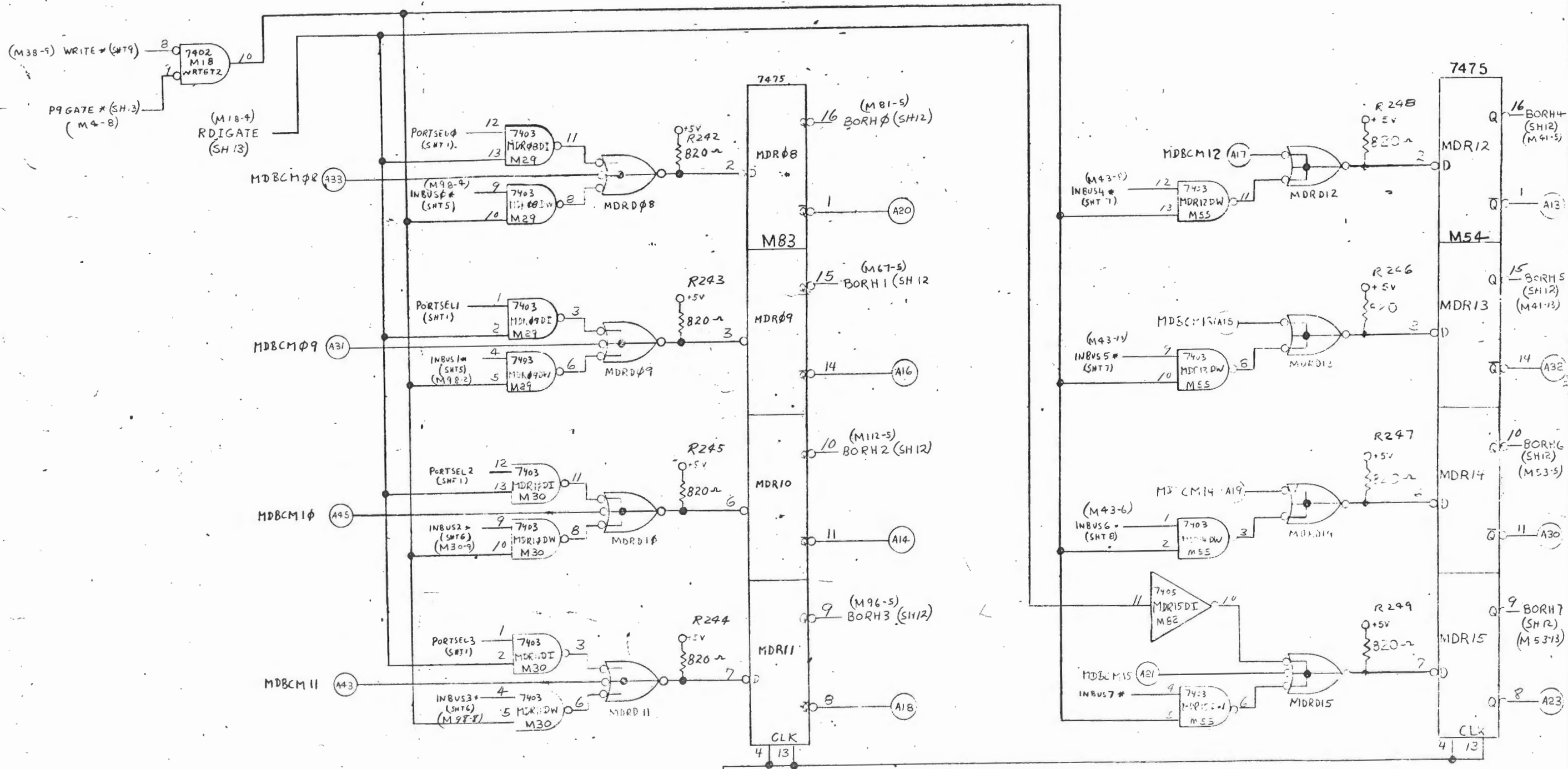
<b>INCOTERM CORPORATION</b> <small>Keyes Memorial Drive Marlborough, Massachusetts 01752</small>		TITLE <b>MLU: 20-PHASE CLOCK</b>	
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .005 .3PLCS1 FRACTIONS 1/32 .12PLCS1 ANGLES 2°</small>		DATE <b>1-28-72</b>	
DR <b>D. Rich</b>	CHK ENG APPD NEXT ASSY	SIZE <b>D</b>	P.C. S.S. NO. REV <b>036-02-01 A</b>
SCALE <b>SHT 11 OF 14</b>			



<b>INCOTERM CORPORATION</b> Mayes Memorial Drive Marlborough, Massachusetts 01752		TITLE <b>MLU          BUS OUTPUT          LOGIC</b>	
ALL DIMENSIONS UNLESS SPECIFIED OTHERWISE ARE IN INCHES DECIMALS 000 3PLCSH ANGLES 2°	DATE 7-24-72	SIZE P C S S NO REV	SCALE SH 12 OF 14
DR <i>[Signature]</i>	ENG	D 036-02-01 A	
APPD			
NEXT ASSY			

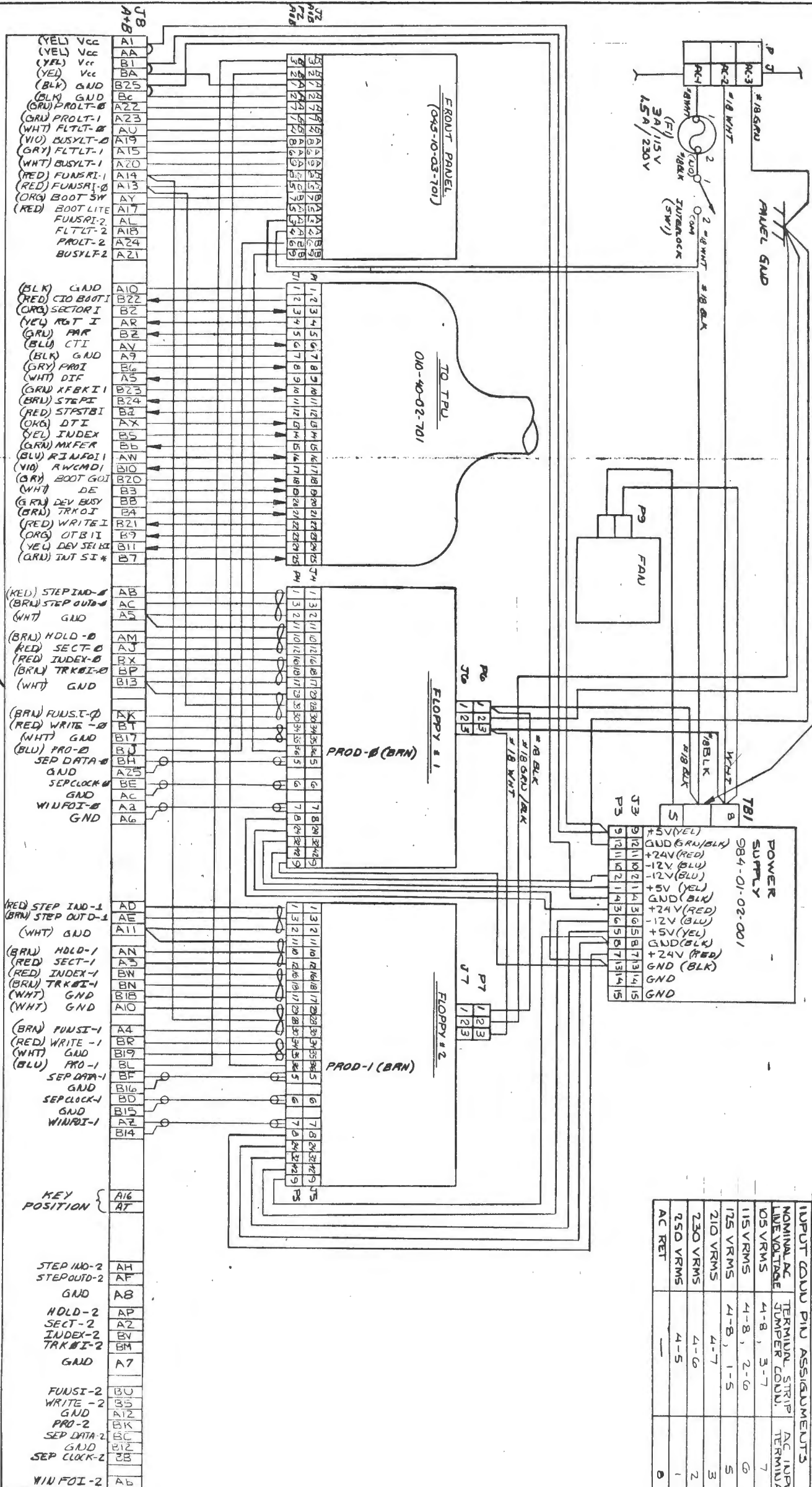


<b>INCOTEAM CORPORATION</b> <small>INCOTEAM CORPORATION          1000 Memorial Drive          Marlborough, Massachusetts 01752</small>		<b>MLU:</b> <b>MDR REGISTER</b> <b>BITS 0-7</b>	
<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>
<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>	<small>DATE SPECIFIED</small> <small>DATE ORDERED</small> <small>QTY</small> <small>PRICE</small> <small>TOTAL</small> <small>NET 25%</small>



INCOTERM CORPORATION		Heres Memory Drive Woburn, Massachusetts 01792	
DATE		MLU:	
SCALE		MDR REGISTER	
		BITS 8-15	
		D: 036-02-01	A
		SCALE	14 14

TERMINAL STRIP  
SEE CHART FOR  
PROPER CONNECTORS  
AND SUPPLIERS.



INPUT CABLE PIN ASSIGNMENTS

NOMINAL AC LINE VOLTAGE	TERMINAL STRIP JUMPER CABLE	AC INPUT TERMINAL
105 VRMS	4-8, 3-7	7
115 VRMS	4-8, 2-6	6
125 VRMS	4-8, 1-5	5
210 VRMS	4-7	3
230 VRMS	4-6	2
250 VRMS	4-5	1
AC RET		8

PC BOARD ASSY 045-01-02-701

- KEY POSITION
- AH STEP IND-2
  - AF STEP OUT-2
  - A8 GND
  - AP HOLD-2
  - A2 SECT-2
  - BY INDEX-2
  - BM TRKOI-2
  - A7 GND
  - BU FUNSI-2
  - BS WRITE-2
  - A12 GND
  - BK PRO-2
  - BC SEP DATA-2
  - B12 GND
  - CB SEP CLOCK-2
  - AB WINFOI-2

REVISIONS

REV	DESCRIPTION	CHK	APPD
B	R&R PRIORITY TO RELEASE. PROTOTYPE ASSY TO REV. A WHICH IS IN TO FILE DRAWN RELEASED RDP# 6592		
C	REVISED/ECO 2612		

**INCOTERM CORPORATION**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS .005 (FIFTEEN THOUSITHS) ANGLES 2°

TITLE: POWER WIRING SCHEMATIC (FLOPPY DISC) 001

DATE: 04/23/73

SCALE: D 045-10-23

REV: C

APPROVED: [Signature]

DATE: 04/23/73

SCALE: D 045-10-23

REV: C

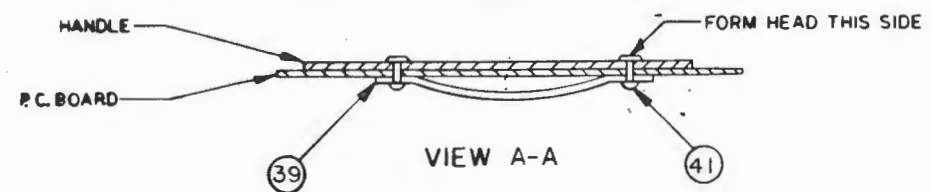
1 OF 1

CUT ETCH FROM
AI M53-3 TO M53-8
BI M53-3 TO EYELET
DI M23-1 TO EYELET

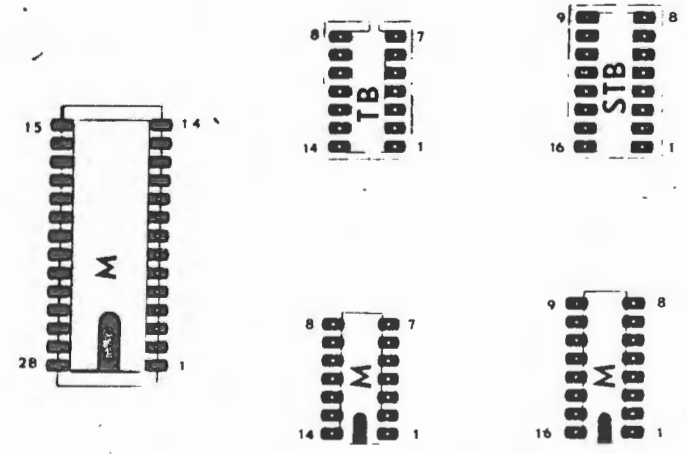
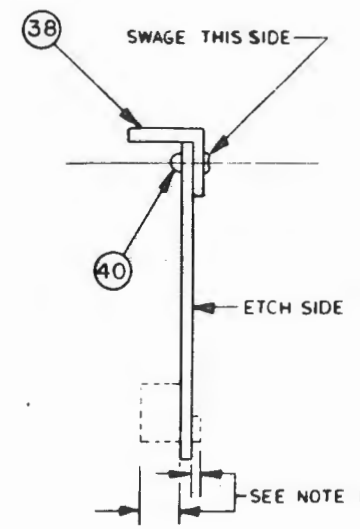
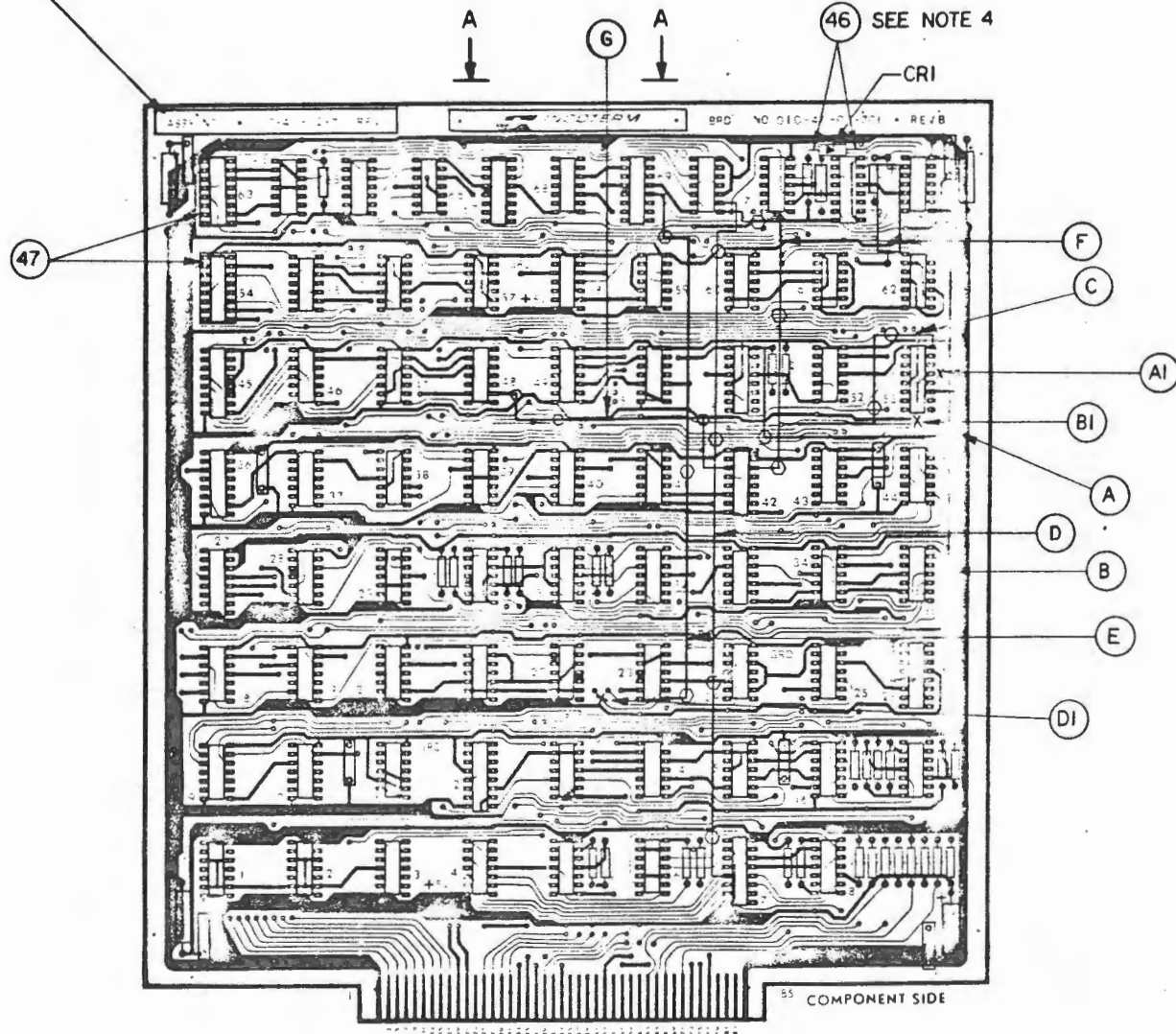
ADD WIRE (ITEM 43) FROM
A M53-3 TO M51-8
B M73-1 TO EYELET
C M53-8 TO EYELET
D M7-13 TO M70-2
E M23-1 TO M69-4
F M70-1 TO M42-6
G M42-1 TO M48-2

