

ZS-M7

SERVICE MANUAL

Ver 1.2 2001.07
With SUPPLEMENT 1
(9-923-346-82)

US Model
AEP Model
UK Model
Tourist Model



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MD Section	Model Name Using Similar Mechanism	NEW
	MD Mechanism Type	MDM-3EG
	Optical Pick-up Type	KMS-260A
CD Section	Model Name Using Similar Mechanism	NEW
	MD Mechanism Type	CDM-2411AAA
	Optical Pick-up Type	DAX-11A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 4-ohm loads, both channels driven from 100 – 10,000 Hz ; rated 7W per channel-minimum RMS power, with no more than 10% total harmonic distortion in AC operation (US Model).

CD player Section

System Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wave length: 785 nm

Emission duration : Continuous

Laser output : Less than 44.6 μ W

(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.)

Spindle speed

200 r/min (rpm) to 500 r/min (rpm) (CLV)

Number of programme positions

2

Frequency response

20 – 20,000 Hz +1 /-2 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

US Model :

FM : 87.6 – 108 MHz

AM : 530 – 1,710 kHz

EXCEPT US Model :

FM : 87.6 – 107 MHz

MW : 531 – 1,602 kHz

LW : 153 – 279 kHz

IF FM : 10.7 MHz

MW/LW : 450 kHz

Aerials FM : Telescopic areal

Extension areal terminal

AM : Extension areal terminals (US Model)

MW/LW : Extension areal terminals (EXCEPT US Model)

MD player section

System

Minidisc digital audio system

Disc MiniDisc

Laser diode properties

Material: GaAlAs

Wave length: 785 nm

Emission duration : Continuous

Laser output : Less than 44.6 μ W

(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.)

– Continued on page 2 –

PERSONAL MINIDISC SYSTEM

9-923-346-12
2001G0200-1
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Sony Corporation
Personal Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

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
Cording	Adaptive Transform Acoustic Cording (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
General	
Speaker	Full range : 8 cm (3 in.) dia., 4ohms, cone type (2)
Inputs	LINE IN (stereo minijack) : Sensitivity 436 mV/691 mV

Outputs	Headphones jack (stereo minijack) (2) : For 32 ohms impedance headphones
Power outputs	7 W + 7 W
Power requirements	For personal minidisc system : US Model :120V AC, 60Hz EXCEPT US Model :230V AC, 50Hz For remote commander : 3V DC, 2 size AA (R6) batteries
Power consumption	30 W
Dimensions (incl. projecting parts)	Approx. 528 x 275 x 139 mm (w/h/d) (20 7/8 x 10 7/8 x 5 1/2 inches)
Mass	approx. 6.4 kg (14 lb. 2 oz)
Supplied accessories	Remote commander (1) AM loop aerial (1) (US Model) MW/LW loop aerial (1) (EXCEPT US Model) Speaker nets (2) (EXCEPT US Model)

Design and specifications are subject to change without notice.

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SAFETY CHECK-OUT (US Model)

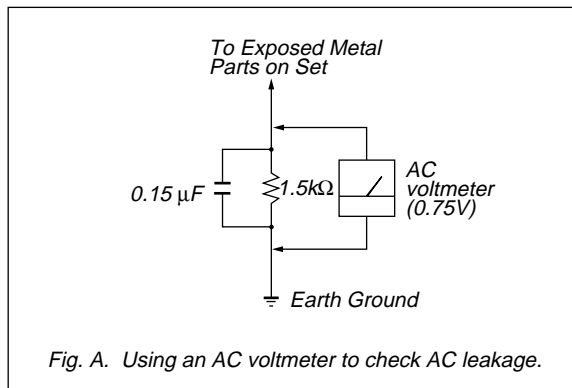
After correcting the original service problem, perform the following safety check before releasing the set to the customer :
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)



Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle 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.

SECTION 1 SERVICE NOTE

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 charged 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 LASER DIODE EMISSION CHECK

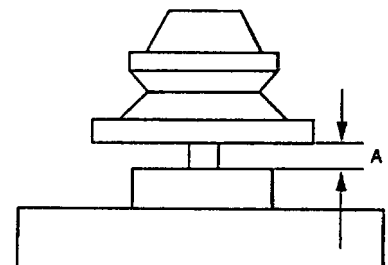
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Close the lid for CD.
2. Press CD \blacktriangleright button.
3. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
Objective lens moves up and down once for the focus search.

CAUTION DURING WHEN MOUNTING THE PULLEY FOR THE LOADING MOTOR

Make the following adjustment when mounting the loading motor (part number : 1-698-999-11) and motor pulley (part number : 2-627-174-01) of the CD section.

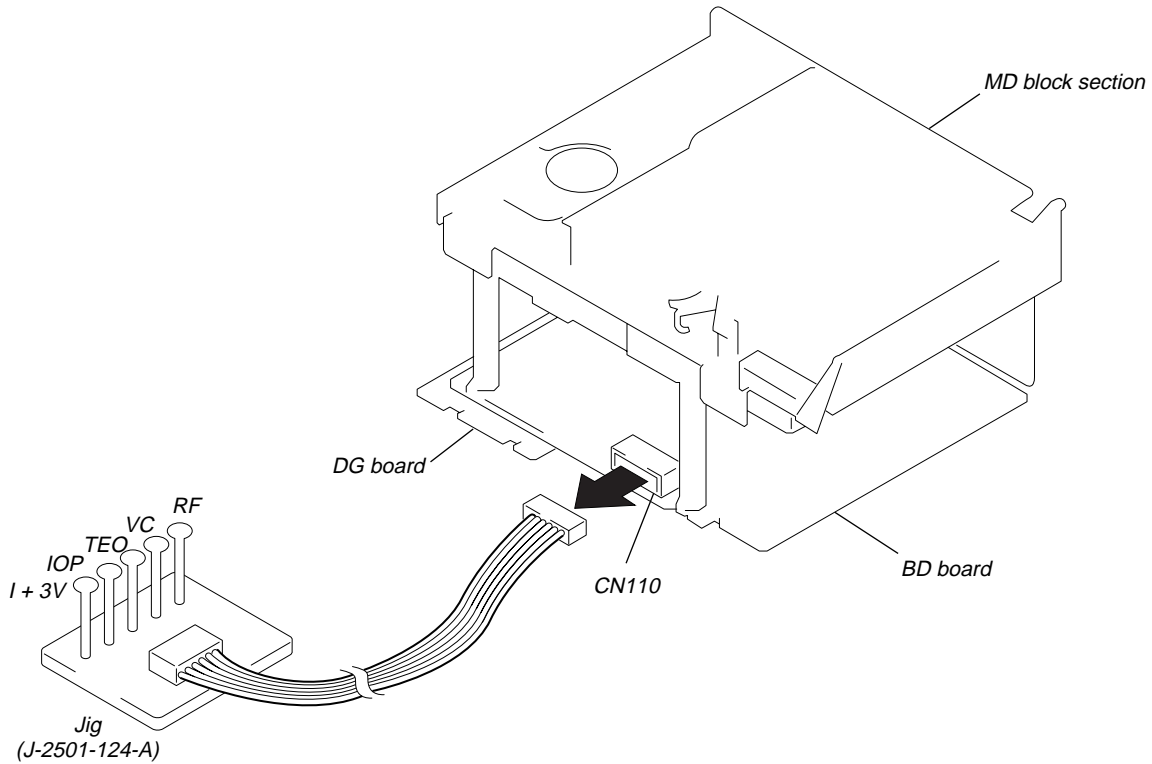


Specification : A = 0.9 to 1.1mm

ABOUT THE BD BOARD WAVEFORM CHECKING JIG

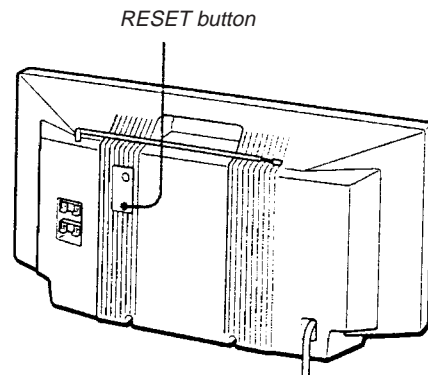
The special jig (J-2501-124-A) is highly convenient when checking the waveform of the BD board of the MD section. Pin names and items to check are as follows:

- I+3V : for IOP measurement (check for depleted optical pickup laser)
- IOP : for IOP measurement (check for depleted optical pickup laser)
- TEO : TRK error signal (traverse adjustment)
- VC : Standard level for checking signals
- RF : RF signal (jitter check)



ABOUT THE HARDWARE RESET

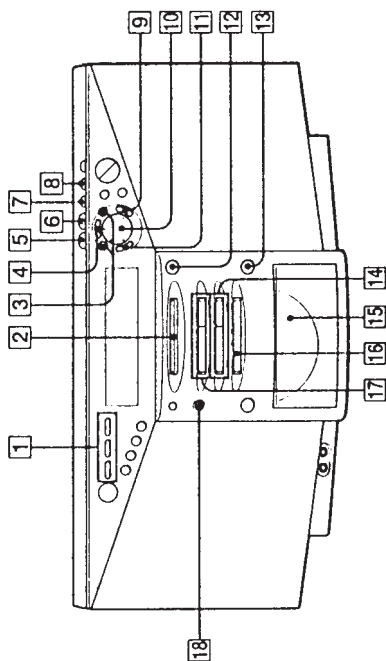
It is possible to reset the system microcomputer by pressing the RESET button located on the rear with a pointed object. Use this button when the unit cannot be operated properly due to such problems as microcomputer errors, etc.



SECTION 2 GENERAL

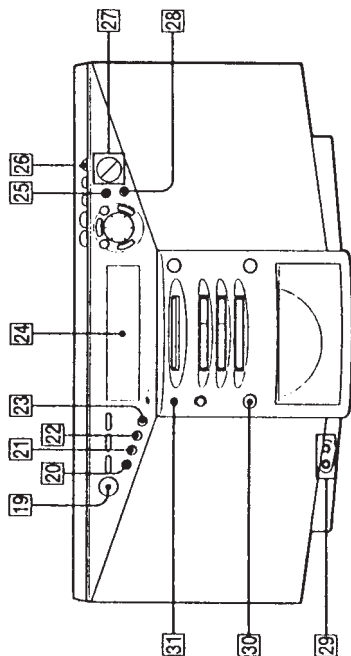
LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL : RADIO section



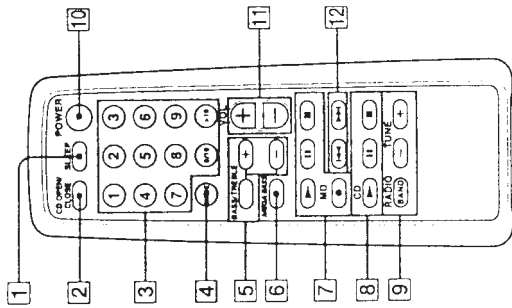
- 1 CD ► MD SYNCHRO REC button
- 2 MD insert section
- 3 TUNE-, + • ◀ ◁, ▶ ▷ • ◂ ◃ button
- 4 EDIT button
- 5 DELETE button
- 6 INSERT button
- 7 AUTO PRESET • SHUF/PGM button
- 8 LINE LEVEL • MONO/ST • REPEAT button
- 9 ENTER • YES button
- 10 Jog dial
- 11 CANCEL • NO button
- 12 ▲ MD EJECT button
- 13 ▲ CD OPEN/CLOSE button
- 14 CD operation buttons
 - ▶▶ (play/pause)
 - (stop)
- 15 CD tray
- 16 BAND button
- 17 MD operation button
 - ▶▶ (play/pause)
 - (stop)
- 18 REC button

FRONT PANEL : TIMER • COM section



- 19 POWER button (US MODEL)
- 20 OPERATE button (EXCEPT US MODEL)
- 21 SLEEP button
- 22 STANDBY button
- 23 TIMER button
- 24 CLOCK button
- 25 BASS/TREBLE button
- 26 MEGA BASS button
- 27 VOLUM -, + button
- 28 DISPLAY button
- 29 Ⓞ (Headphones) Jack (stereo mini jack)
- 30 LINE button
- 31 Remote control receiver section

REMOTE CONTROL

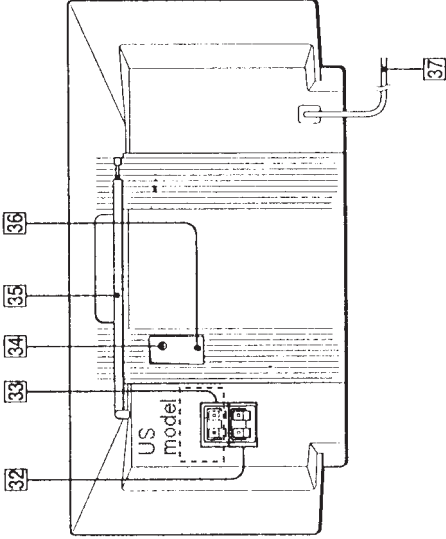
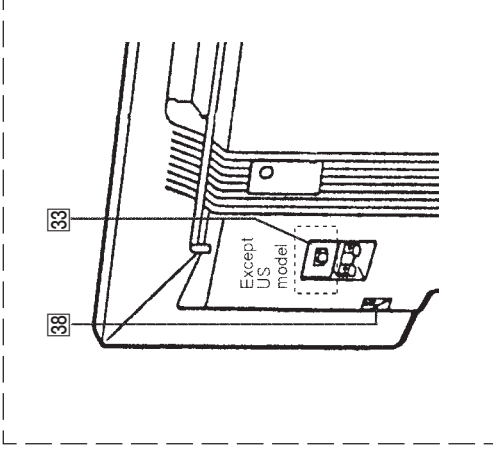


- 1 SLEEP button
- 2 CD OPEN/CLOSE button
- 3 Number button
- 4 MODE button
- 5 BASS/TREBLE+, - button
- 6 MEGA BASS button
- 7 MD operation button
- ▲ (play)
- ▬▬ (pause)
- (stop)
- (REC)

- 8 CD operation button
- ▲ (play)
- ▬▬ (pause)
- (stop)
- 9 Radio operation button
- BAND
- TUNER -, +
- 10 POWER button(US MODEL)
- OPERATE button (EXCEPT US MODEL)
- 11 VOL +, - button
- 12 ◀◀, ▶▶ (AMS/SERCH) button

REAR PANEL section

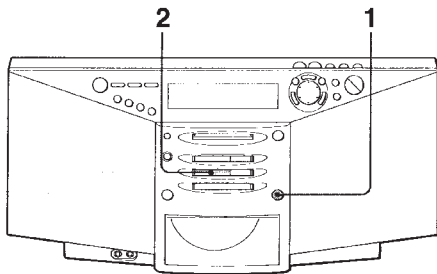
EXCEPT US Model



- 32 AM ANTENNA terminal
- MW(LW) ANTENNA terminal
- 33 FM EXT ANTENNA terminal (US model)
- ANTENNA SELECTOR switch (Except US model)
- 34 LINE IN (Analog) terminal
- 35 Antenna
- 36 RESET button
- 37 Power cord
- 38 FM EXT ANTENNA terminal (Except US model)

Basic Operations

Playing a CD



Connect the AC power cord (see page 49).

1 Press **▲ CD OPEN/CLOSE** (direct power-on) and place the CD on the CD tray until it clicks into place.

With the label side up

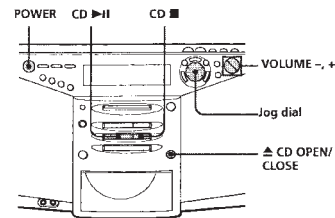
2 Press **CD ►II**. The CD tray closes and the player plays all the tracks once.

Display

Position pointer Track number Playing time

Basic Operations

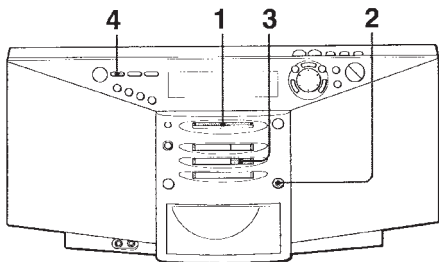
Use these buttons for additional operations



- Tips**
- Next time you want to listen to a CD, just press **CD ►II**. The player turns on automatically and starts playing the CD.
 - What is the position pointer in the display?** It shows about where on the CD track the player is playing.

To	Do this
adjust the volume	Press VOLUME +/- (VOL +/- on the remote).
stop playback	Press CD ■ .
pause playback	Press CD ►II (CD II on the remote). Press the button again to resume play after pause.
go to the next track	Turn the jog dial clockwise. (On the remote, press ► .)
go back to the previous track	Turn the jog dial counterclockwise. (On the remote, press ◀ .)
remove the CD	Press ▲ CD OPEN/CLOSE .
turn on/off the player	Press POWER .

Recording a whole CD (Synchronized recording)



Connect the AC power cord (see page 49).

1 Insert a recordable MD (direct power-on).

With the label side up

Insert in the direction of the arrow

Display

TOC Reading

000

After "TOC Reading" is displayed, the disc name will be displayed if it is labeled.

2 Press **▲ CD OPEN/CLOSE** and place the CD on the CD tray until it clicks into place. Press **▲ CD OPEN/CLOSE** again to close the CD tray.

With the label side up

3 Press **CD ■**.

Basic Operations

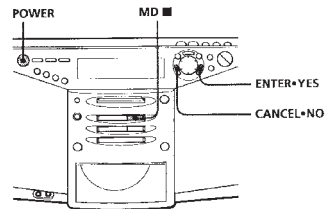
4 Press **DISC ALL**. The player starts recording automatically. If the MD has any previous recording, recording will be made from the last recorded position.

Position pointer (showing playing position on the CD and recording position on the MD)

Track number of MD Remaining recording time of MD

- Notes**
- TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
 - When you record a whole CD, you cannot pause recording.
- Tips**
- Adjusting the volume or the audio emphasis (page 54) will not affect the recording level. Keep the volume at a moderate level so as to prevent the sound from skipping.
 - To record over the previous recording, see page 28.
 - Once the clock is set, the recording date and time are stamped automatically (page 42).

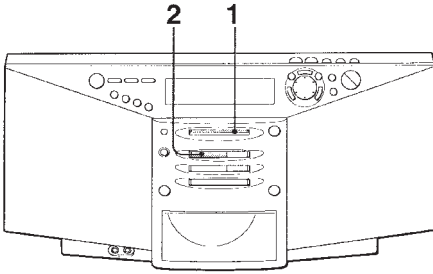
Use these buttons for additional operations



To	Press
stop recording	MD ■ or CD ■
turn on/off the player	POWER

If "CD*MD OK?" alternates with time display There is not enough space on the MD to record the whole CD. If it is all right to record as much as possible and cancel recording of some tracks, press **ENTER*YES**. To stop recording, press **CANCEL*NO**. If any other messages are displayed, see page 64.

Playing an MD



Connect the AC power cord (see page 49).

1 Insert the MD (direct power-on).
With the label side up
Insert in the direction of the arrow

Display
SELECTION
00 3850

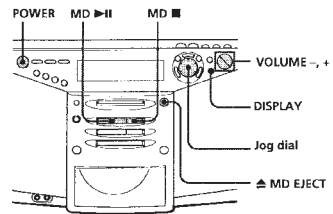
After "TOC Reading" is displayed, the disc name will be displayed if it is labeled.

2 Press MD ►II.
The player plays all the tracks once.

Track name is displayed if it is labeled.
LOVE SONG
00 00 00 00
Track number Playing time

Tip
Next time you want to listen to a MD, just press MD ►II. The player turns on automatically and starts playing the MD.

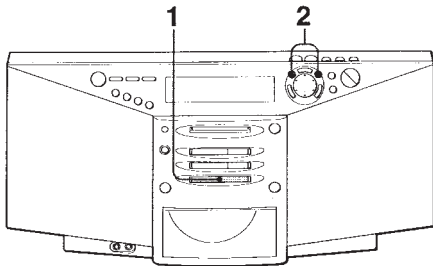
Use these buttons for additional operations



To	Do this
adjust the volume	Press VOLUME +, - (VOL +, - on the remote).
stop playback	Press MD ■.
pause playback	Press MD ►II (MD II on the remote). Press the button again to resume play after pause.
go to the next track	Turn the jog dial clockwise. (On the remote, press ►II.)
go back to the previous track	Turn the jog dial counterclockwise. (On the remote, press ◀II.)
remove the MD	Press ▲ MD EJECT.
turn on/off the player	Press POWER.
check the playing position in the display using the position pointer	Press DISPLAY.

Basic Operations

Listening to the radio



Connect the AC power cord (see page 49).

1 Press BAND until the band you want appears in the display (direct power-on).

Display
FM 83.2

"FM" or "AM" appears

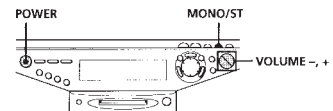
2 Hold down TUNE + or TUNE - until the frequency digits begin to change in the display.
The player automatically scans the radio frequencies and stops when it finds a clear station.
If you can't tune in a station, press TUNE + or TUNE - repeatedly until you tune in the station you want.

Indicates an FM stereo broadcast

Tips

- If the FM broadcast is noisy, press MONO/ST (MODE on the remote) until "MONO" appears in the display and radio will play in monaural.
- Next time you want to listen to the radio, just press BAND. The player turns on automatically and starts playing the previous station.

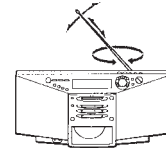
Use these buttons for additional operations



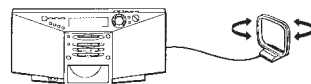
To	Press
adjust the volume	VOLUME +, - (VOL +, - on the remote)
turn on/off the radio	POWER

To improve broadcast reception

FM:
Reorient the aerial for FM.



AM:
Keep the AM loop aerial as far as possible from the player and reorient it.

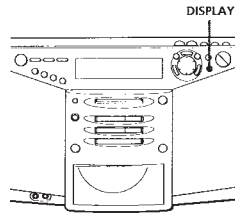


If the broadcast is still noisy, connect the external aerial (page 50).

Basic Operations

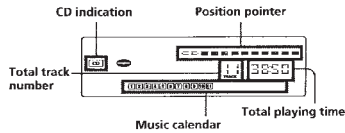
Using the display

You can check information about the CD and MD using the display.



During stop (CD)

The total track number and playing time are displayed.



If the CD has more than 20 tracks, "OVER 20" appears in the display.

During play (CD)

The current track number and playing time are displayed. The track numbers in the music calendar disappear after they are played.

Note

During repeat play (page 16), program play (page 17) and shuffle play (page 19), the number of tracks left and remaining time on the CD will not be displayed.

Tip

The disc name is displayed only with the MDs that have been electronically labeled.

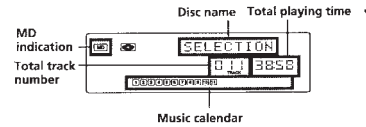
To check the remaining time

Press DISPLAY.

To display	Press DISPLAY
the current track number and remaining time on the current track	once
the number of tracks left and remaining time on the CD	twice
the current track number and playing time	three times

During stop (MD)

The total track number and playing time are displayed.



If the MD has more than 20 tracks, "OVER 20" appears in the display.

To check the remaining recording time on the MD Press DISPLAY.

The position pointer also appears in the display.

continued

Using the display (continued)

Note

During repeat play (page 16), program play (page 17) and shuffle play (page 19), the number of tracks left and remaining time on the MD will not be displayed.

During play (MD)

The current track number, playing time and the track name are displayed. The track numbers in the music calendar disappear after they are played.

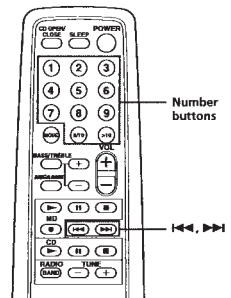
To check the remaining time, recording date and time, etc. Press DISPLAY.

To display	Press DISPLAY
the current track number, remaining time on the current track and position pointer	once
the number of tracks left, remaining time on the MD and the disc name	twice
recording date and time*	three times
the current track number, playing time and the track name	four times

* Once the clock is set, the recording date and time are stamped automatically (page 42).

Locating a specific track

You can quickly locate any track on a CD or an MD using the number buttons. You can also find a specific point in a track while playing a CD or an MD.



Note

You cannot locate a specific track if "REPEAT PGM", "REPEAT SHUFFLE", "PGM" or "SHUFFLE" is lit in the display. Turn off the indication by pressing ■.

Tips

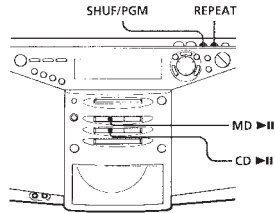
- To locate a track numbered over 10, press >10 first, then the corresponding number buttons.
Example:
To play the track number 23, press >10 first, then 2 and 3.
To play the track number 10, you can use the 0/10 button as well as >10, 1 and 0.
- To select a track on an MD numbered 100 or more, press >10 twice, then the corresponding number buttons.

To locate	Press
a specific track directly	the 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. (On the player, use ▶▶ or ◀◀.)
a point while observing the display	▶▶ (forward) or ◀◀ (backward) in pause and hold down until you find the point. (On the player, use ▶▶ or ◀◀.)

Playing tracks repeatedly

(Repeat Play)

You can play tracks repeatedly in normal, shuffle or program play modes (page 17).



On the remote

- During play, press MODE repeatedly until "REPEAT 1" or "REPEAT" appears in the display. During play, you cannot select "REPEAT SHUFFLE" or "REPEAT PGM".
- You can also select the repeat play during stop. Press MODE repeatedly until "REPEAT 1", "REPEAT", "REPEAT SHUFFLE" or "REPEAT PGM" appears in the display. Then, play the CD or the MD.

To repeat	Do this
a single track	1 Play the track you want. 2 Press REPEAT repeatedly until "REPEAT 1" appears in the display.
all the tracks	1 Start normal play. 2 Press REPEAT repeatedly until "REPEAT 1" appears in the display.
tracks in random order	1 Start shuffle play (page 19). 2 Press REPEAT repeatedly until "REPEAT SHUFFLE" appears in the display.
programed tracks	1 Start program play (page 17). 2 Press REPEAT repeatedly until "REPEAT PGM" appears in the display.

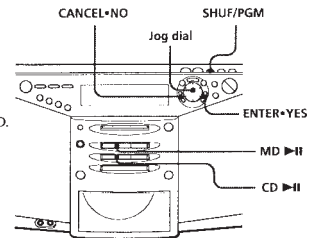
To cancel Repeat Play

Stop play first. Then, press REPEAT until "REPEAT" disappears from the display.

Creating your own program

(Program Play)

You can arrange the playing order of up to 20 tracks on a CD or an MD.



On the remote

Press MODE until "PGM" appears in the display, then press the number button to select the track.

Tip

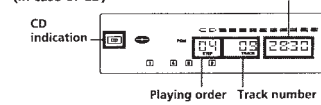
If you made a mistake, press CANCEL*NO and re-enter the track number by turning the jog dial and press ENTER*YES.

Before you begin, make sure that the CD or MD player is in stop mode.

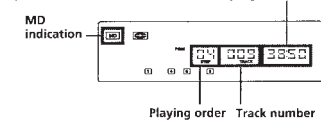
- 1 Press SHUF/PGM until "PGM" appears in the display.
- 2 Turn the jog dial to select the track you want to program, and press ENTER*YES. Repeat this step.

Programed tracks appear in the music calendar.

(In case of CD) Total programed time



(In case of MD) Total programed time



- 3 Press CD ►► (or MD ►►) to start program play.

continued

Creating your own program (Program Play) (continued)

Tips

- If the program play is finished, the program is saved. You can play the same program again by pressing ►►.
- If you open the CD tray, the program is erased.
- If you take out the MD, the program is erased.
- During play, total programed time cannot be displayed.

To cancel Program Play

Stop play first. Then, press SHUF/PGM until "PGM" disappears from the display.

To check the order of tracks before play

Before starting the program play, press ENTER*YES. "PGM Check" appears in the display. Every time you press ENTER*YES, the track number appears in the programed order.

To change the current program

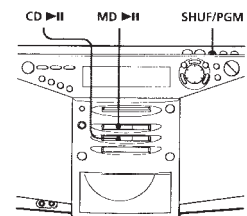
Change before starting the program play.

To	Do this
erase the last track in the program	1 Press CANCEL*NO. The track programed last is erased. 2 Re-enter the track numbers by turning the jog dial and pressing ENTER*YES.
change the whole program completely	1 Press ■ to erase the whole program. 2 Create a new program following the programming procedure.

Playing tracks in random order

(Shuffle Play)

You can play tracks in random order.



Tip

During shuffle play, you cannot select the previous track by turning the jog dial (or by pressing ◀◀ on the remote).

On the remote

Press MODE until "SHUFFLE" appears in the display.

Before you begin, make sure that the CD or MD player is in stop mode.

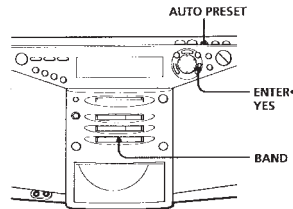
- 1 Press SHUF/PGM until "SHUFFLE" appears in the display.
- 2 Press CD ►► (or MD ►►) to start shuffle play.

To cancel Shuffle Play

Stop play first. Then, press SHUF/PGM until "SHUFFLE" disappears from the display.

Presetting radio stations

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



- 1 Press BAND until the band you want appears in the display.
- 2 Hold down AUTO PRESET until "AUTO PRESET" flashes in the display.

The stations are stored in memory from the lower frequencies (from the preset number 1, in numerical order) as long as the station has a signal strong enough.

When you've done presetting, the station stored in the preset number 1 will be tuned in automatically.

On the remote

- 1 Press BAND until the band you want appears in the display.
- 2 Press TUNE + or - until you tune in the station you want.
- 3 Hold down the number button that you want to preset the new station on for 2 seconds.

To select the preset number 11 or 12, press >10 first, then press 1 or 2.

If a station cannot be preset automatically

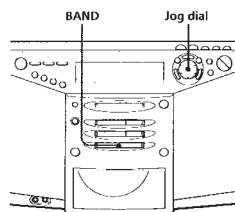
You need to preset a station with a weak signal manually. Also, when you want to replace preset stations with a new one, proceed as follows:

- 1 Press BAND until the band you want appears in the display.
- 2 Press TUNE + or - repeatedly until you tune in the station you want, and then, hold down ENTER•YES for 2 seconds.
- 3 Select the preset number you want to preset the new station on by turning the jog dial.
- 4 Press ENTER•YES.

The new station replaces the old one.

Playing preset radio stations

Once you've preset the stations, use the jog dial on the player or the number buttons on the remote to tune in your favorite stations.



On the remote

To display the preset number you want in step 2, use the number buttons.

To select the preset number 10:
Press 0/10.

To select the preset number 11 or 12:
Press >10 first, then press 1 or 2.

- 1 Press BAND until the band you want appears in the display.
- 2 Turn the jog dial to display the preset number of the station you want.

To label the station

- 1 According to the procedure on page 22, tune in the station you want to label.
- 2 Press EDIT for 2 seconds.
- 3 Input the name of the station (up to 12 characters).
For details, see steps 4 - 8 on pages 39 and 40.

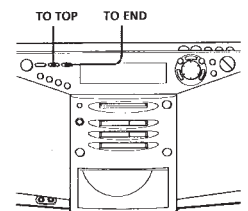
To	Do this
move the cursor	Press < or >
select the characters	Turn the jog dial.
erase the characters	Press DELETE.
insert the characters	Use INSERT.

- 4 Press ENTER•YES.

Recording

Recording the track you are listening to (Synchronized recording of a single track - REC IT Function)

You can record the track you are listening to from its beginning using the TO TOP or TO END button.



Notes

- **TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
- If you turn up the volume too high, sound skipping may occur.

Tips

- To record over the previous recording, see page 28.
- Once the clock is set, the recording date and time are stamped automatically (page 42).

- 1 Insert a recordable MD.
- 2 Insert the CD and play the track you want to record.

- 3 Press TO TOP or TO END.

The player goes back to the beginning of the track you are listening to, and starts recording.

When you use a recorded MD:

To record before the previous recording, press TO TOP.

To record after the previous recording, press TO END.

When you use a new MD:

Press either TO TOP or TO END.

When recording is finished, MD player will stop operation automatically but CD player will continue play.

You can label the track during recording

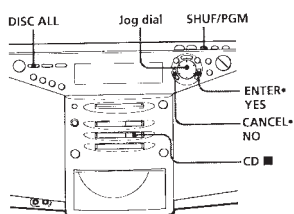
- 1 Press EDIT.
- 2 Press DISPLAY repeatedly to select the type of characters.
- 3 Turn the jog dial to display the character you want and press < or >.
- 4 Repeat steps 2 and 3 to complete the entire name.
- 5 Press ENTER•YES.

For details, see pages 39 - 41.

Recording the tracks you programmed

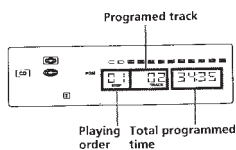
(Synchronized recording of the tracks you programmed)

You can record the tracks you programmed.



- 1 Insert a recordable MD.
- 2 Insert the CD you want to record and press CD ■.
- 3 Press SHUF/PGM until "PGM" appears in the display.
- 4 Turn the jog dial to select the track you want to program, and press ENTER+YES. Repeat this step.

Programmed tracks appear in the music calendar.



- 5 Press DISC ALL.

The player starts recording automatically.

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

Tip
If you made a mistake, press CANCEL+NO and re-enter the track number using the jog dial and ENTER+YES.

Notes

- **TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
- If you turn up the volume too high, sound skipping may occur.

Tips

- To record over the previous recording, see page 28.
- Once the clock is set, the recording date and time are stamped automatically (page 42).

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

There is not enough space on the MD to record the whole program.

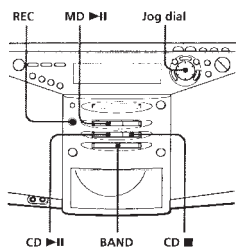
If it is all right to record as much as possible and cancel recording of some tracks, press ENTER+YES. To stop recording, press CANCEL+NO.

If any other messages are displayed, see page 64.

Recording

Recording from the radio or a CD

You can record from the radio or a CD to an MD using the REC button. You can start or stop recording at any point you want. You can also pause recording.



- Notes**
- **TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
 - While recording from radio, you cannot change the station.
 - If you turn up the volume too high, sound skipping may occur.

- Tips**
- To add track marks during recording, press REC where you want to add track marks.
 - To record over the previous recording, see page 28.
 - To add track marks after recording, see "Dividing recorded tracks" on page 34.

Recording from the radio

When receiving conditions are good, track marks are added on the MD automatically:

- when there is no sound input during recording for more than 2 seconds.
- when a soft sound like pianissimo continues during recording.
- when you pause recording.

If unnecessary track marks are added, erase them after recording (see "Combining recorded tracks" on page 36).

- 1 Tune in the station you want to record from.
- 2 Insert a recordable MD.
- 3 Press REC (● on the remote).
Recording does not start (recording standby mode).
- 4 Press MD >II (MD > or MD II on the remote).
Recording will be made from the last recorded position.

To stop recording

Press MD ■.

Tip

When you record a program of a station whose name is labeled on this player, the station name is recorded automatically as the track name (page 21).

Notes

- **TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
- If you turn up the volume too high, sound skipping may occur.

Tips

- To add track marks during recording, press REC where you want to add track marks.
- To record over the previous recording, see page 28.
- To add track marks after recording, see "Dividing recorded tracks" on page 34.

To pause recording

Press MD >II. Press the button again to resume recording. (On the remote, use MD II instead of MD >II.)

Recording from a CD

Track marks on the source CD are recorded on the same positions on the MD. Track marks are also added automatically on the MD when you pause recording.

If unnecessary track marks are added, erase them after recording (see "Combining recorded tracks" on page 36).

- 1 Insert a CD.
- 2 Press CD ■ to activate the CD player.
- 3 Insert a recordable MD.
- 4 Press REC (● on the remote).
Recording does not start (recording standby mode).
- 5 Press MD >II (MD > or MD II on the remote).
Recording will be made from the last recorded position.
- 6 Press CD >II.

To stop recording

Press MD ■.

To pause recording

Press MD >II. Press the button again to resume recording. (On the remote, use MD II instead of MD >II.)

Recording

Recording on a recorded MD

There are two ways of recording on a recorded MD.

- To add to the previous recording. The previous recording will remain.
- To record over the previous recording. The previous recording will be erased.

Adding recording (the previous recording will remain)

Insert a recorded MD, and start recording (pages 6, 26 and 27). Recording will be made from the last recorded position.

If there is not enough space on the MD to record

When recording a whole CD, "CD>MD OK?" appears in the display (page 7). When recording from the radio or a CD, press DISPLAY to check the recording remaining time on the MD.

Recording over the previous recording (the previous recording will be erased)

To record over from the beginning of the MD after erasing all tracks on the MD

First, erase all tracks on an MD (page 32). You can use the MD the same as a new one. Then, record on the MD as usual.

To record over from a specific point on the MD

- 1 Play the MD and press MD ► to pause play at the point you want to start recording.
- 2 Press REC to make the player in standby mode.
- 3 Play the sound source.
- 4 Press MD ► to start recording.

Note

When recording over from a specific point on the MD:
If the new recording is shorter than the previous recording, a part of the previous recording will remain after the recording. As you repeat this type of recording, many fragments of recording will remain on the MD. We recommend that you erase all tracks on the MD (page 32) if you no longer need to keep the recording. Then, start recording on the blank MD.

Editing recorded tracks on the MD

Before editing

On the MD, track marks are inserted between the tracks. You can find the beginning of the tracks quickly using the track marks. You can change the positions of the track marks. For instance, you can divide a certain track into several tracks by adding track marks. You can also combine some tracks into a new longer track by erasing some track marks.

You can add or erase track marks after recording. When you record, for instance, from a radio or other equipment connected to the player, track marks may be added to the positions you do not want. If that happens, change the positions of the track marks to those you want.

Change the track marks correctly

- To erase a track mark → "Combining recorded tracks (Combine Function)" (page 36): You can combine two tracks into a single one by erasing the track mark between the two tracks.
- To add a track mark → "Dividing recorded tracks (Divide Function)" (page 34): You can divide one track into two tracks by adding a track mark.

The position of the track marks to be added are different depending on the type of recording or recording conditions

The type of recording	The position of the track marks to be added
Recording a whole CD (page 6)	The same positions on the source CD
Recording from a CD using REC button (page 27)	<ul style="list-style-type: none"> • The same positions on the source CD • The position where you pause recording • The position where you press REC
Recording from the radio or other equipment connected to the player (pages 26 and 52)	<ul style="list-style-type: none"> • When there is no sound input or a soft sound continues during recording for more than two seconds • The positions where you pause recording • The positions where you press REC

continued

Before editing (continued)

You can also use the following functions

- Erasing a single track → "Erasing recordings (Erase Function)" (page 31)
- Erasing all tracks on an MD → "Erasing recordings (Erase Function)" (page 32)
- Changing the order of the tracks → "Moving recorded tracks (Move Function)" (page 38)
- Locating any point in the track quickly → "Dividing recorded tracks (Divide Function)" (page 34)
- Combining several independently recorded portions into a single track → "Erasing recordings (Erase Function)" (page 31) and "Combining recorded tracks (Combine Function)" (page 36)

Note

TOC EDIT After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

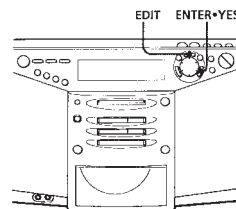
Erasing recordings

(Erase Function)

You can quickly erase the recorded tracks or unnecessary portion in the track. Unlike a cassette-corder, blank portion will not remain after erasure.

Here are three options to erase recordings:

- Erasing a single track
- Erasing all tracks on an MD
- Erasing a portion of a track



Notes

- If "Protected" appears in the display, the tab on the MD is in the record-protect position (page 56).
- **TOC EDIT** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

Erasing a single track

You can erase a whole track quickly. 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 EDIT repeatedly until "Track Erase" appears in the display.
- 3 Press ENTER•YES.

"Erase OK?" appears in the display, and one-track repeat play starts. Once you have erased a track, you cannot recover it. Be sure to check the contents of the track you are trying to erase.

if you want to cancel the erase function at this point:

- 1 Press CANCEL•NO or MD ■.
- 2 Press ENTER•YES.

"Complete" appears in the display for a few seconds, and the current track will be erased.

continued

Erasing recordings (Erase Function) (continued)

Note
TOC EDIT After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

Erasing all tracks on an MD

You can erase the disc name, all recorded tracks and their names at the same time. After you have erased all tracks on the MD, you can use it as a new MD.

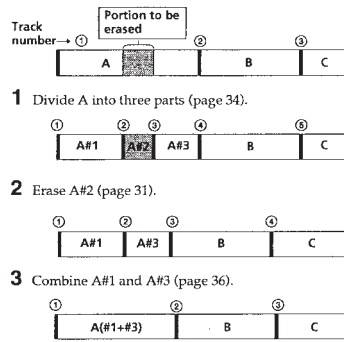
- 1 While the player is stopped, press EDIT repeatedly until "All Erase" appears in the display.
- 2 Press ENTER•YES.
 "Erase OK?" appears in the display. Once you have erased a track, you cannot recover it. Be sure to check the contents of the track you are trying to erase.
If you want to cancel the erase function at this point:
 Press CANCEL•NO or MD ■.
- 3 Press ENTER•YES.
 After "TOC EDIT" disappears from the display, "Blank Disc" appears in the display, and all contents on the MD are erased.

Note
TOC EDIT After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

Erasing a portion of a track

By using the Divide (page 34), Erase (page 31) and Combine (page 36) functions, you can erase specific portions of a track.

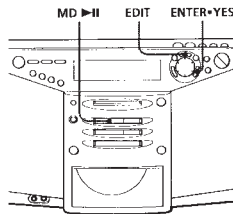
Example: Erasing a portion of track A



Editing recorded tracks on the MD

Dividing recorded tracks (Divide Function)

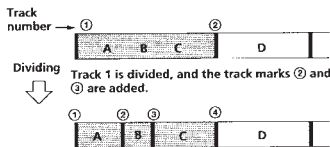
When recording from the radio, etc., track marks may not be added correctly. A number of tracks may be included in a single track. You can divide these tracks into separate tracks, and add a new track mark to each track. All tracks following the divided tracks are renumbered.



- Tips**
- To put the divided tracks together, see "Combining recorded tracks" on page 36.
 - To divide a track during recording, press REC at the point where you want to add the track mark.

Note
 If "Sorry" appears in the display, you cannot divide the track. If you repeat editing on the MD, you may not be able to divide a track. This is due to the system limitations of the MD (page 57), but not caused by malfunction.

Example: Dividing track 1 into three tracks



- 1 While playing the MD, press MD ►II at the point where you want to create a new track.
 The player pauses.
- 2 Press EDIT repeatedly until "Divide" appears in the display.
- 3 Press ENTER•YES.
 "Divide OK?" appears in the display.
If you want to cancel the divide function at this point:
 Press CANCEL•NO or MD ■.

Note
TOC EDIT After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

- 4 Press ENTER•YES.

"Complete" appears in the display for a few seconds after the track is divided. The original track only has the track name, while the new track has no name (this happens only when the track you divided had its track name). One track is added to the music calendar.

Editing recorded tracks on the MD

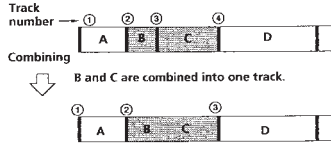
Combining recorded tracks (Combine Function)

You can combine two adjacent tracks into a single one. Using the combine function, you can combine a number of fragmented recordings or delete the unnecessary track marks. All tracks following the combined track are renumbered.

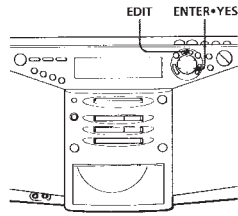
Notes

- If "Sorry" appears in the display, you cannot combine the tracks. If you repeat editing on the MD, you may not be able to combine the tracks. This is due to the system limitations of the MD (page 57), but not caused by malfunction.
- If "Cannot Edit" appears in the display, you may be trying to combine the tracks on the first track. You cannot use the combine function on the first track.

Example: Combine the tracks B and C



- 1 Play the track you want to combine.
Example: To combine tracks B and C, play the track C.
- 2 Press EDIT repeatedly until "Combine" appears in the display.
- 3 Press ENTER•YES.
"Combine OK?" appears in the display; the player enters the playback pause mode.
If you want to cancel the combine function at this point:
Press CANCEL•NO or MD ■.



Note
After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

- 4 Press ENTER•YES.

"Complete" appears in the display for a few seconds after the tracks are combined. If both of the combined tracks had track names, the name of the latter track is erased. The total number of tracks in the music calendar decreases by one.

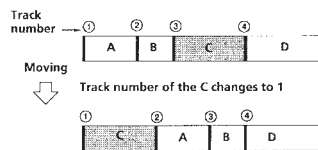
Moving recorded tracks (Move Function)

You can change the order of the tracks. After you move the track, the track numbers are renumbered automatically.

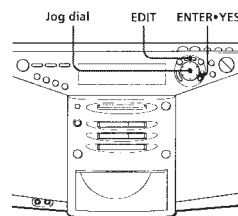
Note

After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

Example: Moving C to the position of track 1

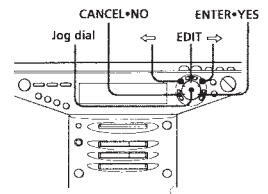


- 1 Play the track you want to move.
- 2 Press EDIT repeatedly until "Track Move" appears in the display.
- 3 Press ENTER•YES.
"→Track 003?" appears in the display, and one-track repeat play starts.
- 4 Turn the jog dial to select the new track position.
If you want to cancel the move function at this point:
Press CANCEL•NO or MD ■.
- 5 Press ENTER•YES.
"Complete" appears in the display for a few seconds after the track is moved.



Labeling recordings (Name Function)

You can label the MDs and the tracks you have recorded with letters, numbers and symbols. Each label can be made up of up to 100 characters. You can input up to about 1,700 characters into each MD.



Labeling an MD

- 1 Insert the MD you want to label, and stop the MD play.
- 2 Press EDIT repeatedly until "Disc Name" appears in the display.
- 3 Press ENTER•YES.
If the disc name has been already labeled, the disc name appears in the display.
- 4 Press DISPLAY repeatedly to select the type of characters.

Each time you press DISPLAY, the character changes as follows: Uppercase letters → Lowercase letters → Numbers and symbols.

You can use the following characters:

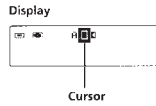
The type of characters	Characters (symbols)
Uppercase letters	ABCD...WXYZ, /, / (space)
Lowercase letters	abcd...wxyz, /, / (space)
Numbers and symbols	0123456789!@#%&'()*+,-<=>? @_~+,-./:;_ (space)

continued

5 Turn the jog dial counterclockwise or clockwise to select the characters.

6 Press ⇐⇒.

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



7 Repeat steps 4 through 6 to complete the entire name.

8 Press ENTER•YES.

The name has been labeled on the MD.

Labeling a track

1 Play the track you want to label.

2 Press EDIT repeatedly until "Track Name" appears in the display.

3 Press ENTER•YES.

One-track repeat play starts. If the track name has been already labeled, the track name appears in the display.

4 Input the characters according to steps 4 through 8 of "Labeling an MD."

The name has been labeled on the track.

Note
TOC EDIT After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.

To change the characters

• **To add characters after the existing characters**

- ① Move the cursor to the right of the last character using ⇐⇒.
- ② Turn the jog dial to select the character.
- ③ Press ENTER•YES.

• **To change the characters**

- ① Move the cursor to the character you want to change using ⇐⇒.
- ② Turn the jog dial to select the character.
- ③ Press ENTER•YES.

• **To delete the character**

- ① Move the cursor to the character you want to delete using ⇐⇒.
- ② Press DELETE. If you press DELETE repeatedly, the characters will be deleted one after another.
- ③ Press ENTER•YES.

• **To insert a character**

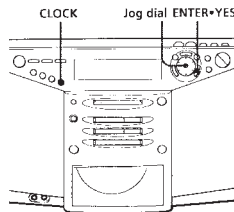
- ① Move the cursor to the place you want to add a character using ⇐⇒.
- ② Press INSERT to make a space between the characters.
- ③ Turn the jog dial to select the character.
- ④ Press ENTER•YES.

Editing recorded tracks on the MD

Setting the clock

"-y -m -d" and "-:--" indications appear in the display until you set the clock.

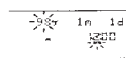
Once the clock is set, the recording date and time are stamped automatically (pages 7, 23 and 25).



Tips

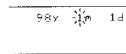
- The time display system of this player is the 12-hour system.
- You can set the clock of this player any time, no matter whether power is on or off.

1 Press and hold CLOCK until the year digits flash.

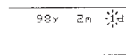


2 Set the date.

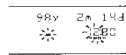
① Turn the jog dial to set the year and press ENTER•YES.



② Turn the jog dial to set the month and press ENTER•YES.



③ Turn the jog dial to set the day and press ENTER•YES.



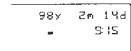
3 Set the time.

① Turn the jog dial to set the hour and press ENTER•YES.

② Turn the jog dial to set the minutes and press ENTER•YES.

4 Press ENTER•YES.

The clock starts from 00 seconds.



To display the time

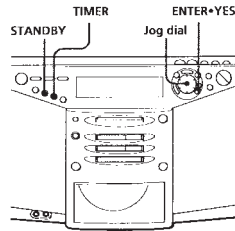
Press CLOCK. To go back to the previous display, press CLOCK again. As long as the power is turned off, the time indication is displayed.

The Timer

Waking up to music

You can wake up to music or a radio program at a preset time. Make sure you have set the clock (see "Setting the clock" on page 42).

Note
You cannot preset waking up timer and recording timer (page 46) at the same time.



Before you begin, make sure "TIMER PLAY" or "TIMER REC" is not displayed. If either one is displayed, press STANDBY.

1 Prepare the music source you want to play.

Source	Do this
CD	Insert a CD.
MD	Insert an MD.
RADIO	Tune in the station.
LINE	Turn on the equipment connected to LINE IN.

2 Press TIMER.

"TIMER PLAY" or "TIMER REC" flashes in the display.



Make the following settings by checking the indications in the display.

3 Turn the jog dial until "TIMER PLAY" flashes in the display, and press ENTER+YES.

"MD", "CD", "RADIO" or "LINE" flashes in the display.

4 Turn the jog dial until the music source you want to play ("MD", "CD", "RADIO" or "LINE") appears in the display, and press ENTER+YES.

Tip
If you made a mistake, press CANCEL•NO. The setting entered last will be cleared. Re-enter it.

5 Set the timer to the hour and the minutes you want the music to go on.

① Turn the jog dial to set the hour and press ENTER+YES.



② Turn the jog dial to set the minutes and press ENTER+YES.

6 Set the timer to the hour and the minutes you want the music to go off (Do as step 5.).

7 Turn the jog dial to set the volume you want, and press ENTER+YES.



8 Press STANDBY.

"TIMER PLAY" lights up; the player enters the standby mode.

At the preset time, the power will go on and music will play. Then the power will go off at the preset time, and the player will enter the standby mode again.

To check/change the waking up timer settings

Press TIMER, then press ENTER+YES. Each time you press ENTER+YES, a stored setting is displayed in the set order. To change the setting, display the setting you want to change and re-enter it.

To use the player before a timer playback starts

If you turn on the player, you can use it as usual (in case of the radio, if you listen to the station which is different from the one you tuned in step 1 on page 44, you will hear that station at the preset time.) Turn off the player before the preset time.

To stop play

Turn off the power.

Tips

- To exit the standby mode, press STANDBY to make either "TIMER PLAY" or "TIMER REC" disappear from the display.
- The preset settings remain until you reset them.
- As long as the Ⓞ indication appears in the display, the player is in timer mode.

Timer-recording radio programs

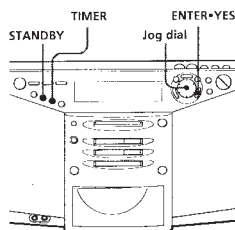
You can set timer to record the radio at a certain time. You can also record from the component connected to the LINE IN jack of the player.

Make sure you have set the clock (see "Setting the clock" on page 42).

Notes

- You cannot preset recording timer and waking up timer (page 44) at the same time.
- When recording from the component connected to the LINE IN jack of the player, refer to the operating instructions of the component.

Tip
If you made a mistake, press CANCEL•NO. The setting entered last will be cleared. Re-enter it.



Before you begin, make sure "TIMER PLAY" or "TIMER REC" is not displayed. If either one is displayed, press STANDBY.

1 Tune in the radio station and insert an MD.

2 Press TIMER.

"TIMER PLAY" or "TIMER REC" flashes in the display.



Make the following settings by checking the indications in the display.

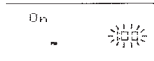
3 Turn the jog dial until "TIMER REC" flashes in the display, and press ENTER+YES.

4 Turn the jog dial until "RADIO" flashes in the display, and press ENTER+YES.

When recording from the component connected to the LINE IN jack of the player, turn the jog dial until "LINE" flashes in the display, and press ENTER+YES.

5 Set the timer to the hour and the minutes you want to start recording.

① Turn the jog dial to set the hour and press ENTER+YES.



② Turn the jog dial to set the minutes, and press ENTER+YES.

