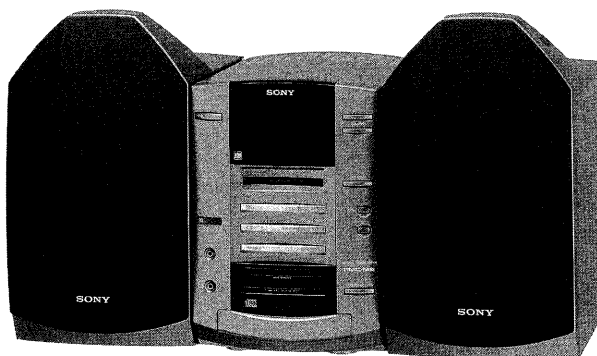


PMC-M2

SERVICE MANUAL

AEP Model
UK Model



CD Section	Model Name Using Similar Mechanism	CFD-703L
	CD Mechanism Type	CDM-M2-116
	Optical Pick-up Name	KSS-360A
MD Section	Model Name Using Similar Mechanism	MDS-S30
	MiniDisc Mechanism Type	MDM-2D
	MiniDisc Base Unit Name	MBU-2C
	Optical Pick-up Name	KMS-210A/J-N

SPECIFICATIONS

CD player section

System

Compact disc digital audio system

Number of programme positions

2

Frequency response

20 - 20,000 Hz +1/-2 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM : AEP, UK model 87.6 - 107 MHz

Italian model 87.5 - 108 MHz

AM 531 - 1,611 kHz

IF FM : 10.7MHz

AM : 450kHz

Aerials

FM : 75 ohm unbalanced

AM : External aerial terminals

MD player section

System

Minidisc digital audio system

Disc

MiniDisc

Laser diode properties

Material: GaAlAs

Wave length: 780nm

Emission duration: Continuous

Laser output: Less than 44.6µW

(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Recording/playback time

Maximum 74 minutes (with MDW-74)

Revolutions

400 rpm to 900 rpm (CLV)

Error correction

Advanced Cross Interleave Reed Solomon Code (ACIRC)

Sampling frequency

44.1 kHz

Coding

Adaptive TRAnsform Acoustic Coding (ATRAC)

Modulation system

EFM (Eight-to-Fourteen Modulation)

Number of programme positions

2 stereo programme positions

Frequency response

20 - 20,000 Hz +1/-2 dB

Signal-to-noise ratio

Over 80 dB (during playback)

Wow and flutter

Below measurable limit

—continued on next page—

PERSONAL MINIDISC SYSTEM
SONY®

General

Speaker

Woofer : 10 cm (4 in.) dia., 4 ohms cone type (2)
Tweeter : 5 cm (2 in.) dia., cone type (2)

Inputs

MIX MIC (minijack): Sensitivity 1.38 mV
LINE IN (phono jack): Sensitivity 436 mV

Outputs

Headphones jack (stereo minijack):
For 32 ohms impedance headphones
OPTICAL DIGITAL OUT (CD/MD) jack:
Output level -17 dBm
Wave length 660 nm

Maximum power output
25 W + 25 W

Power requirements

For personal minidisc system:
230 V AC, 50 Hz
For remote commander:
3 V DC, 2 R6 (size AA) batteries

Power consumption
75W

Dimensions (incl. projecting parts)

For personal minidisc system:
approx. 180 × 253 × 292 mm (w/h/d)
(7 1/8 × 10 × 11 1/2 inches)
For speaker:
approx. 175 × 309 × 250 mm (w/h/d)
(7 × 12 1/4 × 9 7/8 inches)

Mass

For personal minidisc system:
approx. 6.5 kg (14 lb. 5 oz)
For speaker:
approx. 3.7 kg (8 lb. 3 oz) (1 set)

Supplied accessories

Remote commander RMT-CM2 (1)
Sony SUM-3 (NS) batteries (2)
FM lead aerial (1)
AM loop aerial (1)

U.S. and foreign patents licensed from Dolby
Laboratories Licensing Corporation.

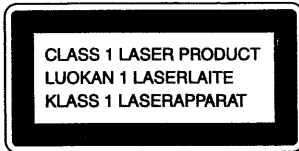
Design and specifications are subject to change without
notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICE NOTE

Information



This Personal Minidisc System is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the changed electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON CD LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30cm away from the objective lens.

CHECK THE CD LASER DIODE AND FOCUS SEARCH

Remove the CD section according to the disassembly (See page 29.). Then, remove the chucking chassis and connect it to other board.

Turn on power to the set, then press the CD OPEN/CLOSE $\triangle$ key to open the tray. Without inserting disc, press the CD OPEN/CLOSE $\triangle$ key again to close the tray.

Observe the objective lens and perform the following checks :

- ① Check that dispersed laser beams are seen.
- ② Check vertical movements of the objective lens.
(three times)

EXTENSION CABLE

When performing voltage measurement, etc., the following extension cable (flat type) should be used.

1-775-521-11 10pin 600mm MAIN board—FILTER board
(CN301) (CN505)

1-775-522-11 10pin 300mm FILTER board—MD MAIN board
(CN501) (CN206)

1-775-523-11 20pin 300mm FILTER board—MD MAIN board
(CN502) (CN205)

1-775-524-11 21pin 550mm MAIN board—FILTER board
(CN802) (CN506)

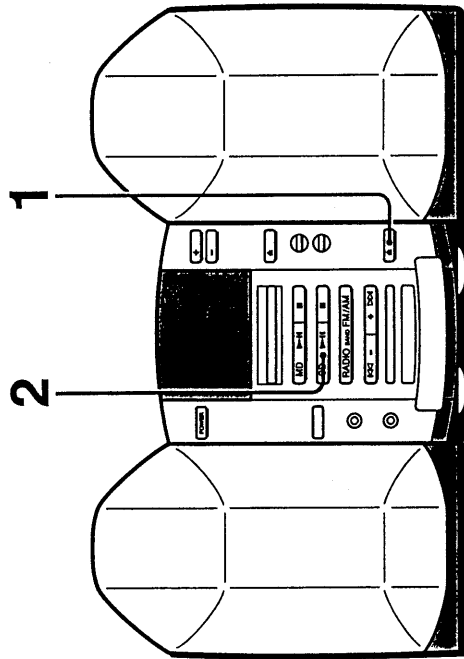
CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

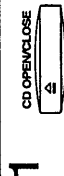
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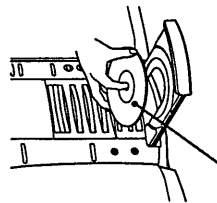
Playing a CD



For hookup instructions, see pages 48-49.



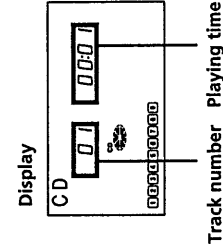
Press CD OPEN/CLOSE  and place the disc on the disc tray. The power automatically turns on (direct power-on).



With the label side up

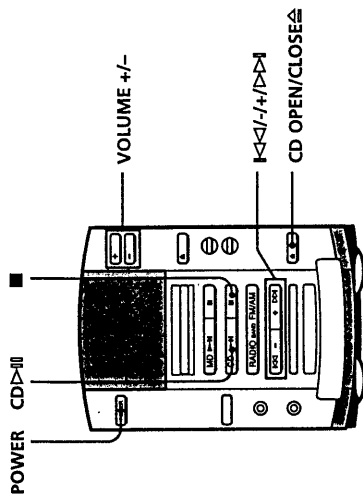


Press CD . The disc tray closes and the player plays all the tracks once.



Track number Playing time

Use these buttons for additional operations



To	Press
Adjust the volume	VOLUME +/-
Stop playback	CD
Pause playback	CD
Go to the next track	K<K>
Go back to the previous track	K>K
Remove the CD	CD OPEN/CLOSE
Turn on/off the player	POWER

Tips

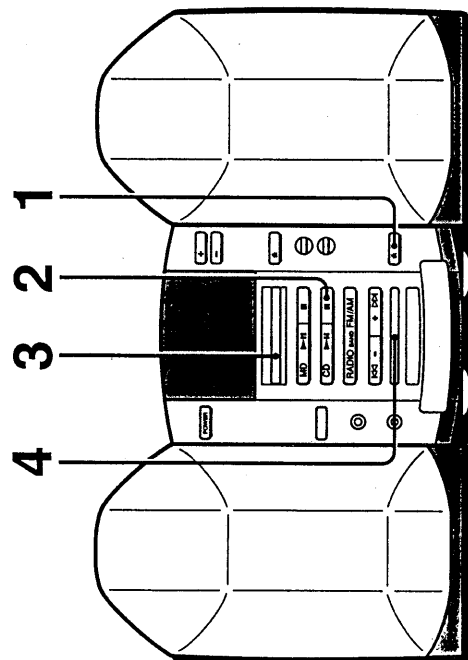
- Next time you want to listen to a CD, just press CD. The player turns on automatically and starts playing the CD.
- To locate the beginning of a track, you can also use the jog dial on the remote instead of K<K> OFF. Press JOG ON/OFF to light up the jog indicator, then turn the jog dial.
- You can play an MD following the CD playback. 1 Insert the MD after step 1 (page 8). 2 Press RELAY on the remote repeatedly until "CD-MD RELAY CONTINUE" appears in the display. 3 Press CD. After the CD finishes playing, the MD starts playing automatically.

SECTION 1 GENERAL

Basic Operations

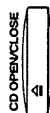
This section is extracted from instruction manual.

Recording a CD on an MD

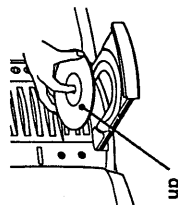


For hookup instructions, see pages 48-49.

1



Press CD OPEN/CLOSE and place the disc on the disc tray. The power automatically turns on (direct power-on).



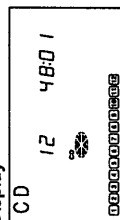
With the label side up

2

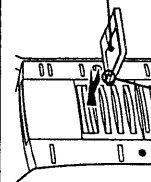


Press on the CD section. The player is ready to record the CD.

Display



3



Insert the recordable MD.

With the label side up

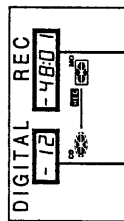
With the arrow pointing this way

4



Press CD → MD DIGITAL REC to start recording.

If the MD has any previous recording, recording will be made from the last recorded portion.



The number of tracks left on the CD

Remaining time on the CD

Note

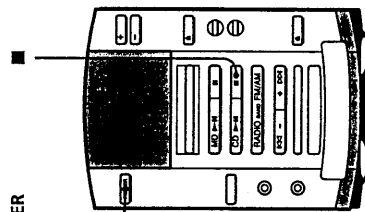
Do not move the player or pull out the power cord while "TOC EDIT" is flashing in the display, because the player updates the Table of Contents (TOC) during this time.

Tips

- Adjusting the volume or the audio emphasis will not affect the recording level.
- To record over previous recordings, see page 30.
- The track numbers are automatically marked when you record using the CD → MD DIGITAL REC button. These markers let you quickly locate the tracks later.

Use these buttons for additional operations

POWER



To Press

Stop recording

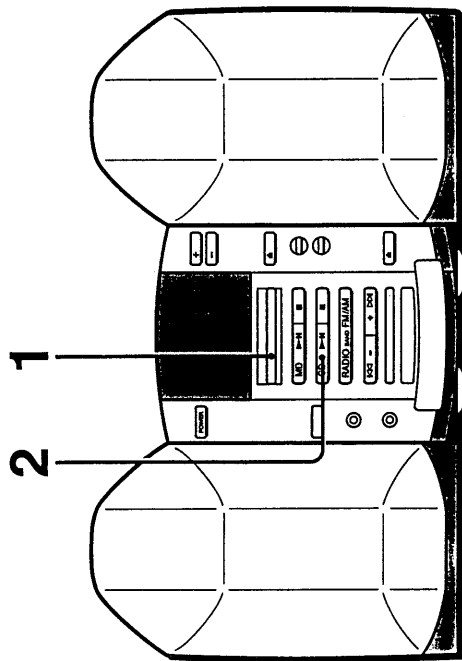
Turn on/off the player POWER

If "CD→MD OK?" alternates with time display

There is not enough space on the MD to record new data.

Press on the CD section and replace the MD with a recordable one. Or, press CD → MD DIGITAL REC again to record the CD.

Playing an MD



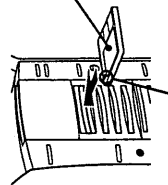
For hookup instructions, see pages 48-49.

1

Insert the MD.

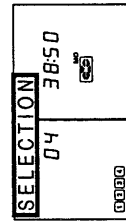
The player turns on automatically.

With the label side up



With the arrow pointing this way

Display



Disc name

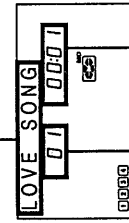
2

Press MD >III.

The player plays all the tracks once.

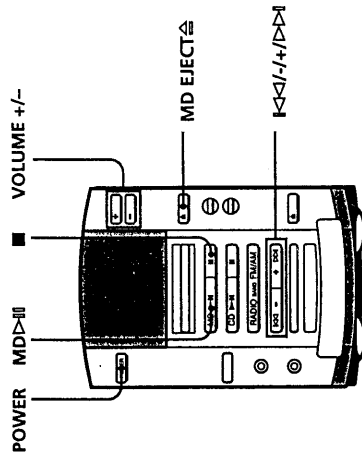


Track title



Track number Playing time

Use these buttons for additional operations

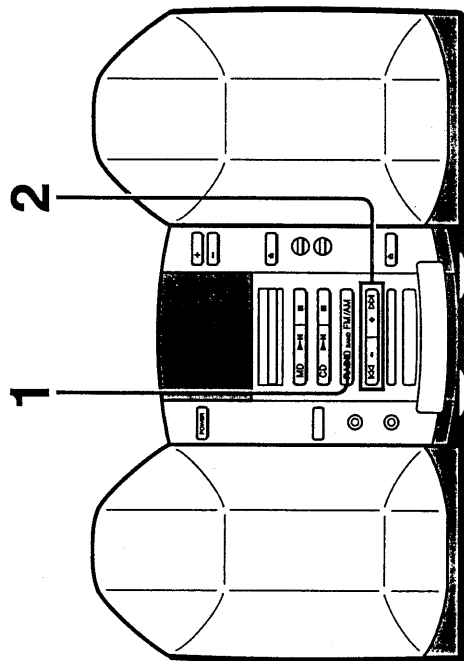


To	Press
Adjust the volume	VOLUME +/-
Stop playback	MD>III
Pause playback	Press again to resume play after pause.
Go to the next track	>>1/+
Go back to the previous track	<<1/-
Remove the MD	MD EJECT
Turn on/off the player	POWER

Tips

- Next time you want to listen to an MD, just press MD>III. The player turns on automatically and starts playing the MD.
- To locate the beginning of a track, you can also use the jog dial on the remote instead of <<1/- >>1. Press JOG ON/OFF to light up the jog indicator, then turn the jog dial.
- You can play a CD following the MD playback.
 - 1 Insert the CD after step 1.
 - 2 Press RELAY on the remote repeatedly until "MD-CD RELAY CONTINUE" appears in the display.
 - 3 Press MD>III. After the MD finishes playing, the CD starts playing automatically.

Listening to the radio

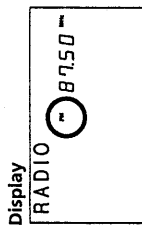


For hookup instructions, see pages 48-49.

1



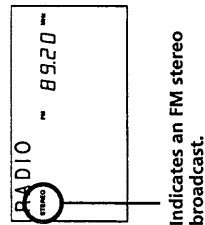
Press **RADIO BAND FM/AM** until the band you want appears in the display.
The power automatically turns on (direct power-on).



2

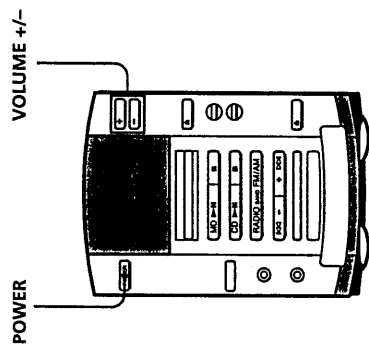


Hold down **+ / >** until the frequency digits begin to change in the display.
The player automatically scans the radio frequencies and stops when it finds a clear station.
If you can't tune in a station, press **TUNING +** on the remote repeatedly until the desired station appears.



Indicates an FM stereo broadcast.

Use these buttons for additional operations

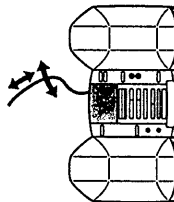


To	Press
Adjust the volume	VOLUME +/-
Turn on/off the radio	POWER

To improve broadcast reception

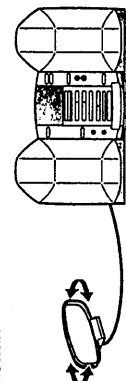
For FM

Extend and reorient the aerial.



For AM

Set the AM loop aerial away from the system, and reorient the aerial.

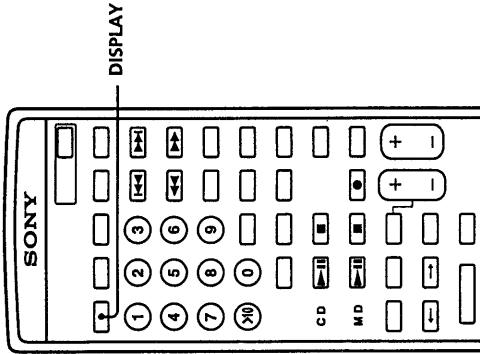


If you cannot improve the reception, connect an outdoor aerial (page 49).

Using the display

You can use the display to find out the following information about the disc:

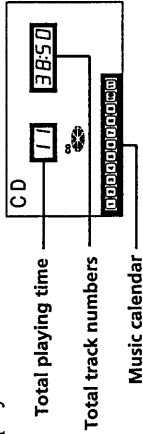
- Total number of tracks and playing time
- The remaining time or the number of tracks left



Checking the total track numbers and playing time

Press DISPLAY in stop mode.

If the disc has more than 17 tracks, "16<" appears in the display.



Checking the remaining time

Press DISPLAY while playing a disc.

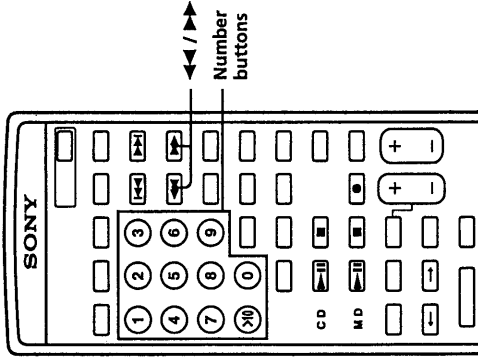
To display	Press DISPLAY
Remaining time on the current track*	Once
Remaining time on the disc and the number of tracks left	Twice
Playing time and the current track number	Three times

The track numbers in the music calendar disappear after they are played.

* If the disc has more than 21 tracks, the remaining time appears as ":-:" in the display.

Locating a specific track (Direct/Search Play)

You can quickly locate any track using the number buttons. You can also find a specific point in a track while playing a disc.



Note

You cannot start playback if "REP PGM," "REP SHUF," "PGM," or "SHUF" is lit in the display. Turn off the indication by pressing ■ on the CD section.

Tip

When you locate a track numbered over 10, press > 10 first, then the corresponding number buttons.

Example:

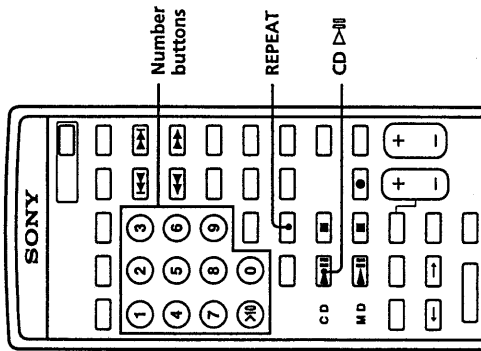
To play track number 23, press >10 first, then 2 and 3.

To locate

	Press
a specific track directly	a number button of the track.
a point while listening to the sound	▶▶ (forward) or ◀◀ (backward) while playing and hold down until you find the point.
a point while observing the display	▶▶ (forward) or ◀◀ (backward) in pause and hold down until you find the point.

Playing tracks repeatedly (Repeat Play)

You can play tracks repeatedly in normal, shuffle or programme play modes (see pages 15 - 17).



Tip

You can repeat all the tracks or only the current track while playing back by pressing REPEAT repeatedly until "REP ALL" or "REP 1" appears in the display.

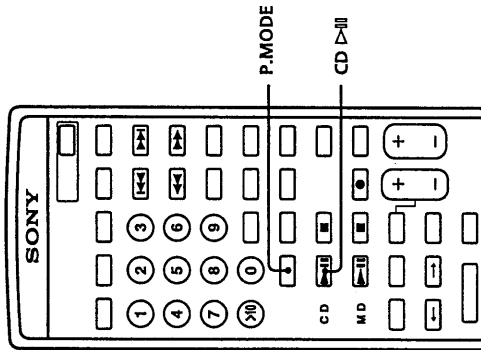
To repeat	Do this
a single track	1 Press REPEAT repeatedly until "REP 1" appears in the display.
all tracks	2 Press the number button. 1 Press REPEAT repeatedly until "REP ALL" appears in the display. 2 Press $\triangleright \parallel$ on the CD section.
tracks in random order	1 Start shuffle play. (see page 15) 2 Press REPEAT repeatedly until "SHUF REP" appears in the display.
programmed tracks	1 Start programme play. (see page 16). 2 Press REPEAT repeatedly until "REP PGM" appears in the display.

To cancel Repeat Play

Press $\blacksquare$ on the CD section in stop mode.

Playing tracks in random order (Shuffle Play)

You can play all the tracks on the CD in random order.



1 Press P.MODE repeatedly in stop mode until "SHUF" appears in the display.

2 Press $\triangleright \parallel$ on the CD section to start playback.

To cancel Shuffle Play

Press $\blacksquare$ on the CD section and press P.MODE repeatedly until "SHUF" disappears from the display.

Tips

- You cannot replay the previous track during shuffle play.

- You can play all the tracks on the CD and MD in random order.

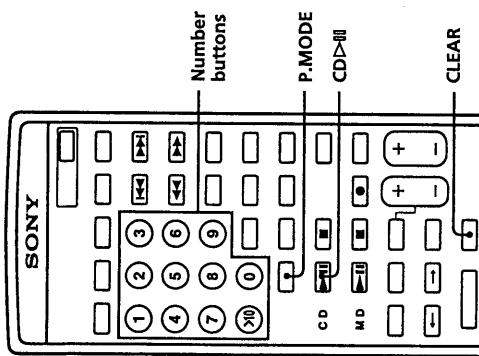
1 Insert the CD and MD.

2 Press RELAY on the remote repeatedly until "MD-CD RELAY SHUFFLE" appears in the display.

3 Press CD $\triangleright \parallel$.

Creating your own programme (Programme Play)

You can programme up to 20 tracks to play any order you want.

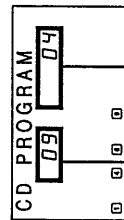


1 Press P.MODE in stop mode until "PGM" appears in the display.

2 Press the number buttons for the tracks you want to programme in the order you want.

Programmed tracks appear in the music calendar.

If you made a mistake, press CLEAR and re-enter the track number.



Programmed track

3 Press Δ III on the CD section to start programme play.

To cancel Programme Play

Press $\blacksquare$ on the CD section and press P.MODE repeatedly until "PGM" disappears from the display.

To check the order of tracks before play

Press ENTER.

Every time you press the button, the track number appears in the programmed order.

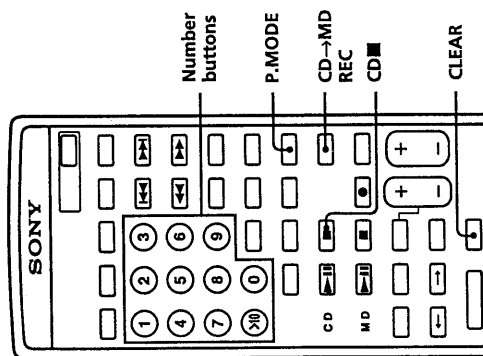
To change the current programme

Do the following before programme play starts.

To	Do this
Erase the last track in the programme	1 Press CLEAR. Each time you press CLEAR, the last track will be erased.
Change the whole programme completely	2 Re-enter the track number. 1 Press $\blacksquare$ on the CD section. 2 Start from step 2 (page 16) again.

Recording from CDs in the desired order

You can arrange the order of the CD tracks to be recorded. Also, you can change CDs if you want.



Tip

The track numbers are automatically marked when you record using the CD → MD REC button. These markers let you quickly locate the tracks later.

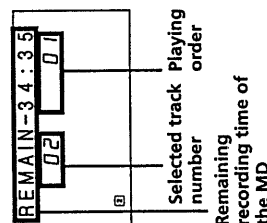
- 5 Press CD → MD REC to start recording.
Recording will be made from the last recorded portion on the MD and the tracks will be recorded in the order you selected.
After the recording ends, "Next Program" alternates with "CD Change" in the display, and the disc tray opens.
- 6 Insert the next CD, and repeat steps 4 and 5.

To stop recording

Press ■ on the CD section. If the CD tray is open, it will close automatically.

- 1 Insert a recordable MD.
- 2 Insert the first CD, and press ■ on the CD section.
- 3 Press EDIT.
- 4 "CD PROGRAM" appears in the display.
Press the number buttons to enter the tracks in the order you want to record.

The selected track number appears in the display.
To check the total time, press DISPLAY.



If "CD>MD OK?" alternates with time display

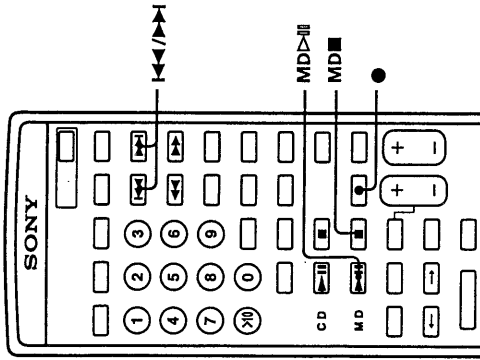
There is not enough space to record the selected track on the MD. Press CLEAR to erase the current track, or go to the next step if you record the track.

Tip

If you made a mistake, press CLEAR and re-enter the track number.

Recording from a radio

Track numbers are marked automatically when there is no sound input during recording for more than two seconds with good broadcast reception.



1 Insert a recordable MD.

2 Press ●.

The player is ready to start.

The remaining recording time of the MD alternates with "New" in the display.

3 Tune in the radio station you want to record.

4 Press ▷|| on the MD section to start recording. Recording will be made from the last recorded portion.

Tip

To mark track numbers after the recording ends, see "Dividing recorded tracks" on page 32.

Note

Press EJECT▲ or POWER if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC). "TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the power cord while "TOC EDIT" is flashing in the display.

To stop recording

Press ■ on the MD section.

To pause recording

Press ▷|| on the MD section.

To record over the previous recording

You must select the position to start recording after step 1 on page 20.

1 Select the desired position as follows :

- To record over from the beginning of the recorded track, press ■ on the MD section. Then press ◀◀/▶▶ to select the desired track number.
- To record over from a specific position of the recorded track, play the MD and press MD ▷|| at the desired position. The player enters pause mode.

2 Go to step 2 on page 20.

"Overwrite" appears instead of "New" in the display.

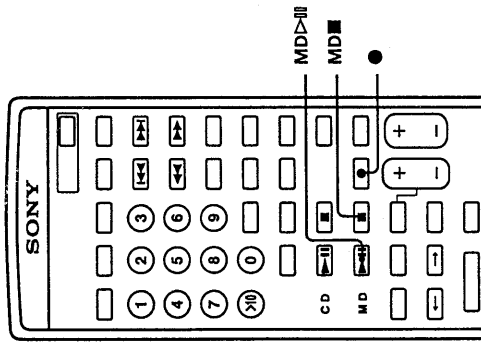
You can record over the previous recording just as you would using a tape deck. The previous recording remains or is erased depending on the length of the newly recorded track.

To mark track numbers while recording (Track Marking)

Press ● when you want to add a track mark while recording.

Recording a microphone/Using as a PA system

You can record sound using a microphone (not supplied) or use the player as a public address (PA) system. Track numbers are marked automatically when there is no sound input during recording for more than two seconds.



Recording through a microphone

- 1 Plug the microphone into the MIX MIC jack and turn on the microphone if it has a power switch.
- 2 Turn on the power.
- 3 Insert a recordable MD, and press **■** on the MD section.
- 4 Press **●**.
The player is ready to start.
The remaining recording time of the MD alternates with "New" in the display.
- 5 Press **▷||** on the MD section to start recording.
Recording will be made from the last recorded portion.

Tips

- You can also mix and record sounds by playing a CD after step 4. In this case, the CD is recorded in analog.
- Adjusting the volume or the audio emphasis will not affect the recording level.

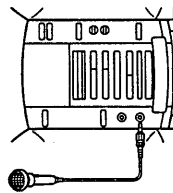
Notes

- Acoustic feedback (howling) tends to occur when you use a microphone with echo function.
- If acoustic feedback (howling) occurs, turn down the volume or move the microphone away from the speakers.

Note
Press **EJECT** or **POWER** if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC).
"TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the power cord while "TOC EDIT" is flashing in the display.

Tip

You can enjoy singing a song or talking over the music by connecting a microphone and playing back a CD.



The MD Player-Recording

To stop recording
Press **■** on the MD section.

To pause recording
Press **▷||** on the MD section.

- To record over the previous recording**
You must select the position to start recording after step 3 on page 22.
- 1 Select the desired position as follows :
 - To record over from the beginning of the recorded track, press **■** on the MD section. Then press **◀◀** / **▶▶** to select the desired track number.
 - To record over from a specific position of the recorded track, play the MD and press **MD ▷||** at the desired position. The player enters pause mode.
 - 2 Go to step 4 on page 22.
- "Overwrite" appears instead of "New" in the display.

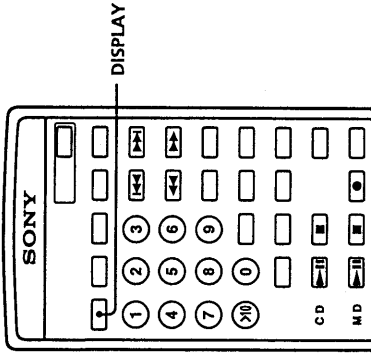
Using as a PA system

- 1 Do steps 1 and 2 of "Recording through a microphone" on the previous page.
- 2 Press **■** on the MD section.
- 3 Sing or speak into the microphone and adjust the volume.

Using the display

You can check information about the disc using the display. The following information appears in the display :

- Total track numbers and playing time
- The remaining time or the date/time you recorded

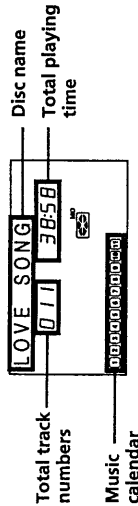


Tip
“MD” appears in the display if no disc name or track name is recorded on the MD.

Checking the total track numbers and playing time

Press DISPLAY in stop mode.

If the disc has more than 17 tracks, “16<” appears in the display.



Checking the remaining time or the date/time you recorded

Press DISPLAY while playing a disc.

The track numbers in the music calendar disappear after they are played.

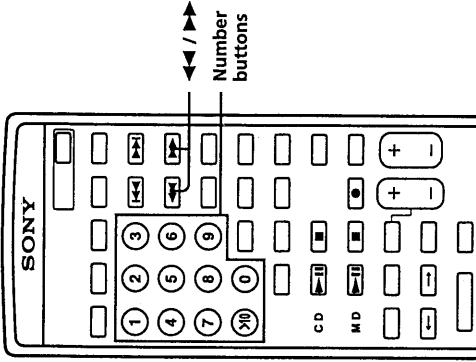
To display	Press DISPLAY
Remaining time on the current track	Once
Remaining time on the disc and the number of tracks left	Twice
The date/time you recorded*	Three times
Playing time and the current track number	Four times

- * The date/time you recorded is displayed for 10 seconds, then the playing time and the current track number appear. If no date or time is recorded on the MD, “- - - y - - m - - d” and “- - - : - - -” appear on the display. You cannot record the date or time with this recorder.

The MD Player-Playback

Locating a specific track (Direct/Search Play)

You can quickly locate any track using the number buttons. You can also find a specific point in a track while playing a disc.



Note

You cannot start playback if “REP PGM,” “REP SHUF,” “PGM,” or “SHUF” is lit in the display. Turn off the indication by pressing ■ on the MD section.

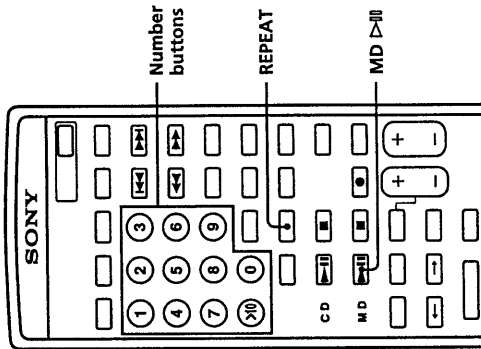
Tips

- When you locate a track numbered over 10, press > 10 first, then the corresponding number buttons.
Example:
To play track number 23, press > 10 first, then 2 and 3.
- To select a track numbered over 100, press > 10 twice, then the corresponding number buttons for the remaining digits.
Example:
To select track number 138, press > 10 twice, then 1, 3 and 8.

To locate	Press
a specific track directly	a number button of the track
a point while listening to the sound	▶▶ (forward) or ◀◀ (backward) while playing and hold down until you find the point.
a point while observing the display	▶▶ (forward) or ◀◀ (backward) in pause and hold down until you find the point.

Playing tracks repeatedly (Repeat Play)

You can play tracks repeatedly in normal, shuffle or programme play modes (see pages 27 – 28).



Tip
You can repeat all the tracks or only the current track while playing back by pressing REPEAT repeatedly until "REP ALL" or "REP 1" appears in the display.

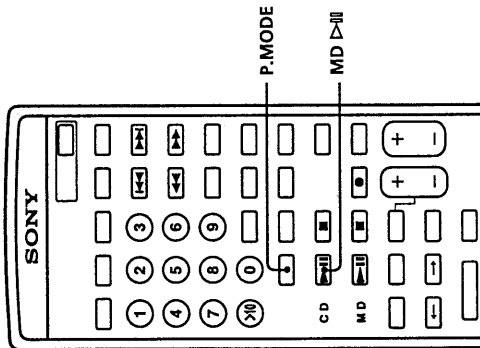
To repeat	Do this
a single track	1 Press REPEAT repeatedly until "REP 1" appears in the display. 2 Press the number button.
all tracks	1 Press REPEAT repeatedly until "REP ALL" appears in the display. 2 Press Δ on the MD section.
tracks in random order	1 Start shuffle play. (see page 27) 2 Press REPEAT repeatedly until "SHUF REP" appears in the display.
programmed tracks	1 Start programme play. (see page 28). 2 Press REPEAT repeatedly until "REP PGM" appears in the display.

To cancel Repeat Play

Press $\blacksquare$ on the MD section in stop mode.

Playing tracks in random order (Shuffle Play)

You can play all the tracks on the MD in random order.



- 1 Press P.MODE repeatedly in stop mode until "SHUF" appears in the display.
- 2 Press Δ on the MD section to start playback.

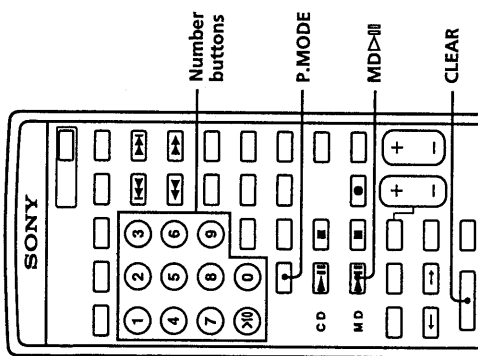
To cancel Shuffle Play

Press $\blacksquare$ on the MD section and press P.MODE repeatedly until "SHUF" disappears from the display.

- Tips**
- You cannot replay the previous track during shuffle play.
 - You can play all the tracks on the CD and MD in random order.
 - 1 Insert the CD and MD.
 - 2 Press RELAY on the remote repeatedly until "MD-CD RELAY SHUFFLE" appears in the display.
 - 3 Press MD Δ .

Creating your own programme (Programme Play)

You can programme up to 20 tracks to play any order you want.

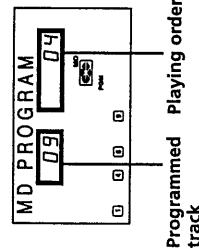


1 Press P.MODE in stop mode until "PGM" appears in the display.

2 Press the number buttons for the tracks you want to programme in the order you want.

Selected track number appears in the music calendar.

If you made a mistake, press CLEAR and re-enter the track number.



3 Press >||| on the MD section to start programme play.

- Tips**
- You can play the same programme again by pressing >|||, since the programme remains until you remove the disc.
 - To check the total time, press DISPLAY before playback. You cannot check the total time during playback.

To cancel Programme Play
Press ■ on the MD section and press P.MODE repeatedly until "PGM" disappears from the display.

To check the order of tracks before play
Press ENTER.

Every time you press the button, the track number appears in the programmed order.

To change the current programme

Do the following before programme play starts.

To	Do this
Erase the last track in the programme	1 Press CLEAR. Each time you press CLEAR, the last track will be erased.
Change the whole programme completely	2 Re-enter the track number. 1 Press ■ on the CD section. 2 Start from step 2 (page 28) again.

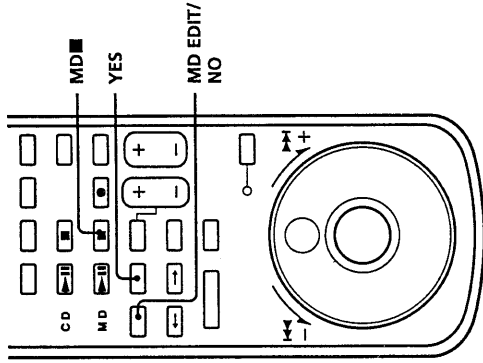
Erasing recordings

(Erase Function)

You can quickly erase the recorded sound or unnecessary portion recorded through a microphone. Unlike a tape deck, you don't have to record over the previous recordings.

Here are the three options to erase recordings:

- Erasing a single track
- Erasing all tracks
- Erasing a portion of a track



Note

Make sure to check the track number before pressing YES, since you cannot recover the erased track.

Tip

Use the corresponding buttons when you use the player.

Remote	Player
MD EDIT/NO	MD EDIT
YES	MD >

Note

If "TRK PROTECT" alternates with "Erase OK?" in the display, the track was recorded or edited on another MD player and is record-protected. If these indications appear, press YES to erase the track.

Erasing a single track

You can erase a track simply by specifying its track number. When you erase a track, the total number of tracks on the MD decreases by one and all tracks following the erased one are renumbered.

- 1 Play the track you want to erase.
- 2 Press MD EDIT/NO repeatedly until "Track Erase" appears in the display. Then press YES. "Erase OK?" appears in the display. If you want to cancel the erase function at this time, press MD EDIT/NO, or press ■ on the MD section.
- 3 Press YES to erase the track. "Complete" appears for a few seconds, and the track you selected is erased.

Note

Press EJECT▲ or POWER if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC).

"TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the mains lead while "TOC EDIT" is flashing in the display.

Erasing all tracks on an MD

Erasing all tracks deletes the disc name, all recorded tracks and titles. Note that you cannot recover the data once erased.

- 1 While the player is stopped, press MD EDIT/NO repeatedly until "Disc Erase" appears in the display. Then press YES. "All Erase?" appears in the display. If you want to cancel the erase function at this point, press MD EDIT/NO, or press ■ on the MD section.
- 2 Press YES. "Complete" appears for a few seconds, and all recorded tracks and titles are erased.

Erasing a portion of a track

By using the Divide (see page 32), Erase (see page 30), and Combine (see page 34) Functions, you can erase specific portions of a track.

Example : Erasing a portion of track A.



- 1 Divide A into 3 parts (see page 32).

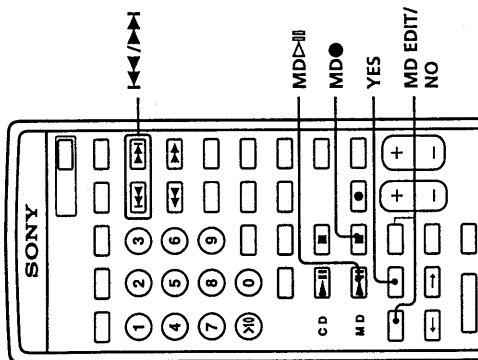
1	2	3	4	5
A#1	A#2	A#3	B	C
- 2 Erase #2 (see page 30).

1	2	3	4
A#1	A#3	B	C
- 3 Combine #1 and #3 (see page 34).

1	2	3
A (#1+#3)	B	C

Dividing recorded tracks (Divide Function)

You can assign track numbers at places you want to access later. Use this function to mark track numbers on the tracks recorded from an analog source (when recorded in analog, one track has several parts), or to divide a track. The total number of tracks on the MD increases by one and all tracks following the divided tracks are renumbered.



Note
Press EJECT or
press the button
marked with the
eject symbol
to open the disc
tray. The disc
will be ejected
automatically.
If the disc is not
ejected, press the
eject button
again.

Tips

- Use the corresponding buttons when you use the player.

Remote	Player
MD EDIT/NO	MD EDIT
YES	MD Δ

- To put the divided tracks together, see “Combining recorded tracks” on page 34.
- You can also divide tracks while recording. Press **●** on the MD section at the desired point.

Track number → ①

A	B	C	D
---	---	---	---

Dividing

Track ① is divided and a new tracks are created for B and C (② and ③)

①	②	③	④
A	B	C	D

- 1** While playing the MD, press Δ on the MD section at the point where you want to create a new track.
The player pauses.
- 2** Press MD EDIT/NO repeatedly until "Divide" appears in the display. Then press YES.
"Rehearsal" alternates with "Position OK?" in the display. The player repeats the portion to be divided.

**To shift the point to be divided
Press MD EDIT/NO.**

While monitoring the sound, press **◀◀/▶▶** to shift the starting point to be divided. Each time you press **◀◀/▶▶**, the point shifts about 0.06 second. You can shift the point up to 8 seconds before and after. Press **YES** when you decide the point.

If you want to cancel the erase function at this point, press MD EDIT/NO, or press ■ on the MD section.

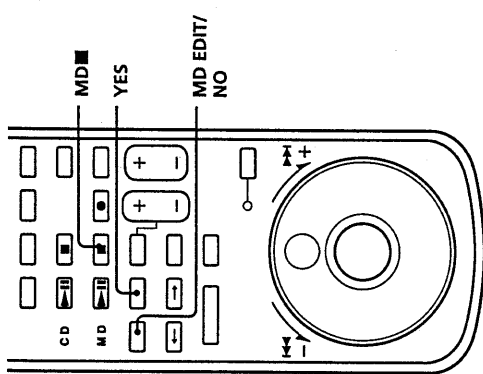
Press YES when you find the point to be divided.

After the track has been divided, "Complete" appears for a few seconds and the newly created track begins playing. The new track will have no track title even if the original track was labeled.

The MD Player–Editing

Combining recorded tracks (Combine Function)

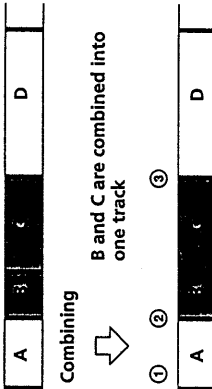
This function is useful for combining several tracks into a single one, or several independently recorded portions into a single track. When you combine two tracks, the total number of tracks decreases by one and all tracks following the combined tracks are renumbered.



Tips
Use the corresponding buttons when you use the player.

Remote	Player
MD EDIT/NO	MD EDIT
YES	MD $\triangleright$ II

Example: Combining B and C
Track number $\rightarrow$ ① ② ③ ④



- 1 Play back the track you want to combine.
Example: To combine track 3 and track 4, play back track 4.
- 2 Press MD EDIT/NO repeatedly until "Combine" appears in the display. Then press YES.
"Rehearsal" alternates with "Track OK?" in the display. The portion where the two tracks will join (i.e., the end of the first track and the beginning of the second track) is repeated.

- Notes**
- If "SORRY" appears in the display, the tracks cannot be combined. This sometimes happens when you've edited the same track many times. This is due to a technical limitation of the MD system (page 53) and is not a mechanical error.
 - Press EJECT or POWER if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC).
 - "TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the mains lead while "TOC EDIT" is flashing in the display.

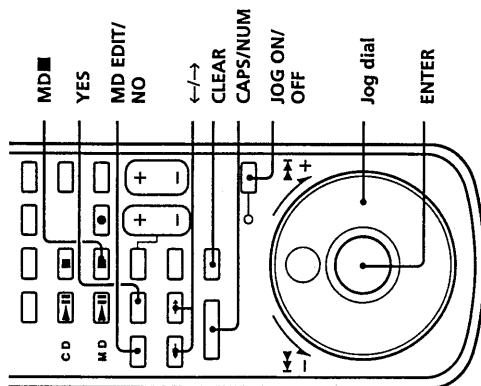
If the portion where the two tracks will join is not played back, press NO, and repeat from step 1 again.

If you want to cancel the erase function at this point, press MD EDIT/NO, or press $\blacksquare$ on the MD section.

- 3 When you find the portion, press YES.
After the tracks have been combined, "Complete" appears for a few seconds and the total number of tracks in the music calendar decreases by one. If both of the combined tracks have track titles, the title of the second track is erased.

Labeling recordings

You can create titles for your recorded MDs and tracks. Titles that you created appear in the display during MD operation.



Use the corresponding buttons when you use the player.

Remote	Player
MD EDIT/NO MD EDIT	
YES	MD ▷

Number buttons **◀◀/→**, **+ / ▷▷**

Press **EJECT** or **POWER** if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC).

"TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the mains lead while "TOC EDIT" is flashing in the display.

Diagram of a four-track tape. The tracks are labeled 1, 2, 3, and 4. Track 1 contains the character 'A', track 2 contains 'B', track 3 contains a blacked-out area, and track 4 contains 'D'. An arrow points to track 1.

①	②	③	④
	A	B	D

- 1 Play back the track you want to move.
- 2 Press MD EDIT/NO repeatedly until "Track Move" appears in the display. Then press YES.
→ Track 001?" appears in the display.
- 3 Press one of the number buttons to select the new track position.
If you want to cancel the move function at this point, press MD EDIT/NO, or press ■ on the MD section.
- 4 Press YES.
After you have moved the track, "Complete" appears for a few seconds.