47	M54,63
45	CRI
37	C3
36	C1, 4, 5, 6, 7, 8, 9, 10
35	C2
34	C11, 12, 13, 14
33	R1, 2, 5, 6, 7, 8, 11, 12, 13, 14
	15, 16, 19, 29, 20, 21, 22,
	23, 24, 25, 26, 27, 30, 31
32	R28
31	R17
30	R10
29	R3, 4, 9
28	R18
27	M54, 63
26	M27, 36, 45
25	M42
24	M72
23	M9, 10
22	M57
21	M26, 51, 53, 67, 69
20	M11, 36, 40, 50, 62, 66, 73
19	M20
18	M7, 12
17	M41
16	M37, 43
15	M4, 17, 30
14	M23, 29, 44, 46
13	
12	M14, 18, 19, 21, 32, 34
	55, 58
11	M1, 2, 5
10	M8, 13, 15, 16, 25, 33, 47
	49, 52, 65, 70, 71
9	M3, 6, 22, 24, 26, 31, 35
	39, 46, 56, 59, 60, 61, 64, 66
8	
7	
6	
5	
4	
3	
2	
1	
ITEM NO.	REFERENCE DESIGNATION

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
B	RELEASED R.D.# 659D	JK	JK
C	REVISED/ECO 2563	JK	JK
D	REVISED/ECO 2598	JK	JK



SEE NOTE 2 (42)



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

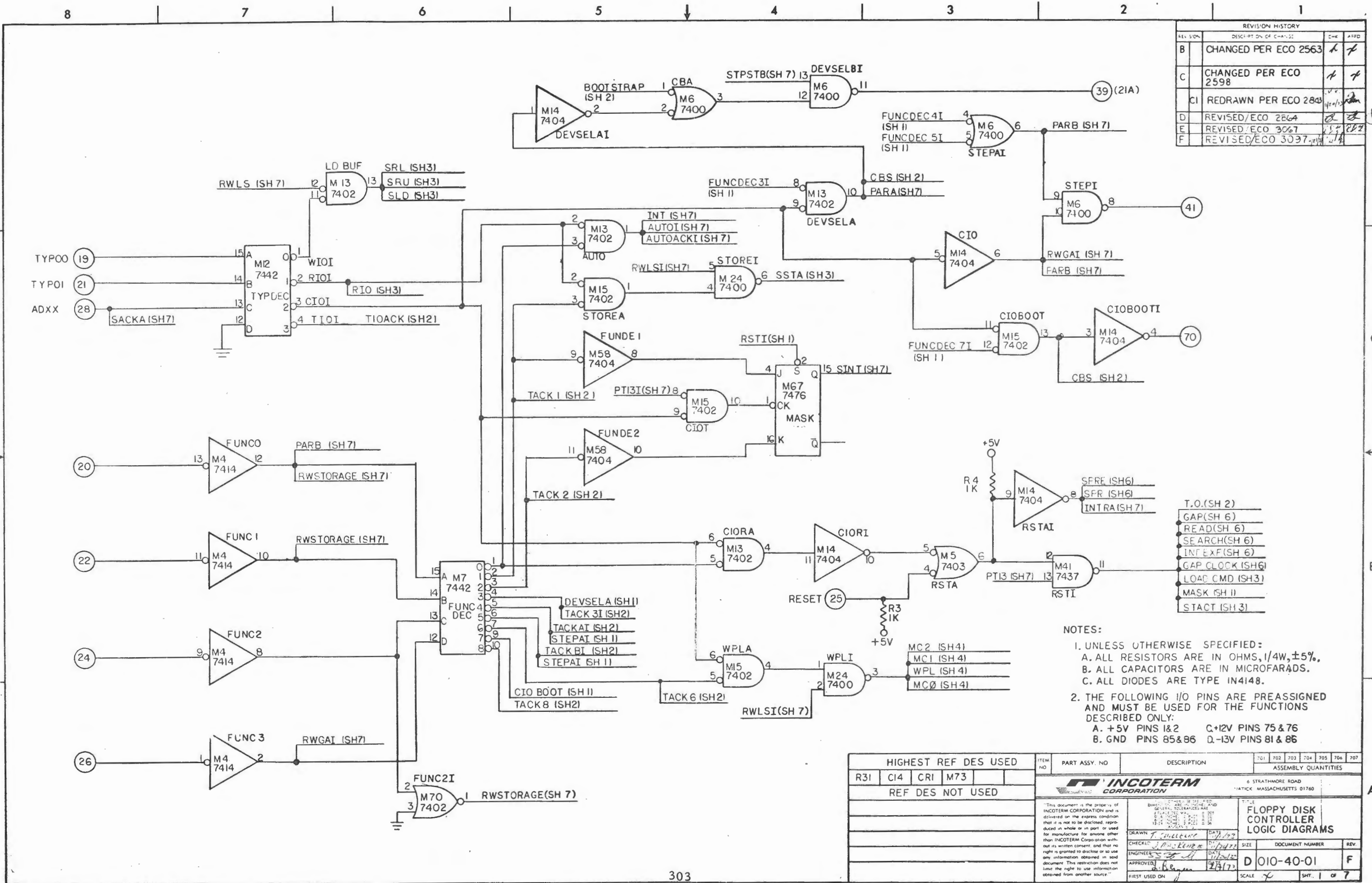
**NOTE:**

- HEIGHT LIMITATIONS.**  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
- LOCATE IN APPROXIMATE AREA SHOWN REV LABLE, ITEM 42, AND MARK "ASS Y NO 010-40-02-701" AND LATEST ASS'Y REV
- ATTACH JUMPER WIRES ITEM 43, USING GLUE ITEM 44, TO BOARD IN AREAS MARKED (O).
- ATTACH CLEAR SLEEVING ITEM 46, OVER DIODE LEADS BEFORE ATTACHING DIODE TO BOARD.

ASSEMBLE WITH ARTWORK CIO-40-02-701 REV B

<b>INCOTERM CORPORATION</b>		100 WEAVER ROAD MILFORD, MASSACHUSETTS 01530	
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CHECKED: <i>[Signature]</i>	DATE: 6/24/73	SIZE: D	DOCUMENT NUMBER: 010-40-02
ENGINEER: <i>[Signature]</i>	DATE: 6/25/73	REV: D	SCALE: 1/1
APPROVED: <i>[Signature]</i>	DATE: 6/25/73	SHEET 1 OF 2	
FIRST USED ON: 7/1/73			

REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD
B	CHANGED PER ECO 2563	/	/
C	CHANGED PER ECO 2598	/	/
CI	REDRAWN PER ECO 2843	/	/
D	REVISED/ECO 2864	/	/
E	REVISED/ECO 3067	/	/
F	REVISED/ECO 3097	/	/



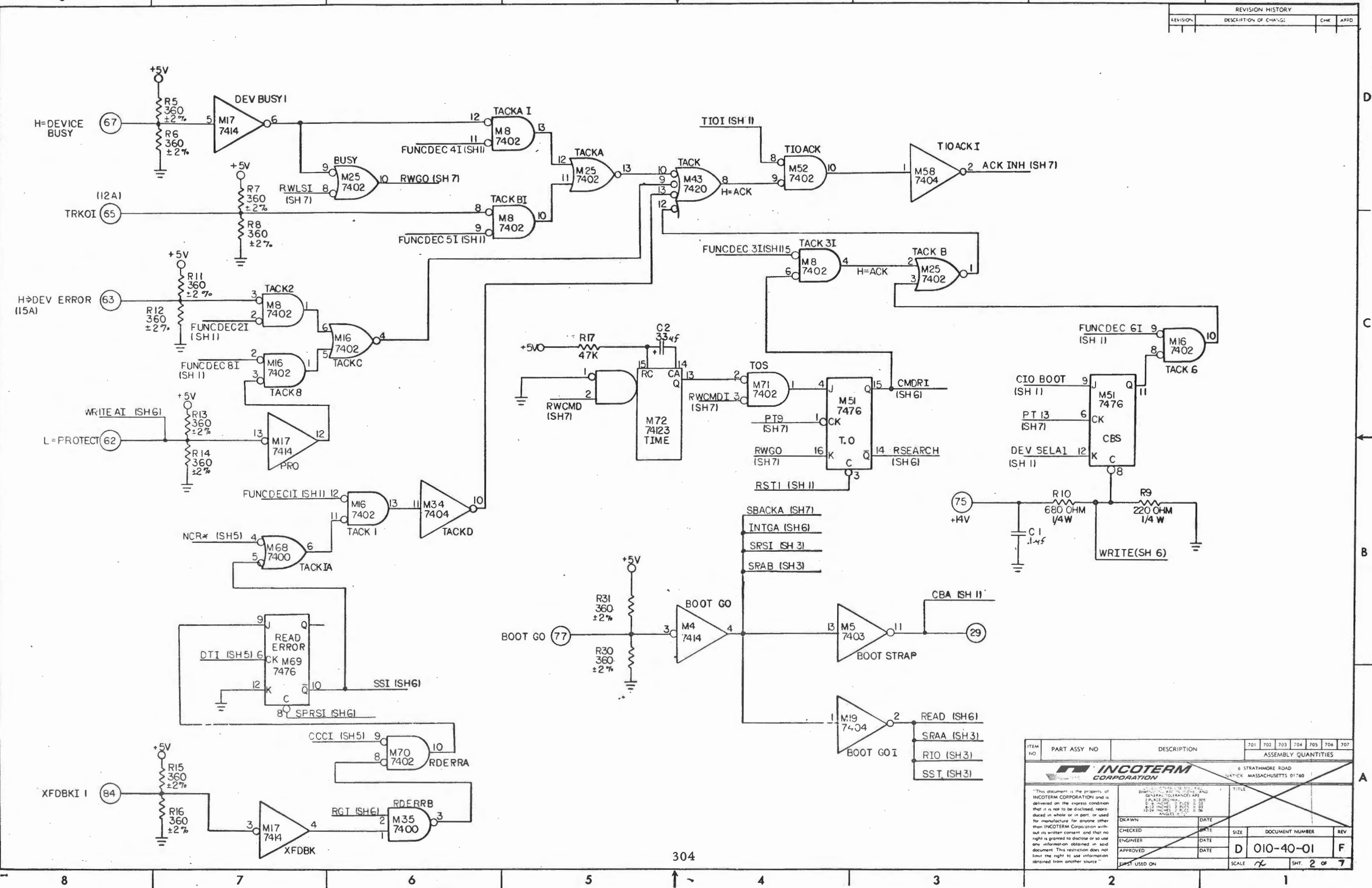
- T.O.(SH 2)
- GAP(SH 6)
  - READ(SH 6)
  - SEARCH(SH 6)
  - INDEX(SH 6)
  - GAP CLOCK(SH6)
  - LOAD CMD(SH3)
  - MASK(SH 1)
  - STACT(SH 3)

- NOTES:
- UNLESS OTHERWISE SPECIFIED:
    - A. ALL RESISTORS ARE IN OHMS, 1/4W, ±5%.
    - B. ALL CAPACITORS ARE IN MICROFARADS.
    - C. ALL DIODES ARE TYPE IN4148.
  - THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED ONLY:
 

A. +5V PINS 1&2	C.+12V PINS 75 & 76
B. GND PINS 85&86	D.-13V PINS 81 & 86

HIGHEST REF DES USED		ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707
R31	CI4	CR1	M73								
REF DES NOT USED											
<b>INCOTERM CORPORATION</b>											
6 STRATHMORE ROAD TATUCK, MASSACHUSETTS 01760											
<b>FLOPPY DISK CONTROLLER LOGIC DIAGRAMS</b>											
DRAWN: T. SHILLINE			DATE: 11/17/73			SIZE:			DOCUMENT NUMBER:		
CHECKED: J. B. BERNER			DATE: 11/21/73			REV:					
APPROVED: S. J. J.			DATE: 11/21/73			D 010-40-01			F		
FIRST USED ON:			SCALE: 1/1			SHT. 1 OF 7					

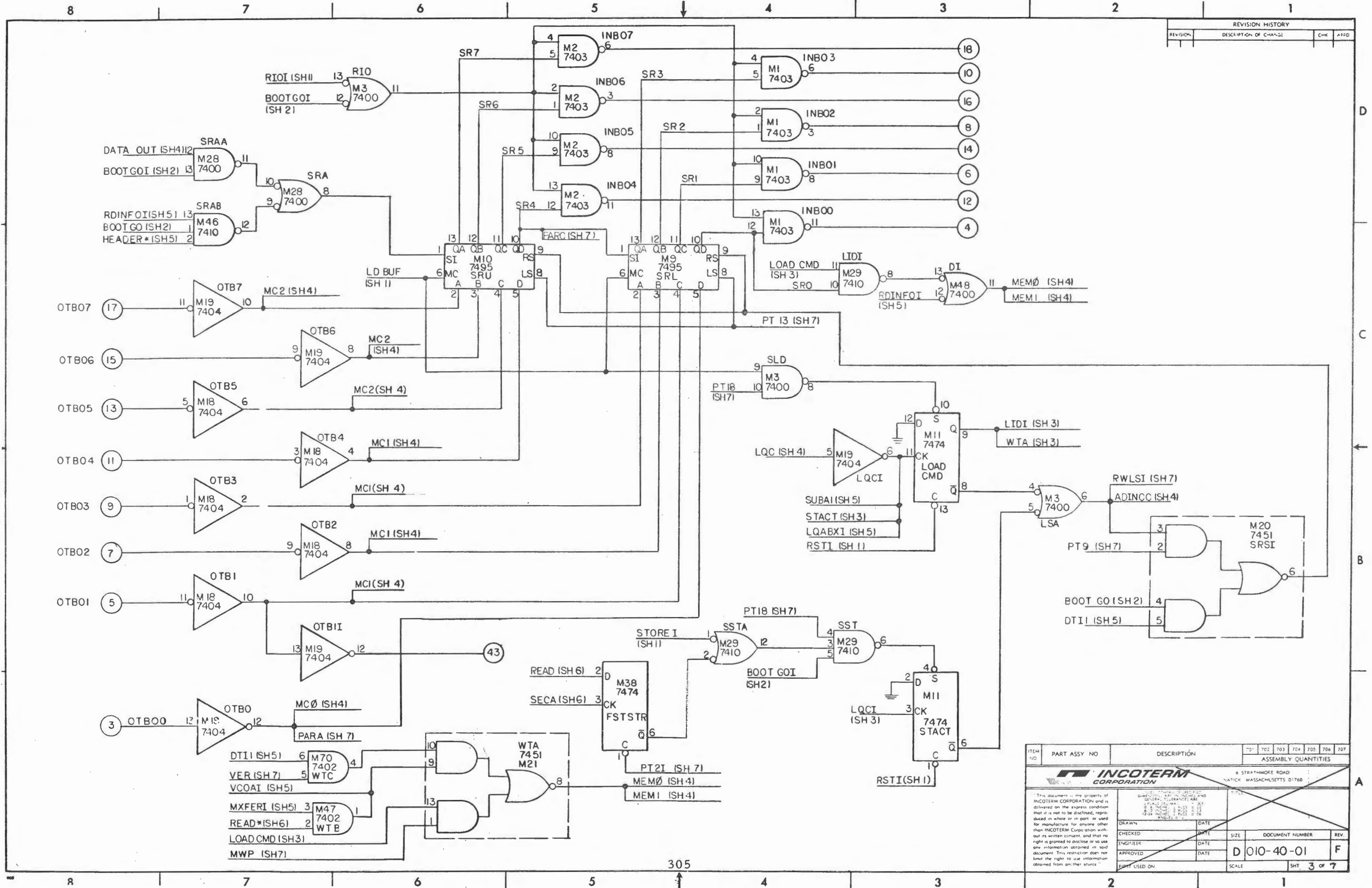
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
INCOTERM CORPORATION			ASSEMBLY QUANTITIES						
6 STRATHMORE ROAD QUICK MASSACHUSETTS 01740			TITLE						
DRAWN			DATE		SIZE		DOCUMENT NUMBER		REV
ENGINEER			DATE		D		010-40-01		F
APPROVED			DATE		SCALE		SHT. 2 of 7		
FIRST USED ON									

