

530032

MAGNETIC TAPE UNIT - TYPE 729 II & IV  
INDEX

00.01.0

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INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	MAGNETIC TAPE UNIT		3-31-59	244313A			X PRINT TO ENG. SPEC. NO. 895291  DWG. SIZE - B	530032
	INDEX		10-26-59	246414				
DESIGN		MODEL 729 II & IV	2-2-60	245843				
CHECK	NS	3-9-59	8-10-60	247249				
APPRO	YB	3-9-59						
								00.01.0

2-1889-68 REV. 10/62

DEFINANCE NO. 98 895291

530033

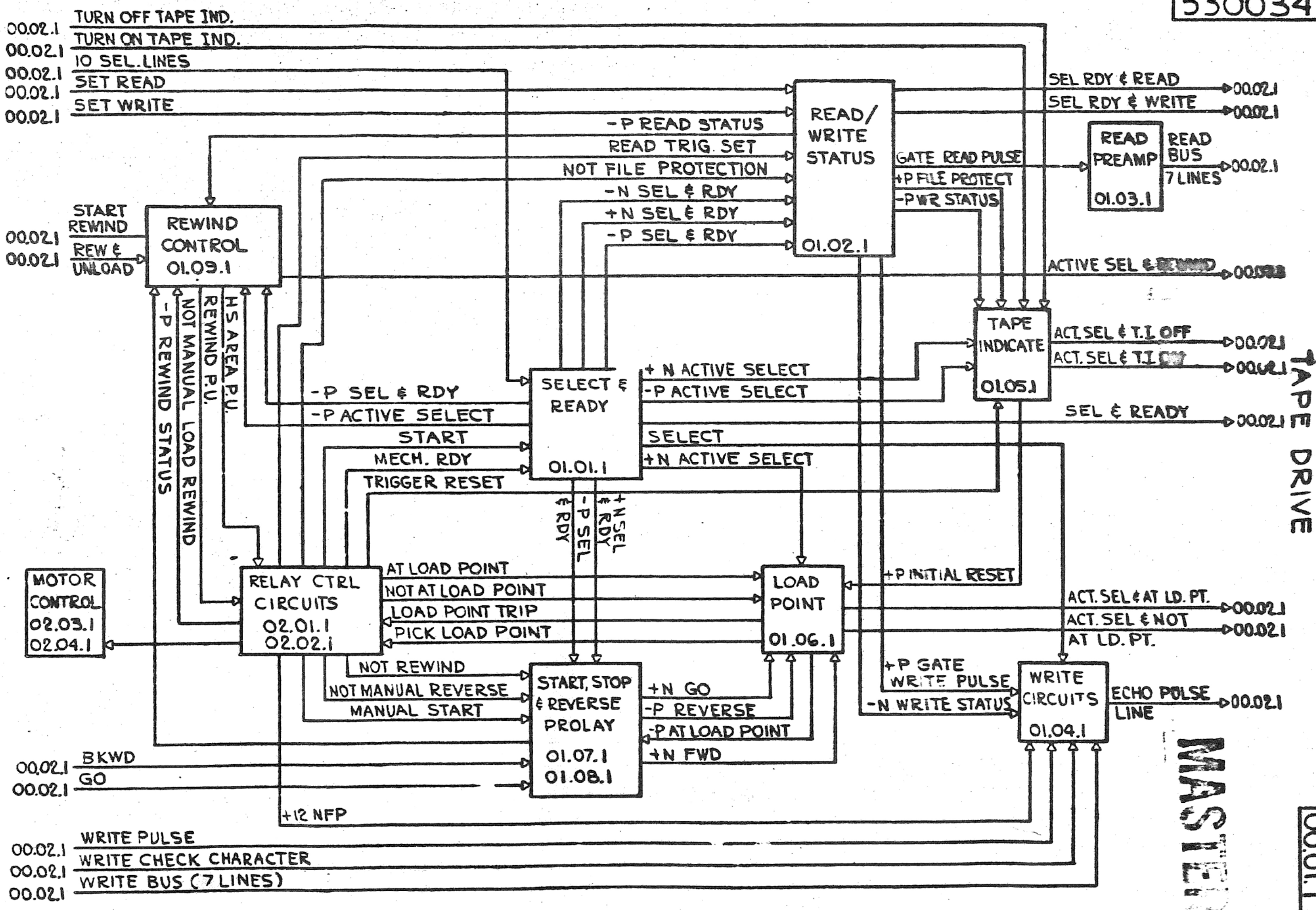
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MASTER

INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME			3-31-59	244313A			X PRINT TO ENG. SPEC. NO. 895291	
INDEX			10-26-59	246414				
DESIGN		MODEL	729 JL&JL				DWG. SIZE - B	00.01.0
DETAIL	GT.	2-14-59						
CHECK	1/5	3-9-59	DRAW					
APPRO	2/5	3-9-59	CHECK					

530033

INTERNATIONAL BUSINESS MACHINES CORP.		NAME	SYSTEMS DIAGRAM	DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
DESIGN	GT	00.01.1	MODEL	7291I & IV	3.31.59	2443/3A		X PRINT TO ENG. SEC. NO.	
CHECK	US	3-9-59	DRAW		10-13-59	246200		395291	
APPRO	MS	3-4-59	CHECK						
DWG. SIZE - B		00.01.1		530034					



TAPE DRIVE

MASTERS



530035

00.02.1

# MASTER

## T/C CONNECTOR RECEPTACLE

15	SHIELD	SET READ STATUS	SHIELD	SET WRITE STATUS	SHIELD	START REWIND	8 SHIELD	8 SHIELD	SHIELD	GO	SHIELD	TURN OFF T.I.	SHIELD	1 TURN ON T.I.	
30	SEL & NOT AT LD. PT.	SHIELD	SEL & AT LD. PT.	SHIELD	SEL & T.I. OFF	SHIELD	23 SEL & T.I. ON	SHIELD	SEL & RDY MOD II	SHIELD	SPARE	SHIELD	SPARE	16 SHIELD	
45	SHIELD	SET LO-DENSITY	SHIELD	SET HI-DENSITY	SHIELD	REWIND UNLOAD	38 SHIELD	SEL & REWIND	SHIELD	SEL RDY & WRITE	SHIELD	SEL RDY & READ	SHIELD	31 SEL & RDY MOD II	
60							53						HI-DENSITY LO-DENSITY	46 SHIELD	
75							68							61	
85	SHIELD	READ BUS 2	SHIELD	READ BUS 1	81						80	SEL T.U. 1	SHIELD	SEL T.U. 0	76 SHIELD
95	READ BUS B	SHIELD	READ BUS 4	SHIELD	91						90	SHIELD	SEL T.U. 3	SHIELD	86 SEL T.U. 2
105	SHIELD	READ BUS B	SHIELD	READ BUS A	101						100	SEL T.U. 5	SHIELD	SEL T.U. 4	96 SHIELD
115	SPARE	SHIELD	READ BUS C	SHIELD	111						110	SHIELD	SEL T.U. 7	SHIELD	106 SEL T.U. 6
125	SHIELD	SPARE	SHIELD	SPARE	121						120	SEL T.U. 9	SHIELD	SEL T.U. 8	116 SHIELD
140	-6V						133	+6V							126
155							148								141
170	-12V						163	GND							156
185	WRITE BUS C	SHIELD	WRITE BUS B	SHIELD	WRITE BUS A	SHIELD	178 WRITE BUS B	SHIELD	WRITE BUS 4	SHIELD	WRITE BUS 2	SHIELD	WRITE BUS 1	171 SHIELD	
200			SHIELD	WRITE PULSE	SHIELD	WRITE CHECK CHAR	193 SHIELD	WRITE ECHO PULSE	SHIELD	SPARE	SHIELD	SPARE	187 SHIELD	SPARE	

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE X PRINT TO ENG. SPEC. NO. 895291  DWG. SIZE - B	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		3-31-59	244313A	10-17-60	245842B		
00.02.1		7-10-59	245016				
DESIGN	MODEL 729 II 41%	10-26-59	245614				
DETAIL	G.T. 2-19-59	2-2-60	245843				
CHECK	NS 3-9-59	8-10-60	247249				
APPRO	NS 5-9-59						

00.02.1

530035

STANDARD NO. 88



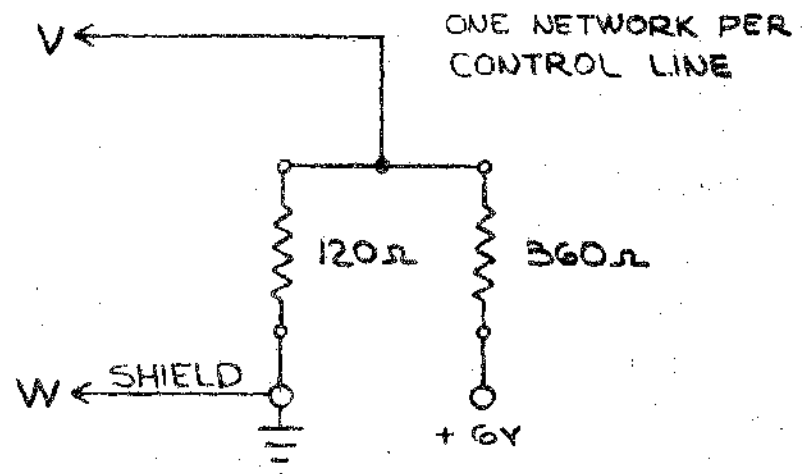
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# TAPE SIGNAL TERMINATOR

DISCONTINUED

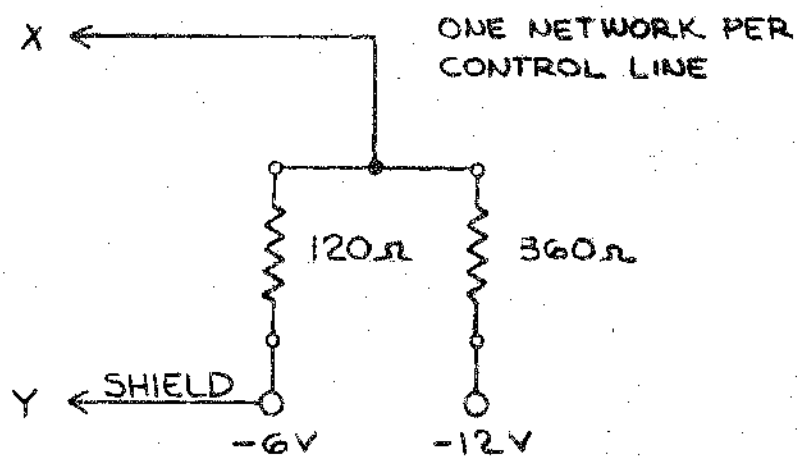
V	W
T/C 1	T/C 2
7	8
9	10
11	12
17	16
19	18
43	44
172	171
174	173
176	175
178	177
180	179
182	181
184	183
194	195
196	197

## "N" LINE COUPLING NETWORK



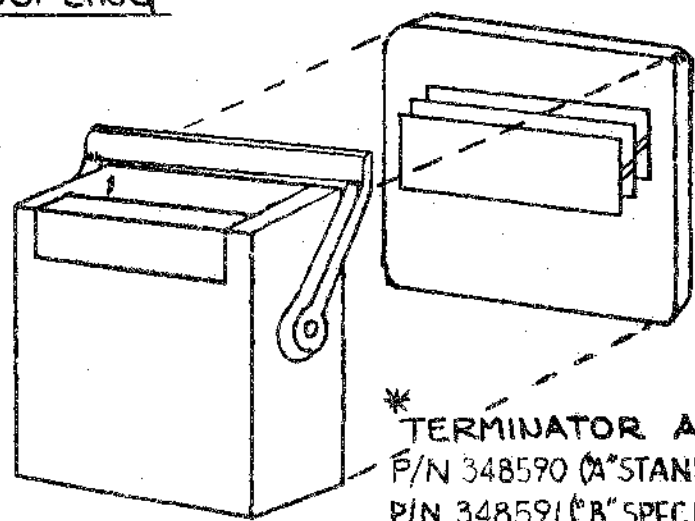
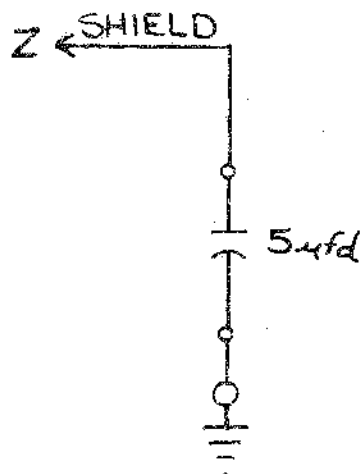
X	Y
T/C 3	T/C 4
5	6
13	14
39	40
41	42
77	76
79	78
86	87
88	89
97	96
99	98
106	107
108	109
117	116
119	118

## "P" LINE COUPLING NETWORK



## RESPONSE LINE DECOUPLING

Z
T/C 20
22
24
26
28
32
34
36
38
46
52
54
56
58
68
70
72
74
193



\* CONNECTED TO UNUSED TAPE UNIT SIGNAL CONNECTOR

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	4-5-60	247124			NOTE X PRINT TO ENG. SPEC. NO. 895291	00.02.2
	00.02.2	8-30-60	247963				
DESIGN	WB 1-27-60 MODEL 729 II, 4 IV	7-19-61	249230				
DETAIL	NS 1-27-60	11-30-61	250249				
CHECK	WB 1-27-60 DRAW						
APPROV	WB 3-1-60 CHECK						

9-6600-00-0000

U.S. CO. NO. 187509

535311

530036

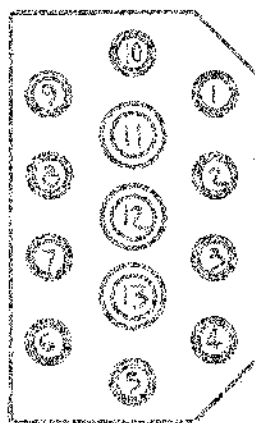
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MASTER

TAPE POWER CONNECTORS

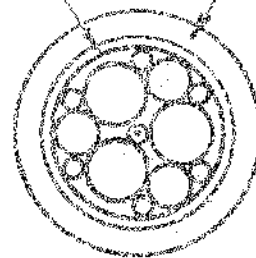
POWER PLUG PIN ASSIGNMENTS				
TAPE UNIT		POWER CABLE		SYSTEMS PAGE
PIN NO.	VOLTAGE OR CONTROL	WIRE SIZE	TYPE	
1	AC OUTLET - 115 VOLTS	14	AC	02.04.1
2	AC OUTLET - 115 VOLTS	14	AC	02.04.1
3	BOND	14		02.04.1
4	SPARE	18		
5	MODEL II & III RESET - 208 VOLTS	18	AC	02.04.1
6	SPARE	18		
7	SPARE	18		
8	SPARE	18		
9	SPARE	18		
10	MODEL I & IV RESET - 208 VOLTS	18	AC	02.04.1
11	UNREG AC #1	10	AC	02.04.1
12	UNREG AC #2	10	AC	02.04.1
13	UNREG AC #3	10	AC	02.04.1

POWER PLUG PIN ASSIGNMENTS



PIN LAYOUT - POWER PLUG - MALE

WRAPPER OUTER JACKET



POWER CABLE CROSS SECTION VIEW

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			8-31-59	244313A			E PRINT TO ENG. SPEC. NO. 895291	
	00.03.1			2-2-60	245543				
DESIGN		MODEL	725 II & III					DWG. SIZE - 8	
DETAIL	CA.T.	7-16-59							
CHECK	AS	3-2-59	DRAW						
APPRO	AS	3-4-59	CHECK						00.03.1

530036

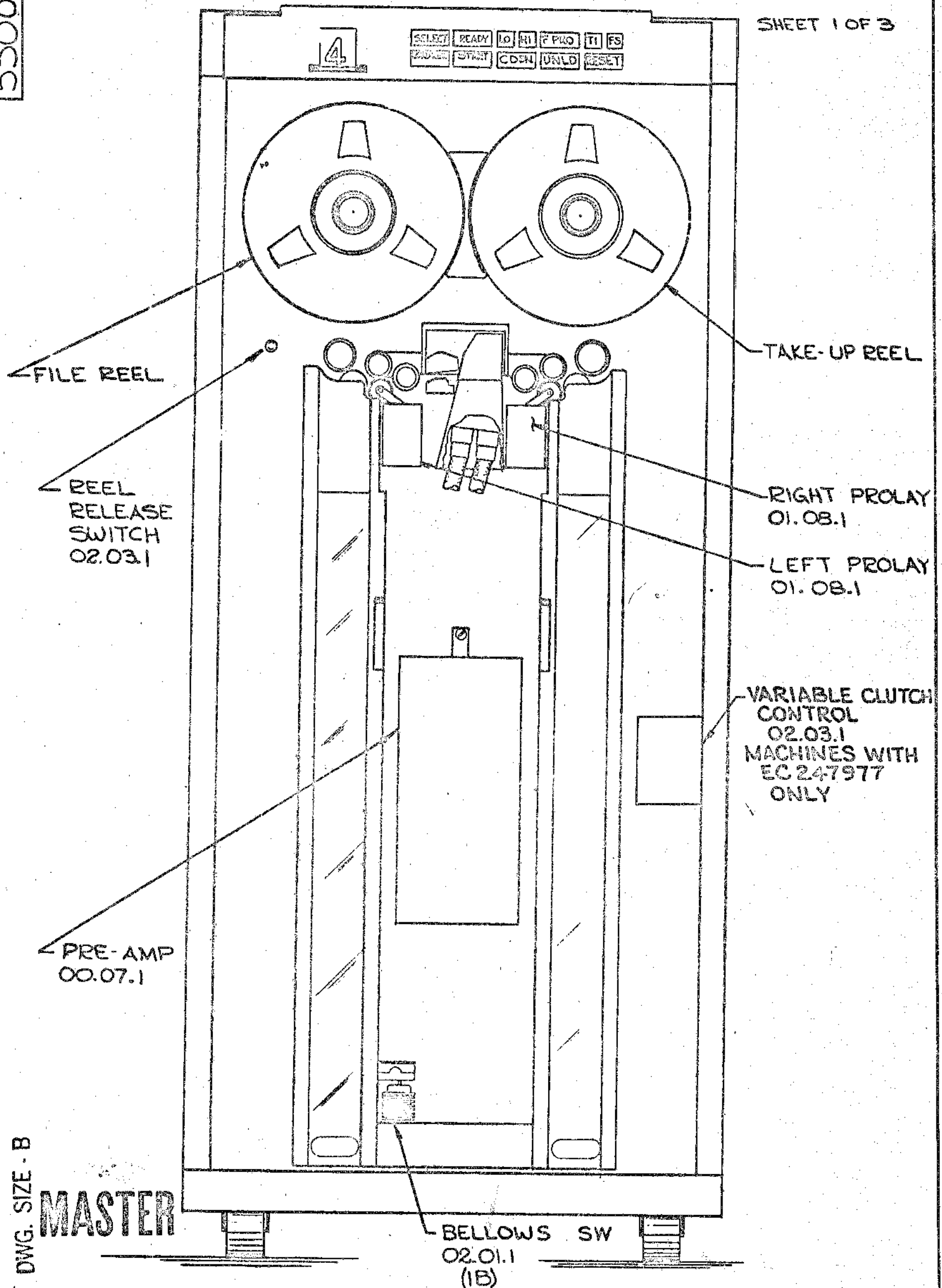
REPLACES INT. 80 0485

530037

# ASSEMBLY LOCATION FRONT

00.04.1

SHEET 1 OF 3



INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEM DIAGRAM		3-19-59	244313-A	12-19-60	247977	X PRINT TO ENG. SPEC. NO. 895291	
	00.04.1		11-28-59	246413				
DESIGN		MODEL 729II&IV	2-2-60	245843				
DETAIL	GT	2-14-59	5-19-60	247454-A				
CHECK	NS	3-9-59 DRAW	8-10-60	247249				
APPRO	WB	3-9-59 CHECK						

00.04.1

530037

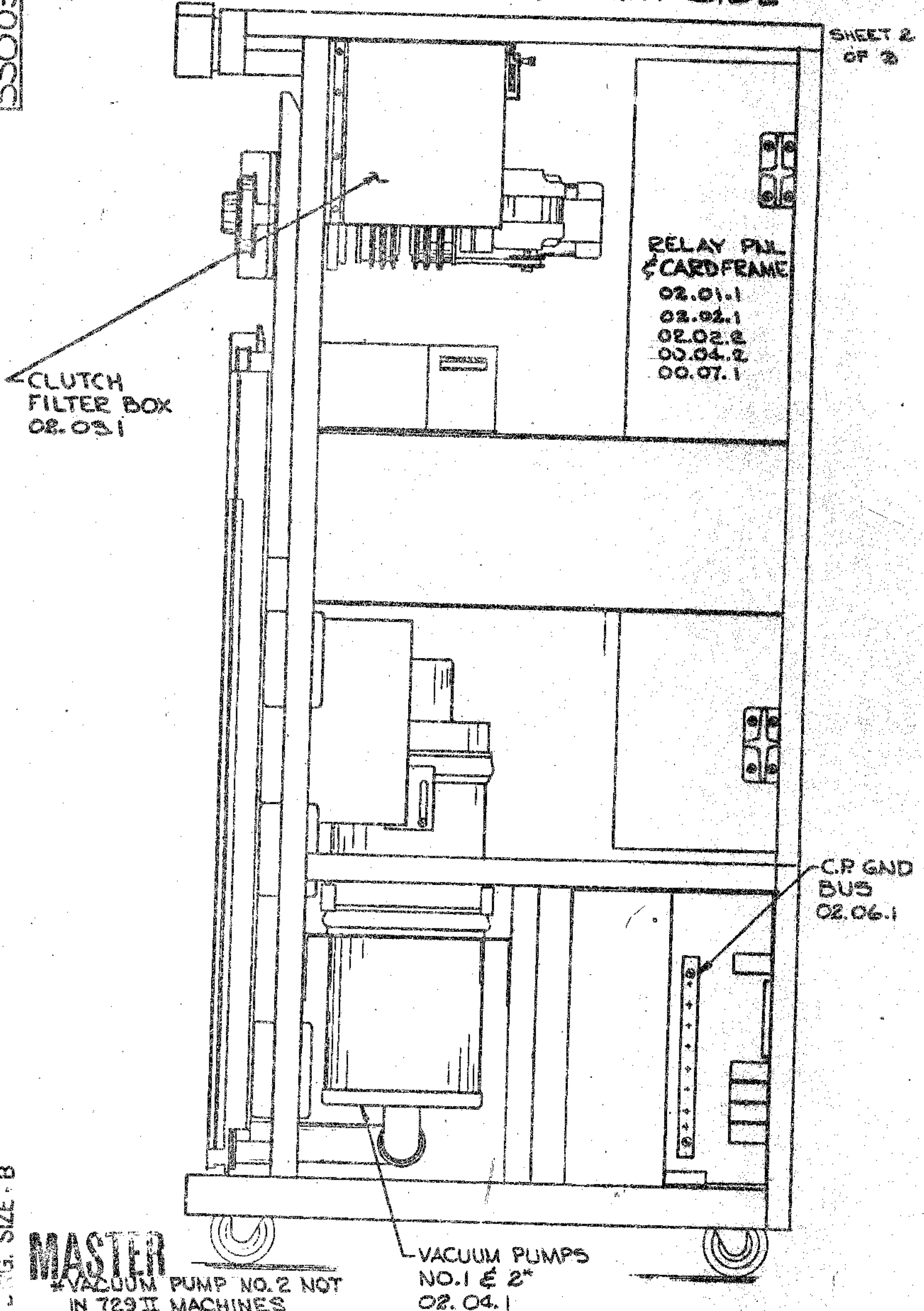


530037

ASSEMBLY LOCATION, RIGHT SIDE

00.04.1

SHEET 2  
OF 2



ENG. SIZE - B

**MASTER**

\*VACUUM PUMP NO. 2 NOT IN 729 II MACHINES

VACUUM PUMPS NO. 1 & 2\* 02.04.1

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	3-13-59	244313-A	12-19-60	247977	X PRINT TO ENG. SPEC. NO. 595291	00.04.1
	00.04.1	11-28-59	246413				
DESIGN		MODEL	729 II & IV				
DETAIL	GT 2-14-59						
CHECK	NS 3-5-59	DRAW		5-19-60	247454-A		
APPRO	WB 3-9-59	CHECK		8-10-60	247249		

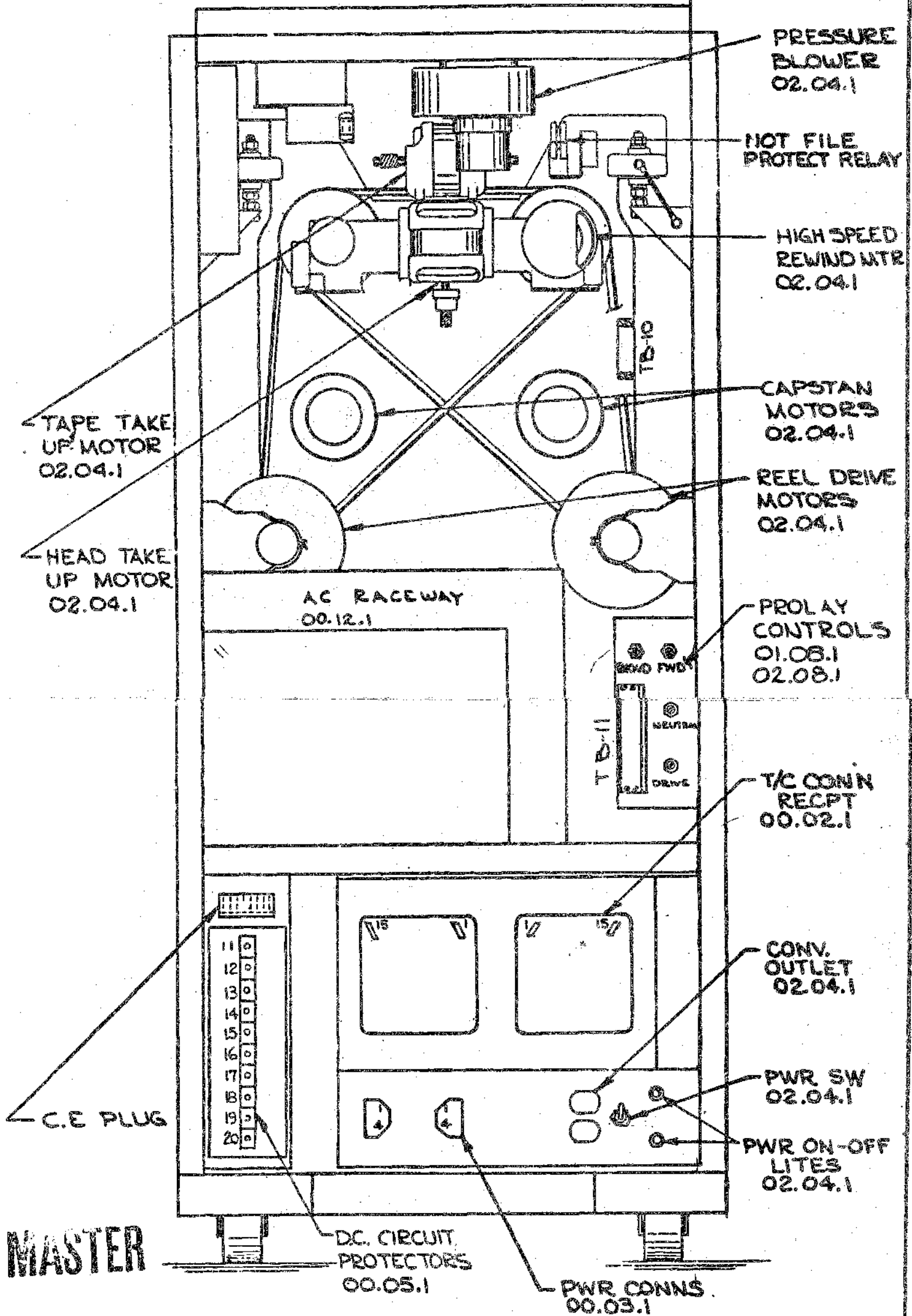
530037

530037

ASSEMBLY LOCATION, REAR

00.04.1

SHEET 3 OF 3



DWG. SIZE - B

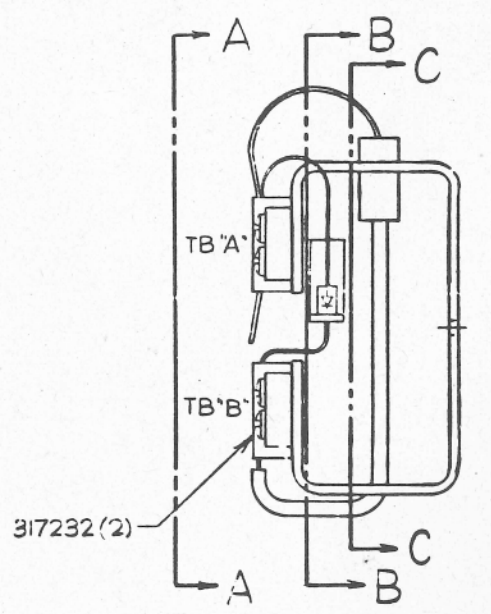
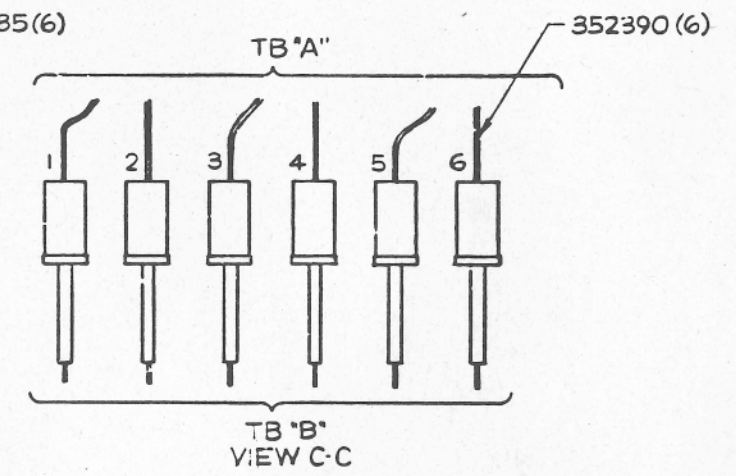
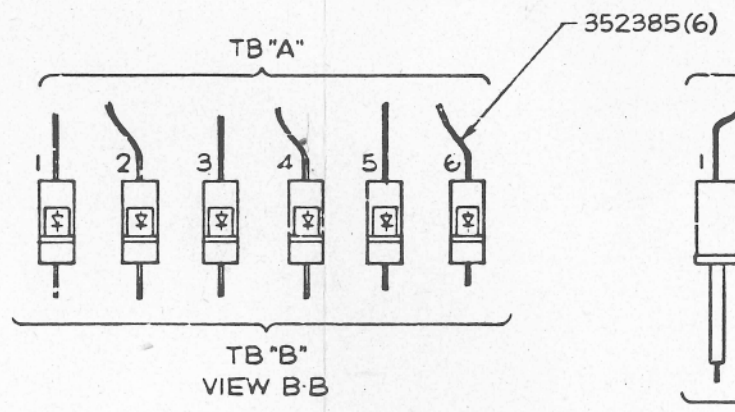
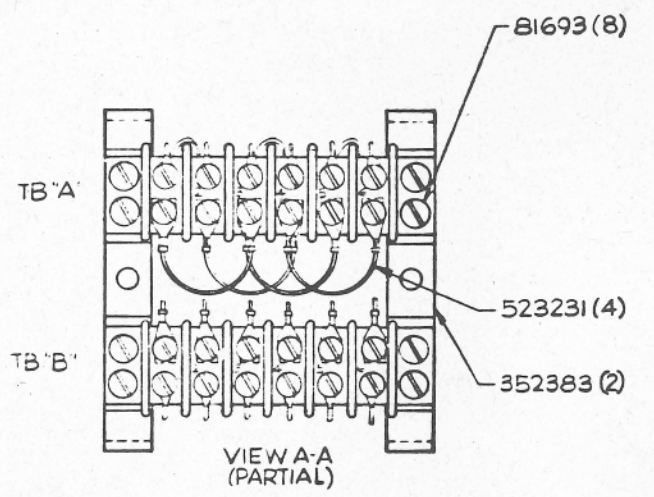
MASTER

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		3-13-59	244313-A	12-19-60	247977	X PRINT TO ENG. SPEC. NO. 89529)	
00.04.1		11-28-59	246413				
DESIGN	MODEL 729II&IV	2-2-60	245843				
DETAIL ST	2-14-59	5-19-60	247454-A				
CHECK MS	3-9-59	8-10-60	247249				
APPRO WB	3-9-59	CHECK					00.04.1

530037

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	ELEC			10-16-61	248593						352384	1
528010	1	MET											
		PLASTIC											
		FINISH											

352384



COMPONENT	FROM	TO
DIODE*1	B-1	A-1
DIODE*2	B-2	A-1
DIODE*3	B-3	A-3
DIODE*4	B-4	A-3
DIODE*5	B-5	A-5
DIODE*6	B-6	A-5
R/C*1	B-1	A-2
R/C*2	B-2	A-2
R/C*3	B-3	A-4
R/C*4	B-4	A-4
R/C*5	B-5	A-6
R/C*6	B-6	A-6

352384

352384

IBM MATERIAL	NO	TOLERANCE UNLESS OTHERWISE NOTED	2 PLACE DEC ±	MUST CONFORM TO ENG SPEC 890350	INTERNATIONAL BUSINESS MACHINES CORP
CASE DEPTH			3 PLACE DEC ±	ALIGNMENT WITHIN NOTE I	NAME CLUTCH FILTER CIRCUIT
HARDNESS			ANGLES ±	CONC TO DU WITHIN TIR NOTE II	ASSEMBLY
SURFACE TREATMENT		CORNERS AND / OR EDGES BROKEN	OUTSIDE MAX	FLAT WITHIN NOTE III	DESIGN A P 6-12-61 TYPE 729 II & IV
		RADI UNLESS OTHERWISE NOTED	INSIDE MAX	PARALLEL TO DU WITHIN NOTE IV	DETAIL I I I 6-19-61 SCALE
				STRAIGHT WITHIN NOTE V	CHECK ELD 6-19-61 DRAW
				SQUARE TO DU WITHIN NOTE VI	APPRO A G V 8-30-61 CHECK

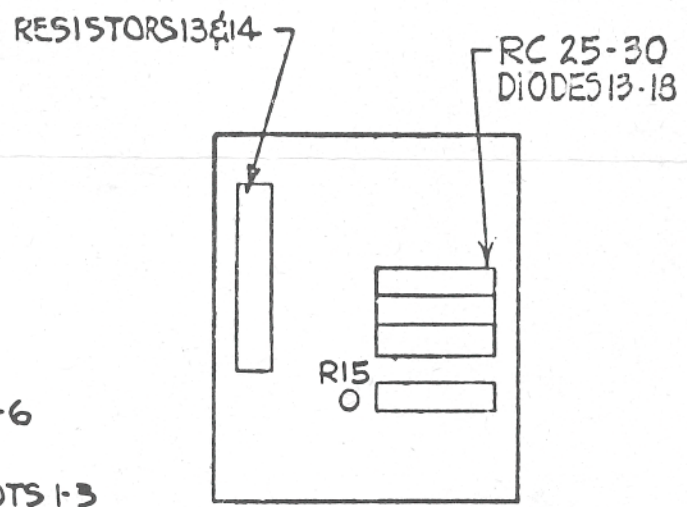
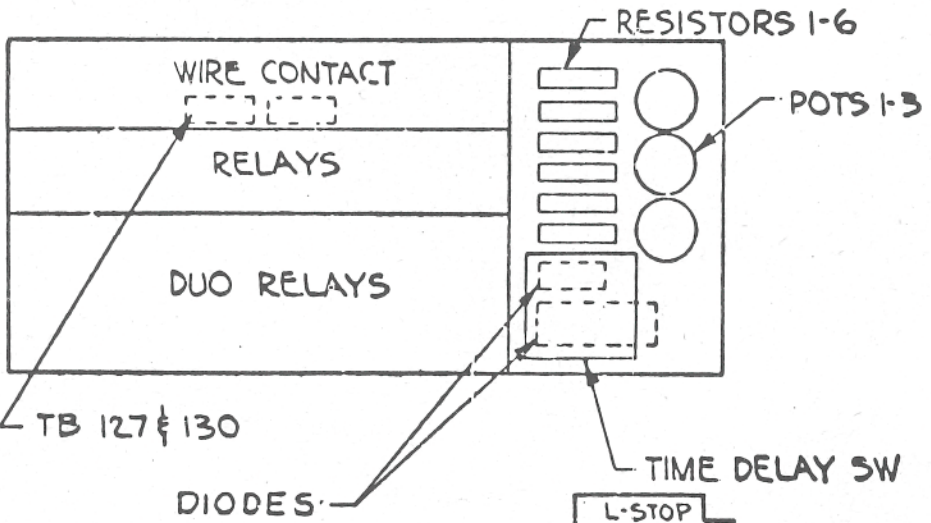
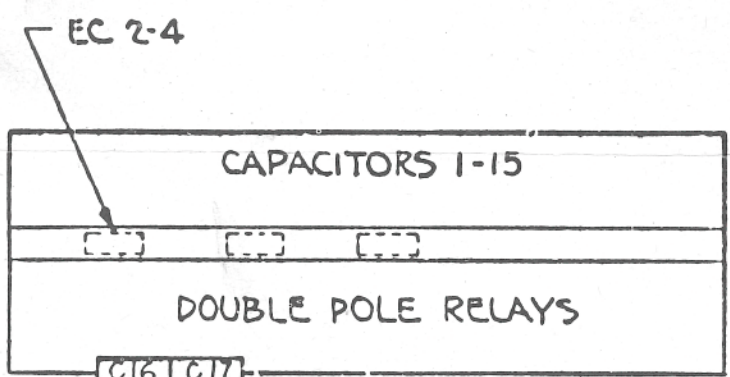
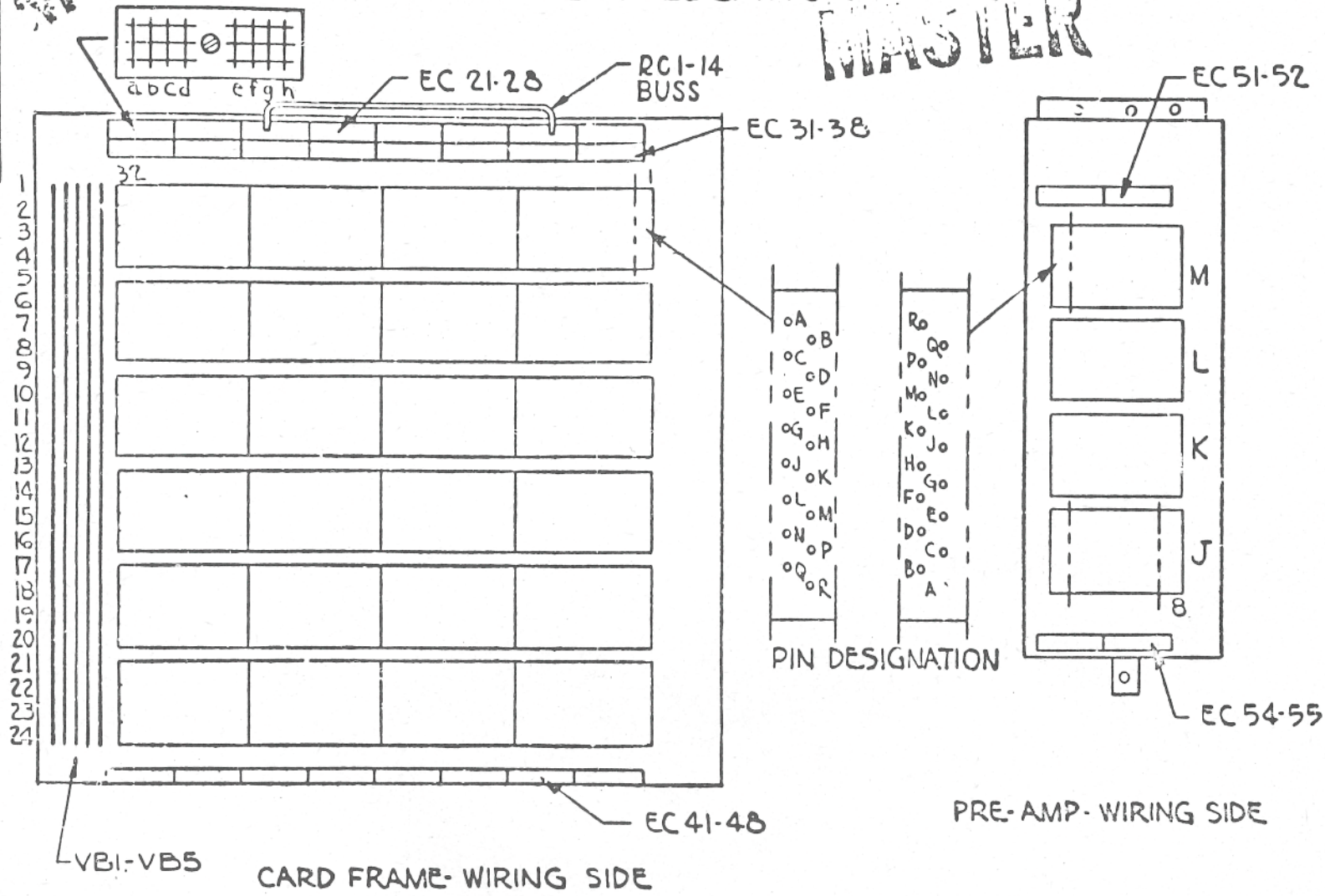


530038

COMPONENT LOCATION

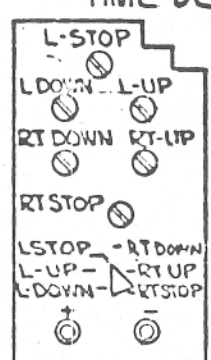
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MASTER

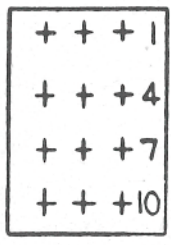


CLUTCH FILTER BOX

DISCONTINUED



VARIABLE CLUTCH CONTROL ASM (MACHINES WITH EC 247977)



INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM		3-31-59	244313A	12-19-60	247977	X PRINT TO ENG. SPEC. NO. 895291	
	00.04.2		9-21-59	246204-A	7-19-61	249230		
DESIGN		MODEL 729 II & IV	2-3-60	246412	10-16-61	248593		
CHECK	NS	3-8-59	6-29-60	247723				
APPRO	NS	3-9-59	12-1-60	248610				

DWG. SIZE - B

00.04.2

530038

DETAILED NO. 88

530039

## CIRCUIT PROTECTOR CHART

00.05.1

MOTOR

## AC. C.P.

C.P. #	VOLTAGE	CURRENT	FUNCTION	PART NO.
1	208	7A	Ø 1 LINE	535296
2		4A	Ø 1 POWER SUPPLY	535295
3		8A	Ø 2 LINE	524179
4		7A	Ø 3 LINE	535296
5		2A	Ø 3 GATE BLOWER	535294
6		2A	Ø 3 VAC. PUMP & PRES. BLOWER	
7		2A	Ø 2 GATE BLOWER	
8		2A	Ø 2 VAC. PUMP & PRES. BLOWER	
9		2A	Ø 2 CAP TAKE UP	
10	208	2A	Ø 3 CAP TAKE UP	535294

DC. C.P.  
MACHINES WITH PHASE I & II POWER SUPPLYCP'S  
LOCATED  
IN POWER  
SUPPLY

C.P. NO.	VOLTAGE	CURRENT	WIRE COLOR	PART NO.
11	-48	2A	WHITE/ORANGE	535294
12	-12	3.5A	VIOLET	597450
13	-6	3.5A	BROWN	597450
14	+6	4.0A	ORANGE	597452
15	+12	3.5A	GRAY	597450
16	-75	20A	BLUE	535297
17	+62	0.5A	WHITE/BLACK	535290
18	+140F	0.5A	PINK	535290
19	+140	1A	RED	535292
20	-485P	0.5A	WHITE/RED	535290

MACHINES  
WITH PHASE IID.C. C.P.  
MACHINES WITH PHASE III POWER SUPPLY

C.P. NO.	VOLTAGE	CURRENT	WIRE COLOR	PART NO.
11	-48	2.0	WHITE /ORANGE	535294
12	-12	3.5	VIOLET	597450
13	-6	3.5	BROWN	597450
14	+6	3.5	ORANGE	597450
15	+12	3.5	GRAY	597450
16	-75	20.0	BLUE	535297
17	+62	0.5	WHITE/BLACK	535290
18	+140F	0.5	PINK	535290
19	+140	1.0	RED	535292
20	-485P	0.5	WHITE/RED	535290

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	3-31-59	244313A			X PRINT TO ENG. SPEC. NO. 895291  DWG. SIZE - B	00.05.1
	00.05.1	11-10-59	246406				
DESIGN		5-19-60	247434-A				
DETAIL	SI 2-13-59	9-12-60	247455-B				
CHECK	MS 3-2-59	12-21-60	248692				
APPRO	MS 3-4-59						

P. 1 OF 1

530039



530053

LOCATION CHARTS

00.06.1

SHEET 1 OF 2

WIRE CONTACT RELAYS

**MASTER**

RELAY NO.	SIZE	TYPE	PART NO.	COILS		POINTS						NAME	NEON NO.
				PU	LT	1	2	3	4	5	6		
101	6	S	198197	4D		1A	3B	1C	4D	3A	2A	LOAD REW-2	3
102	6	S	198197	3D		2D	3A	2D	1A	3A		UNLOAD-2	39
104	6	S	198197	3B		1C	3B	3A	1B	2A	2D	REW STATUS-1	2
106	6	S	198197	3B		1K	3B	2B	4A	2A		START	
107	4	L	186685	4B	3B	2A	1B	4C	1D			UNLOAD-1	40
109	4	L	186685	2D	1D	1C	4D	2A	4B			UNLOAD STOP-1	43
110	4	S	196207	4B		4A	4C	4C	1K			REMOVE INITIAL RESET	6
111	4	S	196207	4C		4D	1D	3A				REWIND P.U.	5
112	4	S	196207	2D		2A		2A	2A			NOT FILE PROTECT-2	
113	4	S	196207	2D		2F	2D					H.S. REW STATUS	25
114	6	S	196197	2D		4A	3E	2D				H.S. REW INTLK	24
116	4	L	186685	4C	4C	1C	4D	3B	3C			LOAD POINT	15
117	4	S	196207	3D		3B	4D	1D	2A			CAPSTANS OUT	16
119	4	S	196207	1D		3C						MAN. GO	20
120	4	S	196207	1B		4B	4D	4C	2C			CLUTCH STATUS-2	36
121	4	S	196207	4C		3A	1B	2D				H.S. REW AREA	26
122	4	S	196207	3D				2A	1C			UNLOAD-3	38
123	4	L	186685	4C	1D	3C	1C	2A				REW & UNLOAD	29
124	4	S	196207	4D			3A					CE. PLUG	27
125	4	L	186685	1J	2J	1J	1J	1J	2K			DEN. STATUS-1	
126	4	L	186685	1J	1J	1J	1J	1J				DEN. STATUS-2	
127	4	L	186685	1J	1J	2J	1J					DEN. STATUS-3	

DUO RELAYS

RELAY NO.	PART NO.	COIL P.U.	POINTS				NAME	NEON NO.
			AU	AL	BU	BL		
1	124843	1B	2A	3B	2E	2F	RUN	
2		1B	3C	2E	2F	4B	CLUTCH STATUS-1	37
3		4D		3B	3C	1B	LOAD REW-1	4
4		3B	1B	3B	4D	3A	H.S. REW END	1
5		3D	1A	1D	2C	2E	TAPE OUT LT. COL.	44
6		3D	1A	1C	2C	2F	TAPE OUT RT. COL.	44
7		4C		1B	4C	4C	PHOTO LAMP	13
8		1B	1G	1D	2C		TIME DELAY MOTOR	12
9		3B		2E			REW STATUS-2	
NFP	124843	2B		2B		2A	NOT FILE PROTECT-1	

DOUBLE POLE RELAYS

RELAY NO.	PART NO.	COIL P.U.	POINTS		NAME
			A	B	
DP1	223642	1B		1G	PHASE 1
DP2		1B	1H	1H	PHASE 2 & 3
DP3		3D	2H	2H	CAPSTAN MOTORS
DP4		1D	1H	1G	VACUUM MOTOR
DP5		2D	2G	2G	REWIND MOTOR
DP6		3D	2H	2H	TAPE TAKE-UP START
DP7		3B	2H	2H	TAPE TAKE-UP REVERSE
DP8	223642	2D	2H	2H	HEAD TAKE-UP MTR

CONTACTOR

NO.	PART NO.	LOC.	NAME
K1	369224	02.04.1	POWER ON

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE X PRINT TO ENG. SPEC. NO. 895291	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		3-31-59	244313A	6-29-60	247723		
00.06.1		7-10-59	246016	7-12-60	247602	DWG. SIZE - B	00.06.1
DESIGN	MODEL 729 II	10-26-59	246414	8-10-60	247249		
DETAIL	G.T. 2-14-59	6-16-60	246407	2-11-61	247614		
CHECK	115 2-9-59	6-17-60	247734				
APPRO	Y13 3-9-59	CHECK					

FILED IN 530053

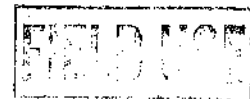
DRAWING NO. 530053



LOCATION CHARTS

KEYS AND SWITCHES

NAME	LOCATION	NEON #
CAPSTAN IN SWITCH-LEFT	02.02.1 (3C)	47
CAPSTAN IN SWITCH-RIGHT	02.02.1 (3C)	47
CAPSTAN OUT SWITCH-LEFT	02.02.1 (3D)	
CAPSTAN OUT SWITCH-RIGHT	02.02.1 (3C)	
DOOR CLOSED INTERLOCK	02.01.1 (2A)	
HEAD DOWN SWITCH	02.01.1 (1A)	18
HEAD UP SWITCH	02.02.1 (2C)	46
H.S. REW THERMAL CUT OUT	02.01.1 (3A)	
LOAD REWIND P.B.	02.01.1 (4A)	
REEL RELEASE P.B.	02.03.1 (2F)	
RESET P.B.	02.01.1 (3A)	
START P.B.	02.01.1 (3A)	
TAPE IN COL SW-LEFT	02.02.1 (3C)	9
TAPE IN COL SW- RIGHT	02.02.1 (3C)	8
TIME DELAY SW	02.02.1 (2D)	19
UNLOAD P.B.	02.01.1 (4A)	
VACUUM COL SW-LEFT	02.03.1	
VACUUM COL SW-RIGHT	02.03.1	
VACUUM OFF BELLOW SW	02.01.1 (1B)	11
SELECTOR SW	02.02.2 (3J)	
CHANGE DENSITY P.B.	02.02.2 (1K)	
POWER ON-OFF SW.	02.04.1 (2G)	



LIGHTS AND LAMPS

NAME	LOCATION
FILE PROTECT LIGHT	02.01.1 (2B)
FUSE LIGHT	02.02.2 (3K)
H.S. AREA LAMP	01.09.1
LOAD POINT LAMP	02.02.1 (4D)
READY LIGHT	02.01.1 (2B)
SELECT LIGHT	01.01.1
TAPE BREAK LAMP	02.02.1 (4D)
TAPE INDICATE LAMP	02.02.1 (4D)
TAPE INDICATE ON LIGHT	01.05.1
ADDRESS LIGHT	02.01.1 (2A)
POWER OFF LIGHT	02.04.1 (1G)
POWER ON LIGHT	02.04.1 (1G)
HI AND LO DENSITY LIGHTS	02.02.2 (2K)

DIODES \*\*

NO	PART NO	LOC
1	315902	3B
2	315902	3B
3	315902	4A
4	315902	2C
5	315902	1B
6	315902	1C
7	315902	3B
8	315902	3B
9	315902	3B
10	315902	4B
11	333264	02.08.1
12	333264	02.08.1
13-18	352385	02.03.1
19-20	352385	02.03.1

POTENTIOMETERS

NO.	PART NO.	LOC.	NAME
1	528154	01.09.1	H.S. AREA LAMP
2	333198	02.02.1	PHOTO LAMP
3	535673	02.03.1	STOP CLUTCH- RIGHT
4	528459	02.08.1	PROLAY- NEUTRAL
5	528481	02.08.1	PROLAY-DRIVE
6	527738	02.08.1	BKWD GO DELAY
7	527738	02.08.1	FWD GO DELAY
* 8	352396	02.03.1	STOP CLUTCH-LEFT
* 9	352396	02.03.1	STOP CLUTCH-RIGHT
* 10	352397	02.03.1	UP CLUTCH- RIGHT
* 11	352397	02.03.1	DOWN CLUTCH- RIGHT
* 12	352397	02.03.1	UP CLUTCH- LEFT
* 13	352397	02.03.1	DOWN CLUTCH- LEFT

PHOTO CELLS

NAME	LOC.
H.S. AREA	01.09.1
LOAD POINT AND TAPE BREAK	01.06.1
TAPE IND.	01.05.1

\*\* IN92 DIODE (\*\* 352375 ASM) ACROSS COILS OF DP2-DP8

\* MACHINES WITH EC 247977 ONLY

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.		
NAME SYSTEMS DIAGRAM		3-31-59	244313-A	10-4-60	247602-B	* PRINT TO ENG. SPEC. NO. 895291	530054		
00.06.1		7-10-59	246016	12-21-60	247977				
DESIGN	MODEL 729 II	9-28-59	246189	7-19-61	249230	DWG. SET C	00.06.1		
DETAIL	GT 2-13-59	10-27-59	246414	10-16-61	248593				
CHECK	NS 3-9-59	APPRO	VP 3-9-59	CHECK	JFT 12-23-60			6-4-60	246407

530055

# LOCATION CHART

00.07.1

CARD FRAME

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
A	371204	022																															
B			371206																														
C									371209	051																							
D																																	
E				371428	051																												
F				371200	051																												
G				371213	051																												
H				371204	051																												
I								371209	051																								
J																																	
K																																	
L																																	
M																																	
N																																	
O																																	
P																																	
Q																																	
R																																	
S																																	
T																																	
U																																	
V																																	
W																																	
X																																	
Y																																	
Z																																	

W. J. LEM

**NOTE:**

ALL INDEX NUMBERS PREFIXED BY O!  
 \* CARD IN C18 LOCATION REQUIRE TWO SPACES.  
 SCHEMATIC DESIGNATION 04.1 ON CARD 371204 AT LOCATION D15 REFERS ONLY TO MACHINES WITH EC248974.

