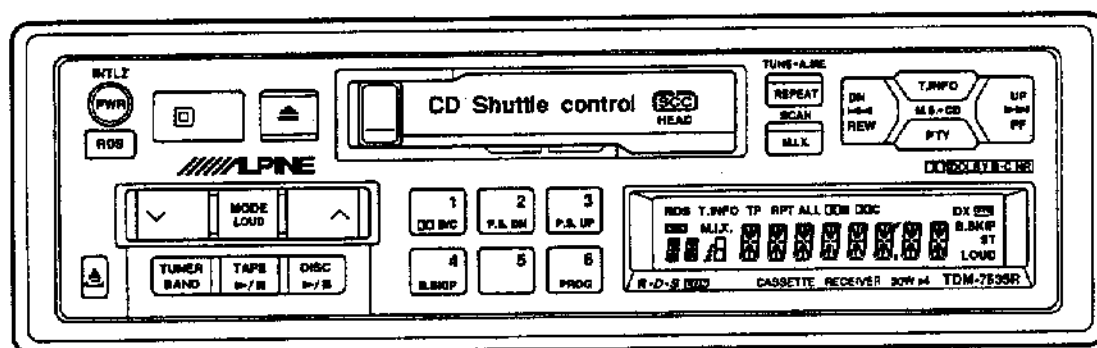


ALPINE® SERVICE MANUAL

FM/MW/LW/RDS Cassette Receiver

CD Shuttle Controller

- For the cassette deck mechanism parts (GR75H110/120) of this model, refer to the Service Manual • GR/GR-Y Series (68P20504W07).

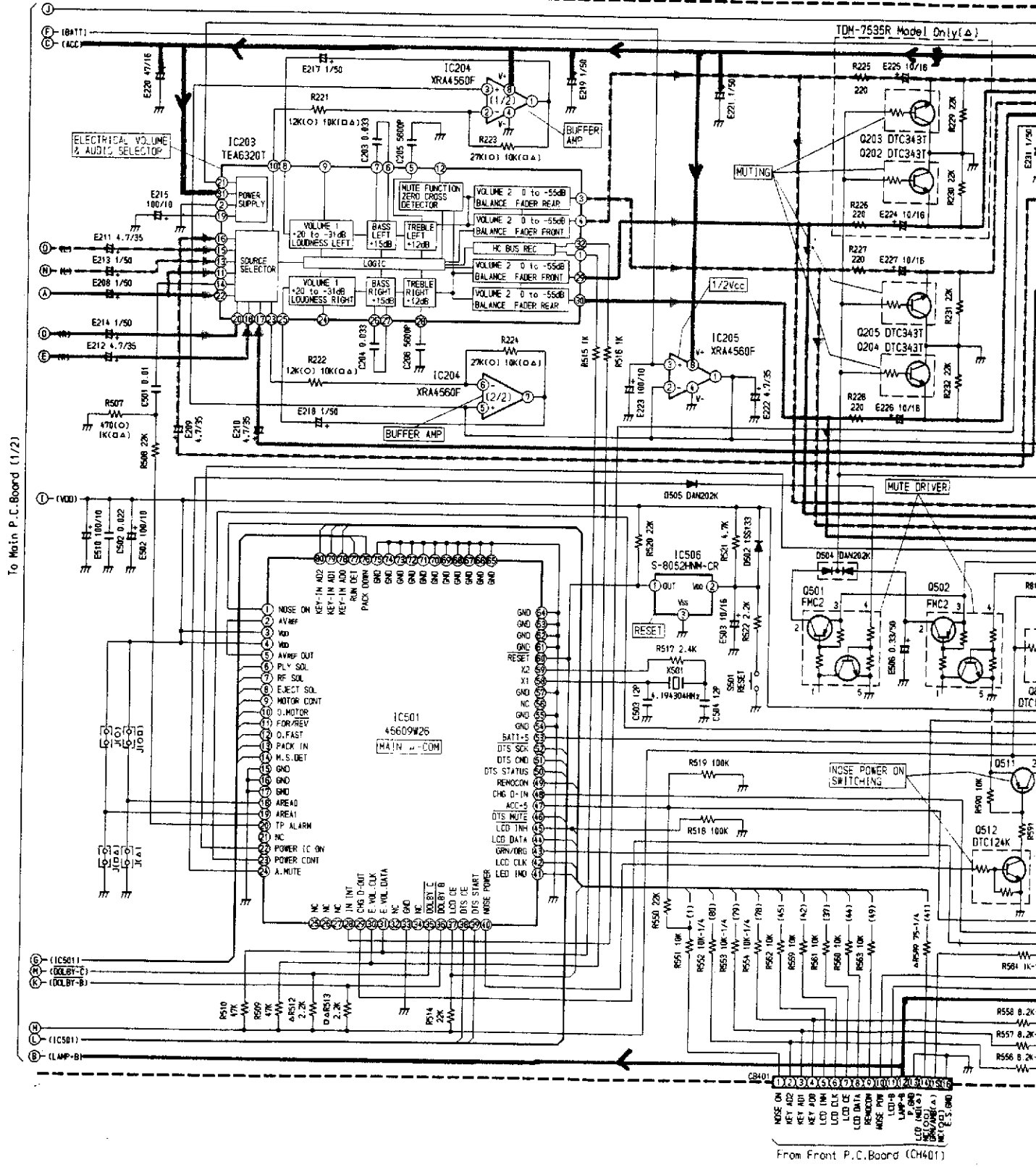


TDM-7531R/TDM-7532R
TDM-7535R

Schematic Diagram (2/3)

IC	IC203	IC501	IC204	IC506	IC205	0203	0202	0205	0204	0501	0502	0512	0511
Transistor (Q)													

Main P.C.Board (2/2)



