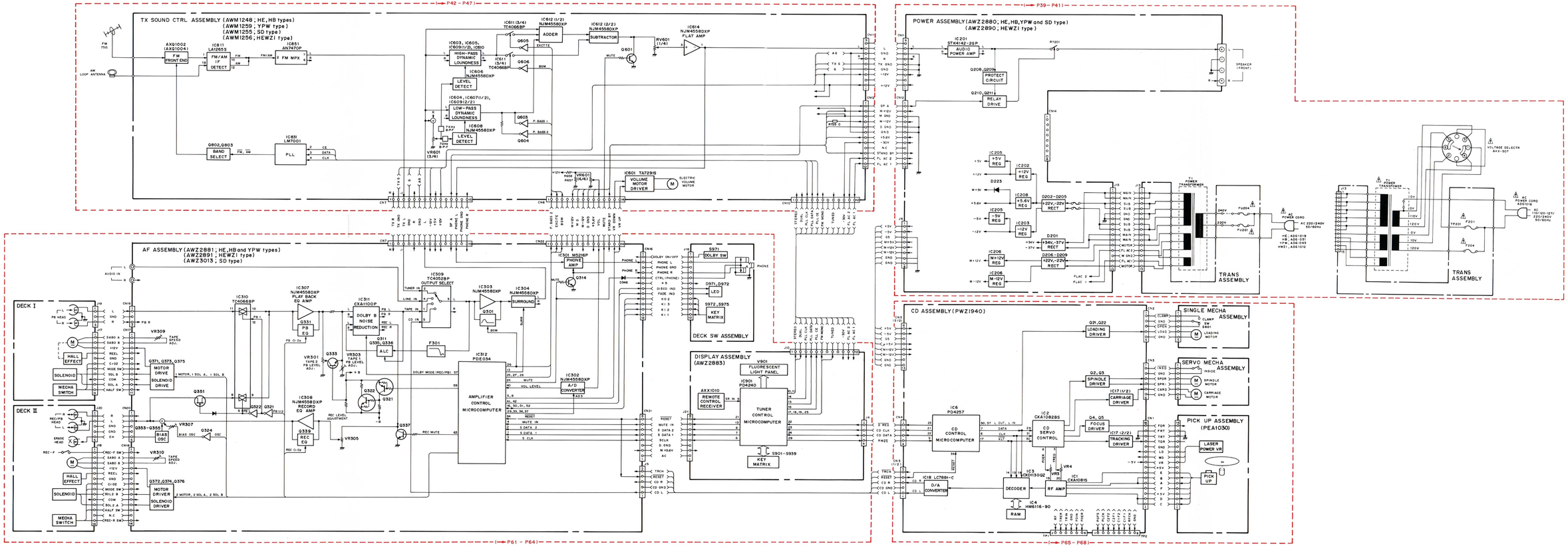
5. OVER ALL SCHEMATIC DIAGRAM



6. SCHEMATIC DIAGRAMS AND P.C. BOARD PATTERNS

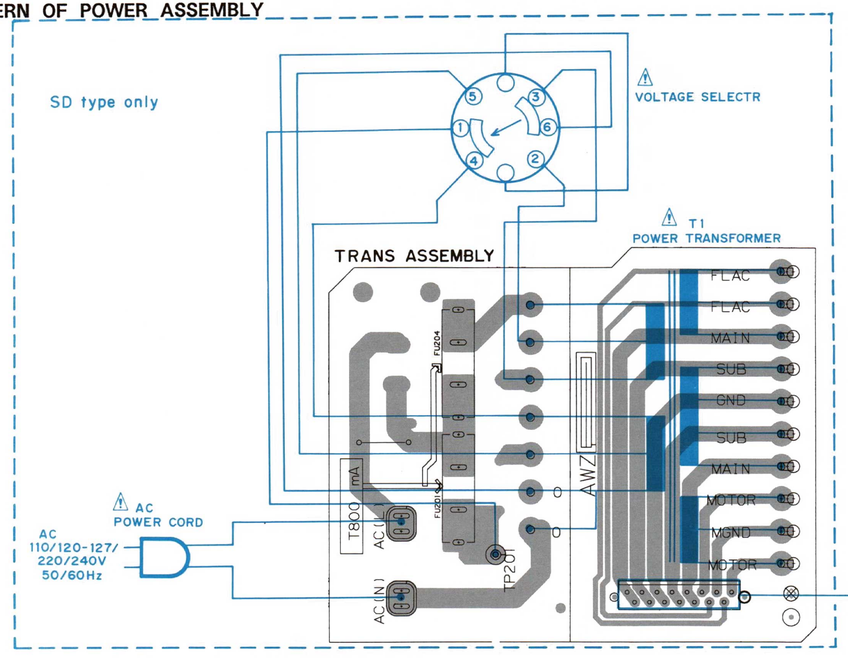
6.1 P.C. BOARD PATTERN OF POWER ASSEMBLY

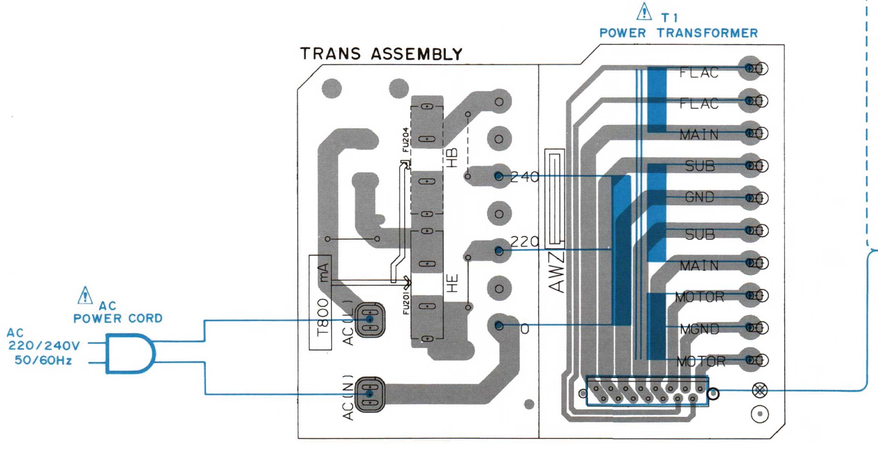
- View from soldering side

6. SCHEMATIC DIAGRAMS AND P.C. BOARD PATTERNS

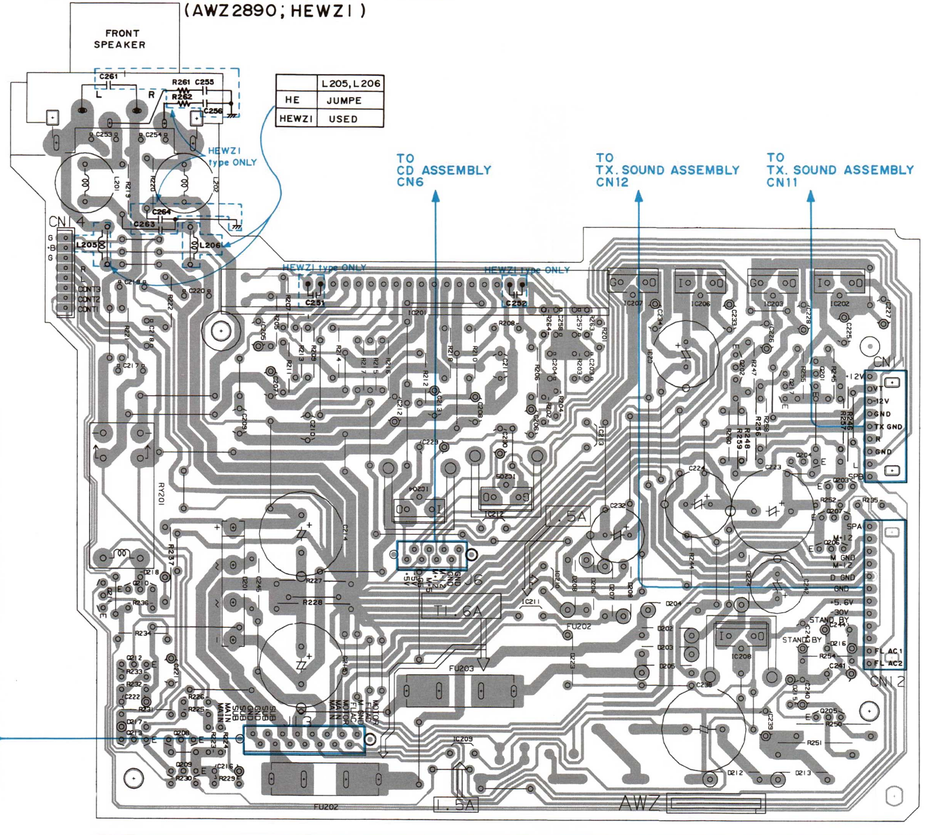
6.1 P.C. BOARD PATTERN OF POWER ASSEMBLY

- View from component side





POWER ASSEMBLY (AWZ2880; HE, HB, YPW and SD)
(AWZ2890; HEWZ1)



	L205, L206
HE	JUMPE
HEWZ1	USED

IC201 IC204 IC205 IC212 IC211 IC210 IC209 IC207 IC213 IC206 IC203 IC202
Q211 Q210 Q212 Q213 Q208 Q209 Q202 Q217 Q201 Q204 Q203 Q208 Q207 Q205 Q206
5 6 7

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 (E C B)	E C or E C	Transistor
Q215 (E C B)	E C or E C	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

