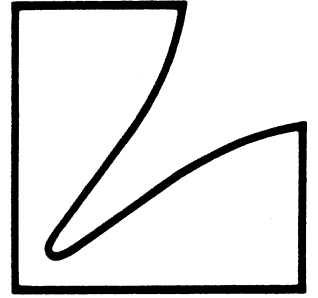
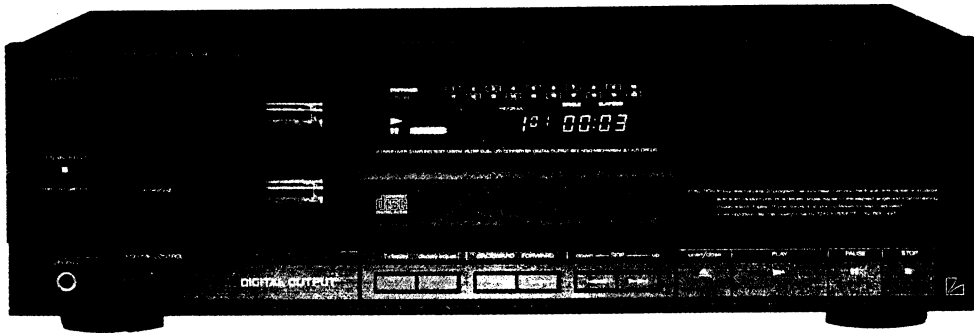


