


# TC-WE305

## SERVICE MANUAL

Ver 1.2 2003.12  
With SUPPLEMENT-1  
(9-960-691-81)

*US Model*  
*Canadian Model*  
*AEP Model*  
*E Model*  
*Australian Model*  
*PX Model*



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

Model Name Using Similar Mechanism		NEW
Tape Transport Mechanism Type	DECK A	TCM-YS47CZ-19
	DECK B	TCM-YS47CZ-18

### SPECIFICATIONS

#### System

##### Recording system

4-track 2-channel stereo

##### Fast-winding time (approx.)

120 sec. (with Sony C-60 cassette)

##### Bias

AC bias

##### Signal-to-noise ratio (at peak level and weighted with Dolby NR off)

Type I tape, Sony Type I (NORMAL):

55 dB

Type II tape, Sony Type II (HIGH):

57 dB

Type IV tape, Sony Type IV (METAL):

58 dB

##### S/N ratio improvement (approximate values)

With Dolby NR on: 5 dB at 1 kHz,

10 dB at 5 kHz

#### Harmonic distortion

0.4% (with Type I tape, Sony Type I (NORMAL): 160 nWb/m 315 Hz, 3rd H.D.)

1.8% (with Type IV tape, Sony Type IV (METAL): 250 nWb/m 315 Hz, 3rd H.D.)

#### Frequency response (Dolby NR off)

Type I tape, Sony Type I (NORMAL):

30 - 14,000 Hz ( $\pm 3$  dB, IEC)

20 - 15,000 Hz ( $\pm 6$  dB)

Type II tape, Sony Type II (HIGH):

30 - 15,000 Hz ( $\pm 3$  dB, IEC)

20 - 16,000 Hz ( $\pm 6$  dB)

Type IV tape, Sony Type IV (METAL):

30 - 15,000 Hz ( $\pm 3$  dB, IEC)

20 - 16,000 Hz ( $\pm 6$  dB)

30 - 13,000 Hz ( $\pm 3$  dB, -4 dB

recording)

— Continued on page 2 —

## STEREO CASSETTE DECK

9-960-691-13  
2003L02-1  
© 2003.12

**Sony Corporation**  
Home Audio Company  
Published by Sony Engineering Corporation

# SONY®

## TABLE OF CONTENTS

### Inputs

#### Line inputs (phono jacks)

Sensitivity : 0.16 V  
Input impedance : 47 kilohms

### Outputs

#### Line outputs (phono jacks)

Rated output level : 0.5 V at a load  
impedance of 47 kilohms  
Load impedance : Over 10 kilohms

### General

#### Power requirements

Where purchased	Power requirements
US, Canadian model	120V AC, 60Hz
AEP, Singapore model	220 - 230V AC, 50/60Hz
Australian model	240V AC, 50/60Hz
E, PX model	120/220/240V AC, 50/60Hz

#### Power consumption

15 W (Continental Europe)  
27 W (Other countries)

#### Dimensions (approx.)

430 × 120 × 305 mm (w/h/d)  
(17 × 4 3/4 × 12 1/8 inches)  
including projecting parts and  
controls

#### Mass (approx.)

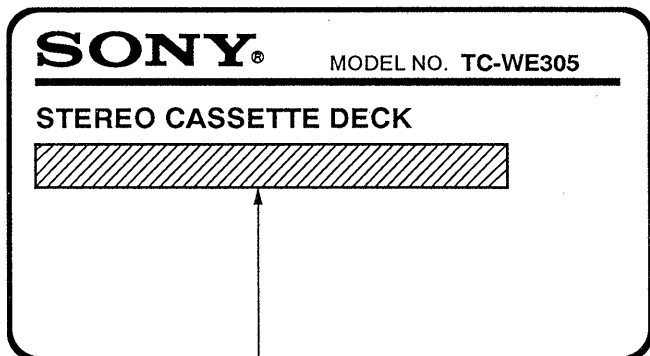
3.3 kg (7 lbs 4 oz)

#### Supplied accessories

Audio connecting cords (2 phono  
plugs - 2 phono plugs) (2)

Design and specifications are subject to  
change without notice.

### MODEL IDENTIFICATION



US, Canadian model : AC 120V 60Hz  
Australian model : AC 240V~50/60Hz  
AEP, Singapore model : AC 220-230V~50/60Hz  
E, PX model : AC120/220/240V~50/60Hz

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## 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 2V AC range are suitable. (See Fig. A)

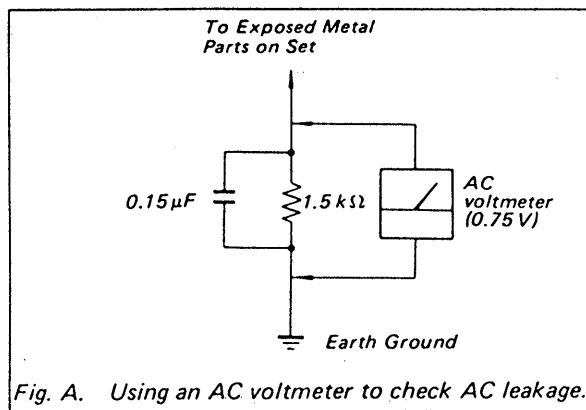


Fig. A. Using an AC voltmeter to check AC leakage.

### SAFETY-RELATED COMPONENT WARNING!!

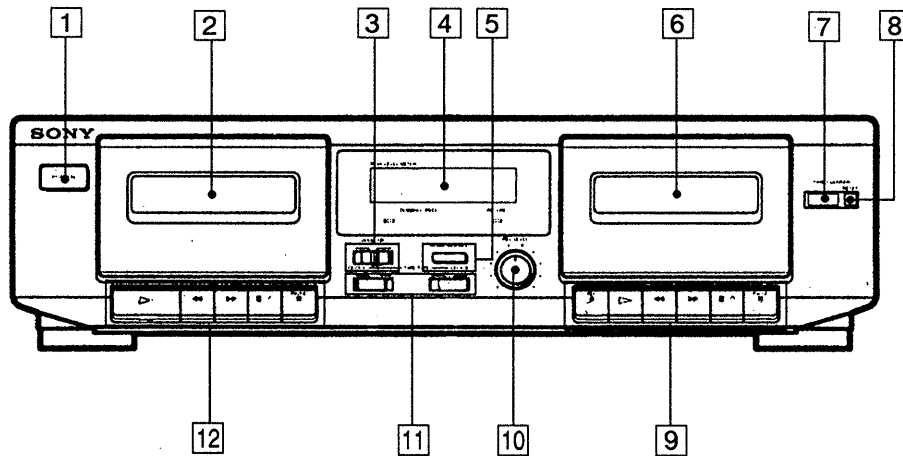
COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### 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.

