

Service Manual

Tuner

ST-HD505MD

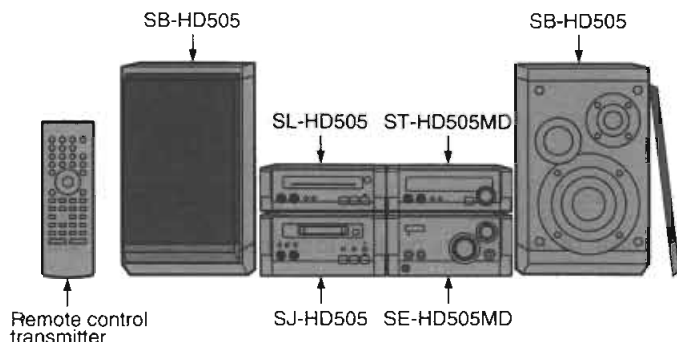
Colour

(S)Silver Type

Area

EG.....Europe.

System: SC-HD505MD



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

Note: Refer to the service manual for Model No. SE-HD505MD (ORDER NO. AD9904116A2) for information on "ACCESSORIES", "INSTALLATION", "CONNECTIONS" and "PACKAGING".

Specification

■Pre-amplifier section

Input sensitivity/impedance

EXT IN: 300mV/15k Ω

Output level

EXT OUT: 250mV/1.5k Ω

■FM tuner section

Frequency range: 87.5-108.0MHz(0.05MHz step)

Antenna terminals: 75 Ω

■AM tuner section

Frequency range: 522-1629kHz(9kHz step)

520-1630kHz(10kHz step)

■Timer section

Clock: Quartz-lock type

Function:

Play timer: 1 time or everyday

Rec. timer: 1 time or everyday

Sleep timer: 120min, 30min intervals

■General

Dimensions(WxHxD): 202x76x262.5mm

Weight: 1.2kg

Power Supply AC4.2V, DC \pm 13V/+16V/+10V/+5.6V/-24V

Power Consumption 15W

Notes:

1. Design and specifications are subject to change without notice.
2. Dimensions and weight are approximate.

■System/SC-HD505MD:

Tuner: ST-HD505MD, Compact Disk Player: SL-HD505, Amplifier: SE-HD505MD, Mini Disk Deck: SJ-HD505, Speakers: SB-HD505 (Made in MAES)

⚠ 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.

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1 Before Repair

This equipment (ST-HD505MD), which is a component of the system, is supplied with power from the amplifier (SE-HD505MD).When repairing this equipment or checking

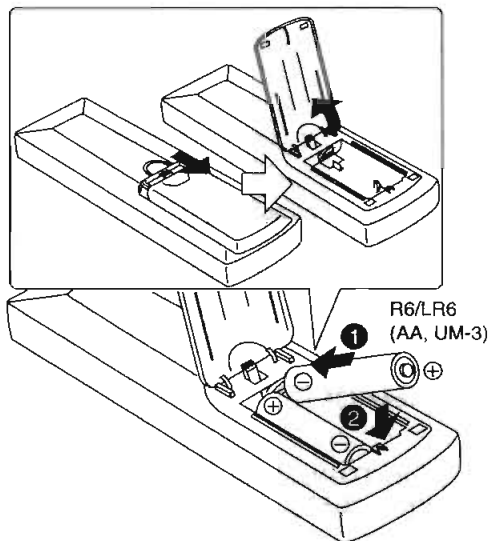
operation of the system, be sure to connect the amplifier with it. Power supply and operation check in the state of it as a single equipment are impracticable.

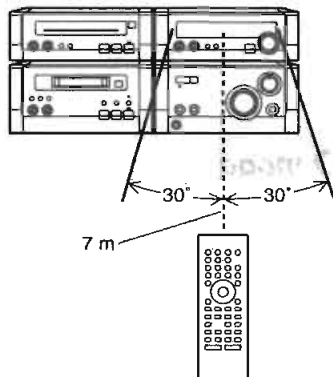
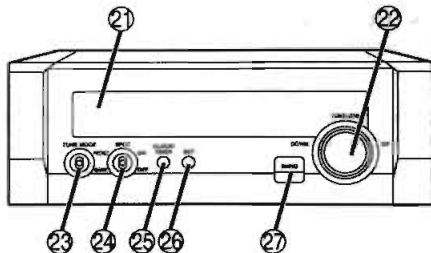
2 Blue LED

- The LED mounted to each side of the front panel of this set is very sensitive to static electricity. When handling the LED base plate, be very careful about it.
- Do not replace a blue LED singly. If replaced singly, 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 permit the brightness adjustment.

*For configuration at the time of supply of replacement parts, refer to "Printed Circuit Board Diagram".

3 Operating Instructions

A

 R6/LR6
(AA, UM-3)

B

C


The remote control

A Batteries

Insert so the poles (+ and -) match those in the remote control.

Do not;

- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart.
- short circuit.
- attempt to recharge alkaline or manganese batteries.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

If electrolyte leaks from the batteries, consult your dealer.

Wash thoroughly with water if electrolyte comes in contact with any part of your body.

Do not use rechargeable type batteries.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Replace if the unit does not respond to the remote control even when held close to the front panel.

If the battery lid comes loose, slide it back into place horizontally.

B Use

Aim at the sensor, avoiding obstacles, at a maximum range of 7 meters directly in front of the unit.

Keep the transmission window and the unit's sensor free from dust.

Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

Do not;

- put heavy objects on the remote control.
- take the remote control apart.
- spill liquids onto the remote control.

Front panel controls

C Tuner

① Display panel

The display also shows information for the MD deck, CD player, and amplifier.

② Station selection and JOG dial (TUNE/JOG)

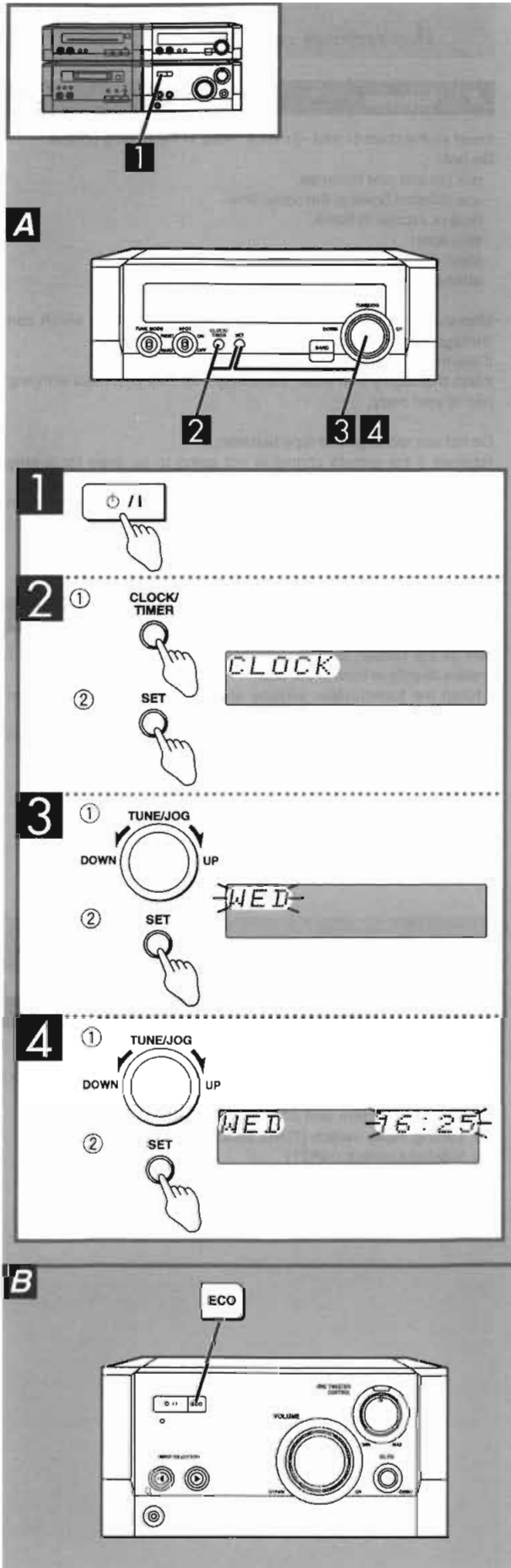
③ Tuning mode switch (TUNE MODE)

④ Sidelight switch (SPOT)

⑤ Clock/timer button (CLOCK/TIMER)

⑥ Set button (SET)

⑦ Band select button (BAND)



A Setting the time

This is a 24-hour clock.

The example shows how to set the clock for Wednesday 16:25 (4:25 pm).

1 Press [] to turn the unit on.

2 **1** Press [CLOCK/TIMER] to display "CLOCK."

Each time you press the button:

CLOCK → → → Original display

2 Within 7 seconds
Press [SET].

3 **1** Turn [TUNE/JOG] to set the day.
2 Press [SET].

4 **1** Turn [TUNE/JOG] to set the time.
2 Press [SET].

The time is set and the original display is restored.

Displaying the clock

Press [CLOCK/TIMER].

The clock is shown for about 5 seconds.

B ECO mode

When this mode is turned on, the clock is not displayed when the unit is in standby mode, thereby reducing standby mode power consumption from 9 W to 0.8 W. The standby indicator still lights.

Note

Turn DEMO off. ECO does not work when DEMO is on.

Turning ECO on and off:

1 Press [ECO].
The current mode is displayed.

2 Within 2 seconds
Press [ECO] again.
The mode changes.
NORMAL (off) ↔ ECO (on)

The mode can be switched to ECO when the unit is off but it can not be switched back to NORMAL.

4 About the Self-Diagnostic Mode

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 malfunctions. Use this self-diagnostic function when servicing the unit.

| Display method | Display location |
|---|------------------|
| <p>To display the malfunction code</p> <p>U70 CD..... Automatically displays on the tuner when a malfunction occurs.</p> <p>U70 MD..... Automatically displays on the tuner when a malfunction occurs.</p> <p>F61..... Automatically displays on the tuner when a malfunction occurs.</p> <p>F15 MD..... Automatically displays on the tuner when a malfunction occurs.</p> <p>To return the normal display</p> <p>1. For U70 CD/U70 MD:</p> <ul style="list-style-type: none"> 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. <p>2. For F61 CD:</p> <ul style="list-style-type: none"> 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 redisplayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off. <p>3. For F15 MD:</p> <ul style="list-style-type: none"> After displayed the disk is taken off and it returns to normal display. | |

Display contents

| Display code | Problem or condition | Correction procedure |
|--|--|--|
| <p>U70 CD U70 MD (displayed automatically)</p> | <p>A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.</p> <p>1. If U70 is displayed on the tuner, the MD deck or CD player cannot be operated by remote control.</p> | <p>1. To check for correct insertion of the flat cables</p> <ol style="list-style-type: none"> Match each connector with the color (blue/ white) of the connection port and insert until you hear a click. Insert the flat cables at the back of the unit in the order indicated. Make sure the white side of the cable is on your right side. <p>2. Breakage of flat cable (Check and replace as necessary.)</p> <p>3. If the problem is not corrected by items (1.) and (2.) above, this indicates a faulty IC.</p> <p>U70CD { ST-HD505MD: IC701 (M30218MAA101) SL-HD505 : IC403 (LC66358C4K97)</p> <p>Check these IC's and replace as necessary.</p> <p>U70MD { ST-HD505MD: IC502, 503, 701 SJ-HD505 : IC10, 303, 304</p> <p>Check these IC's and replace as necessary.</p> |
| <p>F61</p> | <p>When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.</p> | <ul style="list-style-type: none"> Faulty amplifier (SE-HD505MD) output IC (IC501 and IC502). (When a DC voltage is applied to the speaker terminals.) |
| <p>F15MD</p> | <p>There are any troubles for traverse mechanism of SJ-HD505, movement is impossible.</p> | <ol style="list-style-type: none"> Traverse detect switch (S8) is broken. Traverse motor (M2) is broken. |

5 Power Source ON/OFF and Signal Check

To operate this unit ST-HD505MD normally, it is necessary for connecting to the unit SE-HD505MD.

When operating the unit ST-HD505MD, be sure to connect the unit SE-HD505MD 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).(As shown in Fig.1.)
2. Connect with the Amplifier (SE-HD505MD).(As shown in Fig.1.)

3. Connect the AC mains lead to Amplifier (SE-HD505MD).(As shown in Fig.1.)
4. Connect the speakers to speaker input terminal.(As shown in Fig.1.)
5. Turn on the power of the Amplifier (SE-HD505MD).
6. Press INPUT SELECTOR to select the external source (EXT) of the Amplifier (SE-HD505MD).
7. Input a sound signal to external input terminal of Tuner (ST-HD505MD), and confirm to be outputted from the speaker.

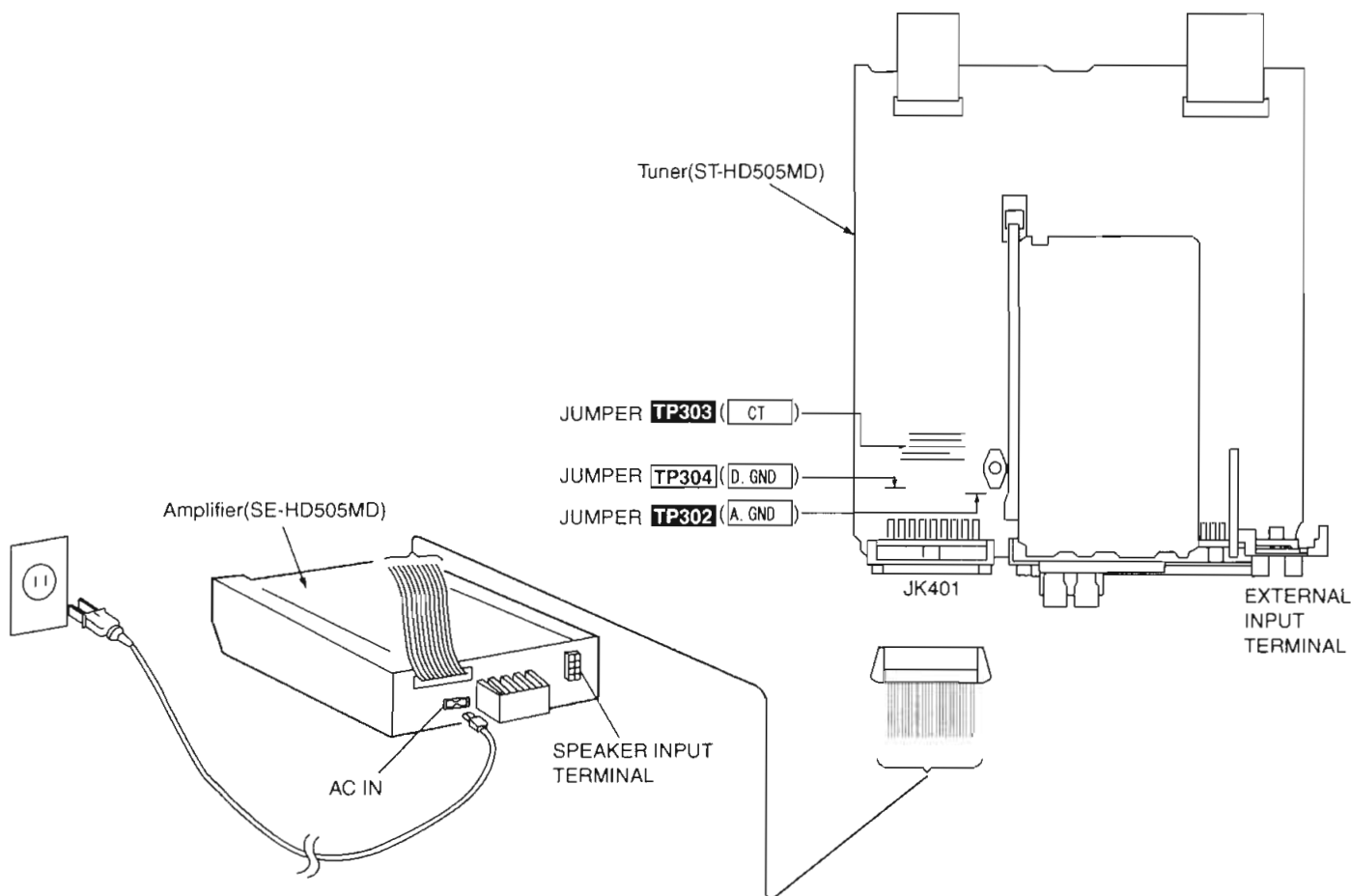
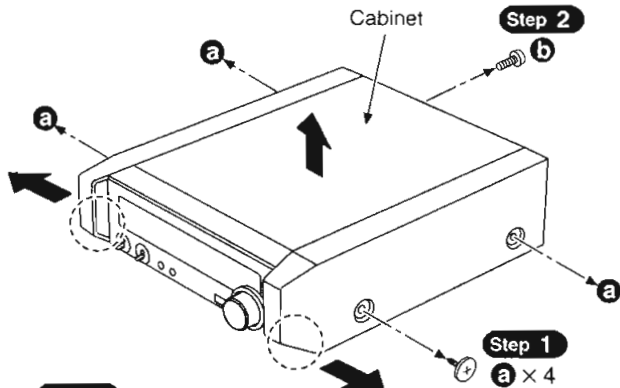