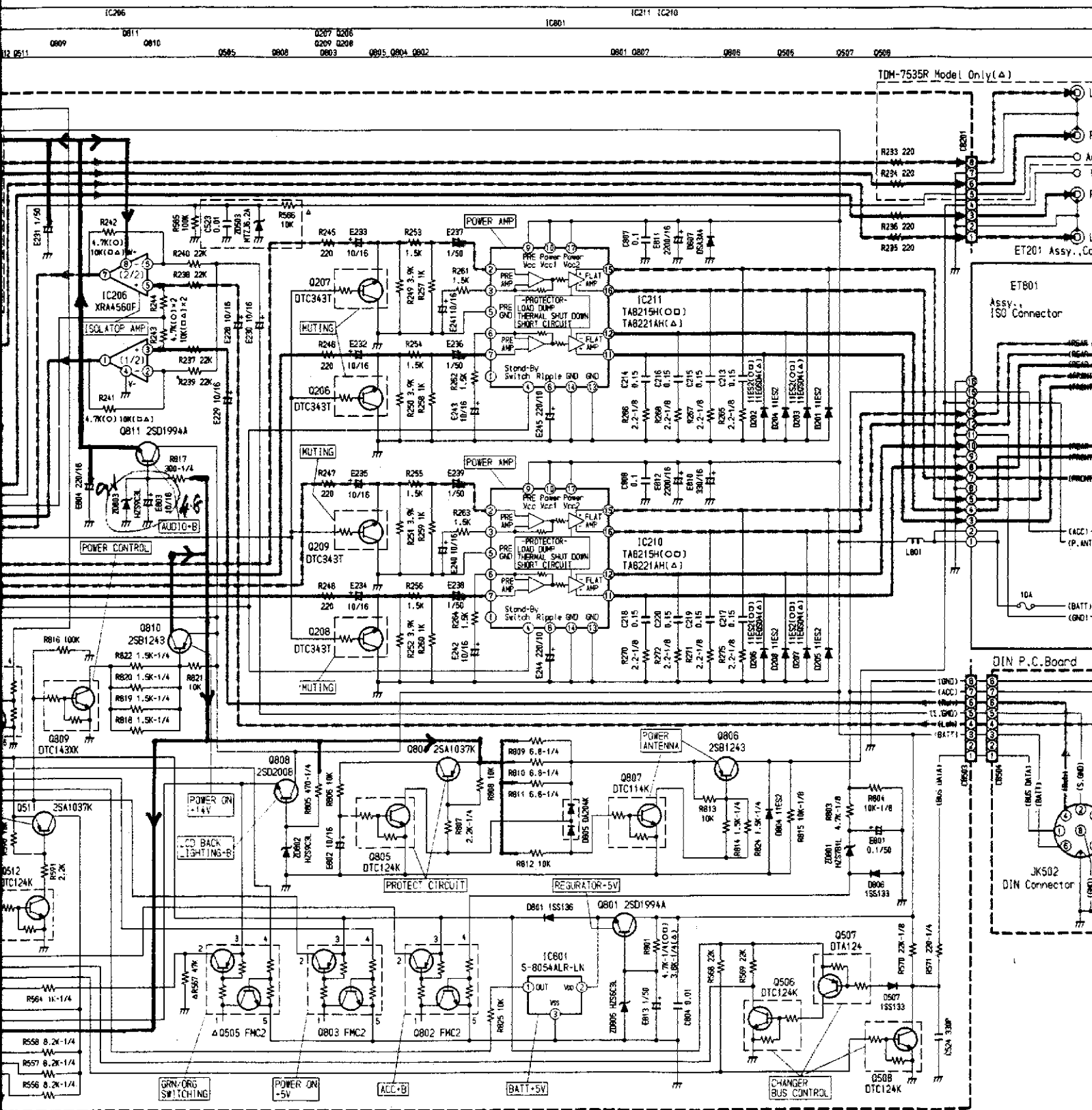
To Main P.C.Board (1/2)

From Front P.C.Board (CH401)