Tips

- To exit the standby mode, press STANDBY to make either "TIMER PLAY" or "TIMER REC" disappear from the display.
- The preset settings remain until you reset them.
- As long as the Ⓞ indication appears in the display, the player is in timer mode.

6 Set the timer to the hour and the minutes you want to stop recording. (Do as step 5.)

7 Turn the jog dial to set the volume you want, and press ENTER+YES.



8 Press STANDBY.

"TIMER REC" is displayed, and the player enters the standby mode.

At the preset time, the power will go on and the recording will start. Then the power will go off at the preset time, and the player will enter the standby mode again.

To check/change the recording timer settings

Press TIMER, then press ENTER+YES. Each time you press ENTER+YES, a stored setting is displayed in the set order. To change the setting, display the setting you want to change and re-enter it.

To use the player before a timer-recording starts

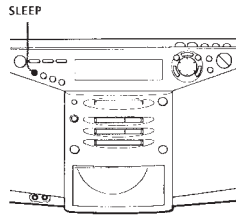
If you turn on the player, you can use it as usual (in case of the radio, if you listen to the station which is different from the one you tuned in step 1 on page 46, you will hear that station at the preset time.) Turn off the player before the preset time.

To stop timer-recording

Turn off the power.

Falling asleep to music

You can set the player to turn off automatically after 10, 20, 30, 60, 90 and 120 minutes, allowing you to fall asleep while listening to music.



On the remote

Press SLEEP repeatedly to select the minutes for the sleeping timer.

Tips

- You can combine the waking up timer with the sleeping timer. Set the waking up timer first (page 44), turn on the player, and then set the sleeping timer.
- You can prepare the different music for the waking up timer and the sleeping timer. However, you cannot store different radio stations.
- You can set different volume for the waking up timer and the sleeping timer. For instance, you can sleep at lower volume and wake up at higher volume.

- Play the music source you want.
- Press SLEEP until "SLEEP" appears in the display.
- Press SLEEP to select the minutes for the sleeping timer.

Each time you press the button, the indication changes as follows: "10" → "20" → "30" → "60" → "90" → "120" → no indication.



If 4 seconds have passed after you pressed SLEEP, the minutes in the display are entered.

The preset time has passed, the player goes off automatically.

To cancel the sleep function

Press SLEEP to make "SLEEP" disappear from the display.

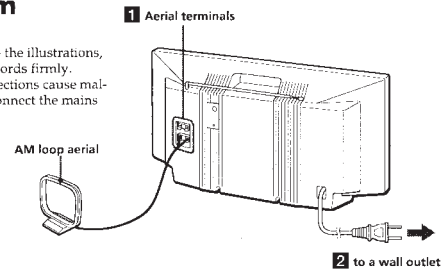
To change the preset time

Do the steps 2 and 3 again.

Setting Up

Preparing the system

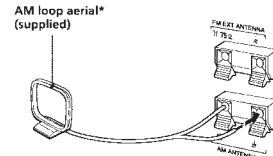
According to the illustrations, connect the cords firmly. Wrong connections cause malfunctions. Connect the mains lead last.



Note

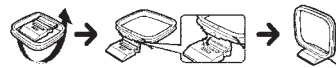
Keep the AM loop aerial away as far as possible from the player. If you do not, noise may be heard.

1 Hooking up the aerial



*Reorient the aerial to improve broadcast reception

Setting up the AM loop aerial



2 Connecting the AC power cord

Connect the AC power cord to the wall outlet.

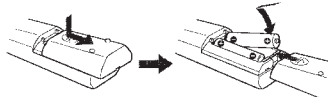
continued

Preparing the system (continued)

Tips

- This player has two Ω (headphones) jacks so that two persons listen to the same music together. When using the Ω jack marked with **, you can also listen to the sound through the speakers. You can enjoy the surround sound using optional cordless stereo headphones system such as MDR-IF520RK and transmitter.
- The sound quality may be changed depending on the polarity of the plug. Change the direction of inserting the plug and check the sound quality.

3 Inserting batteries into the remote



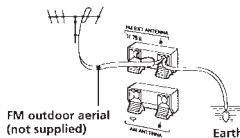
Insert two size AA (R6) batteries (not supplied)

Replacing batteries

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

To improve the FM reception

Connect the FM outdoor aerial (not supplied). If you use a distributor, you can also use the TV aerial.

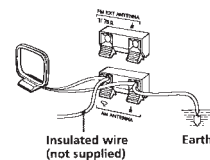


Important

When you use an outdoor aerial, be sure to connect the # terminal to earth against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

To improve the AM reception

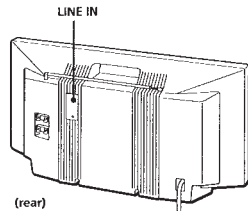
Connect a 6- to 15-meter (20- to 50 feet) (not supplied) insulated wire to the AM ANTENNA terminal. Keep the wire as horizontal as possible near the window or outdoor. You do not need to disconnect the supplied AM loop aerial.



Connecting optional components

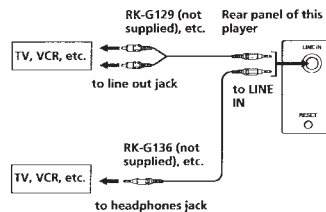
You can enjoy the sound from a TV or VCR through the speakers of this player.

Be sure to turn off the power of each component before making connections. For details, refer to the instructions of the component to be connected.



Note
Connect the cords firmly to avoid any malfunction.

Connecting a TV or a VCR



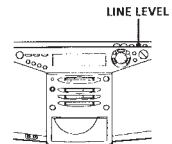
After finishing the connections, turn on the player, and press LINE on the front panel to display "LINE".

Tip
If there is no sound input for more than 2 seconds during recording, a track mark is stamped automatically.

Recording the sound from the connected components

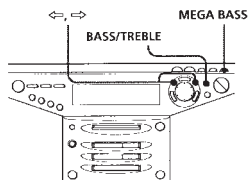
- 1 Insert a recordable MD.
 - 2 Press LINE on the front panel to display "LINE".
 - 3 Press REC.
- Recording does not start (recording standby mode).
- 4 Press MD **▶II**.
 - 5 Play the optional component connected to the LINE IN jack of the player.

If the volume of the component connected to the LINE IN jack is too high
Press LINE LEVEL to display "Level: High" or reduce the volume of the connected component.



Adjusting the audio emphasis

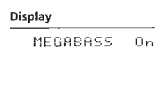
You can adjust the audio emphasis of the bass sound or the bass/treble sound you are listening to.



Note
When the volume is too high, the sound adjustments may not be effective.

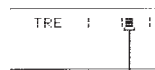
Reinforcing the bass sound

Press MEGA BASS until "MEGABASS On" appears in the display.



Adjusting the bass/treble sound

- 1 Press BASS/TREBLE to select "BASS" or "TRE" (treble).
- 2 Adjust the bass or treble sound using \leftarrow or \rightarrow .



Each time you press \leftarrow or \rightarrow , the cursor moves left or right. As the cursor moves rightward, the level will be turned up. As the cursor moves leftward, the level will be turned down.

System limitations of the MD

The recording system in your MiniDisc recorder is radically different from those used in cassette and DAT decks and the system has limitations described below. Note, however, that these limitations are due to the inherent nature of the MD recording system itself and not to mechanical causes.

"Disc Full" appears in the display even before the MD has reached the maximum recording time (60 or 74 minutes)

When 254 tracks have been recorded on the MD, "Disc Full" appears regardless of the total recorded time. More than 254 tracks cannot be recorded on the MD. To continue recording, erase unnecessary tracks.

"Disc Full" appears in the display even before the MD has reached the maximum track number or recording time.

Repeated recording and erasing may cause fragmentation and scattering of data. Although those scattered data can be read, each fragment is counted as a track. In this case, the number of tracks may reach 254 and further recording is not possible. To continue recording, erase unnecessary tracks.

The remaining recording time does not increase even after erasing numerous short tracks

Tracks under 12 seconds long are not counted, so erasing them may not increase the recording time.

Some tracks cannot be combined with others

Track combination may become impossible when tracks are under 12 seconds long.

The total recorded time and the remaining time on the MD may not reach the maximum recording time (60 or 74 minutes)

Recording is done in minimum units of 2 seconds each, no matter how short the material. The contents recorded may thus be shorter than the maximum recording capacity. Disc space may also be further reduced by scratches.

The sound may dropout while fast-forwarding or rewinding the edited tracks.

Tracks created through editing may exhibit sound dropout during fast-forwarding or rewinding because high-speed playback takes time to search for the position on the disc when the tracks are scattered on the disc.

continued

Guide to the serial copy management system

Digital audio equipment such as CDs, MDs, DATs, etc., copy music easily with high quality, for these products process music as a digital signal. The Serial Copy Management System allows you to make only a single copy of a recorded digital source through digital-to-digital connections because music programmes may be copyrighted.

This system is applied to this player.

You can make only a first-generation copy* through a digital-to-digital connection.

That is :

- 1 You can make a copy of a digital sound programme on the market such as CDs, MDs, etc., but you cannot make a second copy from the first-generation copy.
- 2 You can make a copy of a digital signal from a digitally-recorded analog sound programme on the market such as an analog record, music cassette tape, etc., or from digital satellite broadcasts, but you cannot make a second copy.

Note

No restrictions apply when a digital signal is recorded as an analog signal (that is, when a digital signal is recorded through analog-to-analog connection.)

* A first-generation copy is a digital recording of a digital signal made on digital audio equipment through a digital-to-digital connection. During recording, "DIGITAL REC" appears in the display on this player.

Error messages

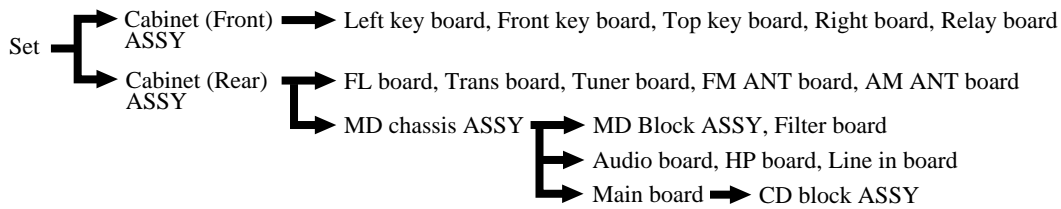
If the player cannot perform an MD or a CD operation, one of the following error messages may flash in the display window.

This message will flash	If
Blank Disc	you try to play an MD with no recording on it.
Cannot Edit	you try to use the combine function on the first track of the MD.
Disc Error	the player cannot read the MD (it is scratched or dirty).
Disc Full	there is no more space for recording or editing on the MD. (See "System limitations of the MD" on page 57.)
Name Full	the labeling capacity of the MD has reached its limit. Each label can be made up of up to 100 characters. You can input up to about, 1,700 characters into each MD.
No Disc	you try to play or record with no CD or MD in the player.
No MD	you try to play or record with no MD in the player (in case of synchronized recording, etc.)
PB Disc	you try to record or edit on a pre-mastered MD (PB means playback).
Protected	you try to record or edit on an MD with the tab in the record-protect position.
Sorry	you try to edit, ignoring the system limitations of the MD.
Trk Protect	you try to record or edit a track that has been already protected using other MD recorders

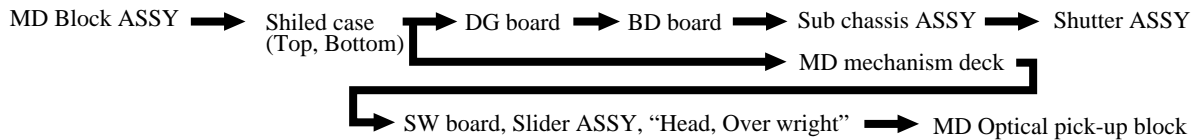
SECTION 3 DISASSEMBLY

- The equipment can be removed using the following procedure.

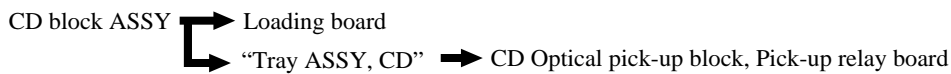
< MAIN BLOCK SECTION >



< MD BLOCK SECTION >



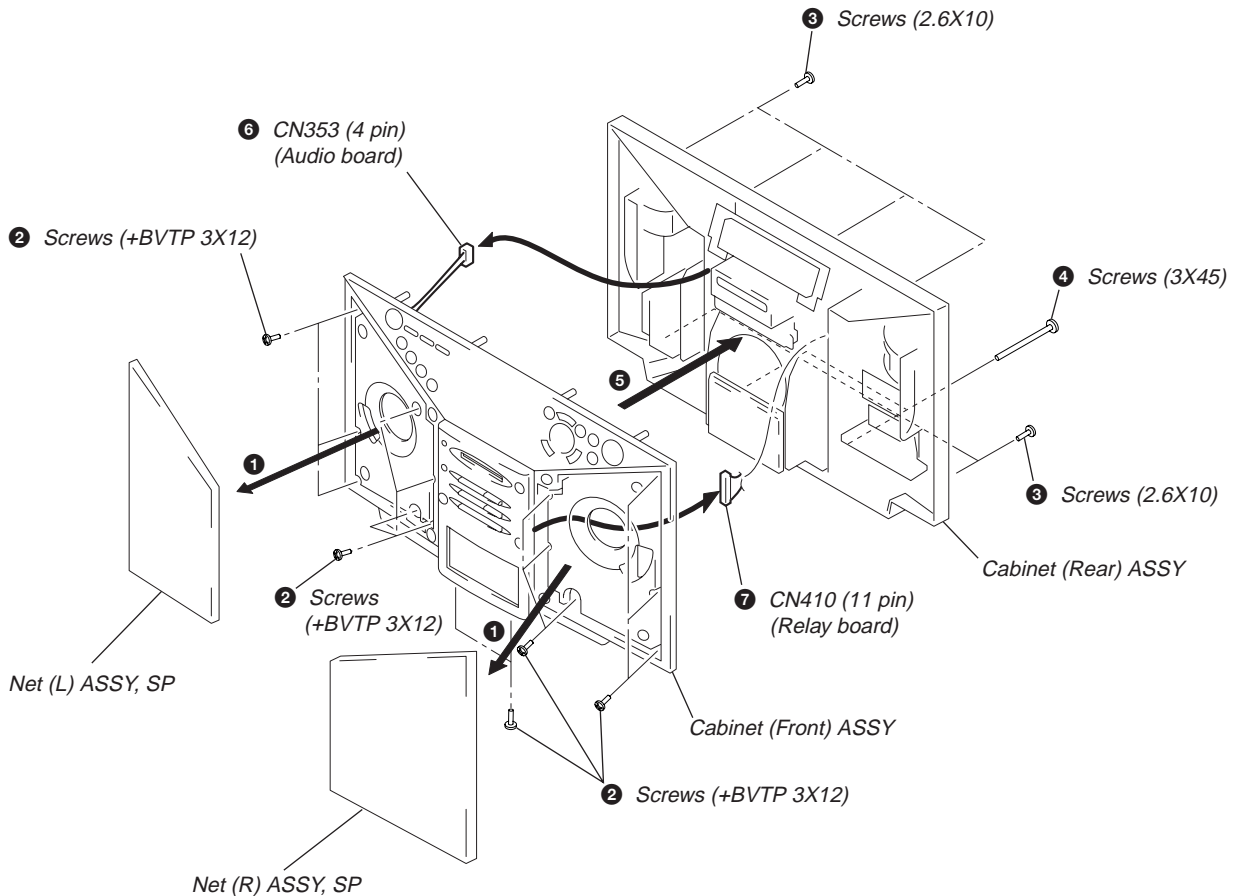
< CD BLOCK SECTION >



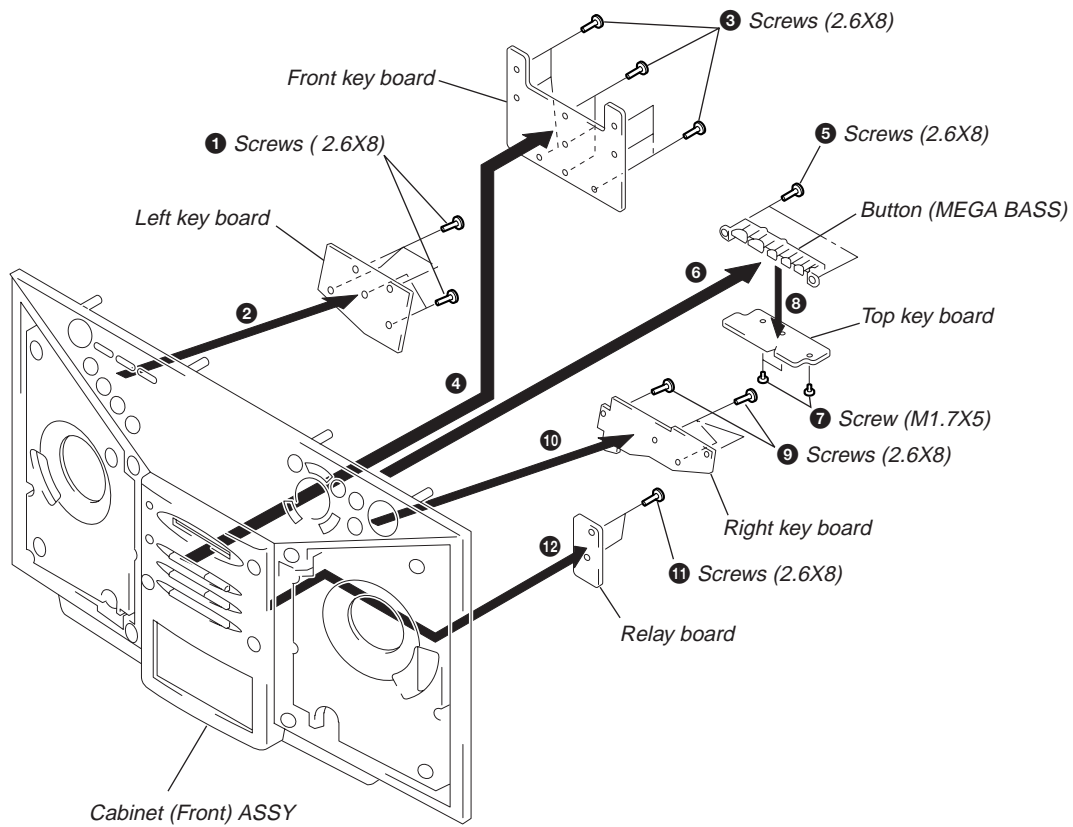
Note : Follow the disassembly procedure in the numerical order given.

< MAIN BLOCK SECTION >

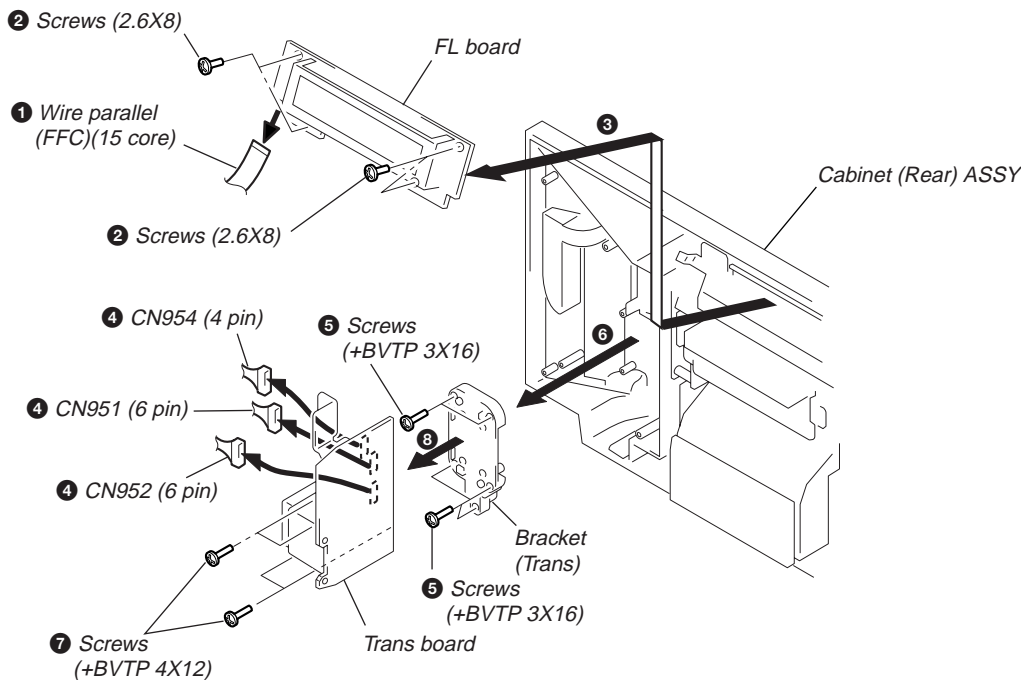
3-1. CABINET (FRONT) ASSY, CABINET (REAR) ASSY



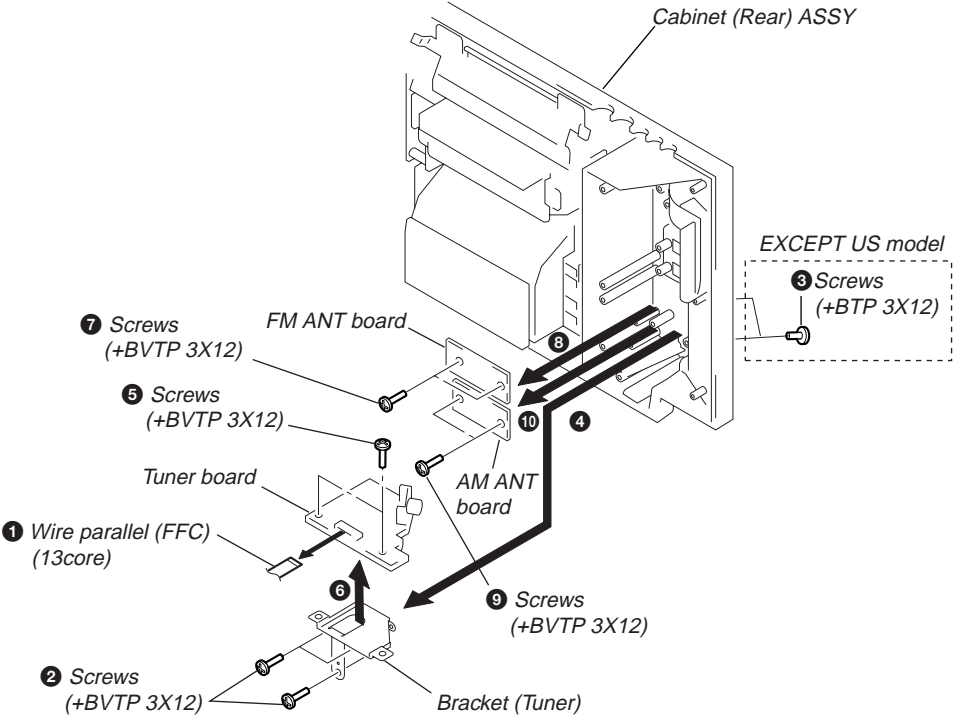
3-2. LEFT KEY BOARD, FRONT KEY BOARD, TOP KEY BOARD, RIGHT KEY BOARD, RELAY BOARD



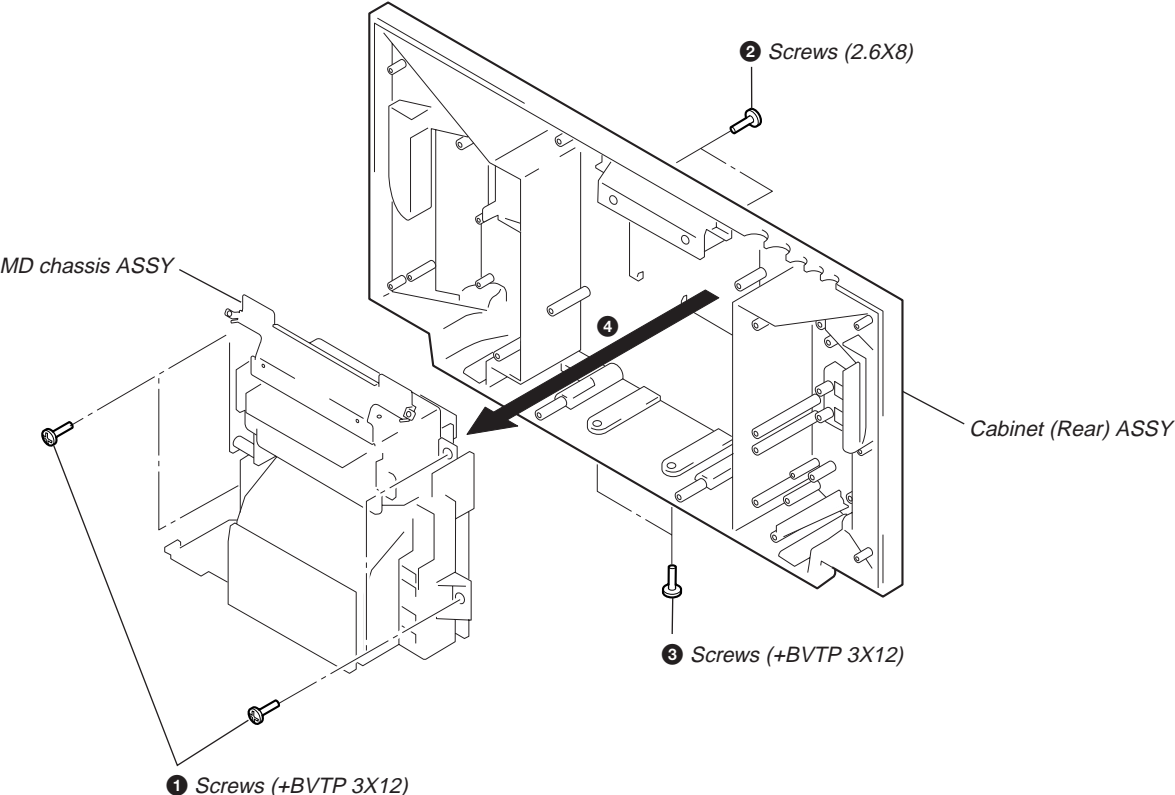
3-3. FL BOARD, TRANS BOARD



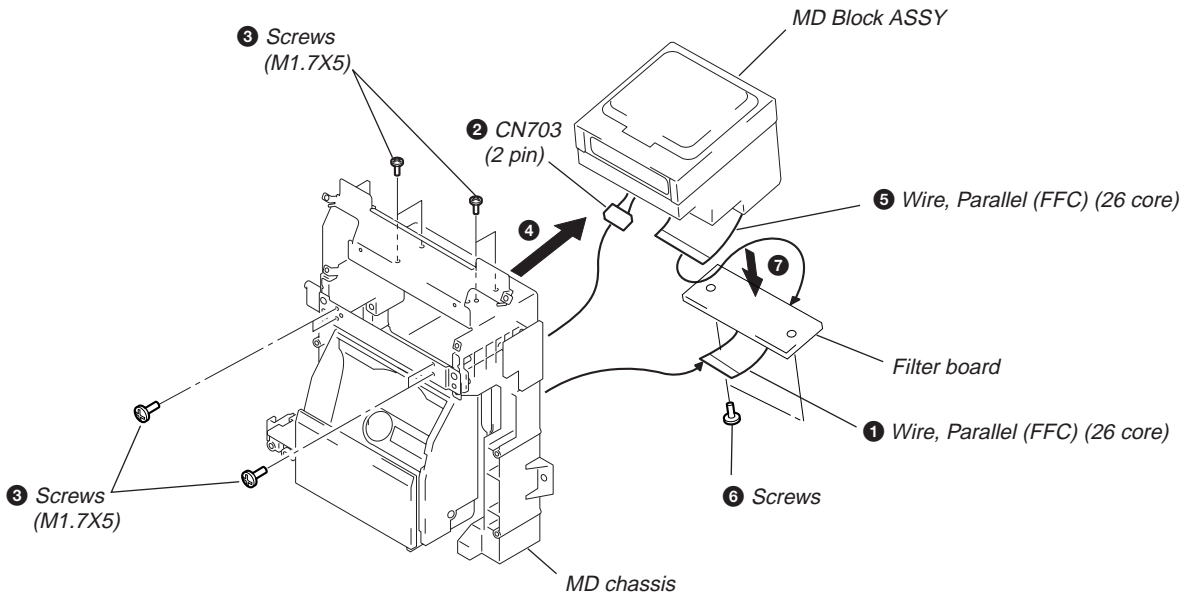
3-4. TUNER BOARD, FM ANT BOARD, AM ANT BOARD



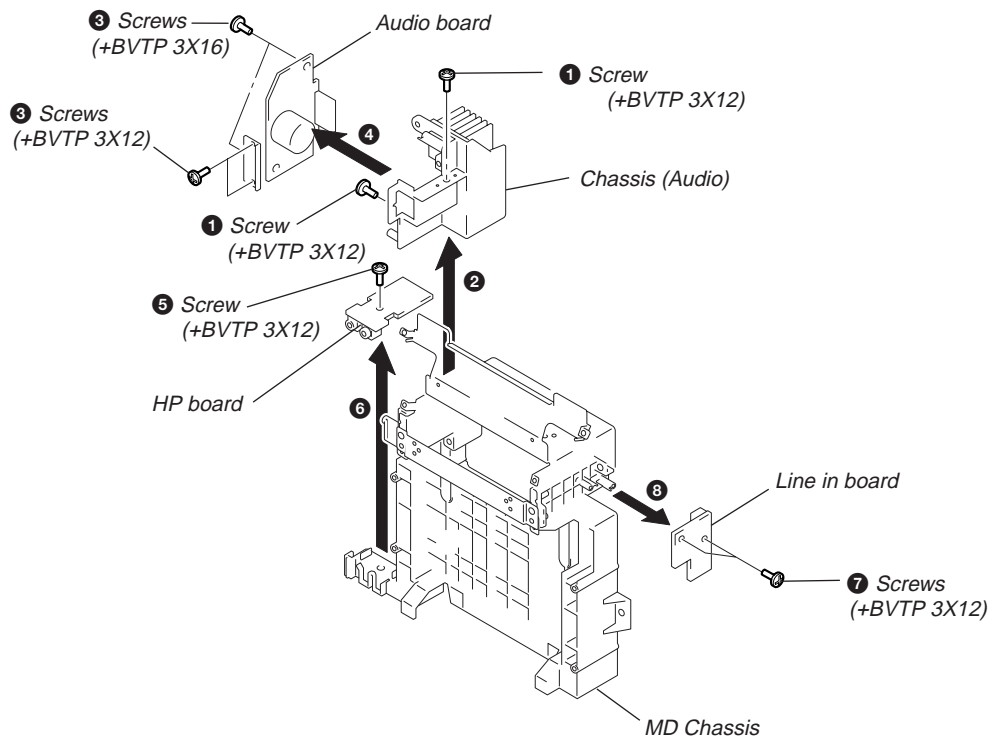
3-5. MD CHASSIS ASSY



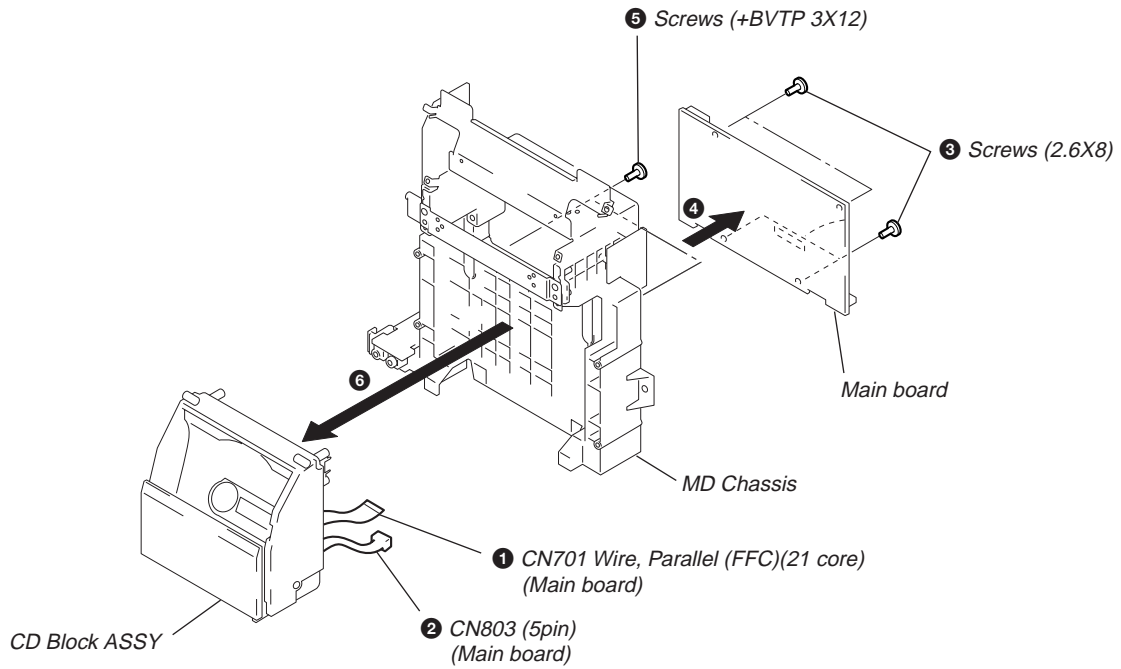
3-6. MD BLOCK ASSY, FILTER BOARD



3-7. AUDIO BOARD, HP BOARD, LINE IN BOARD

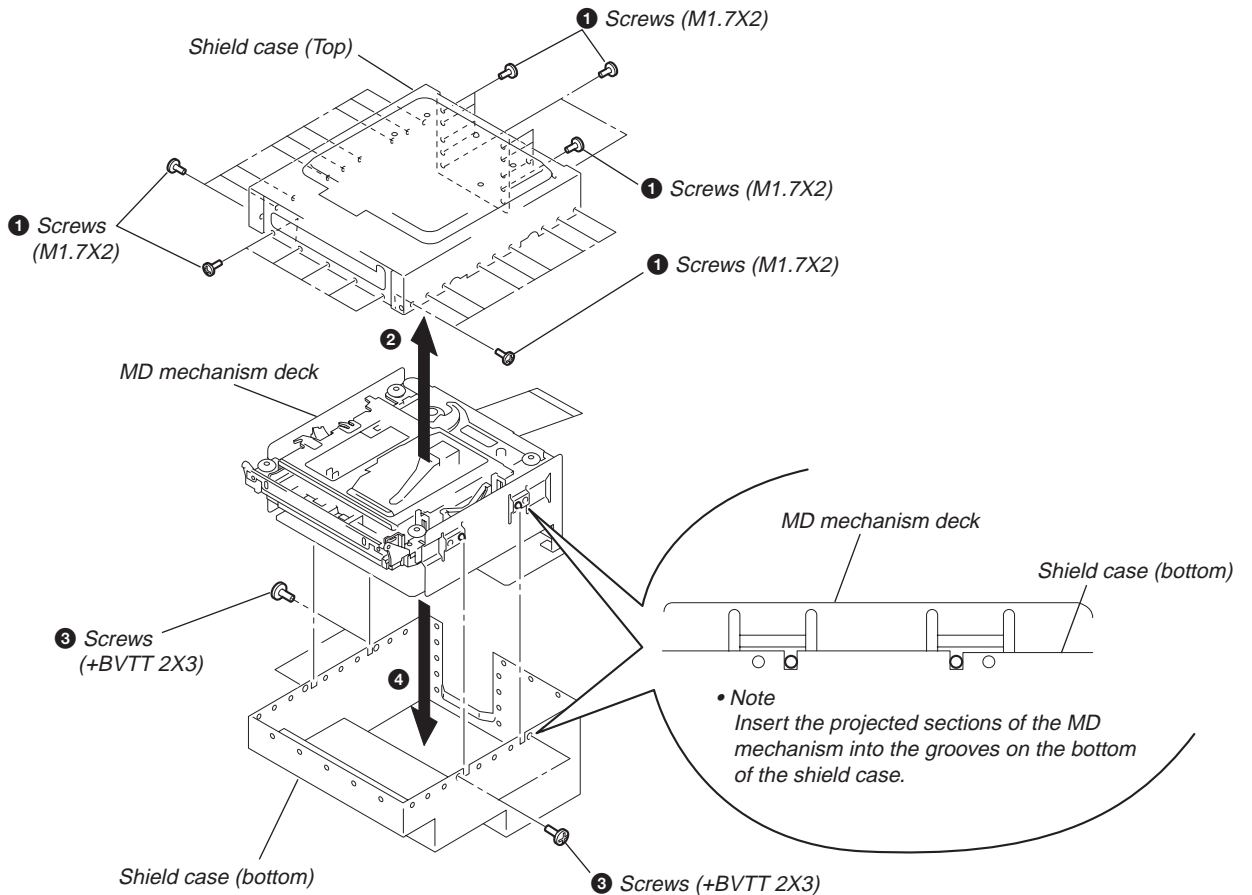


3-8. MAIN BOARD, CD BLOCK ASSY

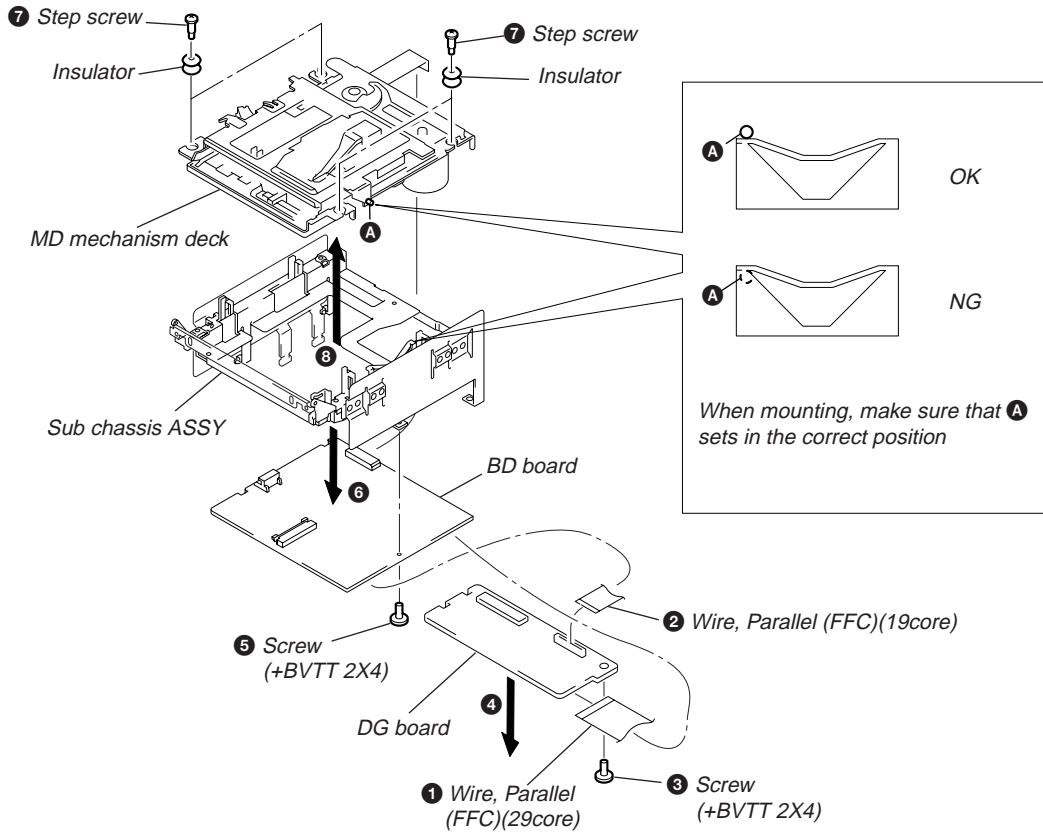


< MD BLOCK SECTION >

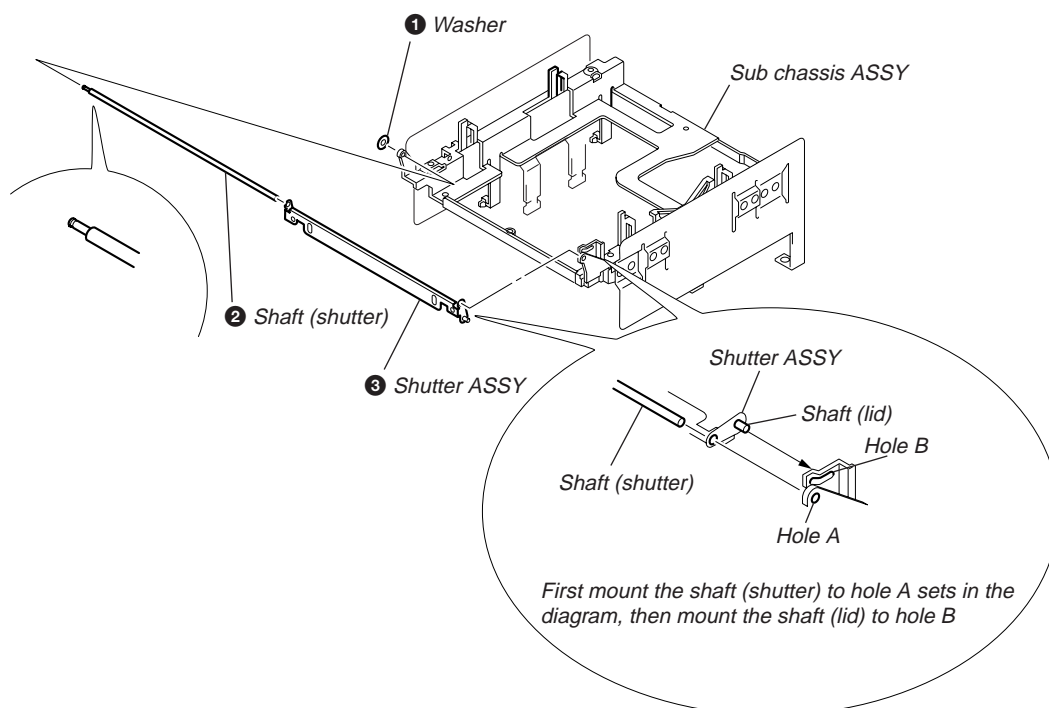
3-9 . SHIELD CASE (TOP), SHIELD CASE (BOTTOM)



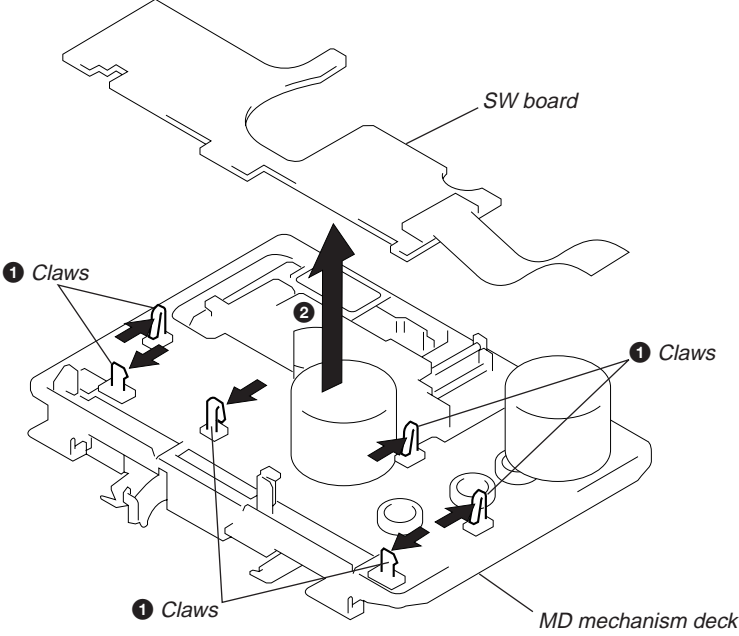
3-10 . DG BOARD, BD BOARD, MD MECHANISM DECK



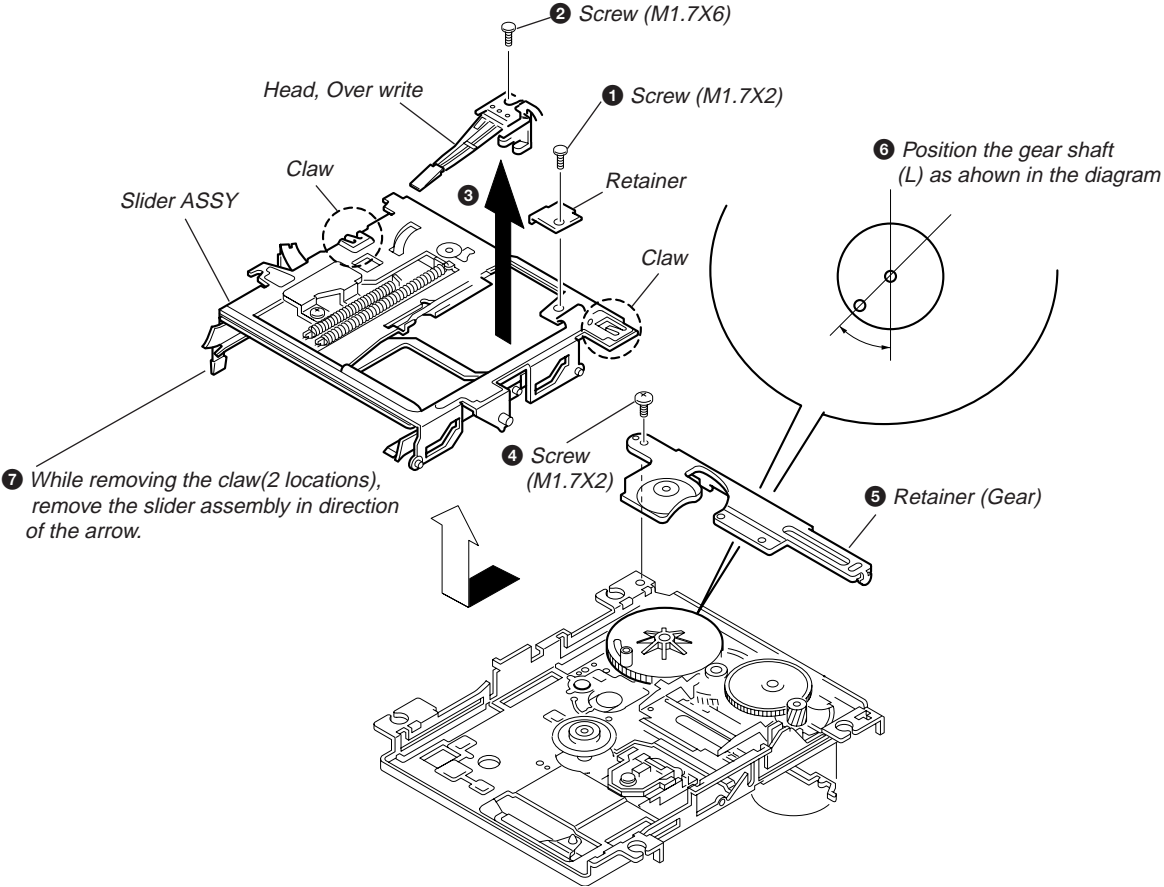
3-11 . SHUTTER ASSY



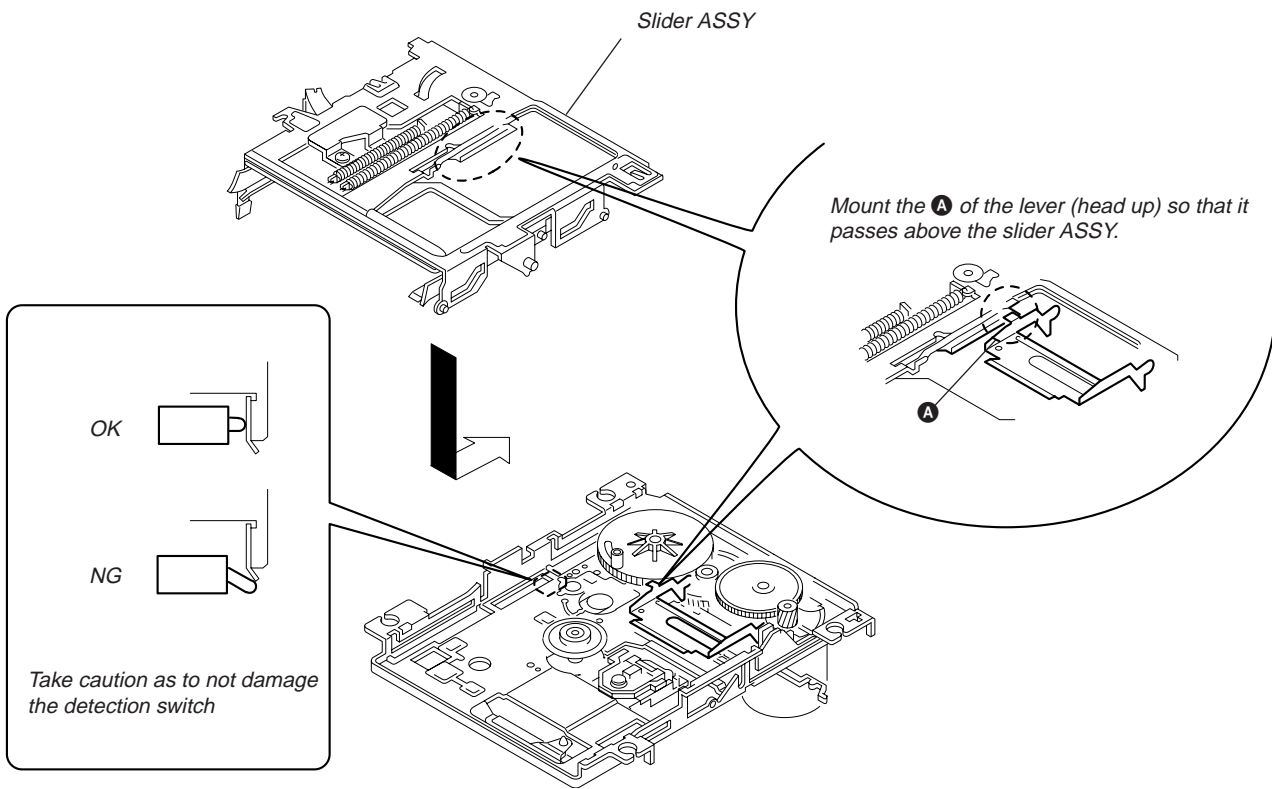
3-12 . SW BOARD



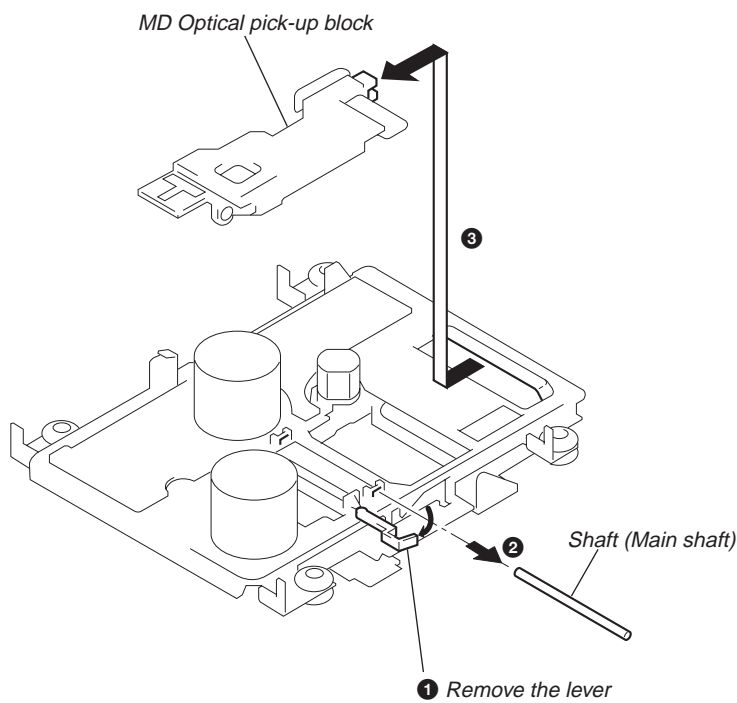
3-13. SLIDER ASSY, “ HEAD, OVER WRITE ”



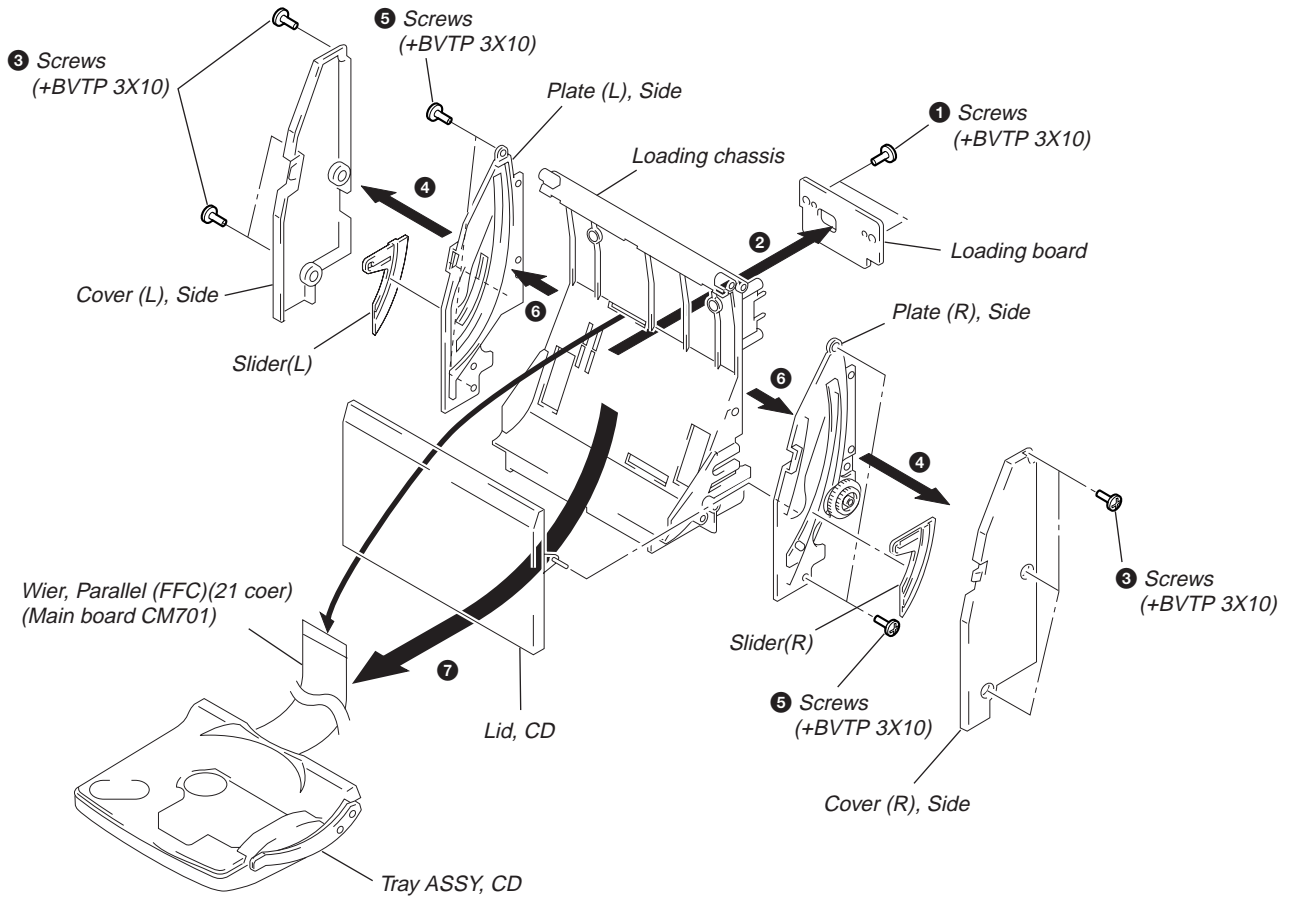
• CAUTION DURING SLIDER ASSY ASSEMBLY



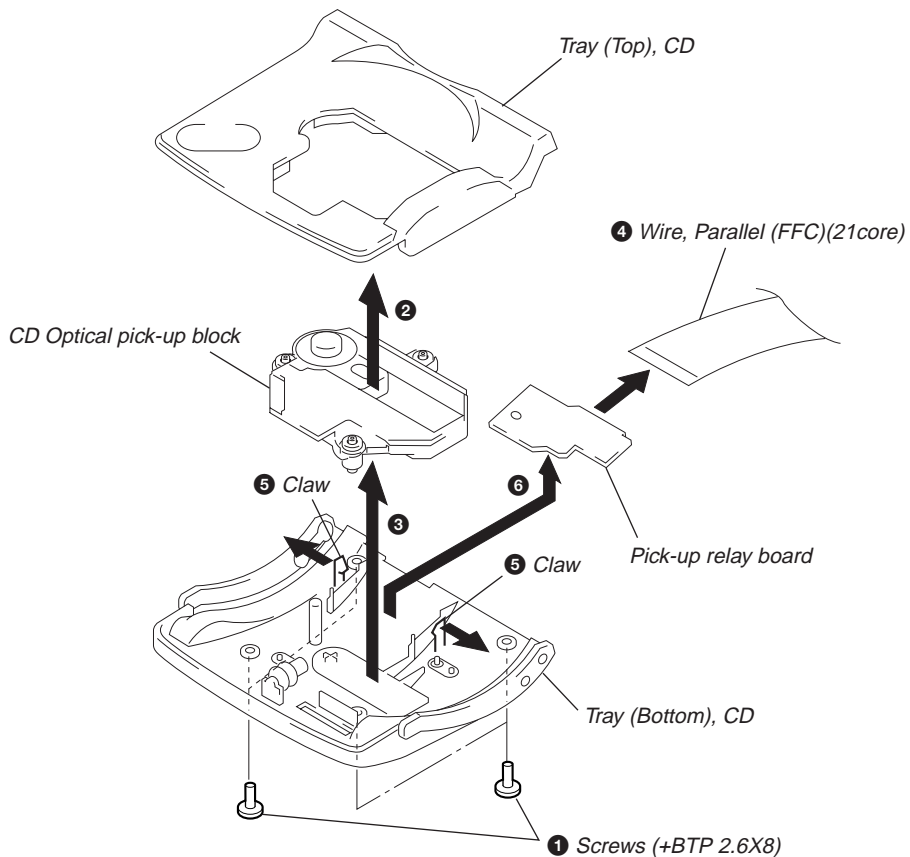
3-14. MD OPTICAL PICK-UP BLOCK



< CD BLOCK SECTION >
3-15. LOADING BOARD, "TRAY ASSY, CD"



3-16. CD OPTICAL PICK-UP BLOCK, PICK-UP RELAY BOARD



SECTION 4 TEST MODE

4-1. CAUTIONS WHEN USING THE TEST MODE

- ① Check to make sure the inserted disk is completely stopped before removing since loading related operations will operate regardless of the Test mode operation.
The rotation of the inserted disk will not stop even when pressing the MD EJECT button during continuous playback and continuous recording.
In this case, the disk will be ejected while still in motion.
Always press the CANCEL/NO button and check to see that the disk has stopped turning before pressing the MD EJECT button.
- ② In the Test mode, detection of the write-protect tab is executed. For this reason, pressing the REC button in modes where the recording laser is emitted (see 3-1-1) will delete the recorded contents regardless of the tab position. When using a disk in the Test mode which its contents must not be deleted, avoid entering the Continuous Recording mode and Transverse Adjustment mode.