# SECTION 1 GENERAL

## IDENTIFYING THE PARTS



- |   |   |
|---|---|
| <p>1 POWER switch</p> <p>2 Deck-A</p> <p>3 DOLBY NR ON/OFF switch</p> <p>4 Display</p> <p>5 DUBBING SPEED HIGH/NORM switch</p> <p>6 Deck-B</p> <p>7 TAPE COUNTER</p> <p>8 RESET (COUNTER) button</p> <p>9 Tape operation buttons (Deck-B)</p> <ul style="list-style-type: none"> <li>● REC (record) button</li> <li>▷ (play) button</li> <li>◀◀ (leftward fastwinding) button</li> <li>▶▶ (rightward fastwinding) button</li> <li>■ / ▲ (stop/eject) button</li> <li>   PAUSE button</li> </ul> | <p>10 REC (recording) LEVEL control</p> <p>11 TAPE TYPE selector</p> <ul style="list-style-type: none"> <li>I (Normal)</li> <li>II / IV (CrO<sub>2</sub> / Metal) } Deck-A</li> <li>I (Normal)</li> <li>II (CrO<sub>2</sub>) } Deck-B</li> <li>IV (Metal)</li> </ul> <p>12 Tape operation buttons (Deck-A)</p> <ul style="list-style-type: none"> <li>▷ (play) button</li> <li>◀◀ (leftward fastwinding) button</li> <li>▶▶ (rightward fastwinding) button</li> <li>■ / ▲ (stop/eject) button</li> <li>   PAUSE button</li> </ul> |
|---|---|