# CARDS NOT IN MACHINES WITH EC. 249224 (SINGLE DELAY LINE)

1 2 3 4 5 6 7 8

	1	2	3	4	5	6	7	8
M	370100	051	370099	031	371432	031		
K								
C								
J								
G								
F								
E								
D								
C								
B								
A								

PRE-AMP

**POWER TRANSISTORS**

1	2	3	4
528405 08.1	528405 08.1	528405 08.1	
528405 08.1	528405 08.1	528405 08.1	B
528455 05.1, 06.1, 09.1	528455 05.1, 06.1, 09.1	528455 05.1, 06.1, 09.1	12

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		SEE INDEX CARD		5-16-61	24922.4	X PRINT TO ENG. SPEC. NO. 895291	
DESIGN		9-9-60 247125					
DETAIL G.T. 215-59		MODEL 729 II					
CHECK NS 3-9-59 DRAW		11-21-60 248328					
APPRO 2B 3-9-59 CHECK		1-27-61 248710					
		4-19-61 248974					
						DWG. SIZE - B	00.07.1

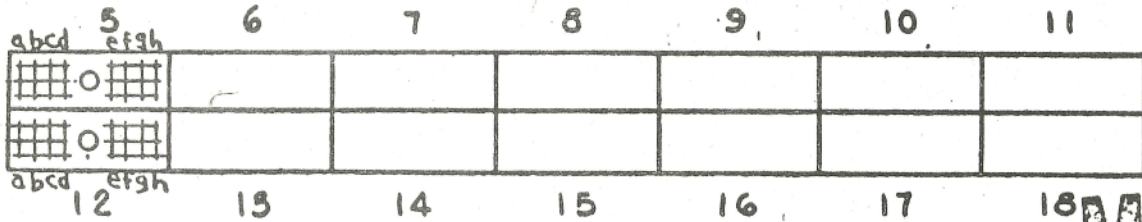
530055



530056

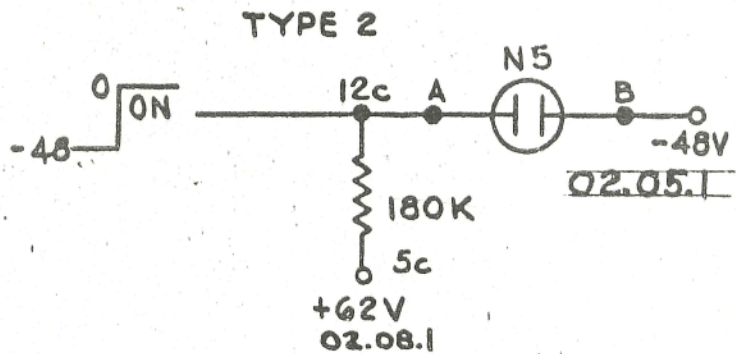
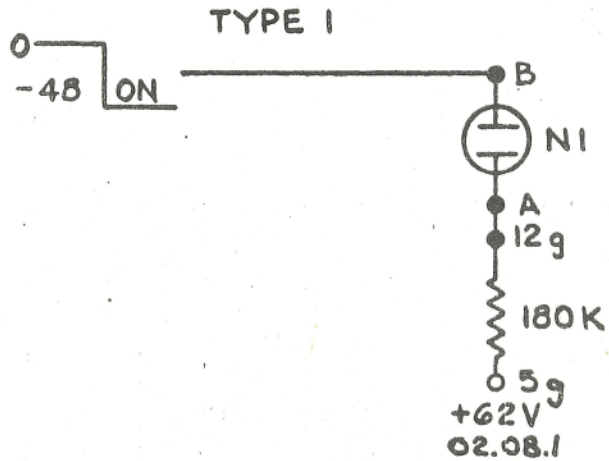
NEON PANEL

00.08.1

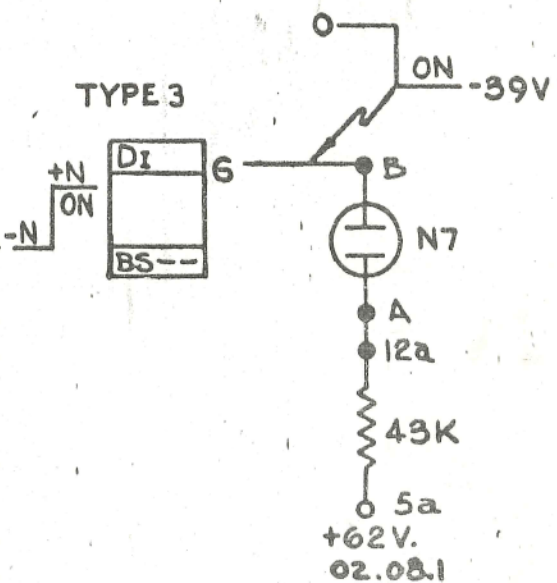


MASTER

- N1 R4
- N2 R104
- N3 R101
- N4 R3
- N5 R111
- N6 R110
- N7 WR1
- N8 TAPE IN RT COL.
- N9 TAPE IN LEFT COL.
- N10 BEL SW
- N11 R8
- N12 R7
- N13 WR-2
- N15 R116
- N16 R117
- N17 CAP OUT SW
- N18 HEAD DOWN
- N19 TD SW. Delay
- N20 R119
- N21 WR4
- N22 R114
- N23 R113
- N24 R121
- N25 R124
- N26 WR3
- N29 R123
- N30
- N31
- N32
- N33
- N34 WR STATUS
- N35 WRA
- N36 R120
- N37 R2
- N38 R122
- N39 -R102
- N40 R107
- N41 T.I. ON
- N42 WRB
- N43 R109
- N44 R5/R6
- N45 HEAD UP SW
- N46 CAP IN SW
- N47 ATLD PT
- N48 WR C
- N50
- N51
- N52
- N53
- N54
- N55
- N56



NO.	E.C.	TYPE CKT.	SYSTEM LOC.	NO.	E.C.	TYPE CKT.	SYSTEM LOC.
1	12g	1	02.01.1 (3B)	29	16c	3	
2	12f	1	02.01.1 (1B)	30	16b		
3	12e	2	02.01.1 (1A)	31	16a		
4	12d	1	02.02.1 (3C)	32	15h		
5	12c	2	02.02.1 (4D)	33	15g		
6	12b	1	02.02.1 (4C)	34	15f	3	01.02.1
7	12a	3	01.04.1	35	15e	3	01.04.1
8	13f	1	02.02.1 (3D)	36	17b	1	02.01.1 (1B)
9	13e	1	02.02.1 (3D)	37	17a	1	02.02.1 (3D)
10	13d			38	16h	1	02.02.1 (3D)
11	13c	1	02.01.1 (1B)	39	16g	1	02.01.1 (3A)
12	13b	1	02.01.1 (1B)	40	16f	1	02.02.1 (4C)
13	15a	2	02.02.1 (4C)	41	16e	3	01.05.1
14	12h	3	01.04.1	42	16d	3	01.04.1
15	14e	1	02.02.1 (3C)	43	18a	1	02.02.1 (1C)
16	14d	1	02.02.1 (4C)	44	17h	1	02.02.1 (2C)
17	14c	1	02.02.1 (3D)	45	17g		
18	14b	1	02.01.1 (1A)	46	17f	1	02.02.1 (2D)
19	14a	1	02.02.1 (3D)	47	17e	1	02.02.1 (2C)
20	13h	1	02.02.1 (3C)	48	17d	3	01.06.1
21	13g	3	01.04.1	49	17c	3	01.04.1
22	15d			50	18h		
23	15c			51	18g		
24	15b	1	02.02.1 (2D)	52	18f		
25	15a	2	02.02.1 (2D)	53	18e		
26	14h	1	02.01.1 (3A)	54	18d		
27	14g	1	02.01.1 (3A)	55	18c		
28	14f	3	01.04.1	56	18b		



INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM				244313A			X PRINT TO ENG. SPEC. NO.	
00.08.1			2-2-60	245843			895291	
DESIGN	MODEL	729 II	6-16-60	246407				
DETAIL	GT	2-15-59	10-4-60	247602-B				
CHECK	NS	3-9-59						
APPRO	WB	3-9-59						
							DWG. SIZE - B	00.08.1

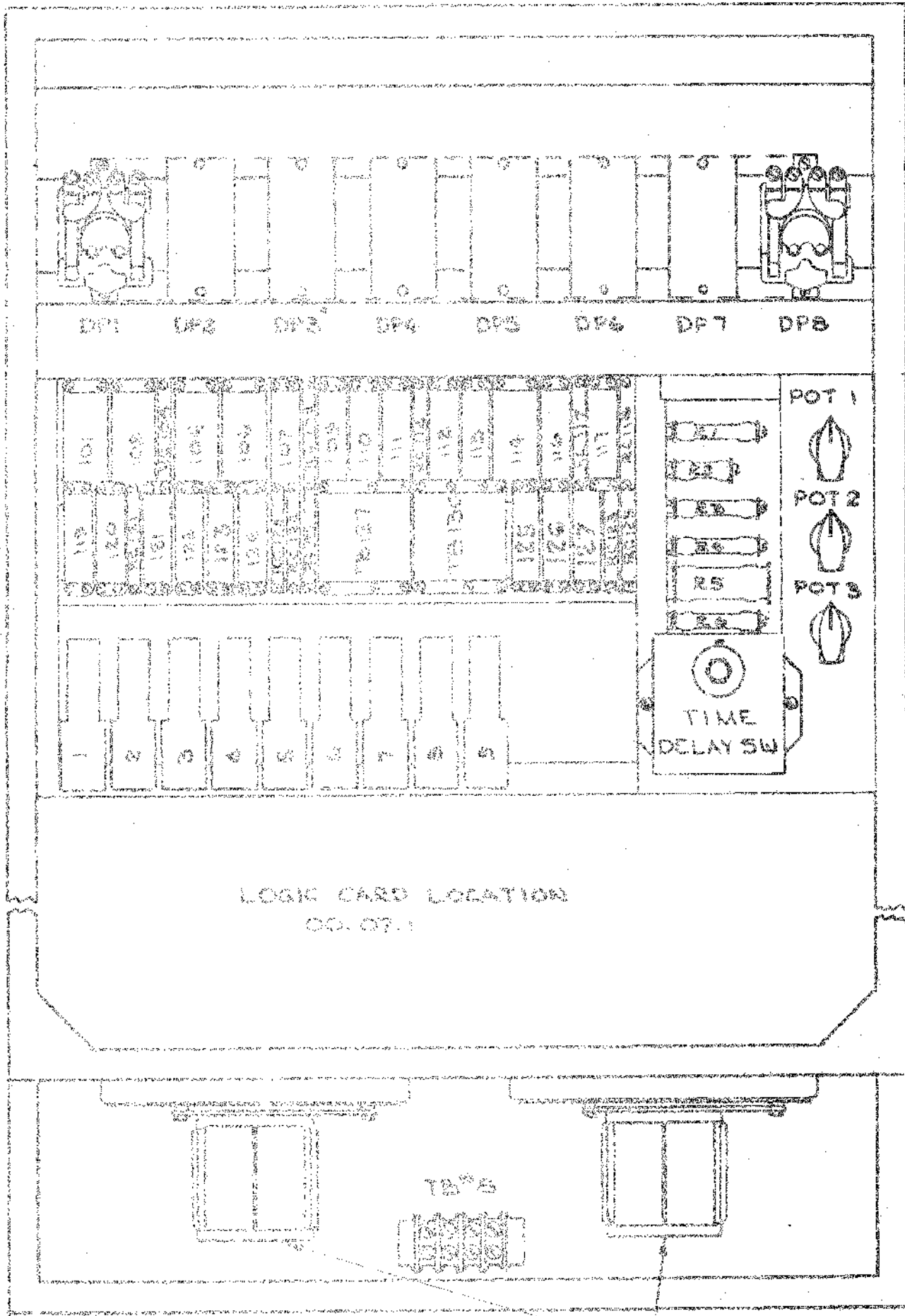
530056



526510

00.11.1

# RELAY GATE & BLOWERS



DWG. SIZE - B

**MASTER**

NOTE: SEE SYSTEMS  
DIAGRAMS 00.01.1, 00.02.1  
& 00.02.2 FOR RELAY LOGIC.

BLOWERS  
0204.1

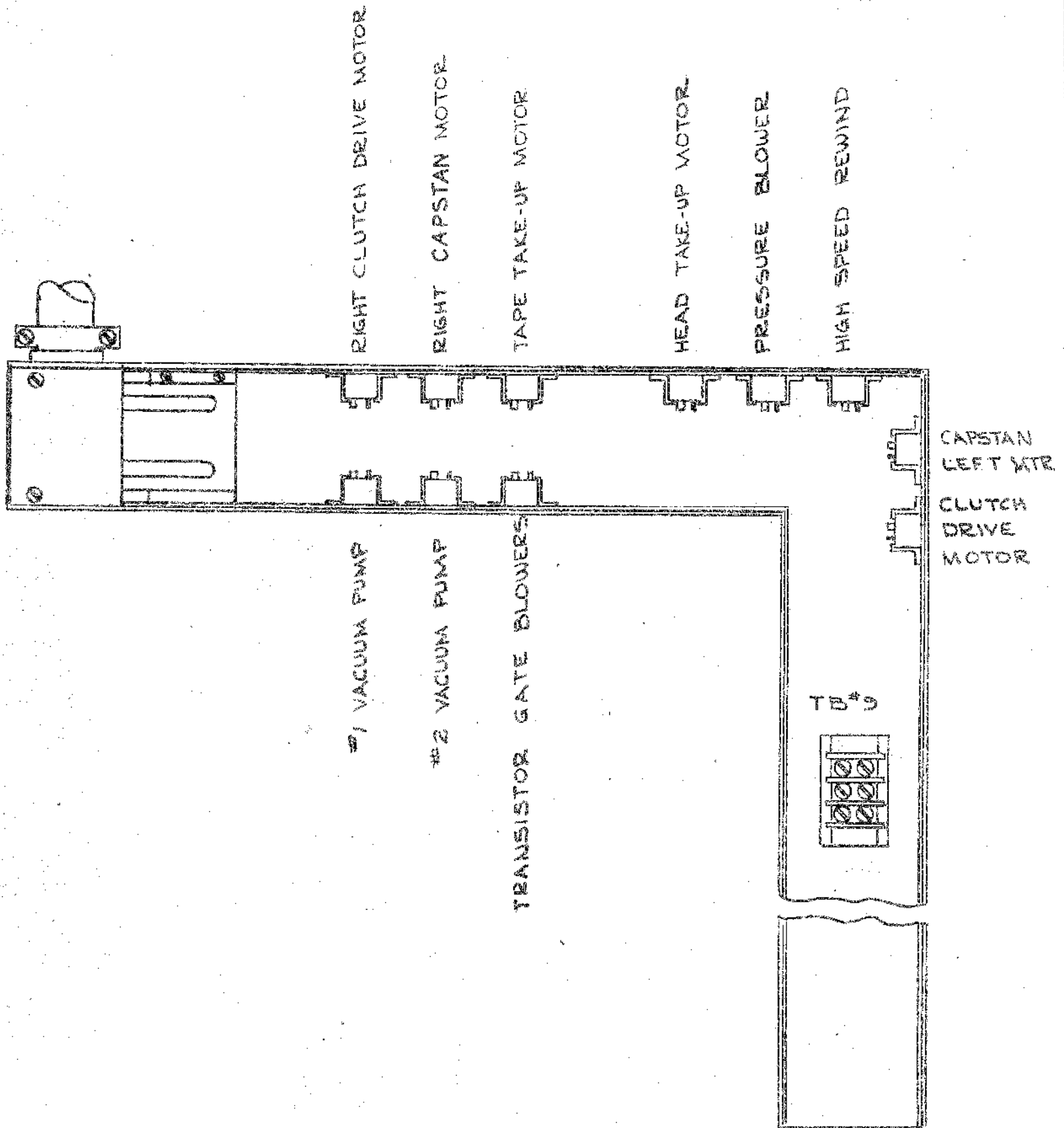
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	FIGURE NO.	REV.	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME: SYSTEMS DIAGRAM		10-3-50	245161			X PRINT TO IBM SPEC. NO. 855291	526510
00.11.1		10-3-50	245161				
DESIGN:		MODEL:	72001A17				
DESIGN:	HMM 4-9-50						
CHECK:	N.S. 10-20-50	DRAWN:					
APPRO:		CHECK:					00.11.1

530930

00.12.1

# A. C. RACEWAY

**MASTER**



INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHARGE NO.	DATE	CHARGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEM DIAGRAM	5-20-59	2448795			X PRINT TO ENG. SPEC. NO. 895291	
DESIGN	HMM 3-26-59	MODEL	72911				
DETAIL	HMM 3-26-59						
CHECK	KEE 4-27-59	DRAW					
APPRO	AP 7-27-59	CHECK					00.12.1

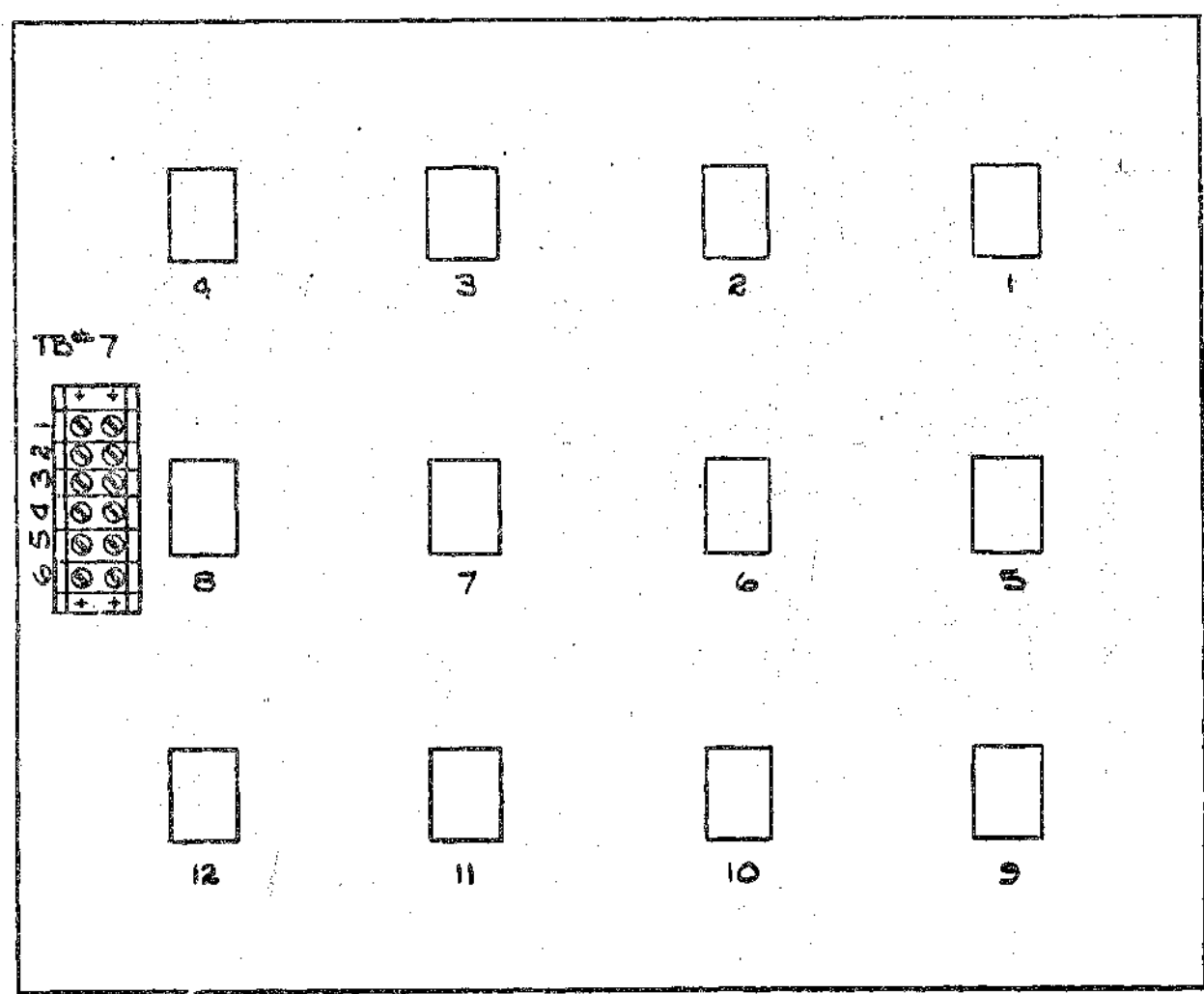
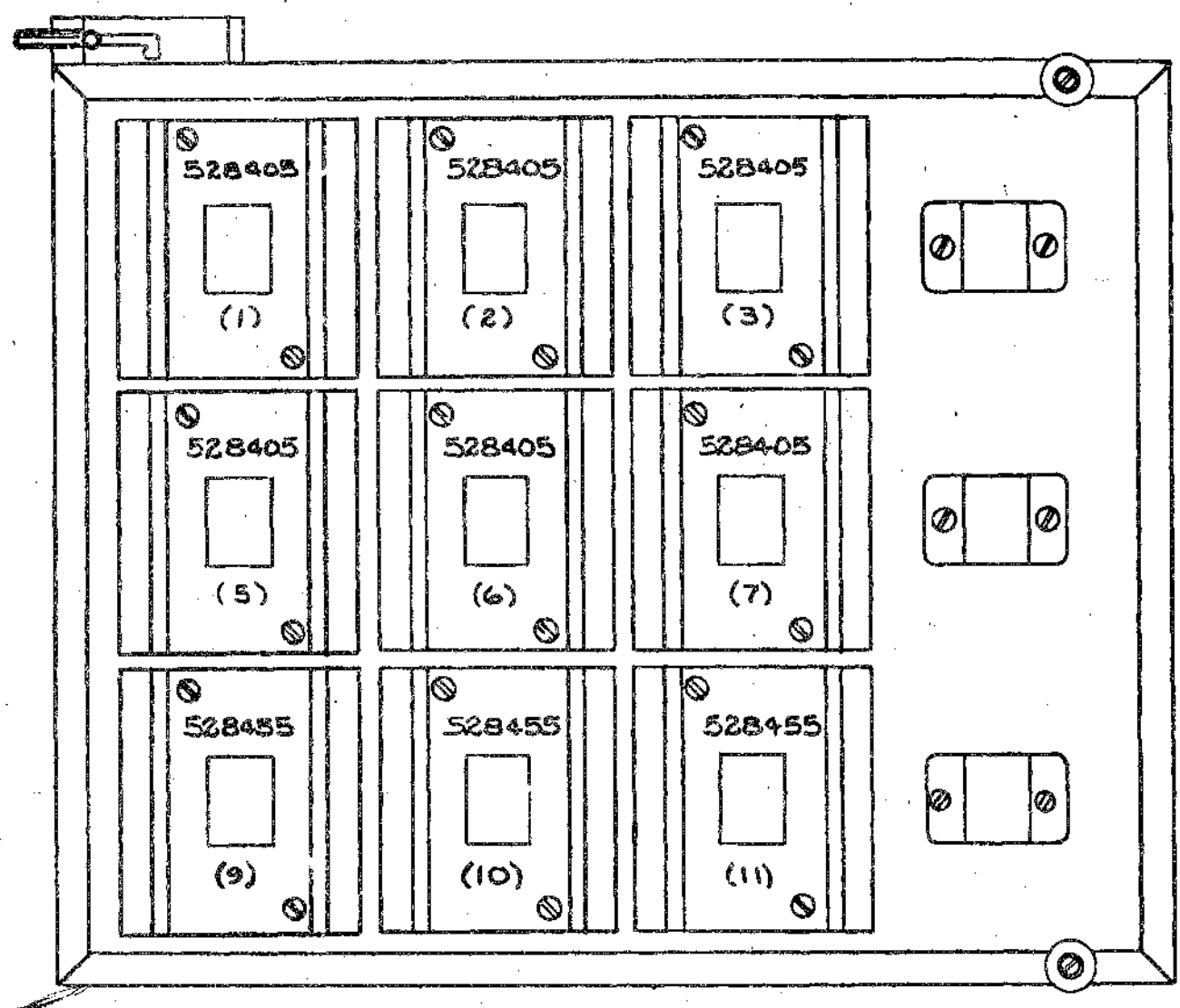
530930

DETACHED FROM PA 8091

00.13.1

POWER TRANSISTOR PANEL

526511



DWG. SIZE - B  
**MASTER**

INTERNATIONAL BUSINESS MACHINES CORP.			DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME			11-28-59	246413			X PRINT TO ENG. SPEC. NO. 895291	00.13.1
00.13.1			8-10-60	247249				
DESIGN		MODEL 729 II & IV	1-27-61	248710				
DETAIL	HMM	3-24-59						
CHECK	NS	10-30-59						
APPRO	WEB	11/18/59						

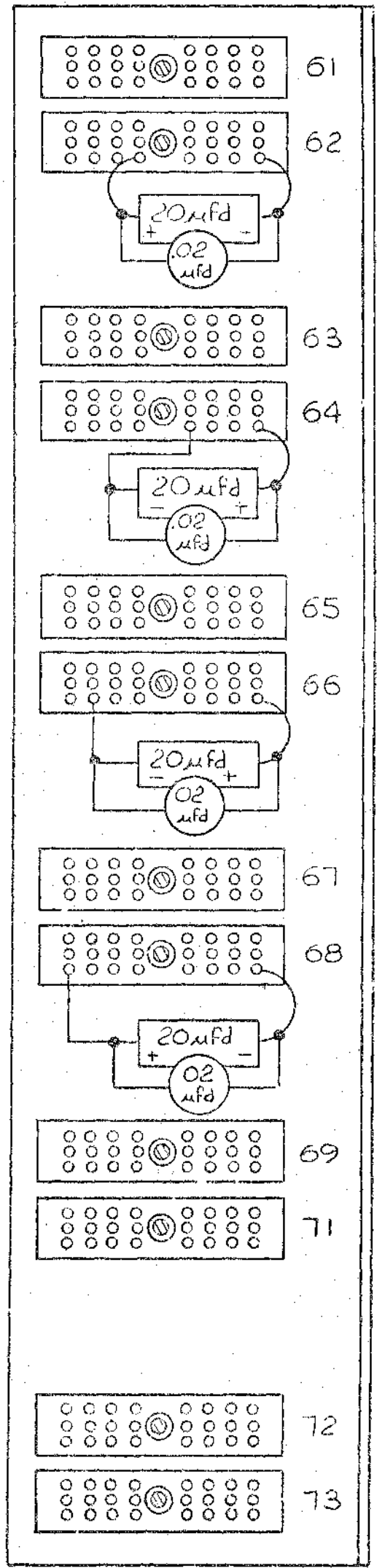
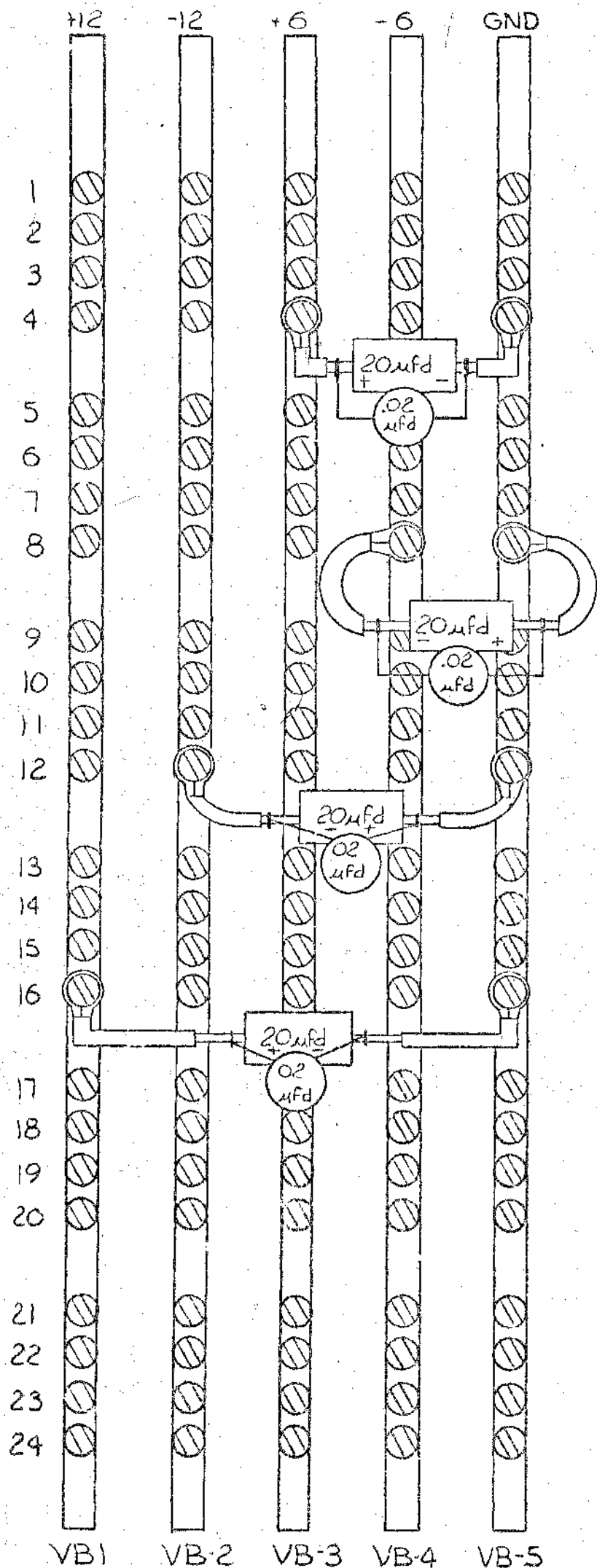
526511

VOLTAGE BUS (OPTIONAL)

526208

WITH E.C. 246204

WITHOUT EC 246204



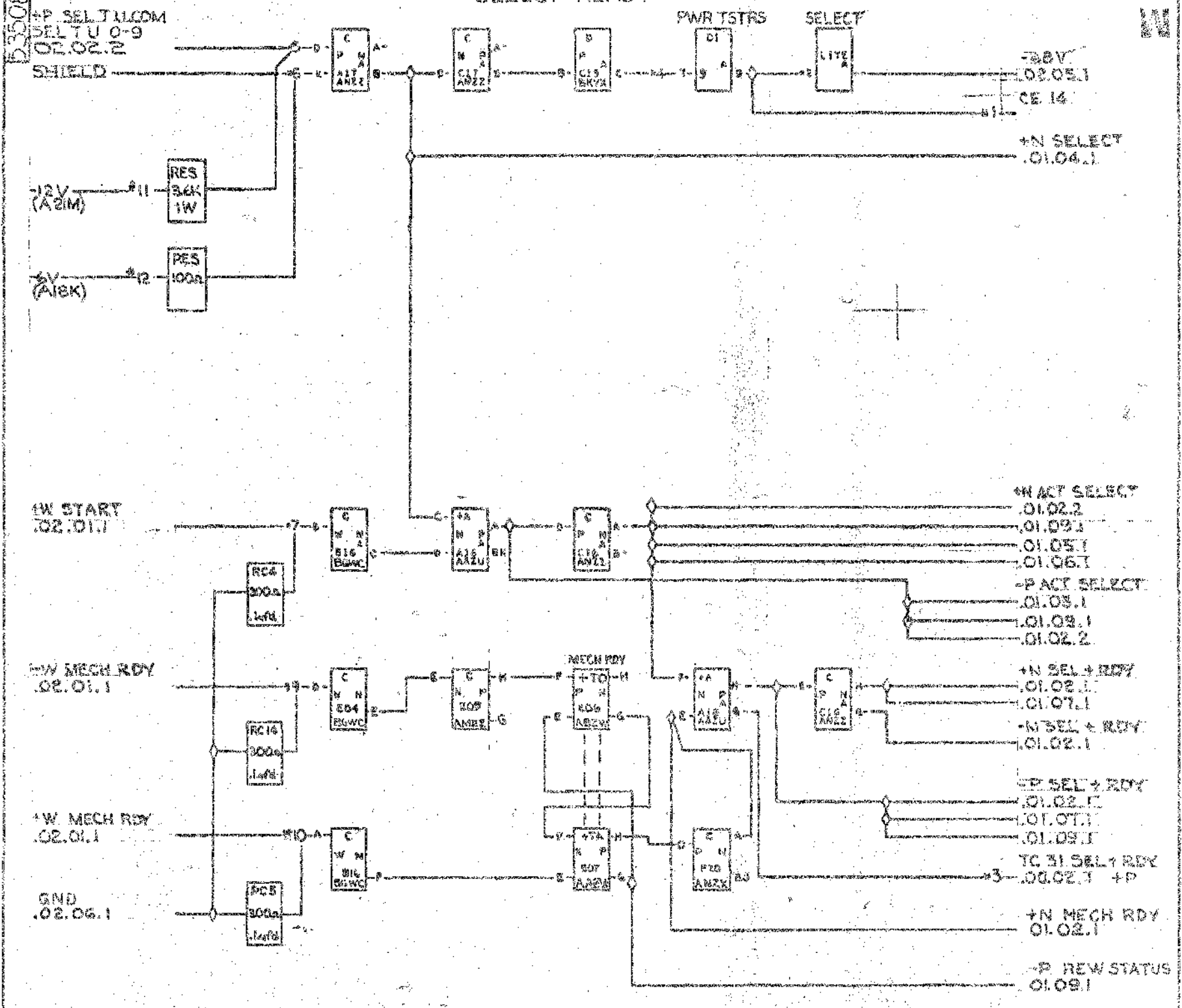
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	3-30-59	246204			X PRINT TO ENG. SPEC. NO.	
DESIGN	HHH 11-3-59	219-59	245249			895291	
DETAIL	AAM 11-3-59					DWG. SIZE - 8	
CHECK	HHH 11-17-59						00.15.1
APPRO	GJR 11-23-59						526208

625-6393-2



SELECT READY

01.01.1



NOTE: ROMAN NUMERAL CONNECTORS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES

\*1--TPO -45 III'S \*2--III'S \*3--42G. \*4--TPO 6 25C IX-W III M \*5--34E \*6--34F \*7--IX'S 24C  
 \*8-27g \*10-244 \*11-33H \*12-24F

DWG. SHEET 4

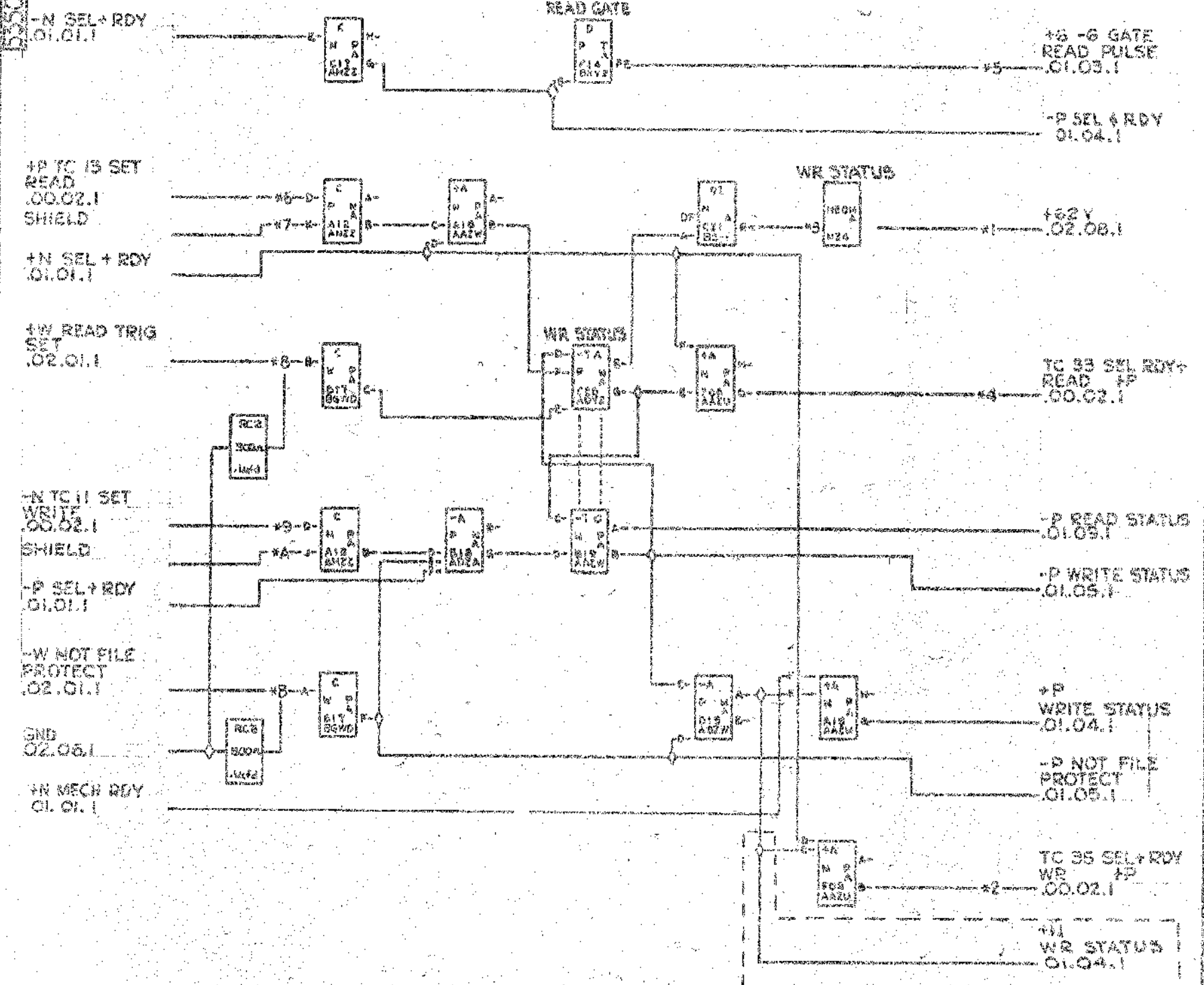
MASTER

DATE	CHANGE NO.	BY	REASON	REVISION NO.
2-19-60	246002A	5-4-60	246407	
6-23-60	246003	6-29-60	247723	
7-10-60	246004	8-10-60	247749	
8-5-60	246005	10-9-60	248161	
9-8-60	246006	11-21-60	248528	

01.01.1

# READ WRITE STATUS

01.02.1



NOTE: A ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES  
 B CIRCUIT WITHIN DOTTED AREA  
 REFER ONLY TO MACHINES WITH EC 248974

- \*1--5F 45K8F
- \*2--46C
- \*3--TP 56 0 93F
- \*4--54C
- \*5--49E
- \*6--56A
- \*7--56B
- \*8--IX-E 24A
- \*9--54A
- \*A--54B
- \*B--IX-C 24B

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	REVISED	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	DATE	2-15-59	240315A	4-19-61	248974	005291
DESIGN	01.02.1	DATE	6-21-59	246010			
DRAWN	10 582	DATE	8-3-59	246415			
CHECKED		DATE	8-22-59	267723			
APPROVED		DATE	7-12-60	248974			

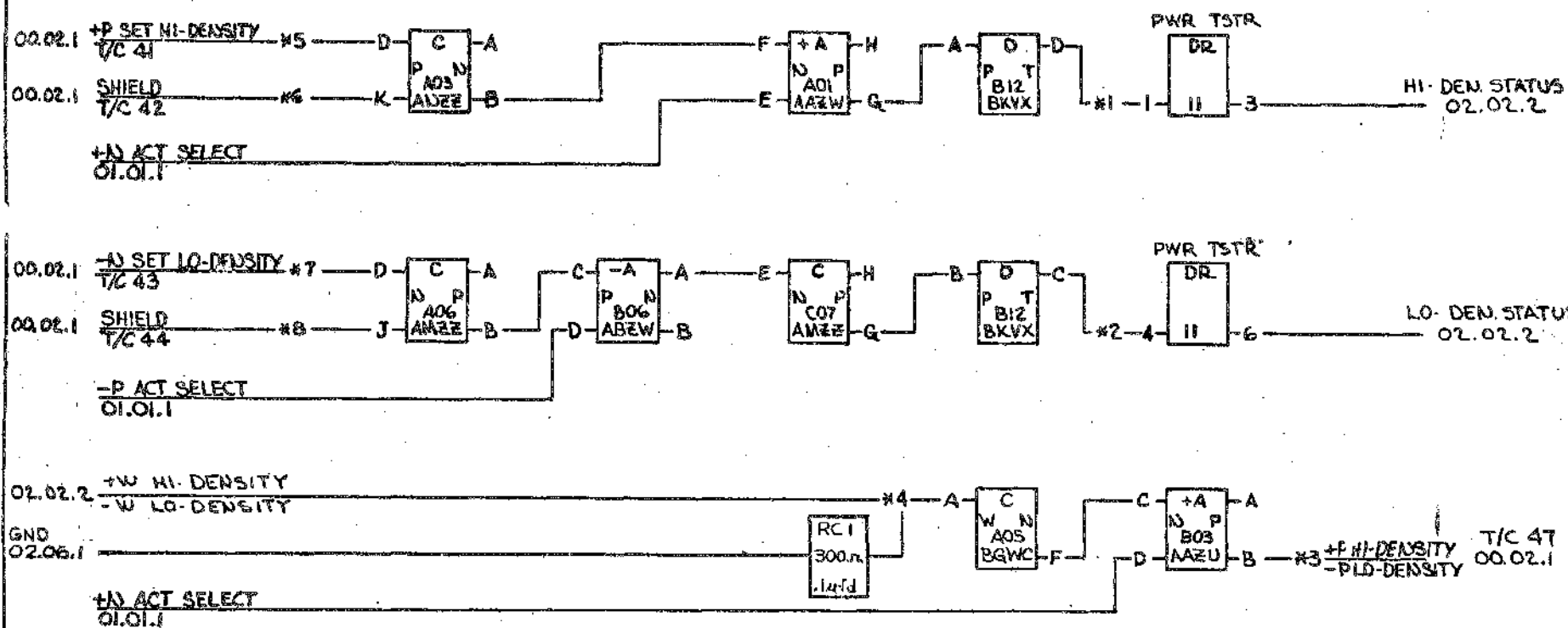
01.02.1

530986

DWG. SIZE C

# DENSITY STATUS

01.02.2



NOTES  
 ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH  
 PLUGGABLE MAIN GATE CABLES

\*1- 26c IX YR \*2- 26e IX YV \*3- 30e \*4- 33g \*5- 33b \*6- 33c \*7- 26f \*8- 26g

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	10-59	246016			* PRINT TO ENG. SPEC. NO. 895291	
	01.02.2	10-26-59	246414				
DESIGN				2-2-60	245843		
CHECK	WB 7-2-59	DRAW	SYS 10-11-59	6-29-60	247723		
APPRO	V/11 7-2-59	CHECK	DS 10-2-59	8-10-60	247249		
							01.02.2

530986

535090

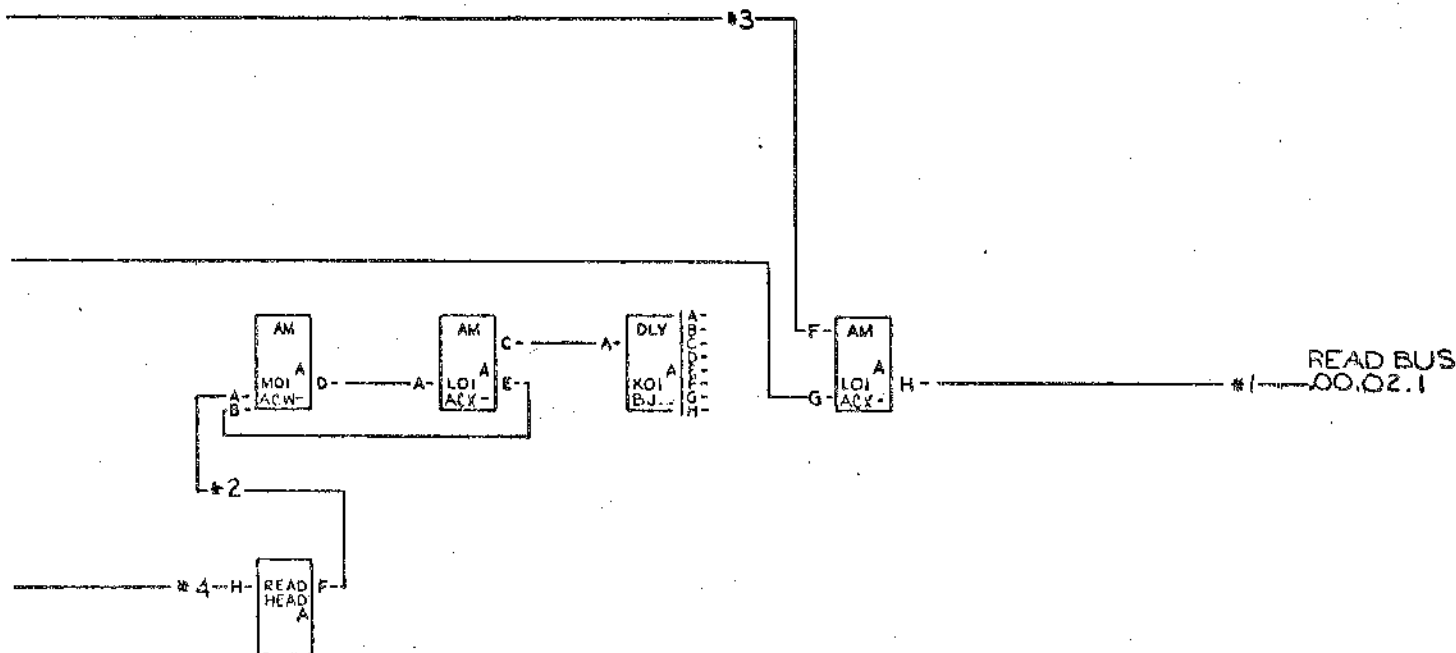
READ PREAMP TRACK 1

01.03.1

\*G-G GATE  
READ PULSE  
01.02.1

DELAY LINE  
K01 A TO H

GROUND  
02.06.1



TRACK NO	CARD LOCATION			INPUTS				OUTPUT		
				RED (GND)	YELLOW		E.C.	SIG T/C	SHIELD T/C	
	ACW	ACX	BJ	E.C.	PLUG	PLUG	E.C.	E.C.		
1	M01	L01	K01	51b	F	H	51a	55a	82	83
2	M02	L02	K02	51d	E	D	51c	55b	84	85
4	M03	L03	K03	51f	C	N	51e	55c	93	92
8	M04	L04	K04	51h	C	B	51g	55d	95	94
A	M05	L05	K05	52b	M	A	52a	55e	102	103
B	M06	L06	K06	52d	R	L	52c	55f	104	105
C	M07	L07	K07	52f	J	K	52e	55g	113	112

NOTE:  
ROMAN NUMERAL CONNECTIONS REFER  
ONLY TO MACHINES WITH PLUGGABLE  
MAIN GATE CABLES.

\*1-55A \*2-51A \*3-54H \*4-51B

DWG. SIZE: C

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM			11-12-59	244313A	6-21-60	247728	895291	01.03.1
DETAIL	01.03.1			6-24-59	246070				
CHECK	11-12-59			12-15-59	246619				
APPROV	DRAW			2-2-60	246625				
	CHECK			2-11-60	247122				

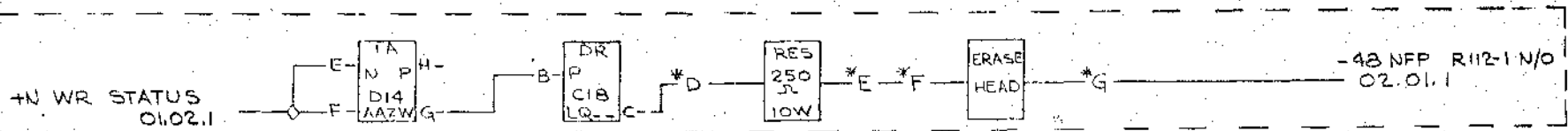
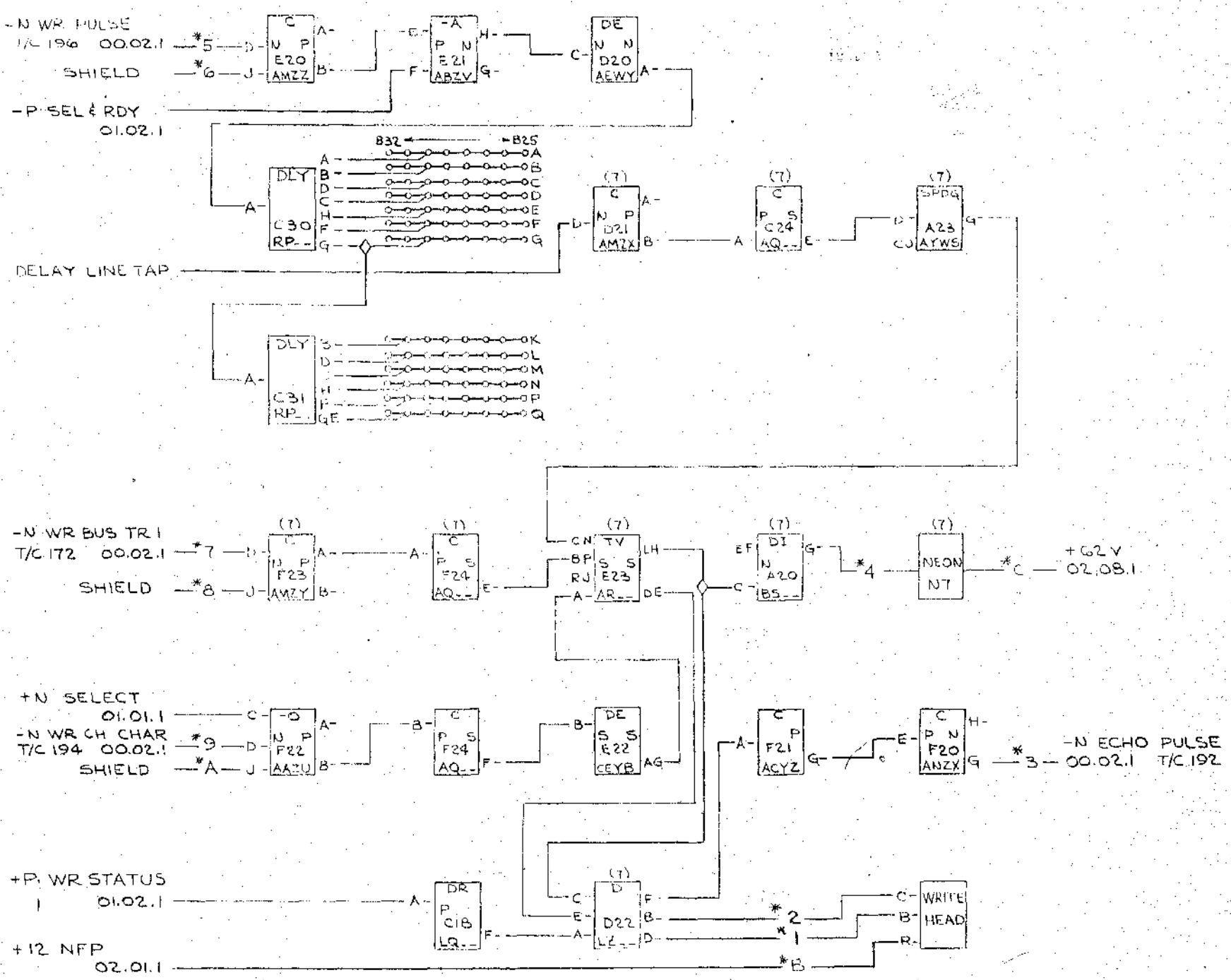
0605090



35102

# WRITE AMPLIFIER TRACK 1

01.04.1



CKT WITHIN DOTTED AREA REFERS ONLY TO MACHINES WITH E.C. 248974 AND 249865

TRACK NO.	CARD LOCATIONS								INPUT WR. BUS				OUTPUT				NEON		DELAY LINE 0-3.24 μs TAPS OF .27 μs				
	AMZY	AMZX	AQ	AYWS	AR	BS	LZ		SIG T/C	E.C.	SHIELD T/C	E.C.	E.C.	PLUG PIN	E.C.	PLUG PIN	E.C.	PLUG PIN		SHIELD E.C.	IND E.C.	NO.	E.C.
1	F23 D	D21 D	C24 A	A23	E23	A20	D27		172	42e	171	42f	22g	B	22h	C	32g	R	32h	23h	N7	12a	B25 A-G; K-Q
2	F25 D	D21 E	C24 B	A25	E25	A21	D24		174	42c	173	42d	22c	S	22f	D	32e	T	32f	23g	N14	12h	B26 " "
4	F26 D	D23 D	C24 C	A26	E26	A22	D25		176	42a	175	42b	22e	E	22d	U	32c	F	32d	23f	N21	13g	B27 " "
B	F27 D	D26 D	C28 A	A27	E27	B20	D27		178	41g	177	41h	22a	H	22b	V	32a	J	32b	23e	N28	14f	B28 " "
A	F28 D	D26 E	C28 B	A29	E28	B21	D28		180	41e	179	41f	21g	K	21h	W	31g	L	31h	23d	N35	15e	B29 " "
B	F30 D	D29 D	C28 C	A30	E30	B22	D30		182	41c	181	41d	21e	Y	21f	X	31e	M	31f	23c	N42	16d	B30 " "
C	F31 D	D29 E	C28 D	A31	E31	C22	D31		184	41a	183	41b	21c	A	21d	P	31c	N	31d	23b	N49	17c	B31 " "

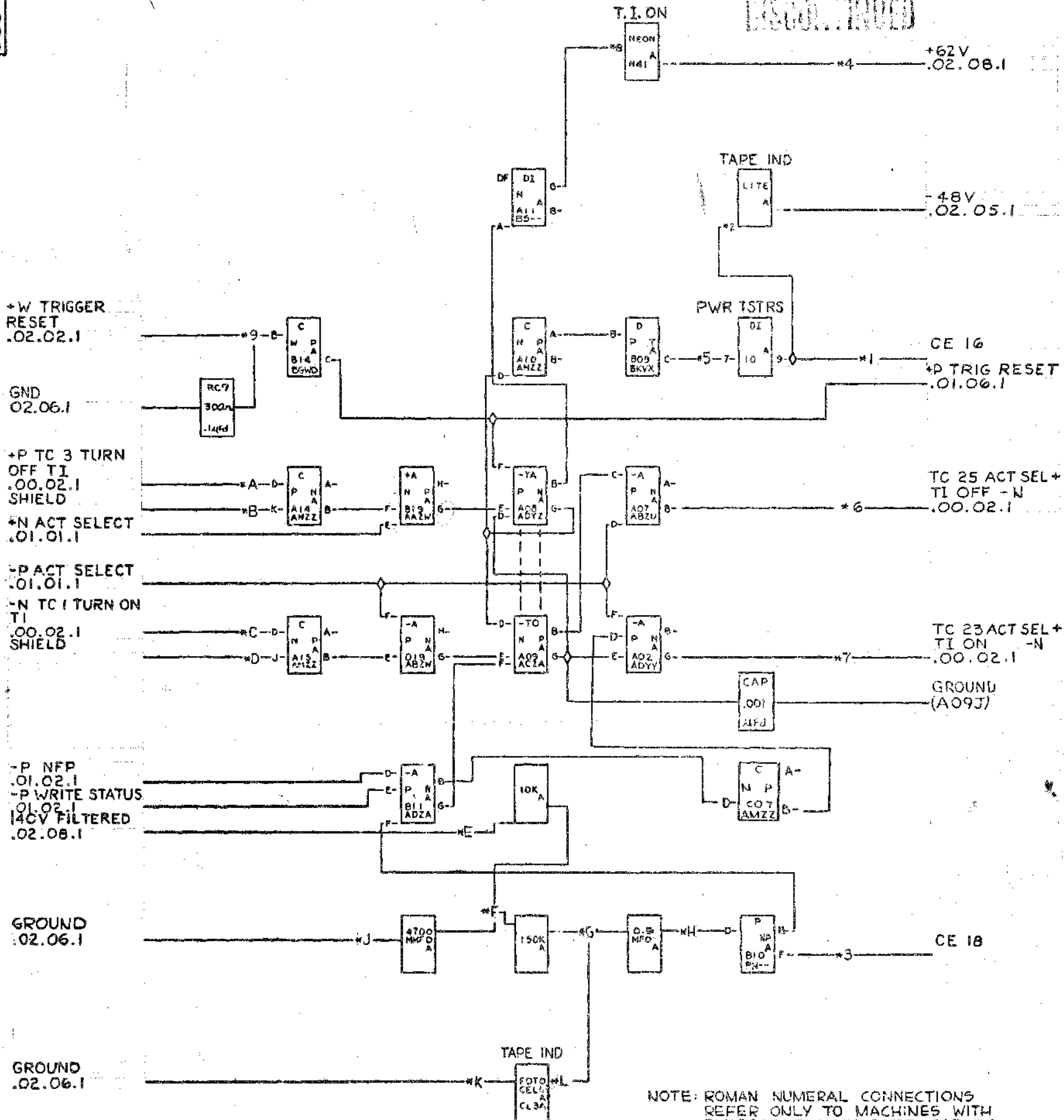
- \*1- 22g \*2- 22h \*3- 43e \*4- TP-36, O, 23h
- \*5- 43a \*6- 43b \*7- 42e \*8- 42f
- \*9- 43c \*A- 43d \*B- 32g \*C- 12a, 43k, 5a
- \*D- 33d \*E- 37g \*F- PC\*14 \*G- PC\*4

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		5-16-61	249224			X PRINT TO ENG. SPEC. NO. 895291	35102
DESIGN WBS 12-15-60 MODEL 729 II		6-6-61	249865				
DETAIL NS 3-24-61	CHECK JLD 4-18-61 DRAW						01.04.1
APP 6JR 4-22-61 CHECK							

535092

TAPE INDICATE

01.05.1



NOTE: ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES

- \*1-TPO -48 III T \*2-TPO -48 III 16 \*3-27A IXA \*4-16e 43K @ \*5-TPO 6 25F IXE III R \*6-36C \*7-37A.  
 \*8-TP-36 O 33J \*9-IXH 25A \*A-35C. \*B-35D. \*C-35A. \*D-35B \*E-47D \*F-47B \*G-46G \*H-45G  
 \*J-47F \*K-P5 \*2 \*L-P5 \*3 XD

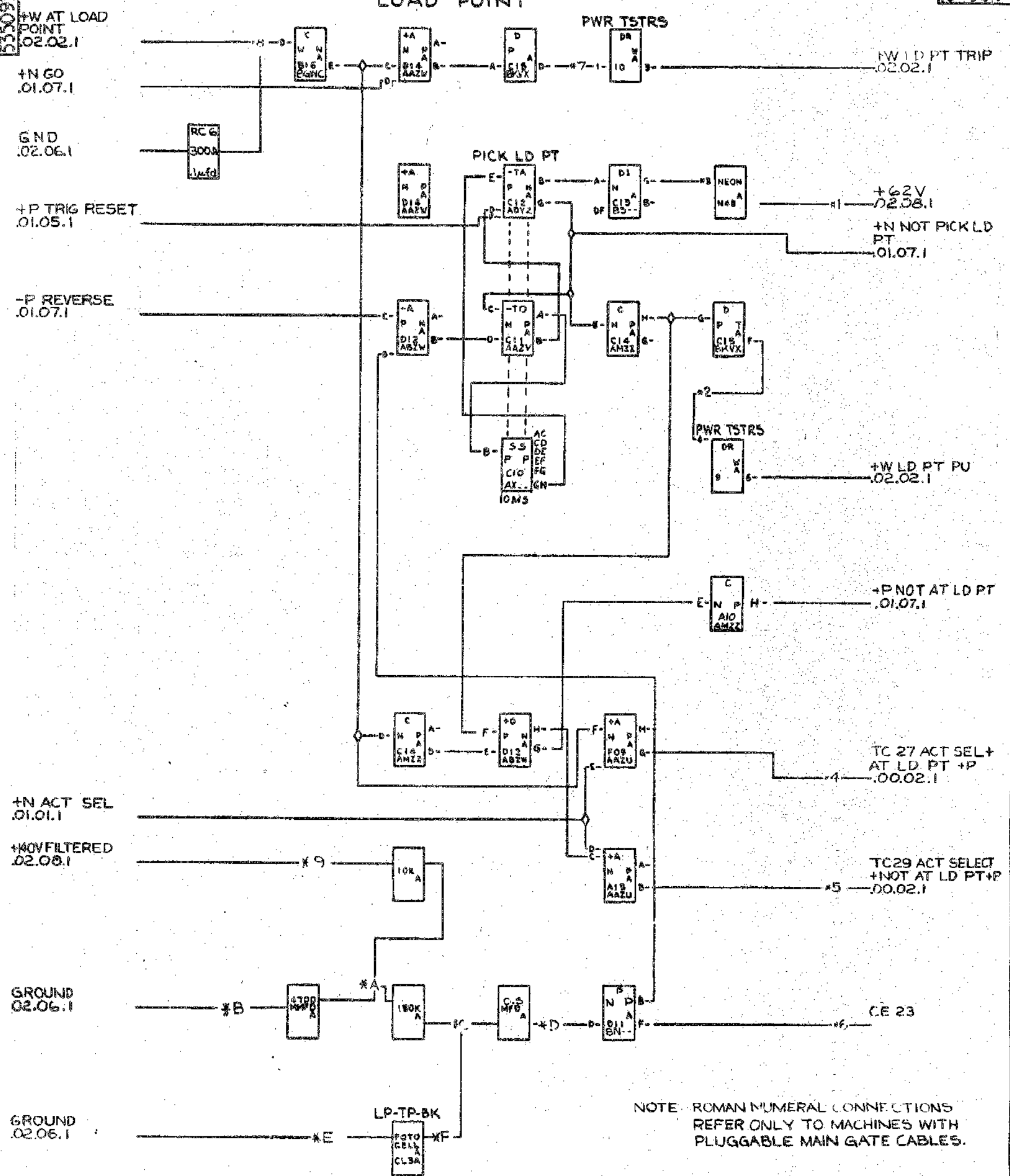
DWG. SIZE - C

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	2-13-59	244313A	12-16-60	248693	PRINT TO ENG. SPEC. NO. 895291  DWG. SIZE - C	535092
	01.05.1	6-24-59	246020	7-19-61	249230		
DESIGN	MODEL 7231J	2-3-60	246412	10-11-61	248991		
CHECK		6-29-60	247723				
APPRO		3-23-60	247961				

01.05.1

N 40.4 - 001  
P - 3 2 2 0 4

# LOAD POINT



NOTE: ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES.