4-1-1. Modes which the record laser is emitted and button operations

- Continuous Recording mode (CREC MODE)
- Transverse Adjustment mode (EFBAL ADJUST)
- Laser Power Adjustment mode (LDPWR ADJUST)
- Laser Power Check mode (LDPWR CHECK)
- Transverse (MO) check (EF MO CHECK)
- Transverse (MO) adjustment (EF MO ADJUST)
- When pressing the REC button

4-2. TEST MODE SETTINGS

MD Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press MD ►|| → MD ■ → MD ►|| → MD ■.

CD Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press CD ►|| → CD ■ → CD ►|| → CD ■.

Display Test mode :

Press and hold the EDIT button and BASS/TREBLE button, then press BAND → LINE → BAND → LINE (FUNCTION is LINE).

Note 1 : Each test mode can be entered regardless of whether the power is on or off. However, it is not possible to enter the test mode of the particular function being operated. For example, it is not possible to enter the CD Test mode when the CD is in function.

Note 2 : When entering the MD Test mode, EEPROM data for the radio broadcasting station names are automatically cleared. To exit the MD Test mode with sufficient memory, always use the RESET button. Moreover, never make radio presets once in the MD Test mode until the mode is exited.

4-3. RELEASING THE TEST MODE

Press the RESET button located on the rear.

4-4. BASIC OPERATIONS OF THE TEST MODE

All operations are made using the AMS dial, ENTER/YES button and CANCEL/NO button.

The functions of each button are as follows:

Function Name	Functions
AMS dial	Used to change parameters and modes
ENTER/YES button	Used to advance and confirm
CANCEL/NO button	Used to return and cancel

4-5. SELECTING THE TEST MODE

There are 9 types of test modes (see table below). Turning the AMS dial clockwise switches modes shown in the table in the order from top to bottom. Turning the AMS dial counterclockwise switches modes shown in the table in the reverse order.

Display	Description
TEMP ADJUST	Temperature compensation offset adjustment
LDPWR ADJUST	Laser power adjustment
LDPWR CHECK	Laser power check
EF BAL ADJUST	Transverse adjustment
FBIAS ADJUST	Focus bias adjustment
FBIAS CHECK	Focus bias check
CPLAY MODE	Continuous playback mode
CREC MODE	Continuous recording mode
EFP MODE	Non-volatile storage memory control

- For details on each adjustment mode, see respective items of SECTION 5. ADJUSTMENT
- If you have accidentally entered another mode, press the CANCEL/NO button to exit.
- The EEP MODE is not used during servicing. Thus, details on this mode are not given. If this mode is accidentally entered, exit immediately by pressing the CANCEL/NO button as the unit may not operate correctly if the non-volatile storage memory being overwritten.

4-5-1. Operating in the Continuous Playback mode

1. Entering the Continuous Playback mode

- ① Insert a disk into the unit (either recordable or playback disk)
- ② Turn the AMS dial until “CPLAY MODE” is displayed.
- ③ Press the ENTER/YES button. The display will change to “CPLAY IN”.
- ④ When accessing is completed, the display will change to “C1= [] AD = []”.

Note : The numbers of “ [] ” displayed indicate the error rate and “ADER”.

2. Changing the playback location

- ① Pressing the YES button during continuous playback will change the display in the following manner, enabling change in the playback location.
“CPLAY MID” → “CPLAY OUT” → “CPLAY IN”
↑
- ② When accessing is completed, the display will change to “C1= [] AD = []”.

Note : The numbers of “ [] ” displayed indicate the error rate and “ADER”.

3. Exiting the Continuous Playback mode

- ① Press the CANCEL/NO button. The display will change to “CPLAY MODE”.
- ② To remove the disk, press the MD EJECT button.

Note : The playback initiate addresses of IN, MID and OUT are indicated below. To display the playback position, press the DISPLAY button and “CPLAY([] [] [] [])”.

IN	40h cluster
MID	300h cluster
OUT	700h cluster

4-5-2. Operating in the Continuous Recording mode

1. Entering the Continuous Recording mode

- ① Insert a disk that may be recorded into the unit (see Note 3)
- ② Turn the AMS dial until “CREC MODE” is displayed.
- ③ Press the ENTER/YES button. The display will change to “CREC MID”.
- ④ When accessing is completed, the display will change to “CREC (0000)”.

Note : The numbers of “ ” displayed indicate the record position address.

2. Changing the recording location

- ① Pressing the YES button during continuous recording will change the display in the following manner, enabling change in the recording location. During location change, the REC indicator will be off.

“CPLAY MID” → “CPLAY OUT” → “CPLAY IN”

- ② When accessing is completed, the display will change to “CREC (0000)” and the REC indicator will light.

Note : The numbers of “ ” displayed indicate the record position address.

3. Exiting the Continuous Recording mode

- ① Press the CANCEL/NO button. The display will change to “CREC MODE” and the REC indicator will turn off.
- ② To remove the disk, press the MD EJECT button.

Note 1 : The record initiate addresses of IN, MID and OUT are indicated below.

IN 40h cluster
MID 300h cluster
OUT 700h cluster

Note 2 : The CANCEL/NO button can be used at anytime to stop recording.

Note 3 : Detection for the write-protect tab is not executed when in the test mode. Do not enter the Continuous Recording mode with a disk you do not wish to have deleted.

Note 4 : Do not continuously record for more than 5 minutes.

Note 5 : Make sure no vibration is applied to the unit during continuous recording.

4-5-3. Non-volatile storage memory mode (EEP mode)

This is the mode to read and write the contents of the non-volatile storage memory.

This mode is not used for servicing.

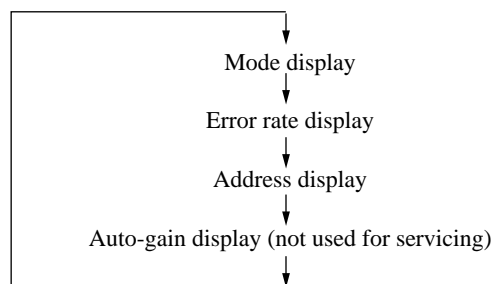
If you accidentally enter this mode, exit immediately by pressing the CANCEL/NO button.

4-6. FUNCTIONS OF OTHER BUTTONS

Function Name	Main Description
EDIT + ►	Continuous playback when pressed during disk is stopped. Tracking servo ON/OFF when pressed during continuous playback
EDIT + ■	Stopping of continuous recording/playback
►►	The thread moves outward while the button is pressed
◄◄	The thread moves inward while the button is pressed
EDIT + REC	Record ON/OFF during continuous playback
EDIT + DELETE	Switched between pit and groove every time the button is pressed
EDIT + SHUF/PGM	Spindle servo mode switch (CLV S ← → CLV A)
DISPLAY	Display contents are switched every time the button is pressed
MD EJECT	Eject disk
RESET	Exit the test mode

4-7. TEST MODE DISPLAY

The display will switch in the following sequence every time the DISPLAY button is pressed.



1. Mode display

Displays such information as “TEMP ADJUST” and “CPLAY MODE”.

2. Error rate display

The error rate is displayed using the following format.

C1=C1ER AD=ADER

3. Address display

The address is displayed using the following format (MO : recordable disk, CD : playback disk)

Note : “-” is displayed when servo is off.

4. Auto-gain display (not used for servicing)

The auto-gain is displayed using the following format.

AG = @@/##[&&]

@@ : focus servo gain coefficient

: tracking servo gain coefficient

&& : displays [OK], [NG] or [- -].

[- -] indicates that convergence is incomplete

Definitions of other displays

Display	Description	
	Indicator ON	Indicator OFF
◁	Continuous playback in operation (CLV : ON)	Disk stopped (CLV : OFF)
	Tracking servo OFF	Tracking servo ON
REC	Recording mode ON	Recording mode OFF
AUTO	ABCD adjustment completed	
DIGITAL	Focus auto-gain OK	(Flashing) Focus OK Tracking auto-gain NG
TRACK	Pit	Groove
DISC	High reflection	Low reflection
DATE	CLV-S	CLV-A
⊕	CLV LOCK	CLV UNLOCK

SECTION 5 ADJUSTMENTS

MD SECTION

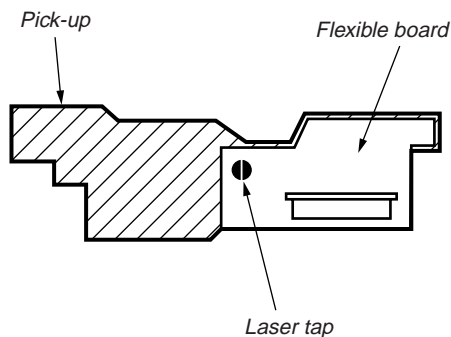
5-1. CAUTION WHEN CHECKING LASER DIODE EMISSION

Never look from directly above when checking the laser diode emission during adjustment as failure to do so may result in loss of eyesight.

5-2. CAUTIONS WHEN HANDLING THE OPTICAL PICK-UP (KMS-260A)

The laser diode within the optical pick-up is extremely vulnerable to static electricity. When handling, bridge the laser tap of the flexible board on the optical pick-up with solder.

When removing the connector, first bridge the laser tap with solder. Furthermore, do not remove the soldered bridge before reconnecting. In addition, take sufficient measures when working to prevent electrostatic damage. Take caution when handling the flexible board since it is easily torn.



5-3. CAUTIONS DURING ADJUSTMENT

- 1) After replacing the following parts, make adjustments and checks for the table items where indicated with a O in the order given.

	Optical pickup	BD board		
		IC171	D101	IC101,IC121,IC192
1. Temperature compensation offset adjustment	X	O	O	O
2. Laser power adjustment	O	O	X	O
3. Traverse adjustment	O	O	X	O
4. Focus bias adjustment	O	O	X	O
5. Error rate adjustment	O	O	X	O

- 2) Perform adjustments in the test mode.
Exit the test mode when completed with adjustment.
- 2) Perform adjustments in the order given.
- 3) Use the following jig and measuring equipment:
 - Check disk (MD) TDYS-I (Part no : 4-963-646-01)
 - Laser power meter LPM-8001 (Part no : J-2501-046-A)
 - Oscilloscope (perform measurement after calibrating the probe)
 - Digital voltmeter
 - Thermometer
 - BD board waveform checking jig (part no : J-2501-124-A)
- 5) When looking at multiple signals using oscilloscope, etc., make sure VC and GND are not connected within the oscilloscope. Failure to do so will short circuit VC and GND.
- 6) Using the special jig enables checking of the waveform without soldering (see page 4 of Service Notes).

5-4. CREATING A CONTINUOUS RECORDING DISK

- This disk is used during focus bias adjustment and error rate check. The procedure for creating a continuous recording disk is as follows.

1. Insert a disk (any commercially available blank disk).
2. Turn the AMS dial until "CREC MODE" is displayed.
3. Press the YES button to display "CREC MID".
"CREC(0300)" will be displayed for an instant and recording will begin.
4. Complete recording within 5 minutes.
5. Press the NO button to stop recording.
6. Press the MD EJECT button to remove the disk.

A continuously recorded disk can be created by following the procedure above for focus bias adjustment and error rate check.

Note: Take caution as to not apply vibration to the unit during continuous recording.

5-5. TEMPERATURE COMPENSATION OFFSET ADJUSTMENT

The temperature data at the time is saved in the non-volatile storage memory as the standard data of 25°C.

Notes:

1. Do not make this adjustment under normal conditions.
2. Perform this adjustment in an environment with ambient temperature between 22 to 28°C. Furthermore, make the adjustment immediately after turning on the power when the internal temperature and ambient temperature are between 22 to 28°C.
3. After D101 replacement, perform the adjustment after the part has ample time to adjust to the ambient temperature.

Procedure:

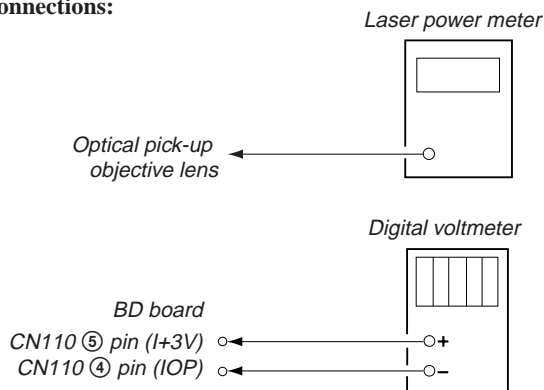
1. Turn the AMS dial until “TEMP ADJUST” is displayed.
 2. Press the ENTER/YES button and select the TEMP ADJUST mode.
 3. “TEMP=□□□” and the current temperature data will be displayed.
 4. To save the data: press the ENTER/YES button
To not save the data: press the CANCEL/NO button
 5. After pressing the ENTER/YES button, “TEMP= □□□SAVE” will be displayed momentarily and the display will then return to “TEMP ADJUST”.
- The display will immediately return to “TEMP ADJUST” when pressing the CANCEL/NO button.

Specified values:

The value of TEMP= □□□ must be within the range of E0-EF, F0-FF, 00-0F, 10-1F or 20-2F.

5-6. LASER POWER ADJUSTMENT

Connections:



Procedure:

1. Insert the laser power meter into the disk loading port and set atop the objective lens of the optical pickup (if this cannot be done successfully, shift the optical pickup using the ◀▶ buttons).
Connect the digital voltmeter to the CN110 ⑤ pin (I+3V) and CN110 ④ pin (IOP).
2. Turn the AMS dial until “LDPWR ADJUST” is displayed. (Laser power: adjustment purposes)
3. Press the ENTER/YES button once to display “LD 0.9mW \$ □□□”.
4. Turn the AMS dial so that the laser power meter reading is between 0.86 – 0.92mW. After setting the range dial of the laser power meter to 10mW, press the ENTER/YES button to save the adjustment result to the non-volatile storage memory (at this time, “LD SAVE \$ □□□” will be displayed for an instant).
5. Next, “LD 7.0mW \$ □□□” will be displayed.
6. Turn the AMS dial so that the laser power meter reading is between 6.9 – 7.1mW, then press the ENTER/YES button to save the adjustment result (at this time, “LD SAVE \$ □□□” will be displayed for an instant).

Note: Do not emit the 7.0mW emission more than 15 seconds continuously.

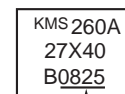
7. Next, turn the AMS dial until “LDPWR CHECK” is displayed.
 8. Press the ENTER/YES button once to display “LD 0.9mW \$ □□□”.
- At this time, check to see that the laser power meter reading is between 0.85 – 0.91mW.
9. Next, press the ENTER/YES button once more to display “LD 7.0mW \$ □□□”.
- At this time check to see that the laser power meter and digital voltmeter reading comply with the specified values.

Specified values:

Laser power meter reading : 6.9–7.1mW

Digital voltmeter reading : ±10% the value on the label of the optical pickup.

(Optical pick-up label)



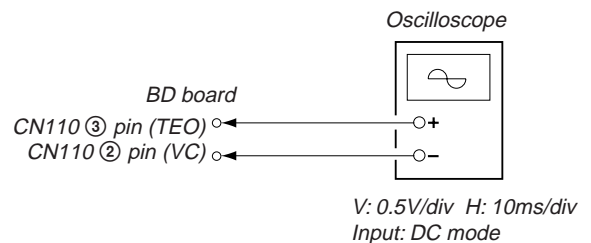
In this case, $I_{op} = 82.5\text{mA}$

$I_{op}(\text{mA}) = \text{digital voltmeter reading (mV)} / 1(\Omega)$

10. Press the CANCEL/NO button to display “LDPWR CHECK” and stop laser emission. (The CANCEL/NO button can be used at anytime to stop laser emission.)

5-7. TRAVERSE ADJUSTMENT

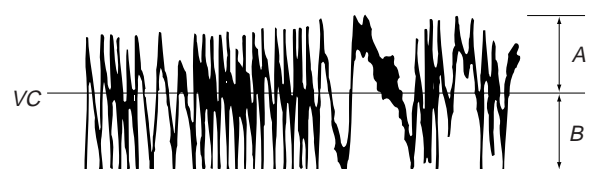
Connection:



Procedure:

1. Connect the oscilloscope to the CN110 ③ pin (TEO) and CN110 ② pin (VC) of the BD board.
2. Insert a disk (any commercially available disk) that may be recorded on (see Note 1).
3. Press the ◀▶ or ▶▶ button to shift the optical pick-up to the outer edge of the pit.
4. Turn the AMS dial until “EFBAL ADJUST” is displayed.
5. Press the ENTER/YES button to display “EFB= □□□ MO-R”. (The unit will be in the condition of: laser power READ power, focus servo ON, tracking servo OFF and spindle (S) servo ON.)
6. Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value (turning the AMS dial will change the numbers of “EFB= □□□” as well as the waveform). During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value (read power traverse adjustment).

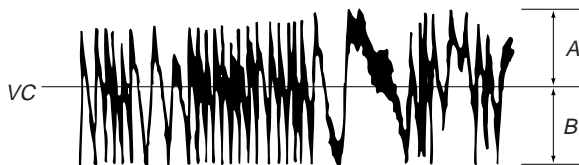
(Traverse waveform)



Specification: $A=B$

- Press the ENTER/YES button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant, then "EFB= [] MO-W" will be displayed).
- Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value (turning the AMS dial will change the numbers of "EFB= []" as well as the waveform). During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value (write power traverse adjustment).

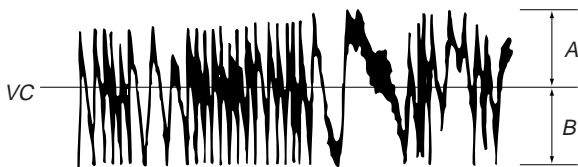
(Traverse waveform)



Specification: A=B

- Press the ENTER/YES button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant).
- "EFB= [] MO-P" will then be displayed and the servo will be activated after the optical pickup is automatically shifted to the inner edge of the pit.
- At this time, turn the AMS dial so that the waveform on the oscilloscope is that of the specified value. During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value. and the rotation of the disk will automatically stop.

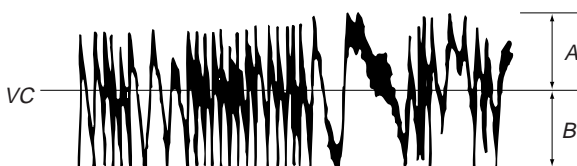
(Traverse waveform)



Specification: A=B

- Press the ENTER/YES button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant). "EFBAL CD" will then be displayed
- Press the MD EJECT button to remove the disk.
- Insert the check disk (MD) TDYS-1.
- Press the ENTER/YES button to display "EFB= [] CD". The servo will automatically be activated.
- Turn the AMS dial so that the waveform on the oscilloscope is that of the specified value. During this adjustment, the waveform changes for approximately every 2%. Adjust the waveform closest to the specified value.

(Traverse waveform)

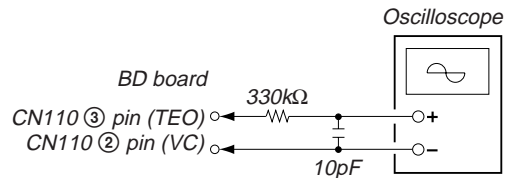


Specification: A=B

- Press the ENTER/YES button to save the adjustment result to the non-volatile storage memory (at this time "EFB= [] SAVE" will be displayed for an instant). "EFBAL ADJUST" will then be displayed.
- Press the MD EJECT button to remove the check disk (MD) TDYS-1.

Note 1: When using a pre-recorded disk for adjustment, data will be deleted during MO write.

Note 2: If the traverse waveform is hard to see, reconnect the oscilloscope as shown below for easier view.



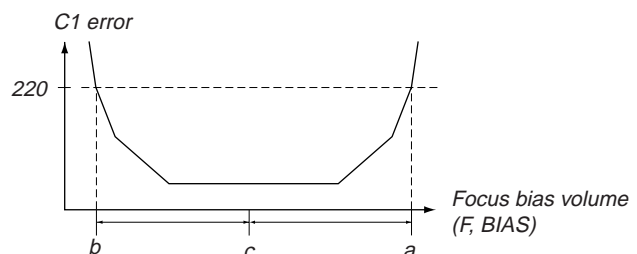
5-8. FOCUS BIAS ADJUSTMENT

Procedure:

- Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
- Turn the AMS dial until "CPLAY MODE" is displayed.
- Press the ENTER/YES button to display "CPLAY MID".
- When "C1= [] AD= []" is displayed, press the CANCEL/NO button.
- Turn the AMS dial until "FBIAS ADJUST" is displayed.
- Press the ENTER/YES button to display "[]/[] a= []". The first 4 digits indicate the C1 error rate, the 2 digits following "/" indicate ADER and the 2 digits following "a=" indicate the focus bias volume.
- Turn the AMS dial clockwise and search the focus bias volume closest to the C1 error rate of 220 (see Note 2).
- Press the ENTER/YES button to display "[]/[] b= []".
- Turn the AMS dial counterclockwise and search the focus bias volume which is the C1 error rate of 220.
- Press the ENTER/YES button to display "[]/[] c= []".
- Press the ENTER/YES button after making sure that the C1 error rate is below 50 and ADER is 00.
- Press the ENTER/YES button if the value indicated in the "[]-[] ([])" display is more than 20. Otherwise, press the CANCEL/NO button and repeat procedure from step 2.
- Press the MD EJECT button to remove the continuously recorded disk.

Note 1: The relationship of the C1 error and focus bias volume is shown in the diagram below. Find points a and b shown in the diagram by following the procedure above. The met focal point C is found by automatic calculation.

Note 2: The C1 error rate fluctuates. Thus, make the adjustment using the average value.



5-9. ERROR RATE CHECK

5-9-1. CD error rate check

Procedure:

1. Insert the check disk (MD) TDYS-1
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the ENTER/YES button to display "CPLAY MID".
4. The display will change to "C1= 0000 AD= 00".
5. Check to see that the C1 error rate is less than 20.
6. Press the CANCEL/NO button to stop playback, then press the MD EJECT button to remove the check disk (MD).

5-9-2. MO error rate check

Procedure:

1. Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the ENTER/YES button to display "CPLAY MID".
4. The display will change to "C1= 0000 AD= 00".
5. Check to see that the C1 error rate is less than 50 and ADER is constantly not above 00.
6. Press the CANCEL/NO button to stop playback, then press the button to remove the continuously recorded disk.

5-10. FOCUS BIAS CHECK

The focus tolerance volume is checked by changing the focus bias volume.

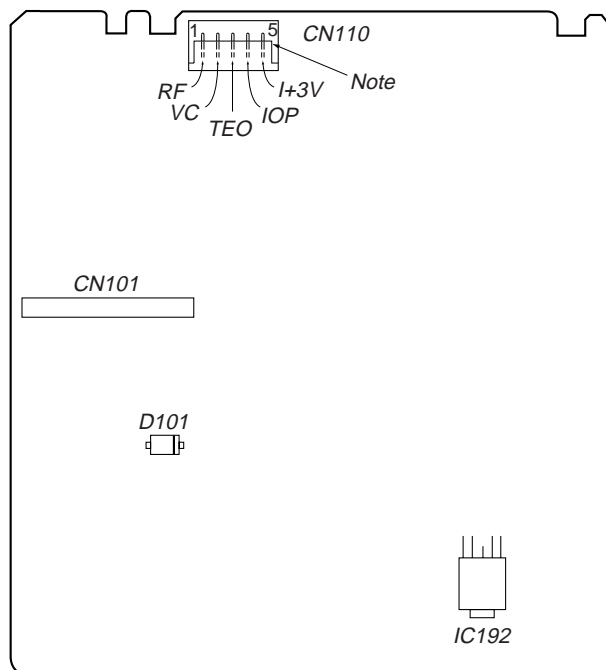
Procedure:

1. Insert a continuously recorded disk (see 5-4. Creating a continuous recording disk).
2. Turn the AMS dial until "CPLAY MODE" is displayed.
3. Press the ENTER/YES button to display "CPLAY MID".
4. When "C1= 0000 AD= 00" is displayed, press the CANCEL/NO button.
5. Turn the AMS dial until "FBIAS CHECK" is displayed.
6. Press the ENTER/YES button to display "0000 / 00 c= 00".
The first 4 digits indicate the C1 error, the 2 digits following "/" indicate ADER and the 2 digits following "c=" indicate the focus bias volume.
At this time, check to see that the C1 error is less than 50 and ADER is 00.
7. Press the ENTER/YES button to change the display to "0000 / 00 b= 00".
At this time check to see that the C1 error is not less than 220 and ADER is constantly not above 00.
8. Press the ENTER/YES button to change the display to "0000 / 00 a= 00".
At this time check to see that the C1 error is not less than 220 and ADER is constantly not above 00.
9. Press the CANCEL/NO button, then press the MD EJECT button to remove the continuously recorded disk.

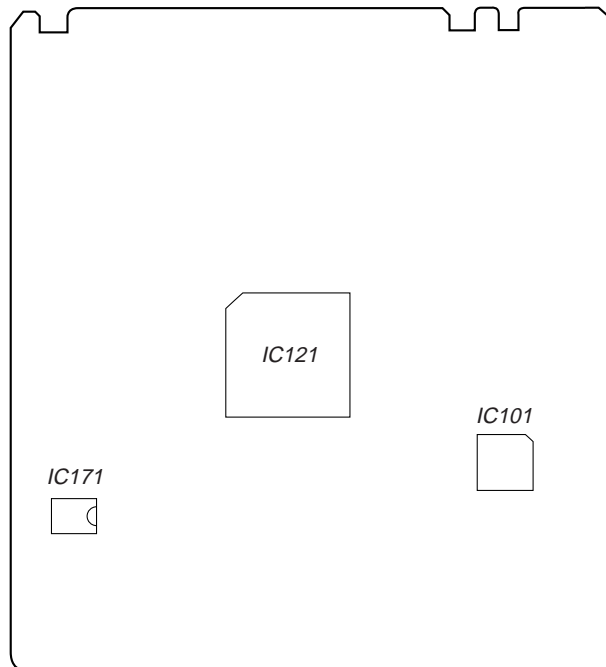
Note 1: If the C1 error or ADER is more than 00 for only one of points a (8. above) and b (7. above), there is the possibility of a gap in the focus bias adjustment. In such case, repeat adjustment.

5-11. ADJUSTMENT AND CONNECTION LOCATIONS

[BD BOARD] (Side A)



[BD BOARD] (Side B)



Note: The jig is highly convenient when checking the waveform (see page 4 of Service Notes)

CD SECTION

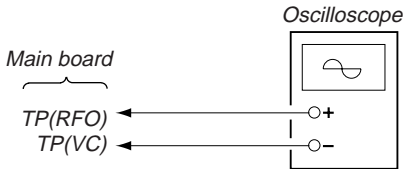
1. Enter the CD Test mode
(see page 30)



The above is the default display.
Pressing the **▶||** key will rotate the CD and pressing the **▶||** once more will output sounds.
Pressing the **▶||** key will execute automatic adjustment and values will change; however, this value is quite normal.

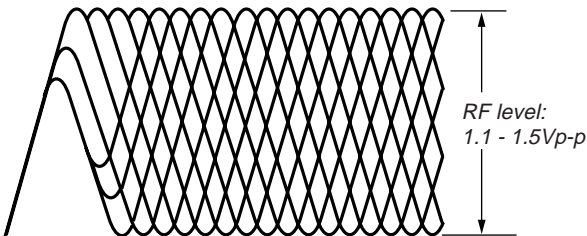
2. RF LEVEL and jitter check
Test mode PLAY status

Connection Point:



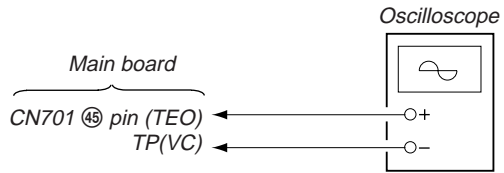
Check to see that the jitter is less than 9.0 nsec.
and RF level is between 1.1 – 1.5Vp-p.

VOLT/DIV : 200mV (using 10:1 probe)
TIME/DIV : 500ns



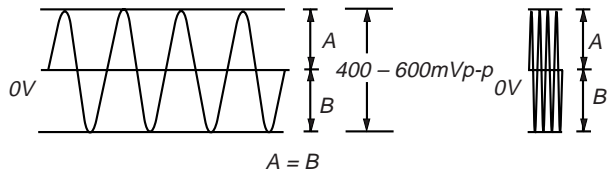
3. Traverse signal check

Connection Point:



Press the FF or FR from 2.
Check to see that the traverse signal level is between 400 – 600mVp-p.

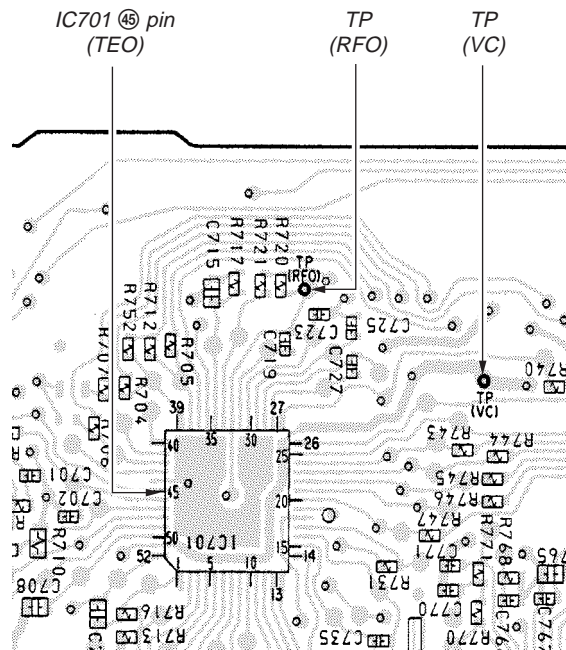
Note:
Extend the sweep time for easier view.



4. After completed with adjustment, press the RESET button to release the test mode.

Adjustment Location :

[MAIN BOARD] (SIDE A)



TUNER SECTION

AM Section

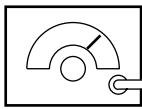
Function switch :

AM : US Model

MW (LW) : EXCEPT US Model

Volume : MIN

AM RF signal generator



Put the lead-wire antenna close to the set.

30% amplitude modulation by 400Hz signal.

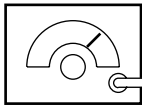
Output level : as low as possible

FM Section

Function switch : FM

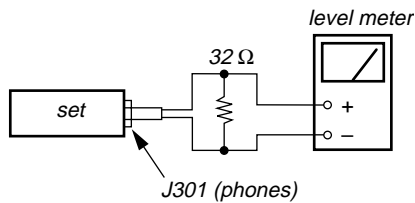
Volume : MIN

FM RF signal generator



22.5kHz frequency deviation by 400Hz signal.

Output level : as low as possible



Connect and Adjustment Location : Tuner board (See page 38)

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

< > : EXCEPT US model

AM <MW/LW> IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
CFT1	450kHz

AM <MW> FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter.
L2	530kHz	0.9 - 1.1V
< L4 >	< 531kHz >	< 0.8 - 1.0V >
Confirmation	1.710kHz	5.2 - 5.6V
< CT2 >	< 1.611kHz >	< 5.2 - 5.6V >

AM <MW> TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
CT1	620kHz
< CT3 >	< 621kHz >
L1	1.400kHz
< L3 >	< 1.404kHz >

EXCEPT US model

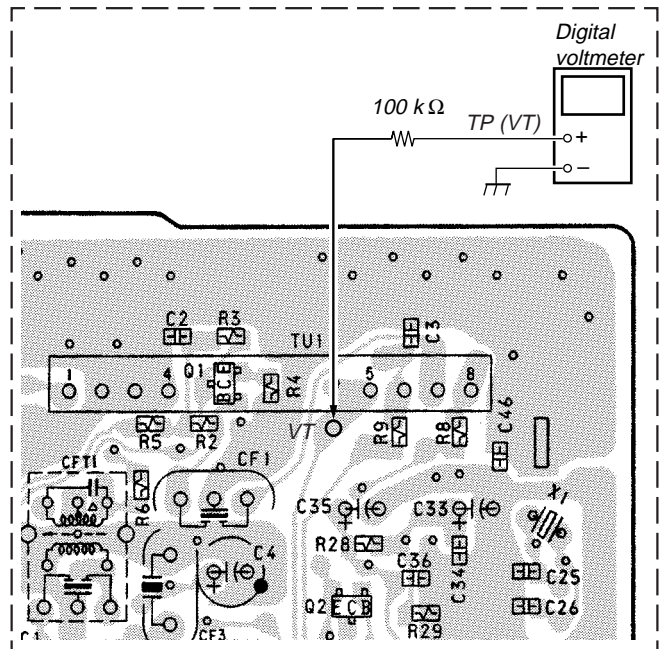
FM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L10	10.7MHz

LW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	153kHz	0.6 - 0.8V
CT4	297kHz	5.1 - 5.5V

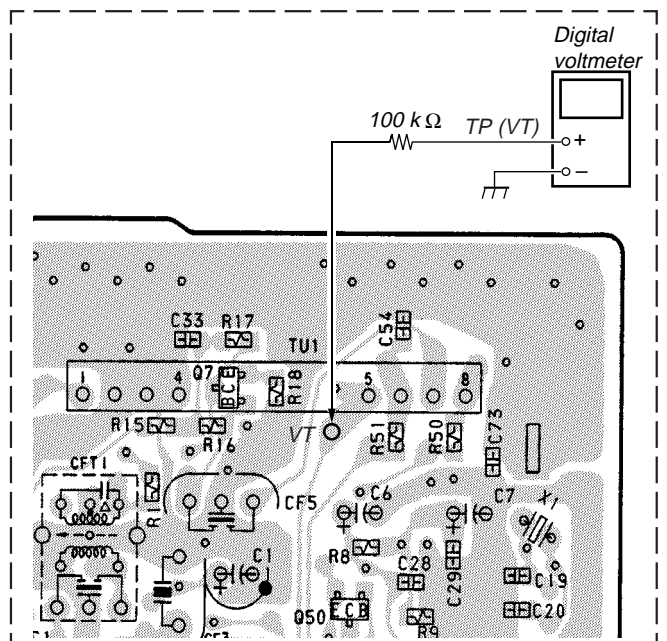
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L5	162kHz
CT5	261kHz

[TUNER BOARD] (SIDE B)

US Model

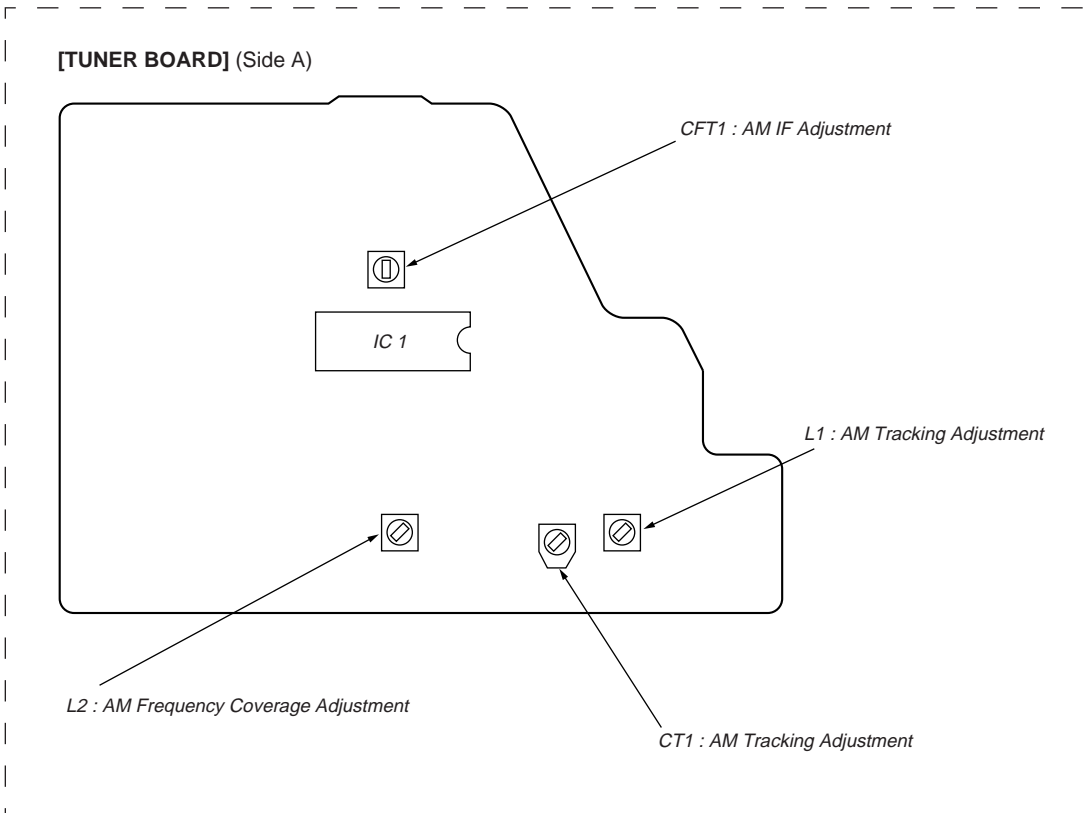


EXCEPT US Model

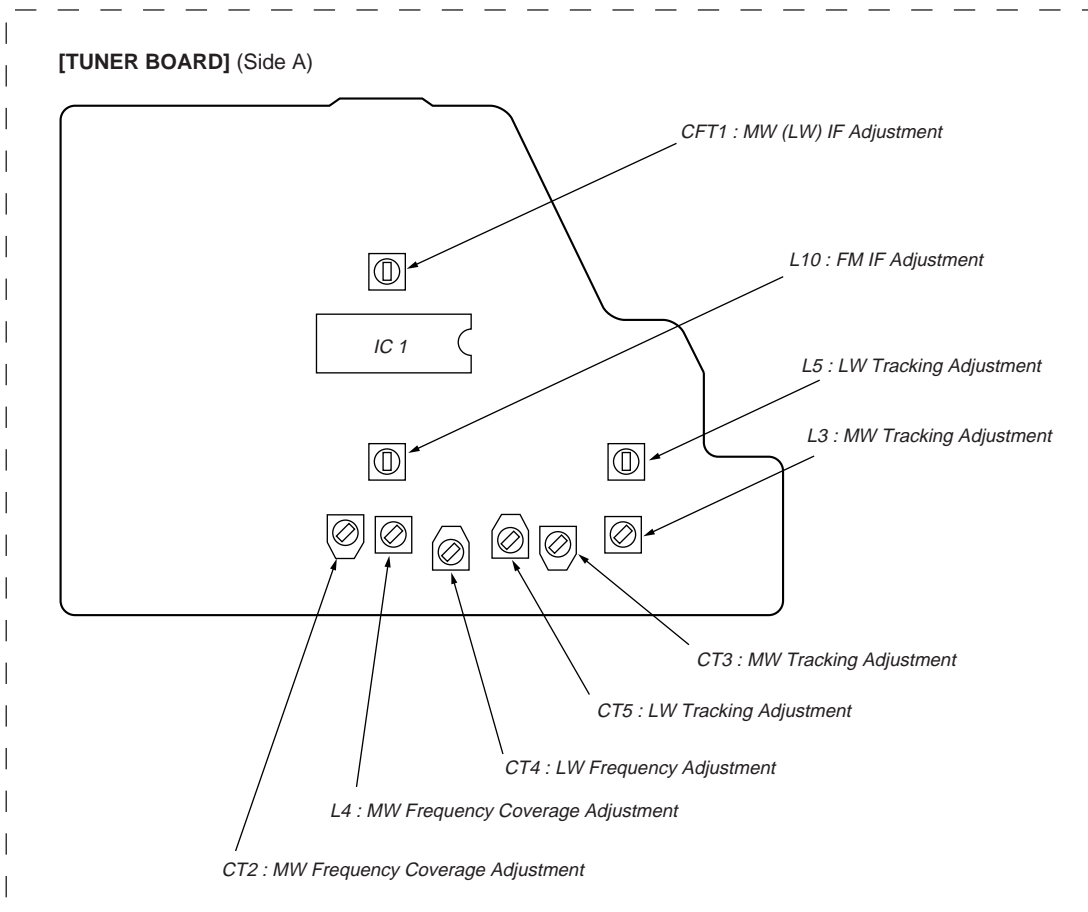


Adjustment Location :

US Model



EXCEPT US Model



SECTION 6 DIAGRAMS

6-1. EXPLANATION OF IC TERMINALS

BD BOARD IC101 MD SECTION RF AMPLIFIER (CXA2523R)

Pin No.	Pin name	I/O	Description
1	I	I	Input of RF signal I converted from I to V
2	J	I	Input of RF signal J converted from I to V.
3	VC	O	Midpoint voltage (+1.5V) generation output.
4 - 9	A-F	I	Signal inputs from optical pickup detector.
10	PD	I	Light volume monitor input.
11	APC	O	Laser APC output.
12	APCREF	I	Reference voltage input for laser power setting.
13	GND	-	Ground.
14	TEMPI	I	Temperature sensor connection terminal.
15	TEMPR	O	Reference voltage output for temperature sensor.
16	SWDT	I	Serial data input from CXD2652AR.
17	SCLK	I	Serial clock input from CXD2652AR.
18	XLAT	I	Latch signal input from CXD2652AR. "L": Latch
19	XSTBY	I	Standby signal input. "L": Standby
20	FOCNT	I	Center frequency control voltage input of internal circuits BFF22, BPF3T and EQ from CXD2652AR.
21	VREF	O	Reference voltage output (not used).
22	EQADJ	I/O	Pin for center frequency setting of internal circuit EQ.
23	3TADJ	I/O	Pin for center frequency setting of internal circuit BPF3T.
24	VCC	-	Power supply (+3V).
25	WBLADJ	I/O	Pin for center frequency setting of internal circuit BPF22.
26	TE	O	Tracking error signal output to CXD2652AR.
27	CSLED	-	External condenser connector pin for thread error signal LPF.
28	SE	O	Thread error signal output to CXD2652AR.
29	ADFM	O	ADIP FM signal output.
30	ADIN	I	ADIP signal comparator input ADFM connection by coupling with AC.
31	ADAGC	-	External condenser connector pin for AGC of ADIP.
32	ADFG	O	ADIP duplex signal output to CXD2652AR.
33	AUX	O	I3 signal/temperature signal output (switched by serial command) to CXD2652AR.
34	FE	O	Focus error signal output to CXD2652AR.
35	ABCD	O	Light volume signal output to CXD2652AR.
36	BOTM	O	RF/ABCD bottom hold signal output to CXD2652AR.
37	PEAK	O	RF/ABCD peak hold signal output to CXD2652AR.
38	RF	O	RF equalizer output to CXD2652AR.
39	RFAGC	-	RF AGC circuit external condenser connector pin.
40	AGCI	I	Input RF amplifier output is input to RF AGC circuit by coupling with AC.
41	COMPO	O	User comparator output (not used).
42	COMPP	I	User comparator input (Fixed at "L").
43	ADDC	I/O	Low-pass cutoff external capacitor terminal of ADIP amplifier.
44	OPO	O	User op amplifier output (not used).
45	OPN	I	User op amplifier inverted input (Fixed at "L").
46	RFO	O	RF amplifier output.
47	MORFI	I	Group RF signal input by coupling with AC.
48	MORFO	O	Group RF signal output.

APC : Auto Power Control

AGC : Auto Gain Control

• **BD BOARD IC121 digital signal processor, digital servo signal processor, EFM/ACIRC encoder/decoder, shock-proof memory controller, ATRAC encoder/decoder, 2Mbit DRAM (CXD2652AR)**

Pin No.	Pin name	I/O	Description
1	MNT0(FOK)	O	FOK signal output to system control. H is outputted when in focus.
2	MNT1(SHCK)	O	Track-jump detection signal output to system control.
3	MNT2(XBUSY)	O	Monitor 2 output to system control.
4	MNT3(SLOC)	O	Monitor 3 output to system control.
5	SWDT	I	Write-data signal input from system control.
6	SCLK	I(S)	Serial clock signal input from system control.
7	XLAT	I(S)	Serial latch signal input from system control.
8	SRDT	O(3)	Read-data signal output to system control.
9	SENS	O(3)	Internal status (SENSE) output to system control.
10	XRST	I(S)	Reset signal input from system control. "L": Reset
11	SQSY	O	Subcode Q-SYNC (SCOR) output to system control. Majority of those which output "L" every 13.3 seconds output "H".
12	DQSY	O	Subcode of digital-in U-bit CD format to system control. Majority of those which outputs "L" every 13.3 seconds during output of Q-SYNG (SCOR) outputs "H".
13	RECP	I	Laser power switch input from system control "H": Record, "L": Playback.
14	XINT	O	Interrupt status output to system control.
15	TX	I	Record data output authorization input from system control.
16	OSCI	I	System clock input (512Fs = 22.5792MHz).
17	OSCO	O	System clock output (512FS = 22.5792MHz).
18	XTSL	I	Pin for system clock frequency setting . "L": 45.1584MHz "H": 22.5792MHz (Fixed at "H").
19	TEST G	-	Test terminal.
20	DVSS	-	Ground (digital system).
21	DIN	I	Digital audio input (for optical input).
22	DOUT	O	Digital audio output (for optical output).
23	ADDT	I	Data input from A/D converter.
24	DADT	O	Data output to D/A converter.
25	LRCK	O	LR clock output (44.1kHz) for A/D and D/A converters.
26	XBCK	O	Bit clock output (2.8224MHz) for A/D and D/A converters.
27	FS256	O	11.2896MHz clock output (unused).
28	DVDD	-	Power supply for digital (+3V).
29-32	A03-A00	O	DRAM address outputs.
33	A10	O	
34-38	A04-A08	O	
39	A11	O	
40	DVSS	-	Ground for digital.
41	XOE	O	DRAM output-enable output.
42	XCAS	O	DRAM CAS signal output.
43	A09	O	DRAM address output.
44	XRAS	O	DRAM RAS signal output.
45	XWE	O	DRAM write-enable signal output.
46	D1	I/O	DRAM data I/O.
47	D0	I/O	
48, 49	D2,D3	I/O	
50	MVCI	I(S)	Clock input from external VCO (Fixed at "L").

* In the I/O column, I(S) is Schmitt input, I(A) is analog input, O(3) is state output and O(A) is analog output.