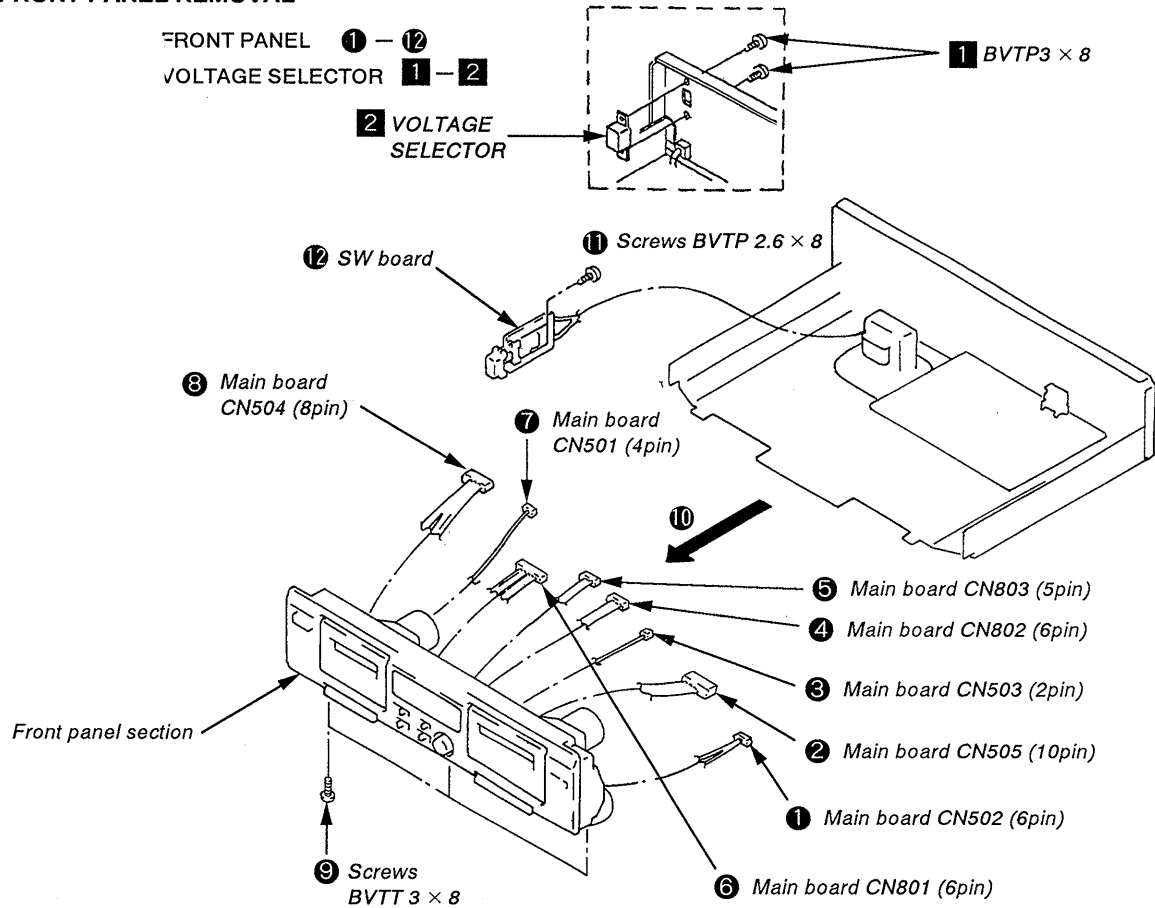
## SECTION 2 DISASSEMBLY

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

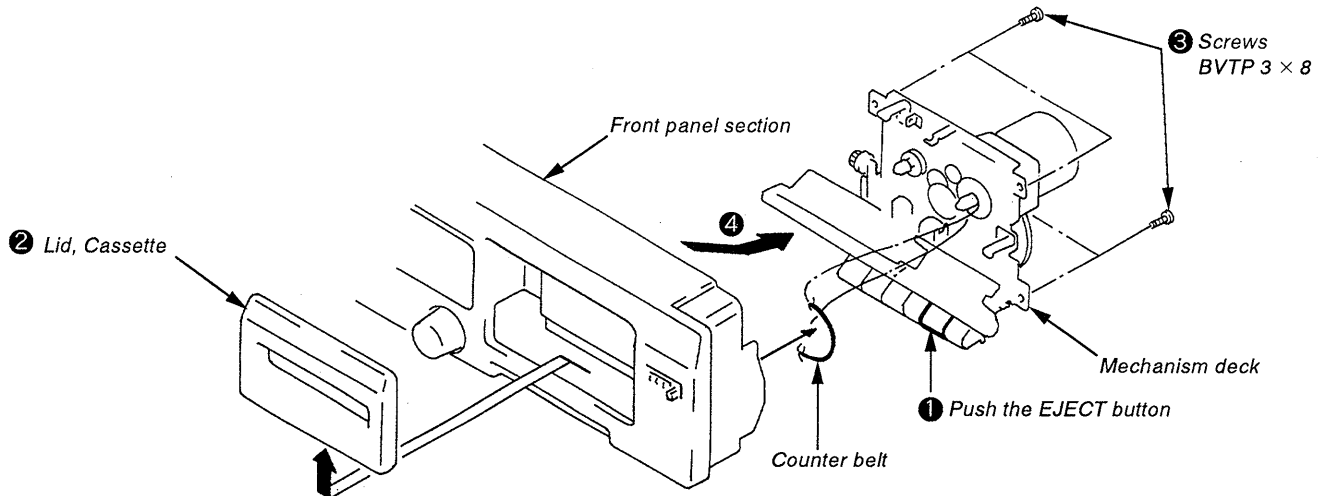
### CASE

Unscrew the four case attachment screws M3 × 8 and remove the case.

### 2-1. FRONT PANEL REMOVAL



### 2-2. MECHANISM DECK REMOVAL



## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

record/playback/erase head	pinch roller
rubber belts	capstan
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustment.
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

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 70g • cm (0.42 to 0.97 oz • inch)
Forward back tension	CQ-102C	DECK-A : 1.5 to 5.5g • cm (0.020 to 0.076 oz • inch)  DECK-B : 1.5 to 7g • cm (0.020 to 0.096 oz • inch)
FF/REW	CQ-201B	60g • cm or more (0.83 oz • inch or more)

#### • Tape Tension Measurement

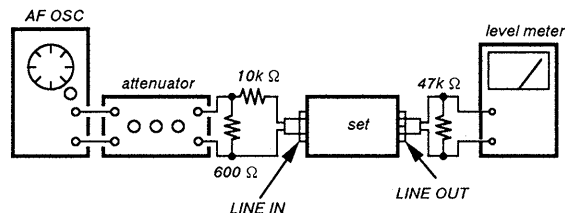
Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 100g (3.53 oz)

### 3-2. ELECTRICAL ADJUSTMENTS

#### PRECAUTION

1. The adjustment should be performed in the publication.  
(Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
  - Switch position  
DOLBY NR switch : OFF  
TAPE TYPE switch : TYPE I (NORMAL)  
REC level : min
  - Standard record position :  
Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

— Record Mode —



#### Standard Input Level

Input terminal	LINE IN
source impedance	10k Ω
input signal level	0.5V ( - 3.8dB)

#### Standard Output Level

Output terminal	LINE OUT
load impedance	47k Ω
output signal level	0.5V ( - 3.8dB)

#### Test Tape

Tape	Contents	Use
P-4-A100	10kHz, - 10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

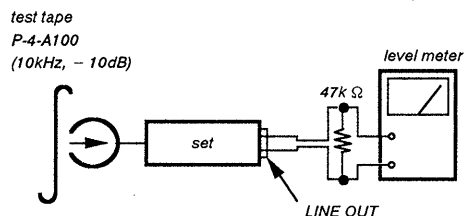
0dB=0.775V

#### Record/Playback Head Azimuth Adjustment

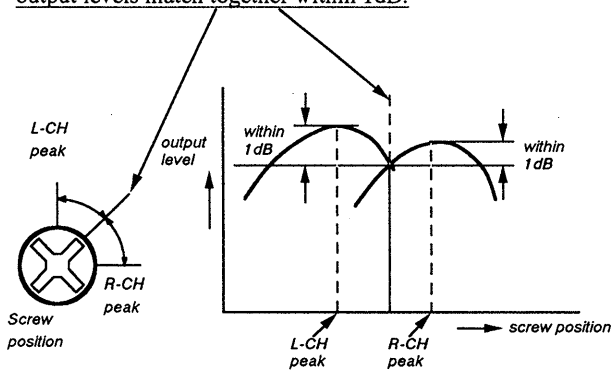
DECK-A DECK-B

#### Procedure :

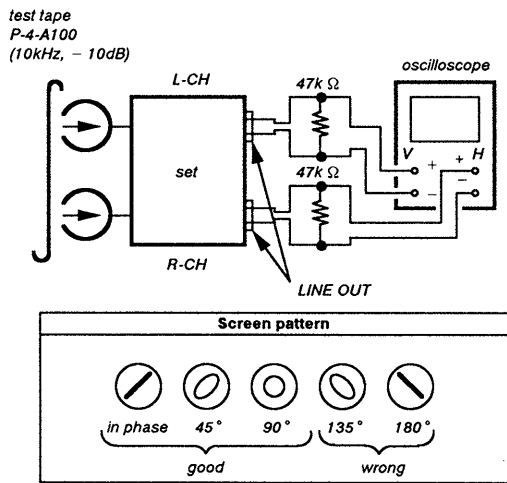
1. Forward playback Mode



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

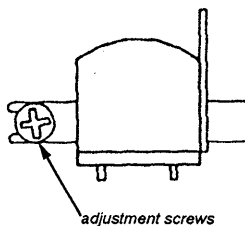


3. Playback Mode



4. Change the reverse playback mode and repeat the steps 1 to 3.  
5. After the adjustment, lock the adjustment screws with suitable locking compound.

