

HCD-D290/G3300/XB3

SERVICE MANUAL

*US Model
Canadian Model
HCD-D290/G3300*

*AEP Model
UK Model
E Model
Australian Model
PX Model
HCD-XB3*



Photo: HCD-XB3

HCD-D290, HCD-G3300, HCD-XB3 is the tuner, deck, CD and amplifier section in LBT-D290, LBT-G3300, LBT-XB3.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM37L-5BD29AL
	Base Unit Name	BU-5BD29AL
	Optical Pick-up Name	KSS-213D/Q-NP
Tape deck Section	Model Name Using Similar Mechanism	HCD-H881
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

For the U.S. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 70-20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.9 % total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

DIN power output

AEP, UK, East European models: 55+55 watts (6 ohms at 1 kHz, DIN)

Continuous RMS power output

Canadian model: 100+100 watts
(8 ohms at 1 kHz, 5%)

Argentine, Australian, E, Mexican,

PX models: 70+70 watts
(6 ohms at 1kHz, 10% THD)

AEP, UK, East European models: 65+65 watts
(6 ohms at 1kHz, 100% THD)

Peak music power output

Argentine, Australian, E, Mexican,
PX models: 1000 watts

Music power output

AEP, UK, East European models: 100+100 watts

Inputs

PHONO IN (phono jack): sensitivity 3 mV, impedance 47 kilohms

VIDEO (AUDIO) IN (phono jack): sensitivity 250 mV, impedance 47 kilohms

MIX MIC (phono jack): sensitivity 1 mV, impedance 10 kilohms

Outputs

PHONES (stereo phone jack): accepts headphones of 8 ohms or more

SPEAKER:

US, Canadian models: accepts impedance of 8 to 16 ohms.

Other models: accepts impedance of 6 to 16 ohms.

— Continued on next page —

COMPACT DISC DECK RECEIVER



SONY®

CD player section

System	compact disc and digital audio system
Laser	Semiconductor laser ($\lambda = 780\text{nm}$). Emission duration: continuous
Laser output	Max. 44.6 μF * *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength	780 - 790 nm
Frequency response	2 Hz - 20 kHz (± 0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 - 13,000 Hz (± 3 dB), using a Sony TYPE I cassette 60 - 14,000 Hz (± 3 dB), using a Sony TYPE II cassette
Wow and flutter	$\pm 0.15\%$ W. Peak (IEC) 0.1% W. RMS (NAB) $\pm 0.2\%$ W. Peak (DIN)

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
US, Canadian models:	87.5 - 108.0 MHz (100 kHz step)
AEP, UK models:	87.5 - 108.0 MHz (50 kHz step)
East European model	
FM:	87.5 - 108.0 MHz (50 kHz step) 65.0 - 74.0 MHz (10 kHz step) OIRT 65.0 - 74.0 MHz (10 kHz step) POLAR STEREO
UKV:	
Other models:	87.5 - 108.0 MHz (50 kHz step)
Antenna	FM wire antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
US, Canadian models:	530 - 1,710 KHz (with the tuning interval set at 10 kHz) 531 - 1,710 KHz (with the tuning interval set at 9 kHz)
AEP, UK, East European models:	
MW:	531 - 1,602 kHz (with the tuning interval set at 9 kHz)
LW:	153 - 279 kHz (with the tuning interval set at 3 kHz)
Other models:	531 - 1,602 kHz (with the tuning interval set at 9 kHz) 530 - 1,710 KHz (with the tuning interval set at 10 kHz)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

General

Power requirements	
US, Canadian models:	120 V AC, 60 Hz
Mexican model:	120 V AC, 50/60 Hz
Australian model:	220 - 240 V AC, 50/60 Hz
AEP, UK, East European models:	220 - 230 V AC, 50/60 Hz
Other models:	110 - 120 V or 220 - 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	
US, Canadian models:	170 watts
AEP, UK, East European models:	130 watts
Other models:	140 watts
Dimensions (w/h/d)	Approx. 355 x 425 x 435 mm (14 x 16 ³ / ₄ x 17 ¹ / ₄ in) incl. projecting parts and controls
Mass	
(D290)	Approx. 11.5 kg (25 lb 6 oz.)
(G3300)	Approx. 11.6kg (25 lb 9 oz.)
(XB3)	Approx. 10.6kg (23 lb 6 oz.)
Supplied accessories:	AM loop antenna (1) Remote RM-SD70 (1) Sony SUM-3 (NS) batteries (2) FM wire antenna (1)

Design and specifications are subject to change without notice.

CAUTION

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

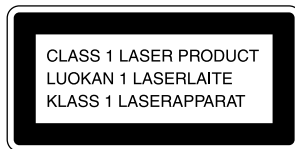
Notes on chip component replacement

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

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.


This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.





Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSÅFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTELYLLE.
VARNING	;	LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URÖPPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
“DOLBY” and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

SAFETY-RELATED COMPONENT WARNING!!

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

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

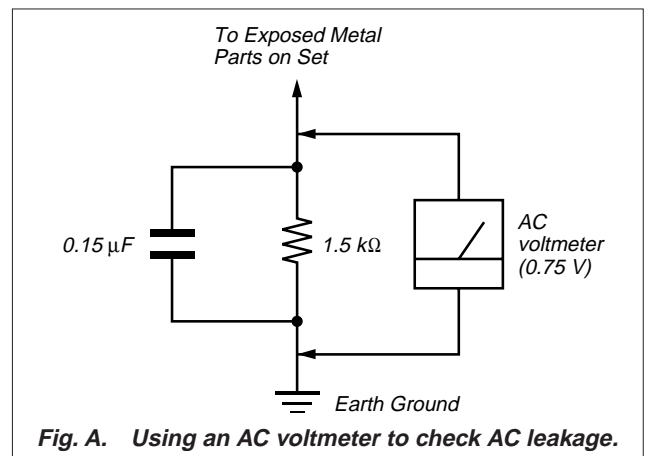
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.

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 0.5 mA (500 microamperes.). 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 0.75 V, 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 2 V AC range are suitable. (See Fig. A)



ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!


LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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- Abbreviation
- CND : Canadian model
- MX : Mexican model
- AUS : Australian model
- AR : Argentine model.

SERVICING NOTES

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

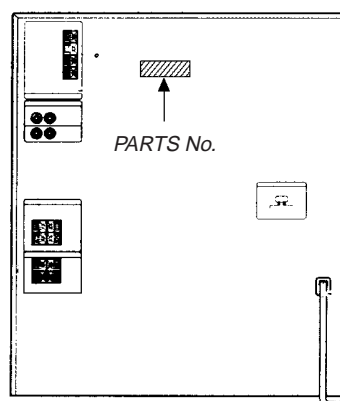
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter 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 from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION

– BACK PANEL –

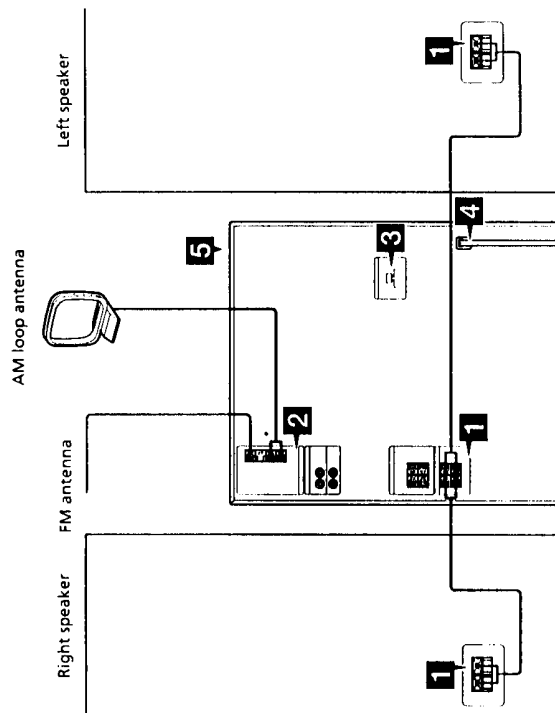


MODEL	PARTS No.
D290: US model	4-987-043-0□
D290: Canadian model	4-987-043-1□
G3300: US model	4-987-043-2□
G3300: Canadian model	4-987-043-3□
XB3: AEP, UK models	4-987-043-4□
XB3: East European model	4-987-043-6□
XB3: Argentine, E models	4-987-134-0□
XB3: Australian model	4-987-134-1□
XB3: PX model	4-987-134-2□
XB3: Mexican model	4-987-134-3□

Getting Started

Step 1: Hooking up the system

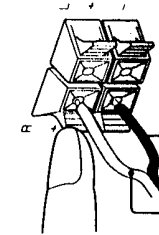
Follow steps 1 through 5 to hook up your system using the supplied cords and accessories.



The above illustration is of the LBT-XB6K.

1 Connect the speakers.

- 1 Connect the speaker cords to SPEAKER jacks of the same color. Keep the speaker cords away from the antennas to prevent noise.



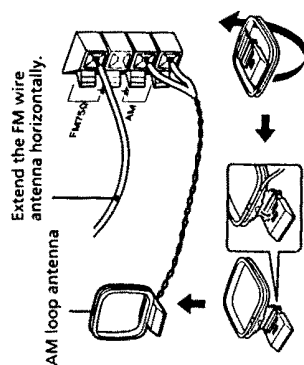
Red (●) Black (●)

- 2 Insert only the stripped portion of the cord. Inserting the vinyl portion will interfere with the speaker connection and no sound will come from the speaker.

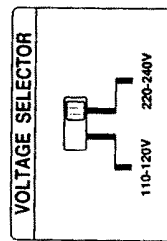
Note

The speakers for LBT-D290/G3300/NB3/NB3K do not have the speaker jacks. Connect the speaker cords to the speaker jacks on the unit.

- 2 Connect the FM/AM antennas. Set up the AM loop antenna, then connect it.



- 3 Set VOLTAGE SELECTOR to the position of your local power line voltage (except for North American, Malaysian, Mexican, and Australian models).



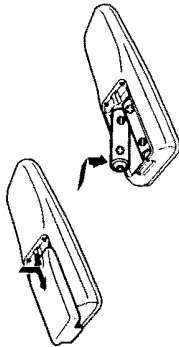
- 4 Connect the power cord to a wall outlet.

The demonstration appears in the display.

If the plug on this unit does not fit your wall outlet, detach the supplied adapter from the plug (except for North and South American countries, Australia, and Malaysia).

- 5 Deactivate the demonstration mode by pressing DISPLAY/DEMO while the system power is off.

Inserting two size AA (R6) batteries into the remote



Tips

- With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.
- When you set the time, the demonstration is deactivated.

To activate the demonstration again, press DISPLAY/DEMO while the system power is off.

Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage.

When carrying this system

Do the following to protect the CD mechanism.

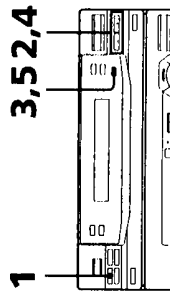
- 1 Press FUNCTION repeatedly until "CD" appears in the display.
- 2 Hold down PLAY/MODE and press POWER to turn off the power.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Step 2: Setting the time

You must set the time before using the timer functions.



LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K only

- 1 Press **ENTER/NEXT**.
The hour indication flashes.



- 2 Press **TUNING +/-** to set the hour.
The clock uses the 12-hour system.



- 3 Press **ENTER/NEXT**.
The minutes indication flashes.



- 4 Press **TUNING +/-** to set the minutes.



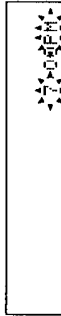
- 5 Press **ENTER/NEXT**.
The clock starts.

LBT-D690/XB600/XB6/XB6K only

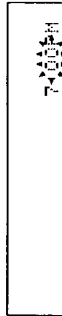
- 1 Press **ENTER/NEXT**.
The hour indication flashes.



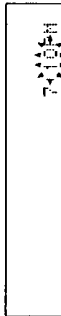
- 2 Press **TUNING +/-** to set the hour.
The clock uses the 12-hour system.



- 3 Press **ENTER/NEXT**.
The minutes indication flashes.



- 4 Press **TUNING +/-** to set the minutes.

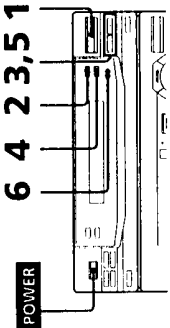


- 5 Press **ENTER/NEXT**.
The clock starts.

Tip
If you make a mistake, start over from step 1.

Step 3: Presetting radio stations

You can preset up to 30 stations, 20 for FM and 10 for AM.



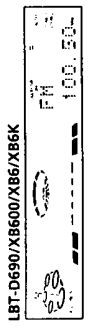
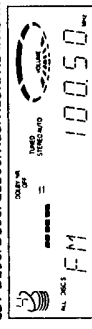
- 1 Press **TUNER/BAND** repeatedly until the band you want appears in the display.

Each time you press this button, the band changes as follows:
FM ↔ AM

- 2 Press **TUNING MODE** repeatedly until "AUTO" appears in the display.

- 3 Press **TUNING +/-**.
The frequency indication changes and scanning stops when the system tunes in a station. "TUNED" and "STEREO" (for a stereo program) appear.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



- 4 Press **TUNER MEMORY**.

A preset number flashes in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K

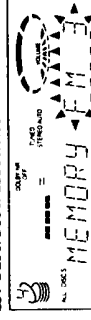


LBT-D690/XB600/XB6/XB6K



- 5 Press **TUNING +/-** to select the preset number you want.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



- 6 Press **ENTER/NEXT**.
The station is stored.

- 7 Repeat steps 1 through 6 to store other stations.

To tune in a station with a weak signal

Press **TUNING MODE** repeatedly until "MANUAL" appears in step 2, then press **TUNING +/-** to tune in the station.

To change the preset number

Start over from step 1.

To change the AM tuning interval (Except for the Middle Eastern model)

The AM tuning interval is factory-preset to 9 kHz (10 kHz in some areas). To change the AM tuning interval to 10 kHz (or 9 kHz), tune in any AM station first, then turn off the power. While holding down **ENTER/NEXT**, turn the power back on.

When you change the interval, the AM preset stations will be erased. To reset the interval, repeat the same procedure.

Note

The preset stations are canceled when you disconnect the power cord or if a power failure occurs for half a day.

Connecting optional AV components

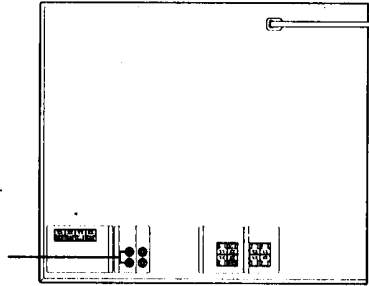
To enhance your system, you can connect optional components. Refer to the instructions included with each component for details.

Connecting audio components

Connecting a turntable

Be sure to match the color of the plugs and the connectors. To listen to the sound from the connected turntable, press **FUNCTION** repeatedly until "PHONO" appears.

To the audio output of the turntable



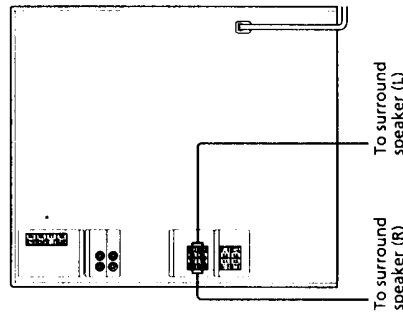
Note

Using the turntable at high volume may cause distortion or howling. This is often caused by the bass sound from the speakers. The bass sound may be picked up by the needle of the turntable, and produce the distortion or howling. To avoid this, do the following:

- 1 Keep some distance between the speakers and the turntable.
- 2 Stop using the surround effect.
- 3 Install the speakers or the turntable on a firm and stable surface.
- 4 Press **DBFB** repeatedly until "DBFB" appears from the display (LBT-D290/G3300/XB3/XB3K only). Press **SUPER WOOFER** repeatedly until the indicator on this button goes off (except for LBT-D290/G3300/XB3/XB3K).

Connecting surround speakers (LBT-D590/D690/XB600/XB6/XB6K only)

You can connect optional surround speakers.



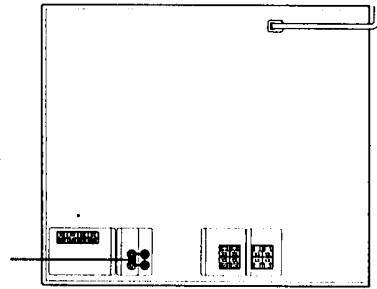
Note

You need to connect both left and right surround speakers. Otherwise, the sound will not be heard.

Connecting a VCR

Be sure to match the color of the plugs and the connectors. To listen to the sound from the connected VCR, press **FUNCTION** repeatedly until "VIDEO" appears.

To the audio output of the VCR

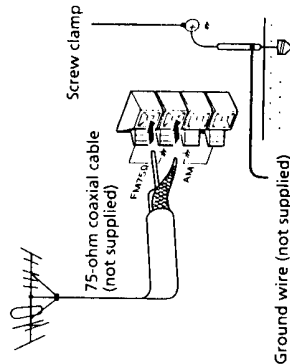


Connecting outdoor antennas

Connect an outdoor antenna to improve the reception.

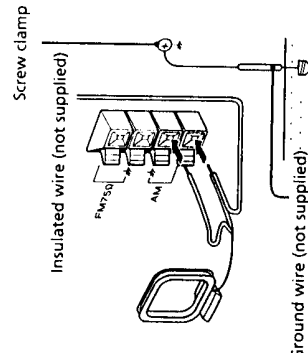
FM antenna

Connect an optional FM outdoor antenna. You can also use the TV antenna instead.



AM antenna

Connect a 6 to 15 meter (20 to 30 feet) insulated wire to the AM antenna terminal. Leave the supplied AM loop antenna connected.



Important

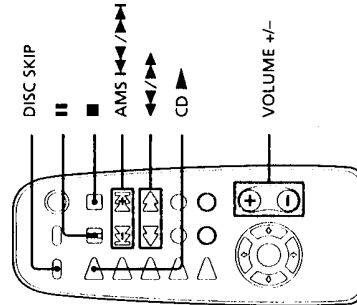
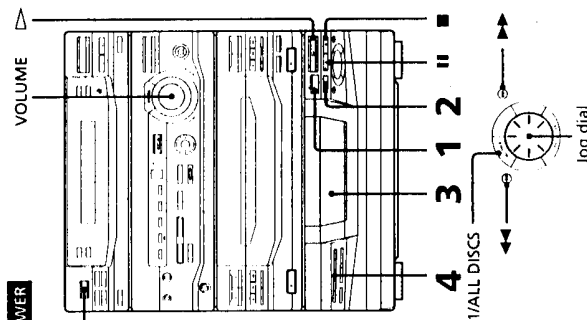
If you connect an outdoor antenna, connect a ground wire to the ϕ terminal with the screw clamp. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

Basic Operations

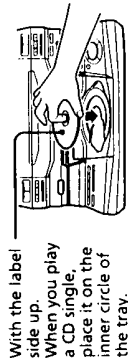
Playing a CD

— Normal Play

You can play up to five CDs in a row.



- 1 Press **▶ OPEN** and place a CD on the disc tray. If the disc is not placed properly it will not be recognized.



- 2 Press **DISC SKIP** to place up to four more CDs on the tray. The disc tray rotates so you can insert other CDs.

- 3 Close the front cover.

- 4 Press one of the **DIRECT PLAY** buttons.

Playback starts. If you press **▶** (or **CD ▶** on the remote), playback starts from the CD in the playing position.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Disc number in the playing position



LBT-D690/XB600/XB6/XB6K
Disc number in the playing position



Elapsed time



Basic Operations

To	Do this
Stop playback	Press ■ .
Pause	Press ■ . Press again to resume playback.
Select a track	During playback or pause, turn the jog dial clockwise (to go forward) or counterclockwise (to go backward) and release it when you reach the desired track. Or press AMS ▶▶▶ (to go forward) or AMS ◀◀◀ (to go backward) on the remote.
Find a point in a track	Press and hold ▶▶▶ or ◀◀◀ during playback, and release at the desired point.
Select a CD	Press one of the DIRECT PLAY buttons (or DISC SKIP).
Play only the CD you have selected	Press 1 / ALL DISCS repeatedly until "1 DISC" appears.
Play all CDs	Press 1 / ALL DISCS repeatedly until "ALL DISCS" appears.
Remove or change the CDs	Press ▶ OPEN .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

* AMS: Automatic Music Sensor.

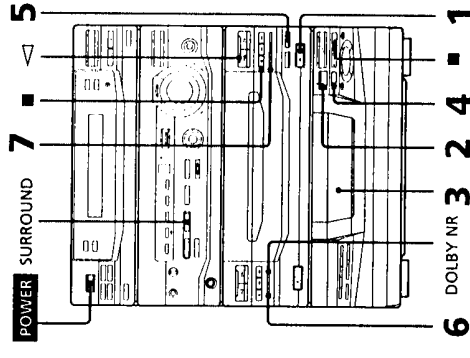
Tips

- Pressing **▶** while the power is off automatically turns the power on and starts CD playback if there is a CD on the tray (One Touch Play).
- You can switch from another source to the CD player and start playing a CD just by pressing **▶** or one of the **DIRECT PLAY** buttons (Automatic Source Selection).
- If there is no CD in the player, "NO DISC" appears in the display.
- You can change the CD in the loading position during playback.

Recording a CD

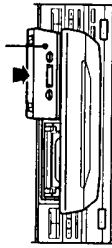
— CD Synchro Recording

This function lets you record from a CD to a tape easily. You can use TYPE I (normal) or TYPE II (CrO₂) tapes. The recording level is adjusted automatically.

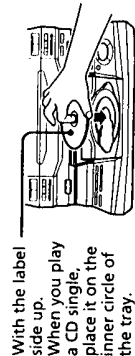


- 1 Press **EJECT** and insert a blank tape into deck B.

With the side you want to record on facing forward



- 2 Press **OPEN** and place a CD.



- 3 Close the front cover.

- 4 Press **DISC SKIP** repeatedly until the disc number you want to record appears in the playing position indicator.

- 5 Press **CD SYNC**.

Deck B stands by for recording and the CD player stands by for playback, and the indicator on the **▷** button (for the front side) lights up.

- 6 Press **DIRECTION** repeatedly to select **◀** to record on one side, or select **▶** (or **RELAY**) to record on both sides.

- 7 Press **II** on deck B. Recording starts.

To stop recording

Press **■** on deck B or on the CD player.

Tips

- If you want to record on the reverse side, press **◀** so the indicator on the **◀** button (for the reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- When you want to reduce the hiss noise in low-level high-frequency signals, press **DOLBY NR** before step 7 so "DOLBY NR B" appears in the display.
- To record with the surround effect, press **SURROUND** so "SUR (|||||)" appears in the display. The equalizer settings will not be recorded.

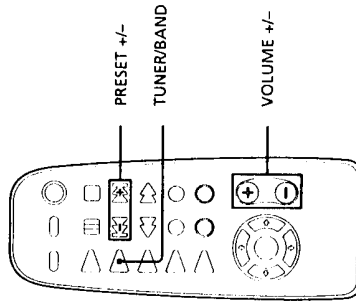
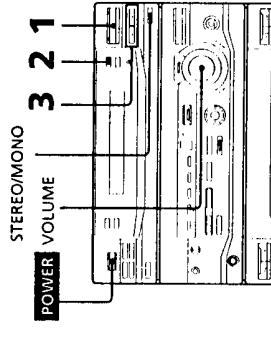
Note

You cannot listen to other sources while recording.

Listening to the radio

— Preset Tuning

Before using this function, preset radio stations in the tuner's memory (see "Step 3: Presetting radio stations").



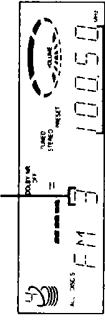
- 1 Press **TUNER/BAND** repeatedly until the band you want appears in the display.

Each time you press this button, the band changes as follows:
FM \leftrightarrow AM

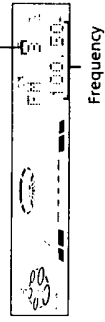
- 2 Press **TUNING MODE** repeatedly until "PRESET" appears in the display.
MANUAL \rightarrow AUTO \rightarrow PRESET

- 3 Press **TUNING +/-** (or **PRESET +/-** on the remote) to tune in the desired preset station.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Preset number



LBT-D690/XB600/XB6/XB6K
Preset number



Basic Operations

To	Do this
Turn off the radio	Press POWER .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

To listen to non-preset radio stations

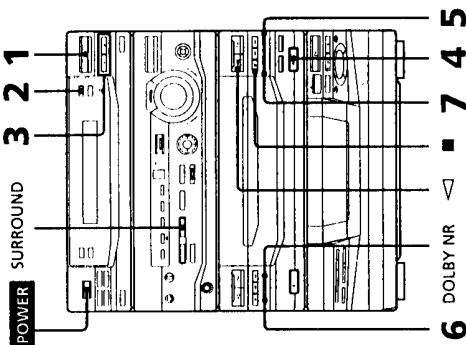
Press **TUNING MODE** repeatedly in step 2 until "MANUAL" appears, then press **TUNING +/-** to tune in the desired station.

Tips

- Pressing **TUNER/BAND** while the power is off automatically turns on the power and tunes to the last received station (One Touch Play).
- You can switch from another source to the radio just by pressing **TUNER/BAND** (Automatic Source Selection).
- If an FM program is noisy, press **STEREO/MONO** so "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press this button again to restore the stereo effect.
- To improve broadcast reception, move the supplied antennas.

Recording from the radio

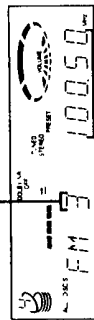
You can record a radio program on a tape by tuning in a preset station. You can use TYPE I (normal) or TYPE II (CrO₂) tapes. The recording level is automatically adjusted.



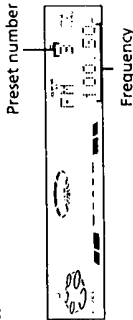
- 1 Press TUNER/BAND repeatedly until the band you want appears in the display.
- 2 Press TUNING MODE repeatedly until "PRESET" appears in the display.

- 3 Press TUNING +/- to tune in a preset station.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Preset number

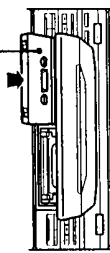


LBT-D690/XB600/XB6/XB6K
Frequency



- 4 Press EJECT and insert a blank tape into deck B.

With the side you want to record on facing forward



- 5 Press REC. Deck B stands by for recording, and the indicator on the button (for the front side) lights up.
- 6 Press DIRECTION repeatedly to select to record on one side, or select (or RELAY) to record on both sides.
- 7 Press II on deck B. Recording starts.

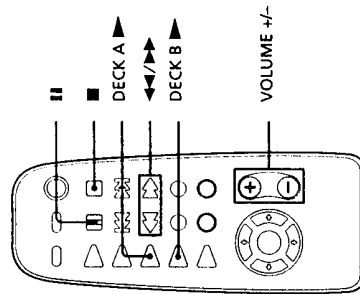
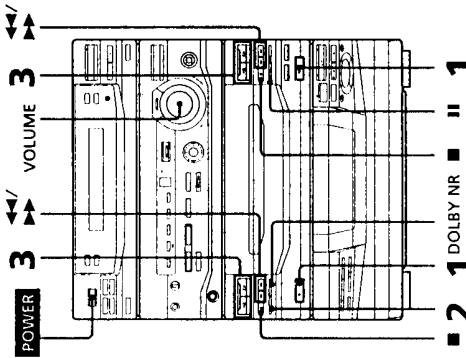
To stop recording
Press ■ on deck B.

Tips

- If you want to record on the reverse side, press so the indicator on the button (for the reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- To record non-preset stations, select "MANUAL" in step 2, then press TUNING +/- to tune in the desired station.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR before step 7 so "DOLBY NR B" appears in the display.
- To record with surround effect, press SURROUND so "SUR" appears in the display. The equalizer settings will not be recorded.
- If noise is heard while recording from the radio, move the appropriate antenna to reduce the noise.

Playing a tape

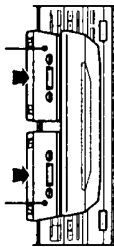
You can play any type of tape, TYPE I (normal), TYPE II (CrO₂) or TYPE IV (metal). The deck automatically detects the tape type. To select either deck A or B, press DECK A or DECK B on the remote.



Playing a Tape (continued)

- 1 Press **EJECT** and insert a recorded tape in deck A or B.

With the side you want to play facing forward



- 2 Press **DIRECTION** repeatedly to select **==** to play one side, **↔** to play both sides, or **RELAY** (Relay Play)** to play both decks in succession.

- 3 Press **▷**. Press **◁** to play the reverse side. The tape starts playing.

- * The deck stops automatically after playing both sides five times.
- ** Relay Play always plays according to the following sequence:
Deck A (front side), Deck A (reverse side), Deck B (front side), Deck B (reverse side).

To	Do this
Stop play	Press ■ .
Pause (Deck B only)	Press II . Press again to resume play.
Fast-forward	Press ▶▶ while playing the front side or ◀◀ while playing the reverse side.
Rewind	Press ◀◀ while playing the front side or ▶▶ while playing the reverse side.
Remove the cassette	Press EJECT .
Adjust the volume	Turn VOLUME (or press VOLUME +/- on the remote).

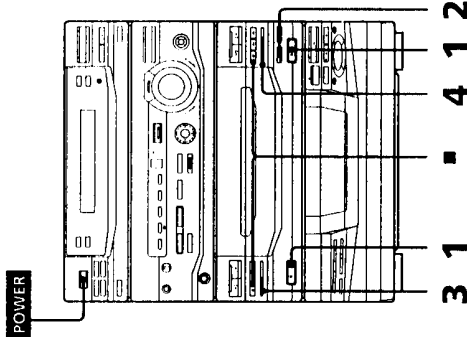
Tips

- Pressing **▷** or **◁** while the power is off automatically turns on the power and starts tape playback if there is a tape in the deck (One Touch Play).
- You can switch from another source to the tape deck just by pressing **▷** or **◁** (Automatic Source Selection).
- When you want to reduce the hiss noise in low-level high-frequency signals, press **DOLBY NR** so "DOLBY NR B" appears in the display.

Recording from a tape

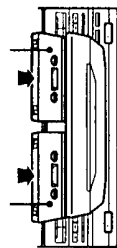
— High-speed Dubbing

You can use **TYPE I** (normal) or **TYPE II** (CrO₂) tapes. The recording level is automatically adjusted.



- 1 Press **EJECT** and insert a recorded tape in deck A and a blank tape in deck B.

With the side you want to play/record on facing forward



- 2 Press **H SPEED DUB**. Deck B stands by for recording.
- 3 Press **DIRECTION** repeatedly to select **==** to record on one side, or **↔** (or **RELAY**) to record on both sides.

Basic Operations

- 4 Press **II**. Dubbing starts. When dubbing ends, decks A and B automatically stop.

To stop dubbing

Press **■** on deck A or B.

Tips

- When you dub on both sides, start recording from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- If you set **DIRECTION** to **↔** when the tapes you use have different lengths, the tape in each deck reverses independently. If you select **RELAY**, the tapes in both decks reverse together.
- You don't have to set **DOLBY NR**, since the tape in deck B is automatically recorded in the same state as the tape in deck A.

Note

You cannot record the surround effect.

The CD Player

Using the CD display

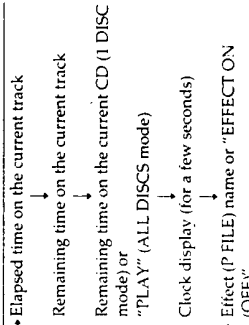
You can check the remaining time of the current track or the whole CD.

DISPLAY/DEMO



→ Press DISPLAY/DEMO during playback.

Each time you press this button in Normal Play, the display changes as follows:



To check the total playing time and the number of tracks on a CD

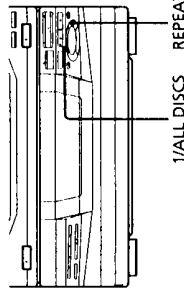
Press DISPLAY/DEMO in stop mode.

If you press DISPLAY/DEMO again, the clock display appears for a few seconds then the display returns to the previous indication.

Playing CD tracks repeatedly

— Repeat Play

This function lets you repeat a single CD or all CDs in Normal Play, Shuffle Play, and Program Play.



→ Press REPEAT repeatedly during playback until "REPEAT" appears in the display.

Repeat Play starts. The following table describes the various repeat modes.

To repeat	Press
All the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
All the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Only one track*	REPEAT repeatedly while playing the track you want to repeat until "REPEAT 1" appears in the display.

* You can't repeat a single track during Shuffle Play and Program Play.

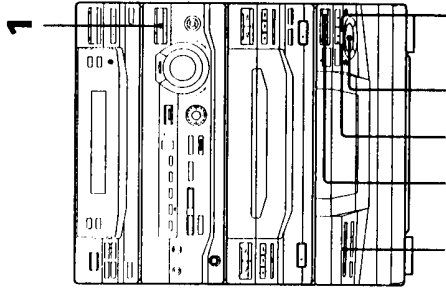
To cancel Repeat Play

Press REPEAT repeatedly until "REPEAT" or "REPEAT 1" disappears from the display.

Playing CD tracks in random order

— Shuffle Play

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



DIRECT PLAY 4 3 log dial 2

1 Press FUNCTION repeatedly until "CD" appears in the display.

2 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS."

"All DISCS" shuffles the tracks on all the CDs in the player. "1 DISC" shuffles the tracks on the CD in the playing position.

4 Press ▷.

"▷" appears and all the tracks play in random order.

To cancel Shuffle Play

Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

To select a desired CD

Press one of the DIRECT PLAY buttons during 1 Disc Shuffle Play.

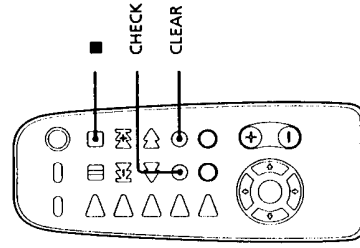
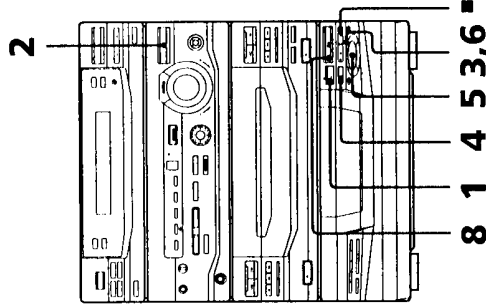
Tips

- You can start Shuffle Play during Normal Play by pressing PLAY MODE repeatedly until "SHUFFLE" appears in the display.
- To skip a track, turn the jog dial clockwise (or press AMIS ►► on the remote).

Programming CD tracks

— Program Play

You can create a program of up to 32 tracks from all the CDs in the order you want them to be played.



- 1 Place CDs and close the front cover.

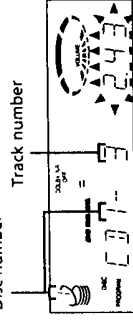
- 2 Press FUNCTION repeatedly until "CD" appears in the display.

- 3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

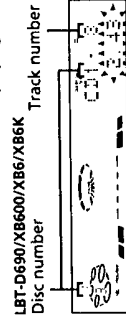
- 4 Press DISC SKIP to select a CD.

- 5 Turn the jog dial until the desired track appears in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
Disc number



Total playing time

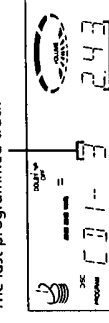


Total playing time

- 6 Press PLAY MODE once.

The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
The last programmed track



Total playing time
LBT-D690/XB600/XB6/XB6K

The last programmed track



Total playing time

- 7 To program additional tracks, repeat steps 4 through 6. Skip step 4 to select tracks from the same disc.

- 8 Press Δ .

All the tracks play in the order you selected.

To cancel Program Play

Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

To Press
Check the program CHECK on the remote repeatedly. After the last track, "CHECK END" appears.

Clear the last selected track CLEAR on the remote in stop mode.

Clear a specific track CHECK on the remote repeatedly until the number of the track to be cleared lights up, then press CLEAR.

Add a track to the program 1 Press DISC SKIP to select a CD.
2 Turn the jog dial to select a track.

3 Press PLAY MODE.
Clear the entire program \blacksquare once in stop mode or twice while playing.

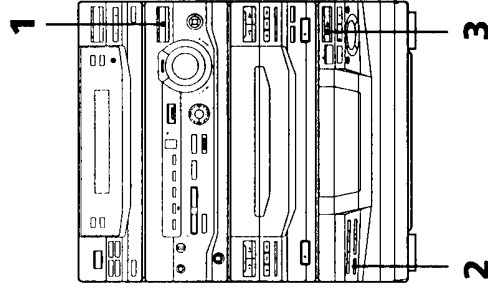
Tips

- The program you created remains in the CD player's memory even after it has been played. Press Δ to play the same program again.
- If "..." appears instead of the total playing time while programming, this means:
 - you have programmed a track numbered over 20, or
 - the total playing time has exceeded 100 minutes.

Playing CDs without interruption

— Non-Stop Play

You can play CDs without pausing between tracks.



- 1 Press FUNCTION repeatedly until "CD" appears in the display.

- 2 Press NON-STOP so the indicator on this button lights up.

- 3 Press Δ .

To cancel Non-Stop Play

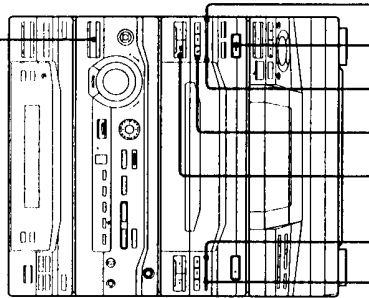
Press NON-STOP so the indicator on this button goes off.

The Tape Deck

Recording on a tape manually

You can record from CDs, tapes, or the radio as you like. For example, you can record just the songs you want or begin recording from the middle of the tape. The recording level is adjusted automatically.

2



4 DOLBY NR 5 1 3

- 1 Insert a blank tape into deck B.
- 2 Press FUNCTION repeatedly until the source you want to record (e.g., CD) appears in the display.
- 3 Press ● REC.
Deck B stands by for recording, and the indicator on the ▷ button (for the front side) lights up.
- 4 Press DIRECTION repeatedly to select ⇐ to record on one side, or ⇨ (or RELAY) to record on both sides.

22

- 5 Press II on deck B.

Recording starts.

- 6 Start playing the source to be recorded.

To

Press

Stop recording ■ on deck B

Pause recording II on deck B

Tips

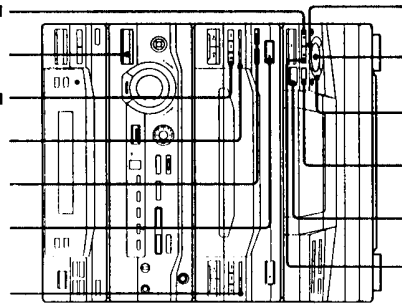
- If you want to record on the reverse side, press ◀ so the indicator on the ◀ button (for the reverse side) lights up.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR before step 5 so "DOLBY NR B" appears in the display.

Recording CDs by specifying the track order

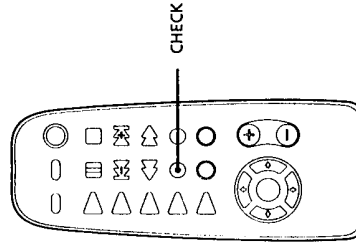
— Program Edit

You can record tracks from all the CDs in the order you want. When programming, make sure the playing times for each side do not exceed the length of one side of the tape.

12 2 1113 3



9 1 5 EDIT 6 4,7



continued 23

- 1 Place CDs and close the front cover.
- 2 Insert a blank tape into deck B.
- 3 Press FUNCTION repeatedly until "CD" appears in the display.
- 4 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.
- 5 Press DISC SKIP to select a CD.
- 6 Turn the jog dial until the desired track appears in the display.
LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K Disc number
Track number
Total playing time (including selected track)
LBT-D690/XB600/XB6K/XB6K Disc number
Track number
Total playing time (including selected track)

Recording CDs by specifying the track order (continued)

- 7** Press **PLAY MODE** once. The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.

LBT-D290/D590/G3300/XB3/XB4/XB6K
The last programmed track



Previously selected track
LBT-D690/XB600/XB6/XB6K
The last programmed track



- 8** Repeat steps 5 through 7 to program additional tracks to be recorded on side A.

Skip step 5 to select tracks from the same disc.

- 9** Press **II** to insert a pause at the end of side A. "P" appears in the display and the total playing time resets to "0.00" in the display.

- 10** Repeat steps 5 through 7 to program the tracks to be recorded on side B. Skip step 5 to select tracks from the same disc.

- 11** Press **CD SYNC**. Deck B stands by for recording, the CD player stands by for playback, and the indicator on the **▷** button (for the front side) lights up.

- 12** Press **DIRECTION** repeatedly to select **◀** to record on one side, or **▶** (or **RELAY**) to record on both sides.

- 13** Press **II** on deck B. Recording starts.

To stop recording

Press **II** on deck B or on the CD player.

To check the order

Press **CHECK** on the remote repeatedly. After the last track, "CHECK END" appears.

To cancel Program Edit

Press **PLAY MODE** repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

Selecting the tape length automatically

— Tape Select Edit

You can check the most suitable tape length for recording a CD. Note that you cannot use Tape Select Edit for discs containing more than 20 tracks.

- ➔ After inserting a CD, press **EDIT** once so "EDIT" flashes.

The required tape length for the CD in the playing position appears, followed by the total playing time for sides A and B.

Note

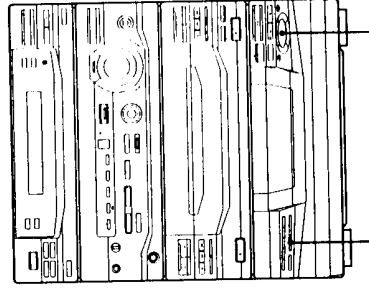
You cannot use this function when Program Play mode has been set. After clearing the entire program (see "To clear the entire program" on page 21), follow the above procedure.

DJ Effects

Looping part of a CD

— Loop

With the loop function, you can repeat part of a CD during playback. This lets you create original recordings.



LOOP

- ➔ Press and hold **LOOP** during playback at the point you want to start the Loop function, and release to resume normal playback.

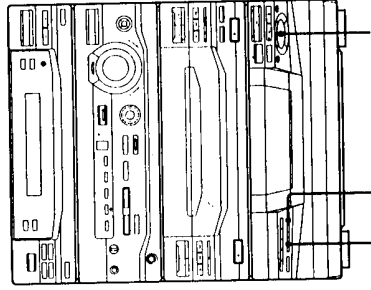
To adjust the loop length

Turn the jog dial while holding **LOOP** (or press **MUSIC MENU** **◀** or **▶** while holding **LOOP** on the remote) to select different loop lengths.

Flashing part of a CD

— Flash

With the flash function, you can "flash" the CD sound during playback. This lets you create original recordings.



FLASH

- ➔ Press and hold **FLASH** during playback at the point you want to start the Flash function, and release to resume normal playback.

To adjust the flash length

Turn the jog dial while holding **FLASH** (or press **MUSIC MENU** **◀** or **▶** while holding **FLASH** on the remote) to select different flash lengths.

To use LOOP and FLASH together

Press and hold both **LOOP** and **FLASH** at the same time.

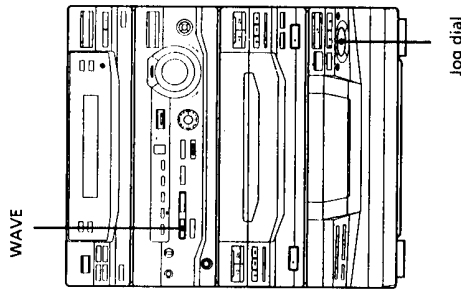
Note

The loop and flash length cannot be adjusted in stop mode. Adjust the loop and flash lengths during operation.

Waving the equalizer

— Wave

With the Wave function, you can fluctuate the graphic equalizer automatically while listening to a source. This effect can be used with any source, but it cannot be recorded.



➔ Press and hold WAVE while listening to a source at the point you want to start the Wave function, and release to resume normal playback.

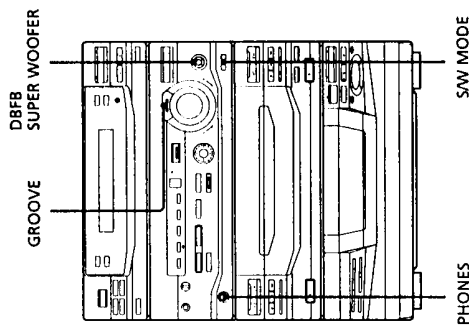
To adjust the wave length

Turn the jog dial while holding WAVE to select different wave lengths.

Sound Adjustment

Adjusting the sound

You can reinforce the bass, create a more powerful sound, and listen with headphones.



To reinforce the bass (DBFB) (LBT-D290/G3300/XB3/XB3K only)

Press DBFB.*

Each time you press this button, the DBFB level display changes as follows:

DBFB ■■■ → DBFB ■■■■■ → display off

"DBFB ■■■■■" reinforces the bass more than "DBFB ■■■".

* DBFB = Dynamic Bass Feedback

To reinforce the bass from the super woofer (SUPER WOOFER) (except for LBT-D290/G3300/XB3/XB3K)

Press SUPER WOOFER.

Each time you press this button, the super woofer level display changes as follows:

SUPER WOOFER FLAT → LOW → HIGH

To select the super woofer mode (except for LBT-D290/G3300/XB3/XB3K)

Press S/W MODE while the super woofer is on.

Each time you press this button, the super woofer mode display changes as follows:

MOVIE ↔ MUSIC

For a powerful sound (GROOVE)

Press GROOVE.

The volume switches to power mode, the equalizer curve changes, the bass level (DBFB or SUPER WOOFER) changes to "HIGH," and the indicator on the GROOVE button lights up. Press GROOVE again to return to the previous volume.

