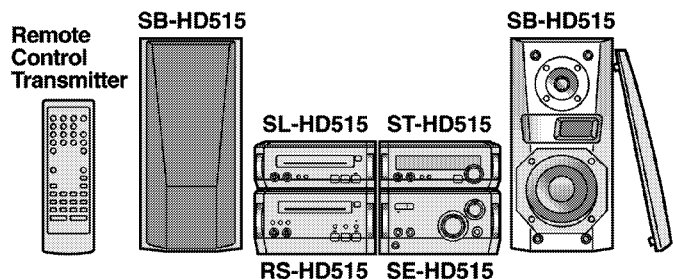


Service Manual

Tuner



ST-HD515

Colour

(S).....Silver Type

Areas

(PP).....U.S.A. and Canada.

(E).....Europe.

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

System	SC-HD515
Tuner	ST-HD515
Amplifier	SE-HD515
CD Player	SL-HD515
Cassette Deck	RS-HD515
Speakers*	SB-HD515

* : Made in Spain.

Specifications

Pre-amplifier section

Input sensitivity/impedance:

EXT IN; 300 mV/15 k Ω

Output level/impedance:

EXT OUT; 250 mV/1.5 k Ω

Tuner section

FM frequency range for (PP) area: 87.5 – 108.0 MHz
(0.1 MHz steps)

87.9 – 107.9 MHz
(0.2 MHz steps)

FM frequency range for (E) area: 87.5 – 108.0 MHz
(0.05 MHz steps)

Antenna terminal(s): 75 Ω (unbalanced)

AM frequency range for (PP) area: 520 – 1710 kHz (10 kHz steps)

AM frequency range for (E) area: 522 – 1629 kHz (9 kHz steps)

520 – 1630 kHz (10 kHz steps)

Timer section

Clock:

Quartz - lock type

Function:

Play timer (1 time or everyday),

Rec timer (1 time or everyday),

Sleep timer (120 min, 30 min intervals)

General

Dimensions (W×H×D):

200×76×261.5 mm
(7 7/8"×2 31/32"×10 9/32")

Mass:

1.2 kg
(2.7 lb)

Notes: Specifications are subject to change without notice.

Mass and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics®

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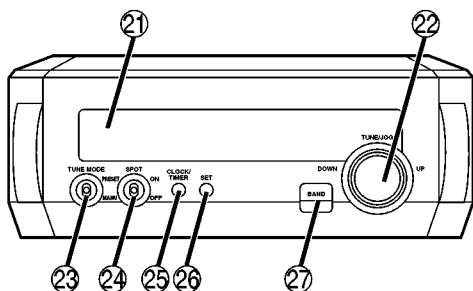
1 Note

Refer to the service manual for Model No. SE-HD515 (ORDER No. AD0005103C5) for information on Accessories and Packaging.

2 Blue LED

- The blue LED mounted to each sides of front panel is very sensitive to static electricity. When handling the LED base plate, be very careful about it.
- Do not replace the blue LED by itself because it may be subject to electrostatic breakdown or deterioration in quality. When replacing the LED base plate, be sure to replace L and R sides simultaneously to adjust the brightness. For configuration at the time of supply of replacement parts, refer to Printed Circuit Board Diagram.

4 Location of Controls

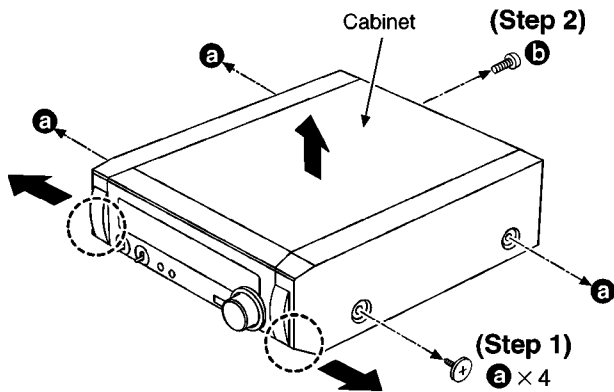


- ②① **Display panel**
The display also shows information for the MD deck, CD player, and amplifier.
- ②② **Station selection and JOG dial (TUNE/JOG)**
- ②③ **Tuning mode switch (TUNE MODE)**
- ②④ **Sidelight switch (SPOT)**
- ②⑤ **Clock/timer button (CLOCK/TIMER)**
- ②⑥ **Set button (SET)**
- ②⑦ **Band select button (BAND)**

5 Operation Checks and Component Replacement Procedures

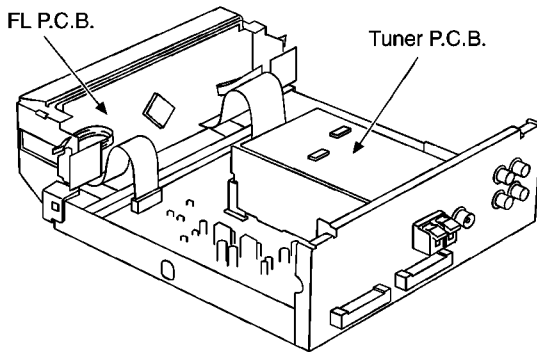
- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the tuner P.C.B. and FL P.C.B.



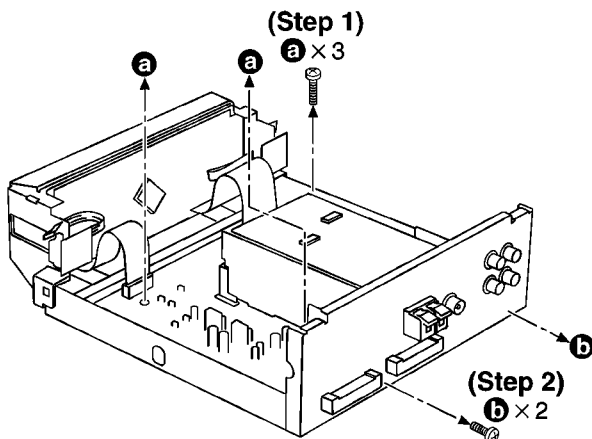
(Step 3)
Spreading the both front tails indicated with (○) of cabinet a small amount, lift up and remove the cabinet in the direction of arrow.

- Check the tuner P.C.B. and FL P.C.B. as shown below.

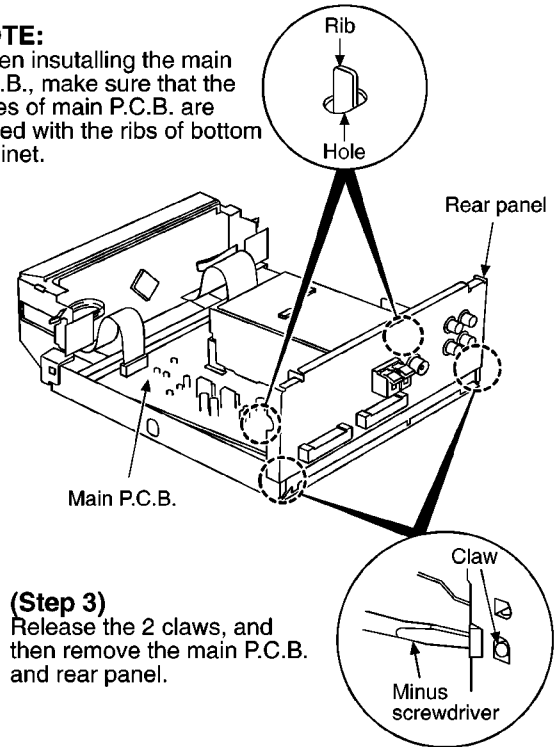


5.2. Checking for the main P.C.B.

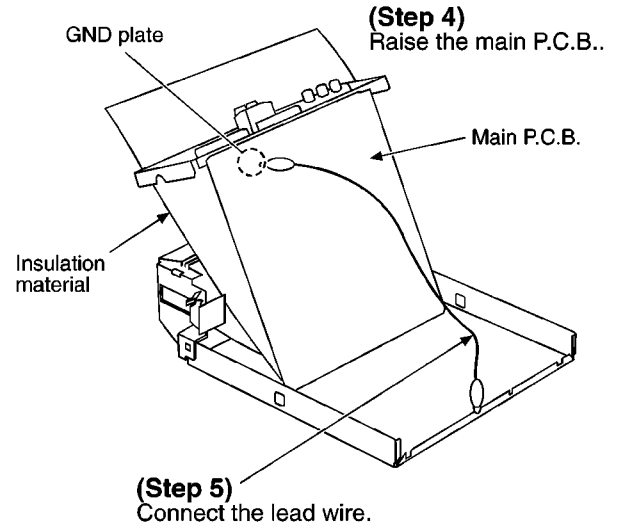
- Follow the (Step 1) - (Step 3) of item 5.1.



NOTE:
When installing the main P.C.B., make sure that the holes of main P.C.B. are aligned with the ribs of bottom cabinet.



- Check the main P.C.B. as shown below.



6 To Supply Power Source and Signal Check

To operate the unit ST-HD515 normally, it is necessary to connect to the unit SE-HD515. When operating the unit ST-HD515, be sure to connect to the unit SE-HD515 by connection cable.

1. Short the section between TP302 (A.GND) and TP304 (D.GND), and as well as the section between TP303 (CT) and TP304 (D.GND). Refer to Fig. 6-1.
2. Connect with the Amplifier (SE-HD515). Refer to Fig. 6-1.
3. Connect the AC power supply cord to the Amplifier (SE-

HD515). Refer to Fig. 6-1.

4. Connect the speakers to speaker terminal. Refer to Fig. 6-1.
5. Turn on the power of the Amplifier (SE-HD515).
6. Press INPUT SELECTOR to select the external source (EXT) of the Amplifier (SE-HD515).
7. Input a sound signal to external input terminal of the Tuner (ST-HD515) and confirm to be outputted from the speaker. (Both High and Low.)

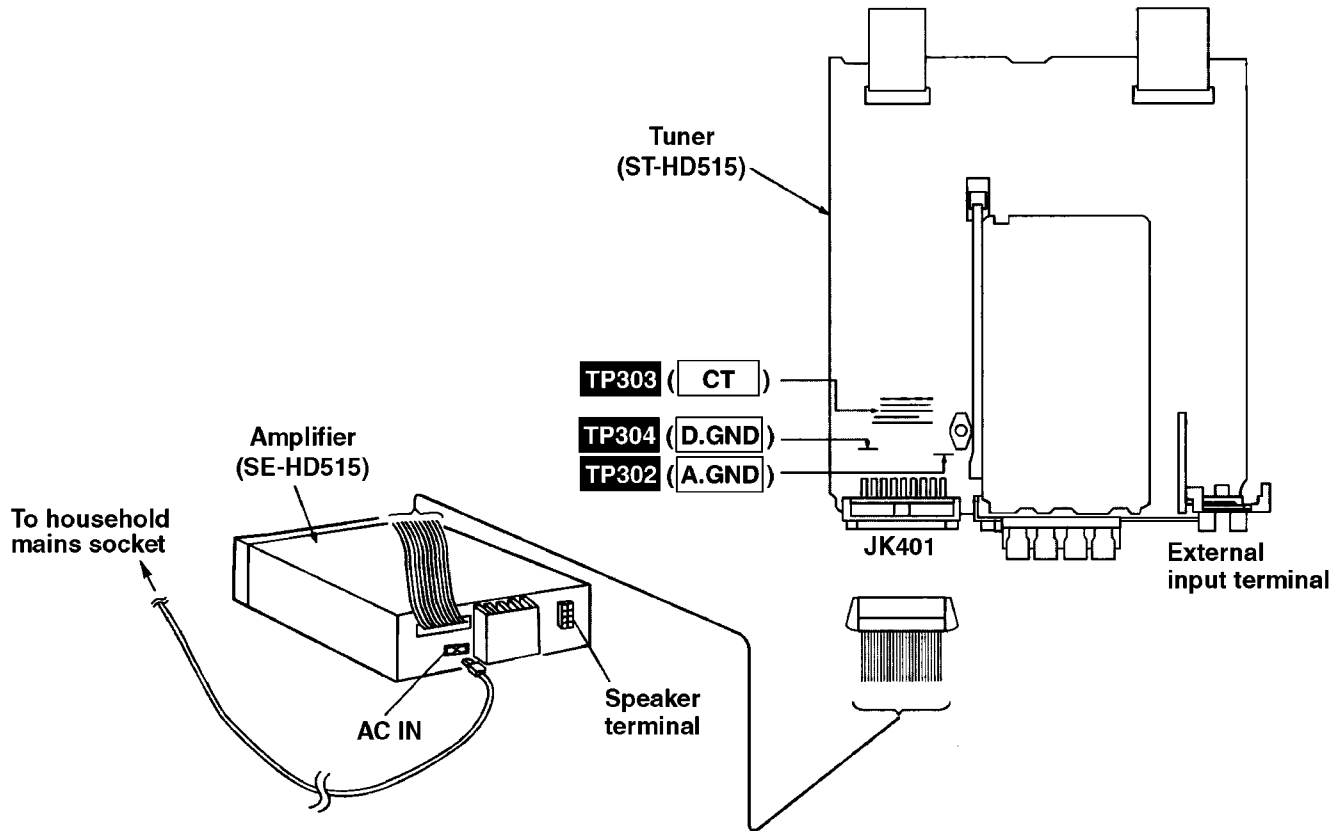


Fig. 6-1.

7 Self-Diagnostic Function

This unit is equipped with a self-diagnostic function which, in the event of a malfunction, automatically displays a code indicating the nature of the malfunction.

Use this self-diagnostic function when servicing the unit.

7.1. To display the malfunction code

U70 CD: Automatically displays on the tuner when a malfunction occurs. Refer to Fig. 7-1.
U70 DECK: Automatically displays on the tuner when a malfunction occurs. Refer to Fig. 7-1.
F61: Automatically displays on the tuner when a malfunction occurs. Refer to Fig. 7-1.

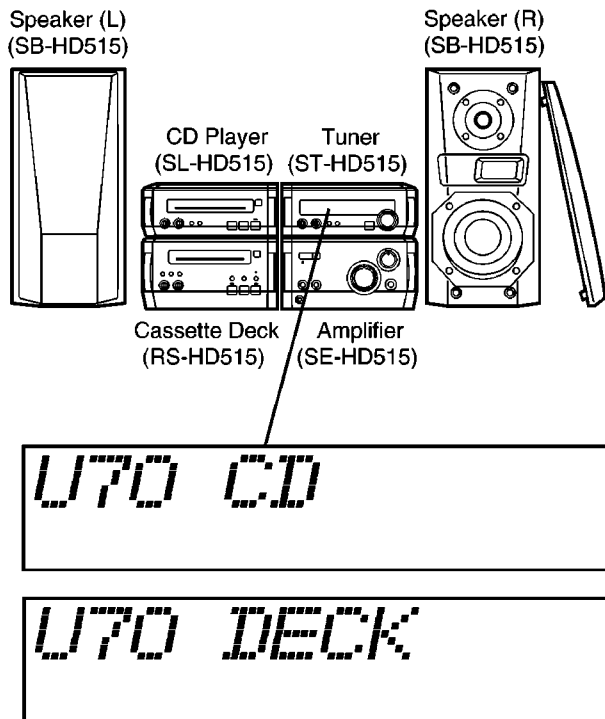


Fig. 7-1.

7.2. To return to the normal display

1. For U70 CD/U70 DECK

- Press any operation button on the tuner.
- To re-display the code, switch the power off (POWER STANDBY button), and then switch power back on again.

2. For F61

- If F61 is displayed, the power will automatically be switched off.
- F61 will be displayed for 3 seconds, and then the clock will be displayed.
- To re-display the code, switch the power on. F61 will be re-displayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off.

7.3. Display contents

7.3.1. U70 CD/U70 DECK (displayed automatically)

• Problem or condition

A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.

- If U70 is displayed on the tuner, the CD Player or Cassette deck cannot be operated by remote control.

• Correction Procedure

1. To check for correct insertion of the flat cables.
 - Insert each connector until you hear a click.
 - Insert the flat cables at the back of the unit in the order indicated. Refer to Fig. 7-2.