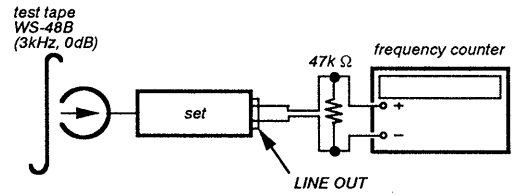
Adjustment Location : - record/playback head -



### Tape Speed Adjustment DECK-A DECK-B

Procedure :

- Perform high speed adjustment before normal speed adjustment.  
Mode : FWD playback



Specifications :

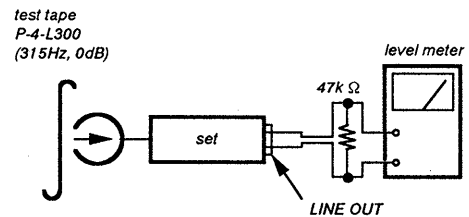
	Adjustment part		CNP506	Frequency counter
High speed	Deck A	RV501	SHORT	5980 to 6020Hz
	Deck B	RV503		
Normal speed	Deck A	RV502	OPEN	2990 to 3010Hz
	Deck B	RV504		

Adjustment Location : MAIN board (see page 9)

### Playback Level Adjustment DECK-A DECK-B

Procedure :

Mode : FWD playback



DECK A is RV101 (L-CH) and RV201 (R-CH),  
DECK B is RV102 (L-CH) and RV202 (R-CH)  
so that adjustment within the following adjustment level.

Adjustment Level :

LINE OUT level : -  $7.7 \pm 0.5\text{dB}$  (0.30 to 0.34V)

Level difference between channels : within 0.5dB

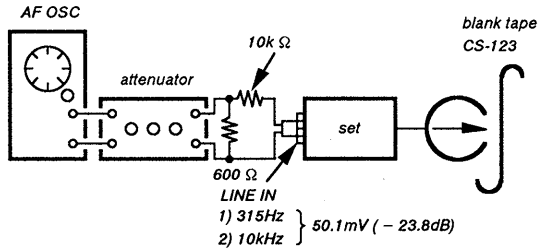
## Record Bias Adjustment **DECK-B**

### Setting :

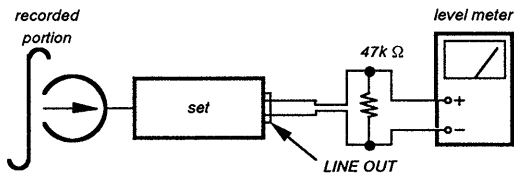
TAPE SELECT : TYPE -I (DECK-B)

### Procedure :

1. Record Mode



2. Playback Mode



Confirm that the 10kHz playback output is  $0 \pm 0.5\text{dB}$  relative to the 315Hz output. If necessary, adjust RV105 (L-CH), RV205 (R-CH) and repeat the steps given above.

Adjustment Location : MAIN board (see page 9)

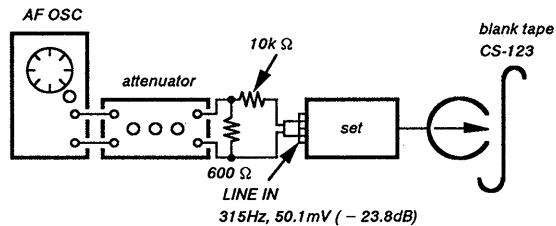
## Record Level Adjustment **DECK-B**

### Setting :

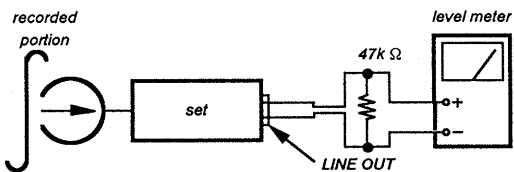
TAPE SELECT : TYPE -I (DECK-B)

### Procedure :

1. Record Mode



2. Playback Mode



Confirm playback the tape recorded become adjustment level as follows.

If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps 1 and 2.

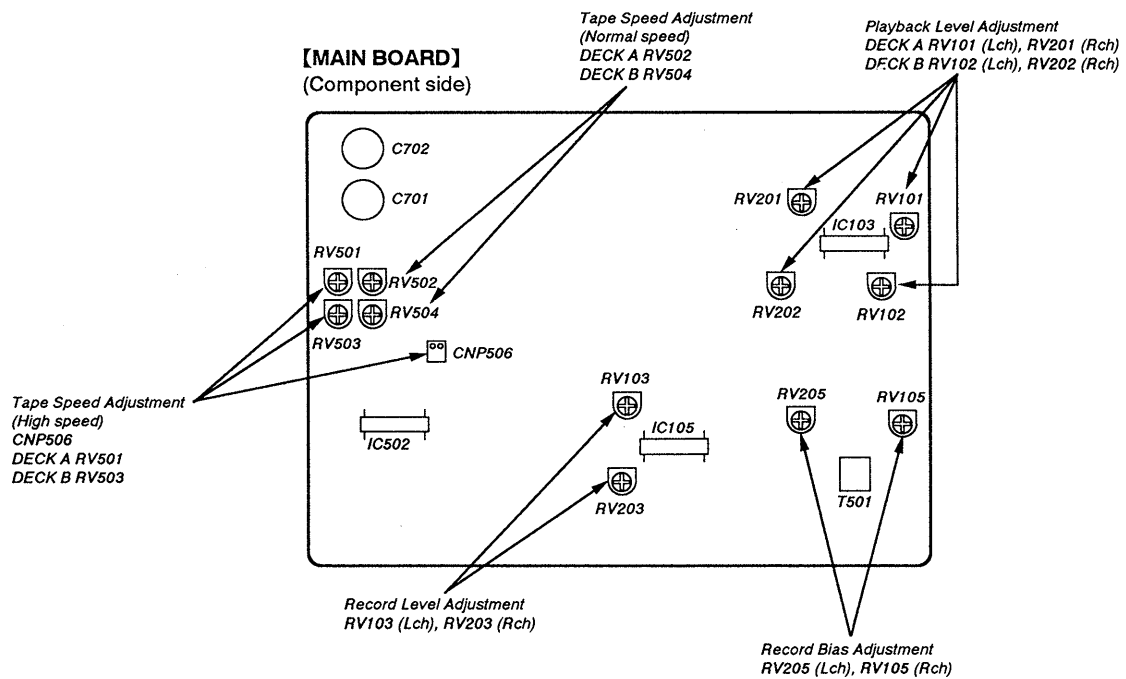
### Adjustment Level :