A

C

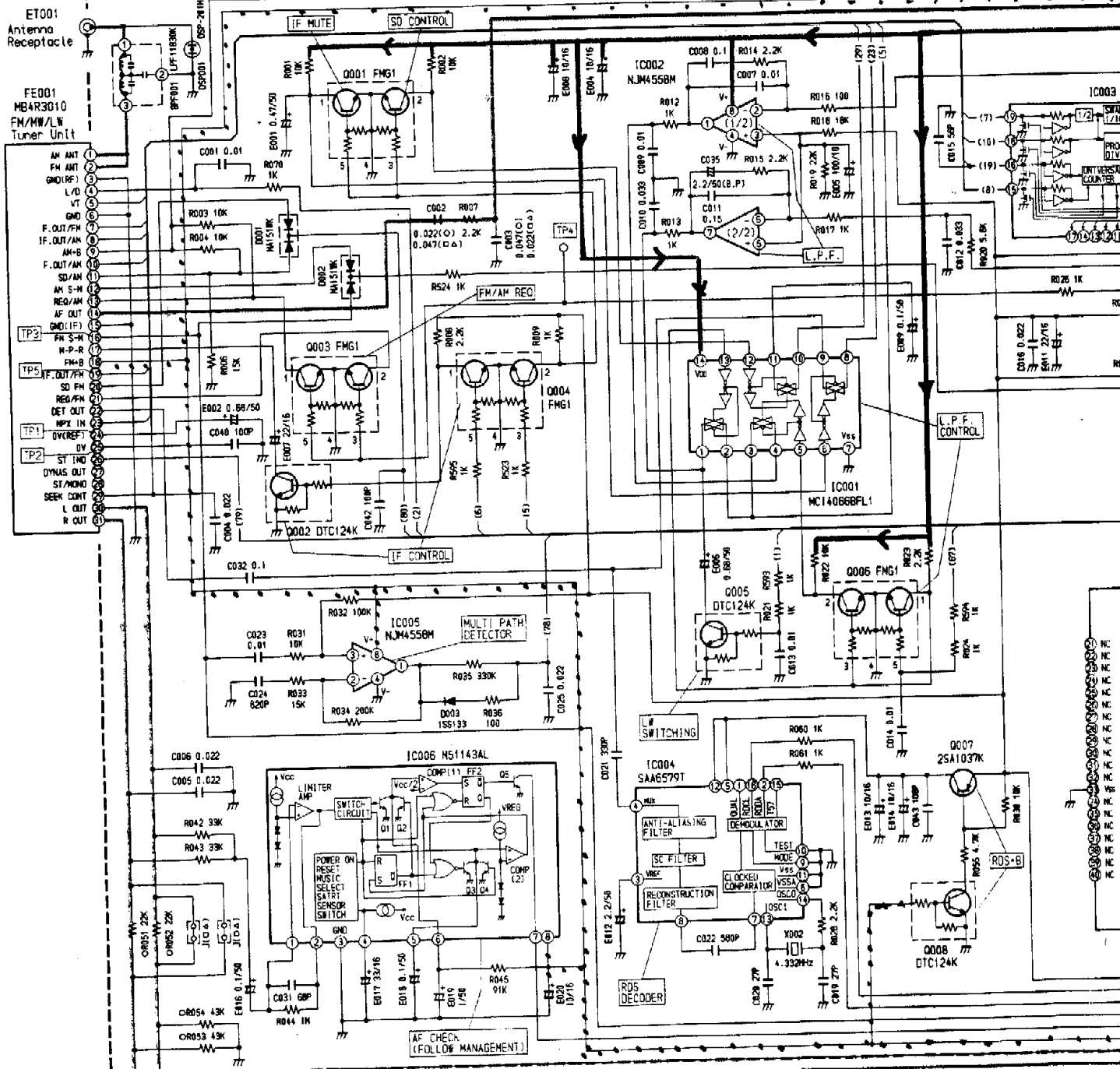
D

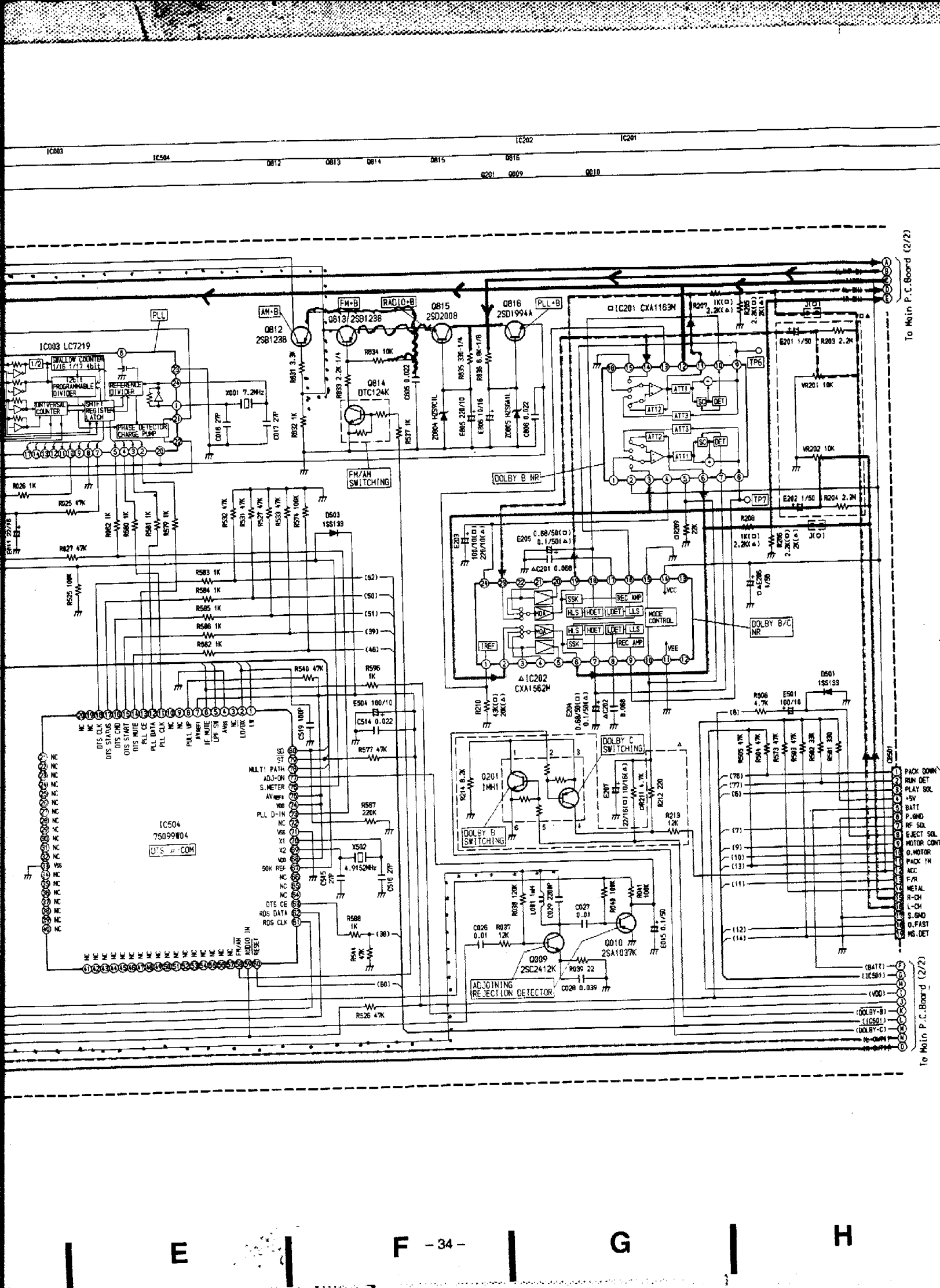


Schematic Diagram (1/3)

IC	IC805 (C306)		IC002	IC804	IC001	IC003
Transistor (Q)	Q002 Q003	Q001	Q004	Q005	Q006	Q007

Main P.C.Board (1/2)





To Main P.C. Board (2/2)

To Main P.C. Board (2/2)

E

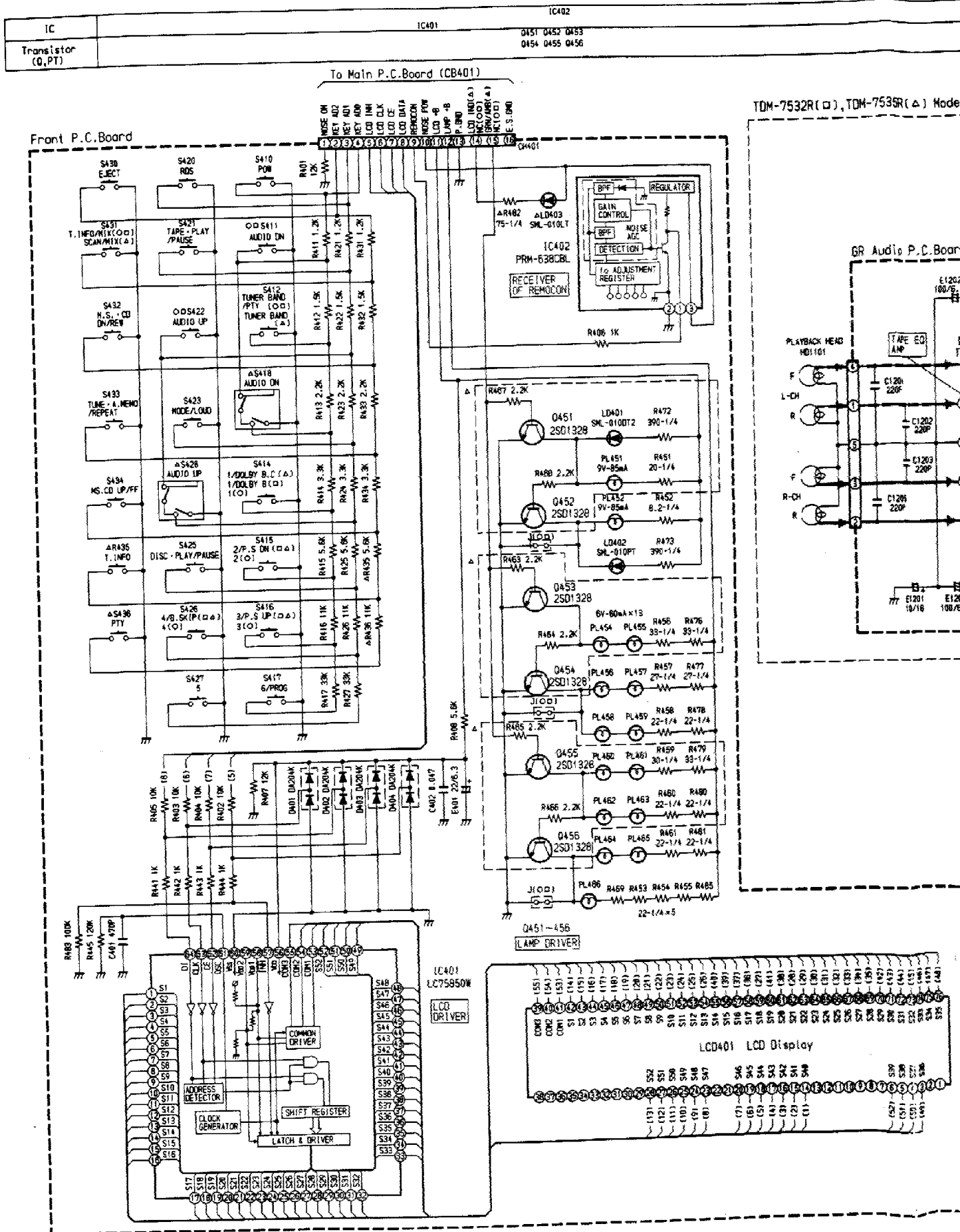
F

- 34 -

G

H

Schematic Diagram (3/3)



IC1201(PA)

IC1502
IC1201(O)

