PRESIDENT

V H F MARINE / UNIDEN - PRESIDENT

Modèle : M C - 6 7 0 0

SERVICE MANUAL

A L I G N M E N T I N S T R U C T I O N S

PLL ALIGNMENT PROCEDURES

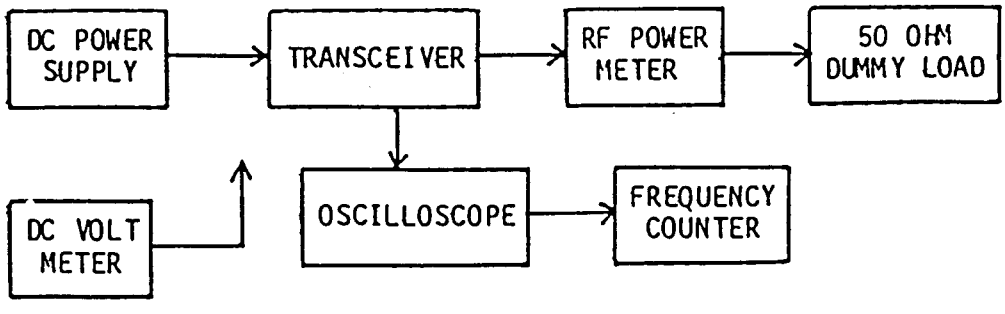
1. Test Equipment Required

Oscilloscope
Frequency Counter
AF Power Meter (50W)
PTT Switch
Dummy Load (50 ohm, 50W)
DC Power Supply (13.8V, 6A)
DC Voltmeter

2. Alignment Procedure

STEP	PRESET TO	ADJUSTMENT	REMARKS
1	25W/1W SW: 1W CH-16 : ON Mode : RX	L27	Connect DC Volt Meter to TP-2. Adjust for 3.5V on DC Volt Meter.
2	Same as Step 1 Except CH: 14 Mode : TX	L25	Adjust for 3.5V on DC Volt Meter at TP2.
3	Same as Step 1 Except CH: 88 (Mode : RX)	L29	Connect Oscilloscope to TP4. adjust L29 for 140.625MHz on Frequency Counter.
5	Same as Step 3 Except Mode : TX	L31	Adjust for 156.700MHz on Frequency Counter.
4	Same as Step 3 Except CH: 06	L30	adjust for 134.900MHz on Frequency Counter.

3. Test Equipment Connection



TRANSMITTER ALIGNMENT PROCEDURES

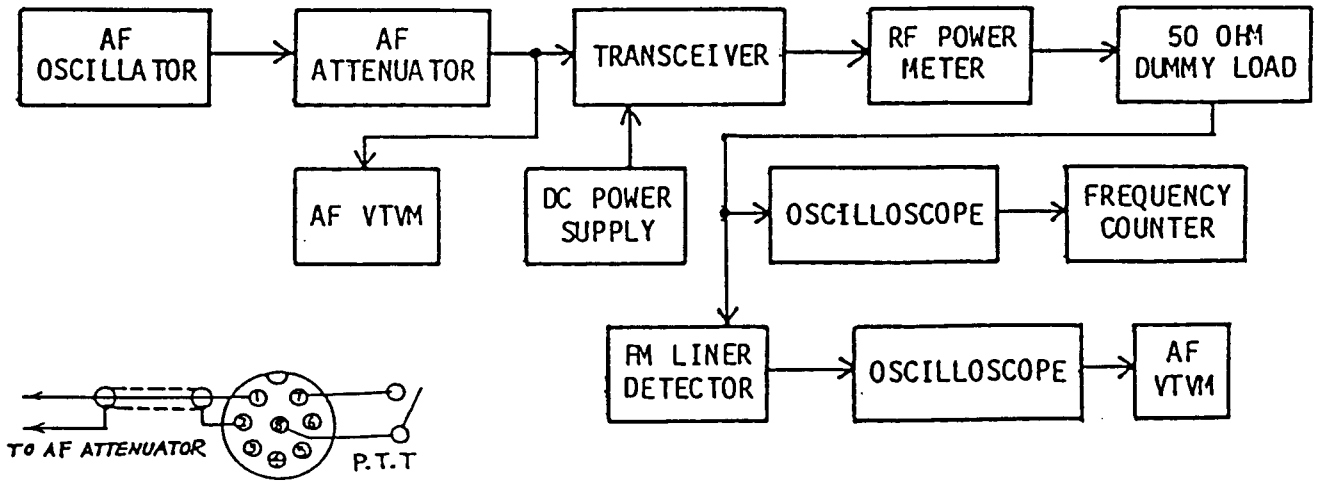
1. Test Equipment Required

RF Power Meter (50W & 5W)	RF Attenuator
Dummy Load (50 ohm, 50W)	AM Linear Detector
AF VTVM	AF Attenuator
AF Oscillator	DC Power Supply (13.8V, 6A)
Distortion Meter	RF Attenuator
Frequency Counter	Oscilloscope

2. Alignment Procedure

STEP	PRESET TO	ADJUSTMENT	REMARKS
1	25W/1W SW:25W CH : 14 Mode : TX	VR2	Adjust for 24.5W on RF Power Meter.
2	Same as Step 1 Except 25W/1W SW: 1W	VR3	Adjust for 0.8W on RF Power Meter.
3	Same as Step 1	VR5	Set the level of AF Osc to 30mV at 1kHz modulation. Then adjust for ±4.7kHz Deviation.
4	Same as Step 1	VR6	Set the level of AF Osc to 3mV at 1kHz modulation. Then adjust for ±3kHz Deviation.

3. Test Equipment Connection



RECEIVER ALIGNMENT PROCEDURES

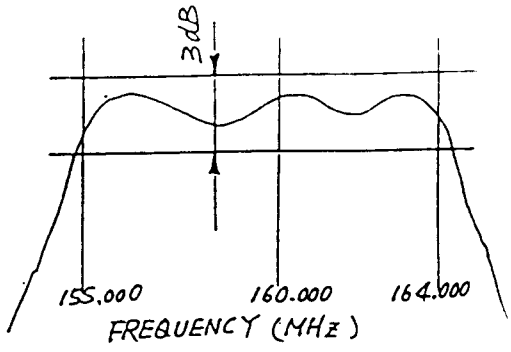
1. Test Equipment Required

VHF Sweep Generator
X-Y Oscilloscope (for Sweep Generator)
DC Power Supply
Standard Signal Generator
Detector
Distortion Meter
Oscilloscope
Dummy Load (8 ohm, 5W)
AF VTVM
Frequency Counter

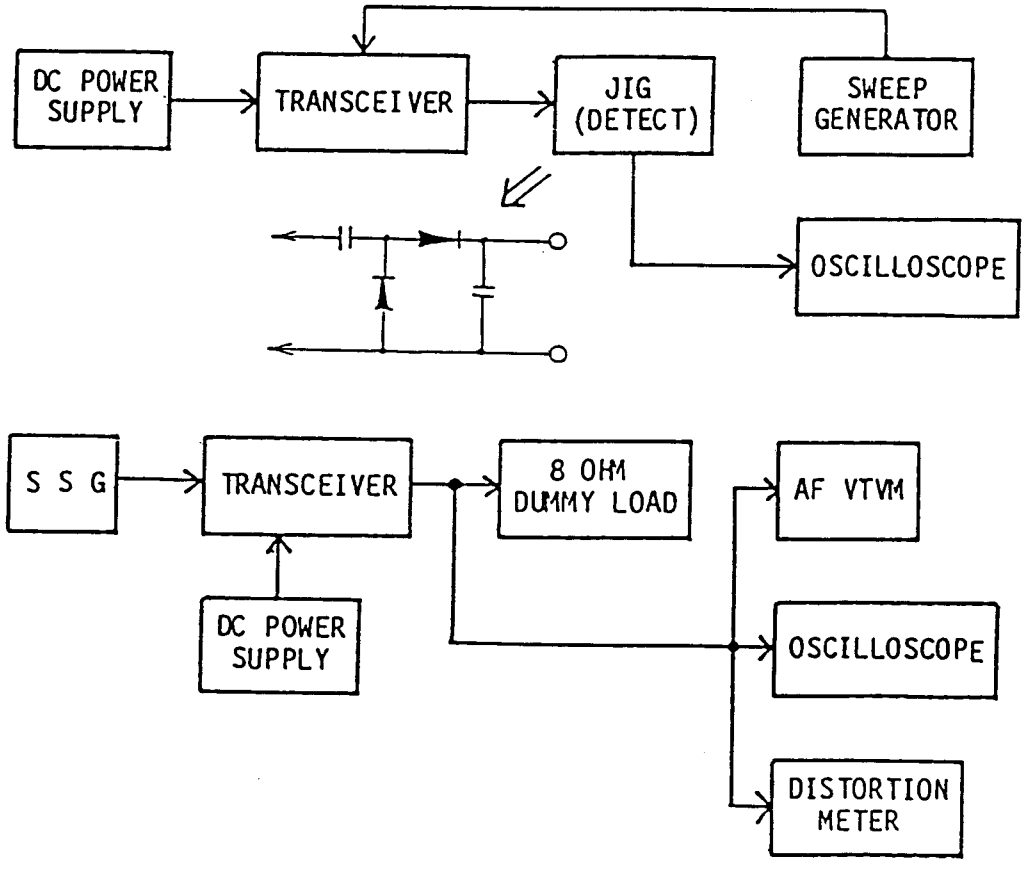
2. Alignment Procedure

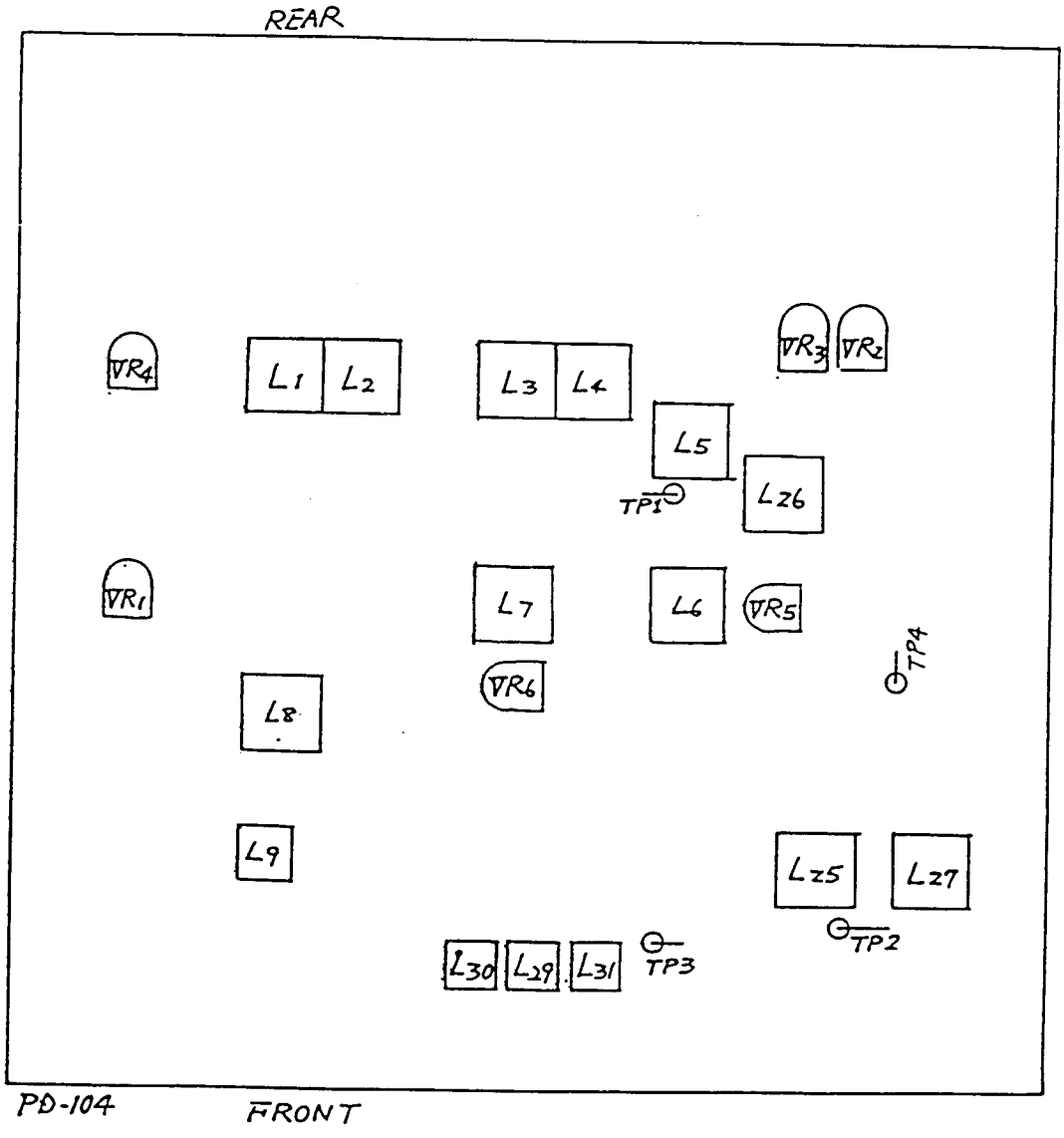
STEP	PRESET TO	ADJUSTMENT	REMARKS
1	Squelch : Max CH : 16 Mode : RX	L1, L2, L3 L4, L5 and L6	Connect VHF Sweep Generator to Antenna Jack and Oscilloscope to TP1. Adjust coils to obtain the specified curve on Oscilloscope as shown in Figure 1.
2	Same as Step 1 Except Squelch : Min	L6, L7, L8 L9 and L26	Set the level of SSG to 10uV with 156.800MHz at 1kHz, ±3.0kHz Dev. input to Antenna. Adjust coils to obtain maximum indication on AF VTVM.
3	Same as Step 2	L6, L7, L8 and L26	Set the level of SSG to -5dBu(=0.25uV). Adjust coils for minimum distortion on Distortion Meter.
4	Same as Step 2	L9	Set the SSG to 60dBu(1000uV), adjust for maximum AF Output.
5	Repeat Step 3.		
6	Same as Step 2 Except Volume : Max	VR1	Set the level of SSG Output to 1000uV. Adjust for 4.5V AF Output Signal.
7	Same as Step 4	VR4	Connect 8 ohm Load to Headphone Jack. Adjust for 0.1Vrms AF Output Signal.