Make sure the white side of the cable is on your right side. Refer to Fig. 7-3.

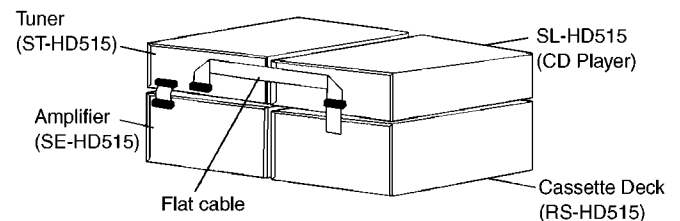


Fig. 7-2.

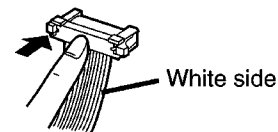


Fig. 7-3.

2. Breakage of the flat cables. (Check and replace.)
3. If the problem is not corrected by items 1 and 2 above, this indicates a faulty IC.

ST-HD515:

IC701 (M30218MAA108)

SL-HD515:

IC403 (LC66358C4K97)

RS-HD515:

IC701 (M37478M4456F)

Check these ICs and replace.

7.3.2. F61

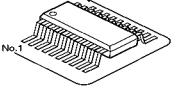
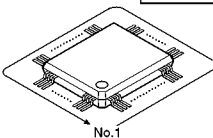
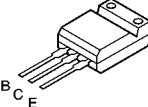
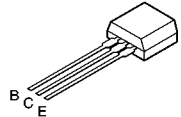
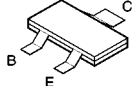
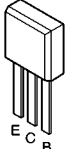
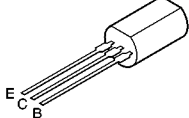
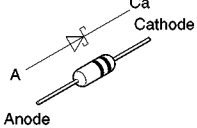
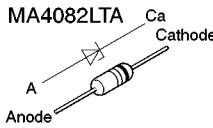
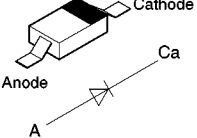
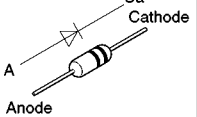
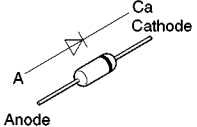
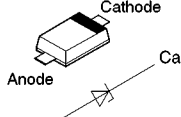
• Problem or condition

When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.

• Correction procedure

Faulty the Amplifier (SE-HD515) output IC (IC501 and IC502). (When a DC voltage is applied to speaker terminals.)

8 Type Illustration of ICs, Transistors and Diodes

<table border="1"> <tr><td>M5218AFPE3</td><td>8PIN</td></tr> <tr><td>LA1833MN-TLM</td><td>24PIN</td></tr> <tr><td>LC72131MDTLM</td><td>20PIN</td></tr> <tr><td>LC72722PMTLM</td><td>24PIN</td></tr> </table> 	M5218AFPE3	8PIN	LA1833MN-TLM	24PIN	LC72131MDTLM	20PIN	LC72722PMTLM	24PIN	<table border="1"> <tr><td>M62433AFP</td><td>80PIN</td></tr> <tr><td>M30218MAA108</td><td>100PIN</td></tr> </table> 	M62433AFP	80PIN	M30218MAA108	100PIN	2SB1417PQTA 2SD2137PQTA 	DTB123YSTP DTC114ESTP DTC143XSTP 
M5218AFPE3	8PIN														
LA1833MN-TLM	24PIN														
LC72131MDTLM	20PIN														
LC72722PMTLM	24PIN														
M62433AFP	80PIN														
M30218MAA108	100PIN														
2SD1819ATX 2SB709ASTX UN5214TX 	 2SC2787LTA 2SC3311ARSTA 2SC3311ATA UN4111TA UN4115TA	2SC3940AQSTA 	MA719TA 	MA4043MTA MA4051MTA MA4075HTA MA4082LTA 											
MA111TX 1SS380TE-17 	MA185TA 	MA165TA 	UDZ2R0BTE-17 												

9 Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S601:	Sidelight switch (SPOT)
S602:	Tuning mode switch (TUNE MODE)
S603:	Band select switch (BAND)
S604:	Set switch (SET)
S605:	Clock/timer switch (CLOCK/TIMER)
VR601:	Station selection and JOG dial (TUNE/JOG)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark : FM
() : AM

- Important safety notice:

Components identified by \triangle mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts.

• Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.







Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

- Voltage and signal line

	: Positive voltage line
	: Negative voltage line
	: FM signal line
	: FM OSC signal line
	: AM signal line
	: AM OSC signal line

10 Schematic Diagram

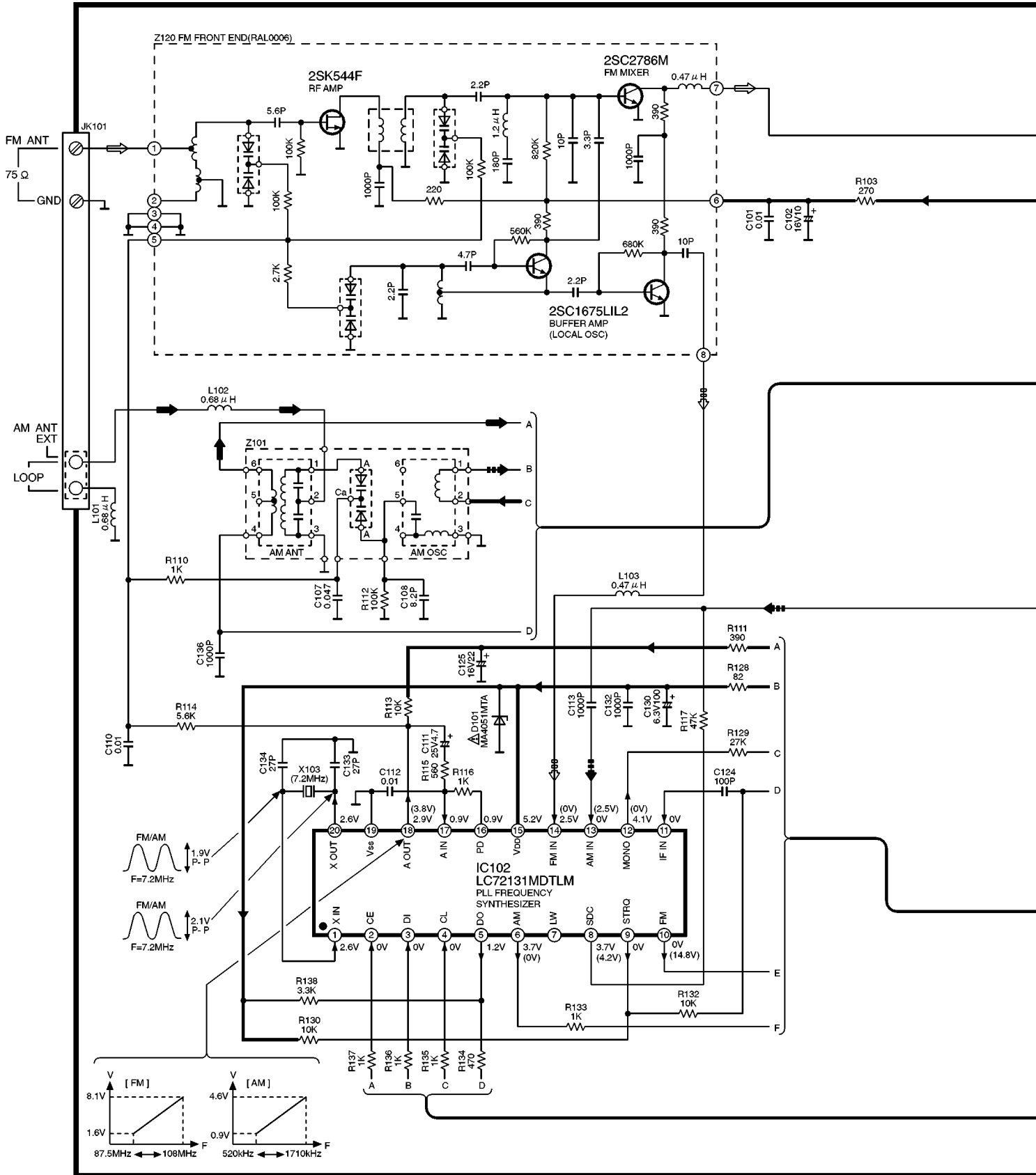
SCHEMATIC DIAGRAM- 1

NOTE:

The number which noted at the connectors on the schematic diagram as "SCHEMATIC DIAGRAM- 1" or "SCHEMATIC DIAGRAM- 2" indicates the schematic diagram serial number located on the left corner in the schematic diagram.

A TUNER CIRCUIT For [PP] area.

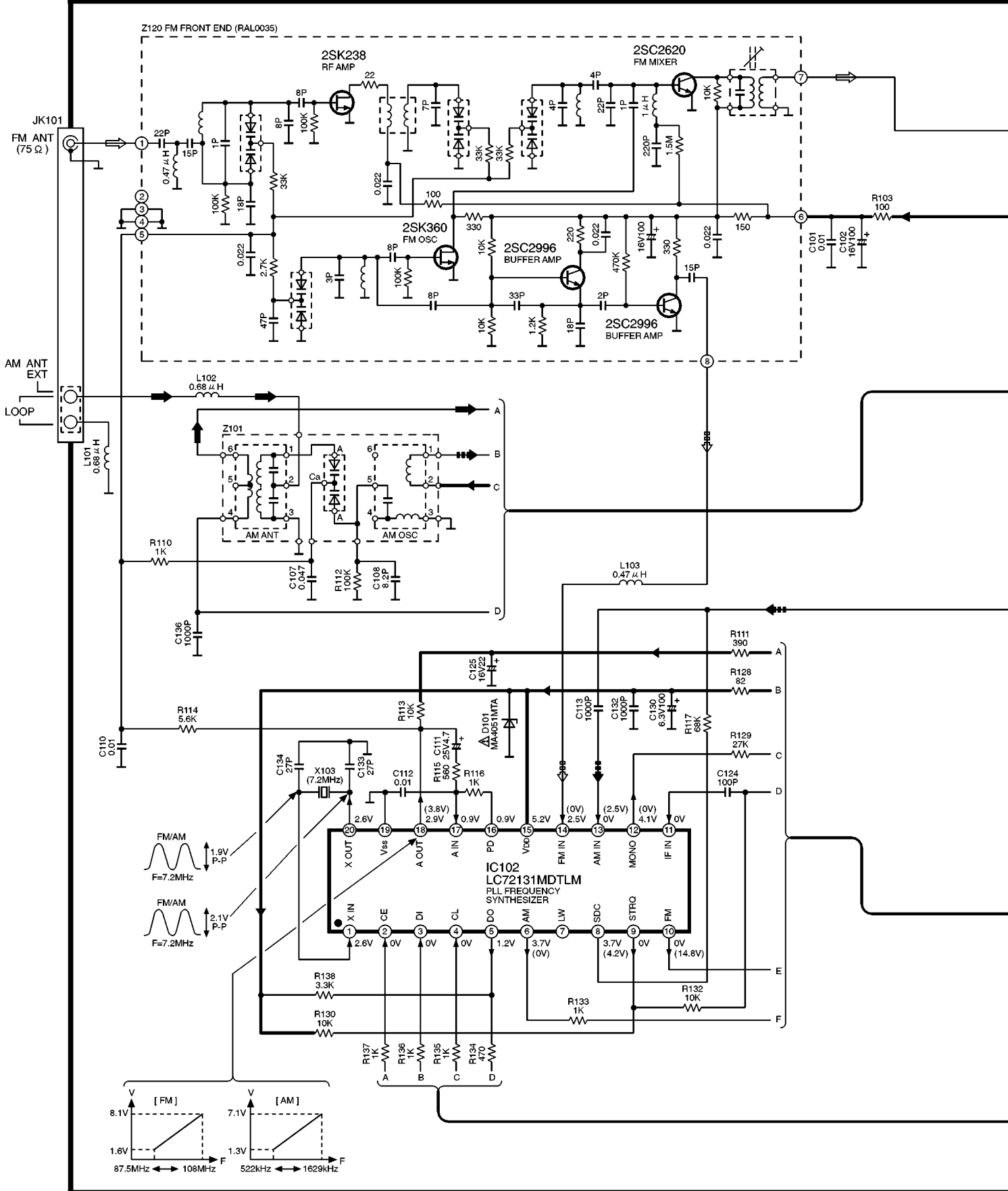
→ : POSITIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE ⇩ : AM SIGNAL LINE
 ⇨⇨ : FM OSC SIGNAL LINE ⇩⇩ : AM OSC SIGNAL LINE



SCHEMATIC DIAGRAM-3

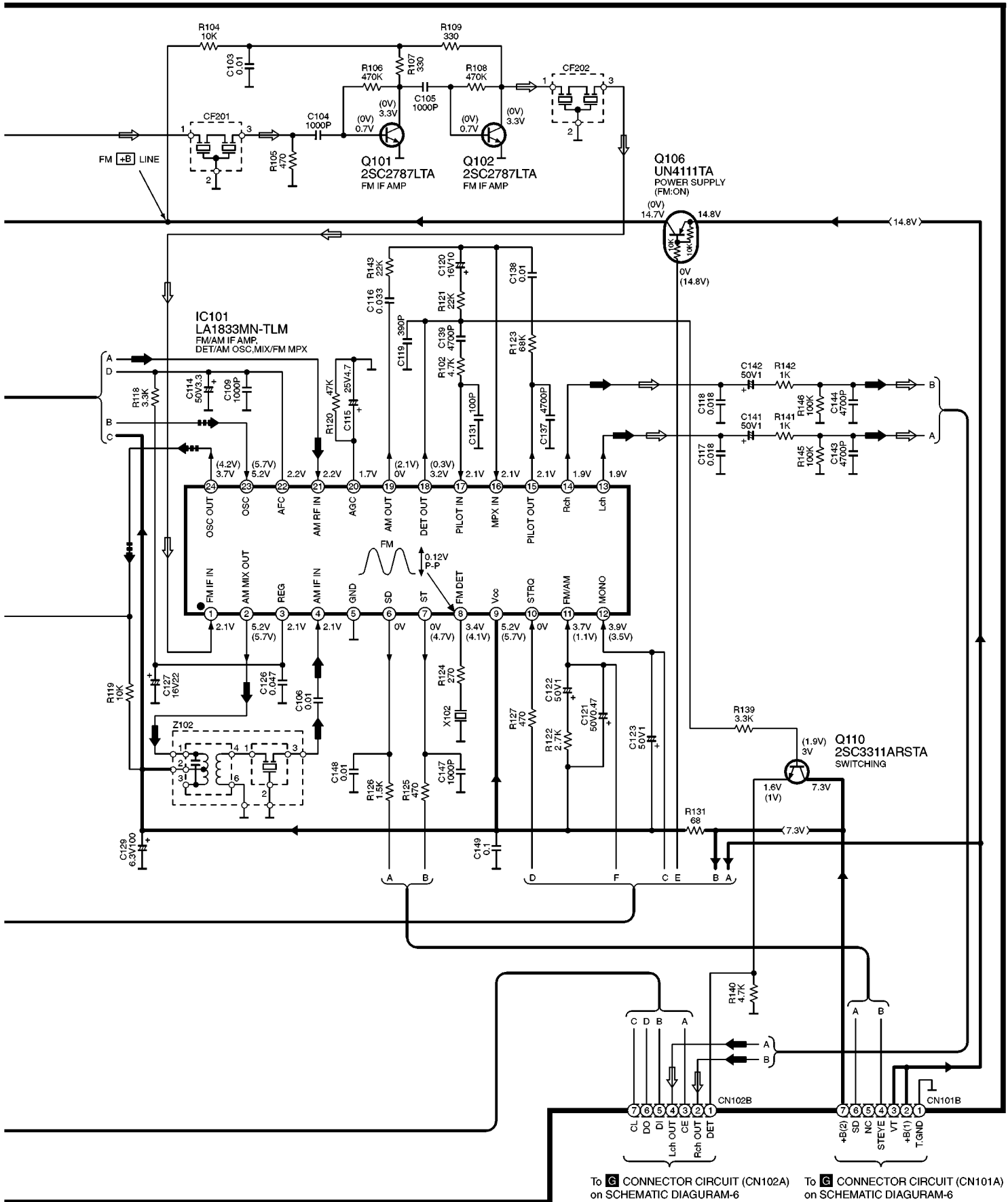
A TUNER CIRCUIT For [E] area.