Pin No.	Pin name	I/O	Description
51	ASYO	O	Playback EFM duplex signal output.
52	ASYI	I(A)	Playback EFM comparator slice level input.
53	AVDD	–	Power supply for analog (+3V).
54	BIAS	I(A)	Playback EFM comparator bias current input.
55	RFI	I(A)	Playback EFM RF signal input.
56	AVSS	–	Ground for analog.
57	PDO	O(3)	Phase comparison output for clock playback analog PLL of playback EFM (not used).
58	PCO	O(3)	Phase comparison output for record/playback EFM system master PLL.
59	FILI	I(A)	Filter input for record/playback EFM system master PLL.
60	FILO	O(A)	Filter output for record/playback EFM system master PLL.
61	CLTV	I(A)	Internal VCO control voltage input for record/playback EFM system master PLL15.
62	PEAK	I(A)	Light volume signal peak hold input from CXA2523AR.
63	BOTM	I(A)	Light volume signal bottom hold input from CXA2523AR.
64	ABCD	I(A)	Light volume signal input from CXA2523AR.
65	FE	I(A)	Focus error signal input from CXA2523AR.
66	AUX1	I(A)	Auxiliary A/D input.
67	VC	I(A)	Midpoint voltage (+1.5V) input from CXA2523AR.
68	ADIO	O(A)	A/D converter input signal monitor output (not used).
69	AVDD	–	Power supply for analog (+3V).
70	ADRT	I(A)	A/D converter operating range upper limit voltage input (Fixed at “H”).
71	ADRB	I(A)	A/D converter operating range lower limit voltage input (Fixed at “L”).
72	AVSS	–	Ground for analog.
73	SE	I(A)	Thread error signal input from CXA2523AR.
74	TE	I(A)	Tracking error signal input from CXA2523AR.
75	AUX2	I(A)	Auxiliary A/D input (Fixed at “L”).
76	DCHG	I(A)	Connected to +3V power supply.
77	APC	I(A)	Laser digital APC error signal input (Fixed at “L”).
78	ADFG	I(S)	ADIP duplex FM signal input (22.05±1kHz) from CXA2523AR.
79	FOCNT	O	Filter f0 control output from CXA2523AR.
80	XLRF	O	Control latch output from CXA2523AR.
81	CKRF	O	Control clock output from CXA2523AR.
82	DTRF	O	Control data output from CXA2523AR.
83	APCREF	O	Laser APC reference PWM output.
84	LDDR	O	Laser digital APC PWM output (not used).
85	TRDR	O	Tracking servo drive PWM output (-).
86	TFDR	O	Tracking servo drive PWM output (+).
87	DVDD	–	Power supply for digital (+3V).
88	FFDR	O	Focus servo drive PWM output (+).
89	FRDR	O	Focus servo drive PWM output (-).
90	FS4	O	176.4kHz clock signal output (X’tal) (not used).
91	SRDR	O	Thread servo drive PWM output (-).
92	SFDR	O	Thread servo drive PWM output (+).
93	SPRD	O	Spindle servo drive PWM output (-).
94	SPFD	O	Spindle servo drive PWM output (+).
95	FGIN	I(S)	Spindle CAV servo FG input.
96–98	TEST1–TEST3	I	Test input pins (Fixed at “L”).
99	DVSS	–	Ground for digital.
100	EFMO	O	EFM output during recording.

EFM : Eight to Fourteen Modulation
PLL : Phase Locked Loop
VCO : Voltage Controlled Oscillator

DG BOARD (2/2) IC502 SYSYSTEM CONTROL (RU8X12MF-0021)

Pin No.	Pin name	I/O	Description
1	DAOUT0	–	not used (OPEN).
2	DAOUOT1	–	not used (OPEN).
3	KEY0	–	Reserved (“H” level).
4	KEY1	–	Reserved (“H” level).
5	KEY2	–	Reserved (“H” level).
6	CHACK IN	I	Detection input from chucking-in switch (S685).
7	PACK IN	I	Detection input from back-in switch (not used).
8	PACK OUT	I	Detection input from back-out switch (S686).
9		–	not used (ground connection).
10		–	not used (ground connection).
11	AVSS	–	ground for analog.
12	X INT	I	Interrupt status input from digital signal processor IC (IC121).
13	PDOWN	I	Power cutoff signal input from master control IC (IC801).
14		–	Reserved (ground connection).
15	SQSY	I	Subcode Q-SYNC (SCOR) input from digital signal processor IC (IC121).
16	DQSY	I	Digital-in U-bit format subcode input from digital signal processor IC (IC121).
17		–	Reserved (ground connection).
18		–	Reserved (ground connection).
19		–	Reserved (ground connection).
20	$\overline{\text{SYS-RST}}$	I	System reset input pin “L”: Reset.
21	TEST	I	Test mode pin “L”: Normal mode, “H”: Test mode.
22	+3.3V	–	Power supply terminal (VCC).
23	VBAT	I	Power supply pin for internal RTC and RAM.
24	XOUT-T	O	Sub-clock connector pin (32.768kHz).
25	XINT-T	I	Sub-clock connector pin (32.768kHz).
26	GND	–	Power supply terminal (ground).
27	XOUT	O	Main clock connector pin (12MHz).
28	XIN	I	Main clock connector pin (12MHz).
29	EXEM	I	Switch pin for External ROM mode and Internal ROM mode.
30	S1	–	not used (OPEN).
31		–	Reserved (ground connection).
32	SENS	I	Internal status (SENSE) input from digital signal processor IC (IC121).
33	SHOCK	I	Track-jump detection signal input from digital signal processor IC (IC121).
34		–	Reserved (ground connection).
35		–	Reserved (ground connection).
36	STB	O	Power ON/OFF control signal output.
37	REC P	I	Detection input from REC switch (S688).
38	PB P	I	Detection input from PB switch (S687).
39	LD LOW	O	Loading motor control signal output.
40	NC	–	not used (OPEN).
41	MNT2	I	Monitor 2 input from digital signal processor IC (IC121).
42	MNT3	I	Monitor 3 input from digital signal processor IC (IC121).
43	LEDO	–	not used (OPEN).
44		–	Reserved (ground connection).
45		–	Reserved (ground connection).
46	RST LOW	–	not used (OPEN).
47	GND	–	Power supply terminal (ground).
48	+3.3V	–	Power supply terminal (VCC).
49	SNG/CHG	–	Reserved (ground connection).
50	JOG1	–	Reserved (ground connection).

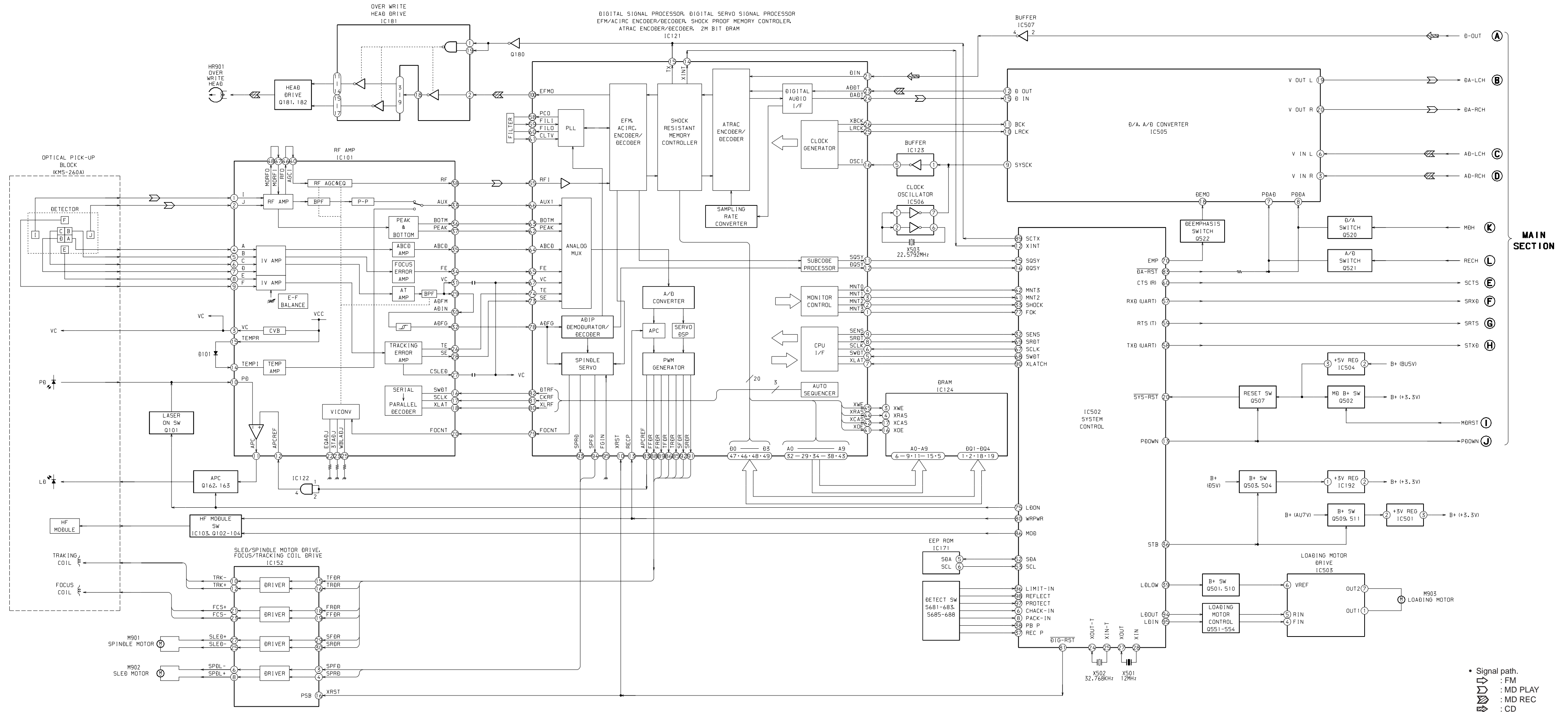
MAIN BOARD (2/2) IC801 SYSYTEM CONTROL (CXP84648-037Q)

Pin No.	Pin name	I/O	Description
51	JOG0	–	Reserved (ground connection).
52	SDA	I/O	Serial data I/O with EEPROM (IC171).
53	SCL	O	Serial clock output to EEPROM (IC171).
54	2M/4M	–	Reserved (“H” level).
55		–	Reserved (ground connection).
56		–	Reserved (ground connection).
57	RXD (UART)	O	Communication with master control IC (IC801) and UART receive output.
58	TXD (UART)	I	Communication with master control IC (IC801) and UART send input.
59	RTS (T)	I	UART send request input from master control IC (IC801).
60	CTS (R)	O	UART send request output to master control IC (IC801).
61	AUBIT0	–	Reserved (“H” level).
62	AUBIT1	–	Reserved (ground connection).
63	CLKSET0	–	Reserved (ground connection).
64	CLKSET1	–	Reserved (ground connection).
65	GND	–	Power supply pin (ground).
66	+3.3V	–	power supply pin (VCC).
67	SCLK	O	Serial clock output to digital signal processor IC (IC201).
68	SWDT	O	Write data signal output to digital signal processor IC (IC121).
69	SRDT	I	Read data signal input from digital signal processor IC (IC121).
70	EMP	O	Delmphasis ON/OFF control signal output.
71	SCK1	–	not used (OPEN).
72	SOUT1	–	not used (OPEN).
73	SIN1	–	not used (OPEN).
74	CSB	–	Reserved (VCC connection).
75	LDON	O	Laser ON/OFF control signal output.
76	PIT/GRV	–	not used (OPEN).
77	FOK	I	Focus OK signal input from digital signal processor IC (IC121).
78		–	not used (OPEN).
79	LOCK	–	not used (OPEN).
80	WRPWR	O	Laser power switch signal output to digital signal processor IC (IC121).
81	DIG-RST	O	Reset signal output.
82		–	not used (OPEN).
83	DA-RST	O	Reset signal output to D/A and A/D converters “L”: reset.
84	DSEL-A	–	not used (OPEN).
85	DSEL-B	–	not used (OPEN).
86	MOD	O	MD module ON/OFF control signal output.
87	REC/PB	–	not used (OPEN).
88		–	not used (OPEN).
89	SCTX	O	Record data output authorization signal output.
90	XLATCH	O	Serial latch signal output to digital signal processor IC (IC121).
91		–	not used (OPEN).
92		–	not used (OPEN).
93	AMUTE	–	not used (OPEN).
94	LD OUT	O	Loading motor F control signal output.
95	LD IN	O	Loading motor F control signal output.
96	LIMIT IN	I	Detection input from limit switch (S681).
97	PROTECT	I	Record tab detection input from disk write-protect switch (S683).
98	REFLECT	I	Disk reflection rate detection input from reflect switch (S682).
99	GND	–	Power supply terminal (ground).
100	+3.3V	–	Power supply terminal (VCC).

Pin No.	Pin name	I/O	Description
1	PACON	O	Power amplifier control output.
2	MEGABASE	O	Mega-bus control output.
3	RECH	O	A/D converter select output.
4	STXD	O	Communication with MD and UART send output.
5	SRXD	I	Communication with MD and UART receive input.
6	SCTS	I	UART send request input from MD.
7	SRTS	O	UART send request output to MD.
8	MDH	O	D/A converter select output.
9	PDOWN	O	Notification of power cutoff to MD.
10	MDRST	O	Reset MD microcomputer.
11	PCON	O	Power supply control output.
12	OPEN	O	CD tray control output H: Open.
13	CLOSE	O	CD tray control output H: Close.
14	XRST	O	CD system reset output.
15	MDATA	O	CD serial data output.
16	SENSE1	I	CD sense input 1.
17	MCLK	O	CD serial clock output.
18	XLT	O	CD system latch output.
19		–	not used.
20	SENCE2	I	CD sense input 1.
21	TEST	I	Test mode input. “L”: Reset
22	RSMK1	I	Radio-directed setting 1 (+5V connection).
23	RSMK2	I	Radio-directed setting 2 (ground connection).
24	RSMK3	I	Radio-directed setting 3 (ground connection).
25	ACCHK	I	AC power supply detection input. L: AC H: No AC
26	LEDMD	O	LED on during MD.
27	LED CD	O	LED on during CD.
28	LEDRADIO	O	LED on during radio.
29	SHIFT	O	Shift system clock.
30	RST	I	Hardware reset pin. “L”: Reset
31	EXTAL	I	System clock (5MHz) oscillation input.
32	XTAL	O	System clock (5MHz) oscillation output.
33	VSS		Ground.
34	TX	O	Time clock (32.768kHz) oscillation output.
35	TEX	I	Time clock (32.768kHz) oscillation input.
36	AVSS		Ground for A/D converter.
37	AVREF	I	A/D converter reference voltage input.
38	KEY1	I	Key input (12 stage input) 1.
39	KEY2	I	Key input (12 stage input) 2.
40	KEY3	I	Key input (12 stage input) 3.
41		–	not used (OPEN).
42		–	not used (OPEN).
43		–	not used (OPEN).
44	REGCHK	I	Regulator voltage check input.
45	OPN/CLS	I	CD tray status detection input.
46	FLRST	O	FL microcomputer reset.
47	FLCS2	O	FL name communication and chip select output.
48	FLSCK2	O	FL name communication and clock output.
49	FLDI2	I	FL name communication and data input.
50	FLDO2	O	FL name communication and data output.

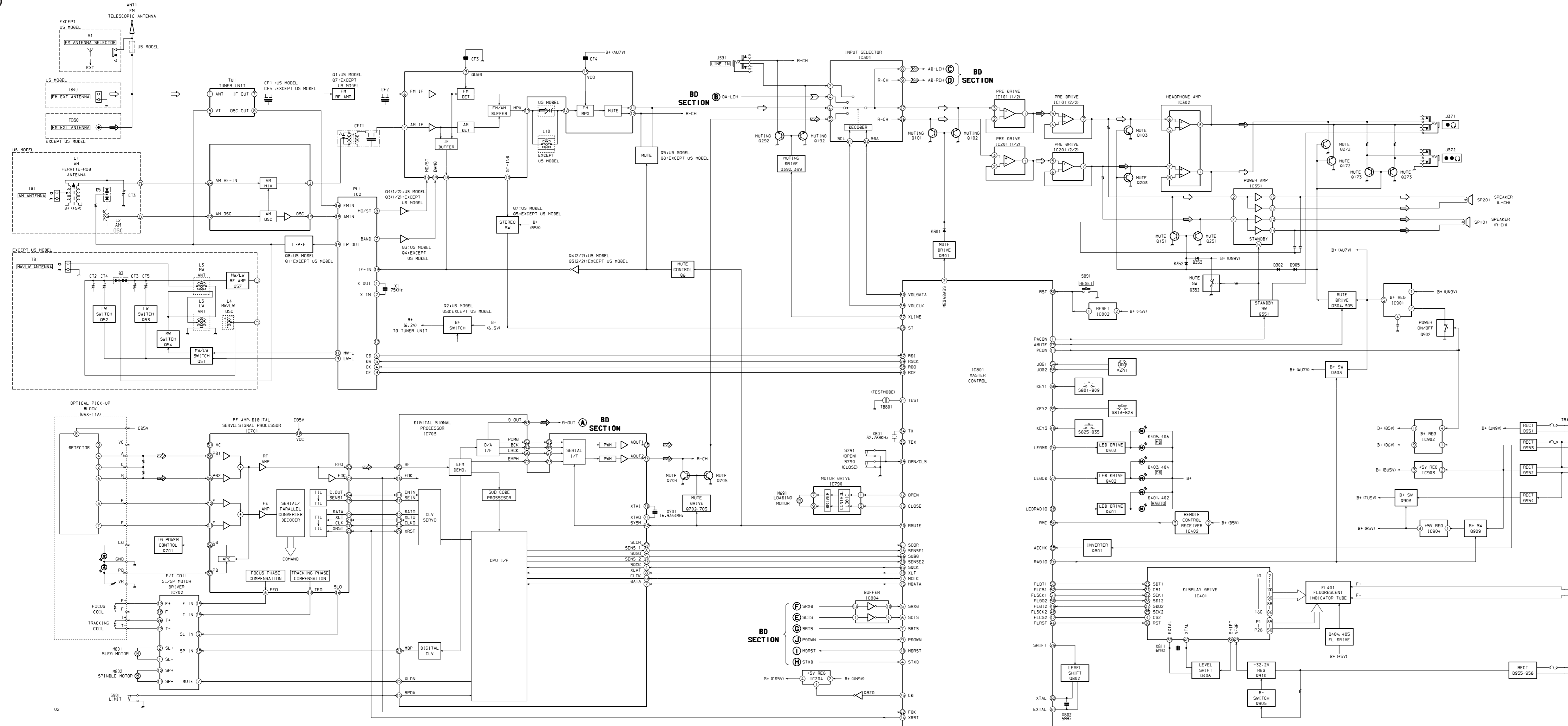
Pin No.	Pin name	I/O	Description
51	FLSCK1	O	Communication with FL microcomputer and clock output.
52	FLCS1	O	FL microcomputer chip select output.
53	FLDT1	O	Communication with FL microcomputer and data output.
54	JOG1	I	JOG dial rotation detection 1 input.
55	JOG2	I	JOG dial rotation detection 2 input.
56	RMC	I	remote control signal input.
57	RDI	I	Radio PLL data input.
58	RDO	O	Radio PLL data output.
59	RSCK	O	Radio PLL clock output.
60	RCE	O	Radio PLL chip enable output.
61	SCOR	I	CD score input.
62	FOK	I	CDFOK input.
63		–	not used (OPEN).
64	EPSD	I/O	EEPROM data I/O.
65	SQCK	O	CDSUBQ clock output.
66	SUBQ	I	CDSUBQ data input.
67	EPSK	O	EEPROM clock output.
68	ST	I	Radio stereo detection. “L”: Mono
69	9/10	I	Radio AM station interval switch. “L”: Set to 9kHz
70	RMUTE	O	Radio mute output.
71	EPCS	O	EEPROM chip select output.
72	VDD	–	Power supply terminal (+5V).
73	NC	–	VDD connection.
74	MD	–	not used (OPEN).
75	CD	O	CD function output.
76	RADIO	O	Radio function output.
77	XLINE	O	Line function output.
78	VOCLK	O	Serial data output for volume.
79	AMUTE	O	Audio mute output.
80	VOLDATA	O	Serial clock output for volume.

6-2. BLOCK DIAGRAM (1)

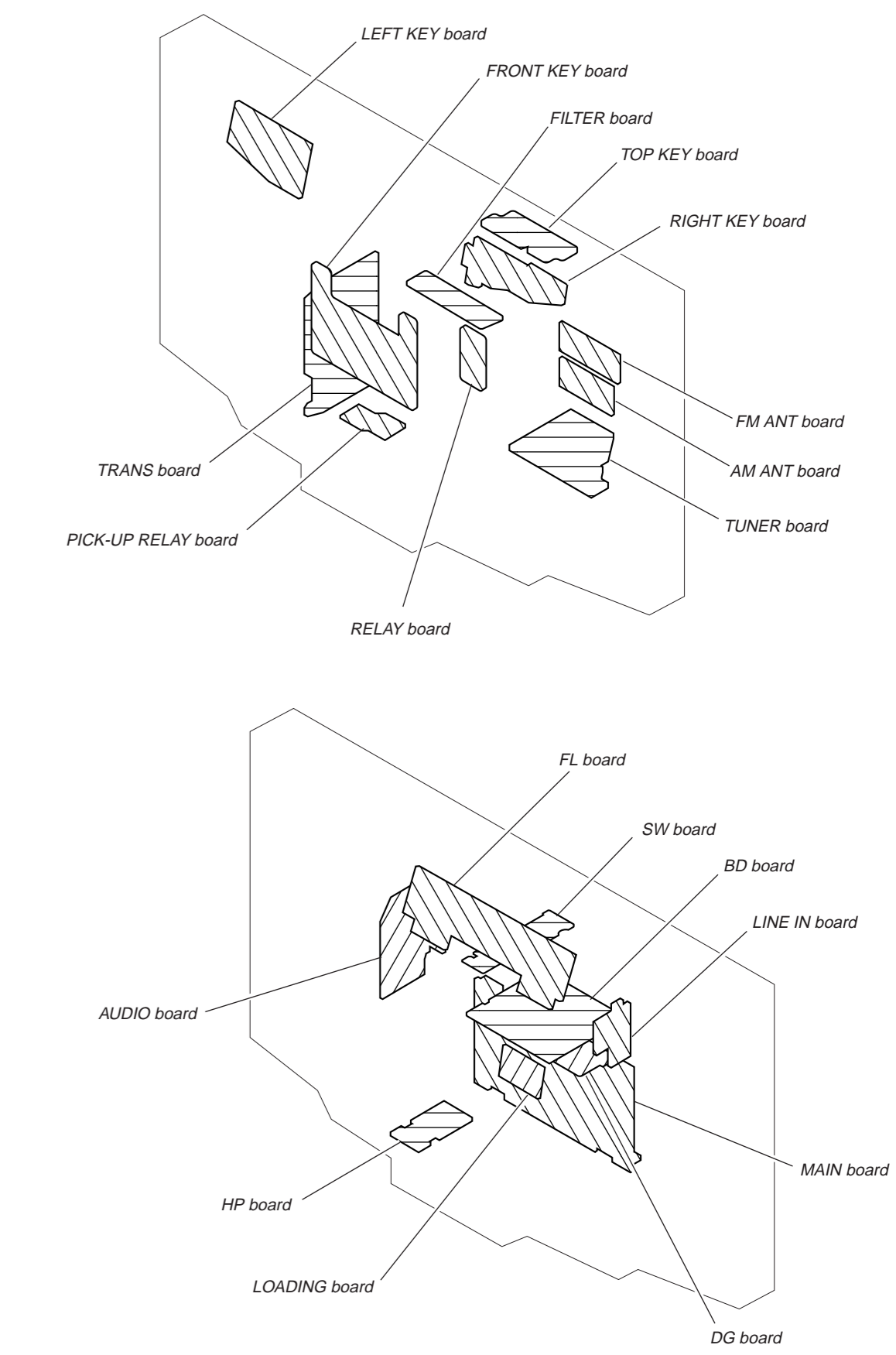


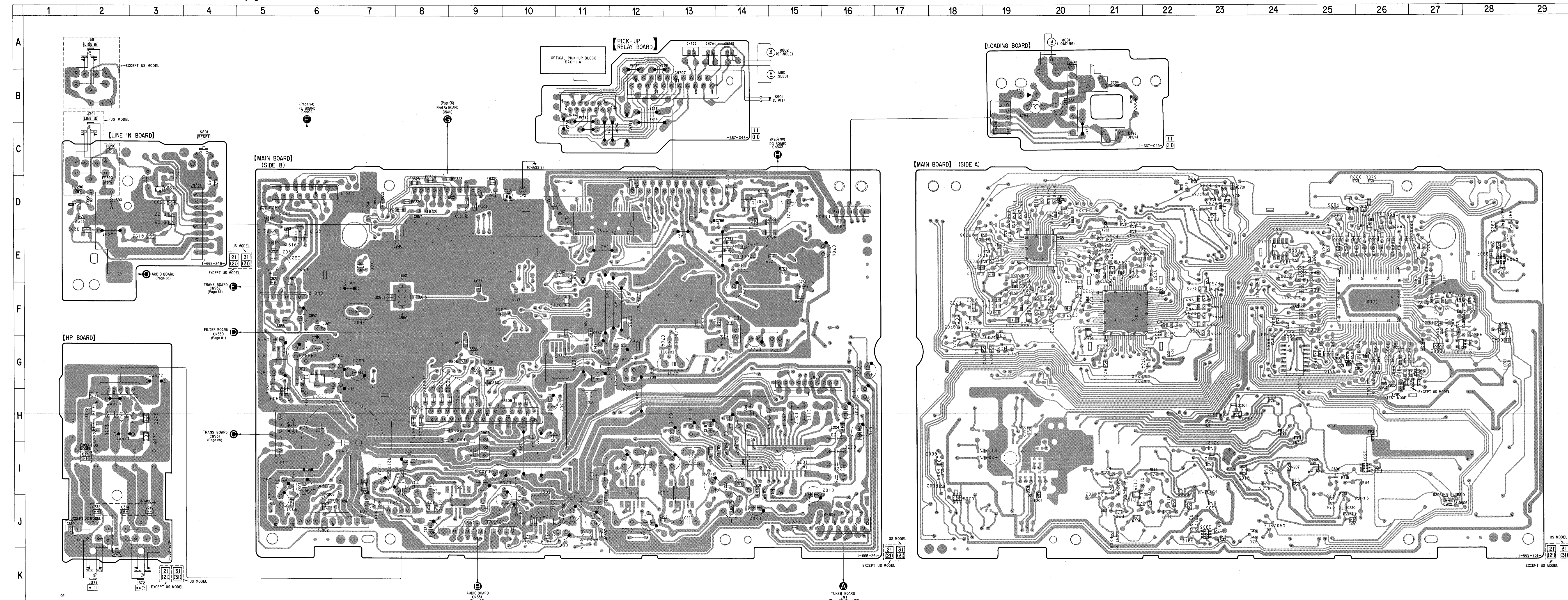
MAIN SECTION

- Signal path.
- ◁ : FM
- ▷ : MD PLAY
- ◁▷ : MD REC
- ◁▷ : CD



• Circuit Boards Location





• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D301	J-23	IC903	G-6
D302	I-7	IC904	G-5
D303	D-10	IC905	I-9
D304	G-20		
D305	G-19		
D306	I-7	Q102	I-21
D711	F-11	Q103	I-23
D712	F-11	Q172	H-2
D790	B-19	Q173	H-3
D901	G-6	Q192	E-3
D902	J-27	Q202	I-21
D903	E-5	Q203	I-25
D904	D-28	Q272	H-2
D905	J-27	Q273	H-3
D906	G-5	Q292	E-2
D907	E-28	Q301	I-26
D910	F-24	Q303	J-18
		Q304	H-23
		Q305	H-23
		Q392	D-3
IC101	I-12	Q399	D-3
IC201	I-13	Q701	D-14
IC301	J-9	Q702	F-18
IC302	E-20	Q703	F-18
IC701	E-20	Q704	G-19
IC702	D-11	Q705	G-19
IC703	F-21	Q801	F-28
IC704	G-11	Q802	F-27
IC790	B-20	Q803	I-18
IC801	F-26	Q902	J-24
IC802	G-27	Q903	J-23
IC803	E-24	Q905	E-28
IC804	G-24	Q909	H-5
IC901	J-10	Q910	E-6
IC902	J-6		

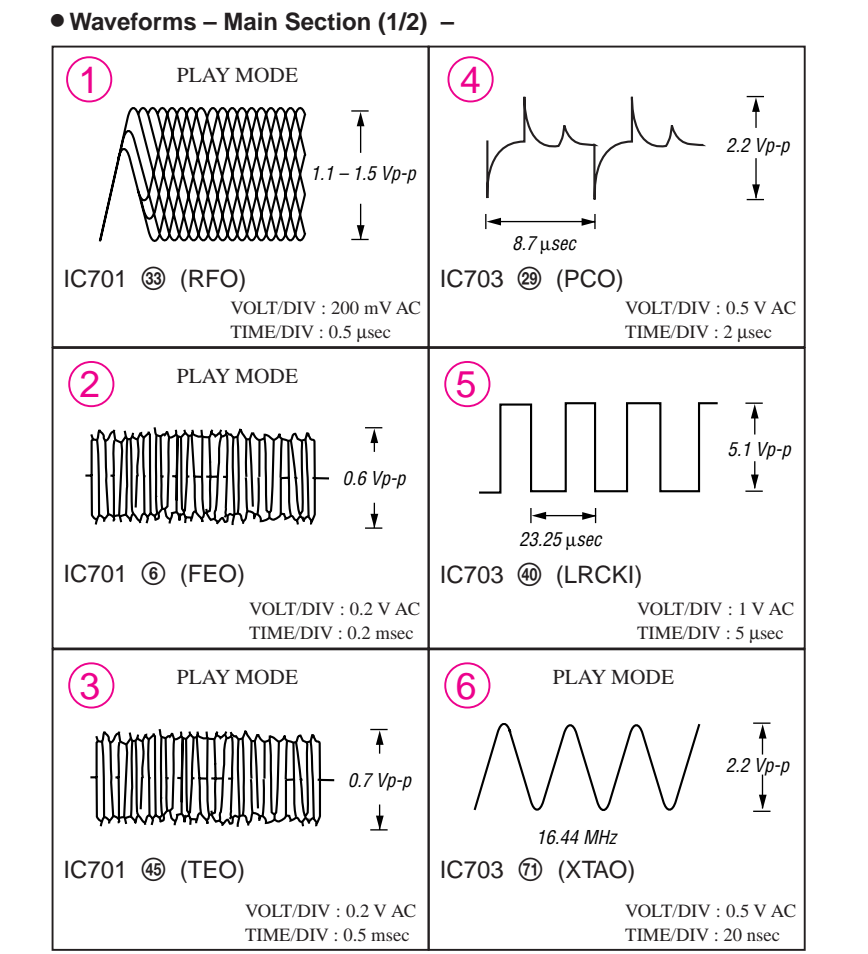
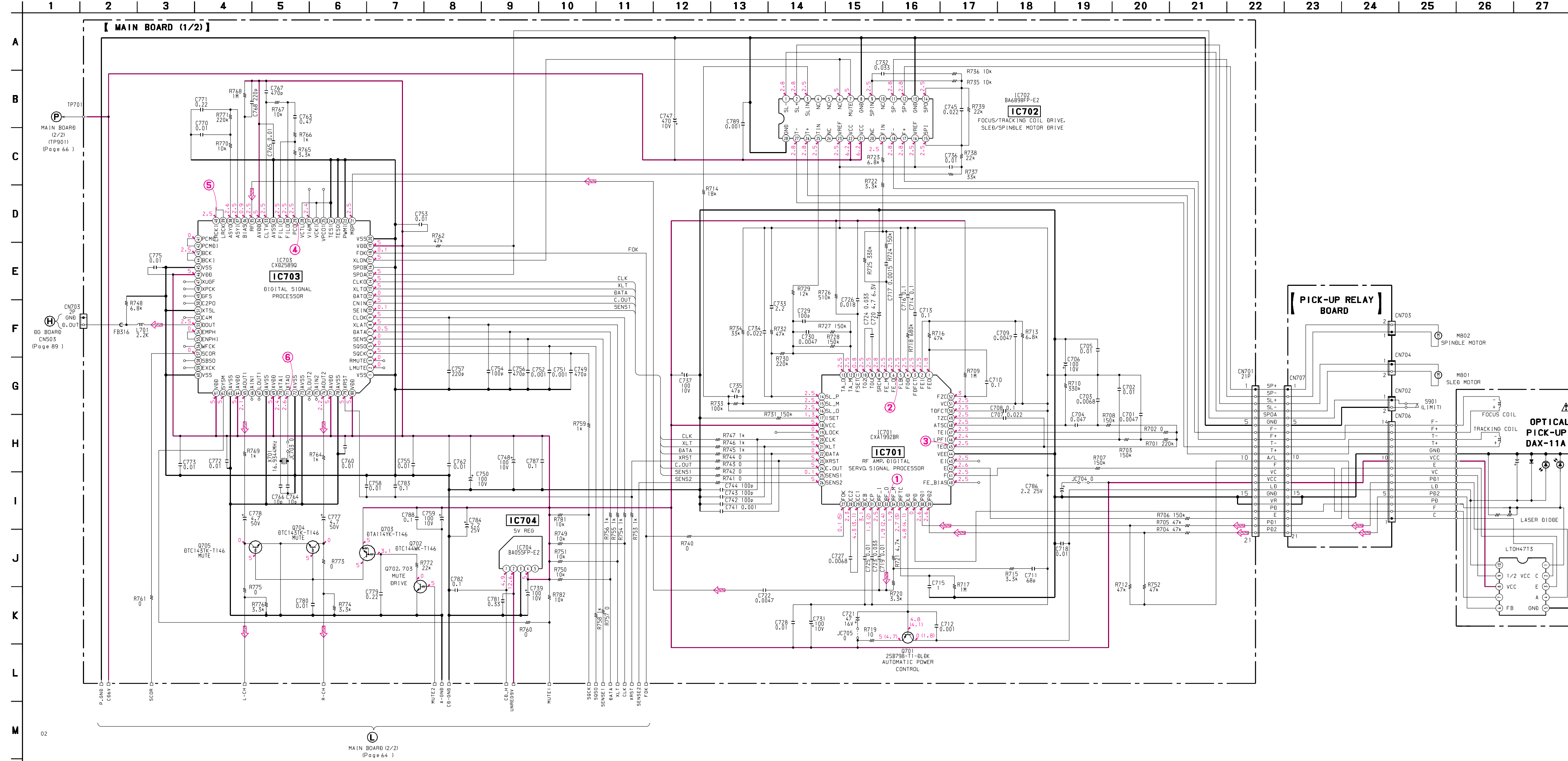
Note:

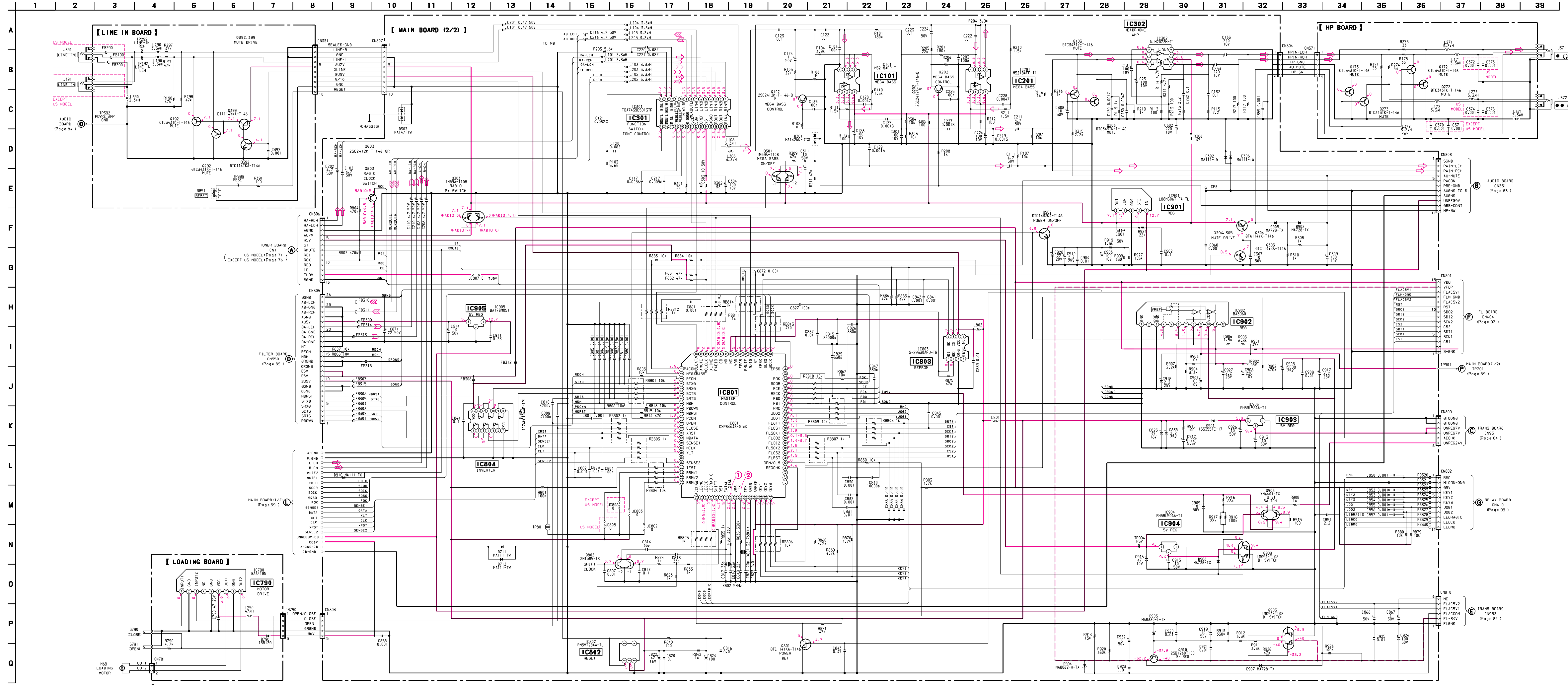
- : parts extracted from the component side.
- : parts mounted on the conductor side.
- : Pattern on the side which is seen. (The other layers' patterns are not indicated.)

Caution:

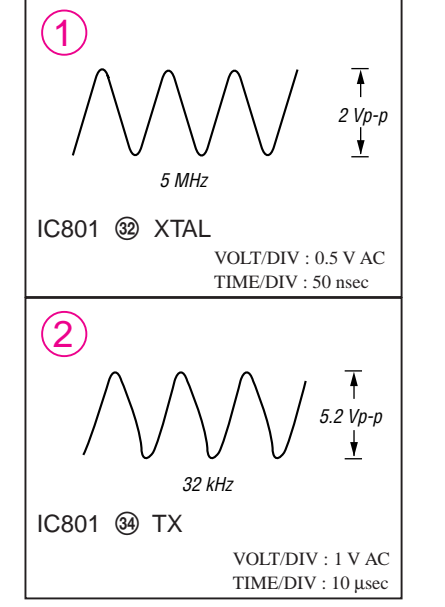
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
 (Side B)

Parts face side: Parts on the parts face side seen from the parts face are indicated.
 (Side A)





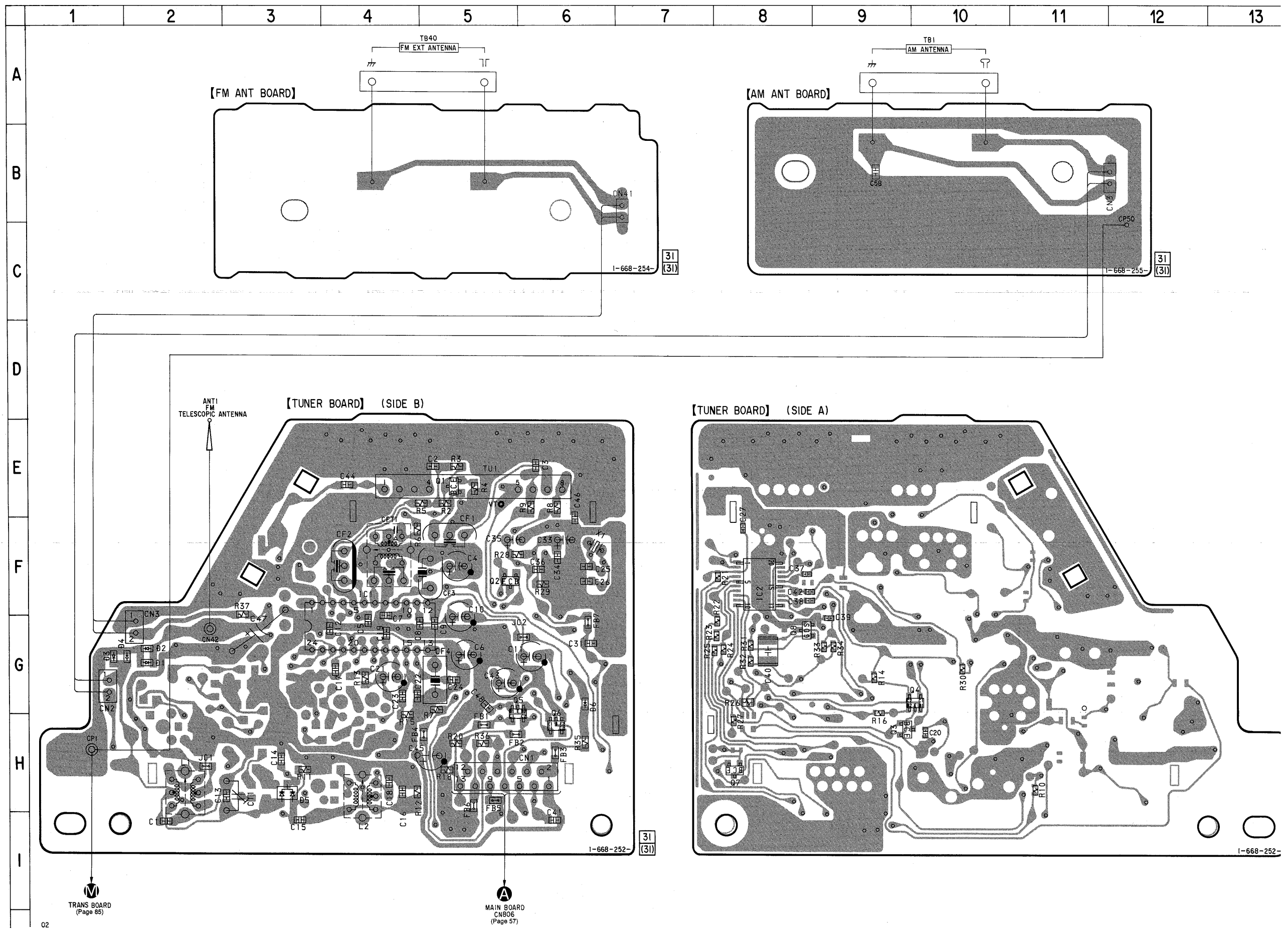
Waveforms – Main Section (2/2) –



- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 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.
 - % : indicates tolerance.
 - : B+ Line.
 - : B- Line.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark : CD (STOP) () : CD (PLAY)
 - Voltages are taken with a VOM (Input impedance 10 M 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.
 - FM : FM
 - MD PLAY : MD PLAY
 - MD REC : MD REC
 - CD : CD

• Semiconductor Location

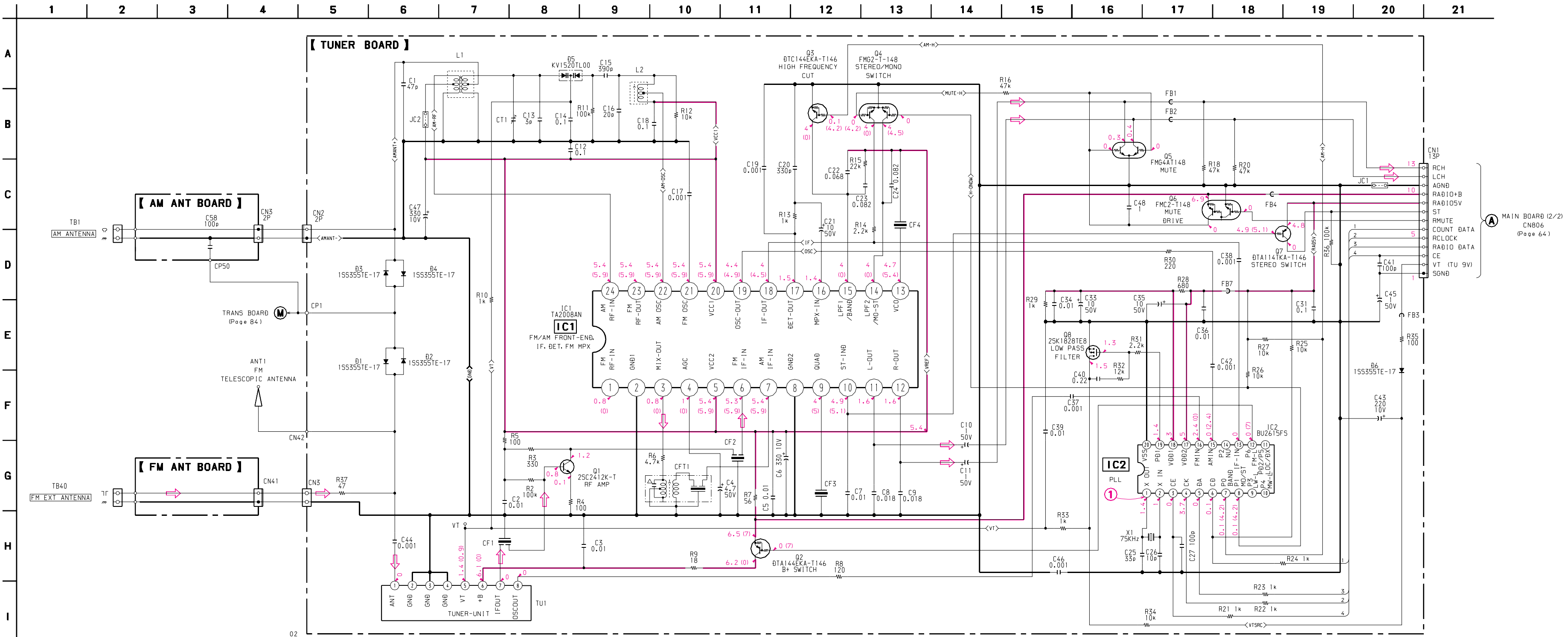
Ref. No.	Location
D1	G-2
D2	G-2
D3	G-1
D4	G-1
D5	H-3
D6	G-6
IC1	G-4
IC2	F-8
Q1	E-5
Q2	F-5
Q3	H-9
Q4	G-9
Q5	G-5
Q6	H-6
Q7	H-8
Q8	G-8



TRANS BOARD
(Page 55)

MAIN BOARD
CN806
(Page 57)

6-8. SCHEMATIC DIAGRAM – TUNER SECTION (US MODEL) – Refer to page 102 for IC Block Diagrams.

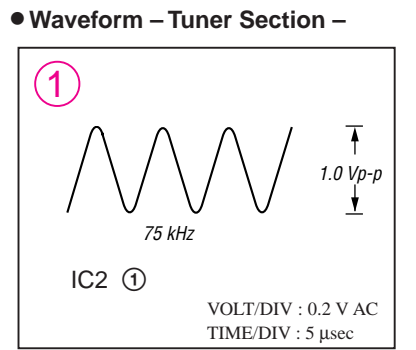


Note:
 • : parts extracted from the component side.
 • : Pattern on the side which is seen.
 (The other layers' patterns are not indicated.)

Caution:
 Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
 Parts face side: Parts on the parts face side seen from the parts face are indicated.

Note:
 • All capacitors are in μF unless otherwise noted. pF : μpF
 50 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+ Line.
 • Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 () : FM
 () : AM
 • Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.

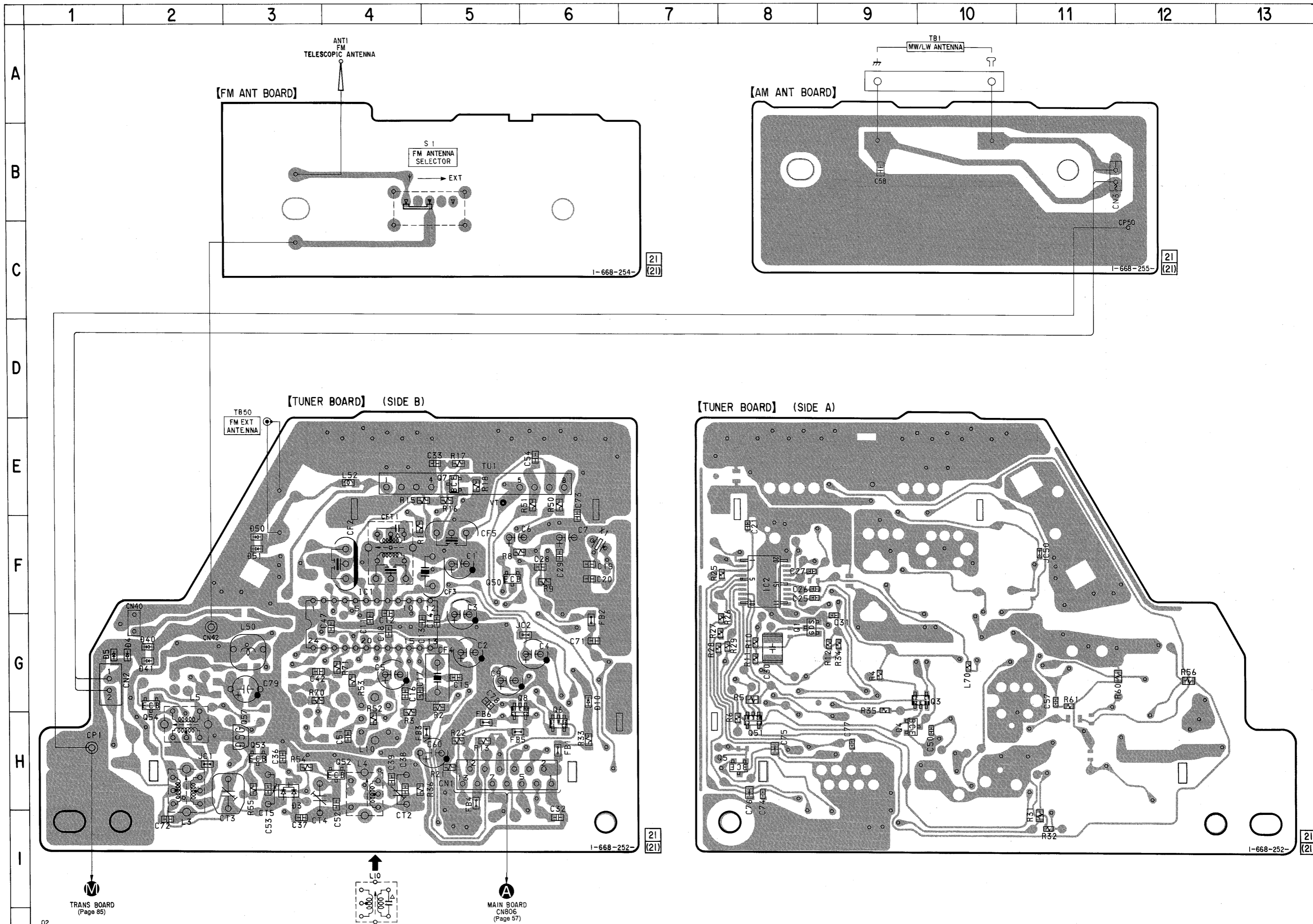
• Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 • Circled numbers refer to waveforms.
 • Signal path.
 ◀ : FM

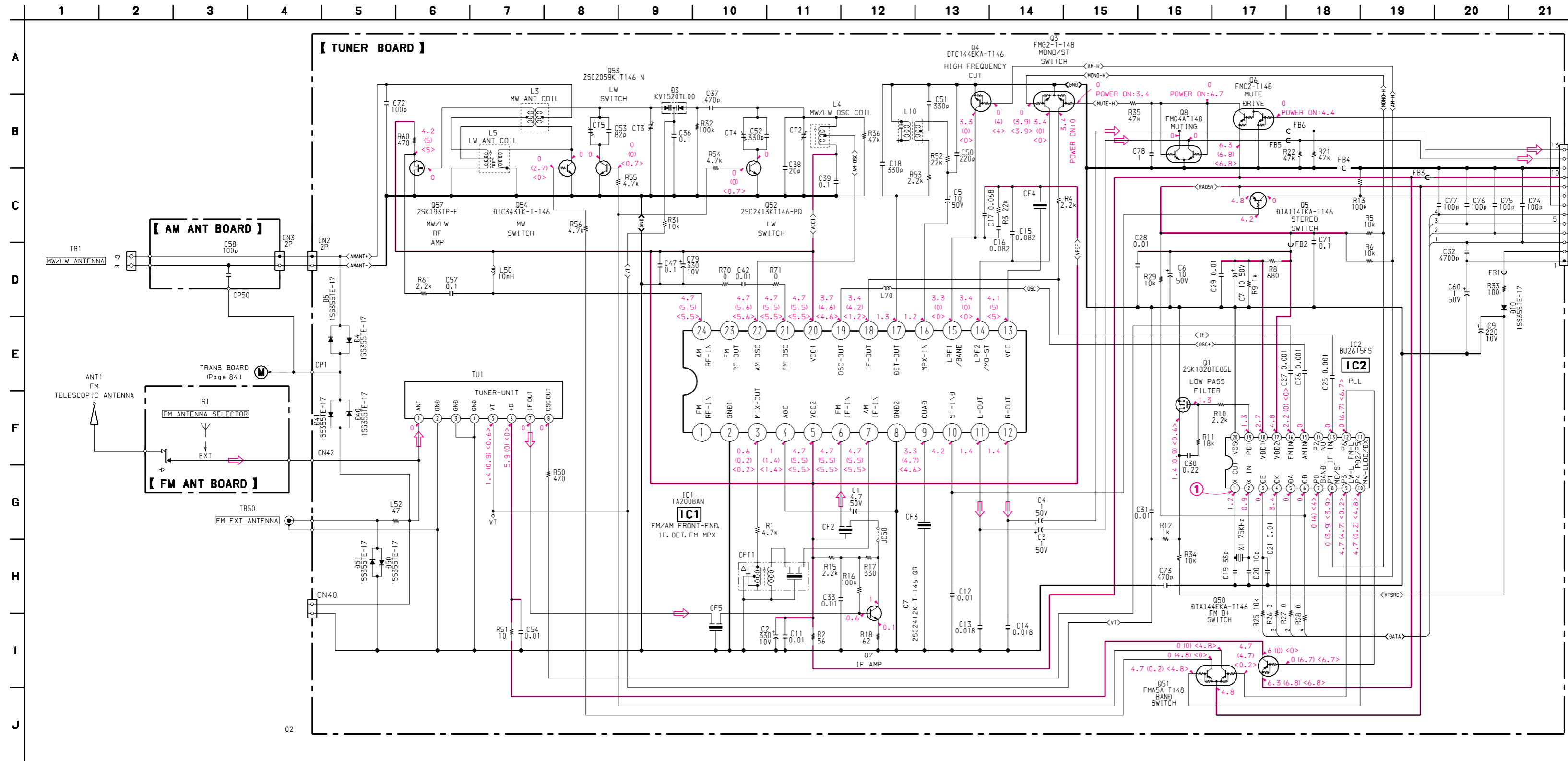


6-9. PRINTED WIRING BOARDS - TUNER SECTION (EXCEPT US MODEL) - • Refer to page 53 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location
D3	H-3
D4	G-1
D5	G-1
D10	G-6
D40	G-2
D41	G-2
D50	F-3
D51	F-3
IC1	G-4
IC2	F-8
Q1	G-8
Q3	G-9
Q4	H-9
Q5	H-8
Q6	H-6
Q7	E-5
Q8	G-5
Q50	F-5
Q51	H-8
Q52	H-4
Q53	H-3
Q54	G-2
Q57	H-3





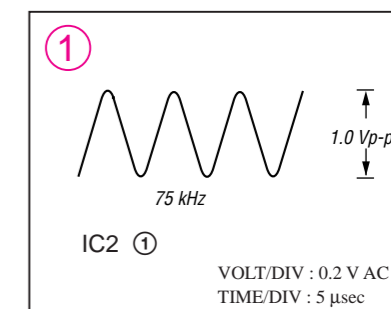
Note:
 ● : parts extracted from the component side.
 ○ : Pattern on the side which is seen.
 (The other layers' patterns are not indicated.)