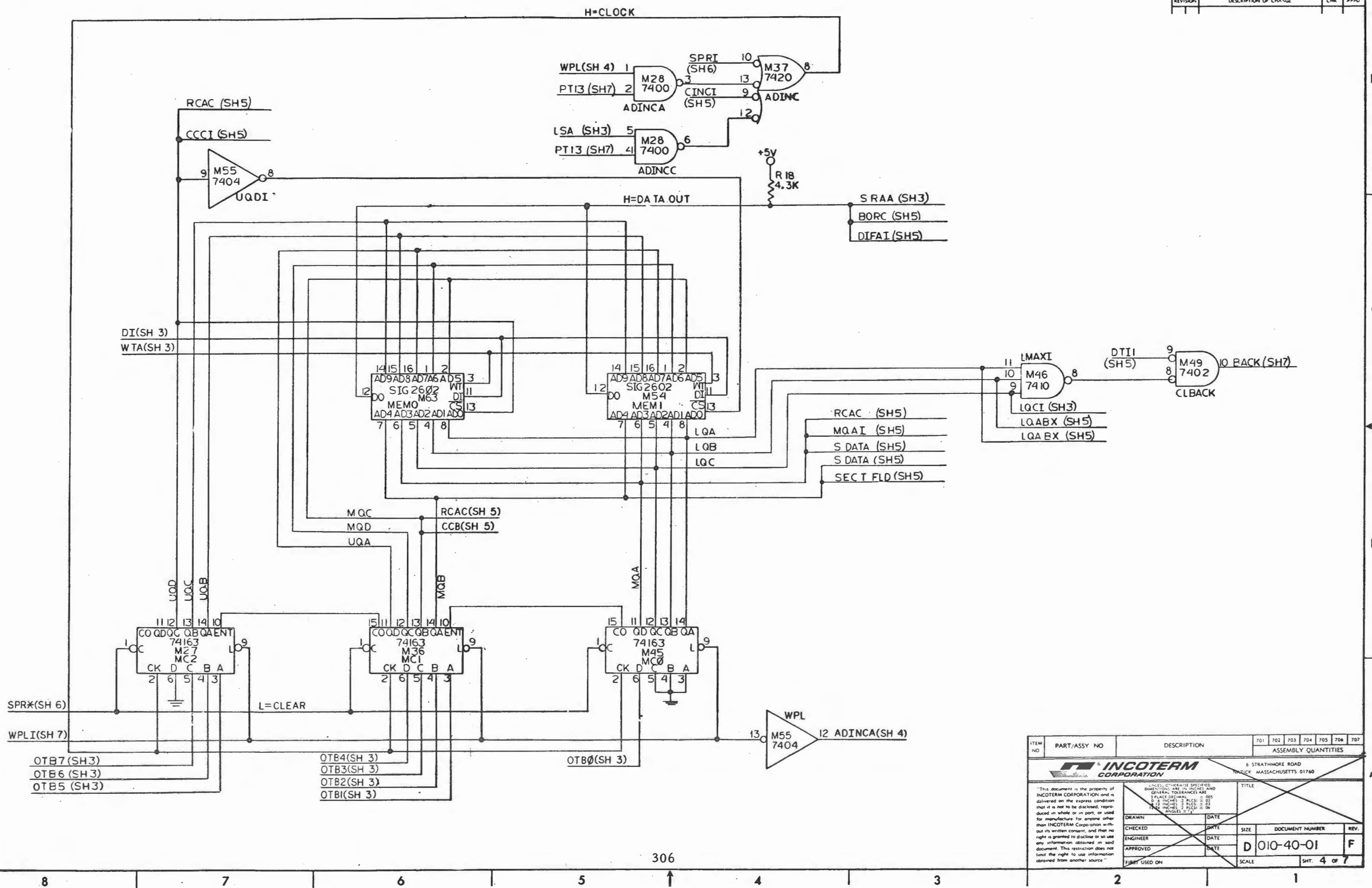


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



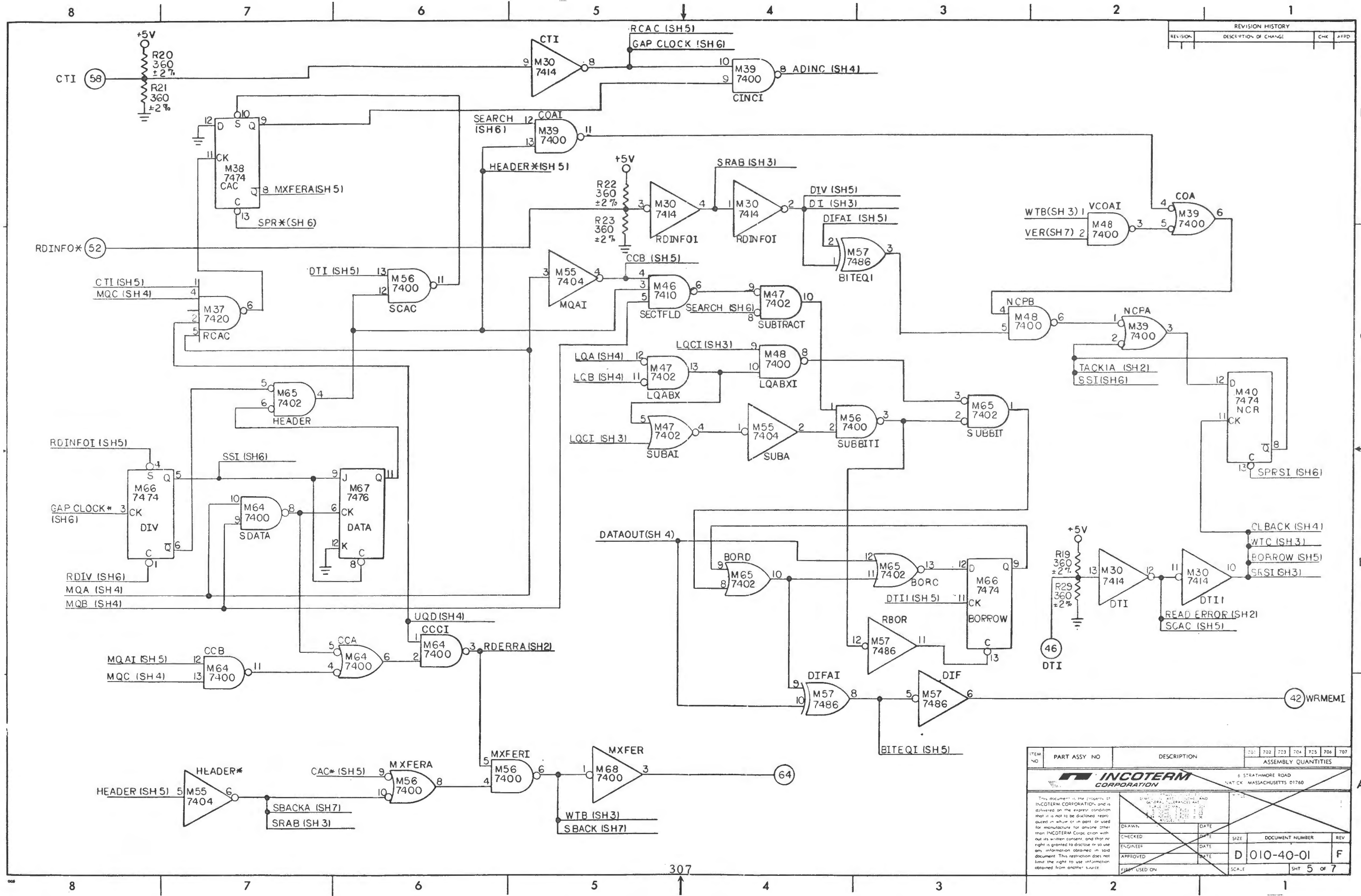
ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES				
			701	702	703	704	705
<b>INCOTERM CORPORATION</b> 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760							
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DRAWN	DATE	CHECKED	DATE	SIZE	DOCUMENT NUMBER	REV.	
ENGINEER	DATE	APPROVED	DATE		D 010-40-01	F	
EIGHT USED ON		SCALE				SHT 3 OF 7	

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



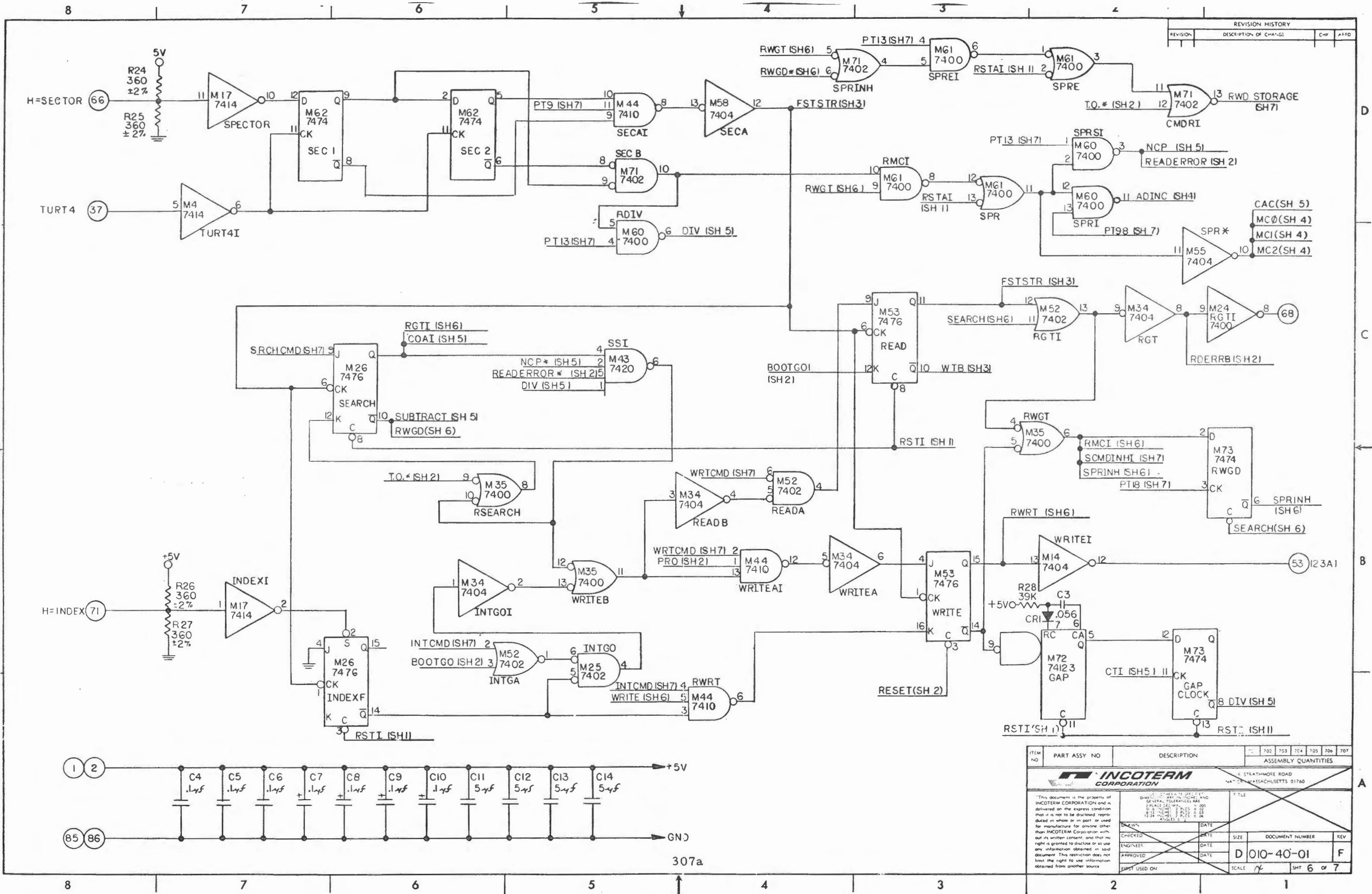
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			701	702	703	704	705	706
INCOTERM CORPORATION		6 STRATHMORE ROAD NORWICK, MASSACHUSETTS 01760					TITLE	
DRAWN		DATE	SIZE	DOCUMENT NUMBER	REV.	D 010-40-01		
CHECKED		DATE	SCALE		SHT. 4 OF 7			
ENGINEER		DATE	F					
APPROVED		DATE	F					
FIRST USED ON		SCALE						

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REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES						
			201	202	203	204	205	206	207
			6 STRATHMORE ROAD NAT CK MASSACHUSETTS 01760						
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DRAWN	DATE	SIZE	DOCUMENT NUMBER	REV					
CHECKED	DATE								
ENGINEER	DATE								
APPROVED	DATE								
SIGN USED ON									

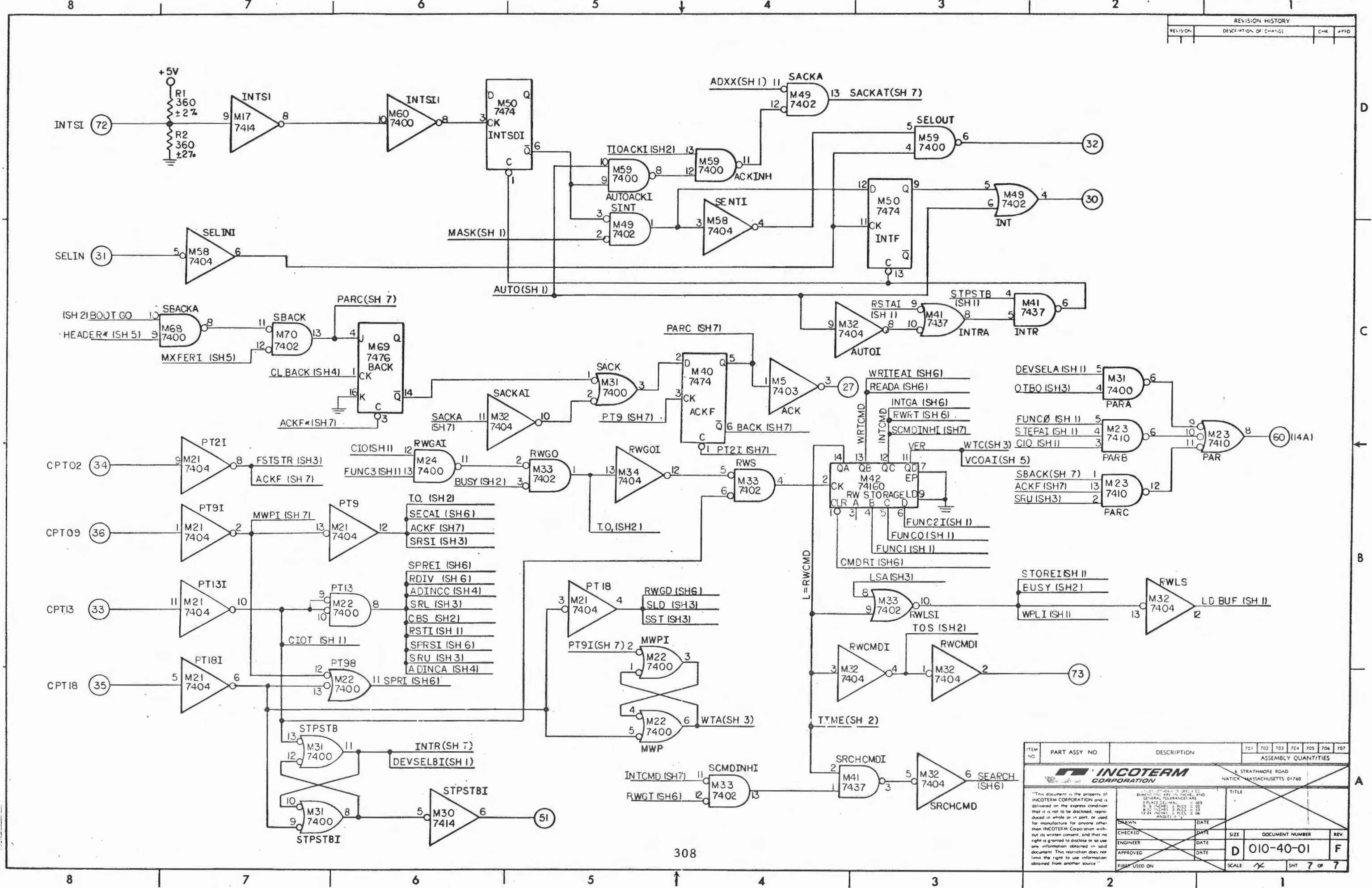


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES					
			702	703	704	705	706	707
<b>INCOTERM CORPORATION</b> <small>INCOTERM CORPORATION            1224 MASSACHUSETTS ROAD            WILMINGTON, MASSACHUSETTS 01970</small>								
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FIRST USED ON			SCALE		SHEET		OF	
			D 010-40-01		F			
			SCALE		SHT 6 of 7			