#17443K10V12-TP 06 25E IXF III L \*3--TP-36033E \*4--46A. \*5-35E. \*6-27C IXC \*7-TP0 6 25D IX-X III N \*8 III XL 24E  
 #9-47C \*A-47A \*B-47F \*C-46H \*D-45H  
 \*E-PS\*2 \*F-PS\*1 IE  
 U.W. SIZE-C

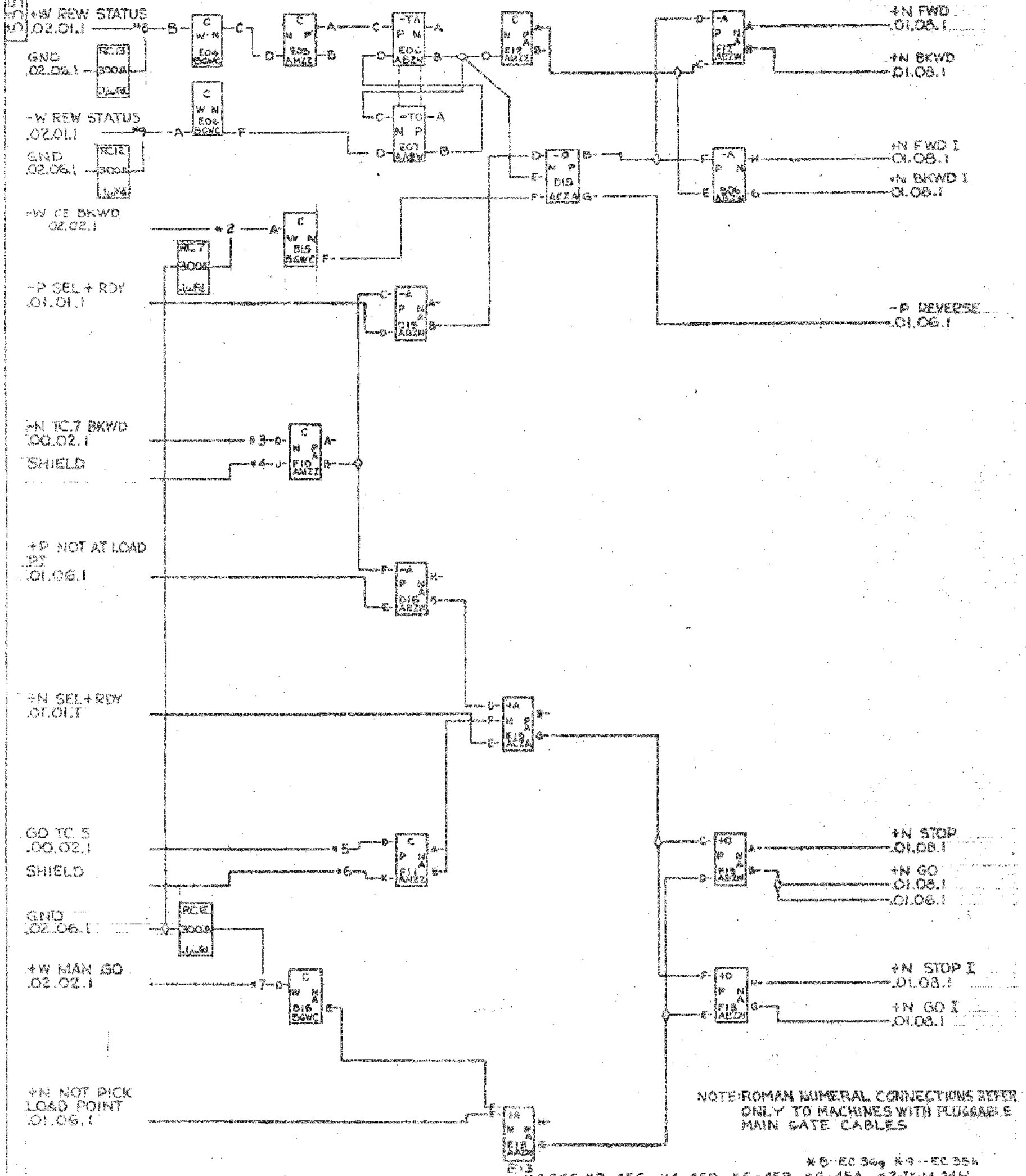
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.	U.I.
NAME SYSTEMS DIAGRAM	2-13-59	244313A	7-14-60	247734B	PRINT TO ENG. SPEC. NO. 395291		(1)
DESIGN 01.05.1	6-21-59	246670					(1)
DETAIL 05.08.5	2-4-60	246672					(1)
CHECK	6-15-60	247734					(1)
APPRO	6-29-60	247723					(1)

01061



START STOP AND REVERSE CONTROL

01071



NOTE: ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES

\*8-EC 35g \*9-EC 35h

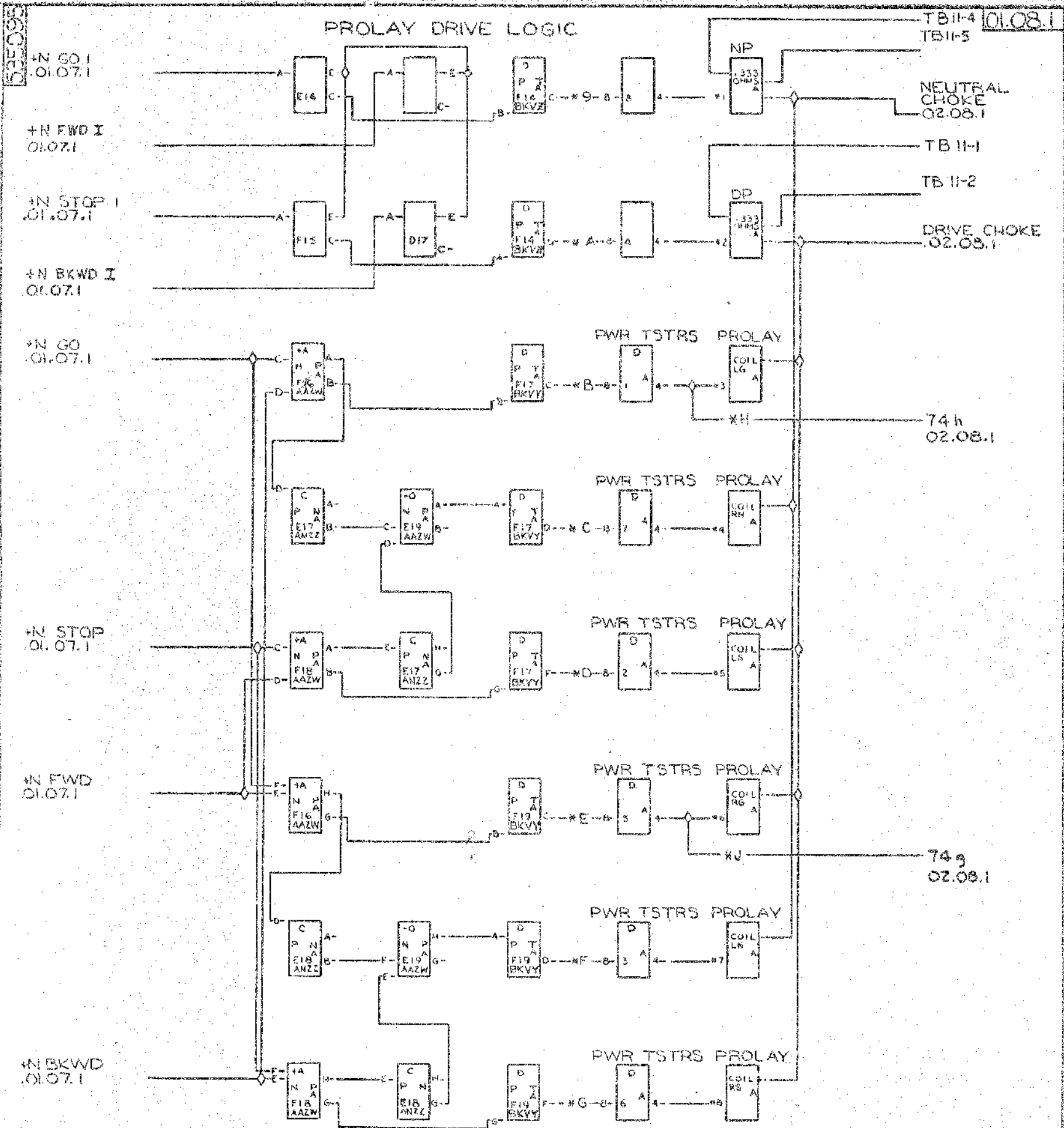
\*2-446 \*3-45C \*4-45D \*5-45B \*6-45A \*7-IX-M 24H

DATE	FIGURE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
2-12-59	244318A	6-14-60	247734		
6-24-59	246020	6-29-60	247723		
11-9-59	246200				
2-3-60	246412				
5-4-60	246407				

01071

DRG. SIZE - C

PROLAY DRIVE LOGIC



NOTE: ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES.

\*1-0-75 II J \*2-0-75 II D \*3-0-75 II A \*4-0-75 II H \*5-0-75 II B \*6-0-75 II E \*7-0-75 II C  
 \*8-0-75 II F \*9-6+6 44H IX B III J \*A-6+6 44G IX-T III D \*B-6+6 44F IX-R III A  
 \*C-6+6 44E IX-K III H \*D-6+6 44D IX-Z III B \*E-6+6 44C IX-S III E \*F-6+6 44B IX-J III C  
 \*G-6+6 44A IX-A III F \*H--II L \*J--II K

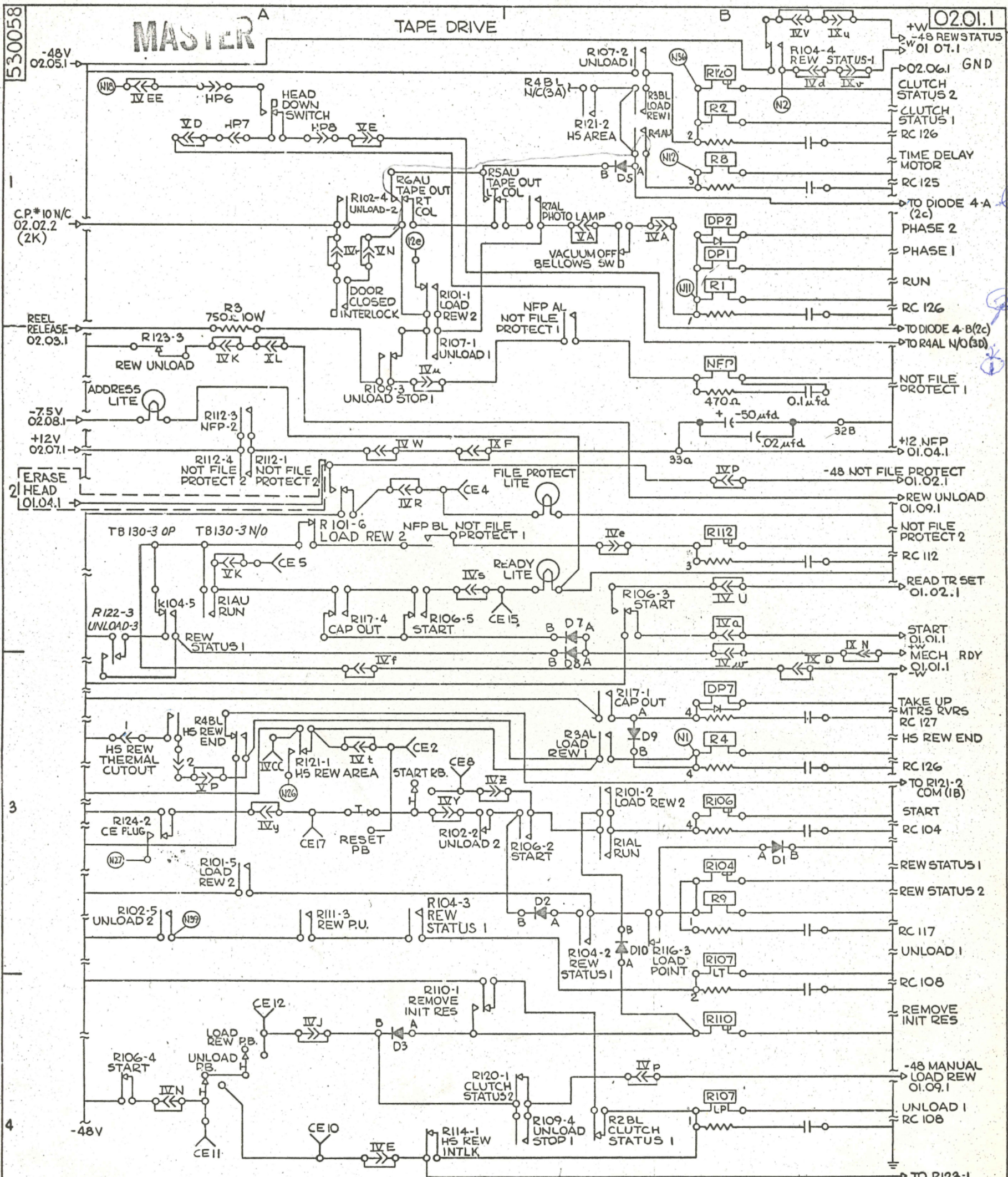
DRIVE SIZE - C

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHARGE NO.	DATE	EMPL NO.	NOTE	DEVELOPMENT NO.
NAME		2-13-59	244313A			NOTE & PRINT TO ENR. SPEC. NO. 895291	0108.1
SYSTEMS DIAGRAM		6-24-59	246020				
DESIGN		11-9-59	246189				
DETAIL		2-3-60	246412				
APPRO		1-26-61	248710				









NOTE  
 B-CIRCUIT WITHIN DOTTED AREA REFER ONLY TO MACHINES WITH EC 248974

NOTE:  
 A- ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES

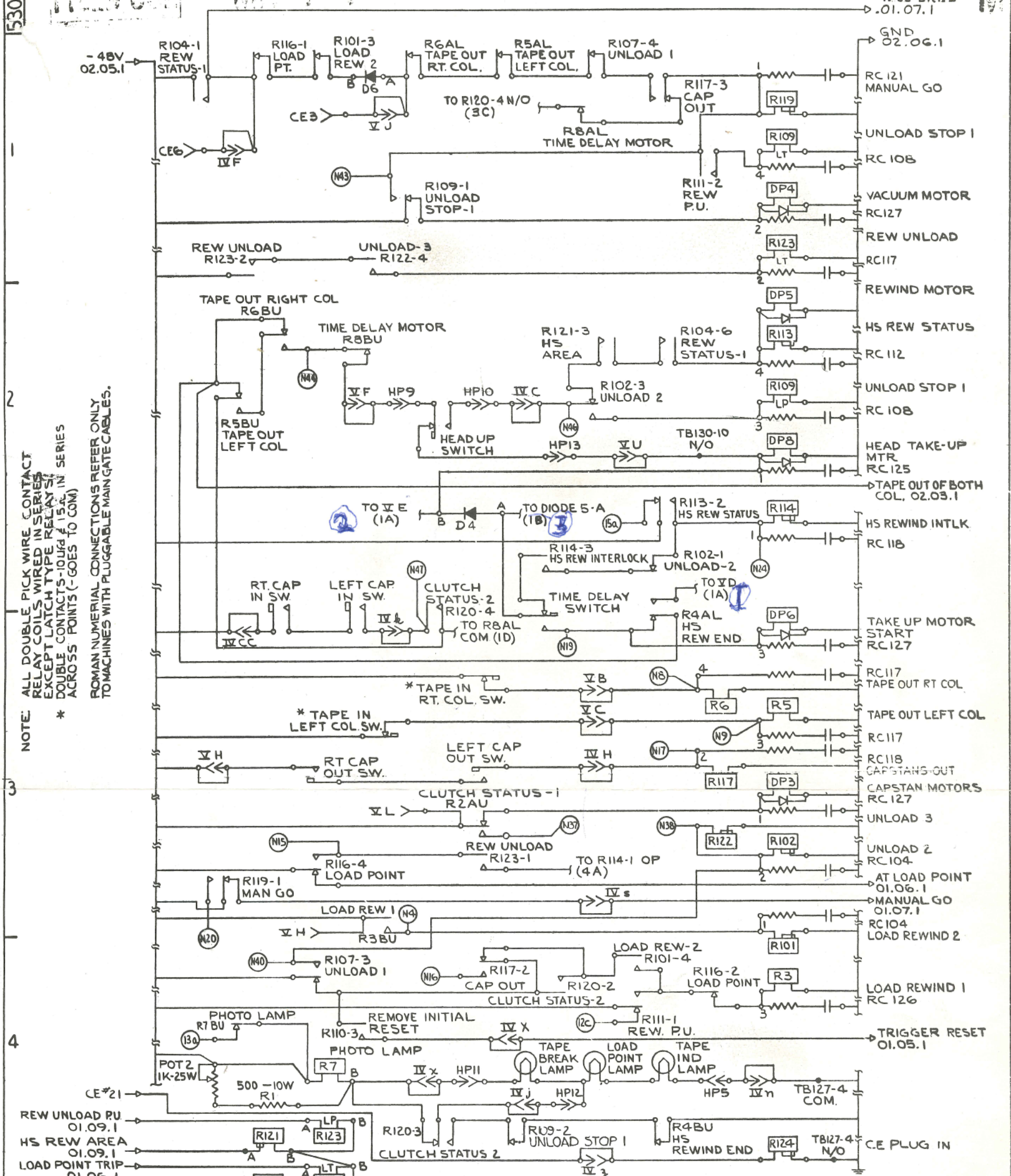
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	SEE INDEX CARD				X PRINT TO ENG. SPEC. NO. 895291 DWG. SIZE - C	530058
	02.01.1	12-21-60	248692				
DESIGN	GT 2-14-59	MODEL	729 II				
CHECK	US 3-9-59	DRAW					
APPRO	WB 3-9-59	CHECK					02.01.1



530059

02.02.1

# TAPE DRIVE



NOTE:  
 \* ALL DOUBLE PICK WIRE CONTACT RELAY COILS WIRED IN SERIES EXCEPT LATCH TYPE RELAY. DOUBLE CONTACTS-1044 & 154 IN SERIES ACROSS POINTS (- GOES TO COM)  
 \* ROMAN NUMERICAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES.

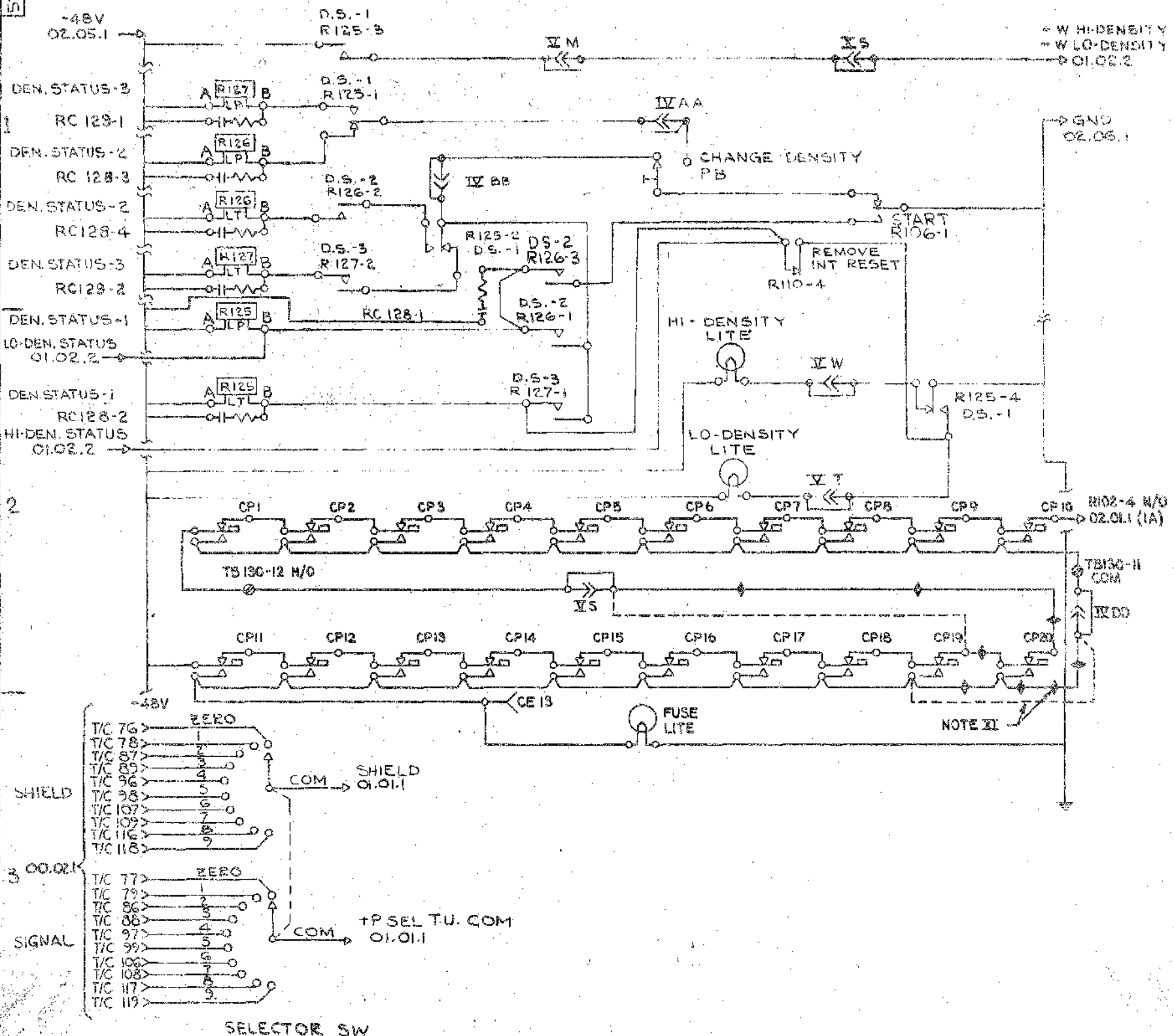
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	3-31-59	244313A	10-4-60	247602-B	X PRINT TO ENG. SPEC. NO. 895291	530059
DESIGN	02.02.1	7-10-59	246016	2-11-61	247614		
DETAIL	MODEL 725 II	10-26-59	246414	7-19-61	249230	DWG. SIZE - C	02.02.1
CHECK	GT 21359	2-2-60	245843	10-16-61	248593		
APPRO	3-9-59	6-18-60	246407	2-7-63	252527		

Light 00.88.1  
 Relay 00.06.1

526277

02.02.2

TAPE DRIVE



NOTES  
 I ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES.  
 II ——— MACHINES WITHOUT -48V SP  
 III ——— MACHINES WITH -48V SP

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	10-21-59	246414	10-3-60	248161	X PRINT TO ENG. DEPT. NO. 895291	526277
DESIGN	MODEL 729 II (W)	2-2-60	245843	12-21-60	248692		
DETAIL	EJK 10-21-59	6-3-60	246407				
CHECK	NS 10-21-59	6-23-60	247723				
APPROV	10-21-59	8-23-60	247959				

02.02.2

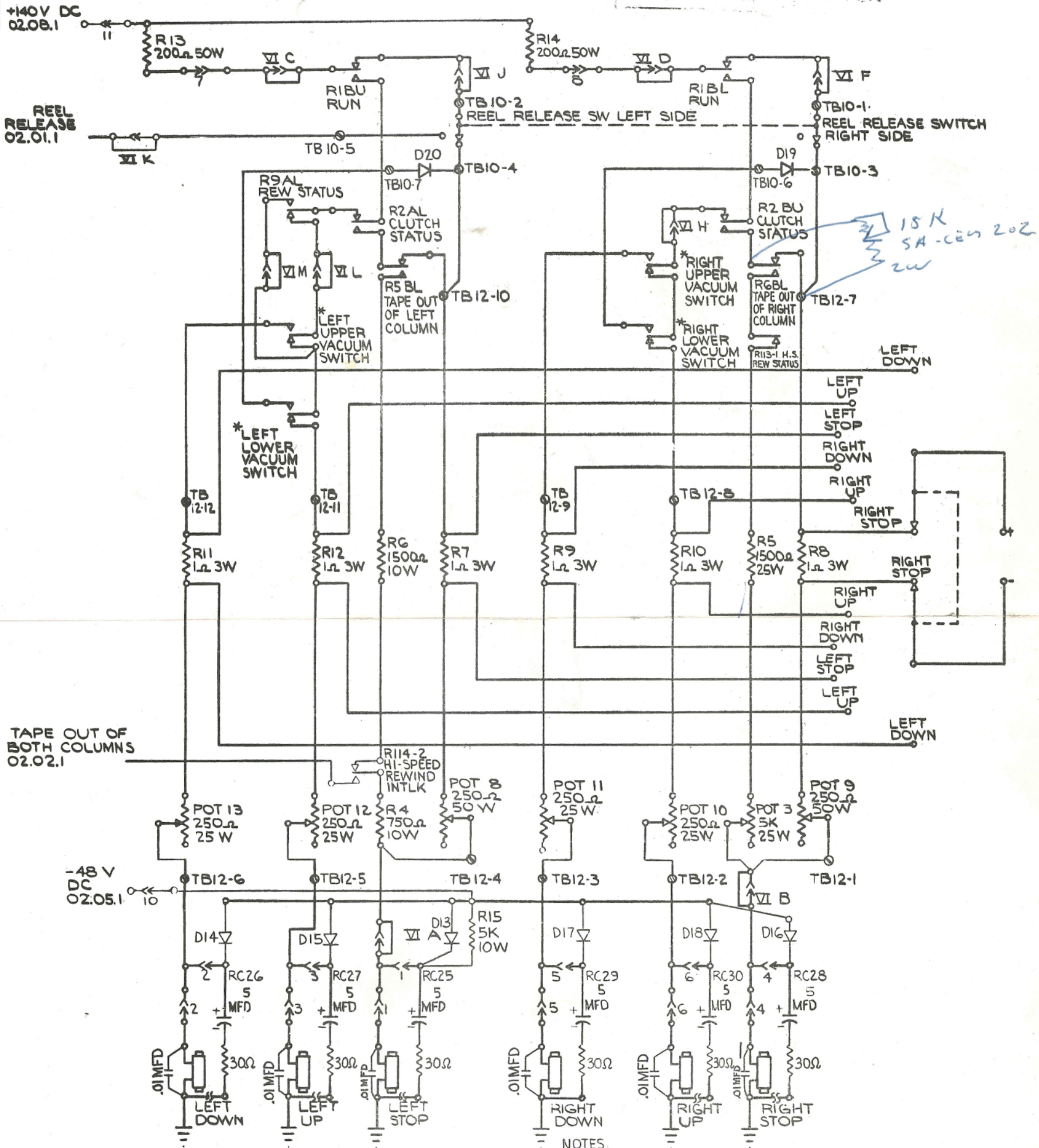


352601

CLUTCH & VACUUM CONTROL  
(MACHINES WITH EC 247977)

FIELD NO. MASTER

02.03.1



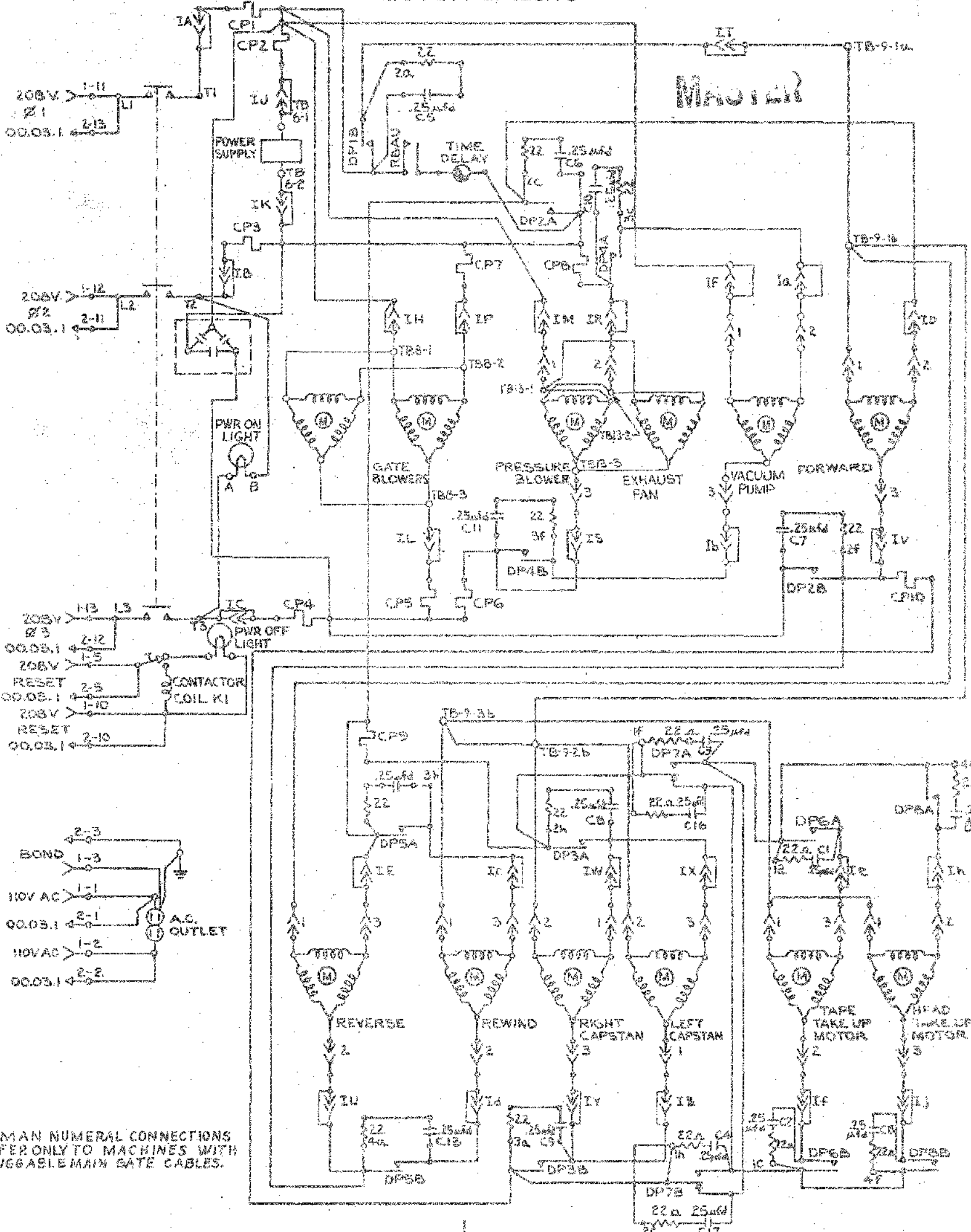
*15K  
5A-CEN 20Z  
2W*

TAPE OUT OF BOTH COLUMNS  
02.02.1

NOTES  
\* DOUBLE CONTACTS - 5 MFD & 30Ω IN SERIES AROUND EACH SET OF POINTS. (+ TO COM)  
XII ROMAN NUMERALS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES.

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	12-20-60	247977			X PRINT TO ENG. SPEC. NO. 895291	352601
	02.03.1	6-29-61	247977C				
DESIGN	HHH 9-30-60 MODEL 729 II	7-19-61	249230				
DETAIL	DD 9-30-60	10-16-61	248593				
CHECK	HHH 10-5-60 DRAW	2-7-63	252527				
APPRO	AFD 10-18-60 CHECK						02.03.1

MOTOR CIRCUITS



NOTE:  
 ROMAN NUMERAL CONNECTIONS  
 REFER ONLY TO MACHINES WITH  
 PLUGGABLE MAIN GATE CABLES.

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	QUANTITY	DATE	QUANTITY	DATE	QUANTITY
NAME	SYSTEMS DIAGRAM	2-21-59	244313A	9-15-60	248167		
DESIGN	MODEL 7200	9-9-59	244322	2-7-60	248321		
DRAWN	BY 215-59	11-25-59	244323	4-13-61	248697		
CHECKED	BY 2-2-60	2-2-60	245343				
APPROVED	BY 2-9-60	2-9-60	247123				

DWG. SIZE C

DWG. SIZE C

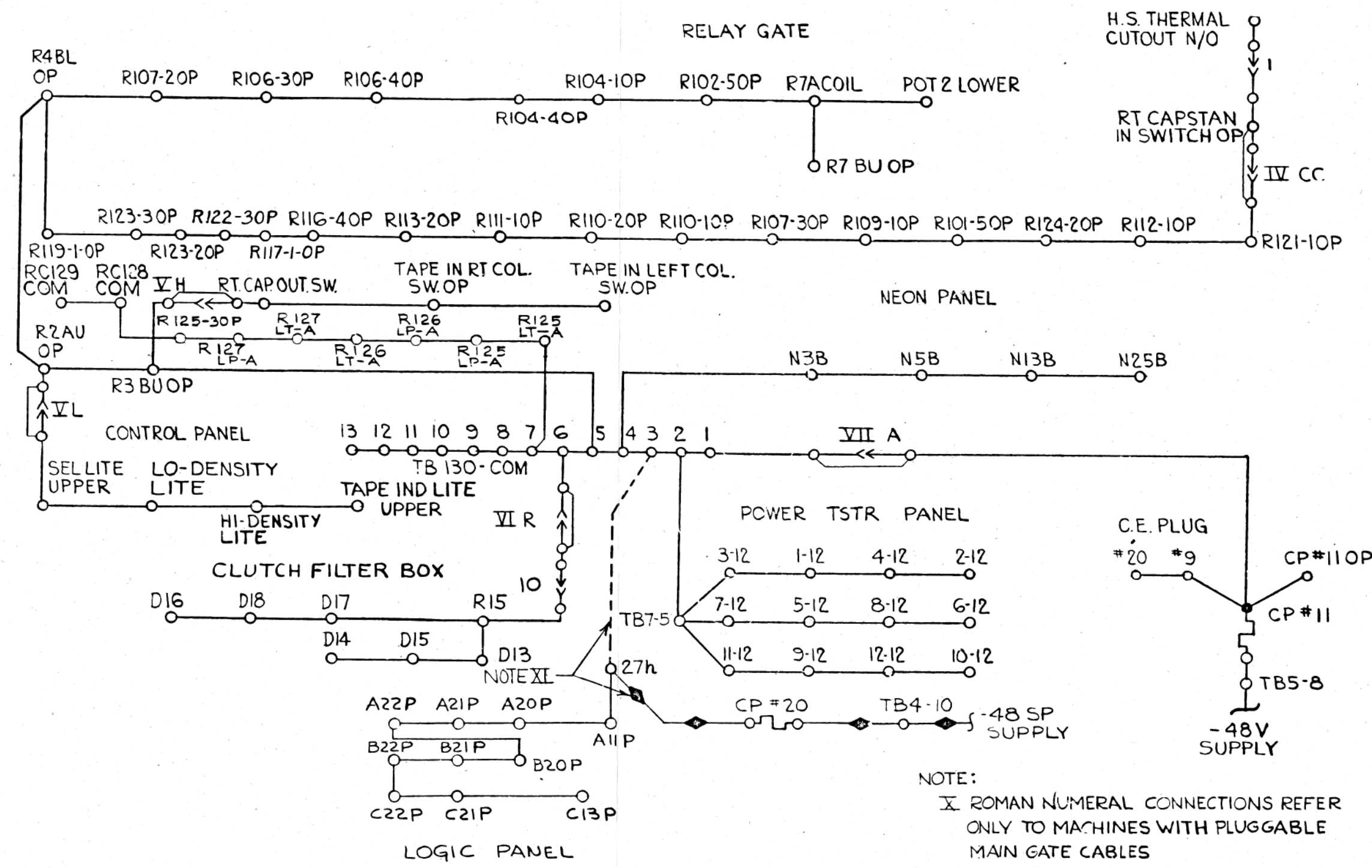
02041



530062

-48VOLT DISTRIBUTION

02.05.1



NOTE:  
 X ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES  
 XI - - - - MACHINES WITHOUT -48SP  
 ◆◆ MACHINES WITH -48SP

INTERNATIONAL BUSINESS MACHINES CORP.		DATE		CHANGE NO.		DATE		CHANGE NO.		NOTE	
NAME SYSTEMS DIAGRAM		SEE INDEX CARD								X PRINT TO ENG. SPEC. NO. 895291	
DESIGN 02.05.1		2-11-61		247614							
DETAIL GT. 2-14-59		7-19-61		249230							
CHECK 5-9-57		10-16-61		248593							
APPROV. VIT											
MODEL 729 II											
DEVELOPMENT NO.											
02.05.1											

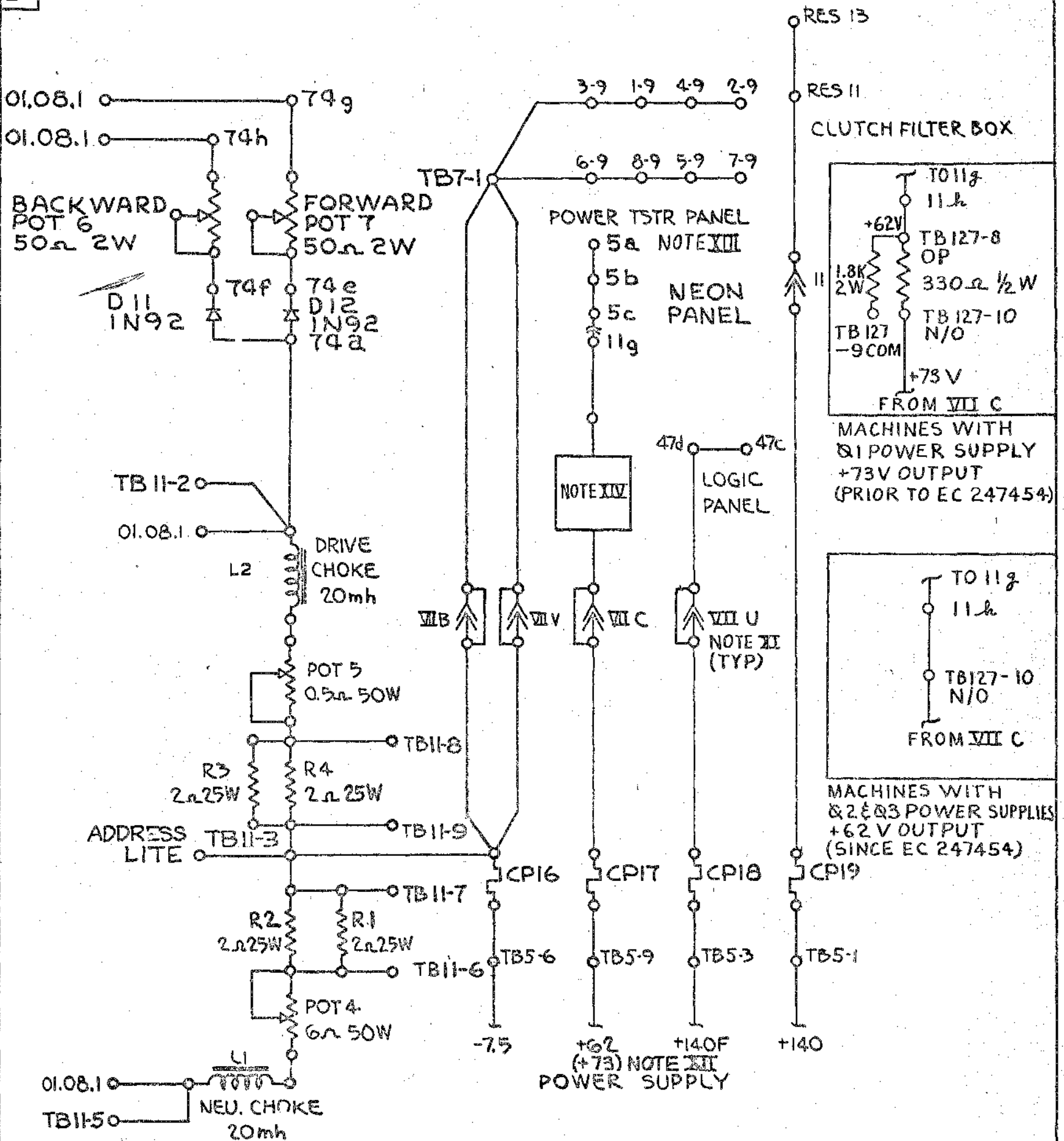
530065

VOLTAGE DISTRIBUTION (-7.5, +62, +140F & +140)

02.08.1

(+73) NOTE XII

MASTER



NOTES

- XI ROMAN NUMERAL CONNECTIONS REFER ONLY TO MACHINES WITH PLUGGABLE MAIN GATE CABLES
- XII MACHINES WITH & 1 POWER SUPPLIES HAVE +73V OUTPUT
- XIII JUMPERED FROM 5a TO 11h INCLUSIVE
- XIV SEE RECTANGLES ON RIGHT SIDE OF PAGE FOR SPECIFIC MACHINE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	8-31-59	24713A	2-11-61	247614	X PRINT TO ENG. SPEC. NO. 895251	
	02.08.1	9-28-59	246189				
DESIGN		2-3-60	246412			DNG. SIZE - B	
DETAIL	GT 2-14-59	8-18-60	246565				
CHECK	2/5 3-9-59	12-21-60	245692				
APPRO	3 3-9-59						

02.08.1

530065

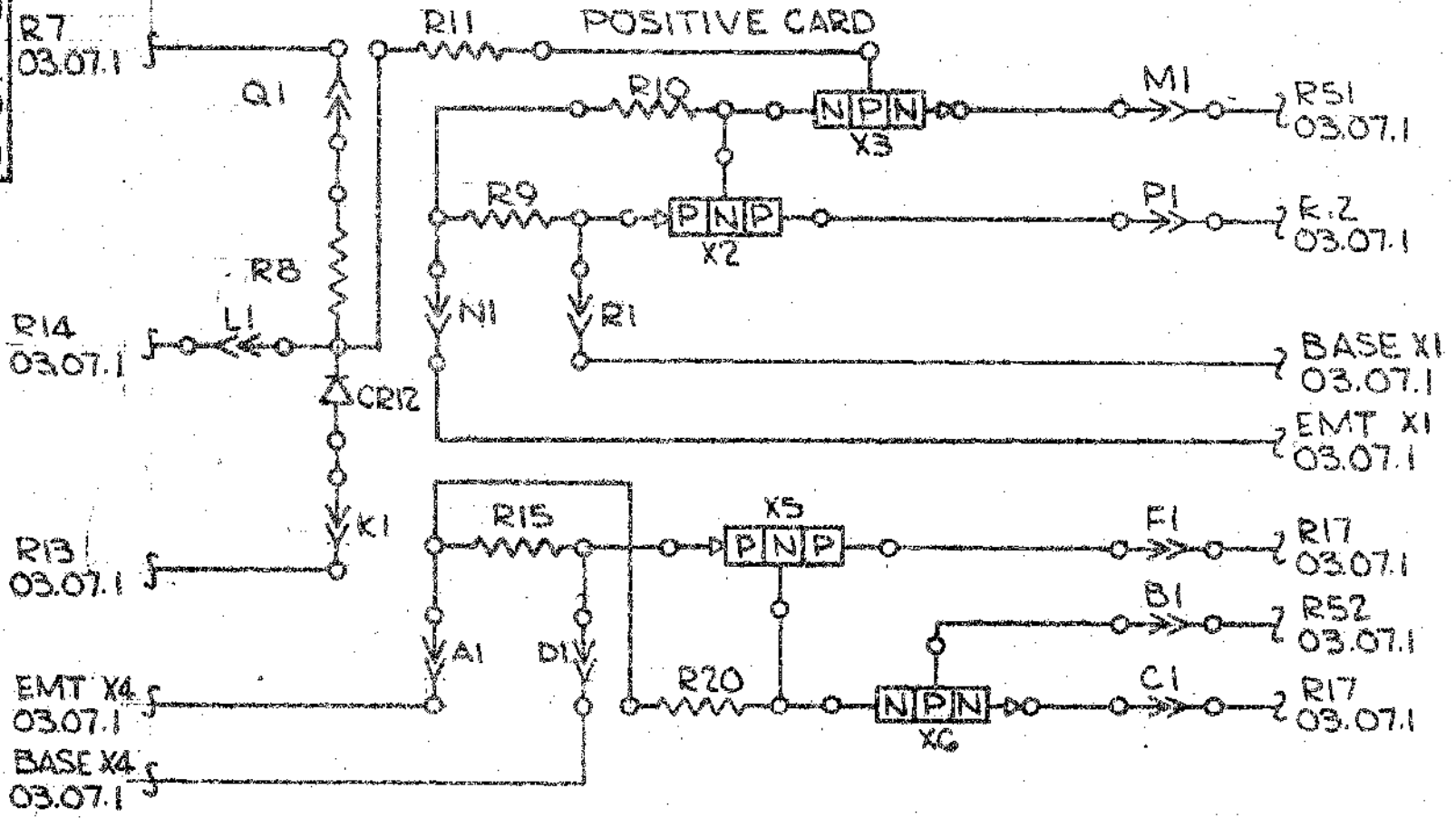


316158

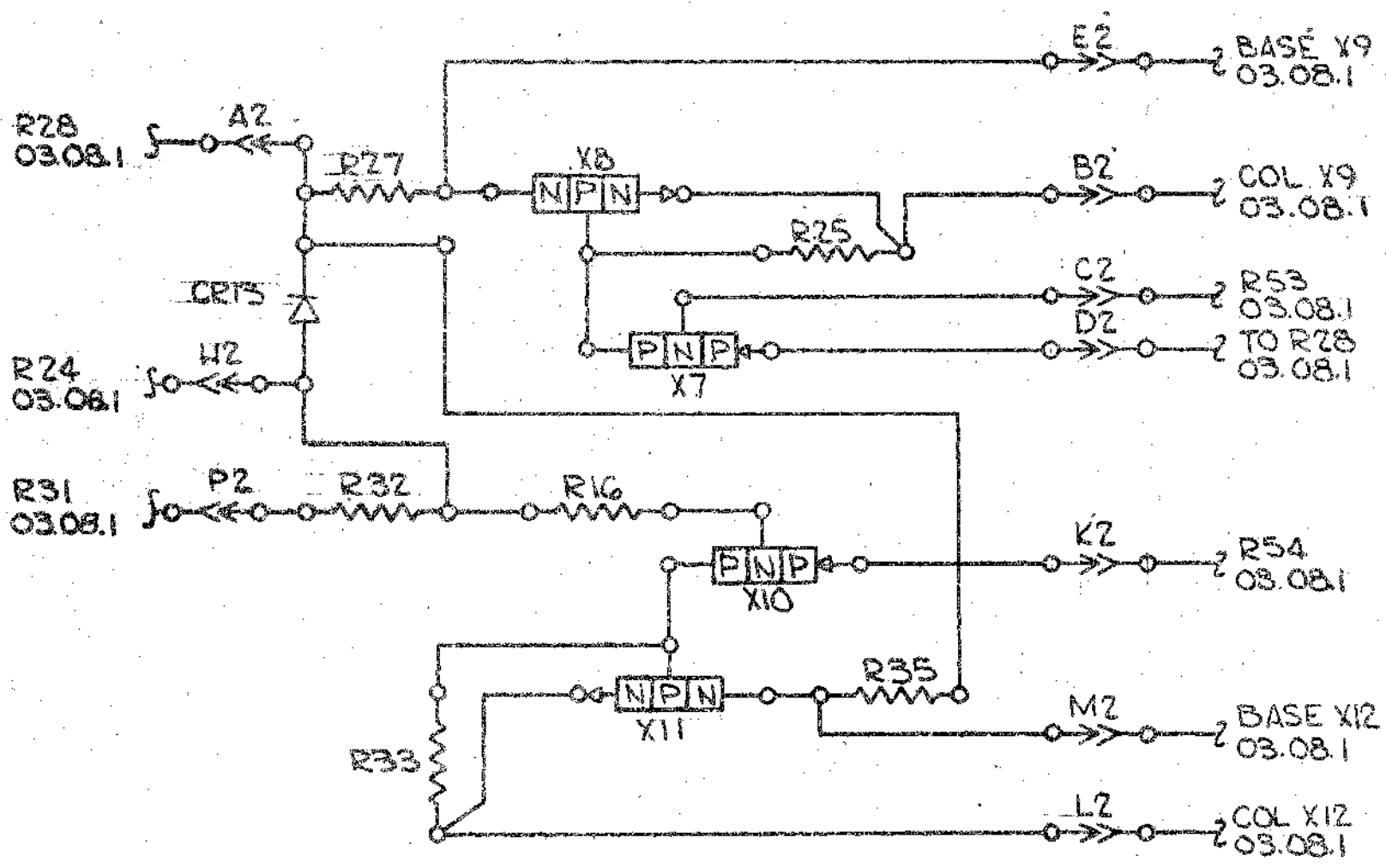
±6V & ±12V CARD WIRING

MASTER

03.04.1



NEGATIVE CARD



NOTE:  
 I O->> O DESIGNATES PIN CONNECTIONS ON CARD SOCKET.

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME   SYSTEMS DIAGRAM		6-9-60	247455			X PRINT TO ENG. SPEC. NO. 895291	P439-0434
03.04.1							
DESIGN	PECOZ-LGO	MODEL	729 II & IV				
DETAIL	ID 4-1960	PHASE	III				
CHECK	FLV 4-21-60	DRAW					
APPROV	NM 5-6-60	CHECK					03.04.1

WHITNEY 100

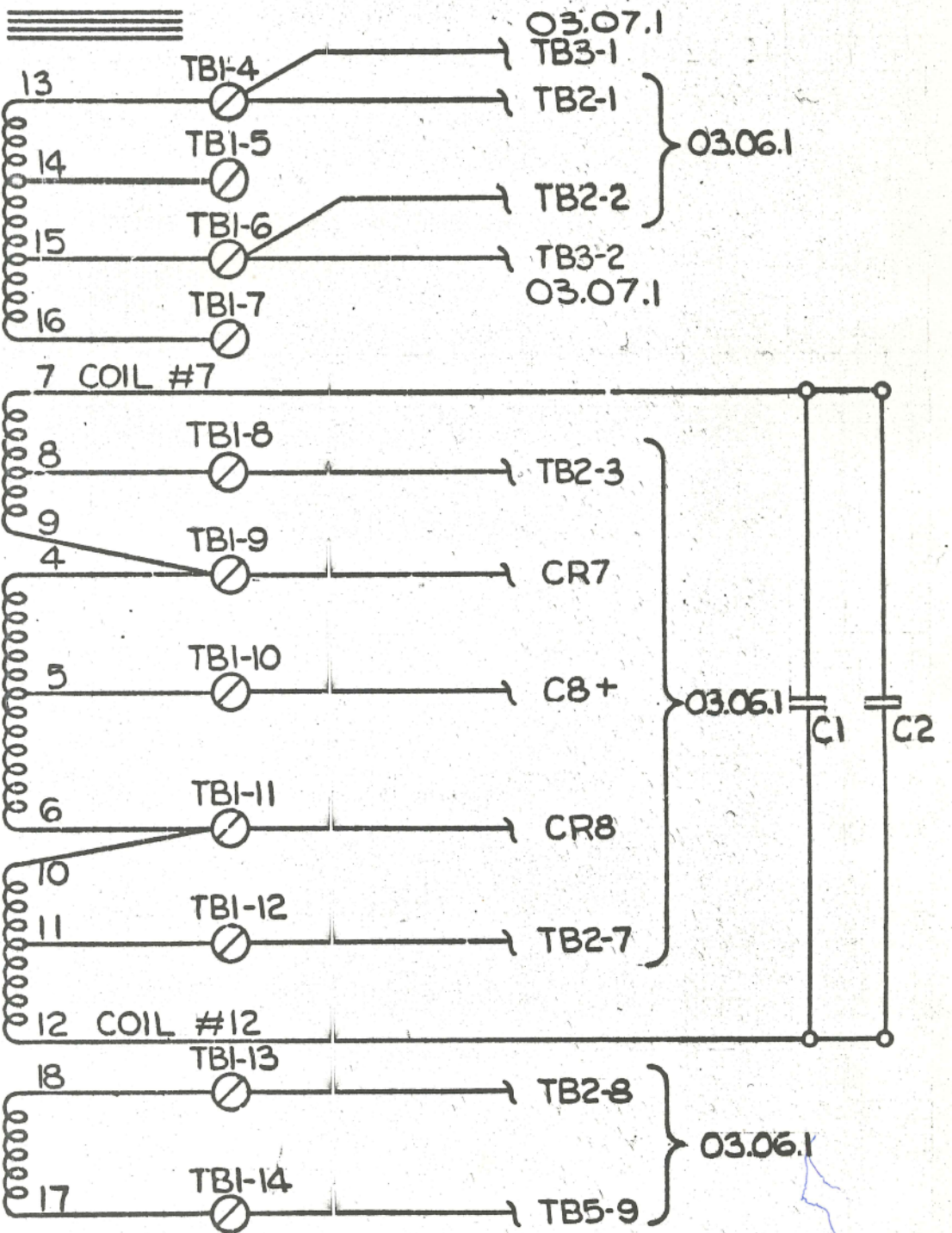
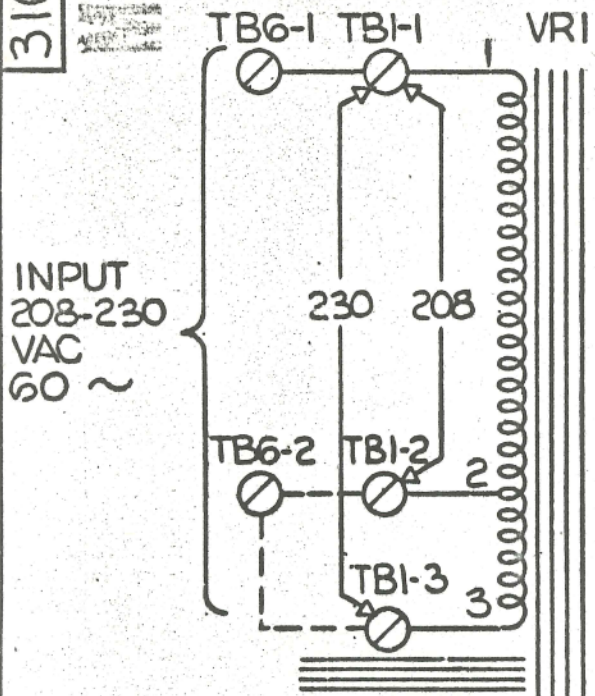


316159

03.05.1

FERRO-REGULATOR SECTION

03.05.1



INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE X PRINT TO ENG. SPEC. NO. 895291	DEVELOPMENT NO.	316159
NAME	SYSTEMS DIAGRAM	6-9-60	247455				P439-0435	
DESIGN	Pecoli-29-60	MODEL	729 II & IV					
DETAIL	ID 4-10-60	PHASE	III					
CHECK	FLV 4-21-60	DRAW						
APPRO	NM 5-6-60	CHECK					03.05.1	

316159

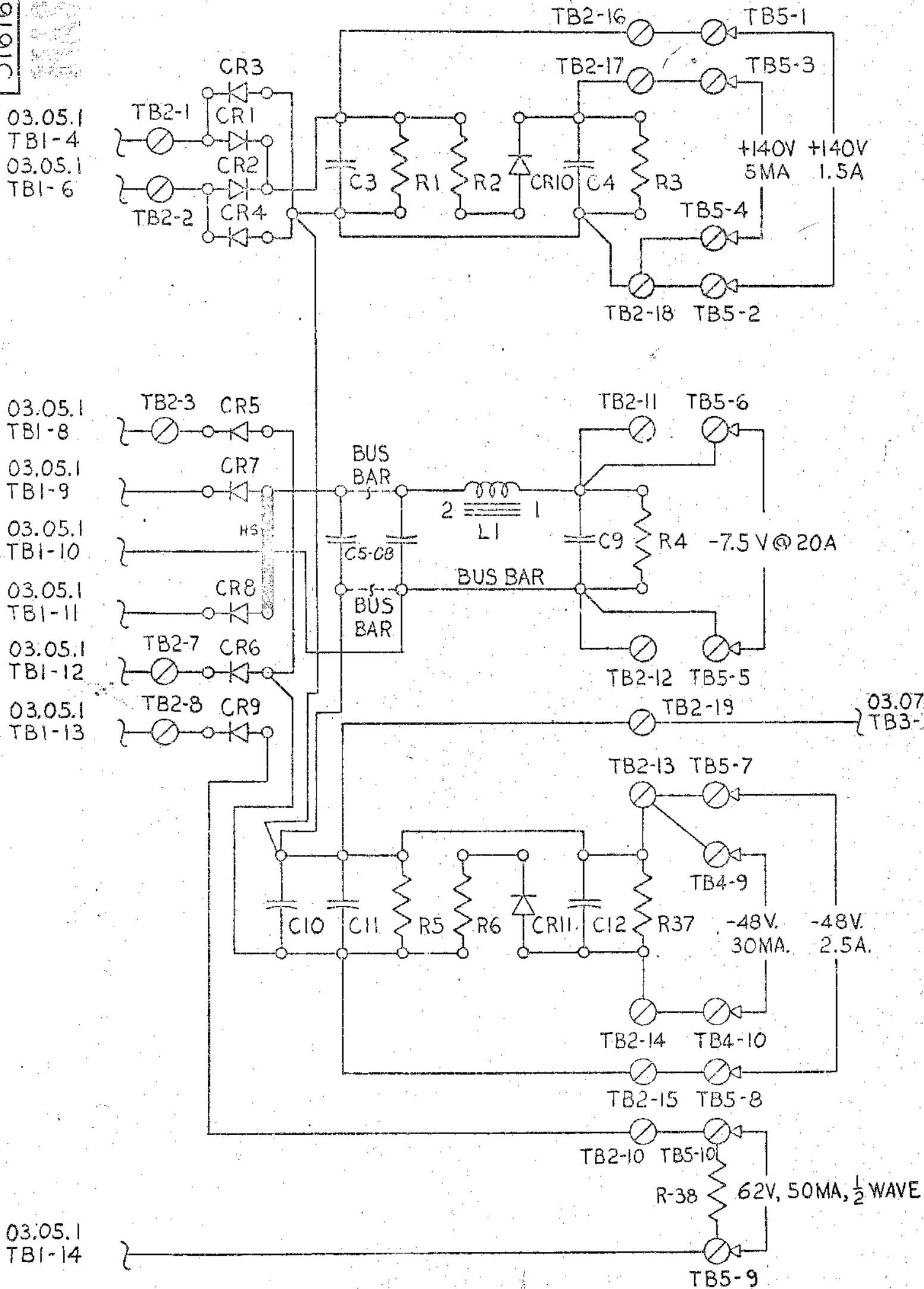
WHITE 100



316160

-48V, -7.5V, +140 & 62V SUPPLY

03.06.1



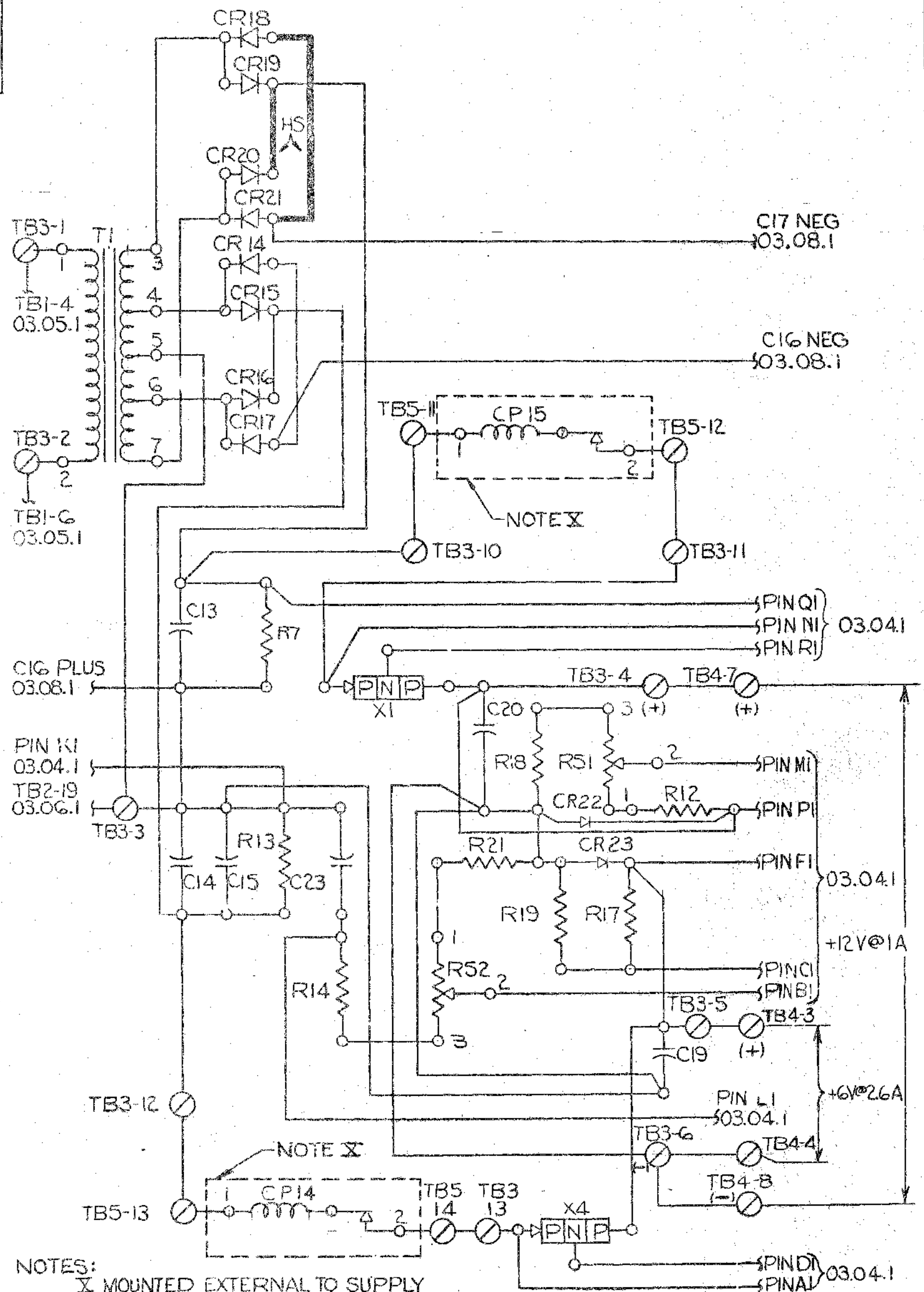
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	6-9-60	247455			X PRINT TO ENG. SPEC. NO. 895291	P439-0436
DESIGN	FCO 2-1-60						
DETAIL	ID 4-19-60						
CHECK	FLV 4-21-60						
APPRO	NM 5-6-60						
							03.06.1