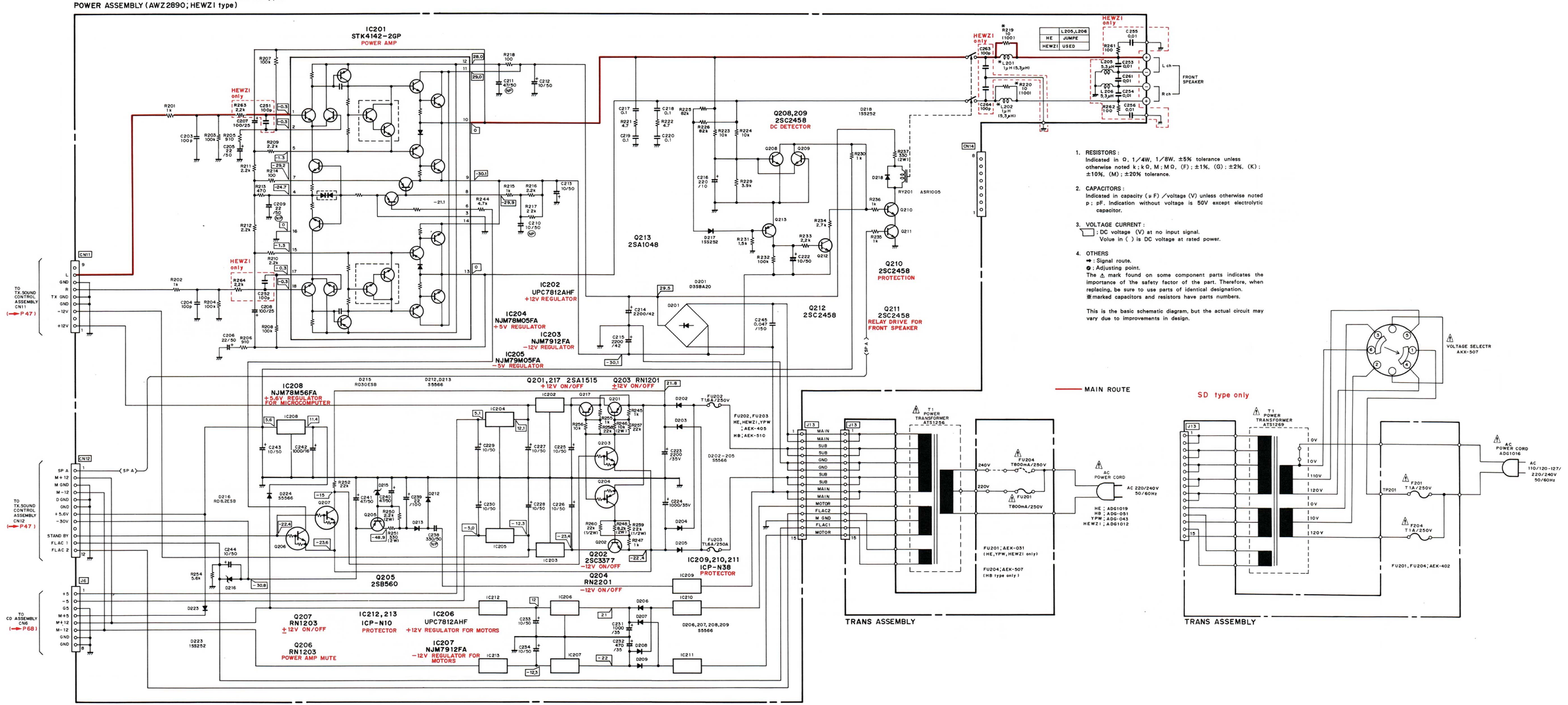
Others

P.C.B. pattern diagram indication	
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with (double circles) shows negative terminal.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

6.2 SCHEMATIC DIAGRAM OF POWER ASSEMBLY

(AWZ2880; HE, HB, YPW and SD type)
POWER ASSEMBLY (AWZ2890; HEWZ1 type)



HE	JUMPE	L205, L206
HEWZ1	USED	

1. RESISTORS :
Indicated in Ω, 1/4W, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
; DC voltage (V) at no input signal.
Volue in ( ) is DC voltage at rated power.

4. OTHERS
→ ; Signal route.
● ; Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

6.3 SCHEMATIC DIAGRAM OF TX.SOUND CTRL ASSEMBLY (1/2)

(AWM1248 ; HE, HB type)
(AWM1259 ; YPW type)
(AWM1255 ; SD type)
TX. SOUND CONTROL (1/2) ASSEMBLY (AWM1256 ; HEWZI type)

1. RESISTORS :
   Indicated in Ω, 1/4W, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2. CAPACITORS :
   Indicated in capacity (μF) /voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

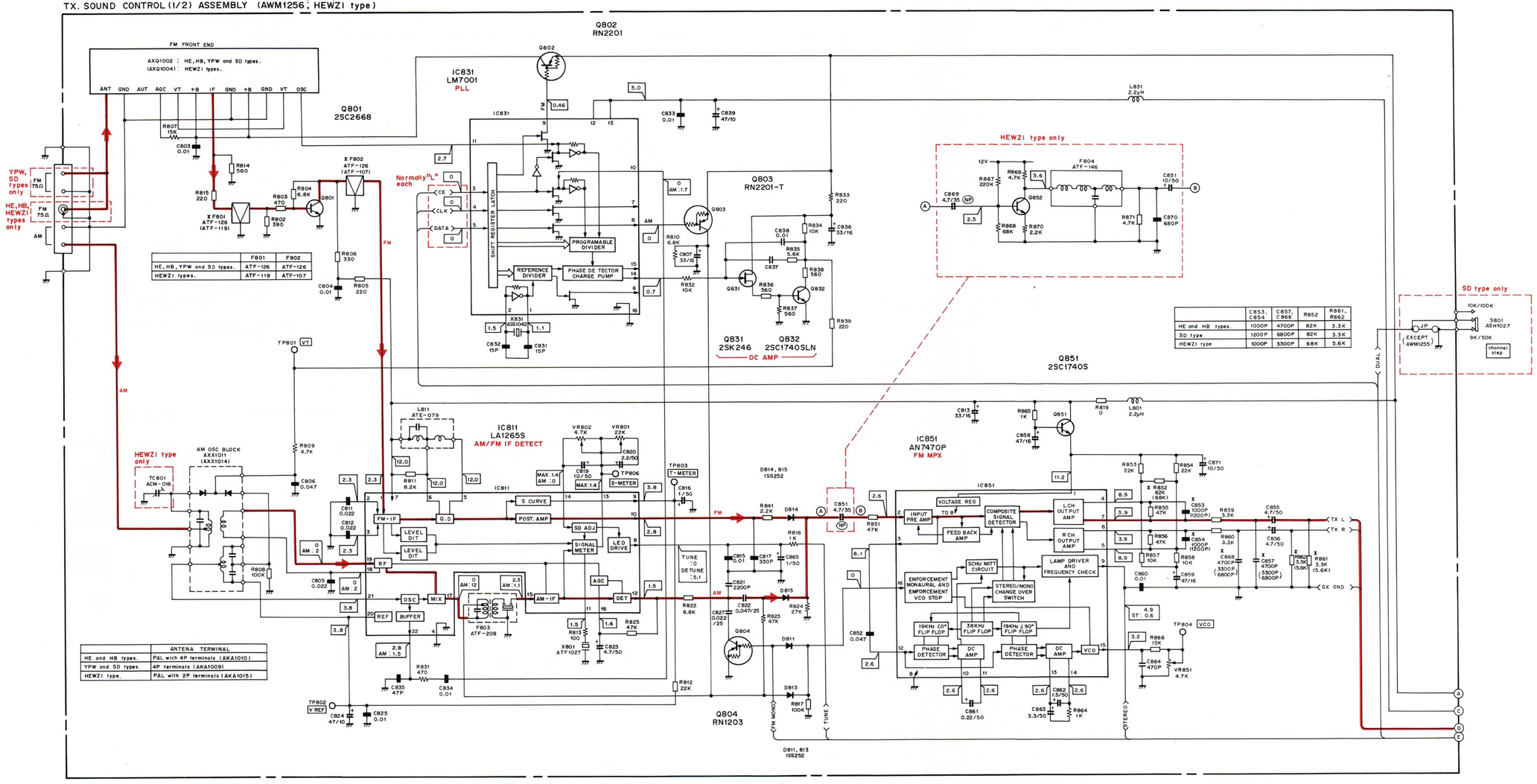
3. VOLTAGE CURRENT :
   ; DC voltage (V) at no input signal.
   Volue in ( ) is DC voltage at rated power.

4. OTHERS
   ➡ : Signal route.
   ● : Adjusting point.
   The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※marked capacitors and resistors have parts numbers.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. CHIP PARTS

- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.
- Indicates a chip inductor.
- Diode