- 1 Press MD EDIT/NO repeatedly until "Disc Name" appears in the display.

- 2 Press YES.
"JOG ON?" alternates with the disc name in the display if the disc has been labeled.
- 3 Press JOG ON/OFF until the jog dial indicator lights up.

The indicator goes off automatically if you don't turn the jog dial for one minute. In this case, press JOG ON/OFF again.

continued

- 4 Press CAPS/NUM repeatedly to select the type of characters.

Each time you press CAPS/NUM, the character changes as follows:

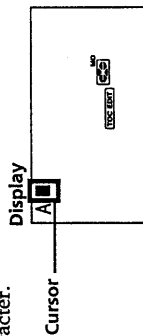
Upper case letters → Lower case letters → Numbers → Symbols

You can use the following characters:

The type of characters	Characters (symbols)
Upper case letters	ABCD...WXYZ./;(space)
Lower case letters	abcd...wxyz./;(space)
Numbers	0123456789
Symbols	!@#%&()*+,-.:;<=>?@_`/;(space)

- 5 Turn the jog dial to select the characters.
6 Press ENTER.

The cursor shifts rightward and waits for the input of the next character.



Note

Press EJECT or POWER if "TOC EDIT" remains lit even after recording ends, otherwise the player will not update the Table of Contents (TOC). "TOC EDIT" starts flashing in the display, and the player updates the TOC. Do not move the player or pull out the mains lead while "TOC EDIT" is flashing in the display.

- If you entered the wrong character, press ←/→ until the character to be corrected starts flashing, and repeat steps 5 and 6 to enter the correct character. Press CLEAR to erase all the characters.
- 7 Repeat steps 4 through 6 to complete the entire title.

If you want to cancel the title function at this point, press MD EDIT/NO, or press ■ on the MD section.

- 8 Press YES.
The title has been labeled.

Labeling a track

- 1 Play back the track you want to label.
- 2 Press MD EDIT/NO repeatedly until "Track Name" appears in the display.
- 3 Press YES.
"JOG ON?" alternates with disc name in the display if the disc name has been labeled.
- 4 Follow steps 3 through 8 on "Labeling an MD."

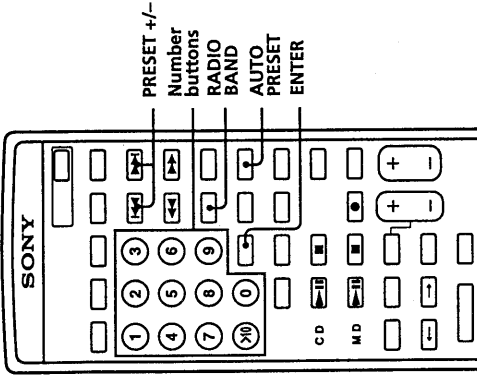
To change the existing title

Do the steps above.
A new title replaces the existing one.

Tip
You can quickly erase the disc name, all recorded tracks and titles on an MD. See "Erasing recordings" on page 30.

Presetting radio stations

You can store radio stations into the player's memory. You can preset up to 24 radio stations, 12 for each band in any order.



- 1 Press RADIO BAND until the band you want appears in the display.
- 2 Keep pressing AUTO PRESET until "AUTO PRESET" flashes in the display.
The preset stations are stored from preset number 1 in numerical order, from the lowest frequency.
When you are done presetting, the station of preset number 1 is tuned in automatically.

Note

The preset radio stations are erased when you disconnect the mains lead.

Tip

To select the preset number over 10, press >10 first, then the corresponding number buttons. You need to hold down the last number button for 3 seconds to enter the number. (Example: To select 12, press >10 and 1, then hold down 2 for 3 seconds.)

To preset radio stations manually

Use this function when stations with weak signal are skipped by automatic tuning or when you want to tune in a station to a desired preset number.

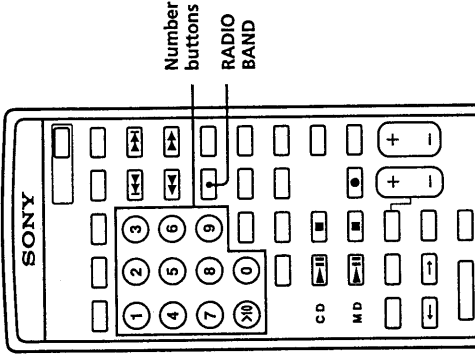
- 1 Press RADIO until the band you want appears in the display.
- 2 Press TUNING +/- to tune in a station you want.
- 3 Hold down the number button that you want to preset the new station on for 3 seconds.
The new station replaces the old one.

To erase preset radio stations

Hold down CLEAR for 3 seconds after you tuned in the station (page 41).

Playing preset radio stations

Once you've preset the stations, use the number buttons to tune in your favorite stations.



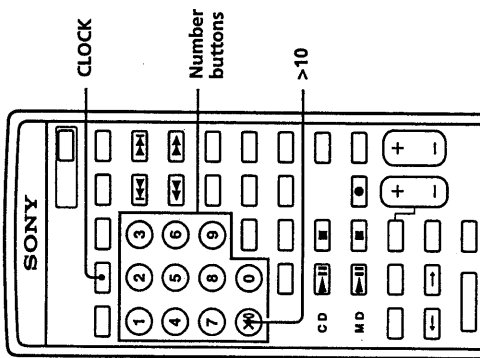
- 1 Press RADIO BAND to select the band.
- 2 Press the number buttons to tune in a stored station.
To tune in a preset station 11, press >10, and then press 1 and 1.

Tip

You can tune in a preset station with the player. Use PRESET +/- instead of the number buttons.

Setting the clock

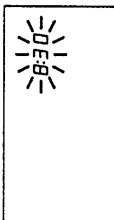
You need to set the clock to enjoy the timer-activated features of your system. "----" appears in the display until you set the clock.



Before you begin, connect the AC power cord, and insert the batteries in the remote (see page 49).

- 1 Hold down **CLOCK** until "----" flashes in the display.
- 2 Set the current hour and minute by pressing number buttons.

(Example: To select 8:30, press 8, and then press 3 and 0.)



- 3 Press **CLOCK**.

The clock starts from 00 seconds.

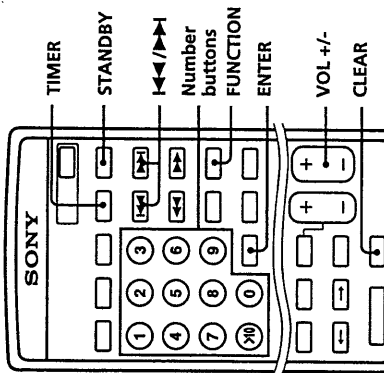
To display the time

Press **CLOCK**. To go back to the previous display, press **CLOCK** again.

Tip
If you made a mistake, press **CLEAR**. Each time you press **CLEAR**, the last setting will be erased. Re-enter the desired setting.

Waking up to music

You can wake up to music at a preset time. Make sure you have set the clock (see page 42).



The Timer

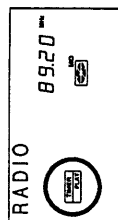
Before you begin, make sure that neither "TIMER PLAY" nor "TIMER REC" is lit in the display. To turn off the indications, press **STANDBY**.

- 1 Prepare the music source you want to play.

To play	Do this
a CD	Insert a CD.
an MD	Insert an MD.
the radio	Tune in a station.
the component connected to the LINE IN jacks	Turn on the power of the component or set the power to go on at the time you want.

- 2 Press **TIMER**.

Do the following steps while checking the display.



- 3 Press **←** or **→** until "TIMER PLAY" appears in the display, and press **ENTER**.

- 4 Press **FUNCTION** repeatedly until the music source you want appears, and press **ENTER**. "CD," "MD," "RADIO," or "LINE" appears in the display.

- 5 Set the time you want to start playback.

continued

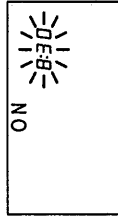
Waking up to music (continued)

Note

The setting will be cleared if you press an unrelated button such as  or  before you finish the setting. In this case, start from step 1 again.

Set the desired hour and minute by pressing number buttons and press ENTER.

(Example: To select 8:30, press 8, and then press 3 and 0.)



- 6 Set the time you want to stop playback (see step 5 above).
- 7 Press VOL +/- to set the volume, and press ENTER.
- 8 Press STANDBY.

The power goes off, and the player enters timer standby.

At the preset start time, the power will go on, the music will play, and  indicator will light up. The power will go off again at the preset stop time, and the player will enter timer standby.

To check/change when the playback will start

Press TIMER, then press ENTER. Each time you press ENTER, a stored setting lights up. Change the setting if you need to when the setting lights up. When you are done checking, press TIMER again.

To listen to the radio or do other operations after you set the timer

Press STANDBY until "TIMER PLAY" disappears from the display. After you finish listening to the radio or doing other operations, be sure to press STANDBY until "TIMER PLAY" appears in the display before the set time comes.

To cancel timer standby

Press STANDBY until "TIMER PLAY" disappears from the display.

To stop play

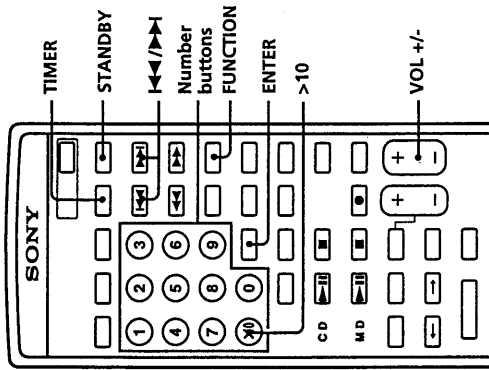
Press POWER.

Tip

The preset settings remain until you reset them.

Timer-recording radio programs

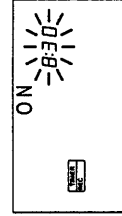
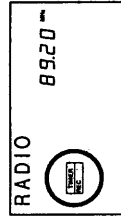
You can set the timer to record the radio program at a certain time. Make sure you have set the clock (see page 42).



The Timer

Before you begin, make sure that neither "TIMER PLAY" nor "TIMER REC" is lit in the display. To turn off the indications, press STANDBY.

- 1 Tune in the radio station you want to record, and insert a recordable MD.
- 2 Press TIMER.
Do the following steps while checking the display.
- 3 Press  or  until "TIMER REC" appears in the display, and press ENTER.
- 4 Press FUNCTION repeatedly until "RADIO" appears in the display, and press ENTER.
- 5 Set the time you want to start recording.



Set the desired hour and minute by pressing number buttons and press ENTER.

(Example: To select 8:30, press 8, and then press 3 and 0.)

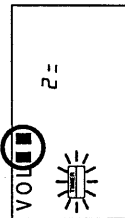
continued

Tips

- If you made a mistake, press CLEAR. Each time you press CLEAR, the last setting will be erased. Re-enter the desired setting.
- If "MD REC TIME" appears in the display, there is not enough space on the MD for recording. Replace with a recordable MD. If you record the MD as it is, the player ejects the MD when the MD becomes full.
- The preset settings remain until you reset them.

6 Set the time you want to stop recording (see step 5 on page 45).

7 Press VOL +/- to set the volume, and press ENTER.



8 Press STANDBY.

The power goes off, and the player enters timer standby.

At the preset start time, the power will go on, the recording will start, and the indicator will light up. The power will go off again at the preset stop time, and the player will enter timer standby.

To check/change when the recording will start

Press TIMER, then press ENTER. Each time you press ENTER, a stored setting lights up. Change the setting if you need to when the setting lights up. When you are done checking, press TIMER again.

To listen to the radio or do other operations after the timer setting

Press STANDBY until "TIMER REC" disappears from the display. After you finish listening to the radio or doing other operations, tune in the radio station you want to record, then press STANDBY until "TIMER REC" appears in the display. Be sure to press STANDBY before the set time comes.

To cancel timer standby

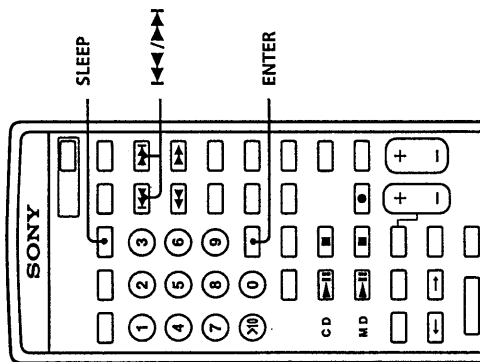
Press STANDBY until "TIMER REC" disappears from the display.

To stop recording

Press POWER.

Falling asleep to music

You can set the player to turn off automatically so you can fall asleep while listening to music. The power will turn off after 10 to 120 minutes depending on the length of time you chose.



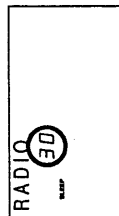
1 Play your favorite sound source (CD, MD or the radio).

2 Press SLEEP.

"SLEEP" appears in the display.

3 Press <<</>>> to select the time you want, then press ENTER.

The player will automatically turn off after the preset time has passed.



To cancel the sleep function

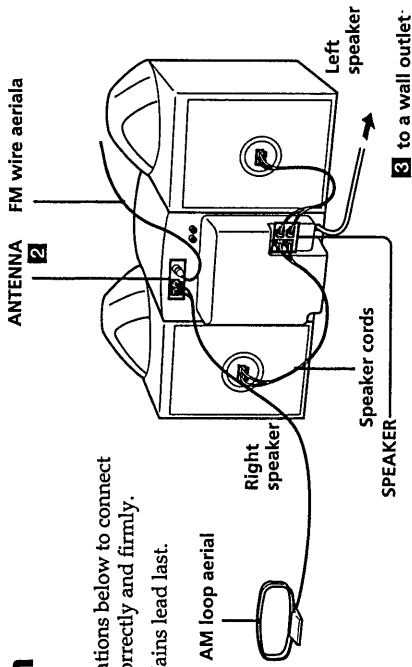
Press SLEEP again. "SLEEP" disappears from the display.

To change the preset time

Do steps 2 and 3 again.

Hooking up the system

Use the illustrations below to connect your system correctly and firmly. Connect the Mains lead last.

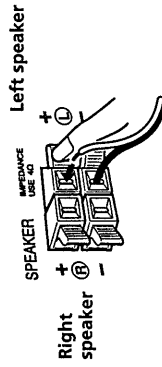


Note

Keep the aerials away from the player, the speaker cords and other connecting cords.

1 Hooking up the speakers

Connect the speaker cords to the main unit and to the speaker.



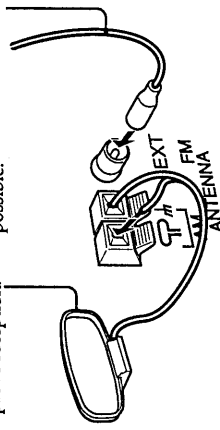
Connect the black wires to (-) minus and the red wires to (+) plus terminals; the right speaker wires to the R and the left speaker wires to the L terminals.

- ### Tips
- To improve FM reception, connect an outdoor FM aerial to the FM 75 Ω and h_i using a 75-ohm coaxial cable (not supplied).
 - To improve AM reception, connect a 6- to 15-meter (20- to 50-foot) insulated wire to the AM terminal and ground the h_i terminal. You can use the speaker with the net removed.

2 Hooking up the aerials

AM loop aerial (supplied)
Reorient the aerial to improve reception.

FM wire aerial (supplied)
Keep the aerial as horizontal as possible.



Setting up the loop aerial



3 Connecting the power

Connect the mains lead to the wall outlet after you have made all the above connections.

4 Inserting batteries into the remote



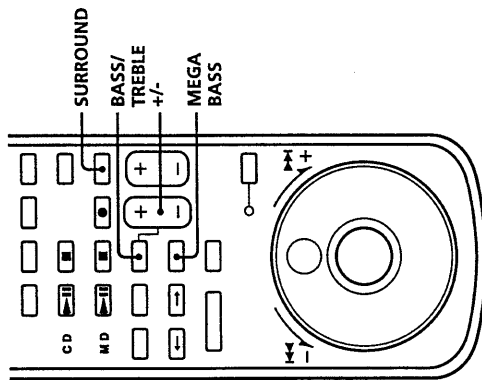
Insert two size AA (R6) batteries (supplied)

Replacing batteries

With normal use, the batteries should last for about six months. When the remote no longer operates the player, replace both batteries with new ones.

Adjusting the sound

You can adjust the audio emphasis of the bass sound or the bass/treble sound you are listening to.

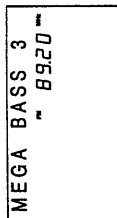


Reinforcing the bass sound

Press MEGA BASS to select the bass sound level.

Display

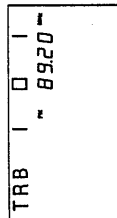
You can select from "MEGA BASS 0" to "MEGA BASS 3."



Adjusting the bass/treble sound

1 Press BASS/TREBLE to select BASS or TRB (treble).

2 Press +/- to adjust the bass or treble from -8 to +8 dB.



Enjoying the surround sound

Press SURROUND.

"SURROUND" appears in the display.

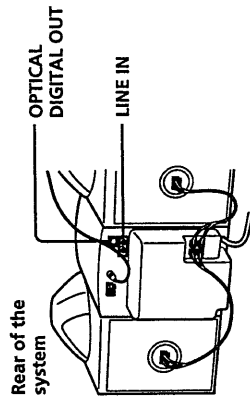
Tip

Sound adjustments is more effective at lower volumes. When the volume is high, the sound adjustments may not be effective.

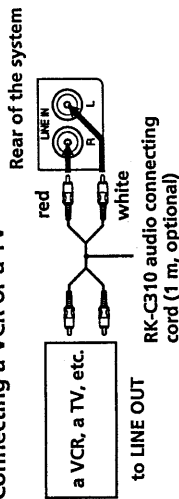
Connecting optional components

You can enjoy TV or VCR sound through internal speakers by connecting a TV or VCR to this player.

Be sure to turn off the power of each component before making connections. Refer to the instructions of each component.

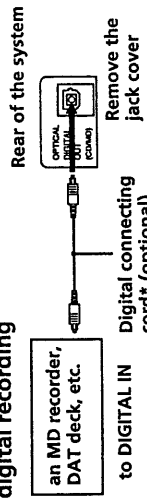


Connecting a VCR or a TV



When you use the connected component, turn on the power, and press FUNCTION on the remote until "LINE" appears in the display.

Connecting an MD recorder or DAT deck for digital recording



When you use the connected component, turn on the power, and start recording.

To record the sound from the connected components

- 1 Insert the recordable MD.
- 2 Press FUNCTION on the remote until "LINE" appears in the display.
- 3 Press ●.

The player is ready to start.

4 Press ► on the MD section to start recording.

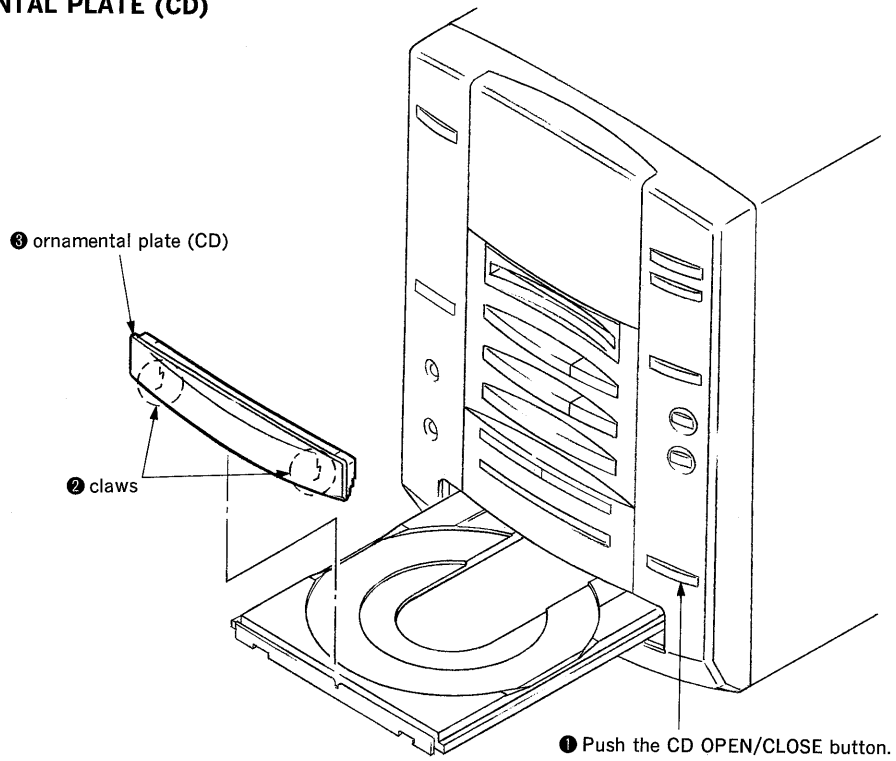
5 Play the optional component connected to LINE IN.

Setting Up

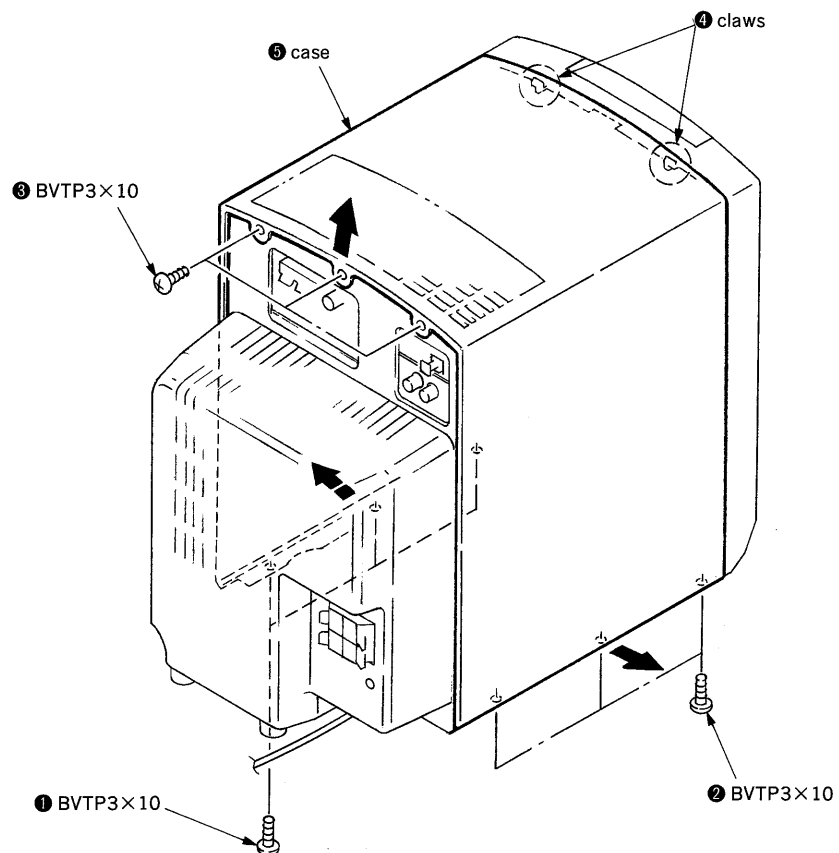
SECTION 2 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

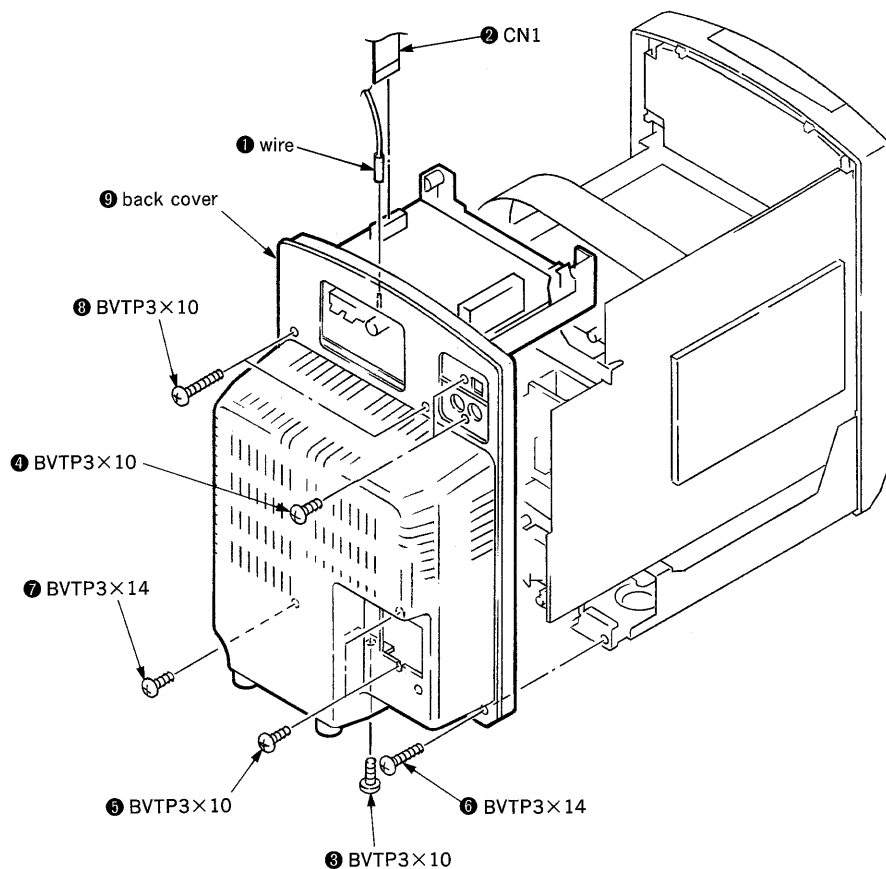
2-1. ORNAMENTAL PLATE (CD)



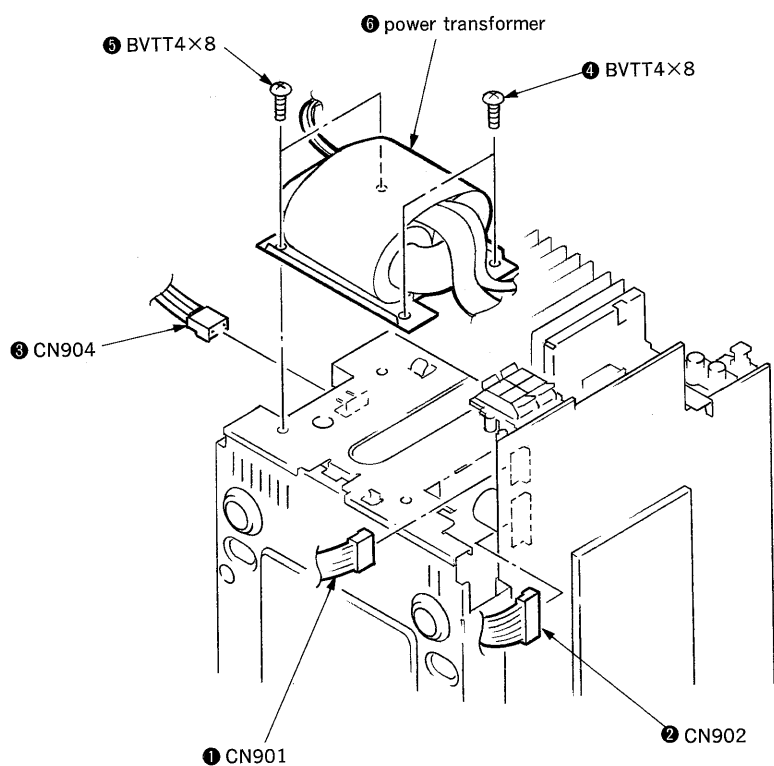
2-2. CASE



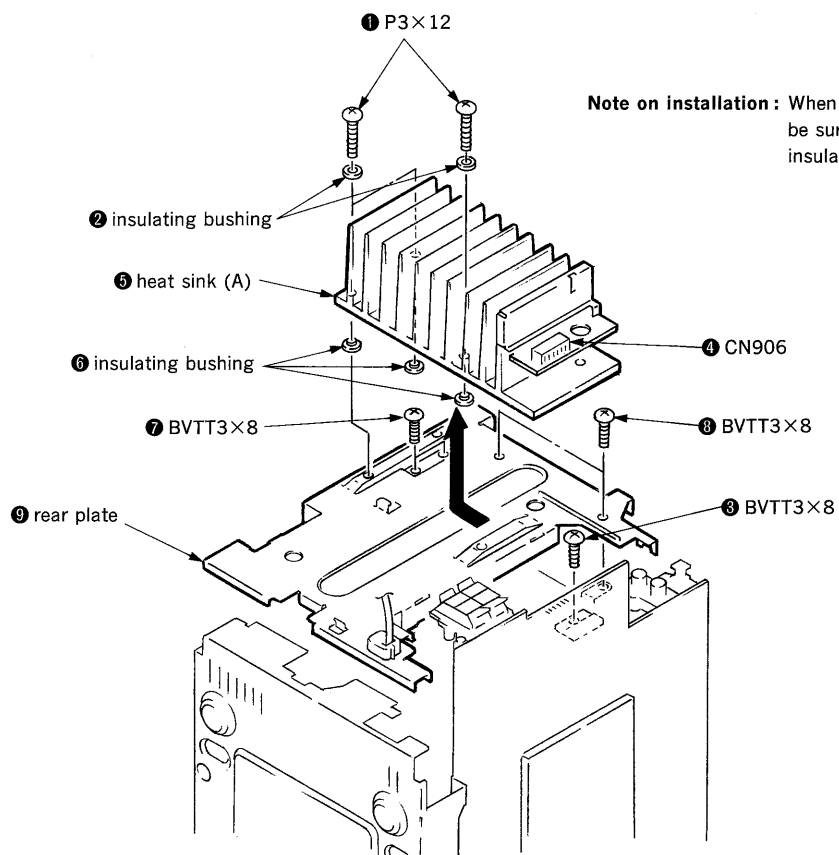
2-3. BACK COVER



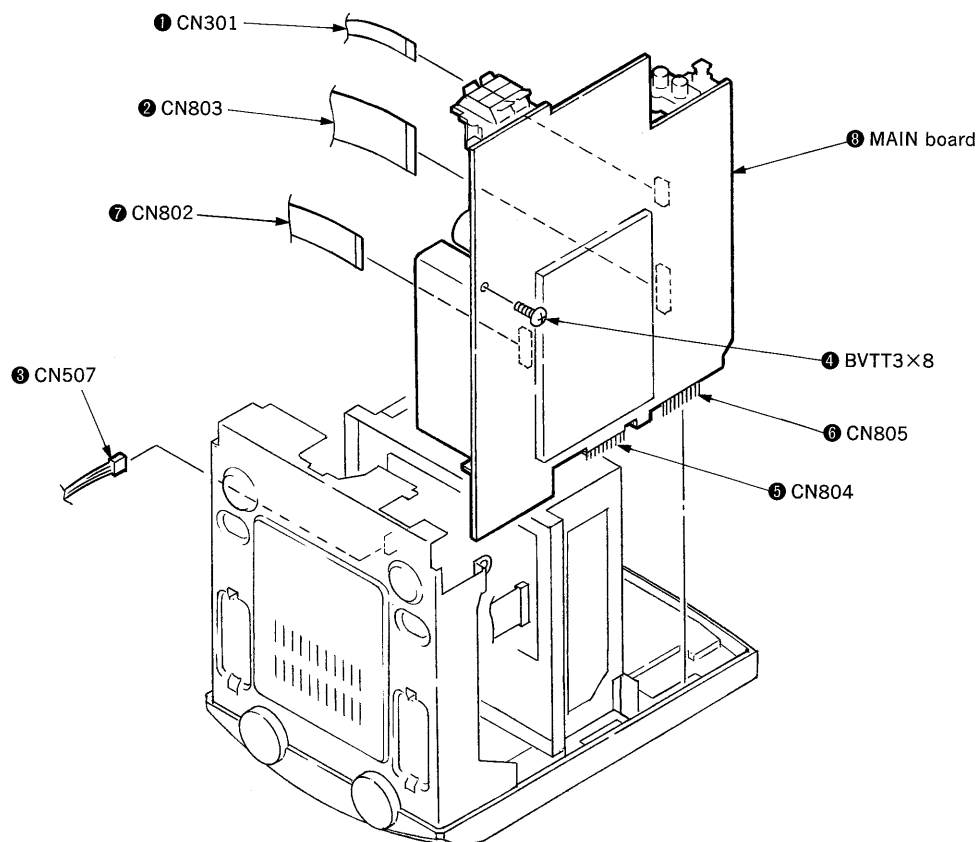
2-4. POWER TRANSFORMER



2-5. REAR PLATE

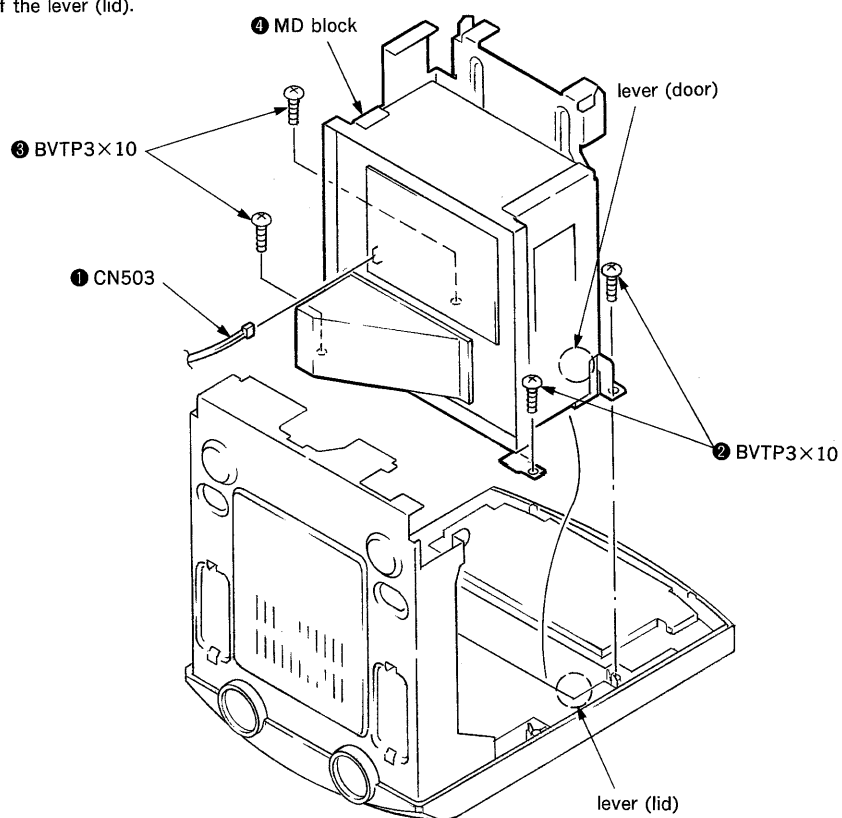


2-6. MAIN BOARD

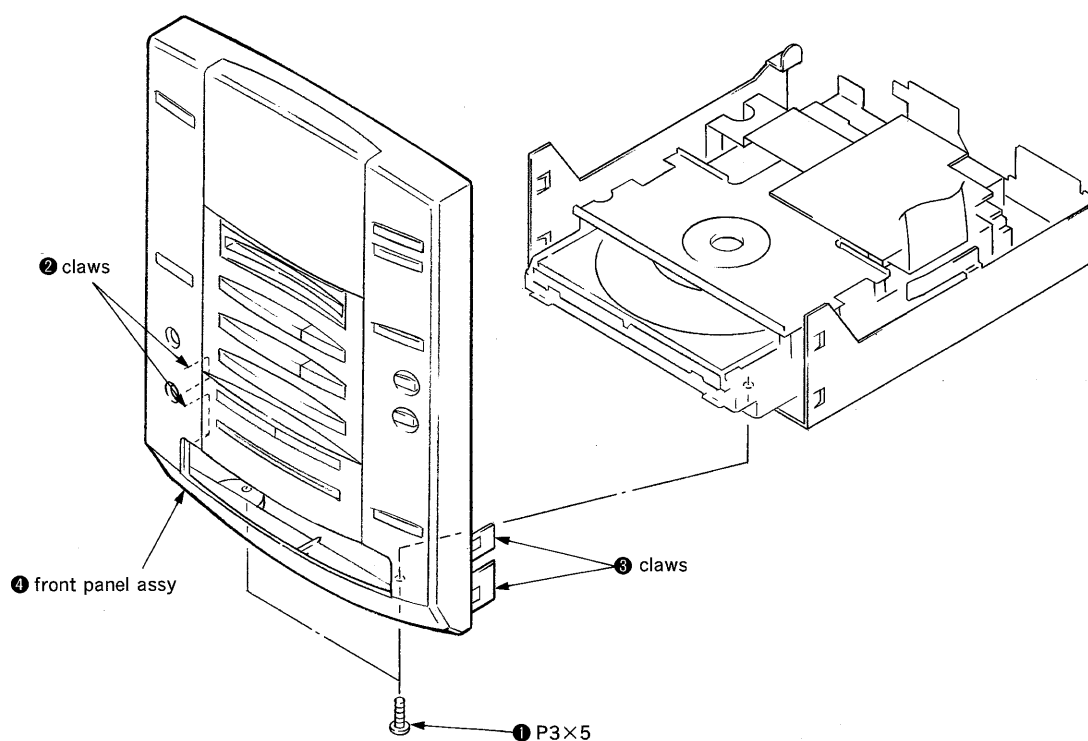


2-7. MD BLOCK

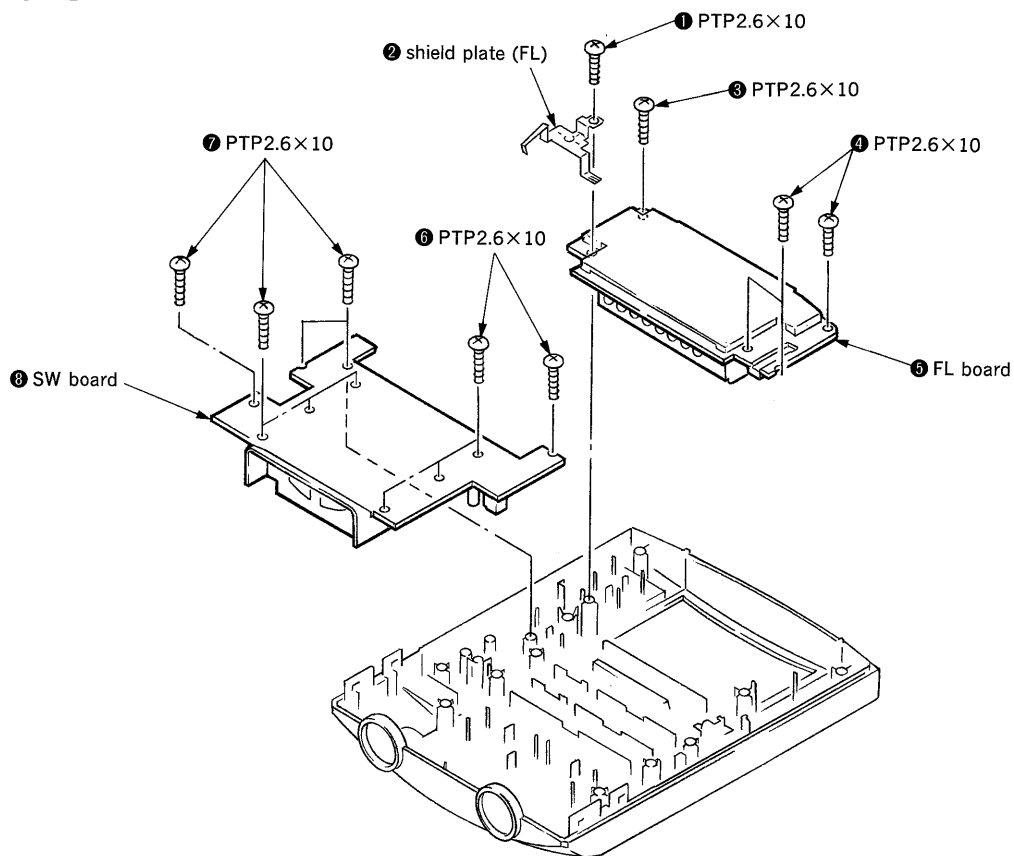
Note : When installing, fit the lever (door) on the bottom of the lever (lid).