SERVICE MANUAL



Compact Disc Player

D-103u



Adjustment Procedures

1. Compact Disc Section

(1) Connections

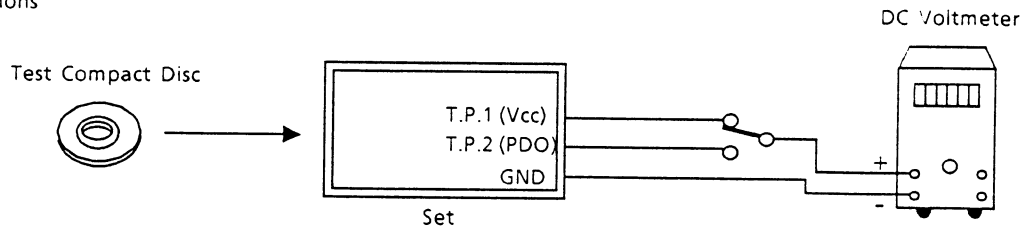


Figure 15

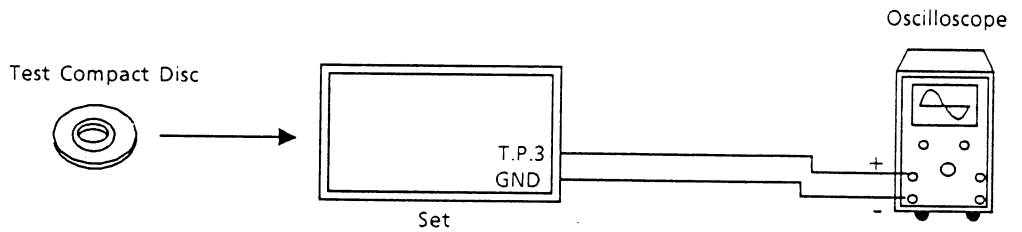


Figure 16

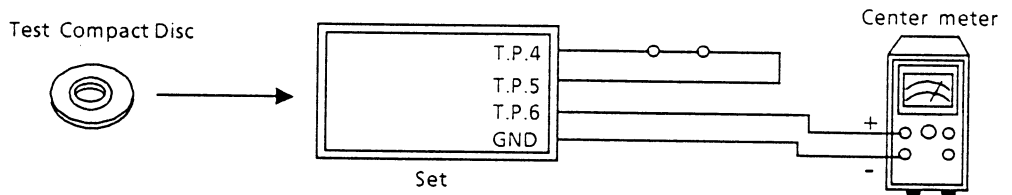


Figure 17

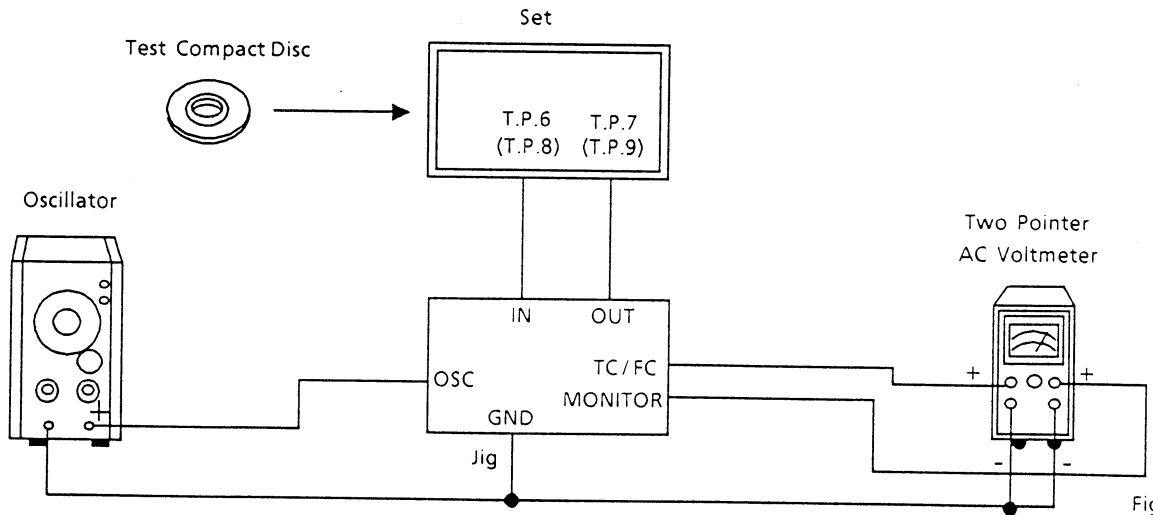


Figure 18

Note : Use the Jig which using for D-105u

(2) Control Settings

Power Switch	ON
Play Switch	ON
Others	OFF

(3) Test CD

Tracking Error Balance Adjustment	SONY YEDS-18 (No7)
	A-BEX TCD-782 (No8)
Others	SONY YEDS-18 (No2)
	A-BEX TCD-782 (No2)

(4) Adjustment Procedures

Step	Description	Connections	Oscillator	Test Point	Adjustment
1	VCO Adjustment	Figure 14	-	T.P.1 T.P.2	Take measurement of the voltage at the T.P.1. Then adjust VR202 so that the output voltage at the T.P.2 becomes. $1/2 \pm 10\text{mV}$ of the voltage at the T.P.1.
2	Focus Bias Adjustment	Figure 15	-	T.P.3	Adjust VR201 so that the T.P.3 (Eye pattern) signal is at its maximum, with a favorable Eye pattern as shown in Figure 18.
3	Tracking Error Balance Adjustment	Figure 16	-	T.P.4 T.P.5 T.P.6	After short circuiting between T.P.4 and T.P.5, turn VR204 fully counterclockwise. When the center meter is connected to the unit, the meter pointer will deflect between "a" and "b" as shown in Figure 19. Adjust VR203 until minimum deflection of the center meter shows "0". In this case, minimum deflection shows "0" stands for that "a". After the adjustment set VR204 to its center position.
4	Tracking Gain Adjustment	Figure 17	1kHz 100mV	T.P.6 T.P.7	Adjust VR204 so that both arms of the voltmeter come at the same position.
5	Focus Gain Adjustment	Figure 17	1kHz 100mV	T.P.8 T.P.9	Adjust VR205 so that both arms of the voltmeter come at the same position.