Notes

- The music sound will be distorted when you use the DBFB system with the graphic equalizer if the bass is too strong. Adjust the bass slowly while listening to the music so you can monitor the effect of the adjustment.
- Canceling GROOVE cancels the equalizer curve and bass level. Adjust the equalization to obtain the effect you desire.

To listen through the headphones

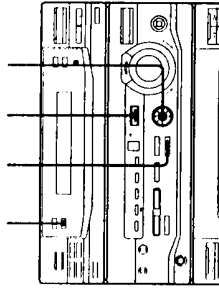
Connect the headphones to the PHONES jack. No sound will come from the speakers.

Selecting the audio emphasis

The audio emphasis menu lets you select the sound characteristics according to the music you are listening to.

The personal file function (see "Making a personal audio emphasis file (Personal File)") lets you store your own effects.

SPECTRUM ANALYZER **EFFECT 1,2,3**



- 1 Press **GEQ** $\blacktriangle/\blacktriangledown$ (or **MUSIC MENU** $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select **MENU 1** or **MENU 2**.
See the chart "Music menu options" below. The last audio emphasis chosen from that menu appears in the display.
- 2 Press **GEQ** $\blacktriangle/\blacktriangledown$ (or **MUSIC MENU** $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select the audio emphasis you desire.
The audio emphasis name appears in the display.
- 3 Press **ENTER**.
You don't need to press **ENTER** when you use the remote.

To cancel the audio emphasis

Press **EFFECT** (or **MUSIC MENU ON/OFF** on the remote) repeatedly so the indicator on the **EFFECT** button goes off.

Music menu options

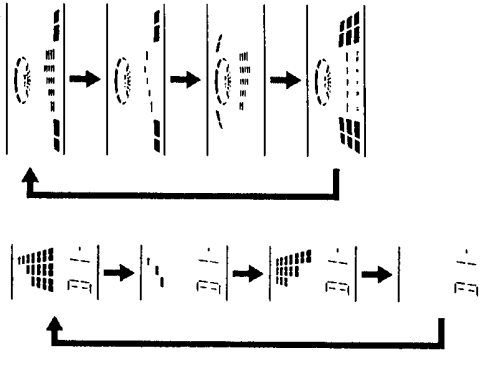
"**SUR** (|||||)" appears if you select an audio emphasis with a surround effect.

Press	To select
GEQ $\blacktriangle/\blacktriangledown$	MENU 1
GEQ $\blacktriangle/\blacktriangledown$	MENU 2
GEQ $\blacktriangle/\blacktriangledown$	ROCK
GEQ $\blacktriangle/\blacktriangledown$	MOVIE
GEQ $\blacktriangle/\blacktriangledown$	POP
GEQ $\blacktriangle/\blacktriangledown$	GAME
GEQ $\blacktriangle/\blacktriangledown$	JAZZ
GEQ $\blacktriangle/\blacktriangledown$	NIGHT
GEQ $\blacktriangle/\blacktriangledown$	DANCE
GEQ $\blacktriangle/\blacktriangledown$	PARTY
GEQ $\blacktriangle/\blacktriangledown$	SALSA
GEQ $\blacktriangle/\blacktriangledown$	RELAX

To change the equalizer display

Each time you press **SPECTRUM ANALYZER**, the equalizer display changes to show one of the four displays below.

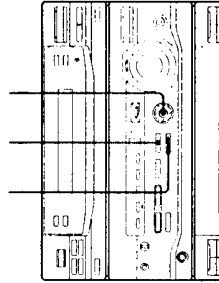
LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
LBT-D690/XB600/XB6/XB6K



Adjusting the audio emphasis

You can adjust the audio emphasis using the graphic equalizer and surround effect.

6 2 3,4



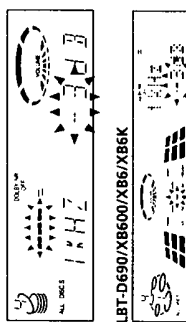
Adjusting the graphic equalizer

You can adjust the sound by raising or lowering the levels of specific frequency ranges.

Before operation, first select the basic audio emphasis you want for your sound.

- 1 Select the basic audio emphasis you want for your sound.
(see "Selecting the audio emphasis.")
- 2 Press **GEQ CONTROL**.
The frequency range appears and the level value flashes in the display.
- 3 Press **GEQ** $\blacktriangle/\blacktriangledown$ repeatedly to select a frequency band.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K
LBT-D690/XB600/XB6/XB6K



- 4 Press **GEQ** $\blacktriangle/\blacktriangledown$ to adjust the level.



- 5 Repeat steps 3 and 4 to adjust the other frequency bands.
- 6 Press **ENTER** when finished.

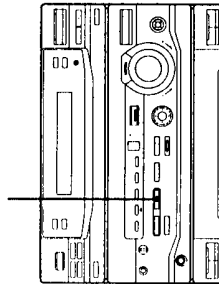
Note

If you choose another audio emphasis (other than "EFFECT OFF"), the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file (see "Making a personal audio emphasis file").

Activating the surround effect

You can enjoy the surround effect.

SURROUND



- ➔ Press **SURROUND** so "SUR (|||||)" appears in the display.

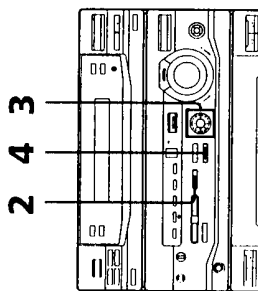
Note

If you choose other sound effects, the surround effect will be canceled. To retain the effect, store it in a personal file (see "Making a personal audio emphasis file").

Making a personal audio emphasis file

— Personal File

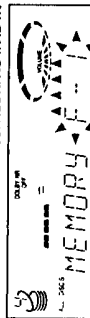
You can create personal files of audio patterns (surround effect and graphic equalizer) and store them in the unit's memory. Later call up an audio pattern to play a favorite tape, CD, or radio program. You can create up to five audio files. Before operation, first select the basic audio emphasis you want for your sound.



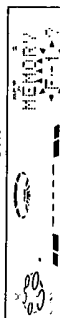
1 Create the sound effect you want by using the graphic equalizer and surround effect (see "Adjusting the audio emphasis").

2 Press P FILE MEMORY.
A personal file number appears in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



3 Press GEQ $\blacktriangle/\blacktriangledown$ to select the file number (P FILE) where you want to store the sound effect.

4 Press ENTER.

The adjusted sound effects are stored under the selected file number. Any settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

1 Press GEQ $\blacktriangle/\blacktriangledown$ (or MUSIC MENU $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to display the last selected personal file.

2 Press GEQ $\blacktriangle/\blacktriangledown$ (or MUSIC MENU $\blacktriangle/\blacktriangledown$ on the remote) repeatedly to select the desired personal file.

3 Press ENTER.

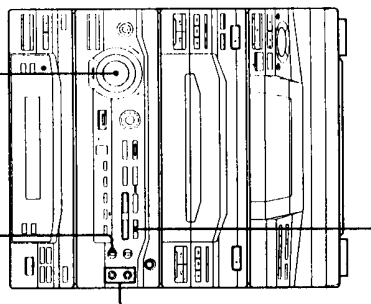
You don't need to press ENTER when you use the remote.

Other Features

Singing along: Karaoke

You can sing along with any stereo CD or tape by turning down the singer's voice. You need to connect an optional microphone.

1, 5 **4**



2

1 Turn MIC LEVEL to MIN to turn down the microphone level.

2 Connect an optional microphone to the MIC (MIC 1*) jack.

When you use two microphones at the same time, connect the other one to the MIC 2* jack.

(* LBT-XB3K/XB4K/XB6K only)

3 Press KARAOKE PON/MPX repeatedly to obtain the desired karaoke effect.

Each time you press this button, the display changes as follows:

KARAOKE PON \rightarrow MPX R \rightarrow MPX L

\rightarrow EFFECT OFF (ON) \rightarrow "A" appears in the display when the karaoke mode is activated.

To	Select
Reduce the singer's voice on a CD or tape	KARAOKE PON
Reduce the right channel on a multiplex CD or tape.	MPX R
Reduce the left channel on a multiplex CD or tape.	MPX L

4 Start playing the music and adjust the volume.

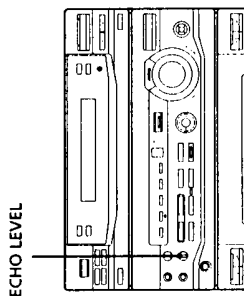
5 Turn MIC LEVEL to adjust the microphone volume.

When you are done

Turn MIC LEVEL to MIN and disconnect the microphone from MIC. Then press KARAOKE PON/MPX repeatedly until "A" disappears from the display.

Singing along: Karaoke (continued)

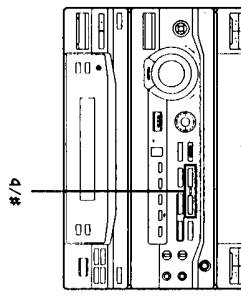
Adjusting the microphone echo (LBT-XB3K/XB4K/XB6K only)



→ Turn **ECHO LEVEL** to adjust the echo effect.

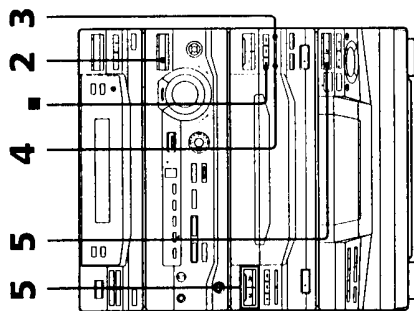
To cancel the echoing
Turn **ECHO LEVEL** to MIN.

Adjusting the key (LBT-XB3K/XB4K/XB6K only)



→ Press **b** or **#**.
You can adjust the key higher or lower in 13 half-tone steps (-3.0 to 3.0).

Mixing and recording sounds



1 Prepare the microphone and the karaoke effect. Then, insert a blank tape in deck B.

2 Press **FUNCTION** repeatedly to select the source you desire and set it to pause mode.

3 Press **REC**.

4 Press **II**.

5 Press **▷** to start playing the CD (or tape in deck A).
Playback starts.
Start singing along with the music.

To stop recording
Press **■** on deck B.

Tips

- If acoustic feedback (howling) occurs, move the microphone away from the speakers or change the direction of the microphone.
- If you want to record your voice through the microphone only, you can do so by selecting the CD source and not playing a CD.

Notes

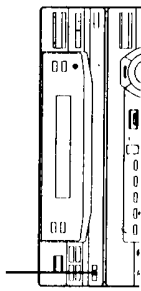
- If you press **EFFECT** or select a sound effect. The karaoke mode is canceled.
- The instrumental sound may be reduced as well as the singer's voice when the source sound was recorded monaurally.
- The singer's voice may not be reduced when:
 - only a few instruments are playing
 - a duet is being sung
 - the source has strong echoes or chorus
 - the singer's voice deviates from the center
 - the voice on the source is singing high soprano or tenor notes.

Falling asleep to music

— Sleep Timer

You can set the system to turn off at a preset time, so you can fall asleep listening to music. You can preset the remaining time in 10 minute increments.

SLEEP



→ Press **SLEEP**.

Each time you press this button, the minutes display (the remaining time) changes as follows:

AUTO → 90min → 80min → 70min
↓
OFF ← 10min 50min ← 60min

When you choose AUTO

The power turns off when the current CD or tape finishes playback (up to 100 minutes). The power turns off if you manually stop playing a CD or tape.

To check the remaining time

Press **SLEEP** once.

To change the remaining time

Press **SLEEP** repeatedly to select the time you want.

To cancel the Sleep Timer function

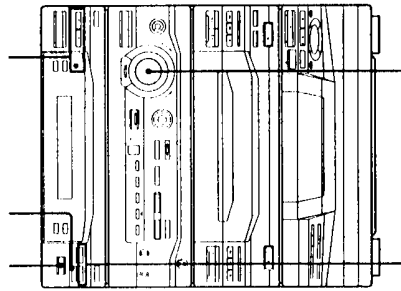
Press **SLEEP** repeatedly until "SLEEP OFF" appears in the display.

Waking up to music

— Wake-up Timer

You can wake up to music at a preset time every day. Make sure you have set the clock (see "Step 2: Setting the time").

9 3 4,5,6,7,8



DAILY 1/DAILY 2

2

- 1** Prepare the music source you want to play.
 - CD: Insert a CD. To start from a specific track, create a program (see "Programming CD tracks").
 - Tape: Insert an tape with the side you want to play facing forward.
 - Radio: Tune in the preset station you want (see "Step 3: Presetting radio stations").

- 2** Turn **VOLUME** to adjust the volume.

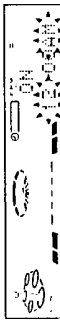
- 3** Press **⏻/CLOCK SET**.
"SET" appears and "DAILY 1" flashes in the display.

- 4** Press **TUNING +/-** to select **DAILY 1** or **DAILY 2**, then press **ENTER/NEXT**.
"ON" appears and the hour indication flashes in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K

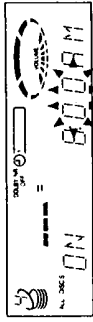


LBT-D690/XB600/XB6/XB6K



- 5** Set the time to start playback. Press **TUNING +/-** to set the hour, then press **ENTER/NEXT**.
The minutes indication flashes.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



Press **TUNING +/-** to set the minutes, then press **ENTER/NEXT**.
The hour indication flashes again.

- 6** Set the time to stop playback following the above procedure.

- 7** Press **TUNING +/-** until the music source you want appears.
The indication changes as follows:
TUNER → CD PLAY → TAPE PLAY

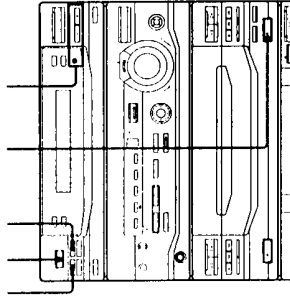
- 8** Press **ENTER/NEXT**.
The start time, the stop time, and the music source appear in turn before the original display returns.

- 9** Turn off the power.

Timer-recording radio programs

To timer-record, you must preset the radio station (see "Step 3: Presetting radio stations") and set the clock (see "Step 2: Setting the time") beforehand.

2 7 REC 6 3,4,5



- 1** Tune in the preset radio station (see "Listening to the radio").

- 2** Press **⏻/CLOCK SET**.
"SET" appears and "DAILY 1" flashes in the display.

- 3** Press **TUNING +/-** to select **REC**, then press **ENTER/NEXT**.
"ON" appears and the hour indication flashes in the display.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



LBT-D690/XB600/XB6/XB6K



Timer-recording radio programs (continued)

- 4** Set the time to start recording.
Press TUNING +/- to set the hour, then
press ENTER/NEXT.
The minutes indication flashes.

LBT-D290/D590/G3300/XB3/XB3K/XB4/XB4K



Press TUNING +/- to set the minutes,
then press ENTER/NEXT.
The hour indication flashes again.

- 5** Set the time to stop recording
following the above procedure.
The start time, the stop time, the
recording source, and the preset station
appear in turn before the original display
returns.

- 6** Insert a blank tape in deck B.
- 7** Turn off the power.
When recording starts, the volume level
is set to the minimum.

To check the setting

- 1** Press REC.
- 2** "TIMER OFF" appears in the display.
- 3** Press REC again.
To change the setting, start over from step 1.

To cancel the timer operation

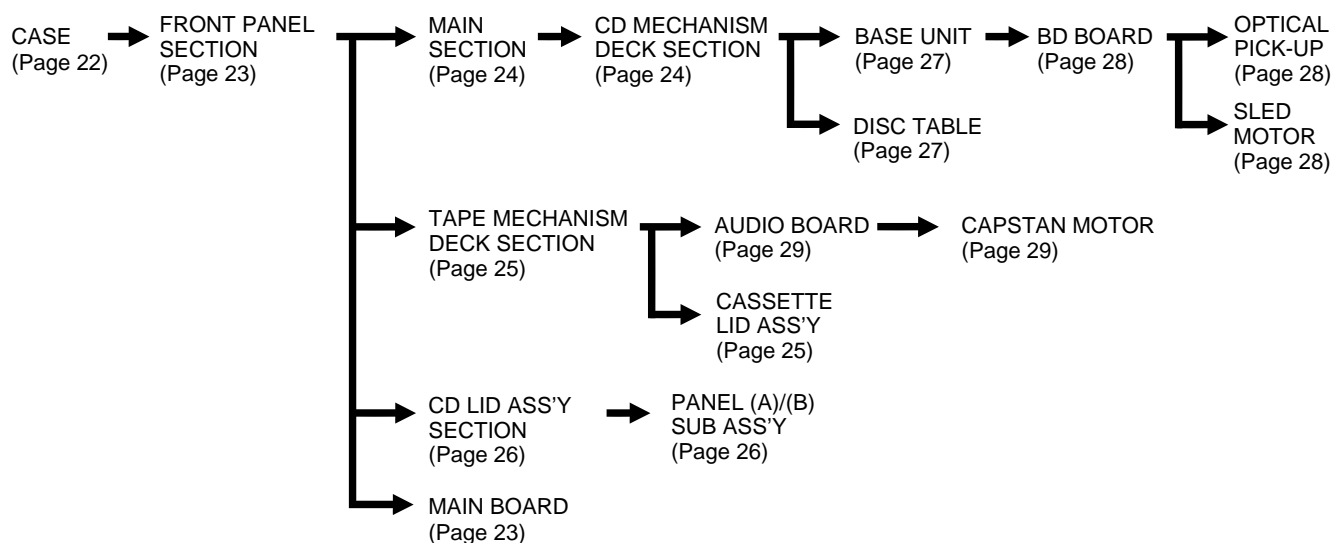
- 1** Press REC.
- 2** "TIMER OFF" appears in the display.

Notes

- The system turns on 15 seconds before the preset time.
- If the power is on at the preset time, the recording will not be made.
- You cannot set the timer if the timer on and off times are the same.
- When you set the Sleep Timer, the Timer-recording will not start until the Sleep Timer turns off the system.
- You cannot activate the Wake-up Timer and Timer-recording at the same time.
- Recording starts from the front side.

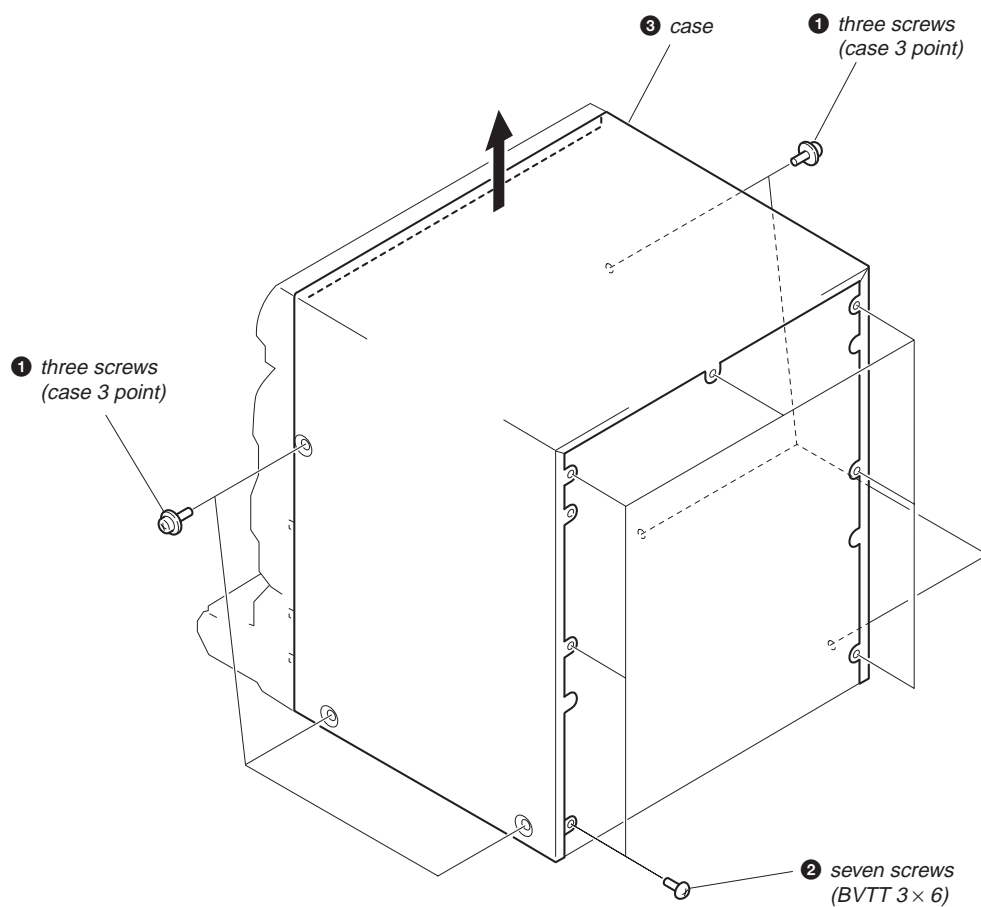
SECTION 2 DISASSEMBLY

• This set can be disassembled in the order shown below.

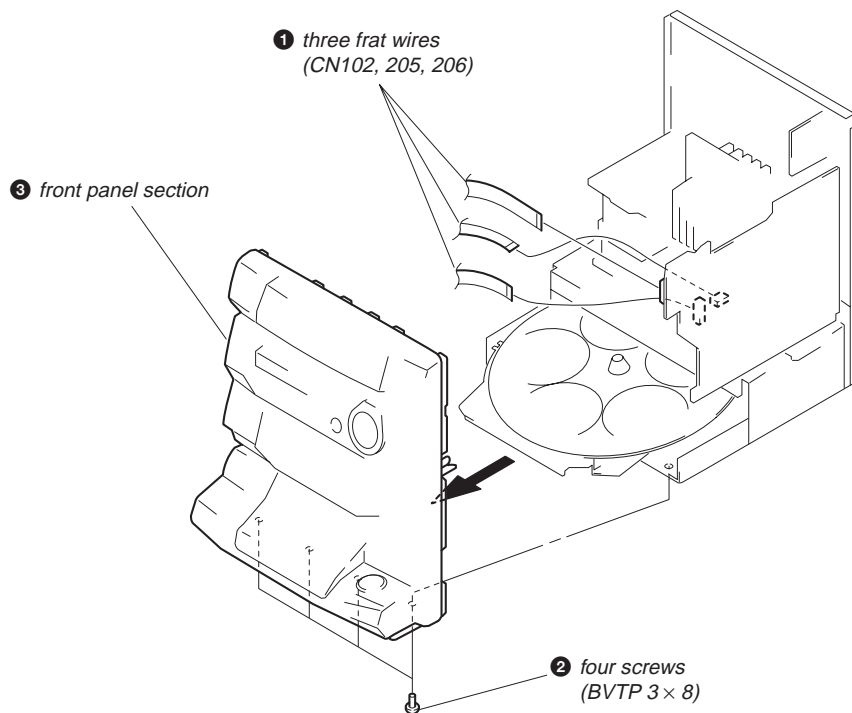


Note: Follow the disassembly procedure in the numerical order given.

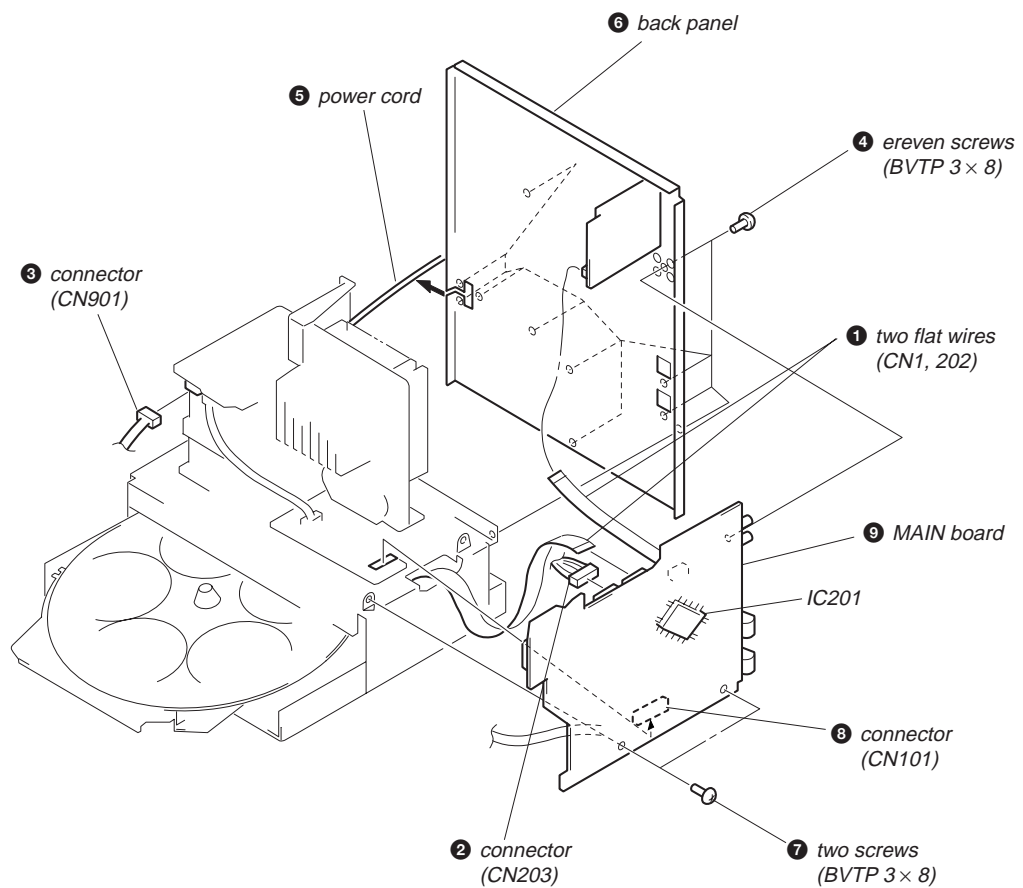
CASE



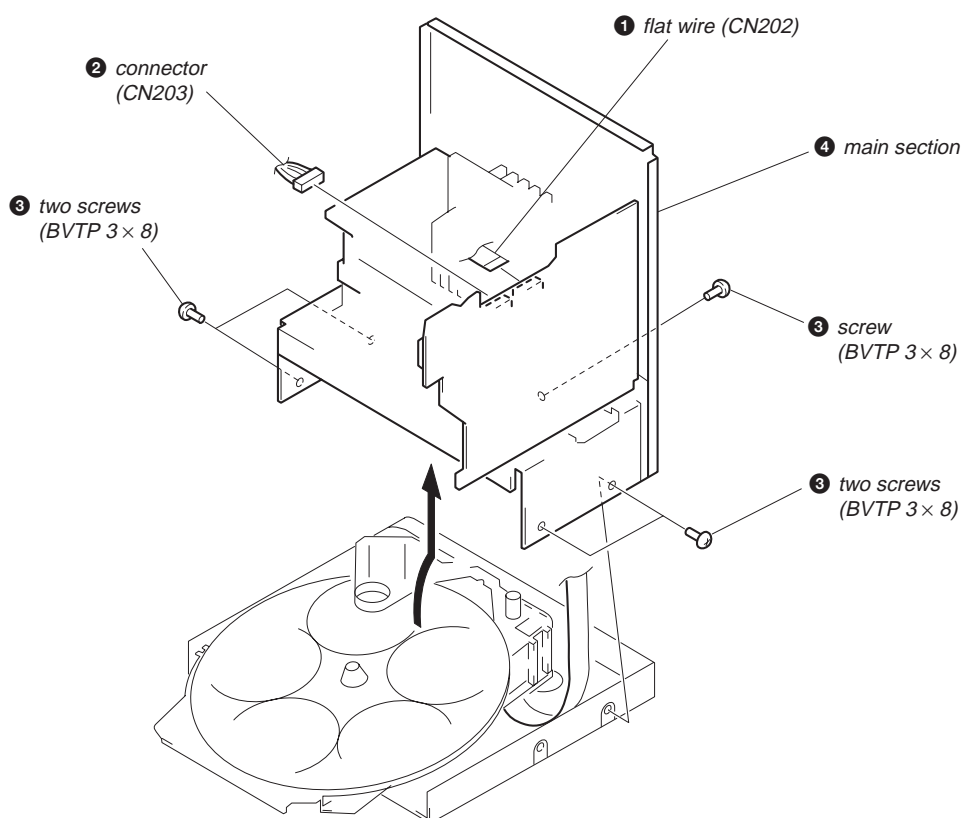
FRONT PANEL SECTION



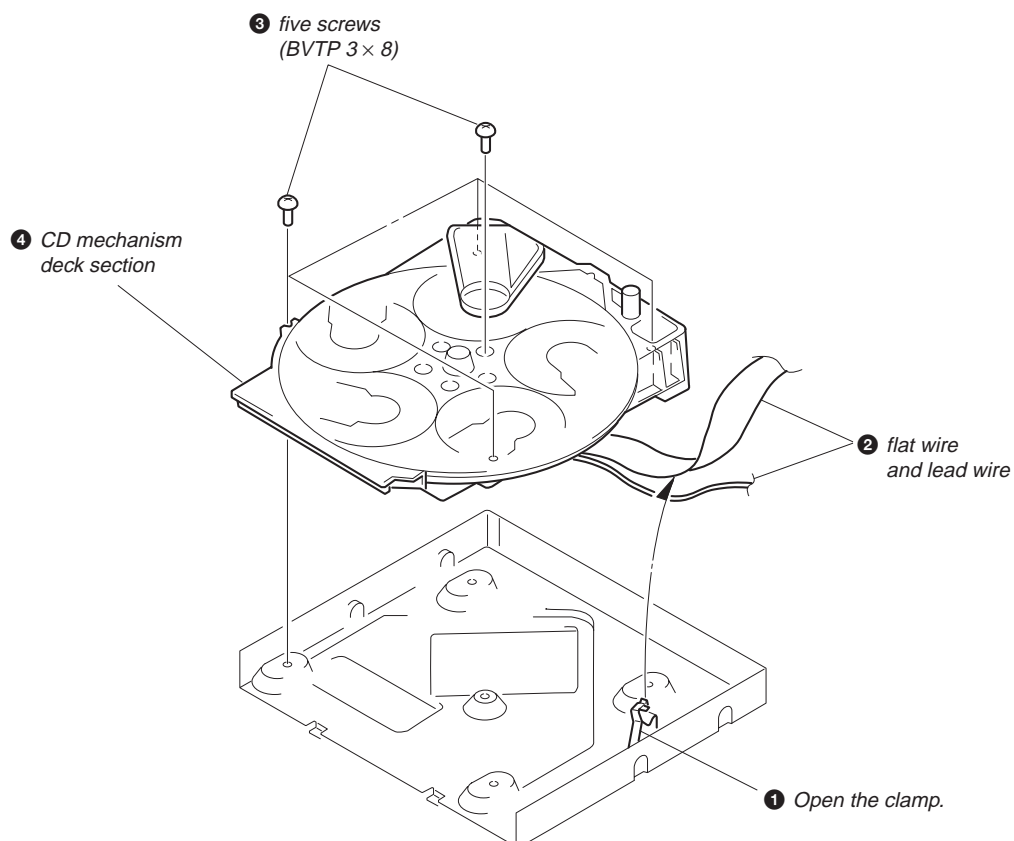
MAIN BOARD



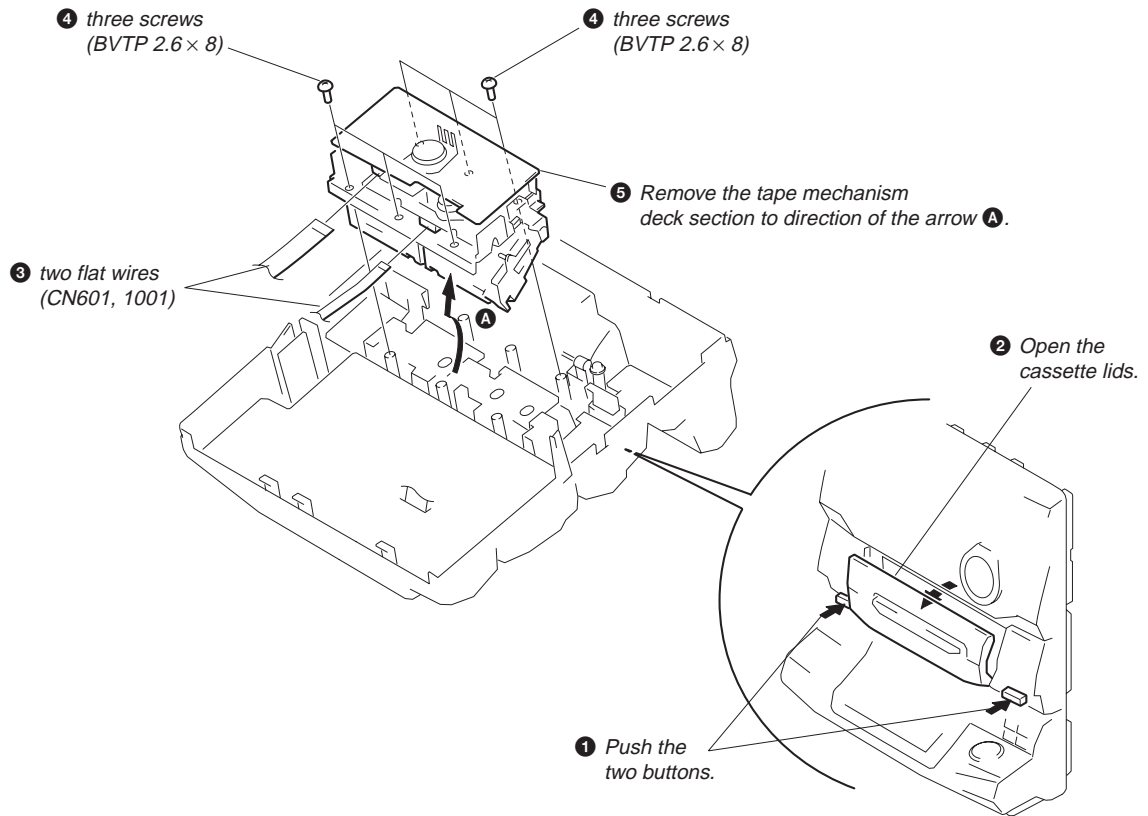
MAIN SECTION



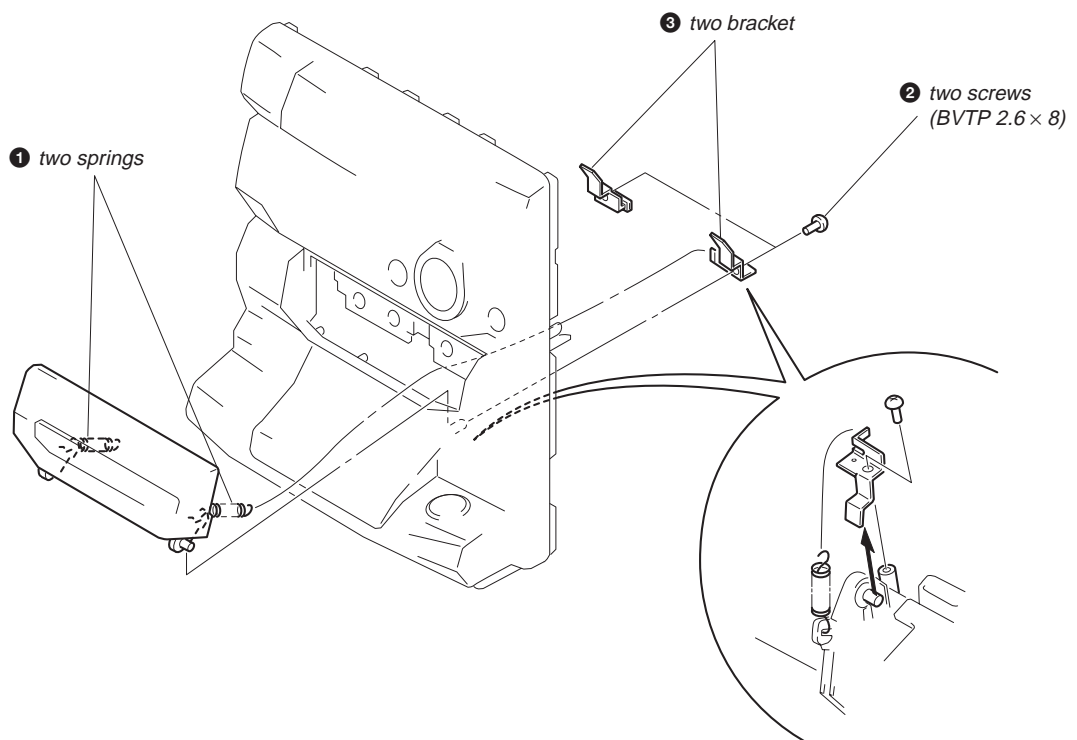
CD MECHANISM DECK SECTION



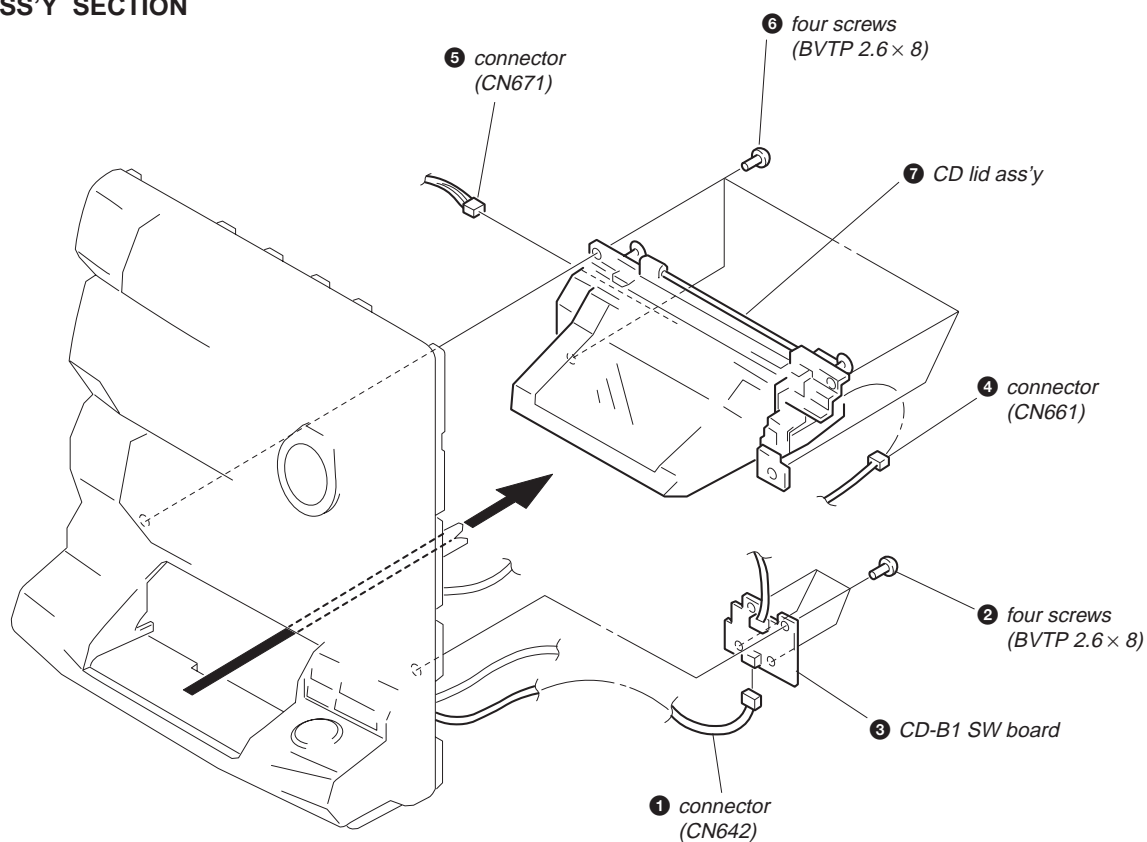
TAPE MECHANISM DECK SECTION



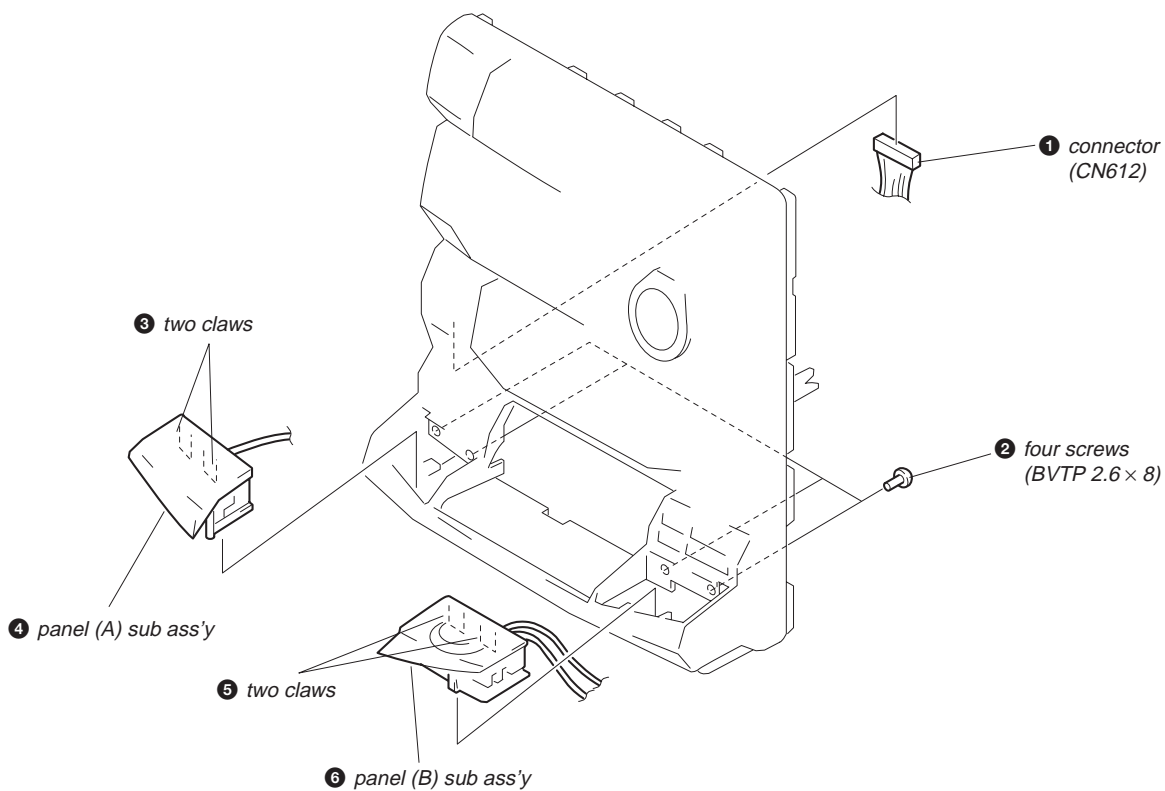
CASSETTE LID ASS'Y



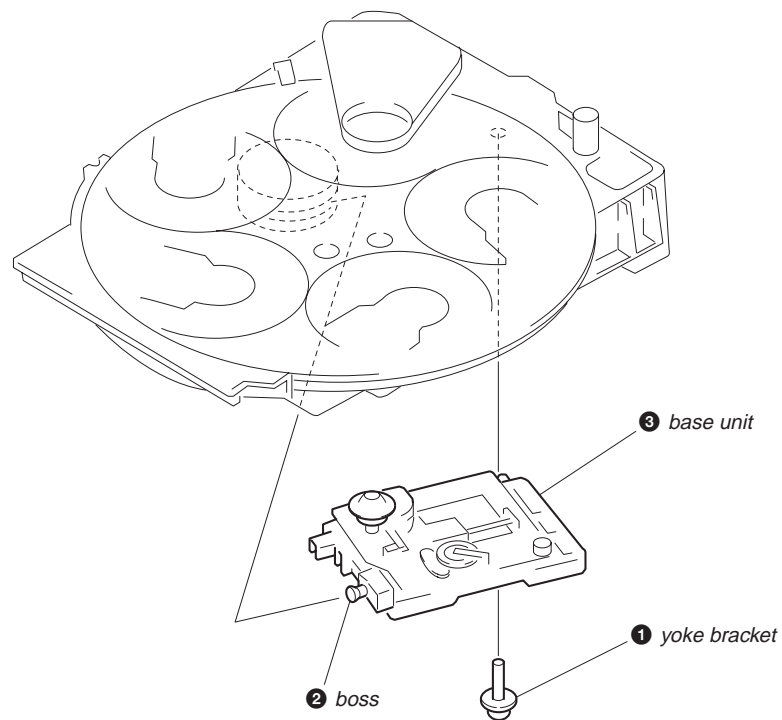
CD LID ASS'Y SECTION



PANEL (A) / (B) SUB ASS'Y



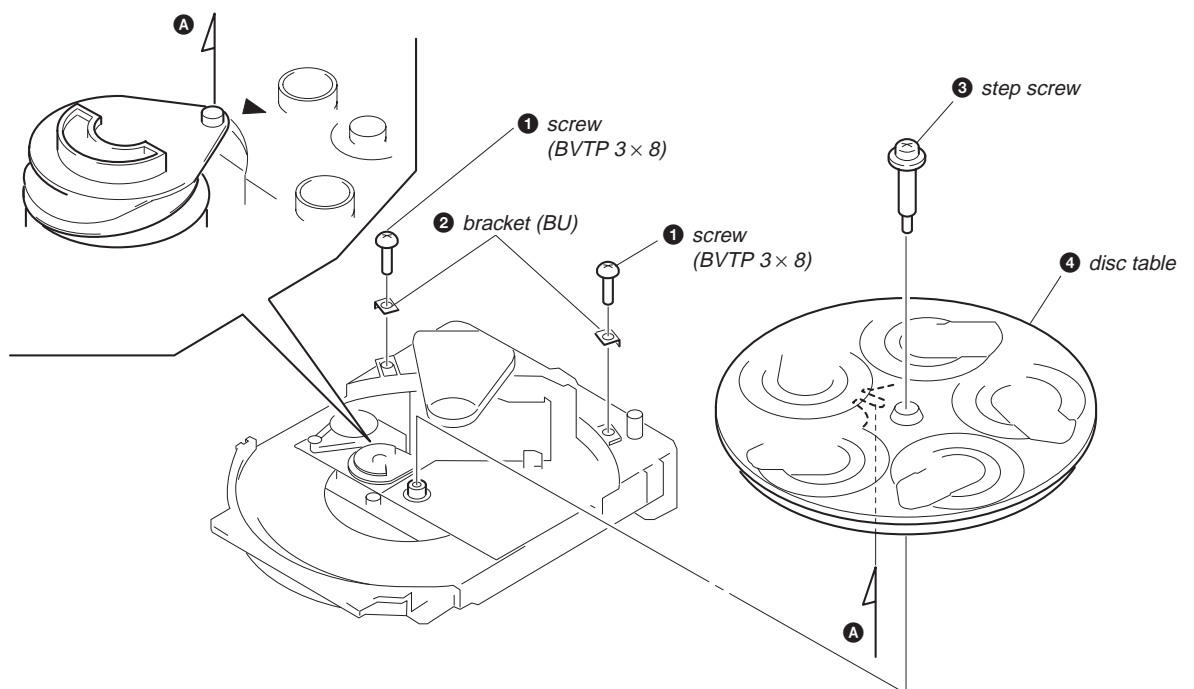
BASE UNIT



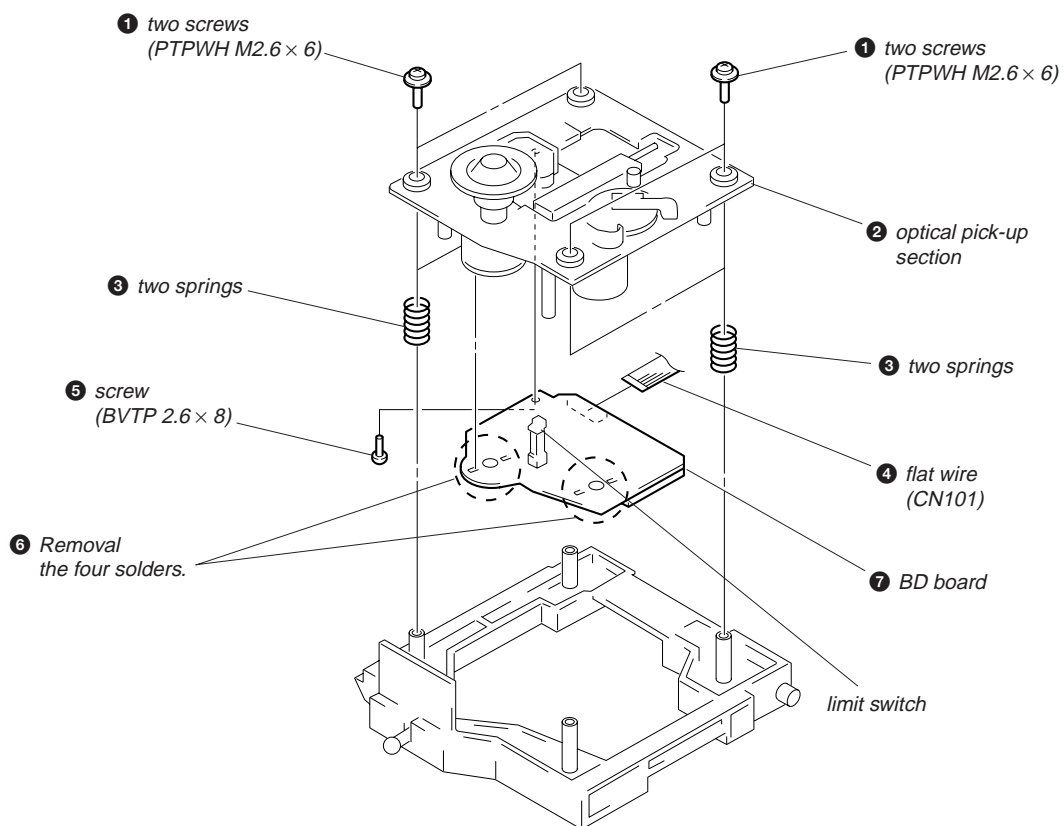
DISC TABLE

Note:

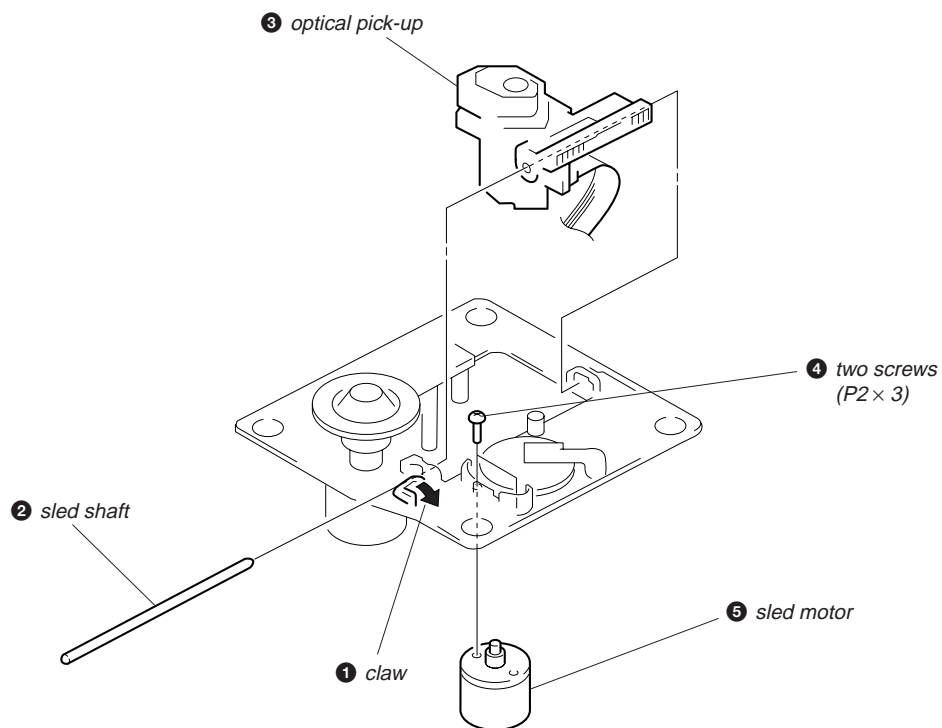
When the disc table is installed, adjust the positions of roller cam and mark ► as shown in the figure, then set to the groove of disc table.