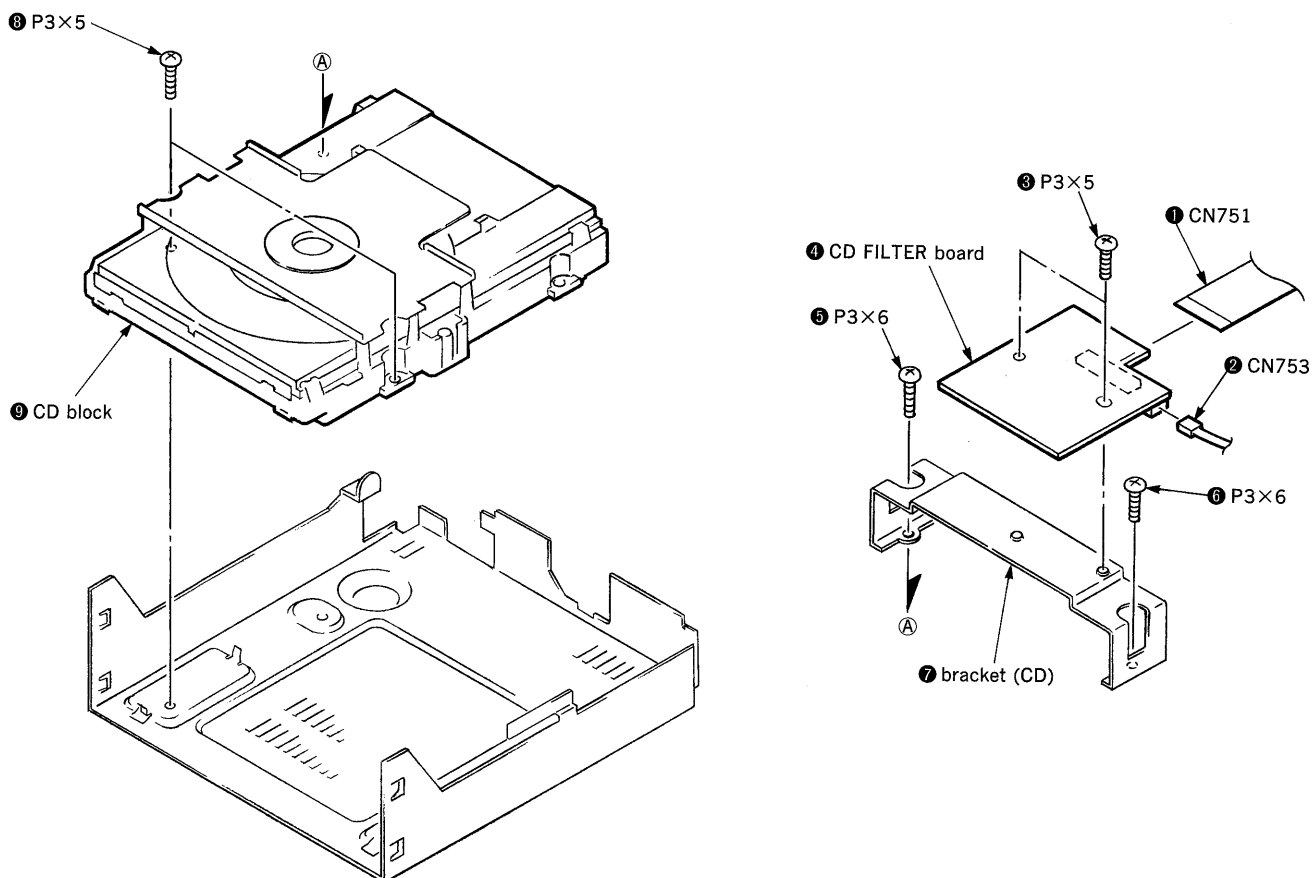
2-8. FRONT PANEL ASSY



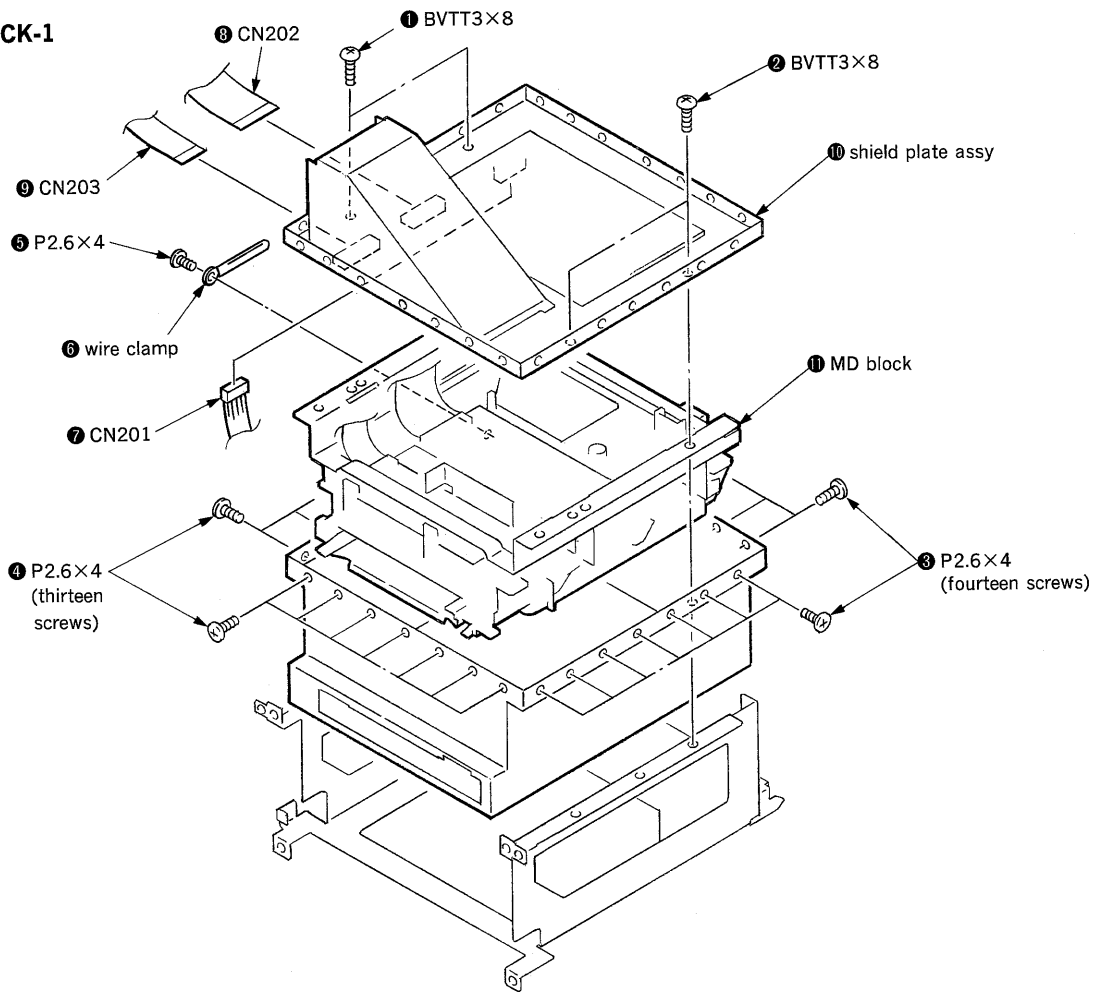
2-9. SW BOARD



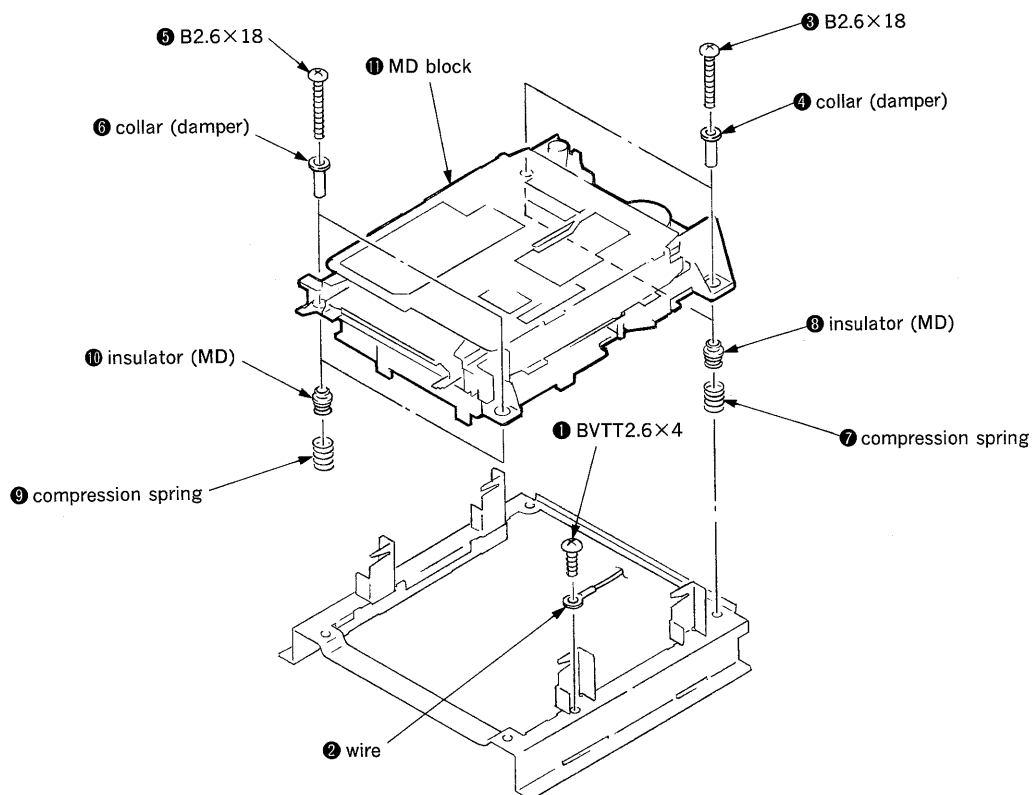
2-10. CD BLOCK



2-11. MD BLOCK-1

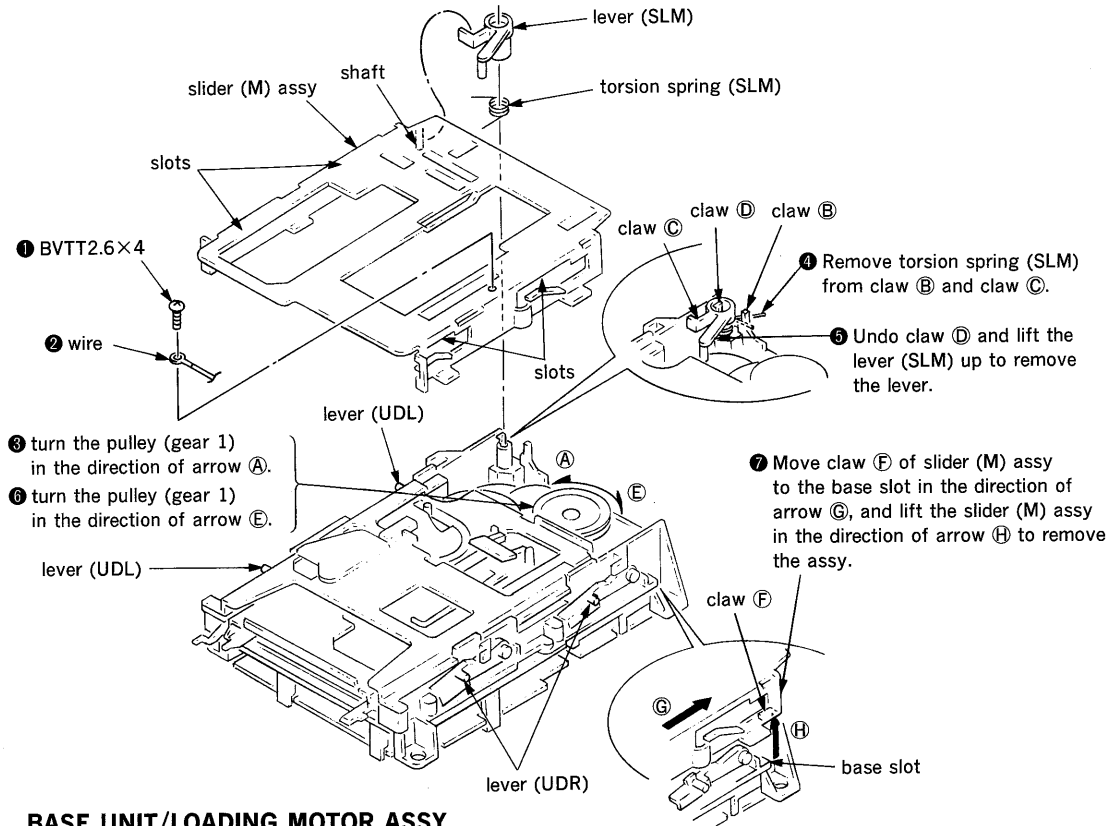


2-12. MD BLOCK-2

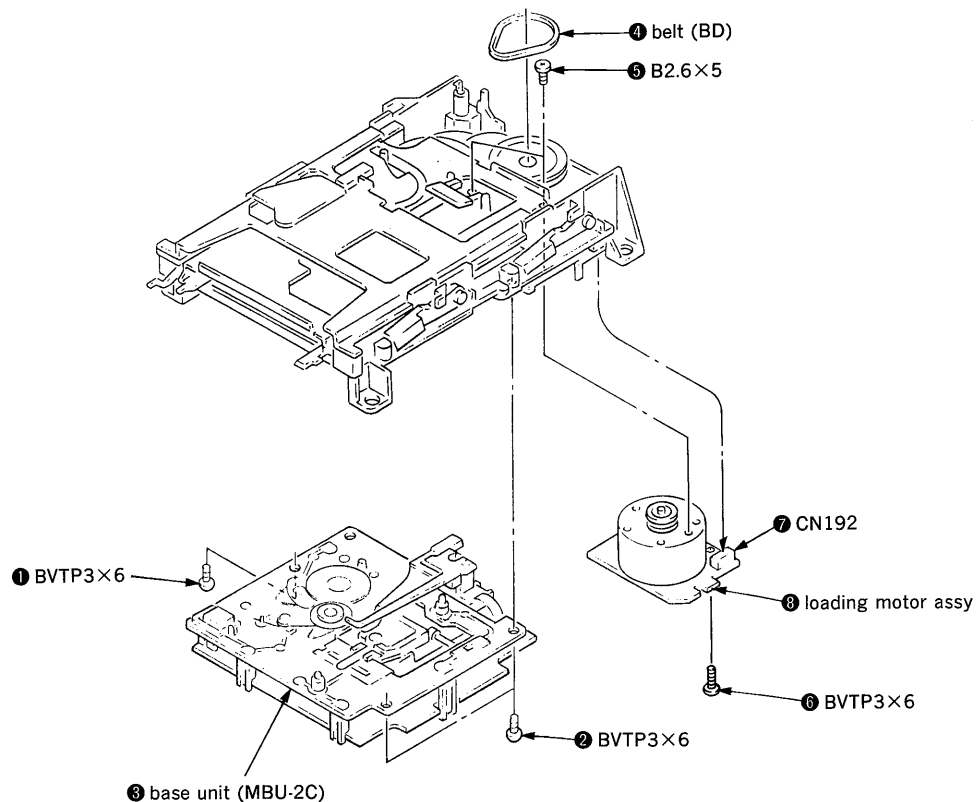


2-13. SLIDER (M) ASSY

Note : When assembling, first fit the lever (UDL) and lever (UDR) onto four slots of the slider (M) assy, Lastly, fasten the slots of the slider (M) assy with the levers (SLM).



2-14. BASE UNIT/LOADING MOTOR ASSY



SECTION 3 TEST MODE

- For test mode setting, three test modes: key mode, MD mode and CD mode are set by key input from the this set.

Set the Test Mode

- With POWER OFF, press and hold down the CD → MD DIGITAL REC key, and press the following keys in turn.
 - Press the MD ► key twice.
 - Press the CD ► key twice.
 - Press the VOLUME + key twice.
 - Press the VOLUME – key twice.
 - Press the POWER key once.
 Now, the test mode is set.

Release the Test Mode

Push the RESET button on the rear of the set to release the test mode.

INITIAL DISPLAY

When the test mode is set, "TEST MODE" is displayed flickering on the FL tube and then the key test mode is first entered.

To change the test mode, each time the MD EDIT key is pressed, the test mode will be changed in the following pattern sequence.

- Key test mode ("KEY TEST" is displayed on FL tube.)
- MD test mode ("MD TEST" is displayed on FL tube.)
(MD ► and ■ LED are lit.)
- CD test mode ("CD TEST" is displayed on FL tube.)
(CD ► and ■ LED are lit.)

KEY TEST MODE

After setting the test mode, when the keys are pressed, the LEDs and FL tube provide the displays shown below.

The current status will remain until another test mode is selected by pressing the MD EDIT key or the test mode is released.

This set/ remote commander key	LED to be lit (process)	FL tube display (lit)
POWER	No	All OFF
MD ►	MD ►, ■	[1] (Music calendar)
MD ■		[2] (Music calendar)
CD ►	CD ►, ■	[3] (Music calendar)
CD ■		[4] (Music calendar)
RADIO BAND FM/AM	RADIO BAND FM/AM	[5] (Music calendar)
AMS/PRESET [◀ -]	[◀, ▶] (AMS)	[6] (Music calendar)
AMS/PRESET + ▶]	-, + (PRESET)	[7] (Music calendar)
CD → MD DIGITAL REC	No	[8] (Music calendar)
VOLUME +	No	All ON
VOLUME –	No	Each time the key is pressed, 16 different illuminations are in succession.
MD EJECT	MD illuminator	[9] (Music calendar)
REC	LED for the key pressed just before remains ON or OFF.	[10] (Music calendar)
CD OPEN/CLOSE	CD illuminator	[11] (Music calendar)
MD EDIT	(Switch to MD test mode)	—

MD TEST MODE

After setting the test mode, when the MD EDIT key is pressed, the MD test mode is entered. Each time the AMS/PRESET + ▶] key is pressed, the following MD test items are displayed from one to another on the FL tube.

The current status will remain until another test mode is selected by pressing the MD EDIT key or the test mode is released.

Test item (FL tube display)	Function
"TEMP ADJUST"	Temperature Adjustment
"LDPWR ADJUST"	LD POWER Adjustment
"EFBAL ADJUST"	E-F BALANCE Adjustment
"FBIAS ADJUST"	FOCUS BIAS Adjustment
"FBIAS CHECK"	FOCUS BIAS Check
"CPLAY MODE"	CPLAY Mode
"CREC MODE"	CREC Mode
"EEP MODE"	EEP-ROM READ/WRITE

Display the test item to be performed and press the CD ► key. (See page 38 for the operating method of each test item.)

This set key used for each test item and its description are shown below.

This set key	Description
AMS/PRESET [◀ -, + ▶]	Change the parameter and mode.
CD → MD DIGITAL REC	Display the write in EEP MODE.
CD ►	YES to go ahead (determine).
CD ■	NO to go back to previous (suspend).

※ While in the MD test mode, apart from the test item, operations can be executed with remote commander.

Remote commander key	Operation
MD ►	In STOPped state, press this to put ALL ON. During ALL ON, press this to put TRACKING ON/OFF.
MD ■	ALL OFF
▶▶ (search)	Only while pressed, SLED moves to outer circumference.
◀◀ (search)	Only while pressed, SLED moves to inner circumference.
MD ●	During ALL ON, press this to put REC ON/OFF.
REPEAT	Allow forced PIT/GRV change.
P. MODE	Change between CLV S and A.
DISPLAY	Change 12-digit display.

The currently selected MD status is displayed on the music calendar of the FL tube.

Music calendar	ON	OFF
[1]	ALL ON	ALL OFF
[2]	Tracking ON	Tracking OFF
[3]	REC ON	REC OFF
[4]	CLV LOCK	CLV UNLOCK
[5]	PIT	GRV
[6]	High reflection	Low reflection
[7]	CLV-A	CLV-S
[8]	ABCD adjusted	—
[9]	Focus/Tracking Auto Gain succeeded.	Focus succeeded. Tracking failed.

SECTION 4 ELECTRICAL ADJUSTMENTS

CD TEST MODE

After setting the test mode, when the main frame keys are pressed, the following operations are executed.

(When playing back, set the CD.)

The current status will remain until another test mode is selected by pressing the MD EDIT key or the test mode is released.

1) When stopped

This set key	Operation
CD ■	CD RESET LD OFF
RADIO BAND FM/AM	LD ON AUTO FOCUS (FOCUS ON) CLV-A
AMS/PRESET + ▷▷]	SLED FWD
AMS/PRESET ◁◁ -	SLED REV
VOLUME +	Increase the sub level of volume one level.
VOLUME -	Decrease the sub level of volume one level.

2) When playing back

This set key	Operation
CD ■	CD RESET LD OFF
RADIO BAND FM/AM	SLED ON CLV-A TRACKING GAIN NORMAL MUTE OFF
CD → MD DIGITAL REC	TRACKING GAIN UP
MD EDIT	ANTI SHOCK ON
AMS/PRESET + ▷▷]	While pressed, SLED moves FWD. When released, TRACKING is set OFF and SLED is set OFF.
AMS/PRESET ◁◁ -	While pressed, SLED moves REV. When released, TRACKING is set OFF and SLED is set OFF.
VOLUME +	Increase the sub level of volume one level.
VOLUME -	Decrease the sub level of volume one level.

Notes :

- The volume display is usually the same as when it is displayed at start-up.
- After pressing the CD ►|| key, when the RADIO BAND FM/AM key is pressed, playback will start.

4-1. MD SECTION

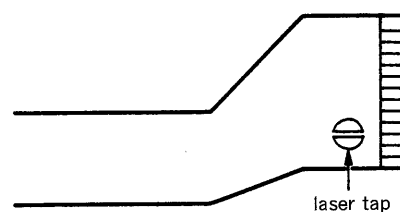
● Caution for Checking Emission of the Laser Diode

When adjusting, loss of eye sight may be caused in checking emission of the laser diode. Be careful never to look into right from above.

● Note for Handling the Optical Pick-up (KMS-210A)

The laser diode within the optical pick-up is very susceptible to electrostatic discharge. Therefore, when removing the flexible board from the connector, bridge the laser tap by soldering it, and then carefully remove the board. Also, take care not to remove the solder bridge before inserting the connector.

Provide an enough precaution to prevent electrostatic discharge before working. Pay particular attention when handling the flexible board, which is breakable.



optical pick-up flexible board

● Note on Adjustment

- The adjustments and checks marked with a circle are to be done in the order given when the following parts are replaced.

	Optical pick-up	BD board		
		IC171	D101	IC101, 121, 191
1. Temperature Correction Offset Adjustment	×	○	○	○
2. Laser Power Adjustment	○	×	×	○
3. MO/CD Traverse Adjustment	○	○	×	○
4. Focus Bias Adjustment	○	○	×	○
5. Error Rate Check	○	○	×	○

- Perform these adjustments in the MD test mode. (See page 36.)
After these adjustments, be sure to release the test mode.
- Perform these adjustments in the order given.
- Use the following jigs and measuring equipment.
 - MD test disc TGYS-1
(Part No. 4-959-188-01)
 - Laser power meter LPM-8001
(Part No. J-2501-046-A)
 - Oscilloscope (Measure after the probe is calibrated.)
 - Digital voltmeter
 - Thermometer
- Take care that VC and GND are not connected within an oscilloscope when multiple signals are measured with the oscilloscope. (Otherwise, VC and GND are shorted.)

- Do not turn RV105 on the BD board. If RV105 is replaced, adjust to the mechanical center of the adjustable resistor.

● Prepare MO Continuous Recording Disc

This disc is used for focus bias adjustment and error rate check. To prepare this disc, take the following procedure.

- Insert a commercially available MO disc (blank).
- Enter the test mode. (See page 36.)
- Press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to display "CREC MODE".
- When the CD $\blacktriangleright$ key is pressed, "CREC IN" is displayed.
- When the CD $\blacktriangleright$ key is pressed once more, "CREC MID" is displayed. "CREC (0300)" is instantaneously displayed and recording starts. Recording should be completed within 5 minutes.
- When the CD $\blacksquare$ key is pressed, "CREC MODE" is displayed and recording stops.
- Release the test mode. (See page 36.)
- Press the MD EJECT key to eject the MO disc.

Now, the MO continuous recording disc can be prepared for focus bias adjustment and error rate check.

Note: Take care that no vibrations are applied during continuous recording.

TEMPERATURE CORRECTION OFFSET ADJUSTMENT

Save the current temperature data as the 25°C reference data into non-volatile memory.

Notes :

- Usually, this adjustment is not performed.
- Perform this adjustment in the ambient temperature range of 22 to 28°C. Also, this adjustment is to be done just after the power is turned on when the internal set temperature is the same as the ambient temperature.
- When D101 is replaced, perform this adjustment after the part temperature adapts itself to the ambient temperature.

Procedure :

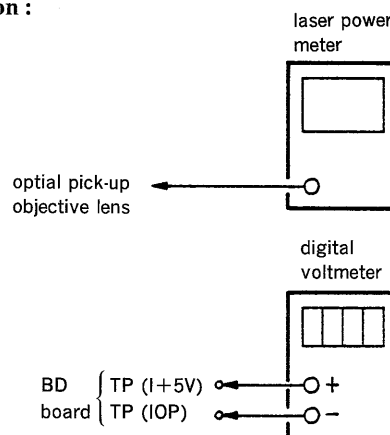
- Enter the test mode. (See page 36.)
- Press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to display "TEMP ADJUST".
- When the CD $\blacktriangleright$ key is pressed, "TEMP=□□" is displayed to indicate the current temperature.
- Confirm that the temperature data is within the specified value, and save the data.
(To save the data, press the CD $\blacktriangleright$ key.)
(To cancel saving the data, press the CD $\blacksquare$ key.)
- When the CD $\blacktriangleright$ key is pressed, "TEMP=□□ SAVE" is displayed and then "TEMP ADJUST" reappears. Pressing the CD $\blacksquare$ key will immediately return to the "TEMP ADJUST" display.
- Release the test mode. (See page 36.)

Specified value :

The temperature data should be within the range from "TEMP=E0" to "TEMP=1F".

LASER POWER ADJUSTMENT

Connection :



Procedure :

- Place laser power meter on the objective lens of the optical pick-up. (If it may not be properly placed, press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to move the optical pick-up.)
- Connect digital voltmeter between TP (I+5V) and TP (IOP) on the BD board.
- Enter the MD test mode. (See page 36.)
- Press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to display "LDPWR ADJUST".
- When the CD $\blacktriangleright$ key is pressed twice, "LD \$4B=3.5mW" is displayed. (Laser power : CD read)
- Adjust RV102 on the BD board so that the reading on laser power meter is 3.4 ± 0.1 mW.
- When the CD $\blacktriangleright$ key is pressed, "LD \$96=7.0mW" is displayed. (Laser power : MO write)
- Confirm that the obtained readings on laser power meter and digital voltmeter are within their specified values.

Specified value :

Reading on laser power meter : 7.0 ± 0.3 mW

Reading on digital voltmeter : Indicated value on optical pick-up $\pm 10\%$

(Label on optical pick-up)



In this case, $I_{op} = 82.5$ mA
 $I_{op} \text{ (mA)} = \text{reading on the digital voltmeter (mV)} / 1 \text{ (}\Omega\text{)}$

9. When the CD ► key is pressed, "LD \$0F=0.7mW" is displayed. (Laser power : MO write)
10. Confirm that the obtained reading on laser power meter is within the specified value.

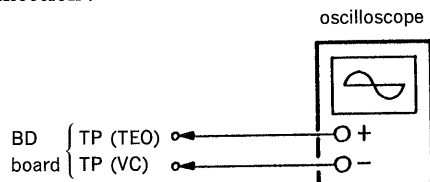
Specified value :

Reading on laser power meter : $0.7 \pm 0.1 \text{mW}$

11. When the CD ■ key is pressed, "LDPWR ADJUST" is displayed and the laser stops emitting.
(The CD ■ key is accepted at any time to stop laser emission.)
12. Release the test mode. (See page 36.)

CD TRAVERSE ADJUSTMENT

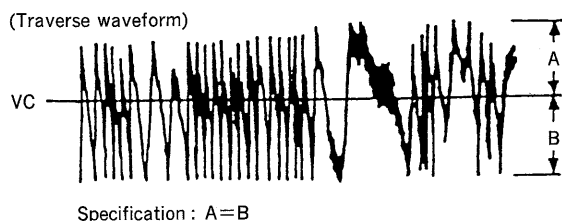
Connection :



Procedure :

1. Connect oscilloscope between TP (TEO) and TP (VC) on the BD board.
2. Insert MD test disc TGYS-1.
3. Press the AMS/PRESET [◀◀ - or + ▶▶] key to move the optical pick-up to outer circumference over the pit portion.
4. Enter the MD test mode. (See page 36.)
5. Press the AMS/PRESET [◀◀ - or + ▶▶] key to display "EFBAL ADJUST".
6. When the CD ► key is pressed, "EFB=\$□ CD" is displayed and servo is automatically activated.
7. Press the AMS/PRESET [◀◀ - or + ▶▶] key to adjust so that the waveform of oscilloscope satisfies the specified value. (Pressing these keys will change the digit □ of "EFB=\$□" and change the waveform.)
In this adjustment, the waveform is changed in about 3% increments. So, adjust so that the waveform is closest to the specified value.

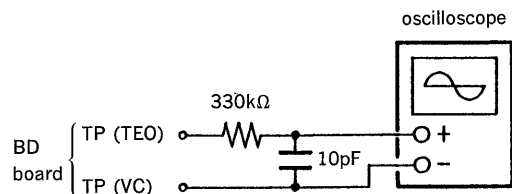
(CD Read Power Traverse Adjustment)



8. Press the CD ► key. "EFB=\$□ SAVE" is instantaneously displayed and the adjustment result is saved in non-volatile memory. Just after this, "EFBAL ADJUST" is displayed.
9. Release the test mode. (See page 36.)
10. Press the MD EJECT key to eject the MD test disc.

Note :

1. If the traverse waveform is not easy to see, connect the oscilloscope as shown below. This makes the waveform easier to see.



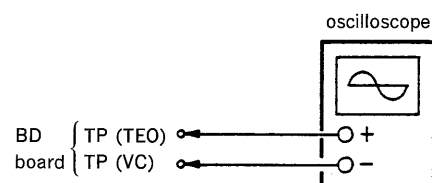
CD ERROR RATE CHECK

Procedure :

1. Insert MD test disc TGYS-1.
2. Enter the MD test mode. (See page 36.)
3. Press the AMS/PRESET [◀◀ - or + ▶▶] key to display "CPLAY MODE".
4. When the CD ► key is pressed twice, "CPLAY MID" is displayed.
Just after this, "C1=□□□□ AD=—" is displayed.
5. Confirm that the C1 error rate is 20 or less.
6. Press the CD ■ key, then release the test mode. (See page 36.)
7. Press the MD EJECT key to eject the MD test disc.

MO TRAVERSE ADJUSTMENT

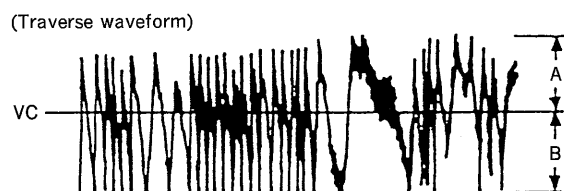
Connection :



Procedure :

1. Connect oscilloscope between TP (TEO) and TP (VC) on the BD board.
2. Insert MO disc (commercially available).
3. Press the AMS/PRESET [◀◀ - or + ▶▶] key to move the optical pick-up to outer circumference over the pit portion.
4. Enter the MD test mode. (See page 36.)
5. Press the AMS/PRESET [◀◀ - or + ▶▶] key to display "EFBAL ADJUST".
6. When the CD ► key is pressed, "EFBAL MO-W" is displayed.
(Laser power : WRITE Power/Focus Servo ON/Tracking Servo OFF/Spindle (S) Servo ON)

7. Adjust RV101 on the BD board so that the waveform of oscilloscope satisfies the specified value.
(MO Group Write Power Traverse Adjustment)

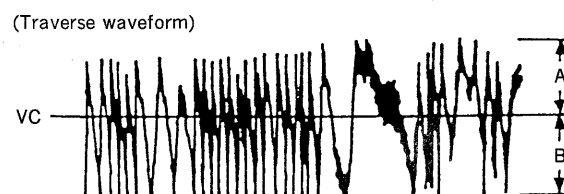


Specification : A=B

8. When the CD ► key is pressed, "EFB=\$ MO-R" is displayed. (Laser power : MO read)
9. Press the AMS/PRESET ◀◀ - or + ▶▶ key to adjust so that the waveform of oscilloscope satisfies the specified value. (Pressing these keys will change the digit □ of "EFB=\$" and change the waveform.)

In this adjustment, the waveform is changed in about 3% increments. So, adjust so that the waveform is closest to the specified value.

(MO Group Read Power Traverse Adjustment)

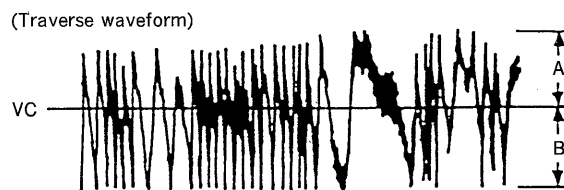


Specification : A=B

10. Press the CD ► key. "EFB=\$ SAVE" is instantaneously displayed and the adjustment result is saved in non-volatile memory. Just after this, "EFBAL MO-P" is displayed.
11. When the CD ► key is pressed, "EFB=\$ MO-P" is displayed, the optical pick-up is automatically moved to the pit area, and servo is activated.
12. Press the AMS/PRESET ◀◀ - or + ▶▶ key to adjust so that the waveform of oscilloscope satisfies the specified value. (Pressing these keys will change the digit □ of "EFB=\$" and change the waveform.)

In this adjustment, the waveform is changed in about 3% increments. So, adjust so that the waveform is closest to the specified value.

(MO Pit Read Power Traverse Adjustment)

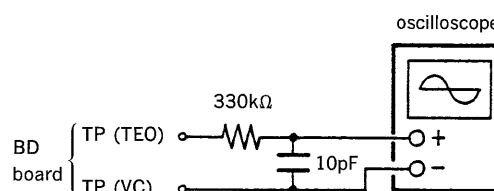


Specification : A=B

13. Press the CD ► key. "EFB=\$ SAVE" is instantaneously displayed and the adjustment result is saved in non-volatile memory. Just after this, "EFBAL CD" is displayed and rotation of disc is stopped automatically.
14. Release the test mode. (See page 36.)
15. Press the MD EJECT key to eject the MO disc.

Notes:

1. If a recorded disc is used for this adjustment, data at MO write will be erased.
2. If the traverse waveform is not easy to see, connect the oscilloscope as shown below. This makes the waveform easier to see.



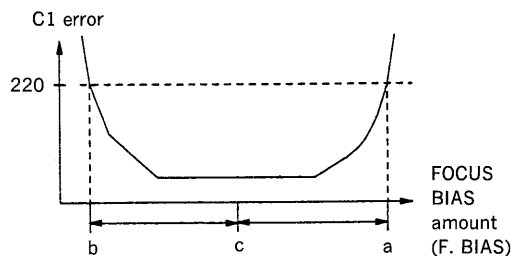
FOCUS BIAS ADJUSTMENT

Procedure :

1. Insert continuous recorded disc. (See page 38.)
2. Enter the MD test mode. (See page 36.)
3. Press the AMS/PRESET ◀◀ - or + ▶▶ key to display "FBIAS ADJUST".
4. When the CD ► key is pressed, "□□□□/□□ a = □□" is displayed.
The first four digits represents the CD error rate. The two digits after slash "/" represents ADER and the two digits after "a=" represents the amount of focus bias.
5. Press the AMS/PRESET + ▶▶ key to adjust the amount of focus bias so that the C1 error rate is 220.
6. When the CD ► key is pressed, "□□□□/□□ b = □□" is displayed.
7. Press the AMS/PRESET ◀◀ -key to adjust the amount of focus bias so that the C1 error rate is 220.
8. When the CD ► key is pressed, "□□□□/□□ c = □□" is displayed. Confirm that the displayed C1 error rate is 50 or less and that ADER is 00.
9. When the CD ► key is pressed, "□□-□□-□□(□□)" is displayed. If the displayed "(□□)" is 20 or more, press the CD ► key. If less than 20, press the CD ■ key and readjust from Item 2.
10. Press the CD ■ key, then release the test mode. (See page 36.)
11. Press the MD EJECT key to eject continuous recorded disc.

Notes:

1. The relation between C1 error and amount of focus bias is shown below. In this adjustment, points a and b in the figure are measured and point c, the resultant focus is automatically calculated from the points a and b.
2. Since the C1 error rate varies, this calculation is used to determine the average for adjustment.



MO ERROR RATE CHECK

Procedure :

1. Insert continuous recorded disc. (See page 38.)
2. Enter the MD test mode. (See page 36.)
3. When the AMS/PRESET $\llcorner$ or $\lrcorner$ key is pressed, "CPLAY MODE" is displayed.
4. When the CD $\blacktriangleright$ key is pressed twice, "CPLAY MID" is displayed. Just after this, "C1=□□□□ AD=□□" is displayed.
5. Confirm that the C1 error rate is 50 or less and that ADER is 00.
6. Press the CD $\blacksquare$ key, then release the test mode. (See page 36.)
7. Press the MD EJECT key to eject continuous recorded disc.

FOCUS BIAS CHECK

Check the amount of focus tolerance by changing the amount of focus bias.

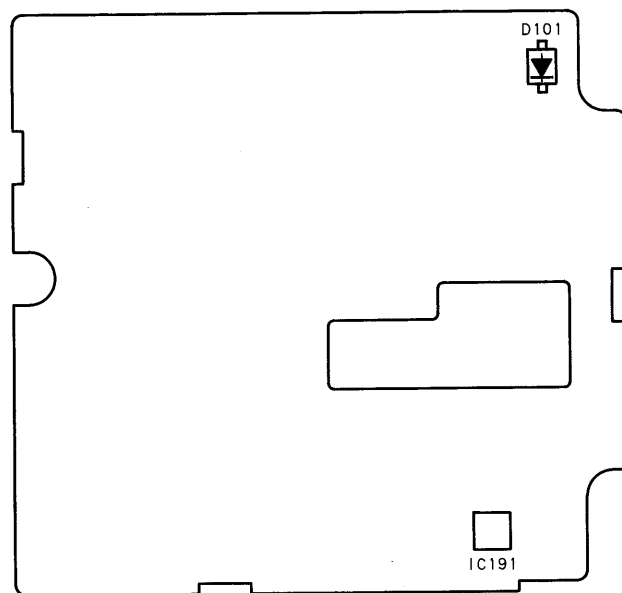
Procedure :

1. Insert continuous recorded disc. (See page 38.)
2. Enter the MD test mode. (See page 36.)
3. Press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to display "FBIAS CHECK".
4. When the CD $\blacktriangleright$ key is pressed, "□□□□/□□ c=□□" is displayed.
The first four digits represents the C1 error rate. The two digits after slash "/" represents ADER and the two digits after "c=" represents the amount of focus bias. Confirm that the display C1 error rate is 50 or less and that ADER is 00.
5. When the CD $\blacktriangleright$ key is pressed, "□□□□/□□ b=□□" is displayed. Confirm that the displayed C1 error rate is 220 or less and that ADER is always not 00.
6. When the CD $\blacktriangleright$ key is pressed, "□□□□/□□ a=□□" is displayed. Confirm that the displayed C1 error rate is 220 or less and that ADER is always not 00.
7. Press the CD $\blacksquare$ key, then release the test mode. (See page 36.)
8. Press the MD EJECT key to eject continuous recorded disc.

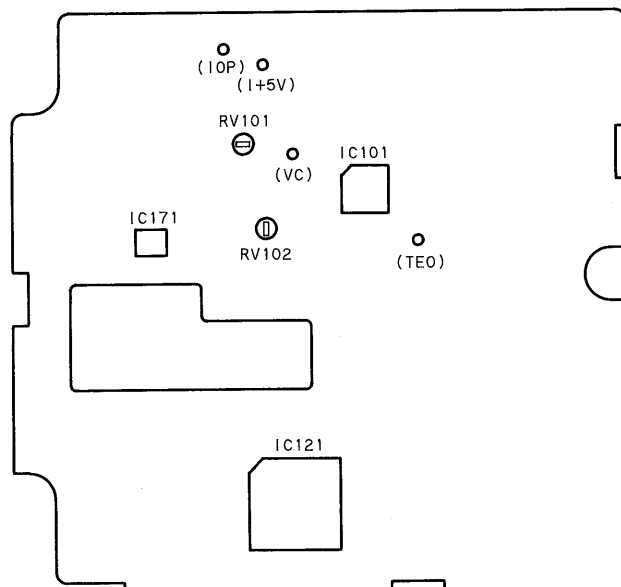
Note : If the C1 error rate is satisfied only at point a or b and/or if ADER is not ADER, the focus bias adjustment may be shifted. Readjustment is to be done.

MD Section Adjustment Location :

BD board (side A)



BD board (side B)



4-2. CD SECTION

• Notes on Adjustment

1. Perform adjustment in the test mode.
After adjustment, be sure to release the test mode.
2. Perform the adjustments in the order given.
3. Use the disc (YEDS-18 : Part No. 3-702-101-01) only when so indicated.

• Before Adjustment

Put the set into the CD test mode (see page 36.) and perform the following checks.

Repair if there are any problems.

• Sled Motor Check

Procedure :

Press the AMS/PRESET $\llcorner$ or $\lrcorner$ key and check that the optical pick-up moves from innermost circumference to outermost circumference to innermost circumference smoothly, with no catching.

$\lrcorner$: Allows the optical pick-up to move to outer circumference.

$\llcorner$: Allows the optical pick-up to move to inner circumference.

• Focus Search Check

Procedure :

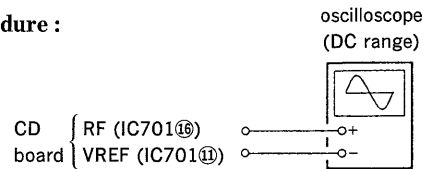
1. Press the CD $\blacksquare$ key. (Focus search operation is executed continuously.)
2. Look at the optical pick-up objective lens and confirm that it moves up and down smoothly, with no catching or jarring noise.
3. Press the CD $\blacksquare$ key. Confirm that focus search operation stops. If it does not stop, press the CD $\blacksquare$ key again longer.

Note : If any abnormal condition (runaway, etc.) occurs due to incorrect key operation, push the RESET button on the rear of the set. Retry from entering the test mode.

FOCUS BIAS ADJUSTMENT

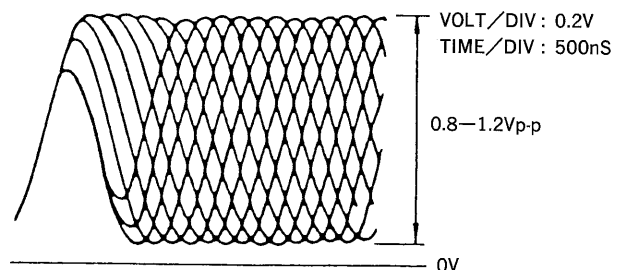
This adjustment is to be done when the optical pick-up block is replaced in service.

Procedure :



1. Connect oscilloscope between RF and VREF on the CD board.
2. Enter the CD test mode. (See page 36.)
3. Insert disc (YEDS-18), and press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to move the optical pick-up to the center.
4. Press the CD $\blacksquare$ key.
5. Press the RADIO BAND FM/AM key. (Tracking and Sled ON)
6. Adjust RV702 so that the waveforms of the oscilloscope have a distinct eye pattern. This means that lozenges $\diamond$ can be clearly distinguished in the centers of the overlapped waveforms.
7. After this adjustment, release the test mode. (See page 36.)

• RF signal reference waveform (eye pattern)



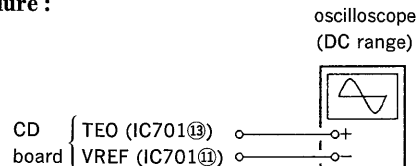
When observing the eye pattern, set oscilloscope for AC range and raise its vertical sensitivity. This makes the pattern easier to see.

Adjustment Location : See page 44.

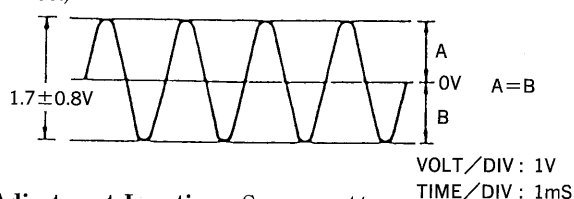
TRAVERSE ADJUSTMENT

This adjustment is to be done when the optical pick-up block is replaced in service.

Procedure :



1. Connect oscilloscope between TEO and VREF on the CD board.
2. Enter the CD test mode. (See page 36.)
3. Insert disc (YEDS-18), and press the AMS/PRESET $\llcorner$ or $\lrcorner$ key to move the optical pick-up to the center.
4. Press the CD $\blacktriangleright$ key.
Focus search starts, focus is set ON, and CLV is withdrawn. Tracking and sled are OFF.
5. Adjust RV701 so that the waveform of the oscilloscope is vertically symmetrical at 0V.
6. After this adjustment, release the test mode. (See page 36.)



Adjustment Location : See page 44.

Reference

FOCUS/TRACKING GAIN ADJUSTMENT

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operates.

However, as these reciprocate, the adjustment is at the point where both conditions are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

When gain adjustment is off, the symptoms shown below develop.

Symptoms	Gain	
	Focus	Tracking
• The time until music starts becomes longer for STOP → $\blacktriangleright$ PLAY on automatic selection. ($\llcorner$ or $\lrcorner$ key pressed.) (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP → $\blacktriangleright$ PLAY or automatic selection. ($\llcorner$ or $\lrcorner$ key pressed.)	—	low
• Sound is interrupted during PLAY. Or time counter display stops progressing.	—	low
• More noise during 2-axis device operation.	high	high

The following is a simple adjustment method.

—Simple Adjustment—

Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after this simple adjustment is only a little different, return that control to its original position.

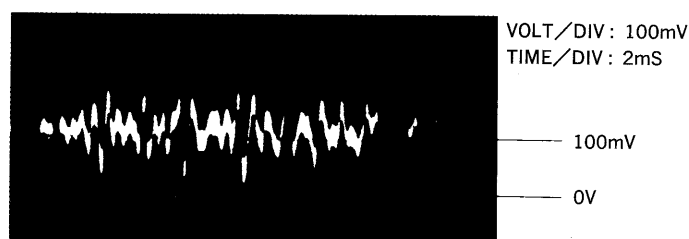
Procedure :



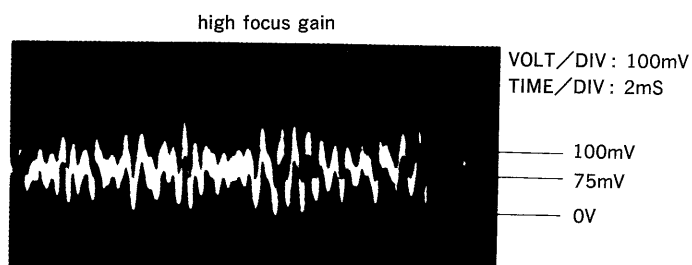
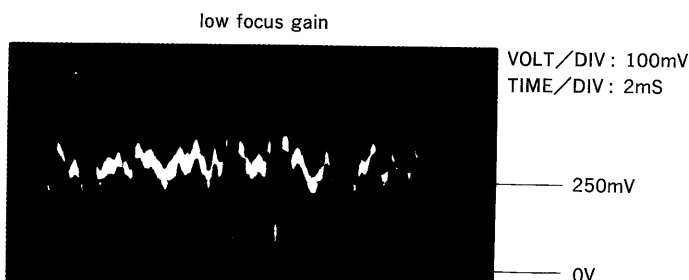
1. Place the set in a horizontal position.
If not horizontal, this adjustment cannot be performed due to gravity acting on the 2-axis device.
2. Insert disc (YEDS-18) and press the CD $\blacktriangleright$ key.
3. Connect oscilloscope between FEO and VREF on the CD board.
4. Adjust RV702 so that the waveform is as shown in the following figure. (Focus Gain Adjustment)

Adjustment Location : See page 44.

• Correct Example

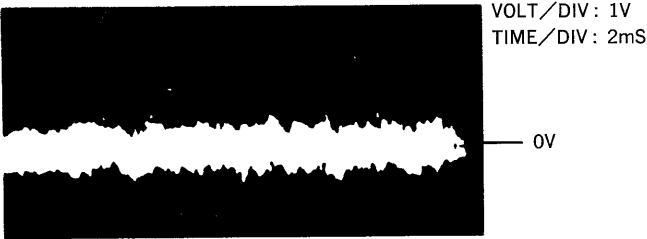


• Incorrect Examples (DC level changes more significantly than on adjusted waveform)

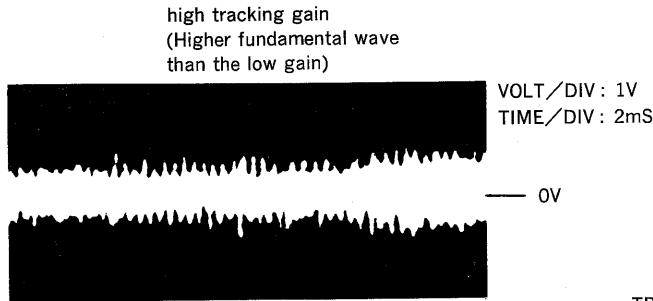
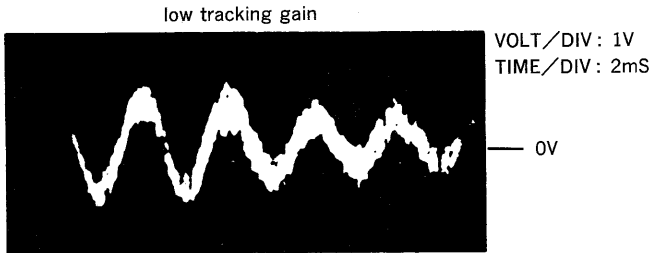


- Connect oscilloscope between TEO and VREF on the CD board.
- Adjust RV702 so that the waveform is as shown in the following figure. (Tracking Gain Adjustment)

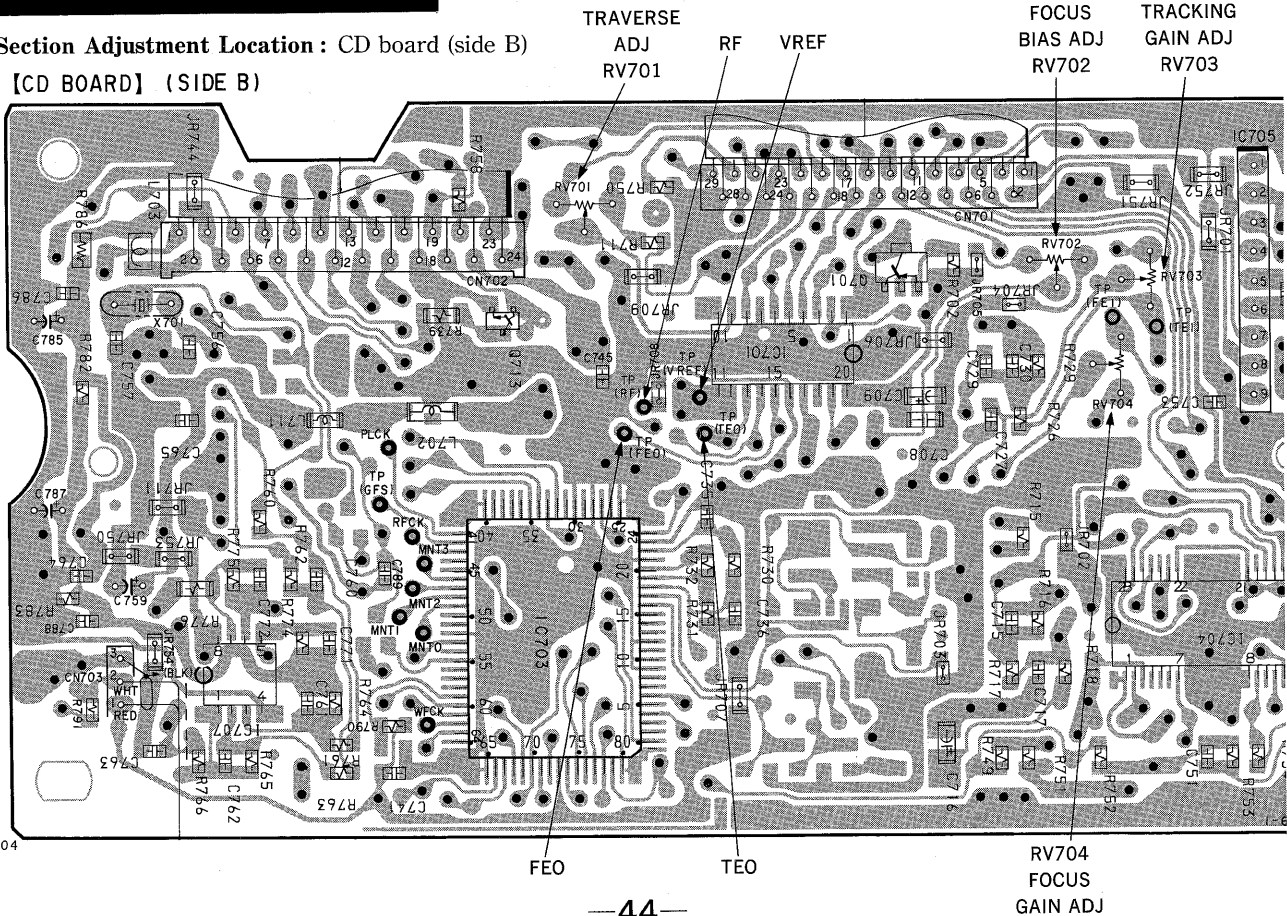
• Correct Example



• Incorrect Examples (fundamental wave appears)

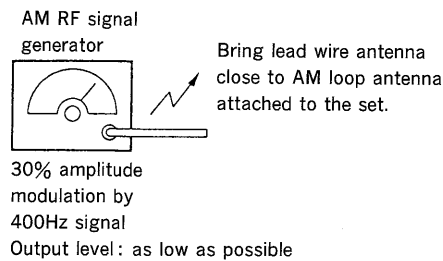


CD Section Adjustment Location : CD board (side B)
[CD BOARD] (SIDE B)

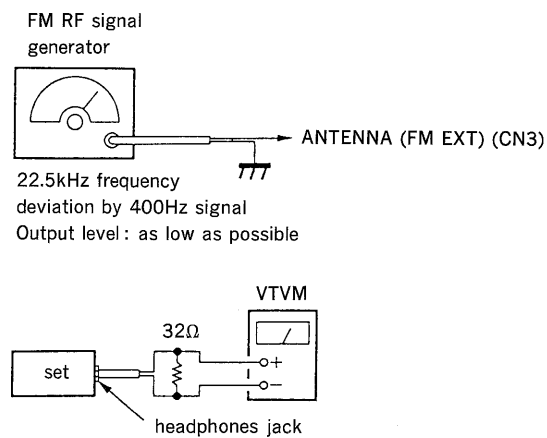


4-3. TUNER SECTION 0dB=1μV

• AM Section



• FM Section



- Repeat the tracking adjustment procedure several times to ensure that the reading on VTVM is maximum.
- Tracking adjustment should be finally completed by adjustment of the trimmer capacitors.

