

537356

00.29.10.0

KEYBOARD & CAM REFERENCE

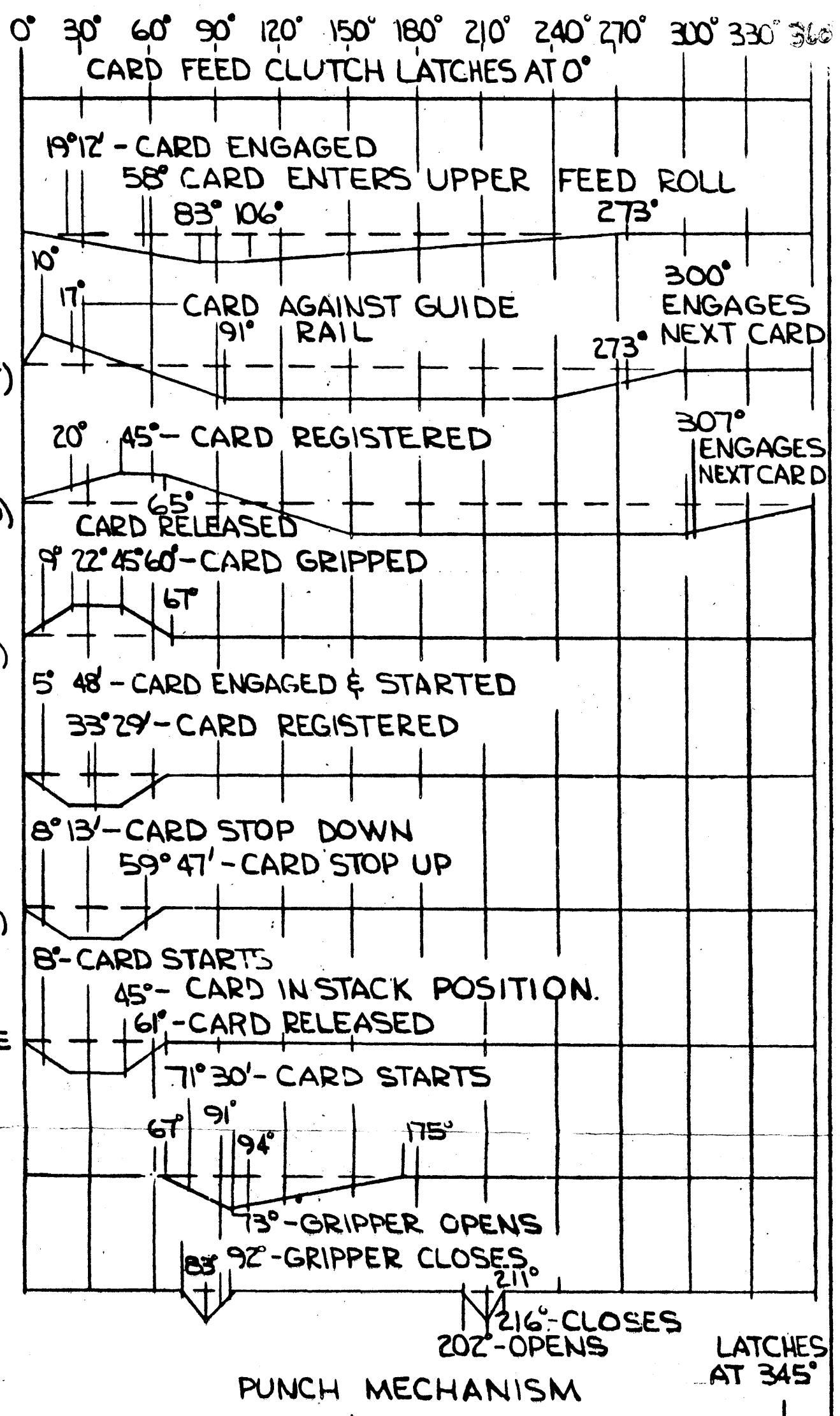
MASTER

STEM POS	GRAPHIC		CARD CODE		BAILS		LATCHES	
	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC
1	ERROR RESET							
2	MULTI-PUNCH							
3	NUMERIC							
4	Q	+	11-8	12-8-6	13,9	12,8,6		
5	A		12-1		15,3			
6	@	#	8-4	8-3	9,7	8,2		
7	Z		0-9		1,11			
8	W	-	0-6	0-8-5	14	14,8,4	X	
9	S	>	0-2	0-8-6	14	14,8,6	X	
10	%	,	0-8-4	0-8-3	14,9,7	14,8,2		
11	X	7	0-7	0-8-7	14	14,8	X	X
12	E	)	12-5	11-8-5	15	10,8	X	X
13	D	:	12-4	8-2	15,7	8		X
14	*	\$	11-8-4	11-8-3	7,9	8,2	X	X
15	C	"	12-3	8-7	15,5	8		X
16	R	¢	11-9	12-8-2	13,11	12,8		X
17	F	;	12-6	11-8-6	15	10,8	X	X
18	<	.	12-8-4	12-8-3	9,7	8,2	X	X
19	V	=	0-5	6-8	1	8,6	X	
20	T	0-8-2	0-3	0-8-2	14,5	14,8		X
21	G	-	12-7	11-8-7	15	10,8	X	X
22	MASTERCARD						X	X
23	B	1	12-2	11-8-2	15	10,8	X	X
24	Y	1	0-8	12-8-7	1,9	12,8		X
25	H	'	12-8	8-5	15,9	8,4		
26	DUP							
27	N	(	11-5	12-8-5	13	12,8	X	X
28	U	1	0-4	1	1,7			X
29	J	4	11-1	4	13,3			X
30	-	-	11	11	13	10		
31	M	7	11-4	7	13,7			X
32	I	2	12-9	2	15,11			X
33	K	5	11-2	5	13	4	X	
34	/	0	0-1	0	14,3	14		
35	,	8	0-8-3	8	1,9,5	8		
36	O	3	11-6	3	13	2	X	
37	L	6	11-3	6	13,5	6		
38	SPACE						X	X
39	.	9	12-8-3	9	15,9,5			X
40	P	&	11-7	12	13	12	X	
41	SKIP						X	X
42	RELEASE						X	X
43	AUX DUP						X	X
44	FEED							
45	REGISTER						X	X
46	PROG 2							
47	ALPHA							
48	LEFT ZERO						X	X
49	LEFT ZERO							
50	PROG 1							

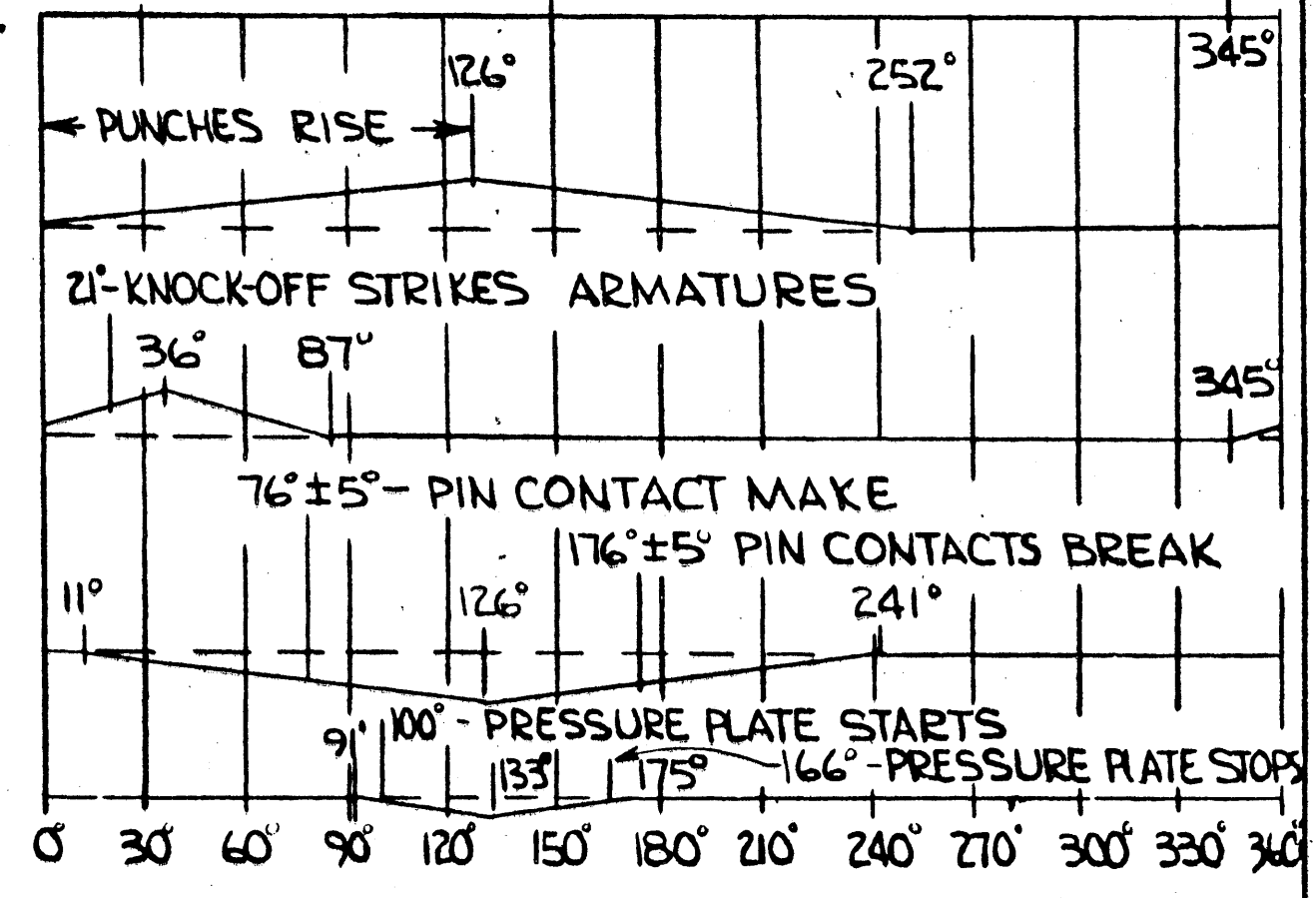
ODD NUMBER BAILS ON RIGHT SIDE OF KEYBOARD
EVEN NUMBER BAILS ON LEFT SIDE OF KEYBOARD

- CARD FEED CLUTCH 60 RPM 1° = 2.78 MS
- CARD FEED KNIFE
- CARD ALIGNER (VERTICAL ALIGNMENT)
- CARD PUSHER FEED (FOR DETAIL CARD)
- PRESSURE ROLLS (ON FEED WHEELS)
- INSERTING ROLL (FOR MASTER CARD)
- CARD REGISTER STOP (FOR MASTER STOP)
- EJECT ROLL (FOR CARD TO BE STACKED)
- CARD PUSHER-STACKER
- STACKER DRUM GRIPPERS
- PUNCH CLUTCH 1200 RPM (NON-PRINT) 1° = .139 MS 1080 RPM (PRINT) 1° = .154 MS
- PUNCH BAIL
- ARMATURE KNOCK-OFF
- PIN OPER CAM
- PRINT CAM

MECHANICAL TIME CHART
CARD FEED MECHANISM



PUNCH MECHANISM



INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	12-30-64	205199			X PRINT TO ENG. SPEC. NO. 695291	
DESIGN	WT 11-23-64 MODEL						
CHECK	LF 11-23-64 DRAW						
APPRO	JKC 11-23-64 CHECK						

00.29.10.0

5373561

5406556
 0104E

MODEL "B" 29 WIRING DIAGRAM INDEX

NAME	SECTION	PART NO
POWER SUPPLY 60 CYCLE		5761451
POWER SUPPLY 50 CYCLE		5761461
NUM KYBD-INTERPOSER MAG-PIN SENSE	1 AND 2	960865
64 CHARACTER KYBD	3 AND 4	5405944
CARD FEED-PROG SELECT - PRINT	5 AND 6	5405916
DUP-CLEAR-RELEASE-CARD LEVER	7 AND 8	5405938
PCH CLUTCH-MP-ALPHA-KYBD RESTORE	9 AND 10	5405939
SKIP-ESC MAG	11 AND 12	5405948
FIELD SIZE - ENCODE	13 AND 14	960785
IA RLG DECODE-READOUT	15 AND 16	5405957
BIT REG AND LZ REGISTER-SMS CARD	17, 18, 19, 20, 21, 22	960866
COMPONENT LOCATION	23 AND 24	960867
KEYBOARD AND CAM REFERENCE		5373561
PRINT-SMS CARD		375105
ARC SUPP-SMS CARD		375106
ENCODE-SMS CARD		375107
COMBINATION KYBD CODE CHART		5367164
NUMERIC KYBD CODE CHART		5367184

FOR ENGINEERING USE

PREVIOUS ASSIGNED PAGE(S) PART NUMBER(S)
 INDEX PAGE(S) P/N 5406555

LOGIC PAGE(S) P/N 5405938, 5405955, 5405956

REPLACED BY P/N(S) 960865, 960866, 960867

NOTES

- I PRINT TO ENG SPEC 895291
- II PART NUMBERS, 5406551 THRU 5406600 ARE RESERVED FOR MODEL "B" INDEX PAGES. (ENG NOTE)
- III LAST BALLON USED (25) NOT USED 11, 24, 26, 41-48, 72, AND 87 (ENG NOTE)

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			21 NOV 69	920126					
	W D INDEX			9 JAN 70	920164					
DESIGN	REP	21 NOV 69	MODEL							
DETAIL			SCALE							
CHECK	RC L	21 NOV 69	DRAW	V H	21 NOV 69					
APPRO	NR W	21 NOV 69	CHECK							

5406556

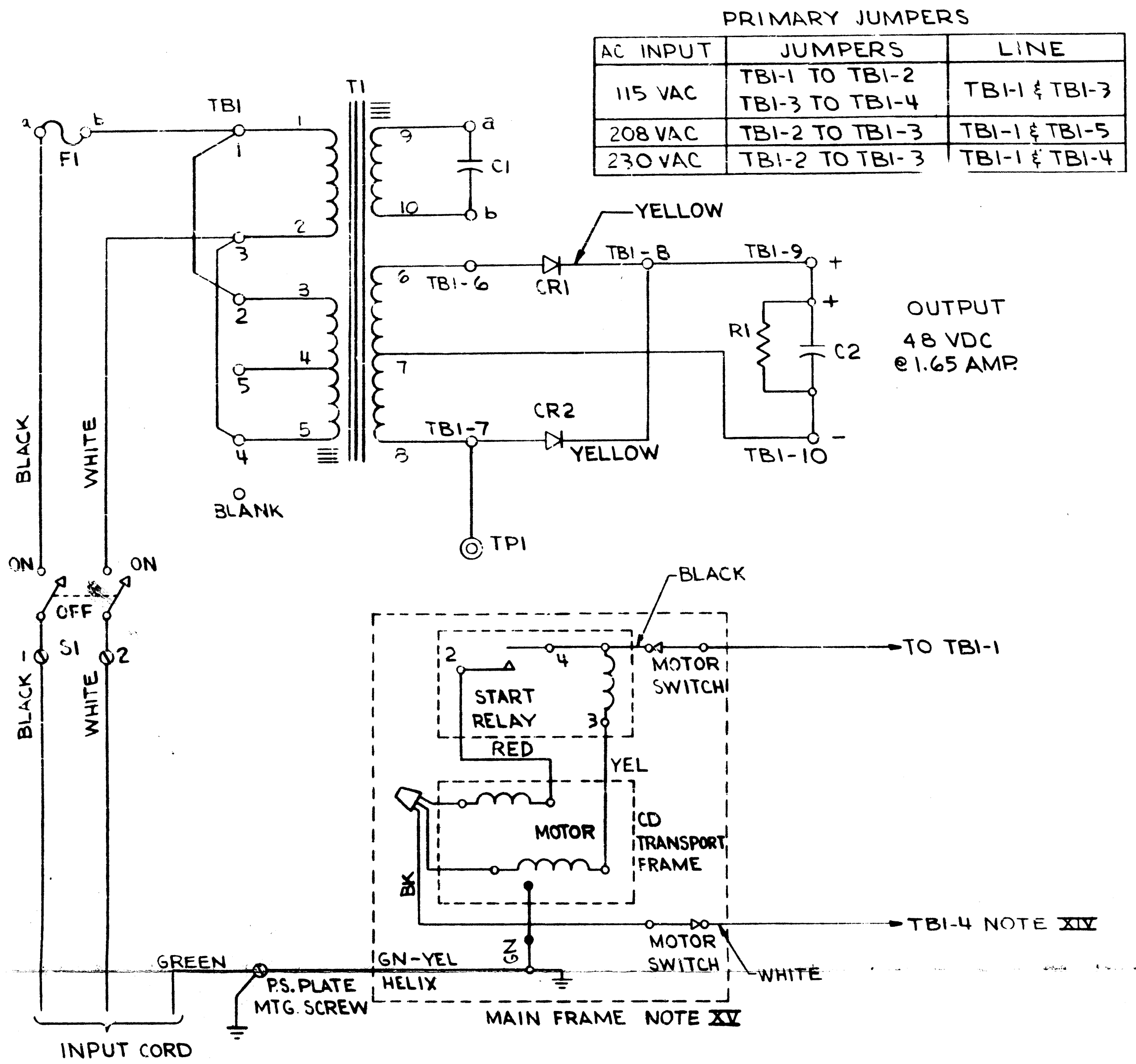
C

5761451

POWER SUPPLY 60 HZ

REFERENCE DRAWING

YF337



PRIMARY JUMPERS

AC INPUT	JUMPERS	LINE
115 VAC	TBI-1 TO TBI-2 TBI-3 TO TBI-4	TBI-1 & TBI-3
208 VAC	TBI-2 TO TBI-3	TBI-1 & TBI-5
230 VAC	TBI-2 TO TBI-3	TBI-1 & TBI-4

OUTPUT
48 VDC
@ 1.65 AMP.

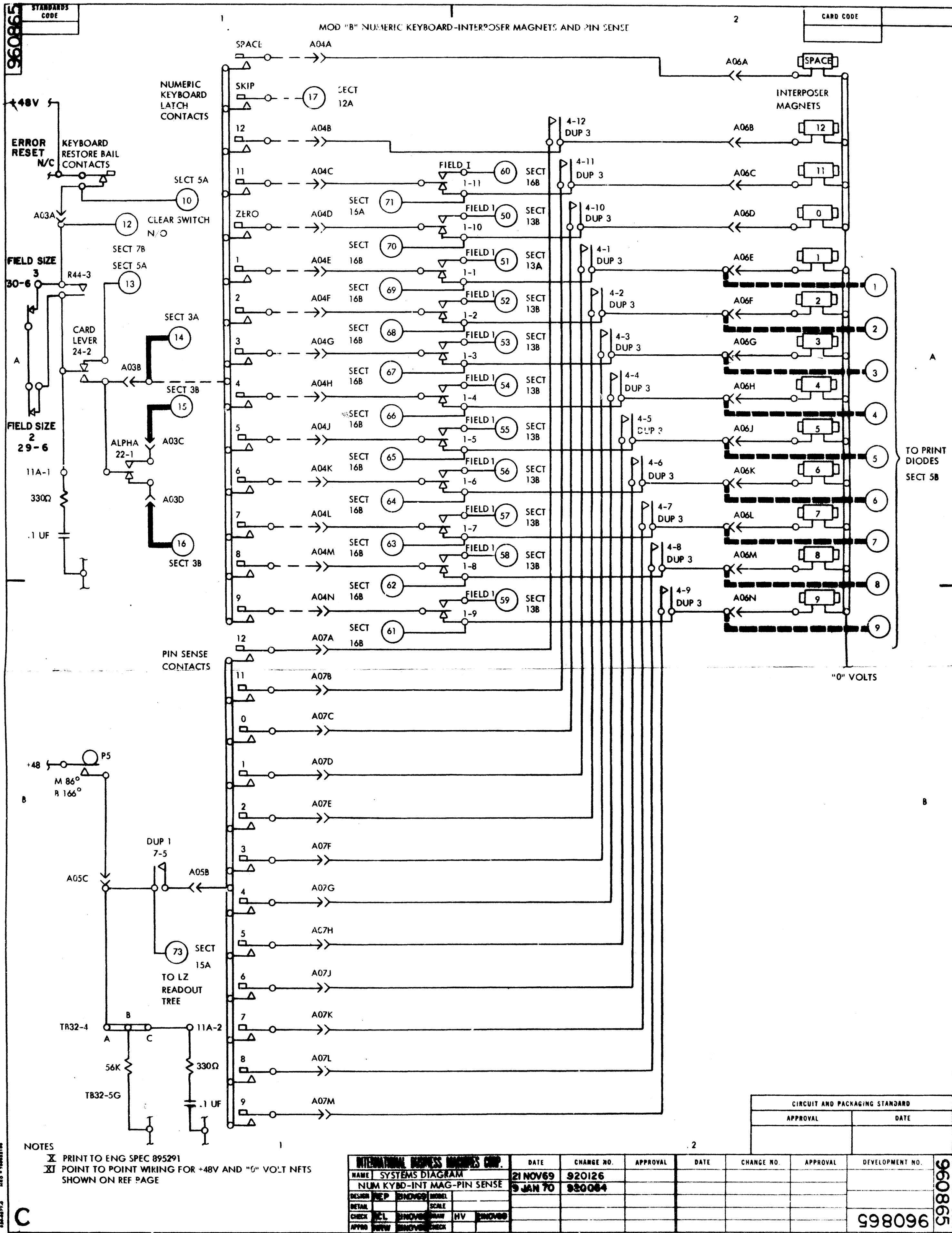
SYMBOL	DESCRIPTION	PART NO
T1	FERRO REGULATOR	5761559
CR1 & CR2	2A. FLANGLSS RECTIFIER	5323537
C1	CAPACITOR 6MFD 330 VAC	2159748
C2	CAPACITOR 5000MFD 55VDC	208222
R1	RESISTOR 500 Ω 10 W	338571
S1	SWITCH	5214428
F1	FUSE 4A	1143492

NOTE XII

NOTES

- XI FACTORY WIRED FOR 115 V AC
- XII FOR 208/230V INPUT, USE 615683 (2A) FUSE
- XIII WIRING DIAGRAM 5253883 APPLIES TO UNITS PRIOR TO EC708099 LEVEL
- XIV FOR 208V INPUT, CONNECT THIS LEAD TO TBI-5
- XV MAIN FRAME INF FOR THE O29 GROUP

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	WIRING DIAGRAM -	20 JUL 66	708099			X PRINT TO ENG. SPEC. NO. 895291	5761451
	48VDC @ 1.65A P/S 60HZ	10 APR 67	709472				
DESIGN	CMC-666 MODEL	3 NOV 67	710705				5761451
DETAIL	CMC-666	6 MAR 68	710998-A				YF337
CHECK	CMC-666						
APPRO	CMC-666	10 OCT 68	711702-A				



NOTES
 X PRINT TO ENG SPEC 895291
 XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME | SYSTEMS DIAGRAM				21 NOV 69	920126					960865
NUM KYBD-INT MAG-PIN SENSE				9 JAN 70	820084					
DESIGN	W.P.	UNDOVER	MODEL							998096
DRAW	W.P.	UNDOVER	SCALE							
CHECK	W.P.	UNDOVER	DATE							
APPROV	W.P.	UNDOVER	CHECK							

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE

960865

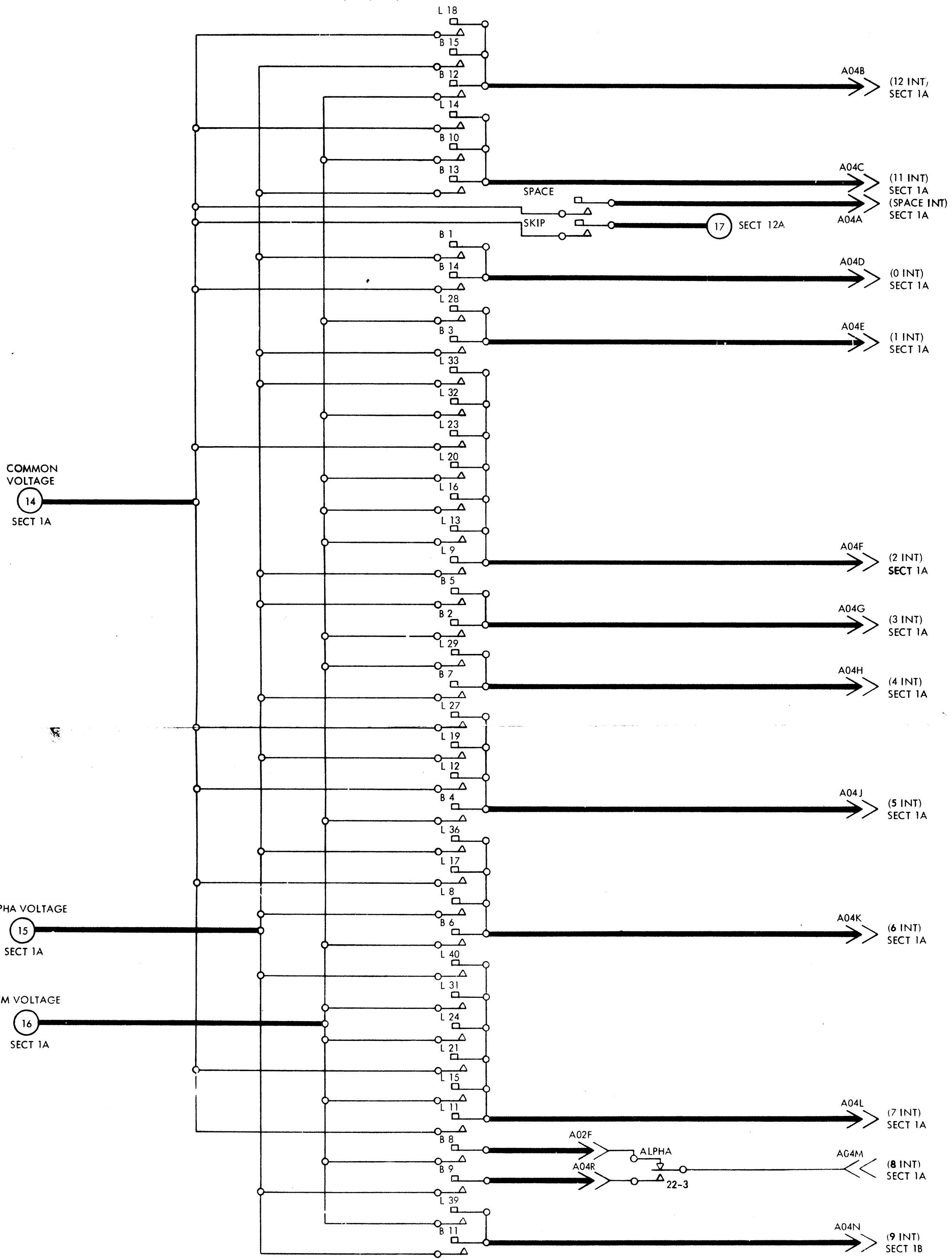
C

5405914

3

MOD "A", "B", "C", "10" & "11" 64 CHARACTER KEYBOARD

4



NOTES
XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.
NAME	SYSTEMS DIAGRAM	19 SEP 66	205636 - G		
	64 CHAR KYBD	18 OCT 66	205811-A		
DESIGN	EB 11 SEP 66	MODEL			
DETAIL	AG 9 SEP 66	DRAW			
CHECK	RAS 9 SEP 66	GT 7 SEP 66			
APPRO	RSS 9 SEP 66	CHECK			

DATE	CHANGE NO.	DATE	CHANGE NO.
19 SEP 66	205636 - G		
18 OCT 66	205811-A		

NOTE
X PRINT TO ENG. SPEC. NO. 895291

DEVELOPMENT NO.