Fig.1

6 Operation Checks and Component Replacement Procedures

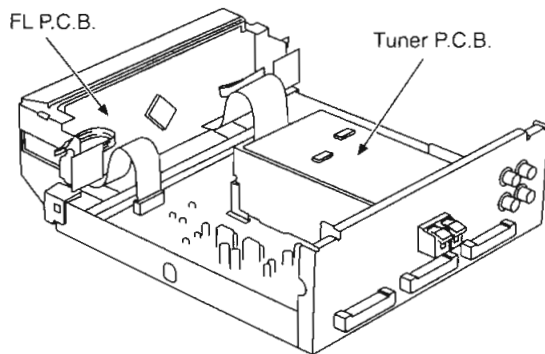
- NOTE** 1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

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



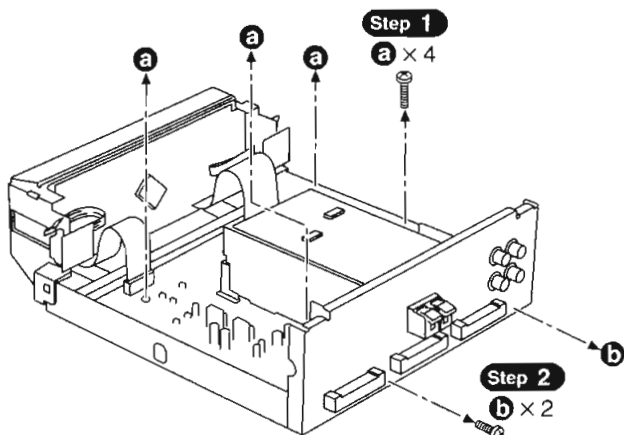
Step 3
Spreading the both front tails indicated with (○) of cabinet a small amount, lift up and remove the cabinet in the direction of arrow.

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



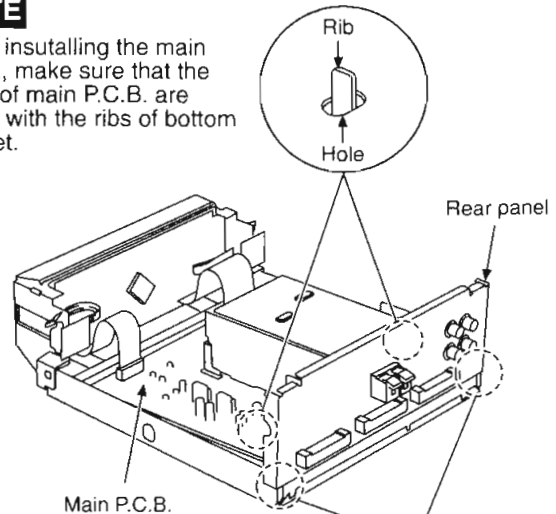
2. Checking for the main P.C.B.

- Follow **Step 1** ~ **Step 3** in item 1.



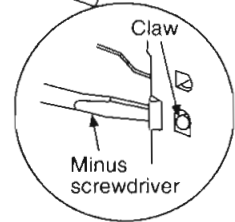
NOTE

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.



Step 3

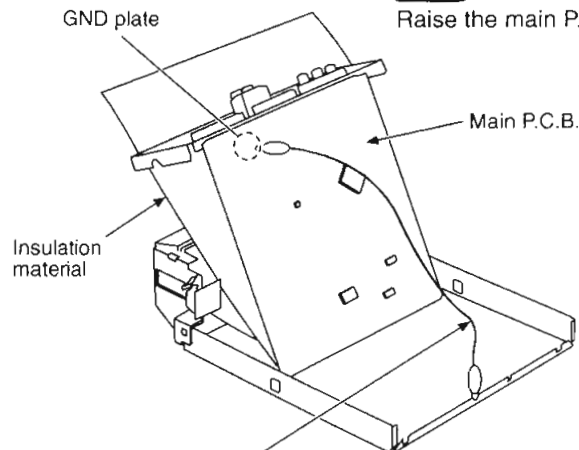
Release the 2 claws, and then remove the main P.C.B. and rear panel.



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

Step 4

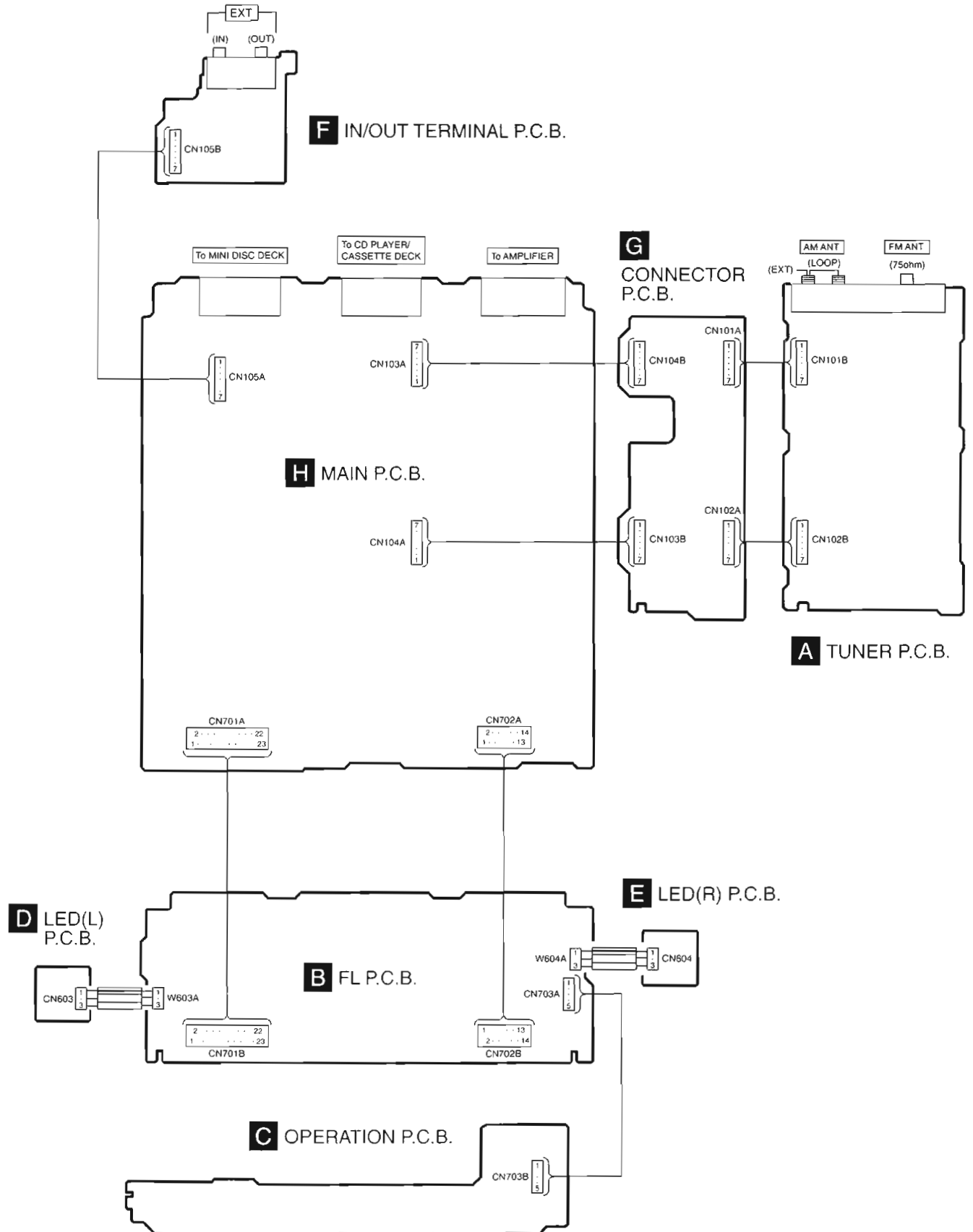
Raise the main P.C.B..