 : FM OSC SIGNAL LINE
 : FM SIGNAL LINE
 : POSITIVE VOLTAGE LINE
 : AM OSC SIGNAL LINE
 : AM SIGNAL LINE



SCHEMATIC DIAGRAM-4

→ : POSITIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE ➔ : AM SIGNAL LINE ⇩⇩ : AM OSC SIGNAL LINE

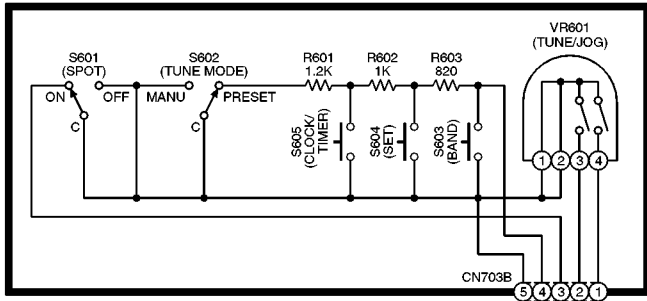


To **6** CONNECTOR CIRCUIT (CN102A) on SCHEMATIC DIAGRAM-6

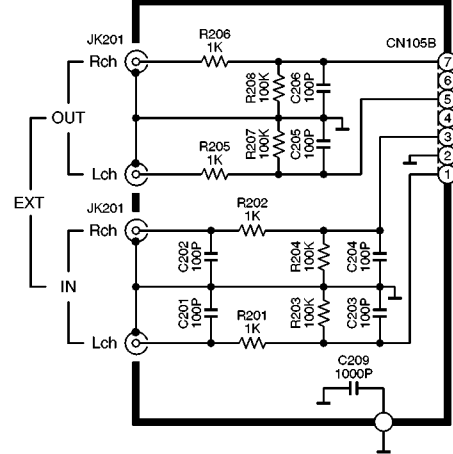
To **6** CONNECTOR CIRCUIT (CN101A) on SCHEMATIC DIAGRAM-6

SCHEMATIC DIAGRAM- 6

C OPERATION CIRCUIT

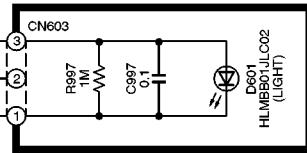


F IN/OUT TERMINAL CIRCUIT

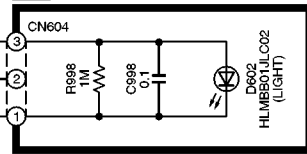


KEEPING TO THE RULE OF UNIT SUPPLY,
WE DO NOT SUPPLY SINGLE PARTS.

D LED(L) CIRCUIT

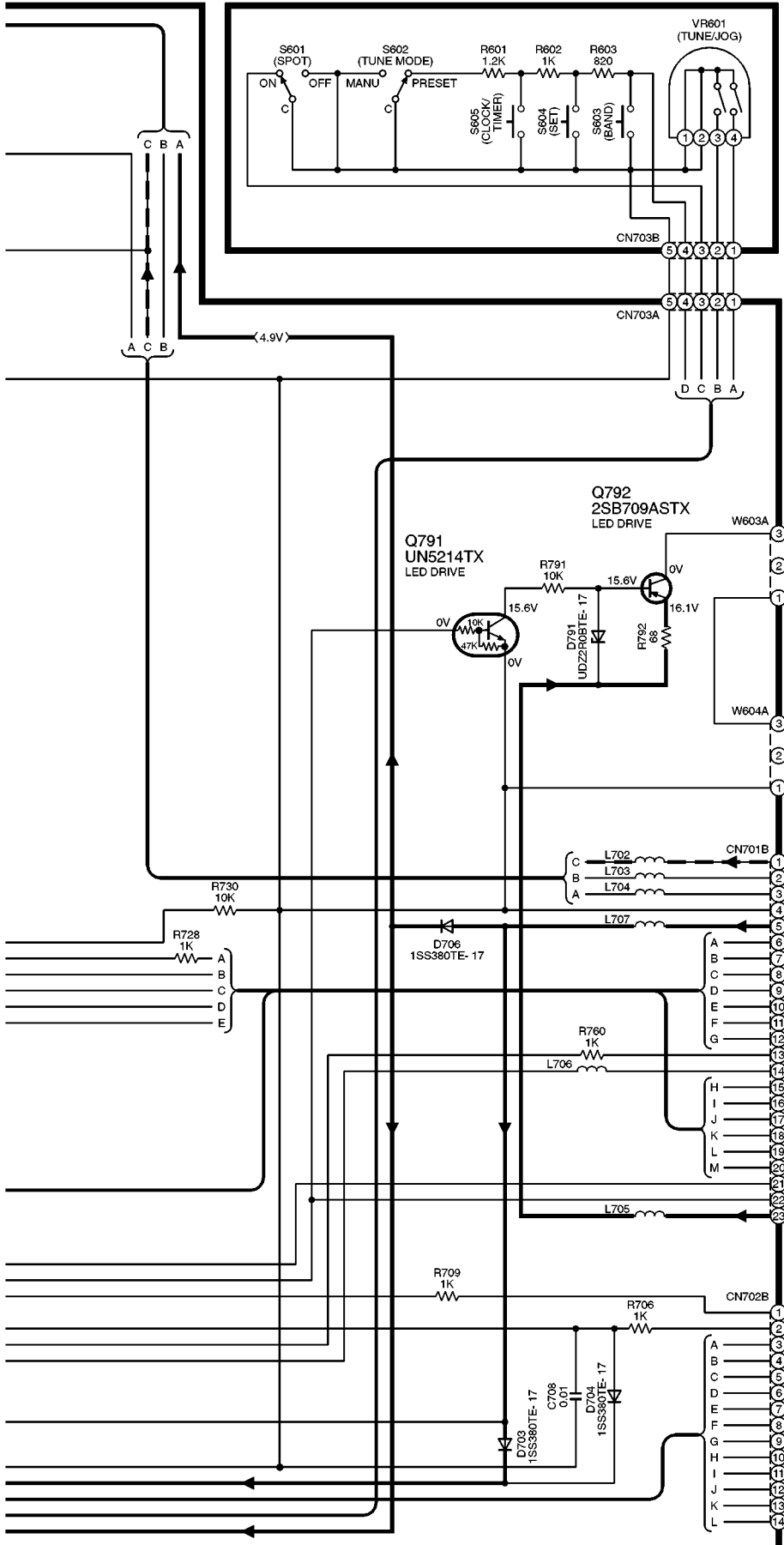
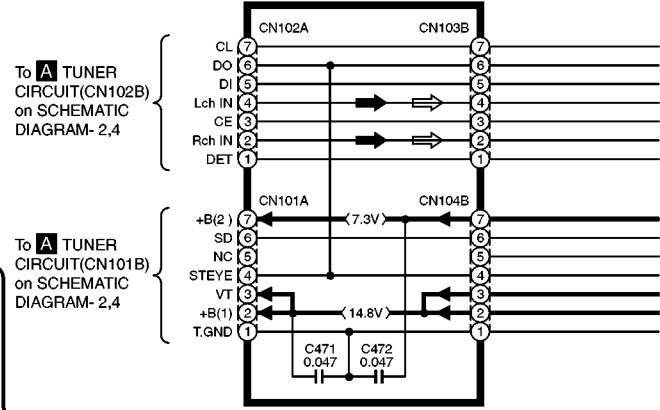