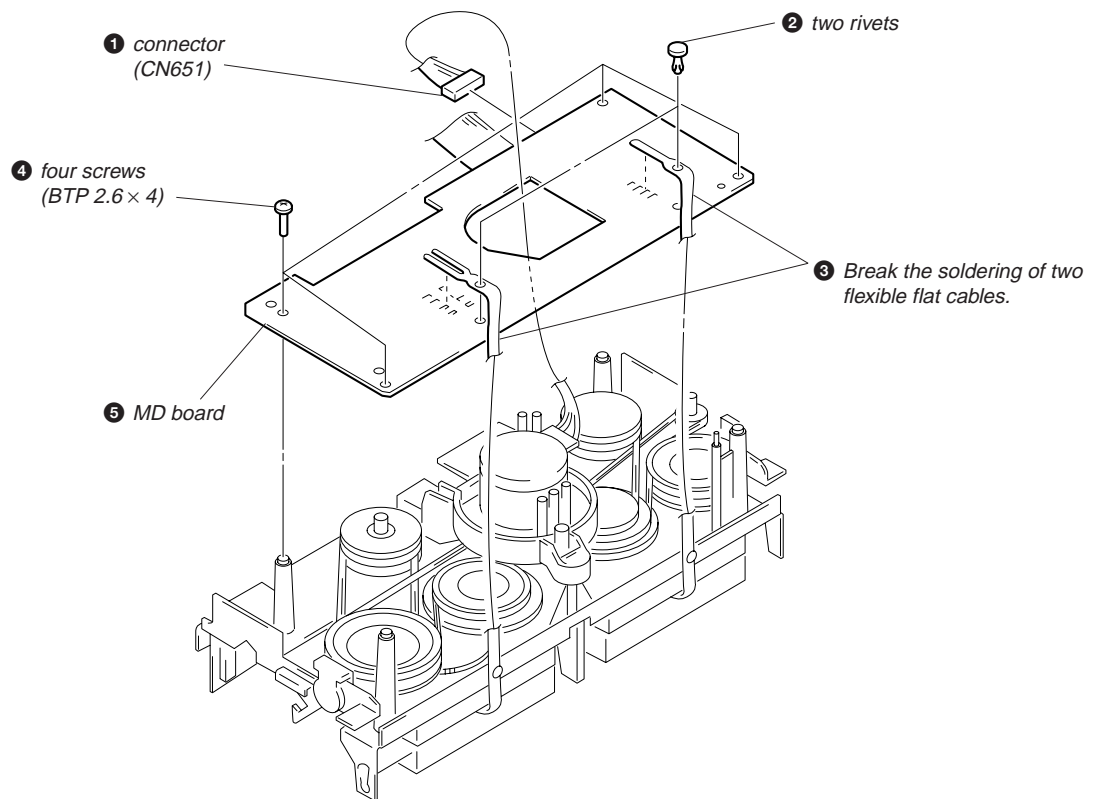
BD BOARD



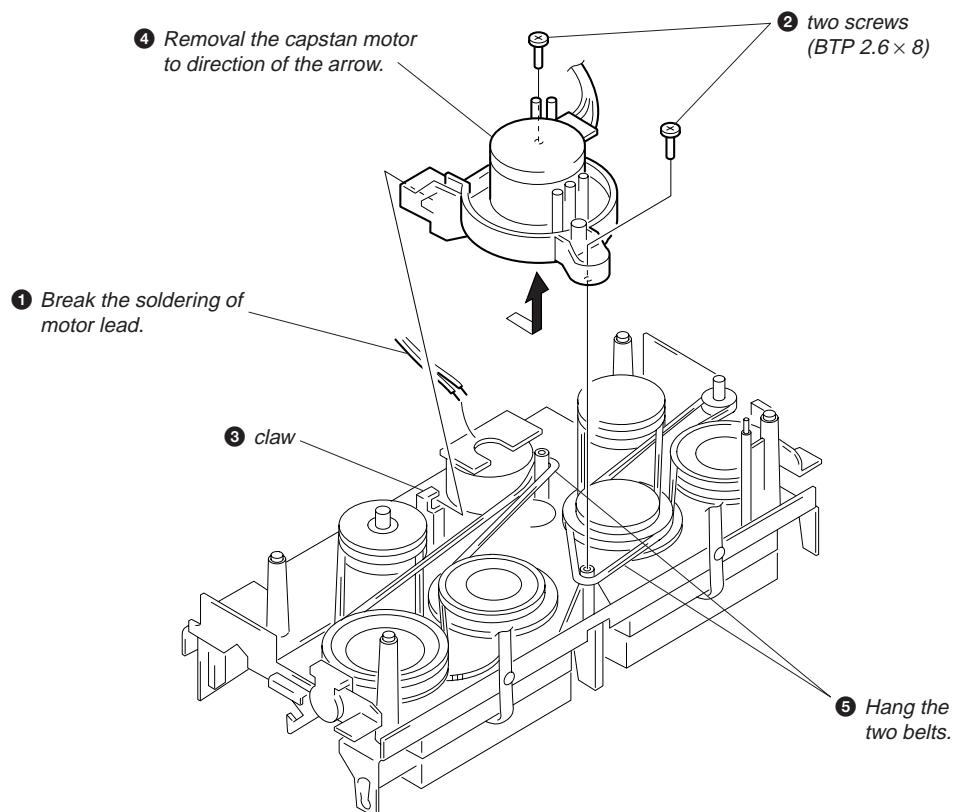
OPTICAL PICK-UP, SLED MOTOR



AUDIO BOARD



CAPSTAN MOTOR



SECTION 3

TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 1]** simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press **[POWER]** button to turn the set ON.
2. Press **[PLAY MODE]** button and **[POWER]** button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 2]** simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Select the function "CD".
2. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[FLASH]** simultaneously.
3. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
4. With the CD in stop status, press **[▶▶]** button in CD section to move the pickup to outside track, or **[◀◀]** button to inside track.
5. To exit from this mode, perform as follows:
 - 1) Move the pickup to the most inside track.
 - 2) Press three buttons in the same manner as step 2.

Note:

- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of FUNCTION Name]

- The FUNCTION name of external input terminal can be changed over to VIDEO or MD. With the FUNCTION selected to "MD", about 5dB mute is applied to the input gain.

Procedure:

1. Press **[POWER]** button to turn the set OFF.
2. Press **[POWER]** button together with **[FUNCTION]** button, and the power is turned on, the display of fluorescent indicator tube changes to "MD" or "VIDEO" instantaneously, and thus the FUNCTION is changed over.

[Change-over of AM Tuner Step between 9kHz and 10kHz]

- A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press **[POWER]** button to turn the set ON.
2. Select the function "TUNER", and press **[TUNER/BAND]** button to select the BAND "AM".
3. Press **[POWER]** button to turn the set OFF.
4. Press **[ENTER/NEXT]** and **[POWER]** buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9k STEP" or "AM 10k STEP", and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 3]** simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press **[DISC 2]** button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 V0 J0". Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.
 - "J" Value increases like 1, 2, 3 ... if rotating **[JOG]** knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
 - "V" Value increases like 1, 2, 3 ... if rotating **[VOLUME]** knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
The aging operation stops.
- If no error occurs:
The aging operation continues repeatedly.

1. Aging Mode in CD Section

1-1. Operating Method of Aging Mode

1. Set discs in DISC 1 and DISC 3 trays.
 2. Select the function "CD".
 3. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 5]** simultaneously.
 4. The aging mode is activated, if a roulette mark on the fluorescent indicator tube is blinking.
 5. In the aging mode, the aging is executed in a sequence given in "1-2. Operation during Aging Mode".
The aging continues unless an alarm occurred.
 6. To exit from the aging mode, press **[POWER]** button to turn the set OFF.
- If a button other than buttons In CD section is pressed during aging, the aging in the CD section is finished.
 - To execute aging to the tape deck section successively, press **[▷]** button in the deck A.
"AGING" is displayed on the fluorescent indicator tube. (For the aging in tape deck, see "2. Aging Mode in Tape Deck Section".

1-2. Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

1. The disc tray turns to select a disc. (For a disc selection sequence, see Section 1-3.)
2. TOC of disc is read.
3. The pickup accesses to the last track.
4. Steps 1 through 3 are repeated.

1-3. Disc Selection Sequence

- During the aging mode, discs are selected in the following sequence:

Disc 1 → Disc 3
↑ ↓
Disc 3 ← Disc 1

2. Aging Mode in Tape Deck Section

2-1. Operating Method of Aging Mode

1. Load a commercially available 10-minute tape into the decks A and B respectively.
(If a 10-minute tape is not available, another tape may be used but a cycle time will be longer.)
2. Select the function "TAPE".
3. Rewind tapes in advance by pressing **[◀◀]** button respectively on decks A and B.
4. Press three buttons **[GROOVE]**, **[ENTER/NEXT]**, and **[DISC 5]** simultaneously.
5. Press **[▷]** button on deck A. (This button triggers the aging mode.)
6. The aging mode is activated if "AGING A" is displayed on the fluorescent indicator tube.
7. In the aging mode, the aging is executed in a sequence given in "2-2. Operation during Aging Mode".
The aging continues unless an alarm occurred.

8. To exit from the aging mode, press **[POWER]** button to turn the set OFF.

2-2. Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

1. A tape on FWD side is played for one minute.
2. PAUSE STOP is made.
3. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
4. FF is executed up to the end of tape.
5. A tape is reversed, and the tape on REV side is played for one minute.
6. PAUSE STOP is made.
7. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
8. FF is executed up to the end of tape.
9. Steps 1 through 8 are executed for the other deck.
10. Steps 1 through 9 are repeated unless an alarm occurred.

2-3. Deck Selection Sequence

- During the aging mode, decks are selected in the following sequence:

Deck A (FWD) → Deck A (REV)
↑ ↓
Deck B (REV) ← Deck B (FWD)

SECTION 4 MECHANISM ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61g-cm (0.50 – 0.84 oz-inch)
Forward Back Tension	CQ-102C	2 to 6g-cm (0.026 – 0.082 oz-inch)
Reverse	CQ-102RC	36 to 61g-cm (0.50 – 0.84 oz-inch)
Reverse Back Tension	CQ-102RC	2 to 6g-cm (0.026 – 0.082 oz-inch)
FF, REW	CQ-201B	61 to 143g-cm (0.85 – 1.98 oz-inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 100g (3.52 oz)
Reverse	CQ-403R	more than 100g (3.52 oz)

SECTION 5 ELECTRICAL ADJUSTMENTS

DECK SECTION

0dB=0.775V

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-ch.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to test mode. (Press key switch same time **GROOVE** **ENTER/NEXT** and **DISC 4** button.)

• Test Tape

Tape	Signal	Used for
P-4-A100	10kHz, -10 dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-L300	315Hz 0dB	Level Adjustment

Record/Playback Head Azimuth Adjustment

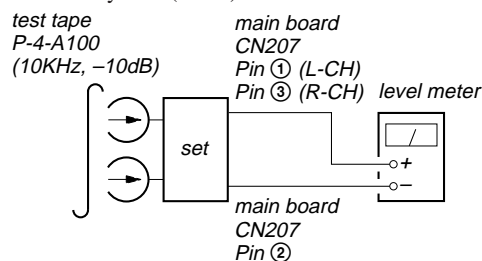
DECK A

DECK B

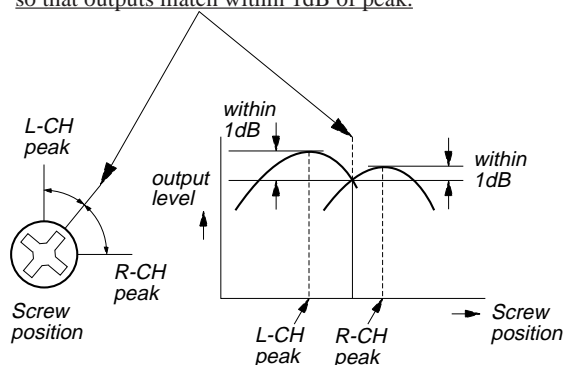
Note: Perform this adjustments for both decks

Procedure:

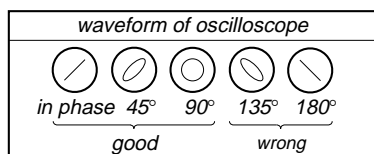
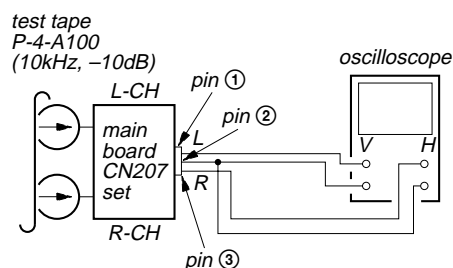
1. Mode: Playback (FWD)



- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

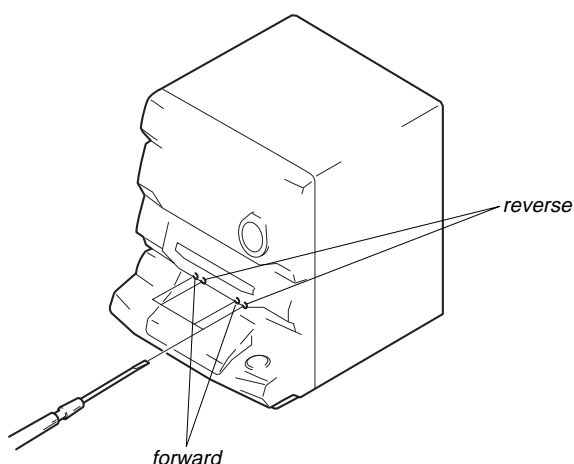


- Mode: Playback (FWD)



- Repeat steps 1 to 3 in playback (REV) mode.
- After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Record/Playback Head (Deck A and B) and main board.



Tape Speed Adjustment **DECK A**

Note: Start the Tape Speed adjustment as below after setting to the test mode.

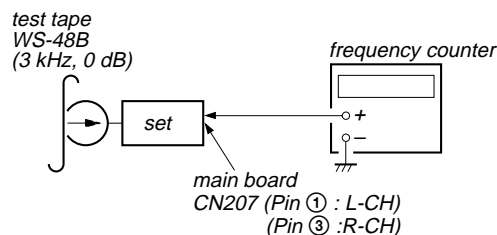
In the test mode, the tape speed is high during pressing the **H. SPEED DUBB** button.

Procedure:

- Turn the power switch on.
- Press the **GROOVE** button, **ENTER/NEXT** button and **DISC 4** button simultaneously.

To exit from the test mode, press the **POWER** button.

Mode: Playback (FWD)



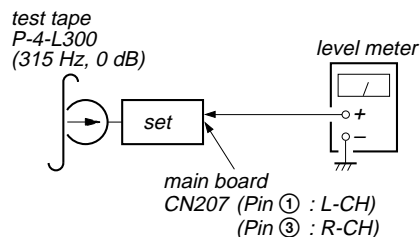
- Insert the WS-48B into the deck A and the blank tape into the deck B.
- Press the **REC** button and **▶** button on the deck B. Then the deck B is at recording mode.
- Set the deck A to playback mode.
- Keep pressing the **H. SPEED DUBB** button in playback mode. Then at HIGH speed mode.
- Adjust RV652 on the AUDIO board so that frequency counter reads $6,000 \pm 60$ Hz.
- Take off the **H. SPEED DUBB** button. Then at NORMAL speed mode.
- Adjust RV651 on the AUDIO board so that frequency counter reads $3,000 \pm \frac{30}{10}$ Hz.
- Frequency difference between deck A and deck B the beginning of the tape should be within $\pm 1.5\%$.

Adjustment Location: AUDIO board

Playback level Adjustment **DECK A** **DECK B**

Procedure:

Mode: Playback (FWD)



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

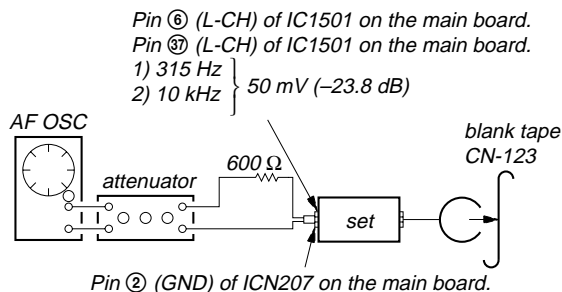
CN207 PB level: 301.5 to 338.3 mV (-8.2 to -7.2 dB) level difference between the channels: within ± 0.5 dB

Adjustment Location: AUDIO and main boards

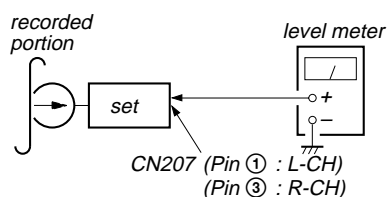
Record bias Current Adjustment DECK B

Procedure:

1. Mode: record



2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

If these levels do not adjustable limits, adjustment the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1 and 2.

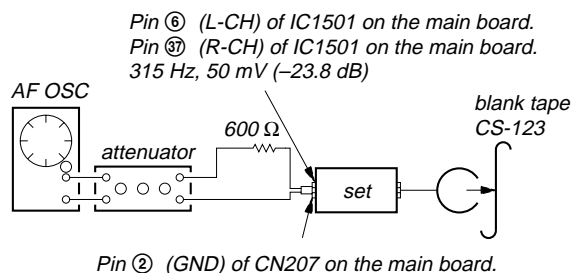
Adjustable limits: Playback output of 315 Hz to playback output of 10kHz: 0 ± 0.5 dB

Adjustment Location: AUDIO and main boards

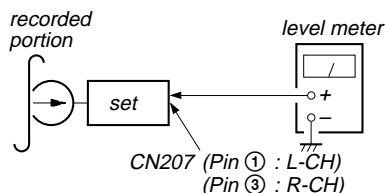
Record Level Adjustment DECK B

Procedure:

1. Mode: record



2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

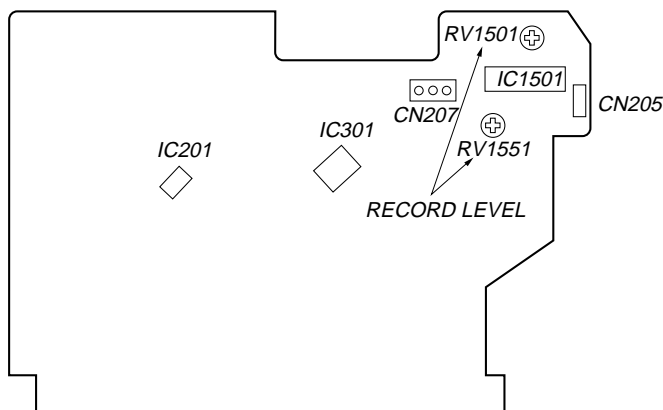
If these levels do not adjustable limits, adjustment the RV1501 (L-CH) and RV1551 (R-CH) on the main board to repeat steps 1 and 2.

Adjustable limits:

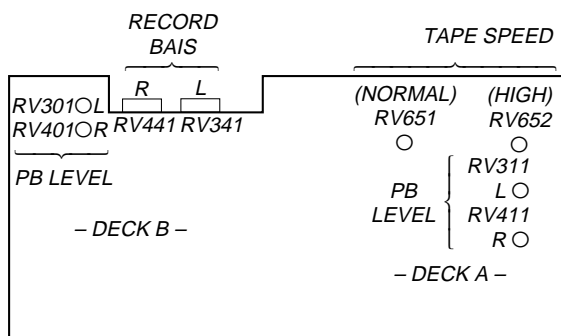
CN207 PB level: 47.3 to 53.1 mV (−24.3 to −23.3 dB)

Adjustment Location: main board

[MAIN BOARD] (Component Side)



[AUDIO BOARD] (Conductor Side)



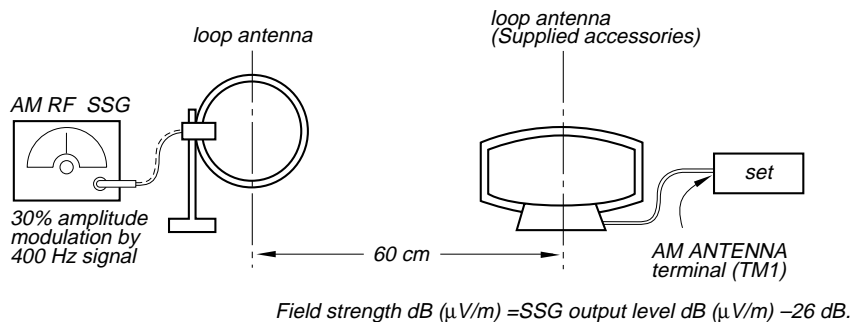
TUNER SECTION

0dB=1μV

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

AM Section Adjustment

Setting:



AM Tuned Level Adjustment

Band: AM or MW

Procedure:

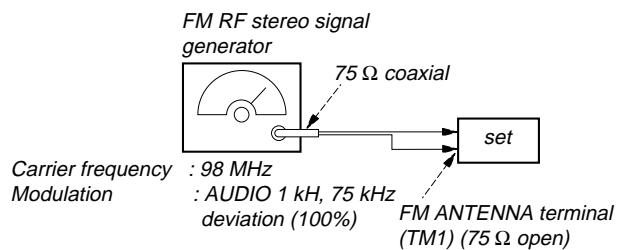
1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 1,050 kHz (US, CND models), 999 kHz (other models).
3. Adjust RV41 (AEP, UK models), RV42 (other models) to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location : TCB board

FM Section Adjustment

Note: This adjustment should be performed after the AM Tuned Level Adjustment due to the same adjustment element.

Setting:



FM Tuned Level Adjustment

Band: FM

Procedure:

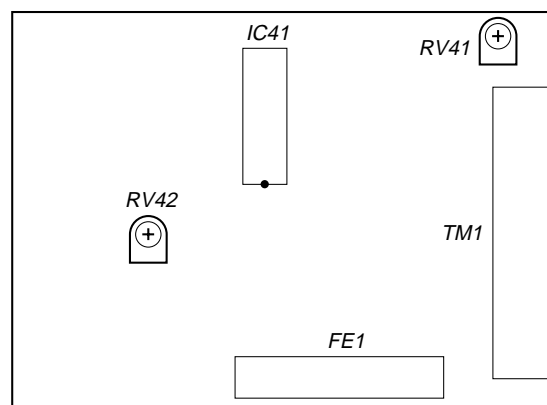
1. Supply a 25dBμ 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. If the TUNED indicator does not light, adjust RV42 (AEP, UK models), RV41 (other models) to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: TCB board

Adjustment Location:

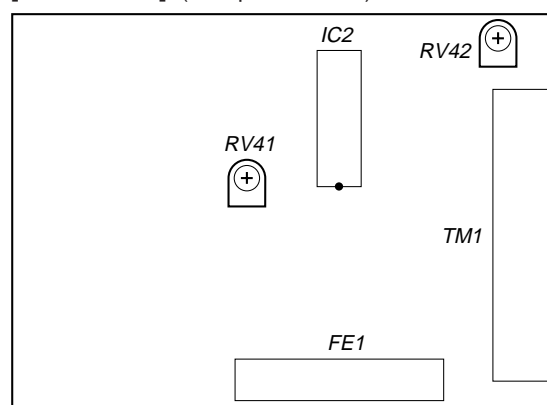
AEP, UK model

[TCB BOARD] (Component Side)



Other model

[TCB BOARD] (Component Side)



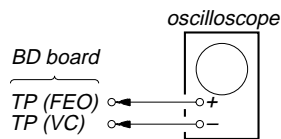
- Abbreviation
CND: Canadian model

CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

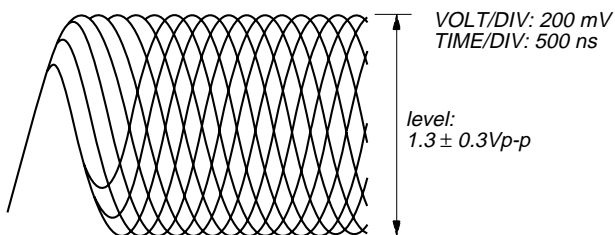
Focus Bias check



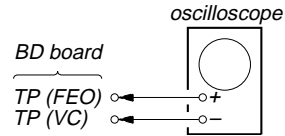
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that the shape “◇” can be clearly distinguished at the center of the waveform and check the RF signal level.

• RF signal



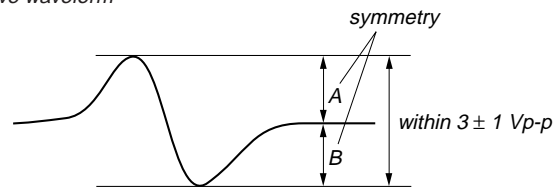
S Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FEO) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1 Vp-p.

S-curve waveform

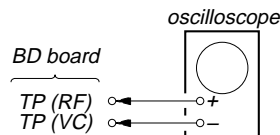


6. After check, remove the lead wire connected in step 2.

Note:

- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



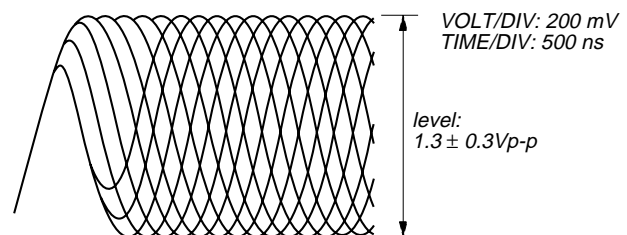
Procedure:

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

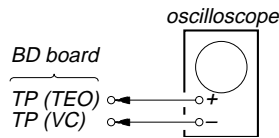
Note:

Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

• RF signal



**E-F Balance (1 Track Jump) check
(Without remote commander)**



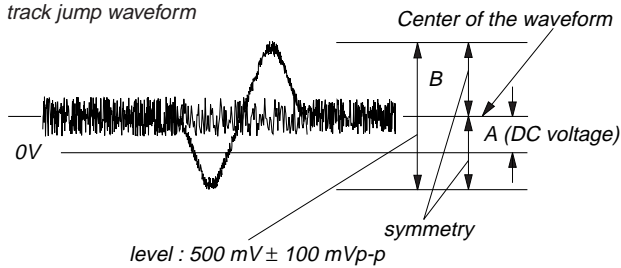
Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the “■” (Pause)” button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.

Confirm the following:

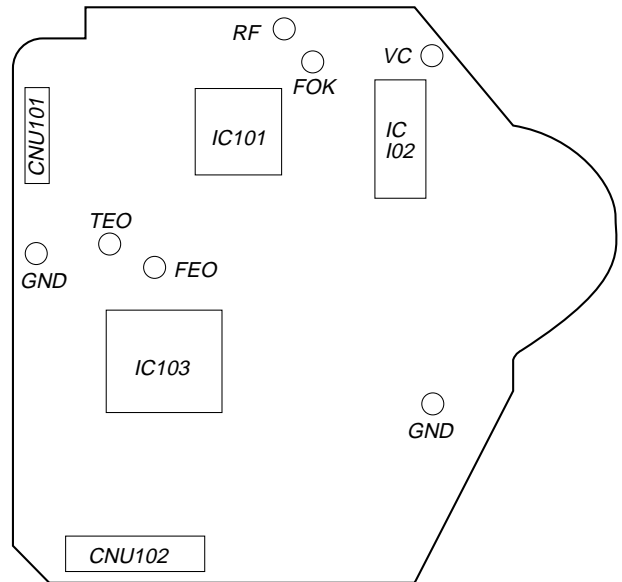
$$\frac{A - B}{2 (A + B)} \times 100 = \pm 7 (\%)$$

1 track jump waveform



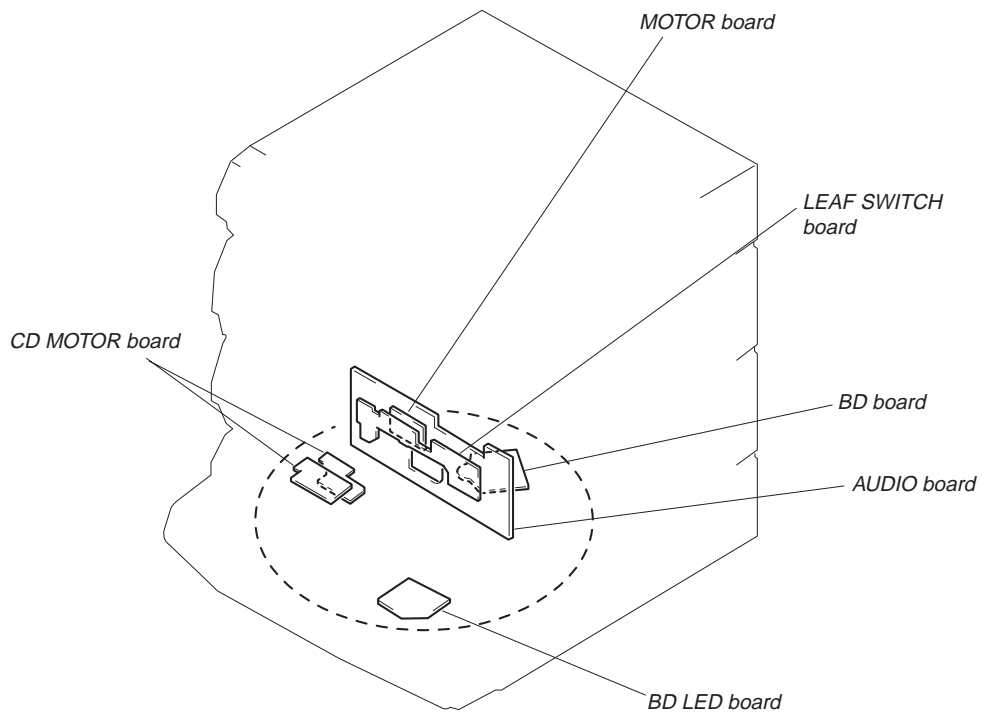
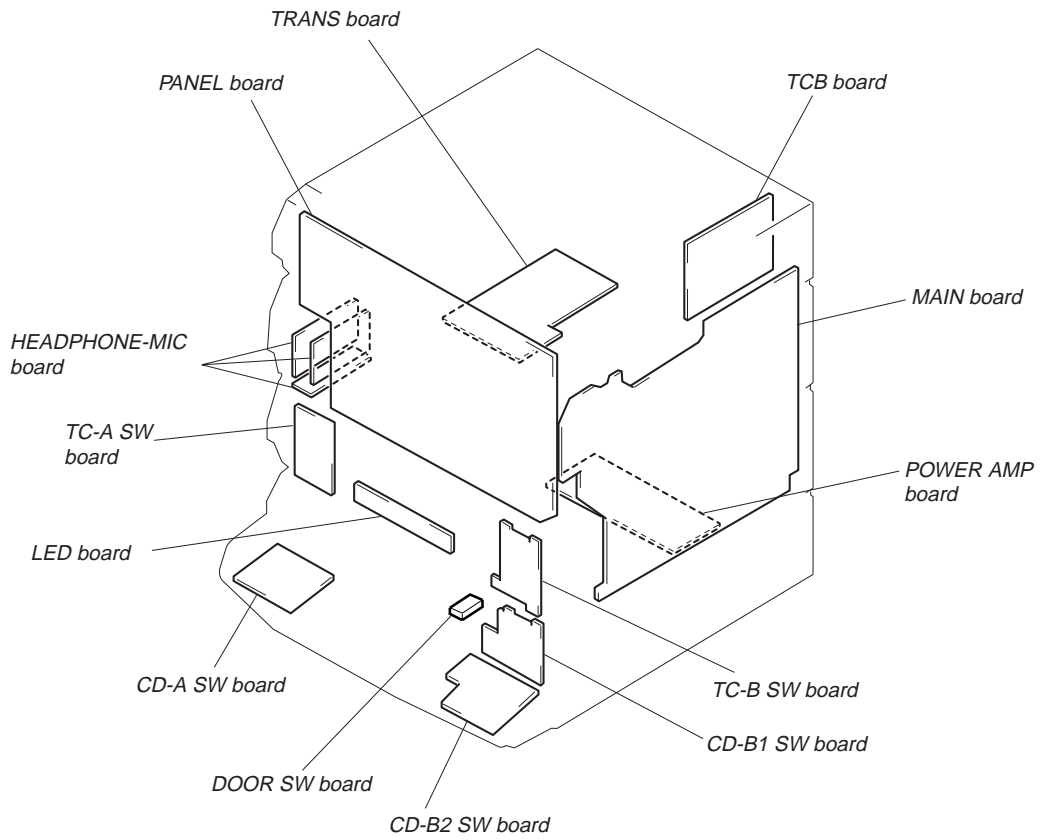
Adjustment Location:

[BD BOARD] (Conductor Side)



SECTION 6 DIAGRAMS

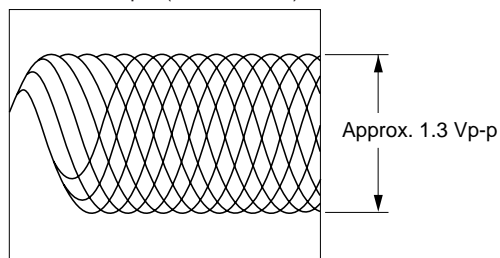
• Circuit Board Location



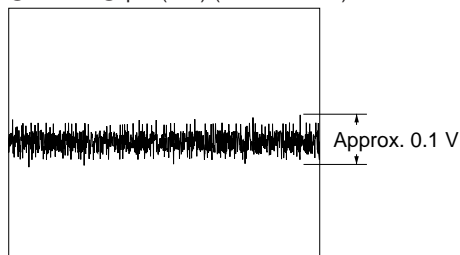
• Waveforms

— BD Section—

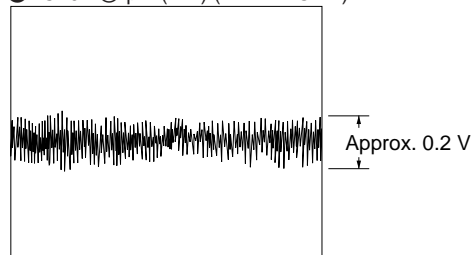
① IC101 ③③ pin (PLAY MODE)



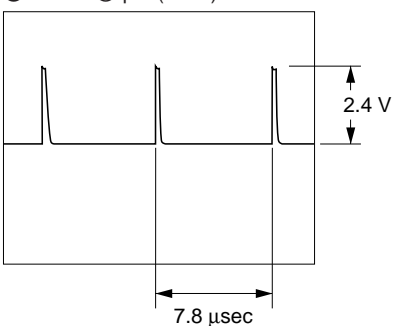
② IC101 ② pin (FEI) (PLAY MODE)



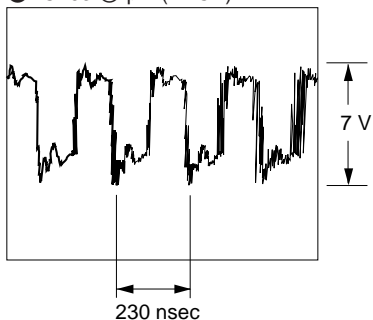
③ IC101 ④⑦ pin (TEI) (PLAY MODE)



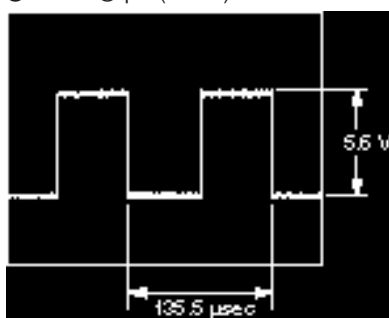
④ IC103 ②⑦ pin (MDP)



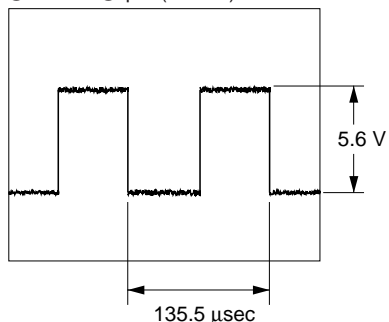
⑤ IC103 ⑥⑩ pin (XPCK)



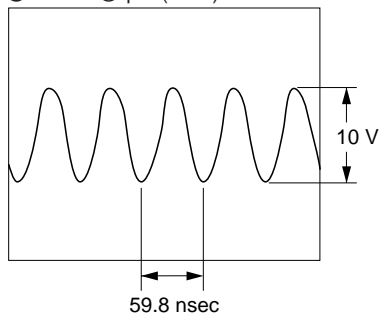
⑥ IC103 ⑥② pin (RFCK)



⑦ IC103 ⑦④ pin (WFCK)

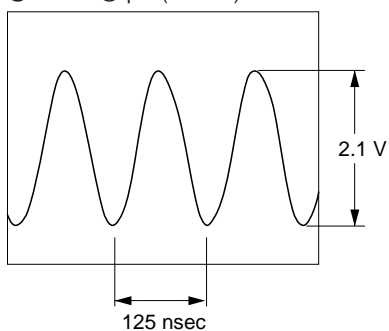


⑧ IC103 ⑧⑨ pin (XTAI)



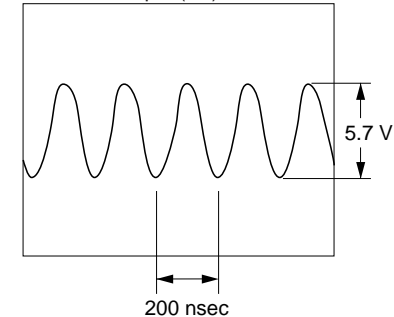
— PANEL Section—

⑨ IC601 ⑧ pin (X-OUT)

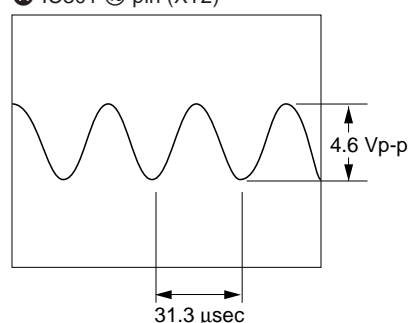


— MAIN Section—

⑩ IC301 ⑩ pin (X2)

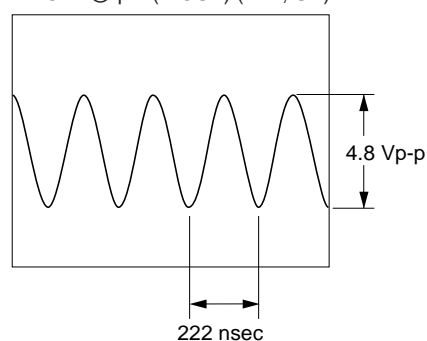


⑪ IC301 ⑩ pin (XT2)

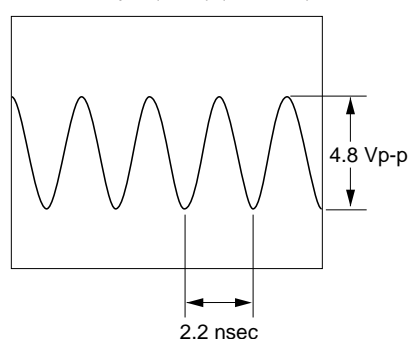


— TUNER Section—

⑫ IC1 ②④ pin (XOUT) (EXCEPT AEP, UK)
IC21 ②④ pin (X OUT) (AEP, UK)

