FIELD ENGINEERING

TECHNICAL MANUAL
SPD™ 10/20

LOGIC DIAGRAMS

INCOTERM CORPORATION

6 STRATHMORE ROAD, NATICK, MASS. 01760 617—655-6100

FIELD ENGINEERING

TECHNICAL MANUAL

SPD™ 10/20

STORED PROGRAM DISPLAY

SPD™

FOREWORD

This document (FS003) contains logic diagrams that are provided to support the theory of operation and maintenance information contained in Document FS002, Field Engineering Technical Manual SPD 10/20 and FS004, Volume I SPD-L Program Loader in the Field Engineering Technical Manual SPD 10/20 Peripherals. A number of logic diagrams have been added to this interim issue of this document to reflect some of the changes and additions that have occurred since publication of the original document. For example, this (interim) edition reflects most of the logic incorporated in the Model 010 SPD 10/20 Display series.

NOTE

This is an interim issue of this document and is provided in lieu of Revision 1, currently in process, which will contain all electrical and mechanical revisions to date.

CONTENTS

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 10/21/70		
B	ECO 1321 C. Ely 8-10-71		
C	ECO 1409 9-7-71 RAF		
D	ECO 1449 5-13-71 RAF		
E	ECO 1535 6/21/71 L.R.		

TPU

C1 C2 C3 C4

+5 +14 -14 RET

BUSS

C3 22μf

C1 22μf

(TS) TEST STRIP

RET +5V +28V +14V -14V +5V

T-V MONITOR

J11 P11

6.3 AC RTN. 6.3 AC +73 SYNC RET +24 VIDEO RET VERT SYNC RET HORIZ SYNC BRIGHTNESS

RED #22 MAX. BRIGHTNESS

BRN #22

WHT #22 MIN

R1 250K

B10-B5 B11-B5 B12-B5

MEM. ELECT. A10 MEM STACK A11 DATA FLOW A12 CPU CONTROL A13 R.M.U. A14

NEON (OPTIONAL)

P13 J13

#22 WHT

#22 BLK

#18 WHT

#18 BLK

POWER SUPPLY

6.3V AC OUT

115V AC OUT

115/230 AC IN

4A 115V 2A 230V

V. TEKLOCK

ON-OFF

S1 S2

BLK WHT GRN

J12 P12

		J12	P12	
YEL	+5	1	1	#22
ORG	+14	4	4	#22
BLU	-14	14	14	#22
BLK	RET	15	15	#18
YEL	+5	2	2	#22
BLK	RET	9	9	#16
GRN	-5	5	5	#22
WHT	POWER UP	3	3	#22
WHT	THERMISTOR	7	7	#22
RED	+28	11	11	#22
GRY	+73	8	8	#22
BLK	T-V MON. RET	10	10	#22
VIO	+24	13	13	#22
BLK	RET	6	6	#16
BLK	RET	12	12	#18

B10 B11 E12 E13 E14

P11-19 P11-22 P11-46

8 • TWISTED PAIR

C8 C7 C6 C5

+5 +14 -14 RET

BUSS

C4 22μf

C2 22μf

INCOTRAM CORPORATION

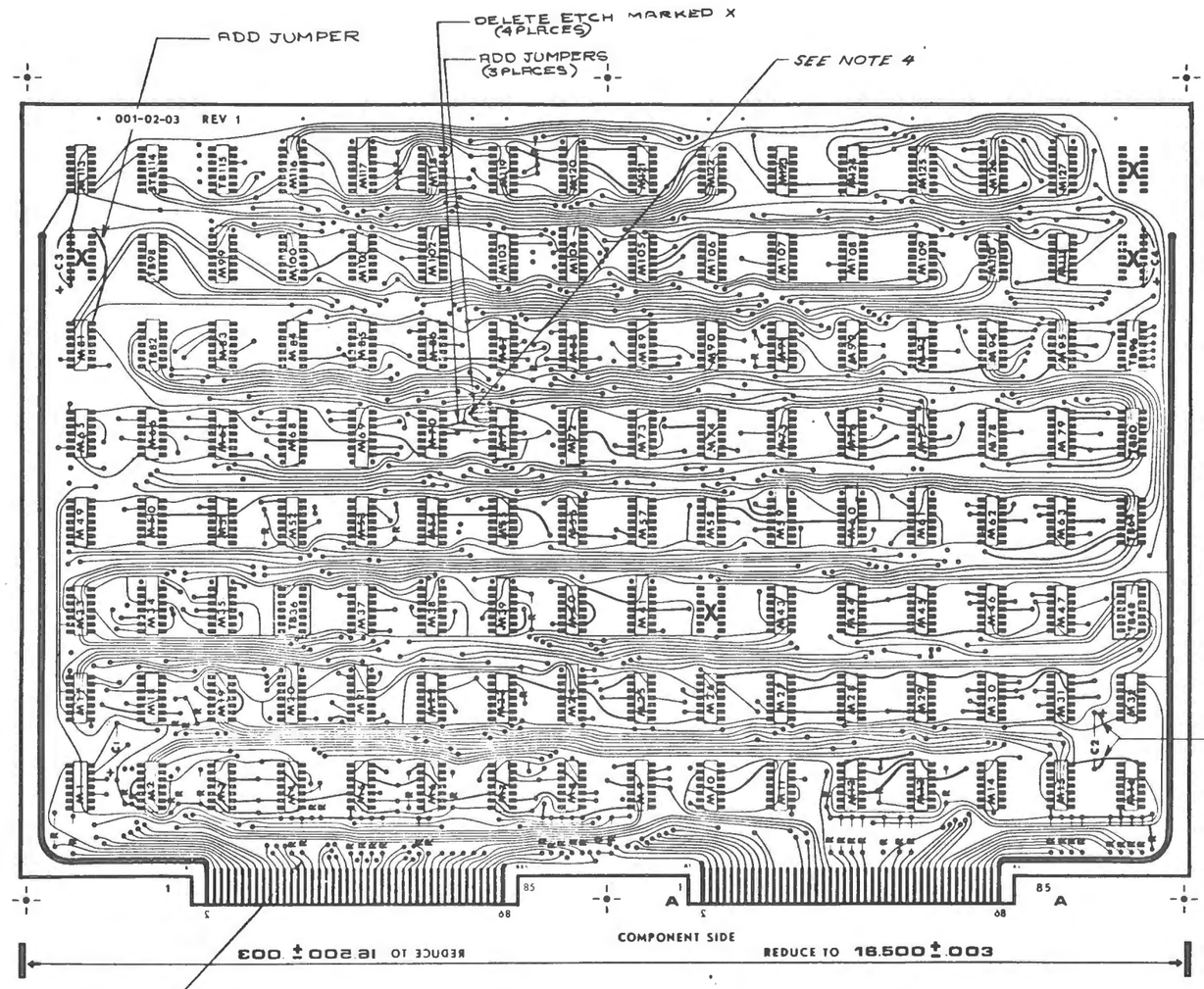
Hayes Memorial Drive Marlborough, Massachusetts 01752

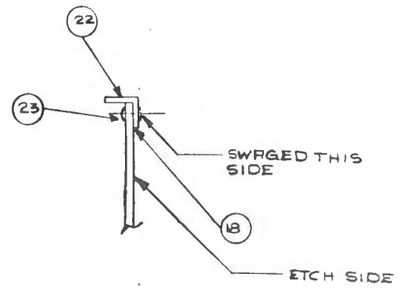
TITLE: POWER WIRE SCHEMATIC

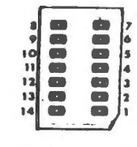
SIZE D 010-10-70 E

010-10-36

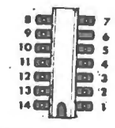
REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED PER ECO 1059 4/22/70		
B	UPDATED/ECO 1098 6/22/70		
C	UPDATED/ECO 1125 8-7-70		
D	ECO 1269 1-27-71 NO CHANGE		

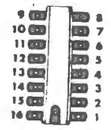






TB 36, 48, 64, 80, 7882, 98, 115, STB114





ADD JUMPERS

PIN NUMBERING AND ORIENTATION

NOTES:
M20, 21, 24, 34, 35, 38, 39, 41, 59, 60, 61, 68, 69, 72, 99, 116, 117, 120, 126, 127 ARE 16 PIN IC'S ORIENTED AS SHOWN.

19	ZC6384-255-5	B36, 48, 64, 80, 82, 98, 115, STB114, 7036
17	CSTE1127	C1-C4
16	RSRC07GF821J	R
14	ICSN7486N	M107, M108
13	ICSN7483N	M116, 117, 120, 126, 127
12	ICSN7475	M20, 21, 24, 34, 35, 38, 39, 41, 59, 60, 61, 68, 69, 72, 99, 102, 104
11	ICSN7472N	M30, 31, 46, 47, 62, 63, 78, M79
10	ICSN7454N	M73, M89
9	ICSN7461N	M27, 28, 29, 43, 44, 45, 57
8	ICSN7440N	M18, 49, 65, 81
7	ICSN7430N	M37, M106
6	ICSN7420N	M74, M109
5	ICSN7410N	M1, M103, M121
4	ICSN7404N	M14, 15, 94, 105, 118, 119
3	ICSN7403N	M2-8, 12, 13, 16, 17, 19, 22, 23, M25
		M32, 33, 40, 50-56, 66, 67
		M70, 71, 75-77, 85, 86
		M87, M91-93, M111, M113
		M123, M124
2	ICSN7402N	M10, 26, 90, 95, 110, 122, 125
1	ICSN7400N	M9, 58, 64, 65, 88, 100, 101

NOTES:

1. COMPONENT TERMINATING LEAD TO BE CLINCHED OR NON-CLINCHED PRIOR TO SOLDERING.
2. MAXIMUM HEIGHT OF LEAD PROTRUSIONS CLINCHED OR NON-CLINCHED TO BE .080
3. COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TESTS SOCKETS WITH EXTERNALS PLUGS, ETC.
4. DRILL THRU THIS BULLSEYES WITH #60 DRILL, MAKE SURE THIS WIRE MAKES CONTACT WITH POINT "A" ON ETCH SIDE OF BOARD AS SHOWN ON SHEET 2.

INTERNATIONAL COMPUTER TERMINALS CORP.

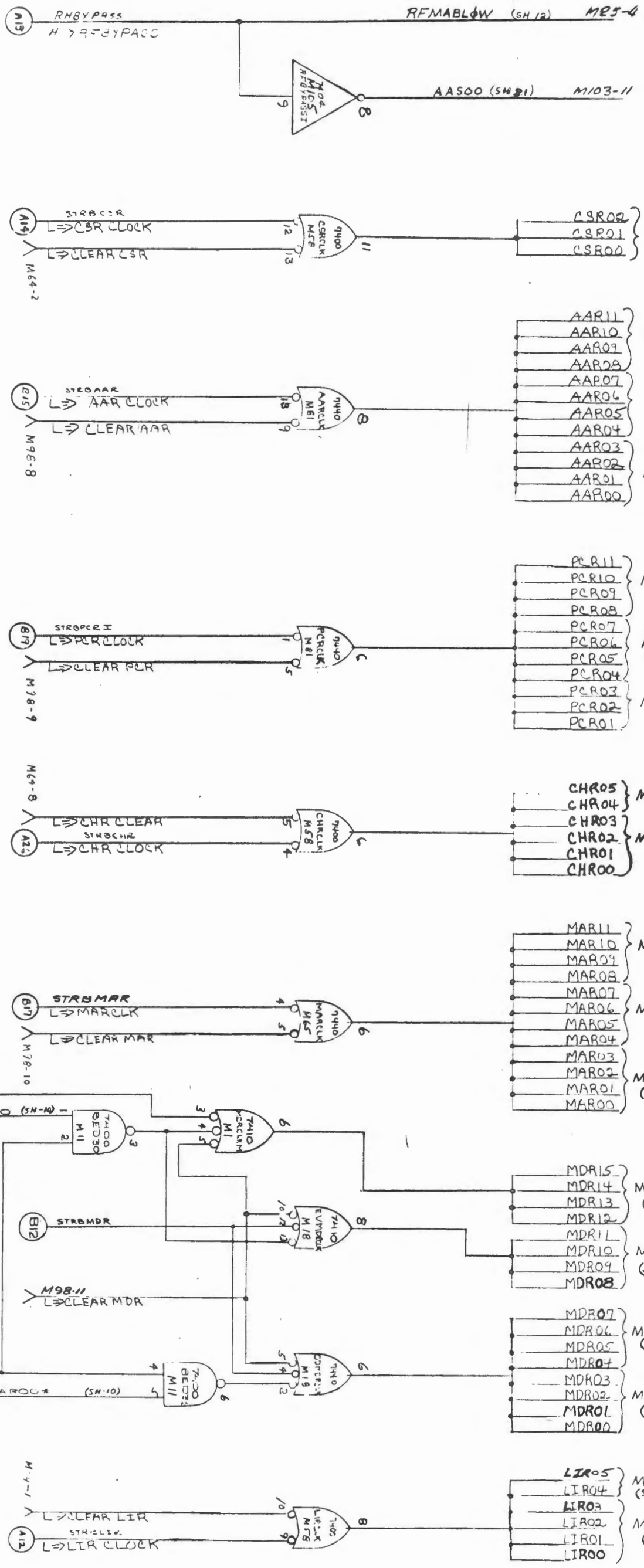
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3PLCS) ± .02 (2PLCS)
ANGLES ± 2°

		DATE
DR		
CHK		
ENG		
APPD		
NEXT ASSY		

TITLE: REGISTER FLOW COMPONENT ASSY AND HOLE SIZES

SIZE	P.C.	S.S.	NO.	REV
D	001-02-02			D

SCALE — SHT 1 OF 3



DRAWN	DATE	TITLE
CHECKED	DATE	CPU REGISTER CLOCK DRIVERS
ENG'NR	DATE	DWG NO 001-02-01
		SHT 2

		CHANGED PER ECO 1096 11/20/70
3	ECO 1224	11/20/70
4	ECO 1224	11/20/70
5	ECO 042	5/11/70
6	ECO 1096	11/20/70

4			
5	ECO 1042	3/1/70	
6	ECO 1066	4/27/70	

ARB27 ARB26 ARB25 ARB24 ARB23 ARB22 ARB21 ARB20 (SH-15)

MDR-ACR EXCLUSIVE OR

7403 ARBX001 M123 — 3, 2, 1
7403 ARBX001 M123 — 8, 10, 9
7403 ARBX001 M123 — 11, 13, 12
7403 ARBX001 M123 — 6, 5, 4
7403 ARBX003 M124 — 8, 10, 9
7403 ARBX002 M124 — 6, 5, 4
7403 ARBX001 M124 — 3, 2, 1
7403 ARBX001 M124 — 11, 13, 12

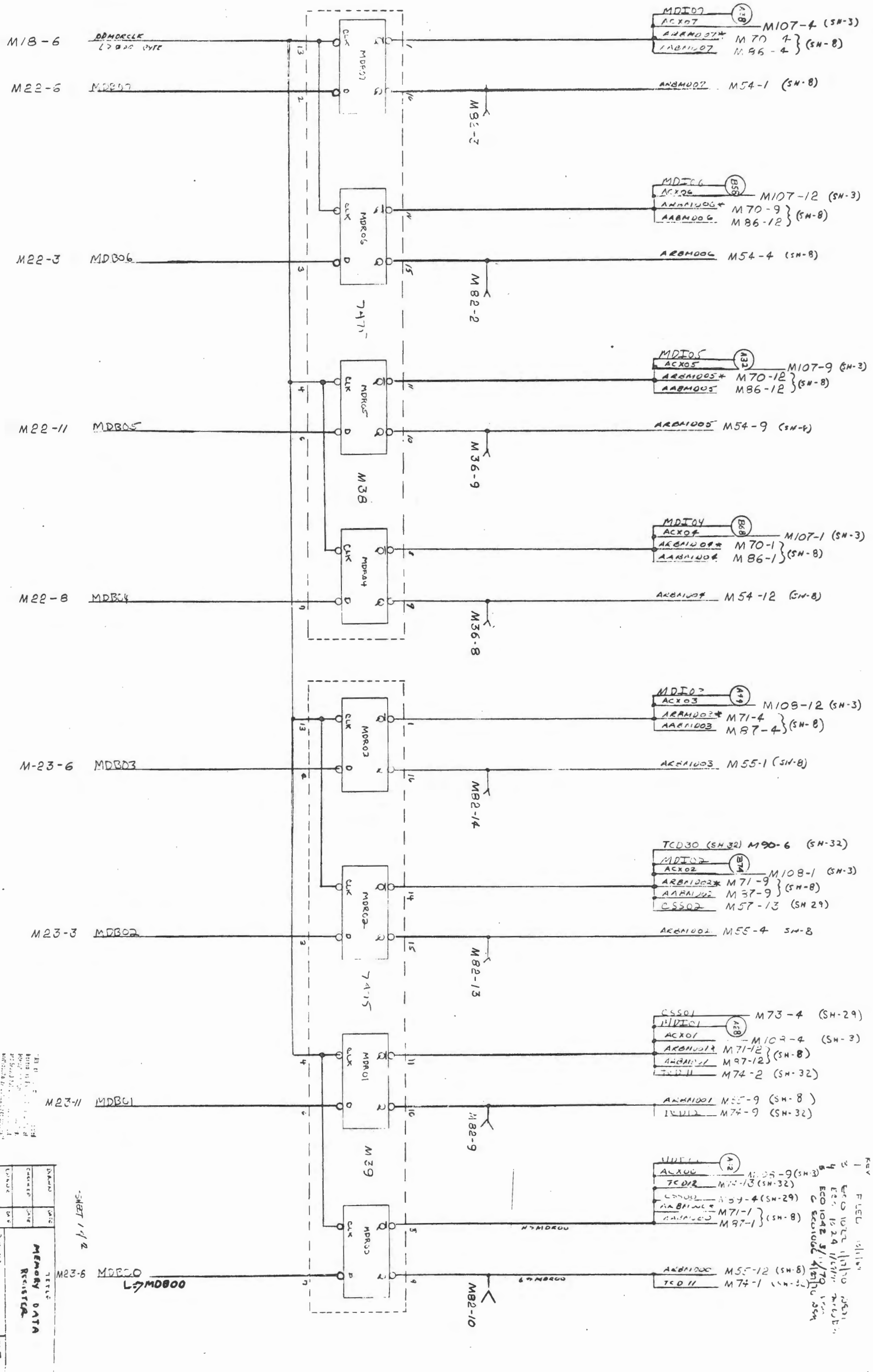
H=>MDR00-07 @ ACR00-07->MR13

7486 ACX03 M107 — 6
7486 ACX06 M107 — 11, 12, 13
7486 ACX05 M107 — 8, 9, 10
7486 ACX04 M107 — 1, 2
7486 ACX03 M108 — 11, 12, 13
7486 ACX02 M108 — 1, 2
7486 ACX01 M108 — 6, 4, 5
7486 ACX00 M108 — 3, 1, 2

A40

MDR27* M38-1 — H=>MDR07 — ACR07* M78-6 — L=>ACR07
MDR26* M38-14 — H=>MDR06 — ACR06* M62-6 — L=>ACR06
MDR25* M38-11 — H=>MDR05 — ACR05* M46-6 — L=>ACR05
MDR24* M38-8 — H=>MDR04 — ACR04* M30-6 — L=>ACR04
MDR23* M39-1 — H=>MDR03 — ACR03* M79-6 — L=>ACR03
MDR22* M39-14 — H=>MDR02 — ACR02* M62-6 — L=>ACR02
MDR21* M32-11 — H=>MDR01 — ACR01* M47-6 — L=>ACR01
MDR20* M39-8 — H=>MDR00 — ACR00* M41-6 — L=>ACR00

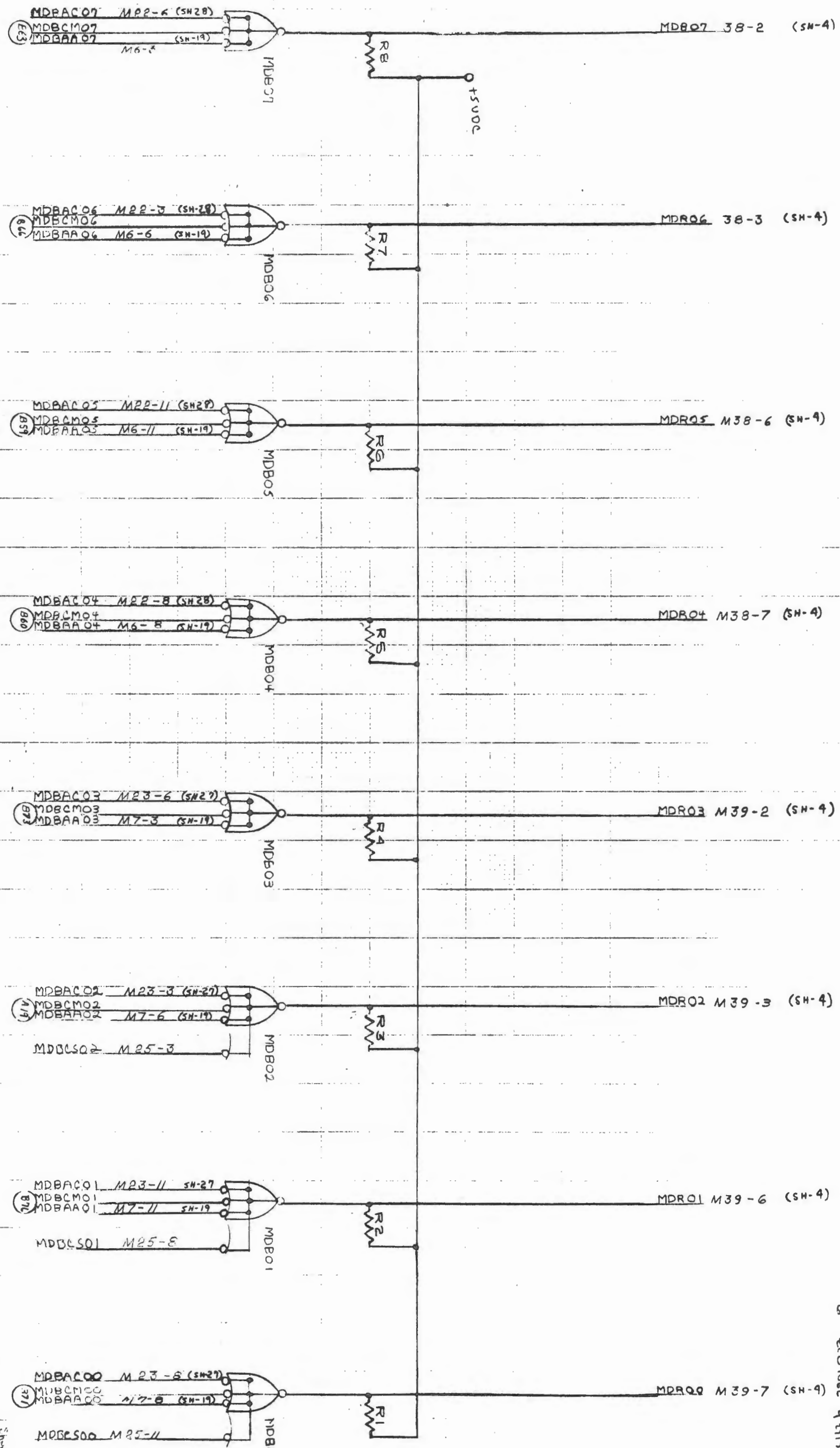
DRAWN	DATE	TITLE MDR-ACR EXCLUSIVE OR UNIT
CHECKED	DATE	
ENGNR	DATE	
		DWG NO 1001-02-01 SHT 3

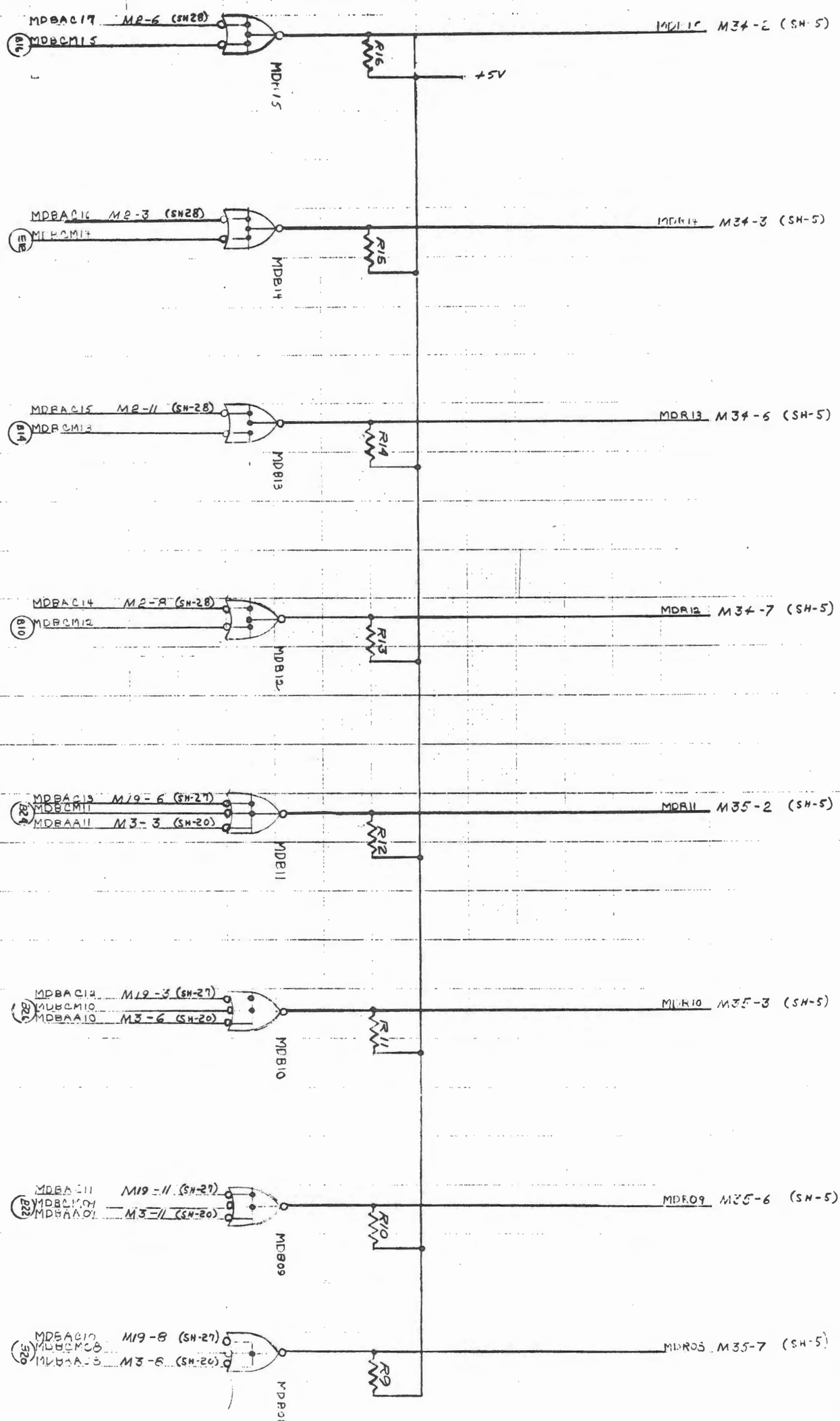

M18-6
DDMORCLK
M22-6
MDB07
M22-3
MDB06
M22-11
MDB05
M22-8
MDB04
M-23-6
MDB03
M23-3
MDB02
M23-11
MDB01
M23-6
MDB00
L⇒MDB00
74175
M38
M39
MDR07
MDR06
MDR05
MDR04
MDR03
MDR02
MDR01
MDR00
CLK
D
Q
MDI07
ACX07
ARBMDO7*
AABMDO7
M107-4 (SH-3)
M70-4
M86-4
(SH-8)
ANBMDO7
M54-1 (SH-8)
M82-7
MDI06
ACX06
ANBMDO6*
AABMDO6
M107-12 (SH-3)
M70-9
M86-12
(SH-8)
ARBMDO6
M54-4 (SH-8)
M82-2
MDI05
ACX05
ARBMDO5*
AABMDO5
M107-9 (SH-3)
M70-12
M86-12
(SH-8)
ARBMDO5
M54-9 (SH-8)
M36-9
MDI04
ACX04
ARBMDO4*
AABMDO4
M107-1 (SH-3)
M70-1
M86-1
(SH-8)
ARBMDO4
M54-12 (SH-8)
M36-8
MDI03
ACX03
ARBMDO3*
AABMDO3
M109-12 (SH-3)
M71-4
M87-4
(SH-8)
ARBMDO3
M55-1 (SH-8)
M82-14
TCD30 (SH 32) M90-6 (SH-32)
MDI02
ACX02
ARBMDO2*
AABMDO2
CSS02
M108-1 (SH-3)
M71-9
M37-9
M57-13 (SH 29)
ARBMDO2
M55-4 SH-8
M82-13
CSS01
MDI01
ACX01
ARBMDO1*
AABMDO1
TCD11
M73-4 (SH-29)
M108-4 (SH-3)
M71-12
M87-12
M74-2 (SH-32)
ANBMDO1
TCD12
M55-9 (SH-8)
M74-9 (SH-32)
M82-9
ACX00
TCD12
CSS00
ARBMDO0*
AABMDO0
M55-9 (SH-8)
M74-13 (SH-32)
M57-4 (SH-29)
M71-1
M87-1
(SH-8)
N⇒MDB00
ARBMDO0
M55-12 (SH-8)
TCD11
M74-1 (SH-32)
6⇒MDB00
M82-10
MEMORY DATA REGISTER
DWG NO. 001-02-01
SHT 4
SHEET 1 of 2
REV
1 ECO 1042 3/4/79
2 ECO 1042 3/4/79
3 ECO 1042 3/4/79
4 ECO 1042 3/4/79
5 ECO 1042 3/4/79
6 ECO 1042 3/4/79

REV		
1	FILED	10-1-69
2	CHANGED PER ECO 1022	11/20/69
3	ECO 1022	1-16-70
4	ECO 1024	1-29-70
6	ECO 1066	4-27-70

SHEET 2 / 2

DRAWN	DATE	TITLE: MEMORY DATA REGISTER
CHECKED	DATE	
ENGINEER	DATE	DWG NO. 001-02-01 SHT 5


MDBAC07 M22-6 (SH28)
MDBCMO7
MDBAA07 M6-2 (SH-19)
E23
MDB07
R8
+5VDC
MDR07 38-2 (SH-4)
MDBAC06 M22-3 (SH-28)
MDBCMO6
MDBAA06 M6-6 (SH-19)
B22
MDB06
R7
MDR06 38-3 (SH-4)
MDBAC05 M22-11 (SH28)
MDBCMO5
MDBAA05 M6-11 (SH-19)
B51
MDB05
R6
MDR05 M38-6 (SH-9)
MDBAC04 M22-8 (SH28)
MDBCMO4
MDBAA04 M6-8 (SH-19)
B60
MDB04
R5
MDR04 M38-7 (SH-4)
MDBAC03 M23-6 (SH27)
MDBCMO3
MDBAA03 M7-3 (SH-19)
B43
MDB03
R4
MDR03 M39-2 (SH-4)
MDBAC02 M23-3 (SH-27)
MDBCMO2
MDBAA02 M7-6 (SH-19)
A47
MDBCS02 M25-3
MDB02
R3
MDR02 M39-3 (SH-4)
MDBAC01 M23-11 SH-27
MDBCMO1
MDBAA01 M7-11 SH-19
B28
MDBCS01 M25-8
MDB01
R2
MDR01 M39-6 (SH-4)
MDBAC00 M23-8 (SH27)
MDBCMOO
MDBAA00 M7-8 (SH-19)
A21
MDBCS00 M25-11
MDB00
R1
MDR00 M39-7 (SH-9)
7
6
REV
1 FILED
3
4
5 ECO 042 3/
6 ECO 1062
DRAWN
CHECKED
ENGR
DATE
DATE
MEMORY DATA REGISTER BUS
001-02-01
SHT 6
Sheet 1 of 2



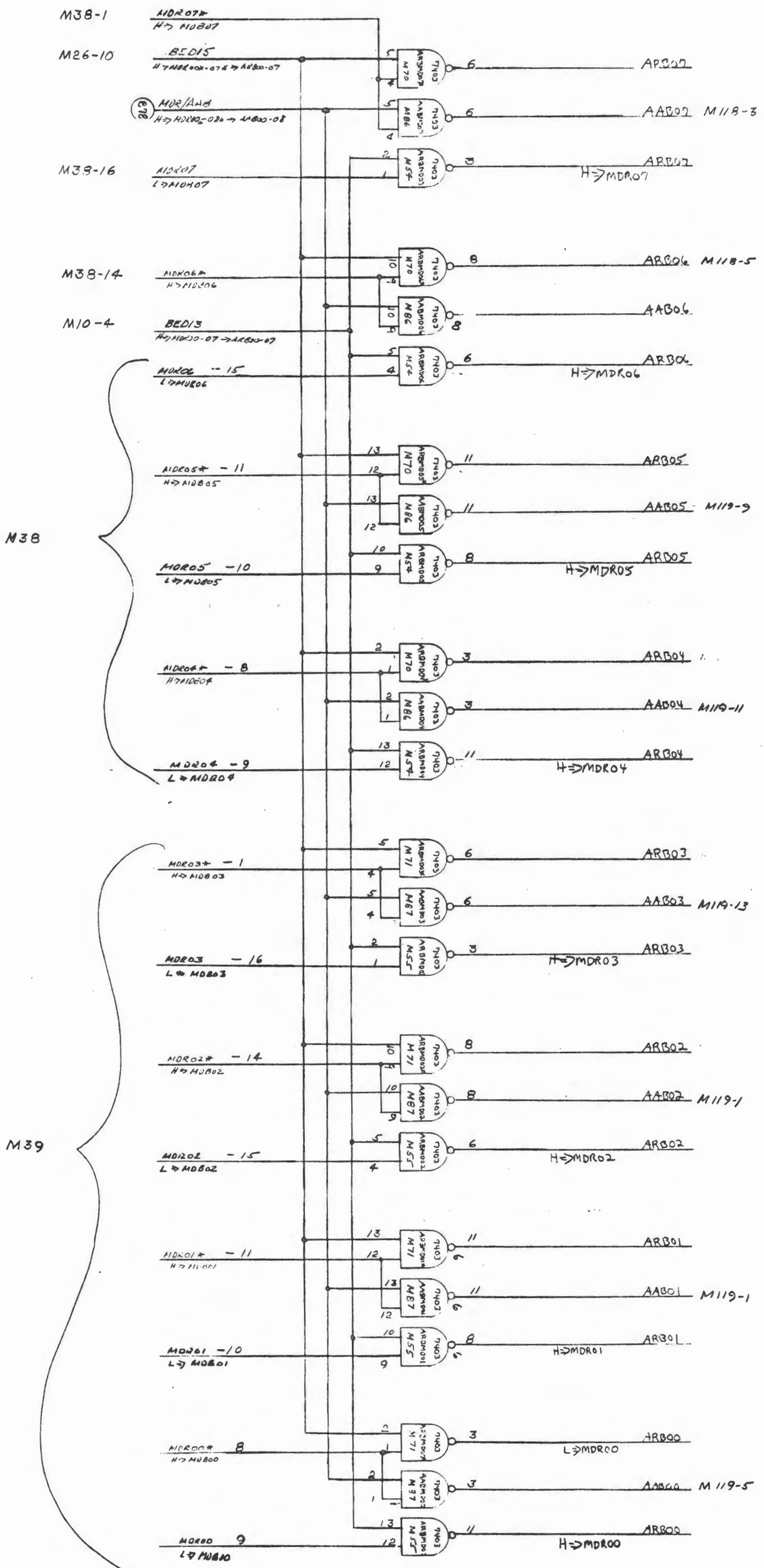
8

MEMORY DATA REGISTER BUS

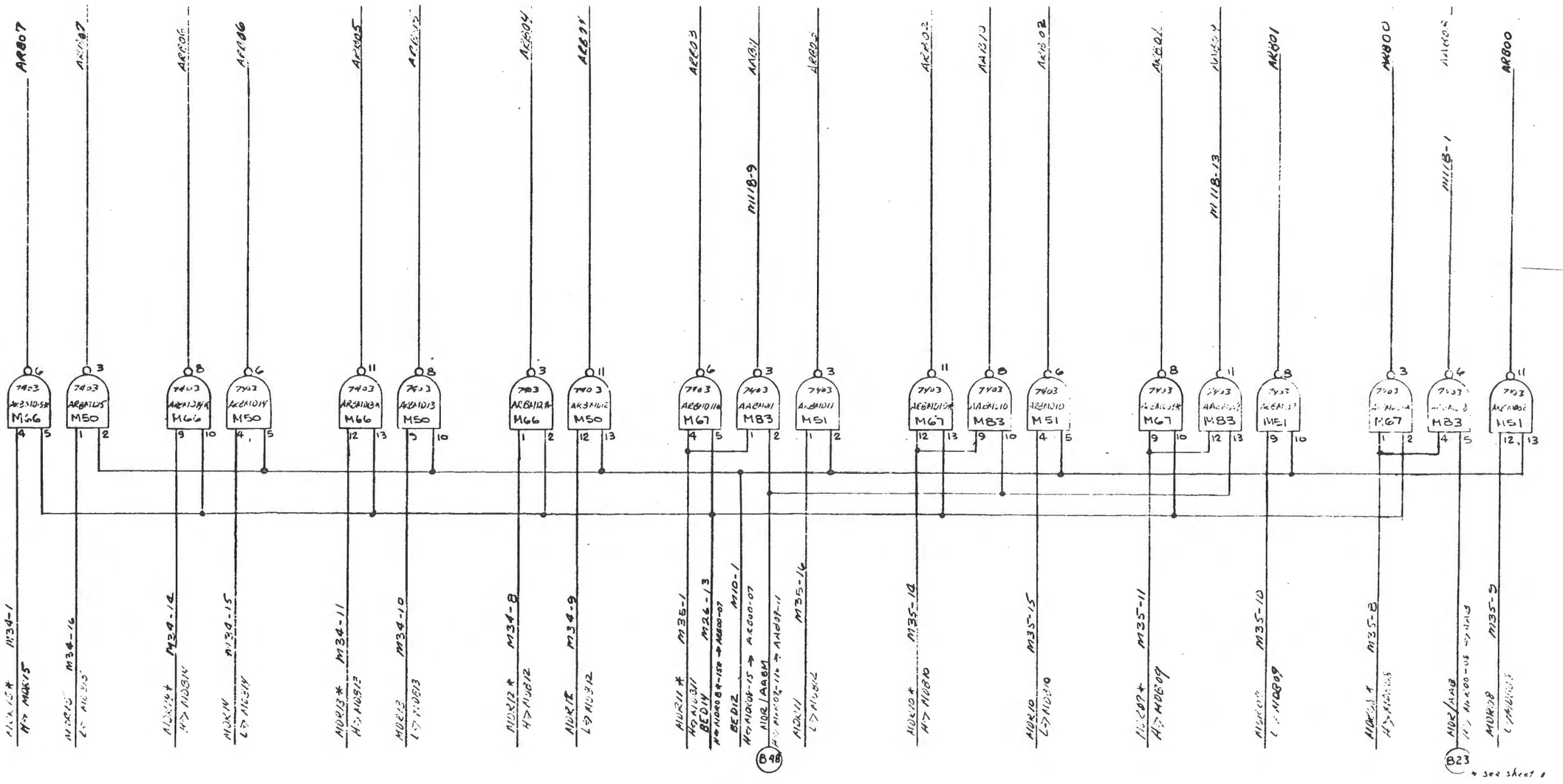
10-20-0001

SHT 7

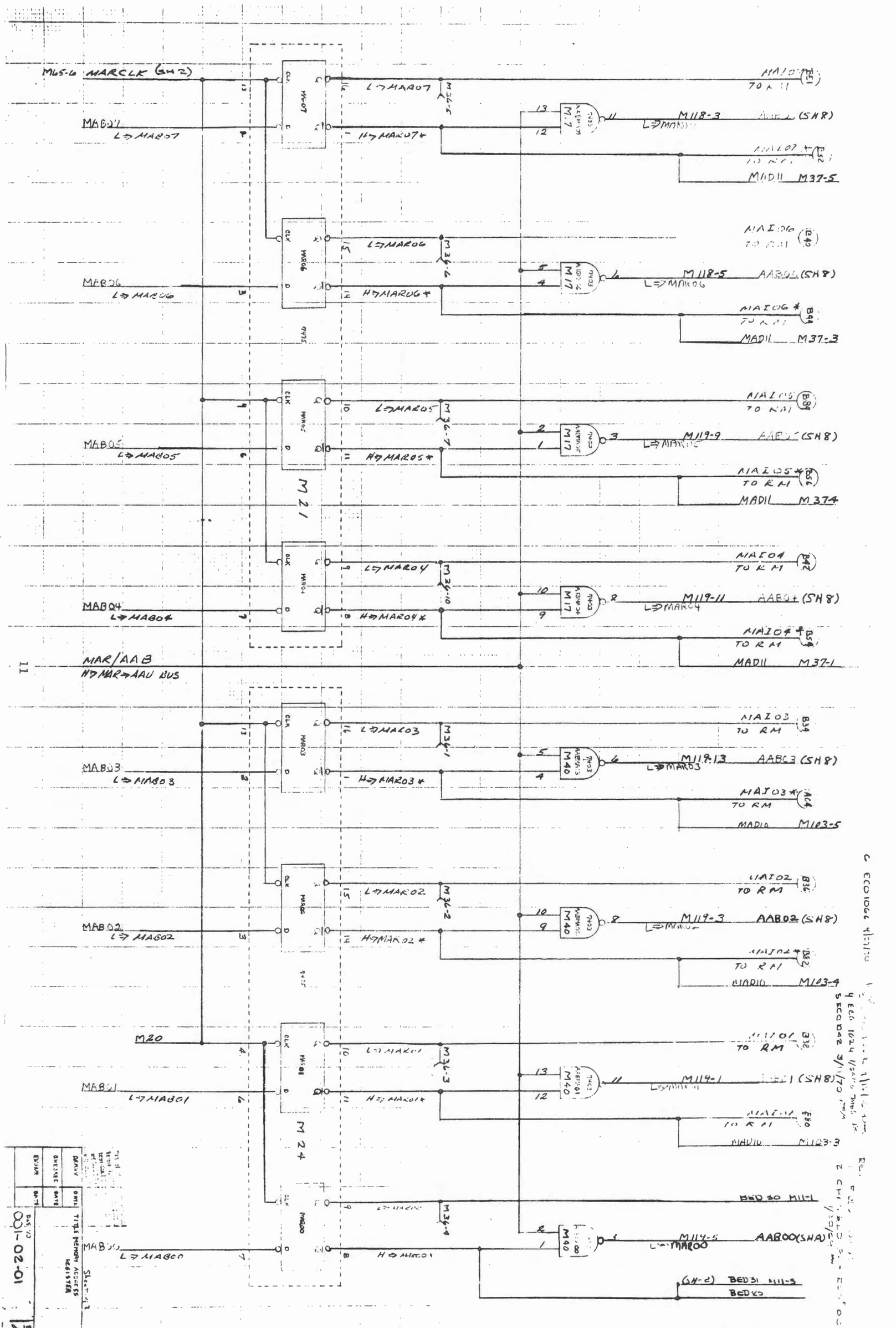
SHEET 2 of 2

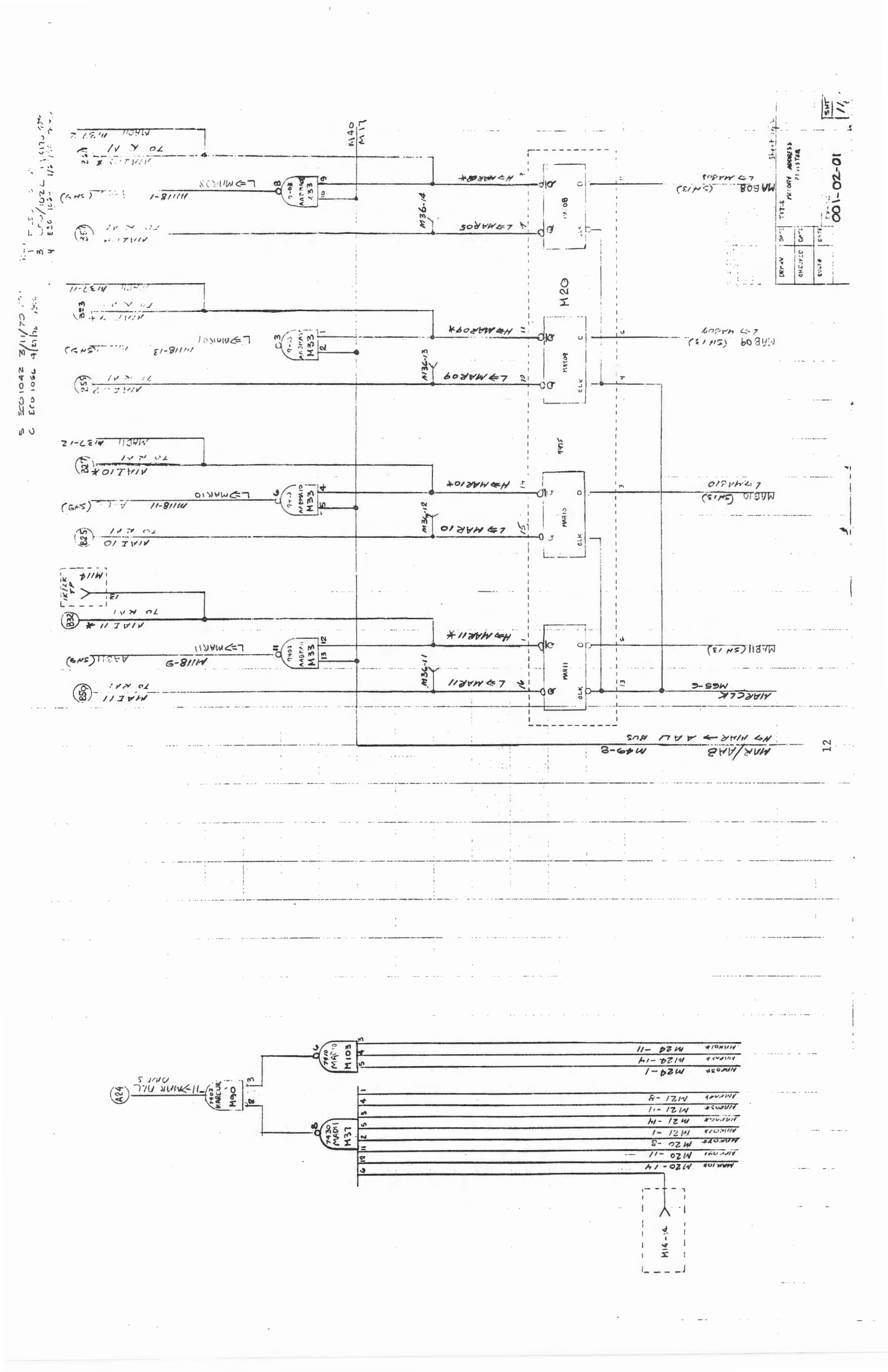


1 FRU
1 FILED 10/15/69
3 ECO 1012 1/16/70 VSS
4 ECO 1024 11/29/[illegible]
6 ECO 1066 4/23/70 DSM



DRAWN	DATE	TITLE: MEMORY DATA BUS DRIVERS
ENGINEER	DATE	
ENGR.	DATE	DWG NO. 001-02-01 SHT 9


M165-6 MARCLK (GH2)
MABQ7
L⇒MAAQ7
MABQ6
L⇒MAAQ6
MABQ5
L⇒MAAQ5
MABQ4
L⇒MAAQ4
MAR/AAB
H⇒MAR→AAU BUS
MABQ3
L⇒MAAQ3
MABQ2
L⇒MAAQ2
M20
MABQ1
L⇒MAAQ1
MABQ0
L⇒MAAQ0
M21
M24
L⇒MAAQ7
H⇒MAAQ7*
L⇒MAAQ6
H⇒MAAQ6*
L⇒MAAQ5
H⇒MAAQ5*
L⇒MAAQ4
H⇒MAAQ4*
L⇒MAAQ3
H⇒MAAQ3*
L⇒MAAQ2
H⇒MAAQ2*
L⇒MAAQ1
H⇒MAAQ1*
L⇒MAAQ0
H⇒MAAQ0*
M118-3 AAB07 (SH8)
M118-5 AAB06 (SH8)
M119-9 AAB05 (SH8)
M119-11 AAB04 (SH8)
M119-13 AAB03 (SH8)
M119-3 AAB02 (SH8)
M119-1 AAB01 (SH8)
M114-5 AAB00 (SH8)
MAD11 M37-5
MAD11 M37-3
MAD11 M37-4
MAD11 M37-1
MAD10 M103-5
MAD10 M103-4
MAD10 M103-3
BED30 M111-1
(GH-2) BED31 M111-5
BED00
MEMORY ACCESS REGISTER
001-02-01


001-02-01
M20
M140
M17
M36-14
M36-13
M36-12
M36-11
M14-14
M90
M103
M37
MAR/AAB
M49-8
12

MA8A00 M26-6

MA8A01 M8-3

MA8A02 M6-8

MA8A03 M6-11

MA8A04 M5-6

MA8A05 M5-3

MA8A06 M16-11

MA8A07 M5-8

MA8B00 M25-4

MA8B01

MA8B02

MA8B03

MA8B04

MA8B05

MA8B06

MA8B07

MA8B00 M26-7

MA8B01 M24-6

MA8B02 M24-3

MA8B03 M24-2

MA8B04 M21-7

MA8B05 M21-6

MA8B06 M21-3

MA8B07 M21-2

R17

R18

R19

R20

R21

R22

R23

R24

+5VDC

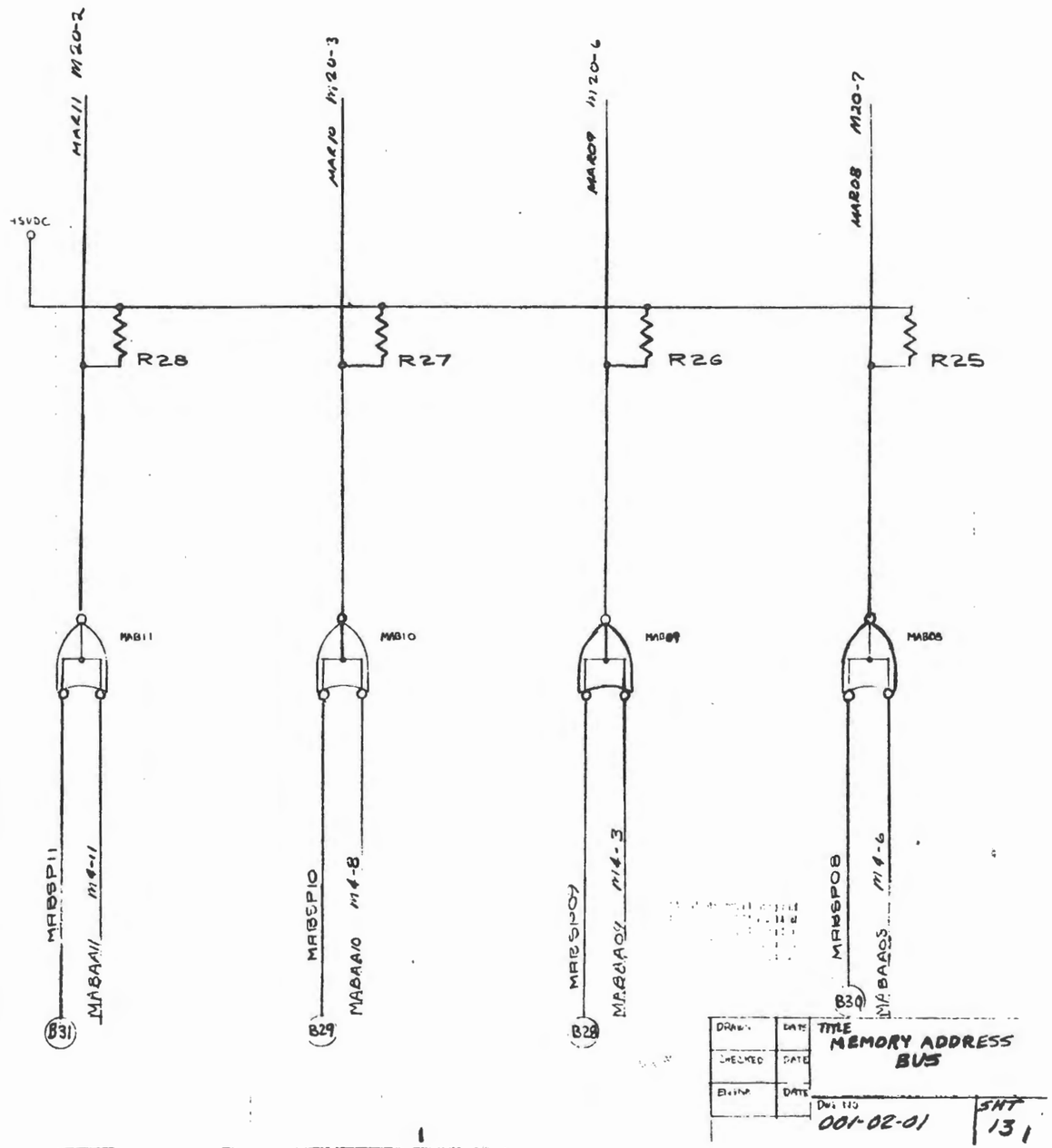
M25 (740: ...) 4 MEMORY LOW IN → MA8B00 H REFRESH REQUEST (5115)

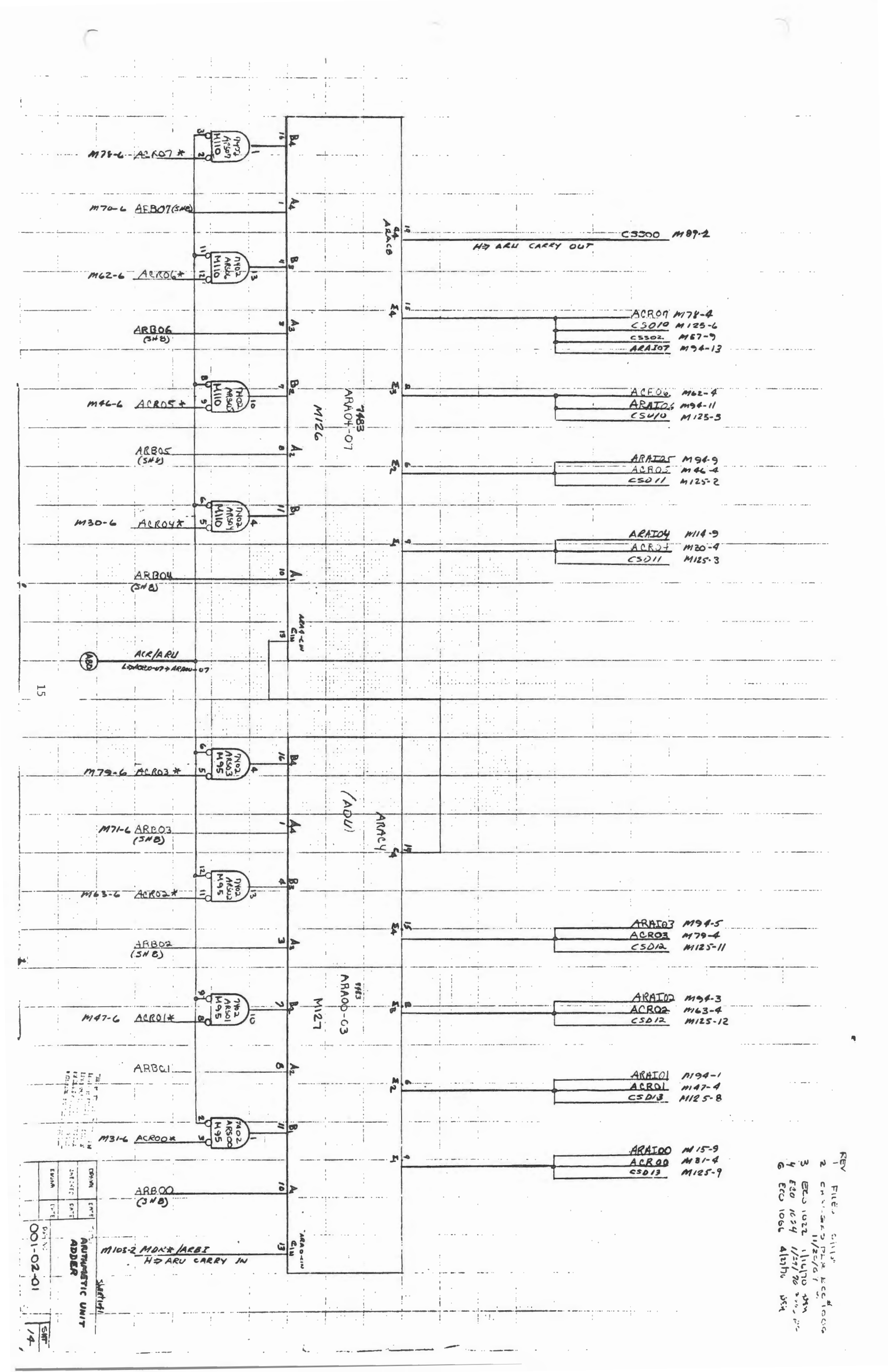
B75 B79 B81 B83 B87 B91 B95

DRAWN	DATE	TITLE: MEMORY ADDRESS BUS	DWG NO: 10-20-100	REV: 12
CHECKED	DATE			
ENGR	DATE			

1 ECO 1022 1/16/70 RT
3 ECO 1022 1/16/70 RT
4 ECO 1024 1/29/70 RT
5 ECO 1042 3/11/70
6 ECO 1066 4/17/70

3 ECO 1022
4 ECO 1034 1/23/75
5 ECO 1042 3/1/75
6 ECO 1066 4/27/75





ARITHMETIC UNIT ADDER

001-02-01

SHEET 11

15

14

REV

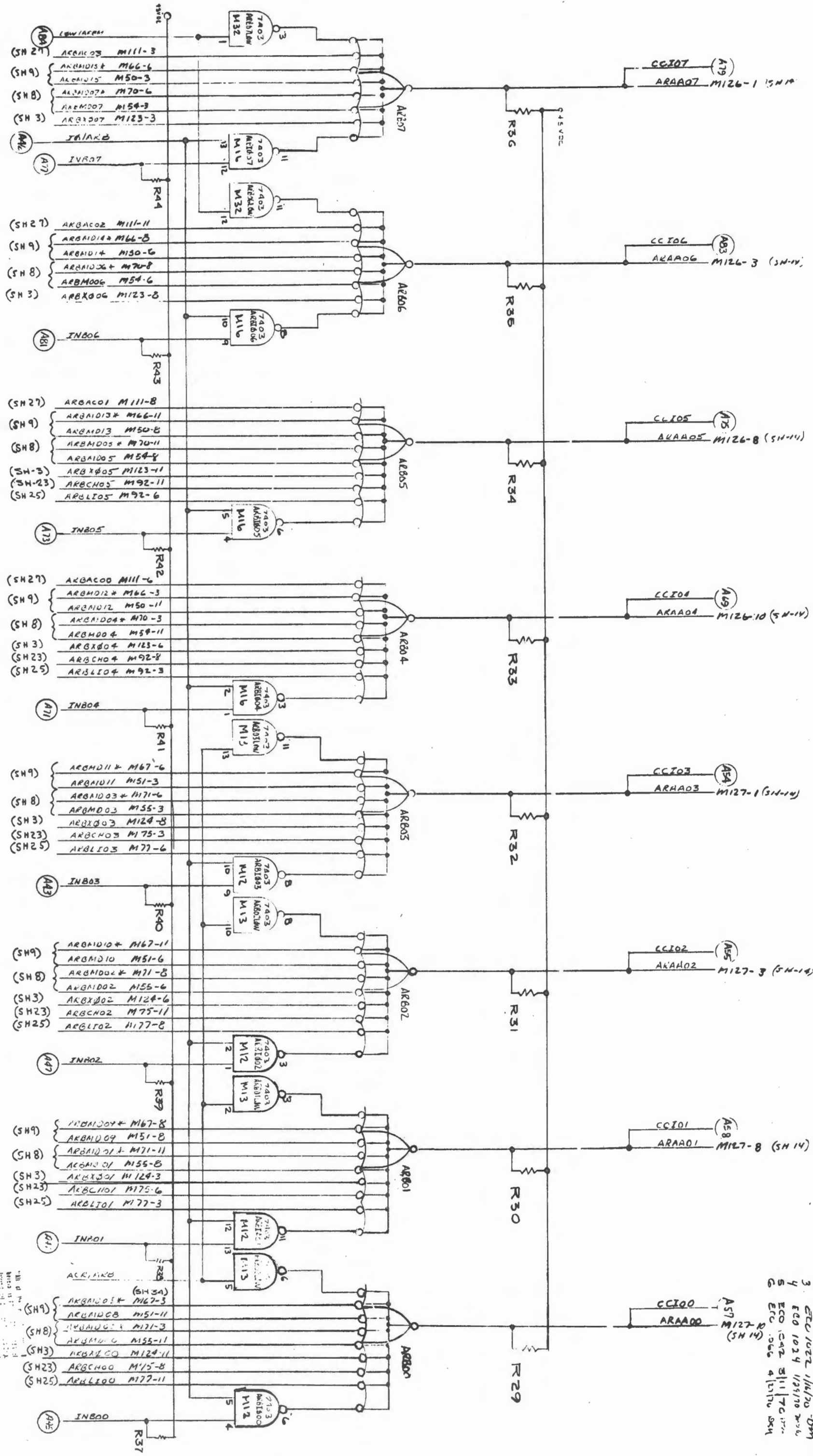
1 Files Built

2 Changed per ECO 10026 11/26/69

3 ECO 1022 11/4/70 JSM

4 ECO 1024 1/27/70 JSM

6 ECO 1096 4/17/70 JSM


+5VDC
A(B)A
LOW IARBA
(SH 27) ARBAC03 M111-3
(SH 9) ARBAID13* M66-6
ARBAID13 M50-3
(SH 8) ARBMD07* M70-6
ARBMD07 M54-3
(SH 3) ARBX07 M123-3
A(B)2
IAIARB
A77
IVR07
R44
7403 M16 ARBI07
7403 M32 ARBA07
AR(B)07
R36
CCI07
ARAA07 M126-1 (SH 14)
A79
(SH 27) ARBAC02 M111-11
(SH 9) ARBAID12* M66-8
ARBAID12 M50-6
(SH 8) ARBMD06* M70-8
ARBMD06 M54-6
(SH 3) ARBX06 M123-8
A81
INB06
R43
7403 M16 ARBI06
7403 M32 ARBA06
AR(B)06
R35
CCI06
ARAA06 M126-3 (SH 14)
AB3
(SH 27) ARBAC01 M111-8
(SH 9) ARBAID13* M66-11
ARBAID13 M50-8
(SH 8) ARBMD05* M70-11
ARBAID05 M54-8
(SH-3) ARBX05 M123-11
(SH-23) ARBCH05 M92-11
(SH 25) ARBLI05 M92-6
A73
INB05
R42
7403 M16 ARBI05
7403 M32 ARBA05
AR(B)05
R34
CCI05
ARAA05 M126-8 (SH 14)
A75
(SH 27) ARBAC00 M111-6
(SH 9) ARBMD12* M66-3
ARBMD12 M50-11
(SH 8) ARBAID04* M70-3
ARBMD04 M54-11
(SH 3) ARBX04 M123-6
(SH 23) ARBCH04 M92-8
(SH 25) ARBLI04 M92-3
A71
INB04
R41
7403 M16 ARBI04
7403 M32 ARBA04
AR(B)04
R33
CCI04
ARAA04 M126-10 (SH 14)
A69
(SH 9) ARBMD11* M67-6
ARBAID11 M51-3
(SH 8) ARBAID03* M71-6
ARBMD03 M55-3
(SH 3) ARBX03 M124-8
(SH 23) ARBCH03 M75-3
(SH 25) ARBLI03 M77-6
A43
INB03
R40
7403 M12 ARBI03
7403 M13 ARBA03
AR(B)03
R32
CCI03
ARAA03 M127-1 (SH 14)
A54
(SH 9) ARBAID10* M67-11
ARBMD10 M51-6
(SH 8) ARBAID02* M71-8
ARBAID02 M55-6
(SH 3) ARBX02 M124-6
(SH 23) ARBCH02 M75-11
(SH 25) ARBLI02 M77-8
A47
INB02
R39
7403 M12 ARBI02
7403 M13 ARBA02
AR(B)02
R31
CCI02
ARAA02 M127-3 (SH 14)
A55
(SH 9) ARBAID09* M67-8
ARBAID09 M51-8
(SH 8) ARBAID01* M71-11
ARBAID01 M55-8
(SH 3) ARBX01 M124-3
(SH 23) ARBCH01 M75-6
(SH 25) ARBLI01 M77-3
A51
INP01
R38
7403 M12 ARBI01
7403 M13 ARBA01
AR(B)01
R30
CCI01
ARAA01 M127-8 (SH 14)
A58
ACK1ARB
(SH 34)
(SH 9) ARBAID08* M67-3
ARBAID08 M51-11
(SH 8) ARBMD08* M71-3
ARBMD08 M55-11
(SH 3) ARBX08 M124-11
(SH 23) ARBCH00 M75-8
(SH 25) ARBLI00 M77-11
A45
INB00
R37
7403 M12 ARBI00
AR(B)00
R29
CCI00
ARAA00 M127-10 (SH 14)
A57
REVISIONS
1 ECO 1027 11/14/70 DM
3 ECO 1024 11/5/70 DM
4 ECO 1042 8/11/70 DM
5 ECO 1066 4/13/70 DM
TITLE: ARITHMETIC UNIT
DWG NO. 001-02-01
SHT 15

CS800

AAUCA OUT TO CER

14

C4 (AAUC12)

CS019

AAR11 — M99-6

(SH9 SH17) AAB11 — M118 — 9 — 8 — TWSV AA211 — 1 — A4

AA D11 M100-8 (SH22) — 12 — B4

Σ4 — 15

(SH9 SH17) AAB10 — M118 — 11 — 10 — TWSV AA210 — 3 — A3

AA D10 M100-6 (SH22) — 4 — B3

Σ3 — 2 — AAR10 — M99-3; CSD19 — M90-11

AAA08-11 T483

M116

(SH9 SH17) AAB09 — M118 — 13 — 12 — TWSV AA209 — 8 — A2

AA D09 M100-3 (SH22) — 7 — B2

Σ2 — 6 — AAR09 — M99-2; CSD18 — M90-8

(SH9 SH17) AA B08 — M118 — 1 — 2 — TWSV AA208 — 10 — A1

AA D08 M100-11 (SH22) — 11 — B1

Σ1 — 9 — AAR08 — M99-7; CSD18 — M90-9

CSN

13

14

C4 AAUC8

(SH8 SH17) AAB07 — M118 — 3 — 4 — TWSV AA207 — 1 — A4

AA D07 M101-8 (SH21) — 14 — B4

Σ4 — 15 — AAR07 — M102-6; CSD17 — M122-2

(SH8 SH17) AAB06 — M118 — 5 — 6 — TWSV AA206 — 3 — A3

AA D06 M103-12 (SH21) — 4 — B3

Σ3 — 2 — AAR06 — M102-3; CSD17 — M122-3

AAA04-07 T483

M117

17

(SH8 SH17) AAB05 — M118 — 9 — 8 — TWSV AA205 — 8 — A2

AA D05 M101-6 (SH21) — 7 — B2

Σ2 — 6 — AAR05 — M102-2; CSD16 — M122-6

(SH8 SH17) AAB04 — M118 — 11 — 10 — TWSV AA204 — 10 — A1

AA D04 M101-11 (SH21) — 11 — B1

Σ1 — 9 — AAR04 — M102-7; CSD16 — M122-5

CSN

13

14

C6 AAUC4

(SH8 SH17) AA B03 — M118 — 13 — 12 — TWSV AA203 — 1 — A4

AA D03 M9-6 (SH21) — 16 — B4

Σ4 — 15 — AAR03 — M104-6; CSD15 — M122-12

(SH8 SH17) AA B02 — M118 — 3 — 4 — TWSV AA202 — 13 — A3

AA D02 M121-12 (SH21) — 4 — B3

Σ3 — 2 — AAR02 — M104-3; CSD15 — M122-11

AAA00-03 T483

M120

(SH8 SH17) AA B01 — M118 — 1 — 2 — TWSV AA201 — 8 — A2

AA D01 M121-8 (SH21) — 7 — B2

Σ2 — 6 — AAR01 — M104-2; CSD14 — M122-8

(SH8 SH17) AA B00 — M118 — 5 — 6 — TWSV AA200 — 10 — A1

LD AA B00

AA D00 M121-6 (SH21) — 11 — B1

Σ1 — 9 — AAR00 — M104-7; CSD14 — M122-7

CSN

13

AAK AAN

NOT AAK SIN

DRAWN		DATE	
CHECKED		DATE	
ENGR		DATE	

TITLE: AUXILIARY ARITHMETIC UNIT ADDERS

DWG NO 001-02-01

SHT 16

REV

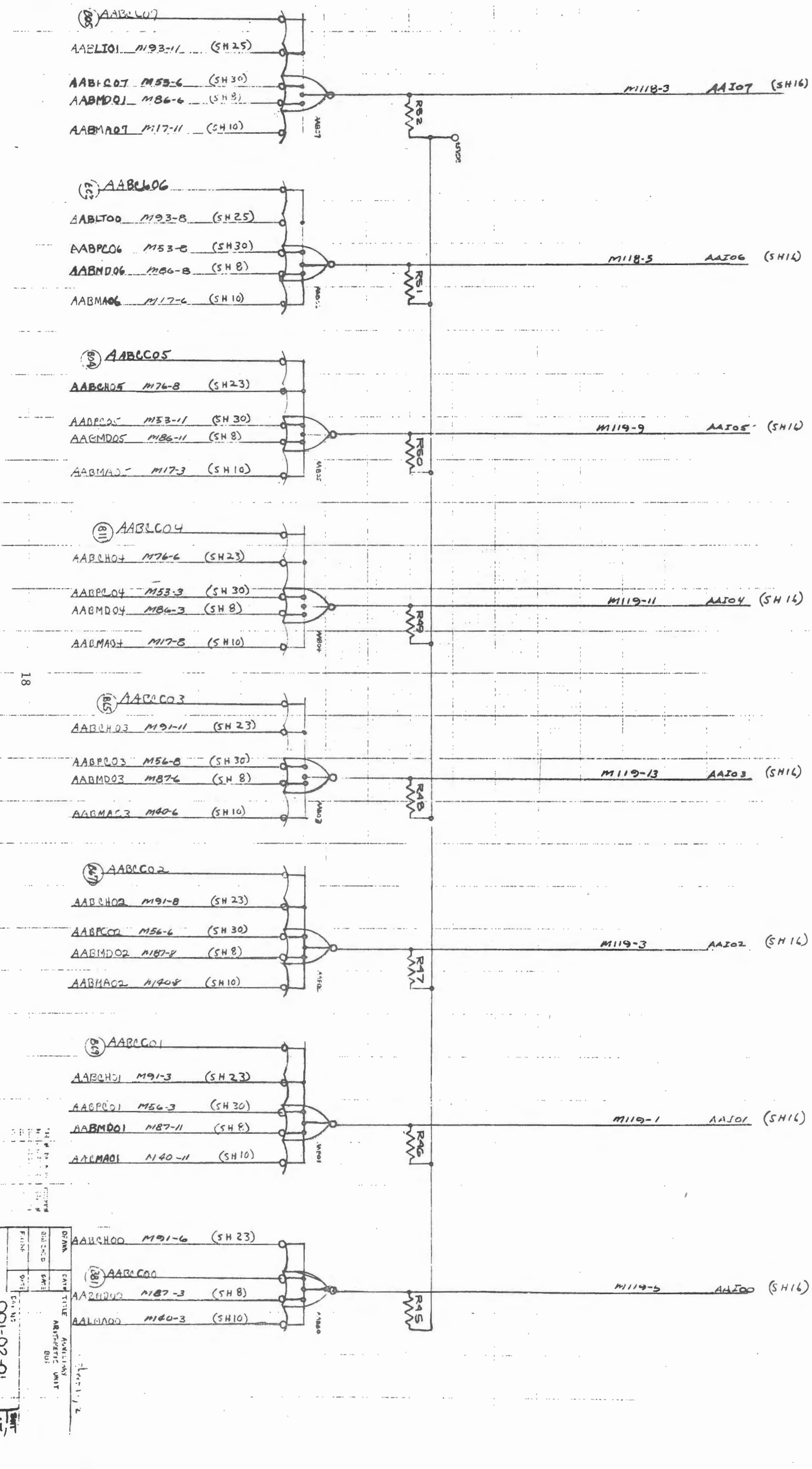
1 [illegible]

3 [illegible]

4 ECO 1024 1/28/70 [illegible]

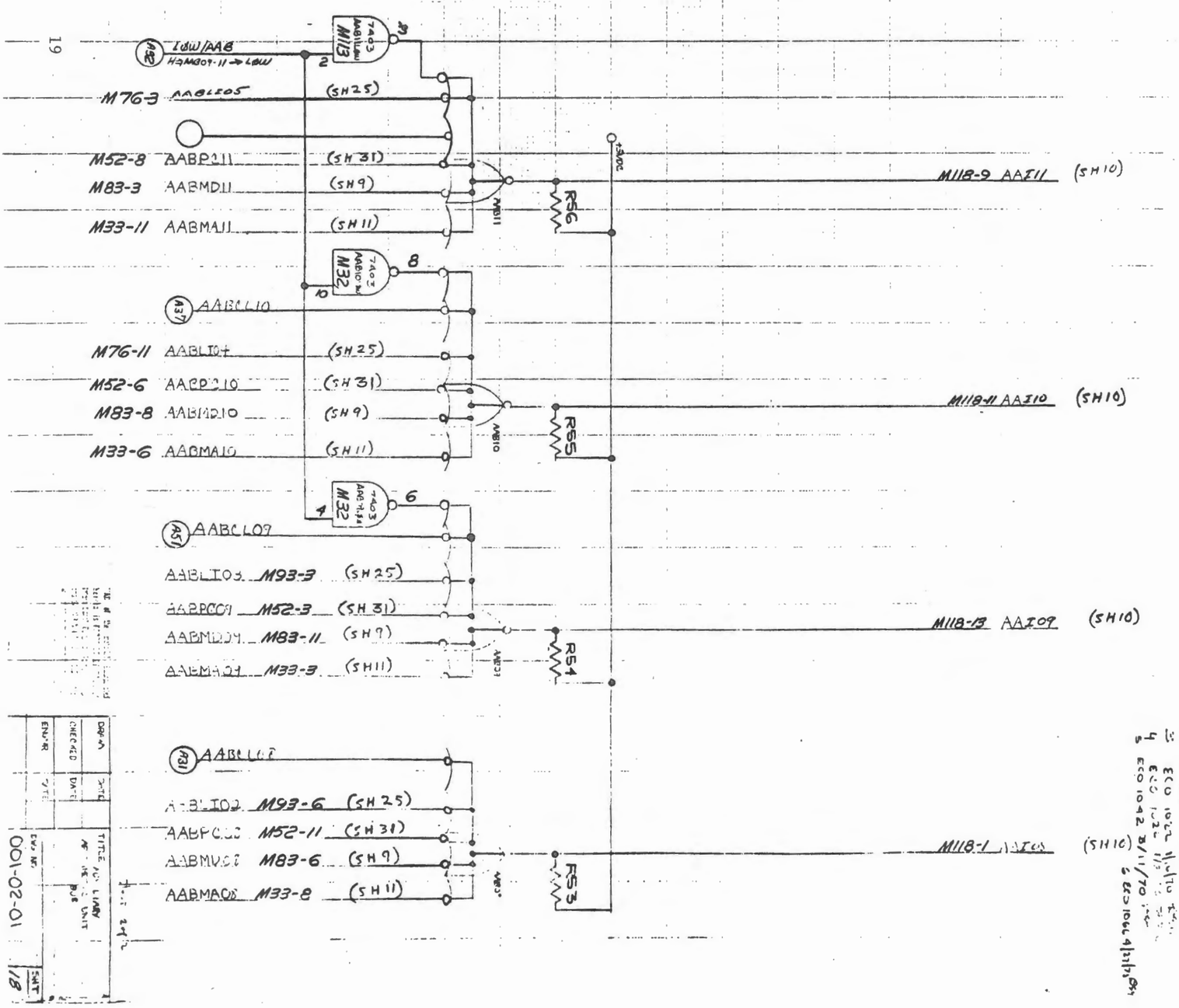
5 ECO 1042 3/11/70 [illegible]

6 ECO 1066 4/27/70 [illegible]



1 ERO 1022 1/11/70 DSM
3 ECO 1024 1/25/70 [illegible]
4 ECO 1042 3/11/70 [illegible]
5 ECO 1066 4/13/70 [illegible]
6

DRAWN
CHECKED
ENG
TITLE ARITHMETIC UNIT BUS
SIZE
DWG NO 10-02-01
SHT 17



19

001-02-01

ECO 1064 4/21/71

6 ECO 1066 4/27/70 KEV

3 [illegible]

4/ ECO 1042 3/11/70 KEV

CHANGED PER ECO #1006

M115-7 M115-6 M115-5 M115-4 M115-8 M115-12 M115-11 M115-9

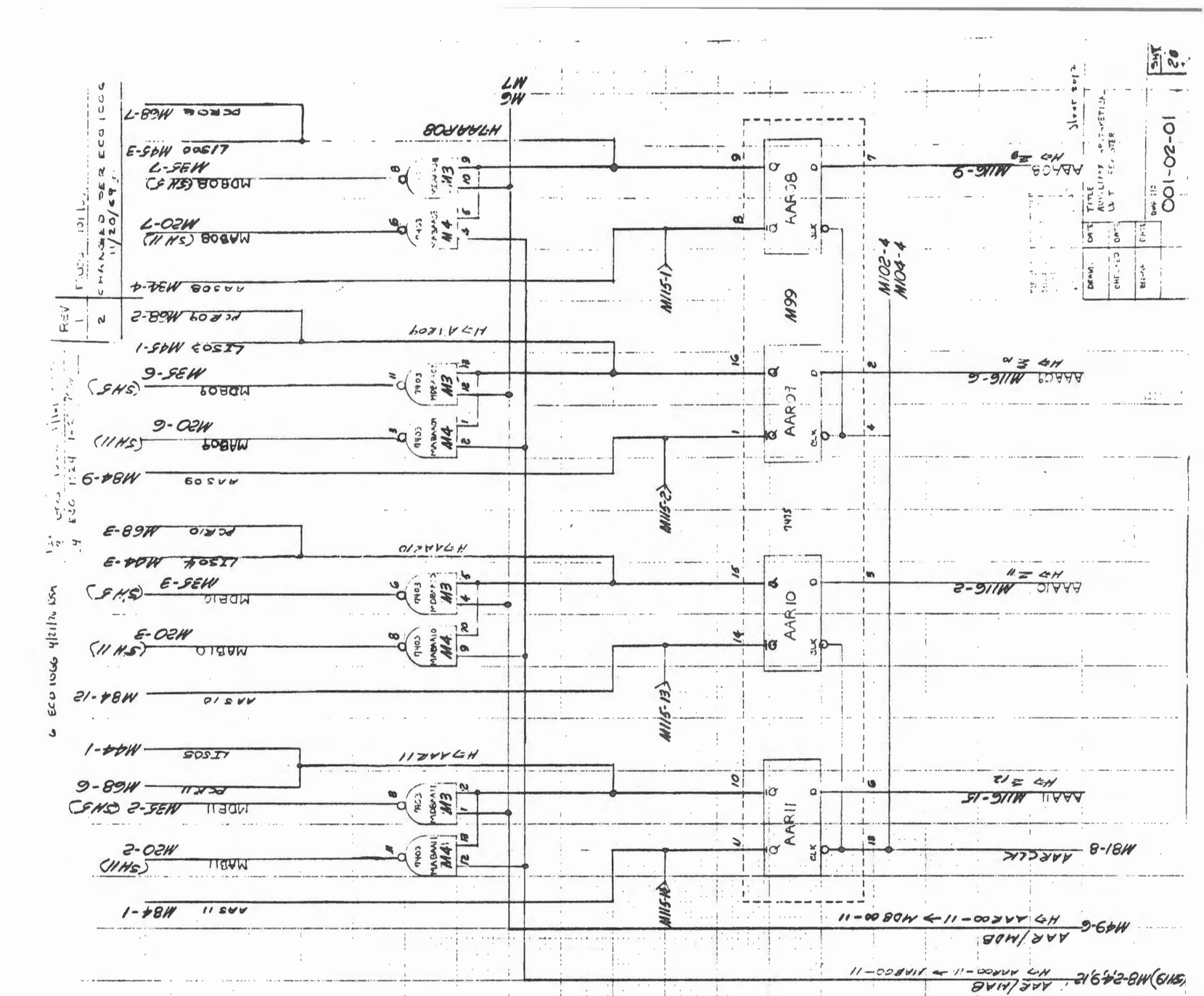
M102 M104

M99-13 (SH 20)

M4:2,19,12 AAR/MAB (SH 34) MAB00-11 → MAB03-11 MAB03-11 → MAB00-11

M19-6 AAR/LIOR

DRAWN	DATE	TITLE AUXILIARY ARITHMETIC UNIT REGISTER
CHECKED	DATE	
ENGR	DATE	DWG NO 1001-02-01 SHT 19



M102-11 AAR07 *
L⇒AARO7

M102-15 AAR06 *
L⇒AARO6

M102-16 AAR05 *
L⇒AARO5

M102-8 AAR04 *
L⇒AARO4

SH34 AAE-1 L,
L⇒(-1)

M104-11 AAR03 *
L-AARO3

AAR/AAU
H⇒ AAR00-11 → AAAB00-11

M104-14 AAR02 *
L⇒AARO2

(A15) +4/AAU
(44) from control

M104-1 AAR01 *
L⇒AARO1

(A05) +2/AAU
(42) from control

AAR00 *
M104-8 L⇒AARO0

(A17) +1/AAU
(41) from control

AAA807
H⇒ (-1) + AAR07
M117-16

AAA806
H⇒ (-1) + AAR06
M117-4

AAA805
H⇒ (-1) + AAR05
M117-7

AAA804
H⇒ (-1) + AAR04
M117-11

AAA803
H⇒ (-1) + AAR03
M120-16

±AAA802
H⇒ (-1) + AAR02 + (+4)
M120-4

AAA801
M120-7

AAA800
M120-11

M94 SH22

REV
1 FIXED
2 ECO 1062 3/11/70 MM
3 ECO 1066 4/23/70 SEN

DRAWN
CHECKED
ENGR APPR
DATE
TITLE
DWG NO 001-02-01
SHT 21

22

REV		
4 ECO 624 1/29/70 JSH	1	FILED 10-1-69
5 ECO 1042 3/11/70 JM	2	CHANGED PER ECO 9006 11/20/69 JSH
6 ECO 1066 4/27/70 JSH	3	ECO 1022 1/16/70 JSH

M116-10 — AAAB11 — M7 (-1) + AAM11

M116-4 — AAAB10 — M7 (-1) + AAA10

M116-7 — AAAB02 — M7 (-1) + AAA09

M116-11 — AAAB08 — M7 (-1) + AAM01

7400 AA011 M120 (8; 10, 9)

7400 AA910 M100 (6; 5, 4)

7400 AAD09 M100 (3; 2, 1)

7400 AAD21 M120 (N; 12, 13)

7400 AA811 M84 (8; 2, 1)

7400 AA910 M84 (4; 13, 12)

7400 AA804 M84 (8; 10, 9)

7400 AA803 M84 (6; 6, 4)

AAR11 * M99-11 L⇔AAR11

AAR10 * M99-14 L⇔AAR10

SH21 AAE-12: L⇔F-1) M101-10

AAR/AAU H⇔AAR→AAU

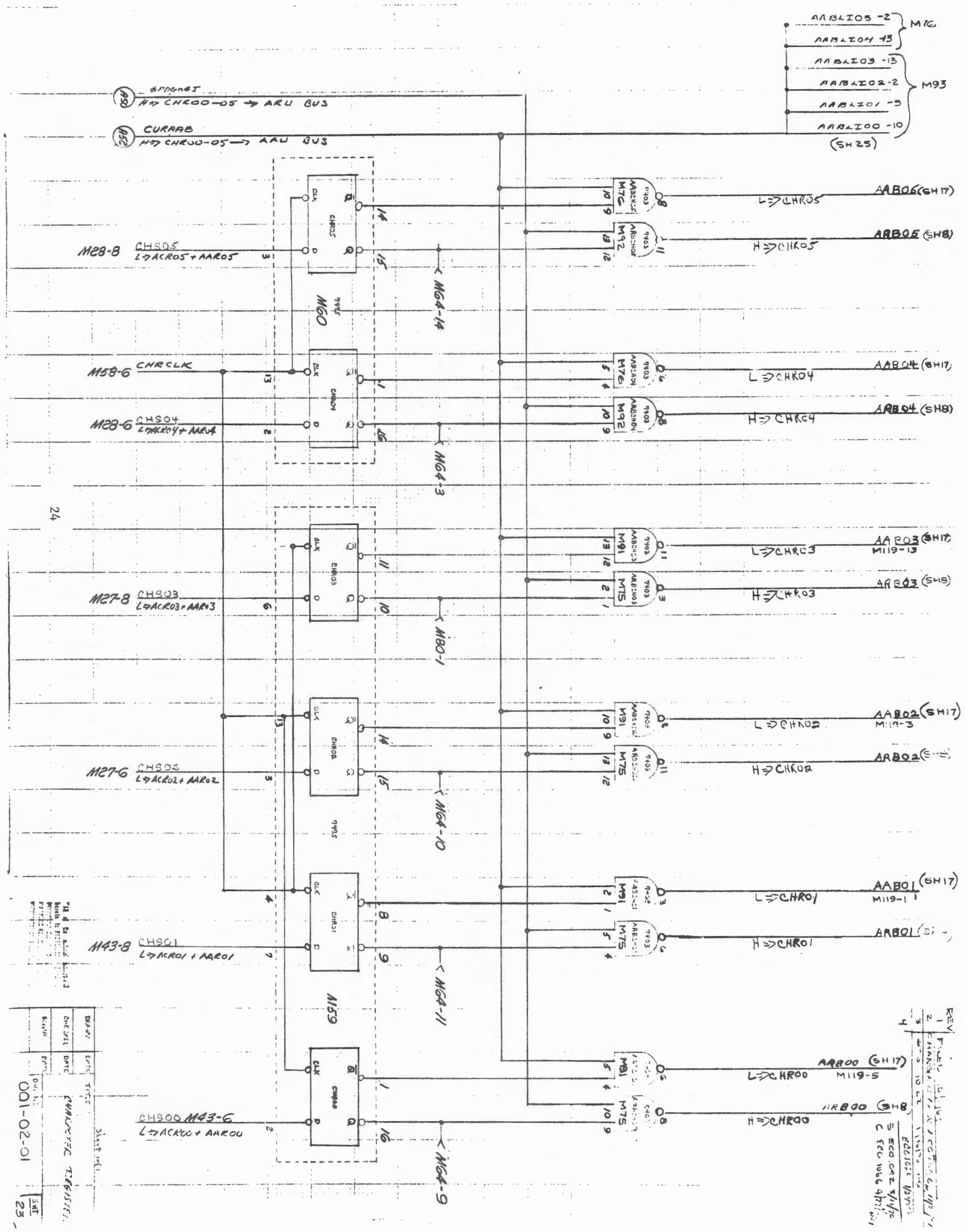
AAR09 * L⇔AAR09 M99-1

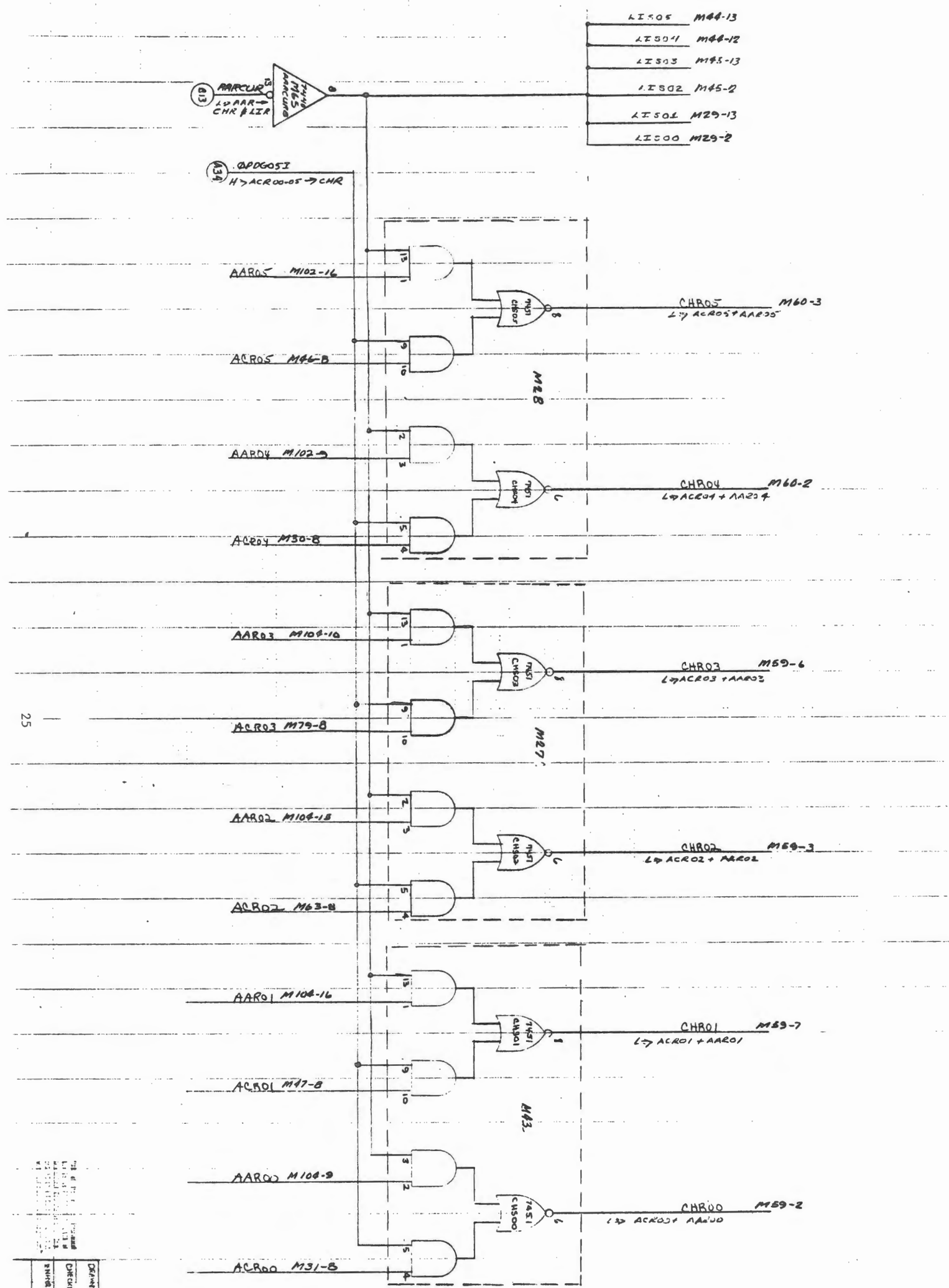
M88 (SHT 23)

AAR08 * L⇔AAR08 M99-8

Sheet 2 of 2

DRAWN	DATE	TITLE AUXILIARY ARITHMETIC UNIT OPTIONAL STEERING
CHECKED	DATE	
ENGNR	DATE	DWG NO 001-02-01 SHT 22


AARBLIO5 -2
AARBLIO4 -3
M76
AARBLIO3 -13
AARBLIO2 -2
AARBLIO1 -5
AARBLIO0 -10
M93
(SH 25)
CURAAB
H⇒CHR00-05 → AAU BUS
M28-8 CH505
L⇒ACR05 + AAR05
M58-6 CHRCLK
M28-6 CH504
L⇒ACR04 + AAR04
M27-8 CH503
L⇒ACR03 + AAR03
M27-6 CH502
L⇒ACR02 + AAR02
M43-8 CH501
L⇒ACR01 + AAR01
CH500 M43-6
L⇒ACR00 + AAR00
M60
M59
M64-14
M64-13
M80-1
M64-10
M64-11
M64-9
L⇒CHR05
H⇒CHR05
L⇒CHR04
H⇒CHR04
L⇒CHR03
H⇒CHR03
L⇒CHR02
H⇒CHR02
L⇒CHR01
H⇒CHR01
L⇒CHR00
H⇒CHR00
AARB06 (SH17)
ARB05 (SH8)
AARB04 (SH17)
ARB04 (SH8)
AARB03 (SH17)
M119-13
ARB03 (SH8)
AARB02 (SH17)
M119-3
ARB02 (SH8)
AARB01 (SH17)
M119-1
ARB01 (SH8)
AARB00 (SH17)
M119-5
ARB00 (SH8)
24
23
001-02-01