E LED(R) CIRCUIT



- : POSITIVE VOLTAGE LINE
- ← : NEGATIVE VOLTAGE LINE
- ⇌ : FM SIGNAL LINE
- ⇨ : AM SIGNAL LINE

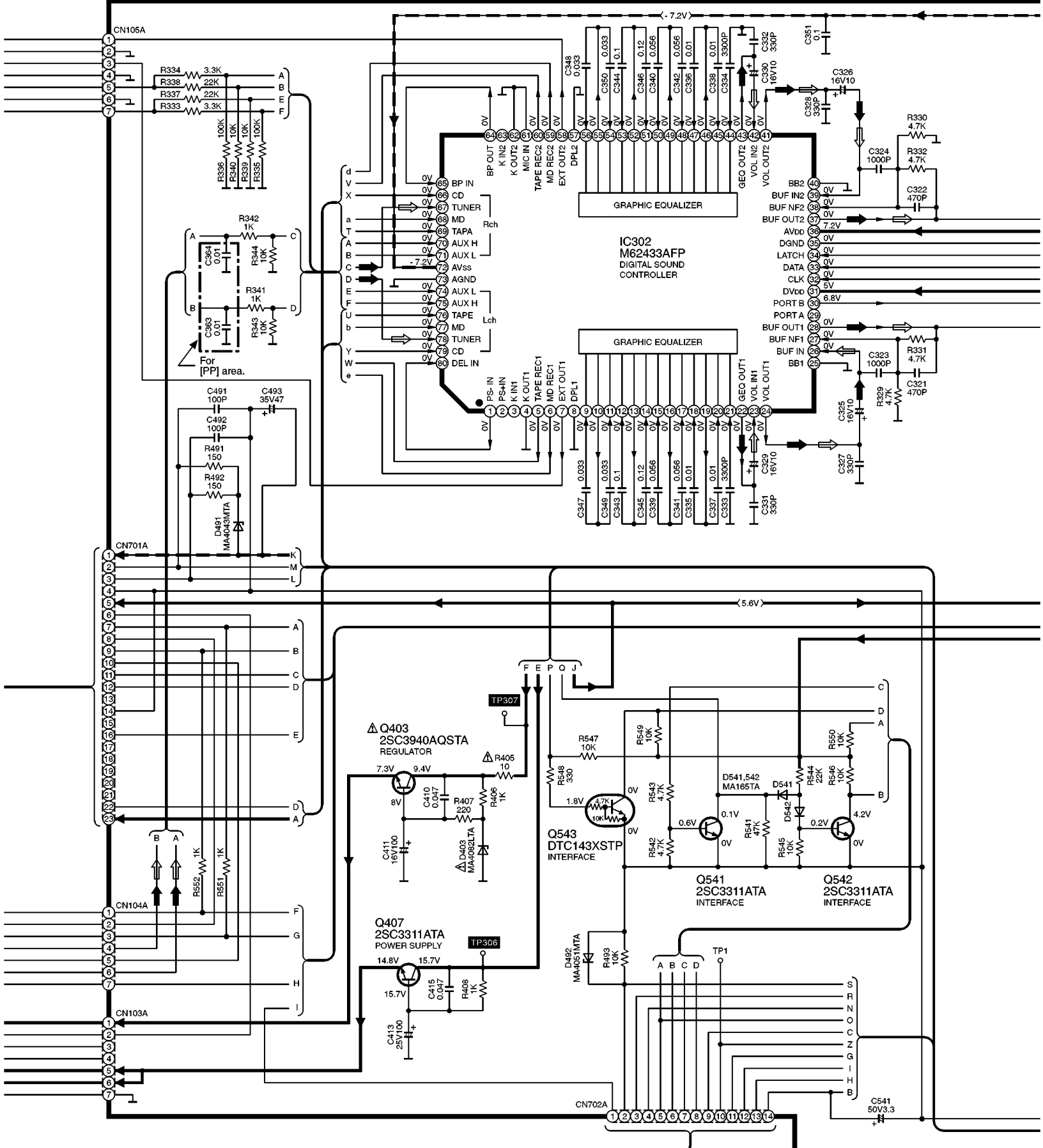
G CONNECTOR CIRCUIT



SCHEMATIC DIAGRAM- 7

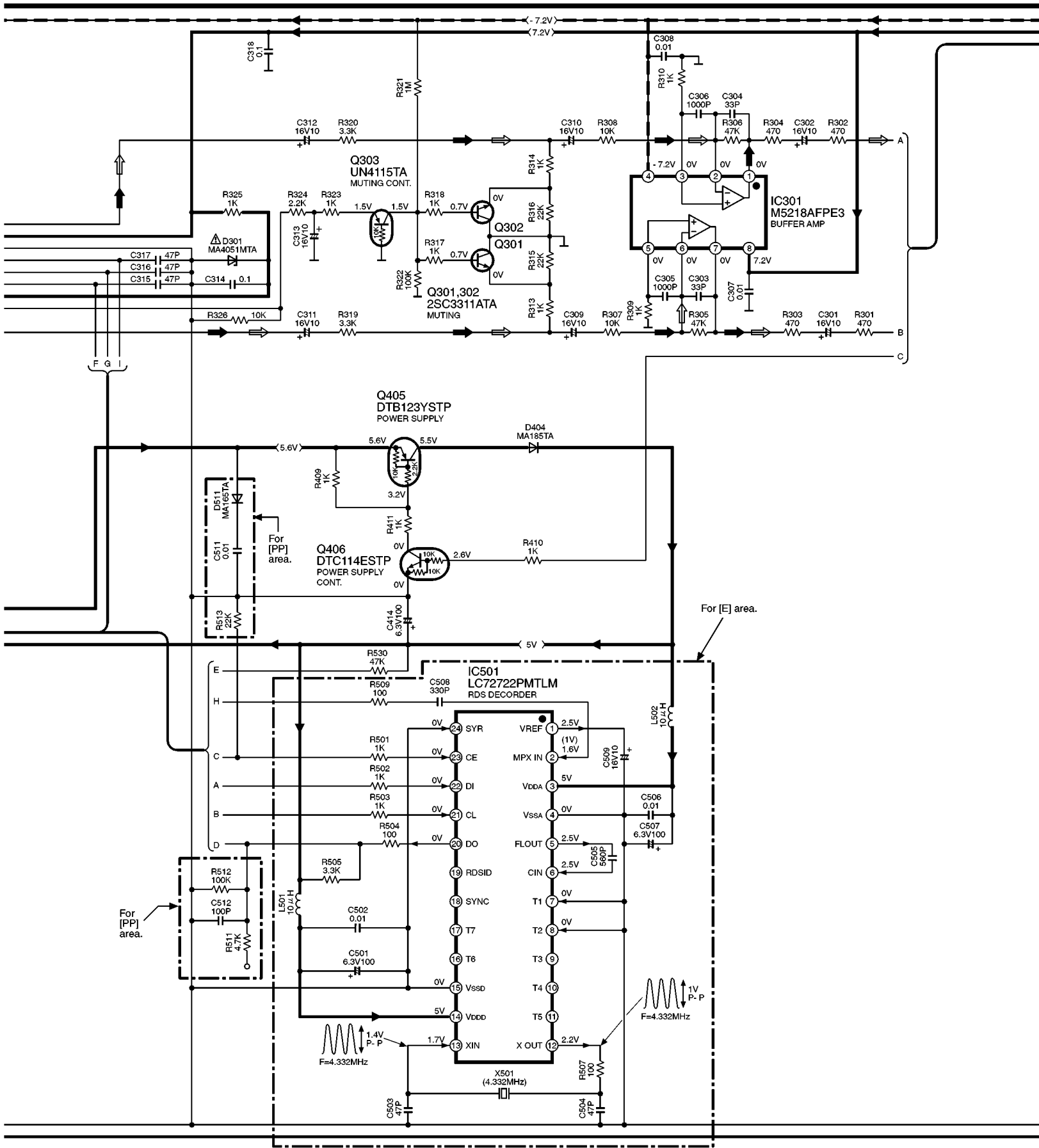
H MAIN CIRCUIT

→ : POSITIVE VOLTAGE LINE - - - - - : NEGATIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE ⇨ : AM SIGNAL LINE



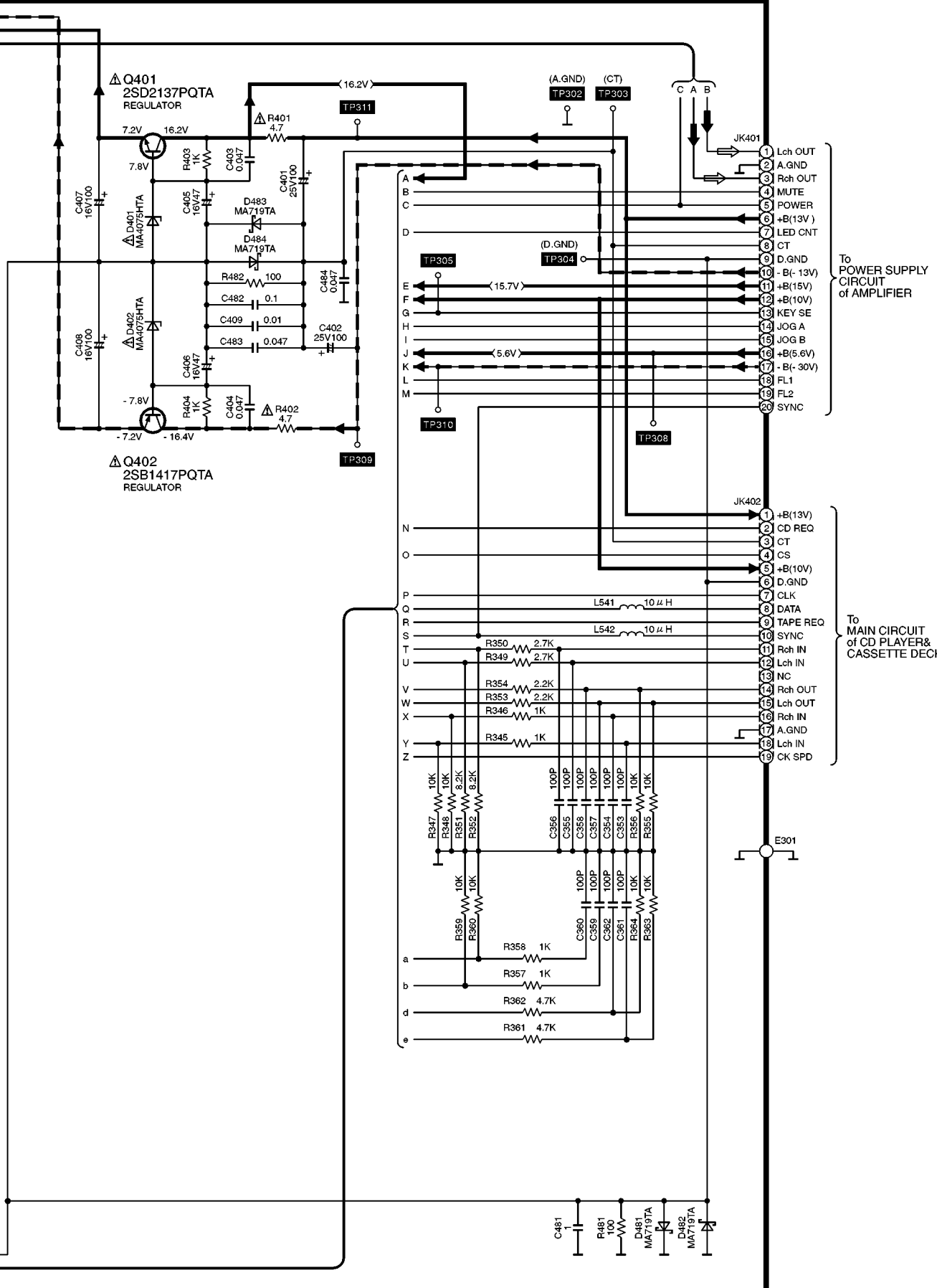
SCHEMATIC DIAGRAM- 8

→ : POSITIVE VOLTAGE LINE → : NEGATIVE VOLTAGE LINE ⇨ : FM SIGNAL LINE ⇨ : AM SIGNAL LINE



SCHEMATIC DIAGRAM- 9
H MAIN CIRCUIT

—▶ : POSITIVE VOLTAGE LINE ◁ : FM SIGNAL LINE
 - - -▶ : NEGATIVE VOLTAGE LINE ▶ : AM SIGNAL LINE

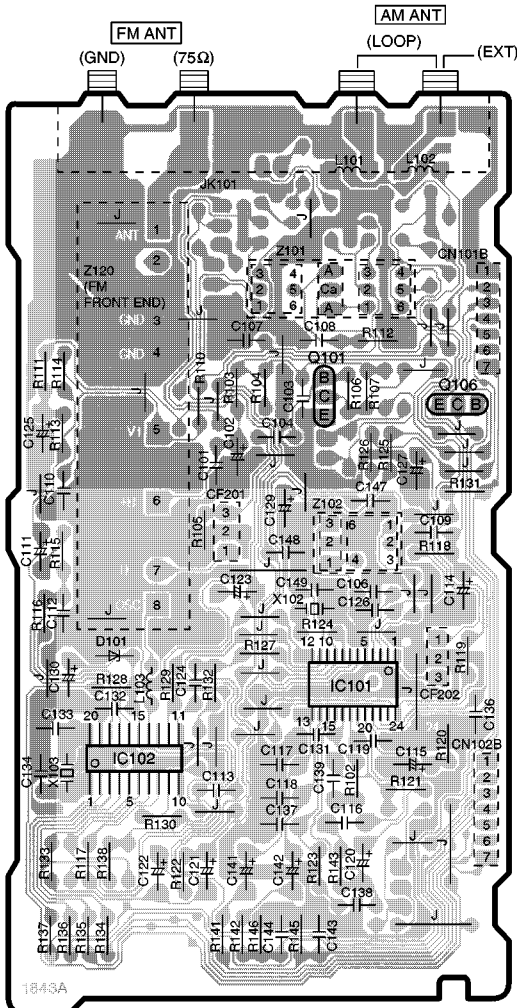


11 Printed Circuit Board Diagram

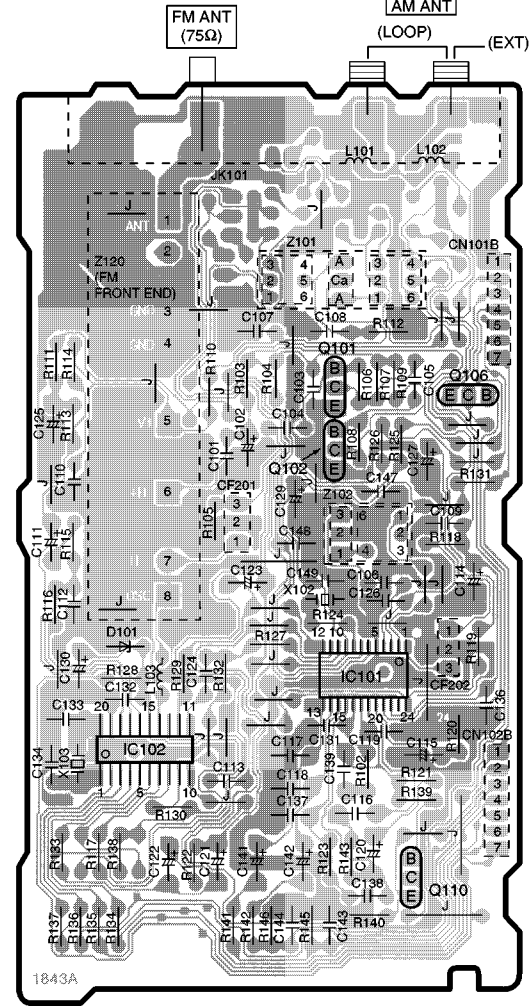


Note: This printed circuit board diagram may be modified at any time with the development of new technology.

A TUNER P.C.B. For [PP] area.



A TUNER P.C.B. For [E] area.



ELECTRICAL PARTS LOCATION

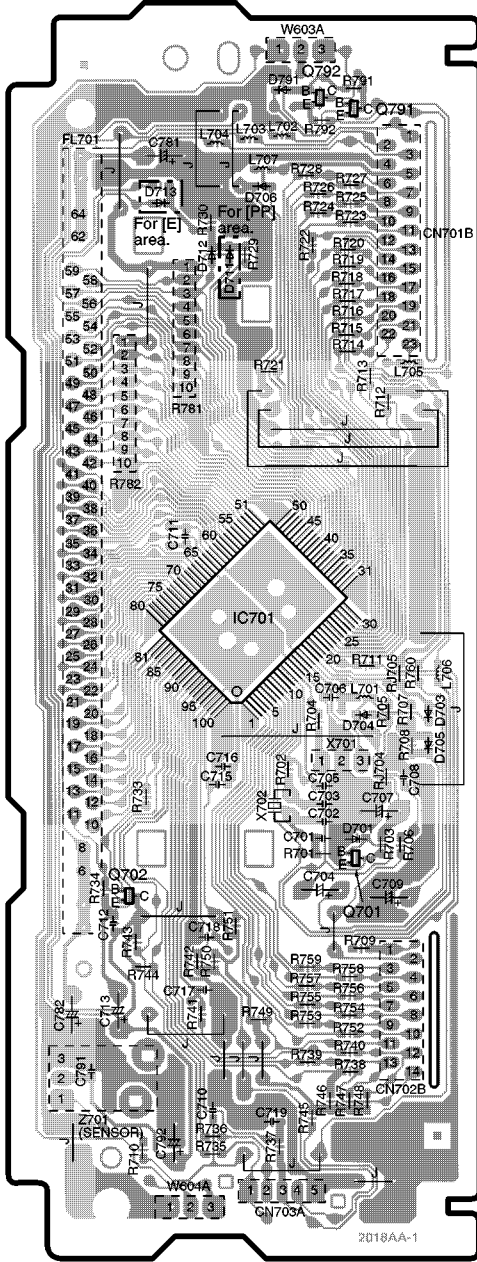
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
A TUNER P.C.B. For [PP] area.															
IC101	4C	X102	4B	R112	3C	R125	3C	R138	5A	C109	3C	C122	5B	C137	5B
IC102	5B	X103	5A	R113	3A	R126	3C	R141	5B	C110	3A	C123	4B	C138	5C
Q101	3B	CN101B	2C	R114	3A	R127	4B	R142	5B	C111	4A	C124	4B	C139	5B
Q106	3C	CN102B	5C	R115	4A	R128	4A	R143	5B	C112	4A	C125	3A	C141	5B
D101	4A	JK101	2B	R116	4A	R129	4B	R145	5B	C113	5B	C126	4C	C142	5B
L101	2C	R102	5C	R117	5A	R130	5B	R146	5B	C114	4C	C127	3C	C143	5B
L102	2C	R103	3B	R118	4C	R131	3C	C101	3B	C115	5C	C129	3B	C144	5B
L103	4B	R104	3B	R119	4C	R132	4B	C102	3B	C116	5C	C130	4A	C147	3C
Z101	2B	R105	4B	R120	4C	R133	5A	C103	3B	C117	5B	C131	4B	C148	4B
Z102	4C	R106	3C	R121	5C	R134	5A	C104	3B	C118	5B	C132	4A	C149	4B
Z120	2B	R107	3C	R122	5B	R135	5A	C106	4C	C119	4C	C133	4A		
CF201	3B	R110	3B	R123	5B	R136	5A	C107	3B	C120	5C	C134	5A		
CF202	4C	R111	3A	R124	4B	R137	5A	C108	3B	C121	5B	C136	4C		
A TUNER P.C.B. For [E] area.															
IC101	4E	CF202	4F	R110	3E	R124	4E	R138	5D	C107	3E	C121	5E	C137	5E
IC102	4D	X102	4E	R111	3D	R125	3E	R139	5F	C108	3E	C122	5D	C138	5E
Q101	3E	X103	5D	R112	3E	R126	3E	R140	5E	C109	3F	C123	4E	C139	5E
Q102	3E	CN101B	2F	R113	3D	R127	4E	R141	5E	C110	3D	C124	4E	C141	5E
Q106	3F	CN102B	5F	R114	3D	R128	4D	R142	5E	C111	4D	C125	3D	C142	5E
Q110	5F	JK101	2E	R115	4D	R129	4D	R143	5E	C112	4D	C126	4E	C143	5E
D101	4D	R102	5E	R116	4D	R130	5D	R145	5E	C113	5E	C127	3F	C144	5E
L101	2E	R103	3E	R117	5D	R131	3F	R146	5E	C114	4F	C129	3E	C147	3E
L102	2F	R104	3E	R118	4F	R132	4E	C101	3E	C115	5F	C130	4D	C148	4E
L103	4D	R105	3E	R119	4F	R133	5D	C102	3E	C116	5E	C131	4E	C149	4E
Z101	2E	R106	3E	R120	4F	R134	5D	C103	3E	C117	5E	C132	4E		
Z102	3E	R107	3E	R121	5F	R135	5D	C104	3E	C118	5E	C133	4D		
Z120	2D	R108	3E	R122	5E	R136	5D	C105	3F	C119	4E	C134	5D		
CF201	3E	R109	3E	R123	5E	R137	5D	C106	4E	C120	5E	C136	4F		

A B C D E F

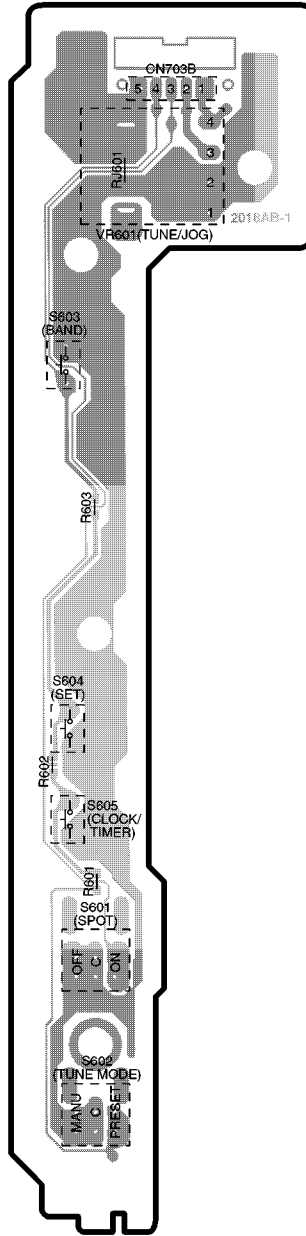
B FL P.C.B.

C OPERATION P.C.B.

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(REP2769H-S [PP])
(REP2769J-S [E])



(REP2769H-S [PP])
(REP2769J-S [E])

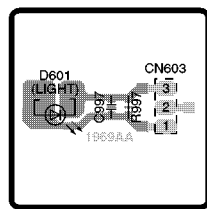
ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
FL P.C.B.			
IC701	4B	R729	2B
Q701	5B	R730	2B
Q702	5A	R733	5A
Q791	1B	R734	5A
Q792	1B	R735	6B
D701	5B	R736	6B
D703	4C	R737	6B
D704	4B	R738	6B
D705	4C	R739	6B
D706	2B	R740	6B
D711	2B	R741	6B
D712	2B	R742	5B
D713	2B	R743	5A
D791	1B	R744	5A
L701	4B	R745	6B
L702	2B	R746	6B
L703	2B	R747	6B
L704	2B	R748	6B
L705	3C	R749	6B
L706	4C	R750	5B
L707	2B	R751	5B
Z701	6A	R752	6B
X701	4B	R753	6B
X702	5B	R754	6B
FL701	2A	R755	5B
CN701B	2C	R756	5B
CN702B	6C	R757	5B
CN703A	6B	R758	5B
W603A	1B	R759	5B
W604A	6B	R760	4C
R701	5B	R781	2B
R702	4B	R782	3A
R703	5C	R791	1B
R704	4B	R792	2B
R705	4C	RJ704	4C
R706	5C	RJ705	4C
R707	4C	C701	5B
R708	4C	C702	5B
R709	5B	C703	5B
R710	6A	C704	5B
R711	4B	C705	4B
R712	3C	C706	4B
R713	3B	C707	5C
R714	3B	C708	4C
R715	2B	C709	5C
R716	2B	C710	6B
R717	2B	C711	3B
R718	2B	C712	5A
R719	2B	C713	6A
R720	2B	C715	4B
R721	3B	C716	4B
R722	2B	C717	5B
R723	2B	C718	5B
R724	2B	C719	6B
R725	2B	C781	2B
R726	2B	C782	6A
R727	2B	C791	6A
R728	2B	C792	6B
OPERATION P.C.B.			
VR601	2D	CN703B	1D
S601	5D	R601	5D
S602	6D	R602	4D
S603	3D	R603	3D
S604	4D	RJ601	2D
S605	5D		
LED(L) P.C.B.			
D601	8B	R997	8C
CN603	8C	C997	8C
LED(R) P.C.B.			
D602	8D	R998	8D
CN604	8D	C998	8D

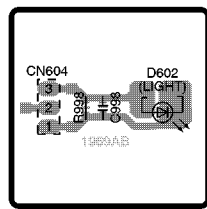
[Keeping to the rule of unit supply, we do not supply single parts.]

