

HCD-CP1

SERVICE MANUAL

US Model
 Canadian Model
 AEP Model
 UK Model
 E Model
 Australian Model



Note

CD block, tape deck block and tuner pack are supplied with the assembled block.

HCD-CP1 is the Amplifier, CD player, Tape Deck and Tuner section in CMT-CP1.

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

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	KSL-2130CCP/K1N
	Optical Pick-up Name	KSS-213C/K1N
Tape deck Section	Model Name Using Similar Mechanism	HCD-ED1
	Tape Transport Mechanism Type	CMAL1Z023A

SPECIFICATIONS

Amplifier section

For the U.S. model

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6-ohm loads both channels driven, from 70 - 20,000 Hz; rated 18 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 25 watts to rated output.

North American model:

Continuous RMS power output (reference):
 25 + 25 W
 (6 ohms at 1 kHz, 10% THD)
 Total harmonic distortion less than 0.07% (6 ohms at 1 kHz, 18 W)

European model:

DIN power output (rated): 20 + 20 W
 (6 ohms at 1 kHz, DIN)
 Continuous RMS power output (reference):
 25 + 25 W
 (6 ohms at 1 kHz, 10% THD)
 Music power output (reference):
 85 + 85 W

Other models:

The following measured at 230 V AC, 60 Hz
 DIN power output (rated): 20 + 20 W
 (6 ohms at 1 kHz, DIN)
 Continuous RMS power output (reference):
 25 + 25 W
 (6 ohms at 1 kHz, 10% THD)
 The following measured at 220 V AC, 60 Hz
 DIN power output (rated): 18 + 18 W
 (6 ohms at 1 kHz, DIN)
 Continuous RMS power output (reference):
 23 + 23 W
 (6 ohms at 1 kHz, 10% THD)

Inputs

MD IN (phono jacks): Sensitivity 1,000 mV, impedance 47 kilohms
 VIDEO IN (phono jacks): Sensitivity 500 mV, impedance 47 kilohms

— Continued on next page —

MICRO HiFi COMPONENT SYSTEM



SONY®

Outputs
 LINE OUT (phono jacks): Sensitivity 500 mV,
 impedance 1 kilohm
 OPTICAL DIGITAL OUT (CD):
 Optical
 PHONES (stereo phone jack):
 Accepts headphones with
 an impedance of 8 ohms
 or more
 SPEAKER:
 Active speaker system,
 6 ohms

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 μW *
 * 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 ($\pm 0.5 \text{ dB}$)

Tape player section

Recording system 4-track 2-channel stereo
Frequency response (DOLBY NR OFF)
 50 - 13,000 Hz ($\pm 3 \text{ dB}$),
 using a Sony TYPE I
 cassette
 50 - 14,000 Hz ($\pm 3 \text{ dB}$),
 using a Sony TYPE II
 cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
 North American model: 87.5 - 108.0 MHz
 (100-kHz step)
 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
 North American model: 530 - 1,710 kHz
 (with the tuning interval
 set at 10 kHz)
 531 - 1,710 kHz
 (with the tuning interval
 set at 9 kHz)
 European model: 531 - 1,602 kHz
 (with the tuning interval
 set at 9 kHz)
 Other models: 530 - 1,710 kHz
 (with the tuning interval
 set at 10 kHz)
 531 - 1,602 kHz
 (with the tuning interval
 set at 9 kHz)
Antenna AM loop antenna,
 external antenna terminal
Intermediate frequency 450 kHz

General

Power requirements
 North American model: 120 V AC, 60 Hz
 European model: 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 55 W

Dimensions (w/h/d) Approx. 190 x 252 x
 280 mm (7 1/2 x 10 x
 11 1/8 in) incl. projecting
 parts and controls

Mass Approx. 5.6 kg
 (12 lb 6 oz)

Design and specifications are subject to change
 without notice.

SECTION 1 SERVICING NOTES

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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.

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.

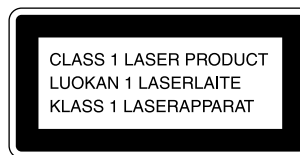
Flexible Circuit Board Repairing

- 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.

CAUTION

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

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.



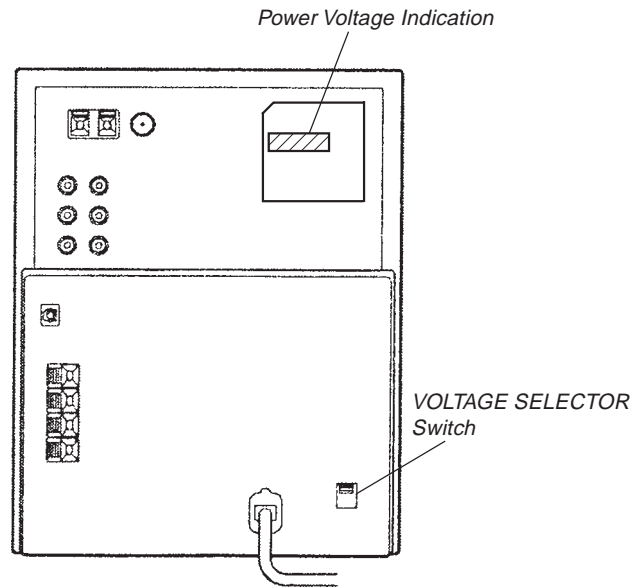
SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle 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.

MODEL IDENTIFICATION
– Back Panel –



Model	Power Voltage Indication
US, Canadian models	AC: 120 V 60 Hz 55 W
AEP, UK models	AC: 230 V \sim 50 Hz 55 W
Malaysia, Singapore, Hong Kong and Thai models	AC: 110 – 120/ 220 – 240 V \sim 50/60 Hz 55 W

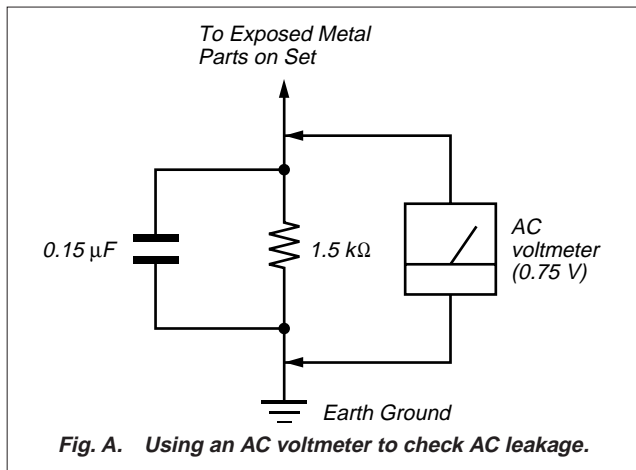
SAFETY CHECK-OUT

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.

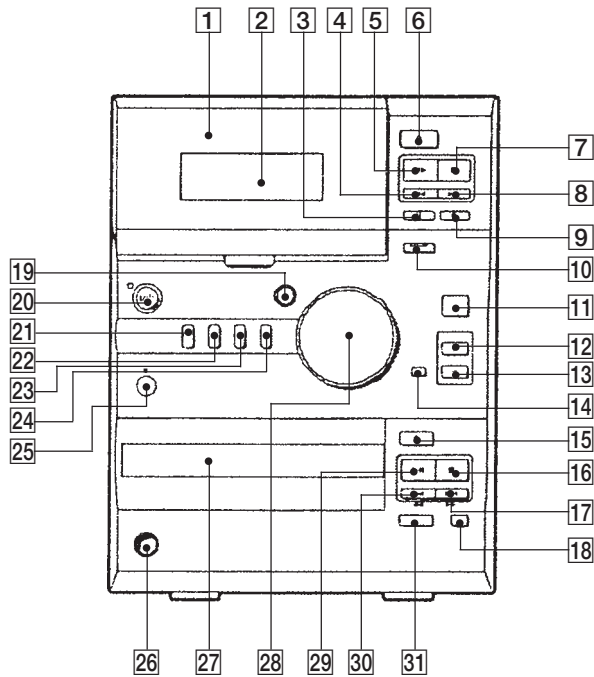
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means 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)



SECTION 2 GENERAL

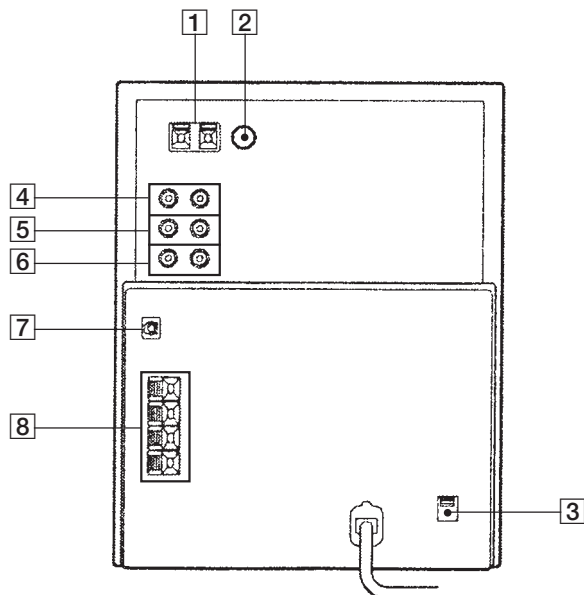
LOCATION OF CONTROLS

• Front View



- 1 TAPE deck
- 2 Liquid crystal display
- 3 TAPE **||** button
- 4 TAPE **◀◀** button
- 5 TAPE **◀▶** button
- 6 TAPE **▶▶** button
- 7 TAPE **■** button
- 8 TAPE **▶▶▶▶** button
- 9 TAPE REC **●** button
- 10 CD SYNC button and indicator
- 11 BAND button
- 12 TUNING + button
- 13 TUNING - button
- 14 TUNING MODE button
- 15 CD EJECT **▲** button
- 16 CD **■** button
- 17 CD **▶▶▶▶▶▶** button
- 18 CD REPEAT button
- 19 DSG button and indicator
- 20 STANDBY **I/⏻** button and indicator
- 21 MD/VIDEO button and indicator
- 22 TAPE button and indicator
- 23 CD button and indicator
- 24 TUNER button and indicator
- 25 Remote sensor
- 26 PHONES jack
- 27 CD disc tray
- 28 VOLUME knob
- 29 CD **▶||** button
- 30 CD **◀◀◀◀** button
- 31 CD PLAY MODE button

• Rear View



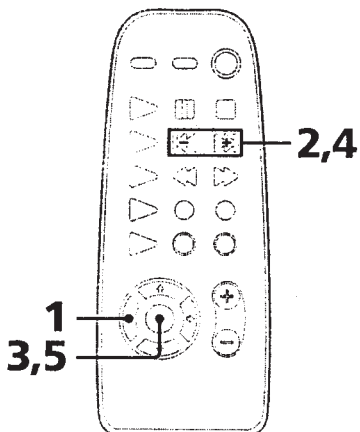
- 1 AM ANTENNA terminals
- 2 FM ANTENNA jack or terminals
- 3 VOLTAGE SELECTOR switch (Malaysia, Singapore and Hong Kong)
- 4 LINE OUT jacks
- 5 MD IN jacks
- 6 VIDEO IN jacks
- 7 CD DIGITAL OUT OPTICAL connector
- 8 SPEAKER terminals

Step 2: Setting the time

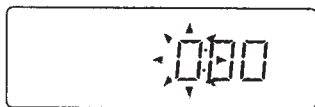
Before you can use the system's timer functions, set the internal clock.

The clock uses a 24-hour system on the European model, and a 12-hour system on other models.

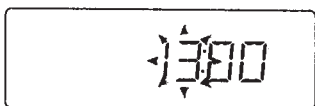
The 24-hour system is used here for illustration purposes.



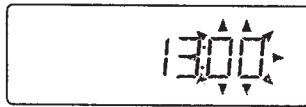
- 1 Press **TIMER SET**.
The hour indication flashes.



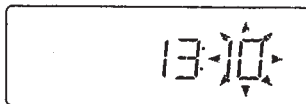
- 2 Press **◀/▶** repeatedly to set the hour.



- 3 Press **ENTER**.
The minute indication flashes.



- 4 Press **◀/▶** repeatedly to set the minute.



- 5 Press **ENTER**.
The clock will begin operating.

To reset the system clock

You can reset the system clock even when the system is on or off.

- 1 Press **TIMER SET**.
- 2 Press **◀/▶** repeatedly until "SET CLOCK" appears, then press **ENTER**.
- 3 Repeat step 2 to 5 in "Step 2: Setting the time".

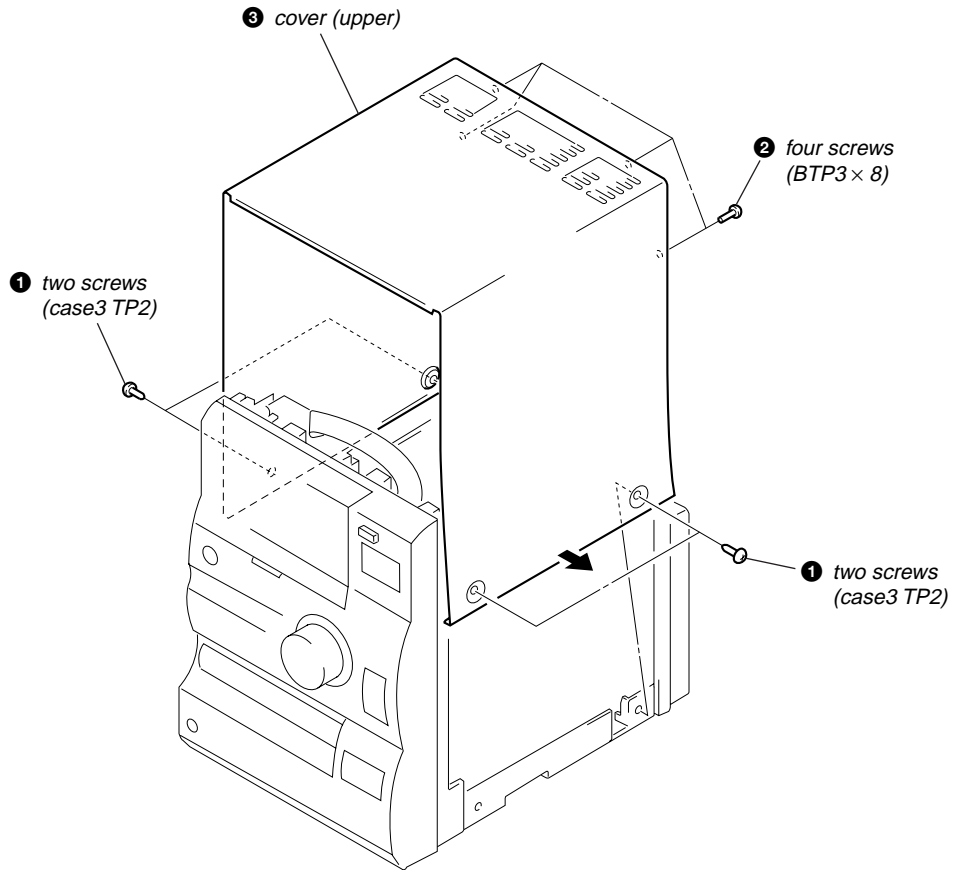
Tip

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

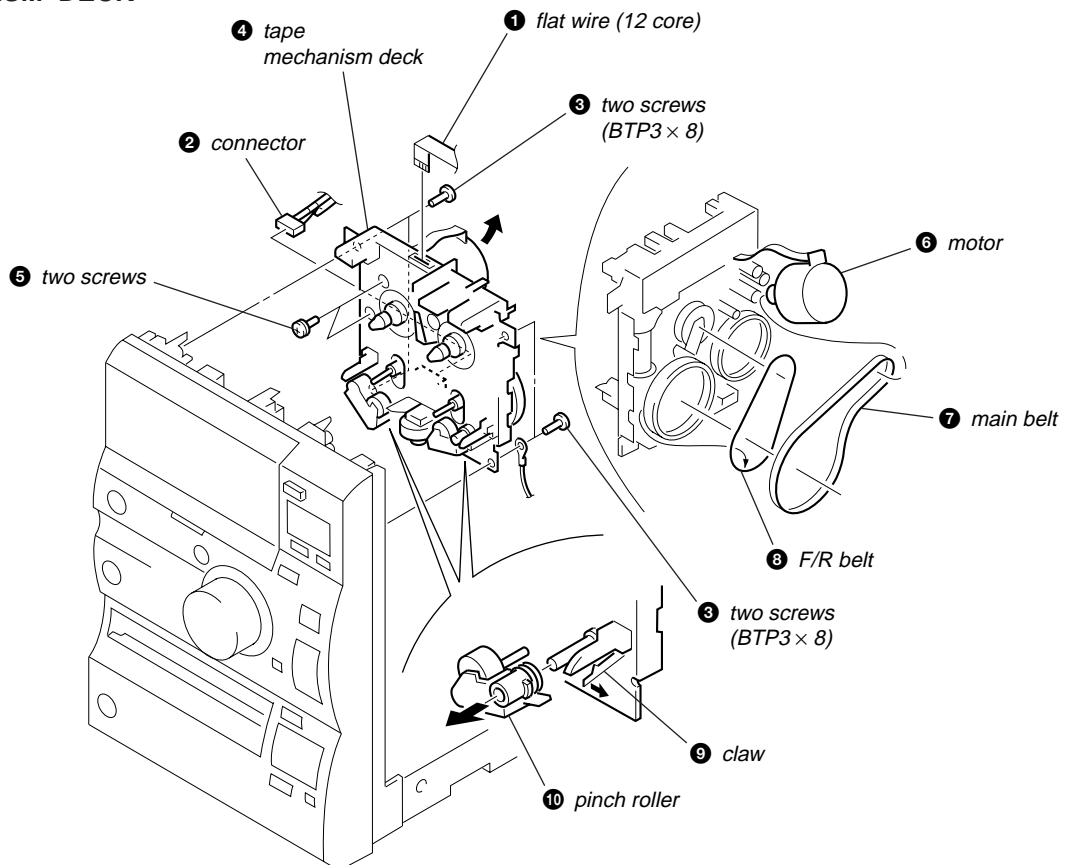
SECTION 3 DISASSEMBLY

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

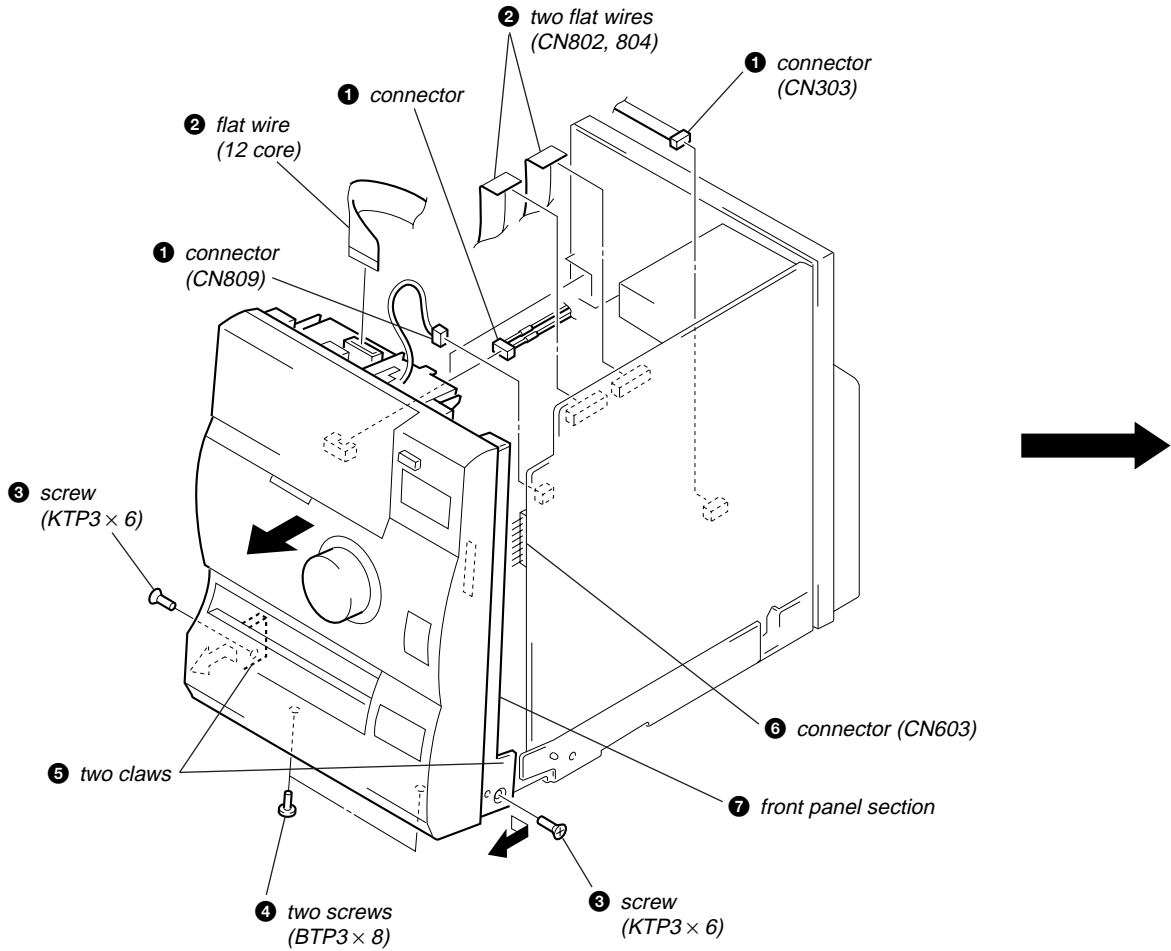
COVER (UPPER)