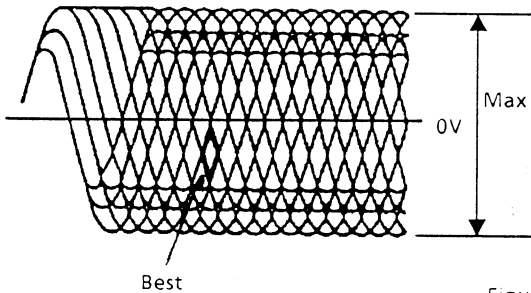


Figure 18

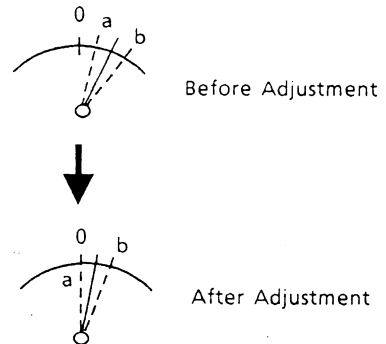
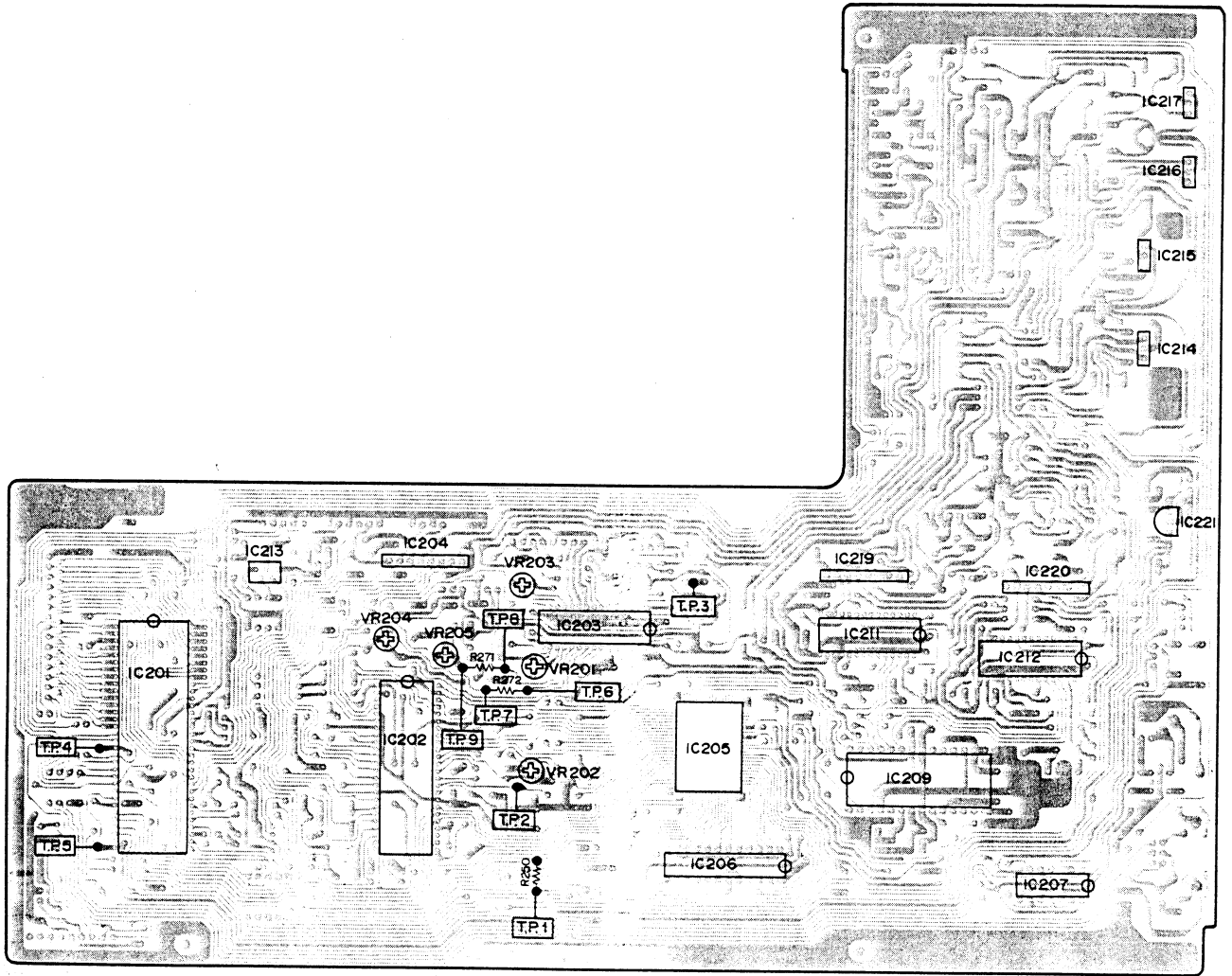


