

Service Manual

CD Stereo System

CD Stereo System
SA-PM15

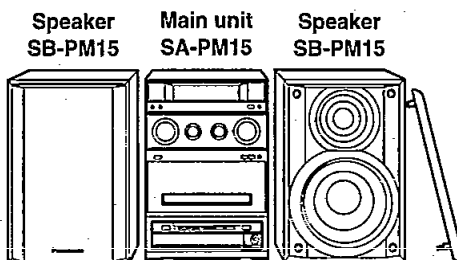
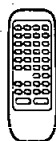
Discard the SA-PM15 Service Manual issued as a provisional edition (Order No. MD9707062C8), and in place of it, use the subject Service Manual.

Colour
(S).....Silver Type

Areas
(E) Europe.
(EB) Great Britain.
(EG) Germany.
(GN) Oceania.

COMPACT
disc
DIGITAL AUDIO

Remote control
transmitter

**System: SC-PM15**

Main unit	SA-PM15
Speakers	SB-PM15

Specifications (DIN 45 500)

AMPLIFIER SECTION

RMS power output	
THD 10 %, both channels driven	
LOW	14 W per channel (6 Ω)
HIGH	6 W per channel (6 Ω)
Total BI-AMP power	20 W per channel
Input sensitivity	
AUX	250 mV
Input impedance	
AUX	47 kΩ
Output impedance	
Headphones	16 – 32 Ω

FM TUNER SECTION

Frequency range	87.50 – 108.00 MHz
Sensitivity	
S/N 26 dB	1.5 μV
Antenna terminal(s)	75 Ω (unbalanced)

AM TUNER SECTION

Frequency range	522 – 1629 kHz
Sensitivity	
S/N 20 dB	500 μV/m

CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase
Tape speed	4.8 cm/s

Frequency response (–3, +3 dB)

Normal (TYPE I)	50 Hz – 13 kHz
HIGH (TYPE II)	50 Hz – 13 kHz
S/N	52 dB (A weighted)
Wow and flutter	0.18 % (WRMS)
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

CD SECTION

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser / 780 nm
Number of channels	Stereo
S/N	
SP OUT	82 dB (JIS.A)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

GENERAL

Power supply	
For (E) and (EG) areas	AC 220 – 230 V, 50 Hz
For (EB) area	AC 230 – 240 V, 50 Hz
Power consumption	66 W
Dimensions (W × H × D)	195 × 287 × 296 mm
Weight	4.9 kg

Notes:

- Design and specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT

⚠ 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.

Panasonic®

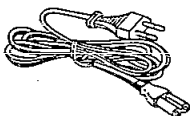
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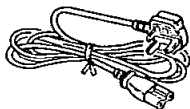
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■ Accessories

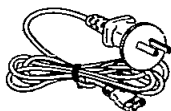
- AC power supply cord
(E) and (EG) areas : (RJA0019-2K) 1



(EB) area : (VJA0733) 1



(GN) area : (RJA0036-A) 1



- FM indoor antenna
(E), (EB) and (EG) areas : (RSA0007) .. 1
(GN) area : (RSA0006) 1



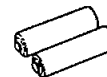
- AM loop antenna set
(RSA0022) 1



- Remote control transmitter
(EUR644851) 1



- Batteries for remote control transmitter
(UM-4, "AAA", R03) 2
Note: These are available on sales route.



■ Before Repair

- (1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C702) in order to discharge the voltage.
- (2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230 V.

Power supply voltage	AC 230 V, 50 Hz
Consumed current	Less than 200 mA

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

CAUTION:

THIS PRODUCT UTILIZES A LASER.
 USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To protect the laser diode against electrostatic breakdown, short the flexible board (FFC board) with a clip or similar object.
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

Grounding for electrostatic breakdown prevention

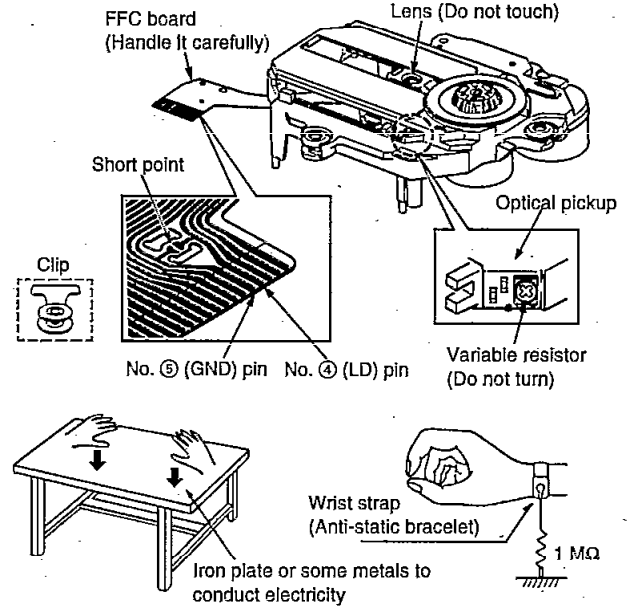
1. Human body grounding
 Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
 Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

Caution when Replacing the Traverse Deck:

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatic breakdown. Be sure to remove the solder from the short point before making connections.

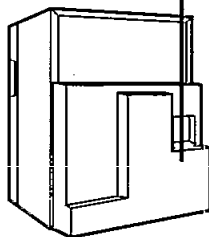


Precaution of Laser Diode

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.
 Wave length: 780 nm
 Maximum output radiation power from pick up: 100 μW/VDE

Laser radiation from the pick up unit is safety level, but be sure the followings:

1. Do not disassemble the pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.



DANGER	VISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFECTED. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNDT LASERSTRÅLING VED ÅPNING. VÅR SIKKERHEDSBREMSER ER GODE AF FUNKTION. LYSBÅ UDSTRÅLING FRA STRÅLERE.
VARO!	AVATTAREJA JA SUOJALUKITUS OHIETTUUN OLET ALTIINA NÄKYVÄN LASERSTRÄLLE. ÄLÄ KATSO SUORAAN.
WARNING	VISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFECTED. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNDT LASERSTRÅLING NÅR DEKSEL ÅPNET OG SIKKERHEDSBREMSER ER GODE AF FUNKTION. LYSBÅ UDSTRÅLING FRA STRÅLERE.
VORSICHT	VISIBLE LASER RADIATION WHEN ASSEMBLY DEFECTED AND INTERLOCK IS RELEASED. AVOID DIRECT EXPOSURE TO BEAM.

(Inside of product)
 (Innsiden av apparatet)
 (Tuotteen sisällä)
 (Apparatens insida)
 (Produktets insida)
 (Im Inneren des Gerätes)

■ Caution for AC Main Lead



("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT


The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF-KEEP DRY.

Before use

Removal the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

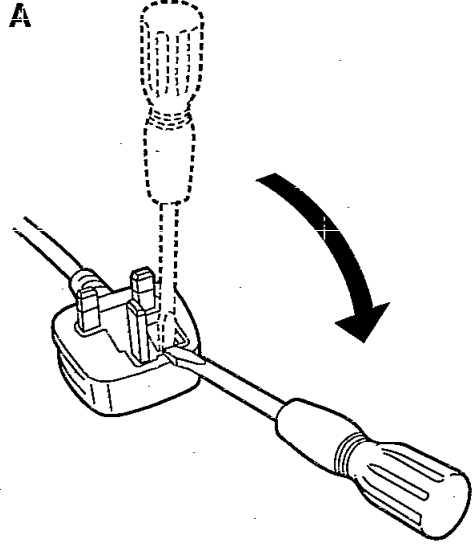
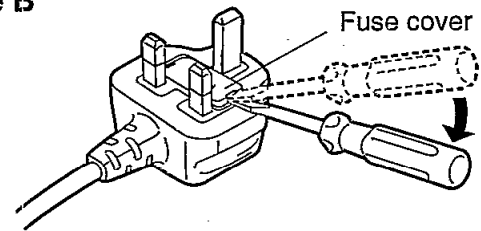


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

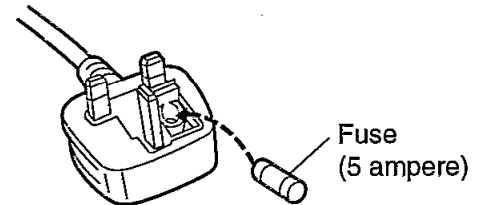
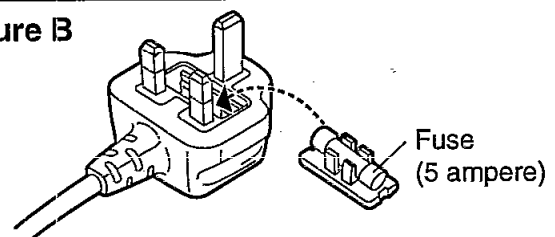
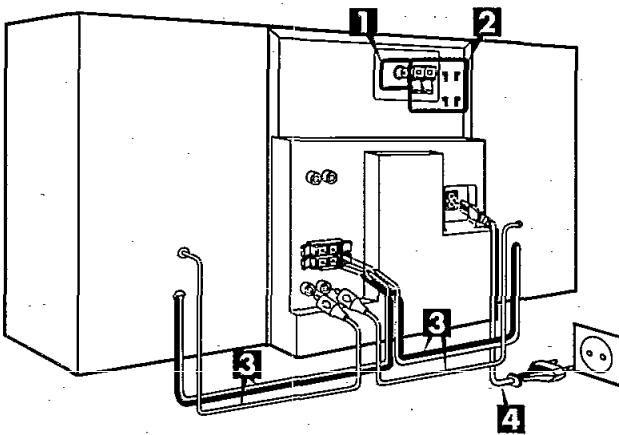


Figure B



Connections



- Plug the AC power cord into a household AC outlet only after all other connections have been made.
- To prepare the AM loop antenna wire and speaker cords, twist the vinyl cover tip and pull off.
- For your listening pleasure, keep your speakers from touching the system.
- Speakers are designed identically so that no left or right channel orientation is necessary.
- You can take the front net off speakers.

1 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

Note

For best reception sound quality:
An FM outdoor antenna is recommended.

2 Connect the AM loop antenna.

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of best reception and least interference.

3 ① Connect the right (R) and left (L) speaker cords (pin type).

② Connect the right (R) and left (L) speaker cables.

Note

- To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (red) wires to positive (+) terminals and negative (black) wires to negative (-) terminals.

Caution

Use the speakers only with the recommended system.

Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire.

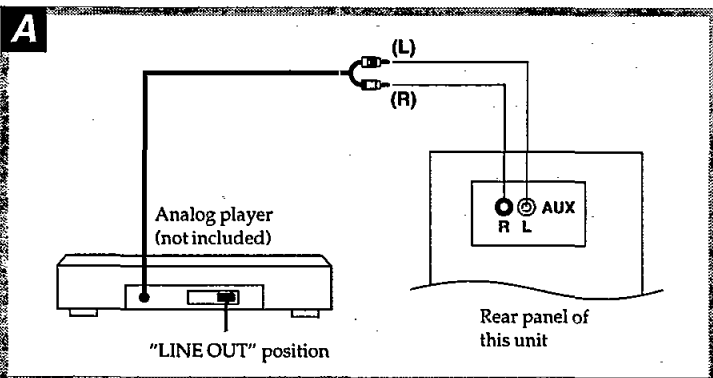
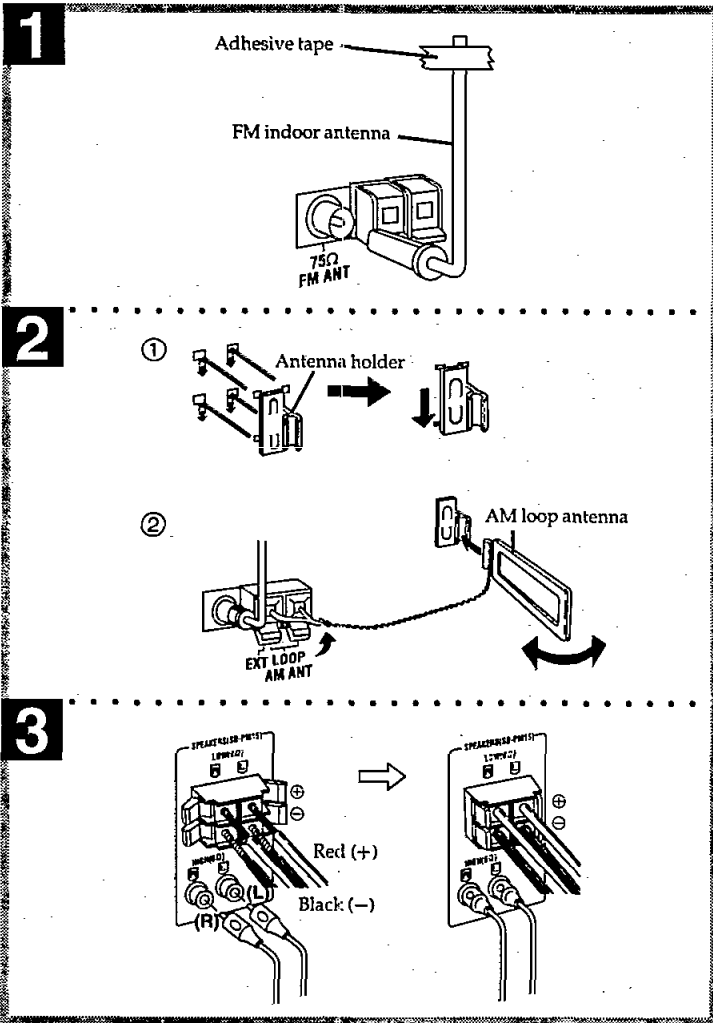
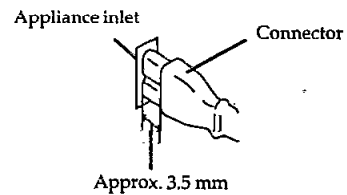
Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

4 Connect the AC power cord.

Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.

However there is no problem using the unit.

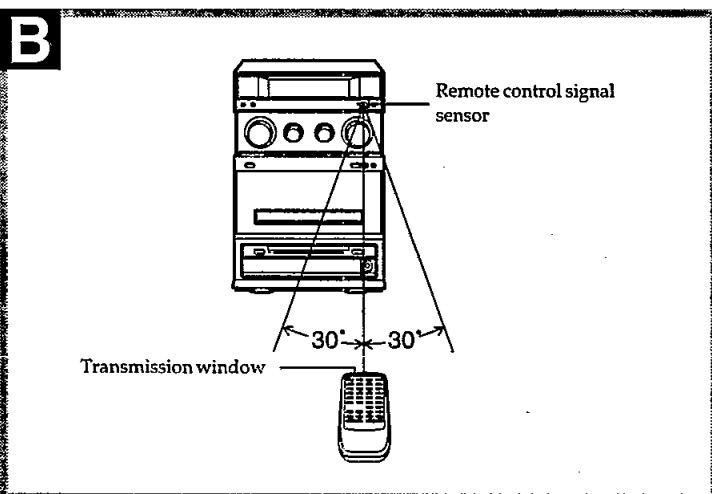
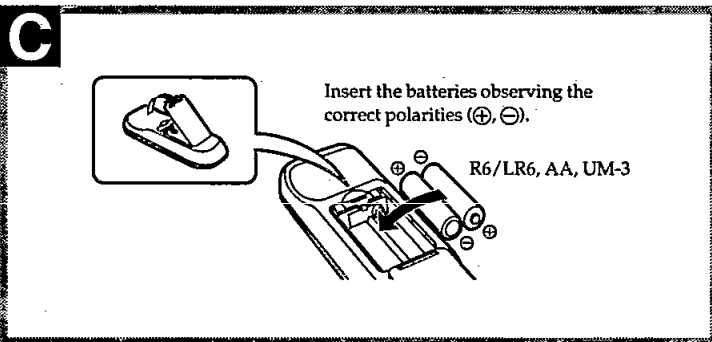
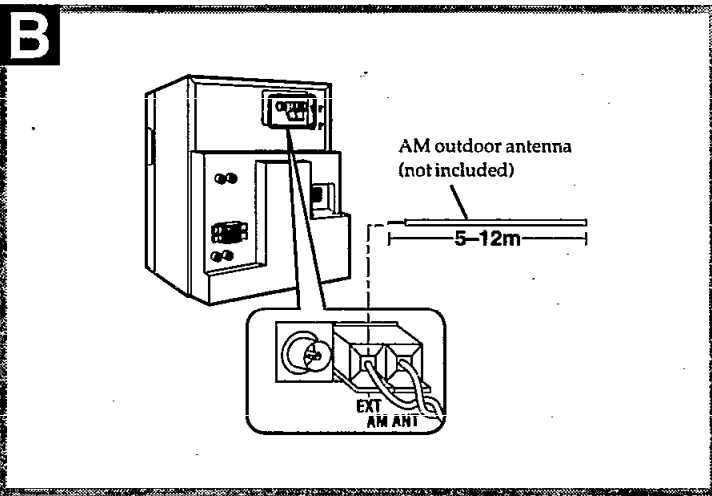
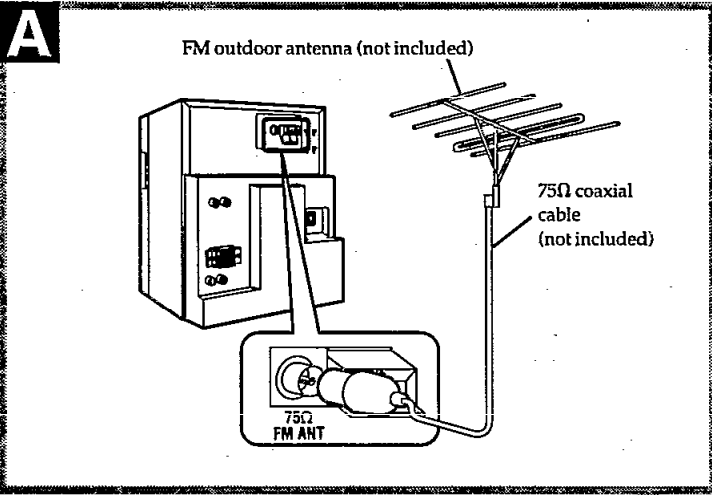


External unit connection

- For details, refer to the instruction manual of the units which are to be connected.
- This example shows how to connect the analog player with the PHONO OUT/LINE OUT switch.
- When units other than those described to the left are to be connected, please consult with your audio dealer.

Note

- Only an analog player with a built-in phono equalizer can be connected.
- Set the switch to the "LINE OUT" position at the back of the analog player.



Optional antenna connections

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna A

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

Note

An outdoor antenna should be installed by a qualified technician only.

AM outdoor antenna B

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

Concerning the Remote Control

Battery installation C

Use of batteries

- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

Battery life

The battery life is about one year.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

Correct method of use D

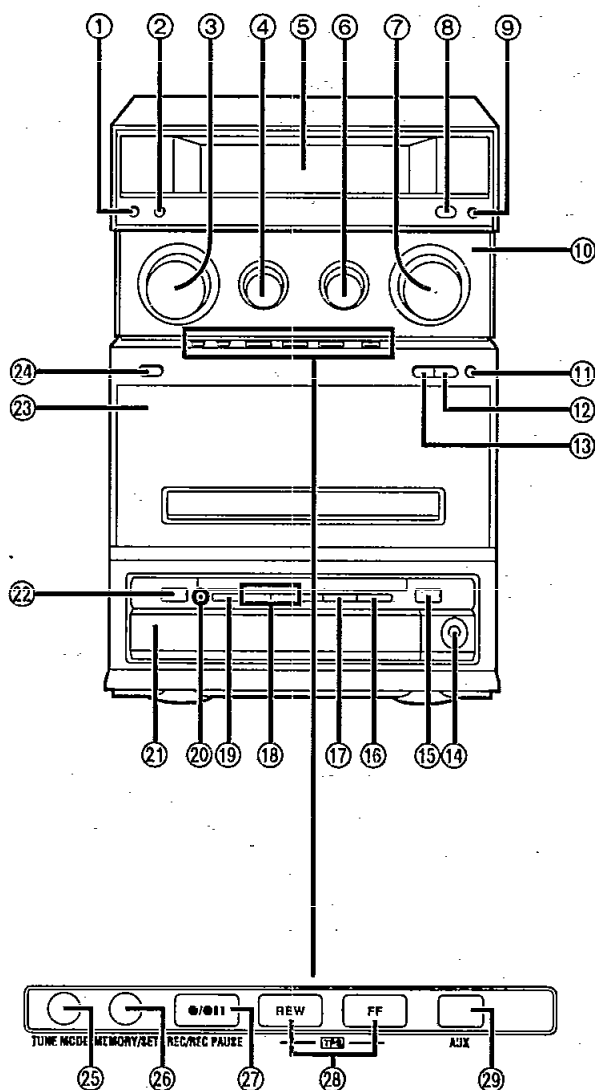
Operations notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Do not place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

■ Front Panel Controls



- ① Play timer/record timer button (⊙ PLAY/⊙ REC)
- ② Clock/timer button (CLOCK/TIMER)
- ③ Tune/time adjust control (TUNE/TIME ADJ)
- ④ Bass control (BASS)
- ⑤ Display
- ⑥ Treble control (TREBLE)
- ⑦ Volume control (VOLUME)
- ⑧ Remote control signal sensor
- ⑨ Glide panel open/close button (OPEN/CLOSE)
- ⑩ Glide panel
- ⑪ Cassette holder open button (▲ OPEN)
- ⑫ Cassette play/direction button (◀ ▶ PLAY/DIR)
- ⑬ Cassette stop button (■ STOP)
- ⑭ Headphone jack (📞)
- ⑮ CD tray open/close button (▲/CLOSE)
- ⑯ CD play/pause button (▶/|| PLAY/PAUSE)
- ⑰ CD stop button (■ STOP)
- ⑱ Skip/search buttons (|◀▶| SKIP)
- ⑲ CD edit button (CD EDIT)
- ⑳ Power indicator

This indicator illuminates to indicate the power is supplied to this unit when the unit is connected to the household AC outlet.

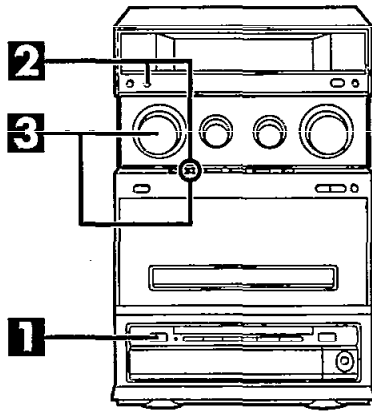
- ㉑ CD tray
 - ㉒ Power "⏻/⏻" switch (POWER, ⏻/⏻)
- Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- ㉓ Cassette holder
 - ㉔ Tuner/band select button (TUNER/BAND)
 - ㉕ Tuning mode select button (TUNE MODE)
 - ㉖ Memory/set button (MEMORY/SET)
 - ㉗ Record/record pause button (●/● || REC/REC PAUSE)
 - ㉘ Fast forward/rewind/tape program sensor buttons (TPS REW FF)
 - ㉙ AUX button (AUX)

Opening/closing the glide panel

When the power is turned on, the glide panel retracts automatically enabling access to the operation buttons (㉓-㉙).

When the power is turned off, the glide panel closes automatically. If you want to open/close the glide panel manually, press OPEN/CLOSE (⑨) when the power is on. When the glide panel is closed manually, the display light dims.

■ Setting the Time



This is a 24-hour display clock.

This example in the figure shows how to set the time for 18:25.

1 Switch on the power.

The glide panel retracts enabling access to the operation buttons.

2 ① Press CLOCK/TIMER to select "CLOCK".

Every time you press the button;

CLOCK → ○ PLAY → ○ REC

↑ Previous display ←

② (within 5 seconds or so)

Press MEMORY/SET.

3 ① Turn TUNE/TIME ADJ to the right or left to show the present time.

② Press MEMORY/SET to finish setting the time.

The display will return to the previous display setting after about 4 seconds.

To display the time

•To check

Press CLOCK/TIMER to select "CLOCK".

The time will be displayed for about 5 seconds and then the display will return to whatever was previously displayed.

•To display the time continuously **by remote control only**

Press DISPLAY to select present time.

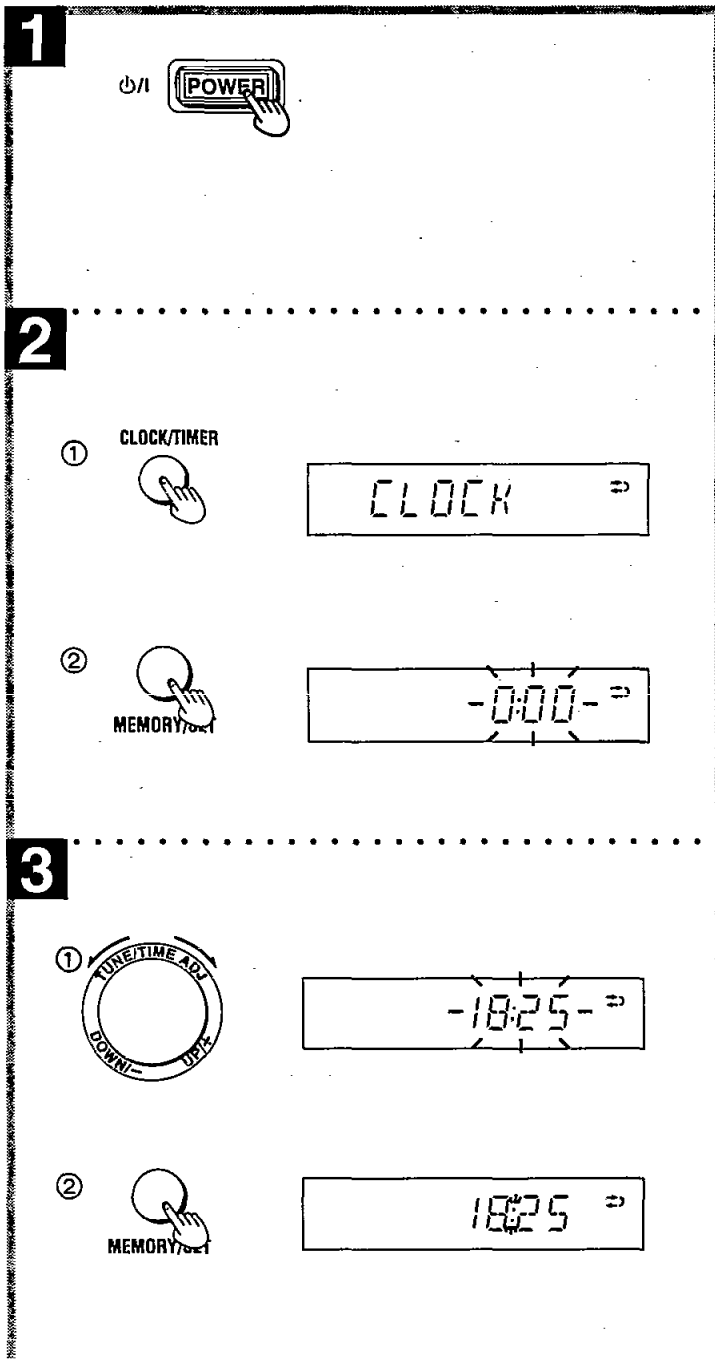
Every time you press the button:

Present time → Tape counter

↑ Previous display ←

For your reference

If the time has been set, the display will default to present time when in standby mode.



■ Operation Checks and Main Component Replacement Procedures

NOTE

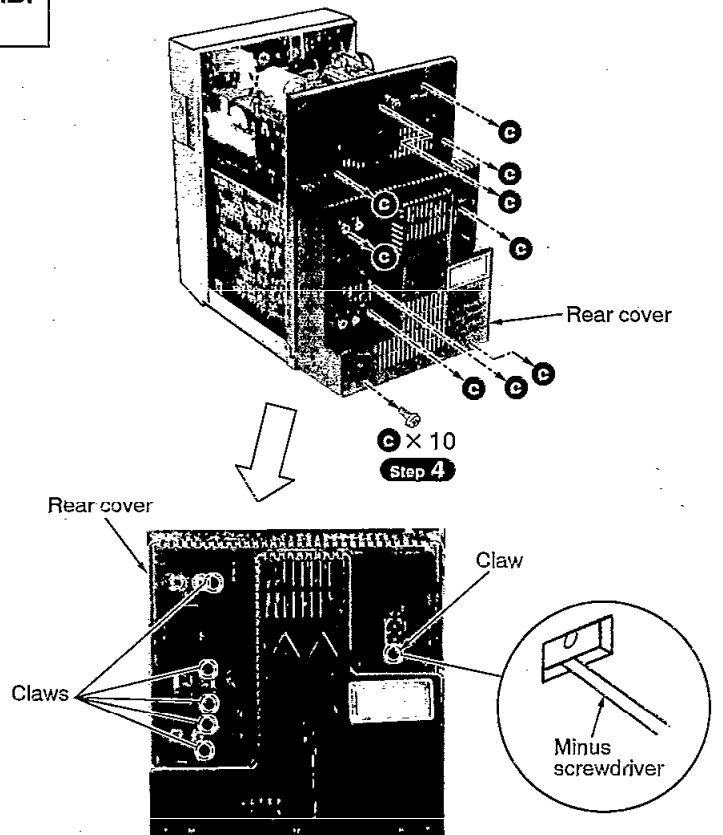
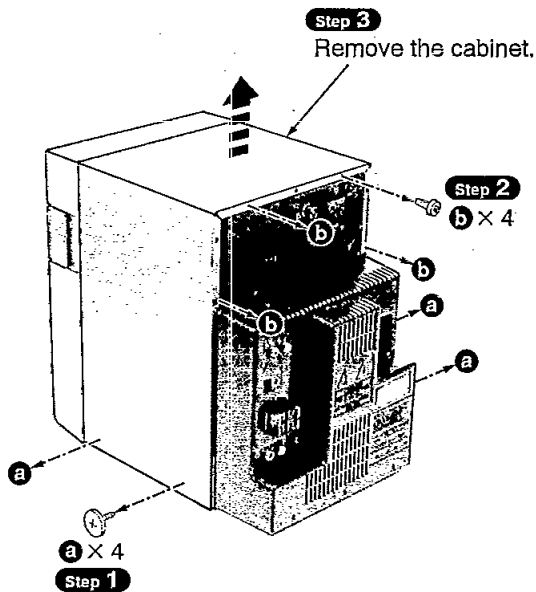
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.

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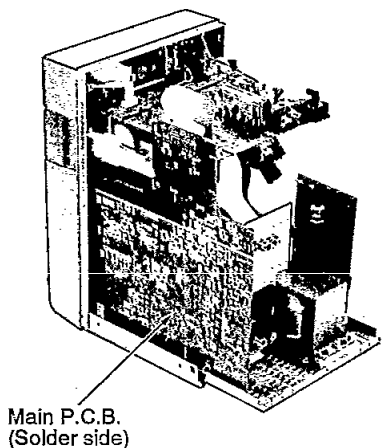
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2. Checking for the FL / tuner P.C.B.	10.
3. Checking for the CD servo P.C.B.	11.
4. Checking for the confirmation of the cassette mechanism operation.	11,12.
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3. Replacement for the belt, loading motor ass'y and loading switch.	16.
4. Replacement for the slide panel motor ass'y and belt.	16.
• Measure for tape trouble	17.

■ Checking Procedure for each P.C.B.

1. Checking for the main P.C.B., power supply P.C.B. and mechanism control P.C.B.

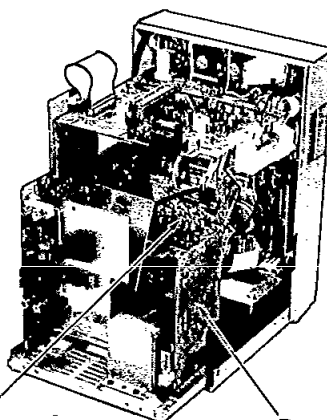


• Check the main P.C.B. as shown below.



Main P.C.B.
(Solder side)

• Check the power supply P.C.B. and mechanism control P.C.B. as shown below.



Mechanism control P.C.B.
(Solder side)

Power supply P.C.B.
(Solder side)

2. Checking for the FL / tuner P.C.B.

• Follow the item 1 (**Step 1** ~ **Step 5**) in checking procedures for each P.C.B. on page 9.

Step 1

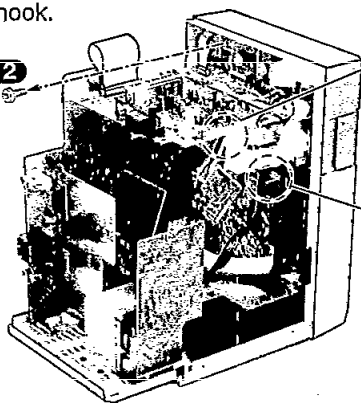
Remove the flat cables from hook.

Flat cable

Hook

Step 2

a



Hook

Flat cable

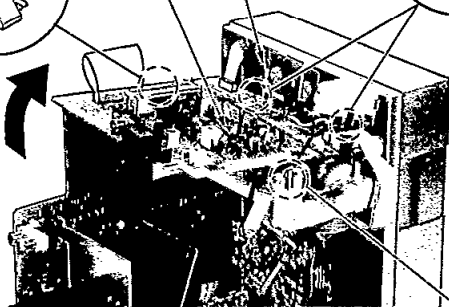
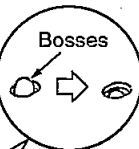
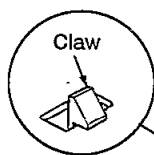
Step 3

Release the 2 claws.
FL / tuner P.C.B.

Bosses

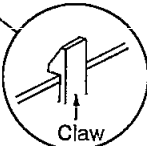
Operation (1) P.C.B.