IC1501

Q1502

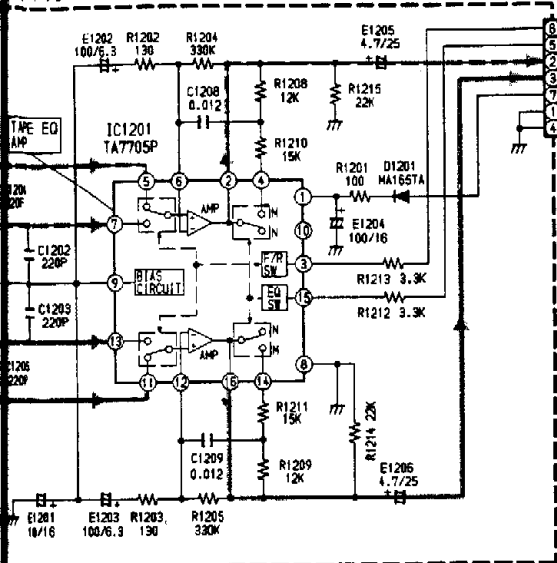
PT1501

Q1501

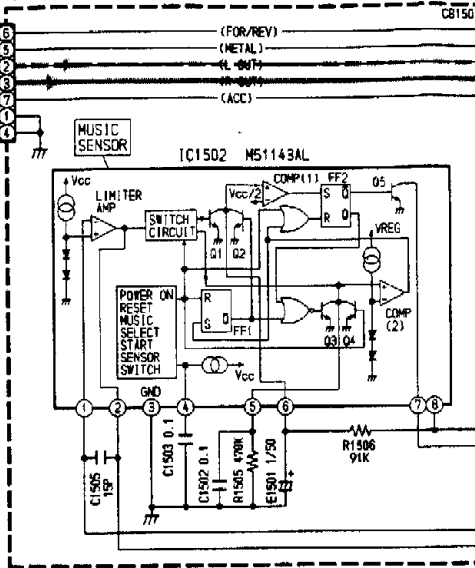
Q1701

SR(Δ) Model Only

to P.C. Board



GR Control P.C. Board



To Main P.C. Board (CB501)

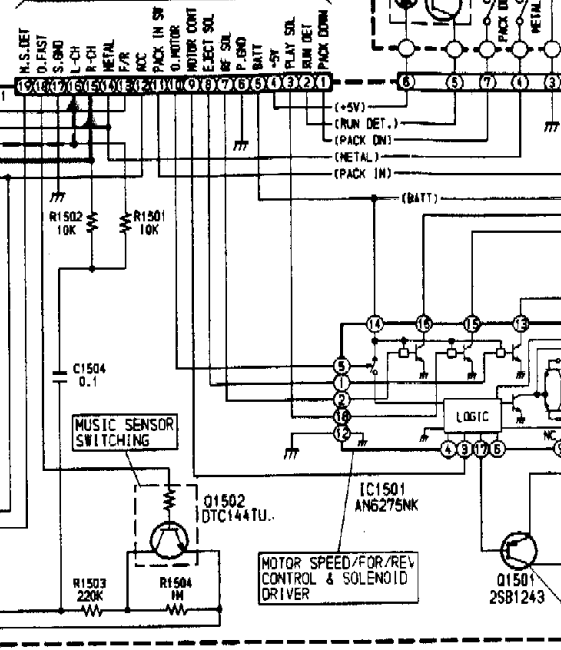
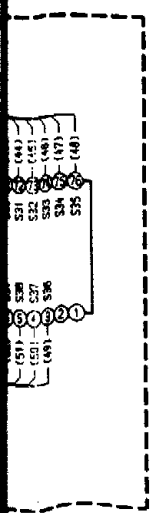
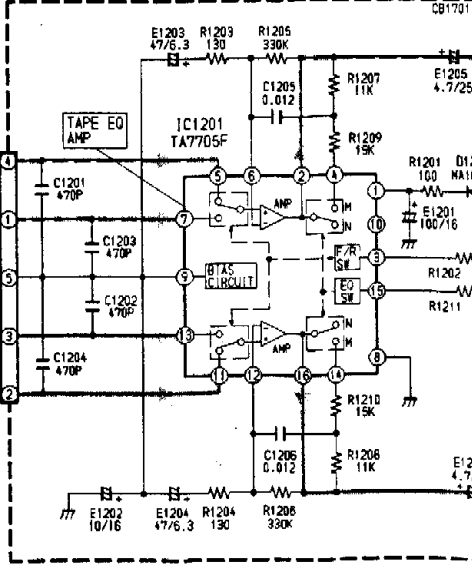


Photo P.C. Board

TDM-7531R(O) Model Only



GR Control P.C. Board



To Main P.C. Board (CB501)

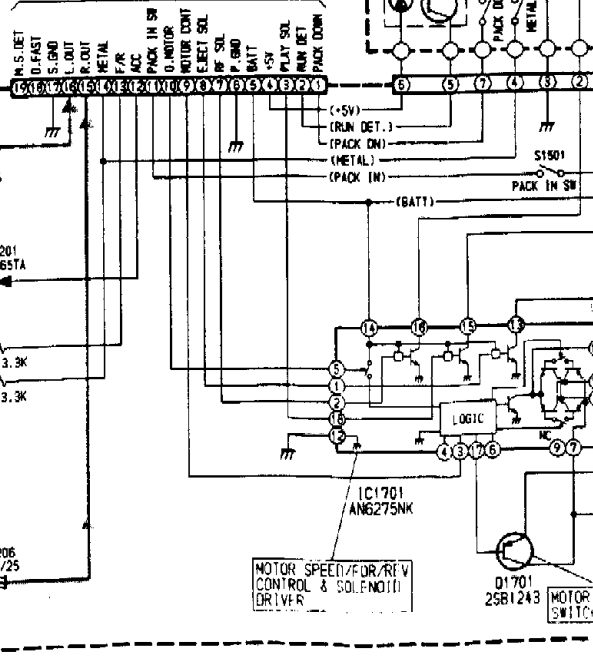


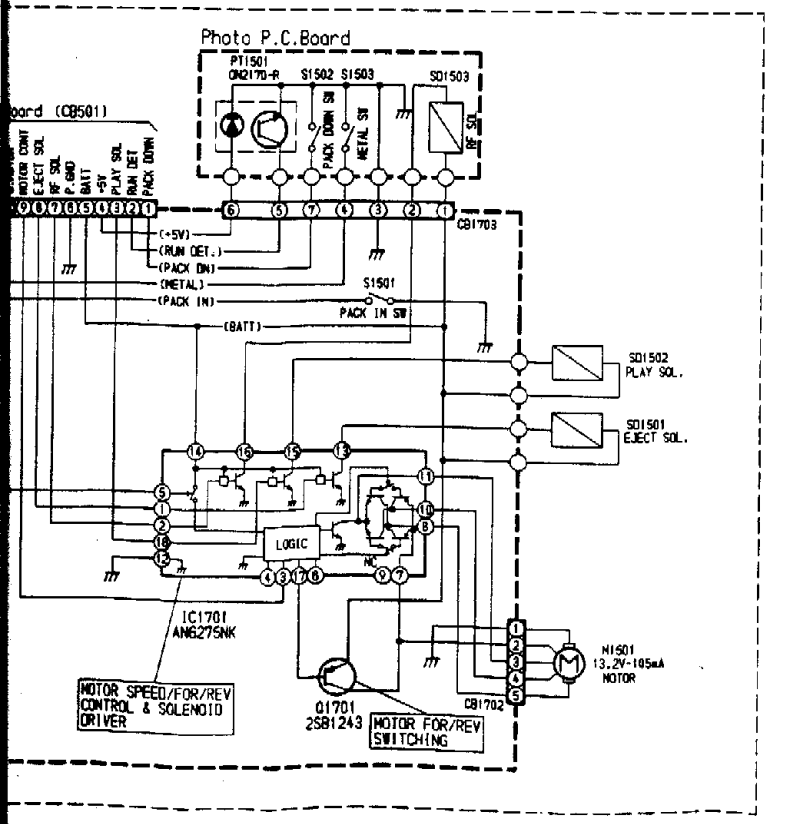
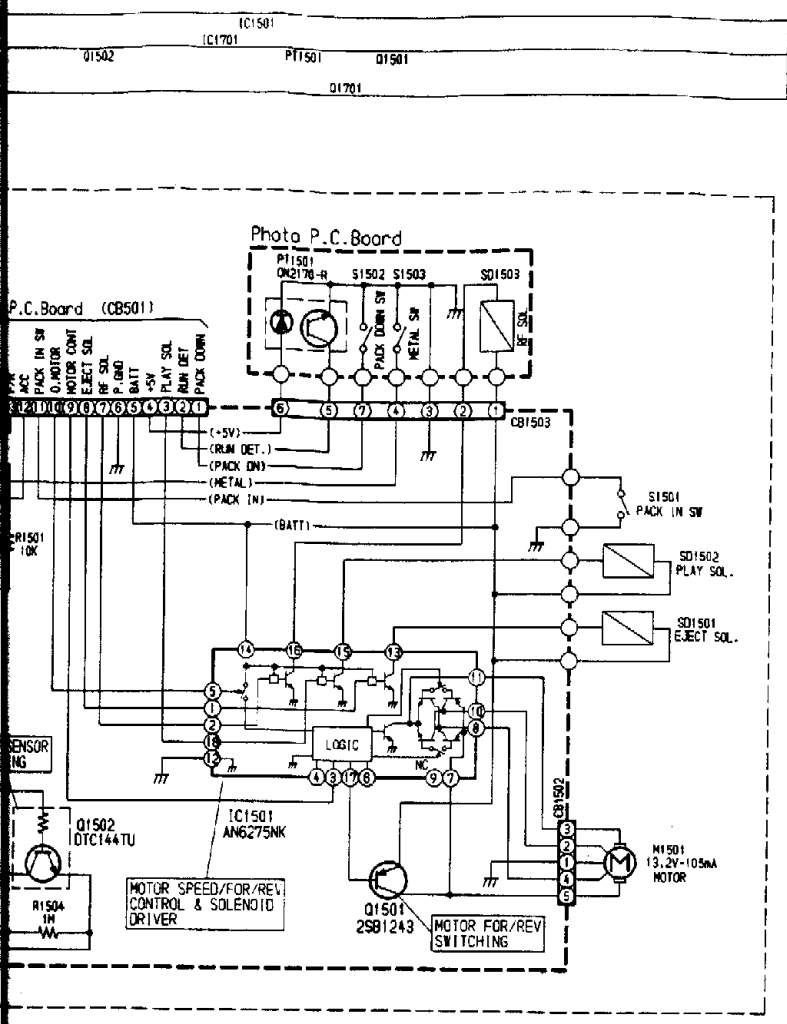
Photo P.C. Board