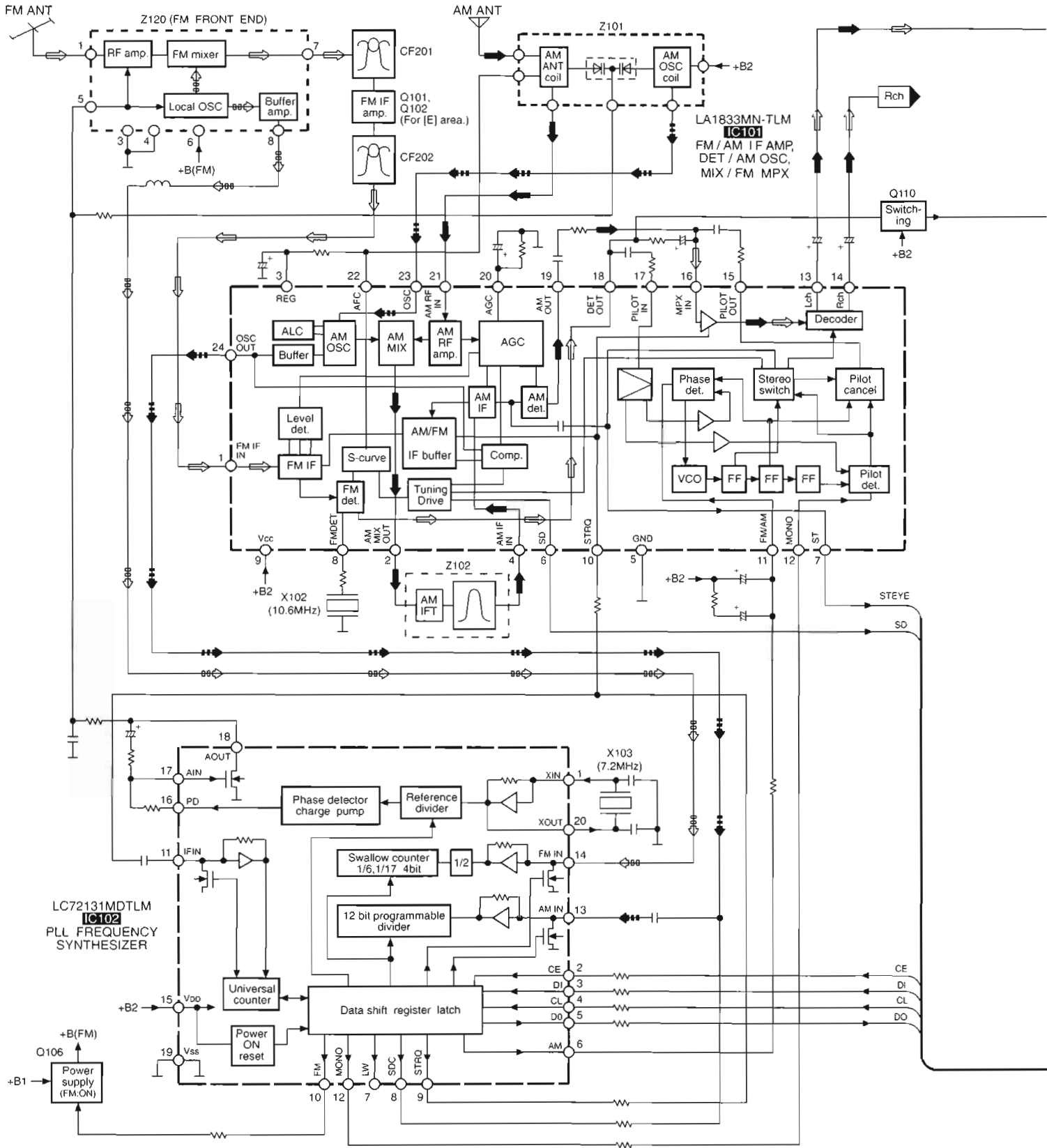
Step 5

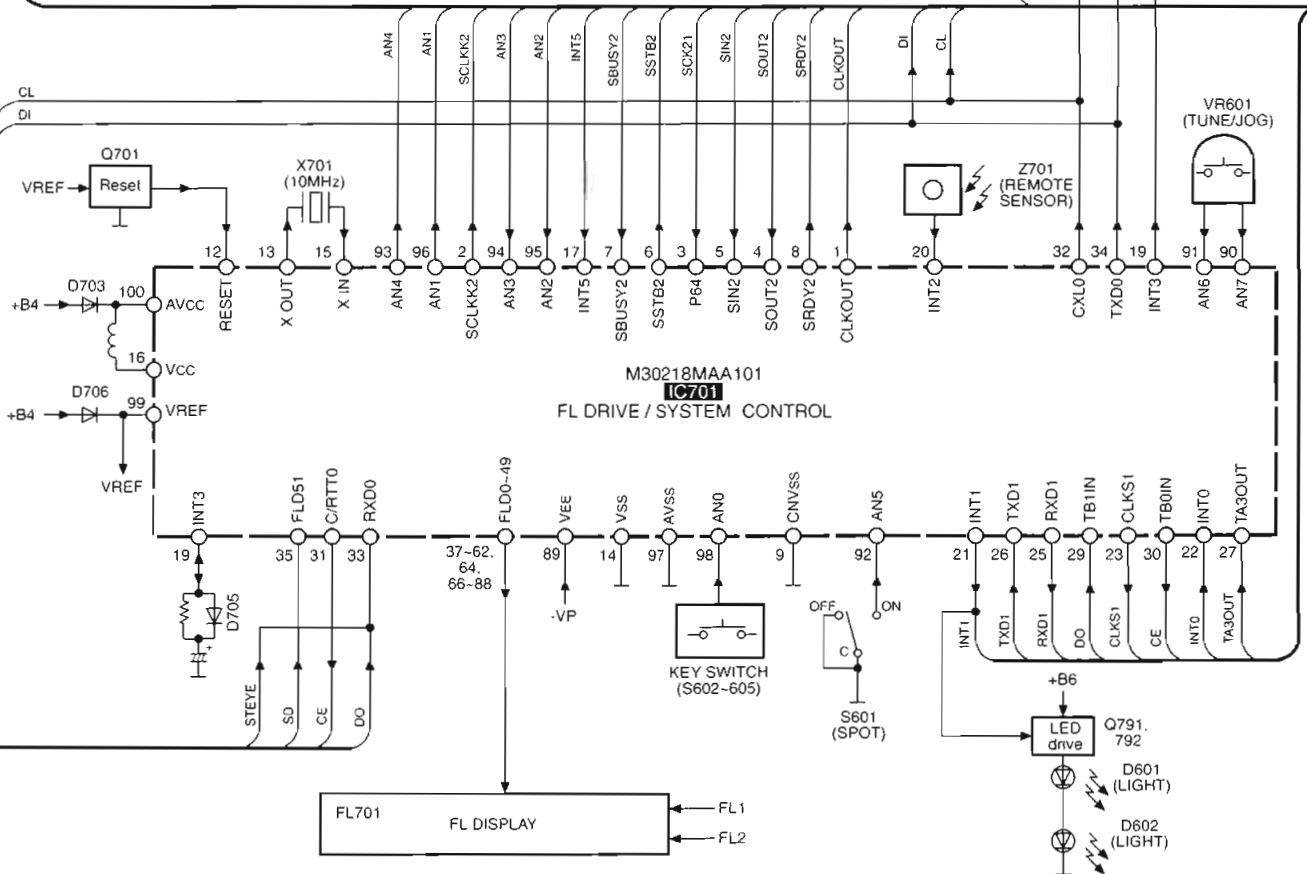
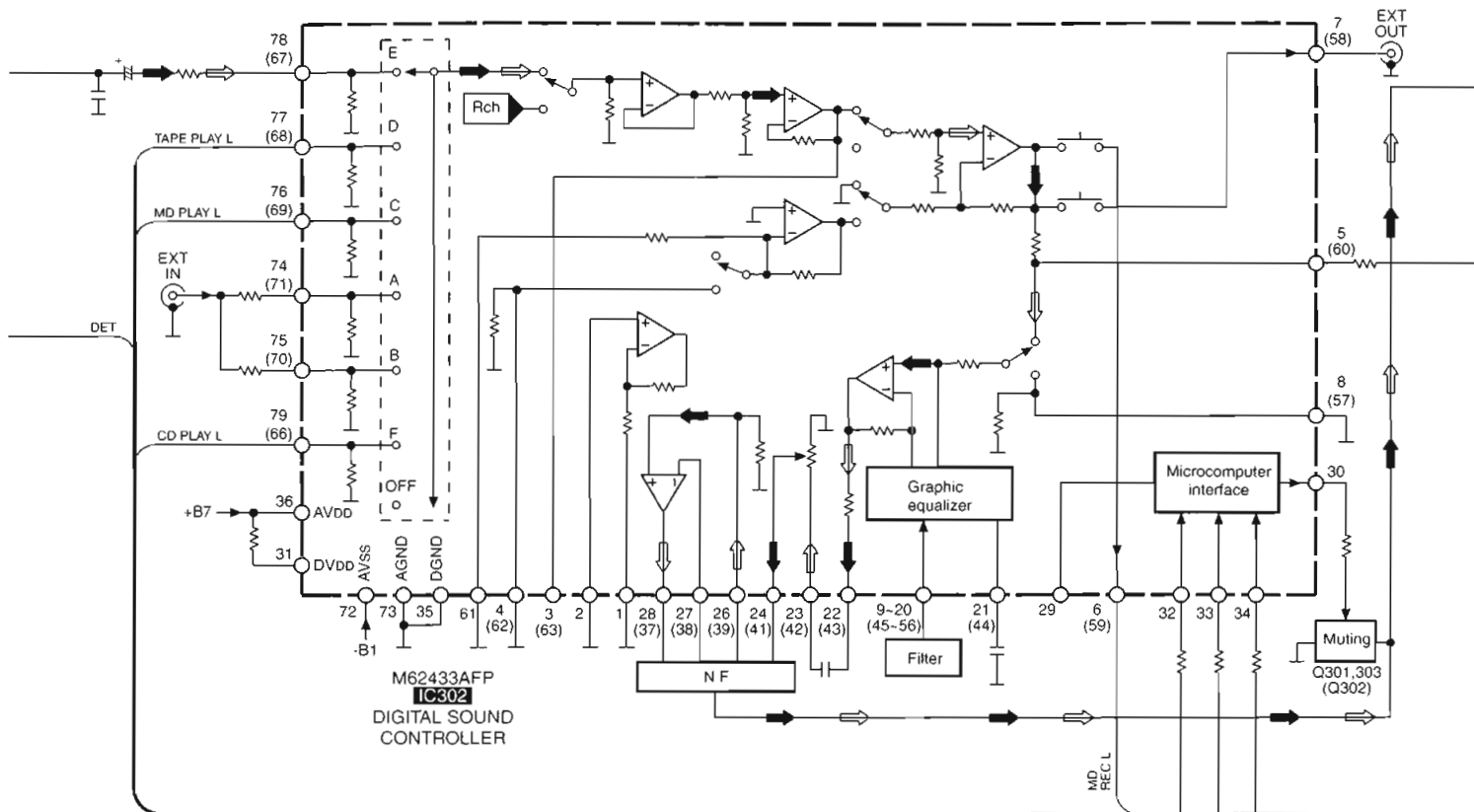
Connect the lead wire.

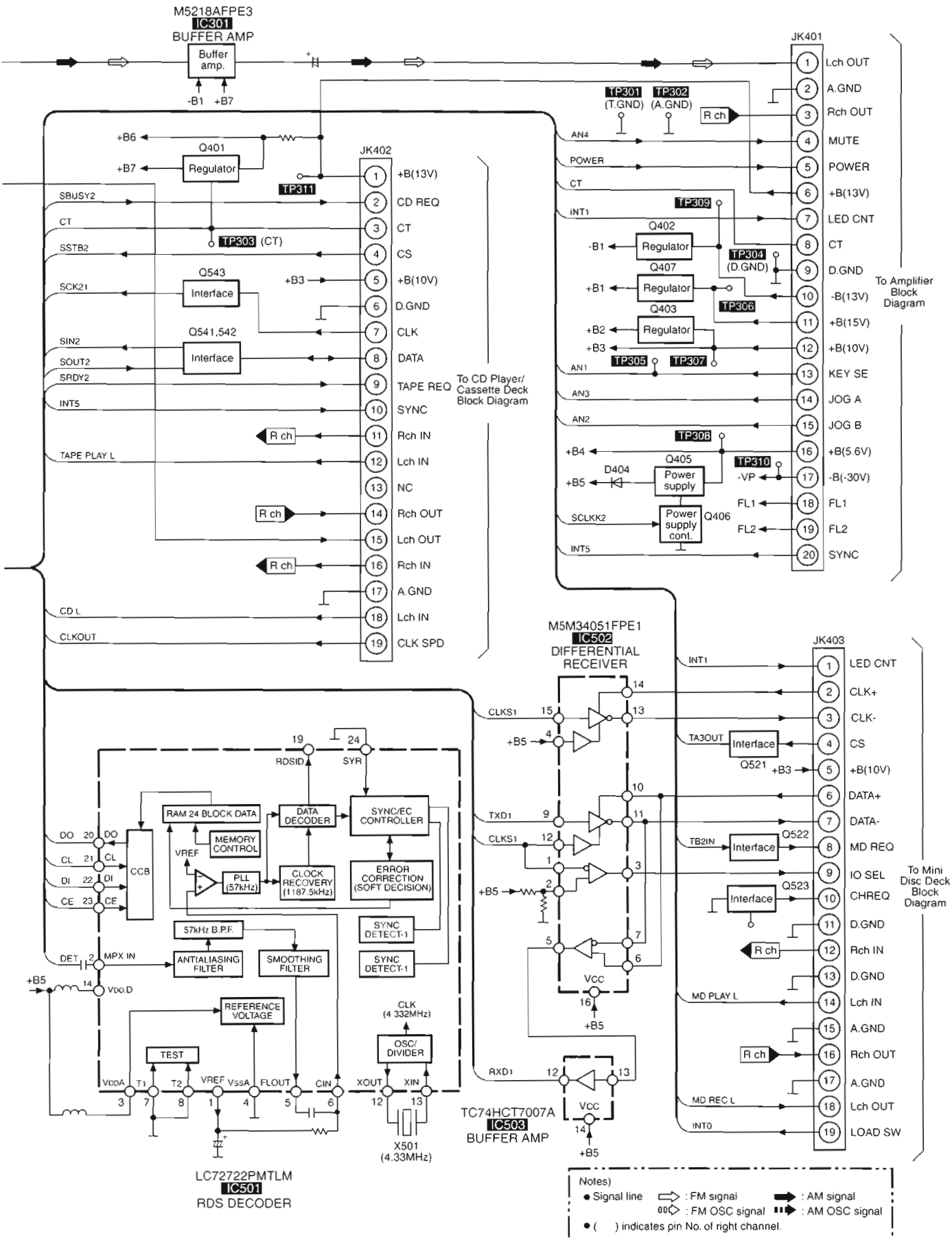
7 Wiring Connection Diagram



8 Block Diagram







Notes)

- Signal line ⇨ : FM signal ⇨ : AM signal
- : FM OSC signal ⇨⇨ : AM OSC signal
- () indicates pin No. of right channel.

9 Schematic Diagram Notes

9.1. Schematic Diagram Notes

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

Notes:

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

(): AM mode

Important safety notice:

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

Furthermore, special parts which have purpose 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.

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.

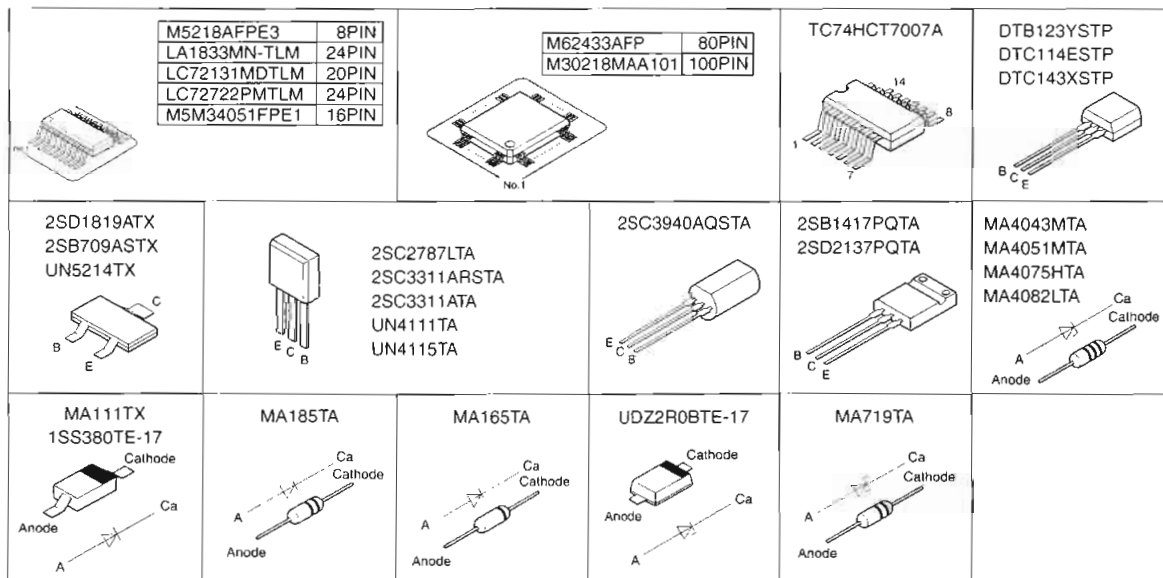
Put a conductive mat on the work table.

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

Voltage and signal line

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

9.2. Type Illustration of IC's, Transistors and Diodes



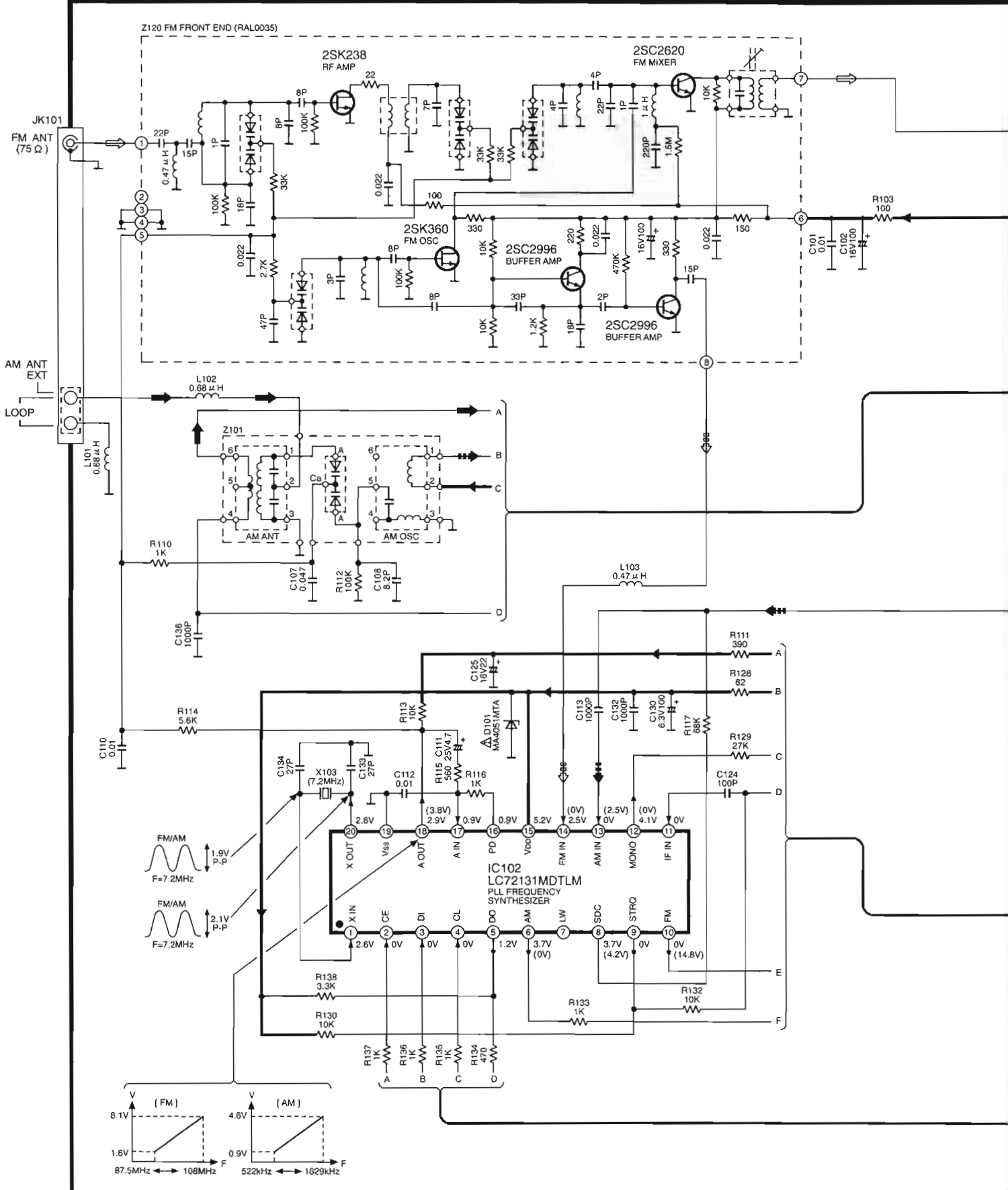
10 Schematic Diagram

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.