Claw



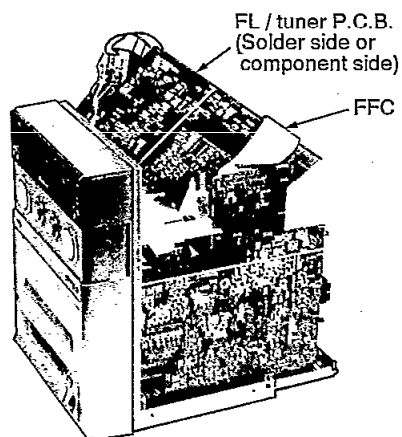
Step 4

Release the bosses with lifting the FL / tuner P.C.B., and then remove the FL / tuner P.C.B. and operation (1) P.C.B..



Claw

• Check the FL / tuner P.C.B. as shown below.



FL / tuner P.C.B.
(Solder side or component side)

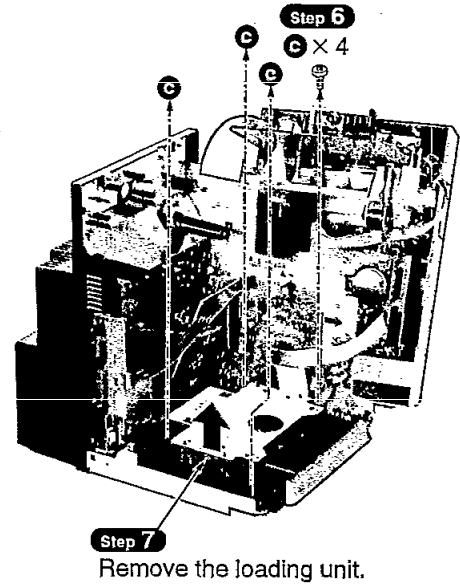
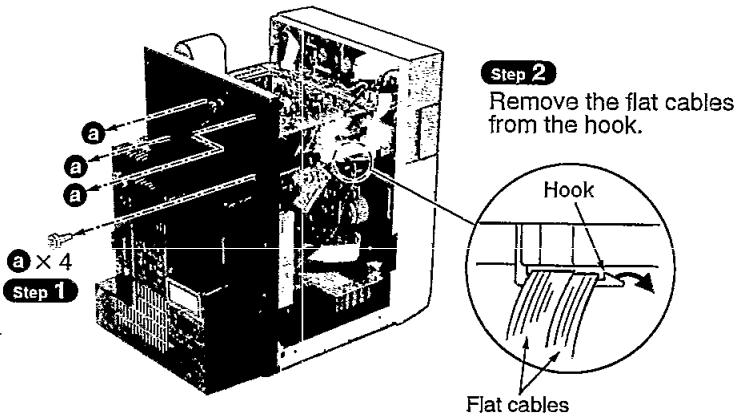
FFC

NOTE

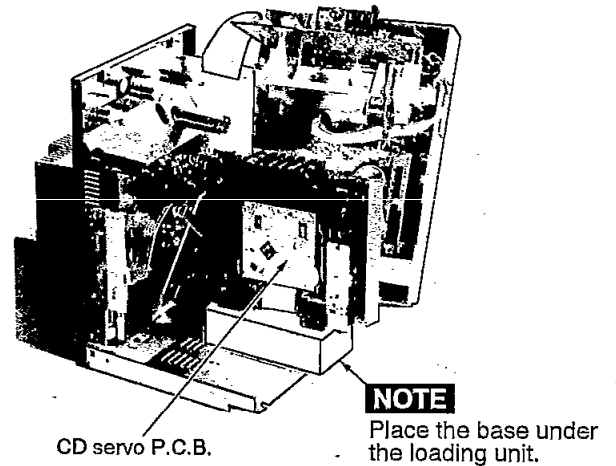
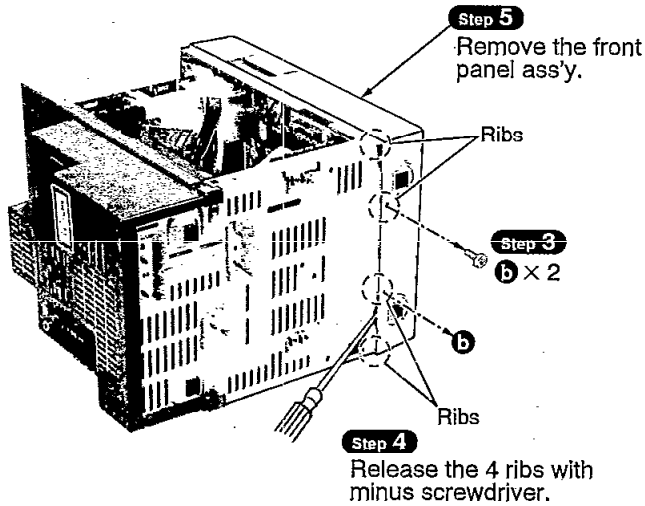
1. Do not bend the FFC.
2. Avoid damaging the FFC.

3. Checking for the CD servo P.C.B.

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.

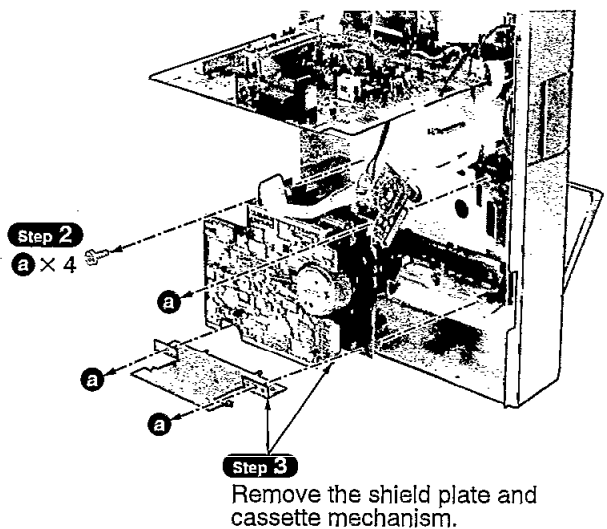
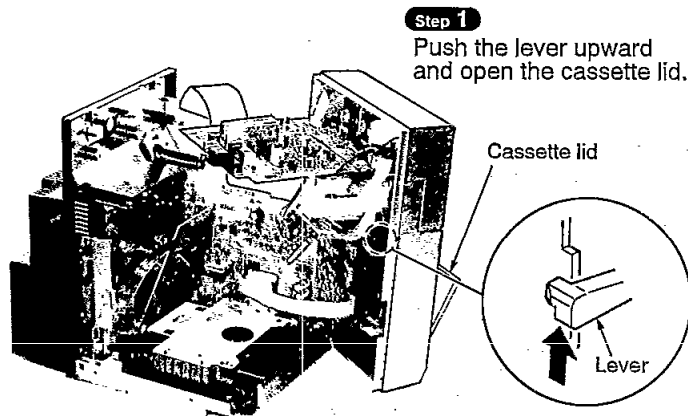


- Check the CD servo P.C.B. as shown below.

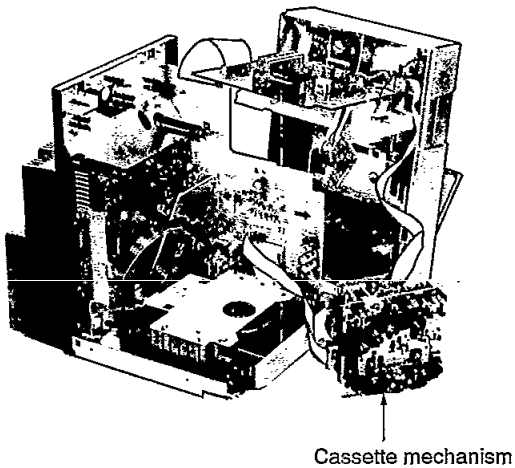


4. Checking for the confirmation of the cassette mechanism operation

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 5**) in checking procedures for each P.C.B. on page 11.



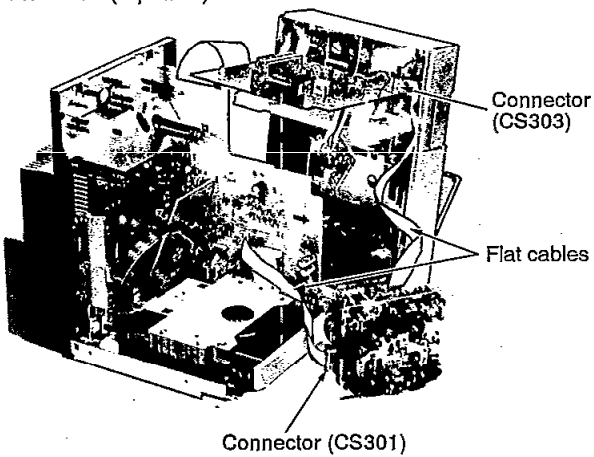
• Check the cassette mechanism as shown below.
 (Push the cassette operation button and confirm)
 each operation visually.



Removal of the mechanism control P.C.B. and mechanism P.C.B. for replacing parts.

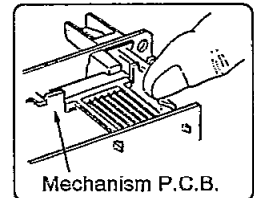
Step 1

Remove the flat cables from the connectors (2 points).



NOTE

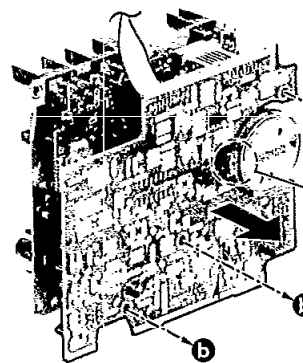
When removing the mechanism control P.C.B., remove it holding the mechanism P.C.B..



Step 2
b × 3

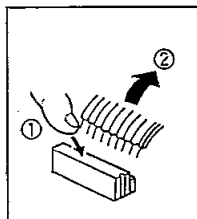
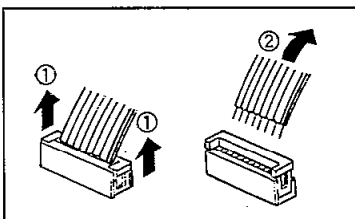
Step 3
Unsolder the motor terminals. (2 points)

Step 4
Remove the mechanism control P.C.B.
 (The parts on the mechanism control P.C.B. can be replaced.)

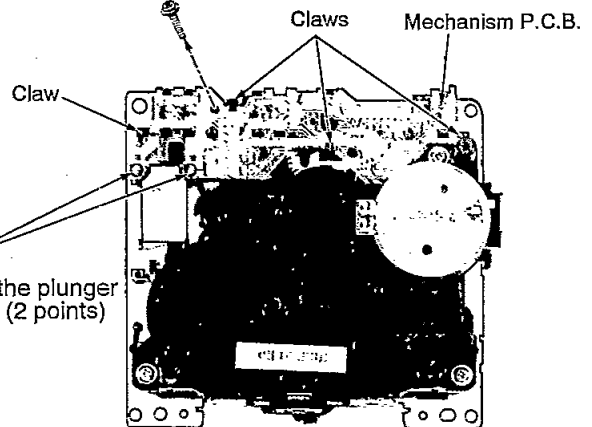


• Removal of the connector (CS303)

(CS301)



Step 5



Step 6
Unsolder the plunger terminals. (2 points)

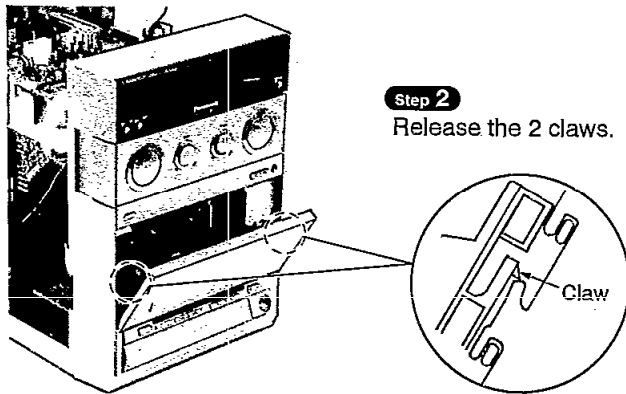
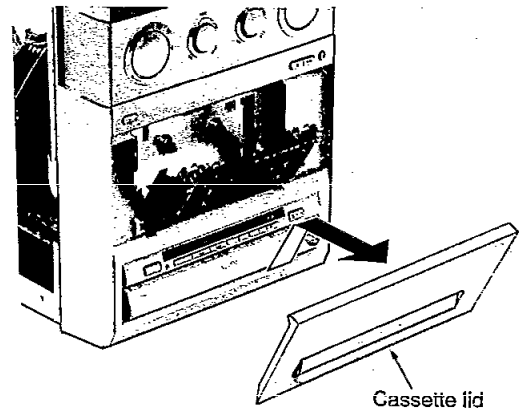
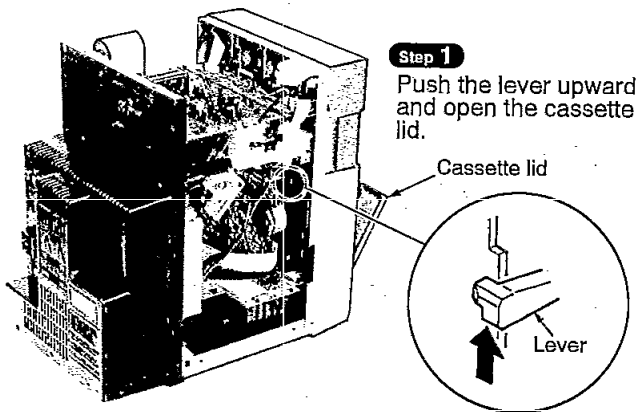
Step 7

Release the 4 claws, and then remove the mechanism P.C.B..
 (The parts on the mechanism P.C.B. can be replaced.)

Main Component Replacement Procedures

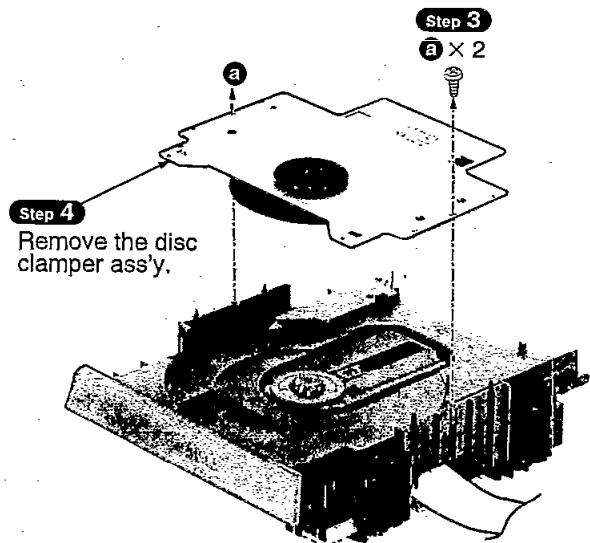
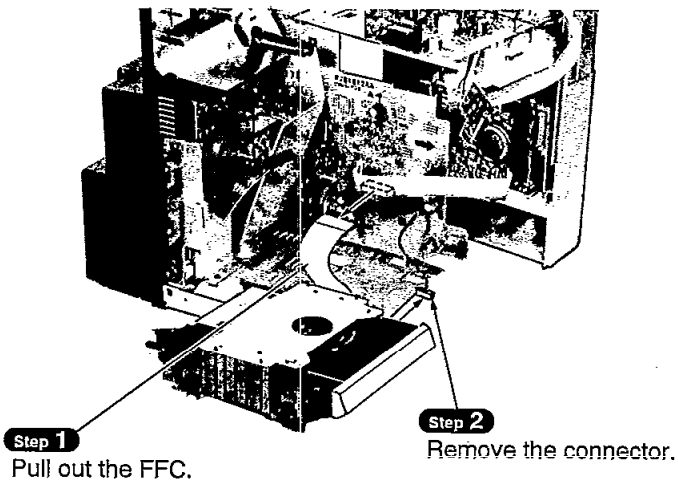
1. Replacement for the cassette lid

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.

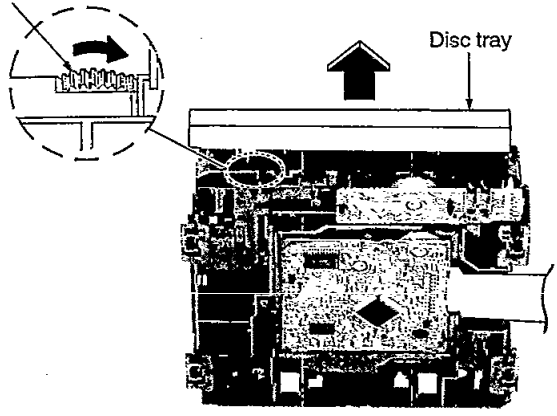


2. Replacement for the traverse deck ass'y

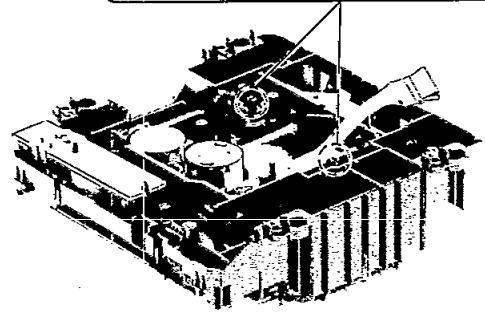
- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 7**) in checking procedures for each P.C.B. on page 11.



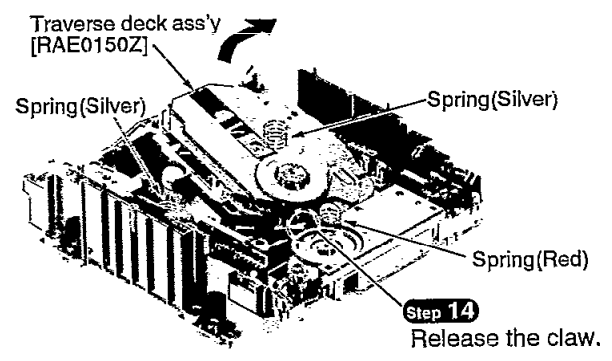
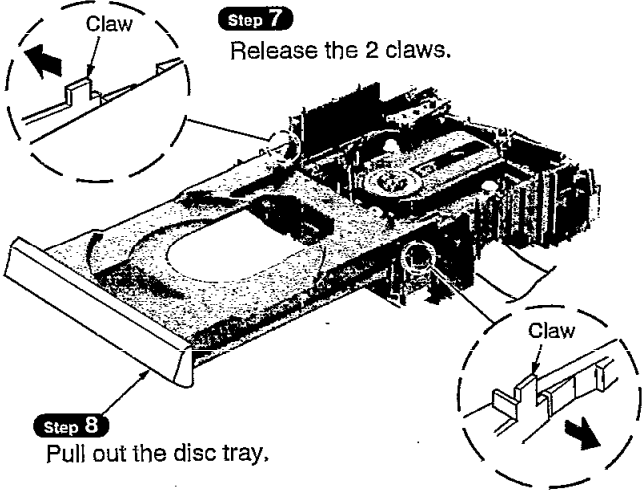
Step 6
Rotate the gear, and then pull out the disc tray.



Step 13
1. Widen the boss using a regular screwdriver.
2. Pull out the pin in the direction of the arrow.



Step 7
Release the 2 claws.



NOTE
Be careful not to lose the 3 springs because those will also be removed on removal of the traverse deck ass'y.

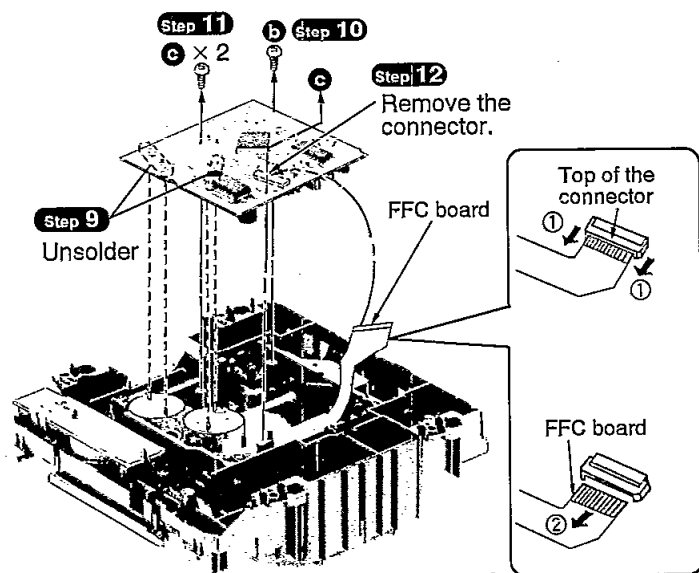
Step 8
Pull out the disc tray.

Step 9
Unsolder

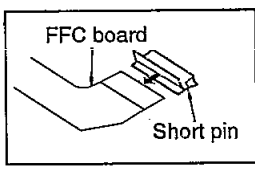
Step 11
c x 2

Step 10
b

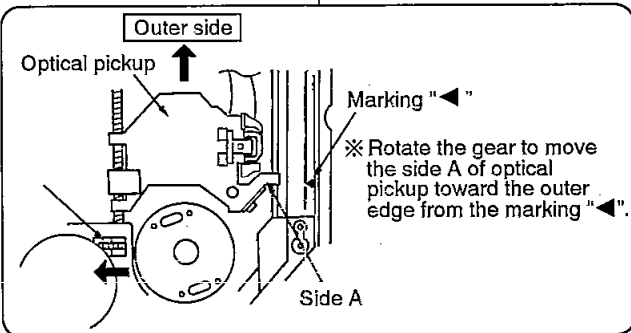
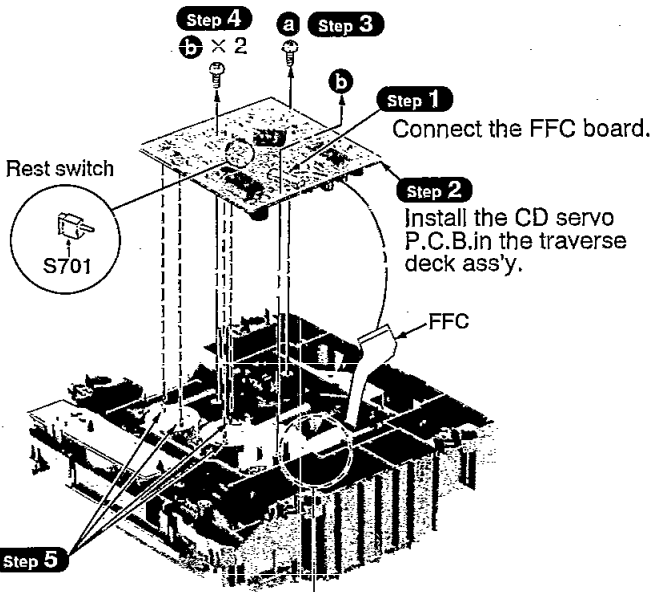
Step 12
Remove the connector.



Caution:
Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse Deck" on page 3.)

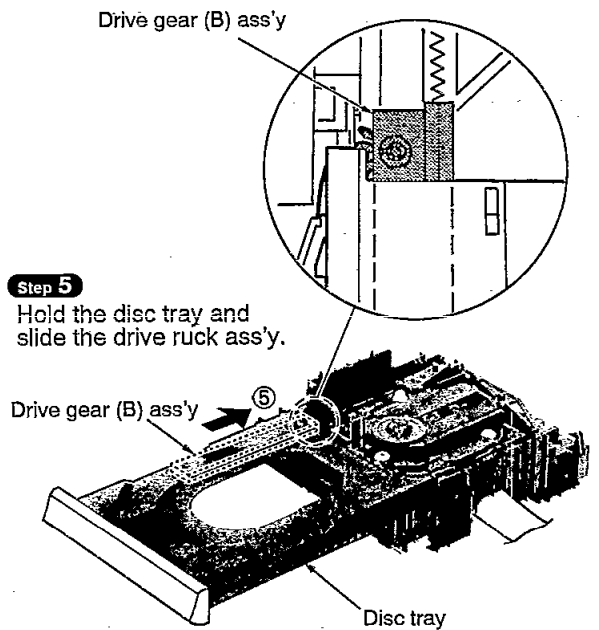
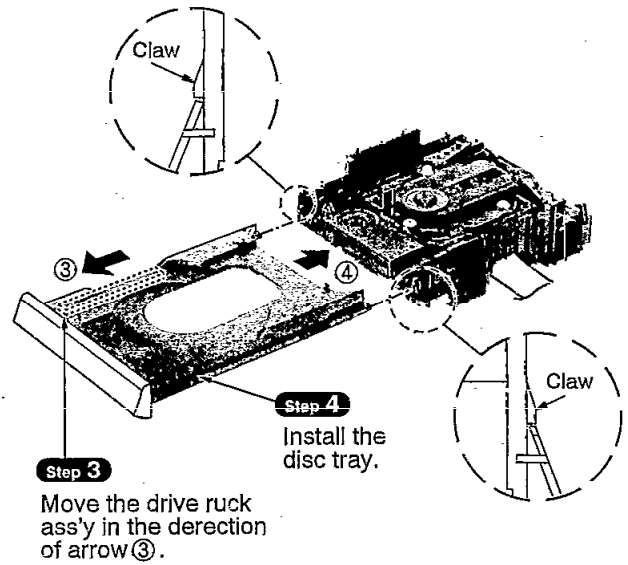


Installation of the CD servo P.C.B. after replacement



NOTE

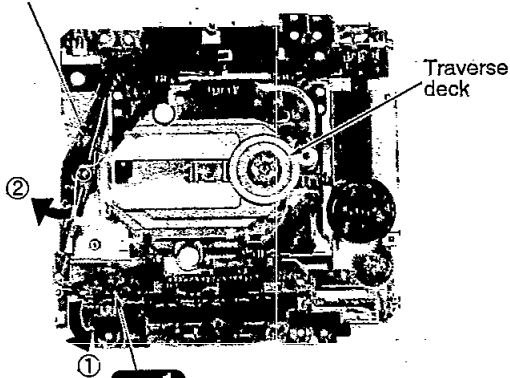
Before installing the CD servo P.C.B., move the optical pickup toward the outer edge from the mark "▲". [Otherwise, the rest detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]



Installation of the disc tray after replacement

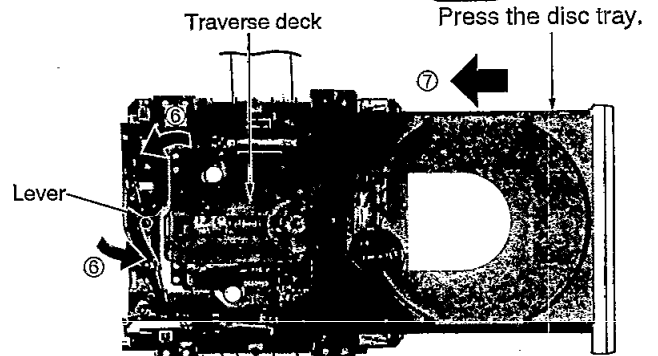
Step 2

Operate the lever, and then locate the traverse deck to "UP" position.



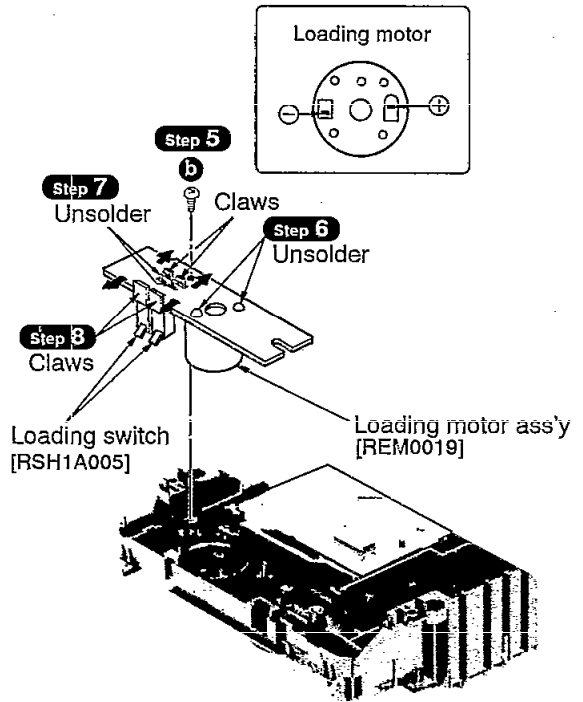
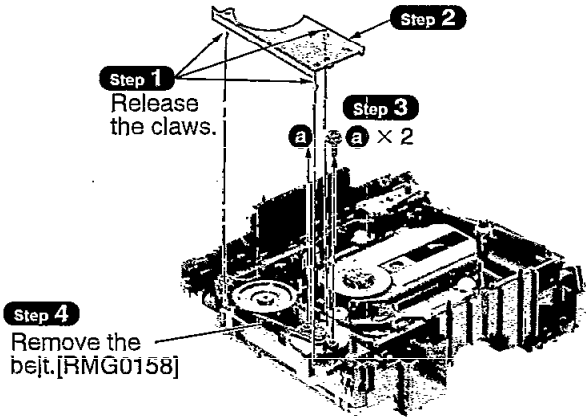
Step 6

Operate the lever, and then locate the traverse deck to "DOWN" position.



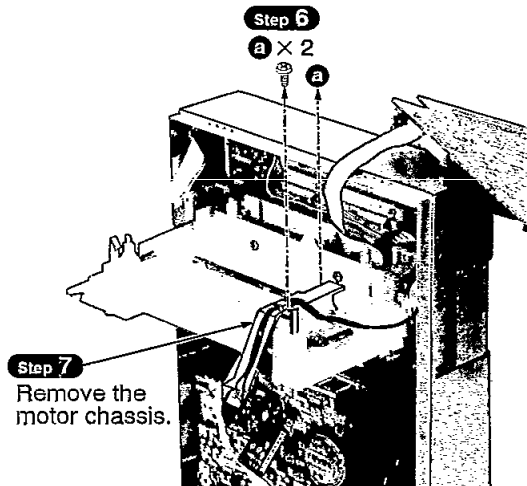
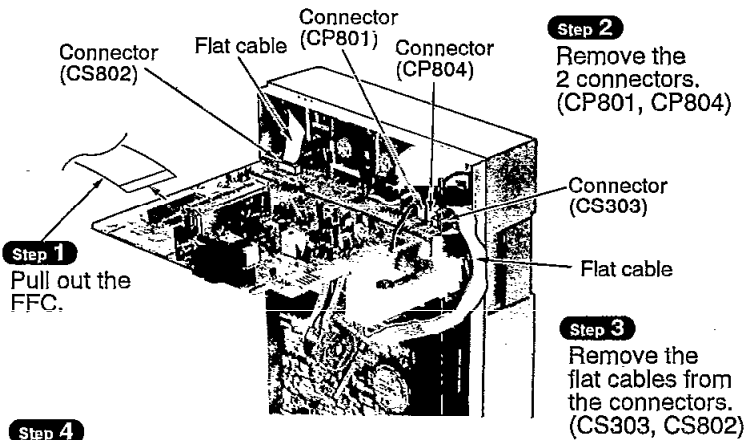
3. Replacement for the belt, loading motor ass'y and loading switch

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 7**) in checking procedures for each P.C.B. on page 11.
- Follow the item 2 (**Step 1** ~ **Step 3**) in main component replacement procedures on pages 13 and 14.

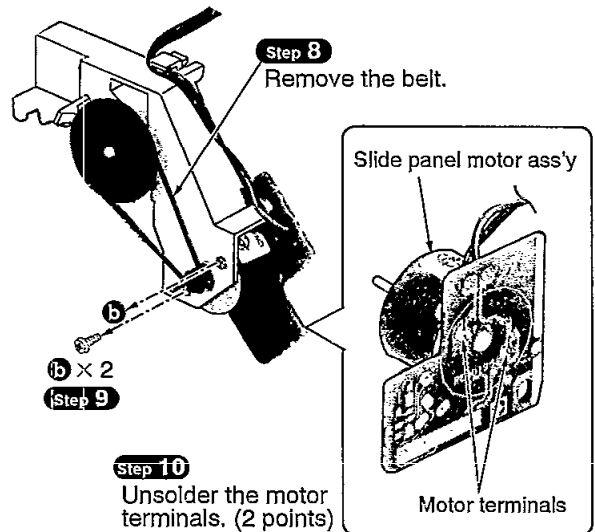
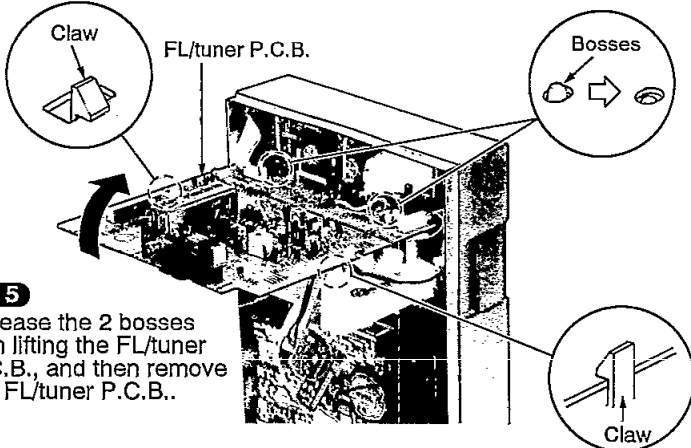


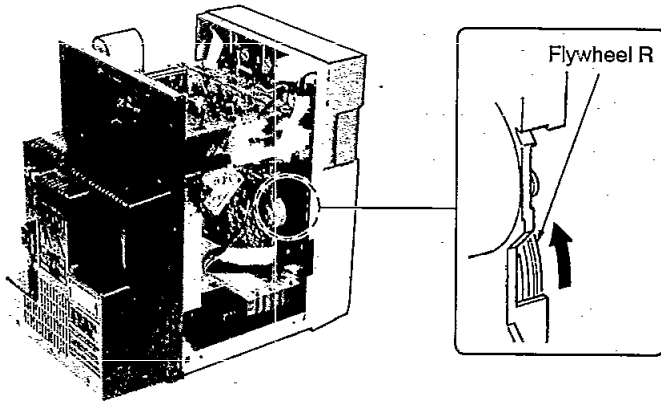
4. Replacement for the slide panel motor ass'y and belt.

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 5**) in checking procedures for each P.C.B. on page 11.