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust so that digital voltmeter reads out the following values:		
Frequency indication	531kHz	1,611kHz
Reading on digital voltmeter	$0.75 \pm 0.3V$	$5.2 \pm 0.1 V$
Adjustment element	(confirmation)	L4

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	CT6
621kHz	1,404kHz

FM FREQUENCY COVERAGE CHECK		
Adjust so that digital voltmeter reads out the following values:		
Frequency indication	76.0MHz	108.0MHz
Reading on digital voltmeter	2.2V (reference value)	7.5V (reference value)
Adjustment element	(confirmation)	(confirmation)

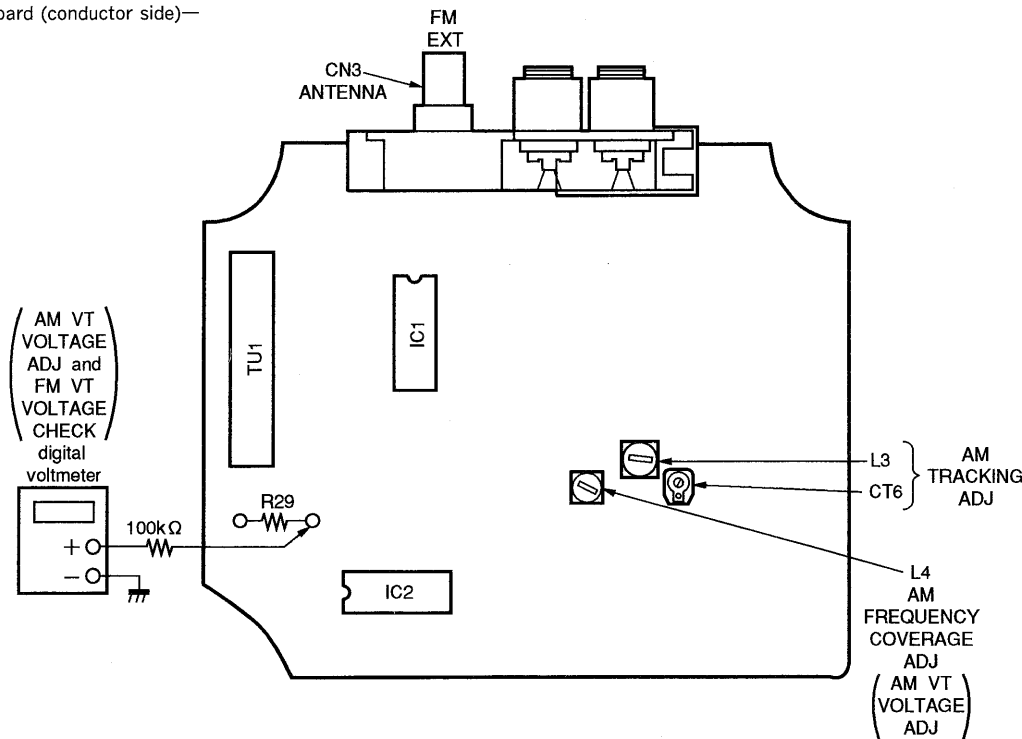
• Positions of Switch Control

FUNCTION RADIO

VOLUME Specified output level position

Tuner Section Adjustment Location :

—tuner board (conductor side)—



SECTION 5 DIAGRAMS

5-1. IC PIN DESCRIPTIONS

• IC101 RF Amplifier (CXA1981AR)

Pin No.	Pin Name	I/O	Pin Description
1	VC	O	Output pin for generating the middle point voltage (+2.5V).
2—7	A—F	I	Signal input from detector of optical pick-up block.
8	FI	I	F operational amplifier input
9	FO	O	F operational amplifier output
10	PD	I	Front monitor (Connect with photo diode.)
11	APCREF	I	Laser power setting input pin
12	TEMPI	I	Temperature sensor connecting pin
13	GND	—	GND
14	AAPC	O	APC's LD amplifier output.
15	DAPC	O	Not used (empty pin).
16	TEMPR	O	Used to output the reference voltage for temperature sensor.
17	XRST	I	Reset signal input from system controller (IC201). "L" for reset.
18	SWDT	I	Write data signal input from system controller (IC201).
19	SCLK	I	Clock signal input from system controller (IC201).
20	XLAT	I	Latch signal input from system controller (IC201).
21	VREF	O	Reference voltage output. Not used in this set (empty pin).
22	TENV	O	Not used (empty pin).
23	THLD	I	Not used (connect with VC).
24	VCC	—	Power supply pin (+5V)
25	TFIL	I	Not used (empty pin).
26	TE	O	Tracking error signal output to CXD2535BR (IC121).
27	TLB	I	Input pin for addition signal to tracking error.
28	CSLED	I	Pin for sled error LPF.
29	SE	O	Sled error signal output to CXD2535BR (IC121).
30	ADFM	O	ADIP's FM signal output
31	ADIN	I	Used to input ADIP's FM signal by AC coupling.
32	ADAGC	I	Used to connect an external capacitor for ADIP's AGC.
33	ADFG	O	ADIP multiplex FM signal output to CXD2535BR (IC121) (22.05kHz±1kHz).
34	AUX	O	Auxiliary signal output to CXD2535BR (IC121).
35	FE	O	Focus error signal output to CXD2535BR (IC121).
36	FLB	I	Not used (empty pin).
37	ABCD	O	Quantity-of-light signal output to CXD2535BR (IC121).
38	BOTM	O	Quantity-of-light signal's bottom hold signal output to CXD2535BR (IC121).
39	PEAK	O	Quantity-of-light signal's peak hold signal output to CXD2535BR (IC121).
40	RFAGC	I	Used to connect an external capacitor for RF AGC circuit.
41	RF	O	Playback EFM RF signal output to CXD2535BR (IC121).
42	ISSET	I	Used to set the internal circuit constant. 22kHz central frequency of BPF.
43	AGCT	I	Used to input RF signal by AC coupling.
44	RFO	O	RF signal output pin
45	MORFI	I	Used to input MO's RF signal by AC coupling.
46	MORFO	O	MO's RF signal output pin
47, 48	I, J	I	Signal input from detector of optical pick-up block.

●IC121 Digital Signal Processor, Digital Servo Signal Processor, EFM/ACIRC Encoder/Decoder (CXD2535BR)

Pin No.	Pin Name	I/O	Pin Description
1	FS256	O	11.2896MHz clock output (MCLK system). Not used in this set (empty pin).
2	FOK	O	FOK signal output to system control (IC201). "H" output when focus is active.
3	DFCT	O	Defect ON/OFF select signal output to CXD2536R (IC202).
4	SHCK	O	Track jump detect signal output to system control (IC201).
5	SHCKEN	I	Track jump detect enable input. Not used in this set (held "H").
6	WRPWR	I	Laser power change signal input from system control (IC201).
7	DIRC	I	Not used (held "H") in this set.
8	SWDT	I	Write data signal input from system control (IC201).
9	SCLK	I	Serial clock signal input from system control (IC201).
10	XLAT	I	Serial latch signal input from system control (IC201).
11	SRDT	O	Read data signal output to system control (IC201).
12	SENS	O(3)	Internal status (SENSE) output to system control (IC201).
13	ADSY	O	ADIP sync signal output. Not used in this set (empty pin).
14	SQSY	O	Subcode Q sync (SCOR) output to system control (IC201). "L" output at intervals of 13.3msec and almost "H" output.
15	DQSY	O	Digital In U-bit CD format's subcode Q sync (SCOR) output to system control (IC201). "L" output at intervals of 13.3msec and almost "H" output.
16	XRST	I	Reset signal input from system control (IC201). "L" for reset.
17	TEST4	I	Test input (held "L").
18	CLVSCK	O	Not used in this set (empty pin).
19	TEST5	I	Test input (held "L").
20	DOUT	O	Digital audio signal output (optical output)
21	DIN	I	Digital audio signal input (optical input)
22	FMCK	O	ADIP's FM demodulation clock signal output
23	ADER	O	ADIP CRC flag output. "H" for error occurrence.
24	REC	I	Record/playback select signal input from system control (IC201). "H" for record and "L" for playback.
25	DVSS	—	GND (digital system)
26	DOVF	I	Used to input validity flag for digital audio output. Held "L" in this set
27	DODT	I	For digital audio output, 16-bit data is input from CXD2536R (IC202).
28	DIDT	O	For digital audio input, 16-bit data is output to CXD2536R (IC202).
29	DTI	I	Record audio data signal input from CXD2536R (IC202).
30	DTO	O(3)	Playback audio data signal output to CXD2536R (IC202).
31	C2PO	O	C2PO signal output to CXD2536R (IC202) (indicating the data error condition). C2PO ("H") for playback, D.In-Vflag for digital recording, and "L" for analog recording.
32	BCK	O	Bit clock signal output to CXD2536R (IC202) (2.8224MHz) (MCLK system).
33	LRCK	O	L/R clock signal output to CXD2536R (IC202) (44.1kHz) (MCLK system).
34	XTAO	O	System clock (512Fs=22.5792MHz) signal output. Not used in this set (empty pin).
35	XTAI	I	System clock (512Fs=22.5792MHz) signal output. Not used in this set (empty pin).
36	MCLK	O	MCLK clock (22.5792MHz) signal output
37	XBCK	O	Inverted output of pin ② (BCK).
38	DVDD	—	Power supply pin (+5V) (digital system)
39	WDCK	O	WDCK clock (88.2kHz) signal output (MCLK system)

Pin No.	Pin Name	I/O	Pin Description
40	RFCK	O	RFCK clock (7.35kHz) signal output (MCLK system).
41	WFCK	O	WFCK clock (7.35kHz) signal output. (EFM decoder PLL system during playback, EFM encoder PLL system during recording.)
42	GTOP	O	When "H", playback EFM frame sync protection window is opened.
43	GFS	O	When "H", playback EFM frame sync is coincided with interpolation protection timing.
44	XPLCK	O	EFM decoder PLL clock output (98Fs=4.3218MHz). Falling edge is coincided with edge of EFM signal.
45	EFMO	O	EFM signal output (during recording)
46	RAOF	O	Internal RAM's overflow detect signal output (decoder monitor output). "H" signal is output when the rotation of disc goes beyond $\pm 4F$ jitter margin.
47	MVCI	I	Digital In PLL oscillation input. Not used in this set (held "L").
48	TEST2	I	Test pin (held "L" in this set).
49	DIPD	O(3)	Digital In PLL phase comparator output. For internal VCO, frequency: Low to "H". For external VCO, frequency: Low to "L".
50	DVSS	—	GND (digital system)
51	DICV	I(A)	Control voltage input for Digital In PLL internal VCO.
52	DIFI	I(A)	Filter input with use of Digital In PLL internal VCO.
53	DIFO	O(A)	Filter output with use of Digital In PLL internal VCO.
54	AVDD	—	Power supply pin (+5V) (analog system)
55	ASYO	O	Playback EFM full swing output (L=VSS, H=VDD)
56	ASYI	I(A)	Playback EFM asymmetry comparator voltage input
57	BIAS	I(A)	Playback EFM asymmetry circuit constant current input
58	RFI	I(A)	Playback EFM RF signal input from CXA1981AR (IC101).
59	AVSS	—	GND (analog system)
60	CLTV	I(A)	VCO control voltage input for decoder PLL's master clock PLL.
61	PCO	O(3)	Phase comparator output of decoder PLL's master clock PLL.
62	FILI	I(A)	Filter input for decoder PLL's master clock PLL.
63	FILO	O(3)	Filter output of decoder PLL's master clock PLL.
64	PEAK	I(A)	Peak hold signal input for luminous energy signal from CXA1981AR (IC101).
65	BOTM	I(A)	Bottom hold signal input for luminous energy signal from CXA1981AR (IC101).
66	ABCD	I(A)	Luminous energy signal input from CXA1981AR (IC101).
67	FE	I(A)	Focus error signal input from CXA1981AR (IC101).
68	AUX1	I(A)	Auxiliary signal input from CXA1981AR (IC101).
69	VC	I(A)	Middle point voltage input (+2.5V) from CXA1981AR (IC101).
70	ADIO	O(A)	Monitor output of A/D converter input signal.
71	TEST3	I(A)	Test input (held "L")
72	AVDD	—	Power supply pin (+5V) (analog system)
73	ADRT	I(A)	Upper limit voltage input for A/D converter operating range (held "H" in this set).
74	ADRB	I(A)	Lower limit voltage input for A/D converter operating range (held "L" in this set).
75	AVSS	—	GND (analog system)
76	SE	I(A)	Sled error signal input from CXA1981AR (IC101).

Pin No.	Pin Name	I/O	Pin Description
77	TE	I(A)	Tracking error signal input from CXA1981AR (IC101).
78	AUX2	I(A)	Auxiliary input pin 2. Not used in this set (held "L").
79	DCHG	I(A)	Connect to GND.
80	APC	I(A)	Laser APC input. Not used in this set (held "L").
81	TEST1	I	Test pin (held "L" in this set).
82	ADFG	I	ADIP doubling FM signal input (22.05kHz±1kHz) from CXA1981AR (IC101) (TTL Schmitt input).
83	TS25	I	Test pin (held "L" in this set)
84	LDDR	O	Laser APC signal output
85	TRDR	O	Tracking servo drive signal output (–)
86	TFDR	O	Tracking servo drive signal output (+)
87	FFDR	O	Focus servo drive signal output (+)
88	DVDD	—	Power supply pin (+5V) (digital system)
89	FRDR	O	Focus servo drive signal output (–)
90	FS4	O	176.4kHz clock signal output (MCLK system)
91	SRDR	O	Sled servo drive signal output (–)
92	SFDR	O	Sled servo drive signal output (+)
93	SPRD	O	Spindle servo drive signal output (–)
94	SPFD	O	Spindle servo drive signal output (+)
95	DCLO	O	Normally not used (empty pin in this set).
96	DCLI	I	Normally not used (held "H" in this set).
97	XDCL	O	Normally not used (empty pin in this set).
98	OFTRK	O	Off track signal output
99	COUT	O	Traverse count signal output
100	DVSS	—	GND (digital system)

* I/O (3) is three-state output and (A) is analog output.

● IC201 MD System Control (M37610MD-060FP)

Pin No.	Pin Name	I/O	Pin Description
1	EMPHA	O	Emphasis on when "H".
2	C. SETO	I	Held "L".
3	KEY3	I	Held "L".
4	KEY2	I	Held "H".
5	KEY1	I	Held "H".
6	KEY0	I	Held "H".
7	—	I	Held "L".
8	XINT	I	Interrupt status input from CXD2536R (IC202).
9	SENS	I	Internal status (SENSE) input from CXD2536R (IC202).
10	SHCK	I	Track jump signal input from CXD2536R (IC202).
11	AUBK	I	Held "L".
12	S/A	O	Held "L".
13	BEEP-SW	I	Held "L".
14	REC/OTHER	O	"L" for recording and "H" for others.
15	BEEP	O	Open
16	F. FIAS/C2	I	Held "L".
17	CNVss	—	GND
18	SYSTEM RST	I	System reset signal input. This input is "L" during several hundreds of msec after power on and then it becomes "H".
19	XIN-T		Open
20	XOUT-T		Open
21	GND	—	GND
22	XIN	I	Clock input (8MHz)
23	XOUT	O	Clock output (8MHz)
24	+5V		Power supply input (+5V)
25	STB	O	Strobe signal output to power circuit. "H" during power on and "L" during standby.
26	MICSW	I	Held "L".
27	MICSW	I	Held "L".
28	BUS-OUT	O	Open
29	—	I	Held "L".
30	LED2	I	Held "L".
31	LED1	I	Held "L".
32	LED0	O	"H" during power on and "L" during standby.
33	C1	I	Held "L".
34	ADER	I	Held "L".
35	NC	I	Held "L".
36	MASTER/SLAVE	I	Held "L".
37	JOG1	I	Held "L".
38	JOG0	I	Held "L".
39	SDA	I/O	Data signal input to and output from backup memory.
40	SCL	O	Clock signal output to backup memory.
41	POWER DOWN	I	Power down detect input. Normally "H".
42	REMOCOM	I	Held "H".
43	ATSY	I	Input of ATIP SYNC or SUBQ SYNC connected to SQSY of CXD2535R (IC202).
44	DQSY	I	SUBQ SYNC input of Digital In U-bit CD format from CXD2535R (IC202).
45	—	I	Held "L".
46	—	I	Held "L".
47	—	I	Held "L".

Pin No.	Pin Name	I/O	Pin Description
48	—	I	Held "L".
49	SCLK	I/O	Clock signal output to serial bus.
50	SWDT	I/O	Write data signal output to serial bus.
51	SRDT	I	Read data signal input from serial bus.
52	—	I	Connect to pin ⑤.
53	FLCLK	O	Open
54	FLDAT	O	Open
55	FLCS	O	Open
56	—	I	Held "L".
57	TEST0	I	Held "L".
58	TEST1	O	Reset signal output to CXD2536R (IC202).
59	—	I	Held "L".
60	—	I	Held "L".
61	AFAST	I	Held "L".
62	SLOW	I	Held "L".
63	LDON	O	Laser ON/OFF control output. "H" for ON.
64	P/GROOVE	I	Held "L".
65	FOK	I	FOK signal input from CXD2535BR (IC121).
66	MON	I	Pull-down
67	LOCK	I/O	Spindle servo lock monitor output. "H" for lock.
68	WRPWR	I/O	Laser power changeover signal output to optical pick-up block and CXD2535BR (IC121).
69	DIG RST	I/O	Reset signal output to CXA1981AR (IC101), CXD2535BR (IC121) and motor driver.
70	DA RST	I/O	Reset signal output to D/A and A/D converters.
71	SCMD1	I/O	Serial command control mode output to CXD2536R (IC202).
72	SCMD0	I/O	Serial command control mode output to CXD2536R (IC202).
73	MOD	I/O	Laser modulation changeover signal output. "L" for record and playback and "H" for stop.
74	REC/PB	I/O	Recording/playback changeover signal output to CXD2535BR (IC121). "H" for recording and playback and "L" for stop.
75	WR/WN	I/O	Write/monitor mode select signal output to CXD2535BR (IC121).
76	SCTX	I/O	Write data send timing output to CXD2536R (IC202). Used in conjunction with ON/OFF output to magnetic head.
77	XLATCH	I/O	Latch signal output to serial bus.
78	DFLATCH	I/O	D/A converter latch signal output
79	DFMUTE	I/O	Pull-down
80	AMUTE	I/O	Line out mute output. "L" for mute.
81	LDOUT	O	Loading motor control output
82	LDIN	O	Loading motor control output
83	CHKIN	I	Chucking switch detect input. "L" for chucking.
84	INSW	I	Detect input from Loading In switch. "L" at position where magnetic head is down.
85	OUTSW	I	Detect input from Loading Out switch. "L" at position of load out.
86	PROTECT	I	Record proof claw detect input from protect detect switch. "H" for protect.
87	REFLECT	I	Disc reflectance detect input from reflect detect switch. "H" for low reflectance disc.

Pin No.	Pin Name	I/O	Pin Description
88	LIMIT IN	I	Detect input from Limit In switch. "L" for Sled Limit In.
89	CTS	I	RS232C pin
90	RTS	O	RS232C pin
91	TXD	O	RS232C pin
92	RXD	I	RS232C pin
93	—	I	Held "L".
94	—	I	Held "L".
95	—	I	Held "L".
96	—	I	Held "L".
97	AVss	—	GND
98	VREF(+5V)	—	Reference voltage input (+5V)
99	TIMER REC/PLAY	I	Held "L".
100	INPUT SEL	I	Held "L".

※ The I/O pins except pin ③⑨, SDA are input pins during POWER OFF (STANDBY).

● IC202 Shock Proof Memory Controller, ATRAC Encoder/Decoder (CXD2536R)

Pin No.	Pin Name	I/O	Pin Description
1	VDD	—	Power supply pin (+5V)
2	SWDT	I	Write data signal input from system control (IC201).
3	SCK	I	Serial clock signal input from system control (IC201).
4	XLAT	I	Serial latch signal input from system control (IC201).
5	SRDT	O/Z	Read data signal input to system control (IC201).
6	SENSE	O/Z	Internal status (SENSE) output to system control (IC201).
7	SCMD0	I	Serial command control mode input from system control (IC201).
8	SCMD1	I	Serial command control mode input from system control (IC201).
9	XINT	O	Interrupt status output to system control (IC201).
10	RCPB	I	Record/playback select input. Not used in this set (held "L").
11	WRMN	I	Write/monitor mode select signal input from system control (IC201).
12	TX	I	Write data transmission timing input from system control (IC201). Used in conjunction with magnetic head ON/OFF output.
13	VSS	—	GND
14	SICK	I	Chip programming pin (held "L" in this set).
15	IDSL	I	Chip programming pin (held "L" in this set).
16	XILT	I	Chip programming pin (held "H" in this set).
17	XRST	I	Reset signal input from system control (IC201). L" for reset.
18—21	TS0—TS3	I	Test pin (held "L" in this set).
22	EXIR	I	Chip programming pin (held "H" in this set).
23	SASL	I	Block select with use of single. "L" for ATRAC and "H" for RAM Controller. (Held "L" in this set.)
24	SNGLE	I	Normally held "L". Held "H" when signal is used as ATRAC or RAM controller. Held "L" in this set.
25	VSS	—	GND
26	AIRCPB	O	ATRAC or external audio block record/playback signal output pin
27	XRQ	I/O	ATRAC I/F's XRQ signal input/output pin
28	ADTO	I/O	ATRAC decode data signal input/output pin
29	ADTI	I/O	ATRAC encode data signal input/output pin
30	XALT	I/O	ATRAC I/F's XALT signal input/output pin
31	ACK	I/O	ATRAC I/F's ACK signal input/output pin
32	AC2	I/O	ATRAC I/F's error data signal input/output pin
33	LCHST	I/O	ATRAC I/F's Lch Start data signal input/output pin
34	EXE	I/O	ATRAC I/F's EXE signal input/output pin
35	MUTE	I/O	ATRAC I/F's MUTE signal input/output pin
36	OSCO	O	Clock output (45MHz).
37	OSCI	I	Clock input (45MHz).
38	VSS	—	GND
39	ATT	I/O	ATRAC I/F's ATT signal input/output pin
40	F86	O	ATRAC block's 11.6 msec timing signal input/output pin
41	DOUT	O	Monitor/decode audio data signal output to A/D and D/A converter (IC206).
42	ADIN	I	Recording signal input from A/D and D/A converter (IC206).
43	ABCK	O	Bit clock signal output to A/D and D/A converter (IC206).
44	ALRCK	O	L/R clock signal output to A/D and D/A converter (IC206).
45—47	SA2—SA0	O	Address signal output. Not used in this set (empty pin).
48, 49	A11, A10	O	Address signal output. Not used in this set (empty pin).
50	VSS	—	GND
51	VDD	—	Power supply pin (+5V)

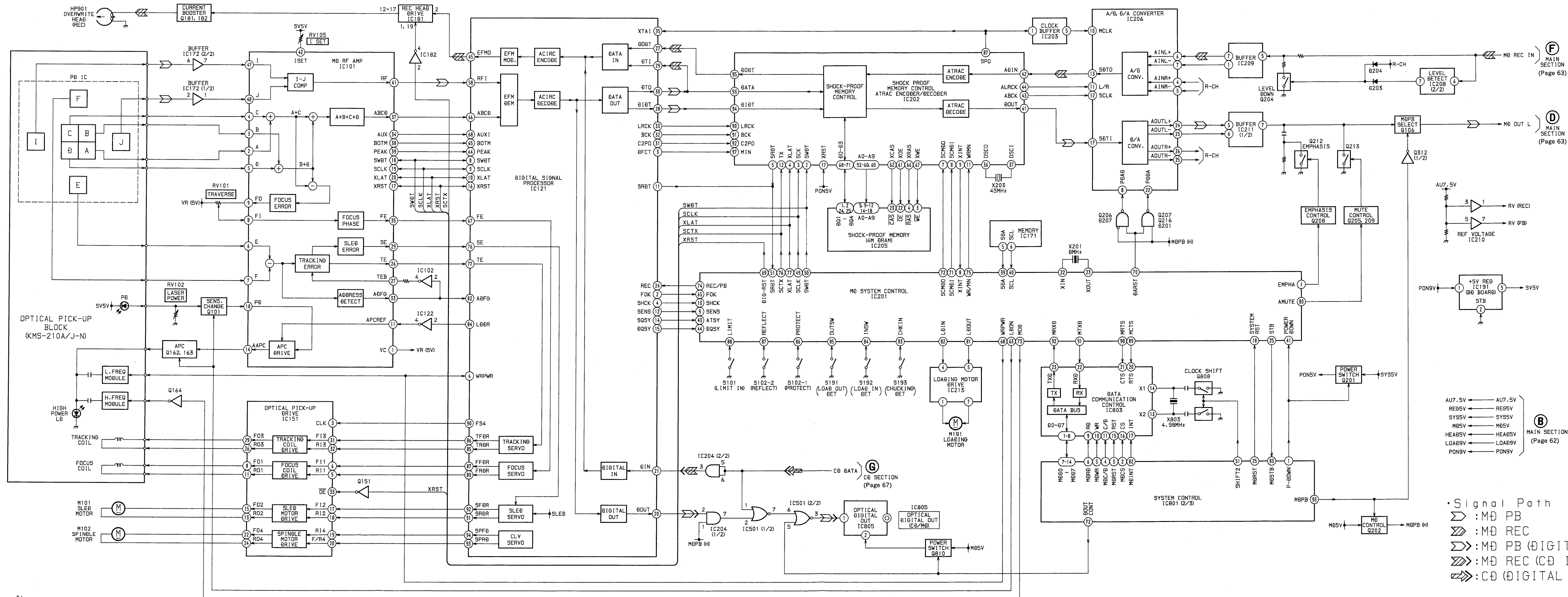
Pin No.	Pin Name	I/O	Pin Description
52—55	A03—A00	O	Address signal output to RAM (IC205).
56—60	A04—A08	O	Address signal output to RAM (IC205).
61	XOE	O	Output enable control signal output to RAM (IC205).
62	XCAS	O	Column address strobe signal output to RAM (IC205).
63	VSS	—	GND
64	XCS	O	Chip select signal output to RAM (IC205).
65	A09	O	Address signal output to RAM (IC205).
66	XRAS	O	Low address strobe signal output to RAM (IC205).
67	XWE	O	Read/write control signal output to RAM (IC205).
68, 69	D1, D0	I/O	Data signal input to and output from RAM (IC205).
70, 71	D2, D3	I/O	Data signal input to and output from RAM (IC205).
72—74	D4—D6	I/O	Data signal input/output pin. Not used in this set (empty pin).
75	VSS	—	GND
76	D7	I/O	Data signal input/output pin. Not used in this set (empty pin).
77	ERR	I/O	Error (C2PO) data input/output with external RAM. Not used in this set (empty pin).
78	EXTC2R	I	Error data write external RAM select input ("H" for external RAM). Held "L" in this set.
79	BUSY	O	RAM access BUSY signal output. Not used in this set (empty pin).
80	EMP	O	Just before EMPTY or FULL ATRAC data ("H" for DSC=ASC+1).
81	FUL	O	Just before FULL or EMPTY ATRAC data ("H" for ASC=DSC+1).
82	EQL	O	EMPTY ATRAC data ("H" for DSC=ASC).
83	MDLK	O	Indicates whether record/playback data is main or sub ("H" for sub, linking and "L" for main).
84	CPSY	O	Interpolation sync signal output
85	CTMD0	O	DSC counter mode output
86	CTMD1	O	DSC counter mode output
87	SPO	O	System clock (512Fs=22.579MHz) signal output to CXD2535BR (IC121).
88	VSS	—	GND
89	MDSY	O	Main data sync detect signal output
90	LRCK	I	L/R clock signal input (44.1kHz) from CXD2535BR (IC121).
91	BCK	I	Bit clock signal input (2.8224MHz) from CXD2535BR (IC121).
92	C2PO	I	C2PO signal input (to indicate data error state) from CXD2535BR (IC121). C2PO ("H") for playback, D. In-Vflag for digital recording and "L" for analog recording.
93	DATA	I/O	In recording mode, recording audio data signal output to CXD2535BR (IC121). In playback mode, playback audio data signal output from CXD2535BR (IC121).
94	DIDT	I	16-bit data input for digital audio input, sent from CXD2535BR (IC121).
95	DODT	O	16-bit data output for digital audio input, sent to CXD2535BR (IC121).
96	DIRCPB	O	Disc drive and EFM encoder/decoder recording/playback mode output. Not used in this set (empty pin).
97	MIN	I	Defect ON/OFF select signal input from CXD2535BR (IC121).
98	SPOSL	I	Pin ⑦ (SPO) input/output select input pin ("L" for IN and "H" for OUT). Held "H" in this set.
99	MCKT1	O	RAM controller's internal master clock output
100	VSS	—	GND

● IC801 System Control (CXP81740-605Q)

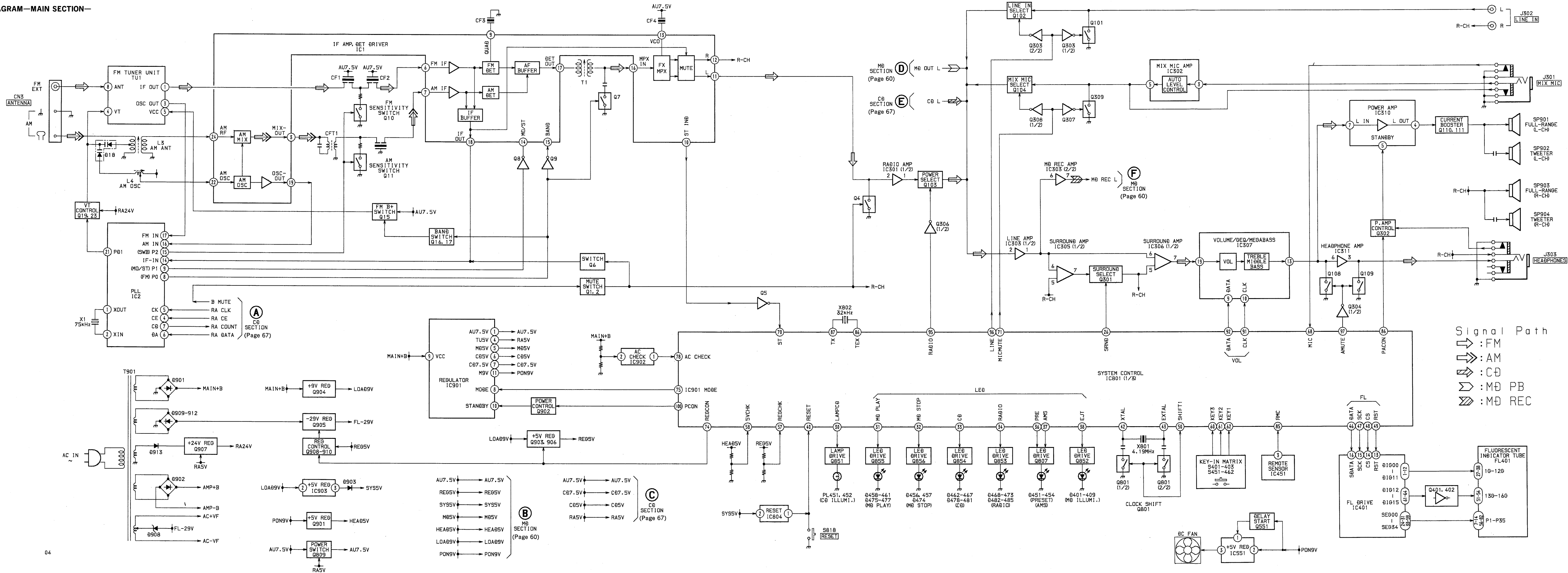
Pin No.	Pin Name	I/O	Pin Description
1	P-DOWN	O	MD section power down control
2	MDCS	O	UART chip select
3	MDRST	O	UART reset
4	MDC/D	O	UART command/data
5	MDWR	O	UART write control
6	MDRD	O	UART read control
7-14	MDD7-0	I/O	UART data bus
15	OPEN	O	CD tray control. "H" to open.
16	CLOSE	O	CD tray control. "H" to close.
17	XRST	O	CD section system reset
18	MDATA	O	CD section data
19	SENSE	I	CD section sense input
20	MCLK	O	CD section data clock
21	XLT	O	CD section system latch
22	LDON	O	CD section laser ON/OFF control
23, 24	—	—	Not used (empty pin).
25	MDRST	O	MD microcomputer reset
26	SRND	O	Surround control
27, 28	—	—	Not used (empty pin).
29	FAN	O	"H" for LINE.
30	LAMPCD	O	CD tray internal illumination
31	LEDMDPLAY	O	LED is lit when function MD is active.
32	LEDMDSTOP		
33	LEDCD	O	LED is lit when function CD is active.
34	LEDRADIO	O	LED is lit when function RADIO is active.
35	LEDREC	O	LED is lit during recording.
36	LEDPRE	O	LED is lit when function RADIO is active.
37	LEDAMS	O	LED is lit when function MD and CD are active.
38	LEDEJT	O	LED is lit when MD disc is present.
39	MP	—	Connect to GND.
40	RST	I	Reset input pin
41	VSS	—	Connect to GND
42	XTAL	O	Crystal oscillator output pin (4.19MHz)
43	EXTAL	I	Crystal oscillator input pin (4.19MHz)
44, 45	—	—	Connect to AVDD
46	FLDATA	SO	FL data
47	FLSCK	SO	FL clock
48	FLCS	O	FL chip select
49	FLRST	O	FL reset
50	SHIFT1	O	Main microcomputer clock shift
51	SHIFT2	O	UART clock shift
52	AVSS	—	GND
53	AVREF	—	Reference power supply pin (+5V)
54	AVDD	—	Power supply pin (+5V)
55, 56	—	—	Not used (empty pin).
57	REGCHK	A/D	Voltage check for REG5V.
58	5VCHK	A/D	Voltage check for HEAD5V.
59	OPN/CLS	A/D	CD tray state detect

Pin No.	Pin Name	I/O	Pin Description
60–62	KEY3–1	A/D	Key input of A/D divided by 6.
63	—	—	Not used (empty pin).
64–66	RSMK3–1	I	Radio destination setting
67	TEST	I	Test mode input. "L" in test mode.
68	MIC	I	Microphone presence detect. "H" when microphone is present.
69	9/10	I	Radio section AM interval select. "H" to select 10kHz.
70	ST	I	Radio stereo detect. "L" in monaural mode.
71	MICMUTE	O	Mic mute control
72	DOUTCON	O	Optical Digital Out control
73	CE	O	Radio section chip enable
74	REGCON	O	REG5V and LOAD9V control
75	IC901MODE	PWM	100% for CD and 53% for RADIO.
76	NC	—	Not used (empty pin).
77	SCOR	INT	CD section score input
78	ACCHK	INT	AC presence check. "H" when AC is present.
79	SUBQ/RDI	SI	CDSUBQ and radio data input.
80	RDO	SO	Radio section data output
81	SQCKRCLK	SO	CDSUBQ and radio lock output.
82	MDINT	INT	UART communication interrupt
83	MDSTB	I	Power supply request from MD. "H" for REQ.
84	—	—	Not used.
85	RMC	RMC	Remote commander input
86	TEX	I	Crystal oscillator input pin (32kHz)
87	TX	O	Crystal oscillator output pin (32kHz)
88	VSS	—	GND
89	VDD	—	Power supply pin (+5V)
90	NC	—	Not used (empty pin).
91	VOLCLK	O	Volume clock output
92	VOLDATA	O	Volume data output
93	MD	O	Function output (MD)
94	CD	O	Function output (CD)
95	RADIO	O	Function output (RADIO)
96	LINE	O	Function output (LINE)
97	AMUTE	O	Audio mute output
98	PACON	O	Power amplifier output
99	BMUTE	O	Block mute output
100	PCON	O	Power supply control

5-2. BLOCK DIAGRAM—MD SECTION—

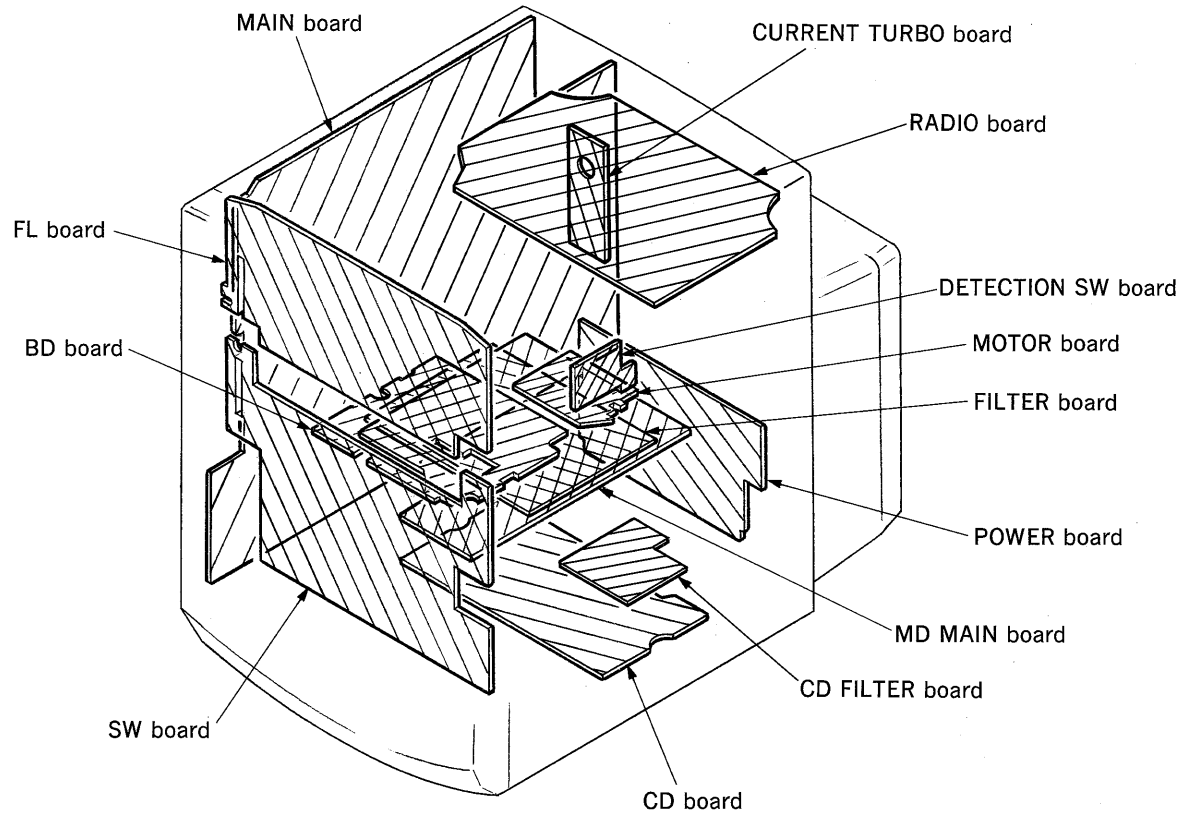


5-3. BLOCK DIAGRAM—MAIN SECTION—





5-5. CIRCUIT BOARDS LOCATION



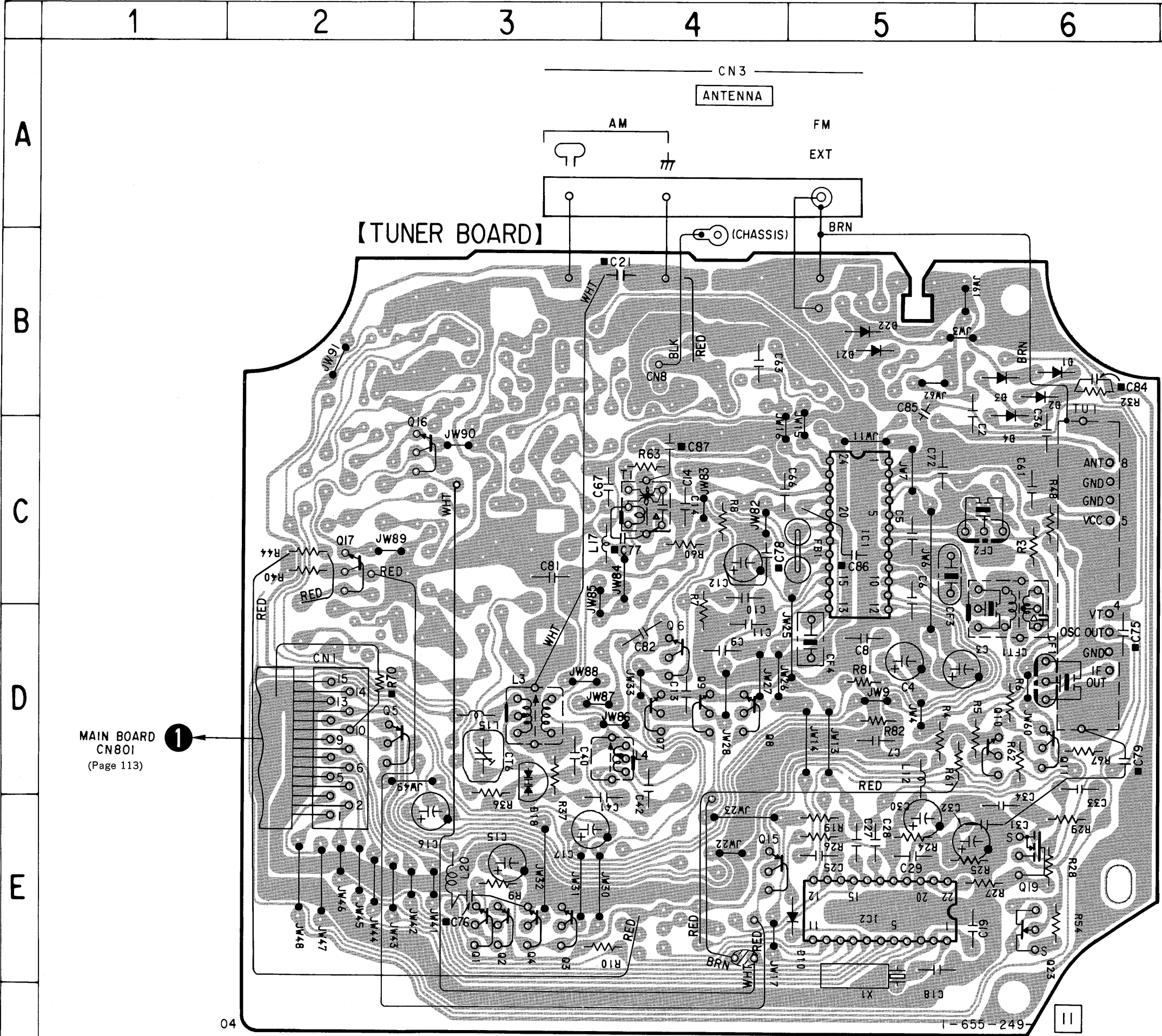
• Semiconductor Location

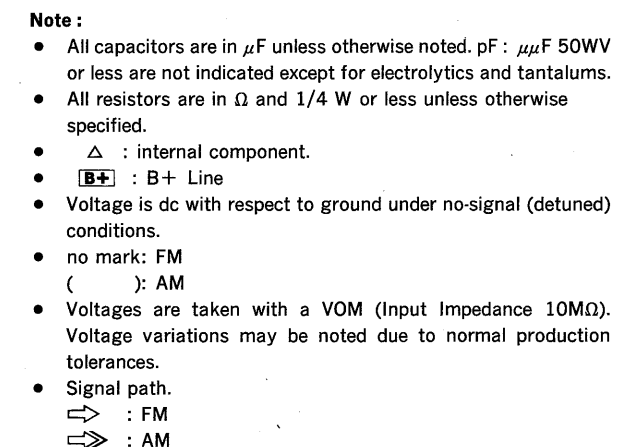
Ref. No.	Location
D1	B-6
D2	B-6
D3	B-6
D4	B-6
D10	E-5
D18	E-3
D21	B-5
D22	B-5
IC1	C-5
IC2	E-5
Q1	E-3
Q2	E-3
Q3	E-3
Q4	E-3
Q5	D-2
Q6	D-4
Q7	D-4
Q8	D-4
Q9	D-4
Q10	D-6
Q11	D-6
Q15	E-4
Q16	C-3
Q17	C-2
Q19	E-6
Q23	E-6

Note :

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- : indicates side identified with part number.
- ▨ : Pattern on the side which is seen.