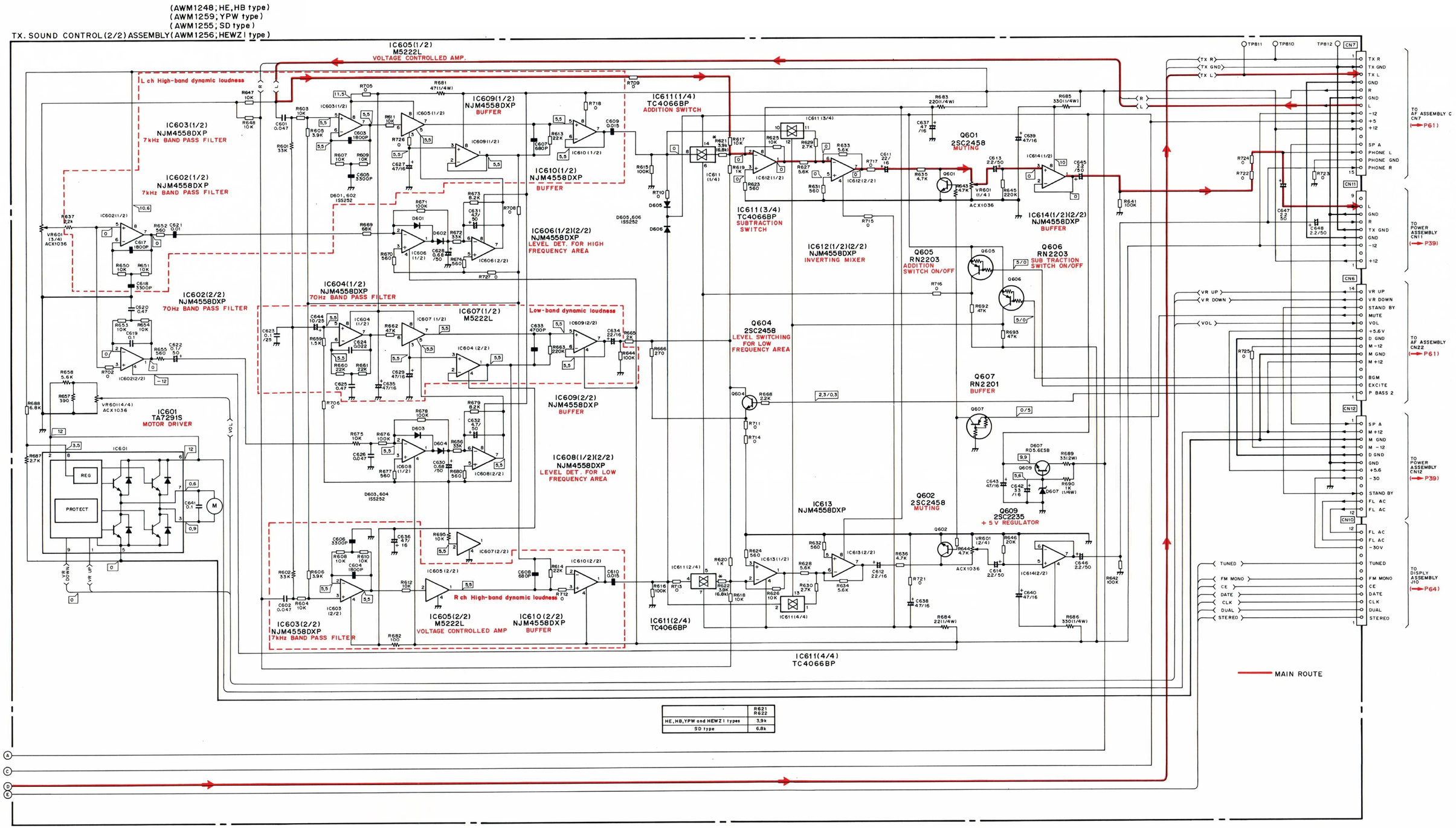


	F801	F802
HE, HB, YPW and SD types.	ATF-126	ATF-126
HEWZI types.	ATF-119	ATF-107

	C853, C854	C857, C868	R852	R861, R862
HE and HB types.	1000P	4700P	82K	3.3K
SD type	1200P	6800P	82K	3.3K
HEWZI type	1000P	3300P	68K	5.6K

	ANTENA TERMINAL
HE and HB types.	PAL wich 4P terminals (AKA1010)
YPW and SD types.	4P terminals (AKA1009)
HEWZI type.	PAL with 2P terminals (AKA1015)

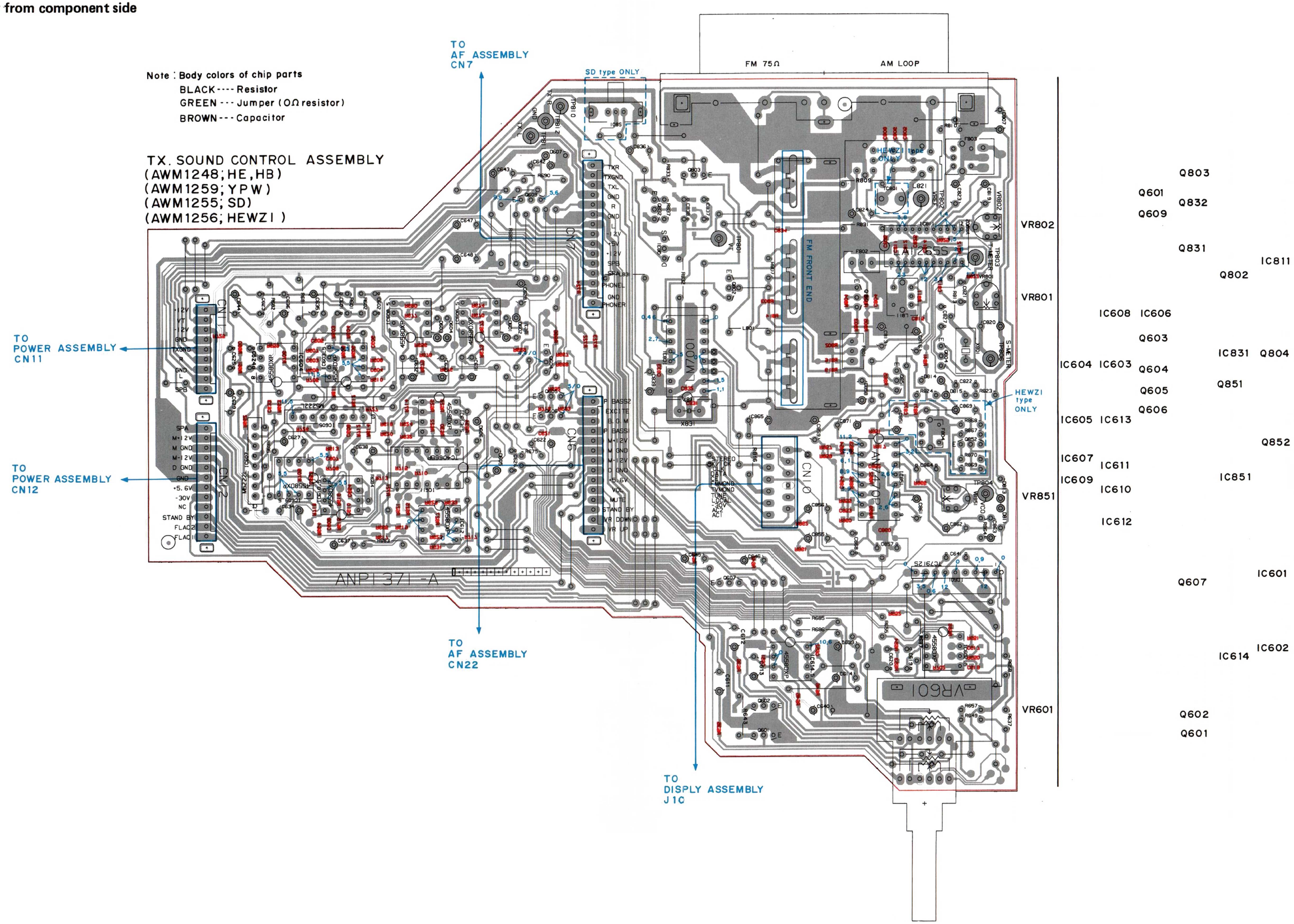
6.4 SCHEMATIC DIAGRAM OF TX.SOUND CTRL ASSEMBLY (2/2)



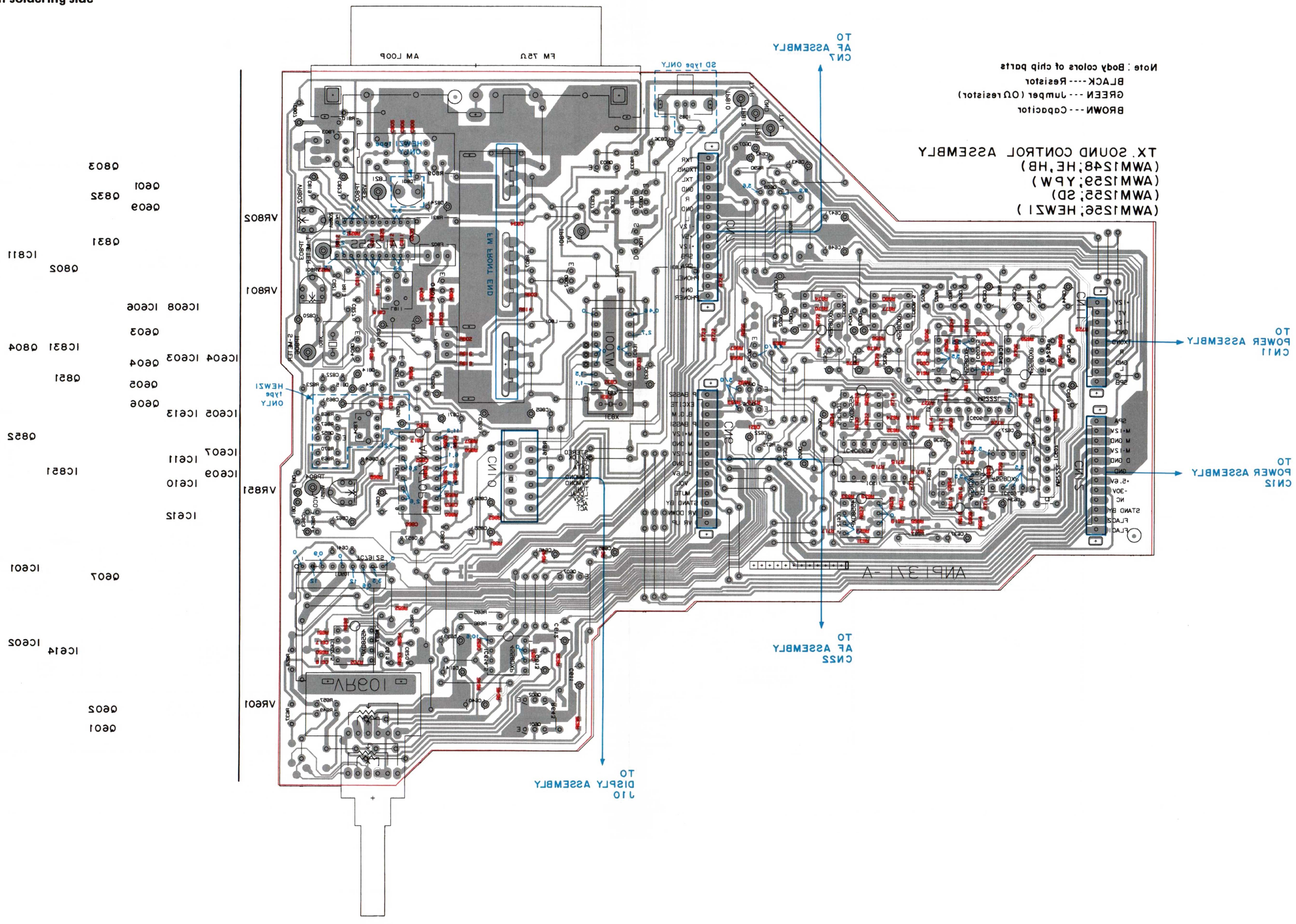
	R621 R622
HE, HB, YPW and HEWZ I types	3.9k
SD type	6.8k