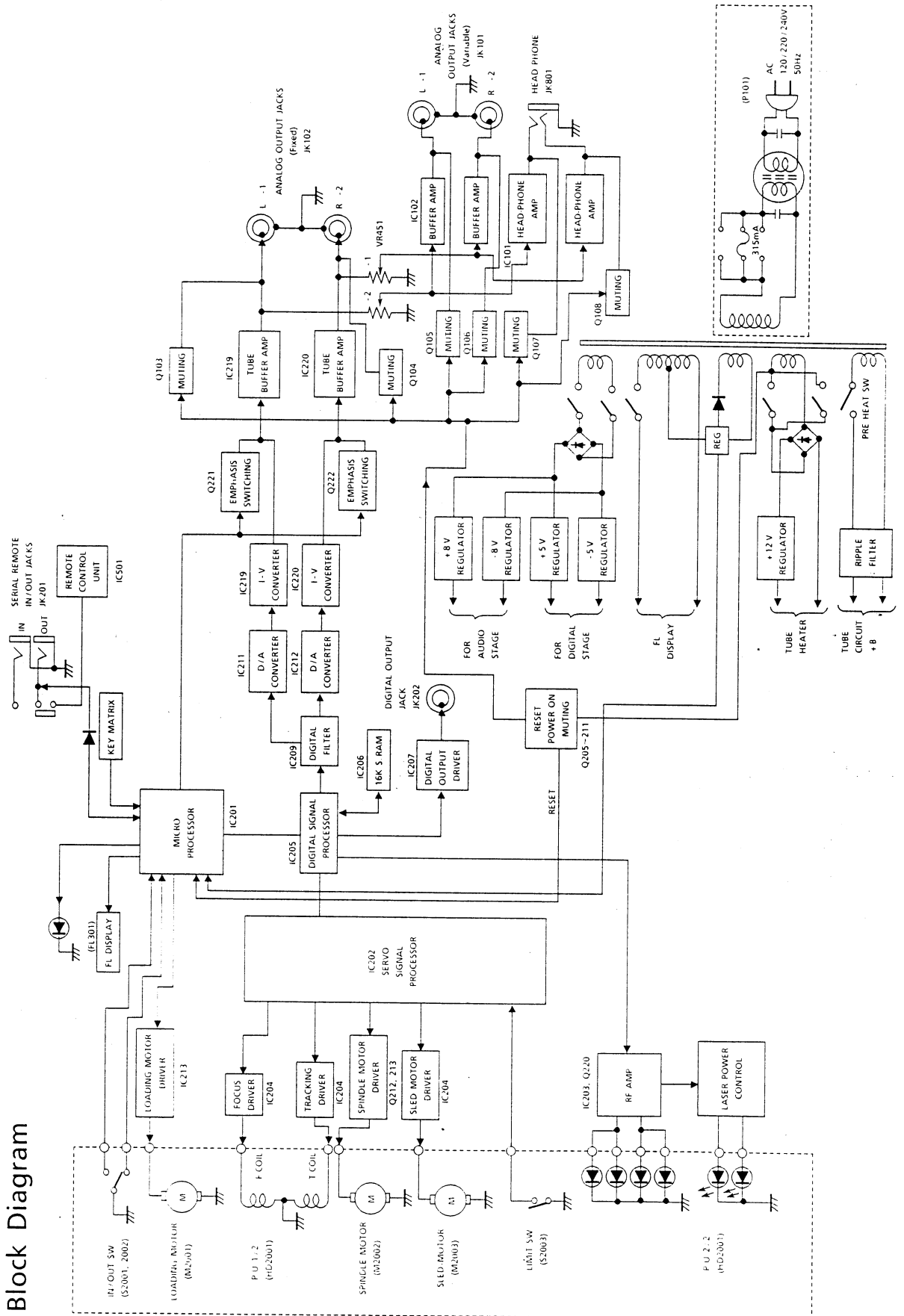
Figure 19

Main P.C. Board (Component Side) EK model



Block Diagram

Block Diagram



Schematic Diagram(1/2)

NOTE

- All resistance values are in ohms $K=1,000 M=1,000,000$
- All capacitance values are in microfarads $P= \frac{1}{1,000,000}$
- General Foreign model only(EK):
 A: West Germany model only(AD).
 others: common.

Voltage Measuring Conditions

- Power Supply Voltage
 - Measuring Meter
 - Measuring Point Reference
 - Measuring Conditions
- AC120/220/240V/50Hz
 Digital Multimeter
 Between Ground
 In play mode of non-signal track
 (TEST CD SONY YEDS-18 TRACK NO.2)

	E	C	B
Q101	-30.2V	-43.8V	-30.7V
Q102	85.1V	130.5V	85.6V
Q103	0V	0V	-7.6V
Q104	0V	0V	-7.6V
Q105	0V	0V	-7.6V
Q106	0V	0V	-7.6V
Q107	0V	0V	-7.6V
Q108	0V	0V	-7.6V
Q204	0V	0V	2.8V
Q205	11.7V	-7.5V	0V
Q206	4.9V	4.9V	0V
Q207	0V	0V	6.3V
Q208	0V	0V	6.3V
Q209	0V	0V	0V
Q210	0V	0V	0V
Q211	0V	0V	0V
Q212	0.6V	—	1V
Q213	0.6V	-12V	1V
Q220	4V	1.8V	2.8V
Q221	0V	0V	-7.6V
Q222	0V	0V	-7.6V
Q223	4.5V	0V	4.8V
Q224	0V	4.5V	0V
Q225	0V	0V	4.5V
Q226	0V	0V	0V

IC201			
1	2.5V	3.2	4.9V
2	-2.2V	3.4	1.4V
3	-2.7V	3.5	4.9V
4	-2.7V	3.6	0V
5	-2.2V	3.7	4.8V
6	-3.2V	3.8	—
7	-3.2V	3.9	0V
8	-3.2V	4.0	0V
9	-3.2V	4.1	0V
10	-3.2V	4.2	0V
11	-3.2V	4.3	2.2V
12	-3.2V	4.4	-1.9V
13	-3.2V	4.5	-1.9V
14	-3.2V	4.6	-1.8V
15	-3.2V	4.7	0V
16	0V	4.8	2.3V
17	-7.6V	4.9	2.3V
18	4.8V	5.0	0V
19	-3.5V	5.1	0V
20	-7.4V	5.2	—
21	0V	5.3	5V
22	4.9V	5.4	0V
23	0.4V	5.5	0V
24	4.9V	5.6	0V
25	4.9V	5.7	-2.2V
26	1.4V	5.8	-2.4V
27	1.4V	5.9	-2.8V
28	4.9V	6.0	-1.7V
29	0V	6.1	-1.0V
30	4.8V	6.2	-1.5V
31	—	6.3	-2.5V
32	5V	6.4	-2.8V

IC204			
1	0V	—	—
2	0V	—	—
3	-4.9V	—	—
4	-4.9V	—	—
5	-4.9V	—	—
6	-4.9V	—	—
7	-4.9V	—	—
8	-4.9V	—	—
9	-4.8V	—	—
10	-4.8V	—	—
11	-4.8V	—	—
12	0V	—	—
13	0V	—	—
14	0V	—	—
15	0V	—	—
16	4.9V	—	—

IC203			
1	0V	—	—
2	1.1V	—	—
3	0V	—	—
4	2.5V	—	—
5	2.8V	—	—
6	-4.8V	—	—
7	0V	—	—
8	0V	—	—
9	0V	—	—
10	0V	—	—
11	0V	—	—
12	-0.6V	—	—
13	-0.4V	—	—
14	0V	—	—
15	-2.2V	—	—
16	-1.9V	—	—
17	-4.9V	—	—
18	0V	—	—
19	0V	—	—
20	0V	—	—
21	-4.8V	—	—
22	0V	—	—
23	-1.7V	—	—
24	-1.2V	—	—
25	0V	—	—
26	2.4V	—	—
27	2.4V	—	—
28	2.4V	—	—
29	0.2V	—	—
30	4.9V	—	—