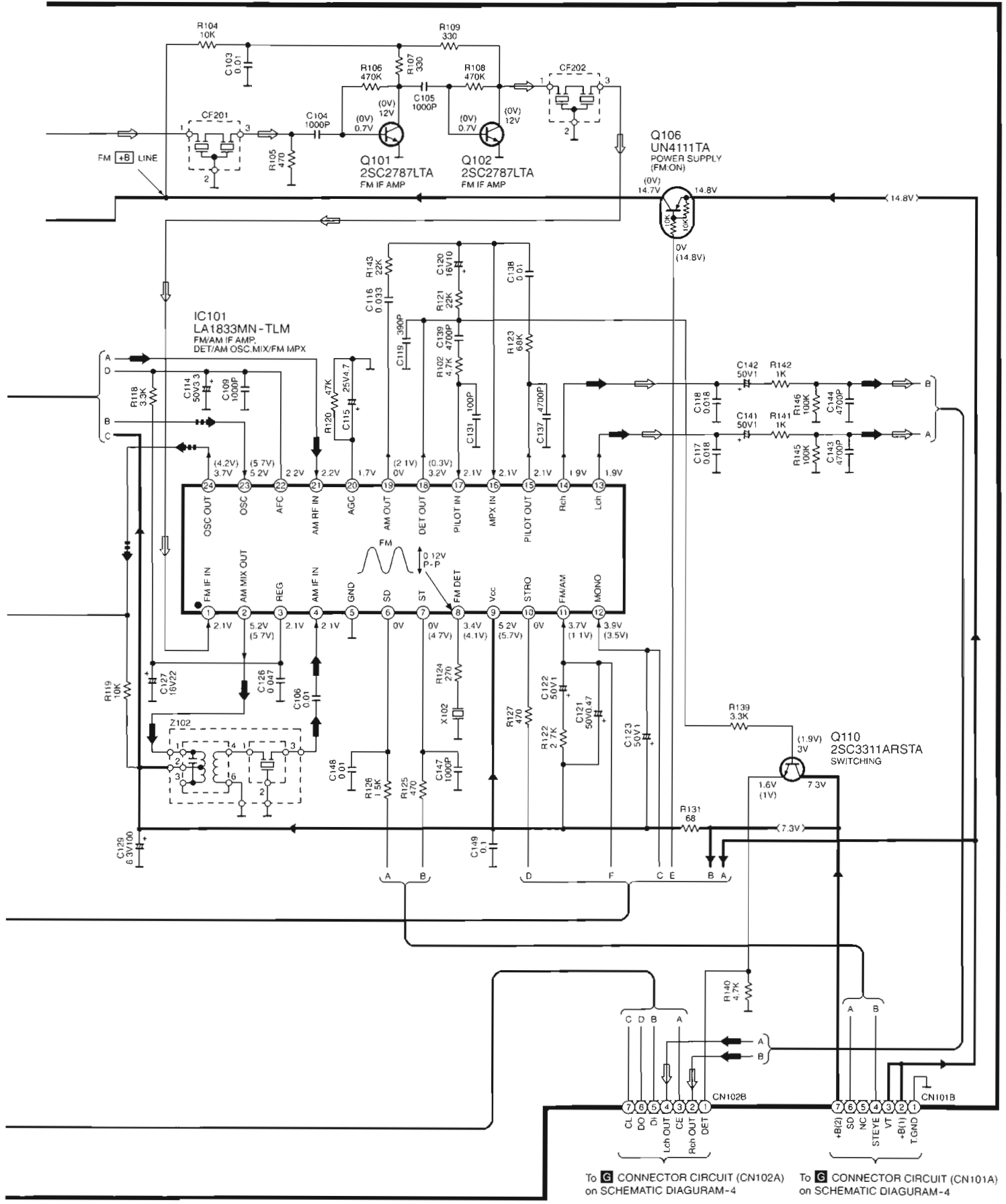
A TUNER CIRCUIT

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



SCHEMATIC DIAGRAM-2

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

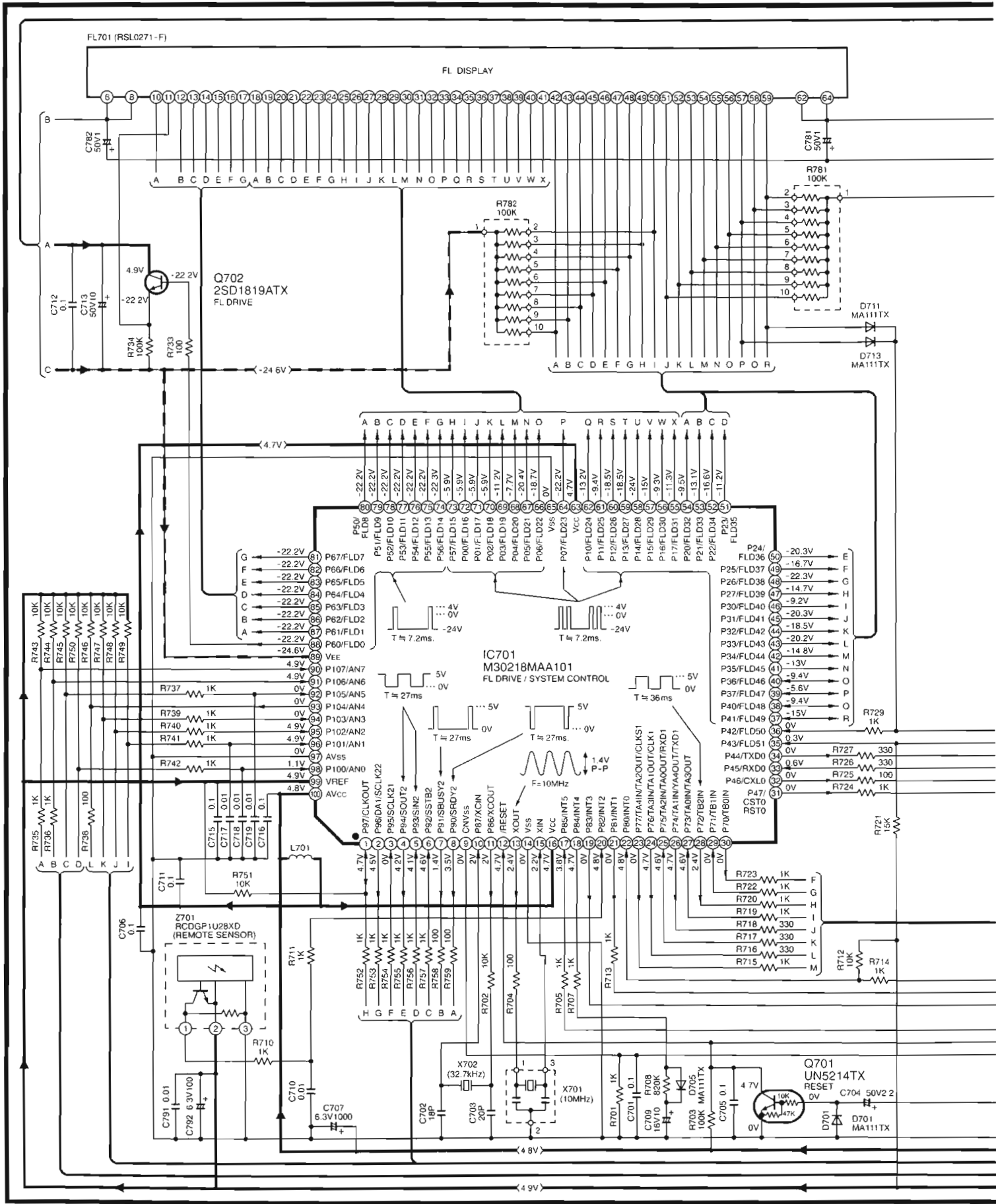


To **G** CONNECTOR CIRCUIT (CN102A) on SCHEMATIC DIAGRAM-4 To **G** CONNECTOR CIRCUIT (CN101A) on SCHEMATIC DIAGRAM-4

SCHEMATIC DIAGRAM-3

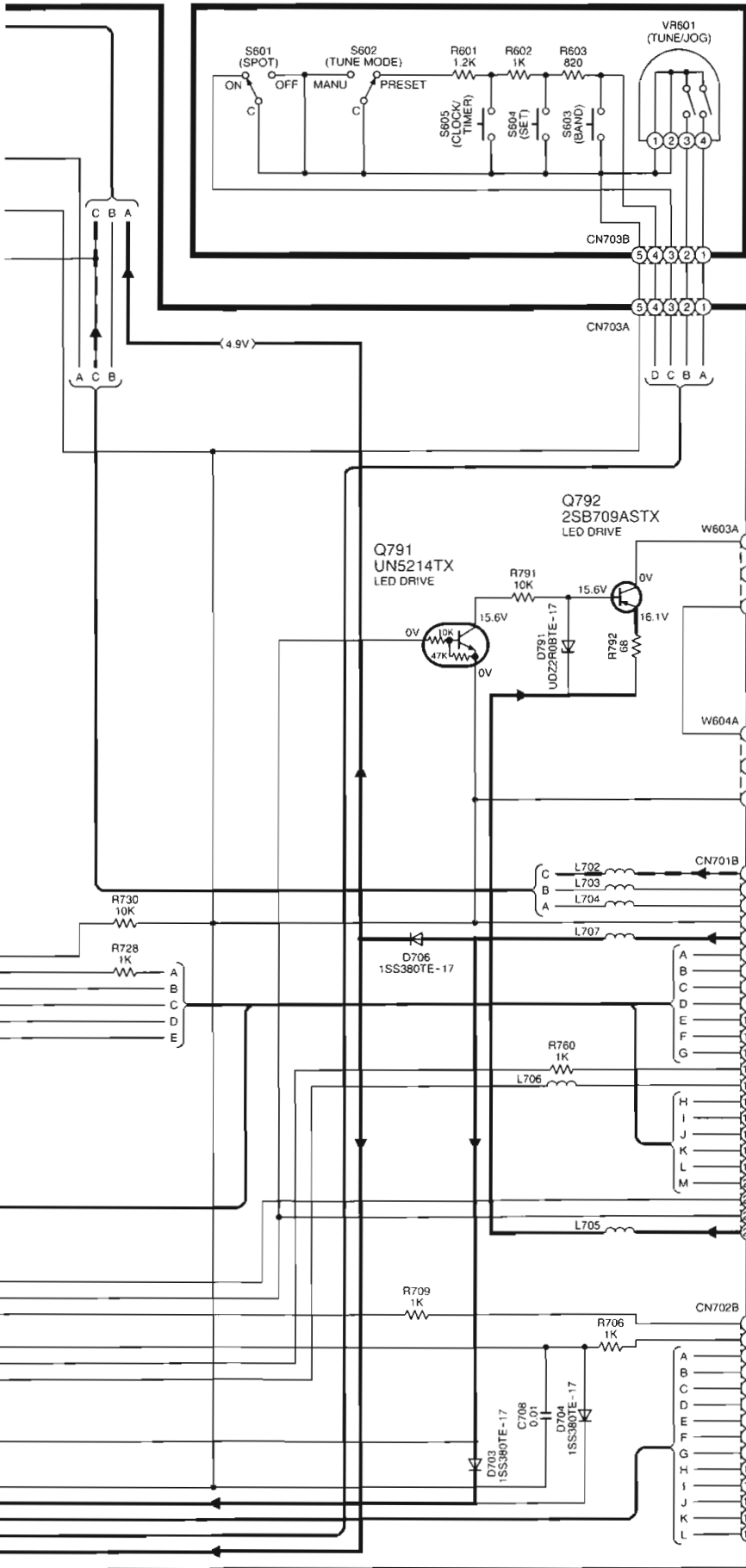
B FL CIRCUIT

→ : POSITIVE VOLTAGE LINE - → : NEGATIVE VOLTAGE LINE

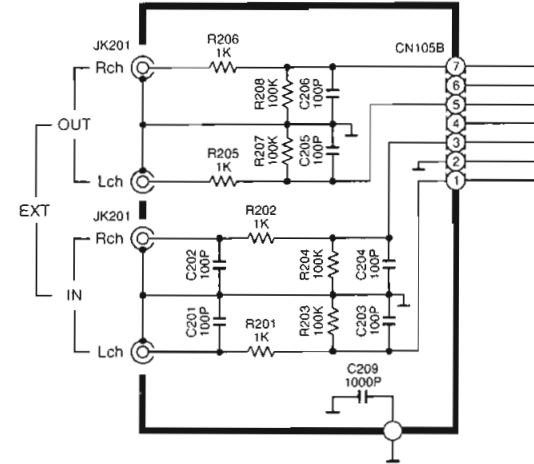


SCHEMATIC DIAGRAM-4

C OPERATION CIRCUIT

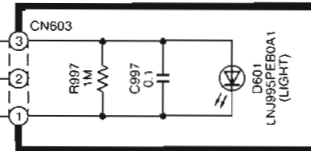


F IN/OUT TERMINAL CIRCUIT

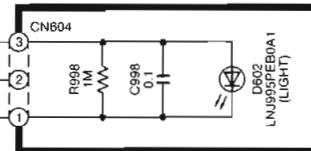


KEEPING TO THE RULE OF UNIT SUPPLY, WE DO NOT SUPPLY SINGLE PARTS.