Step 4
Release the 2 claws.



■ Measure for tape trouble

- If a cassette tape cannot be removed from the deck since the tape is caught by the capstan or pinch roller during playback or recording, rotate the flywheel R in the direction of the arrow to remove the tape.

■ Schematic Diagram

	Page		Page
A CD SERVO CIRCUIT	19, 20	I OPERATION (3) CIRCUIT	26
B MECHANISM CONTROL CIRCUIT	21, 22	J VOLUME CIRCUIT	26
C MECHANISM CIRCUIT	21	K OPERATION (4) CIRCUIT	26
D FL/TUNER CIRCUIT	23 - 26	L OPERATION (5) CIRCUIT	26
E MOTOR (SLIDE PANEL) CIRCUIT	26	M OPERATION (6) CIRCUIT	26
F LAMP CIRCUIT	26	N LOADING MOTOR CIRCUIT	27
G OPERATION (1) CIRCUIT	26	O MAIN CIRCUIT	27 - 30
H OPERATION (2) CIRCUIT	26	P POWER SUPPLY CIRCUIT	30

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

- S701 : CD rest switch.
- S790 : CD tray open detect switch.
- S791 : CD tray close detect switch.
- S801 : Tuner/band select switch. (TUNER/BAND)
- S802 : Tuning mode select switch. (TUNE MODE)
- S803 : Memory/set switch. (MEMORY/SET)
- S804 : Record/record pause switch. (●/●|| REC/REC PAUSE)
- S805 : Rewind TPS switch. (REW/TPS)
- S806 : Fast forward switch. (FF/TPS)
- S807 : AUX switch. (AUX)
- S808 : Cassette stop switch. (■)
- S809 : Cassette play/direction switch. (◀▶)
- S810 : Cassette holder open switch. (▲)
- S811 : Tuning/time adjust switch. (TUNE/TIME ADJ DOWN/-)
- S812 : Tuning/time adjust switch. (TUNE/TIME ADJ UP/+)
- S813 : Glide panel open/close switch. (OPEN/CLOSE)
- S814 : Clock/timer switch. (CLOCK/TIMER)
- S815 : Play timer/record timer switch. (⊙PLAY/⊙REC)
- S816 : Power switch. (POWER)
- S817 : CD edit switch. (CD EDIT)
- S818 : Skip/search switch. (◀◀ SKIP)
- S819 : Skip/search switch. (▶▶ SKIP)
- S820 : CD stop switch. (■ STOP)
- S821 : CD play/pause switch. (▶/|| PLAY/PAUSE)
- S822 : CD tray open/close switch. (▲/CLOSE)
- S971 : Deck mode detect switch.
- S972 : Deck half detect switch.
- S973 : Deck CrO₂ tape detect switch.
- S974 : Deck reverse side record prevention tab detect switch.
- S975 : Deck forward side record prevention tab detect switch.
- VR801 : Volume control encoder. (VOLUME)
- VR802 : Bass control VR. (BASS)
- VR803 : Treble control VR. (TREBLE)

- 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 ... CD STOP
 () CD PLAYBACK (1kHz, L+R, 0dB)
 < > FM
 { } AM
 {{ }} DECK PLAYBACK
 { } DECK RECORDING

- Important safety notice:

Components identified by  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.

- **Caution!**

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

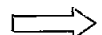

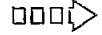
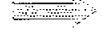

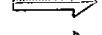

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

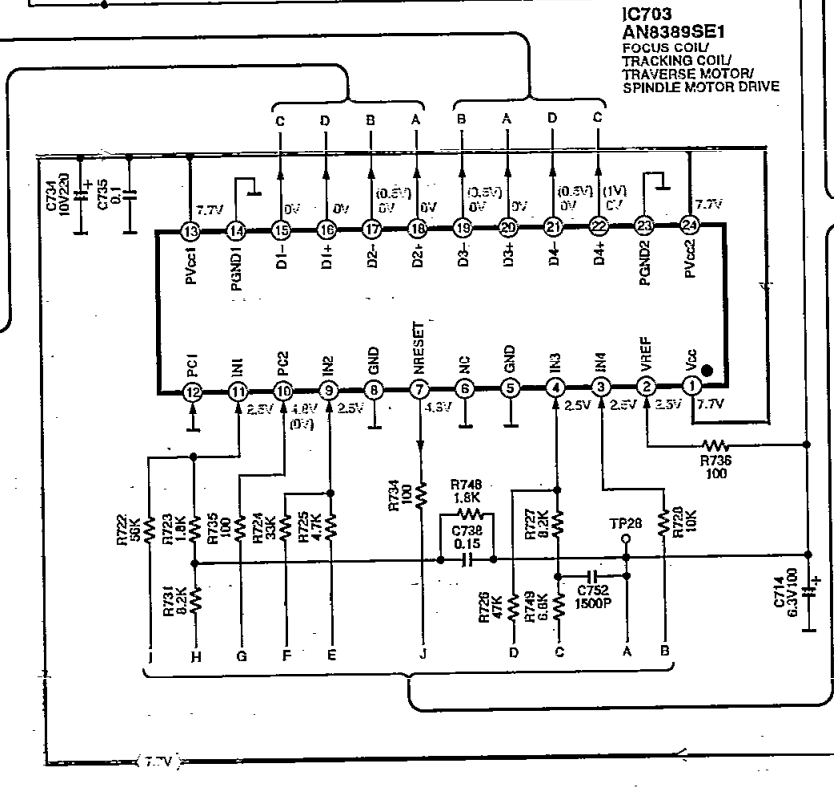
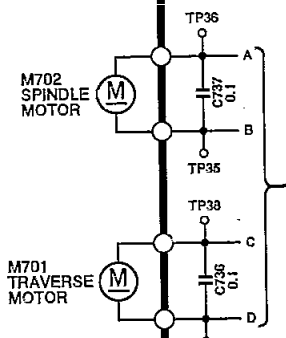
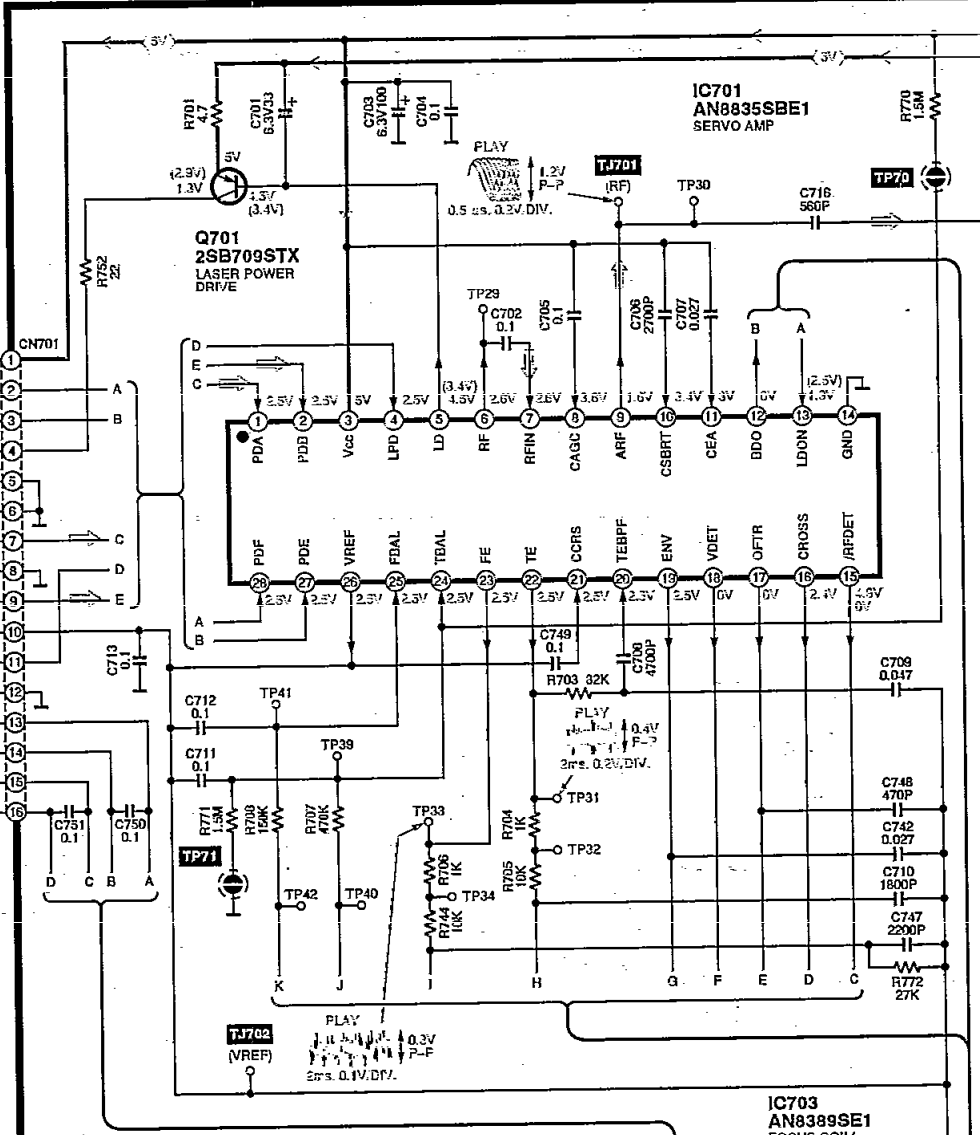
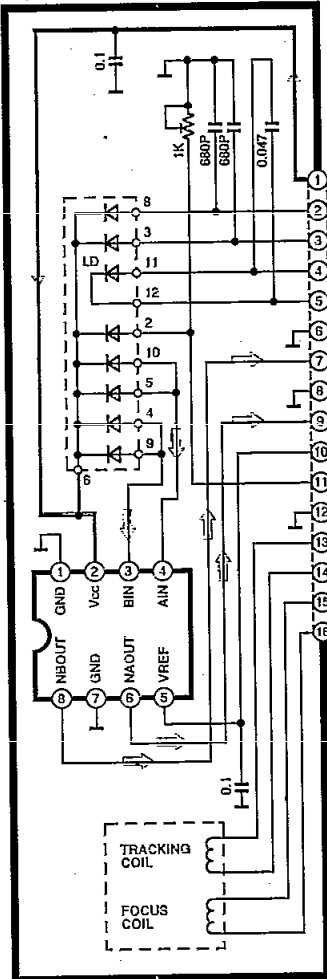
Do not touch the legs of IC or LSI with the fingers directly.

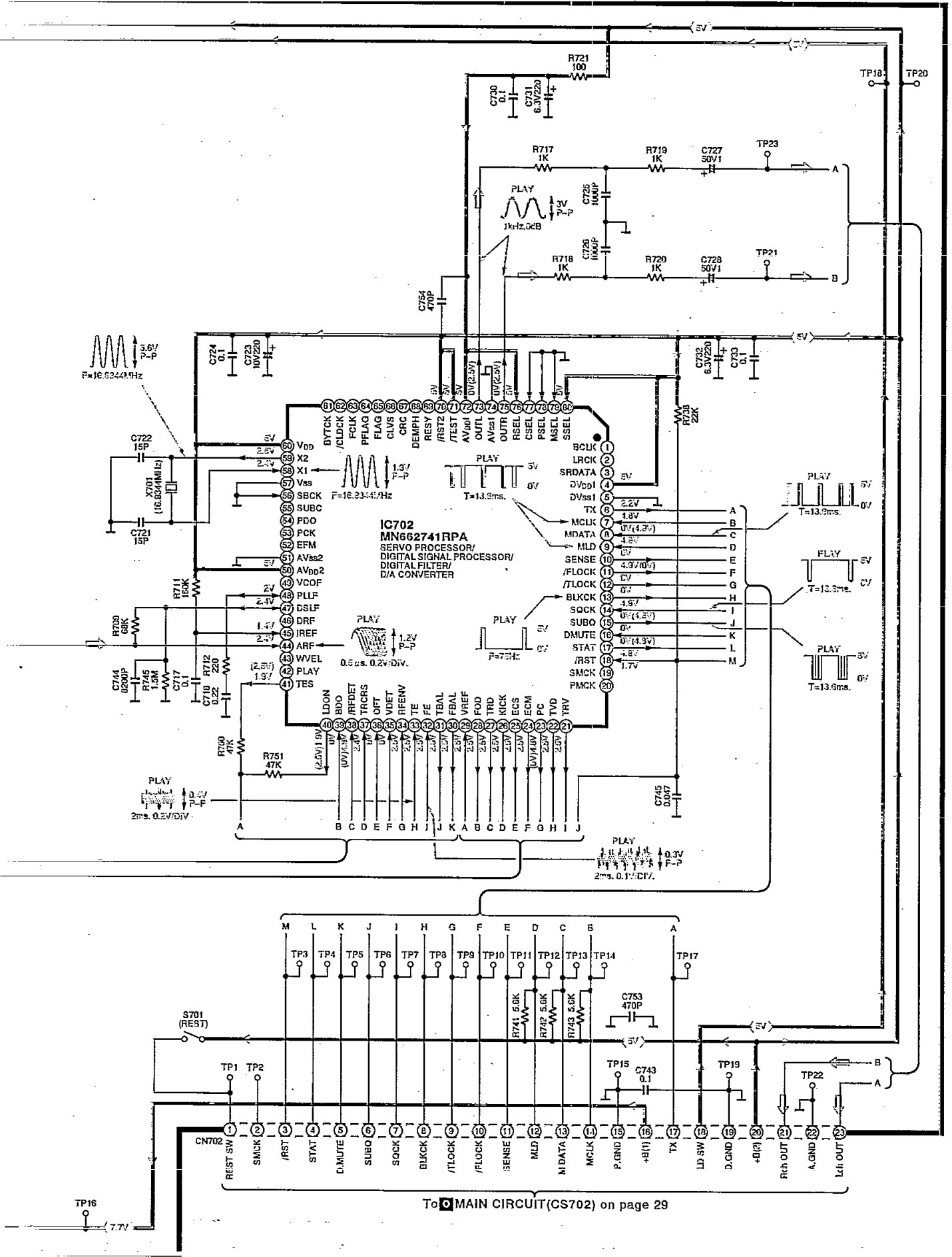
- Signal Line

-  : CD Signal Line
-  : FM Signal Line
-  : FM OSC Signal Line
-  : AM OSC Signal Line
-  : AM OSC SIGNAL Line
-  : Tape Playback Signal Line
-  : Tape Recording Signal Line

A CD SERVO CIRCUIT (P.C.Board: on page 33)

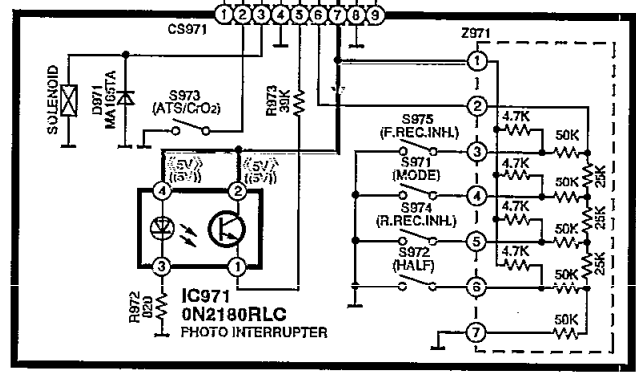
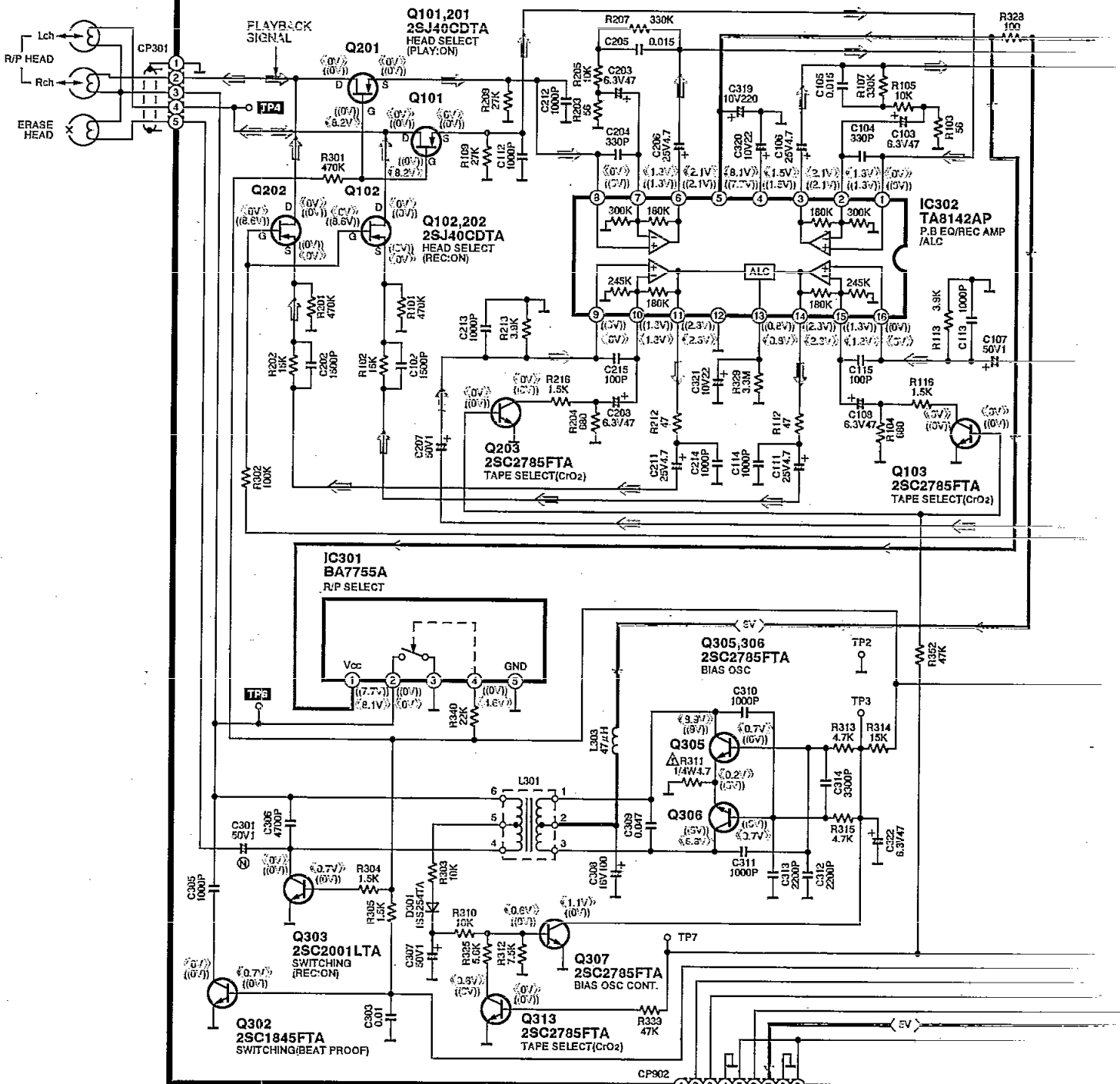
Δ OPTICAL PICKUP



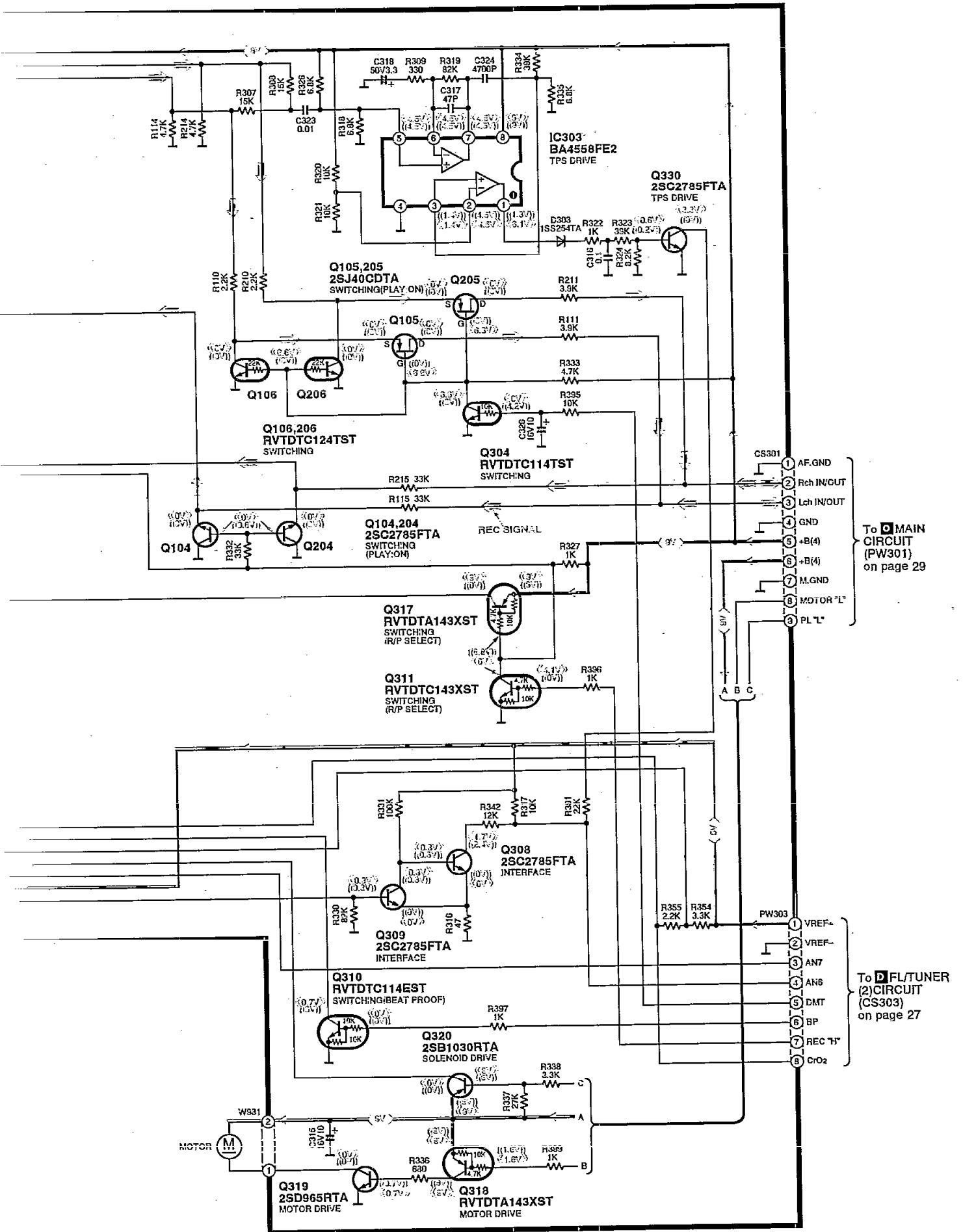


To MAIN CIRCUIT (CS702) on page 29

B MECHANISM CONTROL CIRCUIT (P.C.Board: on page 33)



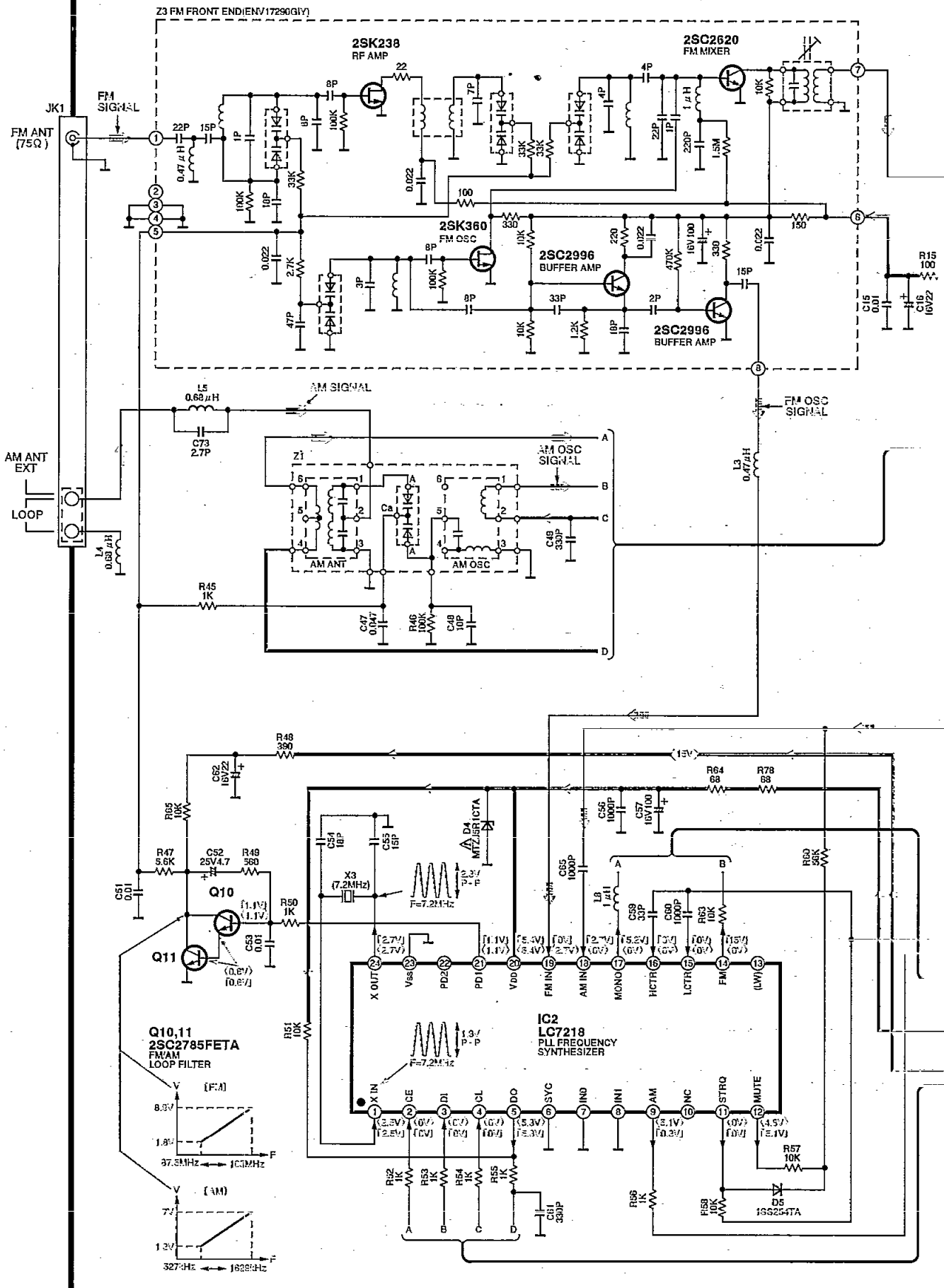
C MECHANISM CIRCUIT (P.C.Board: on page 34)

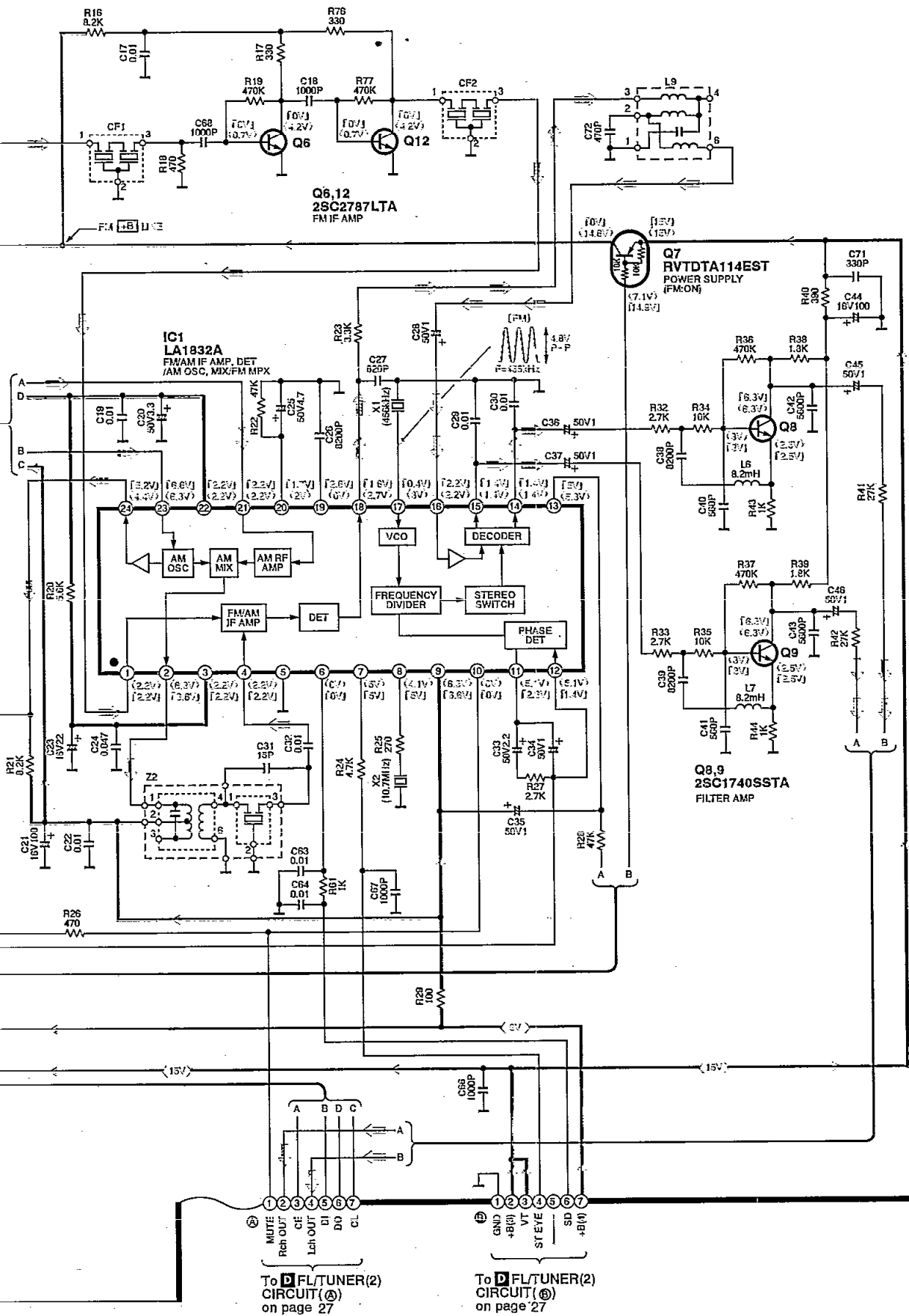


To MAIN CIRCUIT (PW301) on page 29

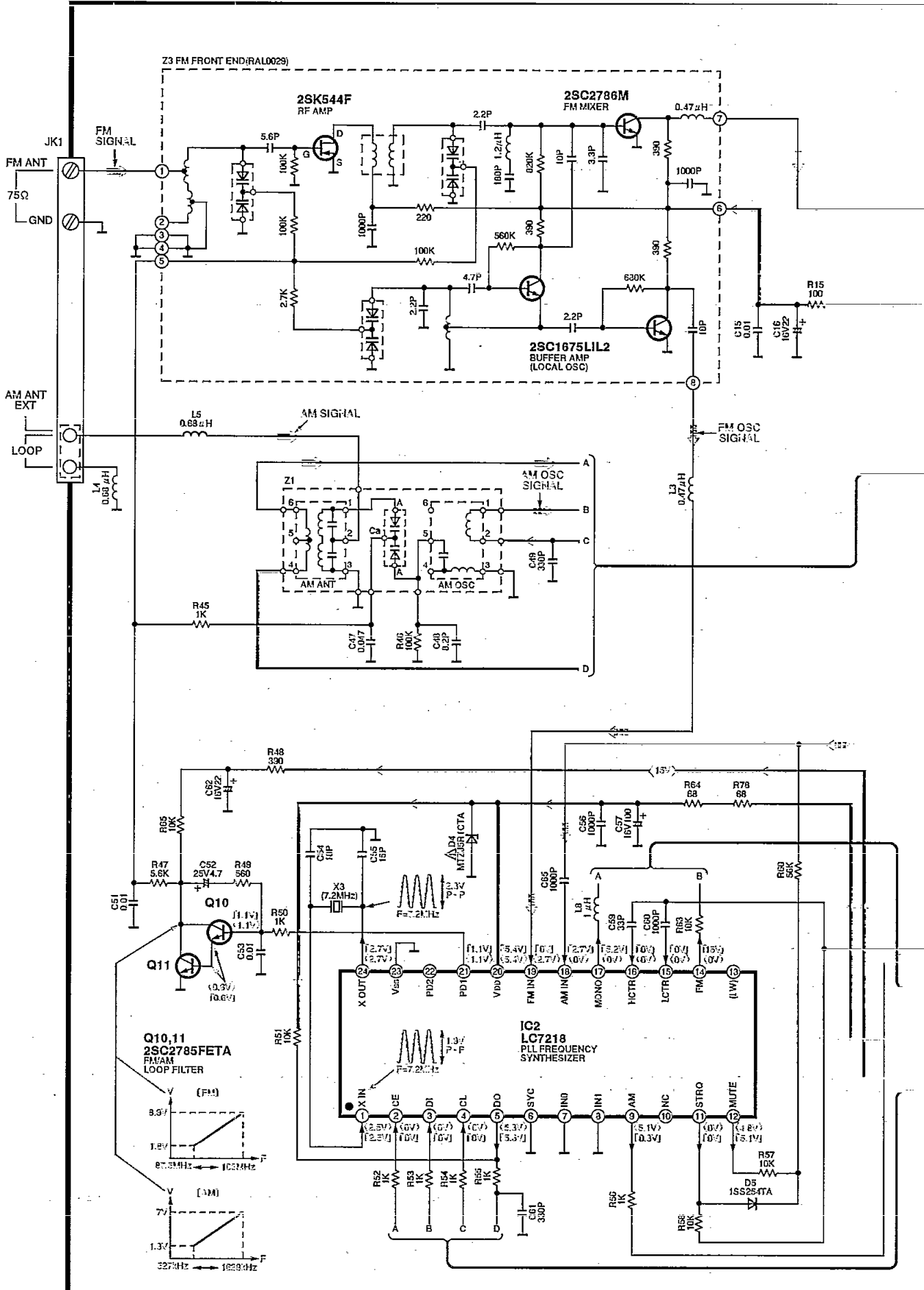
To FL/TUNER (2) CIRCUIT (CS303) on page 27