TAPE MECHANISM DECK

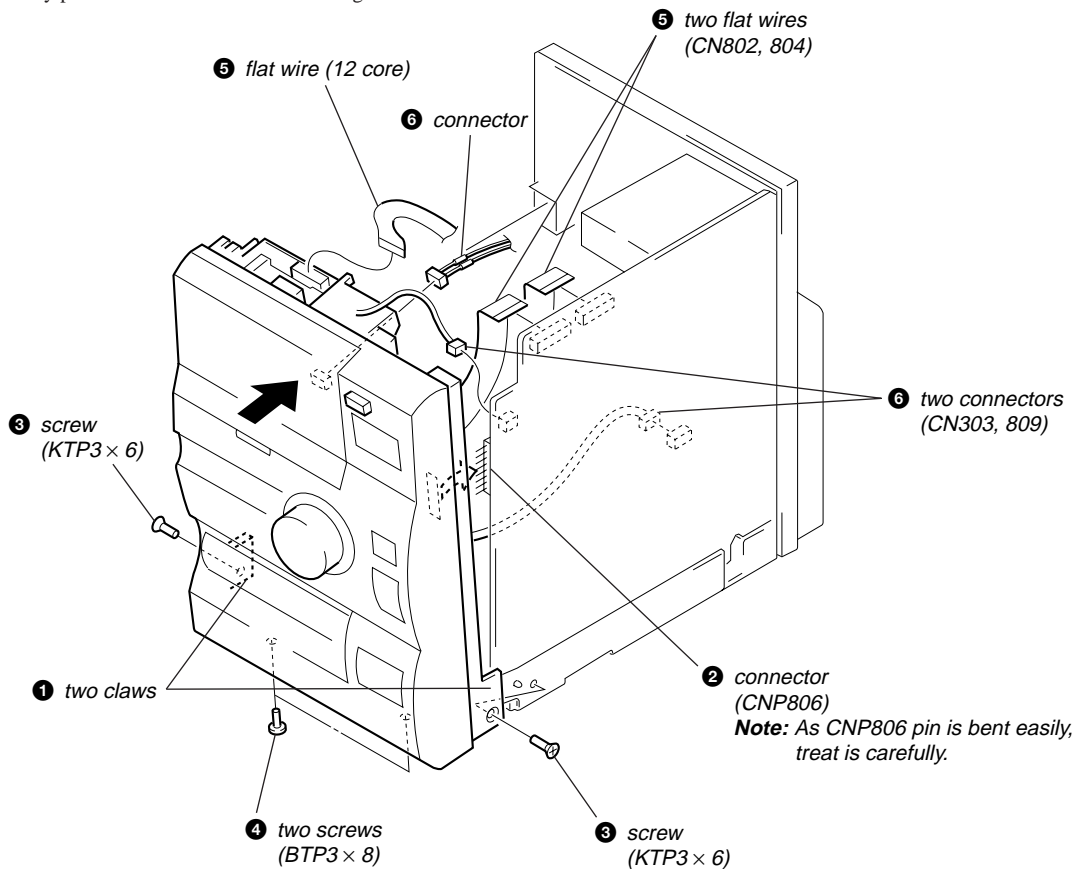


FRONT PAENL SECTION

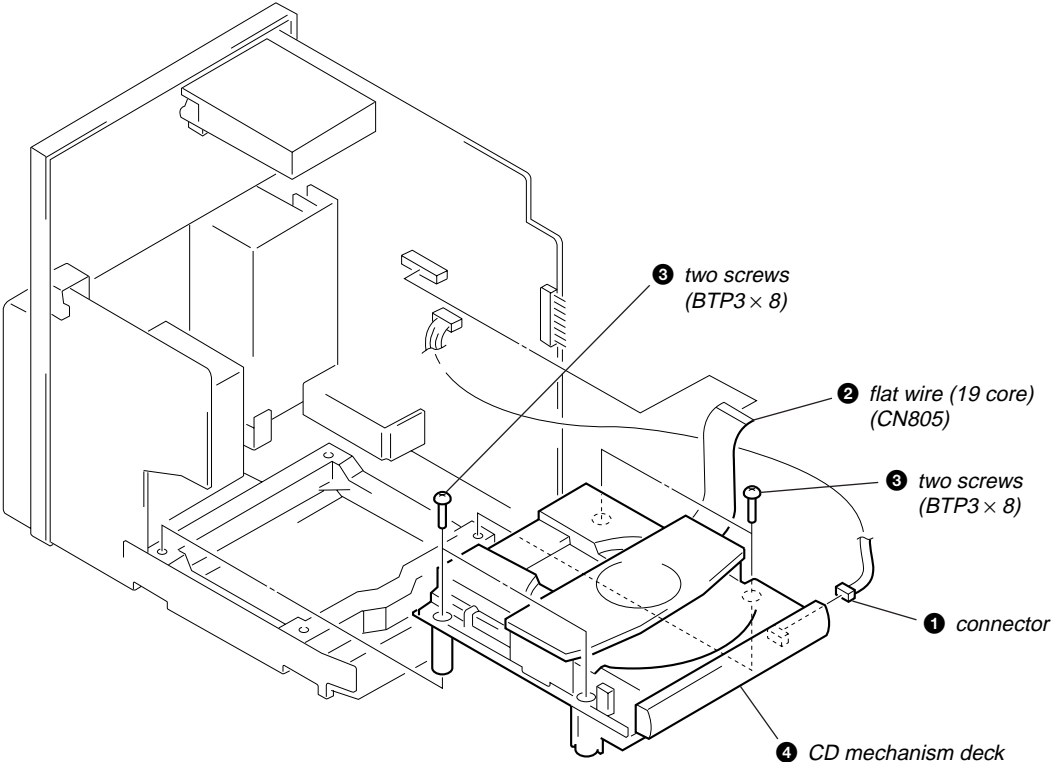


• FRONT PAENL SECTION INSTALLATION

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

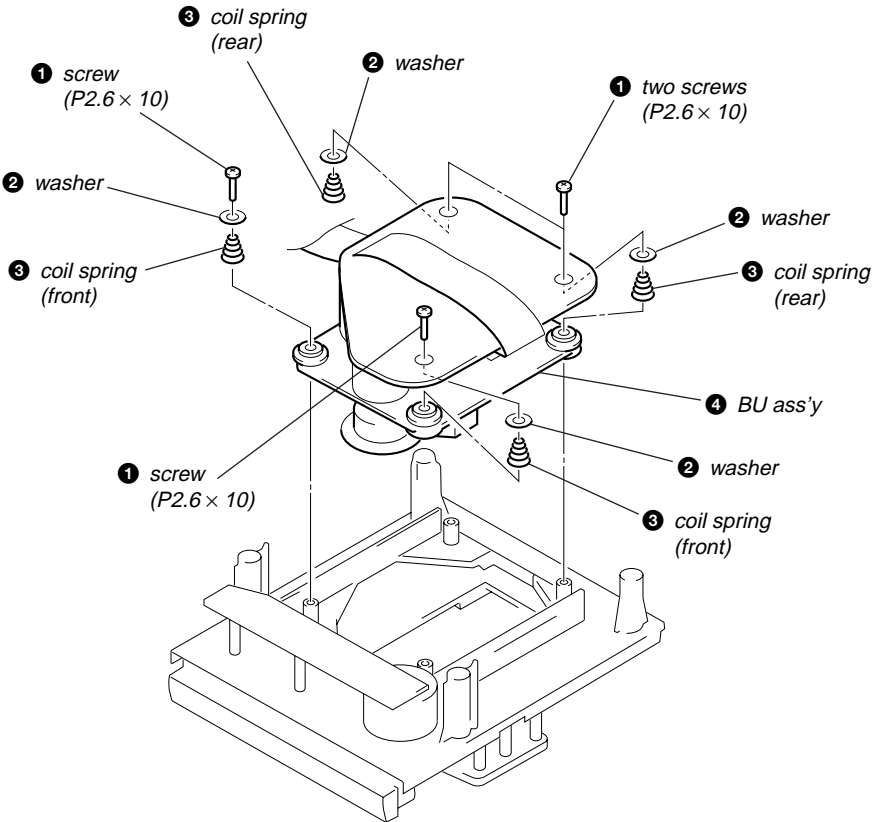


CD MECHANISM DECK

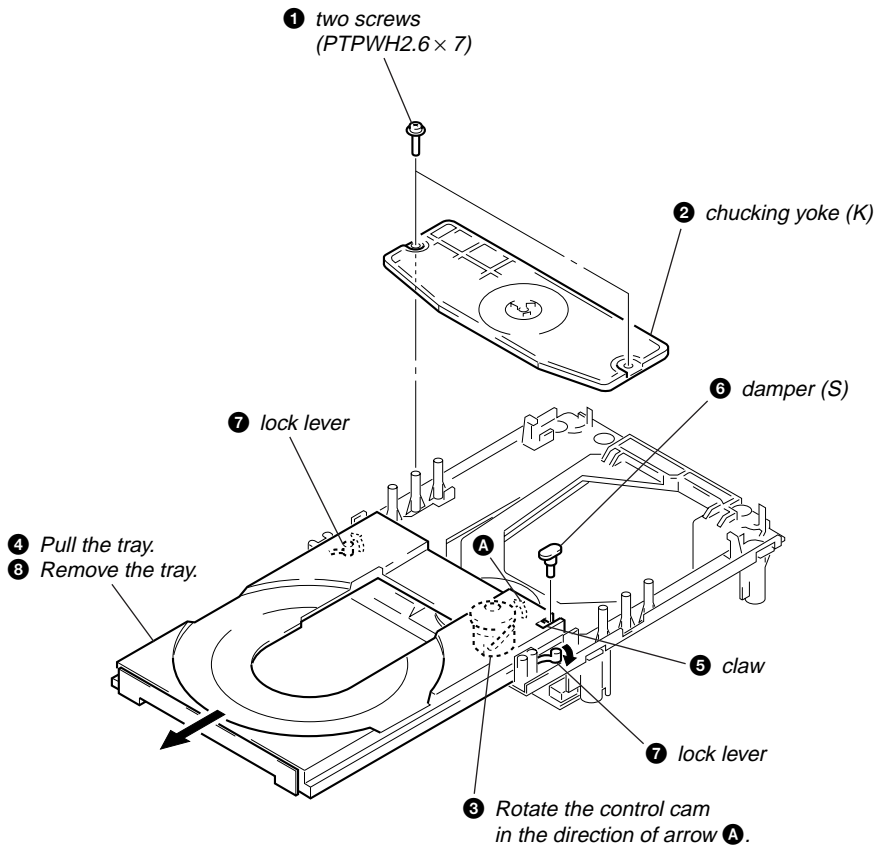


BU ASS'Y

Note: As 3 coil springs are missed easily, treat them carefully.

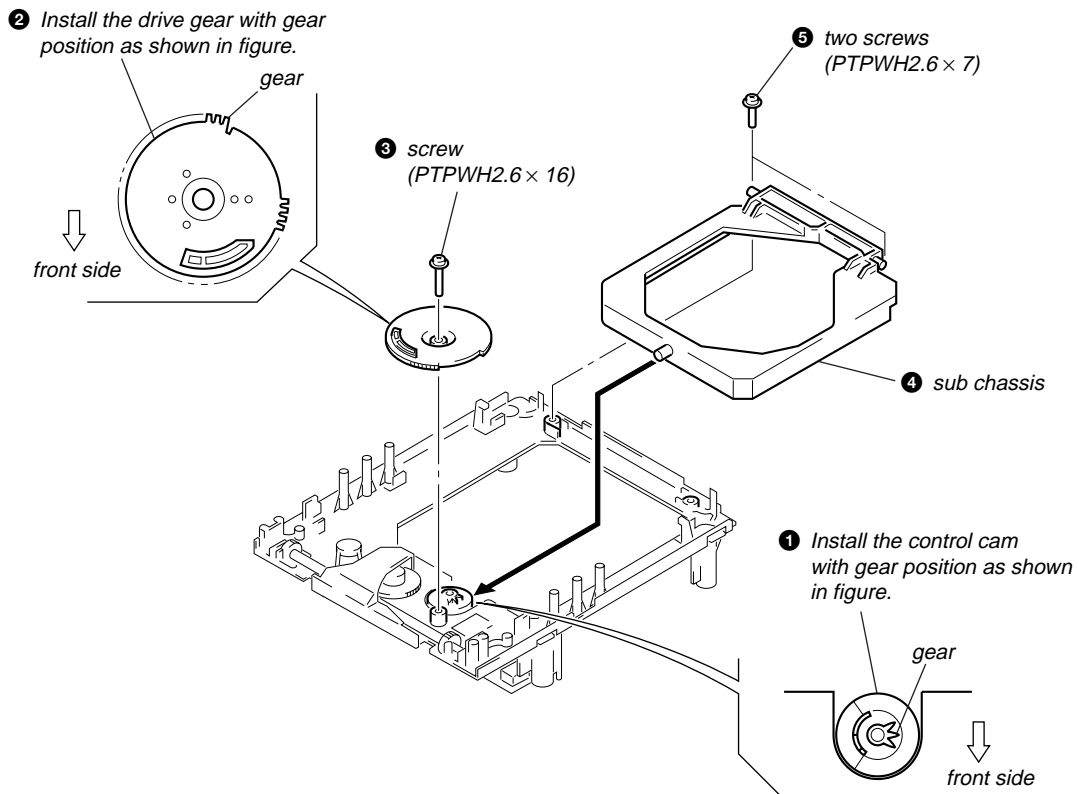


TRAY



• SUB CHASSIS INSTALLATION

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



SECTION 4 SERVICE MODE

[Liquid Crystal Display All Lit Check Mode]

Procedure:

1. Set to standby state.
2. Press three buttons of **[TAPES]** (TAPE), **[CD]**, and **[MD/VIDEO]** simultaneously.
3. Liquid crystal display are all turned on.
4. To exit from this mode, press the **[I/⏻]** button to turn the power OFF.

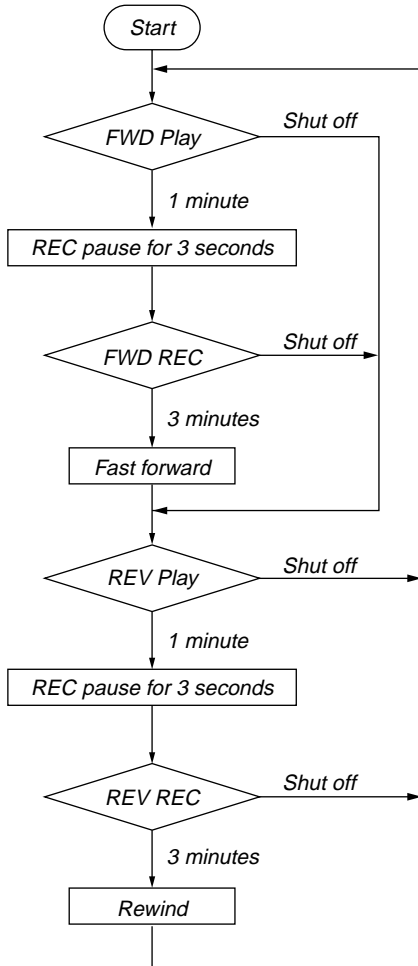
[Tape Deck Aging Mode]

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

Procedure:

1. Set a tape in the tape deck.
2. Set to standby state.
3. Press three buttons of **[TAPES]** (TAPE), **[CD]**, and **[TAPE]** simultaneously.
4. The aging is executed in bellow sequence.
5. To exit from the aging mode, press the **[I/⏻]** button to turn the power OFF.

Aging mode sequence:



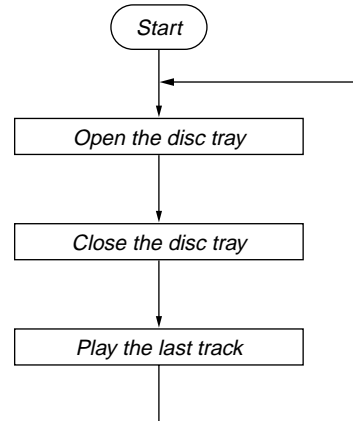
[CD Aging Mode]

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

Procedure:

1. Load a CD disc.
2. Set to standby state.
3. Press three buttons of **[TAPES]** (TAPE), **[CD]**, and **[TUNER]** simultaneously.
4. The aging is executed in bellow sequence.
5. To exit from the aging mode, press the **[I/⏻]** button to turn the power OFF.

Aging mode sequence:



SECTION 5 ELECTRICAL CONFIRMATIONS AND ADJUSTMENTS

DECK SECTION

0 dB=0.775 V

Note: Confirm each contents of this section first of all. If the results are not satisfied, do the adjustment.

1. Demagnetize the record/playback head with a head demagnetizer.
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.

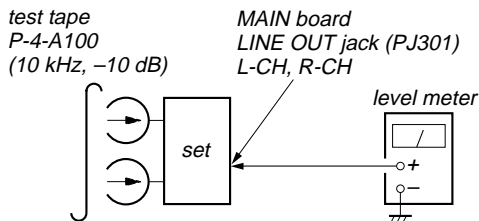
• Test Tape

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

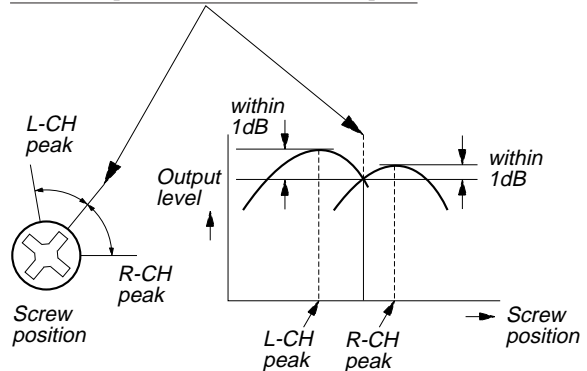
Record/Playback Head Azimuth Adjustment

Procedure:

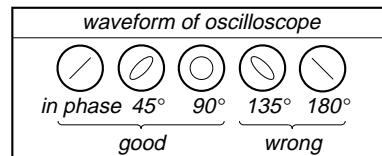
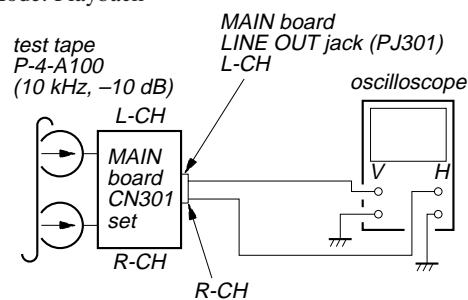
1. Mode: Playback



2. 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.

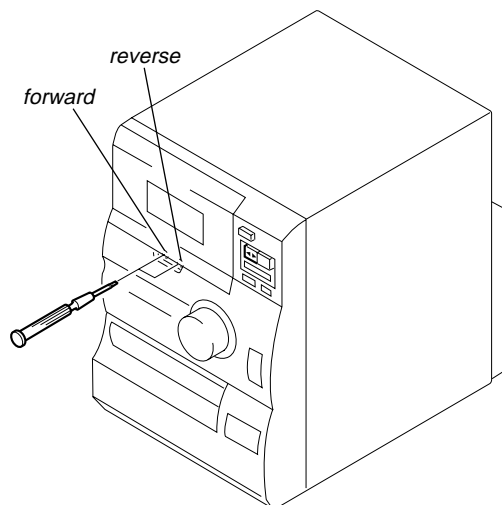


3. Mode: Playback



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

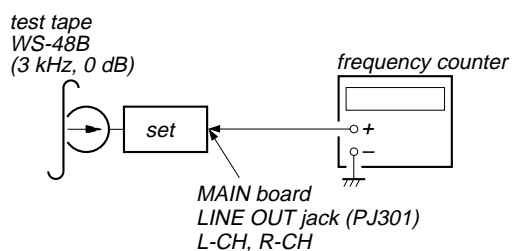
Adjustment Location:



Playback level Confirmation and Adjustment

Procedure:

Mode: Playback



Confirm playback level is within specification values as follows. If these levels are out of specification values, adjust the RV151 (L-CH) and RV251 (R-CH) on the MAIN board so that the level meter reading become within specification values.

Specification values:

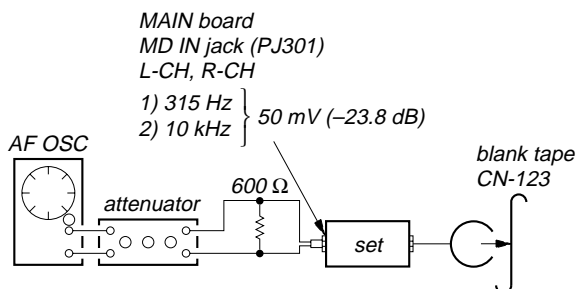
PJ301 PB level: 301.5 to 338.3 mV (−8.2 to −7.2 dB) level difference between the channels: within ±0.5 dB

Adjustment Location: MAIN board

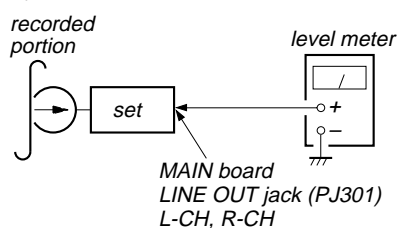
REC Bias Confirmation and Adjustment

Procedure:

1. Mode: Record



2. Mode: Playback



3. Confirm playback the signal recorded in step 1 become specification values as follows.

If these values are out of specification values, adjust the RV153 (L-CH) and RV253 (R-CH) on the MAIN board to repeat steps 1 and 2.