LINE OUT level :  $-23.8 \pm 0.5\text{dB}$  (47.2 to 53mV)

Adjustment Location : MAIN board (see page 9)



Adjustment Location : MAIN board

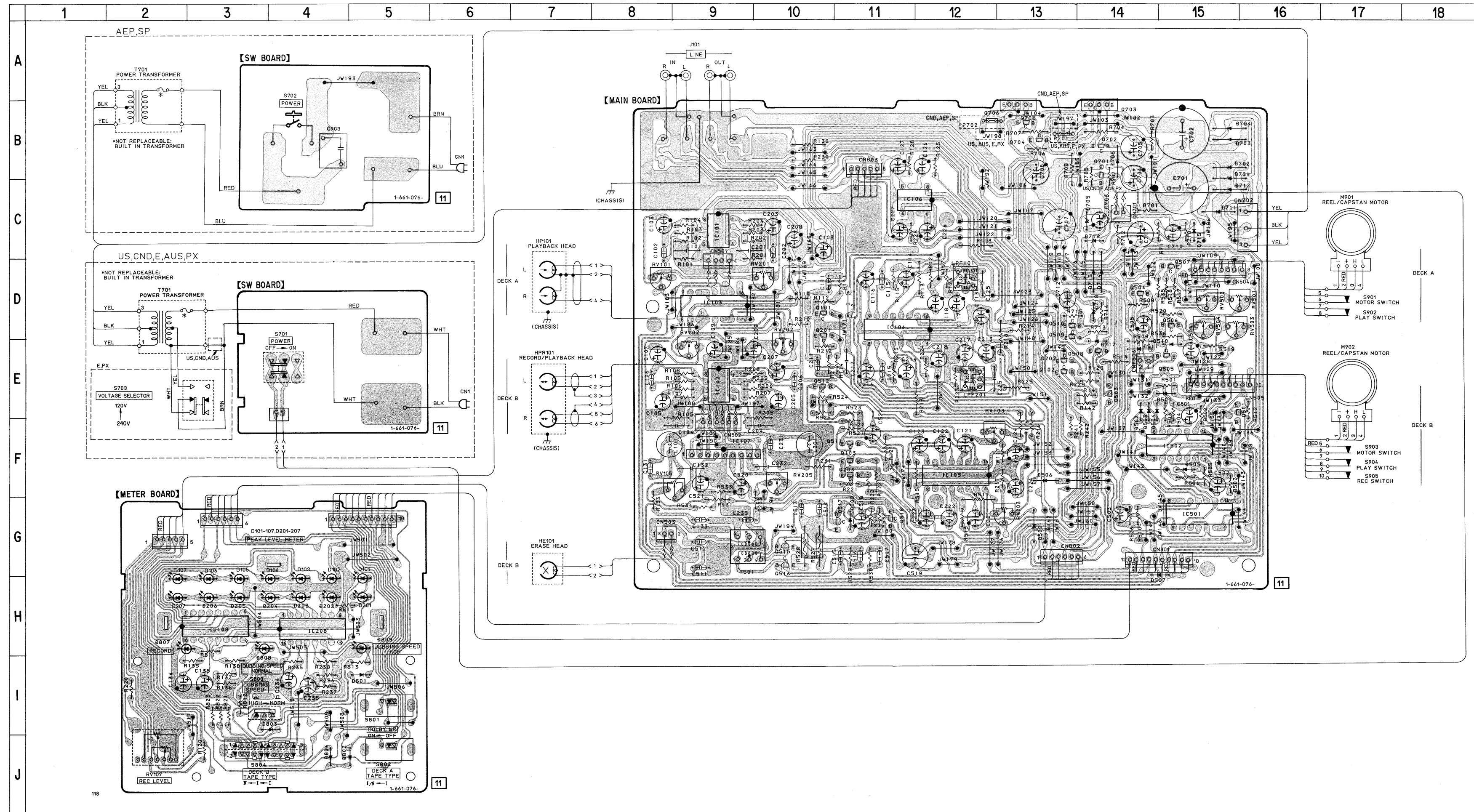


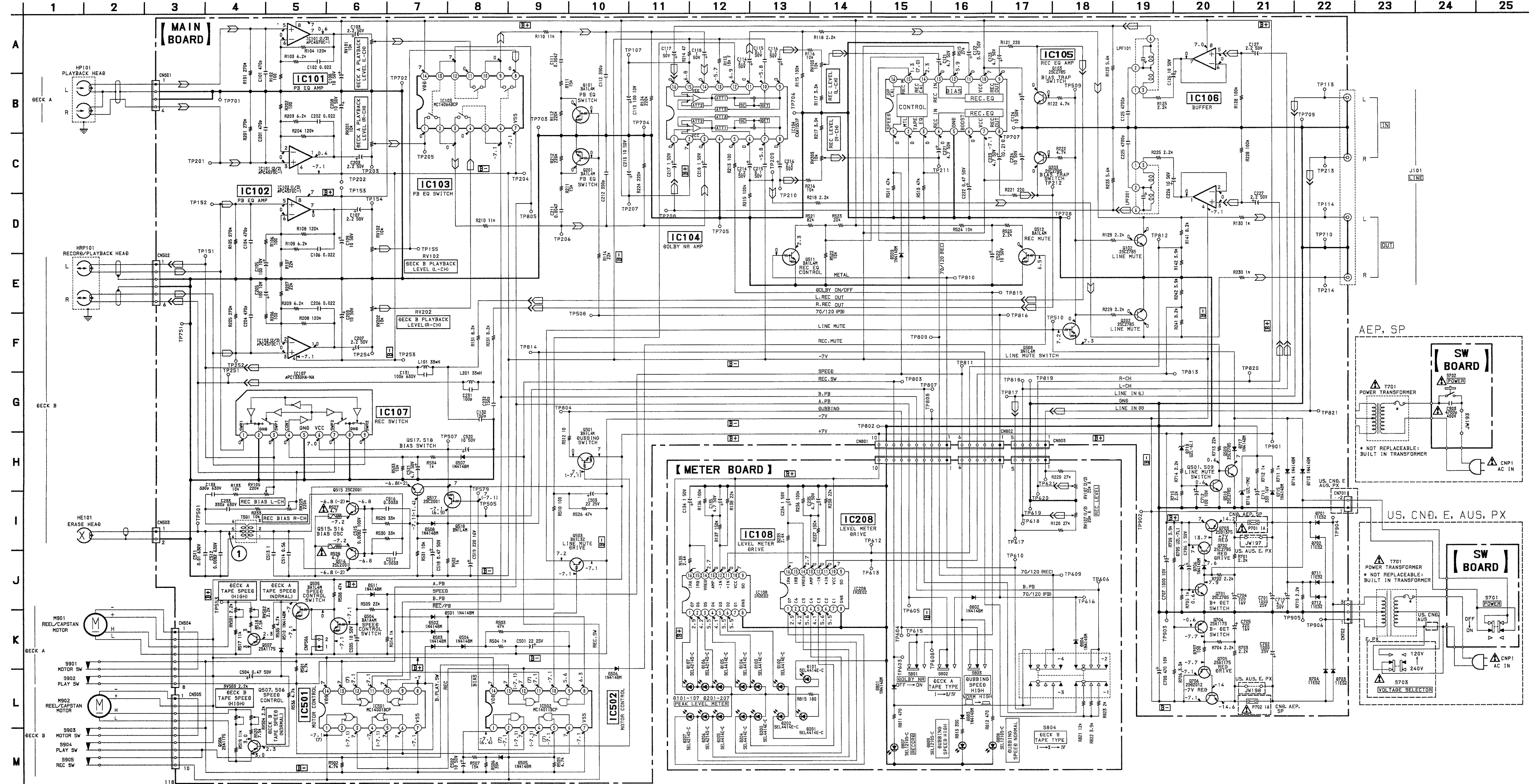
● SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D101	H - 5	D808	H - 3
D102	H - 4	D809	H - 5
D103	H - 4		
D104	H - 4		
D105	H - 3	IC101	C - 9
		IC102	E - 9
D106	H - 3	IC103	D - 9
D107	H - 2	IC104	D - 11
D201	H - 5	IC105	F - 12
D202	H - 4		
D203	H - 4	IC106	C - 12
		IC107	F - 9
D204	H - 4	IC108	H - 3
D205	H - 3	IC208	H - 4
D206	H - 3	IC501	G - 15
D207	H - 2		
D501	E - 15	IC502	F - 15
D502	E - 14		
D503	E - 14	Q101	D - 10
D504	E - 15	Q102	E - 13