E

F - 40 -

G

H



IC401

Pin	Mode
1-66	PS
56	5.5V
57	0V ~ -5V IMH
58	-
59	-
60	0V
61	PS OSC
62	0V ~ -5V CE
63	0V ~ -5V CLK
64	0V ~ -5V DATA

IC402

1	0V ~ -5V
2	0V
3	5V

□ IC1201

1	13.1V	9	2.9V
2	3.1V	10	-
3	4.9V	11	2.9V
4	3.1V	12	2.9V
5	2.9V	13	2.9V
6	2.9V	14	3.1V
7	2.9V	15	0.1V
8	0V	16	3.1V

○ IC1201

1	10.8V	9	2.9V
2	3V	10	-
3	5.1V	11	2.9V
4	3V	12	2.9V
5	2.9V	13	2.9V
6	2.9V	14	3V
7	2.9V	15	0V
8	0V	16	3V

□ IC1501

1	0V	10	13.9V
2	0V	11	8.1V
3	5.1V	12	0V
4	-	13	14V
5	5.1V	14	14V
6	-	15	0.2V
7	13.9V	16	14V
8	8.2V	17	13.2V
9	-	18	5.1V

□ IC1502

1	1.41V
2	1.38V
3	0V
4	1.31V
6	0.02V
7	0.05V
8	14.01V

○ IC1701

1	0V	10	11.9V
2	0V	11	5.7V
3	5.1V	12	0V
4	-	13	12V
5	5.1V	14	12V
6	-	15	0.2V
7	11.9V	16	12V
8	5.7V	17	11.3V
9	-	18	5.1V

	B	C	E	MODE
△Q451	0V/4.3V	9.2V/0V	0V/0V	GRN/ORG
△Q452	9.1V/0V	0V/9.2V	0V/0V	GRN/ORG
△Q453	0V/4.3V	13.8V/0V	0V/0V	GRN/ORG
△Q454	13.7V/0V	0V/13.8V	0V/0V	GRN/ORG
△Q455	0V/4.3V	13.8V/0V	0V/0V	GRN/ORG
△Q456	13.7V/0V	0V/13.8V	0V/0V	GRN/ORG
□△Q1501	13.6V	13.8V	14V	
□△Q1502	3.8V	0.4V	0V	
○Q1701	11.3V	11.9V	12V	

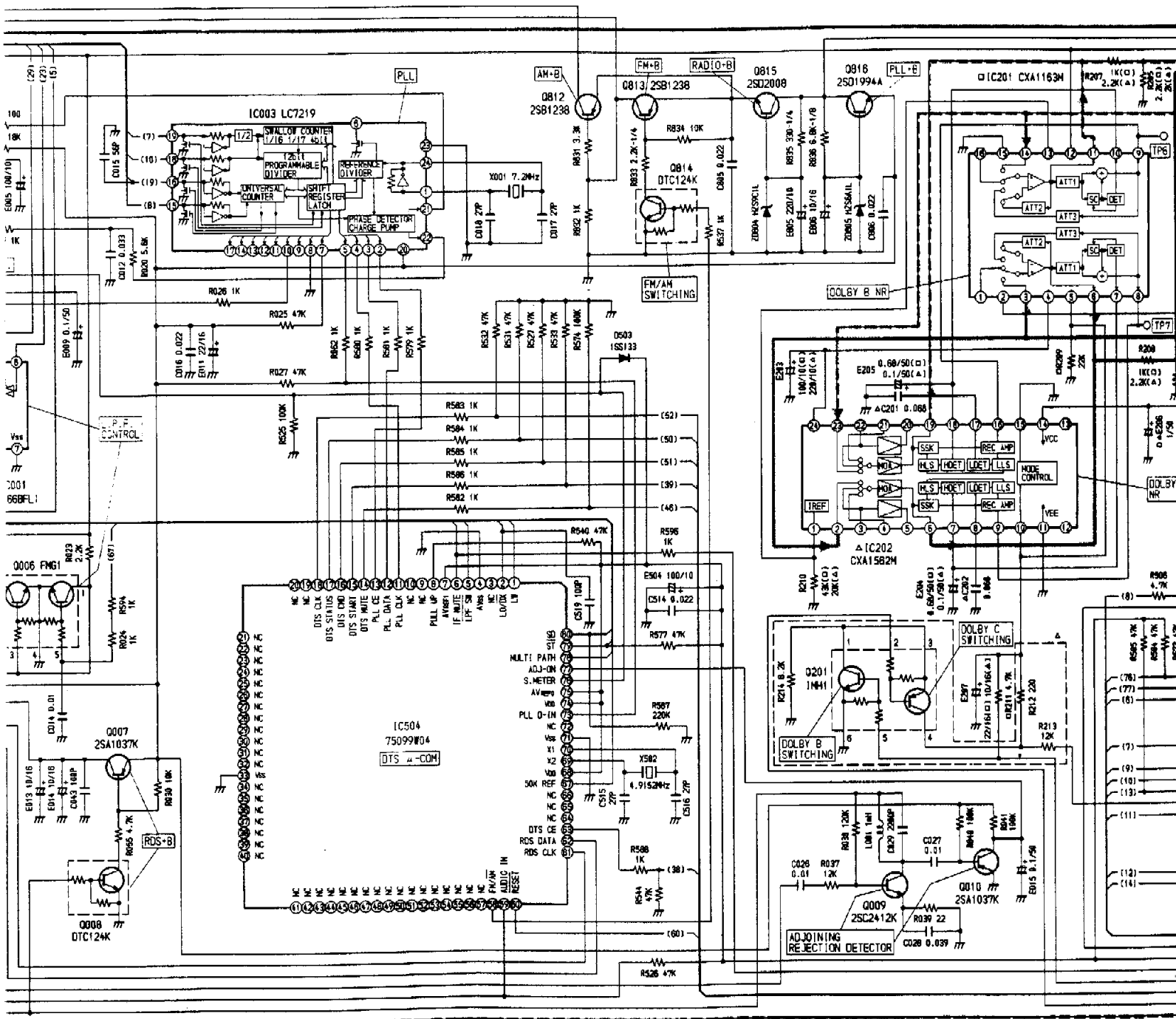
[Measuring Conditions]