Figure 1.



3. Test Equipment Connection




REAR
VR4
L1
L2
L3
L4
VR3
VR2
L5
TP1
LZ6
VR1
L7
L6
VR5
TP4
VR6
L8
L9
LZ5
LZ7
TP2
L30
L29
L31
TP3
PD-104
FRONT

annel No.	Frequency (MHz)		Transmitter RF Power
	Transmitter	Receiver	
-	-	-	-
01	156.050	160.650	25W & 1W
02	156.100	160.700	25W & 1W
03	156.150	160.750	25W & 1W
04	156.200	160.800	25W & 1W
05	156.250	160.850	25W & 1W
06	156.300	156.300	25W & 1W
07	156.350	160.950	25W & 1W
08	156.400	156.400	25W & 1W
09	156.450	156.450	25W & 1W
10	156.500	156.500	25W & 1W
11	156.550	156.550	25W & 1W
12	156.600	156.600	25W & 1W
13	156.650	156.650	25W & 1W
14	156.700	156.700	25W & 1W
15	156.750	156.750	1W Only
16	156.800	156.800	25W & 1W
17	156.850	156.850	1W Only
18	156.900	161.500	25W & 1W
19	156.950	161.550	25W & 1W
20	157.000	161.600	25W & 1W
21	157.050	161.650	25W & 1W
22	157.100	161.700	25W & 1W
23	157.150	161.750	25W & 1W
24	157.200	161.800	25W & 1W
25	157.250	161.850	25W & 1W
26	157.300	161.900	25W & 1W
27	157.350	161.950	25W & 1W
28	157.400	162.000	25W & 1W
29	-	-	-

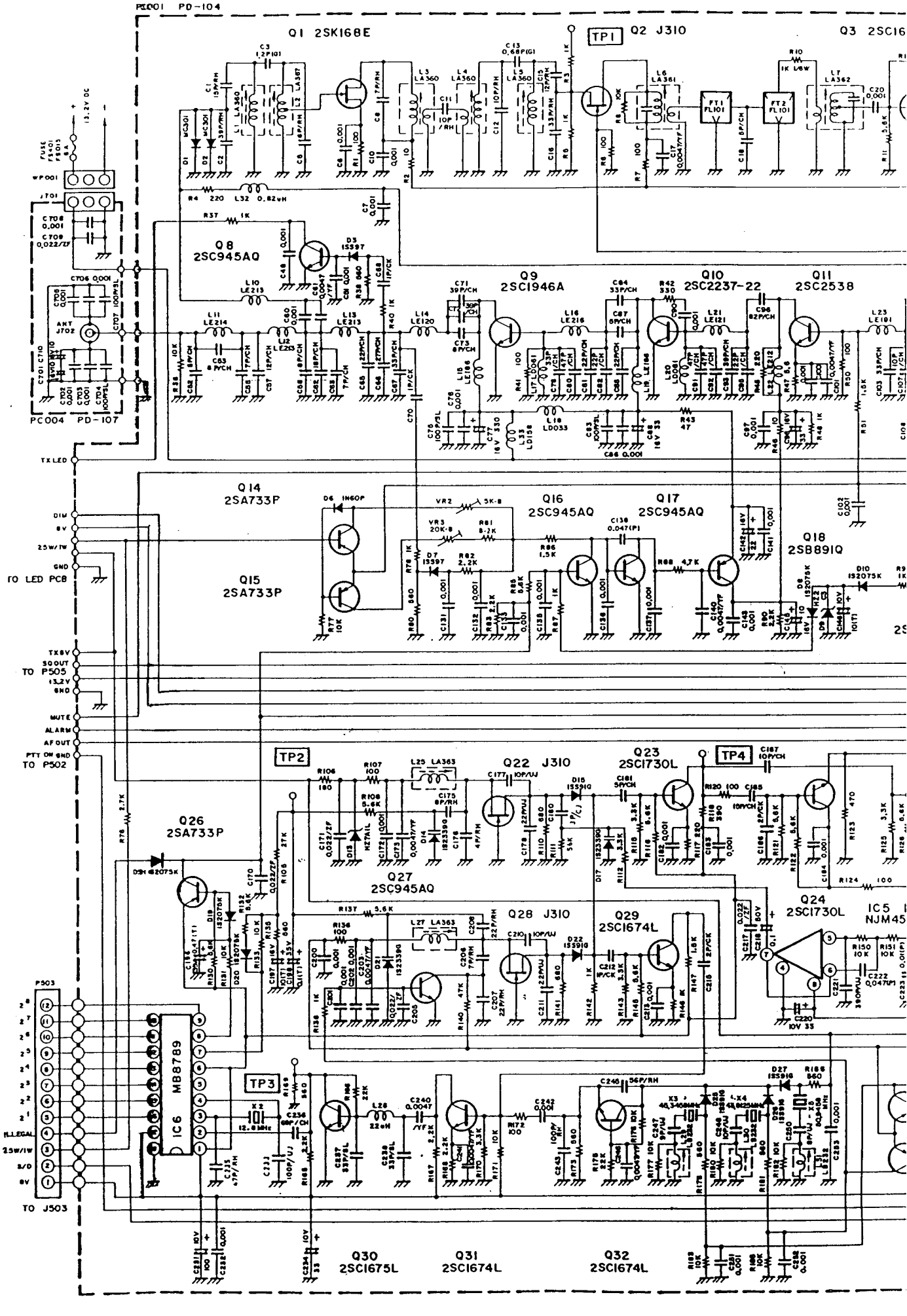
Channel No.	Frequency (MHz)		Transmitter RF Power
	Transmitter	Receiver	
60	156.025	160.625	25W & 1W
61	156.075	160.675	25W & 1W
62	156.125	160.725	25W & 1W
63	156.175	160.775	25W & 1W
64	156.225	160.825	25W & 1W
65	156.275	160.875	25W & 1W
66	156.325	160.925	25W & 1W
67	156.375	156.375	25W & 1W
68	156.425	156.425	25W & 1W
69	156.475	156.475	25W & 1W
70	156.525	156.525	25W & 1W
71	156.575	156.575	25W & 1W
72	156.625	156.625	25W & 1W
73	156.675	156.675	25W & 1W
74	156.725	156.725	25W & 1W
75	-	-	-
76	-	-	-
77	156.875	156.875	25W & 1W
78	156.925	161.525	25W & 1W
79	156.975	161.575	25W & 1W
80	157.025	161.625	25W & 1W
81	157.075	161.675	25W & 1W
82	157.125	161.725	25W & 1W
83	157.175	161.775	25W & 1W
84	157.225	161.825	25W & 1W
85	157.275	161.875	25W & 1W
86	157.325	161.925	25W & 1W
87	157.375	161.975	25W & 1W
88	157.425	162.025	25W & 1W
89	-	-	-

NOTE: Mark (-) shows transmitter and receiver inhibited channel.

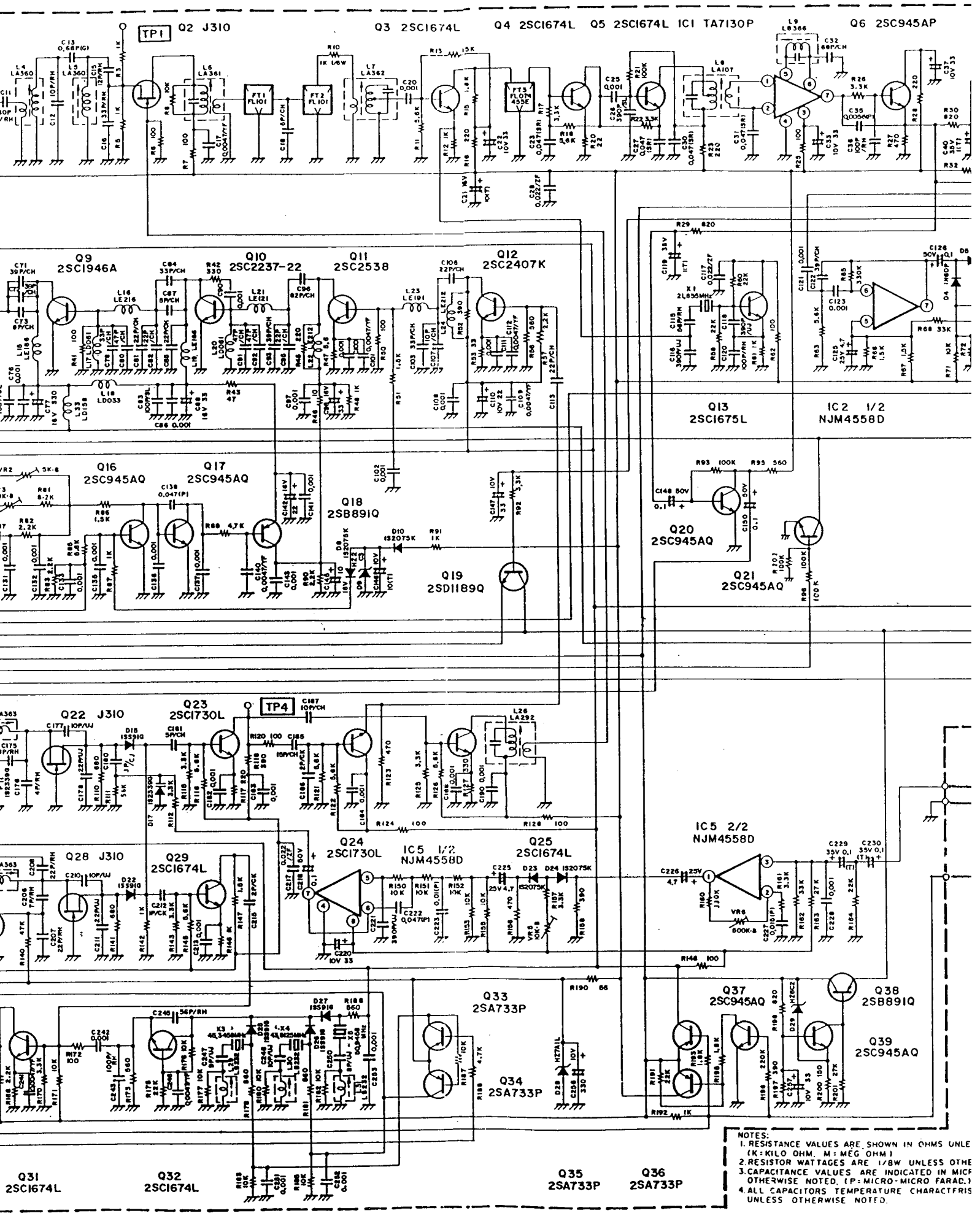
1A

1B

PRESIDENT



1B 1C


TP1
Q2 J310
Q3 2SC1674L
Q4 2SC1674L
Q5 2SC1674L
IC1 TA7130P
Q6 2SC945AP
Q9 2SC1946A
Q10 2SC2237-22
Q11 2SC2538
Q12 2SC2407K
Q13 2SC1675L
IC2 1/2 NJM4558D
Q16 2SC945AQ
Q17 2SC945AQ
Q18 2SB891Q
Q19 2SD1189Q
Q20 2SC945AQ
Q21 2SC945AQ
Q22 J310
Q23 2SC1730L
TP4
Q24 2SC1730L
IC5 1/2 NJM4558D
Q25 2SC1674L
IC5 2/2 NJM4558D
Q28 J310
Q29 2SC1674L
Q33 2SA733P
Q34 2SA733P
Q37 2SC945AQ
Q38 2SB891Q
Q39 2SC945AQ
Q31 2SC1674L
Q32 2SC1674L
Q35 2SA733P
Q36 2SA733P
NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLE
(K:KILO OHM, M:MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHE
3. CAPACITANCE VALUES ARE INDICATED IN MICR
OTHERWISE NOTED. (P:MICRO-MICRO FARAD.)
4. ALL CAPACITORS TEMPERATURE CHARACTERIS
UNLESS OTHERWISE NOTED.