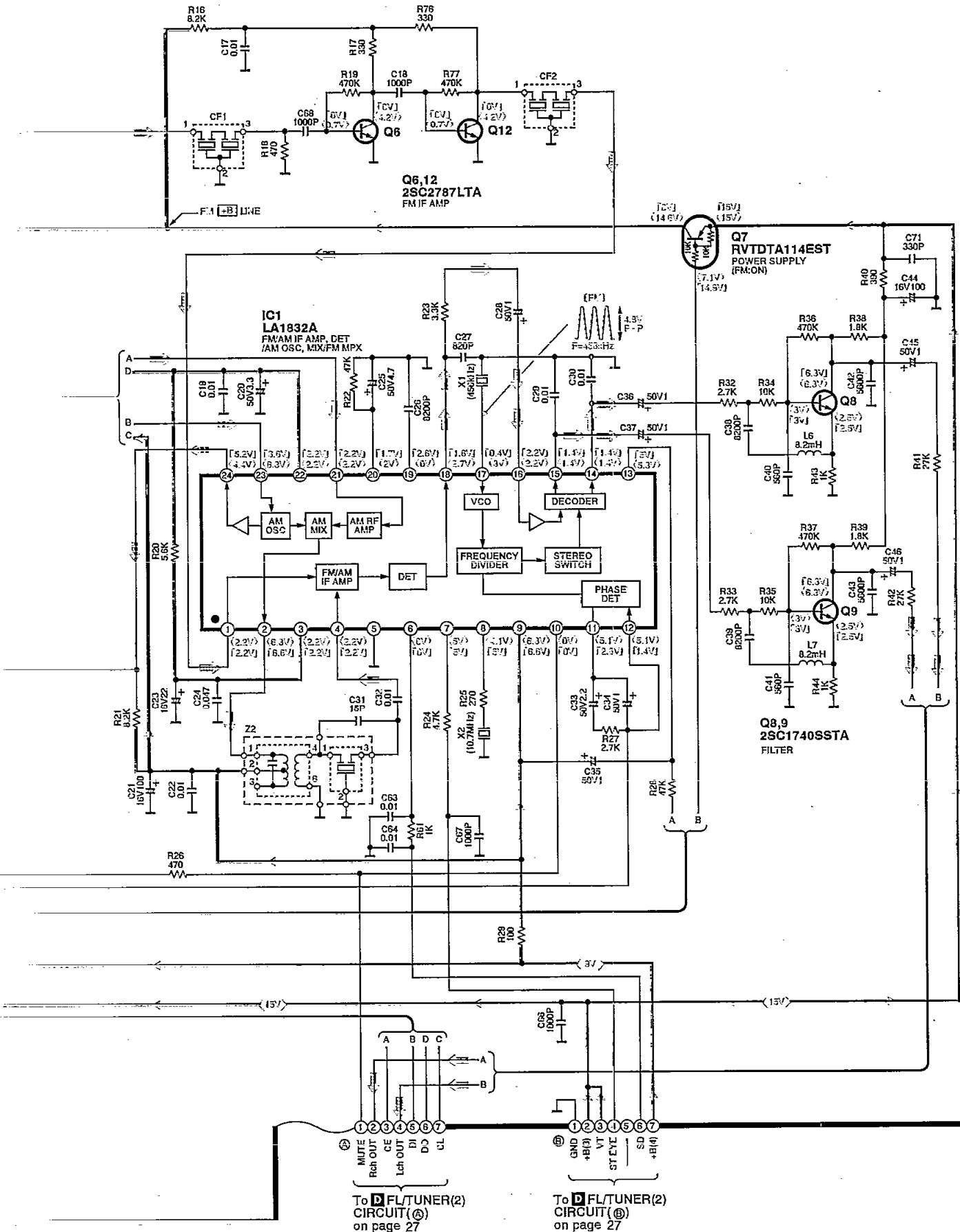
D FL/TUNER(1) CIRCUIT For [E,EB,EG] areas. (P.C.Board on page 34)



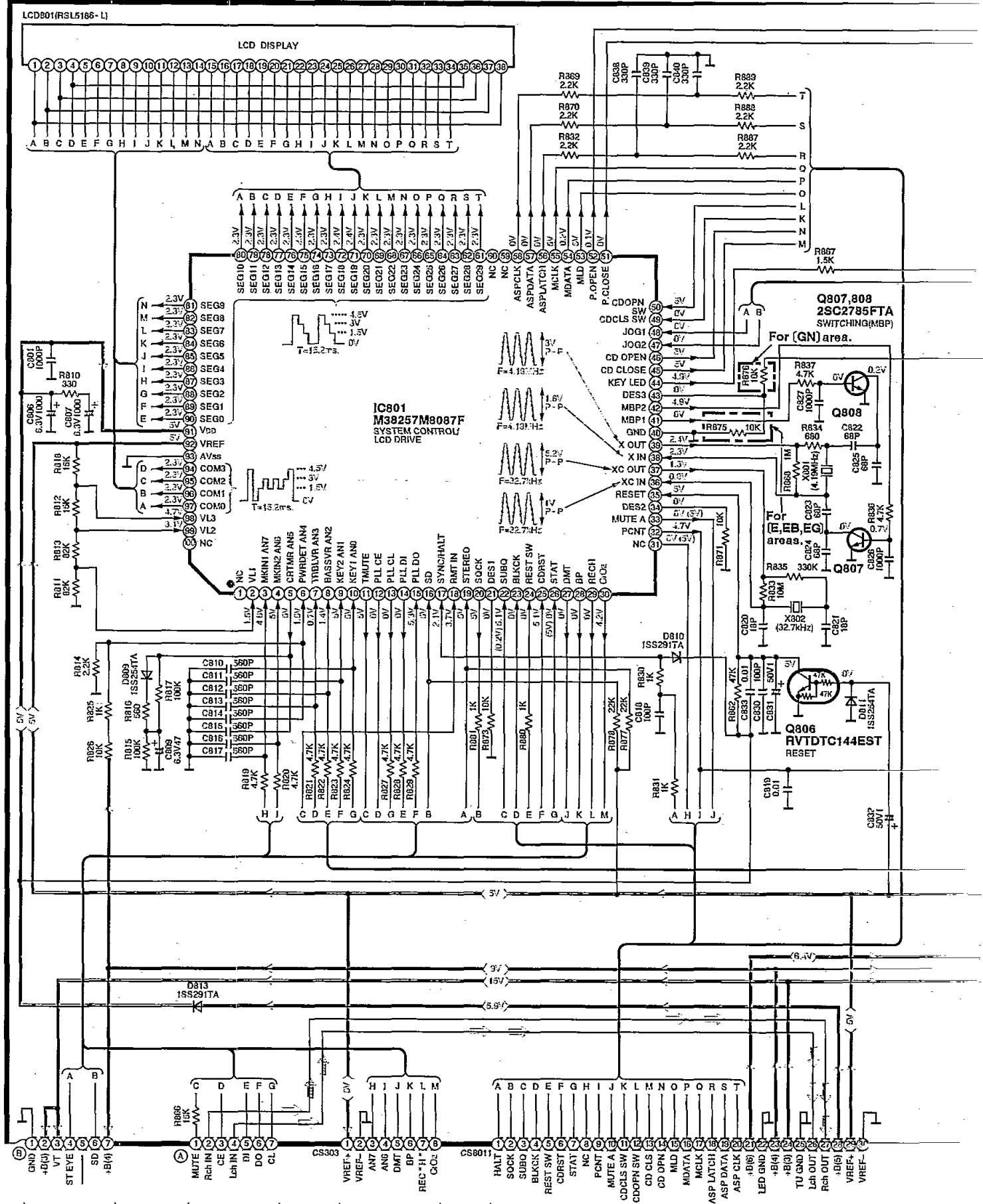


D FL/TUNER(1) CIRCUIT For (GN) area. (P.C.Board: on page 34)





D FL / TUNER(2) CIRCUIT (P.C.Board: on page 34)



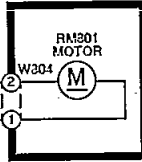
To **D** FL/TUNER(1) CIRCUIT(ⓐ) on page 24 or 26

To **D** FL/TUNER(1) CIRCUIT(ⓐ) on page 24 or 26

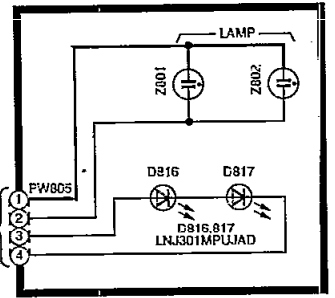
To **B** MECHANISM CONTROL CIRCUIT (PW303) on page 22

To **D** MAIN CIRCUIT(CS801) on page 29

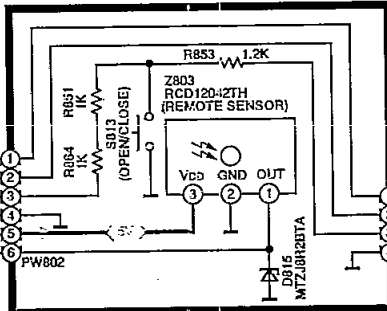
E MOTOR (SLIDE PANEL) CIRCUIT
(P.C.Board: on page 35)



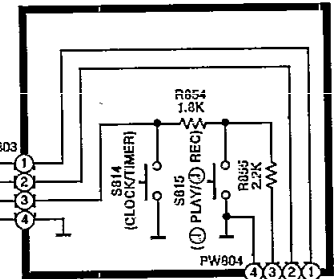
F LAMP CIRCUIT
(P.C.Board: on page 35)



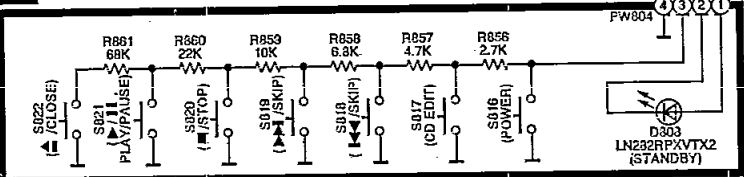
G OPERATION(1) CIRCUIT
(P.C.Board: on page 35)



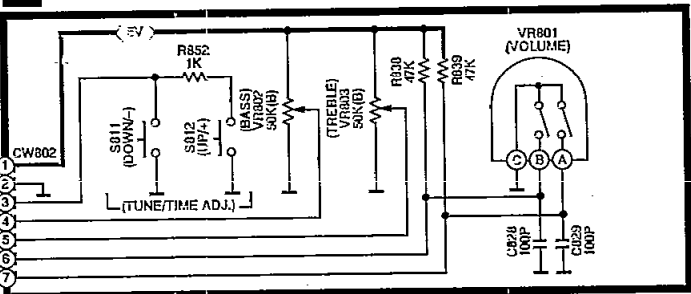
H OPERATION(2) CIRCUIT
(P.C.Board: on page 35)



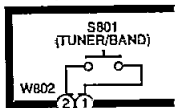
I OPERATION(3) CIRCUIT (P.C.Board: on page 35)



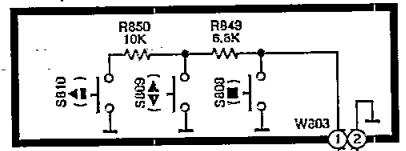
J VOLUME CIRCUIT (P.C.Board: on page 35)



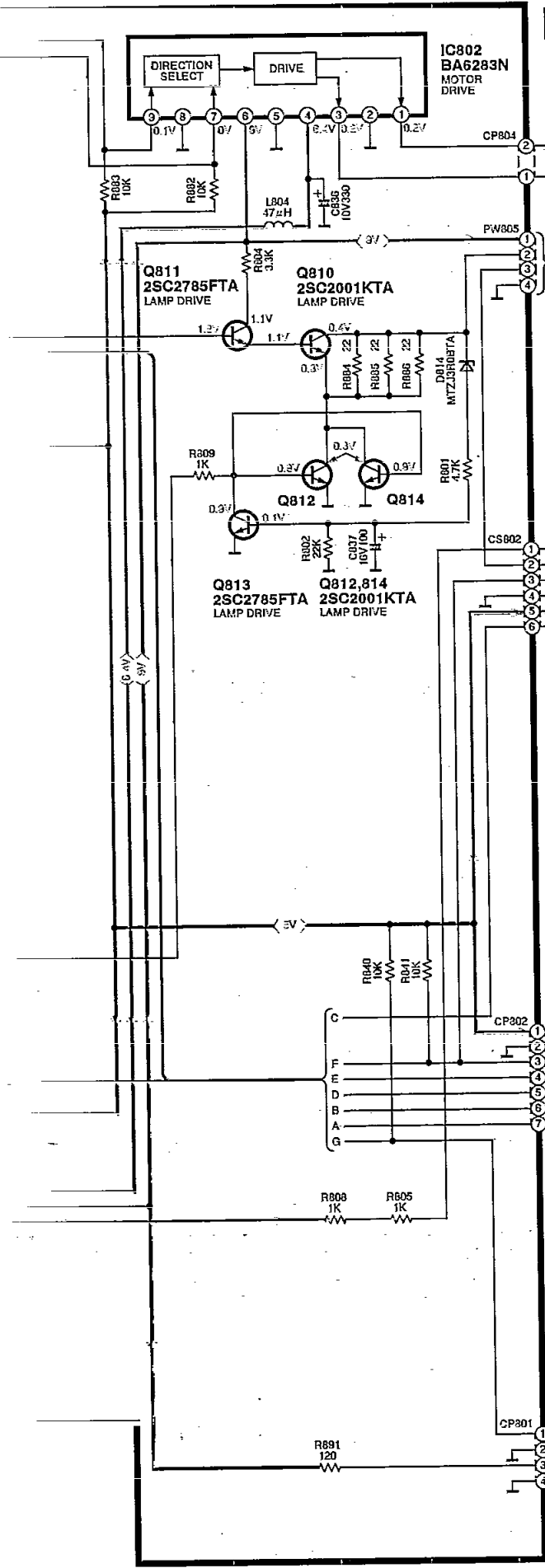
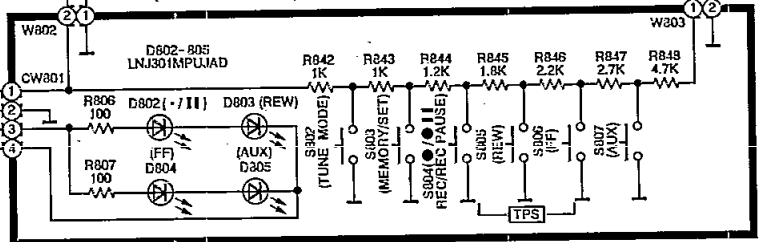
K OPERATION(4) CIRCUIT
(P.C.Board: on page 35)



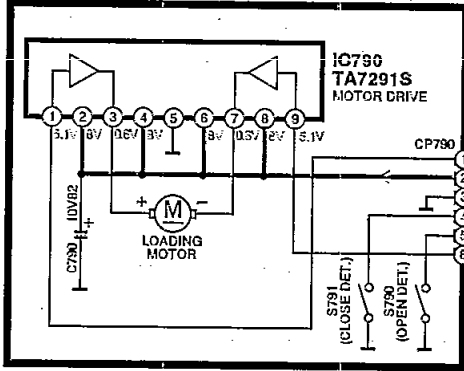
L OPERATION(5) CIRCUIT
(P.C.Board: on page 35)



M OPERATION(6) CIRCUIT
(P.C.Board: on page 35)



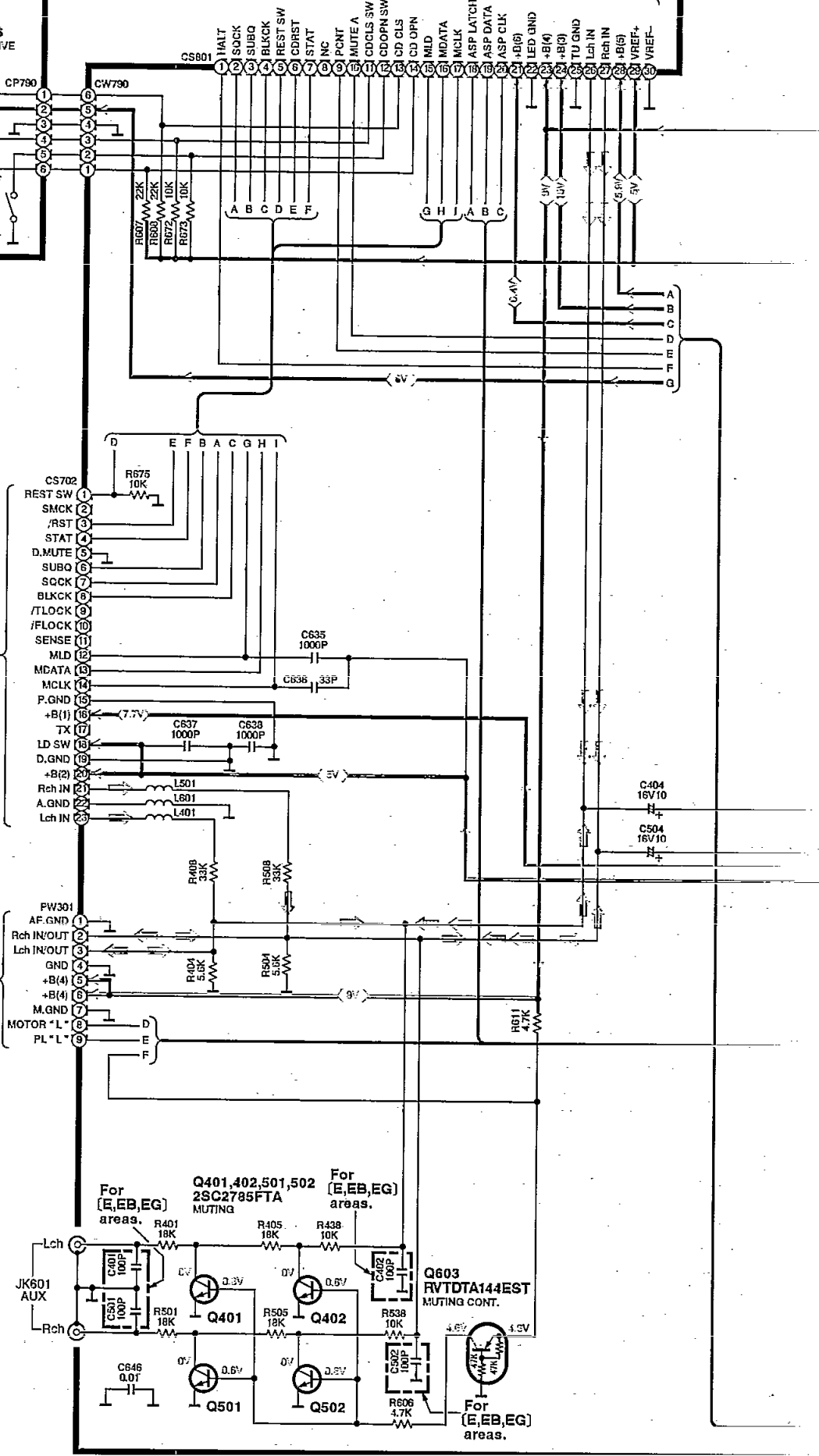
N LOADING MOTOR CIRCUIT
(P.C.Board: on page 35)

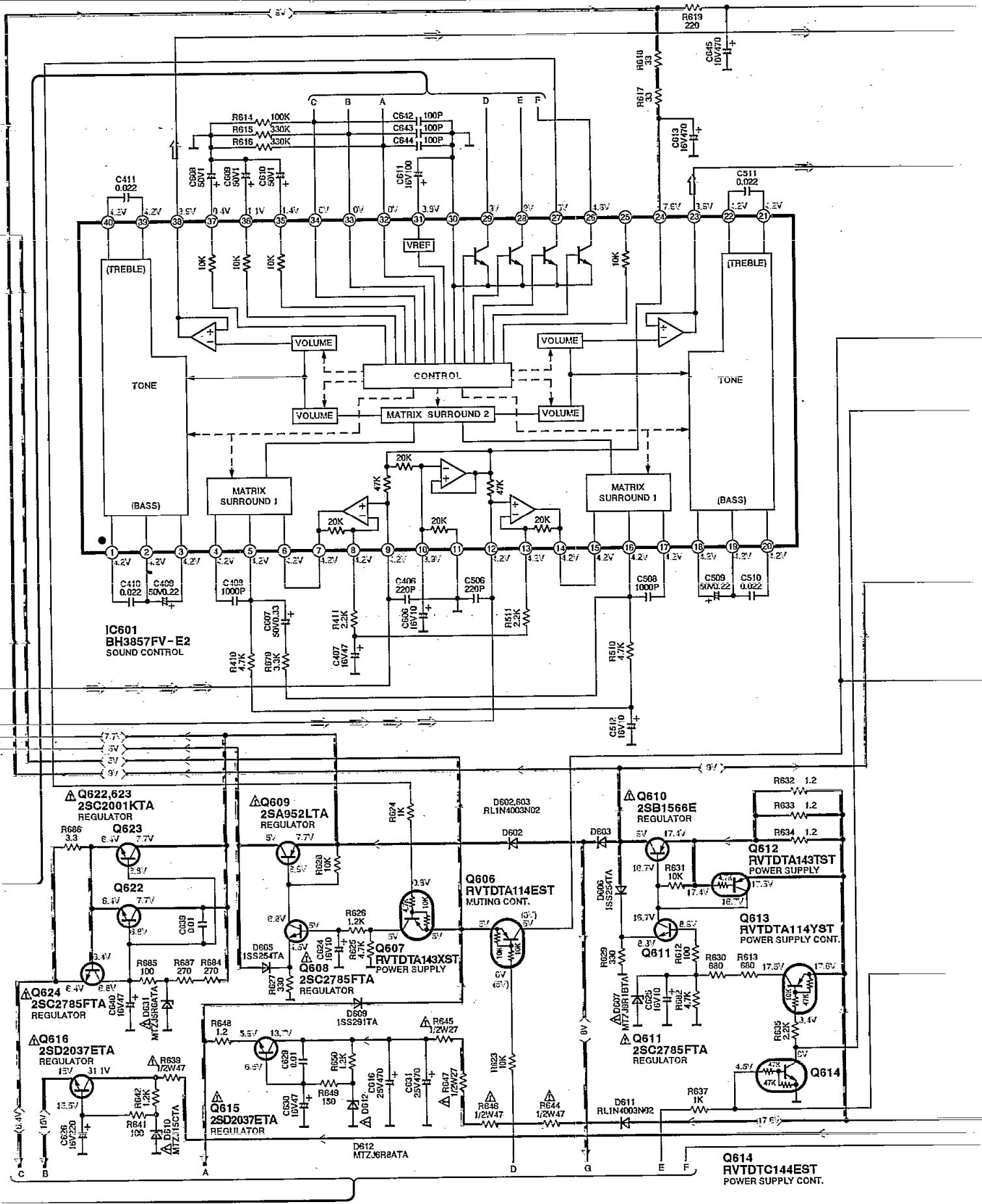


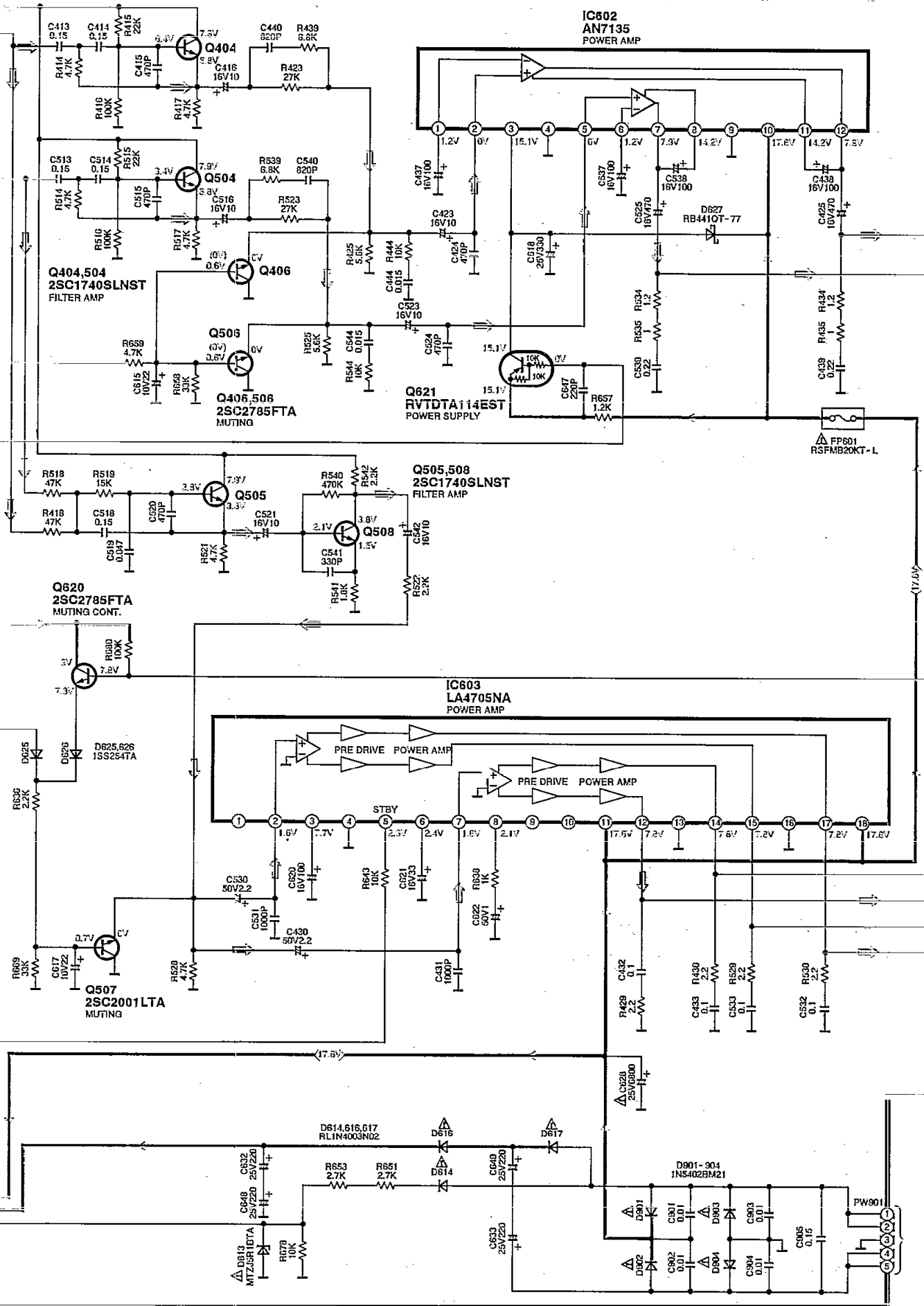
To **D** FL / TUNER(2) CIRCUIT (CS8011) on page 27

To **A** CD SERVO CIRCUIT (CN702) on page 20

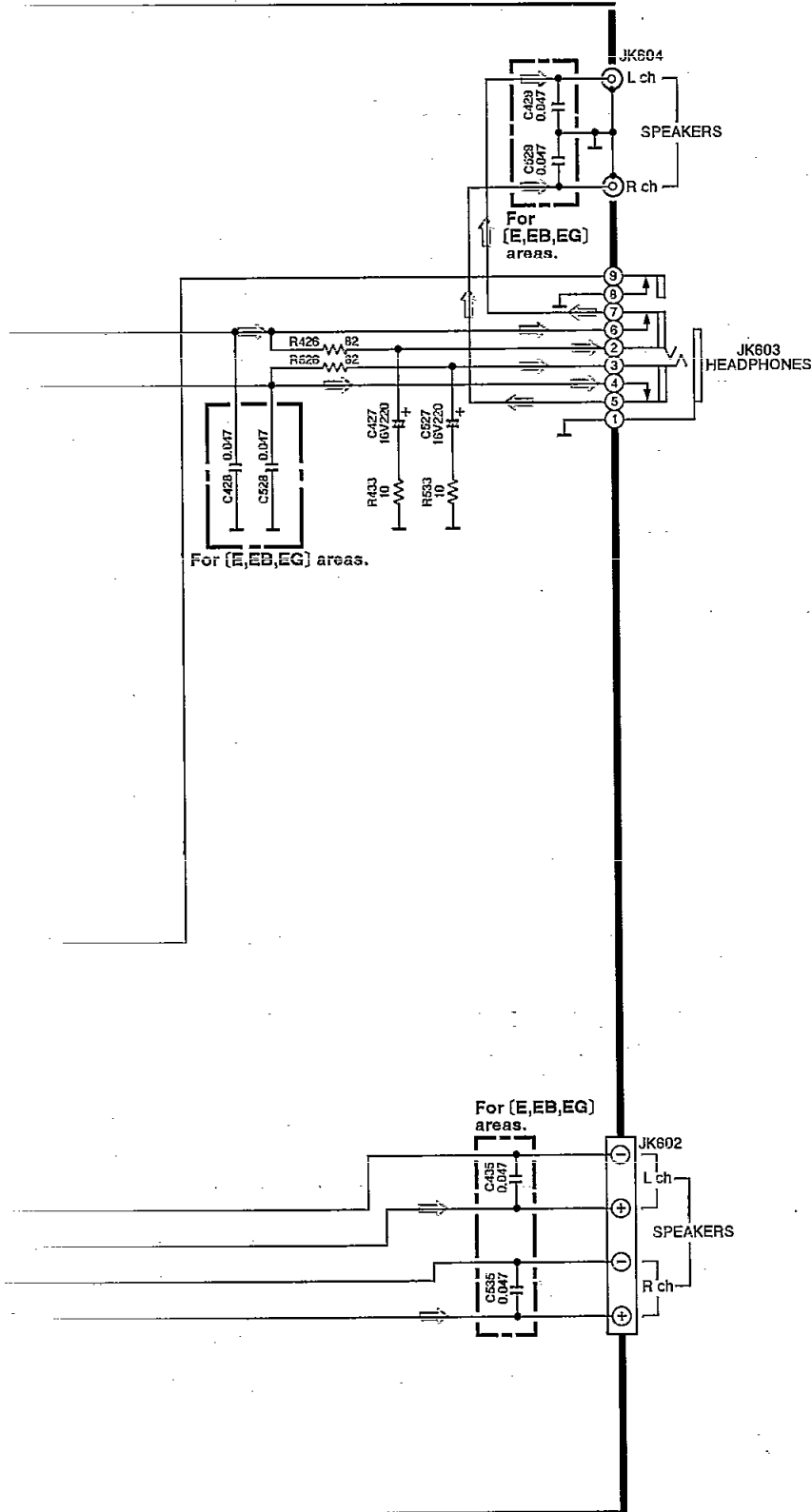
To **E** MECHANISM CONTROL CIRCUIT (CS301) on page 22



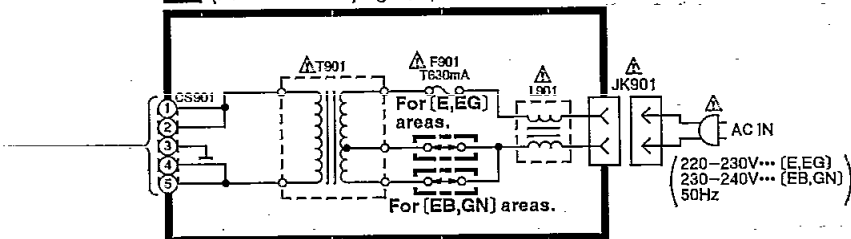




O MAIN CIRCUIT (P.C.Board: on pages 36,37)