307a

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES									
			701	702	703	704	705	706	707			
			8 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
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DRAWN			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
CHECKED			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
ENGINEER			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
APPROVED			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
FIRST USED ON			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
SCALE			DATE		SIZE		DOCUMENT NUMBER		REV.		F	
SHT			DATE		SIZE		DOCUMENT NUMBER		REV.		F	

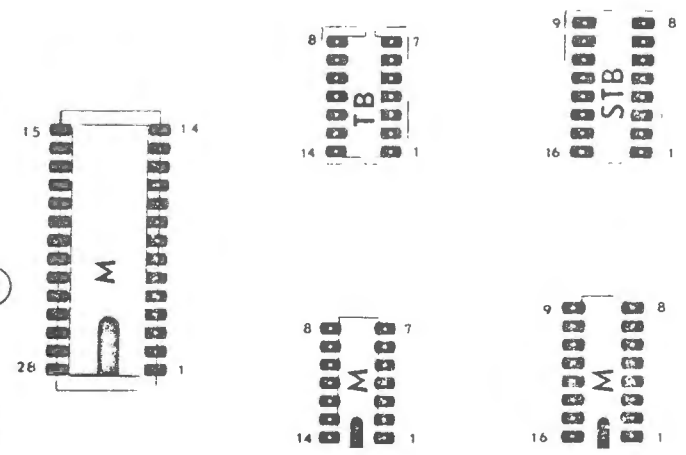
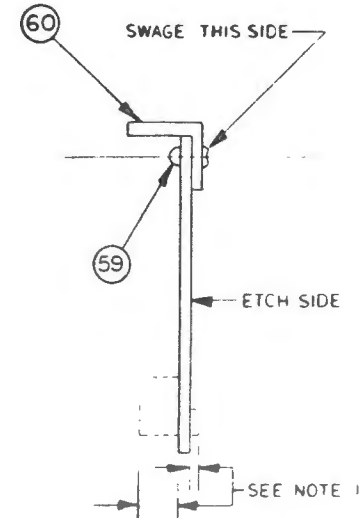
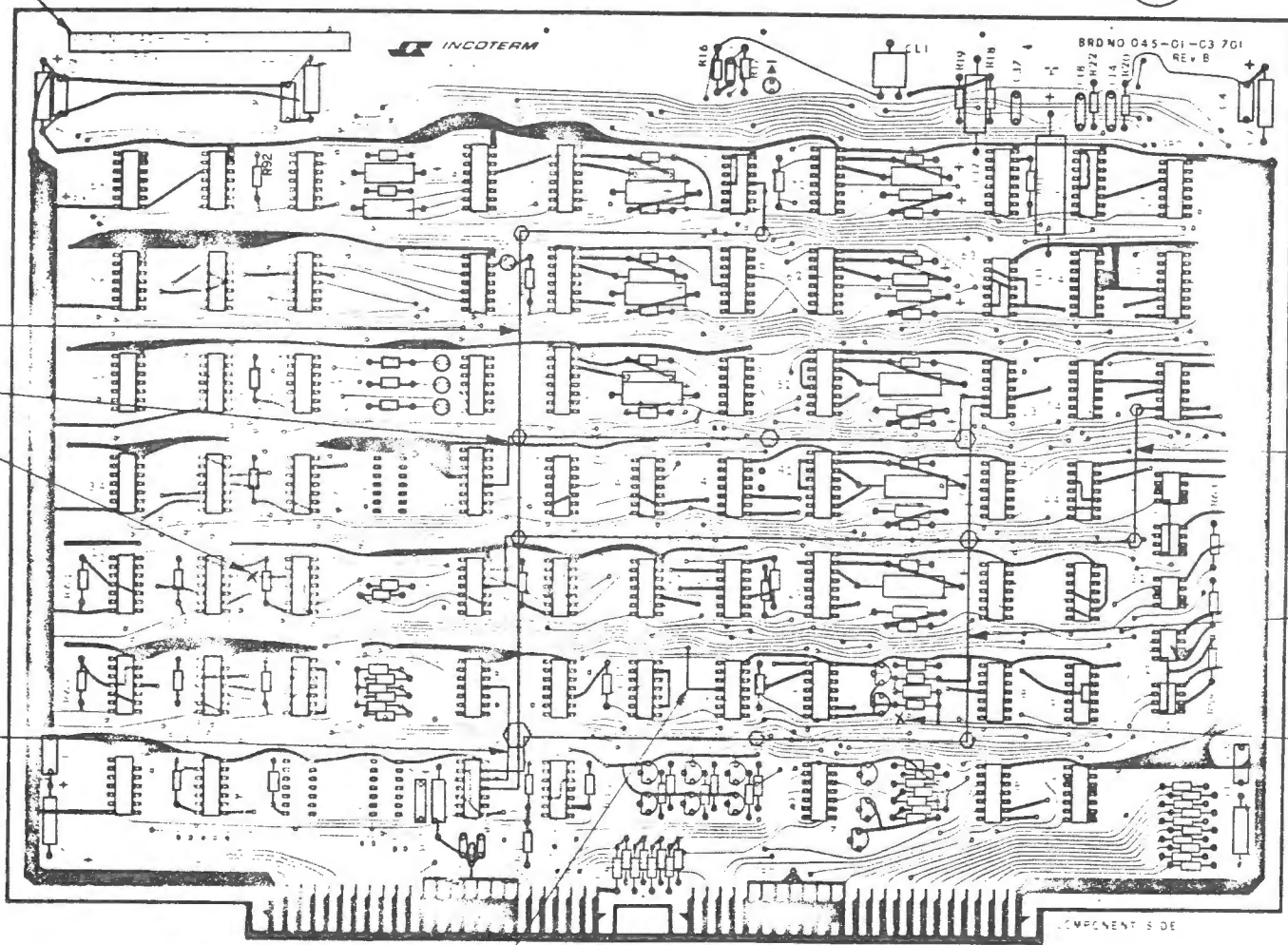
CUT ETCH FROM	
AI	M17-10 TO EYELET
BI	M23-5 TO M24-10

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD
B	RELEASED RD# 6590	Y	N
BI	REVISED ECO 2520 8/11/73	Y	Rm
C	REVISED ECO 2578 9/11/73	Y	Rm
D	REVISED ECO 2598	Y	R
E	REVISED ECO 2602	Y	R

ADD JUMPER WIRE (ITEM 57)	
A	M16-11 TO EYELET
B	M13-4 TO M5-5
C	M71-4 TO M5-4
D	M5-6 TO M53-13
E	M53-12 TO M38-4
F	M55-13 TO M25-4

56	LED1 THRU LED 5
55	VR1
54	Q1 THRU Q11
52	CL1
51	C37
50	C13
49	C19,20,21
48	C23,25,27
47	C6,7,8,9,10,38
46	C1,2,3,4,5,22,24,26,39
44	C31,32,33
43	C28,29,30,34,35,36
42	C14,18
41	C11
40	C12
39	C15,16,17
38	R4,8,80 THRU 85,89,90,91
37	R19,71 THRU 73
36	R11,86,87,88,74 THRU 76
35	R3
34	R6,4 THRU 70
33	R1,2,6,7,9,10,12 THRU 15,18,23 THRU 28,49 THRU 54
32	R16,17,21,94
31	R5
30	R44 THRU 48,55 THRU 63,93
29	R32 THRU 37
28	R20,22,29,30,31
27	R38 THRU 43,77,78,79
26	R92
25	
24	M20,21,32,33,45
23	M64
22	M29,42,50,52,60,62,69,70,72,73,74
21	M46,56,66,67
20	M57
19	M61,65
18	M38
17	M14,16,18,31,36,40,41,43,48,51,54
16	M58,75
15	M5,9
14	M1,7,13
13	M28,39,63,68
12	M2,17,53,59,71
11	M10,11,22,23,35,47
10	M6,12,15,19,24,26,27,30,34,44
9	M8,25,49,55
ITEM NO.	REFERENCE DESIGNATION

58 SEE NOTE 2



PIN NUMBERING AND ORIENTATION

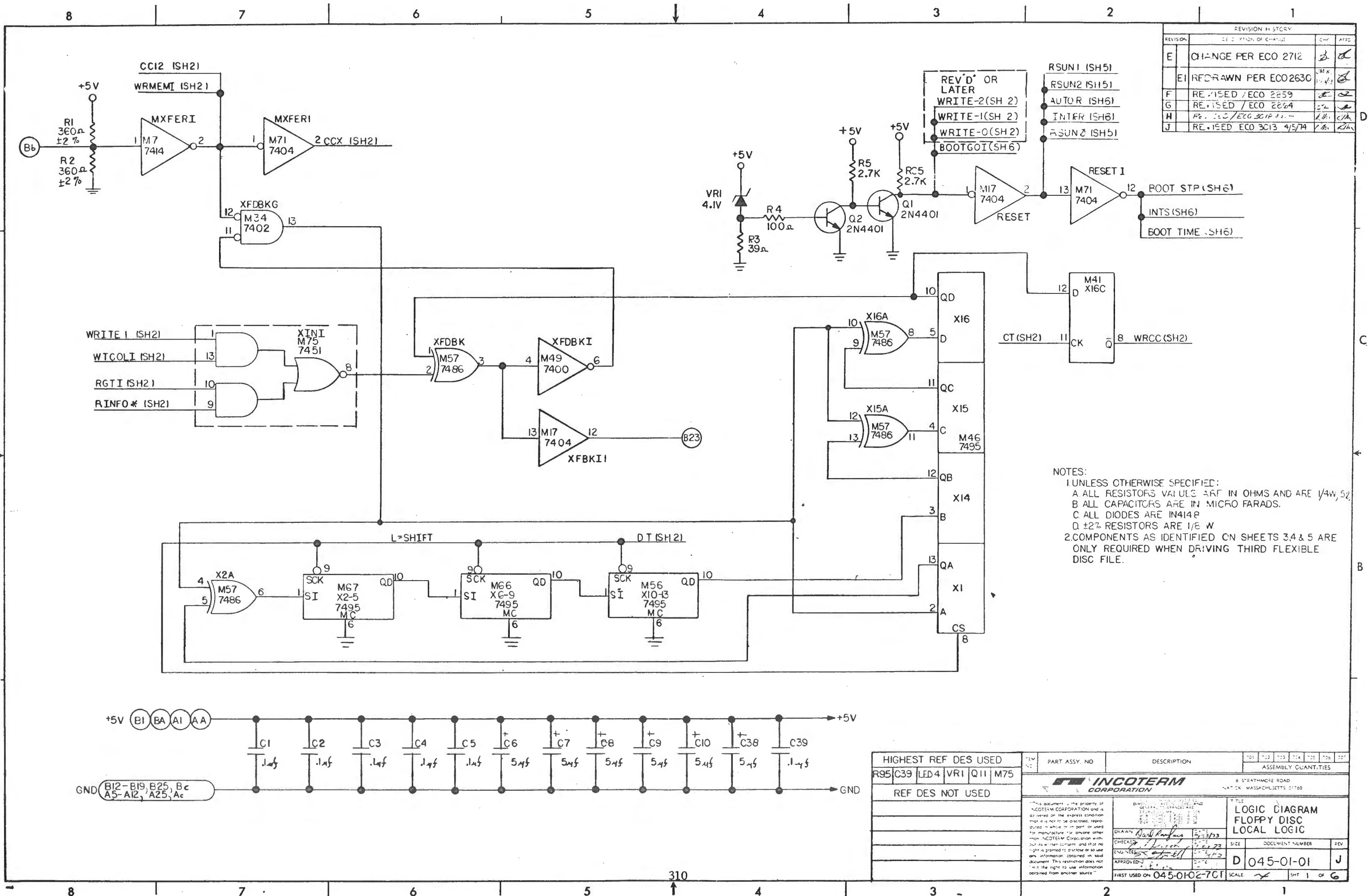
**NOTE:**

1. HEIGHT LIMITATIONS.  
**COMPONENT SIDE OF BOARD .400 MAX.**  
**ETCH SIDE OF BOARD .080 MAX.**
2. LOCATE IN APPROXIMATE AREA AS SHOWN, REV LABEL, ITEM 58, AND MARK ASSY NO. 045-01-02-701 AND LATEST ASSY REV
3. ATTACH JUMPER WIRE, ITEM 57, TO BOARD WITH GLUE, ITEM 45, IN PLACES MARKED (C).