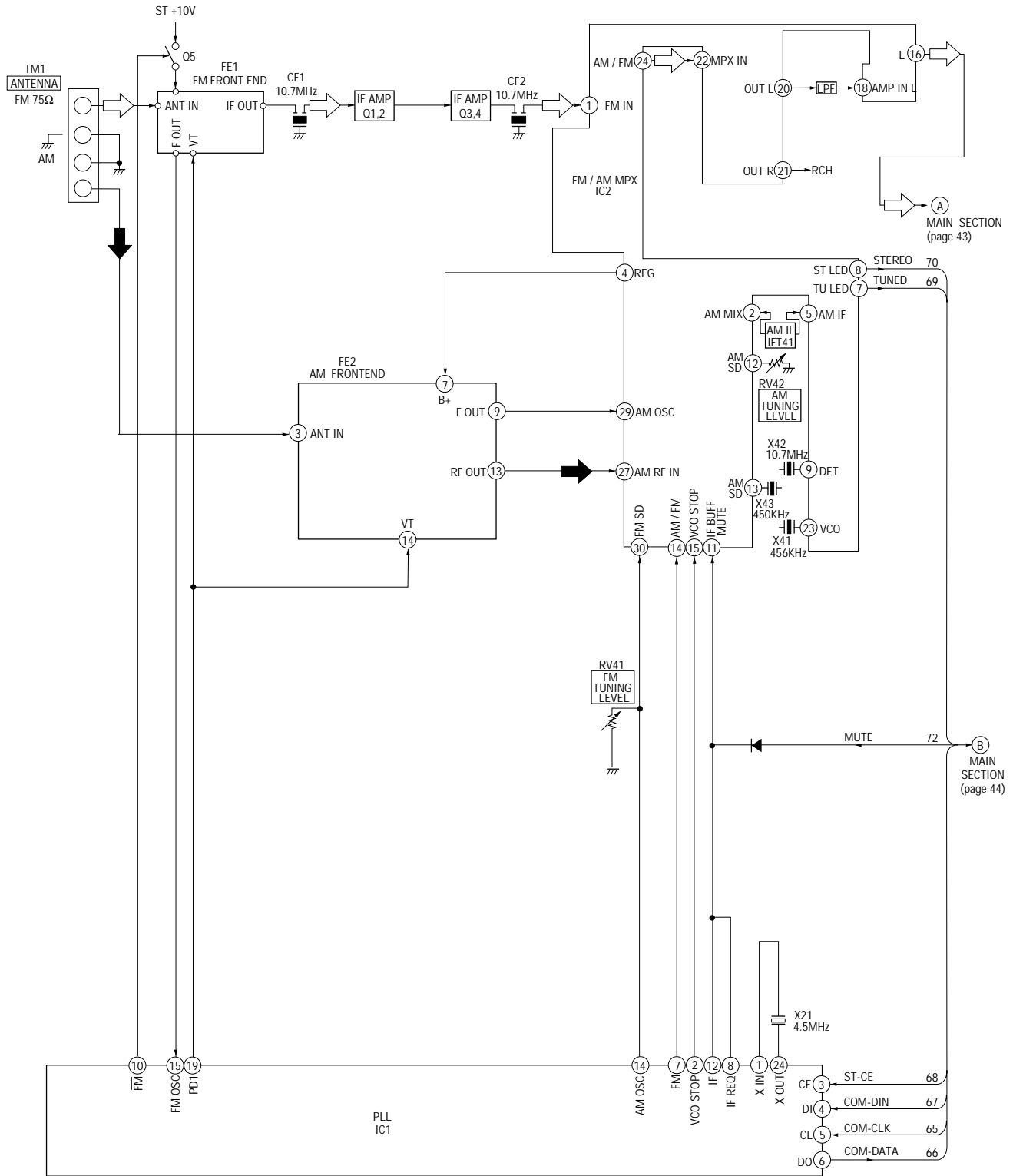


⑬ IC2 ②③ pin (VCO) (EXCEPT AEP, UK)
IC41 ②③ pin (VCO) (AEP, UK)

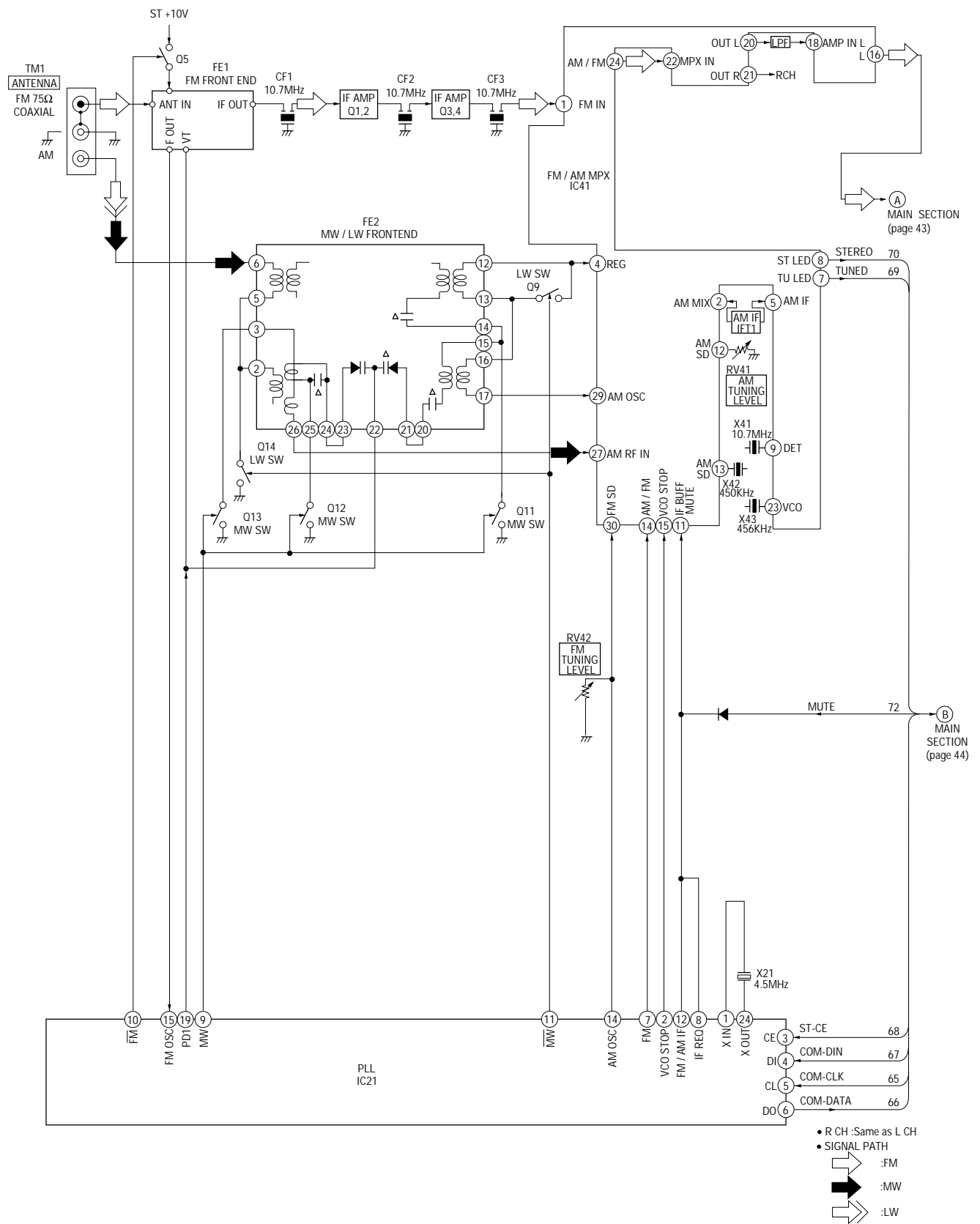


6-1. BLOCK DIAGRAMS

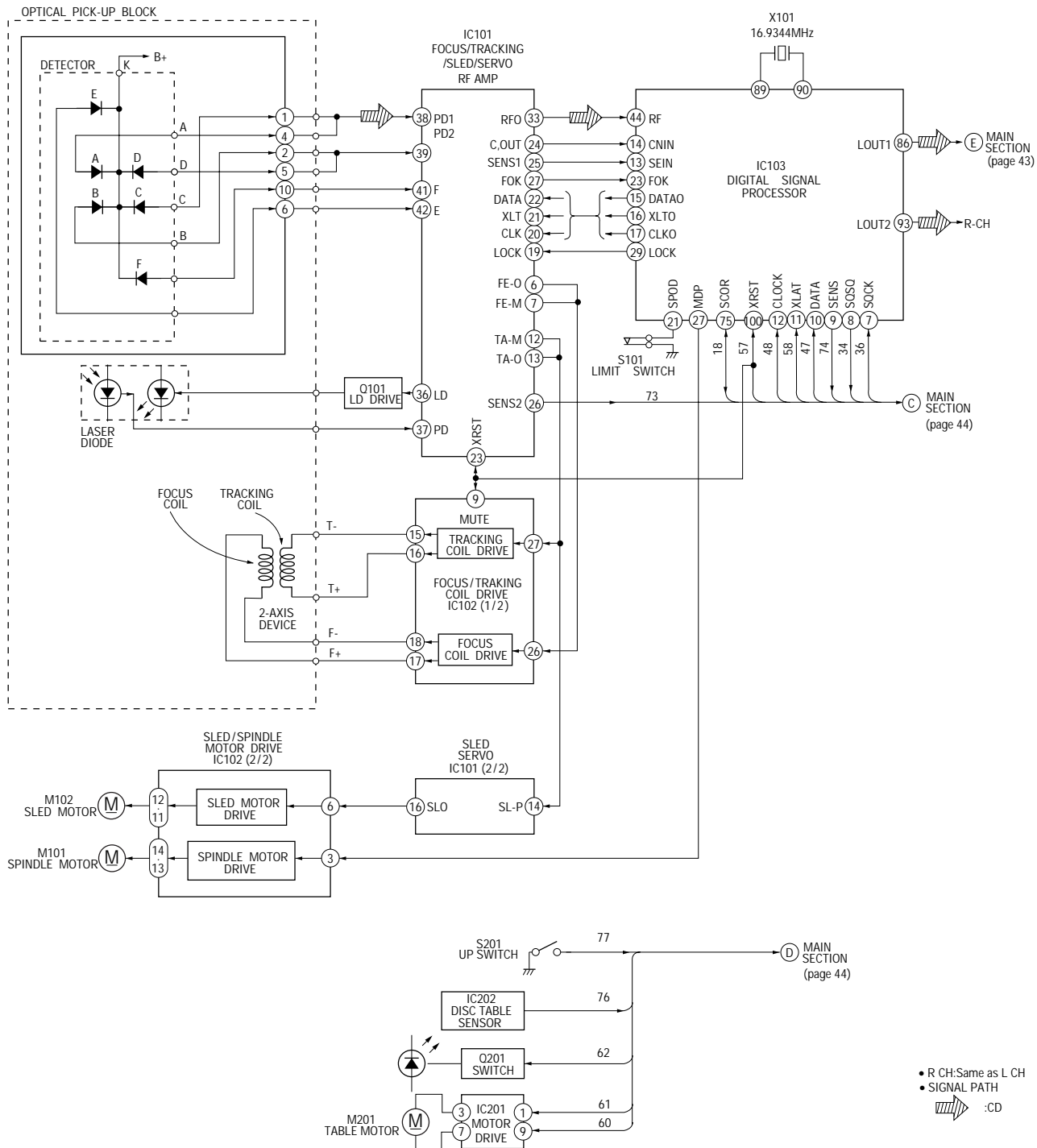
- TUNER SECTION - (US, CND, E, AR, MX, AUS, PX MODELS)



– TUNER SECTION – (AEP, UK MODELS)

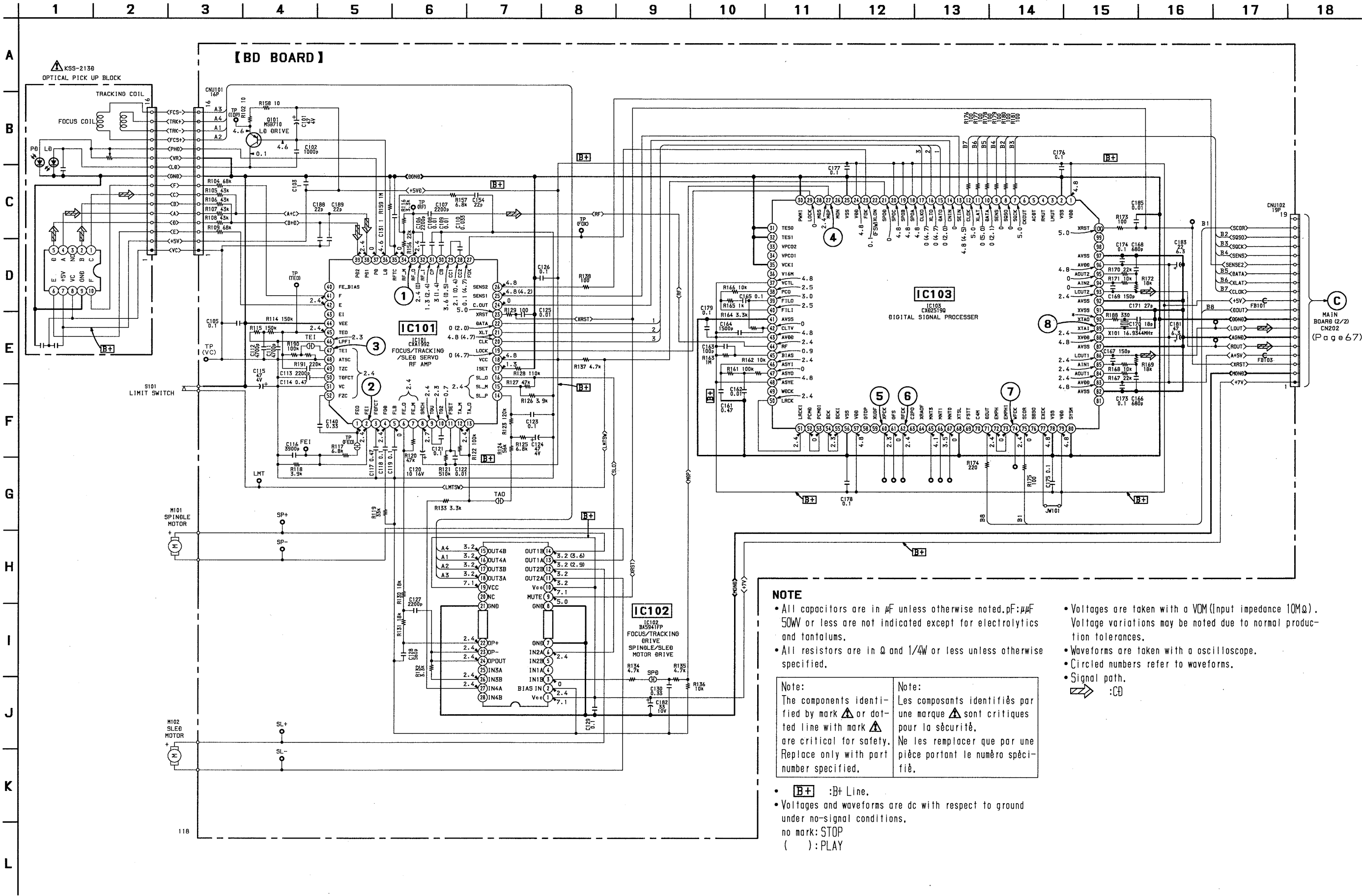


– CD SECTION –





6-2. SCHEMATIC DIAGRAM -BD Section -
• See page 39 for Waveforms. • See page 85 for IC Block Diagrams.



	1	2	3	4	5	6	7	8	9	10	11
--	---	---	---	---	---	---	---	---	---	----	----

A

B

C

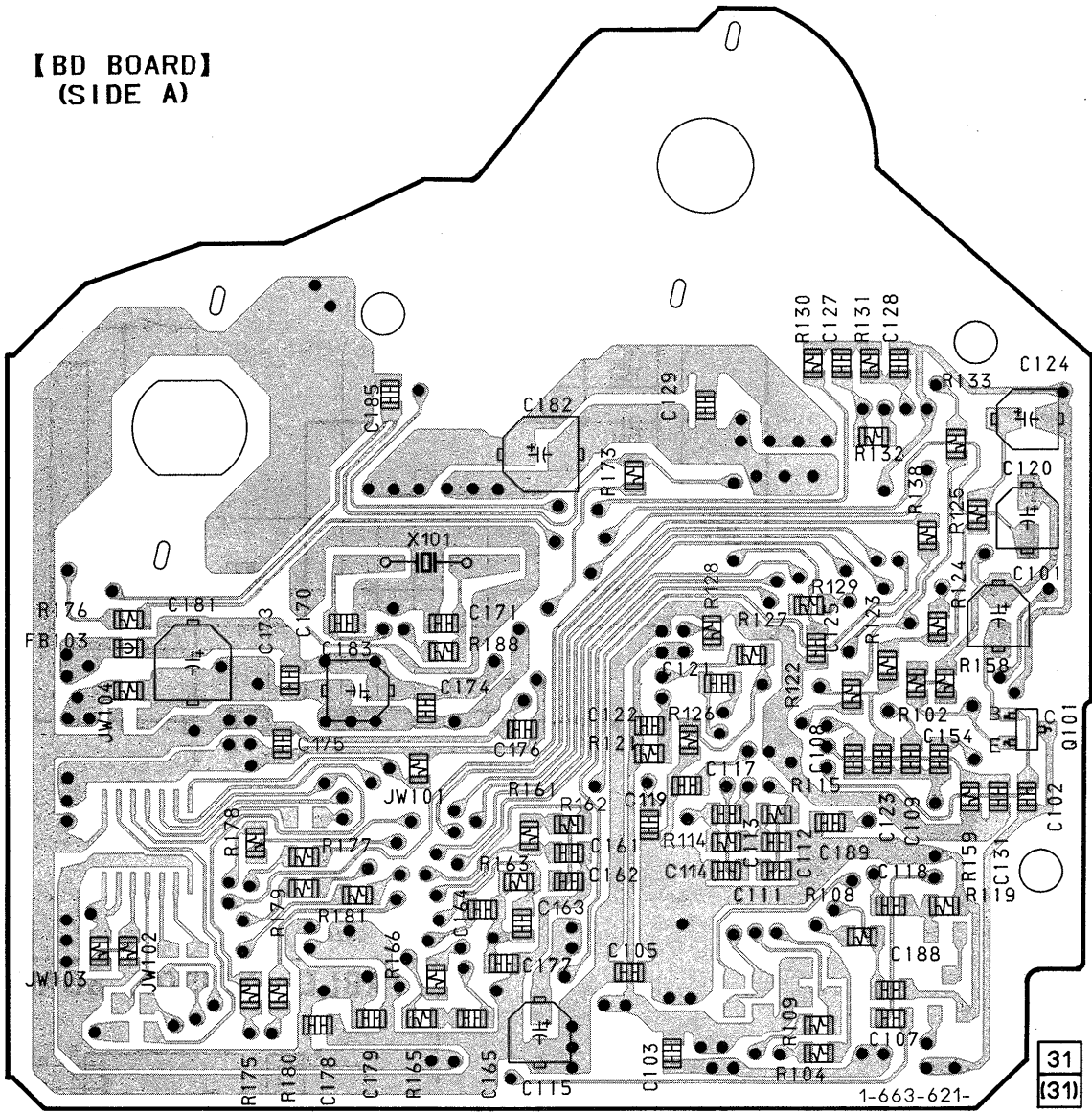
D

E

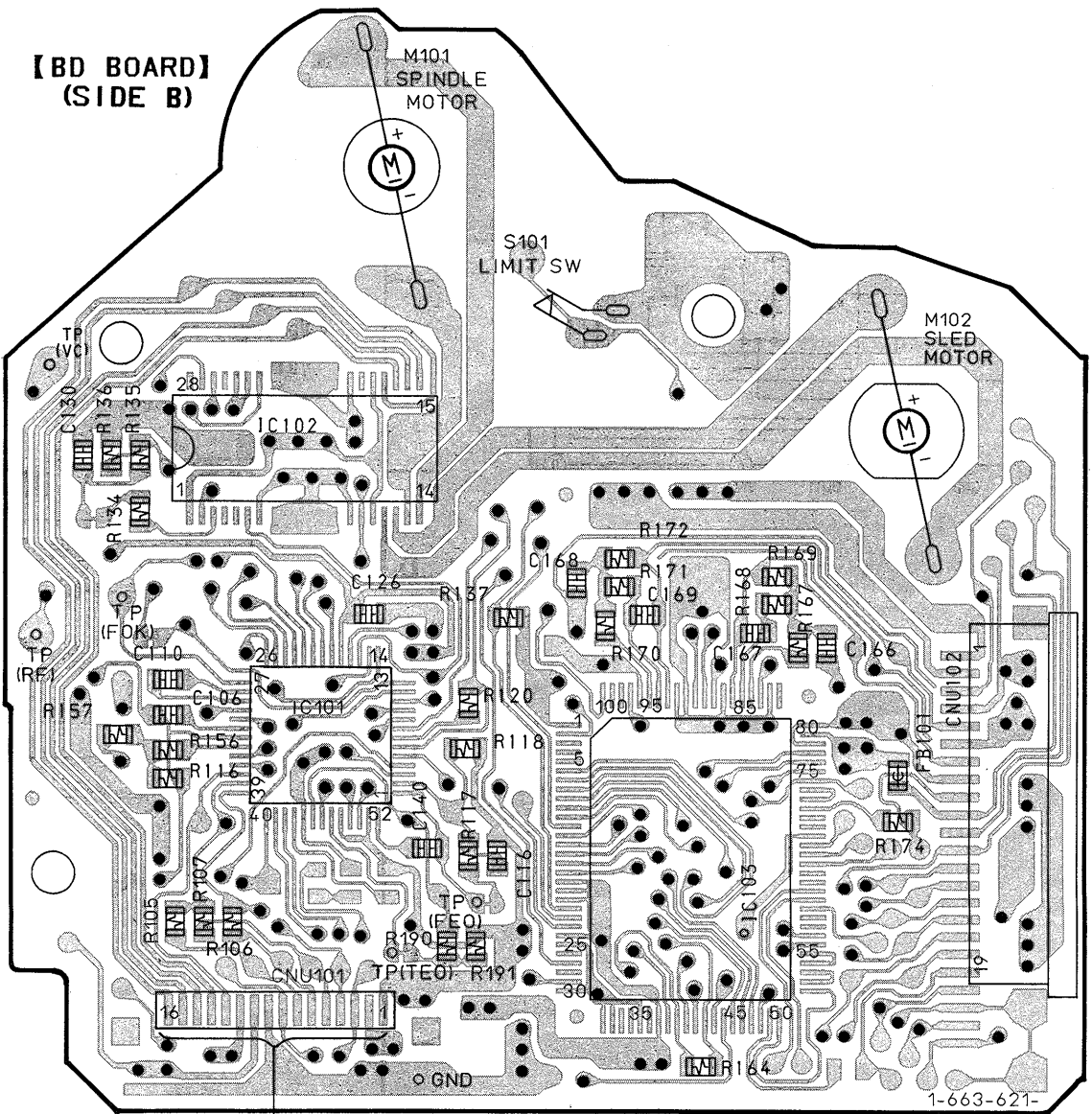
F

G

【BD BOARD】
(SIDE A)



【BD BOARD】
(SIDE B)



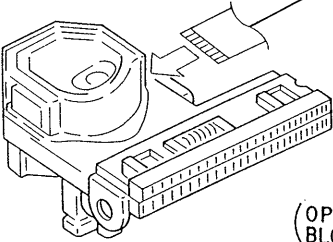
MAIN
BOARD
CN202

(Page 71)

• Semiconductor
Location

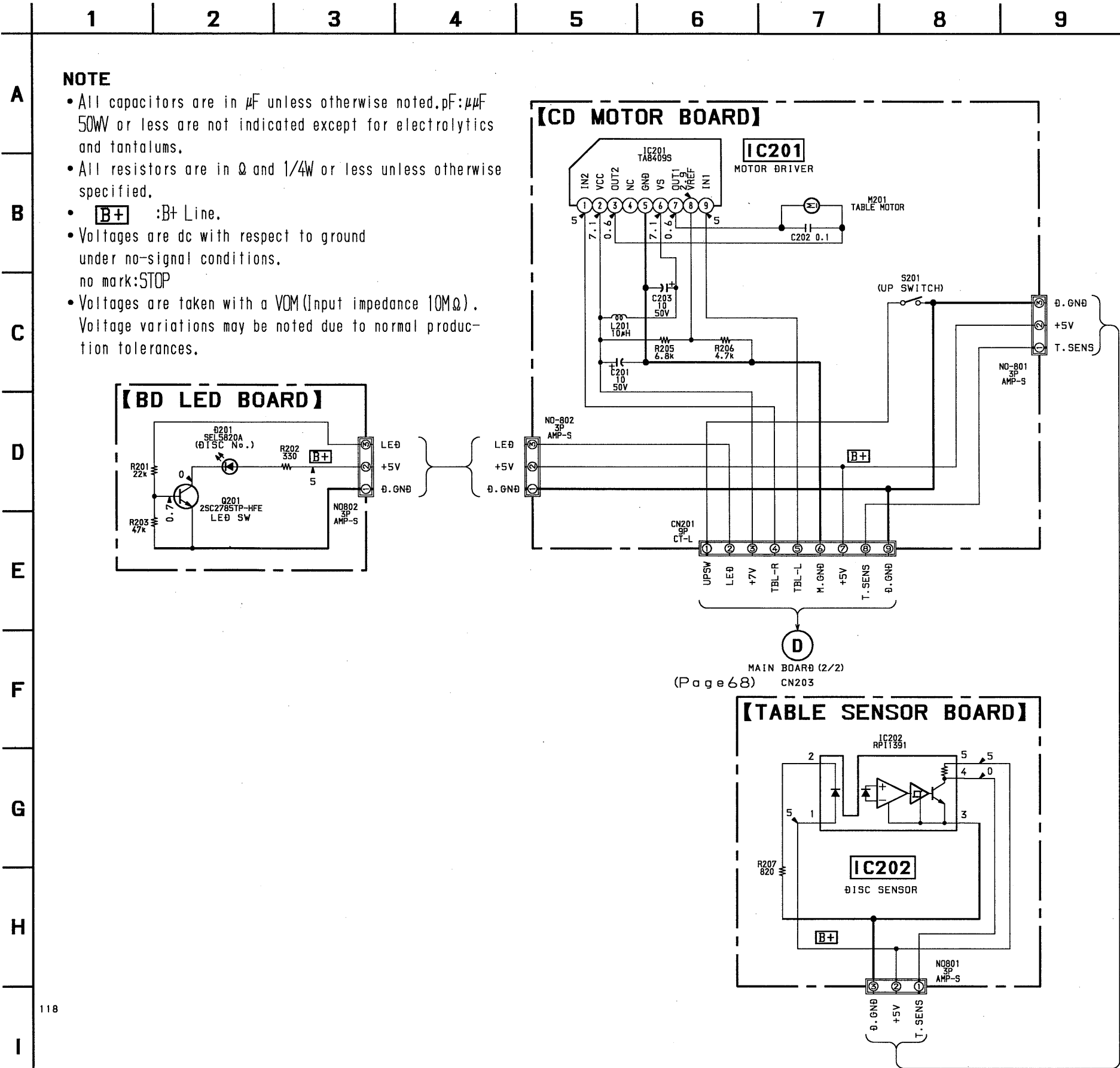
Ref. No.	Location
IC101	D-7
IC102	C-7
IC103	E-9
Q101	D-5

Note:
• ○ : parts extracted from the component side.
• ● : Through hole.
• ■ : Pattern from the side which enables seeing.



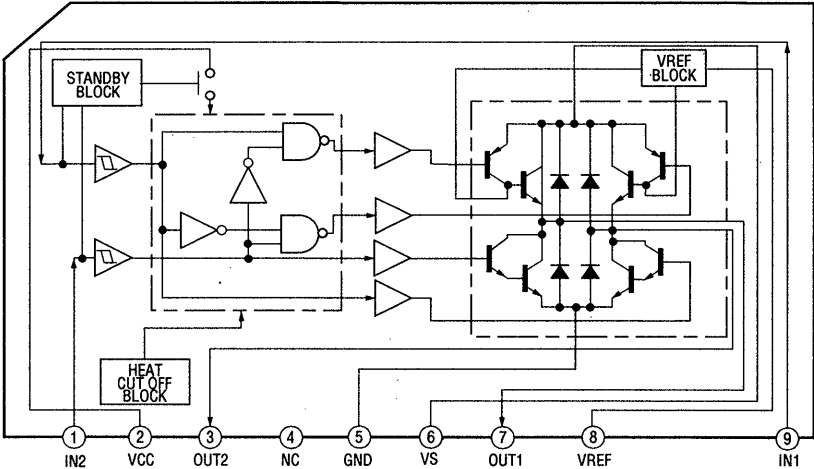
(OPTICAL PICK-UP)
(BLOCK KSS-213D)

6-4. SCHEMATIC DIAGRAM – CD MOTOR Section –

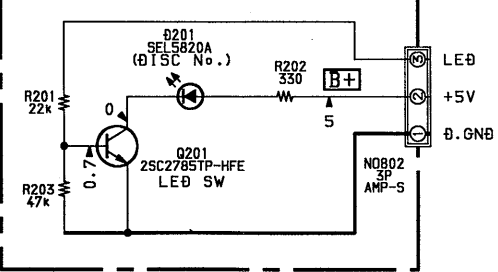


• IC Block Diagram

IC201 TA8409S

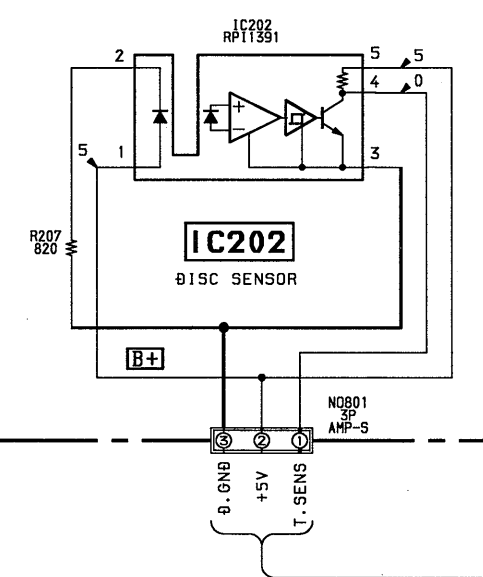


[BD LED BOARD]

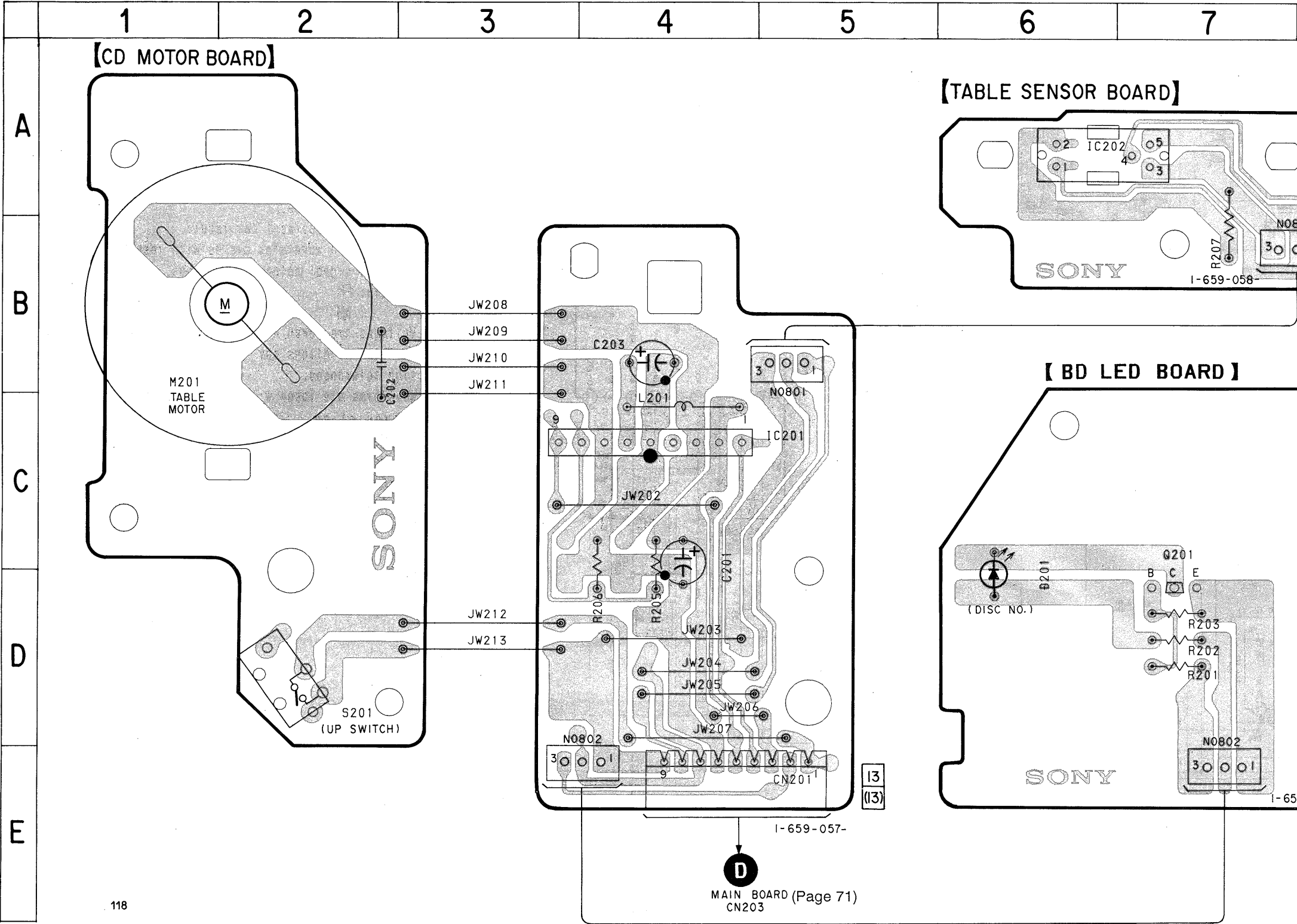


MAIN BOARD (2/2)
(Page 68) CN203

[TABLE SENSOR BOARD]



6-5. PRINTED WIRING BOARDS – CD MOTOR Section – • See page 38 for Circuit Boards Location.



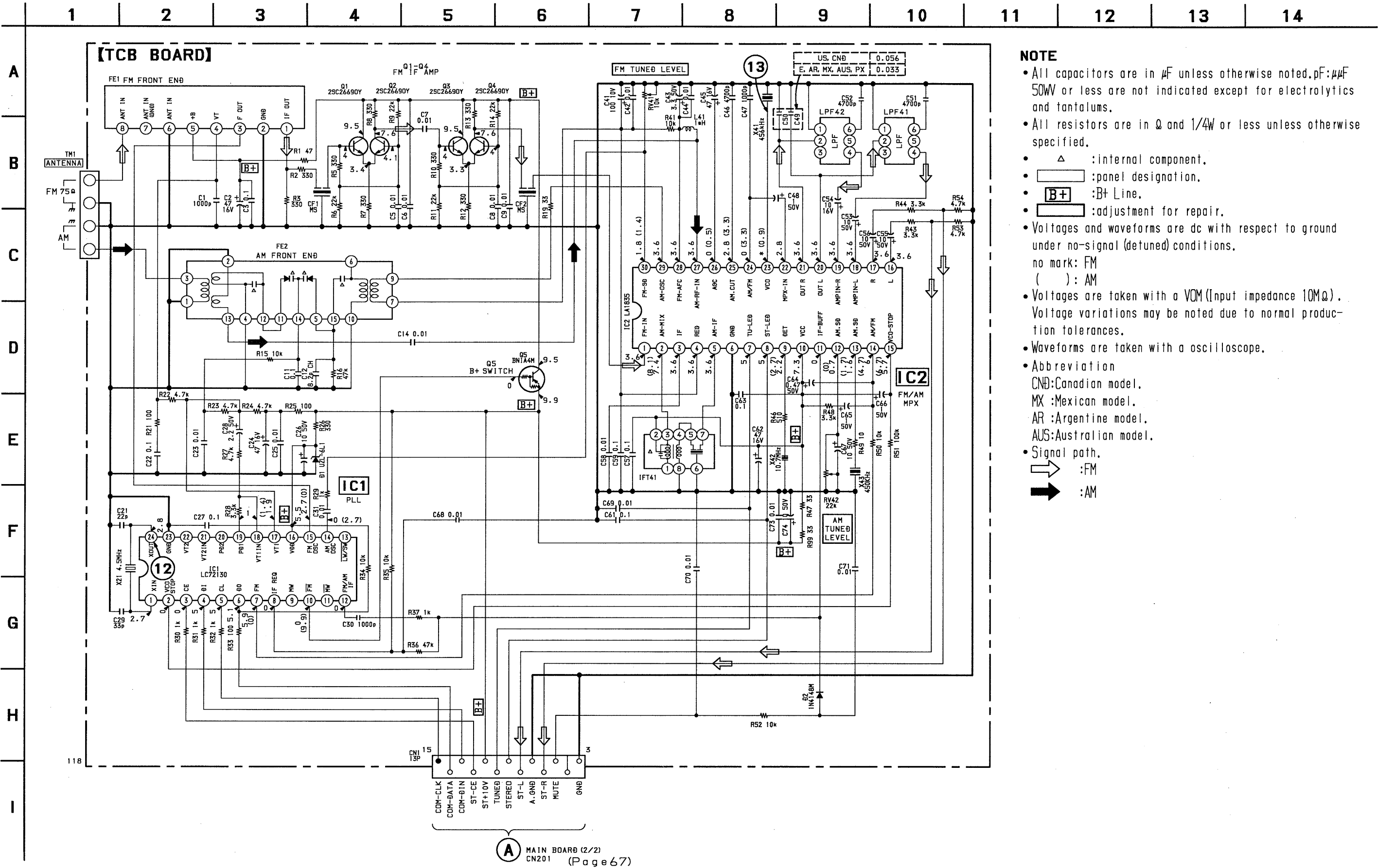
• Semiconductor
Location

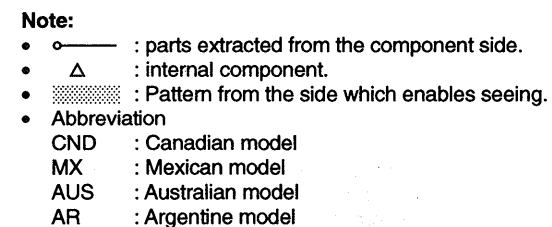
Ref. No.	Location
IC201	C-4
IC202	A-6

Note:

- — : parts extracted from the component side.
- [Pattern] : Pattern from the side which enables seeing.

6-6. SCHEMATIC DIAGRAM – TUNER Section – (US, CND, E, AR, MX, AUS, PX MODEL)
• See page 39 for Waveforms. • See page 87 for IC Block Diagrams.





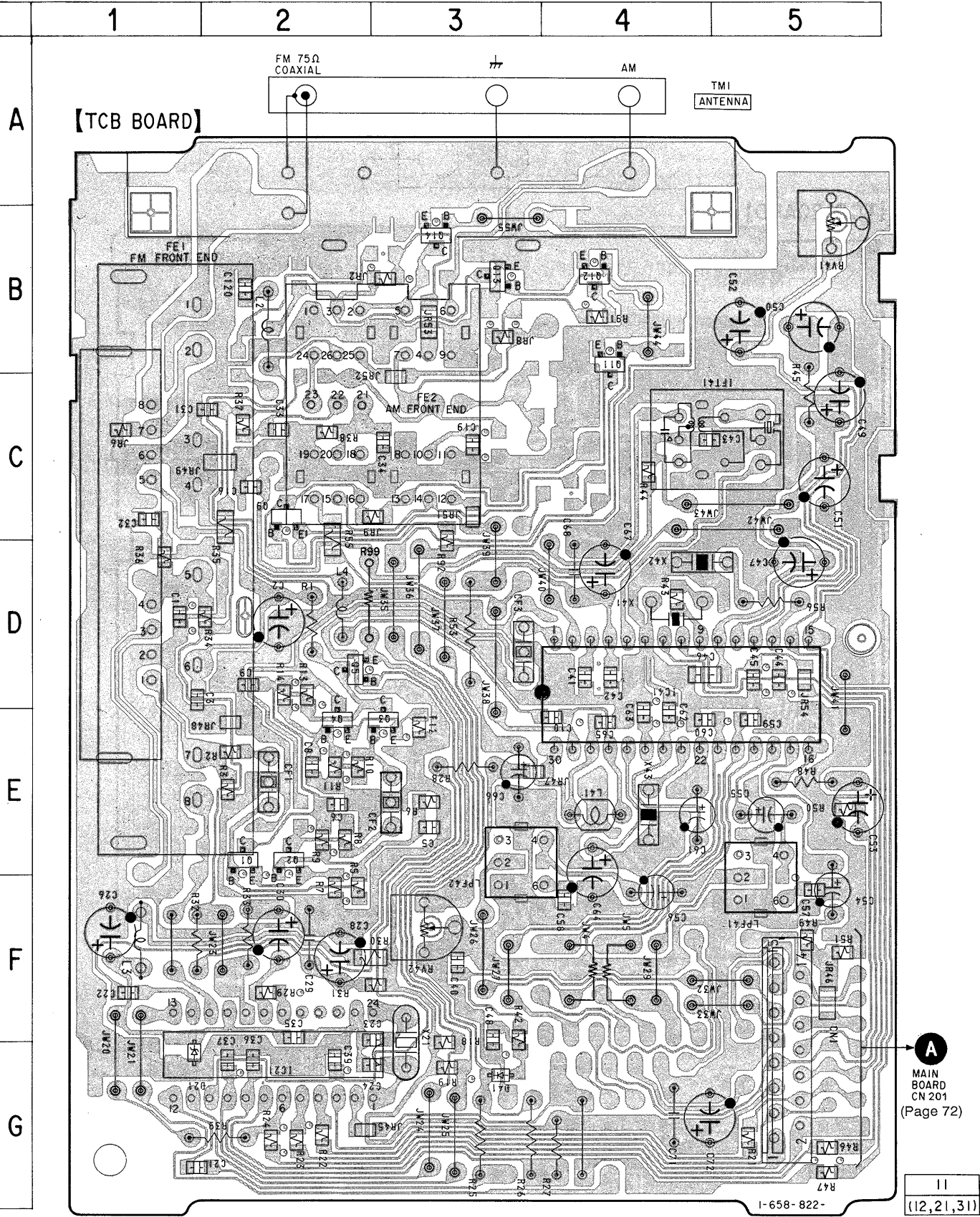
6-8. PRINTED WIRING BOARD – TUNER Section – (AEP, UK MODEL)
• See page 38 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location
D21	G-1
D41	G-3
IC21	G-2
IC41	D-4
Q1	E-2
Q2	E-2
Q3	E-3
Q4	E-2
Q5	D-2
Q9	C-2
Q11	B-4
Q12	B-4
Q13	B-3
Q14	B-3

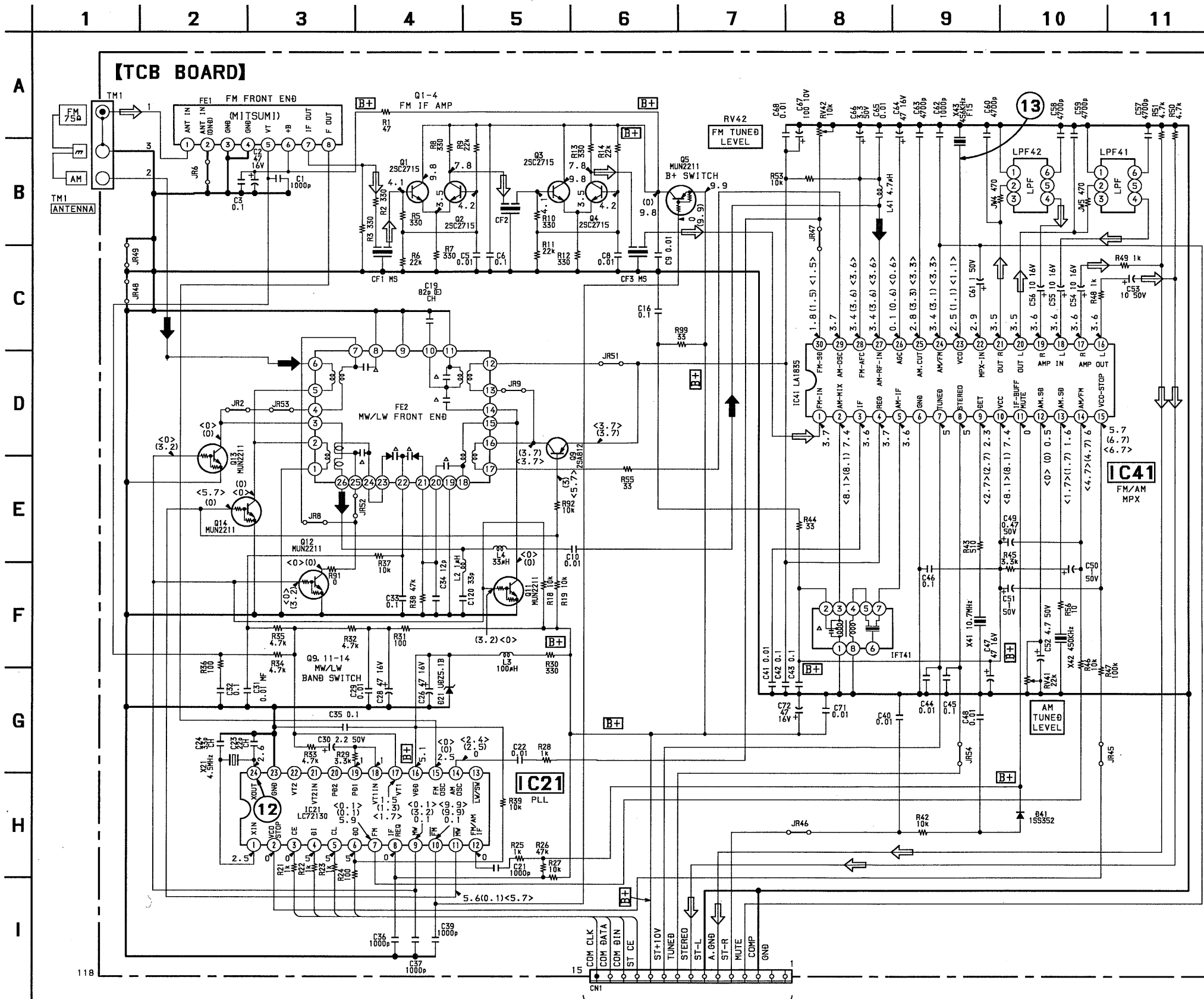
Note:

- : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.