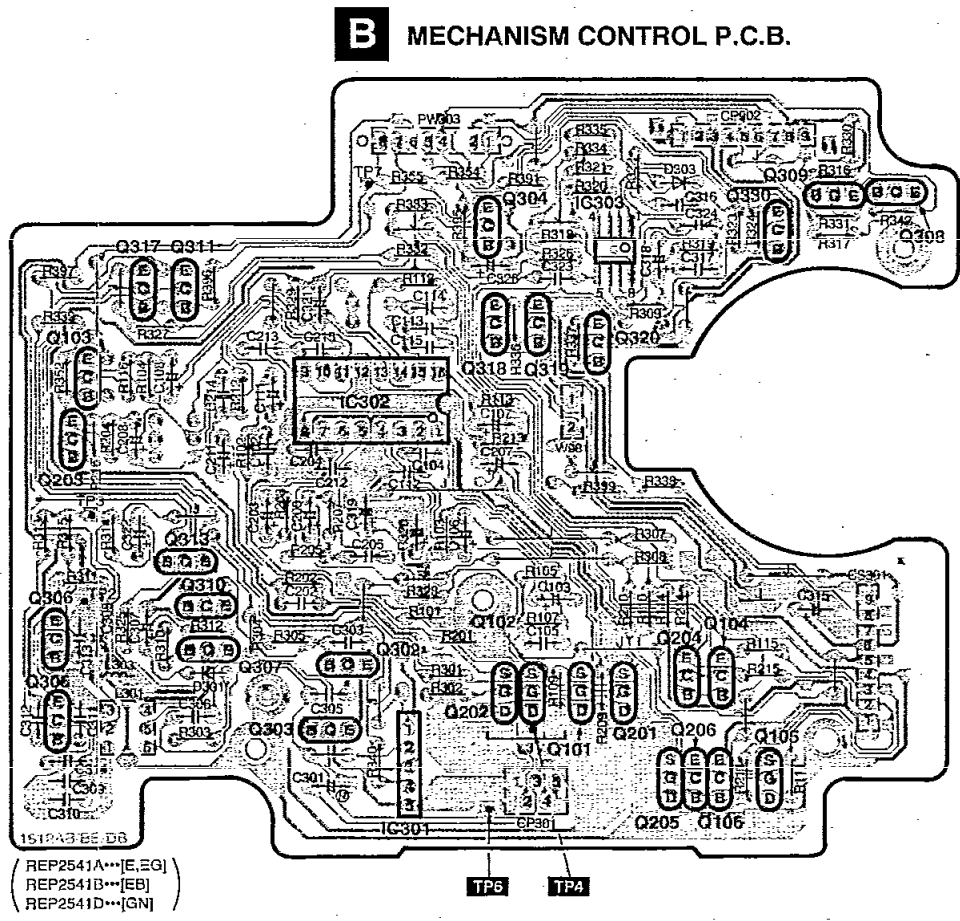
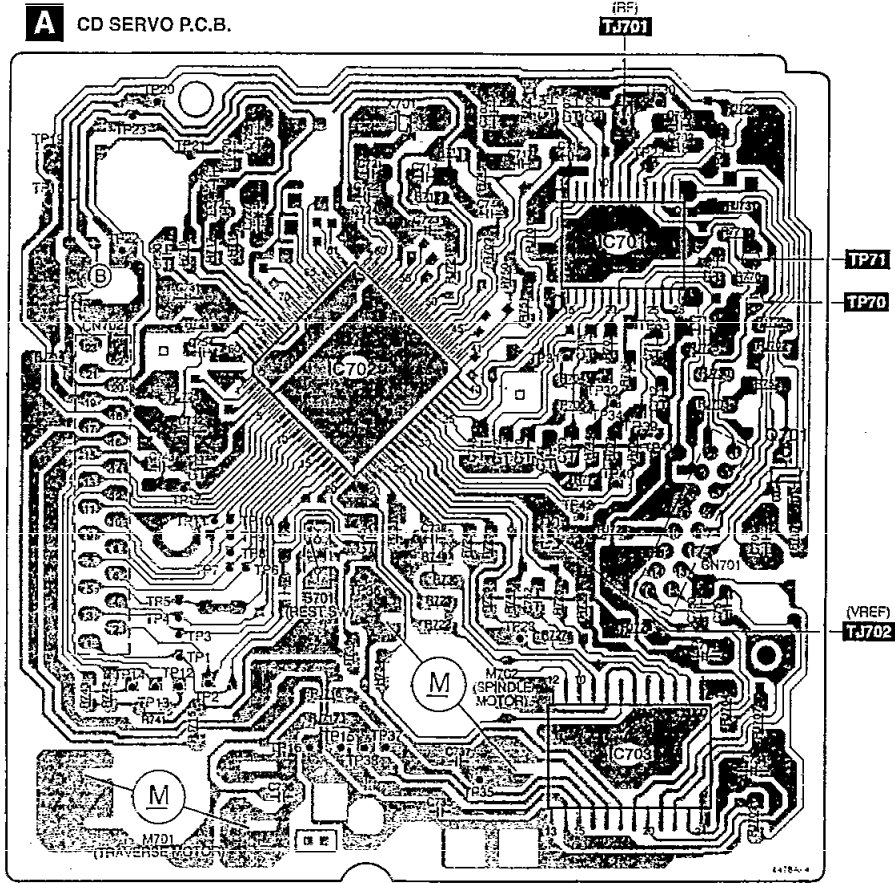


P POWER SUPPLY CIRCUIT (P.C.Board: on page 37)

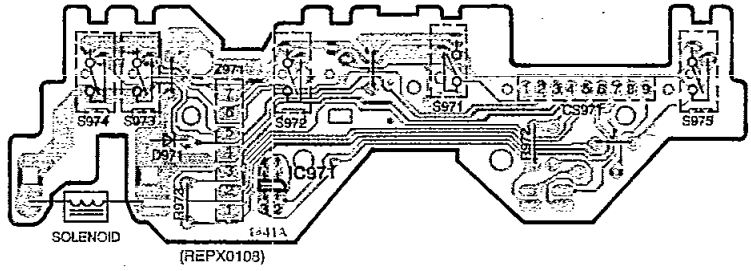


Printed Circuit Board Diagram

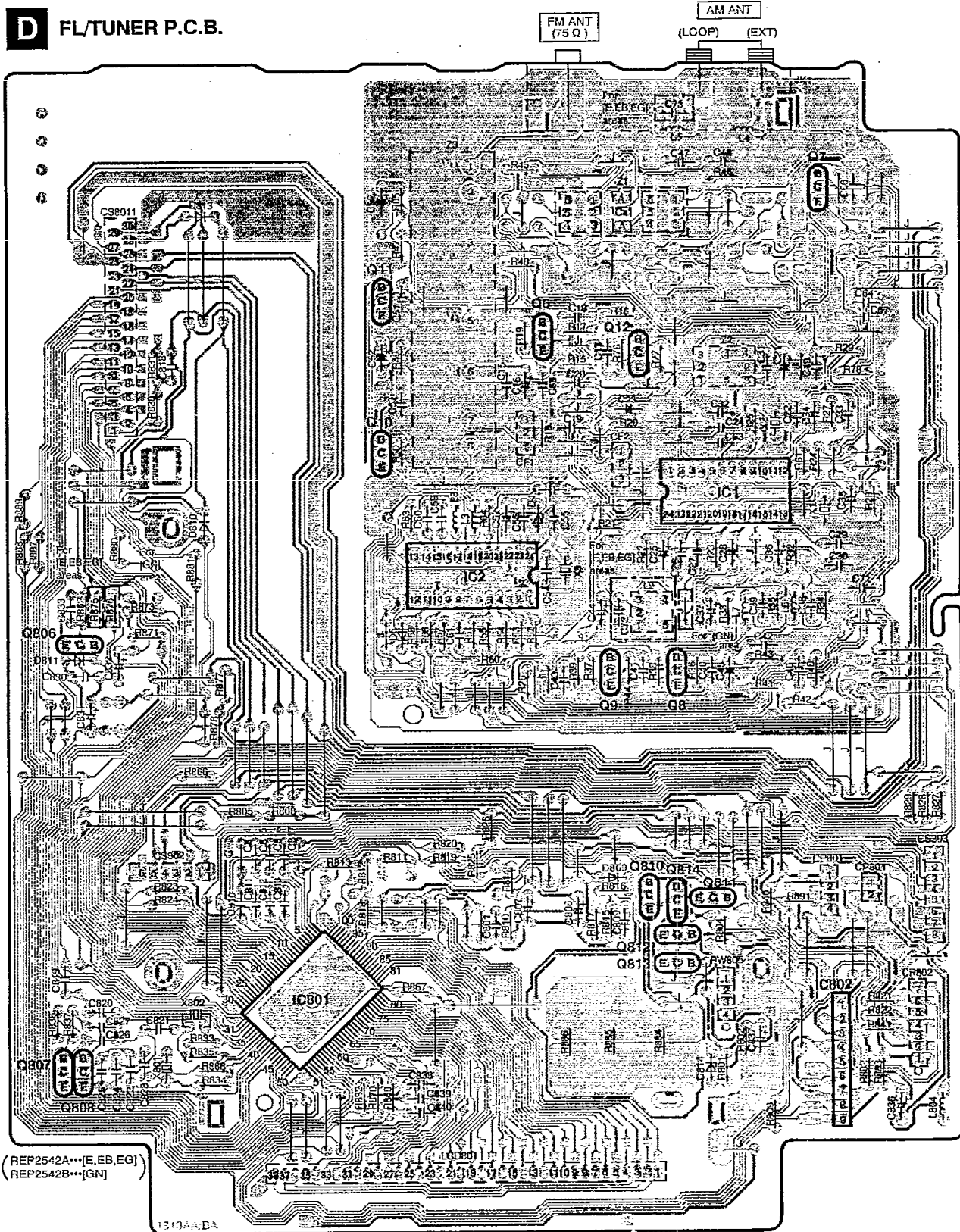
This circuit board diagram may be modified at any time with the development of new technology.



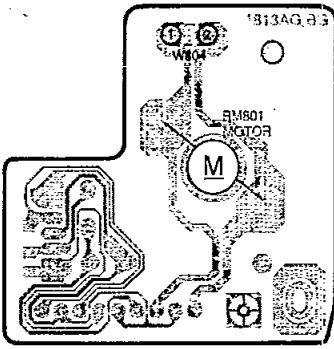
C MECHANISM P.C.B.



D FL/TUNER P.C.B.

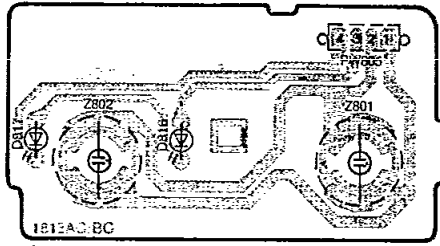


E MOTOR (SLIDE PANEL) P.C.B.



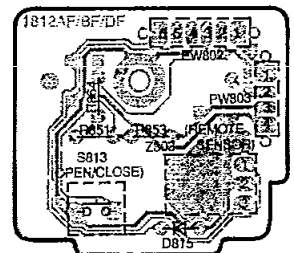
(REP2542A...[E,EB,EG]
REP2542B...[GN])

F LAMP P.C.B.



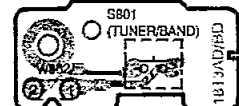
(REP2542A...[E,EB,EG]
REP2542B...[GN])

G OPERATION (1) P.C.B.



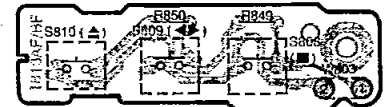
(REP2541A...[E,EG]
REP2541B...[EB]
REP2541D...[GN])

K OPERATION (4) P.C.B.



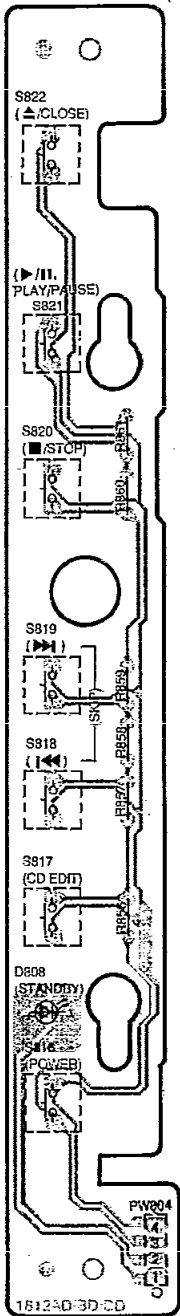
(REP2542A...[E,EB,EG]
REP2542B...[GN])

L OPERATION (5) P.C.B.



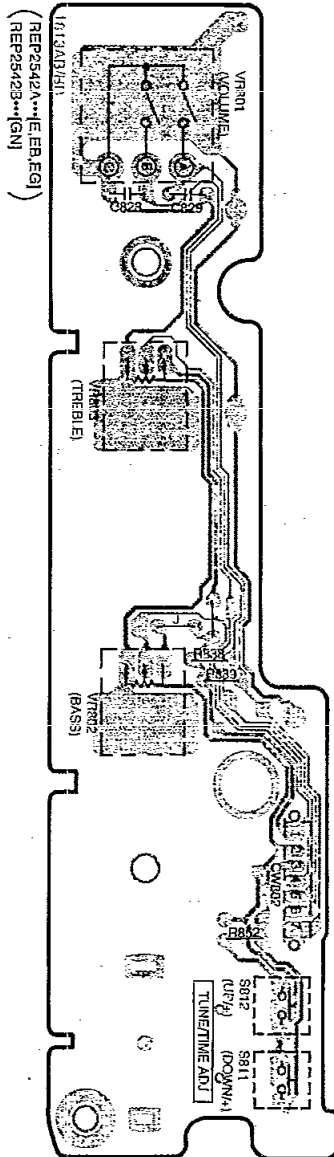
(REP2542A...[E,EB,EG]
REP2542B...[GN])

I OPERATION (3) P.C.B.



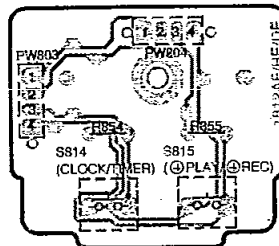
(REP2541A...[E,EG]
REP2541B...[EB]
REP2541D...[GN])

J VOLUME P.C.B.



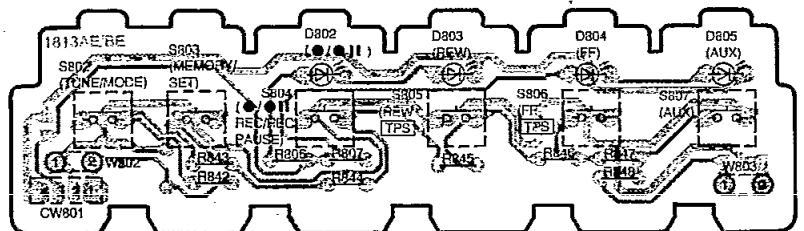
(REP2542A...[E,EB,EG]
REP2542B...[GN])

H OPERATION (2) P.C.B.



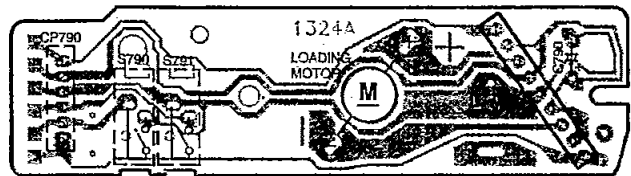
(REP2541A...[E,EG]
REP2541B...[EB]
REP2541D...[GN])

M OPERATION (6) P.C.B.



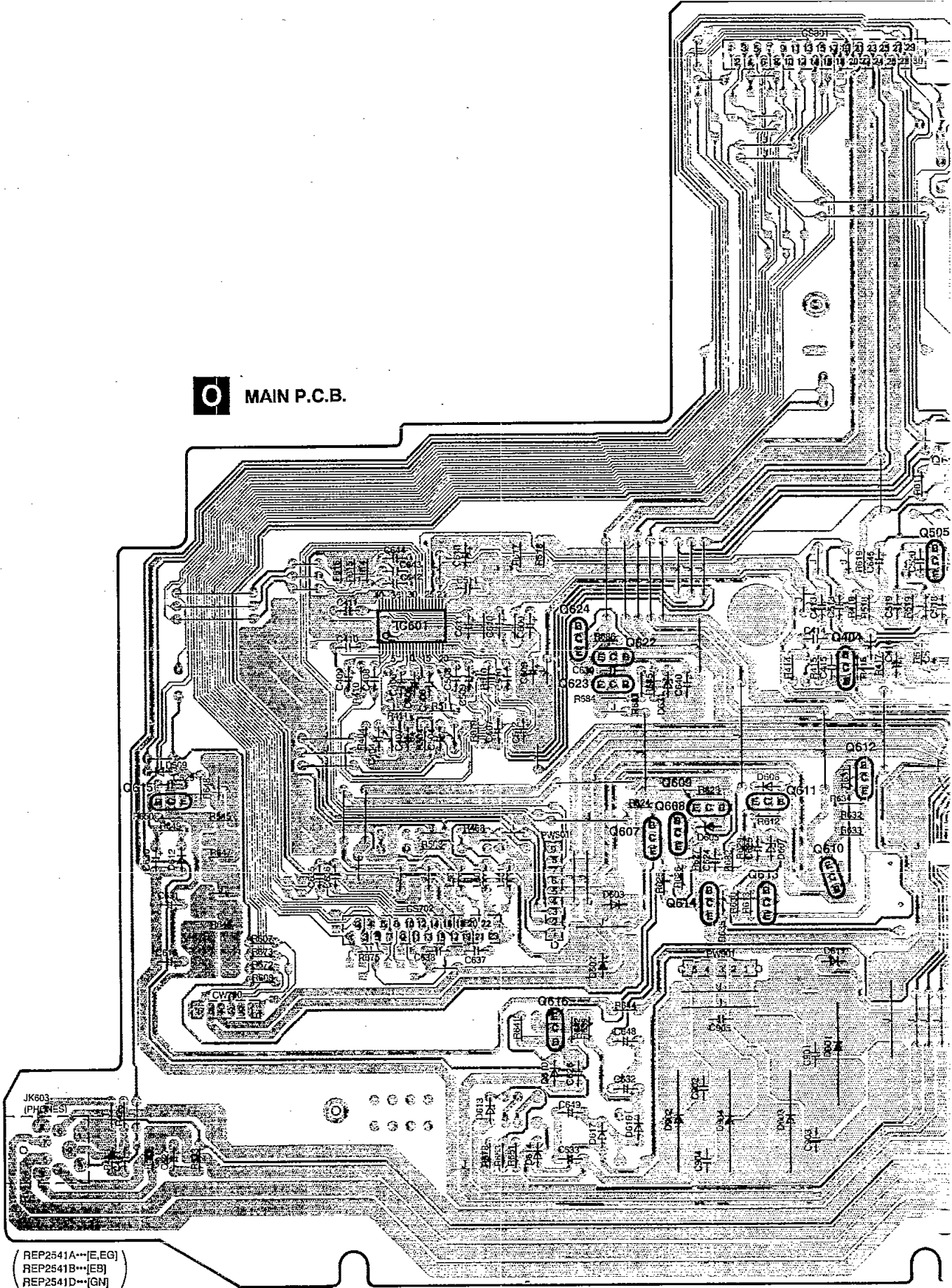
(REP2542A...[E,EB,EG]
REP2542B...[GN])

N LOADING MOTOR P.C.B.



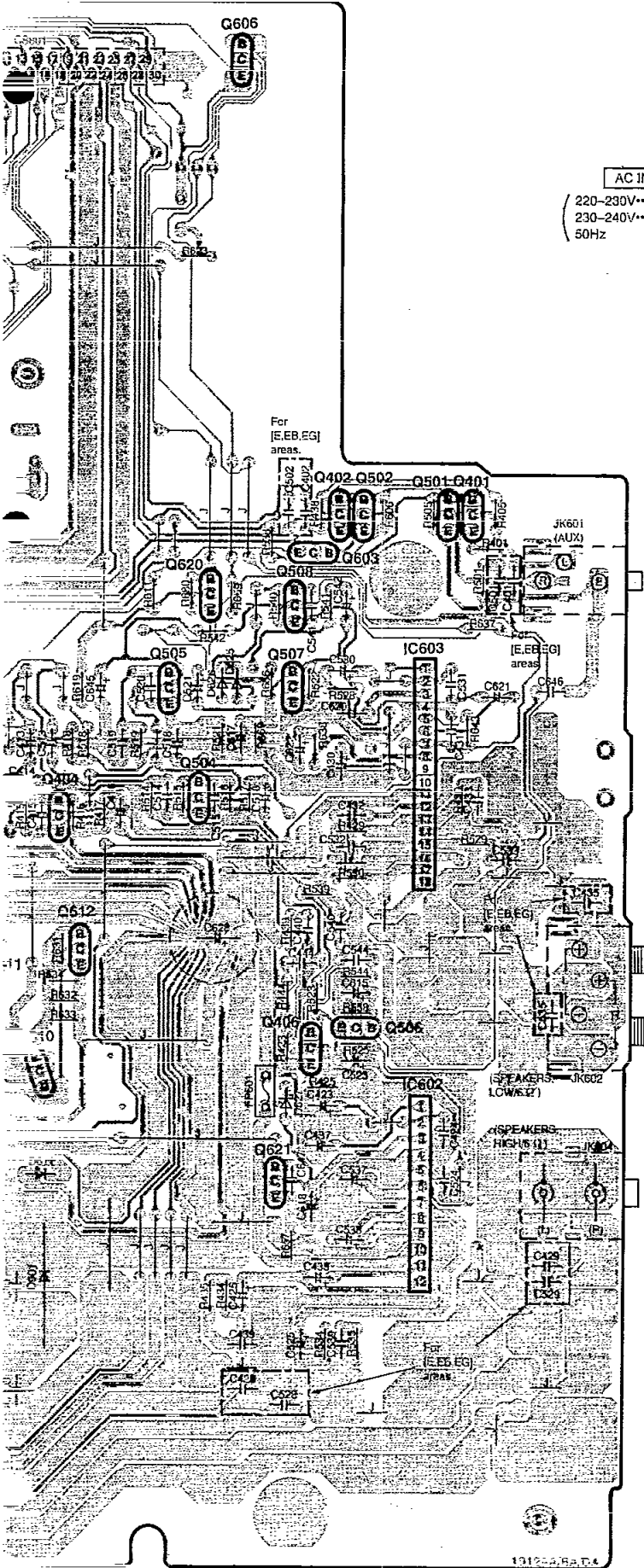
(REP1960A)

O MAIN P.C.B.

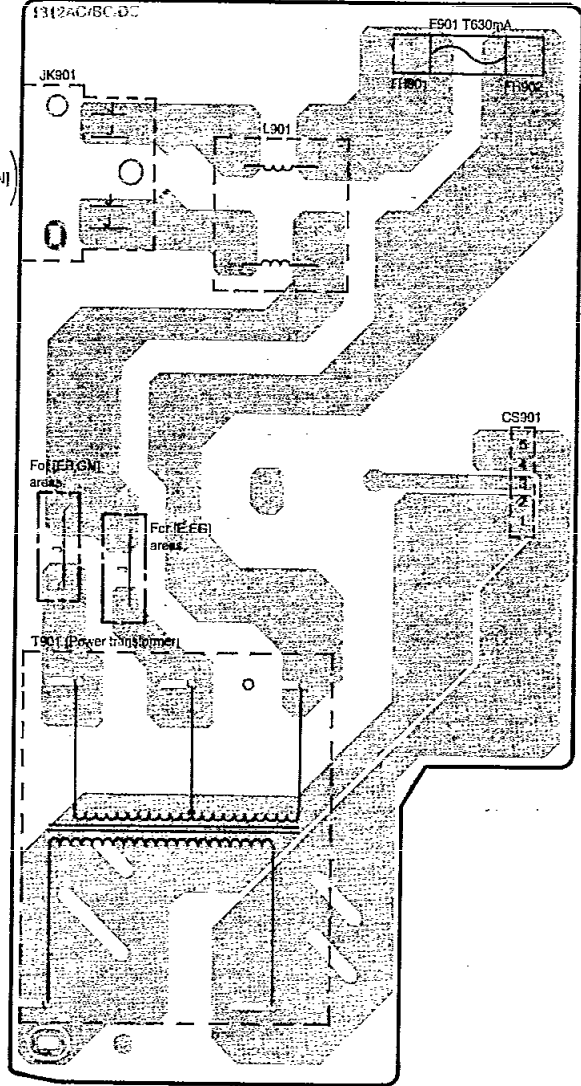


(REP2541A---[E,EG])
(REP2541B---[EB])
(REP2541D---[GM])

P POWER SUPPLY P.C.B.

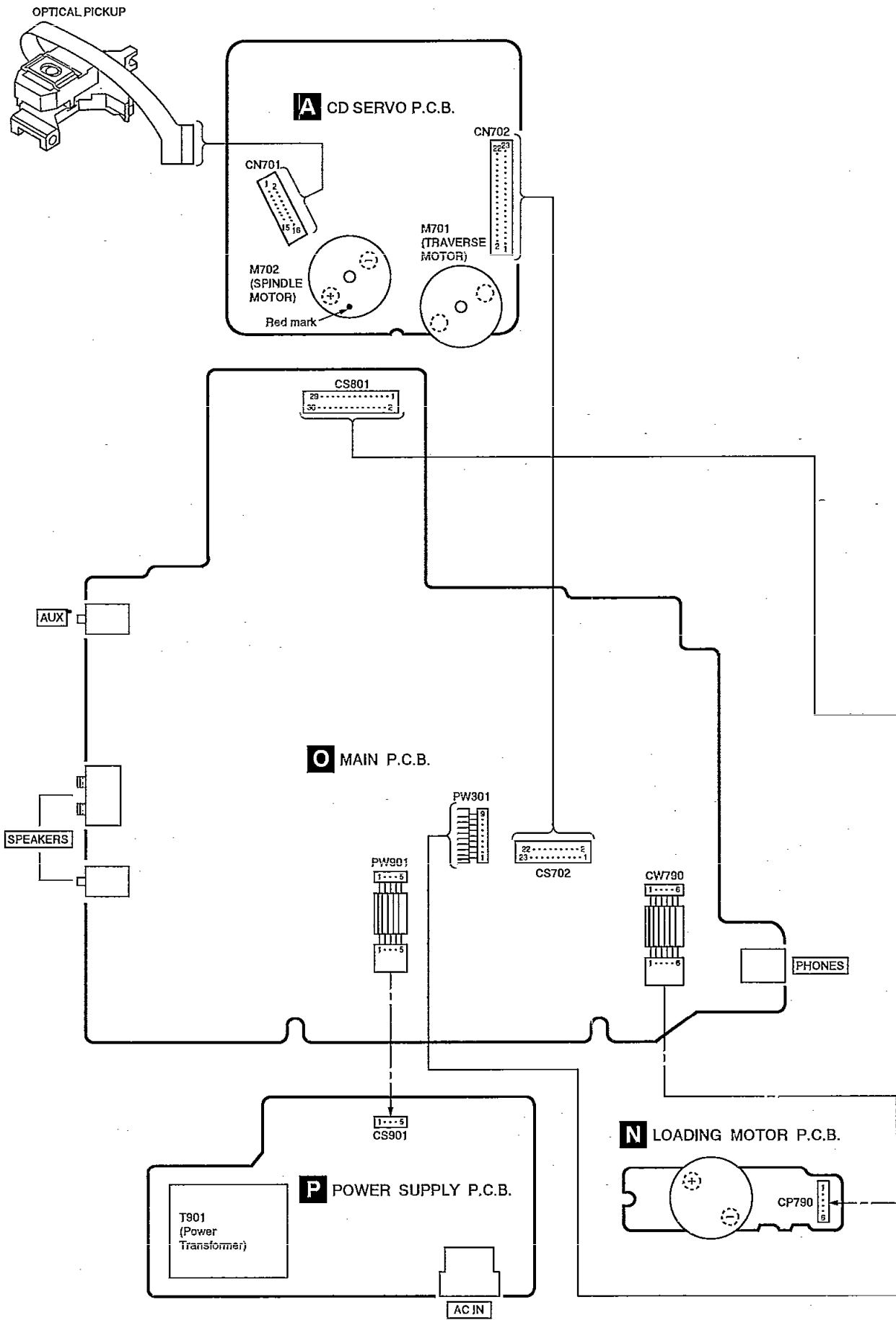


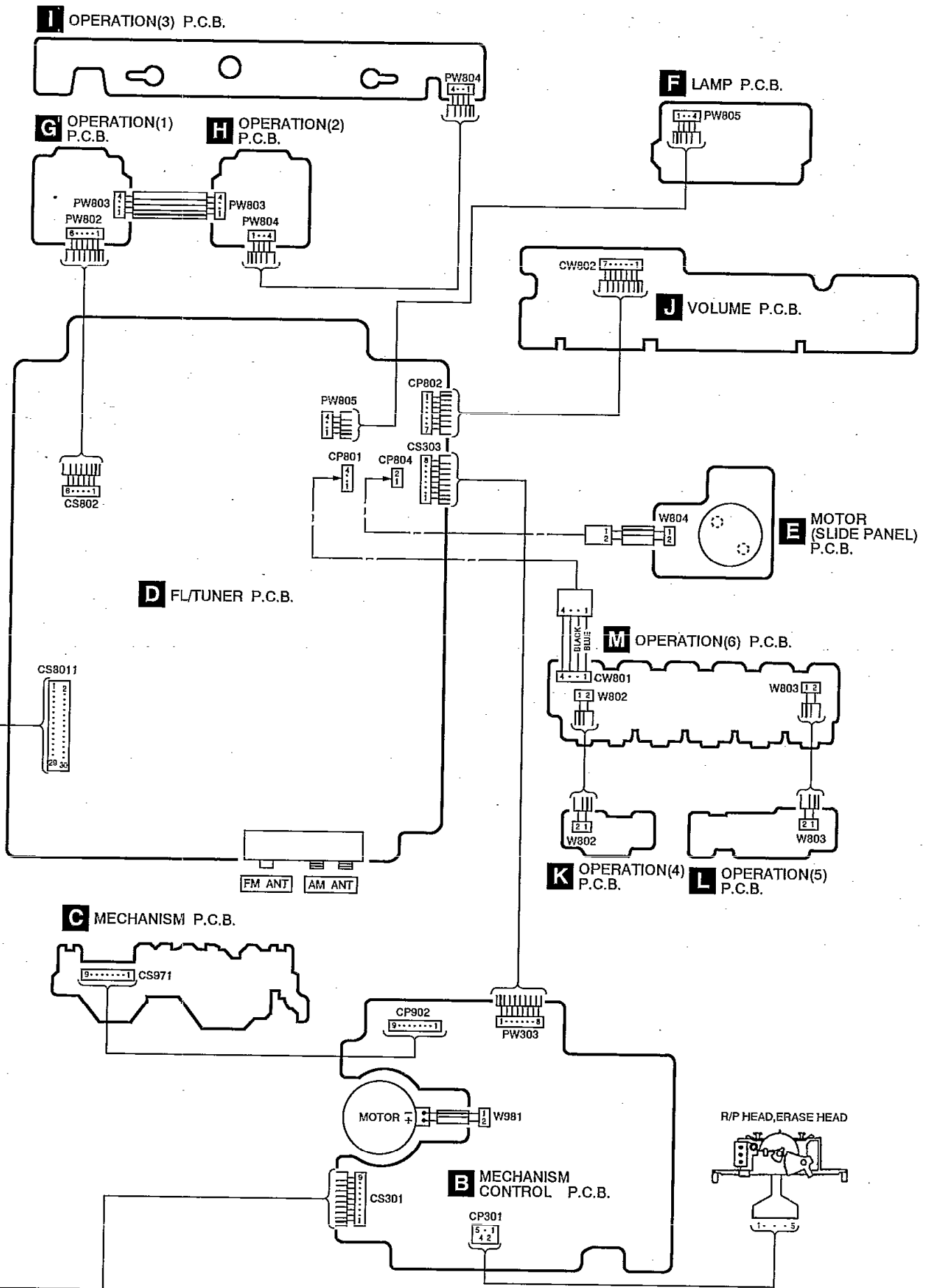
AC IN
 (220-230V...[E,EG])
 (230-240V...[EB,GN])
 50Hz



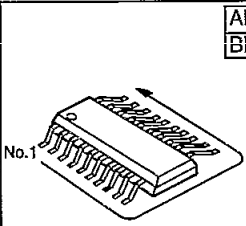
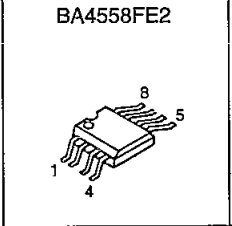
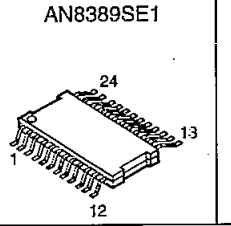
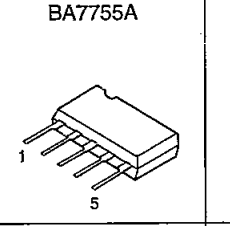
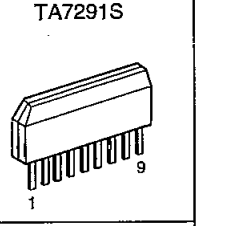
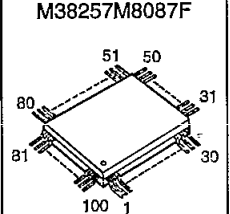
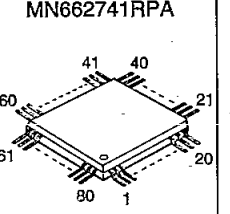
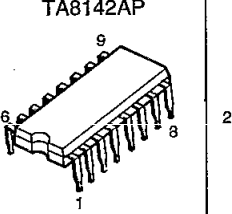
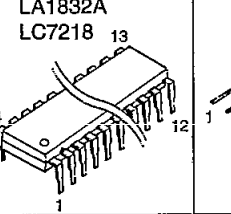
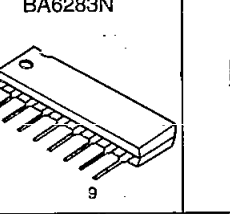
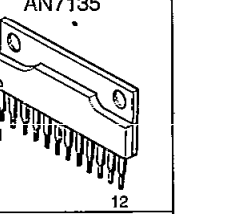
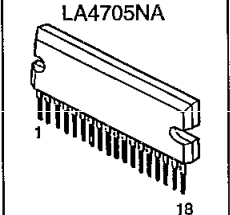
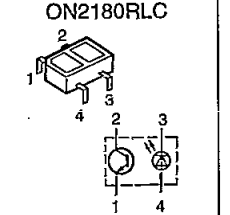
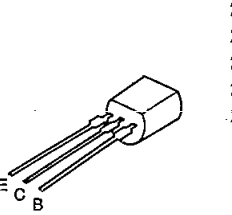
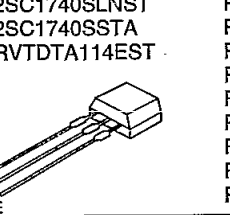
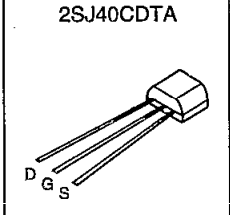
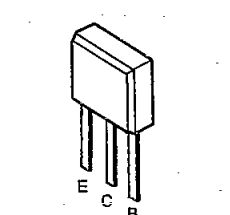
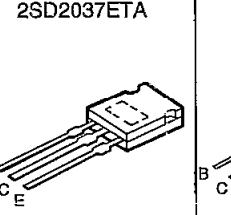
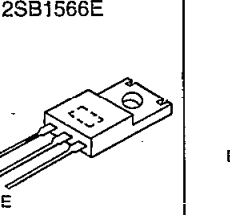
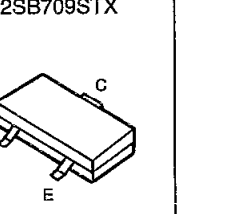
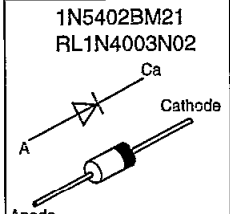
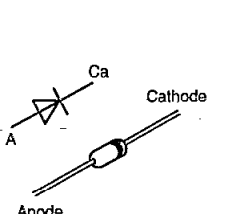
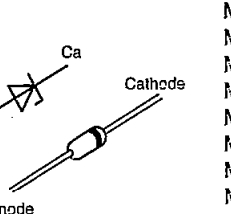
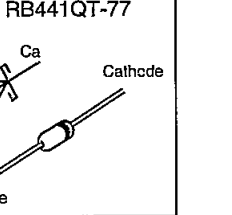
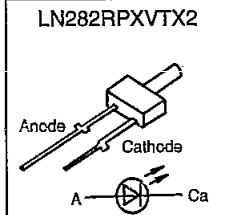
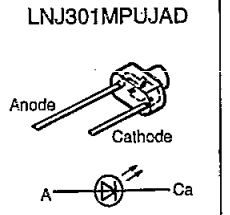
(REP2541A...[E,EG])
 (REP2541B...[EB])
 (REP2541D...[GN])