6.5 P.C. BOARD PATTERN OF TX.SOUND CTRL ASSEMBLY

- **View from component side**



- **View from soldering side**

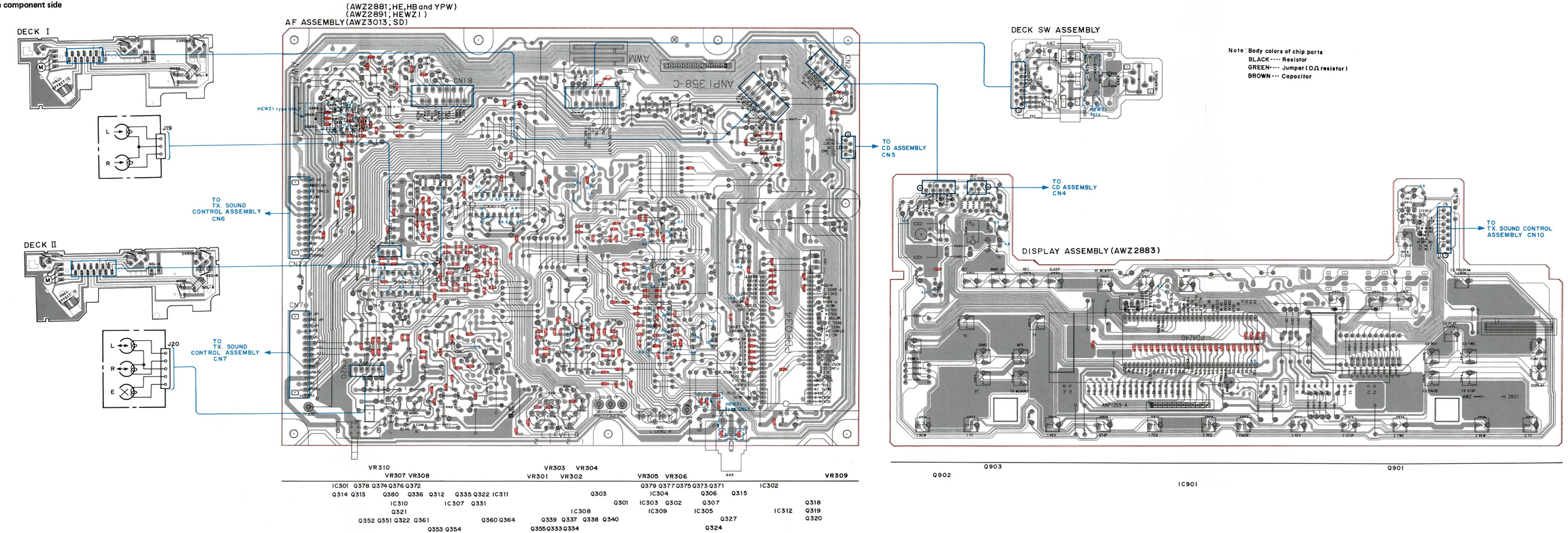


6.6 P.C. BOARD PATTERN OF AF ASSEMBLY

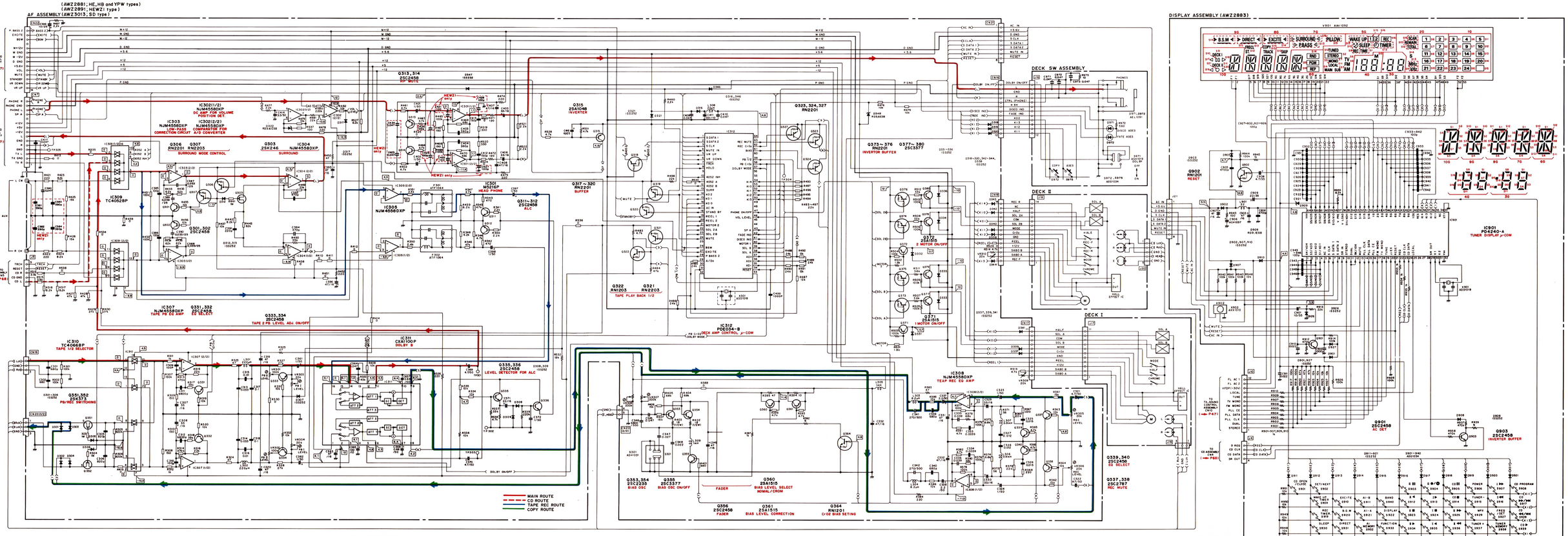
● View from soldering side

6.6 P.C. BOARD PATTERN OF AF ASSEMBLY

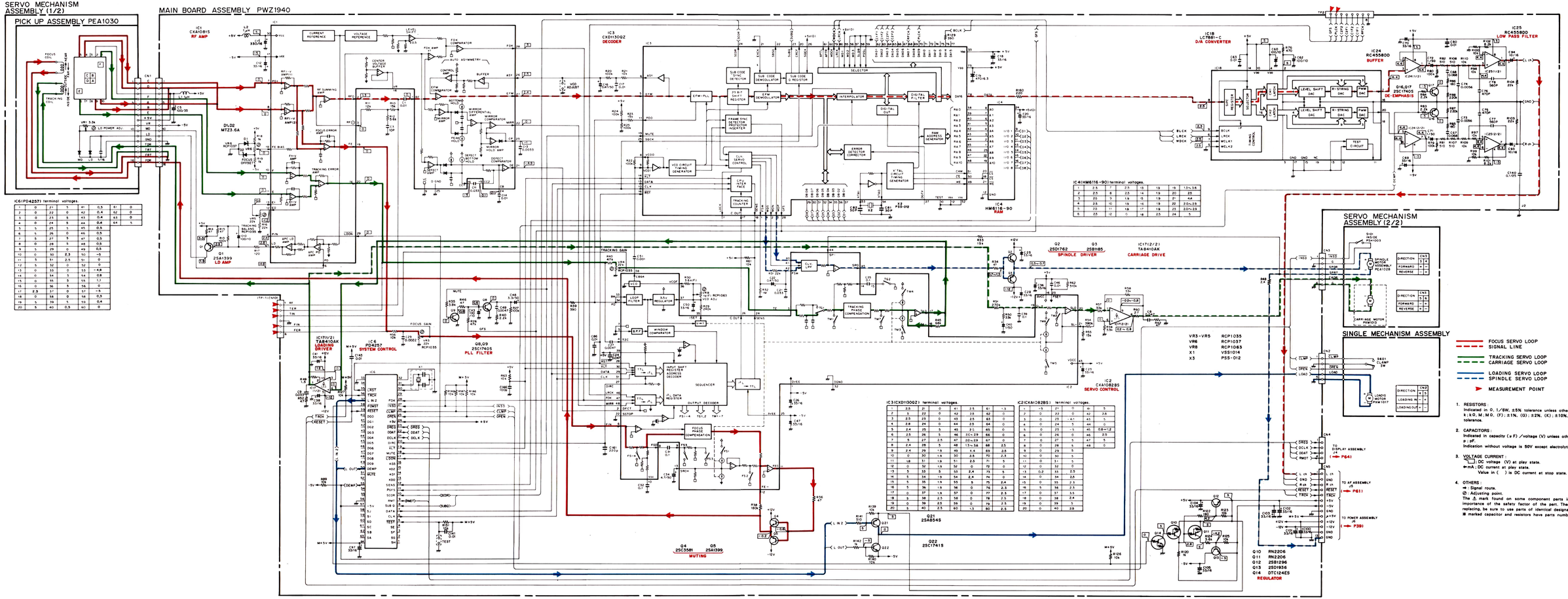
- View from component side



6.7 SCHEMATIC DIAGRAM OF AF ASSEMBLY



6.8 SCHEMATIC DIAGRAM OF CD ASSEMBLY



IC6(PD4257) terminal voltages.

1	0	21	5	41	0.5	61	0
2	0	22	0	42	0.4	62	0
3	0	23	5	43	0.4	63	0
4	0	24	5	44	0.4	64	5
5	5	25	5	45	0.5		
6	5	26	0	46	0.5		
7	5	27	5	47	0.5		
8	0	28	5	48	0.5		
9	5	29	0	49	0.5		
10	0	30	2.3	50	-5		
11	5	31	2.5	51	0		
12	5	32	0	52	0		
13	0	33	0	53	-4.8		
14	0	34	5	54	0.8		
15	0	35	5	55	1.1		
16	0	36	5	56	0		
17	2.5	37	0	57	-5		
18	0	38	0	58	0.3		
19	5	39	5	59	0.4		
20	5	40	0.5	60	0		

IC3(CXD1130QZ) terminal voltages.