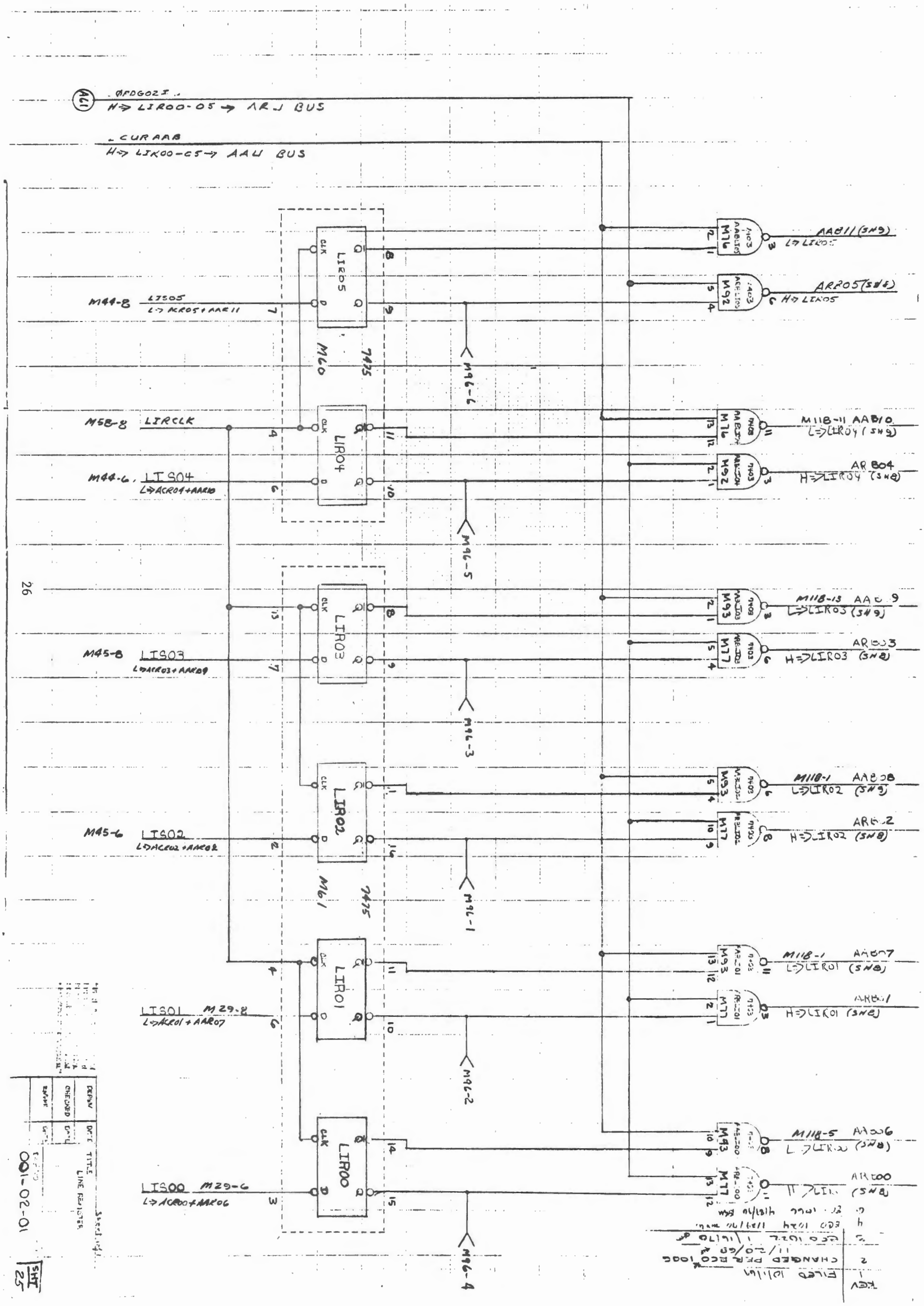
DRAWN		DATE	
CHECKED		DATE	
APPVD		DATE	

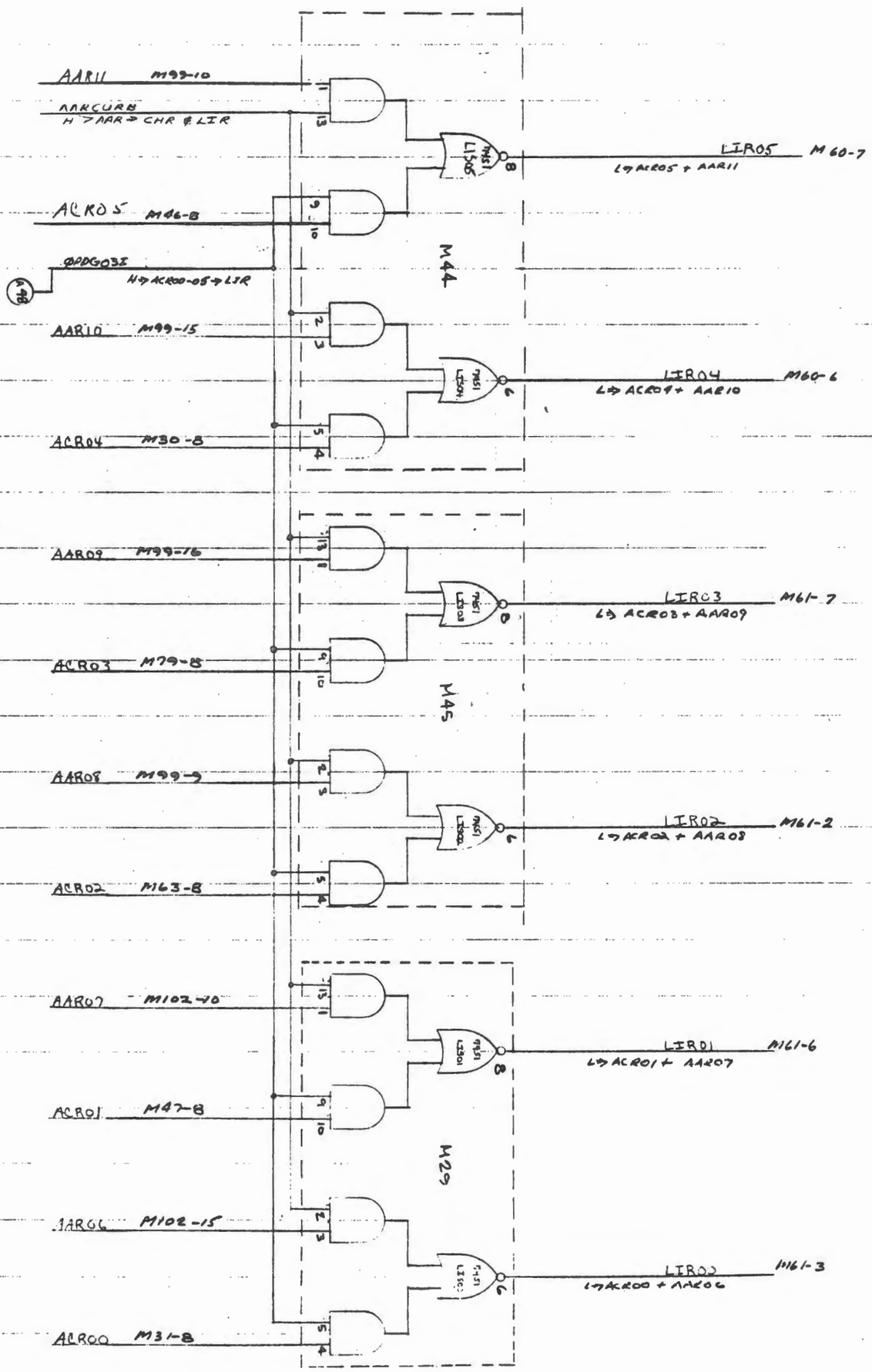
TITLE CHARACTER REG-TRK STEERING

DWG NO 001-02-01

SHT 24

1	FIRST RELEASE	
2	CHANGED FOR ECO 7006	11/26/69
3	ECO 7027	11/26/69
4	ECO 1024	11/[illegible]
5	ECO 1042	3/[illegible]
6	ECO 1066	[illegible]


ACI
.ØFDG02I.
H⇒ LIR00-05 → ARJ BUS
.CURAAB
H⇒ LIK00-C5⇒ AAU BUS
M44-8 LIS05
L⇒ ACR05+AAR11
M58-8 LIRCLK
M44-6 LIS04
L⇒ACR04+AAR10
M45-8 LIS03
L⇒ACR03+AAR09
M45-6 LIS02
L⇒ACR02+AAR08
LIS01 M29-8
L⇒ACR01+AAR07
LIS00 M29-6
L⇒ACR00+AAR06
LIR05
LIR04
LIR03
LIR02
LIR01
LIR00
M60
M61
7475
M96-7
M96-5
M96-3
M96-1
M96-2
M96-4
M76
M92
M93
M77
AAB11 (SH9)
L⇒LIR05
AR205 (SH6)
H⇒LIR05
M118-11 AAB10
L⇒LIR04 (SH9)
AR B04
H⇒LIR04 (SH8)
M118-13 AA 09
L⇒LIR03 (SH9)
AR 03
H⇒LIR03 (SH8)
M118-1 AAB08
L⇒LIR02 (SH9)
AR 02
H⇒LIR02 (SH8)
M118-1 AAB07
L⇒LIR01 (SH9)
AAR01
H⇒LIR01 (SH8)
M118-5 AA206
L⇒LIR00 (SH9)
AR 00
H⇒LIR00 (SH8)
DRAWN
CHECKED
ENGR
DATE
TITLE
LINE REGISTER
001-02-01
SHT 25
26



27

DRAWN			
CHECKED	DATE		
ENGR	DATE		

TITLE: LIR REGISTER 5 FEEDS

DWG NO: 001-02-01

SHT 26

2 CHANGED PER ECO 1C-1C54-1124/2
3 ECO 1C-1C54-1116/2
4 ECO 1C-1C54-1116/2
5 ECO 1C-1C54-1116/2

5	ECC 1042 3/11/70	
6	ECO 1066 4/27/70	

2	CHANGED PER ECO 1305	
3	ECC 1045	11/12/70
4	ECO 1121	

ACR/ARX (SH 34)
M4 ACR00-03 → ARBOX-07

M10-10 BED 11
N → ACR00-07 → MDR00-07 BUS

M10-13 BED 10
N → ACR00-07 → MDR01-15 BUS

ARB03 M195-5 ACX03 M108-13

ARB07 (SH5)

MDB03 M39-2 (SH4)

MDB11 M35-2 (SH5)

A78 M45-10 M127-10 LI503 CN503

AR902 M195-11 ACX02 M108-2

ARB06 (SH5)

MDB02 M39-3 (SH4)

MDB10 M35-3 (SH5)

A76 M45-4 M127-4 LI502 CN502

ARB01 M195-8 ACX01 M108-5

ARB05 (SH5)

MDB01 M39-6 (SH4)

MDB09 M35-6 (SH5)

A74 M124-10 M43-10 LI501 CN501

ARB00 M195-3 ACX00 M108-10

AR2C4 (SH5)

MDB00 M39-7 (SH4)

MDB08 M35-7 (SH5)

A72 M29-4 LI500 CN500 TCD11 M174-4

7403 ARBAC03 M111 · MDBAC03 M23 · MDBAC13 M19 · M15 BTB08 · 7404

7403 ARBAC02 M111 · MDBAC02 M23 · MDBAC12 M19 · M15 BTB02 · 7404

7403 ARBAC01 M111 · MDBAC01 M23 · MDBAC11 M19 · M15 BTB01 · 7404

7403 ARBAC00 M111 · MDBAC00 M23 · MDBAC10 M19 · M15 BTB00 · 7404

7472 M79 ACR03 · M63 ACR02 · M47 ACR01 · M31 ACR00

M80-9 · M80-10 · M80-8 · M80-11

M80-3 · M64-12 · M48-9 · M48-4

M94 · M94 · M94 · M15

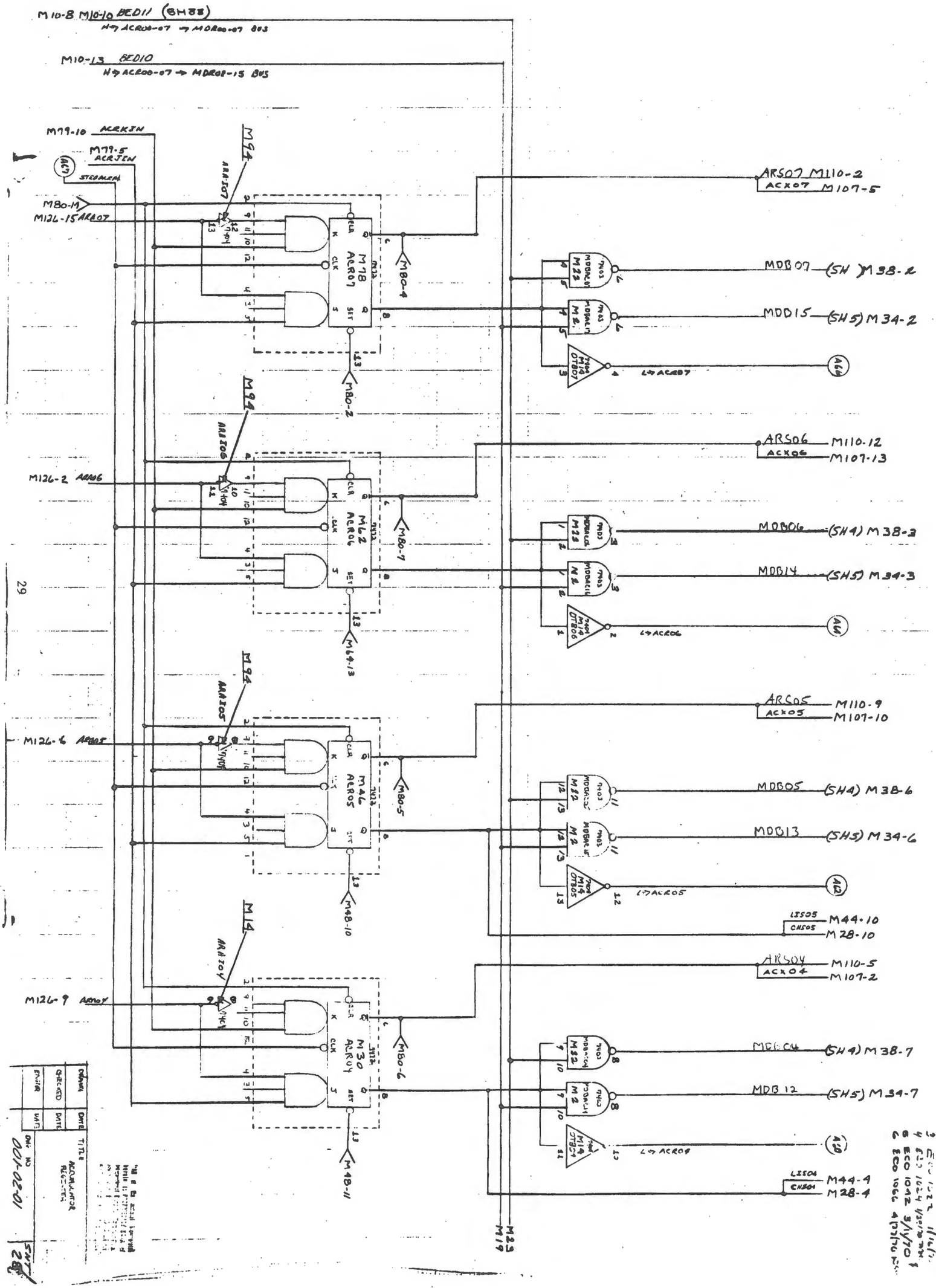
ARAI03 · ARAI02 · ARAI01 · ARAI00 · 7404

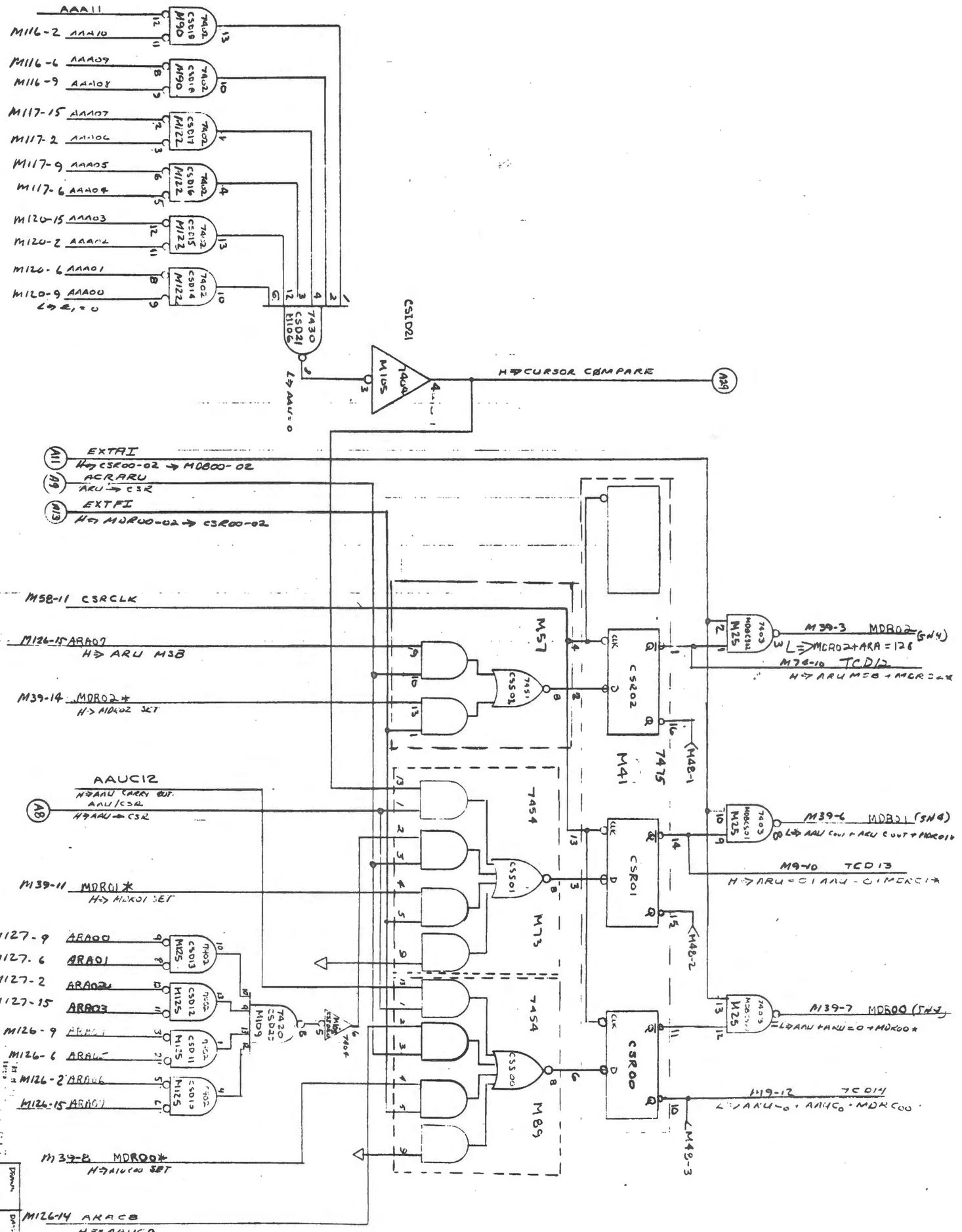
M78-10 · M78-5

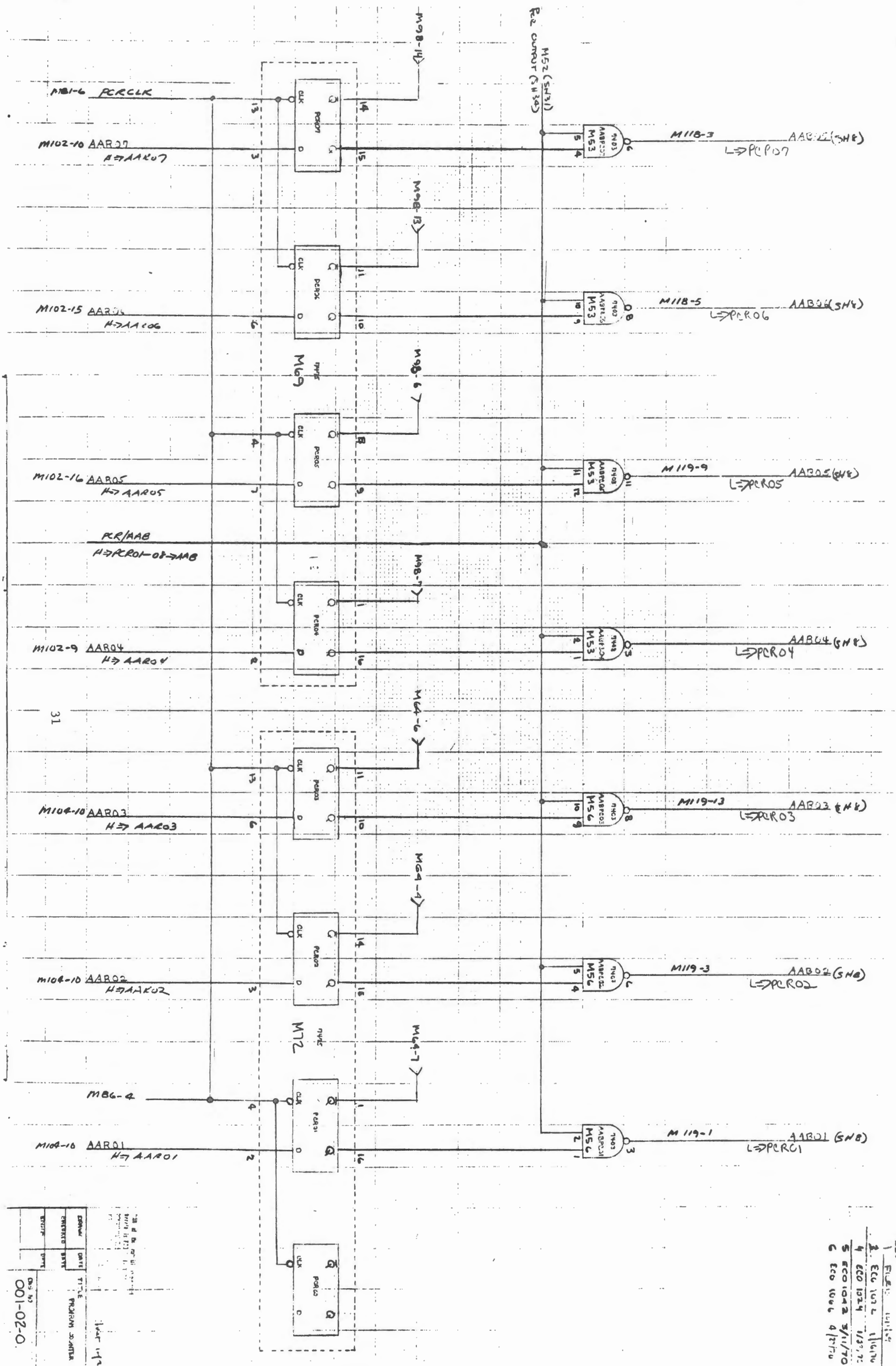
ACRKIN · ACRJIN · STRBACRL · A70

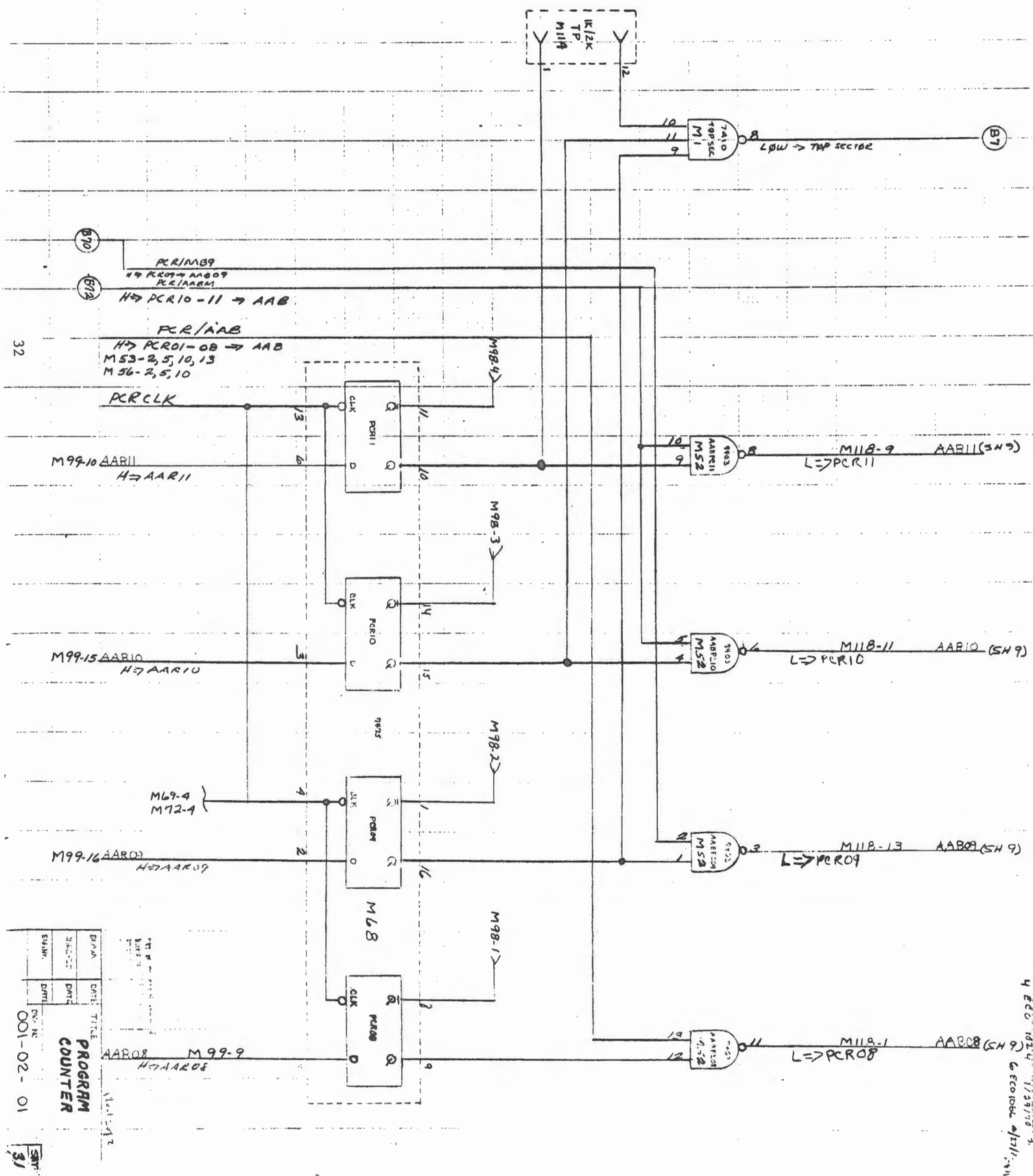
M127-15 ARA03 · M127-2 ARA02 · M127-6 ARA01 · M127-9 ARA00 · M80-13

DRAWN	DATE	TITLE ACCUMULATOR REGISTER
CHECKED	DATE	
ENGR	DATE	
		DWG NO 001-02-01 SHT 27


M10-8 M10-10 BEDII (SH38)
H⇒ACR08-07 ⇒MDR08-07 BUS
M10-13 BEDIO
H⇒ACR00-07 ⇒MDR08-15 BUS
M79-10 ACRKIN
M79-5 ACRJEN
STROBE H
M80-M
M126-15 ARA07
M94
ARA07
M78 ACR07
M80-4
M80-2
ARS07 M110-2
ACR07 M107-5
MDB07 (SH) M38-2
MDD15 (SH5) M34-2
A64
L⇒ACR07
M126-2 ARA06
M94
ARA06
M62 ACR06
M80-7
M49-13
ARS06 M110-12
ACR06 M107-13
MDB06 (SH4) M38-3
MDB14 (SH5) M34-3
A41
L⇒ACR06
M126-6 ARA05
M94
ARA05
M42 ACR05
M80-5
M48-10
ARS05 M110-9
ACR05 M107-10
MDB05 (SH4) M38-6
MDB13 (SH5) M34-6
A42
L⇒ACR05
LIS05 M44-10
CHS05 M28-10
M126-9 ARA04
M14
ARA04
M30 ACR04
M80-6
M48-11
ARS04 M110-5
ACR04 M107-2
MDB04 (SH4) M38-7
MDB 12 (SH5) M34-7
A20
L⇒ACR04
LIS04 M44-9
CHS04 M28-4
M23
M19
DRAWN
CHECKED
ENGR
MFG
DATE
TITLE
ACCUMULATOR REGISTERS
DWG NO
001-02201
SHT
28
29

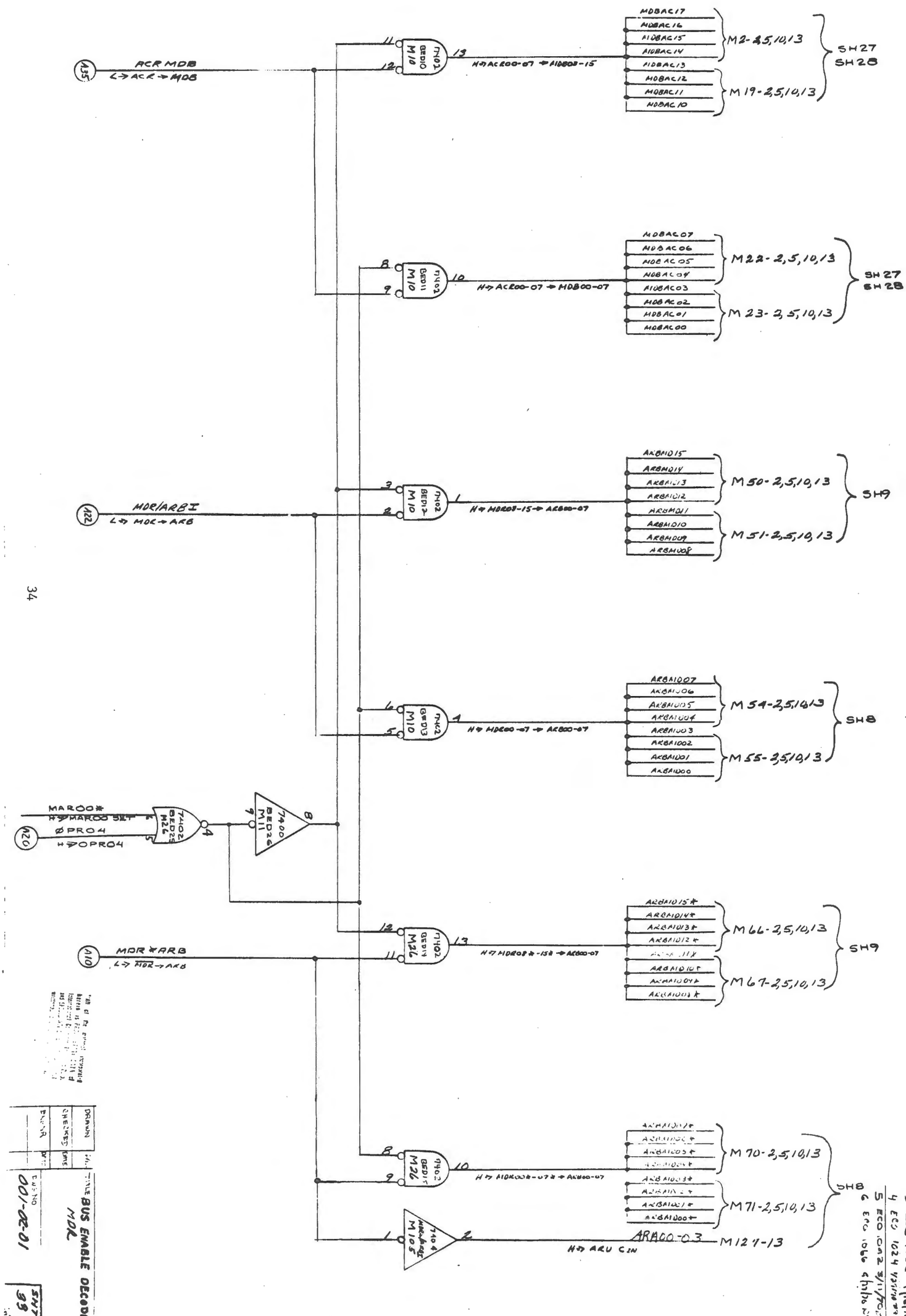

AAA11
M116-2 AAA10
M116-6 AAA09
M116-9 AAA08
M117-15 AAA07
M117-2 AAA06
M117-9 AAA05
M117-6 AAA04
M120-15 AAA03
M120-2 AAA02
M126-6 AAA01
M120-9 AAA00
L⇒ 2,=0
CSID21
L⇒ AAU=0
H⇒CURSOR COMPARE
EXTAI
H⇒ CSR00-02 → MDB00-02
ACRARU
ARU → CSR
EXTFI
H⇒ MDR00-02 → CSR00-02
M58-11 CSRCLK
M126-15 ARA07
H⇒ ARU M38
M39-14 MDR02*
H⇒ MDR02 SET
AAUC12
H⇒AAU CARRY OUT
ARU/CSR
H⇒AAU → CSR
M39-11 MDR01*
H⇒ MDR01 SET
M127-9 ARA00
M127-6 ARA01
M127-2 ARA02
M127-15 ARA03
M126-9 ARA04
M126-6 ARA05
M126-2 ARA06
M126-15 ARA07
M39-8 MDR00*
H⇒AAUC00 SET
M126-14 ARAC8
H⇒ARUC0
M57
M41
M73
M89
7475
7454
CSR02
CSR01
CSR00
M39-3 MDB02 (SN4)
L⇒MCR02+ARA=128
M74-10 TCD12
H⇒ARU M38 + MCRC=1*
M48-1
M39-6 MDB01 (SN4)
L⇒ AAU COUT + ARU COUT + MDR01*
M9-10 TCD13
H⇒ARU=C1 AAU=C1 MCRC1*
M48-2
M39-7 MDB00 (SN4)
L⇒AAU+ARU=0+MDR00*
M49-3
L⇒AAU=0 + AAUC0 + MDRC00*
M39
DRAWN
CHECKED
ENGR
DATE
TITLE
DWG NO
001-02-01
SHT
29
REVISED PER ECO 1006 1/26/76
ECO 1072 5/5/76
ECO 1034 1/5/77
ECO 1042 3/1/77
ECO 1066 4/27/77


M81-6 PCRCLK
M102-10 AAR07
A⇒AAR07
M102-15 AAR06
H⇒AAR06
M102-16 AAR05
H⇒AAR05
PCR/AAB
H⇒PCR01-08⇒AAB
M102-9 AAR04
H⇒AAR04
M104-10 AAR03
H⇒AAR03
M104-10 AAR02
H⇒AAR02
M86-Q
M104-10 AAR01
H⇒AAR01
M98-14
M98-13
M98-6
M98-7
M64-6
M64-4
M64-7
M52 (SH7)
PCR CONTROL (H⇒SH)
M118-3
AAB07 (SH8)
L⇒PCR07
M118-5
AAB06 (SH4)
L⇒PCR06
M119-9
AAB05 (SH8)
L⇒PCR05
AAB04 (SH8)
L⇒PCR04
M119-13
AAB03 (SH8)
L⇒PCR03
M119-3
AAB02 (SH8)
L⇒PCR02
M119-1
AAB01 (SH8)
L⇒PCR01
M69
M72
PCR07
PCR06
PCR05
PCR04
PCR03
PCR02
PCR01
PCR00
M53
M56
001-02-0
PROGRAM COUNTER
31

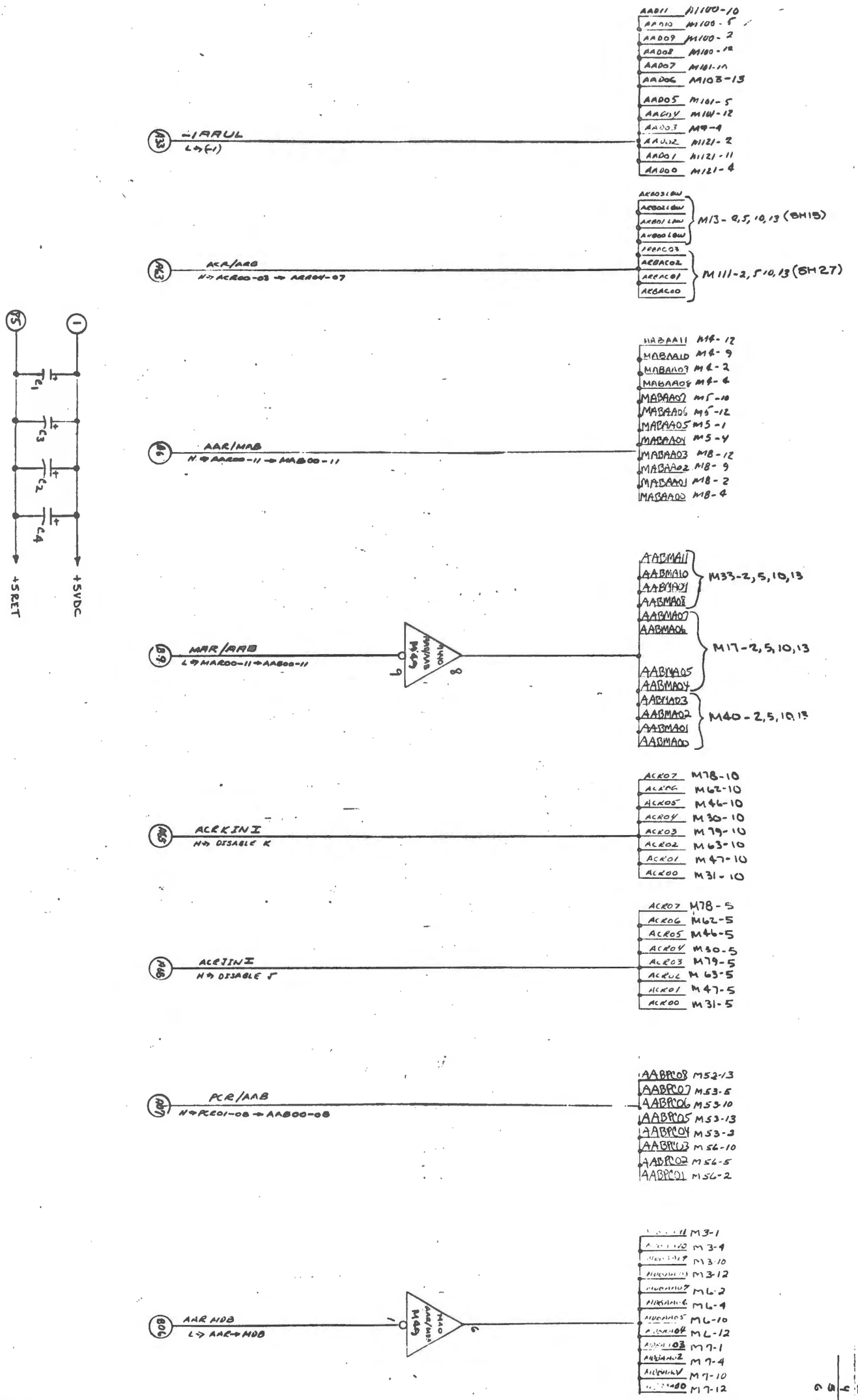

1K/2K TP M11A
74S10 TOPSEC M1
LOW => TAP SECTOR
B7
B10
B12
PCR/MB9
H=> PCR10-11 => AAB
PCR/AAB
H=> PCR01-08 => AAB
M53-2,5,10,13
M56-2,5,10
PCRCLK
M98-4
M98-3
M98-2
M98-1
M99-10 AAR11
H=>AAR11
M99-15 AAR10
H=>AAR10
M69-4
M72-4
M99-16 AAR09
H=>AAR09
M99-9 AAR08
H=>AAR08
PCR11
PCR10
PCR09
PCR08
M68
M118-9 AAR11 (SH 9)
L=>PCR11
M118-11 AAR10 (SH 9)
L=>PCR10
M118-13 AAR09 (SH 9)
L=>PCR09
M118-1 AAR08 (SH 9)
L=>PCR08
PROGRAM COUNTER
001-02-01
32
31

REV	
1	FILED 11/1/69
2	CHANGED PER ECO 1006 11/20/69
3	ECO 1022 1/16/70
4	ECO 1024 1-27-70
5	ECO 1042 3/11/70
6	ECO 1066 4/23/70

DRAWN	DATE	TITLE TEST COMPARATOR
CHECKED	DATE	
ENGR'G	DATE	DWG NO 001-02-01 SHT 37


ACR MDB
L→ACR→MDB
MDR/ARBI
L→MDR→ARB
MDR*ARB
L→MDR→ARB
MAR00*
H→MAR00 SET
Ø PRO4
H→OPRO4
H→ACR00-07→MDB00-15
H→MDR08-15→ARB00-07
H→MDR00-07→ARB00-07
H→MDR08*-15*→ARB00-07
H→MDR00*-07*→ARB00-07
H→ARU CIN
ARA00-03
M1271-13
M2-2,5,10,13
M19-2,5,10,13
M22-2,5,10,13
M23-2,5,10,13
M50-2,5,10,13
M51-2,5,10,13
M54-2,5,10,13
M55-2,5,10,13
M66-2,5,10,13
M67-2,5,10,13
M70-2,5,10,13
M71-2,5,10,13
SH27
SH28
SH9
SH8
SH6
BUS ENABLE DECODER
MDR
001-02-01
SHT 33

34

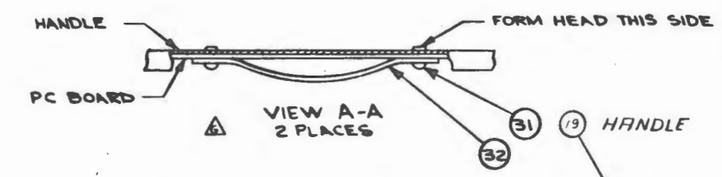


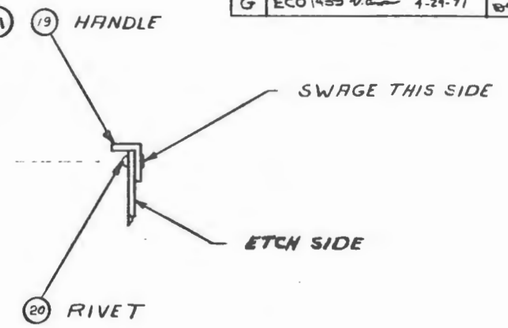
35

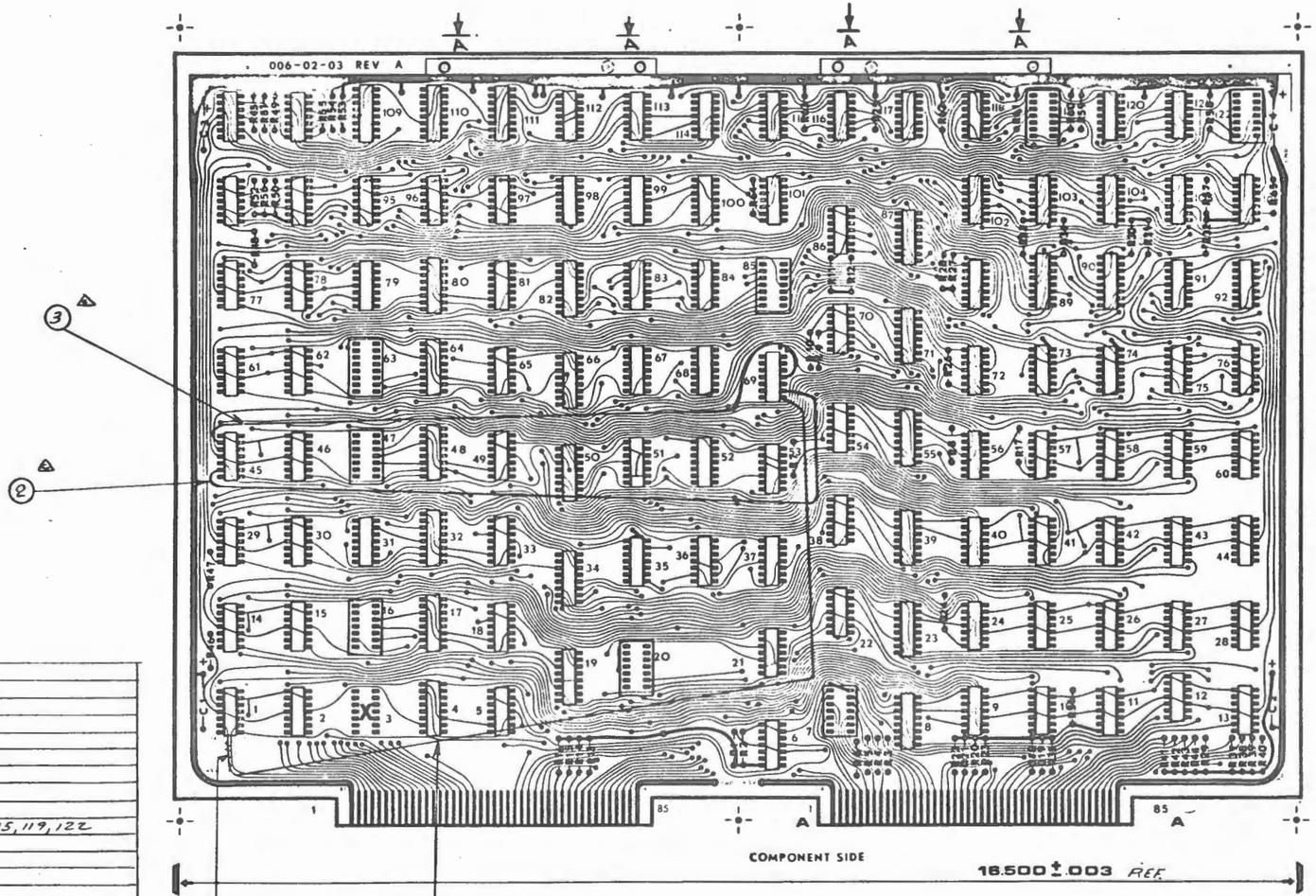
DRAWN
CHECKED
ENG APP
DATE
DME TITLE
REGISTER ENABLE DRIVERS
DWG NO
001-02-01
SHT
34

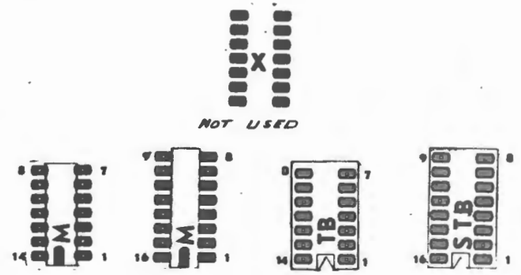
1 INITIAL RELEASE 11/1/79
2 ECO 1023 11/12/79
3 ECO 1024 12/28/79
4 ECO 1028 3/11/80
5 ECO 1061 4/17/80
6 ECO 1066 4/17/80
REV

REVISIONS			
REV	DESCRIPTION	CHK	APPD
B	RELEASED 7-13-70 RAF	[illegible]	[illegible]
C	UPDATED/ECO 1206 10/28/70	[illegible]	[illegible]
D	ECO 1239 C. Eddy 12-4-71	[illegible]	[illegible]
E	ECO 1269 1-11-71 [illegible]	[illegible]	[illegible]
F	ECO 1414 C Eddy 4-2-71	[illegible]	[illegible]
G	ECO 1439 [illegible] 4-29-71	[illegible]	[illegible]









PIN NUMBERING AND ORIENTATION

ITM	PART NUMBER	DESIGNATION
18	EC-6384-235-5	TB7, 16, 20, 47, 85, 119, 122
17	CSTEH127	C1-C4
16	EC-6382-235-5	STB 63
15	RSRC07GF821J	R1-R65
14	ICSN 7486	M 91, 92
13	ICSN 7483	M89, 90, 109, 110, 111
12	ICSN 7475	M4, 8, 17, 19, 23, 32, 34, 39 48, 54 55, 64, 66, 71, 80, 82, 87
11	ICSN 7472	M101-106, 116, 117
10	ICSN 7454	M83, 84
9	ICSN 7451	M5, 18, 33, 49, 65, 68, 81
8	ICSN 7440	M31, 35, 86
7	ICSN 7430	M58, 114
6	ICSN 7420	M100, 120
5	ICSN 7410	M53, 98, 112
4	ICSN 7404	M69, 107, 108, 115, 118, 121
3	ICSN 7403	M1, 2, 6, 9-15, 21, 22, 24-30, 38, 40, 41-44, 51, 54, 56-60, 70, 72, 77, 78, 79, 96
2	ICSN 7402	M36, 73-76, 99 113
1	ICSN 7400	M37, 67, 93-97

RUN NO.	LOCATION
1	MG9 PIN 1 TO CONN 3 PIN 3
2	M45 PIN 13 TO MG9 PIN 2
3	M45 PIN 9 TO MG9 PIN 4

USE #24 GA WIRE FOR JUMPERS.

NOTES:
1. COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUGS, ETC.
2. MAXIMUM HEIGHT OF TERMINATED COMPONENT LEADS (CLINCHED OR NON CLINCHED) TO BE .080.
3. NUMBERS REFER TO JUMPER END POINTS

PARTS LIST

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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TOLERANCES ON:
DECIMALS ± .005 (2PLCS) ± .02 (1PLCS)
ANGLES ± 2°

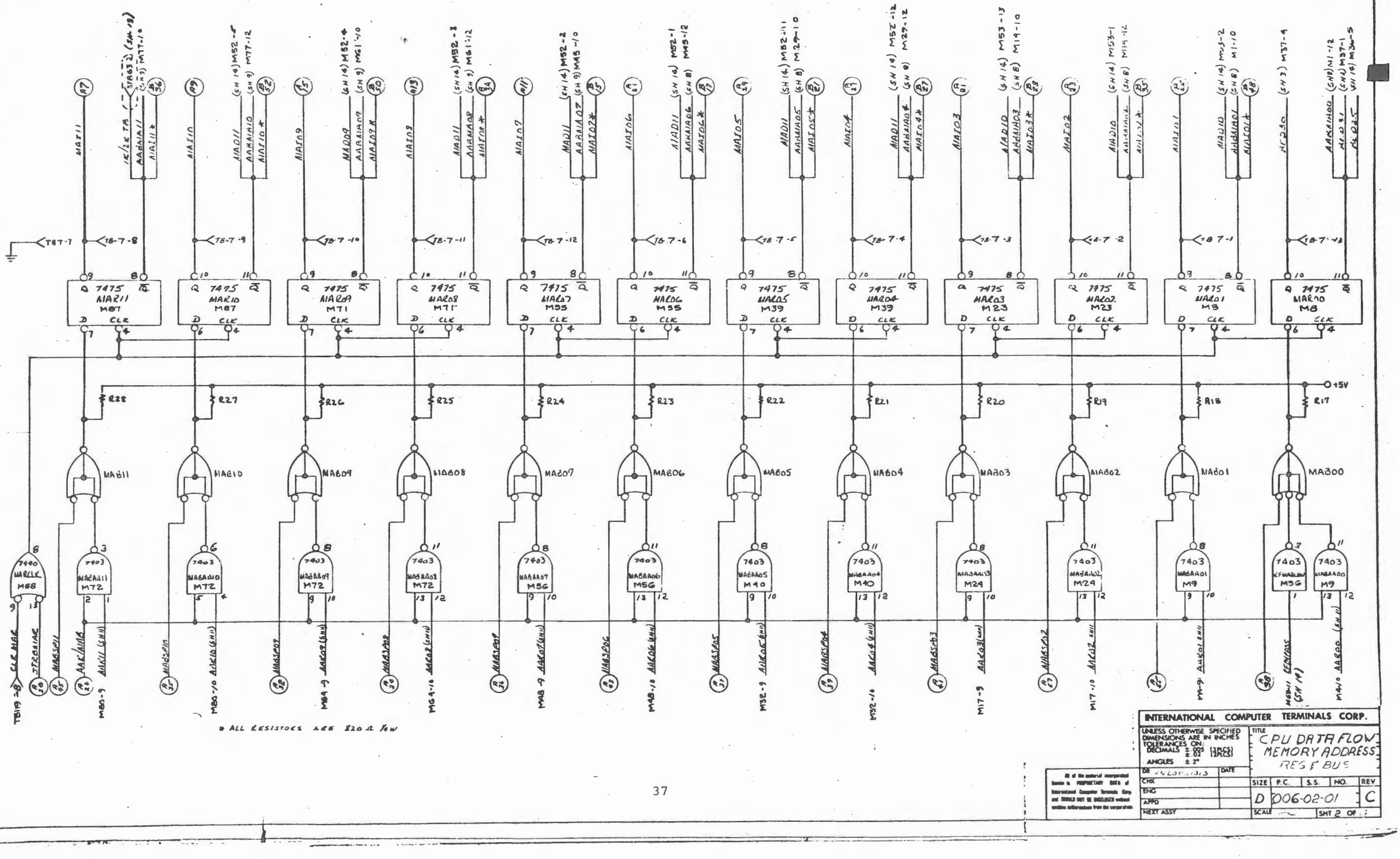
		DATE
DR	RUSS FAGNEREIO	7-15-70
CHK	[illegible]	11-4-71
ENG		
APPD		
NEXT ASSY		

TITLE: P.C. BOARD ASSY CPU DATA FLOW 701

SIZE	P.C.	S.S.	NO.	REV
D	006-02-02			G

SCALE 1:1 SHT 1 OF 2

REVISIONS		
DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (.13mm) ± .02 (.51mm) ANGLES ± 2°	TITLE: CPU DATA FLOW MEMORY ADDRESS REG & BUS				
DR	DATE	SIZE	P.C.	S.S.	NO.	REV
CHK		D	006-02-01			C
ENG		SCALE			SHT 2 OF	
APPD						
NEXT ASSY						

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REVISIONS			
REV	DESCRIPTION	CHK	APPD

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: DECIMALS ± .005 (.13mm) ± .002 (.05mm)
ANGLES ± 2°

DO 4VLaug/ars | DATE
CHK
ENG
APPD
NEXT ASSY

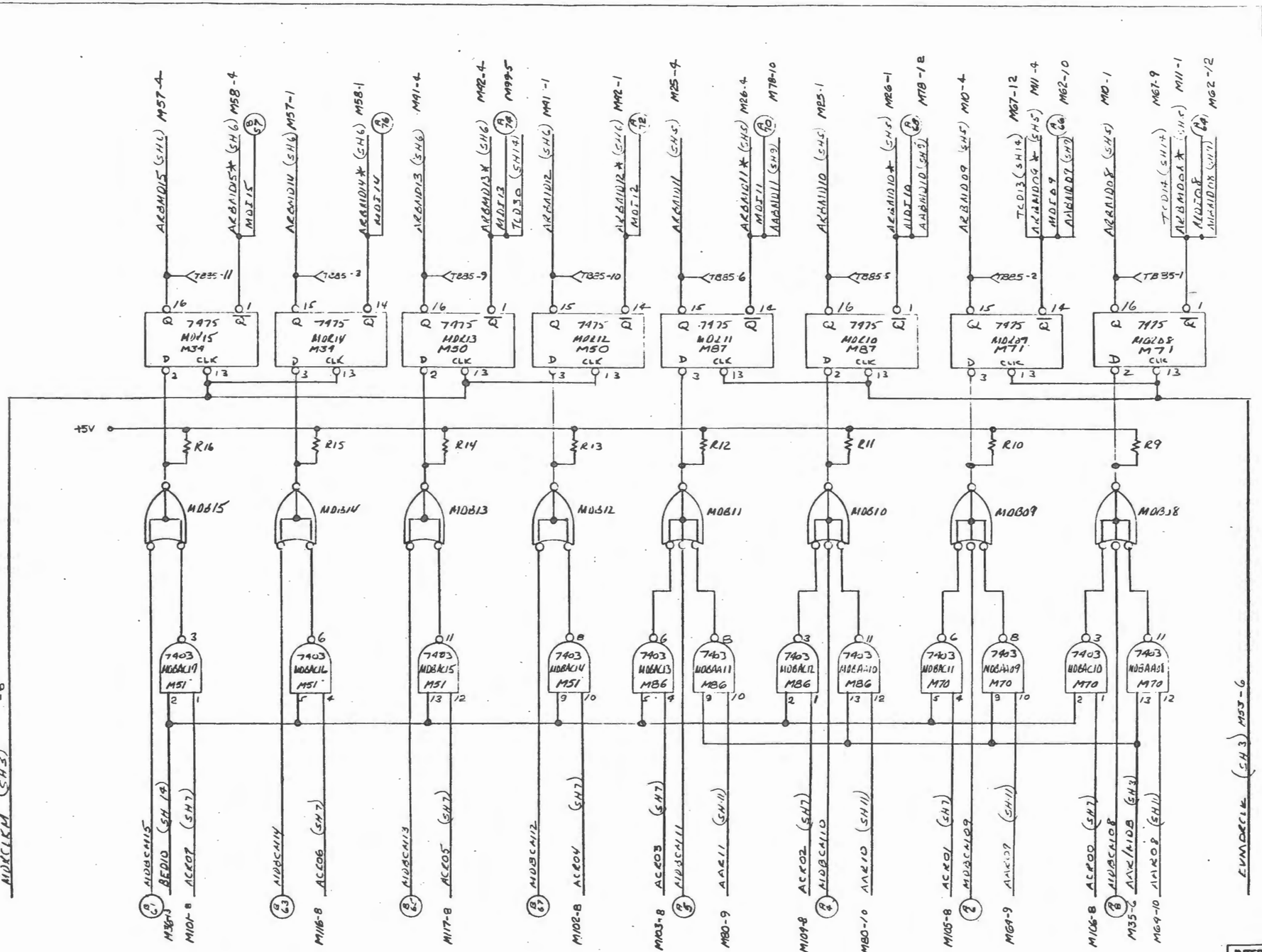
TITLE: C.P.U DATA FLOW MEMORY DATA REG & BUS

SIZE	P.C.	S.S.	NO.	REV
D	006-02-01			C

SCALE ~¼ . SHT 3 OF 16

* ALL RESISTORS ARE 820 Ω 1/4W

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (2PLCS) ± .02 (1PLCS) ANGLES ± 2°			TITLE: CPU DATA FLOW MEMORY DATA REG & BUS		
DR	DATE				
CHK		SIZE	P.C.	S.S.	NO.	REV
ENG		D	006-02-01			C
APPD					
NEXT ASSY		SCALE		SHT 4 OF	

REVISIONS			
REV	DESCRIPTION	CHK	APPD

M90-1 CCT03 ARA03 (SH7)
M90-3 CCT02 ARA02 (SH7)
M90-8 CCT01 ARA01 (SH7)
M90-10 CCT00 ARA00 (SH7)
+5V
R32 R31 R30 R29
ARB03 ARB02 ARB01 ARB00
7403 ARBCH03 M26 · 7403 ARBI003 M28 · 7403 ARBCH03 M25 · 7403 ARBLT03 M24 · 7403 ARBMH03 M26 · 7403 ARBMD03 M25 · 7403 ARBMD03 M27 · 7403 ARBMD03A M27 · 7403 ARBLT03 M28
7403 ARBLT002 M26 · 7403 ARBI002 M28 · 7403 ARBCH02 M25 · 7403 ARBLT02 M24 · 7403 ARBMH02 M26 · 7403 ARBMD02 M25 · 7403 ARBMD02 M27 · 7403 ARBMD02A M27 · 7403 ARBY002 M28
7403 ARBLT001 M11 · 7403 ARBI001 M13 · 7403 ARBCH01 M10 · 7403 ARBLT01 M9 · 7403 ARBMH01 M11 · 7403 ARBMD01 M10 · 7403 ARBMD01 M12 · 7403 ARBMD01A M12 · 7403 ARBI001 M13
7403 ARBLT000 M11 · 7403 ARBI000 M13 · 7403 ARBCH00 M10 · 7403 ARBLT00 M9 · 7403 ARBMH00 M11 · 7403 ARBMD00 M10 · 7403 ARBMD00 M12 · 7403 ARBMD00A M12 · 7403 ARBI000 M13

ACLARB (SH14) · IOAKA (SH14) · INA03 · OPBOOSI (SH14) · CHK03 (SH12) · OPBO-02I (SH14) · LTI03 (SH12) · BEDI4 (SH14) · AUX11 * (SH9) · BEDI2 (SH14) · AUX11 (SH9) · BEDI3 (SH14) · AUX10 (SH9) · BEDI5 (SH14) · AUX13* (SH9-3) · OPBO26I (SH10) · ACE03* (SH7) · INB02 · CHK02 (SH12) · LTI02 (SH12) · MUX11 * (SH9) · AUX10 (SH9) · AUX13 (SH9) · OPBO26I (SH10) · ACE02* (SH7) · INA01 · CHK01 (SH12) · LTI01 (SH12) · MUX09 * (SH9) · AUX09 (SH9) · AUX01 (SH3) · AUX01A (SH3) · ACE01* (SH7) · INB00 · CHK00 (SH12) · LTI00 (SH12) · MUX08 * (SH9) · AUX08 (SH9) · AUX00 (SH3) · AUX00A* (SH3) · ACE00* (SH7)

7406 ACL03 M91 · 7406 ACL02 M92 · 7406 ACL01 M91 · 7406 ACL00 M92

M19-9 · M66-9 · M76-1 · M87-14 · M76-13 · M87-15 · M75-1 · M23-15 · M75-12 · M23-14 · M103-6 · M19-10 · M66-10 · M87-1 · M87-16 · M23-16 · M23-1 · M104-6 · M19-15 · M50-9 · M71-14 · M71-15 · M8-15 · M8-14 · M105-6 · M19-16 · M52-10 · M71-1 · M71-16 · M8-16 · M8-1 · M106-6

R39 R38 R37

ALL RESISTORS ARE 820 Ω 1/4W

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (.13 mm)
± .01 (.25 mm)
ANGLES ± 2°

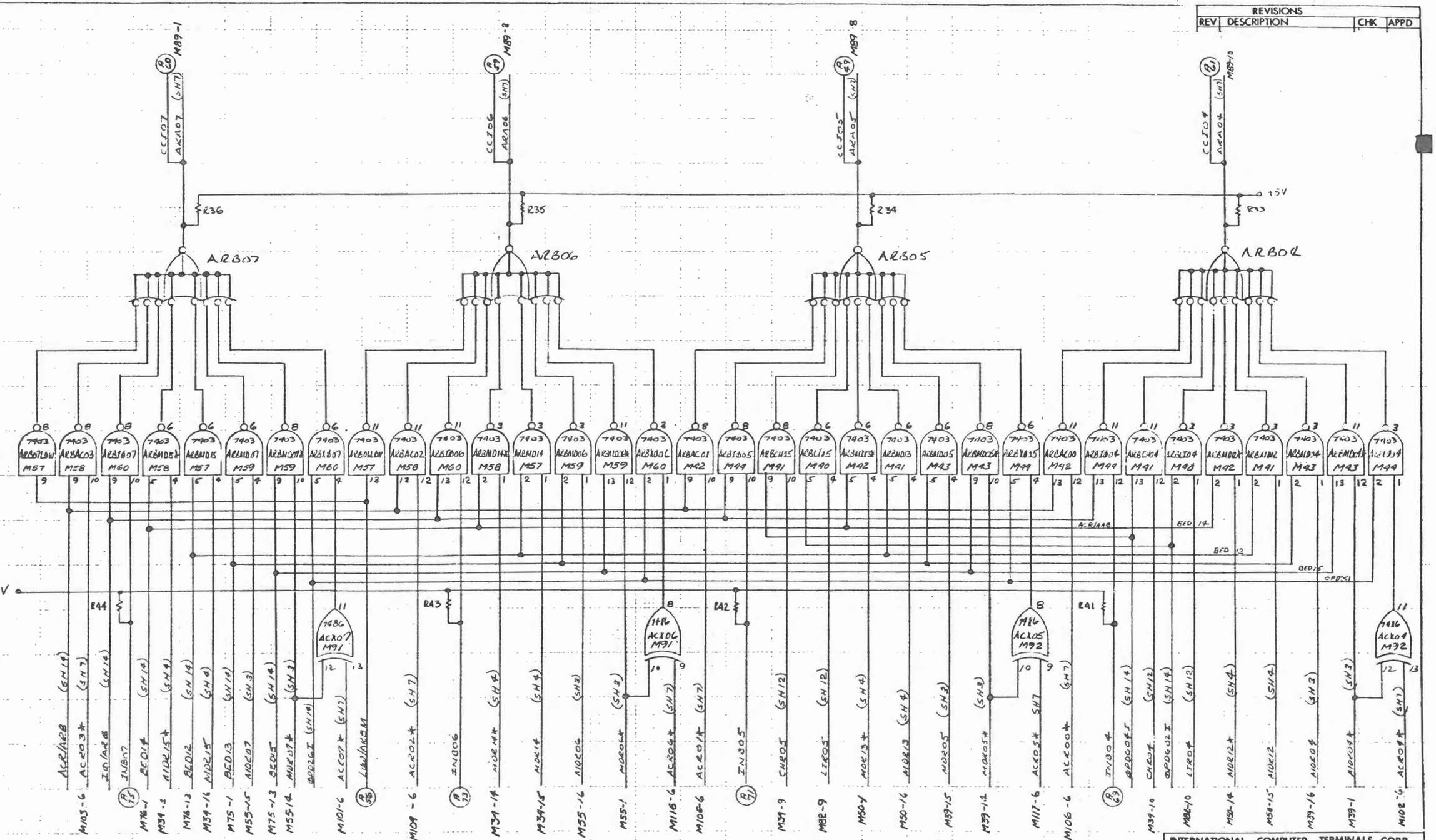
DR JNL 04/11/73 · CHK · ENG · APPD · NEXT ASSY

TITLE: CPU DATA FLOW ARITHMETIC UNIT BUS

SIZE	P.C.	S.S.	NO.	REV
D	006-02-01			C

SCALE NONE · SHT 5 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ± .03 (2PLCS) ANGLES ± 2°	TITLE: CPU DATA FLOW ARITHEMETIC UNIT BUS
DR	SIZE: D · P.C.: 006-02-01 · REV: C
CHK	
ENG	
APPD	
NEXT ASSY	SCALE: — · SHT 6 OF 14

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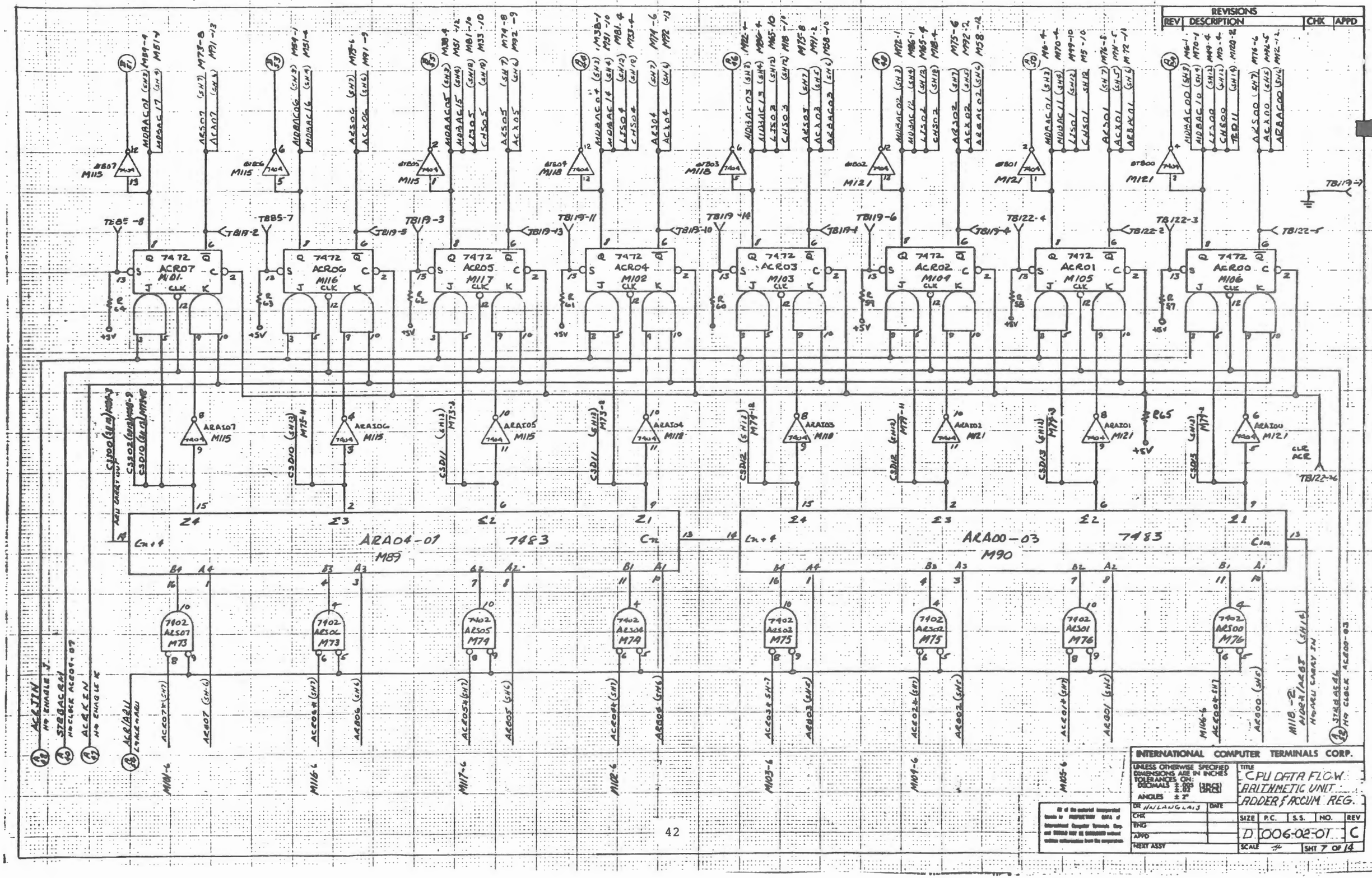
REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

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

		DATE
DR	NVLANGLAIS	
CHK		
ENG		
APPD		
NEXT ASSY		

TITLE: CPU DATA FLOW
ARITHMETIC UNIT
ADDER & ACCUM REG.

SIZE	P.C.	S.S.	NO.	REV
D	006-02-01			C

SCALE — SHT 7 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD

AAL15 (SH 10) M107-7
AAL14 (SH 10) M107-9
AAL13 (SH 10) M107-11
AAL12 (SH 10) M107-13
AAL11 (SH 10) M108-11
AAL10 (SH 10) M108-13
AAL09 (SH 10) M107-5

+5V
R47 R46 R45 R44 R43 R42 R41 R40
AABOL AABO1 AABO2 AABO3 AABO4 AABO5 AABO6 AABO7

MAR/AAR2
A 7404 MC9 3
7403 AABLOO M45 2 1
7403 AABLO1 M46 2 1
7403 AABLO2 M46 12 12
7403 AABLO3 M45 13 12
7403 AABMAO M29 5 4
7403 AABMA1 M30 5 4
7403 AABMA2 M30 9 10
7403 AABMA3 M29 9 10
7403 AABMA4 M29 2 1
7403 AABMA5 M30 2 1
7403 AABMA6 M30 12 12
7403 AABMA7 M29 13 12
7403 AABMBO M14 5 4
7403 AABMB1 M15 5 4
7403 AABMB2 M15 9 10
7403 AABMB3 M14 9 10
7403 AABMCO M14 2 1
7403 AABMC1 M15 2 1
7403 AABMC2 M15 12 12
7403 AABMC3 M14 13 12
7403 AABMDO M1 5 4
7403 AABMD1 M2 5 4
7403 AABMD2 M2 9 10
7403 AABMD3 M1 9 10
7403 AABMEO M1 2 1
7403 AABME1 M2 13 12
7403 AABMEA M1 13 12

CUR/AAB
PCR/AAB
MDR/AAB
MAR/AAB

(B 5) CUBAAB
(B 11) RESAAB
MAR/AAR1
MAR/AAR1T
MAR/AAR2

M20-11 LTR00 * (SH12)
M44-11 PKR06 (SH11)
(B 14) AAKCO6
M55-1 AIOKO6* (SH2)
M65-11 AIMCO6* (SH2)
M34-8 CHR05* (SH12)
M32-15 PKR05 (SH11)
(B 2A) AAKC05
M39-14 AIOK05* (SH3)
M39-8 AIAK05* (SH2)
M39-11 CHR04* (SH12)
M32-16 PKR04 (SH11)
(B 12) AAKC04
M39-1 AIOK04* (SH2)
M39-11 AIAK04* (SH2)
M9-8 CHR03* (SH12)
M17-15 PKR03 (SH11)
(B 10) AAKC03
M25-14 AIOK03* (SH2)
M21-8 AIAK03* (SH2)
M19-11 CHR02* (SH12)
M17-16 PKR02 (SH11)
(B 8) AAKC02
M23-1 AIOK02* (SH2)
M23-11 AIAK02* (SH2)
M19-14 CHR01* (SH12)
M4-15 PKR01 (SH11)
(B 6) AAKC01
M18-14 AIOK01* (SH2)
M6-6 AIAK01* (SH2)
(B 4) AAKC00
MAI CHR00* (SH12)
M8-1 AIOK00* (SH3)
M8-11 AIAK00* (SH2)

* ALL RESISTORS ARE 510Ω 1/4W

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3PLCS) ± .03 (2PLCS)
ANGLES ± 2°

DR DATE
CHK
ENG
APPD
NEXT ASSY

TITLE: CPU DATA FLOW AUXILIARY ARITH UNIT 2&6

SIZE D | PC | SS | NO 006-02-01 | REV C
SCALE | SHT 8 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD

AAB11 AAB10 AAB09 AAB08 AAB07

+5V

R56 R55 R54 R53 R52

7403 M79 M77 M78 M78 M77 — M79 M77 M78 M78 M77 — M2 M61 M62 M62 M61 — M61 M62 M62 M61 — M45 M46 M46 M46 M45

CURAAB

MDR/AABA

MAR/AAB4

MDR/AAB8

(1) LOW/AAB (13)
CUR AA13 (SH8)
(8) PCR/AA8M (11)
(9) MDR/AA8M (7)
MAR-9 MAR/AAB2 (SH8) (22)
MB2-8 LTE05* (SH12)
MB2-5 PCR11 (SH11)
MB7-14 MDR11* (SH4)
MB7-8 MAR11* (SH2)
(8) AA8CLK0 (8)
MB2-11 LTE04* (SH12)
MB1-6 PCR10 (SH11)
MB7-1 MD210* (SH6)
MB7-11 MAR10* (SH2)
(8) AA8CLK8 (12)
M66-8 LTE03* (SH12)
(8) PCR/AA8B (43)
M68-15 PCR08 (SH11)
M7-14 MD208* (SH4)
M11-8 MAR09* (SH2)
M66-11 LTE02* (SH12)
M68-16 PCR08 (SH11)
(8) AA8CLK8 (16)
M11-1 MD208* (SH4)
M11-11 MAR08* (SH2)
M66-8 LTE01* (SH12)
M68-15 PCR07 (SH11)
(8) AA8CLK7 (20)
M55-14 MAR07* (SH3)
M55-8 MAR07* (SH2)
(8) MDR/AA8 (5)
PCR/AA8 (SH8)

ALL RESISTORS ARE 510Ω ¼W

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (.13mm) ± .02 (.25mm)
ANGLES ± 2°

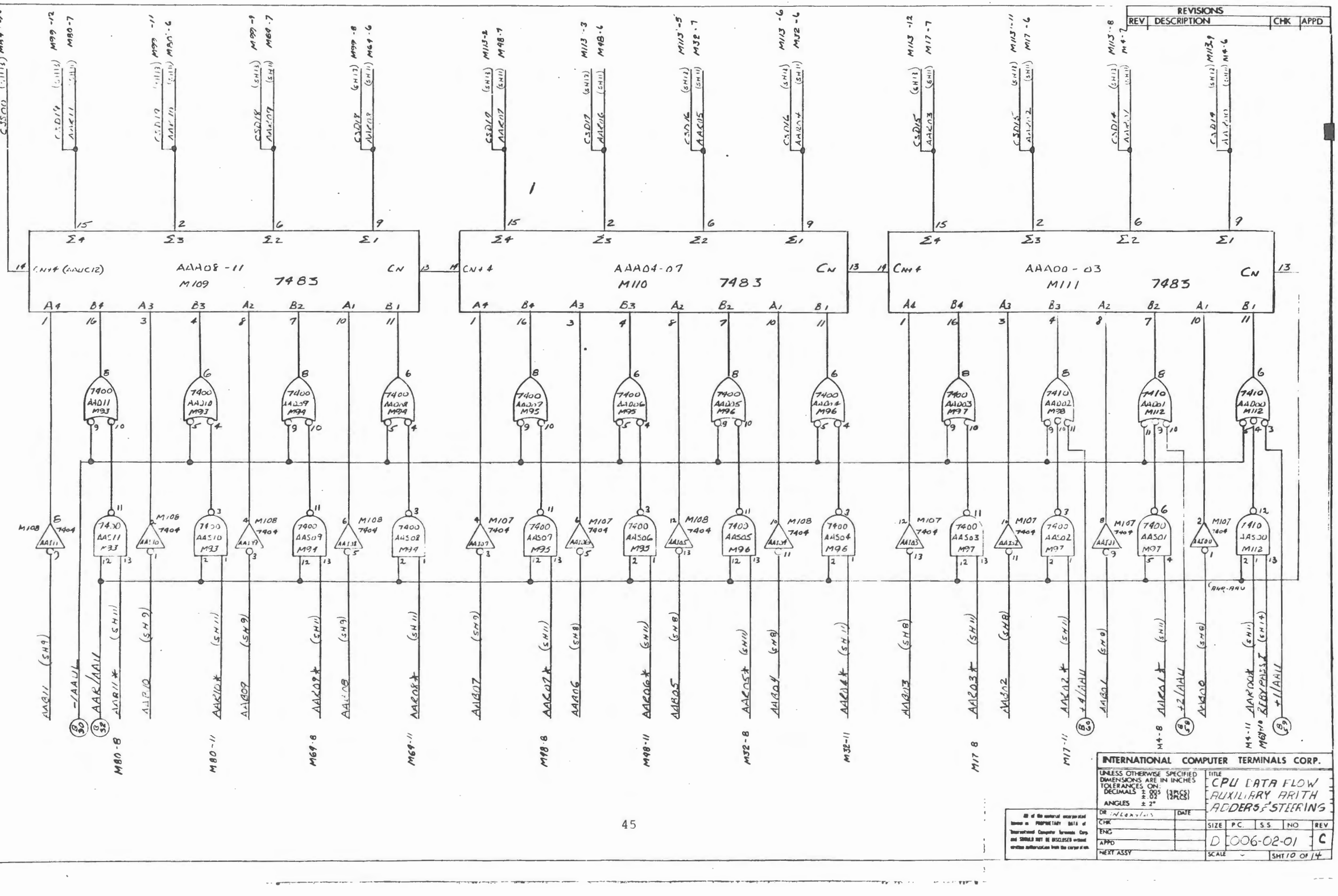
DR JNL 4/4/81 3
CHK
ENG
APPD
NEXT ASSY

TITLE: CPU DATA FLOW AUXILIARY ARITH UNIT BUS

SIZE	P.C.	S.S.	NO.	REV
D	006-02-01			C

SCALE ½ SHT 9 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

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

DR	DATE	
CHK		
ENG		
APPD		
NEXT ASSY		

TITLE: CPU DATA FLOW AUXILIARY ARITH ADDERS & STEERING

SIZE	P.C.	S.S.	NO	REV
D	006-02-01			C

SCALE – SHT 10 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: DECIMALS ± .005 (1PC5) ± .01 (2PC5) ANGLES ± 2°

DR NJ Lang 11/3/15 DATE
CHK
ENG
APPD
NEXT ASSY

TITLE: CPU DATA FLOW AUX ARITH & PROGRAM CTR

SIZE	P.C.	S.S.	NO.	REV
D	006-02-01			C

SCALE — SHT 11 OF 17

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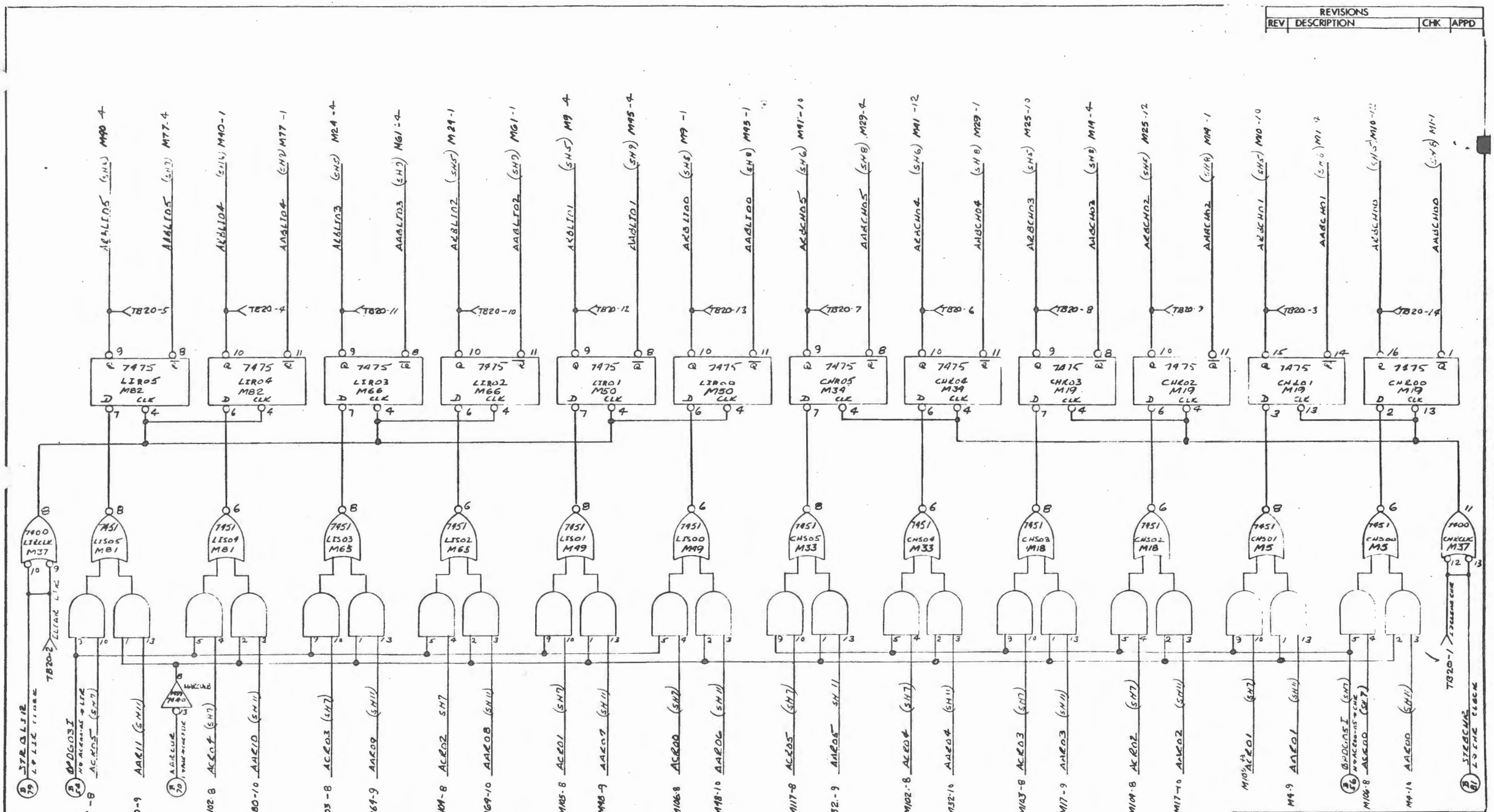
REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

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

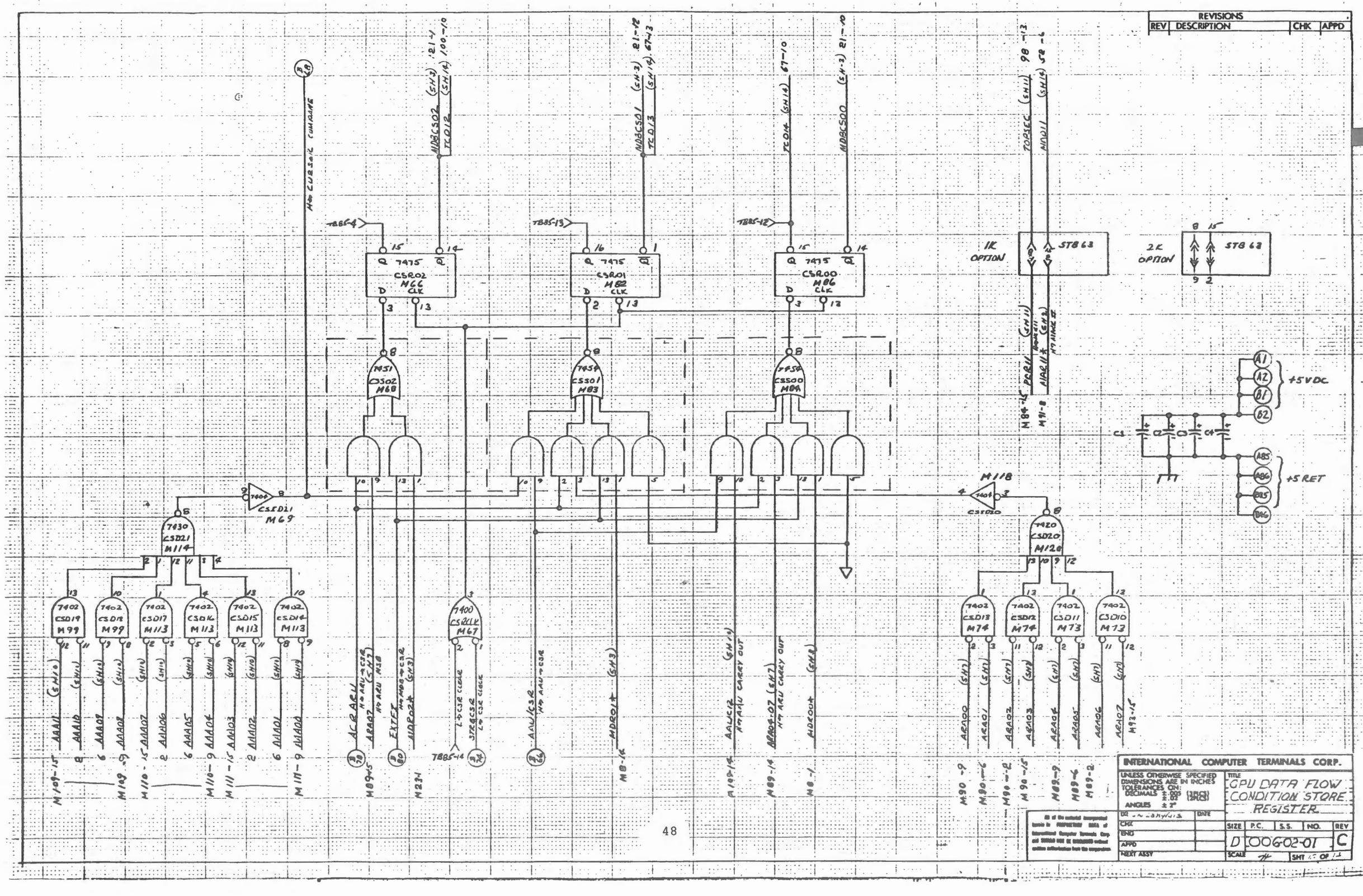
DR W.J. SMITH 5/3/73
CHK
ENG
APPD
NEXT ASSY

TITLE: CPU DATA FLOW CHARACTER & LINE REGISTER

SIZE	P.C.	S.S.	NO.	REV
D	103-02-01			C

SCALE — SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD



REVISIONS			
REV	DESCRIPTION	CHK	APPD

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (.XXX) ± .02 (.XX)
ANGLES ± 2°

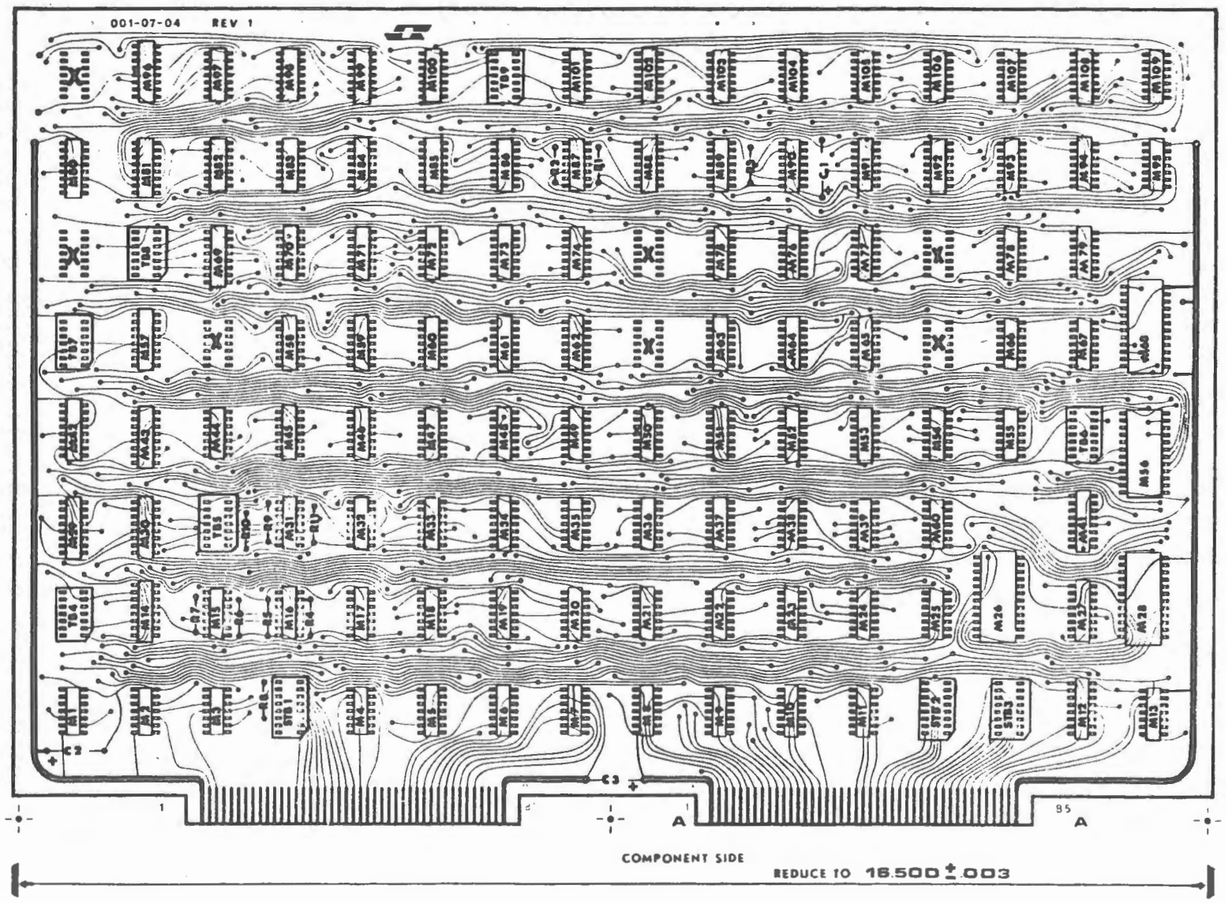
TITLE: CPU DATA FLOW BUS ENABLE DECODER & SPECIAL DECODERS

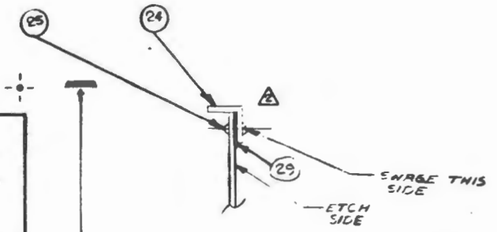
	DR	DATE
	CHK	
	ENG	
	APPD	
	NEXT ASSY	

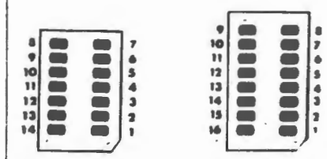
SIZE	P.C.	S.S.	NO	REV
D	1006-02-01			C

SCALE — SHT 14 OF 14

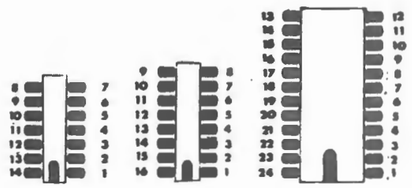
REVISIONS			
REV	DESCRIPTION	CHK	APPD
1	TO FILE 2/26/70		
0	UPDATED/ECL 1058 7/15/70	MH	JL







PIN NUMBERING AND ORIENTATION



PIN NUMBERING AND ORIENTATION

INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (MACH) ± .03 (SHEET) ANGLES ± 2°		TITLE CPU CONTROL COMP. ASSY. + HOLE SIZES			
DR	DATE 7/15/70	SIZE	P.C.	S.S.	NO.	REV
CHK		D	001-07-02			B
ENG		SCALE		SHT	OF	
APPD						
NEXT ASSY						