■ Wiring Connection Diagram



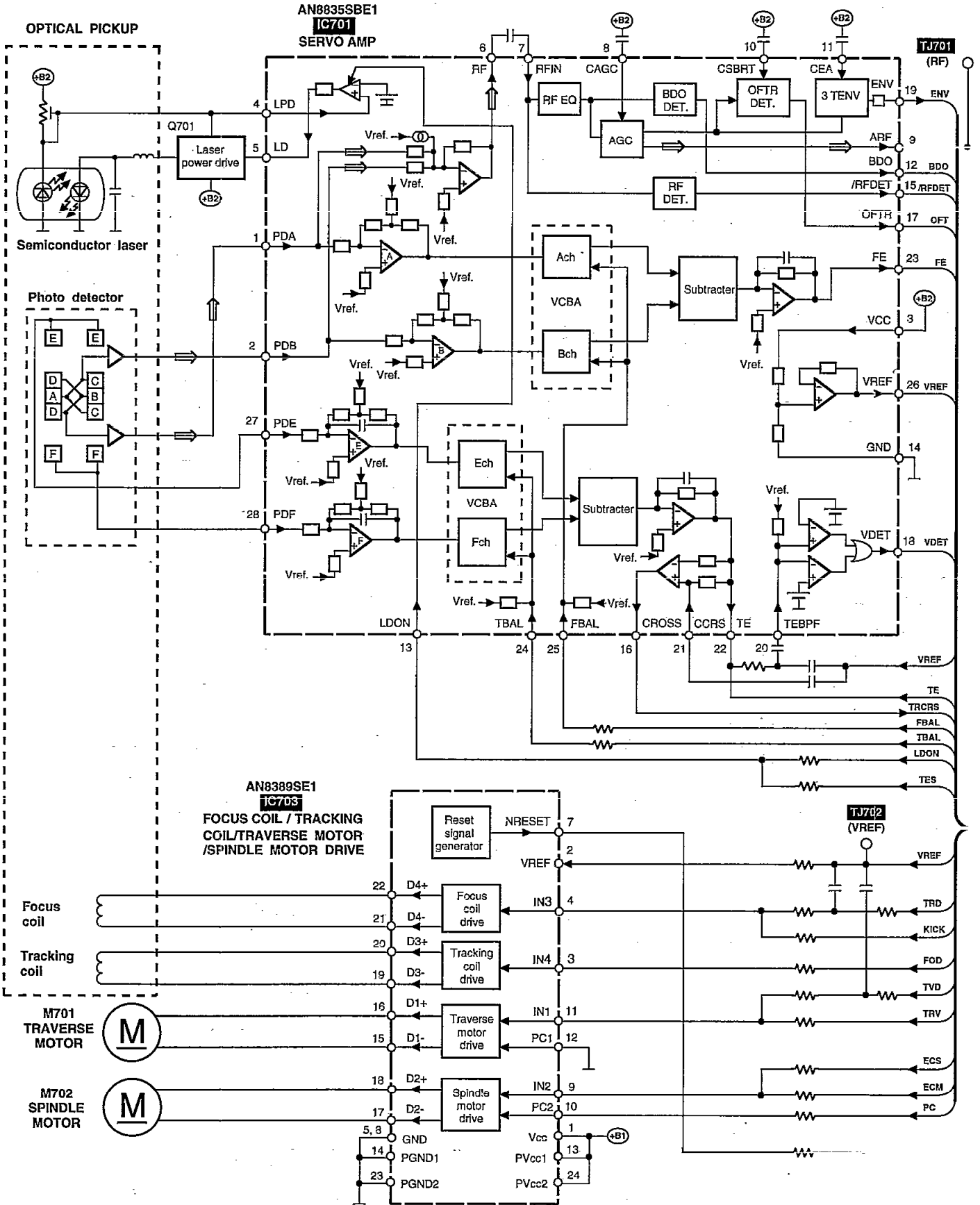


■ Type Illustration of IC's, Transistors and Diodes

<p>AN8835SBE1 28PIN BH3857FV-E2 40PIN</p> 		<p>BA4558FE2</p> 	<p>AN8389SE1</p> 	<p>BA7755A</p> 	<p>TA7291S</p> 
<p>M38257M8087F</p> 	<p>MN662741RPA</p> 	<p>TA8142AP</p> 	<p>LA1832A LC7218</p> 	<p>BA6283N</p> 	<p>AN7135</p> 
<p>LA4705NA</p> 	<p>ON2180RLC</p> 		<p>2SA952LTA 2SC1845FTA 2SC2001KTA 2SC2001LTA 2SD965RTA</p>	<p>2SC1740SLNST 2SC1740SSTA RVTDTA114EST</p> 	<p>RVTDTA114YST RVTDTA143TST RVTDTA143XST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST RVTDTA144EST</p>
<p>2SJ40CDTA</p> 		<p>2SB1030RTA 2SC2785FETA 2SC2785FTA 2SC2787LTA</p>	<p>2SD2037ETA</p> 	<p>2SB1566E</p> 	<p>2SB709STX</p> 
<p>1N5402BM21 RL1N4003N02</p> 		<p>1SS254TA 1SS291TA MA165TA</p>		<p>MTZJ3R0BTA MTZJ5R1BTA MTZJ5R1CTA MTZJ5R6ATA MTZJ6R8ATA MTZJ8R2BTA MTZJ9R1BTA MTZJ15CTA</p>	<p>RB441QT-77</p> 
<p>LN282RPXVTX2</p> 	<p>LNJ301MPUJAD</p> 				

Block Diagram

CD player section

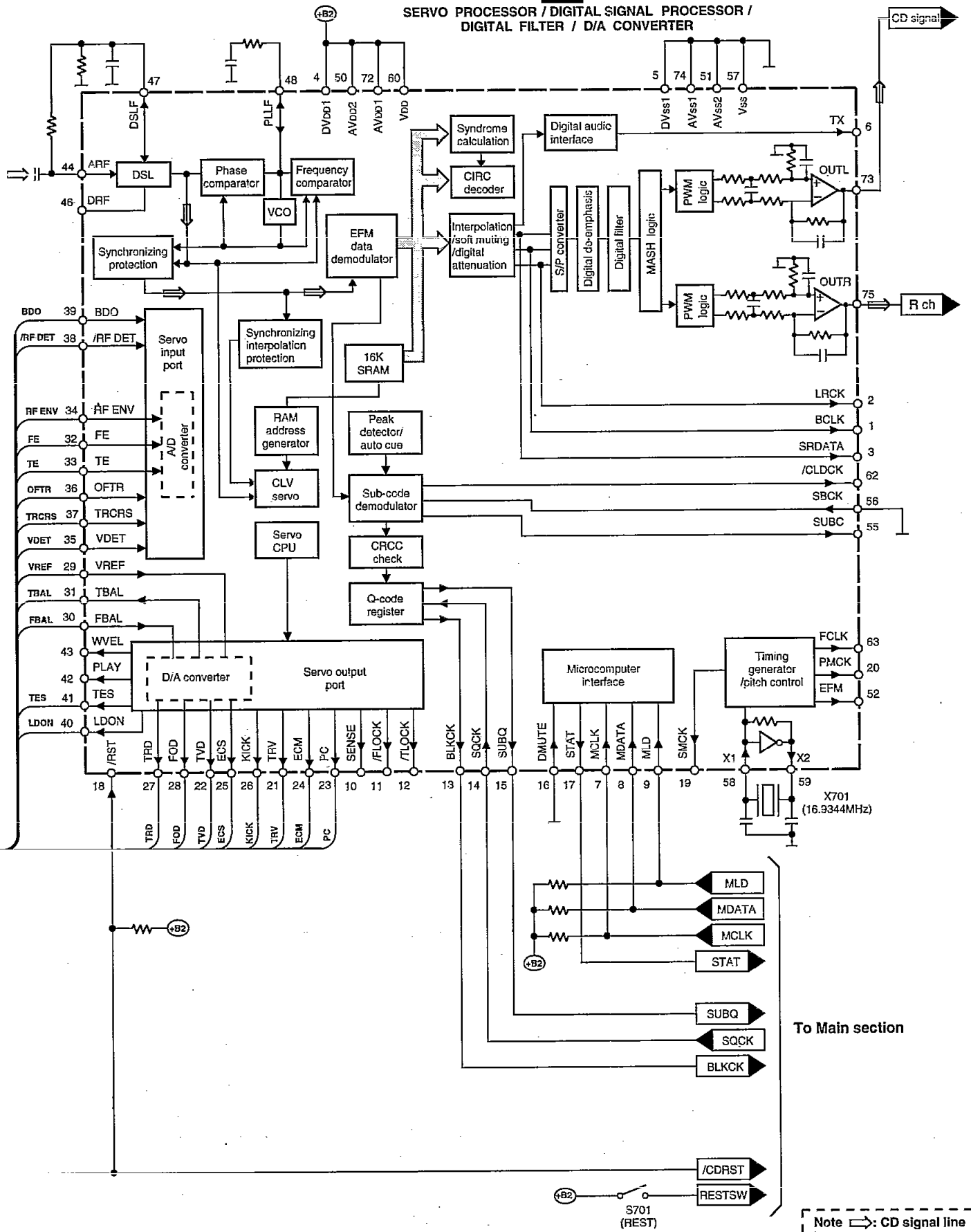


MN662741RPA

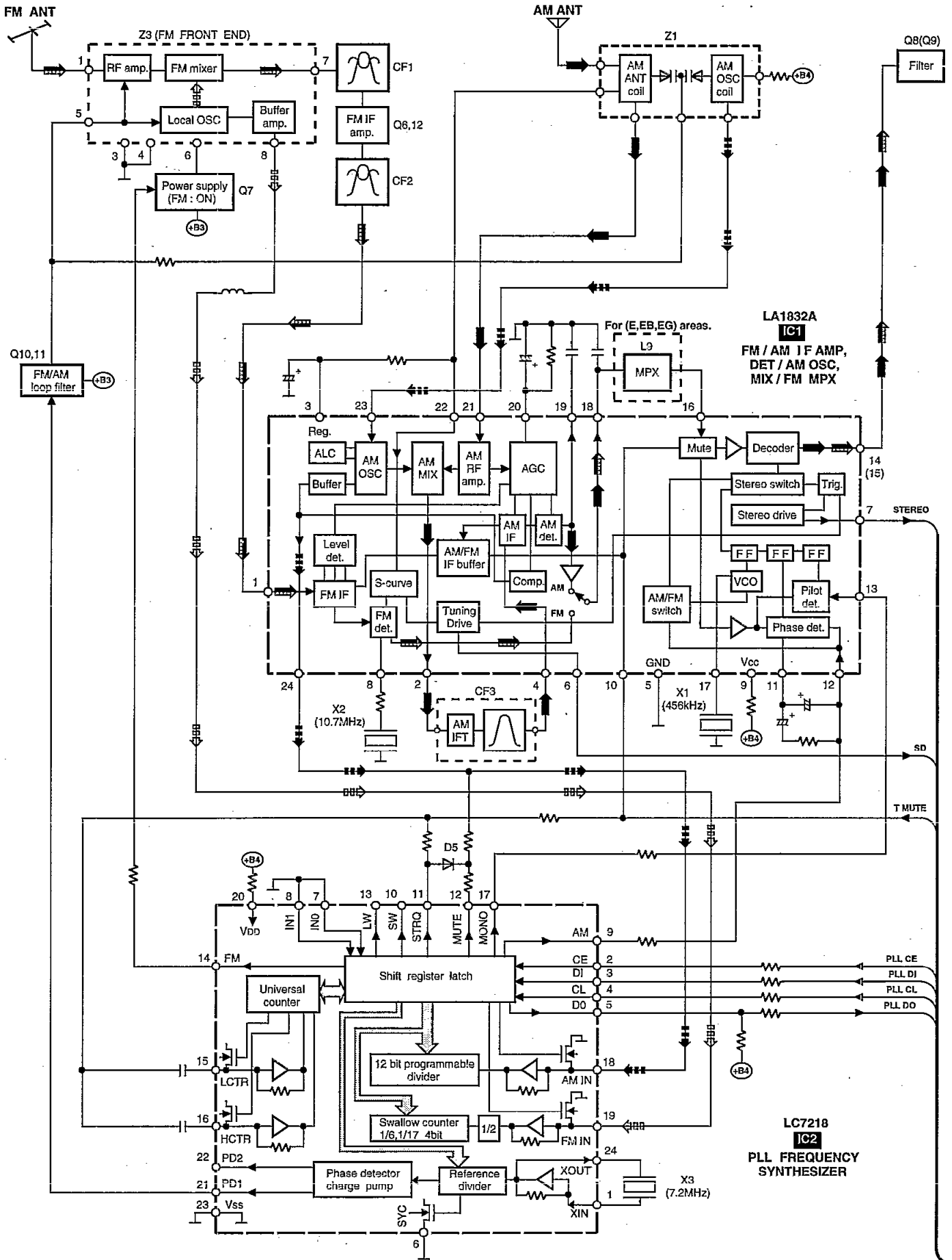
IC702

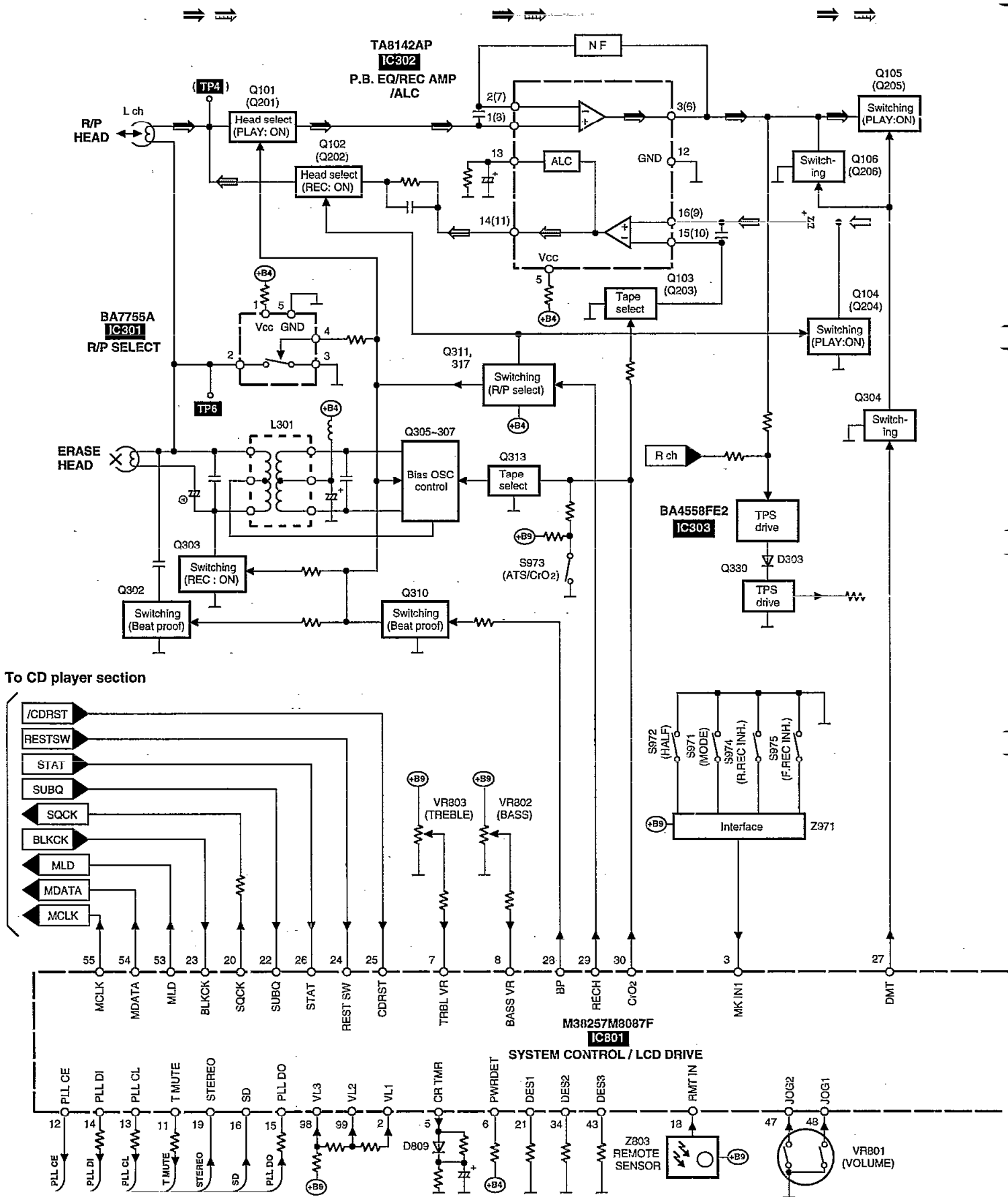
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR /
DIGITAL FILTER / D/A CONVERTER

To Main section

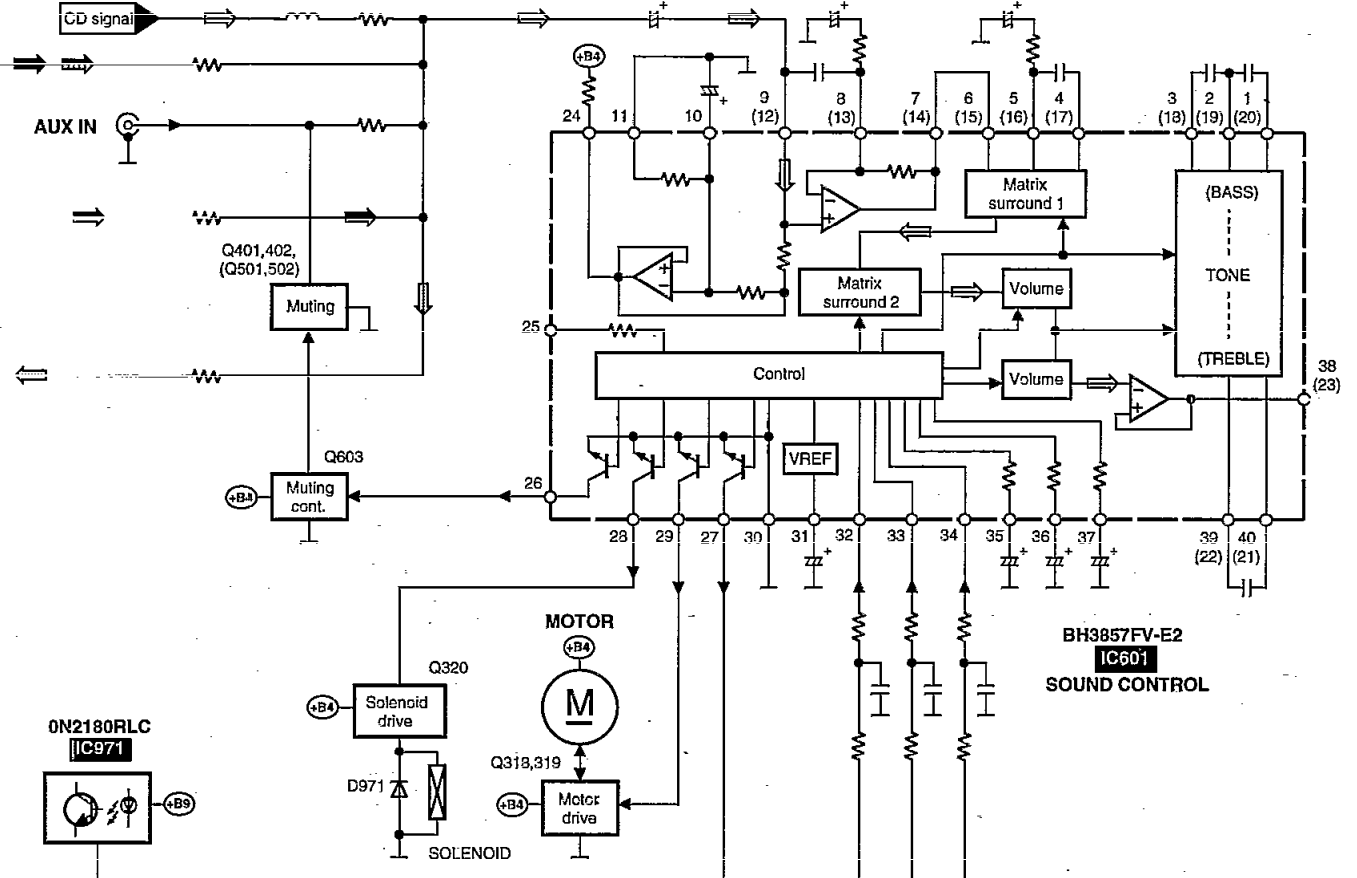


● Main section

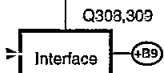




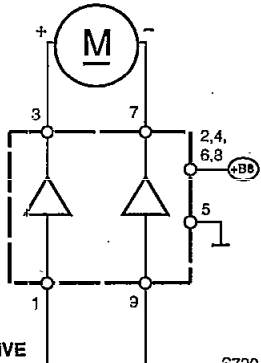
To CD player section



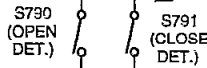
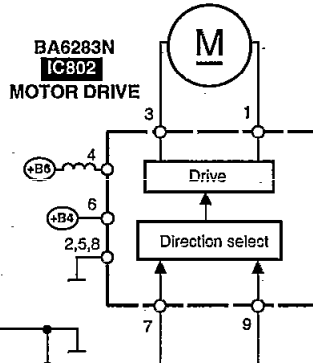
0N2180RLC IC971



LOADING MOTOR

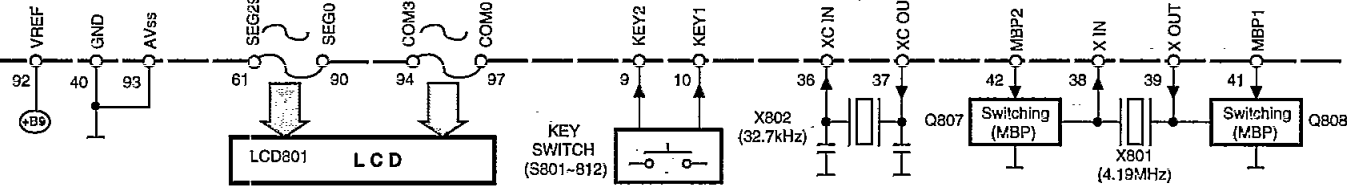


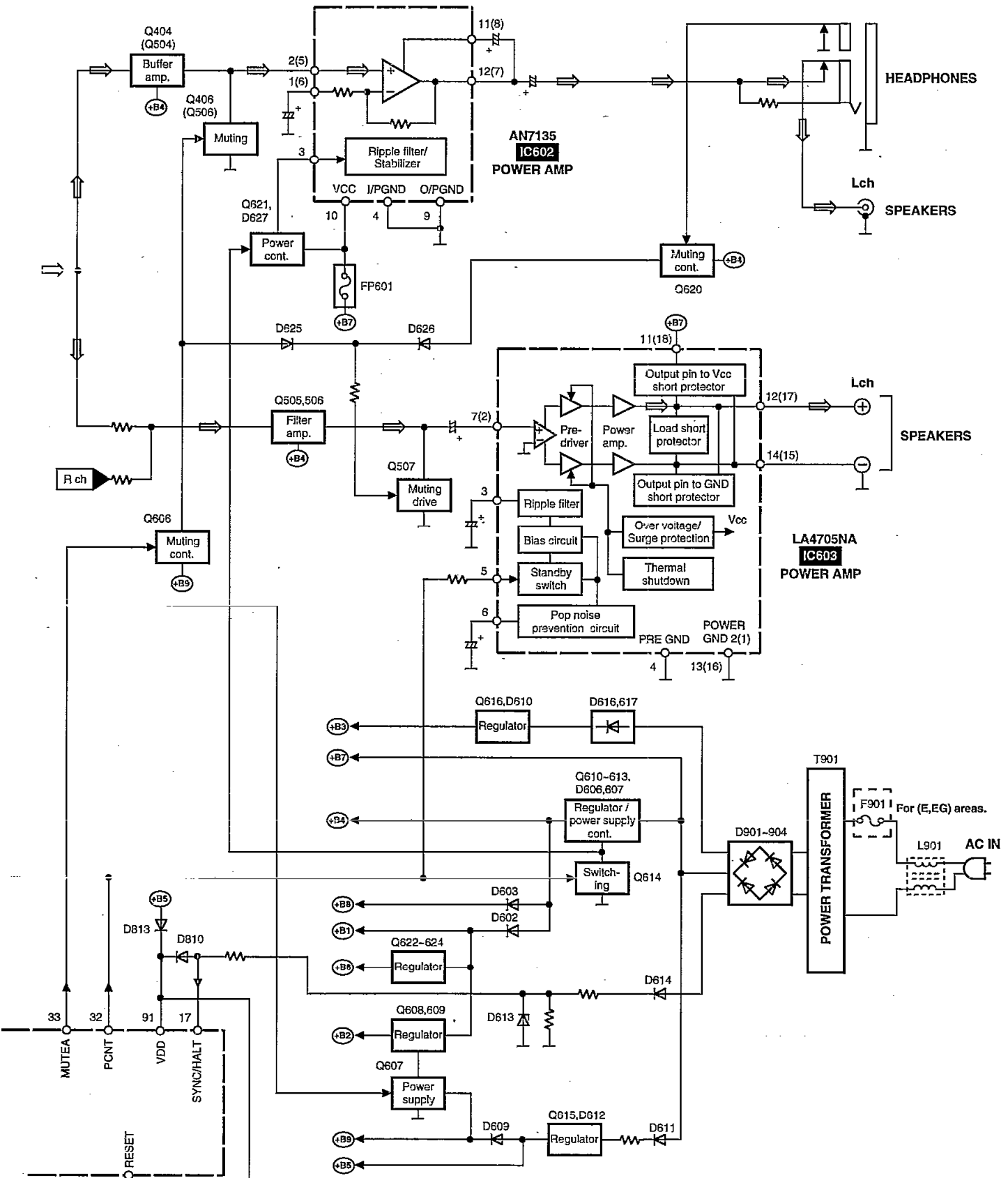
MOTOR (RM801)



M38257M8087F IC801

SYSTEM CONTROL / LCD DRIVE





Notes

1) : CD signal line : FM signal line : FM OSC signal line : AM signal line
 : Playback signal line : REC signal line : AM OSC signal line

2) () indicates pin No. Right channel.

Replacement Parts List

Notes:

*Important safety notice:
Components identified by Δ 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 parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
* [M] indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pos	Remarks	Ref. No.	Part No.	Part Name & Description	Pos	Remarks
	01	**CM NOTHING**	1	(RTL)	62	RDC357	GEAR	1	[M]
					A1	EUR644851	REMOTE CONTROLLER	1	[M]
					Δ A2	RJA0019-2K	AC POWER CORD	1	[M]E, EG
					Δ A2	RJA0036-K	AC POWER CORD	1	[M]GN
					Δ A2	VJA0733	AC POWER CORD	1	[M]EB
					A3	RQA0117	WARRANTY CARD	1	[M]E, EB, EG
					A3	RQX7433ZA	WARRANTY CARD	1	[M]GN
					A4	RQC80169	SERVICE CENTERLIST	1	[M]
					A5	RQT4047-G	OPERATING INSTRUCTIONS	1	[M]EG
					A5	RQT4051-E	OPERATING INSTRUCTIONS	1	[M]E
					A5	RQT4053-B	OPERATING INSTRUCTIONS	1	[M]E, GN
					A9	RQT4052-R	OPERATING INSTRUCTIONS	1	[M]E
					A6	RQT4078-H	OPERATING INSTRUCTIONS	1	[M]EG
					A7	RSA0006	FM ANT	1	[M]GN
					A7	RSA0007	FM ANT	1	[M]E, EB, EG
					A9	RSA0022	AM LOOP ANT	1	[M]
1	RFKQAPM15EGS	FRONT PANEL ASS'Y	1	[M]	G15	ECBT1G103MS5	16V 0.01U	1	[M]
1-1	RKA0C59-K	LEG	2	[M]	G16	EGA1CM22C8	16V 22uF	1	[M]
2	REX0877Y	WIRE ASS'Y (6P/CW790)	1	[M]	G17	ECBT1G103MS5	16V 0.01U	1	[M]
3	RWJ1109210C0	FLAT CABLE (9P/PW301)	1	[M]	G18	ECBT1H102KB5	50V 1000P	1	[M]
4	RWJ1108300G	FLAT CABLE (8P/PW3C3)	1	[M]	G19	ECBT1G103MS5	16V 0.01U	1	[M]
5	RWJ1106120C0	FLAT CABLE (6P/PW802)	1	[M]	G20	RGE1HKA3R3B3	50V 3 3uF	1	[M]
6	RWJ1104180C0	FLAT CABLE (4P/PW803)	1	[M]	G21	EGA1CM101B	16V 1000F	1	[M]
7	RWJ1104300C0	FLAT CABLE (4P/PW804)	1	[M]	G22	ECBT1G103MS5	16V 0.01U	1	[M]
8	REXC876	WIRE ASS'Y (5P/PW801)	1	[M]	G23	EGA1CM220B	16V 22uF	1	[M]
9	XTV3+10F	SCREW	5	[M]	G24	ECBT1H473ZF5	50V 0.047U	1	[M]
10	RGPC620-W	LCD SPACER SHEET	1	[M]	G25	RGE1HKA4R7B3	50V 4.7uF	1	[M]
11	RMD0451	LCD HOLDER	1	[M]	G26	ECBT1C822MR5	16V 8200pF	1	[M]
12	REX0878Y	WIRE ASS'Y (4P/CW801)	1	[M]	G27	ECOP2A821JZT	100V 820pF	1	[M]
13	REX0886Y	WIRE ASS'Y (7P/CW802)	1	[M]	G28	ECEA1HKA010B	50V 1U	1	[M]
14	RWJ1104110C0	FLAT CABLE (4P/PW805)	1	[M]	G25, 30	ECFR1G103KR	16V 0.01U	2	[M]
15	REX0875	WIRE ASS'Y (2P/PW804)	1	[M]	G31	ECBT1H150JC5	50V 15P	1	[M]
16	RGPO618-Q	LCD PANEL	1	[M]	G32	ECBT1G103MS5	16V 0.01U	1	[M]
17	RGPO619-S	CASSETTE LID	1	[M]	G33	ECEA1HKA2R2B	50V 2.2U	1	[M]
18	RGW0267-S	KNOB, BASS/TREBLE	2	[M]	G34-37	ECEA1HKA010B	50V 1U	4	[M]
19	RGW0268-S	KNOB, VOLUME/TUNING	2	[M]	G38, 39	ECBT1C822MR5	16V 8200pF	2	[M]
20	RHD30007-S	SCREW	4	[M]	G40, 41	ECBT1H561KB5	50V 560P	2	[M]
21	RKA0C59-K	LEG	2	[M]	G42, 43	ECBT1C562MR5	16V 5600pF	2	[M]
22	RKN0355Z-S	TOP CABINET	1	[M]	G44	EGA1CM101B	16V 1000F	1	[M]
23	RWR1129-K	WASHER	2	[M]	G45, 46	ECEA1HKA010B	50V 1U	2	[M]
24	RGPO818-S	BUTTON PANEL	1	[M]	G47	ECBT1H473ZF5	50V 0.047U	1	[M]
25	RGU1565-S	BUTTON, TIMER	1	[M]	G48	ECBT1H100JC5	50V 10P	1	[M]E, EB, EG
26	RGU1566-S	BUTTON, OPEN/CLOSE	1	[M]	G49	ECBT1H331KB5	50V 330P	1	[M]E, EB, EG
27	RGU1567-S	BUTTON, TUN/BAND	1	[M]	G51	ECBT1G103MS5	16V 0.01U	1	[M]
28	RGU1568-S	BUTTON, CASS EJ	1	[M]	G52	ECEA1EU4R7B	25V 4.7uF	1	[M]
29	RGU1569-S	BUTTON, POWER/GD	1	[M]	G53	ECBT1G103MS5	16V 0.01U	1	[M]
30	RGU1571-Q	BUTTON, CONTROL	1	[M]	G54	ECBT1H190JC5	50V 18P	1	[M]
31	RWX0366	BUTTON CHASSIS	1	[M]	G55	ECBT1H150JC5	50V 15P	1	[M]
32	RDG0402	RACK (L)	1	[M]	G56	ECBT1H102KB5	50V 1000P	1	[M]
33	RDG0403	RACK (R)	1	[M]	G57	EGA1CM101B	16V 1000F	1	[M]
34	RDG0404	GEAR	2	[M]	G59	ECBT1H330J5	50V 33P	1	[M]
35	RDG0405	GEAR	1	[M]	G60	ECBT1H102KB5	50V 1000P	1	[M]
36	RDK0032	CAM	1	[M]	G61	ECBT1H331KB5	50V 330P	1	[M]
37	RHD26016	SCREW	2	[M]	G62	EGA1CM22C8	16V 22uF	1	[M]
38	RMB0533	SPRING	1	[M]	G63, 64	ECBT1G103MS5	16V 0.01U	2	[M]
39	RMK0368	SLIDE PANEL CHASSIS	1	[M]	G65-68	ECBT1H102KB5	50V 1000P	4	[M]E, EB, EG
40	RMS0598	GUIDE SHAFT	2	[M]	G71	ECBT1H331KB5	50V 330P	1	[M]
41	RMS0597	MAIN SHAFT	1	[M]	G72	ECBT1H471KB5	50V 470P	1	[M]E, EB, EG
42	RDPO056	PULLEY	1	[M]	G73	ECBT1H2R7KC5	50V 2.7pF	1	[M]E, EB, EG
43	RMG0158	BELT	1	[M]	G102	ECBT1G152KR5	16V 1500P	1	[M]
44	RMR1095-W	GEAR FIXTUR	1	[M]	G103	ECEA0JKA47C6	6.3V 47UF	1	[M]
45	XON2+C3	SCREW	2	[M]	G104	ECBT1H331KB5	50V 330P	1	[M]
46	RMB0477	SPRING	1	[M]	G105	ECFR1G153KR	16V 0.015UF	1	[M]
47	RYFO780-S	SLID PANEL UNIT	1	[M]	G106	ECEA1EKA4R7B	25V 4.7uF	1	[M]
47-1	RMA1089	SLIDE MECH ANGLE	1	[M]	G107	ECEA1HKA010B	50V 1U	1	[M]
47-2	XIV26+6G	SCREW	5	[M]	G108	ECEA0JKA47C6	6.3V 47UF	1	[M]
48	XTBS26+10J	SCREW	20	[M]	G111	ECEA1EKA4R7B	25V 4.7uF	1	[M]
49	XIV3+10G	SCREW	4	[M]	G112-14	ECBT1H102KB5	50V 1000P	3	[M]
50	REEO799	FFO	1	[M]	G115	ECBT1H101KB5	50V 100P	1	[M]
51	REED800	FFO	1	[M]	G202	ECBT1G152KR5	16V 1500PF	1	[M]
52	RGK0929-S	CD TRAY LID	1	[M]	G203	ECEA0JKA47C6	6.3V 47UF	1	[M]
53	RFKQAPM15E-S	REAR CABINET ASS'Y	1	[M]E	G204	ECBT1H331KB5	50V 330P	1	[M]
53	RFKQAPM15EBS	REAR CABINET ASS'Y	1	[M]EB					
53	RKS0270-K	REAR CABINET ASS'Y	1	[M]EG					
53	RFKQAPM15EBS	REAR CABINET ASS'Y	1	[M]GN					
54	RWK0370	BOTTOM CHASSIS	1	[M]					
55	REO0191	SUPPORTER	1	[M]					
56	XTB3+10JFZ	SCREW	25	[M]					
57	RFKQAPM15EGS	MOTOR ASS'Y	1	[M]					
58	RFKQAPM15EGS	CASSETTE LID ASS'Y	1	[M]					
58-1	RUS757ZAA	SPRING	2	[M]					