5-6. PRINTED WIRING BOARD—TUNER SECTION—



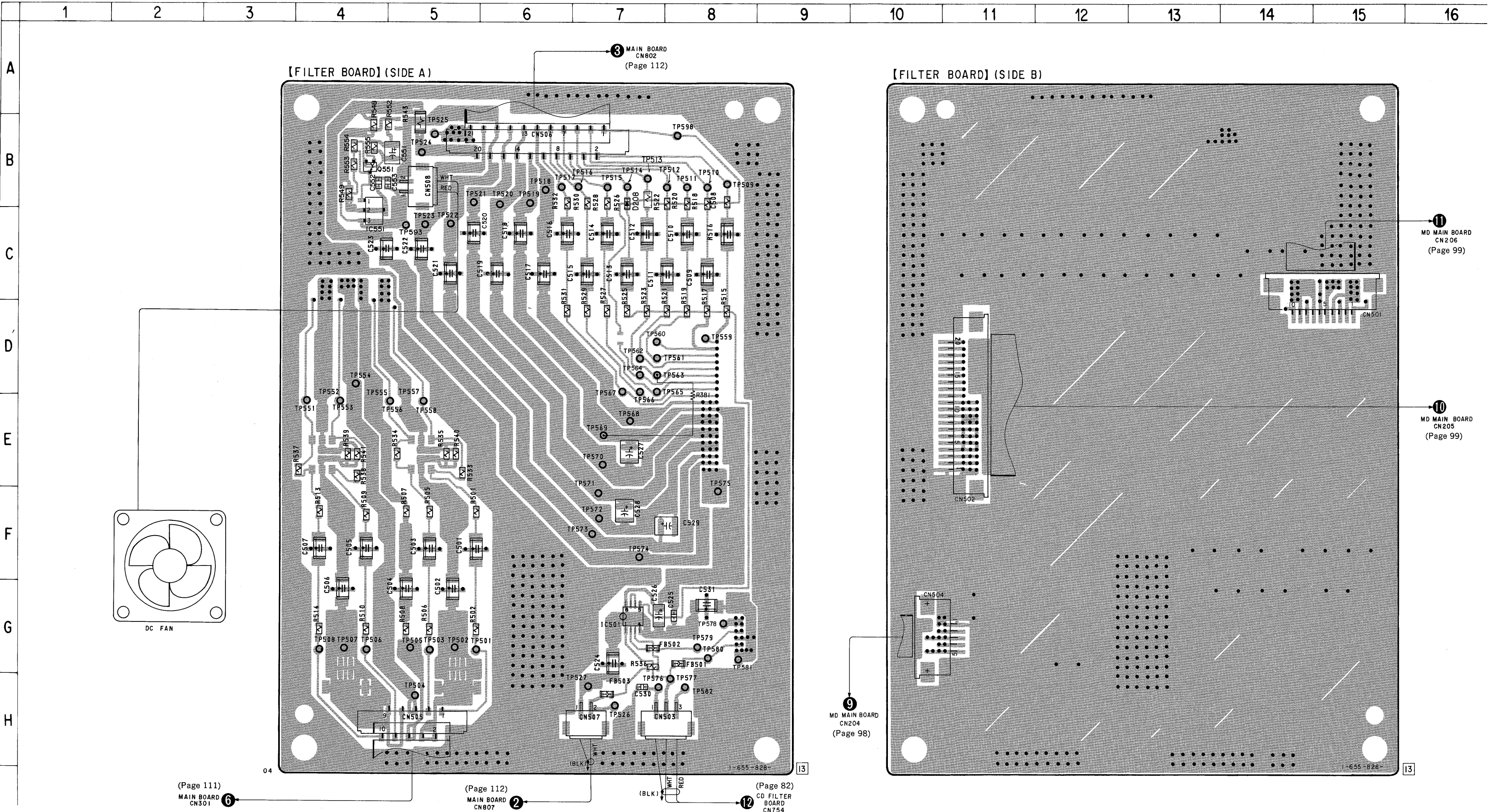


5-8. PRINTED WIRING BOARDS—FILTER SECTION—

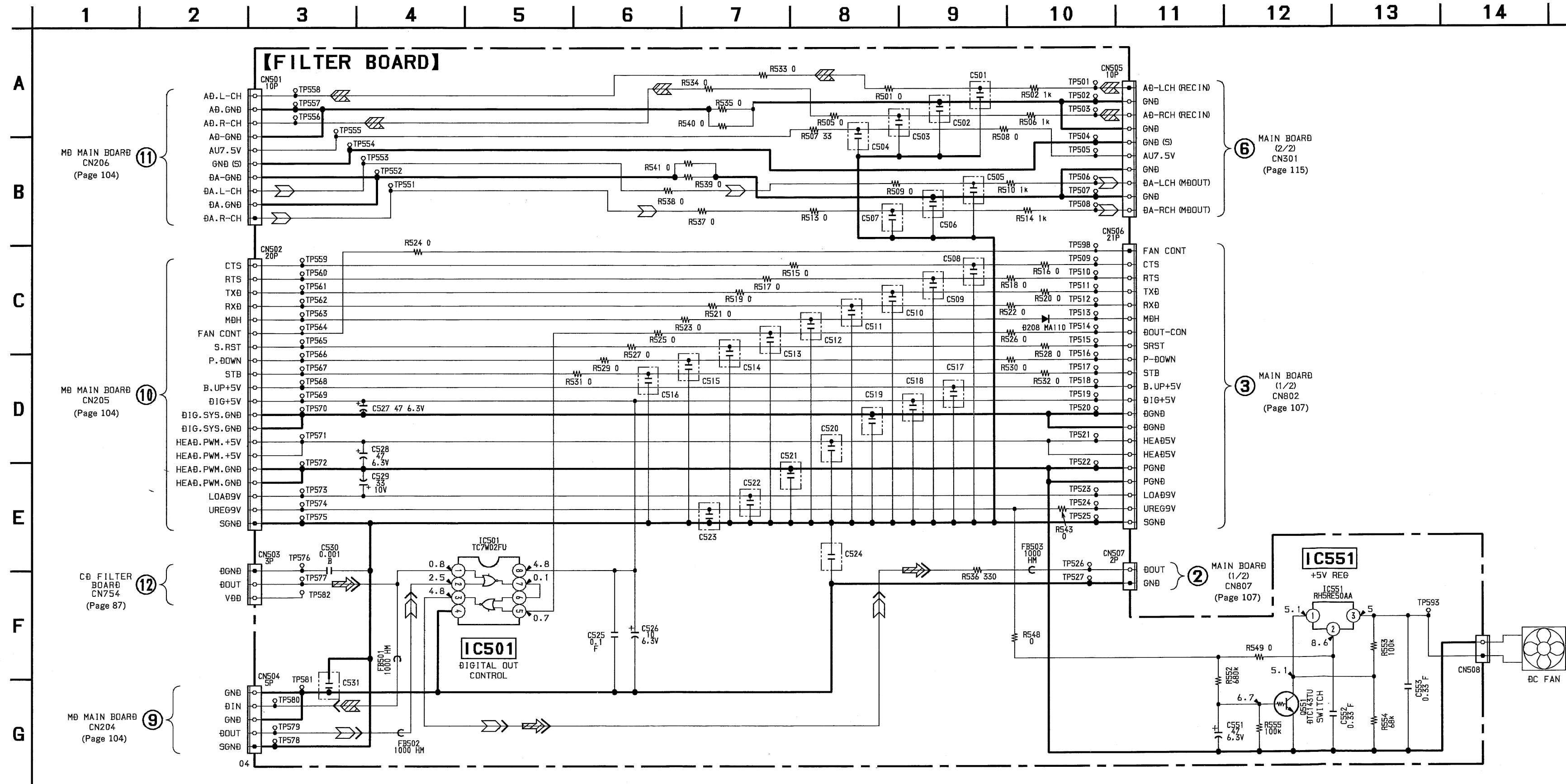
● Semiconductor Location

Ref. No.	Location
D208	B-7
IC501	G-7
IC551	C-4
Q551	B-4

Note :
● : Through hole.
■ : Pattern on the side which is seen.
(The other layer's patterns are not indicated.)



5-9. SCHEMATIC DIAGRAM—FILTER SECTION—



- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4 W or less unless otherwise specified.
 - B+ : B+ Line
 - Voltage is dc with respect to ground under no-signal conditions.
 - no mark: POWER OFF
 - Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - PB (MD)
 - REC (MD)
 - PB (DIGITAL OUT)
 - REC (DIGITAL IN)
 - DIGITAL OUT (CD)

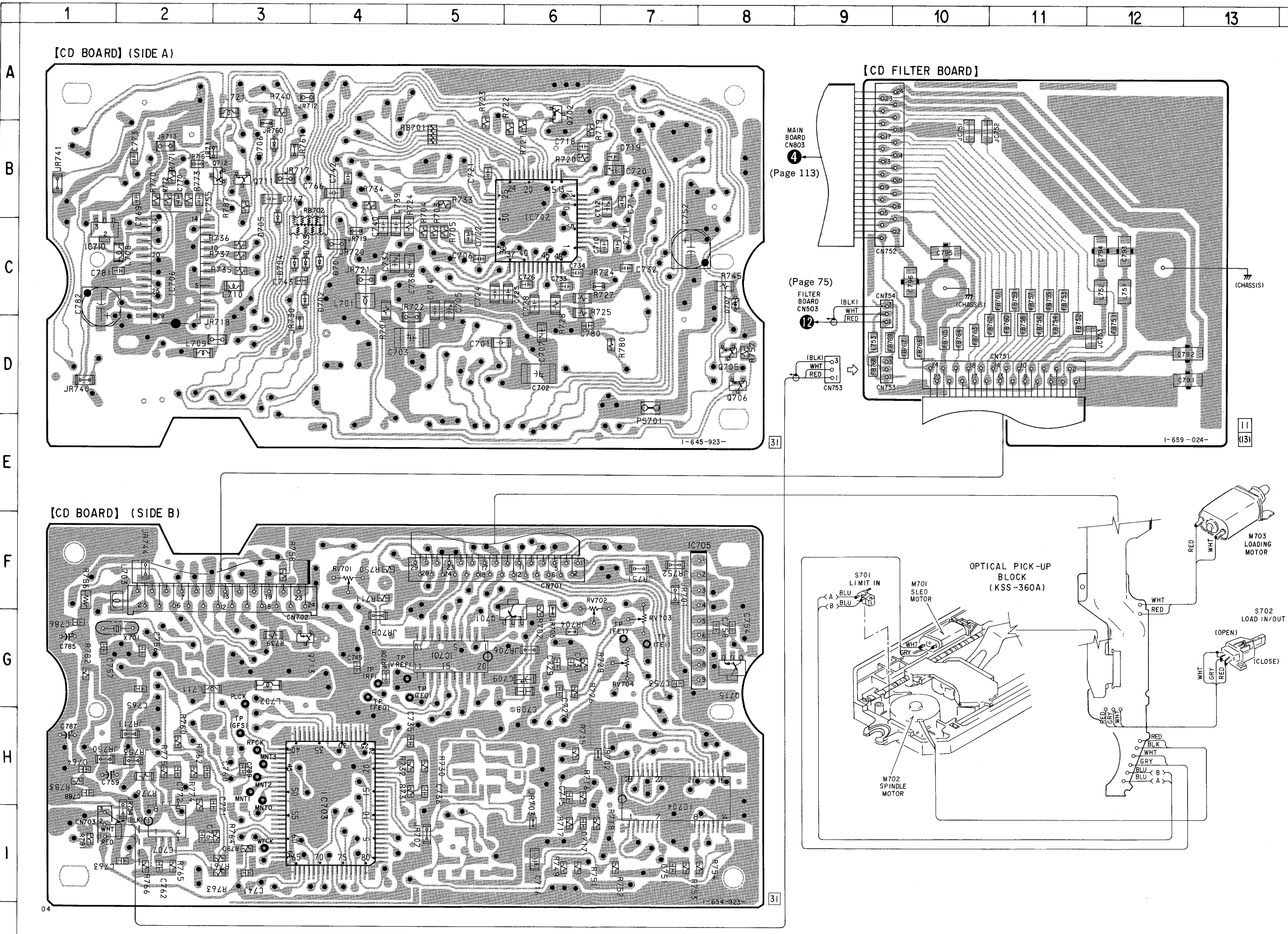
5-10. PRINTED WIRING BOARDS—CD SECTION—

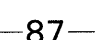
• Semiconductor Location

Ref. No.	Location
D701	C-4
D702	C-3
D703	C-3
D704	C-3
D705	B-3
D706	B-3
D707	C-8
IC701	G-5
IC702	B-6
IC703	H-4
IC704	H-7
IC705	F-7
IC706	C-2
IC707	I-2
IC710	C-1
Q701	G-6
Q702	A-6
Q705	D-8
Q706	D-8
Q711	B-3
Q712	B-3
Q713	G-3
Q715	G-8

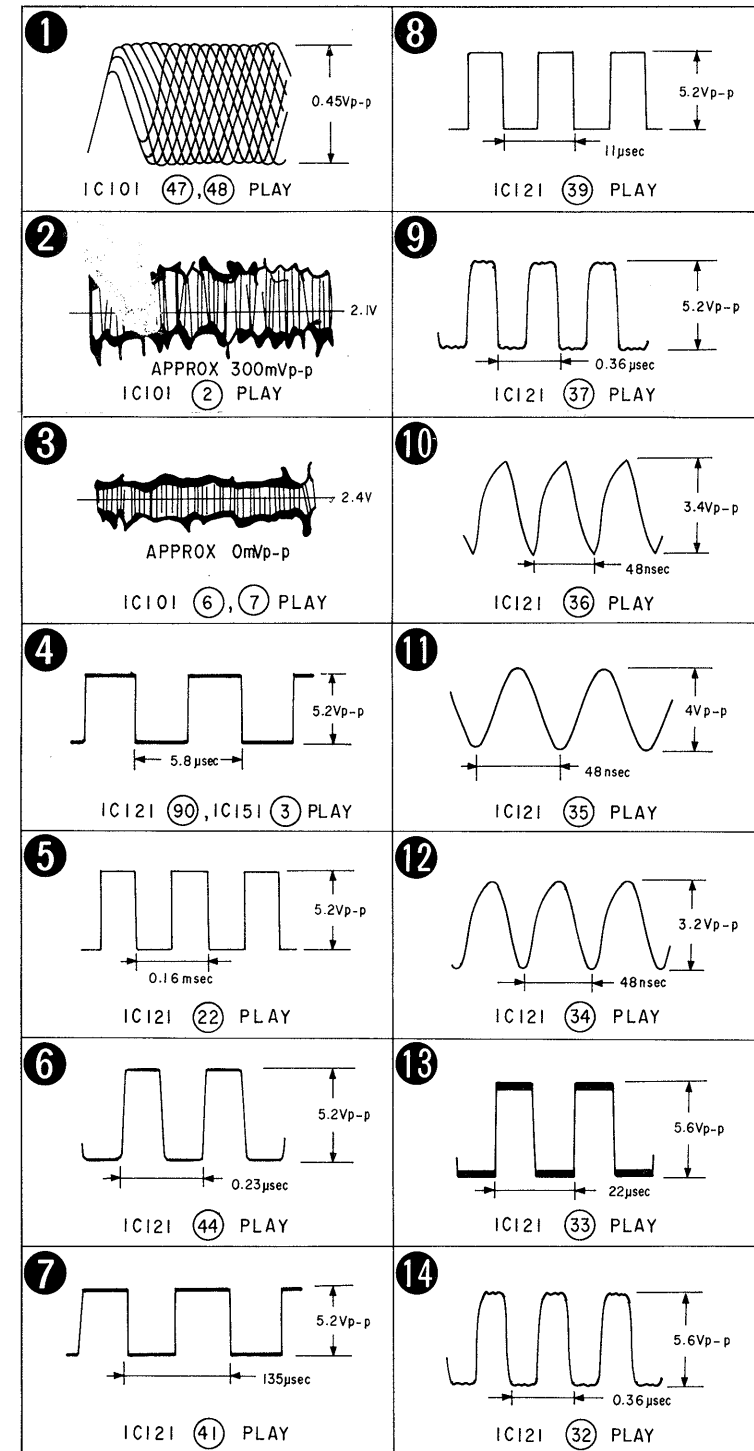
Note :

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
(The other layer's patterns are not indicated.)





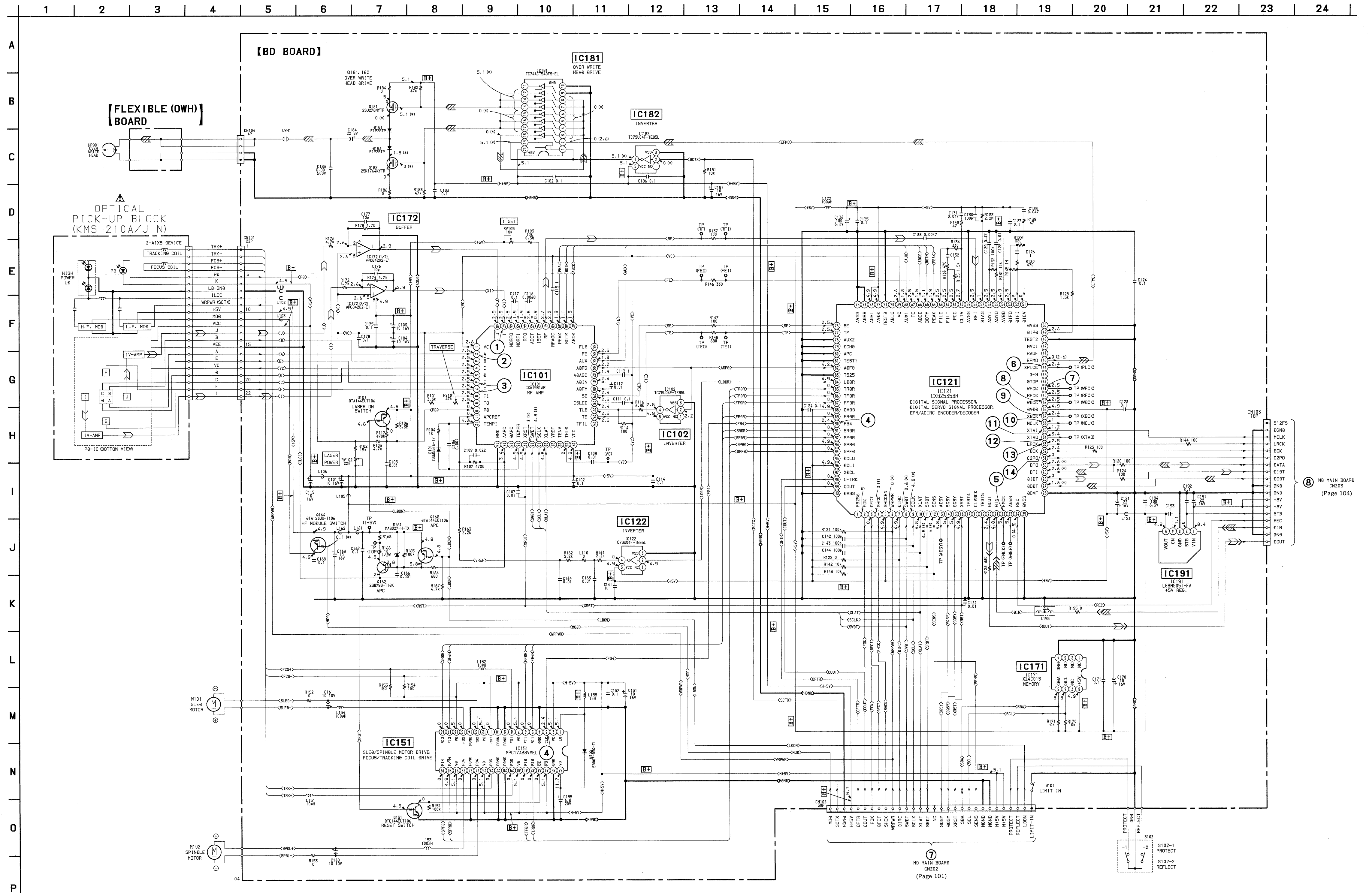
• Waveforms

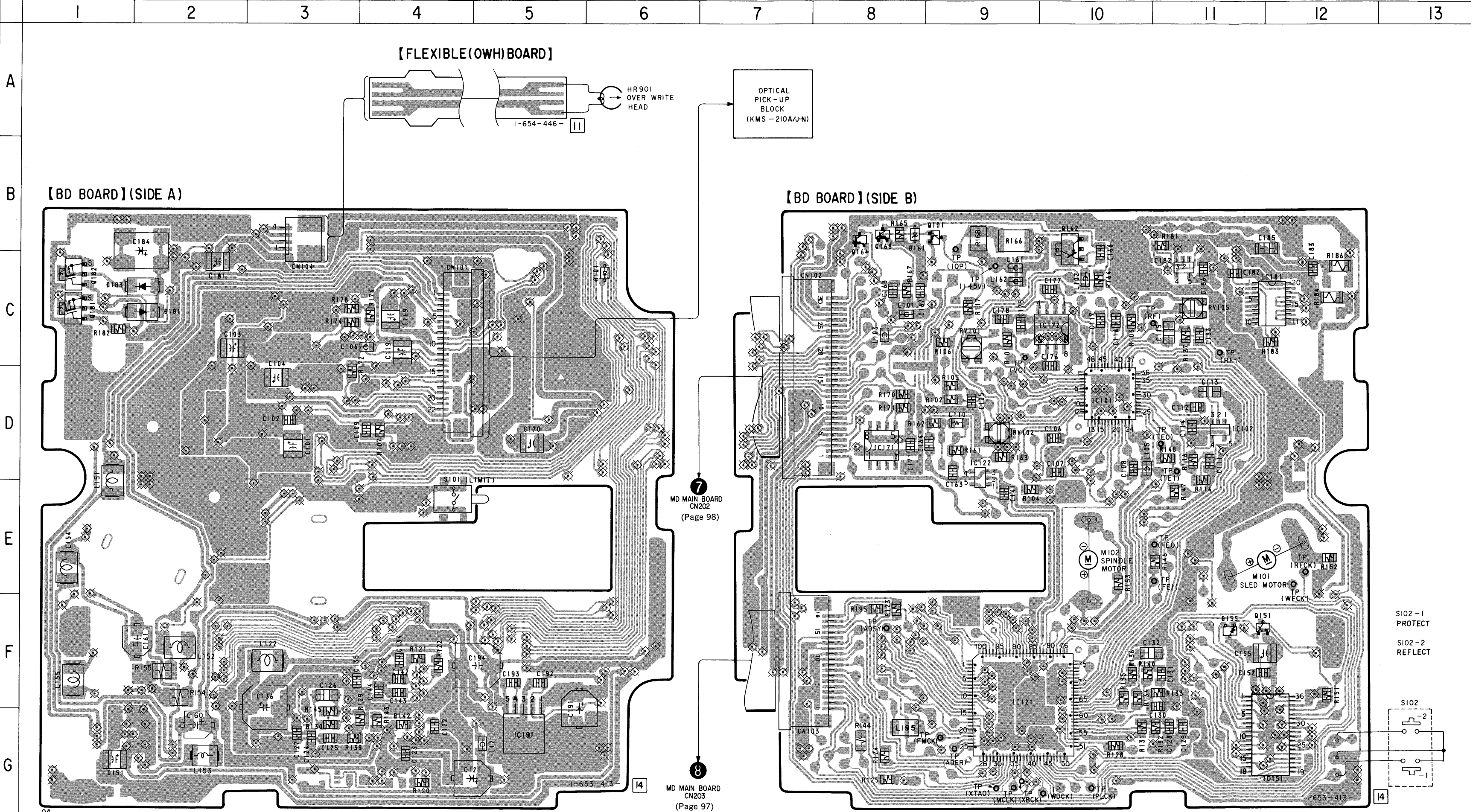


- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
 - Δ : internal component.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- $\square$: B+ Line
- $\square$: adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP (MD)
- (): PB (MD)
- < : REC (MD)
- > : REC (MD)
- Δ : Impossible measurement point
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path:
 - $\rightarrow$: PB (MD)
 - $\rightarrow$: REC (MD)
 - $\rightarrow$: PB (DIGITAL OUT)
 - $\rightarrow$: REC (DIGITAL IN)





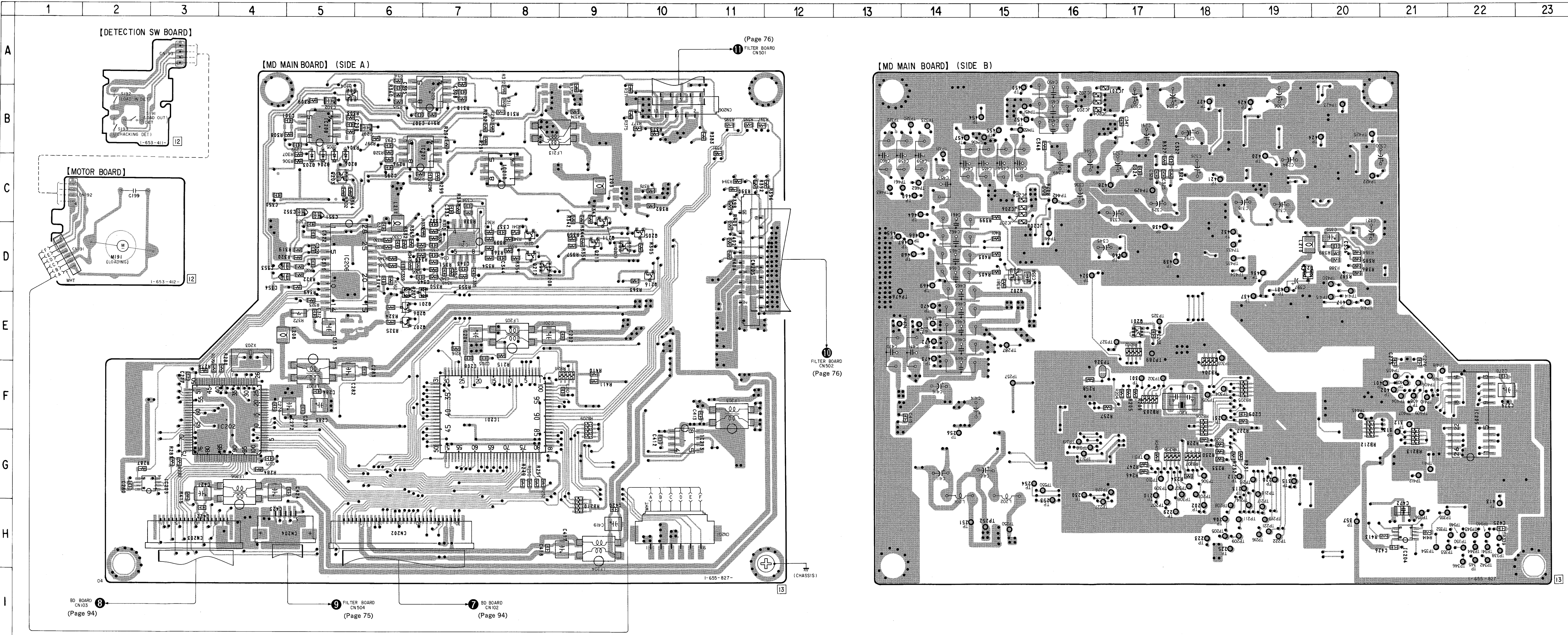
5-14. PRINTED WIRING BOARDS—MD MAIN SECTION—

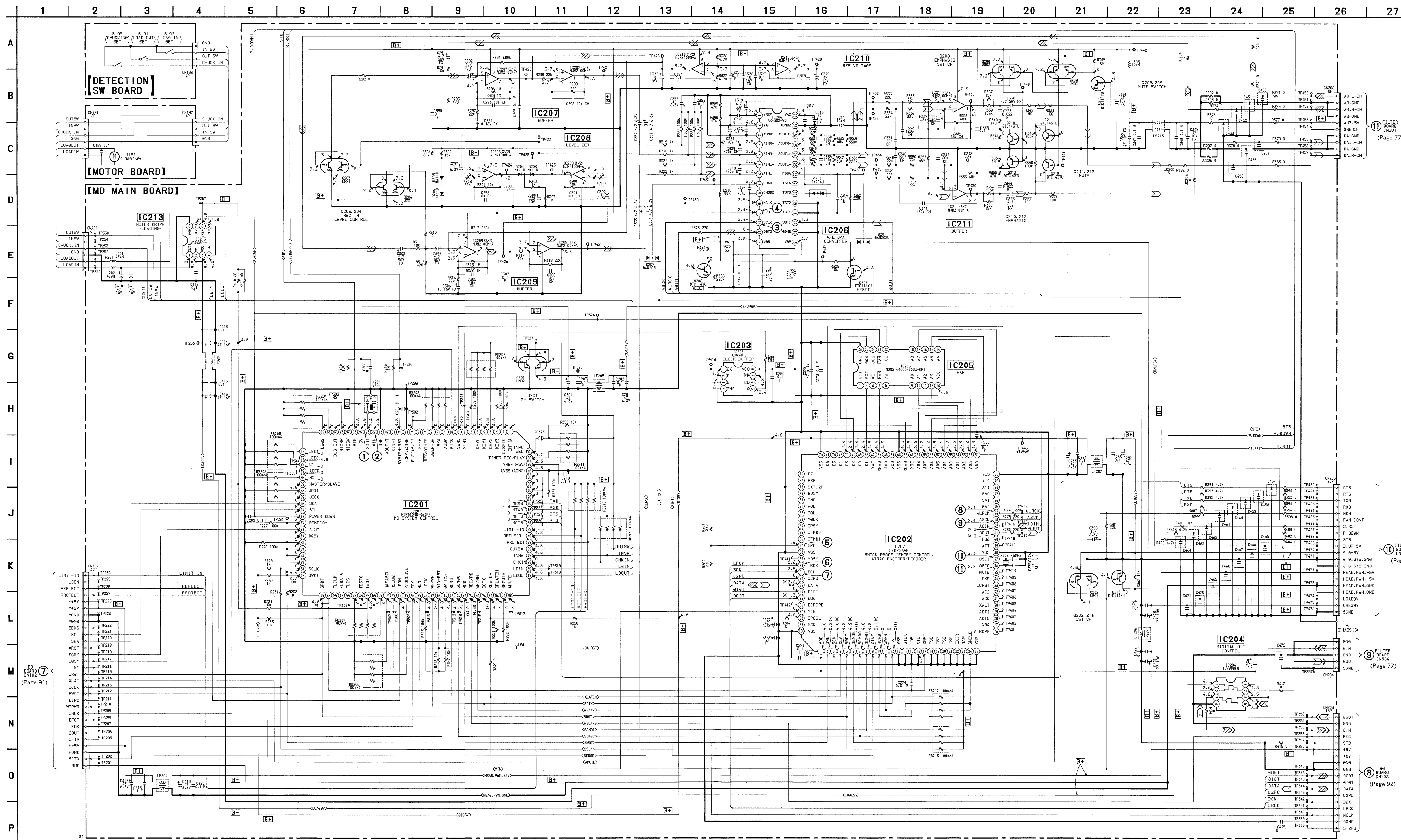
• Semiconductor Location

Ref. No.	Location
D201	E-6
D202	D-19
D203	C-5
D204	C-5
D205	C-5
D206	C-5
D207	D-6
IC201	F-7
IC202	F-4
IC203	G-3
IC204	H-21
IC205	F-22
IC206	D-5
IC207	B-6
IC208	B-5
IC209	B-7
IC210	C-8
IC211	D-7
IC213	G-10
Q201	E-17
Q202	D-15
Q203	C-5
Q204	B-5
Q205	D-10
Q206	E-6
Q207	E-6
Q208	D-8
Q209	D-9
Q210	D-8
Q211	C-9
Q212	D-8
Q213	D-9
Q216	D-10

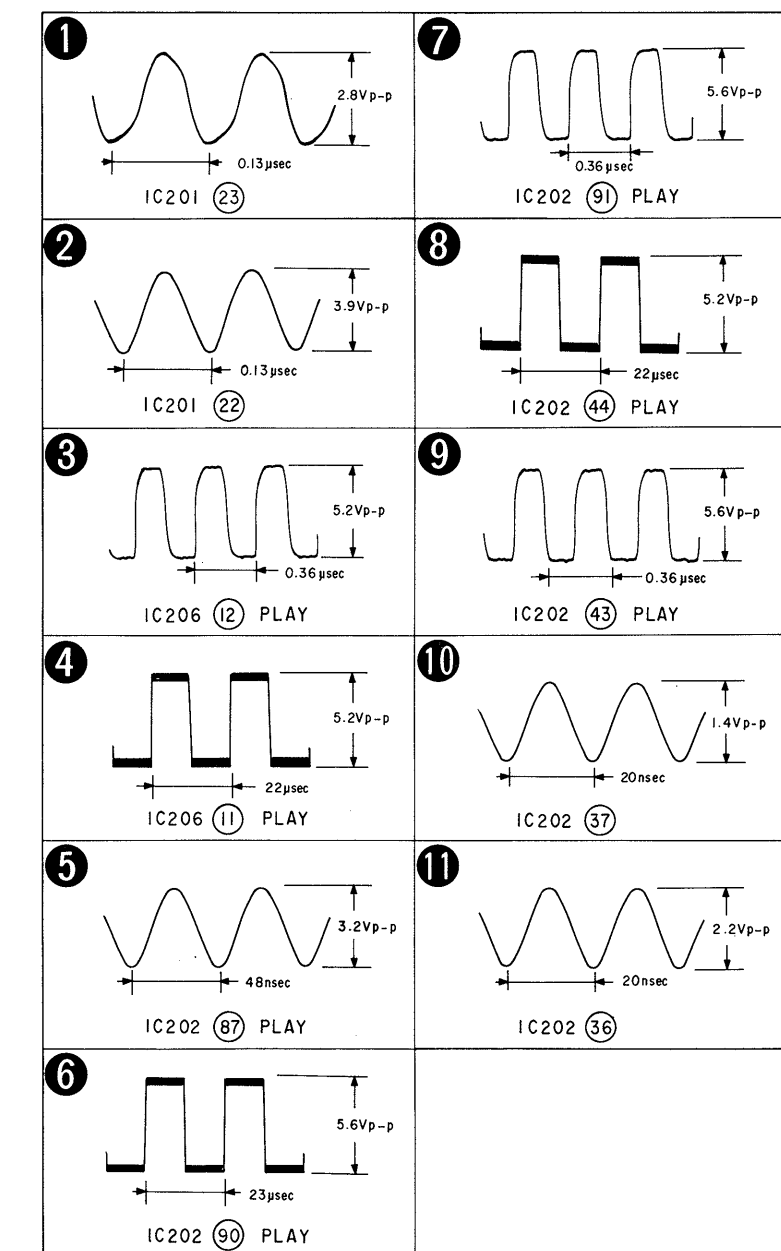
Note:

- : parts extracted from the component side.
- : Through hole.
- : Pattern on the side which is seen.
(The other layer's patterns are not indicated.)



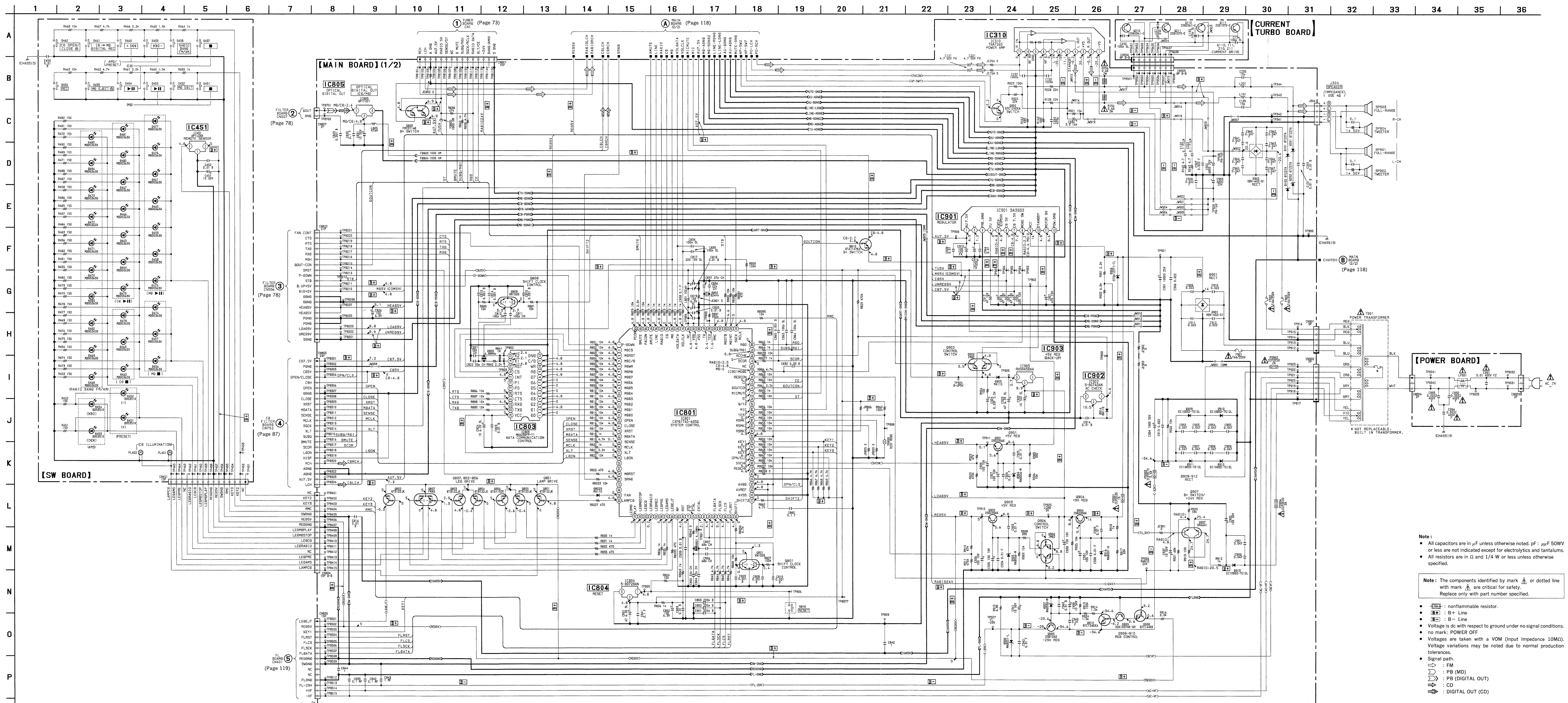


- Waveforms



Note :

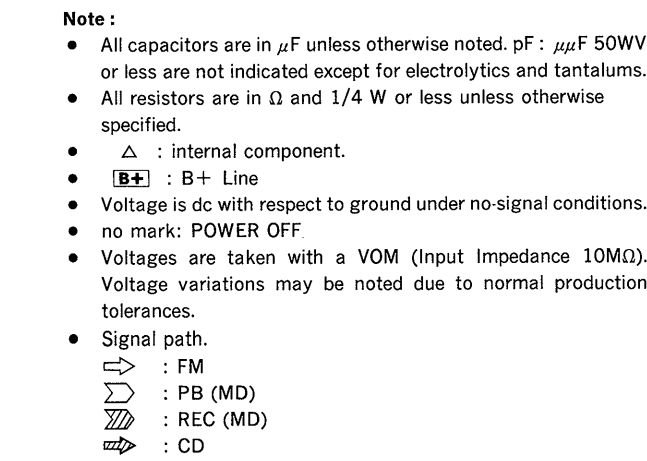
- All capacitors are in μF unless otherwise noted. $p\text{F}$: $\mu\text{F} \times 50\text{WV}$ or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4 \text{ W}$ or less unless otherwise specified.
- Δ : internal component.
- **B Σ** : B + Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP (MD)
- ($\rightarrow$) : PB (MD)
- $\langle$ $\rightarrow$ $\rangle$: REC (MD)
- * : Impossible measurement point
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- Σ : PB (MD)
- $\Rightarrow$: REC (MD)
- $\Rightarrow$: PB (DIGITAL OUT)
- $\Rightarrow$: REC (DIGITAL IN)



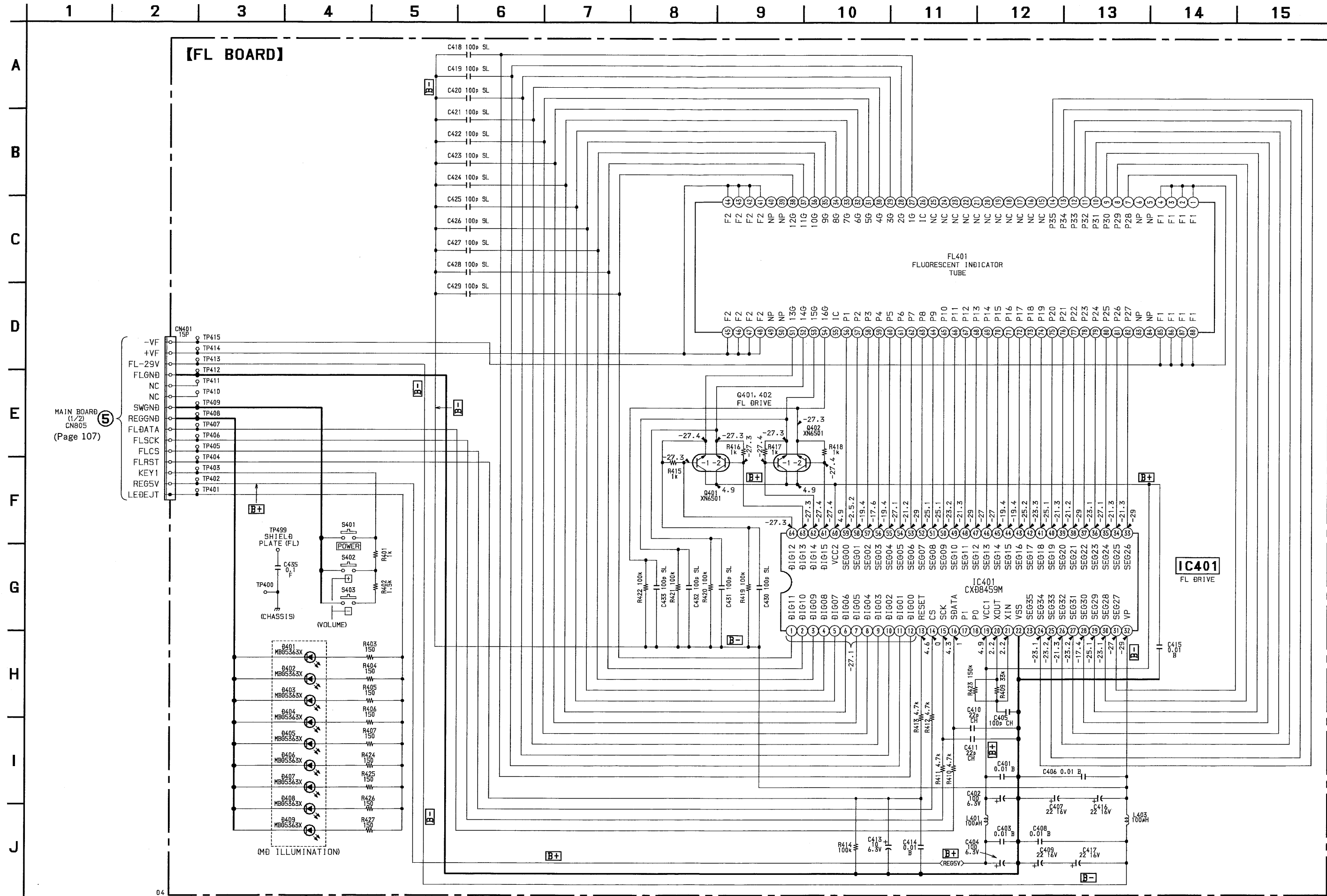


Note :

- — : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ◐ : Pattern on the rear side.



5-19. SCHEMATIC DIAGRAM—DISPLAY SECTION—

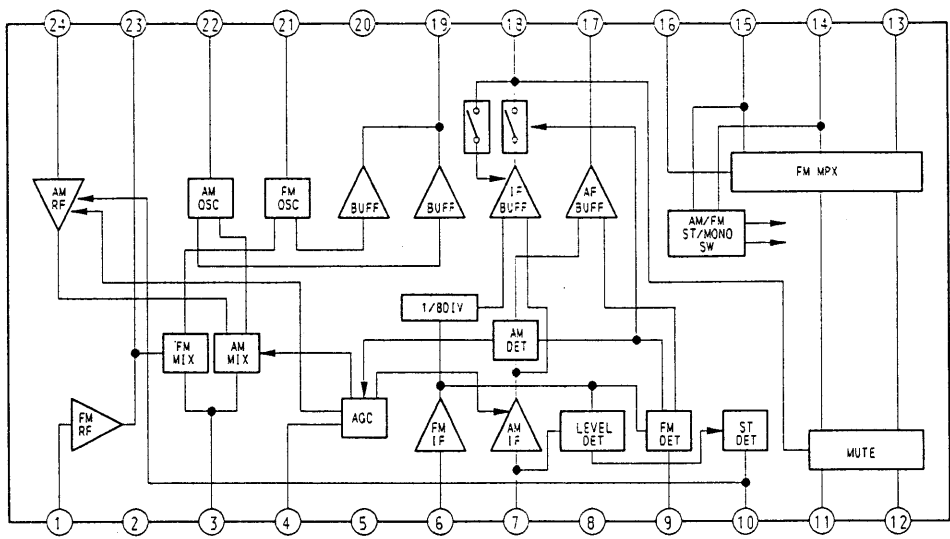


Note:

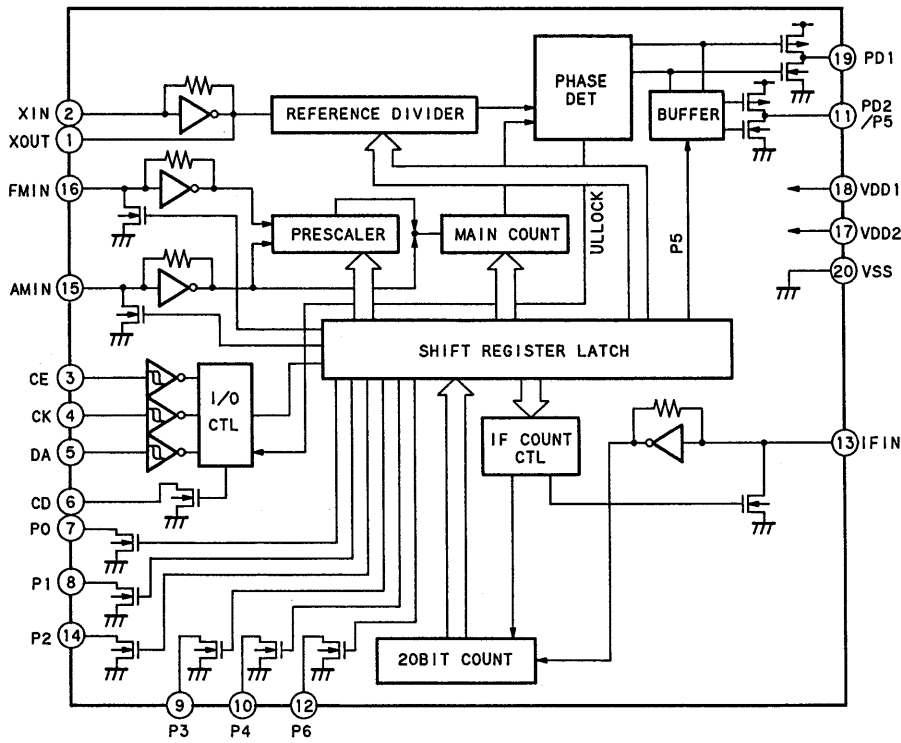
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+**: B+ Line
- B-**: B- Line
- Voltage is dc with respect to ground under no-signal conditions.
- no mark: POWER OFF
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.