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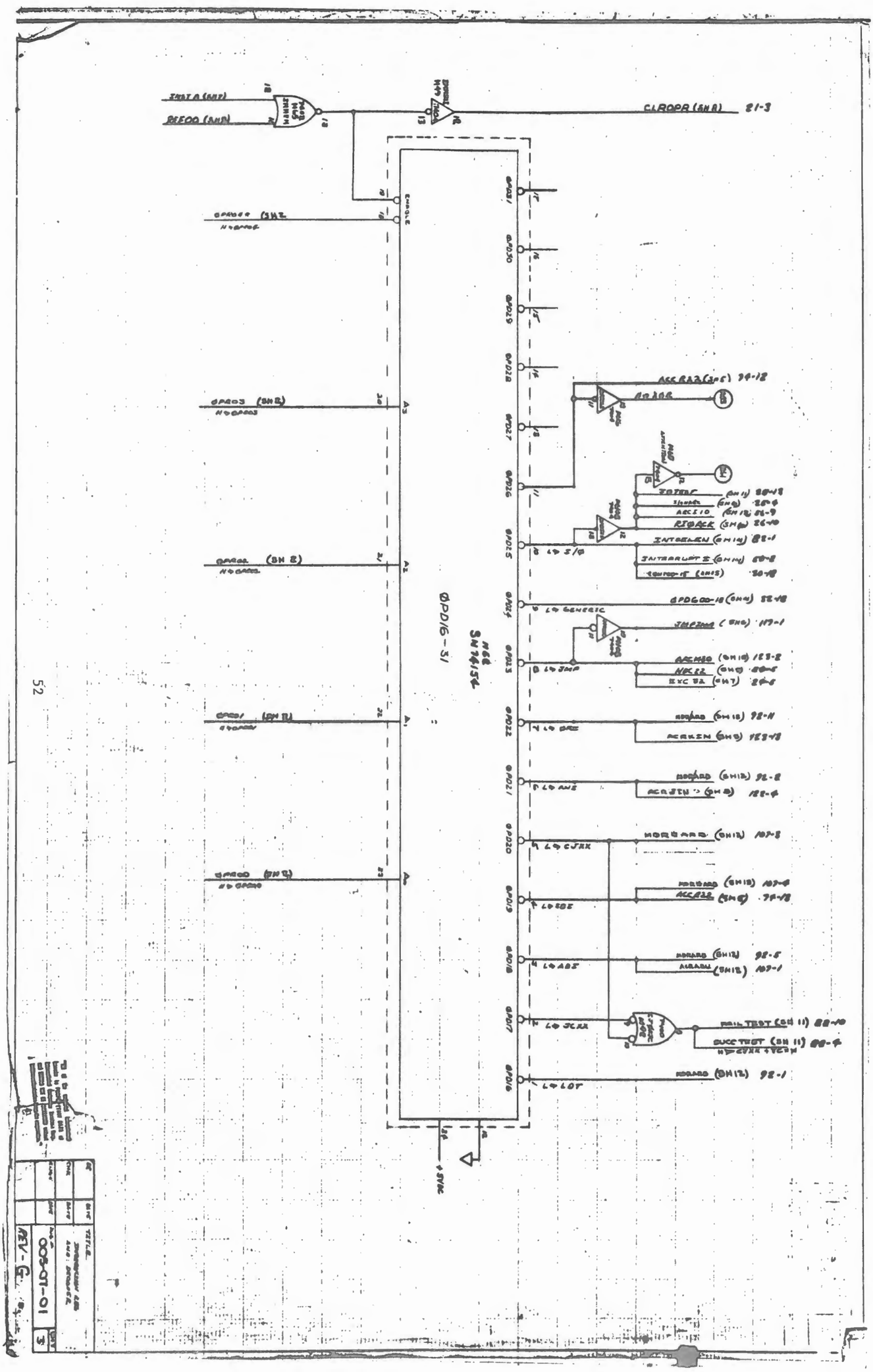
SN74154

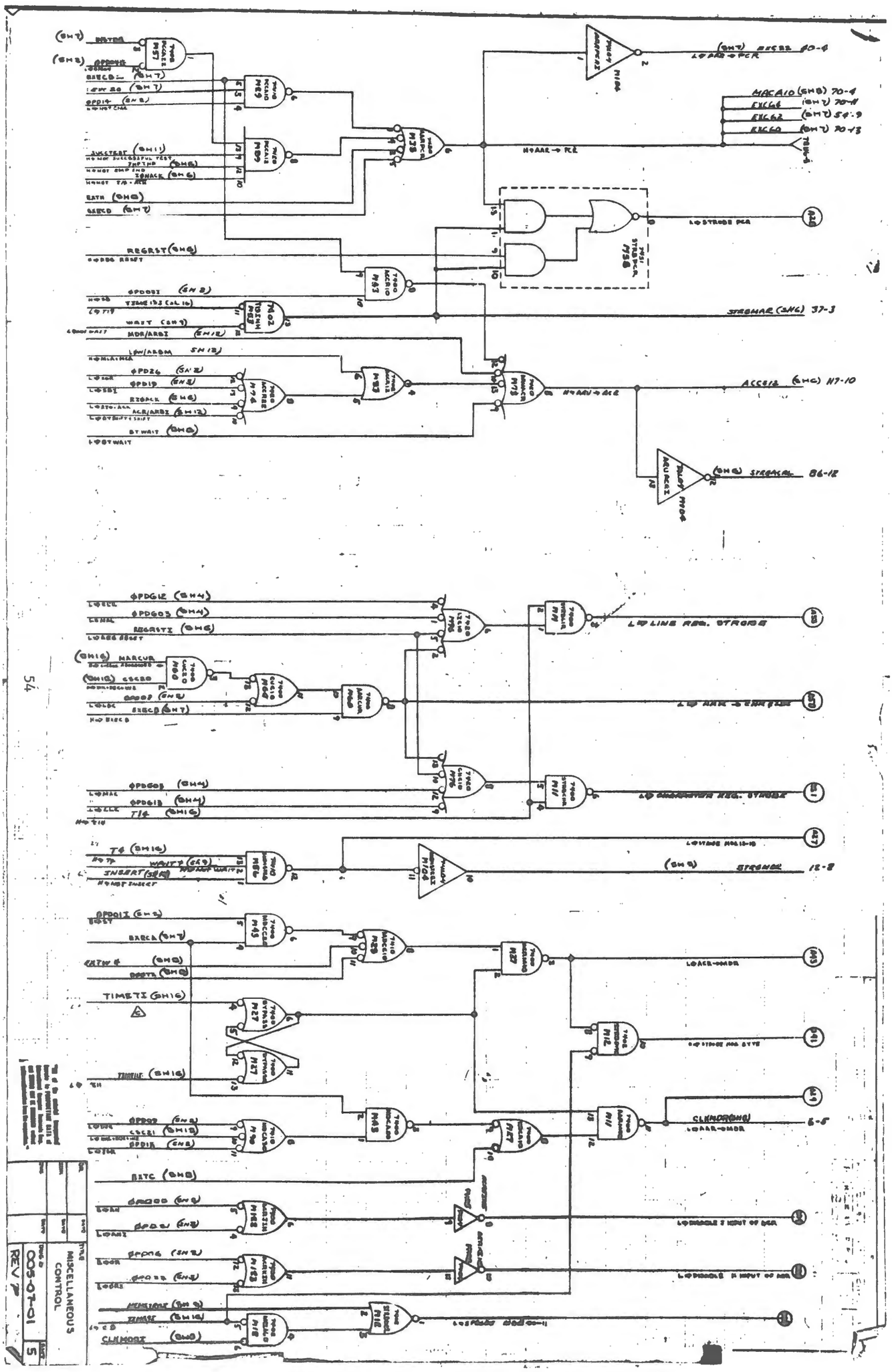
$PD00-15

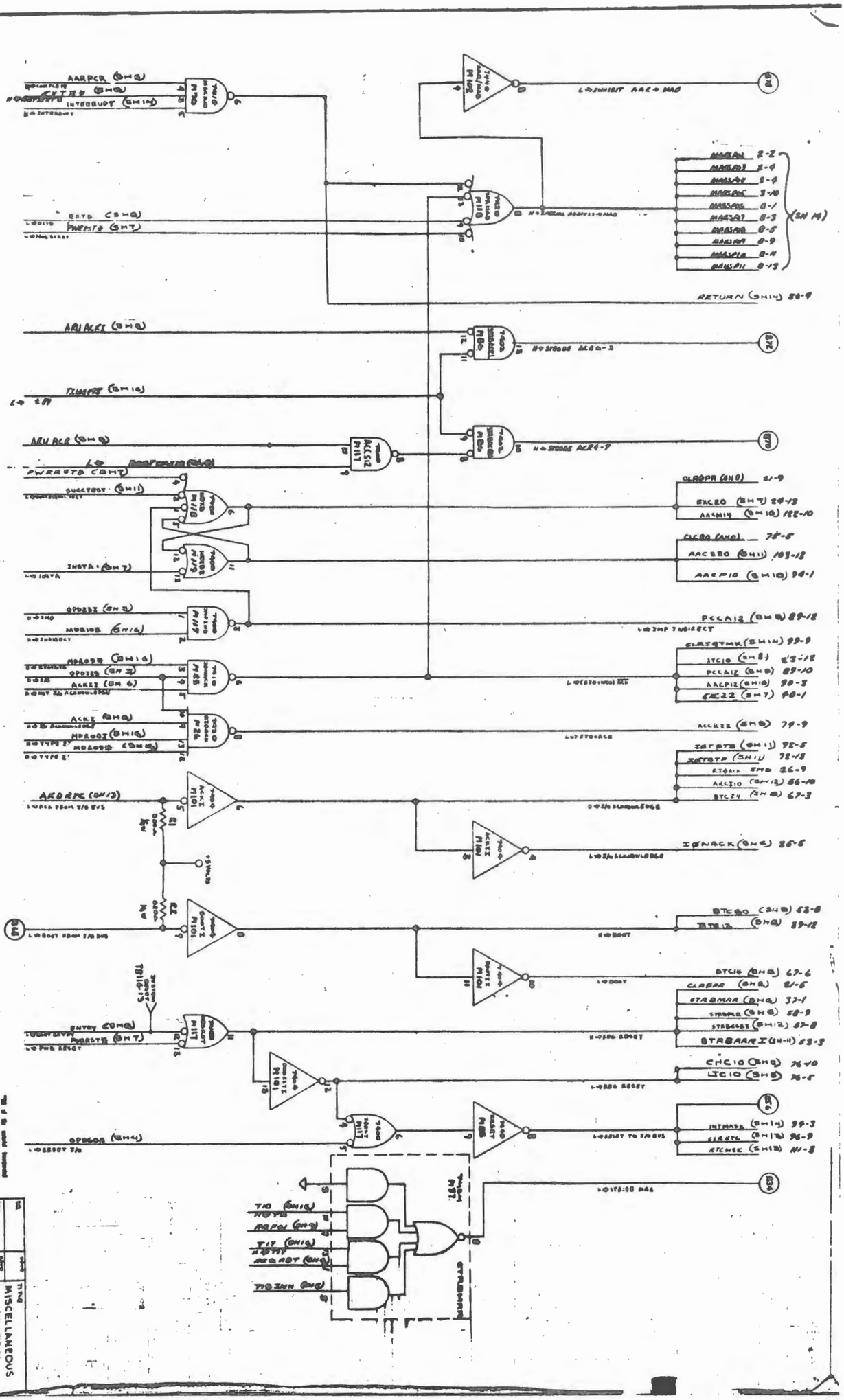
M78

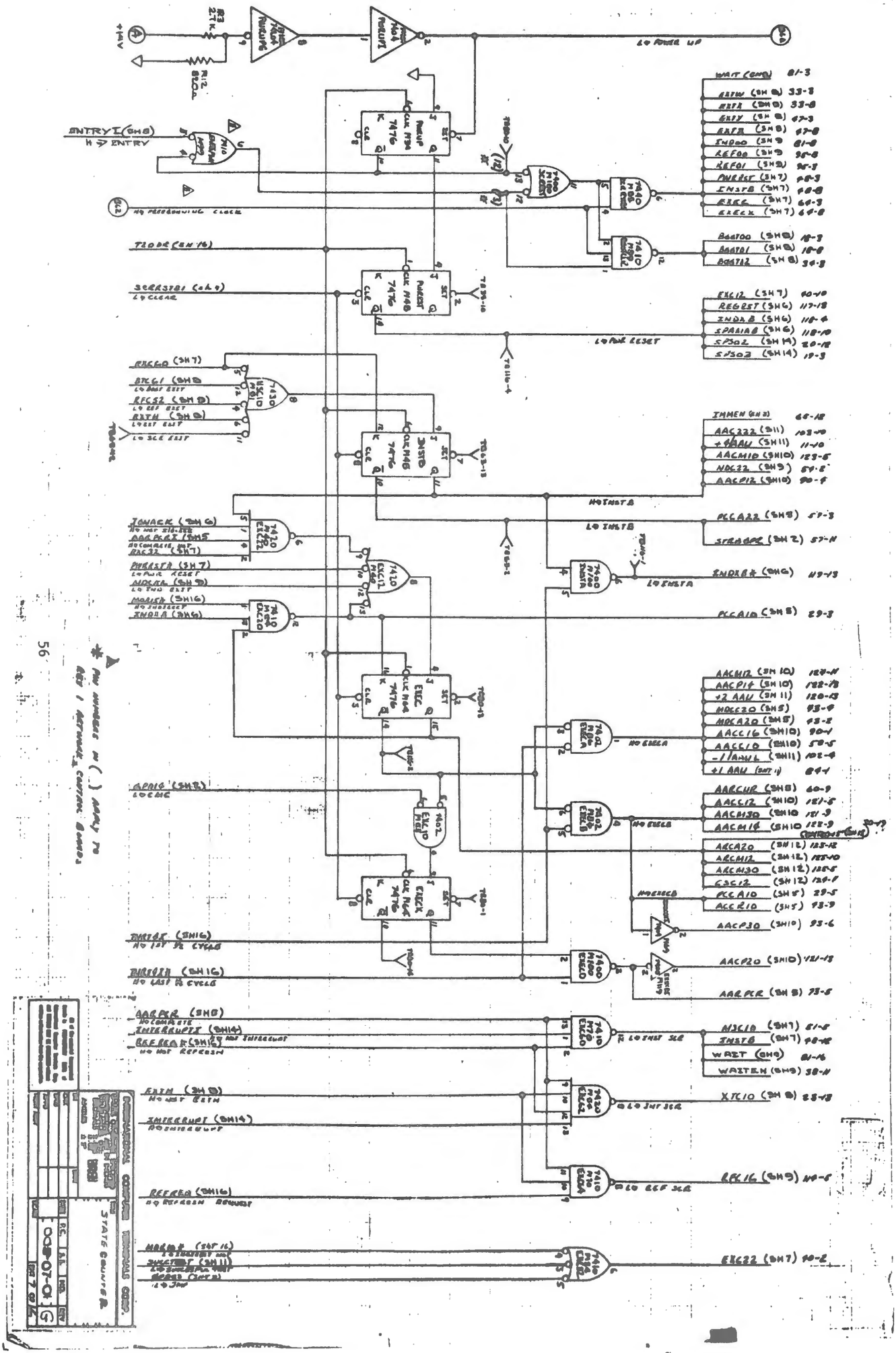
005-07-01 REV G


INSTA (SH2)
RECOD (SH2)
CLRDPA (SH A) 21-3
ØPDØ3 (SH E)
ØPDØ2 (SH E)
ØPDØ1 (SH E)
ØPDØØ (SH E)
ØPD16-31
ØPD31
ØPD30
ØPD29
ØPD28
ØPD27
ØPD26
ØPD25
ØPD24
ØPD23
ØPD22
ØPD21
ØPD20
ØPD19
ØPD18
ØPD17
ØPD16
ACCRAA (SH E) 29-12
ZBTEST (SH 11) 88-8
INTERLEN (SH 14) 82-1
ØPDØØ-16 (SH 4) 52-12
ARCMSG (SH 10) 123-2
NRC12 (SH 8) 88-6
EXC 32 (SH 7) 26-6
NORGRD (SH 12) 92-11
NORGRD (SH 12) 92-2
NORGRD (SH 12) 102-8
NORGRD (SH 12) 102-6
NRC32 (SH 6) 29-12
NORGRD (SH 12) 92-5
NORGRD (SH 12) 102-1
FAIL TEST (SH 11) 88-10
SUCC TEST (SH 11) 88-9
NORGRD (SH 12) 92-1
NSE SN74134
REV-E
008-001-01

SN 74154
ΦPDG00-15
MSI
GENERIC OP CODE DECODER
003-0701
REV- G

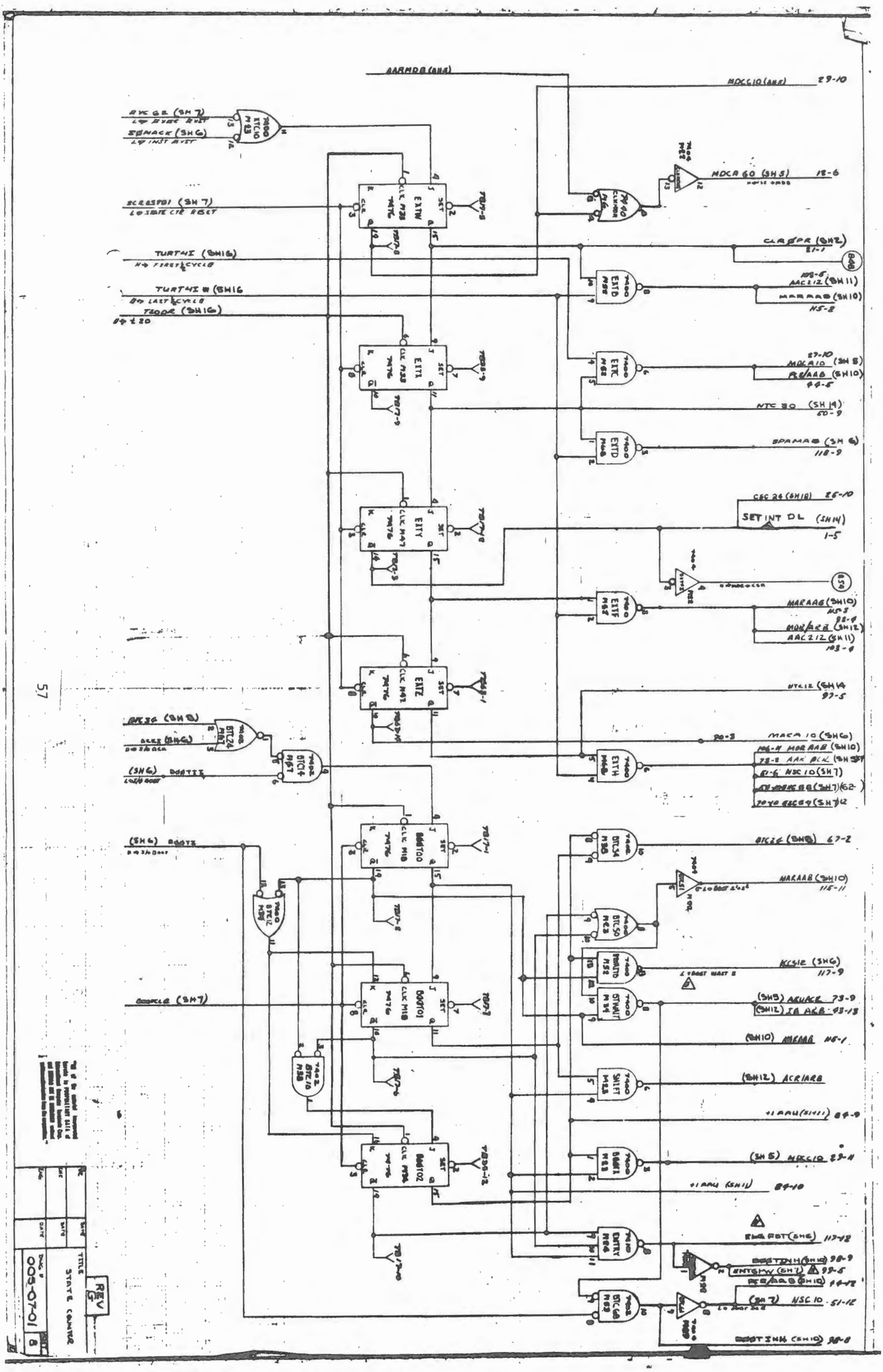

MISCELLANEOUS CONTROL
008-07-01
REV P
5


AARPCR (SH8)
INTERRUPT (SH14)
RSTD (SH8)
PWRRSTD (SH7)
ARIACKI (SH8)
TIMERR (SH14)
MEMACK (SH8)
PWRRSTD (SH7)
SWICTBOT (SH11)
INSTA (SH7)
OPDBIT (SH3)
MDR10B (SH16)
MDR09B (SH16)
OPDBIT (SH3)
ACKII (SH6)
ACKII (SH8)
MDR00T (SH16)
ARDRPC (SH13)
ENTRY (SH8)
PWRRSTD (SH7)
OPDBOR (SH4)
CLRDPR (SH8)
EXCEO (SH7)
AACH14 (SH16)
CLCBA (SH8)
AACEBO (SH11)
AACPIO (SH16)
PCCAIZ (SH8)
CLRIOTMK (SH14)
ITC10 (SH8)
PCCAIZ (SH8)
AACPIZ (SH16)
CAC22 (SH7)
ACCKIZ (SH8)
IOTPTR (SH11)
IOTRTP (SH11)
ACCII0 (SH12)
BTC24 (SH8)
IONACK (SH6)
BTC60 (SH8)
BTC14 (SH8)
CLRDPR (SH8)
STRBMAR (SH8)
STRBMB (SH8)
STRBMBI (SH12)
STRBMARI (SH11)
CMC10 (SH8)
ITC10 (SH8)
INTMASK (SH14)
CLRSTC (SH12)
KICMSK (SH13)
TIO (SH16)
NOTB
ARCOL (SH3)
TIF (SH16)
ARDART (SH8)
TIOINH (SH6)
STRBMAR
MISCELLANEOUS CONTROL
009-07-01
REV G

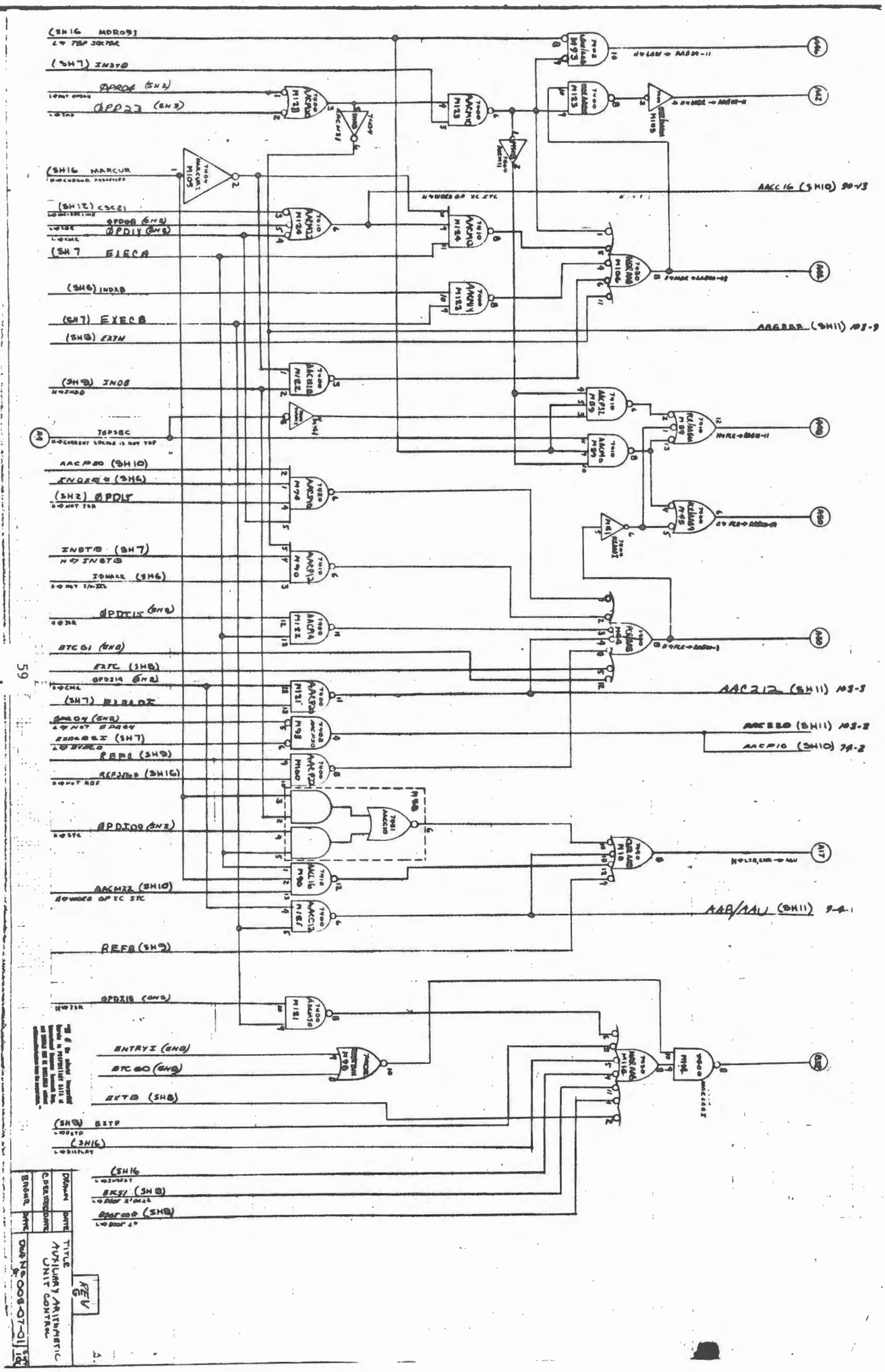


56

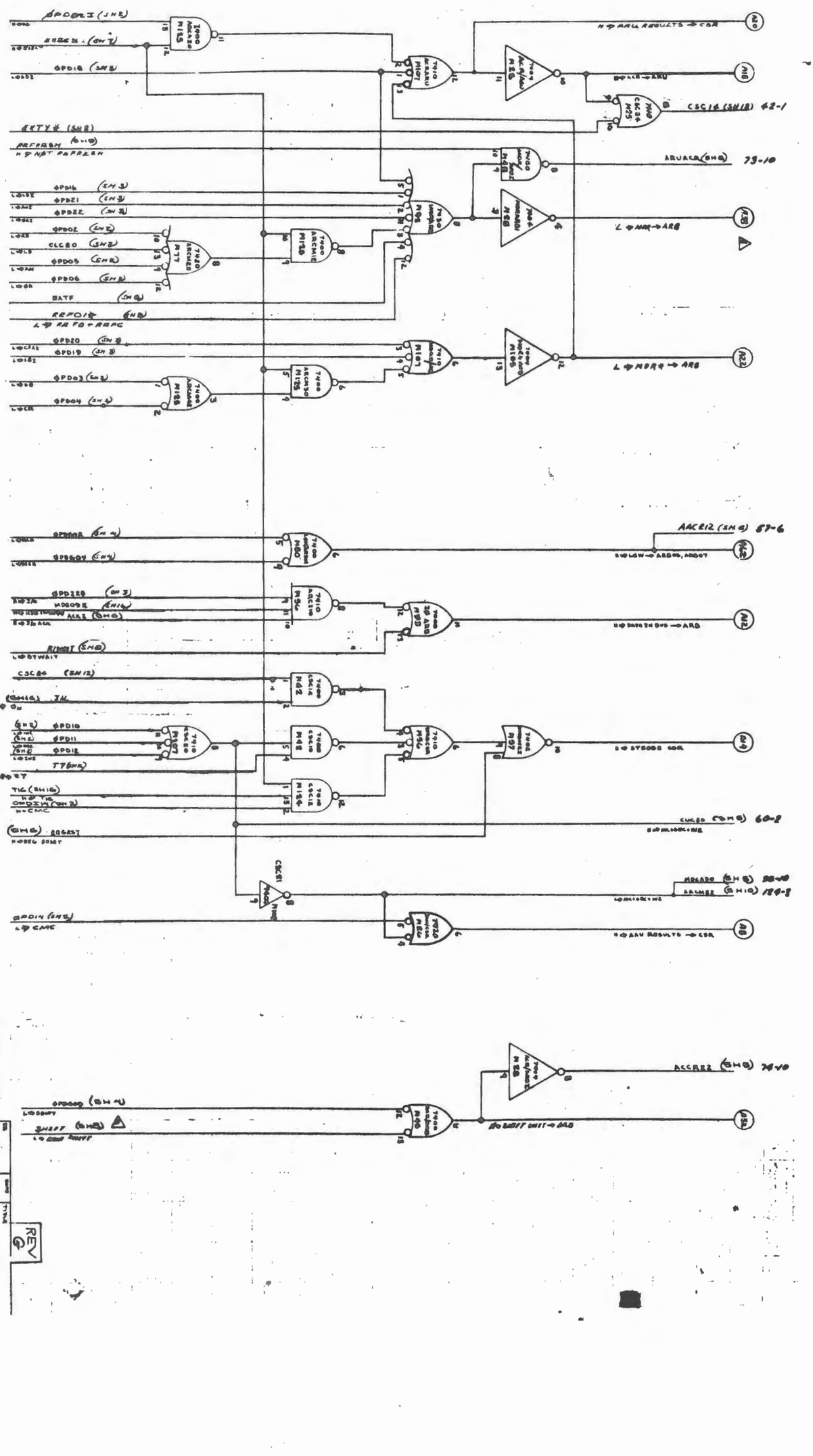
* PIN NUMBERS IN ( ) APPLY TO ALU 1 ARITHMETIC CONTROL BOARD.

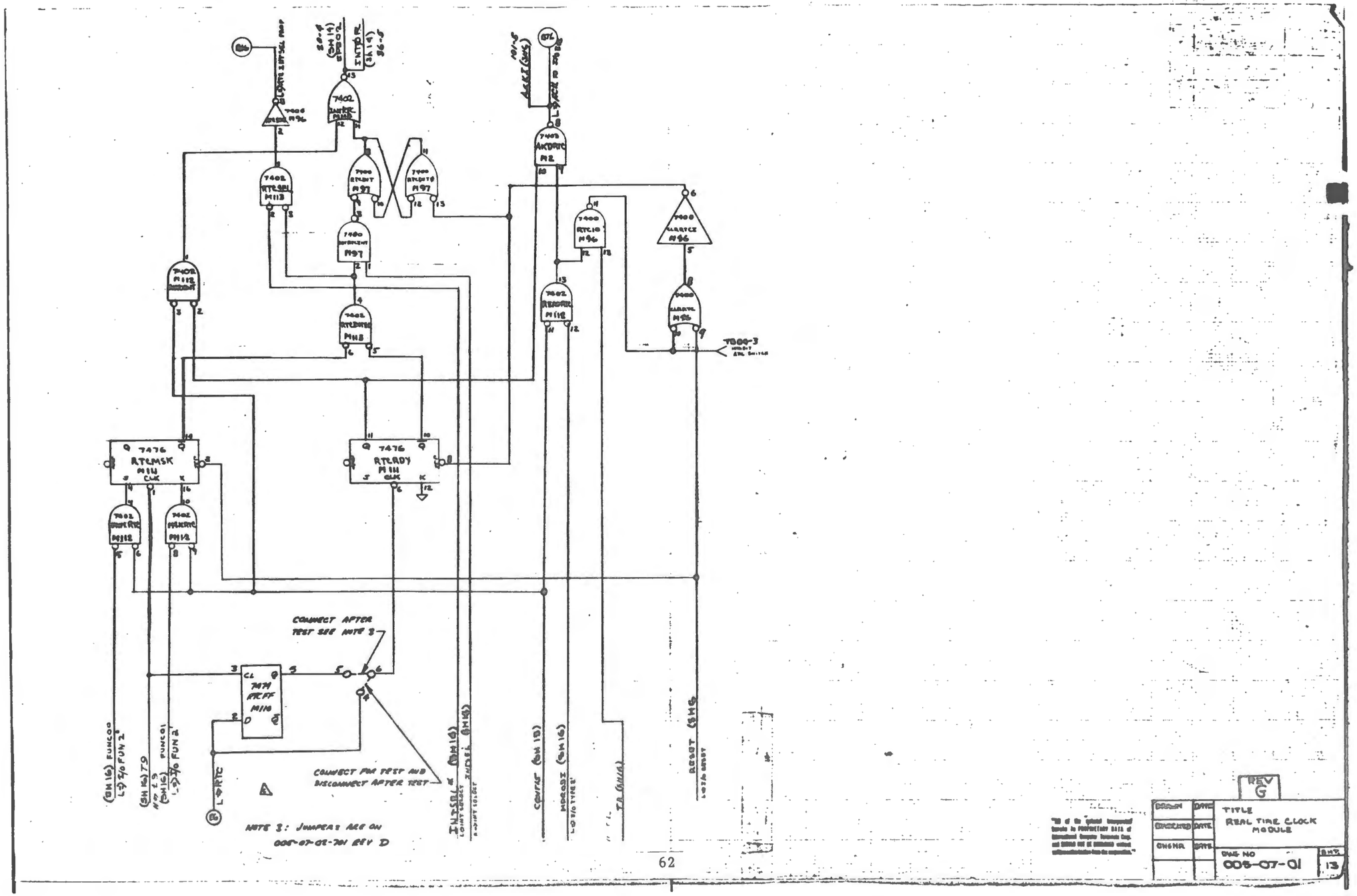

AARMDB (SH6)
MDCC10 (SH12) 29-10
MDCA 60 (SH5) 18-6
CLASPR (SH2) 27-7
MDCA12 (SH11) 108-5
MARAAB (SH10) H5-2
MDCA10 (SH5) 27-10
PERAAB (SH10) 99-5
NTC 80 (SH19) 60-9
BPARAB (SH 6) 118-9
SET INT DL (SH14) 1-5
CEC 24 (SH18) 25-10
MARAAB (SH10) H5-5
MDCA12 (SH11) 108-4
MDCA 10 (SH6) 20-3
MDC-H MDRAAB (SH10) 78-2
AAR BCK (SH 5) 81-6
NSC 10 (SH7)
ACKIAR (SH7) (62-
BKCLK (SH6) 67-2
MARAAB (SH10) 115-11
KCSIR (SH6) 117-9
(SH5) ACKACK 73-9
(SH12) IA ACK 93-15
(SH10) MKEMAB H5-1
(SH12) ACKIARB
+1 AAU (SH11) 84-9
(SH5) MDCC10 29-4
+1 AAU (SH11) 84-10
EMA RST (SH6) 117-12
(SH7) NSC 10 51-12
(SH10) 98-8
(SH6) BAATS
(SH6) BAATT
ACCK (SH6)
(SH6) BAATT
CLOCK (SH7)
TITLE
STATE COUNTER
005-07-01
REV
5
57

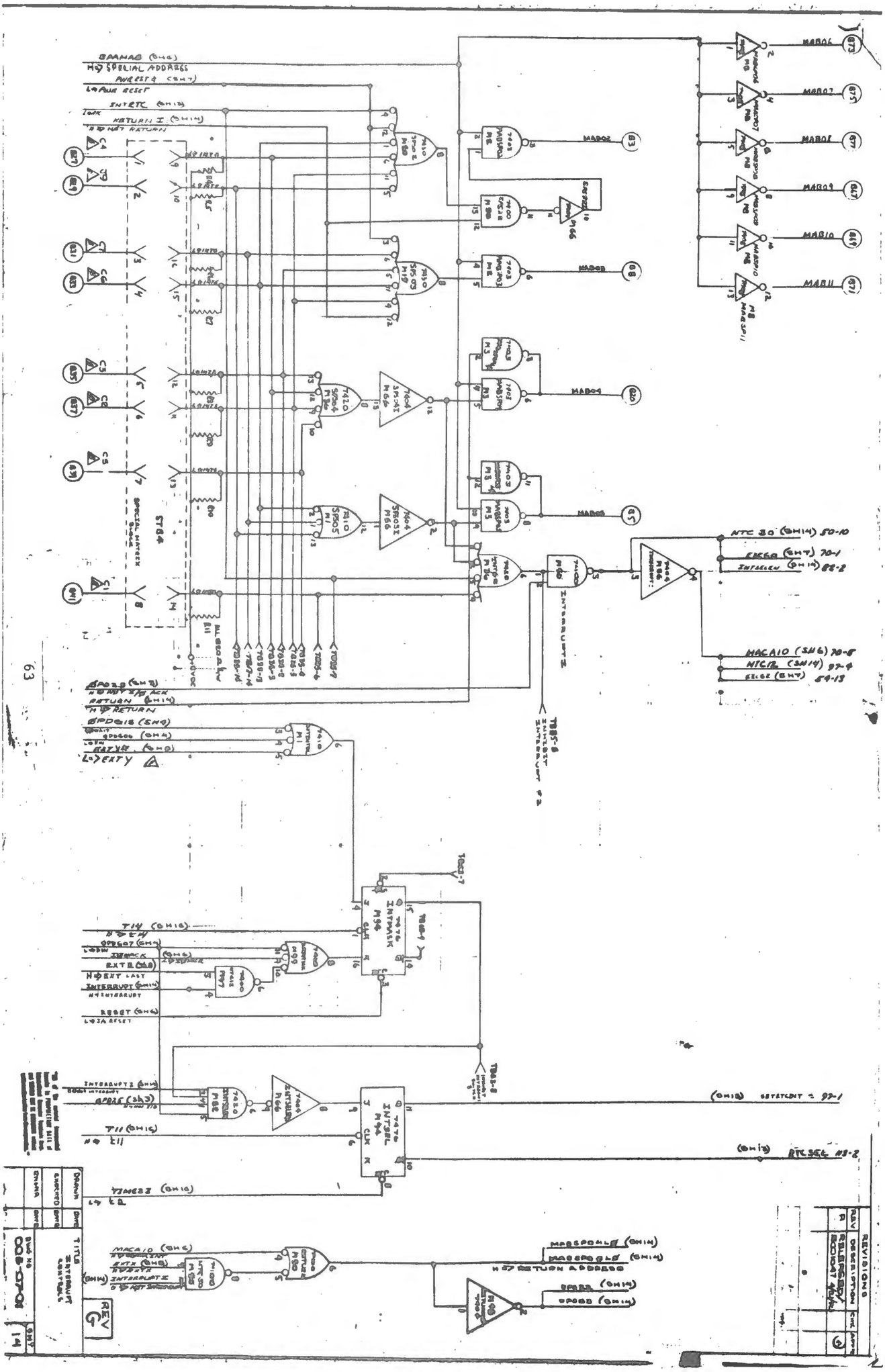
7476
CLK M15
INDCUR
7402
INDB
M16
7400
NDCEE
M48
7400
NDCEE
M48
7476
CLK M81
INDOO
7476
CLK M01
WRT
7420
NDCEE
M86
7400
NDCEE
M85
WRITE
7402
M16
7476
CLK M95
EEFOO
7476
CLK M96
EEF01
7400
M96
EPCIE
7402
EPCIE
M96
7402
EPCIO
M86
7400
M96
EPCIO
7400
M96
EEWE
7451
M83
EEPCLK
7400
M96
EEWE
REV
G
TITLE:
STATE COUNTER
10-20-007-01
9

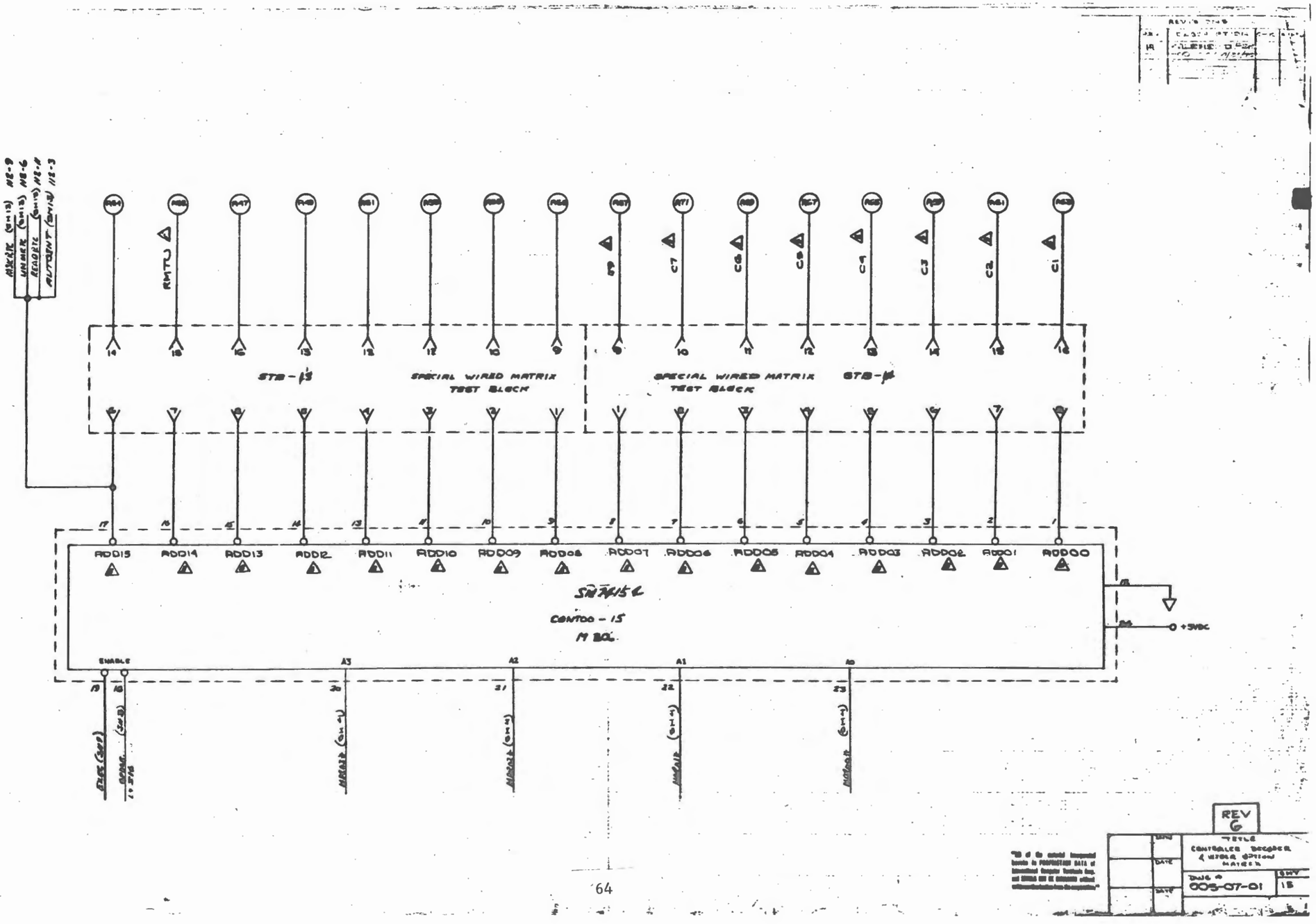

(SH16 MDR09)
(SH7) INSTB
BPRO4 (SH2)
BPP23 (SH3)
(SH16 MARCUR
(SH12) CSCE1
BPD08 (SH2)
BPD14 (SH2)
(SH7 EIECA
(SH6) INDAB
(SH7) EXECB
(SH8) EATN
(SH8) INOB
TOPSEC
AACM30 (SH10)
ENOREQ (SH6)
(SH2) BPD15
INSTB (SH7)
IOWAIT (SH6)
BPD11 (SH2)
BTC01 (SH2)
EATC (SH8)
BPD219 (SH2)
(SH7) BIBLOK
BPD04 (SH2)
ENDEBUI (SH7)
REFB (SH9)
REFSTRB (SH16)
BPD109 (SH2)
AACM32 (SH10)
REFB (SH9)
BPD219 (SH2)
ENTRYI (SH2)
BTC00 (SH2)
EXTB (SH8)
(SH8) EITF
(SH16)
(SH16
BRSI (SH8)
BPRO08 (SH8)
AACC16 (SH10) 30-43
AAC212 (SH11) M3-3
AAC230 (SH11) M3-2
AACM10 (SH10) 74-2
AAB/AAU (SH11) 9-4
DRAWN
CHECKED
ENGR
APPR
TITLE
AUXILIARY ARITHMETIC UNIT CONTROL
REV
DWG NO. 8008-07-01 (2)
SH

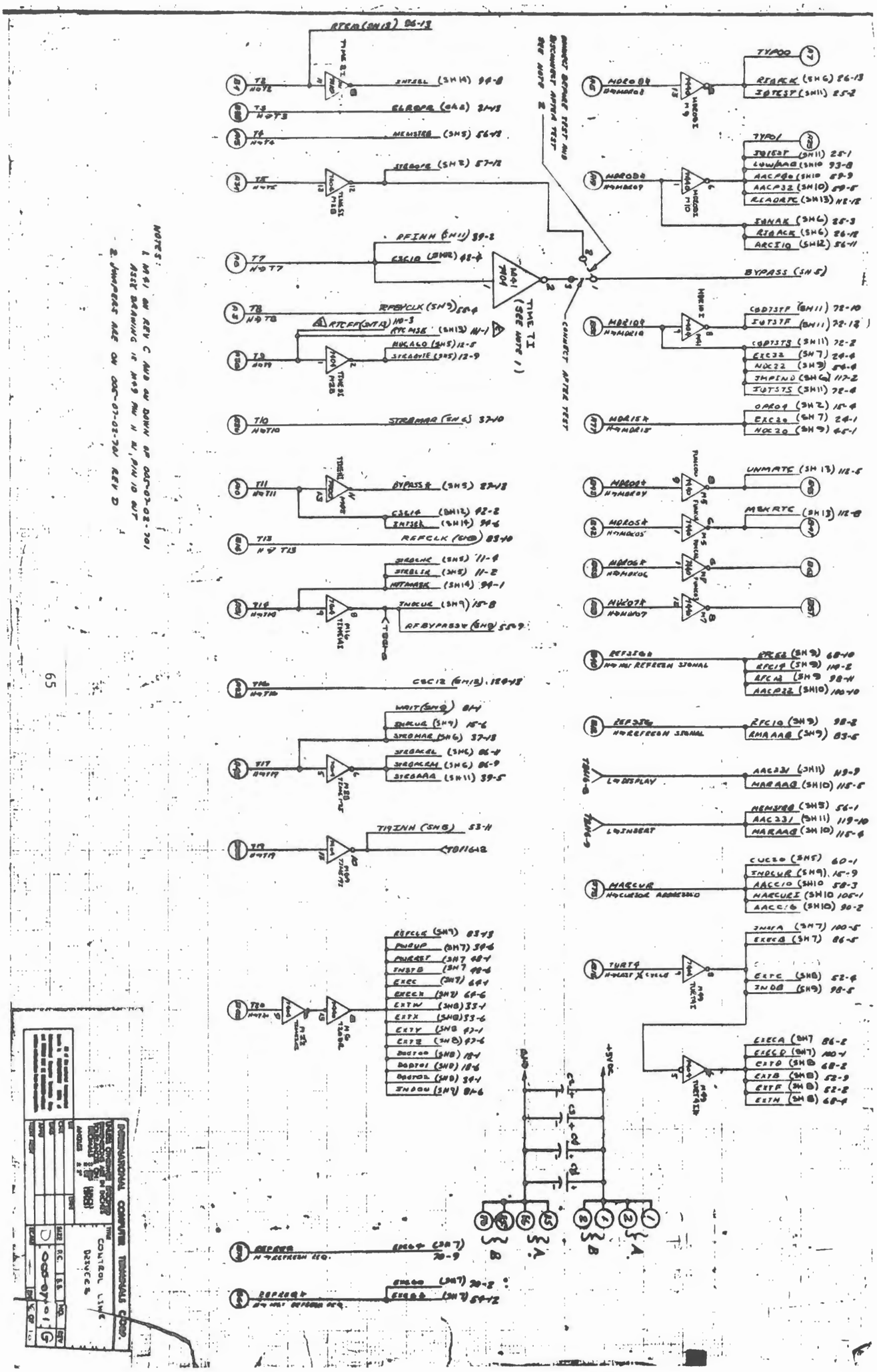
AUXILIARY ARITHMETIC UNIT CONTROL
REV G
003-01-01


ARITHMETIC UNIT CONTROL
REV G
006-07-01
SHEET 12


BLOCK INTSEL MAP
7400 N96
7402 INTER PULSE
INTDIR. (SH 14) $6-5
7400 ATNINT N97
7400 ATNRTC N97
7400 ATNMNT N97
7402 RTCSEL M113
7400 RTC.10 N96
7400 CLKDIV2 N96
7400 CLKDIV8 N96
7402 READRTC M118
7402 RTCRDY M118
7402 RTCMSK M118
7476 RTCMSK M111
7476 RTCRDY M111
7402 RDRTC M118
7402 MSKRTC M118
7474 ATNRTC M111
TO 00-3
CONNECT AFTER TEST SEE NOTE 3
CONNECT FOR TEST AND DISCONNECT AFTER TEST
(SH 16) FUNC00 L-2 TO FUN 2*
(SH 16) TO PIN 2 OF (SH 16) FUNC01 L-2 TO FUN 2*
L-2 TO RTC
INTSRC (SH 16)
COMPAT (SH 19)
MRDOX (SH 16)
RESET (SH 6)
NOTE 3: JUMPERS ARE ON 005-07-02-701 REV D
REV G
TITLE REAL TIME CLOCK MODULE
DWG NO 005-07-01
SHT 13

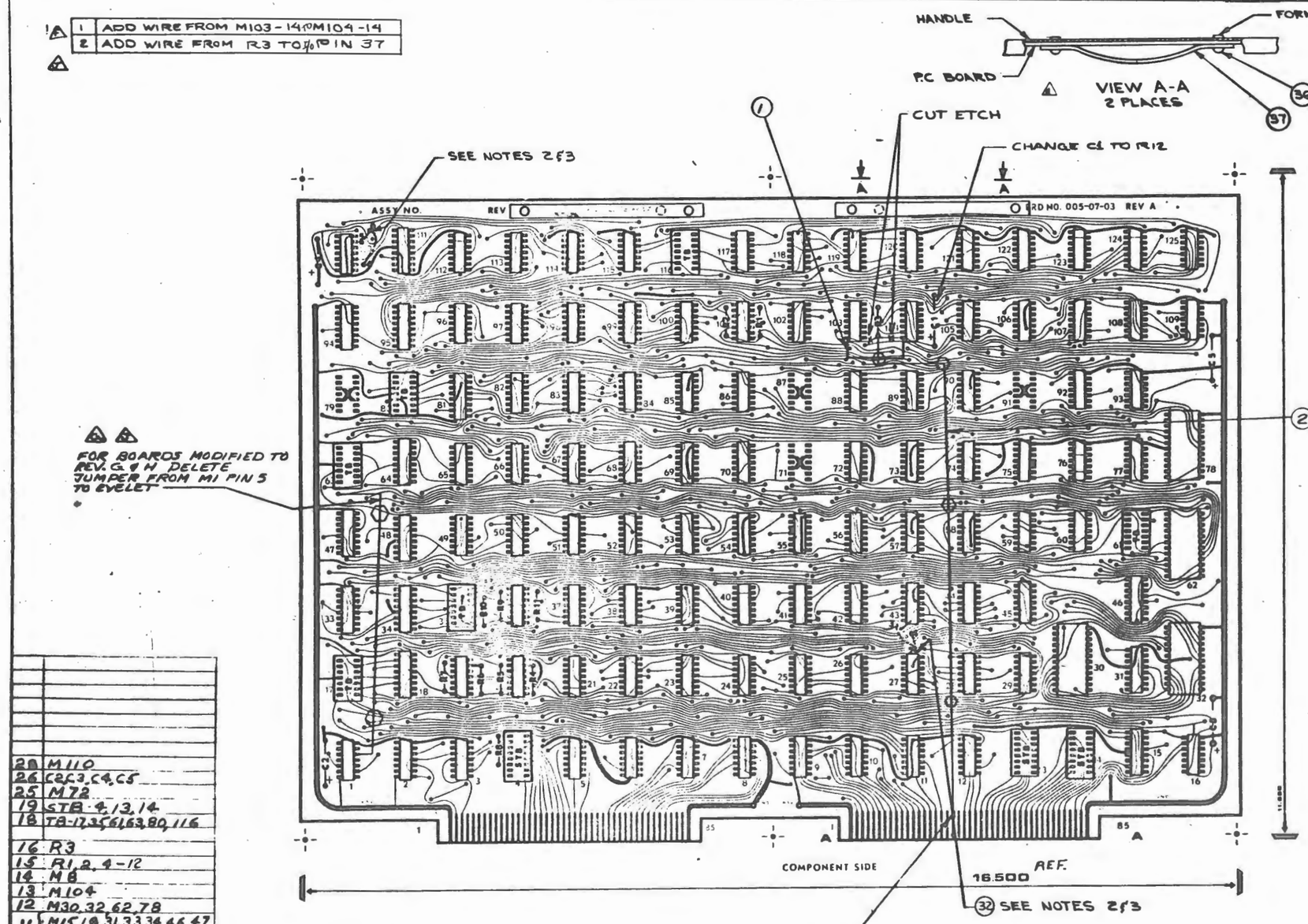

BAMAG (SH6)
HD SPECIAL ADDRESS
INTETC (SH13)
MAB02
MAB03
MAB04
MAB05
MAB06
MAB07
MAB08
MAB09
MAB10
MAB11
NTC 30 (SH14) 50-10
MACA10 (SH6) 70-5
INTERRUPT
RESET (SH4)
(SH13) RTC SEC 83-2

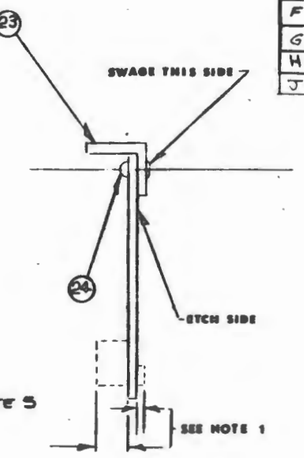

STB-J3
SPECIAL WIRED MATRIX TEST BLOCK
SPECIAL WIRED MATRIX TEST BLOCK
STB-J4
RMTU
SN74154
CONTOO - 15
M BOL
ENABLE
A3
A2
A1
A0
+5VDC

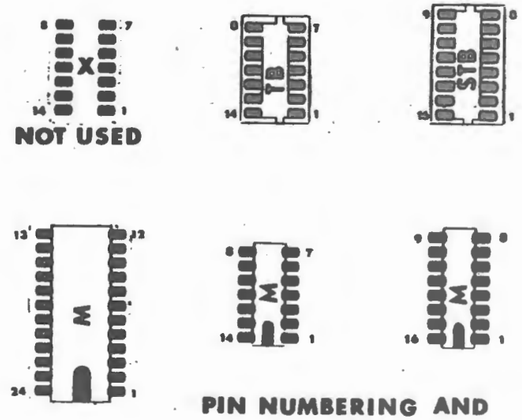

NOTES:
1. M9/ ON REV C AND ON DOWN AS 000-03-03-701 ASSY DRAWING IS M9 PIN 11 N/, PIN 10 OUT
2. JUMPERS ARE ON 000-03-03-701 REV D
TIME T1
(SEE NOTE 1)
BYPASS (SH 8)
CONNECT AFTER TEST
DISABLE BEFORE TEST AND DISCONNECT AFTER TEST SEE NOTE 2
REFCLK (SH 9)
REFCLK (SH 13)
TYPA00
TYPA01
RTACK (SH 6)
IOTEST (SH 11)
IOWAAB (SH 10)
AACP30 (SH 10)
AACP32 (SH 10)
READRTC (SH 13)
IOWAK (SH 6)
ARCS10 (SH 12)
CBDTSTP (SH 11)
IOTSTP (SH 11)
CBPTSTS (SH 11)
ERC32 (SH 7)
NOC22 (SH 9)
IMPEND (SH 6)
IOTSTS (SH 11)
OPRO4 (SH 2)
ERC20 (SH 7)
NOC20 (SH 9)
UNMATC (SH 13)
MBKRTC (SH 13)
REFRSH
NO MS REFRESH SIGNAL
ERC12 (SH 9)
ERC13 (SH 9)
ERC14 (SH 9)
AACP22 (SH 10)
REFRSH
NO MS REFRESH SIGNAL
RFC10 (SH 9)
RMAAAB (SH 9)
AAC23V (SH 11)
MARAAB (SH 10)
MEMSPEB (SH 8)
AAC23I (SH 11)
MARAAB (SH 10)
CUC20 (SH 5)
INDLNR (SH 9)
AACC10 (SH 10)
MARCUR1 (SH 10)
AACC16 (SH 10)
MARCUR
NO CURSOR ADDRESS
INHA (SH 7)
EXECB (SH 7)
EXTC (SH 8)
IND0B (SH 9)
EXECA (SH 7)
EXECD (SH 7)
EXTD (SH 8)
EXTB (SH 8)
EXTP (SH 8)
EXTN (SH 8)
INTRTG
NO LAST X CYCLE
REFCLK (SH 9)
PWRUP (SH 7)
PWRAST (SH 7)
INSTB (SH 7)
EXEC (SH 7)
EXECN (SH 7)
EXTW (SH 8)
EXTX (SH 8)
EXTY (SH 8)
EXTZ (SH 8)
DBSTOO (SH 8)
DBSTO1 (SH 8)
DBSTOL (SH 8)
INDOU (SH 7)
REFCLK
NO MS REFRESH REQ.
ERC09 (SH 7)
ERC00 (SH 7)
ERC02 (SH 7)
ERC03 (SH 7)
+5VDC
BUS
C1
C2
C3
C4
C5
C6
C7
C8
A
B
CONTROL LINE DEVICES
INTERNATIONAL COMPUTER TERMINALS CORP.
65

1	ADD WIRE FROM M103-14 TO M104-14	
2	ADD WIRE FROM R3 TO M1 PIN 37	

REVISIONS			
REV	DESCRIPTION	CHK	APPD
D	REDRAWN & REVISED PER ECO 1222 10-6-70 RAT	RaB	
E	ECO 1269 1-13-71 NO CHANGE	DRM	DRM
F	UPDATED/ECO 1309 3/26/71	DRM	DRM
G	ECO 1429		
H	ECO 1439	DRM	DRM
J	ECO 1488 7/7/71	RaB	RaB



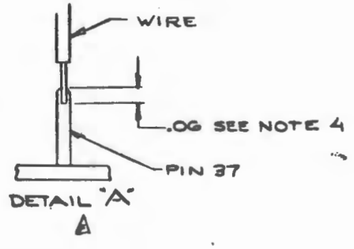




28	M10
26	C2,C3,C4,C5
25	M22
19	STB-1,13,14
18	TB-1,23,61,63,80,116
16	R3
15	R1,2,4-12
14	M8
13	M104
12	M30,32,62,78
11	M15,18,31,33,34,46,47, 48,64,81,94,95,111
10	M12,38,53,57,65,67, 86,93,98,112,113
9	M21,37,120
8	M58,83,84,88
7	M5,6,7,9,10,85,102
6	M19,20,44,51,92,106,115
5	M26,36,40,54,73,74, 76,77,82,89,118
4	M1,24,25,29,56,59, 70,90,99,103,107,124
3	M16,22,28,41,49,66, 69,101,105,108,109
2	M2,3
1	M11,23,27,39,42,43,45,50, 52,55,60,68,75,96,97, 100,114,117,119,121,122,123,125
QTY	REFERENCE DESIGNATION

NOTE:

1. **HEIGHT LIMITATIONS.**
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. INSTALL EYELET (ITEM #32) IN PADS NUMBERD 1 THRU 6 AND SOLDER BOTH SIDES
3. AFTER TESTING INSTALL JUMPERS (ITEM #28) BETWEEN EYELETS 1&3 AND 5&6
4. WIRE AND SOLDER NOT TO EXCEED .06 DIM.
5. FASTEN WIRE ITEM 27 TO BOARD USING 35 7 PLCS MARKED (8)



COMPONENT SIDE

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

DR	Russ Fontaine	4-21-70
CHK	Ron Ellsworth	4-22-70
ENG	Ron B. Lanoue	4-22-70
APPD	Frank Lentner	4-29-70
NEXT ASSY	005-10-15	

TITLE
P.C. BOARD ASSY CPU CONTROL 701

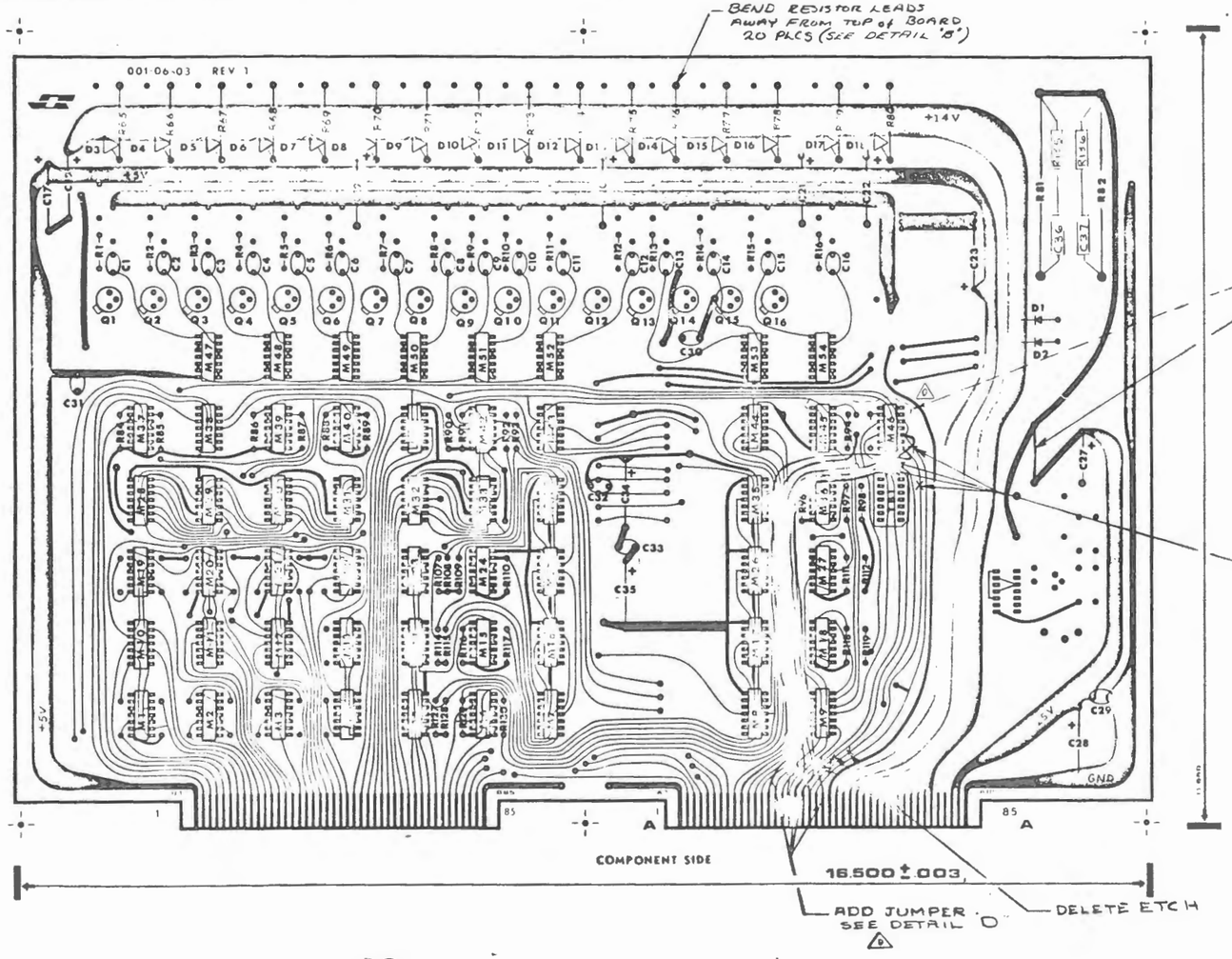
SIZE	P.C.	S.S.	NO	REV
D	005-07-02			J

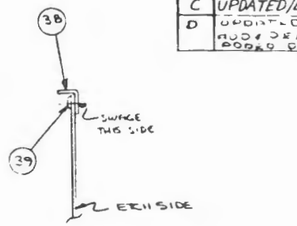
SCALE 1:1 SHT 1 OF 2

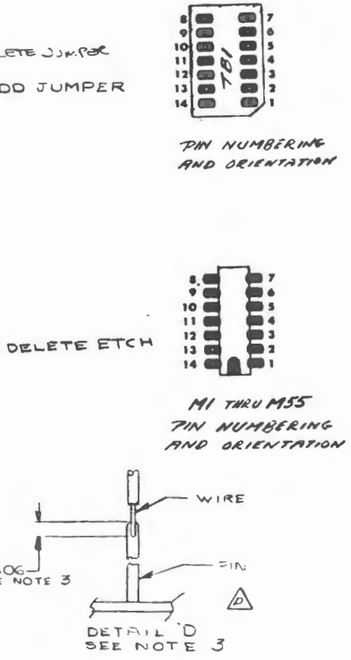
REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED PER ECO1056 4/14/70		
B	UPDATED/ECO 1084 6/1/71		
C	UPDATED/ECO1134 6/1/72		
D	UPDATED/ECO 1171 9/1/72 ADDED & DELETED JUMPERS, ADDED DETAIL "D"		

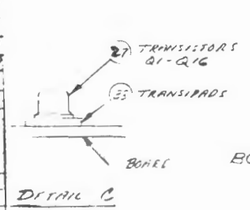
R76	RSNS-2-374	Q10	TS2N6188	D1	DSIN4148	D8	DSIN4148	D15	DSIN4148		
R75		Q9		Q16	TS2N5188	D7		D14			
R74		Q8		Q15		D6		D13			
R73		Q7		Q14		D5		D12			
R72		Q6		Q13		D4		D11			
R71		Q5		Q12		D3		D10			
R70		Q4		Q11	TS2N5188	D2	DSIN4148	D9	DSIN4148		
RG9		Q3									
R68		Q2									
RG7		Q1	TS2N5188								
RG6		C37	CS CD6FG621K								
RG5	RSNS-2-374	C36	CS CDI6FC621K								
R16	R MUST BE 330J	C35	CS150D685								
R15		C34	CS150D685								
R14		C33	CS TGS-10								
R13		C32									
R12		C31									
R11		C30									
R10		C29	CS TGS-10								
R9		C28	CS150D685								
R8		C27	CS150D685								
R7		C23	CS150D685								
R6		C22	CS150D226								
R5		C21									
R4		C20									
R3		C19									
R2		C18	CS150D226								
R	RSRC07GF330J	C17	CS60X685								
M54	ICSN74H40N	C16	CS OTS-T47								
M53		C15									
M52		C14									
M51		C13									
M50		C12									
M49		C11									
M48		C10									
M47	ICSN74H40N	C9									
M46	ICSN7404N	C8									
M45	ICSN74H40N	C7									
M44	ICSN7404N	C6									
M43		C5									
M42		C4									
M41	ICSN7404N	C3									
M40	ICSN7440N	C2									
M39	ICSN7440N	C1	CS IC T47								
M38	ICSN7404N	R136	RSRC07GF101J								
M37	ICSN7440N	R135	RSRC07GF01J								
M36	ICSN7440N	R130	RSRC07GF471J								
M35	ICSN7532N	R129									
M34		R128									
M33		R127									
M32		R119									
M31		R118									
M30		R117									
M29		R116									
M28	ICSN7532N	R115									
M27	ICSN74H40N	R114									
M26	ICSN7532N	R112									
M25	ICSN7532N	R111									
M24	ICSN7440N	R110									
M23	ICSN7440N	R109									
M22	ICSN7402N	R108									
M21		R107	RSRC07GF471J								
M20		R98	RSRC07GF471J								
M19	ICSN7402N	R97	RSRC07GF102J								
M18	ICSN74H40N	R96	RSRC07GF471J								
M17	ICSN7532N	R94	RSRC07GF472J								
M16	ICSN7532N	R93	RSRC07GF 523								
M15	ICSN7440N	R92	RSRC07GF471J								
M14	ICSN7440N	R91	RSRC07GF 52J								
M13	ICSN7403N	R90	RSRC07GF47KJ								
M12		R89									
M11		R88									
M10	ICSN7408N	R87									
M9	ICSN7410N	R86									
M8	ICSN7532N	R85									
M7	ICSN7532N	R84	RSRC07GF4.7J								
M6	ICSN7440N	R82	RSNS-10-619								
M5	ICSN7440N	R81	RSNS-10-619								
M4	ICSN7404N	R80	RSNS-2-374								
M3		R79									
M2		R78									
M1	ICSN7400N	R77	RSNS-2-374								
FIELD DESIG	PART NO.	FIELDING	PART NO.								

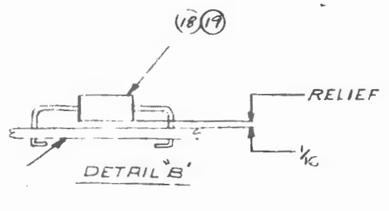
T81	IC-6384-2564		
D18	DSIN4148		
D17	DSIN4148		
D6	DSIN4148		

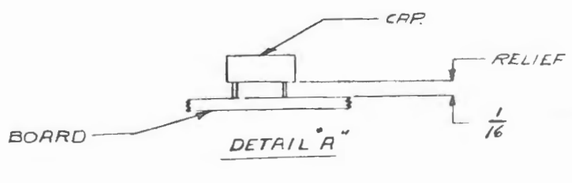












△3 WIRE AND SOLDER NOT TO EXCEED .06

2. RESISTORS RG5 R82 TO BE RELEIVED FROM BOARD; SEE DETAIL "B"

1. CAPACITORS C1-C16, C29-C37 TO BE RELIEVED FROM BOARD TO AVOID BREAKING CERAMIC - SEE DETAIL A

NOTES

INTERNATIONAL COMPUTER TERMINALS CORP.

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

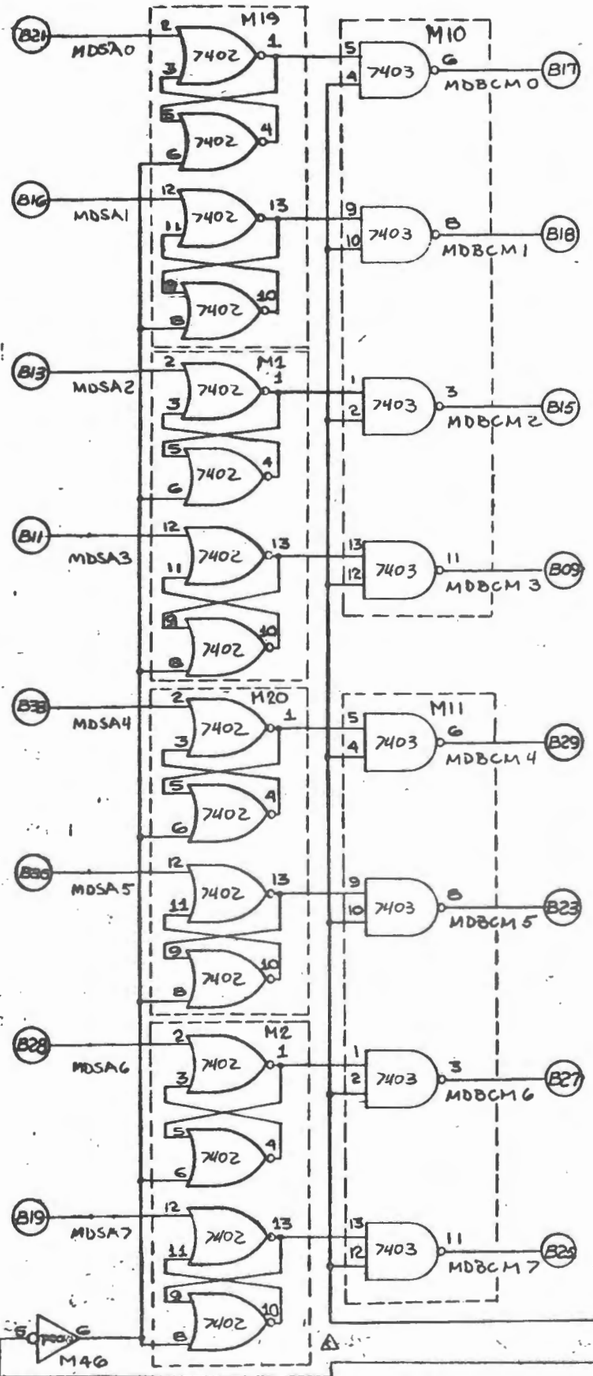
TITLE: MEMORY ELECTRONICS COMPONENT ASSY AND HOLE SIZES

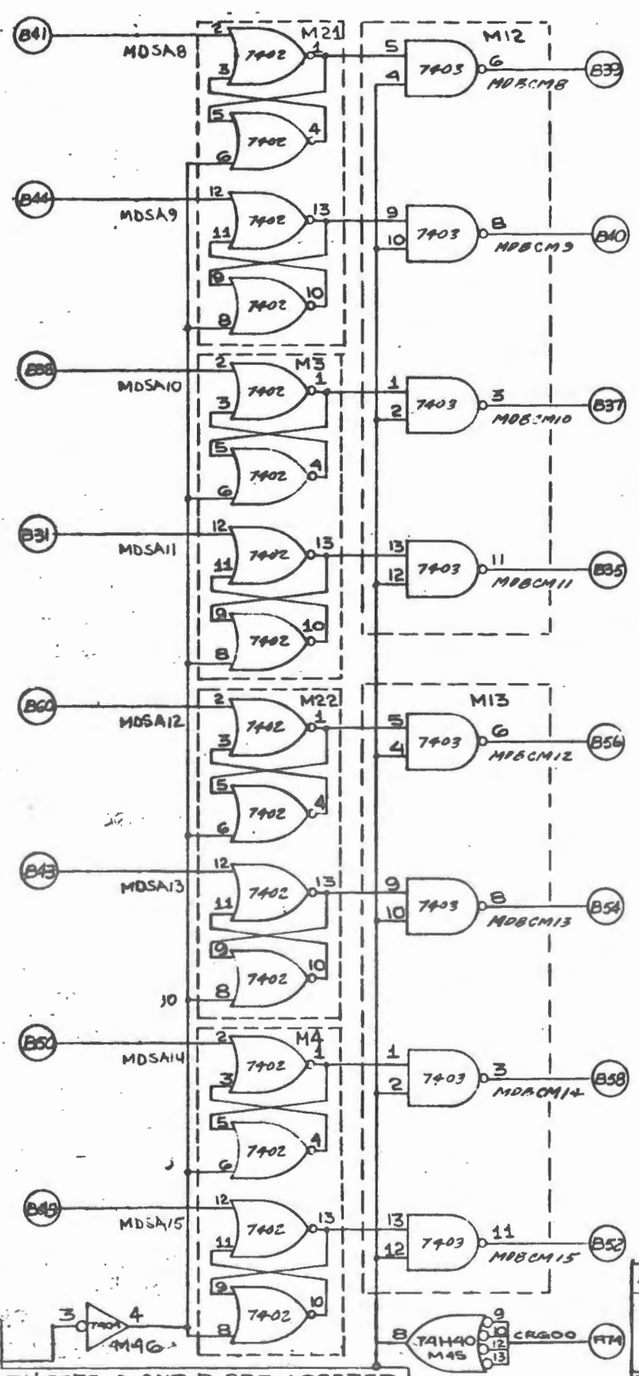
DR | DATE
CHK
ENG
APPD
NEXT ASSY 005-10-15

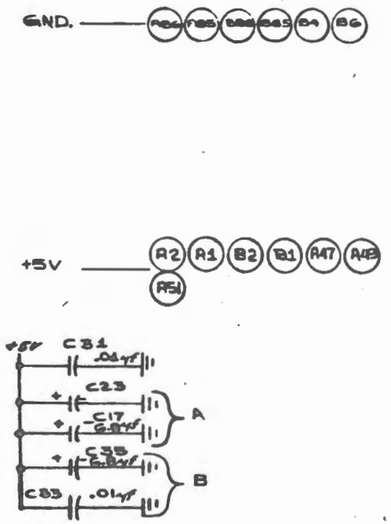
SIZE	PC	SS	NO	REV
D	001-06-02			D

SCALE 1:1 SHT 1 OF 2

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







NOTES:
1. ALL RESISTORS DESIGNATED MF, ARE 1%, 1/8W, 100 PPM/DEG.C
2. ALL OTHER RESISTORS ARE 1/4W, 5%
3. UNLESS OTHERWISE NOTED, CAPACITORS ARE 0.01 MF, DISC CERAMIC.
4. ELECTROLYTIC CAPACITORS ARE 6.8 μF, 35V
5. CAPACITORS C31 & C33 ARE LOCATED AT OPPOSITE SIDES OF THE BOARD

TURT 4

TB1-09

INTERNATIONAL COMPUTER TERMINALS CORP

MEMORY SENSE LOGIC

SIZE	PC	SS	DWG NO	REV
D	001-06-01			C
SCALE			SHT 2 OF 5	

CPT 09 (A37) — 7404 M46 — R94 4.7K +5 — TB1-08 — B INNIBIT

PWRESET (SHT 5) — CPT 17 (A35) — 7404 M46 — 7410 M9

74H40 M45

MDR 10 * (B10) — MDR 01 * (B3) — MDR 12 * (B11) — MDR 03 * (B8) — MDR 04 * (B9) — MDR 05 * (B5) — MDR 06 * (B6) — MDR 07 * (B7)

7400 M38 — MDG00 — 74H40 M47

R1-R16 33Ω — C1-C16 470pf — Q1-Q16 2N5188 — R65-R80 40.2Ω — D3-D18 — CKT 0

A02 I0A — A04 I1A — A06 I2A — A08 I3A — A50 I4A — A52 I5A — A54 I6A — A56 I7A

CKT 1 — CKT 2 — CKT 3 — CKT 4 — CKT 5 — CKT 6 — CKT 7

+14V — C18 — C19

A23 MDR 15* — A25 MDR 14* — A21 MDR 13* — A19 MDR 12* — A11 MDR 11* — A9 MDR 10* — A13 MDR 09* — A17 MDR 08*

7400 M44 — MDG15 — 74H40 M54

MDG14 — MDG13 — MDG12 — 7400 M43 — MDG11 — MDG10 — MDG09 — MDG08 — 74H40 M51

CKT 15 — CKT 14 — CKT 13 — CKT 12 — CKT 11 — CKT 10 — CKT 9 — CKT 8

A72 I15A — A70 I14A — A68 I13A — A66 I12A — A64 I11A — A62 I10A — A60 I9A — A58 I8A

C20 — C21 — C22

+14V — A53 A55 A57 A59 A61 A63 A65 A67 A69 A71 A73 A75

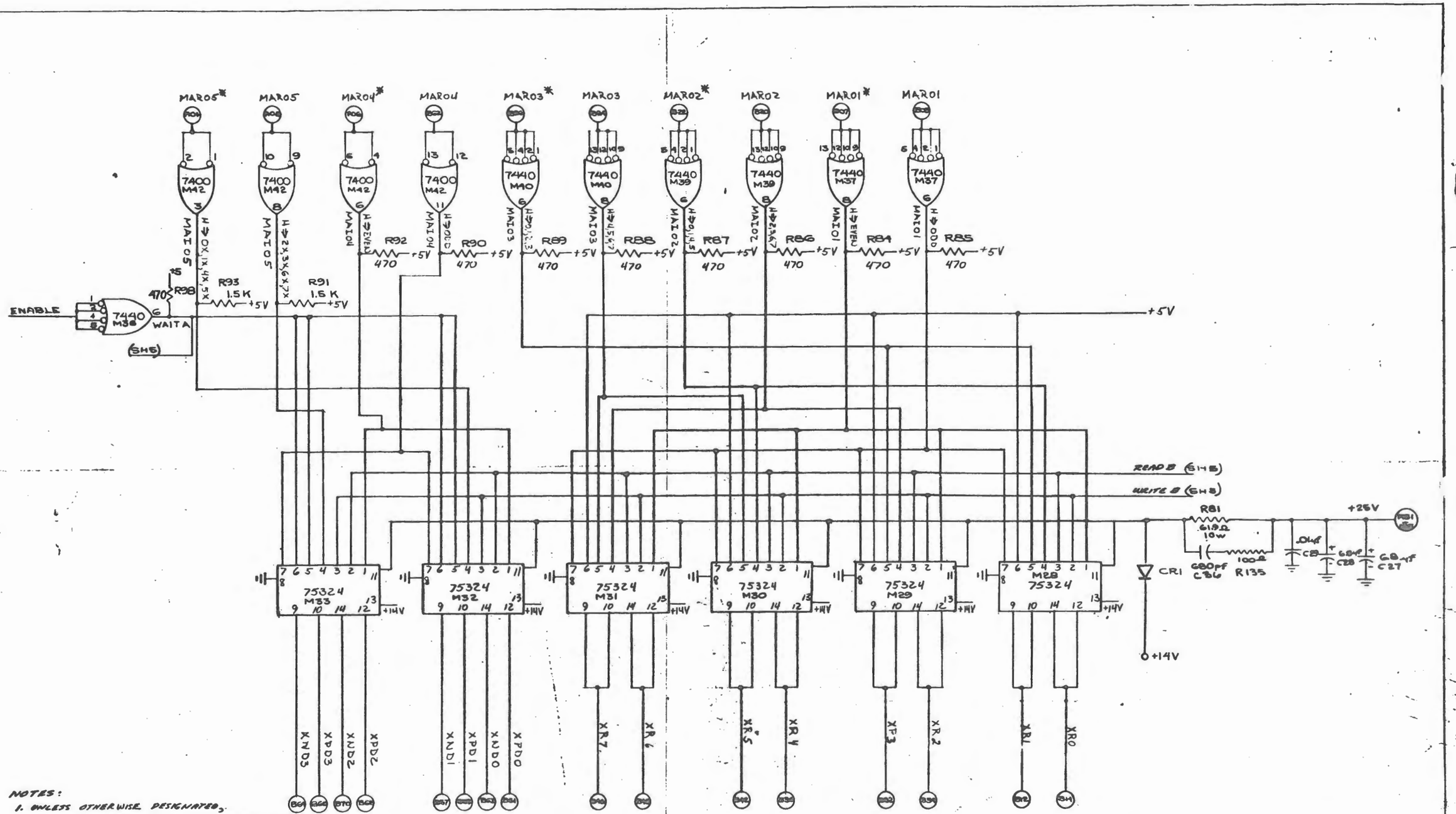
+14 — C34 — C32 — C30

NOTES
1. TRANSISTORS ARE TO5.
2. ELECTROLYTIC CAPACITORS ARE 22μf, 35V
   ALL OTHER CAPACITORS ARE DISC CERAMIC .01μf.
3. RESISTORS ARE 1/8 W ±5% UNLESS OTHERWISE NOTED.

INTERNATIONAL COMPUTER TERMINALS CORP

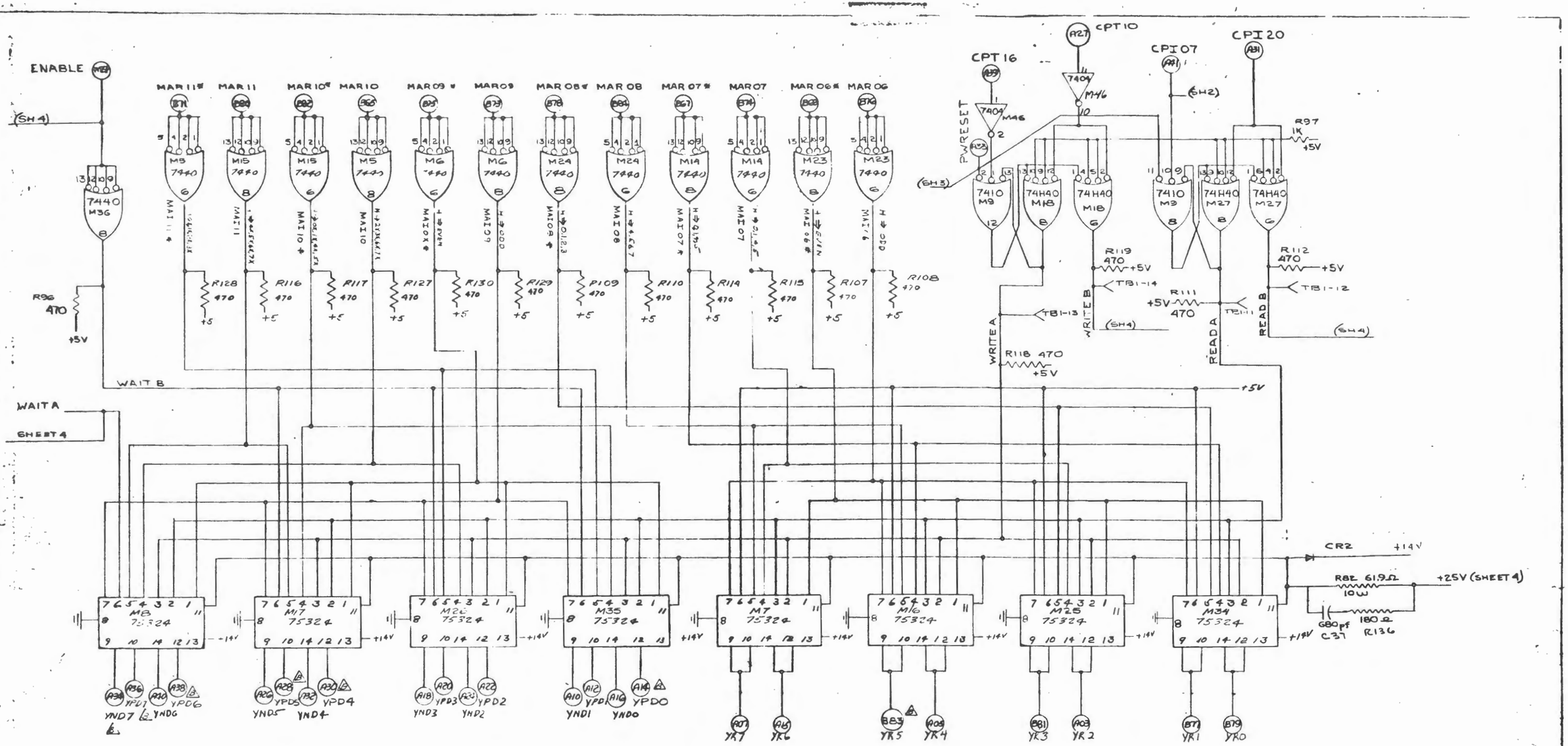
MEMORY
INHIBIT LOGIC AND DRIVER

DR				
CHK				
APPD				
NEXT ASSY	SIZE D	FSCM NO 001-06-01	REV C	
	SCALE		SHT 3 OF 5	



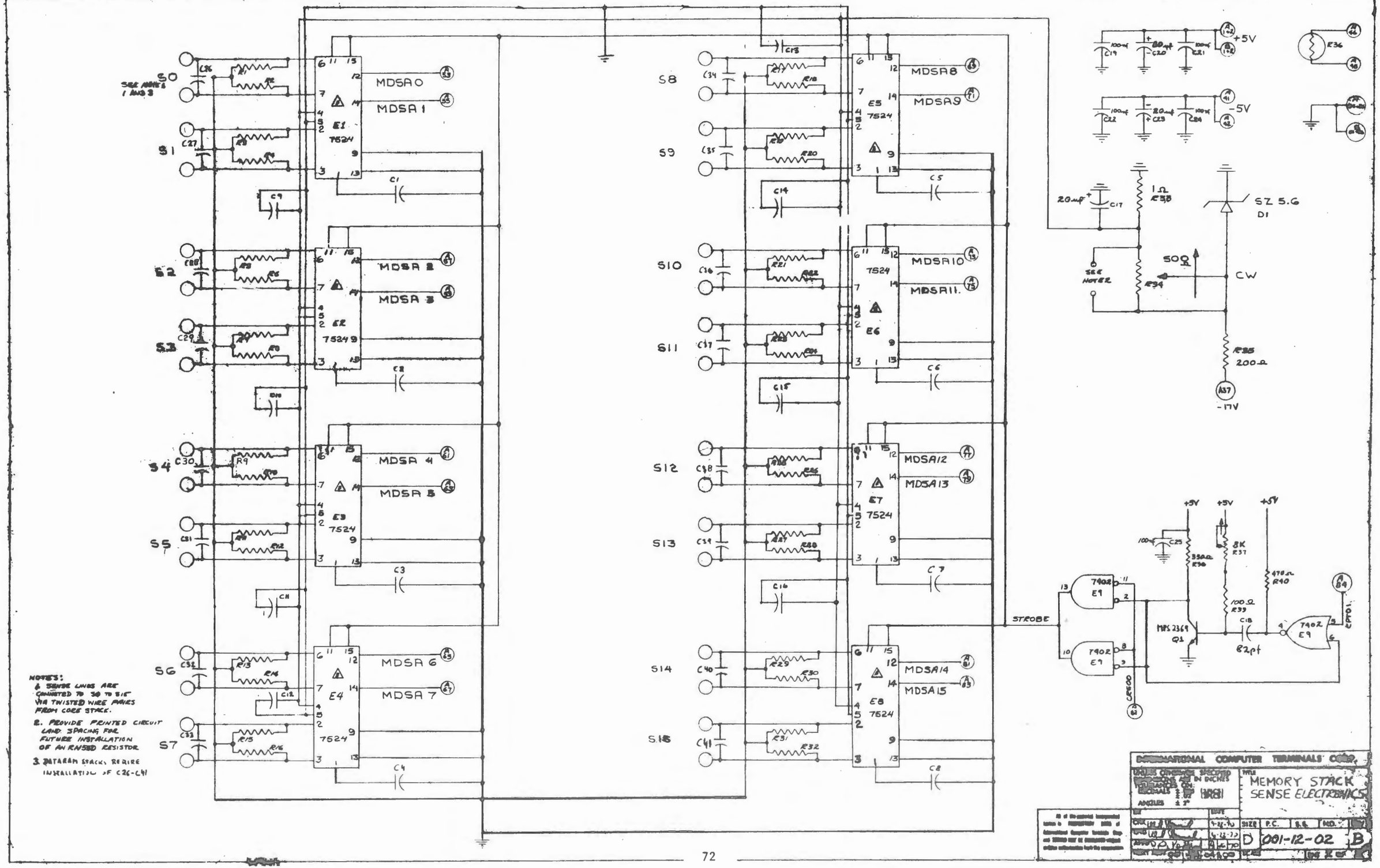
NOTES:
1. UNLESS OTHERWISE DESIGNATED, RESISTORS ARE RCOT (1/4W, 5% CARBON COMPOSITION)

INTERNATIONAL COMPUTER TERM. CORP			
	MEMORY X DRIVE AND LOGIC		
DR		SIZE	PC 55 DWG NO	REV
CHK		D	001-06-01	C
ENG			
APPD			
NEXT ASSY		SCALE		SHT 4 of 5

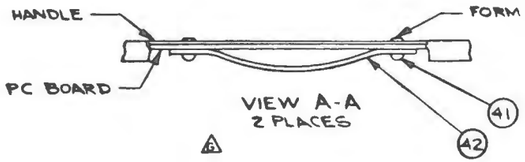


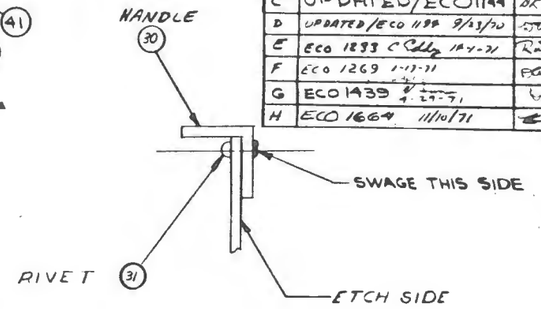
NOTE!
UNLESS OTHERWISE NOTED, RESISTORS ARE 1/4 W, 5%

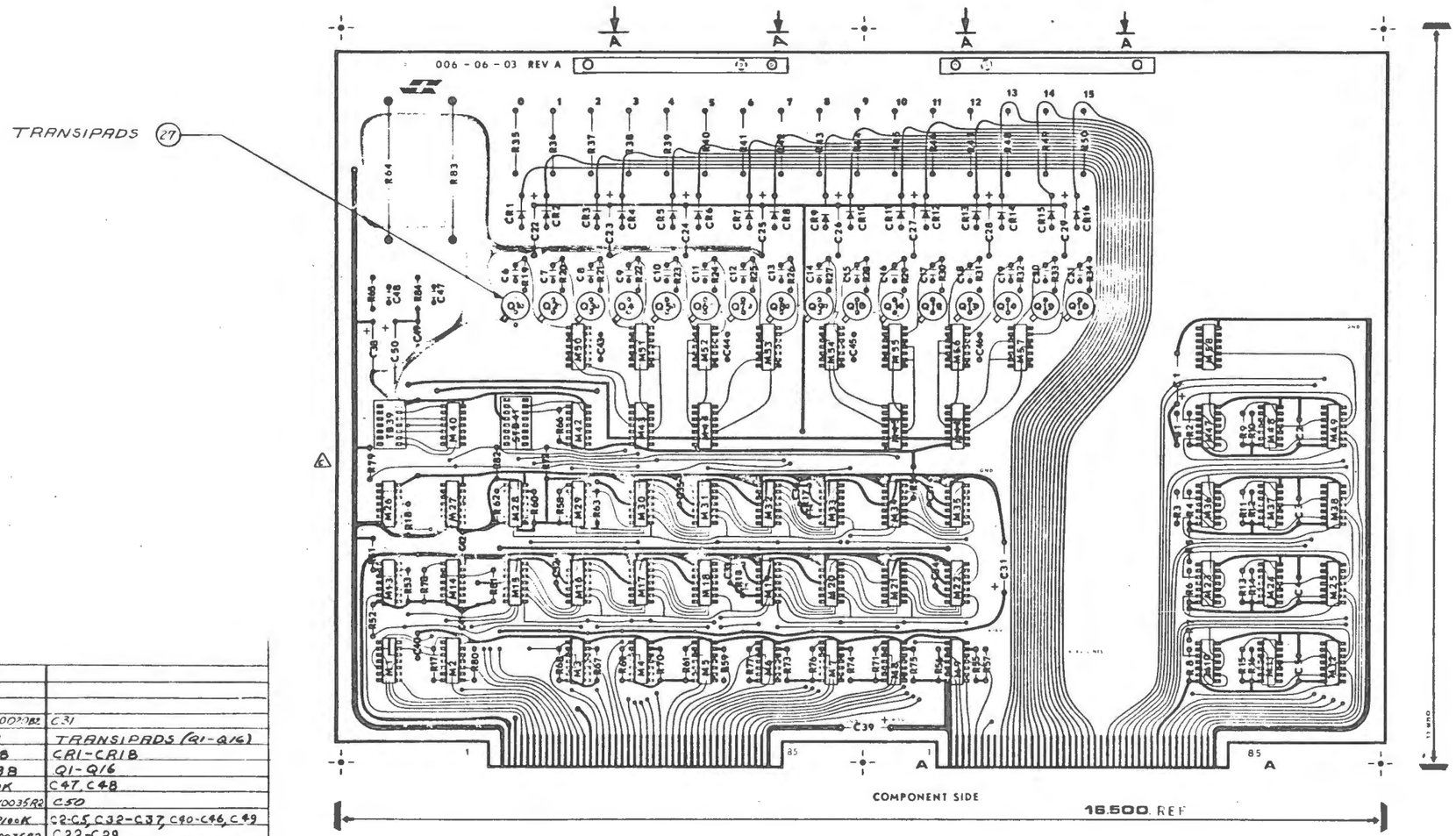
INTERNATIONAL COMPUTER TERMINALS CORP			
	MEMORY Y DRIVERS AND LOGIC		
DR	SIZE D	PC 001-06-01	DWG NO REV C
CHK			
ENG			
APPR			
MFG ASSY	SCALE	SHT 5	OF 5

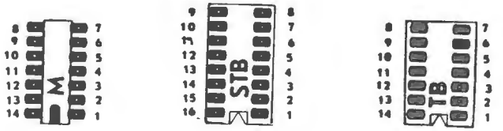

S0
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
MDSA 0
MDSA 1
MDSA 2
MDSA 3
MDSA 4
MDSA 5
MDSA 6
MDSA 7
MDSA8
MDSA9
MDSA10
MDSA11.
MDSA12
MDSA13
MDSA14
MDSA15
E1 7524
E2 7524
E3 7524
E4 7524
E5 7524
E6 7524
E7 7524
E8 7524
+5V
-5V
1Ω E38
SZ 5.6 D1
500Ω
CW
200Ω E35
-17V
STROBE
7402 E9
MPS 2369 Q1
82pf
330Ω R36
8K R37
100Ω R39
470Ω R40
NOTES:
1. SENSE LINES ARE CONNECTED TO S0 TO S15 VIA TWISTED WIRE PAIRS FROM CORE STACK.
2. PROVIDE PRINTED CIRCUIT LAND SPACING FOR FUTURE INSTALLATION OF AN R/SSD RESISTOR.
3. 2K/4K RAM STACKS REQUIRE INSTALLATION OF C26-C41
INTERNATIONAL COMPUTER TERMINALS CORP.
MEMORY STACK SENSE ELECTRONICS
001-12-02
B

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED RAT 5-15-70		
B	UPDATED/ECO 1084 6/8/71		
C	UPDATED/ECO 1199		
D	UPDATED/ECO 1298 9/23/71		
E	ECO 1293 C 10-4-71		
F	ECO 1269 1-17-71		
G	ECO 1439 11-29-71		
H	ECO 1664 11/10/71		









PIN NUMBERING AND ORIENTATION

ITEM	PARTS NO.	DESIGNATION
32	CS150D156X0020B2	C31
27	EC10123N	TRANSIPADS (Q1-Q16)
26	DSIN4148	CR1-CR16
25	TS2N5188	Q1-Q16
24	CSCD15EC681K	C47, C48
23	CS150D226X0035R2	C50
22	CSC2B0AE/P100K	C2-C5, C32-C37, C40-C46, C49
21	CS150D685X0035B2	C22-C29
20	CS10TS-T9P	C6-C21
19	CSTE1129	C1, 38, 39
18	RSRC07GF101J	R65, 84
17	RSN5-10	R64, 83
16	RSN5-2	R35-R50
15	RSRC07GF152J	R54, 55
14	RSRC07GF102J	R17, 18, 51, 81
13	RSRC07GF471J	R52, 53, R56-R63, R66-R80, 82
12	RSRC07GF330J	R19-R34
11	RSRC07GF222J	R1-R16
10	EC-75#1 TI	STB 61
9	EC-75#4 TI	TB 39
8	ICSN75324	M15-M22, M30-M35
7	ICSN74H60N	M19, 26 27, M50-M57
6	ICSN7440N	M3, 4, 5, 6, 7, 8, 13, 28, 29, 42
5	ICSN7410N	M2
4	ICSN7406N	M40, M58
3	ICSN7403N	M12, 25, 38, 49
2	ICSN7402N	M10, 11, 23, 24, 36, 37, 47, 48
1	RSN7400N	M1, 9, 14, 40, 45, 46

3. COMPONENT TERMINATING LEADS TO BE CLINCHED OR NON-CLINCHED PRIOR TO SOLDERING.
2. MAXIMUM HEIGHT OF LEAD PROTRUSIONS CLINCHED OR NON-CLINCHED TO BE .080 MAX.
△E 1. COMPONENT HEIGHT TO BE .475 MAX: INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUGS, ETC.