IC206			
1	2.5V	—	—
2	2.5V	—	—
3	2.4V	—	—
4	2.4V	—	—
5	2.4V	—	—
6	2.4V	—	—
7	2.4V	—	—
8	2.4V	—	—
9	2.4V	—	—
10	1.9V	—	—
11	1.9V	—	—
12	0V	—	—
13	1.9V	—	—
14	1.9V	—	—
15	1.9V	—	—
16	1.9V	—	—
17	1.9V	—	—
18	2.6V	—	—
19	0.3V	—	—
20	2.6V	—	—
21	4.3V	—	—
22	1.9V	—	—
23	2.8V	—	—
24	4.9V	—	—
25	0V	—	—
26	2.4V	—	—
27	2.4V	—	—
28	2.4V	—	—
29	0.2V	—	—
30	4.9V	—	—

IC205			
1	0V	4.1	2.4V
2	-4.8V	4.2	2.4V
3	2.5V	4.3	2.4V
4	2.7V	4.4	2.5V
5	2.4V	4.5	2.5V
6	2.4V	4.6	2.8V
7	4.9V	4.7	1.9V
8	2.4V	4.8	2.2V
9	2.4V	4.9	4.3V
10	0V	5.0	2.6V
11	1.5V	5.1	—
12	0V	5.2	0V
13	4.9V	5.3	2.3V
14	4.9V	5.4	—
15	1.4V	5.5	0V
16	4.9V	5.6	0V
17	0V	5.7	4.9V
18	4.8V	5.8	0V
19	0V	5.9	0V
20	—	6.0	—
21	—	6.1	—
22	—	6.2	—
23	1.4V	6.3	—
24	0V	6.4	—
25	4.9V	6.5	—
26	4.9V	6.6	—
27	2.3V	6.7	—
28	4.8V	6.8	—
29	1.9V	6.9	—
30	1.9V	7.0	—
31	1.9V	7.1	—
32	1.9V	7.2	—
33	4.9V	7.3	4.9V
34	1.9V	7.4	—
35	1.9V	7.5	—
36	1.9V	7.6	2.3V
37	1.9V	7.7	—
38	2.4V	7.8	2.5V
39	2.4V	7.9	2.4V
40	2.4V	8.0	2.5V

IC105	IC214	IC215	IC216	IC217	IC221
1	1.5V	5.7V	-4.9V	7.9V	-7.8V
2	0V	0V	-12.8V	0V	-12.8V
3	1.9V	1.2V	0V	1.2V	0V

IC101	IC102	IC219	IC220
1	0V	0V	0V
2	0V	0V	0V
3	0V	0V	0V
4	-7.8V	-7.8V	-7.8V
5	0V	0V	0V
6	0V	0V	0V
7	0V	0V	0V
8	-7.9V	7.9V	7.9V

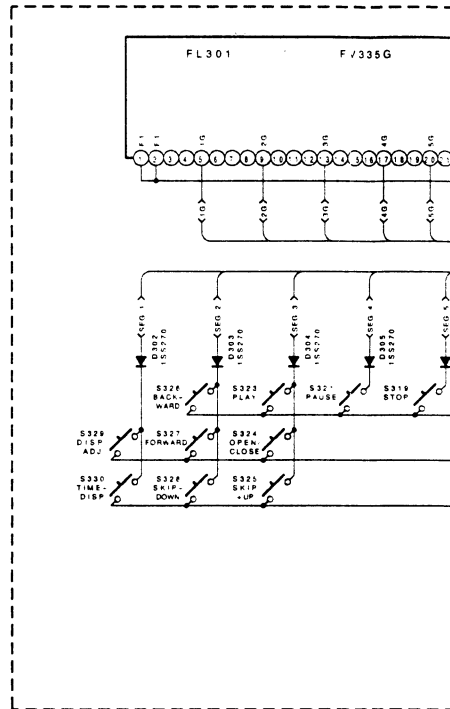
IC213			
1	0	-4.9V	—
2	-4.9	-4.9V	—
3	-12.8V	—	—
4	-4.9	-4.9V	—
5	12V	—	—

IC202			
1	-4.8V	2.5	-4.9V
2	-4.9V	2.5	0V
3	0V	2.5	—
4	0V	2.8	4.9V
5	0V	2.9	0V
6	0V	3.0	4.9V
7	0V	3.1	4.9V
8	0V	3.2	0V
9	0V	3.3	2.4V
10	0V	3.4	2.5V
11	0.9V	3.5	2.3V
12	0V	3.6	2.3V
13	0.3V	3.7	3.5V
14	0V	3.8	2.5V
15	0V	3.9	4.9V
16	4.9V	4.0	2.5V
17	0V	4.1	4.8V
18	-3.2V	4.2	2.5V
19	0V	4.3	4.9V
20	-7.4V	4.4	0V
21	0V	4.5	1.1V
22	-4.9V	4.6	2.4V
23	-3.9V	4.7	0V
24	4.9V	4.8	0V