5405914

5405916

STANDARDS CODE

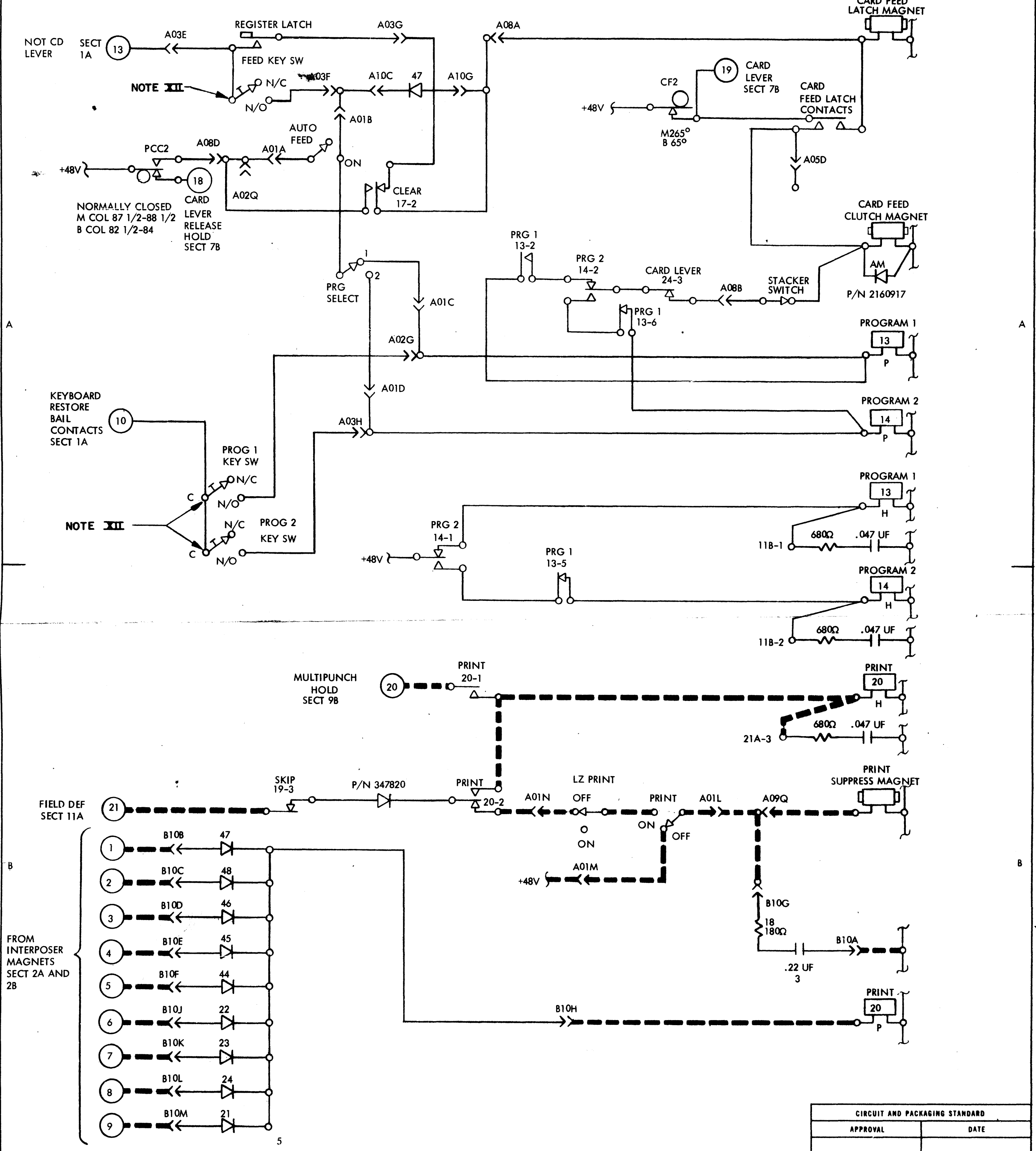
5

6

CARD CODE

MOD "A" AND "B" CARD FEED-PROG SELECT-PRINT

MASTER



NOTES
 XII PRINT TO ENG SPEC NO 895291
 XIII POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE
 XIV A STRAP CONTACT KEYBOARD MAY BE INSTALLED ON THIS M/C

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			11 OCT 68	206435					
	CD FEED-PROG SEL-PRINT			23 MAR 71	920307					
DESIGN	EB	1	SEP 66	MODEL						
DETAIL	AG	9	SEP 66	SCALE						
CHECK	RAS	9	SEP 66	DRAW	IDI	AUG 68				
APPRO	RSS	9	SEP 66	CHECK						

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE

C

5405916

5405958

STANDARDS CODE

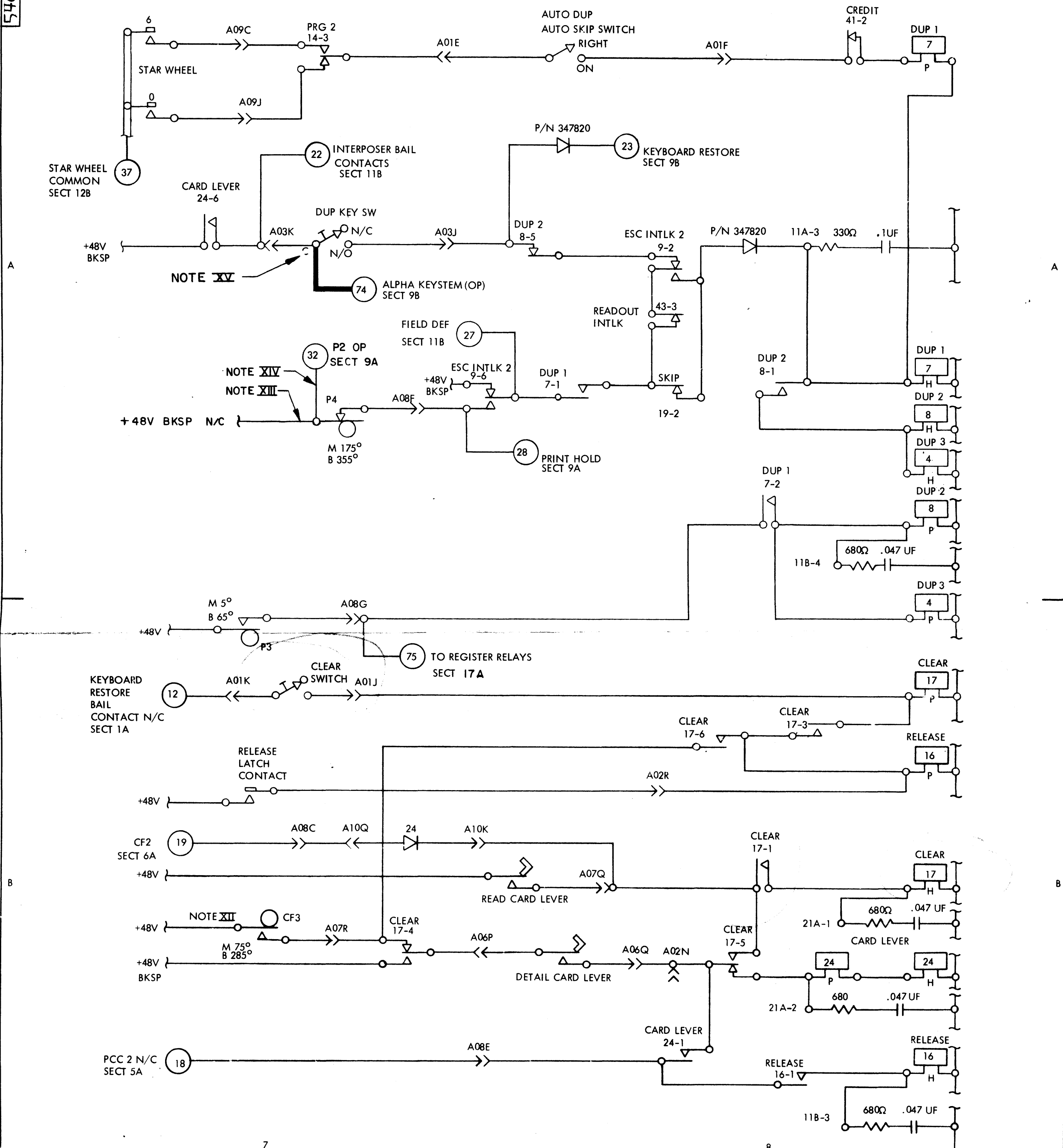
7

8

MASTER

CARD CODE

MOD "B" DUP-CLEAR - RELEASE - CARD LEVER



NOTES

- X PRINT TO ENG SPEC NO 895291
- XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE
- XII CF 3 TIMING FOR VLCD AND/OR HSS M90° ± 2° B 300° ± 5°
- XIII FACTORY REMOVE EC 920064 OCT 69
- XIV FACTORY INSTALL EC 920064 OCT 69
- XV A STRAPCONTACT KEYBOARD MAY BE INSTALLED ON THIS M/C

CIRCUIT AND PACKAGING STANDARD			
APPROVAL	DATE	APPROVAL	DATE

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME | SYSTEMS DIAGRAM				11OCT68	206435					
DUP-CLEAR-REL-CD LEVER				4 NOV 69	920064					
DESIGN | EB	15SEP68	MODEL		23MAR71	920307					
DETAIL | AG	9SEP68	SCALE								
CHECK | RAS	9SEP68	DRAW	IDI	1AUG68						
APPRO | RRS	9SEP68	CHECK								

14-00000-01

C

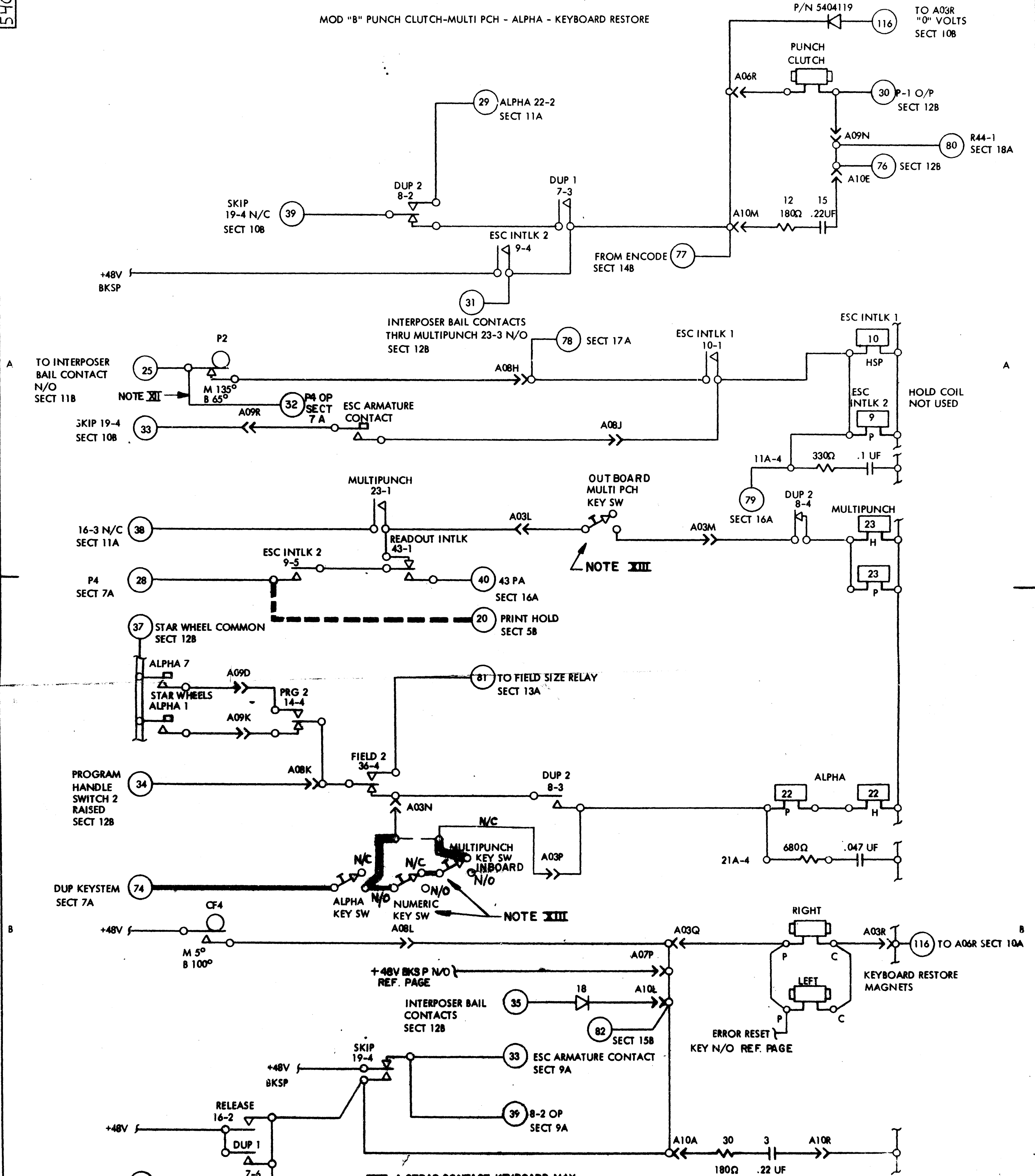
5405958

5405939

STANDARDS CODE

CARD CODE

MOD "B" PUNCH CLUTCH-MULTI PCH - ALPHA - KEYBOARD RESTORE



- NOTES
- X PRINT TO ENG SPEC 895291
 - XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE
 - XII FACTORY INSTALL EC 920064 OCT 69

XIII A STRAP CONTACT KEYBOARD MAY BE INSTALLED ON THIS M/C

DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
19 SEP 68	206331-C					
18 JAN 69	920013					
4 NOV 68	920064					
23 MAR 71	920307					

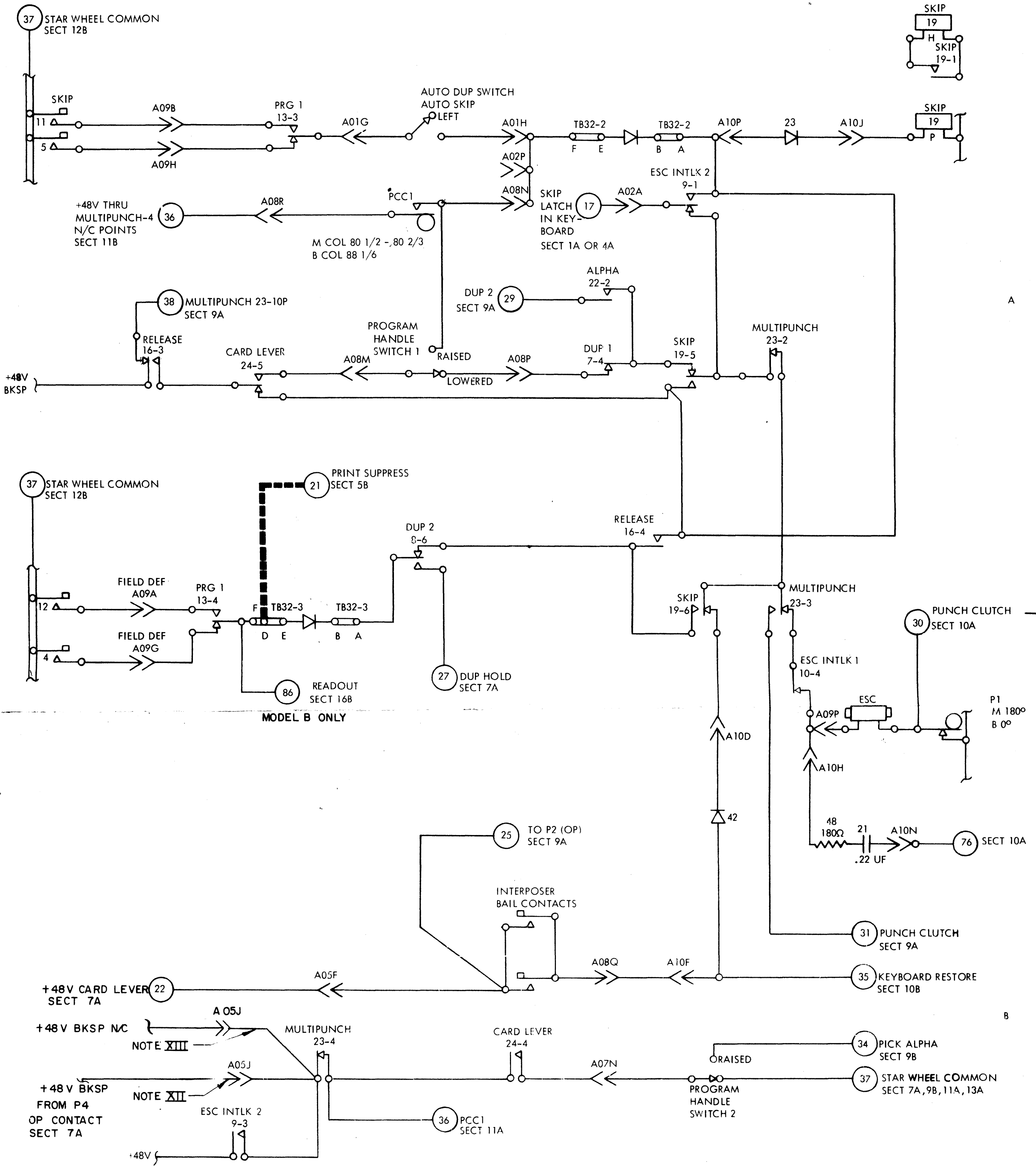
5405939

5405948

11

MOD "A" & "B" SKIP-ESCAPE MAGNET

12



- NOTES
- XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE
 - XII FACTORY REMOVED EC 920064 OCT 69
 - XIII FACTORY INSTALLED EC 920064 OCT 69

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME		19 SEP 66	205666 - G			X PRINT TO ENG. SPEC. NO. 895291	5405948
SKIP - ESCAPE - MAGNET		18 OCT 66	205811 - A				
DESIGN	EB 1 SEP 66 MODEL	11 NOV 66	205813 - A				
DETAIL	AG 9 SEP 66	4 NOV 69	920064				
CHECK	RAS 9 SEP 66 DRAW GT 7 SEP 66						
APPRO	RSS 9 SEP 66 CHECK						

960785

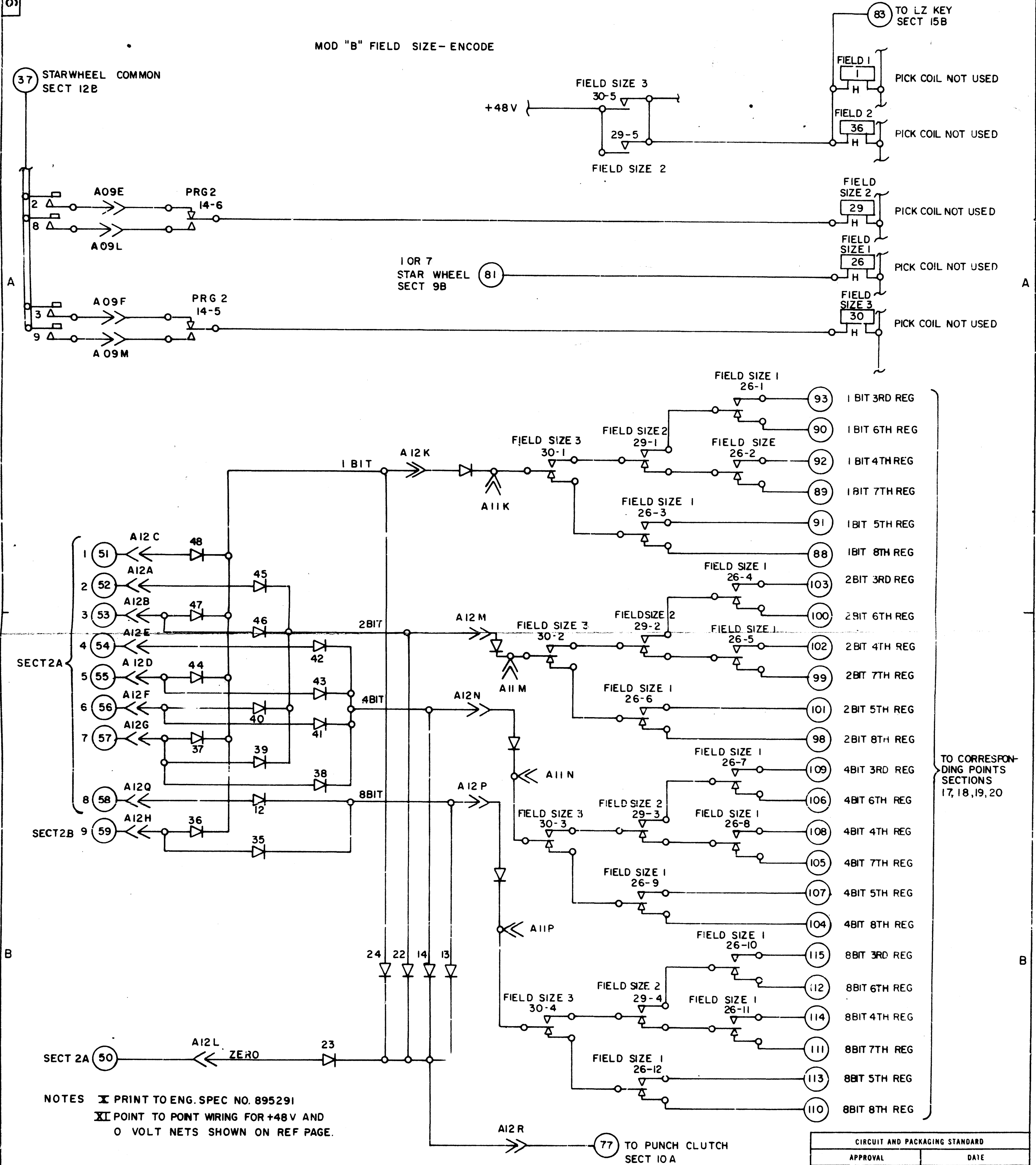
STANDARDS CODE
01046

13

14

CARD CODE

MOD "B" FIELD SIZE- ENCODE



NOTES X PRINT TO ENG. SPEC NO. 895291
 XI POINT TO POINT WIRING FOR +48V AND
 O VOLT NETS SHOWN ON REF PAGE.