3-11-60

WHITE 18

+6V AND +12V SUPPLY

316161



NOTES:  
X MOUNTED EXTERNAL TO SUPPLY

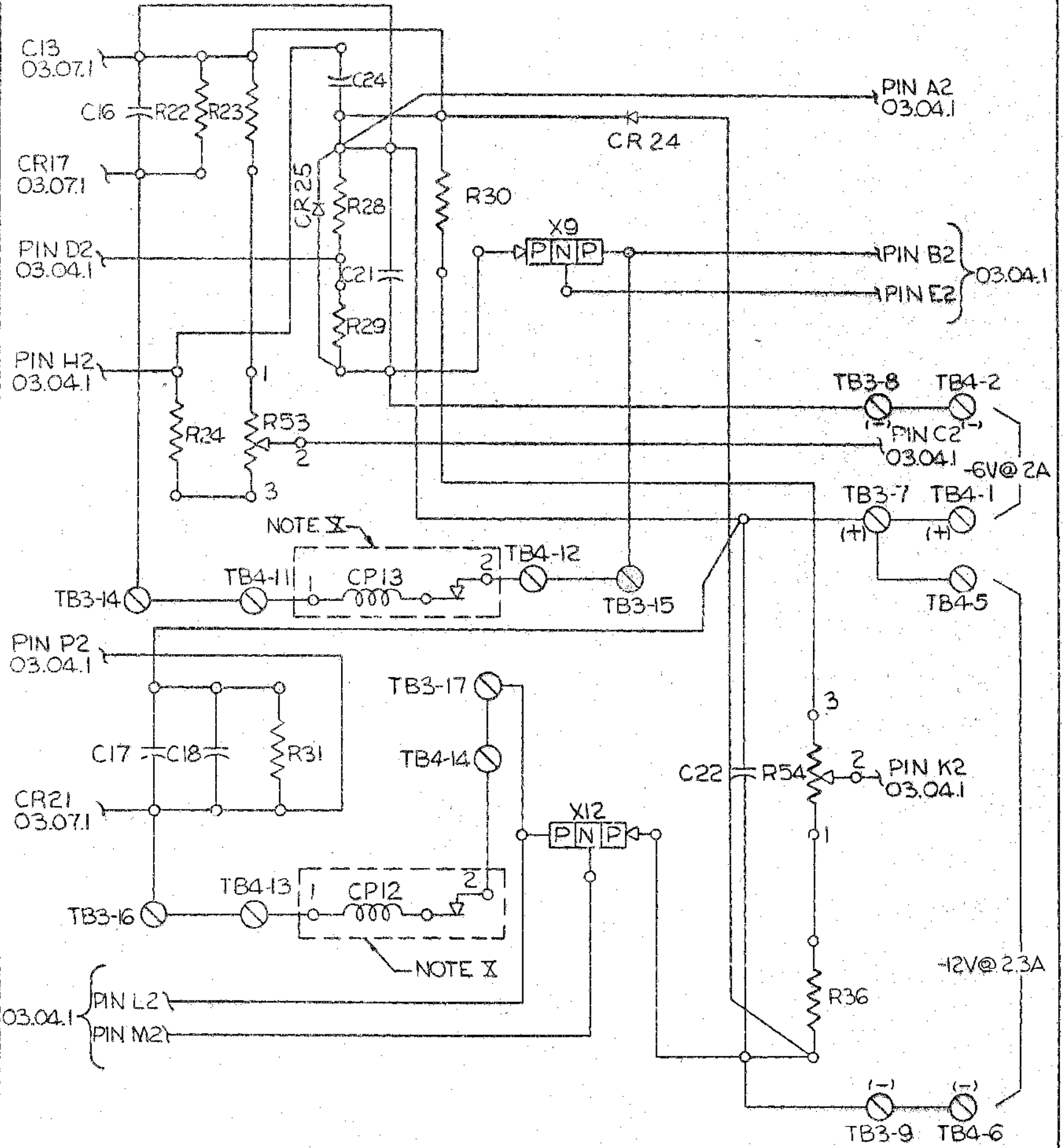
INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME				6-9-60	247455			NOTE X PRINT TO ENG. SPEC. NO. 895 291	316161 <del>2439-0437</del>
03.07.1				11-29-60	248153-A				
DESIGN				9-25-61	248692A				
MODEL									
ID									
DRAW									
CHECK									
APPRO									
									03.07.1



316162

-6V & -12V SUPPLY

03.08.1



NOTE:  
X MOUNTED EXTERNAL TO SUPPLY

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE X PRINT TO ENG. SPEC. NO. 895291	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM 03.08.1				6-9-60	247455				
DESIGN PECO 2-1-60 MODEL 729 II & IV				11-29-60	248153-A				2439-0438
DETAIL JD 4-19-60 PHASE III				9-25-61	248692A				
CHECK FLV 4-21-60 DRAW									
APPRO NM 5-6-60 CHECK									03.08.1

COPY 58 100

WHITNEY 120

316169

316169

COMPONENTS

SHEET 1 OF 2

03.09.1

DIODES			
SYMBOL	PART NO	PAGE NO	DESCRIPTION
CR1-4	595257	03.06.1	200 PIV
CR5,CR6	208386	03.06.1	150 PIV
CR7,CR8	207344	03.06.1	50 PIV
CR9-11	257800	03.06.1	100 PIV
CR12,CR13	209002	03.04.1	ZENER 10 VOLT
CR14-17	208194	03.07.1	50 PIV
CR18,CR21	598480	03.07.1	135 PIV
CR19,CR20	598479	03.07.1	135 PIV
CR22,CR23	257800	03.07.1	100 PIV
CR24,CR25		03.08.1	

MAGNETIC COMPONENTS			
SYMBOL	PART NO	PAGE NO	DESCRIPTION
VR1	316148	03.05.1	FERRO REGULATOR
TI	316149	03.07.1	ISOLATION TRANSFORMER
LI	316150	03.06.1	CHOKE

TRANSISTORS			
SYMBOL	PART NO	PAGE NO	DESCRIPTION
X1, X4	209001	03.07.1	POWER TRANSISTOR
X9, X12		03.08.1	
X2, X5	518689	03.04.1	TYPE 028
X3, X6	318325	03.04.1	TYPE 083
X7, X10	535441	03.04.1	TYPE 026
X8, X11	369087	03.04.1	TYPE 086

CAPACITORS			
SYMBOL	PART NO	PAGE NO	DESCRIPTION
C1	207361	03.05.1	15 MFD, 330 VAC
C2	524854	03.05.1	20 MFD, 330 VAC
C3	316135	03.06.1	1500 MFD, 150 VDC
C4	316136	03.06.1	250 MFD, 150 VDC
C5-C9	316137	03.06.1	15, 500 MFD 10 VDC
C14, C15		03.07.1	
C16		03.08.1	
C10, C11	208222	03.06.1	5000 MFD, 55 VDC
C12	316138	03.06.1	2000 MFD, 50 VDC
C13	316139	03.07.1	12,500 MFD 16 VDC
C17, C18		03.08.1	
C19, C20	316173	03.07.1	300 MFD, 15 VDC
C21, C22		03.08.1	
C23	316668	03.07.1	300 MFD, 15 VDC
C24		03.08.1	

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.	W	
NAME	SYSTEMS DIAGRAM	6-9-60	247455			X PRINT TO ENG. SPEC. NO. 895291		5	
	03.09.1	11-29-60	248153-A						6
DESIGN	FLV 4-20-60 MODEL 729 II & IV	12-21-60	248865						7
DETAIL	ID 4-20-60 PHASE III							8	
CHECK	FLV 4-21-60 DRAW							9	
APPRO	NM 5-6-60 CHECK						03.09.1	10	

316169

316169

316172

MASTER

## COMPONENTS

SHEET 2 OF 2

03091

RESISTORS			
SYMBOL	PART NO	PAGE NO	DESCRIPTION
R1	442960	03.06.1	1500 $\Omega$ 25W
R2	317011	03.06.1	470 $\Omega$ 1/2W
R10, R20		03.04.1	
R3	317099	03.06.1	22K $\Omega$ 2W
R4	322888	03.06.1	100 $\Omega$ 2W
R5	221110	03.06.1	200 $\Omega$ 25W
R6	502483	03.06.1	51 $\Omega$ 1/2W
R7	317019	03.07.1	150 $\Omega$ 2W
R31		03.08.1	
R14	316140	03.07.1	470 $\Omega$ 5W
R24		03.08.1	
R9, R15	317003	03.04.1	47 $\Omega$ 1/2W
R11, R16	317012	03.04.1	510 $\Omega$ 1/2W
R12, R17	316142	03.07.1	10 $\Omega$ 5W
R29, R36		03.08.1	
R13	132779	03.07.1	75 $\Omega$ 1W
R22		03.08.1	
R37	2100878	03.06.1	1K $\Omega$ 5W
R38	326998	03.06.1	7500 $\Omega$ 2W
R18, R19	316144	03.07.1	50 $\Omega$ 5W
R28, R30		03.08.1	
R21	316145	03.07.1	530 $\Omega$ 5W
R23		03.08.1	
R27	322347	03.04.1	560 $\Omega$ 1/2W
R8, R32	317006	03.04.1	200 $\Omega$ 1/2W
R35	317276	03.04.1	1200 $\Omega$ 1/2W
R25, R33	322729	03.04.1	150 $\Omega$ 1/2W
R51	316146	03.07.1	5 $\Omega$ 2W POT
R54		03.08.1	
R52	316147	03.07.1	50 $\Omega$ 2W POT
R53		03.08.1	

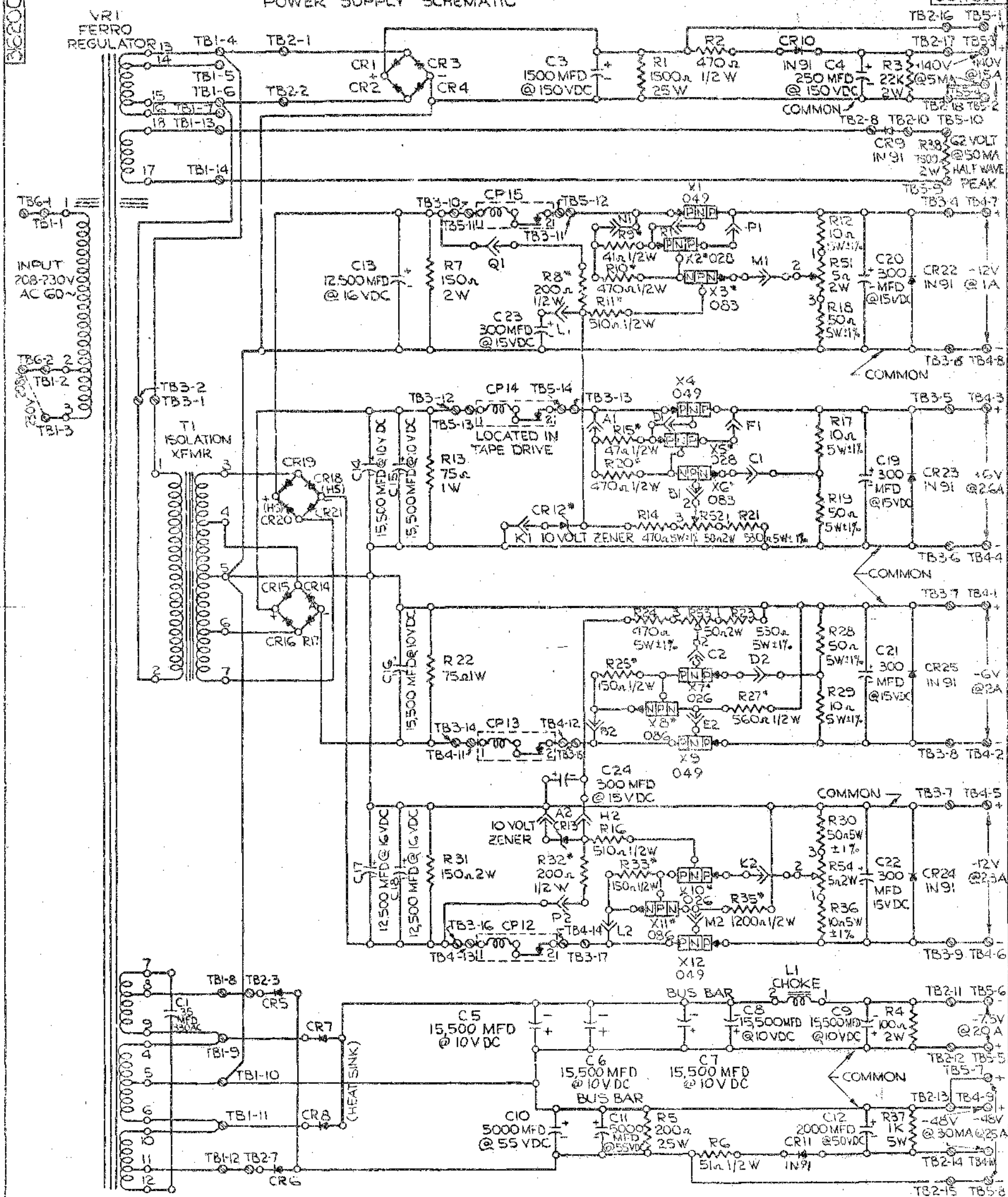
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME SYSTEMS DIAGRAM		6-9-60	247455	FROM THE IBM. APPS. NO. 895291	
DESIGN FLV 4-20-60 MODEL 129 II 3W					
DETAIL ID 4-20-60 PHASE III					
CHECK FLV 4-21-60 DRAW					
APPROD N M 5-6-60 CHECK					
					03.09.1

316172

PRINTED IN U.S.A.

POWER SUPPLY SCHEMATIC

03.10.1



NOTE  
COMPONENTS MARKED BY \*  
ARE MOUNTED ON PRINTED  
CIRCUIT CARDS

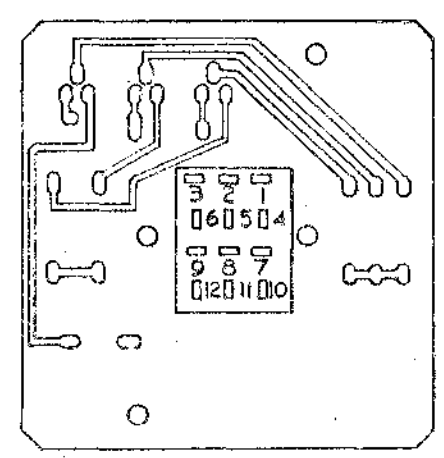
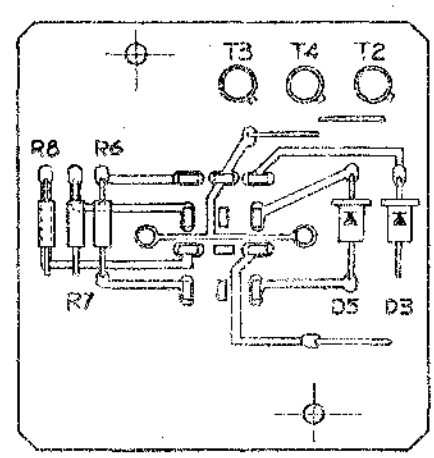
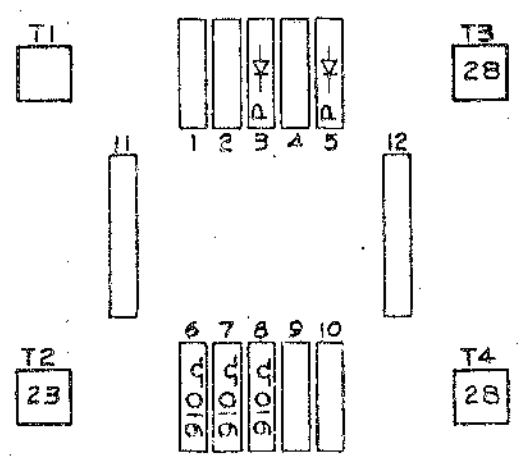
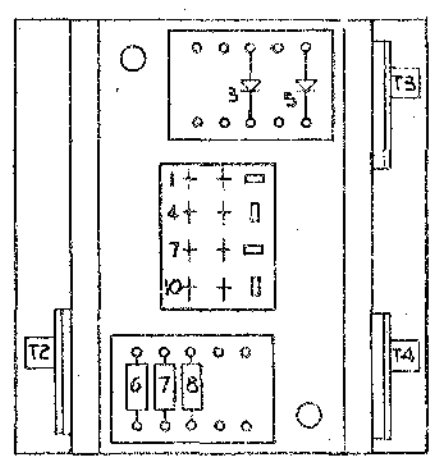
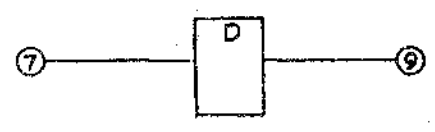
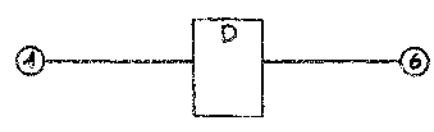
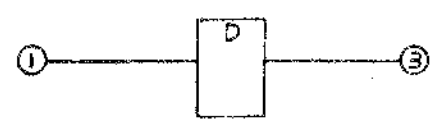
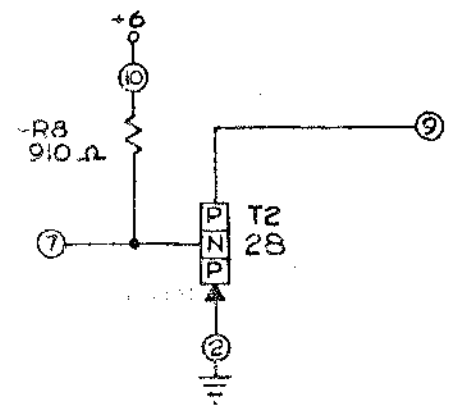
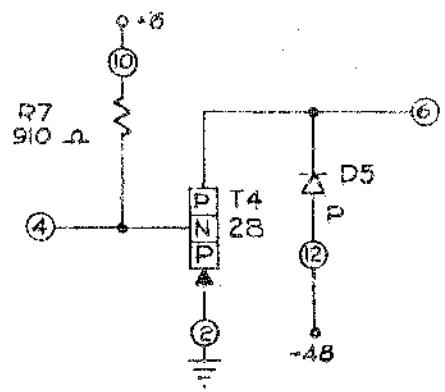
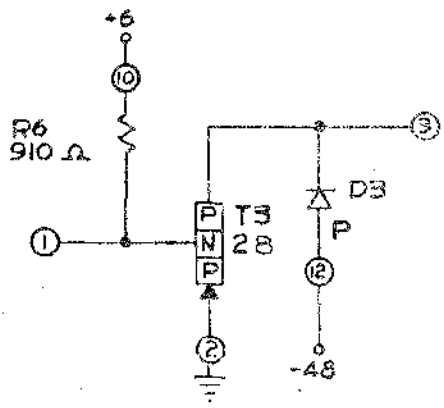
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INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME	SYSTEMS DIAGRAM	9-15-60	248153			* PRINT TO ENG. SPEC. DR. 895291	03.10.1
DESIGN	17-25 CD MODEL 725 II IV	12-21-60	248156S				
DETAIL	D 8-9-C9 PHASE III	6-6-61	249545				
CHECK	LFC 8-19-60 DRAW	6-22-61	249735				
APPROV	10-11-60 ENGR	9-25-61	248692A				



526615

POWER RELAY & POWER LIGHT DRIVER

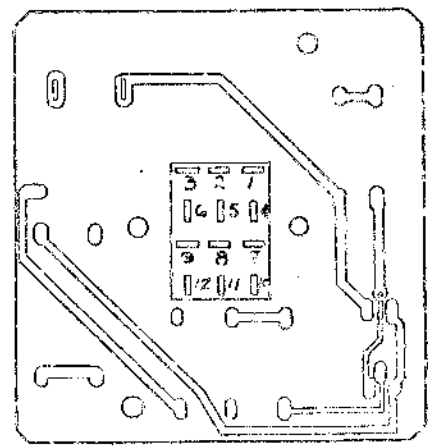
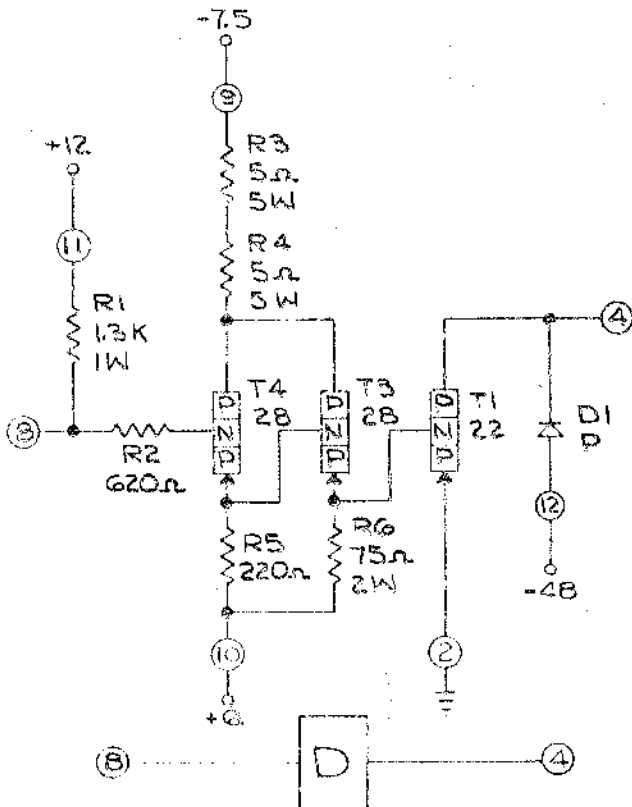
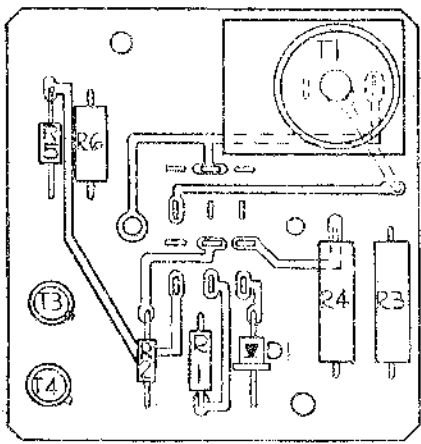
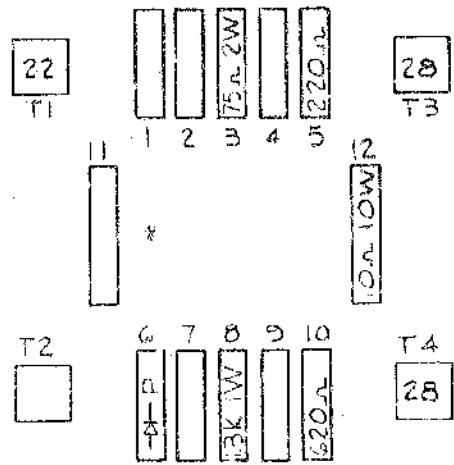
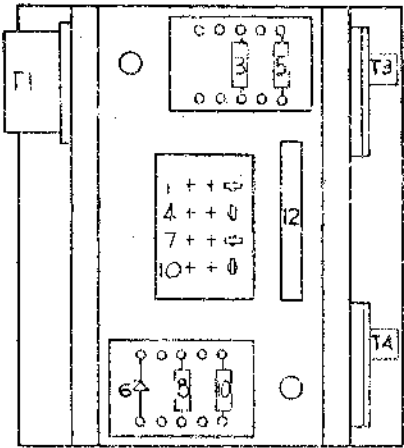
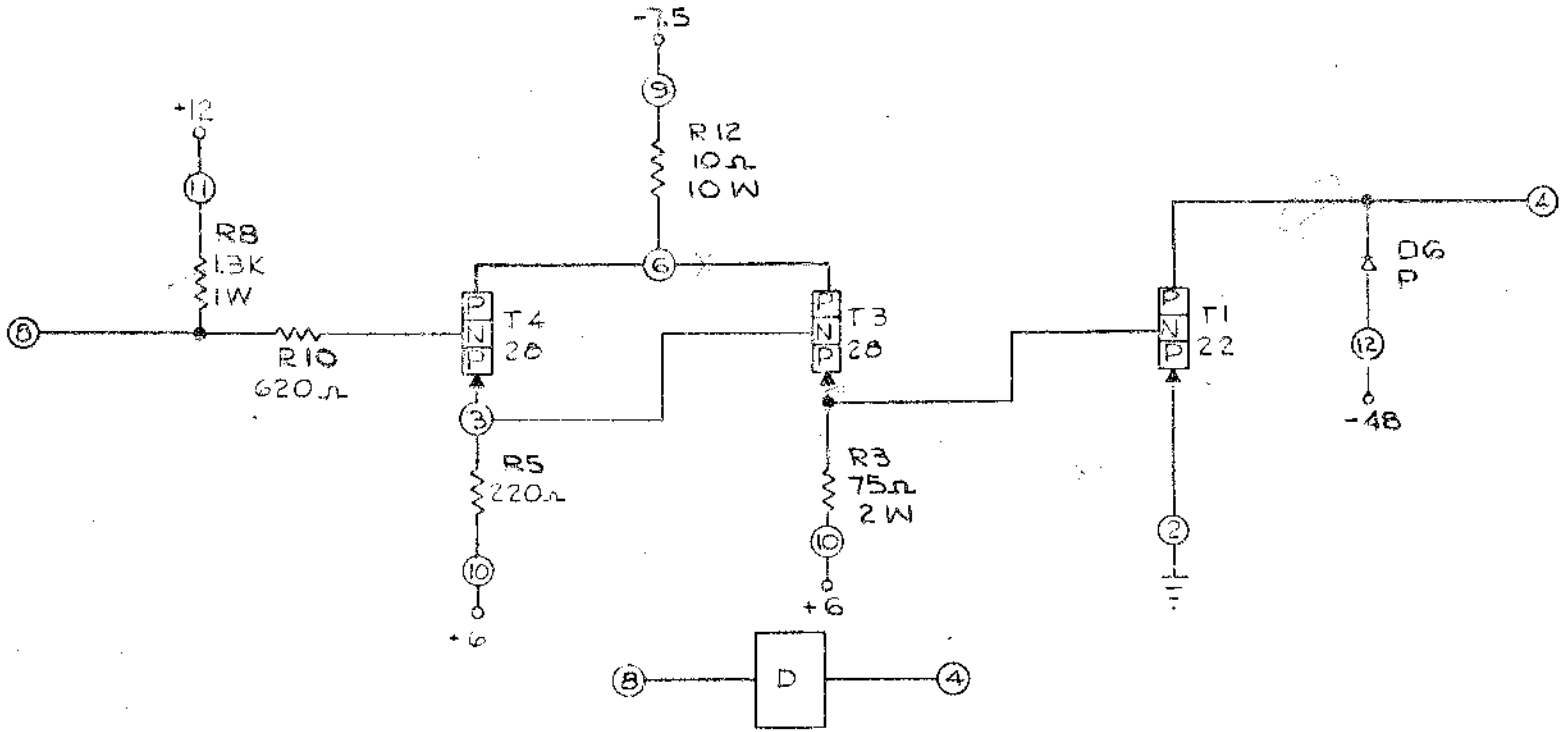


INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	NOTE	DEVELOPMENT NO.
NAME		9-2-58	244306A			PRINT TO ENR. SPEC. NO. 895291	4526-0679
DESIGN		1-11-61	248314				
DETAIL	DWC	3-18-58					
CHECK	JES	6-3-59	DRAW	J.D.	11-9-60		
APP'D	GV	R/E	7-2-59	CHECK	JAK	1-7-60	

526615

612825

POWER PULSAR DRIVER



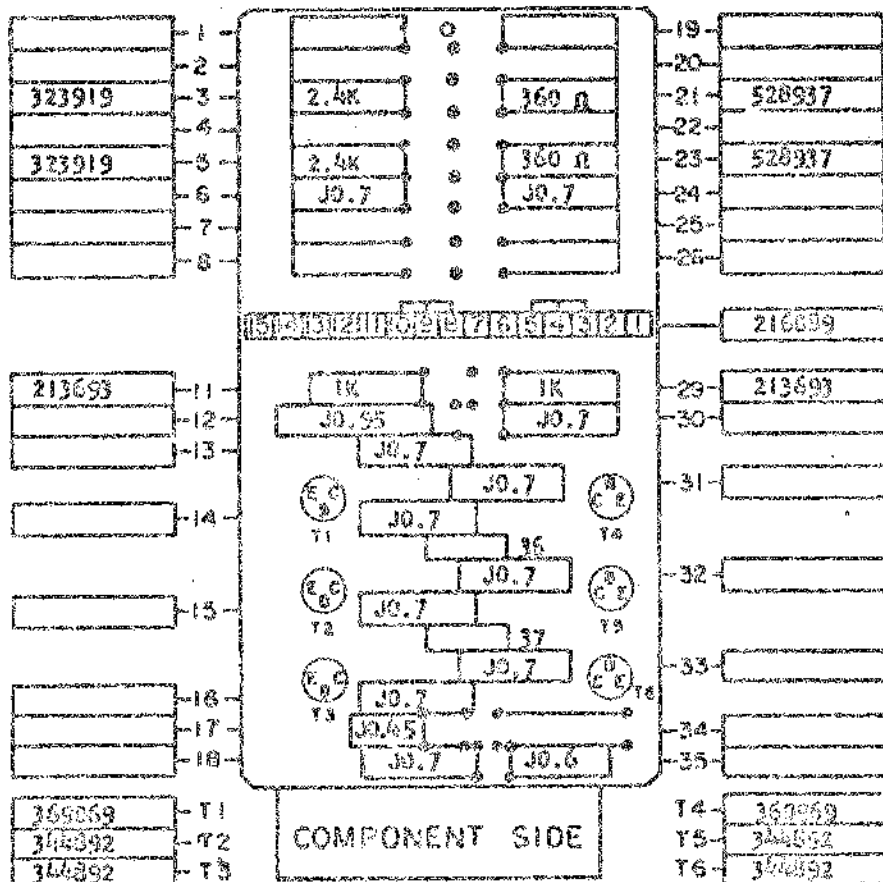
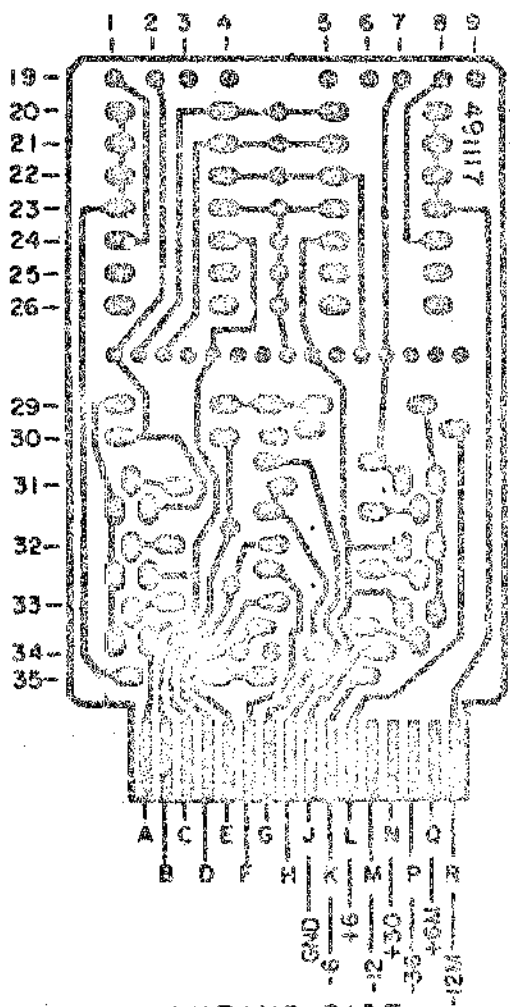
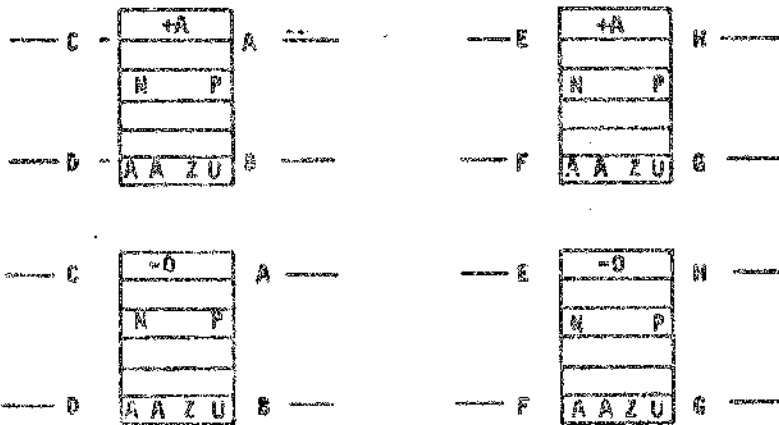
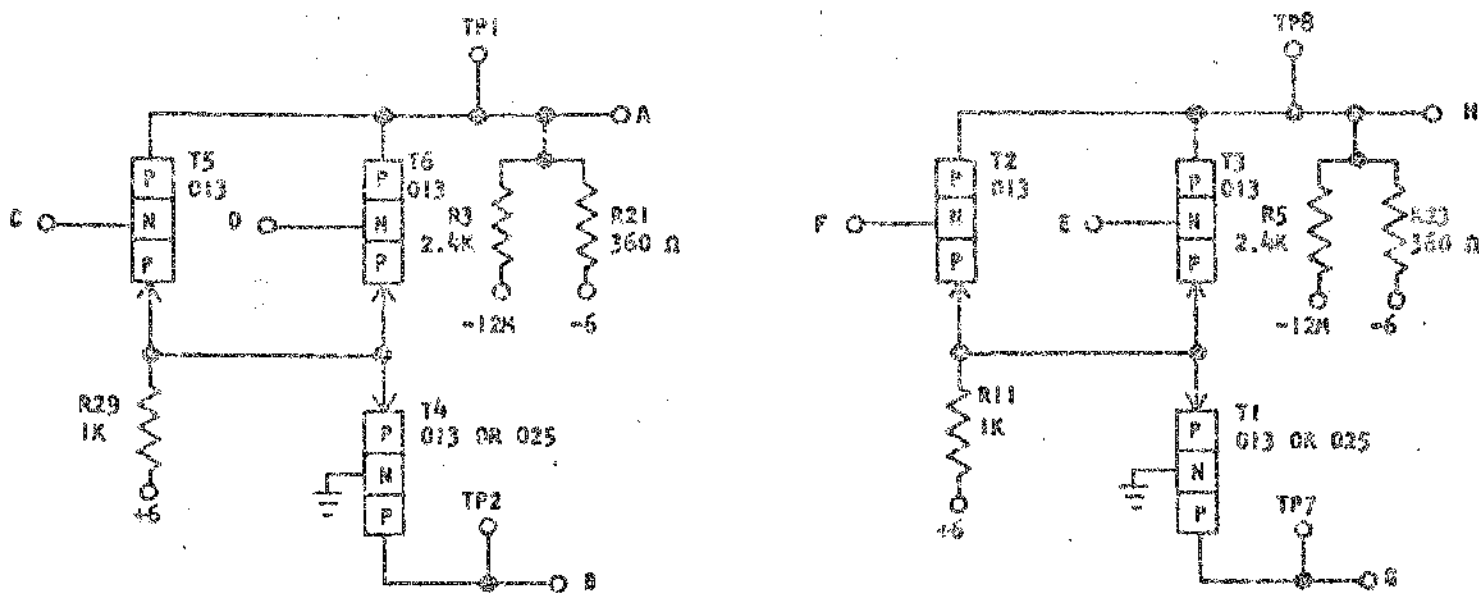
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	DATE	CHANGE NO.	DATE	RECEIPT NO.
NAME SYSTEMS DIAGRAM		3-2-59	44306A			PRINT TO EMP. PFG. NO. 625231	0020-079
DESIGNER		1-11-61	248374				
DETAIL DMC 3-13-59							
CHECK JES 1-3-58 DRAW I.D. 11-9-40							
APPROV. J.M. 1-27-58 CHECK W.J. 1-11-61							

ALLOY - TWO WAY "N" BLOCK

371206

371206

STANDARDS CODE  
2-7045



013 OR 025  
013  
013

NOTES  
X ASSEMBLE TO ENGINEERING SPECIFICATION 895356 AND 891999  
XI "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491256  
XII ALL RESISTORS ARE 1/2 WATT AND 5% UNLESS OTHERWISE NOTED  
XIII TEST TO ENGINEERING SPECIFICATION 891206

B

WIRING SIDE

IPC CIRCUIT & PACKAGING STANDARD

APPROVAL DATE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY TWO WAY	11-18-58	105502A	R.81				
DESIGN	REV 01-18-58	4-23-59	105505	R.81				
DETAIL	REV 01-18-58	5-14-59	100035					
CHGDN	REV 11-18-58							
APPRO	REV 11-18-58							

371206

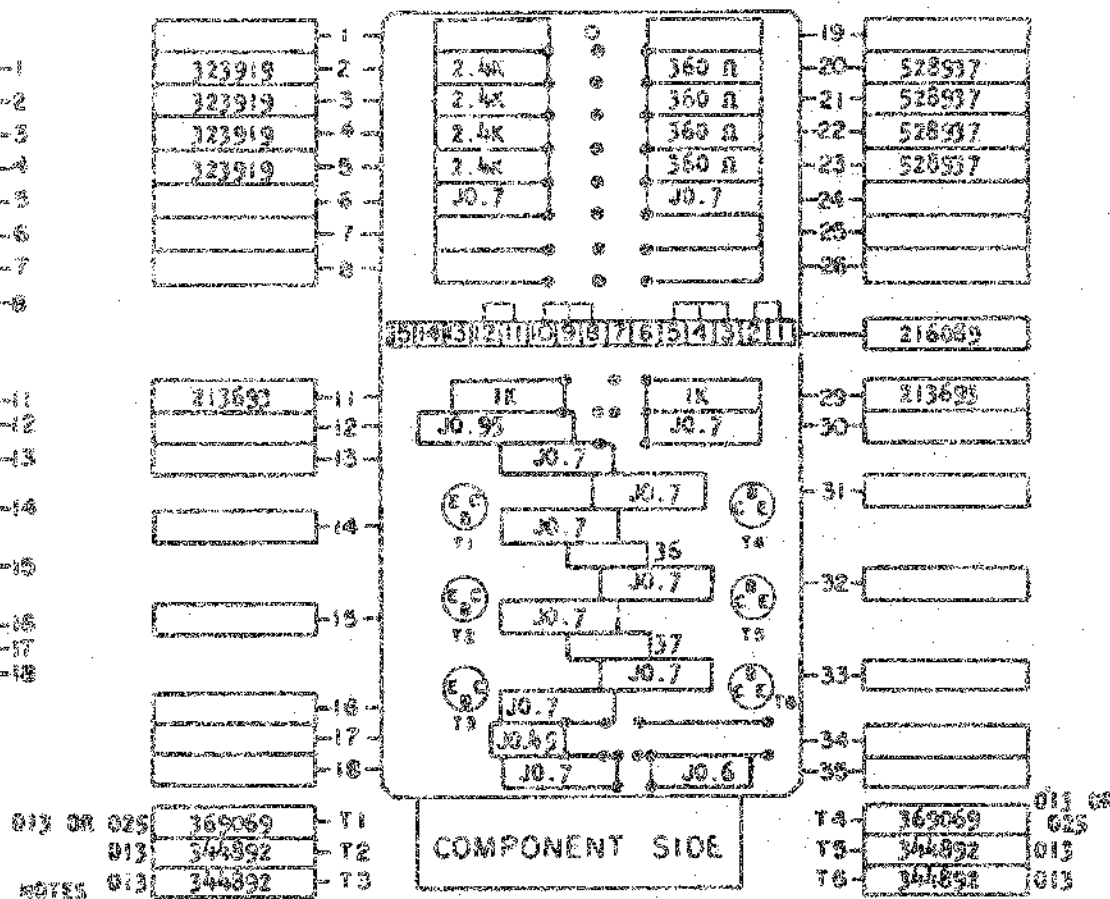
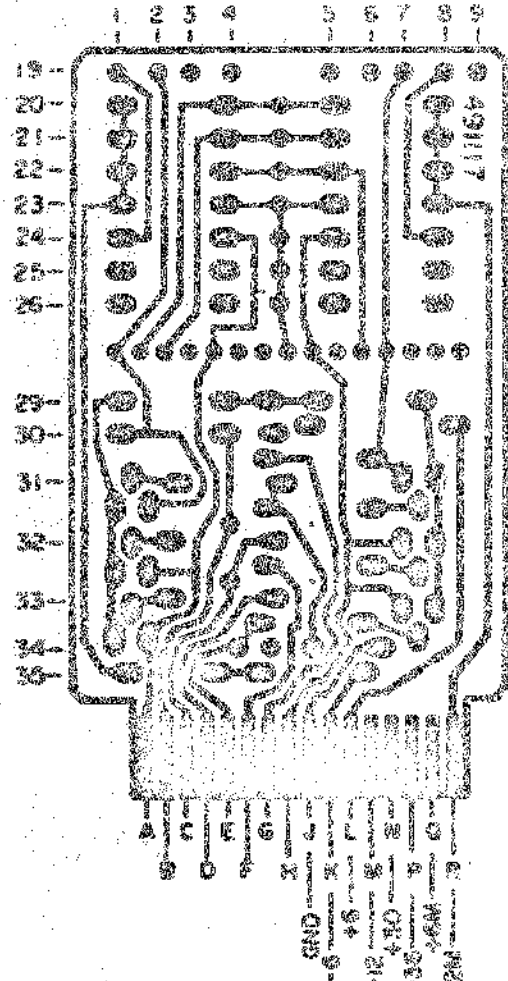
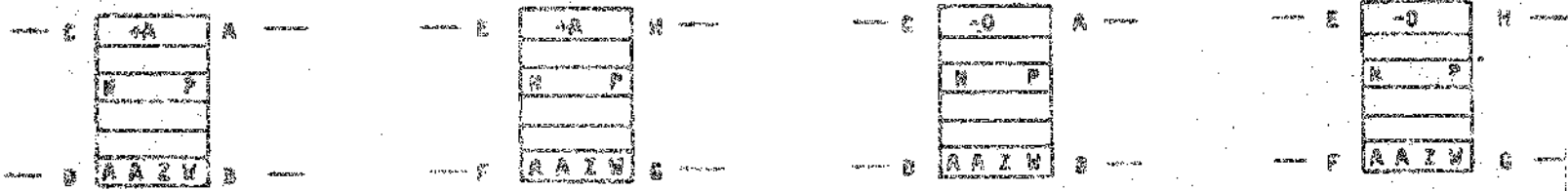
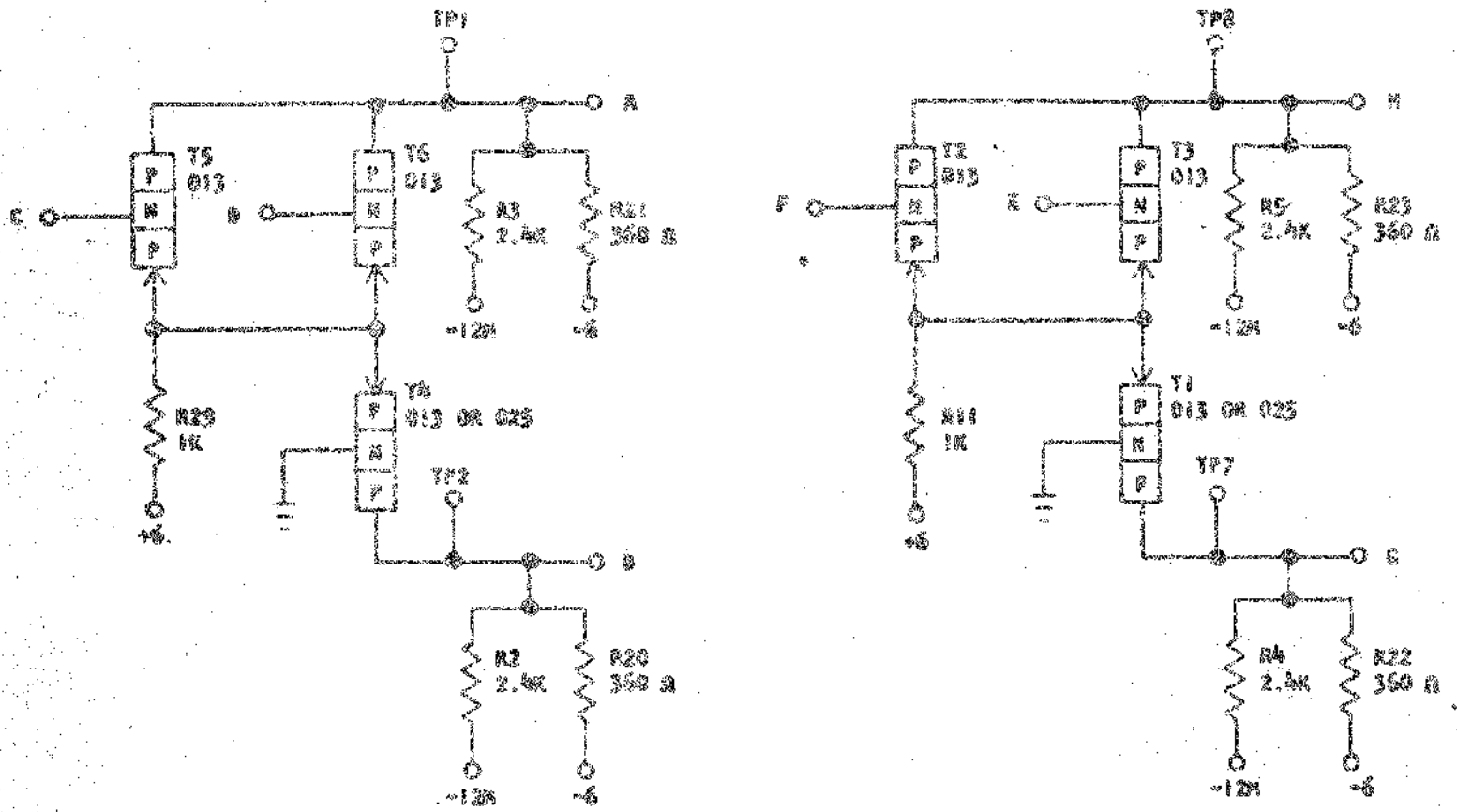
RC



ALLOY-TWO WAY "N" BLOCK

371204

STANDARDS CODE  
3-7045



- 013 OR 025 369059 T1
- 013 344892 T2
- 013 344892 T3
- 011 OR 025 369059 T4
- 013 344892 T5
- 013 344892 T6

NOTES:  
 1 ASSEMBLE TO ENGINEERING SPECIFICATION B95396 AND B91999  
 2 "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296  
 3 ALL RESISTORS ARE 1/2 WATT AND 1% UNLESS OTHERWISE NOTED  
 4 TEST TO ENGINEERING SPECIFICATION B91204

**B WIRING SIDE**

IPC CIRCUIT & PACKAGING STANDARD

APPROVAL: RWE DATE: 10-30-58

DESIGN	REV	DATE	BY	CHKD	DATE	REASON
371204	1	11-20-58	RJM			
	2	1-11-60	RJM			
	3	5-2-60				

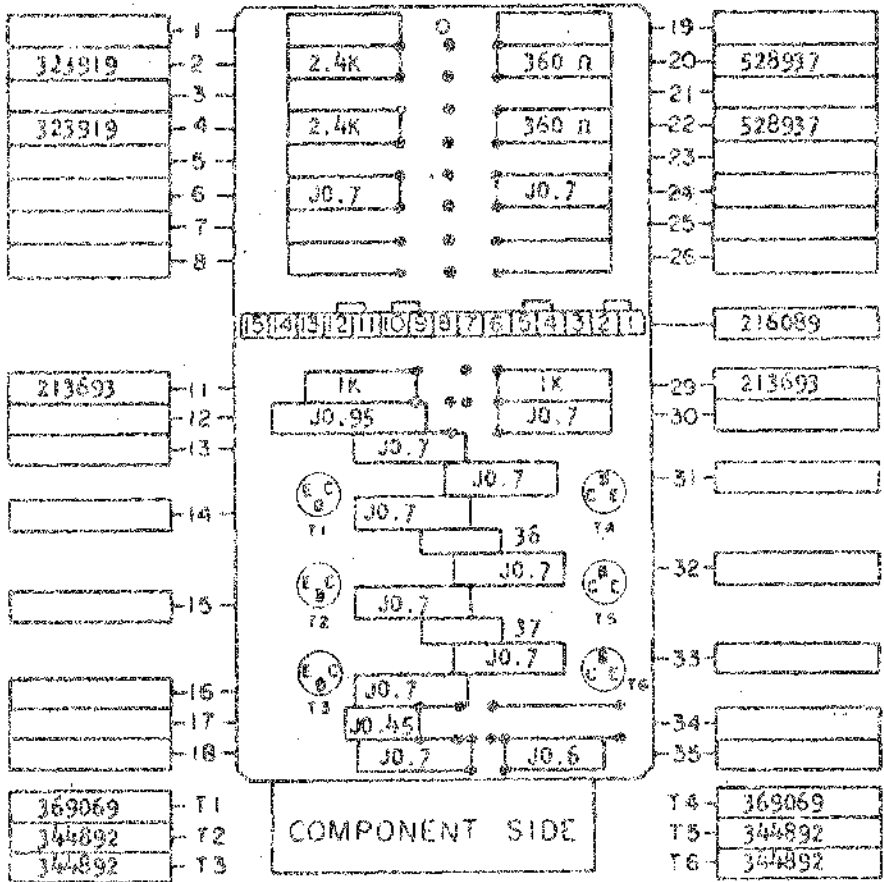
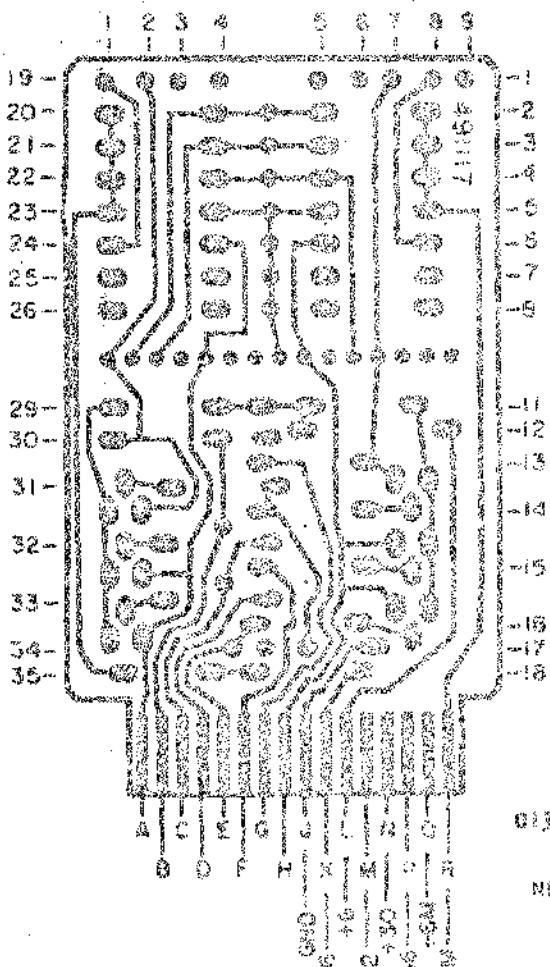
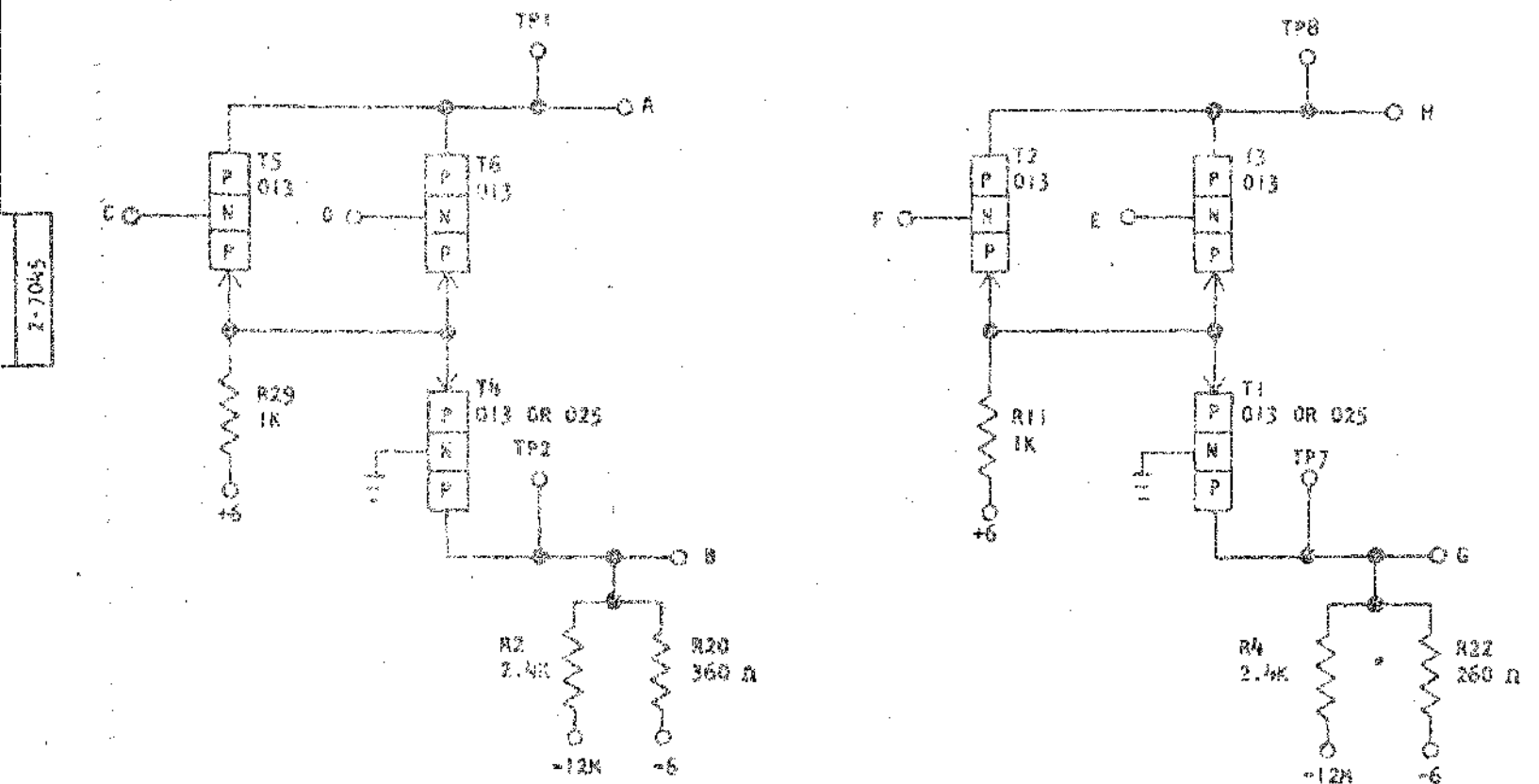
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME: CARD ASM TEST- ALLOY-TWO	11-20-58	105502A	RJM				371204
REV: 1-11-60	1-11-60	104995	RJM				
CHKD: 5-2-60	5-2-60	104995					
APPD: 11-27-60	11-27-60						

ALLOY - TWO WAY "N" BLOCK

371205

371205

STANDARDS CODE  
Z-7045



013 OR 025	369069	T1	013 OR 025	369069	T4
013	344892	T2	013	344892	T5
013	344892	T3	013	344892	T6

- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- XI "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
- XII ALL RESISTORS ARE 1/2 WATT AND +5% UNLESS OTHERWISE NOTED
- XIII TEST TO ENGINEERING SPECIFICATION 891205

**B**

WIRING SIDE

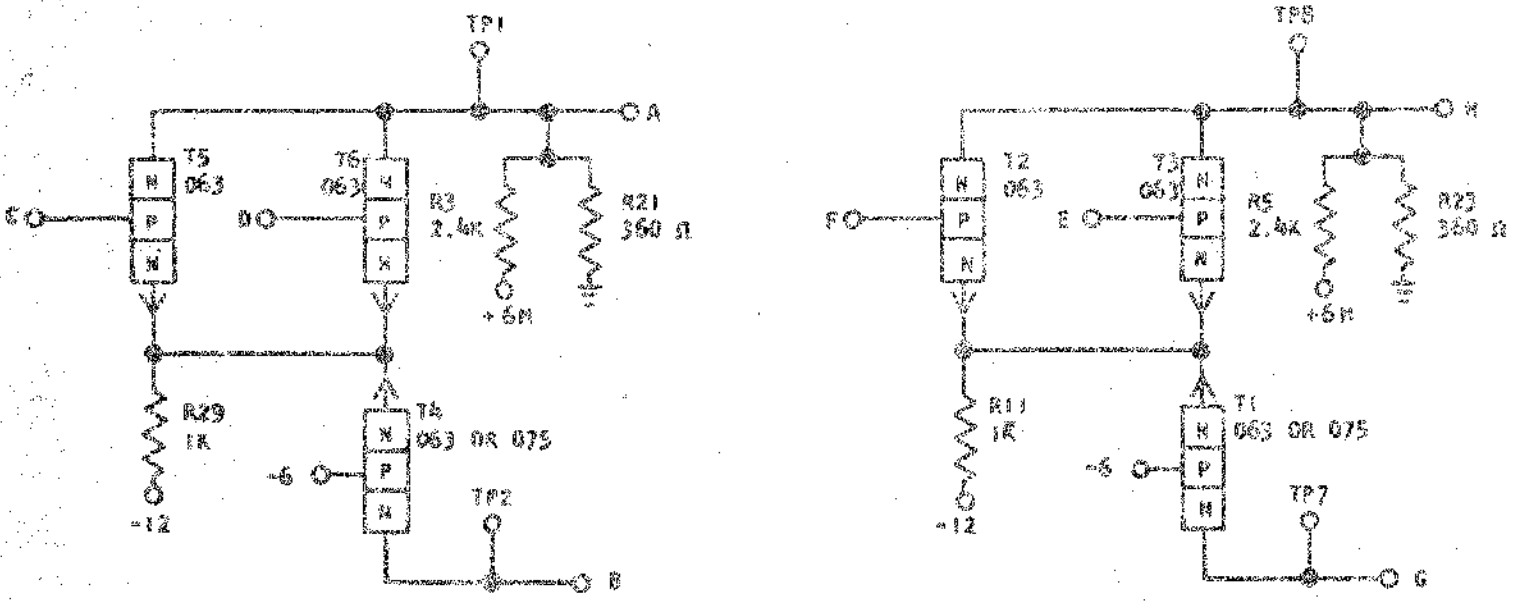
EPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

DESIGN	DEV	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
INTERNATIONAL BUSINESS MACHINES CORP.								
NAME CARD ASM TSTR-ALLOY-TWO		12-9-58	105546	RJH				
WAY "N" BLOCK		4-23-59	105865	RJH				
DESIGN	DEV	12-8-58	MODEL	SMS	1-11-58	RESPAWN		
DETAIL	RKD	12-8-58	SCALE	NONE	4-16-60	D108701		
CHECK	GWS	12-8-58	DRAW	VE 14-10-60	5-4-60	108605		
APPROD	BES	12-8-58	CHECK	DN 1/14/60				