D LED(L) CIRCUIT

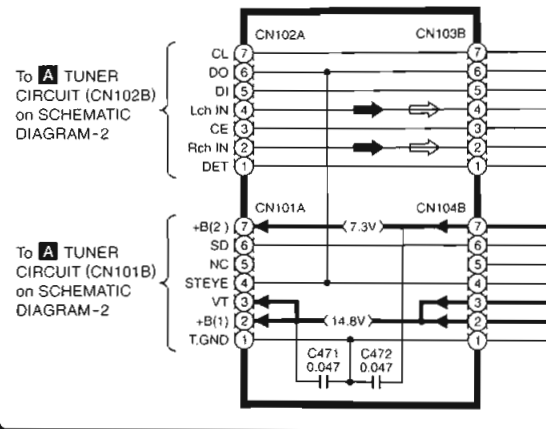


E LED(R) CIRCUIT



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

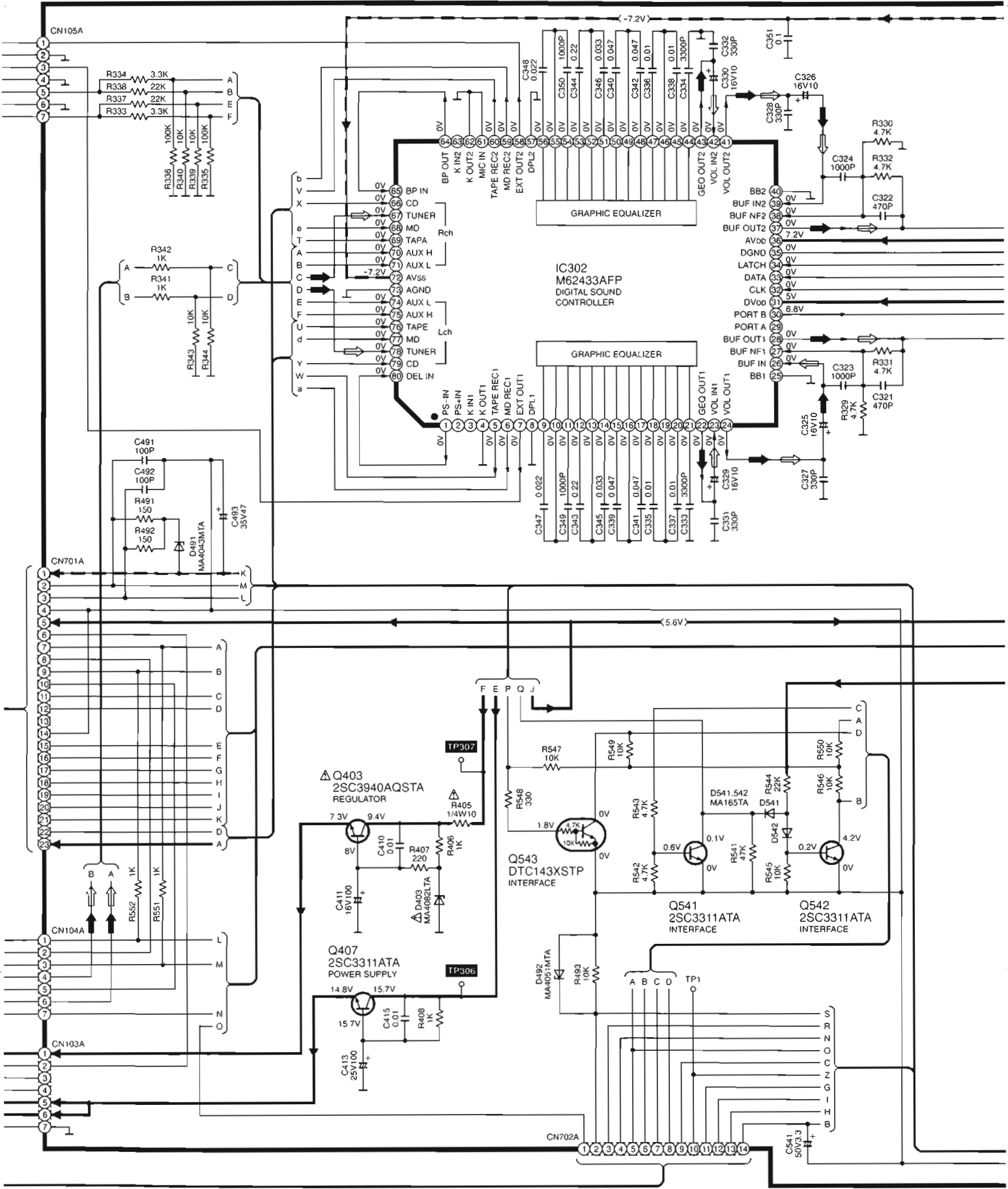
G CONNECTOR CIRCUIT







SCHEMATIC DIAGRAM-5

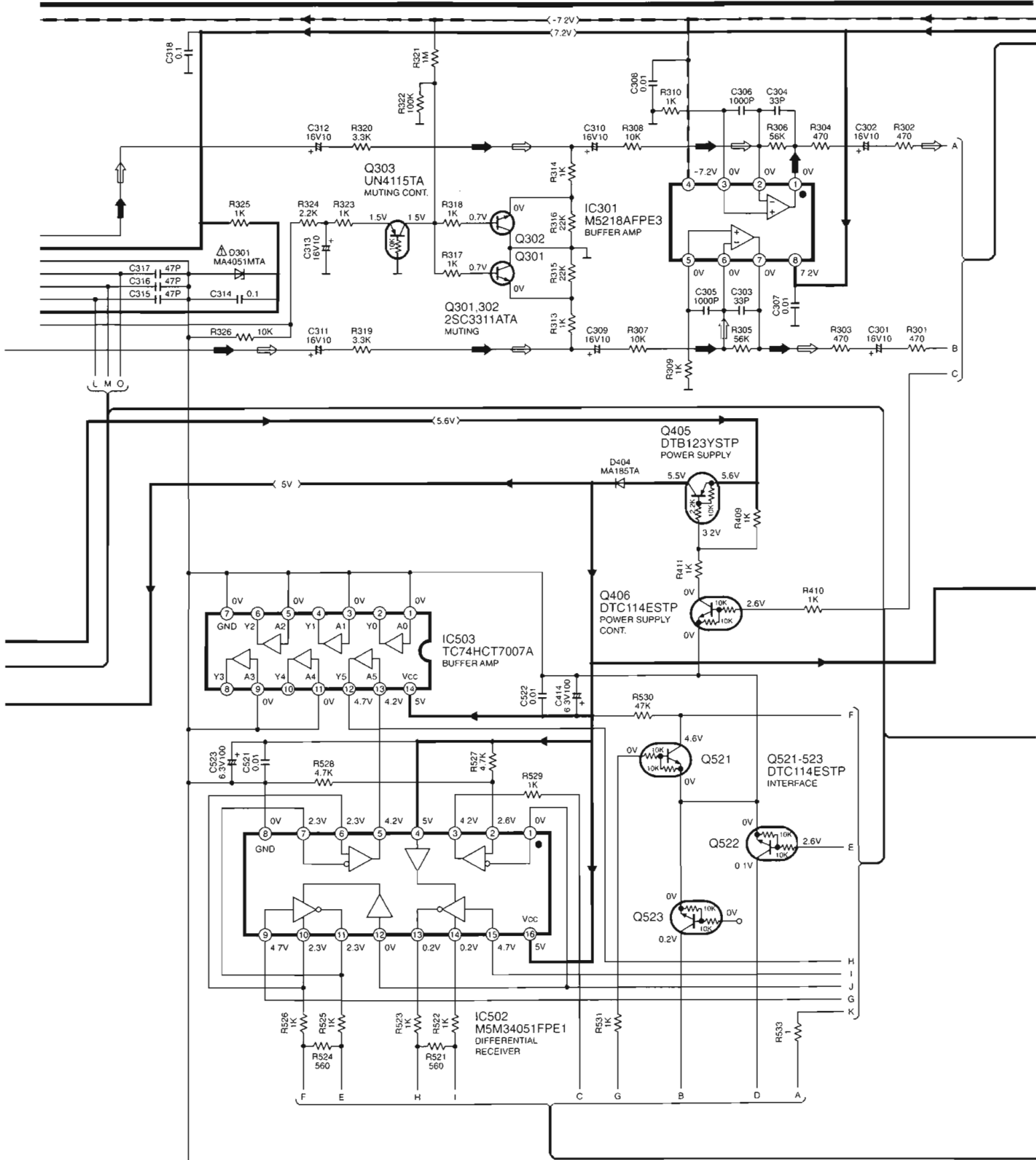
MAIN CIRCUIT

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



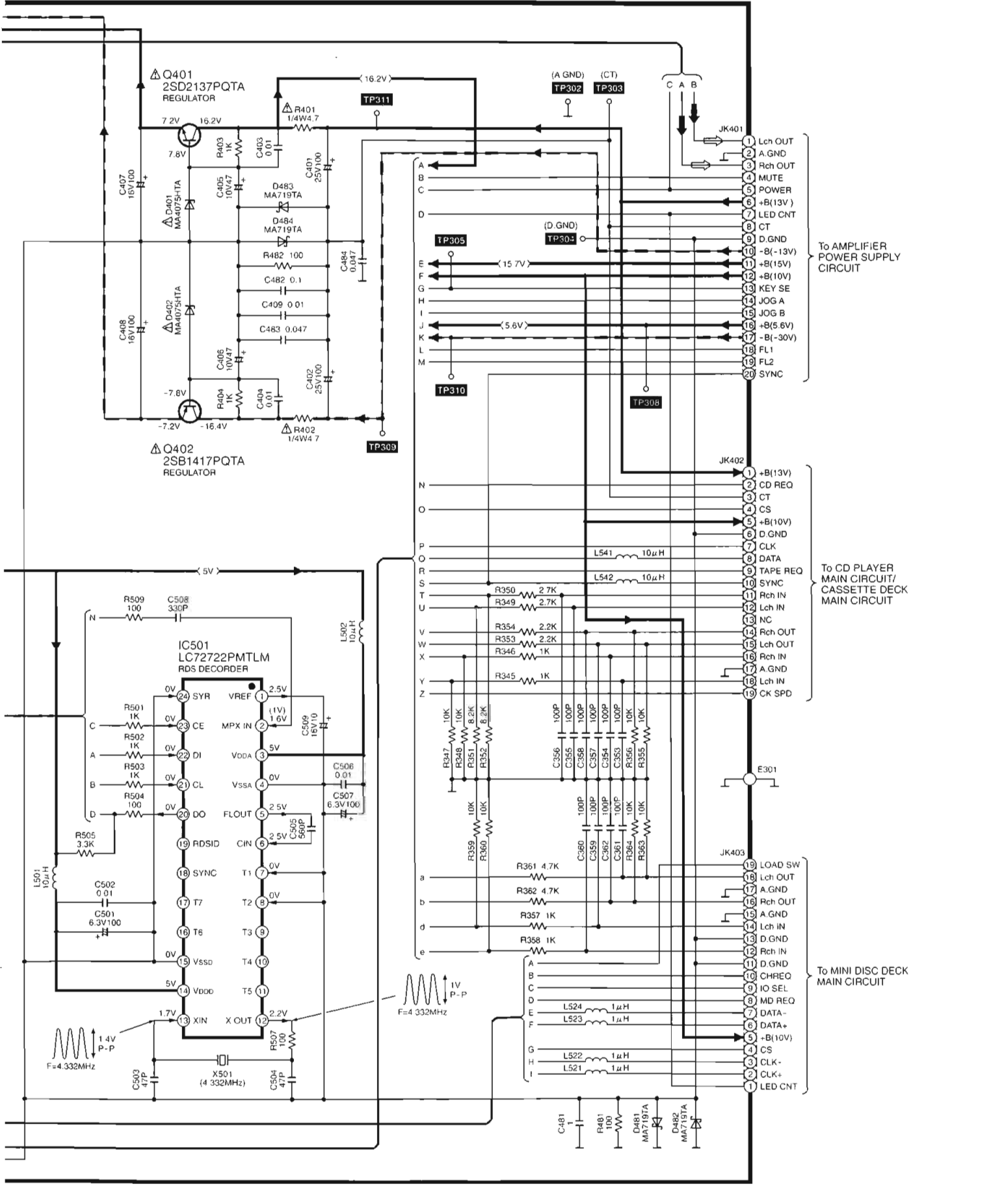
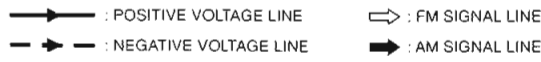
SCHEMATIC DIAGRAM-6

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

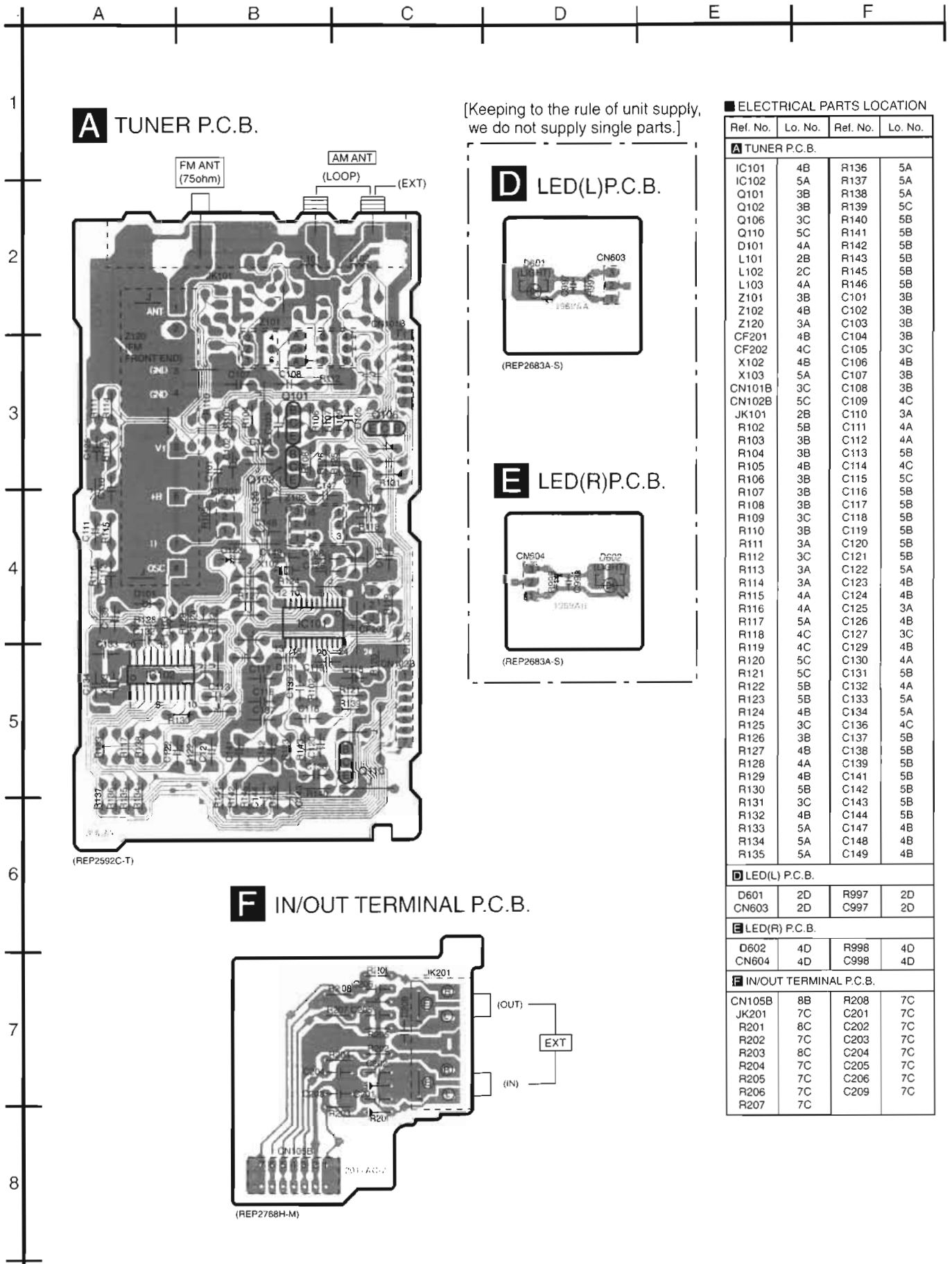


SCHEMATIC DIAGRAM-7

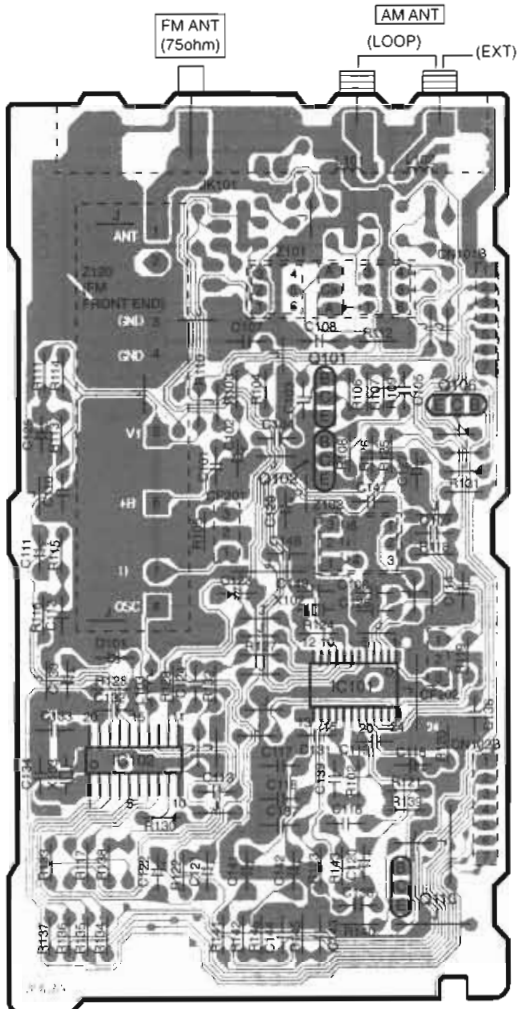
H MAIN CIRCUIT



11 Printed Circuit Board Diagram



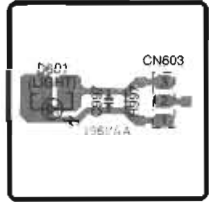
A TUNER P.C.B.