1C

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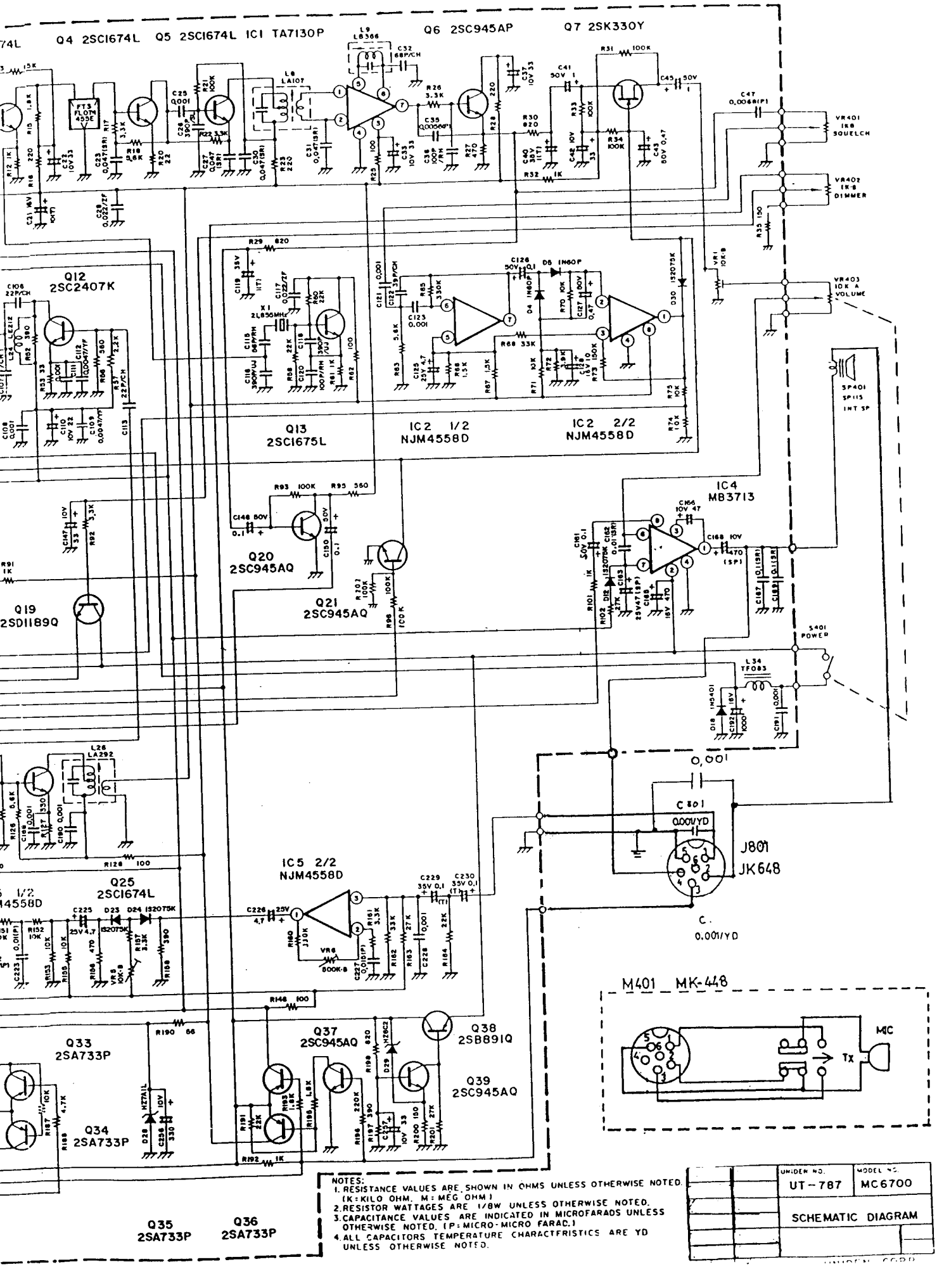
MC-6700

93



NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. (K=KILO OHM, M=MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
3. CAPACITANCE VALUES ARE INDICATED IN MICROFARADS UNLESS OTHERWISE NOTED. (P=MICRO-MICRO FARAD.)
4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE YD UNLESS OTHERWISE NOTED.

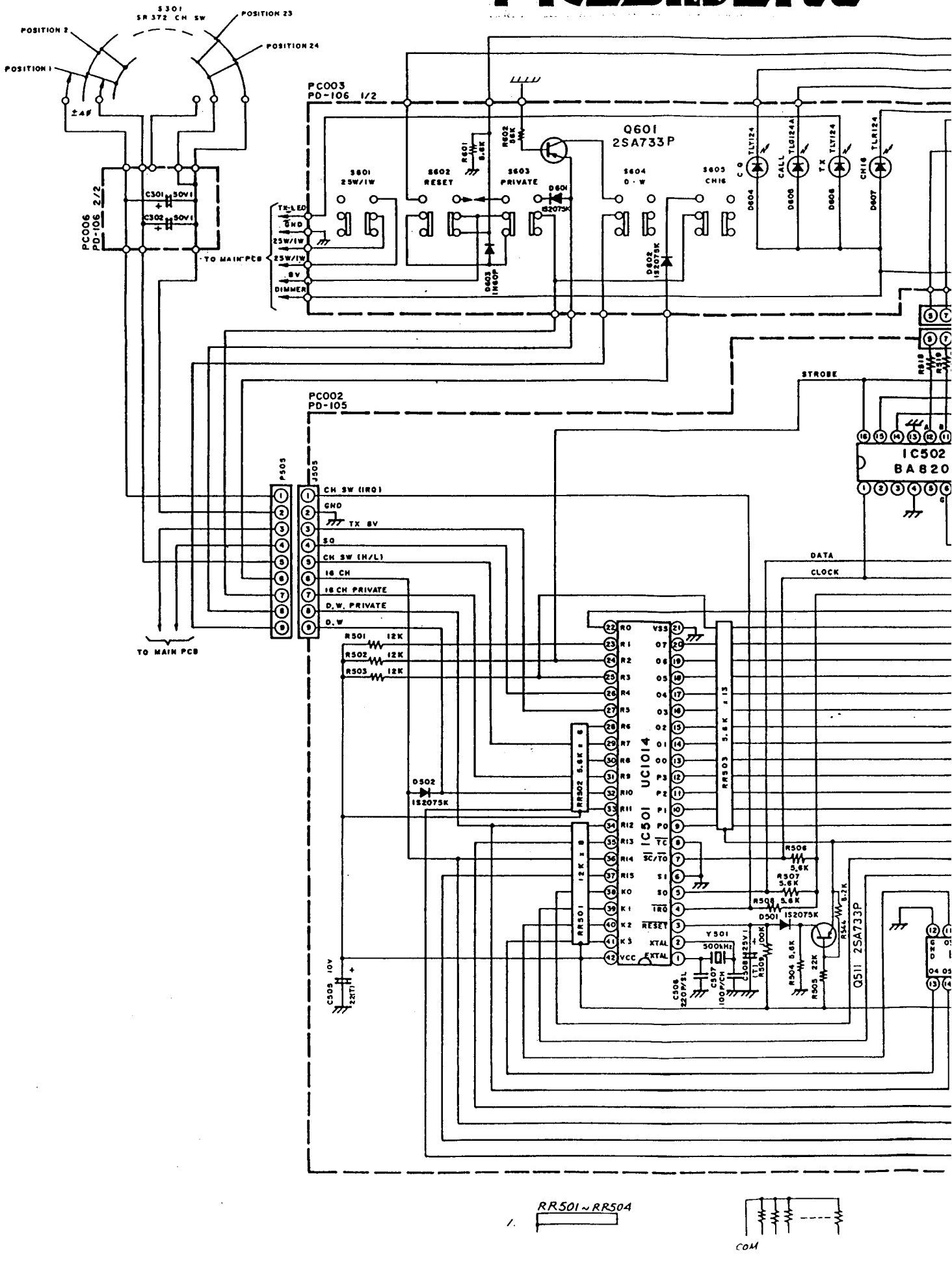
UNIDEN NO.	MODEL NO.
UT-787	MC6700

SCHEMATIC DIAGRAM

2A

2B

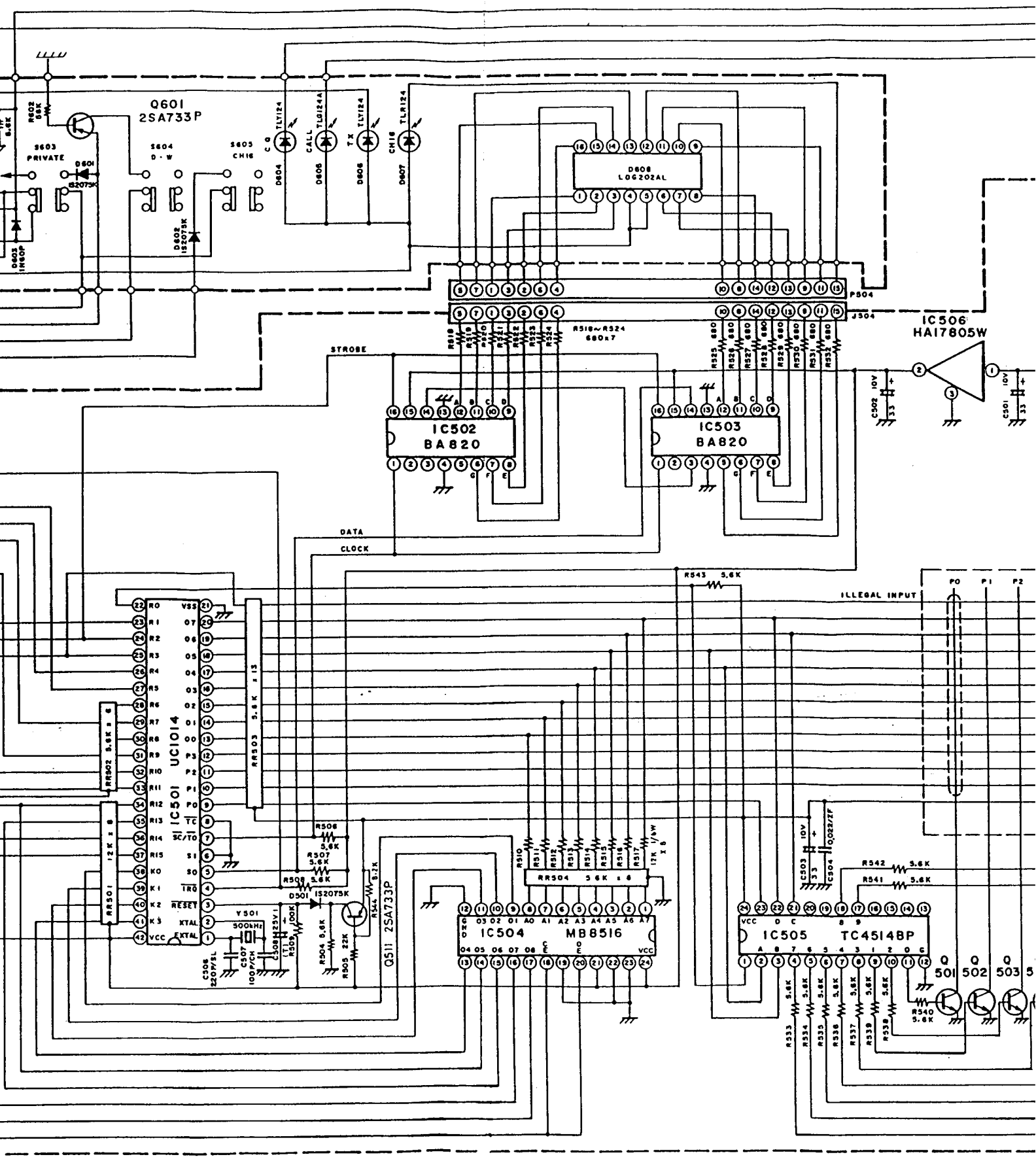
PRESIDENT



1. RR501 ~ RR504

2B 2C

PRESIDENT



RR501~RR504

COM

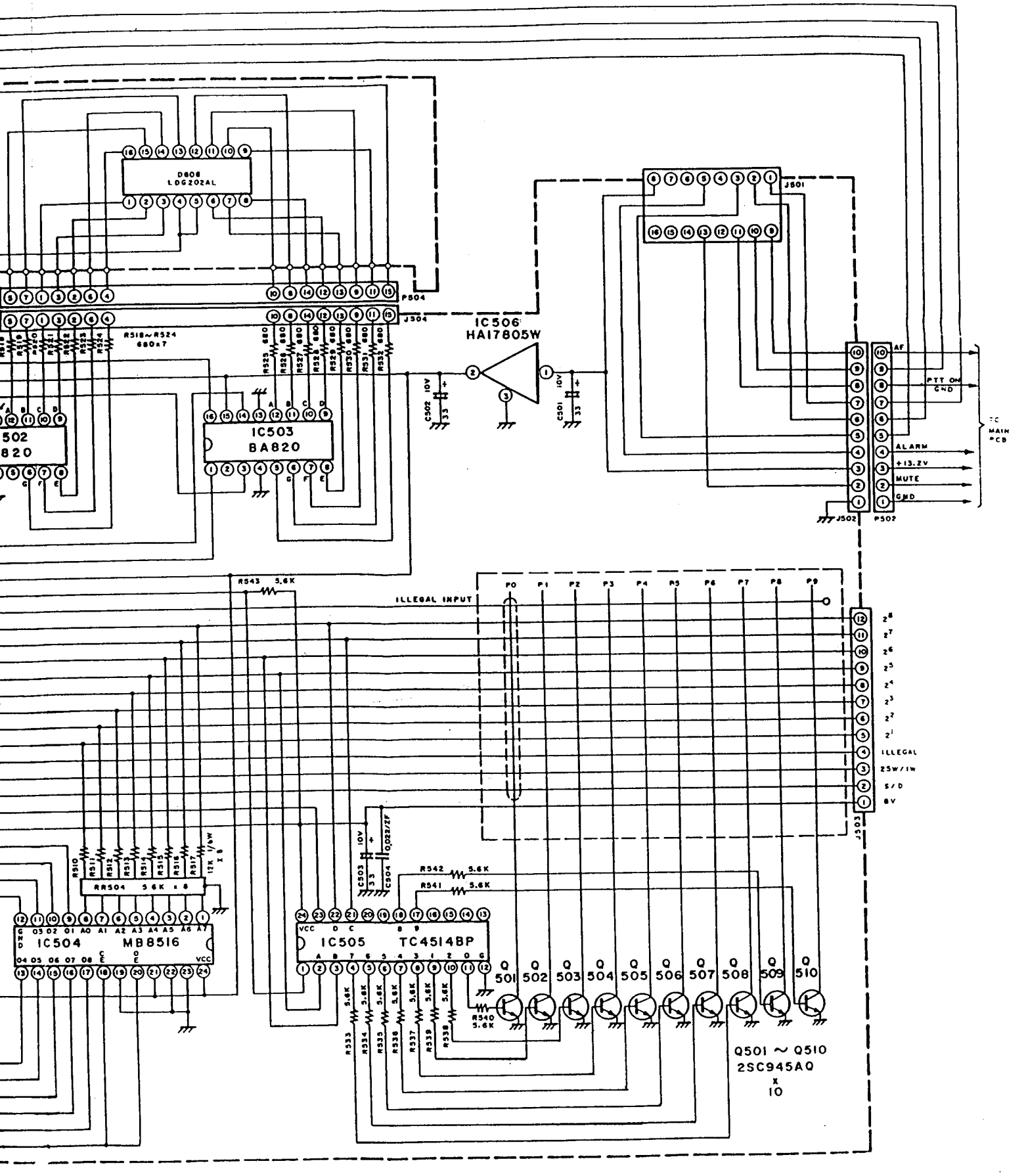
NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS (K=KILO OHM, M=MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS
3. CAPACITANCE VALUES ARE INDICATED IN OTHERWISE NOTED. (P=MICRO-MICRO FA
~~4. ALL CAPACITORS TEMPERATURE CHARAC UNLESS OTHERWISE NOTED~~