D LED(L) P.C.B.

E LED(R) P.C.B.

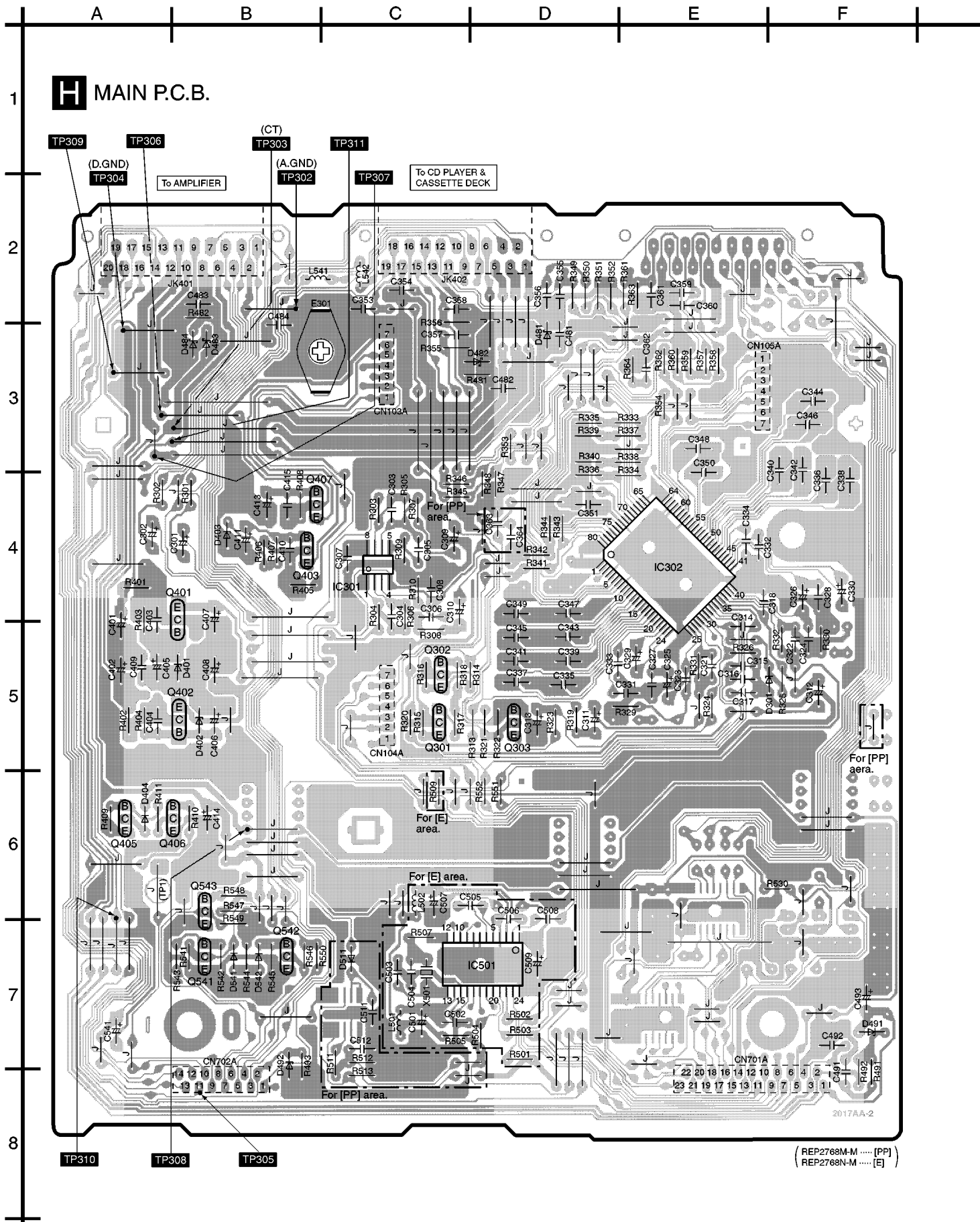


(REP2683D-S)



(REP2683D-S)

H MAIN P.C.B.

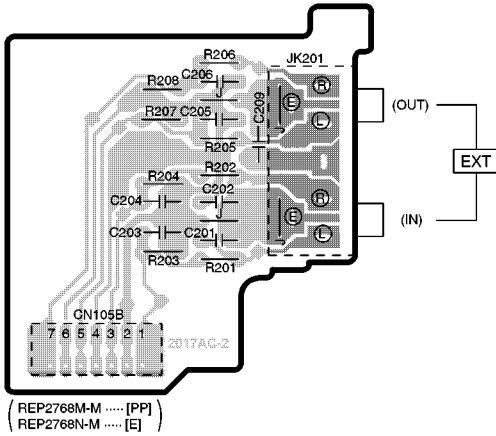


2017AA-2

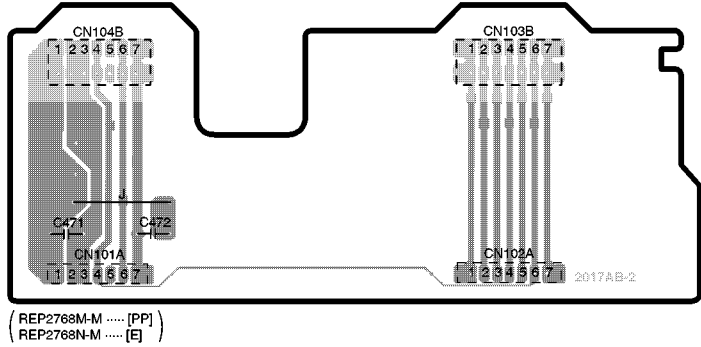
(REP2768M-M [PP])
(REP2768M-M [E])

G H I J K L

F IN/OUT TERMINAL P.C.B.



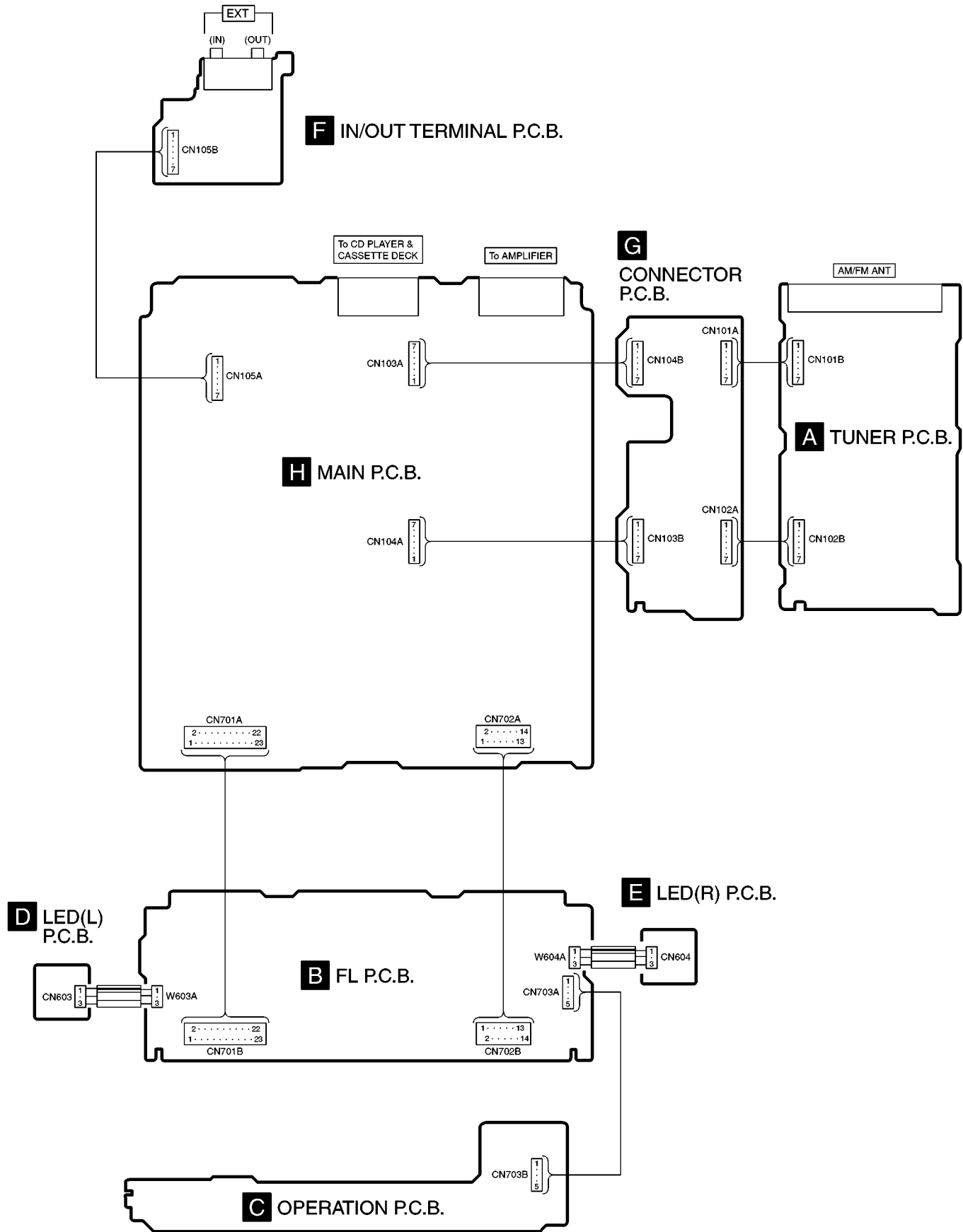
G CONNECTOR P.C.B.