(REP2592C-T)

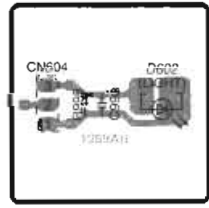
[Keeping to the rule of unit supply, we do not supply single parts.]

D LED(L) P.C.B.



(REP2683A-S)

E LED(R) P.C.B.

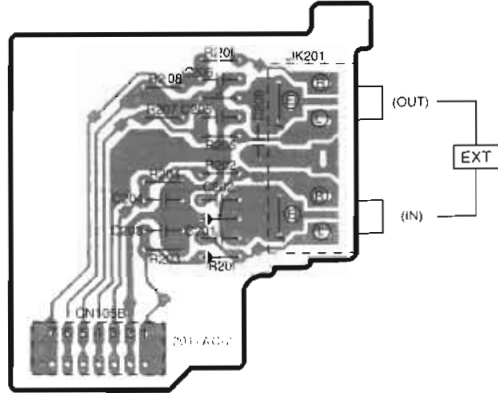


(REP2683A-S)

ELECTRICAL PARTS LOCATION

| Ref. No. | Lo. No. | Ref. No. | Lo. No. |
|---------------------------------|---------|----------|---------|
| A TUNER P.C.B. | | | |
| IC101 | 4B | R136 | 5A |
| IC102 | 5A | R137 | 5A |
| Q101 | 3B | R138 | 5A |
| Q102 | 3B | R139 | 5C |
| Q106 | 3C | R140 | 5B |
| Q110 | 5C | R141 | 5B |
| D101 | 4A | R142 | 5B |
| L101 | 2B | R143 | 5B |
| L102 | 2C | R145 | 5B |
| L103 | 4A | R146 | 5B |
| Z101 | 3B | C101 | 3B |
| Z102 | 4B | C102 | 3B |
| Z120 | 3A | C103 | 3B |
| CF201 | 4B | C104 | 3B |
| CF202 | 4C | C105 | 3C |
| X102 | 4B | C106 | 4B |
| X103 | 5A | C107 | 3B |
| CN101B | 3C | C108 | 3B |
| CN102B | 5C | C109 | 4C |
| JK101 | 2B | C110 | 3A |
| R102 | 5B | C111 | 4A |
| R103 | 3B | C112 | 4A |
| R104 | 3B | C113 | 5B |
| R105 | 4B | C114 | 4C |
| R106 | 3B | C115 | 5C |
| R107 | 3B | C116 | 5B |
| R108 | 3B | C117 | 5B |
| R109 | 3C | C118 | 5B |
| R110 | 3B | C119 | 5B |
| R111 | 3A | C120 | 5B |
| R112 | 3C | C121 | 5B |
| R113 | 3A | C122 | 5A |
| R114 | 3A | C123 | 4B |
| R115 | 4A | C124 | 4B |
| R116 | 4A | C125 | 3A |
| R117 | 5A | C126 | 4B |
| R118 | 4C | C127 | 3C |
| R119 | 4C | C129 | 4B |
| R120 | 5C | C130 | 4A |
| R121 | 5C | C131 | 5B |
| R122 | 5B | C132 | 4A |
| R123 | 5B | C133 | 5A |
| R124 | 4B | C134 | 5A |
| R125 | 3C | C136 | 4C |
| R126 | 3B | C137 | 5B |
| R127 | 4B | C138 | 5B |
| R128 | 4A | C139 | 5B |
| R129 | 4B | C141 | 5B |
| R130 | 5B | C142 | 5B |
| R131 | 3C | C143 | 5B |
| R132 | 4B | C144 | 5B |
| R133 | 5A | C147 | 4B |
| R134 | 5A | C148 | 4B |
| R135 | 5A | C149 | 4B |
| D LED(L) P.C.B. | | | |
| D601 | 2D | R997 | 2D |
| CN603 | 2D | C997 | 2D |
| E LED(R) P.C.B. | | | |
| D602 | 4D | R998 | 4D |
| CN604 | 4D | C998 | 4D |
| F IN/OUT TERMINAL P.C.B. | | | |
| CN105B | 8B | R208 | 7C |
| JK201 | 7C | C201 | 7C |
| R201 | 8C | C202 | 7C |
| R202 | 7C | C203 | 7C |
| R203 | 8C | C204 | 7C |
| R204 | 7C | C205 | 7C |
| R205 | 7C | C206 | 7C |
| R206 | 7C | C209 | 7C |
| R207 | 7C | | |

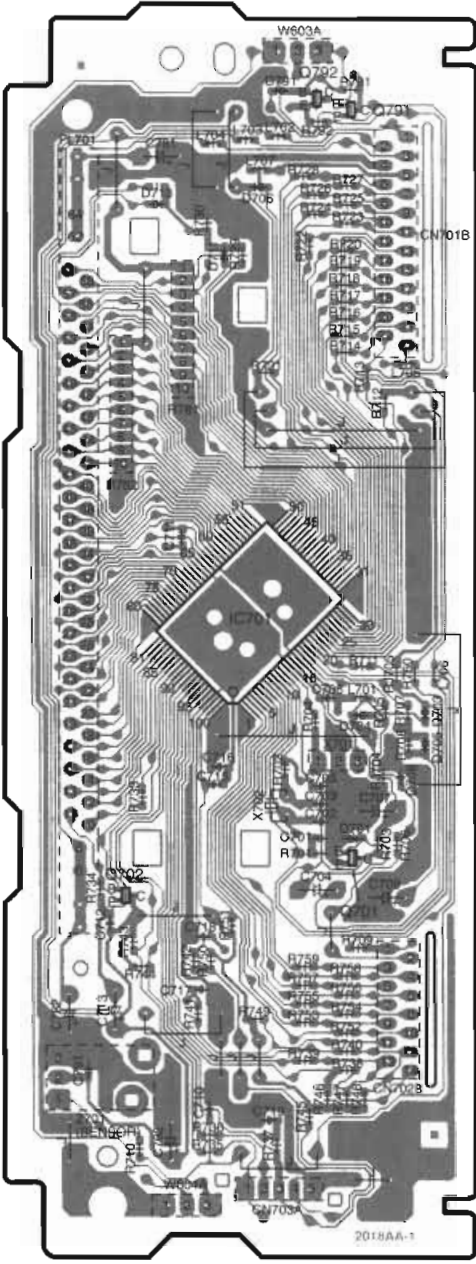
F IN/OUT TERMINAL P.C.B.



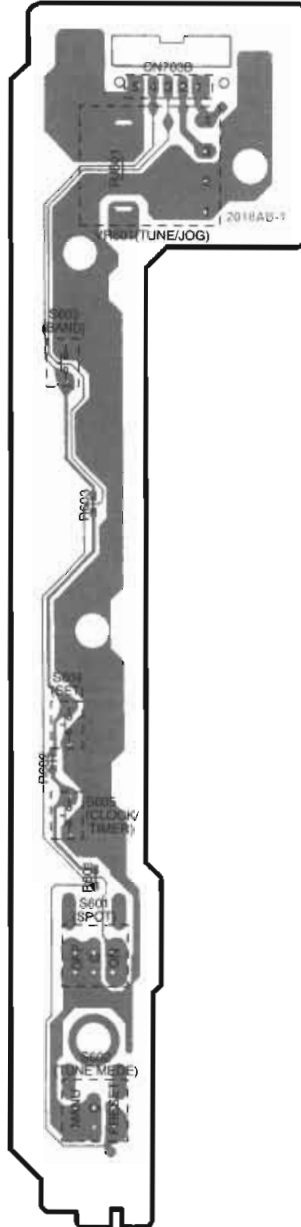
(REP2768H-M)

A B C D E F

B FL P.C.B.



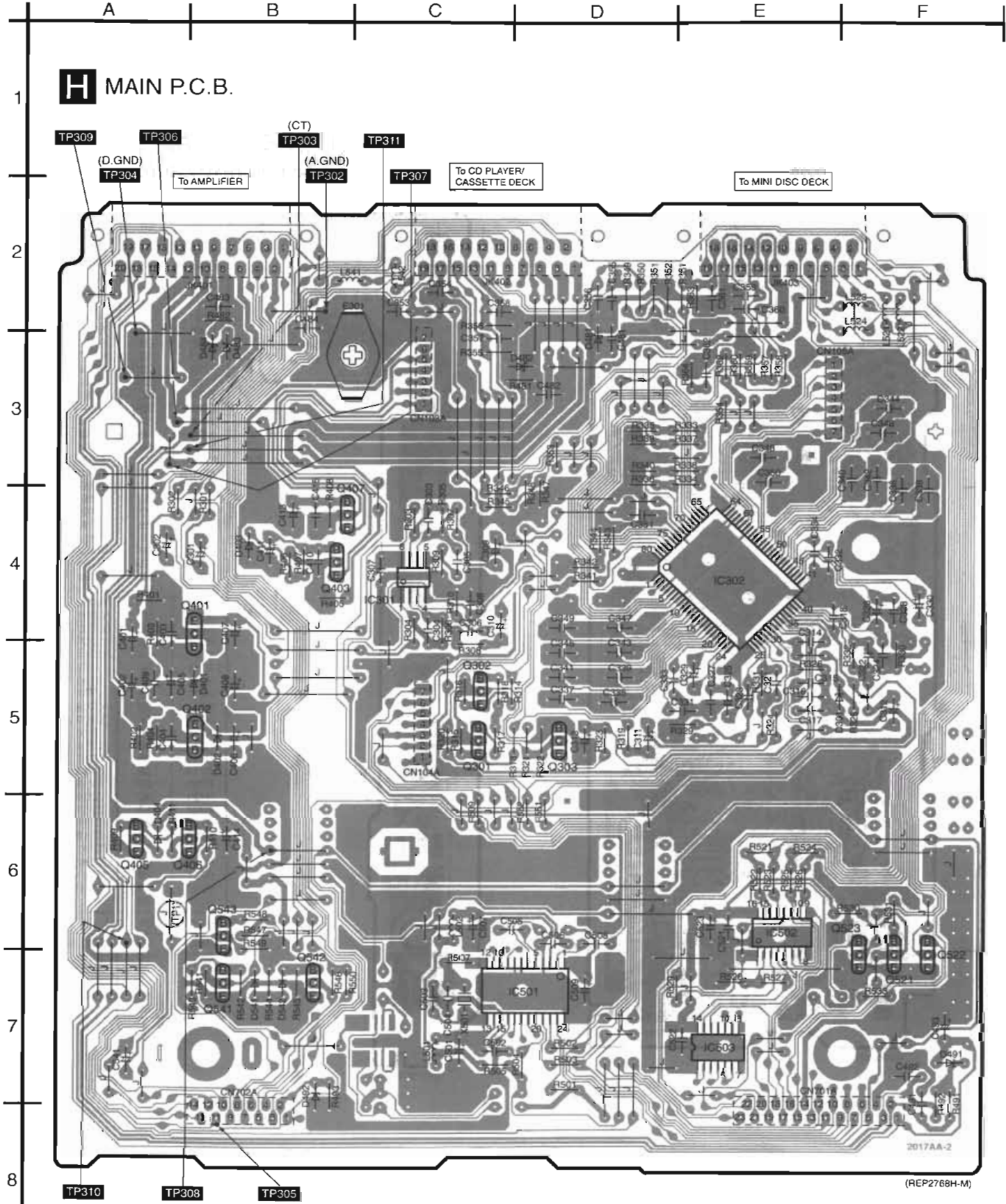
C OPERATION P.C.B.



■ ELECTRICAL PARTS LOCATION

| Ref. No. | Lo. No. | Ref. No. | Lo. No. |
|-------------------------|---------|----------|---------|
| FL P.C.B. | | | |
| IC701 | 4B | R730 | 2B |
| Q701 | 5B | R733 | 5A |
| Q702 | 5A | R734 | 5A |
| Q791 | 2B | R735 | 7B |
| Q792 | 2B | R736 | 7B |
| D701 | 5B | R737 | 7B |
| D703 | 5C | R738 | 6B |
| D704 | 5B | R739 | 6B |
| D705 | 5C | R740 | 6B |
| D706 | 2B | R741 | 6B |
| D711 | 3B | R742 | 6B |
| D713 | 2A | R743 | 6A |
| D791 | 2B | R744 | 6A |
| L701 | 5B | R745 | 6B |
| L702 | 2B | R746 | 6B |
| L703 | 2B | R747 | 6B |
| L704 | 2B | R748 | 6B |
| L705 | 3C | R749 | 6B |
| L706 | 4C | R750 | 6B |
| L707 | 2B | R751 | 6B |
| Z701 | 6A | R752 | 6B |
| X701 | 5B | R753 | 6B |
| X702 | 5B | R754 | 6B |
| FL701 | 2A | R755 | 6B |
| CN701B | 3C | R756 | 6B |
| CN702B | 6C | R757 | 6B |
| CN703A | 7B | R758 | 6B |
| W603A | 2B | R759 | 6B |
| W604A | 7B | R760 | 4C |
| R701 | 5B | R781 | 3B |
| R702 | 5B | R782 | 3A |
| R703 | 5B | R791 | 2B |
| R704 | 5B | R792 | 2B |
| R705 | 5B | RJ704 | 5B |
| R706 | 5C | RJ705 | 4C |
| R707 | 5C | C701 | 5B |
| R708 | 5C | C702 | 5B |
| R709 | 6B | C703 | 5B |
| R710 | 7A | C704 | 5B |
| R711 | 4B | C705 | 5B |
| R712 | 3B | C706 | 5B |
| R713 | 3B | C707 | 5B |
| R714 | 3B | C708 | 5C |
| R715 | 3B | C709 | 5C |
| R716 | 3B | C710 | 6B |
| R717 | 3B | C711 | 4B |
| R718 | 3B | C712 | 6A |
| R719 | 3B | C713 | 6A |
| R720 | 3B | C715 | 5B |
| R721 | 3B | C716 | 5B |
| R722 | 3B | C717 | 6B |
| R723 | 2B | C718 | 6B |
| R724 | 2B | C719 | 7B |
| R725 | 2B | C781 | 2A |
| R726 | 2B | C782 | 6A |
| R727 | 2B | C791 | 6A |
| R728 | 2B | C792 | 7B |
| R729 | 3B | | |
| OPERATION P.C.B. | | | |
| VR601 | 2D | CN703B | 2D |
| S601 | 6D | R601 | 6D |
| S602 | 7D | R602 | 5D |
| S603 | 3D | R603 | 4D |
| S604 | 5D | RJ601 | 2D |
| S605 | 5D | | |

H MAIN P.C.B.



2017AA-2
(REP2768H-M)

G

H

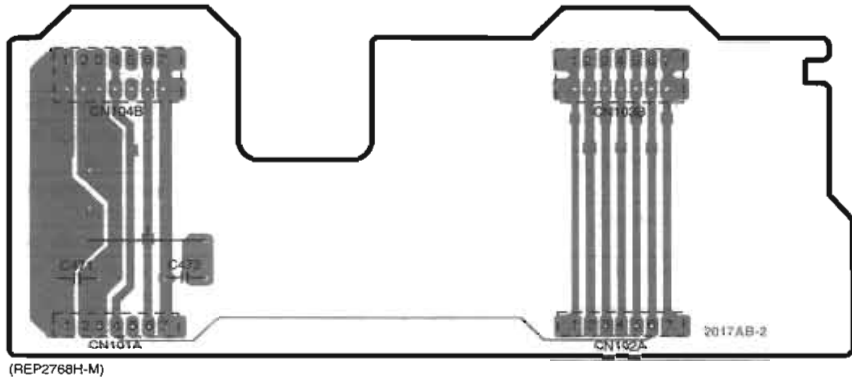
I

J

K

L

G CONNECTOR P.C.B.