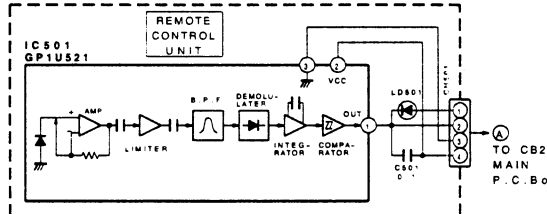
IC209	IC211	IC212
1	2.5V	—
2	2.3V	—
3	4.9V	—
4	4.9V	—
5	2.6V	—
6	2.6V	—
7	2.6V	—
8	0V	2.3V
9	2V	5V
10	4.9V	2V
11	—	3V
12	—	0V
13	—	0V
14	4.7V	0V
15	4.9V	0V
16	4.9V	-7.8V
17	4.9V	0V
18	—	0V
19	—	4.9V
20	—	—
21	0V	—
22	4.9V	—
23	2.1V	3.4V
24	2.1V	1.9V
25	3.7V	3.7V
26	1.9V	1.9V
27	—	-7.8V
28	2.5V	—

IC 5	IC501
TRANSISTORS (O)	Q101

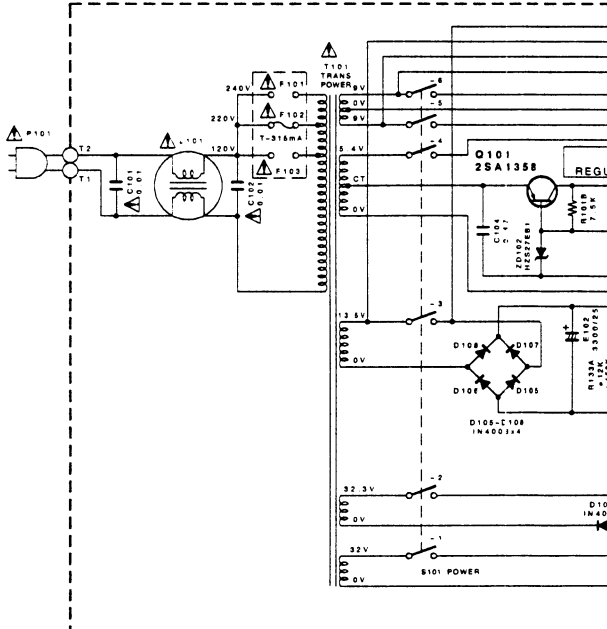
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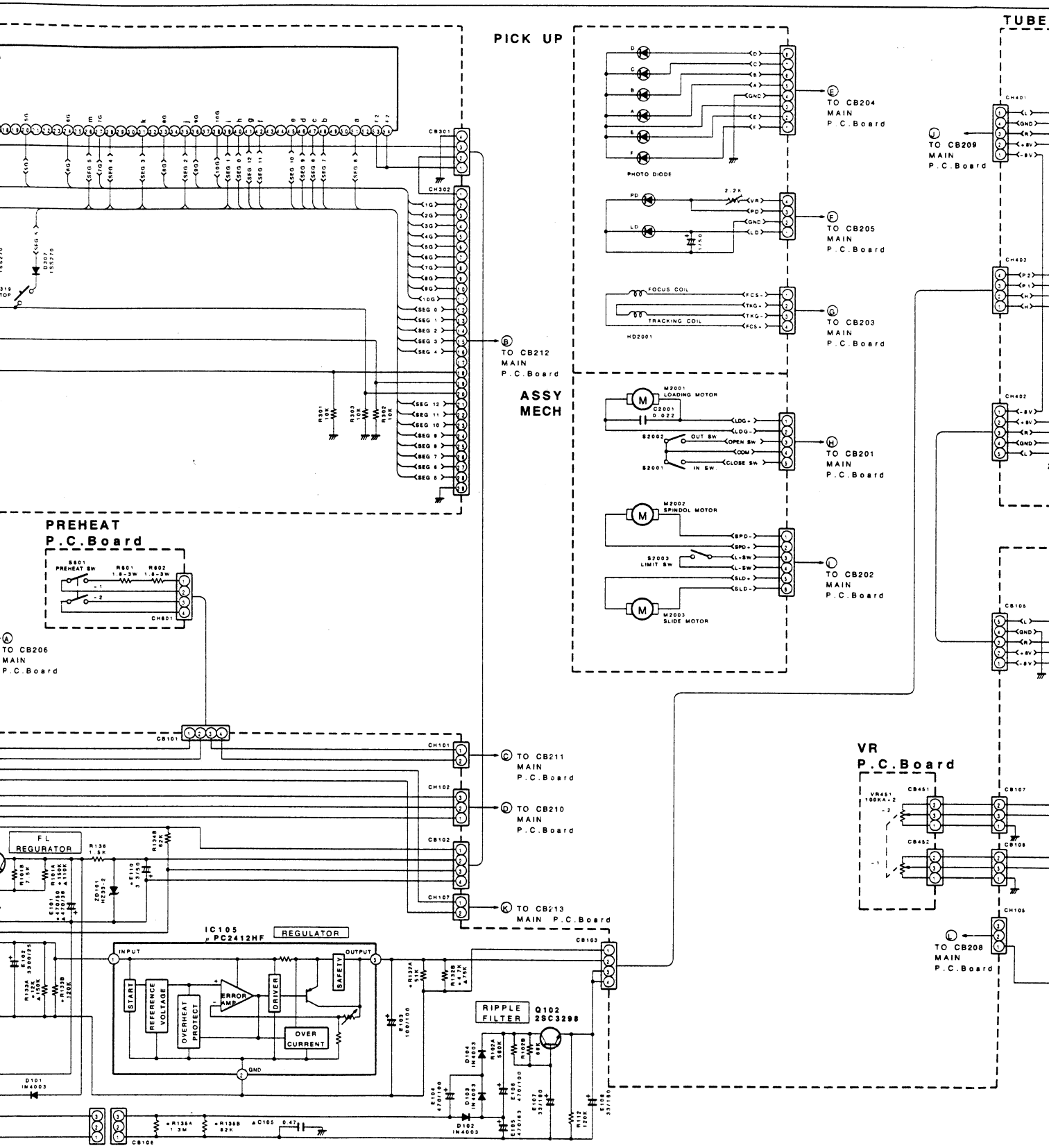