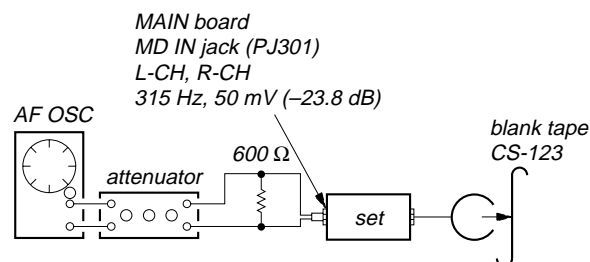
Specification values: Playback output of 315 Hz to playback output of 10 kHz: ± 0.5 dB

Adjustment Location: MAIN board

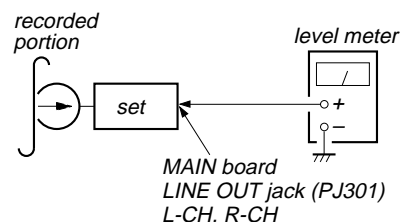
REC Level Confirmation and Adjustment

Procedure:

1. Mode: Record



2. Mode: Playback



3. Confirm playback the signal recorded in step 1 become specification values as follows.

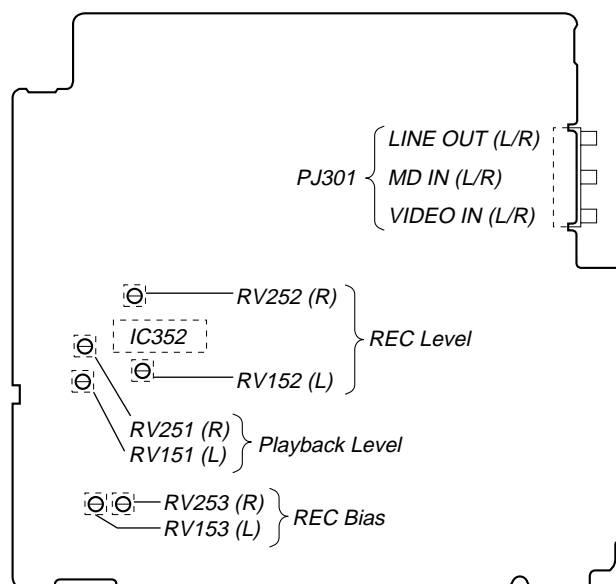
If these values are out of specification values, adjust the RV252 (R-CH) and RV152 (L-CH) on the MAIN board to repeat steps 1 and 2.

Specification values:

PJ301 PB level: 47.2 to 53.0 mV (− 24.3 to − 23.3 dB)

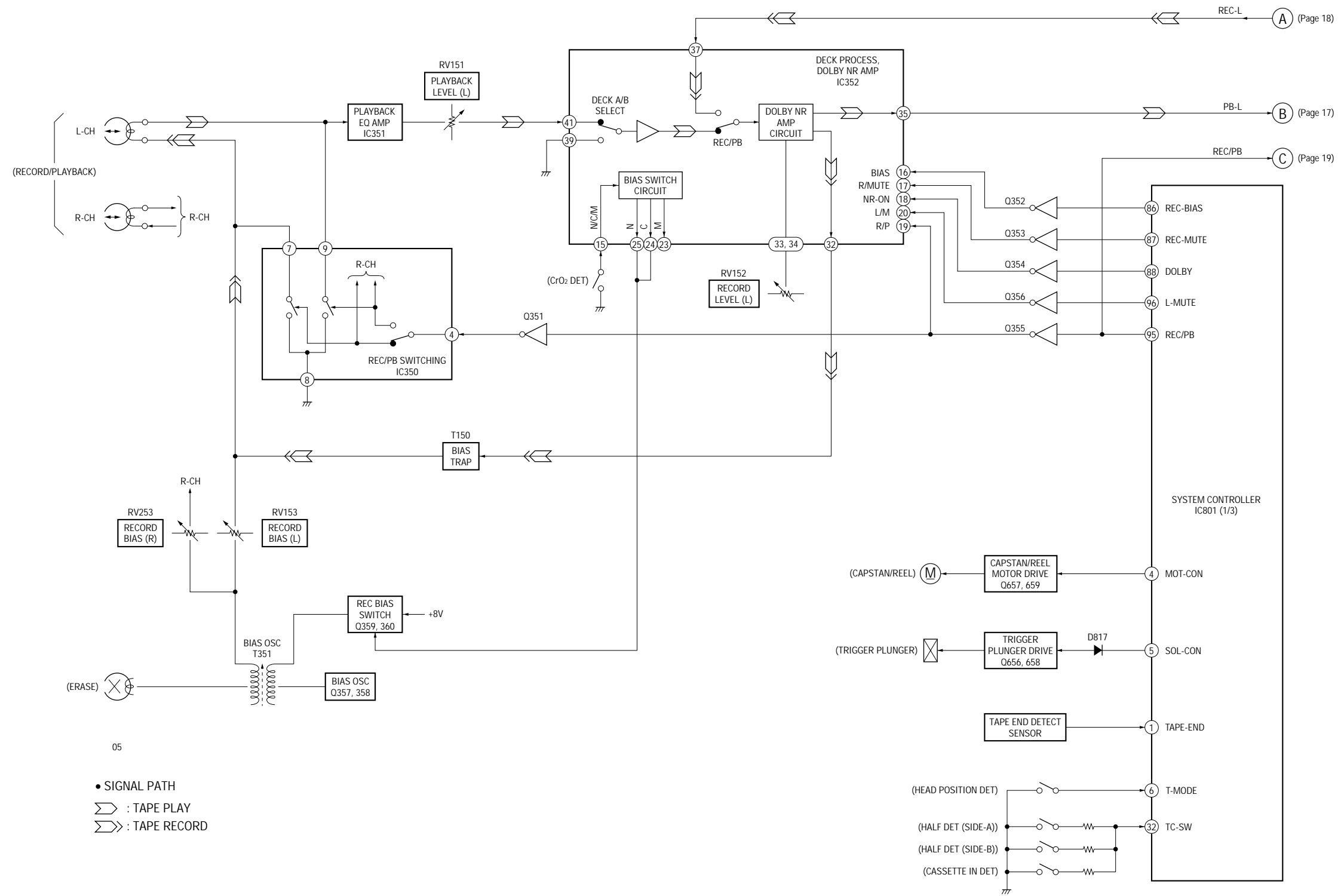
Adjustment Location: MAIN board

– MAIN BOARD (Conductor Side) –

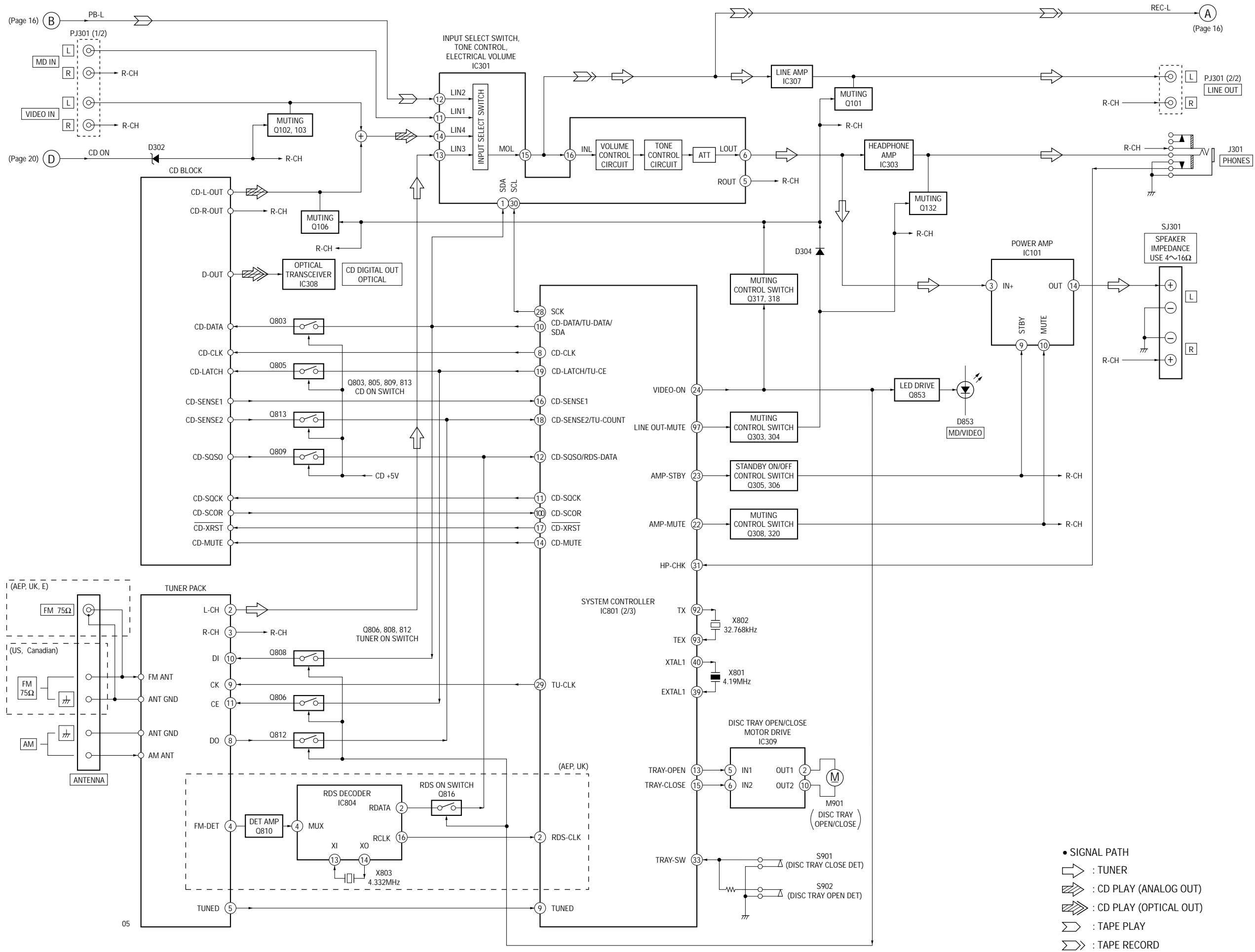


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM – TAPE Section –



6-2. BLOCK DIAGRAM - MAIN Section -



6-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

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

Note on Schematic Diagram:

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

Note:

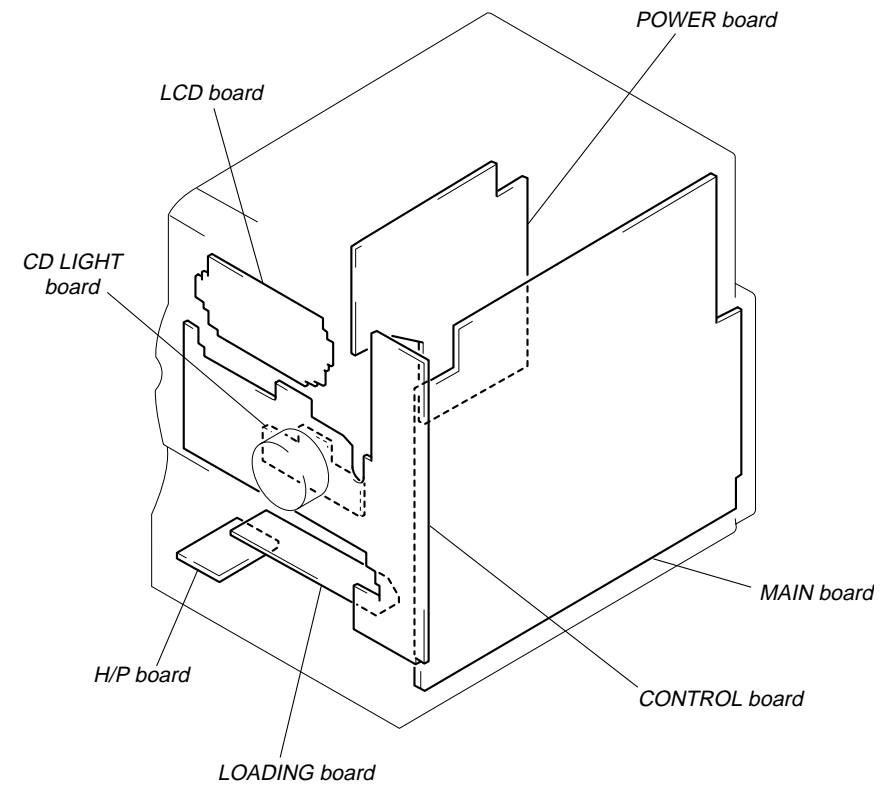
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:

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

- B+** : B+ Line.
- B-** : B- Line.
- : adjustment for repair.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - ⇒ : TUNER
 - ⇒ : TAPE PLAY
 - ⇒ : TAPE RECORD
 - ⇒ : CD PLAY (ANALOG OUT)
 - ⇒ : CD PLAY (OPTICAL OUT)
- Abbreviation
 - CND : Canadian model
 - HK : Hong Kong model
 - MY : Malaysia model
 - SP : Singapore model
 - TH : Thai model

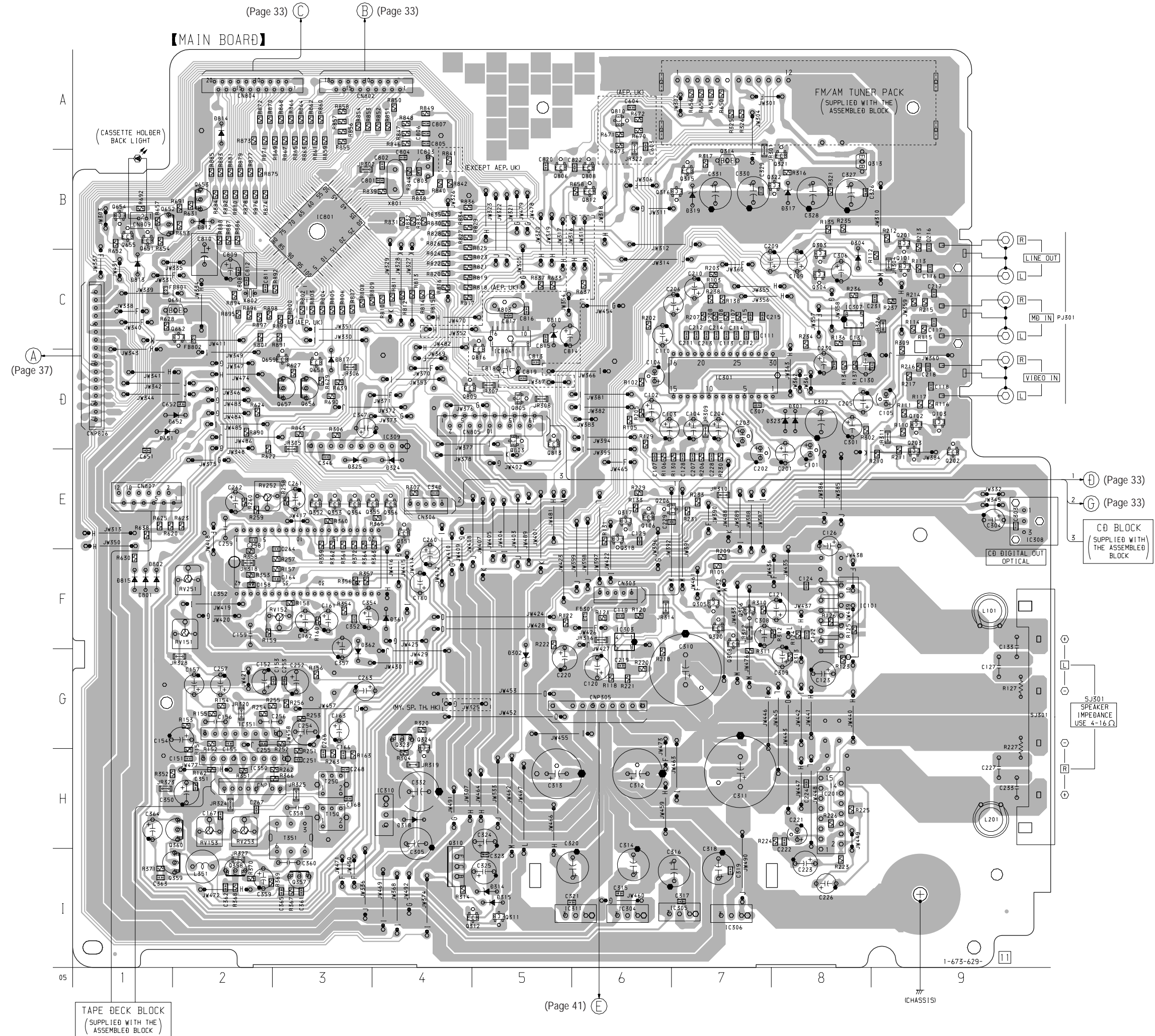
• Circuit Boards Location



• Semiconductor Location

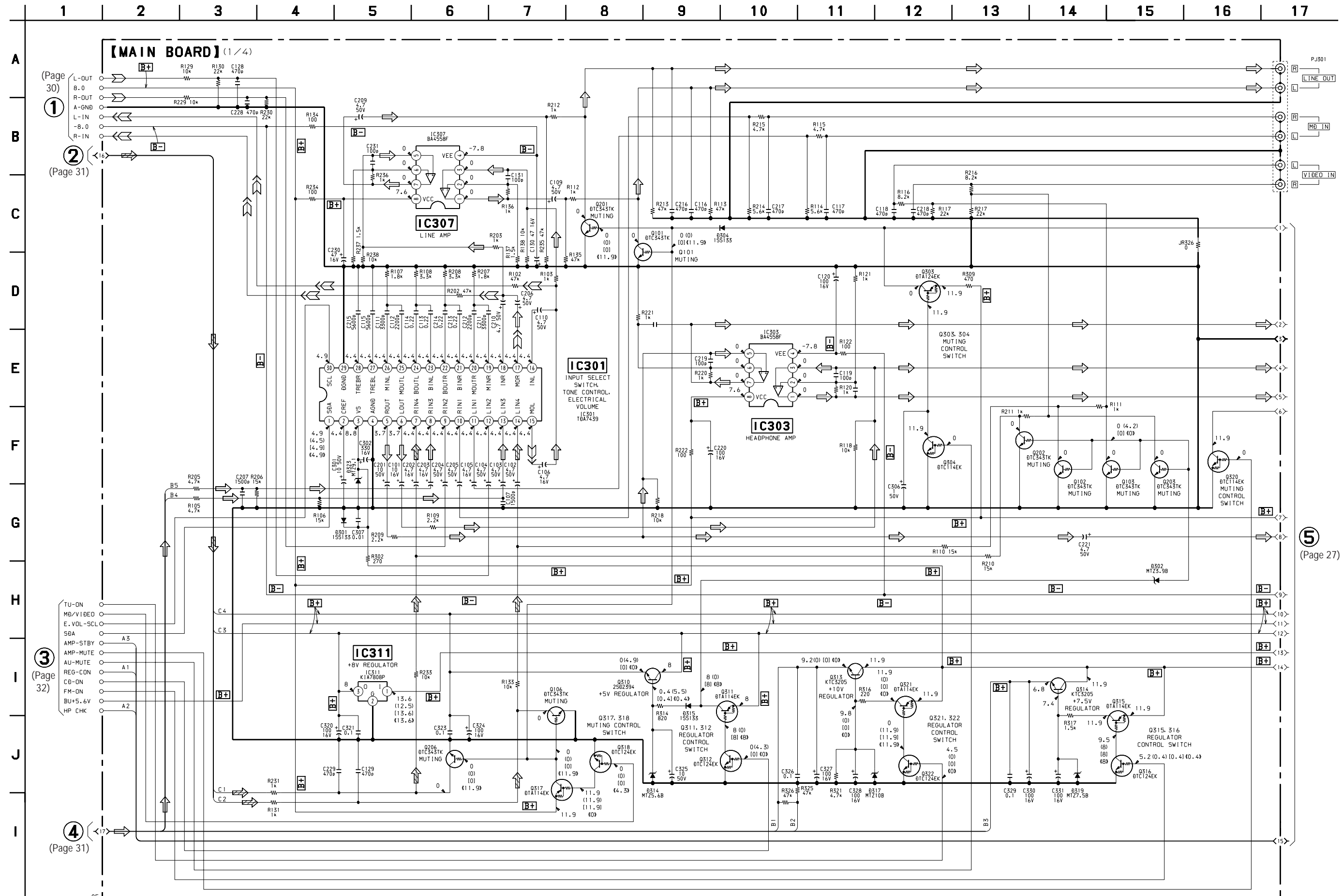
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	D-8	IC310	H-4	Q323	G-4
D302	G-5	IC311	I-6	Q324	G-4
D304	C-8	IC350	H-2	Q351	E-4
D314	I-5	IC351	G-2	Q352	E-3
D315	I-5	IC352	F-3	Q353	E-3
D317	B-8	IC801	B-3	Q354	E-3
D318	H-4	IC803	B-4	Q355	E-4
D319	B-7	IC804	C-5	Q356	E-4
D323	D-8			Q357	I-3
D324	E-4	Q101	C-9	Q358	I-2
D325	E-3	Q102	D-9	Q359	I-2
D361	F-4	Q103	D-9	Q360	H-2
D362	G-3	Q106	E-6	Q651	B-1
D651	D-1	Q201	B-9	Q652	B-1
D652	D-2	Q202	E-9	Q653	B-2
D801	F-1	Q203	E-9	Q654	B-1
D802	F-1	Q206	E-7	Q655	B-1
D810	C-5	Q303	C-8	Q656	D-3
D812	B-2	Q304	C-8	Q657	D-3
D813	C-1	Q305	F-7	Q658	D-3
D814	A-2	Q306	F-7	Q659	D-3
D815	F-1	Q308	F-7	Q661	C-2
D817	D-3	Q310	I-4	Q662	C-2
		Q311	I-5	Q803	D-5
		Q312	I-5	Q805	D-5
IC101	F-8	Q313	B-8	Q806	B-5
IC201	H-8	Q314	B-7	Q808	B-6
IC301	D-7	Q315	B-7	Q809	D-4
IC303	F-6	Q316	B-7	Q810	A-6
IC304	I-6	Q317	E-6	Q812	B-6
IC305	I-7	Q318	E-6	Q813	D-5
IC306	I-7	Q320	F-7	Q816	D-5
IC307	C-8	Q321	B-8		
IC308	E-9	Q322	B-8		
IC309	D-3				

6-5. PRINTED WIRING BOARD – MAIN Section – • See page 22 for Circuit Boards Location.