• IC Block Diagrams

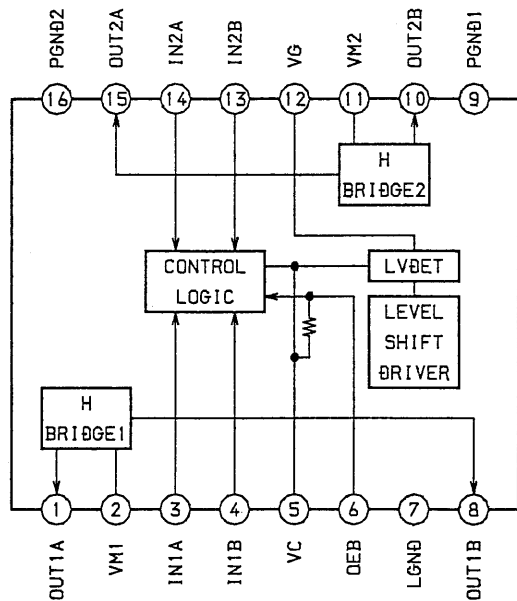
IC1 TA2008N



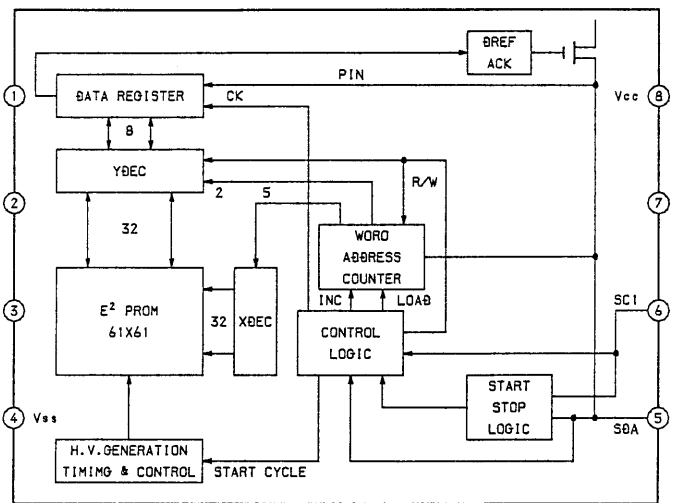
IC2 BU2615S



IC151 MPC17A38VMEL

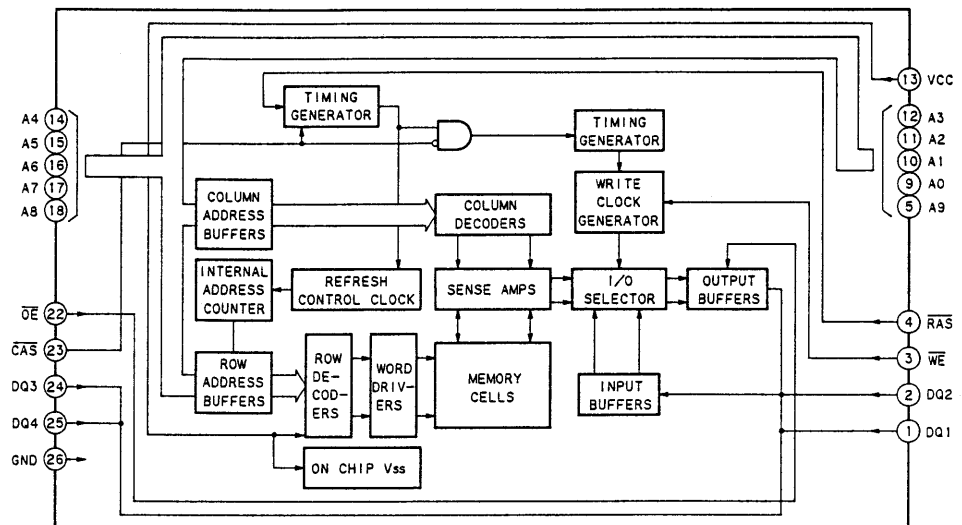
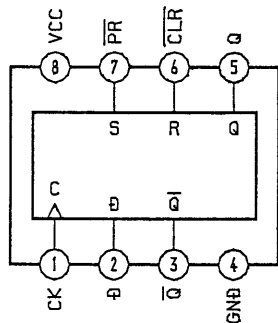


IC171 X24C01S

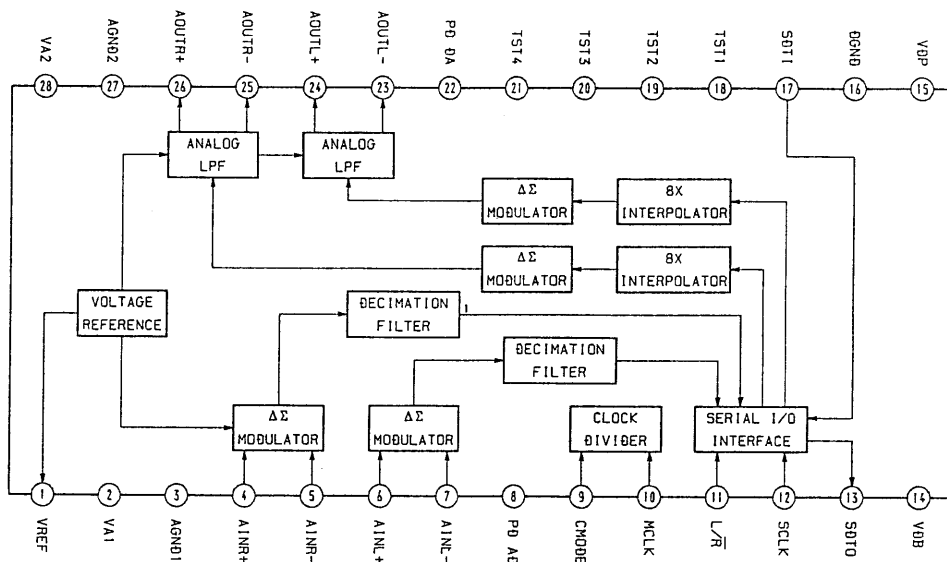


IC205 MSM514400C-70SJ-DR1

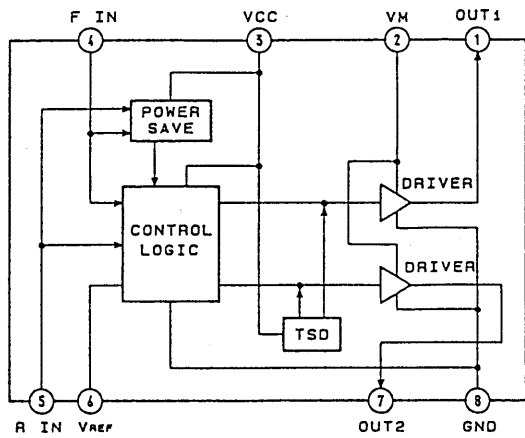
IC203 TC7W74FU



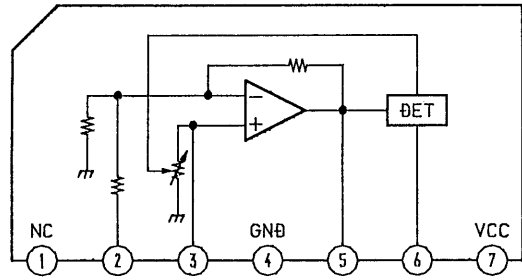
IC206 AK4502-VS



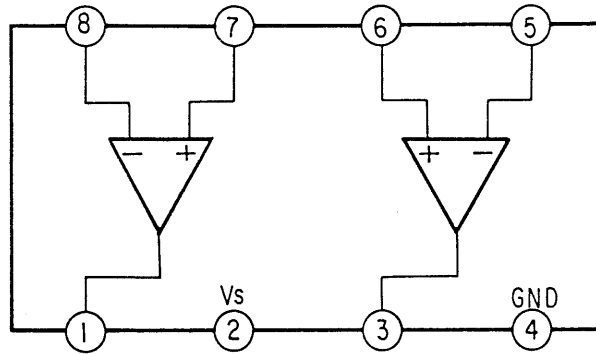
IC213 BA6287F-T1



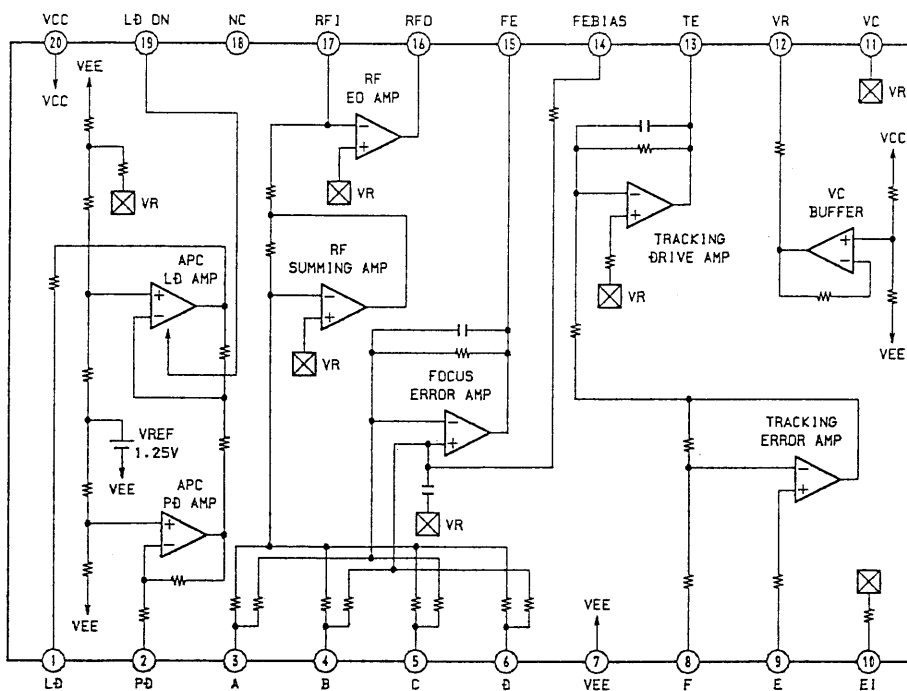
IC302 TA2011S



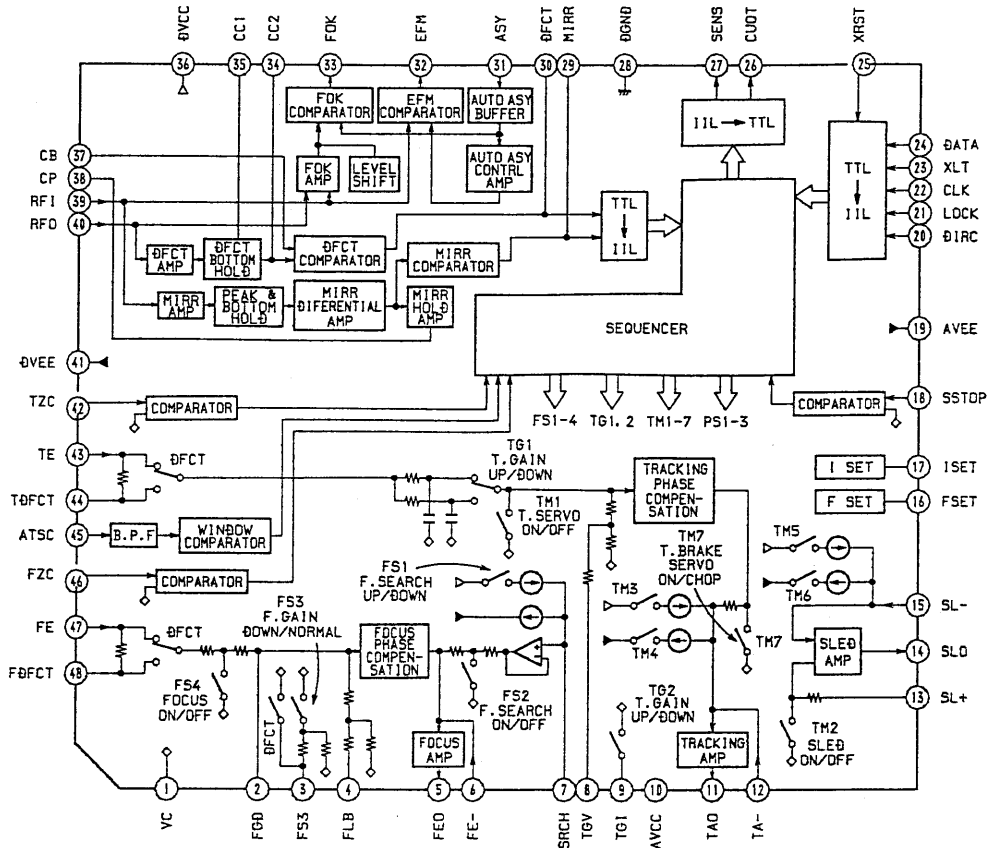
IC311 NJM2073M



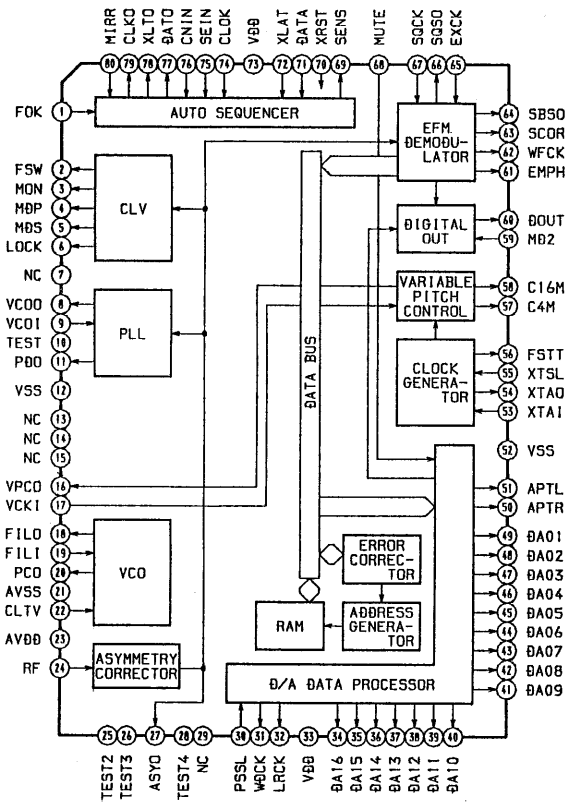
IC701 CXA1610M-T6



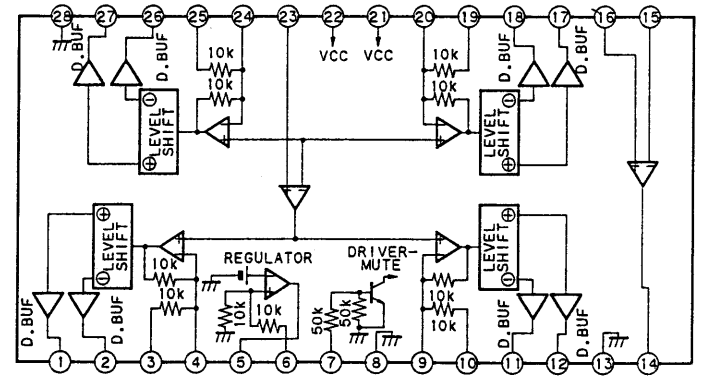
IC702 CXA1372AQ



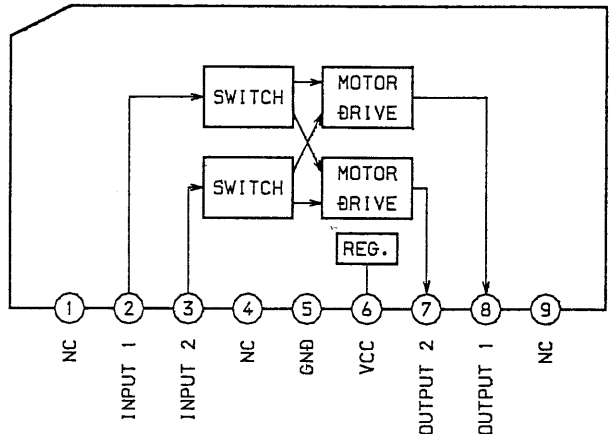
IC703 CXD2500BQ



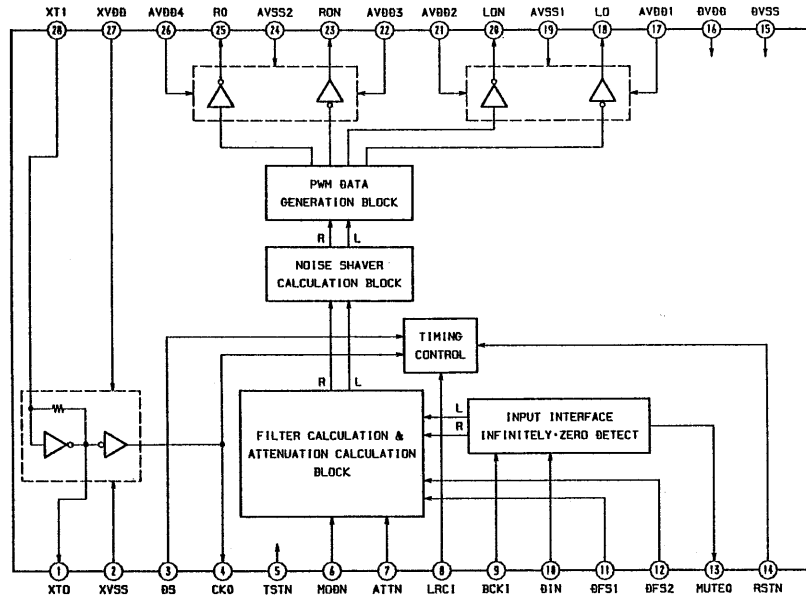
IC704 BA6296FP-T1



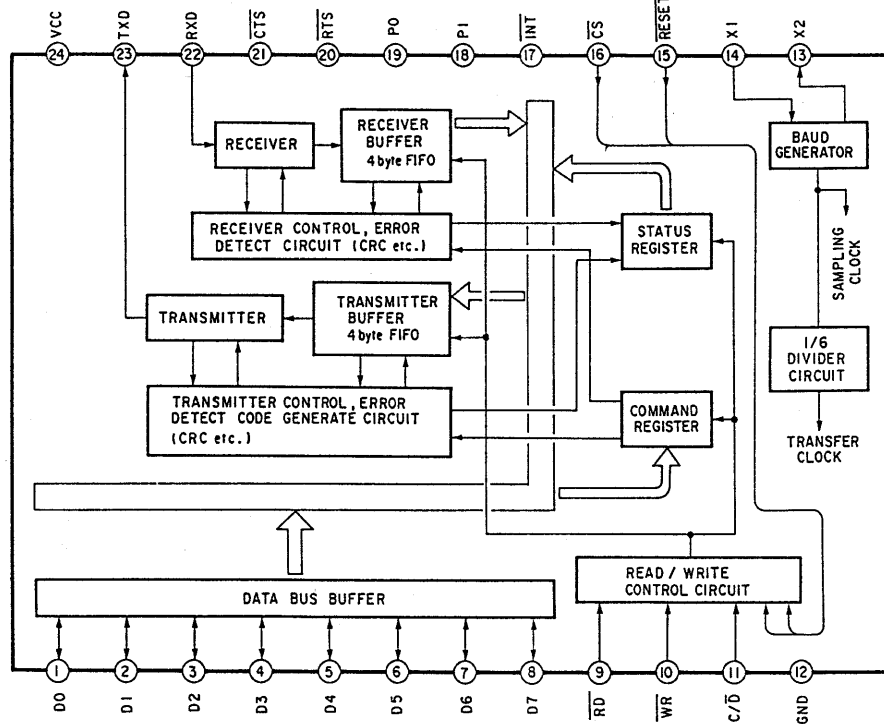
IC705 BA6208



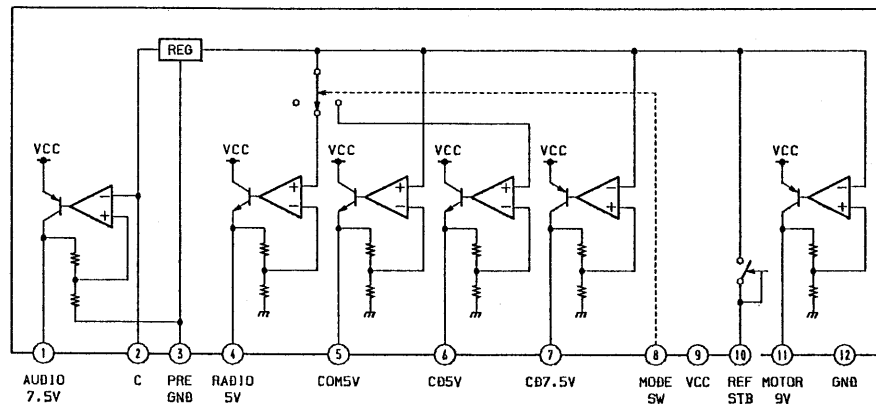
IC706 CXD8451M-ET



IC803 M66230FP-T1



IC901 BA3933



SECTION 6

EXPLODED VIEWS

NOTE:

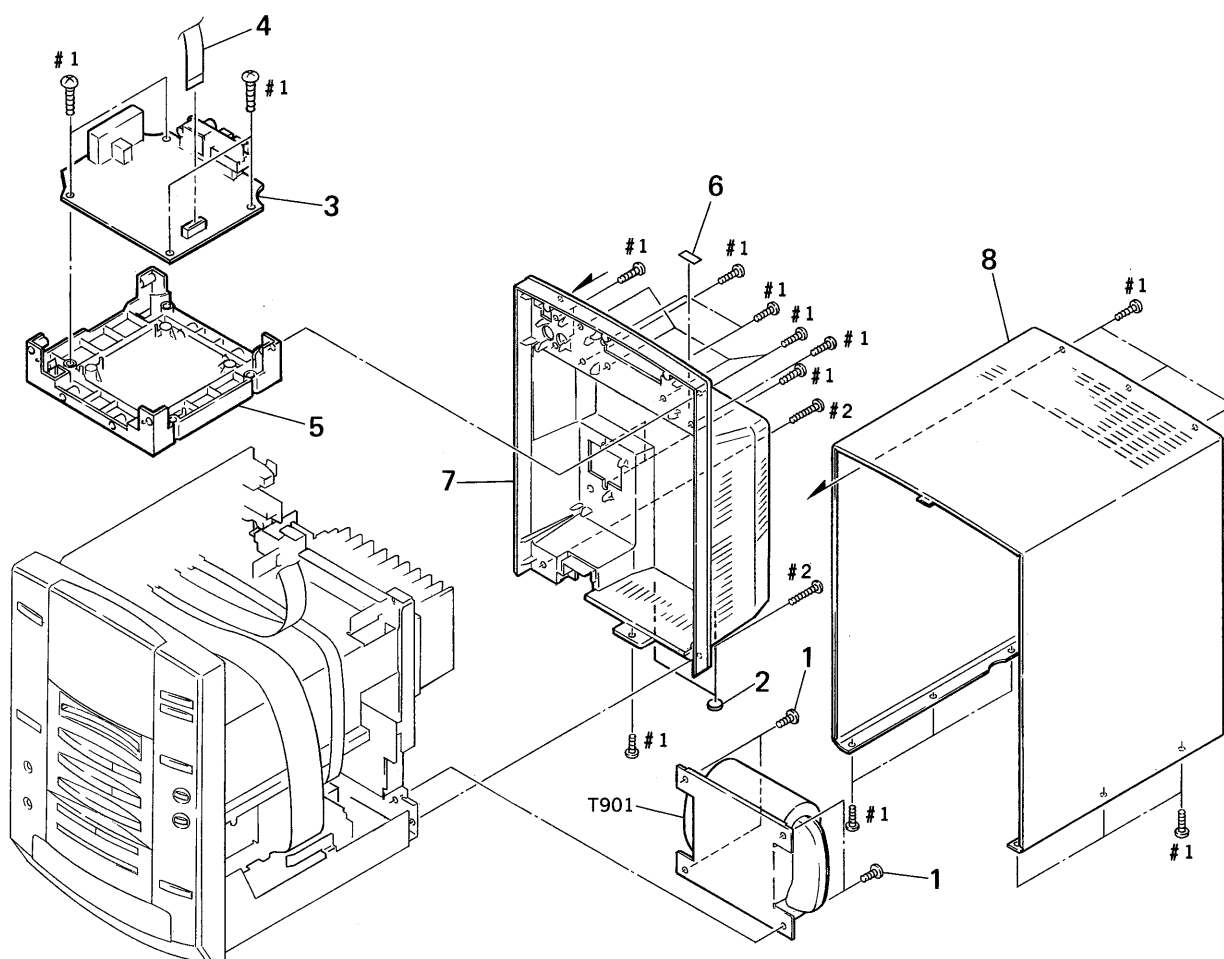
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
IT : Italian model

- -XX and -X mean standardized parts, so they may have some difference from the original one.
 - Color Indication of Appearance Parts
- Example :
- KNOB, BALANCE (WHITE)... (RED)
- ↑ ↑
- Parts Color Cabinet's Color

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark  or dotted line with mark.  are critical for safety. Replace only with part number specified.

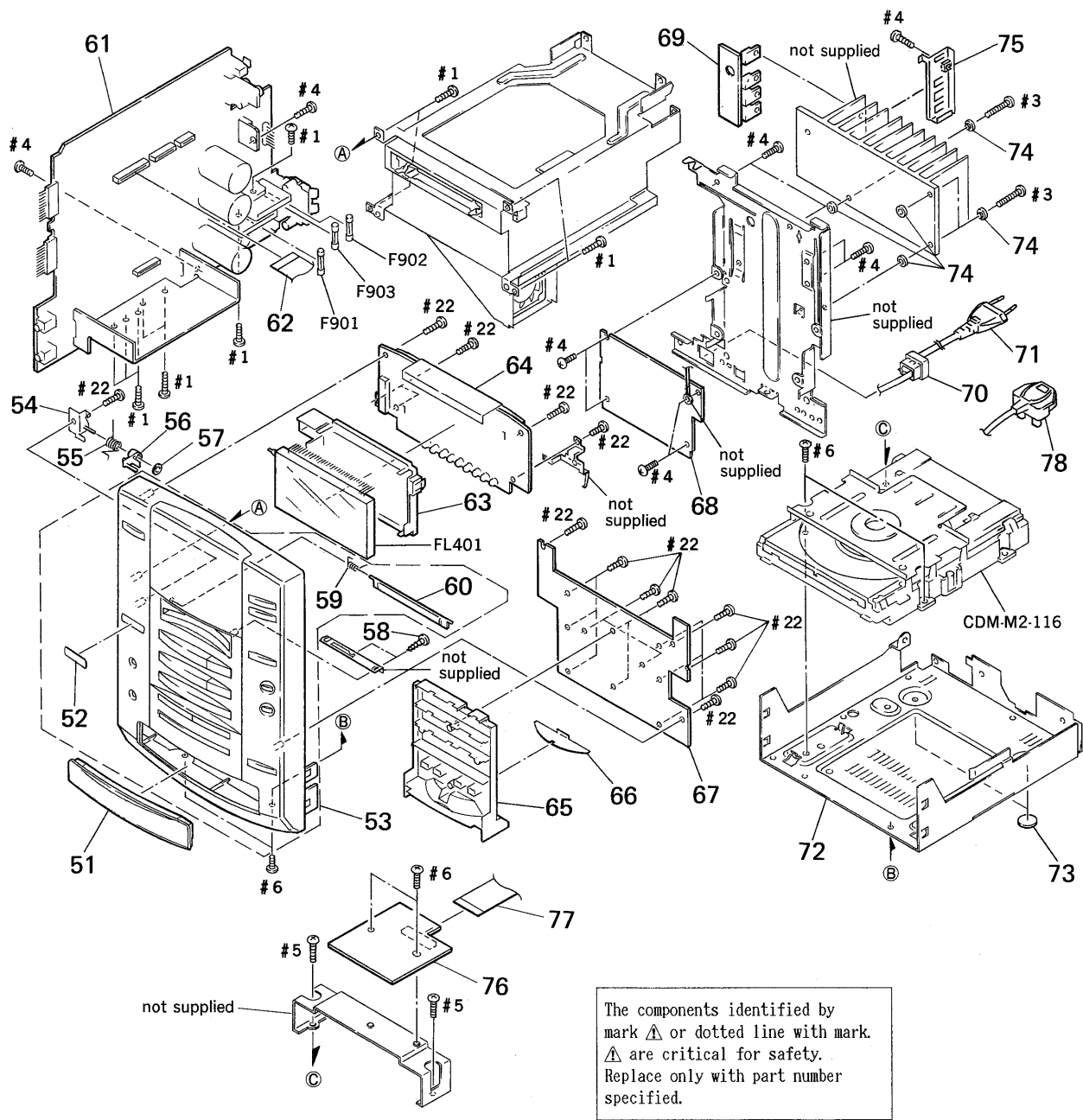
6-1. BACK COVER SECTION



Ref. No.	Part No.	Description	Remark
1	4-381-962-11	SCREW +BVT 4X8 (S)	
2	4-976-681-01	FOOT (B), RUBBER (AEP)	
2	4-976-681-11	FOOT (B), RUBBER (IT, UK)	
* 3	A-3276-903-A	TUNER BOARD, COMPLETE	
4	1-769-529-11	WIRE (FLAT TYPE) (15 CORE)	

Ref. No.	Part No.	Description	Remark
* 5	4-972-758-01	CHASSIS (TUNE)	
* 6	4-941-548-01	LABEL, CLASS (1)	
7	4-972-754-21	COVER, BACK	
8	4-972-757-01	CASE	
△T901	1-429-133-11	TRANSFORMER, POWER	

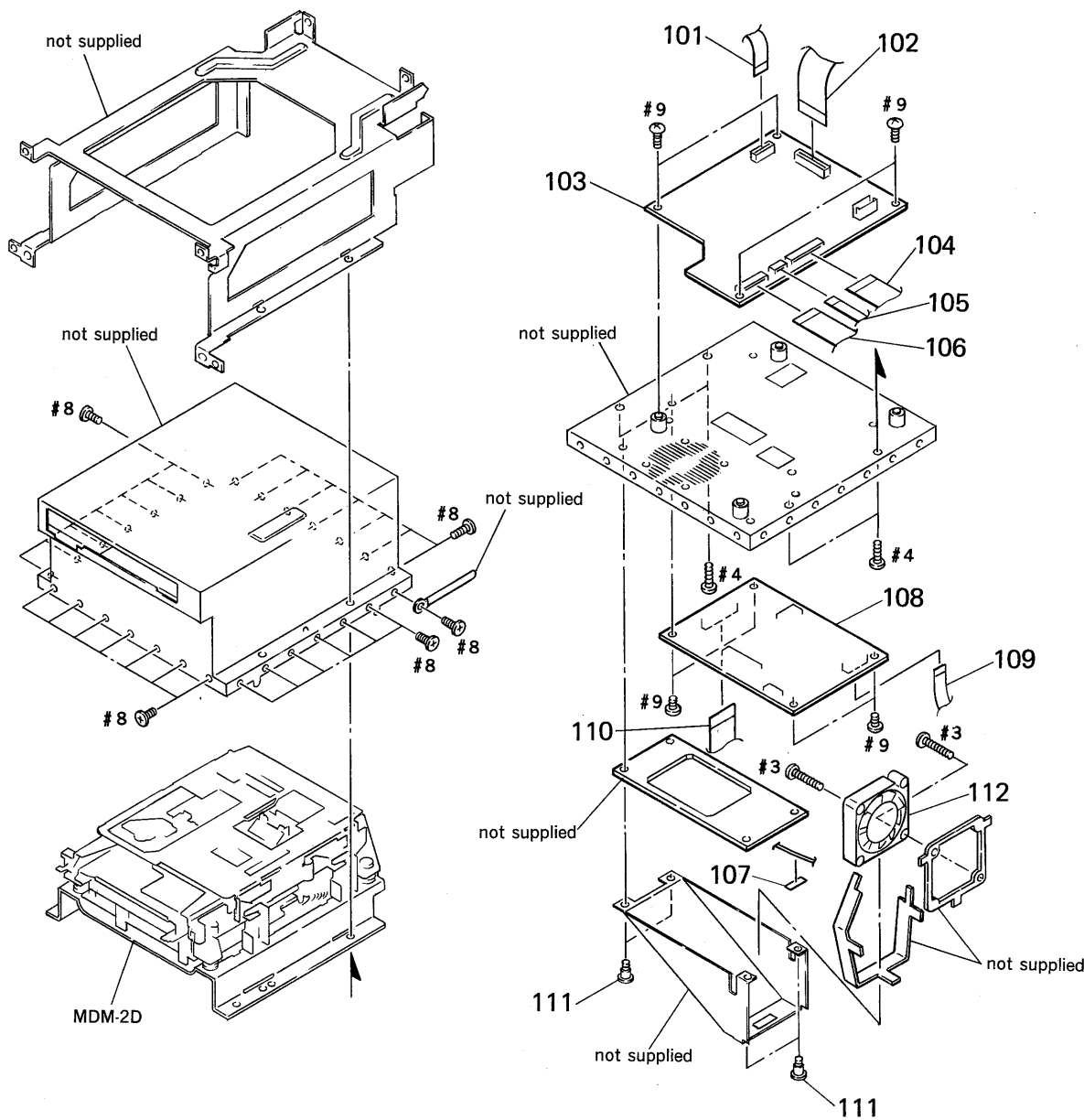
6-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
51	4-972-772-01	PLATE (CD), ORNAMENTAL	
52	4-972-774-01	WINDOW (RAY CATCHER)	
53	X-4945-834-1	PANEL ASSY, FRONT	
54	X-4945-242-1	BRACKET (LEVER LID) ASSY	
55	4-969-215-01	SPRING, TORSION	
56	4-969-213-01	LEVER (LID)	
57	3-681-678-00	WASHER, SLIT	
58	4-908-618-21	SCREW (+BTP) (2X6)	
59	4-969-236-01	SPRING (LID), TORSION	
60	4-969-226-01	LID (CARTRIDGE)	
* 61	A-3276-886-A	MAIN BOARD, COMPLETE	
62	1-775-922-11	WIRE (FLAT TYPE) (A) (24 CORE)	
63	4-972-752-01	HOLDER (FL)	
* 64	A-3276-885-A	FL BOARD, COMPLETE	
* 65	4-972-773-01	REFLECTOR	

Ref. No.	Part No.	Description	Remark
* 66	4-974-387-01	PLATE, BLIND	
* 67	A-3276-698-A	SW BOARD, COMPLETE	
* 68	1-655-823-11	POWER BOARD	
* 69	1-657-454-11	CURRENT TURBO BOARD	
* 70	3-703-244-00	BUSHING (2104), CORD	
⚠71	1-751-275-11	CORD, POWER (AEP, IT)	
* 72	4-972-756-01	PLATE, BOTTOM	
73	3-940-657-01	FOOT (FELT)	
74	2-832-002-00	BUSHING, INSULATING	
75	4-976-269-01	DETENT (H/S)	
* 76	1-658-549-11	CD FILTER BOARD	
77	1-775-923-11	WIRE (FLAT TYPE) (B) (24 CORE)	
⚠78	1-696-586-21	CORD, POWER (UK)	
⚠F901-903			
	1-532-350-00	FUSE, TIME-LAG (T4A/250V)	
FL401	1-517-377-11	INDICATOR TUBE, FLUORESCENT	

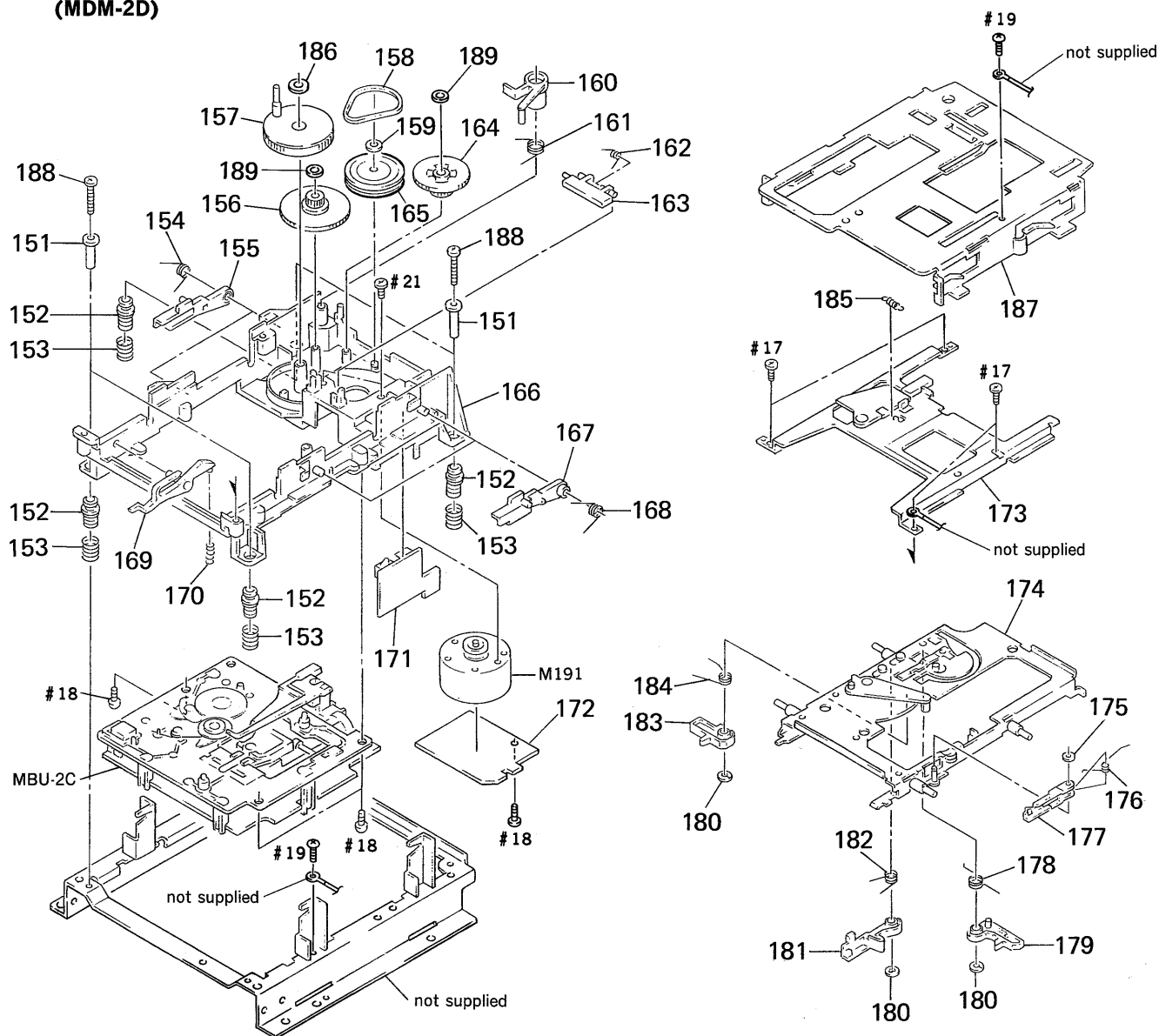
6-3. MD SECTION



Ref. No.	Part No.	Description	Remark
101	1-769-524-11	WIRE (FLAT TYPE) (10 CORE)	
102	1-769-525-11	WIRE (FLAT TYPE) (20 CORE)	
* 103	A-3269-892-A	MD MAIN BOARD, COMPLETE	
104	1-769-521-11	CABLE, FLAT (32 CORE)	
105	1-769-523-11	WIRE (FLAT TYPE) (5 CORE)	
106	1-769-522-11	CABLE, FLAT (18 CORE)	

Ref. No.	Part No.	Description	Remark
107	4-017-441-01	CUSHION (B)	
* 108	A-3269-895-A	FILTER BOARD, COMPLETE	
109	1-769-526-11	WIRE (FLAT TYPE) (10 CORE)	
110	1-769-527-11	WIRE (FLAT TYPE) (21 CORE)	
111	4-976-318-01	SCREW (M1.7), STEP	
112	1-698-586-11	FAN, DC	

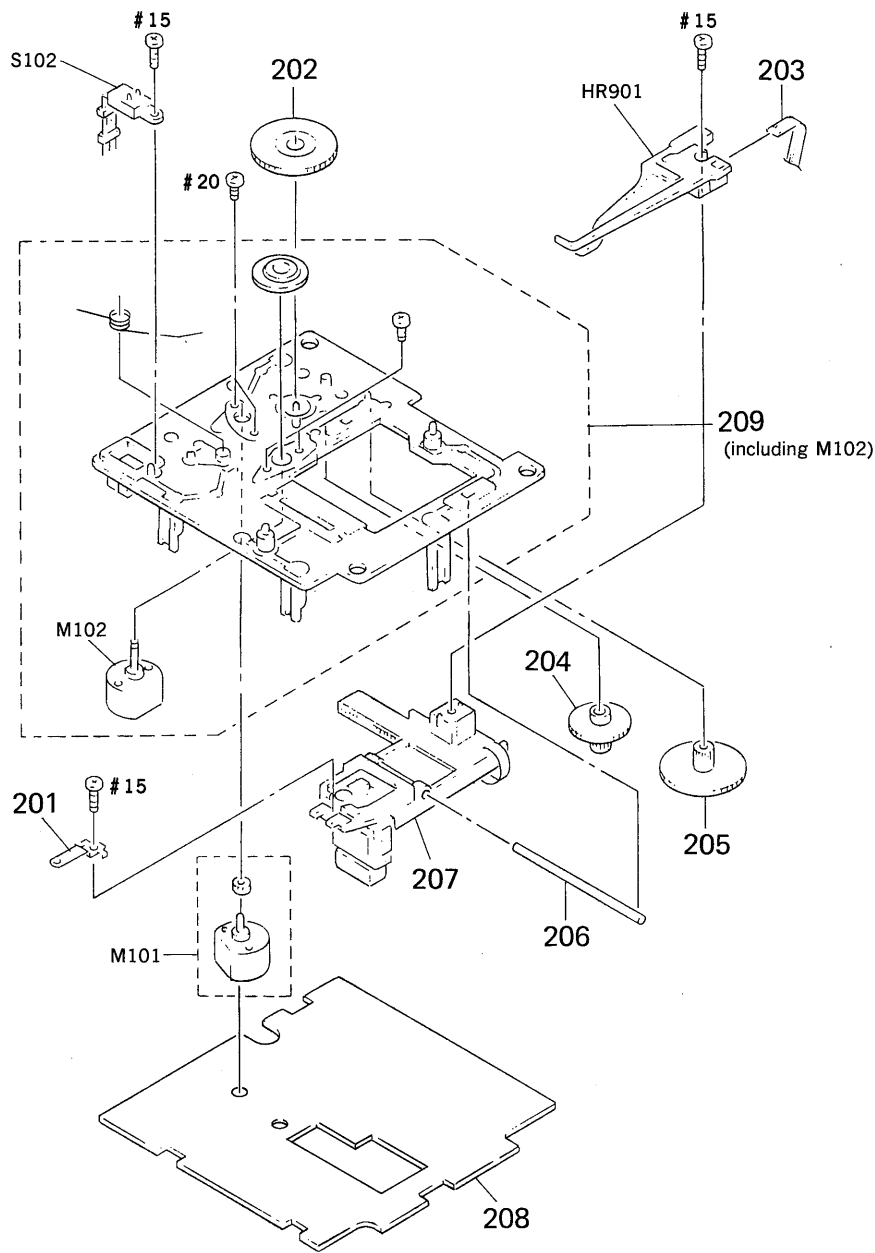
6-4. MD MECHANISM DECK SECTION
(MDM-2D)



Ref.No.	Part No.	Description	Remark
151	4-967-672-01	COLLAR (DAMPER)	
152	4-967-671-01	INSULATOR (MD)	
153	4-967-673-01	SPRING, COMPRESSION	
154	4-967-668-01	SPRING (UDL), TORSION	
155	4-967-667-01	LEVER (UDL)	
156	4-967-655-01	GEAR (BD-B)	
157	X-4945-069-1	CAM ASSY	
158	4-967-656-01	BELT (BD)	
159	4-968-919-31	WASHER, STOPPER	
160	4-967-637-01	LEVER (SLM)	
161	4-967-638-01	SPRING (SLM), TORSION	
162	4-968-273-01	SPRING (OWH), TORSION	
163	4-968-272-01	LEVER (OWH)	
164	4-967-654-01	GEAR (BD-A)	
165	4-957-794-01	PULLEY (GEAR 1)	
* 166	X-4945-068-1	BASE (BD) ASSY	
167	4-967-669-01	LEVER (UDR)	
168	4-967-670-01	SPRING (UDR), TORSION	
169	4-967-657-01	LEVER (DOOR)	
170	4-970-710-01	SPRING, COMPRESSION	