COMPONENT SIDE

ASSEMBLE WITH ARTWORK 045-01-03-701 REV B

<b>INCOTERM CORPORATION</b>		PC BOARD ASSY FLOPPY DISC LOCAL LOGIC-701	
DATE: 6/25/73	CHK: Y	APPD: Rm	REV: E
CHECKED: [Signature]	DATE: 6/25/73	DOC. NO.:	045-01-02
ENGINEER: [Signature]	DATE: 5/29/73	REV:	E
APPROVED: [Signature]	DATE: 6/25/73	REV:	E
FIRST USED IN: 040-10-00-001	REV:	REV:	REV:



8

7

6

5

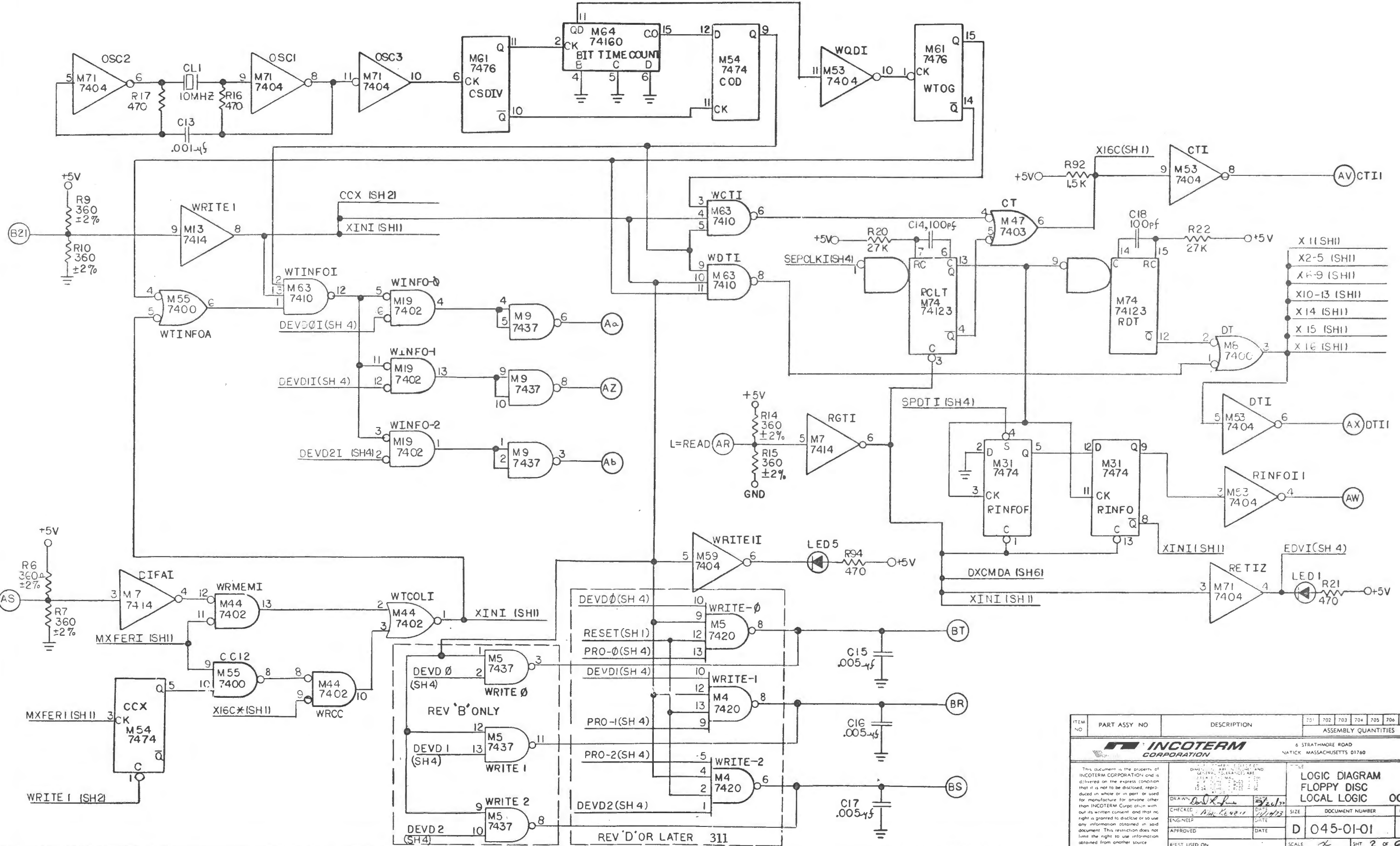
4

3

2

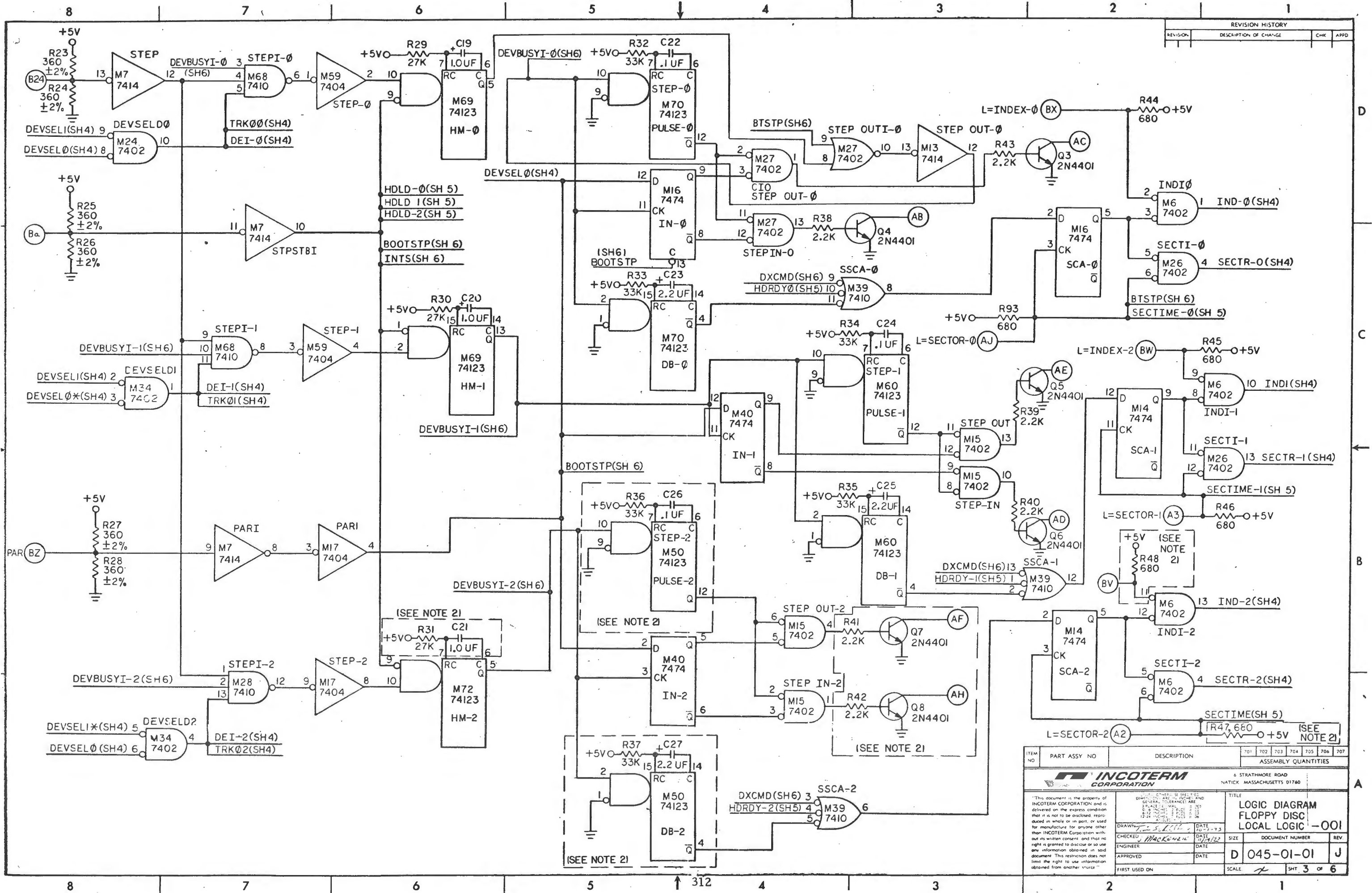
1

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
INCOTERM CORPORATION		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740							
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DRAWN: [Signature] CHECKED: [Signature] ENGINEER: [Signature] APPROVED: [Signature]			DATE: 11/17/73 DATE:			SCALE: 1		SHEET: 2 OF 6	



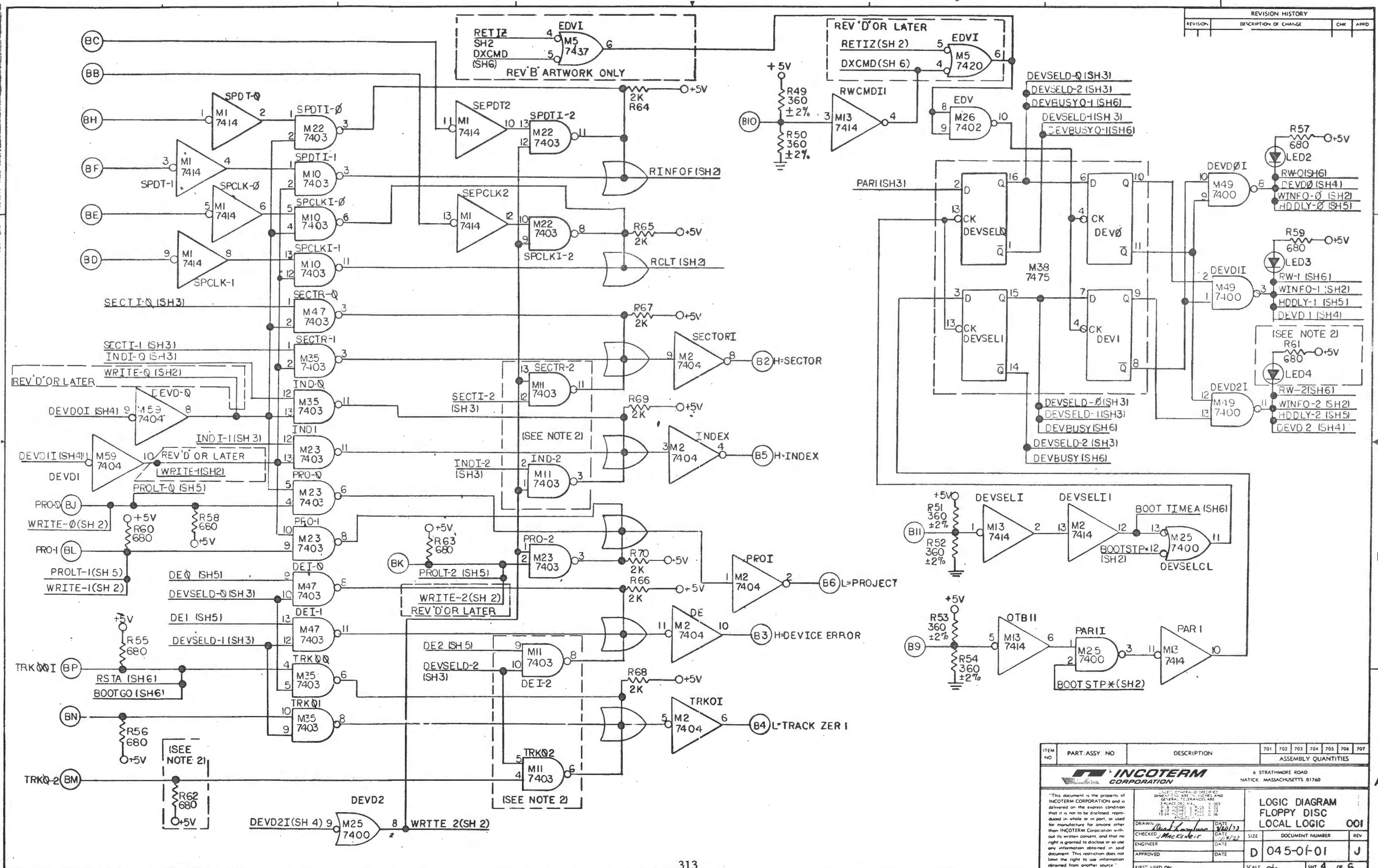


REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
ASSEMBLY QUANTITIES									
<b>INCOTERM CORPORATION</b>									
6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740									
DRAWN: <i>J. S. [Signature]</i>		DATE: 10/17/73		TITLE: LOGIC DIAGRAM FLOPPY DISC LOCAL LOGIC -001		SIZE: D		DOCUMENT NUMBER: 045-01-01	
CHECKED: <i>J. MacKenzie</i>		DATE: 11/14/72		ENGINEER: <i>J. MacKenzie</i>		DATE:		REV: J	
APPROVED:		DATE:		FIRST USED ON:		SCALE:		SHT. 3 OF 6	