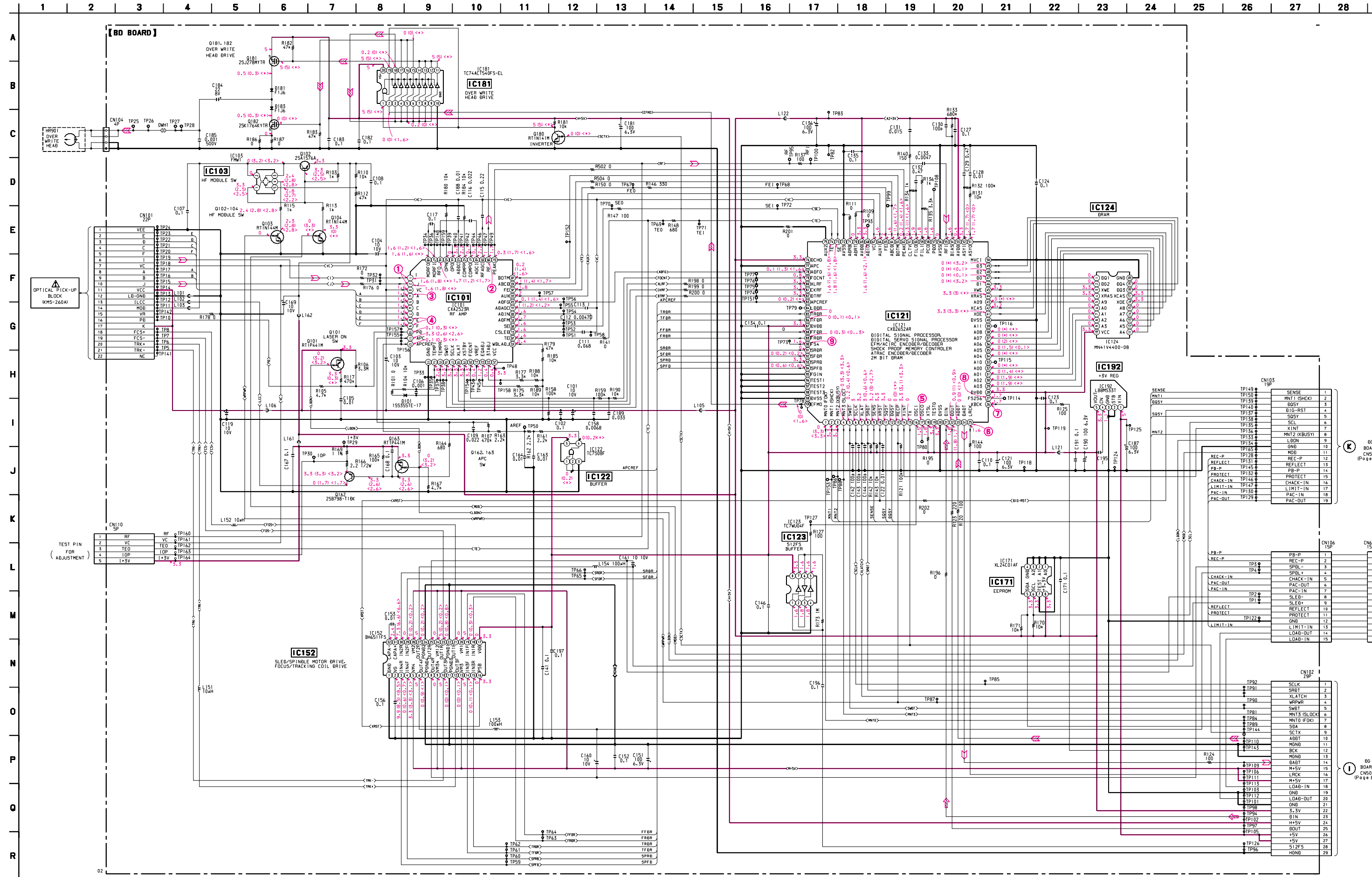
Caution:
 Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
 Parts face side: Parts on the parts face side seen from the parts face are indicated.

Note:
 ● All capacitors are in μF unless otherwise noted. pF: μF
 50 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.
 ● \triangle : internal component.
 ● --- : B+ Line.
 ● Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : FM
 () : AM
 < > : LW
 ● Voltages are taken with a VOM (Input impedance 10 M Ω).
 Voltage variations may be noted due to normal production tolerances.

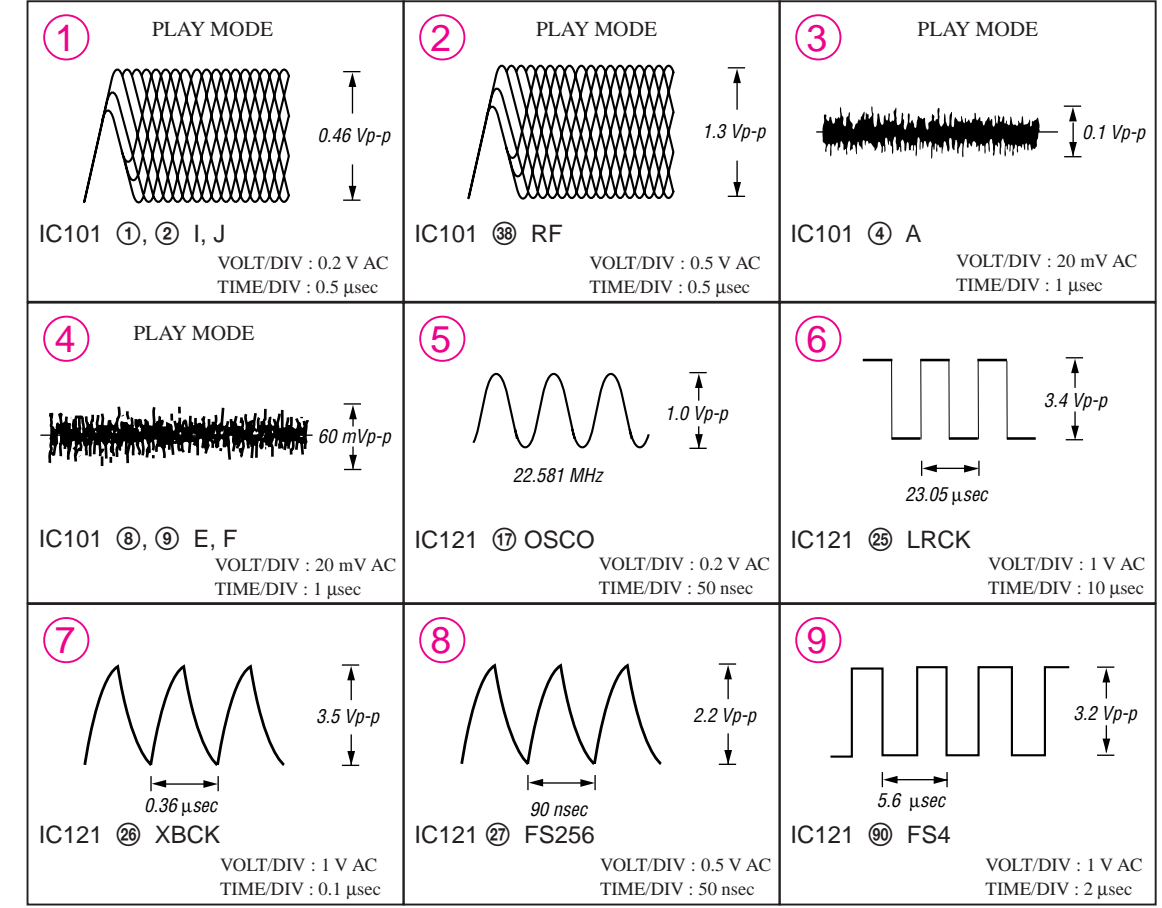
● Waveforms are taken with an oscilloscope.
 Voltage variations may be noted due to normal production tolerances.
 ● Circled numbers refer to waveforms.
 ● Signal path.
 --- : FM

● Waveform – Tuner Section –





Waveforms – BD Section –



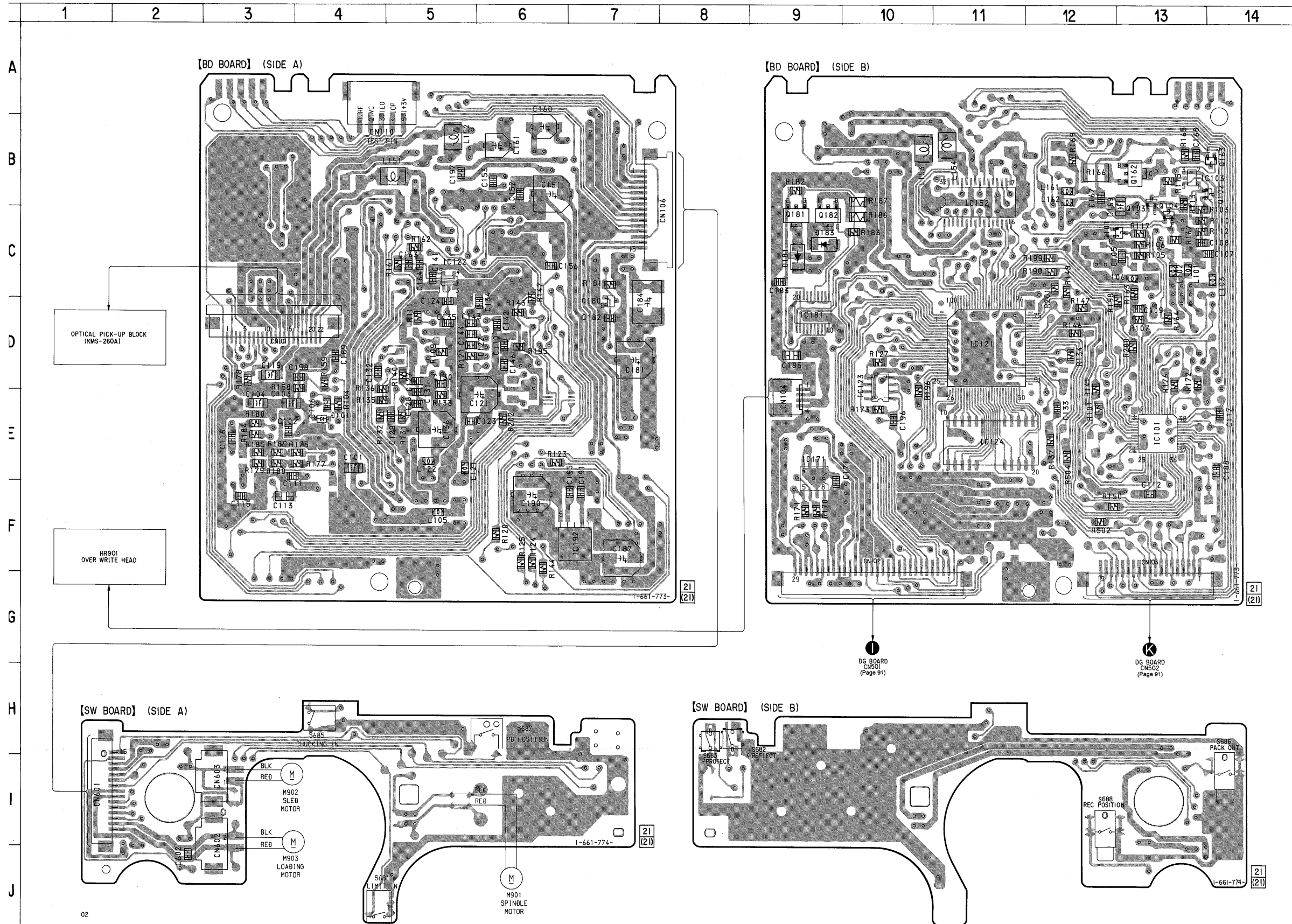
Semiconductor Location

Ref. No.	Location
D101	E-4
D181	C-9
D183	C-9
IC101	E-13
IC103	B-13
IC121	D-11
IC122	C-5
IC123	D-10
IC124	E-11
IC152	B-11
IC171	E-9
IC181	D-9
IC192	F-7
Q101	C-13
Q102	B-14
Q103	B-13
Q104	C-13
Q162	B-13
Q163	B-14
Q180	D-7
Q181	C-9
Q182	C-9

Note:
 • All capacitors are in μF unless otherwise noted. pF: μF
 50 WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and 1/4 W or less unless otherwise specified.
 • % : indicates tolerance.
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

• B+ Line.
 • Voltages and waveforms are dc with respect to ground under no-signal conditions.
 no mark : MD STOP
 () : MD PLAY
 < : MD REC
 * : impossible to measure
 • Voltages are taken with a VOM (Input impedance 10 MΩ). 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.
 Δ : MD PLAY
 Δ : MD REC
 Δ : CD

12. PRINTED WIRING BOARDS - BD SECTION - Refer to page 53 for Circuit Boards Location.

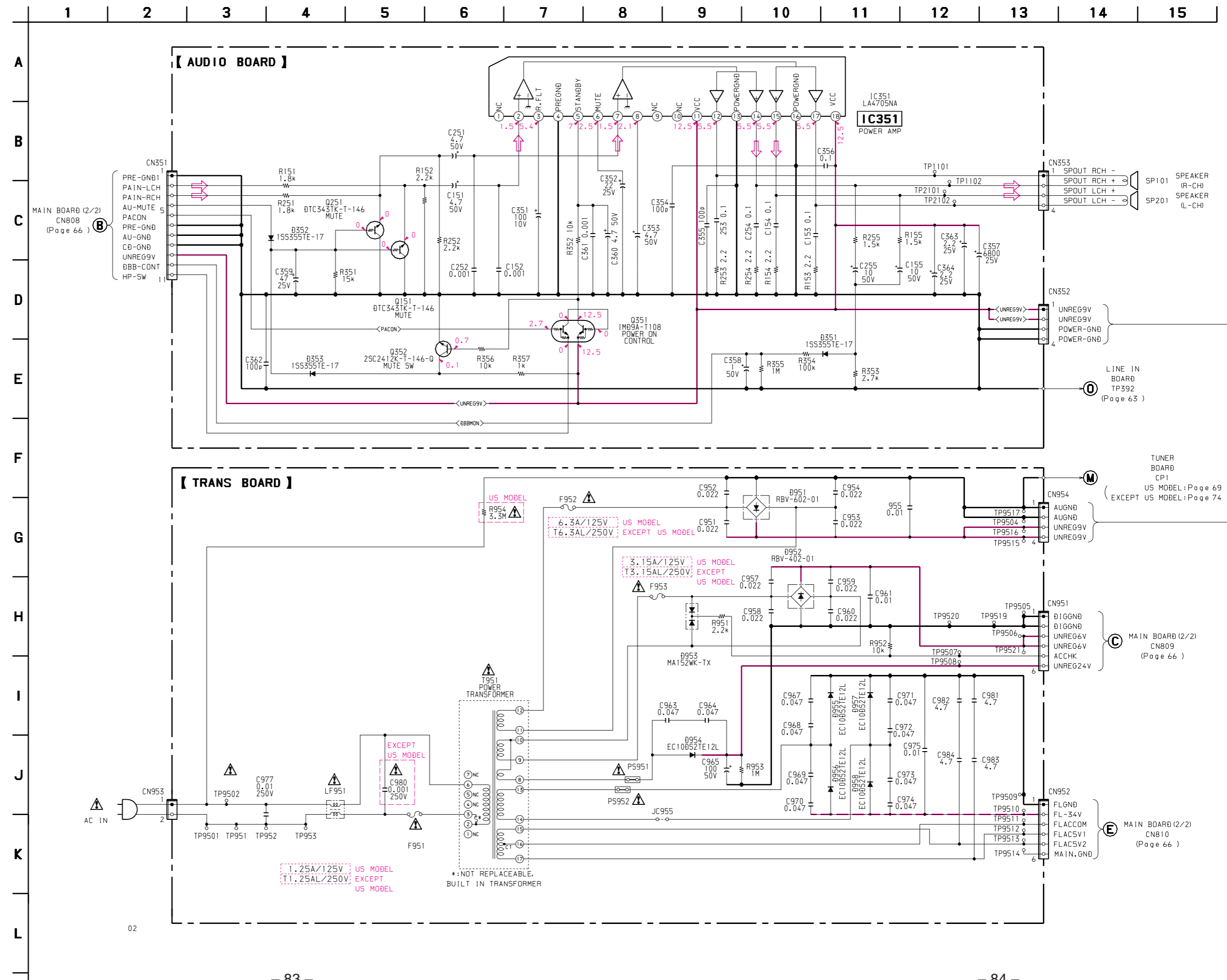


Note:

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

Caution:

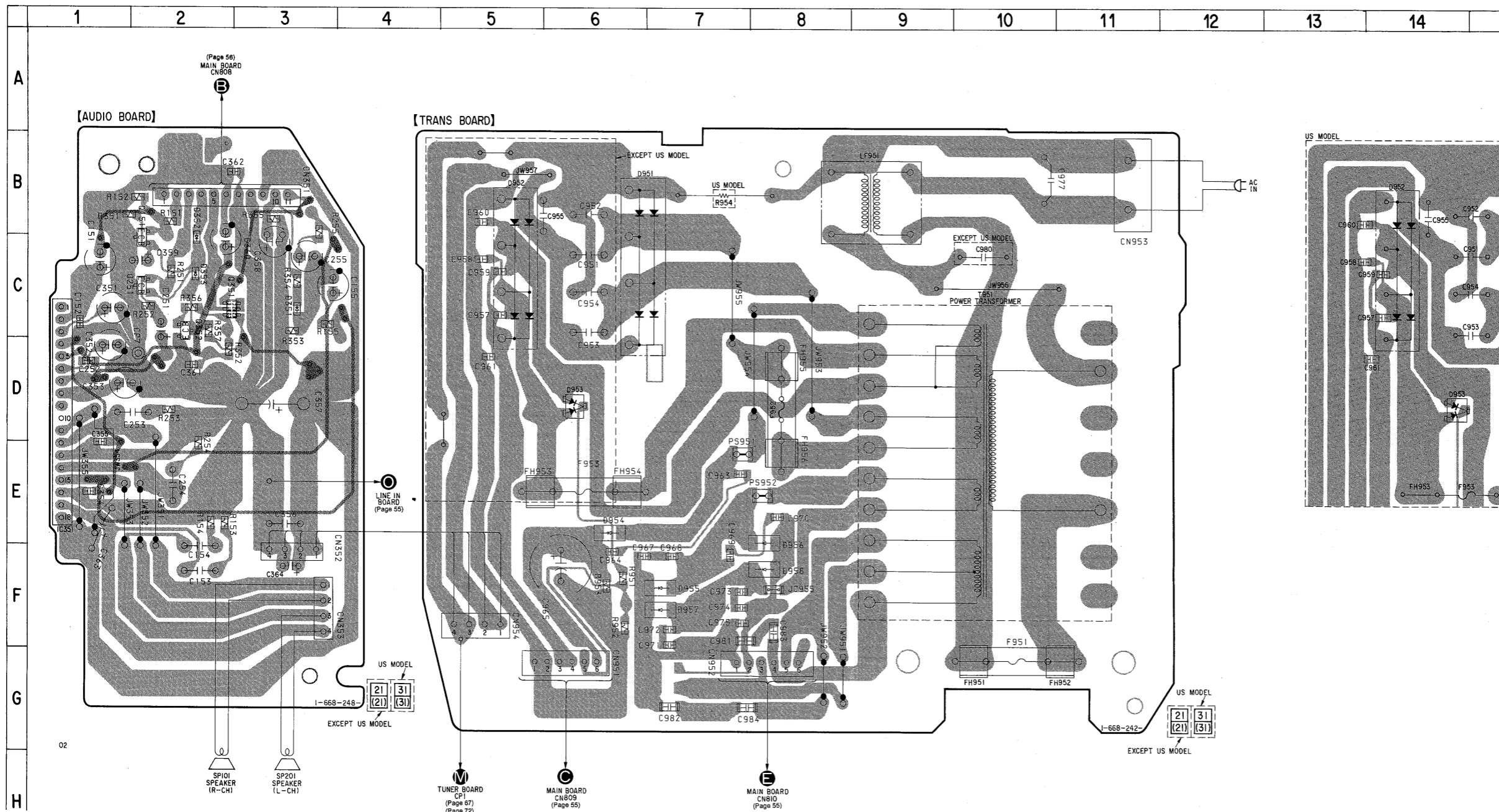
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.



Note:
 • All capacitors are in μF unless otherwise noted. pF : μF
 50 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.

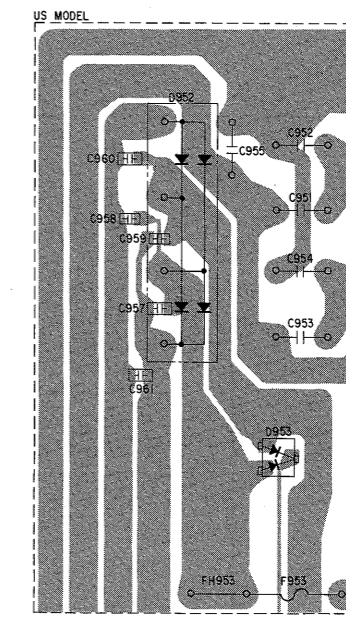
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

- — : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
 no mark : FM
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

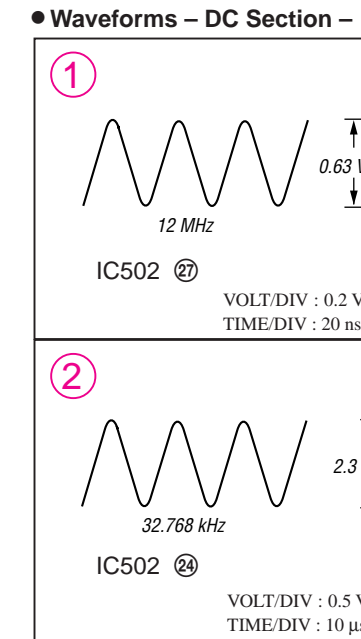
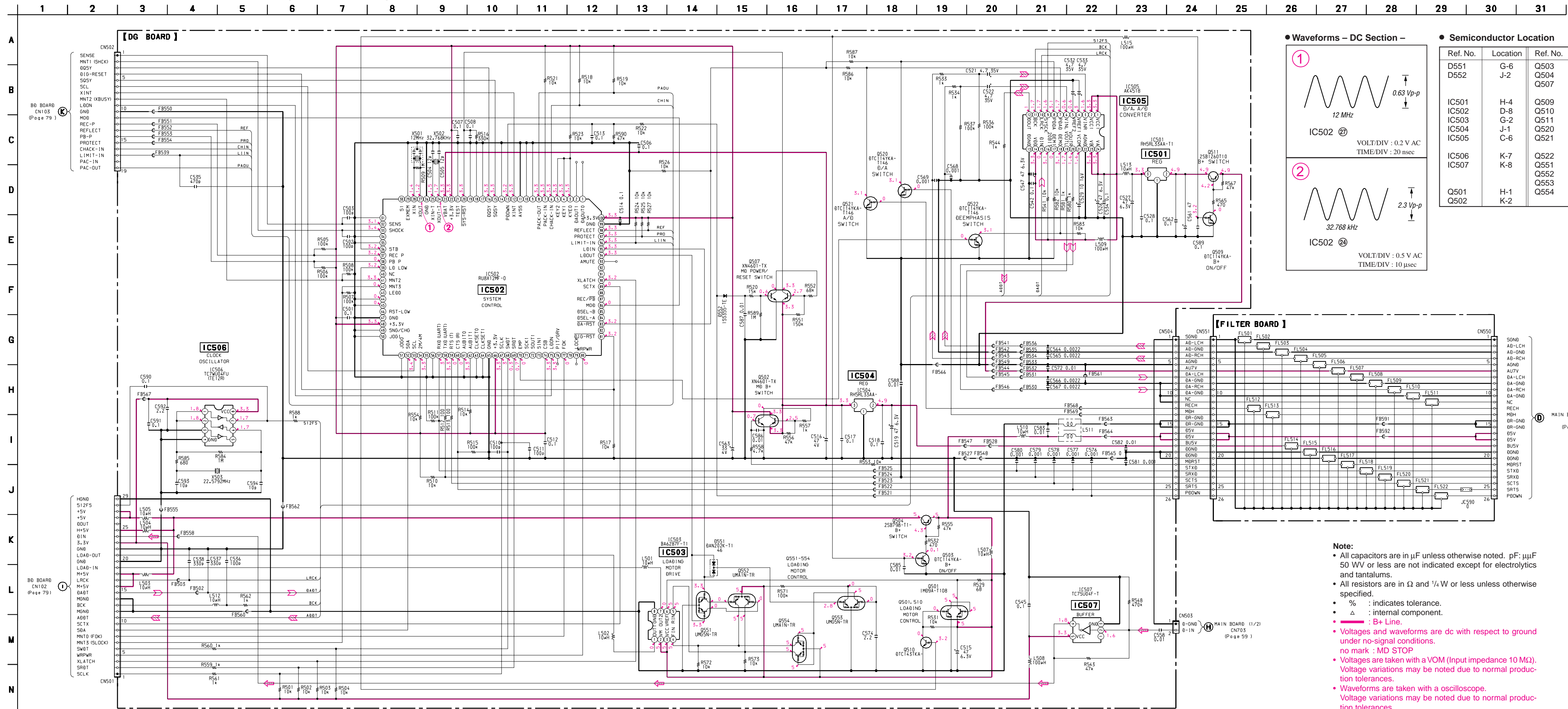


• Semiconductor Location

Ref. No.	Location
D351	C-3
D352	C-2
D353	C-2
D951	C-6
D952	C-5
(EXCEPT US MODEL)	
D-952	C-14
(US MODEL)	
D953	D-6
(EXCEPT US MODEL)	
D-953	D-14
(US MODEL)	
D954	E-6
D955	F-7
D956	E-8
D957	F-7
D958	F-8
IC351	D-1
Q151	C-2
Q251	C-2
Q351	C-2
Q352	C-2

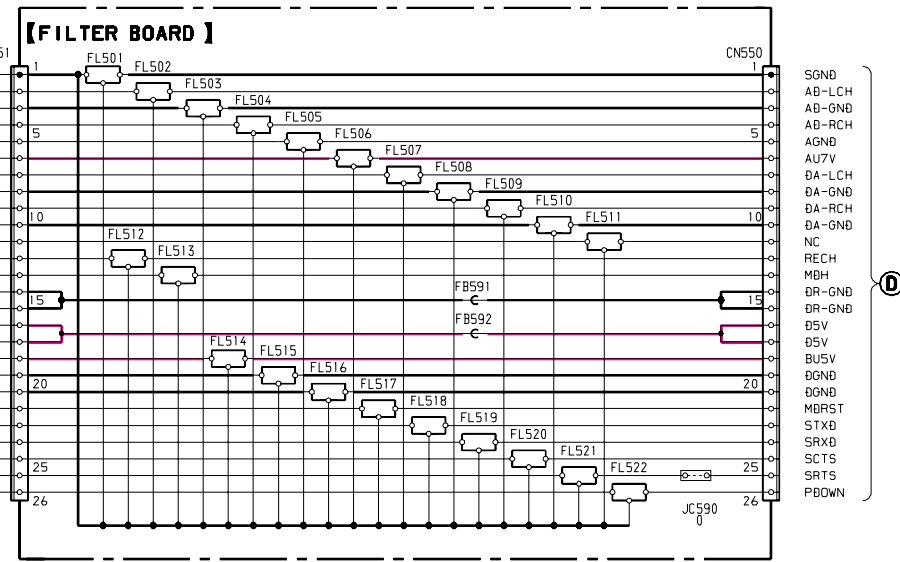


Note:
 • ○ : parts extracted from the component side.
 • ▨ : Pattern of the rear side.
 • ▩ : Pattern on the side which is seen.



● Semiconductor Location

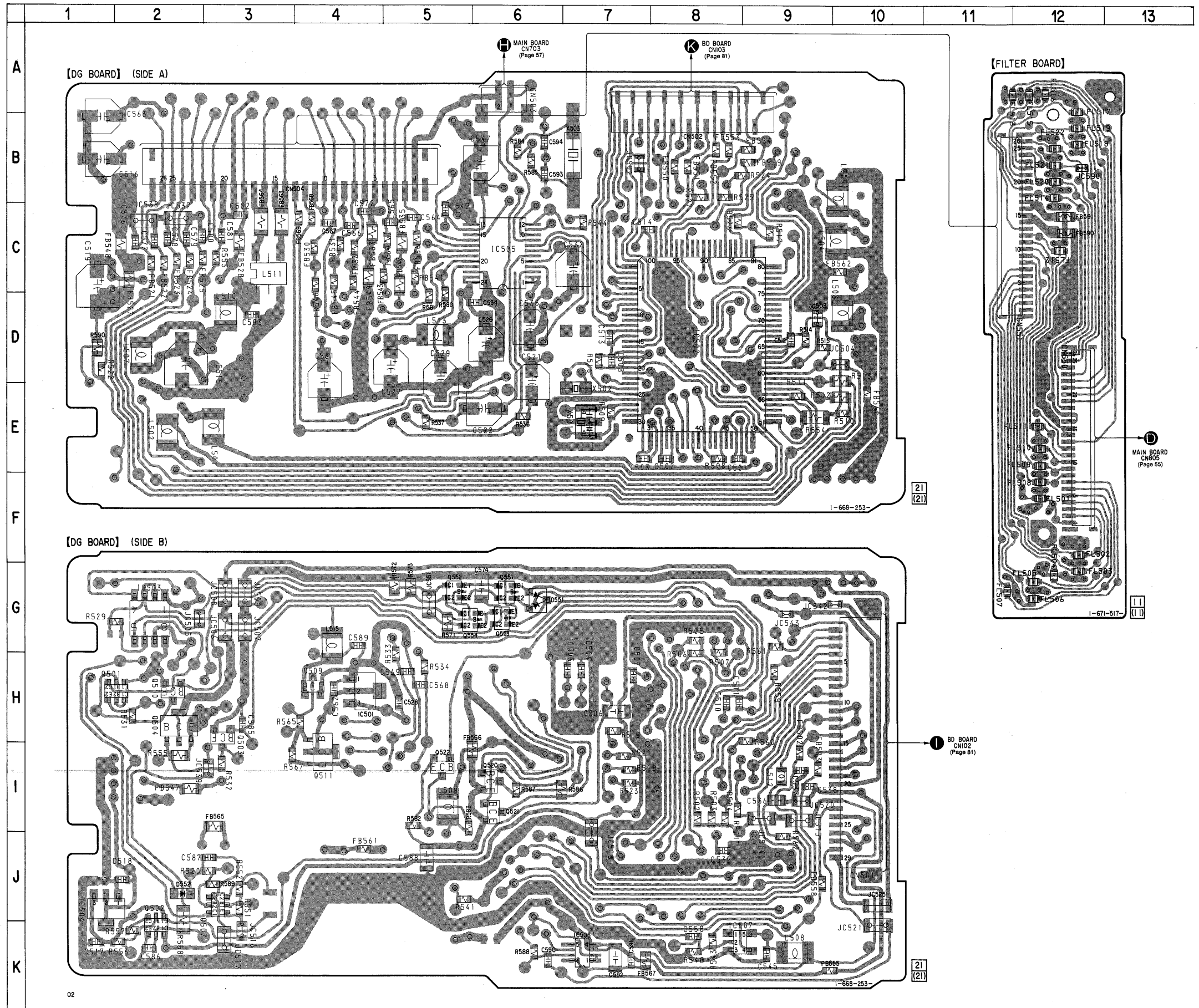
Ref. No.	Location	Ref. No.	Location
D501	G-6	Q503	H-3
D502	J-2	Q504	H-2
		Q507	J-3
IC501	H-4	Q509	H-4
IC502	D-8	Q510	H-2
IC503	G-2	Q511	I-4
IC504	J-1	Q520	I-6
IC505	C-6	Q521	I-6
IC506	K-7	Q522	I-5
IC507	K-8	Q551	G-6
		Q552	G-5
		Q553	G-6
Q501	H-1	Q554	G-5
Q502	K-2		



- Note:**
- All capacitors are in µF unless otherwise noted. pF: µµF
 - 50 W or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4 W or less unless otherwise specified.
 - % : indicates tolerance.
 - Δ : internal component.
 - — : B+ Line.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions.
 - Voltages are taken with a VOM (Input impedance 10 MΩ). 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.
 - MD PLAY
 - MD REC
 - CD

6-16. PRINTED WIRING BOARDS – DG SECTION – • Refer to page 53 for Circuit Boards Location.

Location
H-3
H-2
J-3
H-4
H-2
I-4
I-6
I-5
G-6
G-5
G-6
G-5



Note:
 • — : parts extracted from the component side.
 • : Pattern on the side which is seen.
 (The other layers' patterns are not indicated.)

Caution:
 Pattern face side: Parts on the pattern face side seen from the (Side B)
 Parts face side: Parts on the parts face side seen from the (Side A)

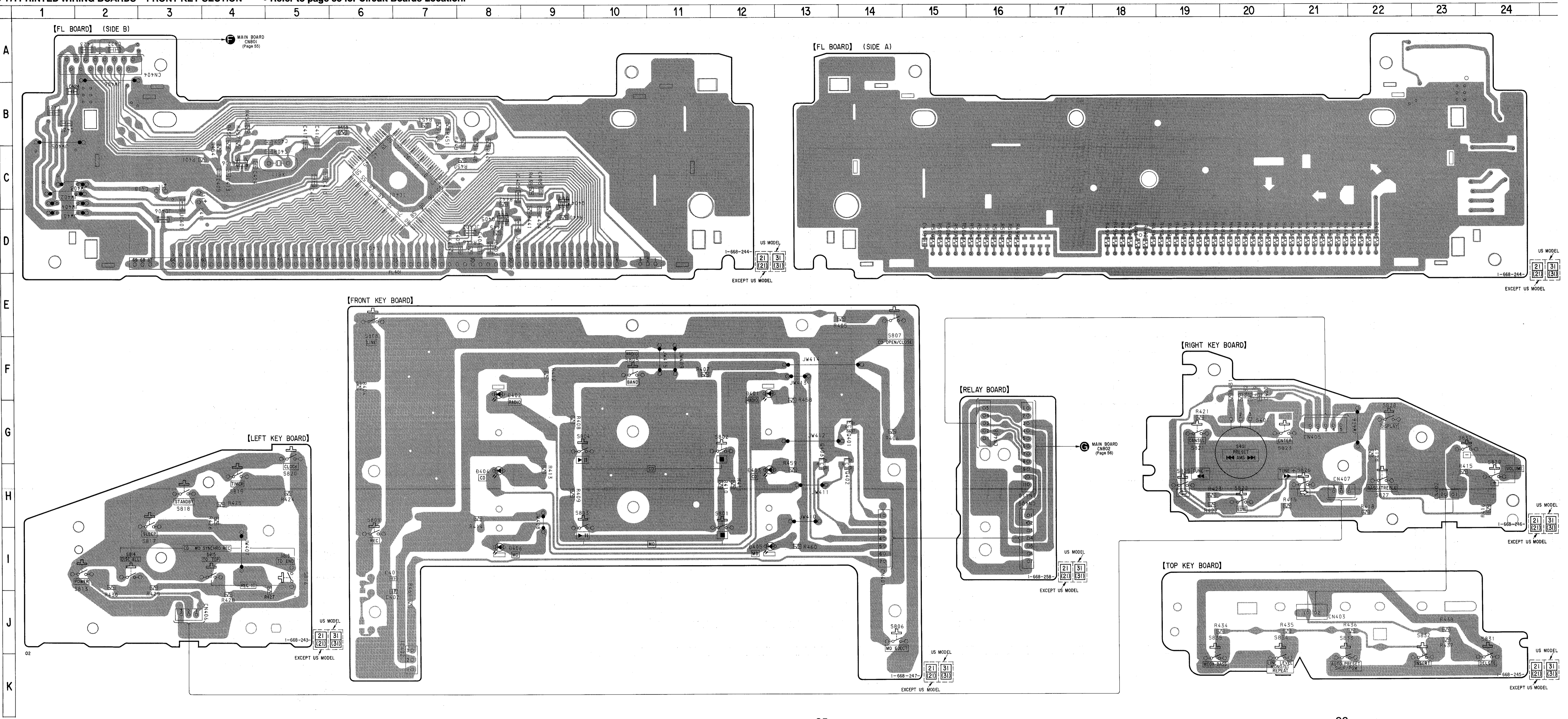
6-17. PRINTED WIRING BOARDS - FRONT KEY SECTION - Refer to page 53 for Circuit Boards Location.

• Semiconductor Location

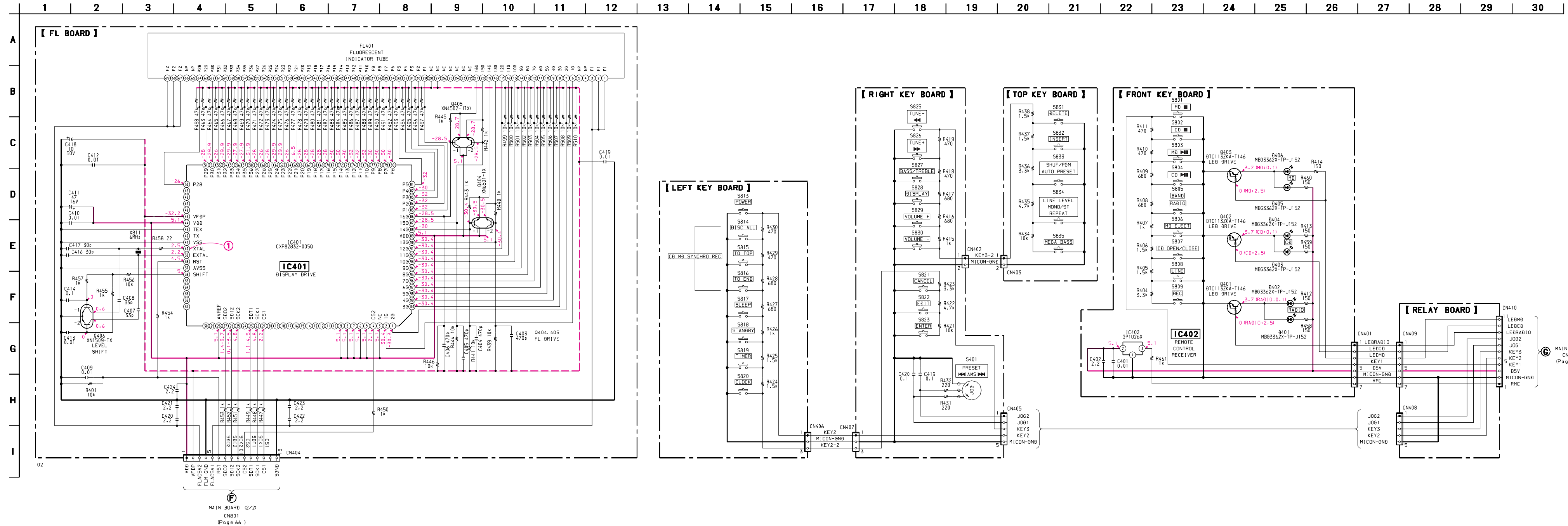
Ref. No.	Location
D401	F-12
D402	F-8
D403	H-12
D404	H-8
D405	I-12
D406	I-8
IC401	C-7
IC402	K-7
Q401	G-14
Q402	H-14
Q403	H-13
Q404	C-9
Q405	D-8
Q406	C-4

Note:
 • : parts extracted from the component side.
 • : Pattern on the side which is seen.
 (The other layers' patterns are not indicated.)

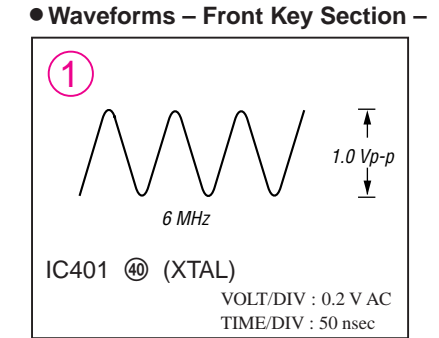
Caution:
 Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.
 Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.



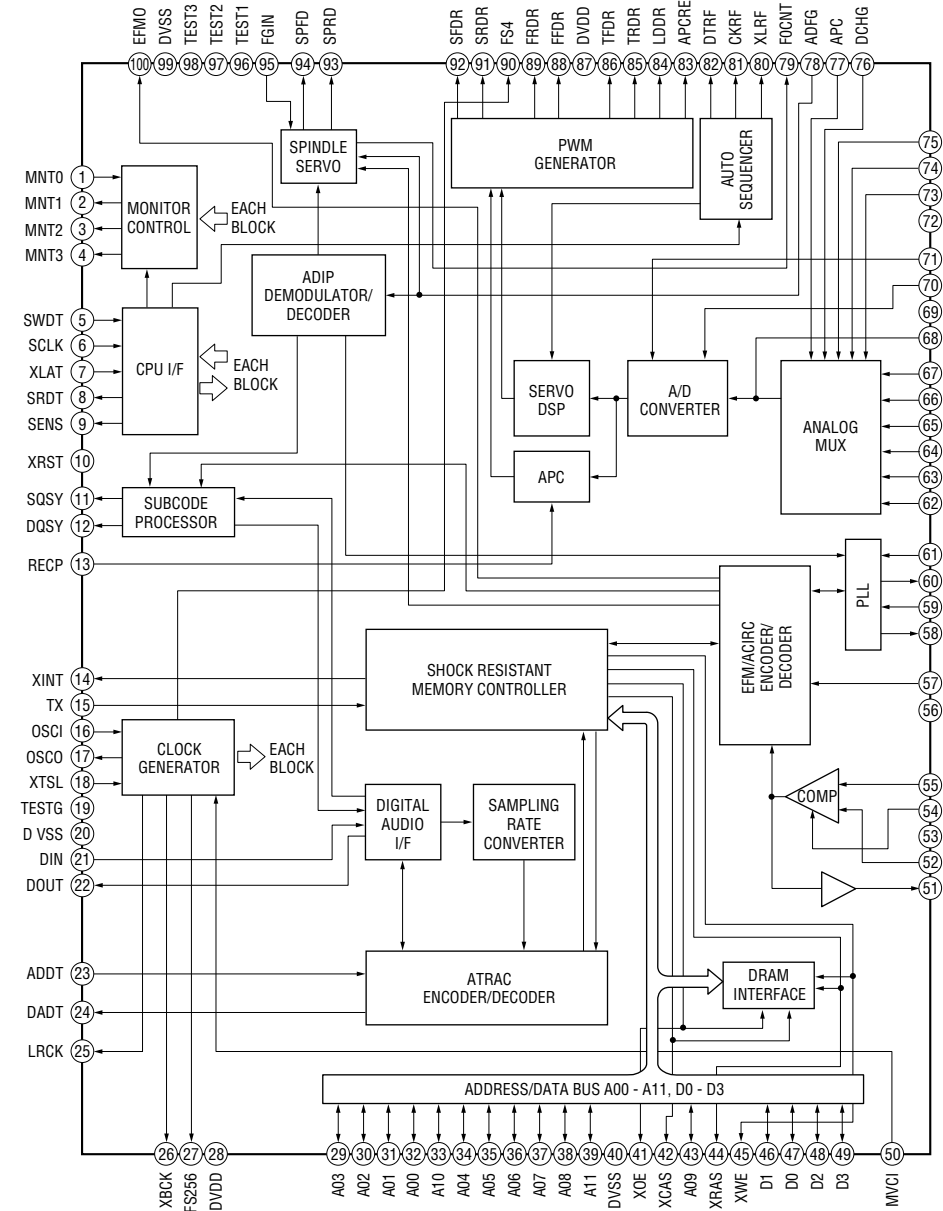
6-18. SCHEMATIC DIAGRAM – FRONT KEY SECTION –



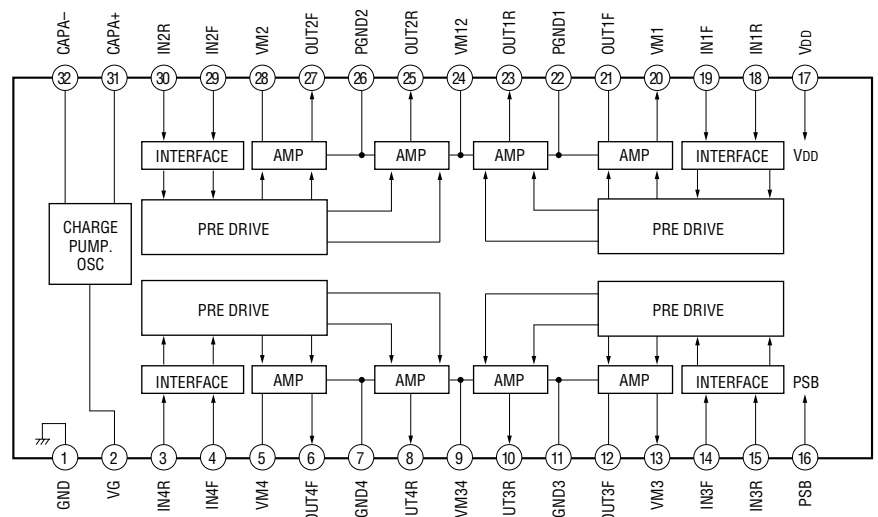
- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - — : B+ Line.
 - — : B- Line.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions.
 - no mark : FM
 - 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.