Ref.No.	Part No.	Description	Remark
* 171	1-653-411-11	DETECTION SW BOARD	
* 172	1-653-412-11	MOTOR BOARD	
173	A-4660-647-B	BRACKET (LVO) ASSY	
174	X-4946-378-1	HOLDER ASSY	
175	4-968-919-11	WASHER, STOPPER	
176	4-967-646-01	SPRING (SHT), TORSION	
177	4-967-645-01	LEVER (SHT)	
178	4-977-450-01	SPRING (LM), TORSION	
179	4-967-639-01	LEVER (LM)	
180	4-968-919-01	WASHER, STOPPER	
181	4-967-641-01	LEVER (L)	
182	4-967-642-01	SPRING (L), TORSION	
183	4-967-643-01	LEVER (LS)	
184	4-967-644-01	SPRING (LS), TORSION	
185	4-971-743-02	SPRING, TENSION	
186	4-968-919-21	WASHER, STOPPER	
* 187	X-4945-872-1	SLIDER (M) ASSY	
188	4-972-910-01	SCREW (2.6X18), +B	
189	4-968-919-41	WASHER, STOPPER	
M191	A-4660-646-A	MOTOR (LOADING) ASSY	

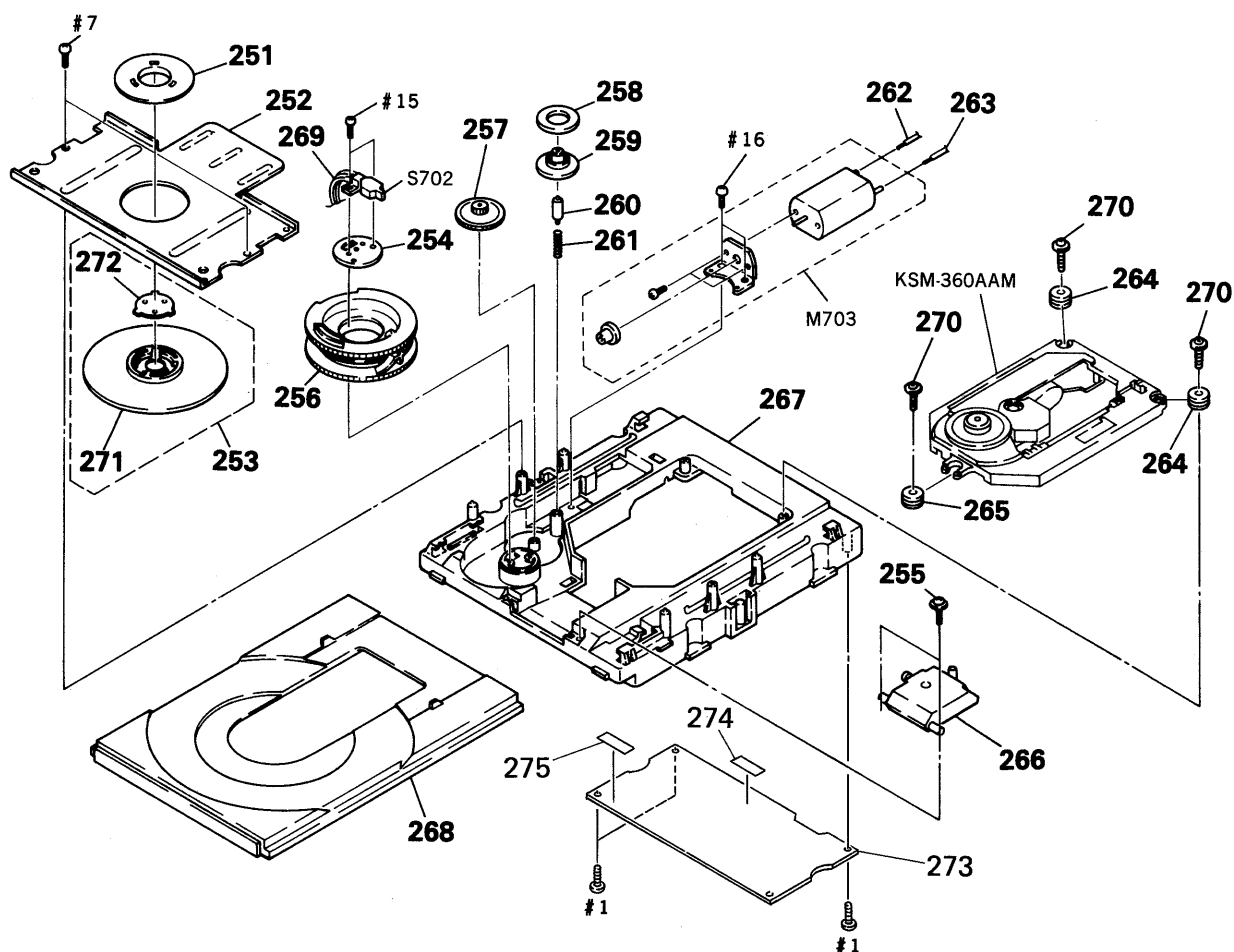
6-5. MD BASE UNIT SECTION
(MBU-2C)



The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-967-679-01	SPRING (OP), LEAF		 207	8-583-009-11	PICK-UP, OPTICAL, MINI DISC KMS-210A/J-N	
202	4-967-675-01	GEAR (SL-A)		* 208	A-4673-618-A	BD BOARD, COMPLETE	
203	1-654-446-11	FLEXIBLE (OWH) BOARD		209	A-4660-650-A	CHASSIS ASSY, BU	
204	4-967-676-01	GEAR (SL-B)		HR901	1-500-175-11	HEAD, OVER WRITE (RF322-74A)	
205	4-967-677-01	GEAR (SL-C)		M101	A-4660-651-A	MOTOR (SLED) ASSY	
206	4-967-678-01	SHAFT (OP)		S102	1-762-148-11	SWITCH, PUSH (2 KEY) (PROTECT/REFLECT)	

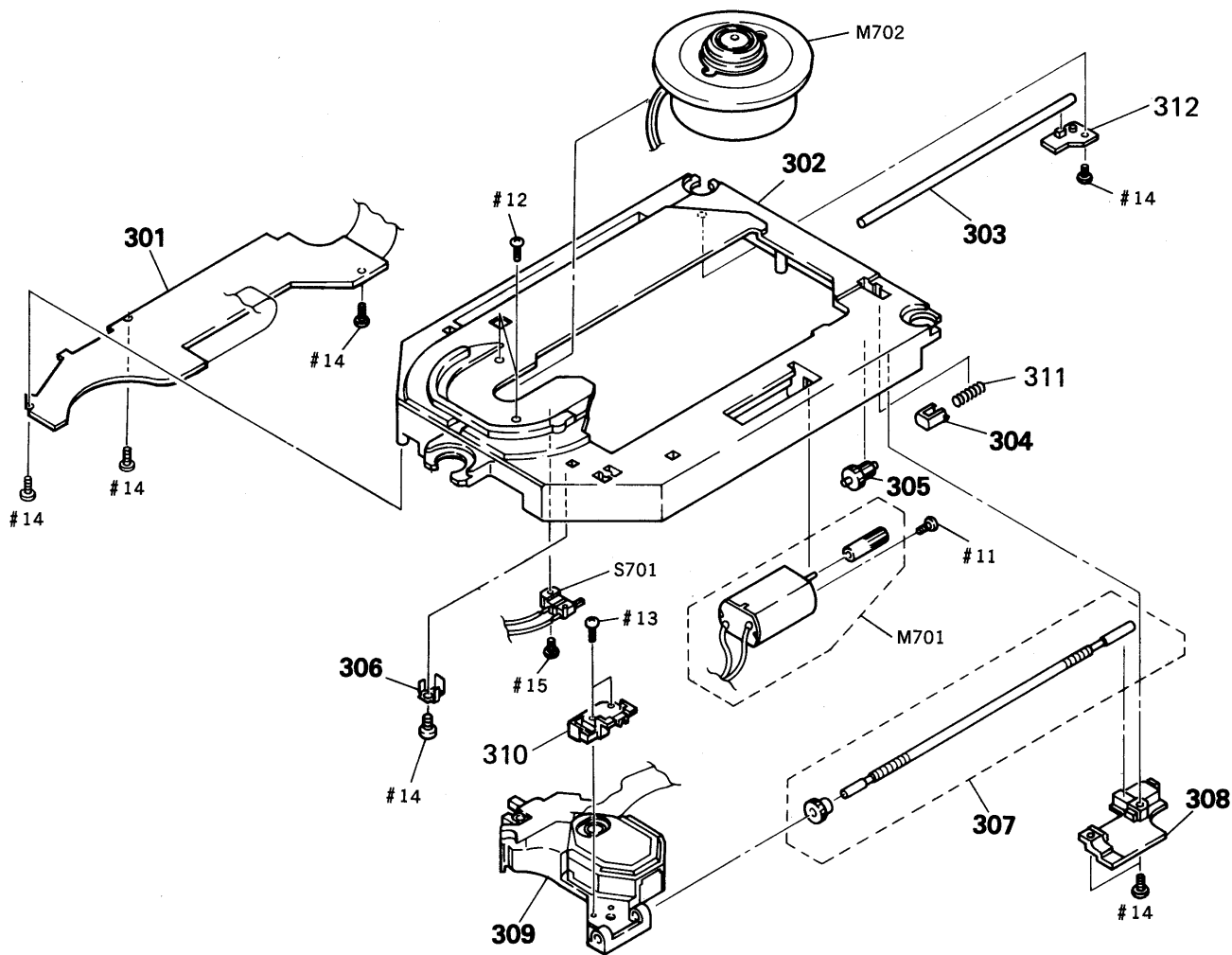
6-6. CD CHASSIS SECTION
(CDM-M2-116)



Ref. No.	Part No.	Description	Remark
* 251	2-625-934-01	PULLEY (B), CHUCKING	
* 252	2-625-932-01	CHASSIS, CHUCK	
253	X-2625-355-1	CHUCKING (A) ASSY (RP)	
* 254	2-625-920-01	SWITCH (BASE), LEAF	
255	2-626-294-01	SCREW (+PTPWH) (2.6X7)	
256	2-625-931-01	GEAR, CONTROL	
257	2-625-925-01	GEAR (B)	
258	2-625-865-01	RING, RUBBER	
259	2-625-926-01	GEAR (A)	
260	2-625-927-01	SHAFT, SPRING	
261	2-625-928-01	SPRING, COMPRESSION	
262	1-949-834-21	HARNESS (D)	
263	1-949-834-11	HARNESS (D)	
264	2-625-864-13	INSULATOR	

Ref. No.	Part No.	Description	Remark
265	2-625-864-03	INSULATOR	
* 266	2-625-930-01	LIFTER	
* 267	2-625-935-01	CHASSIS, LU	
268	2-625-936-01	TRAY	
269	1-949-833-11	HARNESS (SW (K))	
270	2-625-922-01	SCREW (2X6), + PTPWH	
* 271	2-625-933-02	PULLEY (A), CHUCKING	
* 272	2-625-923-01	PLATE, PULLEY	
* 273	A-3305-082-A	CD BOARD, COMPLETE	
274	3-831-441-XX	SPACER	
* 275	3-338-604-01	SHEET, PROTECTION	
M703	X-2625-350-1	MOTOR ASSY, LOADING	
S702	1-692-053-11	SWITCH, LEAF (LOAD IN/OUT)	

6-7. CD OPTICAL PICK-UP BLOCK
(KSM-360AAM)

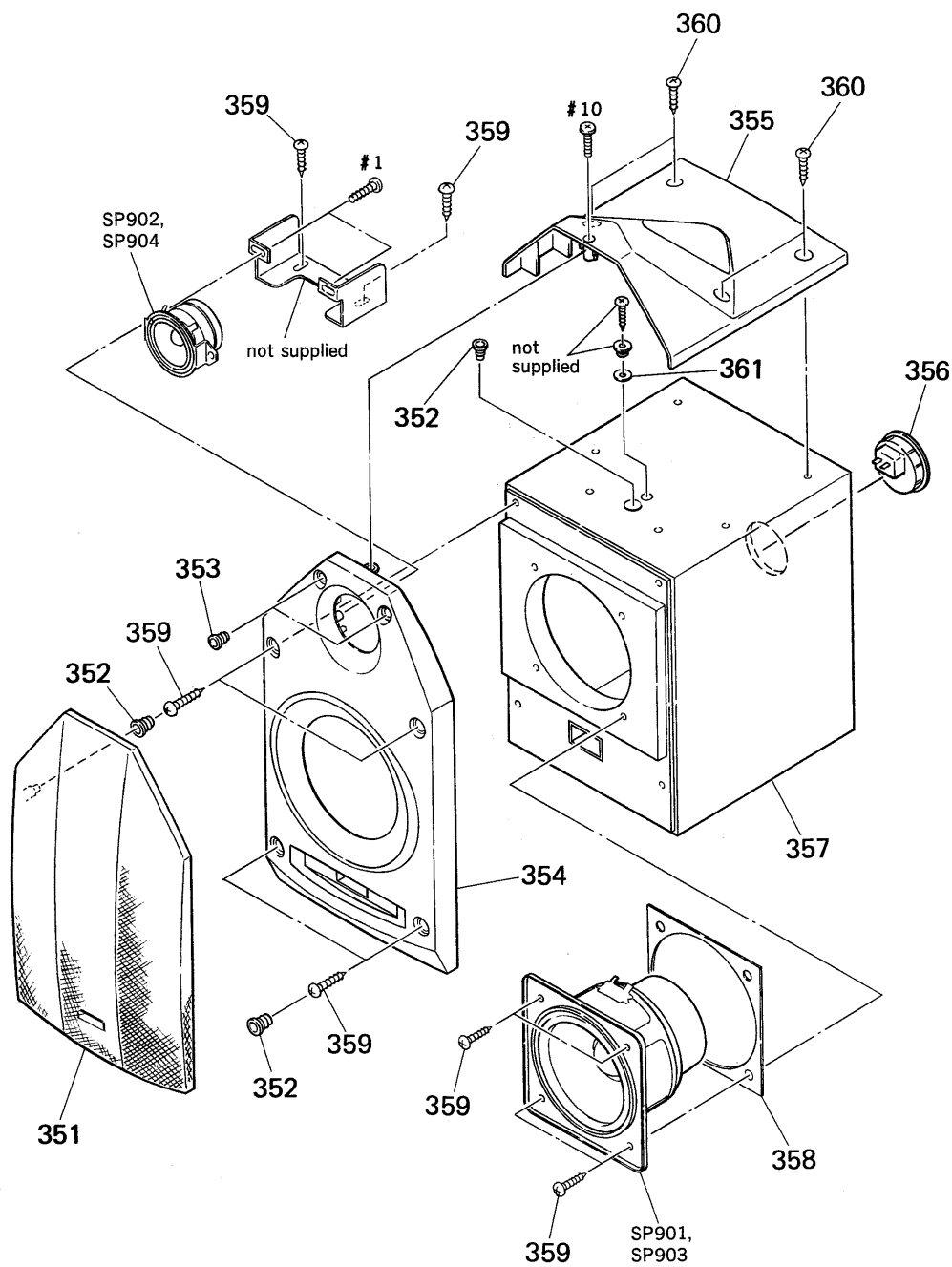


The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
	301	A-4910-578-A FLEXIBLE (80) ASSY, RELAY	
	302	2-626-067-02 CHASSIS (80), MD	
	303	2-626-062-01 SHAFT (80), GUIDE	
*	304	2-625-941-01 RETAINER (80), THRUST	
	305	2-625-944-01 GEAR (B80)	
*	306	2-625-946-01 SPRING (80), SLED	
	307	X-2625-351-1 SCREW (80) ASSY, SLED	
	308	2-626-064-02 PLATE (80), FIXED	

Ref. No.	Part No.	Description	Remark
	309	8-848-246-22 PICK-UP, OPTICAL KSS-360A	
	310	2-626-099-01 RACK (80)	
	311	2-640-618-01 SPRING, COMPRESSION	
*	312	2-625-942-02 RETAINER, SHAFT	
	M701	X-2625-352-1 MOTOR ASSY, SLED	
	M702	X-2625-354-1 MOTOR ASSY, SPINDLE	
	S701	1-570-771-21 SWITCH (LIMIT)	

6-8. SPEAKER SECTION
(SS-M2)



Ref. No.	Part No.	Description	Remark
351	X-4945-833-1	GRILLE FLAME ASSY	
352	4-912-253-01	CATCHER	
* 353	4-963-075-01	CATCHER	
354	4-972-644-01	PANEL, SPEAKER	
355	4-972-646-01	PANEL, UPPER	
356	1-537-332-11	TERMINAL BOARD	
* 357	X-4946-422-1	CABINET ASSY, WOODEN	
* 358	4-972-650-01	PACKING	

Ref. No.	Part No.	Description	Remark
359	4-874-614-11	SCREW (4) (3.5X14), TAPPING	
360	4-874-614-61	SCREW (4) (3.5X16), TAPPING	
* 361	4-908-892-01	SPACER	
SP901	1-504-793-11	SPEAKER (10CM) (L-CH)	
SP902	1-504-936-11	SPEAKER (5CM) (L-CH)	
SP903	1-504-793-11	SPEAKER (10CM) (R-CH)	
SP904	1-504-936-11	SPEAKER (5CM) (R-CH)	

SECTION 7
ELECTRICAL PARTS LIST

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
IT : Italian model

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A.. uPA...: μ PA..
uPB...: μ PB.. uPC...: μ PC.. uPD...: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4673-618-A	BD BOARD, COMPLETE		C151	1-104-913-11	TANTAL. CHIP 10uF	20% 16V
	*****			C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V
	< CAPACITOR >			C155	1-104-916-11	TANTAL. CHIP 6.8uF	20% 20V
C101	1-104-913-11	TANTAL. CHIP 10uF	20% 16V	C160	1-104-601-11	ELECT CHIP 10uF	20% 10V
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C161	1-104-601-11	ELECT CHIP 10uF	20% 10V
C103	1-104-913-11	TANTAL. CHIP 10uF	20% 16V	C163	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C104	1-104-913-11	TANTAL. CHIP 10uF	20% 16V	C164	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C105	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C166	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C106	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V	C167	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C107	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C168	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C108	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C169	1-104-913-11	TANTAL. CHIP 10uF	20% 16V
C109	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	C170	1-104-913-11	TANTAL. CHIP 10uF	20% 16V
C111	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C175	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C113	1-107-682-11	CERAMIC CHIP 1uF	10% 16V	C176	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C114	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C177	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C115	1-107-682-11	CERAMIC CHIP 1uF	10% 16V	C178	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C116	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	C181	1-104-913-11	TANTAL. CHIP 10uF	20% 16V
C117	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C182	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C119	1-104-913-11	TANTAL. CHIP 10uF	20% 16V	C183	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C121	1-126-395-11	ELECT 22uF	20% 16V	C184	1-107-836-11	ELECT CHIP 22uF	20% 8V
C122	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C185	1-164-611-11	CERAMIC CHIP 0.001uF	10% 500V
C123	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C186	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C124	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C191	1-126-395-11	ELECT 22uF	20% 16V
C125	1-104-760-11	CERAMIC CHIP 0.047uF	10% 50V	C192	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C126	1-107-682-11	CERAMIC CHIP 1uF	10% 16V	C193	1-164-346-11	CERAMIC CHIP 1uF	16V
C127	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C194	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C128	1-164-232-11	CERAMIC CHIP 0.01uF	50V	< CONNECTOR >			
C129	1-107-823-11	CERAMIC CHIP 0.47uF	10% 16V	CN101	1-766-508-11	CONNECTOR, FFC/FPC (ZIF) 22P	
C130	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	CN102	1-766-510-21	CONNECTOR, FFC/FPC 30P	
C131	1-104-760-11	CERAMIC CHIP 0.047uF	10% 50V	CN103	1-766-509-21	CONNECTOR, FFC/FPC 18P	
C132	1-107-682-11	CERAMIC CHIP 1uF	10% 16V	CN104	1-766-898-21	HOUSING, CONNECTOR (PC BOARD) 4P	
C133	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V	< DIODE >			
C134	1-163-038-00	CERAMIC CHIP 0.1uF	25V	D101	8-719-988-62	DIODE 1SS355	
C135	1-163-038-00	CERAMIC CHIP 0.1uF	25V	D155	8-719-031-17	DIODE 1SS322-TE85L	
C136	1-126-206-11	ELECT CHIP 100uF	20% 6.3V	D161	8-719-421-15	DIODE MA8027-L	
C141	1-163-038-00	CERAMIC CHIP 0.1uF	25V	D181	8-719-033-60	DIODE F1P2STP	
C142-144	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D183	8-719-033-60	DIODE F1P2STP	

Ref. No.	Part No.	Description	Remark
< IC >			
IC101	8-752-072-68	IC CXA1981AR	
IC102	8-759-243-19	IC TC7SU04F	
IC121	8-752-375-36	IC CXD2535BR	
IC122	8-759-243-19	IC TC7SU04F	
IC151	8-759-179-60	IC MPC17A38VMEL	
IC171	8-759-504-12	IC X24C01S	
IC172	8-759-149-73	IC uPC842G2	
IC181	8-759-095-65	IC TC74ACT540FS	
IC182	8-759-243-19	IC TC7SU04F	
IC191	8-759-822-99	IC L88MS05T-FA	
< COIL >			
L101-103	1-414-234-11	INDUCTOR, FERRITE BEAD	
L105	1-414-234-11	INDUCTOR, FERRITE BEAD	
L106	1-414-234-11	INDUCTOR, FERRITE BEAD	
L110	1-216-295-11	CONDUCTOR, CHIP	(2012)
L121	1-414-234-11	INDUCTOR, FERRITE BEAD	
L122	1-412-039-51	INDUCTOR CHIP 100uH	
L151	1-412-622-51	INDUCTOR 10uH	
L152	1-412-622-51	INDUCTOR 10uH	
L153	1-412-039-51	INDUCTOR CHIP 100uH	
L154	1-412-039-51	INDUCTOR CHIP 100uH	
L155	1-410-980-51	INDUCTOR CHIP 1mH	
L161	1-414-234-11	INDUCTOR, FERRITE BEAD	
L162	1-414-234-11	INDUCTOR, FERRITE BEAD	
L195	1-233-316-21	FILTER, CHIP EMI	
< TRANSISTOR >			
Q101	8-729-905-12	TRANSISTOR DTA144EU	
Q151	8-729-905-18	TRANSISTOR DTC144EU	
Q162	8-729-101-07	TRANSISTOR 2SB798-DL	
Q163	8-729-905-12	TRANSISTOR DTA144EU	
Q164	8-729-924-19	TRANSISTOR DTA123JU	
Q181	8-729-018-75	TRANSISTOR 2SJ278MY	
Q182	8-729-017-65	TRANSISTOR 2SK1764KY	
< RESISTOR >			
R101	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R102	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R103	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R104	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R105	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R106	1-216-133-00	METAL CHIP 3.3M 5% 1/10W	
R107	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R114	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R116	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R117	1-216-113-00	METAL CHIP 470K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R120	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R121	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R122	1-216-295-11	CONDUCTOR, CHIP	(2012)
R123	1-216-037-00	METAL CHIP 330 5% 1/10W	
R124	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R125	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R128	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R129	1-216-037-00	METAL CHIP 330 5% 1/10W	
R130	1-216-041-00	METAL CHIP 470 5% 1/10W	
R131	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R132	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R133	1-216-129-00	METAL CHIP 2.2M 5% 1/10W	
R134	1-216-037-00	METAL CHIP 330 5% 1/10W	
R135	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R136	1-216-041-00	METAL CHIP 470 5% 1/10W	
R137	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R139	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R140	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R142	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R143	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R144	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R145	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R146	1-216-037-00	METAL CHIP 330 5% 1/10W	
R147	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R148	1-216-045-00	METAL CHIP 680 5% 1/10W	
R151	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R152	1-216-295-11	CONDUCTOR, CHIP	(2012)
R153	1-216-295-11	CONDUCTOR, CHIP	(2012)
R154	1-220-259-11	METAL GLAZE 150 5% 1/4W	
R155	1-220-259-11	METAL GLAZE 150 5% 1/4W	
R161-163	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R164	1-216-045-00	METAL CHIP 680 5% 1/10W	
R165	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R166	1-220-250-11	METAL GLAZE 10 5% 1/2W	
R167	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R168	1-218-236-11	METAL GLAZE 1 10% 1/4W	
R170	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R171	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R172	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R174	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R176	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R178	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R181	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R182	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R183	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R184	1-216-296-11	CONDUCTOR, CHIP	(3216)
R186	1-216-296-11	CONDUCTOR, CHIP	(3216)
R195	1-216-295-11	CONDUCTOR, CHIP	(2012)

Ref. No.	Part No.	Description	Remark		
< VARIABLE RESISTOR >					
RV101	1-241-397-11	RES, ADJ, METAL GLAZE 47K			
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K			
RV105	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
< SWITCH >					
S101	1-572-467-31	SWITCH, PUSH (1 KEY) (LIMIT IN)			

*	A-3305-082-A	CD BOARD, COMPLETE			

< CAPACITOR >					
C701	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C702	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3
C703	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3
C704	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C705	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C706	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C707	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C708	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C709	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C710	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C711	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C712	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3
C714	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C715	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C716	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C717	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C718	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C719	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C720	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C721	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C722	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C724	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C725	1-163-078-11	CERAMIC CHIP	0.033uF	10%	25V
C726	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C727	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C728	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C729	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C730	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C732	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C733	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C734	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C735	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C736	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C737	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3
C738	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description	Remark		
C739	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C740	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C741	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C742	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C743	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C745	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C751	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C752	1-128-393-11	ELECT	100uF	20%	10V
C753	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C754	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C755	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C756	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C757	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C758	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C759	1-124-635-00	ELECT	220uF	20%	6.3V
C760	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C761	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C762	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C763	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C764	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C765	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C766	1-163-168-00	CERAMIC CHIP	30PF	5%	50V
C767	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C769	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C770	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C771	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C772	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C773	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C780	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C781	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C782	1-128-393-11	ELECT	100uF	20%	10V
C785	1-126-177-11	ELECT	100uF	20%	10V
C786	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C787	1-124-635-00	ELECT	220uF	20%	6.3V
C788	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C789	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
< CONNECTOR >					
* CN701	1-691-777-11	HOUSING, CONNECTOR 29P			
CN702	1-750-465-11	CONNECTOR, FFC/FPC 24P			
* CN703	1-506-999-11	PIN, CONNECTOR (PC BOARD) 3P			
< DIODE >					
D701	8-719-421-27	DIODE MA728			
D702	8-719-421-27	DIODE MA728			
D703	8-719-421-27	DIODE MA728			
D704	8-719-404-46	DIODE MA110			
D705	8-719-421-27	DIODE MA728			

Ref. No.	Part No.	Description	Remark
D706	8-719-421-27	DIODE MA728	
D707	8-719-422-46	DIODE MA8056	
< IC >			
IC701	8-752-059-30	IC CXA1610M	
IC702	8-752-058-77	IC CXA1372AQ	
IC703	8-752-351-78	IC CXD2500BQ	
IC704	8-759-518-59	IC BA6296FP	
IC705	8-759-962-08	IC BA6208	
IC706	8-759-093-98	IC CXD8451M	
IC707	8-759-184-98	IC NJM2100M-A	
IC710	8-759-948-48	IC RH5RA50A	
< JUMPER RESISTOR >			
JR701	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR702-705	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR706	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR707	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR708	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR709	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR711	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR712	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR713	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR716	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR717	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR718	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR719	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR720-722	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR724	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR730	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR731	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR740	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR741	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR744	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR750-754	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR760	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR761	1-216-295-11	CONDUCTOR, CHIP	(2012)
< COIL >			
L701	1-543-813-21	FILTER, EMI	
L702	1-236-741-21	FILTER, EMI	
L703	1-543-775-11	FILTER, EMI	
L708	1-543-813-21	FILTER, EMI	
L709	1-543-775-11	FILTER, EMI	
L710	1-543-775-11	FILTER, EMI	
L711	1-543-610-11	BEAD, FERRITE	

Ref. No.	Part No.	Description	Remark
L721	1-543-775-11	FILTER, EMI	
< IC LINK >			
△PS701	1-576-259-11	LINK, IC (CCP2E15) (0.6A)	
< TRANSISTOR >			
Q701	8-729-903-46	TRANSISTOR 2SB1132-P	
Q702	8-729-901-46	TRANSISTOR DTA114YK	
Q705	8-729-424-67	TRANSISTOR UN2216	
Q706	8-729-424-67	TRANSISTOR UN2216	
Q711	8-729-421-19	TRANSISTOR UN2213	
Q712	8-729-024-90	TRANSISTOR MUN2214T1	
Q713	8-729-024-90	TRANSISTOR MUN2214T1	
Q715	8-729-106-68	TRANSISTOR 2SD1615A-GP	
< RESISTOR >			
R701	1-216-154-00	METAL GLAZE 15 5% 1/8W	
R702	1-216-001-00	METAL CHIP 10 5% 1/10W	
R703	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R704	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R705	1-216-062-00	METAL CHIP 3.6K 5% 1/10W	
R711	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R715	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R716	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R717	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R718	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R719	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R720	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R721	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R722	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R723	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R724	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
R725	1-216-234-00	METAL GLAZE 33K 5% 1/8W	
R726	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R727	1-216-216-00	METAL GLAZE 5.6K 5% 1/8W	
R728	1-216-254-00	METAL GLAZE 220K 5% 1/8W	
R729	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R730	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R731	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R732	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R733	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R734	1-216-074-00	METAL CHIP 11K 5% 1/10W	
R735	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R736	1-216-033-00	METAL CHIP 220 5% 1/10W	
R737	1-216-029-00	METAL CHIP 150 5% 1/10W	
R739	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W	
R740	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R745	1-216-178-00	METAL GLAZE 150 5% 1/8W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

CD

CD FILTER

CURRENT TURBO

Ref. No.	Part No.	Description	Remark		
R749	1-216-073-00	METAL CHIP	10K	5%	1/10W
R750	1-216-024-00	METAL GLAZE	91	5%	1/10W
R751	1-216-083-00	METAL CHIP	27K	5%	1/10W
R752	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R753	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R754	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R757	1-216-071-00	METAL CHIP	8. 2K	5%	1/10W
R758	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W
R760	1-216-073-00	METAL CHIP	10K	5%	1/10W
R761	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R762	1-216-073-00	METAL CHIP	10K	5%	1/10W
R763-765	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R766	1-216-051-00	METAL CHIP	1. 2K	5%	1/10W
R770	1-216-073-00	METAL CHIP	10K	5%	1/10W
R771	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R772	1-216-073-00	METAL CHIP	10K	5%	1/10W
R773-775	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R776	1-216-200-11	METAL GLAZE	1. 2K	5%	1/8W
R780	1-216-091-00	METAL CHIP	56K	5%	1/10W
R782	1-216-077-00	METAL CHIP	15K	5%	1/10W
R783	1-216-077-00	METAL CHIP	15K	5%	1/10W
△R786	1-219-212-11	FUSIBLE	15	5%	1/8W F
R787	1-216-073-00	METAL CHIP	10K	5%	1/10W
R790	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R791	1-216-041-00	METAL CHIP	470	5%	1/10W
< NETWORK RESISTOR >					
RB701	1-236-904-11	NETWORK RESISTOR (CHIP) 1KX4			
RB702	1-239-292-11	RESISTOR ARRAY, CHIP 33KX8			
< VARIABLE RESISTOR >					
RV701	1-238-019-11	RES, ADJ, CARBON 47K			
RV702	1-238-019-11	RES, ADJ, CARBON 47K			
RV703	1-238-019-11	RES, ADJ, CARBON 47K			
RV704	1-238-019-11	RES, ADJ, CARBON 47K			
< VIBRATOR >					
X701	1-567-908-11	VIBRATOR, CRYSTAL (16.9344MHz)			

Ref. No.	Part No.	Description	Remark		
*	1-658-549-11	CD FILTER BOARD	*****		
< FILTER >					
C791-796					
1-239-899-21 FILTER, CHIP EMI					
< CONNECTOR >					
CN751	1-770-531-31	CONNECTOR, FFC/FPC 24P			
CN752	1-770-531-31	CONNECTOR, FFC/FPC 24P			
* CN753	1-565-875-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN754	1-565-875-11	PIN, CONNECTOR (PC BOARD) 3P			
< FERRITE BEAD >					
FB751-769					
1-414-235-11 INDUCTOR, FERRITE BEAD					
< JUMPER RESISTOR >					
JC751-753					
1-216-296-11 CONDUCTOR, CHIP (3216)					
< COIL >					
L751	1-412-028-11	INDUCTOR CHIP	4. 7uH		
L752	1-412-028-11	INDUCTOR CHIP	4. 7uH		
L753	1-412-006-31	INDUCTOR CHIP	10uH		

*	1-657-454-11	CURRENT TURBO BOARD	*****		
< CAPACITOR >					
C133	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C134	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C233	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C234	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
< CONNECTOR >					
CN906 1-770-940-11 CONNECTOR, BOARD TO BOARD 8P					
< TRANSISTOR >					
Q110	8-729-209-15	TRANSISTOR	2SD2012		
Q111	8-729-024-93	TRANSISTOR	2SB1565E		
Q210	8-729-209-15	TRANSISTOR	2SD2012		
Q211	8-729-024-93	TRANSISTOR	2SB1565E		

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

DETECTION SW

FILTER

FL

Ref. No.	Part No.	Description	Remark
*	1-653-411-11	DETECTION SW BOARD *****	
		< CONNECTOR >	
CN193	1-770-010-21	CONNECTOR, BOARD TO BOARD 4P	
		< SWITCH >	
S191	1-762-149-11	SWITCH, PUSH (1 KEY) (LOAD OUT DET)	
S192	1-762-149-11	SWITCH, PUSH (1 KEY) (LOAD IN DET)	
S193	1-762-149-11	SWITCH, PUSH (1 KEY) (CHUCKING DET)	

*	A-3269-895-A	FILTER BOARD, COMPLETE *****	
		< CAPACITOR >	
C501-524			
	1-239-601-11	FILTER, CHIP EMI	
C525	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C526	1-135-259-11	TANTAL. CHIP 10uF	20% 6.3V
C527	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V
C528	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V
C529	1-107-814-11	TANTAL. CHIP 33uF	20% 10V
C530	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C531	1-239-601-11	FILTER, CHIP EMI	
C551	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V
C552	1-165-112-11	CERAMIC CHIP 0.33uF	16V
C553	1-165-112-11	CERAMIC CHIP 0.33uF	16V
		< CONNECTOR >	
CN501	1-566-526-11	CONNECTOR, FPC (ZIF) 10P	
CN502	1-566-536-11	CONNECTOR, FPC (ZIF) 20P	
CN503	1-691-550-11	PIN, CONNECTOR (1.5MM) (SMD) 3P	
CN504	1-566-521-11	CONNECTOR, FPC (ZIF) 5P	
* CN505	1-695-584-11	CONNECTOR, FPC/FFC 10P	
* CN506	1-695-538-11	CONNECTOR, FPC/FFC 21P	
* CN507	1-695-320-21	PIN, CONNECTOR (1.5MM) (SMD) 2P	
* CN508	1-695-320-31	PIN, CONNECTOR (1.5MM) (SMD) 2P	
		< DIODE >	
D208	8-719-404-46	DIODE MA110	
		< FERRITE BEAD >	
FB501-503			
	1-414-385-11	INDUCTOR, FERRITE BEAD	
		< IC >	
IC501	8-759-242-78	IC TC7W02F	

Ref. No.	Part No.	Description	Remark
IC551	8-759-512-51	IC RH5RE50AA	
		< TRANSISTOR >	
Q551	8-729-922-94	TRANSISTOR DTC143TU	
		< RESISTOR >	
R501	1-216-864-11	METAL CHIP 0	5% 1/16W
R502	1-216-821-11	METAL CHIP 1K	5% 1/16W
R505	1-216-864-11	METAL CHIP 0	5% 1/16W
R506	1-216-821-11	METAL CHIP 1K	5% 1/16W
R507	1-216-803-11	METAL CHIP 33	5% 1/16W
R508	1-216-864-11	METAL CHIP 0	5% 1/16W
R509	1-216-864-11	METAL CHIP 0	5% 1/16W
R510	1-216-821-11	METAL CHIP 1K	5% 1/16W
R513	1-216-864-11	METAL CHIP 0	5% 1/16W
R514	1-216-821-11	METAL CHIP 1K	5% 1/16W
R515-535			
	1-216-864-11	METAL CHIP 0	5% 1/16W
R536	1-216-815-11	METAL CHIP 330	5% 1/16W
R537-541			
	1-216-864-11	METAL CHIP 0	5% 1/16W
R543	1-216-296-11	CONDUCTOR, CHIP	(3216)
R548	1-216-295-11	CONDUCTOR, CHIP	(2012)
R549	1-216-295-11	CONDUCTOR, CHIP	(2012)
R552	1-216-855-11	METAL CHIP 680K	5% 1/16W
R553	1-216-845-11	METAL CHIP 100K	5% 1/16W
R554	1-216-843-11	METAL CHIP 68K	5% 1/16W
R555	1-216-845-11	METAL CHIP 100K	5% 1/16W

*	A-3276-885-A	FL BOARD, COMPLETE *****	
	4-972-752-01	HOLDER (FL)	
		< CAPACITOR >	
C401	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C402	1-111-253-11	TANTAL. CHIP 100uF	20% 6.3V
C403	1-163-059-00	CERAMIC CHIP 0.01uF	10% 50V
C404	1-111-253-11	TANTAL. CHIP 100uF	20% 6.3V
C405	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C406	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C407	1-110-574-11	TANTAL. CHIP 22uF	20% 16V
C408	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C409	1-110-574-11	TANTAL. CHIP 22uF	20% 16V
C410	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C411	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C413	1-135-259-11	TANTAL. CHIP 10uF	20% 6.3V
C414	1-163-059-00	CERAMIC CHIP 0.01uF	10% 50V
C415	1-164-232-11	CERAMIC CHIP 0.01uF	50V

Ref. No.	Part No.	Description	Remark
C416	1-110-574-11	TANTAL. CHIP 22uF	20% 16V
C417	1-110-574-11	TANTAL. CHIP 22uF	20% 16V
C418-433			
	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C435	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
* CN401	1-565-354-11	SOCKET, CONNECTOR 15P	
< DIODE >			
D401	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D402	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D403	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D404	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D405	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D406	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D407	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D408	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
D409	8-719-053-66	LED MBG5363X (MD ILLUMINATION)	
< FLUORESCENT INDICATOR >			
FL401	1-517-377-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC401	8-759-164-44	IC CXD8459M-T2	
< JUMPER RESISTOR >			
JC400-426			
	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC427	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC428-431			
	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC432	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC433-438			
	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC439	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC440	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC441	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC442	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC443	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC444-459			
	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC460	1-216-295-11	CONDUCTOR, CHIP	(2012)
< COIL >			
L401	1-412-032-11	INDUCTOR CHIP 100uH	
L403	1-412-032-11	INDUCTOR CHIP 100uH	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q401	8-729-402-19	TRANSISTOR XN6501	
Q402	8-729-402-19	TRANSISTOR XN6501	
< RESISTOR >			
R401	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R402	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R403-407			
	1-216-029-00	METAL CHIP 150 5%	1/10W
R409	1-216-085-00	METAL CHIP 33K 5%	1/10W
R410-413			
	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R414	1-216-246-00	METAL GLAZE 100K 5%	1/8W
R415-418			
	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R419-422			
	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R423	1-216-101-00	METAL CHIP 150K 5%	1/10W
R424-427			
	1-216-029-00	METAL CHIP 150 5%	1/10W
< SWITCH >			
S401	1-692-444-11	SWITCH, KEY BOARD (POWER)	
S402	1-692-444-11	SWITCH, KEY BOARD (VOLUME +)	
S403	1-692-444-11	SWITCH, KEY BOARD (VOLUME -)	

* A-3276-886-A MAIN BOARD, COMPLETE			

	1-533-233-11	HOLDER, FUSE	
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
< CAPACITOR >			
C101	1-126-163-11	ELECT 4.7uF 20%	50V
C102	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C103	1-126-163-11	ELECT 4.7uF 20%	50V
C104	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C105	1-124-994-11	ELECT 100uF 20%	10V
C106	1-163-235-11	CERAMIC CHIP 22PF 5%	50V
C107	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C108	1-163-235-11	CERAMIC CHIP 22PF 5%	50V
C109	1-163-235-11	CERAMIC CHIP 22PF 5%	50V
C110	1-126-163-11	ELECT 4.7uF 20%	50V
C111	1-126-163-11	ELECT 4.7uF 20%	50V
C112	1-164-182-11	CERAMIC CHIP 0.0033uF 10%	50V
C113	1-164-492-11	CERAMIC CHIP 0.15uF 10%	16V
C114	1-164-492-11	CERAMIC CHIP 0.15uF 10%	16V
C115	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V
C116	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V

MAIN

Ref. No.	Part No.	Description	Remark		
C117	1-126-163-11	ELECT	4. 7uF	20%	50V
C118	1-126-157-11	ELECT	10uF	20%	16V
C119	1-124-995-11	ELECT	220uF	20%	10V
C120	1-136-165-00	FILM	0. 1uF	5%	50V
C121	1-126-163-11	ELECT	4. 7uF	20%	50V
C122	1-136-165-00	FILM	0. 1uF	5%	50V
C123	1-126-963-11	ELECT	4. 7uF	20%	50V
C124	1-124-994-11	ELECT	100uF	20%	10V
C125	1-126-163-11	ELECT	4. 7uF	20%	50V
C126	1-126-163-11	ELECT	4. 7uF	20%	50V
C127	1-164-161-11	CERAMIC CHIP	0. 0022uF	10%	100V
C129	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C131	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C132	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C135	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C201	1-126-163-11	ELECT	4. 7uF	20%	50V
C202	1-164-161-11	CERAMIC CHIP	0. 0022uF	10%	100V
C203	1-126-163-11	ELECT	4. 7uF	20%	50V
C204	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C205	1-124-994-11	ELECT	100uF	20%	10V
C206	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C208	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C209	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C210	1-126-163-11	ELECT	4. 7uF	20%	50V
C211	1-126-163-11	ELECT	4. 7uF	20%	50V
C212	1-164-182-11	CERAMIC CHIP	0. 0033uF	10%	50V
C213	1-164-492-11	CERAMIC CHIP	0. 15uF	10%	16V
C214	1-164-492-11	CERAMIC CHIP	0. 15uF	10%	16V
C215	1-164-489-11	CERAMIC CHIP	0. 22uF	10%	16V
C216	1-164-489-11	CERAMIC CHIP	0. 22uF	10%	16V
C217	1-126-163-11	ELECT	4. 7uF	20%	50V
C218	1-126-157-11	ELECT	10uF	20%	16V
C219	1-124-995-11	ELECT	220uF	20%	10V
C220	1-136-165-00	FILM	0. 1uF	5%	50V
C221	1-126-163-11	ELECT	4. 7uF	20%	50V
C222	1-136-165-00	FILM	0. 1uF	5%	50V
C223	1-126-963-11	ELECT	4. 7uF	20%	50V
C224	1-124-994-11	ELECT	100uF	20%	10V
C225	1-126-163-11	ELECT	4. 7uF	20%	50V
C226	1-126-163-11	ELECT	4. 7uF	20%	50V
C227	1-164-161-11	CERAMIC CHIP	0. 0022uF	10%	100V
C229	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C231	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C232	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C235	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C301	1-126-157-11	ELECT	10uF	20%	16V
C302	1-126-967-11	ELECT	47uF	20%	16V
C303	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C304	1-163-019-00	CERAMIC CHIP	0. 0068uF	10%	50V

Ref. No.	Part No.	Description	Remark		
C305	1-124-902-00	ELECT	0. 47uF	20%	50V
C306	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C307	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C308	1-126-963-11	ELECT	4. 7uF	20%	50V
C309	1-126-963-11	ELECT	4. 7uF	20%	50V
C310	1-128-551-11	ELECT	22uF	20%	25V
C311-314					
	1-124-994-11	ELECT	100uF	20%	10V
C315	1-126-157-11	ELECT	10uF	20%	16V
C316-318					
	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C319	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C320	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C321	1-124-994-11	ELECT	100uF	20%	10V
C322	1-126-163-11	ELECT	4. 7uF	20%	50V
C323	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C324	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C325	1-124-995-11	ELECT	220uF	20%	10V
C326	1-126-157-11	ELECT	10uF	20%	16V
C327-329					
	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C331	1-164-346-11	CERAMIC CHIP	1uF		16V
C332	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C333	1-163-133-11	CERAMIC CHIP	470PF	10%	50V
C334	1-104-912-11	TANTAL. CHIP	3. 3uF	20%	16V
C801	1-126-154-11	ELECT	47uF	20%	6. 3V
C802	1-111-253-11	TANTAL. CHIP	100uF	20%	6. 3V
C803	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C804	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C805	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C806	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C807	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C808-810					
	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C811	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C812	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C813-815					
	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C816	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C817	1-128-241-11	ELECT	220uF	20%	10V
C818	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C819	1-124-584-00	ELECT	100uF	20%	10V
C820	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C821	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C822	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C823	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C824	1-126-157-11	ELECT	10uF	20%	16V
C826	1-124-584-00	ELECT	100uF	20%	10V
C830	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C831	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description	Remark		
C832	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C833	1-136-165-00	FILM	0.1uF	5%	50V
C834	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C835	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C836	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C837	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C838	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C839	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C840	1-136-165-00	FILM	0.1uF	5%	50V
C841	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C842	1-164-346-11	CERAMIC CHIP	1uF		16V
C843	1-136-177-00	FILM	1uF	5%	50V
C844	1-164-346-11	CERAMIC CHIP	1uF		16V
C845	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C851-853	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C863	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C864	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C865	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C880	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C901	1-111-235-61	ELECT	10000uF	20%	25V
C902	1-104-650-11	ELECT	6800uF	20%	25V
C903	1-104-650-11	ELECT	6800uF	20%	25V
C904	1-126-972-11	ELECT	1000uF	20%	50V
C905	1-124-122-11	ELECT	100uF	20%	50V
C906-913	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C914	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C915	1-124-994-11	ELECT	100uF	20%	10V
C916	1-124-994-11	ELECT	100uF	20%	10V
C917	1-126-022-11	ELECT	47uF	20%	10V
C918	1-126-022-11	ELECT	47uF	20%	10V
C919	1-126-967-11	ELECT	47uF	20%	10V
C920	1-126-923-11	ELECT	220uF	20%	10V
C921	1-126-925-11	ELECT	470uF	20%	10V
C922	1-126-157-11	ELECT	10uF	20%	16V
C923	1-126-154-11	ELECT	47uF	20%	6.3V
C924	1-104-905-11	DOUBLE LAYERS	0.22F		5.5V
C925	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C926	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C927	1-126-933-11	ELECT	100uF	20%	10V
C928	1-126-933-11	ELECT	100uF	20%	10V
C929	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C930	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C931	1-126-933-11	ELECT	100uF	20%	10V
C932	1-126-933-11	ELECT	100uF	20%	10V
C933	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C934	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C935	1-126-933-11	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description	Remark		
C936	1-126-933-11	ELECT	100uF	20%	10V
C937	1-126-964-11	ELECT	10uF	20%	50V
C938	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C939	1-126-964-11	ELECT	10uF	20%	50V
C940	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C941	1-126-964-11	ELECT	10uF	20%	50V
C942	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C943	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C944	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C950-967	1-163-035-00	CERAMIC CHIP	0.047uF		50V
< CONNECTOR >					
* CN301	1-764-908-11	CONNECTOR, FFC/FPC (ZIF) 10P			
CN801	1-569-932-11	SOCKET, CONNECTOR 15P			
* CN802	1-770-862-11	CONNECTOR, FFC/FPC (ZIF) 21P			
* CN803	1-569-940-11	SOCKET, CONNECTOR 24P			
* CN804	1-565-353-11	PIN, CONNECTOR 15P			
* CN805	1-565-353-11	PIN, CONNECTOR 15P			
* CN807	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN901	1-770-317-11	PIN, CONNECTOR 5P			
* CN902	1-770-318-11	PIN, CONNECTOR 7P			
CN905	1-770-939-11	CONNECTOR, BOARD TO BOARD 8P			
< DIODE >					
D101	8-719-978-88	DIODE DTZ-TT11-27A			
D102	8-719-978-88	DIODE DTZ-TT11-27A			
D201	8-719-978-88	DIODE DTZ-TT11-27A			
D202	8-719-978-88	DIODE DTZ-TT11-27A			
D901	8-719-510-53	DIODE D4SB60L			
D902	8-719-510-53	DIODE D4SB60L			
D903	8-719-404-46	DIODE MA110			
D904	8-719-977-03	DIODE DTZ5.6B			
D905	8-719-977-03	DIODE DTZ5.6B			
D906	8-719-030-26	DIODE ST04-27F1			
D907	8-719-042-77	DIODE MA8300-M			
D908	8-719-422-41	DIODE MA8051-L-TX			
D909	8-719-210-33	DIODE EC10DS2			
D910	8-719-210-33	DIODE EC10DS2			
D911	8-719-210-33	DIODE EC10DS2			
D912	8-719-210-33	DIODE EC10DS2			
D913	8-719-210-33	DIODE EC10DS2			
D914	8-719-404-46	DIODE MA110			
D916	8-719-422-97	DIODE MA8091-M			
D8029	8-719-404-46	DIODE MA110			
< FUSE >					
△F901-903	1-532-350-00	FUSE, TIME-LAG (T4A/250V)			