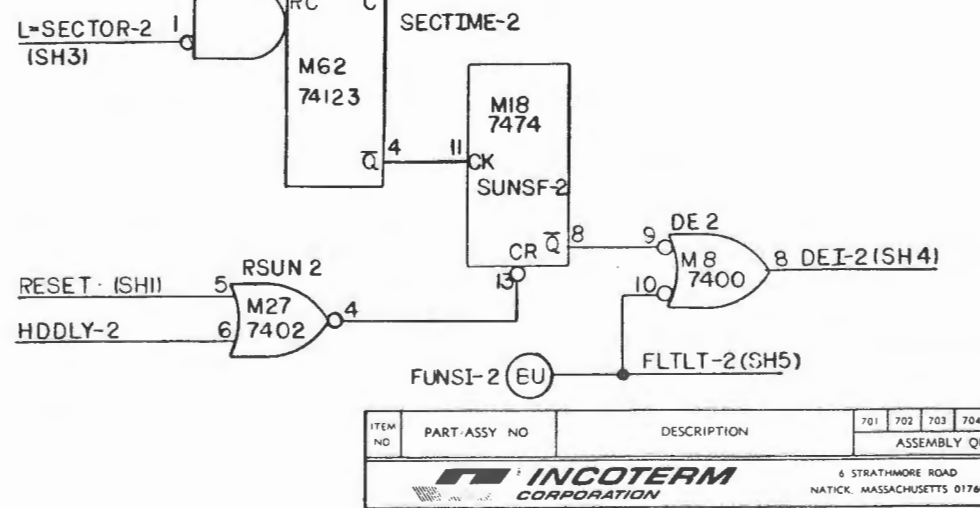
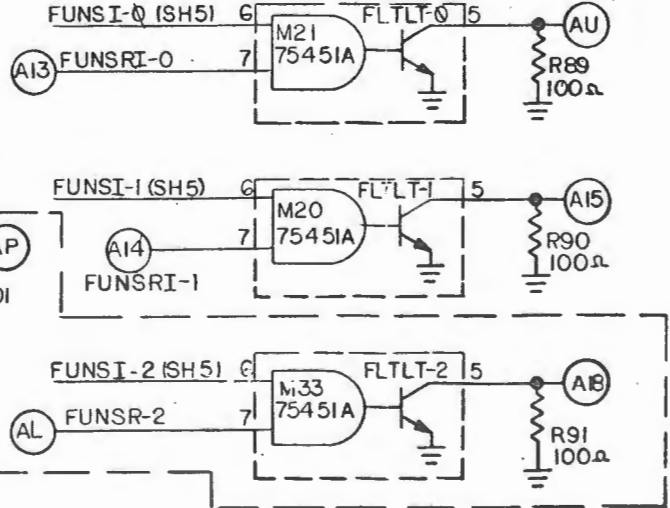
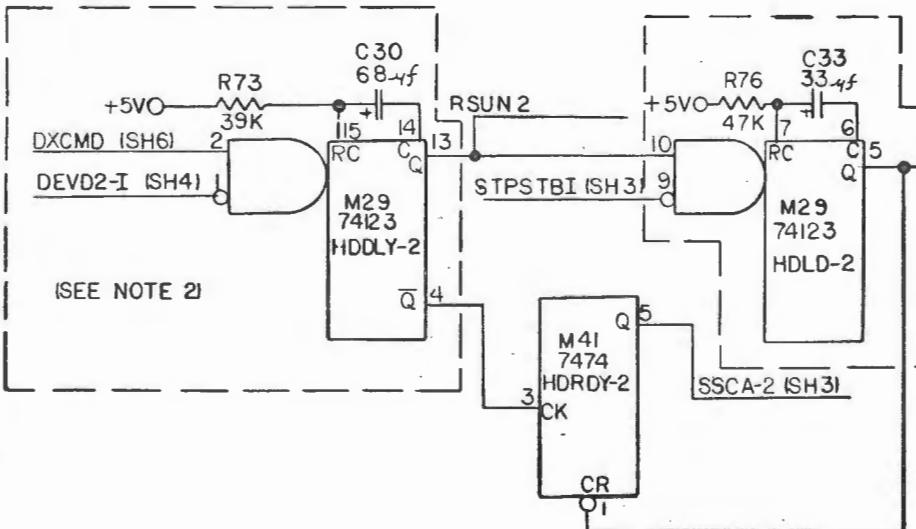
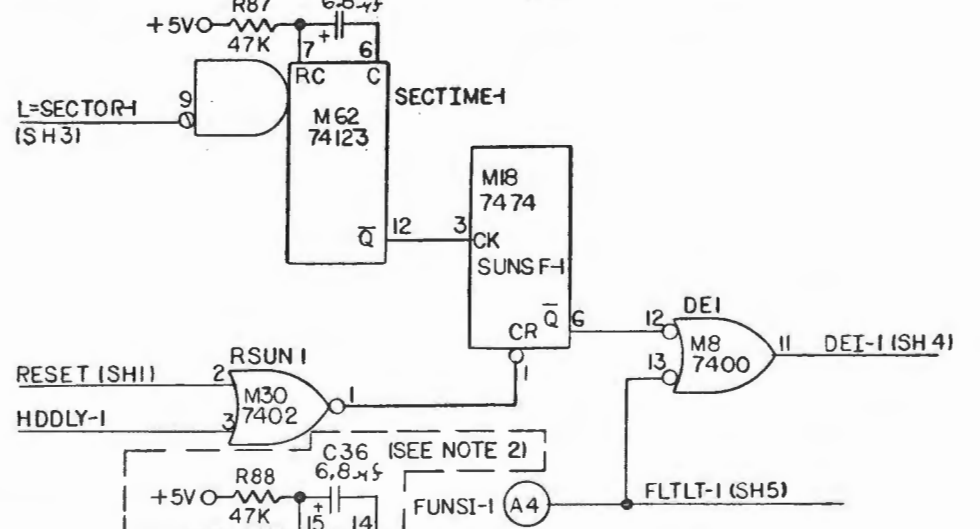
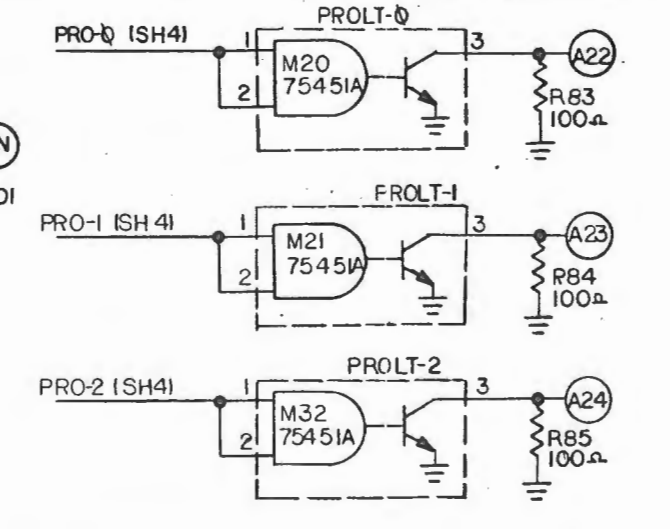
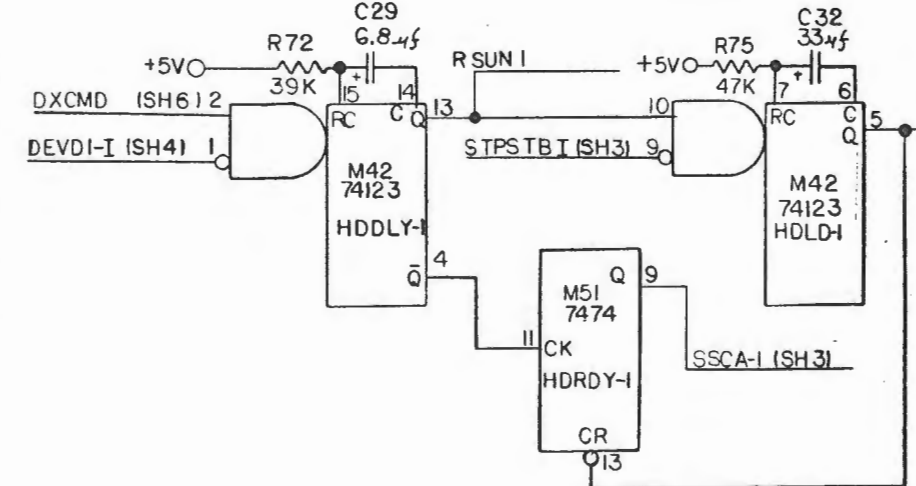
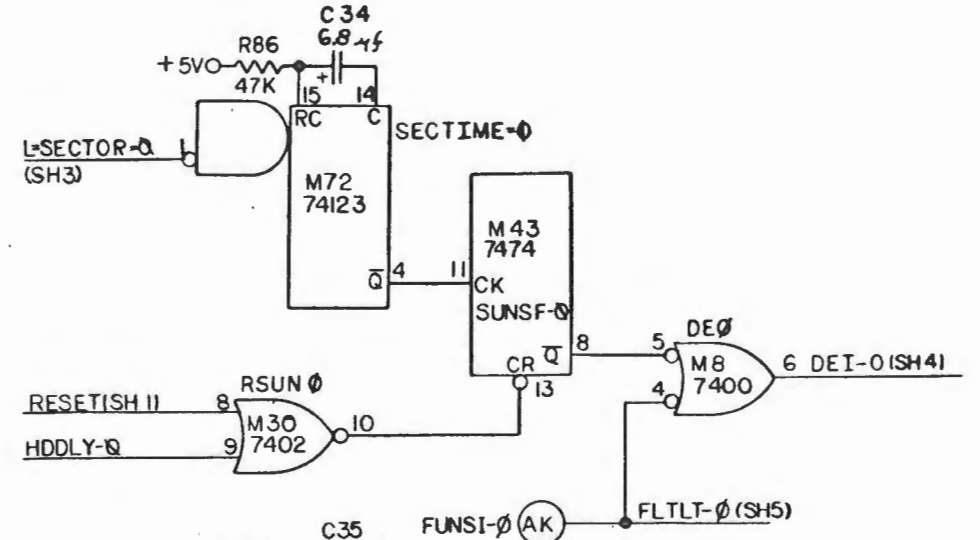
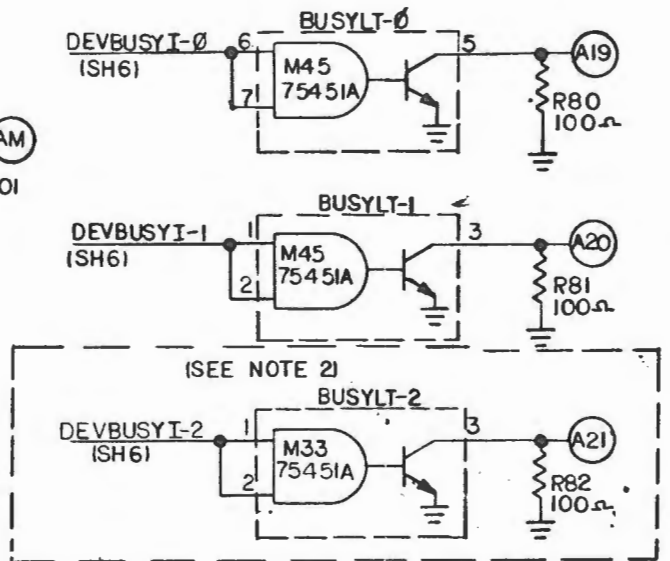
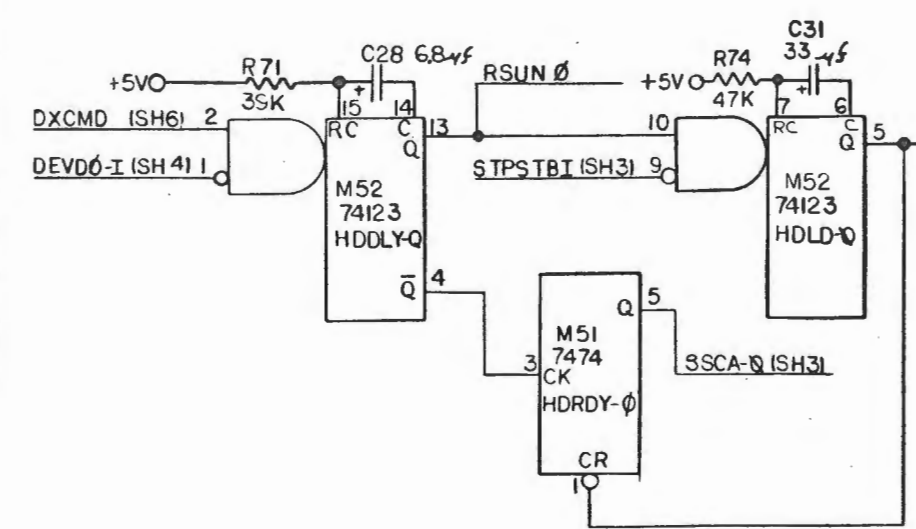
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REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



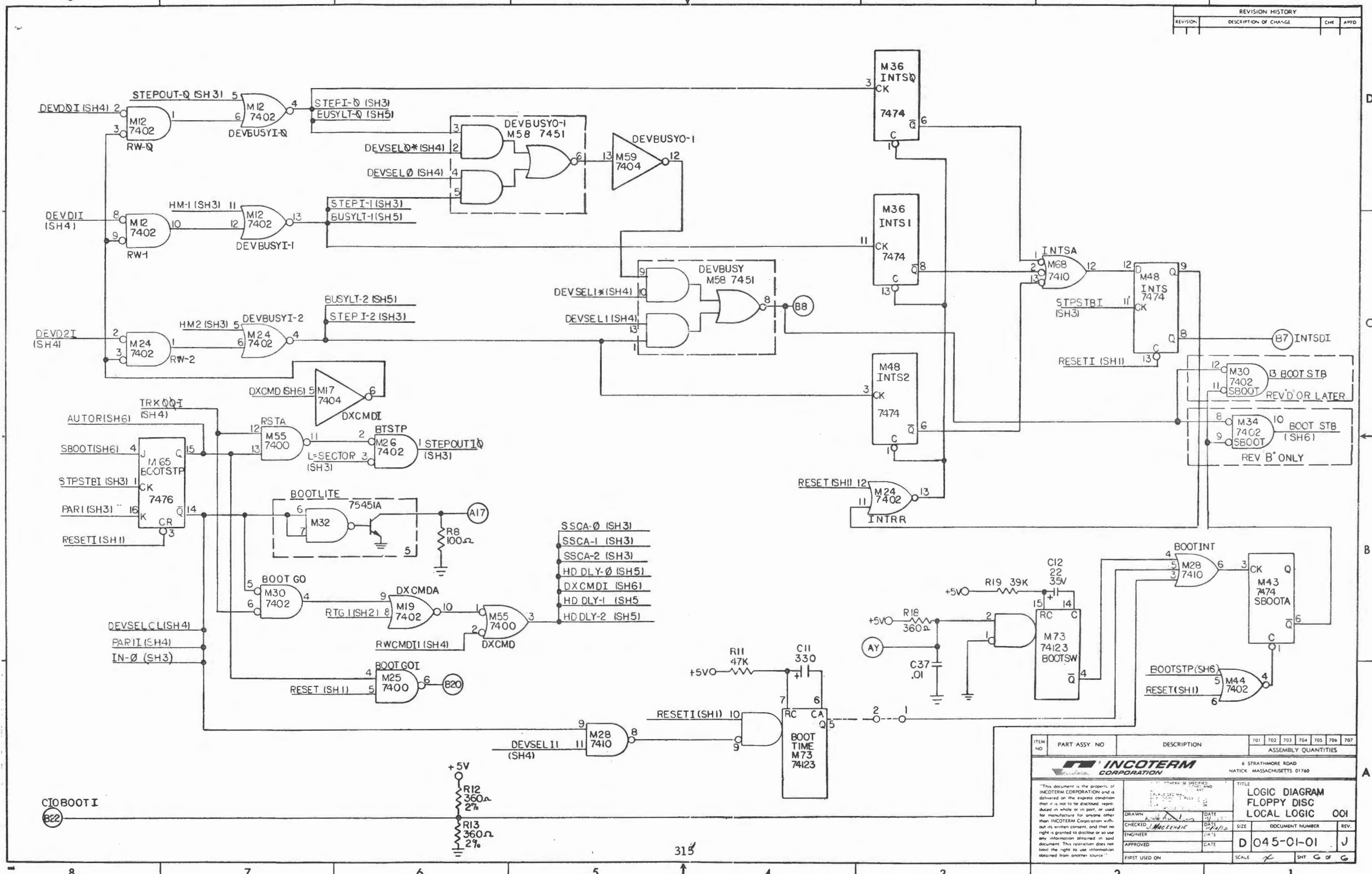
ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
<b>INCOTERM CORPORATION</b> 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
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DRAWN	DATE	CHECKED	DATE	ENGINEER	DATE	APPROVED	DATE	SIZE DOCUMENT NUMBER REV D 045-01-01 J	
FIPS USED ON			SCALE		SHT 4 OF 6				

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART-ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
<b>INCOTERM CORPORATION</b> 6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760									
TITLE: LOGIC DIAGRAM FLOPPY DISC LOCAL LOGIC 001									
DRAWN: <i>[Signature]</i>		DATE: 2/2/82		SIZE: D		DOCUMENT NUMBER: 045-01-01		REV: J	
CHECKED: <i>[Signature]</i>		DATE: 2/2/82		SCALE: 1/1		SHT: 5 of 6			
ENGINEER: <i>[Signature]</i>		DATE:							
APPROVED: <i>[Signature]</i>		DATE:							
FIRST USED ON:									

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						

INCOTERM CORPORATION  
6 STRATHMORE ROAD  
NATICK, MASSACHUSETTS 01760

TITLE: LOGIC DIAGRAM FLOPPY DISC LOCAL LOGIC OOI

DRAWN	DATE	SIZE	DOCUMENT NUMBER	REV.
CHECKED	DATE			
ENGINEER	DATE			
APPROVED	DATE			
FIRST USED ON	SCALE	SHT	OF	G

D 045-01-01 J

CUT ETCH FROM  
A1 M63-10 TO EYELET

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

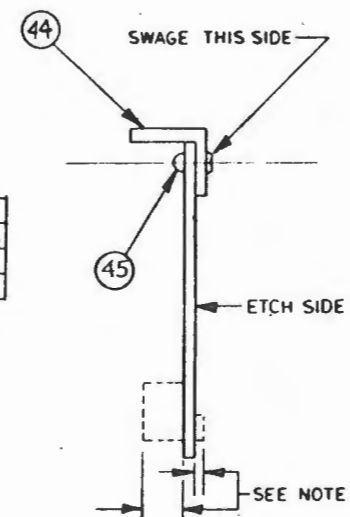
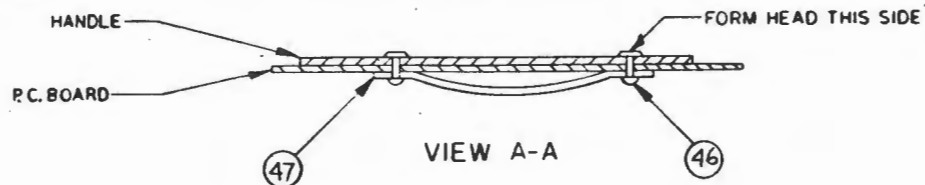
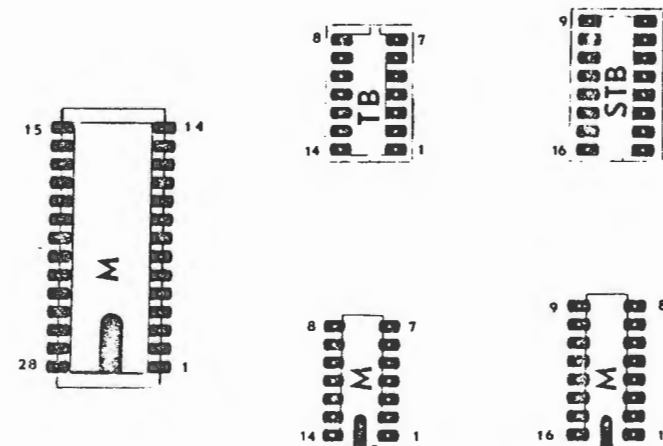
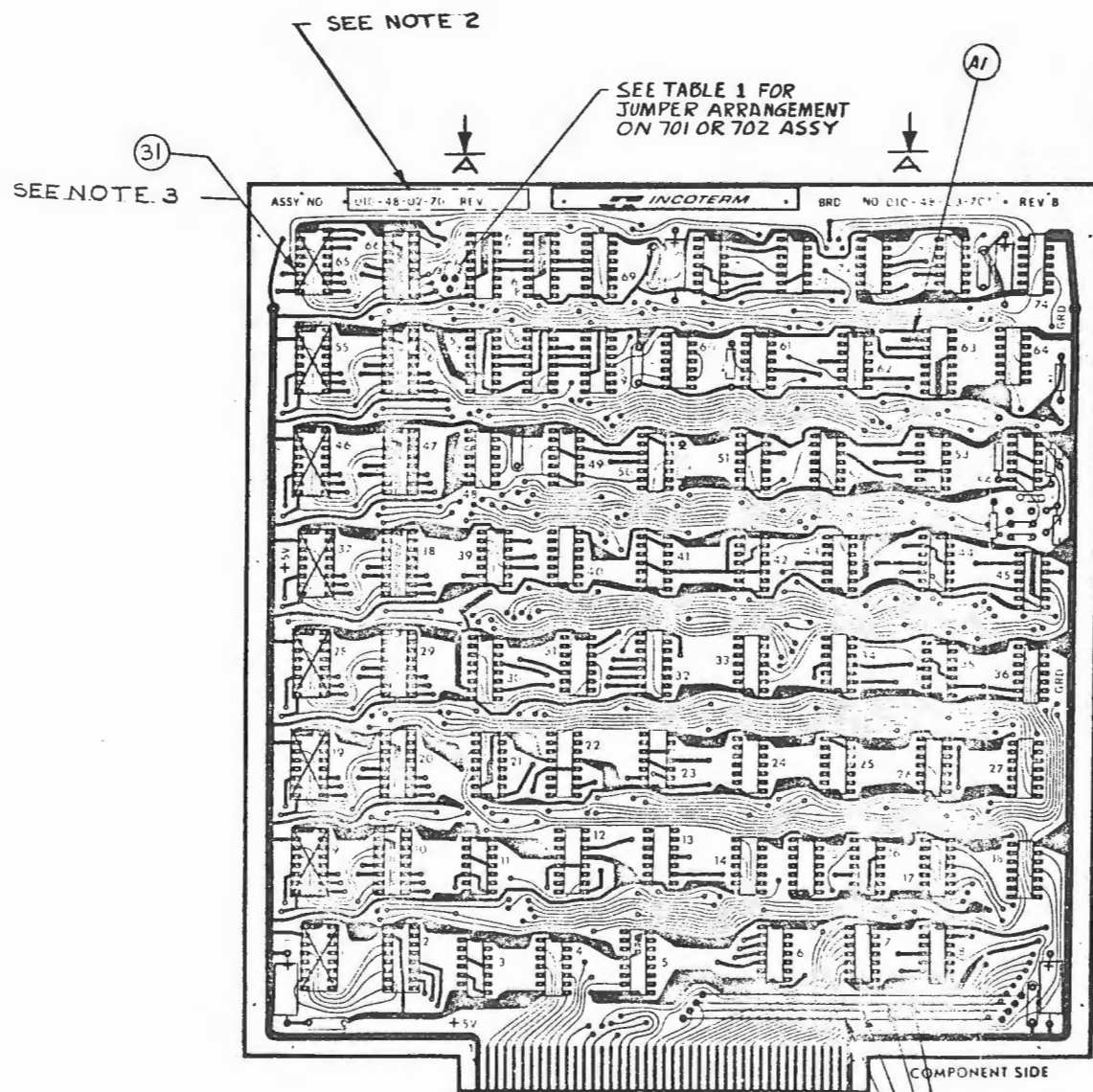