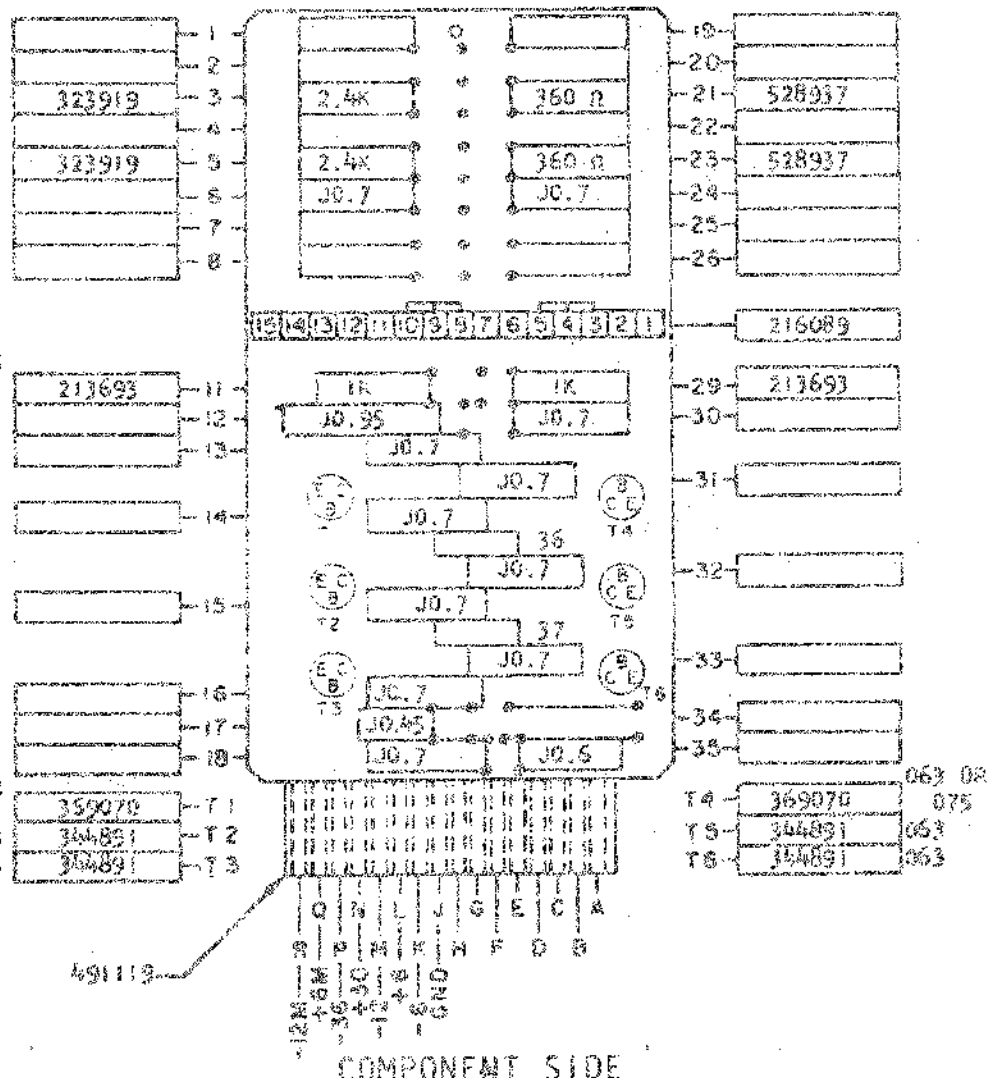
371205

ALLOY-TWO WAY "P" BLOCK

371215  
A B Z U  
STANDARDS  
CODE  
2-7045



- NOTES
- I TEST TO ENGINEERING SPECIFICATION 891215
  - II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895196 AND 891999
  - III ALL RESISTORS ARE 1/2 WATT AND 5% UNLESS OTHERWISE NOTED
  - IV "J" IN BLOCK DENOTES BARE WIRE JUMPER. 491796



**B**

DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR- ALLOY-	5-14-59	105546		8-23-59	105865	RJH	
TWO WAY "P" BLOCK OUT PH LOADS		6-6-58	382-8926		3-31-60	R20RAWH		
DESIGN DEV	12-8-58	TYPE	SMS		6-20-60	D109187	A 2/3	
DETAIL RKD	12-8-58	SCALE	NONE					
CHECK	SMS	12-8-58	DRAW	VE	12-8-58	105546	RJH	
APPROV	DES	12-8-58	CHECK	VE	2-16-59	105875	RJH	

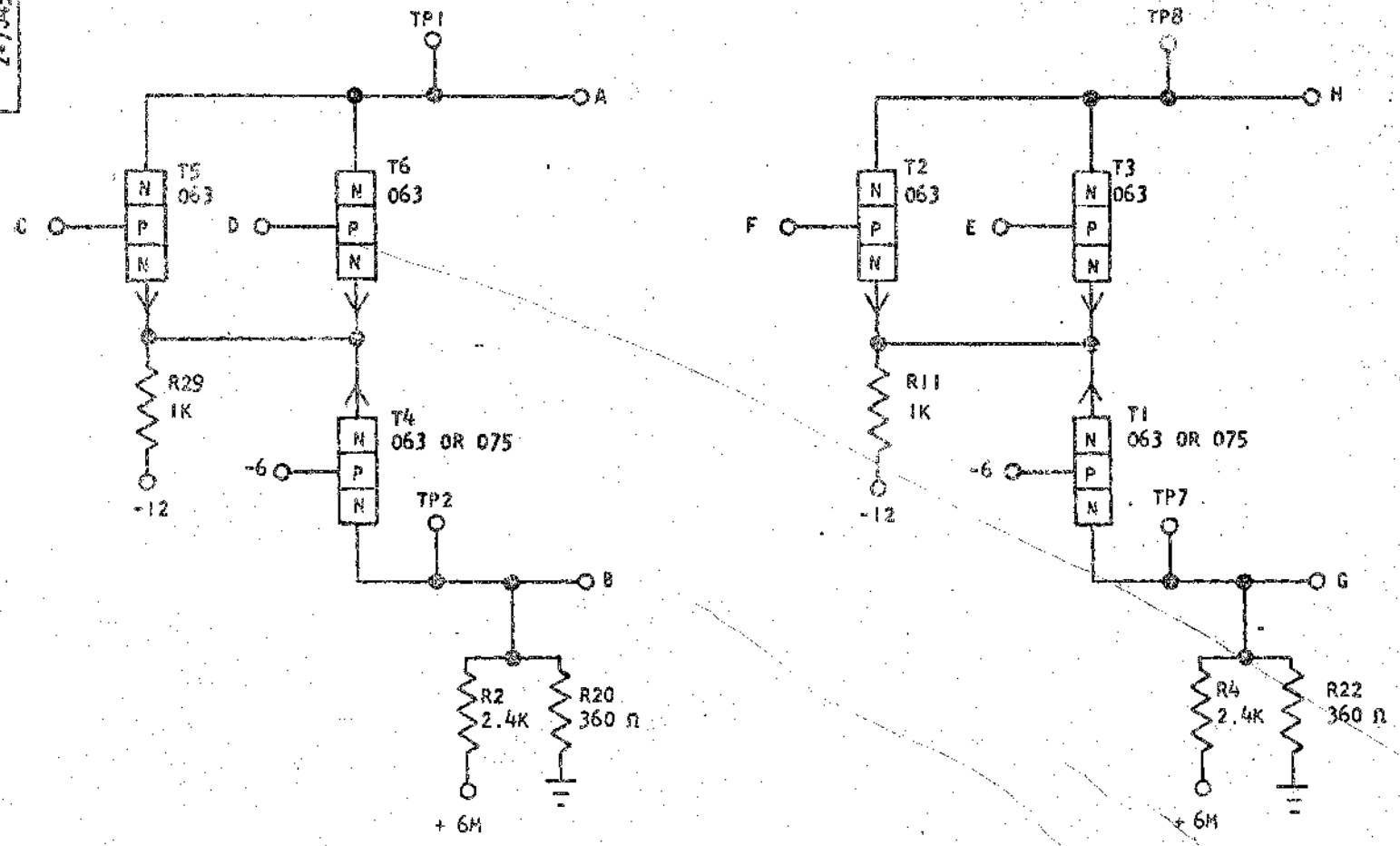
371215



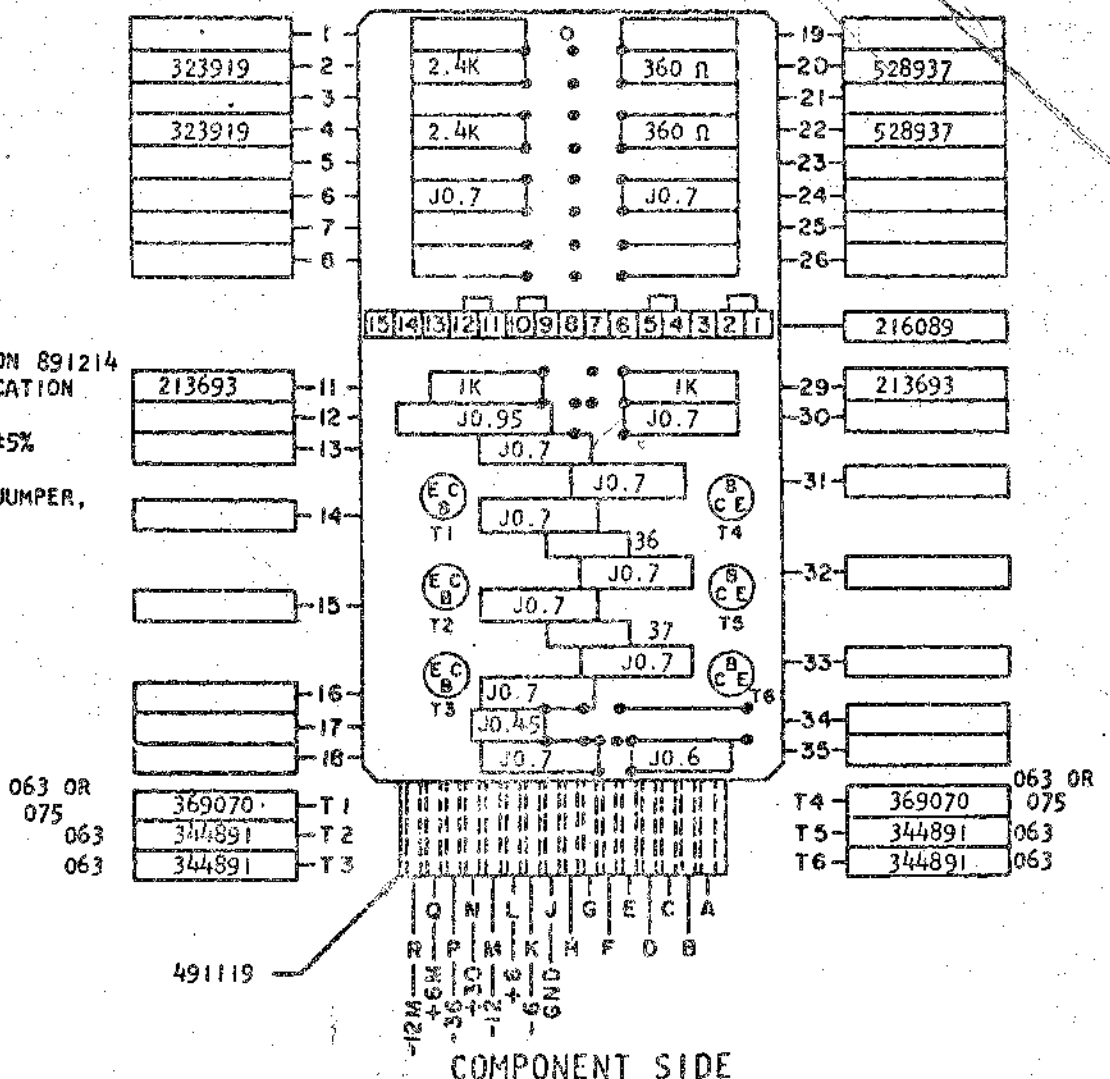
ALLOY-TWO WAY "P" BLOCK-IN PH LOADS

371214

371214  
A B Z V  
STANDARDS CODE  
2-7045



- NOTES  
 X TEST TO ENGINEERING SPECIFICATION 891214  
 XI ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999  
 XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



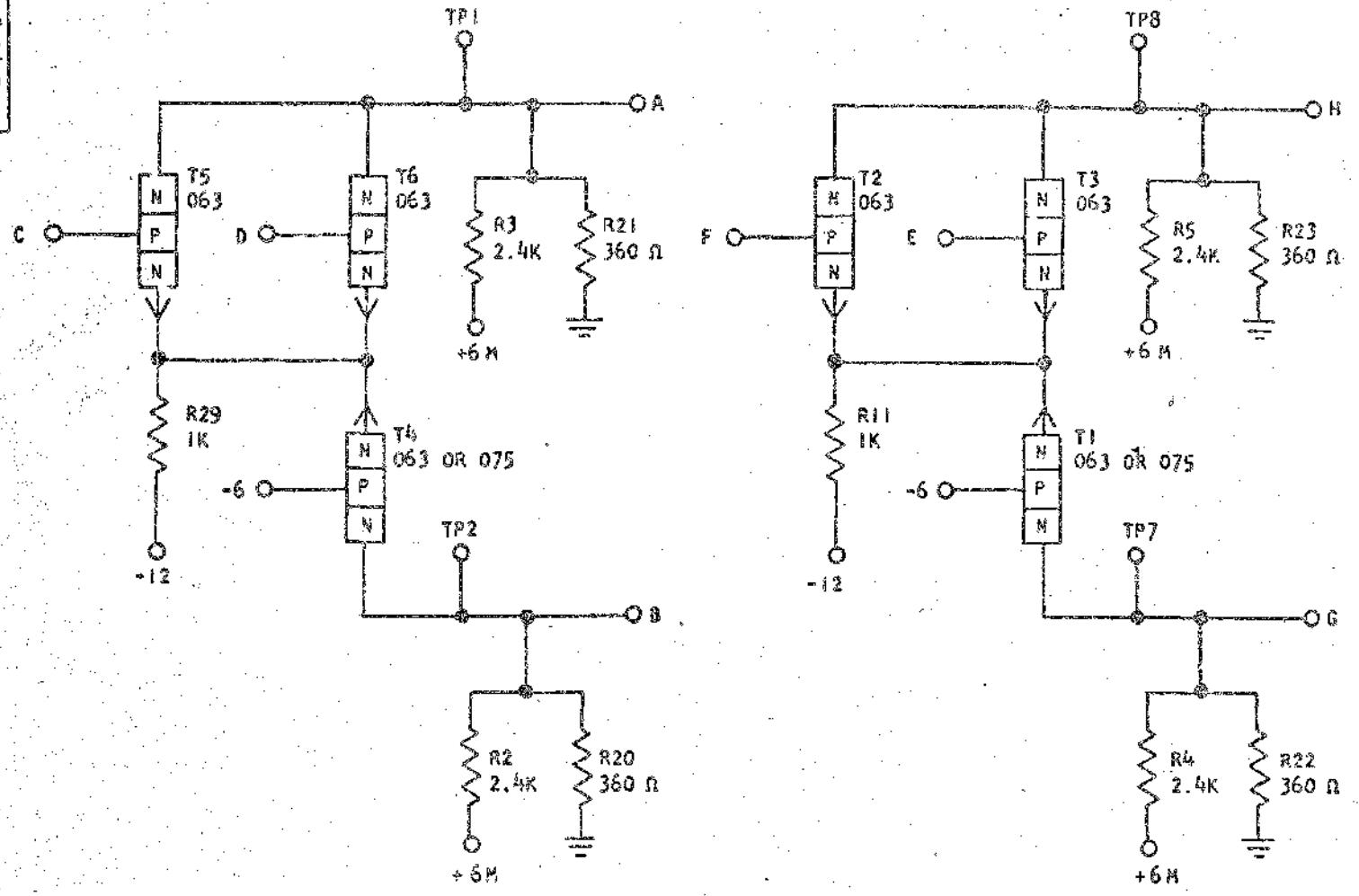
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DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

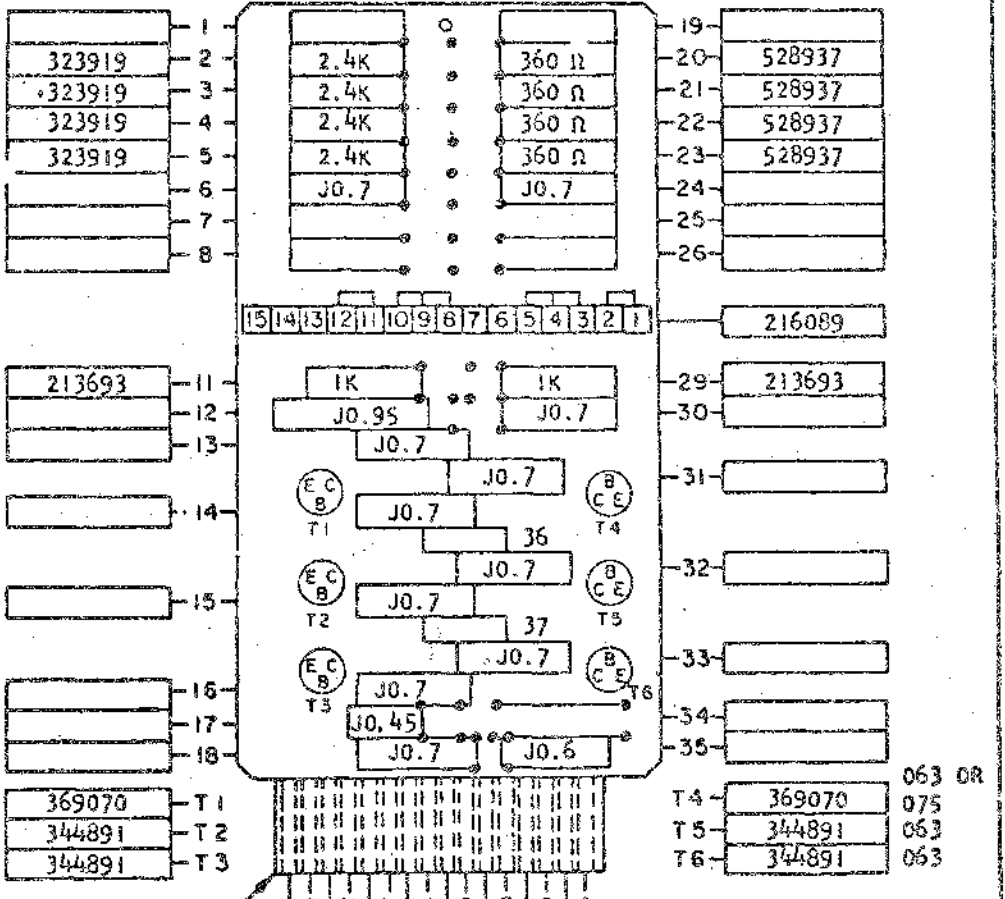
INTERNATIONAL BUSINESS MACHINES CORP.					DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY-TWO WAY				12-9-58	105546	RJH				371214
	"P" BLOCK-IN PH LOADS				4-23-59	105865	RJH				
DESIGN	DEV 12-8-58	TYPE	SMS		1-22-60	FEDRAWN					
DETAIL	RKD 12-8-58	SCALE	NONE		6-20-60	D109187	<i>DWB</i>				
CHECK	GWS 12-8-58	DRAW	VE	5-23-60							
APPRO	BES 12-8-58	CHECK	<i>9/23</i>	5-23-60							

ALLOY-TWO WAY "P" BLOCK

371213  
A B Z W  
STANDARDS  
COC  
2-7045



- NOTES
- I TEST TO ENGINEERING SPECIFICATION 891213
  - II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - IV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



B

DPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY-TWO	11-20-58	105502A	RJH				
WAY	"P" BLOCK TWO ON CARD ALL LDS	4-23-59	105865	RJH				
DESIGN	DEV 11-1-58 TYPE SMS	1-27-60	REDRAWN					
DETAIL	RKD 11-18-58 SCALE NONE	6-20-60	D109187	<i>RWB</i>				
CHECK	GWS 11-18-58 DRAW VE 5-10-60							
APPRO	DEV 11-18-58 CHECK <i>5-19-61</i>							

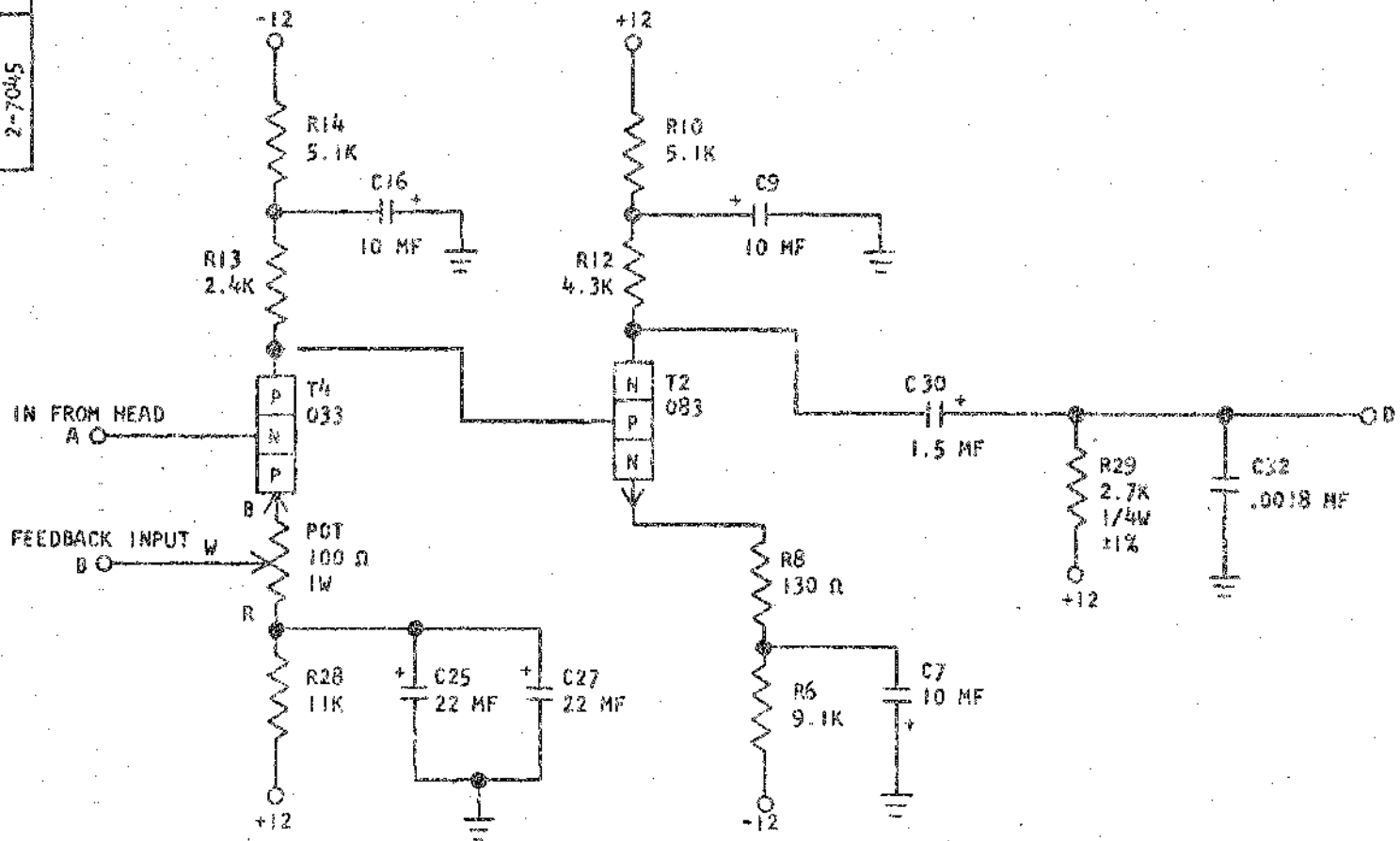
ALLOY-PREAMP NUMBER 3, MAGNETIC TAPE

370100

370100

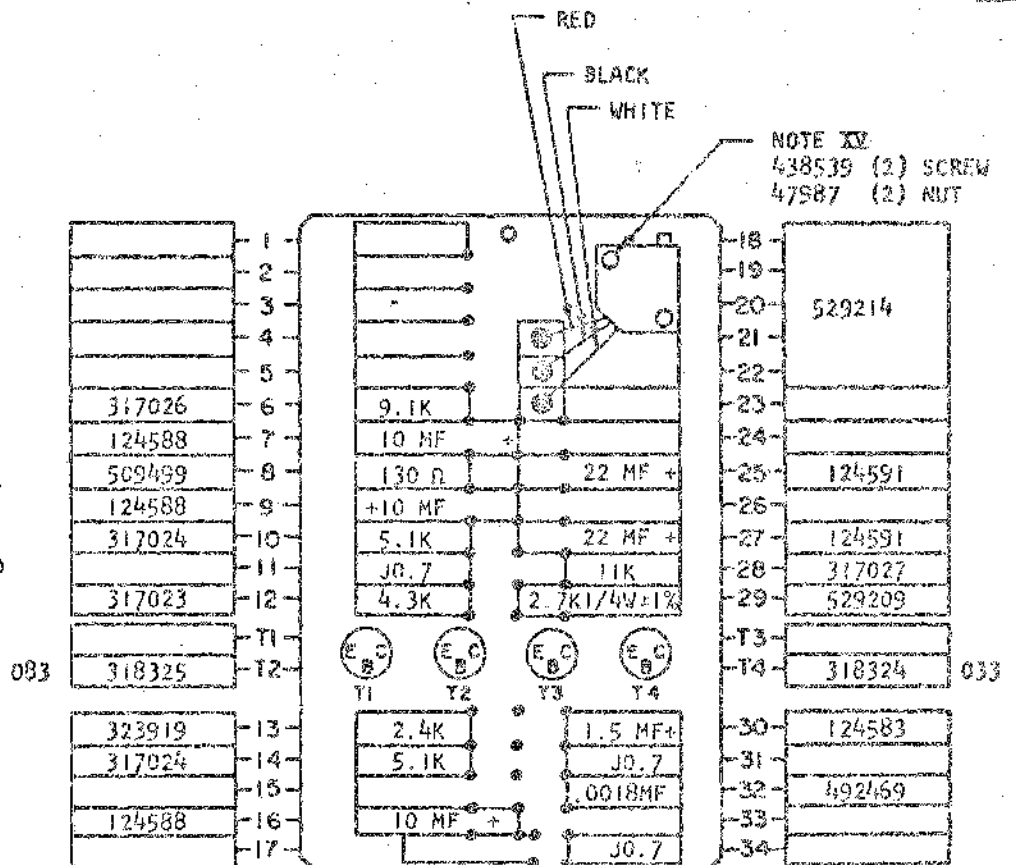
A C W -

STANDARDS CODE  
2-7045



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 892099
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- III "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
- IV
- XV PART NUMBER 529214 NOT TO BE SUBJECTED TO ANY LIQUID



B

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
KMT	5-9-60

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM YSTR-ALLOY-PREAMP NO 3, MAGNETIC TAPE	5-27-60	109175	<i>gwb</i>				2547-1143
DESIGN	VJK 5-9-60	TYPE	SHS 729					
DETAIL	VJK 5-9-60	SCALE	NONE					
CHECK	<i>gwb</i> 5-24-60	DRAW	VE 5-14-60					
APPRO	<i>gwb</i> 5-27-60	CHECK	<i>gwb</i> 5-14-60					

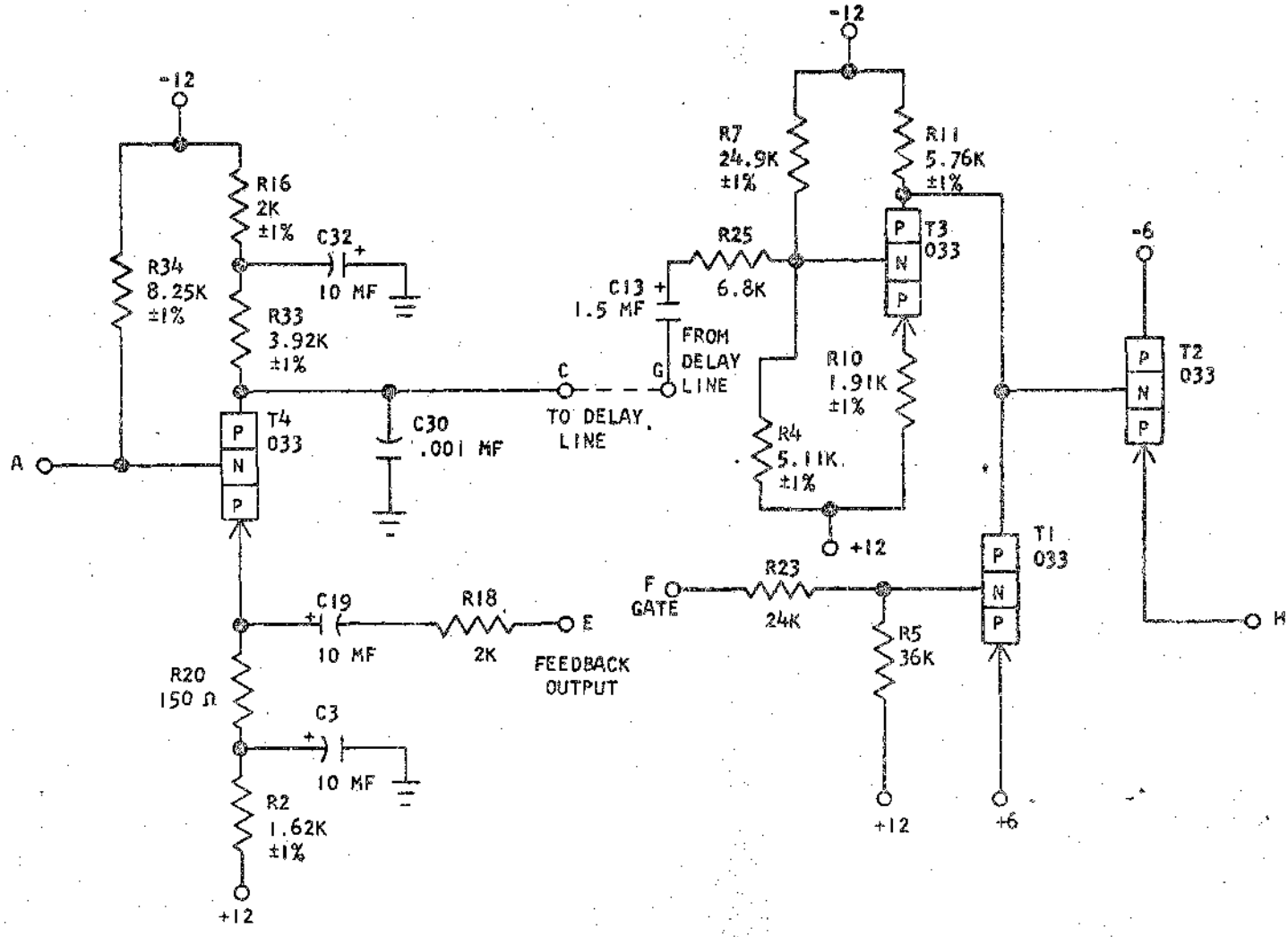
370100

RD

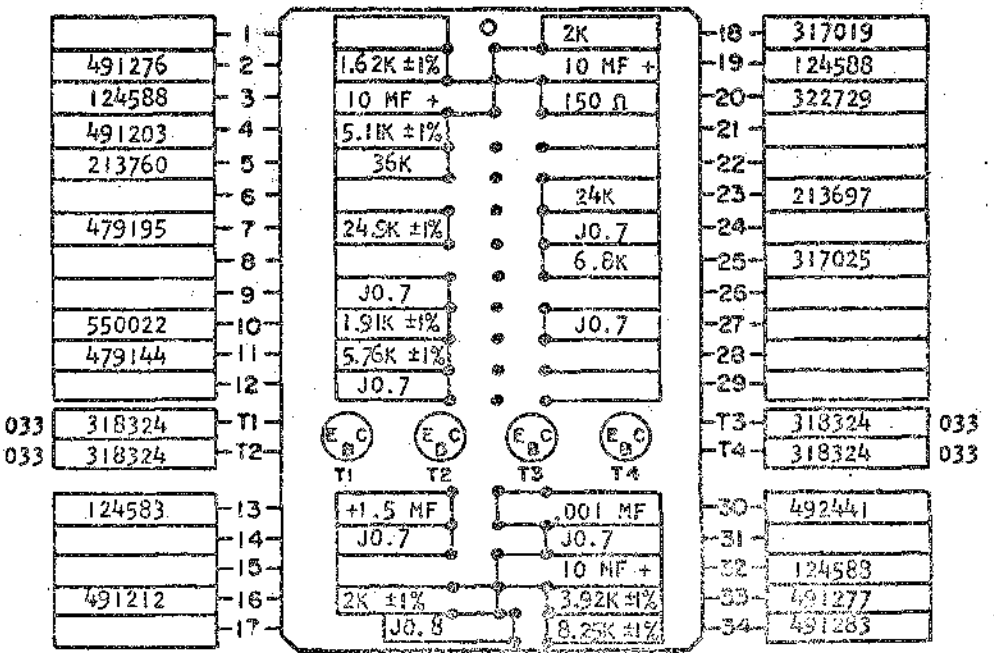


ALLOY - PREAMP NUMBER 4 MAGNETIC TAPE

370099  
STANDARDS CODE  
2-7045  
A C X



- NOTES
- I TEST TO ENGINEERING SPECIFICATION
  - II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED (AS NOTE XV)
  - III "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
  - XIV 491299-ASSEMBLE WITH JEDEC TRANSISTOR
  - XV ALL ±1% RESISTORS ARE 1/8 WATT



**B**

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
KMT	5-9-60

INTERNATIONAL BUSINESS MACHINES COOP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.	370099
NAME	CARD ASM TSTR-ALLOY-PREAMP NUMBER 4 MAGNETIC TAPE	5-27-60	109175	97UB				2547-1142	
DESIGN	VJK 5-9-60 TYPE SMS 729								
DETAIL	VJK 5-9-60 SCALE NONE								
CHECK	294 5-24-60 DRAW VE 5-16-60								
APPRO	5-27-60 CHECK 5-18-60								

COMPONENT SIDE

ALLOY-THREE WAY "N" BLOCK  
IN PH LOADS

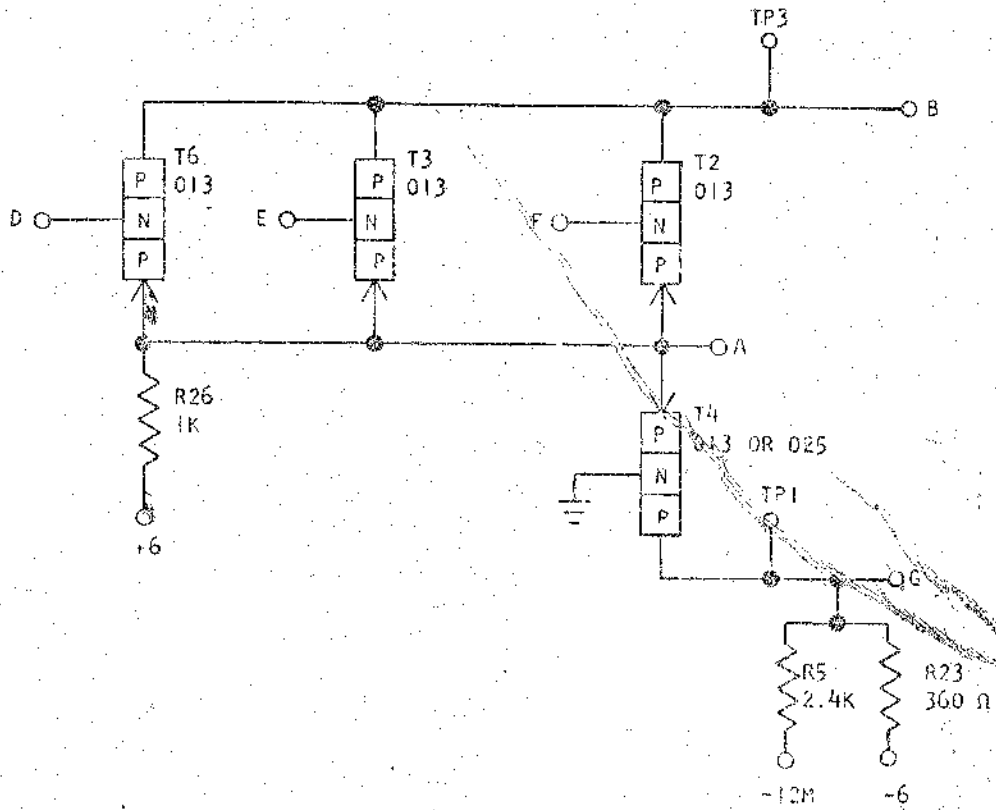
371219

371219

A C Y Z

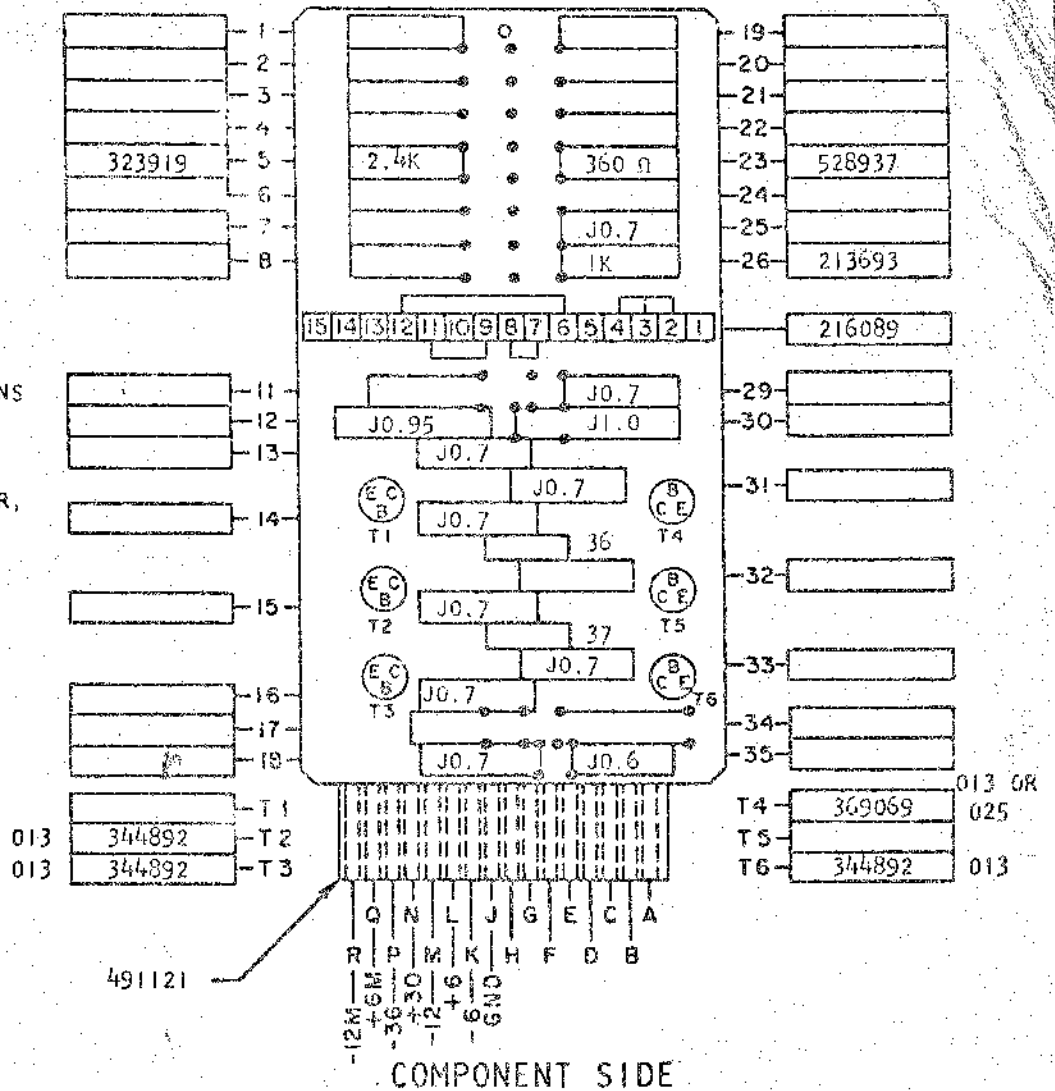
STANDARDS  
CODE

2-7045



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891219
- XI ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
- XIII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



B

DPD CIRCUIT B PACKAGING STANDARD

APPROVAL

DATE

RWE

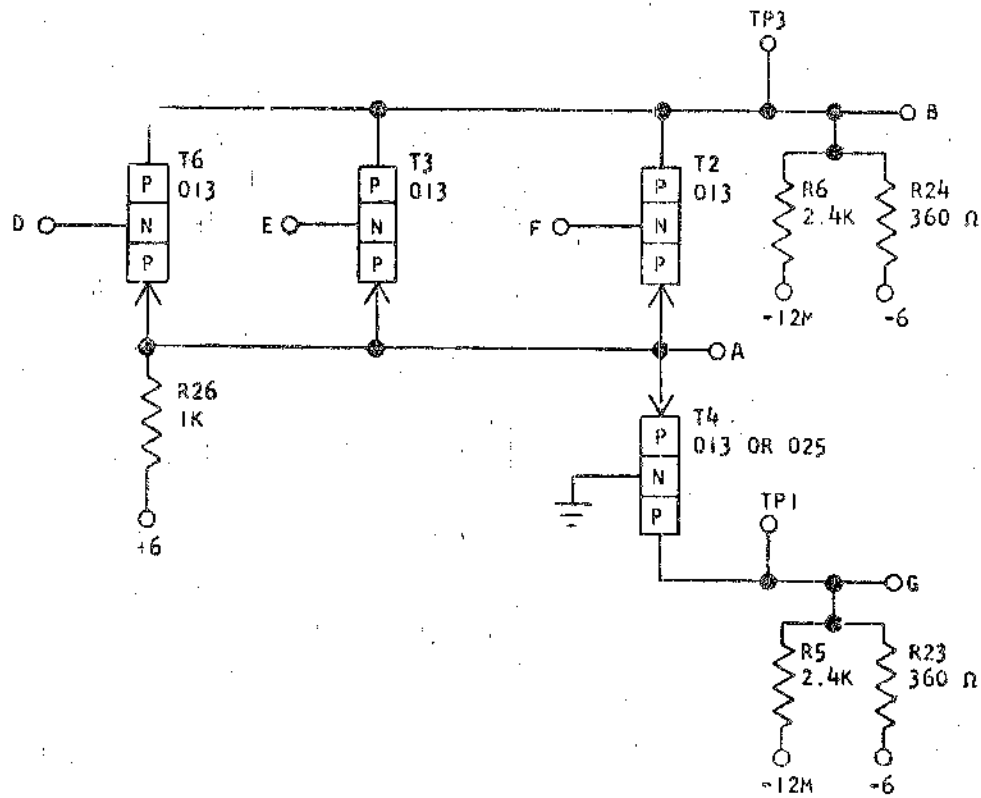
10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR- ALLOY -THREE WAY "N" BLOCK IN PH LOADS			5-6-58	104500		7-6-60	D109624	DWB	371219
DESIGN	DEV	12-8-58	TYPE	SMS						
DETAIL	RKD	12-8-58	SCALE	NONE	12-10-58	105546A	RJH			
CHECK	GWS	12-8-58	DRAW	VE	4-23-59	105865	RJH			
APPRO	CAM	4-14-59	CHECK	10/11	5-16-60					
					3-25-60	REDRAWN				

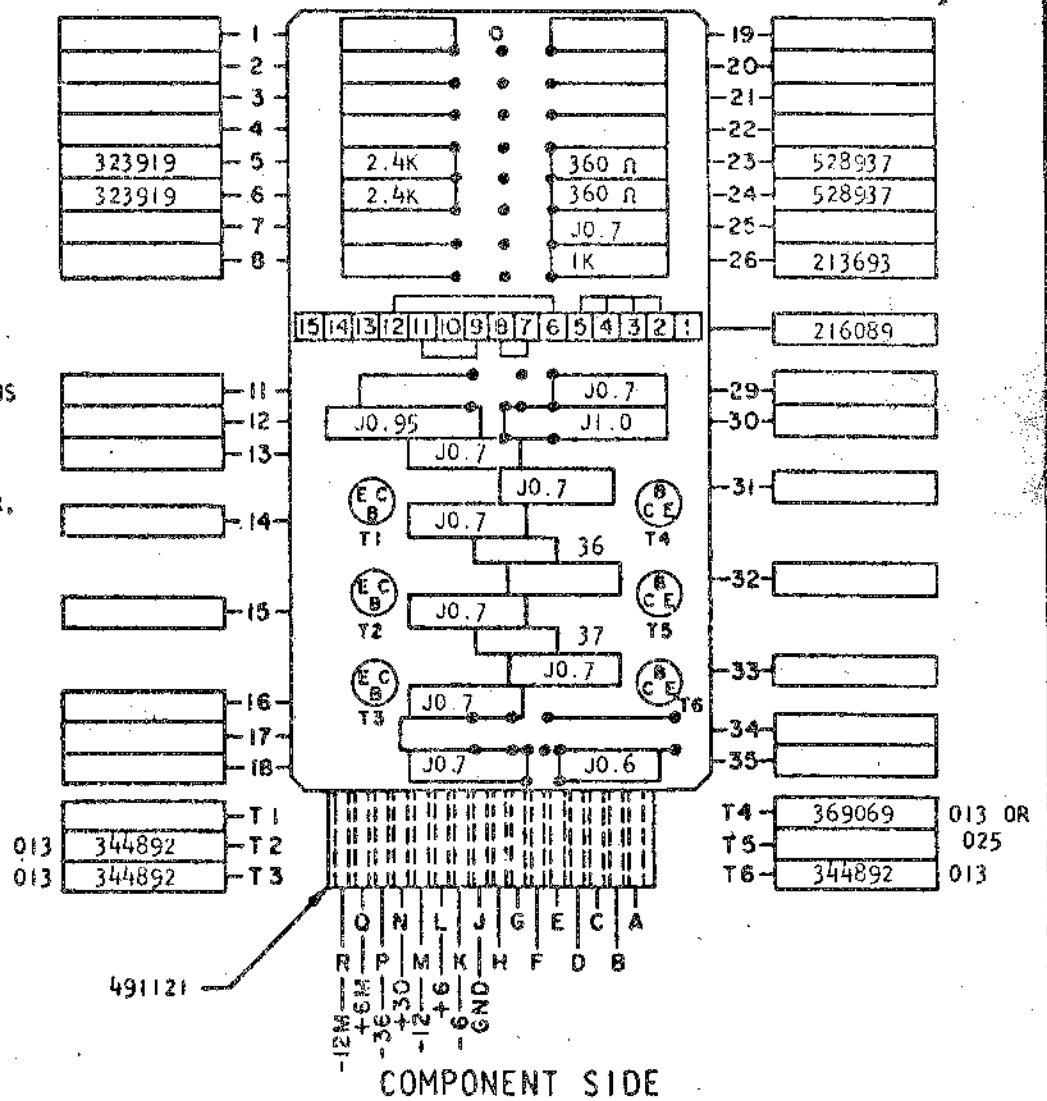
ALLOY-THREE WAY "N" BLOCK ALL LOADS

371218

371218  
ACZA  
STANDARDS CODE  
2-7045



- NOTES
- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891218
  - II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - IV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



**B**

OPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME		5-6-58	104500-		7-6-60	D109624	RWB	371218
WAY "N" BLOCK ALL LOADS		11-11-58	382-0061-					
DESIGN	DEV II-1-58	TYPE	SMS					
DETAIL	RKD II-18-58	SCALE	NONE					
CHECK	GWS II-18-58	DRAW	VE 5-16-60					
APPRO	DEV II-18-58	CHECK	CLW 5-16-60					

KD





371228

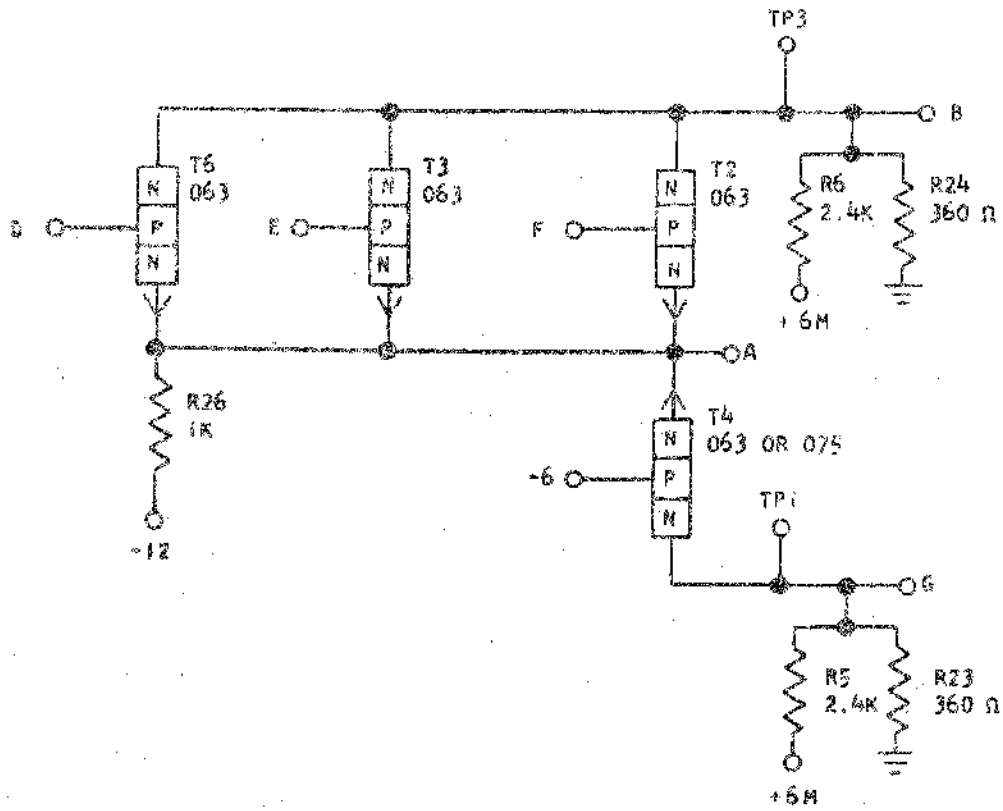
A D Z A

STANDARDS CODE

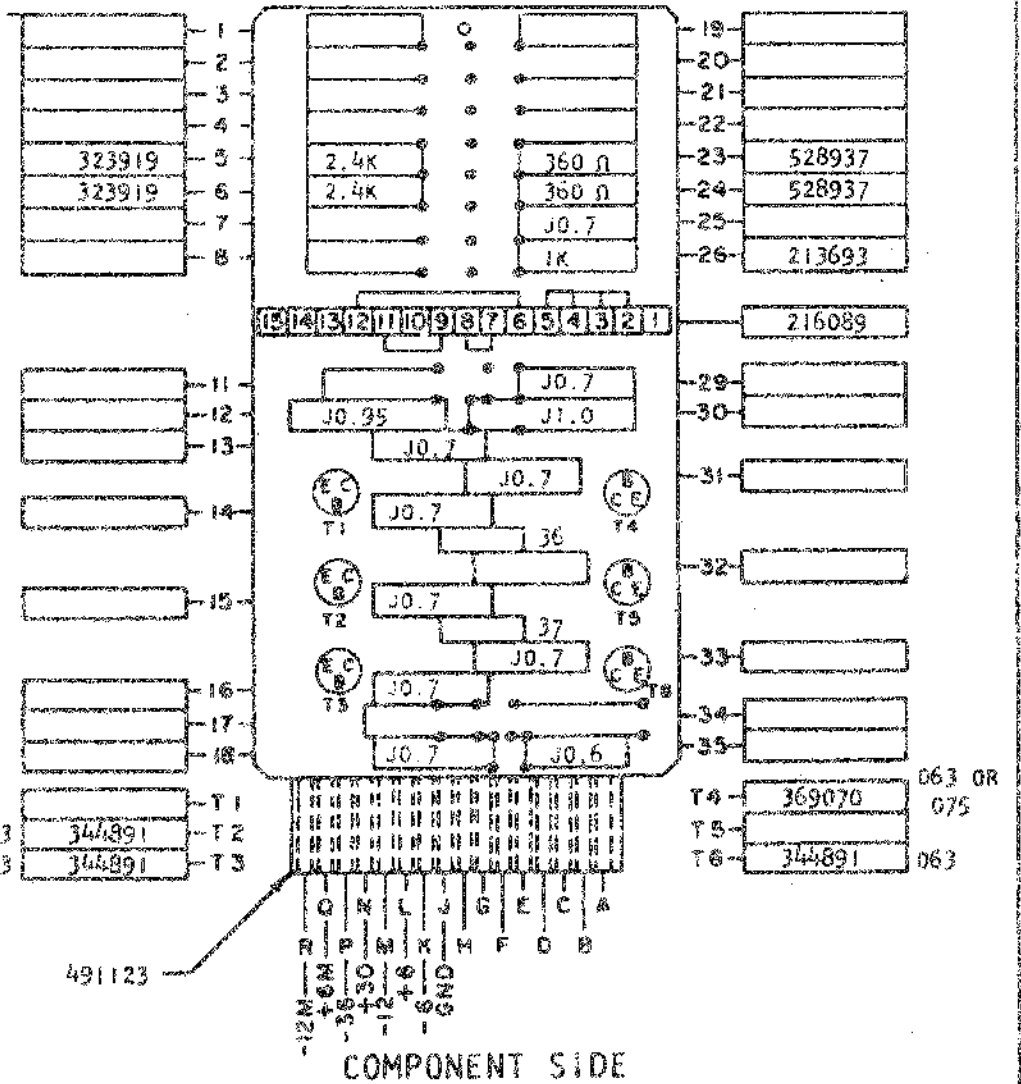
2-7045

ALLOY - THREE WAY "P" BLOCK  
ALL LOADS

371228



- NOTES
- X CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891228
  - XI ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - XII ALL RESISTORS ARE 1/2 WATT AND 5% UNLESS OTHERWISE NOTED
  - XIII "P" IN BLOCK DENOTES GARE WIRE JUMPER. 891296



B

OPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASH YSTR-ALLOY-THREE WAY "P" BLOCK ALL LOADS	5-6-58	124500		7-6-60	D109624	RJH	371228
DESIGN DEV	11-1-58	TYPE	SMS					
DETAIL RKD	11-18-58	SCALE	NONE					
CHECK GWS	11-18-58	DRAW	VE	5-16-60				
APPROV DEV	11-18-58	CHECK	CLW	5-18-60	3-25-60	REDRAWN		

ALLOY - THREE WAY "P" BLOCK  
IN PH LOADS

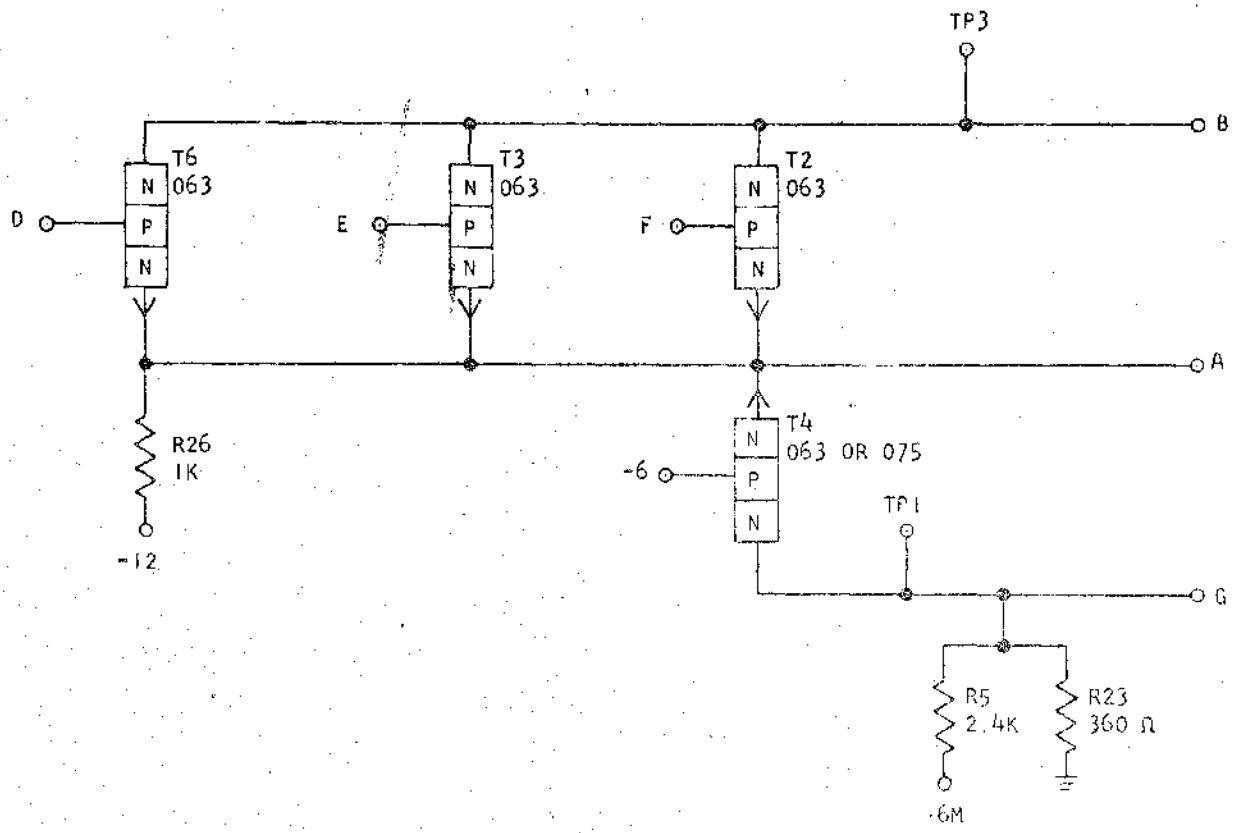
371229

371229

A D Y Z

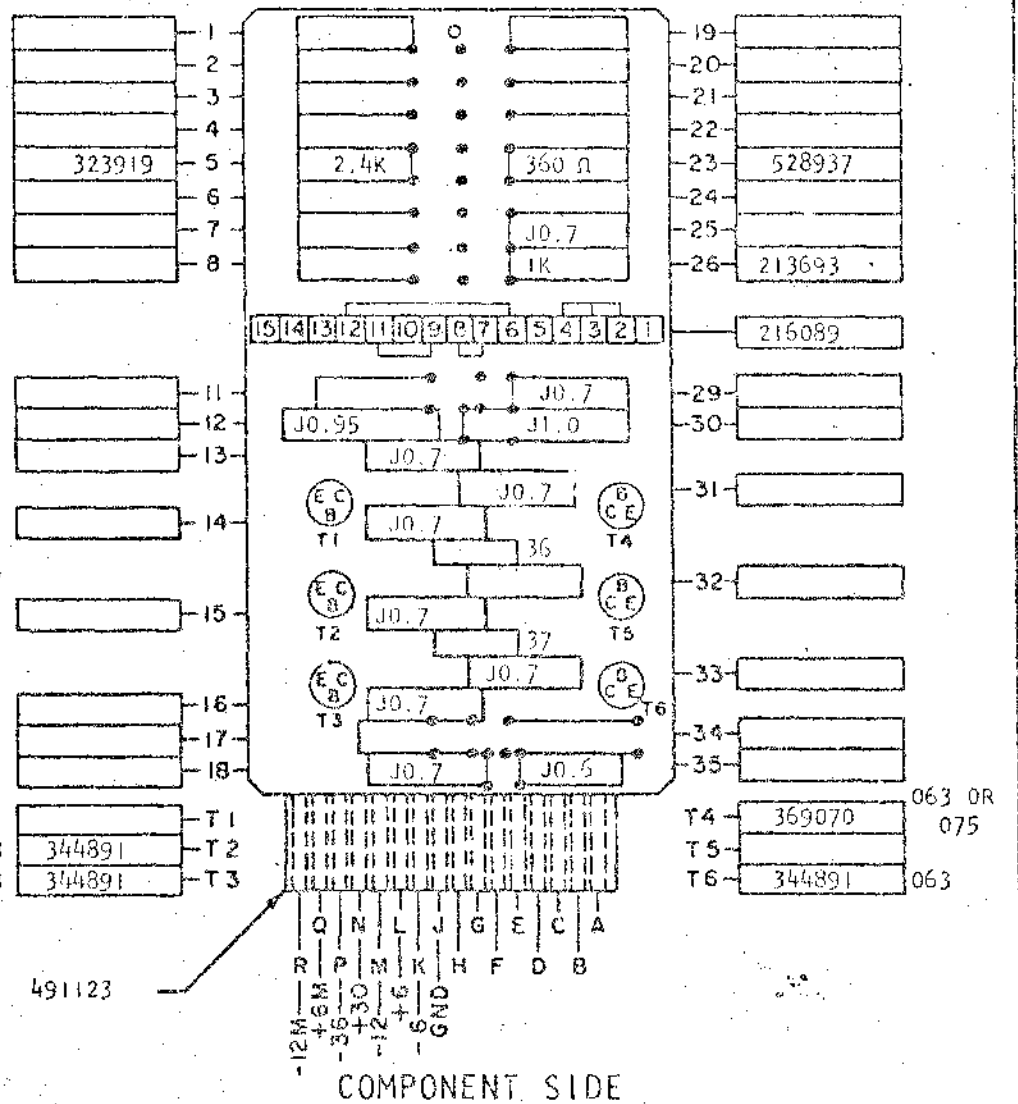
STANDARDS  
CODE

2-7045



NOTES

- X. CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891229
- XI. ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
- XII. ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- XIII. "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296