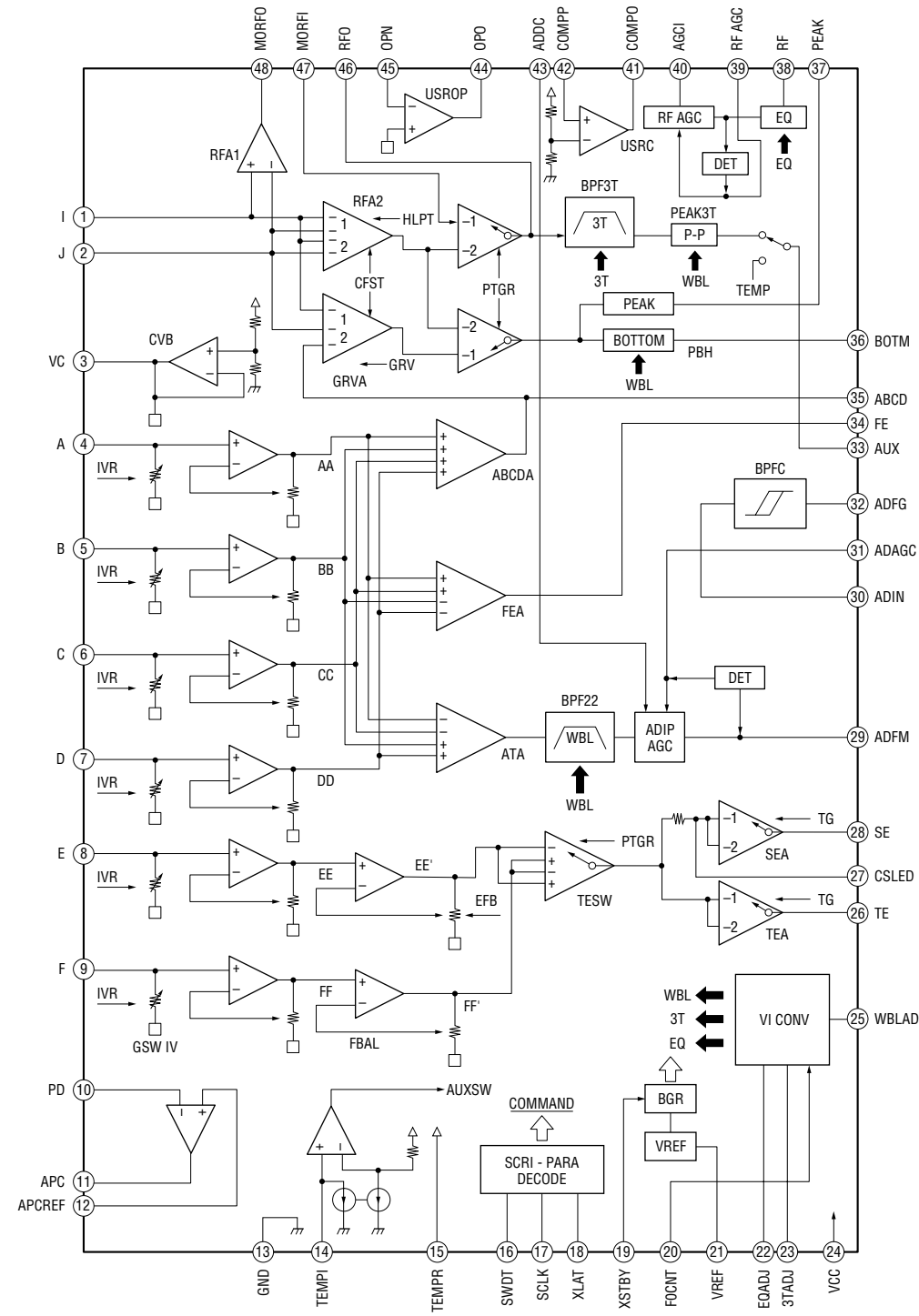
● IC Block Diagrams – BD Section –
IC121 CXD2652AR



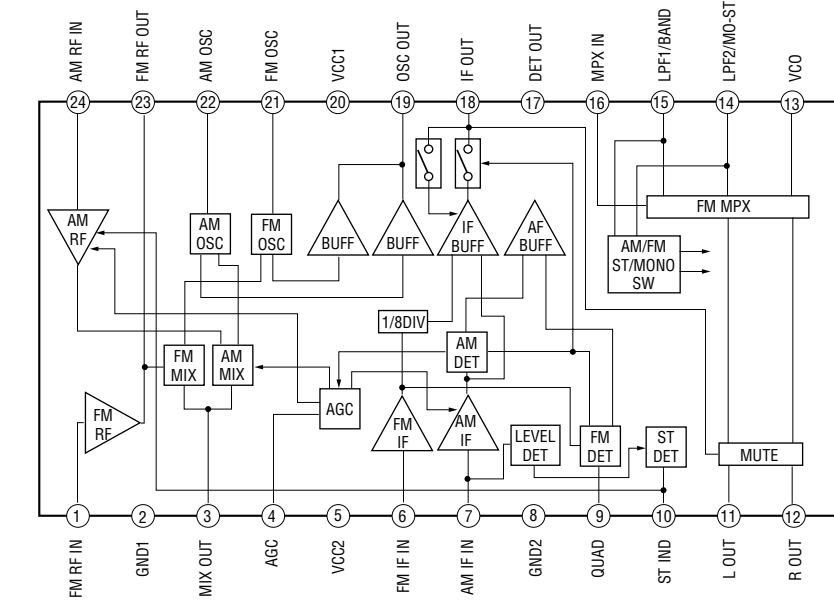
IC152 BH6511FS



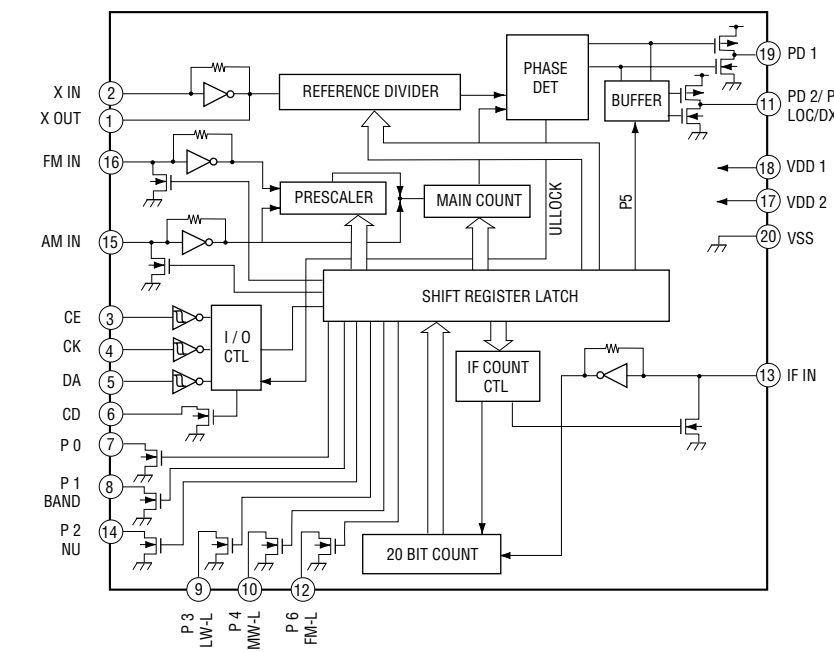
IC101 CXA2523R



● IC Block Diagrams – Tuner Section –
IC1 TA2008AN

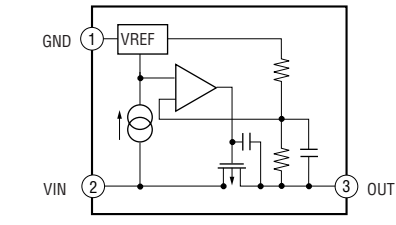


IC2 BU2615FS

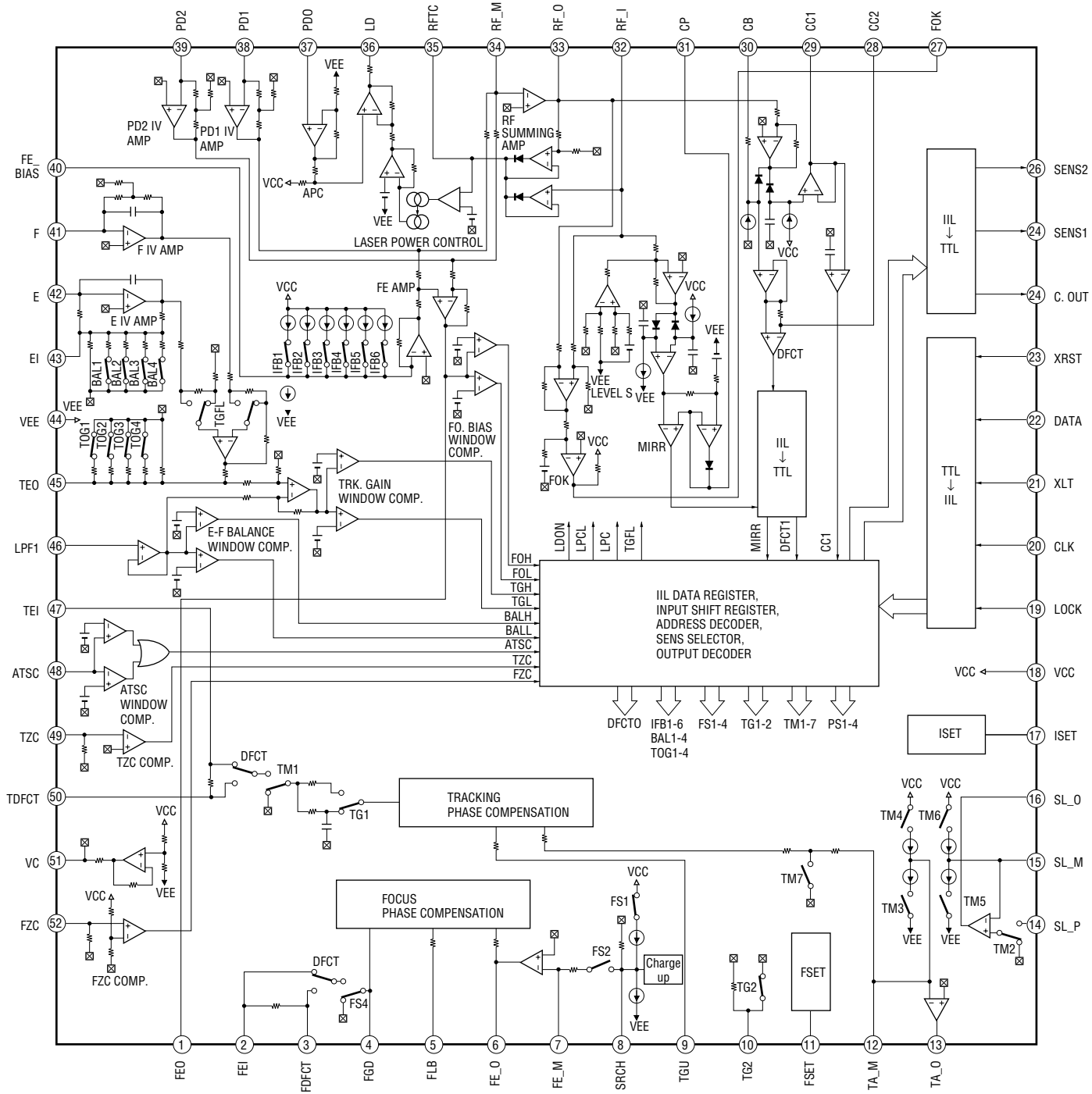


● IC Block Diagrams (DG Section)

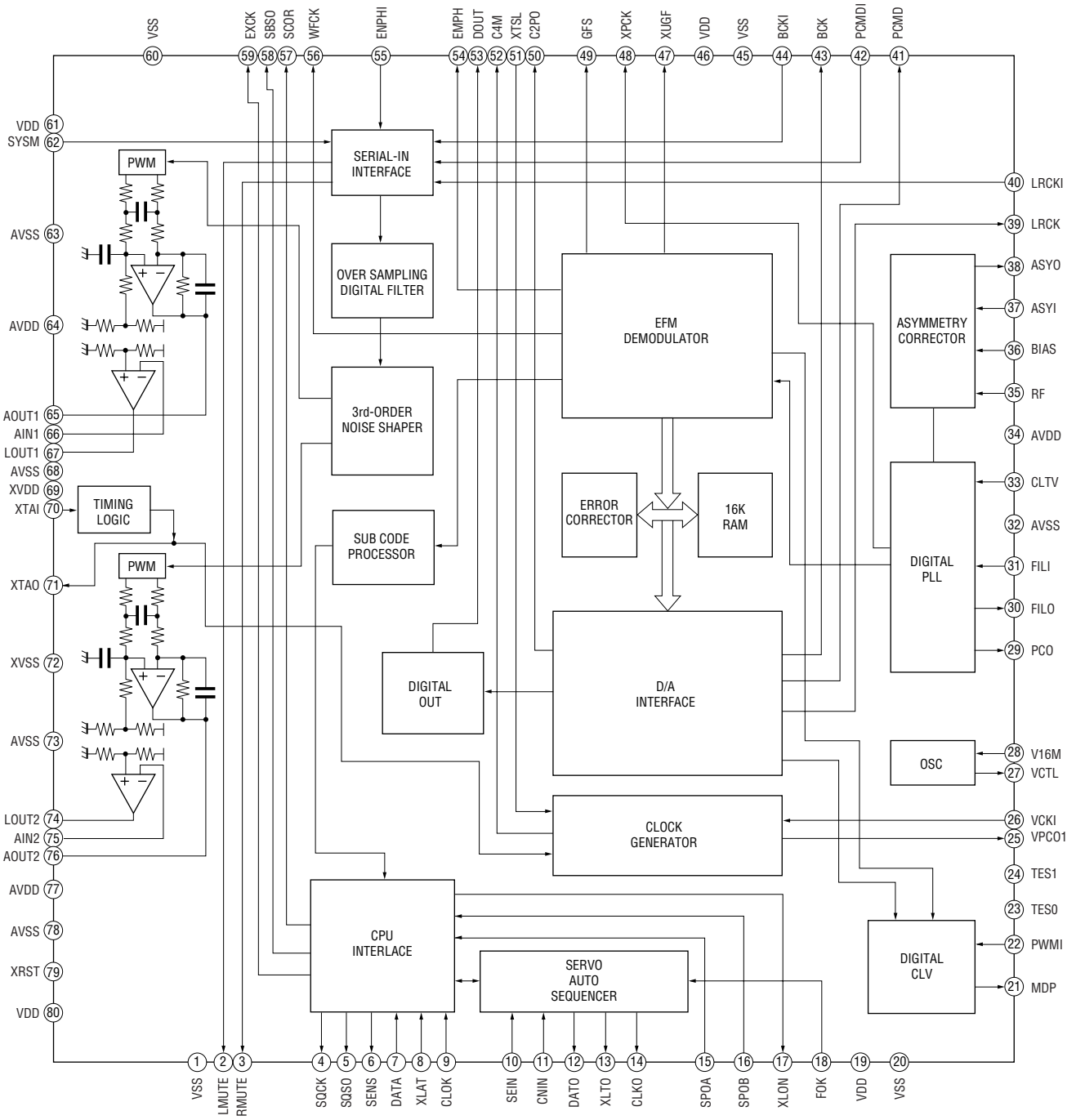
IC504 RH5RL33AA-T1



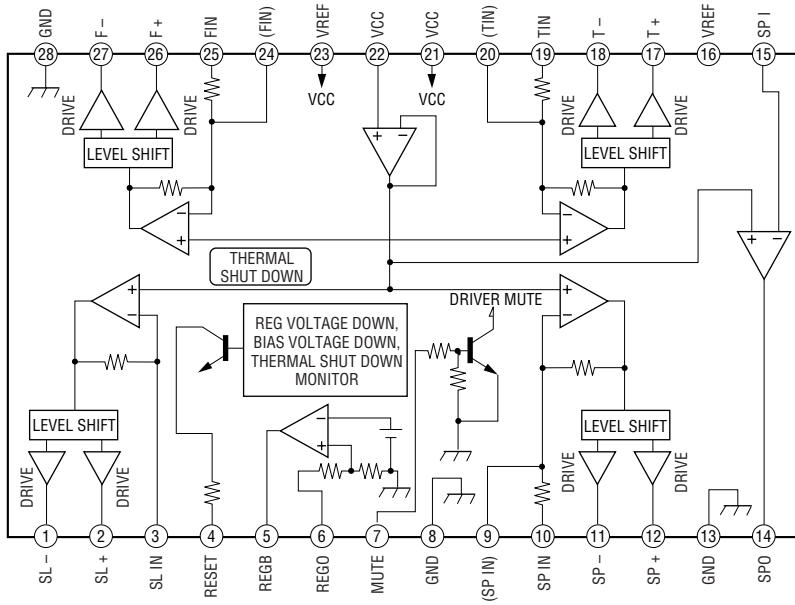
● IC Block Diagrams – Main Section –
IC701 CXA1992BR



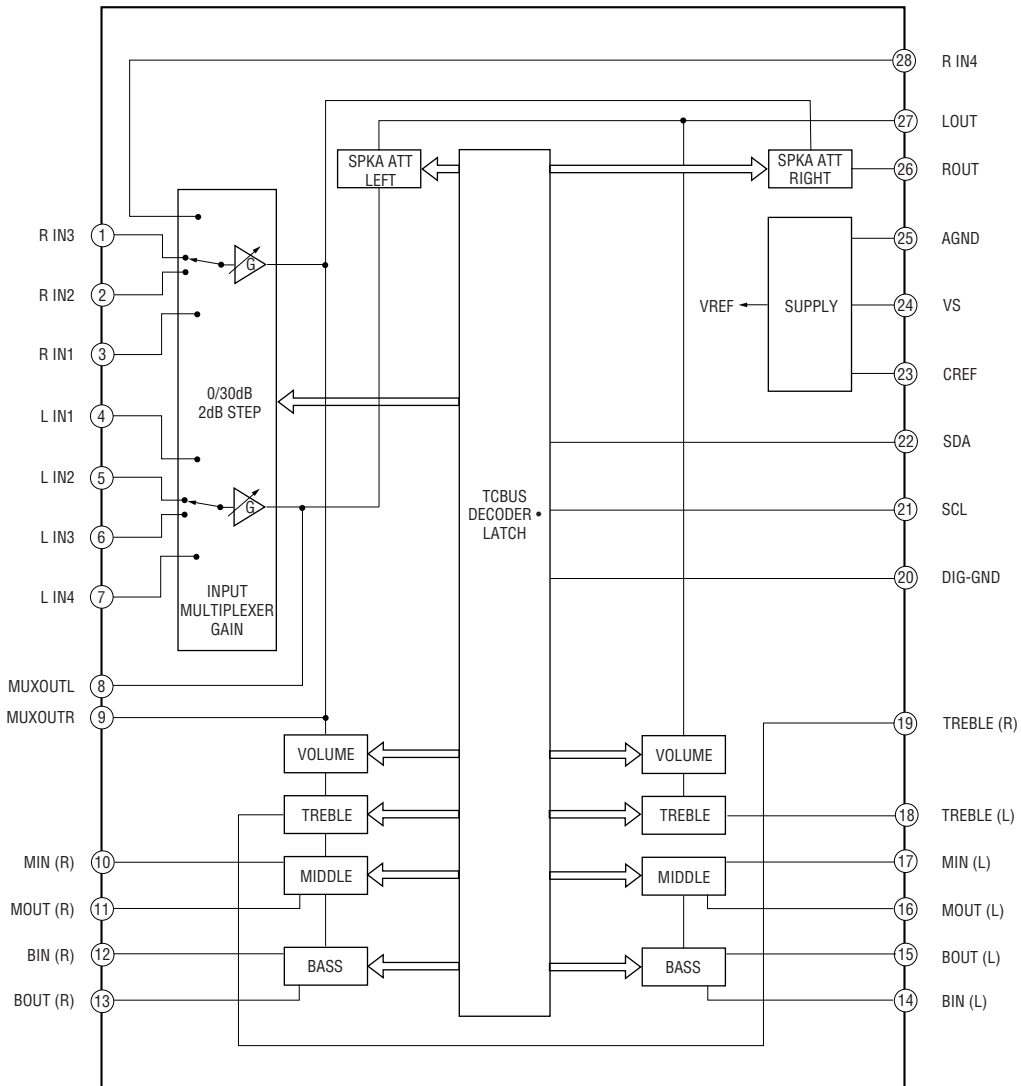
IC703 CXD2589Q



IC702 BA6898FP



IC301 TDA7439D013TR



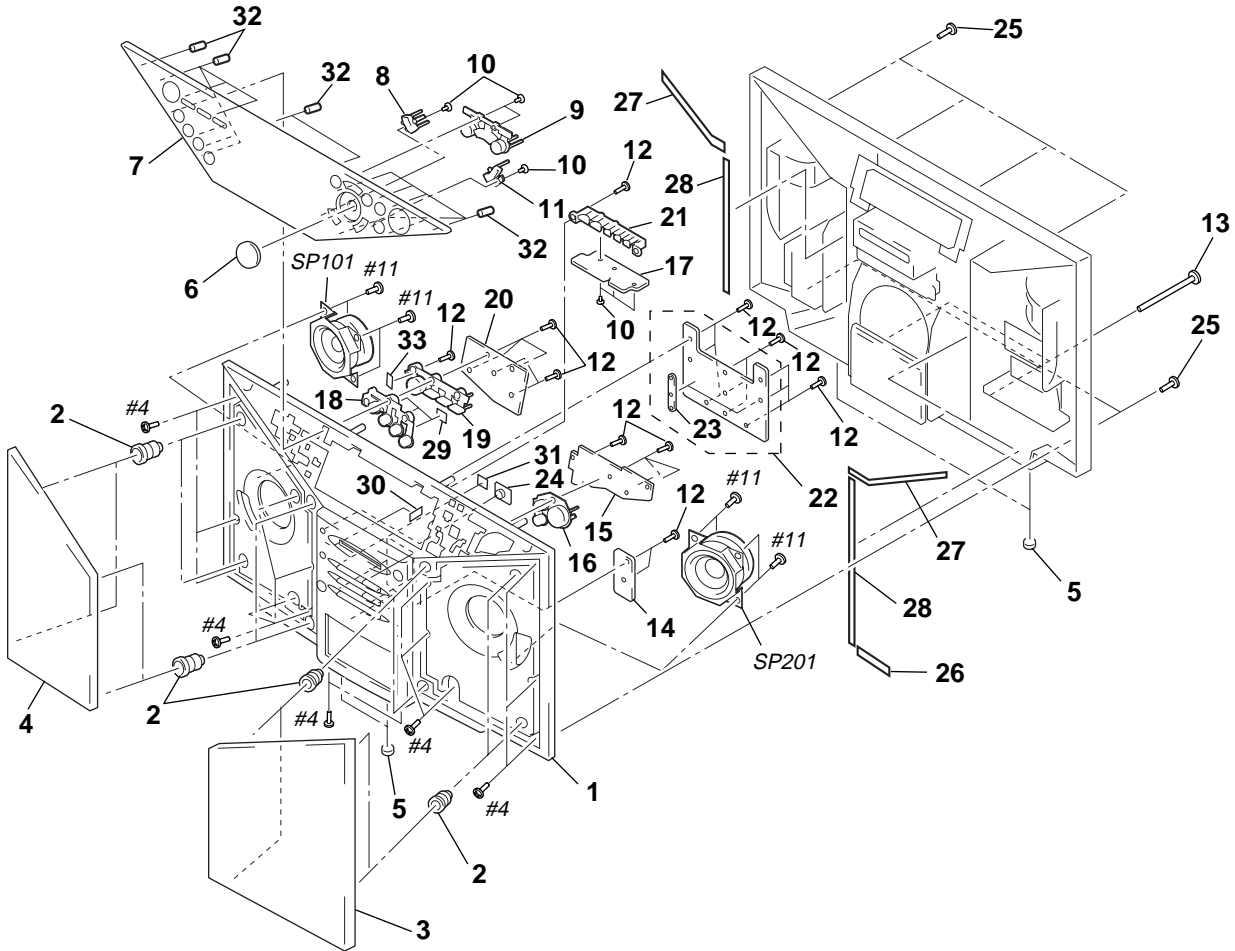
SECTION 7 EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
 EE : East European
 JE : Tourist

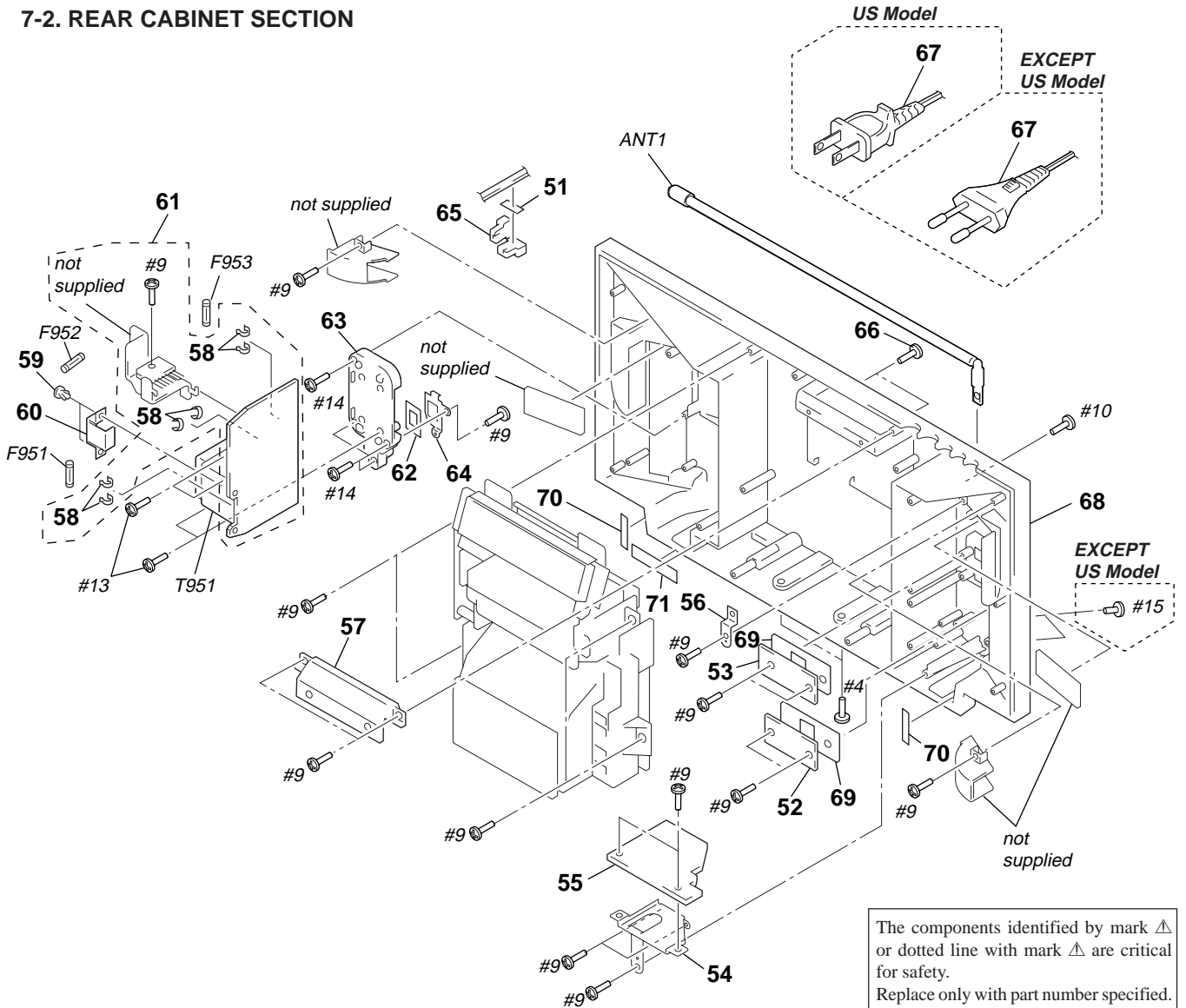
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
 Replace only with part number specified.

7-1. FRONT CABINET SECTION



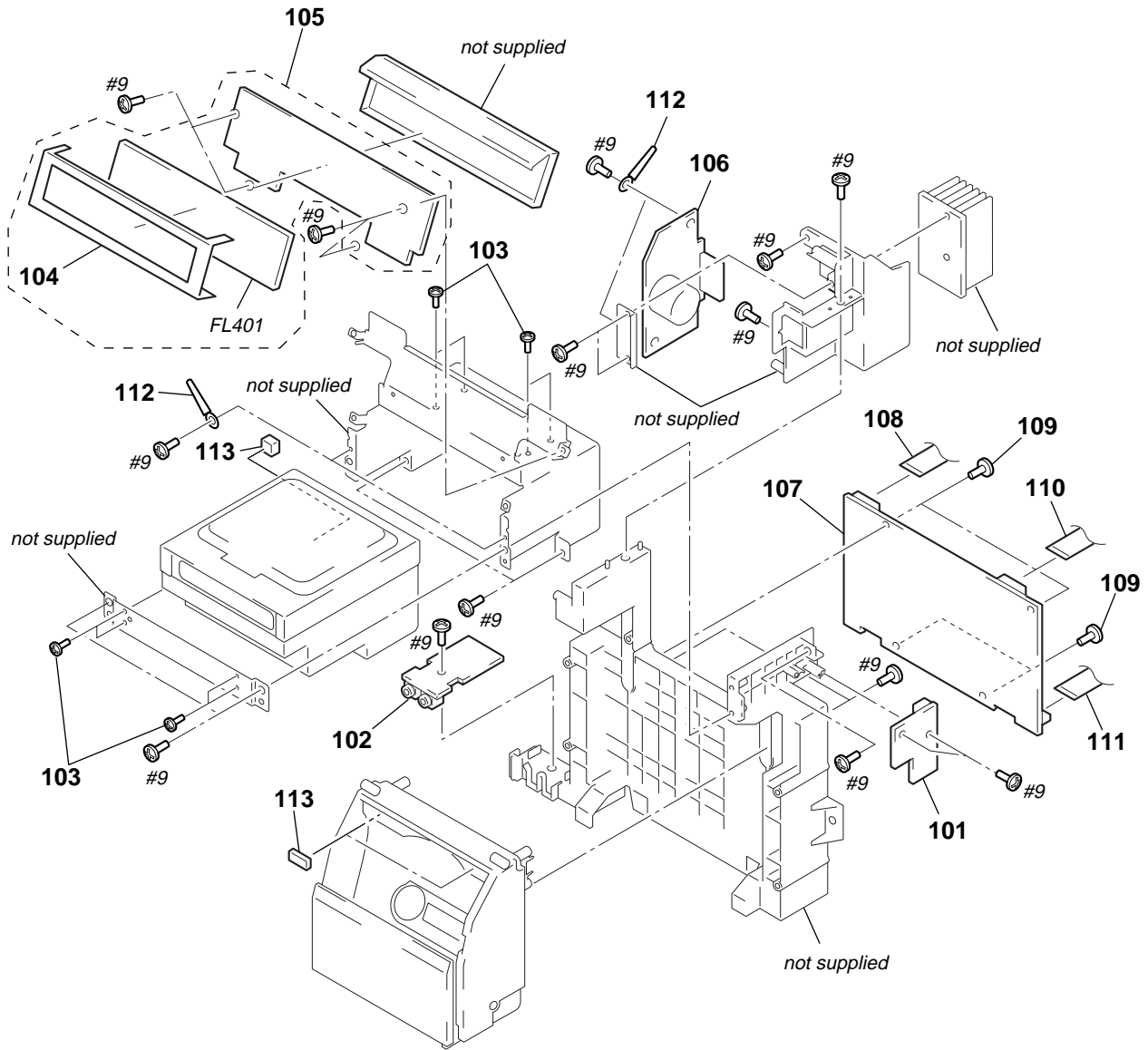
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3374-653-1	CABINET (FRONT) SUB ASSY		19	3-019-661-01	BUTTON (POWER) (US)	
* 2	4-963-075-01	CATCHER		19	3-019-661-11	BUTTON (POWER) (EXCEPT US)	
3	X-3374-656-1	NET (R) ASSY, SP		* 20	1-668-243-21	LEFT KEY BOARD (EXCEPT US)	
4	X-3374-655-1	NET (L) ASSY, SP		* 20	1-668-243-31	LEFT KEY BOARD (US)	
5	3-023-288-01	SPACER (RUBBER FOOT)		21	3-019-663-01	BUTTON (MEGABASS)	
6	3-019-664-01	KNOB (JOG)		* 22	A-3321-557-A	FRONT KEY BOARD, COMPLETE (EXCEPT US)	
7	3-019-652-01	PANEL		* 22	A-3321-539-A	FRONT KEY BOARD, COMPLETE (US)	
8	3-019-659-01	BUTTON (CAN/ENT)		23	3-020-475-01	HOLDER (LED)	
9	3-019-658-01	BUTTON (EDIT)		24	3-025-864-01	COVER (REMOTE CONTROL WINDOW)	
10	3-022-992-01	SCREW, WASHER HEAD		25	4-931-757-91	SCREW (DIA. 2.6) (IT3B)	
11	3-019-659-11	BUTTON (CAN/ENT)		* 26	3-378-433-01	CUSHION, SARANET	
12	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING		27	3-026-848-01	CUSHION	
13	3-020-473-01	SCREW (3X45)		28	3-026-849-01	CUSHION	
* 14	1-668-258-31	RELAY BOARD (US)		29	3-338-596-01	CUSHION (EXCEPT US)	
* 14	1-668-258-21	RELAY BOARD (EXCEPT US)		30	3-022-197-01	CUSHION (JACK)	
* 15	1-668-246-21	RIGHT KEY BOARD (EXCEPT US)		31	3-026-450-01	CUSHION	
* 15	1-668-246-31	RIGHT KEY BOARD (US)		32	3-026-295-01	BLIND (BOSS)	
16	3-019-660-01	BUTTON (VOL)		33	3-026-779-01	CUSHION	
* 17	1-668-245-21	TOP KEY BOARD (EXCEPT US)		SP101	1-505-829-11	SPEAKER (8cm) (L-CH)	
* 17	1-668-245-31	TOP KEY BOARD (US)		SP201	1-505-829-11	SPEAKER (8cm) (R-CH)	
18	3-019-662-01	BUTTON (CLOCK)					

7-2. REAR CABINET SECTION



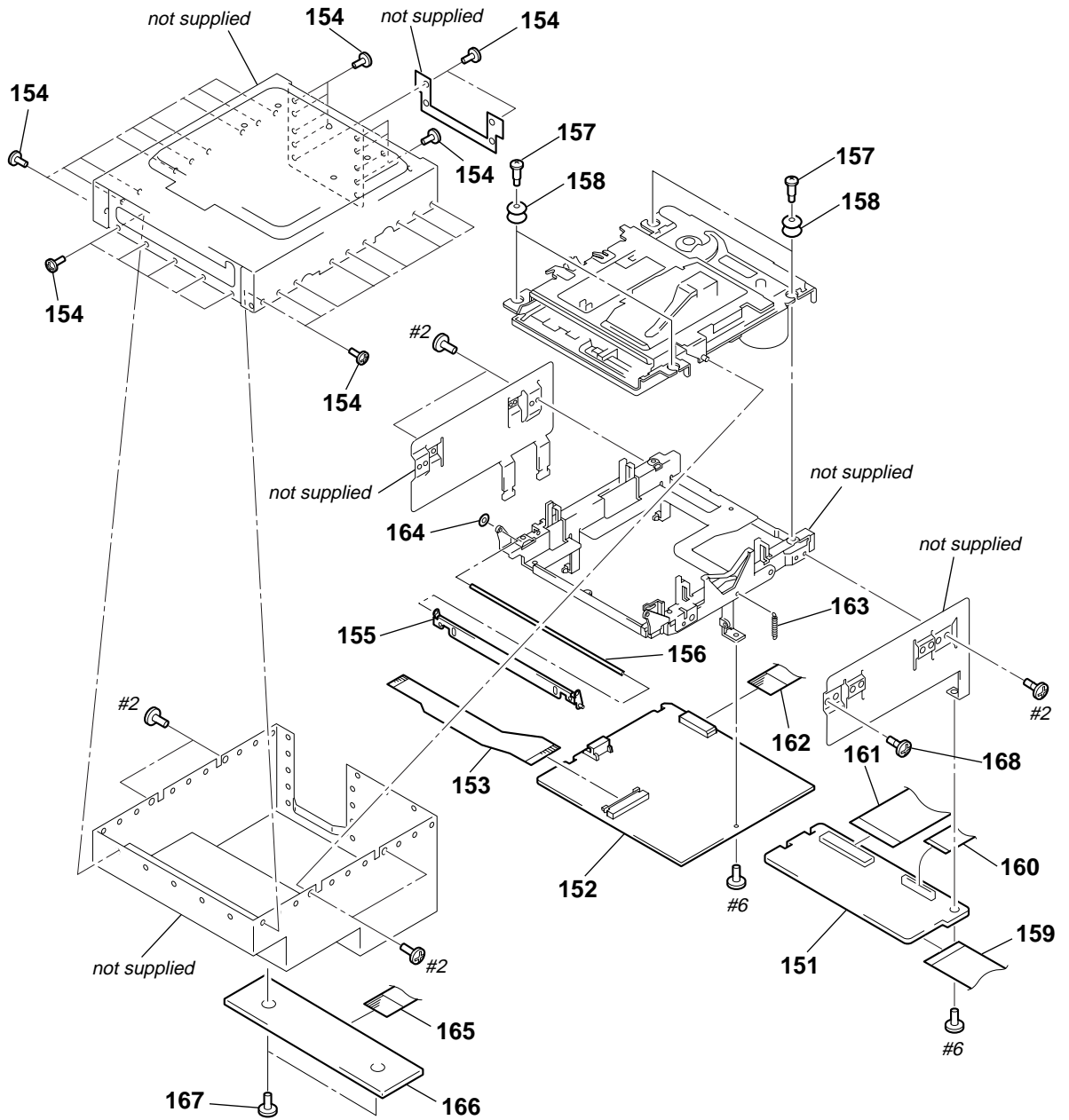
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-009-989-01	CUSHION (HANDLE)		66	4-931-757-31	SCREW (DIA. 2.6X8) (IT3B)	
* 52	1-668-255-21	AM ANT BOARD (EXCEPT US)		Δ 67	1-783-531-31	CORD, POWER (US)	
* 52	1-668-255-31	AM ANT BOARD (US)		Δ 67	1-575-651-21	CORD, POWER (EXCEPT US)	
* 53	1-668-254-21	FM ANT BOARD (EXCEPT US)		68	X-3376-404-1	CABINET REAR ASSY (US)	
* 53	1-668-254-31	FM ANT BOARD (US)		68	X-3376-405-1	CABINET REAR ASSY (EXCEPT US)	
54	3-019-682-01	BRACKET (TUNER)		69	3-023-746-11	PACKING (TU)	
* 55	A-3321-562-A	TUNER BOARD, COMPLETE (EXCEPT US)		70	3-378-434-01	CUSHION, SARANET	
* 55	A-3321-536-A	TUNER BOARD, COMPLETE (US)		71	3-378-121-01	CUSHION, SARANET	
56	3-019-683-01	TERMINAL BOARD, ANTENNA		ANT1	1-501-480-11	ANTENNA, TELESCOPIC	
57	3-019-665-01	HANDLE		Δ F951	1-576-101-11	FUSE (1.25A/125V) (US)	
58	1-533-293-11	FUSE HOLDER		Δ F951	1-532-502-51	FUSE, TIME LAG (T1.25AL/250V) (EXCEPT US)	
59	4-812-134-00	RIVET (DIA. 3.5), NYLON		Δ F952	1-533-310-11	FUSE, GLASS TUBE (6.3A/125V) (US)	
60	3-023-950-01	COVER, FUSE		Δ F952	1-532-506-51	FUSE, TIME LAG (T6.3AL/250V) (EXCEPT US)	
* 61	A-3321-535-A	TRANS BOARD, COMPLETE (US)		Δ F953	1-532-465-51	FUSE, TIME LAG (T3.15AL/250V) (EXCEPT US)	
* 61	A-3321-561-A	TRANS BOARD, COMPLETE (EXCEPT US)		Δ F953	1-576-107-11	FUSE (3.15A/125V) (US)	
62	3-023-747-01	PACKING (CORD)		Δ T951	1-433-445-11	TRANSFORMER, POWER (US)	
63	3-019-668-01	BRACKET (TRANSFORMER)		Δ T951	1-433-444-11	TRANSFORMER, POWER (EXCEPT US)	
64	3-019-681-01	BRACKET (POWER CORD)					
* 65	3-703-244-00	BUSHING (2104), CORD					

7-3. CHASSIS SECTION



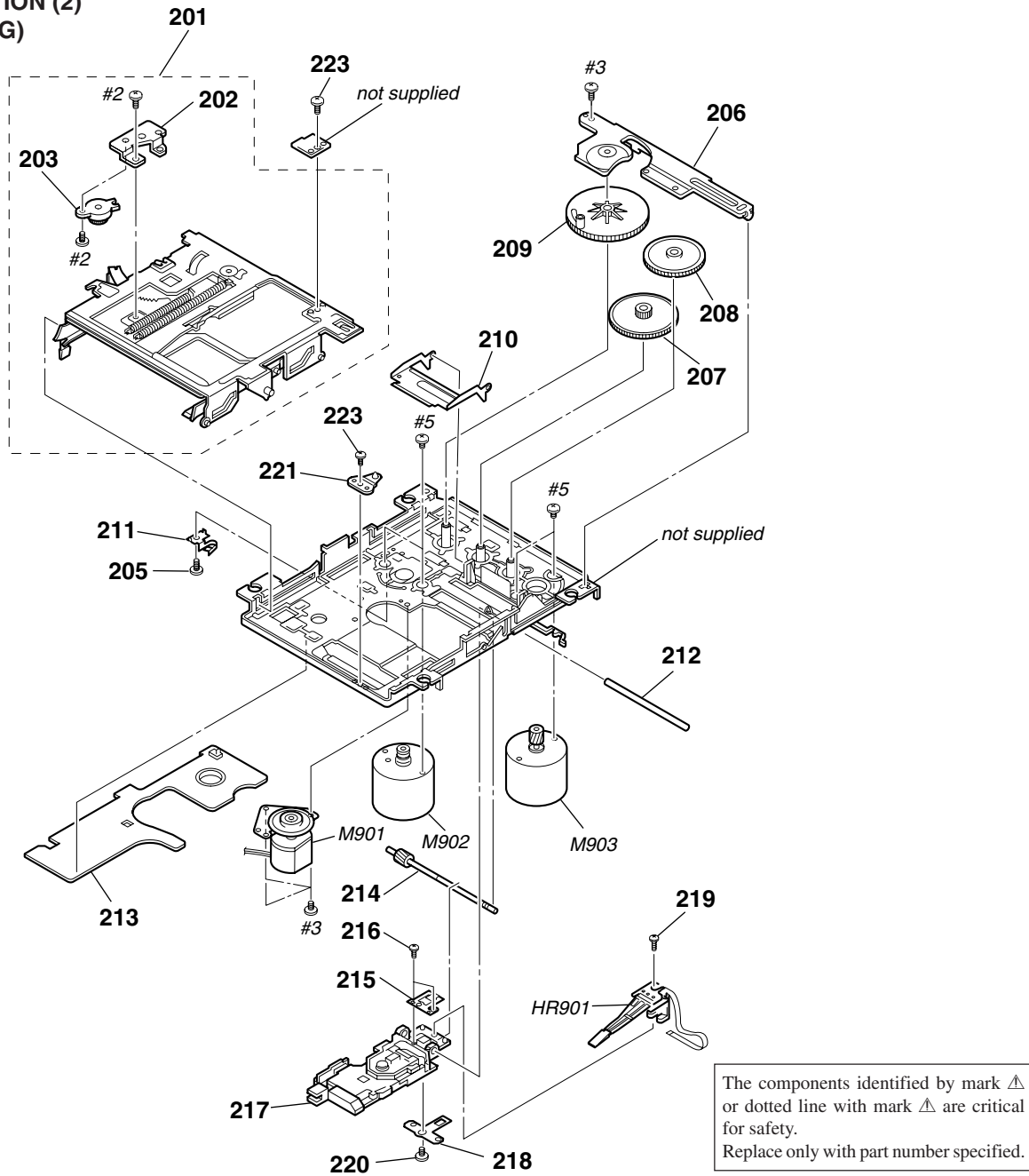
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	1-668-249-21	LINE IN BOARD (EXCEPT US)		* 107	A-3321-544-A	MAIN BOARD, COMPLETE (US)	
* 101	1-668-249-31	LINE IN BOARD (US)		* 107	A-3321-565-A	MAIN BOARD, COMPLETE (EXCEPT US)	
* 102	1-668-250-31	HP BOARD (US)		108	1-783-539-11	WIRE, PARALLEL (FFC) (15 CORE)	
* 102	1-668-250-21	HP BOARD (EXCEPT US)		109	4-931-757-31	SCREW(DIA.2.6X8)(IT3B),TAPPING	
103	3-321-041-41	SCREW (M1.7X5), TAPPING		110	1-783-537-11	WIRE, PARALLEL (21 CORE)	
104	3-019-671-01	HOLDER (FL)		111	1-783-538-11	WIRE, PARALLEL (FFC) (13 CORE)	
* 105	A-3323-036-A	FL BOARD, COMPLETE (EXCEPT US)		* 112	3-703-150-11	CLAMP	
* 105	A-3323-029-A	FL BOARD, COMPLETE (US)		113	3-031-392-01	CUSHION (CD)	
* 106	A-3321-573-A	AUDIO BOARD, COMPLETE (EXCEPT US)		FL401	1-517-744-11	INDICATOR TUBE, FLUORESCENT	
* 106	A-3321-552-A	AUDIO BOARD, COMPLETE (US)					

**7-4. MD SECTION (1)
(MDM-3EG)**



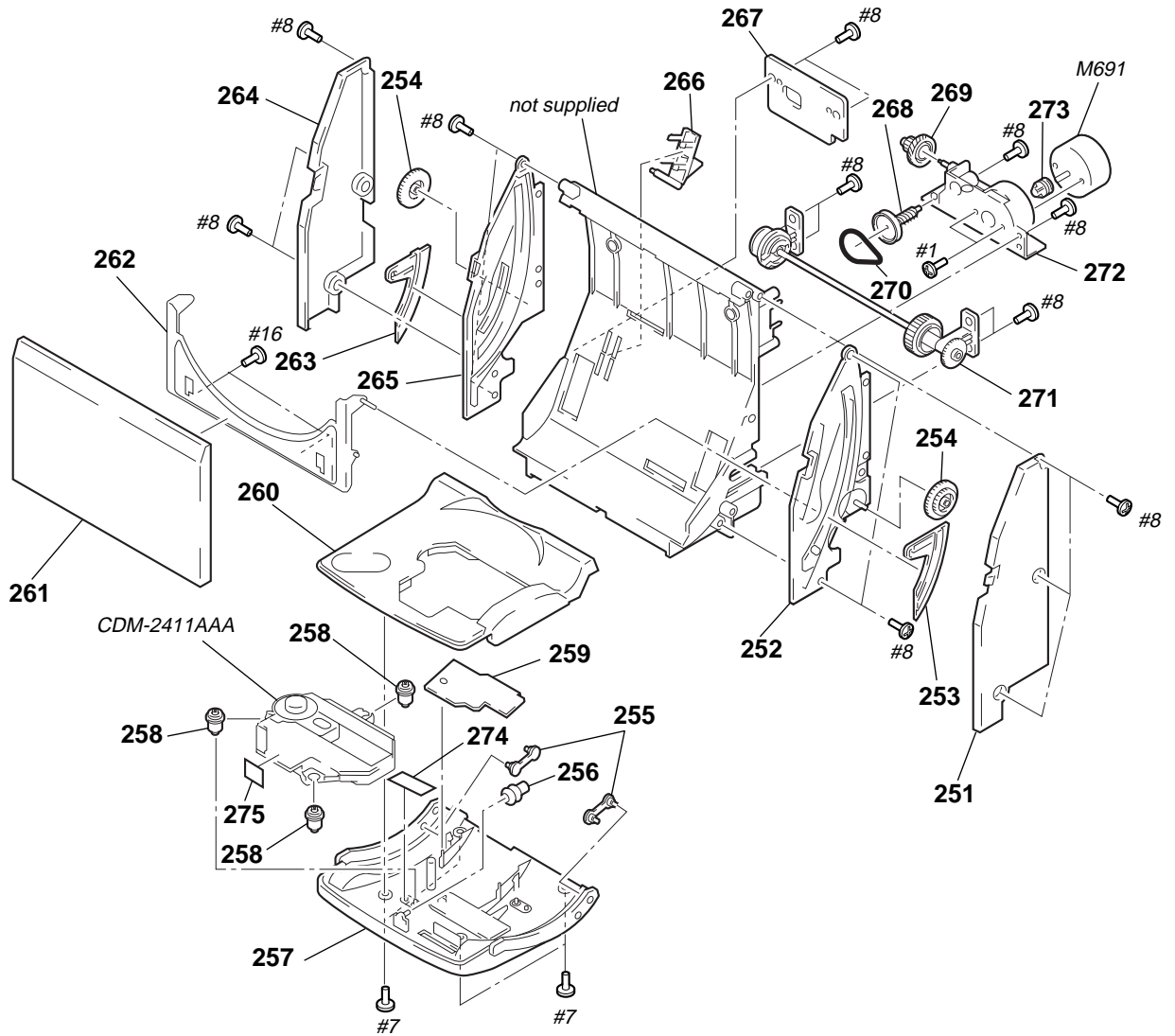
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	A-3321-571-A	DG BOARD, COMPLETE (EXCEPT US)		160	1-783-540-11	WIRE, PARALLEL (FFC) (19 CORE)	
* 151	A-3321-550-A	DG BOARD, COMPLETE (US)		161	1-790-045-11	WIRE, PARALLEL (26 CORE)(60mm)	
* 152	A-3293-900-A	BD BOARD, COMPLETE		162	1-777-517-11	WIRE, PARALLEL (15 CORE)	
153	1-660-966-11	OP RELAY FLEXIBLE BOARD		163	4-987-910-01	SPRING (O/C), TENSION	
154	3-028-625-01	SCREW (M1.7X2) (S TITE)		164	4-986-959-01	WASHER	
155	X-4947-825-1	SHUTTER ASSY		165	1-790-046-11	WIRE, PARALLEL (26 CORE)(172mm)	
156	4-987-736-11	SHAFT (SHUTTER)		* 166	1-671-517-11	FILTER BOARD	
157	4-628-167-01	SCREW, STEP		167	3-029-176-01	SCREW (M1.7X4)	
158	4-987-327-11	INSULATOR		168	7-627-553-27	SCREW,PRECISION +P 2X2.5	
159	1-783-542-11	WIRE, PARALLEL (FFC) (29 CORE)					

7-5. MD SECTION (2)
(MDM-3EG)



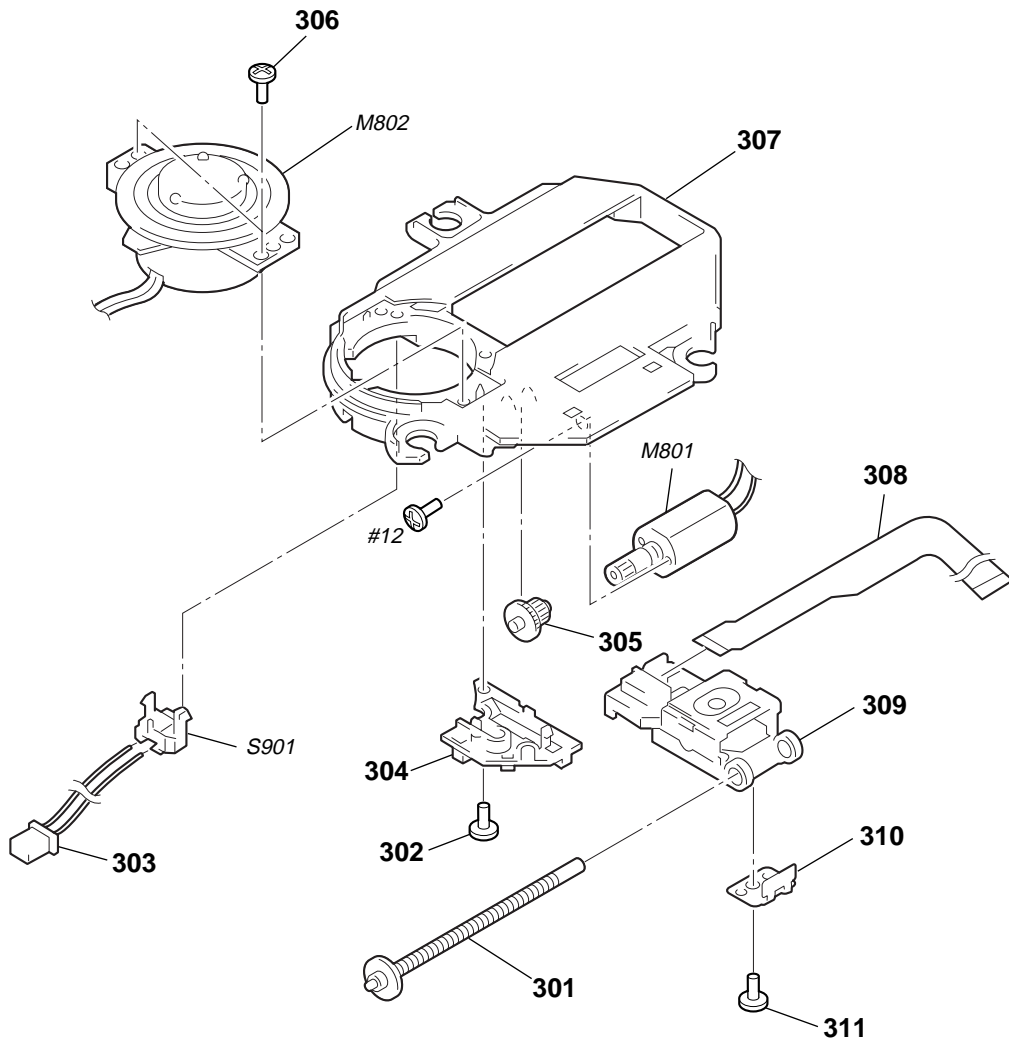
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	A-4672-138-A	SLIDER COMPLETE ASSY		216	3-366-890-11	SCREW (M1.4)	
* 202	4-983-439-01	BRACKET (DAMPER)		Δ 217	A-4672-541-A	OPTICAL PICK-UP KMS-260B	
203	3-953-235-01	DAMPER, OIL		218	4-987-061-01	SPACER (RACK)	
205	3-342-375-11	SCREW (M1.7X1.4), SPECIAL		219	4-988-560-01	SCREW (+P1.7X6)	
* 206	4-979-890-11	RETAINER (GEAR)		220	4-955-841-11	SCREW	
207	4-979-898-01	GEAR (LB)		* 221	4-983-511-02	PIN (OUTSERT)	
208	4-979-899-01	GEAR (LC)		223	3-028-625-01	SCREW (M1.7X2) (S TITE)	
209	4-979-897-01	GEAR (LA)		HR901	1-500-396-11	HEAD, OVER WRITE	
210	4-979-885-01	LEVER (HEAD UP)		M901	A-4672-135-A	MOTOR ASSY, SPINDLE	
211	4-979-906-11	SPRING (LEAD SCREW)		M902	A-4672-133-A	MOTOR ASSY, SLED (INCLUDING GEAR)	
* 212	4-984-556-01	SHAFT (MAIN SHAFT)		M903	A-4672-134-A	MOTOR ASSY, LOADING (INCLUDING GEAR)	
* 213	1-661-774-11	SW BOARD					
214	A-3304-200-A	SCREW ASSY, LEAD					
215	4-963-914-02	RACK (INSERTER)					

**7-6. CD SECTION
(VLM-ZSM7-142)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 251	3-017-025-01	COVER (R), SIDE		* 264	3-017-035-01	COVER (L), SIDE	
* 252	3-017-012-01	PLATE (R), SIDE		* 265	3-017-011-01	PLATE (L), SIDE	
* 253	3-017-014-01	SLIDER (R)		266	3-017-017-01	LEVER, DETECTION	
254	3-017-027-01	GEAR (C)		* 267	1-667-045-11	LOADING BOARD	
255	3-017-016-01	SHAFT, TRAY		268	3-017-031-01	GEAR (A)	
256	4-975-811-01	INSULATOR		269	3-017-032-01	GEAR (B)	
257	3-017-022-01	TRAY (BOTTOM), CD		270	3-017-030-01	BELT	
258	4-975-762-11	INSULATOR		271	A-3311-798-A	DRIVE ASSY	
* 259	1-667-046-11	PICK-UP RELAY BOARD		* 272	3-017-036-01	CHASSIS, GEAR	
* 260	3-020-624-01	TRAY (TOP), CD		273	2-627-174-01	PULLEY (M)	
261	3-020-492-01	LID, CD		* 274	3-378-138-01	CUSHION, SARANET	
262	X-3374-204-1	WINDOW ASSY, CD		* 275	3-022-456-01	SPACER (VLM)	
* 263	3-017-013-01	SLIDER (L)		M691	1-698-999-11	MOTOR, DC (LOADING)	

**7-7. OPTICAL PICK-UP SECTION
(CDM-2411AAA)**



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	A-3303-970-A	SCREW ASSY, FEED		308	1-660-965-11	SLIDE FLEXIBLE BOARD	
302	3-318-203-11	SCREW (B1.7X6), TAPPING		Δ 309	X-4946-311-1	OPTICAL PICK-UP (DAX-11A)	
303	1-690-530-21	LEAD (WITH CONNECTOR)		310	4-972-165-01	RACK	
304	4-972-163-01	SPRING, SLED		311	4-973-631-01	SCREW	
305	4-974-003-01	GEAR (B)		M801	A-3303-403-A	MOTOR ASSY, SLED (INCLUDING GEAR)	
306	3-719-401-11	SCREW (B1.7), TAPPING		M802	A-3320-300-A	MOTOR ASSY, TURNTABLE (SPINDLE)	
* 307	4-972-162-01	CHASSIS		S901	1-571-099-21	SWITCH (1 KEY) (LIMIT)	

SECTION 8 ELECTRICAL PARTS LIST

AM ANT

AUDIO

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, -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
- 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
- Abbreviation
EE : East European
JE : Tourist