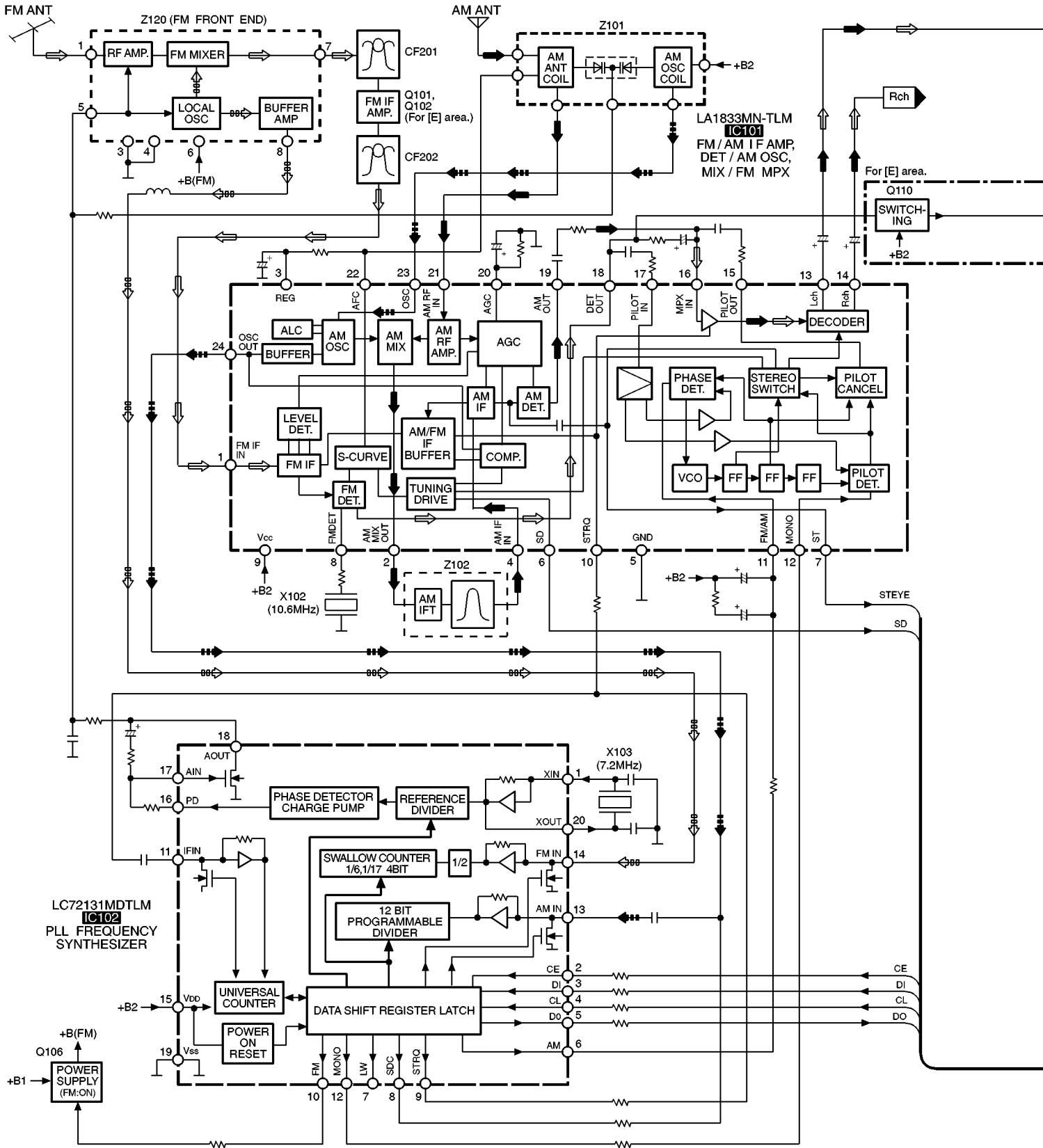
ELECTRICAL PARTS LOCATION

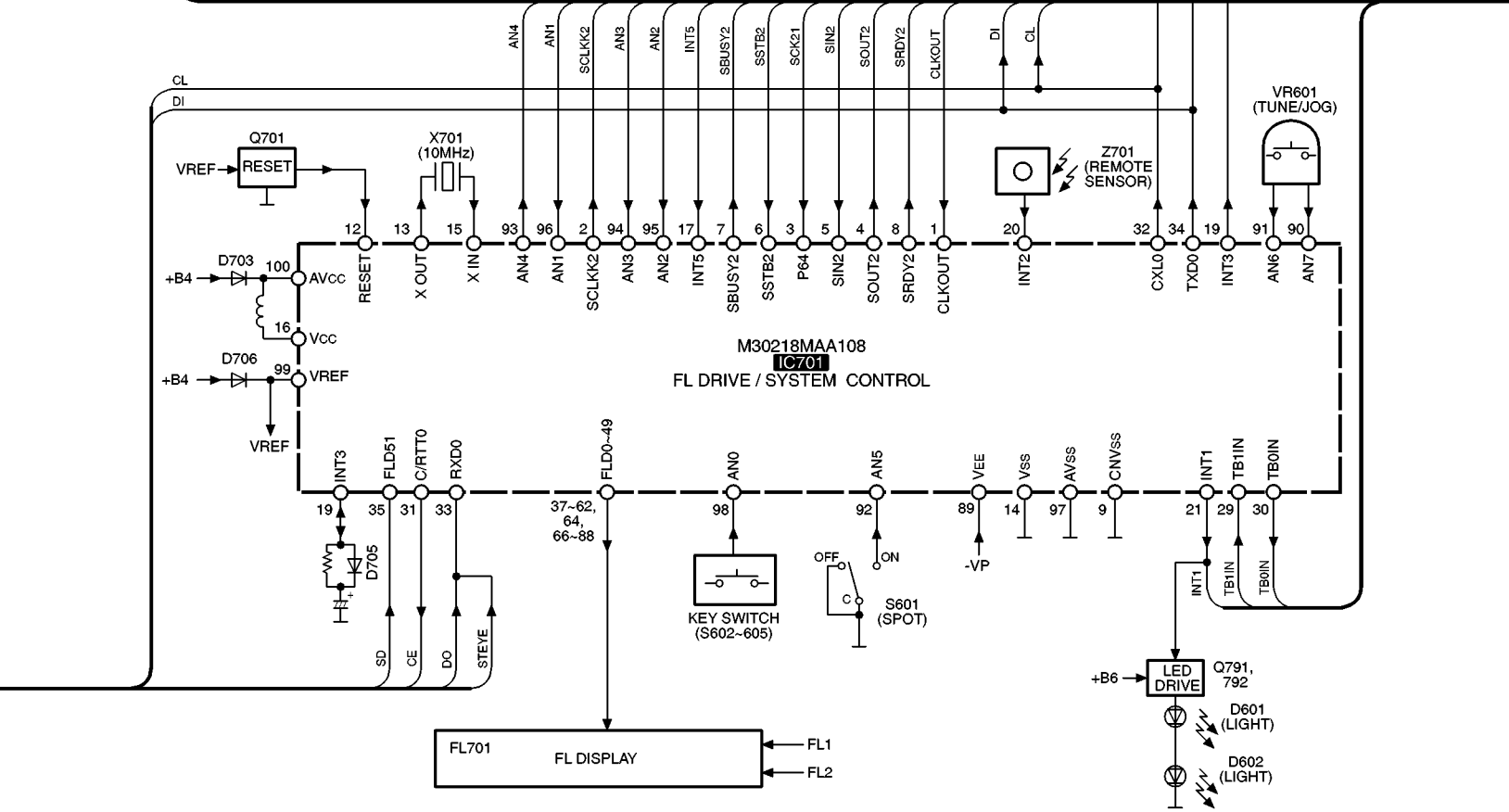
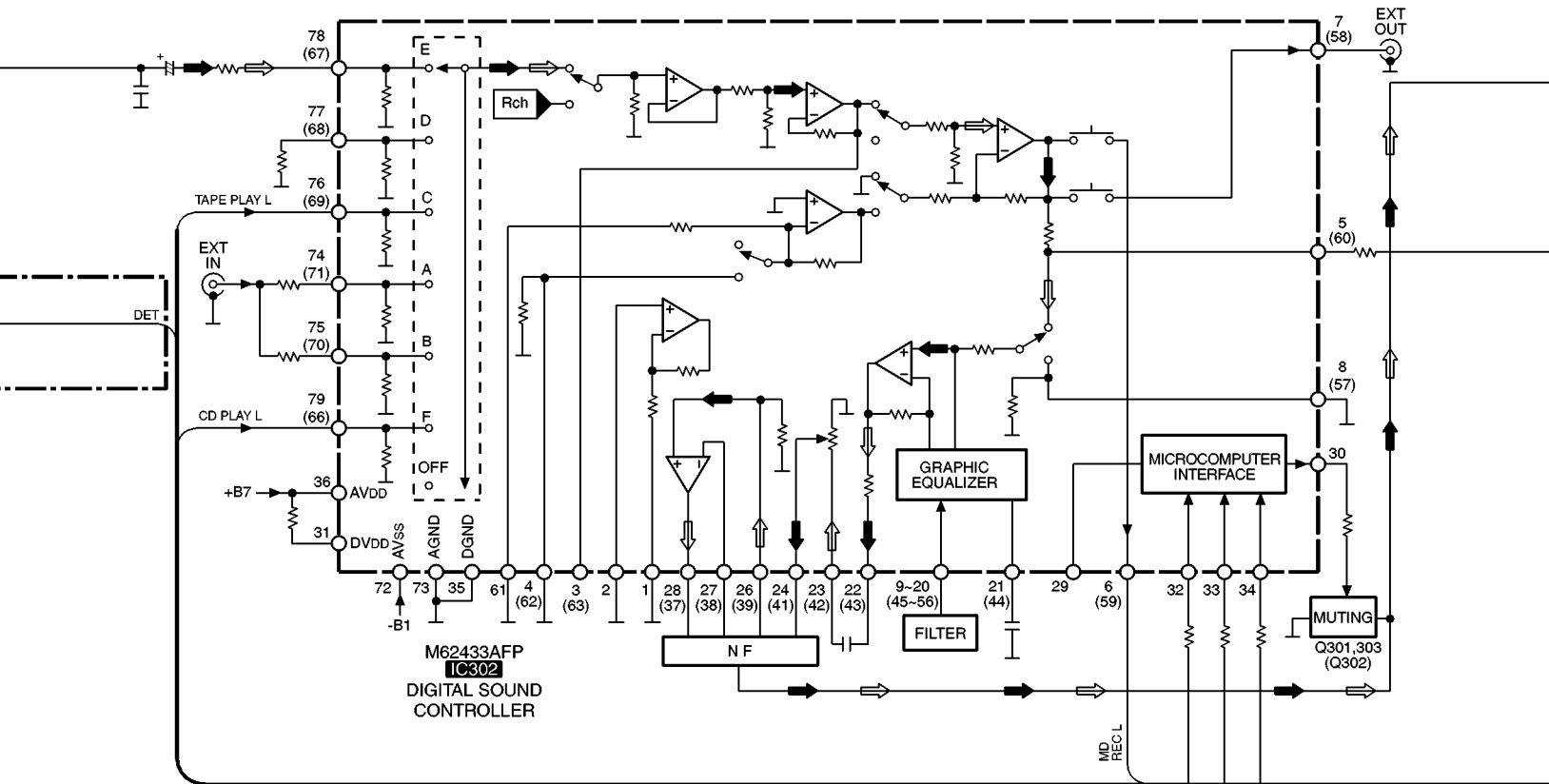
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
F IN/OUT TERMINAL P.C.B.											
CN105B	3G	R202	2H	R205	2H	R208	2G	C203	2G	C206	1H
JK201	2H	R203	2G	R206	1H	C201	2H	C204	2G	C209	2H
R201	2H	R204	2G	R207	2G	C202	2H	C205	2H		
G CONNECTOR P.C.B.											
CN101A	2J	CN102A	2K	CN103B	1K	CN104B	1J	C471	2J	C472	2J
H MAIN P.C.B.											
IC301	4C	JK402	2C	R343	4D	R503	7D	C322	5F	C363	4D
IC302	4E	E301	3C	R344	4D	R504	7D	C323	5E	C364	4D
IC501	7D	R301	4B	R345	4C	R505	7C	C324	5F	C401	5A
Q301	5C	R302	4A	R346	4C	R507	7C	C325	5E	C402	5A
Q302	5C	R303	4C	R347	4D	R509	6C	C326	4F	C403	4A
Q303	5D	R304	4C	R348	4D	R511	7C	C327	5E	C404	5A
Q401	4B	R305	4C	R349	2D	R512	7C	C328	4F	C405	5A
Q402	5B	R306	4C	R350	2D	R513	8C	C329	5E	C406	5B
Q403	4B	R307	4C	R351	2D	R530	6F	C330	4F	C407	4B
Q405	6A	R308	5C	R352	2D	R541	7B	C331	5E	C408	5B
Q406	6B	R309	4C	R353	3D	R542	7B	C332	4E	C409	5A
Q407	4B	R310	4C	R354	3E	R543	7B	C333	5D	C410	4B
Q541	7B	R313	5D	R355	3C	R544	7B	C334	4E	C411	4B
Q542	7B	R314	5D	R356	2C	R545	7B	C335	5D	C413	4B
Q543	6B	R315	5C	R357	3E	R546	7B	C336	4F	C414	6B
D301	5F	R316	5C	R358	3E	R547	6B	C337	5D	C415	4B
D401	5B	R317	5C	R359	3E	R548	6B	C338	4F	C481	3D
D402	5B	R318	5C	R360	3E	R549	6B	C339	5D	C482	3D
D403	4B	R319	5D	R361	2E	R550	7B	C340	3F	C483	2B
D404	6A	R320	5C	R362	3E	R551	6D	C341	5D	C484	2B
D481	3D	R321	5D	R363	2E	R552	6D	C342	3F	C491	8F
D482	3D	R322	5D	R364	3E	C301	4B	C343	5D	C492	7F
D483	3B	R323	5D	R401	4A	C302	4A	C344	3F	C493	7F
D484	3B	R324	5E	R402	5A	C303	4C	C345	5D	C501	7C
D491	7F	R325	5F	R403	4A	C304	4C	C346	3F	C502	7C
D492	7B	R326	5E	R404	5A	C305	4C	C347	4D	C503	7C
D511	7C	R329	5E	R405	4B	C306	4C	C348	3E	C504	7C
D541	7B	R330	5F	R406	4B	C307	4C	C349	4D	C505	6D
D542	7B	R331	5E	R407	4B	C308	4C	C350	3E	C506	6D
L501	7C	R332	5F	R408	4B	C309	4C	C351	4D	C507	6C
L502	6C	R333	3E	R409	6A	C310	4C	C353	2C	C508	6D
L541	2B	R334	3E	R410	6B	C311	5D	C354	2C	C509	7D
L542	2C	R335	3D	R411	6A	C312	5F	C355	2D	C511	7C
X501	7C	R336	3D	R481	3D	C313	5D	C356	2D	C512	7C
CN103A	3C	R337	3E	R482	2B	C314	5E	C357	3C	C541	7A
CN104A	5C	R338	3E	R491	8F	C315	5E	C358	2C		
CN105A	3E	R339	3D	R492	8F	C316	5E	C359	2E		
CN701A	8E	R340	3D	R493	7B	C317	5E	C360	2E		
CN702A	8B	R341	4D	R501	7D	C318	4E	C361	2E		
JK401	2B	R342	4D	R502	7D	C321	5E	C362	3E		

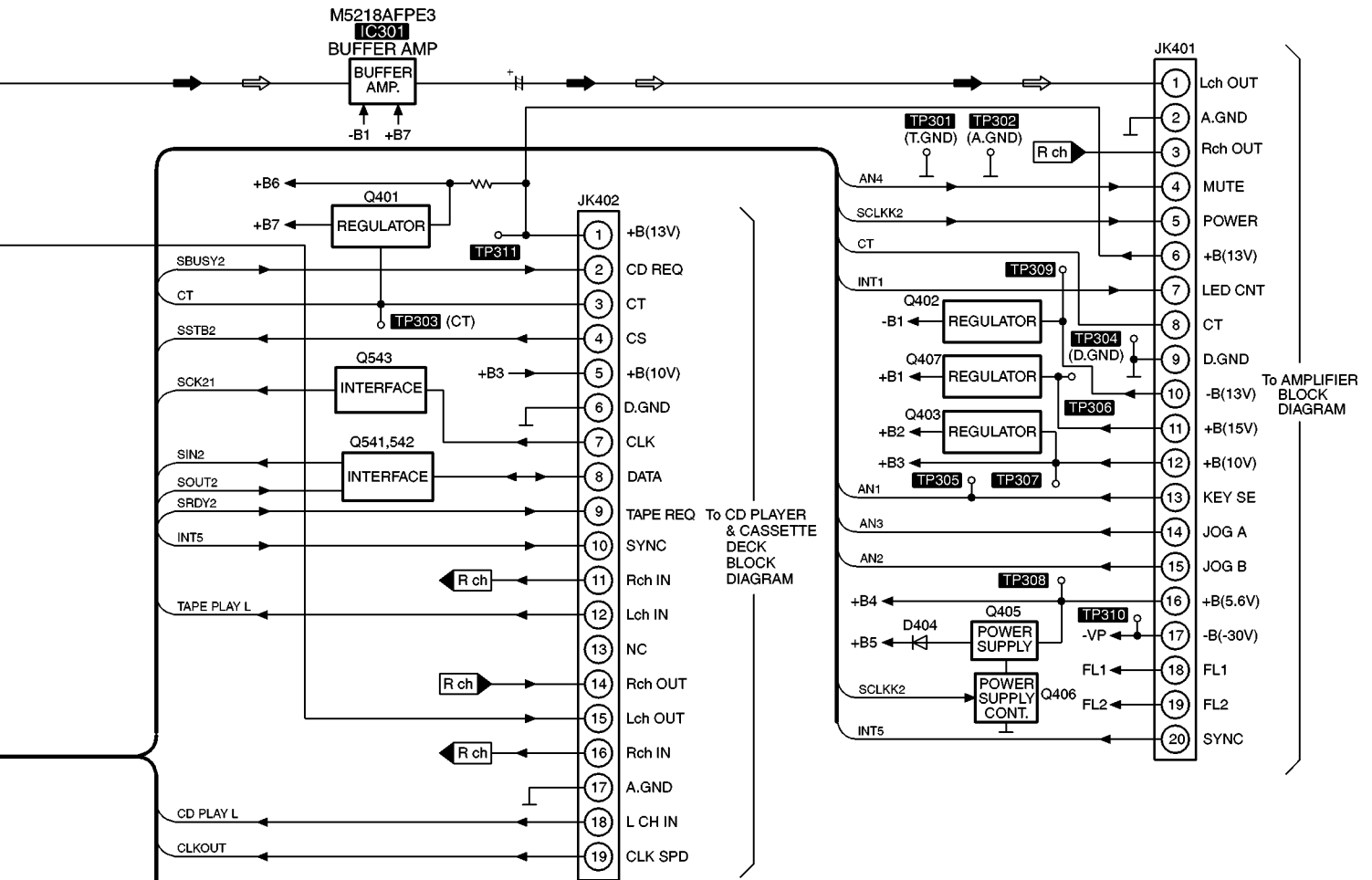
12 Wiring Connection Diagram



13 Block Diagram







14 Terminal Function of ICs

14.1. IC302 (M62433AFP): Digital Sound Controller

Pin No.	Terminal Name	I/O	Function
1	PS-IN	O	R/L output terminal for surround
2	PS+IN	-	Phase shift filter input terminal for surround (Not used, open)
3	KIN1	-	Key control adaptor output terminal (Not used, open)
4	KOUT1	-	Key control adaptor input terminal (Not used, connected to GND)
5	TAPEREC1	O	Rec signal output terminal form surround mix amp. terminal
6	MD REC1	O	Select common output rec signal output terminal
7	EXT OUT1		
8	DPL1	-	Tone signal input terminal (Not used, connected to GND)
9	F1F1	I	Resonance impedance connect terminal
10	F1O1	O	Resonance buffer amp output terminal
11	FIN1	I	Resonance buffer amp input terminal
12	F2F1	I	Resonance impedance connect terminal
13	F2O1	O	Resonance buffer amp output terminal
14	F2IN1	I	Resonance buffer amp input terminal
15	F3F1	I	Resonance impedance connect terminal
16	F3O1	O	Resonance buffer amp output terminal
17	F3IN1	I	Resonance buffer amp input terminal
18	F4F1	I	Resonance impedance connect terminal
19	F4O1	O	Resonance buffer amp output terminal
20	F4IN1	I	Resonance buffer amp input terminal
21	F5F1	I	Bass pass filter connect terminal (Connected to GND via capacitor)
22	GEQOUT1	O	Tone signal output terminal
23	VOLIN1	I	R ladder volume input terminal
24	VOLOUT1	O	R ladder volume output terminal
25	BB1	-	Bass boost capacity connection terminal (Not used, connected to GND)
26	BUFIN	I	Bass boost amp (+) input terminal
27	BUFNF1	I	Bass boost amp (-) input terminal
28	BUFOUT1	O	Bass boost amp output terminal
29	PORTA	-	Port A output terminal (Not used, open)
30	PORTB	O	Port B output terminal
31	DV _{DD}	I	Power supply terminal
32	CLK	I	Clock input terminal for serial data transfer
33	DATA	I	Control data input terminal
34	LATCH	I	Latch signal input terminal
35	DGND	-	GND terminal
36	AV _{DD}	I	Power supply terminal
37	BUFOUT2	O	Bass boost amp output terminal
38	BUFNF2	I	Bass boost amp (-) input terminal
39	BUFIN2	I	Bass boost amp (+) input terminal
40	BB2	-	Bass boost capacity connection terminal (Not used, connected to GND)
41	VOLOUT2	O	R ladder volume output terminal
42	VOLIN2	I	R ladder volume input terminal
43	GEQOUT2	O	Tone signal output terminal
44	F5F2	I	Bass pass filter connect terminal (Connected to GND via capacitor)
45	F4IN2	I	Resonance buffer amp input terminal
46	F4O2	O	Resonance buffer amp output terminal
47	F4F2	I	Resonance impedance connect terminal
48	F3IN2	I	Resonance buffer amp input terminal
49	F3O2	O	Resonance buffer amp output terminal
50	F3F2	I	Resonance impedance connect terminal
51	F2IN2	I	Resonance buffer amp input terminal
52	F2O2	O	Resonance buffer amp output terminal
53	F2F2	I	Resonance impedance connect terminal