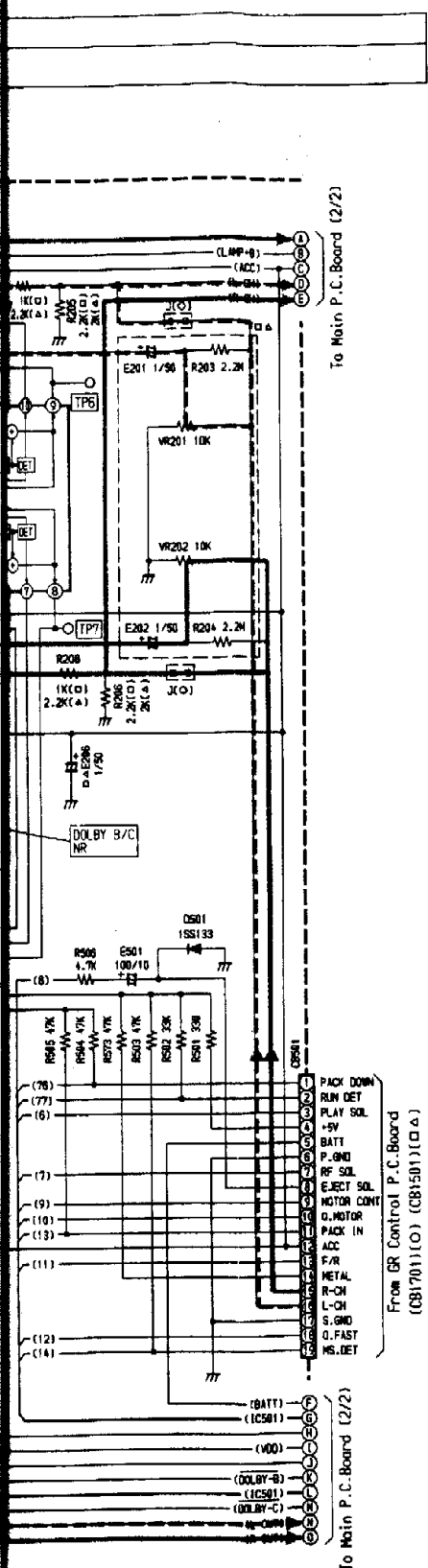
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : FM : 98.1MHz, 1W Output
MW : 999kHz, 0.16W Output
LW : 216kHz, 0.16W Output
TAPE : MTT-212, 1W Output

Note : ○ : For TDM-7531R Model Only,
□ : For TDM-7532R Model Only,
△ : For TDM-7535R Model Only,
Others : Common.

NOTES:

- All resistance values are in ohms. K = 1,000
- All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$





To Main P.C. Board (2/2)

To Main P.C. Board (2/2)

From GR Control P.C. Board
(CB1701)(O) (CB1501)(O4)

	MODE		MODE
1	2.2V/4.2V RDS ON/OFF	8	2.4V FM
2	4.2V VT	9	2.4V FM
3	4.2V VT	10	0V/2.3V SEEK ON/OFF
4	2.2V/5.1V RDS ON/OFF	11	0V FM
5	9.4V/0V RDS ON/OFF	12	9.4V FM
6	9.4V FM	13	0V/8.5V FM/AM
7	0V	14	9.4V

	MODE
1	4.2V FM
2	2.7V FM
3	2.7V FM
4	0V
5	2.7V FM
6	2.7V FM
7	2.2V/4.2V RDS ON/OFF
8	9.4V

	MODE		MODE
1	—	9	0V
2	5V FM	10	0V
3	2.4V FM	11	0V
4	2.4V FM	12	4.9V XTAL
5	4.8V	13	8.3V XTAL
6	0V	14	2.4V XTAL
7	2.4V FM	15	—
8	2.4V FM	16	4.8V FM

	MODE		MODE
1	0V XTAL	13	—
2	4.9V SEEK ON	14	—
3	4.9V SEEK ON	15	2.8V MW/LW
4	4.9V SEEK ON	16	0V FM
5	4.7V SEEK ON	17	—
6	—	18	2.5V MW/LW
7	4.8V FM	19	2.8V FM
8	0V	20	4.8V
9	—	21	2.7V FM
10	4.8V FM	22	2.7V FM
11	—	23	0V
12	—	24	2.5V XTAL

	MODE
1	4.8V FM
2	4.8V FM
3	4.8V FM
4	0V
5	—
6	—
7	—
8	9V

	MODE
1	1.4V FM
2	1.4V FM
3	0V
4	1.3V FM
5	0V FM
6	0V/8.5V MOD. ON/OFF
7	0V/8.5V MOD. ON/OFF
8	9V

	MODE
1	—
2	9.2V
3	SKL R OUT
4	4.7V TAPE
5	3.8V/0V DOLBY OFF/B
6	SKL R OUT
7	0.38V/0.64V/0.7V DOLBY OFF/B
8	4.9V TAPE
9	4.9V TAPE
10	0.38V/0.7V DOLBY OFF/B
11	SKL L OUT
12	9.5V
13	1.2V TAPE
14	SKL L OUT
15	0V
16	—

	MODE		MODE
1	1.2V TAPE	13	—
2	SKL R OUT	14	9.4V
3	—	15	0V
4	—	16	4.7V TAPE
5	—	17	0.38V/0.64V/0.7V DOLBY NR/B/C
6	SKL R OUT	18	0.38V/0.64V/0.7V DOLBY NR/B/C
7	0.38V/0.64V/0.7V DOLBY NR/B/C	19	SKL L OUT
8	0.38V/0.64V/0.7V DOLBY NR/B/C	20	—
9	4.7V TAPE	21	—
10	0V/8.5V/3V DOLBY NR/B/C	22	—
11	0V	23	SKL LIN
12	—	24	4.7V TAPE

	MODE		MODE
1	5V LW	63	5V FM
2	5V/0V LOIDX	64	—
3	—	65	—
4	0V	66	—
5	5V FM	67	3V/0V RDS ON/OFF
6	0V FM	68	5V
7	5V FM	69	PS XTAL
8	5V FM	70	PS XTAL
9	—	71	0V
10	—	72	—
11-18	0V-8V FM	73	4.7V SEEK ON
19-32	—	74	5V
33	0V	75	5V
34-57	—	76	0V FM
58	5V/0V FM/AM	77	5V FM
59	5V A-IN	78	5V FM
80	0V/5V RESET ON/OFF	79	0V/5V ST/MONO
61	5V FM	80	0V FM
62	5V FM		