TO CORRESPONDING POINTS
 SECTIONS
 17, 18, 19, 20

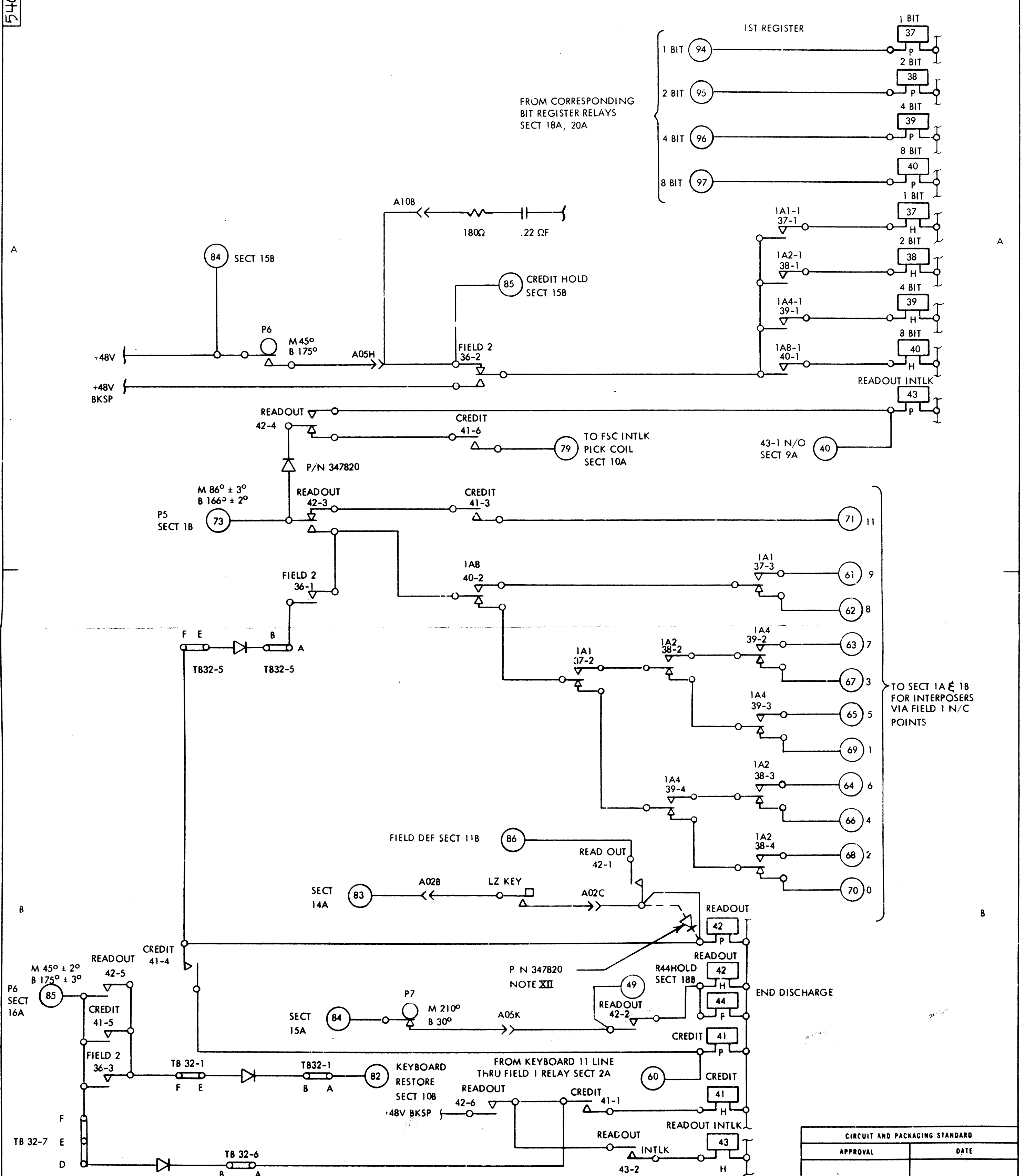
CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	11 JUN 69	920086					
FIELD SIZE-ENCODE		14 JUL 69	920086A					
DESIGN REP	14 JUL 69	MODEL						
DETAIL REP	14 JUL 69	SCALE	4 NOV 69	920064				
CHECK	RCL 14 JUL 69	DRAW	9 APR 70	920064A				
APPRO	NRW 14 JUL 69	CHECK						

960785

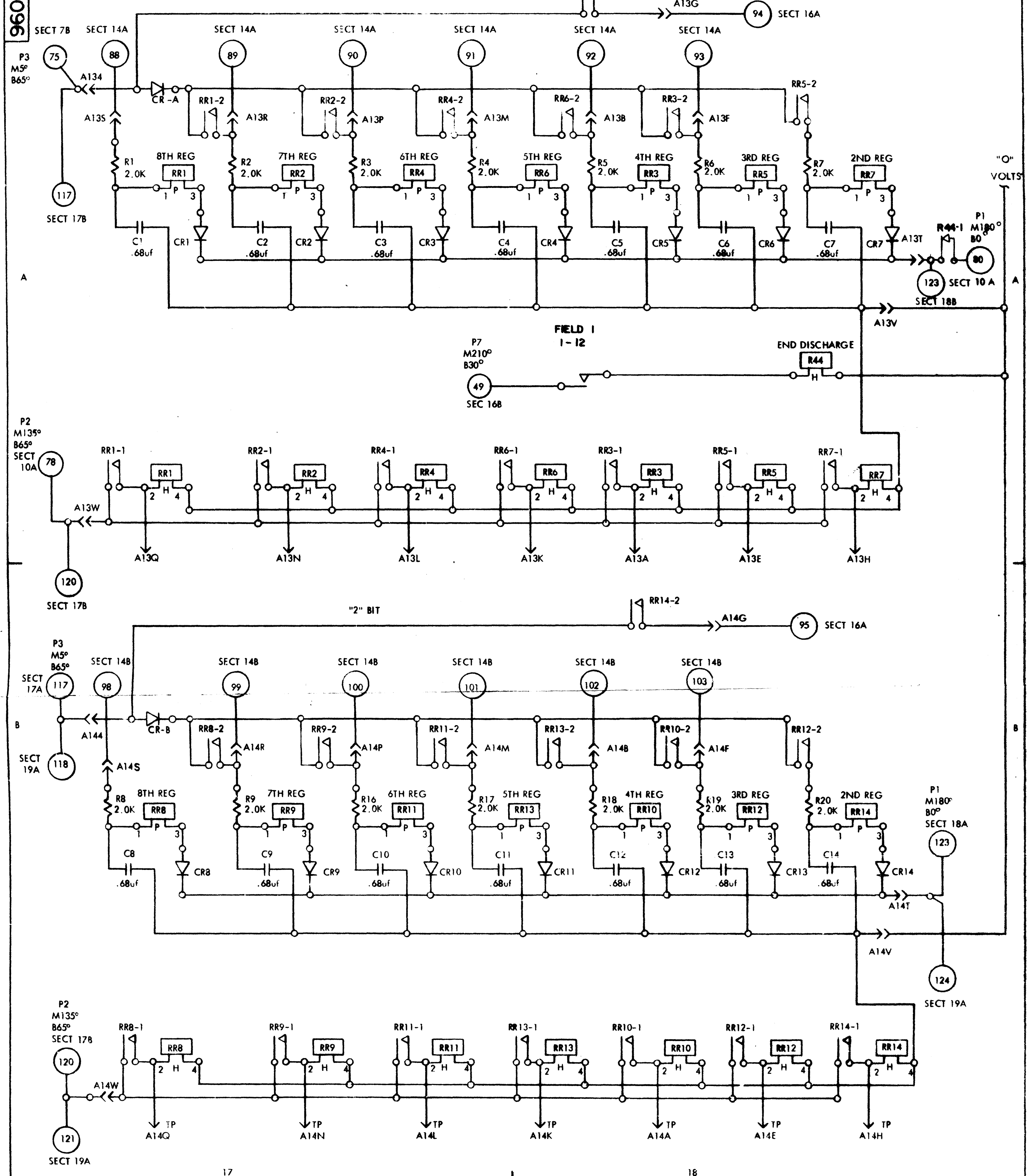
SECURITY - INFO PROHIBITED

C

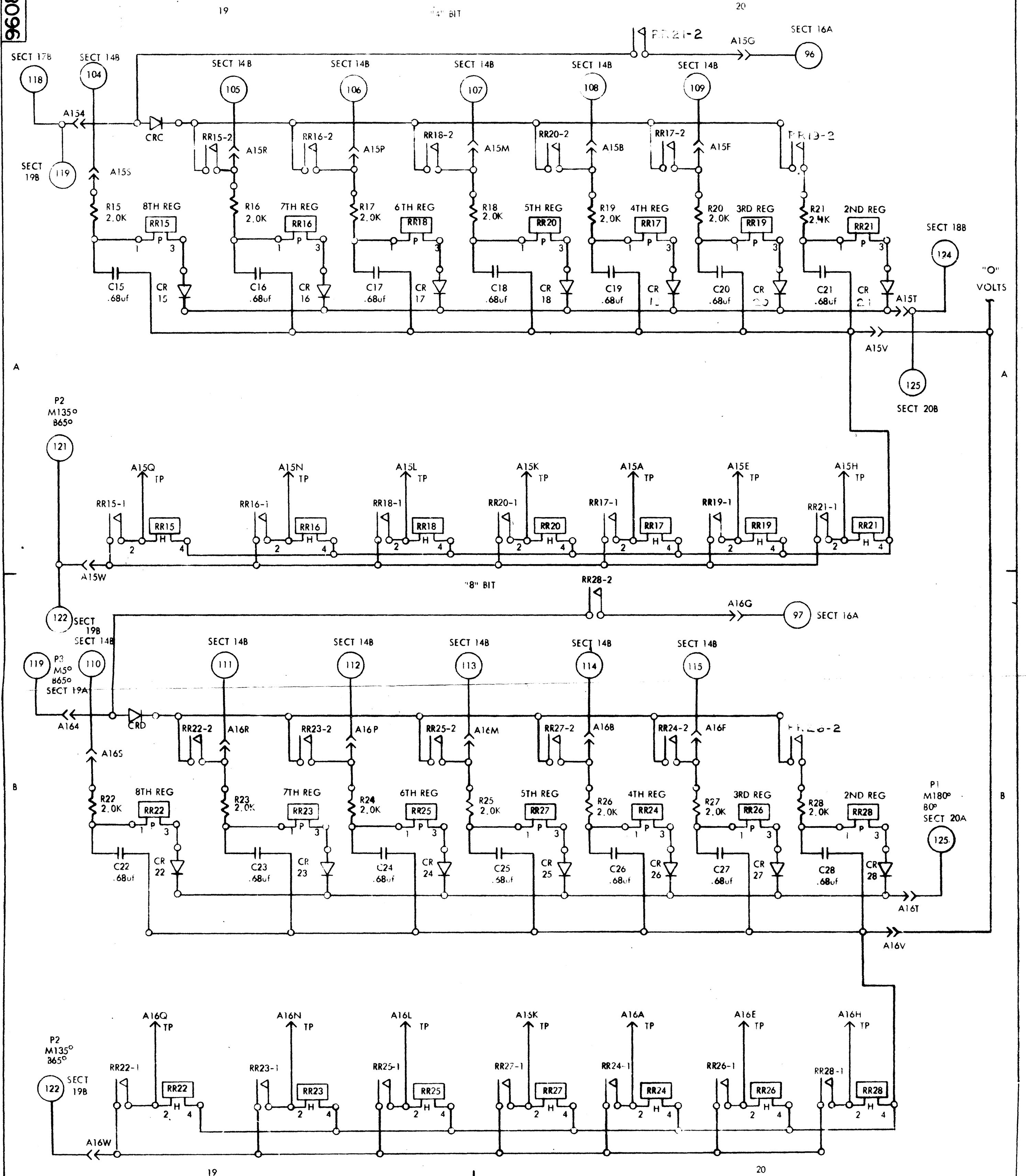


NOTES
 X PRINT TO ENG SPEC NO 895291
 XI POINT TO POINT WIRING FOR +48V AND "0" VOLT NETS SHOWN ON REF PAGE
 XII DIODE NOT REQUIRED ON NON-PRINT. JUMPER IS INSTALLED ON NON-PRINT MACHINES

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME | SYSTEMS DIAGRAM		18SEP68	206331-C					
1A REG DECODE - READOUT								
DESIGN	EB 11SEP66	MODEL						
DETAIL	AG 9SEP66	SCALE						
CHECK	RAS 9SEP66	DRAWN	IDI 2AUG68					5405957
APPRO	RSS 9SEP66	CHECK						



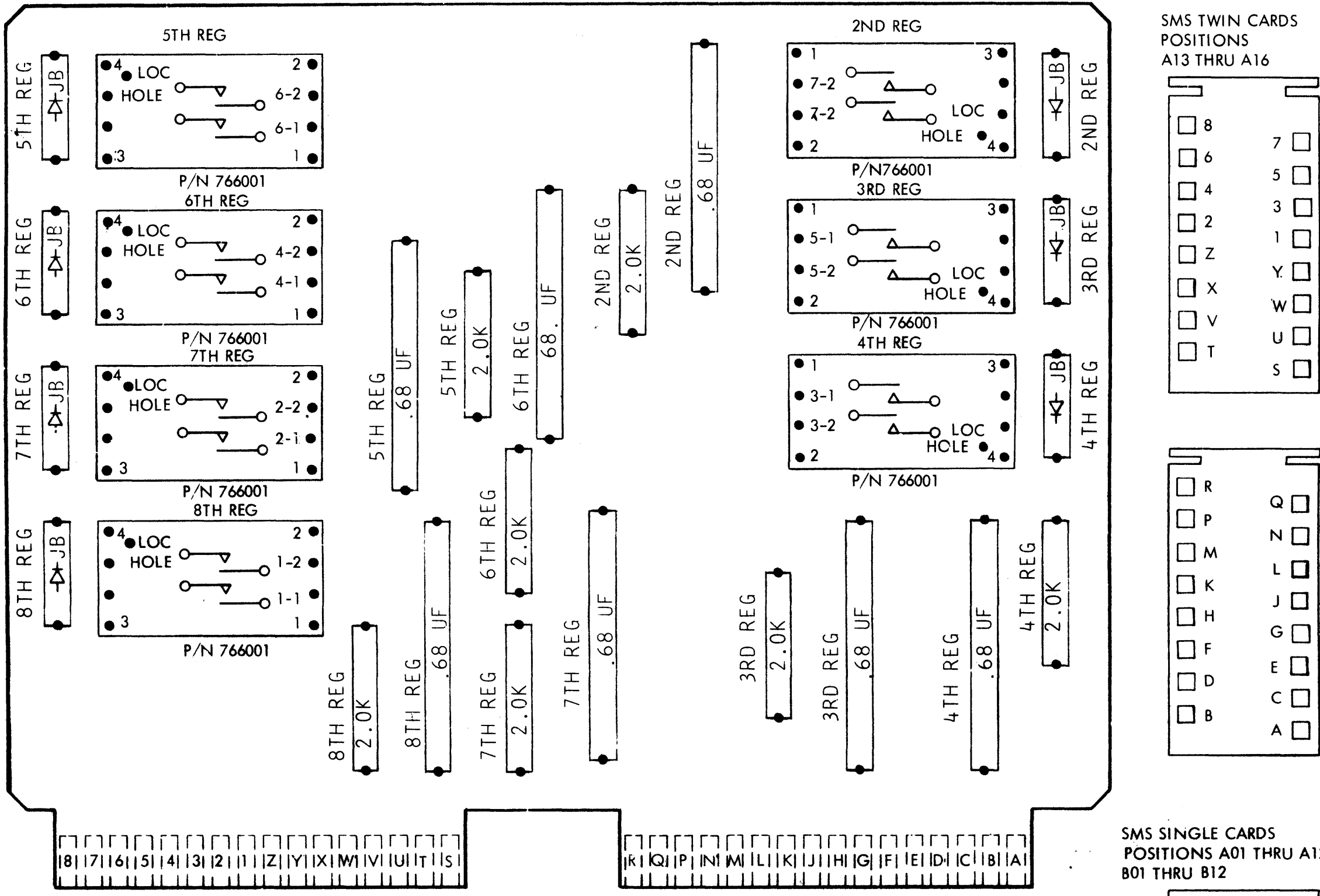
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME		21 NOV 69	920126			NOTE 1 PRINT TO END. OPER. NO. 895291	998096
DESIGNED BY							
DRAWN BY							
APPROVED BY							



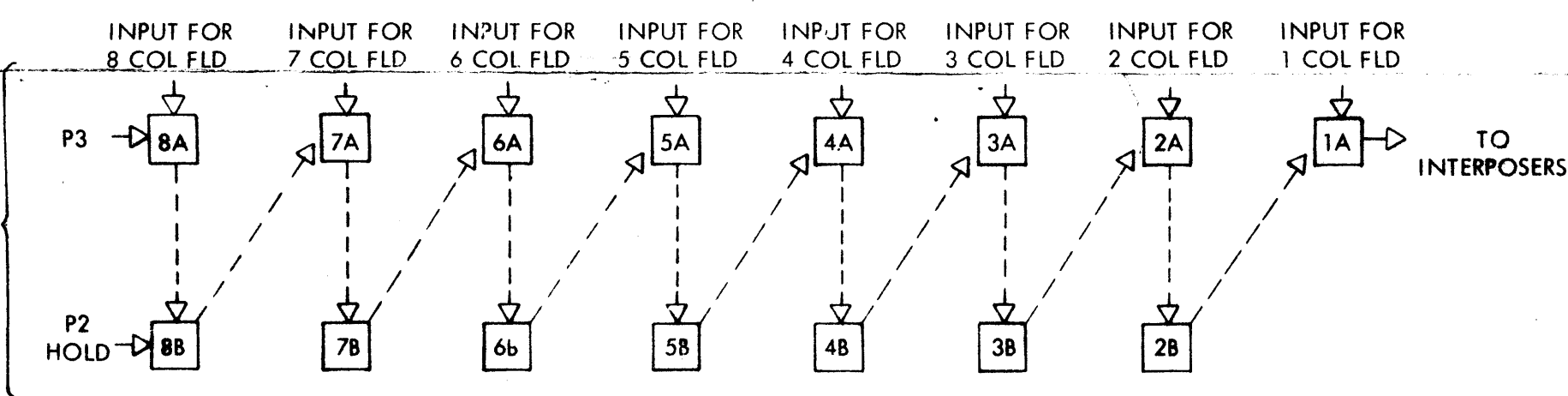
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		21 NOV 69	920128			X PRINT TO ENG. SPEC. NO. 895291	
DESIGNED	REP	BY	NOV 69	MODEL			
CHECKED	BY	NOV 69	DRAWN	BY	NOV 69		
APPROVED	BY	NOV 69	CHECKED				

998096

LEFT ZERO RESISTER

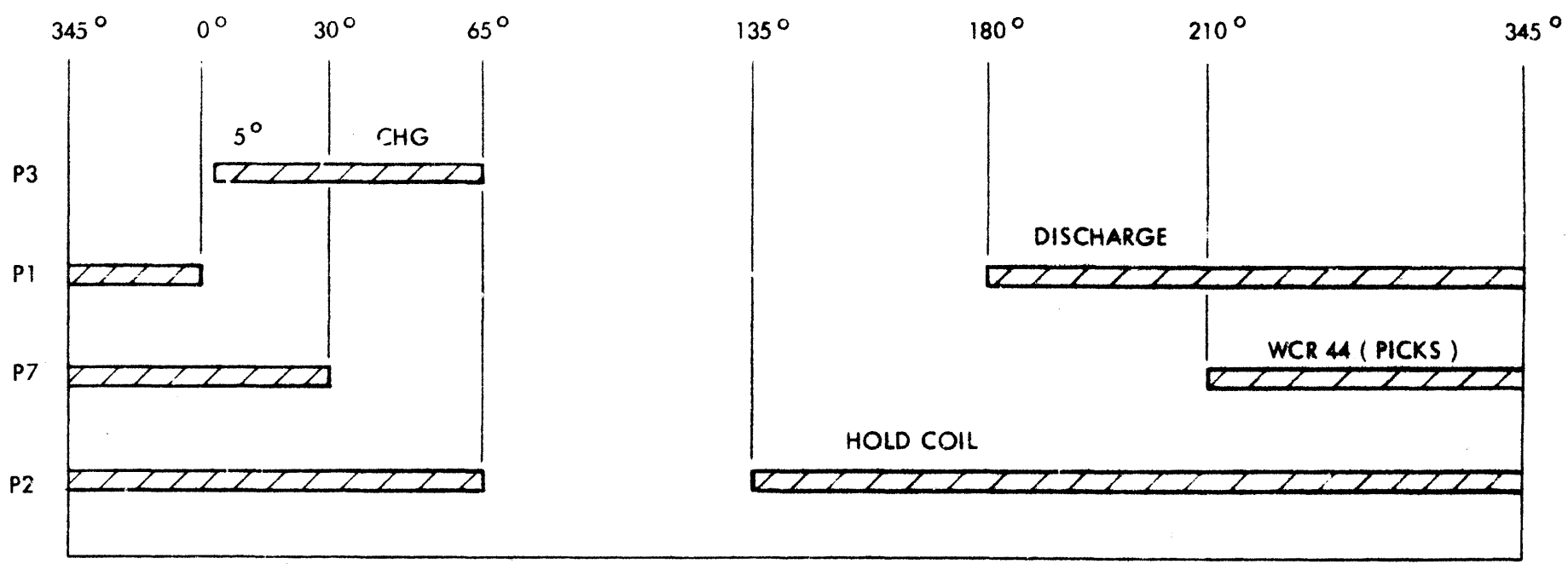


1 BIT (REF)



LOGIC FLOW THROUGH BIT REGISTER

VIEW - TOP OF OPEN GATE (WIRING SIDE)



INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME TWIN CARD ASSEMBLY LEFT				21NOV69	920126			X PRINT TO ENG. SPEC. NO. 895291	998096
ZERO REGISTER									
DESIGN REP ZINOV MODEL									
DETAIL									
CHECK	MCL	ZINOV	DRAW HV ZINOV						
APPRO	NRW	ZINOV	CHECK						

STANDARD CODE
01046

25

26

CARD CODE

SHEET 2 OF 2

PUNCH CAMS

NO	LOC	PART NO	M	B
1	12 B	309630	180°±2	0°±3
2	9A	309634	135°±3	65°±2
3	7B	350359	5°±1	85°±3
4	7A	309630	175°±3	355°±2
5	1B	309629	86°±3	166°±2
6	15 A	326429	45°±2	175°±3
7	15 B	309630	210°±3	30°±2

CARD FEED CAMS

NO	LOCATION	PART NO	MAKE CONTACT	BREAK CONTACT
2	6 A	344181	265°±5	65°±2
3	7 B	315042	75°±2	265°±5
4	9 B	313807	5°±2	100°±5

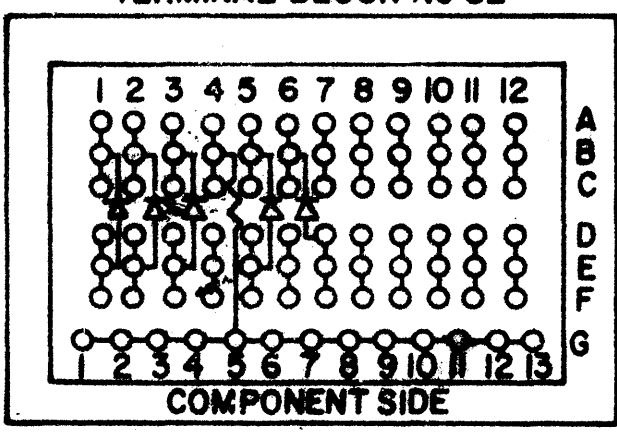
REED RELAY DATA

PART NO	COIL	1	2
766001	P H	N/O	N/O

ARC SUPPRESSION BLOCKS

PIN	1A	1B	2A
1	1A	6A	8B
2	1B	6B	8B
3	8A	8B	6B
4	10A	8B	10B

TERMINAL BLOCK NO 32



P/N 328602 P/N 328601

COMP P/N	1	2	3	4	5	6	7
DIODE 347820	15B	12A	11A	1B	15B	15B	
DIODE 347820	15B	12A	11A	1B	15B	15B	15B
DIODE 347820			11A	1B			
RESISTOR 5405904							
DIODE 347820	15B	12A	11A		15B		15B
DIODE 347820	15B	12A	11A		15B		15B
DIODE 347820	24A	24A	14A		1B		

OP	4321	654321	2110987654321
N/C	0000	000000	00000000000000
N/O	0000	000000	00000000000000
COIL	0000	00 00	00 00
	PHHP	PH HP	PH HP
	BB AA	BB AA	BB AA

TB 32 LOCATION

WIRE CONTACT RELAYS WIRING SIDE

25

26

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME		21 NOV 69	920126					
SYSTEMS DIAGRAM		9 JAN 70	920064					
COMPONENT LOCATION								
DESIGN REP	21 NOV 69	MODEL						
DETAIL	SCALE							
CHECK PCL	21 NOV 69	RAW	H V	21 NOV 69				
APPRO	NRW	21 NOV 69	CHECK					

798096 798096

C

968096

537356

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KEYBOARD & CAM REFERENCE

STEM POS	GRAPHIC		CARD CODE		BAILS		LATCHES	
	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC
1	ERROR RESET							
2	MULTI PUNCH							
3	NUMERIC							
4	Q	+	11-8	12-8-6	13,9	12,8,6		
5	A		12-1		15,3			
6	@	#	8-4	8-3	9,7	8,2		
7	Z		0-9		1,11			
8	W	-	0-6	0-8-5	14	14,8,4	X	
9	S	>	0-2	0-8-6	14	14,8,6	X	
10	%	,	0-8-4	0-8-3	14,9,7	14,8,2		
11	X	?	0-7	0-8-7	14	14,8	X	X
12	E	)	12-5	11-8-5	15	10,8	X	X
13	D	:	12-4	8-2	15,7	8		X
14	*	\$	11-8-4	11-8-3	7,9	8,2	X	X
15	C	"	12-3	8-7	15,5	8		X
16	R	¢	11-9	12-8-2	13,11	12,8		X
17	F	;	12-6	11-8-6	15	10,8	X	X
18	<	.	12-8-4	12-8-3	9,7	8,2	X	X
19	V	=	0-5	6-8	1	8,6	X	
20	T	0-8-2	0-3	0-8-2	14,5	14,8		X
21	G	-	12-7	11-8-7	15	10,8	X	X
22	MASTERCARD						X	X
23	B	|	12-2	11-8-2	15	10,8	X	X
24	Y	|	0-8	12-8-7	19	12,8		X
25	H	'	12-8	8-5	15,9	8,4		
26	DUP							
27	N	(	11-5	12-8-5	13	12,8	X	X
28	U	1	0-4	1	1,7			X
29	J	4	11-1	4	13,3			X
30	-	-	11	11	13	10		
31	M	7	11-4	7	13,7			X
32	I	2	12-9	2	15,11			X
33	K	5	11-2	5	13	4	X	
34	/	0	0-1	0	14,3	14		
35	,	8	0-8-3	8	19,5	8		
36	O	3	11-6	3	13	2	X	
37	L	6	11-3	6	13,5	6		
38	SPACE						X	X
39	.	9	12-8-3	9	15,9,5			X
40	P	&	11-7	12	13	12	X	
41	SKIP						X	X
42	RELEASE						X	X
43	AUX DUP						X	X
44	FEED							
45	REGISTER						X	X
46	PROG 2							
47	ALPHA							
48	LEFT ZERO						X	X
49	LEFT ZERO							
50	PROG 1							