Ref.No.	Part No.	Part Name & Description	Pos	Remarks
C205	ECFR10153KR	16V 0.015UF	1	[M]
C206	ECEA1EKA4R7B	25V 4.7UF	1	[M]
C207	ECEA1HKA010B	50V 1U	1	[M]
C208	ECEA0JKA470B	6.3V 47UF	1	[M]
C211	ECEA1EKA4R7B	25V 4.7UF	1	[M]
C212-14	ECBT1H102KB5	50V 1000P	3	[M]
C215	ECBT1H101KB5	50V 100P	1	[M]
C301	ECEA1HKA010B	50V 1U	1	[M]
C303	ECBT1G103MS5	16V 0.01U	1	[M]
C305	ECOP2A102J2T	100V 1000PF	1	[M]
C306	ECOP2A472J2T	100V 4700PF	1	[M]
C307	ECEA1HKA010B	50V 1U	1	[M]
C308	ECA1GM101B	16V 100UF	1	[M]
C309	ECQV1H473JN3	50V 0.047UF	1	[M]
C310, 11	ECBT1H102KB5	50V 1000P	2	[M]
C312, 13	ECBT1G222WR5	16V 2200PF	2	[M]
C314	ECBT1G332WR5	16V 3300PF	1	[M]
C315	ECEA1CKA100B	16V 10U	1	[M]
C316	ECFR10104KR	16V 0.1UF	1	[M]
C317	ECBT1H470J5	50V 47P	1	[M]
C318	ECEA1HKA3R3B	50V 3.3U	1	[M]
C319	ECEA1KA221B	10V 220UF	1	[M]
C320, 21	ECEA1KA220B	10V 22U	2	[M]
C322	ECEA0JKA470B	6.3V 47UF	1	[M]
C323	ECBT1G103MS5	16V 0.01U	1	[M]
C324	ECBT1G472WR5	16V 4700PF	1	[M]
C326	ECEA1CKA100B	16V 10U	1	[M]
C401, 02	ECBT1H101KB5	50V 100P	2	[M]E, EB, EG
C404	ECEA1CKA100B	16V 10U	1	[M]
C406	ECBT1H221KB5	50V 220P	1	[M]
C407	ECEA1CKA470B	16V 47UF	1	[M]
C408	ECBT1H102KB5	50V 1000P	1	[M]
C409	ECEA1HKA22B	50V 0.22U	1	[M]
C410, 11	ECFR1C223MR	16V 0.022U	2	[M]
C413, 14	ECQV1H154JN3	50V 0.15UF	2	[M]
C415	ECBT1H471KB5	50V 470P	1	[M]
C416	ECEA1CKA100B	16V 10U	1	[M]
C423	ECEA1CKA100B	16V 10U	1	[M]
C424	ECBT1H471KB5	50V 470P	1	[M]
C425	ECA1GM471B	16V 470UF	1	[M]
C427	ECA1GM221B	16V 220UF	1	[M]
C428, 29	ECBT1H473ZF5	50V 0.047U	2	[M]
C430	ECEA1HKA2R2B	50V 2.2U	1	[M]
C431	ECBT1H102KB5	50V 1000P	1	[M]
C432, 33	ECFR1E104MR	25V 0.1UF	2	[M]
C435	ECBT1H473ZF5	50V 0.047U	1	[M]
C437, 38	ECEA1CKA101B	16V 100U	2	[M]
C439	ECQV1H224JN3	50V 0.22UF	1	[M]
C440	ECBT1H821KB5	50V 820P	1	[M]
C444	ECFR1C153KR	16V 0.015UF	1	[M]
C501, 02	ECBT1H101KB5	50V 100P	2	[M]E, EB, EG
C504	ECEA1CKA100B	16V 10U	1	[M]
C506	ECBT1H221KB5	50V 220P	1	[M]
C508	ECBT1H102KB5	50V 1000P	1	[M]
C509	ECEA1HKA22B	50V 0.22U	1	[M]
C510, 11	ECFR1C223MR	16V 0.022U	2	[M]
C512	ECEA1CKA100B	16V 10U	1	[M]
C513, 14	ECQV1H154JN3	50V 0.15UF	2	[M]
C515	ECBT1H471KB5	50V 470P	1	[M]
C516	ECEA1CKA100B	16V 10U	1	[M]
C518	ECQV1H154JN3	50V 0.15UF	1	[M]
C519	ECFR10473MR	16V 0.047U	1	[M]
C520	ECBT1H471KB5	50V 470P	1	[M]
C521	ECEA1CKA100B	16V 10U	1	[M]
C523	ECEA1CKA100B	16V 10U	1	[M]
C524	ECBT1H471KB5	50V 470P	1	[M]
C525	ECA1GM471B	16V 470UF	1	[M]
C527	ECA1GM221B	16V 220UF	1	[M]
C528, 29	ECBT1H473ZF5	50V 0.047U	2	[M]E, EB, EG
C530	ECEA1HKA2R2B	50V 2.2U	1	[M]
C531	ECBT1H102KB5	50V 1000P	1	[M]
C532, 33	ECFR1E104MR	25V 0.1UF	2	[M]
C535	ECBT1H473ZF5	50V 0.047U	1	[M]E, EB, EG
C537, 38	ECEA1CKA101B	16V 100U	2	[M]
C539	ECQV1H224JN3	50V 0.22U	1	[M]

Ref.No.	Part No.	Part Name & Description	Pos	Remarks
C540	ECBT1H821KB5	50V 820P	1	[M]
C541	ECBT1H331KB5	50V 330P	1	[M]
C542	ECEA1CKA100B	16V 10U	1	[M]
C544	ECFR1G153KR	16V 0.015UF	1	[M]
C606	ECEA1CKA100B	16V 10U	1	[M]
C607	ECEA1HKA3R3B	50V 0.33UF	1	[M]
C608-10	ECEA1HKA010B	50V 1U	3	[M]
C611	ECEA1CKA101B	16V 100U	1	[M]
C613	ECA1GM471B	16V 470UF	1	[M]
C615	ECEA1KA220B	10V 22U	1	[M]
C616	ECA1EM471B	25V 22UF	1	[M]
C617	ECEA1KA220B	10V 22U	1	[M]
C618	ECA1EM331B	25V 330UF	1	[M]
C620	ECEA1CKA101B	16V 100U	1	[M]
C621	ECEA1CKA330B	16V 33UF	1	[M]
C622	ECEA1HKA010B	50V 1U	1	[M]
C624, 25	ECEA1CKA100B	16V 10U	2	[M]
C626	ECA1GM221B	16V 220UF	1	[M]
△ C628	ECA1EM632E	25V 680UF	1	[M]
C629	ECBT1G103MS5	16V 0.01U	1	[M]
C630	ECEA1CKA470B	16V 47UF	1	[M]
C631	ECA1EM471B	25V 22UF	1	[M]
C632, 33	ECA1EM221B	25V 220UF	2	[M]
C635	ECBT1H102KB5	50V 1000P	1	[M]
C636	ECBT1H330J5	50V 33P	1	[M]
C637, 38	ECBT1H102KB5	50V 1000P	2	[M]
C639	ECBT1G103MS5	16V 0.01U	1	[M]
C640	ECEA1CKA470B	16V 47UF	1	[M]
C642-44	ECBT1H101KB5	50V 100P	3	[M]
C645	ECA1AM471B	16V 470UF	1	[M]
C646	ECBT1G103MS5	16V 0.01U	1	[M]
C647	ECBT1H221KE5	50V 220P	1	[M]
C648, 49	ECA1EM221B	25V 220UF	2	[M]
C790	ECA1AKF820E	10V 82U	1	[M]
C801	ECBT1H102KB5	50V 1000P	1	[M]
C806, 07	ECA0JN102B	6.3V 1000UF	2	[M]
C809	ECEA0JKA470B	6.3V 47UF	1	[M]
C810-17	ECBT1H551KB5	50V 550P	8	[M]
C818	ECBT1H101KB5	50V 100P	1	[M]
C819	ECBT1G103MS5	16V 0.01U	1	[M]
C820, 21	ECBT1H180J5	50V 180P	2	[M]
C822-25	ECBT1H680J5	50V 68P	4	[M]
C826, 27	ECBT1H102KE5	50V 1000P	2	[M]
C828-30	ECBT1H101KE5	50V 100P	3	[M]
C831, 32	ECEA1HKA010B	50V 1U	2	[M]
C833	ECBT1G103MS5	16V 0.01U	1	[M]
C836	ECA1AM331B	16V 330UF	1	[M]
C837	ECA1GM101B	16V 100UF	1	[M]
C838-40	ECBT1H331KB5	50V 330P	3	[M]
C801-04	ECR1H103ZF5	50V 0.01U	4	[M]
C905	ECQV1H154JN3	50V 0.15UF	1	[M]
GF1	RLFPETNGD01L	CERAMIC FILTER	1	[M]E, EB, EG
GF1	RLFPETNGD01H	CERAMIC FILTER	1	[M]GN
GF2	RLFPETNGD01L	CERAMIC FILTER	1	[M]E, EB, EG
GF2	RLFPETNGD01H	CERAMIC FILTER	1	[M]GN
CP301	RJS1A6805-1	CONNECTOR (5P)	1	[M]
CP801	SJTD413	CONNECTOR (4P)	1	[M]
CP802	RJP7G1E2A	CONNECTOR (7P)	1	[M]
CP804	RJT025H02V-1	CONNECTOR (2P)	1	[M]
CP802	RJT071H09A	CONNECTOR (9P)	1	[M]
CS301	RJS9T7ZA	CONNECTOR (9P)	1	[M]
CS303	RJS1A5203	CONNECTOR (8P)	1	[M]
CS702	RJS1A6823-J	CONNECTOR (23P)	1	[M]
CS801	RJS1A6830-J	CONNECTOR (30P)	1	[M]
CS802	RJS1A5206	CONNECTOR (6P)	1	[M]
CS601	RJT025H005	CONNECTOR (5P)	1	[M]
CS8011	RJS1A6330-J	CONNECTOR (30P)	1	[M]
△ D4	MTZJ5R1GTA	DIODE	1	[M]
D5	1SS254TA	DIODE	1	[M]
D301	1SS254TA	DIODE	1	[M]
D303	1SS254TA	DIODE	1	[M]

Ref. No.	Part No.	Part Name & Description	Pos	Remarks
D602, 03	RL1N4003N02	DIODE	2	[M]
D605, 06	1SS254TA	DIODE	2	[M]
△ D607	MTZJ6R1BTA	DIODE	1	[M]
D609	1SS291TA	DIODE	1	[M]
△ D610	MTZJ150TA	DIODE	1	[M]
△ D611	RL1N4003N02	DIODE	1	[M]
△ D612	MTZJ6R8ATA	DIODE	1	[M]
△ D613	MTZJ5R1BTA	DIODE	1	[M]
△ D614	RL1N4003N02	DIODE	1	[M]
△ D616	RL1N4003N02	DIODE	1	[M]
△ D617	RL1N4003N03	DIODE	1	[M]
D625, 26	1SS254TA	DIODE	2	[M]
D627	RB441Q77	DIODE	1	[M]
△ D631	MTZJ5R8ATA	DIODE	1	[M]
D802-05	LNJ301MPUJAD	LED	4	[M]
D808	LN282RPXVTX2	LED	1	[M]
D809	1SS254TA	DIODE	1	[M]
D810	1SS291TA	DIODE	1	[M]
D811	1SS254TA	DIODE	1	[M]
D813	1SS291TA	DIODE	1	[M]
D814	MTZJ3R0BTA	DIODE	1	[M]
D815	MTZJ8R2BTA	DIODE	1	[M]
D816, 17	LNJ301MPUJAD	LED	2	[M]
△ D901-04	1N5402B-M21	DIODE	4	[M]
D971	1N165TA	DIODE	1	[M]
△ F901	XBA2006T80	FUSE	1	[M]
FH901, 02	ZYF52B0	FUSE HOLDER	2	[M]
△ FP601	RSFM320KT-L	PROTECTOR	1	[M]
IC1	LA1832A	I.C	1	[M]
IC2	LC7218	I.C	1	[M]
IC301	BA7755A	I.C	1	[M]
IC302	TA8142AP	I.C	1	[M]
IC303	BA4558FE2	I.C	1	[M]
IC501	BH3857FV-E2	I.C	1	[M]
IC602	AN7135	I.C	1	[M]
IC603	LA4705NA	I.C	1	[M]
IC790	TA7291S	I.C	1	[M]
IC801	M38257M3G27F	I.C	1	[M]
IC802	BA6283N	I.C	1	[M]
IC971	OM2180RLC	I.C	1	[M]
JK1	RJH5210M	ANTENNA	1	[M] E, EB, EG
JK1	RJH5404M	ANTENNA	1	[M] GN
JK601	RJH2206	ROA PIN (AUX)	1	[M]
JK602	RJH5410	SP. TERMINAL	1	[M]
JK603	RJJ39T01	HP JACK	1	[M]
JK604	RJH2208	ROA PIN (SP. TERM)	1	[M]
△ JK901	SJS9236	AC IN	1	[M]
L3	RLQZPR47KT-Y	COIL	1	[M]
L4, L5	ELEPKR68MA	COIL	2	[M]
L6, L7	ELELN82KL	COIL	2	[M]
L8	RLQZP1RCKT-Y	COIL	1	[M]
L9	SLM1B1C-1M	COIL	1	[M] E, EB, EG
L301	RL089003-K	BIAS COIL	1	[M]
L303	RLGA470JTJ-Y	AXIAL COIL	1	[M]
L401	RL1500050T-Y	COIL	1	[M]
L501	RL1500050T-Y	COIL	1	[M]
L601	RL1500050T-Y	COIL	1	[M]
L804	RLQZ3470KT-D	COIL	1	[M]
△ L901	RLQZ271M	COIL	1	[M]
LC0801	RSL5186-L	LCD	1	[M]
P1	RPG3528	GIFT BOX	1	[M] GN
P1	RPG3568	GIFT BOX	1	[M] EG
P1	RPG3581	GIFT BOX	1	[M] E
P1	RPG3582	GIFT BOX	1	[M] EB
P2	SPSD152	PAD	1	[M]
P3	XZB25X34003X	POLYETHYLENE COVER	1	[M]
P4	RPH0192	SHEET	1	[M]

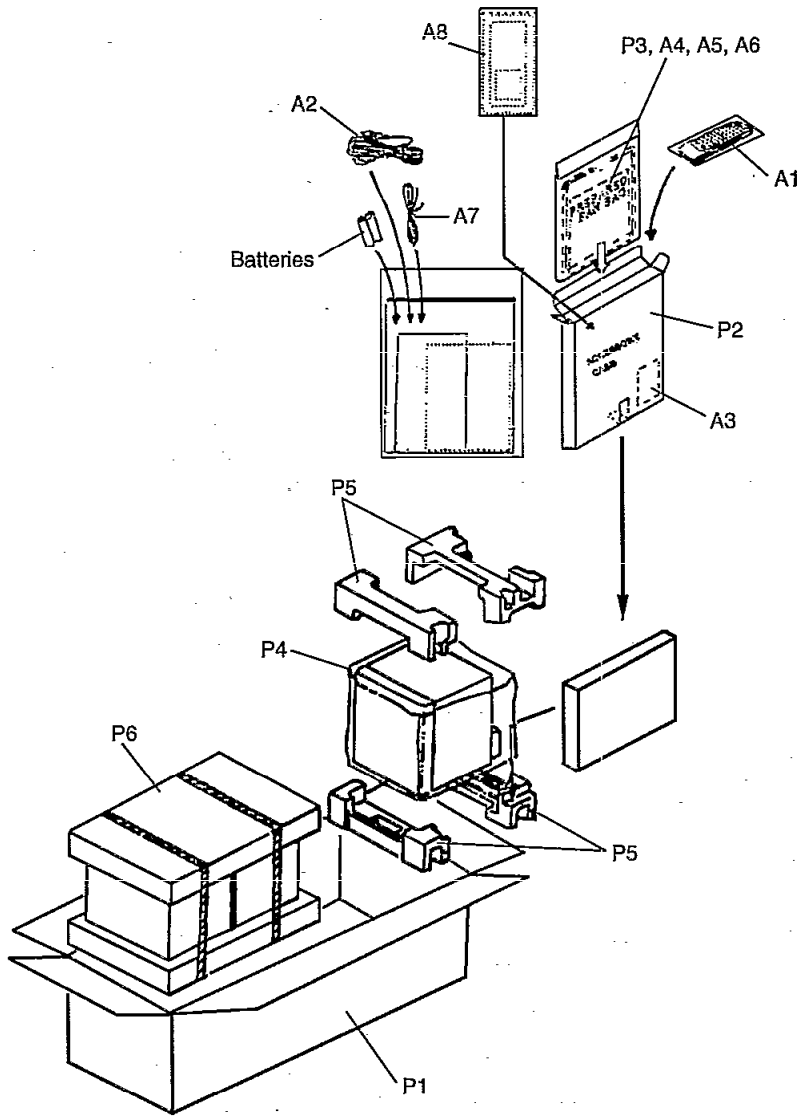
Ref. No.	Part No.	Part Name & Description	Pos	Remarks
P5	RPN1073	PAD	1	[M]
P6	RPN1084	PAD	1	[M]
Q8	2SC2787LTA	TRANSISTOR	1	[M]
Q7	RVTDTA114EST	TRANSISTOR	1	[M]
Q8, Q9	2SC1740SSTA	TRANSISTOR	2	[M]
Q10, 11	2SC2785FETA	TRANSISTOR	2	[M]
Q12	2SC2787LTA	TRANSISTOR	1	[M]
Q101, 02	2SJ400BTA	TRANSISTOR	2	[M]
Q103, 04	2SC2785FTA	TRANSISTOR	2	[M]
Q105	2SJ400BTA	TRANSISTOR	1	[M]
Q106	RVTDTG124TST	TRANSISTOR	1	[M]
Q201, 02	2SJ400BTA	TRANSISTOR	2	[M]
Q203, 04	2SC2785FTA	TRANSISTOR	2	[M]
Q205	2SJ400BTA	TRANSISTOR	1	[M]
Q206	RVTDTG124TST	TRANSISTOR	1	[M]
Q302	2SC1845FTA	TRANSISTOR	1	[M]
Q303	2SC2001LTA	TRANSISTOR	1	[M]
Q304	RVTDTG114TST	TRANSISTOR	1	[M]
Q305-09	2SC2785FTA	TRANSISTOR	5	[M]
Q310	RVTDTG114EST	TRANSISTOR	1	[M]
Q311	RVTDTG143XST	TRANSISTOR	1	[M]
Q313	2SC2785FTA	TRANSISTOR	1	[M]
Q317, 18	RVTDTA143XST	TRANSISTOR	2	[M]
Q319	2SD965RTA	FET	1	[M]
Q320	2SB103GRTA	TRANSISTOR	1	[M]
Q330	2SC2785FTA	TRANSISTOR	1	[M]
Q401, 02	2SC2785FTA	TRANSISTOR	2	[M]
Q404	2SC1740SLNST	TRANSISTOR	1	[M]
Q408	2SC2785FTA	TRANSISTOR	1	[M]
Q501, 02	2SC2785FTA	TRANSISTOR	2	[M]
Q504, 05	2SC1740SLNST	TRANSISTOR	2	[M]
Q506	2SC2785FTA	TRANSISTOR	1	[M]
Q507	2SC2001LTA	TRANSISTOR	1	[M]
Q508	2SC1740SLNST	TRANSISTOR	1	[M]
Q603	RVTDTA144EST	TRANSISTOR	1	[M]
Q606	RVTDTA114EST	TRANSISTOR	1	[M]
Q607	RVTDTA143XST	TRANSISTOR	1	[M]
△ Q608	2SC2785FTA	TRANSISTOR	1	[M]
△ Q609	2SA952LTA	TRANSISTOR	1	[M]
△ Q610	2SB1568E	TRANSISTOR	1	[M]
△ Q611	2SC2785FTA	TRANSISTOR	1	[M]
Q612	RVTDTA143TST	TRANSISTOR	1	[M]
Q613	RVTDTA114YST	TRANSISTOR	1	[M]
Q614	RVTDTG144EST	TRANSISTOR	1	[M]
△ Q615, 16	2SD2037ETA	TRANSISTOR	2	[M]
Q620	2SC2785FTA	TRANSISTOR	1	[M]
Q621	RVTDTA114EST	TRANSISTOR	1	[M]
Q622, 23	2SC2001KTA	TRANSISTOR	2	[M]
△ Q624	2SC2785FTA	TRANSISTOR	1	[M]
Q806	RVTDTG144EST	TRANSISTOR	1	[M]
Q907, 08	2SC2785FTA	TRANSISTOR	2	[M]
Q910	2SC2001KTA	TRANSISTOR	1	[M]
Q911	2SC2785FTA	TRANSISTOR	1	[M]
Q912	2SC2001KTA	TRANSISTOR	1	[M]
Q913	2SC2785FTA	TRANSISTOR	1	[M]
Q914	2SC2001KTA	TRANSISTOR	1	[M]
R15	ERDS2TJ101T	1/4W 100	1	[M]
R16	ERDS2TJ822T	1/4W 8.2K	1	[M] E, EB, EG
R17	ERDS2TJ331T	1/4W 330	1	[M]
R18	ERDS2TJ471T	1/4W 470	1	[M]
R19	ERDS2TJ474T	1/4W 470K	1	[M] E, EB, EG
R20	ERDS2TJ562T	1/4W 5.6K	1	[M]
R21	ERDS2TJ822T	1/4W 8.2K	1	[M]
R22	ERDS2TJ473T	1/4W 47K	1	[M]
R23	ERDS2TJ332T	1/4W 3.3K	1	[M]
R24	ERDS2TJ472T	1/4W 4.7K	1	[M]
R25	ERDS2TJ271T	1/4W 270	1	[M]
R26	ERDS2TJ471T	1/4W 470	1	[M]
R27	ERDS2FJ272	1/4W 2.7K	1	[M]
R28	ERDS2TJ473T	1/4W 47K	1	[M]
R29	ERDS2TJ101T	1/4W 100	1	[M]
R32, 33	ERDS2FJ272	1/4W 2.7K	2	[M]
R34, 35	ERDS2TJ103T	1/4W 10K	2	[M]

Ref. No.	Part No.	Part Name & Description	Pos	Remarks
R36, 37	ERDS2TJ474T	1/4W 470K	2	[M]
R38, 39	ERDS2TJ182T	1/4W 1.8K	2	[M]
R40	ERDS2TJ391T	1/4W 390	1	[M]
R41, 42	ERDS2TJ273T	1/4W 27K	2	[M]
R43-45	ERDS2TJ102T	1/4W 1K	3	[M]
R46	ERDS2TJ104T	1/4W 100K	1	[M]
R47	ERDS2TJ562T	1/4W 5.6K	1	[M]
R48	ERDS2TJ391T	1/4W 390	1	[M]
R49	ERDS2TJ561T	1/4W 560	1	[M]
R50	ERDS2TJ102T	1/4W 1K	1	[M]
R51	ERDS2TJ103T	1/4W 10K	1	[M]
R52-56	ERDS2TJ102T	1/4W 1K	5	[M]
R57, 58	ERDS2TJ103T	1/4W 10K	2	[M]
R60	ERDS2TJ563T	1/4W 56K	1	[M]
R61	ERDS2TJ102T	1/4W 1K	1	[M]
R63	ERDS2TJ103T	1/4W 10K	1	[M]
R64	ERDS2FJ680	1/4W 68	1	[M]
R65	ERDS2TJ103T	1/4W 10K	1	[M]
R76	ERDS2TJ331T	1/4W 330	1	[M]E, EB, EG
R77	ERDS2TJ474T	1/4W 470K	1	[M]E, EB, EG
R78	ERDS2FJ680	1/4W 68	1	[M]
R101	ERDS2TJ474T	1/4W 470K	1	[M]
R102	ERDS2TJ153T	1/4W 15K	1	[M]
R103	ERDS2FJ560	1/4W 56	1	[M]
R104	ERDS2TJ681T	1/4W 680	1	[M]
R105	ERDS2TJ103T	1/4W 10K	1	[M]
R107	ERDS2TJ834T	1/4W 330K	1	[M]
R109	ERDS2TJ273T	1/4W 27K	1	[M]
R110	ERDS2TJ222T	1/4W 2.2K	1	[M]
R111	ERDS2FJ392	1/4W 3.9K	1	[M]
R112	ERDS2TJ470T	1/4W 47	1	[M]
R113	ERDS2FJ392	1/4W 3.9K	1	[M]
R114	ERDS2TJ472T	1/4W 4.7K	1	[M]
R115	ERDS2TJ833T	1/4W 33K	1	[M]
R116	ERDS2TJ152T	1/4W 1.5K	1	[M]
R201	ERDS2TJ474T	1/4W 470K	1	[M]
R202	ERDS2TJ153T	1/4W 15K	1	[M]
R203	ERDS2FJ560	1/4W 56	1	[M]
R204	ERDS2TJ681T	1/4W 680	1	[M]
R205	ERDS2TJ103T	1/4W 10K	1	[M]
R207	ERDS2TJ334T	1/4W 330K	1	[M]
R209	ERDS2FJ273	1/4W 27K	1	[M]
R210	ERDS2FJ222	1/4W 2.2K	1	[M]
R211	ERDS2FJ392	1/4W 3.9K	1	[M]
R212	ERDS2TJ470T	1/4W 47	1	[M]
R213	ERDS2FJ392	1/4W 3.9K	1	[M]
R214	ERDS2TJ472T	1/4W 4.7K	1	[M]
R215	ERDS2TJ333T	1/4W 33K	1	[M]
R216	ERDS2TJ152T	1/4W 1.5K	1	[M]
R301	ERDS2TJ474T	1/4W 470K	1	[M]
R302	ERDS2TJ194T	1/4W 100K	1	[M]
R303	ERDS2TJ103T	1/4W 10K	1	[M]
R304, 05	ERDS2TJ152T	1/4W 1.5K	2	[M]
R307, 08	ERDS2TJ153T	1/4W 15K	2	[M]
R309	ERDS2TJ331T	1/4W 330	1	[M]
R310	ERDS2TJ103T	1/4W 10K	1	[M]
R311	ERD2FCJ4R7	1/4W 4.7	1	[M]
R312	ERDS2FJ752	1/4W 7.5K	1	[M]
R313	ERDS2TJ472T	1/4W 4.7K	1	[M]
R314	ERDS2TJ153T	1/4W 15K	1	[M]
R315	ERDS2TJ472T	1/4W 4.7K	1	[M]
R316	ERDS2TJ470T	1/4W 47	1	[M]
R317	ERDS2TJ103T	1/4W 10K	1	[M]
R318	ERDS2FJ682	1/4W 6.8K	1	[M]
R319	ERDS2FJ823	1/4W 82K	1	[M]
R320, 21	ERDS2TJ103T	1/4W 10K	2	[M]
R322	ERDS2TJ102T	1/4W 1K	1	[M]
R323	ERDS2TJ393T	1/4W 39K	1	[M]
R324	ERDS2TJ822T	1/4W 8.2K	1	[M]
R325	ERDS2TJ562T	1/4W 5.6K	1	[M]
R326	ERDS2FJ682	1/4W 6.8K	1	[M]
R327	ERDS2TJ102T	1/4W 1K	1	[M]
R328	ERDS2TJ101T	1/4W 100	1	[M]
R329	ERDS2TJ335T	1/4W 3.3K	1	[M]
R330	ERDS2FJ823	1/4W 82K	1	[M]

Ref. No.	Part No.	Part Name & Description	Pos	Remarks
R331	ERDS2TJ104T	1/4W 100K	1	[M]
R332	ERDS2TJ393T	1/4W 39K	1	[M]
R333	ERDS2TJ472T	1/4W 4.7K	1	[M]
R334	ERDS2TJ393T	1/4W 39K	1	[M]
R335	ERDS2FJ682	1/4W 6.8K	1	[M]
R336	ERDS2TJ681T	1/4W 680	1	[M]
R337	ERDS2TJ273T	1/4W 27K	1	[M]
R338	ERDS2TJ332T	1/4W 3.3K	1	[M]
R339	ERDS2TJ473T	1/4W 47K	1	[M]
R340	ERDS2TJ223T	1/4W 22K	1	[M]
R342	ERDS2TJ123T	1/4W 12K	1	[M]
R352	ERDS2TJ473T	1/4W 47K	1	[M]
R354	ERDS2TJ332T	1/4W 3.3K	1	[M]
R355	ERDS2TJ222T	1/4W 2.2K	1	[M]
R391	ERDS2TJ223T	1/4W 22K	1	[M]
R395	ERDS2TJ103T	1/4W 10K	1	[M]
R396, 97	ERDS2TJ102T	1/4W 1K	2	[M]
R399	ERDS2TJ102T	1/4W 1K	1	[M]
R401	ERDS2FJ183	1/4W 18K	1	[M]
R404	ERDS2TJ562T	1/4W 5.6K	1	[M]
R405	ERDS2FJ183	1/4W 18K	1	[M]
R408	ERDS2TJ393T	1/4W 39K	1	[M]
R410	ERDS2TJ472T	1/4W 4.7K	1	[M]
R411	ERDS2TJ222T	1/4W 2.2K	1	[M]
R414	ERDS2TJ472T	1/4W 4.7K	1	[M]
R415	ERDS2TJ223T	1/4W 22K	1	[M]
R416	ERDS2TJ104T	1/4W 100K	1	[M]
R417	ERDS2TJ472T	1/4W 4.7K	1	[M]
R418	ERDS2TJ473T	1/4W 47K	1	[M]
R423	ERDS2TJ273T	1/4W 27K	1	[M]
R424	ERDS2TJ102T	1/4W 1K	1	[M]
R425	ERDS2TJ562T	1/4W 5.6K	1	[M]
R426	ERDS2TJ520T	1/4W 82	1	[M]
R429, 30	ERDS2FJ2R2	1/4W 2.2	2	[M]
R433	ERDS2TJ100T	1/4W 10	1	[M]
R434	ERDS2TJ1R2T	1/4W 1.2	1	[M]
R435	ERDS2TJ1R0T	1/4W 1	1	[M]
R438	ERDS2TJ1G3T	1/4W 10K	1	[M]
R439	ERDS2FJ682	1/4W 6.8K	1	[M]
R444	ERDS2TJ103T	1/4W 10K	1	[M]
R501	ERDS2FJ183	1/4W 18K	1	[M]
R504	ERDS2TJ562T	1/4W 5.6K	1	[M]
R505	ERDS2FJ183	1/4W 18K	1	[M]
R508	ERDS2TJ333T	1/4W 33K	1	[M]
R510	ERDS2TJ472T	1/4W 4.7K	1	[M]
R511	ERDS2TJ222T	1/4W 2.2K	1	[M]
R514	ERDS2TJ472T	1/4W 4.7K	1	[M]
R515	ERDS2TJ223T	1/4W 22K	1	[M]
R516	ERDS2TJ104T	1/4W 100K	1	[M]
R517	ERDS2TJ472T	1/4W 4.7K	1	[M]
R518	ERDS2TJ473T	1/4W 47K	1	[M]
R519	ERDS2TJ153T	1/4W 15K	1	[M]
R520	ERDS2TJ223T	1/4W 22K	1	[M]
R521	ERDS2TJ472T	1/4W 4.7K	1	[M]
R522	ERDS2TJ222T	1/4W 2.2K	1	[M]
R523	ERDS2TJ273T	1/4W 27K	1	[M]
R524	ERDS2TJ102T	1/4W 1K	1	[M]
R525	ERDS2TJ562T	1/4W 5.6K	1	[M]
R526	ERDS2TJ820T	1/4W 82	1	[M]
R528	ERDS2TJ472T	1/4W 4.7K	1	[M]
R529, 30	ERDS2FJ2R2	1/4W 2.2	2	[M]
R533	ERDS2TJ100T	1/4W 10	1	[M]
R534	ERDS2TJ1R2T	1/4W 1.2	1	[M]
R535	ERDS2TJ1R0T	1/4W 1	1	[M]
R538	ERDS2TJ103T	1/4W 10K	1	[M]
R539	ERDS2FJ682	1/4W 6.8K	1	[M]
R540	ERDS2TJ474T	1/4W 470K	1	[M]
R541	ERDS2TJ182T	1/4W 1.8K	1	[M]
R542	ERDS2TJ222T	1/4W 2.2K	1	[M]
R544	ERDS2TJ103T	1/4W 10K	1	[M]
R606	ERDS2TJ472T	1/4W 4.7K	1	[M]
R607, 08	ERDS2TJ223T	1/4W 22K	2	[M]
R611	ERDS2TJ472T	1/4W 4.7K	1	[M]
R612	ERDS2TJ101T	1/4W 100	1	[M]
R613	ERDS2TJ681T	1/4W 680	1	[M]