2C

2D

MC-6700

93



NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. (K=KILO OHM, M=MEG OHM)
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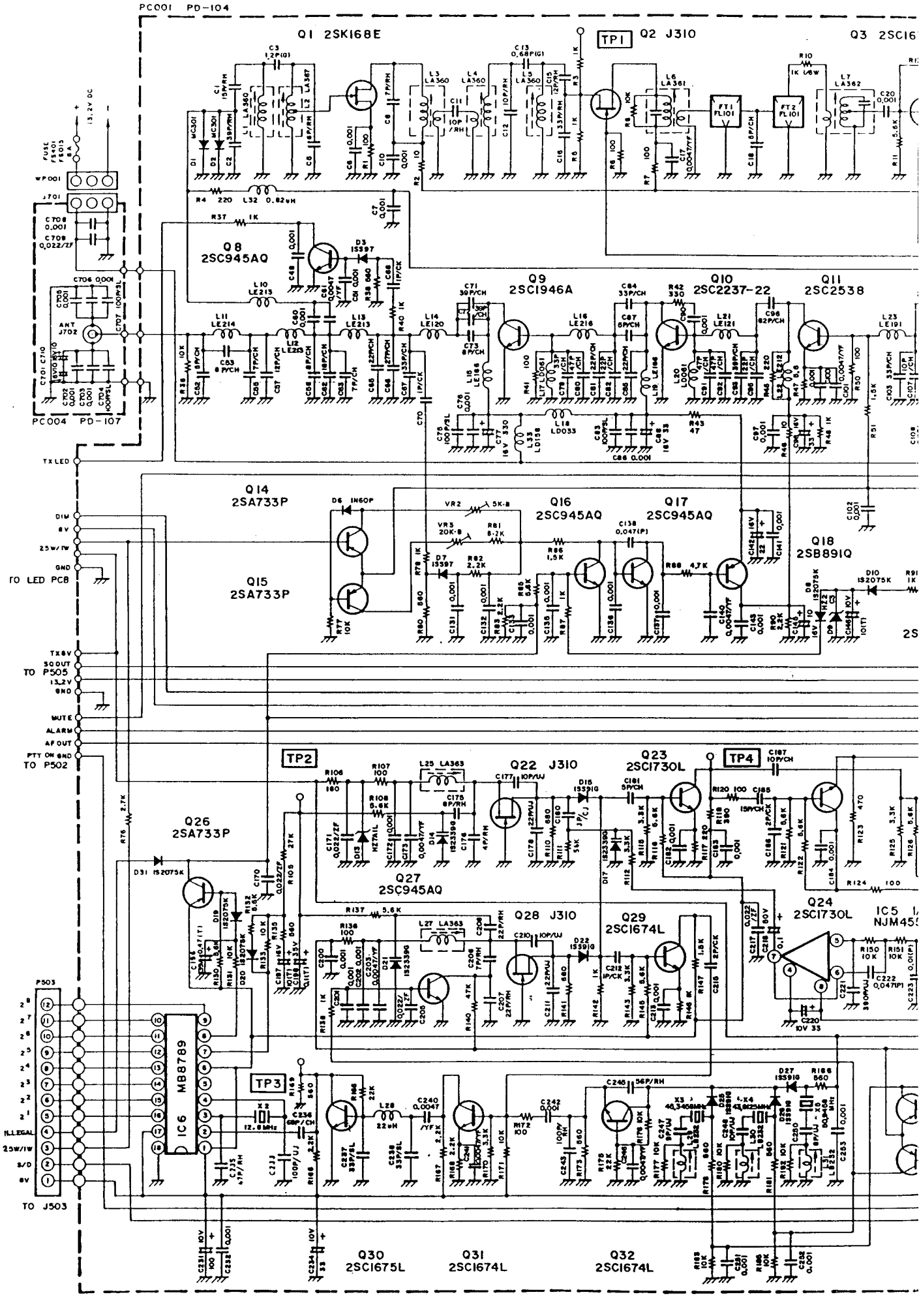
3. CAPACITANCE VALUES ARE INDICATED IN MICROFARADS UNLESS OTHERWISE NOTED. (P=MICRO-MICRO FARAD.)
~~4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE ZF UNLESS OTHERWISE NOTED~~

DESIGN BY	DRAWN BY	UNIT NO.	MODEL NO.
		UT-787	MC6700
T. Kurisu	KUMOI	TITLE	
CHECK BY	APPRO. BY	SCHEMATIC DIAGRAM2/2	
		DRAWING NO.	
		E12-2213	

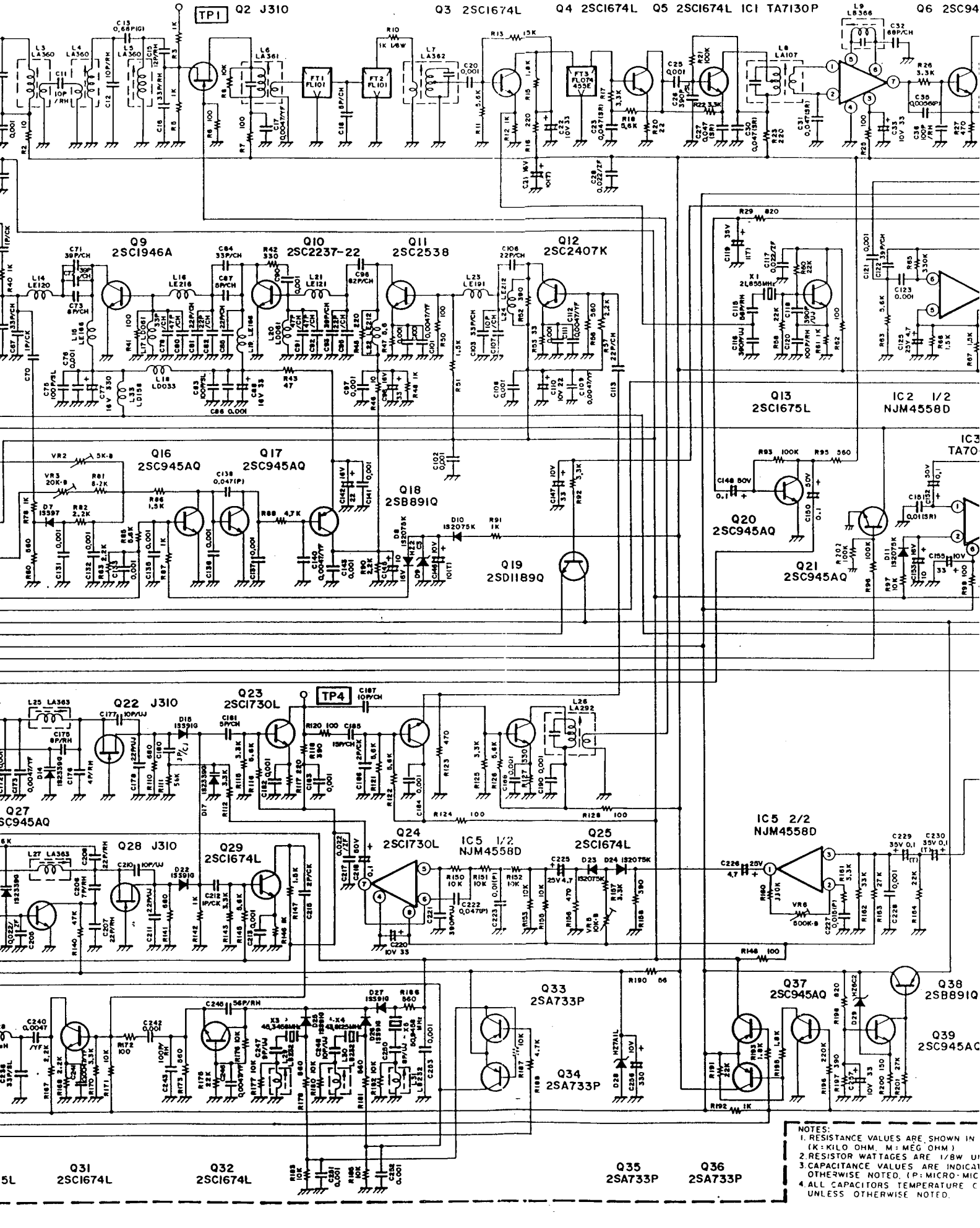
3A

3B

PRESIDENT



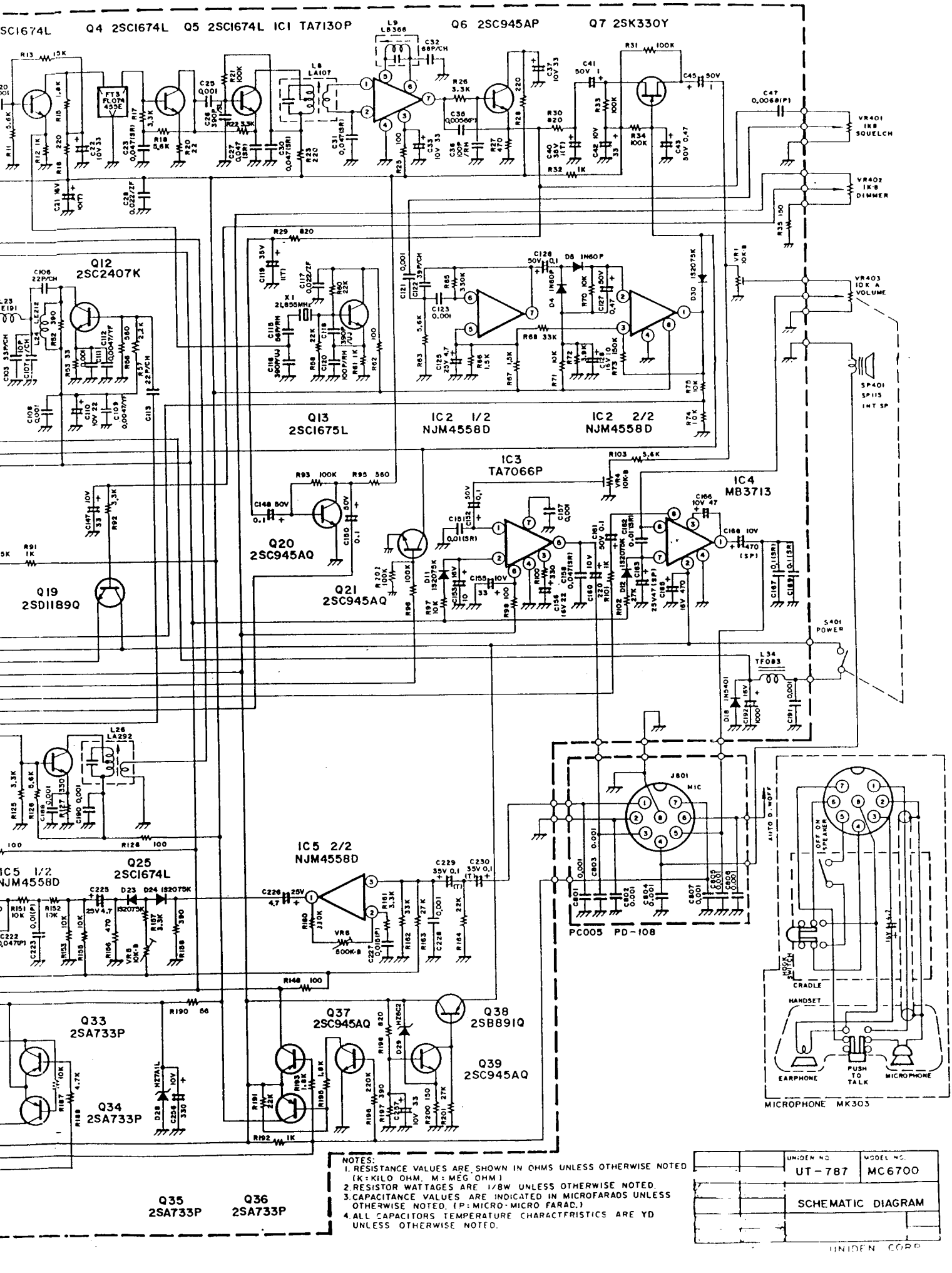
3B 3C


TP1
Q2 J310
Q3 2SC1674L
Q4 2SC1674L
Q5 2SC1674L
IC1 TA7130P
Q6 2SC94
Q9 2SC1946A
Q10 2SC2237-22
Q11 2SC2538
Q12 2SC2407K
Q13 2SC1675L
IC2 1/2 NJM4558D
Q16 2SC945AQ
Q17 2SC945AQ
Q18 2SB891Q
Q19 2SD1189Q
Q20 2SC945AQ
Q21 2SC945AQ
TP4
Q22 J310
Q23 2SC1730L
Q24 2SC1730L
IC5 1/2 NJM4558D
Q25 2SC1674L
IC5 2/2 NJM4558D
Q27 2SC945AQ
Q28 J310
Q29 2SC1674L
Q33 2SA733P
Q34 2SA733P
Q37 2SC945AQ
Q38 2SB891Q
Q39 2SC945AQ
Q31 2SC1674L
Q32 2SC1674L
Q35 2SA733P
Q36 2SA733P
NOTES:
1. RESISTANCE VALUES ARE SHOWN IN
(K: KILO OHM, M: MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W U
3. CAPACITANCE VALUES ARE INDICA
OTHERWISE NOTED. (P: MICRO-MIC
4. ALL CAPACITORS TEMPERATURE C
UNLESS OTHERWISE NOTED.