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
*	1-668-255-21	AM ANT BOARD (EXCEPT US)		C358	1-126-960-11	ELECT 1uF 20%	50V
*	1-668-255-31	AM ANT BOARD (US)		C359	1-104-664-11	ELECT 47uF 20%	25V
		*****		C360	1-126-963-11	ELECT 4.7uF 20%	50V
		< CAPACITOR >		C361	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C58	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	(EXCEPT US)	C362	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
		< CONNECTOR >		C363	1-127-508-00	ELECT 2.2uF 20%	25V
CN3	1-580-163-11	PIN, CONNECTOR (PC BOARD) 2P		C364	1-127-508-00	ELECT 2.2uF 20%	25V
		< POST PIN >				< CONNECTOR >	
CP50	1-536-354-00	PIN, POST		* CN351	1-573-489-21	PIN, CONNECTOR (PC BOARD) 11P	
		< TERMINAL >		* CN352	1-564-507-11	PLUG, CONNECTOR 4P	
TB1	1-536-833-31	TERMINAL BOARD (AM ANTENNA)(US)		* CN353	1-564-519-11	PLUG, CONNECTOR 4P	
TB1	1-536-833-31	TERMINAL BOARD (MW/LW ANTENNA)	(EXCEPT US)			< POST PIN >	
*****				CP7	1-536-354-00	PIN, POST	
*	A-3321-552-A	AUDIO BOARD, COMPLETE (US)				< DIODE >	
*	A-3321-573-A	AUDIO BOARD, COMPLETE (EXCEPT US)		D351	8-719-988-62	DIODE 1SS355	
		*****		D352	8-719-988-62	DIODE 1SS355	
		< CAPACITOR >		D353	8-719-988-62	DIODE 1SS355	
C151	1-126-963-11	ELECT 4.7uF 20%	50V			< IC >	
C152	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	IC351	8-759-333-16	IC LA4705NA	
C153	1-136-165-00	FILM 0.1uF 5%	50V			< TRANSISTOR >	
C154	1-136-165-00	FILM 0.1uF 5%	50V	Q151	8-729-920-31	TRANSISTOR DTC343TK	
C155	1-126-964-11	ELECT 10uF 20%	50V	Q251	8-729-920-31	TRANSISTOR DTC343TK	
C251	1-126-963-11	ELECT 4.7uF 20%	50V	Q351	8-729-031-43	TRANSISTOR IMD9A-T108	
C252	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	Q352	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C253	1-136-165-00	FILM 0.1uF 5%	50V			< RESISTOR >	
C254	1-136-165-00	FILM 0.1uF 5%	50V	R151	1-216-657-11	METAL CHIP 1.8K 0.5%	1/10W
C255	1-126-964-11	ELECT 10uF 20%	50V	R152	1-216-659-11	METAL CHIP 2.2K 0.5%	1/10W
C351	1-124-994-11	ELECT 100uF 20%	10V	R153	1-216-298-00	METAL CHIP 2.2 5%	1/10W
C352	1-128-551-11	ELECT 22uF 20%	25V	R154	1-216-298-00	METAL CHIP 2.2 5%	1/10W
C353	1-126-047-75	ELECT 4.7uF 20%	50V	R155	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
C354	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	R251	1-216-657-11	METAL CHIP 1.8K 0.5%	1/10W
C355	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	R252	1-216-659-11	METAL CHIP 2.2K 0.5%	1/10W
C356	1-136-165-00	FILM 0.1uF 5%	50V	R253	1-216-298-00	METAL CHIP 2.2 5%	1/10W
C357	1-117-943-11	ELECT 6800uF 20%	25V	R254	1-216-298-00	METAL CHIP 2.2 5%	1/10W
				R255	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
				R351	1-216-077-00	METAL CHIP 15K 5%	1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R352	1-216-073-00	METAL CHIP	10K 5% 1/10W	C168	1-163-038-91	CERAMIC CHIP 0.1uF	25V
R353	1-216-059-00	METAL CHIP	2.7K 5% 1/10W	C169	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
R354	1-216-097-91	RES,CHIP	100K 5% 1/10W	C171	1-163-038-91	CERAMIC CHIP 0.1uF	25V
R355	1-216-121-91	RES,CHIP	1M 5% 1/10W	C181	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
R356	1-216-073-00	METAL CHIP	10K 5% 1/10W	C182	1-163-038-91	CERAMIC CHIP 0.1uF	25V
R357	1-216-049-91	RES,CHIP	1K 5% 1/10W	C183	1-163-038-91	CERAMIC CHIP 0.1uF	25V

*	A-3293-900-A	BD BOARD, COMPLETE		C184	1-107-836-11	ELECT CHIP 22uF	20% 8V
		*****		C185	1-164-611-11	CERAMIC CHIP 0.001uF	10% 500V
		< CAPACITOR >		C187	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C101	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C188	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF 25V	C189	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C103	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C190	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C104	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C191	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C105	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	C195	1-164-346-11	CERAMIC CHIP 1uF	16V
C106	1-163-275-11	CERAMIC CHIP	0.001uF 5% 50V	C196	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C107	1-163-038-91	CERAMIC CHIP	0.1uF 25V	C197	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C108	1-163-038-91	CERAMIC CHIP	0.1uF 25V	< CONNECTOR >			
C109	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	CN101	1-766-508-11	CONNECTOR, FFC/FPC (ZIF) 22P	
C110	1-163-038-91	CERAMIC CHIP	0.1uF 25V	CN102	1-778-461-11	CONNECTOR, FFC/FPC 29P	
C111	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V	CN103	1-778-460-11	CONNECTOR, FFC/FPC 19P	
C112	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V	CN104	1-766-898-21	HOUSING, CONNECTOR(PC BOARD)4P	
C113	1-107-682-11	CERAMIC CHIP	1uF 10% 16V	CN106	1-770-698-11	CONNECTOR, FFC/FPC 15P	
C115	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V	CN110	1-774-731-21	PIN, CONNECTOR (PC BOARD) 5P	
C116	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	< DIODE >			
C117	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	D101	8-719-988-62	DIODE 1SS355	
C119	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	D181	8-719-046-86	DIODE F1J6TP	
C121	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	D183	8-719-046-86	DIODE F1J6TP	
C122	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	< IC >			
C123	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC101	8-752-074-77	IC CXA2523R	
C124	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC103	8-729-903-10	IC FMW1	
C127	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC121	8-752-384-47	IC CXD2652AR	
C128	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	IC122	8-759-234-20	IC TC7S08F	
C129	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	IC123	8-759-242-70	IC TC7WU04F	
C130	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	IC124	8-759-473-29	IC MN41V4400SJ-08-T1	
C131	1-163-023-00	CERAMIC CHIP	0.015uF 5% 50V	IC152	8-759-430-25	IC BH6511FS	
C132	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	IC171	8-759-428-58	IC XL24C01AF-E2	
C133	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V	IC181	8-759-095-65	IC TC74ACT540FS	
C134	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC192	8-759-426-95	IC L88MS33T-TL	
C135	1-163-038-91	CERAMIC CHIP	0.1uF 25V	< COIL >			
C136	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	L101	1-414-235-11	FERRITE BEAD INDUCTOR	
C141	1-163-038-91	CERAMIC CHIP	0.1uF 25V	L102	1-414-235-11	FERRITE BEAD INDUCTOR	
C142	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	L103	1-414-235-11	FERRITE BEAD INDUCTOR	
C143	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	L105	1-414-235-11	FERRITE BEAD INDUCTOR	
C144	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	L106	1-414-235-11	FERRITE BEAD INDUCTOR	
C146	1-163-038-91	CERAMIC CHIP	0.1uF 25V	L121	1-414-235-11	FERRITE BEAD INDUCTOR	
C151	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	L122	1-414-235-11	INDUCTOR CHIP	
C152	1-163-038-91	CERAMIC CHIP	0.1uF 25V	L151	1-412-622-51	INDUCTOR 10uH	
C153	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	L152	1-412-622-51	INDUCTOR 10uH	
C156	1-163-038-91	CERAMIC CHIP	0.1uF 25V	L153	1-412-039-51	INDUCTOR CHIP 100uH	
C158	1-163-019-00	CERAMIC CHIP	0.0068uF 10% 50V	L154	1-412-039-51	INDUCTOR CHIP 100uH	
C160	1-104-601-11	ELECT CHIP	10uF 20% 10V	L161	1-414-235-11	FERRITE BEAD INDUCTOR	
C161	1-104-601-11	ELECT CHIP	10uF 20% 10V	L162	1-414-235-11	FERRITE BEAD INDUCTOR	
C163	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V				
C164	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V				
C167	1-163-038-91	CERAMIC CHIP	0.1uF 25V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRANSISTOR >				R170	1-216-073-00	METAL CHIP 10K	5% 1/10W
Q101	8-729-028-91	TRANSISTOR DTA144EUA-T106		R171	1-216-073-00	METAL CHIP 10K	5% 1/10W
Q102	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR		R172	1-216-295-00	METAL CHIP 0	5% 1/10W
Q103	8-729-028-99	TRANSISTOR DTC114YUA-T106		R173	1-216-121-91	RES,CHIP 1M	5% 1/10W
Q104	8-729-028-99	TRANSISTOR DTC114YUA-T106		R175	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
Q162	8-729-101-07	TRANSISTOR 2SB798-DL		R176	1-216-295-00	METAL CHIP 0	5% 1/10W
Q163	8-729-028-91	TRANSISTOR DTA144EUA-T106		R177	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
Q180	8-729-028-96	TRANSISTOR DTC114EUA-T106		R178	1-216-295-00	METAL CHIP 0	5% 1/10W
Q181	8-729-018-75	TRANSISTOR 2SJ278MY		R179	1-216-089-91	RES,CHIP 47K	5% 1/10W
Q182	8-729-017-65	TRANSISTOR 2SK1764KY		R180	1-216-073-00	METAL CHIP 10K	5% 1/10W
< RESISTOR >				R181	1-216-073-00	METAL CHIP 10K	5% 1/10W
R101	1-216-295-00	METAL CHIP 0	5% 1/10W	R182	1-216-089-91	RES,CHIP 47K	5% 1/10W
R103	1-216-049-91	RES,CHIP 1K	5% 1/10W	R183	1-216-089-91	RES,CHIP 47K	5% 1/10W
R104	1-216-073-00	METAL CHIP 10K	5% 1/10W	R184	1-216-073-00	METAL CHIP 10K	5% 1/10W
R105	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	R185	1-216-073-00	METAL CHIP 10K	5% 1/10W
R106	1-216-133-00	METAL CHIP 3.3M	5% 1/10W	R186	1-216-296-00	METAL CHIP 0	5% 1/8W
R107	1-216-113-00	METAL CHIP 470K	5% 1/10W	R187	1-216-296-00	METAL CHIP 0	5% 1/8W
R109	1-216-295-00	METAL CHIP 0	5% 1/10W	R188	1-216-073-00	METAL CHIP 10K	5% 1/10W
R110	1-216-073-00	METAL CHIP 10K	5% 1/10W	R189	1-216-073-00	METAL CHIP 10K	5% 1/10W
R111	1-216-295-00	METAL CHIP 0	5% 1/10W	R190	1-216-073-00	METAL CHIP 10K	5% 1/10W
R112	1-216-089-91	RES,CHIP 47K	5% 1/10W	R195	1-216-295-00	METAL CHIP 0	5% 1/10W
R113	1-216-049-91	RES,CHIP 1K	5% 1/10W	R196	1-216-295-00	METAL CHIP 0	5% 1/10W
R115	1-216-049-91	RES,CHIP 1K	5% 1/10W	R198	1-216-295-00	METAL CHIP 0	5% 1/10W
R117	1-216-113-00	METAL CHIP 470K	5% 1/10W	R199	1-216-295-00	METAL CHIP 0	5% 1/10W
R120	1-216-025-91	RES,CHIP 100	5% 1/10W	R200	1-216-295-00	METAL CHIP 0	5% 1/10W
R121	1-216-097-91	RES,CHIP 100K	5% 1/10W	R201	1-216-295-00	METAL CHIP 0	5% 1/10W
R123	1-216-033-00	METAL CHIP 220	5% 1/10W	R202	1-216-295-00	METAL CHIP 0	5% 1/10W
R124	1-216-025-91	RES,CHIP 100	5% 1/10W	R502	1-216-295-00	METAL CHIP 0	5% 1/10W
R125	1-216-025-91	RES,CHIP 100	5% 1/10W	R504	1-216-295-00	METAL CHIP 0	5% 1/10W
R127	1-216-025-91	RES,CHIP 100	5% 1/10W	*****			
R131	1-216-073-00	METAL CHIP 10K	5% 1/10W	*	A-3321-550-A	DG BOARD, COMPLETE (US)	
R132	1-216-097-91	RES,CHIP 100K	5% 1/10W	*	A-3321-571-A	DG BOARD, COMPLETE (EXCEPT US)	
R133	1-216-117-00	METAL CHIP 680K	5% 1/10W	*****			
R134	1-216-049-91	RES,CHIP 1K	5% 1/10W	< CAPACITOR >			
R135	1-216-061-00	METAL CHIP 3.3K	5% 1/10W	C501	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R136	1-216-049-91	RES,CHIP 1K	5% 1/10W	C502	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
R137	1-216-025-91	RES,CHIP 100	5% 1/10W	C503	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
R140	1-216-029-00	METAL CHIP 150	5% 1/10W	C504	1-162-916-11	CERAMIC CHIP 12PF	5% 50V
R141	1-216-295-00	METAL CHIP 0	5% 1/10W	C505	1-162-916-11	CERAMIC CHIP 12PF	5% 50V
R142	1-216-073-00	METAL CHIP 10K	5% 1/10W	C506	1-163-077-00	CERAMIC CHIP 0.1uF	10% 25V
R143	1-216-073-00	METAL CHIP 10K	5% 1/10W	C507	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R144	1-216-025-91	RES,CHIP 100	5% 1/10W	C508	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R146	1-216-037-00	METAL CHIP 330	5% 1/10W	C510	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
R147	1-216-025-91	RES,CHIP 100	5% 1/10W	C511	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
R148	1-216-045-00	METAL CHIP 680	5% 1/10W	C512	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R150	1-216-295-00	METAL CHIP 0	5% 1/10W	C513	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R158	1-216-097-91	RES,CHIP 100K	5% 1/10W	C514	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R159	1-216-097-91	RES,CHIP 100K	5% 1/10W	C515	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
R161	1-216-057-00	METAL CHIP 2.2K	5% 1/10W	C516	1-126-607-11	ELECT CHIP 47uF	20% 4V
R162	1-216-057-00	METAL CHIP 2.2K	5% 1/10W	C517	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R163	1-216-057-00	METAL CHIP 2.2K	5% 1/10W	C518	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R164	1-216-045-00	METAL CHIP 680	5% 1/10W	C519	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
R165	1-216-097-91	RES,CHIP 100K	5% 1/10W	C521	1-126-603-11	ELECT CHIP 4.7uF	20% 35V
R166	1-220-149-11	REGISTER 2.2	10% 1/2W	C522	1-126-603-11	ELECT CHIP 4.7uF	20% 35V
R167	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	C525	1-126-603-11	ELECT CHIP 4.7uF	20% 35V
R169	1-219-724-11	METAL CHIP 1	1% 1/4W	C526	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
				C527	1-126-205-11	ELECT CHIP 47uF	20% 6.3V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
C528	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB523	1-414-385-11	INDUCTOR, FERRITE BEAD	
C529	1-124-779-00	ELECT CHIP	10uF	20%	16V			
C532	1-126-603-11	ELECT CHIP	4.7uF	20%	35V	FB524	1-414-385-11	INDUCTOR, FERRITE BEAD
C533	1-126-603-11	ELECT CHIP	4.7uF	20%	35V	FB525	1-414-385-11	INDUCTOR, FERRITE BEAD
C534	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB527	1-414-235-11	INDUCTOR, FERRITE BEAD	
C535	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	FB528	1-414-235-11	INDUCTOR, FERRITE BEAD
C536	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB530	1-414-385-11	INDUCTOR, FERRITE BEAD
C537	1-162-959-11	CERAMIC CHIP	330PF	5%	50V	FB531	1-414-385-11	INDUCTOR, FERRITE BEAD
C538	1-162-959-11	CERAMIC CHIP	330PF	5%	50V	FB532	1-414-385-11	INDUCTOR, FERRITE BEAD
C542	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB533	1-414-235-11	INDUCTOR, FERRITE BEAD	
C545	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB534	1-414-385-11	INDUCTOR, FERRITE BEAD	
C547	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	FB535	1-414-235-11	INDUCTOR, FERRITE BEAD
C558	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB536	1-414-385-11	INDUCTOR, FERRITE BEAD
C561	1-126-204-11	ELECT CHIP	47uF	20%	16V	FB539	1-414-385-11	INDUCTOR, FERRITE BEAD
C562	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB541	1-414-385-11	INDUCTOR, FERRITE BEAD	
C563	1-126-207-11	ELECT CHIP	33uF	20%	4V	FB542	1-414-235-11	INDUCTOR, FERRITE BEAD
C564	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	FB543	1-414-385-11	INDUCTOR, FERRITE BEAD
C565	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	FB544	1-414-385-11	INDUCTOR, FERRITE BEAD
C566	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	FB545	1-414-385-11	INDUCTOR, FERRITE BEAD
C567	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	FB546	1-414-385-11	INDUCTOR, FERRITE BEAD
C568	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB547	1-414-235-11	INDUCTOR, FERRITE BEAD
C569	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB548	1-414-235-11	INDUCTOR, FERRITE BEAD
C572	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB549	1-414-235-21	INDUCTOR, FERRITE BEAD
C574	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V	FB550	1-414-385-11	INDUCTOR, FERRITE BEAD
C576	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB551	1-414-385-11	INDUCTOR, FERRITE BEAD
C577	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB552	1-414-385-11	INDUCTOR, FERRITE BEAD
C578	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB553	1-414-385-11	INDUCTOR, FERRITE BEAD
C579	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB554	1-414-385-11	INDUCTOR, FERRITE BEAD
C580	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB555	1-414-385-11	INDUCTOR, FERRITE BEAD
C581	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB558	1-414-385-11	INDUCTOR, FERRITE BEAD
C582	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB560	1-414-811-21	INDUCTOR, FERRITE BEAD
C583	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB561	1-414-385-11	INDUCTOR, FERRITE BEAD
C585	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB562	1-414-385-11	INDUCTOR, FERRITE BEAD
C586	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB563	1-469-185-11	INDUCTOR, FERRITE BEAD
C587	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	FB564	1-469-185-11	INDUCTOR, FERRITE BEAD
C588	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	FB566	1-414-235-11	INDUCTOR, FERRITE BEAD
C589	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB567	1-414-235-11	INDUCTOR, FERRITE BEAD
C590	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB568	1-414-385-11	INDUCTOR, FERRITE BEAD	
C591	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB569	1-414-385-11	INDUCTOR, FERRITE BEAD	
C592	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V		< IC >	
C593	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	IC501	8-759-444-93	IC RH5RL33AA-T1
C594	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	IC502	8-759-494-80	IC RU8X12MF-0021
		< CONNECTOR >				IC503	8-759-040-83	IC BA6287F
CN501	1-784-836-21	CONNECTOR (SMD) 29P				IC504	8-759-444-93	IC RH5RL33AA-T1
CN502	1-778-691-11	CONNECTOR, FFC/FPC 19P				IC505	8-759-566-19	IC AK4518VF-E2
* CN503	1-695-320-21	PIN, CONNECTOR (1.5MM)(SMD) 2P				IC506	8-759-096-87	IC TC7WU04FU(TE12R)
CN504	1-750-524-31	CONNECTOR, FFC/FPC (ZIF) 26P				IC507	8-759-243-19	IC TC7SU04F
		< DIODE >						< JUMPER RESISTOR >
D551	8-719-914-43	DIODE DAN202K				JC502	1-216-295-00	METAL CHIP 0 5% 1/10W
D552	8-719-988-61	DIODE 1SS355TE-17				JC503	1-216-295-00	METAL CHIP 0 5% 1/10W
		< FERRITE BEAD >				JC504	1-216-295-00	METAL CHIP 0 5% 1/10W
FB502	1-414-385-11	INDUCTOR, FERRITE BEAD				JC505	1-216-295-00	METAL CHIP 0 5% 1/10W
FB503	1-414-385-11	INDUCTOR, FERRITE BEAD				JC506	1-216-296-00	METAL CHIP 0 5% 1/8W
FB521	1-414-385-11	INDUCTOR, FERRITE BEAD				JC507	1-216-296-00	METAL CHIP 0 5% 1/8W
FB522	1-414-385-11	INDUCTOR, FERRITE BEAD				JC508	1-216-296-00	METAL CHIP 0 5% 1/8W
						JC509	1-216-296-00	METAL CHIP 0 5% 1/8W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
JC513	1-216-296-00	METAL CHIP	0 5% 1/8W	R509	1-216-857-11	METAL CHIP	1M 5% 1/16W
JC514	1-216-296-00	METAL CHIP	0 5% 1/8W	R510	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC515	1-216-296-00	METAL CHIP	0 5% 1/8W	R511	1-216-845-11	METAL CHIP	100K 5% 1/16W
JC516	1-216-295-00	METAL CHIP	0 5% 1/10W	R512	1-216-025-91	RES.CHIP	100 5% 1/10W
JC517	1-216-296-00	METAL CHIP	0 5% 1/8W	R513	1-216-025-91	RES.CHIP	100 5% 1/10W
JC520	1-216-295-00	METAL CHIP	0 5% 1/10W	R514	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC521	1-216-296-00	METAL CHIP	0 5% 1/8W	R515	1-216-097-91	RES.CHIP	100K 5% 1/10W
JC525	1-216-296-00	METAL CHIP	0 5% 1/8W	R516	1-216-851-11	METAL CHIP	330K 5% 1/16W
JC537	1-216-296-00	METAL CHIP	0 5% 1/8W	R517	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC538	1-216-296-00	METAL CHIP	0 5% 1/8W	R518	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC539	1-216-295-00	METAL CHIP	0 5% 1/10W	R519	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC542	1-216-864-11	METAL CHIP	0 5% 1/16W	R520	1-216-849-11	METAL CHIP	220K 5% 1/16W
JC543	1-216-864-11	METAL CHIP	0 5% 1/16W	R521	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC551	1-216-296-00	METAL CHIP	0 5% 1/8W	R522	1-216-833-11	METAL CHIP	10K 5% 1/16W
JC565	1-216-295-00	METAL CHIP	0 5% 1/10W	R523	1-216-833-11	METAL CHIP	10K 5% 1/16W
< COIL >				R524	1-216-833-11	METAL CHIP	10K 5% 1/16W
L501	1-414-398-11	INDUCTOR	10uH	R525	1-216-833-11	METAL CHIP	10K 5% 1/16W
L502	1-414-398-11	INDUCTOR	10uH	R526	1-216-833-11	METAL CHIP	10K 5% 1/16W
L503	1-414-398-11	INDUCTOR	10uH	R527	1-216-833-11	METAL CHIP	10K 5% 1/16W
L504	1-414-398-11	INDUCTOR	10uH	R529	1-216-807-11	METAL CHIP	68 5% 1/16W
L505	1-414-398-11	INDUCTOR	10uH	R531	1-216-833-11	METAL CHIP	10K 5% 1/16W
L507	1-414-398-11	INDUCTOR	10uH	R532	1-216-817-11	METAL CHIP	470 5% 1/16W
L508	1-412-032-11	INDUCTOR CHIP	100uH	R533	1-216-821-11	METAL CHIP	1K 5% 1/16W
L509	1-414-404-11	INDUCTOR	100uH	R534	1-216-821-11	METAL CHIP	1K 5% 1/16W
L510	1-414-398-11	INDUCTOR	10uH	R536	1-216-845-11	METAL CHIP	100K 5% 1/16W
L511	1-416-107-21	INDUCTOR	0uH	R537	1-216-845-11	METAL CHIP	100K 5% 1/16W
L512	1-412-006-31	INDUCTOR CHIP	10uH	R541	1-216-833-11	METAL CHIP	10K 5% 1/16W
L513	1-414-398-11	INDUCTOR	10uH	R543	1-216-841-11	METAL CHIP	47K 5% 1/16W
L515	1-414-404-21	INDUCTOR CHIP	100uH	R544	1-216-819-11	METAL CHIP	680 5% 1/16W
< TRANSISTOR >				R548	1-216-853-11	METAL CHIP	470K 5% 1/16W
Q501	8-729-031-43	TRANSISTOR	IMD9A-T108	R551	1-216-847-11	METAL CHIP	150K 5% 1/16W
Q502	8-729-402-84	TRANSISTOR	XN4601	R552	1-216-843-11	METAL CHIP	68K 5% 1/16W
Q503	8-729-027-46	TRANSISTOR	DTC114YKA-T146	R553	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q504	8-729-101-07	TRANSISTOR	2SB798-DL	R554	1-216-222-00	RES.CHIP	10K 5% 1/8W
Q507	8-729-402-84	TRANSISTOR	XN4601	R555	1-216-089-91	RES.CHIP	47K 5% 1/10W
Q509	8-729-027-46	TRANSISTOR	DTC114YKA-T146	R556	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q510	8-729-027-56	TRANSISTOR	DTC143TKA-T146	R557	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q511	8-729-019-72	TRANSISTOR	2SB1260	R558	1-216-214-00	RES.CHIP	4.7K 5% 1/8W
Q520	8-729-027-46	TRANSISTOR	DTC114YKA-T146	R559	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q521	8-729-027-46	TRANSISTOR	DTC114YKA-T146	R560	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q522	8-729-027-46	TRANSISTOR	DTC114YKA-T146	R561	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q551	8-729-046-16	TRANSISTOR	UMG5N-TR	R562	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q552	8-729-046-15	TRANSISTOR	UMA1N-TR	R565	1-216-817-11	METAL CHIP	470 5% 1/16W
Q553	8-729-046-16	TRANSISTOR	UMG5N-TR	R567	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q554	8-729-046-15	TRANSISTOR	UMA1N-TR	R571	1-216-097-91	RES.CHIP	100K 5% 1/10W
< RESISTOR >				R572	1-216-073-00	METAL CHIP	10K 5% 1/10W
R501	1-216-833-11	METAL CHIP	10K 5% 1/16W	R573	1-216-073-00	METAL CHIP	10K 5% 1/10W
R502	1-216-833-11	METAL CHIP	10K 5% 1/16W	R580	1-216-821-11	METAL CHIP	1K 5% 1/16W
R503	1-216-833-11	METAL CHIP	10K 5% 1/16W	R581	1-216-821-11	METAL CHIP	1K 5% 1/16W
R504	1-216-833-11	METAL CHIP	10K 5% 1/16W	R582	1-216-833-11	METAL CHIP	10K 5% 1/16W
R505	1-216-845-11	METAL CHIP	100K 5% 1/16W	R583	1-216-833-11	METAL CHIP	10K 5% 1/16W
R506	1-216-845-11	METAL CHIP	100K 5% 1/16W	R584	1-216-857-11	METAL CHIP	1M 5% 1/16W
R507	1-216-845-11	METAL CHIP	100K 5% 1/16W	R585	1-216-819-11	METAL CHIP	680 5% 1/16W
R508	1-216-845-11	METAL CHIP	100K 5% 1/16W	R586	1-216-833-11	METAL CHIP	10K 5% 1/16W
				R587	1-216-833-11	METAL CHIP	10K 5% 1/16W
				R588	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R589	1-216-857-11	METAL CHIP	1M 5% 1/16W

DG **FILTER** **FL**

Ref. No.	Part No.	Description	Remark
R590	1-216-841-11	METAL CHIP 47K 5%	1/16W
< VIBRATOR >			
X501	1-760-174-11	VIBRATOR, CERAMIC (12MHz)	
X502	1-760-872-11	VIBRATOR, CRYSTAL (32.768KHz)	
X503	1-767-286-11	VIBRATOR, CRYSTAL (22.5792MHz)	

*	1-671-517-11	FILTER BOARD *****	
< CONNECTOR >			
CN550	1-750-524-31	CONNECTOR, FFC/FPC (ZIF) 26P	
CN551	1-750-524-31	CONNECTOR, FFC/FPC (ZIF) 26P	
< FERRITE BEAD >			
FB590	1-469-185-11	FERRITE 0UH	
FB591	1-469-185-11	FERRITE 0UH	
< FILTER >			
FL501	1-239-895-11	FILTER, EMI (SMD)	
FL502	1-239-895-11	FILTER, EMI (SMD)	
FL503	1-239-895-11	FILTER, EMI (SMD)	
FL504	1-239-895-11	FILTER, EMI (SMD)	
FL505	1-239-895-11	FILTER, EMI (SMD)	
FL506	1-239-895-11	FILTER, EMI (SMD)	
FL507	1-239-895-11	FILTER, EMI (SMD)	
FL508	1-239-895-11	FILTER, EMI (SMD)	
FL509	1-239-895-11	FILTER, EMI (SMD)	
FL510	1-239-895-11	FILTER, EMI (SMD)	
FL511	1-239-895-11	FILTER, EMI (SMD)	
FL512	1-239-895-11	FILTER, EMI (SMD)	
FL513	1-239-895-11	FILTER, EMI (SMD)	
FL514	1-239-895-11	FILTER, EMI (SMD)	
FL515	1-239-895-11	FILTER, EMI (SMD)	
FL516	1-239-895-11	FILTER, EMI (SMD)	
FL517	1-239-895-11	FILTER, EMI (SMD)	
FL518	1-239-895-11	FILTER, EMI (SMD)	
FL519	1-239-895-11	FILTER, EMI (SMD)	
FL520	1-239-895-11	FILTER, EMI (SMD)	
FL521	1-239-895-11	FILTER, EMI (SMD)	
FL522	1-239-895-11	FILTER, EMI (SMD)	
< JUMPER RESISTOR >			
JC590	1-216-295-00	METAL CHIP 0 5%	1/10W

*	A-3323-029-A	FL BOARD, COMPLETE (US)	
*	A-3323-036-A	FL BOARD, COMPLETE (EXCEPT US) *****	
	3-019-671-01	HOLDER (FL)	
< CAPACITOR >			
C403	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C404	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C405	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C406	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C407	1-163-239-11	CERAMIC CHIP 33PF 5%	50V

Ref. No.	Part No.	Description	Remark
C408	1-163-239-11	CERAMIC CHIP 33PF 5%	50V
C409	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C410	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C411	1-104-664-11	ELECT 47uF 20%	16V
C412	1-163-059-91	CERAMIC CHIP 0.01uF 10%	50V
C413	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C414	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C416	1-163-104-00	CERAMIC CHIP 30PF 5%	50V
C417	1-163-104-00	CERAMIC CHIP 30PF 5%	50V
C418	1-126-964-11	ELECT 10uF 20%	50V
C419	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C420	1-164-337-11	CERAMIC CHIP 2.2uF	16V
C421	1-164-337-11	CERAMIC CHIP 2.2uF	16V
C422	1-164-337-11	CERAMIC CHIP 2.2uF	16V
C423	1-164-337-11	CERAMIC CHIP 2.2uF	16V
C424	1-164-337-11	CERAMIC CHIP 2.2uF	16V
< CONNECTOR >			
* CN404	1-569-306-11	SOCKET, CONNECTOR (L TYRE) 15P	
< FLUORESCENT INDICATOR TUBE >			
FL401	1-517-744-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC401	8-752-891-96	IC CXP82832-005Q	
< JUMPER RESISTOR >			
JC401	1-216-296-00	METAL CHIP 0 5%	1/8W
JC402	1-216-296-00	METAL CHIP 0 5%	1/8W
JC403	1-216-296-00	METAL CHIP 0 5%	1/8W
JC404	1-216-296-00	METAL CHIP 0 5%	1/8W
JC405	1-216-296-00	METAL CHIP 0 5%	1/8W
JC406	1-216-296-00	METAL CHIP 0 5%	1/8W
< TRANSISTOR >			
Q404	8-729-402-19	TRANSISTOR XN6501	
Q405	8-729-028-21	TRANSISTOR XN4502	
Q406	8-729-024-33	TRANSISTOR XN1509-TX	
< RESISTOR >			
R401	1-216-073-00	METAL CHIP 10K 5%	1/10W
R439	1-216-073-00	METAL CHIP 10K 5%	1/10W
R440	1-216-049-91	RES,CHIP 1K 5%	1/10W
R441	1-216-073-00	METAL CHIP 10K 5%	1/10W
R442	1-216-049-91	RES,CHIP 1K 5%	1/10W
R443	1-216-049-91	RES,CHIP 1K 5%	1/10W
R444	1-216-073-00	METAL CHIP 10K 5%	1/10W
R445	1-216-049-91	RES,CHIP 1K 5%	1/10W
R446	1-216-073-00	METAL CHIP 10K 5%	1/10W
R447	1-216-049-91	RES,CHIP 1K 5%	1/10W
R448	1-216-049-91	RES,CHIP 1K 5%	1/10W
R449	1-216-049-91	RES,CHIP 1K 5%	1/10W
R450	1-216-049-91	RES,CHIP 1K 5%	1/10W
R451	1-216-049-91	RES,CHIP 1K 5%	1/10W
R452	1-216-049-91	RES,CHIP 1K 5%	1/10W
R453	1-216-049-91	RES,CHIP 1K 5%	1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R454	1-216-049-91	RES,CHIP	1K 5% 1/10W	*	1-668-254-21	FM ANT BOARD (EXCEPT US)	
R455	1-216-049-91	RES,CHIP	1K 5% 1/10W	*	1-668-254-31	FM ANT BOARD (US)	
R456	1-216-073-00	METAL CHIP	10K 5% 1/10W			*****	
R457	1-216-049-91	RES,CHIP	1K 5% 1/10W			< CONNECTOR >	
R458	1-216-009-00	METAL CHIP	22 5% 1/10W				
R463	1-216-089-91	RES,CHIP	47K 5% 1/10W	* CN41	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P	(EXCEPT US)
R464	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R465	1-216-089-91	RES,CHIP	47K 5% 1/10W	* CN41	1-580-163-11	PIN, CONNECTOR (PC BOARD) 2P (US)	
R466	1-216-089-91	RES,CHIP	47K 5% 1/10W			< SWITCH >	
R467	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R468	1-216-089-91	RES,CHIP	47K 5% 1/10W	S1	1-771-535-11	SWITCH, SLIDE (FM ANTENNA SELECTOR)	(EXCEPT US)
R469	1-216-089-91	RES,CHIP	47K 5% 1/10W			< TERMINAL >	
R470	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R471	1-216-089-91	RES,CHIP	47K 5% 1/10W	TB40	1-536-833-31	TERMINAL BOARD (FM EXT ANTENNA) (US)	
R472	1-216-089-91	RES,CHIP	47K 5% 1/10W			*****	
R473	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R474	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R475	1-216-089-91	RES,CHIP	47K 5% 1/10W	*	A-3321-539-A	FRONT KEY BOARD, COMPLETE (US)	
R476	1-216-089-91	RES,CHIP	47K 5% 1/10W	*	A-3321-557-A	FRONT KEY BOARD, COMPLETE (EXCEPT US)	
R477	1-216-089-91	RES,CHIP	47K 5% 1/10W			*****	
R478	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R479	1-216-089-91	RES,CHIP	47K 5% 1/10W			3-020-475-01	HOLDER (LED)
R480	1-216-089-91	RES,CHIP	47K 5% 1/10W			< CAPACITOR >	
R481	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R482	1-216-089-91	RES,CHIP	47K 5% 1/10W	C401	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
R483	1-216-089-91	RES,CHIP	47K 5% 1/10W	C402	1-109-994-11	CERAMIC CHIP 2.2uF 10% 10V	
R484	1-216-089-91	RES,CHIP	47K 5% 1/10W			< CONNECTOR >	
R485	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R486	1-216-089-91	RES,CHIP	47K 5% 1/10W	CN401	1-580-168-11	PIN, CONNECTOR (PC BOARD) 7P	
R487	1-216-089-91	RES,CHIP	47K 5% 1/10W			< DIODE >	
R488	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R489	1-216-089-91	RES,CHIP	47K 5% 1/10W	D401	8-719-071-33	LED MBG3362X-TP-J434K (RADIO)	
R490	1-216-089-91	RES,CHIP	47K 5% 1/10W	D402	8-719-071-33	LED MBG3362X-TP-J434K (RADIO)	
R491	1-216-089-91	RES,CHIP	47K 5% 1/10W	D403	8-719-071-33	LED MBG3362X-TP-J434K (CD)	
R492	1-216-089-91	RES,CHIP	47K 5% 1/10W	D404	8-719-071-33	LED MBG3362X-TP-J434K (CD)	
R493	1-216-089-91	RES,CHIP	47K 5% 1/10W	D405	8-719-071-33	LED MBG3362X-TP-J434K (MD)	
R494	1-216-089-91	RES,CHIP	47K 5% 1/10W	D406	8-719-071-33	LED MBG3362X-TP-J434K (MD)	
R495	1-216-089-91	RES,CHIP	47K 5% 1/10W			< IC >	
R496	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R497	1-216-089-91	RES,CHIP	47K 5% 1/10W	IC402	8-749-011-03	IC GP1U26X	
R498	1-216-089-91	RES,CHIP	47K 5% 1/10W			< TRANSISTOR >	
R499	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R500	1-216-073-00	METAL CHIP	10K 5% 1/10W	Q401	8-729-027-42	TRANSISTOR DTC113ZKA-T146	
R501	1-216-073-00	METAL CHIP	10K 5% 1/10W	Q402	8-729-027-42	TRANSISTOR DTC113ZKA-T146	
R502	1-216-073-00	METAL CHIP	10K 5% 1/10W	Q403	8-729-027-42	TRANSISTOR DTC113ZKA-T146	
R503	1-216-073-00	METAL CHIP	10K 5% 1/10W			< RESISTOR >	
R504	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R505	1-216-073-00	METAL CHIP	10K 5% 1/10W	R404	1-208-794-11	RES,CHIP 3.3K 0.50% 1/10W	
R506	1-216-073-00	METAL CHIP	10K 5% 1/10W	R405	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R507	1-216-073-00	METAL CHIP	10K 5% 1/10W	R406	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R508	1-216-073-00	METAL CHIP	10K 5% 1/10W	R407	1-208-782-11	RES,CHIP 1K 0.50% 1/10W	
R509	1-216-073-00	METAL CHIP	10K 5% 1/10W	R408	1-208-778-11	RES,CHIP 680 0.50% 1/10W	
R510	1-216-073-00	METAL CHIP	10K 5% 1/10W				
		< VIBRATOR >		R409	1-208-778-11	RES,CHIP 680 0.50% 1/10W	
X811	1-767-838-11	VIBRATOR, CERAMIC (6MHz)		R410	1-208-774-11	RES,CHIP 470 0.50% 1/10W	
		*****		R411	1-208-774-11	RES,CHIP 470 0.50% 1/10W	
				R412	1-216-029-00	METAL CHIP 150 5% 1/10W	
				R413	1-216-029-00	METAL CHIP 150 5% 1/10W	

FRONT KEY

HP

LEFT KEY

LINE IN

Ref. No.	Part No.	Description	Remark
R414	1-216-029-00	METAL CHIP 150 5%	1/10W
R458	1-216-029-00	METAL CHIP 150 5%	1/10W
R459	1-216-029-00	METAL CHIP 150 5%	1/10W
R460	1-216-029-00	METAL CHIP 150 5%	1/10W
R461	1-216-049-91	RES,CHIP 1K 5%	1/10W
< SWITCH >			
S801	1-692-014-11	SWITCH, KEY BOARD (MD ■)	
S802	1-692-014-11	SWITCH, KEY BOARD (CD ■)	
S803	1-692-014-11	SWITCH, KEY BOARD (MD ►)	
S804	1-692-014-11	SWITCH, KEY BOARD (CD ►)	
S805	1-692-014-11	SWITCH, KEY BOARD (RADIO, BAND)	
S806	1-692-014-11	SWITCH, KEY BOARD (MD EJECT)	
S807	1-692-014-11	SWITCH, KEY BOARD (CD OPEN/CLOSE)	
S808	1-692-014-11	SWITCH, KEY BOARD (LINE)	
S809	1-692-014-11	SWITCH, KEY BOARD (REC)	

*	1-668-250-21	HP BOARD (EXCEPT US)	
*	1-668-250-31	HP BOARD (US)	

< CAPACITOR >			
C370	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(EXCEPT US)
C371	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(EXCEPT US)
C372	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(US)
C373	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(US)
C374	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(US)
C375	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(US)
< CONNECTOR >			
* CN371	1-580-166-21	PIN, CONNECTOR (PC BOARD) 5P	
< JACK >			
J371	1-566-891-21	JACK (•○)	
J372	1-566-891-21	JACK (••○)	
< INDUCTOR >			
L171	1-410-503-11	INDUCTOR, MICRO 3.3uH	
L172	1-410-503-11	INDUCTOR, MICRO 3.3uH	
L271	1-410-503-11	INDUCTOR, MICRO 3.3uH	
L272	1-410-503-11	INDUCTOR, MICRO 3.3uH	
L371	1-410-503-11	INDUCTOR, MICRO 3.3uH	
< TRANSISTOR >			
Q172	8-729-920-31	TRANSISTOR DTC343TK	
Q173	8-729-920-31	TRANSISTOR DTC343TK	
Q272	8-729-920-31	TRANSISTOR DTC343TK	
Q273	8-729-920-31	TRANSISTOR DTC343TK	
< RESISTOR >			
R174	1-216-013-00	METAL CHIP 33 5%	1/10W
R175	1-216-013-00	METAL CHIP 33 5%	1/10W
R274	1-216-013-00	METAL CHIP 33 5%	1/10W

Ref. No.	Part No.	Description	Remark
R275	1-216-013-00	METAL CHIP 33 5%	1/10W

*	1-668-243-21	LEFT KEY BOARD (EXCEPT US)	
*	1-668-243-31	LEFT KEY BOARD (US)	

< CONNECTOR >			
CN406	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P	
< RESISTOR >			
R424	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R425	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R426	1-208-782-11	RES,CHIP 1K 0.50%	1/10W
R427	1-208-778-11	RES,CHIP 680 0.50%	1/10W
R428	1-208-778-11	RES,CHIP 680 0.50%	1/10W
R429	1-208-774-11	RES,CHIP 470 0.50%	1/10W
R430	1-208-774-11	RES,CHIP 470 0.50%	1/10W
< SWITCH >			
S813	1-692-014-11	SWITCH, KEY BOARD (POWER)	
S814	1-692-014-11	SWITCH, KEY BOARD (DISC ALL)	
S815	1-692-014-11	SWITCH, KEY BOARD (TO TOP)	
S816	1-692-014-11	SWITCH, KEY BOARD (TO END)	
S817	1-692-014-11	SWITCH, KEY BOARD (SLEEP)	
S818	1-692-014-11	SWITCH, KEY BOARD (STAND BY)	
S819	1-692-014-11	SWITCH, KEY BOARD (TIMER)	
S820	1-692-014-11	SWITCH, KEY BOARD (CLOCK)	

*	1-668-249-21	LINE IN BOARD (EXCEPT US)	
*	1-668-249-31	LINE IN BOARD (US)	

< CAPACITOR >			
C392	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
< CONNECTOR >			
* CN331	1-695-112-11	PIN, CONNECTOR (PC BOARD) 10P	
< FERRITE BEAD >			
FB190	1-500-445-21	INDUCTOR, FERRITE BEAD (US)	
FB290	1-500-445-21	INDUCTOR, FERRITE BEAD (US)	
FB390	1-500-445-21	INDUCTOR, FERRITE BEAD (US)	
< JACK >			
J391	1-566-891-21	JACK (LINE IN)	
< INDUCTOR >			
L190	1-410-503-61	INDUCTOR, MICRO 3.3uH	(EXCEPT US)
L290	1-410-503-61	INDUCTOR, MICRO 3.3uH	(EXCEPT US)
L390	1-410-503-61	INDUCTOR, MICRO 3.3uH	(EXCEPT US)
< TRANSISTOR >			
Q192	8-729-920-31	TRANSISTOR DTC343TK	

LINE IN

LOADING

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q292	8-729-920-31	TRANSISTOR	DTC343TK			C122	1-136-165-00	FILM	0.1uF	5%	50V
Q392	8-729-027-45	TRANSISTOR	DTC114WKA-T146			C123	1-136-165-00	FILM	0.1uF	5%	50V
Q399	8-729-027-26	TRANSISTOR	DTA114YKA-T146			C124	1-126-960-11	ELECT	1uF	20%	50V
		< RESISTOR >				C125	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
R197	1-216-089-91	RES.CHIP	47K	5%	1/10W	C126	1-124-994-11	ELECT	100uF	20%	10V
R198	1-216-089-91	RES.CHIP	47K	5%	1/10W	C127	1-130-474-00	MYLAR	0.0018uF	5%	50V
R297	1-216-089-91	RES.CHIP	47K	5%	1/10W	C128	1-106-359-00	MYLAR	4700PF	5%	200V
R298	1-216-089-91	RES.CHIP	47K	5%	1/10W	C129	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
R391	1-216-025-91	RES.CHIP	100	5%	1/10W	C130	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
		< SWITCH >				C131	1-104-665-11	ELECT	100uF	20%	10V
S891	1-554-088-00	SWITCH, KEY BOARD (RESET)				C132	1-136-165-00	FILM	0.1uF	5%	50V

*	1-667-045-11	LOADING BOARD				C133	1-126-934-11	ELECT	220uF	20%	10V
		*****				C201	1-126-959-11	ELECT	0.47uF	20%	50V
		< CAPACITOR >				C202	1-126-963-11	ELECT	4.7uF	20%	50V
C790	1-104-664-11	ELECT	47uF	20%	25V	C203	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >				C206	1-126-963-11	ELECT	4.7uF	20%	50V
* CN790	1-580-166-11	PIN, CONNECTOR (PC BOARD) 5P				C210	1-126-963-11	ELECT	4.7uF	20%	50V
		< DIODE >				C211	1-126-963-11	ELECT	4.7uF	20%	50V
D790	8-719-970-02	DIODE 1SR139-400				C216	1-126-963-11	ELECT	4.7uF	20%	50V
		< IC >				C217	1-130-480-00	MYLAR	0.0056uF	5%	50V
IC790	8-759-501-73	IC BA6418N				C220	1-136-164-00	FILM	0.082uF	5%	50V
		< COIL >				C221	1-136-164-00	FILM	0.082uF	5%	50V
L790	1-412-852-11	INDUCTOR	47uH			C222	1-136-165-00	FILM	0.1uF	5%	50V
		< RESISTOR >				C223	1-136-165-00	FILM	0.1uF	5%	50V
R790	1-249-425-11	CARBON	4.7K	5%	1/4W	C224	1-126-960-11	ELECT	1uF	20%	50V
		< SWITCH >				C225	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
S790	1-762-951-11	SWITCH, PUSH (CLOSE)				C226	1-124-994-11	ELECT	100uF	20%	10V
S791	1-762-951-11	SWITCH, PUSH (OPEN)				C227	1-130-474-00	MYLAR	0.0018uF	5%	50V