ODD NUMBER BAILS ON RIGHT SIDE OF KEYBOARD
EVEN NUMBER BAILS ON LEFT SIDE OF KEYBOARD

CARD FEED CLUTCH
60 RPM
1° = 2.78 MS

CARD FEED KNIFE

CARD ALIGNER
(VERTICAL ALIGNMENT)

CARD PUSHER FEED
(FOR DETAIL CARD)

PRESSURE ROLLS
(ON FEED WHEELS)

INSERTING ROLL
(FOR MASTER CARD)

CARD REGISTER STOP
(FOR MASTER STOP)

EJECT ROLL
(FOR CARD TO BE STACKED)

CARD PUSHER-STACKER

STACKER DRUM GRIPPERS

PUNCH CLUTCH
1200 RPM } NON-PRINT
1080 RPM } PRINT
1° = .154 MS

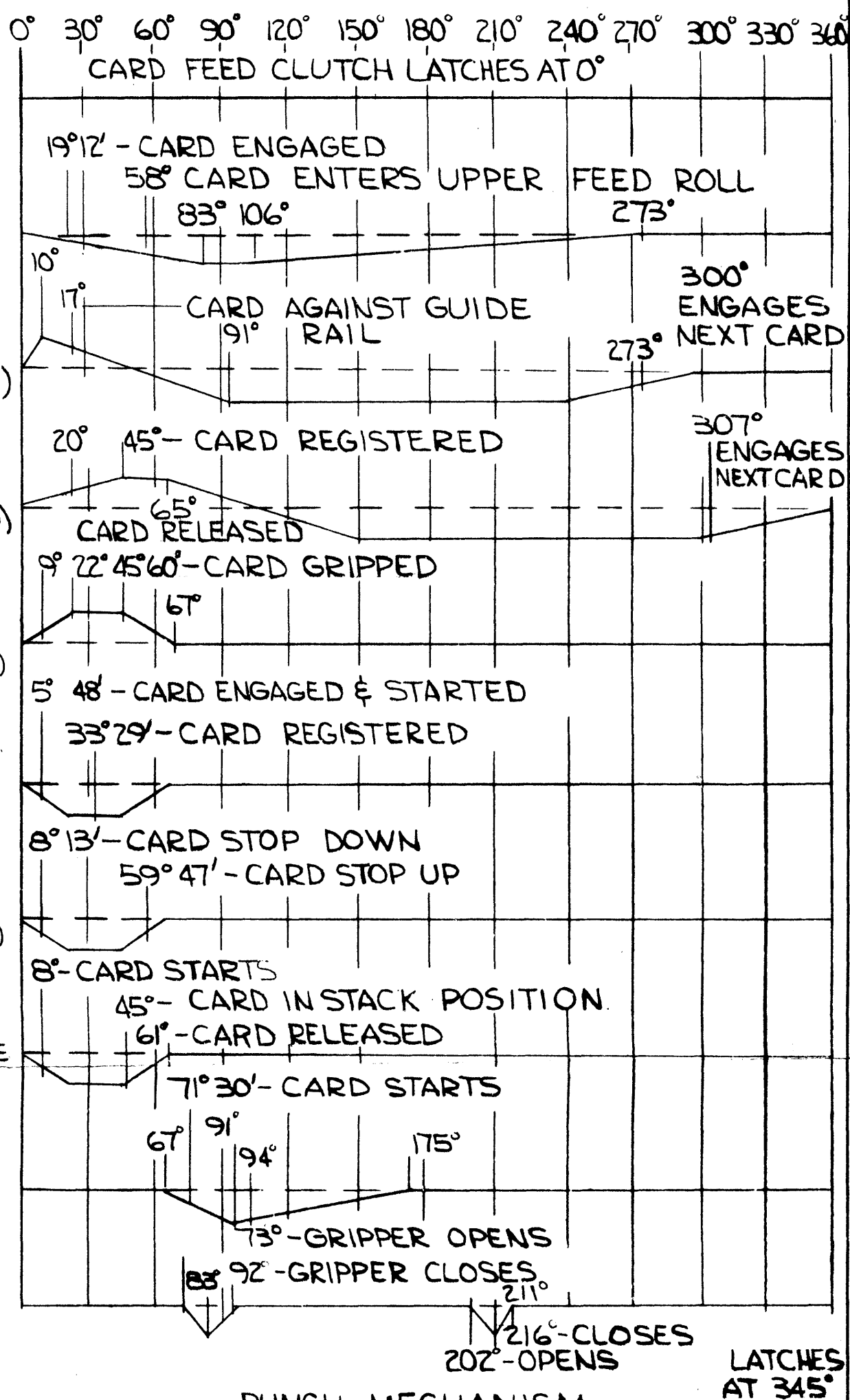
PUNCH BAIL

ARMATURE KNOCK-OFF

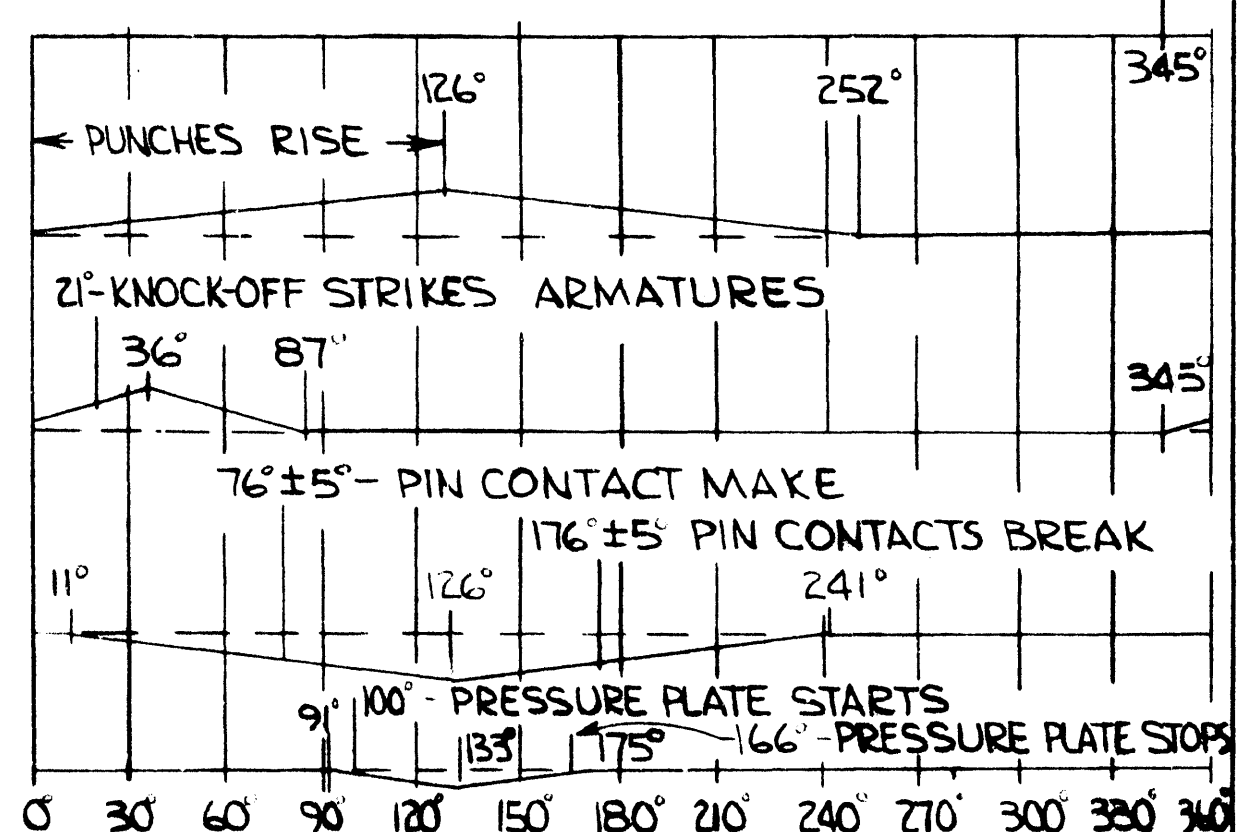
PIN OPER CAM

PRINT CAM

MECHANICAL TIME CHART
CARD FEED MECHANISM



PUNCH MECHANISM



INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	12-30-64	205199			X PRINT TO ENG. SPEC. NO. 895291	5373561
DESIGN	WT 11-23-64 MODEL						00.29.10.0
DETAIL							
CHECK	LF 11-23-64 DRAW	CA 12-2-64					
APPRO	JKC 11-23-64 CHECK	11-2-64					

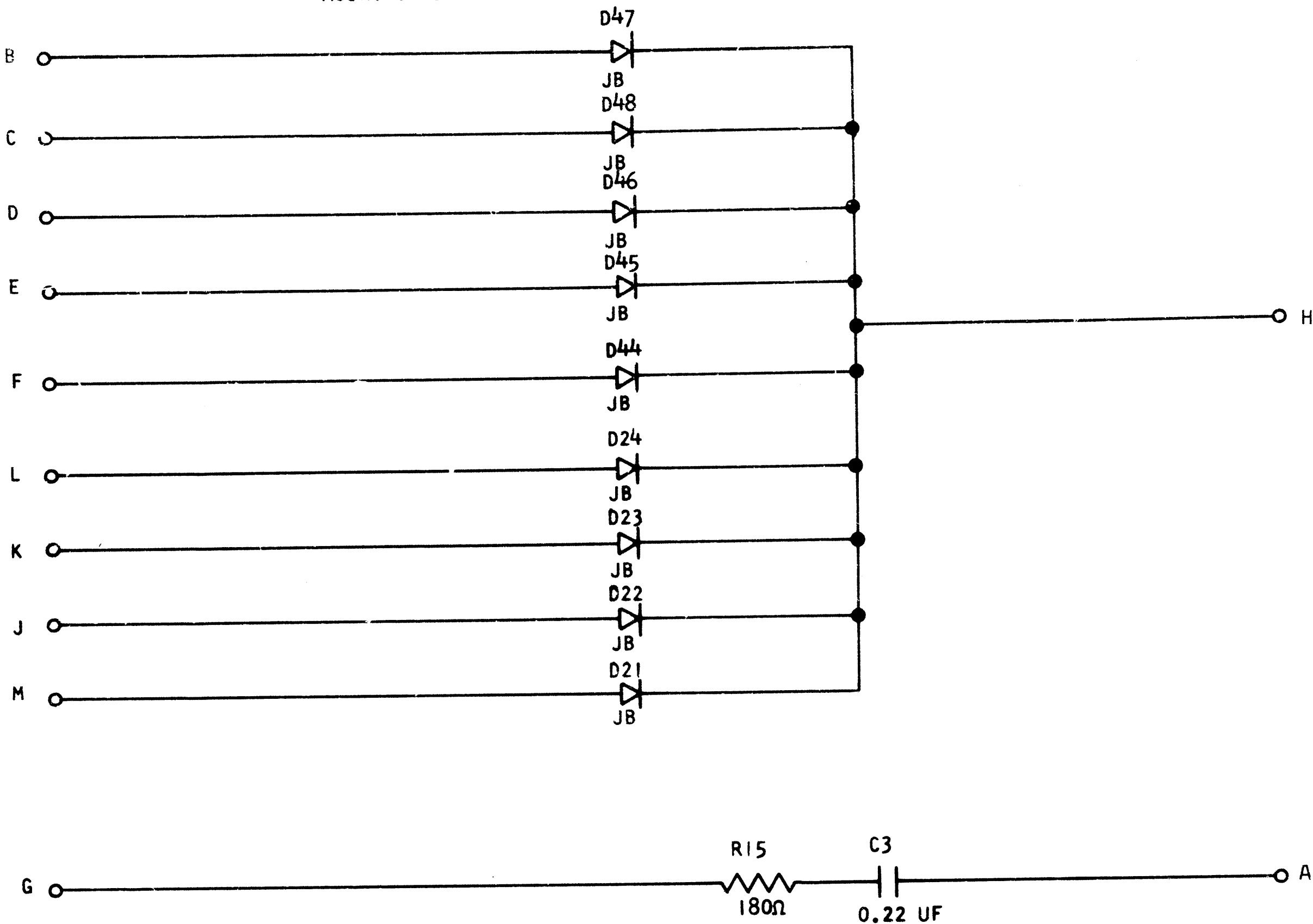
375105

PRINT

MOUNT CARD ON 1.0 INCH CENTERS - NOTE XIII

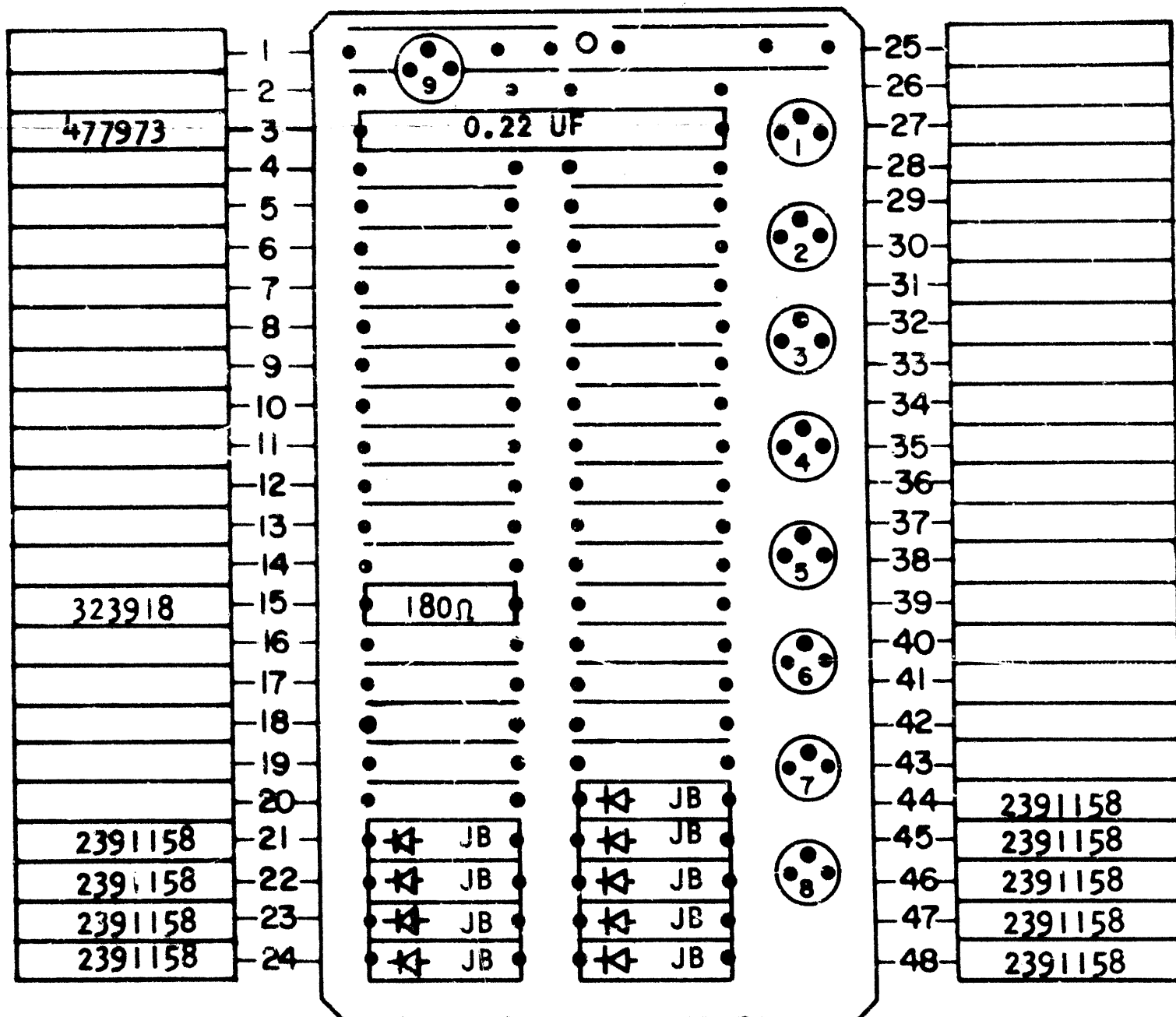
STANDARDS CODE
2-7045

375105
FFH-



NOTES

- X CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION
- XI ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- XII ALL RESISTORS ARE 1/2 WATT AND ± 5% UNLESS OTHERWISE NOTED
- XIII MAXIMUM HEIGHT COMPONENTS MAY PROJECT ABOVE COMPONENT SIDE OF CARD WILL BE .640



B MFG. ENG. PW 5-31-66

CIRCUIT AND PACKAGING STANDARD

APPROVAL DATE

KNT NPB

5/6/66

HOLE PATTERN
493457

COMPONENT SIDE

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR - PRINT			1 JUN 66	126540	AKK				PA-3400 A
DESIGN	VE	5 APR 66	MODEL	SMS						375105
DETAIL	VE	5 APR 66	SCALE	NONE						
CHECK	VE	5 APR 66	DRAW	VE	5 APR 66					
APPRO			CHECK	CFC	4-11-66					

82-3987-2 6-22-61

375106

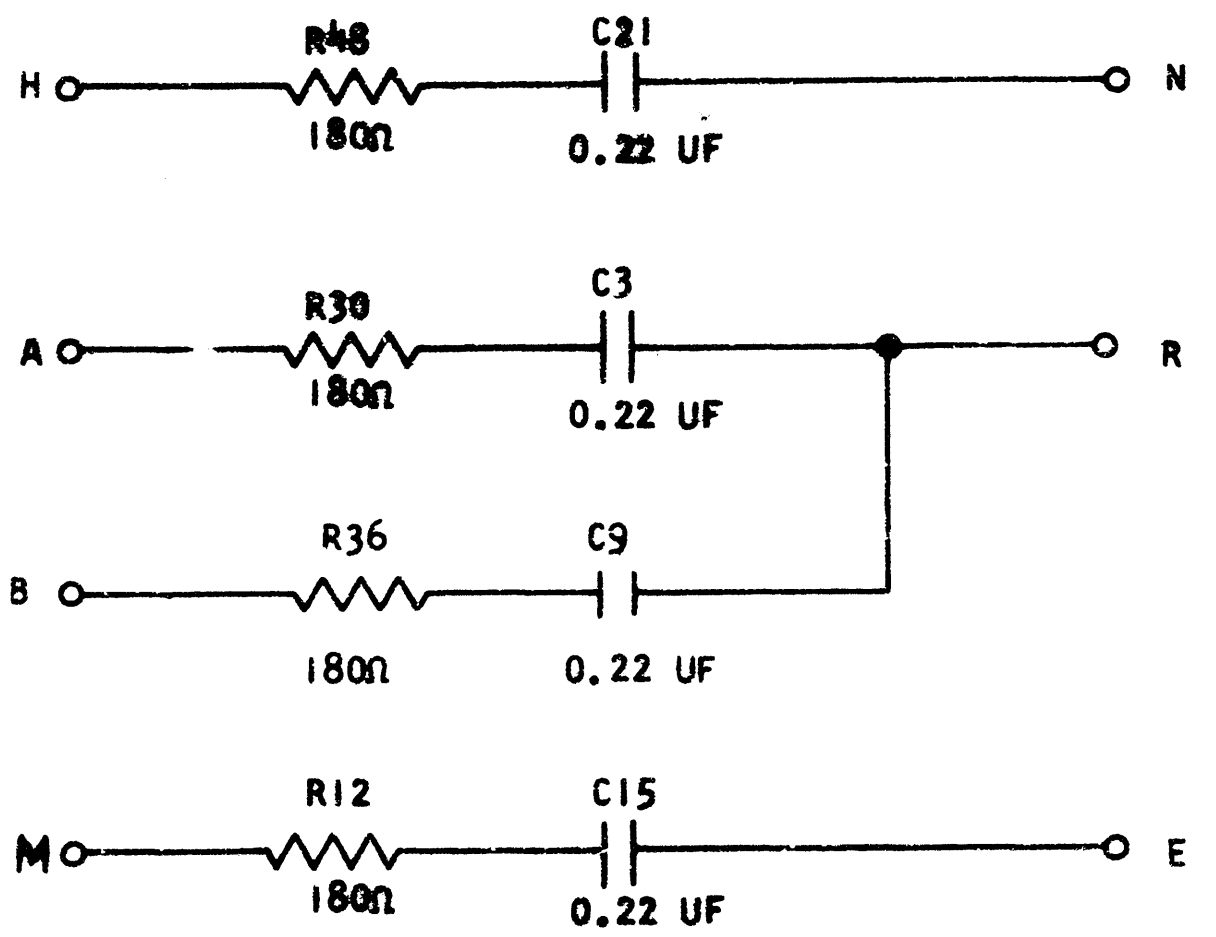
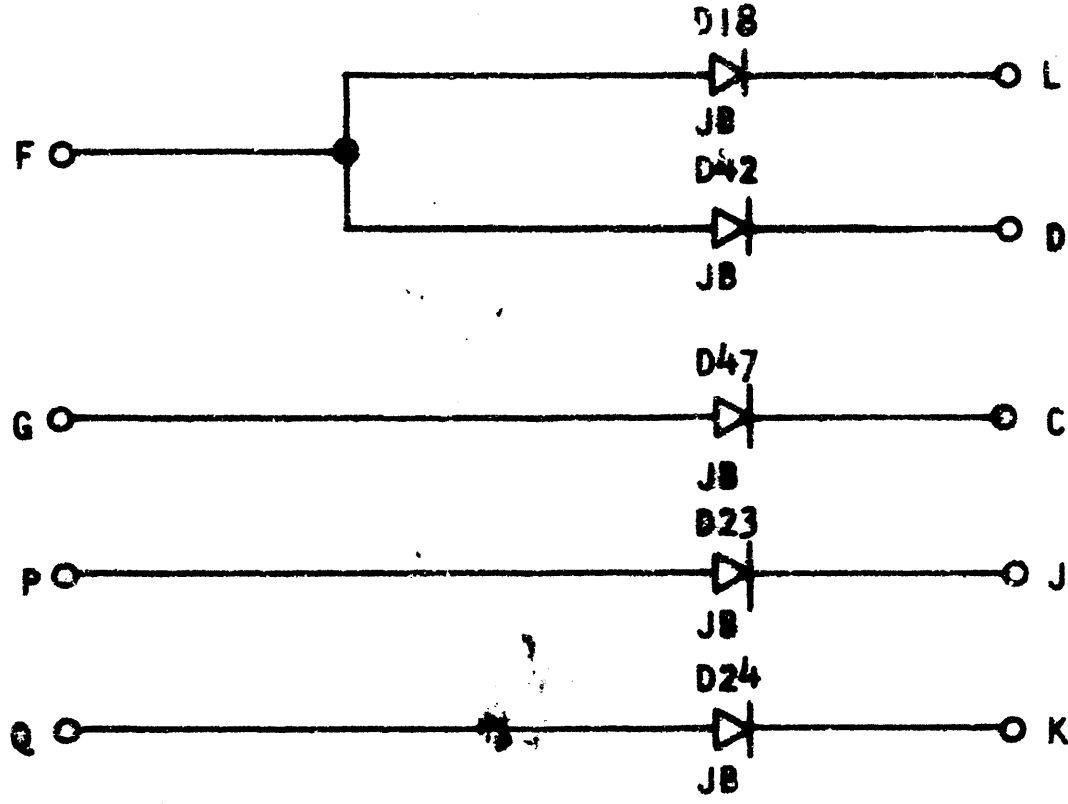
ARC SUPPRESSION