3C

3D

MC-6700



NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED (K: KILO OHM, M: MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
3. CAPACITANCE VALUES ARE INDICATED IN MICROFARADS UNLESS OTHERWISE NOTED. (P: MICRO-MICRO FARAD.)
4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE YD UNLESS OTHERWISE NOTED.

UNIDEN NO.	MODEL NO.
UT-787	MC6700

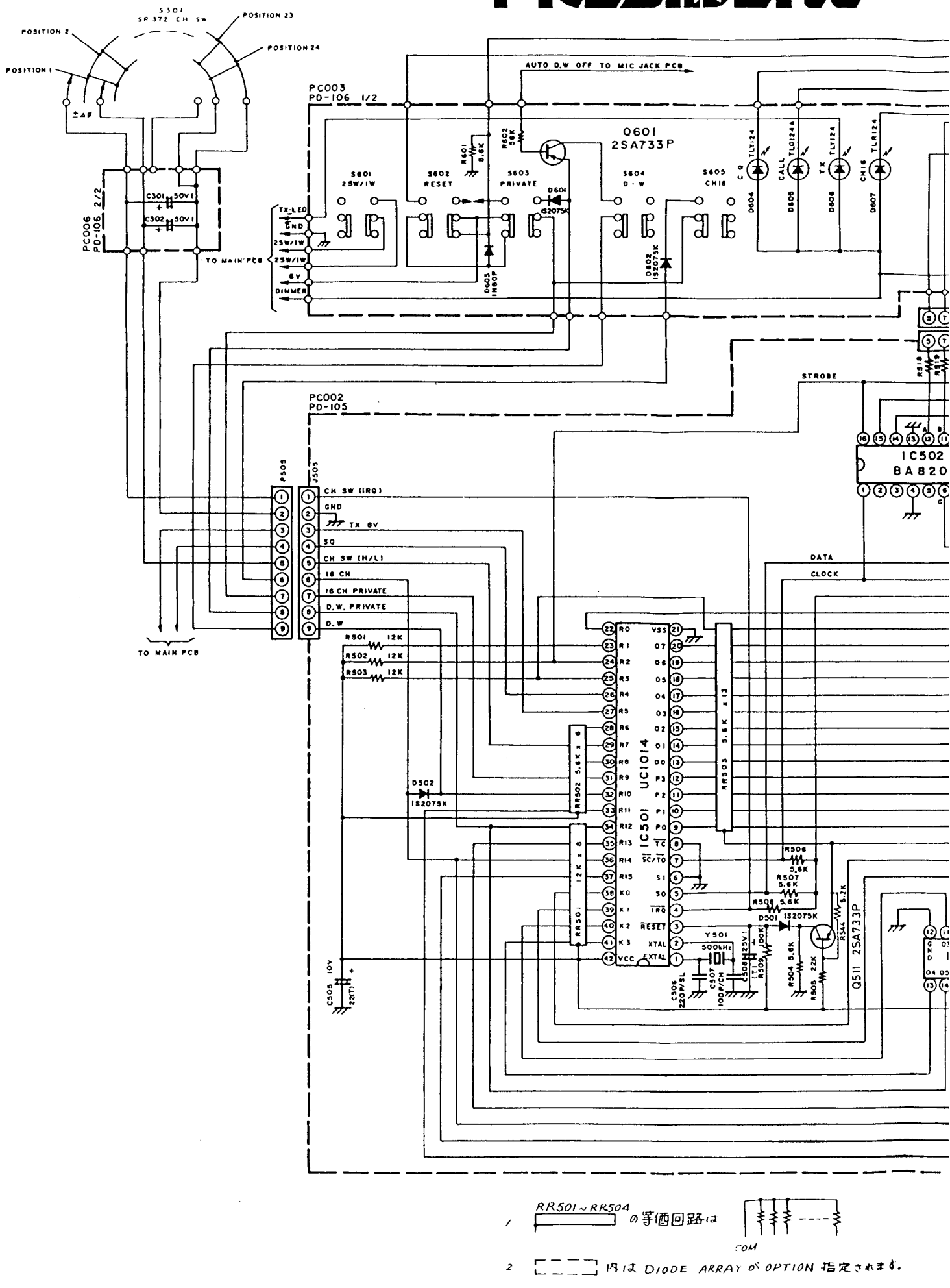
SCHEMATIC DIAGRAM

UNIDEN CORP

4A

4B

PRESIDENT

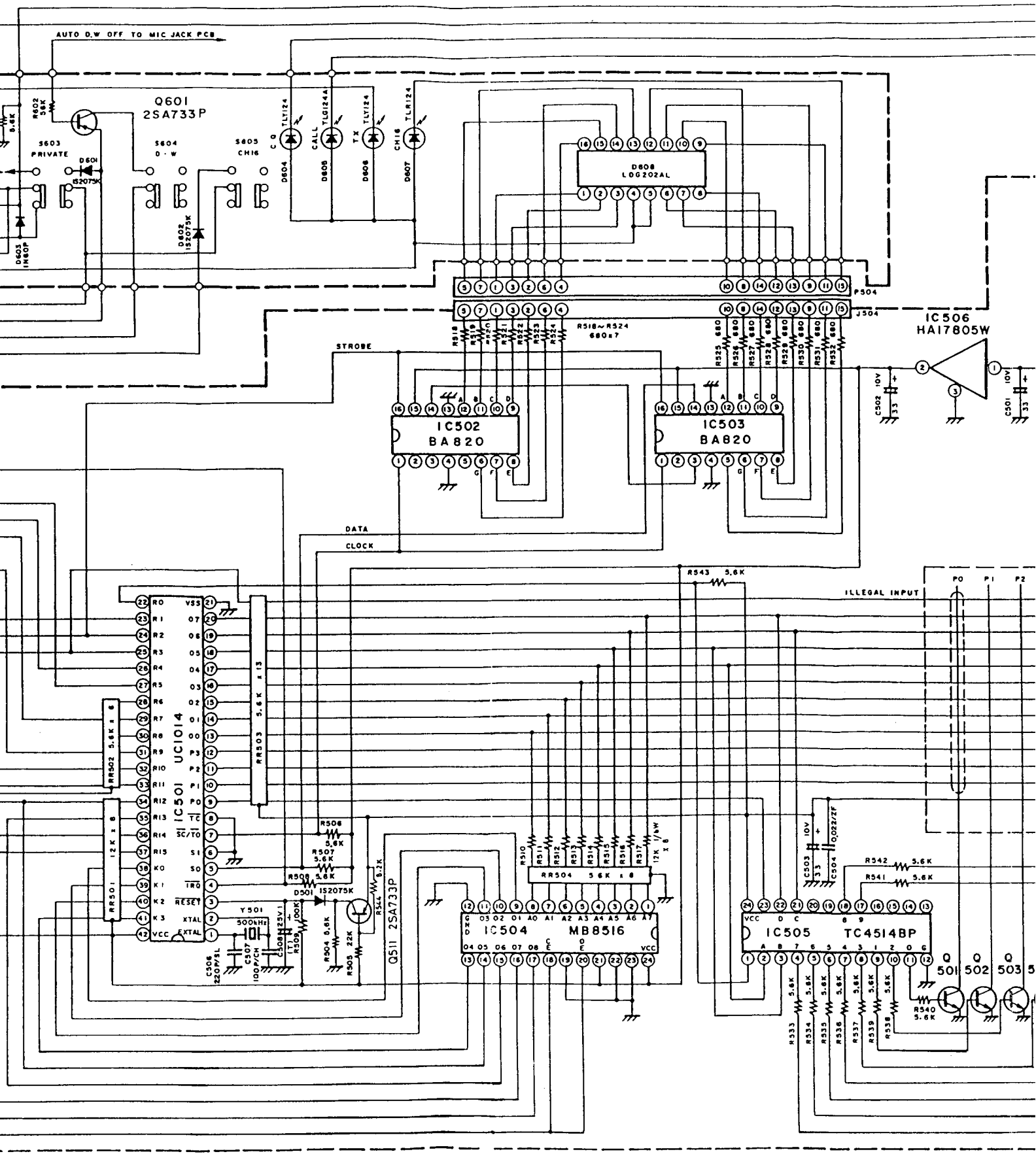


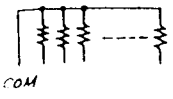
1. RR501~RR504 の等価回路は COM

2. [ ] 内は DIODE ARRAY が OPTION 指定されます。

4B 4C

PRESIDENT



1 RR501~RR504 の等価回路は  COM

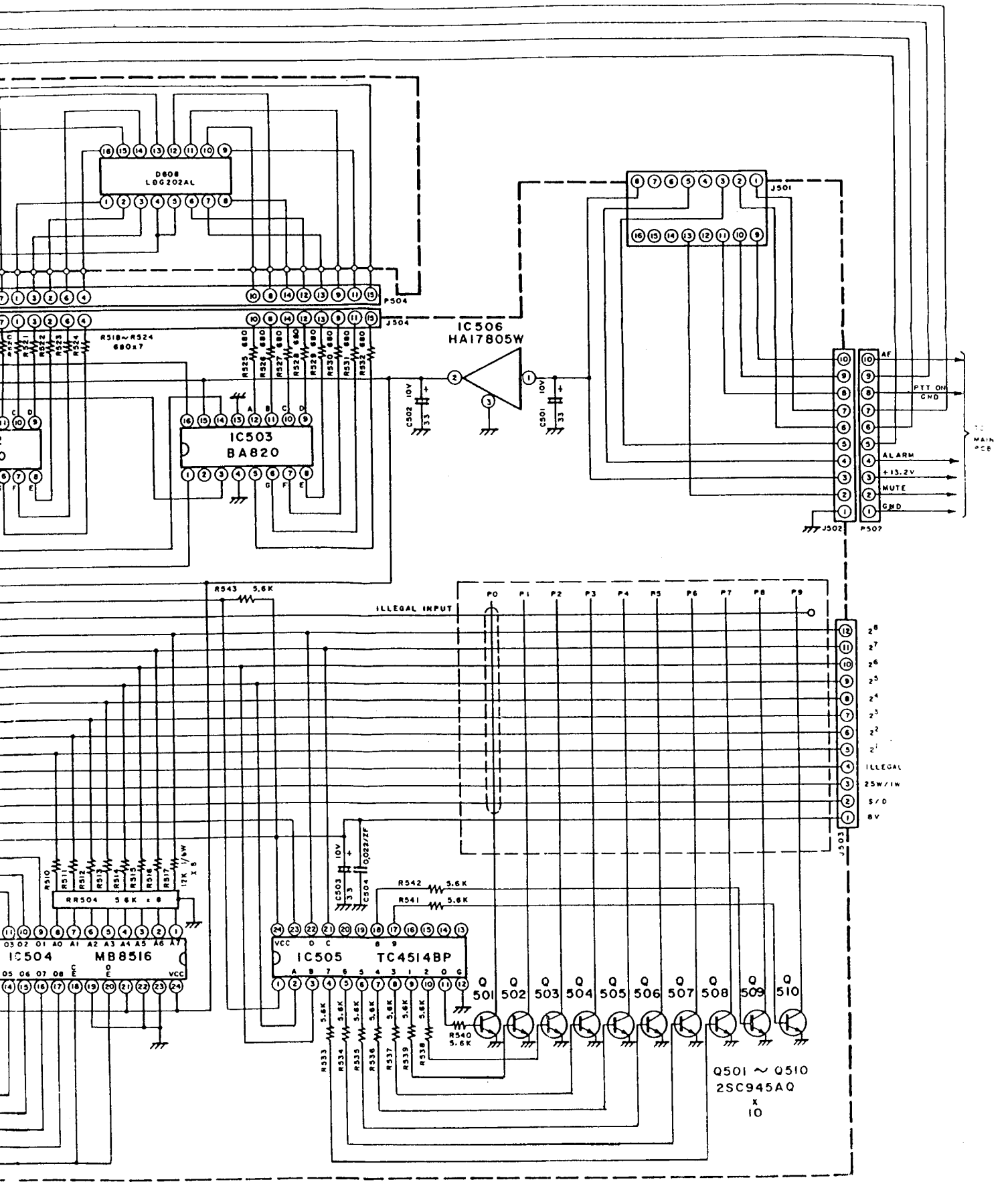
2 [ ] 内は DIODE ARRAY が OPTION 指定されます。

NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS (K: KILO OHM, M: MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
3. CAPACITANCE VALUES ARE INDICATED IN (P: MICRO-MICRO FA
4. ~~ALL CAPACITORS TEMPERATURE CHARAC UNLESS OTHERWISE NOTED~~