	B	C	E	MODE
Q002	3.5V	0V	0V	FM
Q005	4.7V/0V	0V/0V	0V/0V	LW ON/OFF
Q007	4.2V	4.8V	4.9V	FM
Q008	9V	0V	0V	FM
Q009	0.8V	8.8V	0V	FM
Q010	4.8V	0V	4.8V	FM
CB12	8V/8.5V	0V/9V	9.1V/9.1V	FM/AM
CB13	8.4V/8.1V	9V/0.7V	9V/8.1V	FM/AM
CB14	4.8V/0V	0V/9V	0V/0V	FM/AM
CB15	9.5V	13.8V	9.1V	TUNER
CB16	5.5V	13.8V	4.9V	TUNER

	MODE
1	0V/8.5V SEEK ON/OFF
2	0V/8.5V SEEK ON/OFF
3	3V/0V SEEK ON/OFF
4	0V
5	3V/0V SEEK ON/OFF

	MODE
1	7.8V/0V REQ ON/OFF
2	1V/0V REQ ON/OFF
3	0V/4.5V REQ ON/OFF
4	0V
5	0V/4.5V REQ ON/OFF

	MODE
1	0V/4V IF MUTE ON/OFF
2	3V/0V SEEK ON/OFF
3	0V/5V SEEK ON/OFF
4	0V
5	4.2V/0V IF MUTE ON/OFF

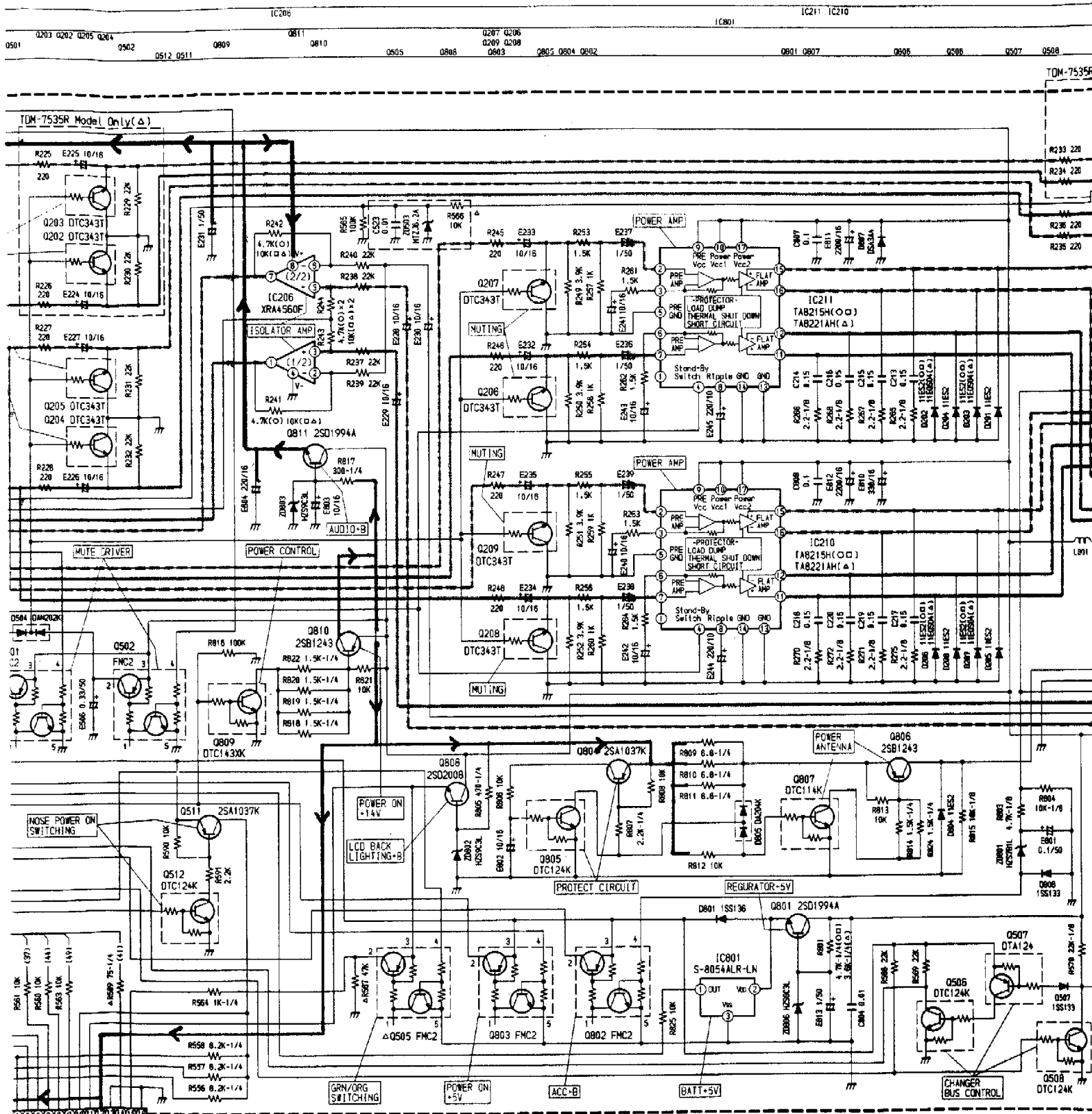
	MODE
1	0V/8.7V RDS ON/OFF
2	8.8V/0V RDS ON/OFF
3	0V/8.7V RDS ON/OFF
4	0V
5	4.7V/0V RDS ON/OFF

	MODE
1	0V/3.7V/0V DOLBY OFF/B/C
2	4.8V/4.9V/0V DOLBY OFF/B/C
3	0V/4.3V/0.2V DOLBY OFF/B/C
4	3V/0V/5V DOLBY OFF/B/C
5	0V DOLBY OFF/B/C
6	0V

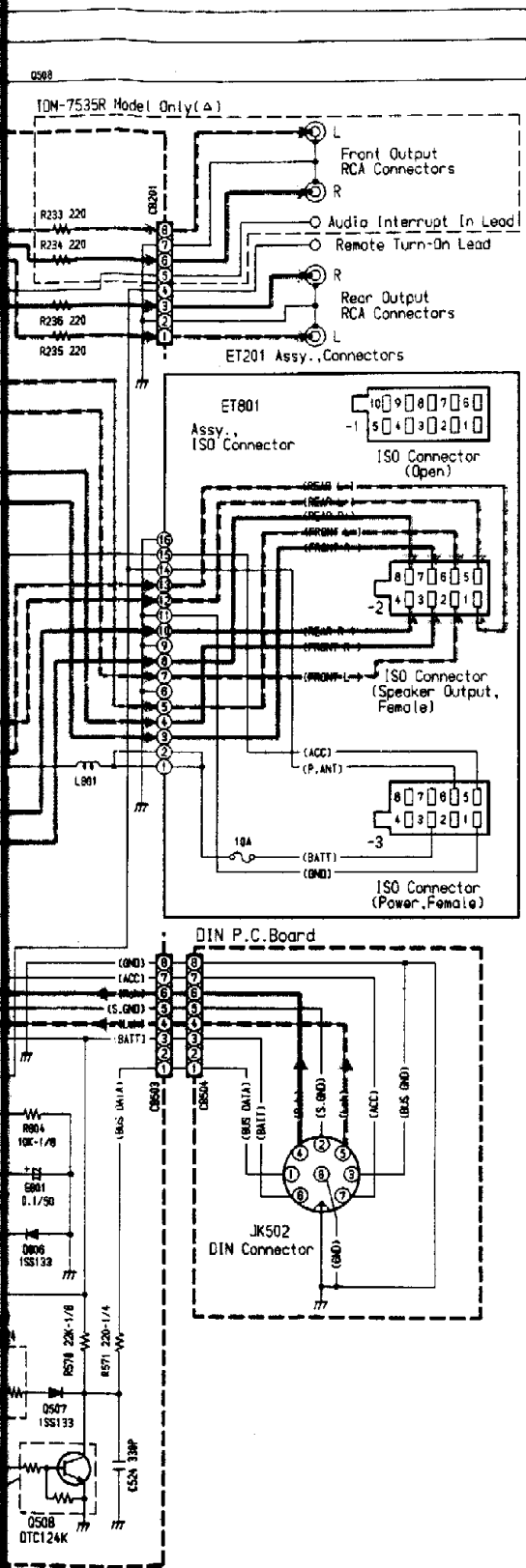
[Measuring Conditions]
 • Power Supply Voltage : DC14.4V
 • Measuring Meter : Digital Multi Meter
 • Measuring Point Reference : Between Ground
 • Measuring Conditions : FM : 98.1MHz, 1W Output
 MW : 99.8kHz, 0.16W Output
 LW : 218kHz, 0.16W Output
 TAPE : MTT-212, 1W Output