6-9. SCHEMATIC DIAGRAM – TUNER Section – (AEP, UK MODEL)

• See page 39 for Waveforms. • See page 87 for IC Block Diagrams.



NOTE

- All capacitors are in μF unless otherwise noted. pF : μF 50W 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.• : panel designation.• B+ : B+ Line.• : adjustment for repair.

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark: FM

() : MW

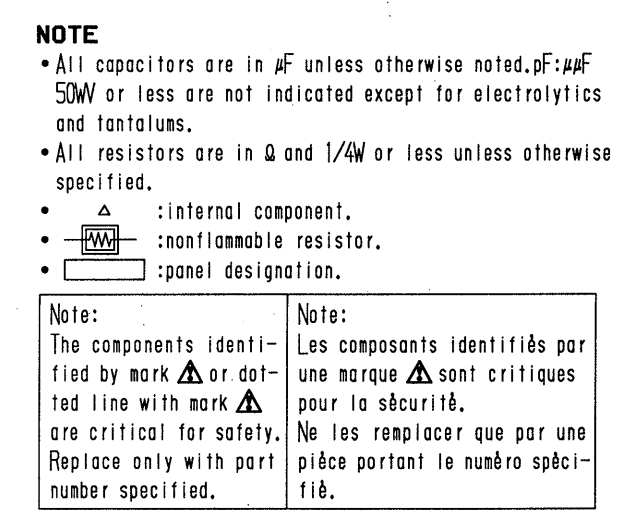
< > : LW

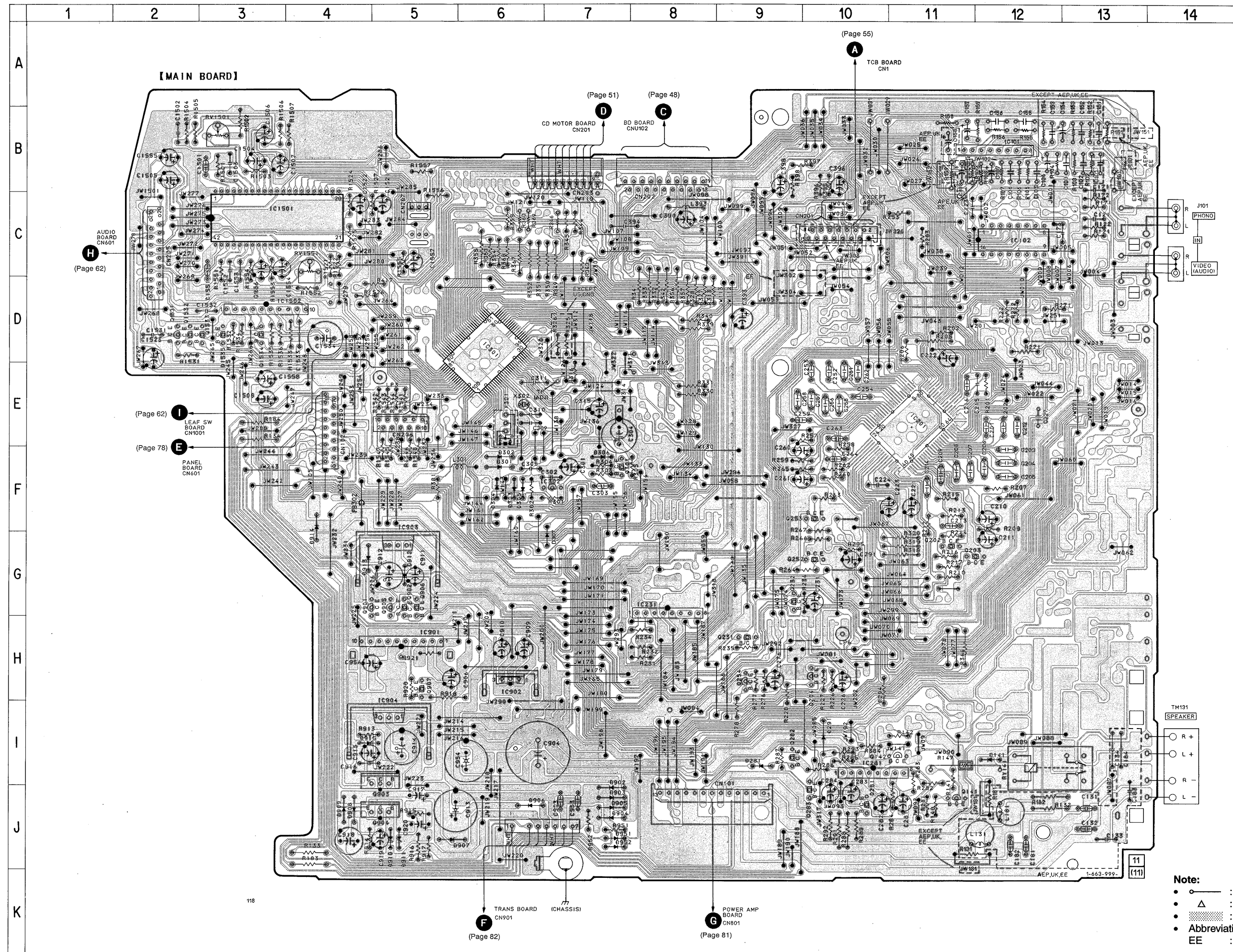
• Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

• Waveforms are taken with a oscilloscope.

• Signal path.

→ : FM→ : AM

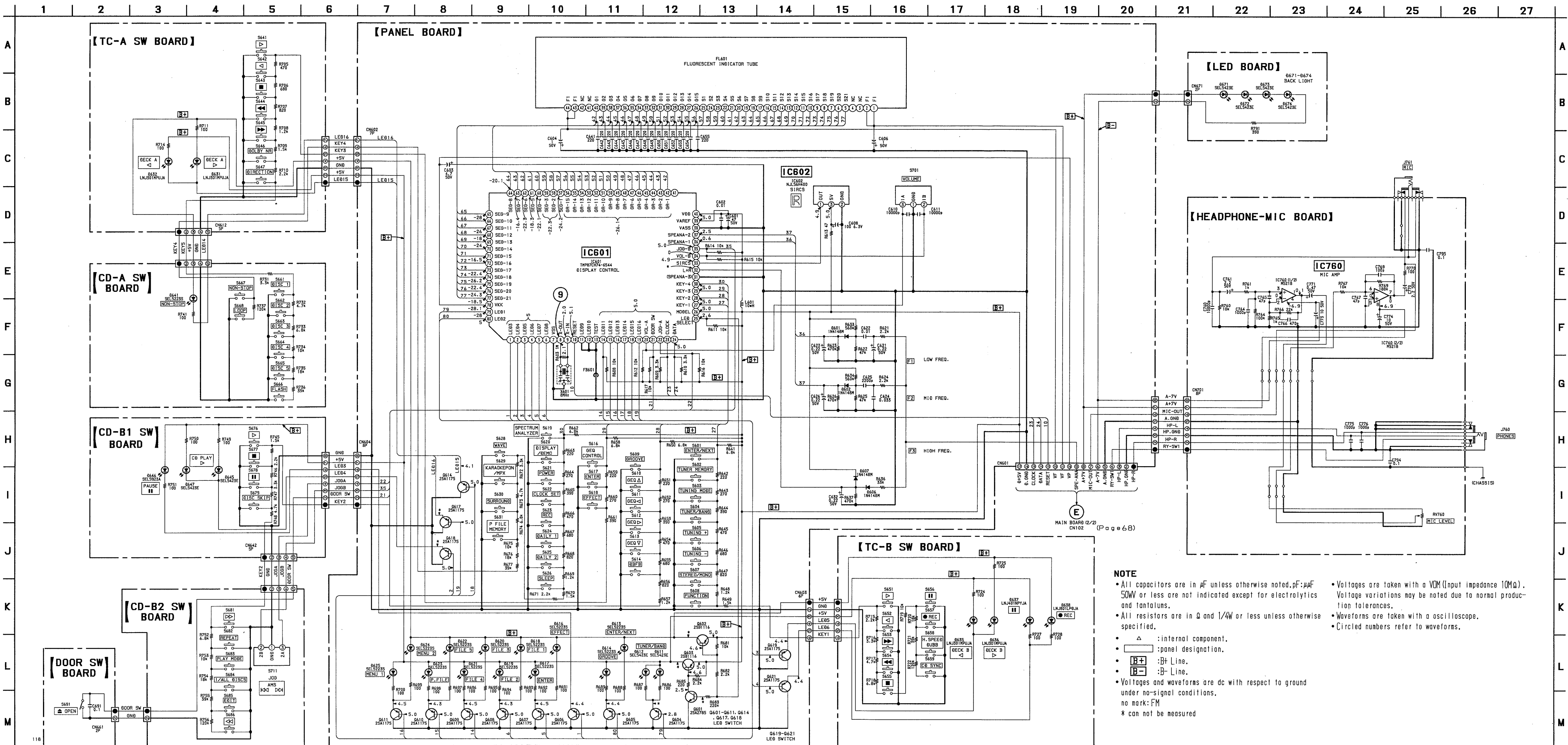




• Semiconductor Location

Ref. No.	Location
D141	I-12
D281	I-9
D291	I-10
D301	F-6
D303	F-6
D304	F-6
D305	F-6
D306	F-7
D307	G-7
D902	J-7
D903	J-7
D904	J-7
D905	J-7
D906	J-6
D907	J-5
D908	J-4
D909	J-4
D910	J-5
D911	J-5
D912	G-5
D913	G-4
D914	F-4
D915	I-4
D951	J-7
D952	J-7
IC201	E-11
IC231	G-8
IC281	I-10
IC301	D-6
IC302	F-7
IC901	H-5
IC902	H-6
IC903	G-5
IC904	I-5
IC1501	C-3
IC1502	D-3
Q141	J-11
Q142	I-11
Q202	G-11
Q203	G-12
Q204	H-10
Q231	H-9
Q232	G-9
Q252	G-10
Q253	F-10
Q254	H-9
Q281	J-10
Q282	I-9
Q283	J-10
Q301	F-7
Q901	G-4
Q902	G-5
Q903	I-5
Q904	J-5
Q905	G-5
Q906	G-5
Q907	H-5
Q1531	D-2
Q1532	D-2
Q1533	D-3
Q1534	D-3
Q1535	D-3

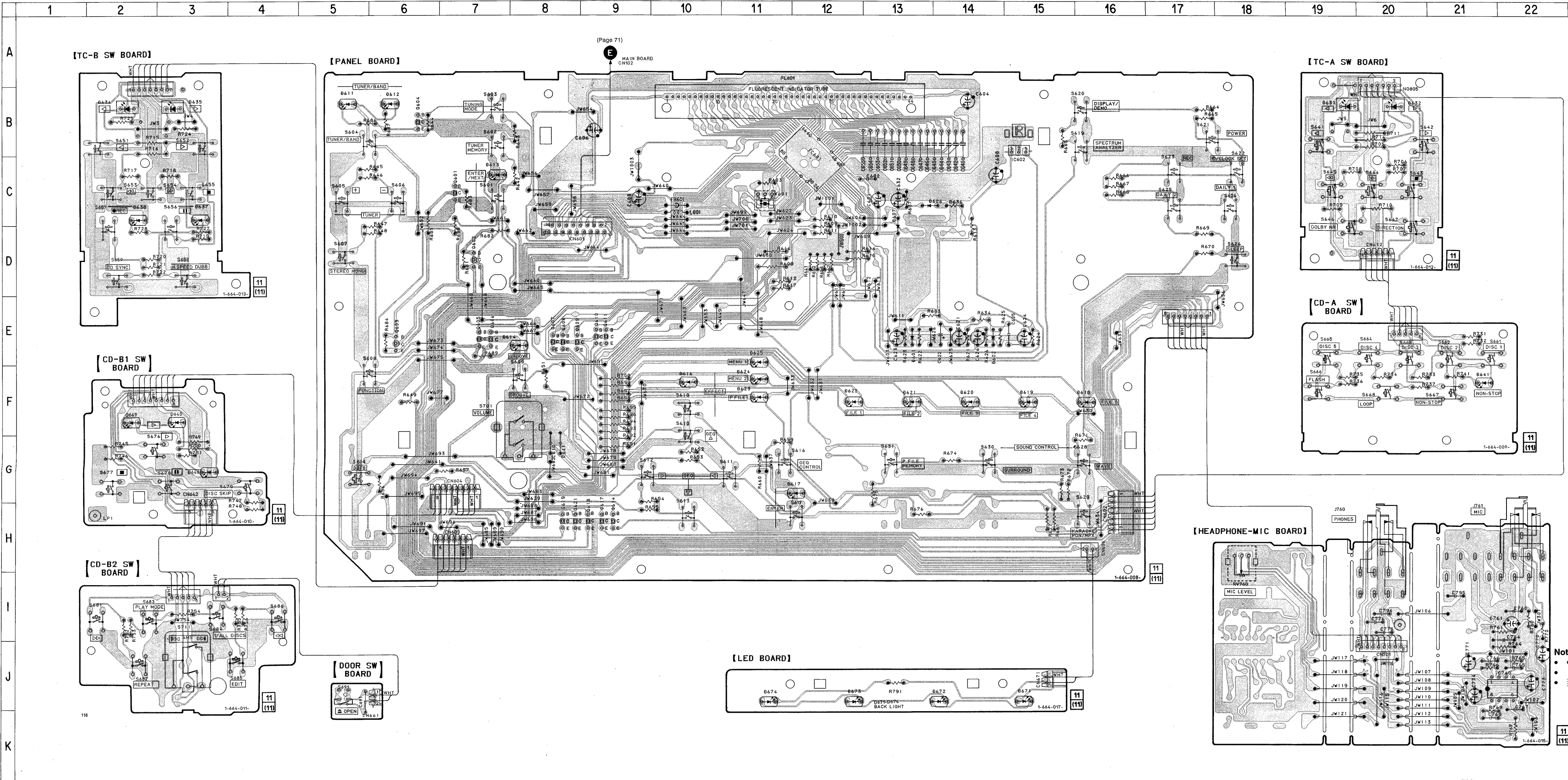
Note:
 • — : parts extracted from the component side.
 • Δ : internal component.
 • : Pattern from the side which enables seeing.
 • Abbreviation
 EE : East European model



NOTE

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} \times 10^{-6}$.
- 50W 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.
- 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.
- Circled numbers refer to waveforms.

• Δ : internal component.
• \square : panel designation.
• B+ : B+ Line.
• B- : B- Line.
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
• no mark: FM
• * can not be measured



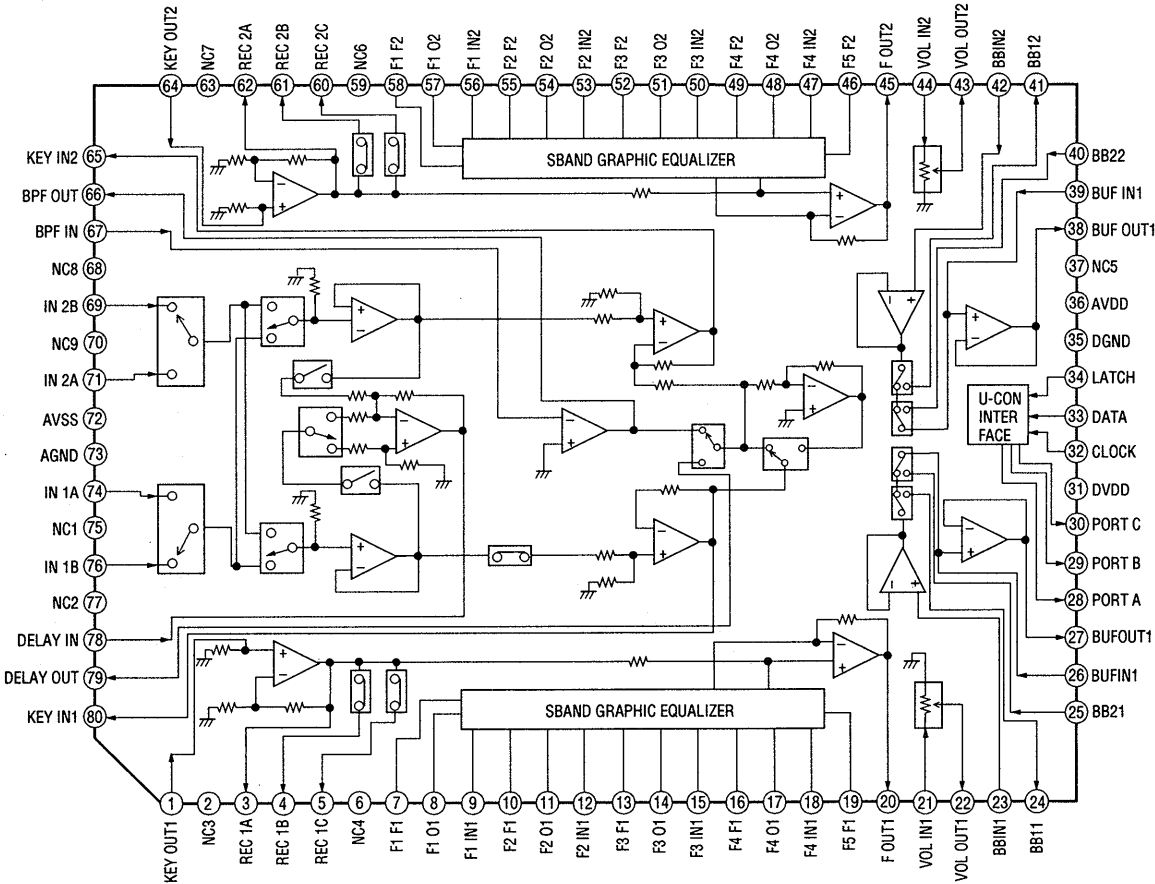
• Semiconductor Location	
Ref. No.	Location
D601	E-13
D602	E-14
D606	C-13
D607	D-13
D611	B-5
D612	B-6
D613	C-7
D614	E-8
D616	F-10
D617	G-12
D618	F-16
D619	F-15
D620	F-14
D621	F-13
D622	F-12
D623	F-11
D624	F-11
D625	E-11
D631	B-19
D632	B-20
D635	B-3
D636	B-2
D637	C-3
D638	C-2
D641	F-21
D645	F-3
D646	G-3
D647	F-2
D671	J-15
D672	J-14
D673	J-12
D674	J-11
IC601	C-12
IC602	B-15
IC760	J-22
Q601	C-7
Q602	D-7
Q603	E-6
Q604	B-6
Q605	E-7
Q606	E-7
Q607	E-8
Q608	E-8
Q609	E-8
Q610	E-9
Q611	E-9
Q614	H-9
Q617	H-9
Q618	H-9
Q619	H-8
Q621	H-8

Note:

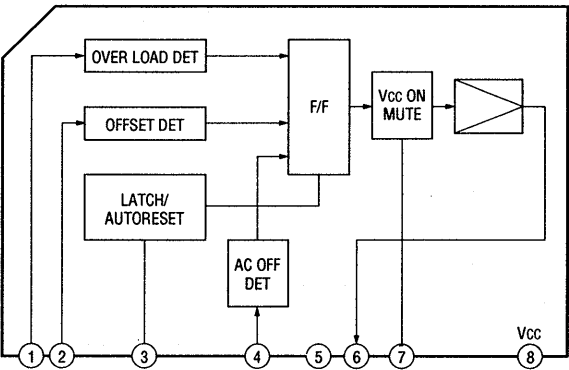
- : parts extracted from the component side.
- Δ : internal component.
- : Pattern from the side which enables seeing.

• IC Block Diagrams – MAIN Section –

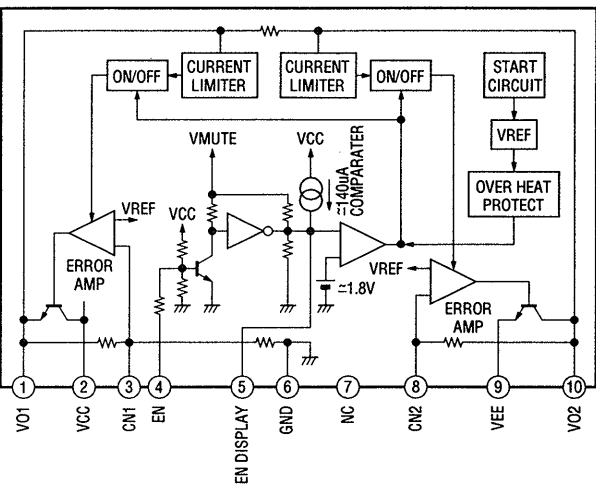
IC201 M62427FP



IC281 μPC1237HA



IC901 LA5617



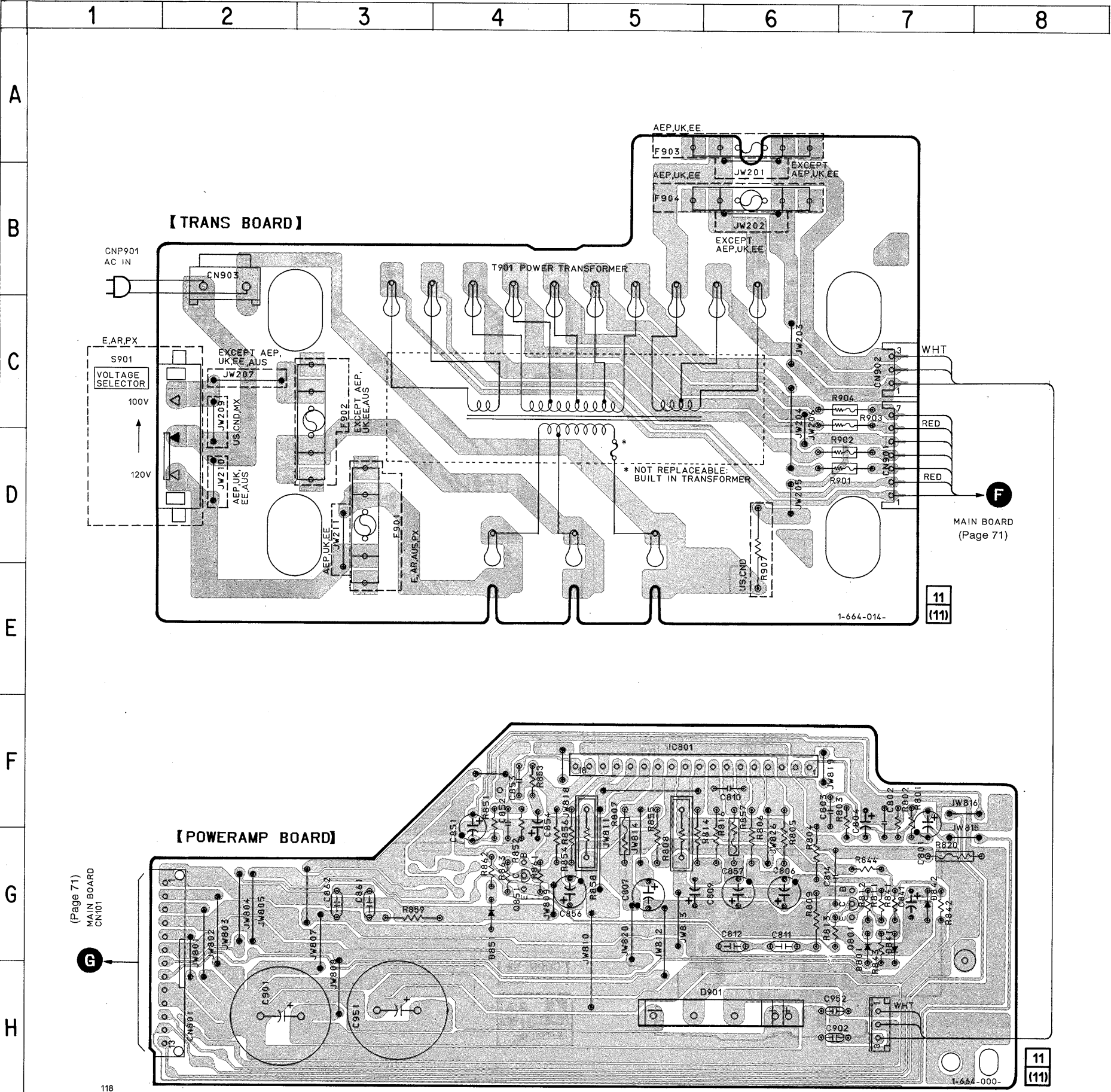
• Semiconductor Location

Ref. No.	Location
D801	G-7
D841	G-7
D842	G-7
D851	G-4
D901	H-6
IC801	F-5
Q801	G-7
Q851	G-4

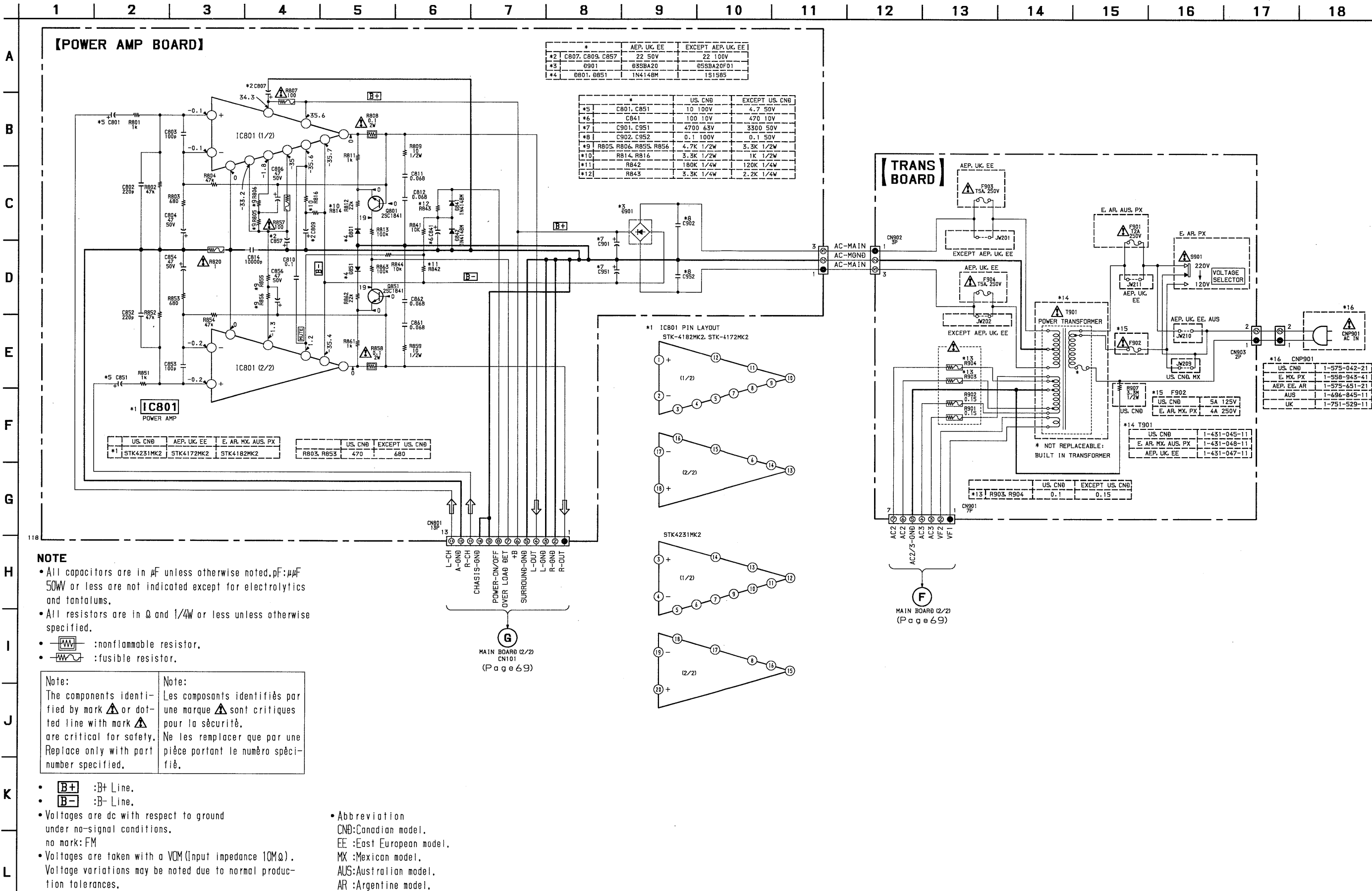
Note:

- : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
 - CND : Canadian model
 - EE : East European model
 - MX : Mexican model
 - AUS : Australian model
 - AR : Argentine model

6-16. PRINTED WIRING BOARDS – POWER Section –
• See page 38 for Circuit Boards Location.



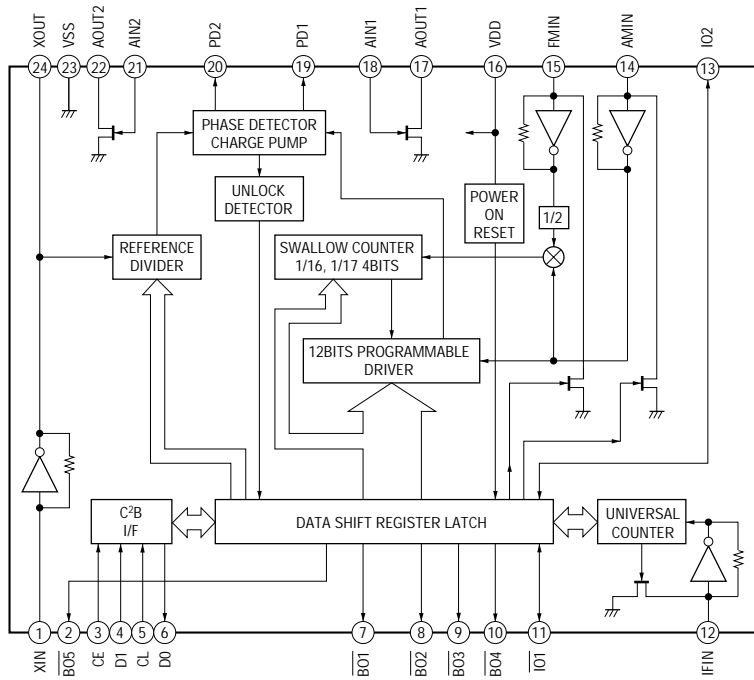
6-17. SCHEMATIC DIAGRAM - POWER Section -



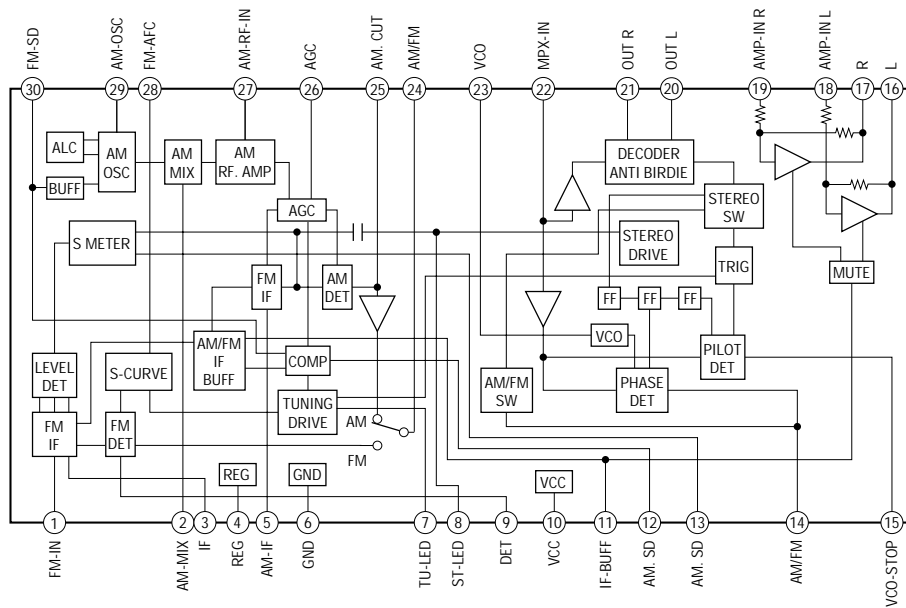
IC101 CXA1992AR



- TUNER Section -
IC1 IC21 LC72130



IC2 IC41 LA1835



6-18. IC PIN FUNCTION DESCRIPTION

MAIN BOARD IC301 μ PD780018Y (MAIN CONTROL)

Pin No.	Pin Name	I/O	Function
1	TA-MUTE	O	Line mute signal output
2	DBFB-H/L	O	DBFB H/L select signal output
3	427-LT	O	Latch signal output for IC201 (62427)
4	KCON-LT	O	Not used
5	KCON-ON/OFF	O	
6	F-RELAY	O	Front speaker relay control output
7	R-RELAY	O	Not used
8	PL-RELAY	O	
9	TEST	I	Connected ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	–	Power supply (+5V)
13	XT2	O	X'tal (32.768 KHz)
14	XT1	I	
15	RESET	I	Reset signal input
16	INT/IN	I	Connected ground
17	INT/IN/OUT	I	
18	SCOR	O	Subcode data request signal output
19	SOFT-TEST	O	Software test port
20	AC-CUT	I	Back up signal input
21	RDS-INT	I	Not used
22	RDS-DATA	I	
23	VDD	–	Power supply (+5V)
24	AVDD	I	Analog reference voltage input
25	ADJ	I	CD adjust point port
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	CLK-CHECK	I	Connected ground
30	SPEC-IN	I	Version select signal input
31	ADJ 2	I	Connected ground
32	DEMO-CHANGE	I	DEMO H/L select signal input
33	AVss	–	Ground
34	SQ-DATA-IN	I	Subcode Q data input
35	—	–	Not used
36	SQ-CLK	O	Sub code Q data clock input
37	SW-ON/OFF	O	Not used
38, 39	FUNC 1, 2	I	Connected ground
40	Vss	–	Ground
41	VOL-LAT	O	Not used
42	PL-LAT	O	
43	COM-DIN	I	Connected ground
44	COM-DOUT	O	Common serial data output

Pin No.	Pin Name	I/O	Function
45	COM-CLK	O	Common serial clock output
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLOCK	O	CD clock output
49	MSM-CMD	O	Not used
50	MSM-BUSY	I	Connected ground
51	MSM-LT	O	Not used
52	MSM-NAR	I	
53	MSM-CH	O	
54	INPUT-CHANGE	O	Not used
55	11C-DATA	O	Data output for IC601
56	11C-CLK	O	Clock output for IC601
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	FOUCUS-SW	O	Not used
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	TRAY-LED	O	CD tray LED ON/OFF output
63	LOAD-OUT	O	Not used
64	LOAD-IN	O	
65	ST-CLK	O	Tuner clock output
66	ST-DIN	I	Tuner data input
67	ST-DOUT	O	Tuner data output
68	ST-CE	O	Tuner chip enable output
69	TUNED	I	Tuned detection for tuner
70	STEREO	I	Stereo detection for tuner
71	Vss	–	Ground
72	ST-MUTE	O	Tuner mute signal output
73	SENS2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Not used
76	T-SENS	I	CD table detection signal input
77	UP-SW	I	Up SW (S201) signal input
78	ENC 3	I	Not used
79	ENC 2	I	
80	ENC 1	I	
81	OUT-OPEN	I	Not used
82	CAP-M-H/N	O	Capstan motor H/N speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	TRG-LOW	O	Trigger motor control output
86	CAP-M-ON/OFF	O	Capstan motor ON/OFF signal output
87	PB-A/B	O	PB Deck A/Deck B select output

Pin No.	Pin Name	I/O	Function
88	EQ-H/N	O	Equalizer H/N select output
89	BIAS	O	Bias ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NR-ON/OFF	O	NR ON/OFF signal output
92	R/P-PASS	I	REC/PB/PASS selection output
93	TC-MUTE	O	TC mute ON/OFF selection output
94	A-PLAY-SW	I	Deck A play detect
95	B-PLAY-SW	I	Deck B play detect
96	TC-RELAY	O	REC/PB head selection output for IC602
97	A-HALF	I	Deck A cassette detect
98	POWER	O	POWER ON/OFF signal output
99	SW-F-CHG	O	Super woofer mode signal output Not used
100	STK-MUTE	O	Power amp ON/OFF signal output

PANEL BOARD IC601 TMP87CH74 (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Function
1-6	LED3-LED8	O	LED driver output
7	VSS	–	Ground
8	X-OUT	O	X'tall (8MHz)
9	X-IN	I	
10	RESET	I	Reset signal input from main controller
11	LED 9	O	Connected ground
12	LED10	O	
13	TEST	I	
14-19	LED11-LED19	O	LED driver output
20	VOL-A	I	Rotary encoder (S701 VOLUME) pulse input
21	DOOR SW	I	SOOR SW (S651) ON/OFF signal input
22	JOG-A	I	Rotary encoder (S711 AMS) pulse input
23	CLOCK	I	Serial clock input from main controller
24	DATA	I	Serial data input from main controller
25	LED SELECT	O	LED select signal output
26	MODEL	I	Version select signal input
27-30	KEY1-KEY4	I	Key input
31	SPEANA-3	I	Connected ground
32	L + R	I	Spectrum analyzer (high frequency) input
33	SIRCS	I	Remote commander signal input
34	VOL-B	I	Rotary encoder (S701 VOLUME) pulse input
35	JOG-B	I	Rotary encoder (S711 AMS) pulse input
36	SPEANA-1	I	Spectrum analyzer (Low frequency) input
37	SPEANA-2	I	Spectrum analyzer (Middle frequency) input
38	VASS	–	Ground
39	VAREF	I	Analog reference voltage input
40	VDD	–	Power supply (+5V)
41	—	–	Not used
42-56	GR1-GR15	O	FL gride signal output
57-77	SEG1-SEG77	O	FL segment signal output
78	VKK	–	–30V driving power for FL
79, 80	LED1-LED2	O	LED driver output

SECTION 7

EXPLODED VIEWS



NOTE:


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

↑
Parts Color

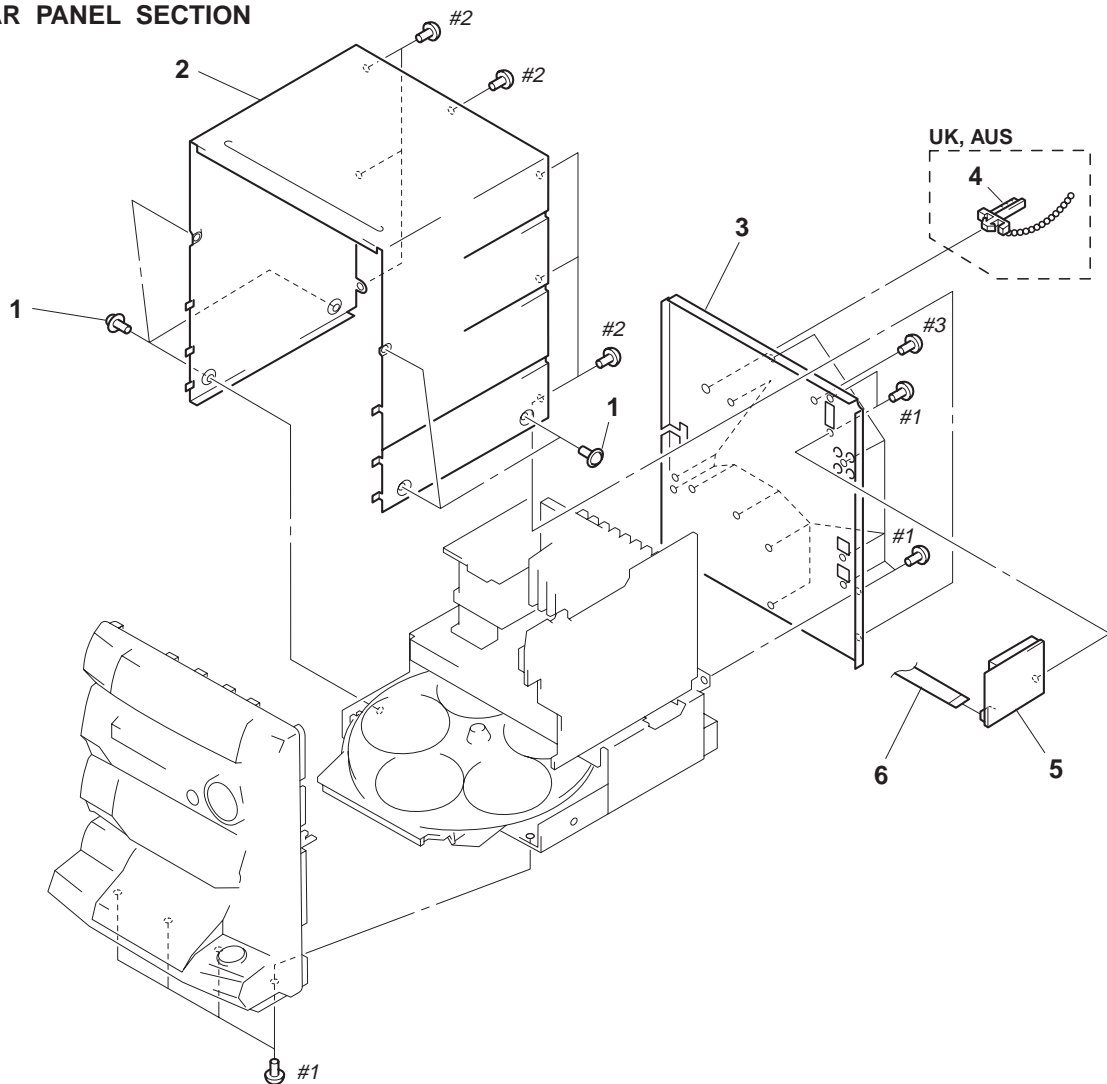
↑
Cabinet's Color
- Abbreviation
 AR: Aurzenchin EE: East European
 AUS: Australian MX: Mexican
 CND: Canadian

- 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 the electrical parts list.

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

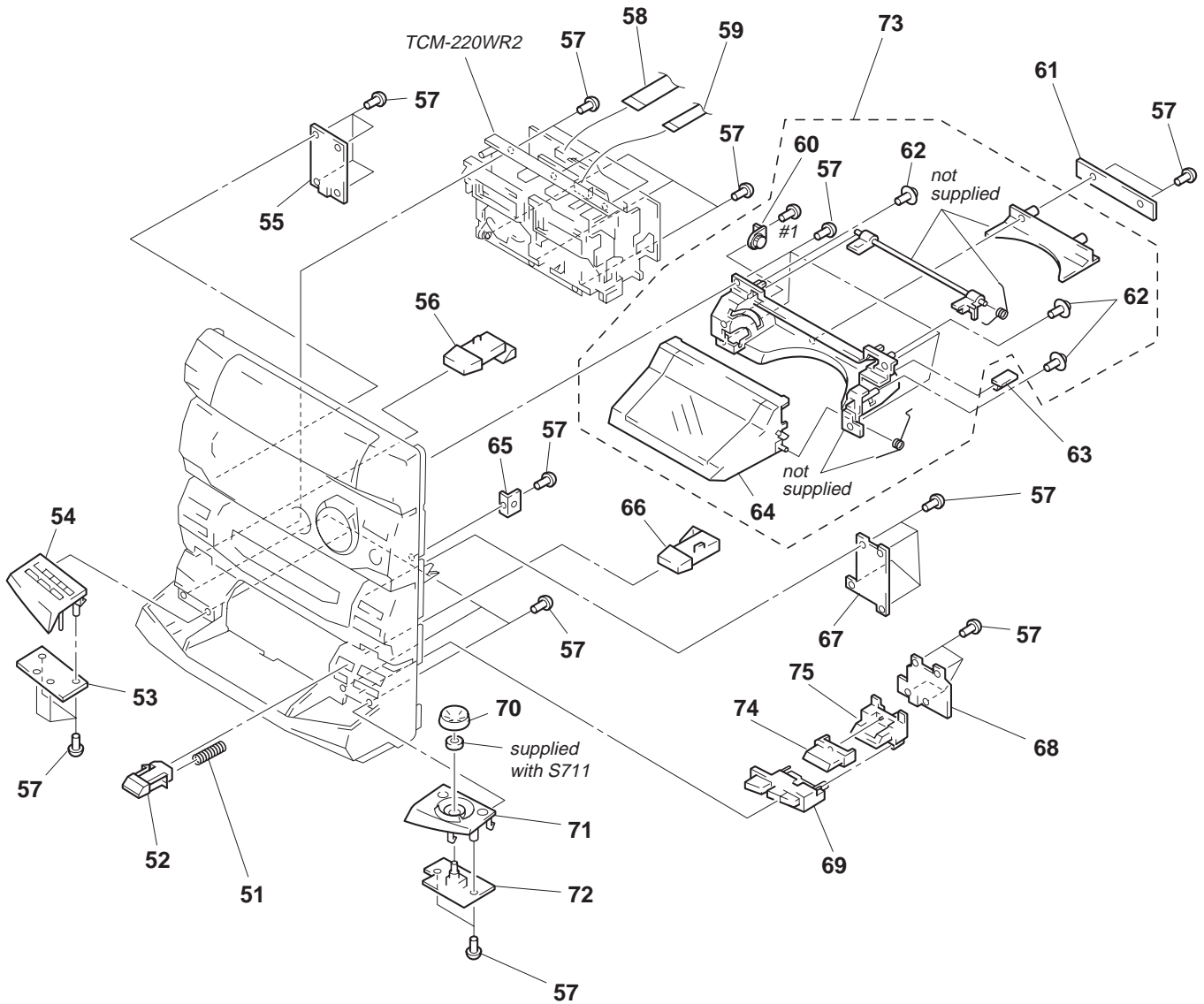
Les composants identifiés par une
marque  sont critiques pour la
sécurité.
Ne les remplacer que par une pièce
portant le numéro spécifié.