4C

4D

MC-6700



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1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED.
(K: KILO OHM, M: MEG OHM)
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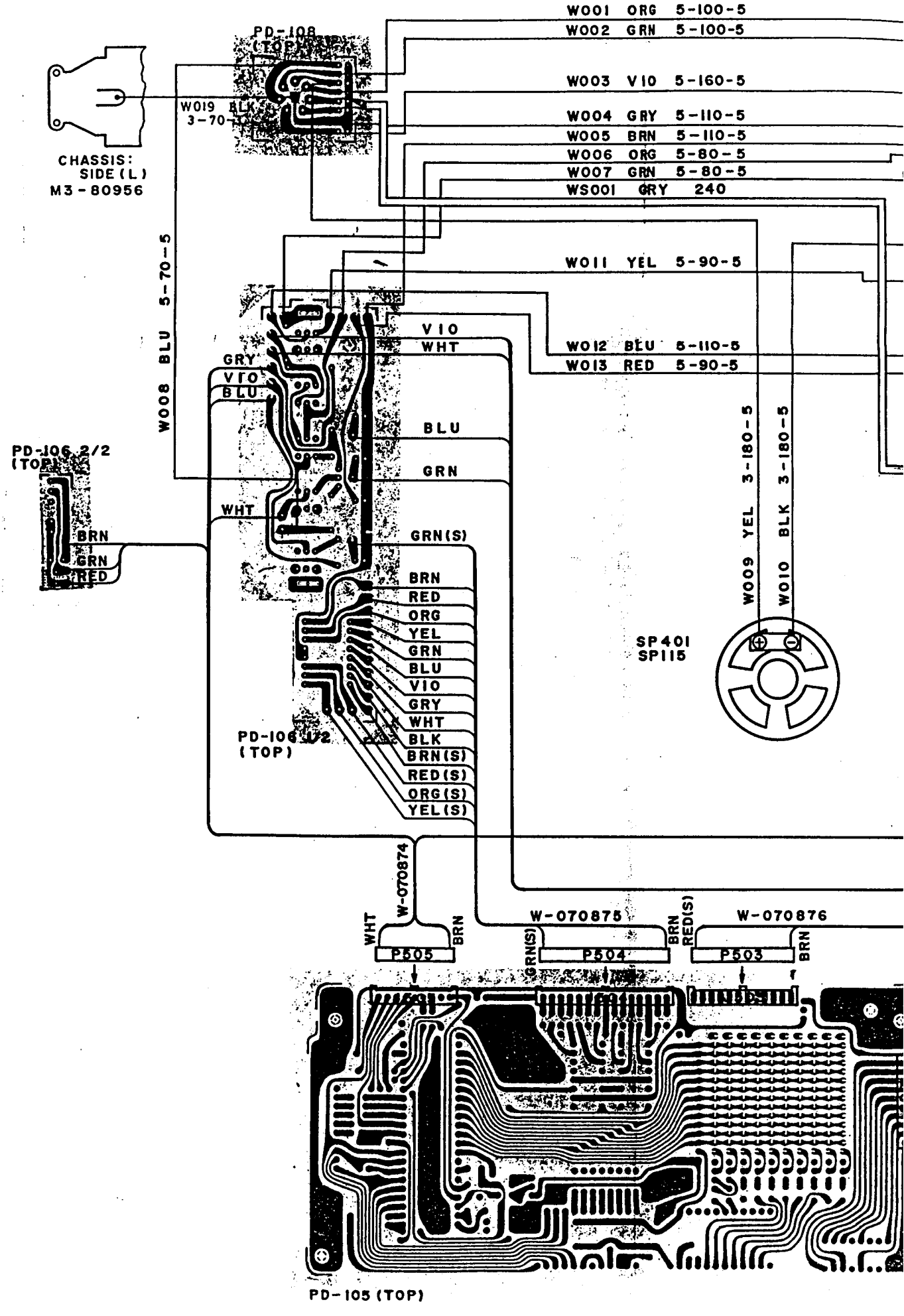
OTHERWISE NOTED. (P: MICRO-MICRO FARAD.)
~~4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE B~~
~~UNLESS OTHERWISE NOTED~~

DESIGN BY	DRAWN BY	UT-787	MC6700
	58.10.19		
CHECK BY	KUMOI	SCHEMATIC DIAGRAM 2/2	
APPROV BY		DRAWING NO. E12-2213	

5A

5B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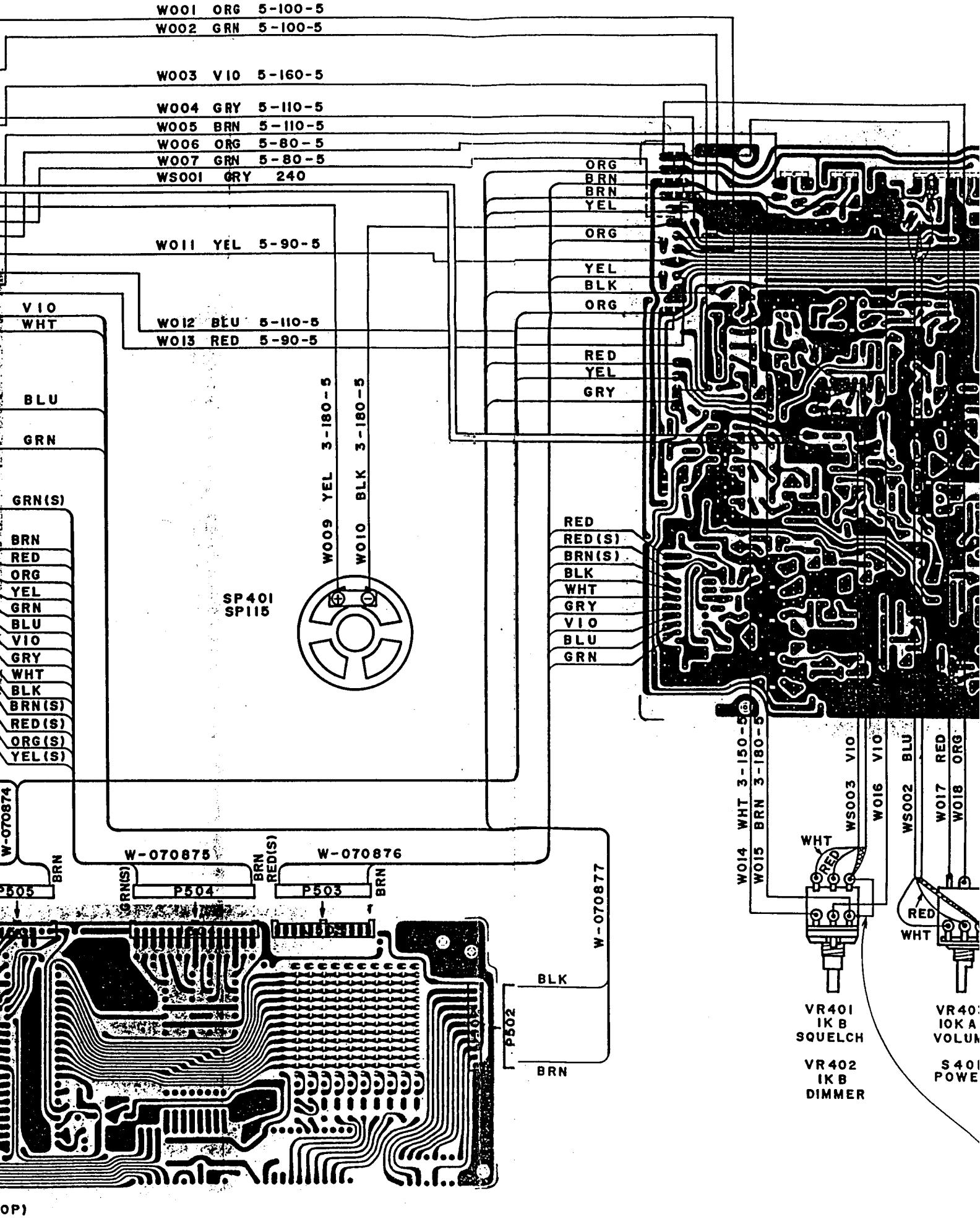
W002 GRN 5-100-5
W003 VIO 5-160-5
W004 GRY 5-110-5
W005 BRN 5-110-5
W006 ORG 5-80-5
W007 GRN 5-80-5
WS001 GRY 240
W011 YEL 5-90-5
W012 BLU 5-110-5
W013 RED 5-90-5
PD-108 (TOP)
W019 BLK 3-70-1
CHASSIS: SIDE (L) M3-80956
W008 BLU 5-70-5
VIO
WHT
GRY
VIO
BLU
BLU
GRN
WHT
GRN(S)
BRN
RED
ORG
YEL
GRN
BLU
VIO
GRY
WHT
BLK
BRN(S)
RED(S)
ORG(S)
YEL(S)
PD-106 2/2 (TOP)
BRN
GRN
RED
PD-106 1/2 (TOP)
W009 YEL 3-180-5
W010 BLK 3-180-5
SP401
SP115
W-070874
WHT
BRN
P505
W-070875
GRN(S)
BRN
P504
W-070876
RED(S)
BRN
P503
PD-105 (TOP)

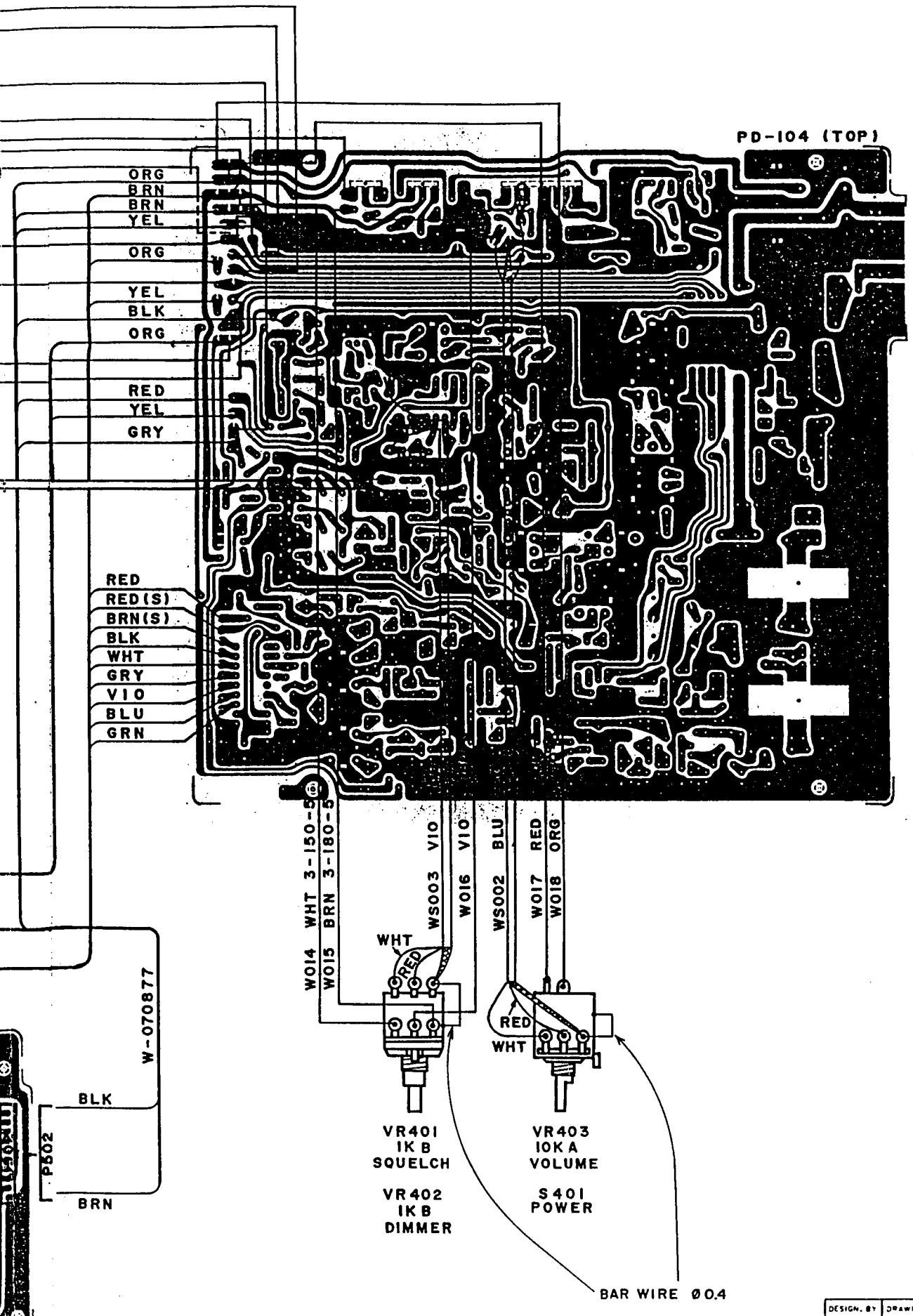
5B 5C


W001 ORG 5-100-5
W002 GRN 5-100-5
W003 VIO 5-160-5
W004 GRY 5-110-5
W005 BRN 5-110-5
W006 ORG 5-80-5
W007 GRN 5-80-5
WS001 GRY 240
W011 YEL 5-90-5
W012 BLU 5-110-5
W013 RED 5-90-5
W009 YEL 3-180-5
W010 BLK 3-180-5
SP401
SP115
ORG
BRN
BRN
YEL
ORG
YEL
BLK
ORG
RED
YEL
GRY
VIO
WHT
BLU
GRN
GRN(S)
BRN
RED
ORG
YEL
GRN
BLU
VIO
GRY
WHT
BLK
BRN(S)
RED(S)
ORG(S)
YEL(S)
RED
RED(S)
BRN(S)
BLK
WHT
GRY
VIO
BLU
GRN
W014 WHT 3-150-5
W015 BRN 3-180-5
WS003 VIO
W016 VIO
WS002 BLU
W017 RED
W018 ORG
WHT
RED
RED
WHT
W-070874
W-070875
W-070876
W-070877
BRN
GRN(S)
BRN
RED(S)
BRN
P505
P504
P503
BLK
P502
BRN
VR401
IK B
SQUELCH
VR402
IK B
DIMMER