1	2.5	21	0	41	2.5	61	-1.3
2	5	22	0	42	2.5	62	0
3	2.5	23	0	43	2.5	63	0
4	2.6	24	0	44	2.5	64	0
5	2.4	25	5	45	2.1	65	0
6	2.5	26	5	46	2.0~2.9	66	0
7	5	27	2.5	47	2.0~2.9	67	0
8	2.4	28	5	48	1.1~3.6	68	2.5
9	2.4	29	1.9	49	1.4	69	2.5
10	0	30	1.9	50	2.5	70	2.3
11	1.8	31	1.9	51	2.3	71	5
12	0	32	1.9	52	0	72	0
13	5	33	5	53	2.4	73	5
14	5	34	1.9	54	2.4	74	0
15	5	35	1.9	55	5	75	2.4
16	5	36	1.9	56	0	76	2.3
17	0	37	1.9	57	0	77	2.3
18	5	38	2.3	58	0	78	2.5
19	0	39	2.5	59	0	79	2.5
20	5	40	2.5	60	-1.3	80	2.5

IC4(HM6116-90) terminal voltages.

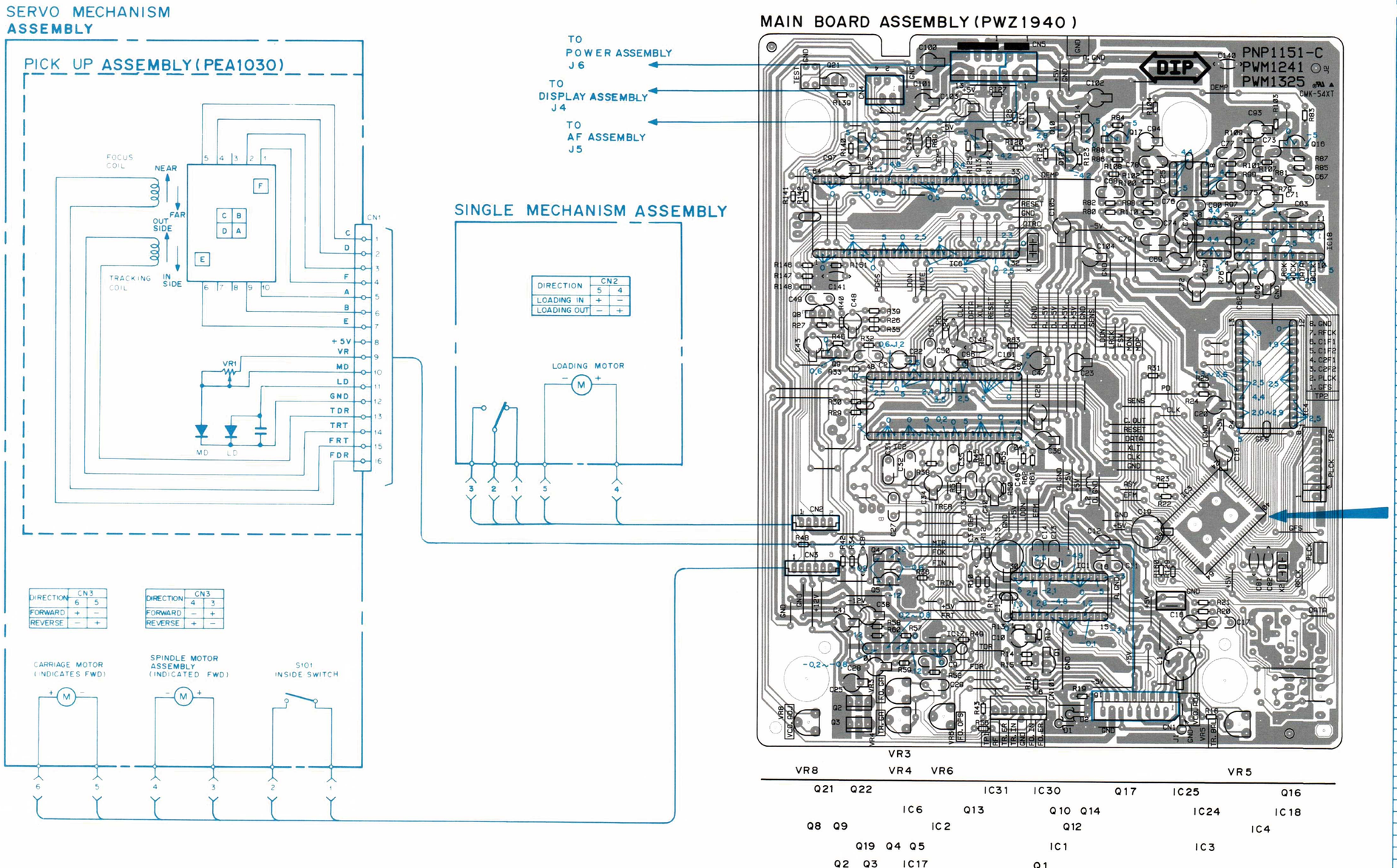
1	2.5	7	2.5	13	1.9	19	1.3~3.6
2	2.5	8	2.5	14	1.9	20	2.5
3	2.5	9	1.9	15	1.9	21	4.4
4	2.5	10	1.9	16	1.9	22	2.0~2.9
5	2.0	11	1.9	17	1.9	23	2.0~2.9
6	2.5	12	0	18	2.5	24	5

IC2(CXA1082BS) terminal voltages.

1	-1.5	21	0	41	5		
2	0	22	0	42	2.5		
3	0	23	-4.1	43	5		
4	0	24	5	44	0		
5	0	25	-5	45	0.6~1.2		
6	0	26	0	46	2.5		
7	0	27	5	47	5		
8	0	28	5	48	0		
9	0	29	5				
10	0	30	5				
11	0	31	5				
12	0	32	0				
13	0.2	33	2.5				
14	0	34	2.5				
15	0	35	2.5				
16	5	36	2.5				
17	0	37	3.5				
18	0	38	2.4				
19	0	39	5				
20	0	40	2.8				

6.9 P.C. BOARD PATTERN OF CD ASSEMBLY

- **View from component side**



IC3 (CXD1130QZ) TERMINAL VOLTAGE

1	2.5
2	5
3	2.5
4	2.8
5	2.4
6	2.5
7	5
8	2.4
9	
10	0
11	1.8
12	0
13	5
14	
15	
16	
17	0
18	5
19	0
20	5
21	0
22	0
23	0
24	
25	5
26	
27	2.5
28	5
29	1.9
30	
31	
32	
33	5
34	1.9
35	
36	
37	2.5
38	
39	
40	
41	
42	
43	
44	
45	
46	2.0 – 2.9
47	
48	1.3 – 3.6
49	4.4
50	2.5
51	2.3
52	0
53	2.4
54	
55	5
56	0
57	
58	
59	
60	1.3
61	
62	0
63	
64	
65	
66	
67	
68	2.5
69	
70	2.3
71	5
72	0
73	5
74	0
75	2.4
76	2.3
77	
78	2.5
79	
80	

P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with O shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

6.9 P.C. BOARD PATTERN OF CD ASSEMBLY

- View from soldering side

IC3 (CXD1130Q2)

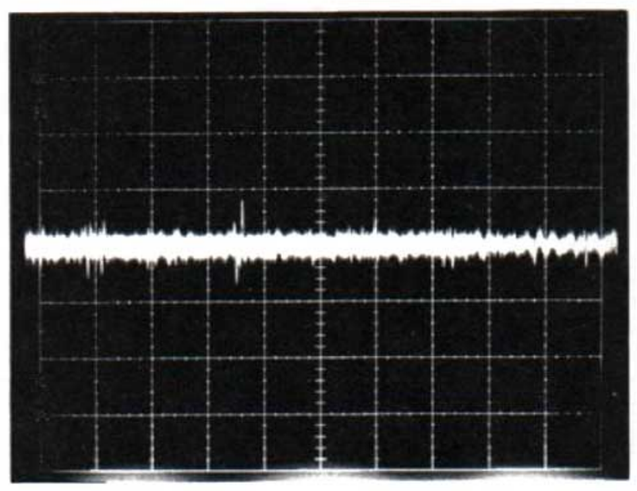
TERMINAL	VOLTAGE
1	2.5
2	5
3	2.5
4	2.8
5	2.4
6	2.5
7	5
8	2.4
9	
10	0
11	1.8
12	0
13	5
14	
15	
16	
17	0
18	5
19	0
20	5
21	0
22	0
23	0
24	
25	5
26	
27	2.5
28	5
29	1.9
30	
31	
32	
33	5
34	1.9
35	
36	
37	
38	2.5
39	
40	
41	
42	
43	
44	
45	
46	2.0 – 2.9
47	
48	1.3 – 3.6
49	4.4
50	2.5
51	2.3
52	0
53	2.4
54	
55	5
56	0
57	
58	
59	
60	1.5
61	
62	0
63	
64	
65	
66	
67	
68	2.5
69	
70	2.3
71	5
72	0
73	5
74	0
75	2.4
76	2.3
77	
78	2.5
79	
80	

Wave Forms

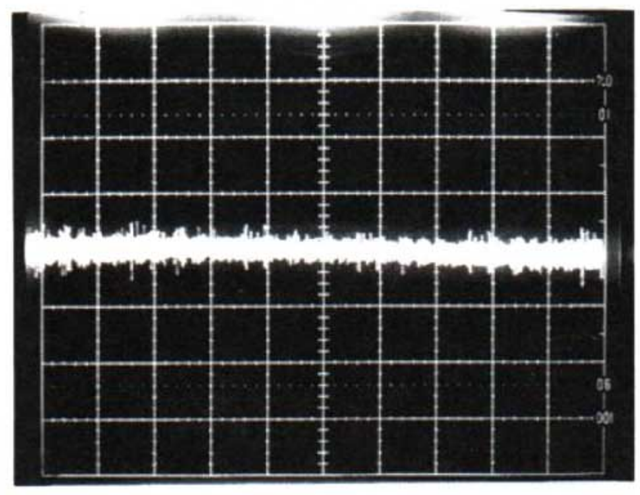
NOTE : The encircled numbers denote measuring points in the schematic diagram.