MOUNT CARD ON 1.0 INCH CENTERS - NOTE XIII

375106

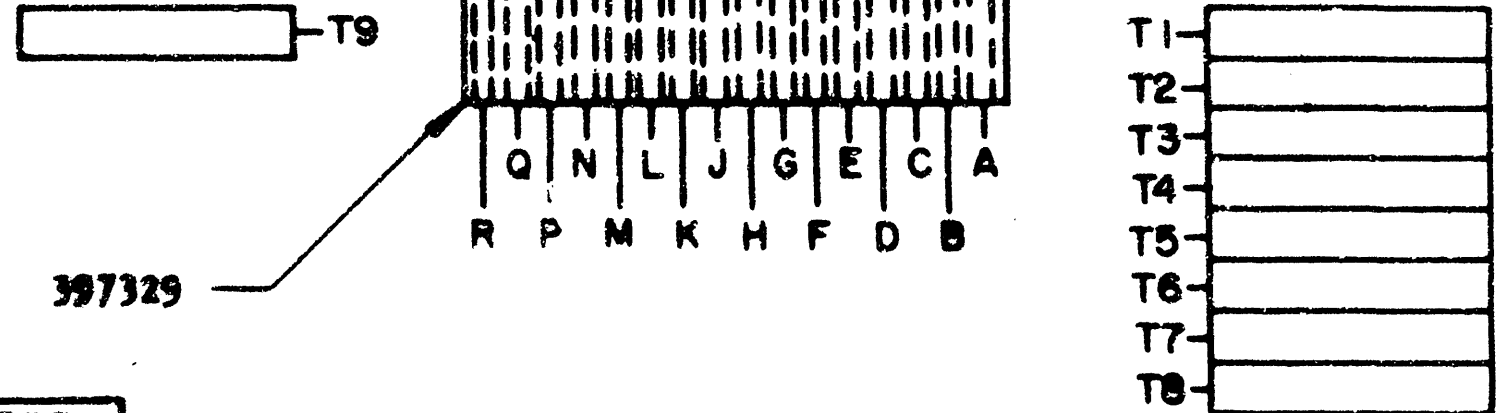
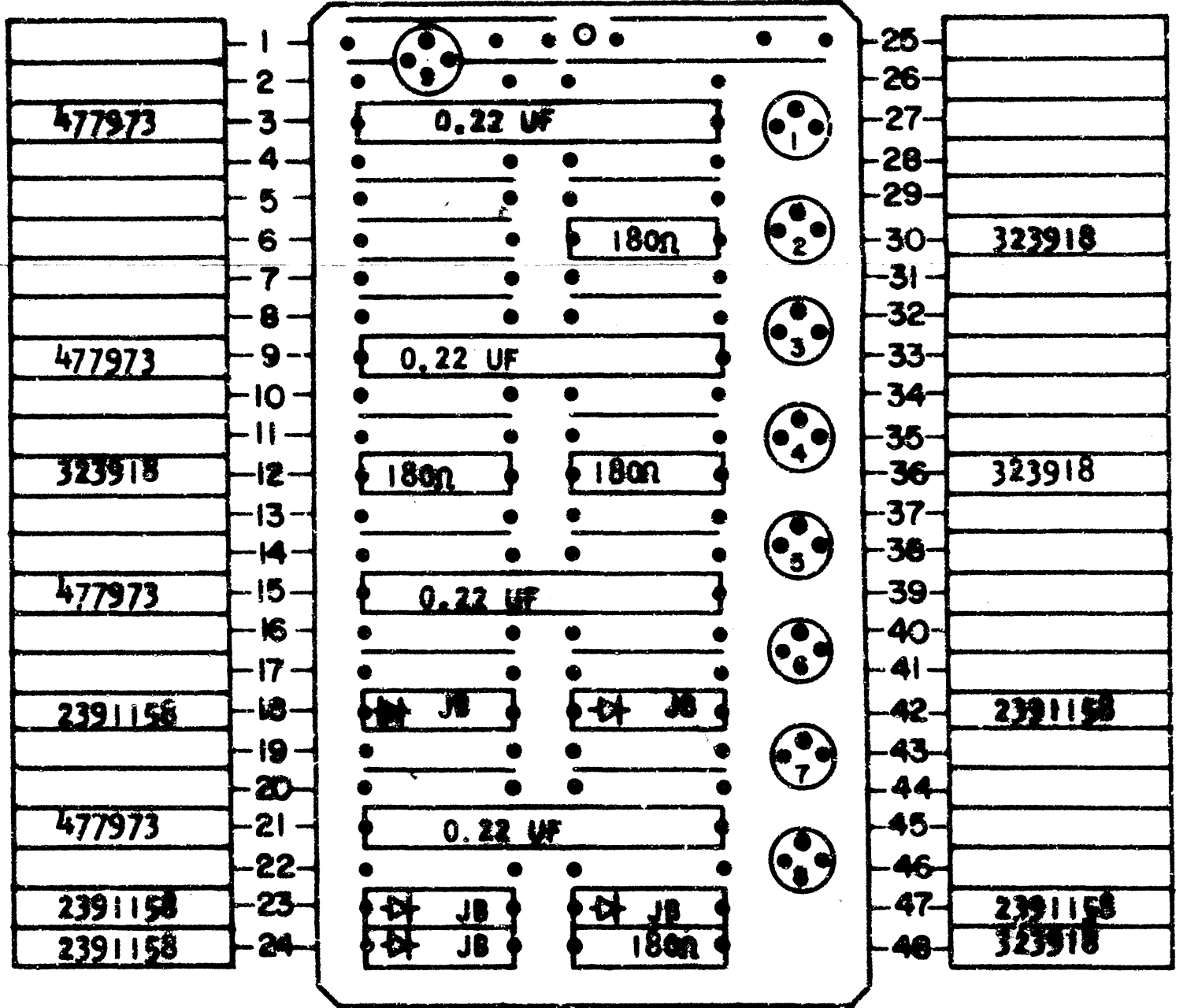
FFJ -

STANDARDS CODE
2-7045



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- XII ALL RESISTORS ARE 1/2 WATT AND ± 5% UNLESS OTHERWISE NOTED
- XIII MAXIMUM HEIGHT COMPONENTS MAY PROJECT ABOVE COMPONENT SIDE OF CARD WILL BE .640



B	MFG. ENG.	PW	26APR67
	CIRCUIT AND PACKAGING STANDARD		
APPROVAL	DATE		

KMT LPT	5/6/66	HOLE PATTERN	493457
---------	--------	--------------	--------

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR -	1 JUN 66	126340	GWS				PA-3401A
DESIGN VE	MODEL 8 MS	16 FEB 67	131072	GWS				375106
DETAIL VE	SCALE NONE	27 APR 67	131083	GWS				
CHECK VE	DATE 4-11-66							
APPRO	CHECK C.F.							

82-3987-2 6-22-61

C. S. CO. NO. 102709 11500

375107

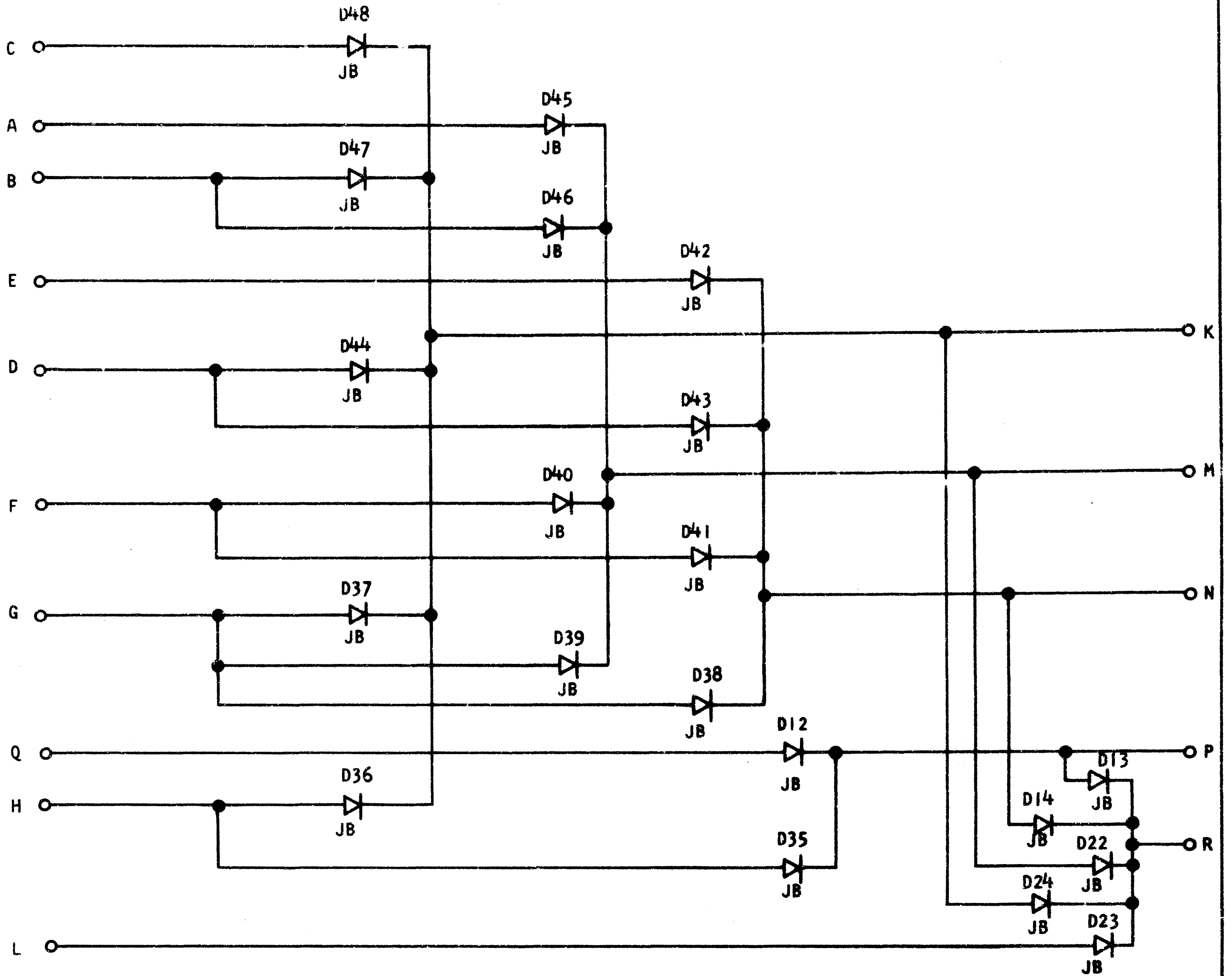
ENCODE

375107

FFK -

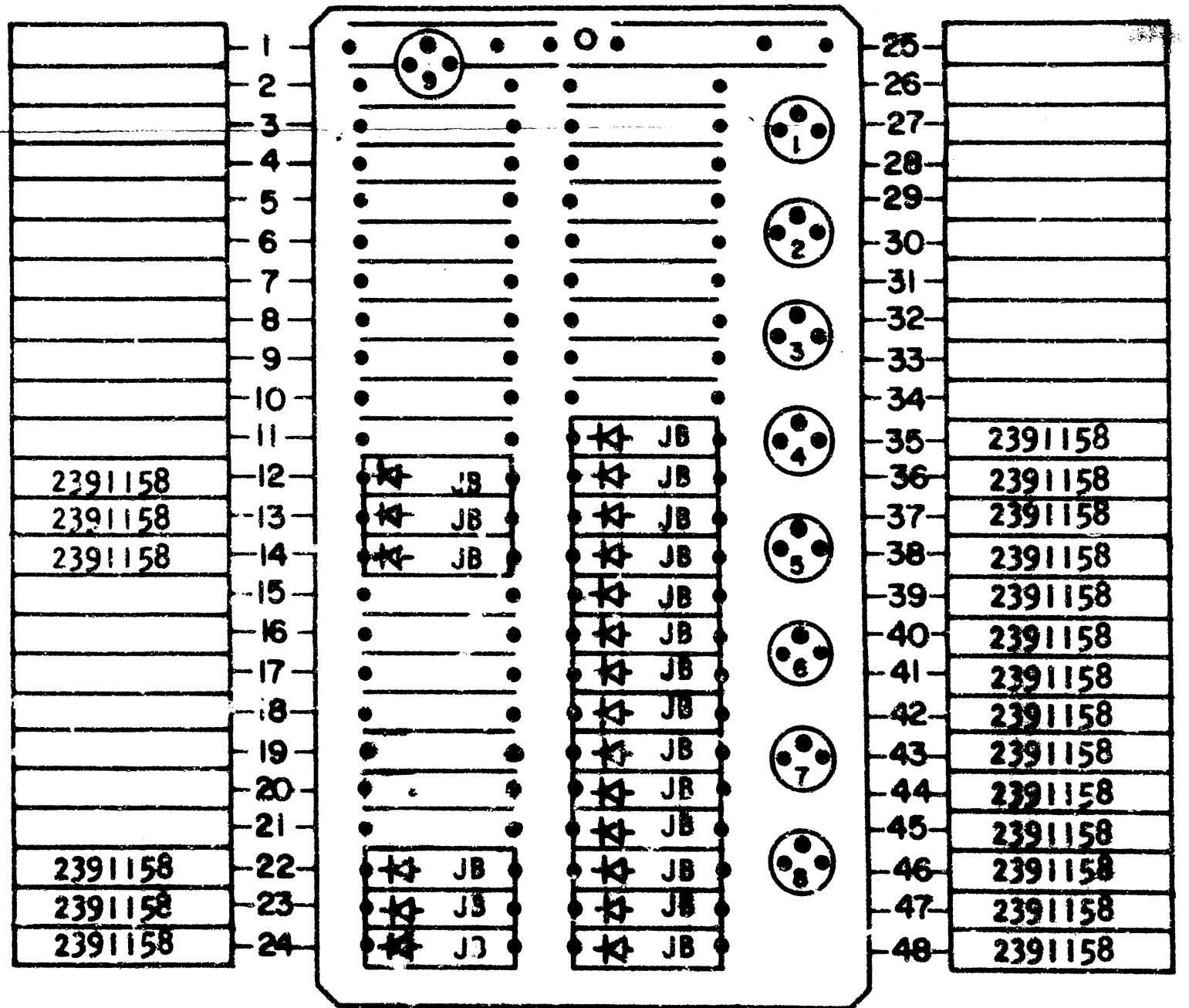
STANDARDS CODE

2-7045



NOTES

- X CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION
- XI ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999

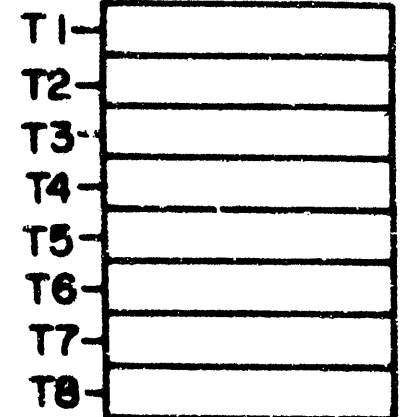


T9

Q N L J G E C A
R P M K H F D B

397331

COMPONENT SIDE



B MFG. ENG. PW 5-31-66

CIRCUIT AND PACKAGING STANDARD

APPROVAL DATE

KMT/PPB 5/6/66

HOLE PATTERN
493457

INTERNATIONAL BUSINESS MACHINES CORP.					DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME					1 JUN 66	126540	XXX				PA-3402 A
ENCODER											375107
DESIGN	VE	5 APR 66	MODEL	SMS							
DETAIL	VE	5 APR 66	SCALE	NONE							
CHECK	VE	5 APR 66	DRAW	VE	5 APR 66						
APPRO			CHECK	CFc	4-11-66						

82-3987-2 6-22-61

G. B. CO., NO. 102709

STANDARDS CODE	5367164
RELEASED FOR ASM	QTY

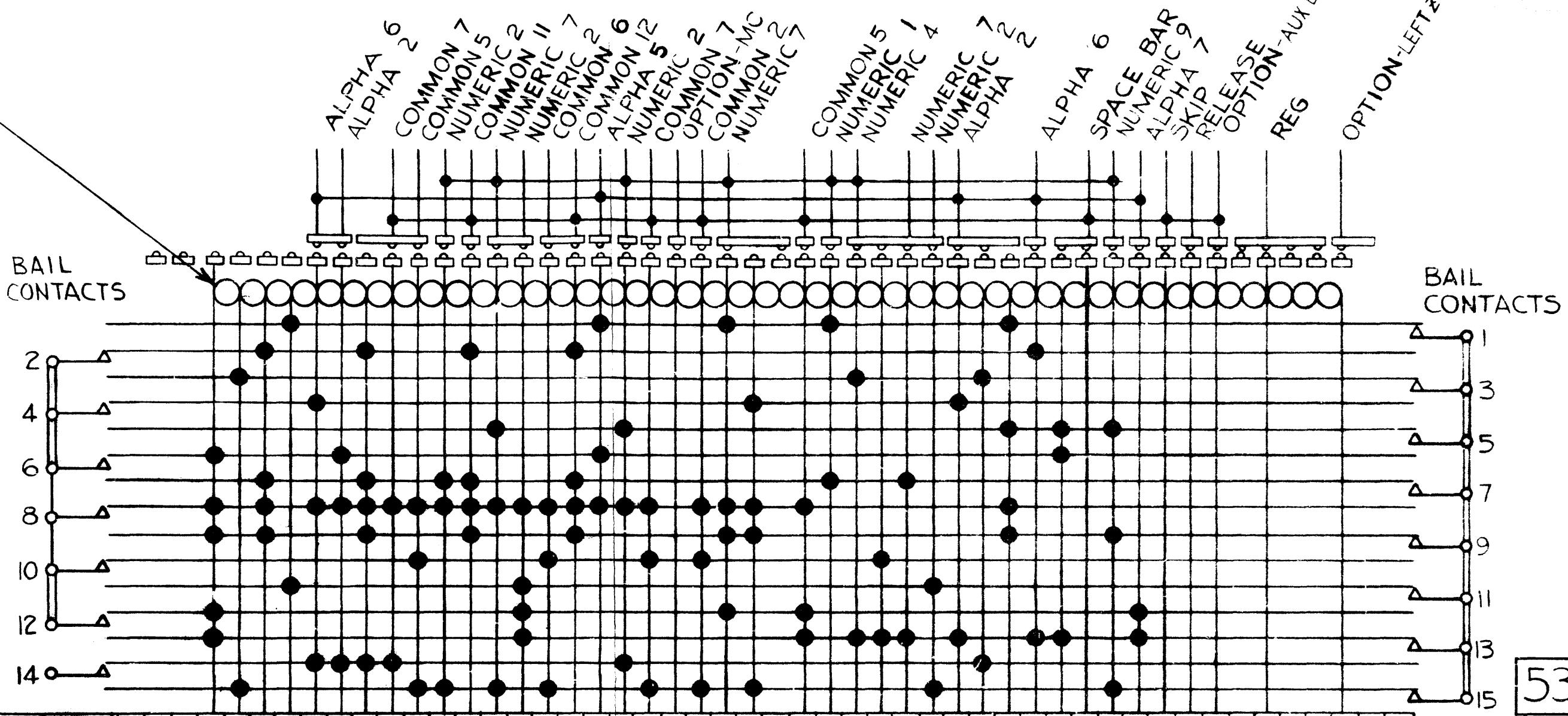
TECH SERVICES APPRO	SYM	DATE	CHANGE NO	TECH APPRO	SYM	DATE	CHANGE NO	TECH APPRO	DEVELOPMENT NO	Q/M
ELEC		5-21-64	205050-A		21SER65		205328			
MET		9-28-64	205050-Q		30JUN66		205516			
PLASTIC		12-30-64	205198		21MAY70		920250		5367164	
FINISH		5-25-65	205282							

REFERENCE DRAWING

KEY BUTTON, LATCH & PERMUTATION CODE CHART *

INTERLOCK DISCS

ARM ASM CONT		
FUNCTION	PART NO	POS
ALPHA 0	5367211	1
NUMERIC 3	5367212	2
ALPHA 1	5367213	3
NUMERIC 5	5367214	4
ALPHA 3	5367215	5
NUMERIC 6	5367216	6
ALPHA 4	5367217	7
NUMERIC 8	5367218	8
ALPHA 8	5367219	9
NUMERIC 11	5367220	10
ALPHA 9	5367221	11
NUMERIC 12	5367222	12
ALPHA 11	5367223	13
COMMON 0	5367224	14
ALPHA 12	5367225	15



KEYBUTTON CHART		STEM POS
CHARACTER SET		E'L
E "A"		
ERROR RESET (TRANSFER)	1	1
MULT PCH	2	2
NUMERIC	3	3
+	4	4
#	5	5
-	6	6
>	7	7
?	8	8
X	9	9
%	10	10
?	11	11
:	12	12
:	13	13
:	14	14
//	15	15
¢	16	16
¢	17	17
.	18	18
=	19	19
0-9-2	20	20
G	21	21
MC	22	22
I	23	23
B	24	24
Y	25	25
H	26	26
DUP	27	27
N	28	28
U	29	29
J	30	30
M	31	31
I	32	32
K	33	33
7	34	34
8	35	35
3	36	36
L	37	37
SPACE BAR	38	38
P	39	39
&	40	40
SKIP	41	41
REL	42	42
AUX DUP	43	43
FEED	44	44
REG	45	45
PROG TWO	46	46
ALPHA	47	47
LEFT ZERO	48	48
(2) STEMS	49	49
PROG ONE	50	50

BAIL CONTACTS	13	15	14	14	14	15	15	15	13	15	14	15	15	13	13	13	13	13
PUNCHES	9	3	11	11	7	5	11	5	9	9	7	3	7	11	5			
	11	12	0	0	0	0	12	12	12	11	12	0	12	11	0	11	11	11
	8	1	9	6	2	7	5	4	3	9	6	5	3	7	2	8	8	5

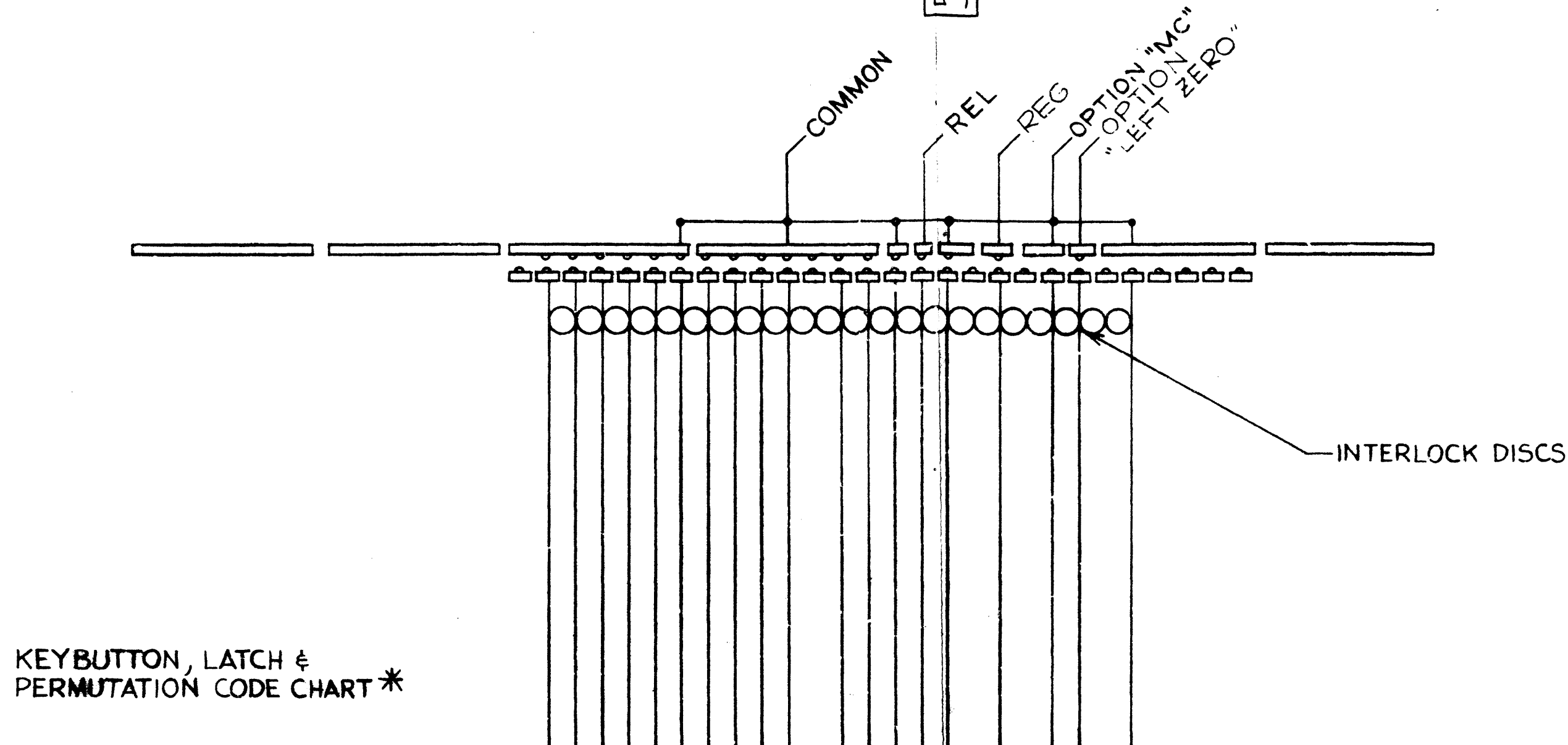
\$ IN MACHINE FINAL ASSEMBLY ADD 1 SPACER FOR MODELS A AND C ONLY TO DISABLE LEFT ZERO KEY.

5367164

IBM MATERIAL	NO	TOLERANCE UNLESS OTHERWISE NOTED	LINEAR ±	MUST CONFORM TO ENG SPEC 890350				INTERNATIONAL BUSINESS MACHINES CORP			
CASE DEPTH		CORNERS AND/OR EDGES BROKEN	ANGLES ±	ALIGNMENT WITHIN	NOTE I	NAME	CODE CHART -				
HARDNESS		RADI UNLESS OTHERWISE NOTED	OUTSIDE MAX	CONC TO DU WITHIN	TIR NOTE II	DESIGN	64 CHAR KEYBOARD				
SURFACE TREATMENT			INSIDE MAX	FLAT WITHIN	NOTE III	DETAIL	FSV 7-28-64			TYPE	
				PARALLEL TO DU WITHIN	NOTE IV	CHECK	RAS	8-21-64	DRAW	CDA	5-14-64
				STRAIGHT WITHIN	NOTE V	APPRO	JKC	8-21-64	CHECK	JMA	5-14-64
				SQUARE TO DU WITHIN	NOTE VI						

STANDARDS CODE		TECH SERVICES APPRO		SYM	DATE	CHANGE NO	TECH APPRO	SYM	DATE	CHANGE NO	TECH APPRO	DEVELOPMENT NO	Q/M
RELEASED FOR ASM	QTY	5367184										5367184	

REFERENCE DRAWING
MASTER



KEYBUTTON, LATCH & PERMUTATION CODE CHART *

KEYSYSTEM CONT N/O	KEYSYSTEM CONT N/C	SPACER 3B274 QUAN	KEYBUTTON CHART		STEM POS
			NUMERIC CHARACTER	STD	
					1
					2
					3
					4
					5
					6
					7
					8
					9
					10
					11
					12
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					45
					46
					47
					48
					49
					50

* SEE REF DWG P/N
§ IN MACHINE FINAL ASSEMBLY
ADD 1 SPACER FOR MODELS
A AND C ONLY, TO DISABLE
LEFT-ZERO KEY.