NOTES:

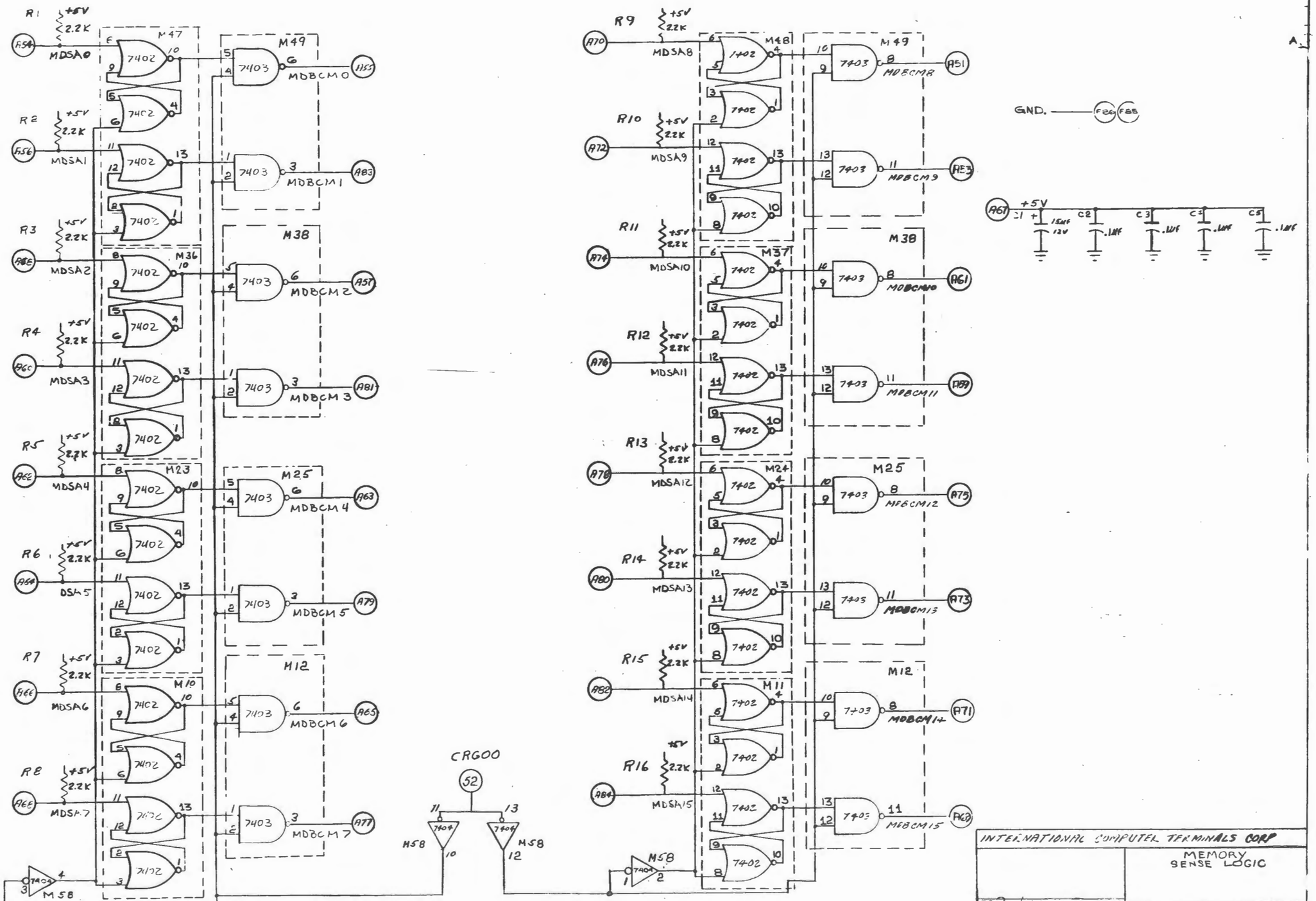
4. RESISTORS R35-R50, R64, AND R83 TO BE RELIEVED FROM BOARD BY .06

INCOTERM CORPORATION
Wayne Memorial Drive
Marlborough, Massachusetts 01752

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

DR		DATE	SIZE	P.C.	S.S.	NO.	REV
CHK		12-1-71	D	006-06-02			H
ENG		12-2-71					
APPD							
NEXT ASSY	006-10-15		SCALE	1/1	SHT 1 OF 1		

TITLE: P.C. BAD ASSY MEMORY ELECTRONICS



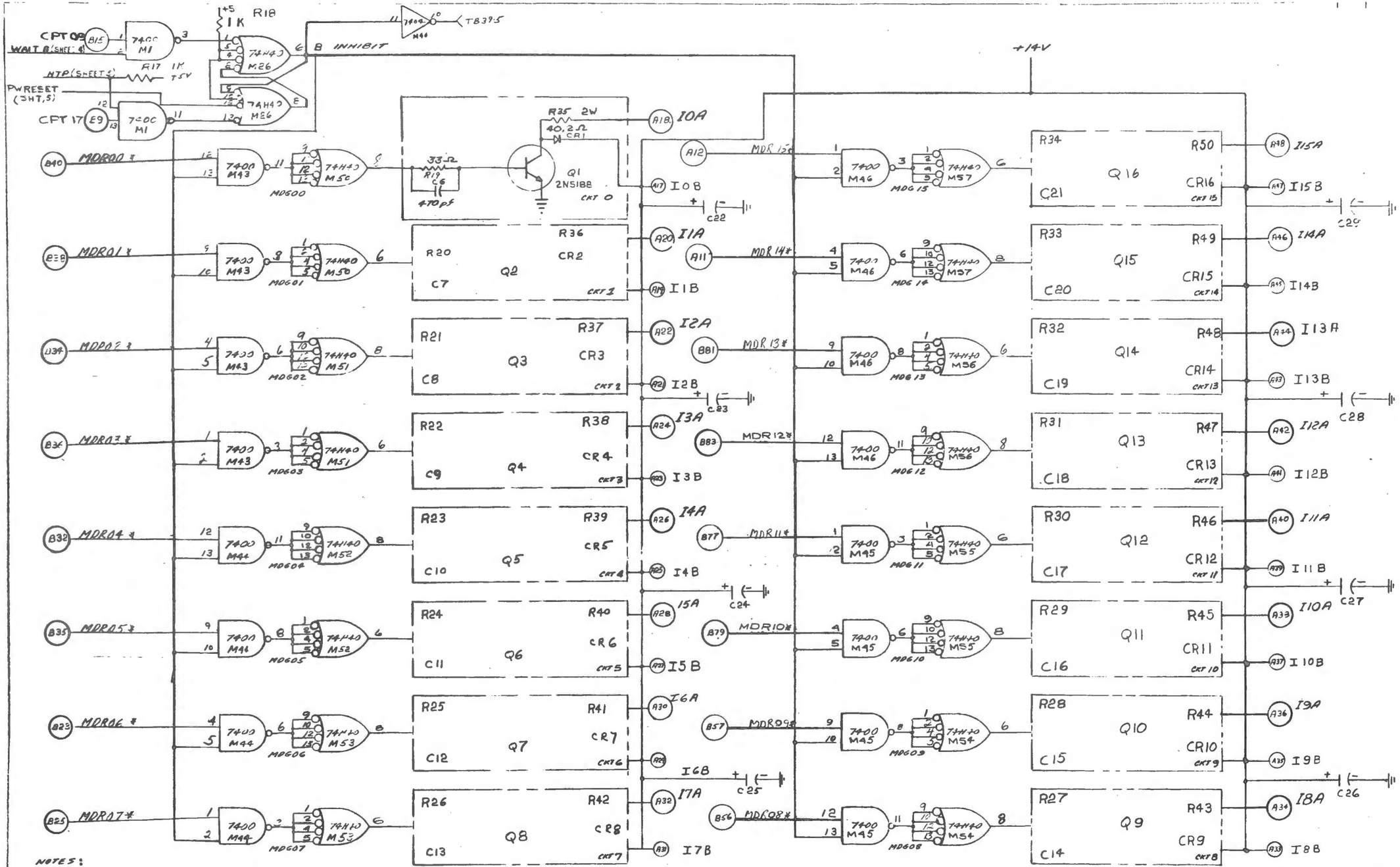
NOTE:

1. ALL RESISTORS ARE 1/4W, 5%

INTERNATIONAL COMPUTER TERMINALS CORP

MEMORY SENSE LOGIC

SIZE	FSC	55	DWG NO		REV
D	006-06-01				B
SCALE			SHT 2		5



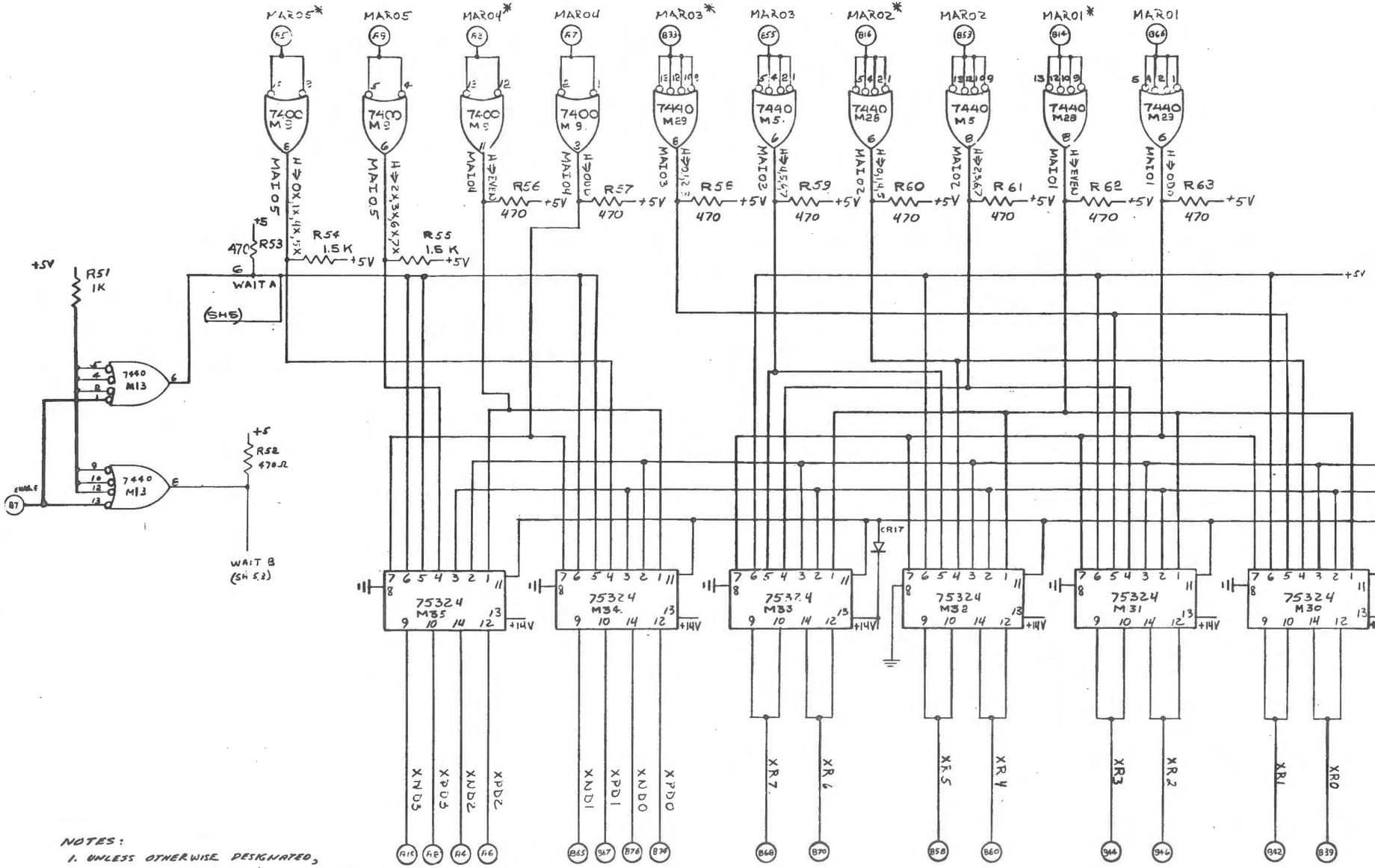
NOTES:

1. ELECTROLYTIC CAPACITORS ARE 6.8uf, 35V
2. RESISTORS ARE 1/8W ±5% UNLESS OTHERWISE NOTED.

INTERNATIONAL COMPUTER TERMINALS CORP

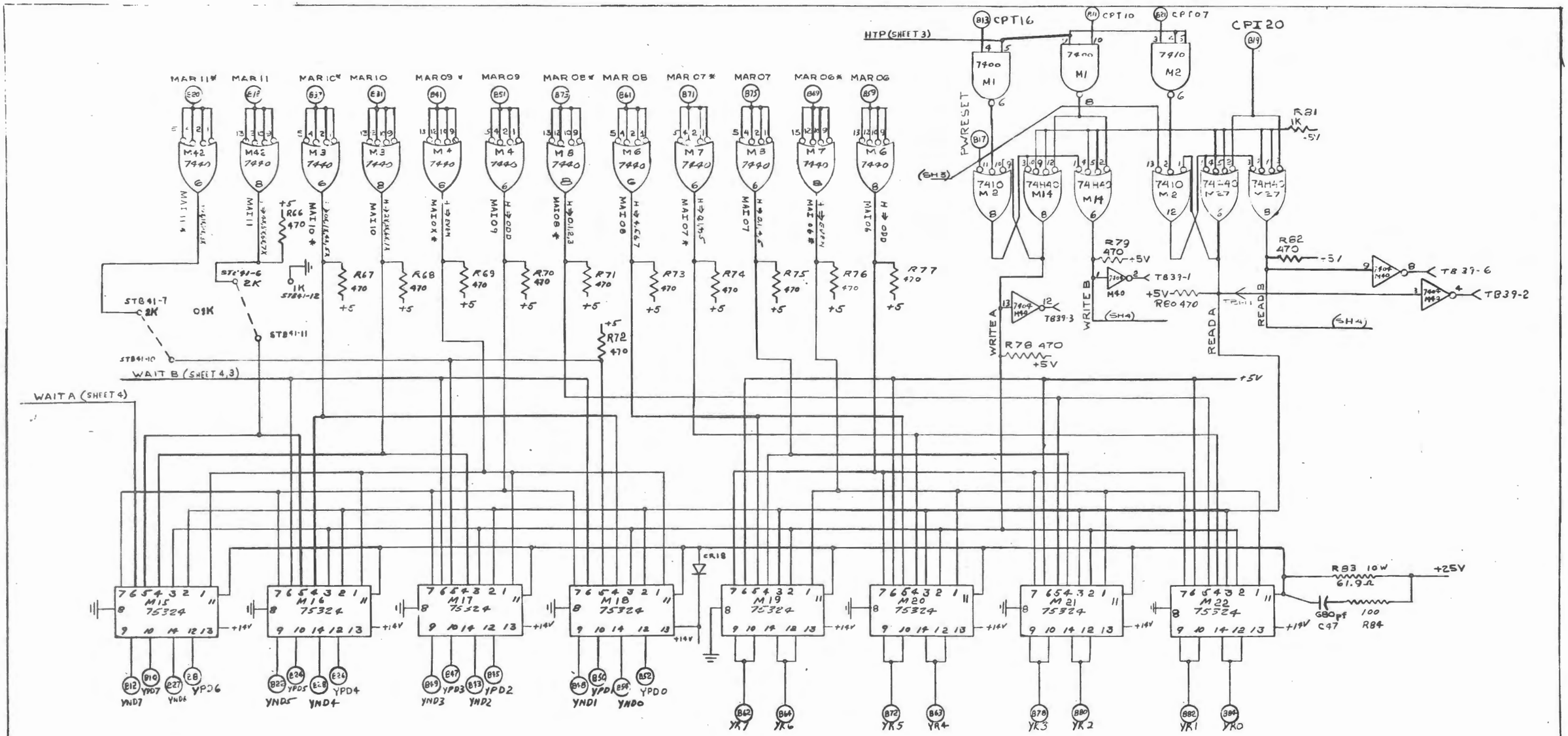
MEMORY
INHIBIT LOGIC AND DRIVERS

DES Bruce Frederick	5-21-70	SIZE	FSCM	DWG NO	REV
CHK			55	D 006-06-01	B
APPD		SCALE		SHT 8 OF 5	
NEXT ASSY					



NOTES:
1. UNLESS OTHERWISE DESIGNATED, RESISTORS ARE RC07 (1/4W, ±5% CARBON COMPOSITION)

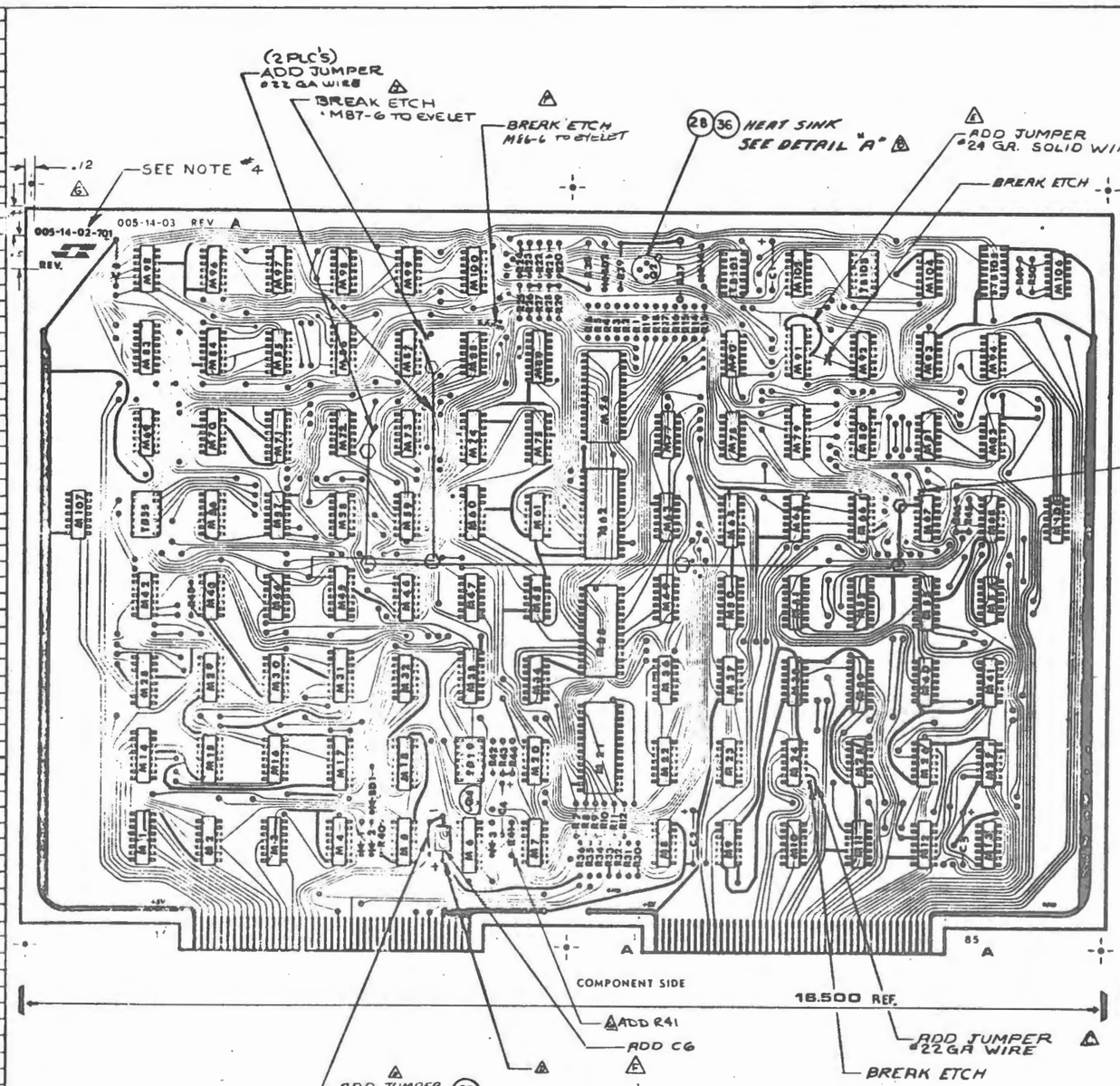
INTERNATIONAL COMPUTER TECH. CORP.		
	MEMORY X DRIVE AND LOGIC	
DR (Russ Jarbnik) 5-21-70	SIZE D	006-06-01 B
CHK		
ENG		
MFGR	SCALE	SHT 4 OF 5
NEXT ASSY		

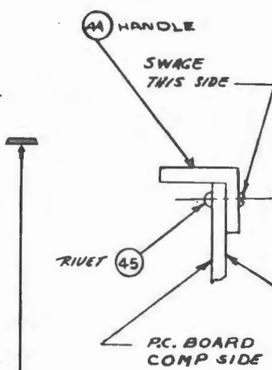


NOTE:
UNLESS OTHERWISE NOTED, RESISTORS ARE 1/4W, 5%

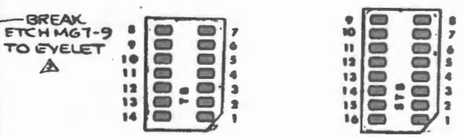
INTERNATIONAL COMPUTER TERMINALS CORP			
	MEMORY Y DRIVERS AND LOGIC		
DR Ron Anderson 6-21-76	SIZE D	PC 006-06-01	SS DWG NO B
CHK			
ENG			
APP	SCALE	SHT 5	OF 5
NEXT ASSY			

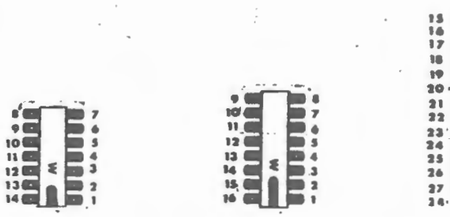
M84 - ICSN7451N			
M83 - ICSN7442N	R50 RSRC0762FB22J		
M82 - ICSN7403N	R49 ↓		
M81 - ICSN7490N	R48 RSRC0762FB02J		
M80 - ICSN7476N			
M79 - ICSN7475N	R46 RSRC0762FB02J		
M78 - ICSN7451N	R45 RSRC0762FB02J		
M77 - ICSN7854N	R44 RSRC0762FB02J		
M76 - 9001-99-01-001	R43 ↓		
M75 - ICSN7475N	R42	C1 CSTE1127	
M74 - ICSN7476N	R41	C2	
M73 - ICSN7413N	R40 RSRC0762FB02J	C3	
M72 - ICSN7854N	R39 RSRC0762FB02J	C4	
M71 - ICSN7476N	R38 RSPC0762FB47J	C5 CSTE1127	
M70 - ICSN7493N	R37 RSPC0762FB47J	C6 CSCL156CH 2N2-3	
M69 - ICSN7404N	R36 RSRC0762FB22J		
M68 - ICSN7801N	R35		
M67 - ICSN7404N	R34		
M66 - ICSN7404N	R33		
M65 - ICSN7402N	R32		
M64 - ICSN7475N	R31		
M63 - ICSN7451N	R30		
M62 A001-99-01-002	R29		
M61 - ICSN7826	R28	BD1 DSS23.3	
M60 - ICSN7855N	R27	BD2 DSS2C3	
M59 - ICSN7404N	R26		
M58 - ICSN7860N	R24		
M57 - ICSN7400N	R23		
M56 - ICSN7855N	R22		
T855 EC6384-215-5	R21		
M54 - ICSN7801N	R20		
M53 - ICSN7404N	R19		
M52 - ICSN7476N	R18		
M51 - ICSN7404N	R17		
M50 - ICSN7855N	R16		
M49 - ICSN7851N	R15	CR1 - DSIN914	
M48 - ICSN7826	R14	CR2 ↓	
M47 - ICSN7851N	R13	CR3	
M46 - ICSN7800N	R12	CR4 DSIN914	
M45 - ICSN7476N	R11		
M44 - ICSN7400N	R10		
M43 - ICSN7402N	R9		
M42 - ICSN7402N	R8		
M41 - ICSN7400N	R7		
M40 - ICSN7404N	R6		
M39 - ICSN7402N	R5		
M38 - ICSN7400N	R4		
M37 - ICSN7805N	R3		
M36 - ICSN7855N	R2	Q1 TSMP56531	
M35 9001-99-01-001	R1 RSRC07GFB22J	Q2 TS2N5088	
M34 - ICSN7826			
M33 - ICSN7476N			
M32 - ICSN7808N			
M31 - ICSN7476N			
M30 - ICSN7408N			
M29 - ICSN7402N			
M28 - ICSN7475N			
M27 - ICSN7402N			
M26 ICSN7402N			
M25 ICSN7402N			
M24 - ICSN7432N	M103 - ICSN7404N		
M23 - ICSN7458N	M104 - ICSN7404N		
M22 - ICSN7451N	M105 - ICSN7451N		
M21 9001-99-01-002	STB105 EC6382-215-5		
M20 - ICSN7855N	M106 - ICSN7420N		
T813 EC6382-215-5	T8103 EC6382-215-5		
M18 - ICSN7476N	M107 - ICSN7402N		
M17 - ICSN7832N	T8101 EC6382-215-5		
M16 - ICSN7820N	M100 - ICSN7420N		
M15 - ICSN7830N	M101 - ICSN7420N		
M14 - ICSN7855N	M102 - ICSN7420N		
M13 - ICSN7402N	M108 - ICSN7420N		
M12 - ICSN7402N	M109 - ICSN7830N		
M11 - ICSN7851N	M110 - ICSN7493N		
M10 - ICSN7808N	M111 - ICSN7493N		
M9 - ICSN7858N	M112 - ICSN7493N		
M8 - ICSN7855N	M113 - ICSN7420N		
M7 - ICSN7860N	M114 - ICSN7476N		
M6 - ICSN7876N	M115 - ICSN7404N		
M5 - ICSN7823N	M116 - ICSN7404N		
M4 - ICSN7409N	M117 - ICSN7409N		
M3 - ICSN7808N	M118 - ICSN7402N		
M2 - ICSN7808N	M119 - ICSN7476N		
M1 - ICSN7475N	M120 - ICSN7404N		





HANDLE ASSEMBLY





PIN NUMBERING AND ORIENTATION

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 4-15-71 RAT		
B	UPDATED/ECO 1089 6/10/70		
C	UPDATED/ECO 1075 7/14/70		
D	UPDATED/ECO 1108 7/27/70		
E	UPDATED/ECO 1129 8/14/70		
F	UPDATED/ECO 1171 9/4/70 ADDED C6 & SOLDER ETCH		
G	UPDATED/ECO 1199 ADDED NOTE 6 10-23-70 RAE		
H	ECO 1269 1-19-71		
J	UPDATED/ECO 1340 8/13/71		
K	ECO 1366 C 3-8-71		
L	REVISED, ECO 1451 5/19/71		

5 ALL JUMPER WIRES TO BE FASTENED TO BOARD USING ITEM 53, 17 PLCS MARKED (◯)

6 4. MARK WITH $\frac{1}{8}$ IN VERTICAL GOTHIC (BLACK) AS SHOWN.

3. COMPONENT TERMINATION LEADS TO BE CLINCHED OR NON CLINCHED PRIOR TO SOLDERING.
2. MAXIMUM HEIGHT OF LEAD PROTRUSIONS CLINCHED OR NON-CLINCHED TO BE .080 MAX.
1. COMPONENT HEIGHT TO BE .400 MAX: INCLUDING SHEILD COVERS, TEST SOCKETS WITH EXTERNAL PLUGS, ETC.

NOTES:

INTERNATIONAL COMPUTER TERMINALS CORP.

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

DR	DATE 4-15-71	TITLE	TOP ASSY P.C. BOARD R.M.T.U. 701
CHK		SIZE D	P.C. 005-14-02
ENG		S.S.	NO. REV 4
APPD		NEXT ASSY 005-10-15	SCALE 1:1 SHT 1 OF 2

E15 CPT 13 FROM I.U.

M29 CPIRM13 7404

M29 CPIRM13 74C4

E5 FUNCO 1
L=ENABLE REFRESH

M107 FUI01 7404

B18 ADDXX

M29 ADIAT 7404

B33 FUNCO 2
L=DISABLE REFRESH

M107 FUI02 7404

B44 FUNCOO
L=LOAD START LINE

M57 FUI00 7404

B20 FUNCO 3
H=ENABLE CURSOR

1KΩ ¼W 5% 5V
R48

STB 105-3

7472
M43
RFGEN
CLEAR

STB105-1

DISPLAY (SH2)

M57 SYSRT 7404

RESET 7420 M16

B34 RESET FROM CPU

M29 FUNO3 7404

M56
7472
CRENAB

CUSOO (SH13)
L=STOP CURSOR

B38 CCG56 (SH11)
H=CHAR COUNT=52

SDSI11 (SH10)
H SEG COUNT=5

DIGST (SH4)
H=START DISPLAY

B56 CPT 14

LSG77 (SH5)

RFGEN (SH2)

SDII5 (SH10)

SDOIO (SH10)

TUIC5 (SH9)
H=0≤CHAR COUNT<64

SDIG (SH10) H=SEG 6

RMSCA1 (SH3)
H=VECTOR TO CCR

CPI55 (SH6)

SDCIC (SH10)
H=SEGMENT 0

SDISI11 * (SH10)

SDDO7 (SH10)
L=SEGMENT 7

IDI (SH10)
H=INTERLACE

DISPLAY M31 7476

VECTOR M31 7476

M30 DIG82 7410

M44 DIG81 7400

M44 DIG84 7400

M44 REG8C 7400

M44 REG81 7400

M30 REG82 7410

M59 REG83 7400

M30 STG70 7410

M57 STG80 7404

SHEET 4 STRO 0 → STRO 4

REFREQ M45

REFSIG M45

TB65-5

B54 REFREQ

L=REFRESH TO CPU

B52 REFREQ *

TO CPU CONTROL BOARD

BRIGHT (SH6)

H=REFRESH SIGNAL TO CPU

B49 REFSIG

B50 REFSIG *

TO CPU CONTROL BOARD

RMGCL (SH8)

TB19-12

TB55-11

REV 10

REFRESH MODULE DISPLAY CONTROL/START AND LAST LINE CONTROL

D 005-14-01

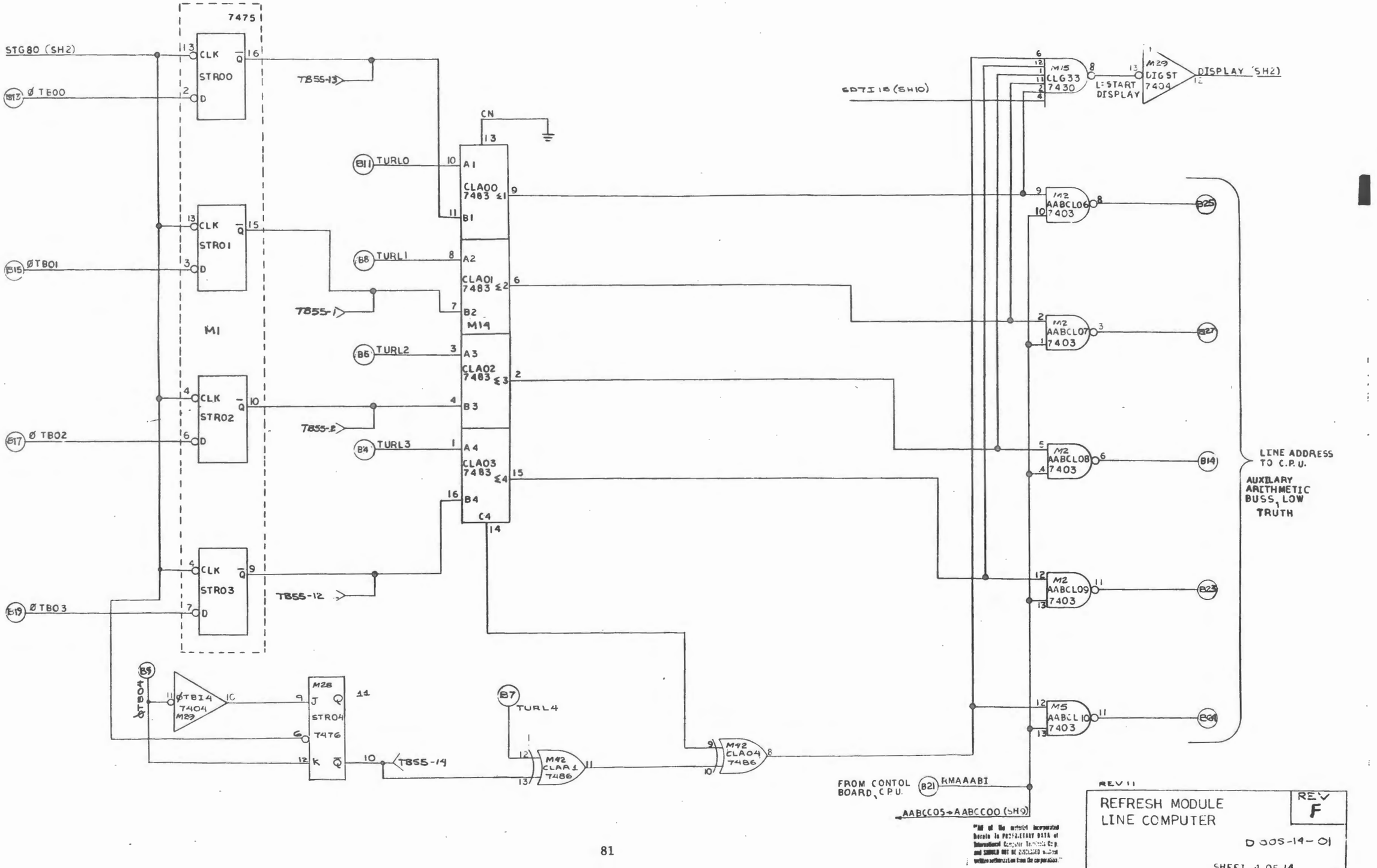
SHEET 2 OF 14 REV F

REV G

REFRESH MODULE
STATE CONTROL

D 005-14-01 REV F

SHEET 3 OF 14



REV H

REFRESH MODULE
LINE COMPUTER

REV F

D 005-14-01

SHEET 4 OF 14

CHARACTER DATA FROM C.P.U. HI=TRUE

ARB00 — M33 CCI00 7404 — M32 CCI10 7404 — CCG17 (SH5), CCG00 (SH5)

ARB01 — M4 CCI01 7404 — M9 CCI11 7404 — CCG01 (SH5), CCG16 (SH5)

RMSCC1 X (SH3)

ARB02 — M4 CCI02 7404 — M9 CCI12 7404 — CCG17 (SH5), CCG02 (SH5)

ARB03 — M4 CCI03 7404 — M9 CCI13 7404 — CCG16 (SH5), CCG03 (SH5)

ARB04 — M3 CCI04 7404 — M3 CCI14 7404 — CCG17 (SH5), CCG04 (SH5)

ARB05 — M3 CCI05 7404 — M3 CCI15 7404 — CCG16 (SH5), CCG05 (SH5)

ARB06 — M3 CCI06 7404 — M3 CCI16 7404 — CCG17 (SH5)

ARB07 — CCG16 (SH5)

RMGCL (SH3)

M67 ENDIGR 7400

7442 M17

M16 7420

BBI00 7404 M32

BBI00 7404 M32

CTU99 (SH3)

M18 BLINK 74176 — BLKRST (SH3), TB19-1

CCG16 (SH5), CCG05 (SH5)

CCD11 7486 M42 — L=NON DISPLAY CHAR.

CCG17 (SH5)

STB105-5, STB106, JUMPER, STB105-11

M59 CCD13 7400 — VPS2

M8 CCD12 7410 — H=NON DISP

M88 CCI13 7404 — L=SPACE — TB19-8

CUR BK (SH12) L=CURSOR

M32 SID10 7404 — RMSCA1 (SH3), RMSCC1 (SH3)

M32 SOD10 7404 — RMSCC1 (SH3)

M73 LSGTT 7402 — DISPLAY (SH2)

SDI0 (SH10), ARB07 (SH5) — CCG16 7454 M58

SDI2 (SH10), CCI15 (SH5)

SDI4 (SH10), CCI13 (SH5)

SDI6 (SH10), CCI11 (SH5)

RMSCA1 (SH3) H=VECTOR TO CCR

C15 CCG10 7451 M47

RMSCA1 X (SH3) H=CODE TO CCR

CCR00 (SH7), CCR30 (SH7)

CCI10 (SH5) — M46 CCG00 7400 — CCR01 (SH7), CCR31 (SH7)

CCI11 (SH5) — M46 CCG01 7400 — CCR02 (SH7), CCR32 (SH7)

CCI12 (SH5) — M46 CCG02 7400 — CCR03 (SH7), CCR33 (SH7)

CCI13 (SH5) — M46 CCG03 7400 — CCR04 (SH7), CCR34 (SH7)

CCI14 (SH5) — M59 CCG04 7400 — CCR05 (SH7), CCR35 (SH7)

CCI15 (SH5) — M73 CCG05 7402

CCG17 7454 M72

CCI16 (SH5), CCI14 (SH5), CCI12 (SH5), CCI10 (SH5)

RMSCA1 (SH3) H=VECTOR TO CCR

CCG15 7451 M47

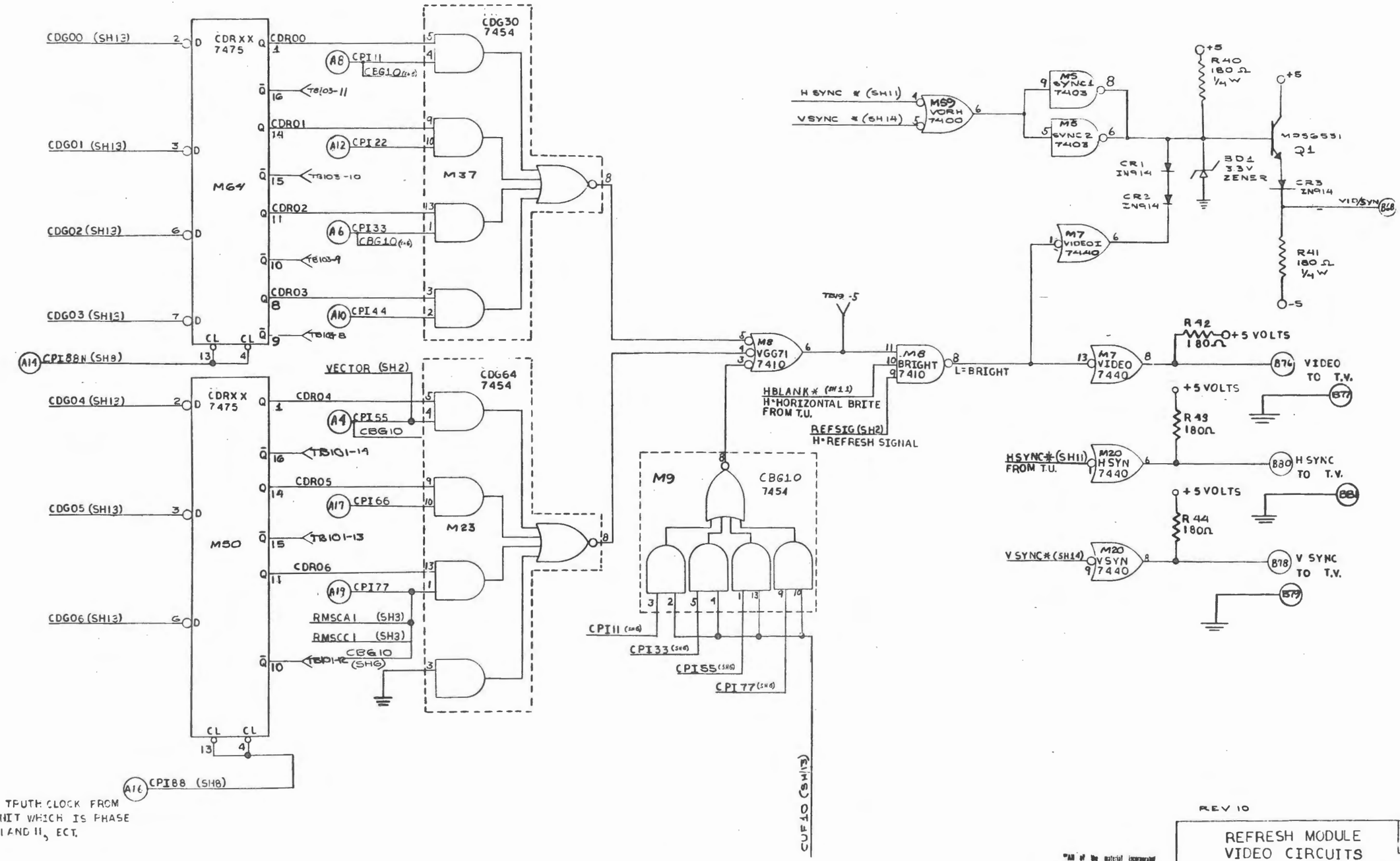
RMSCA1 X (SH3) H=CODE TO CCR

REFRESH MODULE
CHARACTER CODE TRANSULATE

D-005-14-01.

REV F

SHEET 5 OF 14



NOTES:
1. CPIXX HI TRUTH CLOCK FROM TIMING UNIT WHICH IS PHASE 0 AND 10, 1 AND 11, ECT.

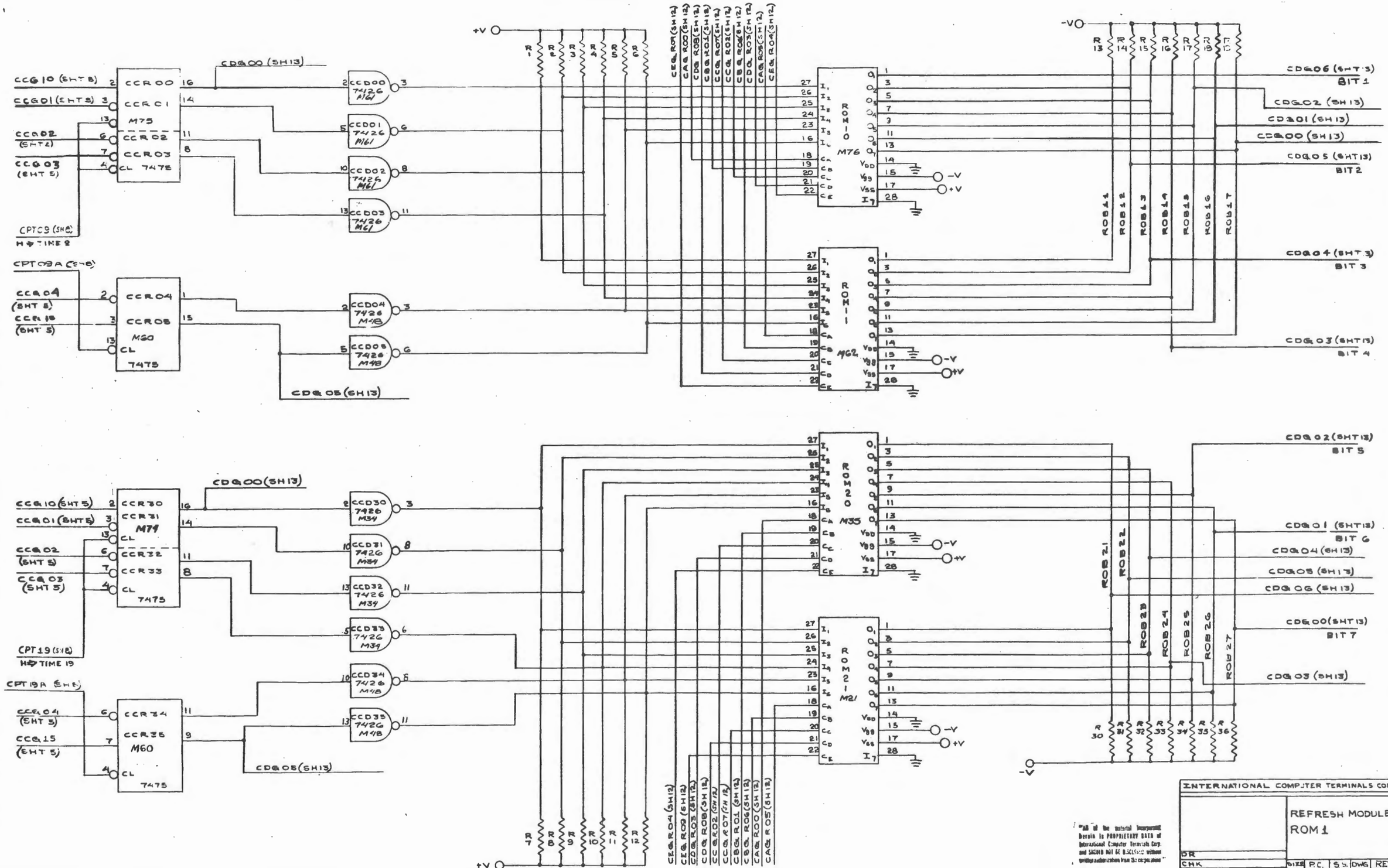
REV 10

REFRESH MODULE
VIDEO CIRCUITS

REV F

D 005-14-01

SHEET 6 OF 14


CCG10 (SHT 8)
CCG01 (SHT 8)
CCG02 (SHT 8)
CCG03 (SHT 5)
CPTC9 (SH8)
H⇒TIME 2
CCR00
CCR01
M75
CCR02
CCR03
CL 7475
CDG00 (SH13)
CCD00 7426 M61
CCD01 7426 M61
CCD02 7426 M61
CCD03 7426 M61
CPTC9A (SH8)
CCG04 (SHT 8)
CCR15 (SHT 5)
CCR04
CCR05
M60
CL 7475
CCD04 7426 M48
CCD05 7426 M48
CDG05 (SH13)
+V
R 7
R 8
R 9
R 10
R 11
R 12
CEG R04 (SH12)
CEG R03 (SH12)
CDG R05 (SH12)
CDG R06 (SH12)
CBG R02 (SH12)
CCG R01 (SH12)
CBG R01 (SH12)
CBG R06 (SH12)
CAG R00 (SH12)
CAG R05 (SH12)
ROM 0 M76
ROM I M62
-V
+V
R 13
R 14
R 15
R 16
R 17
R 18
R 19
ROB 11
ROB 12
ROB 13
ROB 14
ROB 15
ROB 16
ROB 17
CDG06 (SHT 5) BIT 1
CDG02 (SH13)
CDG01 (SH13)
CDG00 (SH13)
CDG05 (SHT 13) BIT 2
CDG04 (SHT 3) BIT 3
CDG03 (SHT 13) BIT 4
CCG10 (SHT 5)
CCG01 (SHT 5)
CCG02 (SHT 5)
CCG03 (SHT 5)
CPT19 (SH8)
H⇒TIME 19
CCR30
CCR31
M79
CCR32
CCR33
7475
CDG00 (SH13)
CCD30 7426 M34
CCD31 7426 M34
CCD32 7426 M34
CCD33 7426 M34
CPT19A (SH8)
CCG04 (SHT 5)
CCG15 (SHT 5)
CCR34
CCR35
M60
7475
CCD34 7426 M48
CCD35 7426 M48
CDG05 (SH13)
ROM 2 M35
ROM 2 M21
ROB 21
ROB 22
ROB 23
ROB 24
ROB 25
ROB 26
ROB 27
R 30
R 31
R 32
R 33
R 34
R 35
R 36
CDG02 (SHT 13) BIT 5
CDG01 (SHT 13) BIT 6
CDG04 (SH13)
CDG05 (SH13)
CDG06 (SH13)
CDG00 (SHT 13) BIT 7
CDG03 (SH13)
"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"
INTERNATIONAL COMPUTER TERMINALS CORP
REFRESH MODULE
ROM 1
DR
CHK
ENG
APP'D
NEXT ASSY.
SIZE P.C. S.S. DWG. REV
D 005-14-01 F
SCALE SHT. 7 OF 14

20 PHASE CLOCK
TIMING UNIT

D 005-14-01

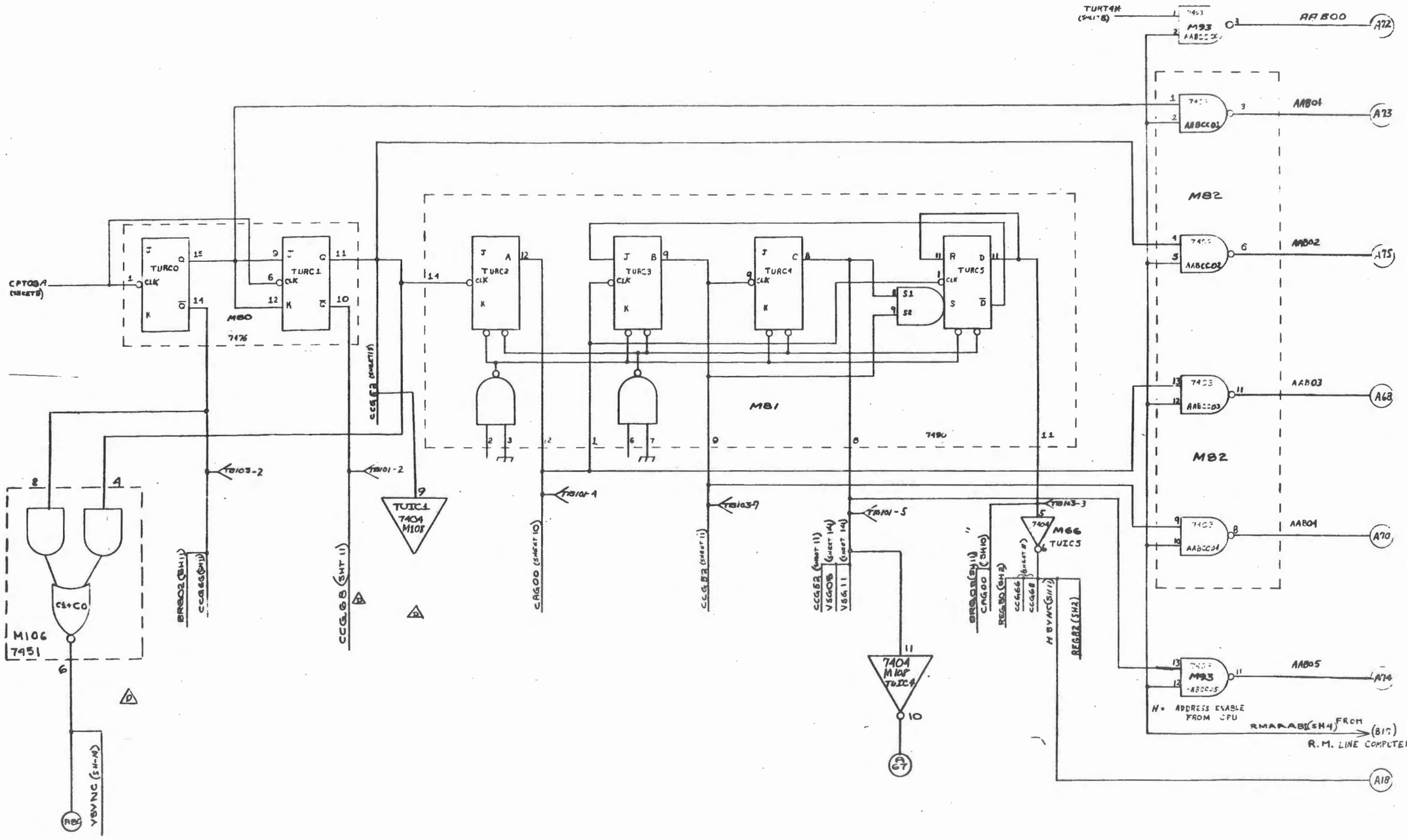
SHEET 8 of 14

REV F

REV 9

NOTES: R51 AND R52 STYLE RC07, 470Ω, 5% 1/4W
C61 CERAMIC DISC 820PF
CRYSTAL IS CLARK MODEL CL60. CRYSTAL CASE TYPE IS HC-18

HI TRUTH CLOCKS TO SYSTEM



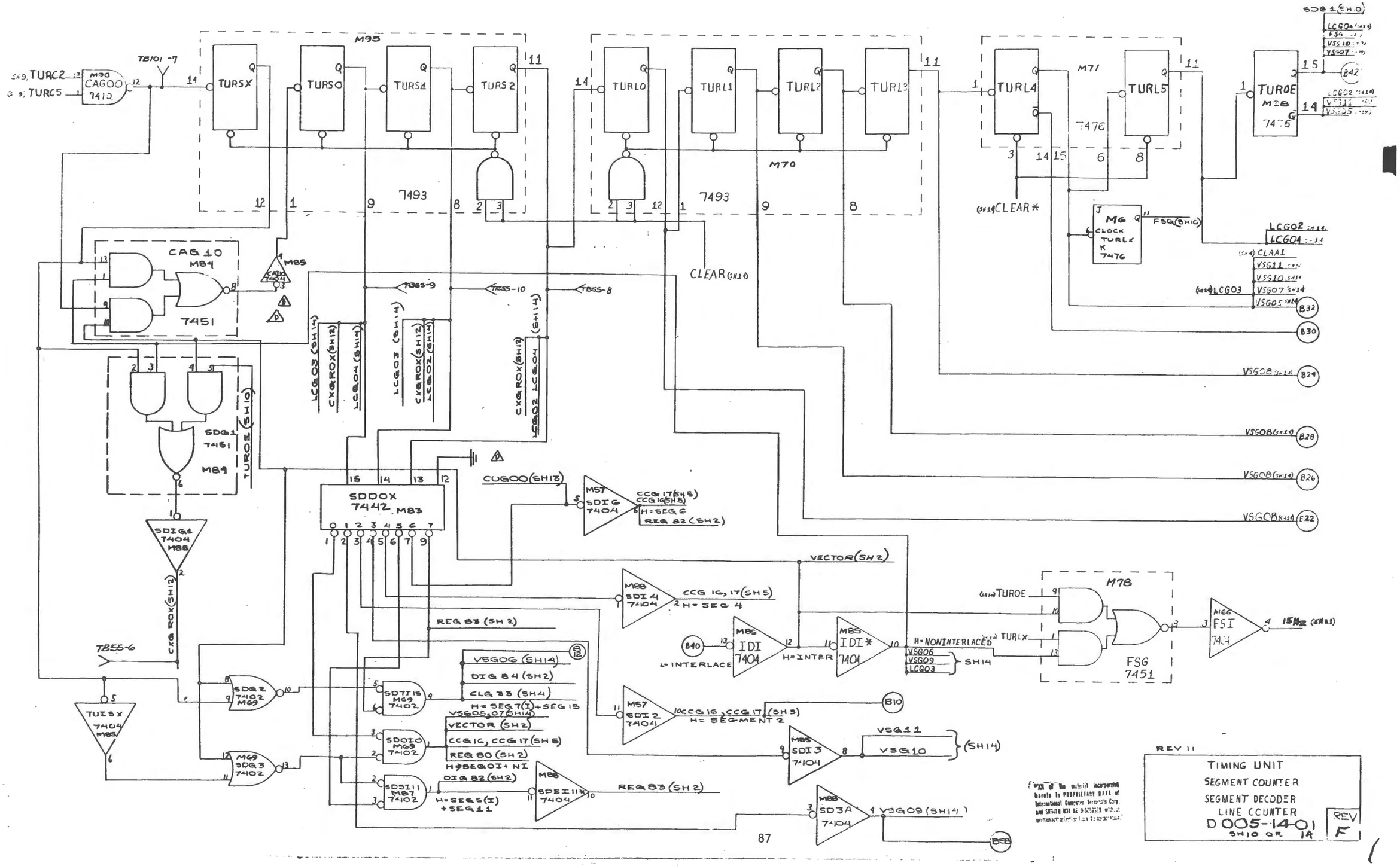
REV G

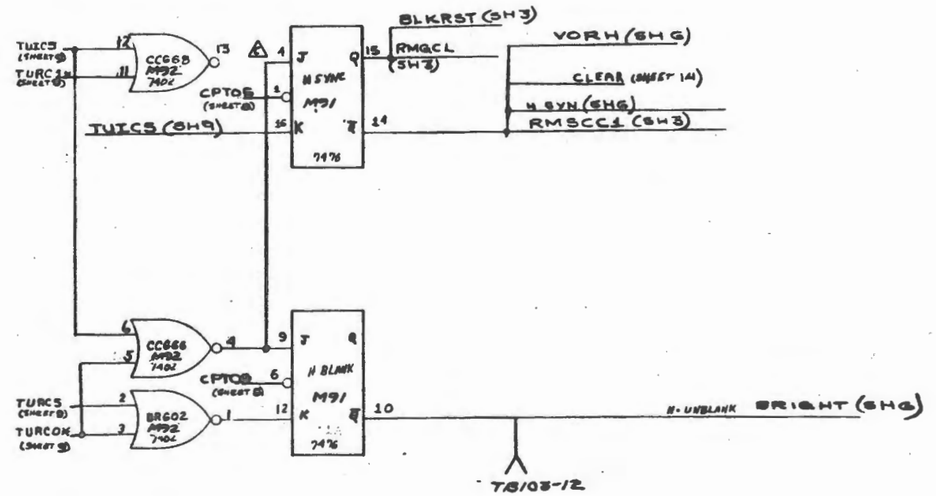
CHARACTER COUNTER TIMING UNIT

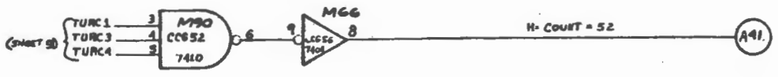
D 005-14-01

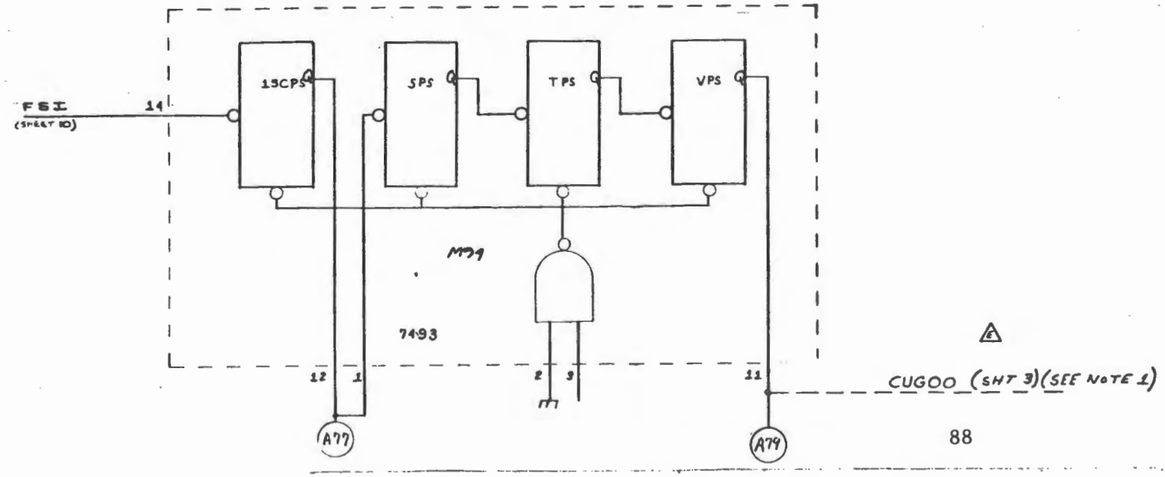
SHEET 9 of 14

REV F









NOTE:
1 FOR ASSY 005-14-02-702 ONLY (BLINKING CURSOR)

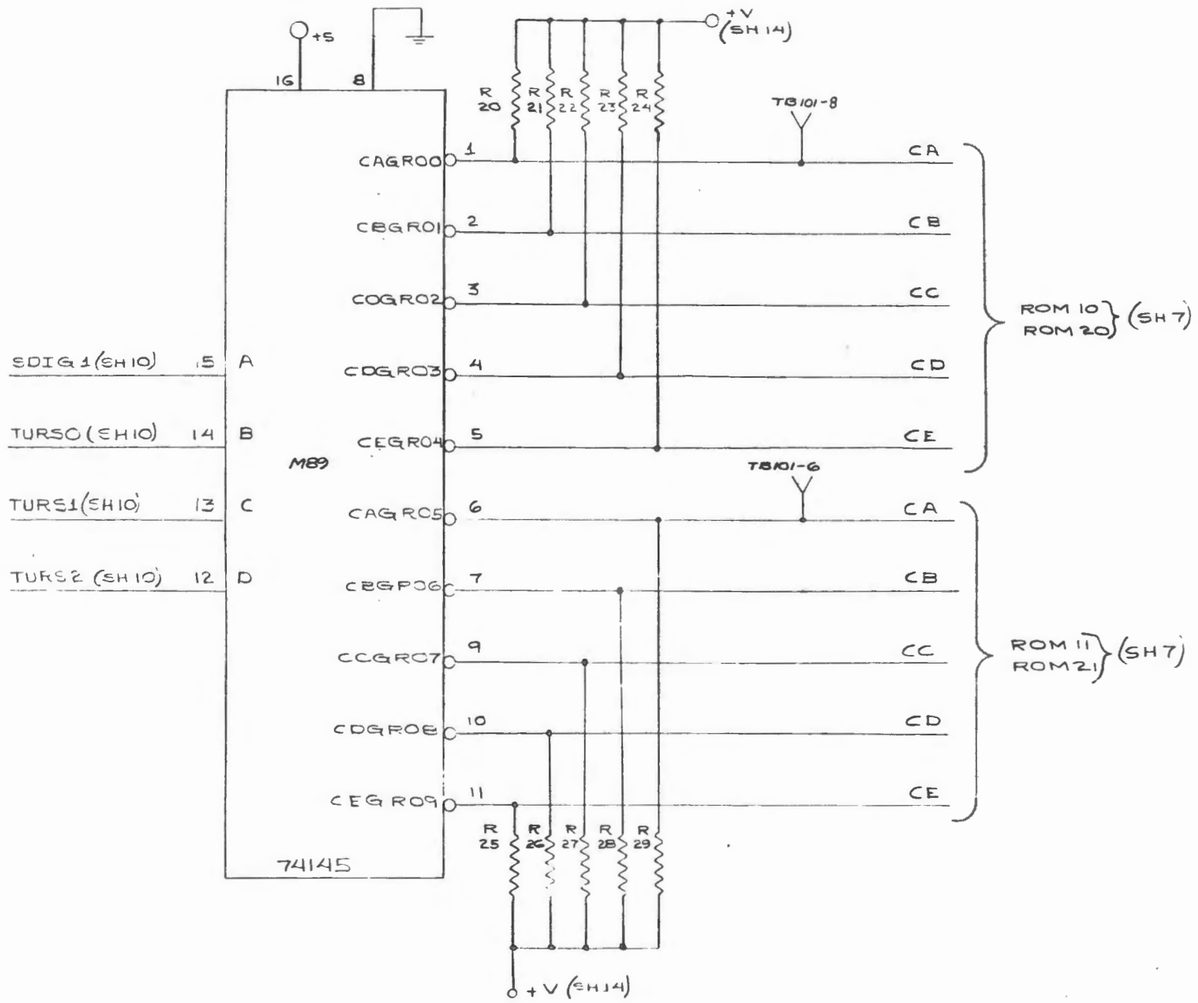
REV E

TIMING UNIT
CHAR. COUNTS
HORIZ SYNC. AND BLANKING

REV F

D 005-14-01

SHEET 11 of 14



INTERNATIONAL COMPUTER TERMINALS CORP.

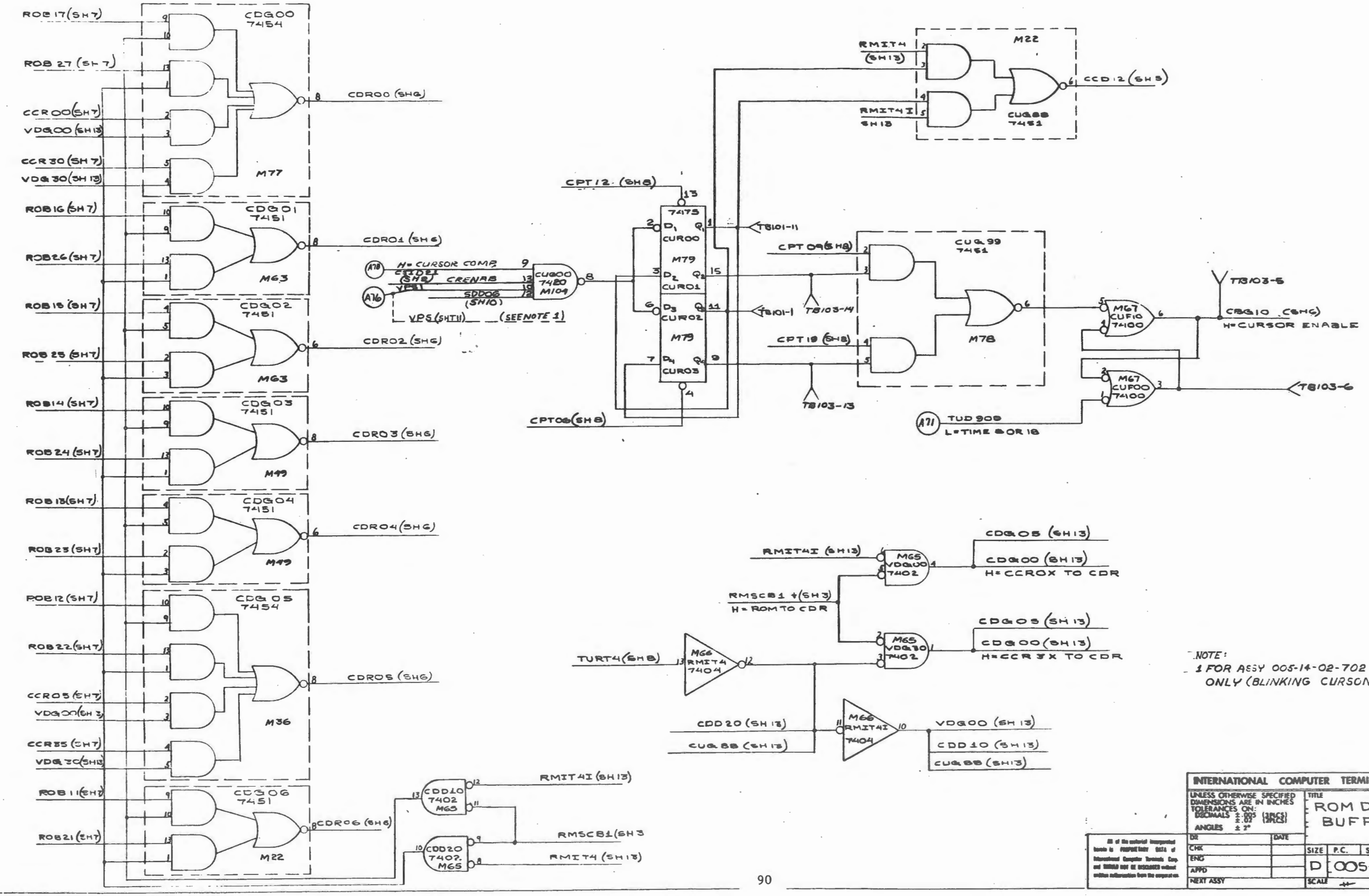
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS ± .005 (3PLCS) ± .02 (2PLCS)
ANGLES ± 2°

TITLE: REFRESH MODULE LINE SELECTION

	DR	DATE
	CHK	
	ENG	
	APPD	
	NEXT ASSY	

SIZE	P.C.	S.S.	NO	REV
D	005-14-01			F

SCALE — SHT 12 OF 14

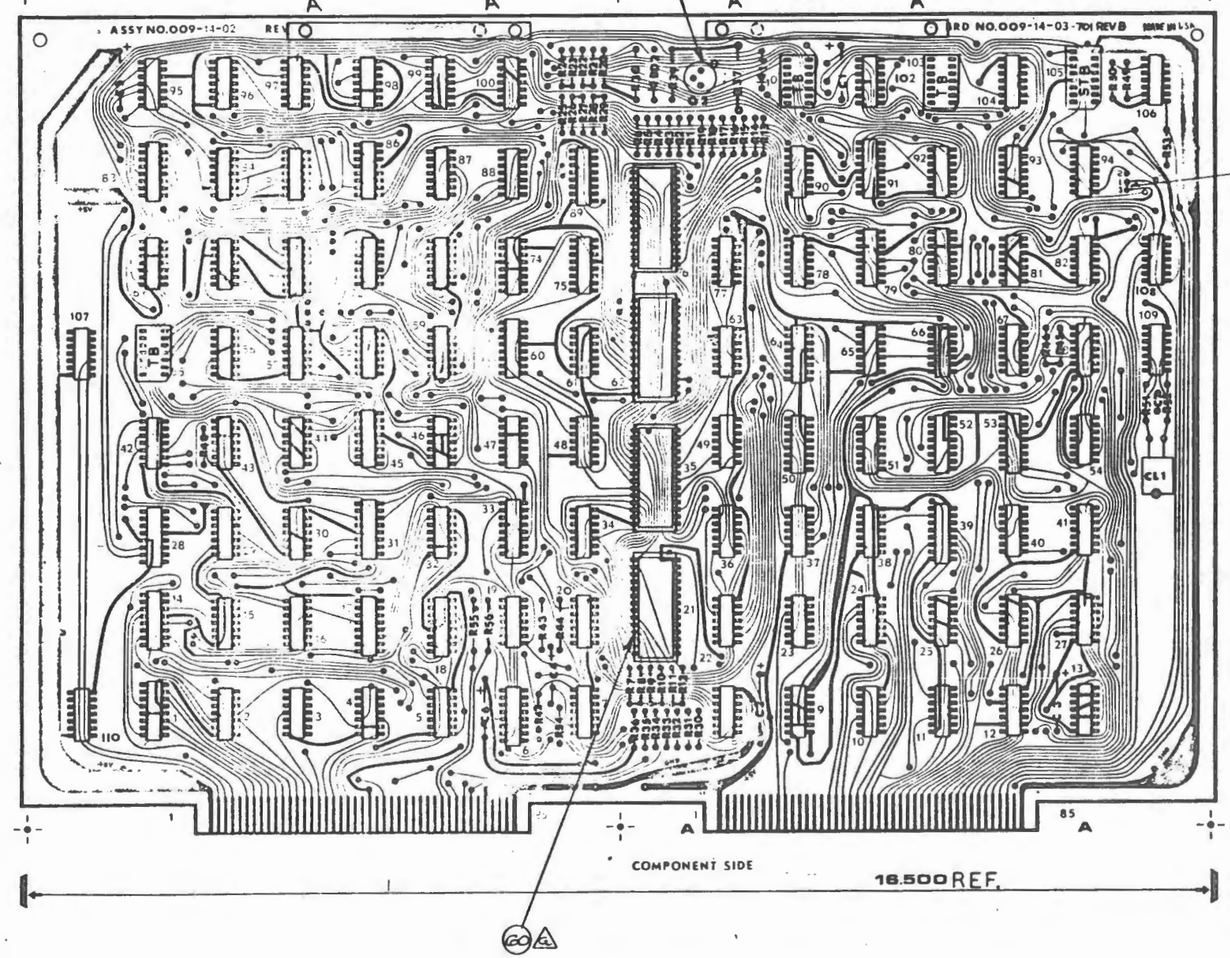


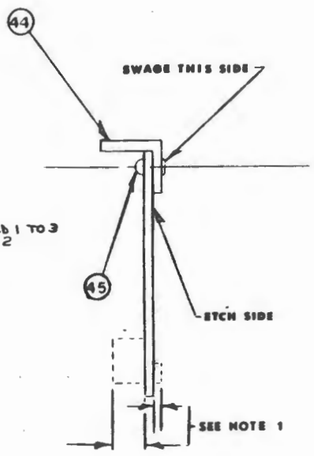
INTERNATIONAL COMPUTER TERMINALS CORP.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ± .02 (2PLCS) ANGLES ± 2°	TITLE: ROM DATA BUFFER
DR / DATE	SIZE: D | P.C. | S.S. | NO.: 005-14-01 | REV: F
CHK	
ENG	
APPD	
NEXT ASSY	SCALE: — | SHT 13 OF 14

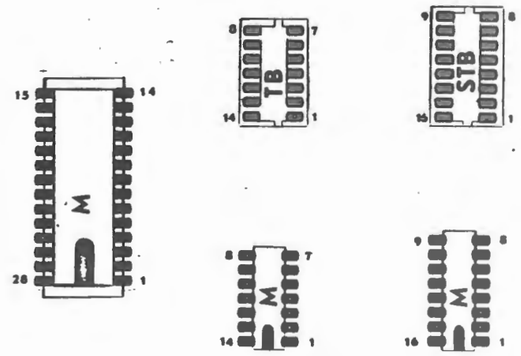
TURC4 (SH9)
TURC5*(SH10)
IDI* (SH10)
(SH10) SDTI15
TUROE (SH.3)
(SHEET 3) TURL3
(SHEET 10) TURL2
(SHEET 10) TURL1
(SHEET 10) TURL0
(SH10) SDIA
SDI3 (SH10)
M96 VSG05 7420
M97 VSG06 7410
M97 VSG07 7410
M96 VSG08 7420
M98 VSG09 7410
M98 VSG10 7410
M99 VSG11 7400
VSG03 7410 M97
VSG04 7410 M98
TB55-7
TB55-A
M88 VSI01 14-4
C1+C0 (SH7)
M87 VSG01 7402
M86 V SYNC 7476
VSYN(SH9)
VORH (SH9)
TURL 3
TURS2 (SH10)
TURS1 (SH10)
TB55-3
M100 LCG02 7420
M99 LCG03 7420
M100 LCG04 7420
LCG01 7410 M90
(SHEET 10) TURS0
(SHEET 10) TUROE
H SYNC* (SHEET 11)
CLEAR M86 7476
TURS0-S3(SH10)
TURL1 (SHEET 10)
TURL3 (SHEET 10)
GROUND
+5V SUPPLY
+5 TO LOGIC
GROUND TO LOGIC
C01
C02
C5
C3
+25V B73
+25V B74
+5
CR14 IN914
R37 47Ω 2W 5% CARBON
R39 430Ω ½W 5% CARBON
+V TO SH7
+V TO SH12
Q2
R38 1500Ω ½W 10% CARBON
BD2 18V 1W ZENER SHAVER
-13.5V B45
-13.5V B46
-V TO SH7
C6
-5V F70
-5V B69
-5 TO SH6
C04

TIMING UNIT
V SYNC AND CLEAR
D 005-14-01
REV F
SHEET 14 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD
F	REVISED/ECO 1508 7/15/71		
G	REVISED/ECO 1661		





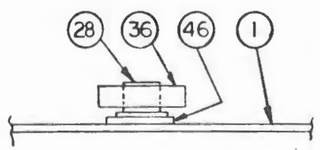


PIN NUMBERING AND ORIENTATION

60	28 PIN SOCKET
57	R43,44,55,56
56	R42, 54
55	
54	CL1
53	R51, 52
52	C7
51	C6
46	TRANSIPAD
43	STB 105
42	TB 55, 101, 103
41	M21, 62
39	BD2
38	R45,46,48,49,50,53
37	R38
36	HEAT SYNC
35	C1 THRU C5
34	
33	R39
32	R37
31	R1 THRU R36
29	CR14
28	Q2
26	M35,76
25	M34,48,61
24	M89
23	M70,94,95
22	M81
21	M42
20	M14
19	M51,52
18	M6,18,28,31,33,45,53,71, 80,86,91
17	M1,50,60 & 4,74,75,79
16	M43,56
15	M9,23, 36,37,58,72,77
14	M22,47,49,63,78,84,106
13	M17,39,83
12	M19, 20, 38
11	M7
10	M15
9	M5,16,96,99,100,104
8	M8,30,90,97,98
7	M3,4,10,11,29,32,57,66, 85,88,107,108,109
6	M2,82,93,110
5	M12,13,24,25,26,27,40, 65,69,73,87,92,102
4	M41,44,46,54,59,67,68
ITEM NO.	REFERENCE DESIGNATION

NOTE:

1. **HEIGHT LIMITATIONS.**
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. FASTEN WIRE ITEM 59 WITH SOLDER TO PADS MARKED 1 AND 3



DETAIL A

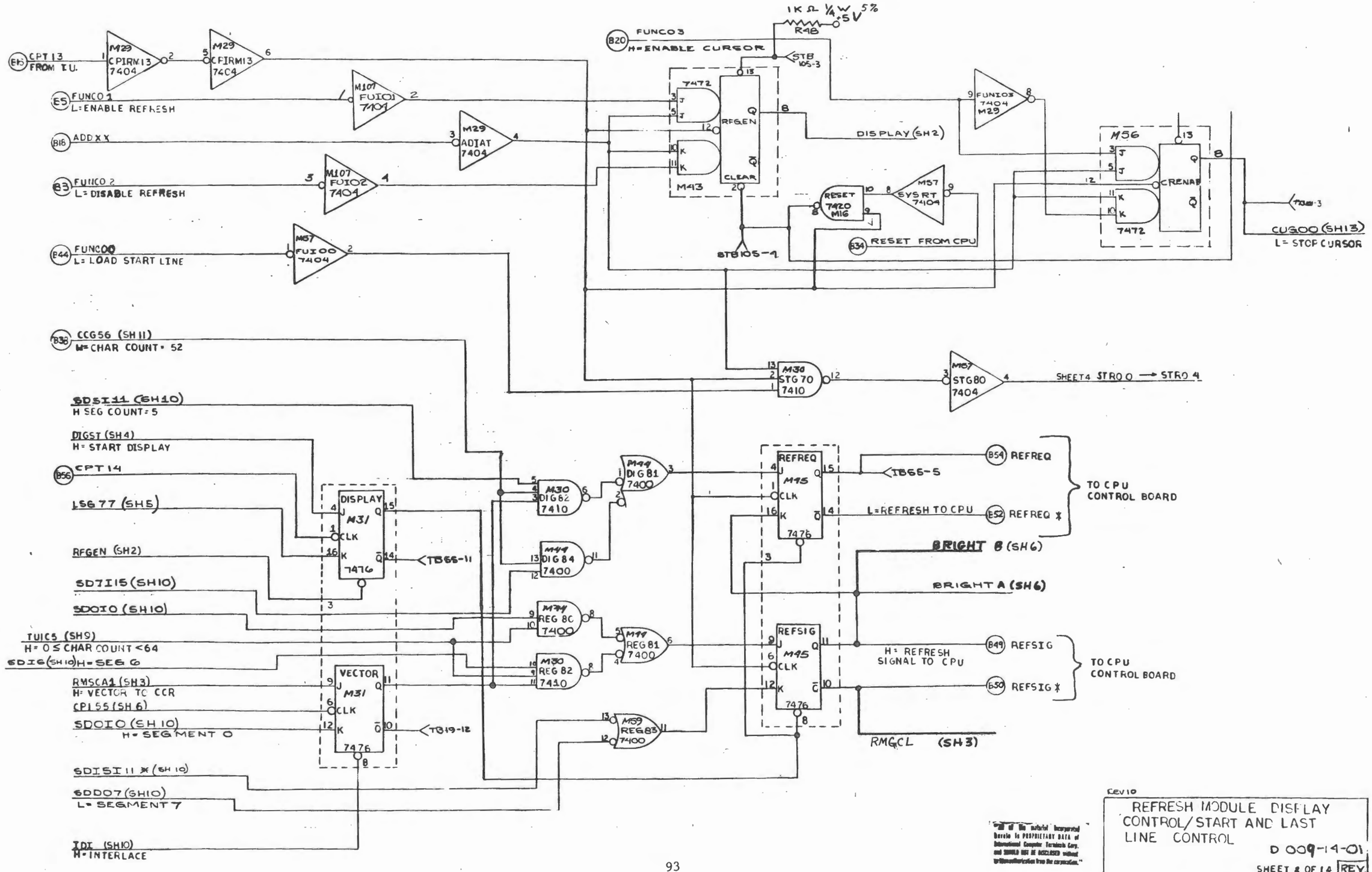
COMPONENT SIDE

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

DR Ryan Fitzpatrick 6-11-71
CHK Lee B. Williams 6-12-71
ENG LOK 6-14-71
APPD [illegible] 6-15-71
NEXT ASSY 009-10-02