Ref.No.	Part No.	Part Name & Description	Pos	Remarks	Ref.No.	Part No.	Part Name & Description	Pos	Remarks
R614	ERDS2TJ104T	1/4W 100K	1	[M]	R854	ERDS2TJ182T	1/4W 1.8K	1	[M]
R615, 16	ERDS2TJ334T	1/4W 330K	2	[M]	R855	ERDS2TJ222T	1/4W 2.2K	1	[M]
R617, 18	ERDS2TJ330T	1/4W 33	2	[M]	R856	ERDS2TJ272	1/4W 2.7K	1	[M]
R619	ERDS2TJ221T	1/4W 220	1	[M]	R857	ERDS2TJ472T	1/4W 4.7K	1	[M]
R623	ERDS2TJ103T	1/4W 10K	1	[M]	R858	ERDS2FJ682	1/4W 6.8K	1	[M]
R624	ERDS2TJ102T	1/4W 1K	1	[M]	R859	ERDS2TJ103T	1/4W 10K	1	[M]
R625	ERDS2TJ472T	1/4W 4.7K	1	[M]	R860	ERDS2TJ223T	1/4W 22K	1	[M]
R626	ERDS2TJ122T	1/4W 1.2K	1	[M]	R861	ERDS2TJ683T	1/4W 68K	1	[M]
R627	ERDS2TJ331T	1/4W 330	1	[M]	R862	ERDS2TJ473T	1/4W 47K	1	[M]
R628	ERDS2TJ103T	1/4W 10K	1	[M]	R864	ERDS2TJ102T	1/4W 1K	1	[M]
R629	ERDS2TJ331T	1/4W 330	1	[M]	R866	ERDS2TJ153T	1/4W 15K	1	[M]
R630	ERDS2TJ681T	1/4W 680	1	[M]	R867	ERDS2TJ152T	1/4W 1.5K	1	[M]
R631	ERDS2TJ103T	1/4W 10K	1	[M]	R868	ERDS2FJ105	1/4W 1M	1	[M]
R632-34	ERDS2TJ182T	1/4W 1.2	3	[M]	R869, 70	ERDS2TJ222T	1/4W 2.2K	2	[M]
R635, 36	ERDS2TJ222T	1/4W 2.2K	2	[M]	R871	ERDS2TJ103T	1/4W 10K	1	[M]
R637, 38	ERDS2TJ102T	1/4W 1K	2	[M]	R873	ERDS2TJ103T	1/4W 10K	1	[M]
R639	ERD2FCG470	1/4W 47	1	[M]	R875, 76	ERDS2TJ103T	1/4W 10K	2	[M]
R641	ERDS2TJ101T	1/4W 100	1	[M]	R877, 78	ERDS2TJ223T	1/4W 22K	2	[M]
R642	ERDS2TJ122T	1/4W 1.2K	1	[M]	R879	ERDS2TJ332T	1/4W 3.3K	1	[M]
R643	ERDS2TJ103T	1/4W 10K	1	[M]	R880, 81	ERDS2TJ102T	1/4W 1K	2	[M]
R644-47	ERDS1FVJ270T	1/2W 27	4	[M]	R882, 83	ERDS2TJ103T	1/4W 10K	2	[M]
R648	ERDS2TJ182T	1/4W 1.2	1	[M]	R884-86	ERDS2FJ220	1/4W 22	3	[M]
R649	ERDS2TJ151T	1/4W 150	1	[M]	R887-89	ERDS2TJ222T	1/4W 2.2K	3	[M]
R650	ERDS2TJ122T	1/4W 1.2K	1	[M]	R891	ERDS2TJ121T	1/4W 120	1	[M]
R651	ERDS2FJ272	1/4W 2.7K	1	[M]	R892	ERDS2FJ821	1/4W 820	1	[M]
R653	ERDS2FJ272	1/4W 2.7K	1	[M]	R893	ERDS2FJ393	1/4W 39K	1	[M]
R657	ERDS2TJ122T	1/4W 1.2K	1	[M]					
R658	ERDS2TJ333T	1/4W 33K	1	[M]	RM301	RRD0030	MOTOR	1	[M]
R659	ERDS2TJ472T	1/4W 4.7K	1	[M]					
R669	ERDS2TJ333T	1/4W 33K	1	[M]	S790, 91	RS1A005	SW	2	[M]
R672, 73	ERDS2TJ103T	1/4W 10K	2	[M]	S801-22	EVGPTD050	SW	22	[M]
R675	ERDS2TJ103T	1/4W 10K	1	[M]	S971	RS1A018-1U	SW	1	[M]
R678	ERDS2TJ103T	1/4W 10K	1	[M]	S972-75	RS1A019-1U	SW	4	[M]
R679	ERDS2TJ332T	1/4W 3.3K	1	[M]					
R680	ERDS2TJ104T	1/4W 100K	1	[M]	T901	RTP1M3B011-X	POWER TRANSFORMER	1	[M]
R682	ERDS2TJ472T	1/4W 4.7K	1	[M]					
R684	ERDS2TJ271T	1/4W 270	1	[M]	VR801	RRV16324104G	V. R	1	[M]
R685	ERDS2TJ101T	1/4W 100	1	[M]	VR802, 03	RRV09A05B54A	V. R	2	[M]
R686	ERDS2FJ3R3	1/4W 3.3	1	[M]					
R687	ERDS2TJ271T	1/4W 270	1	[M]	X1	RSXZ456KM01	OSCILLATOR	1	[M]
R801	ERDS2TJ472T	1/4W 4.7K	1	[M]	X2	RLPFFT11DD	OSCILLATOR	1	[M]
R802	ERDS2TJ223T	1/4W 22K	1	[M]	X3	SVG49U722T-S	OSCILLATOR	1	[M]
R804	ERDS2TJ332T	1/4W 3.3K	1	[M]	X801	EFCEN4194T4	OSCILLATOR	1	[M]
R805	ERDS2TJ102T	1/4W 1K	1	[M]	X802	RSXD32K7602	OSCILLATOR	1	[M]
R806, 07	ERDS2TJ101T	1/4W 100	2	[M]					
R808, 09	ERDS2TJ102T	1/4W 1K	2	[M]	Z1	RLA2Z002M-T	ANT COIL	1	[M]
R810	ERDS2TJ331T	1/4W 330	1	[M]	Z2	RL12Z005M-T	IF BLOCK	1	[M]
R811-13	ERDS2FJ823	1/4W 82K	3	[M]	Z3	ENV1729061Y	TUNER PACK	1	[M] E, EB, EG
R814	ERDS2TJ222T	1/4W 2.2K	1	[M]	Z3	RAL0023	TUNE PACK	1	[M] GN
R815	ERDS2TJ104T	1/4W 100K	1	[M]	Z801, 02	XAMR138	LAMP	2	[M]
R816	ERDS2TJ561T	1/4W 560	1	[M]	Z803	ROD12042TH	SENSOR	1	[M]
R817	ERDS2TJ104T	1/4W 100K	1	[M]	Z971	EXBFL3555YV	COMPONENT COMBINATION	1	[M]
R818	ERDS2TJ153T	1/4W 15K	1	[M]					
R819-24	ERDS2TJ472T	1/4W 4.7K	6	[M]					
R825	ERDS2TJ102T	1/4W 1K	1	[M]					
R826	ERDS2TJ103T	1/4W 10K	1	[M]					
R827-29	ERDS2TJ472T	1/4W 4.7K	3	[M]					
R830, 31	ERDS2TJ102T	1/4W 1K	2	[M]					
R832	ERDS2TJ222T	1/4W 2.2K	1	[M]					
R833	ERDS2TJ106T	1/4W 100	1	[M]					
R834	ERDS2TJ681T	1/4W 680	1	[M]					
R835	ERDS2TJ334T	1/4W 330K	1	[M]					
R836, 37	ERDS2TJ472T	1/4W 4.7K	2	[M]					
R838, 39	ERDS2TJ473T	1/4W 47K	2	[M]					
R840, 41	ERDS1FJ103	1/2W 10K	2	[M]					
R842, 43	ERDS2TJ102T	1/4W 1K	2	[M]					
R844	ERDS2TJ122T	1/4W 1.2K	1	[M]					
R845	ERDS2TJ182T	1/4W 1.8K	1	[M]					
R846	ERDS2TJ222T	1/4W 2.2K	1	[M]					
R847	ERDS2FJ272	1/4W 2.7K	1	[M]					
R848	ERDS2TJ472T	1/4W 4.7K	1	[M]					
R849	ERDS2FJ682	1/4W 6.8K	1	[M]					
R850	ERDS2TJ103T	1/4W 10K	1	[M]					
R851, 52	ERDS2TJ102T	1/4W 1K	2	[M]					
R853	ERDS2TJ122T	1/4W 1.2K	1	[M]					

■ Packaging



Replacement Parts List (for CD Servo Circuit)

All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks						
		CD SERVO CIRCUIT							
		INTEGRATED CIRCUIT(S)							
IC701	AN8835SBE1	IC							
IC702	MN662741RPA	IC							
IC703	AN8389SE1	IC							
		TRANSISTOR(S)							
Q701	ZSB709S	TRANSISTOR							
		COIL(S)							
L701-705	RLBN102V-Y	COIL							
		OSCILLATOR(S)							
X701	RSXB16M9J02T	OSCILLATOR							
		SWITCH(ES)							
S701	RSM0006-P	SW							
		CONNECTOR(S)							
CN701	RJU035T016-1	CONNECTOR(16P)							
CN702	RJS2A4230	CONNECTOR(30P)							

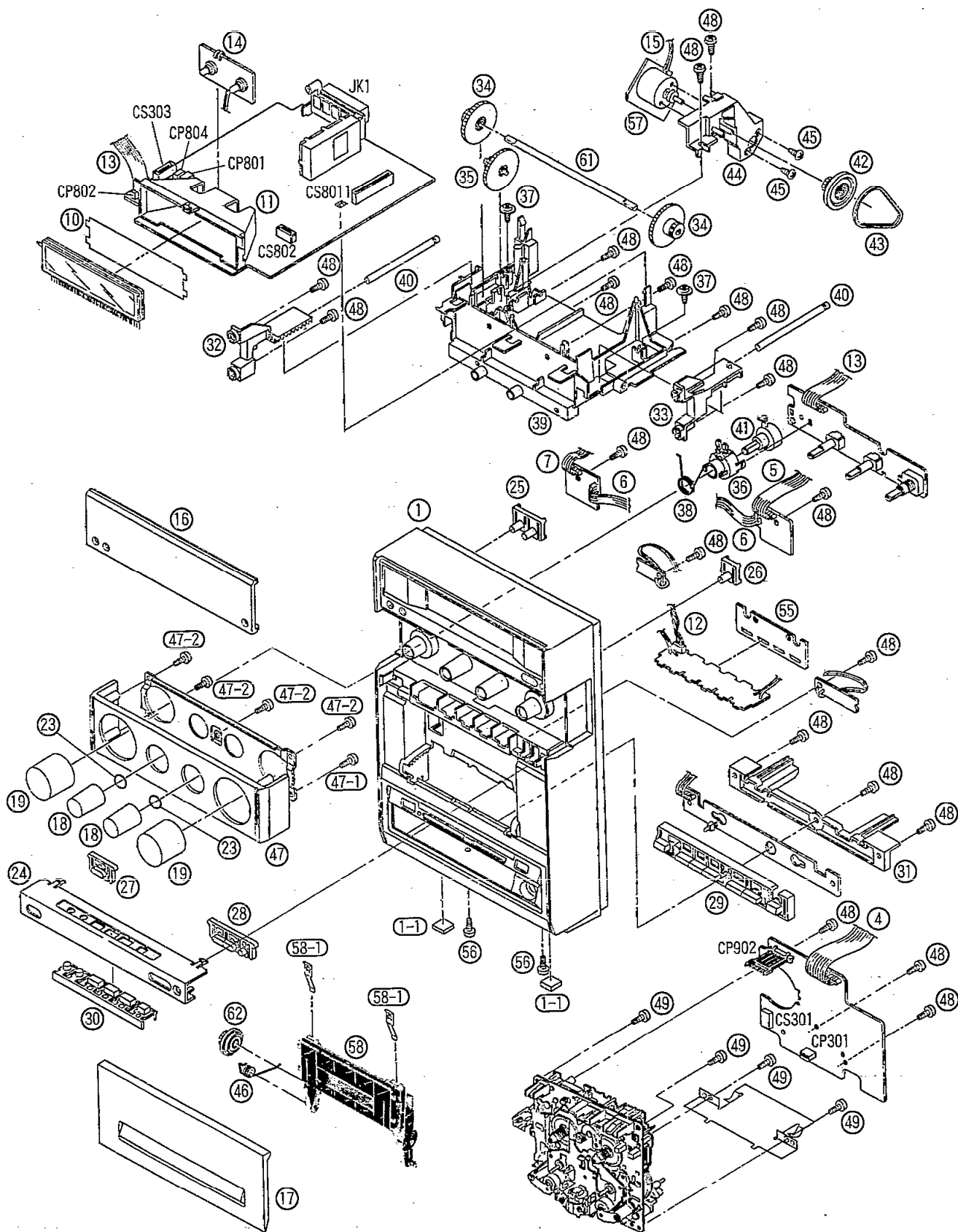
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks			
			C702	ECUZNE104MBN	25V 0.1U			
		RESISTORS	C703	ECEAOJKA1011	6.3V 100U			
			C704, 705	ECUZNE104MBN	25V 0.1U			
R701	ERJ6GEYJ4R7V	1/10W 4.7	C706	ECUV1H272KBN	50V 2700P			
R703	ERJ6GEYJ823	1/10W 82K	C707	ECUV1E273KBN	25V 0.027U			
R704	ERJ6GEYJ102A	1/10W 1K	C708	ECUE1H472KBN	50V 4700P			
R705	ERJ6GEYJ103V	1/10W 10K	C709	ECUE1C473KBN	16V 0.047U			
R706	ERJ6GEYJ102A	1/10W 1K	C710	ECUV1H182KBN	50V 1800P			
R707	ERJ6GEYJ474V	1/10W 470K	C711, 712	ECUWNE104ZFN	25V 0.1U			
R708	ERJ6GEYJ154V	1/10W 150K	C713	ECUV1C104MBN	16V 0.1U			
R709	ERJ6GEYJ683V	1/10W 68K	C714	ECEAOJKA1011	6.3V 100U			
R711	ERJ6GEYJ154V	1/10W 150K	C716	ECUE1H561KBN	50V 560P			
R712	ERJ6GEYJ221V	1/10W 220	C717	ECUWNE104ZFN	25V 0.1U			
R714	ERJ6GEYJ121V	1/10W 120	C718	ECUVNC224KBN	16V 0.22U			
R717, 718	ERJ6GEYJ102A	1/10W 1K	C721	ECUV1H100DCN	50V 10P			
R719	ERJ8GEYOR00A	1/8W 0.00	C722	ECUV1H150JCN	50V 15P			
R720	ERJ6GEYOR00A	1/10W 0.00	C723	ECEA1AKA2211	10V 220U			
R721	ERJ6GEYJ101V	1/10W 100	C724	ECUV1C104MBN	16V 0.1U			
R722	ERJ6GEYJ563V	1/10W 56K	C725, 726	ECUE1H102KBN	50V 1000P			
R723	ERJ6GEYJ182V	1/10W 1.8K	C730	ECUWNE104ZFN	25V 0.1U			
R724	ERJ6GEYJ333V	1/10W 33K	C731, 732	ECEAOJKA2211	6.3V 220U			
R725	ERJ6GEYJ472V	1/10W 4.7K	C733	ECUZNE104MBN	25V 0.1U			
R726	ERJ6GEYJ473V	1/10W 47K	C734	ECEA1AKA2211	10V 220U			
R727	ERJ6GEYJ822V	1/10W 8.2K	C735-737	ECUWNE104ZFN	25V 0.1U			
R728	ERJ6GEYJ103V	1/10W 10K	C738	ECUV1C154KBN	16V 0.15U			
R731	ERJ6GEYJ822V	1/10W 8.2K	C742	ECUV1E273KBN	25V 0.027U			
R735, 736	ERJ6GEYJ101V	1/10W 100	C743	ECUWNE104ZFN	25V 0.1U			
R744	ERJ6GEYJ103V	1/10W 10K	C744	ECUE1E822KBN	25V 8200P			
R745	ERJ6GEYJ155V	1/10W 1.5M	C745	ECUE1H102KBN	50V 1000P			
R748	ERJ6GEYJ182V	1/10W 1.8K	C747	ECUE1H222KBN	50V 2200P			
R749	ERJ6GEYJ682V	1/10W 6.8K	C748	ECUV1H471KBN	50V 470P			
R750, 751	ERJ6GEYJ473V	1/10W 47K	C749	ECUZNE104MBN	25V 0.1U			
R752	ERJ8GEYJ220V	1/8W 22	C750	ECUV1C104MBN	16V 0.1U			
R770, 771	ERJ6GEYJ155V	1/10W 1.5M	C751	ECUZNE104MBN	25V 0.1U			
R772	ERJ6GEYJ273V	1/10W 27K	C752	ECUE1H152KBN	50V 1500P			
			C753	ECUV1H471KBN	50V 470P			
		CHIP JUMPER(S)						
RJ701-710	ERJ8GEYOR00A	1/8W 0.00						
RJ711	ERJ6GEYOR00A	1/10W 0.00						
RJ713	ERJ6GEYOR00A	1/10W 0.00						
RJ714-717	ERJ8GEYOR00A	1/8W 0.00						
RJ721-731	ERJ6GEYOR00A	1/10W 0.00						
		TEST JUMPER(S)						
TJ701, 702	EYF8CU							
		CAPACITORS						
C701	ECEAOJKA3301	6.3V 33U						

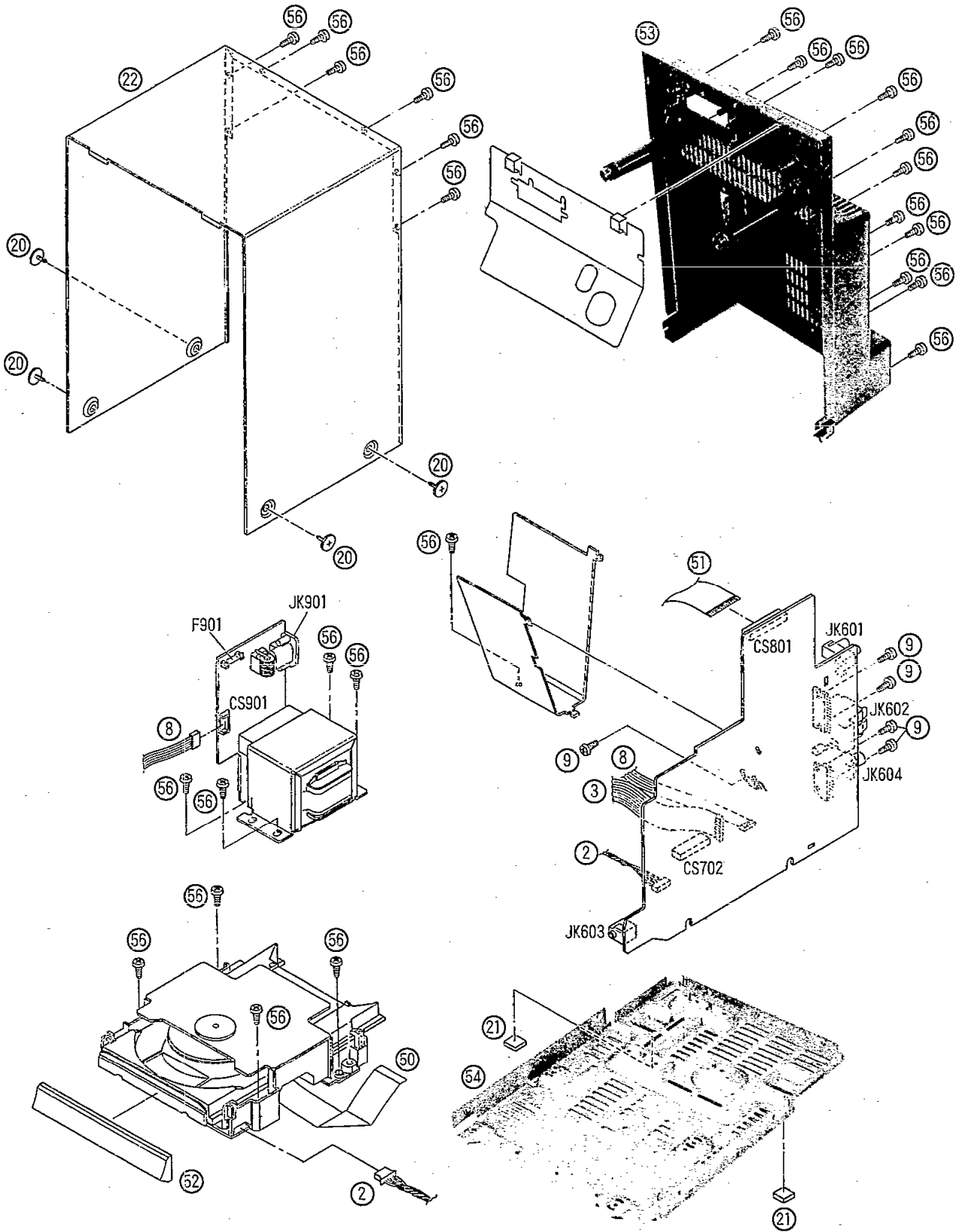
■ Replacement Parts List (for Mechanism and Loading Unit)

All parts are supplied by MESA.

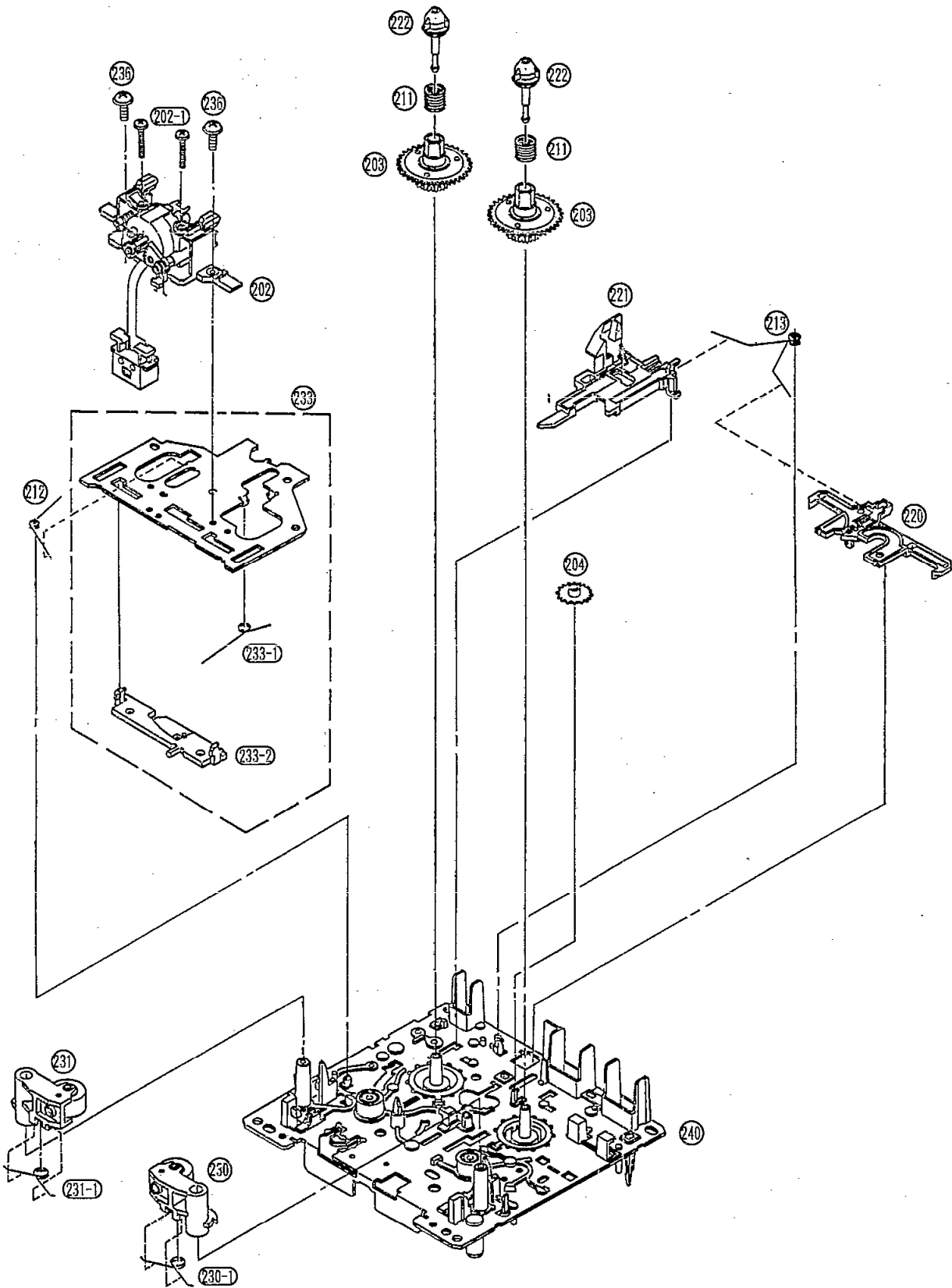
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS				LOADING UNIT	
202	RED0043	HEAD BLOCK(R/P)		301	RFKJXD707-K	LOADING CHASSIS ASS'Y	
202-1	RHD17015	SCREW		301-1	RDG0142	GEAR	
203	RDG0300	REEL TABLE ASS'Y		301-2	RDG0193	GEAR	
204	RDG0301	GEAR		301-3	RDP0065	PULLY	
205	RDK0026	GEAR		302	REM0019	MOTOR	
207	RDY0033-1	BELT1		303	RMK0255	BELT COVER	
208	RDW0034	BELT2		304	RGQ0144-K	DISC TRAY	
210	RMB0399	SPRING		305 △	RAE0150Z	TRAVERSE DECK	
211	RMB0400	SPRING		305-1	SHGD113-1	RUBBER(A)	
212	RMB0403	SPRING		305-2	SHSD38	SCREW	
213	RMB0404	SPRING		306	RMS0350	PIN(B)	
214	RMB0406	SPRING		307	RMS0123-1	PIN(A)	
215	RMB0408	SPRING		308	RME0109	SPRING(A)	
216	RML0370	LEVER		309	RME0142	SPRING(B)	
217	RML0371	LEVER		310	RMK0698-K	TRAVERSE CHASSIS	
218	RML0372	LEVER		311	XTV2+6G	SCREW	
219	RML0374	LEVER		312	RME0063	SPRING	
220	RMK0131	ROD		313	RMK0079-1	SLIDE PLATE(A)	
221	RMK0133	ROD		314	RML0178-1	LEVER	
222	RMQ0519	REEL CAP		315	RFKJLPG440-K	GEAR ASS'Y(B)	
223	RMS0398-1	SHAFT		316	RHD20009-1	SCREW	
224	RSJ0003	PLUNGER ASS'Y		317	RME0087	SPRING	
225	RUS6092C	SPRING		318	RML0349	LEVER	
226	RXF0049	FLYWHEEL ASS'Y		319	RMK0059-1	SLIDE PLATE(B)	
227	RXF0050	FLYWHEEL ASS'Y		320	RMK0334	HOLDER	
228	RXG0040	GEAR		321	RHM2452A	MAGNET	
229	RMK0283	SUB CHASSIS		322	RXQ0380	MAGNET HOLDER	
230	RXL0124	PINCH ROLLER ASS'Y		323	XTN26+6G	SCREW	
230-1	RMB0401	SPRING		324	RMA0793	CLAMPER	
231	RXL0125	PINCH ROLLER ASS'Y		325	XYN2+F6FZ	SCREW	
231-1	RMB0402	SPRING		326	RMG0158	BELT	
232	RXL0126	ARM		327	XTN26+6G	SCREW	
233	RXQ0412	CHASSIS ASS'Y					
233-1	RMB0405	SPRING					
233-2	RMK0132	ROD					
234	REM0055	MOTOR ASS'Y					
235	RHD26022	SCREW					
236	XTW2+5L	SCREW					
237	XTW26+10S	SCREW					
238	XYC2+JF17	SCREW					
240	RFKJSTR280PP	MAIN CHASSIS ASS'Y					

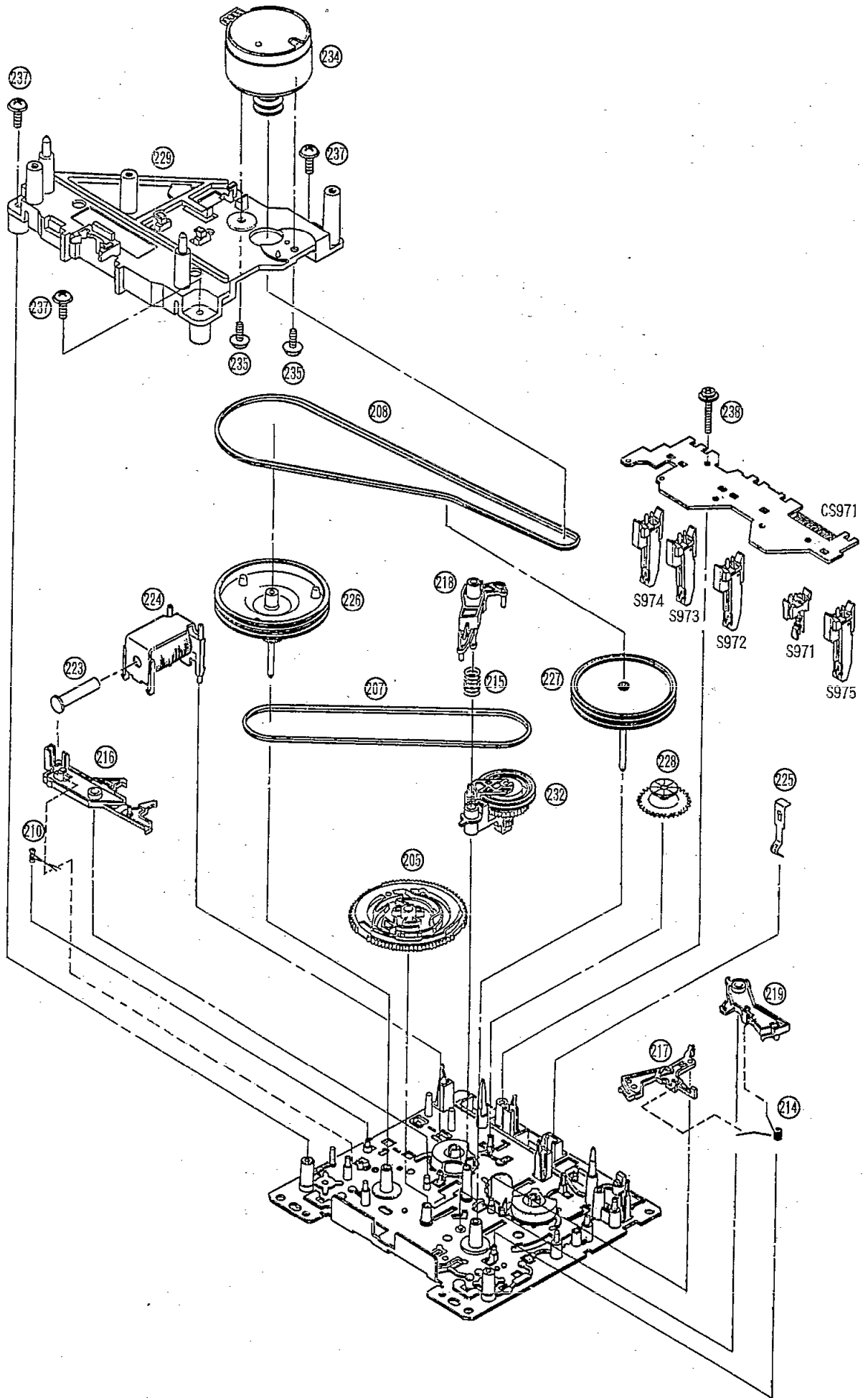
■ Cabinet Parts Location





■ Mechanism Parts Location





■ Loading Unit Parts Location

Note:

When changing mechanism parts, apply the specified grease to areas marked "××" as shown in the drawing.

Ref. No.	Part No.
①	RFKXEM30L