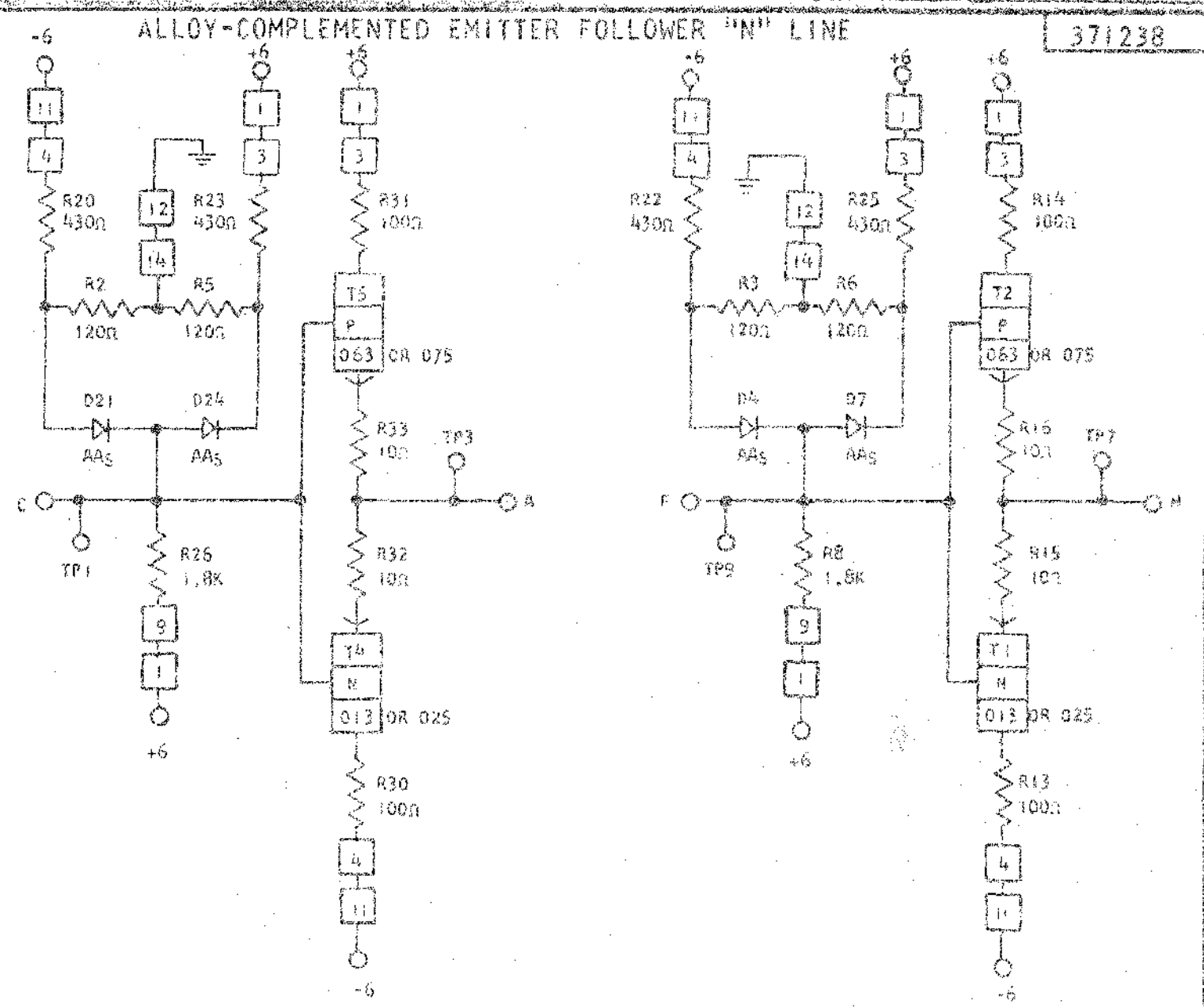


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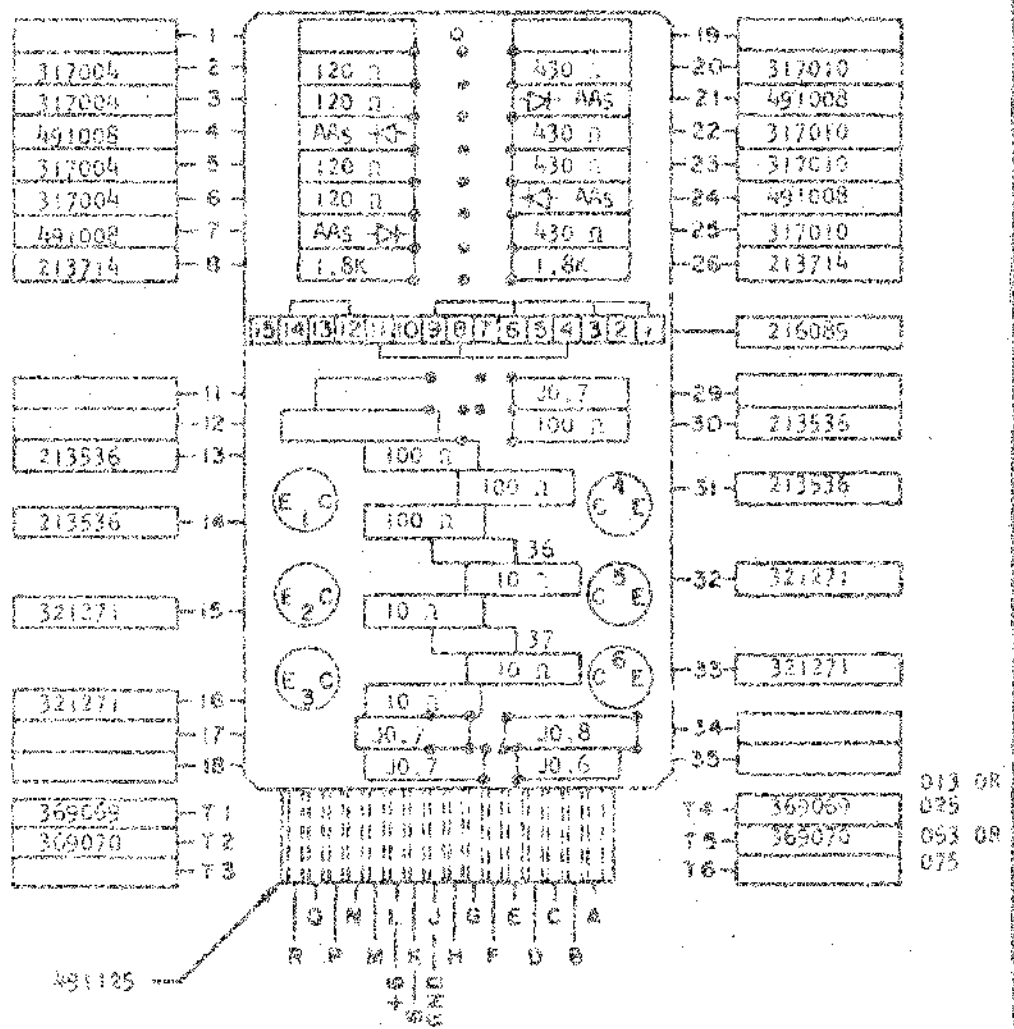
DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM ISTR-ALLOY THREE WAY "P" BLOCK-IN PH LOAD	5-11-58	101500		7-6-60	D109624	RWB	371229
DESIGN	DEV 12-8-58	11-11-58	382-0061					
DETAIL	RKD 12-8-58	12-10-58	105546A	RJH				
CHECK	GWS 12-8-58	4-23-59	105865	RJH				
APPRO	BES 4-14-59	3-24-60	REDRAWN					
	CHECK LCH 5-18-60							

371238  
A E W Y  
STANDARDS CODE  
2-7045



- NOTES
- I. CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891238
  - II. ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
  - III. ALL RESISTORS ARE 1/2 WATT AND 15% UNLESS OTHERWISE NOTED
  - IV. "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



DDP CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

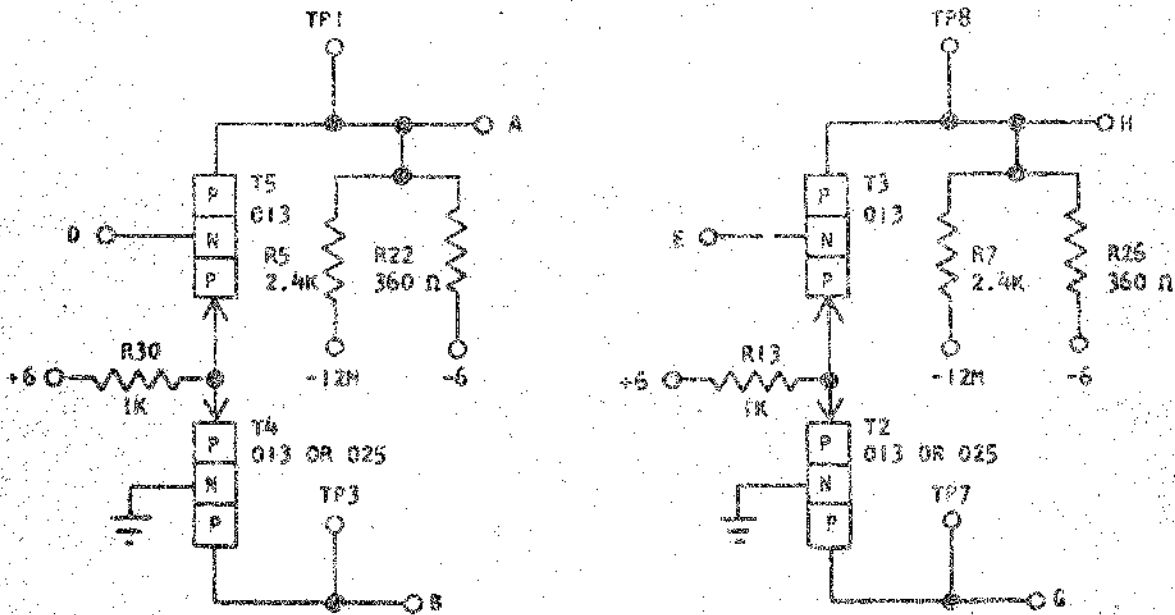
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-ALLOY-COM-PLEMENTED EMITTER FOLLOWER 'N' LINE	11-20-58	105502A	RJH				371238
DESIGN DEV	11-1-58						
DETAIL RCD	11-18-58						
CHECK SWS	11-18-58						
APPROV DEV	11-18-58						



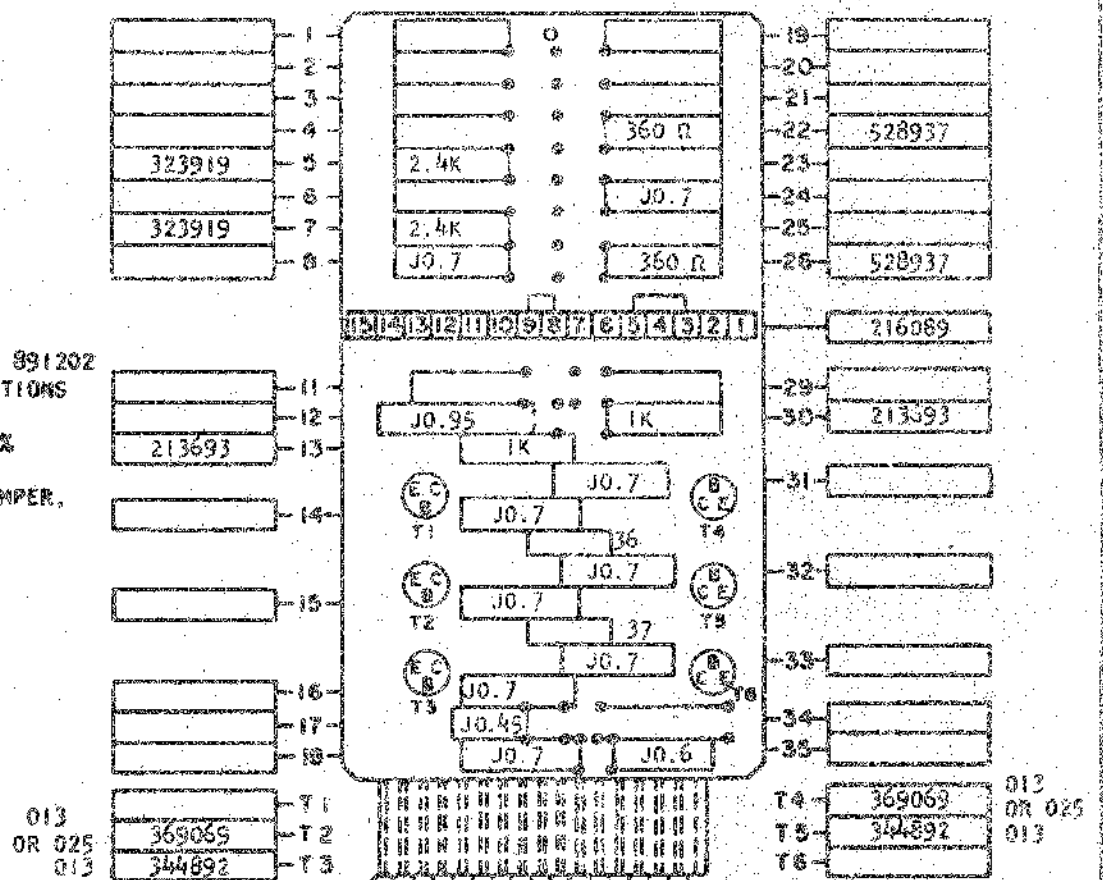
371202  
A M Z X  
STANDARDS CODE  
2-7065

ALLOY - ONE WAY "N" BLOCK

371202



- NOTES  
 I TEST TO ENGINEERING SPECIFICATION 891202  
 II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999  
 III ALL RESISTORS ARE 1/2 WATT AND 5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



**B**

DPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY-ONE WAY	11-20-58	105502A	RJH				
	"N" BLOCK	4-23-59	105065	RJH				
DESIGN DEV	11-1-58	TYPE	SMS					
DESIGN RCD	11-18-58	SCALE	NONE					
CHECK GWS	11-18-58	BEAW	VE	5-9-60	3-29-60	D108613	MGJ	
APPRO DEV	11-18-58	CHECK	7/2	5-12-60	6-20-60	2109187	<i>[Signature]</i>	

371202

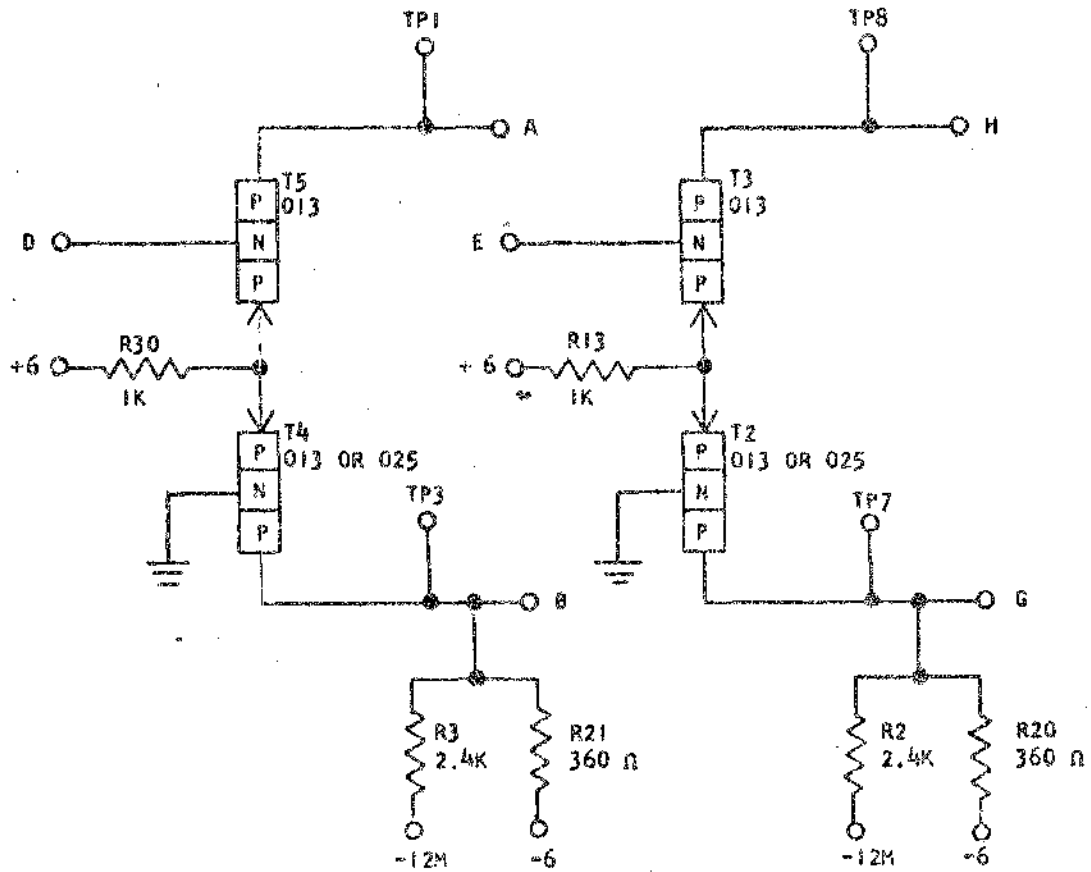
ALLOY-ONE WAY "N" BLOCK

371201

A M Z Y

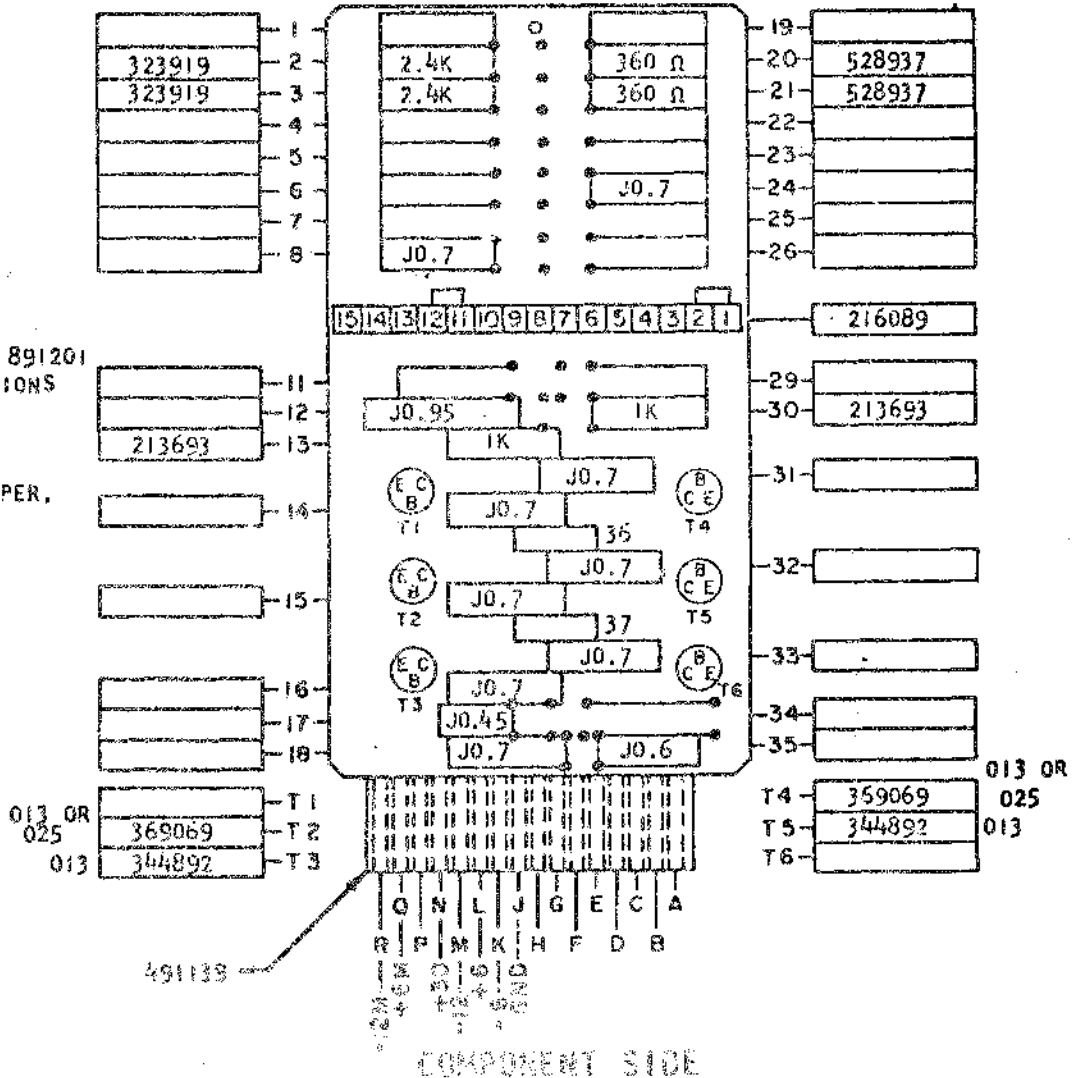
STANDARDS CODE

2-7045



NOTES

- X TEST TO ENGINEERING SPECIFICATION 891201
- XI ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
- XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



B

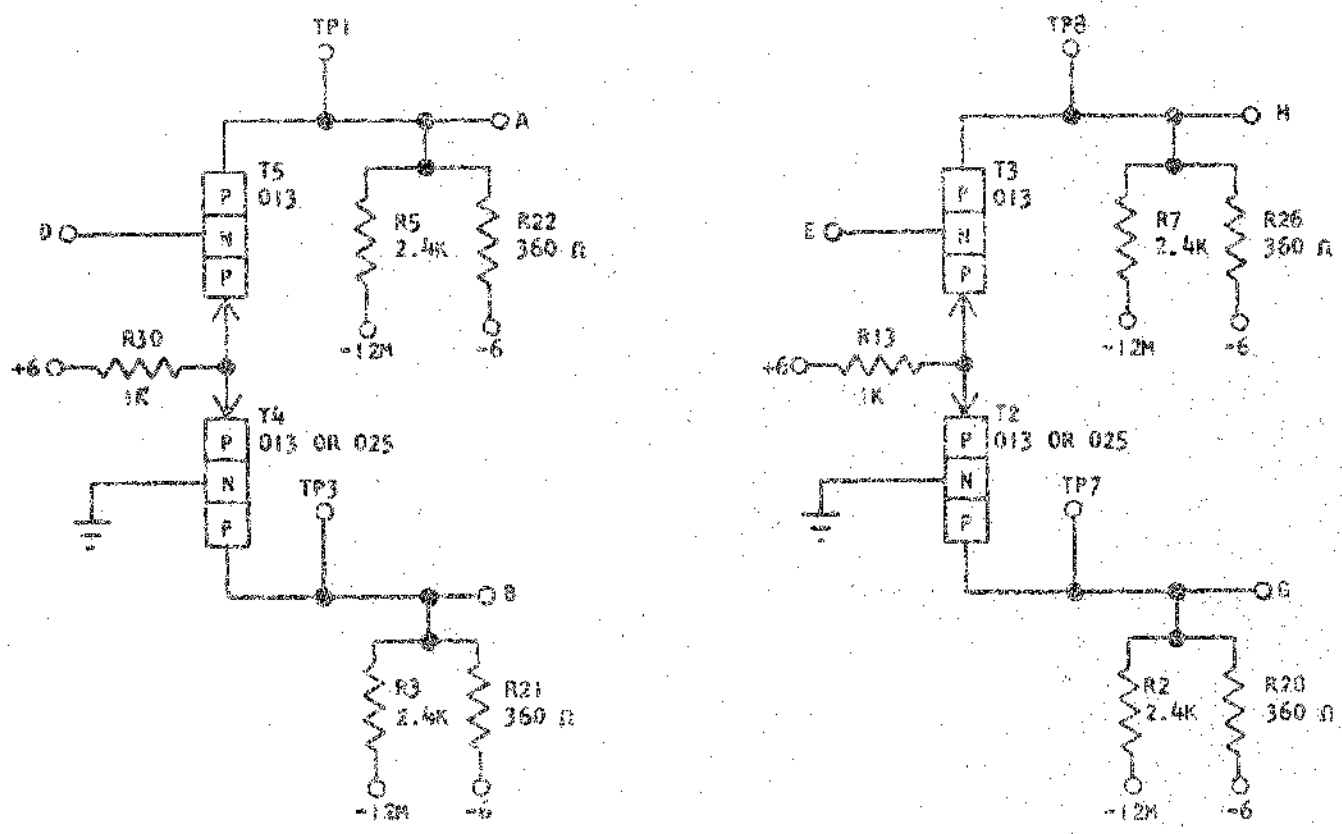
DPD CIRCUIT & PACKAGING STANDARD

APPROVAL	DATE
RWE	10-30-58

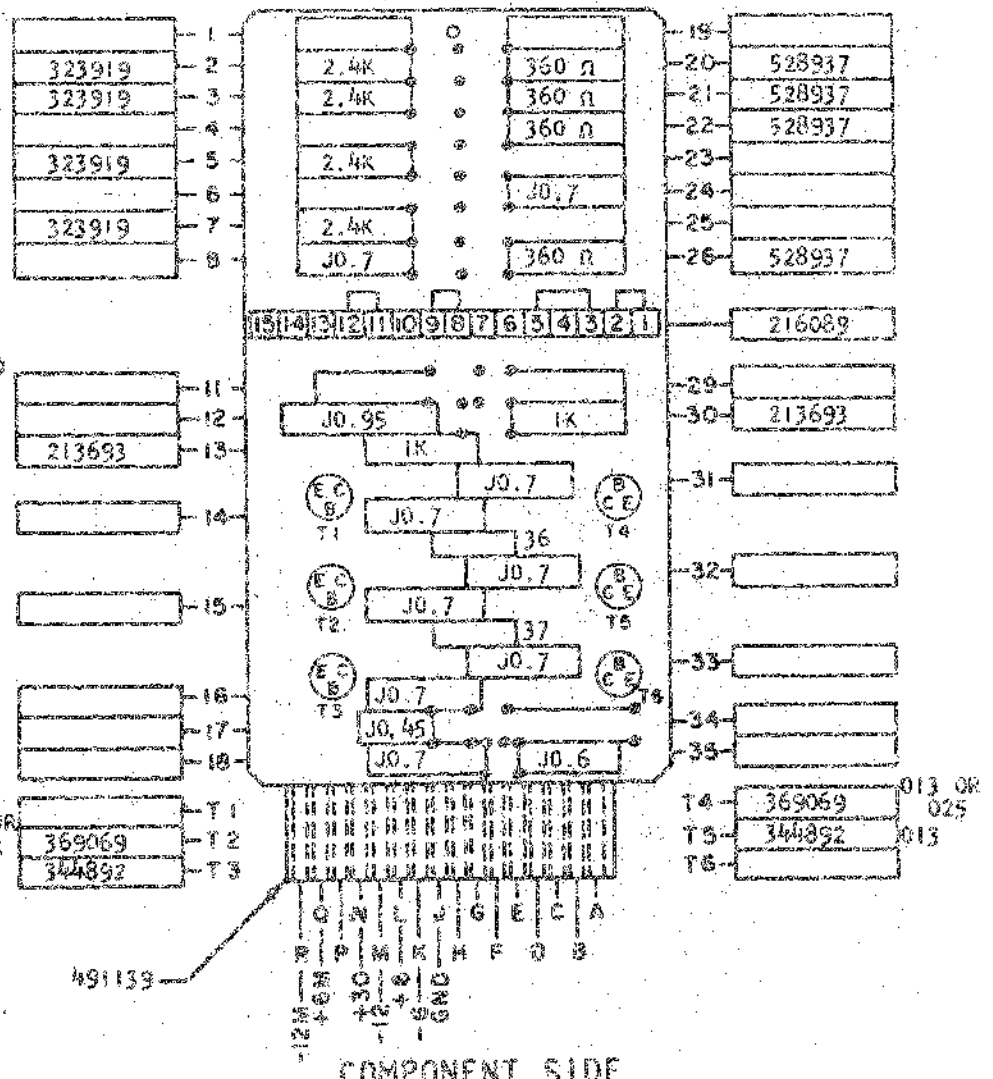
INTERNATIONAL BUSINESS MACHINES CORP.				DATE	STARTED BY	APPROVED	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASK TEST- ALLOY-			11-20-58	1053020	RJP				371201
	ONE WAY "N" BLOCK			5-23-59	105865	RJK				
DESIGN	DEV	11-18-58	TYPE	SMS						
DETAIL	RKD	11-18-58	SCALE	SOME						
CHECK	GWS	11-18-58	DRAW	VE	15-10-60					
APPRO	DEV	11-18-58	CHECK		15-12-60					

ALLOY-ONE WAY "N" BLOCK

STANDARDS CODE  
371200  
A M Z Z  
2-7045



- NOTES
- I TEST TO ENGINEERING SPECIFICATION 891200
  - II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - IV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491256



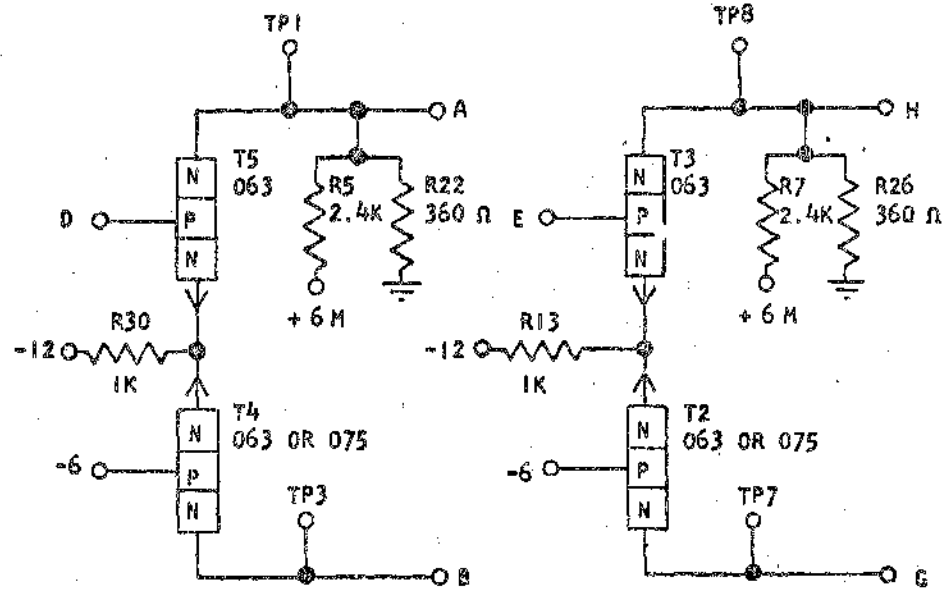
**B**

OPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

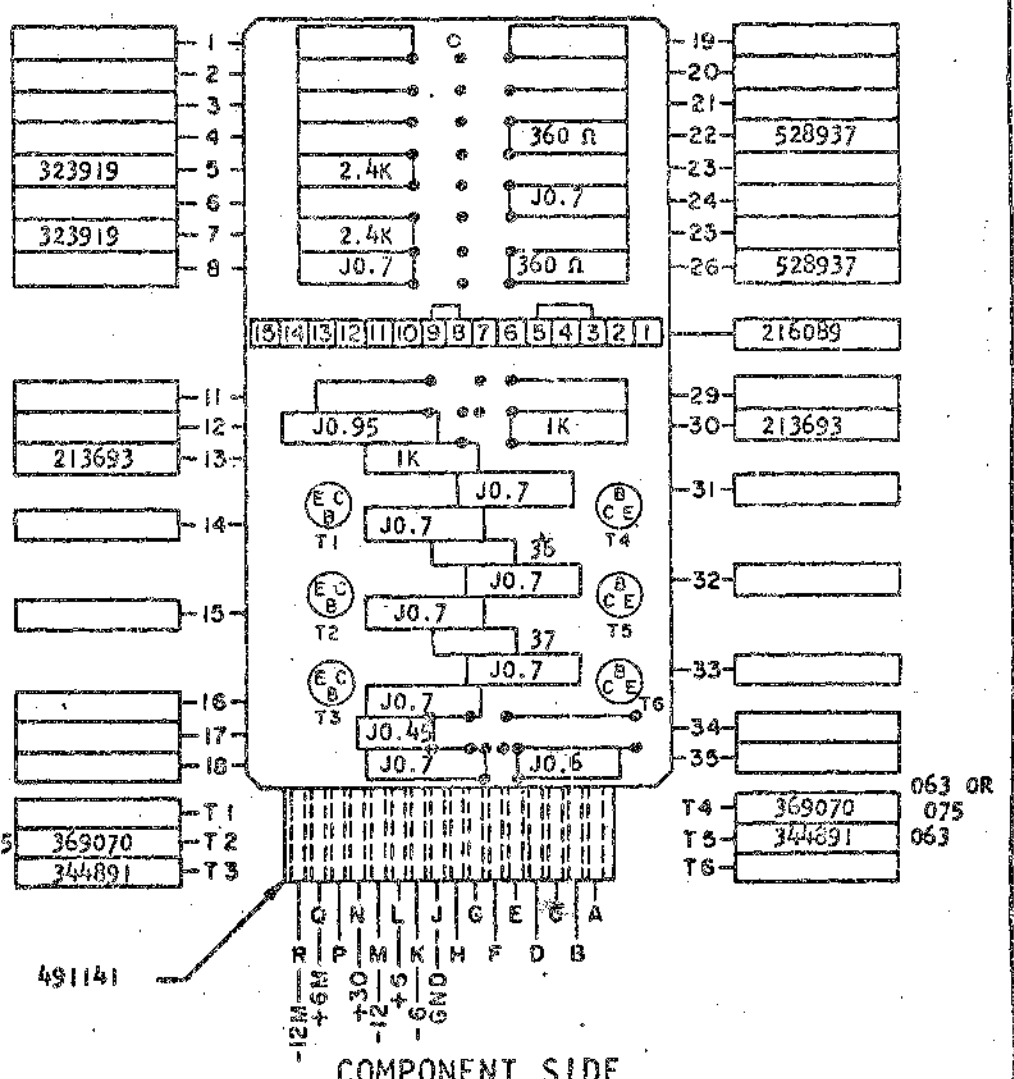
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
BASE CARD ASM TSTR- ALLOY-ONE	11-18-58	105502	RJH				
WAY "N" BLOCK	4-23-59	105865	RJH				
DESIGN							
DETAIL							
CHECK	DEV 4-14-59	DRAN VE 5-10-60		6-22-60	0109187	8208	
APPROV	AWM 6-10-59	CHECK 073 5-11-60					

371211  
A N Z X  
STANDARDS CODE  
2-7045

ALLOY - ONE WAY "P" BLOCK  
OUT PH LOADS -  
TWO ON CARD



- NOTES  
 X TEST TO ENGINEERING SPECIFICATION 891211  
 XI ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999  
 XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



**B**

DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

INTERVIEW ENGINEERING ENGINEERING CO. P.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-ALLOY ONE WAY	5-11-58	100000		4-23-59	100005	R.J.H.	
PH "P" BLOCK OUT PH LOADS TWO ON CARD	7-0-58	100000		8-25-60	D100078		
DESIGN DEV 11-4-58 TYPE SMS							
DETAIL AND 11-12-58 SCALE NONE							
CHECK ENG 11-10-58 DRAW VE 15-16-58	11-11-58						
APPRO DES 11-10-58 CHECK (S) 12-11-58	11-30-58	100002A					

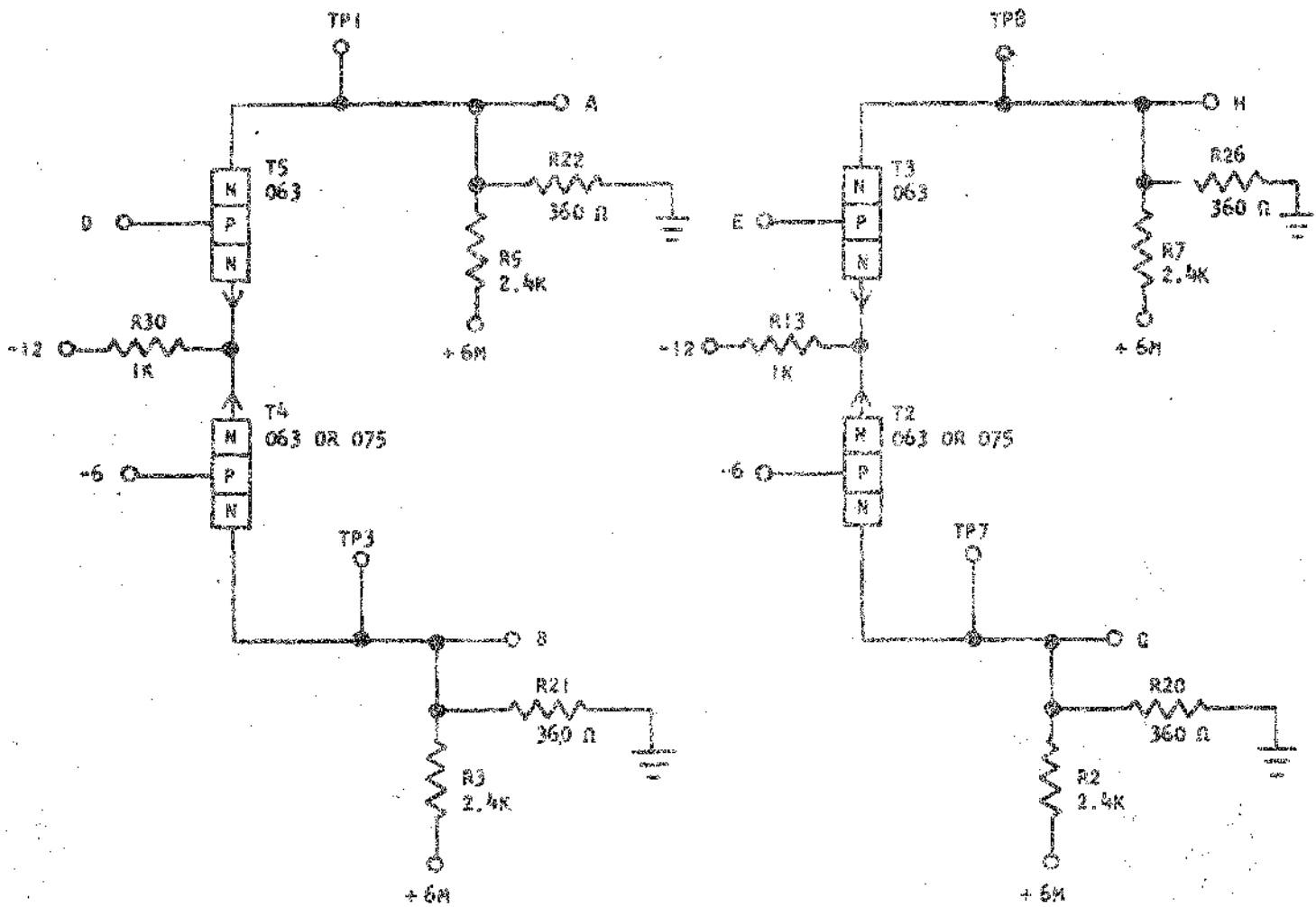


ALLOY - ONE WAY "P" BLOCK  
TWO ON CARD

371209

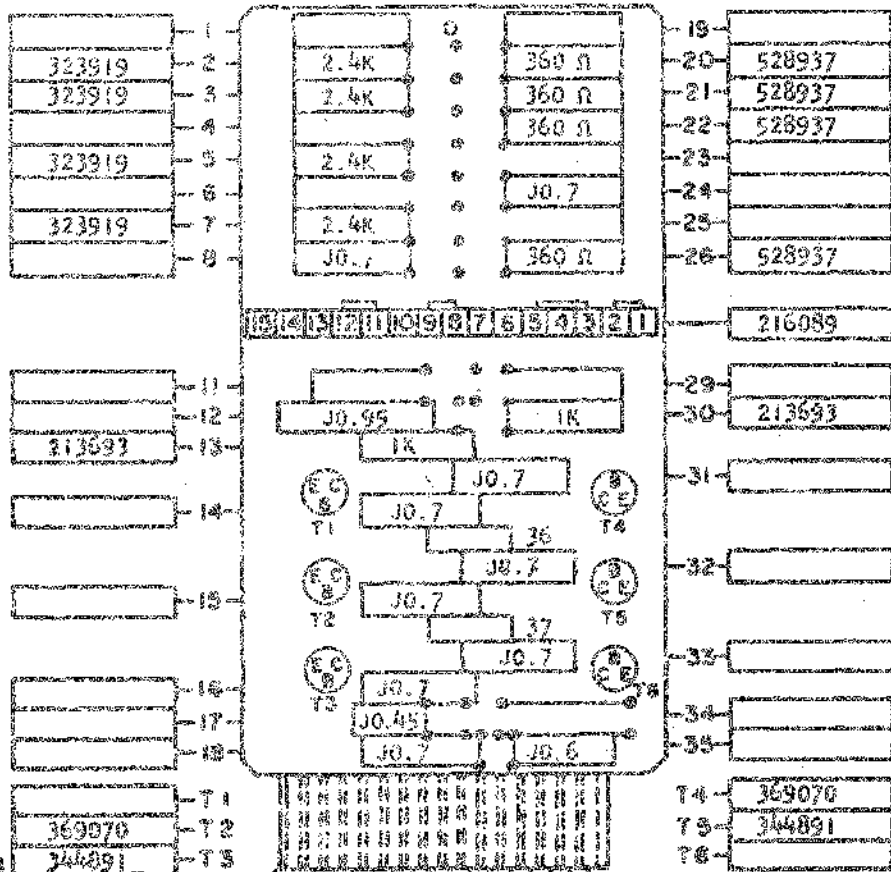
AN ZZ

STANDARDS  
CODE  
2-7005



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891209
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895336 AND 891359
- III ALL RESISTORS ARE 1/2 WATT AND 25% UNLESS OTHERWISE NOTED
- IIII "P" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
- IIII 891209-ASSEMBLE WITH JEDEC TRANSISTOR



B

DPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-30-58

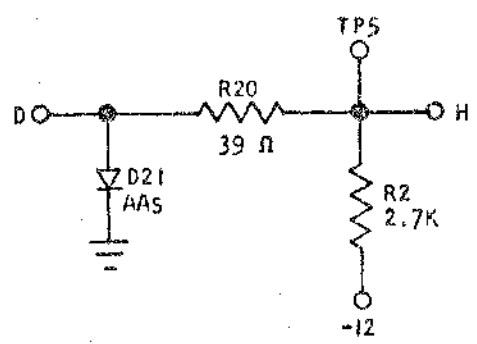
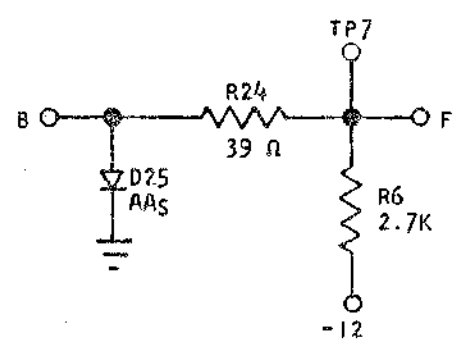
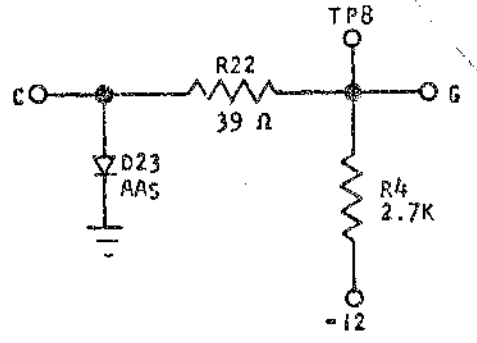
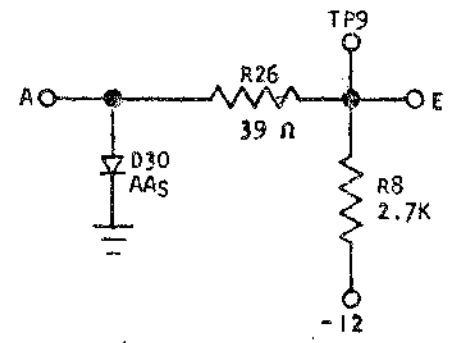
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
WIRE CARD ASM TSTR- ALLOY- ONE	11-20-58	105502A	RJH				
MAY "P" BLOCK TWO ON CARD	4-23-59	105865	RJH				
DESIGN DEV 11-18-58							
DETAIL RWD 11-18-58							
CHECK SWS 11-18-58							
WYD REV 11-18-58							

371209

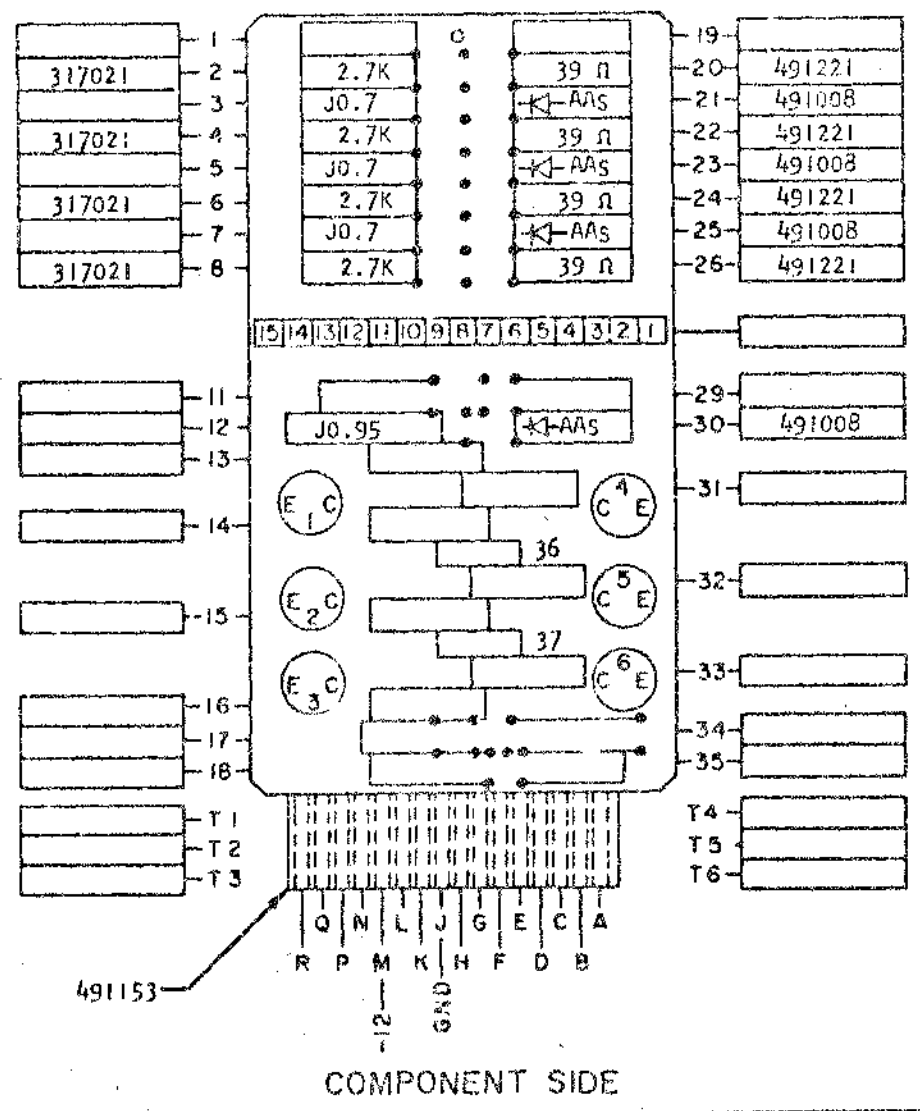
371031

ALLOY-CS-VM CONVERTER

371031  
AQ --  
STANDARDS CODE  
2-7045



- NOTES
- X CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891031
  - XI ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
  - XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



**B**

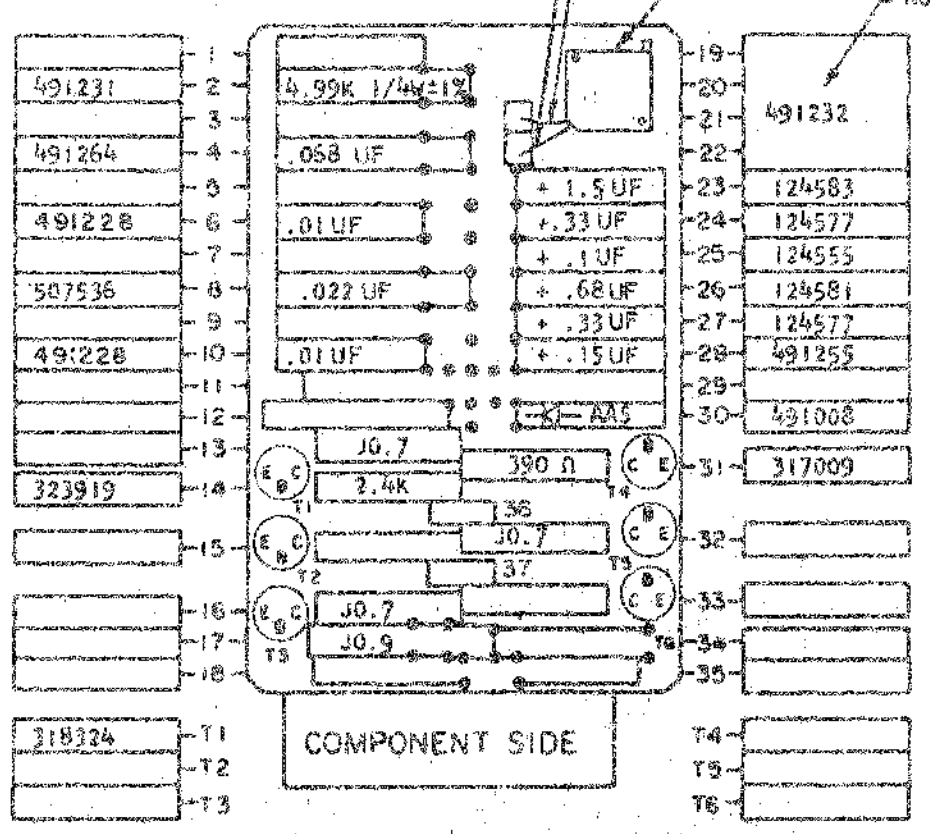
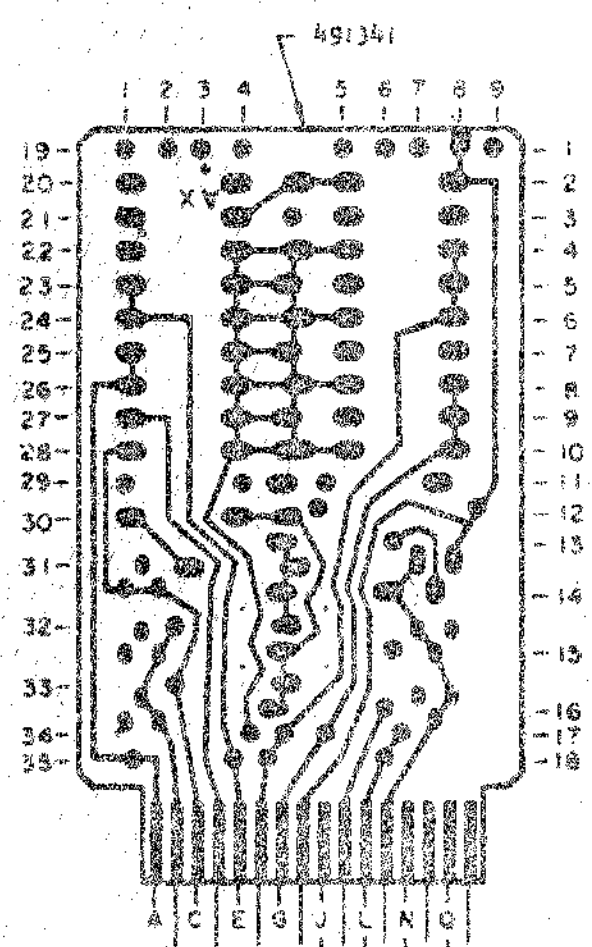
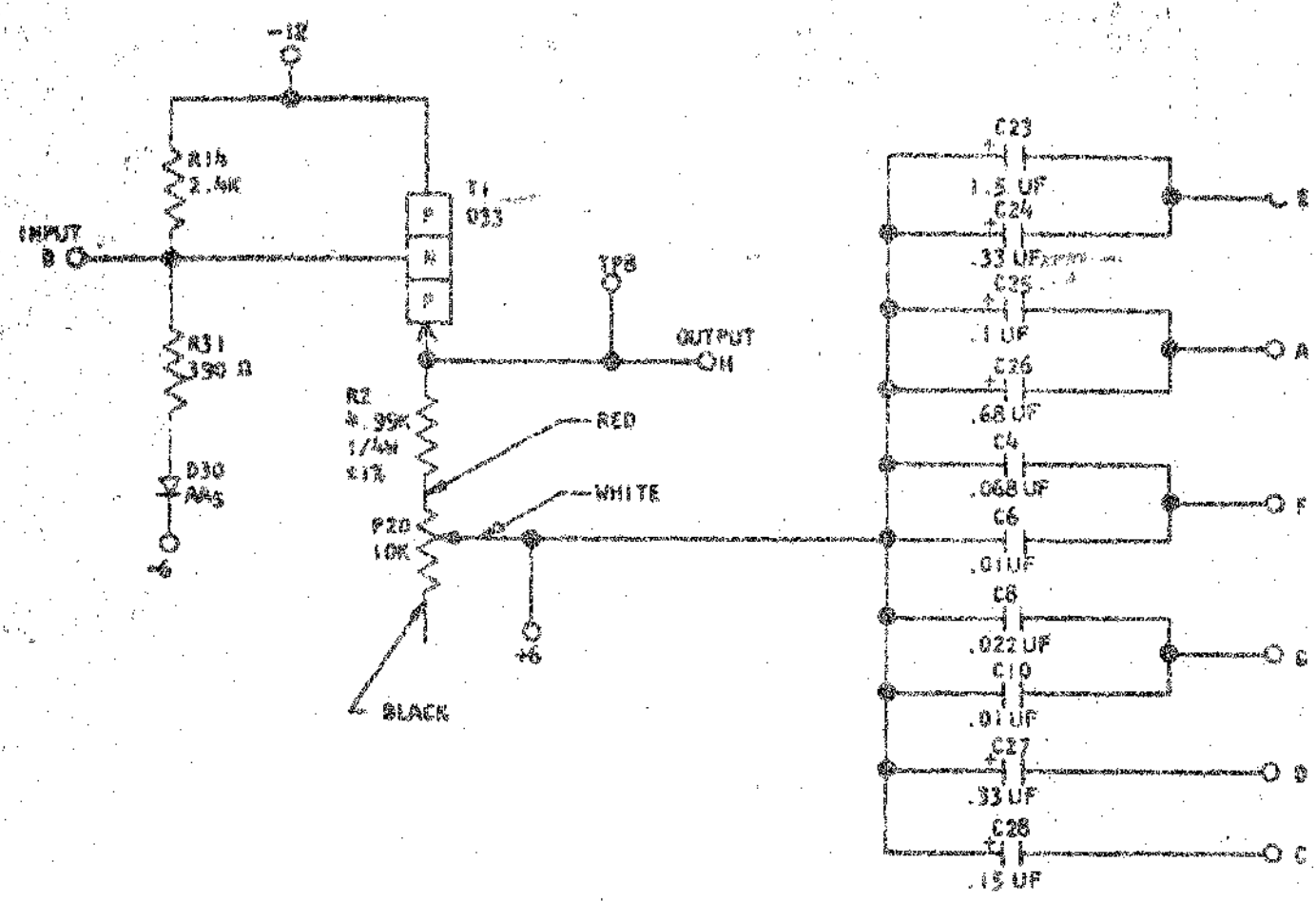
DPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-10-58

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME				11-18-58	105502	RJH				371031
CARD ASM TSTR-ALLOY-CS-VM CONVERTER				11-16-59	REDRAWN					
DESIGN	FKB	TYPE	SMS	5-3-60	D108904	NGJ				
DETAIL	JCT	5-5-58	SCALE	NOPIE						
CHECK	GHS	5-6-58	DRAW	MDE	2-7-61					
APPRO	DEV	11-14-58	CHECK							



ALLOY-TIMING CARD #2, SINGLE SHOT

STANDARDS  
C001  
2-7065



**B** WIRING SIDE

CIRCUIT B PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-10-58

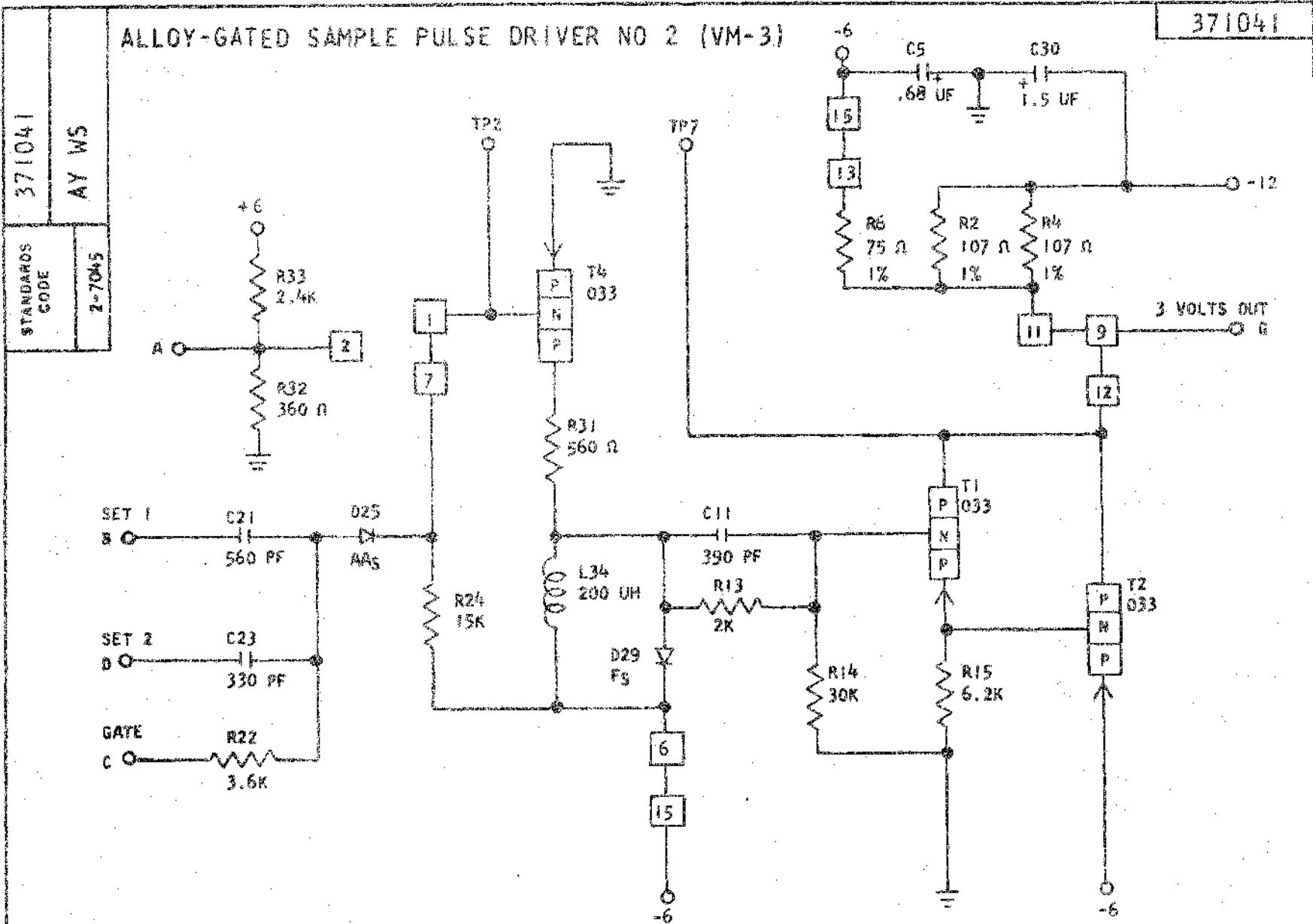
- NOTES
- XI ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891989
  - XII \*J IN BLOCK DENOTES BARE WIRE JUMPER, 491296
  - XIII ALL RESISTORS ARE 1/2 WATT AND 25% UNLESS OTHERWISE NOTED
  - XIV TEST TO ENGINEERING SPECIFICATION 891040
  - XV POTENTIOMETER TO BE MOUNTED AND SOLDERED AFTER BOARD HAS BEEN CLEANED. BLACK WIRE NOT USED, CUT-OFF AS CLOSE AS POSSIBLE TO CASE

INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR- ALLOY	7-17-58	104500		3-28-60	REDRAWN		
TITLE	TIMING CARD NO. 2 SINGLE SHOT	10-8-58	382-0058		8-28-61	112166	IWB	
DESIGN	GHS 5-19-58	MODEL	SMS					
DETAIL	EJC 5-28-58	SCALE	MORE					
CHECK	GHS 6-2-58	DRAW	VE 3-28-60	2-18-59	105890		RJH	
APPROV	DEV 2-24-59	CHECK	RTL 4-11-59	8-5-59	106790		RJH	



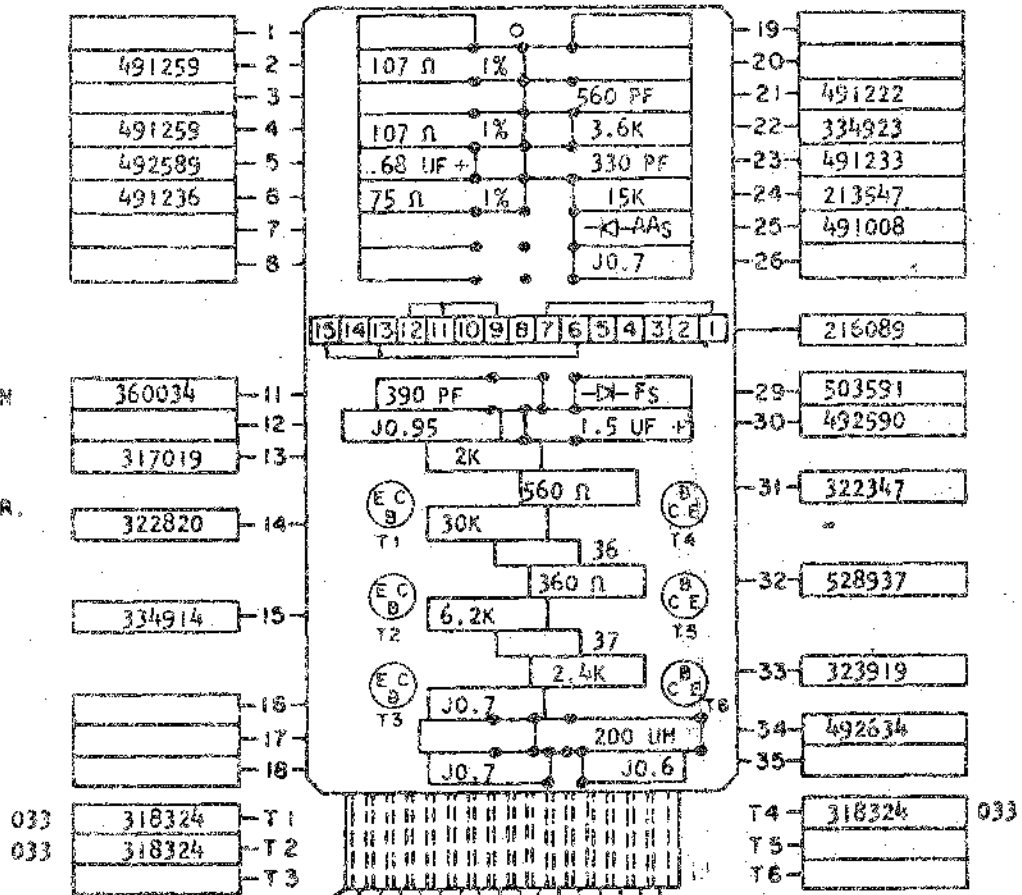
ALLOY-GATED SAMPLE PULSE DRIVER NO 2 (VM-3)

371041



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891041
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- XIII ALL RESISTORS ARE 1/2 WATTY AND ±5% UNLESS OTHERWISE NOTED
- XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER. 491296



B

DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-10-58

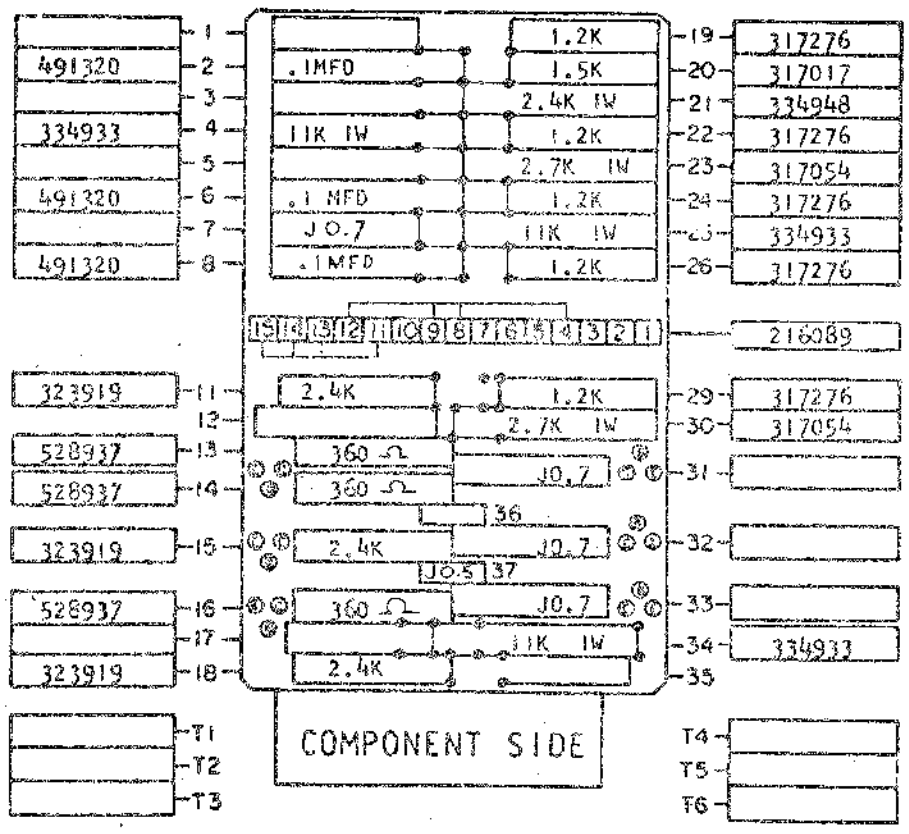
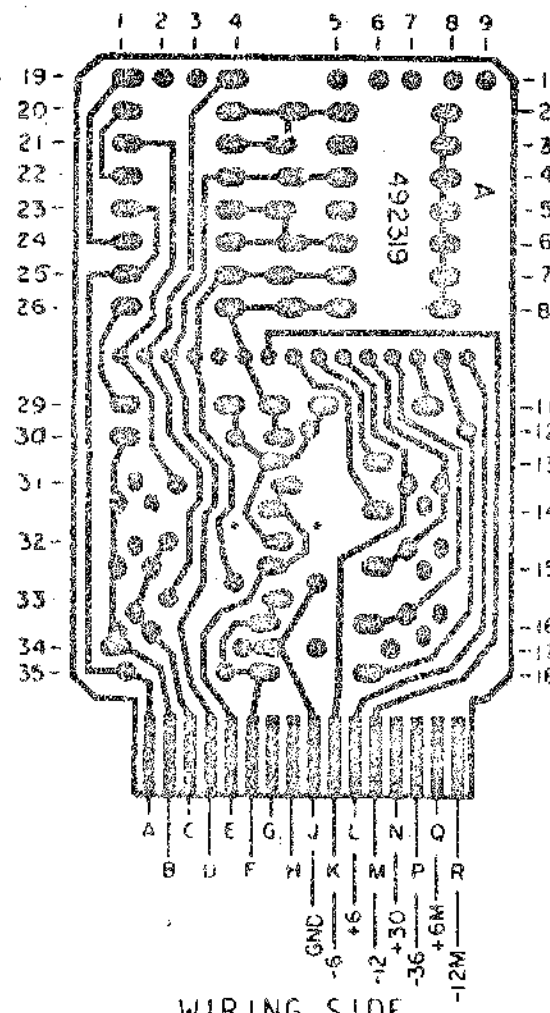
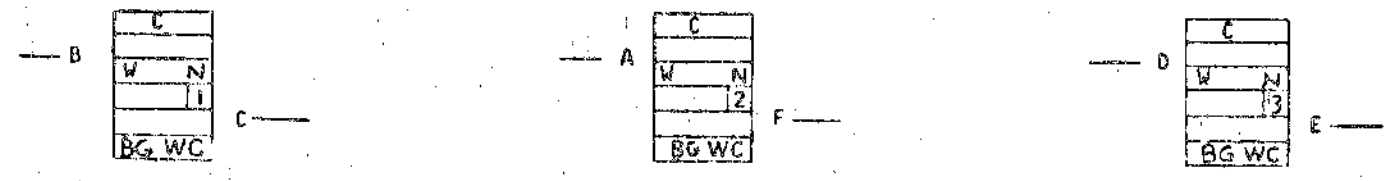
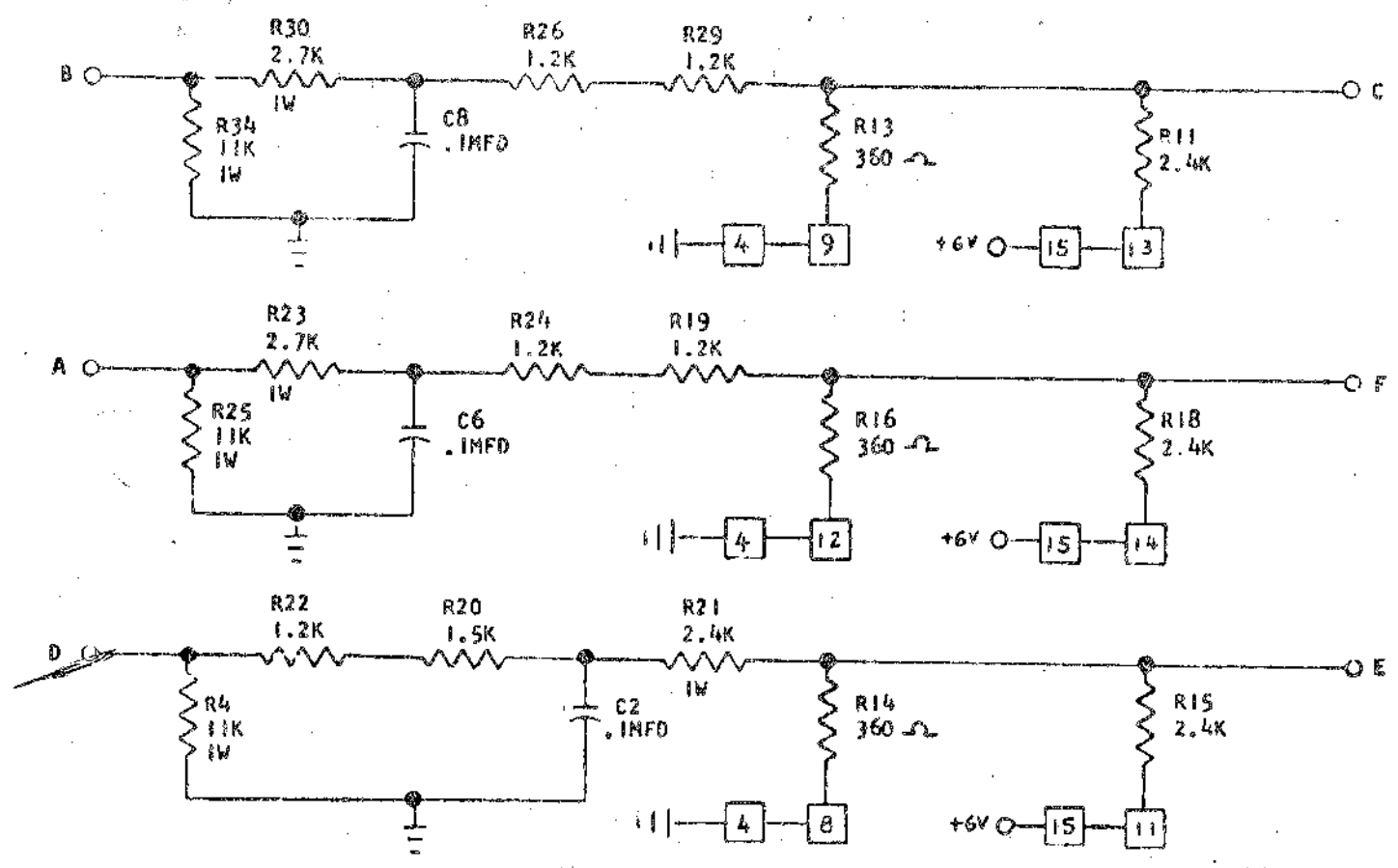
INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-ALLOY-GATED S.P.D. NO2 (VM-3)				SEE INDEX CARD			6-20-61	112146	IWB	
DESIGN	AJR	2-24-59	TYPE	SHS	11-30-59	D107764				
DETAIL	RKD	2-24-59	SCALE	NONE	3-29-60	108609	NGJ			
CHECK	DEV	2-24-59	DRAW	VE	10-13-60	D109900	IWB			
APPRO	GWS	2-24-59	CHECK	REJ	10-12-60	12-13-60	D110872	IWB		

371041

# ALLOY - INTEGRATOR-NEGATIVE INPUT THREE N LINES

371428

STANDARDS CODE  
4-1502



NOTES  
 X ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999  
 XI 491296 BARE WIRE FOR ALL JUMPERS  
 XII ALL RESISTORS ARE 1/2 WATT AND +5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES JUMPER  
 XIV TEST TO ENGINEERING SPECIFICATION 891428

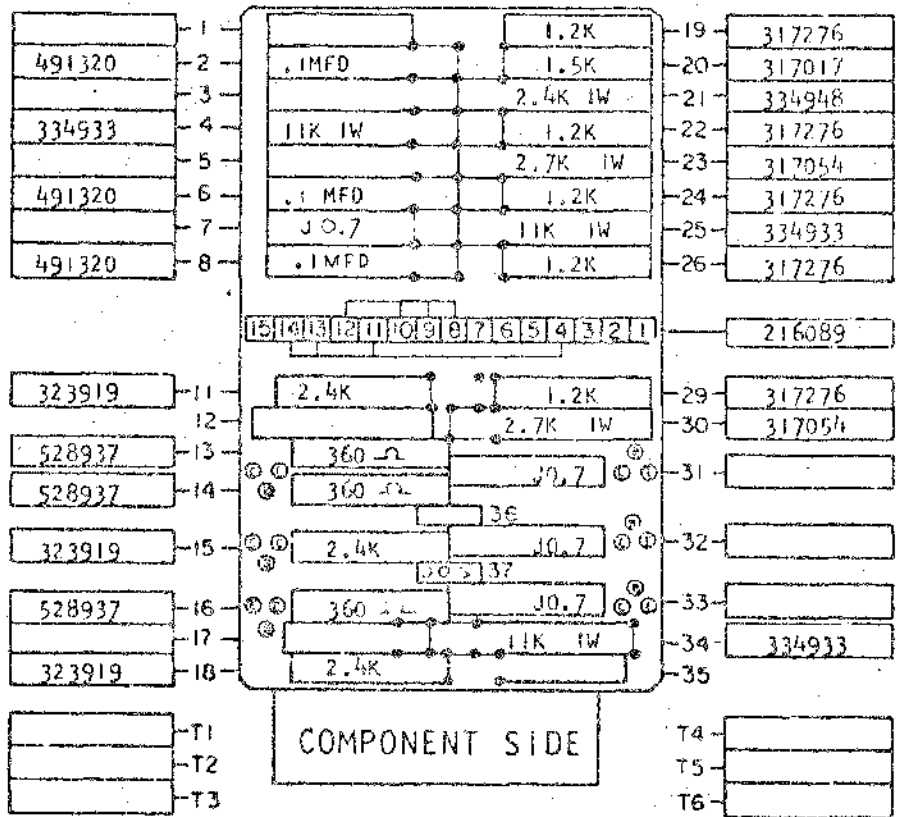
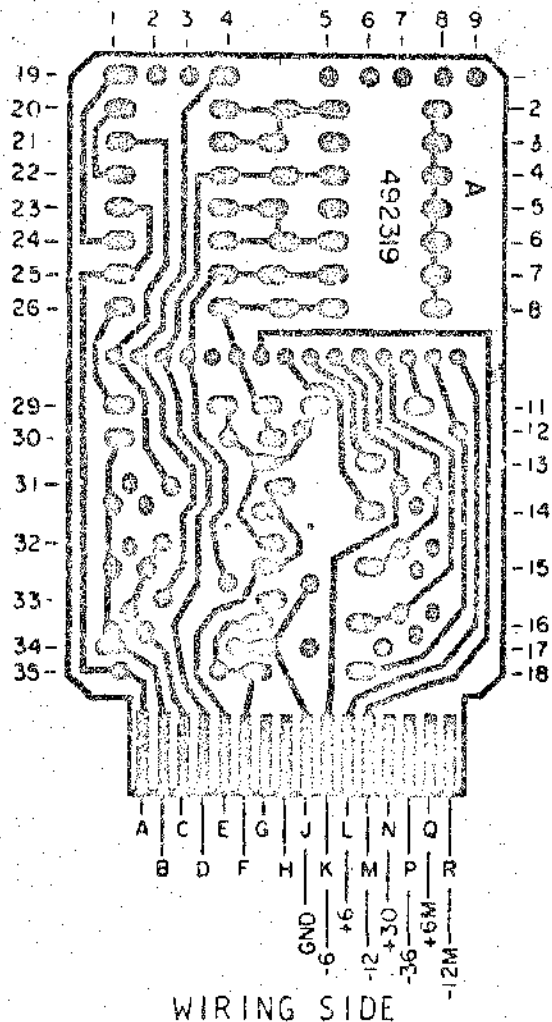
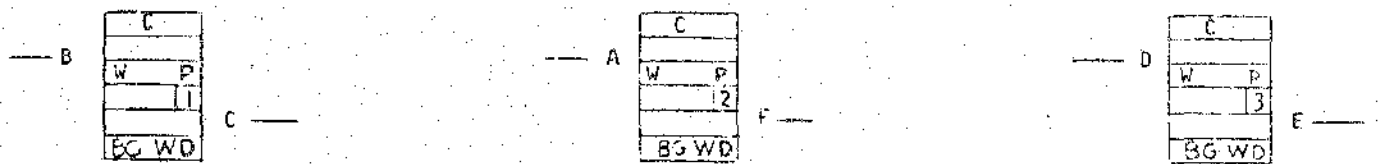
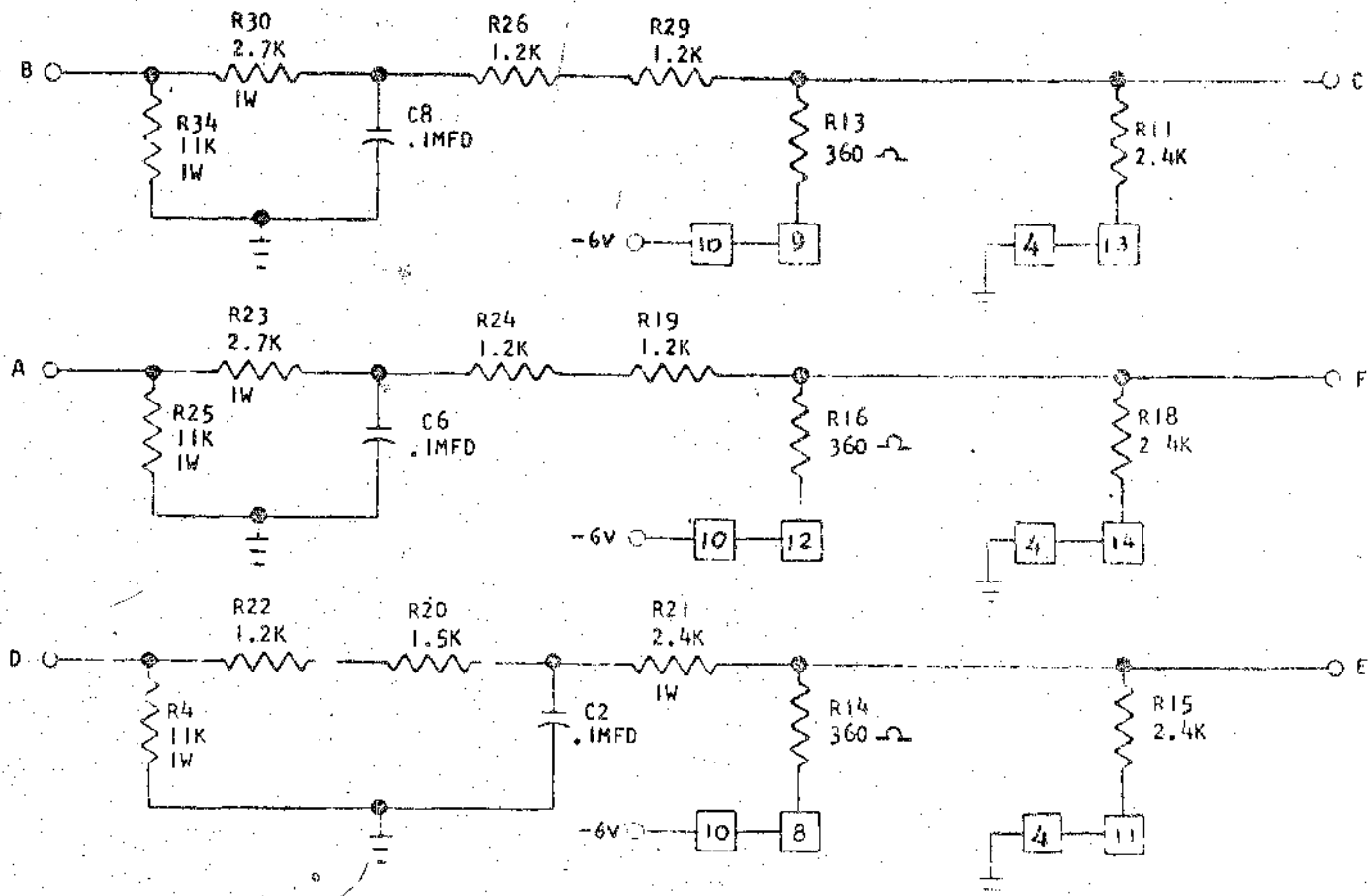
**B**  
 WIRING SIDE  
 DPO CIRCUIT & PACKAGING STANDARD  
 APPROVAL: P. B. Blaney  
 DATE: 5-11-59

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR - ALLOY			11-5-58	105392	RJH				371428
	INTE, NEG INP 3N LINES			1-7-59	D105661	RJH				
DESIGN	RRD	3-26-59	MODEL	SMS	4-22-59	105671	RJH			
DETAIL	AJC	3-27-59	SCALE	NONE	9-9-59	106862	RJH			
CHECK	DEN	4-4-59	DRAW							
APPRO	REC	4-4-59	CHECK	CIW	8-12-59					

ALLOY - INTEGRATOR-NEGATIVE INPUT THREE P LINES

371427

371427  
STANDARDS CODE  
4-1502



- NOTES  
 X ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999  
 XI 491296 BARE WIRE FOR ALL JUMPERS  
 XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES JUMPER  
 XIV TEST TO ENGINEERING SPECIFICATION 891427

**B** WIRING SIDE

DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
<i>P. B. Henry REC</i>	8-4-59

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR - ALLOY			11-5-58	105392	RJH				371427
	INTE. NEG INP 3P LINES			4-22-59	105671	RJH				
DESIGN	RRD	3-26-59	MODEL							
DRAWN	AJC	3-27-59	SCALE							
CHECK	DEN	4-4-59	DRAW							
APPRO	REC	4-4-59	CHECK	11/8-2-59						

DEFINITION NO 891427

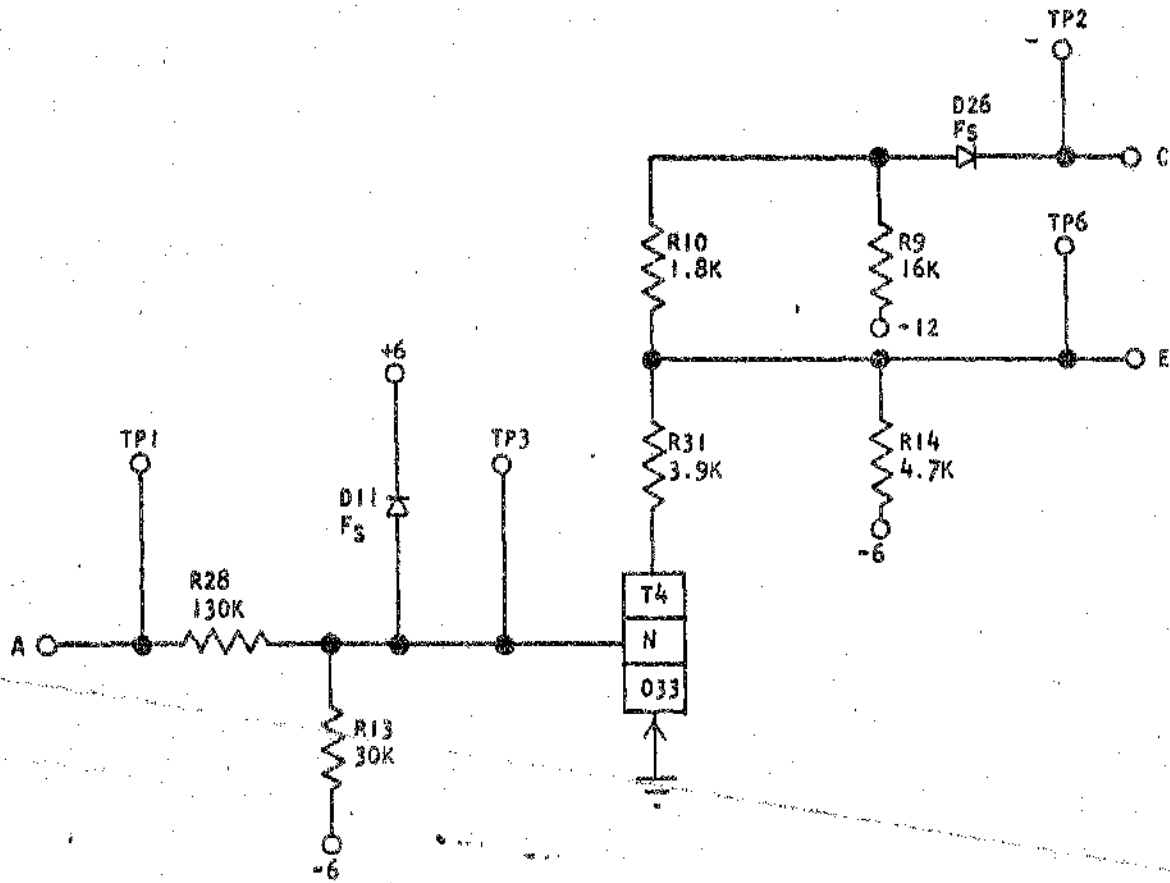
ALLOY-EOR PHOTONSENSE

371431

BH -

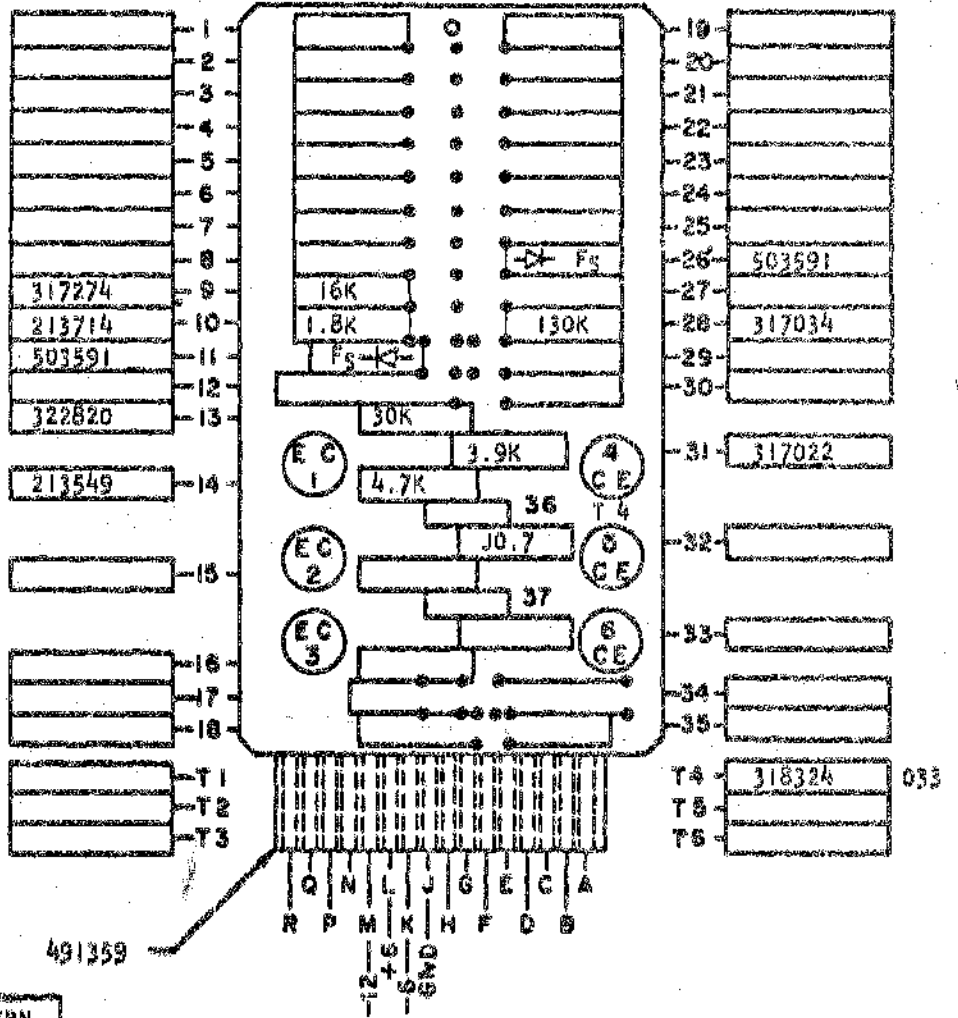
STANDARDS CODE

2-7045



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891431
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895398 AND 891999
- III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- IV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491298



B

DPD CIRCUIT & PACKAGING STANDARD		HOLE PATTERN						
APPROVAL	DATE	491021		COMPONENT SIDE				
RWE	10-10-58							
INTERNATIONAL BUSINESS MACHINES CORP.		DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM YSTR - ALLOY-EOR PHOTONSENSE		11-5-58	105392	RJH				
DESIGN	EJC 6-13-58	TYPE	SMS					
DETAIL	EJC 6-16-58	SCALE	NONE					
CHECK	GHS 8-9-58	DRAW	MDE 6-22-61					
APPROV	7-12-61	CHECK	7-27-61					



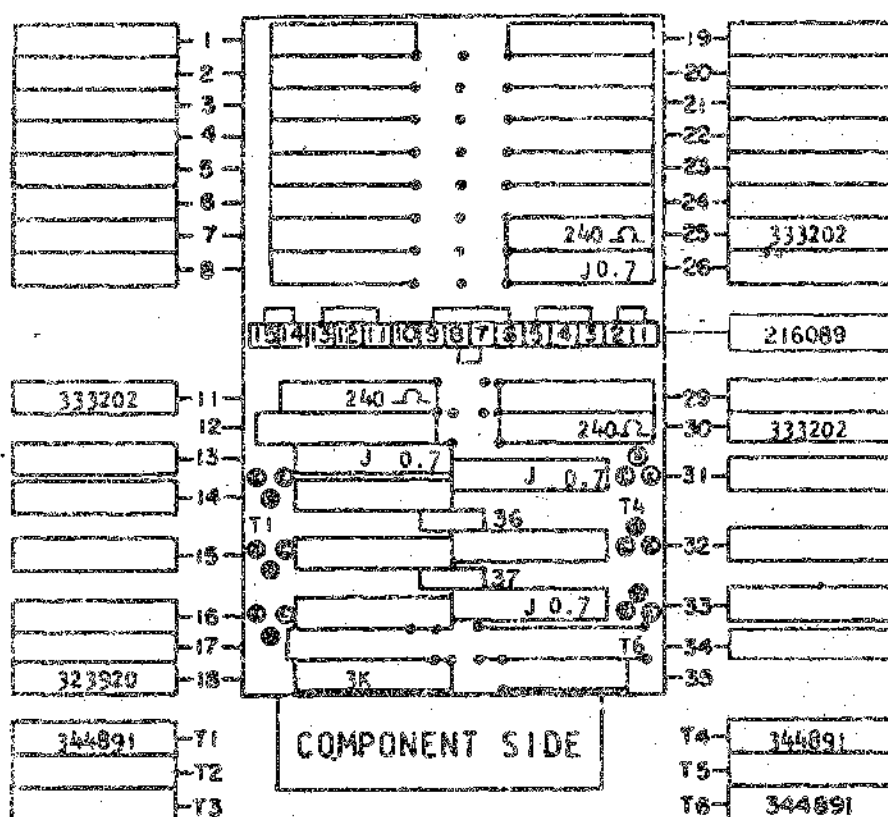
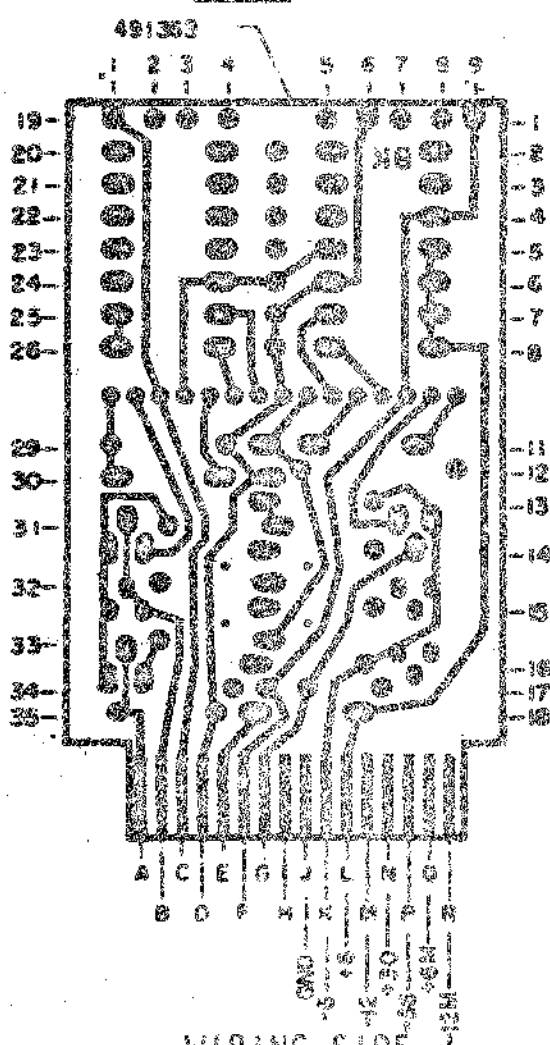
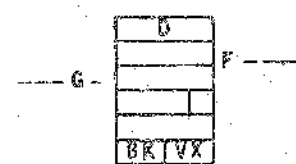
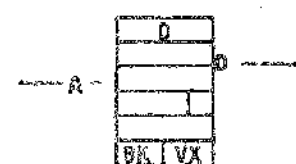
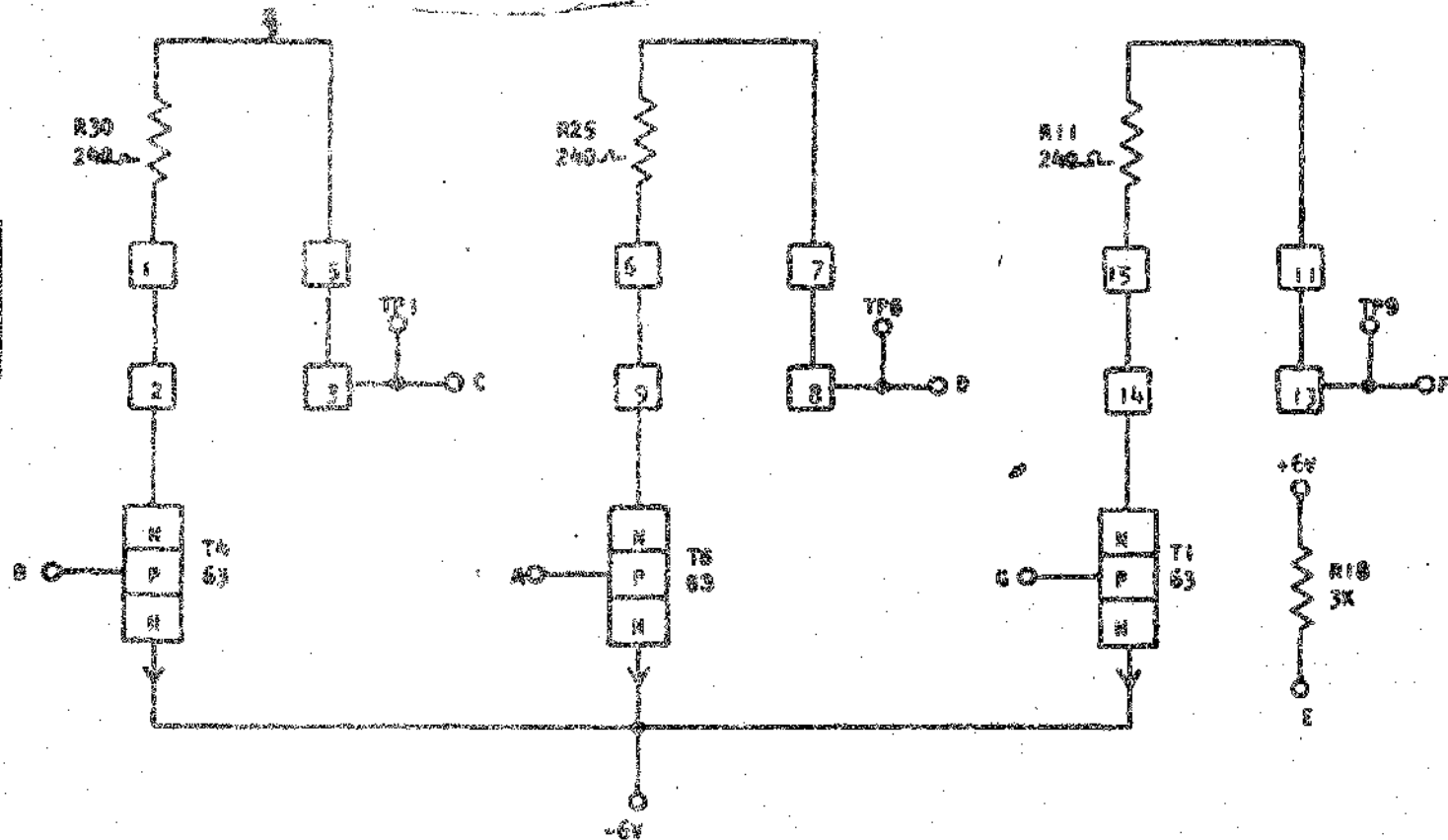


ALLOY-DRIVER, THREE RELAY AND LIGHT

371435

371435

STANDARDS CODE  
2-7040



NOTES  
 I ASSEMBLE TO ENGINEERING SPECIFICATION 895296 AND 891999  
 II 491296 BARE WIRE FOR ALL JUMPERS  
 III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED  
 IIII "J" IN BLOCK DEMOTES JUMPER  
 IIII TEST TO ENGINEERING SPECIFICATION 891435

APPROVAL		DATE		APPROVAL		DATE		APPROVAL		DATE		APPROVAL		DATE		APPROVAL		DATE					
OPD CIRCUIT & PACKAGING STANDARD																							
APPROVAL										DATE													
<i>P. W. Emery</i>										10-10-58													
INTERNATIONAL BUSINESS MACHINES CORP.																							
NAME		CARD ASM TSTR-ALLOY-DRIVER		DATE		11-4-58		CHANGE NO.		105292		APPROVAL		<i>[Signature]</i>		DATE		CHANGE NO.		APPROVAL		DEVELOPMENT NO.	
DESIGN		GHS 6-30-58		MODEL		SMS		DETAIL		EJC 7-8-58		SCALE		NONE		CHECK		GHS 7-9-58		DRAWN		JTB 4-9-58	
APPRO				CHECK																			

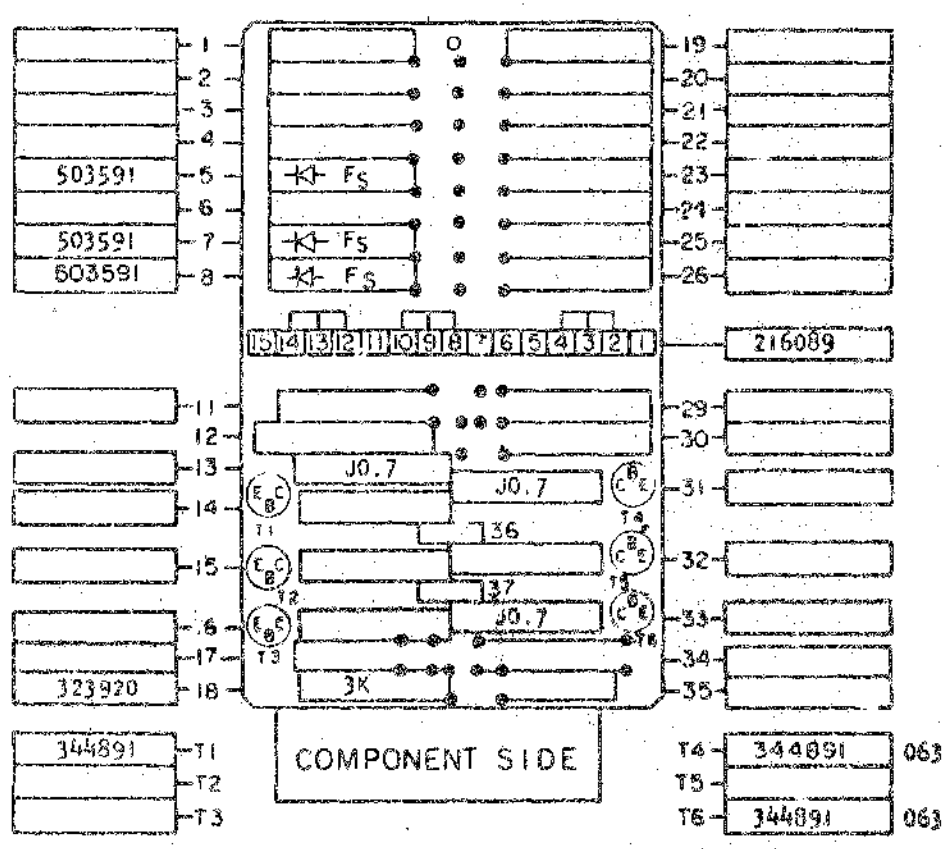
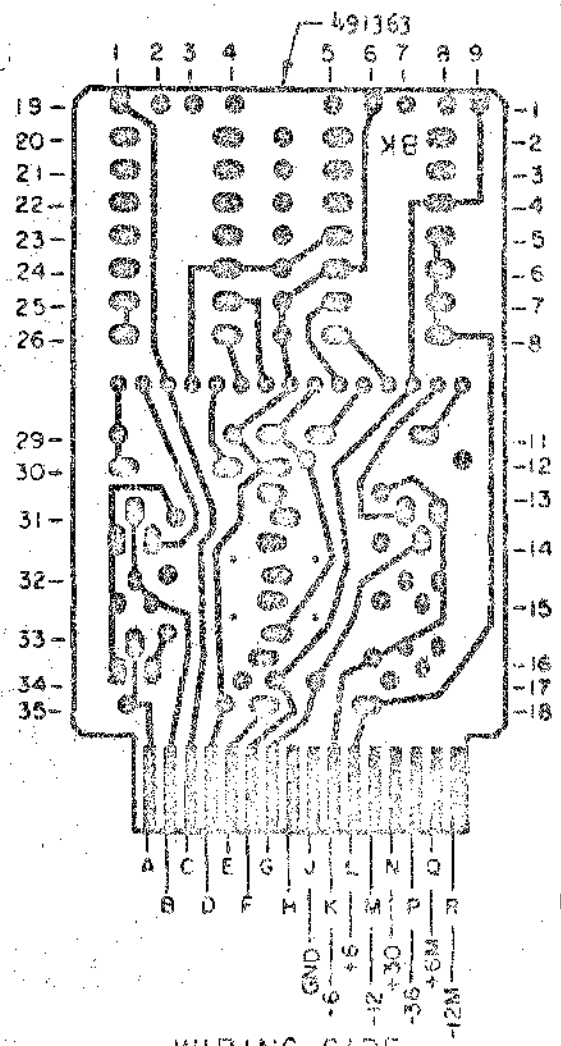
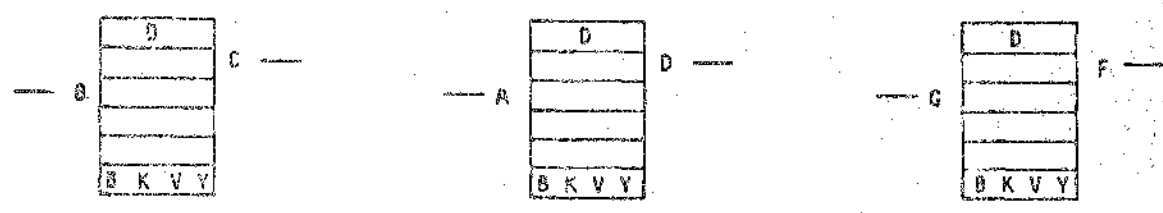
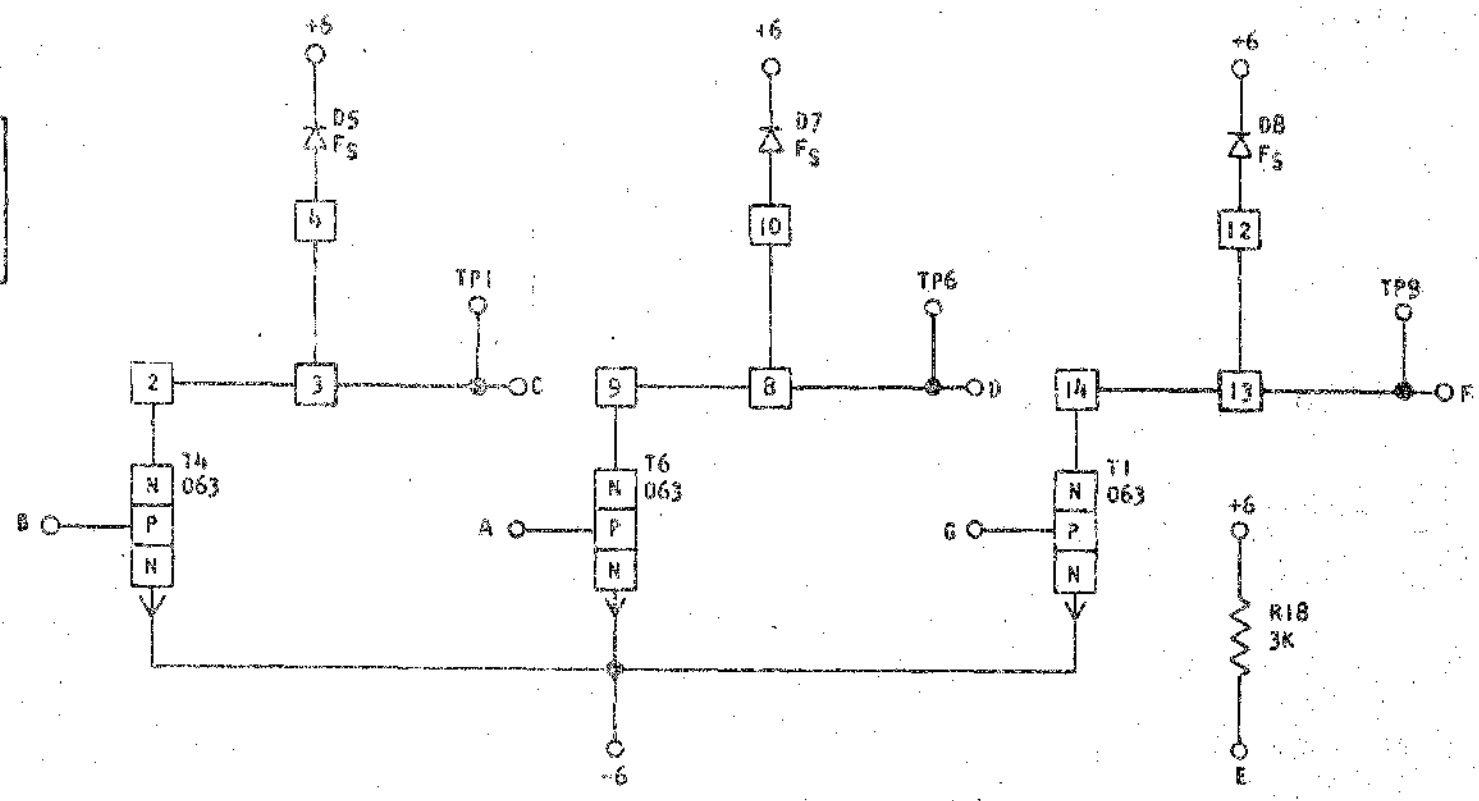
371435

ALLOY-DRIVERS, THREE PROLAY

371434

371434

STANDARDS CODE  
2-7045



NOTES  
 X ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999  
 XI "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296  
 XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED  
 XIII TEST TO ENGINEERING SPECIFICATION 891434

**B**

WIRING SIDE

DPD CIRCUIT & PACKAGING STANDARD

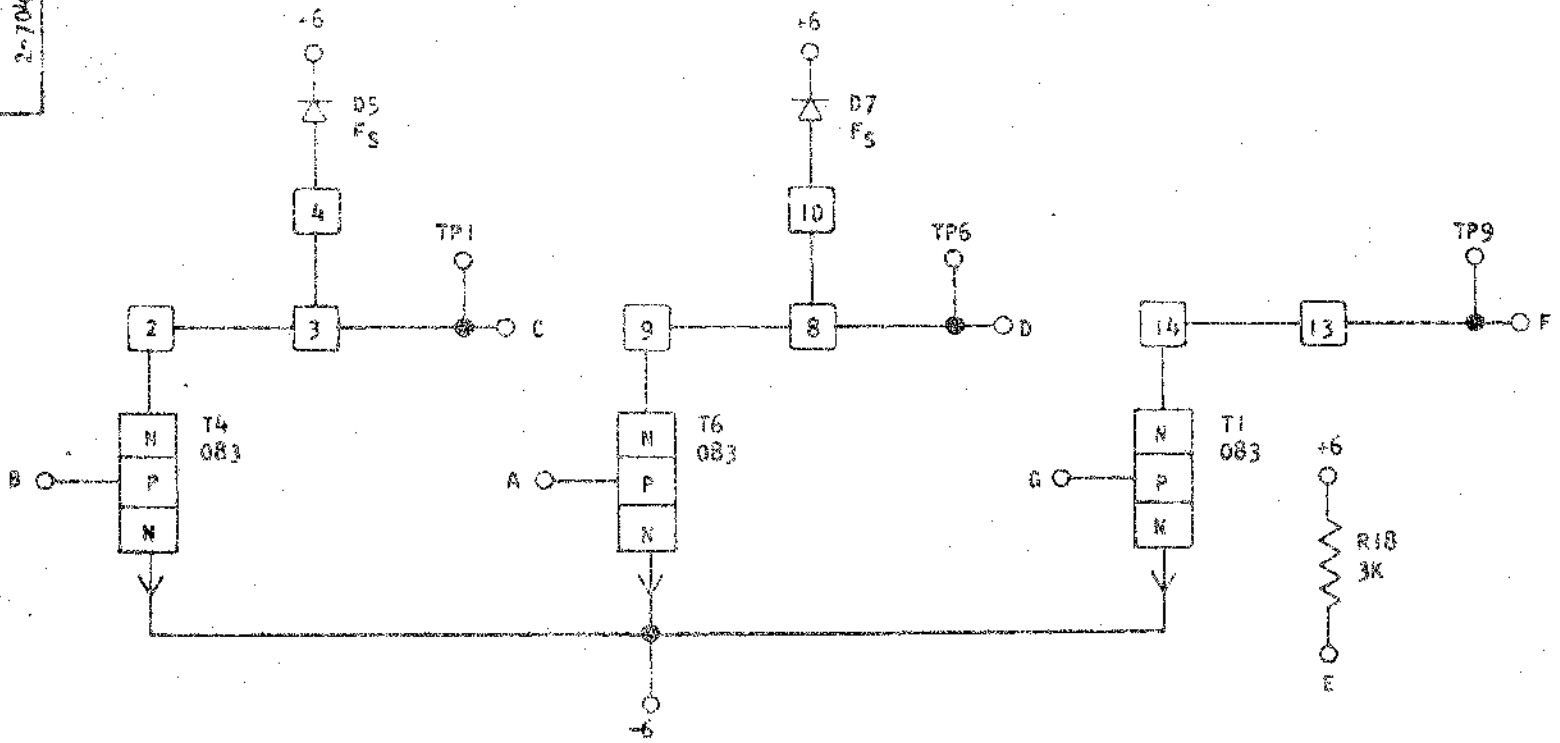
APPROVAL	DATE
RWE	10-10-58

DESIGN	DATE	MODEL	CHANGE NO	APPROVAL	DATE	CHANGE NO	APPROVAL	DEVELOPMENT NO
NAME	CARD ASM TSTR- ALLOY-DRIVERS		11-5-58	RJH				
			3-30-60	REDRAWN				
			4-27-60	108823	NGJ			
DESIGN	GHS 6-30-58	MODEL	SMS					
DETAIL	EJC 7-8-58	SCALE	NONE					
CHECK	GHS 7-9-58	DRAW	VE 3-30-60					
APPROV		CHECK	RJA 4-1-60					

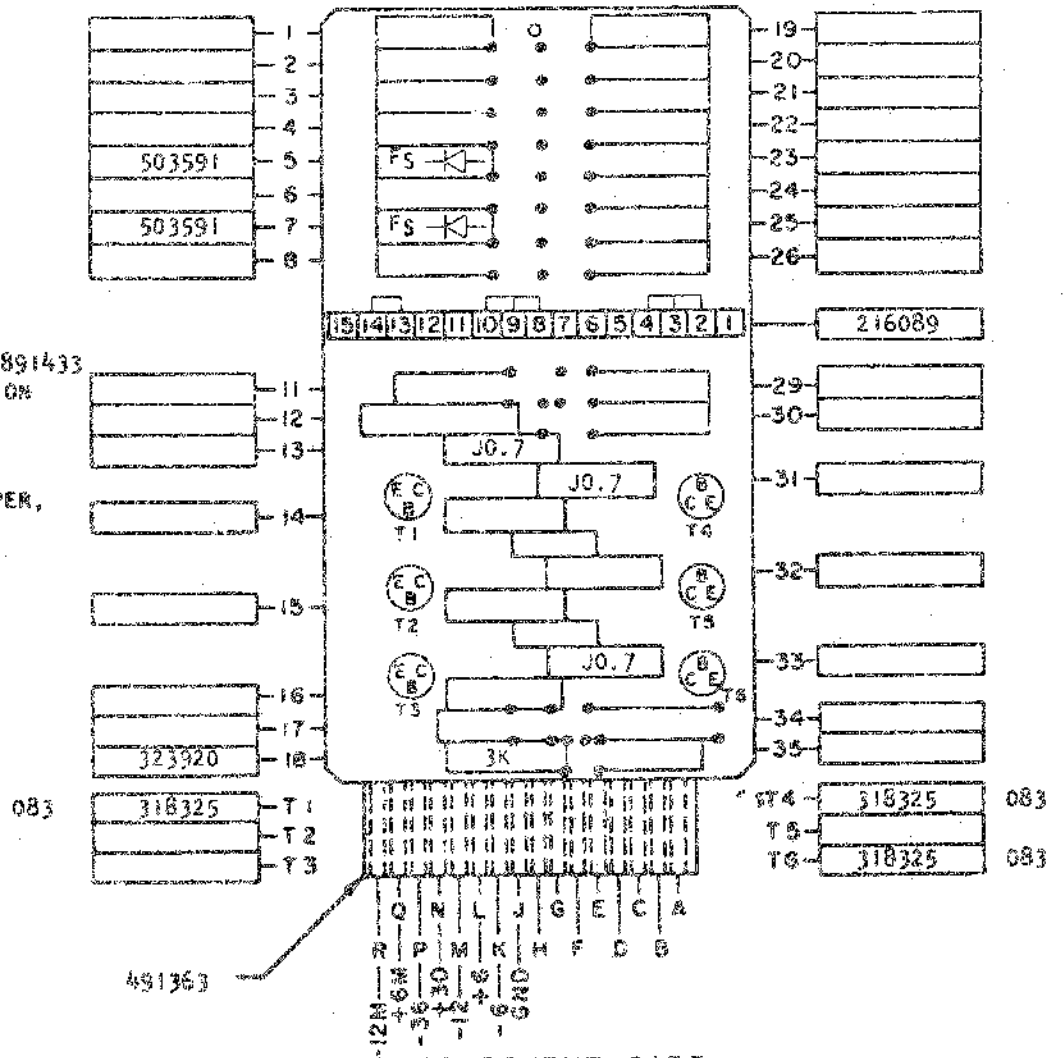
371434

ALLOY-DRIVER, PROLAY ONE READ GATE

371433  
B K V Z  
STANDARDS CODE  
3-70M5



- NOTES  
 I TEST TO ENGINEERING SPECIFICATION 891433  
 II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999  
 III ALL RESISTORS ARE 1/2 WATT AND 5% UNLESS OTHERWISE NOTED  
 XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



**B**

OPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
R.W.E.	10-30-58

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY-DRIVER			11-5-58	105392	RJH				371433
	PROLAY ONE READ GATE			4-27-60	108823	NGJ				
DESIGN	GHS	6-30-58	TYPE	SMS	6-16-60	D109191	JWB			
DETAIL	EJC	7-8-58	SCALE	NONE						
CHECK	GHS	7-9-58	DRAW	PAP	5-12-60					
APPRO	RCH	11-5-58	CHECK	RCH	5-17-60					