D505	F - 15	Q103	F - 11
D506	F - 13	Q201	D - 10
		Q202	E - 13
D507	G - 15		
D508	G - 11	Q203	F - 11
D509	G - 13	Q501	E - 16
D510	E - 15	Q503	E - 14
D511	E - 14	Q504	D - 14
		Q505	E - 15
D701	B - 15		
D702	B - 15	Q506	D - 15
D703	B - 15	Q507	D - 15
D704	B - 15	Q508	E - 14
D705	C - 14	Q509	D - 13
		Q510	D - 13
D706	B - 14		
D711	C - 15	Q511	F - 11
D712	C - 15	Q512	E - 10
D713	D - 14	Q515	G - 10
D714	D - 14	Q516	G - 10
		Q517	G - 11
D715	C - 15		
D716	C - 14	Q518	G - 11
D717	E - 14	Q701	B - 14
D718	D - 14	Q702	B - 14
D801	I - 5	Q703	B - 14
		Q704	B - 13
D802	J - 5		
D803	I - 4	Q705	B - 13
D804	J - 4	Q706	B - 13
D807	H - 2		

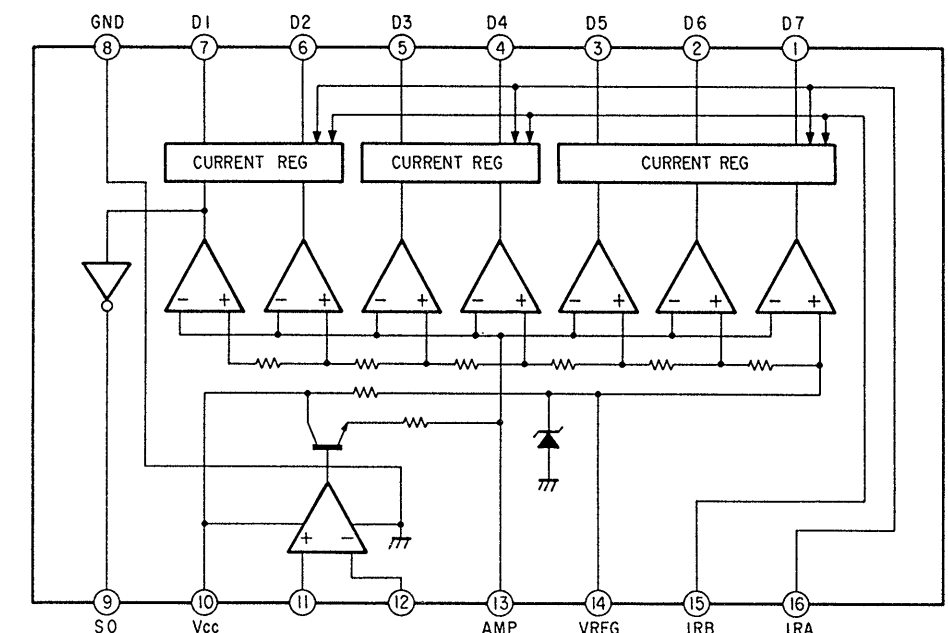
Note:

- — : parts extracted from the component side.
- △ : internal component.
- ⊞ : Pattern from the side which enables seeing.
- Abbreviations  
CND : Canadian  
SP : Singapore  
AUS : Australian

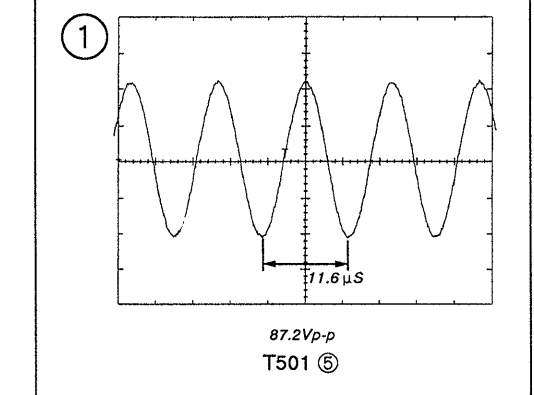




IC BLOCK DIAGRAM  
IC108, 208 IR2E02



WAVEFORM



- Note :**
- All capacitors are in  $\mu F$  unless otherwise noted.  $\mu F$ :  $\mu F$  50kV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
  - % : indicates tolerance.
  - $\Delta$  : internal component.
  - $\square$  : fusible resistor.
  - $\square$  : panel designation.

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

**Note :**  
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- $\square$  B+ : B+ Line
- $\square$  B- : B- Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : PLAY
- ( ) : REC
- Voltagés are taken with a VOM (Input impedance 10M  $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\rightarrow$  : PB (DECK A)
- $\rightarrow$  : PB (DECK B)
- $\rightarrow$  : REC (DECK B)
- Abbreviations  
CND : Canadian  
SP : Singapore  
AUS : Australian

# SECTION 5 EXPLODED VIEWS

**NOTE :**

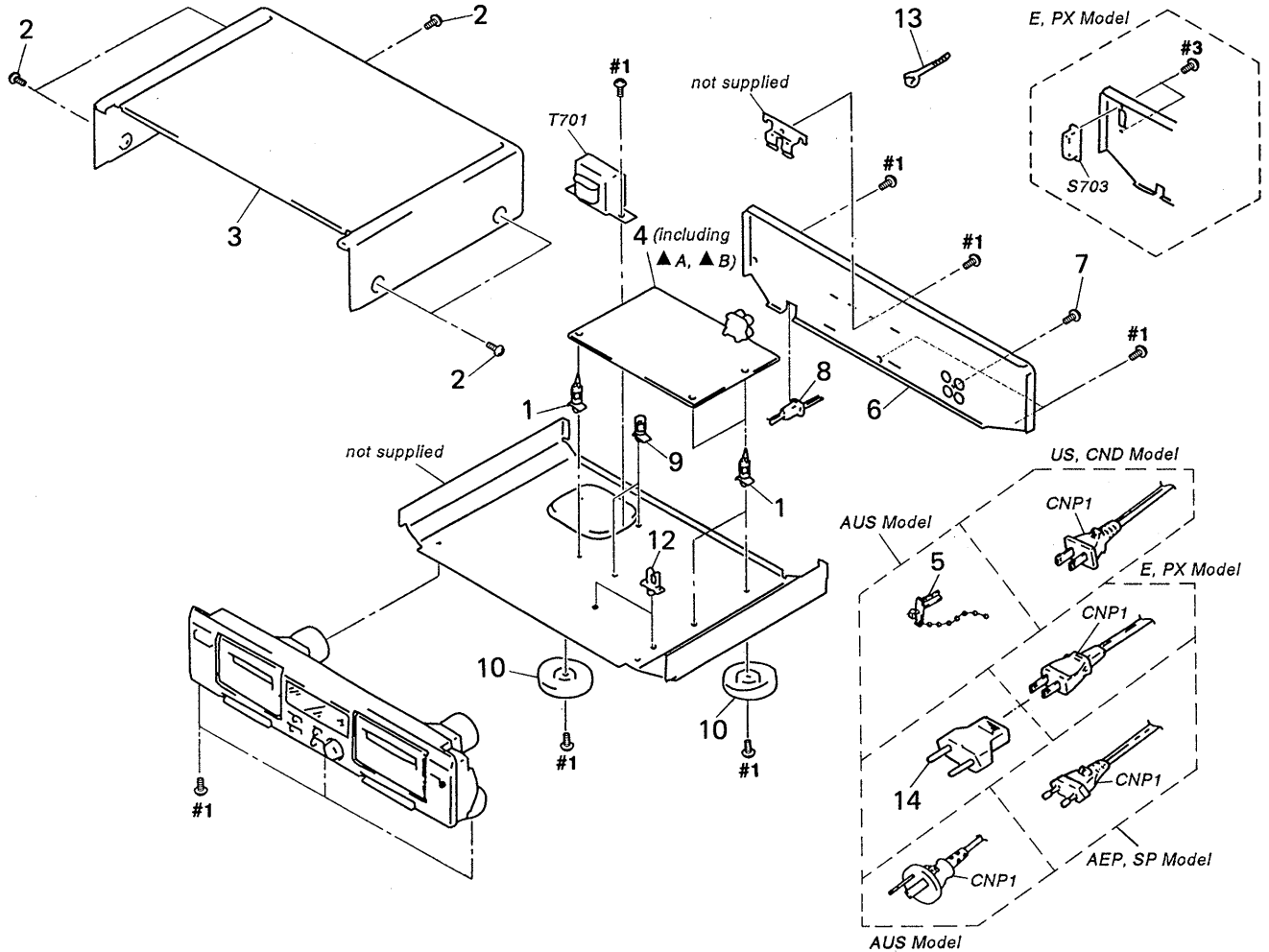
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
 CND : Canadian      SP : Singapore  
 AUS : Australian