Pin No.	Terminal Name	I/O	Function
54	F1IN2	I	Resonance buffer amp input terminal
55	F1O2	O	Resonance buffer amp output terminal
56	F1F2	I	Resonance impedance connect terminal
57	DPL2	-	Tone signal input terminal (Not used, connected to GND)
58	EXT OUT2	O	Select common output rec signal output terminal
59	MD REC2		
60	TAPEREC2	O	Rec signal output terminal form surround mix amp. terminal
61	MIC IN	-	Mic signal input terminal (Not used, connected to GND)
62	KOUT2	-	Key control adaptor input terminal (Not used, connected to GND)
63	KIN2	-	Key control adaptor output terminal (Not used, open)
64	BPOUT	O	Band pass filter amp output terminal for vocal cancel
65	BPIN	I	Band pass filter amp input terminal for vocal cancel
66	CD	I	Input terminal for R ch
67	TUNER		
68	MD		
69	TAPE		
70	AUXH		
71	AUXL		
72	AV _{SS}	I	Power supply terminal
73	AGND	-	GND terminal
74	AUXL	I	Input terminal for L ch
75	AUXH		
76	TAPE		
77	MD		
78	TUNER		
79	CD		
80	DELIN	I	R/L input terminal for surround

14.2. IC701 (M30218MAA108): FL Drive/System Control

Pin No.	Terminal Name	I/O	Function
1	P97/ CLKOUT	I/O	Communication clock velocity terminal (H: normal, L: CD TEXT)
2	P96/DA1/ SCLK22	O	Clock output terminal for serial data transfer
3	P95/ SCLK21	I	CD&Tape communication clock signal input
4	P94/ SOUT2	O	CD&Tape communication data signal output
5	P93/SIN2	I	CD&Tape communication data signal input
6	P92/ SSTB2	I	CD&Tape communication response signal input
7	P91/ SBUSY2	O	CD communication request signal output
8	P90/ SRDY2	O	Tape communication request signal output
9	CNV _{SS}	-	GND terminal
10	P87/XCIN	I	Crystal oscillator connected terminal (f= 32.7 kHz)
11	P86/ XC OUT	O	
12	/RESET	I	Reset signal input
13	XOUT	O	Ceramic oscillator output (f= 10 MHz)
14	V _{SS}	-	GND terminal
15	XIN	I	Ceramic oscillator input (f= 10 MHz)
16	V _{CC}	I	Power supply terminal
17	P85/INT5	I	Power failure detect signal input
18	P84/INT4	I/O	CR timer terminal for clock backup

Pin No.	Terminal Name	I/O	Function
19	P83/INT3	O	Latch signal output for IC302
20	P82/INT2	I	Remote control data input
21	P81/INT1	O	LED drive signal output (L: OFF)
22	P80/INT0	I	Load TRG detect switch signal input (L: ON) (Not used)
23	P77/TA4IN/ TA2OUT/ CLKS1	O	MD communication input/output select signal output (L: Input) (Not used)
24	P76/TA3IN/ TA1OUT/ CLK1	O	MD communication clock signal output (Not used)
25	P75/TA2IN/ TA0OUT/ RXD1	I	MD communication data signal input (Not used)
26	P74/TA1IN/ YA4OUT/ TXD1	O	MD communication data signal output (Not used)
27	P73/TA0IN/ TA3OUT	I	MD communication response signal input
28	P72/TB2IN	O	MD communication request signal output (Not used)
29	P71/TB1IN	I	Data signal input for IC501
30	P70/TB0IN	O	Chip enable signal output for IC501
31	P47/CST0/ RST0	O	Chip enable signal output for IC102
32	P46/CXL0	O	Clock signal output for IC102, IC302
33	P45/RDX0	I	Data signal input for IC102/Stereo signal input for IC101
34	P44/TXD0	O	Data signal output for IC102, IC302
35	P43/FLD51	I	Tuner signal detection input for IC101
36	P42/FLD50	I	Chip select signal input
37 40	P41/FLD49 P36/FLD46	I/O	FL segment control signal input/output
41 62	P35/FLD45 P10/FLD24	O	FL segment control signal output
63	V _{CC}	I	Power supply terminal
64	P07/FLD03	O	FL segment control signal output
65	V _{SS}	-	GND terminal
66 73	P06/FLD22 P57/FLD15	O	FL segment control signal output
74 88	P56/FLD14 P60/FLD0	O	FL grid control signal output
89	V _{EE}	I	Power supply terminal (Negative)
90	P107/AN7	I	Jog switch signal input
91	P106/AN6	I	Key switch signal input
92	P105/AN5	I	Key switch signal input
93	P104/AN4	O	Muting signal output (H: OFF)
94 96	P103/AN3 P101/AN1	I	Key switch signal input
97	AV _{SS}	-	GND terminal
98	P100/AN0	I	Key switch signal input
99	VREF	I	Power supply terminal
100	AV _{CC}	I	Power supply terminal

15 Replacement Parts List

Notes:

- Important safety notice:

Components identified by \triangle mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the area. (Refer to the cover page for area.)
- The marking [RTL] indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RHD30007-S	SCREW	4	
2	RKM0363-2S	CABINET	1	
3	XTB3+8JFZ	SCREW	1	
4	REZ1123	FFC (23P)	1	
5	RKA0114-K	FOOT	4	
5-1	RKA0083-K	CUSHION	4	
6	REZ1243	FFC (14P)	1	
7	RG0160J-S	FRONT PANEL	1	(E)
7	RG0160H-S	FRONT PANEL	1	(PP)
8	RMC0313	TUNER EARTH SPRING	1	(E)
9	RGF0698-S	SUB PANEL	1	
10	RGU1602-1S1	BUTTON, BAND	1	
11	RGW0302-S	KNOB, TUNER/ JOG	1	
12	RKW0568-S1	FL WINDOW	1	
13	XTBS26+8J	SCREW	8	
14	XTBS3+8JFZ1	SCREW	9	
15	XTB3+12JFZ	SCREW	3	
16	XTB3+5JFZ	SCREW	4	
17	RGK1196-S	SIDE PANEL (L)	1	
17-1	XTBS26+8J	SCREW	1	
18	RYQ0277-S1	SIDE PANEL (R)	1	
18-1	XTBS26+8J	SCREW	1	
19	REP2683D-S	LED PCB	1	
C101	ECBT1C103NS5	16V 0.01U	1	
C102	ECEA1CKS100	16V 10U	1	(PP)
C102	ECEA1CKS101	16V 100U	1	(E)
C103	ECBT1C103NS5	16V 0.01U	1	
C104	ECBT1H102KB5	50V 1000P	1	
C105	ECBT1H102KB5	50V 1000P	1	(E)
C106	ECBT1C103NS5	16V 0.01U	1	
C107	ECBT1H473ZF5	50V 0.047U	1	
C108	ECBT1H8R2KC5	50V 8.2P	1	
C109	ECBT1H102KB5	50V 1000P	1	
C110	ECBT1C103NS5	16V 0.01U	1	
C111	ECEA1EKS4R7	25V 4.7U	1	
C112	ECBT1C103NS5	16V 0.01U	1	
C113	ECBT1H102KB5	50V 1000P	1	
C114	RCE1HKA3R3BG	50V 3.3U	1	
C115	ECEA1EKS4R7	25V 4.7U	1	
C116	ECFR1C333KR	16V 0.033U	1	
C117,18	ECFR1C183KR	16V 0.018U	2	
C119	ECQP1391JZ	100V 390P	1	(E)
C119	ECQB1H561JF3	50V 560P	1	(PP)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C120	ECEA1CKS100	16V 10U	1	
C121	RCE1HKA47BG	50V 0.47U	1	
C122,23	ECEA1HKS010	50V 1U	2	
C124	ECBT1H101KB5	50V 100P	1	
C125	ECEA1CKS220	16V 22U	1	
C126	ECBT1H473ZF5	50V 0.047U	1	
C127	ECEA1CKS220	16V 22U	1	
C129,30	ECEA0JKS101	6.3V 100U	2	
C131	ECBT1H101KB5	50V 100P	1	
C132	ECBT1H102KB5	50V 1000P	1	
C133,34	ECBT1H270JU5	50V 27P	2	
C136	ECBT1H102KB5	50V 1000P	1	
C137	ECFR1E472KR	25V 4700P	1	
C138	ECBT1C103KS5	16V 0.01U	1	
C139	ECFR1E472KR	25V 4700P	1	
C141,42	ECEA1HKS010	50V 1U	2	
C143,44	ECBT1C472KR5	16V 4700P	2	
C147	ECBT1H102KB5	50V 1000P	1	
C148	ECBT1C103NS5	16V 0.01U	1	
C149	ECBT1H104ZF5	50V 0.1U	1	
C201-06	ECBT1H101KB5	50V 100P	6	
C209	ECBT1H102KB5	50V 1000P	1	
C301,02	ECA1CAK100XB	16V 10U	2	
C303,04	ECBT1H330J5	50V 33P	2	
C305,06	ECBT1H102KB5	50V 1000P	2	
C307,08	ECBT1E103ZF	25V 0.01U	2	
C309-13	ECA1CAK100XB	16V 10U	5	
C314	ECBT1H104ZF5	50V 0.1U	1	
C315-17	ECBT1H470J5	50V 47P	3	
C318	ECBT1H104ZF5	50V 0.1U	1	
C321,22	ECBT1H471KB5	50V 470P	2	
C323,24	ECBT1H102KB5	50V 1000P	2	
C325,26	ECA1CAK100XB	16V 10U	2	
C327,28	ECBT1H331KB5	50V 330P	2	
C329,30	ECA1CAK100XB	16V 10U	2	
C331,32	ECBT1H331KB5	50V 330P	2	
C333,34	ECBT1C332KR5	16V 3300P	2	
C335-38	ECQB1H103JZ	50V 0.01U	4	
C339-42	ECQV1H563JM3	50V 0.056U	4	
C343,44	ECQV1H104JM3	50V 0.1U	2	
C345,46	ECQV1H124JM3	50V 0.12U	2	
C347-50	ECQB1H333JF3	50V 0.033U	4	
C351	ECBT1H104ZF5	50V 0.1U	1	
C353-62	ECBT1H101KB5	50V 100P	10	
C363,64	ECBT1C103KS5	16V 0.01U	2	(PP)
C401,02	ECA1EAM101XB	25V 100U	2	
C403,04	ECBT1H473KB5	50V 0.047U	2	
C405,06	ECA1CAK470XB	16V 47U	2	
C407,08	ECA1CAK101XB	16V 100U	2	
C409	ECBT1E103ZF	25V 0.01U	1	
C410	ECBT1H473KB5	50V 0.047U	1	
C411	ECA1CAK101XB	16V 100U	1	
C413	ECA1EAM101XB	25V 100U	1	
C414	ECEA0JKS101	6.3V 100U	1	
C415	ECBT1H473KB5	50V 0.047U	1	
C471,72	ECBT1H473KB5	50V 0.047U	2	
C481	ECBT1C105ZF5	16V 1U	1	
C482	ECBT1H104ZF5	50V 0.1U	1	
C483,84	ECBT1H473KB5	50V 0.047U	2	
C491,92	ECBT1H101KB5	50V 100P	2	
C493	ECEA1VKS470	35V 47U	1	
C501	ECEA0JKS101	6.3V 100U	1	(E)
C502	ECBT1E103ZF	25V 0.01U	1	(E)
C503,04	ECBT1H470J5	50V 47P	2	(E)
C505	ECBT1H561KB5	50V 560P	1	(E)
C506	ECBT1E103ZF	25V 0.01U	1	(E)
C507	ECEA0JKS101	6.3V 100U	1	(E)
C508	ECBT1H331KB5	50V 330P	1	(E)
C509	ECA1CAK100XB	16V 10U	1	(E)
C511	ECBT1E103ZF	25V 0.01U	1	(PP)
C512	ECBT1H101KB5	50V 100P	1	(PP)