TABLE 1	
ADD JUMPER ITEM 49 FROM	
701 EYELET 1 TO EYELET 2	
702 EYELET 1 TO EYELET 3	



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

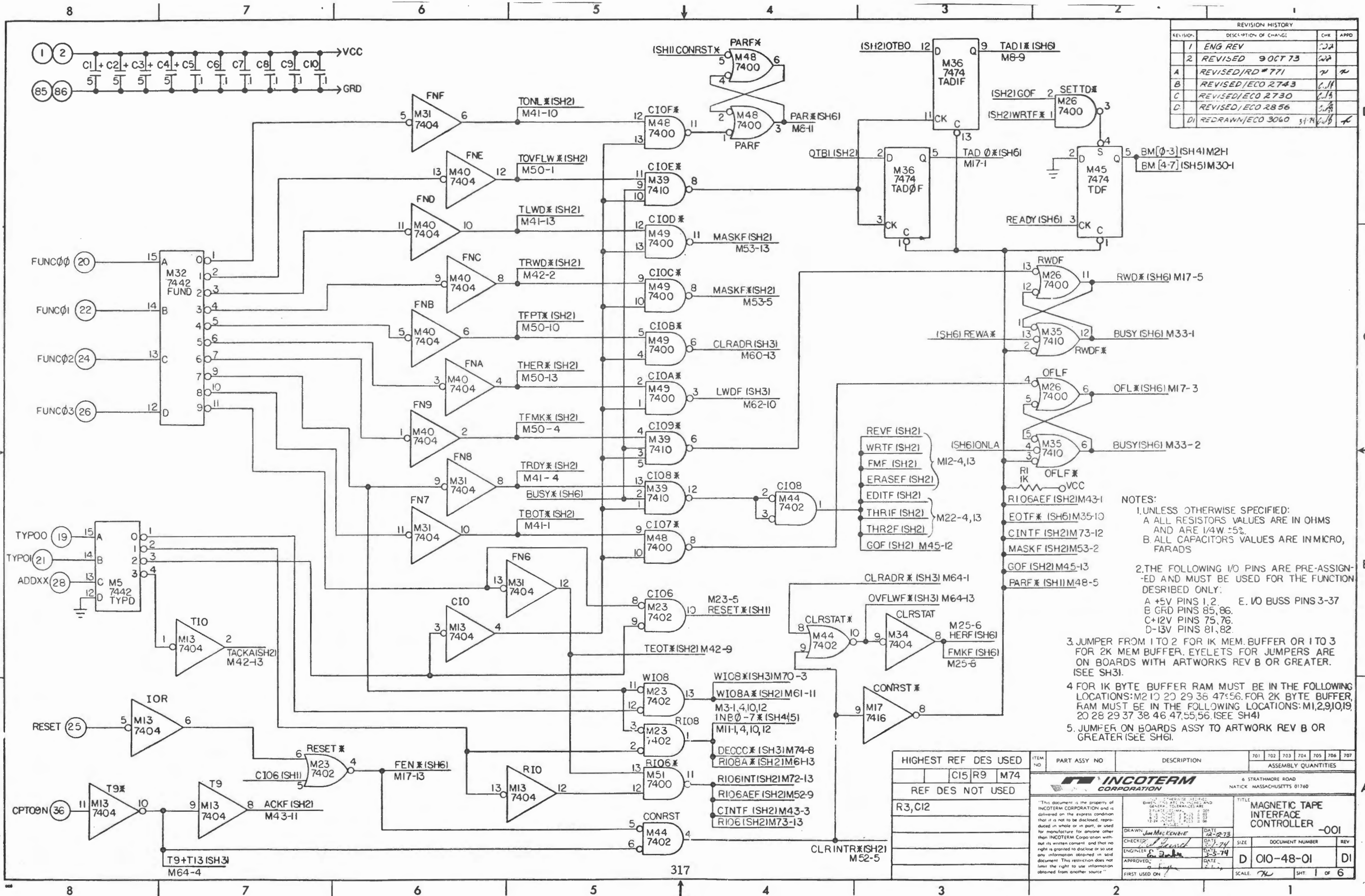
ASSEMBLE WITH ARTWORK NO 010-48-03-701 REV B

38	R9
37	R2,4,5,6
36	R1,7,8
35	
34	
33	
32	
31	
30	
29	C11,13,14,15
28	C5,6,7,8,9,10
27	C1,2,3,4
26	
25	
24	M6,7
23	M 2, 10, 20, 29, 38 27 56 66
22	M5,58,59,67,68,69
21	M2,30
20	M63
19	M12,22
18	M36,43,45,62
17	M5,32
16	M33
15	M8,17,18,27
14	M14,15,16
13	M35,39,53
12	M54,61
11	M4,13,31,34,40,70,72
10	M3,11,41,42,50
9	M23,25,44,52,74
8	M24,26,48,49,51,60,69,71,73
7	
6	
5	
4	
3	
2	
1	
ITEM NO.	REFERENCE DESIGNATION

NOTE:

- HEIGHT LIMITATIONS.  
COMPONENT SIDE OF BOARD .400 MAX.  
ETCH SIDE OF BOARD .080 MAX.
- LOCATE IN APPROXIMATE AREA SHOWN, REV LABEL ITEM 48 AND MARK ASSY NO. 010-48-02-701 OR 702 & LATEST ASSY REV
- PATTERN MARKED X NOT USED (701 ONLY)

INCOTERM CORPORATION		P/C BOARD ASSY MAGNETIC TAPE INTERFACE 701-702	
DRAWN: J.P. [Signature]	DATE: 10-26-73	DATE: 5-21	DOCUMENT NUMBER: REV
CHECKED: [Signature]	DATE: [Blank]	DATE: [Blank]	010-48-02
ENGINEER: [Blank]	DATE: [Blank]	DATE: [Blank]	C
APPROVED: [Blank]	DATE: [Blank]	DATE: [Blank]	
FIRST USED IN: [Blank]	SCALE: 1-1	SHT: 3 OF 4	



REVISION HISTORY			
REV. NO.	DESCRIPTION OF CHANGE	CHK	APPD
1	ENG REV	JJA	
2	REVISED 9 OCT 73	WJ	
A	REVISED/RD # 771	WJ	WJ
B	REVISED/ECO 2743	WJ	
C	REVISED/ECO 2730	WJ	
D	REVISED/ECO 2856	WJ	
D1	REDRAWN/ECO 3060	WJ	WJ

- NOTES:
- UNLESS OTHERWISE SPECIFIED:  
A. ALL RESISTORS VALUES ARE IN OHMS AND ARE 1/4W ±5%.  
B. ALL CAPACITORS VALUES ARE IN MICRO, FARADS
  - THE FOLLOWING I/O PINS ARE PRE-ASSIGNED AND MUST BE USED FOR THE FUNCTION DESCRIBED ONLY:  
A. +5V PINS 1,2. E. I/O BUSS PINS 3-37  
B. GRD PINS 85,86.  
C. +12V PINS 75,76.  
D. -13V PINS 81,82.
  - JUMPER FROM 1 TO 2 FOR IK MEM. BUFFER OR 1 TO 3 FOR 2K MEM. BUFFER. EYELETS FOR JUMPERS ARE ON BOARDS WITH ARTWORKS REV B OR GREATER. ISEE SH31.
  - FOR IK BYTE BUFFER RAM MUST BE IN THE FOLLOWING LOCATIONS: M2 10 20 29 36 47-56. FOR 2K BYTE BUFFER, RAM MUST BE IN THE FOLLOWING LOCATIONS: M1,2,9,10,19, 20 28 29 37 38 46 47,55,56 ISEE SH41
  - JUMPER ON BOARDS ASSY TO ARTWORK REV B OR GREATER ISEE SH61.

HIGHEST REF DES USED	ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
C15, R9, M74										
REF DES NOT USED										
R3, C12										

6 STRATHMORE ROAD  
NATICK, MASSACHUSETTS 01740

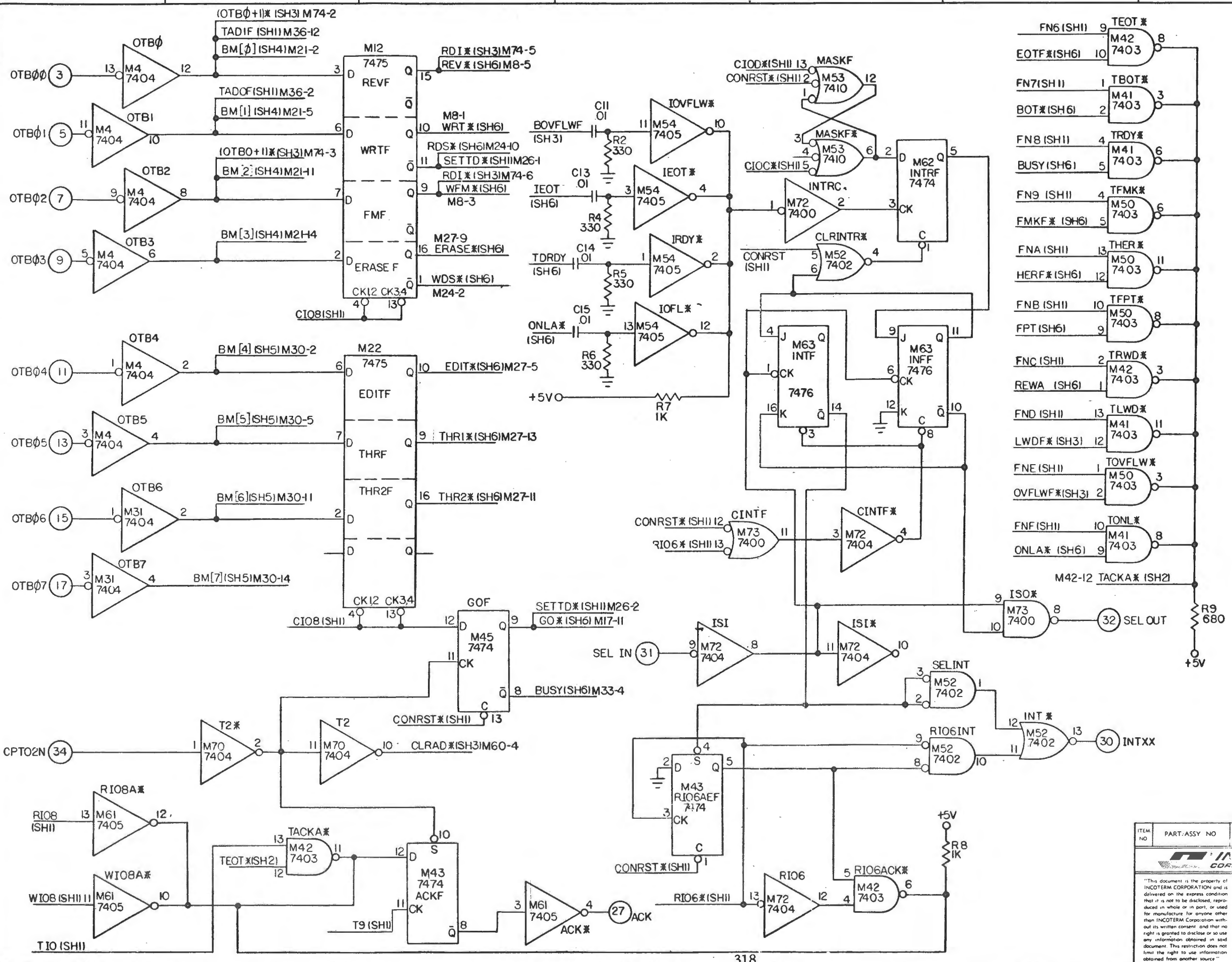
**INCOTERM CORPORATION**

TITLE: **MAGNETIC TAPE INTERFACE CONTROLLER -001**

DRAWN: *Jim MacKenzie* DATE: 12-2-73  
 CHECKED: *John Search* DATE: 3-5-74  
 ENGINEER: *John Search* DATE: 3-5-74  
 APPROVED: *John Search* DATE: 3-5-74