(REP2768H-M)

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. |
|-------------------------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| CONNECTOR P.C.B. | | | | | | | | | | | |
| CN101A | 3H | CN102A | 3J | CN103B | 2J | CN104B | 2H | C471 | 2H | C472 | 2H |
| MAIN P.C.B. | | | | | | | | | | | |
| IC301 | 4C | CN105A | 3E | R331 | 5E | R411 | 6A | C308 | 4C | C355 | 2D |
| IC302 | 4E | CN701A | 8E | R332 | 5F | R481 | 3D | C309 | 4C | C356 | 2D |
| IC501 | 7D | CN702A | 8B | R333 | 3E | R482 | 2B | C310 | 4C | C357 | 3C |
| IC502 | 6E | JK401 | 2B | R334 | 3E | R491 | 7F | C311 | 5D | C358 | 2C |
| IC503 | 7E | JK402 | 2C | R335 | 3D | R492 | 7F | C312 | 5F | C359 | 2E |
| Q301 | 5C | JK403 | 2E | R336 | 3D | R493 | 7B | C313 | 5D | C360 | 2E |
| Q302 | 5C | E301 | 3C | R337 | 3E | R501 | 7D | C314 | 5E | C361 | 2E |
| Q303 | 5D | (TP1) | 6A | R338 | 3E | R502 | 7D | C315 | 5E | C362 | 3E |
| Q401 | 4B | TP302 | 2B | R339 | 3D | R503 | 7D | C316 | 5E | C401 | 5A |
| Q402 | 5B | TP303 | 3B | R340 | 3D | R504 | 7D | C317 | 5E | C402 | 5A |
| Q403 | 4B | TP304 | 3A | R341 | 4D | R505 | 7C | C318 | 4E | C403 | 4A |
| Q405 | 6A | TP305 | 8B | R342 | 4D | R507 | 7C | C321 | 5E | C404 | 5A |
| Q406 | 6B | TP306 | 3A | R343 | 4D | R509 | 6C | C322 | 5F | C405 | 5A |
| Q407 | 4B | TP307 | 3A | R344 | 4D | R521 | 6E | C323 | 5E | C406 | 5B |
| Q521 | 7F | TP308 | 6B | R345 | 4C | R522 | 6E | C324 | 5F | C407 | 4B |
| Q522 | 7F | TP309 | 3A | R346 | 4C | R523 | 6E | C325 | 5E | C408 | 5B |
| Q523 | 7F | TP310 | 6A | R347 | 4D | R524 | 6E | C326 | 4F | C409 | 5A |
| Q541 | 7B | TP311 | 3B | R348 | 4D | R525 | 6E | C327 | 5E | C410 | 4B |
| Q542 | 7B | R301 | 4B | R349 | 2D | R526 | 6E | C328 | 4F | C411 | 4B |
| Q543 | 6B | R302 | 4A | R350 | 2D | R527 | 7E | C329 | 5E | C413 | 4B |
| D301 | 5F | R303 | 4C | R351 | 2D | R528 | 7E | C330 | 4F | C414 | 6B |
| D401 | 5B | R304 | 4C | R352 | 2D | R529 | 7D | C331 | 5E | C415 | 4B |
| D402 | 5B | R305 | 4C | R353 | 3D | R530 | 6F | C332 | 4E | C481 | 3D |
| D403 | 4B | R306 | 4C | R354 | 3E | R531 | 6F | C333 | 5D | C482 | 3D |
| D404 | 6A | R307 | 4C | R355 | 3C | R533 | 7F | C334 | 4E | C483 | 2B |
| D481 | 3D | R308 | 5C | R356 | 2C | R541 | 7B | C335 | 5D | C484 | 2B |
| D482 | 3D | R309 | 4C | R357 | 3E | R542 | 7B | C336 | 4F | C491 | 7F |
| D483 | 3B | R310 | 4C | R358 | 3E | R543 | 7B | C337 | 5D | C492 | 7F |
| D484 | 3B | R313 | 5D | R359 | 3E | R544 | 7B | C338 | 4F | C493 | 7F |
| D491 | 7F | R314 | 5D | R360 | 3E | R545 | 7B | C339 | 5D | C501 | 7C |
| D492 | 7B | R315 | 5C | R361 | 2E | R546 | 7B | C340 | 3F | C502 | 7C |
| D541 | 7B | R316 | 5C | R362 | 3E | R547 | 6B | C341 | 5D | C503 | 7C |
| D542 | 7B | R317 | 5C | R363 | 2E | R548 | 6B | C342 | 3F | C504 | 7C |
| L501 | 7C | R318 | 5C | R364 | 3E | R549 | 6B | C343 | 5D | C505 | 6D |
| L502 | 6C | R319 | 5D | R401 | 4A | R550 | 7B | C344 | 3F | C506 | 6D |
| L521 | 2F | R320 | 5C | R402 | 5A | R551 | 6D | C345 | 5D | C507 | 6C |
| L522 | 2F | R321 | 5D | R403 | 4A | R552 | 6D | C346 | 3F | C508 | 6D |
| L523 | 2F | R322 | 5D | R404 | 5A | C301 | 4B | C347 | 4D | C509 | 7D |
| L524 | 2F | R323 | 5D | R405 | 4B | C302 | 4A | C348 | 3E | C521 | 6E |
| L541 | 2B | R324 | 5E | R406 | 4B | C303 | 4C | C349 | 4D | C522 | 7E |
| L542 | 2C | R325 | 5F | R407 | 4B | C304 | 4C | C350 | 3E | C523 | 6E |
| X501 | 7C | R326 | 5E | R408 | 4B | C305 | 4C | C351 | 4D | C541 | 7A |
| CN103A | 3C | R329 | 5E | R409 | 6A | C306 | 4C | C353 | 2C | | |
| CN104A | 5C | R330 | 5F | R410 | 6B | C307 | 4C | C354 | 2C | | |

12 Terminal Function of IC's

12.1. IC302(M62433AFP): DIGITAL SOUND CONTROLLER

| Pin No. | Mark | I/O Division | Function |
|---------|------------------|--------------|--|
| 1 | PS-IN | O | R/L output terminal for surround |
| 2 | PS+IN | I | Phase shift filter input terminal for surround (Not used, open) |
| 3 | KIN1 | O | Key control adaptor output terminal (Not used, open) |
| 4 | KOUT1 | I | Key control adaptor input terminal (Not used, connected to GND) |
| 5 | TAPEREC1 | O | Rec signal output terminal from surround mix amp. terminal |
| 6 | MDREC1 | O | Select common output rec signal |
| 7 | EXT OUT1 | | output terminal |
| 8 | DPL1 | I | 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 | Band pass filter connect terminal (Connected to GND through 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 | O | 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 |

| Pin No. | Mark | I/O Division | Function | |
|---------|-----------|--------------|--|------------------------|
| 40 | BB2 | I | 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 | Band pass filter connect terminal (Connected to GND through 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 | |
| 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 | I | Tone signal input terminal (Not used, connected to GND) | |
| 58 | EXT OUT2 | O | Select common output rec signal | |
| 59 | MD REC2 | O | output terminal | |
| 60 | TAPE REC2 | O | Rec signal output terminal from surround mix amp. terminal | |
| 61 | MIC IN | I | Mic signal input terminal (Not used, connected to GND) | |
| 62 | KOUT2 | I | Key control adaptor input terminal (Not used, connected to GND) | |
| 63 | KIN2 | O | 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 Rch | |
| 67 | TUNER | | | |
| 68 | MD | | | |
| 69 | TAPE | | | |
| 70 | AUXH | | | |
| 71 | AUXL | | | |
| 72 | AVSS | I | | Power supply terminal |
| 73 | AGND | — | | GND terminal |
| 74 | AUXL | I | | Input terminal for Lch |
| 75 | AUXH | | | |
| 76 | TAPE | | | |
| 77 | MD | | | |
| 78 | TUNER | | | |
| 79 | CD | | | |
| 80 | DELIN | I | R/L input terminal for surround | |

12.2. IC701(M30218MAA101): FL DRIVE/SYSTEM CONTROL

| Pin No. | Mark | I/O Division | 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 input terminal |
| 4 | P94/ SOUT2 | O | CD & Tape communication data output terminal |
| 5 | P93/SIN2 | I | CD & Tape communication data input terminal |
| 6 | P92/ SSTB2 | I | CD & Tape communication response input terminal |
| 7 | P91/ SBUSY2 | O | CD communication request output terminal |
| 8 | P90/ SRDY2 | O | Tape communication request output terminal |
| 9 | CNV _{SS} | — | GND terminal |
| 10 | P87/XCIN | I | Crystal oscillator connection terminal |
| 11 | P86/ XCOUT | O | (f=32.7kHz) |
| 12 | /RESET | I | Reset input terminal ("L": Micon reset) |
| 13 | XOUT | O | Main clock ceramic oscillator output terminal (f=10MHz) |
| 14 | VSS | — | GND terminal |
| 15 | XIN | I | Main clock ceramic oscillator input terminal (f=10MHz) |
| 16 | VCC | I | Power supply terminal |
| 17 | P85/INT5 | I | Power failure detection input terminal |
| 18 | P84/INT4 | I/O | CR timer terminal for watch backup |
| 19 | P83/INT3 | O | Latch output terminal to IC302 (M62433AFP) |
| 20 | P82/INT2 | I | Remote control data input terminal |
| 21 | P81/INT1 | I | LED drive signal output terminal ("L": OFF, "H": ON) |
| 22 | P80/INT0 | I | MD load switch input terminal |
| 23 | P77/TA4IN/ TA2OUT/ CLKS1 | O | MD communication signal output terminal ("L": input, "H": output) |
| 24 | P76/TA3IN/ TA1OUT/ CLK1 | O | MD communication clock output terminal |
| 25 | P75/TA2IN/ TA0OUT/ RXD1 | I | MD communication data input terminal |
| 26 | P74/TA1IN/ YA4OUT/ TXD1 | O | MD communication data output terminal |
| 27 | P73/TA0IN/ TA3OUT | I | MD communication answer input terminal |
| 28 | P72/TB2IN | O | MD communication demand output terminal |

| Pin No. | Mark | I/O Division | Function |
|---------|-------------------|--------------|---|
| 29 | P71/TB1IN | I | Tuner reception detect input terminal |
| 30 | P70/TB0IN | O | Chip enable signal output terminal to IC501 (LC72722PMTLM) |
| 31 | P47/CST0/ RST0 | O | Chip enable signal output terminal to IC102 (LC72131MDTLM) |
| 32 | P46/CXL0 | O | Clock output terminal to IC501 (LC72722PMTLM) |
| 33 | P45/RXD0 | I | Stereo input terminal from IC102 (LC72131MDTLM) |
| 34 | P44/TXD0 | O | Data output terminal from IC102 (LC72131MDTLM) |
| 35 | P43/FLD51 | I | Tuner signal detection input terminal from IC101 (LA1833MN-TLM) |
| 36 | P42/FLD50 | I | Chip select input terminal |
| 37 | P41/FLD49 | I/O | FL segment control in/output terminal |
| ~ | ~ | | |
| 40 | P36/FLD46 | | |
| 41 | P35/FLD45 | O | FL segment control output terminal |
| ~ | ~ | | |
| 54 | P20/FLD32 | | |
| 55 | P17/FLD31 | | |
| ~ | ~ | | |
| 62 | P10/FLD24 | | |
| 63 | VCC | I | Power supply terminal |
| 64 | P70/FLD23 | O | FL segment control output terminal |
| 65 | VSS | — | GND terminal |
| 66 | P06/FLD22 | O | FL segment control output terminal |
| ~ | ~ | | |
| 72 | P00/FLD16 | | |
| 73 | P57/FLD15 | O | FL segment control output terminal |
| 74 | P56/FLD14 | O | FL grid control output terminal |
| ~ | ~ | | |
| 80 | P50/FLD8 | | |
| 81 | P67/FLD7 | O | FL grid control output terminal |
| ~ | ~ | | |
| 86 | P62/FLD2 | | |
| 87 | P61/FLD1 | O | FL grid control output terminal |
| 88 | P60/FLD0 | O | FL grid control output terminal |
| 89 | VEE | I | Power supply terminal |
| 90 | P107/AN7 | I | Key switch connect terminal |
| ~ | ~ | | |
| 92 | P105/AN5 | | |
| 93 | P104/AN4 | O | Muting output terminal ("H": OFF, "L": ON) |
| 94 | P103/AN3 | I | Key switch connect terminal from SE-HD505MD |
| ~ | ~ | | |
| 96 | P101/AN1 | | |
| 97 | AVSS | — | Connected to GND |
| 98 | P100/AN0 | I | Key switch input terminal |
| 99 | VREF | I | Power supply terminal |
| 100 | AVCC | | |

13 Replacement Parts List

Note:

*Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fireretardant (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 marking <RTL> indicates that the 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 dependant 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.

*Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| | | | | |
| 1 | RHD30007-S | SCREW | 4 | |
| 2 | RGK0969-1S | SIDE PANEL(L) | 1 | |
| 3 | RGK0970-1S | SIDE PANEL(R) | 1 | |
| 4 | XTBS26+8J | SCREW | 10 | |
| 5 | RGL0391-Q | PANEL LIGHT(L) | 1 | |
| 6 | RGL0392-Q | PANEL LIGHT(R) | 1 | |
| 7 | XTBS3+8JFZ1 | SCREW | 10 | |
| 8 | REZ1119 | FFC(23P) | 1 | |
| 9 | RKM0363-1S | CABINET | 1 | |
| 10 | RKA0098-K | FOOT | 4 | |
| 11 | XTB3+5JFZ | SCREW | 4 | |
| 12 | XTB3+8JFZ | SCREW | 1 | |
| 13 | RKWO568-S1 | FL WINDOW | 1 | |
| 14 | RGGO160D-S | FRONT PANEL | 1 | |
| 15 | REP2683A-S | LED(L R)P.C.B. | 1 | |
| 16 | RGP0698-S | SUB PANEL | 1 | |
| 17 | REZ1120 | FFC(14P) | 1 | |
| 18 | RGU1602-1S1 | BUTTON BAND | 1 | |
| 19 | RGW0302-S | KNOB TUNER/JOG | 1 | |
| 20 | XTB3+12JFZ | SCREW | 4 | |
| | | | | |
| C101 | ECBT1C103NS5 | 16V 0.01U | 1 | |
| C102 | ECEA1CKS101 | 16V 100U | 1 | |
| C103 | ECBT1C103NS5 | 16V 0.01U | 1 | |
| C104,05 | ECBT1H102KB5 | 50V 1000P | 2 | |
| 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 | |
| C120 | RCE1CKA100BG | 16V 10U | 1 | |
| C121 | RCE1HKAR47BG | 50V 0.47U | 1 | |
| C122,23 | ECEA1HKS010 | 50V 1U | 2 | |
| C124 | ECBT1H101KB5 | 50V 100P | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| 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 | RCE1CKA100BG | 16V 10U | 2 | |
| C303,04 | ECBT1H330J5 | 50V 33P | 2 | |
| C305,06 | ECBT1H102KB5 | 50V 1000P | 2 | |
| C307,08 | ECBT1E103ZF | 25V 0.01U | 2 | |
| C309-13 | RCE1CKA100BG | 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 | RCE1CKA100BG | 16V 10U | 2 | |
| C327,28 | ECBT1H331KB5 | 50V 330P | 2 | |
| C329,30 | RCE1CKA100BG | 16V 10U | 2 | |
| C331,32 | ECBT1H331KB5 | 50V 330P | 2 | |
| C333,34 | ECBT1C332KR5 | 16V 3300P | 2 | |
| C335-38 | ECQB1H103JZ | 50V 0.01U | 4 | |
| C339-42 | ECQV1H473JM3 | 50V 0.047U | 4 | |
| C343,44 | ECQV1H224JM3 | 50V 0.22U | 2 | |
| C345,46 | ECQB1H333JF3 | 50V 0.033U | 2 | |
| C347,48 | ECQB1H223JF3 | 50V 0.022U | 2 | |
| C349,50 | ECBT1H102KB5 | 50V 1000P | 2 | |
| C351 | ECBT1H104ZF5 | 50V 0.1U | 1 | |
| C353-62 | ECBT1H101KB5 | 50V 100P | 10 | |
| C401,02 | ECA1EM101 | 25V 100U | 2 | |
| C403,04 | ECBT1E103ZF | 25V 0.01U | 2 | |
| C405,06 | RCE1AKA470BG | 10V 47U | 2 | |
| C407,08 | ECEA1CKS101 | 16V 100U | 2 | |
| C409,10 | ECBT1E103ZF | 25V 0.01U | 2 | |
| C411 | ECEA1CKS101 | 16V 100U | 1 | |
| C413 | ECA1EM101 | 25V 100U | 1 | |
| C414 | ECEA0JKS101 | 6.3V 100U | 1 | |
| C415 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C471,72 | ECBT1H473ZF5 | 50V 0.047U | 2 | |
| C481 | ECBT1C105ZF5 | 16V 1U | 1 | |
| C482 | ECBT1H104ZF5 | 50V 0.1U | 1 | |
| C483,84 | ECBT1H473ZF5 | 50V 0.047U | 2 | |
| C491,92 | ECBT1H101KB5 | 50V 100P | 2 | |
| C493 | ECEA1VKS470 | 35V 47U | 1 | |
| C501 | ECEA0JKS101 | 6.3V 100U | 1 | |
| C502 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C503,04 | ECBT1H470J5 | 50V 47P | 2 | |
| C505 | ECBT1H561KB5 | 50V 560P | 1 | |
| C506 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C507 | ECEA0JKS101 | 6.3V 100U | 1 | |
| C508 | ECBT1H331KB5 | 50V 330P | 1 | |
| C509 | RCE1CKA100BG | 16V 10U | 1 | |
| C521,22 | ECBT1E103ZF | 25V 0.01U | 2 | |
| C523 | ECEA0JKS101 | 6.3V 100U | 1 | |
| 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 | |