①

③ TP1-6 Pin : SEARCH MODE
500mV/div 10msec/div

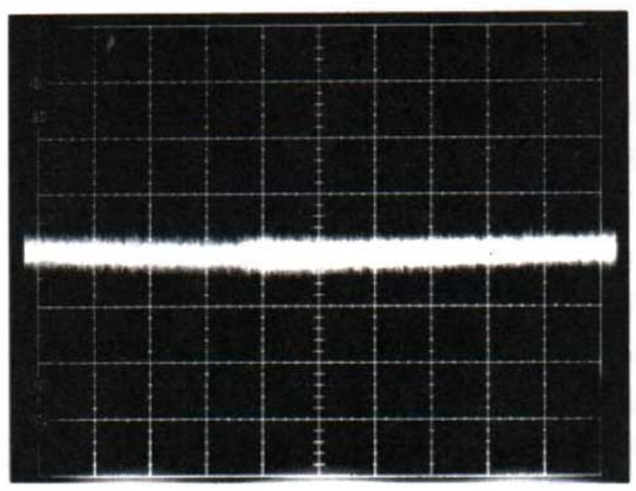


⑥ IC17-1 Pin : PLAY MODE
2V/div 10msec/div

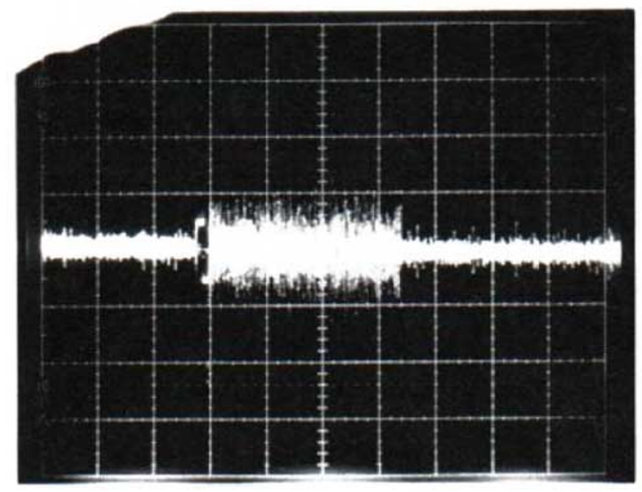


①

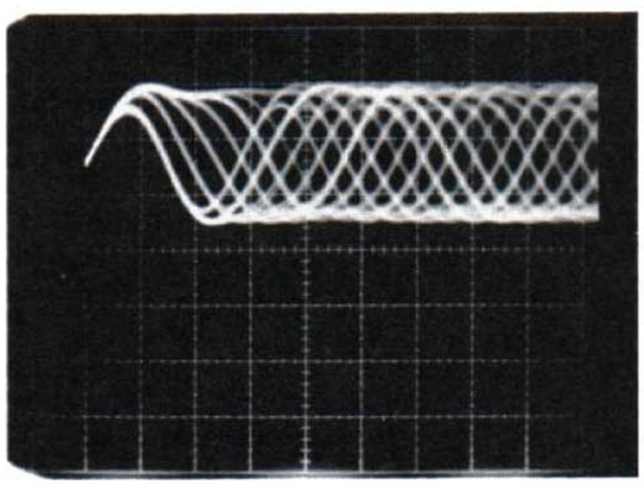
④ TP1-2 Pin : PLAY MODE
1V/div 10msec/div



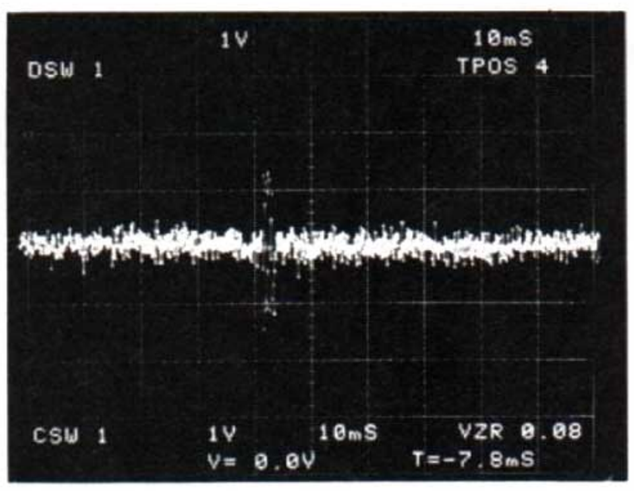
⑥ IC17-1 Pin : SEARCH MODE
2V/div 10msec/div



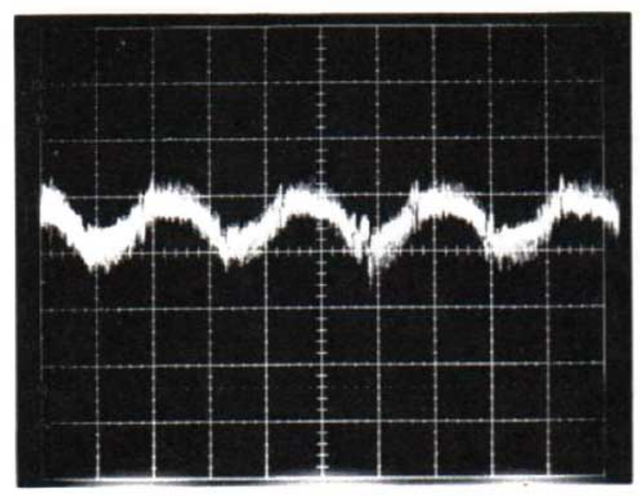
② TP1-1 Pin : PLAY MODE
500mV/div 500nsec/div



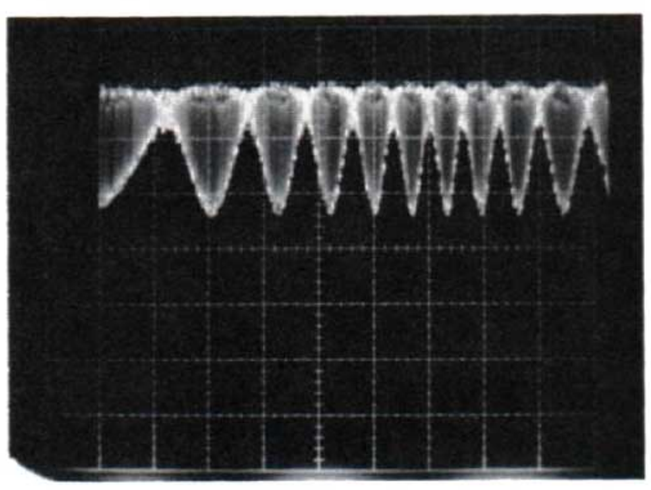
④ TP1-2 Pin : SEARCH MODE
1V/div 10msec/div



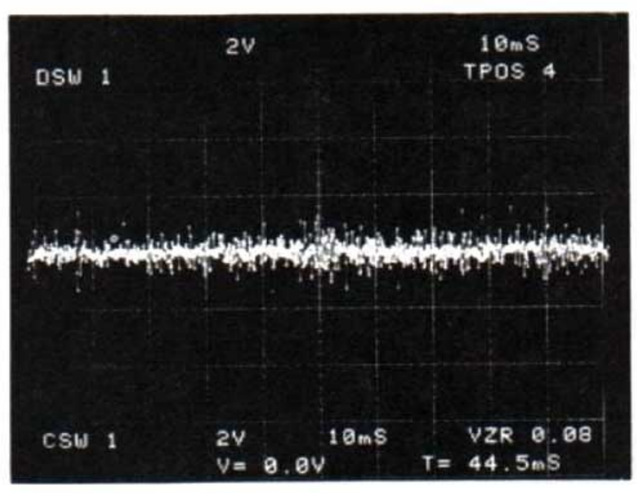
⑦ Q2 Emitter : PLAY MODE
2V/div 50msec/div



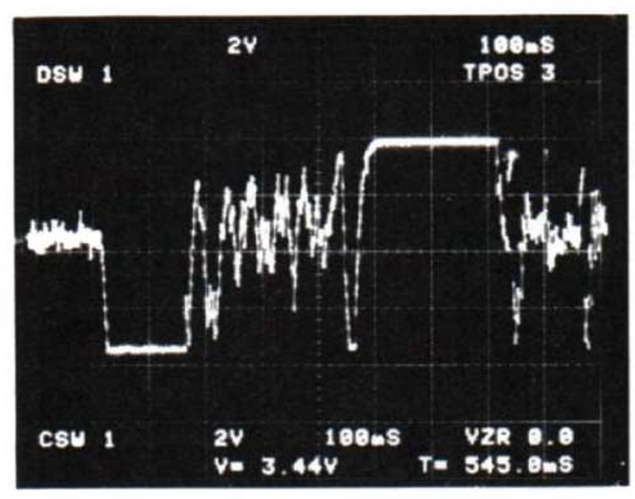
② TP1-1 Pin : SEARCH MODE
500mV/div 200μsec/div



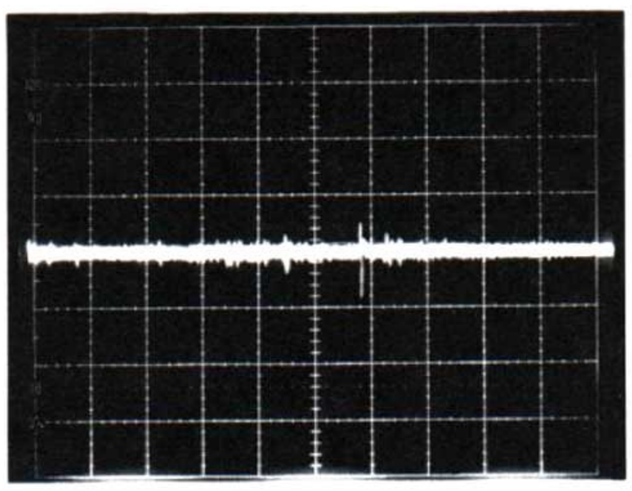
⑤ Q4 Emitter : PLAY MODE
2V/div 10msec/div



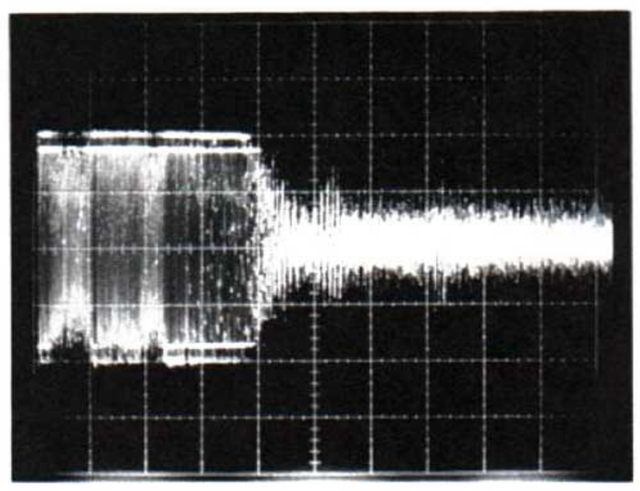
⑦ Q2 Emitter : SEARCH MODE
2V/div 100msec/div