*	A-3321-544-A	MAIN BOARD, COMPLETE (US)				C228	1-106-359-00	MYLAR	4700PF	5%	200V
*	A-3321-565-A	MAIN BOARD, COMPLETE (EXCEPT US)				C229	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
		*****				C230	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				C231	1-104-665-11	ELECT	100uF	20%	10V
		< CAPACITOR >				C232	1-136-165-00	FILM	0.1uF	5%	50V
C101	1-126-959-11	ELECT	0.47uF	20%	50V	C233	1-126-934-11	ELECT	220uF	20%	10V
C102	1-126-963-11	ELECT	4.7uF	20%	50V	C301	1-124-994-11	ELECT	100uF	20%	10V
C103	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C302	1-126-934-11	ELECT	220uF	20%	10V
C106	1-126-963-11	ELECT	4.7uF	20%	50V	C303	1-126-964-11	ELECT	10uF	20%	50V
C110	1-126-963-11	ELECT	4.7uF	20%	50V	C304	1-104-665-11	ELECT	100uF	20%	10V
C111	1-126-963-11	ELECT	4.7uF	20%	50V	C307	1-126-964-11	ELECT	10uF	20%	50V
C116	1-126-963-11	ELECT	4.7uF	20%	50V	C308	1-126-964-11	ELECT	10uF	20%	50V
C117	1-130-480-00	MYLAR	0.0056uF	5%	50V	C309	1-104-665-11	ELECT	100uF	20%	10V
C120	1-136-164-00	FILM	0.082uF	5%	50V	C311	1-126-964-11	ELECT	10uF	20%	50V
C121	1-136-164-00	FILM	0.082uF	5%	50V	C701	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
						C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C703	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
						C704	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
						C705	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
						C706	1-124-994-11	ELECT	100uF	20%	10V
						C707	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
						C708	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
						C709	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
						C710	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
						C711	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
						C712	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
						C713	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
						C714	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
						C715	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
						C716	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C717	1-162-965-11	CERAMIC CHIP	0.0015uF 10% 50V	C781	1-110-501-11	CERAMIC CHIP	0.33uF 10% 16V
C718	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	C782	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C719	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C783	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C720	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	C784	1-127-508-00	ELECT	2.2uF 20% 25V
C721	1-104-664-11	ELECT	47uF 20% 16V	C786	1-127-508-00	ELECT	2.2uF 20% 25V
C722	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V	C787	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C723	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V	C788	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C724	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V	C789	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C725	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C801	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C726	1-104-509-11	CERAMIC CHIP	0.018uF 10% 16V	C802	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C727	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V	C803	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C728	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	C804	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C729	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C805	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C730	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C806	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C731	1-124-994-11	ELECT	100uF 20% 10V	C807	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C732	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V	C808	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C733	1-164-505-11	CERAMIC CHIP	2.2uF 16V	C809	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C734	1-163-033-91	CERAMIC CHIP	0.022uF 50V	C810	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C735	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C811	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C736	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C812	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C737	1-124-994-11	ELECT	100uF 20% 10V	C813	1-162-921-11	CERAMIC CHIP	33PF 5% 50V
C739	1-124-994-11	ELECT	100uF 20% 10V	C814	1-162-921-11	CERAMIC CHIP	33PF 5% 50V
C741	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C815	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C742	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	C816	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C743	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	C817	1-163-237-11	CERAMIC CHIP	27PF 5% 50V
C744	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	C818	1-162-921-11	CERAMIC CHIP	33PF 5% 50V
C745	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C819	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C747	1-126-925-11	ELECT	470uF 20% 10V	C820	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C748	1-104-665-11	ELECT	100uF 20% 10V	C821	1-163-234-11	CERAMIC CHIP	20PF 5% 50V
C749	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C822	1-104-664-11	ELECT	47uF 20% 16V
C750	1-124-994-11	ELECT	100uF 20% 10V	C823	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C751	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C824	1-104-665-11	ELECT	100uF 20% 10V
C752	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C825	1-104-664-11	ELECT	47uF 20% 16V
C753	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C826	1-162-961-11	CERAMIC CHIP	330PF 10% 50V
C754	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C827	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C755	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C829	1-162-961-11	CERAMIC CHIP	330PF 10% 50V
C756	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C830	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C757	1-162-957-11	CERAMIC CHIP	220PF 5% 50V	C831	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C758	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C832	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C759	1-104-665-11	ELECT	100uF 20% 10V	C833	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C760	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C834	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C762	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	C835	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C763	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	C836	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C764	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V	C837	1-163-059-91	CERAMIC CHIP	0.01uF 10% 50V
C765	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	C838	1-127-508-00	ELECT	2.2uF 20% 25V
C766	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V	C839	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C767	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C840	1-163-059-91	CERAMIC CHIP	0.01uF 10% 50V
C768	1-162-957-11	CERAMIC CHIP	220PF 5% 50V	C841	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C770	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C842	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C771	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V	C843	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V
C772	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C844	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C773	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C845	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C775	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C847	1-162-961-11	CERAMIC CHIP	330PF 10% 50V
C777	1-126-963-11	ELECT	4.7uF 20% 50V	C850	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C778	1-126-963-11	ELECT	4.7uF 20% 50V	C851	1-164-505-11	CERAMIC CHIP	2.2uF 16V
C779	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V	C852	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C780	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C853	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
				C854	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C855	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D302	8-719-404-49	DIODE MA111	
C856	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D303	8-719-800-76	DIODE 1SS226	
C857	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D306	8-719-404-49	DIODE MA111	
C858	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D711	8-719-404-49	DIODE MA111	
C859	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D712	8-719-404-49	DIODE MA111	
C860	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D901	8-719-988-62	DIODE 1SS355	
C861	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D902	8-719-421-27	DIODE MA728	
C866	1-126-960-11	ELECT	1uF 20% 50V	D903	8-719-018-12	DIODE MA8330	
C867	1-126-960-11	ELECT	1uF 20% 50V	D904	8-719-422-67	DIODE MA8062-H	
C871	1-126-233-11	ELECT	22uF 20% 50V	D905	8-719-404-49	DIODE MA111	
C880	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D906	8-719-421-27	DIODE MA728	
C881	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D907	8-719-421-27	DIODE MA728	
C901	1-126-044-11	ELECT	1uF 20% 50V	D910	8-719-404-49	DIODE MA111	
C902	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V			< FERRITE BEAD >	
C903	1-124-994-11	ELECT	100uF 20% 10V	FB301	1-414-235-11	INDUCTOR, FERRITE BEAD	
C904	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	FB302	1-414-235-11	INDUCTOR, FERRITE BEAD	
C905	1-125-784-11	ELECT	15000uF 20% 25V	FB303	1-414-235-11	INDUCTOR, FERRITE BEAD	
C906	1-126-934-11	ELECT	220uF 20% 10V	FB304	1-414-235-11	INDUCTOR, FERRITE BEAD	
C907	1-104-665-11	ELECT	100uF 20% 10V	FB305	1-414-235-11	INDUCTOR, FERRITE BEAD	
C908	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	FB306	1-414-235-11	INDUCTOR, FERRITE BEAD	
C909	1-126-964-11	ELECT	10uF 20% 50V	FB307	1-414-235-11	INDUCTOR, FERRITE BEAD	
C910	1-127-508-00	ELECT	2.2uF 20% 25V	FB308	1-414-235-11	INDUCTOR, FERRITE BEAD	
C911	1-110-501-11	CERAMIC CHIP	0.33uF 10% 16V	FB309	1-414-235-11	INDUCTOR, FERRITE BEAD	
C912	1-104-905-11	CAPACITOR	0.22F 5.5V	FB310	1-414-235-11	INDUCTOR, FERRITE BEAD	
C913	1-126-964-11	ELECT	10uF 20% 50V	FB311	1-414-385-11	INDUCTOR, FERRITE BEAD	
C914	1-126-964-11	ELECT	10uF 20% 50V	FB312	1-414-235-11	INDUCTOR, FERRITE BEAD	
C915	1-126-964-11	ELECT	10uF 20% 50V	FB313	1-414-385-11	INDUCTOR, FERRITE BEAD	
C916	1-104-664-11	ELECT	47uF 20% 10V	FB314	1-414-385-11	INDUCTOR, FERRITE BEAD	
C917	1-127-508-00	ELECT	2.2uF 20% 25V	FB315	1-414-235-11	INDUCTOR, FERRITE BEAD	
C918	1-127-508-00	ELECT	2.2uF 20% 25V	FB316	1-414-235-11	INDUCTOR, FERRITE BEAD	
C919	1-126-964-11	ELECT	10uF 20% 50V	FB318	1-414-235-11	INDUCTOR, FERRITE BEAD	
C920	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	FB320	1-216-295-00	METAL CHIP 0	5% 1/10W
C921	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	FB321	1-216-295-00	METAL CHIP 0	5% 1/10W
C922	1-126-964-11	ELECT	10uF 20% 50V	FB322	1-216-295-00	METAL CHIP 0	5% 1/10W
C923	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	FB323	1-216-295-00	METAL CHIP 0	5% 1/10W
C924	1-126-968-11	ELECT	100uF 20% 50V	FB324	1-216-295-00	METAL CHIP 0	5% 1/10W
C925	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	FB325	1-216-295-00	METAL CHIP 0	5% 1/10W
C926	1-126-964-11	ELECT	10uF 20% 50V	FB326	1-216-295-00	METAL CHIP 0	5% 1/10W
C927	1-127-508-00	ELECT	2.2uF 20% 25V	FB327	1-216-295-00	METAL CHIP 0	5% 1/10W
C928	1-113-981-11	TANTAL. CHIP	22uF 20% 20V	FB328	1-216-295-00	METAL CHIP 0	5% 1/10W
		< CONNECTOR >		FB329	1-216-295-00	METAL CHIP 0	5% 1/10W
CN701	1-569-324-11	SOCKET, CONNECTOR 21P		FB330	1-216-295-00	METAL CHIP 0	5% 1/10W
* CN703	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P				< IC >	
CN801	1-569-321-11	SOCKET, CONNECTOR 15P		IC101	8-759-636-55	IC M5218AFP	
CN802	1-573-489-11	PIN, CONNECTOR (PC BOARD) 11P		IC201	8-759-636-55	IC M5218AFP	
CN803	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P		IC301	8-759-567-92	IC TDA7439DS013TR	
CN804	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P		IC302	8-759-701-02	IC NJM2073M	
CN805	1-569-326-11	SOCKET, CONNECTOR 26P		IC701	8-752-082-14	IC CXA1992BR	
CN806	1-568-443-11	SOCKET, CONNECTOR 13P		IC702	8-759-473-42	IC BA6898FP	
* CN807	1-691-581-11	PIN, CONNECTOR (PC BOARD) 10P		IC703	8-752-384-13	IC CXD2589Q	
* CN808	1-573-489-21	PIN, CONNECTOR (PC BOARD) 11P		IC704	8-759-476-21	IC BA05SFP-E2	
* CN809	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P		IC801	8-752-900-67	IC CXP84648-037Q	
* CN810	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P		IC802	8-759-445-91	IC RN5VT28AA-TL	
		< DIODE >		IC803	8-759-398-68	IC S-29330AFJ-TB	
D301	8-719-801-78	DIODE 1SS184		IC804	8-759-233-66	IC TC74HCT04AF	
				IC901	8-759-463-93	IC L88MS06T-FA-TL	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC902	8-759-290-19	IC BA3960		Q803	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC903	8-759-494-77	IC RH5RL58AA-T1		Q902	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
IC904	8-759-442-54	IC RH5RL50AA-T1		Q903	8-729-402-84	TRANSISTOR XN4601	
IC905	8-759-938-15	IC BA178M05		Q905	8-729-031-43	TRANSISTOR IMD9A-T108	
		< JUMPER RESISTOR >		Q909	8-729-031-43	TRANSISTOR IMD9A-T108	
JC301	1-216-864-11	METAL CHIP	0 5% 1/16W	Q910	8-729-019-72	TRANSISTOR 2SB1260	
JC701	1-216-295-00	METAL CHIP	0 5% 1/10W			< RESISTOR >	
JC702	1-216-864-11	METAL CHIP	0 5% 1/16W	R101	1-218-758-11	RES,CHIP 180K 5% 1/10W	
JC703	1-216-295-00	METAL CHIP	0 5% 1/10W	R103	1-216-669-11	METAL CHIP 5.6K 0.5% 1/10W	
JC704	1-216-296-00	METAL CHIP	0 5% 1/8W	R104	1-216-665-11	METAL CHIP 3.9K 0.5% 1/10W	
JC705	1-216-296-00	METAL CHIP	0 5% 1/8W	R105	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
JC802	1-216-295-00	METAL CHIP	0 5% 1/10W	R106	1-218-776-11	RES,CHIP 1M 5% 1/10W	
JC803	1-216-295-00	METAL CHIP	0 5% 1/10W	R107	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
JC805	1-216-295-00	METAL CHIP	0 5% 1/10W (US)	R108	1-216-821-11	METAL CHIP 1K 5% 1/16W	
JC806	1-216-295-00	METAL CHIP	0 5% 1/10W (EXCEPT US)	R110	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
JC807	1-216-295-00	METAL CHIP	0 5% 1/10W	R111	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
JC809	1-216-296-00	METAL CHIP	0 5% 1/8W	R112	1-216-627-11	METAL CHIP 100 0.5% 1/10W	
JC850	1-216-295-00	METAL CHIP	0 5% 1/10W	R113	1-216-809-11	METAL CHIP 100 5% 1/16W	
JC851	1-216-295-00	METAL CHIP	0 5% 1/10W	R114	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
JC852	1-216-295-00	METAL CHIP	0 5% 1/10W	R115	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
JC860	1-216-296-00	METAL CHIP	0 5% 1/8W	R116	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
		< COIL >		R117	1-216-025-91	RES,CHIP 100 5% 1/10W	
L101	1-410-999-11	INDUCTOR CHIP 3.3uH		R119	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L102	1-410-999-11	INDUCTOR CHIP 3.3uH		R201	1-218-758-11	RES,CHIP 180K 5% 1/10W	
L103	1-410-999-11	INDUCTOR CHIP 3.3uH		R203	1-216-669-11	METAL CHIP 5.6K 0.5% 1/10W	
L104	1-410-999-11	INDUCTOR CHIP 3.3uH		R204	1-216-665-11	METAL CHIP 3.9K 0.5% 1/10W	
L105	1-410-999-11	INDUCTOR CHIP 3.3uH		R205	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
L106	1-410-999-11	INDUCTOR CHIP 3.3uH		R206	1-218-776-11	RES,CHIP 1M 5% 1/10W	
L201	1-410-999-11	INDUCTOR CHIP 3.3uH		R207	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
L202	1-410-999-11	INDUCTOR CHIP 3.3uH		R208	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L203	1-410-999-11	INDUCTOR CHIP 3.3uH		R210	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
L204	1-410-999-11	INDUCTOR CHIP 3.3uH		R211	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
L205	1-410-999-11	INDUCTOR CHIP 3.3uH		R212	1-216-627-11	METAL CHIP 100 0.5% 1/10W	
L206	1-410-999-11	INDUCTOR CHIP 3.3uH		R213	1-216-809-11	METAL CHIP 100 5% 1/16W	
L701	1-216-057-00	METAL CHIP 2.2K 5% 1/10W		R214	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
L801	1-216-295-00	METAL CHIP 0 5% 1/10W		R215	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
L802	1-216-295-00	METAL CHIP 0 5% 1/10W		R216	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
		< TRANSISTOR >		R217	1-216-025-91	RES,CHIP 100 5% 1/10W	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R219	1-216-821-11	METAL CHIP 1K 5% 1/16W	
Q103	8-729-920-31	TRANSISTOR DTC343TK		R301	1-216-015-00	METAL CHIP 39 5% 1/10W	
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R302	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
Q203	8-729-920-31	TRANSISTOR DTC343TK		R303	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
Q301	8-729-031-43	TRANSISTOR IMD9A-T108		R304	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
Q303	8-729-031-43	TRANSISTOR IMD9A-T108		R305	1-216-627-11	METAL CHIP 100 0.5% 1/10W	
Q304	8-729-901-46	TRANSISTOR DTA114YK		R306	1-216-017-91	RES,CHIP 47 5% 1/10W	
Q305	8-729-027-46	TRANSISTOR DTC114YKA-T146		R308	1-216-821-11	METAL CHIP 1K 5% 1/16W	
Q701	8-729-101-07	TRANSISTOR 2SB798-DL		R309	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q702	8-729-027-62	TRANSISTOR DTC144WKA-T146		R310	1-216-821-11	METAL CHIP 1K 5% 1/16W	
Q703	8-729-901-46	TRANSISTOR DTA114YK		R311	1-216-089-91	RES,CHIP 47K 5% 1/10W	
Q704	8-729-027-56	TRANSISTOR DTC143TKA-T146		R315	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
Q705	8-729-027-56	TRANSISTOR DTC143TKA-T146		R701	1-216-849-11	METAL CHIP 220K 5% 1/16W	
Q801	8-729-027-46	TRANSISTOR DTC114YKA-T146		R702	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q802	8-729-024-33	TRANSISTOR XN1509-TX		R703	1-216-847-11	METAL CHIP 150K 5% 1/16W	
				R704	1-216-841-11	METAL CHIP 47K 5% 1/16W	
				R705	1-216-841-11	METAL CHIP 47K 5% 1/16W	
				R706	1-216-847-11	METAL CHIP 150K 5% 1/16W	
				R707	1-216-847-11	METAL CHIP 150K 5% 1/16W	

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R708	1-216-847-11	METAL CHIP	150K	5%	1/16W	R767	1-216-833-11	METAL CHIP	10K	5%	1/16W
R709	1-216-121-91	RES.CHIP	1M	5%	1/10W	R768	1-216-857-11	METAL CHIP	1M	5%	1/16W
R710	1-216-109-00	METAL CHIP	330K	5%	1/10W						
R712	1-216-841-11	METAL CHIP	47K	5%	1/16W	R769	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R713	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	R770	1-216-833-11	METAL CHIP	10K	5%	1/16W
						R771	1-216-849-11	METAL CHIP	220K	5%	1/16W
R714	1-216-836-11	METAL CHIP	18K	5%	1/16W	R772	1-216-837-11	METAL CHIP	22K	5%	1/16W
R715	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R773	1-216-295-00	METAL CHIP	0	5%	1/10W
R716	1-216-841-11	METAL CHIP	47K	5%	1/16W						
R717	1-216-857-11	METAL CHIP	1M	5%	1/16W	R774	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R718	1-216-855-11	METAL CHIP	680K	5%	1/16W	R775	1-216-295-00	METAL CHIP	0	5%	1/10W
						R776	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R719	1-216-001-00	METAL CHIP	10	5%	1/10W	R781	1-216-073-00	METAL CHIP	10K	5%	1/10W
R720	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R782	1-216-073-00	METAL CHIP	10K	5%	1/10W
R721	1-216-829-11	METAL CHIP	4.7K	5%	1/16W						
R722	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R801	1-216-097-91	RES.CHIP	100K	5%	1/10W
R723	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	R802	1-216-853-11	METAL CHIP	470K	5%	1/16W
						R803	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R724	1-216-847-11	METAL CHIP	150K	5%	1/16W	R804	1-216-853-11	METAL CHIP	470K	5%	1/16W
R725	1-216-851-11	METAL CHIP	330K	5%	1/16W	R805	1-216-073-00	METAL CHIP	10K	5%	1/10W
R726	1-218-912-11	RES.CHIP	510K	0.50%	1/16W						
R727	1-216-847-11	METAL CHIP	150K	5%	1/16W	R806	1-216-073-00	METAL CHIP	10K	5%	1/10W
R728	1-216-847-11	METAL CHIP	150K	5%	1/16W	R807	1-216-073-00	METAL CHIP	10K	5%	1/10W
						R808	1-216-073-00	METAL CHIP	10K	5%	1/10W
R729	1-216-834-11	METAL CHIP	12K	5%	1/16W	R814	1-216-041-00	METAL CHIP	470	5%	1/10W
R730	1-216-849-11	METAL CHIP	220K	5%	1/16W	R815	1-216-833-11	METAL CHIP	10K	5%	1/16W
R731	1-216-847-11	METAL CHIP	150K	5%	1/16W						
R732	1-216-841-11	METAL CHIP	47K	5%	1/16W	R816	1-216-833-11	METAL CHIP	10K	5%	1/16W
R733	1-216-845-11	METAL CHIP	100K	5%	1/16W	R819	1-216-836-11	METAL CHIP	18K	5%	1/16W
						R820	1-216-836-11	METAL CHIP	18K	5%	1/16W
R734	1-216-839-11	METAL CHIP	33K	5%	1/16W	R823	1-216-821-11	METAL CHIP	1K	5%	1/16W
R735	1-216-833-11	METAL CHIP	10K	5%	1/16W	R824	1-216-821-11	METAL CHIP	1K	5%	1/16W
R736	1-216-833-11	METAL CHIP	10K	5%	1/16W						
R737	1-216-839-11	METAL CHIP	33K	5%	1/16W	R833	1-216-049-91	RES.CHIP	1K	5%	1/10W
R738	1-216-837-11	METAL CHIP	22K	5%	1/16W	R835	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R838	1-216-851-11	METAL CHIP	330K	5%	1/16W
R739	1-216-837-11	METAL CHIP	22K	5%	1/16W	R840	1-216-809-11	METAL CHIP	100	5%	1/16W
R740	1-216-864-11	METAL CHIP	0	5%	1/16W	R842	1-216-821-11	METAL CHIP	1K	5%	1/16W
R741	1-216-864-11	METAL CHIP	0	5%	1/16W						
R742	1-216-864-11	METAL CHIP	0	5%	1/16W	R850	1-216-833-11	METAL CHIP	10K	5%	1/16W
R743	1-216-864-11	METAL CHIP	0	5%	1/16W	R851	1-216-815-11	METAL CHIP	330	5%	1/16W
						R867	1-216-833-11	METAL CHIP	10K	5%	1/16W
R744	1-216-864-11	METAL CHIP	0	5%	1/16W	R868	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R745	1-216-821-11	METAL CHIP	1K	5%	1/16W	R869	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R746	1-216-821-11	METAL CHIP	1K	5%	1/16W						
R747	1-216-821-11	METAL CHIP	1K	5%	1/16W	R870	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R748	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	R871	1-216-841-11	METAL CHIP	47K	5%	1/16W
						R875	1-216-841-11	METAL CHIP	47K	5%	1/16W
R749	1-216-833-11	METAL CHIP	10K	5%	1/16W	R879	1-216-833-11	METAL CHIP	10K	5%	1/16W
R750	1-216-833-11	METAL CHIP	10K	5%	1/16W	R880	1-216-833-11	METAL CHIP	10K	5%	1/16W
R751	1-216-833-11	METAL CHIP	10K	5%	1/16W						
R752	1-216-841-11	METAL CHIP	47K	5%	1/16W	R881	1-216-841-11	METAL CHIP	47K	5%	1/16W
R753	1-216-821-11	METAL CHIP	1K	5%	1/16W	R882	1-216-841-11	METAL CHIP	47K	5%	1/16W
						R883	1-216-833-11	METAL CHIP	10K	5%	1/16W
R754	1-216-821-11	METAL CHIP	1K	5%	1/16W	R884	1-216-833-11	METAL CHIP	10K	5%	1/16W
R755	1-216-821-11	METAL CHIP	1K	5%	1/16W	R885	1-216-841-11	METAL CHIP	47K	5%	1/16W
R756	1-216-821-11	METAL CHIP	1K	5%	1/16W						
R757	1-216-864-11	METAL CHIP	0	5%	1/16W	R886	1-216-841-11	METAL CHIP	47K	5%	1/16W
R758	1-216-821-11	METAL CHIP	1K	5%	1/16W	R901	1-216-089-91	RES.CHIP	47K	5%	1/10W
						R902	1-216-113-00	METAL CHIP	470K	5%	1/10W
R759	1-216-821-11	METAL CHIP	1K	5%	1/16W	R903	1-216-073-00	METAL CHIP	10K	5%	1/10W
R760	1-216-864-11	METAL CHIP	0	5%	1/16W	R904	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R761	1-216-864-11	METAL CHIP	0	5%	1/16W						
R762	1-216-089-91	RES.CHIP	47K	5%	1/10W	R905	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R763	1-216-089-91	RES.CHIP	47K	5%	1/10W	R906	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
						R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R764	1-216-651-11	METAL CHIP	1K	0.5%	1/10W	R908	1-216-821-11	METAL CHIP	1K	5%	1/16W
R765	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R909	1-216-639-11	METAL CHIP	330	0.5%	1/10W
R766	1-216-821-11	METAL CHIP	1K	5%	1/16W						

MAIN

PICK-UP RELAY

RELAY

RIGHT KEY

SW

Ref. No.	Part No.	Description	Quantity	Value	Remark
R910	1-216-025-91	RES,CHIP	100	5%	1/10W
R911	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R912	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R913	1-216-109-00	METAL CHIP	330K	5%	1/10W
R914	1-216-226-00	RES,CHIP	15K	5%	1/8W
R915	1-216-809-11	METAL CHIP	100	5%	1/16W
R916	1-216-843-11	METAL CHIP	68K	5%	1/16W
R917	1-216-837-11	METAL CHIP	22K	5%	1/16W
R918	1-216-845-11	METAL CHIP	100K	5%	1/16W
R919	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R920	1-216-109-00	METAL CHIP	330K	5%	1/10W
R924	1-216-683-11	METAL CHIP	22K	0.5%	1/10W
R926	1-216-845-11	METAL CHIP	100K	5%	1/16W
R927	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R928	1-216-841-11	METAL CHIP	47K	5%	1/16W

< COMPOSITION CIRCUIT BLOCK >

RB801	1-236-908-11	RES, CHIP NETWORK	10K
RB802	1-233-412-11	RES, CHIP NETWORK	1K
RB803	1-233-412-11	RES, CHIP NETWORK	1K
RB804	1-236-908-11	RES, CHIP NETWORK	10K
RB805	1-233-412-11	RES, CHIP NETWORK	1K

RB806	1-236-908-11	RES, CHIP NETWORK	10K
RB807	1-233-412-11	RES, CHIP NETWORK	1K
RB808	1-233-412-11	RES, CHIP NETWORK	1K
RB809	1-236-908-11	RES, CHIP NETWORK	10K
RB810	1-236-908-11	RES, CHIP NETWORK	10K

RB811	1-233-412-11	RES, CHIP NETWORK	1K
RB812	1-233-412-11	RES, CHIP NETWORK	1K
RB813	1-233-577-11	RES, CHIP NETWORK	470
RB814	1-233-412-11	RES, CHIP NETWORK	1K

< VIBRATOR >

X701	1-767-226-11	VIBRATOR, CRYSTAL	(16.9344MHz)
X801	1-767-697-11	VIBRATOR, CRYSTAL	(32.768kHz)
X802	1-767-839-11	VIBRATOR, CERAMIC	(5MHz)

* 1-667-046-11 PICK-UP RELAY BOARD

< CONNECTOR >

CN702	1-565-874-31	PIN, CONNECTOR (PC BOARD)	2P
CN703	1-565-874-11	PIN, CONNECTOR (PC BOARD)	2P
CN704	1-565-874-11	PIN, CONNECTOR (PC BOARD)	2P
CN706	1-784-213-11	CONNECTOR, FFC/FPC	14P
CN707	1-569-309-11	SOCKET, CONNECTOR (L TYPE)	21P

* 1-668-258-21 RELAY BOARD (EXCEPT US)
* 1-668-258-31 RELAY BOARD (US)

< CONNECTOR >

CN408	1-506-987-11	PIN, CONNECTOR (PC BOARD)	5P
* CN409	1-580-159-11	PIN, CONNECTOR (PC BOARD)	7P
CN410	1-573-489-11	PIN, CONNECTOR (PC BOARD)	11P

Ref. No.	Part No.	Description	Quantity	Value	Remark
*	1-668-246-21	RIGHT KEY BOARD (EXCEPT US)			
*	1-668-246-31	RIGHT KEY BOARD (US)			*****

< CAPACITOR >

C419	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C420	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

< CONNECTOR >

* CN402	1-580-163-11	PIN, CONNECTOR (PC BOARD)	2P
* CN405	1-580-166-11	PIN, CONNECTOR (PC BOARD)	5P
CN407	1-695-105-11	PIN, CONNECTOR (PC BOARD)	3P

< RESISTOR >

R415	1-208-782-11	RES,CHIP	1K	0.50%	1/10W
R416	1-208-778-11	RES,CHIP	680	0.50%	1/10W
R417	1-208-778-11	RES,CHIP	680	0.50%	1/10W
R418	1-208-774-11	RES,CHIP	470	0.50%	1/10W
R419	1-208-774-11	RES,CHIP	470	0.50%	1/10W

R421	1-208-806-11	RES,CHIP	10K	0.50%	1/10W
R422	1-208-798-11	RES,CHIP	4.7K	0.50%	1/10W
R423	1-208-794-11	RES,CHIP	3.3K	0.50%	1/10W
R431	1-216-033-00	METAL CHIP	220	5%	1/10W
R432	1-216-033-00	METAL CHIP	220	5%	1/10W

< SWITCH >

S401	1-771-214-11	SWITCH, ROTARY (PRESET, I◀◀AMS▶▶)
S821	1-692-014-11	SWITCH, KEY BOARD (CANSEL)
S822	1-692-014-11	SWITCH, KEY BOARD (EDIT)
S823	1-692-014-11	SWITCH, KEY BOARD (ENTER)
S825	1-692-014-11	SWITCH, KEY BOARD (TUNE-, ◀◀, ⇄)

S826	1-692-014-11	SWITCH, KEY BOARD (TUNE+, ▶▶, ⇄)
S827	1-692-014-11	SWITCH, KEY BOARD (BASS/TREBLE)
S828	1-692-014-11	SWITCH, KEY BOARD (DISPLAY)
S829	1-692-014-11	SWITCH, KEY BOARD (VOLUME+)
S830	1-692-014-11	SWITCH, KEY BOARD (VOLUME-)

* 1-661-774-11 SW BOARD

< CONNECTOR >

CN601	1-770-698-11	CONNECTOR, FFC/FPC	15P
CN602	1-778-638-21	PIN, CONNECTOR (PC BOARD)	2P
CN603	1-778-638-21	PIN, CONNECTOR (PC BOARD)	2P

< SWITCH >

S681	1-572-467-61	SWITCH, PUSH (1 KEY) (LIMIT IN)
S682	1-692-377-31	SWITCH, PUSH (1 KEY) (REFLECT)
S683	1-692-847-21	SWITCH, PUSH (1 KEY) (PROTECT)
S685	1-572-467-61	SWITCH, PUSH (1 KEY) (CHUCKING IN)
S686	1-762-621-21	SWITCH, PUSH (1 KEY) (PACK OUT)

S687	1-572-688-11	SWITCH, PUSH (1 KEY) (PB POSITION)
S688	1-762-621-21	SWITCH, PUSH (1 KEY) (REC POSITION)

Ref. No.	Part No.	Description	Remark
*	1-668-245-21	TOP KEY BOARD (EXCEPT US)	
*	1-668-245-31	TOP KEY BOARD (US)	

	3-321-041-11	SCREW (M1.7X4), TAPPING	
	3-019-663-01	BUTTON (MEGABASS)	
		< CONNECTOR >	
* CN403	1-580-163-11	PIN, CONNECTOR (PC BOARD) 2P	
		< RESISTOR >	
R434	1-208-806-11	RES,CHIP 10K 0.50% 1/10W	
R435	1-208-798-11	RES,CHIP 4.7K 0.50% 1/10W	
R436	1-208-794-11	RES,CHIP 3.3K 0.50% 1/10W	
R437	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R438	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
		< SWITCH >	
S831	1-692-014-11	SWITCH, KEY BOARD (DELETE)	
S832	1-692-014-11	SWITCH, KEY BOARD (INSERT)	
S833	1-692-014-11	SWITCH, KEY BOARD (AUTO PRESET, SHUF/ PGM)	
S834	1-692-014-11	SWITCH, KEY BOARD(LINE LEVEL, MONO/ST, REPEAT)	
S835	1-692-014-11	SWITCH, KEY BOARD (MEGA BASS)	

*	A-3321-535-A	TRANS BOARD, COMPLETE (US)	
*	A-3321-561-A	TRANS BOARD, COMPLETE (EXCEPT US)	

	1-533-293-11	FUSE HOLDER	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
		< CAPACITOR >	
C951	1-136-157-00	FILM 0.022uF 5% 50V	
C952	1-136-157-00	FILM 0.022uF 5% 50V	
C953	1-136-157-00	FILM 0.022uF 5% 50V	
C954	1-136-157-00	FILM 0.022uF 5% 50V	
C955	1-136-153-00	FILM 0.01uF 5% 50V	
C957	1-163-033-91	CERAMIC CHIP 0.022uF 50V	
C958	1-163-033-91	CERAMIC CHIP 0.022uF 50V	
C959	1-163-033-91	CERAMIC CHIP 0.022uF 50V	
C960	1-163-033-91	CERAMIC CHIP 0.022uF 50V	
C961	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C963	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C964	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C965	1-126-968-11	ELECT 100uF 20% 50V	
C967	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C968	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C969	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C970	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C971	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C972	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C973	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C974	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C975	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
△C977	1-113-925-11	CERAMIC 0.01uF 20% 250V	
△C980	1-113-915-11	CERAMIC 0.001uF 20% 250V	
		(EXCEPT US)	

Ref. No.	Part No.	Description	Remark
C981	1-164-506-11	CERAMIC CHIP 4.7uF	16V
C982	1-164-506-11	CERAMIC CHIP 4.7uF	16V
C983	1-164-506-11	CERAMIC CHIP 4.7uF	16V
C984	1-164-506-11	CERAMIC CHIP 4.7uF	16V
		< CONNECTOR >	
* CN951	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P	
* CN952	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P	
CN953	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN954	1-564-507-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D951	8-719-302-38	DIODE RBV-602-01	
D952	8-719-510-53	DIODE D4SB60L	
D953	8-719-801-78	DIODE 1SS184	
D954	8-719-210-33	DIODE EC10DS2	
D955	8-719-210-33	DIODE EC10DS2	
D956	8-719-210-33	DIODE EC10DS2	
D957	8-719-210-33	DIODE EC10DS2	
D958	8-719-210-33	DIODE EC10DS2	
		< FUSE >	
△F951	1-532-502-51	FUSE, TIME LAG (T1.25AL/250V) (EXCEPT US)	
△F951	1-576-101-11	FUSE (1.25A/125V) (US)	
△F952	1-532-506-51	FUSE, TIME LAG (T6.3AL/250V) (EXCEPT US)	
△F952	1-533-310-11	FUSE, GLASS TUBE (6.3A/125V) (US)	
△F953	1-532-465-51	FUSE, TIME LAG (T3.15AL/250V) (EXCEPT US)	
△F953	1-576-107-11	FUSE (3.15A/125V) (US)	
		< JUMPER RESISTOR >	
JC955	1-216-296-00	METAL CHIP 0 5% 1/8W	
		< LINE FILTER >	
△LF951	1-411-528-11	COIL (COMMON MODE CHOKE)	
		< IC LINK >	
△PS951	1-576-122-21	LINK, IC (0.4A)	
△PS952	1-576-123-21	LINK, IC (0.8A)	
		< RESISTOR >	
R951	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R952	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R953	1-216-121-91	RES,CHIP 1M 5% 1/10W	
△R954	1-202-725-00	SOLID 3.3M 10% 1/2W	(US)
		< TRANSFORMER >	
△T951	1-433-444-11	TRANSFORMER, POWER (EXCEPT US)	
△T951	1-433-445-11	TRANSFORMER, POWER (US)	

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

TUNER

Ref. No.	Part No.	Description	Remark
*	A-3321-536-A	TUNER BOARD, COMPLETE (US)	
*	A-3321-562-A	TUNER BOARD, COMPLETE (EXCEPT US)	

		< CAPACITOR >	
C1	1-126-963-11	ELECT	4.7uF 20% 50V (EXCEPT US)
C1	1-163-243-11	CERAMIC CHIP	47PF 5% 50V (US)
C2	1-126-924-11	ELECT	330uF 20% 10V (EXCEPT US)
C2	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C3	1-126-960-11	ELECT	1uF 20% 50V (EXCEPT US)
C3	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C4	1-126-960-11	ELECT	1uF 20% 50V (EXCEPT US)
C4	1-126-963-11	ELECT	4.7uF 20% 50V (US)
C5	1-126-964-11	ELECT	10uF 20% 50V (EXCEPT US)
C5	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C6	1-126-924-11	ELECT	330uF 20% 10V (US)
C6	1-126-964-11	ELECT	10uF 20% 50V (EXCEPT US)
C7	1-126-964-11	ELECT	10uF 20% 50V (EXCEPT US)
C7	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C8	1-163-024-91	CERAMIC CHIP	0.018uF (US)
C9	1-126-934-11	ELECT	220uF 20% 10V (EXCEPT US)
C9	1-163-024-91	CERAMIC CHIP	0.018uF (US)
C10	1-126-960-11	ELECT	1uF 20% 50V (US)
C11	1-126-960-11	ELECT	1uF 20% 50V (US)
C11	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)
C12	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)
C12	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (US)
C13	1-163-024-00	CERAMIC CHIP	0.018uF 5% 50V (EXCEPT US)
C13	1-163-220-91	CERAMIC CHIP	3PF (US)
C14	1-163-024-00	CERAMIC CHIP	0.018uF 5% 50V (EXCEPT US)
C14	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (US)
C15	1-163-131-00	CERAMIC CHIP	390PF 5% 50V (US)
C15	1-164-345-11	CERAMIC CHIP	0.082uF 10% 25V (EXCEPT US)
C16	1-163-234-11	CERAMIC CHIP	20PF 5% 50V (US)
C16	1-164-345-11	CERAMIC CHIP	0.082uF 10% 25V (EXCEPT US)

Ref. No.	Part No.	Description	Remark
C17	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (US)
C17	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V (EXCEPT US)
C18	1-163-263-11	CERAMIC CHIP	330PF 5% 50V (EXCEPT US)
C18	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (US)
C19	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (US)
C19	1-163-239-11	CERAMIC CHIP	33PF 5% 50V (EXCEPT US)
C20	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V (EXCEPT US)
C20	1-163-263-11	CERAMIC CHIP	330PF 5% 50V (US)
C21	1-126-964-11	ELECT	10uF 20% 50V (US)
C21	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (EXCEPT US)
C22	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V (US)
C23	1-164-345-11	CERAMIC CHIP	0.082uF 10% 25V (US)
C24	1-164-345-11	CERAMIC CHIP	0.082uF 10% 25V (US)
C25	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (EXCEPT US)
C25	1-163-239-11	CERAMIC CHIP	33PF 5% 50V (US)
C26	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (EXCEPT US)
C26	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V (US)
C27	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (US)
C27	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (EXCEPT US)
C28	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)
C29	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)
C30	1-104-640-11	FILM CHIP	0.22uF 5% 16V (EXCEPT US)
C31	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (EXCEPT US)
C31	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (US)
C32	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V (EXCEPT US)
C33	1-126-964-11	ELECT	10uF 20% 50V (US)
C33	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)
C34	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C35	1-126-964-11	ELECT	10uF 20% 50V (US)
C36	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (US)
C36	1-163-038-91	CERAMIC CHIP	0.1uF 25V (EXCEPT US)

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C37	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (US)	C78	1-164-346-11	CERAMIC CHIP	1uF 16V
C37	1-163-133-00	CERAMIC CHIP	470PF 5% 50V (EXCEPT US)	C79	1-126-924-11	ELECT	330uF 20% 10V (EXCEPT US)
C38	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (US)			< FILTER >	
C38	1-163-234-11	CERAMIC CHIP	20PF 5% 50V (EXCEPT US)	CF1	1-760-127-11	FILTER, CERAMIC (US)	
C39	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (US)	CF2	1-760-127-11	FILTER, CERAMIC (US)	
C39	1-163-038-91	CERAMIC CHIP	0.1uF 25V (EXCEPT US)	CF2	1-760-468-11	FILTER, CERAMIC (EXCEPT US)	
C40	1-104-640-11	FILM CHIP	0.22uF 5% 16V (US)	CF3	1-760-127-11	FILTER, CERAMIC (US)	
C41	1-163-251-11	CERAMIC CHIP	100PF 5% 50V (US)	CF3	1-760-468-11	FILTER, CERAMIC (EXCEPT US)	
C42	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (US)	CF4	1-579-762-11	VIBRATOR, CERAMIC	
C42	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)	CF5	1-760-468-11	FILTER, CERAMIC (EXCEPT US)	
C43	1-126-934-11	ELECT	220uF 20% 10V (US)			< COMPOSITION CIRCUIT BLOCK >	
C44	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (US)	CFT1	1-233-885-11	ENCAPSULATED COMPONENT(US)	
C45	1-126-160-11	ELECT	1uF 20% 50V (US)	CFT1	1-239-173-11	ENCAPSULATED COMPONENT (EXCEPT US)	
C46	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (US)			< CONNECTOR >	
C47	1-126-924-11	ELECT	330uF 20% 10V (US)	CN1	1-568-444-11	SOCKET, CONNECTOR 13P	
C47	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (EXCEPT US)	* CN2	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P	
C48	1-164-346-11	CERAMIC CHIP	1uF 16V (US)	* CN3	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P	(US)
C50	1-164-816-11	CERAMIC CHIP	220PF 2% 50V (EXCEPT US)	* CN40	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P	(EXCEPT US)
C51	1-163-263-11	CERAMIC CHIP	330PF 5% 50V (EXCEPT US)			< COMPOSITION CIRCUIT BLOCK >	
C52	1-163-263-11	CERAMIC CHIP	330PF 5% 50V (EXCEPT US)	CP1	1-536-354-00	POST PIN	
C53	1-163-249-11	CERAMIC CHIP	82PF 5% 50V (EXCEPT US)	CN42	1-536-354-00	POST PIN	
C54	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V (EXCEPT US)			< TRIMMER >	
C57	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V (EXCEPT US)	CT1	1-141-410-11	CAP, ADJ 10PF	(US)
C60	1-126-160-11	ELECT	1uF 20% 50V (EXCEPT US)	CT2	1-141-410-11	CAP, ADJ 10PF	(EXCEPT US)
C71	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (EXCEPT US)	CT3	1-141-410-11	CAP, ADJ 10PF	(EXCEPT US)
C72	1-163-251-11	CERAMIC CHIP	100PF 5% 50V (EXCEPT US)	CT4	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF	(EXCEPT US)
C73	1-163-133-00	CERAMIC CHIP	470PF 5% 50V (EXCEPT US)	CT5	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF	(EXCEPT US)
C74	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (EXCEPT US)			< DIODE >	
C75	1-163-251-11	CERAMIC CHIP	100PF 5% 50V (EXCEPT US)	D1	8-719-988-62	DIODE 1SS355 (US)	
C76	1-163-251-11	CERAMIC CHIP	100PF 5% 50V (EXCEPT US)	D2	8-719-988-62	DIODE 1SS355 (US)	
C77	1-162-927-11	CERAMIC CHIP	100PF 5% 50V (EXCEPT US)	D3	8-719-049-75	DIODE KV1520TL00 (EXCEPT US)	
				D3	8-719-988-62	DIODE 1SS355 (US)	
				D4	8-719-988-62	DIODE 1SS355	
				D5	8-719-049-75	DIODE KV1520TL00 (US)	
				D5	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
				D6	8-719-988-62	DIODE 1SS355 (US)	
				D10	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
				D40	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
				D41	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
				D50	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
				D51	8-719-988-62	DIODE 1SS355 (EXCEPT US)	
						< FERRITE BEAD >	
				FB1	1-414-235-11	INDUCTOR, FERRITE BEAD	
				FB2	1-414-235-11	INDUCTOR, FERRITE BEAD	
				FB3	1-414-235-11	INDUCTOR, FERRITE BEAD	
				FB4	1-414-235-11	INDUCTOR, FERRITE BEAD (US)	
				FB4	1-414-235-21	INDUCTOR, FERRITE BEAD (EXCEPT US)	

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Ref. No.	Part No.	Description	Remark		
FB5	1-414-235-11	INDUCTOR, FERRITE BEAD (EXCEPT US)			
FB6	1-414-235-11	INDUCTOR, FERRITE BEAD (EXCEPT US)			
FB7	1-414-235-11	INDUCTOR, FERRITE BEAD (US)			
		< IC >			
IC1	8-759-386-02	IC TA2008AN			
IC2	8-759-459-42	IC BU2615FS			
		< JUMPER RESISTOR >			
JC1	1-216-295-00	METAL CHIP	0	5%	1/10W
JC2	1-216-295-00	METAL CHIP	0	5%	1/10W
JC50	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT US)
		< COIL >			
L1	1-416-556-11	COIL, AM ANT (US)			
L2	1-411-959-11	COIL, AM OSC (US)			
L3	1-416-556-11	COIL, AM ANT (EXCEPT US)			
L4	1-411-959-11	COIL, AM OSC (EXCEPT US)			
L5	1-416-129-11	COIL, LW ANT (EXCEPT US)			
L10	1-233-306-31	ENCAPSULATED COMPONENT (EXCEPT US)			
L50	1-410-071-11	INDUCTOR 10mH (EXCEPT US)			
L52	1-216-017-91	RES,CHIP	47	5%	1/10W (EXCEPT US)
L70	1-500-284-21	INDUCTOR CHIP (EXCEPT US)			
		< TRANSISTOR >			
Q1	8-729-025-28	TRANSISTOR 2SK1828 (EXCEPT US)			
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (US)			
Q2	8-729-027-38	TRANSISTOR DTA144EKA-T146 (US)			
Q3	1-801-806-11	TRANSISTOR DTC144EKA-T146 (US)			
Q3	8-729-904-07	TRANSISTOR FMG2 (EXCEPT US)			
Q4	1-801-806-11	TRANSISTOR DTC144EKA-T146 (EXCEPT US)			
Q4	8-729-904-07	TRANSISTOR FMG2 (US)			
Q5	8-729-027-24	TRANSISTOR DTA114TKA-T146 (EXCEPT US)			
Q5	8-729-035-74	TRANSISTOR FMG4AT148 (US)			
Q6	8-729-921-25	TRANSISTOR FMC2			
Q7	8-729-027-24	TRANSISTOR DTA114TKA-T146 (US)			
Q7	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (EXCEPT US)			
Q8	8-729-025-28	TRANSISTOR 2SK1828 (US)			
Q8	8-729-035-74	TRANSISTOR FMG4AT148 (EXCEPT US)			
Q50	8-729-027-38	TRANSISTOR DTA144EKA-T146 (EXCEPT US)			
Q51	8-729-039-73	TRANSISTOR FMA5A-T148 (EXCEPT US)			
Q52	8-729-931-02	TRANSISTOR 2SC2413KQ (EXCEPT US)			
Q53	8-729-920-38	TRANSISTOR 2SC2059K-N (EXCEPT US)			
Q54	8-729-920-31	TRANSISTOR DTC343TK (EXCEPT US)			
Q57	8-729-119-32	TRANSISTOR 2SK193 (EXCEPT US)			
		< RESISTOR >			
R1	1-216-065-91	RES,CHIP	4.7K	5%	1/10W (EXCEPT US)
R2	1-216-019-00	METAL CHIP	56	5%	1/10W (EXCEPT US)
R2	1-216-097-91	RES,CHIP	100K	5%	1/10W (US)
R3	1-216-037-00	METAL CHIP	330	5%	1/10W (US)
R3	1-216-081-00	METAL CHIP	22K	5%	1/10W (EXCEPT US)

Ref. No.	Part No.	Description	Remark		
R4	1-216-025-91	RES,CHIP	100	5%	1/10W (US)
R4	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (EXCEPT US)
R5	1-216-025-91	RES,CHIP	100	5%	1/10W (US)
R5	1-216-073-00	METAL CHIP	10K	5%	1/10W (EXCEPT US)
R6	1-216-065-91	RES,CHIP	4.7K	5%	1/10W (US)
R6	1-216-833-11	METAL CHIP	10K	5%	1/16W (EXCEPT US)
R7	1-216-019-00	METAL CHIP	56	5%	1/10W (US)
R8	1-216-027-00	METAL CHIP	120	5%	1/10W (US)
R8	1-216-045-00	METAL CHIP	680	5%	1/10W (EXCEPT US)
R9	1-216-049-91	RES,CHIP	1K	5%	1/10W (EXCEPT US)
R9	1-216-609-11	METAL CHIP	18	0.5%	1/10W (US)
R10	1-216-821-11	METAL CHIP	1K	5%	1/16W (US)
R10	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (EXCEPT US)
R11	1-216-836-11	METAL CHIP	18K	5%	1/16W (EXCEPT US)
R11	1-216-845-11	METAL CHIP	100K	5%	1/16W (US)
R12	1-216-073-00	METAL CHIP	10K	5%	1/10W (US)
R12	1-216-821-11	METAL CHIP	1K	5%	1/16W (EXCEPT US)
R13	1-216-049-91	RES,CHIP	1K	5%	1/10W (US)
R13	1-216-097-91	RES,CHIP	100K	5%	1/10W (EXCEPT US)
R14	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (US)
R15	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (EXCEPT US)
R15	1-216-081-00	METAL CHIP	22K	5%	1/10W (US)
R16	1-216-097-91	RES,CHIP	100K	5%	1/10W (EXCEPT US)
R16	1-216-841-11	METAL CHIP	47K	5%	1/16W (US)
R17	1-216-037-00	METAL CHIP	330	5%	1/10W (EXCEPT US)
R18	1-216-020-91	METAL CHIP	62	5%	1/10W (EXCEPT US)
R18	1-216-089-91	RES,CHIP	47K	5%	1/10W (US)
R20	1-216-089-91	RES,CHIP	47K	5%	1/10W (US)
R21	1-216-089-91	RES,CHIP	47K	5%	1/10W (EXCEPT US)
R21	1-216-821-11	METAL CHIP	1K	5%	1/16W (US)
R22	1-216-089-91	RES,CHIP	47K	5%	1/10W (EXCEPT US)

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R22	1-216-821-11	METAL CHIP	1K 5% 1/16W (US)	R60	1-216-041-00	METAL CHIP	470 5% 1/10W (EXCEPT US)
R23	1-216-821-11	METAL CHIP	1K 5% 1/16W (US)	R61	1-216-825-11	METAL CHIP	2.2K 5% 1/16W (EXCEPT US)
R24	1-216-821-11	METAL CHIP	1K 5% 1/16W (US)	R70	1-216-295-00	METAL CHIP	0 5% 1/10W (EXCEPT US)
R25	1-216-833-11	METAL CHIP	10K 5% 1/16W	R71	1-216-295-00	METAL CHIP	0 5% 1/10W (EXCEPT US)
R26	1-216-073-00	METAL CHIP	10K 5% 1/10W (US)			< TERMINAL >	
R26	1-216-864-11	METAL CHIP	0 5% 1/16W (EXCEPT US)	TB50	1-694-215-11	TERMINAL BOARD (FM EXT ANTENNA)	(EXCEPT US)
R27	1-216-833-11	METAL CHIP	10K 5% 1/16W (US)			< TUNER >	
R27	1-216-864-11	METAL CHIP	0 5% 1/16W (EXCEPT US)	* TU1	1-693-378-11	TUNER UNIT (EXCEPT US)	
R28	1-216-045-00	METAL CHIP	680 5% 1/10W (US)	TU1	1-693-426-11	TUNER PACK (US)	
R28	1-216-864-11	METAL CHIP	0 5% 1/16W (EXCEPT US)			< VIBRATOR >	
R29	1-216-049-91	RES,CHIP	1K 5% 1/10W (US)	X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)	
R29	1-216-833-11	METAL CHIP	10K 5% 1/16W (EXCEPT US)	*****			
R30	1-216-813-11	METAL CHIP	220 5% 1/16W (US)			MISCELLANEOUS	
R31	1-216-073-00	METAL CHIP	10K 5% 1/10W (EXCEPT US)			*****	
R31	1-216-825-11	METAL CHIP	2.2K 5% 1/16W (US)	58	1-533-293-11	FUSE HOLDER	
R32	1-216-834-11	METAL CHIP	12K 5% 1/16W (US)	△67	1-575-651-21	CORD, POWER (EXCEPT US)	
R32	1-216-845-11	METAL CHIP	100K 5% 1/16W (EXCEPT US)	△67	1-783-531-31	CORD, POWER (US)	
R33	1-216-025-91	RES,CHIP	100 5% 1/10W (EXCEPT US)	108	1-783-539-11	WIRE, PARALLEL (FFC) (15 CORE)	
R33	1-216-821-11	METAL CHIP	1K 5% 1/16W (US)	110	1-783-537-11	WIRE, PARALLEL (21 CORE)	
R34	1-216-833-11	METAL CHIP	10K 5% 1/16W	111	1-783-538-11	WIRE, PARALLEL (FFC) (13 CORE)	
R35	1-216-025-91	RES,CHIP	100 5% 1/10W (US)	153	1-660-966-11	OP RELAY FLEXIBLE BOARD	
R35	1-216-841-11	METAL CHIP	47K 5% 1/16W (EXCEPT US)	159	1-783-542-11	WIRE, PARALLEL (FFC) (29 CORE)	
R36	1-216-089-91	RES,CHIP	47K 5% 1/10W (EXCEPT US)	160	1-783-540-11	WIRE, PARALLEL (FFC) (19 CORE)	
R36	1-216-845-11	METAL CHIP	100K 5% 1/16W (US)	161	1-790-045-11	WIRE, PARALLEL (26 CORE)(60 mm)	
R37	1-216-017-91	METAL CHIP	47 5% 1/10W (US)	162	1-777-517-11	WIRE, PARALLEL (15 CORE)	
R50	1-216-041-91	METAL CHIP	470 5% 1/10W (EXCEPT US)	165	1-790-046-11	WIRE, PARALLEL (26 CORE)(172 mm)	
R51	1-216-001-00	METAL CHIP	10 5% 1/10W (EXCEPT US)	△217	8-583-028-02	DEVICE, MINI DISK KMS-260A	
R52	1-216-081-00	METAL CHIP	22K 5% 1/10W (EXCEPT US)	303	1-690-530-21	LEAD (WITH CONNECTOR)	
R53	1-216-057-00	METAL CHIP	2.2K 5% 1/10W (EXCEPT US)	308	1-660-965-11	PC BOARD, SLIDE FLEXIBLE	
R54	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (EXCEPT US)	△309	X-4946-311-1	OPTICAL PICK-UP (DAX-11A)	
R55	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (EXCEPT US)	ANT1	1-501-480-11	ANTENNA, TELESCOPIC	
R56	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (EXCEPT US)	△F951	1-576-101-11	FUSE (1.25A/125V) (US)	
				△F951	1-532-502-51	FUSE, TIME LAG (1.25A/250V) (EXCEPT US)	
				△F952	1-533-310-11	FUSE, GLASS TUBE (6.3A/125V) (US)	
				△F952	1-532-506-51	FUSE, TIME LAG (6.3A/250V) (EXCEPT US)	
				△F953	1-532-465-51	FUSE, TIME LAG (3.15A/250V) (EXCEPT US)	
				△F953	1-576-107-11	FUSE (3.15A/125V) (US)	
				FL401	1-517-744-11	INDICATOR TUBE, FLUORESCENT	
				HR901	1-500-396-11	HEAD, OVER WRITE	
				M691	1-698-999-11	MOTOR, DC (LOADING)	
				M801	A-3303-403-A	MOTOR ASSY, SLED (INCLUDING GEAR)	
				M802	A-3320-300-A	MOTOR ASSY, TURN TABLE (SPINDLE)	
				M901	A-4672-135-A	MOTOR ASSY, SPINDLE	
				M902	A-4672-133-A	MOTOR ASSY, SLED (INCLUDING GEAR)	
				M903	A-4672-134-A	MOTOR ASSY, LOADING (INCLUDING GEAR)	
				S901	1-571-099-21	SWITCH (1 KEY) (LIMIT)	
				SP101	1-505-829-11	SPEAKER (8cm) (L-CH)	
				SP201	1-505-829-11	SPEAKER (8cm) (R-CH)	

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

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
△ T951	1-433-445-11	TRANSFORMER, POWER (US)	
△ T951	1-433-444-11	TRANSFORMER, POWER (EXCEPT US)	
***** ACCESSORIES & PACKING MATERIALS *****			
△	1-501-374-11	ANTENNA, LOOP	
	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
	3-704-222-11	LABEL, SERIAL NUMBER (PRINTER)	(EXCEPT US)
	3-861-445-11	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-861-445-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH)	(EXCEPT US)
	3-861-445-31	MANUAL, INSTRUCTION (FRENCH, GERMAN)	(AEP, JE)
	3-861-445-41	MANUAL, INSTRUCTION	(DUTCH, PORTUGUESE) (AEP)
	3-861-445-51	MANUAL, INSTRUCTION (SWEDISH, FINNISH)	(AEP)
	3-861-445-61	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-861-445-71	MANUAL, INSTRUCTION (POLISH, RUSSIAN)	(EE,Russian)
	3-861-445-81	MANUAL, INSTRUCTION (CZECH, HUNGALIAN) (EE,Russian)	
	4-991-047-01	LID, BATTERY CASE (FOR RMT-CM7)	
	8-917-623-90	REMOTE COMMANDER, SONY RMT-CM7 (US)	
	8-917-661-90	REMOTE COMMANDER RMT-CM7AD	(EXCEPT US)
	X-3374-655-1	NET (L) ASSY, SP (EXCEPT US)	
	X-3374-656-1	NET (R) ASSY, SP (EXCEPT US)	

HARDWARE LIST

#1	7-621-773-86	SCREW +B 2.6X4
#2	7-685-850-04	SCREW +BVTT 2X3 (S)
#3	7-627-552-27	SCREW,PRECISION +P 1.7X2
#4	7-685-548-19	SCREW +BTP 3X12 TYPE2 N-S
#5	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3
#6	7-685-851-04	SCREW +BVTT 2X4 (S)
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#8	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#9	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S
#10	7-685-872-09	SCREW +BVTT 3X8 (S)
#11	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#12	7-627-850-17	SCREW, PRECISION +P 1.4X2.5
#13	7-685-661-79	SCREW +BVTP 4X12 TYPE2 N-S
#14	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S
#15	7-685-548-19	SCREW, +BTP 3X12 TYPE2 N-S
#16	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT

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

ZS-M7

SONY®

SERVICE MANUAL

2000. 03

US Model
AEP Model
UK Model
Tourist Model

SUPPLEMENT - 1

File this Supplement with the Service Manual.

Subject : EXPLODED VIEWS

(SPM-00011)

● CHANGED PARTS LIST

EXPLODED VIEWS

FRONT CABINET SECTION (Service Manual See page 106)

Ref. No.	Before Change		Afrer Change	
	Part No.	Description	Part No.	Description
3	X-3374-656-1	NET (R) ASSY, SP	X-3374-656-1	NET (R) ASSY, SP (BLACK) (US)
			X-3376-521-1	NET (R) ASSY, SP (BLUE)(EXCEPT US)
4	X-3374-655-1	NET (L) ASSY, SP	X-3374-655-1	NET (L) ASSY, SP (BLACK) (US)
			X-3376-520-1	NET (L) ASSY, SP (BLUE)(EXCEPT US)

ACCESSORIES & PACKING MATERIALS (Service Manual See page 132)

Ref. No.	Before Change		Afrer Change	
	Part No.	Description	Part No.	Description
	X-3374-655-1	NET (L) ASSY, SP (EXCEPT US)	X-3374-655-1	NET (L) ASSY, SP (BLACK) (EXCEPT US)
	X-3374-656-1	NET (R) ASSY, SP (EXCEPT US)	X-3374-656-1	NET (R) ASSY, SP (BLACK) (EXCEPT US)