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

MAIN

Ref. No.	Part No.	Description.	Remark
< FERRITE BEAD >			
FB803-805	1-414-235-11	INDUCTOR, FERRITE BEAD	
< IC >			
IC301	8-759-184-98	IC NJM2100M-A	
IC302	8-759-246-69	IC TA2011S	
IC303	8-759-184-98	IC NJM2100M-A	
IC304	8-759-184-98	IC NJM2100M-A	
IC305	8-759-184-98	IC NJM2100M-A	
IC306	8-759-184-98	IC NJM2100M-A	
IC307	8-759-325-94	IC TDA7319	
IC310	8-759-190-89	IC TDA7265	
IC311	8-759-701-02	IC NJM2073M	
IC801	8-752-846-35	IC CXP81740-605Q	
IC803	8-759-182-29	IC M66230FP-T1	
IC804	8-759-096-23	IC S-80728AN-DR-T1	
IC805	8-749-921-12	IC GP1F32T (OPTICAL DIGITAL OUT	(CD/MD))
IC901	8-759-080-77	IC BA3933	
IC902	8-759-503-60	IC S-80740AN-D4-S	
IC903	8-759-342-78	IC RH5RA58AA-T1	
< JACK >			
J301	1-770-112-11	JACK (MIX MIC)	
* J302	1-770-111-11	JACK, PIN 2P (LINE IN)	
J303	1-770-112-11	JACK (HEADPHONES)	
* J304	1-537-240-41	TERMINAL BOARD (CHECKER PIN) (SPEAKER)	
< JUMPER RESISTOR >			
JC154	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC254	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC301	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC302	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC801	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC802	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC901	1-216-295-11	CONDUCTOR, CHIP	(2012)
JC902	1-216-296-11	CONDUCTOR, CHIP	(3216)
JC903	1-216-296-11	CONDUCTOR, CHIP	(3216)
JR803	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR805	1-216-295-11	CONDUCTOR, CHIP	(2012)
JR806	1-216-295-11	CONDUCTOR, CHIP	(2012)
< COIL >			
L101	1-411-631-11	COIL, AIR-CORE	
L102	1-412-032-11	INDUCTOR CHIP 100uH	
L201	1-411-631-11	COIL, AIR-CORE	
L202	1-412-032-11	INDUCTOR CHIP 100uH	

Ref. No.	Part No.	Description	Remark
L301	1-414-404-11	INDUCTOR 100uH	
L801	1-412-032-11	INDUCTOR CHIP 100uH	
L805	1-412-031-11	INDUCTOR CHIP 47uH	
< IC LINK >			
△PS901	1-576-124-11	LINK, IC (CCP2E25) (1A)	
△PS902	1-533-282-21	LINK, IC (CCP2E50) (2A)	
△PS903	1-576-122-21	LINK, IC (CCP2E10) (0.4A)	
△PS904	1-533-282-21	LINK, IC (CCP2E50) (2A)	
< TRANSISTOR >			
Q101	8-729-920-31	TRANSISTOR DTC343TK	
Q102	8-729-920-31	TRANSISTOR DTC343TK	
Q103	8-729-920-31	TRANSISTOR DTC343TK	
Q104	8-729-920-31	TRANSISTOR DTC343TK	
Q105	8-729-920-31	TRANSISTOR DTC343TK	
Q106	8-729-920-31	TRANSISTOR DTC343TK	
Q108	8-729-920-31	TRANSISTOR DTC343TK	
Q109	8-729-920-31	TRANSISTOR DTC343TK	
Q201	8-729-920-31	TRANSISTOR DTC343TK	
Q202	8-729-920-31	TRANSISTOR DTC343TK	
Q203	8-729-920-31	TRANSISTOR DTC343TK	
Q204	8-729-920-31	TRANSISTOR DTC343TK	
Q205	8-729-920-31	TRANSISTOR DTC343TK	
Q206	8-729-920-31	TRANSISTOR DTC343TK	
Q208	8-729-920-31	TRANSISTOR DTC343TK	
Q209	8-729-920-31	TRANSISTOR DTC343TK	
Q301	8-729-920-31	TRANSISTOR DTC343TK	
Q302	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q303	8-729-904-20	TRANSISTOR FMA2	
Q304	8-729-904-20	TRANSISTOR FMA2	
Q306	8-729-904-20	TRANSISTOR FMA2	
Q307	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q308	8-729-904-20	TRANSISTOR FMA2	
Q309	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q310	8-729-904-20	TRANSISTOR FMA2	
Q312	8-729-904-20	TRANSISTOR FMA2	
Q314	8-729-904-20	TRANSISTOR FMA2	
Q801	8-729-024-33	TRANSISTOR XN1509-TX	
Q807	8-729-015-34	TRANSISTOR FMA5-T-148	
Q808	8-729-024-33	TRANSISTOR XN1509-TX	
Q809	8-729-931-41	TRANSISTOR FMC5	
Q810	8-729-027-26	TRANSISTOR DTA114YKA-T146	
Q851	8-729-031-42	TRANSISTOR DTB122JK-T146	
Q852	8-729-031-42	TRANSISTOR DTB122JK-T146	
Q853	8-729-031-42	TRANSISTOR DTB122JK-T146	
Q854	8-729-031-42	TRANSISTOR DTB122JK-T146	
Q855	8-729-031-42	TRANSISTOR DTB122JK-T146	
Q856	8-729-423-96	TRANSISTOR UN2119	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
Q901	8-729-021-82	TRANSISTOR 2SD2396K	
Q902	8-729-907-39	TRANSISTOR IMD2	
Q903	8-729-021-82	TRANSISTOR 2SD2396K	
Q904	8-729-021-82	TRANSISTOR 2SD2396K	
Q905	8-729-019-72	TRANSISTOR 2SB1260	
Q906	8-729-907-39	TRANSISTOR IMD2	
Q907	8-729-402-84	TRANSISTOR XN4601	
Q908	8-729-901-01	TRANSISTOR DTC144EK	
Q909	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q910	8-729-027-52	TRANSISTOR DTC124EKA-T146	
< RESISTOR >			
R101	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R102	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R103	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R104	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R105	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R107	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R108	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R109	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R110	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R111	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R112	1-216-033-00	METAL CHIP 220 5% 1/10W	
R113	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R115	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R116	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R117	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R118	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R119	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R120-122	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R123	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R124	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R125	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R126	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R127	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R128	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R129	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R130	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R131	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R132	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R133	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R134	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R135	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R136	1-216-041-00	METAL CHIP 470 5% 1/10W	
R137	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R138	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R139	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R140	1-216-089-00	METAL GLAZE 47K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R142	1-216-045-00	METAL CHIP 680 5% 1/10W	
R143	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
R144	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R145	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R146	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R148	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R149	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R150	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R151	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R152	1-216-081-00	METAL CHIP 22K 5% 1/10W	
△R154	1-216-367-11	METAL OXIDE 0.68 5% 2W F	
R201	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R202	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R203	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R204	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R205	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R207	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R208	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R209	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R210	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R211	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R212	1-216-033-00	METAL CHIP 220 5% 1/10W	
R213	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R215	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R216	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R217	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R218	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R219	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R220-222	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R223	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R224	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R225	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R226	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R227	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R228	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R229	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R230	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R231	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R232	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R233	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R234	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R235	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R236	1-216-041-00	METAL CHIP 470 5% 1/10W	
R237	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R238	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R239	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R240	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R242	1-216-045-00	METAL CHIP 680 5% 1/10W	

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	Remark			
R243	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
R244	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R245	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R246	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R248	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R249	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R250	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R251	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R252	1-216-081-00	METAL CHIP	22K	5%	1/10W	
△R254	1-216-367-11	METAL OXIDE	0.68	5%	2W	F
R301	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R302	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R303	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R304	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R305	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	
R306-309						
	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R310	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R312	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R313-316						
	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R318	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R319	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R320	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R321	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R322	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R323	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R330	1-216-029-00	METAL CHIP	150	5%	1/10W	
R332	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R801-817						
	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R818	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R819	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R820	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R821	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R822	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R823	1-216-041-00	METAL CHIP	470	5%	1/10W	
R824	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R826	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R827	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R828	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R829	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R830	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R831	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R832	1-216-041-00	METAL CHIP	470	5%	1/10W	
R833	1-216-041-00	METAL CHIP	470	5%	1/10W	
R834	1-216-049-11	METAL GLAZE	1K	5%	1/10W	

Ref. No.	Part No.	Description	Remark			
R835	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R838	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R839	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R840	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R841	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R842	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R843-846						
	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R847-850						
	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R852-856						
	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R858	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R859	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R860	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R861	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R862	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R863	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R864	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R865	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R866-869						
	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R870-876						
	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R877	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R878	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R879-881						
	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R882	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R883	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R884	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R885-889						
	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R890	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R891	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R901	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R902	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R904	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R905	1-216-037-00	METAL CHIP	330	5%	1/10W	
R906	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R908	1-216-037-00	METAL CHIP	330	5%	1/10W	
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R910	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R911	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R912	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R913	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R914	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R915	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R916	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R917	1-216-085-00	METAL CHIP	33K	5%	1/10W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark		
R918	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R919	1-216-025-00	METAL GLAZE	100	5%	1/10W
R920	1-216-079-00	METAL CHIP	18K	5%	1/10W
R921	1-216-093-00	METAL CHIP	68K	5%	1/10W
R922	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R923	1-216-113-00	METAL CHIP	470K	5%	1/10W
R924	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R925	1-216-073-00	METAL CHIP	10K	5%	1/10W
R926	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8023	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8027	1-216-041-00	METAL CHIP	470	5%	1/10W
R8035	1-216-041-00	METAL CHIP	470	5%	1/10W
R8040	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R8042	1-216-295-11	CONDUCTOR, CHIP	(2012)		
R8050	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R8057	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8077	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R8078	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8081	1-216-041-00	METAL CHIP	470	5%	1/10W
R8082	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8085	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8099	1-216-295-11	CONDUCTOR, CHIP	(2012)		
< SWITCH >					
S818	1-692-431-21	SWITCH, TACTILE (RESET)			
< LPF >					
T101	1-239-503-11	FILTER, LOW PASS			
T201	1-239-503-11	FILTER, LOW PASS			
< VIBRATOR >					
X801	1-760-714-11	VIBRATOR, CERAMIC	(4.19MHz)		
X802	1-567-098-41	VIBRATOR, CRYSTAL	(32kHz)		
X803	1-760-715-11	VIBRATOR, CERAMIC	(4.98MHz)		

*	A-3269-892-A	MD MAIN BOARD, COMPLETE			

< CAPACITOR >					
C201	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C208-210					
	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C271	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C272	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V

Ref.No.	Part No.	Description	Remark		
C273	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C274	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C275	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C276	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C277	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C278	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C279	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C280	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C282	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C283	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C284	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C285	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C291	1-126-163-11	ELECT	4.7uF	20%	50V
C292	1-126-163-11	ELECT	4.7uF	20%	50V
C293	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C294	1-126-157-11	ELECT	10uF	20%	16V
C295	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C296	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C297	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V
C298	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C299	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C300	1-126-923-11	ELECT	220uF	20%	10V
C301	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C302	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V
C303	1-126-163-11	ELECT	4.7uF	20%	50V
C304	1-126-163-11	ELECT	4.7uF	20%	50V
C305	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C306	1-126-157-11	ELECT	10uF	20%	16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C309	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C310	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C313	1-110-975-11	TANTAL. CHIP	47uF	20%	6.3V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-126-022-11	ELECT	47uF	20%	10V
C319	1-126-163-11	ELECT	4.7uF	20%	50V
C320	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C321	1-126-022-11	ELECT	47uF	20%	10V
C322	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C323	1-126-157-11	ELECT	10uF	20%	16V
C324	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C325	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C326	1-126-157-11	ELECT	10uF	20%	16V
C327	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C328	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C329	1-126-022-11	ELECT	47uF	20%	10V
C330	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

MD MAIN

Ref. No.	Part No.	Description	Remark
C331	1-162-928-11	CERAMIC CHIP 120PF	5% 50V
C332	1-162-928-11	CERAMIC CHIP 120PF	5% 50V
C333	1-162-925-11	CERAMIC CHIP 68PF	5% 50V
C334	1-162-925-11	CERAMIC CHIP 68PF	5% 50V
C335	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C336	1-126-022-11	ELECT 47uF	20% 10V
C337	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C338	1-126-163-11	ELECT 4.7uF	20% 50V
C339	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C340	1-162-928-11	CERAMIC CHIP 120PF	5% 50V
C341	1-162-928-11	CERAMIC CHIP 120PF	5% 50V
C342	1-162-925-11	CERAMIC CHIP 68PF	5% 50V
C343	1-162-925-11	CERAMIC CHIP 68PF	5% 50V
C344	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C345	1-126-163-11	ELECT 4.7uF	20% 50V
C346	1-126-022-11	ELECT 47uF	20% 10V
C347	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C348	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C349	1-126-022-11	ELECT 47uF	20% 10V
C350	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C351-354			
	1-107-812-11	TANTAL. CHIP 4.7uF	20% 6.3V
C355	1-135-259-11	TANTAL. CHIP 10uF	20% 6.3V
C356	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C357	1-135-337-11	TANTAL. CHIP 1uF	20% 6.3V
C358	1-107-812-11	TANTAL. CHIP 4.7uF	20% 6.3V
C410	1-126-967-11	ELECT 47uF	20% 16V
C411	1-126-967-11	ELECT 47uF	20% 16V
C412	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C413	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C414	1-126-967-11	ELECT 47uF	20% 16V
C415	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C416	1-126-967-11	ELECT 47uF	20% 16V
C417	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V
C418	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C419	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V
C420	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C421	1-107-814-11	TANTAL. CHIP 33uF	20% 10V
C422	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C423	1-107-814-11	TANTAL. CHIP 33uF	20% 10V
C424-426			
	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C450-471			
	1-424-464-11	FILTER, NOISE	
C472	1-239-601-11	FILTER, CHIP EMI	

< CONNECTOR >

* CN201	1-770-154-11	PIN, CONNECTOR (PC BOARD) 6P
CN202	1-569-532-11	HOUSING, CONNECTOR 30P

Ref. No.	Part No.	Description	Remark
* CN203	1-770-672-11	HOUSING, CONNECTOR (FPC.FFC) 18P	
CN204	1-566-521-11	CONNECTOR, FPC (ZIF) 5P	
CN205	1-573-853-31	CONNECTOR, FPC/FFC 20P	
* CN206	1-695-584-11	CONNECTOR, FPC/FFC 10P	

< DIODE >

D201	8-719-941-86	DIODE DAN202U
D202	8-719-941-23	DIODE DA204U
D203	8-719-404-46	DIODE MA110
D204	8-719-404-46	DIODE MA110
D205	8-719-404-46	DIODE MA110

D206	8-719-404-46	DIODE MA110
D207	8-719-941-86	DIODE DAN202U

< IC >

IC201	8-759-352-58	IC M37610MD-060FP
IC202	8-752-371-17	IC CXD2536R
IC203	8-759-083-94	IC TC7W74FU
IC204	8-759-082-58	IC TC7W08FU
IC205	8-759-344-86	IC MSM514400C-70SJ-DR1

IC206	8-759-252-39	IC AK4502-VS-E1
IC207	8-759-184-98	IC NJM2100M-A
IC208	8-759-184-98	IC NJM2100M-A
IC209	8-759-184-98	IC NJM2100M-A
IC210	8-759-184-98	IC NJM2100M-A

IC211	8-759-184-98	IC NJM2100M-A
IC213	8-759-040-83	IC BA6287F

< JUMPER RESISTOR >

JC201-208					
	1-216-864-11	METAL CHIP	0	5%	1/16W

< COIL >

L201	1-412-852-11	INDUCTOR 47uH
L202	1-412-852-11	INDUCTOR 47uH
L203	1-414-410-21	INDUCTOR 10uH
L208	1-412-032-11	INDUCTOR CHIP 100uH
L210	1-412-032-11	INDUCTOR CHIP 100uH
L211	1-414-410-21	INDUCTOR 10uH

< FILTER >

LF203-207		
	1-239-581-21	FILTER, EMI
LF213	1-239-581-21	FILTER, EMI

< TRANSISTOR >

Q201	8-729-930-00	TRANSISTOR UMD2
Q202	8-729-930-00	TRANSISTOR UMD2

Ref. No.	Part No.	Description	Remark
Q203	8-729-927-62	TRANSISTOR UMX1	
Q204	8-729-927-62	TRANSISTOR UMX1	
Q205	8-729-326-11	TRANSISTOR 2SC2611	
Q206	8-729-326-11	TRANSISTOR 2SC2611	
Q207	8-729-326-11	TRANSISTOR 2SC2611	
Q208	8-729-930-00	TRANSISTOR UMD2	
Q209	8-729-930-00	TRANSISTOR UMD2	
Q210	8-729-922-94	TRANSISTOR DTC143TU	
Q211	8-729-922-94	TRANSISTOR DTC143TU	
Q212	8-729-922-94	TRANSISTOR DTC143TU	
Q213	8-729-922-94	TRANSISTOR DTC143TU	
Q216	8-729-905-18	TRANSISTOR DTC144EU	
< RESISTOR >			
R204	1-216-845-11	METAL CHIP 100K 5%	1/16W
R205	1-216-845-11	METAL CHIP 100K 5%	1/16W
R209	1-216-845-11	METAL CHIP 100K 5%	1/16W
R215	1-216-857-11	METAL CHIP 1M 5%	1/16W
R216	1-216-833-11	METAL CHIP 10K 5%	1/16W
R227	1-216-845-11	METAL CHIP 100K 5%	1/16W
R228	1-216-845-11	METAL CHIP 100K 5%	1/16W
R229	1-216-821-11	METAL CHIP 1K 5%	1/16W
R230	1-216-821-11	METAL CHIP 1K 5%	1/16W
R231	1-216-864-11	METAL CHIP 0 5%	1/16W
R232	1-216-864-11	METAL CHIP 0 5%	1/16W
R233	1-216-833-11	METAL CHIP 10K 5%	1/16W
R234	1-216-833-11	METAL CHIP 10K 5%	1/16W
R245	1-216-845-11	METAL CHIP 100K 5%	1/16W
R246	1-216-833-11	METAL CHIP 10K 5%	1/16W
R247	1-216-833-11	METAL CHIP 10K 5%	1/16W
R249	1-216-864-11	METAL CHIP 0 5%	1/16W
R250	1-216-821-11	METAL CHIP 1K 5%	1/16W
R251	1-216-845-11	METAL CHIP 100K 5%	1/16W
R252	1-216-845-11	METAL CHIP 100K 5%	1/16W
R257	1-216-845-11	METAL CHIP 100K 5%	1/16W
R258	1-216-833-11	METAL CHIP 10K 5%	1/16W
R278-282	1-216-813-11	METAL CHIP 220 5%	1/16W
R284	1-216-864-11	METAL CHIP 0 5%	1/16W
R287	1-216-813-11	METAL CHIP 220 5%	1/16W
R291	1-216-833-11	METAL CHIP 10K 5%	1/16W
R292	1-216-864-11	METAL CHIP 0 5%	1/16W
R293	1-216-817-11	METAL CHIP 470 5%	1/16W
R294	1-216-855-11	METAL CHIP 680K 5%	1/16W
R296	1-216-857-11	METAL CHIP 1M 5%	1/16W
R297-299	1-216-837-11	METAL CHIP 22K 5%	1/16W
R302	1-216-835-11	METAL CHIP 15K 5%	1/16W
R303	1-216-837-11	METAL CHIP 22K 5%	1/16W

Ref. No.	Part No.	Description	Remark
R304	1-216-833-11	METAL CHIP 10K 5%	1/16W
R305	1-216-833-11	METAL CHIP 10K 5%	1/16W
R306	1-216-821-11	METAL CHIP 1K 5%	1/16W
R307	1-216-857-11	METAL CHIP 1M 5%	1/16W
R308	1-216-833-11	METAL CHIP 10K 5%	1/16W
R309	1-216-837-11	METAL CHIP 22K 5%	1/16W
R310	1-216-864-11	METAL CHIP 0 5%	1/16W
R311	1-216-833-11	METAL CHIP 10K 5%	1/16W
R312	1-216-817-11	METAL CHIP 470 5%	1/16W
R313	1-216-855-11	METAL CHIP 680K 5%	1/16W
R315	1-216-857-11	METAL CHIP 1M 5%	1/16W
R316-318	1-216-837-11	METAL CHIP 22K 5%	1/16W
R319-322	1-216-821-11	METAL CHIP 1K 5%	1/16W
R323	1-216-813-11	METAL CHIP 220 5%	1/16W
R324	1-216-833-11	METAL CHIP 10K 5%	1/16W
R325	1-216-833-11	METAL CHIP 10K 5%	1/16W
R326	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R327	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R328	1-216-857-11	METAL CHIP 1M 5%	1/16W
R330	1-216-837-11	METAL CHIP 22K 5%	1/16W
R331	1-216-837-11	METAL CHIP 22K 5%	1/16W
R332	1-216-843-11	METAL CHIP 68K 5%	1/16W
R333	1-216-837-11	METAL CHIP 22K 5%	1/16W
R334	1-216-837-11	METAL CHIP 22K 5%	1/16W
R335	1-216-839-11	METAL CHIP 33K 5%	1/16W
R336	1-216-839-11	METAL CHIP 33K 5%	1/16W
R337	1-216-843-11	METAL CHIP 68K 5%	1/16W
R338	1-216-843-11	METAL CHIP 68K 5%	1/16W
R339	1-216-823-11	METAL CHIP 1.5K 5%	1/16W
R340	1-216-817-11	METAL CHIP 470 5%	1/16W
R341	1-216-857-11	METAL CHIP 1M 5%	1/16W
R342	1-216-809-11	METAL CHIP 100 5%	1/16W
R343	1-216-845-11	METAL CHIP 100K 5%	1/16W
R344	1-216-809-11	METAL CHIP 100 5%	1/16W
R345	1-216-837-11	METAL CHIP 22K 5%	1/16W
R346	1-216-837-11	METAL CHIP 22K 5%	1/16W
R347	1-216-843-11	METAL CHIP 68K 5%	1/16W
R348	1-216-837-11	METAL CHIP 22K 5%	1/16W
R349	1-216-837-11	METAL CHIP 22K 5%	1/16W
R350	1-216-839-11	METAL CHIP 33K 5%	1/16W
R351	1-216-839-11	METAL CHIP 33K 5%	1/16W
R352	1-216-843-11	METAL CHIP 68K 5%	1/16W
R353	1-216-843-11	METAL CHIP 68K 5%	1/16W
R354	1-216-823-11	METAL CHIP 1.5K 5%	1/16W
R355	1-216-817-11	METAL CHIP 470 5%	1/16W
R356	1-216-857-11	METAL CHIP 1M 5%	1/16W
R357	1-216-809-11	METAL CHIP 100 5%	1/16W

MD MAIN

MOTOR

POWER

SW

Ref. No.	Part No.	Description	Remark		
R358	1-216-845-11	METAL CHIP	100K	5%	1/16W
R359	1-216-809-11	METAL CHIP	100	5%	1/16W
R360	1-216-857-11	METAL CHIP	1M	5%	1/16W
R362	1-216-849-11	METAL CHIP	220K	5%	1/16W
R363	1-216-833-11	METAL CHIP	10K	5%	1/16W
R364	1-216-843-11	METAL CHIP	68K	5%	1/16W
R365	1-216-851-11	METAL CHIP	330K	5%	1/16W
R366	1-216-851-11	METAL CHIP	330K	5%	1/16W
R367	1-216-835-11	METAL CHIP	15K	5%	1/16W
R368	1-216-835-11	METAL CHIP	15K	5%	1/16W
R369	1-216-849-11	METAL CHIP	220K	5%	1/16W
R370	1-216-864-11	METAL CHIP	0	5%	1/16W
R371	1-216-864-11	METAL CHIP	0	5%	1/16W
R372	1-216-162-00	METAL GLAZE	33	5%	1/8W
R374-379					
	1-216-864-11	METAL CHIP	0	5%	1/16W
R381	1-216-837-11	METAL CHIP	22K	5%	1/16W
R382	1-216-864-11	METAL CHIP	0	5%	1/16W
R383	1-216-864-11	METAL CHIP	0	5%	1/16W
R384-387					
	1-216-845-11	METAL CHIP	100K	5%	1/16W
R388	1-216-841-11	METAL CHIP	47K	5%	1/16W
R389	1-216-841-11	METAL CHIP	47K	5%	1/16W
R390	1-216-864-11	METAL CHIP	0	5%	1/16W
R391	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R392	1-216-864-11	METAL CHIP	0	5%	1/16W
R393	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R394	1-216-864-11	METAL CHIP	0	5%	1/16W
R395	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R396	1-216-864-11	METAL CHIP	0	5%	1/16W
R397	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R398-400					
	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-864-11	METAL CHIP	0	5%	1/16W
R403	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R404	1-216-864-11	METAL CHIP	0	5%	1/16W
R405	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R410	1-216-807-11	METAL CHIP	68	5%	1/16W
R411	1-216-807-11	METAL CHIP	68	5%	1/16W
R413-415					
	1-216-864-11	METAL CHIP	0	5%	1/16W
< NETWORK RESISTOR >					
RB202-213					
	1-236-907-11	NETWORK RESISTOR (CHIP)	100KX4		
< VIBRATOR >					
X201	1-760-599-11	VIBRATOR, CERAMIC (8MHz)			

Ref. No.	Part No.	Description	Remark		
X203	1-760-173-11	VIBRATOR, CRYSTAL (45MHz)			

*	1-653-412-11	MOTOR BOARD			

< CAPACITOR >					
C199	1-164-159-11	CERAMIC	0.1uF	50V	
< CONNECTOR >					
* CN191	1-568-944-11	PIN, CONNECTOR 6P			
CN192	1-770-011-41	CONNECTOR, BOARD TO BOARD 4P			

*	1-655-823-11	POWER BOARD			

< CAPACITOR >					
△C991	1-161-744-51	CERAMIC	0.01uF	400V	
△C992-994					
	1-161-742-00	CERAMIC	0.0022uF	20%	400V
< CONNECTOR >					
* CN903	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P			
* CN904	1-770-314-11	PIN, CONNECTOR 2P			
< LINE FILTER >					
△LF901	1-424-150-11	TRANSFORMER, LINE FILTER			

*	A-3276-698-A	SW BOARD, COMPLETE			

< CAPACITOR >					
C451	1-126-964-11	ELECT	10uF	20%	50V
C452	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C453	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
< CONNECTOR >					
* CN451	1-565-354-11	SOCKET, CONNECTOR 15P			
< DIODE >					
D451	8-719-053-70	LED BG5351K (PRESET +)			
D452	8-719-053-70	LED BG5351K (PRESET -)			
D453	8-719-053-70	LED BG5351K (AMS D)			
D454	8-719-053-70	LED BG5351K (AMS K)			
D456	8-719-053-66	LED MBG5363X (MD ■)			
D457	8-719-053-66	LED MBG5363X (MD ■)			
D458	8-719-053-66	LED MBG5363X (MD ► ■)			

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

Ref. No.	Part No.	Description	Remark
D459	8-719-053-66	LED MBG5363X (MD ► II)	
D460	8-719-053-66	LED MBG5363X (MD ► II)	
D461	8-719-053-66	LED MBG5363X (MD ► II)	
D462	8-719-053-66	LED MBG5363X (CD ■)	
D463	8-719-053-66	LED MBG5363X (CD ■)	
D464	8-719-053-66	LED MBG5363X (CD ► II)	
D465	8-719-053-66	LED MBG5363X (CD ► II)	
D466	8-719-053-66	LED MBG5363X (CD ► II)	
D467	8-719-053-66	LED MBG5363X (CD ► II)	
D468	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D469	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D470	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D471	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D472	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D473	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D474	8-719-053-66	LED MBG5363X (MD ■)	
D475	8-719-053-66	LED MBG5363X (MD ► II)	
D476	8-719-053-66	LED MBG5363X (MD ► II)	
D477	8-719-053-66	LED MBG5363X (MD ► II)	
D478	8-719-053-66	LED MBG5363X (CD ■)	
D479	8-719-053-66	LED MBG5363X (CD ► II)	
D480	8-719-053-66	LED MBG5363X (CD ► II)	
D481	8-719-053-66	LED MBG5363X (CD ► II)	
D482	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D483	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D484	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
D485	8-719-053-66	LED MBG5363X (RADIO BAND FM/AM)	
< IC >			
IC451	8-749-011-05	IC GPU28X	
< JUMPER RESISTOR >			
JC461-490	1-216-296-11	CONDUCTOR, CHIP	(3216)
< PILOT LAMP >			
PL451	1-517-410-11	LAMP, PILOT (CD ILLUMINATION)	
PL452	1-517-410-11	LAMP, PILOT (CD ILLUMINATION)	
< RESISTOR >			
R451-458	1-216-178-00	METAL GLAZE	150 5% 1/8W
R459	1-216-198-00	METAL GLAZE	1K 5% 1/8W
R460	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
R461	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W
R462	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
R463	1-216-226-00	METAL GLAZE	15K 5% 1/8W
R464	1-216-198-00	METAL GLAZE	1K 5% 1/8W

Ref. No.	Part No.	Description	Remark		
R465	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R466	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R467	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R468	1-216-226-00	METAL GLAZE	15K	5%	1/8W
R469-492	1-216-178-00	METAL GLAZE	150	5%	1/8W
< SWITCH >					
S451	1-762-408-11	SWITCH, KEY BOARD (MD ■)			
S452	1-692-444-11	SWITCH, KEY BOARD (MD EDIT)			
S453	1-762-408-11	SWITCH, KEY BOARD (MD ► ■)			
S454	1-762-408-11	SWITCH, KEY BOARD (CD ► ■)			
S455	1-692-444-11	SWITCH, KEY BOARD (MD EJECT ☰)			
S456	1-692-444-11	SWITCH, KEY BOARD (REC)			
S457	1-762-408-11	SWITCH, KEY BOARD (CD ■)			
S458	1-762-408-11	SWITCH, KEY BOARD (RADIO BAND FM/AM)			
S459	1-762-408-11	SWITCH, KEY BOARD (AMS/PRESET K◀ -)			
S460	1-762-408-11	SWITCH, KEY BOARD (AMS/PRESET + ▶▶)			
S461	1-762-408-11	SWITCH, KEY BOARD (CD→MD DIGITAL REC)			
S462	1-692-444-11	SWITCH, KEY BOARD (CD OPEN/CLOSE ☰)			

*	A-3276-903-A	TUNER BOARD, COMPLETE			

< CAPACITOR >					
C2	1-162-306-11	CERAMIC	0.01uF	30%	16V
C3	1-124-927-11	ELECT	4.7uF	20%	100V
C4	1-126-933-11	ELECT	100uF	20%	10V
C5	1-162-306-11	CERAMIC	0.01uF	30%	16V
C6	1-162-306-11	CERAMIC	0.01uF	30%	16V
C7	1-162-842-11	CERAMIC	0.018uF	10%	16V
C8	1-162-842-11	CERAMIC	0.018uF	10%	16V
C9	1-161-024-00	CERAMIC	0.082uF	10%	25V
C10	1-161-024-00	CERAMIC	0.082uF	10%	25V
C11	1-161-061-11	CERAMIC	0.068uF	10%	50V
C12	1-124-902-00	ELECT	0.47uF	20%	50V
C13	1-162-306-11	CERAMIC	0.01uF	30%	16V
C14	1-162-288-31	CERAMIC	330PF	10%	50V
C15	1-126-964-11	ELECT	10uF	20%	50V
C16	1-124-902-00	ELECT	0.47uF	20%	50V
C17	1-124-902-00	ELECT	0.47uF	20%	50V
C18	1-102-518-11	CERAMIC	33PF	5%	50V
C19	1-102-947-00	CERAMIC	10PF	5%	50V
C21	1-136-177-00	FILM	1uF	5%	50V
C25	1-162-294-31	CERAMIC	0.001uF	10%	50V
C27	1-162-294-31	CERAMIC	0.001uF	10%	50V
C28	1-162-294-31	CERAMIC	0.001uF	10%	50V
C29	1-162-306-11	CERAMIC	0.01uF	30%	16V
C30	1-126-964-11	ELECT	10uF	20%	50V

TUNER

Ref. No.	Part No.	Description	Remark		
C31	1-162-306-11	CERAMIC	0.01uF	30%	16V
C32	1-126-964-11	ELECT	10uF	20%	50V
C33	1-136-177-00	FILM	1uF	5%	50V
C34	1-130-483-00	MYLAR	0.01uF	5%	50V
C36	1-162-294-31	CERAMIC	0.001uF	10%	50V
C40	1-130-483-00	CERAMIC	0.01uF	5%	50V
C41	1-102-824-00	CERAMIC	470PF	5%	50V
C42	1-102-961-00	CERAMIC	27PF	5%	50V
C61	1-162-306-11	CERAMIC	0.01uF	30%	16V
C63	1-162-306-11	CERAMIC	0.01uF	30%	16V
C66	1-162-294-31	CERAMIC	0.001uF	10%	50V
C67	1-162-306-11	CERAMIC	0.01uF	30%	16V
C72	1-162-306-11	CERAMIC	0.01uF	30%	16V
C75	1-162-306-11	CERAMIC	0.01uF	30%	16V
C76	1-110-672-51	CERAMIC	0.47uF		12V
C77	1-102-824-00	CERAMIC	470PF	5%	50V
C78	1-162-286-21	CERAMIC	220PF	10%	50V
C79	1-162-306-11	CERAMIC	0.01uF	30%	16V
C81	1-161-055-00	CERAMIC	0.022uF	10%	50V
C82	1-161-055-00	CERAMIC	0.022uF	10%	50V
C84	1-102-824-00	CERAMIC	470PF	5%	50V
C85	1-102-074-00	CERAMIC	0.001uF	10%	50V
C86	1-162-294-31	CERAMIC	0.001uF	10%	50V
C87	1-161-055-00	CERAMIC	0.022uF	10%	50V
< FILTER >					
CF1-3	1-760-468-11	FILTER, CERAMIC			
CF4	1-579-762-11	VIBRATOR, CERAMIC			
< ENCAPSULATED COMPONENT >					
CFT1	1-239-566-21	ENCAPSULATED COMPONENT			
< CONNECTOR >					
CN1	1-569-932-11	SOCKET, CONNECTOR 15P			
CN3	1-537-489-21	TERMINAL BOARD (ANTENNA)			
CN8	1-536-354-00	POST PIN			
< TRIMMER >					
CT6	1-141-410-11	CAP, ADJ 10PF			
< DIODE >					
D1	8-719-911-19	DIODE 1SS119-25			
D2	8-719-911-19	DIODE 1SS119-25			
D3	8-719-911-19	DIODE 1SS119-25			
D4	8-719-911-19	DIODE 1SS119-25			
D10	8-719-986-73	DIODE RB441Q			
D18	8-719-050-69	DIODE KV1520NT			

Ref. No.	Part No.	Description	Remark		
D21	8-719-911-19	DIODE 1SS119-25			
D22	8-719-911-19	DIODE 1SS119-25			
< FERRITE BEAD >					
FB1	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH		
< IC >					
IC1	8-759-188-84	IC TA2008N			
IC2	8-759-290-61	IC BU2615S			
< COIL >					
L3	1-411-149-11	COIL, AM ANT			
L4	1-411-150-11	COIL, AM OSC			
L12	1-410-521-11	INDUCTOR	100uH		
L15	1-410-322-11	INDUCTOR	3.3uH		
L17	1-410-336-11	INDUCTOR	220uH		
L20	1-410-336-11	INDUCTOR	220uH		
< TRANSISTOR >					
Q1	8-729-900-80	TRANSISTOR DTC114ES			
Q2	8-729-422-57	TRANSISTOR UN4111			
Q3	8-729-905-50	TRANSISTOR DTC343TS			
Q4	8-729-905-50	TRANSISTOR DTC343TS			
Q5	8-729-422-57	TRANSISTOR UN4111			
Q6	8-729-904-36	TRANSISTOR DTC114YS			
Q7	8-729-904-36	TRANSISTOR DTC114YS			
Q8	8-729-904-36	TRANSISTOR DTC114YS			
Q9	8-729-904-36	TRANSISTOR DTC114YS			
Q10	8-729-922-66	TRANSISTOR 2SC2410SN			
Q11	8-729-922-66	TRANSISTOR 2SC2410SN			
Q15	8-729-422-57	TRANSISTOR UN4111			
Q16	8-729-904-36	TRANSISTOR DTC114YS			
Q17	8-729-904-36	TRANSISTOR DTC114YS			
Q19	8-729-012-83	TRANSISTOR 2SK679A			
Q23	8-729-106-07	TRANSISTOR 2SK514-H			
< RESISTOR >					
R3	1-249-425-11	CARBON 4.7K 5% 1/4W			
R4	1-249-404-00	CARBON 82 5% 1/4W			
R5	1-249-393-11	CARBON 10 5% 1/4W			
R6	1-249-405-11	CARBON 100 5% 1/4W			
R7	1-249-433-11	CARBON 22K 5% 1/4W			
R8	1-249-421-11	CARBON 2.2K 5% 1/4W			
R9	1-249-425-11	CARBON 4.7K 5% 1/4W			
R10	1-249-437-11	CARBON 47K 5% 1/4W			
R19	1-249-437-11	CARBON 47K 5% 1/4W			
R24	1-249-412-11	CARBON 390 5% 1/4W			

TUNER

Ref. No.	Part No.	Description	Remark
R25	1-249-415-11	CARBON	680 5% 1/4W
R26	1-249-429-11	CARBON	10K 5% 1/4W
R27	1-249-421-11	CARBON	2.2K 5% 1/4W
R28	1-249-425-11	CARBON	4.7K 5% 1/4W
R29	1-249-417-11	CARBON	1K 5% 1/4W
R32	1-249-405-11	CARBON	100 5% 1/4W
R36	1-249-437-11	CARBON	47K 5% 1/4W
R37	1-249-441-11	CARBON	100K 5% 1/4W
R40	1-249-437-11	CARBON	47K 5% 1/4W
R44	1-249-437-11	CARBON	47K 5% 1/4W
R48	1-249-402-11	CARBON	56 5% 1/4W
R54	1-249-417-11	CARBON	1K 5% 1/4W
R60	1-249-433-11	CARBON	22K 5% 1/4W
R61	1-249-429-11	CARBON	10K 5% 1/4W
R62	1-249-429-11	CARBON	10K 5% 1/4W
R63	1-249-420-11	CARBON	1.8K 5% 1/4W
R67	1-249-404-00	CARBON	82 5% 1/4W
R70	1-249-441-11	CARBON	100K 5% 1/4W
R81	1-249-417-11	CARBON	1K 5% 1/4W
R82	1-249-417-11	CARBON	1K 5% 1/4W
< ENCAPSULATED COMPONENT >			
T1	1-233-306-31	ENCAPSULATED COMPONENT	
< TUNER >			
TU1	1-693-262-11	TUNER UNIT	
< VIBRATOR >			
X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)	

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			

4	1-769-529-11	WIRE (FLAT TYPE) (15 CORE)	
62	1-775-922-11	WIRE (FLAT TYPE) (A) (24 CORE)	
△71	1-751-275-11	CORD, POWER (AEP, IT)	
77	1-775-923-11	WIRE (FLAT TYPE) (B) (24 CORE)	
△78	1-696-586-21	CORD, POWER (UK)	
101	1-769-524-11	WIRE (FLAT TYPE) (10 CORE)	
102	1-769-525-11	WIRE (FLAT TYPE) (20 CORE)	
104	1-769-521-11	CABLE, FLAT (32 CORE)	
105	1-769-523-11	WIRE (FLAT TYPE) (5 CORE)	
106	1-769-522-11	CABLE, FLAT (18 CORE)	
109	1-769-526-11	WIRE (FLAT TYPE) (10 CORE)	
110	1-769-527-11	WIRE (FLAT TYPE) (21 CORE)	
112	1-698-586-11	FAN, DC	
△207	8-583-009-11	PICK-UP, OPTICAL, MINI DISC KMS-210A/J-N	
262	1-949-834-21	HARNESS (D)	
263	1-949-834-11	HARNESS (D)	
269	1-949-833-11	HARNESS (SW (K))	
△309	8-848-246-22	PICK-UP, OPTICAL KSS-360A	
△F901-903			
	1-532-350-00	FUSE, TIME-LAG (T4A/250V)	
HR901	1-500-175-11	HEAD, OVER WRITE (RF322-74A)	
M101	A-4660-651-A	MOTOR (SLED) ASSY	
M191	A-4660-646-A	MOTOR (LOADING) ASSY	
M701	X-2625-352-1	MOTOR ASSY, SLED	
M702	X-2625-354-1	MOTOR ASSY, SPINDLE	
M703	X-2625-350-1	MOTOR ASSY, LOADING	
S102	1-762-148-11	SWITCH, PUSH (2 KEY) (PROTECT/REFLECT)	
S701	1-570-771-21	SWITCH (LIMIT)	
S702	1-692-053-11	SWITCH, LEAF (LOAD IN/OUT)	
SP901	1-504-793-11	SPEAKER (10CM) (L-CH)	
SP902	1-504-936-11	SPEAKER (5CM) (L-CH)	
SP903	1-504-793-11	SPEAKER (10CM) (R-CH)	
SP904	1-504-936-11	SPEAKER (5CM) (R-CH)	
△T901	1-429-133-11	TRANSFORMER, POWER	

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

Ref.No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

	1-473-086-11	REMOTE COMMANDER (RMT-CM2)	
	1-501-594-11	ANTENNA (FM)	
	1-501-696-11	ANTENNA, LOOP (AM)	
	1-755-690-11	CORD, SPEAKER	
	3-798-320-11	MANUAL, INSTRUCTION (ENGLISH, GERMAN)	(AEP, UK)
	3-798-320-41	MANUAL, INSTRUCTION (FRENCH, SPANISH)	(AEP)
	3-798-320-51	MANUAL, INSTRUCTION (DUTCH, SWEDISH, PORTUGUESE)	(AEP)
	3-798-320-61	MANUAL, INSTRUCTION (ITALIAN) (IT)	
*	3-922-573-01	CUSHION (TOP)	
*	3-922-574-01	CUSHION (BOTTOM)	
*	3-922-575-01	CUSHION (SP)	
*	3-923-437-01	INDIVIDUAL CARTON (AEP)	
*	3-923-438-01	INDIVIDUAL CARTON (UK, IT)	
	4-976-650-01	COVER, BATTERY (FOR REMOTE COMMANDER)	
	4-976-651-01	DIAL, JOG (FOR REMOTE COMMANDER)	
	4-976-652-01	BUTTON (JOG DIAL) (FOR REMOTE COMMANDER)	

HARDWARE LIST

#1	7-685-647-79	SCREW, TAPPING +BV 3X10
#2	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S
#3	7-682-150-01	SCREW +P 3X12
#4	7-682-548-04	SCREW +BVTT 3X8 (S)
#5	7-682-547-04	SCREW +P 3X6
#6	7-682-546-04	SCREW +P 3X5
#7	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT
#8	7-627-556-37	SCREW, PRECISION +P2.6X4 TYPE1
#9	7-682-544-04	SCREW +P 3X3
#10	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S
#11	7-627-850-18	SCREW, PRECISION +P 1.4X2.5
#12	7-627-552-87	SCREW, PRECISION +P 1.7X2.2
#13	7-627-852-17	+P 1.7X4
#14	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT
#15	7-685-105-19	TPG +P 2X8, TYPE2, NON-SLIT
#16	7-685-133-19	SCREW +P 2.6X6 TYPE2
#17	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
#18	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#19	7-621-773-86	SCREW +BVTT 2.6X4 (S)
#20	7-627-852-08	SCREW, PRECISION +P 1.7X2.5
#21	7-621-775-20	SCREW +B 2.6X5
#22	7-685-135-19	SCREW +P 2.6X10 TYPE2 SLIT