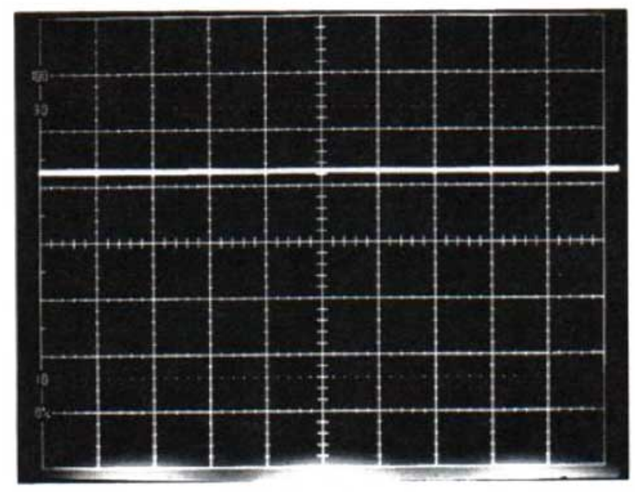
③ TP1-6 Pin : PLAY MODE
500mV/div 10msec/div



⑤ Q4 Emitter : SEARCH MODE
2V/div 10msec/div

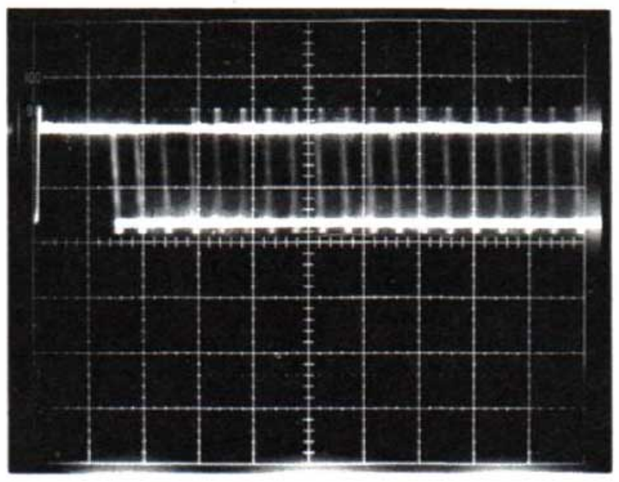


⑧ IC2-33, 34 Pin : PLAY MODE
2V/div 10msec/div

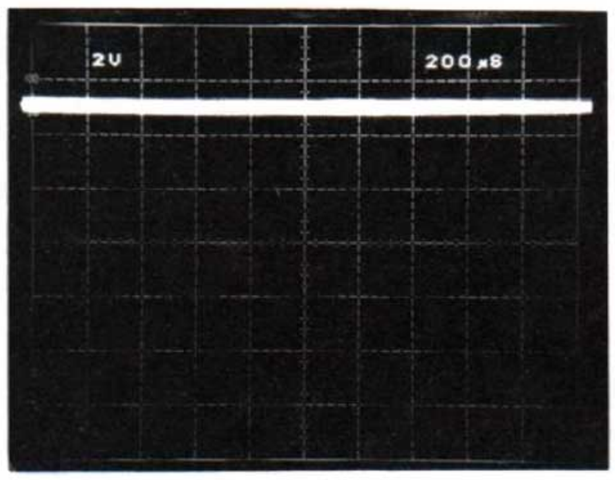


www.hifiengine.com

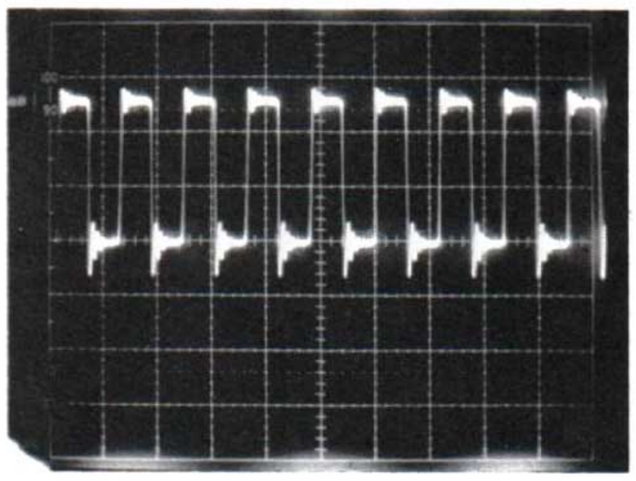
⑨ IC1-27 Pin : PLAY MODE
2V/div 500nsec/div



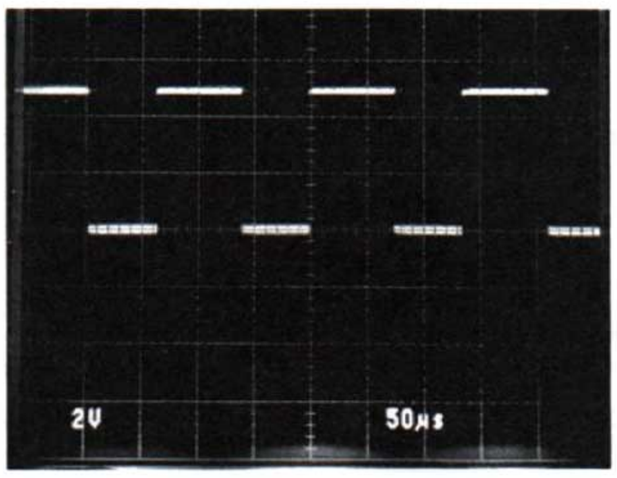
⑫ TP2-1 Pin : PLAY MODE
2V/div 200μsec/div



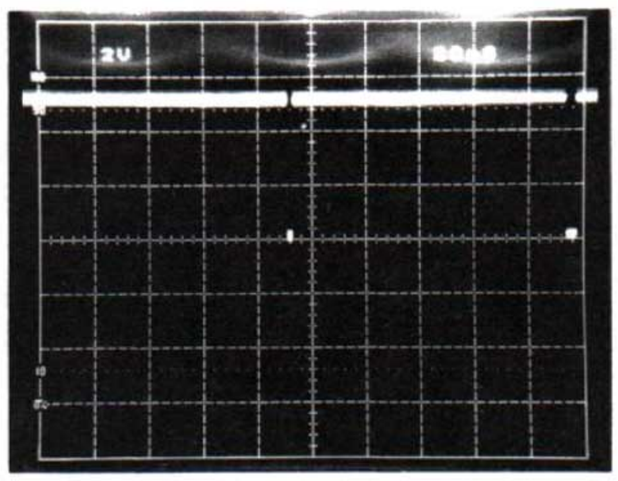
⑯ IC3-76 Pin : STOP MODE
2V/div 200nsec/div



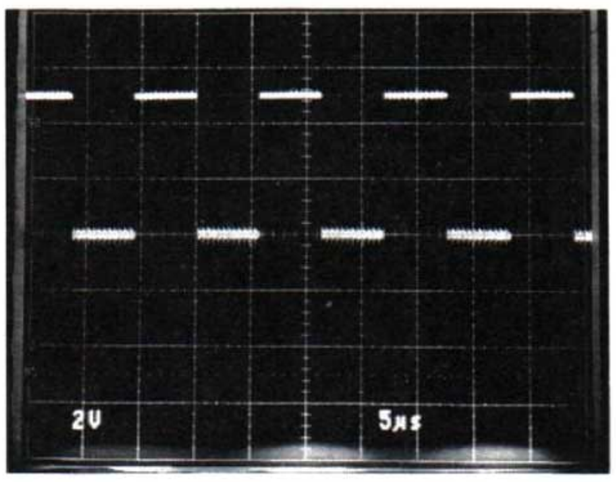
⑩ IC3-4 Pin : PLAY MODE
2V/div 50μsec/div



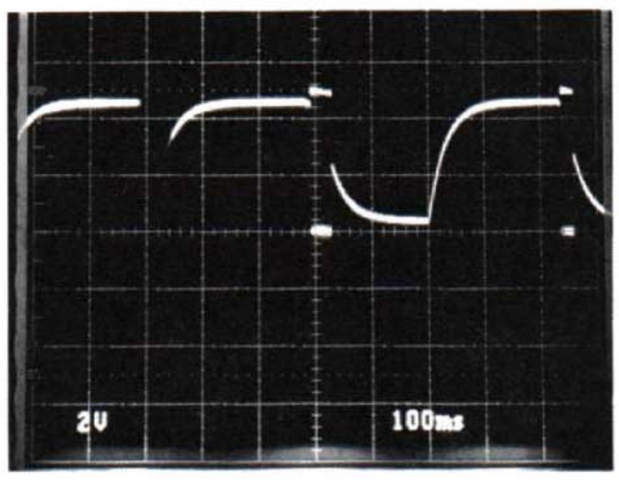
⑫ TP2-1 Pin : SEARCH MODE
2V/div 20msec/div



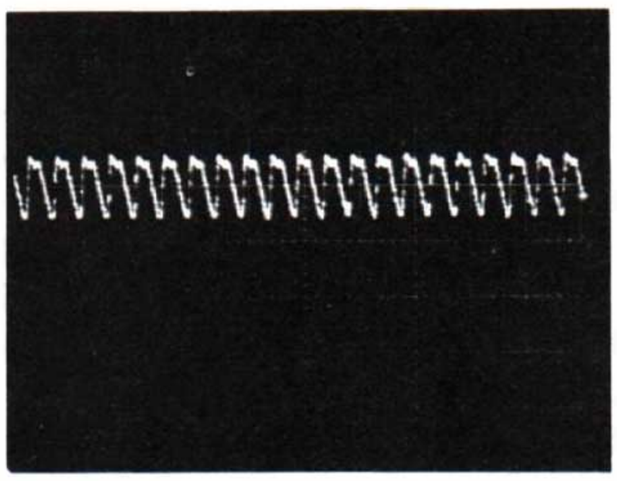
⑰ IC3-79 Pin : STOP MODE
2V/div 5μsec/div