TITLE P.C. BOARD ASSY RMTU 701
SIZE D | P C | S S | NO 009-14-02 | REV G
SCALE 1:1 | SHT 1 OF 1

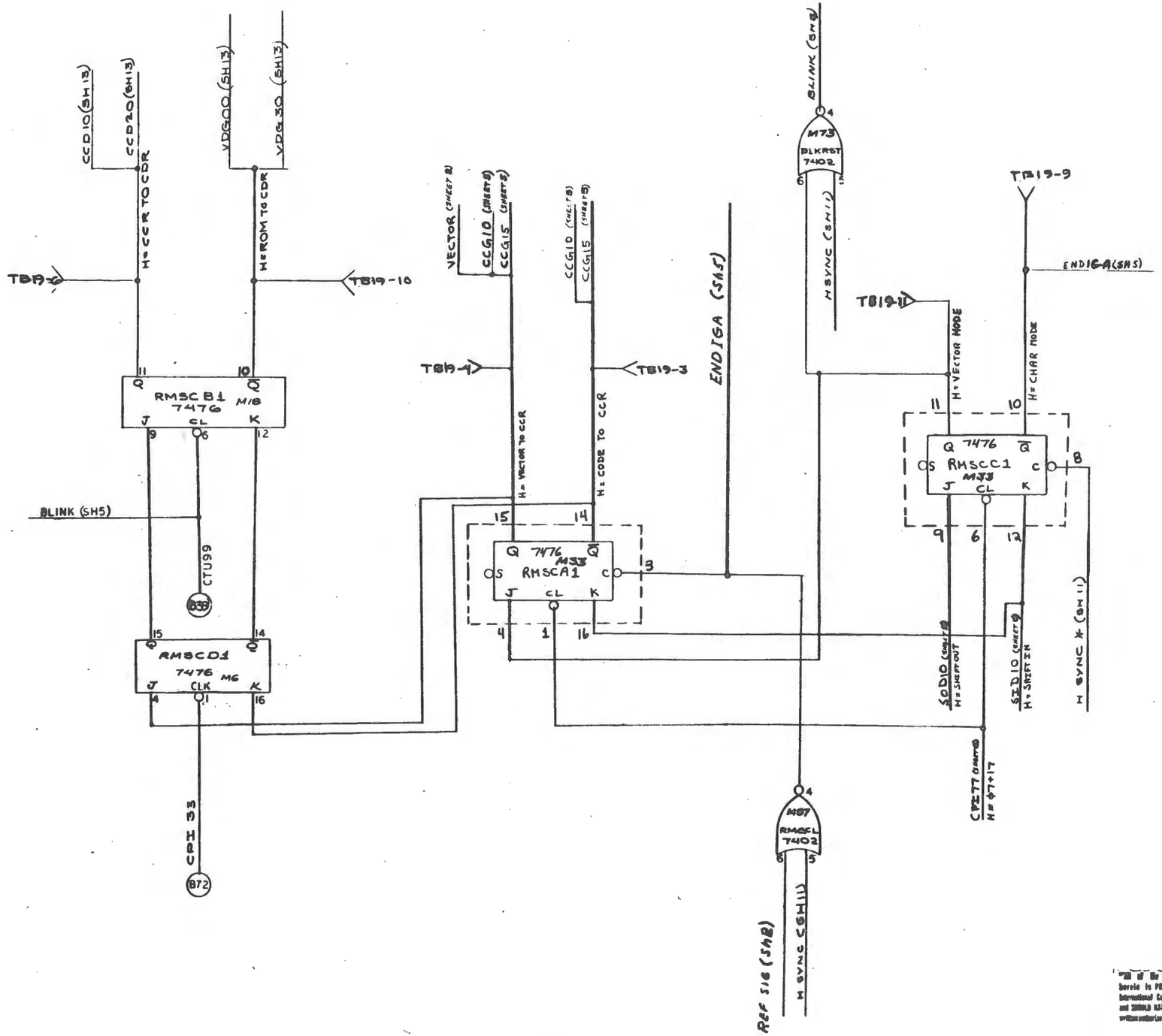


REV 10

REFRESH MODULE DISPLAY CONTROL/START AND LAST LINE CONTROL

D 009-14-01

SHEET 2 OF 14 REV. B

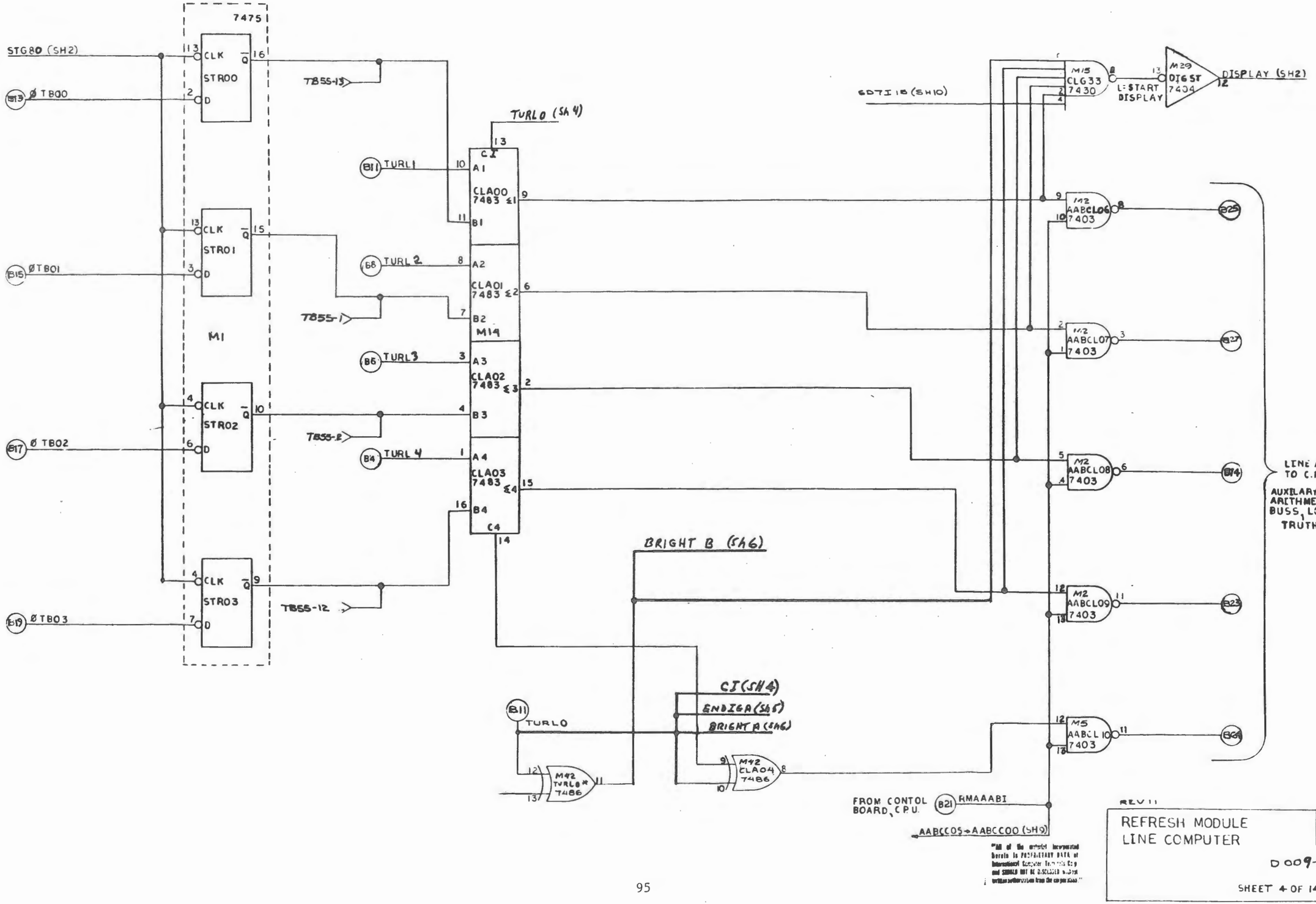


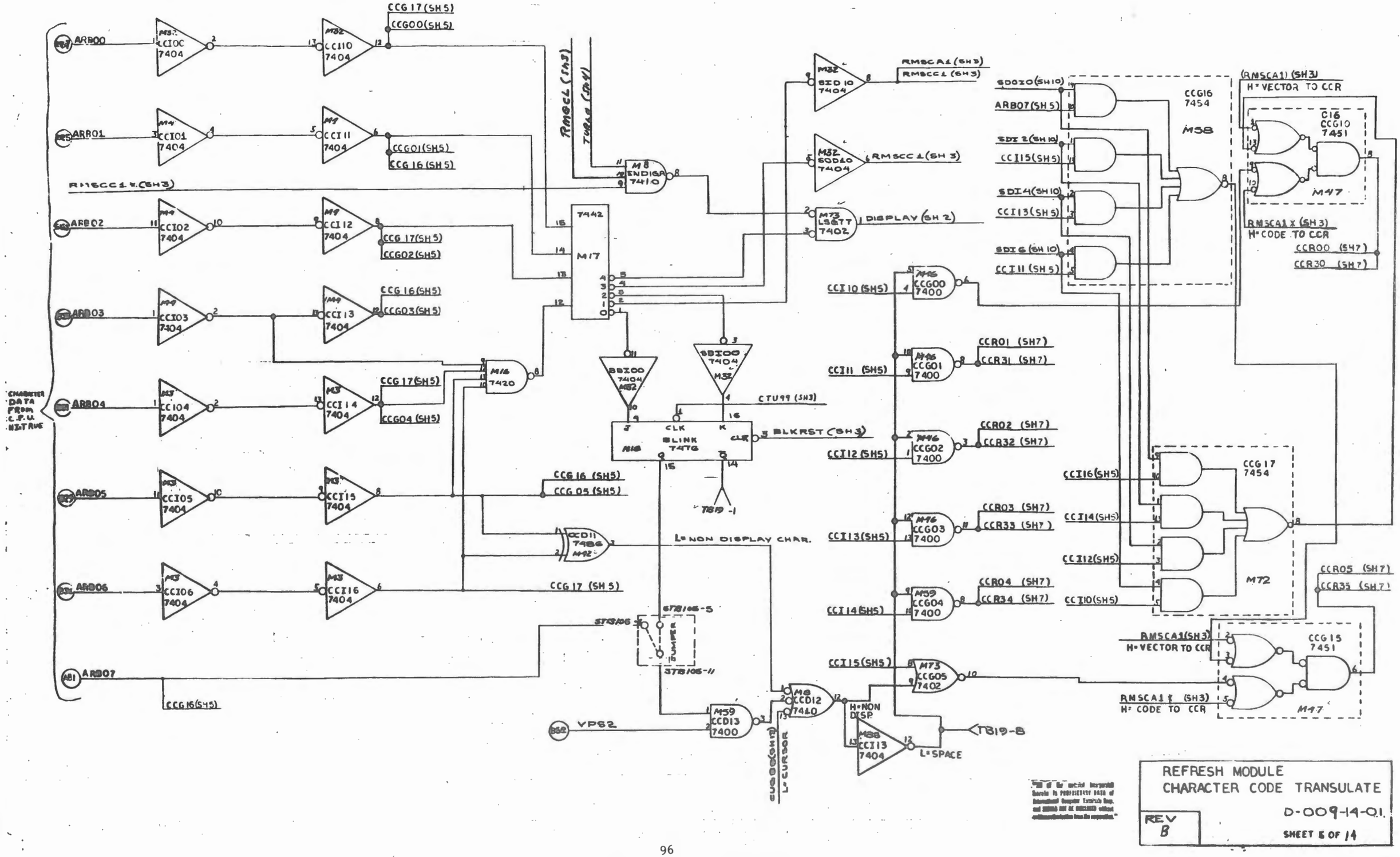
REV G

REFRESH MODULE
STATE CONTROL

D 009-14-01 REV B

SHEET 8 of 19



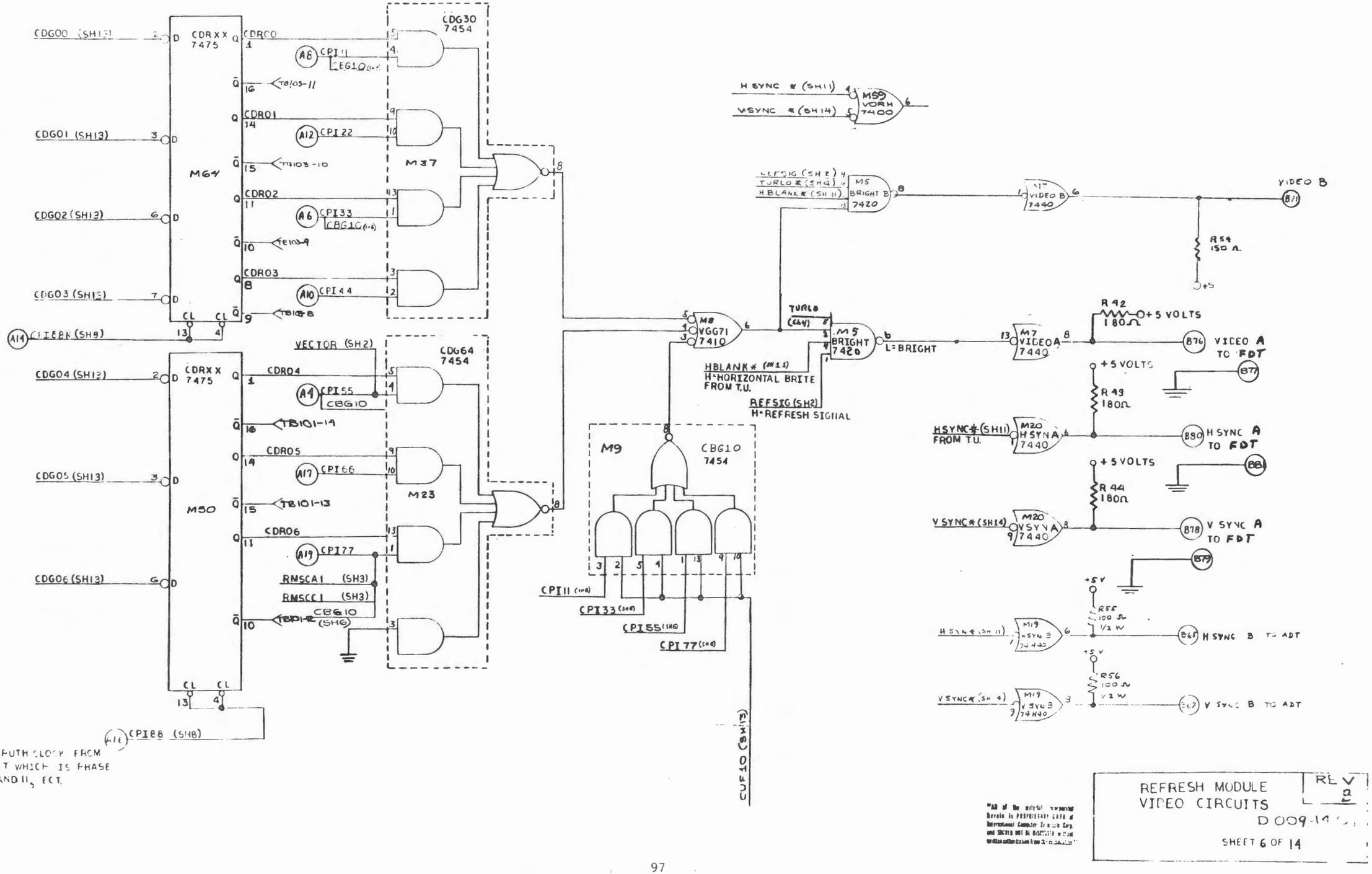


REFRESH MODULE
CHARACTER CODE TRANSULATE

D-009-14-01

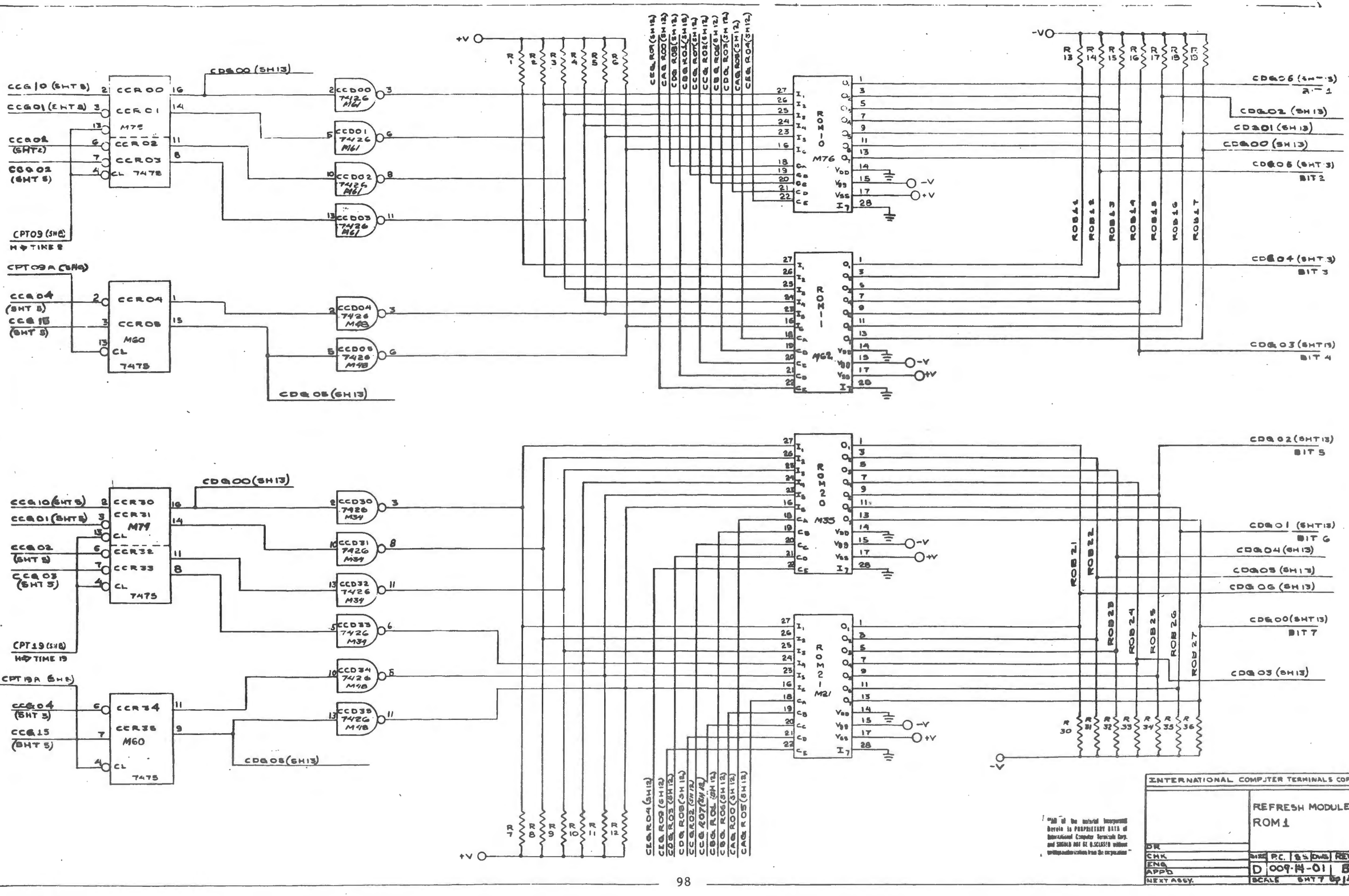
REV B

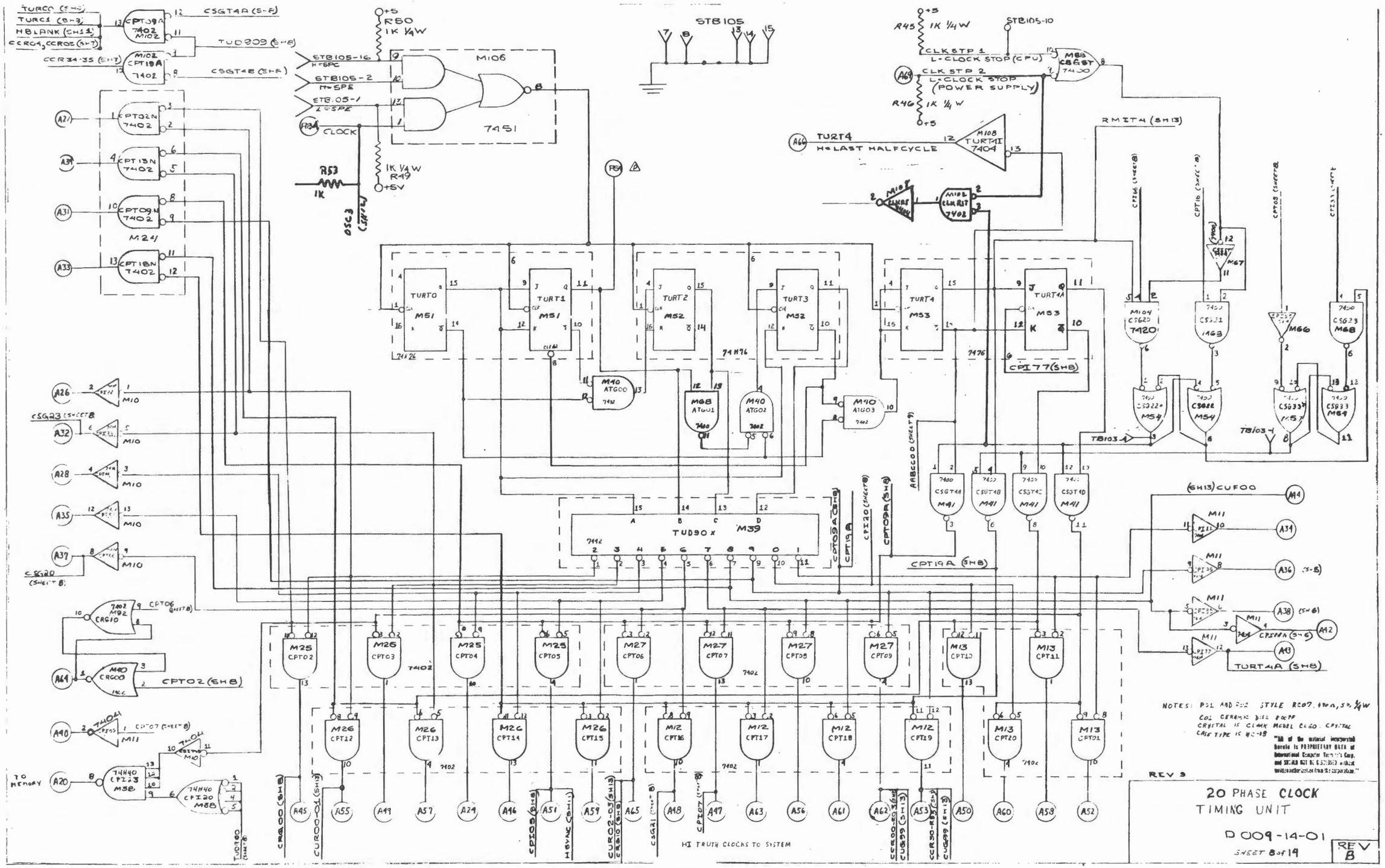
SHEET 5 OF 14



NOTE:
1 CPIXX HI TRUTH CLOCK FROM TIMING UNIT WHICH IS PHASE O AND 10, 4 AND 11, ECT.

REFRESH MODULE
VIDEO CIRCUITS
REV 2
D 009-14
SHEET 6 OF 14


CCG10 (SHT 5)
CCG01 (SHT 5)
CCG02 (SHT 5)
CCG03 (SHT 5)
CPT09 (SH8) H⊕ TIME 8
CPT09A (SH8)
CCG04 (SHT 5)
CCG15 (SHT 5)
CCR00
CCR01
CCR02
CCR03
CCR04
CCR05
CL 7475
M75
M60
CDG00 (SH13)
CDG05 (SH13)
CCD00 7426 M61
CCD01 7426 M61
CCD02 7426 M61
CCD03 7426 M61
CCD04 7426 M48
CCD05 7426 M48
+V
R1 R2 R3 R4 R5 R6
CEG.R04 (SH12)
CAG.R00 (SH12)
CDG.R08 (SH12)
CBG.R01 (SH12)
CCG.R07 (SH12)
CBG.R06 (SH12)
CDG.R03 (SH12)
CAG.R05 (SH12)
CEG.R02 (SH12)
ROM 10 M76
ROM 11 M62
-V
+V
R13 R14 R15 R16 R17 R18 R19
ROB14 ROB15 ROB13 ROB14 ROB15 ROB16 ROB17
CDG06 (SHT 3) BIT 1
CDG02 (SH13)
CD301 (SH13)
CDG00 (SH13)
CDG05 (SHT 3) BIT 2
CDG04 (SHT 3) BIT 3
CDG03 (SHT 13) BIT 4
CCG10 (SHT 5)
CCG01 (SHT 5)
CCG02 (SHT 5)
CCG03 (SHT 5)
CPT19 (SH8) H⊕ TIME 19
CPT19A (SH8)
CCG04 (SHT 5)
CCG15 (SHT 5)
CCR30
CCR31
CCR32
CCR33
CCR34
CCR35
CL 7475
M79
M60
CDG00 (SH13)
CDG05 (SH13)
CCD30 7426 M34
CCD31 7426 M34
CCD32 7426 M34
CCD33 7426 M34
CCD34 7426 M48
CCD35 7426 M48
+V
R7 R8 R9 R10 R11 R12
CEG.R04 (SH12)
CEG.R03 (SH12)
CDG.R08 (SH12)
CCG.R02 (SH12)
CCG.R07 (SH12)
CBG.R01 (SH12)
CBG.R06 (SH12)
CAG.R00 (SH12)
CAG.R05 (SH12)
ROM 20 M35
ROM 21 M21
-V
+V
R30 R31 R32 R33 R34 R35 R36
ROB21 ROB22 ROB23 ROB24 ROB25 ROB26 ROB27
CDG02 (SHT 13) BIT 5
CDG01 (SHT 13) BIT 6
CDG04 (SH13)
CDG05 (SH13)
CDG06 (SH13)
CDG00 (SHT 13) BIT 7
CDG03 (SH13)
"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"
INTERNATIONAL COMPUTER TERMINALS CORP
REFRESH MODULE
ROM 1
DR
CHK
ENG
APP'D
NEXT ASSY.
SIZE D
P.C. 009-14-01
REV B
SCALE
SHT 7 of 15


20 PHASE CLOCK
TIMING UNIT
D 009-14-01
SHEET 8 of 19
REV B
REV 3
HI TRUTH CLOCKS TO SYSTEM
NOTES: P31 AND P32 STYLE RC07, 470Ω, 5%, ¼W
C01 CERAMIC DISC 100PF
CRYSTAL IS CLARK MODEL CL-60. CRYSTAL
CASE TYPE IS HC-18
"All of the material incorporated herein is PROPRIETARY DATA of International Computer Terminals Corp. and SHALL NOT BE DISCLOSED without written authorization from the corporation."
TURT0
TURT1
TURT2
TURT3
TURT4
TURT4A
TURTMI
TURT4A (SH8)
CPI77 (SH8)
CPT19A (SH8)
TURT4A (SH8)
RMIT4 (SH13)
TUD90x
M39
74H74
7476
7402
CPT02 (SH8)
CPT07 (SHEET 8)
CSG23 (SHEET 8)
CSG20 (SHEET 8)
CPT06 (SHEET 8)
TO MEMORY
TUD90 (SHEET 8)
CRA00 (SH8)
CUR00-01 (SH13)
CPT05 (SH8)
HSYNC (SH11)
CUR02-03 (SH13)
CRB10 (SH8)
CSG21 (SHEET 8)
CPT07 (SH8)
CCR00-03 (SH13)
CUC99 (SH13)
CCR30-33 (SH13)
CUC99 (SH13)
(SH13) CUF00
CPT16 (SHEET 8)
CPT05 (SHEET 8)
CPT33 (SHEET 8)
CPT36 (SHEET 8)
CPT16 (SHEET 8)
CPT33 (SHEET 8)
CSG22A
CSG22B
CSG33A
CSG33B
CSGT4A
CSGT4B
CSGT4C
CSGT4D
CSGT4A (SH8)
CSGT4B (SH8)
CSGT4C (SH8)
CSGT4D (SH8)
CPT19A (SH8)
CPT20A (SH8)
CPT20B (SH8)
CPT19A (SH8)
CPT33A (SH8)
CPT33A (SH8)
CPT33B (SH8)
CPT33B (SH8)
CPT36A (SH8)
CPT36B (SH8)
TB103-4
TB103-8
STB105
STB105-10
STB105-16 H=SPC
STB105-2 H=SPE
STB105-1 L=SPE
CLOCK
OSC3 (SHEET 8)
CLK STP 1
L-CLOCK STOP (CPU)
CLK STP 2
L-CLOCK STOP (POWER SUPPLY)
TURT4
H=LAST HALFCYCLE
R45 1K 1/4W
R46 1K 1/4W
R50 1K 1/4W
R49 1K 1/4W
R53 1K
+5
+5V
A20
A21
A24
A25
A26
A27
A28
A31
A32
A33
A34
A35
A36
A37
A38
A39
A40
A41
A42
A43
A44
A45
A46
A47
A48
A49
A50
A51
A52
A53
A54
A55
A56
A57
A58
A59
A60
A61
A62
A63
A64
A65
A66
M01
M02
M03
M04
M05
M06
M07
M08
M09
M10
M11
M12
M13
M24
M25
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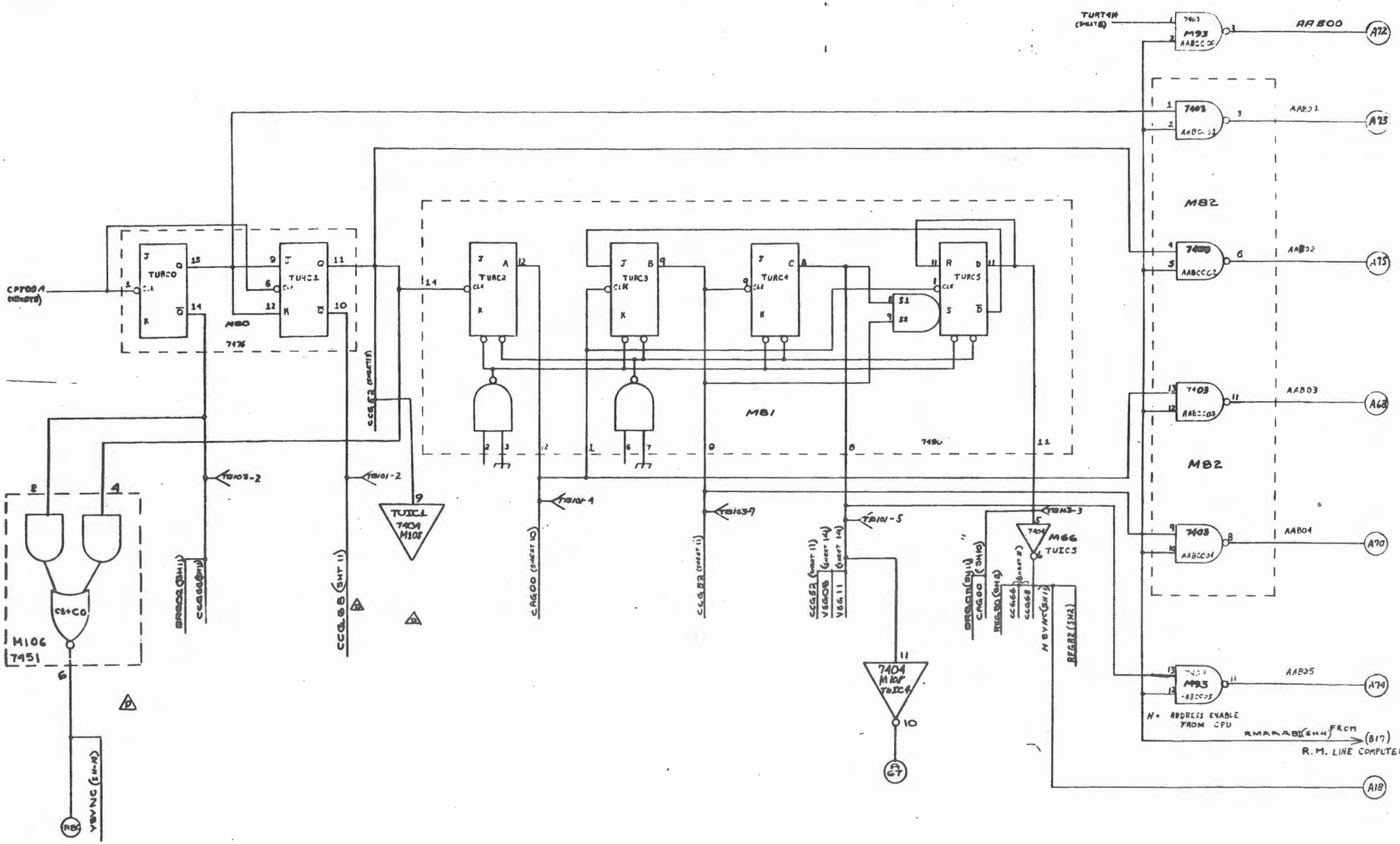
M27
M40
M41
M51
M52
M53
M54
M66
M67
M68
M88
M92



REVG

CHARACTER COUNTER TIMING UNIT
D009-1401
SHEET 8 of 14
REV

M95 7493 — TURSX, TURSO, TURS4, TURS2

M70 7493 — TURL0, TURL1, TURL2, TURL3

M71 7476 — TURL4, TURL5

M28 7476 — TURCE

CAGOO 7410 (M90) — TURC2, TURC5

CAG10 7451 (M84)

SDG1 7451 (M89)

SDDOX 7442 (M83)

SDI4 7404 (M88)

SDI2 7404 (M67)

SDI3 7404 (M88)

SDI1 7404 (M87)

SDG2 7402 (M69)

SDG3 7402 (M69)

SDT15 (M69) 7402

SDD10 (M69) 7402

SDS11 (M87) 7402

SD3A 7404 (M88)

SDG1 7404 (M88)

TUIS X 7404 (M88)

SDI1 7404 (M87)

IDI 7404 (M85)

IDI* 7404 (M85)

SDI7 7404 (M67)

M78 FSG 7451

M66 FSI 7404

M5 CLOCK TURLX K 7476

CLEAR(SH10)

CLEAR*

CLEAR(SH14)

CLAA1

VECTOR(SH2)

REG B3 (SH2)

REG B2 (SH2)

REG B0 (SH2)

DIG B4 (SH2)

DIG B2 (SH2)

CLG 33 (SH4)

CCG 1C, 17 (SH5)

CCG 16, CCG 17 (SH5)

H=SEG 4

H=SEG 7(I) + SEG 15

H=SEGMENT 2

H=SEG 6(I) + SEG 11

H=NONINTERLACED

L=INTERLACE

H=INTER

RMSCL(SH3)

VSG06 (SH14)

VSG09 (SH14)

VSG10

VSG11

VSG07

VSG05

VSG03

LCG03

LCG02

LCG04

TUROE(SH10)

CXAROX(SH12)

LCG03(SH14)

LCG02(SH14)

LCG04(SH14)

CUG00(SH13)

7855-6

TBS5-9

TBS5-10

TBS5-8

RTC To CPU

A77 CONTROL

B42

B32

B30

B24

B28

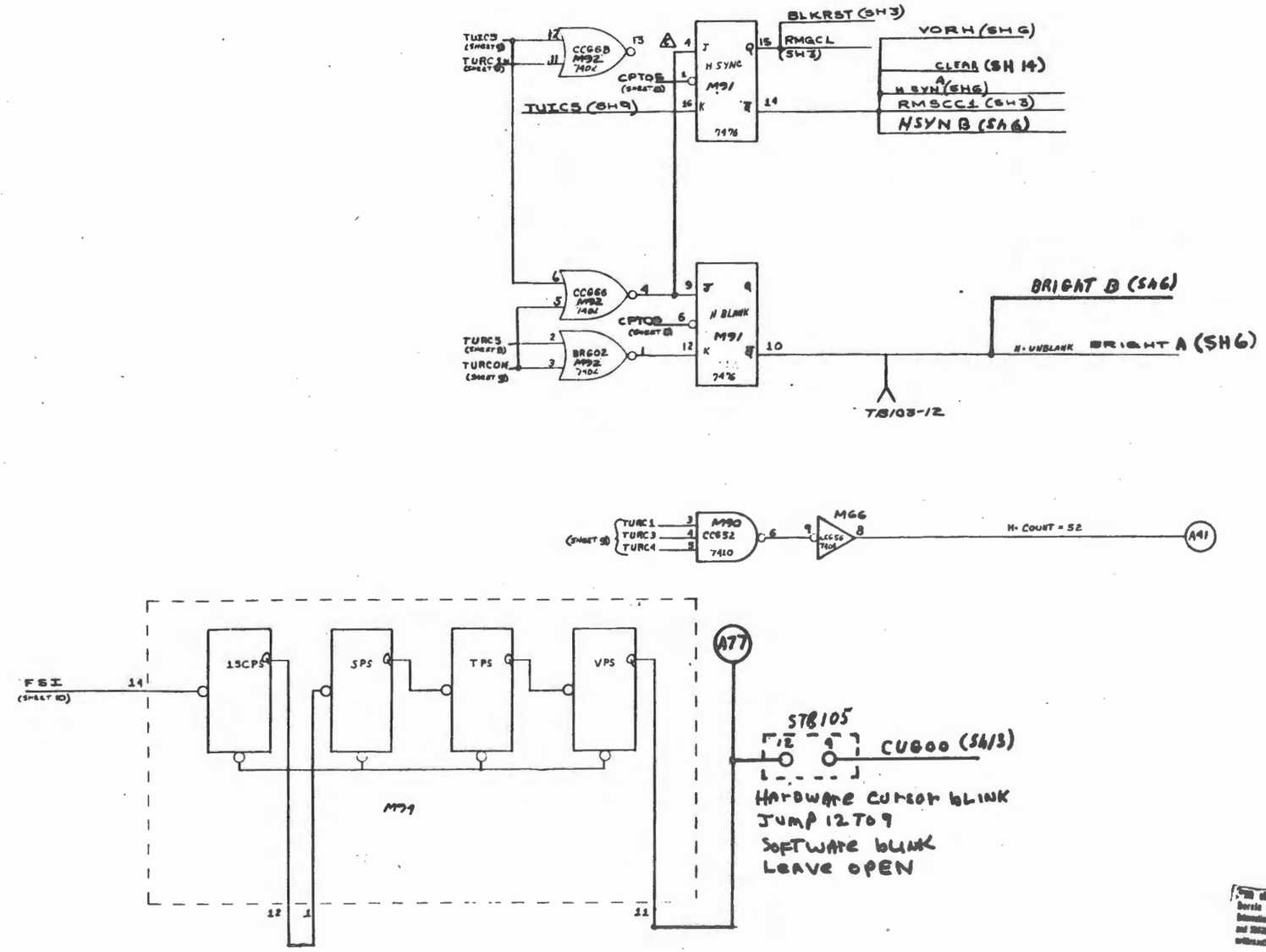
B22

B10

B58

REV 11

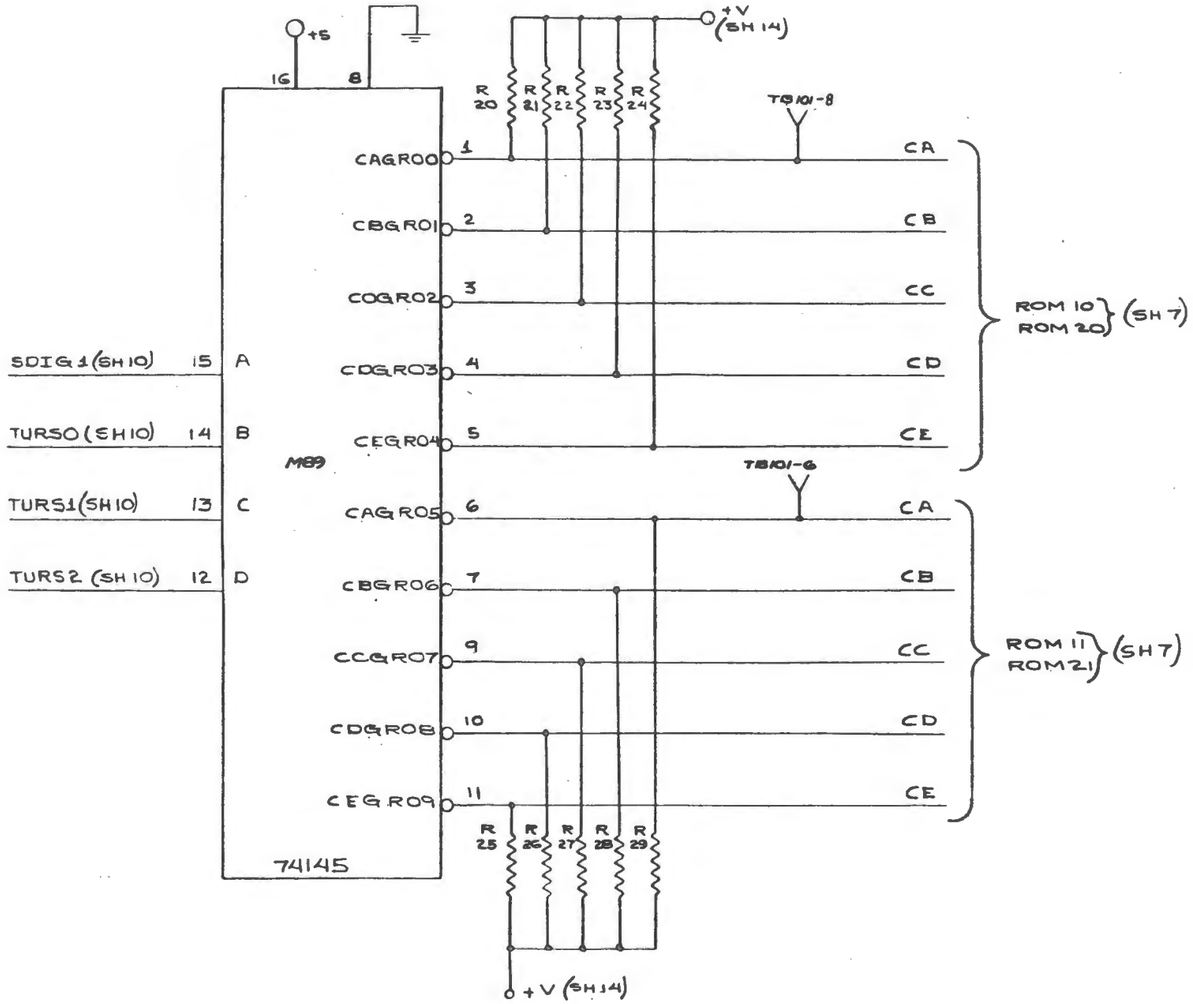
TIMING UNIT
SEGMENT COUNTER
SEGMENT DECODER
LINE COUNTER
D009-14-01
SH10 OF 14
REV B

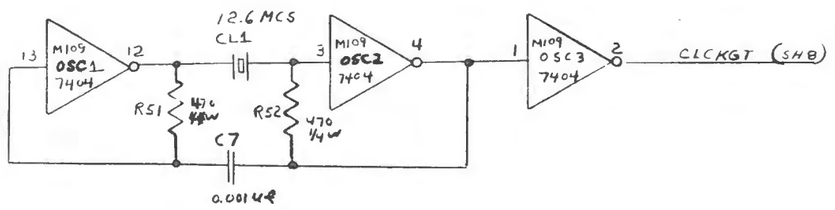


REV B

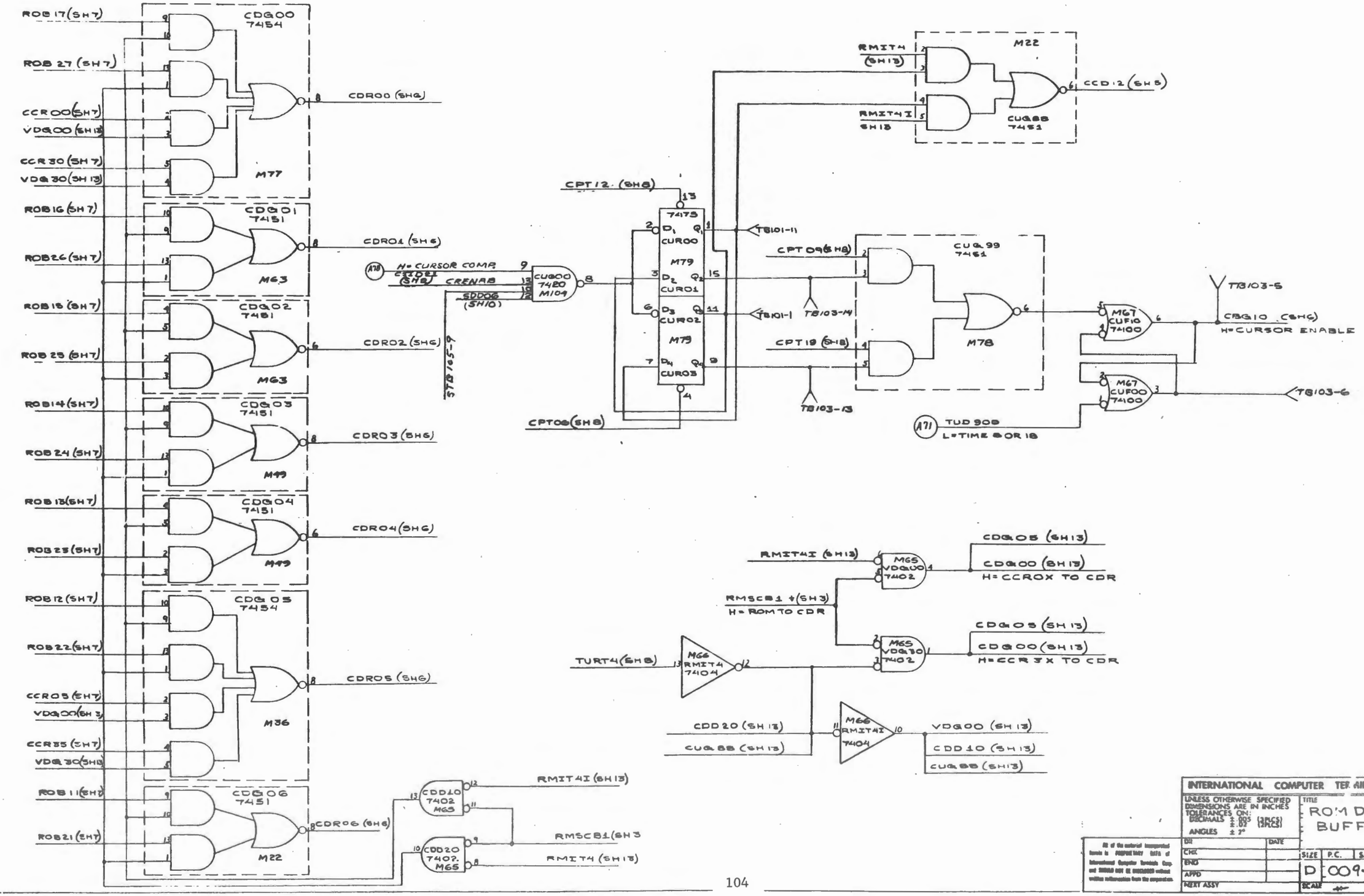
TIMING UNIT
CHAR. COUNTS
HORIZ SYNC. AND BLANKING
D009-14-01

SHEET 11 of 14





INTERNATIONAL COMPUTER TERMINALS CORP.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3 PLCS) ± .03 (2 PLCS) ANGLES ± 2°	TITLE REFRESH MODULE LINE SELECTION
DR / DATE	
CHK	SIZE D · P.C. 009-14-01 · S.S. · NO. · REV B
ENG	
APPD	
NEXT ASSY	SCALE — · SHT 12 OF 14



INTERNATIONAL COMPUTER TERMINALS CORP.

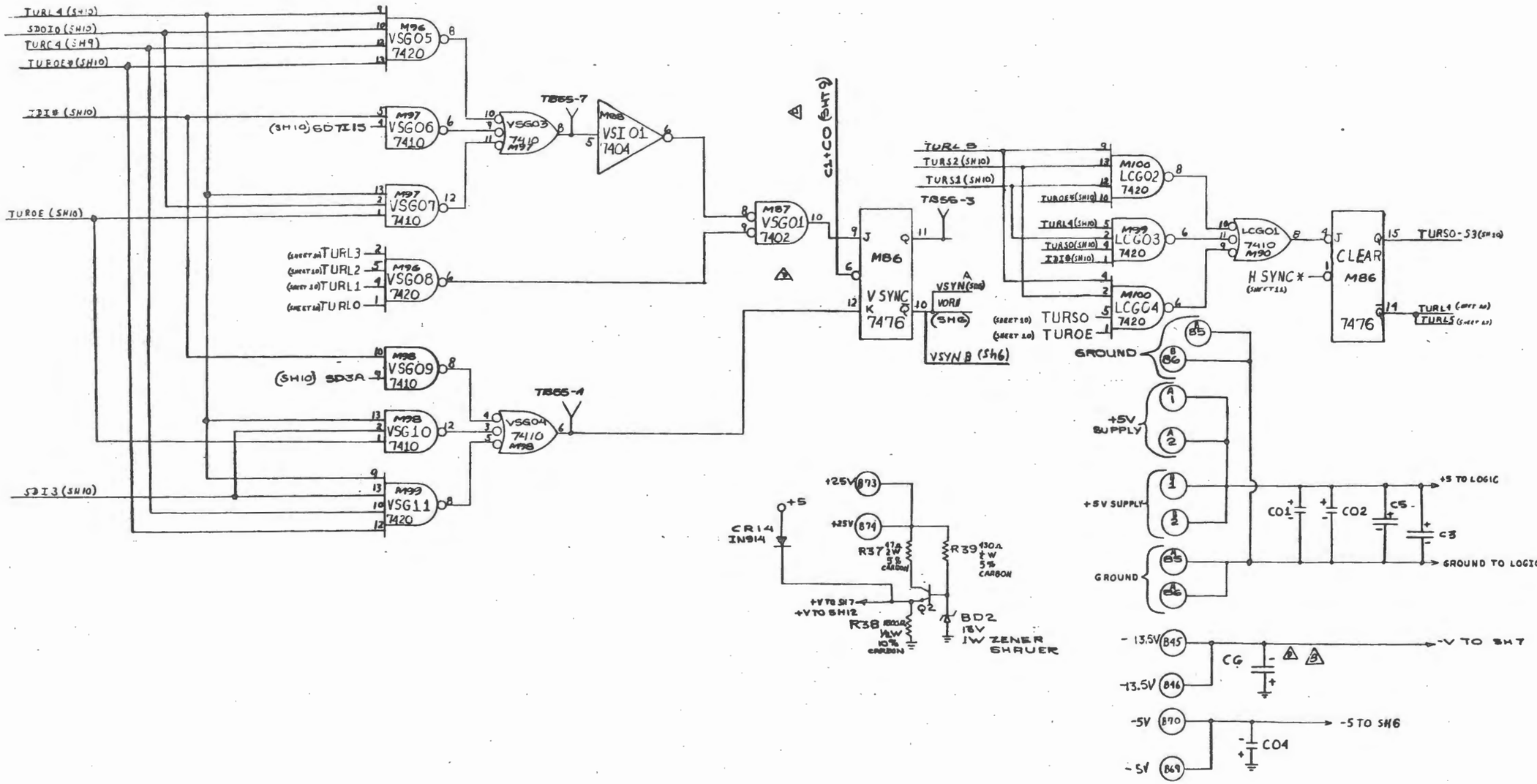
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (.13MCS) ± .02 (.5MCS)
ANGLES ± 2°

DR | DATE
CHK
ENG
APPD
NEXT ASSY

TITLE: ROM DATA BUFFER

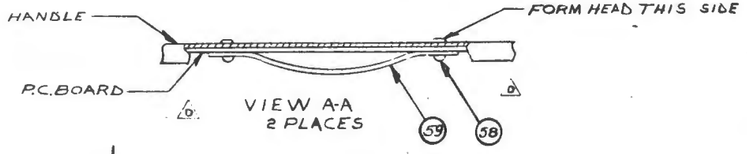
SIZE	P.C.	S.S.	NO.	REV
D	009-14-01			E

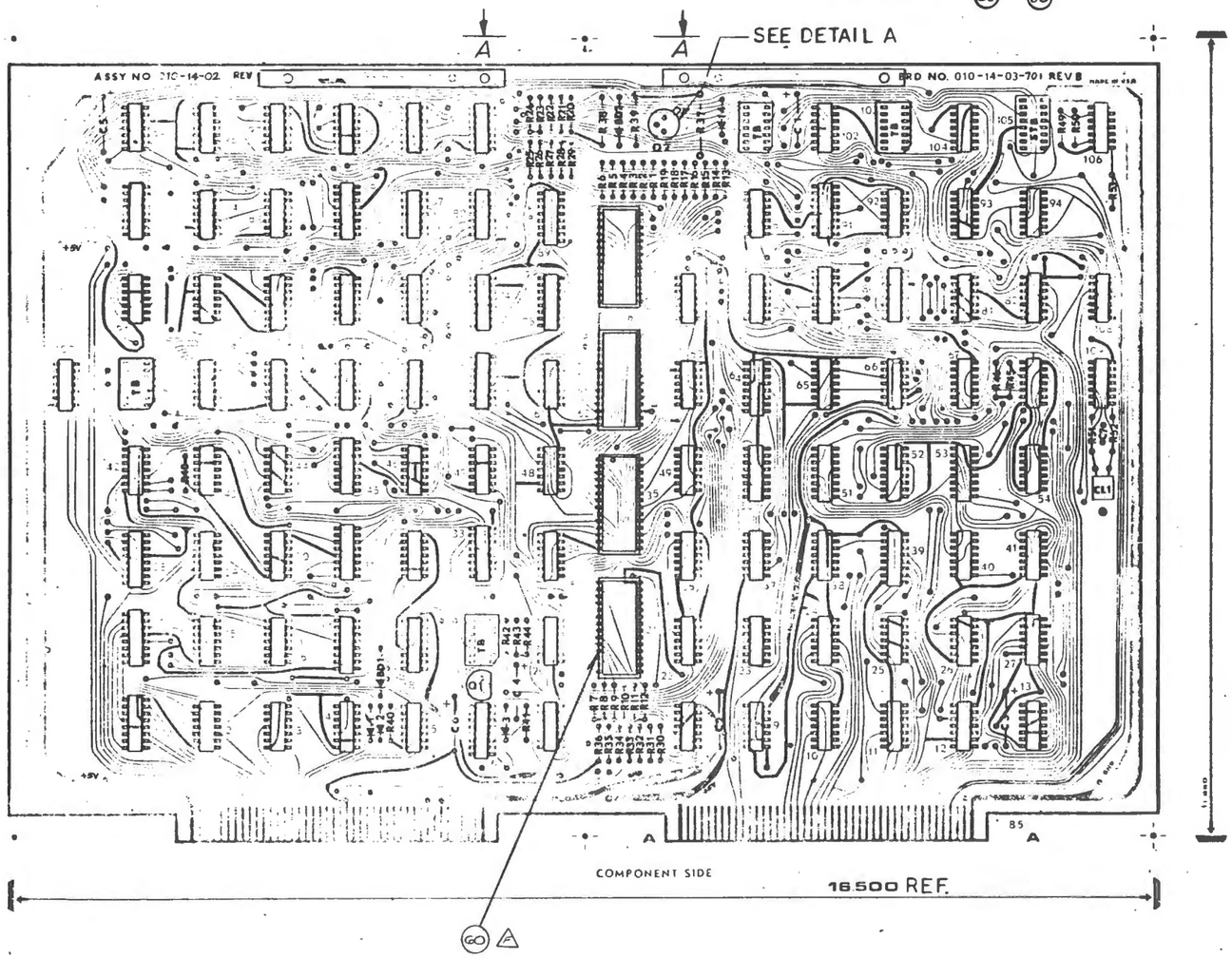
SCALE — SHT 13 OF 14



TIMING UNIT
V SYNC AND CLEAR
o 009-14-01
/ZEVB
SHEET 14 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD
B	RELEASED 1-20-71 R.O.#155 RaB		
C	ECO 1382 C. Ellis 3-12-71	DSM	DSM
D	ECO 1439 RT 5-3-71	DSM	DSM
E	ECO#1527 RAF 7-13-71	RaB	RaB
F	REVISED/ECO1660 11/10/71		

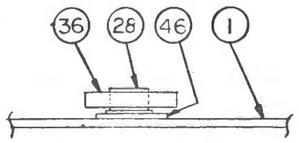




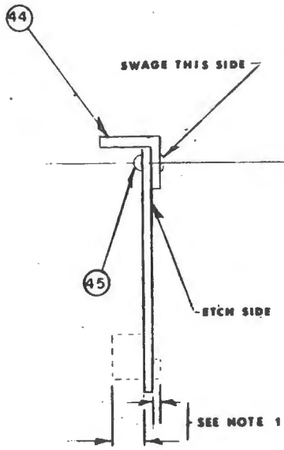
60	28 PIN SOCKET
56	
54	CL1
53	R51,52
52	C7
51	C6
46	TRANSIPAD
43	STB105
42	TB19,55,101,103
41	M21,62
39	BD2
38	R45,46,48,50,53
37	R38
36	HEAT SYNC
35	C1-C5
34	R40,41,42,43,44
33	R39
32	R37
31	R1 THRU R36
30	BD1
29	CR1-CR4
28	Q2
27	Q1
26	M35,76
25	M34,48,61
24	M89
23	M70,94,95
22	M81
21	M42
20	M14
19	M51,52
18	M6,18,28,31,33,45,53,71, 80,86,91
17	M1,50,60,64,74,75,79
16	M43,56
15	M9,23,36,37,58,72,77
14	M22,47,49,63,78,84,106
13	M17,39,83
12	M38
11	M7,20
10	M15
9	M16,96,99,100,104
8	M8,30,90,97,98
7	M3,4,10,11,29,32,57,66,87,88,C7-105
6	M2,5,82,93
5	M12,13,24,25,26,27,30,65, 69,73,87,92,102
4	M41,44,46,54,59,67,68
ITEM NO	REFERENCE DESIGNATION

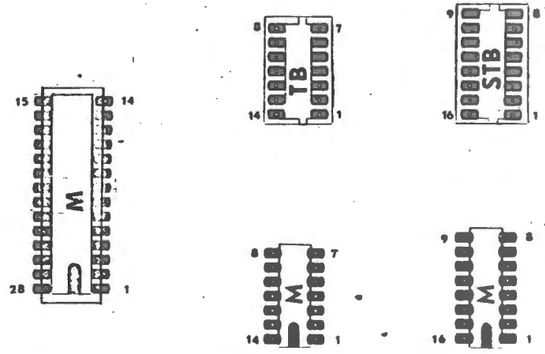
NOTE:

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



DETAIL A





PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

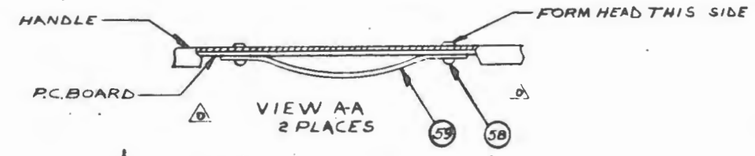
DR Ron T. Hoyt DATE 1/13/71
CH R.a.B. Stoddard 1/20/71
ENG Phil T.
APPD D.A. Kellerhouse 3/29/71
NEXT ASSY 010-10-00

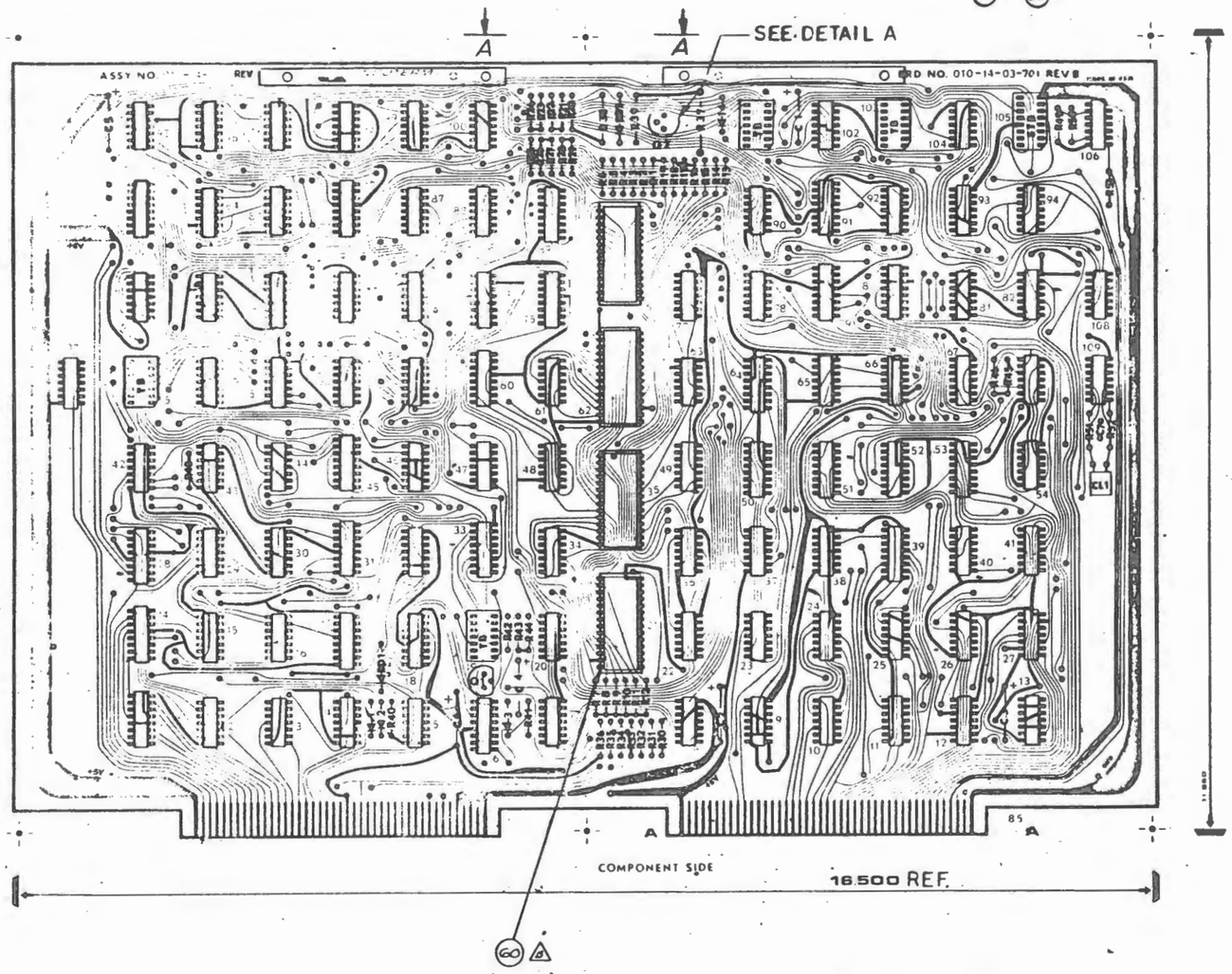
TITLE
P.C. BOARD ASSY RMTU STANDARD 701

SIZE	P.C.	S.S.	NO	REV
D	010-14-02			F

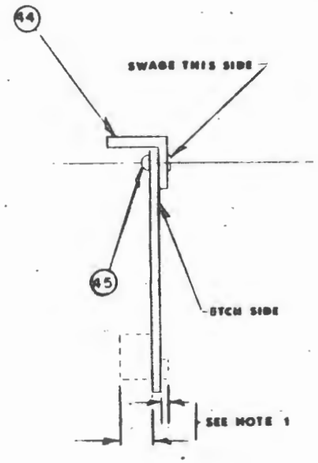
SCALE 1:1 SHT 1 OF 1

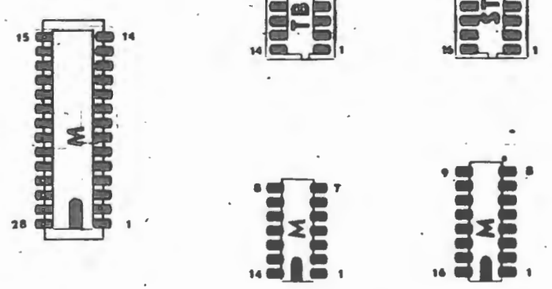
REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 2/25/71 P.O.# 276	[illegible]	[illegible]
B	REVISED ECO 1661 11/3/71	[illegible]	[illegible]





60	28 PIN SOCKET
56	
54	CL1
53	R51,52
52	C7
51	C6
46	TRANSIPAD
43	STB105
42	TB19,55,101,103
41	M21,62
39	BD2
38	R45,46,48,50,53
37	R38
36	HEAT SYNC
35	C1-C5
34	R40,41,42,43,44
33	R39
32	R37
31	R1 THRU R36
30	BD1
29	CR1-CR3
28	Q2
27	Q1
26	M35,76
25	M34,48,61
24	M89
23	M70,94,95
22	M81
21	M42
20	M14
19	M51,52
18	M6,18,28,31,33,45,53,71,80,86,91
17	M1,50,60,64,74,75,79
16	M43,56
15	M9,23,36,37,58,72,77
14	M22,47,49,63,78,84,106
13	M17,39,83
12	M38
11	M7,20
10	M15
9	M16,96,99,100,104
8	M8,30,90,97,98
7	M3,4,10,11,29,32,57,66,85,88,107-109
6	M2,5,82,93
5	M12,13,24,25,26,27,40,65,69,73,87,92,102
4	M41,44,46,54,59,67,68
ITEM	REFERENCE DESIGNATION



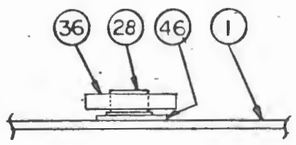


PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

NOTE:

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



DETAIL A

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

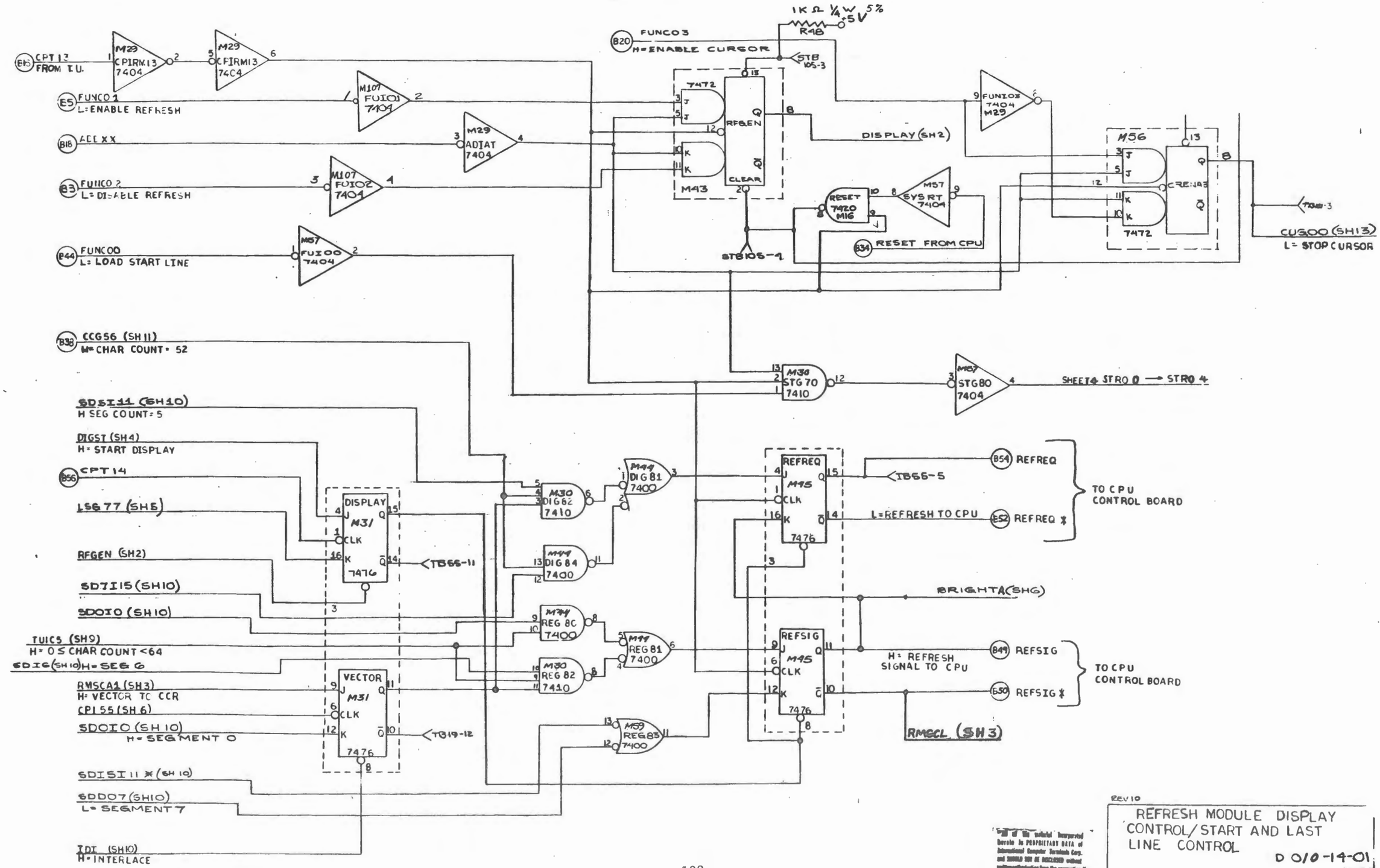
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (3PLCS) .01 (2PLCS)
ANGLES 2°

DR	[illegible]	DATE 6-22-71
CHK	[illegible]	6-23-71
ENG		6/23/71
APPD	D.O. [illegible]	23 JUN 71
NEXT ASSY 010-10-00		

TITLE: P.C. BOARD ASSY RMTU STANDARD 703

SIZE	P.C.	S.S.	NO.	REV
D	010-14-02			B

SCALE 1:1 SHT 1 OF 1



REV 10

REFRESH MODULE DISPLAY CONTROL/START AND LAST LINE CONTROL

D 010-14-01

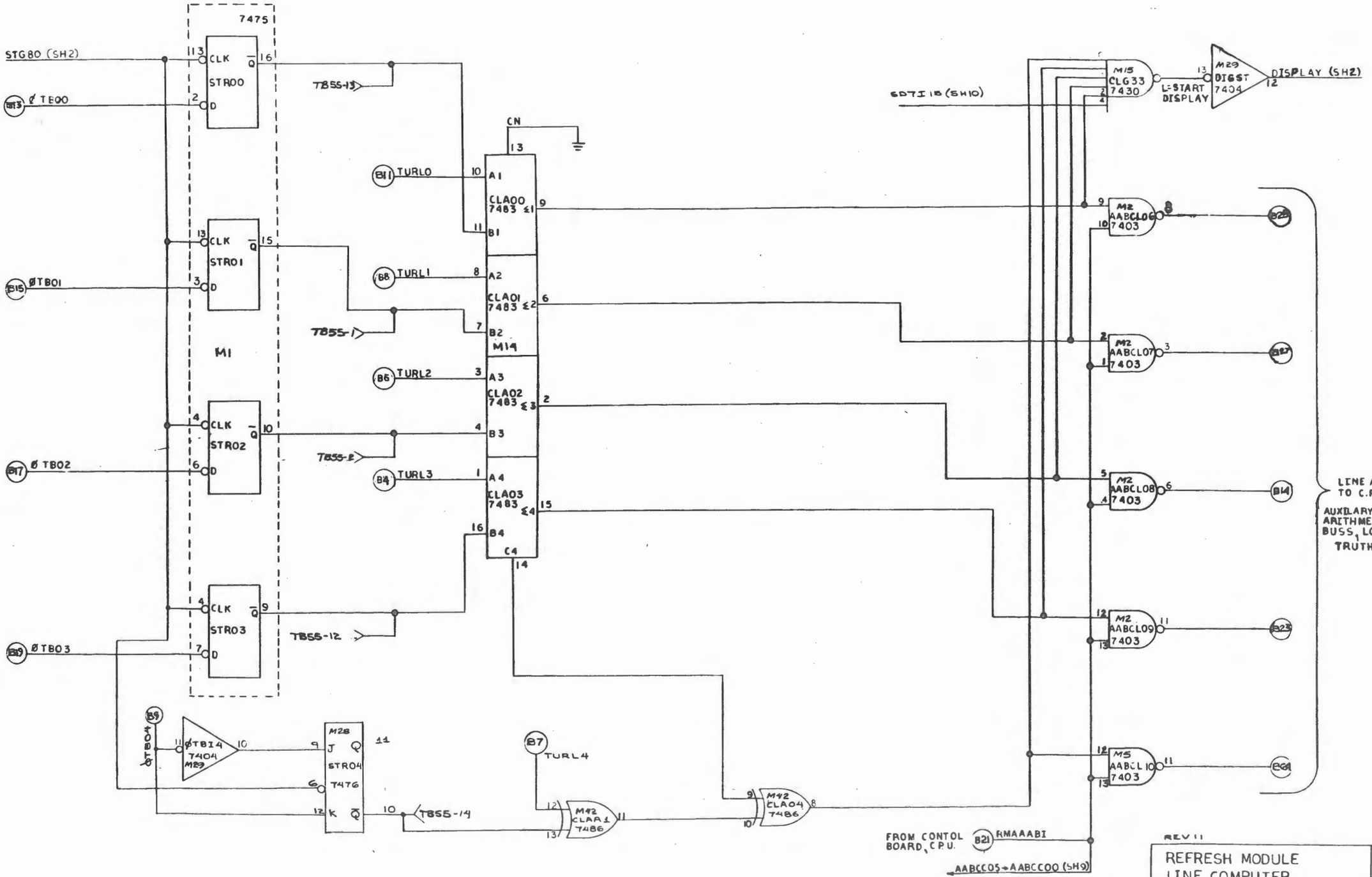
SHEET 2 OF 14 REV. B

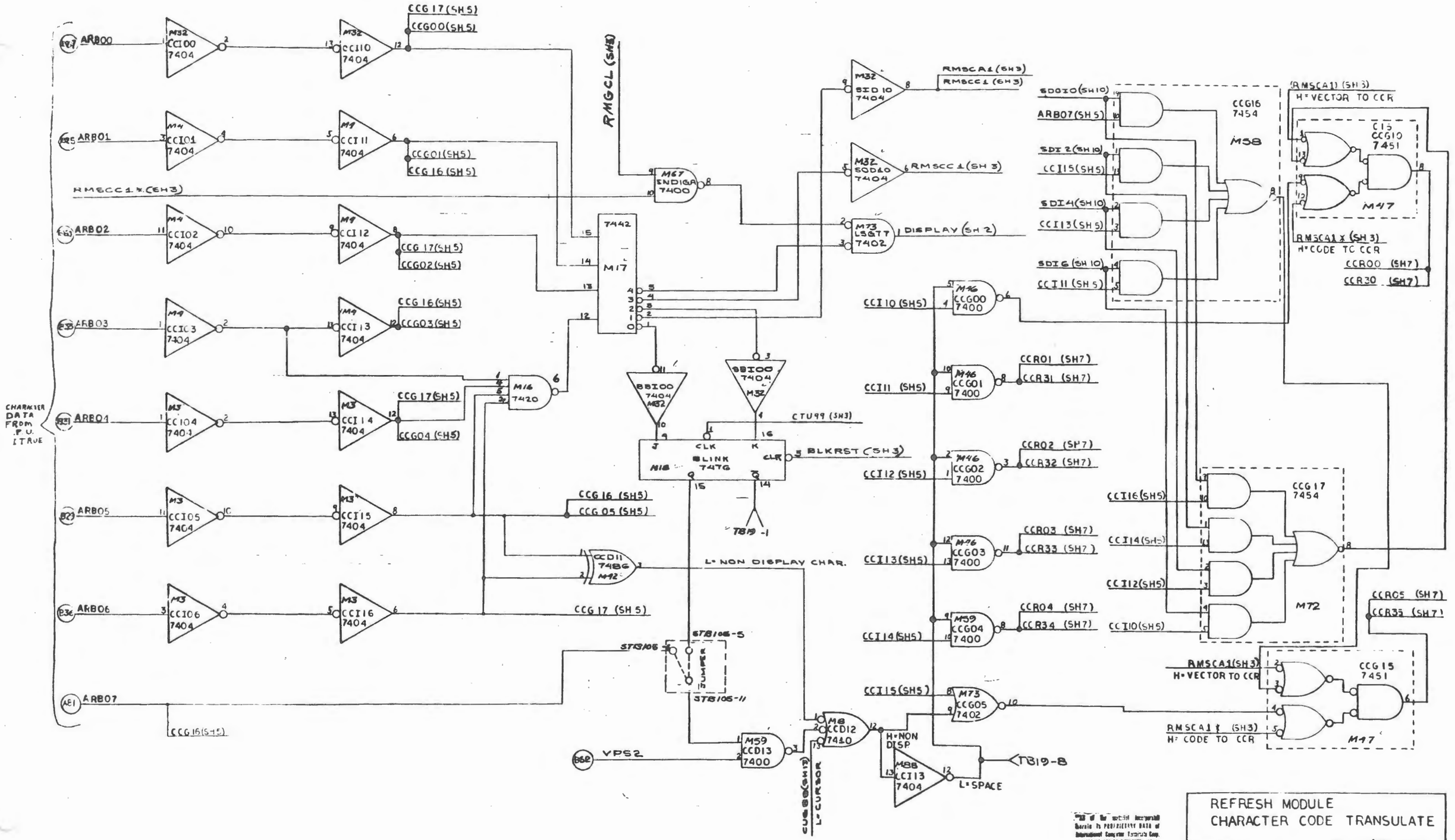
REV G

REFRESH MODULE
STATE CONTROL

D 010-14-01 REV B

SHEET 3 of 14



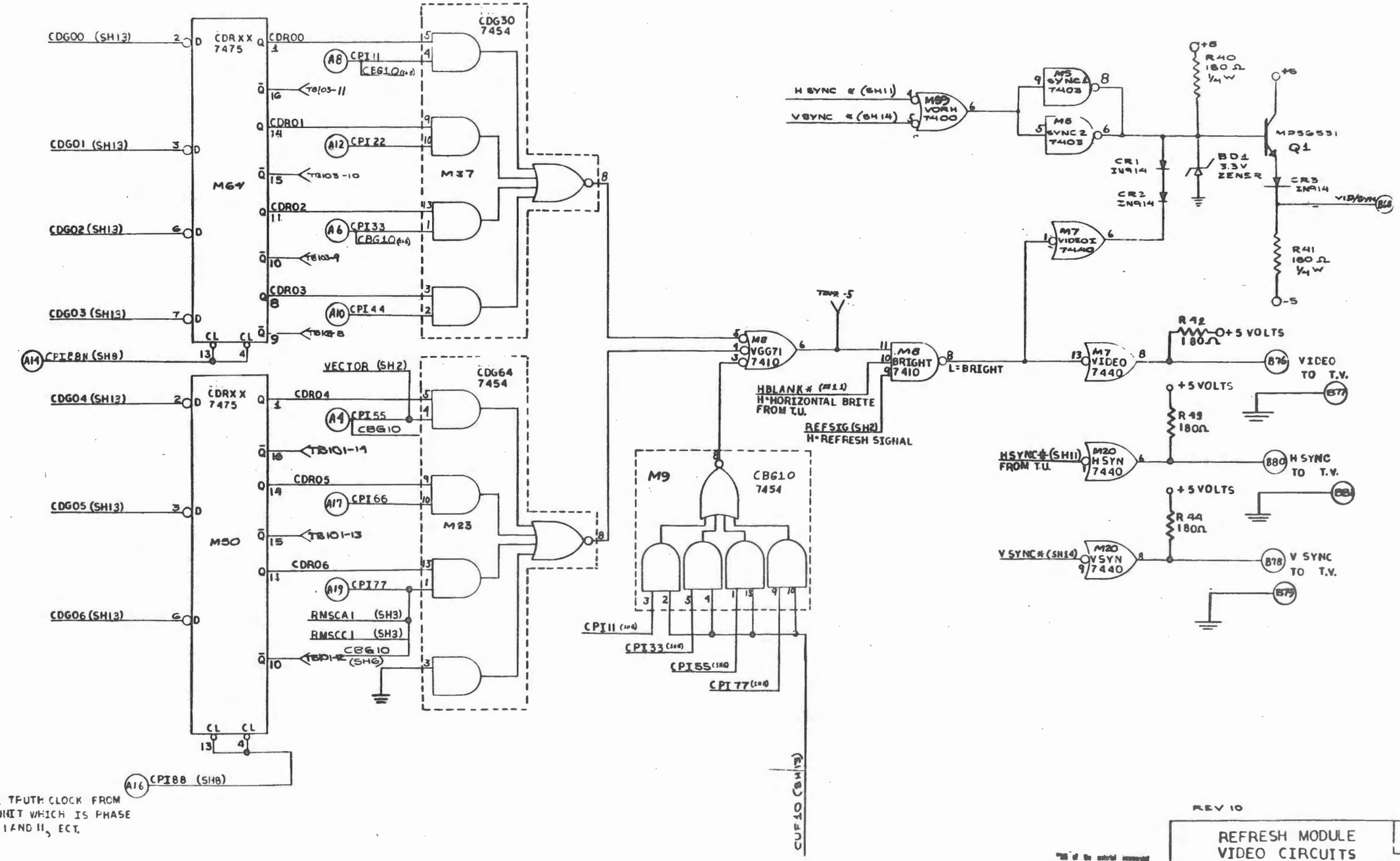


REFRESH MODULE
CHARACTER CODE TRANSULATE

D-010-14-01

REV B

SHEET 5 OF 14



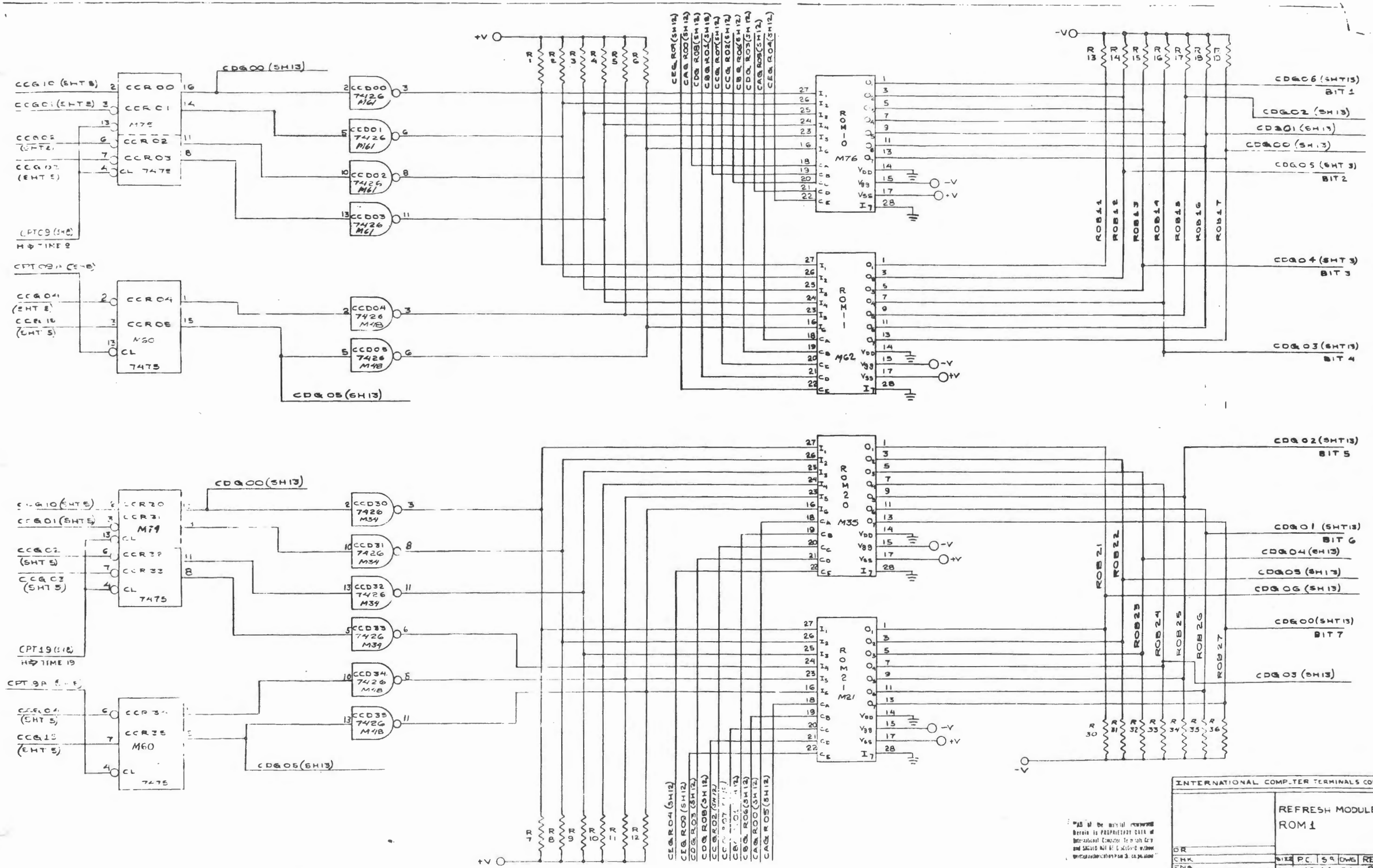
NOTES:
1. CPIXX HI TRUTH CLOCK FROM TIMING UNIT WHICH IS PHASE 0 AND 10_1 AND 11_1 ECT.

REV 10

REFRESH MODULE VIDEO CIRCUITS — REV B

D010-14-01

SHEET 6 OF 14



TURCO (SH5)
TURC1 (SH3)
HBLANK (SH11)
CCR04, CCR06 (SH7)
CCR34-35 (SH7)
CSGT4A (SH5)
TUD309 (SH8)
CSGT4B (SH8)
STB105-16 H=SPC
STB105-2 H=SPE
STB105-1 L=SPE
CLOCK
R53 +5V 1K
OSC 3 (SH12)
R49 1K 1/4W
R50 1K 1/4W +5V
M106 CLCKGT 7451
STB105
R45 1K 1/4W
STB105-10
CLK STP 1 L=CLOCK STOP (CPU)
CLK STP 2 L=CLOCK STOP (POWER SUPPLY)
R46 1K 1/4W +5V
M108 TURT4I 7404
TURT4 H=LAST HALFCYCLE
TO C.P.U. CONTROL BOARD
RMIT4 (SH13)
CPT16 (SHEET 8)
CPT03 (SHEET 8)
CPT33 (SHEET 8)
M51 TURT0
M51 TURT1
M52 TURT2
M52 TURT3
M53 TURT4
M53 TURT4I
74H74
74H76
CPI77 (SH8)
M40 ATG00
M40 ATG01
M40 ATG02
M40 ATG03
M104 CSG20 7420
M105 CSG21 7463
M66 CSG22 M54
M54 CSG22 M54
M66 CSG33 M67
M68 CSG23 M68
TB103
TUD90x M39
CPT09A (SH8)
CPT19A (SH8)
CPT20 (SHEET 8)
CPT09B (SH8)
CPT19B (SH8)
CSGT4A M41
CSGT4B M41
CSGT4C M41
CSGT4D M41
(SH13) CUF00
M11 CPT11
M11 CPT08
M11 CPT17
M11 CPT00
M11 CPT01
TURT4A (SH8)
A21 CPT02N 7402
A31 CPT09N 7402
A33 CPT18N 7402
M24
A26 CPT22 M10
A32 CPT23 M10
A28 CPT24 M10
A35 CPT25 M10
A37 CPT26 M10
CSG23 (SHEET 8)
CSG20 (SHEET 8)
A61 CRG00 CPT02 (SH8)
A40 CPT07 (SHEET 8) M11
A20 TO MEMORY 74H40 CPT23 M38
74H40 CPT20 M38
TUD90 (SHEET 8)
M25 CPT02
M25 CPT03
M25 CPT04
M25 CPT05
M27 CPT06
M27 CPT07
M27 CPT08
M27 CPT09
M13 CPT10
M13 CPT11
M26 CPT12
M26 CPT13
M26 CPT14
M26 CPT15
M12 CPT16
M12 CPT17
M12 CPT18
M12 CPT19
M13 CPT20
M13 CPT21
7402
CRG00 (SH8)
CUR00-01 (SH13)
CPI05 (SH8)
HSYNC (SH11)
CUR02-03 (SH13) CRG10 (SH8)
CSG21 (SHEET 8)
CPT07 (SHEET 8)
CCR30-31 (SH13) CUG99 (SH13)
CCR30-31 (SH13) CUG99 (SH13)
HI TRUTH CLOCKS TO SYSTEM
A45 A55 A49 A57 A29 A46 A51 A59 A65 A18 A47 A63 A56 A61 A62 A53 A50 A60 A58 A52
A14 A34 A36 (SH5) A38 (SH6) A42 A43

NOTES: R01 AND R02 STYLE RC07, 680Ω, 5% 1/4W
C01 CERAMIC DISC 680PF
CRYSTAL IS CLARK MODEL CL60. CRYSTAL CASE TYPE IS HC-18

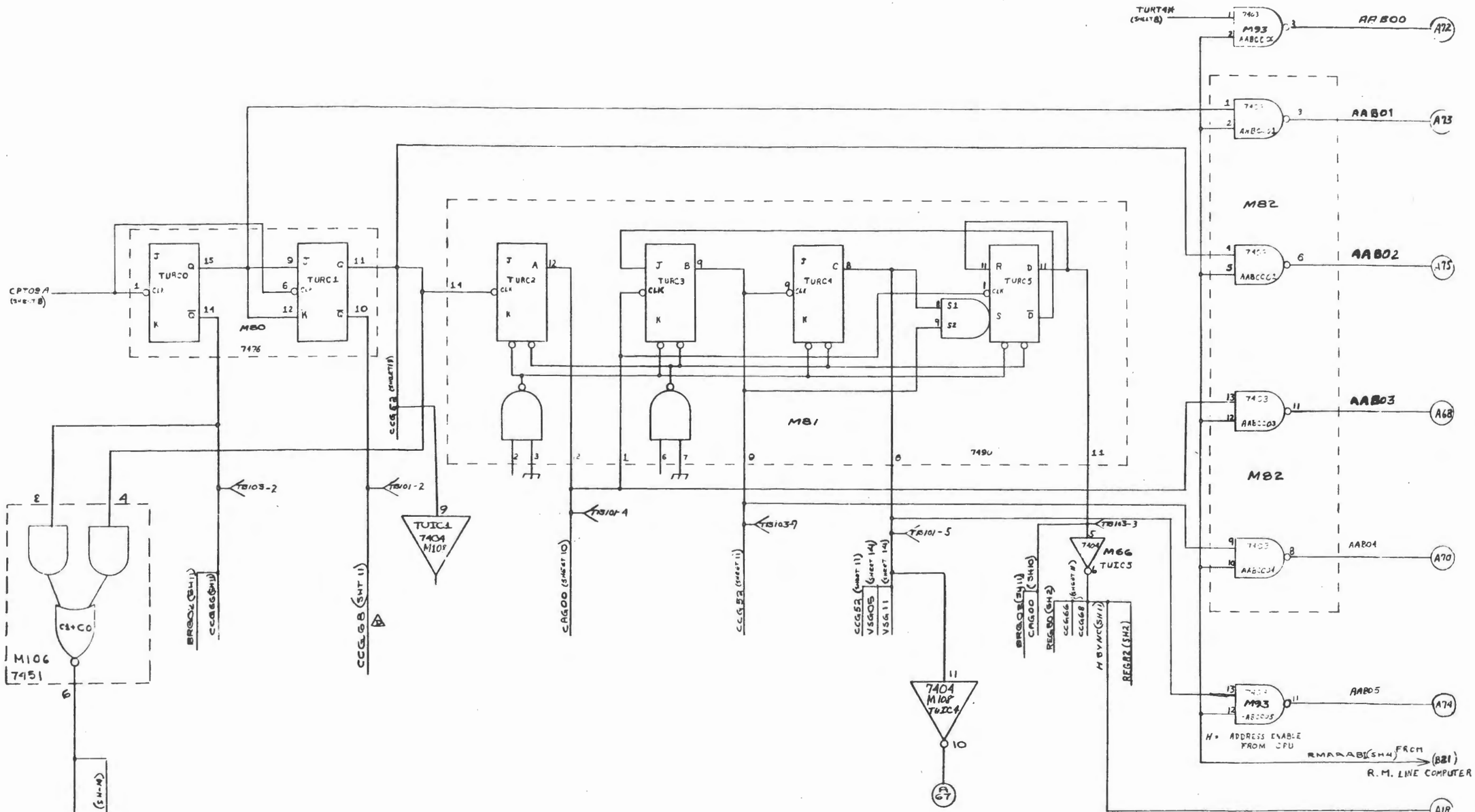
REV B

20 PHASE CLOCK TIMING UNIT

D010-14-01

SHEET 8 of 14

REV B



REV C

CHARACTER COUNTER TIMING UNIT

00/0-14-01

SHEET 8 of 14

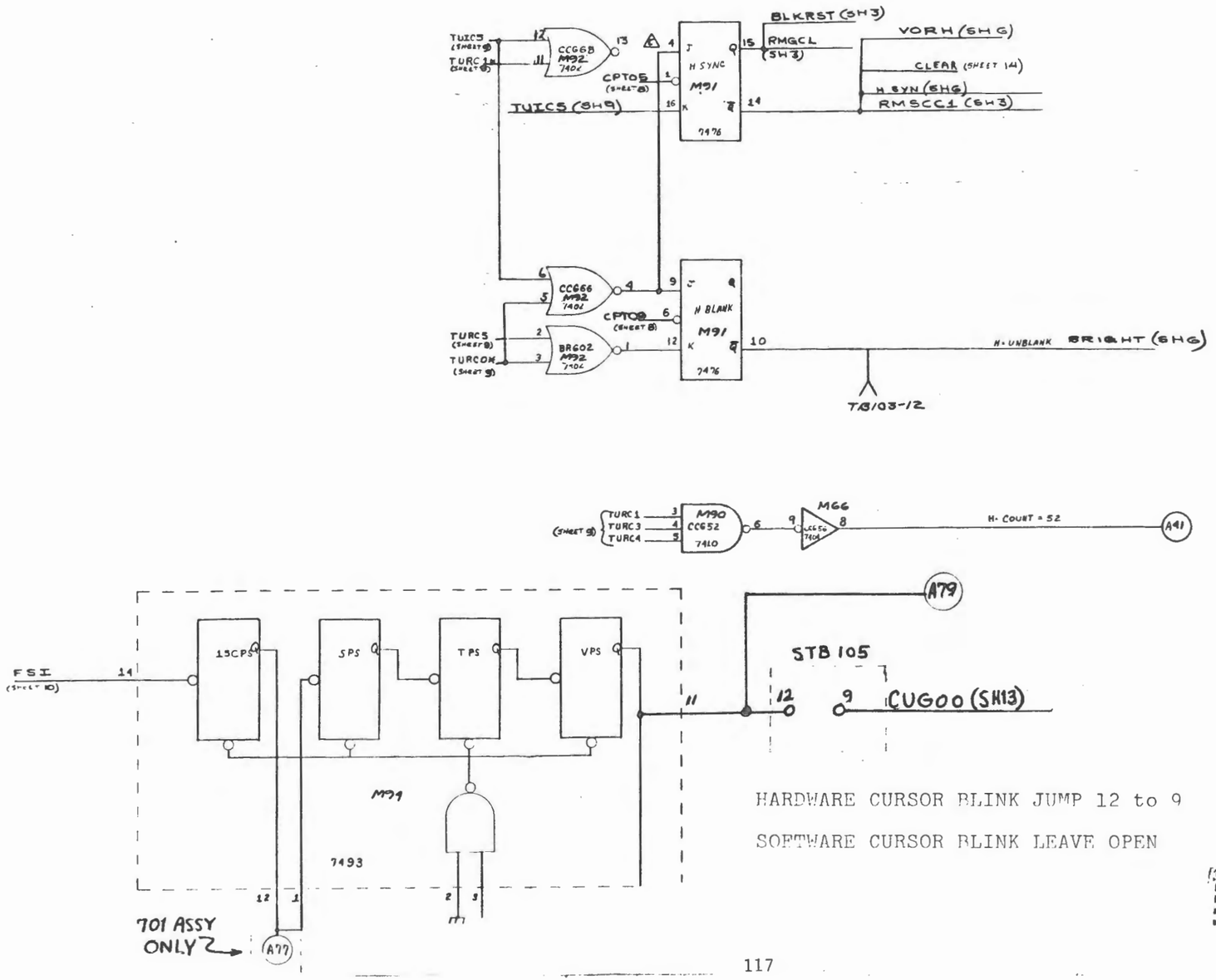
REV B

Note:
702 BOAC Only
24 Lot

16.7msec
CLOCK TO C PU
A17

M95
TURSX
TURS0
TURS1
TURS2
7493
M70
TURL0
TURL1
TURL2
TURL3
7493
M71
TURL4
TURL5
7476
TUROE
M28
7476
CLEAR*
M2
CLOCK TURLX K
7476
FSG(SH10)
LCG02
LCG04
CLAA1
VSG11
VSG10
LCG03
VSG07
VSG05
B32
B30
(SH14)
B42
SDG1(SH10)
LCG04
FSG
VSG10
VSG07
LCG02
VSG11
VSG05
CAG00
M90
7410
TURC5
TURC5
TB101-7
CAG10
M84
7451
M85
CLEAR(SH14)
TBSS-9
TBSS-10
TBSS-8
LCG03(SH14)
CXAROX(SH12)
LCG04(SH14)
LCG03(SH14)
CXAROX(SH12)
LCG02(SH14)
CXAROX(SH12)
LCG02 LCG04(SH14)
7451
M84
SDG1
TUROE(SH10)
SDDOX
7442
M83
CUG00(SH13)
M87
SDIG
7404
CCG 17(SH5)
CCG 16(SH5)
H=SEG G
REG 82(SH2)
SDI61
7404
M88
CXAROX(SH12)
VECTOR(SH2)
M88
SDI4
7404
CCG 16, 17(SH5)
H=SEG 4
REG 83 (SH2)
7855-6
TUISX
7404
M88
SDG2
7402
M69
M69
SDG3
7402
VSG06(SH14)
DIG 84 (SH2)
CLG 33 (SH4)
H=SEG 7(I)+SEG 15
SD7I18
M69
7402
VSG05,07(SH14)
VECTOR (SH2)
SDOI0
M69
7402
CCG16, CCG17(SH5)
REG 80 (SH2)
H=SEGOI+NI
SD3I11
M87
7402
DIG 82(SH2)
H=SEG5(I)
+SEG11
M88
SDE11B
7404
REG 83 (SH2)
B40
L=INTERLACE
M88
IDI
7404
H=INTER
M88
IDI*
7404
H=NONINTERLACED
VSG06
VSG09
LCG03
SH14
TURLX
M78
TUROE
FSG
7451
M166
FSI
7404
15CPS (SH11)
M87
SDI2
7404
CCG 16, CCG 17 (SH5)
H=SEGMENT 2
B10
M88
SDI3
7404
VSG11
VSG10
(SH14)
M88
SD3A
7404
VSG09 (SH14)
B38
VSG08(SH14) B28
VSG08(SH14) B26
VSG08(SH14) B22

REV 11
TIMING UNIT
SEGMENT COUNTER
SEGMENT DECODER
LINE COUNTER
D0/0-14-01
SH10 OF 14
REV B

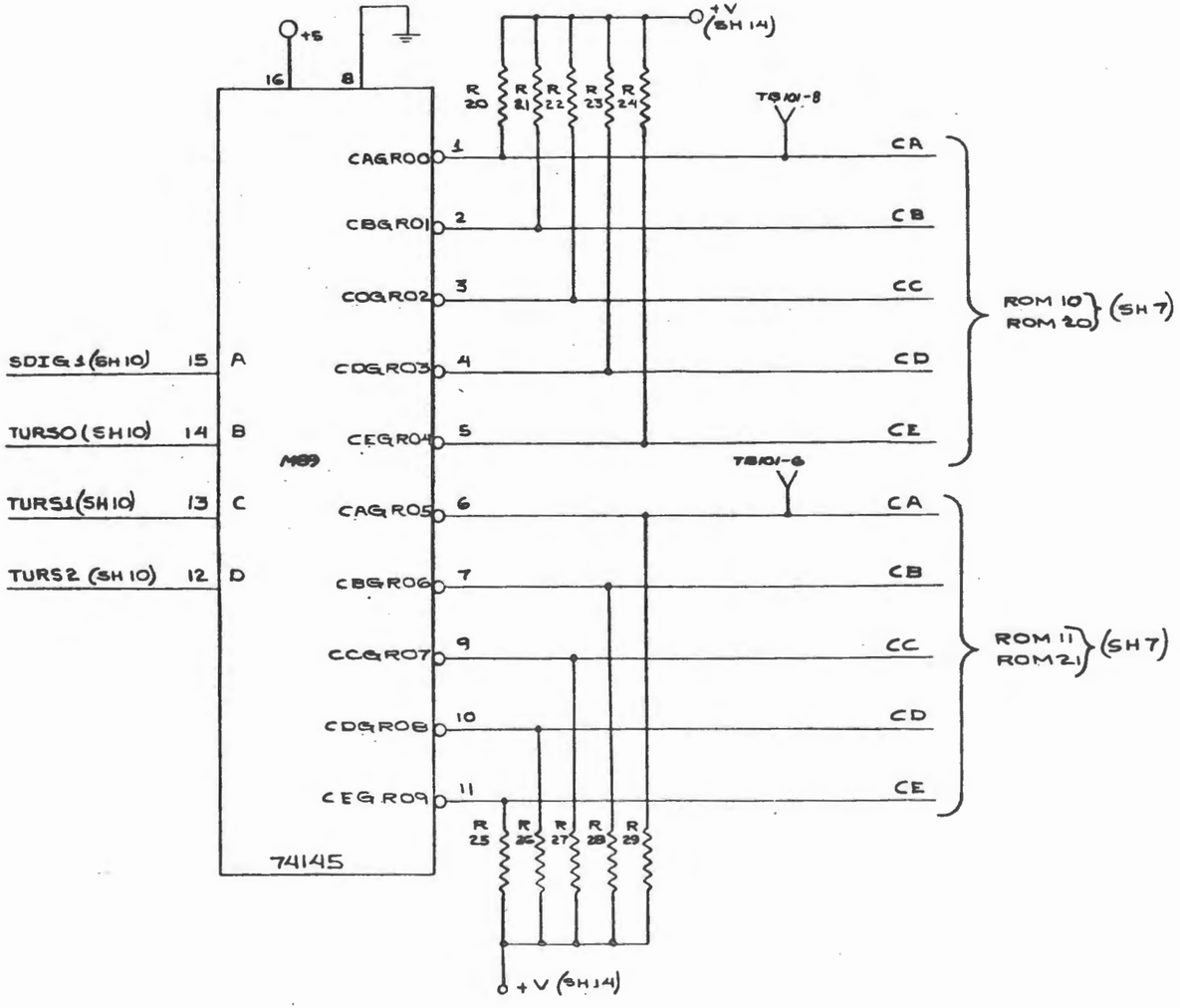


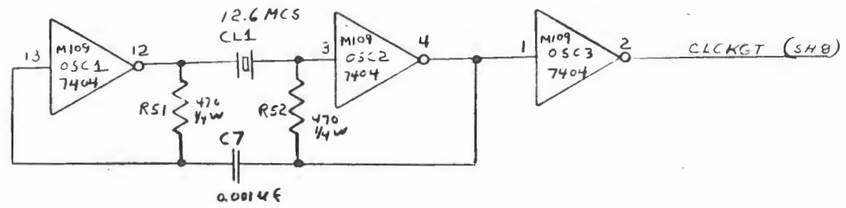
REV B

TIMING UNIT
CHAR. COUNTS
HORIZ SYNC AND BLANKING

D010-1401

SHEET 11 of 14





INTERNATIONAL COMPUTER TERMINALS CORP.						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (.13mm) FRACT ± 1/64 ANGLES ± 2°	TITLE: REFRESH MODULE LINE SELECTION					
DR	DATE					
CHK		SIZE	P.C.	S.S.	NO.	REV
ENG		D	010-14-01			B
APPD		SCALE	—		DWG 12.07.14	
RELEASED						