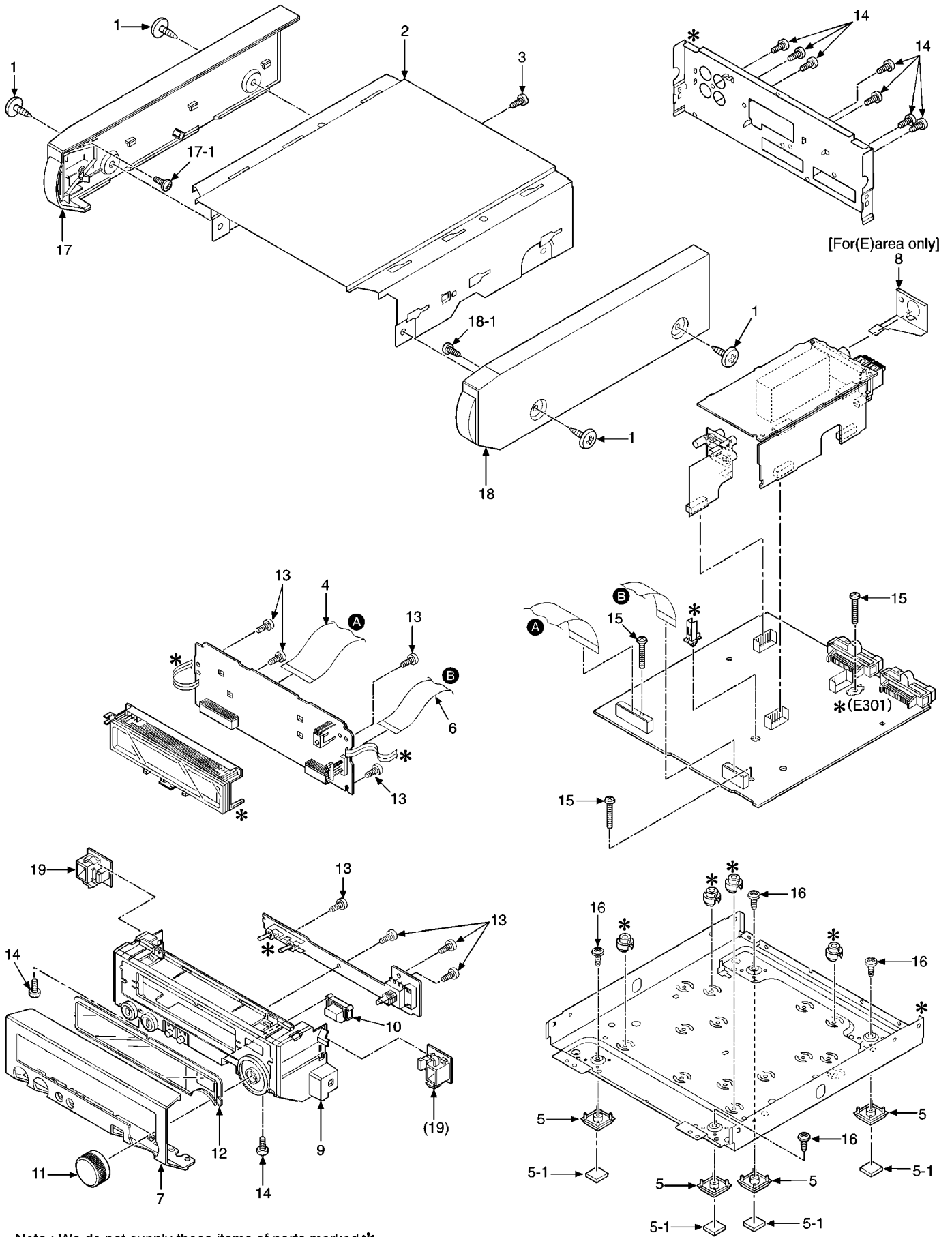
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C541	RCE1HKA3R3BG	50V 3.3U	1	
C701	ECUV1H104ZFN	50V 0.1U	1	
C702	ECUV1H180JCN	50V 18P	1	
C703	ECUV1H200JCN	50V 20P	1	
C704	ECEA1HKS2R2	50V 2.2U	1	
C705,06	ECUV1H104ZFN	50V 0.1U	2	
C707	RCE0JRC102BG	6.3V 1000U	1	
C708	ECUV1H103ZFN	50V 0.01U	1	
C709	ECEA1CKS100	16V 10U	1	
C710	ECUV1H102KBN	50V 1000P	1	
C711,12	ECUV1H104ZFN	50V 0.1U	2	
C713	ECEA1HKS100	50V 10U	1	
C715,16	ECUV1H104ZFN	50V 0.1U	2	
C717-19	ECUV1H103ZFN	50V 0.01U	3	
C781,82	ECEA1HKS010	50V 1U	2	
C791	ECUV1H103ZFN	50V 0.01U	1	
C792	ECEA0JKS101	6.3V 100U	1	
CF201	RLFFETNGD01L	CERAMIC FILTER	1	(E)
CF201	RLFFETWN02DD	CERAMIC FILTER	1	(PP)
CF202	RLFFETMGD01L	CERAMIC FILTER	1	(E)
CF202	RLFFETWN02DD	CERAMIC FILTER	1	(PP)
CN101A	RJT100W07	CONNECTOR (7P)	1	
CN101B	RJU100W07	CONNECTOR (7P)	1	
CN102A	RJT100W07	CONNECTOR (7P)	1	
CN102B	RJU100W07	CONNECTOR (7P)	1	
CN103A	RJT057W007-1	CONNECTOR (7P)	1	
CN103B	RJU057W007	CONNECTOR (7P)	1	
CN104A	RJT057W007-1	CONNECTOR (7P)	1	
CN104B	RJU057W007	CONNECTOR (7P)	1	
CN105A	RJT057W007-1	CONNECTOR (7P)	1	
CN105B	RJU057W007	CONNECTOR (7P)	1	
CN701A	RJS1A6823	CONNECTOR (23P)	1	
CN701B	RJS1A6223-1	CONNECTOR (23P)	1	
CN702A	RJS1A6814	CONNECTOR (14P)	1	
CN702B	RJS1A6214-1	CONNECTOR (14P)	1	
CN703A	RJT066H05A	CONNECTOR (5P)	1	
CN703B	RJU066H05	CONNECTOR (5P)	1	
D101	MA4051M	DIODE	1	△
D301	MA4051M	DIODE	1	△
D401,02	MA4075HTA	DIODE	2	△
D403	MA4082LTA	DIODE	1	△
D404	MA185TA	DIODE	1	
D481-84	MA719TA	DIODE	4	
D491	MA4043M	DIODE	1	
D492	MA4051M	DIODE	1	
D511	MA165	DIODE	1	(PP)
D541,42	MA165	DIODE	2	
D701	MA111TX	DIODE	1	
D703,04	1SS380TE-17	DIODE	2	
D705	MA111TX	DIODE	1	
D706	1SS380TE-17	DIODE	1	
D711	MA111TX	DIODE	1	(PP)
D712	MA111TX	DIODE	1	
D713	MA111TX	DIODE	1	(E)
D791	UDZ2R0BTE-17	DIODE	1	
FL701	RSL0271-F	FL DISPLAY TUBE	1	
IC101	LA1833MN-TLM	IC	1	
IC102	LC72131LMDTLM	IC	1	
IC301	M5218AFPPE3	IC	1	
IC302	M62433AFP	IC	1	
IC501	LC72722PMTLM	IC	1	(E)
IC701	M30218MAA108	IC	1	
JK101	RJH5210M-1	ANTENNA	1	(E)
JK101	RJH5404M	ANTENNA	1	(PP)
JK201	SJF3069-20N	EXT OUT/IN	1	
JK401	RJT065K20	SYSTEM CONNECTOR (20P)	1	
JK402	RJT065K19	SYSTEM CONNECTOR (19P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L101,02	ELESNR68MA	COIL	2	
L103	ELEXTR47MA9	COIL	1	
L501,02	RLQA100JT-Y	COIL	2	(E)
L541,42	RLQA100JT-Y	COIL	2	
L701	RLBN300AV-W	COIL	1	
L702-06	RLBN601V-W	COIL	5	
L707	RLBN300AV-W	COIL	1	
PCB1	REP2592B-T	TUNER P.C.B.	1	(PP) [RTL]
PCB1	REP2592C-T	TUNER P.C.B.	1	(E) [RTL]
PCB2	REP2768N-M	MAIN P.C.B.	1	(E) [RTL]
PCB2	REP2768M-M	MAIN P.C.B.	1	(PP) [RTL]
PCB3	REP2683D-S	LED P.C.B(Ref.No 19)	1	
PCB4	REP2769J-S	CONTROL P.C.B.	1	(E) [RTL]
PCB4	REP2769H-S	CONTROL P.C.B.	1	(PP) [RTL]
Q101	2SC2787FK	TRANSISTOR	1	
Q102	2SC2787FK	TRANSISTOR	1	(E)
Q106	UN4111	TRANSISTOR	1	
Q110	2SC3311AR	TRANSISTOR	1	(E)
Q301,02	2SC3311ATA	TRANSISTOR	2	
Q303	UN4115	TRANSISTOR	1	
Q401	2SD2137PQTA	TRANSISTOR	1	△
Q402	2SB1417PQTA	TRANSISTOR	1	△
Q403	2SC3940AQSTA	TRANSISTOR	1	△
Q405	DTB123YSTP	TRANSISTOR	1	
Q406	DTC114ESTP	TRANSISTOR	1	
Q407	2SC3311ATA	TRANSISTOR	1	
Q541,42	2SC3311ATA	TRANSISTOR	2	
Q543	DTC143XSTP	TRANSISTOR	1	
Q701	UN5214TX	TRANSISTOR	1	
Q702	2SD1819ATX	TRANSISTOR	1	
Q791	UN5214TX	TRANSISTOR	1	
Q792	2SB709ASTX	TRANSISTOR	1	
R102	ERDS2FJ472	1/4W 4.7K	1	
R103	ERDS2FJ101	1/4W 100	1	(E)
R103	ERDS2FJ271	1/4W 270	1	(PP)
R104	ERDS2FJ102	1/4W 1K	1	(PP)
R104	ERDS2FJ103	1/4W 10K	1	(E)
R105	ERDS2FJ471	1/4W 470	1	
R106	ERDS2FJ474	1/4W 470K	1	
R107	ERDS2FJ331	1/4W 330	1	
R108	ERDS2FJ474	1/4W 470K	1	(E)
R109	ERDS2FJ331	1/4W 330	1	(E)
R110	ERDS2FJ102	1/4W 1K	1	
R111	ERDS2FJ391	1/4W 390	1	
R112	ERDS2FJ104	1/4W 100K	1	
R113	ERDS2FJ103	1/4W 10K	1	
R114	ERDS2FJ562	1/4W 5.6K	1	
R115	ERDS2FJ561	1/4W 560	1	
R116	ERDS2FJ102	1/4W 1K	1	
R117	ERDS2FJ473	1/4W 47K	1	(PP)
R117	ERDS2FJ683	1/4W 68K	1	(E)
R118	ERDS2FJ332	1/4W 3.3K	1	
R119	ERDS2FJ103	1/4W 10K	1	(E)
R119	ERDS2FJ682	1/4W 6.8K	1	(PP)
R120	ERDS2FJ473	1/4W 47K	1	
R121	ERDS2FJ223	1/4W 22K	1	
R122	ERDS2FJ272	1/4W 2.7K	1	
R123	ERDS2FJ683	1/4W 68K	1	
R124	ERDS2FJ271	1/4W 270	1	
R125	ERDS2FJ471	1/4W 470	1	
R126	ERDS2FJ152	1/4W 1.5K	1	
R127	ERDS2FJ471	1/4W 470	1	
R128	ERDS2FJ820	1/4W 82	1	
R129	ERDS2FJ273	1/4W 27K	1	
R130	ERDS2FJ103	1/4W 10K	1	
R131	ERDS2FJ680	1/4W 68	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R132	ERDS2FJ103	1/4W 10K	1	
R133	ERDS2FJ102	1/4W 1K	1	
R134	ERDS2FJ471	1/4W 470	1	
R135-37	ERDS2FJ102	1/4W 1K	3	
R138	ERDS2FJ332	1/4W 3.3K	1	
R139	ERDS2FJ332	1/4W 3.3K	1	
R140	ERDS2FJ472	1/4W 4.7K	1	(E)
R141,42	ERDS2FJ102	1/4W 1K	2	
R143	ERDS2FJ223	1/4W 22K	1	
R145,46	ERDS2FJ104	1/4W 100K	2	
R201,02	ERDS2FJ102	1/4W 1K	2	
R203,04	ERDS2FJ104	1/4W 100K	2	
R205,06	ERDS2FJ102	1/4W 1K	2	
R207,08	ERDS2FJ104	1/4W 100K	2	
R301-04	ERDS2FJ471	1/4W 470	4	
R305,06	ERDS2FJ473	1/4W 47K	2	
R307,08	ERDS2FJ103	1/4W 10K	2	
R309,10	ERDS2FJ102	1/4W 1K	2	
R313,14	ERDS2FJ102	1/4W 1K	2	
R315,16	ERDS2FJ223	1/4W 22K	2	
R317,18	ERDS2FJ102	1/4W 1K	2	
R319,20	ERDS2FJ332	1/4W 3.3K	2	
R321	ERDS2FJ105	1/4W 1M	1	
R322	ERDS2FJ104	1/4W 100K	1	
R323	ERDS2FJ102	1/4W 1K	1	
R324	ERDS2FJ222	1/4W 2.2K	1	
R325	ERDS2FJ102	1/4W 1K	1	
R326	ERDS2FJ103	1/4W 10K	1	
R329-32	ERDS2FJ472	1/4W 4.7K	4	
R333,34	ERDS2FJ332	1/4W 3.3K	2	
R335,36	ERDS2FJ104	1/4W 100K	2	
R337,38	ERDS2FJ223	1/4W 22K	2	
R339,40	ERDS2FJ103	1/4W 10K	2	
R341,42	ERDS2FJ102	1/4W 1K	2	
R343,44	ERDS2FJ103	1/4W 10K	2	
R345,46	ERDS2FJ102	1/4W 1K	2	
R347,48	ERDS2FJ103	1/4W 10K	2	
R349,50	ERDS2FJ272	1/4W 2.7K	2	
R351,52	ERDS2FJ822	1/4W 8.2K	2	
R353,54	ERDS2FJ222	1/4W 2.2K	2	
R355,56	ERDS2FJ103	1/4W 10K	2	
R357,58	ERDS2FJ102	1/4W 1K	2	
R359,60	ERDS2FJ103	1/4W 10K	2	
R361,62	ERDS2FJ472	1/4W 4.7K	2	
R363,64	ERDS2FJ103	1/4W 10K	2	
R401,02	ERD2FCJ4R7	4.7	2	△
R403,04	ERDS2FJ102	1/4W 1K	2	
R405	ERD2FCG100	10	1	△
R406	ERDS2FJ102	1/4W 1K	1	
R407	ERDS2FJ221	1/4W 220	1	
R408-11	ERDS2FJ102	1/4W 1K	4	
R481,82	ERDS2FJ101	1/4W 100	2	
R491,92	ERDS2FJ151	1/4W 150	2	
R493	ERDS2FJ103	1/4W 10K	1	
R501-03	ERDS2FJ102	1/4W 1K	3	(E)
R504	ERDS2FJ101	1/4W 100	1	(E)
R505	ERDS2FJ332	1/4W 3.3K	1	(E)
R507	ERDS2FJ101	1/4W 100	1	(E)
R509	ERDS2FJ101	1/4W 100	1	(E)
R511	ERDS2FJ472	1/4W 4.7K	1	(PP)
R512	ERDS2FJ104	1/4W 100K	1	(PP)
R513	ERDS2FJ223	1/4W 22K	1	(PP)
R530	ERDS2FJ473	1/4W 47K	1	
R541	ERDS2FJ473	1/4W 47K	1	
R542,43	ERDS2FJ472	1/4W 4.7K	2	
R544	ERDS2FJ223	1/4W 22K	1	
R545-47	ERDS2FJ103	1/4W 10K	3	
R548	ERDS2FJ331	1/4W 330	1	
R549,50	ERDS2FJ103	1/4W 10K	2	
R551,52	ERDS2FJ102	1/4W 1K	2	
R601	ERJ6GEYJ122V	1/10W 1.2K	1	
R602	ERJ6GEYJ102V	1/10W 1K	1	
R603	ERJ6GEYJ821V	1/10W 820	1	
R701	ERJ6GEYJ102V	1/10W 1K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R702	ERJ6GEYJ103V	1/10W 10K	1	
R703	ERJ6GEYJ104V	1/10W 100K	1	
R704	ERJ6GEYJ101V	1/10W 100	1	
R705-07	ERJ6GEYJ102V	1/10W 1K	3	
R708	ERJ6GEYJ824V	1/10W 820K	1	
R709-11	ERJ6GEYJ102V	1/10W 1K	3	
R712	ERJ6GEYJ103V	1/10W 10K	1	
R713-15	ERJ6GEYJ102V	1/10W 1K	3	
R716-18	ERJ6GEYJ331V	1/10W 330	3	
R719,20	ERJ6GEYJ102V	1/10W 1K	2	
R721	ERJ6GEYJ153V	1/10W 15K	1	
R722-24	ERJ6GEYJ102V	1/10W 1K	3	
R725	ERJ6GEYJ101V	1/10W 100	1	
R726,27	ERJ6GEYJ331V	1/10W 330	2	
R728,29	ERJ6GEYJ102V	1/10W 1K	2	
R730	ERJ6GEYJ103V	1/10W 10K	1	
R733	ERJ6GEYJ101V	1/10W 100	1	
R734	ERJ6GEYJ104V	1/10W 100K	1	
R735-37	ERJ6GEYJ102V	1/10W 1K	3	
R738	ERJ6GEYJ101V	1/10W 100	1	
R739-42	ERJ6GEYJ102V	1/10W 1K	4	
R743-51	ERJ6GEYJ103V	1/10W 10K	9	
R752-57	ERJ6GEYJ102V	1/10W 1K	6	
R758,59	ERJ6GEYJ101V	1/10W 100	2	
R760	ERJ6GEYJ102V	1/10W 1K	1	
R781,82	EXBZ10E104J	COMPONENT COMBINATION	2	
R791	ERJ6GEYJ103V	1/10W 10K	1	
R792	ERJ6GEYJ680V	1/10W 68	1	
RJ601	ERJ8GEY0R00V	CHIP JUMPER	1	
RJ704,05	ERJ8GEY0R00V	CHIP JUMPER	2	
S601,02	RST2A001-2D	SW, SPOT/TIME MODE	2	
S603-05	EVQ21405R	SW, PUSH	3	
VR601	EVQVENF0124B	V.R, TUNE/JOG	1	
X102	RLFDFTL13DD	OSCILLATOR	1	
X103	RSXC7M20S05T	OSCILLATOR	1	
X501	RSXC4M33S02T	OSCILLATOR	1	(E)
X701	RSXY10M0M01T	OSCILLATOR	1	
X702	RSXD32K7S05	OSCILLATOR	1	
Z101	RLA2Z006M-T	COMPONENT COMBINATION	1	
Z102	RLI2Z022M-T	COMPONENT COMBINATION	1	
Z120	RAL0006	FM FRONT END	1	(PP)
Z120	RAL0035	FM FRONT END	1	(E)
Z701	RCDGF1U28XD	REMOTE SENSOR	1	

16 Cabinet Parts Location



Note : We do not supply those items of parts marked*.