IBM MATERIAL	NO	TOLERANCE UNLESS OTHERWISE NOTED	2 PLACE DEC ±	MUST CONFORM TO ENG SPEC 890350	INTERNATIONAL BUSINESS MACHINES CORP
CASE DEPTH		CORNERS AND / OR EDGES BROKEN	3 PLACE DEC ±	ALIGNMENT WITHIN	NAME CODE CHART -
HARDNESS		RADI UNLESS OTHERWISE NOTED	ANGLES ±	CONC TO DU WITHIN	NUMERIC KEYBOARD
SURFACE TREATMENT			OUTSIDE MAX	FLAT WITHIN	DESIGN FSV 4-20-64 TYPE
			INSIDE MAX	PARALLEL TO DU WITHIN	DETAIL
				STRAIGHT WITHIN	CHECK RAS 4-20-64 DRAW CDA 5-14-64
				SQUARE TO DU WITHIN	APPRO JKC 4-20-64 CHECK JMA 5-18-64

5367184

5367184

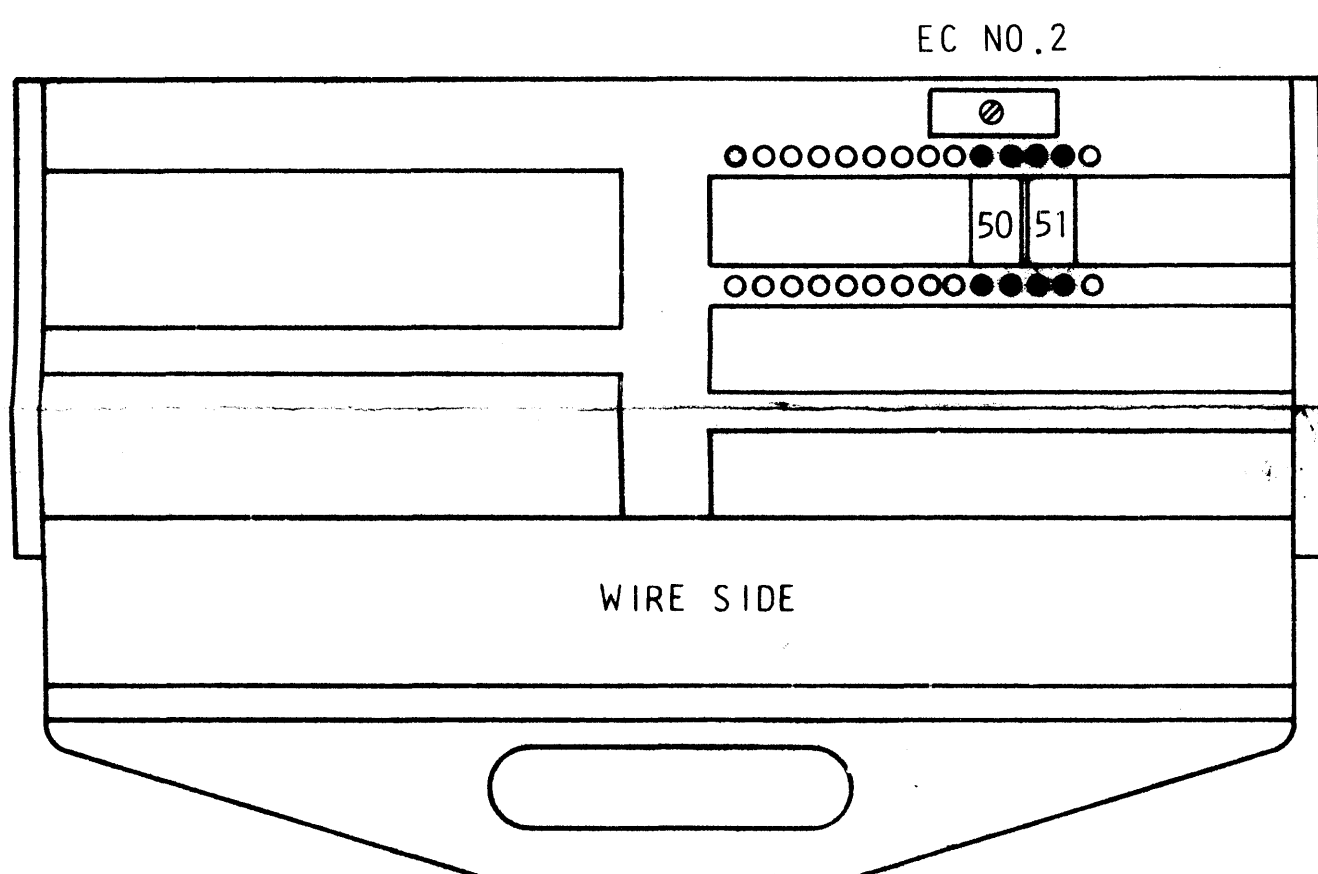
FEEATJURE

PAGES

5405964

MASTER

NAME	SECTION
X-SKIP FEATURE	1, 2, 7, 10, 11, 12, 16



ADD

PART NO.	DESCRIPTION	FROM	TO
196208	RELAY 50-4 POS	---	---
196208	RELAY 51-4 POS	---	---
347820	DIODE	PLT-EC2-D	CATH-EC2-H
347820	DIODE	PLT-EC2-B	CATH-EC2-F
347820	DIODE	PLT-EC2-C	CATH-EC2-G
347820	DIODE	PLT-EC2-A	CATH-EC2-E
347820	DIODE	PLT-51PB	CATH-51PA
5404119	DIODE-SLIP ON	PLT-A12R	CATH-A10M
5404119	DIODE-SLIP ON	PLT-A02M	CATH-A04C
205330	BRASS JPR	50 HA	50-1 N/O
205330	BRASS JPR	51 HA	51-1 N/O
205331	BRASS JPR	50 HB	50 PB
205331	BRASS JPR	51 HB	51 PB
5406373	CABLE	---	---

KEYBUTTONS
COMBINATION KEYBOARDS-REPLACE DASH KEYBUTTON WITH KEYBUTTON P/N 5353766
NUMERIC KEYBOARD - REPLACE 11 KEYBUTTON WITH KEYBUTTON P/N 5422188

DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	JPR	8-6 N/O XII	*9-6 OP XII
GATE	CABLE	*A10M XII	A12R XII
GATE	CABLE	*1-11 N/C XII	41-3 N/O XII
GATE	JPR	1-11 N/C XII	*4-11 OP XII
GATE	CABLE	*4-11 OP XII	A06C XII
GATE	CABLE	1-11 N/O XII	*41PA XII

* DENOTES WIRE END TO BE REMOVED AND TAPED

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	
DESIGN	AG	14FEB67	205854				
DETAIL		17JUL67	206089				
CHECK	RAS	2JUN70	206226				
APPRO	PH						

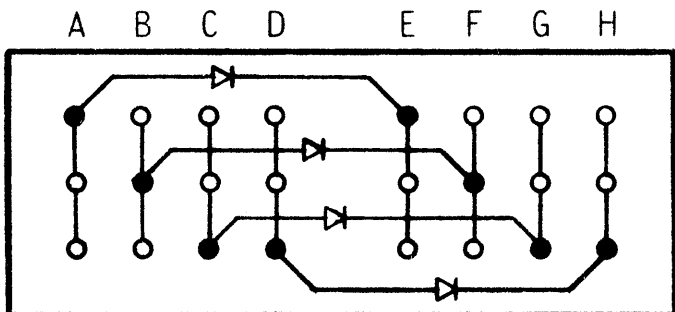
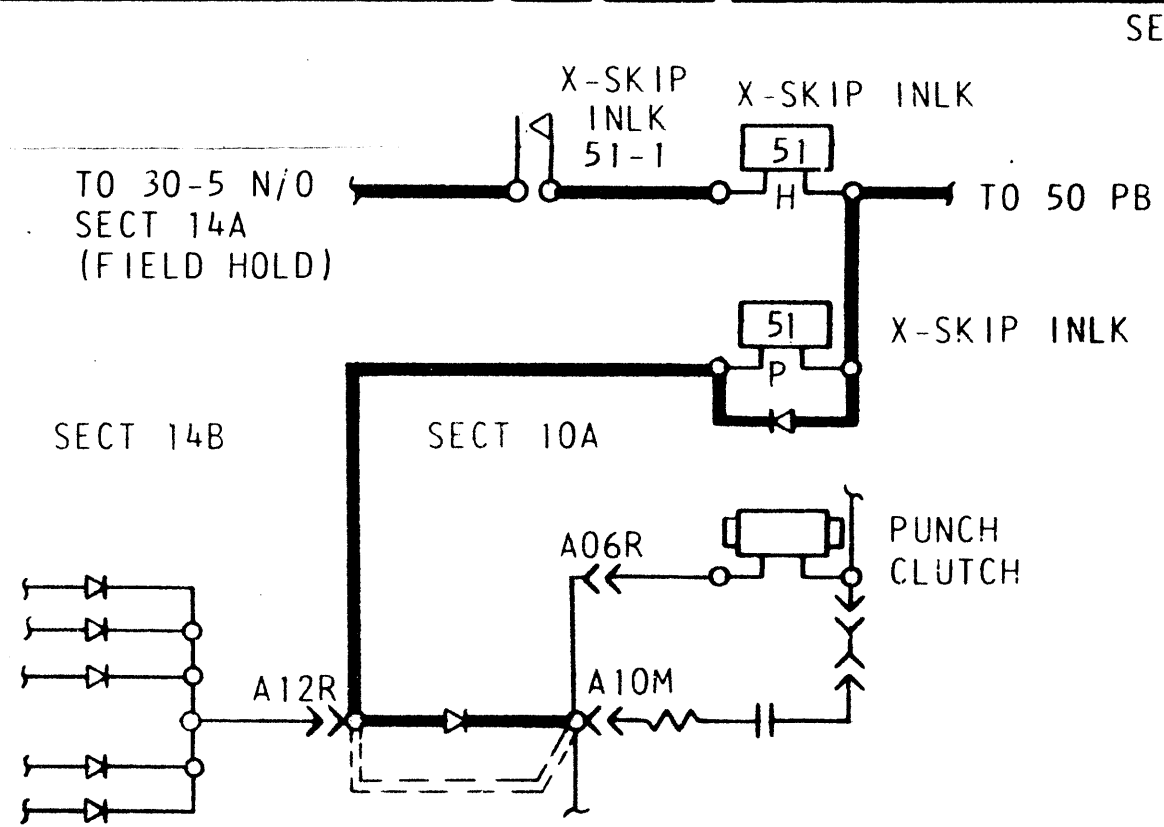
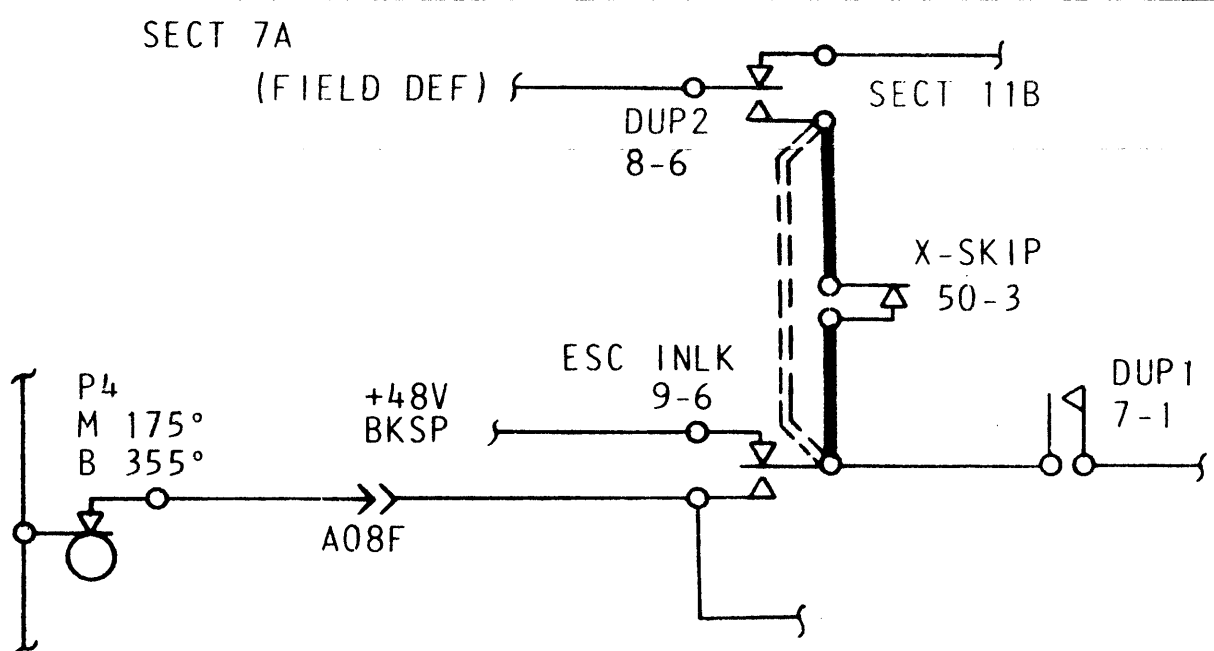
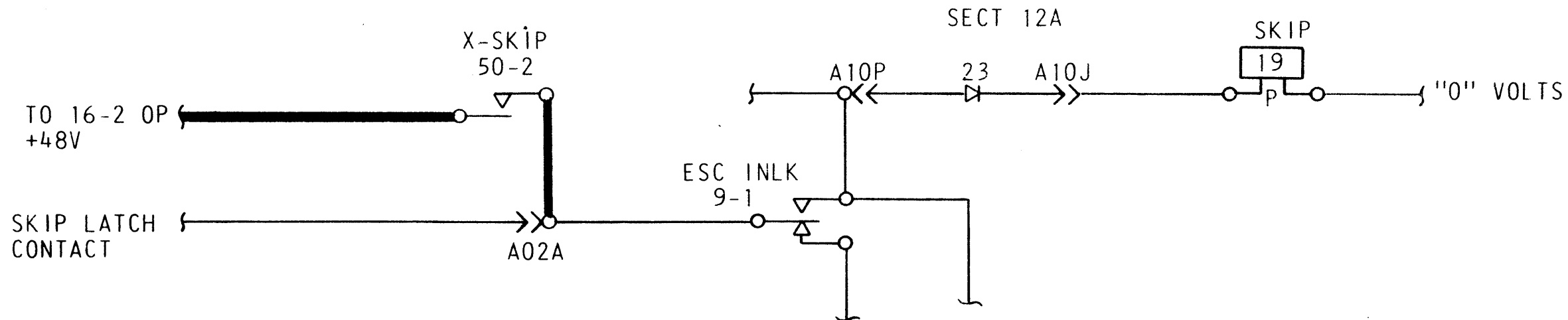
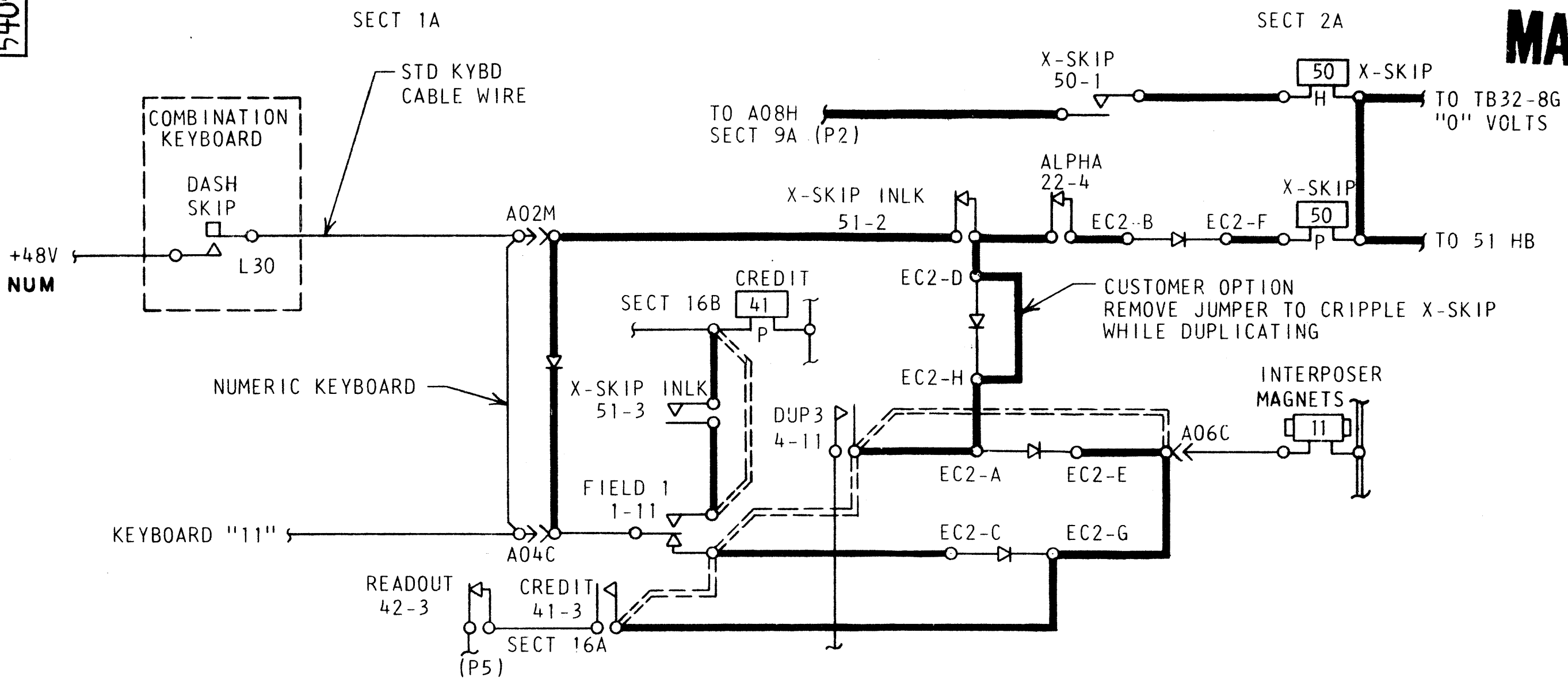
5405964

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MODEL B
X-SKIP

SHEET 2 OF 2

MASTER



EDGE CONNECTOR NO. 2
SERVICING VIEW

- STANDARD WIRING
- - - REMOVED WIRING
- ADDED WIRING

NOTES

- XI STANDARD WIRES ARE SHOWN FOR REFERENCE ONLY. CONSULT MACHINE LOGIC DIAGRAMS FOR DETAIL WIRING
- XII REMOVE THIS LEAD AND TAPE END

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405964
DESIGN	AG 1SEP66 MODEL	14FEB67	205854				
DETAIL		12JUL 67	206089				
CHECK	RAS 1SEP66 DRAW IDJ 19OCT66	8 JUN 70	920106				
APPRO	FH 3SEP66 CHECK						

5405965

INDEX PAGE
29 WIRING DIAGRAM SUPPLEMENT
MODELS A, B & C

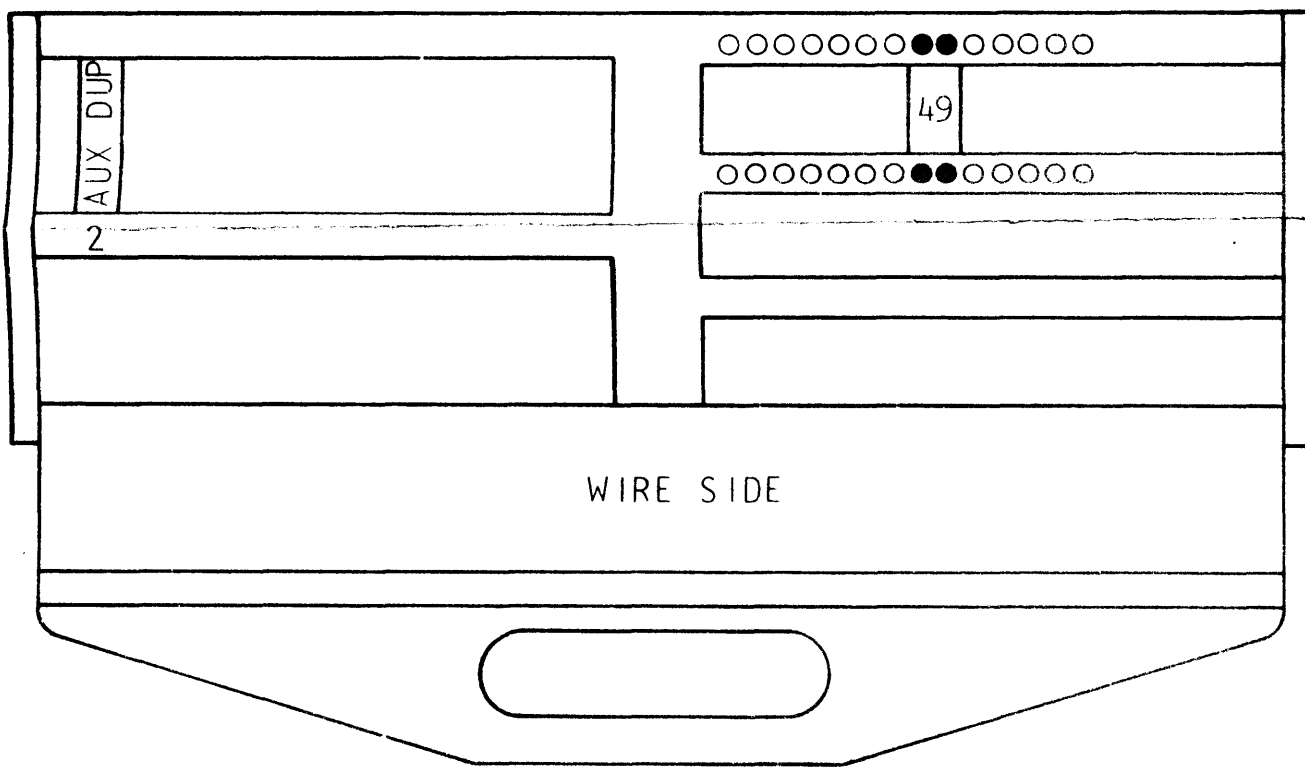
SHEET 1 OF 2

MASTER

NAME	SECTION
AUX DUP FEATURE	1, 2, 8

ADD

PART NO.	DESCRIPTION	FROM	TO
205330	BRASS JPR	49HA	49-1 N/O
196208	RELAY 49-4 POS	---	---
5406097	CABLE	---	GATE
5406064	CABLE	CD TRANS	GATE



DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	CABLE	*8 HA XII	4 HA XII
GATE	CABLE	4 PA XII	*7-2 N/O XII

* DENOTES WIRE ENDS TO BE REMOVED AND TAPED

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405965
DESIGN	AG	15EP66	MODEL	14FEB67	205854				
DETAIL				12JUL67	206089				
CHECK	RAS	15EP66	DRAW	ID1	16OCT66				
APPRO	FH	35EP66	CHECK						

5405965

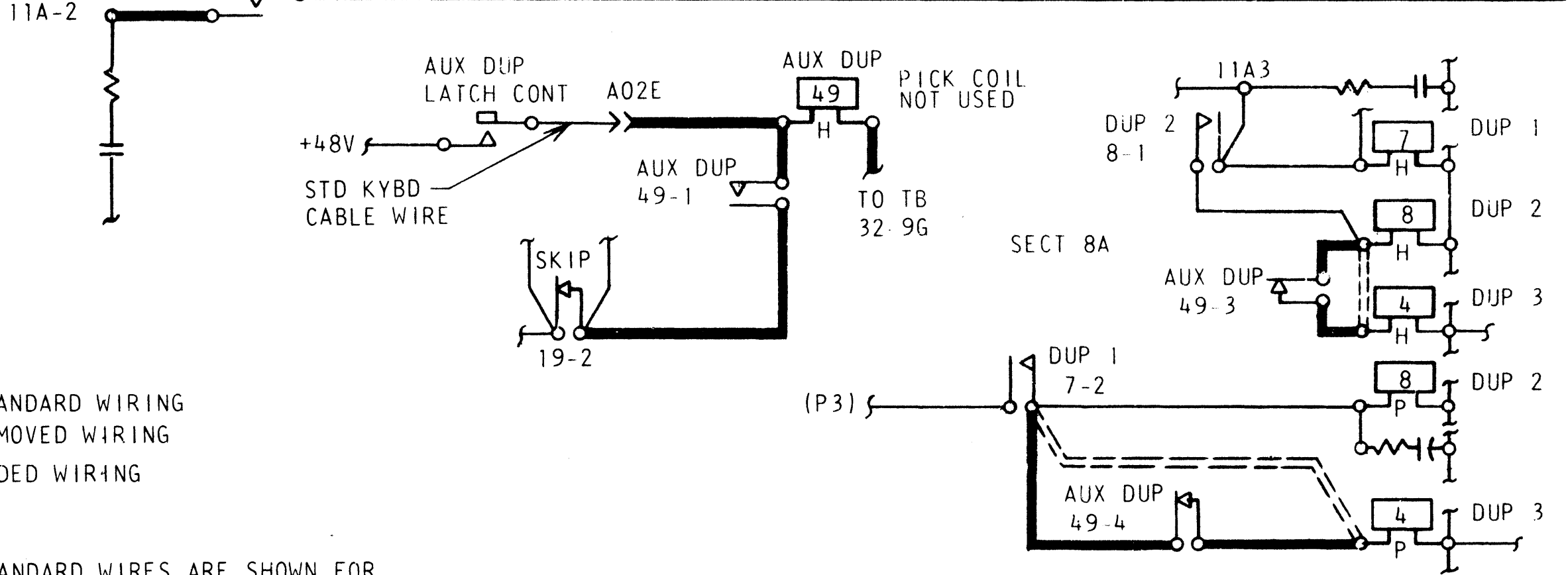
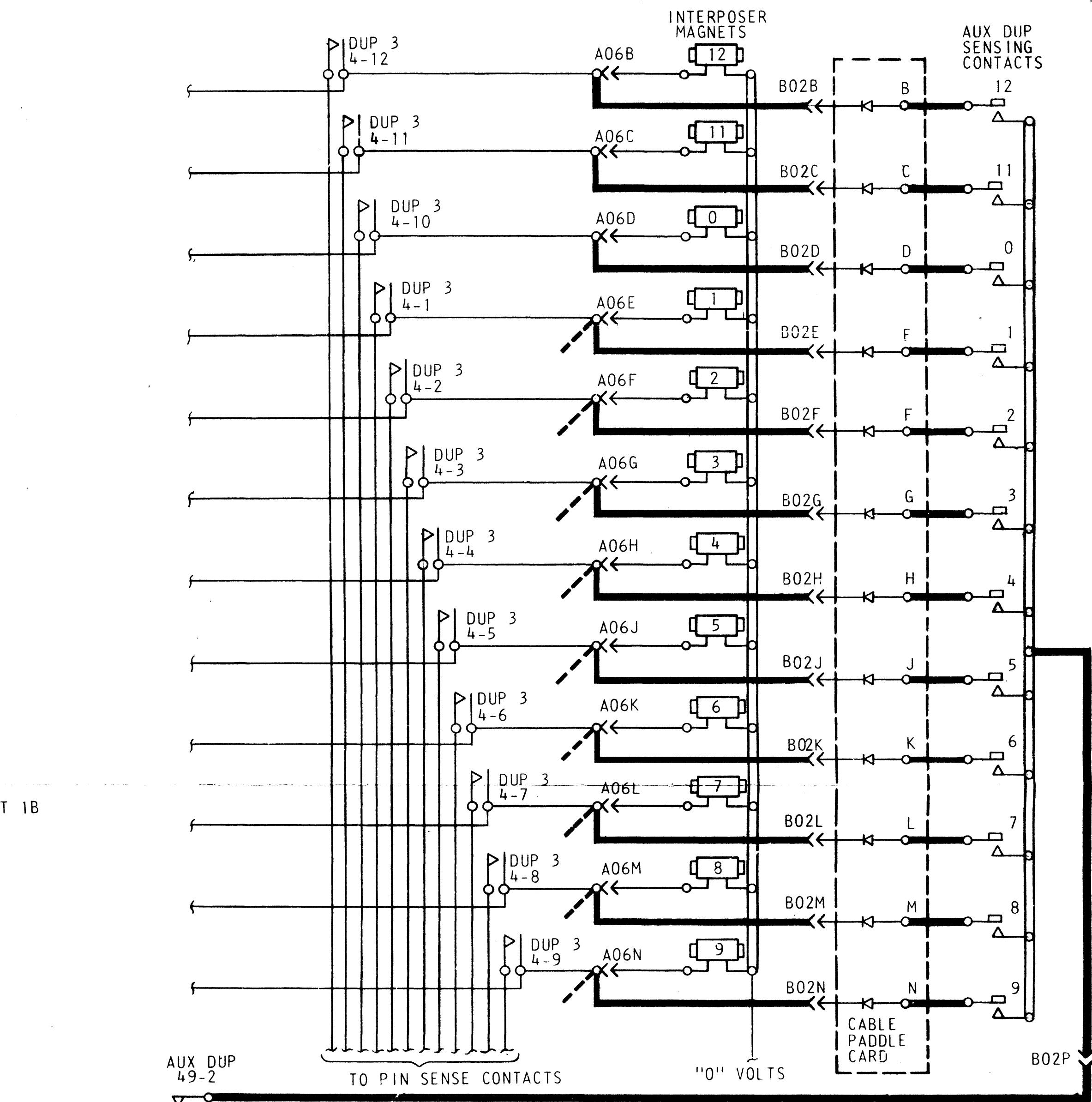
AUXILIARY DUPLICATION
AUX DUP