(1) CASE, REAR PANEL SECTION



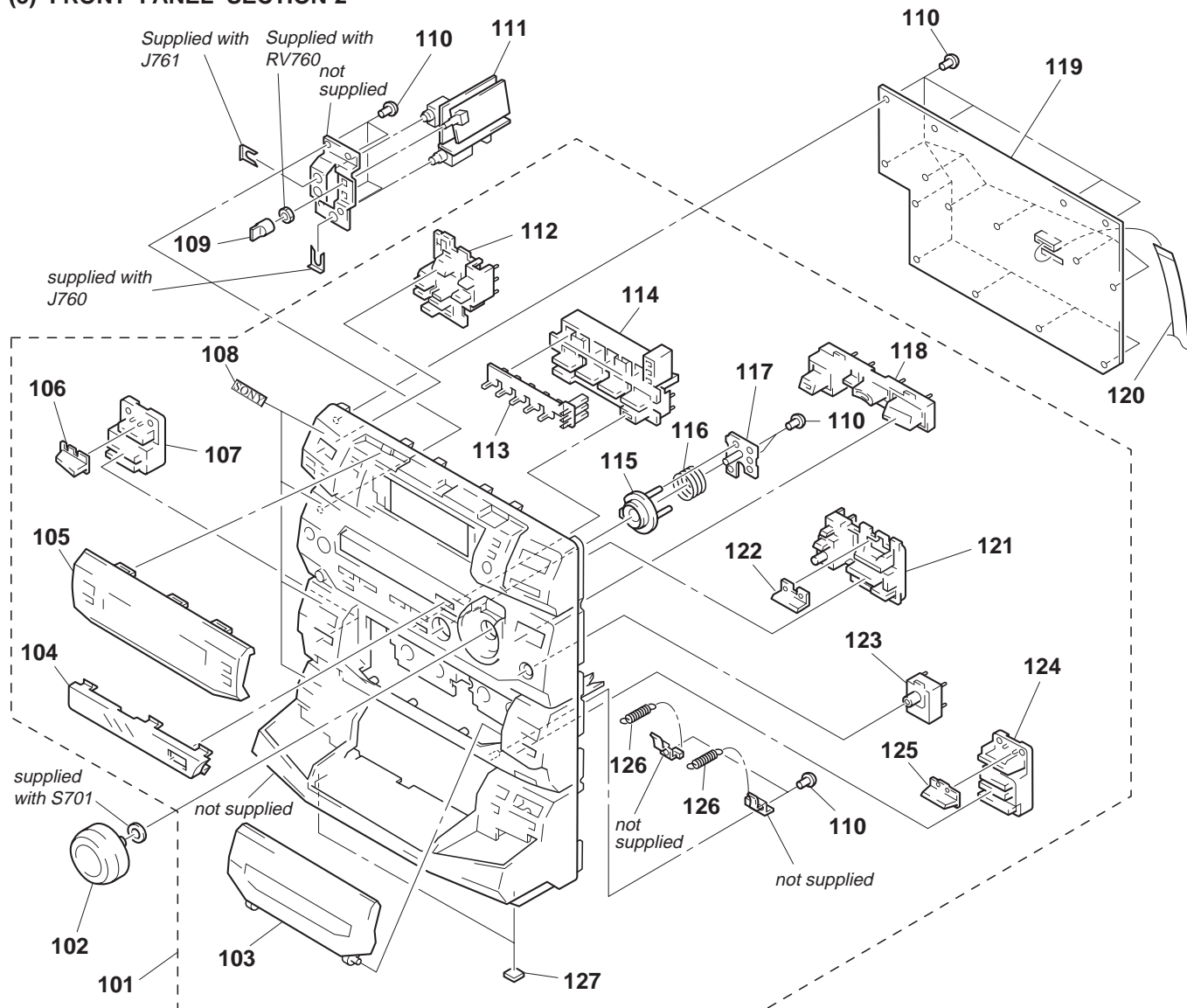
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-929-973-01	SCREW (CASE, 3 POINT)		* 3	4-987-134-21	PANEL, BACK (XB3: PX)	
* 2	4-987-052-11	CASE (D290/ XB3)		* 3	4-987-134-31	PANEL, BACK (XB3: MX)	
* 2	4-987-052-51	CASE (G3300)		4	4-956-370-12	BAND, PLUG FIXED (UK, AUS)	
* 3	4-987-043-01	PANEL, BACK (D290: US)		* 5	A-4303-510-A	TCB BOARD, COMPLETE (US, CND)	
* 3	4-987-043-11	PANEL, BACK (D290: CND)		* 5	A-4303-512-A	TCB BOARD, COMPLETE (E, AR, MX, AUS, PX)	
* 3	4-987-043-21	PANEL, BACK (G3300: US)		* 5	A-4303-570-A	TCB BOARD, COMPLETE (EE)	
* 3	4-987-043-31	PANEL, BACK (G3300: CND)		* 5	A-4303-576-A	TCB BOARD, COMPLETE (AEP, UK)	
* 3	4-987-043-41	PANEL, BACK (XB3: AEP, UK)		6	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
* 3	4-987-043-61	PANEL, BACK (XB3: EE)				(EXCEPT AEP, EE, UK)	
* 3	4-987-134-01	PANEL, BACK (XB3: E, AR)		6	1-773-006-11	WIRE (FLAT TYPE) (15 CORE) (AEP, EE, UK)	
* 3	4-987-134-11	PANEL, BACK (XB3: AUS)					

(2) FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-987-995-01	SPRING (CD EJECT), COMPRESSION		* 63	1-664-016-11	DOOR SW BOARD	
52	4-987-001-01	BUTTON (EJECT CD)		64	4-987-038-11	LID, DISC (G3300)	
* 53	1-664-009-11	CD-A SW BOARD		64	4-987-038-01	LID, DISC (D290/ XB3)	
54	X-4948-295-1	PANEL (A) SUB ASSY (D290)		* 65	4-987-933-01	BRACKET (TA)	
54	X-4948-297-1	PANEL (A) SUB ASSY (G3300)		66	4-987-000-01	BUTTON (EJECT B)	
54	X-4948-348-1	PANEL (A) SUB ASSY (XB3)		* 67	1-664-013-11	TC-B SW BOARD	
* 55	1-664-012-11	TC-A SW BOARD		* 68	1-664-010-11	CD-B1 SW BOARD	
56	4-986-999-01	BUTTON (EJECT A)		69	X-4947-969-1	BUTTON (CD STOP) ASSY	
57	4-951-620-01	SCREW (2.6X8), +BVTP		70	4-987-037-01	KNOB (JOG)	
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)		71	X-4948-296-1	PANEL (B) SUB ASSY (D290/ XB3)	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)		71	X-4948-298-1	PANEL (B) SUB ASSY (G3300)	
60	3-354-963-01	DAMPER		* 72	1-664-011-11	CD-B2 SW BOARD	
* 61	1-664-017-11	LED BOARD		73	A-4384-396-A	LID ASSY, CD (D290/ XB3)	
62	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)		73	A-4384-446-A	LID ASSY, CD (D3300)	
				74	4-987-014-01	INDICATOR (CD)	

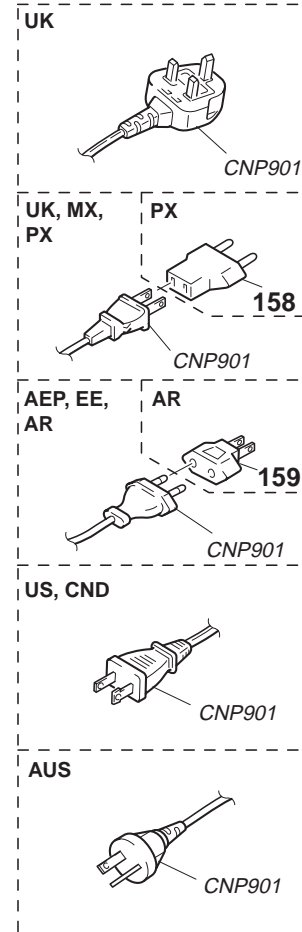
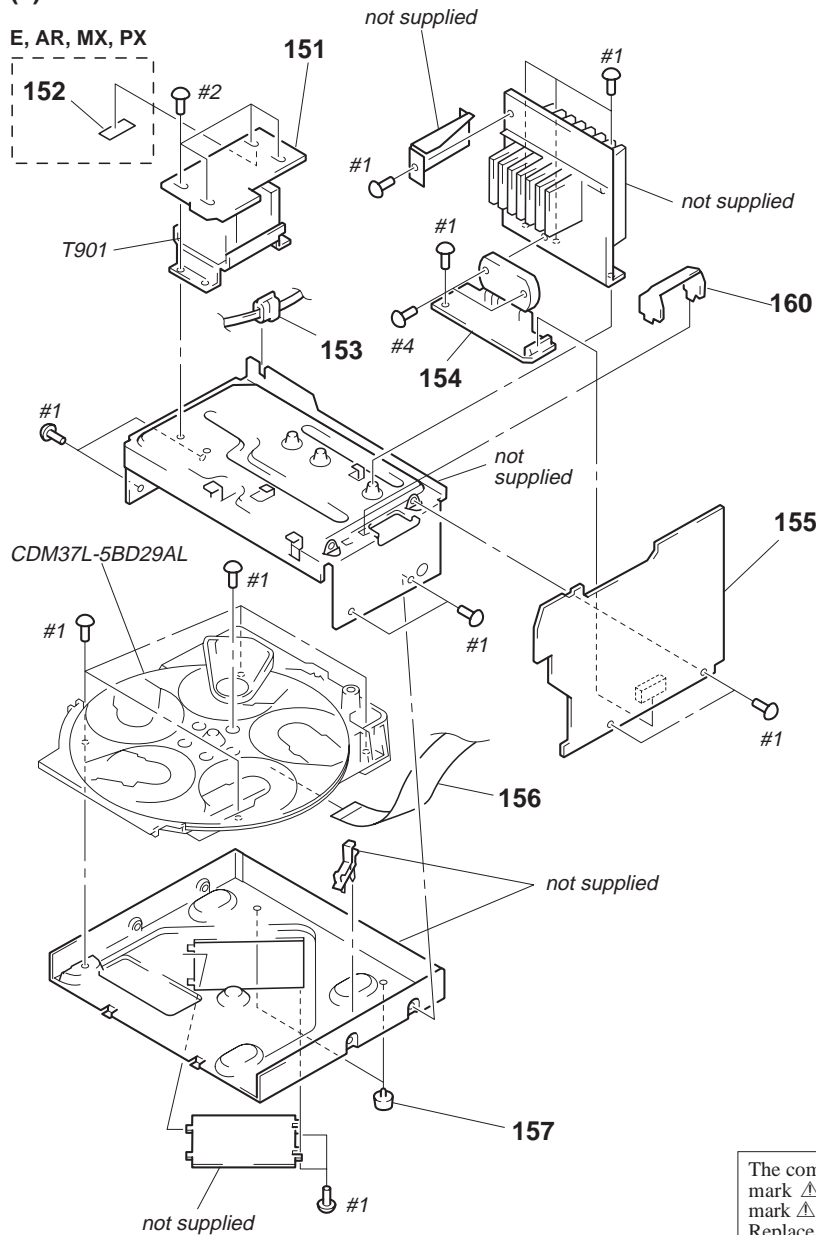
(3) FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
75	4-987-002-01	BUTTON (CD, PLAY)		112	4-986-986-01	BUTTON (POWER)	
101	A-4384-393-A	PANEL ASSY, FRONT (D290)		113	4-987-012-01	INDICATOR (TA)	
101	A-4384-394-A	PANEL ASSY, FRONT (XB3)		114	X-4947-964-1	BUTTON (SOUND) ASSY	
101	A-4384-395-A	PANEL ASSY, FRONT (G3300)		115	4-986-990-01	BUTTON (CURSOR)	
102	4-987-036-01	KNOB (VOL)		116	4-978-683-01	SPRING, COMPRESSION	
103	X-4947-961-1	LID ASSY, CASSETTE (D290/ XB3)		* 117	4-987-041-01	COVER, CURSOR	
103	X-4947-973-1	LID ASSY, CASSETTE (G3300)		118	X-4947-963-1	BUTTON (FUNCTION) ASSY	
104	4-987-032-01	DISPLAY (TA)		* 119	A-4392-444-A	PANEL BOARD, COMPLETE	
105	4-987-028-01	DISPLAY (ST)		120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
106	4-987-021-01	INDICATOR (TC A)		121	X-4947-962-1	BUTTON (TUNER) ASSY	
107	4-986-997-01	BUTTON (DECK.A)		122	4-987-013-01	INDICATOR (TUNER)	
108	4-963-404-21	EMBLEM (5-A), SONY		123	4-986-992-01	BUTTON (DBFB)	
109	4-973-644-01	KNOB (MIC)		124	X-4947-967-1	BUTTON (DECK B) ASSY	
110	4-951-620-01	SCREW (2.6X8), +BVTP		125	4-987-022-01	INDICATOR (TC B)	
* 111	A-4392-452-A	HEADPHONE-MIC BOARD, COMPLETE		126	4-987-996-01	SPRING (TC LID), TENSION	

(4) CHASSIS SECTION

E, AR, MX, PX

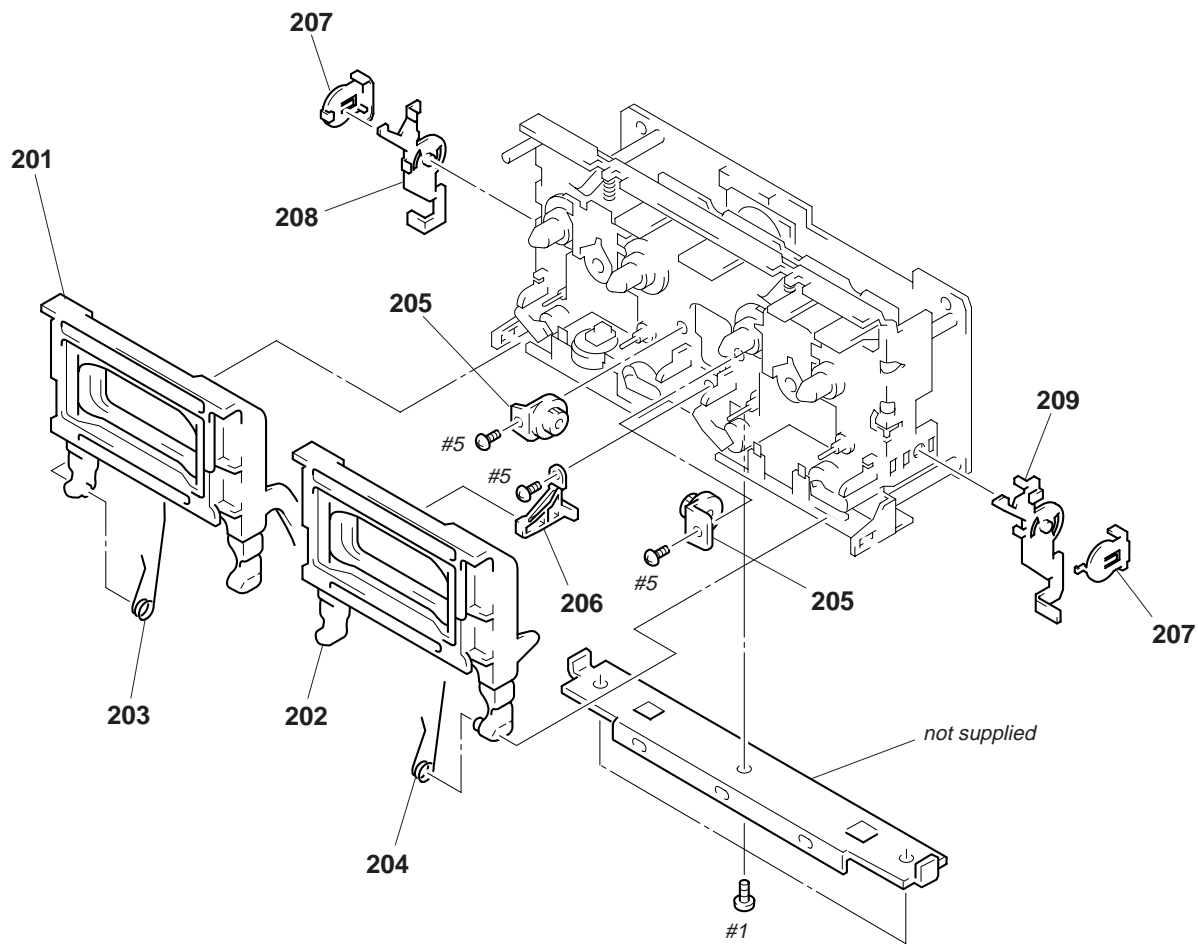


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

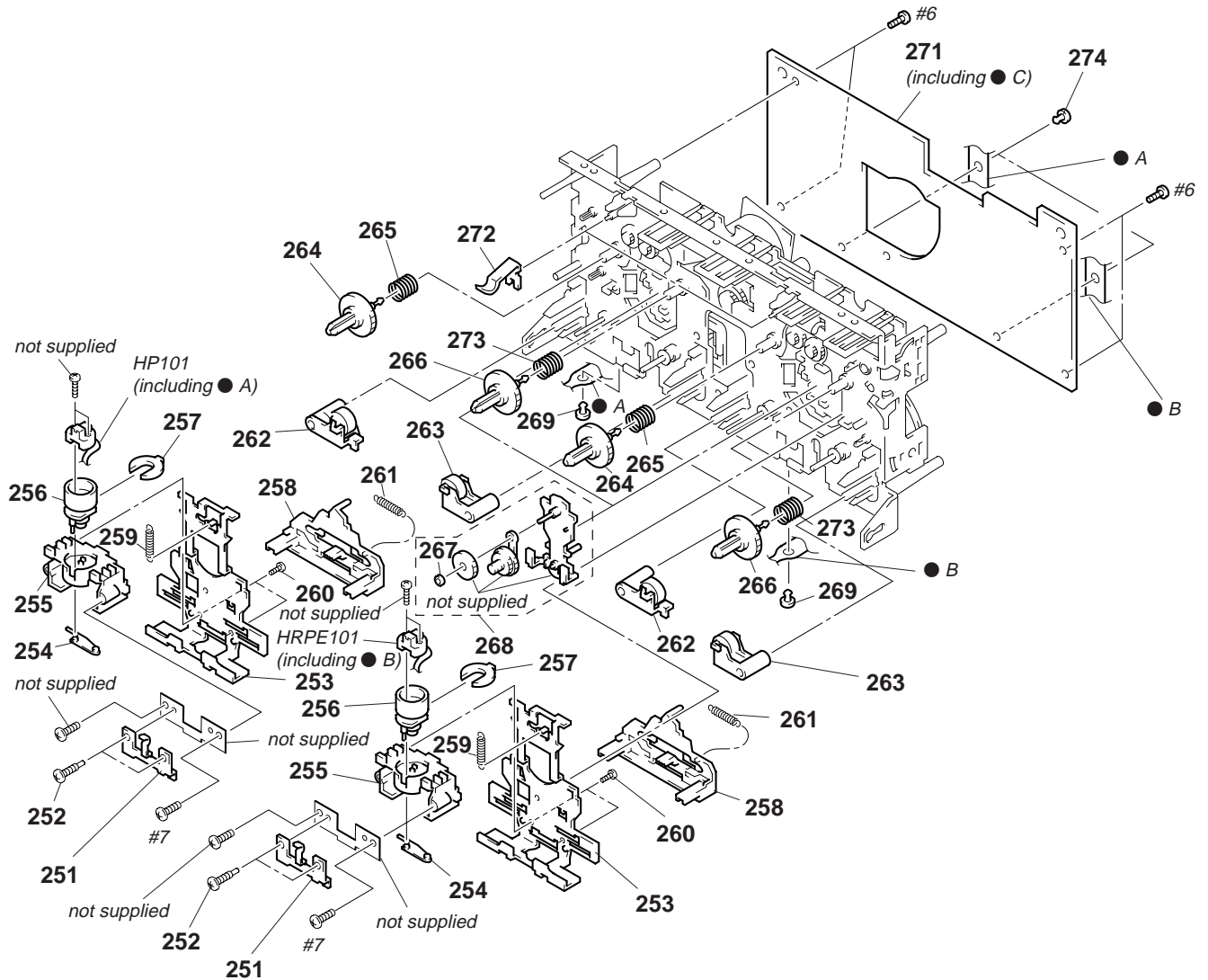
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
127	4-948-236-01	CUSHION (107)		156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)	
* 151	1-664-014-11	TRANS BOARD		157	X-4941-228-1	FOOT (F22125H-M)	
152	3-701-948-20	LABEL (T4A), FUSE (E, AR, MX, PX)		Δ 158	1-569-007-11	ADAPTOR, CONVERSION 2P (PX)	
153	3-703-244-00	BUSHING (FBS001), CORD (EXCEPT XB3:E,MX)		Δ 159	1-569-008-11	ADAPTOR, CONVERSION 2P (AR)	
153	4-966-266-01	BUSHING (S) (FBS002), CORD (XB3: E, MX)		* 160	4-988-533-11	HOLDER, PCB	
* 154	A-4392-442-A	POWER AMP BOARD, COMPLETE (US, CND)					
* 154	A-4392-460-A	POWER AMP BOARD, COMPLETE (E, AR, MX, AUS, PX)		Δ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)	
* 154	A-4392-465-A	POWER AMP BOARD, COMPLETE (AEP, EE, UK)		Δ CNP901	1-575-042-21	CORD, POWER (US, CND)	
* 155	A-4392-438-A	MAIN BOARD, COMPLETE (US, CND)		Δ CNP901	1-575-651-21	CORD, POWER (AEP, EE, AR)	
* 155	A-4392-457-A	MAIN BOARD, COMPLETE (E, AR, MX)		Δ CNP901	1-696-845-11	CORD, POWER (AUS)	
* 155	A-4392-461-A	MAIN BOARD, COMPLETE (AEP, UK)		Δ CNP901	1-751-529-11	CORD, POWER (UK)	
* 155	A-4392-703-A	MAIN BOARD, COMPLETE (EE)		Δ T901	1-431-045-11	TRANSFORMER, POWER (US, CND)	
* 155	A-4392-706-A	MAIN BOARD, COMPLETE (AUS, PX)		Δ T901	1-431-047-11	TRANSFORMER, POWER (AEP, EE, UK)	
				Δ T901	1-431-048-11	TRANSFORMER, POWER (E, AR, MX, AUS, PX)	

(5) TAPE MECHANISM DECK SECTION-1
(TCM-220WR2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	X-4947-943-1	HOLDER (L) ASSY, CASSETTE		* 206	4-980-439-01	FULCRUM, HOLDER	
202	X-4947-944-1	HOLDER (R) ASSY, CASSETTE		207	3-354-957-01	JOINT (LOCK LEVER)	
203	4-959-231-11	SPRING (L), TORSION		208	3-354-953-01	LEVER (LOCK LEVER L)	
204	4-959-232-11	SPRING (R), TORSION		209	3-354-954-01	LEVER (LOCK LEVER R)	
205	3-354-963-01	DAMPER					

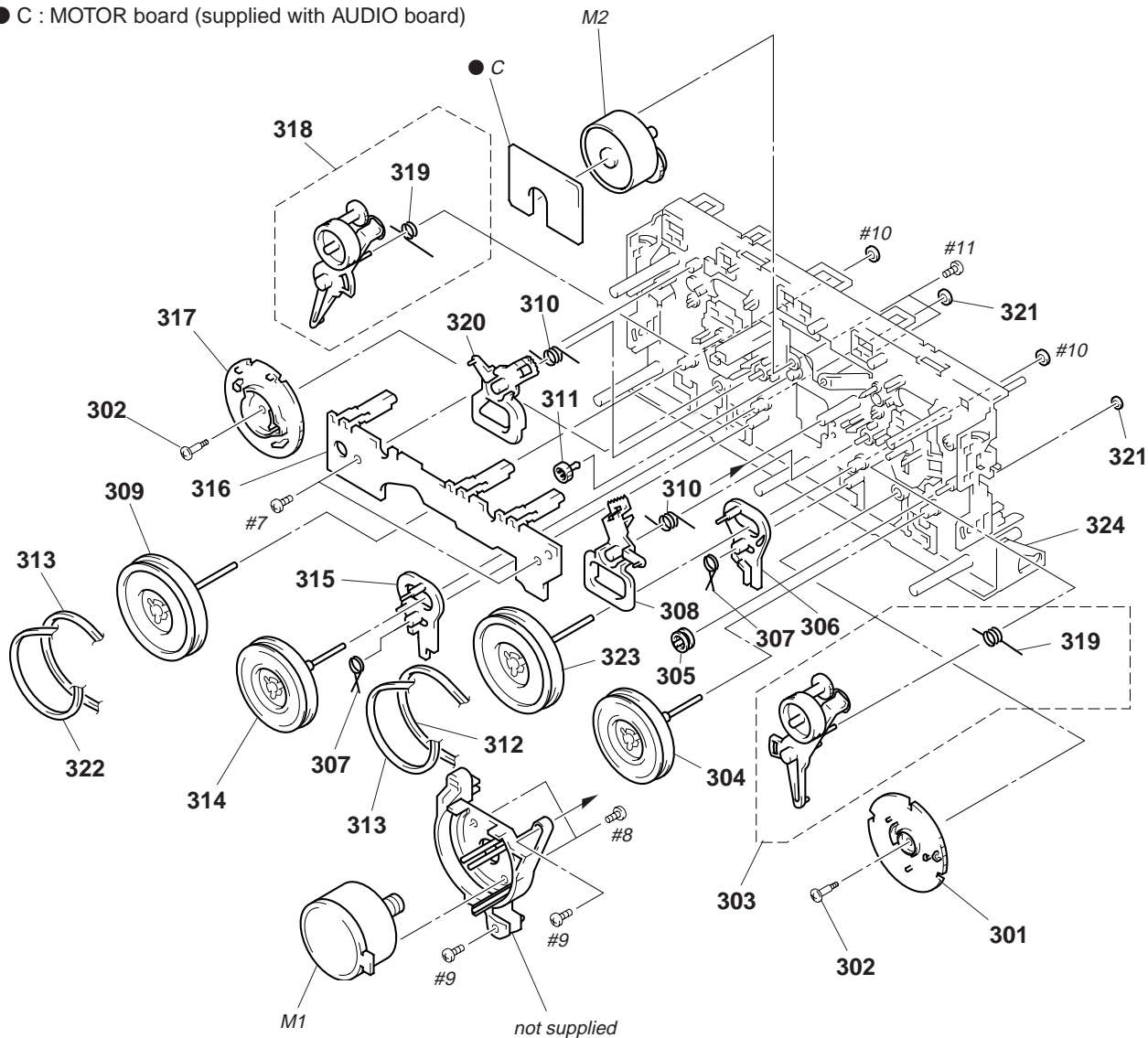
(6) TAPE MECHANISM DECK SECTION-2
(TCM-220WR2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT		264	3-908-613-01	GEAR (S), REEL	
252	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT		265	3-917-141-01	SPRING, COMPRESSION	
253	X-3373-113-1	SLIDER (HEAD) ASSY		266	X-3371-305-1	REEL (T) ASSY	
254	3-908-556-01	SPRING, HEAD TOGGLE		267	3-669-465-01	WASHER (1.5), STOPPER	
255	3-908-558-02	FITTING BLOCK, HEAD		268	X-3370-173-1	TU ASSY	
256	3-908-557-02	ROTARY BLOCK, HEAD		269	3-911-116-21	RIVET, PUSH	
* 257	3-908-559-01	STOPPER, AZIMUTH		* 271	A-2007-131-A	AUDIO BOARD, COMPLETE	
258	3-908-555-01	SLIDER (REV SLIDER)		272	3-930-972-01	DETENT, HALF	
259	3-917-143-11	SPRING, TENSION		273	3-917-142-01	SPRING, COMPRESSION	
260	3-388-848-01	SCREW (P2X6) (B TIGHT)		274	3-911-116-11	RIVET, PUSH	
261	3-939-371-01	SPRING (1), TENSION		HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)	
262	X-3369-909-1	PINCH LEVER (REV) ASSY		HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	
263	X-3369-908-1	PINCH LEVER (FWD) ASSY					

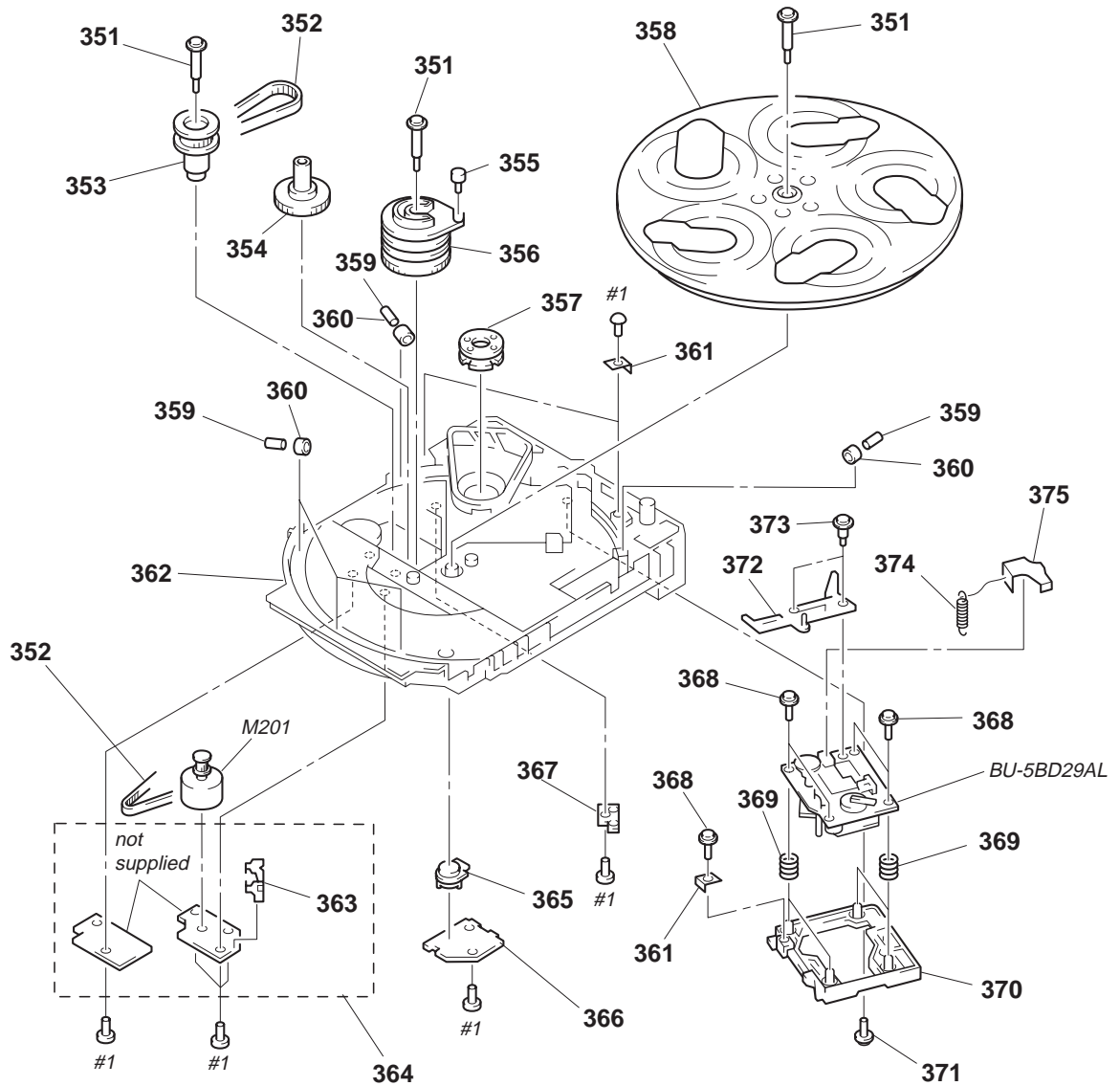
(7) TAPE MECHANISM DECK SECTION-3 (TCM-220WR2)

● C : MOTOR board (supplied with AUDIO board)



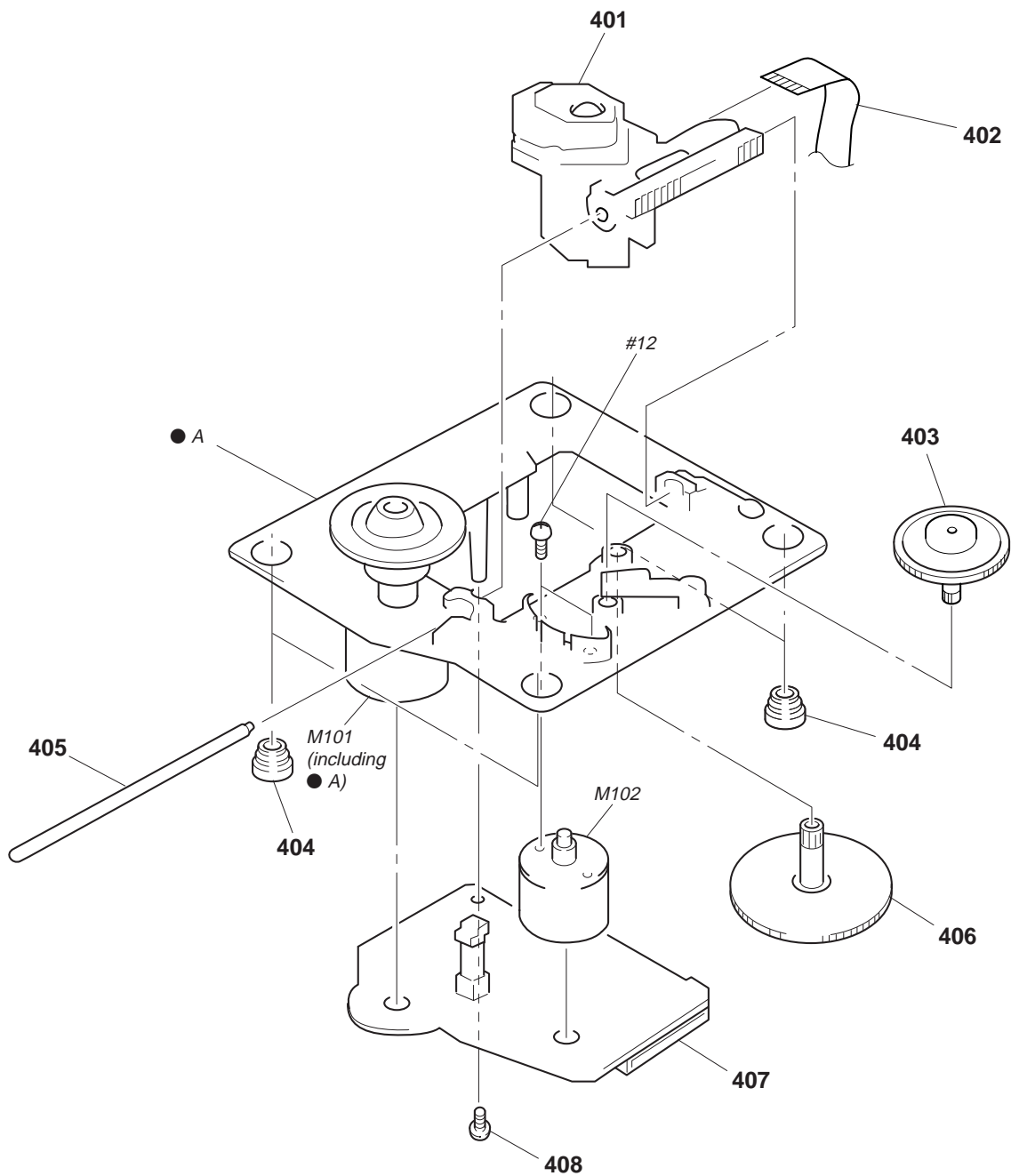
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-908-597-01	CAM (A)		314	X-3370-171-1	FLYWHEEL (BR) ASSY	
302	3-908-608-11	SCREW, STEP		315	3-908-600-01	LEVER (REV-B)	
303	X-3372-930-1	ARM (A) ASSY, FR		* 316	1-650-669-11	LEAF SWITCH BOARD	
304	X-3370-169-1	FLYWHEEL (AR) ASSY		317	3-908-598-01	CAM (B)	
305	3-928-047-01	PULLEY, TENSION		318	X-3372-931-1	ARM (B) ASSY, FR	
306	3-908-599-01	LEVER (REV-A)		319	3-914-111-01	SPRING (FR), TORSION	
307	3-908-601-01	SPRING (REV LEVER), TORSION		320	3-908-604-01	LEVER (TRIGGER B)	
308	3-908-603-01	LEVER (TRIGGER A)		321	3-911-115-01	WASHER, STOPPER	
309	X-3367-593-1	FLYWHEEL (BF) ASSY		322	3-917-176-11	BELT (B)	
310	3-908-605-01	SPRING (TRIGGER), TORSION		323	X-3370-172-1	FLYWHEEL (AF) ASSY	
311	3-908-609-01	GEAR, TRIGGER		324	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
312	3-913-845-11	BELT (A)		M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
313	3-913-846-11	BELT (FR)		M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	

(8) CD MECHANISM DECK SECTION
(CDM37L-5BD29AL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-987-976-01	SCREW, STEP		* 364	A-4673-765-A	CD MOTOR BOARD, COMPLETE	
352	4-944-490-01	BELT (TIMING)		365	4-978-426-01	INDICATOR (NO.)	
353	A-4660-978-A	GEAR (PULLEY) ASSY		* 366	1-659-059-13	BD LED BOARD	
354	4-978-421-01	GEAR (MID)		* 367	1-659-058-13	TABLE SENSOR BOARD	
355	4-978-425-01	ROLLER (CAM)		368	4-933-134-01	SCREW (+PTPWH M2.6X6)	
356	4-978-420-01	CAM (HOLDER)		369	4-958-593-01	SPRING (BU), COMPRESSION	
357	1-452-538-11	MAGNET		* 370	4-978-419-01	HOLDER (BU-5)	
358	4-978-417-01	TABLE, DISC		371	4-917-583-71	BRACKET, YOKE	
359	4-934-376-01	SHAFT (ROLLER)		372	4-989-493-01	SLIDER (37)	
360	X-4924-457-1	ROLLER ASSY		373	4-989-494-01	SCREW (SLIDER), STEP	
* 361	4-978-583-01	BRACKET (BU)		374	4-989-819-01	SPRING, TENSION	
* 362	4-978-418-01	CHASSIS		375	4-989-491-21	COVER, LENS	
* 363	4-980-385-01	HOLDER (SW)		M201	A-4660-977-A	MOTOR ASSY (TABLE)	

(9) BASE UNIT SECTION
(BU-5BD29AL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Δ 401	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP		406	4-917-564-01	GEAR (P), FLATNESS	
402	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		* 407	A-4699-522-A	BD BOARD, COMPLETE	
403	4-917-567-21	GEAR (M)		408	4-951-620-01	SCREW (2.6X8), +BVTP	
404	4-951-940-01	INSULATOR (BU)		M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
405	4-917-565-01	SHAFT, SLED		M102	X-4917-504-1	MOTOR ASSY (SLED)	

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

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 8 ELECTRICAL PARTS LIST

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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- 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

AR : Argentine
AUS : Australian
CND : Canadian
EE : East European
MX : Mexican

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

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

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

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
*	A-2007-131-A	AUDIO BOARD, COMPLETE					C642	1-104-664-11	ELECT	47uF	20%	16V	
		*****					C651	1-161-494-00	CERAMIC	0.022uF		25V	
		(including MOTOR BOARD)					< CONNECTOR >						
< CAPACITOR >													
C301	1-162-289-31	CERAMIC	390PF	10%	50V		* CN601	1-568-864-11	SOCKET, CONNECTOR 21P				
C302	1-126-968-11	ELECT	100uF	20%	6.3V		* CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
C303	1-162-282-31	CERAMIC	100PF	10%	50V		* CN651	1-564-521-11	PLUG, CONNECTOR 6P				
C304	1-130-483-00	MYLAR	0.01uF	5%	50V		< IC >						
C305	1-107-715-11	ELECT	22uF	20%	16V		IC601	8-759-111-44	IC	uPC4570C-1			
C311	1-162-289-31	CERAMIC	390PF	10%	50V		IC602	8-759-143-54	IC	uPC1330HA			
C313	1-162-282-31	CERAMIC	100PF	10%	50V		IC611	8-759-111-44	IC	uPC4570C-1			
C314	1-130-487-00	MYLAR	0.022uF	5%	50V		< COIL >						
C315	1-126-233-11	ELECT	22uF	20%	25V		L331	1-410-780-11	INDUCTOR	27mH			
C331	1-137-427-11	FILM	120PF	5%	50V		L431	1-410-780-11	INDUCTOR	27mH			
C332	1-162-288-31	CERAMIC	330PF	10%	50V		< TRANSISTOR >						
C333	1-162-209-31	CERAMIC	27PF	5%	50V		Q621	8-729-142-46	TRANSISTOR	2SC2001-LK			
C401	1-162-289-31	CERAMIC	390PF	10%	50V		Q622	8-729-142-46	TRANSISTOR	2SC2001-LK			
C402	1-126-968-11	ELECT	100uF	20%	6.3V		Q623	8-729-801-93	TRANSISTOR	2SD1387			
C403	1-162-282-31	CERAMIC	100PF	10%	50V		Q651	8-729-900-65	TRANSISTOR	DTA144ES			
C404	1-130-483-00	MYLAR	0.01uF	5%	50V		< RESISTOR >						
C405	1-107-715-11	ELECT	22uF	20%	16V		R301	1-247-881-00	CARBON	120K	5%	1/4W	
C411	1-162-289-31	CERAMIC	390PF	10%	50V		R302	1-249-409-11	CARBON	220	5%	1/4W	
C413	1-162-282-31	CERAMIC	100PF	10%	50V		R303	1-249-433-11	CARBON	22K	5%	1/4W	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V		R304	1-247-889-00	CARBON	270K	5%	1/4W	
C415	1-126-233-11	ELECT	22uF	20%	25V		R305	1-247-858-11	CARBON	13K	5%	1/4W	
C431	1-137-427-11	FILM	120PF	5%	50V		R311	1-247-881-00	CARBON	120K	5%	1/4W	
C432	1-162-288-31	CERAMIC	330PF	10%	50V		R312	1-247-807-31	CARBON	100	5%	1/4W	
C433	1-162-209-31	CERAMIC	27PF	5%	50V		R314	1-247-882-11	CARBON	130K	5%	1/4W	
C601	1-104-396-11	ELECT	10uF	20%	16V		R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
C602	1-104-396-11	ELECT	10uF	20%	16V		R331	1-249-430-11	CARBON	12K	5%	1/4W	
C611	1-124-907-11	ELECT	10uF	20%	50V		R401	1-247-881-00	CARBON	120K	5%	1/4W	
C612	1-124-907-11	ELECT	10uF	20%	50V		R402	1-249-409-11	CARBON	220	5%	1/4W	
C621	1-137-150-11	FILM	0.01uF	5%	100V		R403	1-249-433-11	CARBON	22K	5%	1/4W	
C622	1-126-961-11	ELECT	2.2uF	20%	50V		R404	1-247-889-00	CARBON	270K	5%	1/4W	
C623	1-136-155-00	FILM	0.015uF	5%	50V		R405	1-247-858-11	CARBON	13K	5%	1/4W	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V								
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V								
C627	1-124-903-11	ELECT	1uF	20%	50V								
C628	1-136-153-00	FILM	0.01uF	5%	50V								

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R411	1-247-881-00	CARBON	120K	5%	1/4W	C113	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
R412	1-247-807-31	CARBON	100	5%	1/4W	C114	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
R414	1-247-882-11	CARBON	130K	5%	1/4W	C115	1-126-607-11	ELECT CHIP	47uF 20%	4V	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	C116	1-163-016-00	CERAMIC CHIP	0.0039uF 10%	50V	
R431	1-249-430-11	CARBON	12K	5%	1/4W						
R601	1-249-409-11	CARBON	220	5%	1/4W	C117	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
R602	1-249-409-11	CARBON	220	5%	1/4W	C118	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	
R608	1-249-409-11	CARBON	220	5%	1/4W	C119	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
R609	1-249-433-11	CARBON	22K	5%	1/4W	C120	1-124-779-00	ELECT CHIP	10uF 20%	16V	
R611	1-249-409-11	CARBON	220	5%	1/4W	C121	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
R612	1-249-409-11	CARBON	220	5%	1/4W	C122	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
△ R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	C123	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
△ R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	C124	1-126-607-11	ELECT CHIP	47uF 20%	4V	
R623	1-249-432-11	CARBON	18K	5%	1/4W	C125	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
R624	1-249-432-11	CARBON	18K	5%	1/4W	C126	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
R625	1-249-429-11	CARBON	10K	5%	1/4W	C127	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
R651	1-247-856-00	CARBON	11K	5%	1/4W	C128	1-163-135-00	CERAMIC CHIP	560PF 5%	50V	
R652	1-247-856-00	CARBON	11K	5%	1/4W	C129	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
R653	1-249-441-11	CARBON	100K	5%	1/4W	C130	1-164-336-11	CERAMIC CHIP	0.33uF	25V	
						C131	1-164-346-11	CERAMIC CHIP	1uF	16V	
< VARIABLE RESISTOR >						C140	1-110-501-11	CERAMIC CHIP	0.33uF	50V	
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K				C154	1-163-235-11	CERAMIC CHIP	22PF 5%	50V	
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K				C161	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
RV341	1-238-551-11	RES, ADJ, CARBON 220K				C162	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K				C163	1-163-117-00	CERAMIC CHIP	100PF 5%	50V	
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K									
RV441	1-238-551-11	RES, ADJ, CARBON 220K				C164	1-163-145-00	CERAMIC CHIP	0.0015uF 5%	50V	
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K				C165	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K				C166	1-163-137-00	CERAMIC CHIP	680PF 5%	50V	
						C167	1-163-121-00	CERAMIC CHIP	150PF 5%	50V	
						C168	1-163-137-00	CERAMIC CHIP	680PF 5%	50V	
< TRANSFORMER >						C169	1-163-121-00	CERAMIC CHIP	150PF 5%	50V	
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION				C170	1-163-099-00	CERAMIC CHIP	18PF 5%	50V	
*****						C171	1-163-237-11	CERAMIC CHIP	27PF 5%	50V	
						C173	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
						C174	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
*	A-4699-522-A	BD BOARD, COMPLETE									
*****						C175	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
< CAPACITOR >						C176	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V	C177	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C178	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
C103	1-164-346-11	CERAMIC CHIP	1uF		16V	C179	1-163-038-91	CERAMIC CHIP	0.1uF	25V	
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V						
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	C181	1-126-205-11	ELECT CHIP	47uF 20%	6.3V	
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	C182	1-126-393-11	ELECT	33uF 20%	10V	
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C183	1-124-778-00	ELECT CHIP	22uF 20%	6.3V	
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C185	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	C188	1-163-235-11	CERAMIC CHIP	22PF 5%	50V	
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V						
						< CONNECTOR >					
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	CNU101	1-777-937-11	CONNECTOR, FFC/FPC 16P			