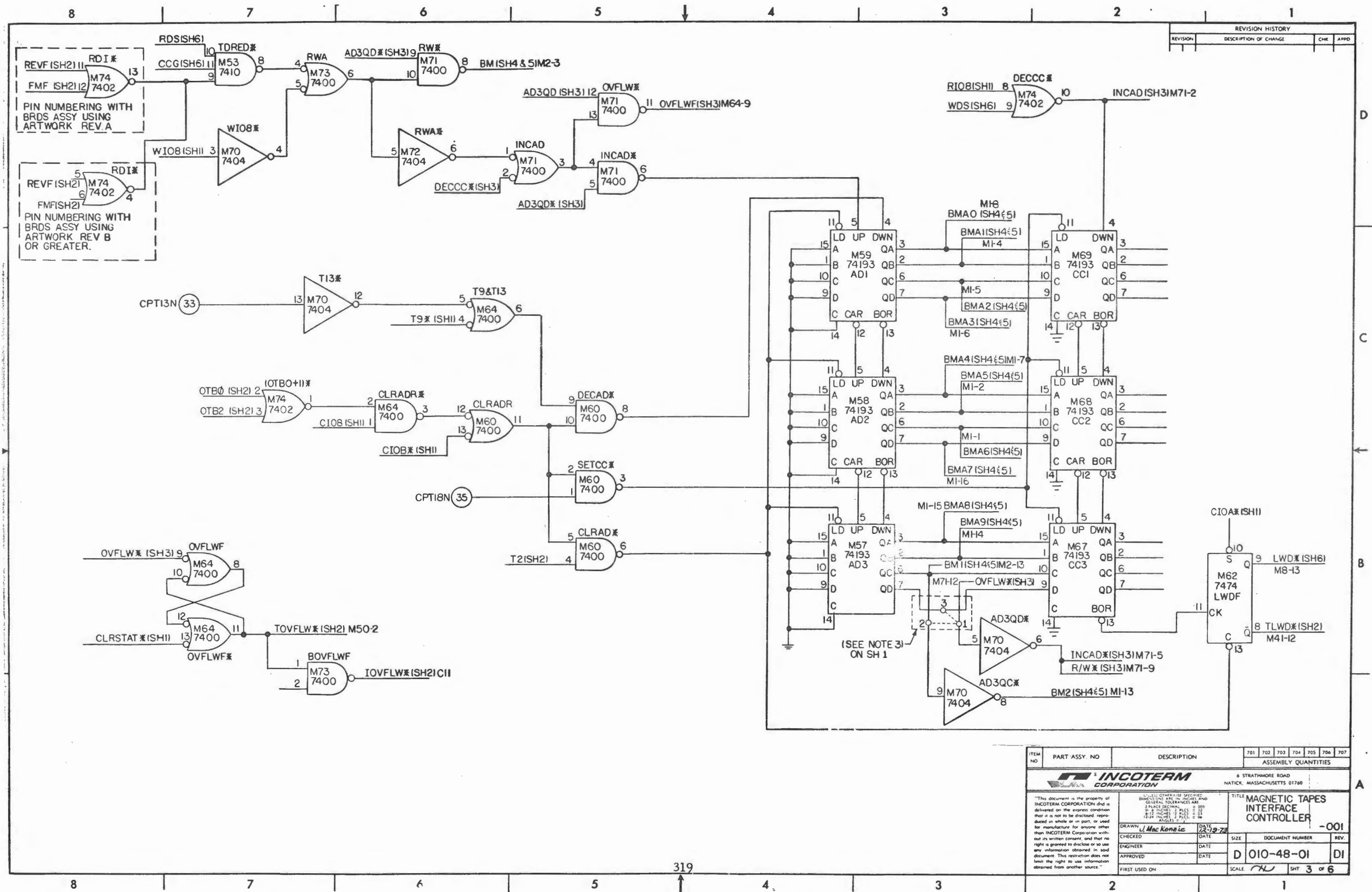
FIRST USED ON: \_\_\_\_\_ SCALE: *TL* SHT: 1 OF 6

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



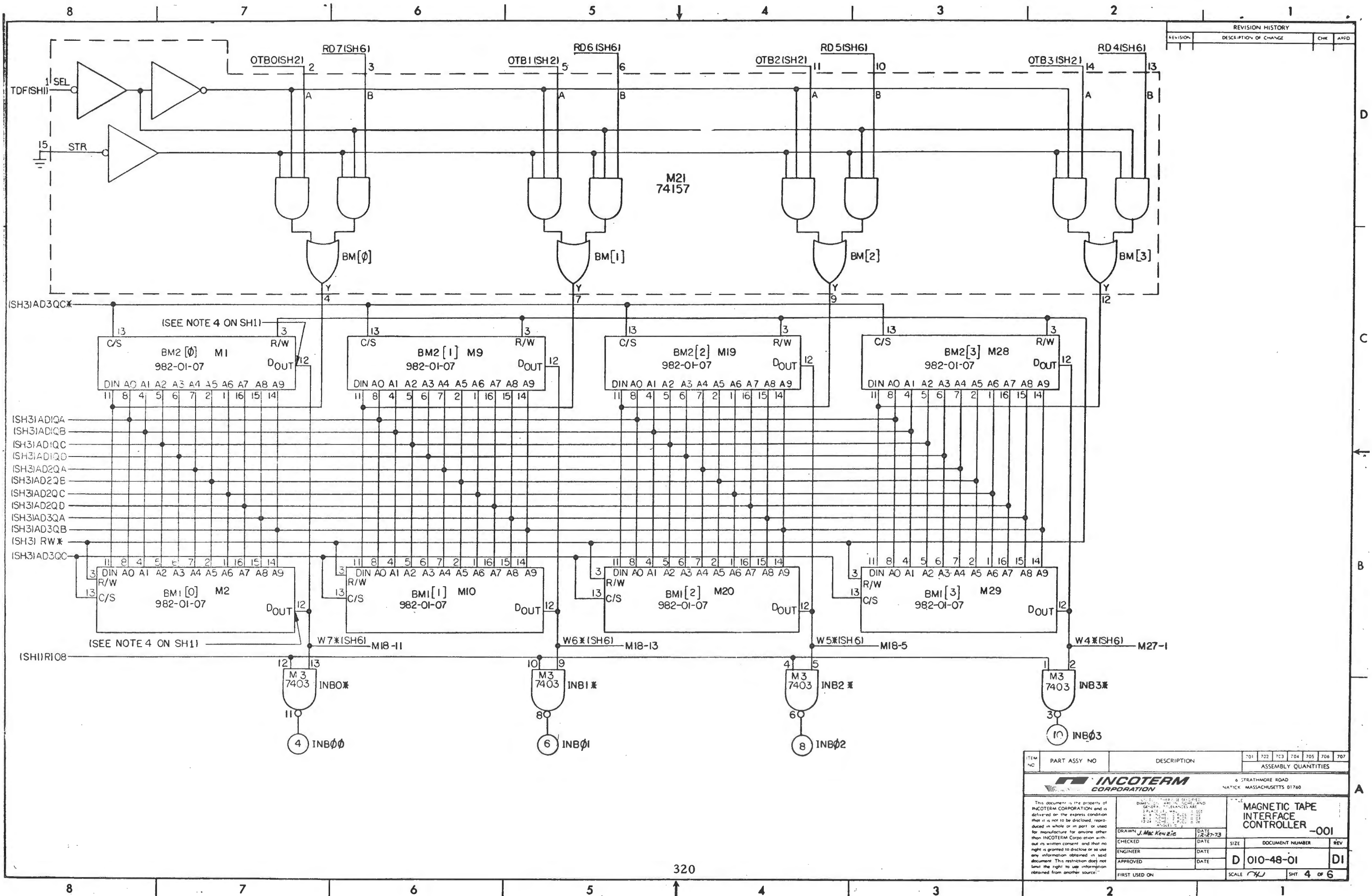
ITEM NO	PART ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740						
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DRAWN <i>J MacKenzie</i>			CHECKED			DATE			SIZE
ENGINEER			DATE			DOCUMENT NUMBER			REV
APPROVED			DATE			<b>D OIO-48-01</b>			<b>DI</b>
FIRST USED ON			SCALE: <i>1/1</i>			SHT 2 of 6			

REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD



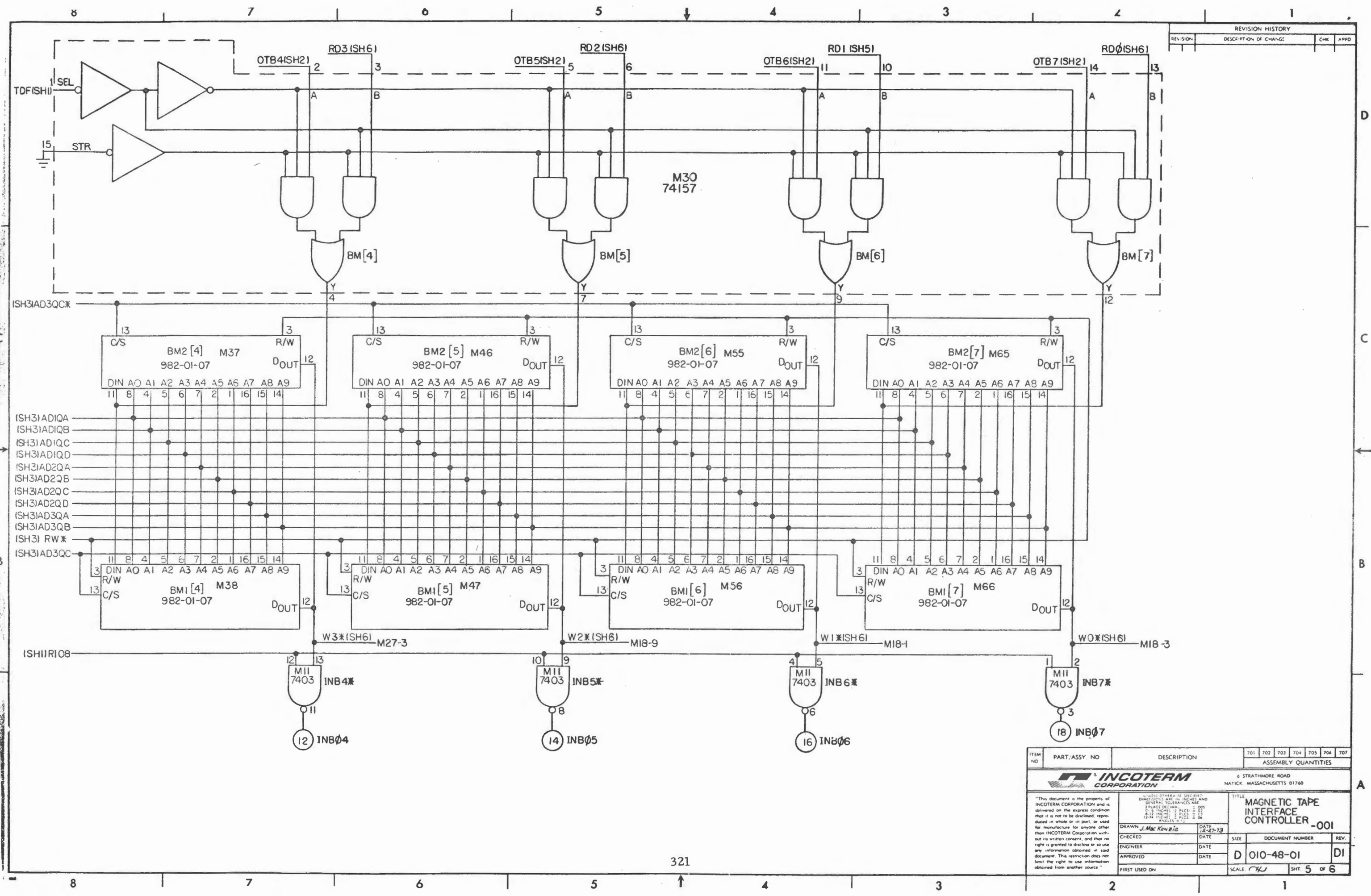
ITEM NO	PART ASSY. NO	DESCRIPTION	701	702	703	704	705	706	707	
			ASSEMBLY QUANTITIES							
				6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760						
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DRAWN	DATE	CHECKED	DATE	SIZE	DOCUMENT NUMBER	REV.				
ENGINEER	DATE	APPROVED	DATE							
FIRST USED ON	SCALE	SHT 3 OF 6								





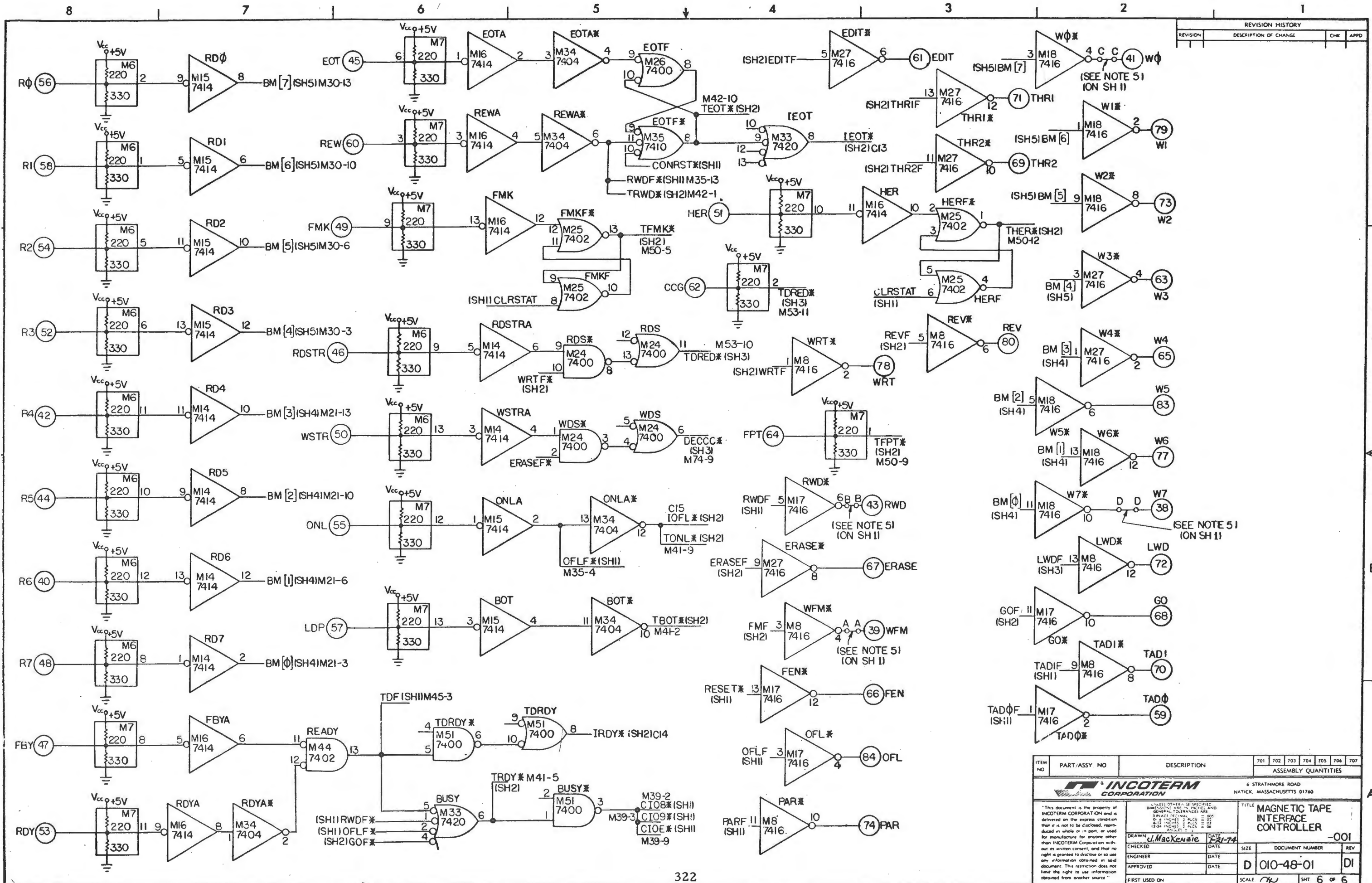
REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART ASSY NO	DESCRIPTION	ASSEMBLY QUANTITIES						
			701	702	703	704	705	706	707
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760						
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CHECKED ENGINEER APPROVED			DATE DATE DATE		D 010-48-01		DI		
FIRST USED ON			SCALE 1/1		SHT 4 of 6		REV		



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART/ASSY NO	DESCRIPTION	701	702	703	704	705	706	707
			ASSEMBLY QUANTITIES						
			6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01760						
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DRAWN	J. Mac Kenzie	DATE	12-27-73		SIZE	DOCUMENT NUMBER		REV.	
CHECKED		DATE							
ENGINEER		DATE							
APPROVED		DATE				D 010-48-01		DI	
FIRST USED ON			SCALE	1/1		SMT. 5 of 6			



REVISION HISTORY			
REVISION	DESCRIPTION OF CHANGE	CHK	APPD

ITEM NO	PART/ASSY NO	DESCRIPTION	701	702	703	704	705	706	707		
ASSEMBLY QUANTITIES											
<b>INCOTERM CORPORATION</b>		6 STRATHMORE ROAD NATICK, MASSACHUSETTS 01740									
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<small>DRAWN</small> <small>J. MacKenzie</small>		<small>ENGINEER</small> <small> </small>		<small>APPROVED</small> <small> </small>		<small>DATE</small> <small> </small>		<small>DATE</small> <small> </small>		<small>DATE</small> <small> </small>	
<small>FIRST USED ON</small> <small> </small>		<small>SCALE</small> <small>7/8</small>		<small>SHT</small> <small>6 OF 6</small>		<small>REV</small> <small> </small>		<small>DOCUMENT NUMBER</small> <small>D 010-48-01</small>		<small>REV</small> <small>DI</small>	