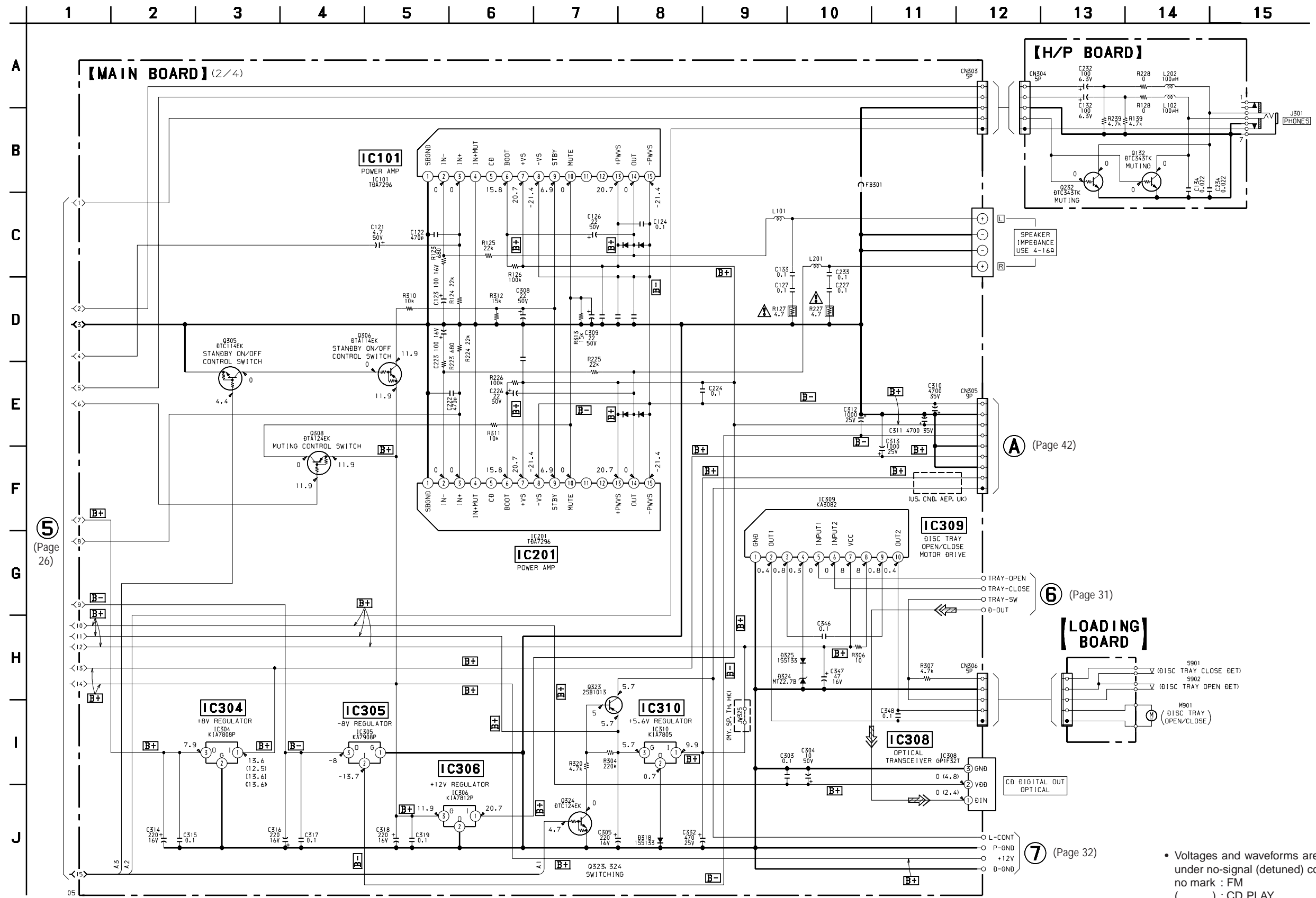


- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : CD PLAY
- [] : TAPE PLAY
- << >> : MD/VIDEO

6-6. SCHEMATIC DIAGRAM – MAIN Section (1/4) – • See page 35 for IC Block Diagram.



6-7. SCHEMATIC DIAGRAM – MAIN Section (2/4) – • See page 35 for IC Block Diagrams.



5 (Page 26)

A (Page 42)

6 (Page 31)

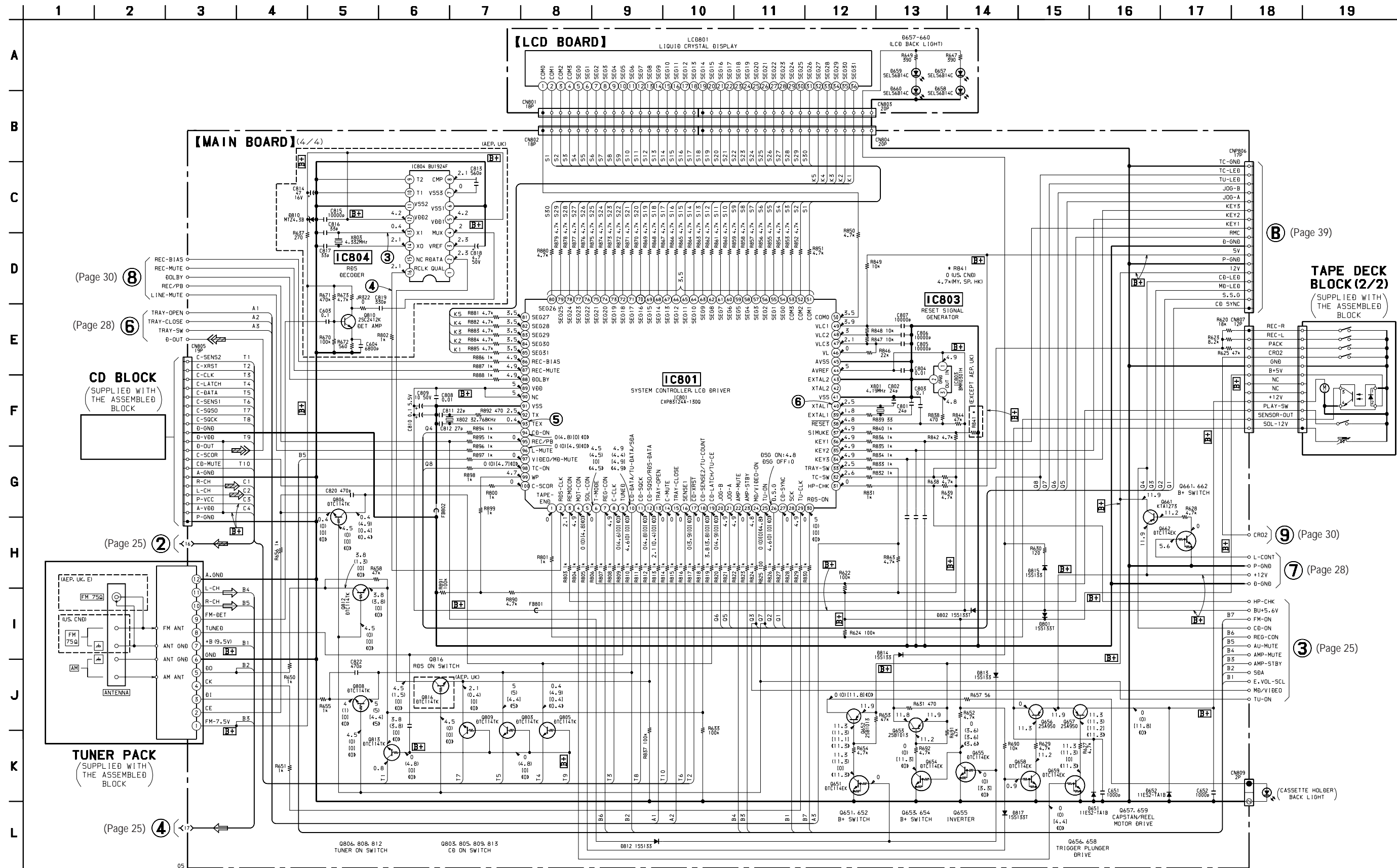
7 (Page 32)

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : CD PLAY
- [] : TAPE PLAY
- << >> : MD/VIDEO

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

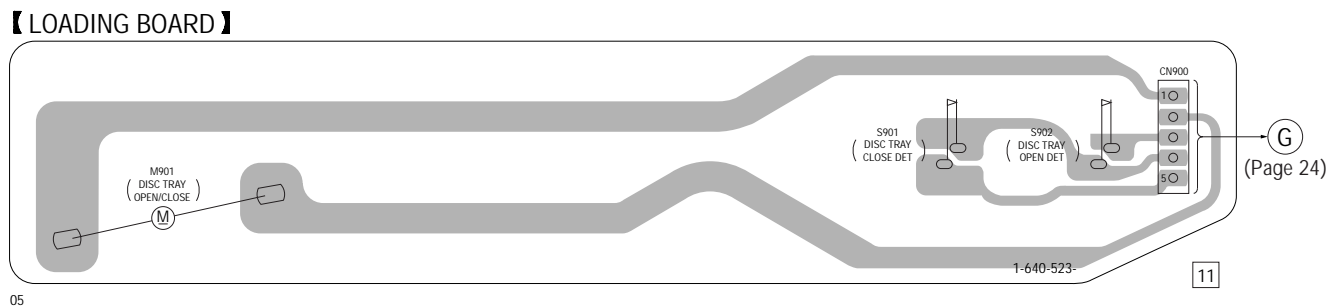
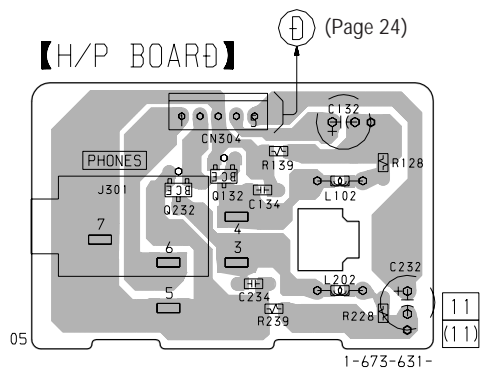
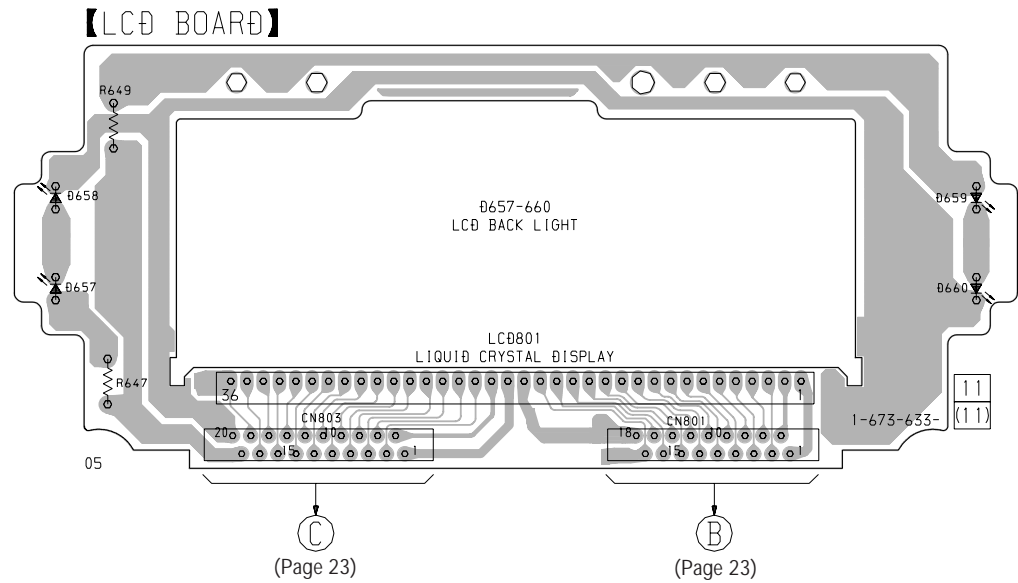
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-9. SCHEMATIC DIAGRAM – MAIN Section (4/4) – • See page 34 for Waveforms. • See page 36 for IC Block Diagram.



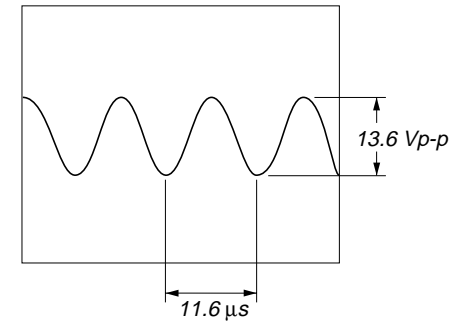
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : FM
 () : CD PLAY
 [] : TAPE PLAY
 << >> : MD/VIDEO

6-10. PRINTED WIRING BOARDS – PANEL/CD LOADING Section –
 • See page 22 for Circuit Boards Location.

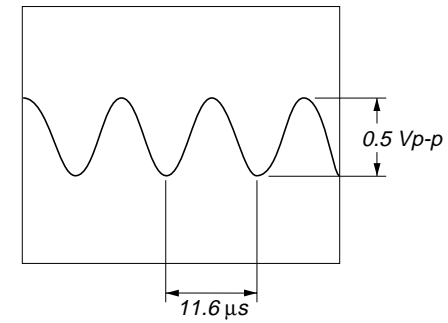


• Waveforms
 – MAIN Board –

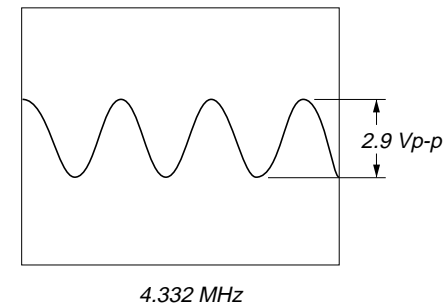
① Q357, 358 collector (REC mode)



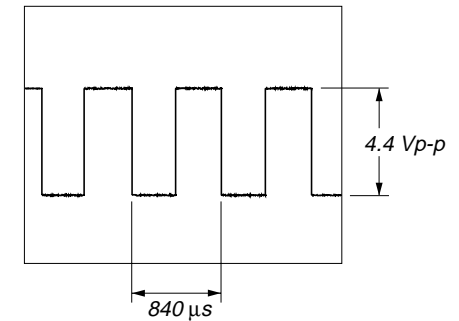
② Q360 collector (REC mode)



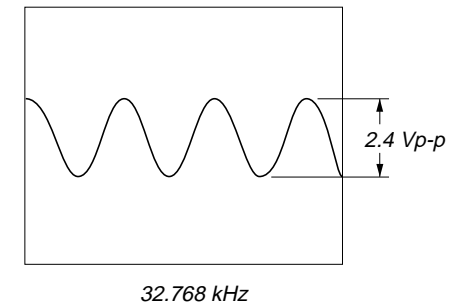
③ IC804 ⑬ (XI)



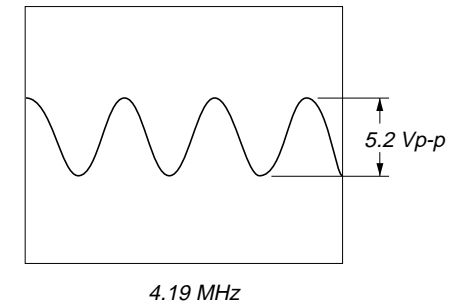
④ IC804 ⑯ (RCLK)



⑤ IC801 ⑳ (TEX)

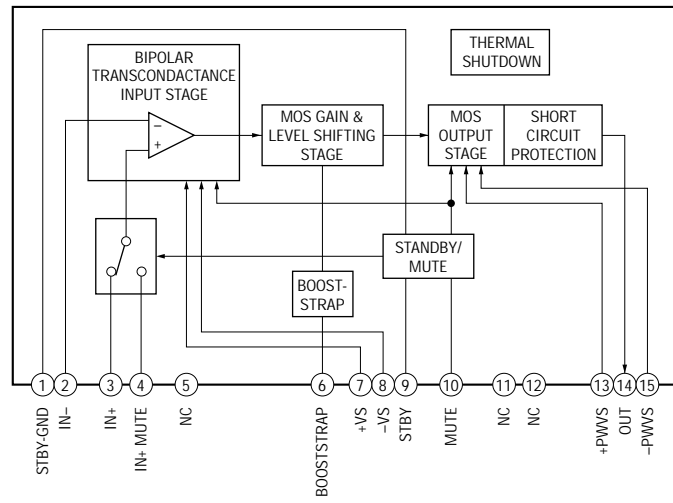


⑥ IC801 ⑳ (XTAL1)

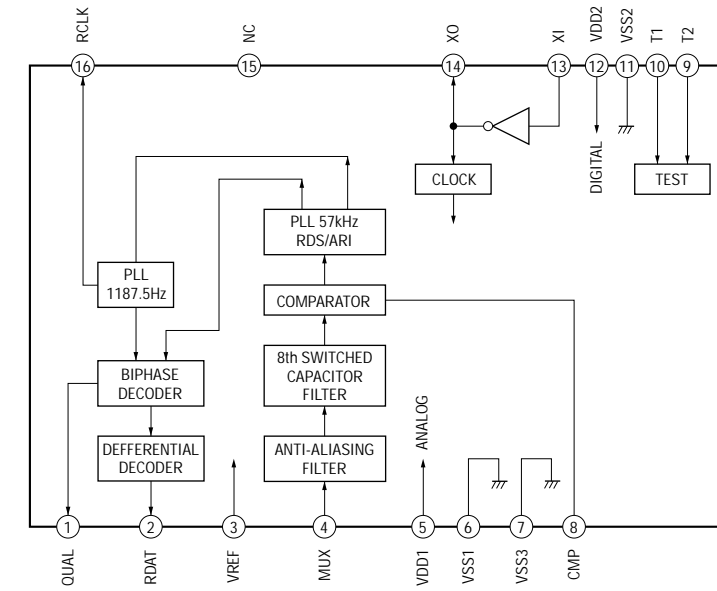


• IC Block Diagrams
– MAIN Board –

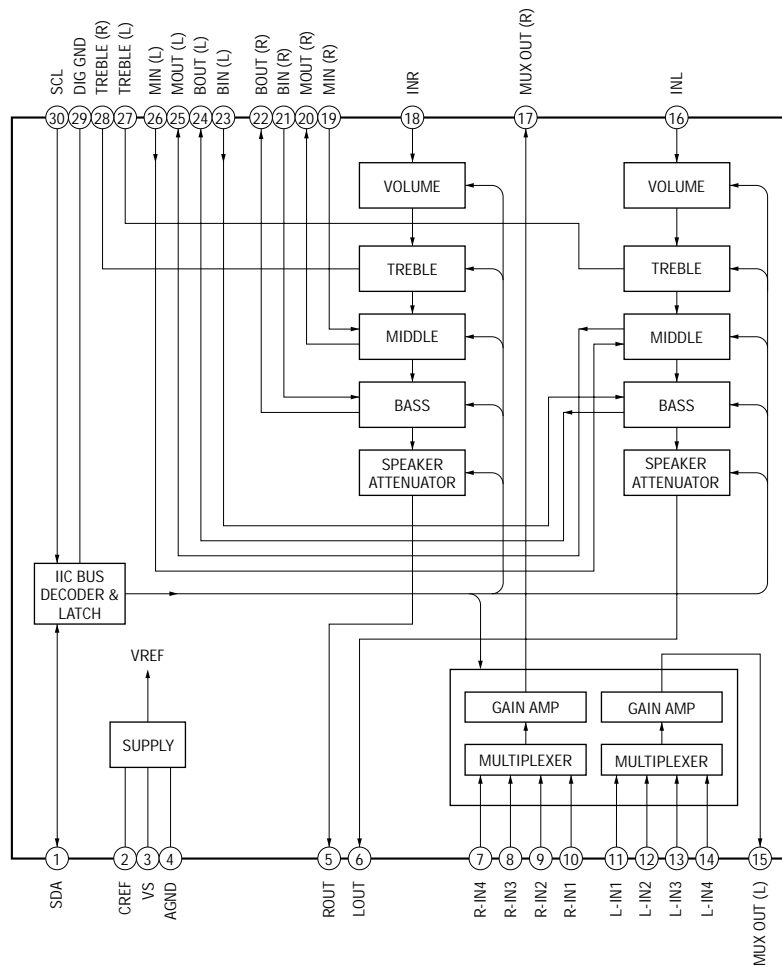
IC101, 201 TDA7296



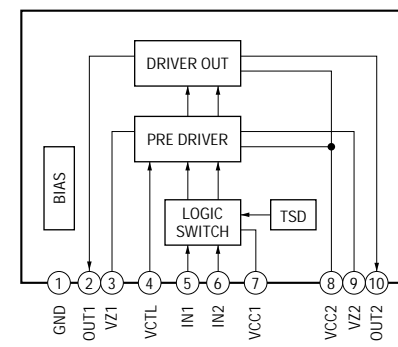
IC804 BU1924F-E2 (AEP, UK models)