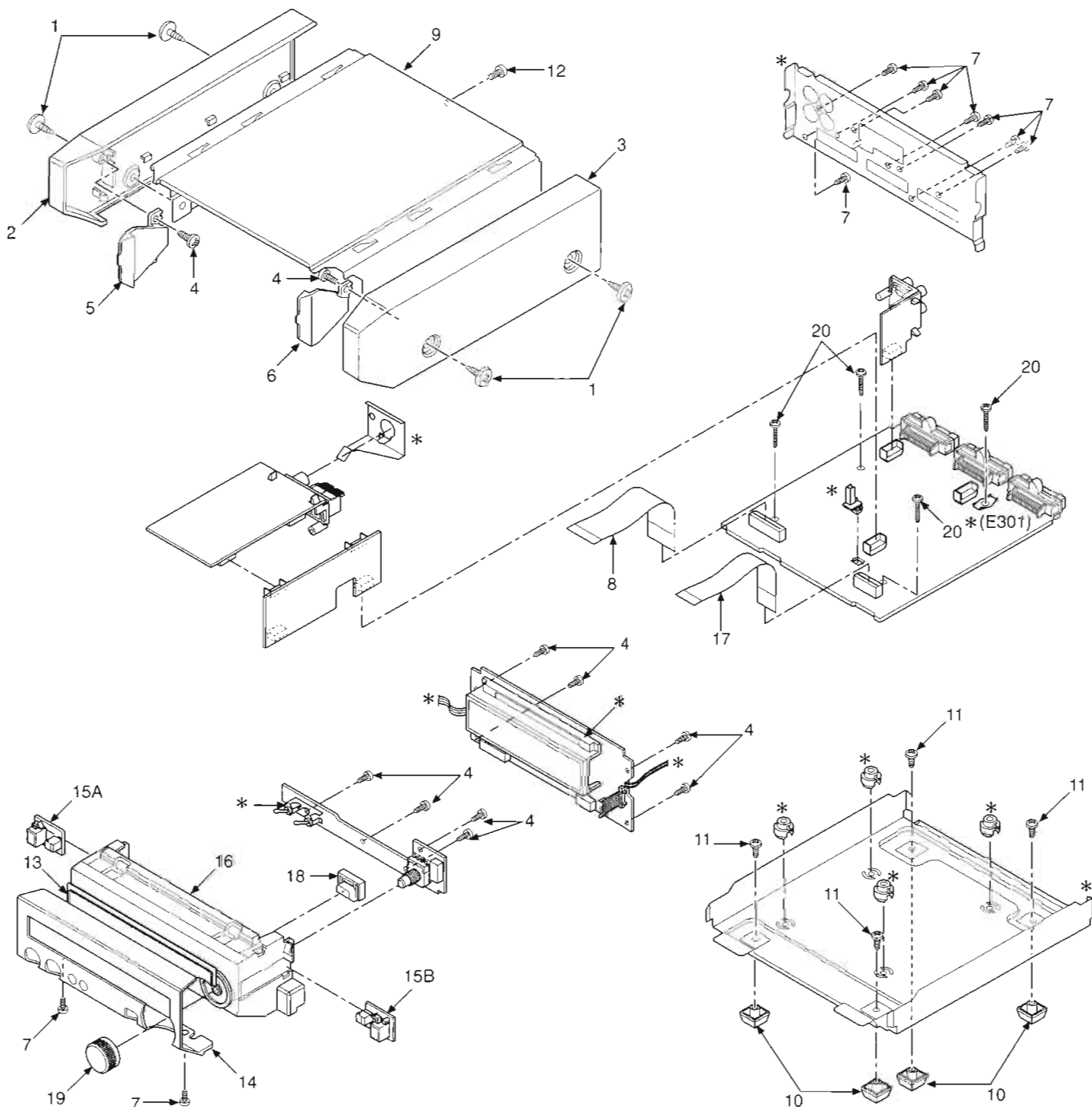
| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| C708 | ECUV1H103ZFN | 50V 0.01U | 1 | |
| C709 | RCE1CKA100BG | 16V 10U | 1 | |
| C710 | ECUV1H103ZFN | 50V 0.01U | 1 | |
| C711,12 | ECUV1H104ZFN | 50V 0.1U | 2 | |
| 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 | RLFFETMGD01L | CERAMIC FILTER | 1 | |
| CF202 | RLFFETMGD01L | CERAMIC FILTER | 1 | |
| | | | | |
| 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 | |
| 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 | |
| D713 | MA111TX | DIODE | 1 | |
| D791 | UDZ2R0BTE-17 | DIODE | 1 | |
| | | | | |
| FL701 | RSL0271-F | FL DISPLAY TUBE | 1 | |
| | | | | |
| IC101 | LA1833MN-TLM | IC | 1 | |
| IC102 | LC72131MDTLM | IC | 1 | |
| IC301 | M5218AFPE3 | IC | 1 | |
| IC302 | M62433AFP | IC | 1 | |
| IC501 | LC72722PMTLM | IC | 1 | |
| IC502 | M5M34051FPE1 | IC | 1 | |
| IC503 | TC74HCT7007A | IC | 1 | |
| IC701 | M30218MAA101 | IC | 1 | |
| | | | | |
| JK101 | RJH5210M-1 | JACK ANTENNA | 1 | |
| JK201 | SJF3069-20N | EXT OUT/IN | 1 | |
| JK401 | RJT065K20 | SYSTEM CONNECTOR (20P) | 1 | |
| JK402 | RJT065K19 | SYSTEM CONNECTOR (19P) | 1 | |
| JK403 | RJT065A19 | SYSTEM CONNECTOR (19P) | 1 | |
| | | | | |
| L101,02 | ELESNR68MA | COIL | 2 | |
| L103 | ELEXTR47MA9 | COIL | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| L501,02 | RLQA100JT-Y | COIL | 2 | |
| L521-24 | RLQA1R0JT1-Y | COIL | 4 | |
| L541,42 | RLQA100JT-Y | COIL | 2 | |
| L701 | RLBN300AV-W | COIL | 1 | |
| L702-06 | RLBN601V-W | COIL | 5 | |
| L707 | RLBN300AV-W | COIL | 1 | |
| | | | | |
| PCB1 | REP2592C-T | TUNER P.C.B. | 1 | (RTL) |
| PCB2 | REP2768H-M | MAIN P.C.B. | 1 | (RTL) |
| PCB3 | REP2769E-S | PANEL P.C.B. | 1 | (RTL) |
| | | | | |
| Q101,02 | 2SC2787FK | TRANSISTOR | 2 | |
| Q106 | UN4111 | TRANSISTOR | 1 | |
| Q110 | 2SC3311AR | TRANSISTOR | 1 | |
| 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 | |
| Q521-23 | DTC114ESTP | TRANSISTOR | 3 | |
| 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 | |
| R104 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R105 | ERDS2FJ471 | 1/4W 470 | 1 | |
| R106 | ERDS2FJ474 | 1/4W 470K | 1 | |
| R107 | ERDS2FJ331 | 1/4W 330 | 1 | |
| R108 | ERDS2FJ474 | 1/4W 470K | 1 | |
| R109 | ERDS2FJ331 | 1/4W 330 | 1 | |
| 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 | ERDS2FJ683 | 1/4W 68K | 1 | |
| R118 | ERDS2FJ332 | 1/4W 3.3K | 1 | |
| R119 | ERDS2FJ103 | 1/4W 10K | 1 | |
| 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 | |
| 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 | |
| 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 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| R205,06 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R207,08 | ERDS2FJ104 | 1/4W 100K | 2 | |
| R301-04 | ERDS2FJ471 | 1/4W 470 | 4 | |
| R305,06 | ERDS2FJ563 | 1/4W 56K | 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 | 1/4W 4.7 | 2 | |
| R403,04 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R405 | ERD2FCG100 | 1/4W 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 | |
| R504 | ERDS2FJ101 | 1/4W 100 | 1 | |
| R505 | ERDS2FJ332 | 1/4W 3.3K | 1 | |
| R507 | ERDS2FJ101 | 1/4W 100 | 1 | |
| R509 | ERDS2FJ101 | 1/4W 100 | 1 | |
| R521 | ERDS2FJ561 | 1/4W 560 | 1 | |
| R522,23 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R524 | ERDS2FJ561 | 1/4W 560 | 1 | |
| R525,26 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R527,28 | ERDS2FJ472 | 1/4W 4.7K | 2 | |
| R529 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R530 | ERDS2FJ473 | 1/4W 47K | 1 | |
| R531 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R533 | ERDS2FJ1R0 | 1/4W 1 | 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 | ERJ6GEYJ102Z | 1/10W 1K | 1 | |
| R603 | ERJ6GEYJ821V | 1/10W 820 | 1 | |
| R701 | ERJ6GEYJ102Z | 1/10W 1K | 1 | |
| R702 | ERJ6GEYJ103V | 1/10W 10K | 1 | |
| R703 | ERJ6GEYJ104V | 1/10W 100K | 1 | |
| R704 | ERJ6GEYJ101V | 1/10W 100 | 1 | |
| R705-07 | ERJ6GEYJ102Z | 1/10W 1K | 3 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|--------------|-------------------------|-----|---------|
| R708 | ERJ6GEYJ824V | 1/10W 820K | 1 | |
| R709-11 | ERJ6GEYJ102Z | 1/10W 1K | 3 | |
| R712 | ERJ6GEYJ103V | 1/10W 10K | 1 | |
| R713-15 | ERJ6GEYJ102Z | 1/10W 1K | 3 | |
| R716-18 | ERJ6GEYJ331V | 1/10W 330 | 3 | |
| R719,20 | ERJ6GEYJ102Z | 1/10W 1K | 2 | |
| R721 | ERJ6GEYJ153V | 1/10W 15K | 1 | |
| R722-24 | ERJ6GEYJ102Z | 1/10W 1K | 3 | |
| R725 | ERJ6GEYJ101V | 1/10W 100 | 1 | |
| R726,27 | ERJ6GEYJ331V | 1/10W 330 | 2 | |
| R728,29 | ERJ6GEYJ102Z | 1/10W 1K | 2 | |
| R730 | ERJ6GEYJ103V | 1/10W 10K | 1 | |
| R733 | ERJ6GEYJ101V | 1/10W 100 | 1 | |
| R734 | ERJ6GEYJ104V | 1/10W 100K | 1 | |
| R735-37 | ERJ6GEYJ102Z | 1/10W 1K | 3 | |
| R738 | ERJ6GEYJ101V | 1/10W 100 | 1 | |
| R739-42 | ERJ6GEYJ102Z | 1/10W 1K | 4 | |
| R743-51 | ERJ6GEYJ103V | 1/10W 10K | 9 | |
| R752-57 | ERJ6GEYJ102Z | 1/10W 1K | 6 | |
| R758,59 | ERJ6GEYJ101V | 1/10W 100 | 2 | |
| R760 | ERJ6GEYJ102Z | 1/10W 1K | 1 | |
| R781,82 | EXB210E104J | 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/TUNE MODE | 2 | |
| S603-05 | EVQ21405R | SW PUSH | 3 | |
| VR601 | EVQVENF0124B | V.R TUNE JOG | 1 | |
| X102 | RLFDFT13DD | OSCILLATOR | 1 | |
| X103 | RSXC7M20S05T | OSCILLATOR | 1 | |
| X501 | RSXC4M33S02T | OSCILLATOR | 1 | |
| X701 | RSXY10M0M01T | OSCILLATOR | 1 | |
| X702 | RSXD32K7S05 | OSCILLATOR | 1 | |
| Z101 | RLA2Z006M-T | COMPONENT COMBINATION | 1 | |
| Z102 | RLI2Z022M-T | COMPONENT COMBINATION | 1 | |
| Z120 | RAL0035 | FM FRONT END | 1 | |
| Z701 | RCDGP1U28XD | REMOTE SENSOR | 1 | |

14 Cabinet Parts Location



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

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|-------------|-------------------------|-----|---------|
| 1 | RHD30007-S | SCREW | 4 | |
| 2 | RGK0969-1S | SIDE PANEL (L) | 1 | |
| 3 | RGK0970-1S | SIDE PANEL (R) | 1 | |
| 4 | XTBS26+8J | SCREW | 10 | |
| 5 | RGL0391-Q | PANEL LIGHT (L) | 1 | |
| 6 | RGL0392-Q | PANEL LIGHT (R) | 1 | |
| 7 | XTBS3+8JFZ1 | SCREW | 10 | |
| 8 | REZ1119 | FFC (23P) | 1 | |
| 9 | RKM0363-1S | CABINET | 1 | |
| 10 | RKA0098-K | FOOT | 4 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|----------|-------------|-------------------------|-----|---------|
| 11 | XTB3+5JFZ | SCREW | 4 | |
| 12 | XTB3+8JFZ | SCREW | 1 | |
| 13 | RKW0568-S1 | FL WINDOW | 1 | |
| 14 | RGG0160D-S | FRONT PANEL | 1 | |
| 15 | REP2683A-S | LED (L R) P.C.B. | 1 | |
| 16 | RGP0698-S | SUB PANEL | 1 | |
| 17 | REZ1120 | FFC (14P) | 1 | |
| 18 | RGU1602-1S1 | BUTTON BAND | 1 | |
| 19 | RGW0302-S | KNOB TUNER/ JOG | 1 | |
| 20 | XTB3+12JFZ | SCREW | 4 | |