ROB 17 (SH 7)
ROB 27 (SH 7)
CCR 00 (SH 7)
VDG 00 (SH 13)
CCR 30 (SH 7)
VDG 30 (SH 13)
CDG00 74154 M77
CDR00 (SH6)

ROB 16 (SH 7)
ROB 26 (SH 7)
CDG01 74151 M63
CDR01 (SH 6)

ROB 15 (SH 7)
ROB 25 (SH 7)
CDG02 74151 M63
CDR02 (SH6)

ROB 14 (SH 7)
ROB 24 (SH 7)
CDG03 74151 M49
CDR03 (SH6)

ROB 13 (SH 7)
ROB 23 (SH 7)
CDG04 74151 M49
CDR04 (SH6)

ROB 12 (SH 7)
ROB 22 (SH 7)
CCR 05 (SH 7)
VDG 00 (SH 3)
CCR 35 (SH 7)
VDG 30 (SH 13)
CDG05 7454 M36
CDR05 (SH6)

ROB 11 (SH 7)
ROB 21 (SH 7)
CDG06 7451 M22
CDR06 (SH6)

A78 H=CURSOR COMP
CCUR01 (SH8)
CRENAB
STB 105-9
SDD06 (SH10)
CUG00 7420 M109

CPT 12 (SH8)
7475 M79
CUR00
CUR01
CUR02
CUR03
TB101-11
TB101-1
TB103-14
TB103-13
CPT 09 (SH8)
CPT 19 (SH8)
CPT 00 (SH8)

RMIT4 (SH13)
RMIT4I SH13
M22 CUG88 7451
CCD12 (SH5)

CUG99 7451 M78
A71 TUD 90B L=TIME 8 OR 18

M67 CUF10 74100
M67 CUF00 74100
TB103-5
CBG10 (C8H6) H=CURSOR ENABLE
TB103-6

CDD10 7402 M63
CDD20 7402 M65
RMIT4I (SH13)
RMSCB1 (SH3)
RMIT4 (SH13)

RMIT4I (SH13)
M65 VDG00 7402
CDG05 (SH13)
CDG00 (SH13) H=CCROX TO CDR

RMSCB1 # (SH3) H=ROM TO CDR
M65 VDG30 7402
CDG05 (SH13)
CDG00 (SH13) H=CCR 3X TO CDR

TURT4 (SH8)
M66 RMIT4 7404
CDD20 (SH13)
CUG88 (SH13)
M66 RMIT4I 7404
VDG00 (SH13)
CDD10 (SH13)
CUG88 (SH13)

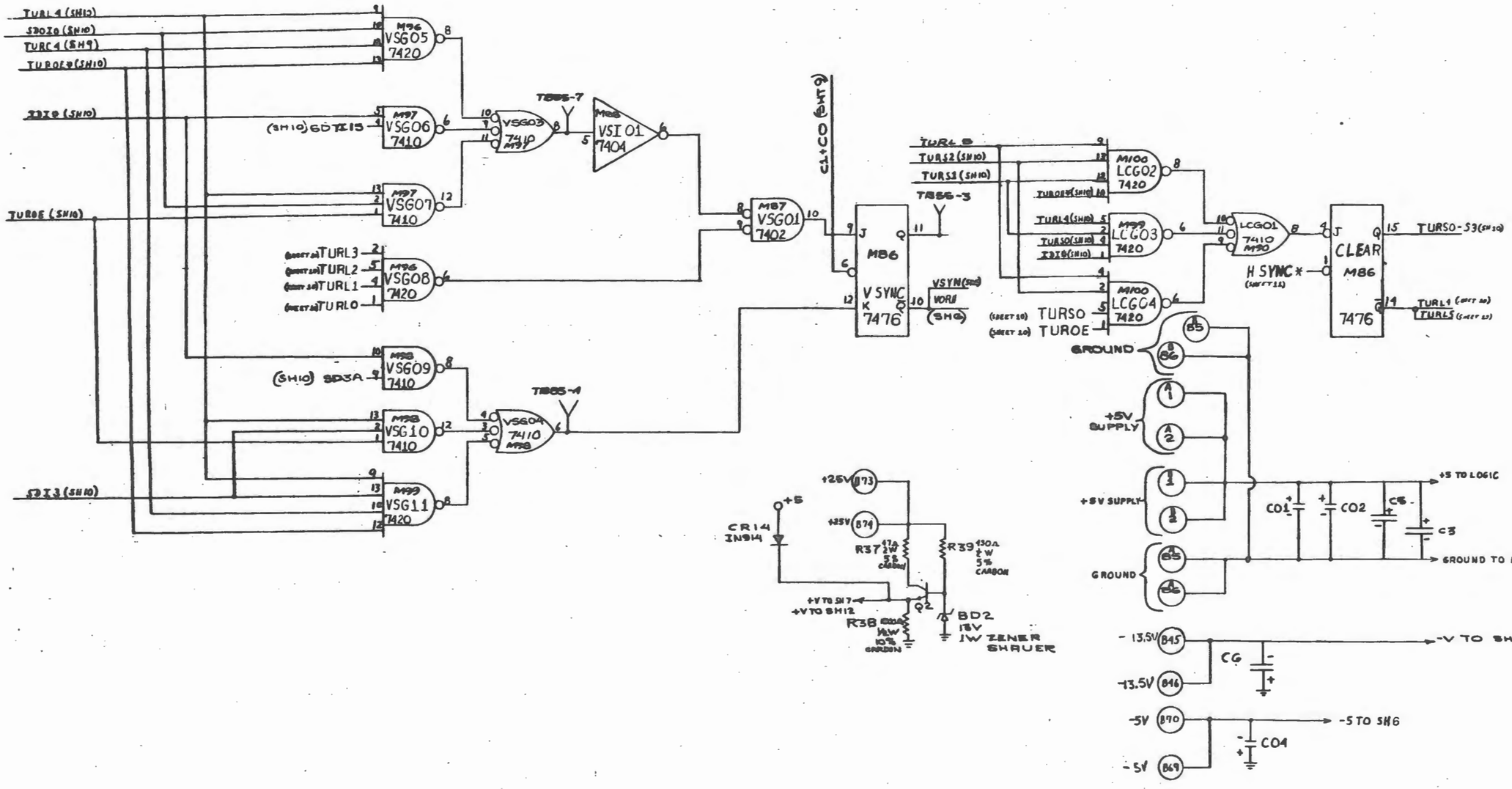
INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3PLCS) ± .03 (2PLCS)
ANGLES ± 2°

DR | DATE
CHK
ENG
APPD
NEXT ASSY

TITLE: ROM DATA BUFFER

SIZE D | P.C. | S.S. | NO. 010-14-01 | REV B
SCALE — | SHT 13 OF 14



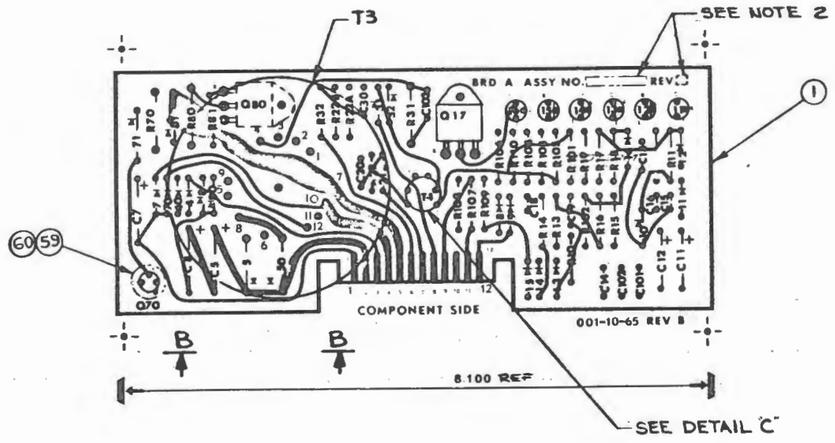
TIMING UNIT
VSYNC AND CLEAR
010-14-01

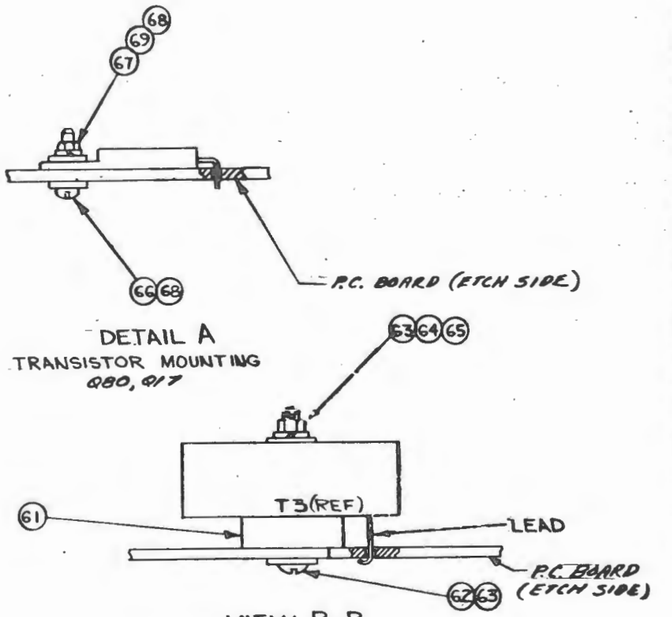
REV B

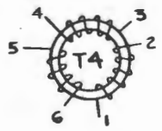
SHEET 14 OF 14

REVISIONS			
REV	DESCRIPTION	CHK	APPD
M	REDRAWN & REVISED PER ECO NO. 1221	RAB 4/14/70	
N	REVISED PER ECO 1621		

58	Q70
57	Q80, Q17
56	D81
55	R80
54	—
53	C103
52	R31
51	R32
50	D7, 8, 70, 80
49	
48	
47	
46	R70
45	R109
44	R16
43	R22A, R22B
42	
41	R18
40	R17
39	R19, 81, 101
38	R11
37	R110
36	R107, R108
35	—
34	R106
33	R10
32	R15
31	R102
30	R103
29	R13, R14
28	R104
27	R105
26	C14
25	C13, 20, 30, 101, 102
24	C19
23	C18
22	C15
21	C16
20	C5, C7
19	—
18	C8, 11, 12
17	D71
16	D101
15	D11, D12
14	D18, 22, 32
13	D13-16, D19, 21, 31
12	D5, D50
11	D4, D40
10	—
9	T3
8	T4
7	Q11, 13, 16
6	Q12, Q15
5	Q14
ITEM NO.	REFERENCE DESIGNATION







DETAIL "C"

NOTES
1. LEAD AND SOLDER HEIGHT ON ETCH SIDE OF BOARD TO BE .080 MAX
2 MARK USING 1/8 HIGH GOTHIC CHARACTERS (BLACK)

INCOTERM CORPORATION
Hayes Memorial Drive · Marlborough, Massachusetts 01752

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

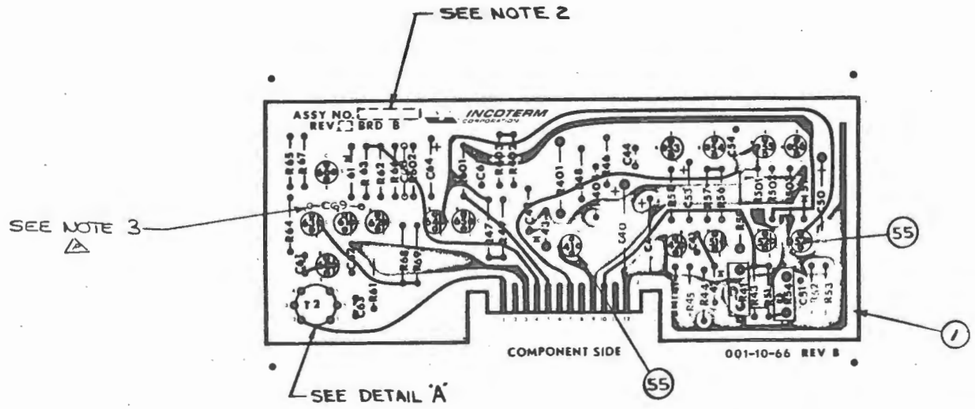
DR	R FREDRICKS	3-26-70
CHK	R A B	4-14-70
ENG	G BRANDES	4-14-70
APPD	F LONDRES	4-15-70
NEXT ASSY	001-10-16	

TITLE
P.C. BOARD ASSY POWER SUPPLY BOARD A

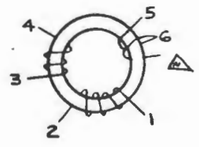
SIZE	P C	S S	NO.	REV
D	001-10-53			N

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
J	REDRAWN & REVISED PER ECO 1221		
K	UPDATED/ECO1347 3/24/71		
L	UPDATED/ECO 1428 6-27-71 INC CHG		
M	UPDATED/ECO1526 7-21-71		
N	REVISED/ECO 1586 10/8/71		
P	REVISED/ECO 1649 11/2/71		



ITEM NO.	REFERENCE DESIGNATION	
54	R59	
53	C4	
52		
51	T2	
50	R54	
49	R41	
48	D52	
47	R52	
46		
45	R401	
44	R404, R61	⚠
43		
42		
41	R66, 602	
40	R49, 68, 69	
39	R65 501, 601	
38	R56	
37	R53, 67	
36	R46, R62	
35	R63	
34	R58, 64, 503	
33	R403	
31	R47, R48	
30	R502	
29	R57	
28	R402	
27	R51	
26	R44	
25	R45	
24	R43	
23	C53	
22	C42	
21	C62, C65, C68, C69	⚠
20	C51, C54	
19	C41	
18	C61	
17	C63	
16	C44	
15	C40	
14	C50	
13	C64	
12		
11	D51	
10	D41	
9	D61	
8	D42, D43	
7	Q60-65, Q42, 51, 52	
6	Q53-56, Q66	
5	Q41	



DETAIL "A"
(T2)

NOTES
1. LEAD AND SOLDER HEIGHT ON ETCH SIDE OF BOARD TO BE .080 MAX
2. MARK 1/8 HIGH GOTHIC CHARACTERS (BLACK)
⚠ 3. DRILL 4 HOLES WITH #56 DRILL AND INSTALL C68 & C69 AS SHOWN.

COMPONENT SIDE

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

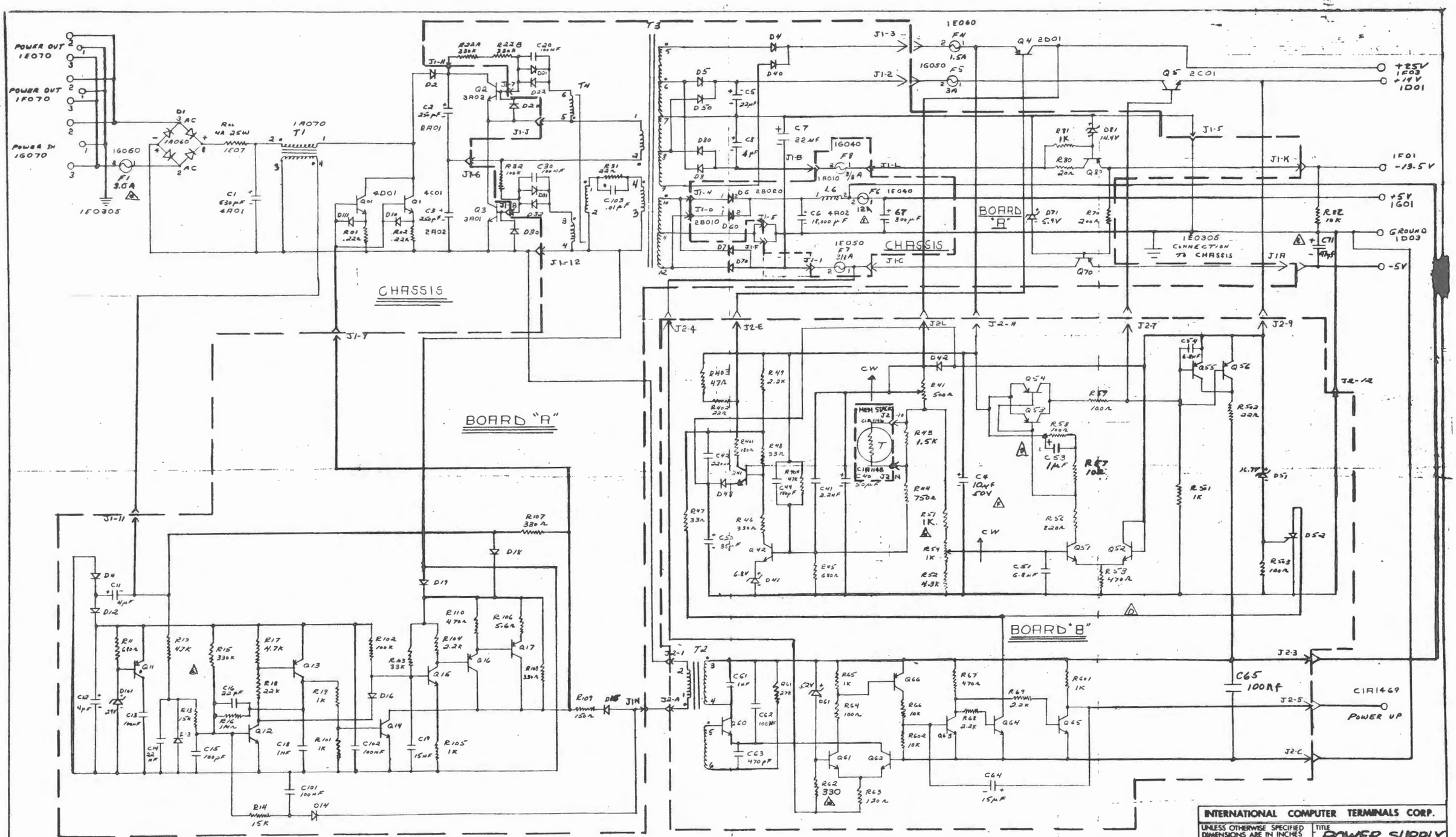
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (3PLCS) .02 (2PLCS)
ANGLES 2°

DR	R. FREDRICKS	4-14-70
CHK	RAB	4-14-70
ENG	G. BRANDES	4-14-70
APPD	F. LONDRES	4-15-70
NEXT ASSY	001-10-16	

TITLE: P.C. BOARD ASSY ASSEMBLY BOARD 'B' 701

SIZE	P C	S S	NO	REV
D	001-10-54			P

SCALE 1:1 SHT 1 OF 2



NOTES:
1. CODING INFO FOR OUTPUT BOARD "A". EXAMPLE: J1N WILL BE 1B040N.
2. CODING INFO FOR OUTPUT BOARD "B" EXAMPLE: J2-A WILL BE 1C040A.

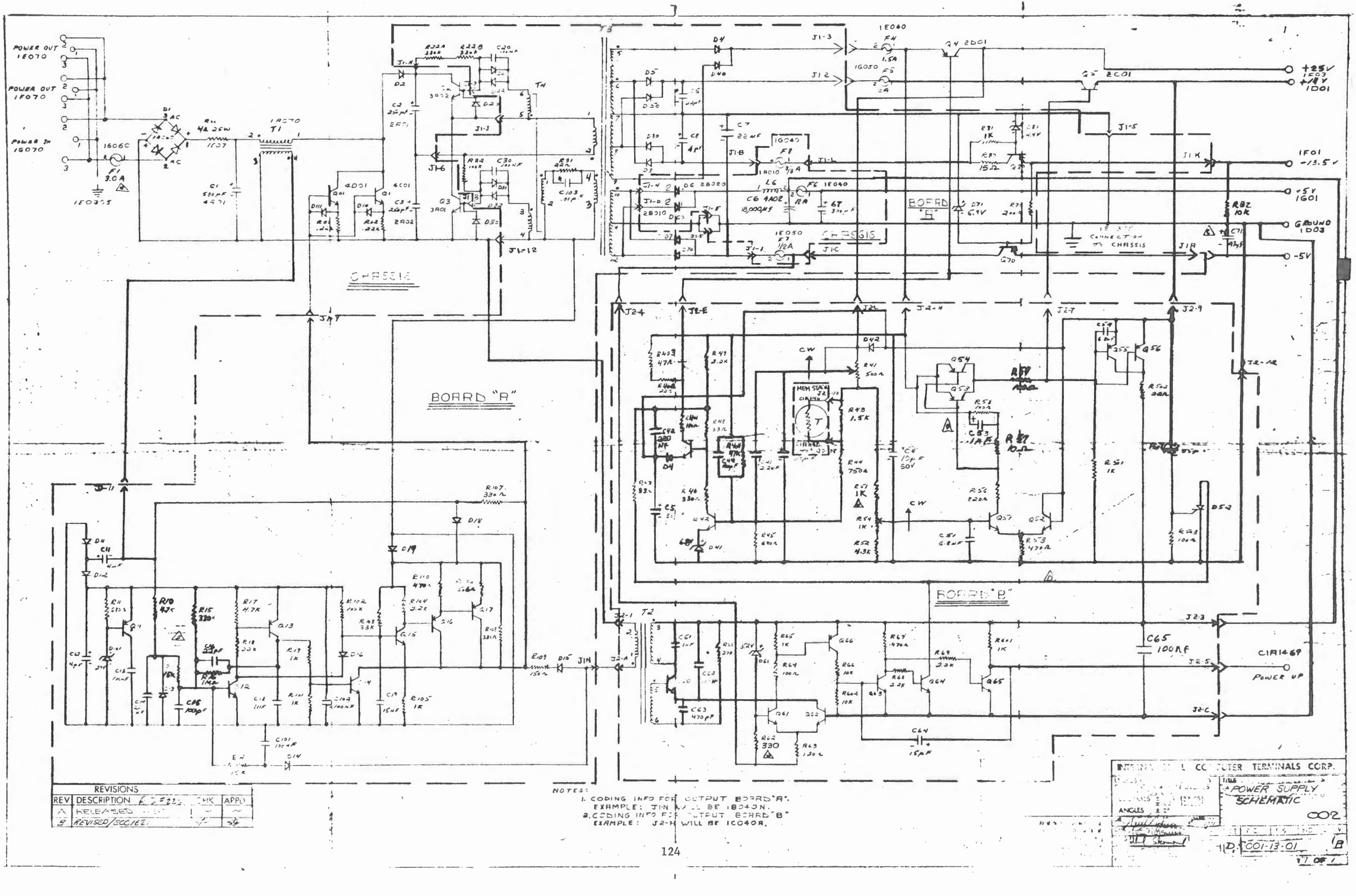
INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (2 PLCS) ± .02 (1 PLCS)
ANGLES ± 2°

TITLE: POWER SUPPLY 001

DR | DATE
CHK
ENG
APPD
NEXT ASSY

SIZE D | P.C. 001-13-01 | S.S. | NO. | REV G
SCALE | SHT # OF #


POWER OUT 1E070
POWER OUT 1F070
POWER IN 1G070
1E060
1E050
1E040
1E030
1F070
1G060
1E070
1E040
1E050
1E060
1G050
1A010
1E030
CHASSIS
BOARD "A"
BOARD "B"
+25V 1E03
+12V 1D01
1F01 -13.5V
+5V 1G01
GROUND 1D03
-5V
C1A1469 POWER UP
C65 100MF
C64 15MF
CW
REVISIONS
REV
DESCRIPTION
CHK
APPD
A
RELEASED
B
REVISED/ECC/1621
NOTES:
1. CODING INFO FOR OUTPUT BOARD "A". EXAMPLE: J1N WILL BE 1B04N.
2. CODING INFO FOR OUTPUT BOARD "B" EXAMPLE: J2-H WILL BE 1C04R.
INTERDATA (UK) COMPUTER TERMINALS CORP.
POWER SUPPLY SCHEMATIC
002
D.C001-13-01
B
SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION PER 249	CHK	APP'D
1	TO FILE		
A	RELEASED 5/23/71		
B	UPDATED/ECO 1526 7/21/71		
C	ECO 1575 8/20/71		
D	ECO 1686 10/13/71		
E	ECO 1621 11/24/71		
F	ECO 1649 11/21/71		

NOTES:
1. CODING INFO FOR OUTPUT BOARD "A". EXAMPLE: J1N-W -- BE 1B04ON.
2. CODING INFO FOR OUTPUT BOARD "B" EXAMPLE: J2-R WILL BE 1C04OR.
3. LEADS NOS A3 AND A4 OF T1A ARE NOT CONNECTED, BUT THE OPEN ENDS MUST BE INSULATED.

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

		DATE
DR	[illegible]	5-25-71
CHK	[illegible]	5-26-71
ENG	[illegible]	5-26-71
APP'D	[illegible]	[illegible]

NEXT ASSY 001-10-16-703

TITLE: SCHEMATIC POWER SUPPLY 003

SIZE	P.C.	S.S.	NO	REV
D	001-13-01			F

SCALE ~ SHT 1 OF 1

REVISIONS			
LTR	DESCRIPTION	CHK	APPD
A	RELEASED RD 5/5/71		
B	REVISED/ECO 1412 5/14/71		
C	ECO 1427 C Relay 5/24-71		
D	REVISED/ECO 1469 5/24/71		
E	REVISED/ECO 1497 6/29/71		
F	REVISED/ECO 1509		
G	REVISED/ECO 1548 9/19/71		
H	REVISED/ECO 1585 10/1/71		
J	REVISED/ECO 1615 10/19/71		
K	REVISED/ECO 1633 10/29/71		
L	REVISED/ECO 1650 11/12/71		
M	REVISED/ECO/652 11/24/71		

T1 INPUT INTERCONNECTION TABLE		
NOMINAL AC LINE VOLTAGE	TRANSFORMER (T1) JUMPER CONNECTION	AC INPUT (J13-2 CONN)
105 VRMS	4-8, 3-7	T1-7
110, 115 VRMS	4-8, 2-6	T1-6
120, 125 VRMS	4-8, 1-5	T1-5
210 VRMS	4-7	T1-3
220, 230 VRMS	4-6	T1-2
240, 250 VRMS	4-5	T1-1

NOTES:

1. ALL RESISTORS ARE ¼ W UNLESS OTHERWISE INDICATED.
2. Q20, Q21, R42 & R48 ARE NOT PART OF BOARD "A" AS SHOWN, THEY ARE LOCATED ON THE SUB-ASSEMBLY.
3. CONN. J1, J2, J3, J4, J5, +J6 ARE LOCATED ON THE MOTHER BOARD. ALL CONNECTIONS BETWEEN THESE CONNECTORS ARE PRINTED CIRCUIT RUNS.

BOARD A

BOARD B

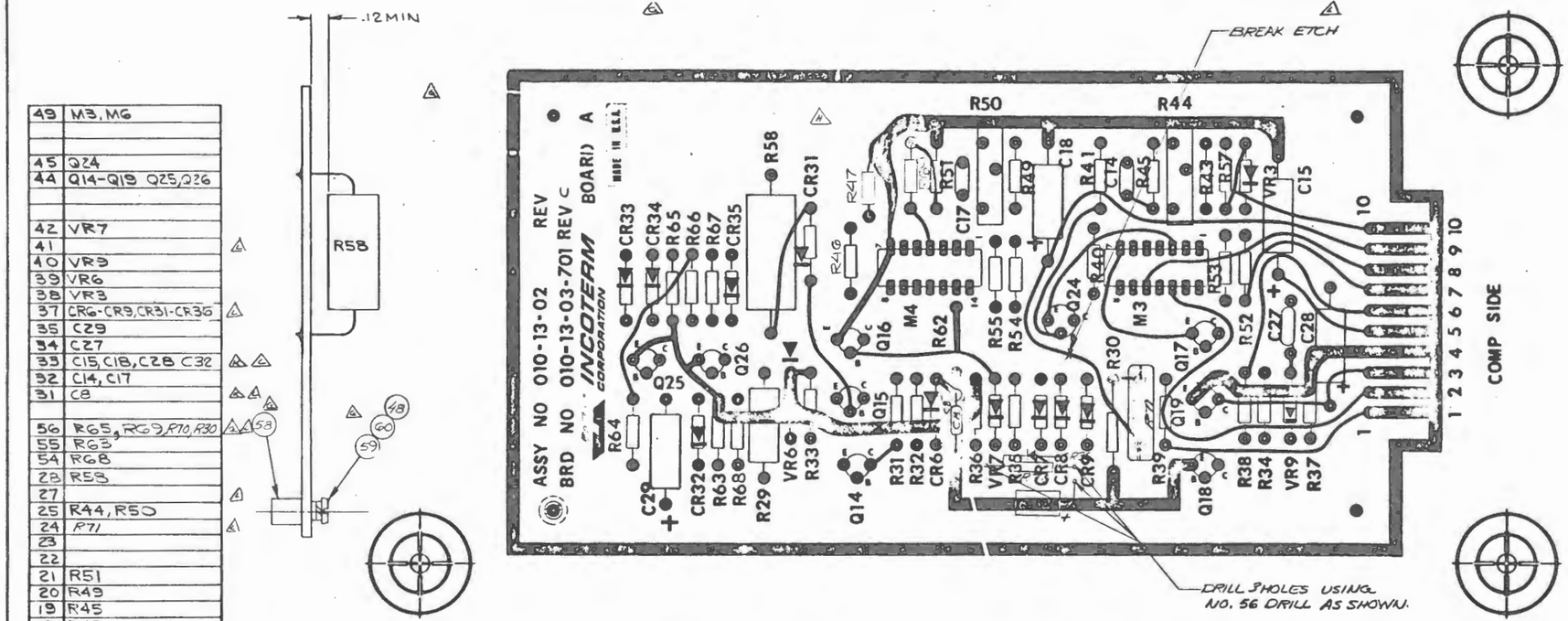
SCHEMATIC POWER SUPPLY TERMINAL 001

D 010-13-01 M

010-13-20

REVISIONS			
E	REDRAWN & REVISED PER ECO 1412 18MAR71	CLK #5 3/31/71	J.B.
F	ECO 1427 C Rdy 4-19-71	DPW	DPW
G	REVISED/ECO 1464 7/26/71	RAB	RAB
H	REVISED/ECO 1465 5/25/71		
J	REVISED/ECO 1497 6/30/71	RAB 2 30 JUN 71	RAB 30/6/71
K	REVISED/ECO 1635		
L	REVISED/ECO 1650 11/2/71		
M	REVISED/ECO 1658 11/4/71		

ITEM	DESIGNATION
49	M3, M6
45	Q24
44	Q14-Q19 Q25,Q26
42	VR7
41	
40	VR9
39	VR6
38	VR3
37	CR6-CR9, CR31-CR36
35	C29
34	C27
33	C15, C18, C28 C32
32	C14, C17
31	C8
56	R65, R69, R70, R30
55	R63
54	R68
28	R59
27	
25	R44, R50
24	R71
23	
22	
21	R51
20	R49
19	R45
18	R43
17	
16	R36, R64
15	R57
14	R55
13	R54
12	R53
11	R52
10	R47
9	R46
8	R40, R41
7	R35, R39, R62, R67
6	R32, R38, R66
5	R37
4	R34
3	R33
2	R31
1	R29



NOTE
1. COMPONENT LIMITATIONS:
   COMPONENT SIDE OF BOARD .600 MAX
   ETCH SIDE OF BOARD .080 MAX

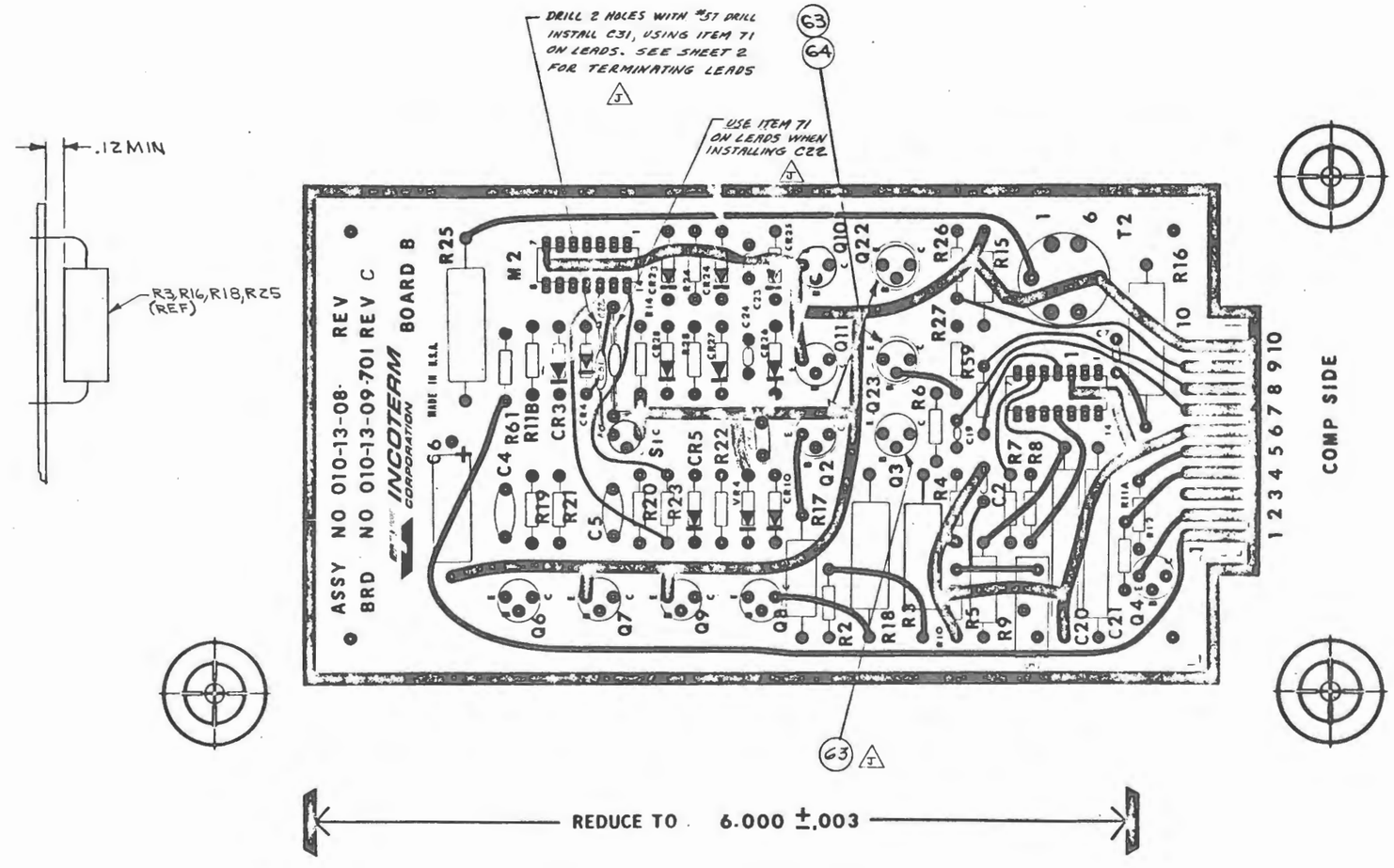
ASSY P.C. BOARD POWER SUPPLY BOARD "A" 701

R.F 1-22-71
R.A.B 1-22-71
J.B 1-22-71
D.O.C 27 MAY 71

D. 010-13-02 M

010-13-20 2/1 1 2

H	REDRAWN & REVISED PER ECO 1510	RAF 1-22-71	RAF 2-2-71
J	ECO 1548 8/19/71 RAB	RAB	RAB
K	REVISED/ECO1585 9/1/71		
L	REVISED/ECO1695 1/25/72		



ITEM	DESIGNATION
72	RG1
61	C30
60	Q22,Q23
59	Q6-Q11
58	Q4
57	Q3
56	Q2
54	M2
53	M1
50	S1
48	VR4
47	CR3,4,5,10,23-28
42	C22
41	C20,21
40	C19,23,24
39	C7 *
38	C6
37	C4,5
36	C2, C31
34	T2
32	R9
31	R17
29	R18
27	R25
26	R3
23	R16
22	R15
21	R5
17	R20 21
16	R10
15	R7
10	R59
9	R24, 23
8	R22,23
7	R19
6	R14,
5	R11A,11B,12, 26,27
4	R8
3	R6
2	R4
1	R2

NOTES:
1. HEIGHT LIMITATION.
   COMPONENT SIDE OF BOARD .600 MAX.
   ETCH SIDE OF BOARD .090 MAX.
* 2. INSTALL C7 (ITEM 39) WITH STRAIN RELIEF BENDS IN LEADS.

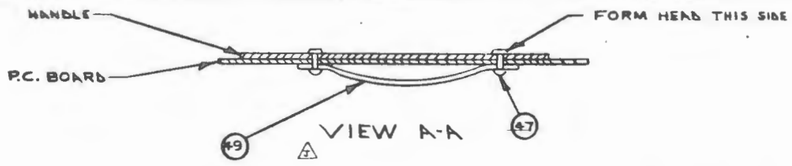
PC BOARD ASSY
POWER SUPPLY
BOARD B

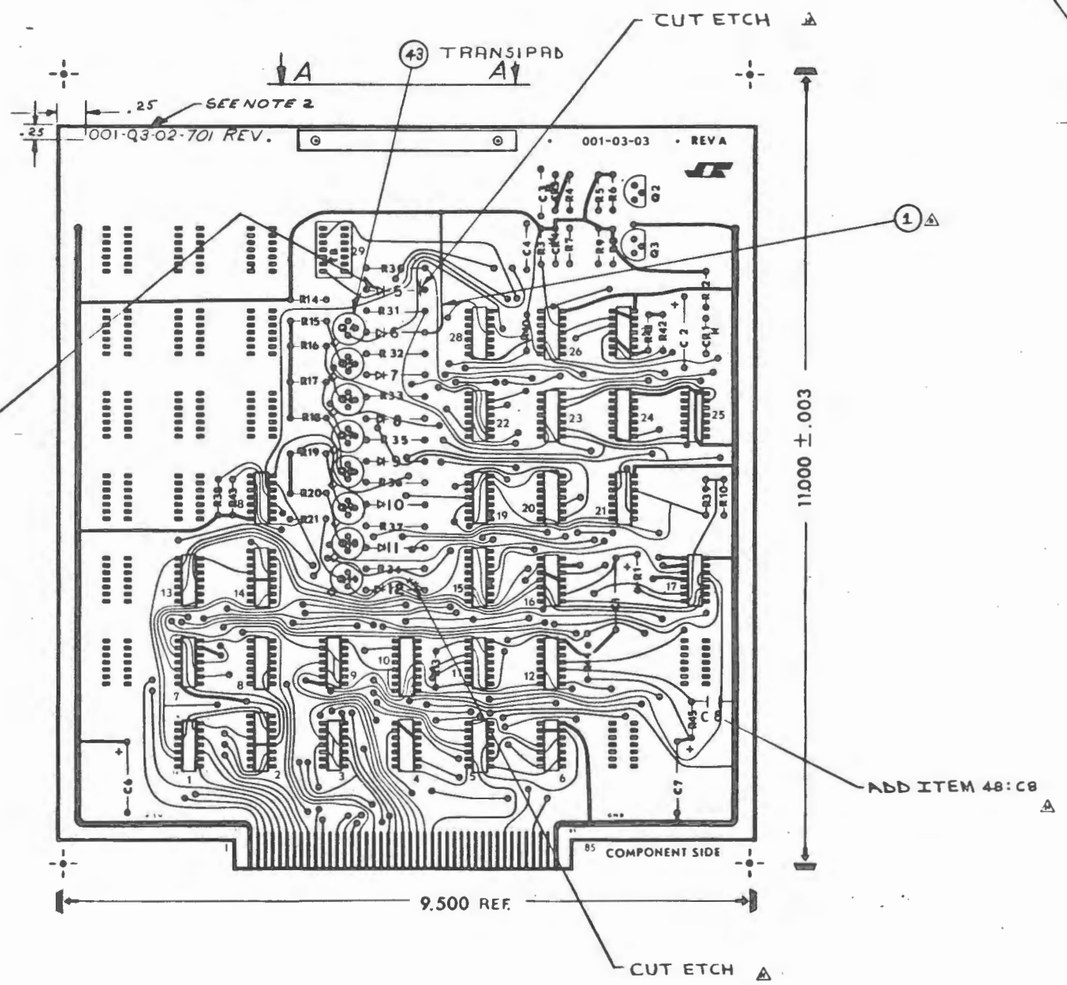
RUSS FREDERICK 1-22-71
R.A.B. LOCEAU 1-22-71
J. BRADES 1-22-71
D.O. KENDRICK 1-29-71
010-13-20

D 010-13-08 L

2:1

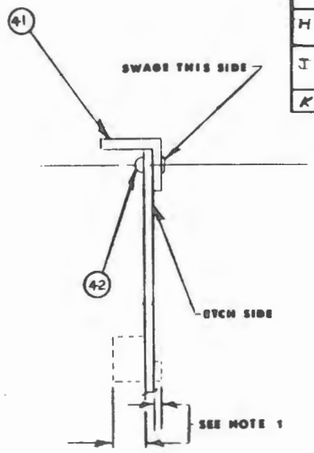
REVISIONS			
REV	DESCRIPTION	CHK	APPD
F	REDRAWN & REVISED PER ECO 1197 11/4/69 RAF		
G	UPDATED/ECO 1205 11-2-70		
H	ECO 1432A 5-7-71 RAF	R.B.Z. 1-10-71	R.B.Z. 1-10-71
J	ECO 1439 5-3-71 RAF		
K	ECO 1483 6/29/71		

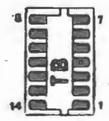




FROM NO	ADD WIRE FROM
1	CATHODE CR5 TO +5 VOLTS

DELETE R22-R29, ADD IN THEIR PLACE CR5-CR12 TYP 8 PLACES





23	C3
48	C8
43	TRANSIPADS Q4-Q11
39	TB29
32	R30-37
31	
30	R14-21
29	Q4-Q11
27	Q2, Q3
25	CR1, CR3-CR12
24	C6, C7
22	C4
21	C1, C2
20	—
19	R8
18	R6, 9
17	R5
16	R4, 7
15	R3, R10, 13, 38-45
14	R2
13	R1
12	M25
11	M10, 15
10	M2, 14
9	M19
8	—
7	M21, 22
6	M16, 23
5	M8, 18, 27
4	M4, 6, 7, 12
3	M3, 9, 11
2	M5, 20, 26
1	M13, 17, 24, 28
ITEM NO	REFERENCE DESIGNATION

PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

NOTE:

1. **HEIGHT LIMITATIONS.**
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. MARK ⅛ IN VERTICAL GOTHIC, BLACK AS SHOWN

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

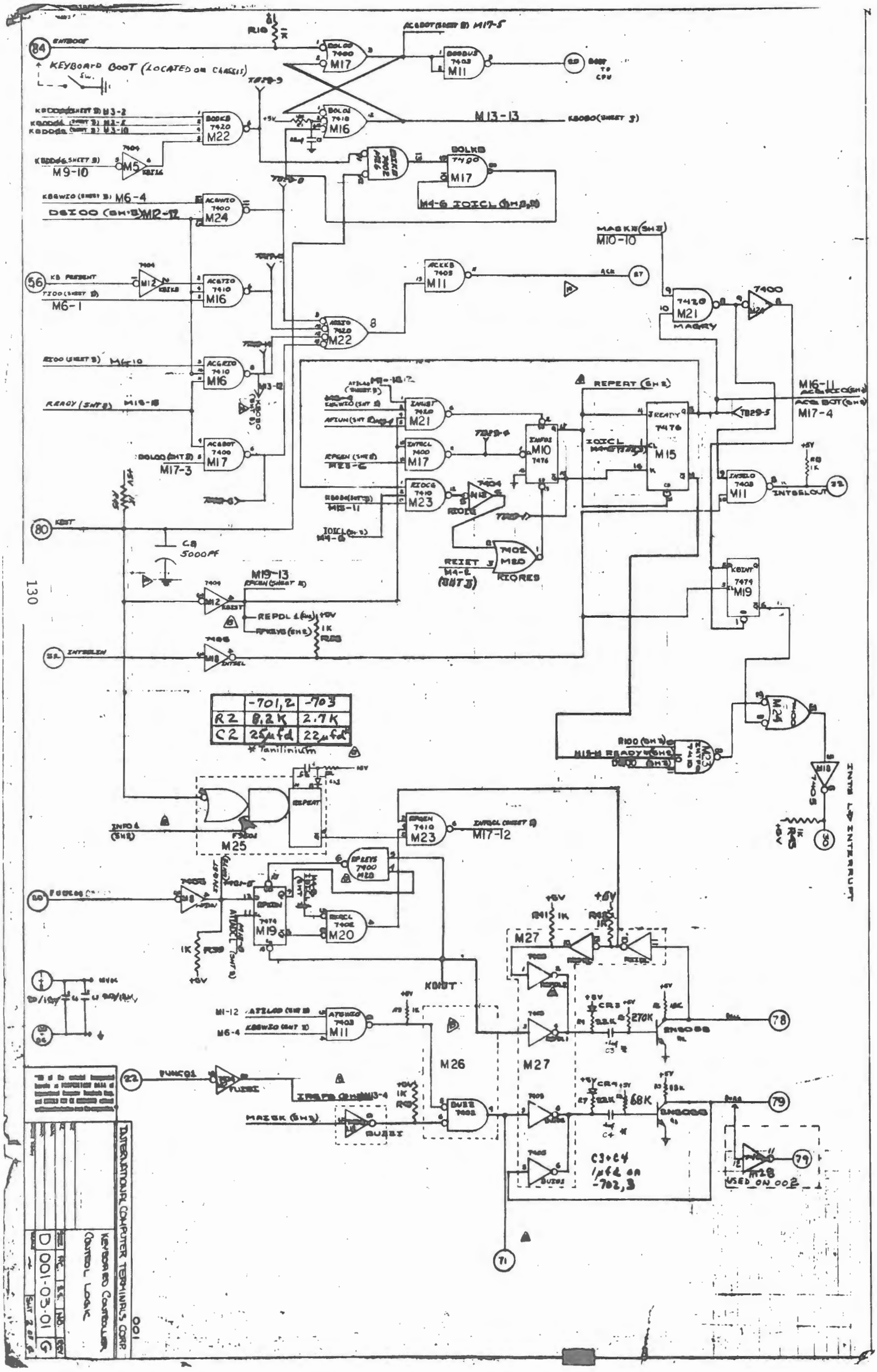
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (3PLCS) .02 (2PLCS)
ANGLES 2°

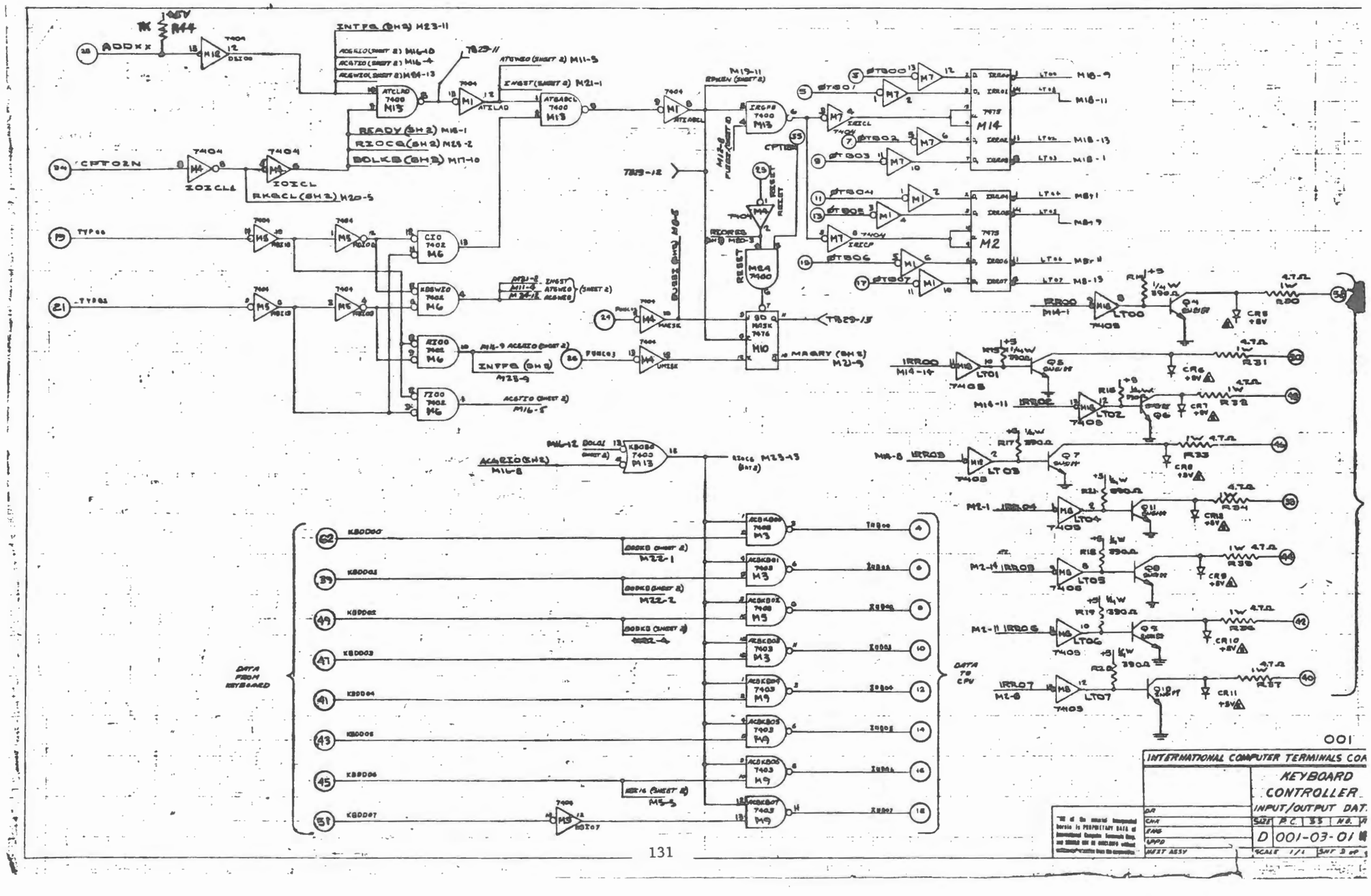
DR	Russ Frederick	4-28-70
CHK	R.A.B. Lorden	4-30-70
ENG	R.A.B. Lorden	4-30-70
APPD	Frank Lindsey	4-30-70
NEXT ASSY	001-03-06	

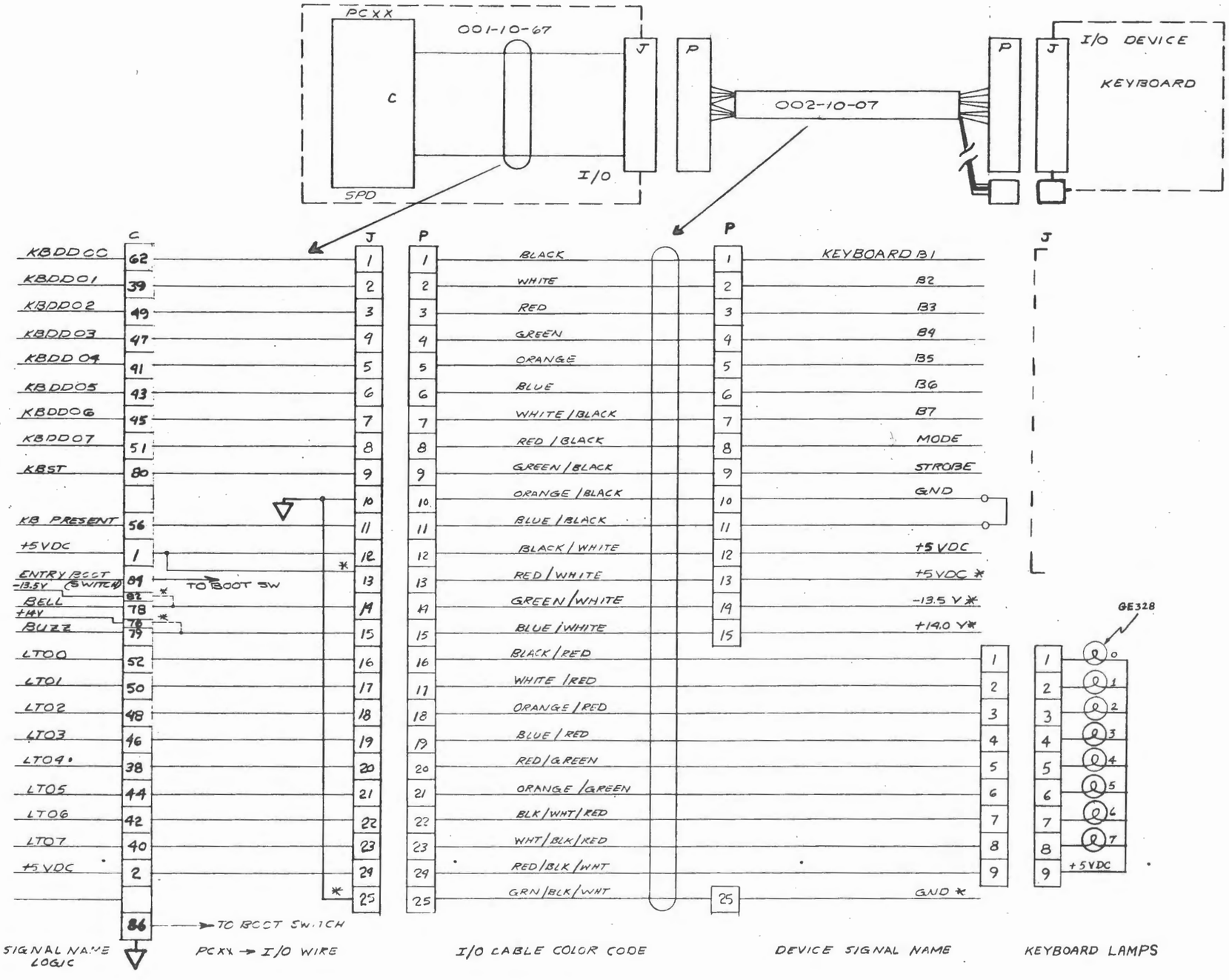
TITLE
P.C. BOARD ASSY
KEYBOARD CONTROLLER
701

SIZE	P.C.	S.S.	NO.	REV.
D	001-03-02			K

SCALE 1:1 SHT 1 OF 1


KEYBOARD BOOT (LOCATED ON CHASSIS)
M17
M11
M16
M22
M5
M24
M21
M15
M23
M20
M19
M25
M26
M27
M10-10
M13-13
M17-4
M17-3
M9-10
M6-4
M6-1
M19-13
M16-11
M13-11
M4-6 IOICL
REPEAT (SH 2)
INTERRUPT
-701,2 -703
R2 8.2K 2.7K
C2 25μfd 22μfd
C3+C4 1μfd on -702,3
M28 USED ON 002
KEYBOARD CONTROLLER
CONTROL LOGIC
001-03-01 G
001


INTFS (SH2) M23-11
ADDRX
M12
7404
DS100
M14
5V
1K
7829-11
ATCLAD (SHEET 2) M16-10
ACATIO (SHEET 2) M16-4
ATCLAD
7400
M13
M1
ATSABCL
7400
M13
READY (SH2) M16-1
RIOCG (SH2) M23-2
BOLKB (SH2) M11-10
CPTOZN
M4
IOICLL
IOICL
RKACL (SH2) M20-5
TYP00
M5
M6
CIO
7402
M6
KBDWIO
7402
M6
KI00
7402
M6
INTFB (SH2)
M23-9
ACATIO (SHEET 2)
M16-5
M4
UMISK
7404
M4
MASK
7476
M10
MASRY (SH 2)
M21-9
M19-11
EPMEN (SHEET 2)
IRGPB
7400
M13
M12-6
PWRFL (SHEET 2)
CPTOZN
RESET
M4
M64
7400
RECVRD
M20-3
BUSRST (SH2) M6-5
ST800
ST801
ST802
ST803
ST804
ST805
ST806
ST807
M7
7404
IRECL
IRECP
7475
M14
7475
M2
LT00
LT01
LT02
LT03
LT04
LT05
LT06
LT07
M18-9
M18-11
M18-13
M18-1
MB7-1
MB7-9
MB7-11
MB7-13
RR00
M14-1
M16
7405
RW
+5
1/4W
390Ω
Q4
CR5
+8V
4.7Ω
1W
R30
R31
R32
R33
R34
R35
R36
R37
CR6
CR7
CR8
CR9
CR10
CR11
IRR00
M14-14
IRR01
M16-11
IRR02
M16-8
IRR03
M14-8
IRR04
M2-1
IRR05
M2-14
IRR06
M2-11
IRR07
M2-8
Q5
Q6
Q7
Q11
Q9
Q10
R15
R16
R17
R21
R18
R19
R20
KBD00
KBD01
KBD02
KBD03
KBD04
KBD05
KBD06
KBD07
DATA FROM KEYBOARD
M16-8
KBD8B
7400
M13
M22-1
M22-2
M22-4
M5-5
M3
M5
M9
ACBKB00
ACBKB01
ACBKB02
ACBKB03
ACBKB04
ACBKB05
ACBKB06
ACBKB07
7403
IRR00
IRR01
IRR02
IRR03
IRR04
IRR05
IRR06
IRR07
DATA TO CPU
001
INTERNATIONAL COMPUTER TERMINALS COR
KEYBOARD
CONTROLLER
INPUT/OUTPUT DAT
D 001-03-01
SCALE 1/1



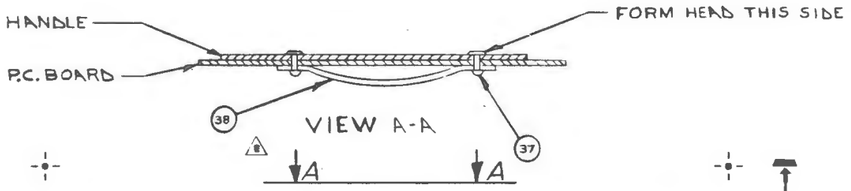
* ON 010 DATA TERMINALS ONLY

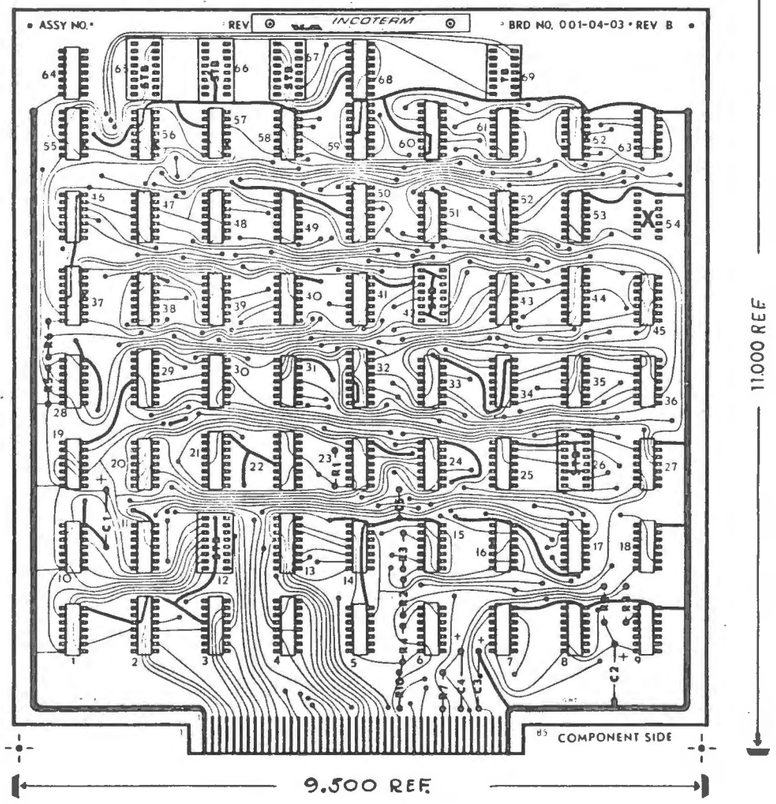
001

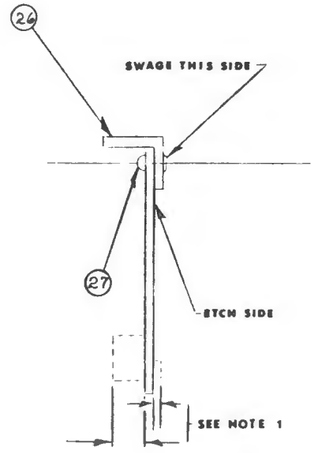
KEYBOARD CONTROLLER

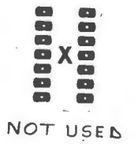
D Langlois 10/6/70
10/25/70
10/27/70
10/27/70 D 001-03-01 H

REVISIONS			
REV	DESCRIPTION	CHK	APPD
D	REDRAWN PREVISED PER ECO 1230 C dtd 12 Jan 71	RaB 1/12/71	RaB 1/12/71
E	ECO 1439 5-4-71 RAF		

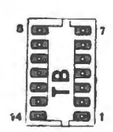


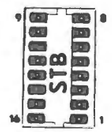


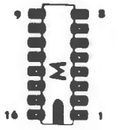




NOT USED







PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ITEM NO.	REFERENCE DESIGNATION
24	R B
24	C5
23	C3, C4
22	C1, C2
21	R7
20	R3
19	R1, 2, 4, 5, 6, 9, 10
18	STB 1, 2, 26, 42, 65, 66, 67
17	TB 69
16	M 7, 8, 9
15	M 18
14	M 5, 14
13	M 55, 56, 57
12	M 22, 29, 32, 37, 44, 50, 59, 60, 68
11	M 2, 3, 4, 13
10	M 41, 47, 48, 53
9	M 21
8	M 17, 49
7	M 64
6	M 27, 36, 61
5	M 19, 24, 33, 39
4	M 11, 20, 31, 34, 46, 52
3	M 1, 6, 10, 23, 28
2	M 30, 40, 51, 58, 62, 63
1	M 15, 16, 25, 35, 38, 43, 45

NOTE:

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

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

DR	R. Russ Frodsham	DATE 3-30-70
CHK	R Billheimer	5-5-70
ENG	R Billheimer	5-5-70
APPD	Frank Lorraires	5-5-70
NEXT ASSY	001-24-06	

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

SIZE	P C	S S	NO	REV
D	001-04-02			E

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD

OTB 07 OTB06 OTB05 OTB04 OTB03 OTB02 OTB01 OTB00

17 15 13 11 9 7 5 3

PAR IN STROBE (SHT 2,5)

7475 M3 — 7475 M12

TB69-13

DC1 (SHT4) — WRT FIC (SHT 3,4) — DC1 (CH 4)

SR PAR EN B (SHT 5)

SDI (SHT4) — 7476 PRESET M32 — 7495 M14 — 7495 M15

M31 7404

SDI (SHT 3,5)

DC1 (SHT4) — PAR OUT STROBE (SHT 5) — DC2 (SHT4)

7476 M22 CLEAR — XST866 — XST866

BCTB·DC3 (SHT4)

7475 M13 — 7475 M4

45 47 49 51 41 39 43 46 — B07 B06 B05 B04 B03 B02 B01 B00

WORD LENGTH 1 2 3 4 — STB 12 5 6 7 8

PAR IN STROBE (SHT 2, 5)

7403 M1 ×6 — 7403 M10 ×6

18 16 14 12 10 8 6 4 — IN B07 IN B06 IN B05 IN B04 IN B03 IN B02 IN B01 IN B00

TB69-8

75,76 — +14V

81,82 — -14V

1,2 — +5V

C1 5µF 12V — C2 5µF 12V — C3 5µF 25V — C4 5µF 25V

85,86 — GROUND

BCTB (SHT4) — BCTB (SHT4)

+5V — R5 1K

DCS (SHT4) — EB+LB (SHT5)

7403 M28 — 7403 M28

7474 M41 D CK PRESET Q

CTS WRT FFI (SHT 3)

7402 M30 — 7402 M30 SDO — SDO (SHT4)

CIO DATA (SHT 3) — 7400 M43 — XST826

RESET (SHT 3)

CTS (SHT 5) — 7420 M27

DSR+CARRL (SHT 3)

INTERNATIONAL COMPUTER TERMINALS CORP.

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

TITLE: ASYNCHRONOUS MODEM

DR C Colby — DATE 7/26/72 — CHK — ENG — APPD — NEXT ASSY

001

SIZE	P.C.	S.S.	NO.	REV
D	001-04-01			F

SCALE — SHT 2 OF 6

REVISIONS			
REV	DESCRIPTION	CHK	APPD

TB69-11

BC TO DC3 (SHT 4)

M19 7410 CIO2

+0 (SHT 3)

+1 (SHT 3)

7400 WRT 4/F M25

WRT 4/F (SHT 3,4,5)

7404 M31

XMIT MODE

61

7400 WRT 4/F M25

WRT 4/F (SHT 2,4)

M53 7474 RESET

CTS-WRT FF SHT 3

M27 7420

1ST WRT (SH 3,5)

7402 M57

CTS-WRT FF1 (SHT 2)

28 ADDXX

19 TYPE 00

21 TYPE 01

7442 M21

7400 M38

(WIO+RIO)(ADDXX) (SHT 3, 5)

7404 M11

7404 M11

CIO3 (SHT 5)

+0 (SHT 3)

+1 (SHT 3)

7410 CIO3 M19

BCTI DC3 (SHT 4, 5)

7402 M51

7400 M25

7476 M60

7400 M25 (SHT 5) WRT INH

7402 M40

(SH 5) INT WRT ENB

BCTO DC1 WRT F/F (SHT 4)

7404 M52

TB69-1

CTS STB 42-14

7474 M53

+5V

R1 1K

+0 (SHT 3)

7403 M23 TIO1

DSR+CANCEL (SHT 4)

DSR+CANCEL

7404 M52

20 FUNC 00

22 FUNC 01

24 FUNC 02

26 FUNC 03

7404 M28

+0 (SHT 3,5)

+0 (SHT 3)

+1 (SHT 3)

+1 (SHT 3)

+2 (SHT 3)

+2 (SHT 3)

+3 (SHT 3)

+3 (SHT 3)

+2 (SHT 3)

+3 (SHT 3)

7402 CIOB M30

7476 M29

UNMASK (SH 5)

7402 CIOC M30

RESET

25

7402 M40

7404 M43

7400 RESET M43

RESET (SHT 5)

RESET (SHT 25)

+0 (SHT 3)

+1 (SHT 3)

M19 7410 CIO1

+3 (SHT 3)

7410 CIO4 M24

CIO DATA (SHT 2)

SDI (SHT 2,5)

M41 7474

+3 (SHT 3)

7403 M28 TIOB

CTS (SHT 5)

(SH 5) (WIO+RIO) ACK

R4 1K

+5V

7400 TIO 0 M16

7403 M6

7403 ACK M6

ACK

27

BOOT (SHT 5)

1K

+5V

R9

55

CONTROLLER BOOT

BCT B (SHT 4)

RDY F/F (SHT 5)

7476 M32

+2 (SHT 3)

7403 TIO4 M23

37 TURT 4

7404 M22

7404 M22

TURT 4 (SHT 4)

TURT 4 (SHT 4)

(WIO+RIO)(ADDXX) (SHT 3)

+2 (SHT 3)

+2 (SHT 3)

7476 M29

1ST WRT (SHT 3)

7400 M23

LB (SHT 5)

CARRIER DETECTED

69

+5V

R2 1K

R3 47

scopt C5

R (SHT 5)

CD (SHT 4)

7404 M52

7400 M15

7403 M6

CTS (SHT 3)

CTS-WRT (SH 2,4,5)

7400 M16

7403 M6

CTS WRT FF SHT 3

WRT F/F (SHT 3)

7400 M16

+1 (SHT 3)

7403 TIO2 M23

7400 M15

7400 M15

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3 PLCS) ± .03 (2 PLCS)
ANGLES ± 2°

DR C Cole DATE Feb 74
CHK
ENG
APPD
NEXT ASSY

TITLE ASYNCHRONOUS MODEM 001

SIZE	P.C.	S.S.	NO.	REV
D	001-0401			F

SCALE 1/1 SHT 3 OF 6

REVISIONS			
REV	DESCRIPTION	CHK	APPD

CTS·WRT (SHT 2,3,5)
1 ZERO (SHT5)
R (SHT5)
DC1 (SHT4)
DC3 (SHT4)
7410 M33
7410 M39
TURT4 (SHT3)
+5V
7476 M37 DVBY1
7493 DVBY2 M55
7493 DVBY3 M56
7493 DVBY4 M57
BAUD RATE XSTB65
XSTB66
7404 M46
TURT4 (SHT3)
7402 STRCK M40
7430 DCD1 M69
WRT F/E
7403 DCK1 M28
7403 DCK2 M28
(SH 2,3)
7476 DCKO M37
+5V
R6 1K
7404 DCK3 M46
XSTB66
TURT4 (SHT3)
7474 M47
7474 M48
7474 M48
7402 DC2 M40
DC2 (SHT 2,5)
TB69-9
TB69-7
TB69-14
TB69-6
7400 DC1 M49
7404 DC1 M31
DC1 (SHT2,4)
DC1 (SHT 2,4)
7400 DC3 M38
7404 DC3 M46
DC3 (SHT 4)
DC3 (SHT 2,4)
STB 42
TRANSMITTER SIGNAL TIMING ELEMENT
64
CM1160 LR M8
RECEIVED LINE SIGNAL DETECTOR
62
CM1160 LR M8
STB26
CD (SHT3,5)
SDO (SHT2)
CM1150 LD M18
TRANSMITTED DATA
70
DATA SET READY + CANCEL
58
CM1160 LR M7
STB26
CANCEL+DSR (SHT3,5)
WRT F/E (SH 3,4,5)
STB26
CM1150 LD M18
REQUEST TO SEND
68
CLEAR TO SEND
60
CM1160 LR M7
CTS (SHT 5)
RECEIVED DATA
66
-14V
R8 1.5K
CM1160 LR M9
SDI (SHT 2)
DATA TERMINAL
67
R7 3.3K
+14V
DC1 (SHT4)
7476 M50
7476 M50
7476 M59
7476 M59
7476 M68
7476 M68
STB67
BCT ENABLE/DISABLE (SHT5)
STB62
DC1 (SHT4)
DC3 (SHT4)
7402 M58
7410 M39
7400 M38
7474 M47
7402 BCT0+BCT1 M58
7410 M39
7402 BCT8 M58
7402 BCT9 M58
DC3 (SHT4)
STB67
TB69-3
7404 M31
7404 M46
WRT F/E (SHT3)
BCT0 DCI WRT F/E (SHT 3)
BCT0 DC3 (SHT 2,
BCT0 (SHT5)
BCT0 DEL (SHT 5)
BCT0+BCT1 (SHT 5)
BCT1 DC3 (SHT3,5)
BCT8 (SHT2)
BCT8 (SHT 2,3)
BCT9 (SHT 5)

INTERNATIONAL COMPUTER TERMINALS CORP.

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

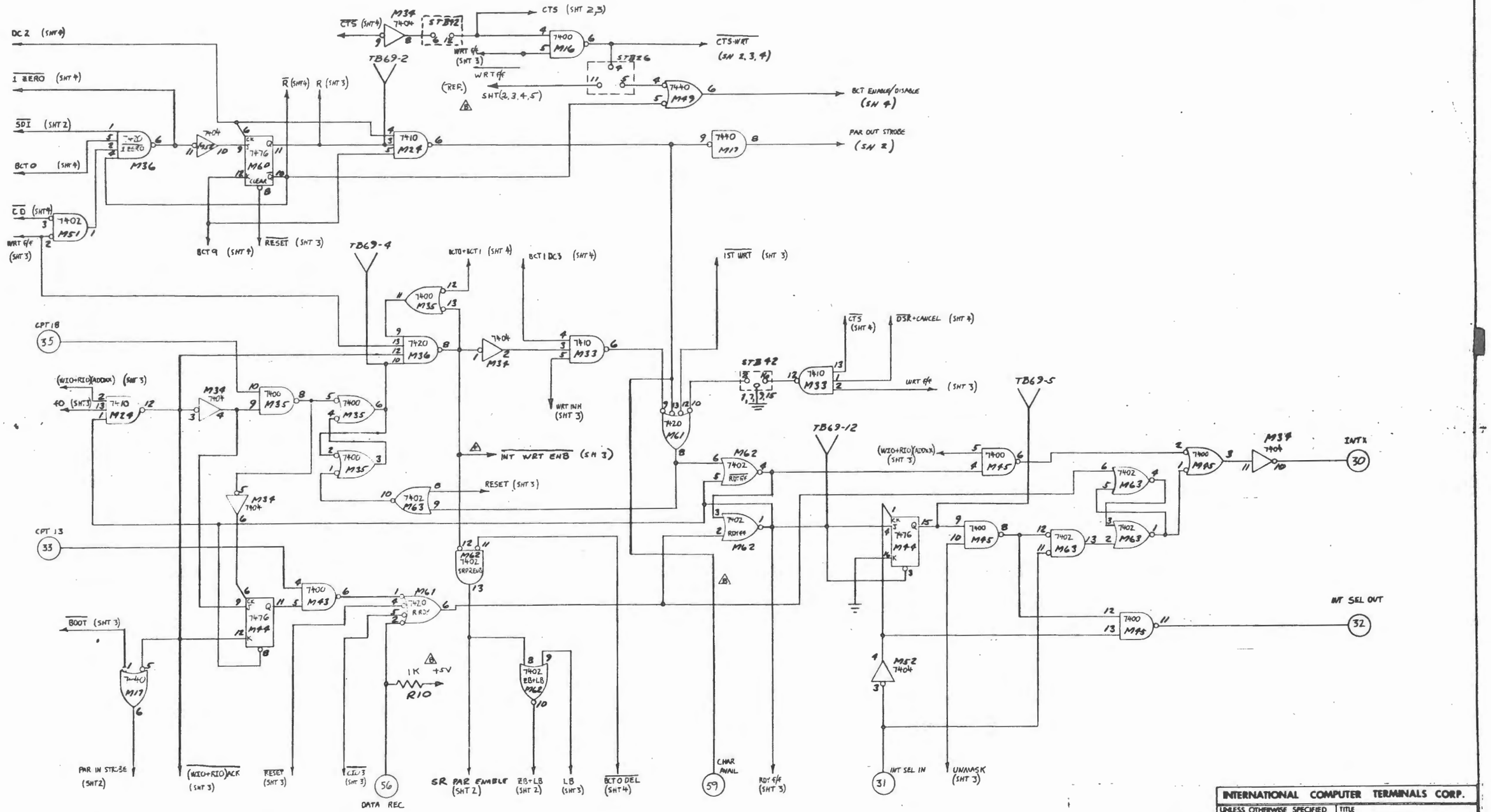
DR	DATE	
CHK		
ENG		
APPD		
NEXT ASSY		

TITLE: ASYNCHRONOUS MODEM 001

SIZE	P.C.	S.S.	NO.	REV
D	001-04-01			F

SCALE — SHT 1 OF 6

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

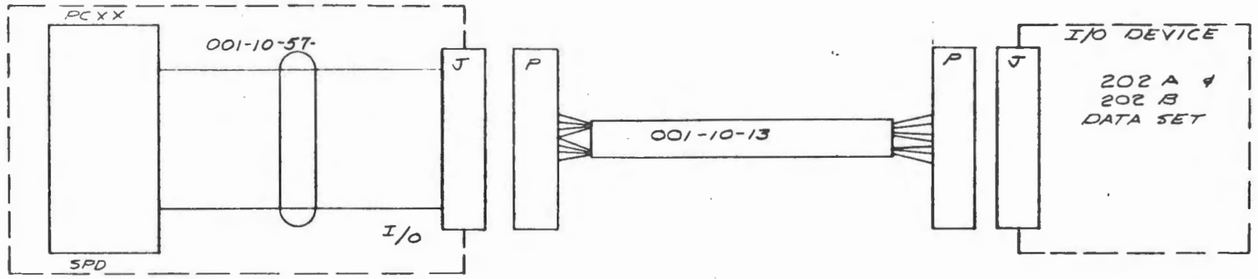
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3PLCS) ± .02 (2PLCS)
ANGLES ± 2°

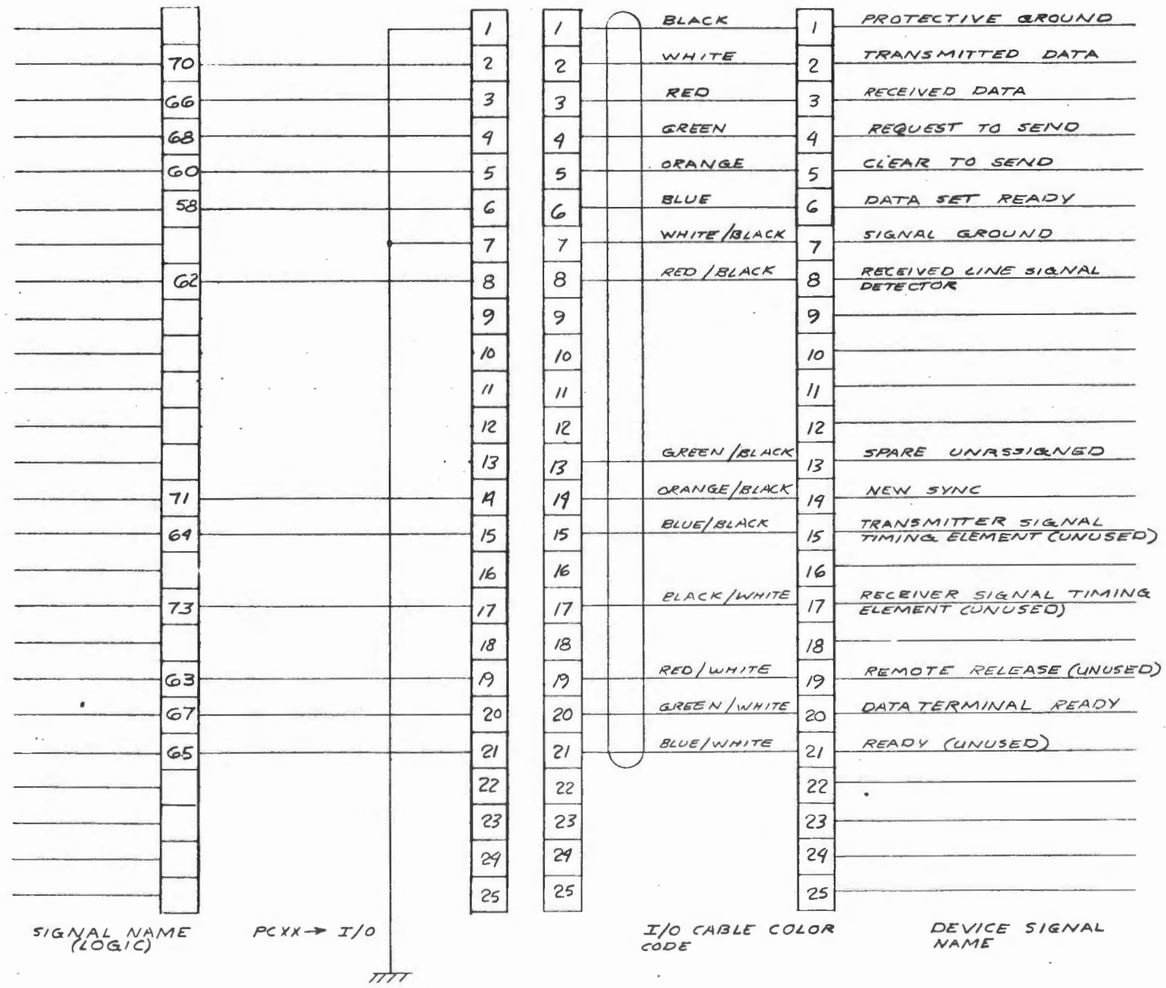
DR	C. Ellis	DATE 2 Jan 79
CHK		
ENG		
APPD		
NEXT ASSY		

TITLE: ASYNCHRONOUS MODEM 001

SIZE	P.C.	S.S.	NO.	REV
D	001-0901			F

SCALE — SHT 5 OF 6





* ALSO PARTY LINE

ASYNCHRONOUS CONTROLLER

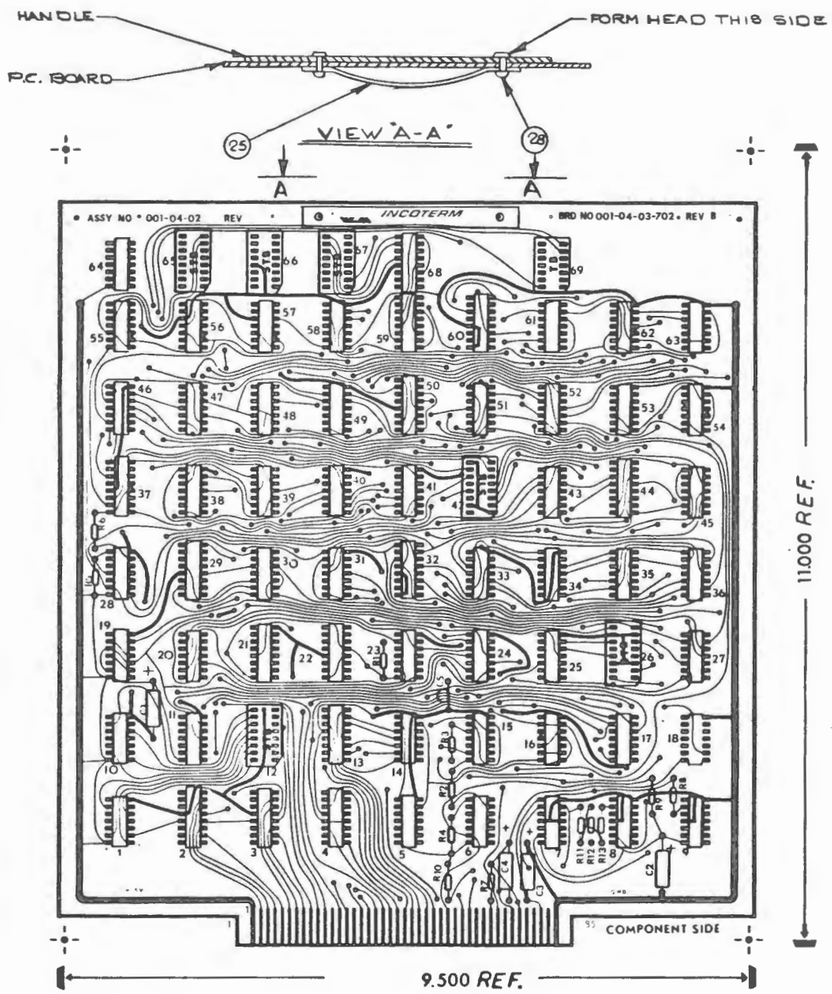
001

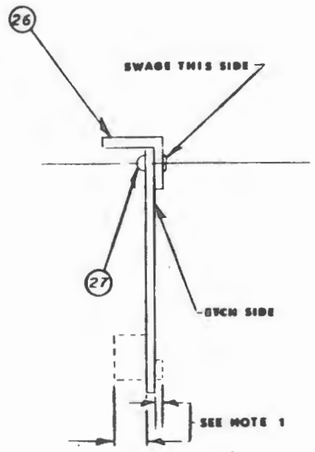
D 001-04-01 F

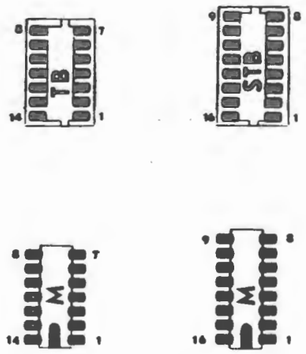
001-04-02

6 6

REVISIONS			
REV	DESCRIPTION	CHK	APPD
G	REDRAW & REVISED PER ECO 1490		







PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ITEM	QUANTITY	REFERENCE DESIGNATION
34		R8,11, 12,13
24		C5
23		C3, C4
22		C1, C2
21		R7
20		R3
19		R1,2,4,5,6,9,10
18		STB 1,12,26,42,65,66,67
17		TB 69
16		M7,8,9
15		M18
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
1		M15,16,25,35,38,43,45,54

NOTE:

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

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

DR	RUSS FREDERICK	4-30-70
CHK	R. BILODEAU	5-5-70
ENG	R. BILODEAU	5-5-70
APPD	FRANK LONDRES	5-5-70

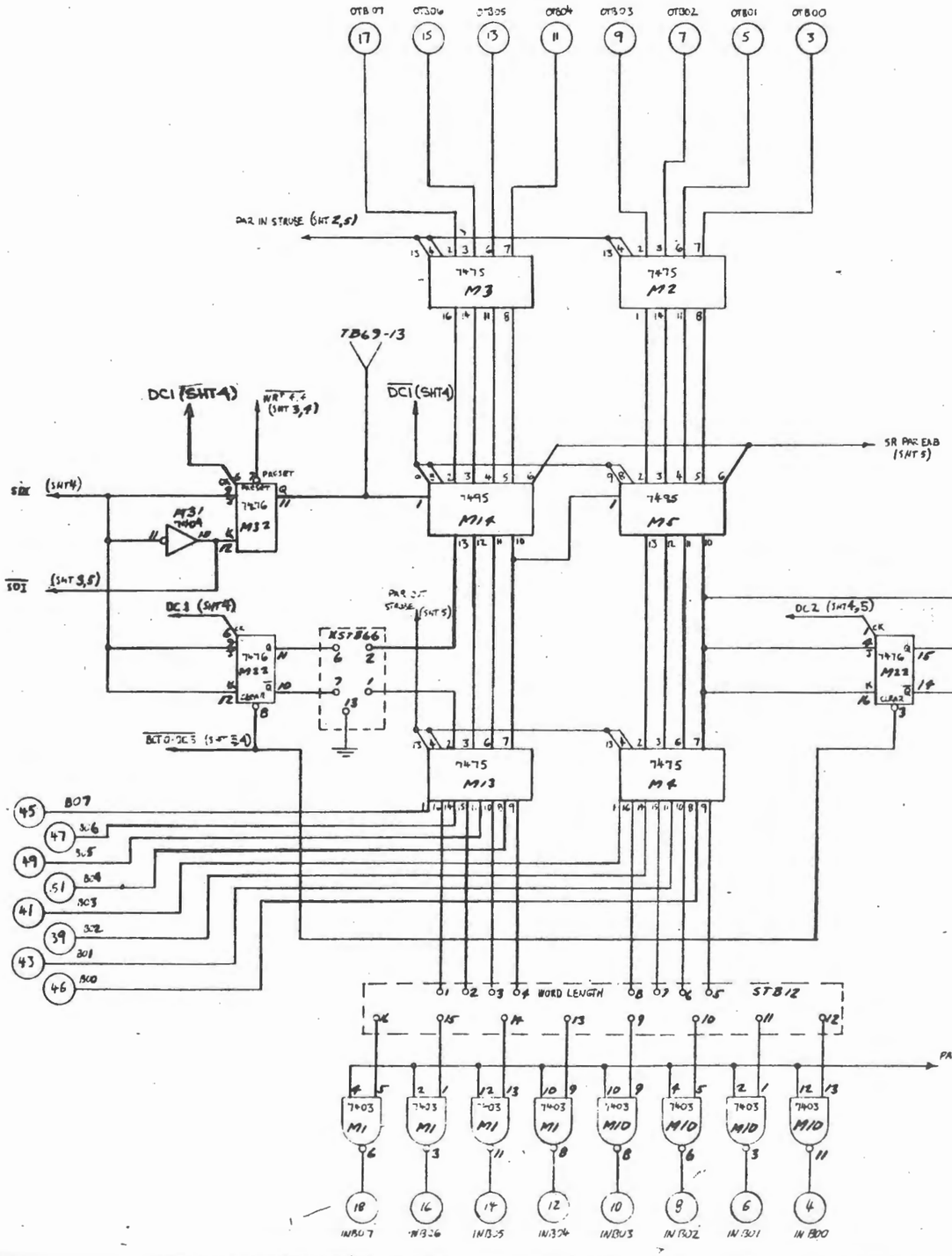
NEXT ASSY 001-04-06-

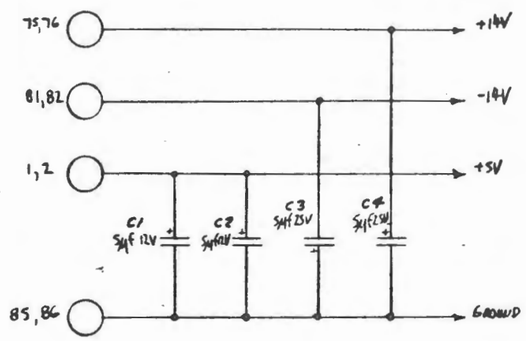
TITLE: P.C. BOARD ASSY ASYNCHRONOUS 702

SIZE	P C	S S	NO	REV
D	001-04-02			G

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD





INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3 PLCS) ± .02 (2 PLCS) ANGLES ± 2°	TITLE ASYNCHRONOUS CONTR.				
DR	DATE			002	
CHK		SIZE	P.C.	S.S.	NO.	REV
ENG		D	001-04-01			C
APPD		SCALE		SHT 2 OF 6		
MFAT 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

REVISIONS			
REV	DESCRIPTION	CHK	APPD

7400 M54 · 7400 M54 · 7402 M40 · BCTODC3 (SHT 4)

TB69-11

M19 7410 CIO2 · $\overline{IO}$ (SHT 3) · I1 (SHT 3)

7400 M25 WRT 4/4 → WRT 4/4 (SHT 3,4,5)

7404 M34 → XMIT MODE → 61

7400 M25 → $\overline{WRT\ 4/4}$ (SHT 2,4)

M53 7474 (CK, D, Reset) · CTS WRT FF SHT 3

M27 7420 → $\overline{1ST\ WRT}$ (SH 3,5)

7402 M51 → $\overline{CTS\text{-}WRT\ FF1}$ (SHT2)

28 ADDR X · 19 TYP 00 · 21 TYP 01 → 7442 M21 → 7400 M38 → (WIO+RIO)(ADDR X) (SHT 3,5)

$\overline{CIO}$ (SHT 5) · IO (SHT 3) · I1 (SHT 3) → 7410 CIO3 M19

BCTODC3 (SHT 4),5) → 7402 M51 → BCTODC3 SHT 3,4

7400 M25 → (SHT 5) WRT INH → 7476 M60 (CLEAR)

(SH 5) $\overline{WRT\ INT\ ENB}$ ← 7402 M51 · BCTODC3 SHT 3,4 (SHT 4)

TB69-1

$\overline{CTS}$ SHT 2,3,4

7474 M53 → DSR+CANCEL (SHT4) → 7404 M34 → $\overline{DSR+CANCEL}$

R1 1K · +5V

40 (SHT 3) → 7403 M23 TIO1

JUMPER WIRED VERSION

7400 M38 · 7404 M46

DETAIL A

20 FUNC 00 · 22 FUNC 01 · 24 FUNC 02 · 26 FUNC 03 → 7404 M34

40 (SHT 3,5) · $\overline{40}$ (SHT 3) · 41 (SHT 3) · $\overline{41}$ (SHT 3) · 42 (SHT 3) · $\overline{42}$ (SHT 3) · 43 (SHT 3) · $\overline{43}$ (SHT 3)

42 (SHT 3) → 7410 CIO4 M22 → $\overline{CIO\ DATA}$ (SHT2)

TB69-10

42 (SHT 3) → 7402 CIO8 M30 · $\overline{43}$ (SHT 3) → 7402 M30 CIOC · $\overline{42}$ (SHT 3) → 7476 M29 (CLEAR) → UNMASK (SH 5)

RESET 25 → 7402 M40 → 7404 M33 → 7400 M23 RESET → RESET (SHT5)

M29 7410 CIO1 · 40 (SHT 3) · $\overline{41}$ (SHT 3) → 6

7476 M32 (CLEAR) · BLT 8 (SHT 4) · RDY 4/4 (SHT 5) · 42 (SHT 3) → 7403 TIO4 M23

7400 M54 · 7400 M54 · SEE DETAIL 'A'

7400 TIO0 M1C · 7403 M6 · 7403 ACK M26 → ACK → Z7

(SH 5) (WIO+RIO) ACK · +5V · R4 1K

$\overline{BOOT}$ (SHT 5) · R5 1K · +5V → 55 CONTROLLER BOOT

37 TURT 4 → 7404 M24 → TURT4 (SHT4) · $\overline{TURT4}$ (SHT4)

(WIO+RIO)(ADDR X) (SHT 3) · 42 (SHT 3) · $\overline{42}$ (SHT 3) → 7476 M29 (CLEAR) → $\overline{1ST\ WRT}$ (SHT3) → 7400 M93 → LB (SHT 5)

CARRIER DETECTED 69 · +5V · R2 1K · R3 47Ω · 50pf C5

R (SHT 5) · $\overline{CD}$ (SHT 4,5) → 7404 M32 → 7400 M15 → 7403 M6

CTS (SHT 3) · $\overline{CTS\text{-}WRT}$ (SH 4,5) → 7400 M16 → 7403 M6 → CTS WRT FF SHT3

$\overline{WRT\ 4/4}$ (SHT 3) → 7400 M16

7400 M15 · 7400 M15 · F1 (SHT 3) → 7403 TIO2 M23

$\overline{SOI}$ (SHT 2,5) → 7474 M41 (CK, D, Q, $\overline{Q}$) · 0/3 (REF) · CTS (SHT 5) · CTS WRT FF (SHT 3)

INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (2PLCS) ± .03 (1PLCS) ANGLES ± 2°		TITLE ASYNCHRONOUS CONTR.			
DR C. U.	DATE				002
CHK		SIZE	PC	SS	NO	REV
ENG		D	001C401			C
APPD		SCALE		SHT 3 OF 5		
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 this corporation

REVISIONS			
REV	DESCRIPTION	CHK	APPD

CTS WRT (SHT 3,4)
ZERO (SHT 5)
R (SHT 5)
DC1 (SHT 4)
DC3 (SHT 4)
M33 7810
M39
TURT 4 (SHT 3)
+5V
M37 7476 DVBY1
M55 7493 DVBY2
M56 7493 DVBY3
M57 7493 DVBY4
XST865 BAUD RATE
XST866
M69 7830 DCD1
M40 7402 STCK
M46 7404
M36 7476 DCK0 CLEAR
WRT E/F
M28 7403 DCK1
M28 7403 DCK2
XST866
R6 1K
M46 7404 DCK3
STB-42
SRC (SH 4)
TB69-7
TB69-9
TB69-14
TB69-6
M47 7476
M48 7474
M49 7476
M40 7402 DC2
M49 7410 DC1
M38 7400 DC3
M31 7404 DC1
M46 7404 DC3
DC2 (SHT 2,5)
DC1 (SHT 2,4)
DC3 (SHT 4)
DC1 (SHT 4)
DC3 (SHT 2,4)
STB 42
STC
TRANSMITTER SIGNAL TIMING ELEMENT
64
M18 CMII50 LR
-14V
R13 15K
RECEIVED LINE SIGNAL DETECTOR
62
M8 CMII50 LR
STB26
CD (SHT 3,5)
SDO (SHT 2)
M18 CMII50 LD
TRANSMITTED DATA
70
DATA SET READY + CANCEL
58
M7 CMII50 LR
CANCEL + DSR (SHT 3,5)
R12 15K
CLEAR TO SEND
60
M7 CMII50 LR
CTS (SHT 5)
R11 15K
WRT E/F (SH 3,4,5)
REQUEST TO SEND
68
RECEIVED DATA
66
M9 CMII50 LR
SDI (SHT 2)
R8 15K
DATA TERMINAL
67
R7 3.3K
+14V
73
RECEIVER SIGNAL TIMING ELEMENT
M9 CMII50 LR
SRC (SH4)

ST867
DCI (SHT 4)
BCT ENABLE/DISABLE (SHT 5)
M50 7476
M59 7476
M68 7476
ST862
M58 7402
M39 7410
M38 7400
M47 7476
M31 7404
M46 7404
DC1 (SHT 4)
DC3 (SHT 4)
DC3 (SHT 4)
ST867
BCT0 DCI WRT E/F (SHT 3)
BCT0 DC3 (SHT 2,4)
BCT0 (SHT 5)
BCT0 DEL (SHT 5)
BCT0+BCT1 (SHT 5)
BCT1 DC3 (SHT 3,5)
BCT8 (SHT 2)
BCT8 (SHT 2,3)
BCT9 (SHT 5)
TB69-3

INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (.13mm) ± .03 (.8mm) ANGLES ± 2°	TITLE ASYNCHRONOUS CONTR.				
DR	DATE 2-26-73				002
CHK		SIZE	P.C.	S.S.	NO	REV
ENG		D	001-04-01			C
APPD		SCALE		SHT 4 OF 5		
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.