OP)

5C

5D



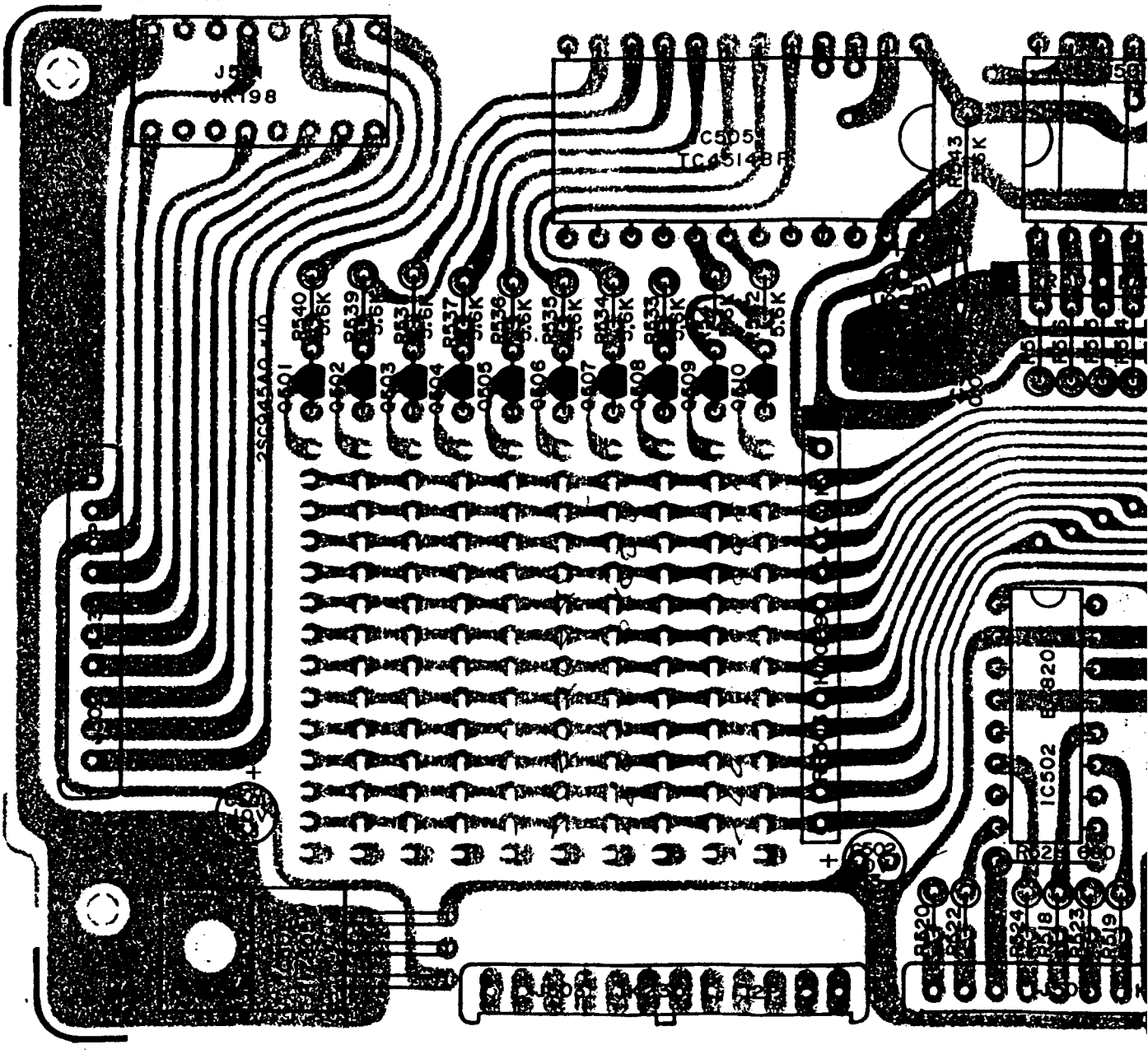
DESIGN. BY	DRAWN. BY	UNIDEN NO.	MODEL NO.
Jan 14, '84	58.12.6	UT-787	MC 670
Pinkerton	IMAI	TITLE	
CHECK. BY	APPRO. BY	WIRING DIAGRAM	
Jan 14, '84	1-14-84	DRAWING NO.	
H. Kurisu	Sagotani	E32-2313	