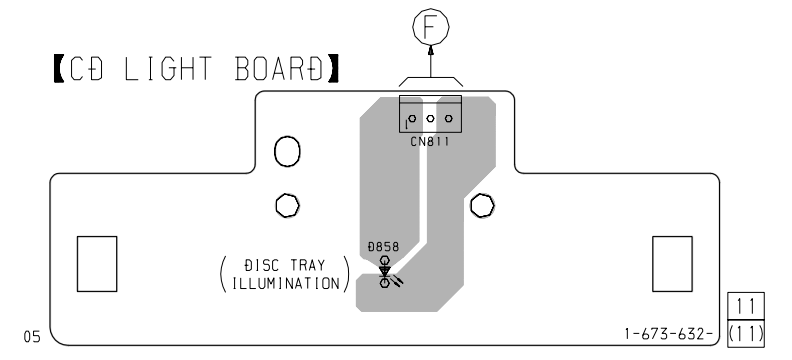
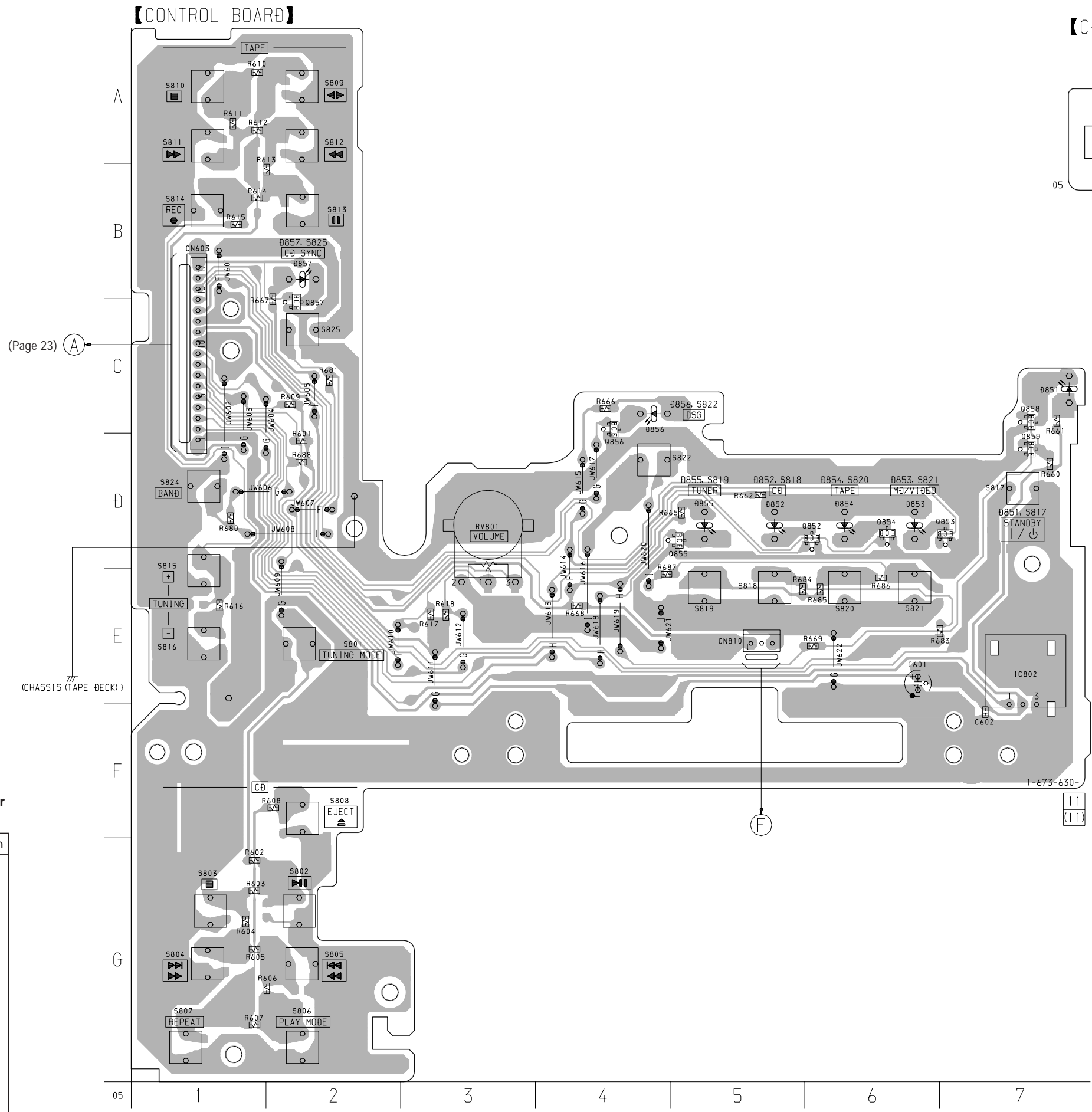
IC301 TDA7439



IC309 KA3082



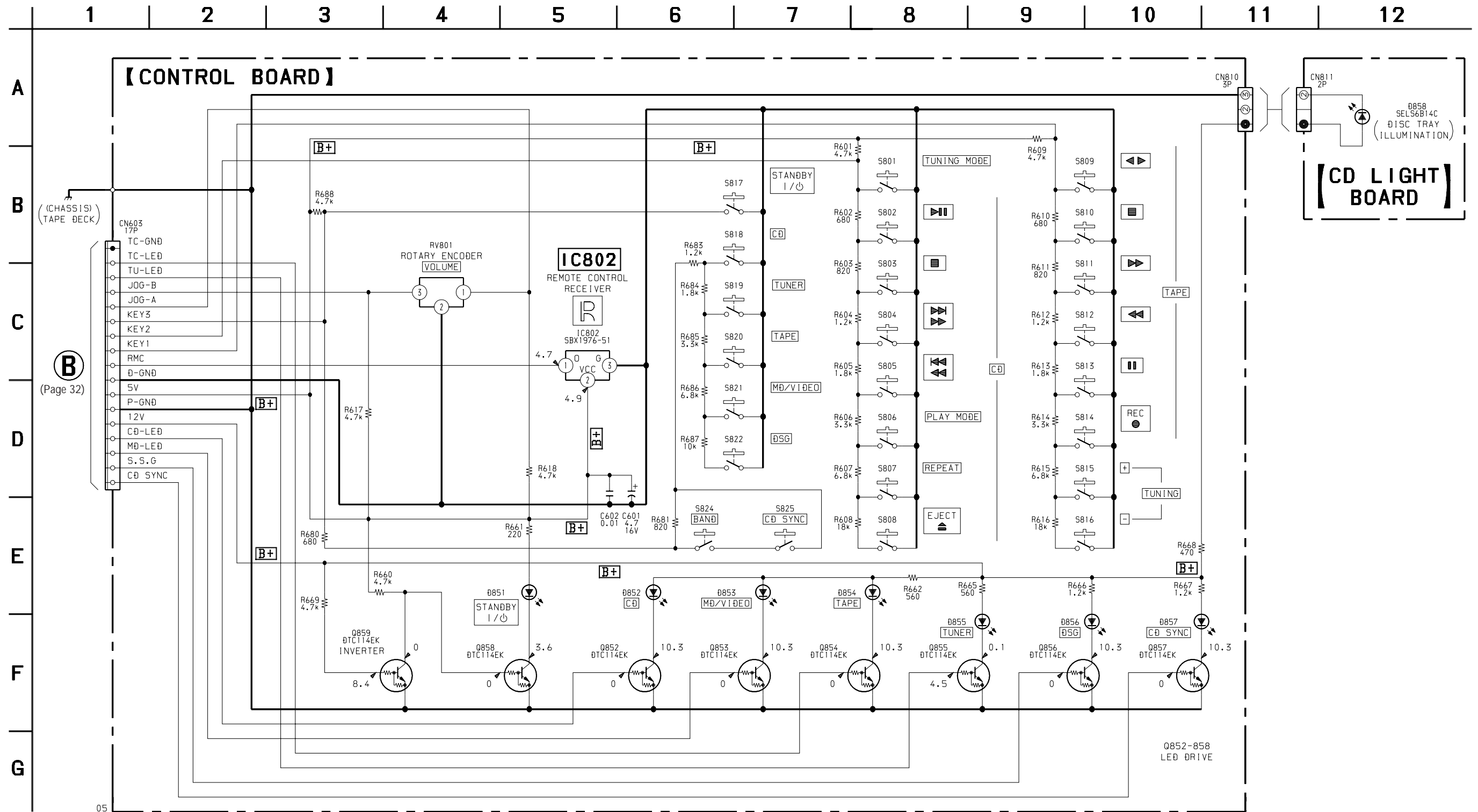
6-11. PRINTED WIRING BOARDS – CONTROL Section – • See page 22 for Circuit Boards Location.



• Semiconductor Location

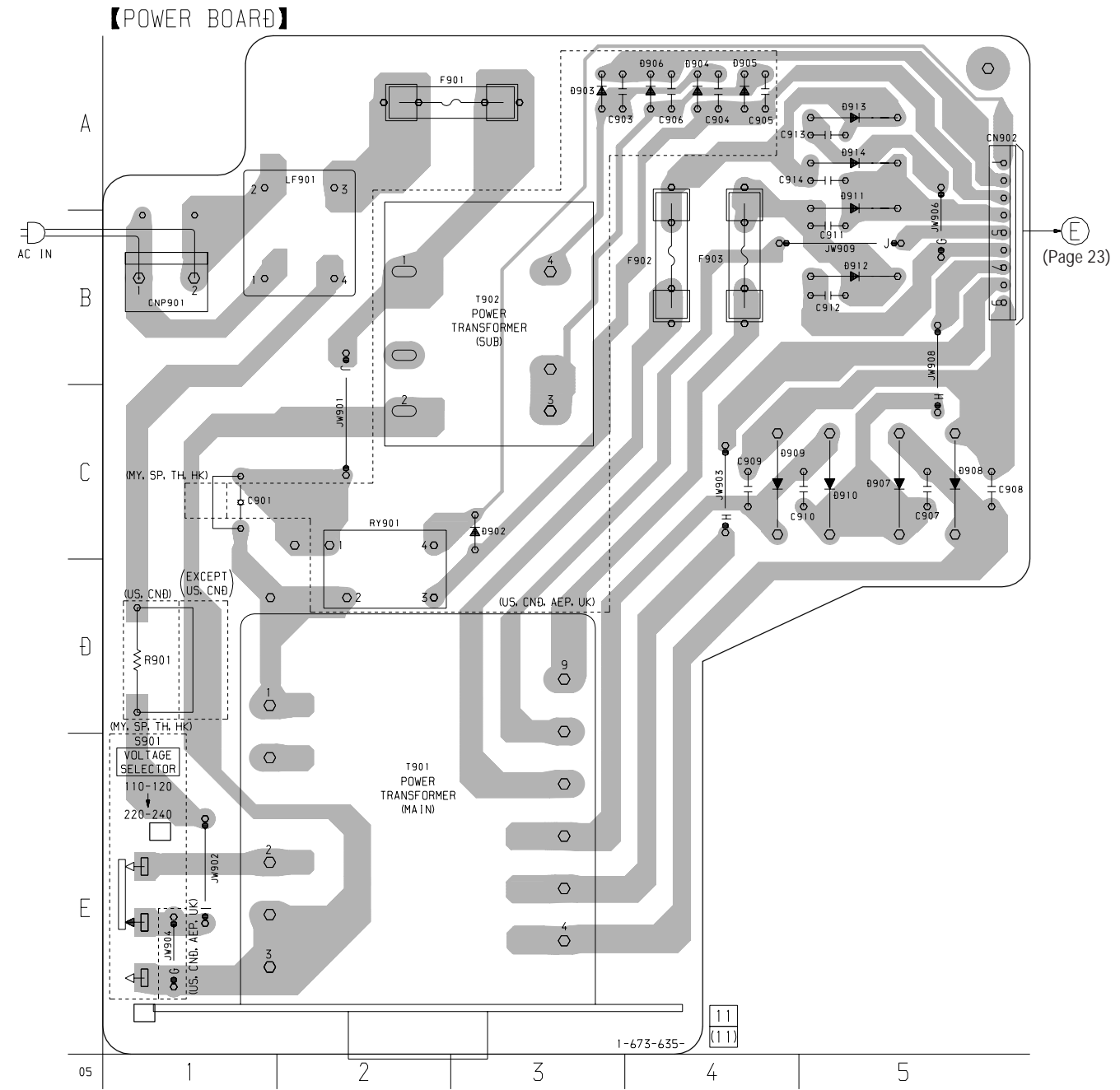
Ref. No.	Location
D851	C-7
D852	D-5
D853	D-6
D854	D-6
D855	D-5
D856	C-4
D857	B-2
IC802	E-7
Q852	D-6
Q853	D-7
Q854	D-6
Q855	D-5
Q856	C-4
Q857	C-2
Q858	C-7
Q859	D-7

6-12. SCHEMATIC DIAGRAM – CONTROL Section –

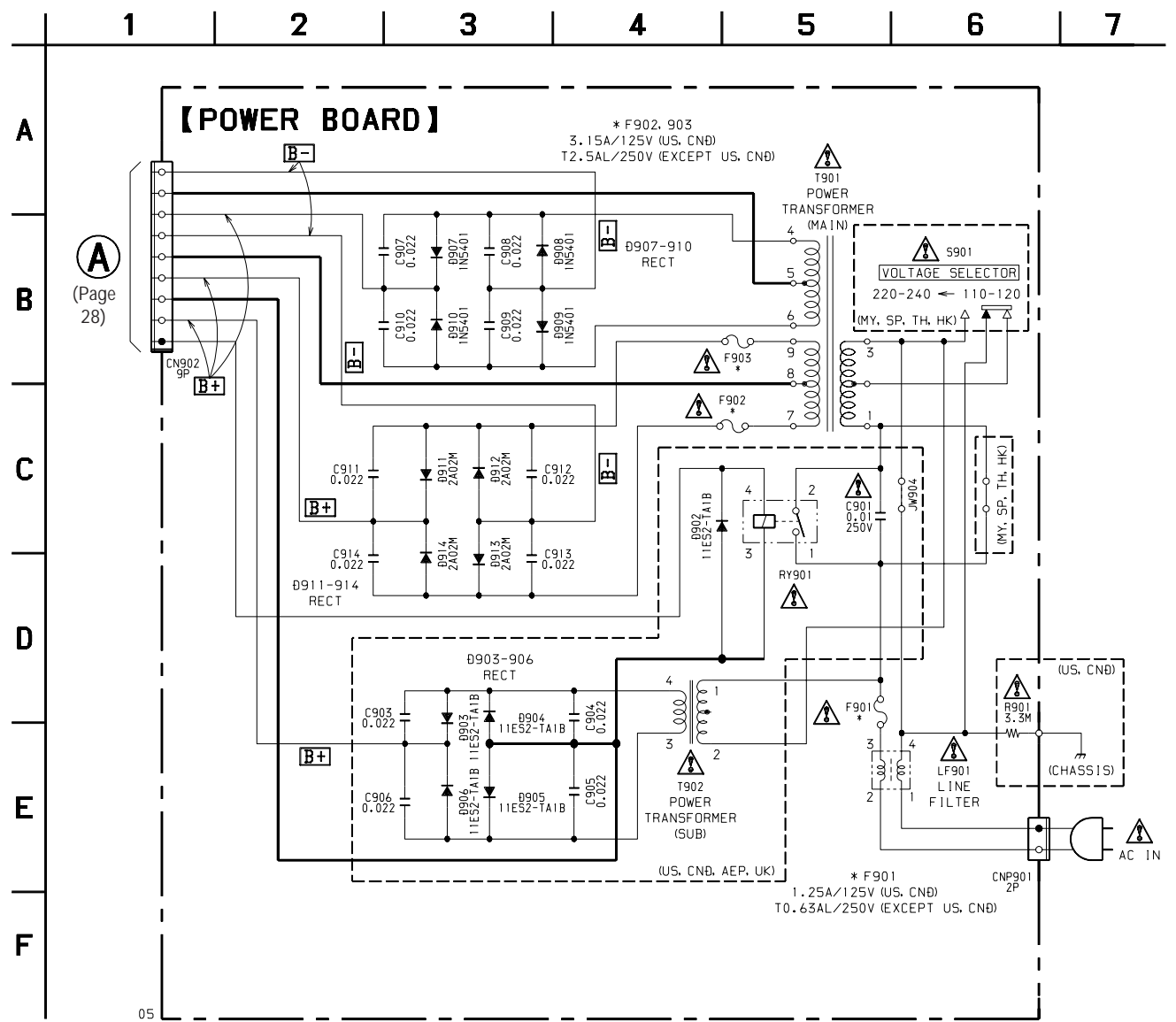


• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

6-13. PRINTED WIRING BOARD – POWER Section –
 • See page 22 for Circuit Boards Location.



6-14. SCHEMATIC DIAGRAM – POWER Section –



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

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

• Semiconductor Location

Ref. No.	Location
D902	C-3
D903	A-3
D904	A-4
D905	A-4
D906	A-4
D907	C-5
D908	C-5
D909	C-4
D910	C-5
D911	A-5
D912	B-5
D913	A-5
D914	A-5

6-15. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC801 CXP83124A-130Q (SYSTEM CONTROLLER, LCD DRIVER)

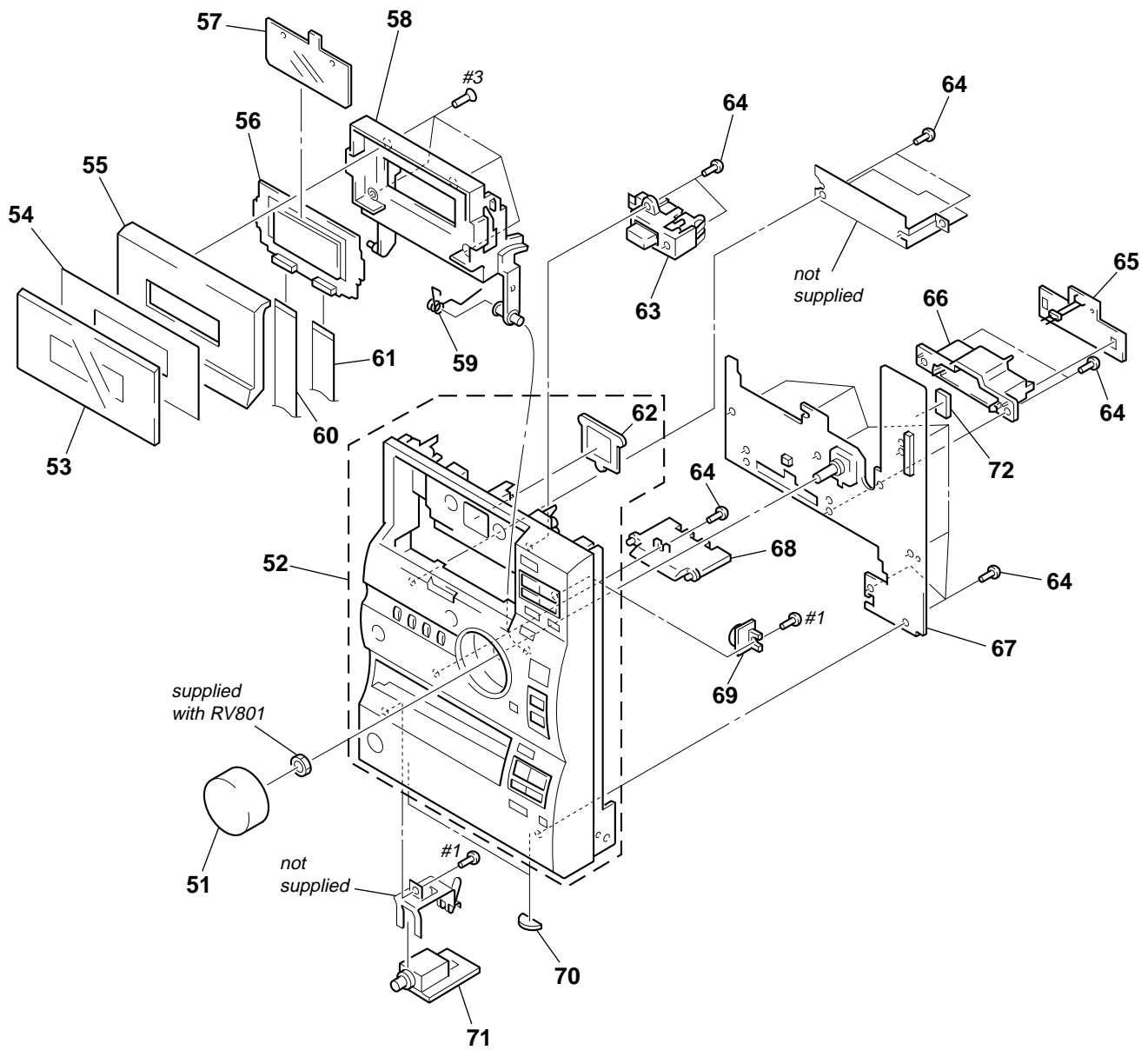
Pin No.	Pin Name	I/O	Description
1	TAPE-END	I	Tape end detect sensor input terminal "H" input when the tape end detected
2	RDS-CLK	I	Serial data reading clock signal input from the RDS decoder (IC804) (Used for the AEP and UK models only)
3	REMOCON	I	Sircs remote control signal input from the remote control receiver (IC802)
4	MOT-CON	O	Capstan/reel motor on/off control signal output terminal "H": motor on
5	SOL-CON	O	Trigger plunger on/off control signal output terminal "H": plunger on
6	T-MODE	I	Head position detect switch input terminal "L": forward direction, "H": reverse direction
7	REG-CON	O	Main system power supply on/off control signal output terminal "H": power on
8	CD-CLK	O	Serial data transfer clock signal output to DSP/SSP on the CD block (at CD function)
9	TUNED	I	Tuning detection signal input from the tuner pack "L": tuned
10	CD-DATA/ TU-DATA/ SDA	O	Serial data output to DSP/SSP on the CD block (at CD function) PLL serial data output to PLL IC on the tuner pack (at tuner function) I ² C data output to the TDA7439 (IC301) (all functions)
11	CD-SQCK	O	Subcode Q data reading clock signal output to DSP on the CD block (at CD function)
12	CD-SQSO/ RDS-DATA	I	Subcode Q data input from DSP on the CD block (at CD function) RDS serial data input from the RDS decoder (IC804) (at tuner function) (RDS decoder: used for the AEP and UK models only)
13	TRAY-OPEN	O	Motor drive signal output to the disc tray open/close motor driver (IC309) "H" active *1
14	CD-MUTE	O	Muting on/off control signal output to the CD block "H": muting on
15	TRAY-CLOSE	O	Motor drive signal output to the disc tray open/close motor driver (IC309) "H" active *1
16	CD-SENSE1	I	Internal status detection monitor input from CD block (for FZC, DFCT1, TZC, etc.) (at CD function)
17	CD-XRST	O	Reset signal output to the CD block "L": reset
18	CD-SENSE2/ TU-COUNT	I	Internal status detection monitor input from the CD block (for MIRR, DFCT2, etc.) (at CD function) PLL count data input from PLL IC on the tuner pack (at tuner function)
19	CD-LATCH/ TU-CE	O	Serial data latch pulse output to DSP on the CD block (at CD function) PLL serial chip enable signal output to PLL IC on the tuner pack (at tuner function)
20	JOG-B	I	Jog dial pulse input from the rotary encoder (RV801 VOLUME) (B phase input)
21	JOG-A	I	Jog dial pulse input from the rotary encoder (RV801 VOLUME) (A phase input)
22	AMP-MUTE	O	Muting on/off control signal output to the power amplifier (IC101, 201) "H": muting on
23	AMP-STBY	O	Standby on/off control signal output to the power amplifier (IC101, 201) "L": standby mode
24	VIDEO-ON	O	VIDEO/MD function control signal output terminal "H": VIDEO/MD ("L" output when other functions)
25	TU-ON	O	Power supply on/off control signal output of the tuner pack (+10V) LED drive signal output of the TUNER indicator (D855) "H": tuner power on (LED on)
26	D.S.G.	O	LED drive signal output of the DSG (Dynamic Sound Generator) indicator (D856) "H": LED on
27	CD-SYNC	O	LED drive signal output of the CD SYNC indicator (D857) "H": LED on
28	SCK	O	Serial data transfer clock signal output to the TDA7439 (IC301)
29	TU-CLK	O	PLL serial data transfer clock signal output to PLL IC on the tuner pack (at tuner function)