Note : ○ : For TDM-7531R Model Only,
 □ : For TDM-7532R Model Only,
 Δ : For TDM-7535R Model Only,
 Others : Common.

NOTES:
 1. All resistance values are in ohms. K = 1,000
 2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$



Front P.C. Board (CH401)



IC203

	MODE		MODE
1	4.8V DATA	17	5V SIG. CD
2	0V	18	5V SIG. TAPE
3	5V SIG. REAR - L	19	5V SIG. FM
4	5V SIG. FRONT - L	20	5V SIG. FM
5	4.5V FM	21	4.7V FM
6	4.5V FM	22	5V SIG. MW/LW
7	4.6V FM	23	4.7V FM
8	4.5V FM	24	—
9	—	25	4.8V FM
10	4.8V FM	26	4.7V FM
11	5V MW/LW	27	4.7V FM
12	—	28	4.7V FM
13	5V SIG. FM	29	5V SIG. FRONT - R
14	5V SIG. TP - ALM	30	5V SIG. REAR - R
15	5V SIG. TAPE	31	9.2V
16	5V SIG. CD	32	4.8V CLK

IC204

	MODE
1	4.7V FM
2	4.7V FM
3	4.7V FM
4	0V
5	4.7V FM
6	4.7V FM
7	4.7V FM
8	9.4V

IC205

	MODE
1	4.7V FM
2	4.7V FM
3	4.7V FM
4	0V
5	—
6	—
7	—
8	9.4V

IC210, IC211

	MODE
1	—
2	5V SIG. LIN
3	5.1V FM
4	5V STBY
5	0V
6	5.1V FM
7	5V SIG. R IN
8	5V SIG. R IN
9	13.8V FM
10	13.8V FM
11	5V SIG. R OUT
12	5V SIG. R OUT
13	0V
14	0V
15	5V SIG. L OUT
16	5V SIG. L OUT
17	13.8V

IC206

	MODE		MODE
1	5V SIG. CD	5	5V SIG. CD
2	5V SIG. CD	6	5V SIG. CD
3	5V SIG. CD	7	5V SIG. CD
4	0V	8	9.4V

IC501

	MODE		MODE		MODE		MODE
1	2.5V/5V NOSE ON/OFF	21	—	41	5V/0V SW ON/OFF	61	0V
2	4.8V	22	5V/0V POW ON/OFF	42	5V LCD CLK	62	0V
3	4.9V	23	5V/0V POW ON/OFF	43	0V/5V GRN/ORG	63	0V
4	4.9V	24	5V/0V MUTE ON/OFF	44	5V LCD DATA	64	0V
5	4.8V	25	—	45	5V LCD INH	65	0V
6	4.9V TAPE	26	—	46	5V DTS MUTE	66	0V
7	4.9V EJECT	27	—	47	5V ACC-B	67	0V
8	4.9V EJECT	28	5.7V/0V IN-INT ON/OFF	48	0V CHANG IN	68	0V
9	5V TAPE	29	0V CHANG OUT	49	5V REMOCON	69	0V
10	5V TAPE	30	5V EV-CLK	50	5V DTS STS	70	0V
11	5V/0V FOW/REV	31	5V EV-DATA	51	0V DTS CMD	71	0V
12	0V/5V PLAYFF - REV	32	—	52	5V DTS SCK	72	0V
13	5V PACK IN	33	0V	53	5V BATT+5	73	0V
14	5V M.S.	34	—	54	0V	74	0V
15	0V	35	0V DOLBY-C	55	0V FM	75	0V
16	0V	36	0V DOLBY-B	56	—	76	5V TAPE
17	0V	37	5V LCD CE	57	0V	77	2.5V PF
18	0V	38	5V DTS CE	58	PS XTAL	78	5V
19	0V	39	5V DTS START	59	PS XTAL	79	5V
20	5V TP. OFF ALM	40	5V NOSE POW	60	0V/5V RESET ON/OFF	80	5V

Q501

	MODE
1	—
2	13.8V/0V MUTE ON/OFF
3	13.8V MUTE ON/OFF
4	5V/0V MUTE ON/OFF
5	0V

Q502

	MODE
1	—
2	13.8V/0V IF MUTE ON/OFF
3	13.8V/13.8V IF MUTE ON/OFF
4	5V/0V IF MUTE ON/OFF
5	0V

ΔQ505

	MODE
1	—
2	0V/9.1V GRN/ORG
3	9.2V/9.2V GRN/ORG
4	0V/5V GRN/ORG
5	0V

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : FM : 98.1MHz, 1W Output
MW : 999kHz, 0.16W Output
LW : 216kHz, 0.16W Output
TAPE : MTT-212, 1W Output

IC506

	MODE
1	5V/0V RESET OFF/ON
2	5V/1.7V RESET OFF/ON
3	0V

Q802

	MODE
1	—
2	5V/0V ACC ON/OFF
3	5V/5.4V ACC ON/OFF
4	6V/0V ACC ON/OFF
5	0V

Q803

	MODE
1	—
2	5V/0V POW ON/OFF
3	5V/5V POW ON/OFF
4	5V/0V POW ON/OFF
5	0V

IC801

	MODE
1	5V FM
2	5V FM
3	0V

Note : ○ : For TDM-7531R Model Only,
□ : For TDM-7532R Model Only,
Δ : For TDM-7535R Model Only,
Others : Common.

	B	C	E	MODE		B	C	E	MODE
ΔQ202	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q511	4.8V	5V	5V	
ΔQ203	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q512	4.8V	0V	0V	
Q204	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q501	5.3V	13.8V	5.6V	
Q205	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q504	13.7V	0V	13.7V	POW ON
Q206	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q505	0V	13.6V	0V	POW ON
Q207	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q506	13V	13.6V	13.6V	POW ON
Q208	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q507	0V	7V	0V	POW ON
Q209	0V/13.8V	0V/0V	0V/0V	MUTE ON/OFF	Q508	9.8V	13.8V	9.2V	POW ON
Q506	PS	4.9V	0V	CHANG IN	Q509	4.1V	0V	0V	POW ON
Q507	PS	0V	5V	CHANG IN	Q510	13V	13.6V	13.7V	POW ON
Q508	PS	0V	0V	CHANG IN	Q511	10V	13.8V	9.5V	POW ON

NOTES:

- All resistance values are in ohms. K = 1,000
- All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$