UNIDEN COR

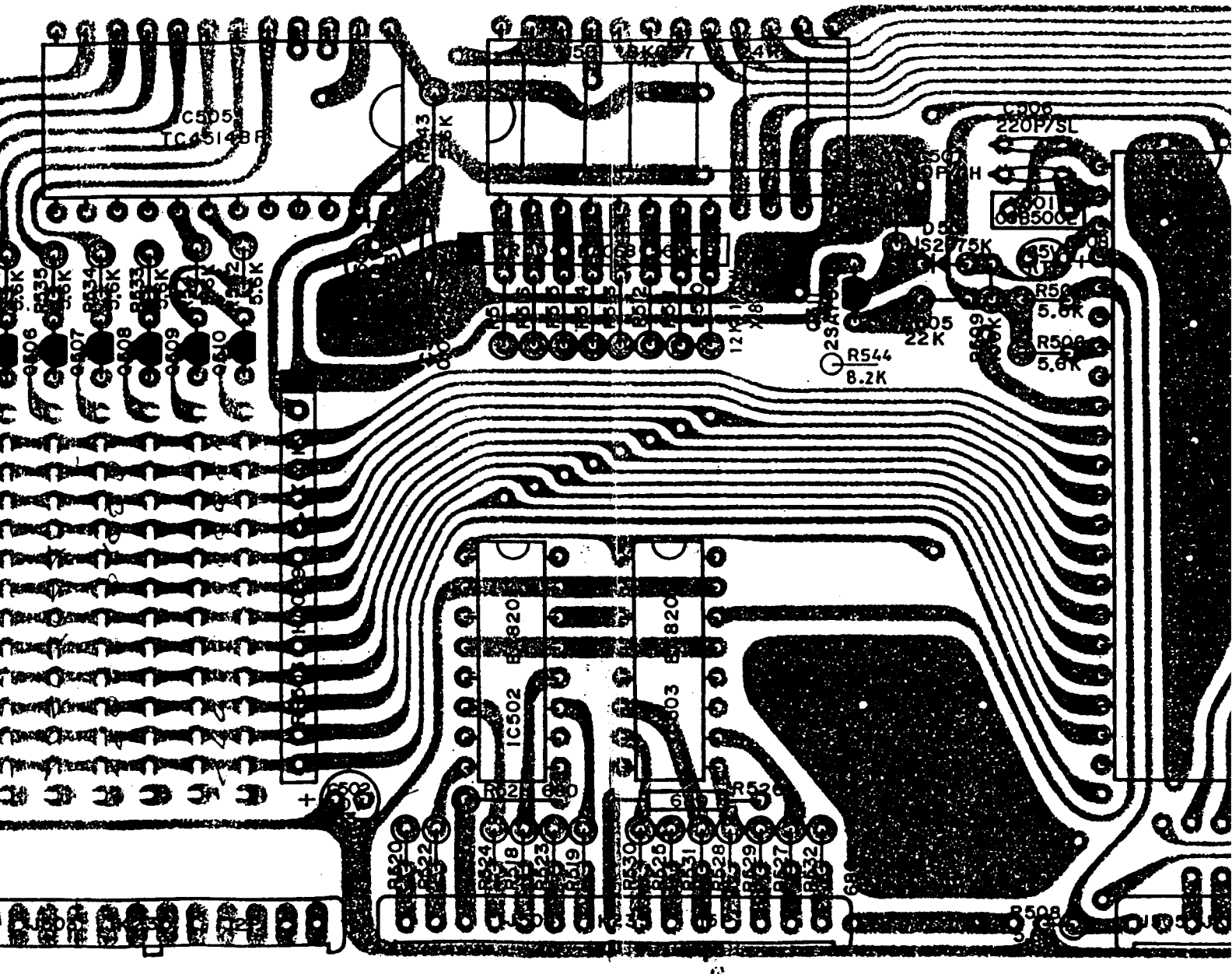
6A

6B

PC002
PD-105AA



6B 6C

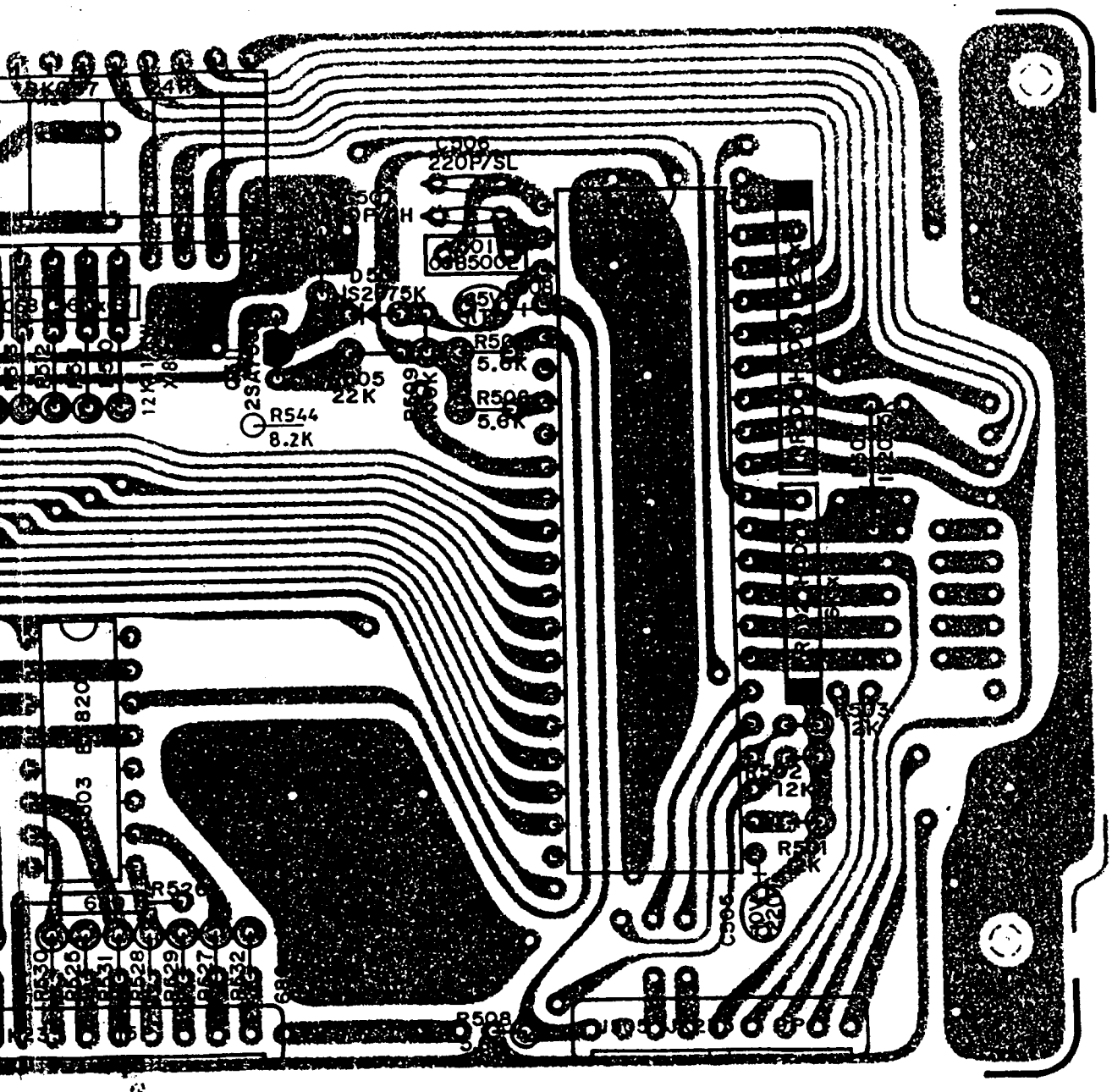


NOTE

1. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE

6C

6D



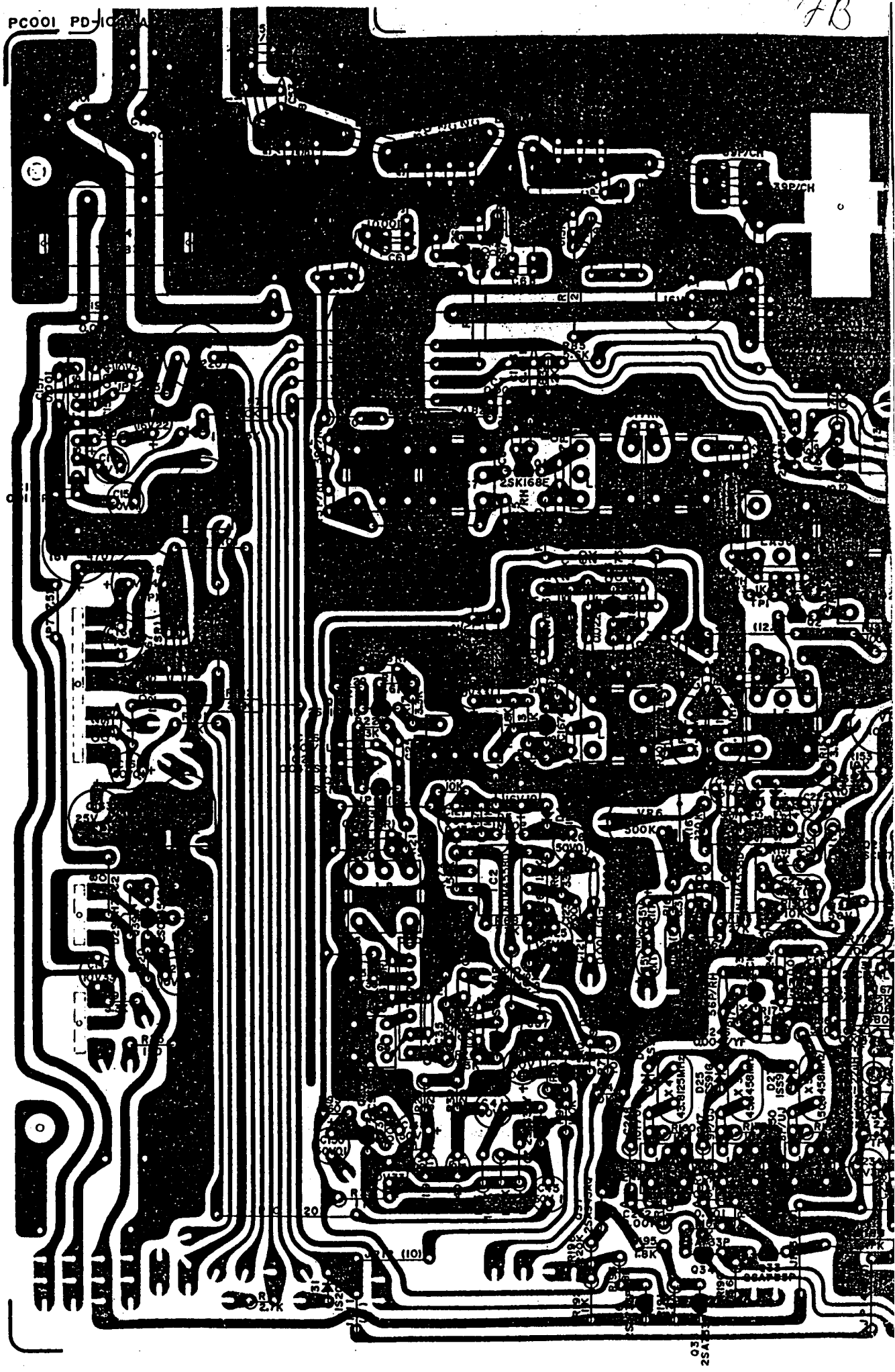
NOTE.
1. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.

DESIGN. BY	DRAWN. BY	UNIDEN NO.	MODEL NO.
Jan. 14. '84	58.12.22	UT-787	MC 6700
T. Takagawa	TANAKA	TITLE	
CHECK. BY	APPRO. BY	PARTS ASSEMBLY TOP VIEW	
Jan. 14 '84	1-14-84	DRAWING NO.	REV. MARK
K. Kurisu	Nagafuchi	E23-5143	

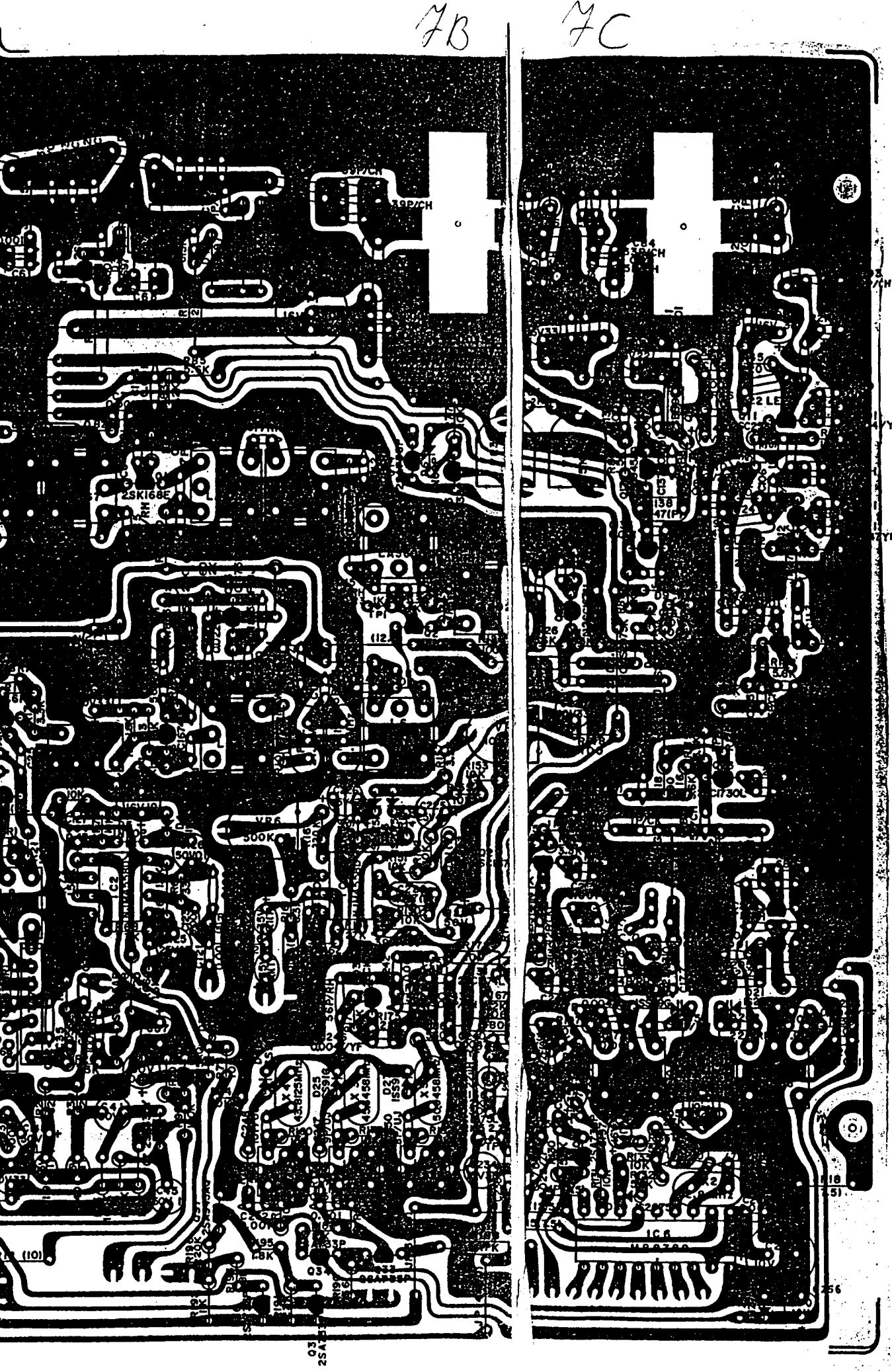
UNIDEN CORP.

7A

7B



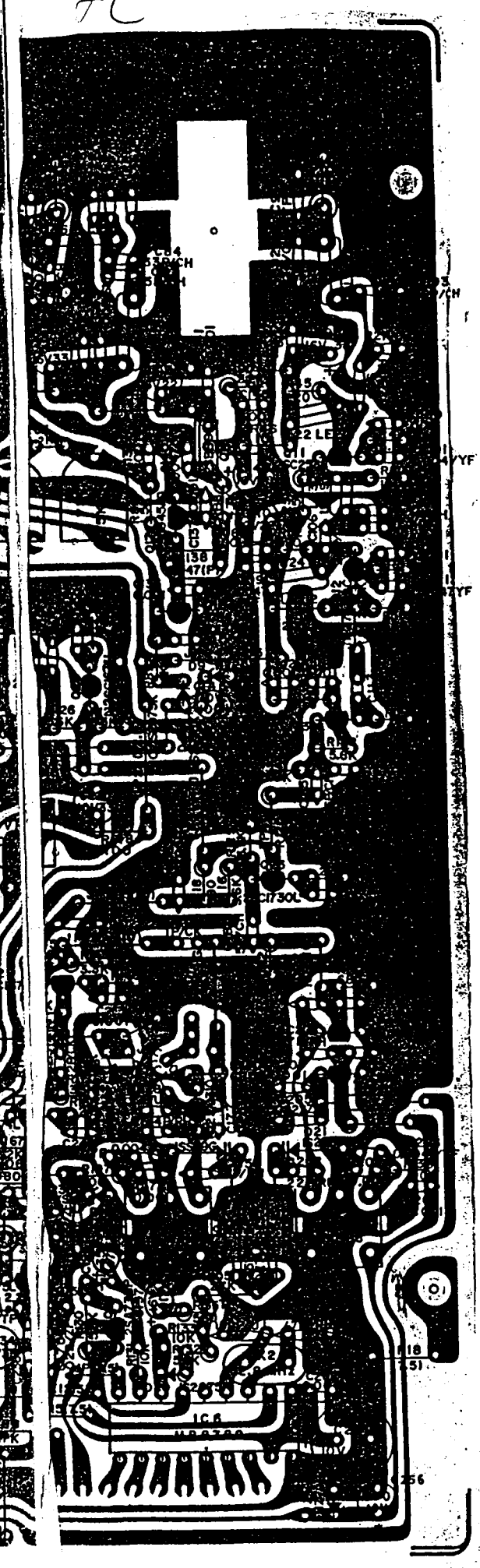
7B 7C



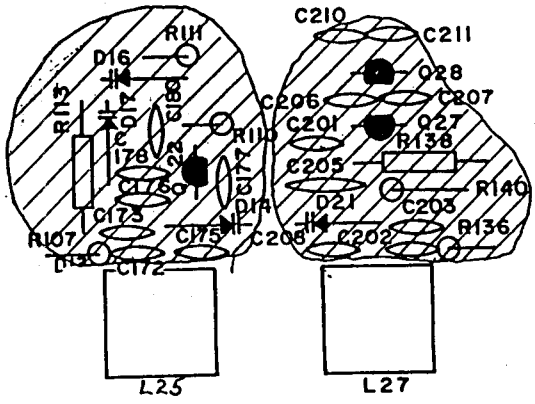
NOTES:
1. RESISTANCE VALUES ARE SHOWN
(K=KILO OHM, M=MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W
3. CAPACITANCE VALUES ARE IN
OTHERWISE NOTED, (P=MICRO-
4. ALL CAPACITORS TEMPERATUR
UNLESS OTHERWISE NOTED

7C

7D



• TX, RX, VCO



• R3, R132, R165, R120

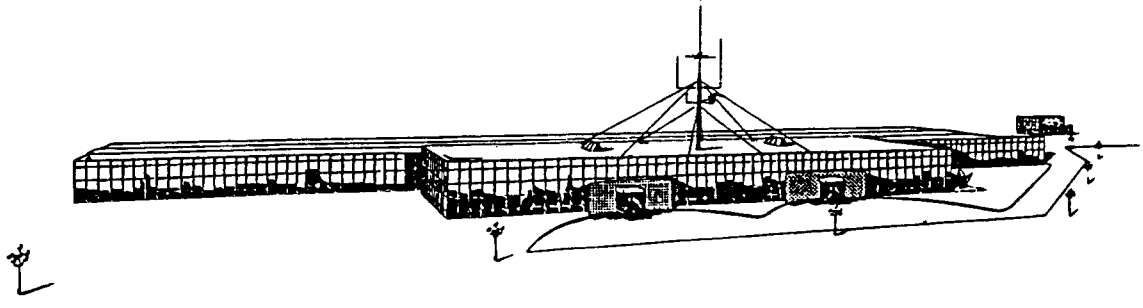
NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED (K=KILO OHM, M=MEG OHM)
2. RESISTOR WATTAGES ARE 1/8W UNLESS OTHERWISE NOTED.
3. CAPACITANCE VALUES ARE INDICATED IN MICROFARADS UNLESS OTHERWISE NOTED, (P=MICRO-MICRO FARAD.)
4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE YD UNLESS OTHERWISE NOTED.

UNIDEN NO.	MODEL NO.
UT-787	MC 67C

TITLE MAIN PCB
PARTS ASSEMBLY TOP VI

DRAWING NO. E22-5141

PRESIDENT
ELECTRONICS EUROPE



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