*1 Disc tray open/close motor control

Terminal \ Mode	Stop	Table In	Table Out	Brake
TRAY-OPEN (pin ⑬)	"L"	"L"	"H"	"H"
TRAY-CLOSE (pin ⑮)	"L"	"H"	"L"	"H"

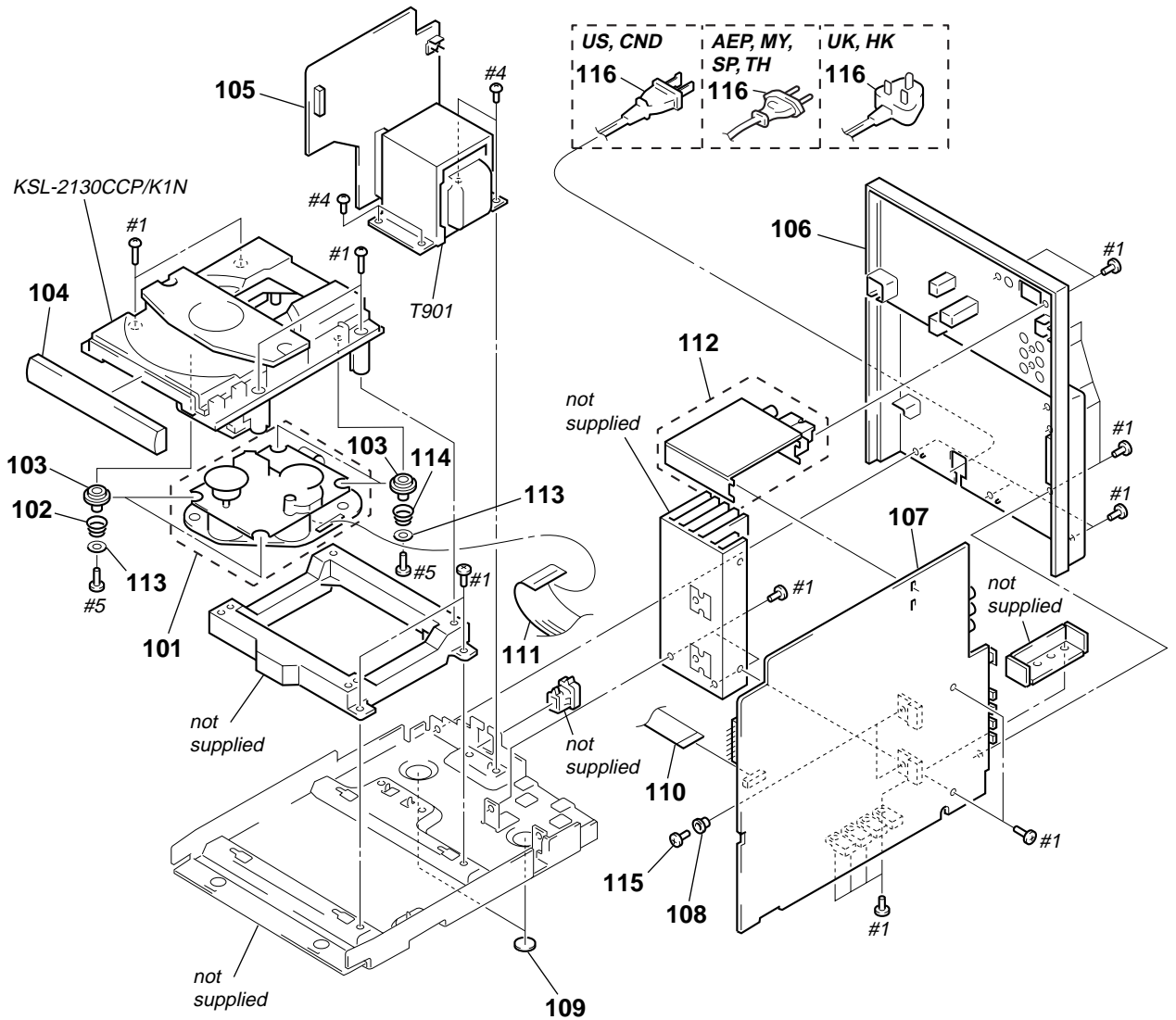
Pin No.	Pin Name	I/O	Description
30	RDS-ON	O	Power supply on/off control signal output of the tuner pack (+7.5V) and RDS decoder (IC804) (RDS decoder: used for the AEP and UK models only) LED drive signal output of the TUNER indicator (D855) "H": tuner power on (LED on)
31	HP-CHK	I	Headphone check detection signal input terminal
32	TC-SW	I	Half detect (side A and B) switch and cassette in detect switch input terminal (A/D input)
33	TRAY-SW	I	Disc tray position detect switch (S901, 902) input terminal (A/D input) "L": close position, "M": open position, "H": moving
34	KEY3	I	Key input terminal (A/D input) S817 to S822, S824 and S825 (STANDBY I/⏻, CD, TUNER, TAPE, MD/VIDEO, DSG, TUNER BAND, CD SYNC keys input)
35	KEY2	I	Key input terminal (A/D input) S801 to S808 (TUNING MODE, CD ► /■/►►/◄◄/◄◄, PLAY MODE, REPEAT, CD EJECT ▲ keys input)
36	KEY1	I	Key input terminal (A/D input) S809 to S816 (TAPE ◄◄/►►/■/►►/◄◄/ , REC ●, TUNING +/- keys input)
37	SIMUKE	I	Destination setting terminal (A/D input)
38	RESET	I	System reset signal input from the reset signal generator (IC803) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
39	EXTAL1	I	Main system clock input terminal (4.19 MHz)
40	XTAL1	O	Main system clock output terminal (4.19 MHz)
41	VSS	—	Ground terminal
42	XTAL2	O	Sub system clock output terminal (500 kHz) Not used (open)
43	EXTAL2	I	Sub system clock input terminal (500 kHz) Not used (fixed at "L")
44	AVREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
45	AVSS	—	Ground terminal (for A/D conversion)
46	VL	O	Liquid crystal display bias on/off control signal output terminal
47 to 49	VLC3 to VLC1	—	Power supply terminal for the liquid crystal display bias
50 to 53	COM0 to COM3	O	Common drive signal output to the liquid crystal display (LCD801)
54 to 85	SEG0 to SEG31	O	Segment drive signal output to the liquid crystal display (LCD801)
86	REC-BIAS	O	Recording bias on/off selection signal output to the HA12203NT (IC352) "L": bias on, "H": bias off
87	REC-MUTE	O	Recording muting on/off selection signal output to the HA12203NT (IC352) "L": muting on, "H": muting off
88	DOLBY	O	Dolby NR on/off selection signal output to the HA12203NT (IC352) "L": dolby on, "H": dolby off
89	VDD	—	Power supply terminal (+5V)
90	NC	—	Connected to power supply (+5V)
91	VSS	—	Ground terminal
92	TX	O	Sub system clock output terminal (32.768 kHz)
93	TEX	I	Sub system clock input terminal (32.768 kHz)
94	CD-ON	O	Power supply on/off control signal output of the CD block (+5V) LED drive signal output of the CD indicator (D852) "H": CD power on (LED on)
95	REC/PB	O	Recording/playback selection signal output to the BA3126N (IC350) and HA12203NT (IC352) "L": playback mode, "H": recording mode
96	L-MUTE	O	Line muting on/off selection signal output to the HA12203NT (IC352) "L": muting on, "H": muting off
97	LINE OUT-MUTE	O	Muting on/off control signal output terminal "H": muting on
98	TC-ON	O	Power supply on/off control signal output of the cassette holder back light LED drive signal output of the TAPE indicator (D854) "H": back light on (LED on)
99	WP	I	Wakeup control signal input terminal
100	CD-SCOR	I	Subcode sync (S0+S1) detection signal input from DSP on the CD block (at CD function)

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-4951-108-1	KNOB ASSY		* 62	4-217-320-01	PLATE, BACK LIGHT (CASSETTE HOLDER BACK LIGHT)	
52	X-4951-102-1	PANEL SUB ASSY, FRONT (AEP, UK)		63	X-4951-107-1	LOCK (EJECT) ASSY	
52	X-4951-702-1	PANEL SUB ASSY, FRONT (EXCEPT AEP, UK)		64	4-931-757-31	SCREW (DIA. 2.6X8) (IT3B), TAPPING	
53	4-217-318-01	WINDOW (CASSETTE)		65	1-673-632-11	CD LIGHT BOARD	
54	4-217-356-01	SHEET, WINDOW ADHESIVE		* 66	4-217-309-01	HOLDER (CD LIGHT)	
55	4-217-316-01	LID, CASSETTE		* 67	A-4419-257-A	CONTROL BOARD, COMPLETE	
* 56	1-673-633-11	LCD BOARD		* 68	4-217-333-01	PLATE, CD LIGHT	
57	4-217-319-01	PLATE, LCD LIGHT		69	3-351-377-11	GEAR, DAMPER	
58	4-217-317-01	HOLDER (CASSETTE)		70	4-218-204-01	FOOT (FRONT)	
59	4-217-345-01	SPRING (CASSETTE)		* 71	1-673-631-11	H/P BOARD	
60	1-790-628-11	WIRE (FLAT TYPE)		72	4-219-810-01	RUBBER (SPACE)	
61	1-790-629-11	WIRE (FLAT TYPE)					

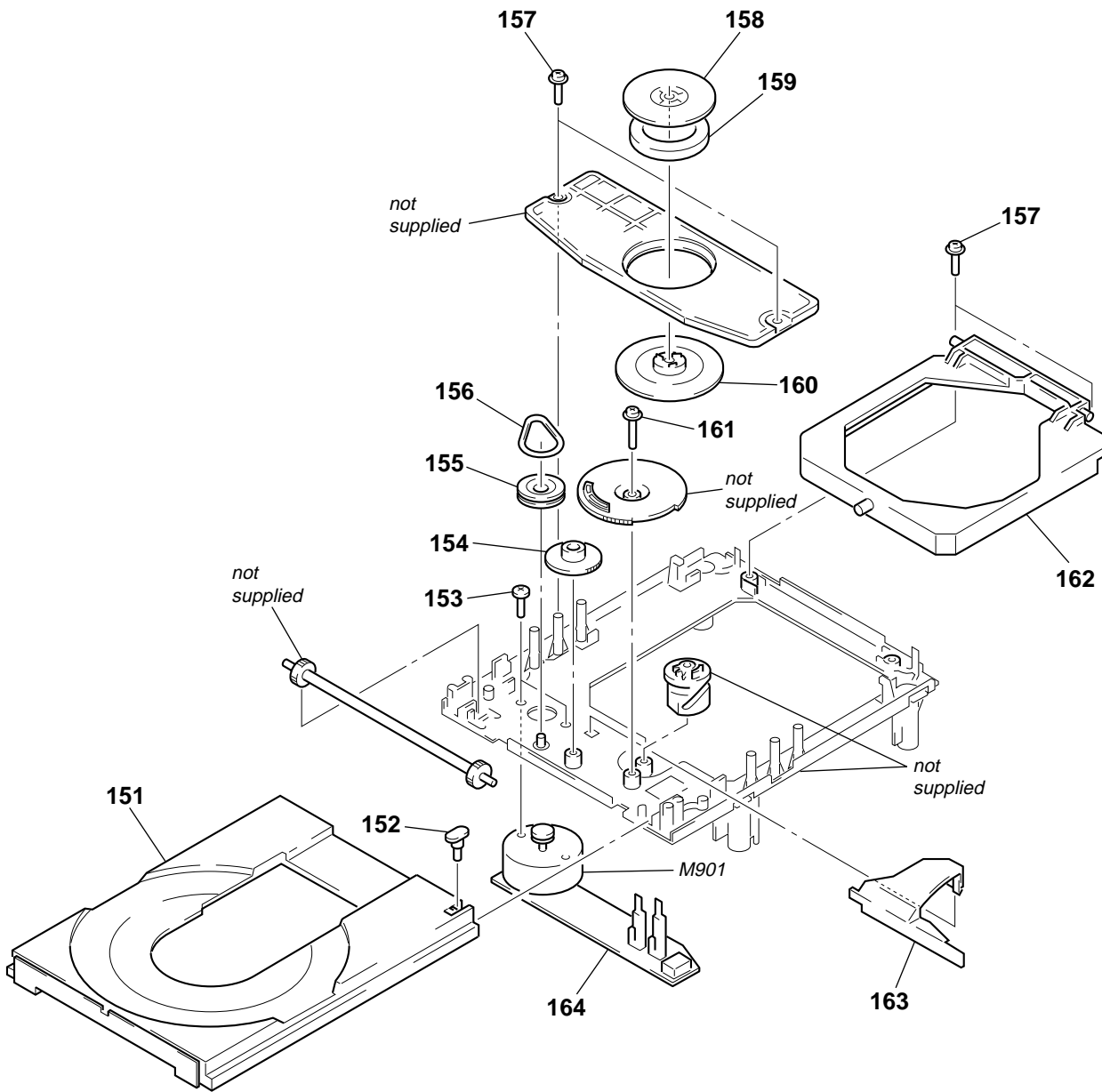
(3) CHASSIS SECTION



<p>The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
\triangle 101	A-4411-681-A	BU ASSY (CD BLOCK)		110	1-790-630-11	WIRE (FLAT TYPE)	
102	2-627-236-01	SPRING (FRONT), COIL		111	1-773-126-11	WIRE (FLAT TYPE) (19 CORE)	
* 103	2-627-234-01	INSULATOR		112	A-4411-460-A	TUNER PACK (AEP, UK)	
104	4-217-332-01	LID (CD)		112	A-4411-693-A	TUNER PACK (US, CND)	
* 105	A-4419-263-A	POWER BOARD, COMPLETE (AEP, UK)		112	A-4411-697-A	TUNER PACK (MY, SP, TH, HK)	
* 105	A-4419-947-A	POWER BOARD, COMPLETE (US, CND)		113	2-646-289-01	WASHER	
* 105	A-4419-950-A	POWER BOARD, COMPLETE (MY, SP, TH, HK)		114	2-627-235-01	SPRING (REAR), COIL	
* 106	4-217-338-01	PANEL, BACK (AEP, UK)		115	4-931-753-31	SCREW (DIA. 2.6X8) (IT3B), TAPPIN	
* 106	4-217-338-11	PANEL, BACK (MY, SP, TH, HK)		\triangle 116	1-575-651-11	CORD, POWER (UK, HK)	
* 106	4-217-338-21	PANEL, BACK (US, CND)		\triangle 116	1-696-169-21	CORD, POWER (AEP, MY, SP, TH)	
* 107	A-4419-265-A	MAIN BOARD, COMPLETE (AEP, UK)		\triangle 116	1-783-531-61	CORD, POWER (US, CND)	
* 107	A-4419-946-A	MAIN BOARD, COMPLETE (US, CND)		\triangle T901	1-433-808-11	TRANSFORMER, POWER (AEP, UK)	
* 107	A-4419-949-A	MAIN BOARD, COMPLETE (MY, SP, TH, HK)		\triangle T901	1-433-809-11	TRANSFORMER, POWER (MY, SP, TH, HK)	
* 108	4-217-354-01	BUSHING, INSULATING		\triangle T901	1-433-810-11	TRANSFORMER, POWER (US, CND)	
109	4-217-355-01	FOOT (REAR)					

(4) CD MECHANISM DECK SECTION
(KSL-2130CCP/K1N)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	2-646-290-01	TRAY (2130)		159	1-452-493-21	MAGNET	
152	2-625-541-02	DAMPER (S)		160	2-625-286-03	PULLEY, CHUKING	
153	2-625-279-01	SCREW (B 2.6X2.5), +		161	3-319-501-51	SCREW (+PTPWH) (2.6X16)	
154	2-625-274-02	GEAR, MIDWAY		* 162	2-646-288-01	CHASSIS (2130), SUB	
155	2-625-276-02	PULLEY, LOADING		* 163	2-625-282-02	COVER, GEAR	
156	3-635-387-00	BELT, LM		* 164	1-640-523-11	LOADING BOARD	
157	2-626-294-01	SCREW (+PTPWH) (2.6X7)		M901	X-2625-117-1	MOTOR ASSY, LOADING	(DISC TRAY OPEN/CLOSE)
* 158	2-625-284-05	PLATE, CHUKING					

SECTION 8 ELECTRICAL PARTS LIST

CD LIGHT

CONTROL

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
CND : Canadian model SP : Singapore model
HK : Hong Kong model TH : Thai model
MY : Malaysia model