REMOTE P.C. Board



POWER SUPPLY P.C. Board



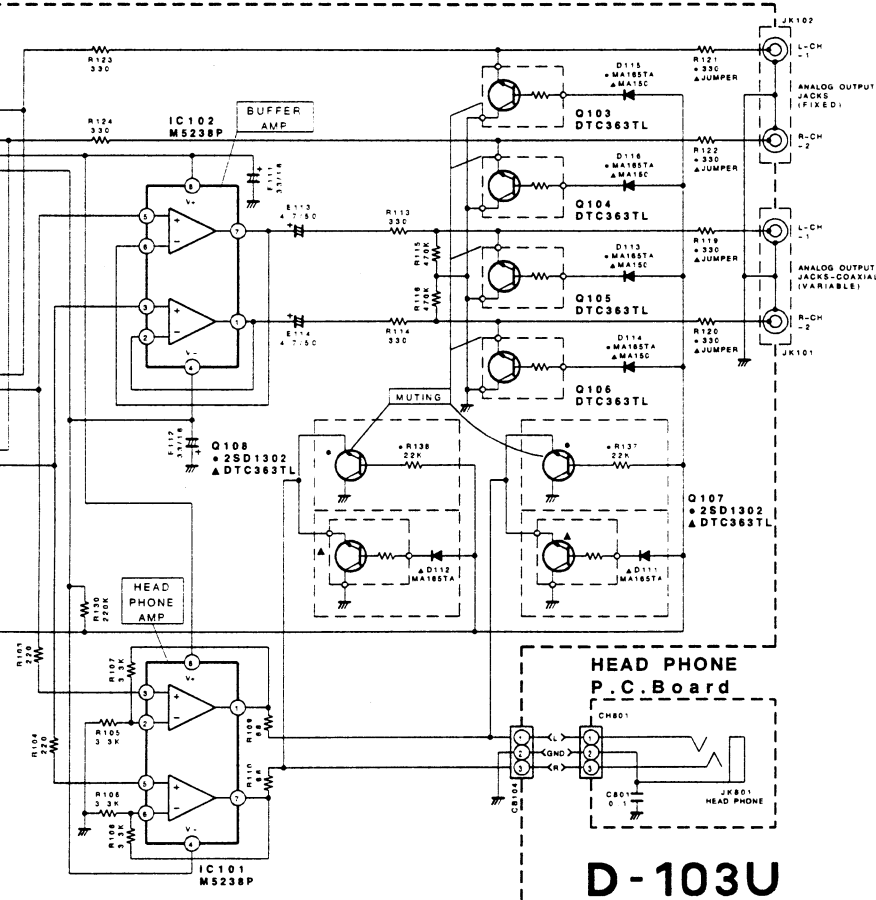
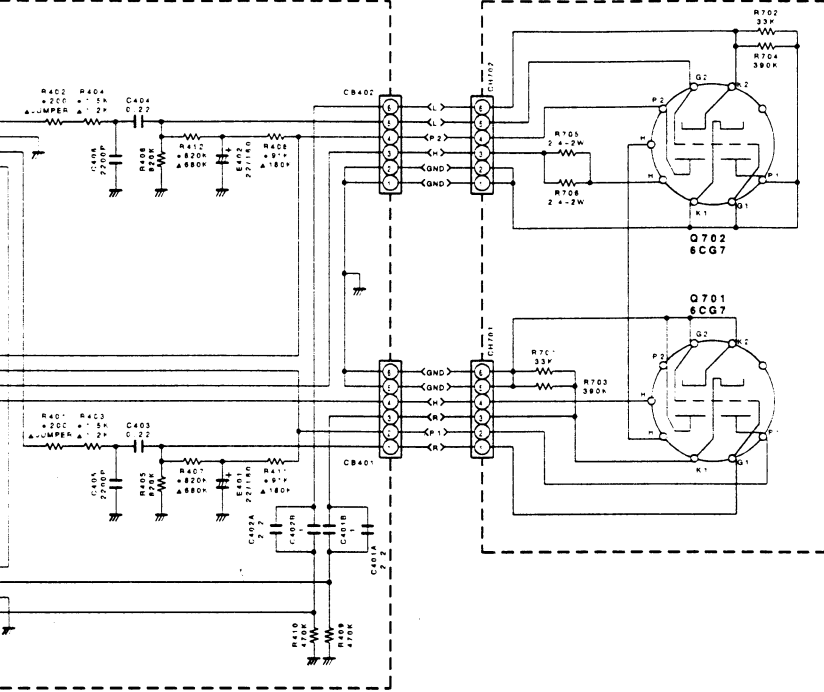