SHEET 2 OF 2

MASTER

SECT 2A

SECT 1B



- STANDARD WIRING
- == REMOVED WIRING
- ADDED WIRING

- NOTES
- XI STANDARD WIRES ARE SHOWN FOR REFERENCE ONLY. CONSULT MACHINE LOGIC DIAGRAMS FOR DETAIL WIRING
 - XII REMOVE THIS LEAD AND TAPE END

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	19OCT66	205745 B			NOTE X PRINT TO ENG. SPEC. NO. 895291	5405965
DESIGN	AG 15EP64 MODEL	14FEB67	205854				
DETAIL		12JUL 67	206089				
CHECK	RAS 15EP64 DRAW IDI						
APPRO	FH 35E						

5405966

INDEX PAGE
29 WIRING DIAGRAM SUPPLEMENT
MODELS A, B & C

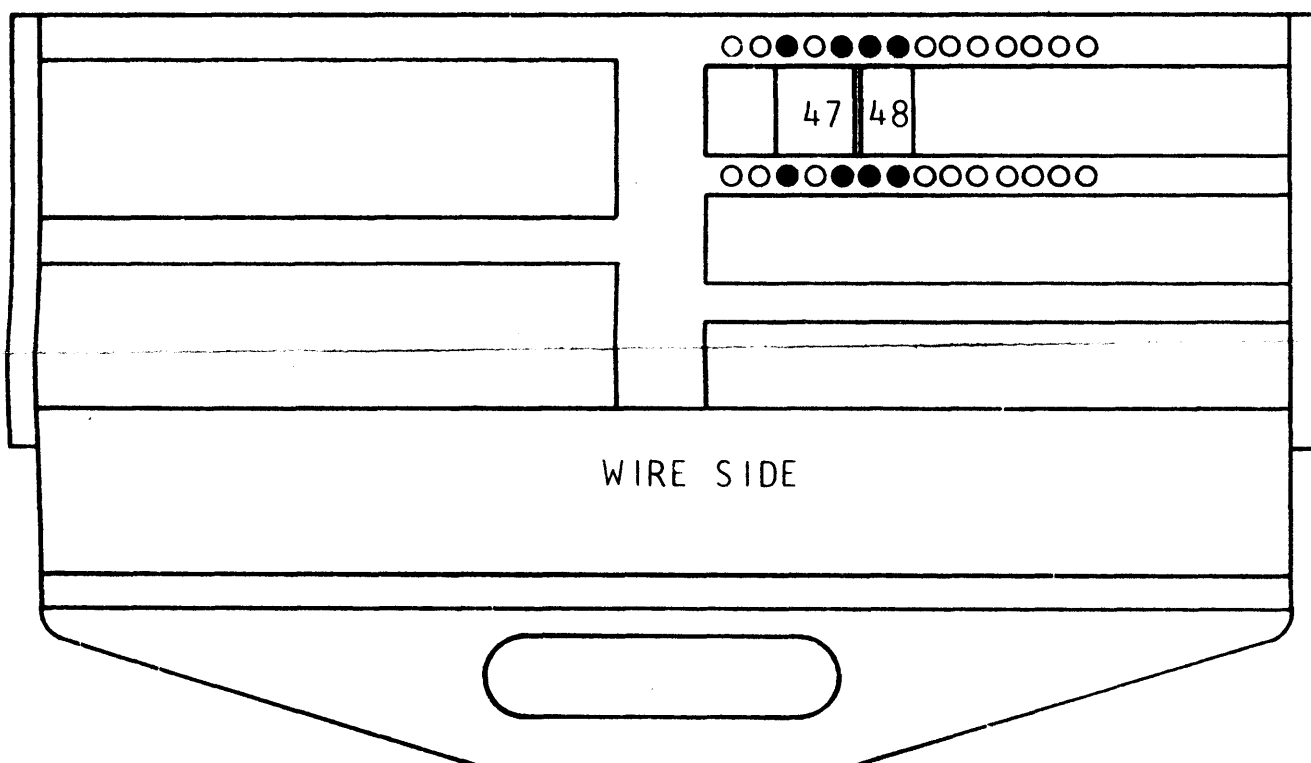
SHEET 1 OF 2

MASTER

NAME	SECTION
MCI FEATURE	5, 7, 8, 9, 11

ADD

PART NO.	DESCRIPTION	FROM	TO
196198	RELAY 47-6 POS	————	————
196208	RELAY 48-4 POS	————	————
205330	BRASS JPR	47 HA	47-1 N/O
205331	BRASS JPR	47 HB	47 PB
205331	BRASS JPR	48 HB	48 PB
205329	BRASS JPR	48 PA	48-1 N/O
347820	DIODE	PLT-47 PB	CATH-47 PA
347820	DIODE	PLT-48-2 N/O	CATH-48 HA
347820	DIODE	PLT-32-10 E	CATH-32-10B
347820	DIODE	PLT-32-11 E	CATH-32-11B
5406087	CABLE	————	GATE
STD TRANS CABLE WIRE	REG MAG	INT 3 COM	
STD TRANS CABLE WIRE	A05Q	REG MAG	
STD SWITCH CABLE WIRE	ADAS N/O	MC SW/OP	
STD SWITCH CABLE WIRE	A01P	MC SW/NO	
STD KYBD CABLE WIRE	MC LATCH/NO	48 VOLTS	
STD KYBD CABLE WIRE	MC LATCH/OP	A02D	



DELETE

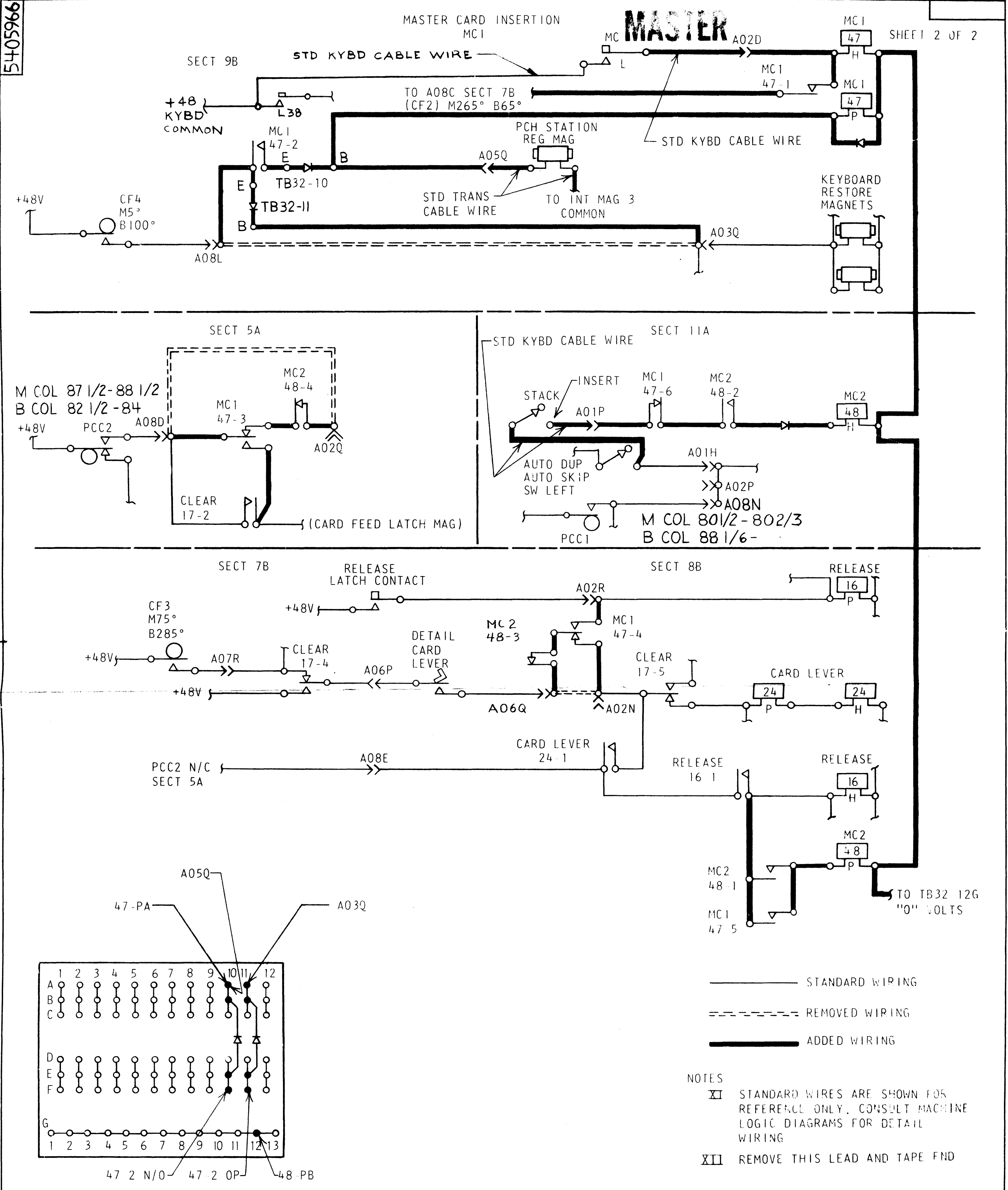
PART NO.	DESCRIPTION	FROM	TO
—	CABLE	* A03Q XII	A08L XII
—	CABLE	* A02Q XII	A08D XII
—	CABLE	* A02N XII	A06Q XII

* DENOTES WIRE END TO BE REMOVED AND TAPED.

PRINT SUITABLE FOR EC MA KUP

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405966
DESIGN	AG	ISEP	MODEL	14FEB67	205854				
DETAIL				12 JUL 67	206089				
CHECK	RAS	ISEP	DRAW	15 JAN 69	920013				
APPRO	FH	3 SEP 68	CHECK						

5405966

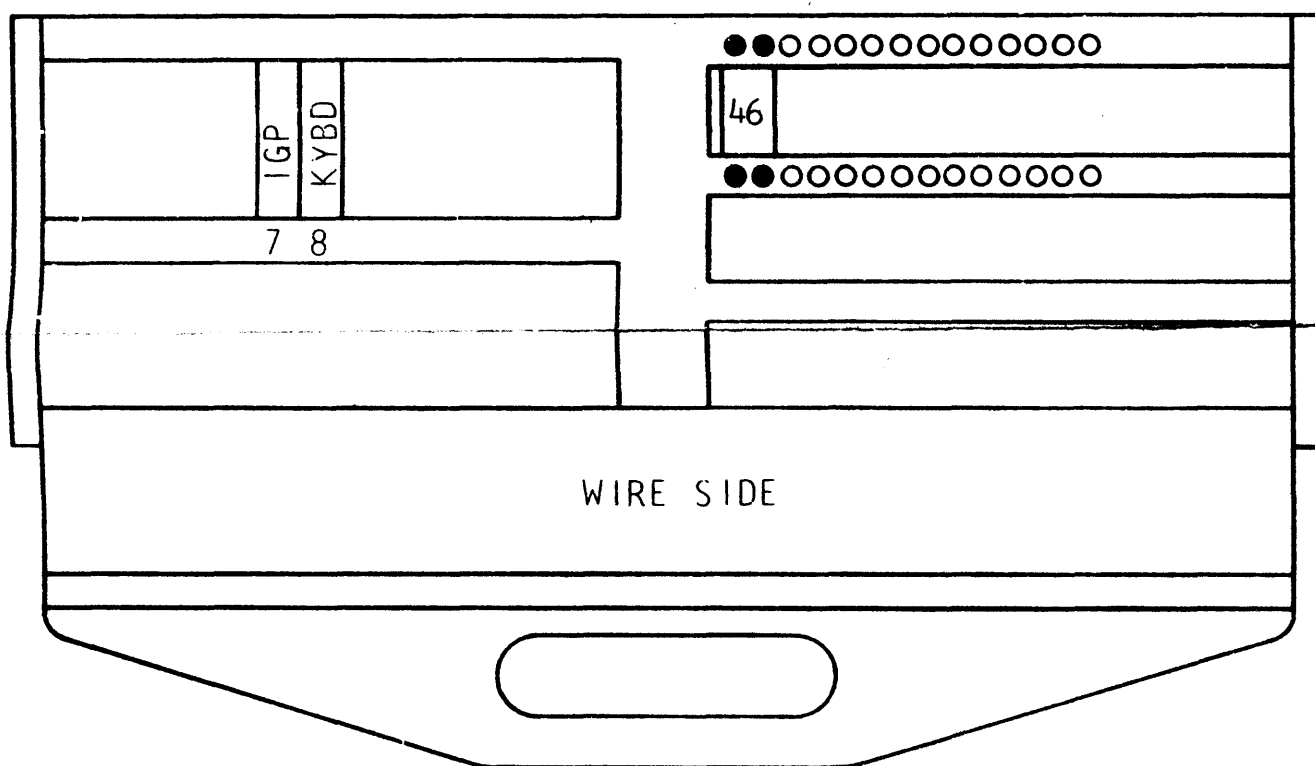


INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405966
		14FEB67	205854				
DESIGN	AG 15SEP66 MODEL	12 JUL 67	206089				
DETAIL		15 JAN 69	920013				
CHECK	RAS 15SEP66 DRAW	18OCT66					
APPRO	FH 3SEP66 CHECK						

5405967

MASTER

NAME	SECTION
IGP FEATURE	7,8



ADD

PART NO.	DESCRIPTION	FROM	TO
196208	RELAY 46-4 POS		
205330	BRASS JPR	46 HA	46-1 N/O
205331	BRASS JPR	46 HB	46 PB
347820	DIODE	PLT-17-6 N/O	CATH-16 PA
5406358	CABLE		GATE
5406067	CABLE	KYBD	GATE
5406063	CABLE	CD TRANS	GATE
	TRANSPORT CABLE-STD	A05N	P6 OP

DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	JPR	*17 PA XII	17-3 OP
GATE	JPR	17-3 N/O	*17-6 N/O XII
GATE	JPR	*16 PA XII	*17-6 N/O XII
GATE	CABLE	A07R XII	*17-4 N/C XII
GATE	JPR	*17-4 N/C XII	17-6 OP

* DENOTES WIRE ENDS TO BE REMOVED AND TAPED

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	19OCT66	205745 B			NOTE X PRINT TO ENG. SPEC. NO. 895291	
DESIGN	AG 15EP66 MODEL	14FEB67	205854				
DETAIL		12 JUL 67	206089				
CHECK	RAS 15EP66 DRAW IDI 18OCT66	1 OCT 69	920094				
APPRO	FH 35EP66 CHECK						

5405967

5405967

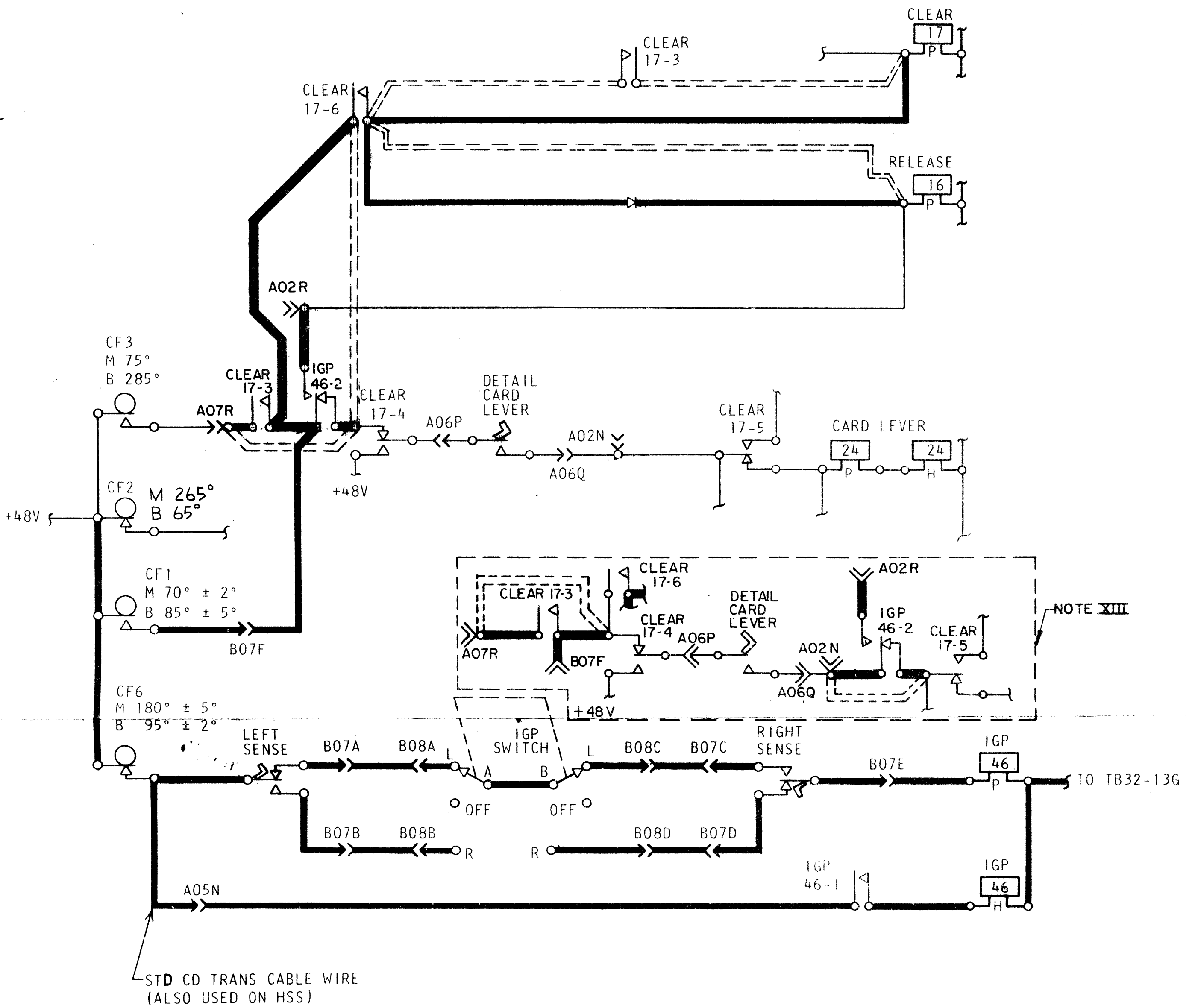
INTERSPERSED GANG PUNCH
IGP

SHEET 2 OF 2

SECT 7B

SECT 8B

MASTER



PART NAME	PART NO.
CAM CF-1	311384
CAM CF-6	315381
SWITCH IGP	382297
SWITCH RIGHT SENSE	5404396
SWITCH LEFT SENSE	5404296

- STANDARD WIRING
- - - REMOVED WIRING
- ADDED WIRING

NOTES

- XI STANDARD WIRES ARE SHOWN FOR REFERENCE ONLY. CONSULT MACHINE LOGIC DIAGRAMS FOR DETAIL WIRING
- XII REMOVE THIS LEAD AND TAPE END
- XIII WIRING BEFORE EC920094 OCT 1969

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		19OCT66	205745 B			X PRINT TO RMB. SPEC. NO. 895271	
		14FEB67	205854				
DESIGN AG	15SEP66	MODEL		12JUL 67	206089		
CHECK P.A.S	15SEP66	DRAW IDI	18OCT66	1 OCT 69	920094		
APPRO F.H	3SEP66	CHECK					

5405967

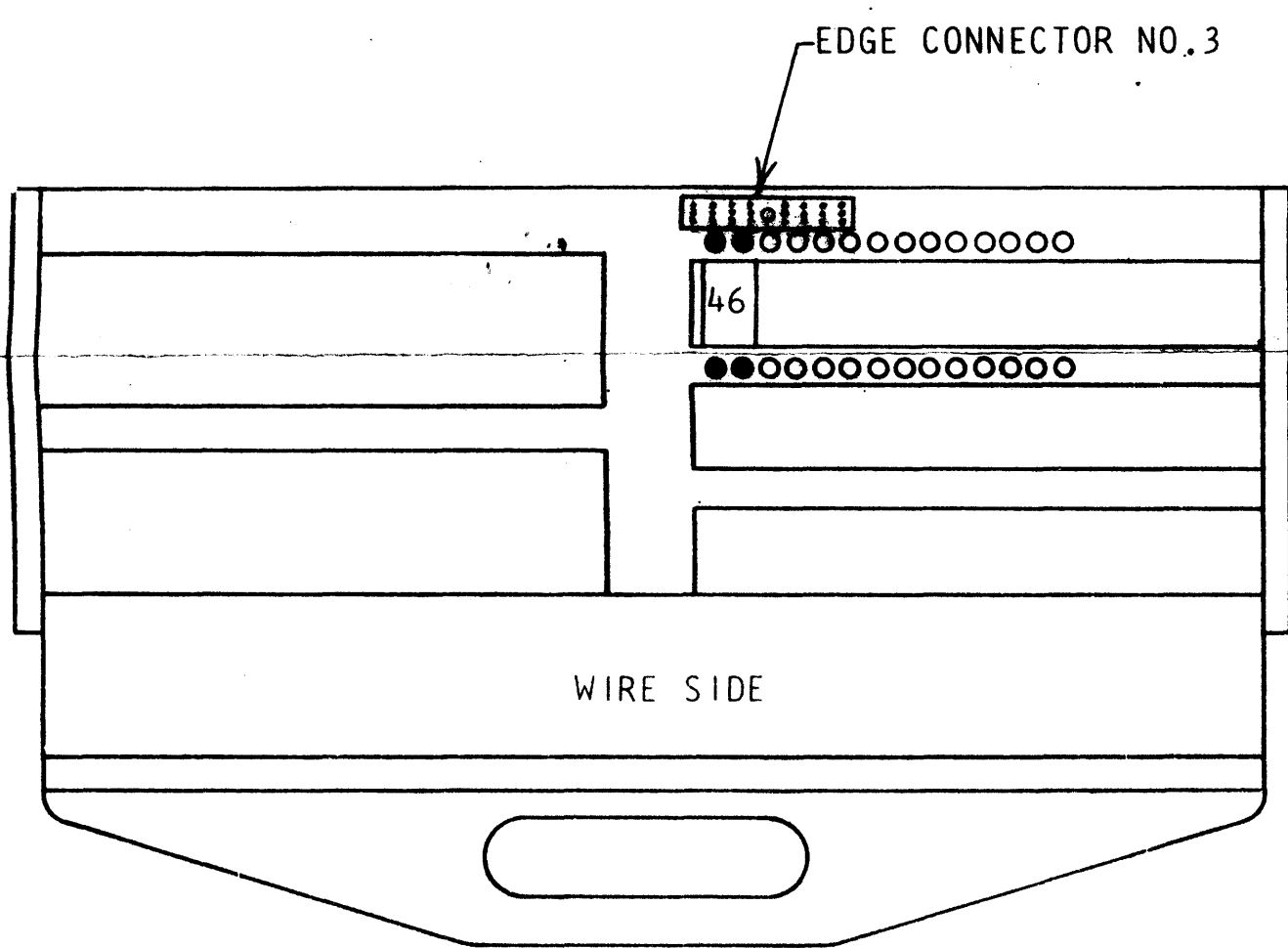
5405968

INDEX PAGE
29 WIRING DIAGRAM SUPPLEMENT
MODELS A, B & C

SHEET 1 OF 2

MASTER

NAME	SECTION
HSS FEATURE	9, 10, 11, 12
KYBD, VLCD AND CAM	P/N 5404109



ADD

PART NO.	DESCRIPTION	FROM	TO
196206	RELAY 46-4 POS		
205329	BRASS JPR	46 PA	46-1 N/O
5820454	RESISTOR 180Ω	EC-G	EC-A
5400890	CAPACITOR .22 UF	EC-G	EC-B
347820	DIODE	PLT-32-12E	CATH-32-12B
TRANSPORT	CABLE ASM	A05N	P6 OP
205331	BRASS JPR'S USED	48-2 N/O	48-3 N/O
205331	WITH HSS/VLCD	48-2 OP	48-3 OP
5406353	CABLE		GATE
STD TRANS	CABLE WIRES	ECA	A05P
		ECB	P1 COM
129245	JUMPER	EC3-3b	46-4N0
347820	DIODE	PLT-EC3-2b	CATH-EC3-2G

DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	CABLE	A08R XII	*23-4 N/C XII
GATE	CABLE	A08J XII	*10-1 N/O XII
GATE	CABLE	*A08K XII	14-4 OP XII

ADD

PART NO.	DESCRIPTION	FROM	TO
5406353	CABLE	TB32-8F	46-3 N/C XIV

DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	CABLE	TB32-8F	A08J XIV

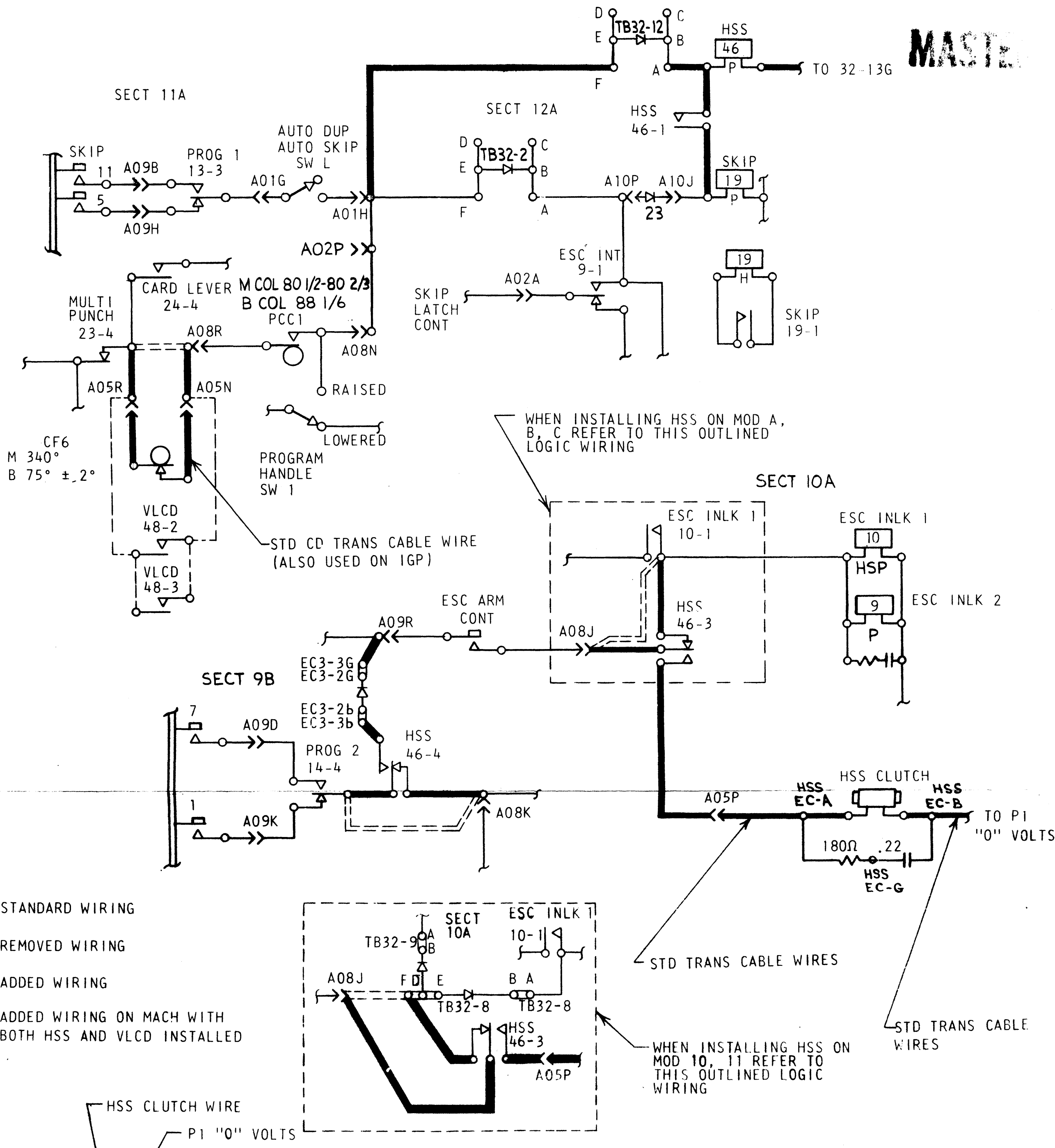
* DENOTES WIRE ENDS TO BE REMOVED AND TAPED

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	
DESIGN	AG	15 SEP 66	MODEL	14FEB67	205854				
DETAIL				12 JUL 67	206089				
CHECK	RAS	15 SEP 66	DRAW	2 FEB 68	206295				
APPRO	FH	30 SEP 66	CHECK	1 OCT 69	92009 4				

5405968

HIGH SPEED SKIP
HSS

MASTER



- NOTES
- XI STANDARD WIRES ARE SHOWN FOR REFERENCE ONLY. CONSULT MACHINE LOGIC DIAGRAMS FOR DETAIL WIRING
 - XII REMOVE THIS LEAD AND TAPE END
 - XIII CF 3 TIMING TO BE
M 90° ± 2°
B 300° ± 5°
 - XIV FOR SELF CHECK ONLY

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME				19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405968
DESIGN				14FEB67	205854				
DETAIL				12JUL67	206089				
CHECK				2FEB68	206295				
APPRO				1 OCT 69	920094				

5405969

INDEX PAGE
29 WIRING DIAGRAM SUPPLEMENT
MODELS A, B & C

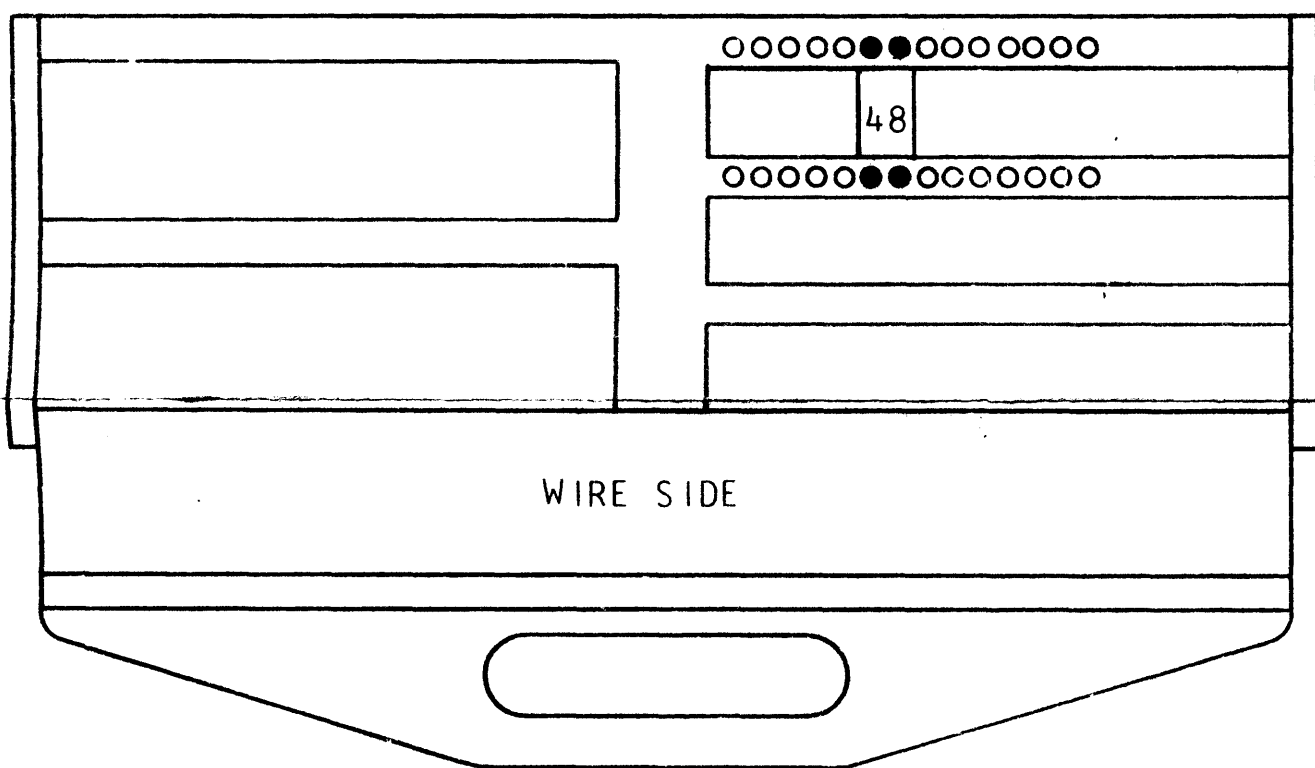
SHEET 1 OF 2

MASTER

NAME	SECTION
VLCD FEATURE	9, 10, 11, 12
KYBD, VLCD AND CAM	P/N 5404109

ADD

PART NO.	DESCRIPTION	FROM	TO
205331	BRASS JPR	48 HA	48-1 N/O
347820	DIODE	PLT-32-11 E	CATH-32-11B
347820	DIODE	PLT-32-10 E	CATH-32-10B
347820	DIODE	PLT-32-10 G	CATH-32-10C
347820	DIODE	PLT-48PB	CATH-48HB
5404119	DIODE-SLIP ON	PLT-A08L	CATH-A07P
196208	RELAY 48-4 POS	---	---
5406363	CABLE	---	GATE
STD CARD TRANS		A05M	AUX MAG
CABLE WIRES		AUX MAG	INT MAG



DELETE

PART NO.	DESCRIPTION	FROM	TO
GATE	CABLE	A03Q	* A08L XII
GATE	CABLE	* A01H XII	* A02P XII

* DENOTES WIRE END(S) TO BE REMOVED AND TAPED

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM				19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	5405969
				14FEB67	205854				
DESIGN AG 15SEP66 MODEL				12JUL67	206089				
CHECK RAS 15SEP66 DRAW IDI 18OCT66									
APPRO FH 35SEP66 CH:CK									

5405969

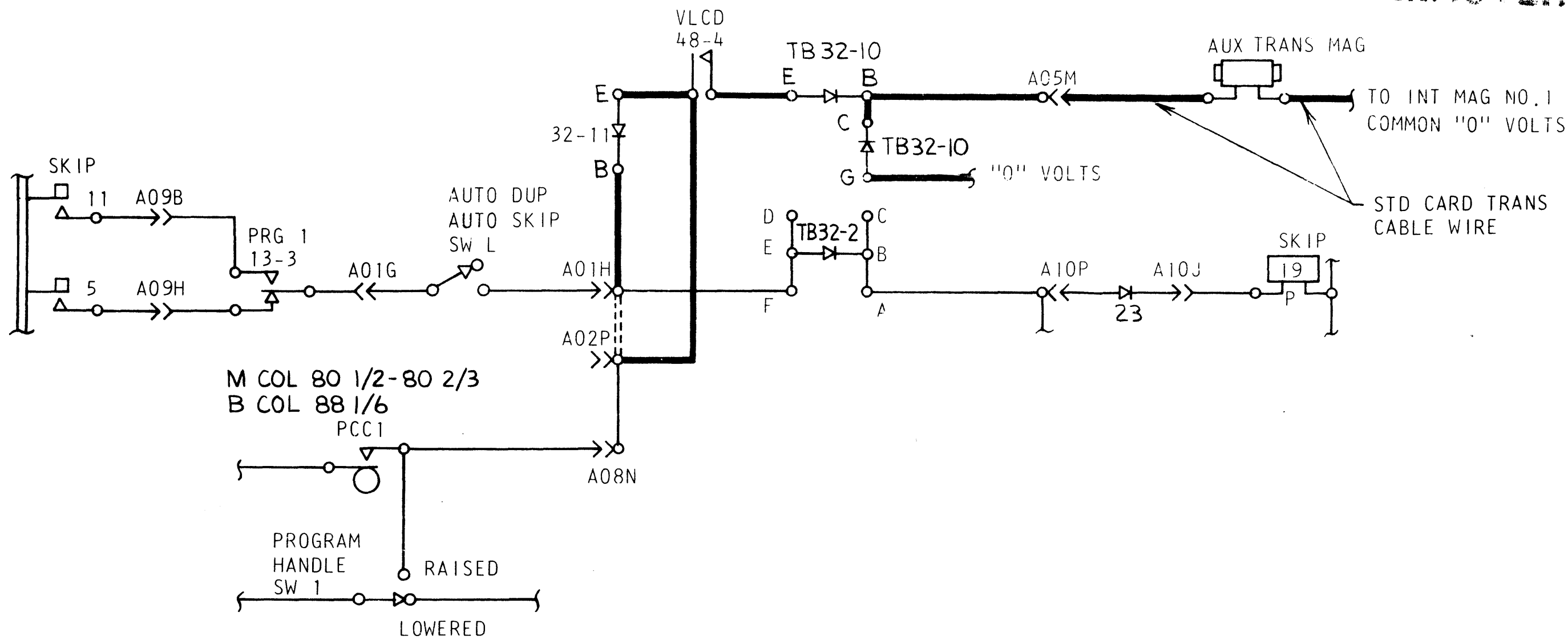
VARIABLE LENGTH CARD DEVICE
VLCD

SHEET 2 OF 2

SECT 11A

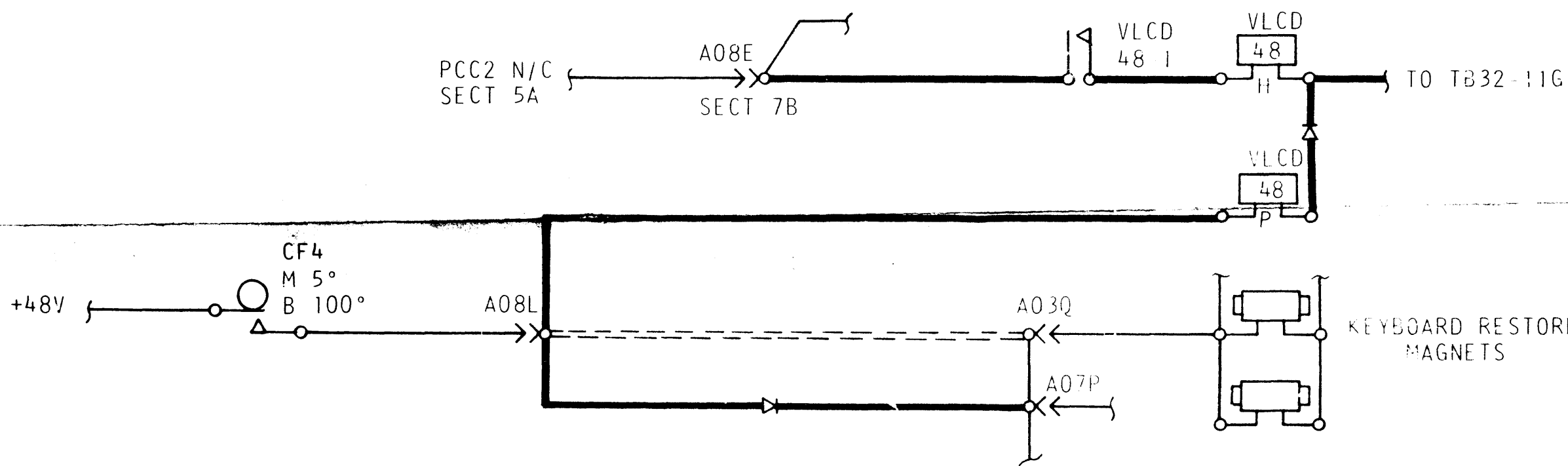
SECT 12A

MASTER

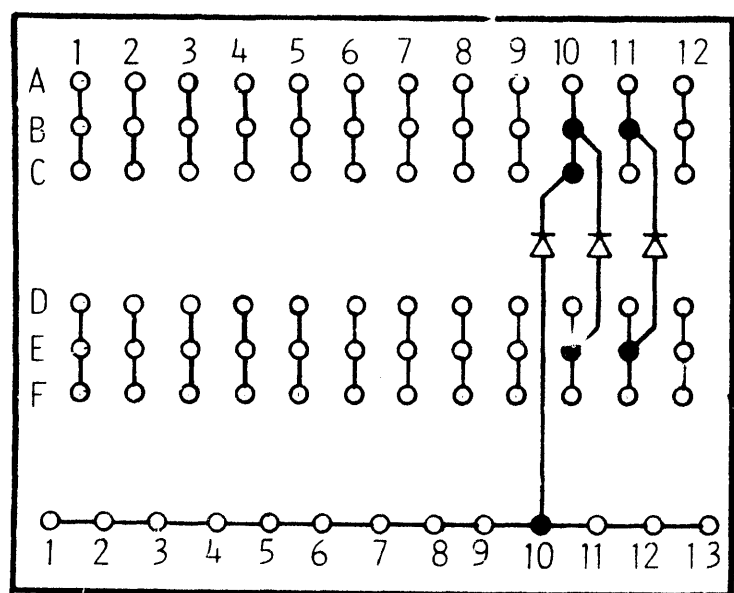


SECT 9B

SECT 10B



- STANDARD WIRING
- REMOVED WIRING
- ADDED WIRING



TERMINAL BLOCK 32
COMPONENT SIDE

- NOTES:
- XI STANDARD WIRES ARE SHOWN FOR REFERENCE ONLY. CONSULT MACHINE LOGIC DIAGRAMS FOR DETAIL WIRING.
 - XII REMOVE THIS LEAD AND TAPE END

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		19OCT66	205745 B			X PRINT TO ENG. SPEC. NO. 895291	
DESIGN AG 1SEP66 MODEL		14FEB67	205854				
DETAIL		12JUL67	206089				
CHECK RAS 1SEP66 DRAW IDI 18OCT66							
APPRO FH 3SEP66 CHECK							

5405969

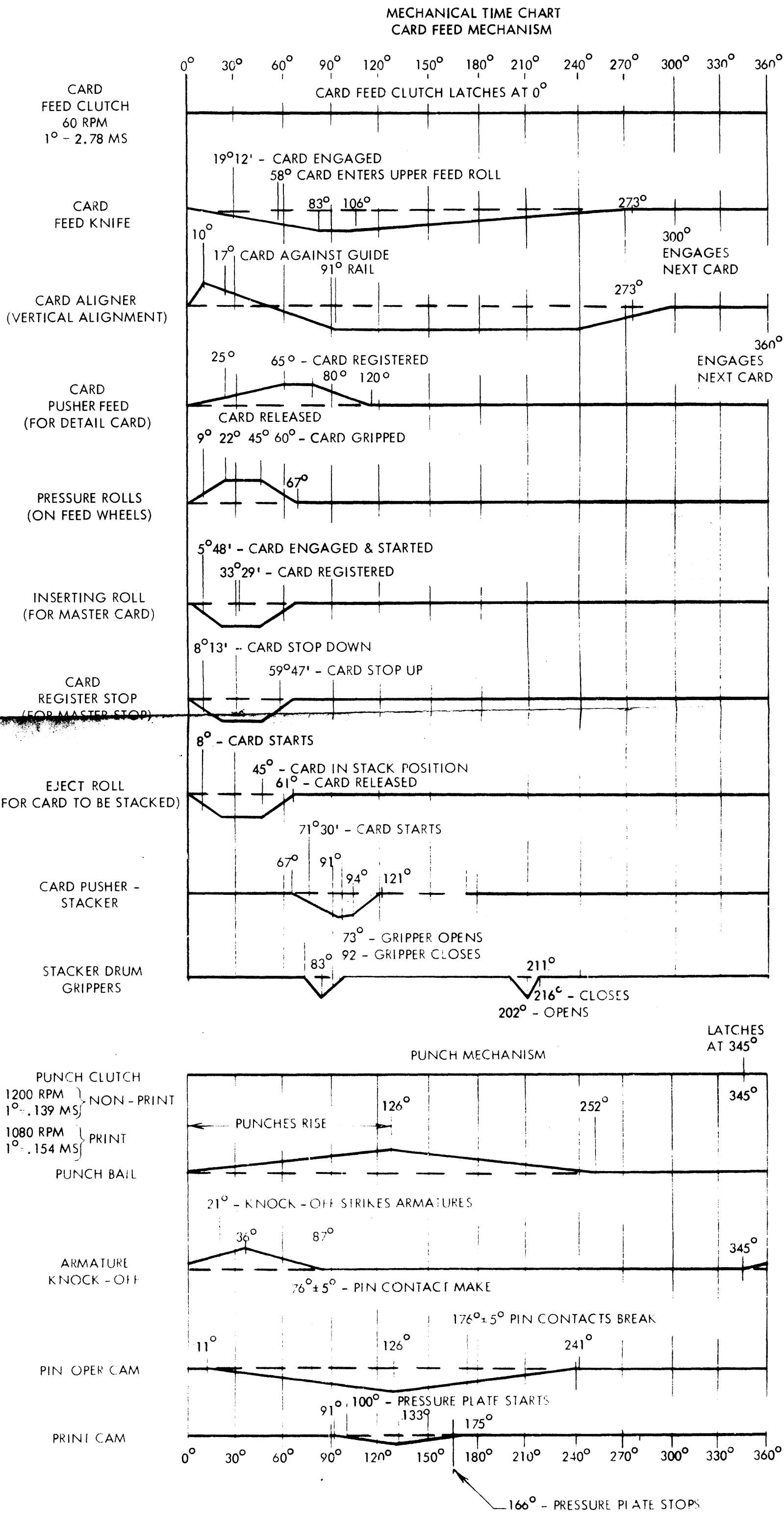
540409

KEYBOARD VLCD & CAM REFERENCE

02.29.10.0

STEM POS	GRAPHIC		CARD CODE		BAILS		LATCHES	
	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC	ALPHA	NUMERIC
1	ERROR RESET							
2	MULTI PUNCH							
3	NUMERIC							
4	Q	+	11-8	12-8-6	13-9	12-8-6		
5	A		12-1		15-3			
6	@	#	8-4	8-3	9-7	8-2		
7	Z		0-9		1-11			
8	W	-	0-6	0-8-5	14	14-8-4	X	
9	S	>	0-2	0-8-6	14	14-8-6	X	
10	%	,	0-8-4	0-8-3	14-9-7	14-8-2		
11	X	?	0-7	0-8-7	14	14-8	X X	
12	E	)	12-5	11-8-5	15	10-8	X X
13	D	:	12-4	8-2	15-7	8	X X	
14	*	\$	11-8-4	11-8-3	7-9	8-2	X X	
15	C	"	12-3	8-7	15-5	8	X X	
16	R	¢	11-9	12-8-2	13-11	12-8	X	
17	F	;	12-6	11-8-6	15	10-8	X X	
18	<	.	12-8-4	12-8-3	9-7	8-2	X X	
19	V	=	0-5	6-8	1	8-6	X	
20	T	0-8-2	0-3	0-8-2	14-5	14-8	X	
21	G	—	12-7	11-8-7	15	10-8	X X	
22	MASTER CARD						X X	
23			12-2	11-8-2	10-8		X	
24	Y	!	0-8	12-8-7	1-9	12-8	X	
25	H	'	12-8	8-5	15-9	8-4		
26	DUP							
27	N	(	11-5	12-8-5	13	12-8	X X
28	U	1	0-4	1	1-7		X	
29	J	4	11-1	4	13-3		X	
30	-	-	11	11	13	10		
31	M	7	11-4	7	13-7		X	
32	I	2	12-9	2	15-11		X	
33	K	5	11-2	5	13	4	X	
34	/	0	0-1	0	14-3	14		
35	,	8	0-8-3	8	1-9-5	8		
36	0	3	11-6	3	13	2	X	
37	L	6	11-3	6	13-5	6		
38	SPACE						X X	
39	.	9	12-8-3	9	15-9-5		X	
40	P	&	11-7	12	13	12	X X	
41	SKIP						X X	
42	RELEASE						X X	
43	AUX DUP						X X	
44	FEED							
45	REGISTER						X X	
46	PROG 2							
47	ALPHA							
48	LEFT ZERO						X X	
49	LEFT ZERO						X X	
50	PROG 1							

ODD NUMBER BAILS ON RIGHT SIDE OF KEYBOARD
EVEN NUMBER BAILS ON LEFT SIDE OF KEYBOARD



INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME		7-13-65	205333			X PRINT TO ENG. SPEC. NO. 895291	02.29.10.0
SYSTEMS DIAGRAM		25 MAY 66	205639				
DESIGN	WT 52665	MODEL					
CHECK	LF 52665	DRAW	GT 4-19-65				
APPRO	RLJ 52665	CHECK	DJR 4-21-65				