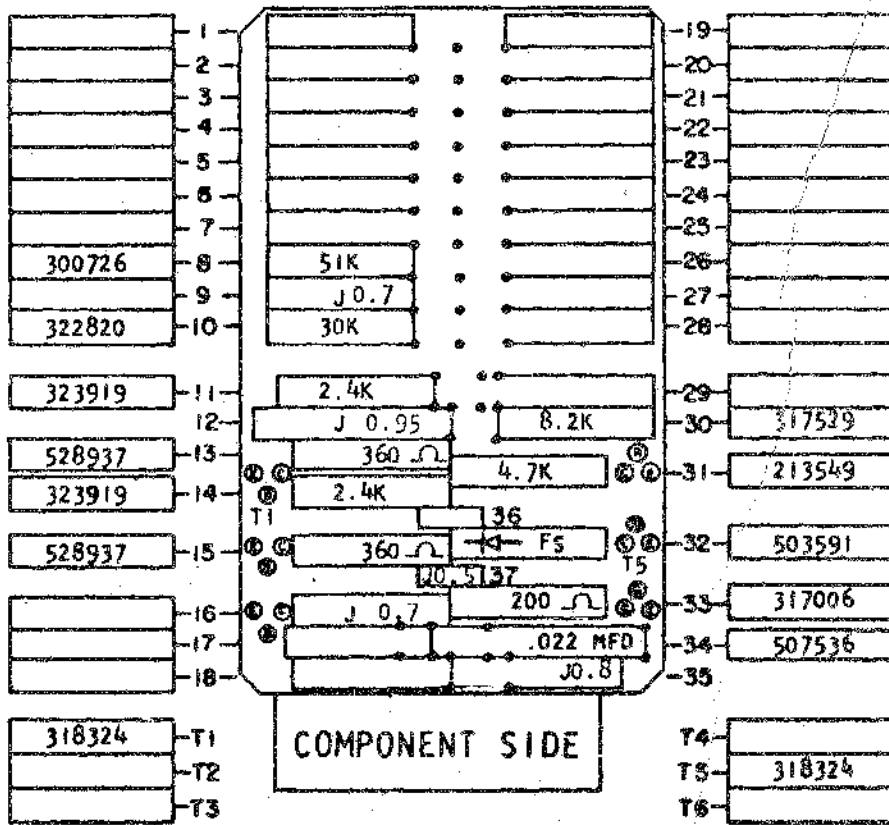
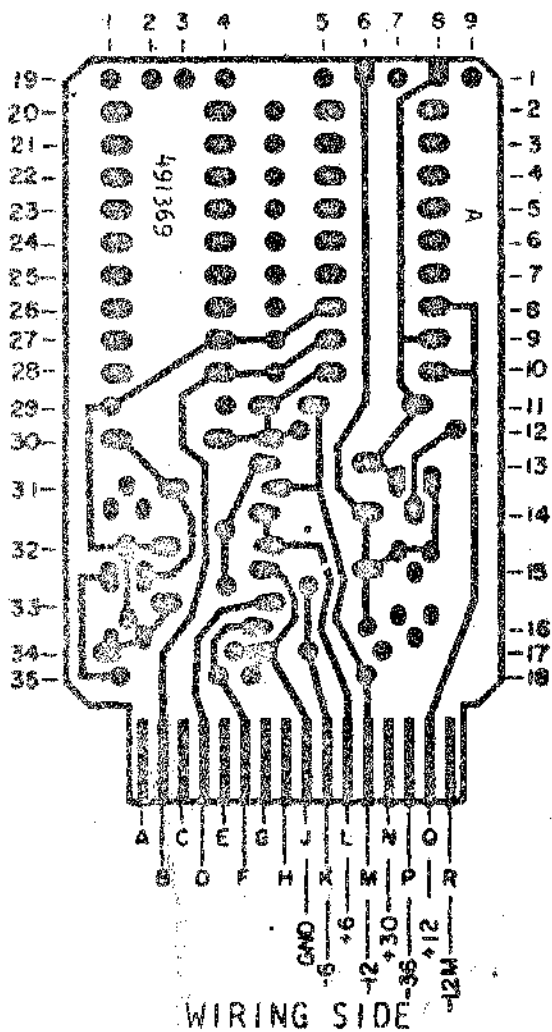
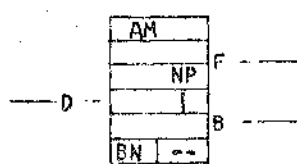
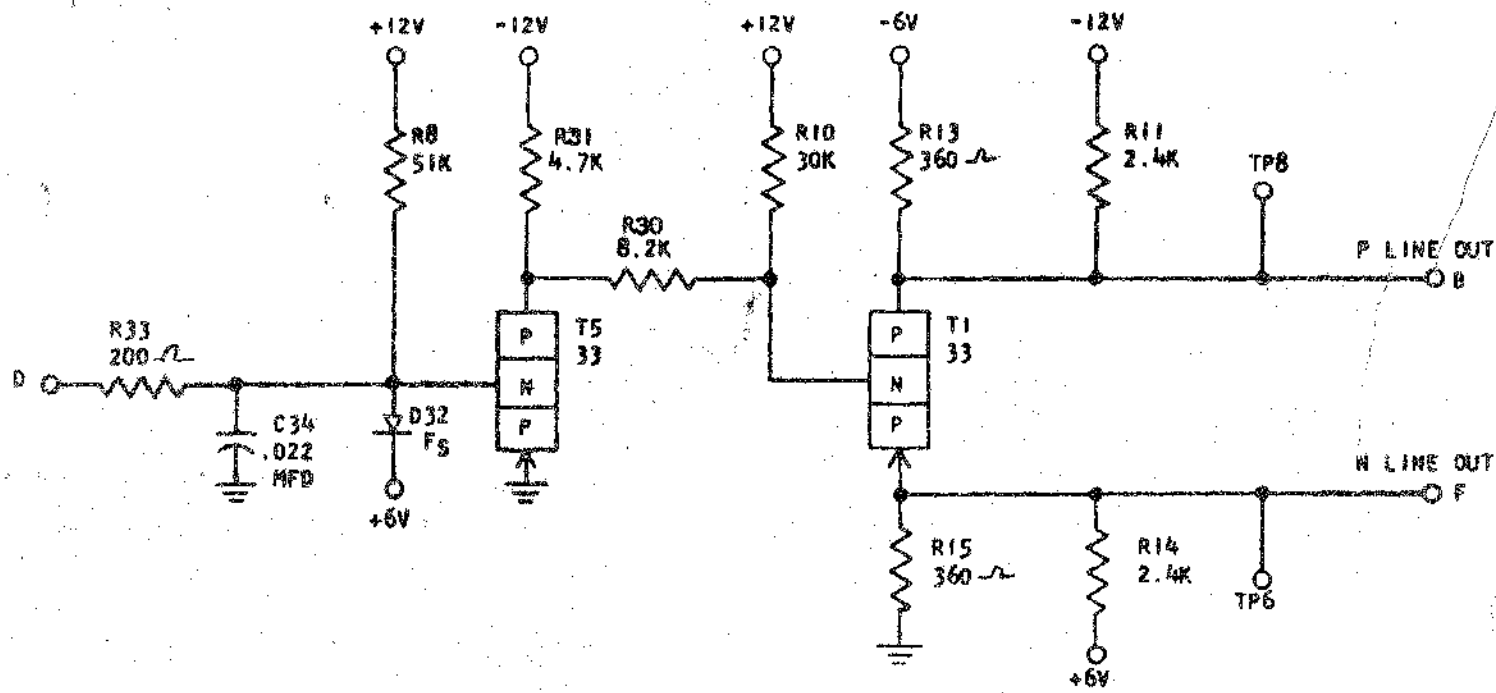


ALLOY - LOAD POINT PHOTOSENSER

371438

371438

STANDARD CODE  
4-1502



- NOTES
- I ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
  - XI 491296 BARE WIRE FOR ALL JUMPERS
  - XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - XIII "J" IN BLOCK DENOTES JUMPER
  - XIV TEST TO ENGINEERING SPECIFICATION 891438
  - XV 491299-ASSEMBLE WITH JEDEC TRANSISTOR

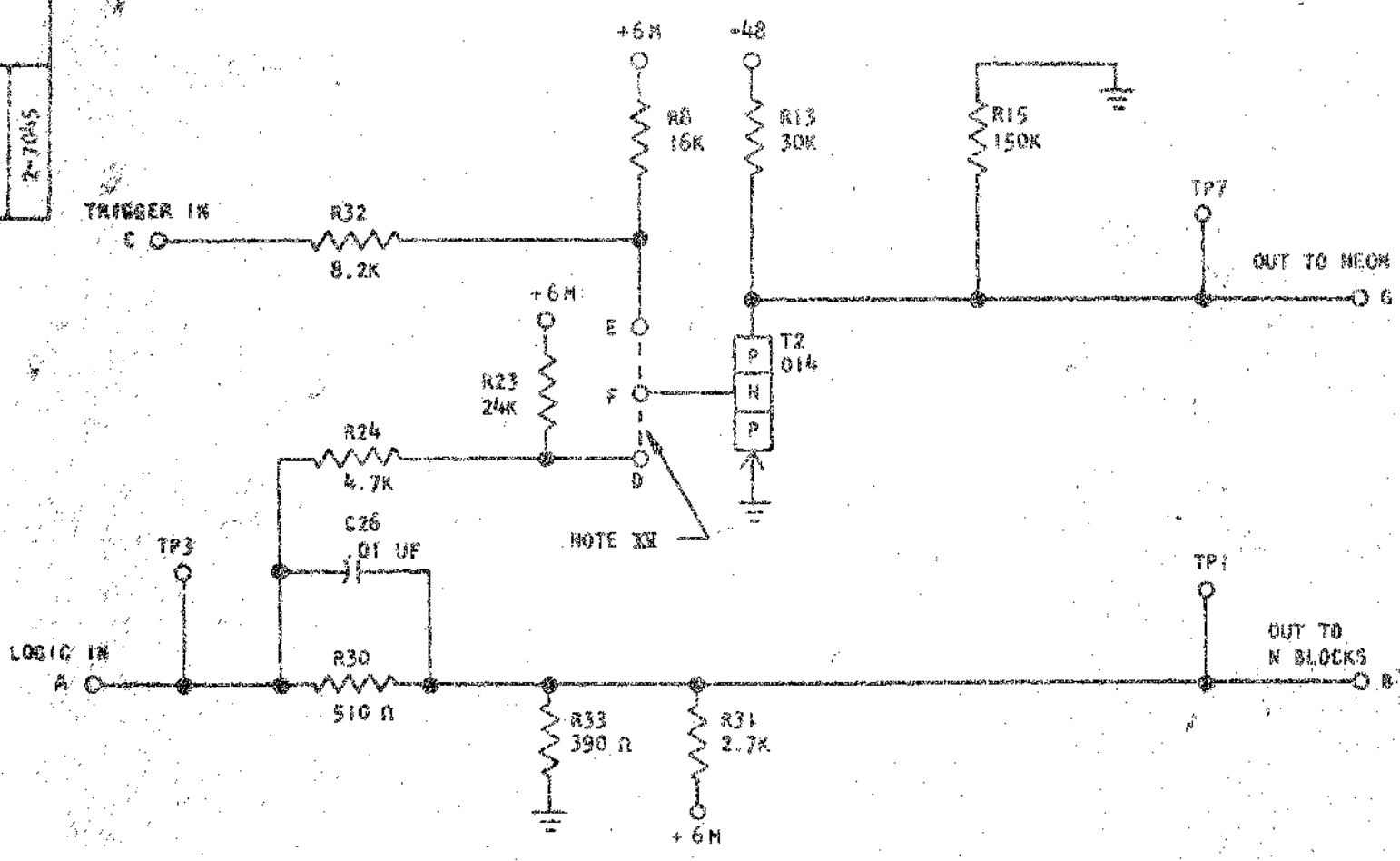
DND CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
<i>R. J. H.</i>	10-10-58

INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-ALLOY-LOADPOINT PHOTOSENSER	11-14-58	105473	RJH				371438
	2-2-59	0105724	RJH				
DESIGN GHS 7-10-58	6-26-59	106680	RJH				
MATERIAL EJC 7-29-58							
CHECKER GHS 7-30-58							

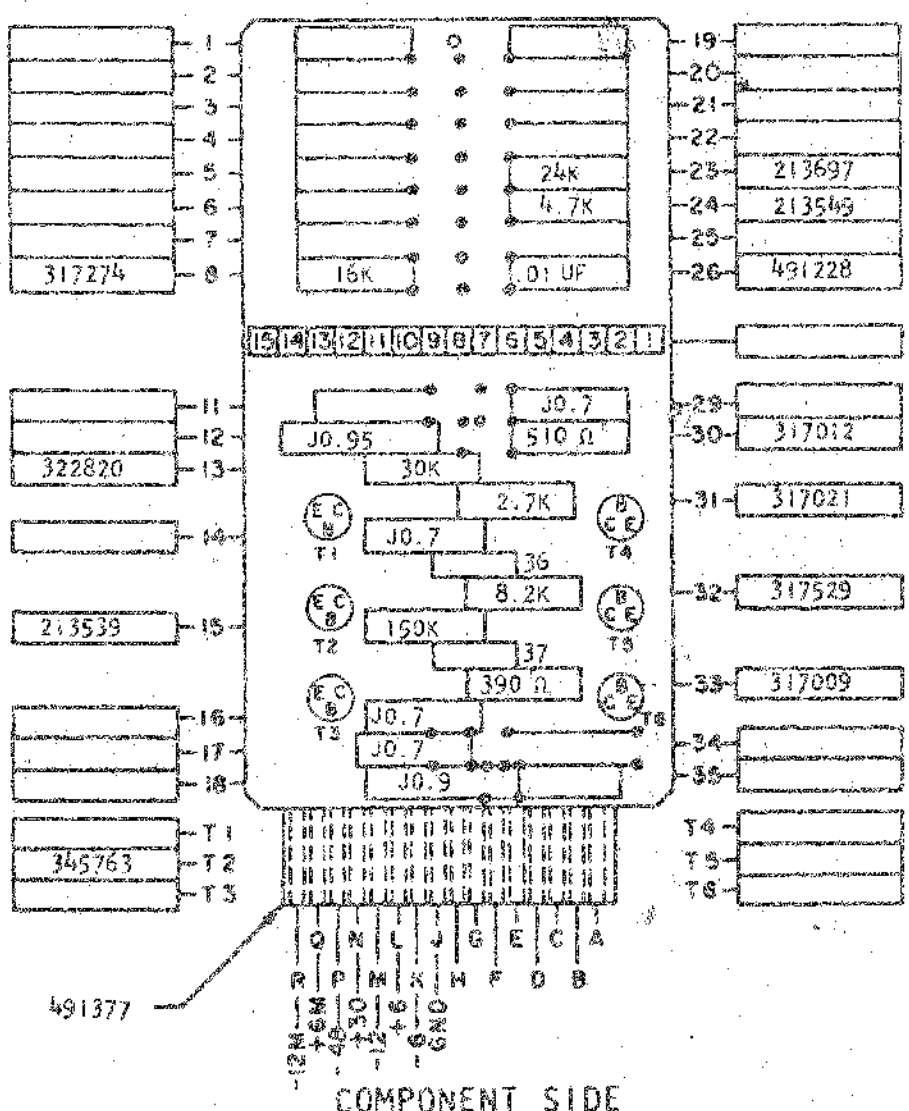
371442

ALLOY - NEON DRIVER

371442  
B S -  
STANDARDS CODE  
2-7045



- NOTES
- XI TEST TO ENGINEERING SPECIFICATION 991442
  - XII ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - XIII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - XIV "P" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
  - XV WHEN USED AS A TRIGGER NEON DRIVER, CONNECT PIN F TO E ON BACK PANEL. WHEN USED AS A LOGIC NEON DRIVER, CONNECT PIN F TO D ON BACK PANEL



**B**

DPO CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RWE	10-10-58

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY			11-5-58	105392	RJH				371442
	NEON DRIVER			6-3-60	D108918	<i>QWB</i>				
DESIGN	GHS	8-7-58	TYPE	SMS	6-28-61	112166	IWB			
DETAIL	TPA	8-7-58	SCALE	NONE						
CHECK	GHS	8-7-58	DRAW	VE	5-6-60					
APPRO	PDB	8-1-58	CHECK							

371032

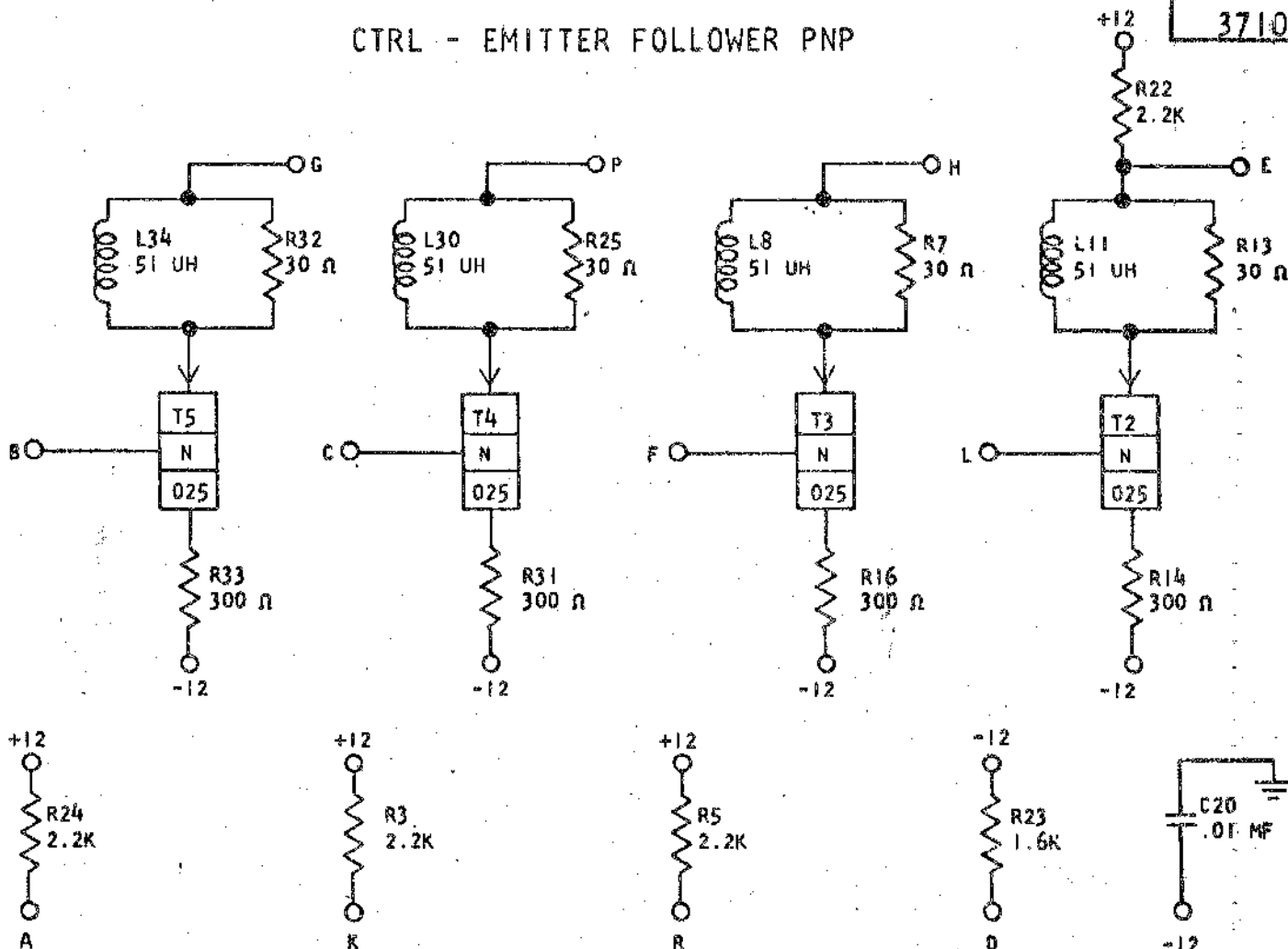
CE YB

STANDARDS CODE

2-7045

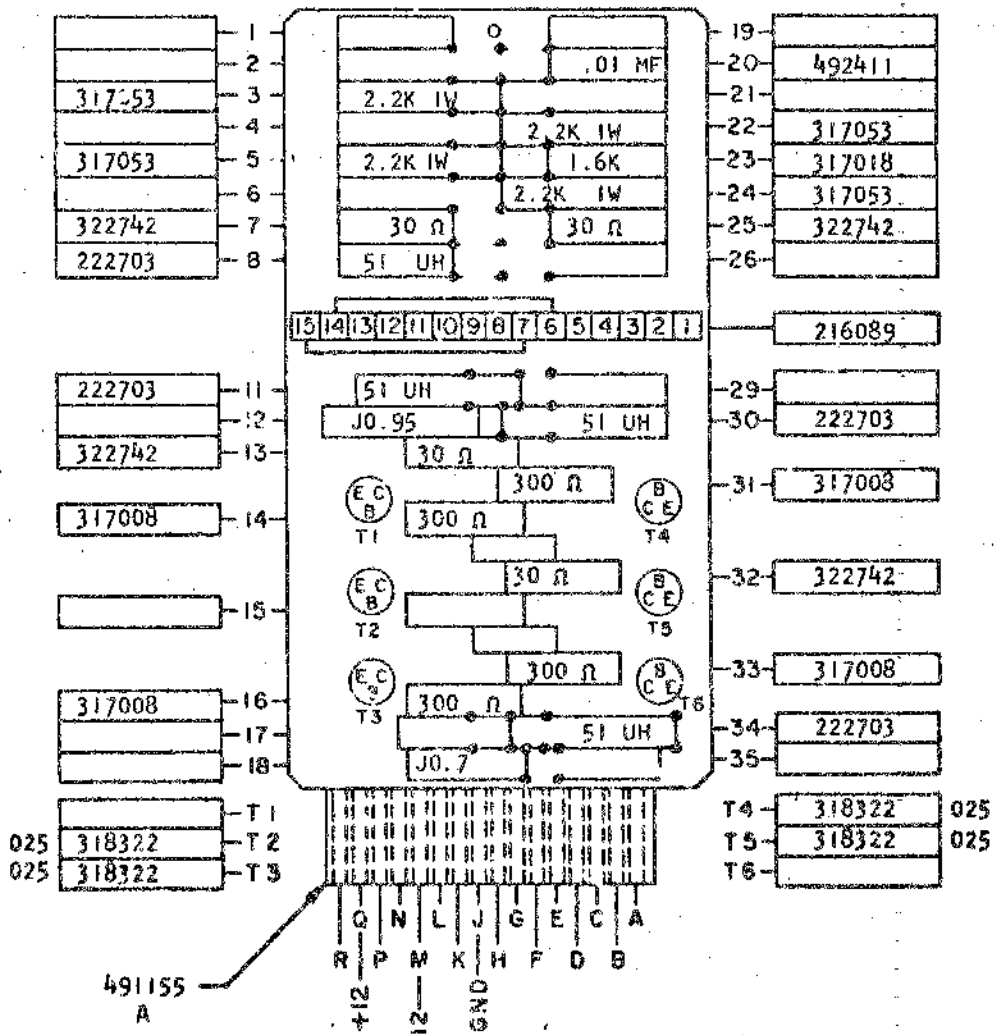
CTRL - EMITTER FOLLOWER PNP

371032



NOTES

- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891032
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- III ALL RESISTORS ARE 1/2 WATT AND  $\pm 5\%$  UNLESS OTHERWISE NOTED
- IV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296



B

OPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
RAE	11-14-58

DESIGN	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	11-18-58	105502	RJH	1-27-61	D111089	IWB	371032
EMITTER FOLLOWER PNP	10-20-59	REDRAWN					
DESIGN	3-22-60	108318	NGJ				
DETAIL	5-5-58	SCALE	NONE				
CHECK	5-6-58	DRAW	VE (1-1)-60	7-7-60	109613	IWB	
APPRO	11-14-58	CHECK	PR (1-19)-60	12-14-60	D110502	JWB	



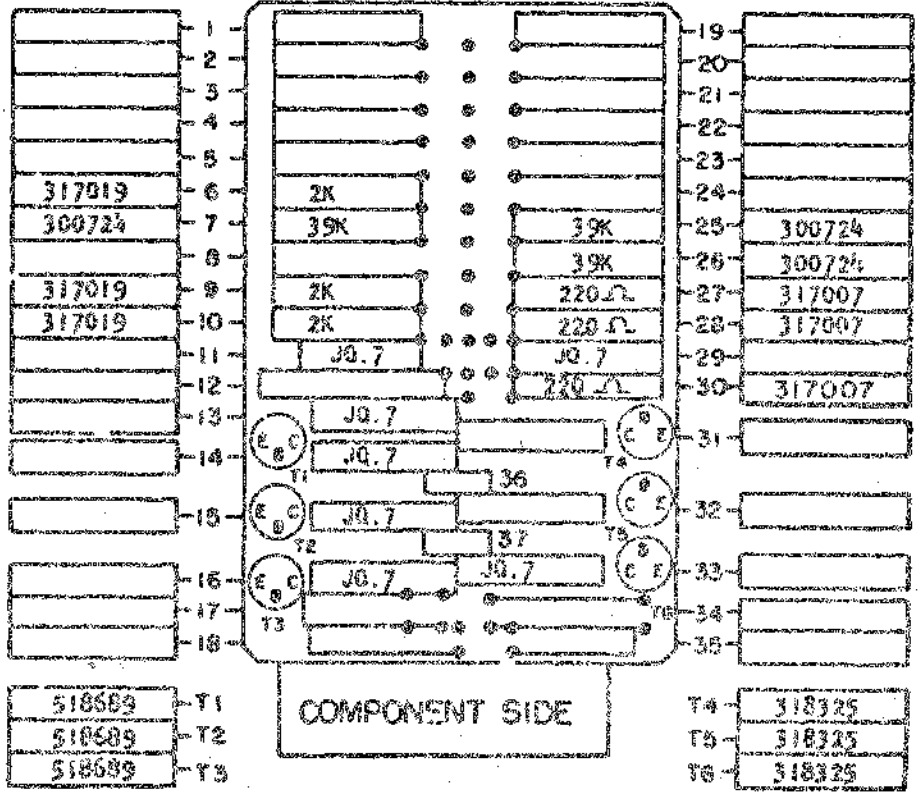
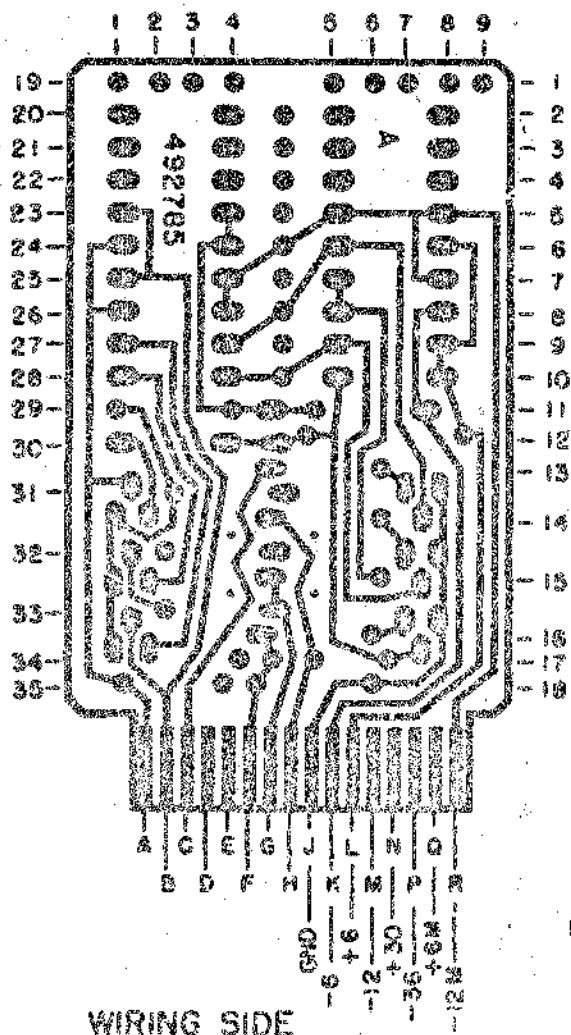
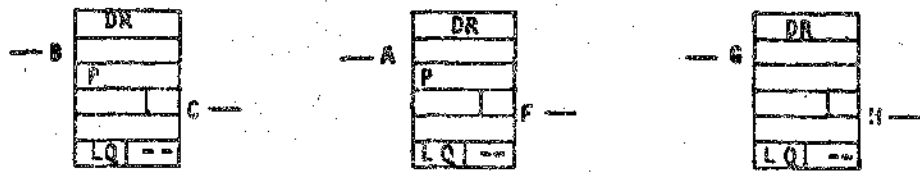
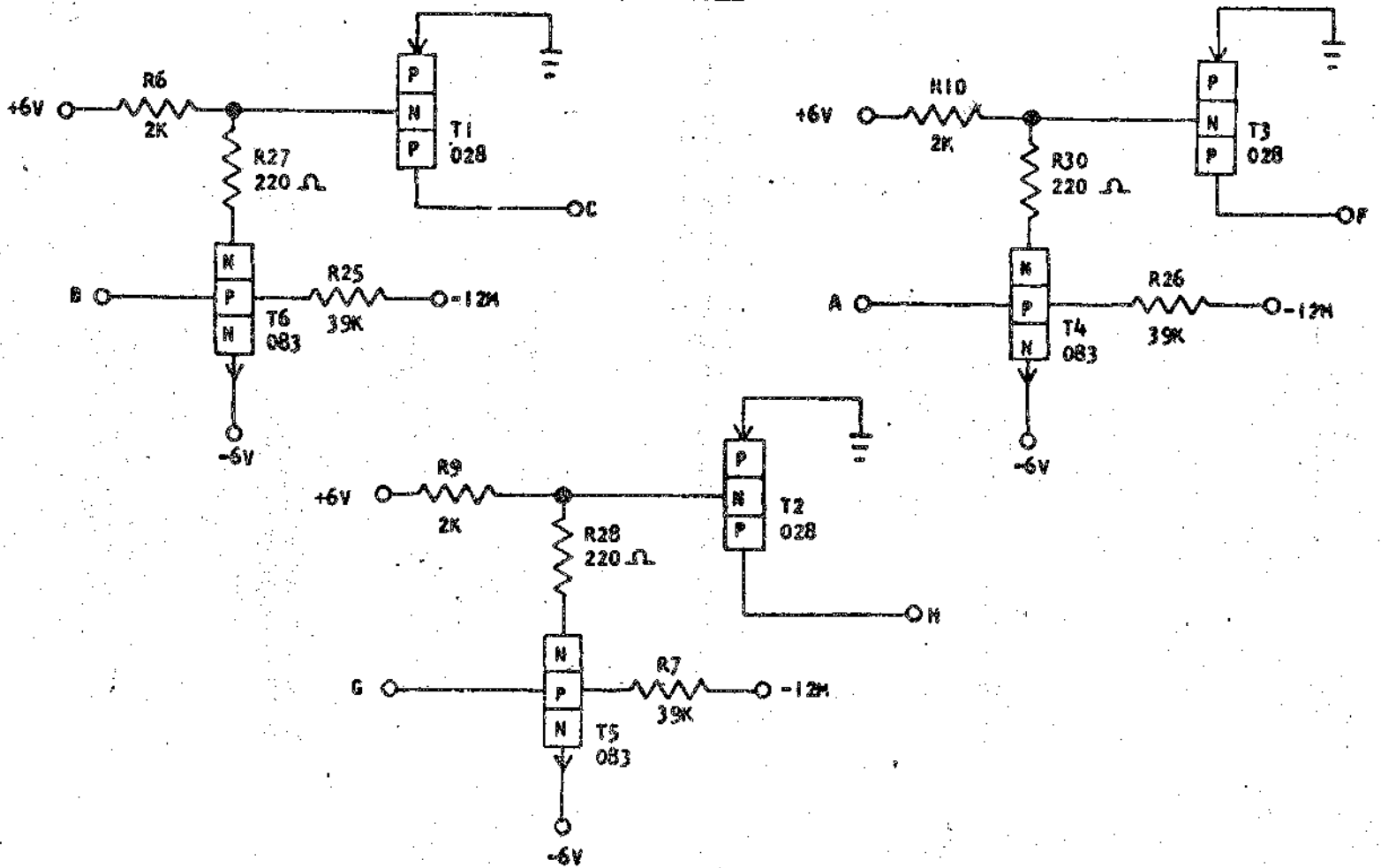


371499

### ALLOY-DRIVER, 48V, LIGHT & RELAY MOUNT CARD ON 1 INCH CENTERS NOTE XVI

371499

STANDARDS  
CODE  
2-7045



**B**

**WIRING SIDE**

CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
LIP	5-6-59

- NOTES**
- I ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
  - II 491295 BARE WIRE FOR ALL JUMPERS
  - III ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
  - IV "J" IN BLOCK DENOTES JUMPER
  - V 491299-ASSEMBLE WITH JEDEC TRANSISTOR
  - VI TEST TO ENGINEERING SPECIFICATION 891499
  - VII MAXIMUM HEIGHT COMPONENTS MAY PROJECT ABOVE SURFACE OF BOARD WILL BE .850

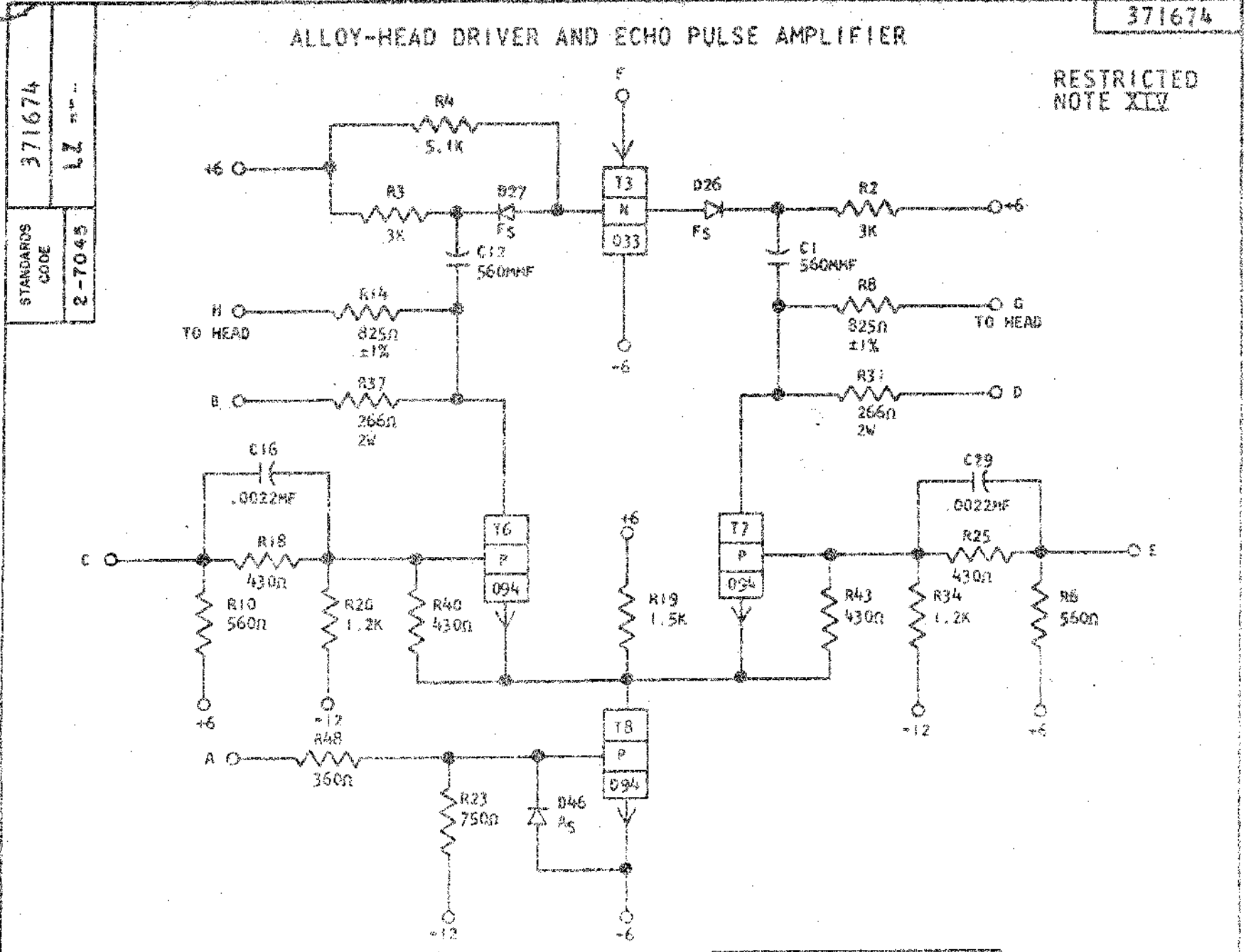
INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-ALLOY	6-9-59	106401	RJH				2547-0365
DRIVER, 48V LIGHT & RELAY	8-14-59	106770	RJH				
DESIGN RJA 5-4-59 MODEL SWS	10-13-59	REDRAWN					
DETAIL RJA 5-4-59 CALP NONE							
CHECK LIP 5-9-59 DRAW VE 10-13-59	4-26-60	0108701	RGJ				
APPRO GWS 5-9-59 CHECK QNH 10-26-59							

371499

ALLOY-HEAD DRIVER AND ECHO PULSE AMPLIFIER

371674

RESTRICTED  
NOTE XLV



NOTES

- X CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891674
- XI ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED (AS NOTE XII)
- XIII "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
- XIV RESTRICTED TO 729 II AND IV MACHINES FOR APPLICATION REASONS
- XV ALL 2 WATT RESISTORS ARE +1% -2%

491222	1	560MMF	0	430Ω	25	317010
323920	2	3K	-FS		26	503591
323920	3	3K	-FS		27	503591
317024	4	5.1K	J0.7		28	
	5	J0.7	0022MF		29	491251
322347	6	560Ω	J0.7		30	
	7		266Ω 2W		31	492606
479094	8	825Ω ±1%			32	
	9	J0.7	J0.7		33	
322347	10	560Ω	1.2K		34	317276
	11		J1.0		35	
491222	12	560MMF			36	
	13	J0.7	266Ω 2W		37	492606
479094	14	825Ω ±1%			38	
	15	J0.7	J0.7		39	
491251	16	0022MF	430Ω		40	317010
	17		J1.0		41	
317010	18	430Ω	J0.7		42	
317017	19	1.5K	430Ω		43	317010
317276	20	1.2K	J0.7		44	
	21		J0.7		45	
	22		-AS		46	491251
317015	23	750Ω	J0.7		47	
	24	J0.7	360Ω		48	528937

B

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
KMT	1-30-61

COMPONENT SIDE

INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR- ALLOY-HEAD	8-12-59	106797	RJH	10-17-60	110171		371674
DRIVER AND ECHO PULSE AMPLIFIER	10-8-59	106945	RJH	2-9-61	111235	NOTE XLV	
DESIGN TPA 1-26-61 TYPE SMS 729	10-20-59	D107565	RJH				
DETAIL TPA 1-26-61 SCALE NONE	10-21-59	REDRAWN					
CHECK DAS 1-27-61 DRAW VE 2-2-61	12-18-59	107924	RJH				
APPRO CHS 2-9-61 CHECK							



371749

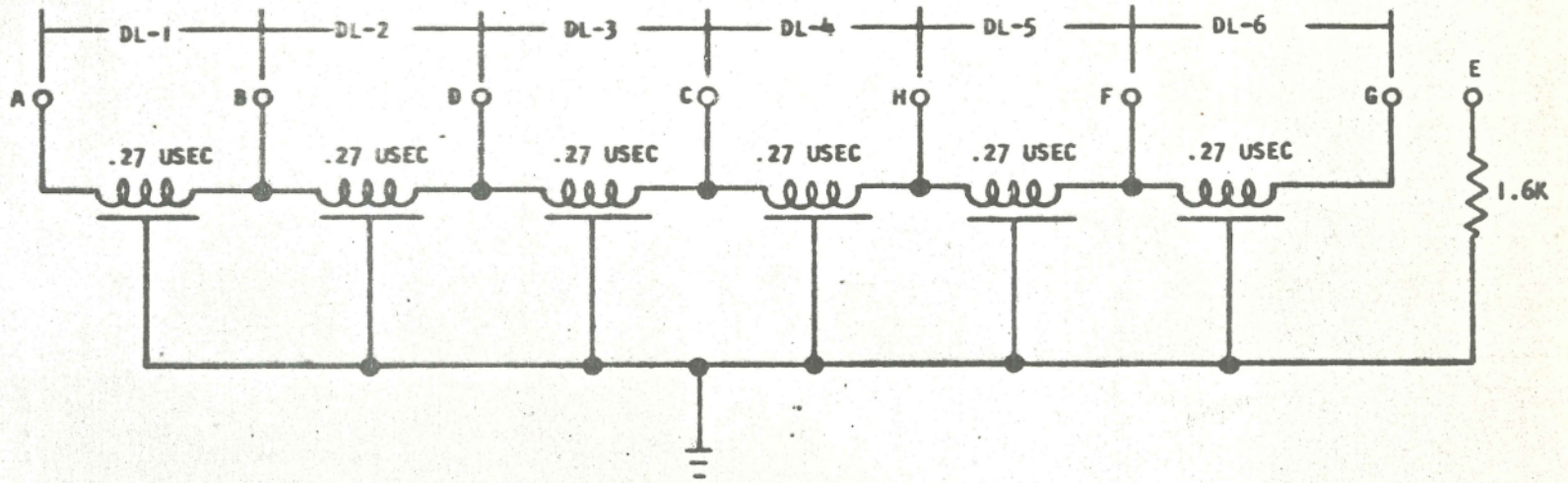
ALLOY-DELAY LINE DISTRIBUTED NUMBER 2

371749

RP --

STANDARDS  
CODE

2-7045



NOTES

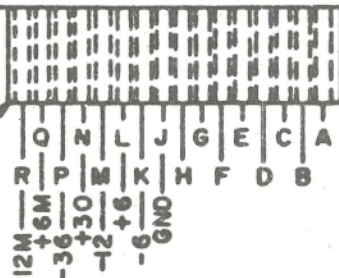
- I CIRCUIT MUST CONFORM TO ENGINEERING SPECIFICATION 891749
- II ASSEMBLE TO ENGINEERING SPECIFICATIONS 895396 AND 891999
- XII ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED



535103 (6)

317018

491371  
B



COMPONENT SIDE

B

DPD CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
HFH KMT	11-10-59

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR-ALLOY-DELAY LINE DISTRIBUTED NUMBER 2			11-13-59	106681	RJH				2547-0598
DESIGN	GHS	11-10-59	MODEL	11-30-59	107826	RJH				
DETAIL	GHS	11-10-59	SCALE	3-28-60	REDRAWN					
CHECK	TPA	11-10-59	DRAW	9-28-60	D109919	<i>JWB</i>				
APPRO	GWS	11-12-60	CHECK	9-13-60						

1-6888-08 REV. 02

371749

G. B. CO., INC. 8700W 41000



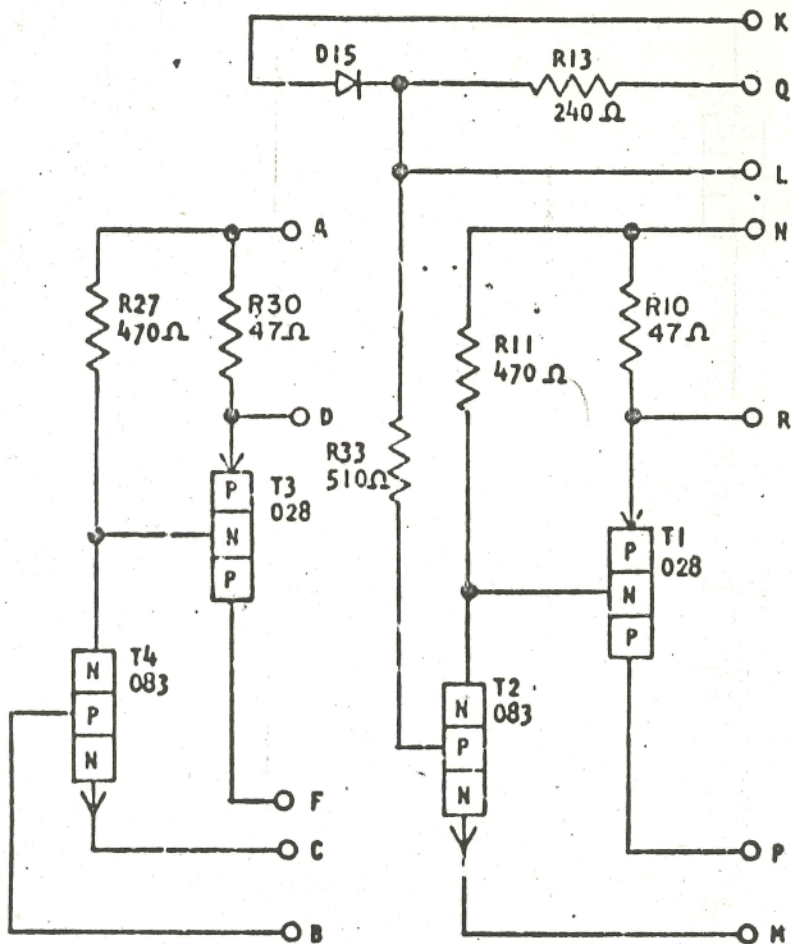
# AMPLIFIER - ERROR VOLTAGE, POSITIVE

MOUNT ON 1 INCH CENTERS NOTE XV

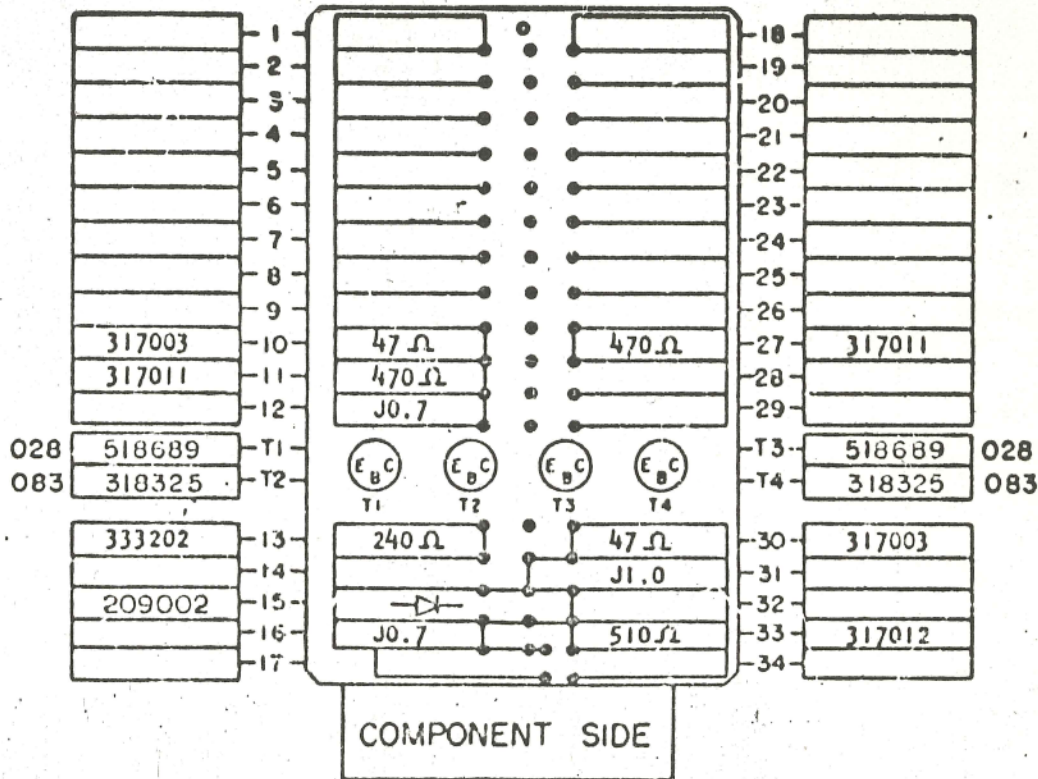
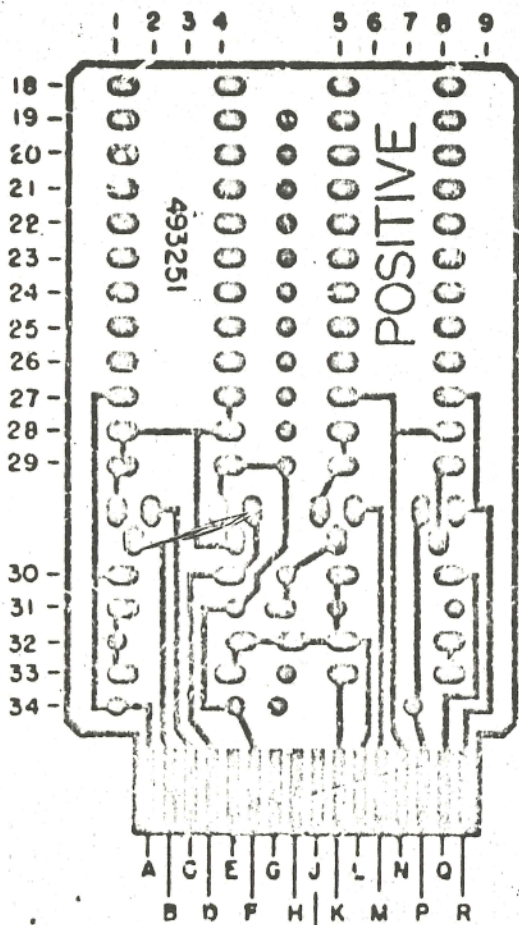
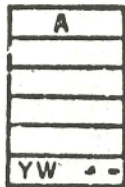
371920

371920

STANDARDS  
CODE  
2-7045



- A - EMITTER OF 022 (+6)
- B - REFERENCE FOR (+6)
- C - VOLTAGE DIVIDER FOR (+6)
- D - BASE OF 022 (+6)
- F - COLLECTOR OF 022 (+6)
- K - D.C. COMMON
- L - VOLTAGE DIVIDER FOR (+6) REFERENCE
- M - VOLTAGE DIVIDER FOR (+12)
- N - EMITTER OF 022 (+12)
- P - COLLECTOR OF 022 (+12)
- Q - LINE SIDE OF C.B (+12)
- R - BASE OF 022 (+12)



**NOTES**

- I TEST TO ENGINEERING SPECIFICATION 891920
- II ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891999
- III 491299-ASSEMBLE WITH JEDEC TRANSISTOR
- IV "J" IN BLOCK DENOTES JUMPER, 491296
- V ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- VI THE MAXIMUM HEIGHT THE COMPONENTS MAY PROJECT ABOVE THE SURFACE OF THE CARD WILL BE .850

**B**

WIRING SIDE

CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
LIP KMT	2-18-60

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM. TSTR-AMPLIFIER			3-15-60	108551	NGJ				2547-0842
	ERROR VOLTAGE, POSITIVE			3-25-60	REDRAWN					
DESIGN	PPH	2-11-60	SCALE	SMS 729	3-29-60	D108613	NGJ			
DETAIL	PPH	2-11-60	SCALE	NONE						
CHECK	CJJ	3-15-60	DRAW	VE	3-25-60					
APPROV	PPS	3-15-60	CHECK	ppp	3-25-60					

371920

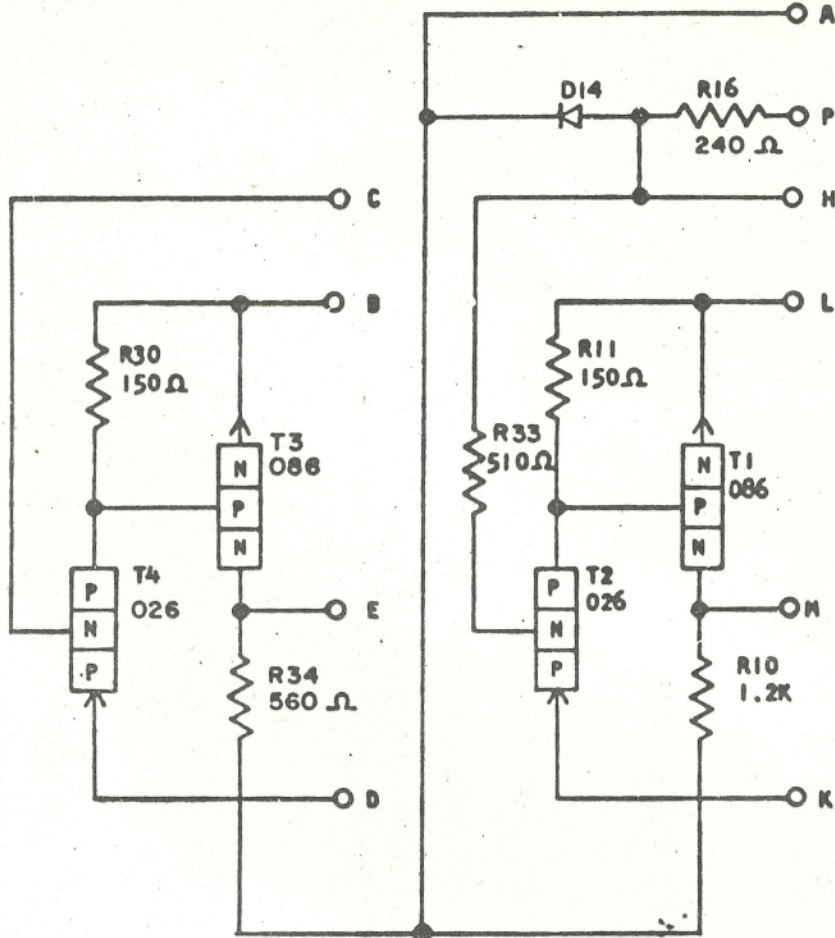


AMPLIFIER - ERROR VOLTAGE - NEGATIVE  
MOUNT ON 1 INCH CENTERS NOTE XV

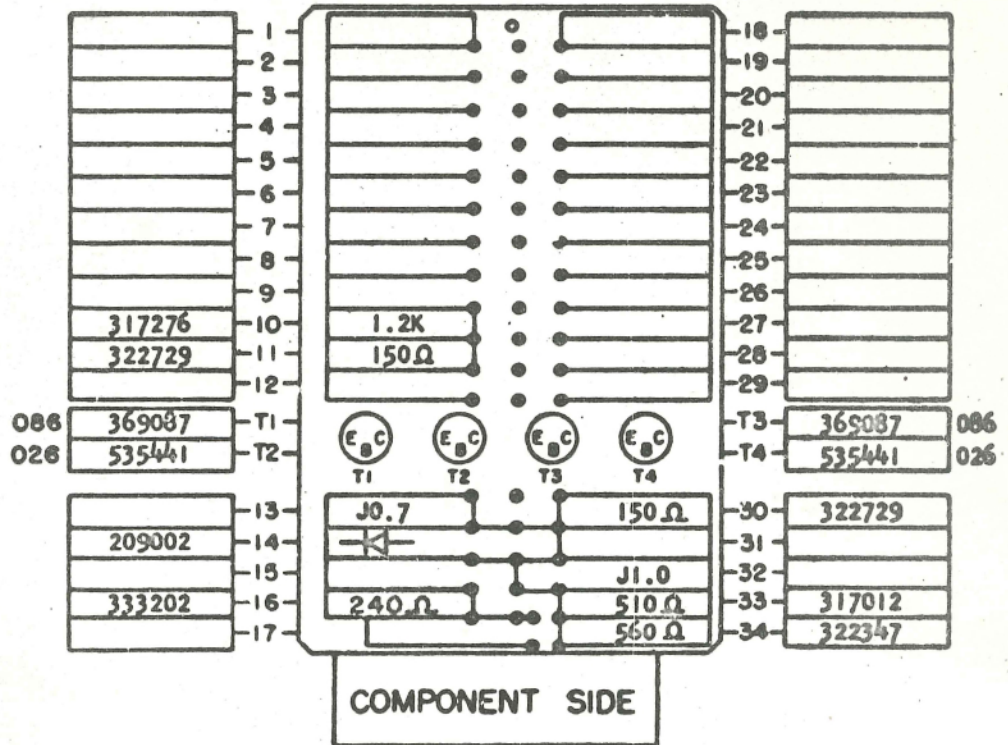
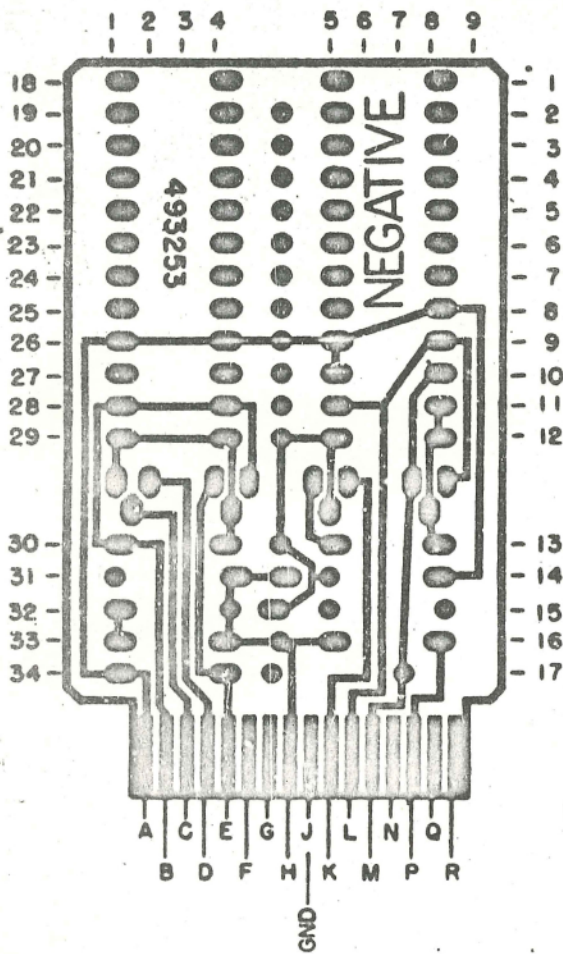
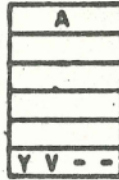
371921

371921

STANDARDS CODE  
2-7045



- A - D.C. COMMON
- B - LOAD SIDE OF C.B. FOR (-6)
- C - (-6) REFERENCE
- D - VOLTAGE DIVIDER FOR (-6) LEVEL
- E - BASE OF O22 (-6)
- H - VOLTAGE DIVIDER FOR (-6) REFERENCE
- K - VOLTAGE DIVIDER FOR (-12) LEVEL
- L - LOAD SIDE OF C.B. (-12) (OR COLLECTOR OF O22)
- M - BASE OF O22 (-12)
- P - LINE SIDE OF C.B.



NOTES

- XI TEST TO ENGINEERING SPECIFICATION 891921
- XII ASSEMBLE TO ENGINEERING SPECIFICATION 895396 AND 891996
- XIII 491299-ASSEMBLE WITH JEDEC TRANSISTOR
- XIV "J" IN BLOCK DENOTES BARE WIRE JUMPER, 491296
- XV ALL RESISTORS ARE 1/2 WATT AND ±5% UNLESS OTHERWISE NOTED
- XVI THE MAXIMUM HEIGHT THE COMPONENTS MAY PROJECT ABOVE THE SURFACE OF THE CARD WILL BE .850

B

WIRING SIDE

CIRCUIT & PACKAGING STANDARD	
APPROVAL	DATE
LIP KNT	2-18-60

INTERNATIONAL BUSINESS MACHINES CORP.	DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASM TSTR-AMPLIFIER ERROR VOLTAGE-NEGATIVE	3-15-60	100551	NGJ				2547-0843
DESIGN PPH 2-11-60 MODEL SMS 729							
DETAIL PPH 2-15-60 SCALE NONE							
CHECK CJB 3-10-60 DRAW VE 3-25-60							
APPRO BES 3-15-60 CHECK pap 3-25-60							

371921