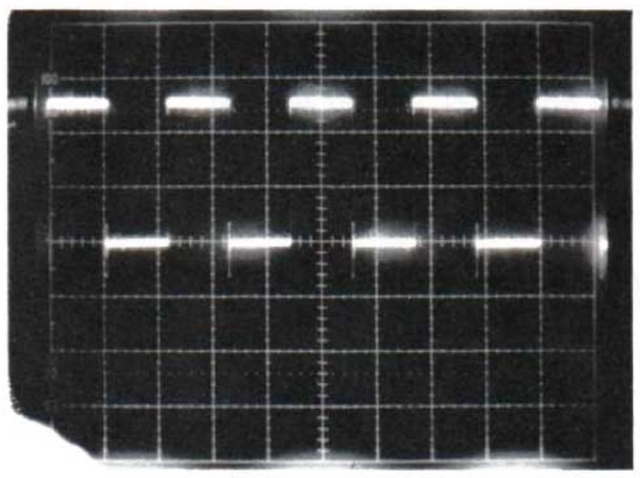
⑩ IC3-4 Pin : SEARCH MODE
2V/div 100msec/div



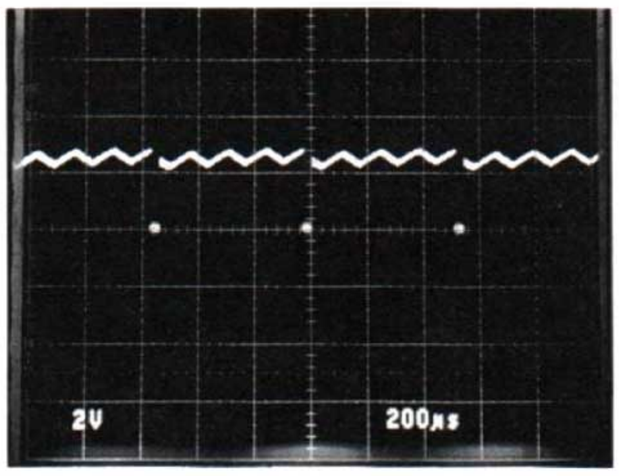
⑬ IC2-38 Pin : PLAY MODE
2V/div 200nsec/div



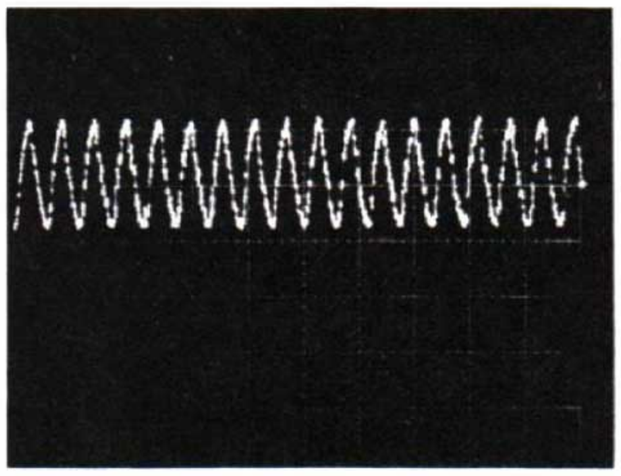
⑱ IC3-80 Pin : STOP MODE
2V/div 5μsec/div



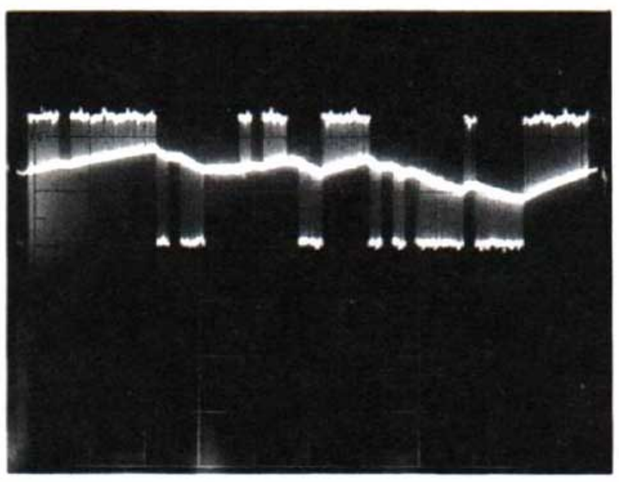
⑪ IC3-3 Pin : PLAY MODE
2V/div 200μsec/div



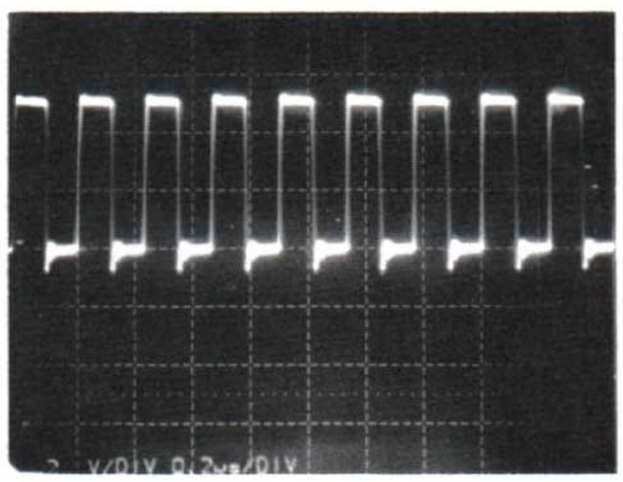
⑭ IC3-8 Pin : PLAY MODE
2V/div 200nsec/div



⑪ IC3-3 Pin : SEARCH MODE
2V/div 10msec/div

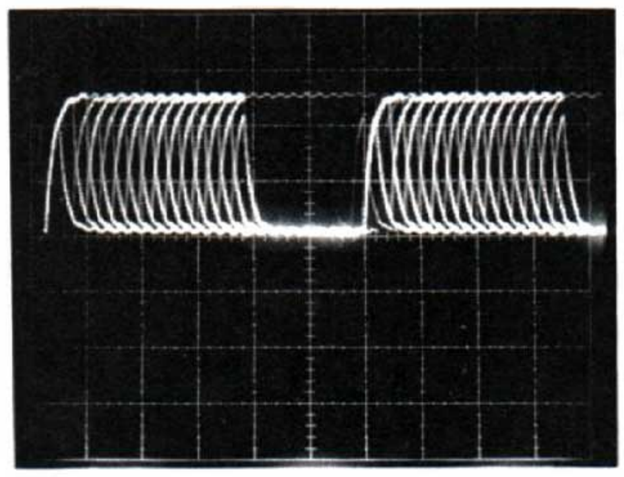


⑮ TP2-2 Pin : PLAY MODE
2V/div 200nsec/div

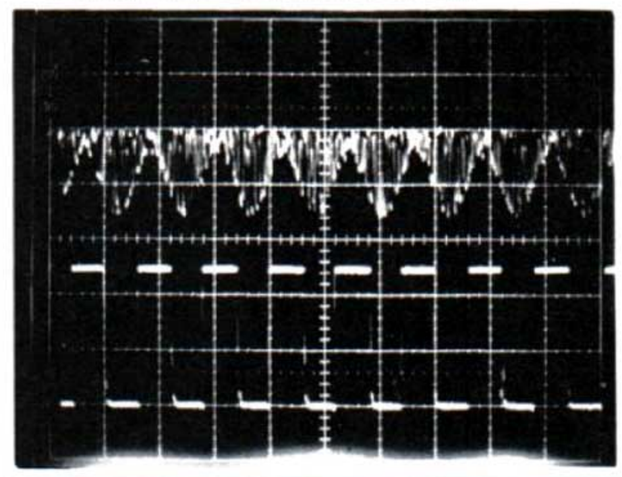


www.hifiengine.com

⑲ IC3-78 Pin : PLAY MODE
2V/div 50μsec/div

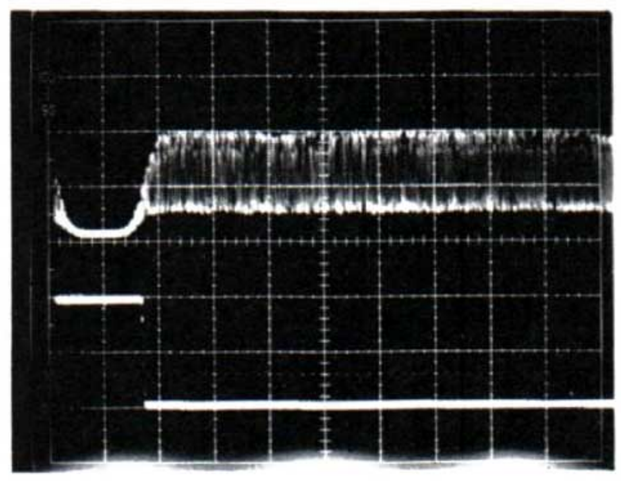


㉓ IC1-22 Pin : TRACKING OPEN
0.1msec/div
Upper TP1-1 Pin : 1V/div
Lower IC1-22 Pin : 2V/div

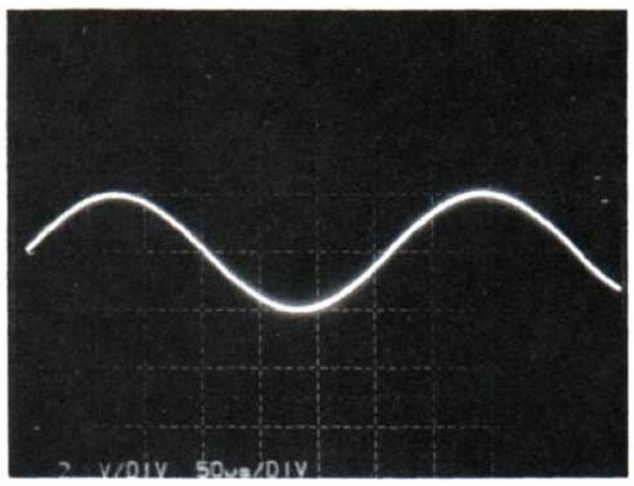


⑳

㉔ IC1-21 Pin : DFCT 0.5msec/div
Upper TP1-1 Pin : 1V/div
Lower IC1-21 Pin : 5V/div



㉑ OUTPUT Lch : PLAY MODE
2V/div 50μsec/div



㉒

㉒

www.hifiengine.com