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BD LED

- 103 -

BD LED	CD MOTOR	CD-A SW	CD-B1 SW	CD-B2 SW
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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
< RESISTOR >						< SWITCH >					
R201	1-247-863-91	CARBON	22K	5%	1/4W	S661	1-554-303-21	SWITCH, TACTILE (DISC 1)			
R202	1-249-411-11	CARBON	330	5%	1/4W	S662	1-554-303-21	SWITCH, TACTILE (DISC 2)			
R203	1-249-437-11	CARBON	47K	5%	1/4W	S663	1-554-303-21	SWITCH, TACTILE (DISC 3)			
*****						S664	1-554-303-21	SWITCH, TACTILE (DISC 4)			
* A-4673-765-A CD MOTOR BOARD, COMPLETE						S665	1-554-303-21	SWITCH, TACTILE (DISC 5)			
*****						S666	1-554-303-21	SWITCH, TACTILE (FLASH)			
< CAPACITOR >						S667	1-554-303-21	SWITCH, TACTILE (NON-STOP)			
< CAPACITOR >						S668	1-554-303-21	SWITCH, TACTILE (LOOP)			

C201	1-124-907-11	ELECT	10uF	20%	50V	*	1-664-010-11	CD-B1 SW BOARD			
C202	1-164-159-21	CERAMIC	0.1uF		50V						
C203	1-124-907-11	ELECT	10uF	20%	50V						
< CONNECTOR >						< CONNECTOR >					
* CN201	1-568-947-11	PIN, CONNECTOR 9P				* CN642	1-568-943-11	PIN, CONNECTOR 5P			
< IC >						< DIODE >					
IC201	8-759-365-94	IC TA8409S				D645	8-719-058-03	DIODE	SEL5423E-TP15	(▷ CD PLAY)	
< COIL >						D646	8-719-057-97	DIODE	SEL5923A-TP15	(■ PAUSE)	
< COIL >						D647	8-719-058-03	DIODE	SEL5423E-TP15	(▷ CD PLAY)	
L201	1-408-117-00	INDUCTOR	10uH			< RESISTOR >					
< RESISTOR >						R745	1-249-419-11	CARBON	1.5K	5%	1/4W
R205	1-249-427-11	CARBON	6.8K	5%	1/4W	R746	1-249-421-11	CARBON	2.2K	5%	1/4W
R206	1-249-425-11	CARBON	4.7K	5%	1/4W	R747	1-247-843-11	CARBON	3.3K	5%	1/4W
< SWITCH >						R748	1-249-425-11	CARBON	4.7K	5%	1/4W
S201	1-762-587-11	SWITCH, PUSH (1 KEY)				R749	1-247-807-31	CARBON	100	5%	1/4W
*****						R750	1-247-807-31	CARBON	100	5%	1/4W
* 1-664-009-11 CD-A SW BOARD						R751	1-247-807-31	CARBON	100	5%	1/4W
*****						< SWITCH >					
< DIODE >						S676	1-554-303-21	SWITCH, TACTILE	(▷)		
< DIODE >						S677	1-554-303-21	SWITCH, TACTILE	(■)		
< DIODE >						S678	1-554-303-21	SWITCH, TACTILE	(■)		
D641	8-719-058-04	DIODE	SEL5223S-TP15 (NON-STOP)			S679	1-554-303-21	SWITCH, TACTILE	(DISC SKIP)		
< RESISTOR >						*****					
< RESISTOR >						* 1-664-011-11	CD-B2 SW BOARD				
< RESISTOR >						*****					
R731	1-247-843-11	CARBON	3.3K	5%	1/4W	< RESISTOR >					
R732	1-249-425-11	CARBON	4.7K	5%	1/4W	< RESISTOR >					
R733	1-249-427-11	CARBON	6.8K	5%	1/4W	< RESISTOR >					
R734	1-249-429-11	CARBON	10K	5%	1/4W	R752	1-249-427-11	CARBON	6.8K	5%	1/4W
R735	1-249-432-11	CARBON	18K	5%	1/4W	R753	1-249-429-11	CARBON	10K	5%	1/4W
R736	1-249-436-11	CARBON	39K	5%	1/4W	R754	1-249-432-11	CARBON	18K	5%	1/4W
R737	1-247-881-00	CARBON	120K	5%	1/4W	R755	1-249-436-11	CARBON	39K	5%	1/4W
R741	1-247-807-31	CARBON	100	5%	1/4W	R756	1-247-881-00	CARBON	120K	5%	1/4W

CD-B2 SW

DOOR SW

HEADPHONE-MIC

LEAF SWITCH

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S681	1-554-303-21	SWITCH, TACTILE (▷▷)	
S682	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S683	1-554-303-21	SWITCH, TACTILE (PLAY MODE)	
S684	1-554-303-21	SWITCH, TACTILE (1/ALL DISCS)	
S685	1-554-303-21	SWITCH, TACTILE (EDIT)	
S686	1-554-303-21	SWITCH, TACTILE (<◁)	
S711	1-467-968-11	ENCODER, ROTARY (I<<< AMS ▷▷I)	

*	1-664-016-11	DOOR SW BOARD	

		< CAPACITOR >	
C691	1-164-159-21	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CN661	1-506-481-11	PIN, CONNECTOR 2P	
		< SWITCH >	
S691	1-771-057-11	SWITCH (▲ OPEN)	

*	A-4392-452-A	HEADPHONE-MIC BOARD, COMPLETE	

		< CAPACITOR >	
C760	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C761	1-126-961-11	ELECT 2.2uF 20% 50V	
C764	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C765	1-162-215-31	CERAMIC 47PF 5% 50V	
C766	1-162-290-31	CERAMIC 470PF 10% 50V	
C767	1-162-215-31	CERAMIC 47PF 5% 50V	
C769	1-162-282-31	CERAMIC 100PF 10% 50V	
C770	1-126-961-11	ELECT 2.2uF 20% 50V	
C771	1-126-959-11	ELECT 0.47uF 20% 50V	
C773	1-126-964-11	ELECT 10uF 20% 50V	
C774	1-126-964-11	ELECT 10uF 20% 50V	
C775	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C776	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C794	1-164-159-21	CERAMIC 0.1uF 50V	
C795	1-164-159-21	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
* CN701	1-568-935-11	PIN, CONNECTOR 8P	
		< IC >	
IC760	8-759-634-51	IC M5218AP	

Ref. No.	Part No.	Description	Remark
		< JACK >	
J760	1-770-226-11	JACK (LARGE TYPE) (PHONES)	
J761	1-770-226-11	JACK (LARGE TYPE) (MIC)	
		< RESISTOR >	
R760	1-249-429-11	CARBON 10K 5% 1/4W	
R761	1-249-417-11	CARBON 1K 5% 1/4W	
R764	1-249-441-11	CARBON 100K 5% 1/4W	
R765	1-249-417-11	CARBON 1K 5% 1/4W	
R766	1-247-863-91	CARBON 22K 5% 1/4W	
R767	1-249-429-11	CARBON 10K 5% 1/4W	
R769	1-247-885-00	CARBON 180K 5% 1/4W	
R770	1-247-807-31	CARBON 100 5% 1/4W	
		< VARIABLE RESISTOR >	
RV760	1-225-366-11	RES, VAR, CARBON 50K (MIC LEVEL)	

*	1-650-669-11	LEAF SWITCH BOARD	

		< CONNECTOR >	
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P	
		< TRANSISTOR >	
Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H	
Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA-H	
		< RESISTOR >	
R1001	1-247-818-11	CARBON 300 5% 1/4W	
R1002	1-247-820-11	CARBON 360 5% 1/4W	
R1003	1-249-414-11	CARBON 560 5% 1/4W	
R1004	1-247-834-11	CARBON 1.3K 5% 1/4W	
R1005	1-247-818-11	CARBON 300 5% 1/4W	
		< SWITCH >	
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)	
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)	
S1004	1-571-281-21	SWITCH, LEAF (A HALF)	
S1005	1-571-281-21	SWITCH, LEAF (A CrO2)	
S1006	1-572-248-21	SWITCH, LEAF (REC A)	
S1007	1-572-248-21	SWITCH, LEAF (B HALF)	
S1008	1-571-281-21	SWITCH, LEAF (REC B)	
S1009	1-571-281-21	SWITCH, LEAF (B CrO2)	

LED

MAIN

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
*	1-664-017-11	LED BOARD *****					C151	1-162-288-31	CERAMIC	330PF	10%	50V	(AEP, UK, EE)
		< CONNECTOR >					C152	1-162-282-31	CERAMIC	100PF	10%	50V	
							C153	1-162-282-31	CERAMIC	100PF	10%	50V	
CN671	1-506-481-11	PIN, CONNECTOR 2P					C154	1-126-962-11	ELECT	3.3uF	20%	50V	
		< DIODE >					C155	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
D671	8-719-058-03	DIODE SEL5423E-TP15					C156	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
D672	8-719-058-03	DIODE SEL5423E-TP15					C157	1-126-956-91	ELECT	0.1uF	20%	50V	
D673	8-719-058-03	DIODE SEL5423E-TP15					C158	1-126-967-11	ELECT	47uF	20%	10V	(AEP, UK, EE)
D674	8-719-058-03	DIODE SEL5423E-TP15					C171	1-162-286-21	CERAMIC	220PF	10%	50V	
		< RESISTOR >					C173	1-162-306-11	CERAMIC	0.01uF	20%	16V	
							C181	1-136-495-11	FILM	0.068uF	5%	50V	(AEP, UK, EE)
R791	1-249-412-11	CARBON 390 5% 1/4W					C182	1-136-495-11	FILM	0.068uF	5%	50V	(AEP, UK, EE)

*	A-4392-438-A	MAIN BOARD, COMPLETE (US, CND)					C183	1-162-294-31	CERAMIC	0.001uF	10%	50V	(AEP, UK, EE)
*	A-4392-457-A	MAIN BOARD, COMPLETE (E, AR, MX)					C184	1-164-159-21	CERAMIC	0.1uF		50V	(AEP, UK, EE)
*	A-4392-706-A	MAIN BOARD, COMPLETE (AUS, PX)											
*	A-4392-461-A	MAIN BOARD, COMPLETE (AEP, UK)					C201	1-136-169-00	FILM	0.22uF	5%	50V	(AEP, UK, EE)
*	A-4392-703-A	MAIN BOARD, COMPLETE (EE)					C202	1-136-169-00	FILM	0.22uF	5%	50V	
		*****					C203	1-130-493-00	MYLAR	0.068uF	5%	50V	
*	4-870-539-11	PLATE, GROUND					C204	1-130-493-00	MYLAR	0.068uF	5%	50V	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S					C205	1-130-486-00	MYLAR	0.018uF	10%	50V	
		< CAPACITOR >					C206	1-130-486-00	MYLAR	0.018uF	10%	50V	
C101	1-162-288-31	CERAMIC 330PF 10% 50V					C207	1-130-480-00	MYLAR	0.0056uF	5%	50V	
		(AEP, UK, EE)					C208	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C102	1-162-282-31	CERAMIC 100PF 10% 50V					C209	1-130-474-00	MYLAR	0.0018uF	5%	50V	
C103	1-162-282-31	CERAMIC 100PF 10% 50V					C210	1-126-964-11	ELECT	10uF	20%	50V	
C104	1-126-962-11	ELECT 3.3uF 20% 50V					C211	1-126-964-11	ELECT	10uF	20%	50V	
C105	1-162-600-11	CERAMIC 0.0047uF 30% 16V					C212	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C106	1-162-301-11	CERAMIC 0.0015uF 30% 16V					C213	1-136-169-00	FILM	0.22uF	5%	50V	
C107	1-126-956-91	ELECT 0.1uF 20% 50V					C214	1-136-169-00	FILM	0.22uF	5%	50V	
C108	1-126-967-11	ELECT 47uF 20% 10V					C215	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		(AEP, UK, EE)					C216	1-136-167-00	FILM	0.15uF	5%	50V	
C109	1-164-159-21	CERAMIC 0.1uF 50V					C221	1-126-967-11	ELECT	47uF	20%	10V	
		(AEP, UK, EE)					C222	1-126-967-11	ELECT	47uF	20%	10V	
C121	1-162-286-21	CERAMIC 220PF 10% 50V					C223	1-126-964-11	ELECT	10uF	20%	50V	
C123	1-162-306-11	CERAMIC 0.01uF 20% 16V					C224	1-162-290-31	CERAMIC	470PF	10%	50V	
C131	1-136-495-11	FILM 0.068uF 5% 50V					C226	1-126-964-11	ELECT	10uF	20%	50V	
		(AEP, UK, EE)					C227	1-164-159-21	CERAMIC	0.1uF		50V	
C132	1-136-495-11	FILM 0.068uF 5% 50V					C231	1-126-960-11	ELECT	1uF	20%	50V	
		(AEP, UK, EE)					C251	1-136-169-00	FILM	0.22uF	5%	50V	
C133	1-162-294-31	CERAMIC 0.001uF 10% 50V					C252	1-136-169-00	FILM	0.22uF	5%	50V	
		(AEP, UK, EE)					C253	1-130-493-00	MYLAR	0.068uF	5%	50V	
C134	1-164-159-21	CERAMIC 0.1uF 50V					C254	1-130-493-00	MYLAR	0.068uF	5%	50V	
		(AEP, UK, EE)					C255	1-130-486-00	MYLAR	0.018uF	10%	50V	
							C256	1-130-486-00	MYLAR	0.018uF	10%	50V	

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C257	1-130-480-00	MYLAR	0.0056uF	5%	50V		C1503	1-164-159-21	CERAMIC	0.1uF		50V	
C258	1-130-479-00	MYLAR	0.0047uF	5%	50V		C1504	1-126-960-11	ELECT	1uF	20%	50V	
							C1505	1-126-964-11	ELECT	10uF	20%	50V	
C259	1-130-474-00	MYLAR	0.0018uF	5%	50V		C1506	1-126-964-11	ELECT	10uF	20%	50V	
C260	1-126-964-11	ELECT	10uF	20%	50V								
C261	1-126-964-11	ELECT	10uF	20%	50V		C1507	1-126-960-11	ELECT	1uF	20%	50V	
C262	1-130-481-00	MYLAR	0.0068uF	5%	50V		C1508	1-126-933-11	ELECT	100uF	20%	10V	
C263	1-136-169-00	FILM	0.22uF	5%	50V		C1521	1-126-964-11	ELECT	10uF	20%	50V	
							C1522	1-126-964-11	ELECT	10uF	20%	50V	
C264	1-136-169-00	FILM	0.22uF	5%	50V		C1523	1-126-933-11	ELECT	100uF	20%	16V	
C276	1-126-964-11	ELECT	10uF	20%	50V								
C281	1-126-933-11	ELECT	100uF	20%	10V		C1531	1-164-159-21	CERAMIC	0.1uF		50V	
C282	1-126-961-11	ELECT	2.2uF	20%	50V		C1532	1-164-159-21	CERAMIC	0.1uF		50V	
C283	1-126-933-11	ELECT	100uF	20%	10V		C1533	1-164-159-21	CERAMIC	0.1uF		50V	
							C1534	1-126-935-11	ELECT	470uF	20%	16V	
C284	1-126-923-11	ELECT	220uF	20%	10V		C1551	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C291	1-126-959-11	ELECT	0.47uF	20%	50V								
C301	1-126-965-11	ELECT	22uF	20%	50V		C1552	1-162-290-31	CERAMIC	470PF	10%	50V	
C302	1-164-159-21	CERAMIC	0.1uF		50V		C1553	1-164-159-21	CERAMIC	0.1uF		50V	
C303	1-136-165-00	FILM	0.1uF	5%	50V		C1554	1-126-960-11	ELECT	1uF	20%	50V	
							C1555	1-126-964-11	ELECT	10uF	20%	50V	
C304	1-126-926-11	ELECT	1000uF	20%	10V		C1556	1-126-964-11	ELECT	10uF	20%	50V	
C305	1-162-306-11	CERAMIC	0.01uF	20%	16V								
C309	1-102-514-11	CERAMIC	22P	5%	50V		C1557	1-126-960-11	ELECT	1uF	20%	50V	
C310	1-102-514-11	CERAMIC	22P	5%	50V		C1558	1-126-933-11	ELECT	100uF	20%	10V	
C311	1-164-159-21	CERAMIC	0.1uF		50V								
									< CONNECTOR >				
C315	1-126-933-11	ELECT	100uF	20%	10V		CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P				
C390	1-126-933-11	ELECT	100uF	20%	10V		* CN102	1-568-836-11	SOCKET, CONNECTOR 17P				
C393	1-126-925-11	ELECT	470uF	20%	10V		* CN201	1-568-832-11	SOCKET, CONNECTOR 13P(EXCEPT AEP, UK, EE)				
C394	1-164-159-21	CERAMIC	0.1uF		50V		* CN201	1-568-834-11	SOCKET, CONNECTOR 15P(AEP, UK, EE)				
C396	1-126-961-11	ELECT	2.2uF	20%	50V		CN202	1-568-802-11	SOCKET, CONNECTOR 19P				
C398	1-126-961-11	ELECT	2.2uF	20%	50V		* CN203	1-568-936-11	PIN, CONNECTOR 9P				
C903	1-136-165-00	FILM	0.1uF	5%	50V		CN205	1-568-838-11	SOCKET, CONNECTOR 21P				
C904	1-126-937-11	ELECT	4700uF	20%	16V		* CN206	1-568-830-11	SOCKET, CONNECTOR 11P				
C906	1-126-933-11	ELECT	100uF	20%	10V		* CN207	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P				
C909	1-126-964-11	ELECT	10uF	20%	50V								
									< DIODE >				
C910	1-126-933-11	ELECT	100uF	20%	10V								
C911	1-126-964-11	ELECT	10uF	20%	50V		D141	8-719-987-63	DIODE	1N4148M			
C912	1-126-916-11	ELECT	1000uF	20%	6.3V		D281	8-719-815-85	DIODE	1S1585 (US, CND)			
C913	1-126-943-11	ELECT	2200uF	20%	25V		D281	8-719-987-63	DIODE	1N4148M (EXCEPT US, CND)			
C914	1-126-952-11	ELECT	1000uF	20%	16V		D291	8-719-987-63	DIODE	1N4148M			
							D301	8-719-200-82	DIODE	11ES2			
C915	1-126-967-11	ELECT	47uF	20%	16V								
C916	1-164-159-21	CERAMIC	0.1uF		50V		D302	8-719-200-82	DIODE	11ES2			
C917	1-126-968-11	ELECT	100uF	20%	50V		D303	8-719-987-63	DIODE	1N4148M			
C918	1-126-968-11	ELECT	100uF	20%	50V		D304	8-719-987-63	DIODE	1N4148M			
C919	1-126-964-11	ELECT	10uF	20%	50V		D305	8-719-987-63	DIODE	1N4148M			
							D306	8-719-987-63	DIODE	1N4148M			
C920	1-126-947-11	ELECT	47uF	20%	35V								
C953	1-136-165-00	FILM	0.1uF	5%	50V		D307	8-719-987-63	DIODE	1N4148M			
C954	1-126-768-11	ELECT	2200uF	20%	16V		D902	8-719-200-82	DIODE	11ES2			
C956	1-126-933-11	ELECT	100uF	20%	10V		D903	8-719-200-82	DIODE	11ES2			
C1501	1-130-479-00	MYLAR	0.0047uF	5%	50V		D904	8-719-200-82	DIODE	11ES2			
							D905	8-719-200-82	DIODE	11ES2			
C1502	1-162-290-31	CERAMIC	470PF	10%	50V								

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D906	8-719-200-82	DIODE 11ES2		Q232	8-729-900-63	TRANSISTOR DTA124ES	
D907	8-719-200-82	DIODE 11ES2		Q252	8-729-119-78	TRANSISTOR 2SC403SP-51	
D908	8-719-200-82	DIODE 11ES2					
D909	8-719-200-82	DIODE 11ES2		Q253	8-729-119-78	TRANSISTOR 2SC403SP-51	
D910	8-719-002-60	DIODE UZL-33L-TA		Q254	8-729-141-30	TRANSISTOR 2SC3623A-LK	
				Q281	8-729-900-36	TRANSISTOR DTC124ES	
D911	8-719-011-47	DIODE UZ-3.3BSB-TA		Q282	8-729-900-63	TRANSISTOR DTA124ES	
D912	8-719-987-63	DIODE 1N4148M		Q283	8-729-900-36	TRANSISTOR DTC124ES	
D913	8-719-200-82	DIODE 11ES2					
D914	8-719-200-82	DIODE 11ES2		Q301	8-729-119-78	TRANSISTOR 2SC403SP-51	
D915	8-719-001-43	DIODE UZL-11M1-TA		Q901	8-729-040-20	TRANSISTOR RT1P137L-TP	
				Q902	8-729-900-36	TRANSISTOR DTC124ES	
D951	8-719-987-63	DIODE 1N4148M		Q903	8-729-030-18	TRANSISTOR 2SD2525	
D952	8-719-987-63	DIODE 1N4148M		Q904	8-729-030-19	TRANSISTOR 2SB1640	
		< FERRITE BEAD >					
FB302	1-412-473-21	INDUCTOR (SMALL)		Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
		< IC >		Q906	8-729-900-63	TRANSISTOR DTA124ES	
				Q907	8-729-119-78	TRANSISTOR 2SC403SP-51	
IC101	8-759-634-50	IC M5218AL		Q1531	8-729-801-93	TRANSISTOR 2SD1387	
IC102	8-759-000-48	IC MC14052BCP		Q1532	8-729-900-80	TRANSISTOR DTC114ES	
IC201	8-759-331-39	IC M62427FP					
IC231	8-759-634-50	IC M5218AL		Q1533	8-729-900-80	TRANSISTOR DTC114ES	
IC281	8-759-111-68	IC uPC1237HA		Q1534	8-729-119-77	TRANSISTOR 2SA1175-FEK	
				Q1535	8-729-900-80	TRANSISTOR DTC114ES	
						< RESISTOR >	
IC301	8-759-459-31	IC uPD780018YGF-013-3BA		R101	1-249-417-11	CARBON 1K 5%	1/4W (AEP, UK, EE)
IC302	8-759-635-63	IC M51943BSL		R102	1-249-417-11	CARBON 1K 5%	1/4W
IC901	8-759-288-53	IC LA5617		R103	1-249-437-11	CARBON 47K 5%	1/4W
IC902	8-759-604-86	IC M5F7807L		R104	1-249-417-11	CARBON 1K 5%	1/4W
IC903	8-759-231-53	IC TA7805S					
				R105	1-247-897-11	CARBON 560K 5%	1/4W
IC904	8-759-231-58	IC TA7812S		R106	1-249-437-11	CARBON 47K 5%	1/4W
IC1501	8-759-363-21	IC HA12203NT		R107	1-249-417-11	CARBON 1K 5%	1/4W
IC1502	8-759-822-09	IC LB1641		R108	1-249-441-11	CARBON 100K 5%	1/4W
		< JACK >		R109	1-247-815-91	CARBON 220 5%	1/4W (AEP, UK, EE)
J101	1-695-188-31	JACK, PIN 4P (PHONO, VIDEO IN)					
		< COIL >		R121	1-249-424-11	CARBON 3.9K 5%	1/4W
				R122	1-247-887-00	CARBON 220K 5%	1/4W
L131	1-420-872-00	COIL, AIR-CORE (AEP, UK, EE)		R131	1-260-076-11	CARBON 10 5%	1/2W (AEP, UK, EE)
L181	1-420-872-00	COIL, AIR-CORE (AEP, UK, EE)					
L301	1-410-509-11	INDUCTOR 10uH		R132	1-260-076-11	CARBON 10 5%	1/2W (AEP, UK, EE)
L393	1-410-515-11	INDUCTOR 33uH					
		< TRANSISTOR >		R133	1-260-091-11	CARBON 220 5%	1/2W
Q141	8-729-140-82	TRANSISTOR 2SA988-PAFAEA (US, CND)		R134	1-260-091-11	CARBON 220 5%	1/2W
Q141	8-729-119-76	TRANSISTOR 2SA1175-HFE (EXCEPT US, CND)		R140	1-249-429-11	CARBON 10K 5%	1/4W
Q142	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA (US, CND)		R141	1-249-437-11	CARBON 47K 5%	1/4W
Q142	8-729-119-78	TRANSISTOR 2SC403SP-51 (EXCEPT US, CND)		R142	1-249-429-11	CARBON 10K 5%	1/4W
Q202	8-729-119-78	TRANSISTOR 2SC403SP-51		△R147	1-215-893-11	METAL OXIDE 1.5K 5%	2W F (US, CND)
				△R147	1-215-892-11	METAL OXIDE 1K 5%	2W F (AEP, UK, EE)
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51		△R147	1-216-456-00	METAL OXIDE 820 5%	2W F (E, AR, MX, AUS, PX)
Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK					
Q231	8-729-900-63	TRANSISTOR DTA124ES					

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R151	1-249-417-11	CARBON	1K	5%	1/4W	(AEP, UK, EE)	R267	1-249-437-11	CARBON	47K	5%	1/4W	
R152	1-249-417-11	CARBON	1K	5%	1/4W		R271	1-249-425-11	CARBON	4.7K	5%	1/4W	
R153	1-249-437-11	CARBON	47K	5%	1/4W		R272	1-249-425-11	CARBON	4.7K	5%	1/4W	
R154	1-249-417-11	CARBON	1K	5%	1/4W		R276	1-249-421-11	CARBON	2.2K	5%	1/4W	
							R277	1-249-441-11	CARBON	100K	5%	1/4W	
R155	1-247-897-11	CARBON	560K	5%	1/4W		R278	1-249-429-11	CARBON	10K	5%	1/4W	
R156	1-249-437-11	CARBON	47K	5%	1/4W		R281	1-249-429-11	CARBON	10K	5%	1/4W	
R157	1-249-417-11	CARBON	1K	5%	1/4W								(US, CND)
R158	1-249-441-11	CARBON	100K	5%	1/4W		R281	1-249-425-11	CARBON	4.7K	5%	1/4W	
R159	1-247-815-91	CARBON	220	5%	1/4W	(AEP, UK, EE)							(EXCEPT US, CND)
							R282	1-249-429-11	CARBON	10K	5%	1/4W	(US, CND)
R171	1-249-424-11	CARBON	3.9K	5%	1/4W								
R172	1-247-887-00	CARBON	220K	5%	1/4W		R282	1-249-425-11	CARBON	4.7K	5%	1/4W	
R181	1-260-076-11	CARBON	10	5%	1/2W	(AEP, UK, EE)							(EXCEPT US, CND)
R182	1-260-076-11	CARBON	10	5%	1/2W	(AEP, UK, EE)	R283	1-249-435-11	CARBON	33K	5%	1/4W	
							R284	1-247-791-91	CARBON	22	5%	1/4W	
							R285	1-249-441-11	CARBON	100K	5%	1/4W	
R183	1-260-091-11	CARBON	220	5%	1/2W		R286	1-249-429-11	CARBON	10K	5%	1/4W	
R184	1-260-091-11	CARBON	220	5%	1/2W		R287	1-249-429-11	CARBON	10K	5%	1/4W	
R201	1-249-429-11	CARBON	10K	5%	1/4W								(US, CND)
R202	1-247-863-91	CARBON	22K	5%	1/4W		R287	1-249-427-11	CARBON	6.8K	5%	1/4W	
R203	1-249-441-11	CARBON	100K	5%	1/4W								(EXCEPT US, CND)
R205	1-247-863-91	CARBON	22K	5%	1/4W		R288	1-249-438-11	CARBON	56K	5%	1/4W	
R206	1-249-421-11	CARBON	2.2K	5%	1/4W		R289	1-249-437-11	CARBON	47K	5%	1/4W	
R207	1-249-431-11	CARBON	15K	5%	1/4W		R291	1-247-863-91	CARBON	22K	5%	1/4W	
R209	1-249-441-11	CARBON	100K	5%	1/4W		R292	1-247-863-91	CARBON	22K	5%	1/4W	
R210	1-247-891-00	CARBON	330K	5%	1/4W		R293	1-249-417-11	CARBON	1K	5%	1/4W	
							R294	1-249-441-11	CARBON	100K	5%	1/4W	
R212	1-249-411-11	CARBON	330	5%	1/4W		R295	1-247-903-00	CARBON	1M	5%	1/4W	
R213	1-249-429-11	CARBON	10K	5%	1/4W		R301	1-249-417-11	CARBON	1K	5%	1/4W	
R214	1-249-437-11	CARBON	47K	5%	1/4W		R302	1-249-429-11	CARBON	10K	5%	1/4W	
R215	1-247-903-00	CARBON	1M	5%	1/4W		R303	1-249-437-11	CARBON	47K	5%	1/4W	
R216	1-249-429-11	CARBON	10K	5%	1/4W		R304	1-249-437-11	CARBON	47K	5%	1/4W	
R217	1-249-437-11	CARBON	47K	5%	1/4W								
R221	1-249-425-11	CARBON	4.7K	5%	1/4W		R305	1-249-429-11	CARBON	10K	5%	1/4W	
R222	1-249-425-11	CARBON	4.7K	5%	1/4W		R313	1-247-807-31	CARBON	100	5%	1/4W	
R226	1-249-421-11	CARBON	2.2K	5%	1/4W		R316	1-249-429-11	CARBON	10K	5%	1/4W	
R227	1-249-441-11	CARBON	100K	5%	1/4W		R318	1-249-429-11	CARBON	10K	5%	1/4W	
							R319	1-249-429-11	CARBON	10K	5%	1/4W	
R228	1-249-429-11	CARBON	10K	5%	1/4W								
R231	1-249-437-11	CARBON	47K	5%	1/4W		R320	1-249-429-11	CARBON	10K	5%	1/4W	
R232	1-249-437-11	CARBON	47K	5%	1/4W		R325	1-249-427-11	CARBON	6.8K	5%	1/4W	
R234	1-247-886-11	CARBON	200K	5%	1/4W								(E, AR, EE, MX)
R235	1-249-421-11	CARBON	2.2K	5%	1/4W		R325	1-249-425-11	CARBON	4.7K	5%	1/4W	
													(AUS, PX)
R236	1-249-441-11	CARBON	100K	5%	1/4W		R325	1-247-843-11	CARBON	3.3K	5%	1/4W	
R253	1-249-441-11	CARBON	100K	5%	1/4W								(AEP, UK)
R257	1-249-431-11	CARBON	15K	5%	1/4W								
R259	1-249-441-11	CARBON	100K	5%	1/4W		R326	1-249-425-11	CARBON	4.7K	5%	1/4W	
R260	1-247-891-00	CARBON	330K	5%	1/4W								(E, AR, MX)
							R326	1-249-427-11	CARBON	6.8K	5%	1/4W	
R262	1-249-411-11	CARBON	330	5%	1/4W								(AEP, UK, AUS, PX)
R263	1-249-429-11	CARBON	10K	5%	1/4W		R326	1-249-435-11	CARBON	33K	5%	1/4W (EE)	
R264	1-249-437-11	CARBON	47K	5%	1/4W								
R265	1-247-903-00	CARBON	1M	5%	1/4W		R327	1-247-807-31	CARBON	100	5%	1/4W	
R266	1-249-429-11	CARBON	10K	5%	1/4W		R328	1-247-807-31	CARBON	100	5%	1/4W	

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R330	1-247-807-31	CARBON	100	5%	1/4W	R1507	1-249-428-11	CARBON	8.2K	5%	1/4W
R331	1-247-807-31	CARBON	100	5%	1/4W	R1521	1-249-430-11	CARBON	12K	5%	1/4W
R332	1-247-807-31	CARBON	100	5%	1/4W	R1522	1-249-426-11	CARBON	5.6K	5%	1/4W
R333	1-247-807-31	CARBON	100	5%	1/4W	R1524	1-249-429-11	CARBON	10K	5%	1/4W
R339	1-247-807-31	CARBON	100	5%	1/4W	R1525	1-249-432-11	CARBON	18K	5%	1/4W
R340	1-247-807-31	CARBON	100	5%	1/4W	R1526	1-249-429-11	CARBON	10K	5%	1/4W
R341	1-247-807-31	CARBON	100	5%	1/4W	R1527	1-249-429-11	CARBON	10K	5%	1/4W
R342	1-247-807-31	CARBON	100	5%	1/4W	R1531	1-247-843-11	CARBON	3.3K	5%	1/4W
R343	1-247-807-31	CARBON	100	5%	1/4W	R1532	1-249-411-11	CARBON	330	5%	1/4W
R344	1-247-807-31	CARBON	100	5%	1/4W	R1533	1-249-427-11	CARBON	6.8K	5%	1/4W
R345	1-247-807-31	CARBON	100	5%	1/4W	R1534	1-249-429-11	CARBON	10K	5%	1/4W
R346	1-247-807-31	CARBON	100	5%	1/4W	R1535	1-249-425-11	CARBON	4.7K	5%	1/4W
R349	1-247-807-31	CARBON	100	5%	1/4W	R1536	1-249-425-11	CARBON	4.7K	5%	1/4W
R350	1-247-807-31	CARBON	100	5%	1/4W	R1541	1-249-425-11	CARBON	4.7K	5%	1/4W
R351	1-247-807-31	CARBON	100	5%	1/4W	R1542	1-249-425-11	CARBON	4.7K	5%	1/4W
R352	1-247-807-31	CARBON	100	5%	1/4W	R1543	1-249-425-11	CARBON	4.7K	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W	R1544	1-249-417-11	CARBON	1K	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W	R1545	1-249-437-11	CARBON	47K	5%	1/4W
R355	1-247-807-31	CARBON	100	5%	1/4W	R1546	1-249-437-11	CARBON	47K	5%	1/4W
R356	1-247-807-31	CARBON	100	5%	1/4W	R1547	1-249-437-11	CARBON	47K	5%	1/4W
R357	1-247-807-31	CARBON	100	5%	1/4W	R1548	1-249-437-11	CARBON	47K	5%	1/4W
R359	1-247-807-31	CARBON	100	5%	1/4W	R1551	1-247-863-91	CARBON	22K	5%	1/4W
R360	1-247-807-31	CARBON	100	5%	1/4W	R1552	1-249-417-11	CARBON	1K	5%	1/4W
R366	1-247-807-31	CARBON	100	5%	1/4W	R1553	1-249-426-11	CARBON	5.6K	5%	1/4W
R367	1-249-429-11	CARBON	10K	5%	1/4W	R1554	1-247-840-00	CARBON	2.4K	5%	1/4W
R368	1-247-843-11	CARBON	3.3K	5%	1/4W	R1555	1-247-863-91	CARBON	22K	5%	1/4W
R369	1-249-429-11	CARBON	10K	5%	1/4W	R1556	1-249-421-11	CARBON	2.2K	5%	1/4W
R381	1-247-807-31	CARBON	100	5%	1/4W	R1557	1-249-428-11	CARBON	8.2K	5%	1/4W
R384	1-249-429-11	CARBON	10K	5%	1/4W	< VARIABLE RESISTOR >					
R395	1-247-807-31	CARBON	100	5%	1/4W	RV1501	1-238-598-11	RES, ADJ, CARBON 2.2K			
R396	1-249-435-11	CARBON	33K	5%	1/4W			RV1551	1-238-598-11	RES, ADJ, CARBON 2.2K	
R397	1-247-807-31	CARBON	100	5%	1/4W	< RELAY >					
R398	1-249-435-11	CARBON	33K	5%	1/4W	RY141	1-755-141-11	RELAY (US, CND)			
R417	1-249-441-11	CARBON	100K	5%	1/4W			RY141	1-515-920-11	RELAY (24V) (EXCEPT US, CND)	
R913	1-247-815-91	CARBON	220	5%	1/4W	< TERMINAL >					
R914	1-249-417-11	CARBON	1K	5%	1/4W	TM131	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SPEAKER)			
R915	1-249-425-11	CARBON	4.7K	5%	1/4W			< VIBRATOR >			
R916	1-247-815-91	CARBON	220	5%	1/4W	X301	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
R917	1-247-815-91	CARBON	220	5%	1/4W			X302	1-567-098-41	VIBRATOR, CRYSTAL (32.768MHz)	
R918	1-249-425-11	CARBON	4.7K	5%	1/4W	*****					
R920	1-249-417-11	CARBON	1K	5%	1/4W						
R921	1-247-895-91	CARBON	470K	5%	1/4W						
R951	1-249-425-11	CARBON	4.7K	5%	1/4W						
R952	1-249-425-11	CARBON	4.7K	5%	1/4W						
R1501	1-249-435-11	CARBON	33K	5%	1/4W						
R1502	1-249-417-11	CARBON	1K	5%	1/4W						
R1503	1-249-426-11	CARBON	5.6K	5%	1/4W						
R1504	1-247-840-00	CARBON	2.4K	5%	1/4W						
R1505	1-247-863-91	CARBON	22K	5%	1/4W						
R1506	1-249-421-11	CARBON	2.2K	5%	1/4W						

PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4392-444-A	PANEL BOARD, COMPLETE *****		D612	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)	
				D613	8-719-058-04	DIODE SEL5223S-TP15 (ENTER/NEXT)	
				D614	8-719-058-04	DIODE SEL5223S-TP15 (GROOVE)	
*	4-978-168-01	HOLDER, FL TUBE		D616	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT)	
		< CAPACITOR >		D617	8-719-058-04	DIODE SEL5223S-TP15 (ENTER)	
C601	1-126-967-11	ELECT 47uF 20% 50V		D618	8-719-058-04	DIODE SEL5223S-TP15 (FILE 1)	
C602	1-162-306-11	CERAMIC 0.01uF 20% 16V		D619	8-719-058-04	DIODE SEL5223S-TP15 (FILE 2)	
C603	1-126-963-11	ELECT 4.7uF 20% 50V		D620	8-719-058-04	DIODE SEL5223S-TP15 (FILE 3)	
C604	1-126-960-11	ELECT 1uF 20% 50V		D621	8-719-058-04	DIODE SEL5223S-TP15 (FILE 4)	
C606	1-126-960-11	ELECT 1uF 20% 50V		D622	8-719-058-04	DIODE SEL5223S-TP15 (FILE 5)	
C608	1-124-584-00	ELECT 100uF 20% 10V		D623	8-719-058-04	DIODE SEL5223S-TP15 (P.FILE)	
C610	1-162-306-11	CERAMIC 0.01uF 20% 16V		D624	8-719-058-04	DIODE SEL5223S-TP15 (MENU 2)	
C611	1-162-306-11	CERAMIC 0.01uF 20% 16V		D625	8-719-058-04	DIODE SEL5223S-TP15 (MENU 1)	
C621	1-126-957-11	ELECT 0.22uF 20% 50V				< FERRITE BEAD >	
C622	1-162-306-11	ELECT 0.01uF 20% 16V					
C623	1-124-464-11	ELECT 0.22uF 20% 50V		FB601	1-412-473-21	INDUCTOR (SMALL TYPE)	
C624	1-136-159-00	ELECT 0.033uF 20% 50V				< FILTER >	
C625	1-162-302-11	FILM 2200PF 5% 16V					
C626	1-124-464-11	ELECT 0.22uF 20% 50V		FL601	1-517-619-11	INDICATOR TUBE, FLUORESCENT	
C632	1-124-464-11	ELECT 0.22uF 20% 50V				< COIL >	
C641	1-162-286-21	CERAMIC 220 10% 50V					
C642	1-162-286-21	CERAMIC 220 10% 50V		L601	1-410-509-11	MICRO INDUCTOR 10uH	
C643	1-162-286-21	CERAMIC 220 10% 50V				< IC >	
C644	1-162-286-21	CERAMIC 220 10% 50V					
C645	1-162-286-21	CERAMIC 220 10% 50V		IC601	8-759-446-26	IC TMP87CH74-6544	
C646	1-162-286-21	CERAMIC 220 10% 50V		IC602	8-759-459-84	IC NJL56H400	
C647	1-162-286-21	CERAMIC 220 10% 50V				< TRANSISTOR >	
C648	1-162-286-21	CERAMIC 220 10% 50V					
C649	1-162-286-21	CERAMIC 220 10% 50V		Q601	8-729-119-78	TRANSISTOR 2SC403SP-51	
C650	1-162-286-21	CERAMIC 220 10% 50V		Q602	8-729-118-00	TRANSISTOR 2SB1116-L	
C651	1-162-286-21	CERAMIC 220 10% 50V		Q603	8-729-118-00	TRANSISTOR 2SB1116-L	
C652	1-162-286-21	CERAMIC 220 10% 50V		Q604	8-729-119-77	TRANSISTOR 2SA1175-FEK	
C653	1-162-286-21	CERAMIC 220 10% 50V		Q605	8-729-119-77	TRANSISTOR 2SA1175-FEK	
C654	1-162-286-21	CERAMIC 220 10% 50V					
C655	1-162-286-21	CERAMIC 220 10% 50V		Q606	8-729-119-77	TRANSISTOR 2SA1175-FEK	
		< CONNECTOR >		Q607	8-729-119-77	TRANSISTOR 2SA1175-FEK	
* CN601	1-568-836-11	SOCKET, CONNECTOR 17P		Q608	8-729-119-77	TRANSISTOR 2SA1175-FEK	
CN602	1-506-486-11	PIN, CONNECTOR 7P		Q609	8-729-119-77	TRANSISTOR 2SA1175-FEK	
* CN603	1-568-944-11	PIN, CONNECTOR 6P		Q610	8-729-119-77	TRANSISTOR 2SA1175-FEK	
* CN604	1-568-946-11	PIN, CONNECTOR 8P					
		< DIODE >		Q611	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D601	8-719-987-63	DIODE 1N4148M		Q614	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D602	8-719-987-63	DIODE 1N4148M		Q617	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D606	8-719-987-63	DIODE 1N4148M		Q618	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D607	8-719-987-63	DIODE 1N4148M		Q619	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D611	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)		Q621	8-729-119-77	TRANSISTOR 2SA1175-FEK	