REVISIONS			
REV	DESCRIPTION	CHK	APPD

DC 2 (SH 2,4)

1 ZERO (SHT 4)

SDI (SHT 2)

BCT 0 (SHT 4)

(SHT 3,4) C D

WRT 0/F (SHT 3)

M36 7420 1 ZERO

M51 7402

M60 7476

M24 7410

M16 7400

M39 7440

M17 7490

M34 7404

STB 2

STB 6

CTS (SHT 4)

CTS (SHT 3)

CTS-WRT (SH 3,4)

WRT 0/F (SHT 3)

WRT 0/F (REF.) SHT(2,3,4,5)

R (SHT 4) R (SHT 3)

TB69-2

BCT ENABLE/DISABLE (SH 4)

PAR OUT STROBE (SH 2)

BCT 9 (SHT 4)

RESET (SHT 3)

(SHT 3,4)

TB69-4

BCT0+BCT1 (SHT 4)

BCT1 DC3 (SHT 4)

1ST WRT (SHT 3)

CPT 18 35

M35 7400

M36 7420

M33 7410

M34 7404

WRT INH (SHT 3)

WRT INT ENB (SHT 3)

M61 7420

CTS (SHT 4)

DSR+CANCEL (SHT 4)

STB 42

WRT 0/F (SHT 3)

TB69-5

(WIO+RIO+ADDR) (SHT 3)

40 (SHT 3)

M24 7410

M35 7400

M35 7400

M35 7400

M34 7404

M63 7402

RESET (SHT 3)

TB69-12

M62 7402

(WIO+RIO+ADDR) (SHT 3)

M45 7400

M34 7404

INTR 30

CPT 13 33

M62 7402 SAMPLE

M62 7402 RDY F/F

M44 7476

M45 7400

M63 7402

M63 7402

INT SEL OUT 32

M43 7400

M61 7420 RRDY

M44 7476

BOOT (SHT 3)

M17 7440

R10 1K +5V

M62 7402 EB+LB

M52 7404

INT SEL IN 31

UNMASK (SHT 3)

PAR IN STROBE (SHT 2)

(WIO+RIO) ACK (SHT 3)

RESET (SHT 3)

CIO 3 (SHT 3)

DATA REC 56

SAMPLE/RRDY (SHT 2)

EB+LB (SHT 2)

LB (SHT 3)

BCT 0 DEL (SHT 4)

CHAR AVAIL 59

RDY F/F (SHT 3)

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .X ± .1 (2 PLCS) .XX ± .02 (2 PLCS) ANGLES ± 2°

TITLE ASYNCHRONOUS CONTROL

002

SIZE C | P.C. NO. 001-04-01 | REV C

SCALE 1/1 SHT 4 OF 8

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED "3/16 8-9-71 RAF	[illegible]	[illegible]

CUT ETCH

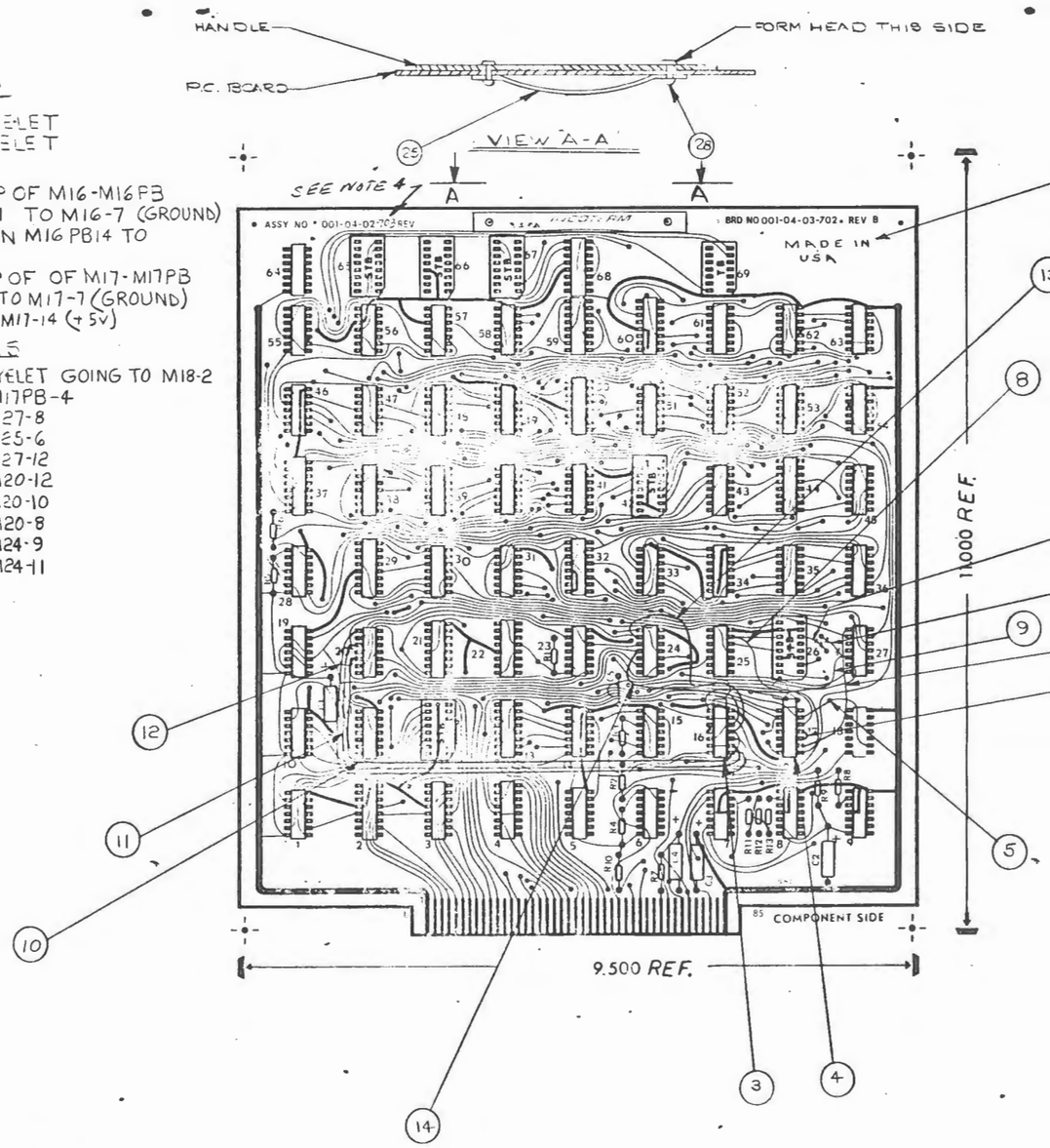
① CUT PC M27-2 TO EYELET
② CUT PC M26-6 TO EYELET

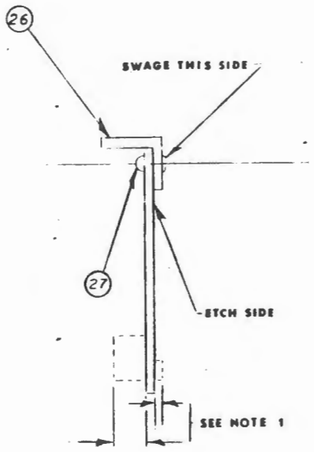
ADD ICS

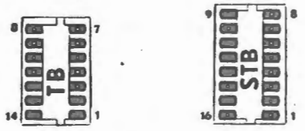
③ ADD IC 7430 ON TOP OF M16-M16PB
TIE DOWN M16PB-7 TO M16-7 (GROUND)
TIE DOWN TIE DOWN M16PB14 TO M16-14 (+5V)
④ ADD IC 7400 ON TOP OF OF M17-M17PB
TIE DOWN M17PB-7 TO M17-7 (GROUND)
TIE DOWN M17PB-14 TO M17-14 (+5V)

ADD WIRES

⑤ RUN WIRE M17PB-6 TO EYELET GOING TO M18-2
⑥ " M17PB-3 TO M17PB-4
⑦ " M17PB-2 TO M27-8
⑧ " M17PB-1 TO M25-6
⑨ " M16PB-8 TO M27-12
⑩ " M16PB-1 TO M20-12
⑪ " M16PB-2 TO M20-10
⑫ " M16PB-3 TO M20-8
⑬ " M16PB-4 TO M24-9
⑭ " M16PB-5 TO M24-11







PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ITEM NO	REFERENCE DESIGNATION
34	R8,11, 12,13
24	C5
23	C3, C4
22	C1, C2
21	R7
20	R3
19	R1,2,4,5,6,9,10
18	STB 1226,42, 6566,67
17	TB 69
16	M7,8,9
15	M18
14	M5,14
13	M55 56, 57
12	M22293237,44,50,59,60,68
11	M2,3,4,13
10	M41, 47, 48, 53
9	M21
8	M17, 49
7	M64, M66PE
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
1	M15,16,25,35,38,43,35,54,1Pin

NOTE:

1. **HEIGHT LIMITATIONS.**
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. FASTEN WIRE ITEM 38 TO BOARD USING ITEM 37, 6 PLACES MARKED
3. MARK 1/8 IN HIGH VERTICAL GOTHIC CHARACTERS AS SHOWN
4. MARK 703 AS SHOWN AFTER REWORK.

INCOTERM CORPORATION
Hayes Memorial Drive
Marlboro gh, Massachusetts 01752

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

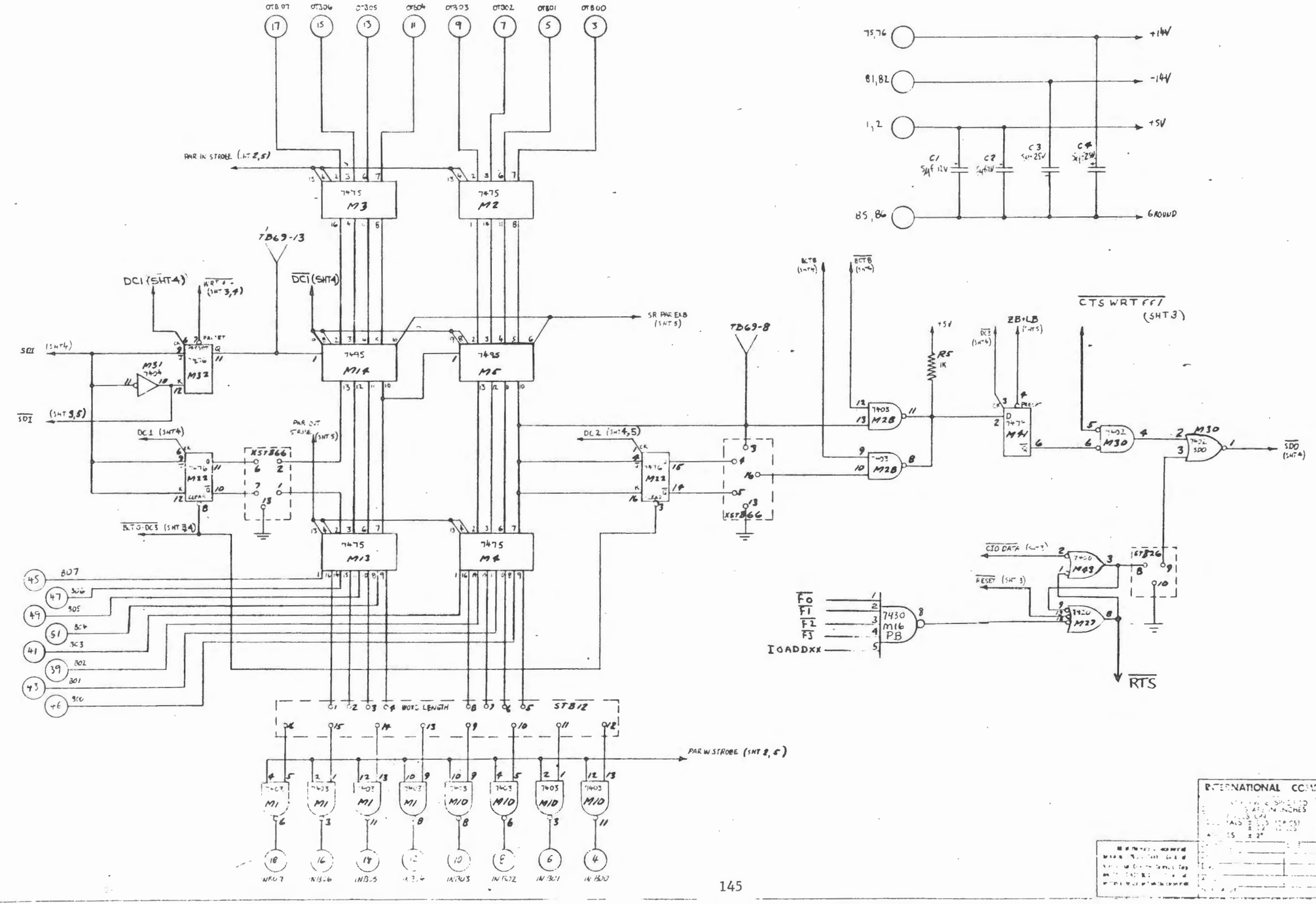
DR	[illegible]	DATE 8-11-71
CHK	[illegible]	8-16-71
ENG	[illegible]	8-18-71
APPD	D.O. [illegible]	8/19/71
NEXT ASSY 010-10-00		

TITLE
P.C. BOARD ASSY
ASYNCHRONOUS
703

SIZE	PC	SS	NO	REV
D	001-04-02			A

SCALE 1:1 SHT 1 OF 2

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

TITLE: ASYNCHRONOUS CONTROL

C03

SIZE C | DOC 001-04-01 | REV A

SHEET 2 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD

7400 M54 · 7400 M54 · BCTODC3 (SHT 4) · 7402 M40 · TB69-11

M19 7410 CI02 · 7400 M25 · WRT f/6 (SHT 3,4,5) · XMIT MODE · 61 · 7404 M41 · WRT f5 (SHT 2,4) · CTS WRT FF SHT 3 · M53 7474 · M27 7420 · 1ST WRT (SH 3,5)

7402 M57 · CTS·WRT f11 (SHT 2)

28 ADDR8 · 19 TYP00 · 21 TYP01 · 7442 M21 · 7400 M38 · (WIO+RIO)(ADDR8) (SHT 3, 5)

M19 7410 CI03 · CIO (SHT 5) · BCT DC3 (SHT 4),5) · 7476 M60 · 7402 M51 · BCTODC3 SHT 3,4 · 7400 M25 · (SHT 5) WRT INT ENB · 7402 M51 · BCTODC1 WRT (SHT 4)

TB69-1 · CTS STB 02-18 · 7474 M53 · +5V · R1 1K · 7403 M28 TID1 · DSR+CANCEL (SHT 4) · DSR+CANCEL

JUMPER WIRED VERSION · 7400 M38 · 7404 M46 · DETAIL A

20 FUNC 00 · 22 FUNC 01 · 24 FUNC 02 · 26 FUNC 03 · 7404 M18 · 7404 M22 · f0 (SHT 3,5) · f0 (SHT 3) · f1 (SHT 3) · f1 (SHT 3) · f2 (SHT 3) · f2 (SHT 3) · f3 (SHT 3) · f3 (SHT 3)

M19 7410 CI04 · CID DATA (SHT 2) · TB69-10 · UNMASK (SH 5)

7402 M30 · 7476 M29 · 7402 M30 · 7476 M29 · RESET 25 · 7402 M40 · 7404 M32 · 7400 M43 RESET · RESET (SHT 5) · RESET (SHT 25)

M19 7410 CI01 · f0 (SHT 3) · f1 (SHT 3)

7474 M54 · 5ST · CTS (SHT 2,5) · f3 (SHT 3) · 7403 M23 · C/D (REA) · CTS (SHT 5) · CTS WRT FF (SHT 3)

(SH 5) (WIO+RIO) ACK · +5V · R4 1K · 7400 M46 · 7400 TIC0 M18 · 7403 ACK M46 · ACK 27 · BOOT (SHT 5) · R5 1K · +5V · 55 CONTROLLER BOOT

BLT B (SHT 4) · R0 f4 (SHT 5) · 7476 M32 · f2 (SHT 3) · 7403 M23 · 7400 M54 · SEE DETAIL 'A'

37 TURT4 · 7404 M22 · TURT4 (SHT 4) · TURT4 (SHT 4)

(WIO+RIO)(ADDR8) (SHT 3) · f2 (SHT 3) · f2 (SHT 3) · 7476 M29 · 15T WRT (SHT 3) · 7402 M93 · LB (SHT 5)

CARRIER DETECTED · 69 · R (SHT 5) · CD (SHT 4,5) · CTS (SHT 3) · CTS WRT (SH 4,5) · WRT f/6 (SHT 3) · 7400 M16 · 7403 M6 · 7400 M15 · 7403 M6 · CTS WRT FF SHT 3 · +5V · R2 1K · R3 47 · SCHT C5 · f1 (SHT 3) · 7403 TIC2 M23 · 7400 M15

INTERNATIONAL COMPUTER TERMINALS CORP.

ASYNCHRONOUS CONTROL

003

001-04-01 A

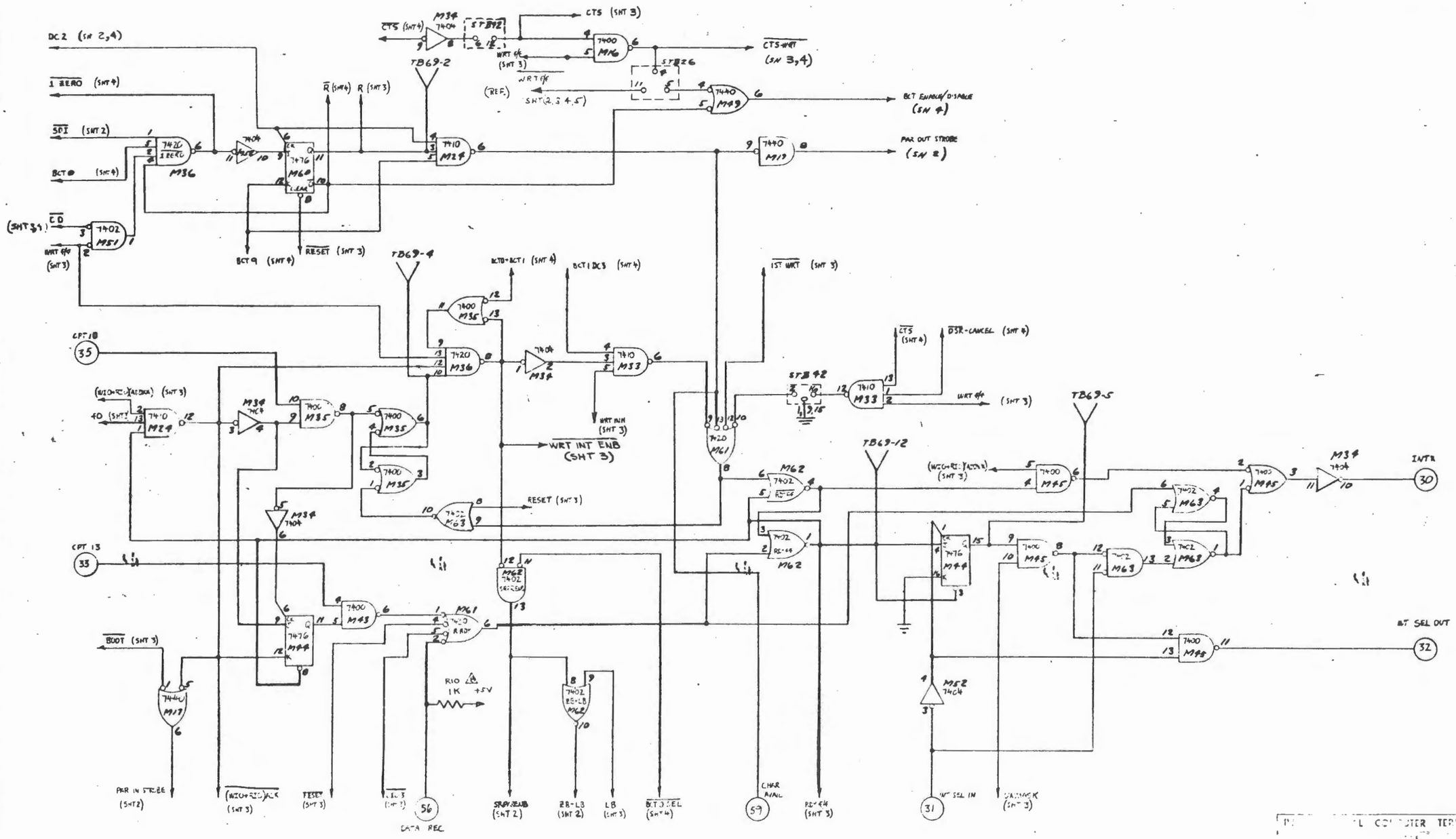
3 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD

CTS WRT (SHT 3,4)
I ZERO (SHT 5)
R (SHT 5)
DC1 (SHT 4)
X3 (SHT 4)
M33 M39
TURT 4 (SHT 3)
TURT 4 (SHT 3)
M55 M56 M57
XST865 XST866
M69
M46
WRT CLK 4
(SH 2,3)
M28 M28
STB-42
SRC (SH 4)
R6 1K
+5V
TB69-9
TB69-7
TB69-M
TB69-6
DC2 (SHT 2,5)
DC1 (SHT 2,4)
DC3 (SHT 2,4)
M49 M31 M38 M46
STB 42
STC
TRANSMITTER SIGNAL TIMING ELEMENT
64
M8
-14V
R13 15K
RECEIVED LINE SIGNAL DETECTOR
62
STB26
CD (SHT 3,5)
-14V
R12 15K
DATA SET READY + CANCEL
58
M7
CANCEL + CD (SHT 3,5)
-14V
R11 15K
CLEAR TO SEND
60
CTS (SHT 5)
-14V
R8 15K
RECEIVED DATA
66
SDI (SHT 2)
DATA TERMINAL
67
R7 3.3K
+4V
M9
SDO (SHT 2)
M18
TRANSMITTED DATA
70
REQUEST TO SEND
68
RTS' (SH2)
M17
RECEIVER SIGNAL TIMING ELEMENT
73
SRC (SH4)
STB67
DC1 (SHT 4)
BLT ERASE/SCRIBE (SHT 5)
M50 M59 M68
M58 M47 M39 M38 M31 M46
DC1 DC3 DC3 DC3 (SHT 4)
WRT CLK (SHT 3)
BCT0 (SHT 5)
BCT0 DC1 (SHT 3,5)
BCT0-BCT1 (SHT 5)
BCT1 DC3 (SHT 3,5)
BCT8 (SHT 2,3)
BCT9 (SHT 5)
TB69-3

INTERNATIONAL COMPUTER TERMINALS CORP.
ASYNCHRONOUS CONTROL
003
001-04-01 A
4 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD

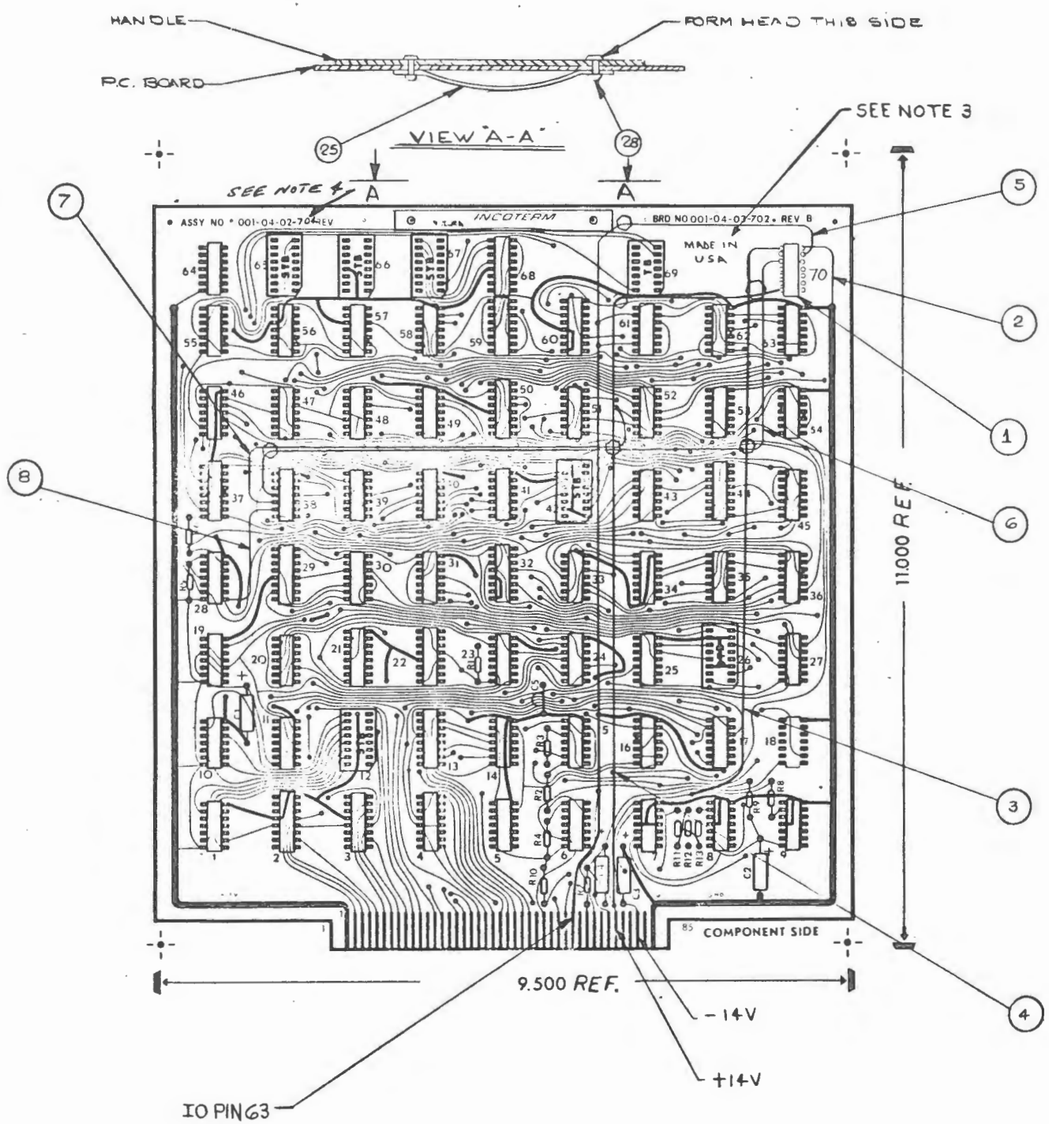


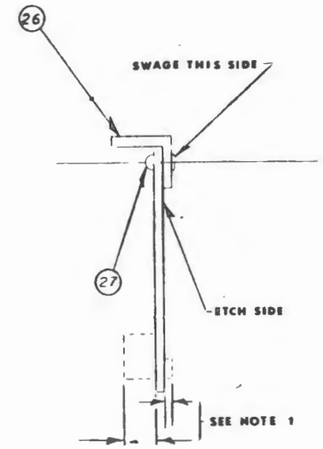
REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED ROD 316 8/19/71	[illegible]	[illegible]

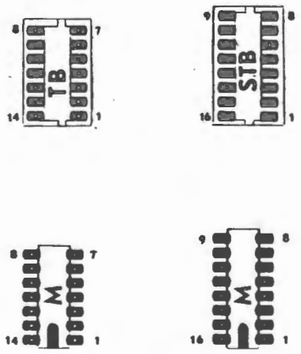
1	ADD IC CM1150 M70

ADD WIRE

2	FROM M70-7 TO GRD BUSS
3	FROM M70-8 TO -14 V DC
4	FROM M70-14 TO +14V DC
5	FROM M70-6 TO IO PIN 63
6	FROM M70-10 TO M38-11
7	FROM M52-12 TO M38-12
8	FROM M28-1 TO M38-13







PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ITEM NO.	REFERENCE DESIGNATION
34	R8,11, 12,13
24	C5
23	C3, C4
22	C1, C2
21	R7
20	R3
19	R1,2,4,5,6,9,10
18	STB 1226,42,65,66,67
17	TB 69
16	M7,8,9
15	M18, M70
14	M5,14
13	M55,56,57
12	M22,23,37,44,50,59,60,68
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
1	M15,16,25,35,38,43,45,54

NOTE:

1. **HEIGHT LIMITATIONS,**
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. FASTEN WIRE ITEM 38 TO BOARD USING ITEM 37 6 PLACES MARKED O.
3. MARK 1/8 IN HIGH VERTICAL GOTHIC CHARACTERS AS SHOWN
4. MARK 704 AS SHOWN AFTER REWORK

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

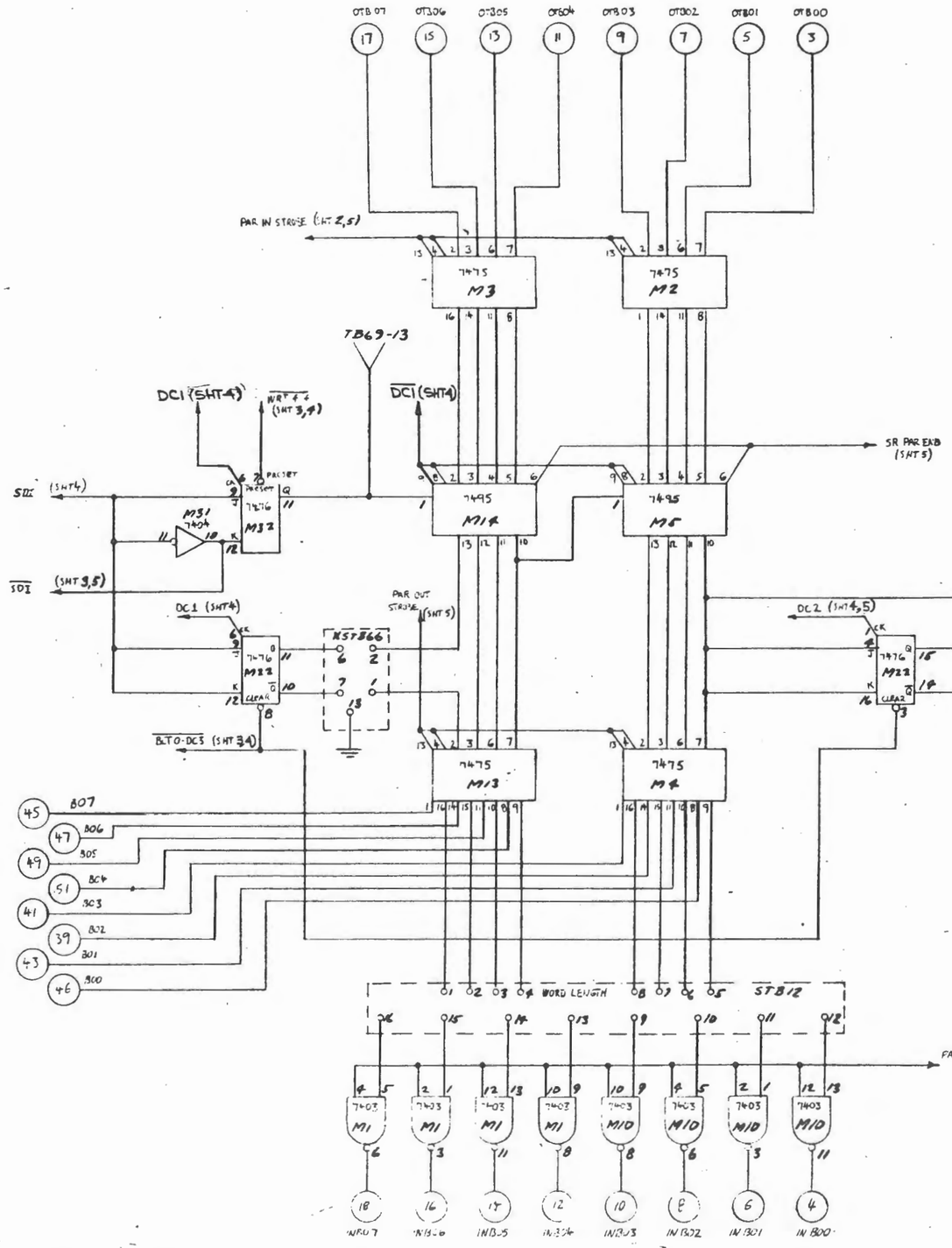
DR	[illegible]	DATE 8-10-71
CHK	[illegible]	8-17-71
ENG	[illegible]	8-18-71
APPD	[illegible]	19 Aug 71
NEXT ASSY	010-10-60	

TITLE: P.C. BOARD ASSY, ASYNCHRONOUS 704

SIZE	P C	S S	NO	REV
D	001-04-02			A

SCALE 1:1 SHT 1 OF 2

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3 PLCS) ± .03 (2 PLCS) ANGLES ± 2°

TITLE: ASYNCHRONOUS CONTROL

004

SIZE	P.C.	S.S.	NO	REV
D	001-04-01			A

SCALE | SHT 2 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD

7400 M54 · 7402 M40 · BCTODC3 (SHT 4) · 7400 M54 · TB69-11

M19 7410 CIO2 · WRT f/f (SHT 3,4,5) · WRT f/f M35 · 7404 M31 · XMIT MODE · 61 · WRT f/f M36 · CTS·WRT FF SHT 3 · M53 7474 · 1ST WRT (SH 3,5) · M27 7420 · CTS·WRT FF1 (SHT2)

7402 M57 · BCTO DC3 (SHT4),5) · 7402 M51 · CLG (SHT 5) · 7410 CIO3 M19 · WRT f/f M35 · 7476 M60 · BCTODC3 SHT 3,4 · TB69-1 · CTS STB 82-18 · 7474 M52 · +5V · R1 1K

WRT INT EUD (SH 5) · 7402 M51 · BCTO DC3 WRITE (SHT4) · 7404 M32 · DSR+CANCEL (SHT4) · 7408 M33 TIO1 · JUMPER WIRED VERSION

7410 CIO4 M24 · CID DATA (SHT2) · 7400 M38 · 7404 M46 · DETAIL A

7402 CIO8 M30 · 7402 CIOC M30 · 7476 M29 · TB69-10 · UNMASK (SH 5) · 7476 M41 · CTS (SHT 5) · CTS WRT FF (SHT 3)

RESET 25 · 7402 M40 · M43 7400 RESET · RESET (SHT 3) · RESET (SHT 2,5) · 7410 CIO1 M49 · 7403 M33 TIO8 · (SH 5) (WIO+RIO) ACK · R4 1K · 7400 TIO M15 · 7403 M6 · 7403 ACK M26 · ACK 27 · BOOT (SHT 5) · R9 1K · +5V · 55 CONTROLLER BOOT

BLT 8 (SHT4) · RDY f/f (SHT 5) · 7476 M32 · 7403 TIO4 M23 · SEE DETAIL 'A'

ADDXX 28 · TYPDO 19 · TYPDI 21 · 7442 M21 · 7400 M38 · (WIO+RIO)(ADDXX) (SHT 3, 5)

FUNC 00 20 · FUNC 01 22 · FUNC 02 24 · FUNC 03 26 · 7404 M28 · 40 (SHT 3,5) · $\overline{40}$ (SHT 5) · $\overline{41}$ (SHT 3) · $\overline{42}$ (SHT 3) · $\overline{43}$ (SHT 3)

TURT4 37 · 7404 M28 · TURT4 (SHT4) · $\overline{TURT4}$ (SHT4)

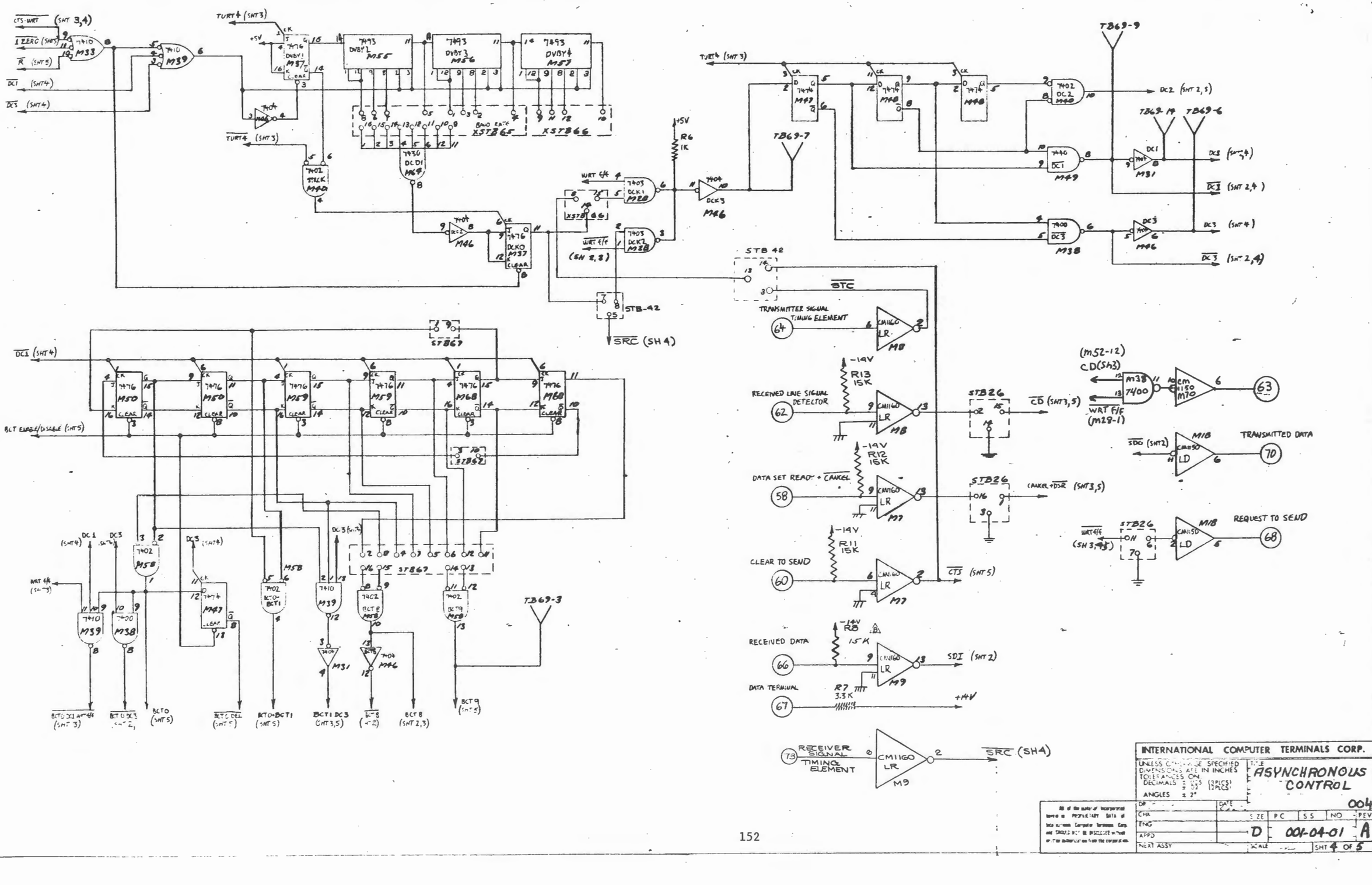
(WIO+RIO)(ADDXX) (SHT 3) · 7476 M29 · 1ST WRT (SHT 3) · 7400 M33 · LB (SHT 5)

CARRIER DETECTED 69 · (M38-12) · CD(SH4) · R2 1K · R3 47Ω · 500pf C5 · 7400 M54 · 7400 M16 · 7403 M6 · 7400 M15 · 7403 TIO2 M23 · R (SHT 5) · $\overline{CD}$ (SHT 4,5) · CTS (SHT 3) · $\overline{CTS·WRT}$ (SH 4,5) · CTS WRT FF SHT 3 · WRT f/f (SHT 3)

INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3 PLCS) ± .03 (2 PLCS) ANGLES ± 2°		TITLE: ASYNCHRONOUS CONTROL			
					004
DR C. M.K.	DATE	SIZE	P C	S S	NO	REV
CHK		D	001-0401		A
ENG					
APPD					
NEXT ASSY		SCALE		SHT 3 OF 5	

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

REVISIONS			
REV	DESCRIPTION	CHK	APPD



DR		DATE			
CHK		SIZE	PC	SS	NO REV
ENG		D	001-04-01		A
APPD					
NEXT ASSY		SCALE		SHT 4 OF 5	

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON DECIMALS ± .XXX (3PLCS) ± .XX (2PLCS)
ANGLES ± 2°

TITLE: ASYNCHRONOUS CONTROL

004

All of the matter of incorporated herein is PROPRIETARY DATA of Intl. Comp. Terminals Corp. and SHOULD NOT BE DISCLOSED without the written authorization from the corporation.

REVISIONS			
REV	DESCRIPTION	CHK	APPD

DC 2 (SH 2,4)

1 ZERO (SHT 4)

SDI (SHT 2)

BCT 0 (SHT 4)

CD (SHT 3,4)

WRT O/P (SHT 3)

7420 1 ZERO M36

7404 M34

7476 M60

7402 M51

7410 M24

BCT 9 (SHT 4)

RESET (SHT 3)

R (SHT 4)

R (SHT 3)

TB69-2

CTS (SHT 4)

7400 M34

STBZ2

CTS (SHT 3)

WRT O/P (SHT 3)

7400 M46

CTS+WRT (SH 3,4)

(REF.) WRT O/P SHT (2,3,4,5)

STBZ6

7440 M49

BCT ENABLE/DISABLE (SH 4)

7440 M19

PAR OUT STROBE (SH 2)

TB69-4

BCT0+BCT1 (SHT 4)

BCT1 DC3 (SHT 4)

7400 M56

7420 M36

7404 M34

7410 M33

WRT INT ENB (SHT 3)

WRT ENB (SHT 3)

RESET (SHT 3)

7400 M55

7400 M35

7402 M63

7420 M61

1ST WRT (SHT 3)

CPT 18 35

(WIO+RIO ADDR) (SHT 3)

40 (SHT 3)

7410 M24

M34 7404

STB42

CTS (SHT 4)

DSR+CANCEL (SHT 4)

7410 M33

WRT O/P (SHT 3)

TB69-5

TB69-12

M62 7402 RD+GE

M62 7402 SRQREAB

M62 7402 EB+LB

M62

(WIO+RIO ADDR) (SHT 3)

7400 M45

7400 M65

M34 7404

INTR 30

7402 M63

7402 M63B

7476 M44

CPT 13 33

7476 M44

7400 M43

7420 M61 R RDY

7400 M95

7402 M63

7402 M63B

INT SEL OUT 32

7400 M95

BOOT (SHT 3)

7440 M17

RIO 1K +5V

M62 7404

INT SEL IN 31

UNMASK (SHT 3)

PAR IN STROBE (SHT 2)

(WIO+RIO) ACK (SHT 3)

RESET (SHT 3)

LEO 3 (SHT 3)

DATA REC 56

SRQREAB (SHT 2)

EB+LB (SHT 2)

LB (SHT 3)

BCT0 DEL (SHT 4)

CHAR AVAIL 59

RD+GE (SHT 3)

INTERNATIONAL COMPUTER TERMINALS CORP.

TITLE: ASYNCHRONOUS CONTROL

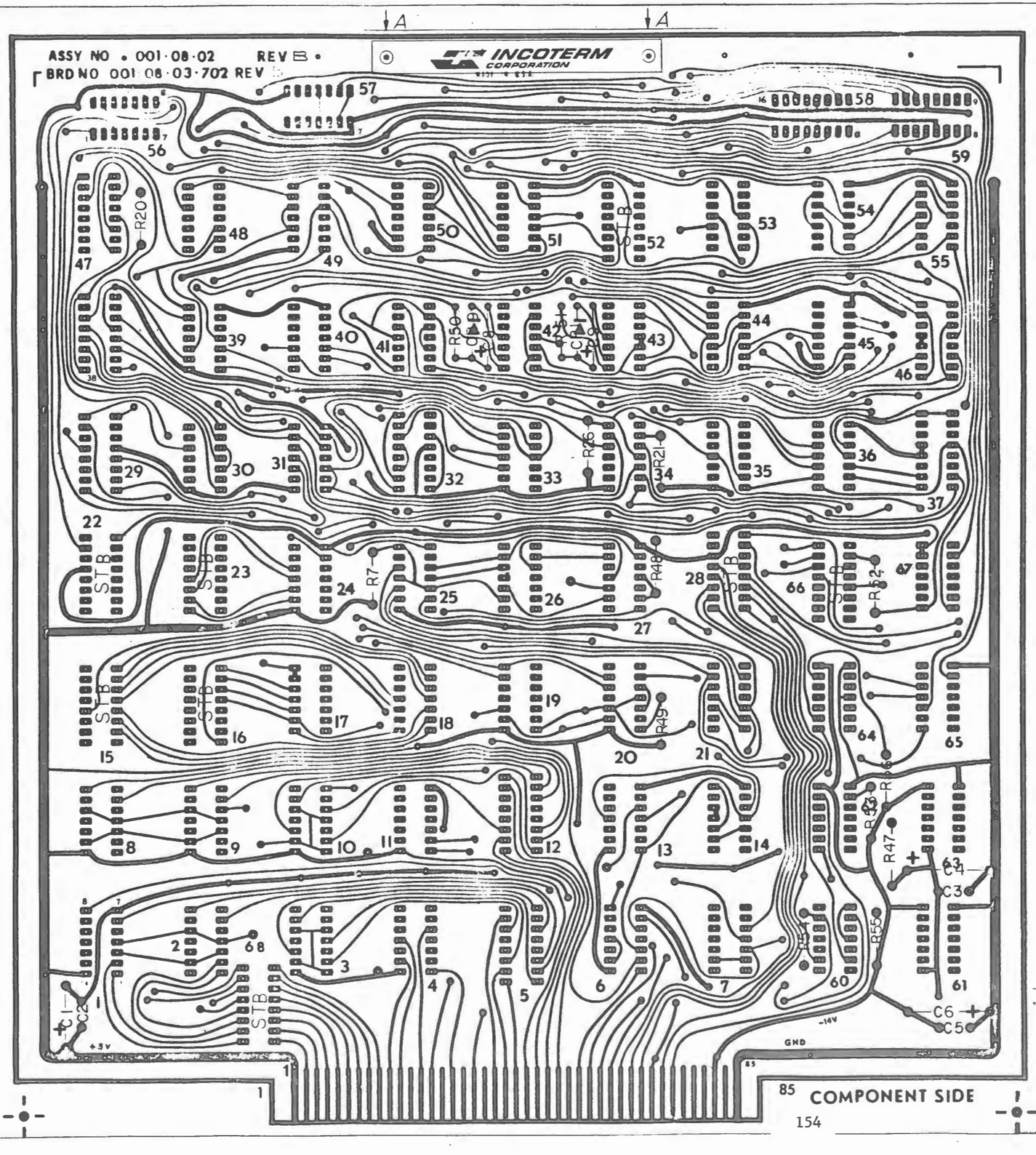
004

SIZE D | P.C. NO. 001-0401 | REV A

SCALE | SHT 5 OF 5

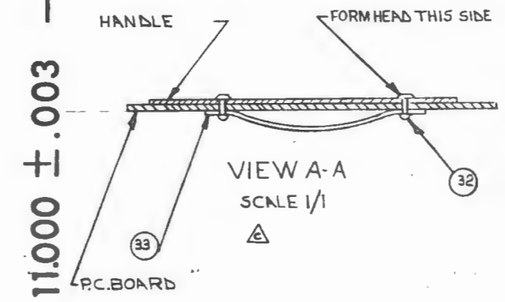
ASSY NO • 001-08-02 REV B •
BRD NO 001-08-03-702 REV B

INCOTERM CORPORATION



ITEM	REFERENCE DESIGNATION
57	C8
56	R51
55	C9
52	R50
51	M61, 63
50	M60, 62, 64
49	M42, 43
46	R53, 54, 55, 56
31	STB15, 16, 22, 23, 28, 52, 66, 68
29	C4, C6
27	C2, C3, C5
26	C1
25	R47
19	R7, 20, 21, 26, 48, 49, 52
17	CR1, CR9
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

REVISIONS			
LTR	DESCRIPTION Rev 205	CHK	APPD
B	RELEASED	~	~
C	ECO 1439 5-4-71 RNF	RSH	
D	REVISED/ECO 1469 8/24/71	R.A.B	



11.000 ± .003

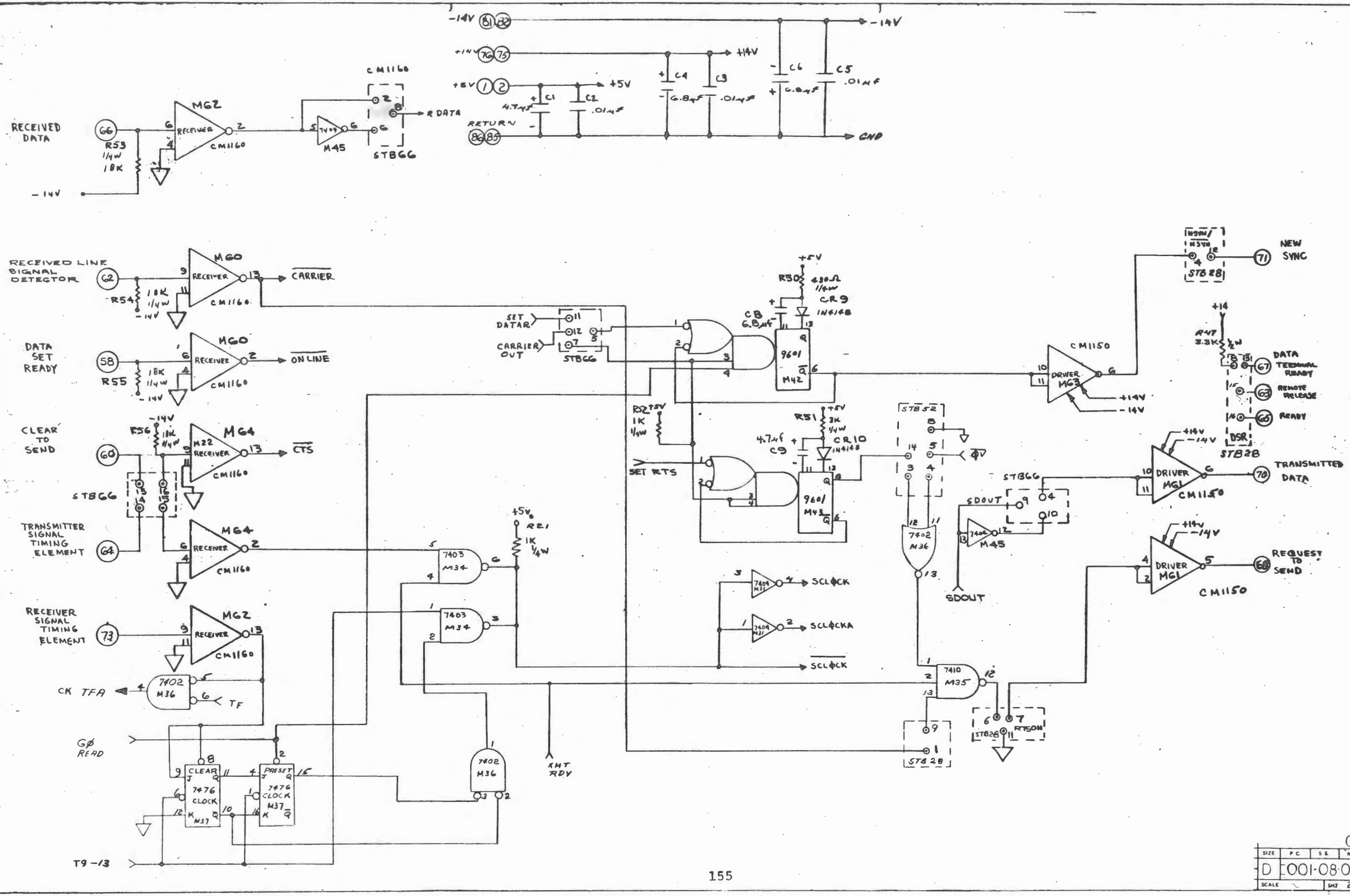
Hayes Memorial Drive
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
.XX ± .02
.XXX ± .005 (SPLICES)
ANGLES ± 2° (SPLICES)

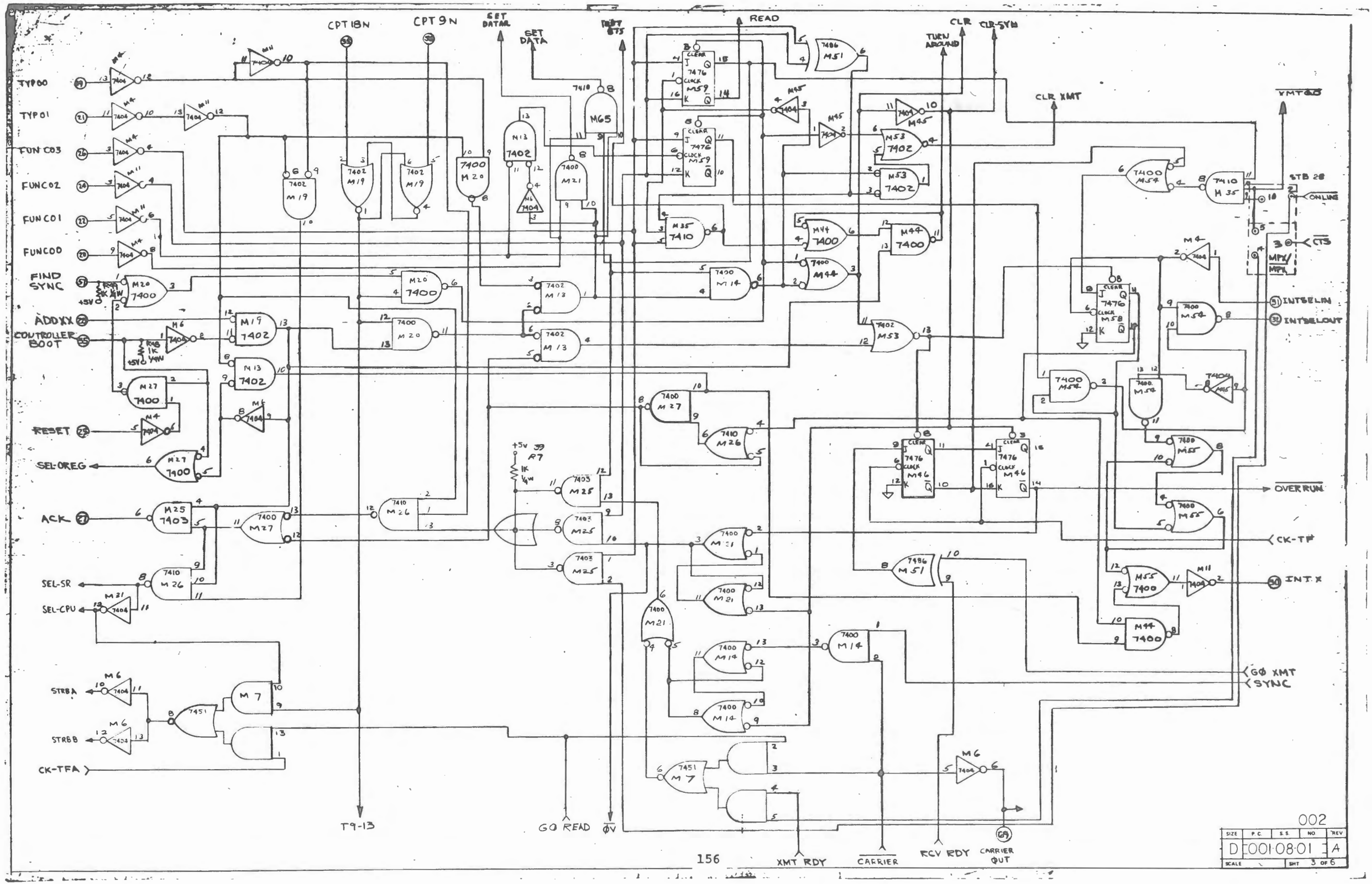
TITLE
P.C.BOARD ASSY
SYNCHRONOUS
MODEM CNTRL 702

Drawn by R.A.B Dean 3-1-71
Checked by C.J. Young 3-5-71
Approved by

SIZE D 001-08-02 D
001-0806-702 2/1



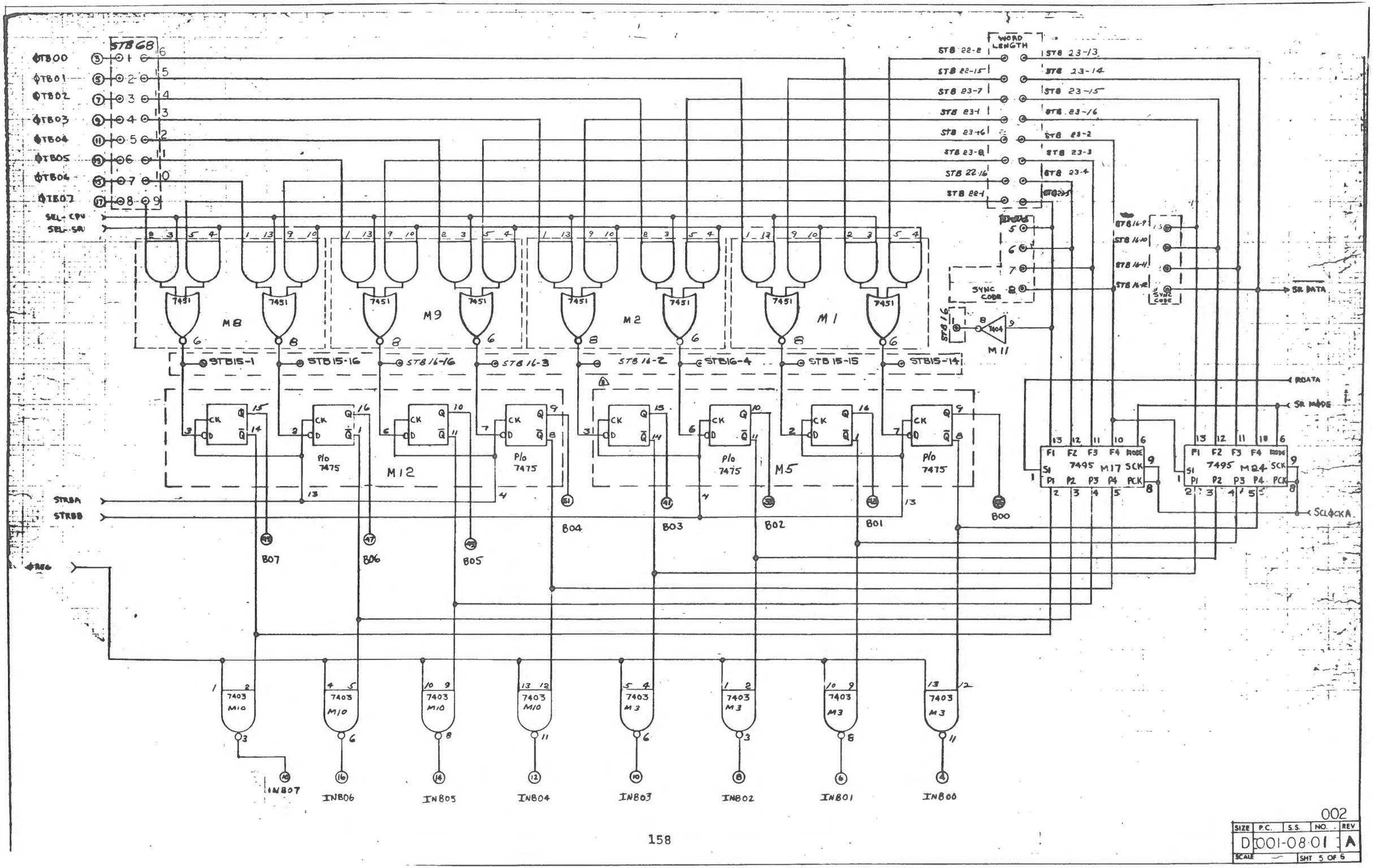
SIZE	P.C.	S.S.	NO.	REV
D	001-08-01		002	A
SCALE		SHT 2 OF 6		



002

SIZE	P.C.	S.S.	NO.	REV
D	001080	1		A
SCALE			SHT 3 OF 6	

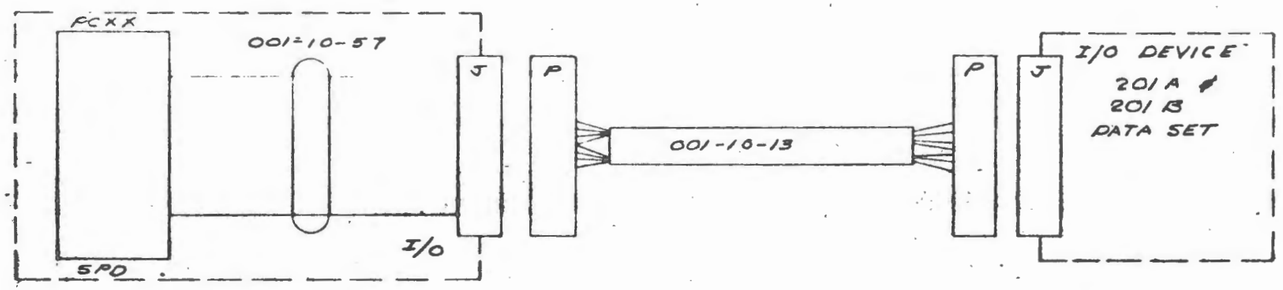
SCLOCKA
CLR-SYNC
CK-TFA
WDAVB (59)
NO SYNC (61)
GO READ
RDATA
SYNC
RCV RDY
SRDATA
CK-TF
SR MODE
XMT RDY
GO XMT
READ
CTS
TF
SCLOCK
CLR XMT
OVERRUN
XMIT GO
TURN AROUND
SCLOCK
SD OUT
SET DATA
SCLOCKA
CLR
ON LINE
SR DATA
SCLOCKA
SRMODE
STB15
STB-16
STB22
STB16
STB 52
SYNC DET STB
TIMING
SYNC CODE
M40
M31
M30
M41
M48
M56
M47
M38
M29
M28
M58
M32
M33
M34
M57
M18
M39
M49
M50
M51
M55
M36
M65
M67
R20
R26
1K 5%W
+5V
45V
MPX1
MPX
002
SIZE D | P.C. 001-08-01 | S.S. | NO. 1 | REV A
SCALE | SHT 4. OF
157



158

002

SIZE	P.C.	S.S.	NO.	REV
D	001-08-01			A
SCALE			SHT 5 OF 6	



SIGNAL NAME (LOGIC)	PCXX → I/O WIRE	I/O CABLE COLOR CODE	DEVICE SIGNAL NAME
	1	BLACK	1 PROTECTIVE GND
70	2	WHITE	2 TRANSMITTED DATA
66	3	RED	3 RECEIVED DATA
68	4	GREEN	4 REQUEST TO SEND
60	5	ORANGE	5 CLEAR TO SEND
58	6	BLUE	6 DATA SET READY
	7	WHITE/BLACK	7 SIGNAL GND
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
69	15	BLUE/BLACK	15 TRANSMITTER SIGNAL TIMING ELEMENT
	16		16
73	17	BLACK/WHITE	17 RECEIVER SIGNAL TIMING ELEMENT
	18		18
63	19	RED/WHITE	19 REMOTE RELEASE
67	20	GREEN/WHITE	20 DATA TERMINAL READY
65	21	BLUE/WHITE	21 READY
	22		22
	23		23
	24		24
	25		25

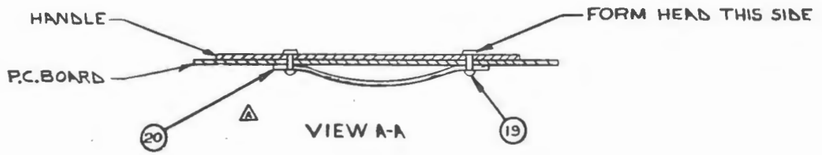
INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

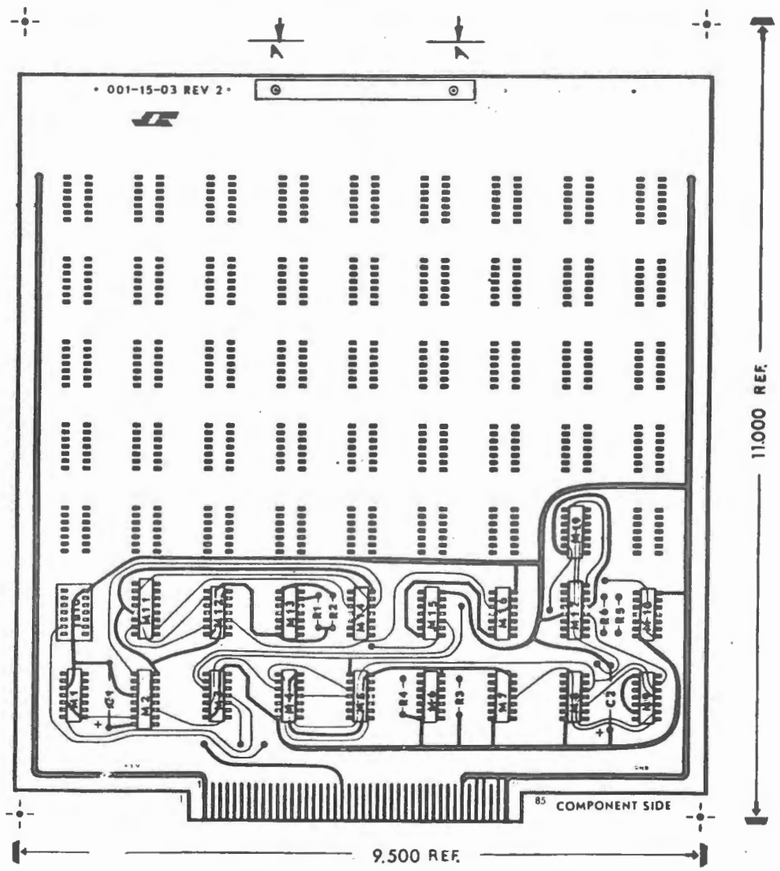
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (SPLCS)
.02 (SPLCS)
ANGLES 2°

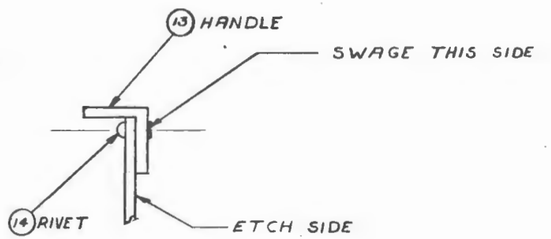
TITLE
SYNCHRONOUS CONTROLLER
002

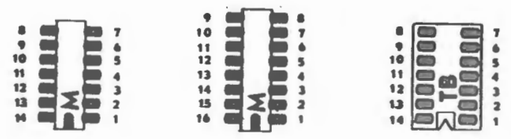
D 001080104-A

REVISIONS			
REV	DESCRIPTION	CHK	APPD
4	RELEASED RAF 5-11-70		
1	ECO 1439 5-4-71 RNF		









PIN NUMBERING AND
OREINTATION

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 .060 MAX.
1. COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUG, ETC.

NOTES:

18	CSTE1127	C1, C2
17	EC6384-235-5	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

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (2PLCS) ± .03 (3PLCS)
ANGLES ± 2°

DR Ryan Smith DATE 5-11-70
CHK K. Baldwin 5-11-70
ENG
APPD
NEXT ASSY 001-15-06

TITLE
P.C. BOARD ASSY
SPLIT SCREEN
CONTROLLER

SIZE	P.C.	S.S.	NO.	REV
D	001-15-02			A

SCALE 1:1 SHT 1 OF 1

R

REVISIONS			
REV	DESCRIPTION	CHK	APPD
1	TO FILE 3/25/70		
2	UPDATE/ECO 0468 4/14/70		
3	CHANGED/ECO 0469 5/12/70		

TBIO-10 TBIO-12 TBIO-14 TBIO-11 TBIO-13

46 VSYNC — M9 SUVSI 7404

38 SD7I:I5 — SU7I:I5 M3 7404

SURLO SURL1 SURL2 SURL3 — 7493 M1

M11 SURL4 7476 (CLEAR, J, K, CLK)

M9 7404 SUVSO

M14 VSG01 7402 — M14 VSG02 7402 — VSG04 7451 M15

TBIO-5 TBIO-4

M9 VSG07 7400

TBIO-8

VSI08 M8 7404 — M19 VSCLR1 7400 — M19 VSCLR2 7400

TBIO-9

VSI14 M8 7404 — M19 VSCLR3 7400 — M19 VSCLR4 7400

SUDECOX 7442 M2 (0 1 2 3 4 5 6 7 8 9)

50 TURDE H=EVEN — SUROEI M5 7404 — M5 SUROE 7404

SU102

56 TURC4I

78 TURCII

SU108 M5

M17 R-VSYNC CLK 7476 (J, K, CLR, Q)

M4 VSG03 7410 — VSI04 M8 7404

M5 VSG05 7400 — M9 VSG08 7400 — M5 VSG06 7400 — VSI03 M8 7404

M11 SUVID R/B 7476 (CLEAR, PRESET)

M4 SUB15 7410 — SUI15 M5 7404

SUI01 M3 7404

M14 SUB16 7402

M17 B-VSYNC CLK 7476 (J, K, CLR, Q)

M18 VSYNB 7440 — +5V 180Ω ¼W RG — 80

1 2 +5V — C1 12V 5MF — C2 12V 5MF — 85 86 GND

TBIO-7

73 77 79 83

M16 VSG09 7451 (M15)

M12 VSG10 7400

M16 VSG12 7400

M16 SUB07 7402

M7 VSI10 7404 — M16 VSG11 7400

M7 VSI09 7404 — M16 VSG13 7400 — M16 VSG14 7400

70 SDI2 — M7 7404 SUSDI2I — M7 SUSDI2

74 SD3R — M8 SUSD3RI — M8 SUSD3R

M12 SUVIDA 7400 — M13 7440 SUVIDEOA

M12 SUVIDB 7400 — M13 7440 SUVIDEOB

+5V RB 180Ω ¼W — 84

M18 VSYNA 7440

44 H=INTERLACED — SUINI M5 7404 — SUINT M5 7404

68 HSYNC — M7 7404 HSYNCI

39 VIDEO

M6 HSYNA 7440 — +5V R3 180Ω ¼W — 66

M6 HSYNB 7440 — +5V R4 180Ω ¼W — 60

+5V 180Ω ¼W R1 — 40

+5V 180Ω ¼W R2 — 42

INTERNATIONAL COMPUTER TERMINALS CORP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: DECIMALS ± .005 (.13mm) ± .02 (.5mm)
ANGLES ± 2°

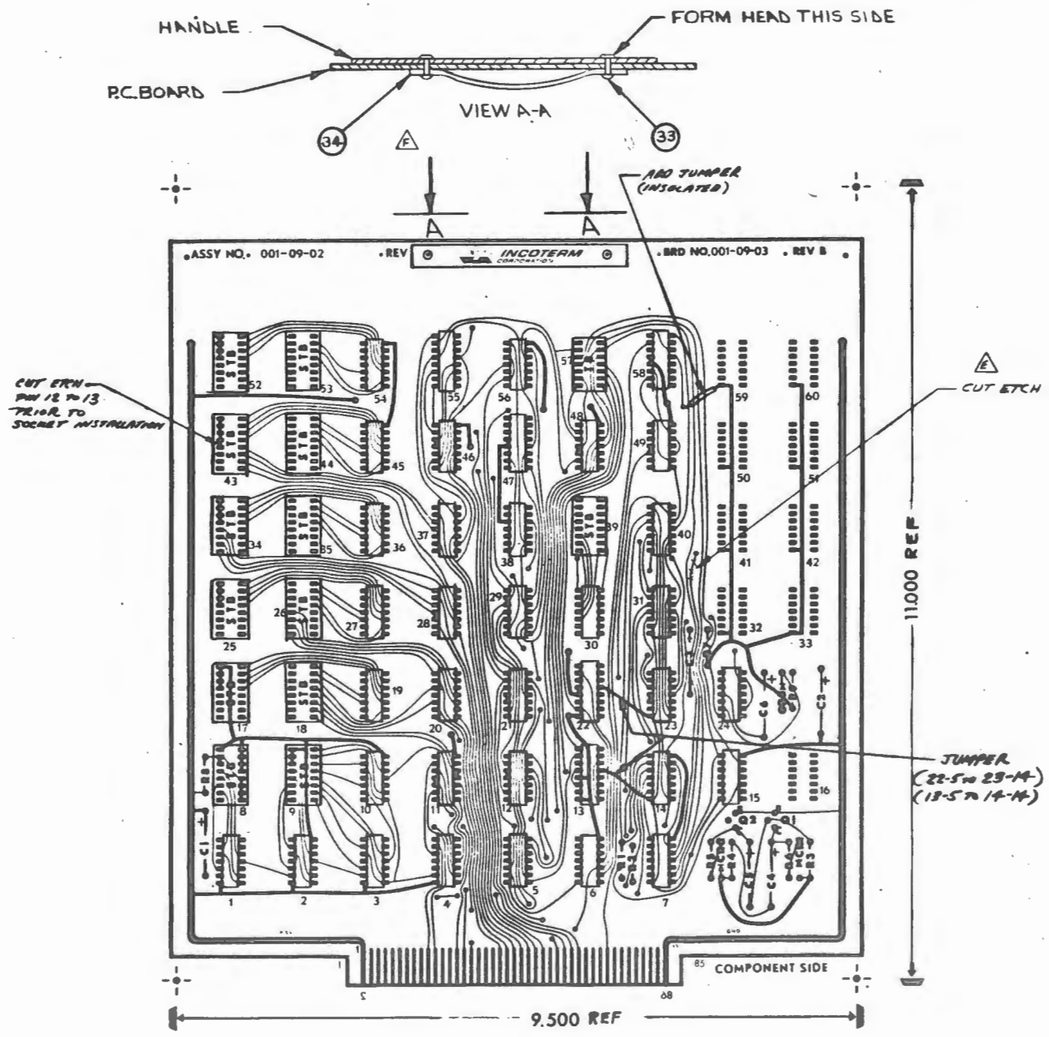
DR J.U. DATE
CHK
ENG
APPD
NEXT ASSY

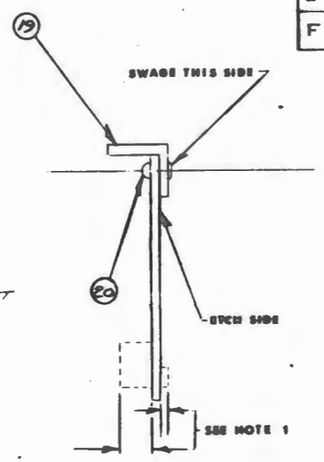
TITLE: T.V. SPLIT SCREEN CONTROLLER

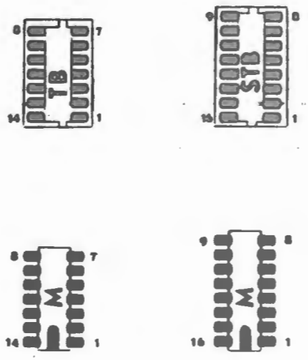
SIZE D | P.C. 001-15-01 | S.S. | NO. | REV A

SHT 09

REVISIONS			
REV	DESCRIPTION	CHK	APP'D
C	REVISED/ECO L-1290 R-D #133	R-B 1-9-71	
D	UPDATED/ECO 1328	DBM	DBM
E	UPDATED/ECO 1434	DBM	DBM
F	ECO 1439 RNF 5-4-71	DBM	DBM







PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

31	R9
30	C4, C5, C6
29	M24
28	
27	TEST
26	[illegible]
25	
24	
23	
22	
21	
20	
19	
18	Q1, Q2
17	CR1, CR2, CR3
16	R7
15	—
14	R3, R4
13	R1, R2, R5, R6, R8
12	—
11	C1, C2, C8
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	M9, 12, 40, 49
1	M46
ITEM NO.	REFERENCE DESIGNATION

NOTE:

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

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

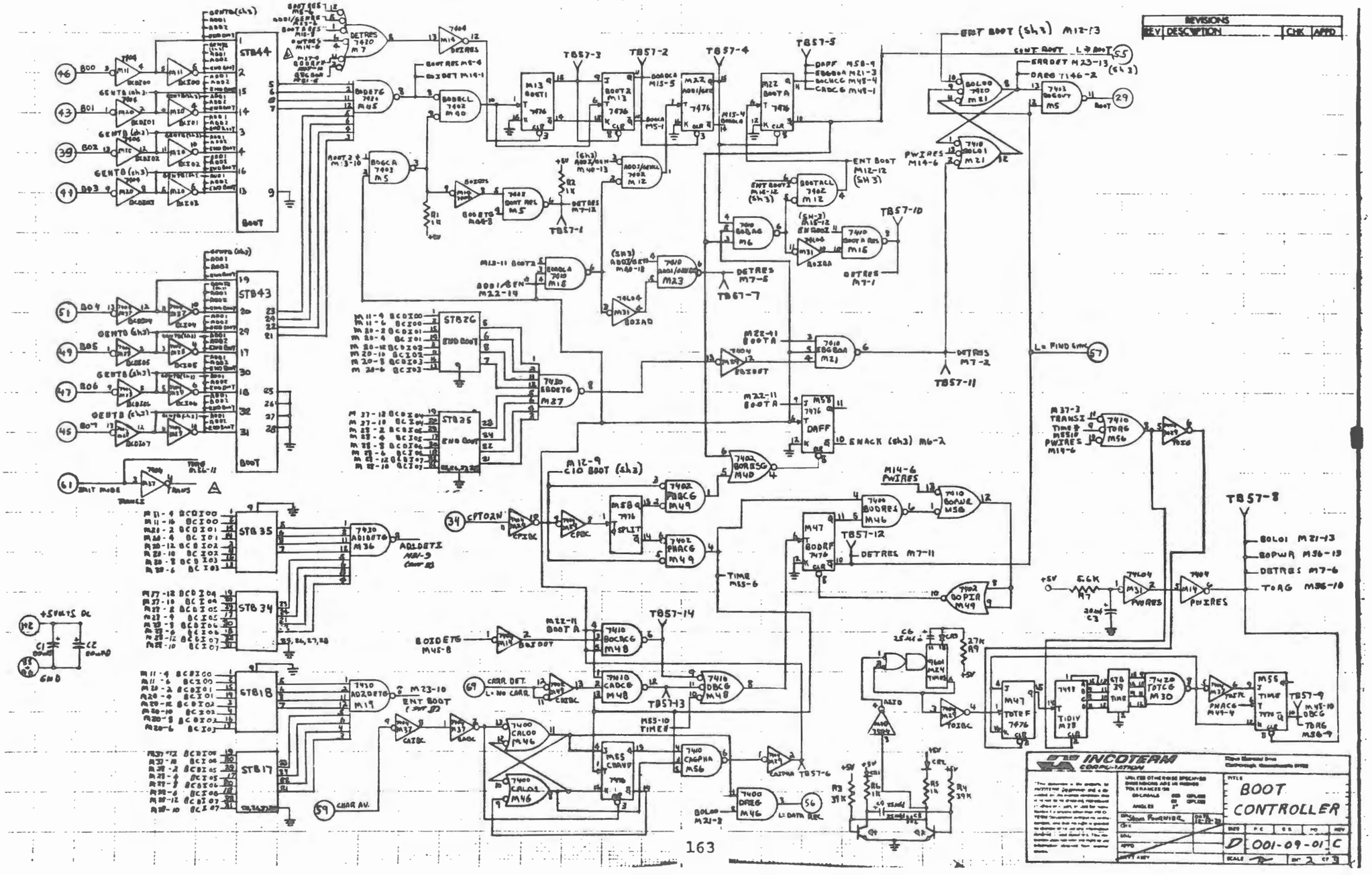
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (3PLCS) .02 (2PLCS)
ANGLES 2°

DR	R. FREDRICKI	7-28-70
CHK	R. BILODEAU	7-28-70
ENG	R. BILODEAU	7-28-70
APPD	L. BRAGNI	7-30-70
NEXT ASSY	001-09-06	

TITLE: **P.C. BOARD ASSY BOOT CONTROLLER**

SIZE	P C	S S	NO	REV
D	001-09-02			F

SCALE 1:1 SHT 1 OF 1


REVISIONS
REV | DESCRIPTION | CHK | APPD
BOOT CONTROLLER
INCOTERM
D
001-09-01
C
STB44
STB43
STB35
STB34
STB18
STB17
STB2G
STB25
BOOT
+5VOLTS DC
GND
ENT BOOT (sh3) M12-13
TBS7-1
TBS7-2
TBS7-3
TBS7-4
TBS7-5
TBS7-7
TBS7-8
TBS7-9
TBS7-10
TBS7-11
TBS7-12
TBS7-13
TBS7-14
ENT BOOT M12-12 (SH 3)
DETRES M7-1
DETRES M7-2
DETRES M7-5
DETRES M7-6
DETRES M7-11
DETRES M7-12
TIME M13-6
CHAR AV.
CHAR DET. L=NO CARR.
L= FIND SYNC
L= DATA REC.
BOOT CONTROLLER
001-09-01 C

REVISIONS

REV	DESCRIPTION	CHK	APPD

M11-4 BCDI00 (SH2) 1
M11-6 BCI00 (SH2) 2
M20-2 BCDI01 (SH2) 15
M20-4 BCI01 (SH2) 14
M20-12 BCDI02 (SH2) 3
M20-10 BCI02 (SH2) 4
M20-8 BCDI03 (SH2) 16
M20-6 BCI03 (SH2) 17

GEN TB STB53

M37-12 BCDI04 (SH2) 19
M37-10 BCI04 (SH2) 20
M29-2 BCDI05 (SH2) 25
M29-4 BCI05 (SH2) 17
M29-8 BCDI06 (SH2) 26
M29-6 BCI06 (SH2) 18
M29-12 BCDI07 (SH2) 28
M29-10 BCI07 (SH2) 27

GEN TB STB52

7410 GENERR M59

7402 GENDET M40

7410 ERRDET M23

7410 ENTB00 M23

M31 GENDETI

M31 ADDZDETI

M15 ENTB00I

ADDZDETG (SH2) M19-8

BOL00 M21-8 (SH2)

ADDI/GENCL (SH2) M12-3

ADDI/GENRE (SH2) M23-4

ADZDETG (SH2) M 36-8

BOOTARES (SH2) M16-11

BOOTACL (SH2) M12-6

19 TYP00

ADDXX M5-6

7402 CIODET M4

M11 CIODETI

7402 CIOBOOT M12

CPIOC (SH2) M29-10

M12 ENT BOOT

BOL00 (SH2) M21-10

34

21 TYP01

29 ADDXX

22 FUNC01

24 FUNC02

TYP01I

TYP02I

7402 RIODET M4

CIODET M4-8

ADDXX1 M6-11

RIOI

7402 RIOADD1 M4

7402 RIOADD2 M4

TIOADD

+5V

9Ω 1W

STB-8

ADDT8-A

STB9

ADDT8-B

ADD104
ADD204
ADD105
ADD106
ADD206
ADD107
ADD207
ADD205

7403 ADD100 M1
7403 ADD200 M1
7403 ADD101 M1
7403 ADD201 M1
7403 ADD102 M2
7403 ADD202 M2
7403 ADD103 M2
7403 ADD203 M2

4 INB00
6 INB01
8 INB02
10 INB03

7403 ADD104 M3
7403 ADD204 M3
7403 ADD105 M3
7403 ADD205 M3
7403 ADD106 M10
7403 ADD206 M10
7403 ADD107 M10
7403 ADD207 M10

ADDT8-B STB9-2
ADDT8-B STB9-1
ADDT8-B STB9-3
ADDT8-B STB9-4
ADDT8-B STB9-6
ADDT8-B STB9-5
ADDT8-B STB9-7
ADDT8-B STB9-8

12 INB04
14 INB05
16 INB06
18 INB07

TYP02I

ADDXX

7410 TIOADD M6

DAFF & M58-10 (SH2)

7410 ENACK M6

7403 ACLOUT M5

ACK

27

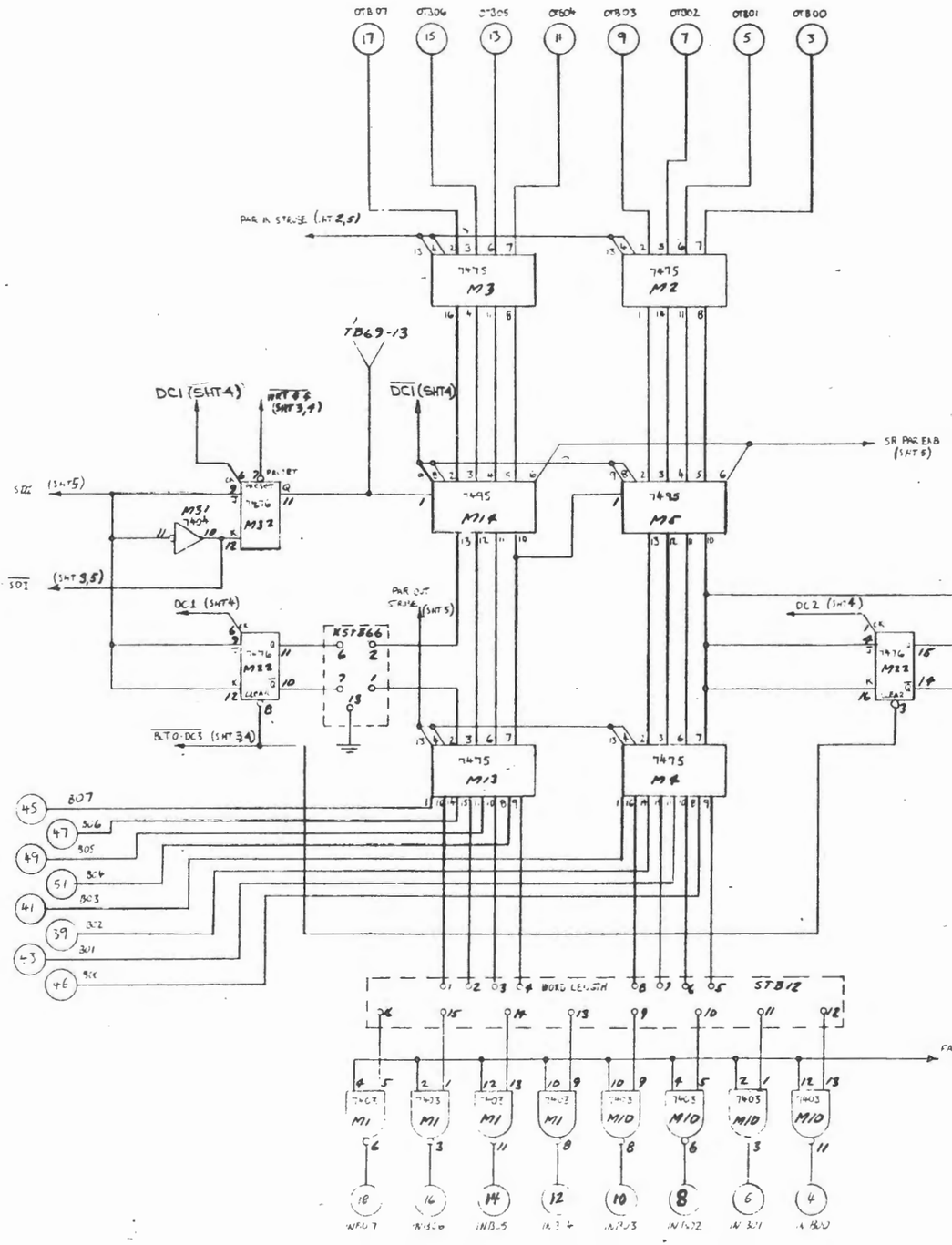
ACKNOWLEDGE

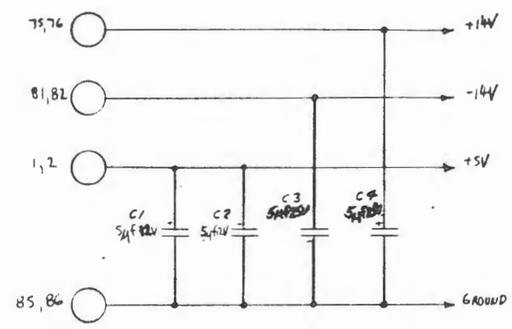
INCOTERM CORPORATION

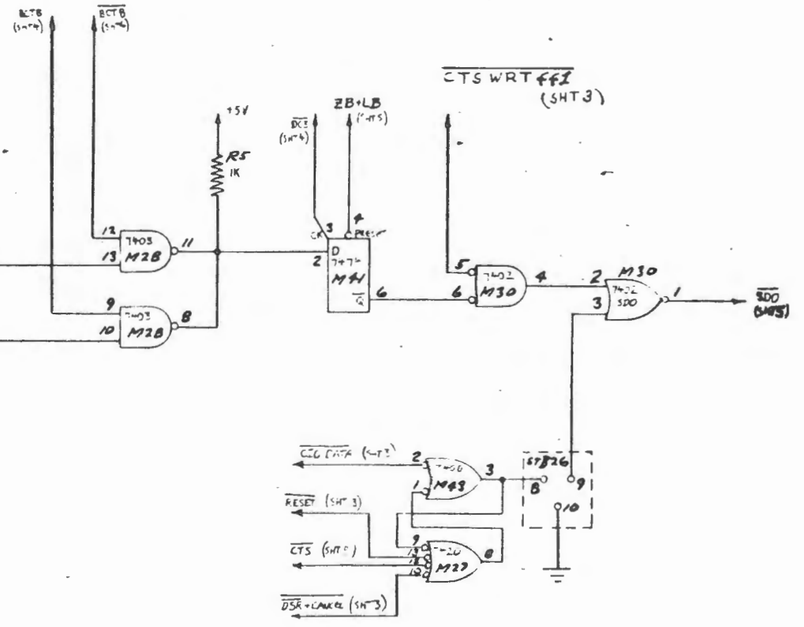
BOOT CONTROLLER

D 001-09-01 C

REVISIONS			
REV	DESCRIPTION	CHK	APPD







INTERNATIONAL COMPUTER TERMINALS CORP.