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

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

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
	1-673-632-11	CD LIGHT BOARD *****		Q859	8-729-900-53	TRANSISTOR DTC114EK	
		< CONNECTOR >				< RESISTOR >	
CN811	1-785-955-11	CONNECTOR (BOARD TO BOARD)		R601	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
		< DIODE >		R602	1-216-045-00	METAL CHIP 680 5% 1/10W	
D858	8-719-075-50	LED SELS6B14C-TP5 (DISC TRAY ILLUMINATION)		R603	1-216-047-00	RES, CHIP 820 5% 1/10W	
*****				R604	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
*	A-4419-257-A	CONTROL BOARD, COMPLETE *****		R605	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
		< CAPACITOR >		R606	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
C601	1-124-259-11	ELECT 4.7uF 20% 16V		R607	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
C602	1-163-021-11	CERAMIC CHIP 0.01uF 10% 50V		R608	1-216-079-00	METAL CHIP 18K 5% 1/10W	
		< CONNECTOR >		R609	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
CN603	1-785-957-11	CONNECTOR (BOARD TO BOARD)		R610	1-216-045-00	METAL CHIP 680 5% 1/10W	
CN810	1-778-697-11	HOUSING, CONNECTOR 3P		R611	1-216-047-00	RES, CHIP 820 5% 1/10W	
		< DIODE >		R612	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
D851	8-719-074-42	LED SLR325VR-T31 (STANDBY I/Ⓛ)		R613	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
D852	8-719-074-40	LED SLR325DU-T31 (CD)		R614	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
D853	8-719-074-40	LED SLR325DU-T31 (MD/VIDEO)		R615	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
D854	8-719-074-40	LED SLR325DU-T31 (TAPE)		R616	1-216-079-00	METAL CHIP 18K 5% 1/10W	
D855	8-719-074-40	LED SLR325DU-T31 (TUNER)		R617	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
D856	8-719-074-42	LED SLR325VR-T31 (DSG)		R618	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
D857	8-719-074-42	LED SLR325VR-T31 (CD SYNC)		R660	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
		< IC >		R661	1-216-033-00	METAL CHIP 220 5% 1/10W	
IC802	8-742-012-11	HYB IC SBX1976-51 (REMOTE CONTROL RECEIVER)		R662	1-216-043-91	RES, CHIP 560 5% 1/10W	
		< TRANSISTOR >		R665	1-216-043-91	RES, CHIP 560 5% 1/10W	
Q852	8-729-900-53	TRANSISTOR DTC114EK		R666	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
Q853	8-729-900-53	TRANSISTOR DTC114EK		R667	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
Q854	8-729-900-53	TRANSISTOR DTC114EK		R668	1-216-041-00	METAL CHIP 470 5% 1/10W	
Q855	8-729-900-53	TRANSISTOR DTC114EK		R669	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
Q856	8-729-900-53	TRANSISTOR DTC114EK		R680	1-216-045-00	METAL CHIP 680 5% 1/10W	
		< VARIABLE RESISTOR >		R681	1-216-047-00	RES, CHIP 820 5% 1/10W	
Q857	8-729-900-53	TRANSISTOR DTC114EK		R683	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
Q858	8-729-900-53	TRANSISTOR DTC114EK		R684	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
		< SWITCH >		R685	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
				R686	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
				R687	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R688	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
				RV801	1-473-392-11	ENCODER, ROTARY (VOLUME)	
				S801	1-571-760-11	SWITCH, KEY BOARD (TUNING MODE)	

CONTROL	H/P	LCD	LOADING	MAIN
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Ref. No.	Part No.	Description	Remark
S802	1-571-760-11	SWITCH, KEY BOARD (CD, ►)	
S803	1-571-760-11	SWITCH, KEY BOARD (CD, ■)	
S804	1-571-760-11	SWITCH, KEY BOARD (CD, ►►►►)	
S805	1-571-760-11	SWITCH, KEY BOARD (CD, ◀◀◀◀)	
S806	1-571-760-11	SWITCH, KEY BOARD (CD, PLAY MODE)	
S807	1-571-760-11	SWITCH, KEY BOARD (CD, REPEAT)	
S808	1-571-760-11	SWITCH, KEY BOARD (CD, EJECT ▲)	
S809	1-571-760-11	SWITCH, KEY BOARD (TAPE, ◀►)	
S810	1-571-760-11	SWITCH, KEY BOARD (TAPE, ■)	
S811	1-571-760-11	SWITCH, KEY BOARD (TAPE, ►►)	
S812	1-571-760-11	SWITCH, KEY BOARD (TAPE, ◀◀)	
S813	1-571-760-11	SWITCH, KEY BOARD (TAPE,)	
S814	1-571-760-11	SWITCH, KEY BOARD (TAPE, REC ●)	
S815	1-571-760-11	SWITCH, KEY BOARD (TUNING, +)	
S816	1-571-760-11	SWITCH, KEY BOARD (TUNING, -)	
S817	1-571-760-11	SWITCH, KEY BOARD (STANDBY I/Ⓞ)	
S818	1-571-760-11	SWITCH, KEY BOARD (CD)	
S819	1-571-760-11	SWITCH, KEY BOARD (TUNER)	
S820	1-571-760-11	SWITCH, KEY BOARD (TAPE)	
S821	1-571-760-11	SWITCH, KEY BOARD (MD/VIDEO)	
S822	1-571-760-11	SWITCH, KEY BOARD (DSG)	
S824	1-571-760-11	SWITCH, KEY BOARD (BAND)	
S825	1-571-760-11	SWITCH, KEY BOARD (CD SYNC)	

* 1-673-631-11 H/P BOARD

< CAPACITOR >

C132	1-124-584-00	ELECT	100uF	20%	10V
C134	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C232	1-124-584-00	ELECT	100uF	20%	10V
C234	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

< JACK >

J301 1-785-925-11 JACK (LARGE TYPE) (PHONES)

< COIL >

L102	1-414-170-41	INDUCTOR	100uH		
L202	1-414-170-41	INDUCTOR	100uH		

< TRANSISTOR >

Q132	8-729-920-31	TRANSISTOR	DTC343TK		
Q232	8-729-920-31	TRANSISTOR	DTC343TK		

< RESISTOR >

R128	1-216-295-00	METAL CHIP	0	5%	1/10W
R139	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R228	1-216-295-00	METAL CHIP	0	5%	1/10W
R239	1-216-065-00	RES, CHIP	4.7K	5%	1/10W

* 1-673-633-11 LCD BOARD

< CONNECTOR >

CN801	1-785-950-11	SOCKET, CONNECTOR			
CN803	1-785-949-11	SOCKET, CONNECTOR			

Ref. No. Part No. Description Remark
< LED >

D657	8-719-075-51	LED SELS6B14C-LF62 (LCD BACK LIGHT)			
D658	8-719-075-51	LED SELS6B14C-LF62 (LCD BACK LIGHT)			
D659	8-719-075-51	LED SELS6B14C-LF62 (LCD BACK LIGHT)			
D660	8-719-075-51	LED SELS6B14C-LF62 (LCD BACK LIGHT)			

< LIQUID CRYSTAL DISPLAY >

LCD801 1-803-542-11 DISPLAY PANEL, LIQUID CRYSTAL

< RESISTOR >

R647	1-249-412-11	CARBON	390	5%	1/4W
R649	1-249-412-11	CARBON	390	5%	1/4W

* 1-640-523-11 LOADING BOARD

< CONNECTOR >

CN900 1-564-721-11 PIN, CONNECTOR 5P

< SWITCH >

S901	1-692-782-11	SWITCH, LEAF (DISC TRAY CLOCE DET)			
S902	1-692-782-11	SWITCH, LEAF (DISC TRAY OPEN DET)			

* A-4419-265-A MAIN BOARD, COMPLETE (AEP, UK)
* A-4419-946-A MAIN BOARD, COMPLETE (US, CND)
* A-4419-949-A MAIN BOARD, COMPLETE (MY, SP, TH, HK)

7-685-863-09	SCREW+BVTT 2.6X8 (S) (AEP, UK)				
A-4411-460-A	TUNER PACK (AEP, UK)				
A-4411-693-A	TUNER PACK (US, CND)				
A-4411-697-A	TUNER PACK (MY, SP, TH, HK)				

< CAPACITOR >

C101	1-124-233-11	ELECT	10uF	20%	16V
C102	1-126-963-11	ELECT	4.7uF	20%	50V
C103	1-126-963-11	ELECT	4.7uF	20%	50V
C104	1-126-963-11	ELECT	4.7uF	20%	50V
C105	1-124-259-11	ELECT	4.7uF	20%	16V

C106	1-124-259-11	ELECT	4.7uF	20%	16V
C107	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C109	1-126-963-11	ELECT	4.7uF	20%	50V
C110	1-126-963-11	ELECT	4.7uF	20%	50V
C111	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V

C112	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C113	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C114	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C115	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C116	1-163-005-11	CERAMIC CHIP	470PF	10%	50V

C117	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C118	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C119	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C120	1-104-665-11	ELECT	100uF	20%	16V
C121	1-126-963-11	ELECT	4.7uF	20%	50V

C122	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C123	1-104-665-11	ELECT	100uF	20%	16V
C124	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C126	1-126-965-11	ELECT	22uF	20%	50V	C254	1-104-666-11	ELECT	220uF	20%	16V
C127	1-130-495-00	MYLAR	0.1uF	5%	50V	C255	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C128	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C256	1-130-487-00	MYLAR	0.022uF	5%	50V
C129	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C257	1-124-907-11	ELECT	10uF	20%	50V
C130	1-104-664-11	ELECT	47uF	20%	16V	C258	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C131	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C259	1-130-495-00	MYLAR	0.1uF	5%	50V
C133	1-130-495-00	MYLAR	0.1uF	5%	50V	C260	1-124-907-11	ELECT	10uF	20%	50V
C151	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	C261	1-126-963-11	ELECT	4.7uF	20%	50V
C152	1-104-665-11	ELECT	100uF	20%	16V	C262	1-124-902-00	ELECT	0.47uF	20%	50V
C153	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C263	1-124-907-11	ELECT	10uF	20%	50V
C154	1-104-666-11	ELECT	220uF	20%	16V	C264	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C155	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C266	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-130-487-00	MYLAR	0.022uF	5%	50V	C267	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C157	1-124-907-11	ELECT	10uF	20%	50V	C268	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C158	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	C301	1-124-907-11	ELECT	10uF	20%	50V
C159	1-130-495-00	MYLAR	0.1uF	5%	50V	C302	1-124-119-00	ELECT	330uF	20%	16V
C160	1-124-907-11	ELECT	10uF	20%	50V	C303	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C161	1-126-963-11	ELECT	4.7uF	20%	50V	C304	1-124-907-11	ELECT	10uF	20%	50V
C162	1-124-902-00	ELECT	0.47uF	20%	50V	C305	1-104-666-11	ELECT	220uF	20%	16V
C163	1-124-907-11	ELECT	10uF	20%	50V	C306	1-124-903-11	ELECT	1uF	20%	50V
C164	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C307	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C166	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	C308	1-126-965-11	ELECT	22uF	20%	50V
C167	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C309	1-126-965-11	ELECT	22uF	20%	50V
C168	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C310	1-126-955-11	ELECT	4700uF	20%	35V
C201	1-124-907-11	ELECT	10uF	20%	50V	C311	1-126-955-11	ELECT	4700uF	20%	35V
C202	1-124-259-11	ELECT	4.7uF	20%	16V	C312	1-126-942-61	ELECT	1000uF	20%	25V
C203	1-124-259-11	ELECT	4.7uF	20%	16V	C313	1-126-942-61	ELECT	1000uF	20%	25V
C204	1-126-963-11	ELECT	4.7uF	20%	50V	C314	1-104-666-11	ELECT	220uF	20%	16V
C205	1-126-963-11	ELECT	4.7uF	20%	50V	C315	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C206	1-126-963-11	ELECT	4.7uF	20%	50V	C316	1-104-666-11	ELECT	220uF	20%	16V
C207	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	C317	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C209	1-126-963-11	ELECT	4.7uF	20%	50V	C318	1-104-666-11	ELECT	220uF	20%	16V
C210	1-126-963-11	ELECT	4.7uF	20%	50V	C319	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C211	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	C320	1-104-665-11	ELECT	100uF	20%	16V
C212	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	C321	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C213	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	C323	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C214	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	C324	1-104-665-11	ELECT	100uF	20%	16V
C215	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	C325	1-104-665-11	ELECT	100uF	20%	16V
C216	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C326	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C217	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C327	1-104-665-11	ELECT	100uF	20%	16V
C218	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C328	1-104-665-11	ELECT	100uF	20%	16V
C219	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C329	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C220	1-104-665-11	ELECT	100uF	20%	16V	C330	1-104-665-11	ELECT	100uF	20%	16V
C221	1-126-963-11	ELECT	4.7uF	20%	50V	C331	1-104-665-11	ELECT	100uF	20%	16V
C222	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C332	1-124-480-11	ELECT	470uF	20%	25V
C223	1-104-665-11	ELECT	100uF	20%	16V	C346	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C224	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C347	1-104-664-11	ELECT	47uF	20%	16V
C226	1-126-965-11	ELECT	22uF	20%	50V	C348	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C227	1-130-495-00	MYLAR	0.1uF	5%	50V	C350	1-104-665-11	ELECT	100uF	20%	16V
C228	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C351	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C229	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	C352	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C230	1-104-664-11	ELECT	47uF	20%	16V	C354	1-124-907-11	ELECT	10uF	20%	50V
C231	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C357	1-124-907-11	ELECT	10uF	20%	50V
C233	1-130-495-00	MYLAR	0.1uF	5%	50V	C358	1-137-150-11	FILM	0.01uF	5%	100V
C251	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	C359	1-124-907-11	ELECT	10uF	20%	50V
C252	1-104-665-11	ELECT	100uF	20%	16V	C360	1-130-485-00	MYLAR	0.015uF	5%	50V
C253	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C361	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
						C362	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C363	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V			
C364	1-124-907-11	ELECT	10uF 20%	50V	D361	8-719-991-33	DIODE 1SS133T-77
C365	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	D362	8-719-991-33	DIODE 1SS133T-77
C603	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	D651	8-719-200-82	DIODE 11ES2
C604	1-163-019-00	CERAMIC CHIP	0.0068uF 10%	50V	D652	8-719-200-82	DIODE 11ES2
			(AEP, UK)		D801	8-719-991-33	DIODE 1SS133T-77
C651	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D802	8-719-991-33	DIODE 1SS133T-77
C652	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D810	8-719-982-11	DIODE MTZJ-4.3B (AEP, UK)
C801	1-163-102-00	CERAMIC CHIP	24PF 5%	50V	D812	8-719-991-33	DIODE 1SS133T-77
C802	1-163-102-00	CERAMIC CHIP	24PF 5%	50V	D813	8-719-991-33	DIODE 1SS133T-77
C803	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	D814	8-719-991-33	DIODE 1SS133T-77
C804	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	D815	8-719-991-33	DIODE 1SS133T-77
C805	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	D817	8-719-991-33	DIODE 1SS133T-77
C806	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V			< FERRITE BEAD >
C807	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	FB301	1-469-144-21	FERRITE OuH
C808	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	FB801	1-469-144-21	FERRITE OuH
C809	1-124-907-11	ELECT	10uF 20%	50V	FB802	1-469-144-21	FERRITE OuH
C810	1-128-647-11	CAP, DOUBLE LAYER	0.1F	5.5V			< IC >
C811	1-163-235-11	CERAMIC CHIP	22PF 5%	50V	IC101	8-759-584-39	IC TDA7296
C812	1-163-237-11	CERAMIC CHIP	27PF 5%	50V	IC201	8-759-584-39	IC TDA7296
C813	1-163-135-00	CERAMIC CHIP	560PF 5%	50V	IC301	8-759-585-01	IC TDA7439
			(AEP, UK)		IC303	8-759-909-71	IC BA4558F
C814	1-104-664-11	ELECT	47uF 20%	16V	IC304	8-759-584-41	IC K1A7808PI
			(AEP, UK)		IC305	8-759-584-40	IC KA7908
C815	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	IC306	8-759-347-19	IC KIA7812PI
			(AEP, UK)		IC307	8-759-909-71	IC BA4558F
C816	1-163-239-11	CERAMIC CHIP	33PF 5%	50V	IC308	8-749-921-12	IC GP1F32T (CD DIGITAL OUT OPTICAL)
			(AEP, UK)		IC309	8-759-584-65	IC KA3082
C817	1-163-239-11	CERAMIC CHIP	33PF 5%	50V	IC310	8-759-324-40	IC KIA7805PI
			(AEP, UK)		IC311	8-759-584-41	IC K1A7808PI
C818	1-126-963-11	ELECT	4.7uF 20%	50V	IC350	8-759-508-69	IC BA3126N
			(AEP, UK)		IC351	8-759-261-93	IC NJM458OLD
C819	1-163-003-11	CERAMIC CHIP	330PF 10%	50V	IC352	8-759-363-21	IC HA12203
			(AEP, UK)		IC801	8-752-894-86	IC CXP83124A-130Q
C820	1-163-005-11	CERAMIC CHIP	470PF 10%	50V	IC803	8-759-584-64	IC BMR0301H
C822	1-163-005-11	CERAMIC CHIP	470PF 10%	50V	IC804	8-759-557-36	IC BU1924F-E2 (AEP, UK)
							< SHORT >
					JR301	1-216-296-00	SHORT 0
					JR302	1-216-296-00	SHORT 0
					JR304	1-216-296-00	SHORT 0
					JR305	1-216-296-00	SHORT 0
					JR306	1-216-296-00	SHORT 0
					JR307	1-216-296-00	SHORT 0
					JR308	1-216-296-00	SHORT 0
					JR309	1-216-296-00	SHORT 0
					JR310	1-216-296-00	SHORT 0
					JR311	1-216-296-00	SHORT 0
					JR312	1-216-296-00	SHORT 0
					JR314	1-216-296-00	SHORT 0
					JR316	1-216-296-00	SHORT 0
					JR318	1-216-296-00	SHORT 0
					JR320	1-216-296-00	SHORT 0
					JR322	1-216-296-00	SHORT 0 (AEP, UK)
					JR323	1-216-296-00	SHORT 0
					JR324	1-216-296-00	SHORT 0
D301	8-719-991-33	DIODE	1SS133T-77				
D302	8-719-109-72	DIODE	RD3.9ES-B2				
D304	8-719-991-33	DIODE	1SS133T-77				
D314	8-719-109-89	DIODE	RD5.6ESB2				
D315	8-719-991-33	DIODE	1SS133T-77				
D317	8-719-921-75	DIODE	MTZN-10B				
D318	8-719-991-33	DIODE	1SS133T-77				
D319	8-719-921-63	DIODE	MTZJ-7.5B				
D323	8-719-110-14	DIODE	RD9.1ES-B3				
D324	8-719-981-95	DIODE	MTZJ-2.7B				
D325	8-719-991-33	DIODE	1SS133T-77				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
JR325	1-216-296-00	SHORT	0	Q658	8-729-900-53	TRANSISTOR	DTC114EK
JR326	1-216-296-00	SHORT	0	Q659	8-729-900-53	TRANSISTOR	DTC114EK
JR327	1-216-296-00	SHORT	0	Q661	8-729-040-76	TRANSISTOR	KTA1273-Y-AT
JR328	1-216-296-00	SHORT	0	Q662	8-729-900-53	TRANSISTOR	DTC114EK
		< COIL >		Q803	8-729-027-44	TRANSISTOR	DTC114TKA-T146
L101	1-420-872-00	COIL, AIR-CORE		Q805	8-729-027-44	TRANSISTOR	DTC114TKA-T146
L201	1-420-872-00	COIL, AIR-CORE		Q806	8-729-027-44	TRANSISTOR	DTC114TKA-T146
L351	1-410-521-11	INDUCTOR	100uH	Q808	8-729-027-44	TRANSISTOR	DTC114TKA-T146
		< JACK >		Q809	8-729-027-44	TRANSISTOR	DTC114TKA-T146
PJ301	1-785-926-11	JACK, PIN (LINE OUT, MD IN, VIDEO IN)		Q810	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (AEP, UK)
		< TRANSISTOR >		Q812	8-729-027-44	TRANSISTOR	DTC114TKA-T146
Q101	8-729-920-31	TRANSISTOR	DTC343TK	Q813	8-729-027-44	TRANSISTOR	DTC114TKA-T146
Q102	8-729-920-31	TRANSISTOR	DTC343TK	Q816	8-729-027-44	TRANSISTOR	DTC114TKA-T146 (AEP, UK)
Q103	8-729-920-31	TRANSISTOR	DTC343TK			< RESISTOR >	
Q106	8-729-920-31	TRANSISTOR	DTC343TK	R102	1-216-089-00	RES, CHIP	47K 5% 1/10W
Q201	8-729-920-31	TRANSISTOR	DTC343TK	R103	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q202	8-729-920-31	TRANSISTOR	DTC343TK	R105	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
Q203	8-729-920-31	TRANSISTOR	DTC343TK	R106	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
Q206	8-729-920-31	TRANSISTOR	DTC343TK			(EXCEPT AEP, UK)	
Q303	8-729-027-31	TRANSISTOR	DTA124EKA-T146	R106	1-216-077-00	METAL CHIP	15K 5% 1/10W
Q304	8-729-900-53	TRANSISTOR	DTC114EK			(AEP, UK)	
Q305	8-729-900-53	TRANSISTOR	DTC114EK	R107	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
Q306	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R108	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
Q308	8-729-027-31	TRANSISTOR	DTA124EKA-T146	R109	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q310	8-729-028-54	TRANSISTOR	KTC3205	R110	1-216-077-00	METAL CHIP	15K 5% 1/10W
Q311	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R111	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q312	8-729-901-00	TRANSISTOR	DTC124EK	R112	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q313	8-729-028-54	TRANSISTOR	KTC3205	R113	1-216-089-00	RES, CHIP	47K 5% 1/10W
Q314	8-729-028-54	TRANSISTOR	KTC3205	R114	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
Q315	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R115	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
Q316	8-729-901-00	TRANSISTOR	DTC124EK	R116	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
Q317	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R117	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q318	8-729-901-00	TRANSISTOR	DTC124EK	R118	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q320	8-729-900-53	TRANSISTOR	DTC114EK	R120	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q321	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R121	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q322	8-729-901-00	TRANSISTOR	DTC124EK	R122	1-216-025-00	RES, CHIP	100 5% 1/10W
Q323	8-729-801-84	TRANSISTOR	2SB1013-4	R123	1-216-045-00	METAL CHIP	680 5% 1/10W
Q324	8-729-901-00	TRANSISTOR	DTC124EK	R124	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q351	8-729-901-00	TRANSISTOR	DTC124EK	R125	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q352	8-729-901-00	TRANSISTOR	DTC124EK	R126	1-216-097-00	RES, CHIP	100K 5% 1/10W
Q353	8-729-901-00	TRANSISTOR	DTC124EK	△R127	1-249-389-11	CARBON	4.7 5% 1/4W F
Q354	8-729-901-00	TRANSISTOR	DTC124EK	R129	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q355	8-729-901-00	TRANSISTOR	DTC124EK	R130	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q356	8-729-901-00	TRANSISTOR	DTC124EK	R131	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q357	8-729-036-89	TRANSISTOR	KTC3198GR-A	R133	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q358	8-729-036-89	TRANSISTOR	KTC3198GR-A	R134	1-216-025-00	RES, CHIP	100 5% 1/10W
Q359	8-729-036-89	TRANSISTOR	KTC3198GR-A	R135	1-216-089-00	RES, CHIP	47K 5% 1/10W
Q360	8-729-037-02	TRANSISTOR	KTA1266Y-AT	R136	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q651	8-729-900-53	TRANSISTOR	DTC114EK	R137	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
Q652	8-729-801-84	TRANSISTOR	2SB1013-4	R138	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q653	8-729-801-84	TRANSISTOR	2SB1013-4	R151	1-216-107-00	METAL CHIP	270K 5% 1/10W
Q654	8-729-900-53	TRANSISTOR	DTC114EK	R152	1-216-027-00	METAL CHIP	120 5% 1/10W
Q655	8-729-900-53	TRANSISTOR	DTC114EK	R153	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q656	8-729-202-56	TRANSISTOR	2SA950-Y	R154	1-216-100-00	RES, CHIP	130K 5% 1/10W
Q657	8-729-202-56	TRANSISTOR	2SA950-Y	R155	1-216-068-00	METAL CHIP	6.2K 5% 1/10W
				R156	1-216-025-00	RES, CHIP	100 5% 1/10W