PANEL

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
< RESISTOR >							R670	1-249-419-11	CARBON	1.5K	5%	1/4W	
							R671	1-249-421-11	CARBON	2.2K	5%	1/4W	
R603	1-247-903-00	CARBON	1M	5%	1/4W		R672	1-247-843-11	CARBON	3.3K	5%	1/4W	
R608	1-249-429-11	CARBON	10K	5%	1/4W		R673	1-249-425-11	CARBON	4.7K	5%	1/4W	
R609	1-247-843-11	CARBON	3.3K	5%	1/4W		R674	1-249-427-11	CARBON	6.8K	5%	1/4W	
R610	1-247-843-11	CARBON	3.3K	5%	1/4W								
R611	1-249-429-11	CARBON	10K	5%	1/4W		R675	1-249-429-11	CARBON	10K	5%	1/4W	
							R676	1-249-432-11	CARBON	18K	5%	1/4W	
R612	1-249-429-11	CARBON	10K	5%	1/4W		R677	1-249-436-11	CARBON	39K	5%	1/4W	
R613	1-249-401-11	CARBON	47	5%	1/4W		R681	1-249-429-11	CARBON	10K	5%	1/4W	
R614	1-249-429-11	CARBON	10K	5%	1/4W		R682	1-249-421-11	CARBON	2.2K	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W								
R616	1-249-429-11	CARBON	10K	5%	1/4W		R683	1-247-887-00	CARBON	220K	5%	1/4W	
							R684	1-249-421-11	CARBON	2.2K	5%	1/4W	
R617	1-249-429-11	CARBON	10K	5%	1/4W		R685	1-247-815-91	CARBON	220	5%	1/4W	
R621	1-249-421-11	CARBON	2.2K	5%	1/4W		R686	1-247-807-31	CARBON	100	5%	1/4W	
R622	1-249-437-11	CARBON	47K	5%	1/4W		R687	1-247-807-31	CARBON	100	5%	1/4W	
R623	1-247-895-91	CARBON	470K	5%	1/4W								
R624	1-249-421-11	CARBON	2.2K	5%	1/4W		R688	1-247-807-31	CARBON	100	5%	1/4W	
							R689	1-247-807-31	CARBON	100	5%	1/4W	
R625	1-249-437-11	CARBON	47K	5%	1/4W		R691	1-247-807-31	CARBON	100	5%	1/4W	
R626	1-247-895-91	CARBON	470K	5%	1/4W		R692	1-247-807-31	CARBON	100	5%	1/4W	
R633	1-247-897-11	CARBON	560K	5%	1/4W		R693	1-247-807-31	CARBON	100	5%	1/4W	
R634	1-247-897-11	CARBON	560K	5%	1/4W								
R636	1-249-435-11	CARBON	33K	5%	1/4W		R694	1-247-807-31	CARBON	100	5%	1/4W	
							R695	1-247-807-31	CARBON	100	5%	1/4W	
R637	1-247-895-91	CARBON	470K	5%	1/4W		R696	1-247-807-31	CARBON	100	5%	1/4W	
R641	1-249-427-11	CARBON	6.8K	5%	1/4W		R697	1-247-807-31	CARBON	100	5%	1/4W	
R642	1-247-815-91	CARBON	220	5%	1/4W		R698	1-247-807-31	CARBON	100	5%	1/4W	
R643	1-249-410-11	CARBON	270	5%	1/4W								
R644	1-249-412-11	CARBON	390	5%	1/4W		R699	1-247-807-31	CARBON	100	5%	1/4W	
							R700	1-247-807-31	CARBON	100	5%	1/4W	
R645	1-249-413-11	CARBON	470	5%	1/4W		< SWITCH >						
R646	1-249-415-11	CARBON	680	5%	1/4W		S601	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)				
R647	1-249-416-11	CARBON	820	5%	1/4W		S602	1-554-303-21	SWITCH, TACTILE (TUNER MEMORY)				
R648	1-249-418-11	CARBON	1.2K	5%	1/4W		S603	1-554-303-21	SWITCH, TACTILE (TUNING MODE)				
R649	1-249-419-11	CARBON	1.5K	5%	1/4W		S604	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)				
							S605	1-554-303-21	SWITCH, TACTILE (TUNING +)				
R650	1-249-427-11	CARBON	6.8K	5%	1/4W								
R651	1-247-815-91	CARBON	220	5%	1/4W		S606	1-554-303-21	SWITCH, TACTILE (TUNING -)				
R652	1-249-410-11	CARBON	270	5%	1/4W		S607	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)				
R653	1-249-412-11	CARBON	390	5%	1/4W		S608	1-554-303-21	SWITCH, TACTILE (FUNCTION)				
R654	1-249-413-11	CARBON	470	5%	1/4W		S609	1-554-303-21	SWITCH, TACTILE (GROOVE)				
							S610	1-554-303-21	SWITCH, TACTILE (GEQ Δ)				
R655	1-249-415-11	CARBON	680	5%	1/4W		S611	1-554-303-21	SWITCH, TACTILE (GEQ ◁)				
R656	1-249-416-11	CARBON	820	5%	1/4W		S612	1-554-303-21	SWITCH, TACTILE (GEQ ▷)				
R657	1-249-418-11	CARBON	1.2K	5%	1/4W		S613	1-554-303-21	SWITCH, TACTILE (GEQ ▽)				
R658	1-249-427-11	CARBON	6.8K	5%	1/4W		S614	1-554-303-21	SWITCH, TACTILE (DBFB)				
R659	1-247-815-91	CARBON	220	5%	1/4W		S616	1-554-303-21	SWITCH, TACTILE (GEQ CONTROL)				
R660	1-249-410-11	CARBON	270	5%	1/4W		S617	1-554-303-21	SWITCH, TACTILE (ENTER)				
R661	1-249-412-11	CARBON	390	5%	1/4W		S618	1-554-303-21	SWITCH, TACTILE (EFFECT)				
R662	1-249-427-11	CARBON	6.8K	5%	1/4W		S619	1-554-303-21	SWITCH, TACTILE (SPECTRUM ANALYZER)				
R663	1-247-815-91	CARBON	220	5%	1/4W		S620	1-554-303-21	SWITCH, TACTILE (DISPLAY/DEMO)				
R664	1-249-410-11	CARBON	270	5%	1/4W		S621	1-554-303-21	SWITCH, TACTILE (POWER)				
R665	1-249-412-11	CARBON	390	5%	1/4W		S622	1-554-303-21	SWITCH, TACTILE (CLOCK SET)				
R666	1-249-413-11	CARBON	470	5%	1/4W		S623	1-554-303-21	SWITCH, TACTILE (REC)				
R667	1-249-415-11	CARBON	680	5%	1/4W								
R668	1-249-416-11	CARBON	820	5%	1/4W								
R669	1-249-418-11	CARBON	1.2K	5%	1/4W								

PANEL
POWER AMP

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S624	1-554-303-21	SWITCH, TACTILE (DAILY 1)		C857	1-128-560-11	ELECT	22uF 20% 100V (EXCEPT AEP, UK, EE)
S625	1-554-303-21	SWITCH, TACTILE (DAILY 2)					
S626	1-554-303-21	SWITCH, TACTILE (SLEEP)		C857	1-126-965-11	ELECT	22uF 20% 50V (AEP, UK, EE)
S628	1-554-303-21	SWITCH, TACTILE (WAVE)		C861	1-130-493-00	MYLAR	0.068uF 5% 50V
S629	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MPX)		C862	1-130-493-00	MYLAR	0.068uF 5% 50V
S630	1-554-303-21	SWITCH, TACTILE (SURROUND)		C901	1-104-482-11	ELECT	4700uF 20% 63V (US, CND)
S631	1-554-303-21	SWITCH, TACTILE (P FILE MEMORY)					
S701	1-473-392-11	ENCODER, ROTARY (VOLUME)		C901	1-126-974-11	ELECT	3300uF 20% 50V (EXCEPT US, CND)
< VIBRATOR >				C902	1-130-777-00	FILM	0.1uF 10% 100V (US, CND)
X601	1-579-125-11	VIBRATOR, CERAMIC (8 MHz)		C902	1-136-165-00	FILM	0.1uF 5% 50V (EXCEPT US, CND)

*	A-4392-442-A	POWER AMP BOARD, COMPLETE (US, CND)		C951	1-104-482-11	ELECT	4700uF 20% 63V (US, CND)
*	A-4392-460-A	POWER AMP BOARD, COMPLETE (E, AR, MX, AUS, PX)		C951	1-126-974-11	ELECT	3300uF 20% 50V (EXCEPT US, CND)
*	A-4392-465-A	POWER AMP BOARD, COMPLETE (AEP, UK, EE)		C952	1-130-777-00	FILM	0.1uF 10% 100V (US, CND)
*****				C952	1-136-165-00	FILM	0.1uF 5% 50V (EXCEPT US, CND)
< CAPACITOR >				< CONNECTOR >			
C801	1-128-582-11	ELECT	10uF 20% 100V (US, CND)	CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P	
C801	1-126-963-11	ELECT	4.7uF 20% 50V (EXCEPT US, CND)	< DIODE >			
C802	1-162-286-21	CERAMIC	220PF 10% 50V	D801	8-719-815-85	DIODE	1S1585 (EXCEPT AEP, UK, EE)
C803	1-162-282-31	CERAMIC	100PF 10% 50V	D801	8-719-987-63	DIODE	1N4148M (AEP, UK, EE)
C804	1-126-967-11	ELECT	47uF 20% 50V	D841	8-719-987-63	DIODE	1N4148M
C806	1-126-967-11	ELECT	47uF 20% 50V	D842	8-719-987-63	DIODE	1N4148M
C807	1-128-560-11	ELECT	22uF 20% 100V (EXCEPT AEP, UK, EE)	D851	8-719-815-85	DIODE	1S1585 (EXCEPT AEP, UK, EE)
C807	1-126-965-11	ELECT	22uF 20% 50V (AEP, UK, EE)	D851	8-719-987-63	DIODE	1N4148M (AEP, UK, EE)
C809	1-128-560-11	ELECT	22uF 20% 100V (EXCEPT AEP, UK, EE)	D901	8-719-510-68	DIODE	D5SBA20F01 (EXCEPT AEP, UK, EE)
C809	1-126-965-11	ELECT	22uF 20% 50V (AEP, UK, EE)	D901	8-719-028-23	DIODE	D3SBA20-4101 (AEP, UK, EE)
C810	1-164-159-21	CERAMIC	0.1uF 50V	< IC >			
C811	1-130-493-00	MYLAR	0.068uF 5% 50V	IC801	8-749-921-68	IC	STK-4231MK2 (US, CND)
C812	1-130-493-00	MYLAR	0.068uF 5% 50V	IC801	8-749-900-34	IC	STK-4182MK2 (E, AR, MX, AUS, PX)
C814	1-162-306-11	CERAMIC	0.01uF 20% 16V	IC801	8-749-920-10	IC	STK4172MK2 (AEP, UK, EE)
C841	1-126-933-11	ELECT	100uF 20% 10V (US, CND)	< TRANSISTOR >			
C841	1-126-925-11	ELECT	470uF 20% 10V (EXCEPT US, CND)	Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
C851	1-128-582-11	ELECT	10uF 20% 100V (US, CND)	Q851	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
C851	1-126-963-11	ELECT	4.7uF 20% 50V (EXCEPT US, CND)	< RESISTOR >			
C852	1-162-286-21	CERAMIC	220PF 10% 50V	R801	1-249-417-11	CARBON	1K 5% 1/4W
C853	1-162-282-31	CERAMIC	100PF 10% 50V	R802	1-249-437-11	CARBON	47K 5% 1/4W
C854	1-126-967-11	ELECT	47uF 20% 50V	R803	1-249-413-11	CARBON	470 5% 1/4W (US, CND)
C856	1-126-967-11	ELECT	47uF 20% 50V				

POWER AMP

TABLE SENSOR

TC-A SW

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
R803	1-249-415-11	CARBON	680	5%	1/4W (EXCEPT, US, CND)	△ R858 R859	1-208-601-11 1-260-076-11	WIREWOUND CARBON	0.1 10	10% 5%	2W 1/2W	F
R804	1-249-437-11	CARBON	47K	5%	1/4W	R861	1-249-417-11	CARBON	1K	5%	1/4W	
R805	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	R862	1-247-863-91	CARBON	22K	5%	1/4W	
R805	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	R863	1-249-441-11	CARBON	100K	5%	1/4W	
R806	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	*	1-659-058-13	TABLE SENSOR BOARD *****				
R806	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	*	4-980-385-01	HOLDER (SW)				
△ R807	1-212-881-11	FUSIBLE	100	5%	1/4W	F	< IC >					
△ R808	1-208-601-11	WIREWOUND	0.1	10%	2W	F						
R809	1-260-076-11	CARBON	10	5%	1/2W	IC202	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391				
R811	1-249-417-11	CARBON	1K	5%	1/4W	< RESISTOR >						
R812	1-247-863-91	CARBON	22K	5%	1/4W							
R813	1-249-441-11	CARBON	100K	5%	1/4W	R207	1-249-416-11	CARBON	820	5%	1/4W	
R814	1-260-105-11	CARBON	3.3K	5%	1/2W (US, CND)	*****						
R814	1-260-099-11	CARBON	1K	5%	1/2W (EXCEPT US, CND)	*	1-664-012-11	TC-A SW BOARD *****				
R816	1-260-105-11	CARBON	3.3K	5%	1/2W (US, CND)	< CONNECTOR >						
R816	1-260-099-11	CARBON	1K	5%	1/2W (EXCEPT US, CND)	* CN612	1-568-943-11	PIN, CONNECTOR 5P				
△ R820	1-202-972-61	FUSIBLE	1	5%	1/4W	F	< DIODE >					
R841	1-249-429-11	CARBON	10K	5%	1/4W	D631	8-719-057-10	DIODE LNJ301MPUJA (▷)				
R842	1-247-885-00	CARBON	180K	5%	1/4W (US, CND)	D632	8-719-057-10	DIODE LNJ301MPUJA (◁)				
R842	1-247-881-00	CARBON	120K	5%	1/4W (EXCEPT US, CND)	< RESISTOR >						
R843	1-247-843-11	CARBON	3.3K	5%	1/4W (US, CND)	R705	1-249-413-11	CARBON	470	5%	1/4W	
R843	1-249-421-11	CARBON	2.2K	5%	1/4W (EXCEPT US, CND)	R706	1-249-415-11	CARBON	680	5%	1/4W	
						R707	1-249-416-11	CARBON	820	5%	1/4W	
						R708	1-249-418-11	CARBON	1.2K	5%	1/4W	
						R709	1-249-419-11	CARBON	1.5K	5%	1/4W	
R844	1-249-429-11	CARBON	10K	5%	1/4W	R710	1-249-421-11	CARBON	2.2K	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	R711	1-247-807-31	CARBON	100	5%	1/4W	
R852	1-249-437-11	CARBON	47K	5%	1/4W	R714	1-247-807-31	CARBON	100	5%	1/4W	
R853	1-249-413-11	CARBON	470	5%	1/4W (US, CND)	< SWITCH >						
R853	1-249-415-11	CARBON	680	5%	1/4W (EXCEPT US, CND)	S641	1-554-303-21	SWITCH, TACTILE (▷)				
R854	1-249-437-11	CARBON	47K	5%	1/4W	S642	1-554-303-21	SWITCH, TACTILE (◁)				
R855	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	S643	1-554-303-21	SWITCH, TACTILE (■)				
						S644	1-554-303-21	SWITCH, TACTILE (◀◀)				
R855	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)	S645	1-554-303-21	SWITCH, TACTILE (▶▶)				
R856	1-260-107-11	CARBON	4.7K	5%	1/2W (US, CND)	S646	1-554-303-21	SWITCH, TACTILE (DOLBY NR)				
						S647	1-554-303-21	SWITCH, TACTILE (DIRECTION)				

R856	1-260-105-11	CARBON	3.3K	5%	1/2W (EXCEPT US, CND)							
△ R857	1-212-881-11	FUSIBLE	100	5%	1/4W	F						

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-664-013-11	TC-B SW BOARD *****		C5	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
		< DIODE >		C5	1-163-031-11	CERAMIC 10000PF 50V (2012) (AEP, UK, EE)	
D635	8-719-057-10	DIODE LNJ301MPUJA (◁)		C6	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
D636	8-719-057-10	DIODE LNJ301MPUJA (▷)		C6	1-163-038-91	CERAMIC 100000PF 25V (2012) (AEP, UK, EE)	
D637	8-719-058-17	DIODE LNJ401NPYJA (■)					
D638	8-719-057-09	DIODE LNJ801LPDJA (● REC)		C7	1-101-004-00	CERAMIC 0.01uF 50V (EXCEPT AEP, UK)	
		< RESISTOR >		C8	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
R715	1-249-421-11	CARBON 2.2K 5% 1/4W		C8	1-163-031-11	CERAMIC 10000PF 50V (2012) (AEP, UK, EE)	
R716	1-247-843-11	CARBON 3.3K 5% 1/4W					
R717	1-249-425-11	CARBON 4.7K 5% 1/4W		C9	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
R718	1-249-427-11	CARBON 6.8K 5% 1/4W		C9	1-163-031-11	CERAMIC 10000PF 50V (2012) (AEP, UK, EE)	
R719	1-249-429-11	CARBON 10K 5% 1/4W		C10	1-163-031-11	CERAMIC 10000PF 50V (2012) (AEP, UK, EE)	
R720	1-249-432-11	CARBON 18K 5% 1/4W					
R721	1-249-436-11	CARBON 39K 5% 1/4W		C11	1-164-159-21	CERAMIC 0.1uF 50V (EXCEPT AEP, UK, EE)	
R722	1-247-881-00	CARBON 120K 5% 1/4W		C12	1-162-198-31	CERAMIC 8.2PF 10% 50V (EXCEPT AEP, UK, EE)	
R724	1-247-807-31	CARBON 100 5% 1/4W		C14	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
R725	1-247-807-31	CARBON 100 5% 1/4W					
		< SWITCH >		C16	1-163-038-91	CERAMIC 100000PF 25V (2012) (AEP, UK, EE)	
S651	1-554-303-21	SWITCH, TACTILE (▷)		C19	1-163-249-11	CHIP CERAMIC 82PF (2012) (AEP, UK, EE)	
S652	1-554-303-21	SWITCH, TACTILE (◁)		C21	1-102-514-11	CERAMIC 22PF 5% 50V (EXCEPT AEP, UK, EE)	
S653	1-554-303-21	SWITCH, TACTILE (▶▶)					
S654	1-554-303-21	SWITCH, TACTILE (◀◀)		C21	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V (AEP, UK, EE)	
S655	1-554-303-21	SWITCH, TACTILE (■)		C22	1-163-031-11	CERAMIC 10000PF 50V (2012) (AEP, UK, EE)	
S656	1-554-303-21	SWITCH, TACTILE (■)		C22	1-164-159-21	CERAMIC 0.1uF 50V (EXCEPT AEP, UK, EE)	
S657	1-554-303-21	SWITCH, TACTILE (● REC)					
S658	1-554-303-21	SWITCH, TACTILE (H.SPEED DUBB)		C23	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
S659	1-554-303-21	SWITCH, TACTILE (CD SYNC)		C23	1-163-235-11	CHIP CERAMIC 22PF 5% 50V (2012) (AEP, UK, EE)	
*****				C24	1-126-967-11	ELECT 47uF 20% 16V (EXCEPT AEP, UK, EE)	
*	A-4303-510-A	TCB BOARD,COMPLETE (US, CND)					
*	A-4303-512-A	TCB BOARD,COMPLETE (E, AR, MX, AUS, PX)		C24	1-163-239-11	CHIP CERAMIC 33PF 5% 50V (2012) (AEP,UK, EE)	
*	A-4303-570-A	TCB BOARD,COMPLETE (EE)		C25	1-162-306-11	CERAMIC 0.01uF 20% 16V (EXCEPT AEP, UK, EE)	
*	A-4303-576-A	TCB BOARD,COMPLETE (AEP, UK)		C26	1-126-964-11	ELECT 10uF 20% 50v (EXCEPT AEP, UK, EE)	

		< CAPACITOR >		C26	1-126-967-11	ELECT 47uF 20% 16V (AEP, UK, EE)	
C1	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V (AEP, UK, EE)		C27	1-164-159-21	CERAMIC 0.1uF 50V (EXCEPT AEP, UK, EE)	
C1	1-162-294-31	CERAMIC 0.001uF 10% 50V (EXCEPT AEP, UK, EE)		C28	1-126-961-11	ELECT 2.2uF 20% 50V (EXCEPT AEP, UK, EE)	
C2	1-126-967-11	ELECT 47uF 20% 16V					
C3	1-163-038-91	CERAMIC 100000PF 25V (2012) (AEP, UK, EE)					
C3	1-164-159-21	CERAMIC 0.1uF 50V (EXCEPT AEP, UK, EE)					

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C28	1-126-967-11	ELECT	47uF	20%	16V (AEP, UK, EE)	C47	1-126-967-11	ELECT	47uF	20%	16V (AEP, UK, EE)
C29	1-102-518-11	CERAMIC	33PF	5%	50V (EXCEPT AEP, UK, EE)	C47	1-162-294-31	CERAMIC	0.001uF	10%	50V (EXCEPT AEP, UK, EE)
C29	1-162-306-11	CERAMIC	0.01uF	20%	16V (AEP, UK, EE)	C48	1-126-160-11	ELECT	1uF	20%	50V (EXCEPT AEP, UK, EE)
C30	1-126-961-11	ELECT	2.2uF	20%	50V (AEP, UK, EE)	C48	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)
C30	1-162-294-31	CERAMIC	0.001uF	10%	50V (EXCEPT AEP, UK, EE)	C49	1-126-959-11	ELECT	0.47uF	20%	50V (AEP, UK, EE)
C31	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	C49	1-136-159-00	METALIZED FILM	0.033uF	5%	16V (E, AR, MX, AUS, PX)
C31	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)	C49	1-136-162-00	METALIZED FILM	0.056uF	5%	16V (US, CND)
C32	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C50	1-126-960-11	ELECT	1.0uF	20%	50V (AEP, UK, EE)
C33	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C50	1-136-159-00	METALIZED FILM	0.033uF	5%	16V (E, AR, MX, AUS, PX)
C34	1-163-229-11	CHIP CERAMIC	12PF	5%	50V (2012) (AEP, UK, EE)	C50	1-136-162-00	METALIZED FILM	0.056uF	5%	16V (US, CND)
C35	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C51	1-126-960-11	ELECT	1.0uF	20%	50V (AEP, UK, EE)
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V (AEP, UK, EE)	C51	1-162-600-11	CERAMIC	4700PF	10%	16V (EXCEPT AEP, UK, EE)
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V (AEP, UK, EE)	C52	1-126-963-11	ELECT	4.7uF	20%	50V (AEP, UK, EE)
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V (AEP, UK, EE)	C52	1-162-600-11	CERAMIC	4700PF	10%	50V (EXCEPT AEP, UK, EE)
C40	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)	C53	1-126-964-11	ELECT	10uF	20%	50v
C41	1-126-933-11	ELECT	100uF	20%	10V (EXCEPT AEP, UK, EE)	C54	1-104-396-11	ELECT	10uF	20%	16V (AEP, UK, EE)
C41	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)	C54	1-126-157-11	ELECT	10uF	20%	16V (EXCEPT AEP, UK, EE)
C42	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	C55	1-104-396-11	ELECT	10uF	20%	16V (AEP, UK, EE)
C42	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C55	1-126-964-11	ELECT	10uF	20%	50V (EXCEPT AEP, UK, EE)
C43	1-126-962-11	ELECT	3.3uF	20%	50V (EXCEPT AEP, UK, EE)	C56	1-104-396-11	ELECT	10uF	20%	16V (AEP, UK, EE)
C43	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C56	1-126-964-11	ELECT	10uF	20%	50v (EXCEPT AEP, UK, EE)
C44	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	C57	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (AEP, UK, EE)
C44	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)	C57	1-164-159-21	CERAMIC	0.1uF		50V (EXCEPT AEP, UK, EE)
C45	1-124-589-11	ELECT	47uF	20%	16V (EXCEPT AEP, UK, EE)	C58	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)
C45	1-163-038-91	CERAMIC	100000PF		25V (2012) (AEP, UK, EE)	C58	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (AEP, UK, EE)
C46	1-162-600-11	CERAMIC	4700PF	10%	16V (EXCEPT AEP, UK, EE)	C59	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (AEP, UK)
C46	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V (AEP, UK, EE)	C59	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (EE)
						C59	1-164-159-21	CERAMIC	0.1uF		50V (EXCEPT AEP, UK, EE)

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C60	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (AEP, UK)	C1706	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
C60	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (EE)	C1712	1-130-736-11	PP FILM	0.01uF	5%	16V (EE)
C61	1-126-301-11	ELECT	1uF	20%	50V (AEP, UK, EE)	C1713	1-130-736-11	PP FILM	0.01uF	5%	16V (EE)
						C1714	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
						C1715	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
C61	1-164-159-21	CERAMIC	0.1uF		50V (EXCEPT AEP, UK, EE)	C1716	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
C62	1-126-967-11	ELECT	47uF	20%	16V (EXCEPT AEP, UK, EE)	C1719	1-126-967-11	ELECT	47uF	20%	16V (EE)
C62	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V (AEP, UK, EE)	C1725	1-126-967-11	ELECT	47uF	20%	16V (EE)
						C1726	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
						C1727	1-126-960-11	ELECT	1.0uF	20%	50V (EE)
C63	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (AEP,UK,EE)	C1728	1-126-966-11	ELECT	33uF	20%	16V (EE)
C63	1-164-159-21	CERAMIC	0.1uF		50V (EXCEPT AEP, UK, EE)			< FILTER >			
C64	1-126-959-11	ELECT	0.47uF	20%	50V (EXCEPT AEP, UK, EE)	CF1	1-567-389-11	FILTER, CERAMIC (EXCEPT AEP, UK)			
						CF1	1-579-374-71	FILTER, CERAMIC (AEP, UK)			
						CF2	1-567-389-11	FILTER, CERAMIC (EXCEPT AEP, UK, EE)			
C64	1-126-967-11	ELECT	47uF	20%	16V (AEP, UK, EE)	CF2	1-760-393-11	FILTER, CERAMIC (AEP, UK)			
C65	1-126-960-11	ELECT	1.0uF	20%	50V (EXCEPT AEP, UK, EE)	CF3	1-760-393-11	FILTER, CERAMIC (AEP, UK)			
C65	1-163-031-11	CERAMIC	10000PF		50V (2012) (AEP, UK, EE)			< CONNECTOR >			
						CN1	1-568-832-11	SOCKET, CONNECTOR 13P (EXCEPT AEP, UK, EE)			
C66	1-126-162-11	ELECT	3.3uF	20%	50V (AEP, UK, EE)	CN1	1-568-834-11	SOCKET, CONNECTOR 15P (AEP, UK, EE)			
C66	1-126-960-11	ELECT	1.0uF	20%	50V (EXCEPT AEP, UK, EE)			< TRIMMER >			
C67	1-126-933-11	ELECT	100uF	20%	10V (AEP, UK, EE)	CT1701	1-141-444-11	CAP, CERAMIC TRIMMER 50PF (EE)			
								< DIODE >			
C67	1-126-964-11	ELECT	10uF	20%	50v (EXCEPT AEP, UK, EE)	D1	8-719-933-33	DIODE UZL-6L1-TA (EXCEPT AEP, UK, EE)			
C68	1-162-306-11	CERAMIC	0.01uF	20%	16V	D2	8-719-987-63	DIODE 1N4148M-TA (EXCEPT AEP, UK, EE)			
C69	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	D21	8-719-976-XX	DIODE UDZ-TE-17-5.1B (AEP, UK, EE)			
C70	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	D41	8-719-016-74	DIODE 1SS352-TPH3 (AEP, UK, EE)			
								< FRONTEND >			
C71	1-162-306-11	CERAMIC	0.01uF	20%	16V	FE1	1-233-533-11	ENCAPSULATED COMPONENT (EXCEPT AEP, UK, EE)			
C72	1-126-967-11	ELECT	47uF	20%	16V (AEP, UK, EE)	FE1	1-693-335-11	FRONT END (3 GANG) (EE)			
C73	1-162-306-11	CERAMIC	0.01uF	20%	16V (EXCEPT AEP, UK, EE)	FE1	1-693-357-11	FRONT END (4 GANG) (AEP, UK)			
						FE2	1-233-514-11	ENCAPSULATED COMPONENT (AEP, UK, EE)			
						FE2	1-239-260-11	ENCAPSULATED COMPONENT (EXCEPT AEP, UK, EE)			
C74	1-126-964-11	ELECT	10uF	20%	50v (EXCEPT AEP, UK, EE)			< IC >			
C120	1-163-105-00	CERAMIC CHIP	33PF	5%	50V (AEP, UK, EE)	IC1	8-759-288-54	IC LC72130 (EXCEPT AEP, UK, EE)			
C1702	1-130-014-00	PP FILM	470PF	5%	16V (EE)	IC2	8-759-176-03	IC LA1835 (EXCEPT AEP, UK, EE)			
C1703	1-126-959-11	ELECT	0.47uF	20%	50V (AEP, UK, EE)	IC21	8-759-288-54	IC LC72130 (AEP, UK, EE)			
C1704	1-126-959-11	ELECT	0.47uF	20%	50V (AEP, UK, EE)	IC41	8-759-176-03	IC LA1835 (AEP, UK, EE)			
C1705	1-163-035-00	CERAMIC CHIP	0.047uF		50V (EE)	IC1701	8-759-063-04	IC IR3R42 (EE)			
						IC1702	8-759-140-53	IC MC14053BCP (EE)			

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< IFT >					
IFT41	1-409-636-11	TRANSFORMER,IF (CERAMIC FILTER)		Q5	8-729-421-22	TRANSISTOR MUN2211T1 (AEP, UK, EE)	
		< JUMPER RESISTOR >		Q5	8-729-422-57	TRANSISTOR BN1A4M-TP	(EXCEPT AEP, UK, EE)
JR2	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		Q9	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6 (AEP, UK, EE)	
JR6	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		Q11	8-729-424-08	TRANSISTOR MUN2111T1 (AEP, UK, EE)	
JR8	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		Q12	8-729-424-08	TRANSISTOR MUN2111T1 (AEP, UK, EE)	
JR9	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		Q13	8-729-424-08	TRANSISTOR MUN2111T1 (AEP, UK, EE)	
JR45	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		Q14	8-729-424-08	TRANSISTOR MUN2111T1 (AEP, UK, EE)	
				Q1702	8-729-907-00	TRANSISTOR RT1N141M-TP-1 (EE)	
JR46	1-216-296-91	CONDUCTOR, CHIP (3216) (AEP, UK, EE)				< RESISTOR >	
JR47	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		R1	1-249-401-11	CARBON 47 5% 1/4W	
JR48	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		R2	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
JR49	1-216-296-91	CONDUCTOR, CHIP (3216) (AEP, UK, EE)		R2	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
JR51	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)					
JR52	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		R3	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
JR53	1-216-296-91	CONDUCTOR, CHIP (3216) (AEP, UK, EE)		R3	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
JR54	1-216-295-91	CONDUCTOR, CHIP (2012) (AEP, UK, EE)		R5	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
		< JUMPER RESISTOR >					
JW4	1-249-413-11	CARBON 470 5% 1/4W (AEP, UK)		R5	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
JW5	1-249-413-11	CARBON 470 5% 1/4W (AEP, UK)		R6	1-216-081-00	METAL CHIP 22K 5% 1/10W	(AEP, UK, EE)
		< COIL >		R6	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W	(EXCEPT AEP, UK, EE)
L2	1-414-142-11	INDUCTOR, MICRO 1uH (AEP, UK)					
L3	1-410-521-11	INDUCTOR, MICRO 100uH (AEP, UK, EE)		R7	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
L4	1-410-515-11	INDUCTOR, MICRO 33uH (AEP, UK)		R7	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
L41	1-407-500-00	MICRO INDUCTOR 4.7mH (AEP, UK, EE)		R8	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
L41	1-410-119-11	MICRO INDUCTOR (EL TYPE) 1mH	(EXCEPT AEP, UK, EE)				
L1701	1-409-497-11	COIL (FILTER) (EE)		R8	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
		< FILTER >		R9	1-216-081-00	METAL CHIP 22K 5% 1/10W	(AEP, UK, EE)
LPF41	1-239-845-11	FILTER, LOW PASS		R9	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W	(EXCEPT AEP, UK, EE)
LPF42	1-239-845-11	FILTER, LOW PASS					
		< TRANSISTOR >		R10	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
Q1	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L (AEP, UK, EE)		R10	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
Q1	8-729-230-XX	TRANSISTOR 2SC26690Y-TPE4	(EXCEPT AEP, UK, EE)	R11	1-216-081-00	METAL CHIP 22K 5% 1/10W	(AEP, UK, EE)
Q2	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L (AEP, UK, EE)					
Q2	8-729-230-XX	TRANSISTOR 2SC26690Y-TPE4	(EXCEPT AEP, UK, EE)	R11	1-247-863-91	CARBON (SMALL) 22K 5% 1/4W	(EXCEPT AEP, UK, EE)
Q3	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L (AEP, UK, EE)		R12	1-216-037-00	METAL CHIP 330 5% 1/10W	(AEP, UK, EE)
Q3	8-729-230-XX	TRANSISTOR 2SC26690Y-TPE4	(EXCEPT AEP, UK, EE)	R12	1-249-411-11	CARBON 330 5% 1/4W	(EXCEPT AEP, UK, EE)
Q4	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L (AEP, UK, EE)					
Q4	8-729-230-XX	TRANSISTOR 2SC26690Y-TPE4	(EXCEPT AEP, UK, EE)				

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R13	1-216-037-00	METAL CHIP	330	5%	1/10W (AEP, UK, EE)	R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (AEP, UK, EE)
R13	1-249-411-11	CARBON	330	5%	1/4W (EXCEPT AEP, UK, EE)	R29	1-249-417-11	CARBON	1K	5%	1/4W (EXCEPT AEP, UK, EE)
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W (AEP, UK, EE)	R30	1-216-186-00	CHIP	330	5%	1/8W (3216) (AEP, UK, EE)
R14	1-247-863-91	CARBON (SMALL)	22K	5%	1/4W (EXCEPT AEP, UK, EE)	R30	1-249-417-11	CARBON	1K	5%	1/4W (EXCEPT AEP, UK, EE)
R15	1-249-429-11	CARBON	10K	5%	1/4W (EXCEPT AEP, UK, EE)	R31	1-216-025-91	CHIP	100	5%	1/10W (2012) (AEP, UK, EE)
R16	1-249-437-11	CARBON	47K	5%	1/4W (EXCEPT AEP, UK, EE)	R31	1-249-417-11	CARBON	1K	5%	1/4W (EXCEPT AEP, UK, EE)
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP, UK, EE)	R32	1-249-417-11	CARBON	1K	5%	1/4W (EXCEPT AEP, UK, EE)
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP, UK, EE)	R32	1-249-425-11	CARBON	4.7K	5%	1/4W (AEP, UK, EE)
R19	1-249-399-11	CARBON	33	5%	1/4W (EXCEPT AEP, UK, EE)	R33	1-247-807-31	CARBON (SMALL)	100	5%	1/4W (EXCEPT AEP, UK, EE)
R21	1-216-049-91	CHIP	1.0K	5%	1/10W (2012) (AEP, UK)	R33	1-249-425-11	CARBON	4.7K	5%	1/4W (AEP, UK, EE)
R21	1-247-807-31	CARBON (SMALL)	100	5%	1/4W (EXCEPT AEP, UK, EE)	R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (AEP, UK, EE)
R21	1-249-417-11	CARBON	1K	5%	1/4W (EE)	R34	1-249-429-11	CARBON	10K	5%	1/4W (EXCEPT AEP, UK, EE)
R22	1-216-049-91	CHIP	1.0K	5%	1/10W (2012) (AEP, UK)	R35	1-216-214-00	CHIP	4.7K	5%	1/8W (3216) (AEP, UK, EE)
R22	1-249-417-11	CARBON	1K	5%	1/4W (EE)	R35	1-249-429-11	CARBON	10K	5%	1/4W (EXCEPT AEP, UK, EE)
R22	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT AEP, UK, EE)	R36	1-216-025-91	CHIP	100	5%	1/10W (2012) (AEP, UK, EE)
R23	1-216-049-91	CHIP	1.0K	5%	1/10W (2012) (AEP, UK)	R36	1-249-437-11	CARBON	47K	5%	1/4W (EXCEPT AEP, UK, EE)
R23	1-249-417-11	CARBON	1K	5%	1/4W (EE)	R37	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP, UK, EE)
R23	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT AEP, UK, EE)	R37	1-249-417-11	CARBON	1K	5%	1/4W (EXCEPT AEP, UK, EE)
R24	1-216-025-91	CHIP	100	5%	1/10W (2012) (AEP, UK, EE)	R38	1-216-089-91	CHIP	47K	5%	1/10W (2012) (AEP, UK, EE)
R24	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT AEP, UK, EE)	R39	1-249-429-11	CARBON	10K	5%	1/4W (AEP, UK, EE)
R25	1-247-807-31	CARBON (SMALL)	100	5%	1/4W (EXCEPT AEP, UK, EE)	R41	1-249-429-11	CARBON	10K	5%	1/4W (EXCEPT AEP, UK, EE)
R25	1-249-417-11	CARBON	1K	5%	1/4W (AEP, UK, EE)	R42	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP, UK, EE)
R26	1-249-411-11	CARBON	330	5%	1/4W (EXCEPT AEP, UK, EE)	R43	1-216-042-00	METAL CHIP	510	5%	1/10W (AEP, UK, EE)
R26	1-249-437-11	CARBON	47K	5%	1/4W (AEP, UK, EE)	R43	1-247-843-11	CARBON (SMALL)	3.3K	5%	1/4W (EXCEPT AEP, UK, EE)
R27	1-249-425-11	CARBON	4.7K	5%	1/4W (EXCEPT AEP, UK, EE)	R44	1-216-013-00	METAL CHIP	33	5%	1/10W (AEP, UK, EE)
R27	1-249-429-11	CARBON	10K	5%	1/4W (AEP, UK, EE)	R44	1-247-843-11	CARBON (SMALL)	3.3K	5%	1/4W (EXCEPT AEP, UK, EE)
R28	1-249-417-11	CARBON	1K	5%	1/4W (AEP, UK, EE)						
R28	1-247-843-11	CARBON (SMALL)	3.3K	5%	1/4W (EXCEPT AEP, UK, EE)						

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TRANS

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R45	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W (AEP, UK, EE)			< VARIABLE RESISTOR >	
R46	1-216-073-00	METAL CHIP	10K 5% 1/10W (AEP, UK, EE)	RV41	1-238-600-11	ADJ, CARBON 10K (EXCEPT AEP, UK, EE)	
R46	1-249-442-11	CARBON	510 5% 1/4W (EXCEPT AEP, UK, EE)	RV41	1-238-601-11	ADJ, CARBON 22K (AEP, UK, EE)	
R47	1-216-097-91	CHIP	100K 5% 1/10W (2012) (AEP, UK, EE)	RV42	1-238-600-11	ADJ, CARBON 10K (AEP, UK, EE)	
R47	1-249-399-11	CARBON	33 5% 1/4W (EXCEPT AEP, UK, EE)	RV42	1-238-601-11	ADJ, CARBON 22K (EXCEPT AEP, UK, EE)	
R48	1-247-843-11	CARBON (SMALL) 3.3K	5% 1/4W (EXCEPT AEP, UK, EE)	RV1701	1-238-600-11	ADJ, CARBON 10K (AEP, UK, EE)	
R48	1-249-417-11	CARBON	1K 5% 1/4W (AEP, UK, EE)	RV1702	1-238-599-11	ADJ, CARBON 4.7K (EE)	
R49	1-216-049-91	CHIP	1.0K 5% 1/10W (2012) (AEP, UK, EE)			< TERMINAL >	
R49	1-249-393-11	CARBON	10 5% 1/4W (EXCEPT AEP, UK, EE)	TM1	1-537-238-21	TERMINAL BOARD (EXCEPT AEP, UK, EE)	
R50	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (AEP, UK, EE)	TM1	1-537-488-11	TERMINAL BOARD (ANT) (AEP, UK, EE)	
R50	1-249-429-11	CARBON	10K 5% 1/4W (EXCEPT AEP, UK, EE)			< VIBRATOR >	
R51	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (AEP, UK, EE)	X21	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	
R51	1-249-441-11	CARBON	100K 5% 1/4W (EXCEPT AEP, UK, EE)	X41	1-577-075-11	OSCILLATOR, CERAMIC (456kHz) (EXCEPT AEP, UK, EE)	
R52	1-249-429-11	CARBON	10K 5% 1/4W (EXCEPT AEP, UK, EE)	X41	1-760-220-11	FILTER, CERAMIC (AEP, UK, EE)	
R53	1-249-425-11	CARBON	4.7K 5% 1/4W (EXCEPT AEP, UK, EE)	X42	1-527-981-00	FILTER, CERAMIC (AEP, UK, EE)	
R53	1-249-429-11	CARBON	10K 5% 1/4W (AEP, UK, EE)	X42	1-760-220-11	FILTER, CERAMIC (EXCEPT AEP, UK, EE)	
R54	1-249-425-11	CARBON	4.7K 5% 1/4W (EXCEPT AEP, UK, EE)	X43	1-527-981-00	FILTER, CERAMIC (EXCEPT AEP, UK, EE)	
R55	1-216-162-00	CHIP 33	5% 1/8W (3216) (AEP, UK, EE)	X43	1-577-075-11	OSCILLATOR, CERAMIC (456kHz) (AEP, UK, EE)	
R56	1-249-393-11	CARBON	10 5% 1/4W (AEP, UK, EE)	*****			
R91	1-216-295-91	CONDUCTOR, CHIP (2012)	(AEP, UK, EE)	*	1-664-014-11	TRANS BOARD *****	
R92	1-216-073-00	METAL CHIP	10K 5% 1/10W (AEP, UK, EE)		1-533-399-31	HOLDER, FUSE	
R99	1-249-399-11	CARBON	33 5% 1/4W			< CONNECTOR >	
R1702	1-216-085-00	METAL CHIP	33K 5% 1/10W (EE)	* CN901	1-564-522-11	PLUG, CONNECTOR 7P	
R1703	1-216-069-00	METAL CHIP	6.8K 5% 1/10W (EE)	* CN902	1-564-518-11	PLUG, CONNECTOR 3P	
R1704	1-216-075-00	METAL CHIP	12K 5% 1/10W (EE)	CN903	1-774-108-11	PIN, CONNECTOR (PC BOARD)	
R1708	1-216-095-00	METAL CHIP	82K 5% 1/10W (EE)			< CONNECTOR >	
R1711	1-249-429-11	CARBON	10K 5% 1/4W (EE)	△ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)	
R1714	1-216-067-00	METAL CHIP	5.6K 5% 1/10W (EE)	△ CNP901	1-575-042-21	CORD, POWER (US, CND)	
R1715	1-216-067-00	METAL CHIP	5.6K 5% 1/10W (EE)	△ CNP901	1-575-651-21	CORD, POWER (AEP, AR, EE)	
R1718	1-249-429-11	CARBON	10K 5% 1/4W (EE)	△ CNP901	1-696-845-11	CORD, POWER (AUS)	
R1720	1-249-434-11	CARBON	27K 5% 1/4W (EE)	△ CNP901	1-751-529-11	CORD, POWER (UK)	
						< FUSE >	
				△ F901	1-532-388-31	FUSE, TIME LAG (2A, 250V) (E, AR, AUS, PX)	
				△ F902	1-532-504-31	FUSE, TIME LAG (4A, 250V) (E, AR, MX, PX)	
				△ F902	1-533-420-11	FUSE, GLASS CYLINDRICAL (DIA.5) (5A, 125V) (US, CND)	
				△ F903	1-532-505-31	FUSE, TIME LAG (5A, 250V) (AEP, UK, EE)	
				△ F904	1-532-505-31	FUSE, TIME LAG (5A, 250V) (AEP, UK, EE)	

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TRANS

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< RESISTOR >							
△ R901	1-219-120-11	FUSIBLE	0.15 5% 1/4W F	△ T901	1-431-047-11	TRANSFORMER, POWER (AEP, EE, UK)	
△ R902	1-219-120-11	FUSIBLE	0.15 5% 1/4W F	△ T901	1-431-048-11	TRANSFORMER, POWER (E, AR, MX, AUS, PX)	
△ R903	1-219-119-81	FUSIBLE	0.1 5% 1/4W F	*****			
			(US, CND)	*****			
△ R903	1-219-120-11	FUSIBLE	0.15 5% 1/4W F	HARDWARE LIST			
			(EXCEPT US, CND)	*****			
△ R904	1-219-119-81	FUSIBLE	0.1 5% 1/4W F	#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
			(US, CND)	#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
△ R904	1-219-120-11	FUSIBLE	0.15 5% 1/4W F	#3	7-685-872-09	SCREW +BVTT 3X8 (S)	
			(EXCEPT US, CND)	#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S	
R907	1-202-725-00	SOLID	3.3M 10% 1/2W	#5	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
			(US, CND)	#6	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
< SWITCH >				#7	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
△ S901	1-762-753-11	SWITCH, VOLTAGE SELECTION		#8	7-621-775-10	SCREW +B 2.6X4	
		(VOLTAGE SELECTOR) (E, AR, PX)		#9	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
< TRANSFORMER >				#10	7-623-921-01	RING, RETAINING, CAPSTAN	
△ T901	1-431-045-11	TRANSFORMER, POWER (US, CND)		#11	7-621-775-00	SCREW +B 2.6X3	
△ T901	1-431-047-11	TRANSFORMER, POWER (AEP, UK, EE)		#12	7-621-255-15	SCREW +P 2X3	
△ T901	1-431-048-11	TRANSFORMER, POWER (E, AR, MX, AUS, PX)		*****			
*****				ACCESSORIES & PACKING MATERIALS			
*****				*****			
MISCELLANEOUS				1-475-115-11	COMMANDER, REMOTE (US)		
*****				1-501-374-11	ANTENNA, LOOP		
6	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)		1-501-659-41	ANTENNA (FM) (EXCEPT AEP, EE, UK)		
		(EXCEPT: AEP, EE, UK)		1-501-804-11	ANTENNA (FM) (AEP, EE, UK)		
6	1-773-006-11	WIRE (FLAT TYPE) (15 CORE) (AEP, EE, UK)		3-859-536-11	MANUAL, INSTRUCTION (ENGLISH)		
58	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)			(US, CND, E, AR, MX, AUS, PX)		
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)		3-859-536-21	MANUAL, INSTRUCTION (FRENCH) (CND)		
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)		3-859-536-31	MANUAL, INSTRUCTION (FRENCH, SPANISH)		
					(E, AR, MX, PX)		
156	1-777-868-11	WIRE (FLAT TYPE) (19 CORE)		3-859-536-41	MANUAL, INSTRUCTION (CHINESE) (PX)		
△ 158	1-569-007-11	ADAPTOR, CONVERSION 2P (PX)		3-859-537-11	MANUAL, INSTRUCTION (ENGLISH)		
△ 159	1-569-008-11	ADAPTOR, CONVERSION 2P (AR)			(AEP, EE, UK)		
357	1-452-538-11	MAGNET		3-859-537-21	MANUAL, INSTRUCTION		
△ 401	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP			(FRENCH, SPANISH, PORTUGUESE) (AEP)		
402	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		3-859-537-31	MANUAL, INSTRUCTION (GERMAN) (AEP)		
△ CNP901	1-558-943-41	CORD, POWER (E, MX, PX)		3-859-537-41	MANUAL, INSTRUCTION		
△ CNP901	1-575-042-21	CORD, POWER (US, CND)			(DUTCH, SWEDISH, ITALIAN) (AEP)		
△ CNP901	1-575-651-21	CORD, POWER (AEP, EE, AR)		3-859-537-51	MANUAL, INSTRUCTION (DANISH, FINNISH)		
△ CNP901	1-696-845-11	CORD, POWER (AUS)			(AEP)		
△ CNP901	1-751-529-11	CORD, POWER (UK)		3-859-537-61	MANUAL, INSTRUCTION (POLISH, RUSSIAN)		
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)			(EE)		
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)		8-917-581-90	REMOCON, SONY RM-SD70//M SET		
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN					
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)					
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)					
M102	X-4917-504-1	MOTOR ASSY (SLED)					
M201	A-4660-977-A	MOTOR ASSY (TABLE)					
△ T901	1-431-045-11	TRANSFORMER, POWER (US, CND)					

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