TITLE PARTY LINE CONTROLLER

001

001-18-01 D

1 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD

TB69-11

BCT Ø DC3 (SH4)

WRT 4/6 (SHT 3,4,5)

WRT Ø (SHT 2,4)

XMIT MODE

61

CTS·WRT FF SHT 3

1ST WRT (SH 3,5)

CTS·WRT FF1 (SHT2)

BCT DC3 (SHT4).5)

(SH 5) WRT INT ENB

BCT Ø DC1 WRT (SHT4)

CID DATA (SHT2)

TB69-10

UNMASK (SH 5)

RESET (SHT5)

RESET (SH 25)

CTS (SHT5)

CTS WRT FF (SHT3)

DSR+CANCEL (SHT4)

DSR+CANCEL (SH2)

SDI (SHT 2,5)

CTS (SH 5)

BOOT (SHT 5

CONTROLLER BOOT

ACK

28 ADDR%

19 TYPE 00

21 TYPE 01

(WIO+RID)(ADDR%) (SHT 3, 5)

20 FUNC 00

22 FUNC 01

24 FUNC 02

26 FUNC 03

37 TURT4

TURT4 (SHT4)

TURT4 (SHT4)

(WIO+RID)(ADDR%) (SHT 3)

1ST WRT (SHT3)

LB (SHT 5)

CARRIER DETECTED

69

R (SHT 5)

CD (SHT 4,5)

CTS (SHT 3)

CTS·WRT (SHT 4,5)

CTS WRT FF SHT 3

WRT 4/6 (SHT 3)

R1 1K

R2 1K

R3 47

C5

R4 1K

R5 1K

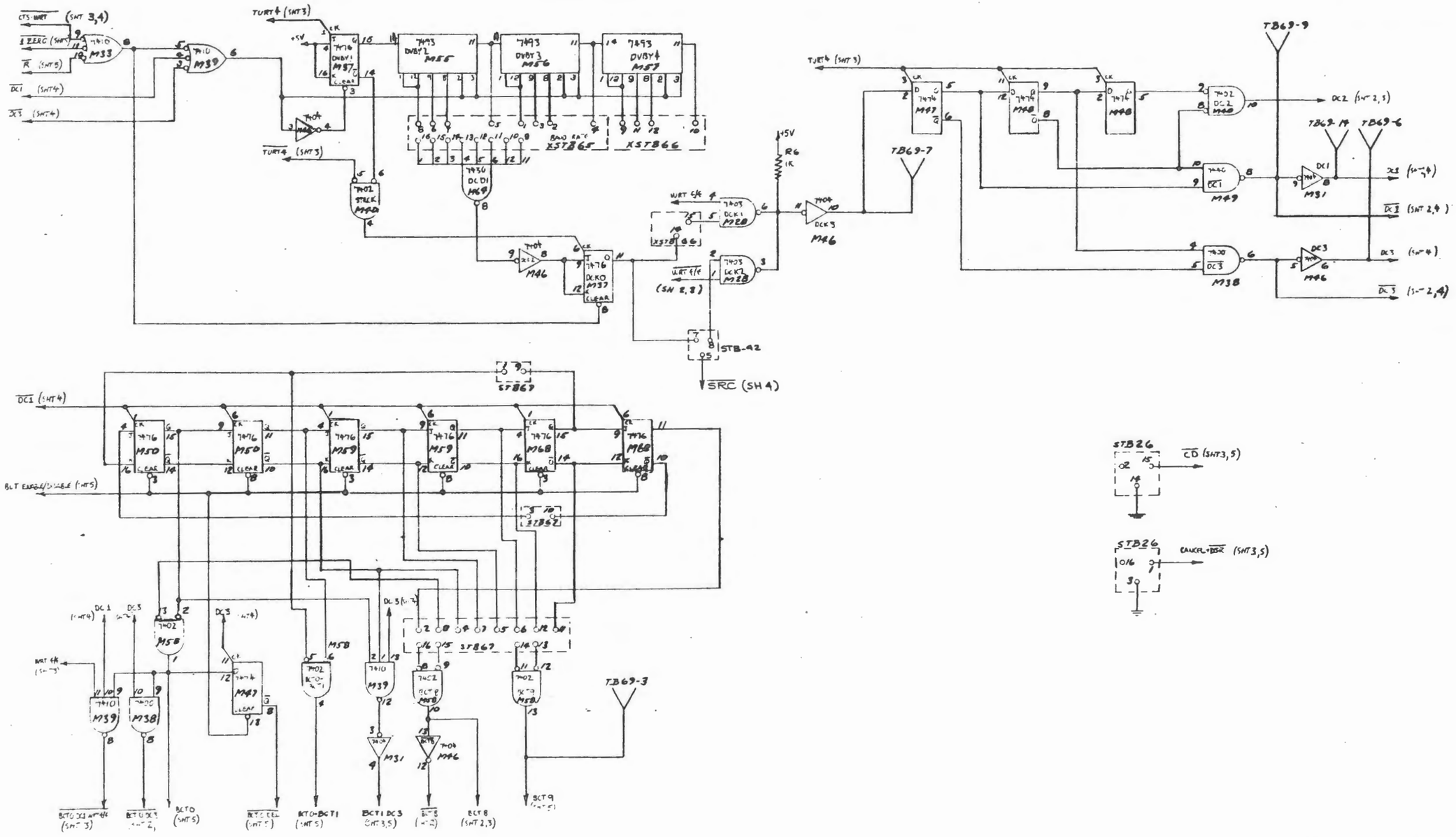
+5V

INTERNATIONAL COMPUTER TERMINALS CORP.

PARTY LINE CONTROLLER

001-18-01 D

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.

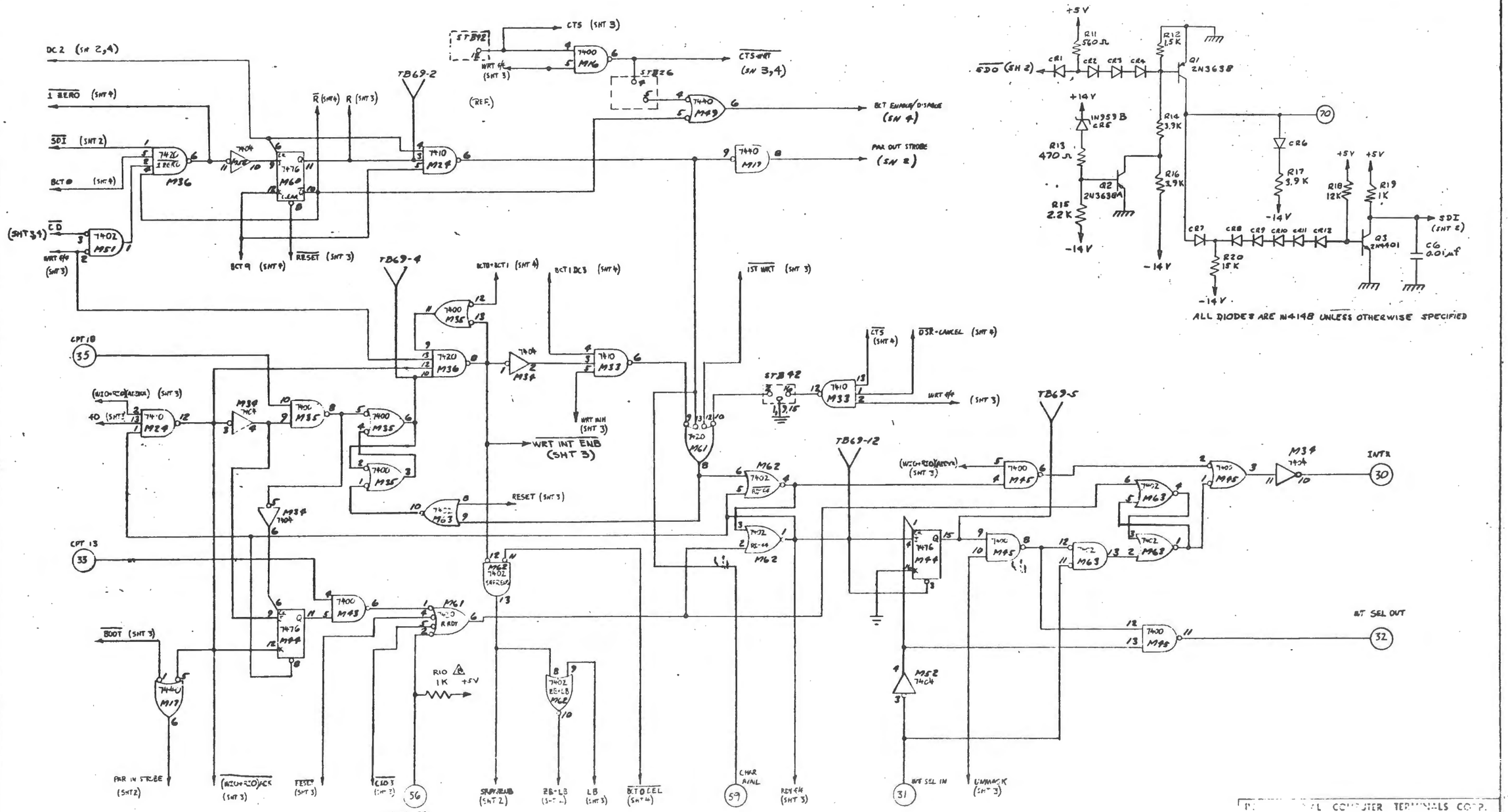
PARTY LINE CONTROLLER

001

001-18-01 D

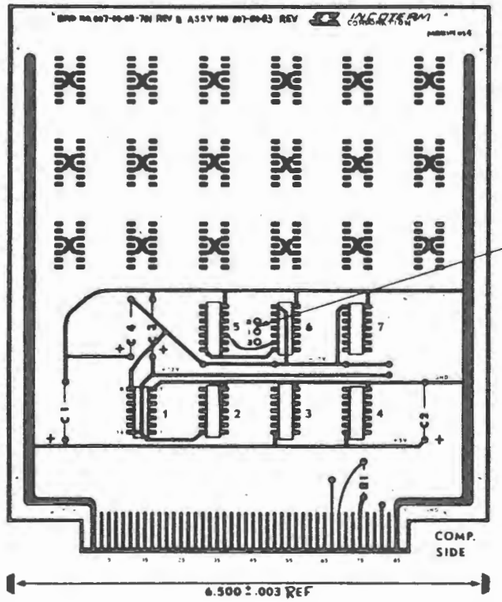
SHT 3 OF 5

REVISIONS			
REV	DESCRIPTION	CHK	APPD



ALL DIODES ARE IN4148 UNLESS OTHERWISE SPECIFIED

REVISIONS			
REV	DESCRIPTION	CHK	APPD
B	PICTORIAL REVISED / RELEASED PER ECO 1178	4	4
C	ECO # 1511 7/7/74	RB	



NOTES:

1. COMPONENT HEIGHT TO BE .400 MAX: INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUGS, ETC.
2. MAX. HEIGHT OF TERMINATED COMPONENT LEADS (CLINCHED OR NON-CLINCHED) TO BE .080.

PIN NUMBERING AND ORIENTATION

ITEM	PART NUMBER	DESIGNATION
6	RSR01GF332J	R1
5	CSTE 12.02	C3, C4
4	CSTE 1127	C1, C2
3	ICCM 1160	M3, 4, 6, 7
2	ICCM 1150	M1, 2
1	ICSN7809N	M5

INCOTERM CORPORATION

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

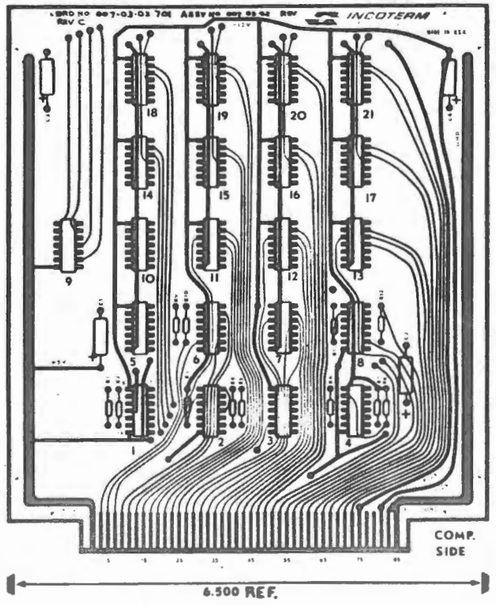
DR	Russ Fawcett	6-14-74
CHK	R A Richmond	6-28-74
ENG	R B Richardson	6-28-74
APPD	[signature]	7-18-74
NEXT ASSY	007-15-01	

TITLE: PC BOARD ASSY LN DRVR/RECV INPT MULTIPLEXER 701

SIZE	P.C.	S.S.	MO.	REV
D	007-04-02			C

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
E	REDRAWN & REVISED PER ECO 1566 2-20-79 RAF	RWB	RAF



PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

NOTE:

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

ASSY 701

QTY	REFERENCE DESIGNATION
12	R1 THRU R12
5	C3,C4
4	C1,C2
3	M1,2,3,4,6,8
2	M5,7,10,11,12,13,14,15,17, 18,19,20,21
1	M9

MASTER 701

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

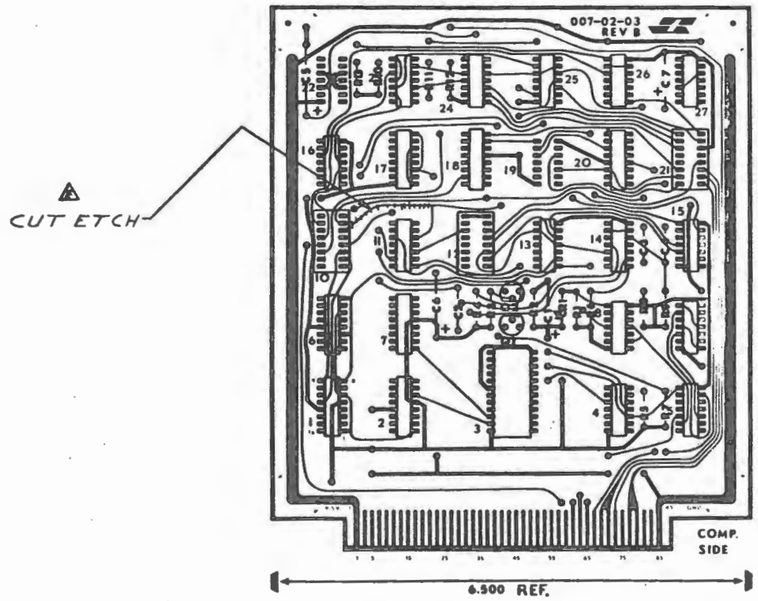
		DATE
DR	Russ Fredrick	6-29-76
CHK	R.A. Bilodeau	6-29-76
ENG	R.A. Bilodeau	8-20-76
APPD	F.T. Longree	8-24-76
NEXT ASSY	007-10-01	

TITLE
P.C. BOARD ASSY
LN DRVR/REC'V
OUTPT MULTIPLEXER
701

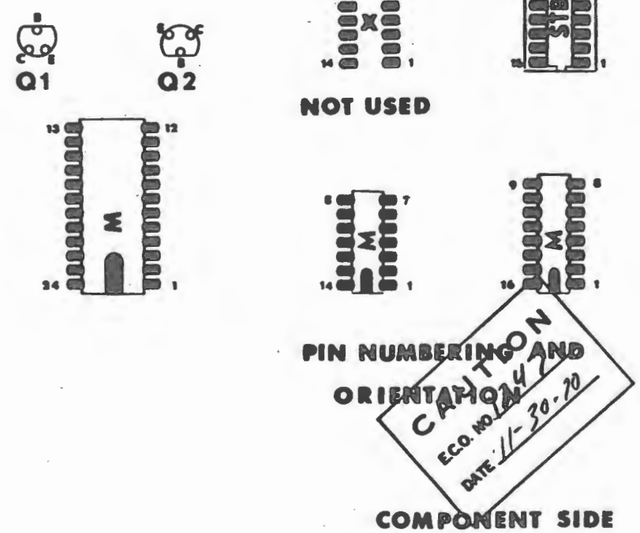
SIZE	P.C.	S.S.	NO	REV
D	007-03-02			E

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
D	UPDATED/ECO 1214 2/6/70 RAB	RAB	RAB
E	UPDATED/ECO 1224 10-30-70	RAB	RAB



ITEM NO.	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	R8,9
11	R1,4,5,6,7,10,11,13
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



NOTE:

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

INCOTERM CORPORATION — Wayne Memorial Drive, Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (2PLCS) .02 (1PLCS)
ANGLES 2°

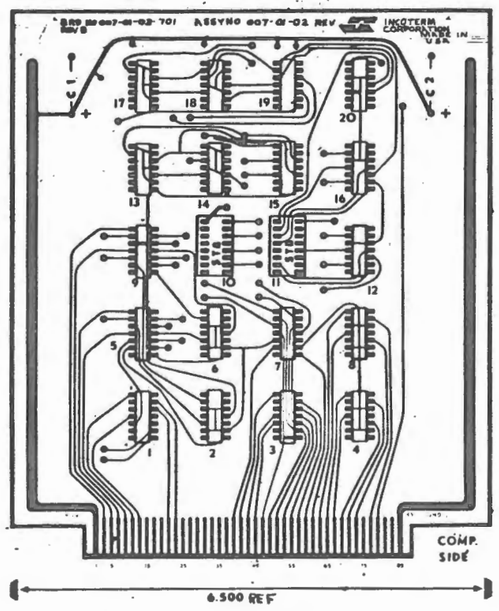
DR	R. Fredrick	DATE 6-24-70
CHK	R.A. Bilodeau	6-29-70
ENG	R.A. Bilodeau	8-28-70
APPD	T. Flanders	8-28-70
NEXT ASSY	007-10-01	

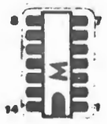
TITLE: **P.C. BOARD ASSY LOGIC DATA FLOW MULTIPLEXER**

SIZE	P C	S S	NO	REV
D	007-02-02			E

SCALE 1:1 SHT 1 OF 2

REVISIONS			
REV	DESCRIPTION	CHK	APPD
C	REDRAWN + REVISED PER ECO 1566 8/20/71	RaB	RaB (M)





PIN NUMBERING AND ORIENTATION

NOTES:

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

ITM.	PART NUMBER	DESIGNATION
9	EC7541	STB 10,11
8	CSTE1127	C1, C2
7	ICSN7430N	M1, 3
6	ICSN7410N	M12, 16, 20
5	ICSN7405N	M13, 17
4	ICSN7404N	M7, 15, 19
3	ICSN7403N	M14, 18
2	ICSN7402N	M5, 9
1	ICSN7400N	M2, 4, 6, 8

INCOTERM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS .XXX ±[PLUS] .XX ±[PLUS]
ANGLES ±°

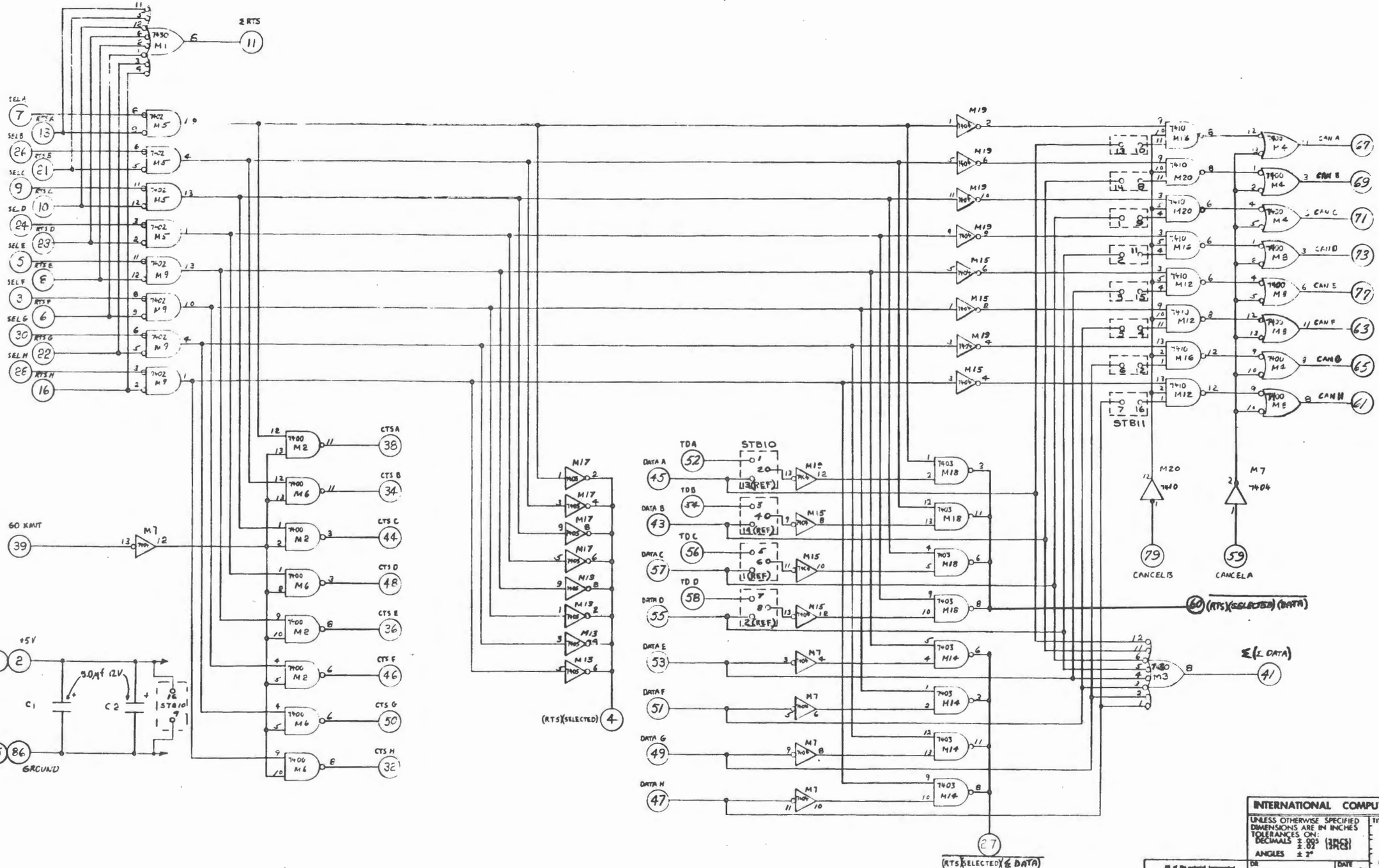
		DATE
DR	Ken Schmidt	6-15-70
CHK	RA BILANEAU	6-29-70
ENG	RA Bilaneau	8-28-70
APPD		8-28-70
NEXT ASSY	007-10-01	

TITLE: P.C. BOARD ASSY. SUMMATION MULTIPLEXER 701

SIZE	P.C.	S.S.	NO.	REV
D	007-01-02			C

SCALE 1:1 SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD



INTERNATIONAL COMPUTER TERMINALS CORP.						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3 PLCS) ± .02 (2 PLCS) ANGLES ± 2°		TITLE: SUMMATION BOARD (MULTIPLEXER) 002				
DR	DATE					
CHK		SIZE	P.C.	S.S.	NO.	REV
ENG			007-01-01			A
APPD						
NEXT ASSY		SCALE			SHT 2 OF 2	

RECEIVER SIGNAL TIMING ELEMENT (10) — M9 (1, 2)

RECEIVED DATA (6) — M9 (5, 6)

RECEIVED LINE SIGNAL DETECTOR (8) — M9 (3, 4)

TRANSMITTER SIGNAL TIMING ELEMENT (4) — M9 (9, 8)

CLEAR TO SEND 1	18	M10 (4, 5)	CTS 1	16	
CANCEL 1	12	M10 (10, 6)	CAN 1	14	
		M14 (10, 6)	STC 1	38	
LAST TO SEND 1	26	M5 (4, 5)	LTS 1	24	
		M19 (10, 6)	SRC 1	25	
		M18 (10, 6)	REC DATA 1	42	
		M15 (10, 6)	CD 1	21	

CLEAR TO SEND 2	13	M11 (4, 5)	CTS 2	15	
CANCEL 2	7	M11 (10, 6)	CAN 2	17	
		M14 (4, 5)	STC 2	36	
LAST TO SEND 2	20	M5 (10, 6)	LTS 2	22	
		M19 (4, 5)	SRC 2	23	
		M18 (4, 5)	REC DATA 2	40	
		M15 (4, 5)	CD 2	19	

CLEAR TO SEND 3	37	M12 (4, 5)	CTS 3	39	
CANCEL 3	27	M12 (10, 6)	CAN 3	41	
		M16 (10, 6)	STC 3	45	
LAST TO SEND 3	31	M7 (4, 5)	LTS 3	33	
		M21 (10, 6)	SRC 3	73	
		M20 (10, 6)	REC DATA 3	49	
		M17 (10, 6)	CD 3	69	

CLEAR TO SEND 4	61	M13 (4, 5)	CTS 4	63	
CANCEL 4	55	M13 (10, 6)	CAN 4	65	
		M16 (4, 5)	STC 4	43	
LAST TO SEND 4	29	M7 (10, 6)	LTS 4	35	
		M21 (4, 5)	SRC 4	71	
		M20 (4, 5)	REC DATA 4	47	
		M17 (4, 5)	CD 4	67	

TRANSMITTED DATA 1	32	M1 (6, 2)	XMIT DATA 1	34	R1
REQUEST TO SEND 1	28	M1 (9, 13)	RTS 1	30	R2
DATA/NO DATA 1	11	M6 (6, 2)	D/ND 1	9	R9

TRANSMITTED DATA 2	48	M2 (6, 2)	XMIT DATA 2	50	R4
REQUEST TO SEND 2	46	M2 (9, 13)	RTS 2	44	R3
DATA/NO DATA 2	3	M6 (7, 13)	D/ND 2	5	R10

TRANSMITTED DATA 3	70	M3 (6, 2)	XMIT DATA 3	68	R6
REQUEST TO SEND 3	66	M3 (9, 13)	RTS 3	64	R5
DATA/NO DATA 3	59	M8 (6, 2)	D/ND 3	57	R12

TRANSMITTED DATA 4	80	M4 (6, 2)	XMIT DATA 4	78	R7
REQUEST TO SEND 4	74	M4 (9, 13)	RTS 4	72	R8
DATA/NO DATA 4	51	M8 (9, 13)	D/ND 4	53	R11

−12 V — (81) (82)

+12 V — (75) (76)

+5 V — (1) (2)

GROUND — (83) (84) (85) (86)

C1, C2: 5.4mf 12V

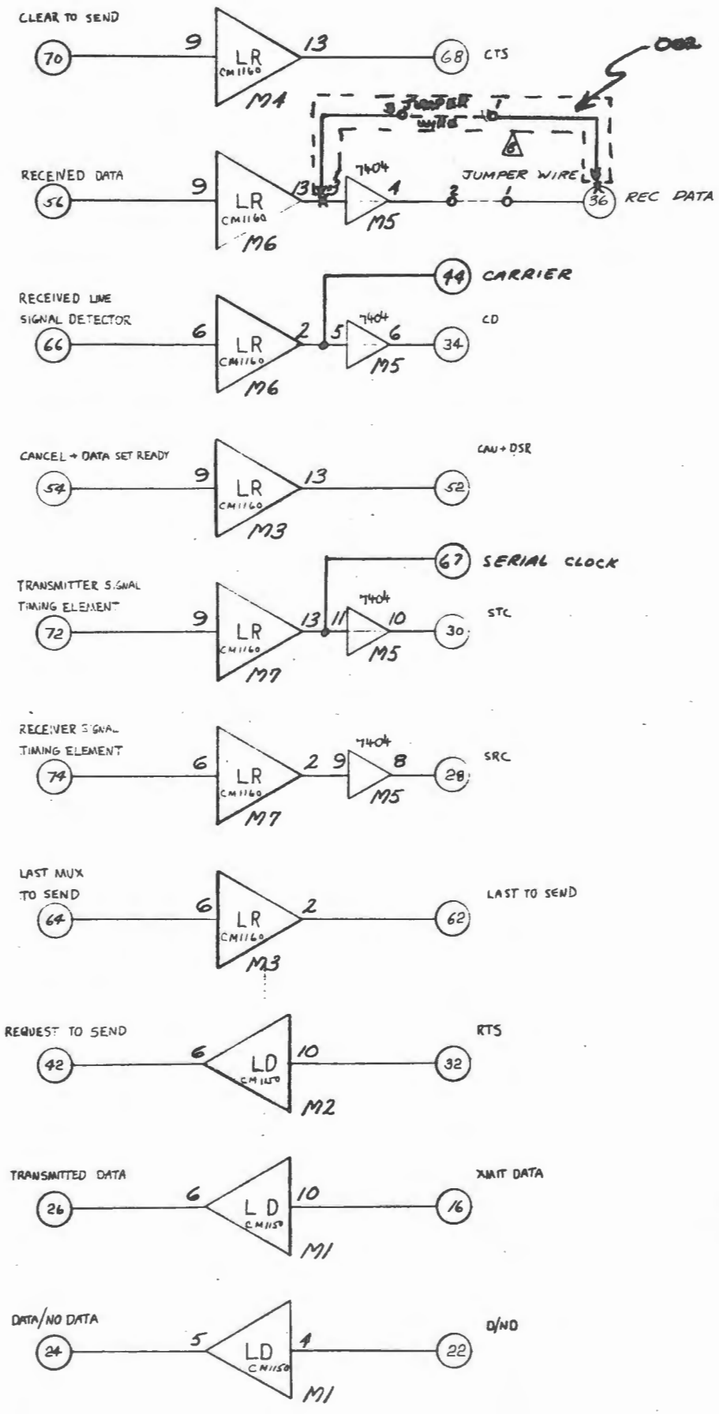
C3, C4: 3.0mf 25V

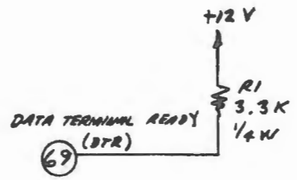
NOTE:
1. LR = LINE RECEIVER = CM 1160
2. LD = LINE DRIVER = CM 1150
3. LR DATA/NO DATA USED ONLY FOR MASTER MULTIPLEXER
4. LD LAST TO SEND USED ONLY FOR MASTER MULTIPLEXER
5. LD TRANSMITTER SIGNAL TIMING ELEMENT USED ONLY FOR MASTER MULTIPLEXER
6. RESISTORS ARE 1/4 W 15K

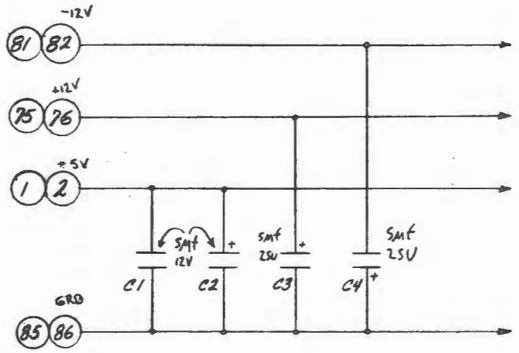
LINE DRIVER/ RECEIVER OUTPUT BOARD (MULTIPLEXER)

SIZE	P.C.	S.S.	NO.	REV
D	001-03-01			C
SCALE			SHT 2 OF 2	

REVISIONS			
REV	DESCRIPTION	CHK	APPD







LR - LINE RECEIVER CERMETEK CM1160
LD - LINE DRIVER CERMETEK CM1150
* - LINES USED ONLY WHEN MUX IS TIED TO MASTERMUX

INTERNATIONAL COMPUTER TERMINALS CORP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ± .02 (2PLCS) ANGLES ± 2°	DR	DATE 8-7-74	TITLE LINE DRIVER/RECV. INPUT BRD (MULTIPLEXER) 001		
	CHK		SIZE	P.C.	S.S.	NO.	REV
	ENG		D	007-04-01			B
	APPD						
	NEXT ASSY		SCALE —		SHT 2 OF 2		

REVISIONS			
REV	DESCRIPTION	CHK	APPD

R14 1K · R15 1K · R1 1K · R2 10K · C1 1μf · CR1 1N4148 · Q1 2N3906 · R3 82K · R4 1K · C2 0.22μf · Q2 2N3904 · R5 1K · R6 1K · R7 1K · R8 3K · R9 3K · C3 100pf · C4 100pf

RTS 56 · CTS · STB10 · STB21 · STB12

ZRTS 1 (44) · ZRTS 2 (46) · CARRIER (10)

(RTS)(SELECTED) 1 (61) · (RTS)(SELECTED) 2 (62) · Σ DATA 1 (52) · Σ DATA 2 (50)

(RTS)(SELECTED)(DATA) 1 (65) · (RTS)(SELECTED)(DATA) 2 (66)

CTS (58) · DATA/NO DATA (48)

SELA (30) SELB (32) SELC (34) SELD (36) SELE (38) SELF (40) SELG (42) SELH (28) SELI (26) SELJ (24) SELK (22) SELL (12) SELM (14) SELN (16) SELO (18) SELP (20)

74154 M3 · G2 · G1 · A (23) · B (22) · C (21) · D (20)

M2 7476 · M2 7476 · M7 7476 · M7 7476 · CLEAR

RTS A (68) · RTS B (70) · RTS C (72) · RTS D (74) · ONE RTS (78)

DSR+ ALL CANCEL (80) · CANCEL A1 (63) · CANCEL A2 (64)

+5V · 5.0μf 12V C6 · C7 · (1) (2) · (85) (86) GROUND

M20 7476 · M22 7400 · M16 7402 · M18 7476 · M19 7410 · M15 7402 · M5 7406 · M4 7404 · M14 7404 · M11 7404 · M13 7400 · M26 7440 · M25 7400 · M27 7474

M6 7476 · M1 7476 · M16 7402 · R10 1K · R11 1K · R12 5.6K · C5 2.5μf · R13 1K

M23 7403 · M24 7410 · M17 7476

DATA OUT (8) · GOXMIT 1 (77) · GOXMIT 2 (79)

SERIAL CLOCK (73) · CANCEL B2 (71) · CANCEL B1 (69) · LAST TO SEND (67)

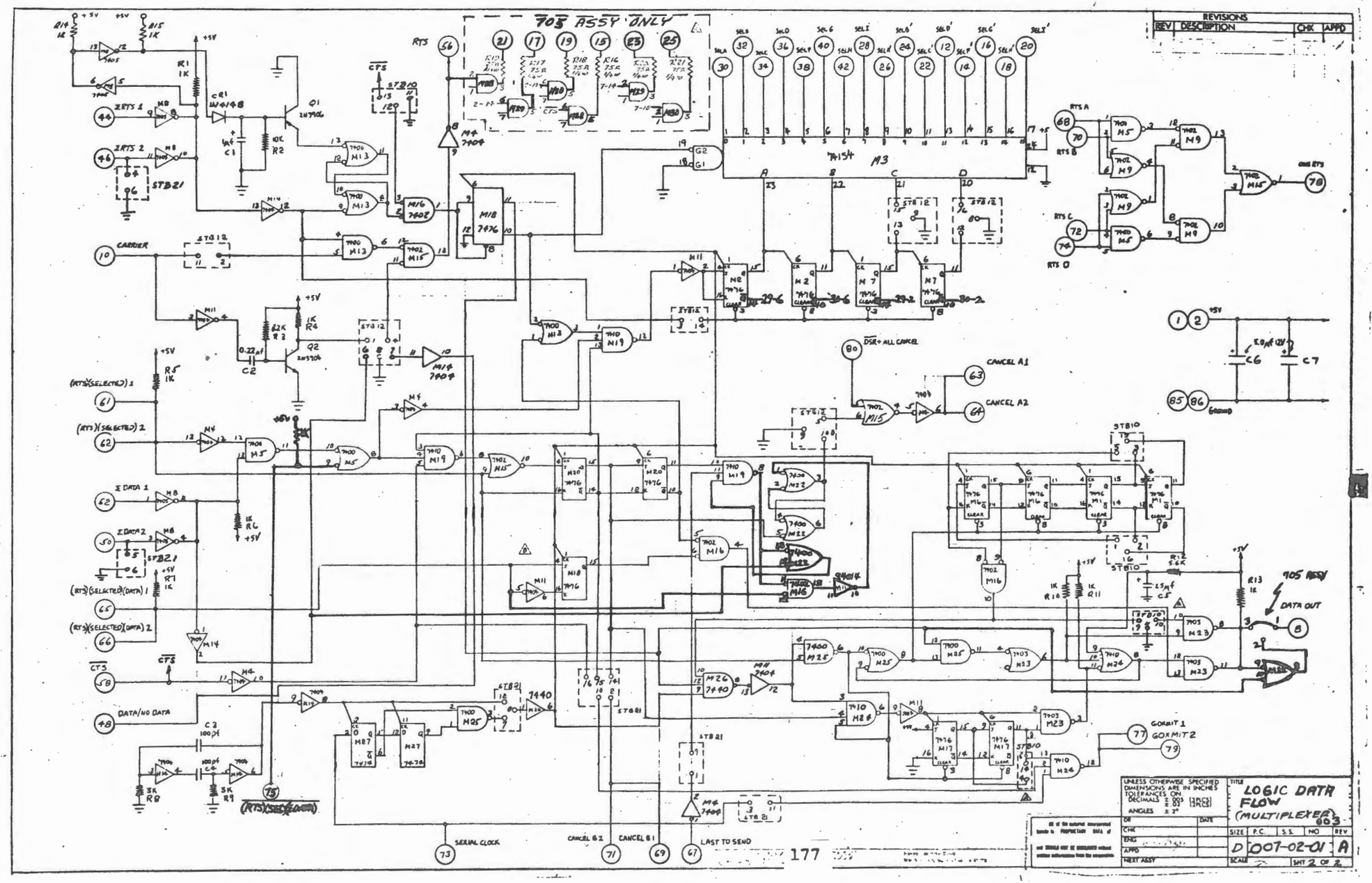
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON: DECIMALS ± .005 (.13mm) ± .02 (.5mm) ANGLES ± 2°

DR · DATE · CHK · ENGR · APPD · NEXT ASSY

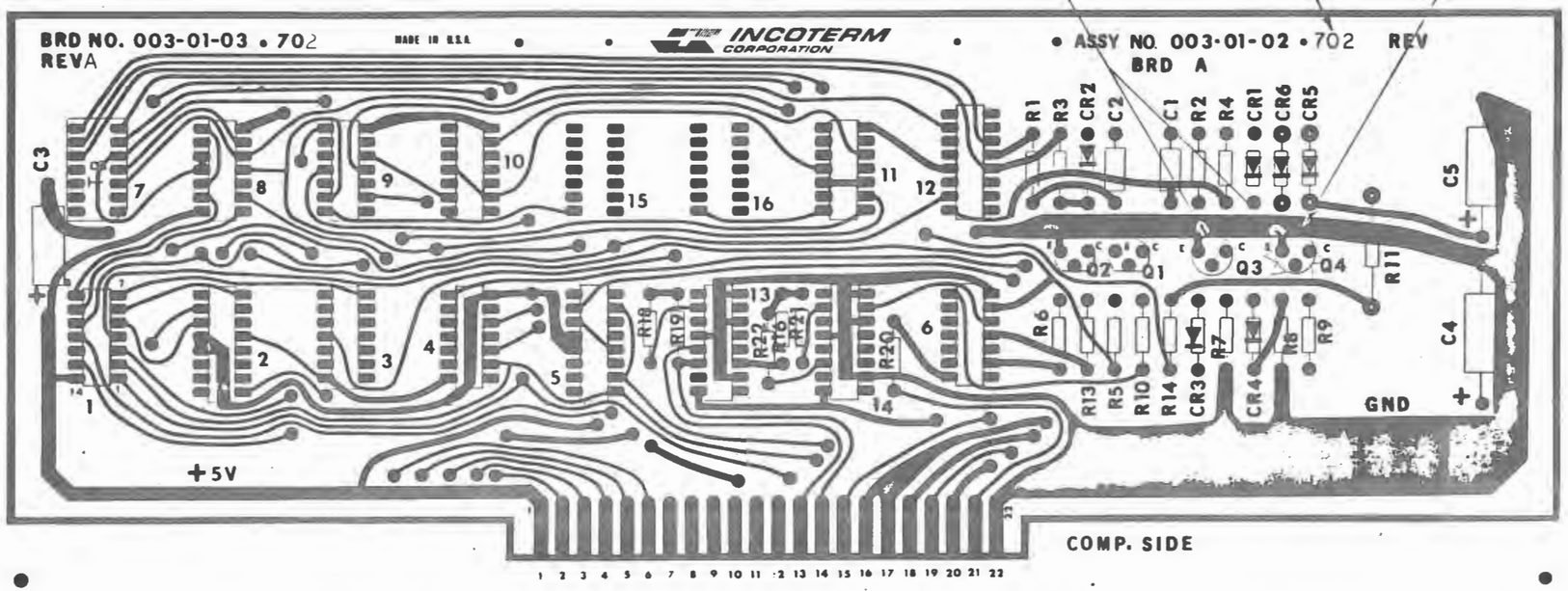
TITLE: LOGIC DATA FLOW (MULTIPLEXER)

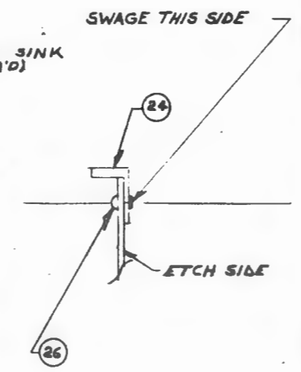
SIZE	P.C.	S.S.	NO.	REV
D	001-02-01			C

SCALE · SHT 2 OF 2


705 ASSY ONLY
REVISIONS
REV DESCRIPTION CHK APPD
RTS
CTS
CARRIER
DATA/NO DATA
Σ DATA 1
Σ DATA 2
(RTS)(SELECTED) 1
(RTS)(SELECTED) 2
(RTS)(SELECTED)(DATA) 1
(RTS)(SELECTED)(DATA) 2
DSR+ ALL CANCEL
CANCEL A1
CANCEL A2
GOXMIT 1
GOXMIT 2
SERIAL CLOCK
CANCEL B2
CANCEL B1
LAST TO SEND
705 ASSY
DATA OUT
GROUND
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON DECIMALS .XX ±.03 .XXX ±.013
ANGLES ±2°
TITLE
LOGIC DATA FLOW (MULTIPLEXER) 803
SIZE D
P.C. 007-02-01
S.S.
NO
REV A
SCALE
SHT 2 OF 2
NEXT ASSY

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 4-29-71 AD# 238		





28	M13, M14
27	R16, 18, 19, 20, 21, 22
26	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	M12, 15, 12
5	M10, 11
4	M6
3	M3, 4
2	M9
1	M1, 8
ITEM NO.	DESIGNATION

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 — Wayne Manor at Drive, Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (.13 MM)
.02 (.5 MM)
ANGLES 2°

DRN	Ron Schrader	4-27-71
CHK	D. Magnant	4-29-71
ENG	D. Magnant	4-29-71
APPD		4-29-71

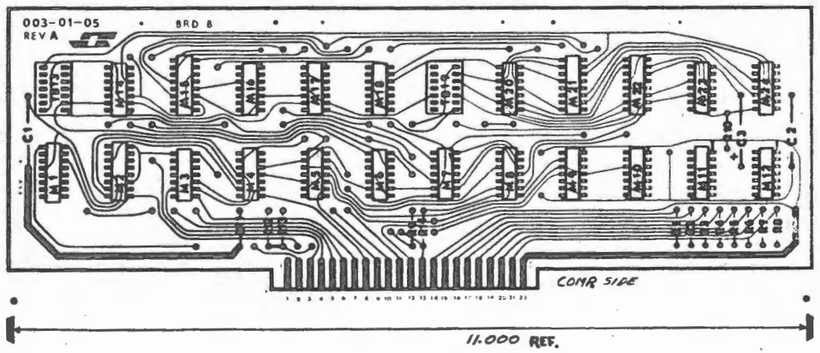
TITLE: P.C. BOARD ASSY PAPER TAPE BOARD "A" 702

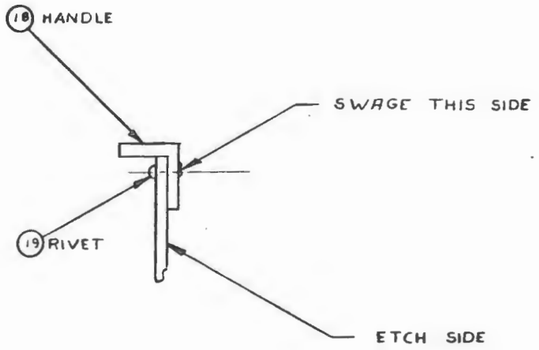
D 003-01-02 A

SIZE C | FSCM NO. | SHT 1 OF 1

NEXT ASSY 003-10-01-002 | SCALE 2:1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 7A1 5-16-75	"	"





PIN NUMBERING AND
ORIENTATION

ITEM	PART NUMBER	DESIGNATION
20	RSRC07GF391J	R14
15	CSTE1130	C1, C2, C3
14	RSRC07GF563J	R10
13	RSRC07GF102J	R9, R11, R12, R13
12	RSRC07GF104J	R1 - R8
11	EC6364-235-5	TB13, TB19
10	ICSN7476N	M1, M2, M15
9	ICSN7475N	M21, M22
8	ICSN7420N	M8, M20
7	ICSN7410N	M6, M14, M17
6	ICSN7405N	M16
5	ICSN74LO4N	M11, M12
4	ICSN7404N	M3, M7, M23, M24
3	ICSN74031	M9, M10
2	ICSN7402N	M18
1	ICSN7400N	M4, M5

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

NOTES:

INTERNATIONAL COMPUTER TERMINALS CORP.

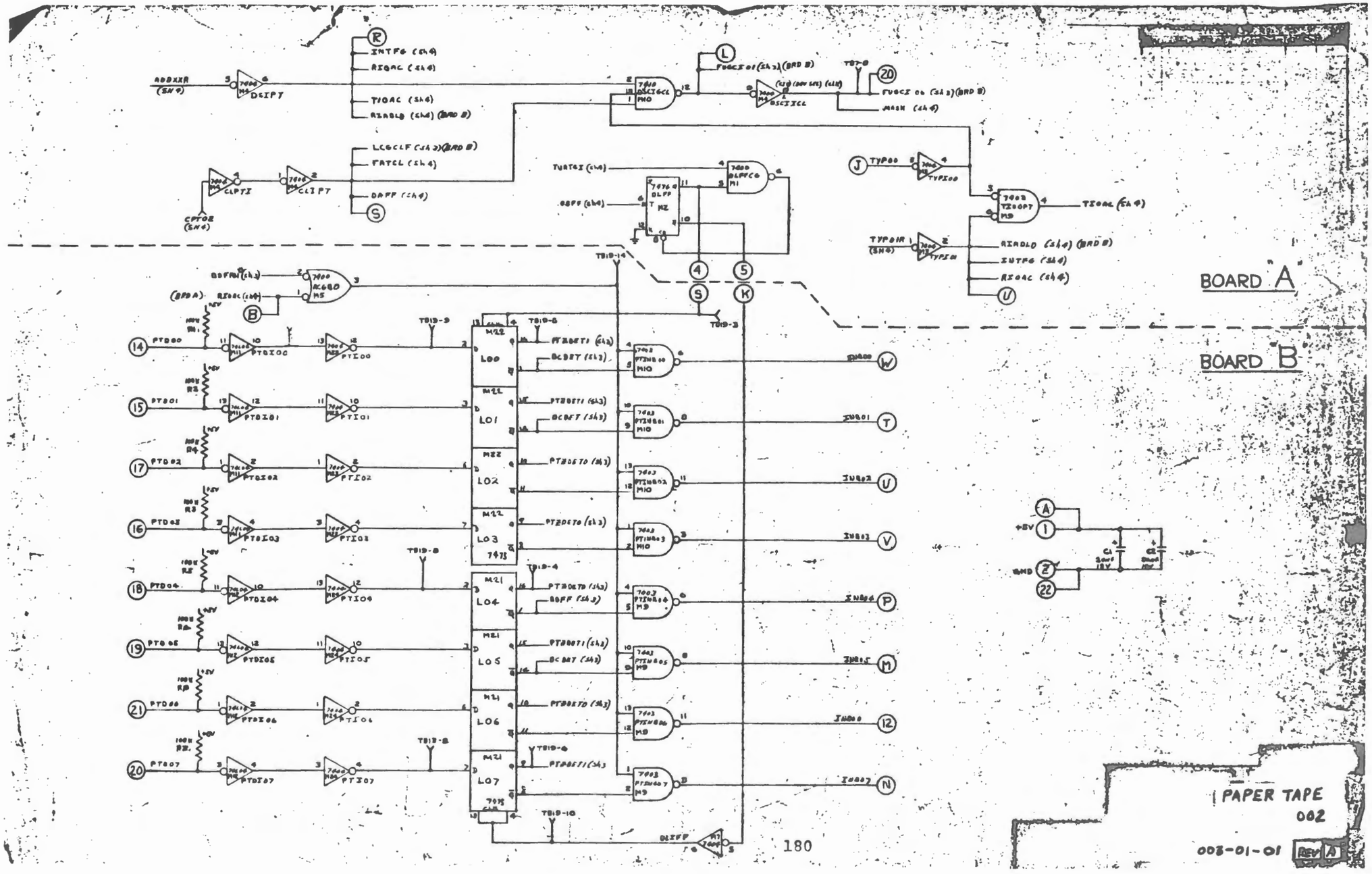
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (3 PLACES)
± .03 (2 PLACES)
ANGLES ± 2°

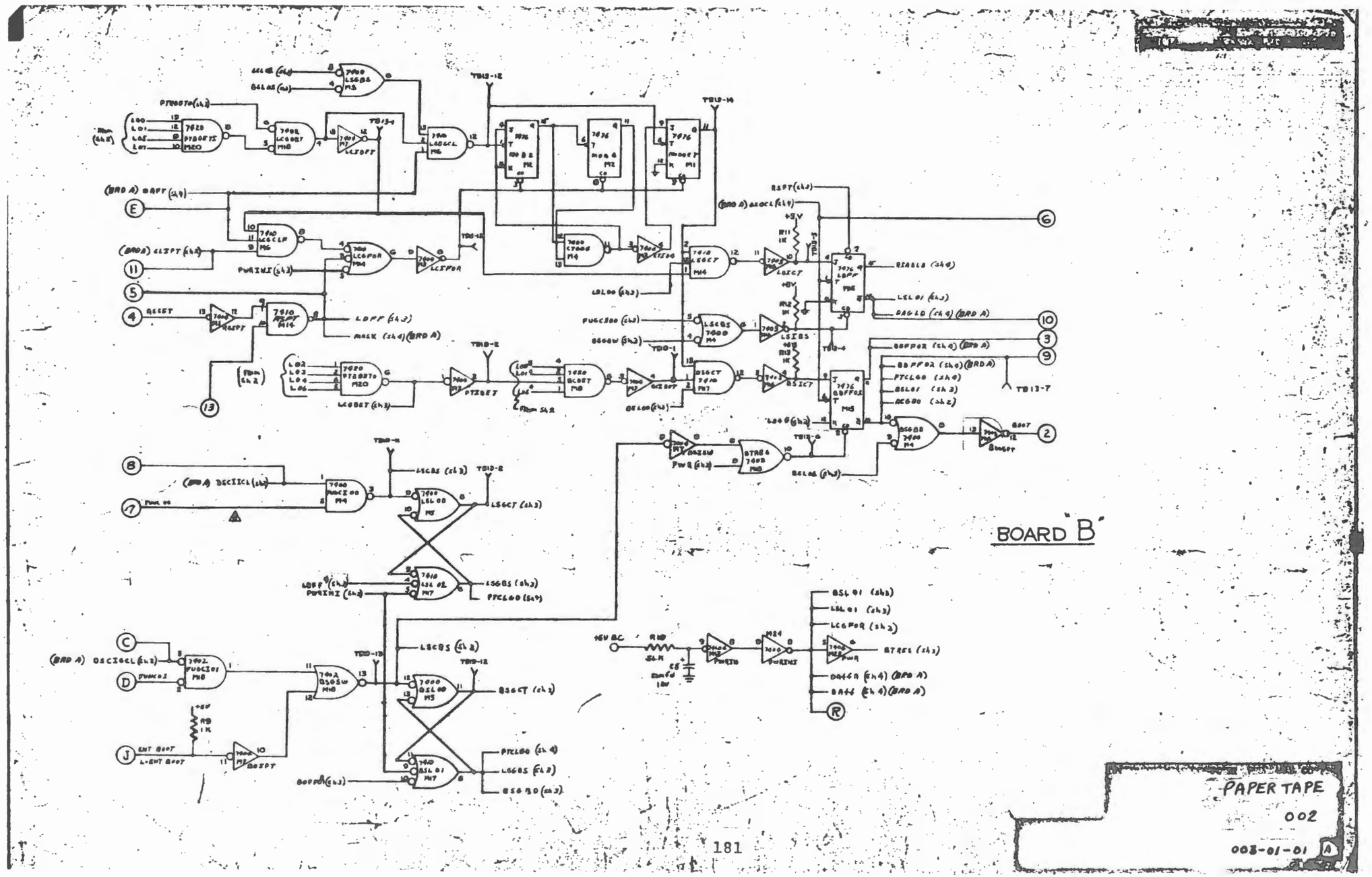
		DATE
DR		
CHK	R. B. Jackson	5/27/75
ENG	J. Rogers	5/27/75
APPD		
NEXT ASSY	003-10-01	

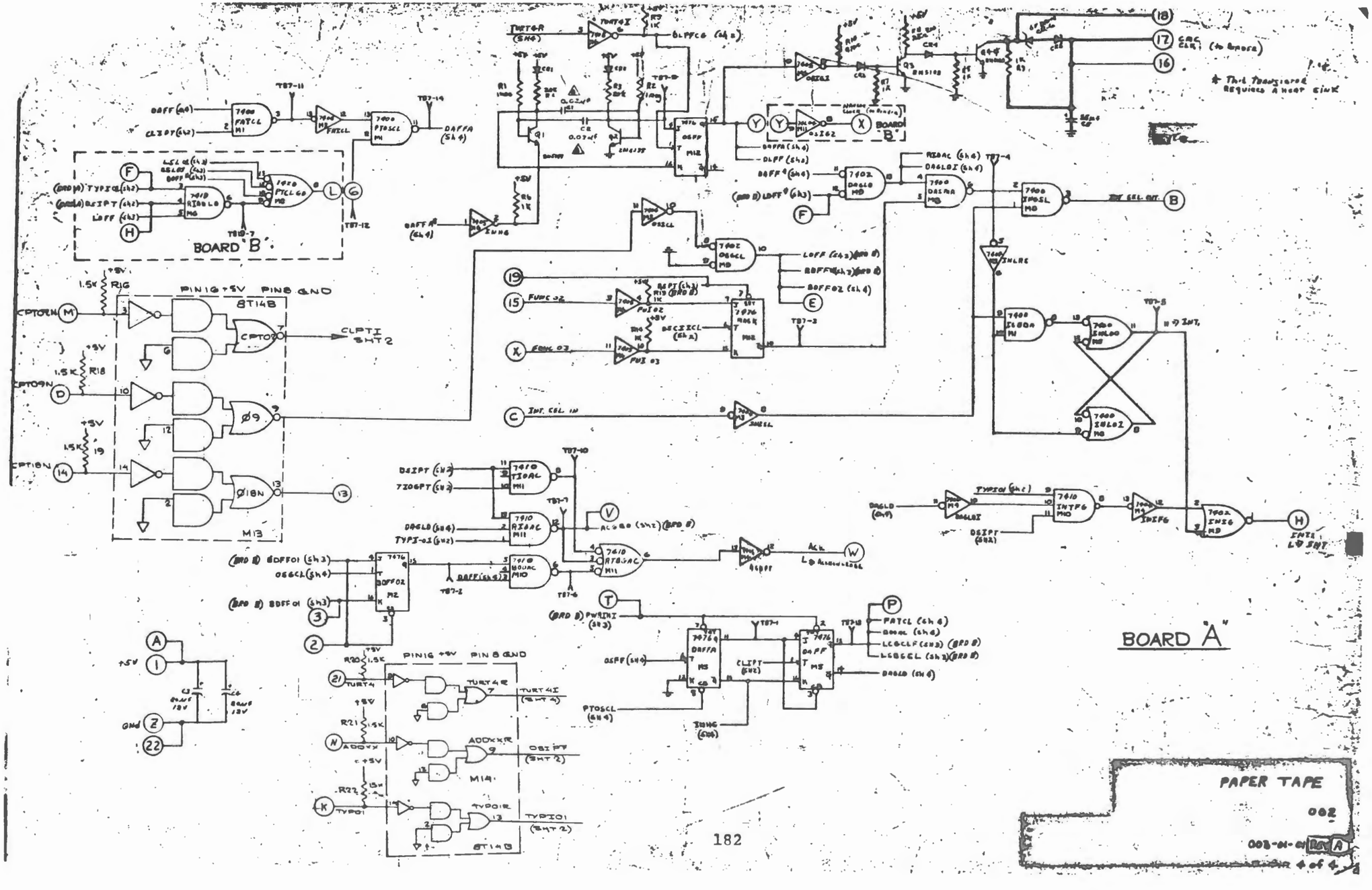
TITLE: P.C. BRD ASSY BOARD B PAPER TAPE

SIZE	P.C.	S.S.	NO.	REV
D	003-01-04			A

SCALE 1/1 SHT 1 OF 1


BOARD A
BOARD B
PAPER TAPE
002
003-01-01
REV A
180

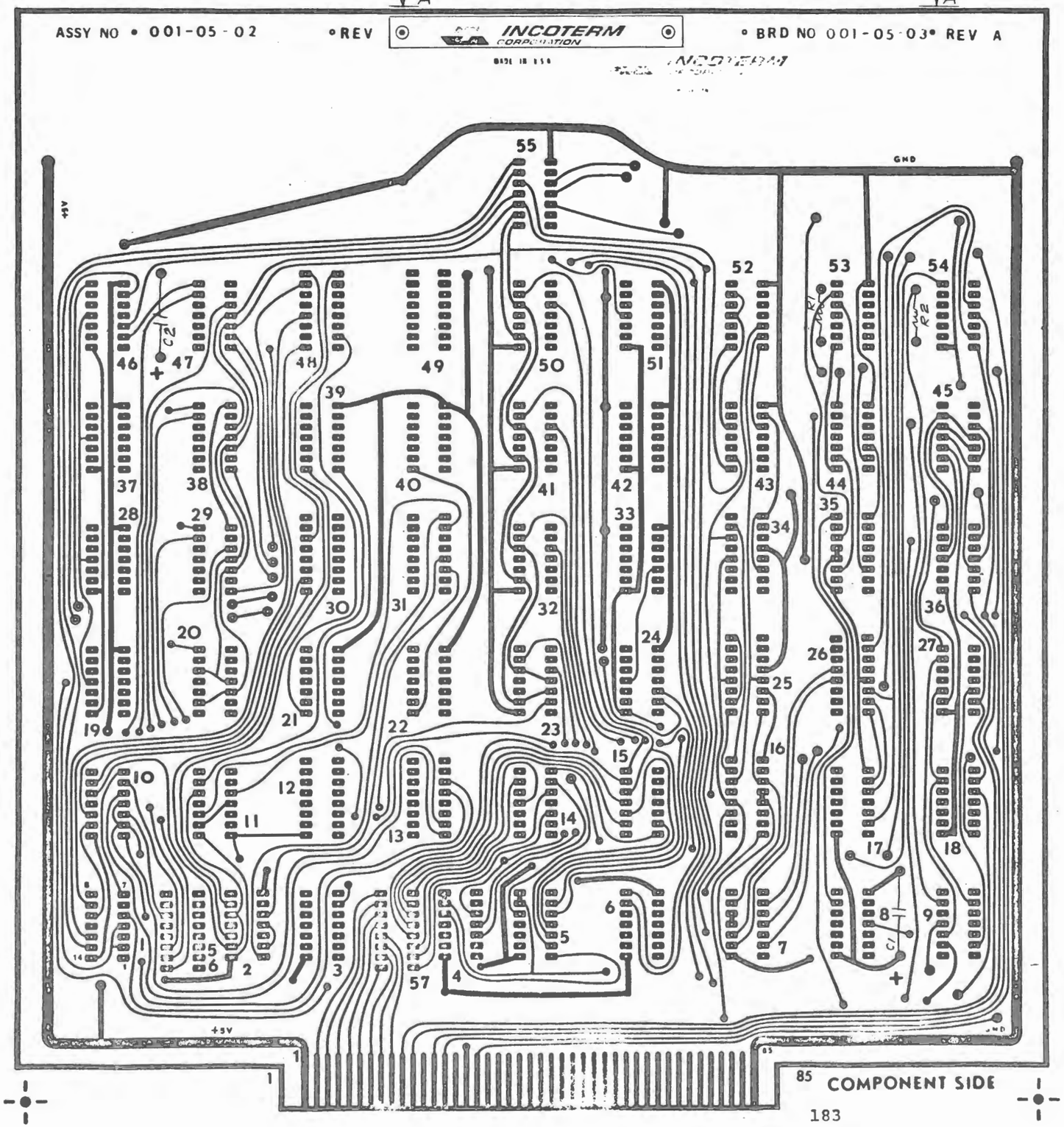

BOARD B
PAPER TAPE
002
003-01-01
A


BOARD "B"
BOARD "A"
PIN 16 +5V PIN 8 GND
8T148
M13
M14
PAPER TAPE
002
4 of 4

ASSY NO • 001-05-02 • REV

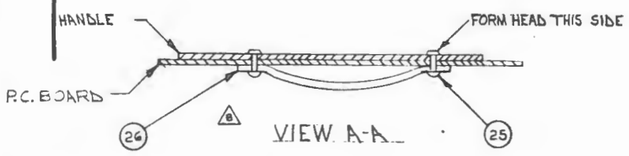
INCOTERM CORPORATION
BASE IN USA

• BRD NO 001-05-03 • REV A



183

REVISIONS				
REV	DESCRIPTION	BD # 183	CHK	APP
A	RELEASED / EC1363 2-19-71	N		
B	ECO 1439 RNF 5-6-71			



11.000 ± .003

ITEM NO	PART NO	REF DESIGNATION	QTY
23			
22			
21			
20	ICSN74180N	M17	1
19	EC7549	TB55	1
18	EC7541	STB12,13,26,30,31,48,49,56,57	9
17			
16			
15			
14	CSTE1127	C1, C2	2
13	RSAC07G102J	R1, R2	2
12	ICSN7495N	M4,5	2
11	ICSN7486N	M21, 22, 39, 40	4
10	ICSN7476N	M16, 25, 34, 35	4
9	ICSN7474N	M19,29,28,33,37,42,46,51	8
8	ICSN7451N	M20,23,29,32,38,41,47,50	8
7	ICSN7440N	M3, 6, 43	3
6	ICSN7410N	M45	7
5	ICSN7405N	M53	1
4	ICSN7404N	M9, 14, 15, 36	4
3	ICSN7403N	M1, 2, 10, 11	4
2	ICSN7402N	M18, 27, 52	3
1	ICSN7400N	M7, 8, 44, 54	4

INCOTERM CORPORATION
Peyton Industrial Drive
Marlborough, Massachusetts 01752

TITLE: ASSEMBLY P.C. BOARD CYCLIC CHECK 701

C. Colby 2-19-71
Ed Gladstone 2-19-71
D.D. Kaufman 2-19-71
PL001-05-02

D 001-05-02 B

2/1

28 ADDXX — M36 — 7410 M45 — WIO·ADDXX (SHT 2)

19 TYP00 — M36 — 7410 M45 — RIO·ADDXX (SHT 2) (SHT 3)

21 TYP01 — M36 — 7410 M45 — TIO·ADDXX

20 FUNC 00 — M9 — $\overline{F00}$ (SHT 3) — M18-12

22 FUNC 01 — M9 — $\overline{F01}$ (SHT 3)

24 FUNC 02

26 FUNC 03

36 CPT 09 — M9 — M8

33 CPT 13 — M9

34 CPT 02

1 2 — +5V — 5uf 12V C1 — C2 5uf 12V — TB55-7 — GROUND — 85 86

TB55-12 — CCRA PAR ENABLE (SHT 3)

TB55-14 — CCRB PAR ENABLE (SHT 4)

7402 M52 — 7402 M52 — 7402 M18 — 7402 M18 — 7402 M27

7402 M27 — 7400 M7 — SR PAR INHIBIT (SHT 4)

7400 M8 — 7400 M8 — 7400 M8 — 7400 M7 — 7404 M45 — SR PAR ENABLE (SHT 3)

WIO·ADDXX (F2 + F3) D29 (SHT 4)

WIO·ADDXX·@13 (SHT 4)

SERIAL STROBE (SHT 3)

TB55-11 — 7440 M3 — CCRA STROBE (SHT 3)

TB-55-2 — 7440 M2 — CCRB STROBE (SHT 4)

TB55-6 — 7440 M6 — SR STROBE (SHT 3)

TB55-3 — SR PAR ENABLE (SHT 3)

31 INT SEL IN

32 INT SEL OUT

0 (SHT 3) … 7 (SHT 3) — 74180 M17 — ST826

7400 M54 — 7400 M54 — 7400 M54 — TB55-5 — 7TH BIT (SHT 3)

R2 1K — +5V — 7404 M53 — 7402 M27

7476 M35 (CR, J, K, $\overline{Q}$, CLEAR, GROUND) — R1 1K — +5V

7400 M44 — 7400 M44 — 7400 M54 — 7404 M53 — TB55-10

7402 M27 — 7404 M36 — 7400 M44 — 7400 M44

RIO·ADDXX (SHT 2) — WIO ADDXX (SHT 2) — 7440 M43 — 7405 M53 — ACK 27

25 RESET

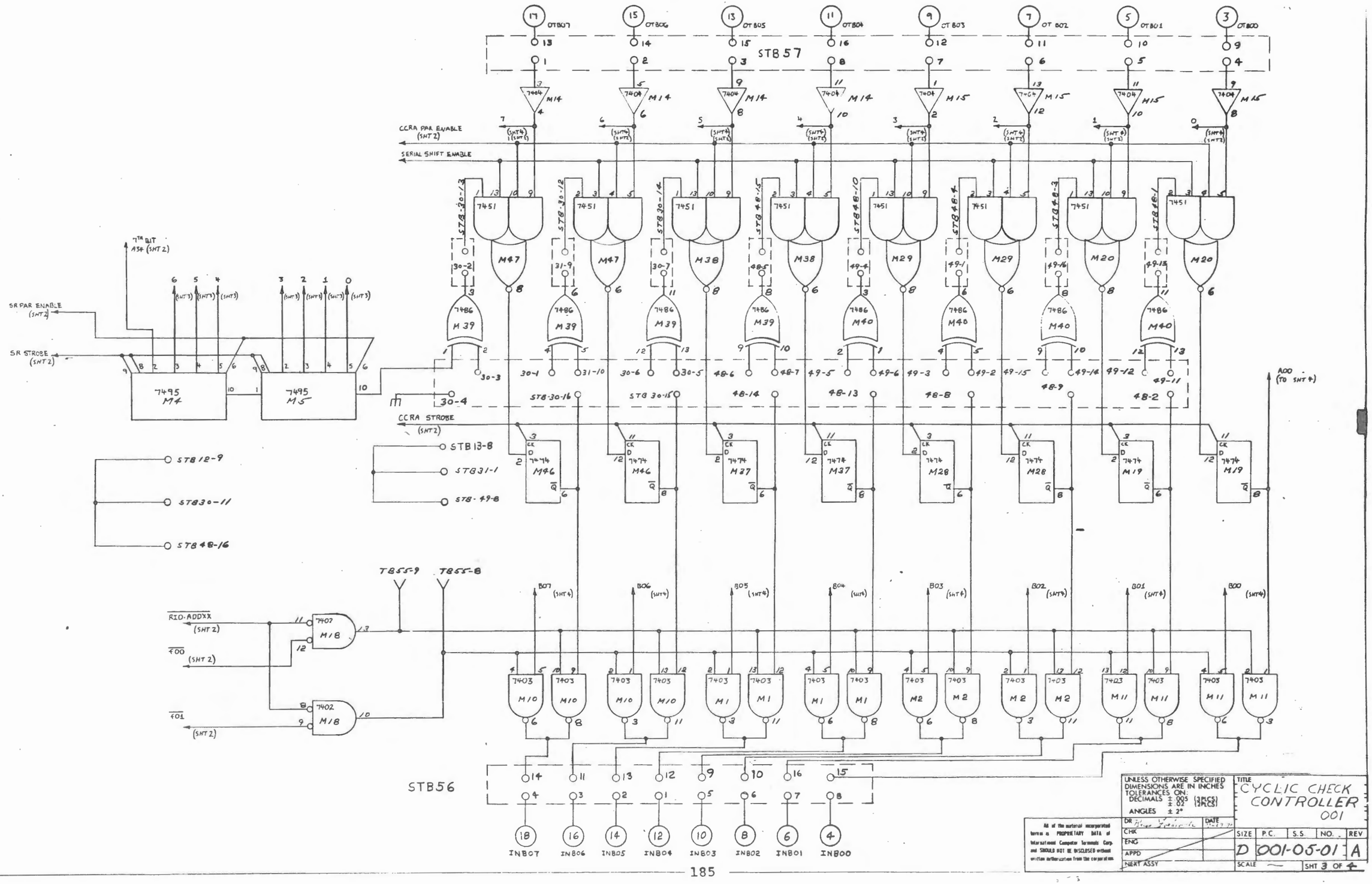
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS ± .005 (2 PLCS) ± .01 (3 PLCS)
ANGLES ± 2°

DR — DATE 7-76
CHK
ENG
APPD
NEXT ASSY

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 (3 PLCS) ± .02 (2 PLCS)
ANGLES ± 2°

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

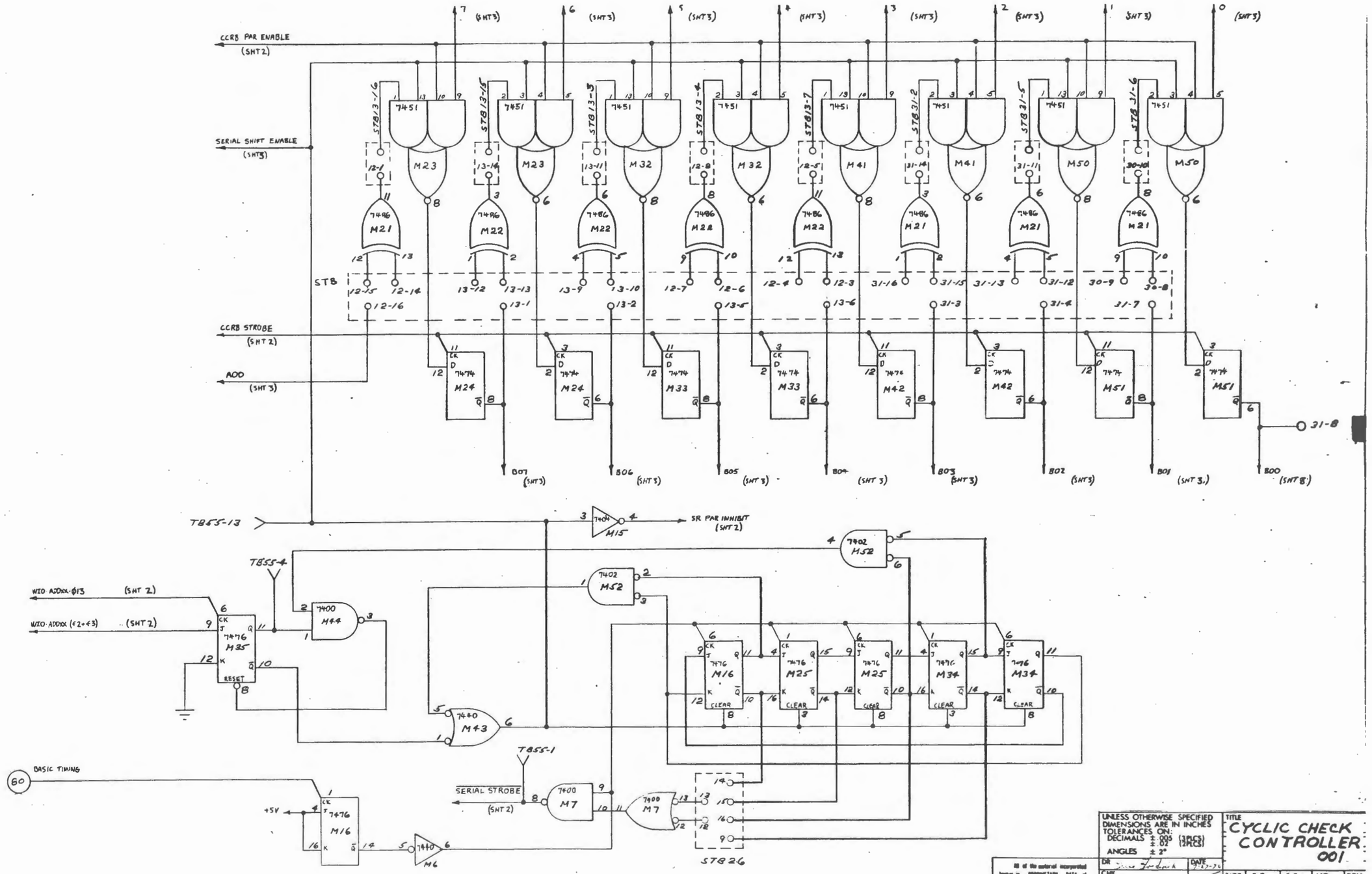
DR Brian Zabarsky DATE 7-24-74
CHK
ENG
APPD
NEXT ASSY

TITLE: CYCLIC CHECK CONTROLLER 001

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

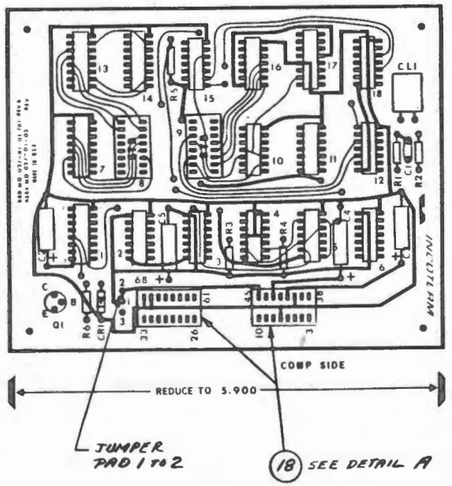
SCALE —

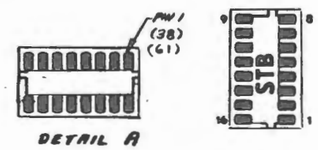
SHT 3 OF 4



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ± .005 (3PLCS) ± .02 (2PLCS) ANGLES ± 2°	TITLE: CYCLIC CHECK CONTROLLER 001			
DR [illegible] DATE 7-27-76	SIZE	P.C.	S.S.	NO.	REV
CHK					
ENG	D	001-05-01			A
APPD					
NEXT ASSY	SCALE —	SHT 4 OF 4			

REVISIONS			
REV	DESCRIPTION	CHK	APPD.
A	RELEASED RD#330 9/17/71		





COMPONENT SIDE

ITEM NO.	REFERENCE DESIGNATION
27	
26	
25	
24	
23	C4, C5
22	C2, C3
21	C1
20	CR1
19	Q1
18	ST88, ST89
17	R6
16	R5
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	

NOTE:

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

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

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

DR	Ronn Fitzpatrick	9/9/71
CHK	A. B. Pellegrini	9/9/71
ENG	D. B. Lanigan	9/16/71
APPD	[illegible]	9/16/71

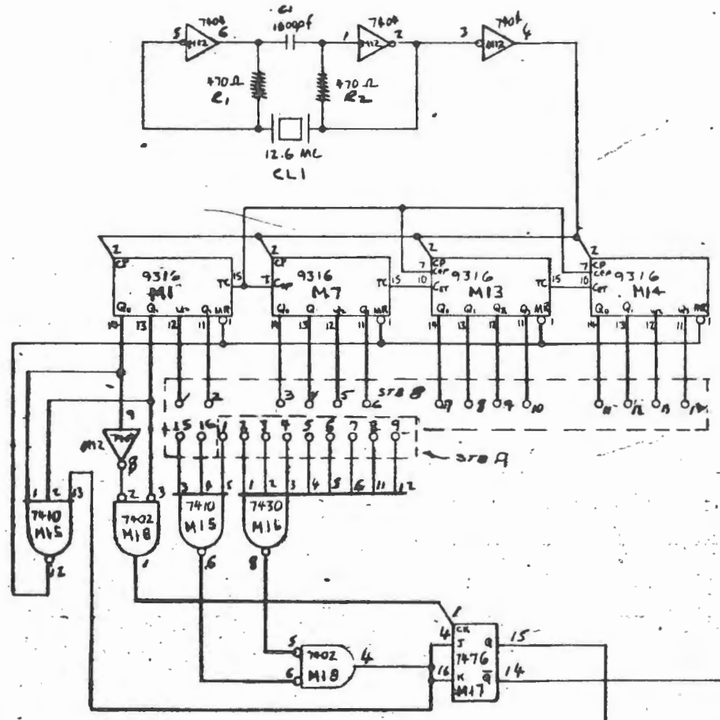
NEXT ASSY 027-10-01-703

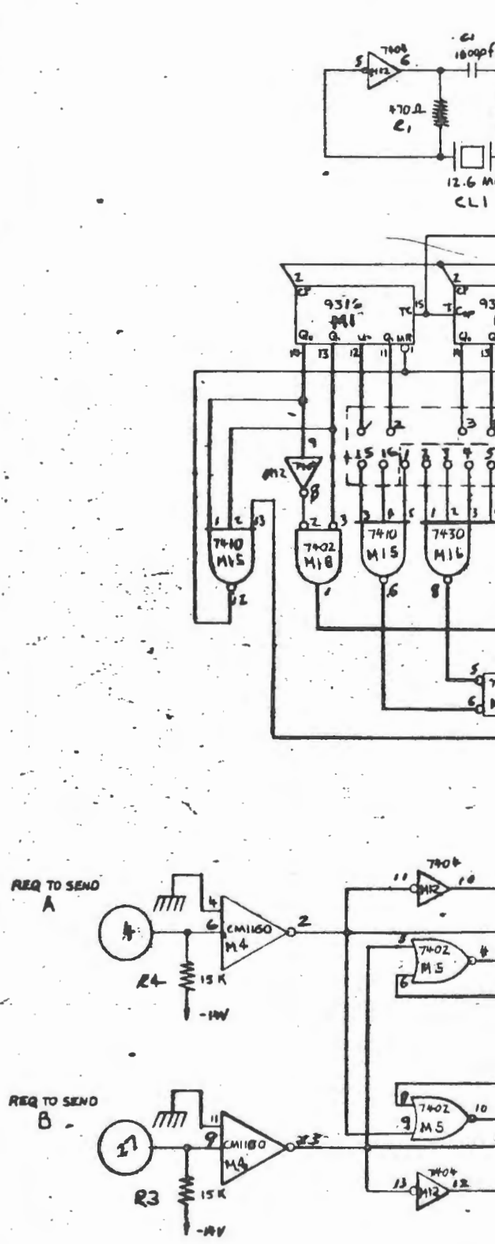
TITLE
P.C. BOARD ASSY
MODEM ELIMINATOR 703

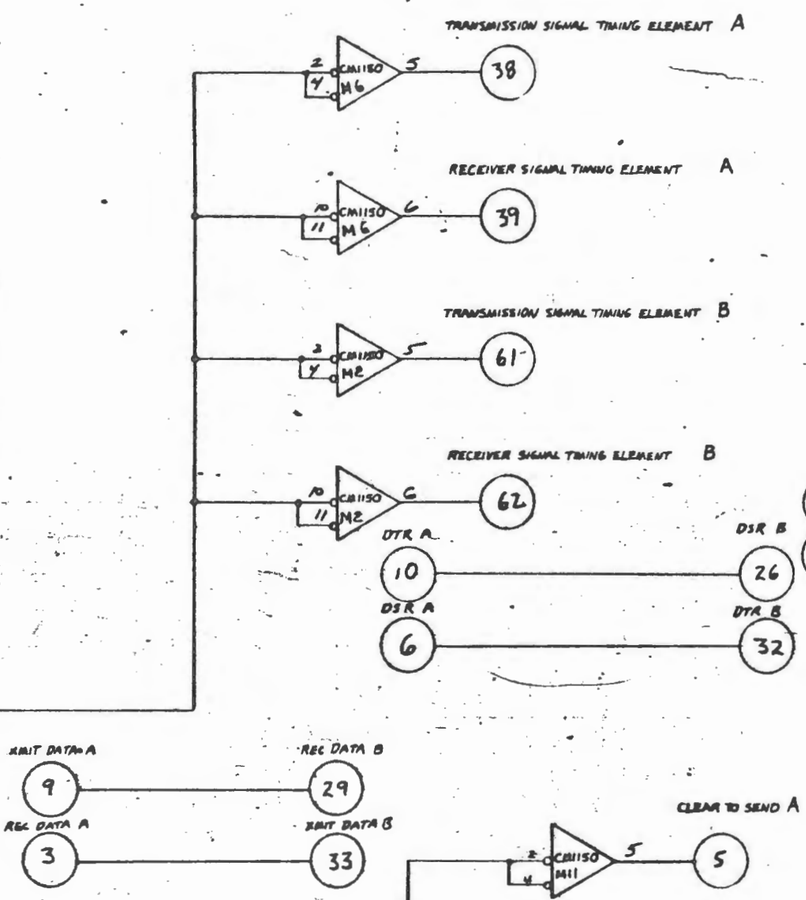
SIZE	P C	S S	NO	REV
D	027-01-02			A

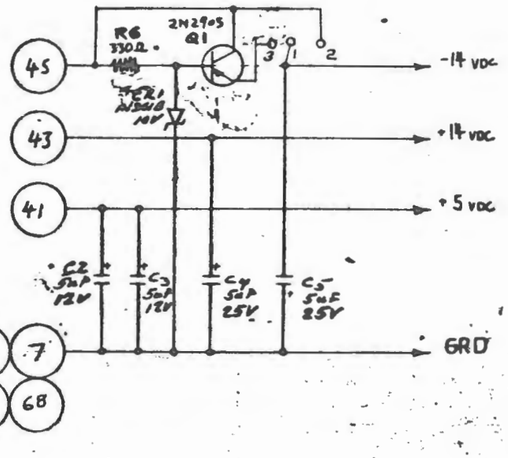
SCALE 1:1 SHT 1 OF 1

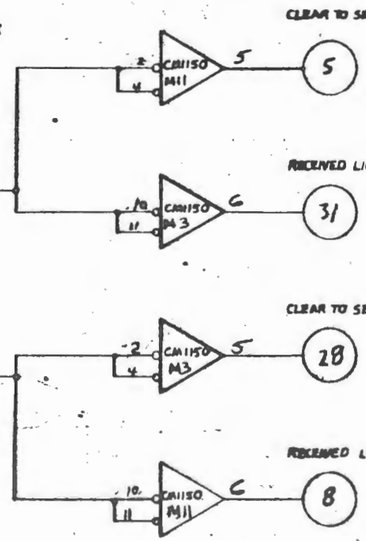
REVISIONS			
REV	DESCRIPTION E.O.-#330	CHK	APPD
A	RELEASED 9/17/71	M	M











002

INCOTERM CORPORATION

Wayne Research Drive
Framingham, Massachusetts 01701

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .XX ±.01 .XXX ±.005
ANGLES ±1°

DR [illegible] DATE 7/1/71
CHK Bob Pullman 7/14/71
ENG [illegible] 7/14/71
APPD [illegible]
NEXT ASSY 021-01-02

TITLE
LOGIC DIAGRAM
MODEM
ELIMINATOR

SIZE D | DWG NO 021-01-01 | REV A
SCALE | SHT 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 2/4/71	[illegible]	[illegible]
B	REVISED, ECO 1470	[illegible]	[illegible]

J11 — TPU BUS SIGNALS IN

J12 — TPU BUS SIGNALS OUT

+5V BUS

GROUND BUS

FAN

TWISTED

T1

115 VAC

TB1

TB2

TB3

POWER SUPPLY

NOTE: TB3 PINS 3 & 7 ARE INTERNALLY CONNECTED

+5VDC (RED)
+5VRET (BLACK)
12VRET (BLACK)
-12VDC (VIOLET)
+12VDC (ORANGE)

+24VDC (BLUE)
24VRET (BLACK)
115 VAC ISOL (GRAY)
115VAC (BLACK)
ACN (WHITE)

P10 HIGH

P1

P2

P6

READ/WRITE & MOTOR CONTROL ELECTRONICS

P4

AC GND 2

P10 LOW

SW1

SW2

SW3

LP1

LP2

LP3

LP4

FROM CASSETTE MOTOR CONTROL BOARD

WHITE

TWISTED

INTERLOCK

ON/OFF

AC INPUT OPTION

TWISTED PAIR

GREEN

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .005 (.13 PLCS)
.02 (.5 PLCS)
ANGLES 2°

TITLE: SCHEMATIC TAPE CASSETTE

DR Rick Lawton	DATE 2/3/71	
DES [illegible]	2/3/71	
ENG [illegible]	2/5/71	
APPD [illegible]	2-1-71	
NEXT ASSY 013-10-01		

001

SIZE	P.C.	S.S.	NO.	REV.
D	013-10-29			B

SCALE [illegible] SHT 1 OF 1

REVISIONS				
REV	DESCRIPTION R.O.# 169		CHK	APPD
A	RELEASED 27 Jan 70 C. Eddy			W

R1 470Ω R2 470Ω Y1 C3 .0047 μF

WCLK (77) T0 (27)

REAL CLOCK (69) SPEED (67) REAL CLOCK (39) RET (40) GC REEL (71)

RECT DATA (45) RET (46)

S DATA IN (10) S DATA OUT (33) 9TH BIT (14) SR SCK (16)

STATE 2 + STATE 3 (15) CLR STATUS (22)

(19) W MODE STRB (21) W MODE

(13) WRITE DATA (9) WRITE DATA (37) ERASE TAPE (7) SR MODE (3) RDY CK (41) T9 (31) DO CK (53) W MODE (20) SR PCK

ERROR (25) (26) PARITY DET (8) PARITY ERROR (4) PARITY ERROR

CASSETTE +5V (1) (2) C1 0.01 μF C2 5.0 μF +5V RET (85) (86) RET

NOTE: ALL RESISTORS ¼ WATT, ±5%

INCOTERM CORPORATION — Hayes Memorial Drive, Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS .XX ±.01, .XXX ±.005; ANGLES ±2°

DR C. J. DRING 1-29-71 — CHK [illegible] 1-29-71 — ENG [illegible] 1-29-71 — MFG [illegible] 11 FAN 71

NEXT ASSY 013-01-02

TITLE: CASSETTE CONTROLLER BOARD A 001

SIZE	P.C.	S.S.	NO.	REV
D	013-01-01			A

SCALE ~ SHT 1 OF 1

REVISIONS				
REV	DESCRIPTION	CHK	APP'D	
A	RELEASED 27 Jan 70 C. Ellg			M
B	ECO 1446 5-11-71 RAP			

BUFFER STRB 40 · READ 34 · 42 · CPT02 22 · FNB 39 · FN A 53 · FN C 65 · STATUS→INB 59 · TACENB 21 · INITIAL 55 · STATUS 56 · STATE 2 74 · SC WRITE 72 · SET DATA SERVICE 83 · CPT02 26 · 1.5K R5 · BT14-B · M25 · M2-1 · M26-6 · M1-10 · M2-4 · 67 BUFFER INB

SELECT IN 77 · SELECT OUT 79 · FNB INT. 44 · 75 RUN* · INTXX 81 · ACKN 84 · SYSTEM RESET · 68 · 64 · 3 WRITE ERROR · 7 MOTION ALLOWED · 69 OPER INTER REQ · 31 PARITY ERROR · 33 DROPOUT · 25 MANUAL MODE · 57 PROGRAM ERROR · 61 TAC* · 27 MOTION · 46 SPEED · 45 · 49 · 71 · 76 · 78 · 63 · 32 · 54 · 15 · 9 · 51 · 14 · 10 · 8 · 28 · 20 · 73 · 4

NOTE: ALL RESISTORS 1/4 WATT, ±5%

INCOTERM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS .000 (3PLCS) .00 (2PLCS) ANGLES 2°

DR C. STRONG DATE

CHK J.P. Strand 1-29-71

ENG C. Ellg 1-29-71

APP'D T.O. [illegible] 1-29-71

NEXT ASY 013-04-02

TITLE: CASSETTE CONTROLLER BOARD B 001

SIZE	FSCM NO	DWG NO	REV
D		013-04-01	B

SCALE ~ SHT 1 OF 1

REVISIONS				
REV	DESCRIPTION REQ #149		CHK	APPD
A	RELEASED 27 Jan 70 C. Eby			
B	ECO 1496 3-11-71 RNS			

CASS. +5V (2) (1) — C1 +50uf C2 C=.01 MF — I.C. — +5V(B)

CASS. +5V RET. (86) (85) — RET(B)

(37) ΦTB07 (33) ΦTB06 (21) ΦTB05 (19) ΦTB04 (59) ΦTB03 (61) ΦTB02 (45) ΦTB01 (43) ΦTB00

(65) SEL → BUFFER

(75) BUFFER STRB

(10) SBD1 (8) MANUAL MODE (14) MOTION (-M6-12) (54) DROPOUT (38) PARITY ERROR (34) PROGRAM ERROR (56) OPER INTER REQ

(27) INB07 (9) INB06 (7) INB05 (31) INB04 (49) INB03 (41) INB02 (39) INB01 (55) INB00

+5V R1 820Ω ¼W — R2 820Ω ¼W

(13) BUFFER→INB (15) STATUS→INB

(57) SDATAIN (26) SR PCK (67) SR MODE (28) SR SCK (22) SDATAOUT

(63) T9 (70) $\overline{T9}$ (74) BOOT MODE

(69) 9TH BIT

(73) (RDAN)(STATE 0)

(71) READ

STATE 2 (72) STATE 5 (81) STATE 4 (79)

D.O. CK (83)

H.S. CK (77)

MODE CHANGE (82)

(M2-1) MOTION

BOOT ERROR (78)

(76) ERROR D.O.

INCOTERM CORPORATION — Hayes Memorial Drive, Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS .005 (FRACT) .02 (DIFFER); ANGLES 2°

DRC. J. TRONG 11-2-70 — CHK J.P. Mason 1-29-71 — ENG C. Eby 1-29-71 — APP D.O.K. Stef 1-29-71

NEXT ASSY 23-02-02

TITLE: CASSETTE CONTROLLER BOARD C 001

SIZE	F.C.	S.S.	NO	REV
D	013-02-01			B

SCALE ~ SHT 1 OF 1

REVISIONS				
REV.	DESCRIPTION	RD. # 169	CHK	APPD
A	RELEASED 16 FEB 1971 C. Cully			
B	ECO 1446 5-11-71 RAF			

NOTE: ALL RESISTORS ¼W, ±5%

INCOTERM CORPORATION	Hayes Memorial Drive, Marlborough, Massachusetts 01752	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS .005 (PLACES), .02 (2 PLACES); ANGLES 2°	TITLE: CASSETTE CONTROLLER BOARD D	
DR C. T. DRONG 1-29-70		
CHK J. R. DAWSON 1-29-71		
ENG C. CULLY 1-29-71	SIZE D	PC 013-03-01
APPD D. K. [illegible] 1-29-71	SS	NO REV B
NEXT ASSY 013-03-02	SCALE ~	SHT 1 OF 1

REVISIONS			
REV	DESCRIPTION	CHK	APPD
A	RELEASED 27 Jan 70 C Ely		
B	ECO 1358 C Ely 3-2-71		
C	ECO 1946 5-11-71 RAF		

NOTE:
ALL DIODES 1N4148 UNLESS OTHERWISE INDICATED
ALL RESISTORS ¼ WATT, ±5% UNLESS OTHERWISE INDICATED

INCOTERM CORPORATION
Hayes Memorial Drive
Marlborough, Massachusetts 01752

UNLESS OTHERWISE SPECIFIED
THREE PLACE DECIMALS ARE TO INCHES
TOLERANCES ON
DECIMALS .XXX ±[ ]PLACES
.XX ±[ ]PLACES
ANGLES ±°

DR	C. J. IRONS	11/13-70
CHK	J.R. Dawson	1-29-71
ENG	G. Murray	1-29-71
APPD	L.O. Kelly	11 Feb 71

MFG APPD 013-05-02

TITLE: CASSETTE CONTROLLER BOARD E 001

SIZE	F.C.	S.S.	NO	REV
D	013-05-01			C

SCALE: ~ SHT 1 OF 1