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.
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MAIN

Ref. No.	Part No.	Description	Quantity	Unit	Percentage	Remark	Ref. No.	Part No.	Description	Quantity	Unit	Percentage	Remark
R157	1-216-065-00	RES, CHIP	4.7K		5%	1/10W	R309	1-216-041-00	METAL CHIP	470		5%	1/10W
R158	1-216-061-00	METAL CHIP	3.3K		5%	1/10W	R310	1-216-073-00	METAL CHIP	10K		5%	1/10W
R159	1-216-049-11	RES, CHIP	1K		5%	1/10W	R311	1-216-073-00	METAL CHIP	10K		5%	1/10W
R160	1-216-083-00	METAL CHIP	27K		5%	1/10W	R312	1-216-077-00	METAL CHIP	15K		5%	1/10W
R162	1-216-025-00	RES, CHIP	100		5%	1/10W							
R163	1-216-075-00	METAL CHIP	12K		5%	1/10W	R313	1-216-077-00	METAL CHIP	15K		5%	1/10W
R202	1-216-089-00	RES, CHIP	47K		5%	1/10W	R314	1-216-047-00	RES, CHIP	820		5%	1/10W
R203	1-216-049-11	RES, CHIP	1K		5%	1/10W	R316	1-216-033-00	METAL CHIP	220		5%	1/10W
R205	1-216-065-00	RES, CHIP	4.7K		5%	1/10W	R317	1-216-053-00	METAL CHIP	1.5K		5%	1/10W
R206	1-216-067-00	METAL CHIP	5.6K		5%	1/10W	R320	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
						(EXCEPT AEP, UK)	R321	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R206	1-216-077-00	METAL CHIP	15K		5%	1/10W	R325	1-216-089-00	RES, CHIP	47K		5%	1/10W
						(AEP, UK)	R326	1-216-089-00	RES, CHIP	47K		5%	1/10W
R207	1-216-055-00	METAL CHIP	1.8K		5%	1/10W	R351	1-216-089-00	RES, CHIP	47K		5%	1/10W
R208	1-216-061-00	METAL CHIP	3.3K		5%	1/10W	R352	1-216-033-00	METAL CHIP	220		5%	1/10W
R209	1-216-057-00	METAL CHIP	2.2K		5%	1/10W							
R210	1-216-077-00	METAL CHIP	15K		5%	1/10W	R353	1-216-081-00	METAL CHIP	22K		5%	1/10W
R211	1-216-049-11	RES, CHIP	1K		5%	1/10W	R354	1-216-073-00	METAL CHIP	10K		5%	1/10W
R212	1-216-049-11	RES, CHIP	1K		5%	1/10W	R355	1-216-081-00	METAL CHIP	22K		5%	1/10W
R213	1-216-089-00	RES, CHIP	47K		5%	1/10W	R357	1-216-066-00	RES, CHIP	5.1K		5%	1/10W
R214	1-216-067-00	METAL CHIP	5.6K		5%	1/10W	R358	1-216-085-00	METAL CHIP	33K		5%	1/10W
R215	1-216-065-00	RES, CHIP	4.7K		5%	1/10W							
R216	1-216-071-00	METAL CHIP	8.2K		5%	1/10W	R359	1-216-089-00	RES, CHIP	47K		5%	1/10W
R217	1-216-081-00	METAL CHIP	22K		5%	1/10W	R360	1-216-097-00	RES, CHIP	100K		5%	1/10W
R218	1-216-073-00	METAL CHIP	10K		5%	1/10W	R361	1-216-089-00	RES, CHIP	47K		5%	1/10W
R220	1-216-049-11	RES, CHIP	1K		5%	1/10W	R362	1-216-089-00	RES, CHIP	47K		5%	1/10W
R221	1-216-049-11	RES, CHIP	1K		5%	1/10W	R363	1-216-089-00	RES, CHIP	47K		5%	1/10W
R222	1-216-025-00	RES, CHIP	100		5%	1/10W							
R223	1-216-045-00	METAL CHIP	680		5%	1/10W	R364	1-216-079-00	METAL CHIP	18K		5%	1/10W
R224	1-216-081-00	METAL CHIP	22K		5%	1/10W	R365	1-216-073-00	METAL CHIP	10K		5%	1/10W
R225	1-216-081-00	METAL CHIP	22K		5%	1/10W	R366	1-217-671-11	METAL CHIP	1		5%	1/10W
R226	1-216-097-00	RES, CHIP	100K		5%	1/10W	R367	1-216-081-00	METAL CHIP	22K		5%	1/10W
△R227	1-249-389-11	CARBON	4.7		5%	1/4W	R368	1-216-081-00	METAL CHIP	22K		5%	1/10W
R229	1-216-073-00	METAL CHIP	10K		5%	1/10W							
R230	1-216-081-00	METAL CHIP	22K		5%	1/10W	R369	1-216-308-00	METAL CHIP	4.7		5%	1/10W
R231	1-216-049-11	RES, CHIP	1K		5%	1/10W	R370	1-216-308-00	METAL CHIP	4.7		5%	1/10W
R233	1-216-073-00	METAL CHIP	10K		5%	1/10W	R371	1-216-081-00	METAL CHIP	22K		5%	1/10W
R234	1-216-025-00	RES, CHIP	100		5%	1/10W	R372	1-216-089-00	RES, CHIP	47K		5%	1/10W
R235	1-216-089-00	RES, CHIP	47K		5%	1/10W	R620	1-216-079-00	METAL CHIP	18K		5%	1/10W
R236	1-216-049-11	RES, CHIP	1K		5%	1/10W							
R237	1-216-053-00	METAL CHIP	1.5K		5%	1/10W	R622	1-216-097-00	RES, CHIP	100K		5%	1/10W
R238	1-216-073-00	METAL CHIP	10K		5%	1/10W	R623	1-216-071-00	METAL CHIP	8.2K		5%	1/10W
R251	1-216-107-00	METAL CHIP	270K		5%	1/10W	R624	1-216-097-00	RES, CHIP	100K		5%	1/10W
R252	1-216-027-00	METAL CHIP	120		5%	1/10W	R625	1-216-089-00	RES, CHIP	47K		5%	1/10W
R253	1-216-081-00	METAL CHIP	22K		5%	1/10W	R627	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R254	1-216-100-00	RES, CHIP	130K		5%	1/10W							
R255	1-216-068-00	METAL CHIP	6.2K		5%	1/10W	R628	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R256	1-216-025-00	RES, CHIP	100		5%	1/10W	R629	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R257	1-216-065-00	RES, CHIP	4.7K		5%	1/10W	R630	1-216-027-00	METAL CHIP	120		5%	1/10W
R258	1-216-061-00	METAL CHIP	3.3K		5%	1/10W	R631	1-216-041-00	METAL CHIP	470		5%	1/10W
R259	1-216-049-11	RES, CHIP	1K		5%	1/10W	R633	1-216-097-00	RES, CHIP	100K		5%	1/10W
R260	1-216-083-00	METAL CHIP	27K		5%	1/10W							
R262	1-216-025-00	RES, CHIP	100		5%	1/10W	R637	1-216-035-00	METAL CHIP	270		5%	1/10W
R263	1-216-075-00	METAL CHIP	12K		5%	1/10W							(AEP, UK)
R302	1-216-035-00	METAL CHIP	270		5%	1/10W	R638	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R304	1-216-105-00	RES, CHIP	220K		5%	1/10W	R639	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
R306	1-216-001-00	METAL CHIP	10		5%	1/10W	R650	1-216-049-11	RES, CHIP	1K		5%	1/10W
R307	1-216-065-00	RES, CHIP	4.7K		5%	1/10W	R651	1-216-049-11	RES, CHIP	1K		5%	1/10W
							R652	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
							R653	1-216-089-00	RES, CHIP	47K		5%	1/10W
							R654	1-216-065-00	RES, CHIP	4.7K		5%	1/10W
							R655	1-216-049-11	RES, CHIP	1K		5%	1/10W
							R656	1-216-049-11	RES, CHIP	1K		5%	1/10W
							R657	1-216-027-00	METAL CHIP	120		5%	1/10W
							R658	1-216-089-00	RES, CHIP	47K		5%	1/10W

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R670	1-216-097-00	RES, CHIP	100K 5% 1/10W (AEP, UK)	R844	1-216-089-00	RES, CHIP	47K 5% 1/10W
R671	1-216-113-00	RES, CHIP	470K 5% 1/10W (AEP, UK)	R846	1-216-081-00	METAL CHIP	22K 5% 1/10W
R672	1-216-043-91	RES, CHIP	560 5% 1/10W (AEP, UK)	R847	1-216-073-00	METAL CHIP	10K 5% 1/10W
R673	1-216-065-00	RES, CHIP	4.7K 5% 1/10W (AEP, UK)	R848	1-216-073-00	METAL CHIP	10K 5% 1/10W
R690	1-216-073-00	METAL CHIP	10K 5% 1/10W	R849	1-216-073-00	METAL CHIP	10K 5% 1/10W
R691	1-216-089-00	RES, CHIP	47K 5% 1/10W	R850	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R692	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R851	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R800	1-216-049-11	RES, CHIP	1K 5% 1/10W	R852	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R801	1-216-049-11	RES, CHIP	1K 5% 1/10W	R853	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R802	1-216-049-11	RES, CHIP	1K 5% 1/10W (AEP, UK)	R854	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R803	1-216-049-11	RES, CHIP	1K 5% 1/10W	R855	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R804	1-216-049-11	RES, CHIP	1K 5% 1/10W	R856	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R805	1-216-049-11	RES, CHIP	1K 5% 1/10W	R857	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R806	1-216-049-11	RES, CHIP	1K 5% 1/10W	R858	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R807	1-216-049-11	RES, CHIP	1K 5% 1/10W	R859	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R808	1-216-049-11	RES, CHIP	1K 5% 1/10W	R860	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R809	1-216-049-11	RES, CHIP	1K 5% 1/10W	R861	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R810	1-216-049-11	RES, CHIP	1K 5% 1/10W	R862	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R811	1-216-049-11	RES, CHIP	1K 5% 1/10W	R863	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R812	1-216-049-11	RES, CHIP	1K 5% 1/10W	R864	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R813	1-216-049-11	RES, CHIP	1K 5% 1/10W	R865	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R814	1-216-049-11	RES, CHIP	1K 5% 1/10W	R866	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R815	1-216-049-11	RES, CHIP	1K 5% 1/10W	R867	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R816	1-216-049-11	RES, CHIP	1K 5% 1/10W	R868	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R817	1-216-049-11	RES, CHIP	1K 5% 1/10W	R869	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R818	1-216-049-11	RES, CHIP	1K 5% 1/10W	R870	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R819	1-216-049-11	RES, CHIP	1K 5% 1/10W	R871	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R820	1-216-049-11	RES, CHIP	1K 5% 1/10W	R872	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R821	1-216-049-11	RES, CHIP	1K 5% 1/10W	R873	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R822	1-216-049-11	RES, CHIP	1K 5% 1/10W	R874	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R823	1-216-049-11	RES, CHIP	1K 5% 1/10W	R875	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R824	1-216-049-11	RES, CHIP	1K 5% 1/10W	R876	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R825	1-216-025-00	RES, CHIP	100 5% 1/10W	R877	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R826	1-216-049-11	RES, CHIP	1K 5% 1/10W	R878	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R827	1-216-049-11	RES, CHIP	1K 5% 1/10W	R879	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R828	1-216-049-11	RES, CHIP	1K 5% 1/10W	R880	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R829	1-216-049-11	RES, CHIP	1K 5% 1/10W	R881	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R830	1-216-049-11	RES, CHIP	1K 5% 1/10W	R882	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R831	1-216-049-11	RES, CHIP	1K 5% 1/10W	R883	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R832	1-216-049-11	RES, CHIP	1K 5% 1/10W	R884	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R833	1-216-049-11	RES, CHIP	1K 5% 1/10W	R885	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R834	1-216-049-11	RES, CHIP	1K 5% 1/10W	R886	1-216-049-11	RES, CHIP	1K 5% 1/10W
R835	1-216-049-11	RES, CHIP	1K 5% 1/10W	R887	1-216-049-11	RES, CHIP	1K 5% 1/10W
R836	1-216-049-11	RES, CHIP	1K 5% 1/10W	R888	1-216-049-11	RES, CHIP	1K 5% 1/10W
R837	1-216-097-00	RES, CHIP	100K 5% 1/10W	R890	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R838	1-216-041-00	METAL CHIP	470 5% 1/10W	R891	1-216-097-00	RES, CHIP	100K 5% 1/10W
R839	1-216-013-00	METAL CHIP	33 5% 1/10W	R892	1-216-041-00	METAL CHIP	470 5% 1/10W
R840	1-216-049-11	RES, CHIP	1K 5% 1/10W	R894	1-216-049-11	RES, CHIP	1K 5% 1/10W
R841	1-216-295-00	SHORT	0 (US, CND)	R895	1-216-049-11	RES, CHIP	1K 5% 1/10W
R841	1-216-065-00	RES, CHIP	4.7K 5% 1/10W (MY, SP, TH, HK)	R896	1-216-049-11	RES, CHIP	1K 5% 1/10W
R842	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R897	1-216-049-11	RES, CHIP	1K 5% 1/10W
R843	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R898	1-216-049-11	RES, CHIP	1K 5% 1/10W
				R899	1-216-049-11	RES, CHIP	1K 5% 1/10W
						< VARIABLE RESISTOR >	
				RV151	1-241-765-11	RES, ADJ, CARBON 22K	
				RV152	1-225-231-21	RES, ADJ, CARBON 4.7K	
				RV153	1-241-767-21	RES, ADJ, CARBON 100K	

MAIN **POWER**

Ref. No.	Part No.	Description	Remark
RV251	1-241-765-11	RES, ADJ, CARBON 22K	
RV252	1-225-231-21	RES, ADJ, CARBON 4.7K	
RV253	1-241-767-21	RES, ADJ, CARBON 100K	
< TERMINAL BOARD >			
* SJ301	1-536-708-41	TERMINAL BOARD, PUSH 4P (SPEAKER)	
< TRANSFORMER >			
T150	1-419-080-11	COIL	
T250	1-419-080-11	COIL	
T351	1-419-081-11	COIL (OSC)	
< VIBRATOR >			
X801	1-767-184-11	VIBRATOR, CERAMIC (4.19MHz)	
X802	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
X803	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz) (AEP, UK)	

*	A-4419-263-A	POWER BOARD, COMPLETE (AEP, UK)	
*	A-4419-947-A	POWER BOARD, COMPLETE (US, CND)	
*	A-4419-950-A	POWER BOARD, COMPLETE (MY, SP, TH, HK)	

	1-533-313-11	HOLDER, FUSE	
< CAPACITOR >			
△C901	1-113-925-11	CERAMIC 0.01uF 20% 250V (US, CND, AEP, UK)	
C903	1-101-005-00	CERAMIC 22000PF 50V (US, CND, AEP, UK)	
C904	1-101-005-00	CERAMIC 22000PF 50V (US, CND, AEP, UK)	
C905	1-101-005-00	CERAMIC 22000PF 50V (US, CND, AEP, UK)	
C906	1-101-005-00	CERAMIC 22000PF 50V (US, CND, AEP, UK)	
C907	1-101-005-00	CERAMIC 22000PF 50V	
C908	1-101-005-00	CERAMIC 22000PF 50V	
C909	1-101-005-00	CERAMIC 22000PF 50V	
C910	1-101-005-00	CERAMIC 22000PF 50V	
C911	1-161-494-00	CERAMIC 0.022uF 25V	
C912	1-161-494-00	CERAMIC 0.022uF 25V	
C913	1-161-494-00	CERAMIC 0.022uF 25V	
C914	1-161-494-00	CERAMIC 0.022uF 25V	
< CONNECTOR >			
CN902	1-766-282-11	PIN, CONNECTOR (PC BOARD) 9P	
CNP901	1-564-321-00	PIN, CONNECTOR 2P	
< DIODE >			
D902	8-719-200-82	DIODE 11ES2 (US, CND, AEP, UK)	
D903	8-719-200-82	DIODE 11ES2 (US, CND, AEP, UK)	
D904	8-719-200-82	DIODE 11ES2 (US, CND, AEP, UK)	
D905	8-719-200-82	DIODE 11ES2 (US, CND, AEP, UK)	
D906	8-719-200-82	DIODE 11ES2 (US, CND, AEP, UK)	
D907	8-719-902-17	DIODE U15G	
D908	8-719-902-17	DIODE U15G	
D909	8-719-902-17	DIODE U15G	
D910	8-719-902-17	DIODE U15G	

Ref. No.	Part No.	Description	Remark
D911	8-719-046-07	DIODE 2A02M	
D912	8-719-046-07	DIODE 2A02M	
D913	8-719-046-07	DIODE 2A02M	
D914	8-719-046-07	DIODE 2A02M	
< FUSE >			
△F901	1-533-447-11	FUSE (1.25A/125V) (US, CND)	
△F901	1-533-463-11	FUSE (T0.63AL/250V) (EXCEPT US, CND)	
△F902	1-533-451-11	FUSE (3.15A/125V) (US, CND)	
△F902	1-533-469-11	FUSE (T2.5AL/250V) (EXCEPT US, CND)	
△F903	1-533-451-11	FUSE (3.15A/125V) (US, CND)	
△F903	1-533-469-11	FUSE (T2.5AL/250V) (EXCEPT US, CND)	
< LINE FILTER >			
△LF901	1-424-150-11	TRANSFORMER, LINE FILTER	
< RESISTOR >			
△R901	1-202-725-00	SOLID 3.3M 10% 1/2W (US, CND)	
< RELAY >			
△RY901	1-755-321-11	RELAY (US, CND, AEP, UK)	
< SWITCH >			
△S901	1-552-921-00	SWITCH, POWER (VOLTAGE SELECTOR) (MY, SP, TH, HK)	
< POWER TRANSFORMER >			
△T901	1-433-808-11	TRANSFORMER, POWER (AEP, UK)	
△T901	1-433-809-11	TRANSFORMER, POWER (MY, SP, TH, HK)	
△T901	1-433-810-11	TRANSFORMER, POWER (US, CND)	
△T902	1-433-811-11	TRANSFORMER, POWER (AEP, UK)	
△T902	1-433-813-11	TRANSFORMER, POWER (US, CND)	

MISCELLANEOUS *****			
1	1-772-001-11	ELECTRIC, MECHANICAL (TAPE DECK BLOCK)	
△101	A-4411-681-A	BU ASSY (CD BLOCK)	
110	1-790-630-11	WIRE (FLAT TYPE)	
111	1-773-126-11	WIRE (FLAT TYPE) (19 CORE)	
112	A-4411-460-A	TUNER PACK (AEP, UK)	
112	A-4411-693-A	TUNER PACK (US, CND)	
112	A-4411-697-A	TUNER PACK (MY, SP, TH, HK)	
△116	1-575-651-11	CORD, POWER (UK, HK)	
△116	1-696-169-21	CORD, POWER (AEP, MY, SP, TH)	
△116	1-783-531-61	CORD, POWER (US, CND)	
159	1-452-493-21	MAGNET	
M901	X-2625-117-1	MOTOR ASSY, LOADING (DISC TRAY OPEN/CLOSE)	
△T901	1-433-808-11	TRANSFORMER, POWER (AEP, UK)	
△T901	1-433-809-11	TRANSFORMER, POWER (MY, SP, TH, HK)	
△T901	1-433-810-11	TRANSFORMER, POWER (US, CND)	

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.
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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		***** HARDWARE LIST *****	
#1	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	
#2	7-685-245-19	SCREW +KTP 3X6 TYPE2 NON-SLIT	
#3	7-685-246-14	SCREW +KTP 3X8 TYPE2 NON-SLIT	
#4	7-685-659-14	SCREW +BVTP 4X8 TYPE2 N-S (EXCEPT AEP, UK)	
#4	7-685-659-79	SCREW +BVTP 4X8 TYPE2 IT-3 (AEP, UK)	
#5	7-685-135-19	SCREW +P 2.6X10 TEPE2 NON-SLIT	