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IC 101

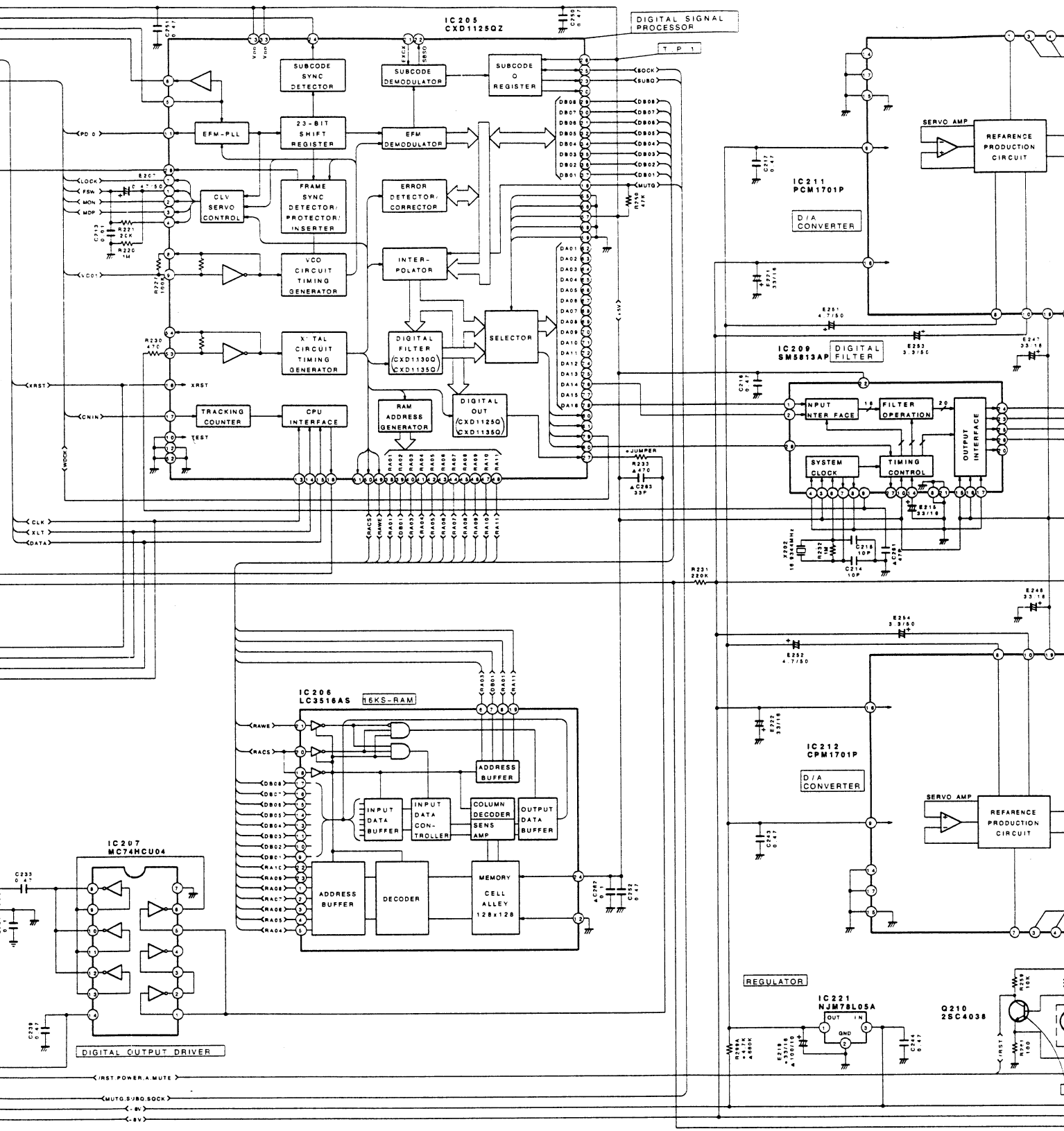
Q 103 Q 105 Q 108 Q 702
Q 104 Q 106 Q 107 Q 701

P.C. Board 2

TUBE P.C. Board 1



D-103U



Q210

Q209

Q206

Q221
Q222
Q207
Q208

Q211

Q205