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

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

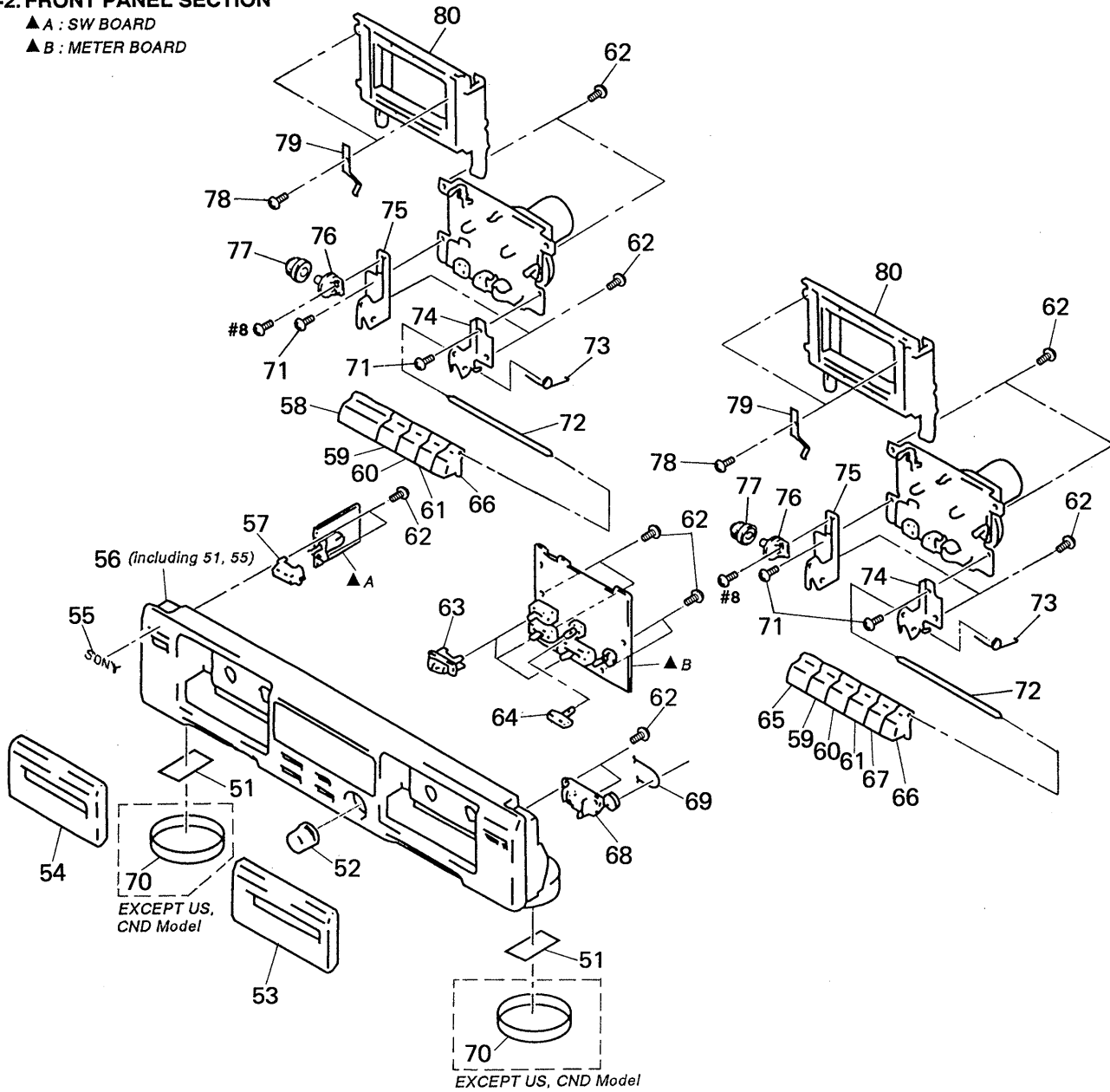
**5-1. CHASSIS SECTION**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	3-346-265-11	HOLDER, PC BOARD		* 9	3-669-610-00	SPACER	
2	3-363-099-01	SCREW (CASE 3 TP2)		10	4-977-591-01	FOOT (F50150S)(EXCEPT US,CND)	
* 3	3-935-634-01	CASE		10	4-977-591-11	FOOT (F50150S)(US,CND)	
* 4	A-2007-564-A	MAIN BOARD, COMPLETE (US,AUS)		12	2-122-805-01	CLAMP, CORD	
* 4	A-2007-589-A	MAIN BOARD, COMPLETE (AEP,SP,E,PX)		* 13	3-847-356-02	CLAMP	
* 4	A-2007-594-A	MAIN BOARD, COMPLETE (CND)		$\Delta$ 14	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
5	4-956-370-12	BAND, PLUG FIXED (AUS)		$\Delta$ CNP1	1-558-945-21	CORD, POWER (POLAR.SPT-1)(US,CND)	
* 6	3-935-621-01	PANEL, BACK (US)		$\Delta$ CNP1	1-777-107-11	CORD, POWER (AEP,SP)	
* 6	3-935-621-11	PANEL, BACK (CND)		$\Delta$ CNP1	1-777-217-11	CORD, POWER (E,PX)	
* 6	3-935-621-21	PANEL, BACK (AEP)		$\Delta$ CNP1	1-777-218-11	CORD, POWER (AUS)	
* 6	3-935-621-31	PANEL, BACK (E,PX)		$\Delta$ S703	1-692-155-11	SELECTOR, POWER VOLTAGE (E,PX)	
* 6	3-935-621-41	PANEL, BACK (AUS)		$\Delta$ T701	1-429-716-11	TRANSFORMER, POWER (US,CND)	
* 6	3-935-621-51	PANEL, BACK (SP)		$\Delta$ T701	1-429-717-11	TRANSFORMER, POWER (AEP,SP)	
7	3-704-515-01	SCREW (BV/RING)		$\Delta$ T701	1-429-718-11	TRANSFORMER, POWER (E,PX)	
* 8	3-703-244-00	BUSHING (2104), CORD (AEP,SP,AUS)		$\Delta$ T701	1-429-827-11	TRANSFORMER, POWER (AUS)	
8	3-703-571-11	BUSHING (S) (4516), CORD (US,CND,E,PX)					

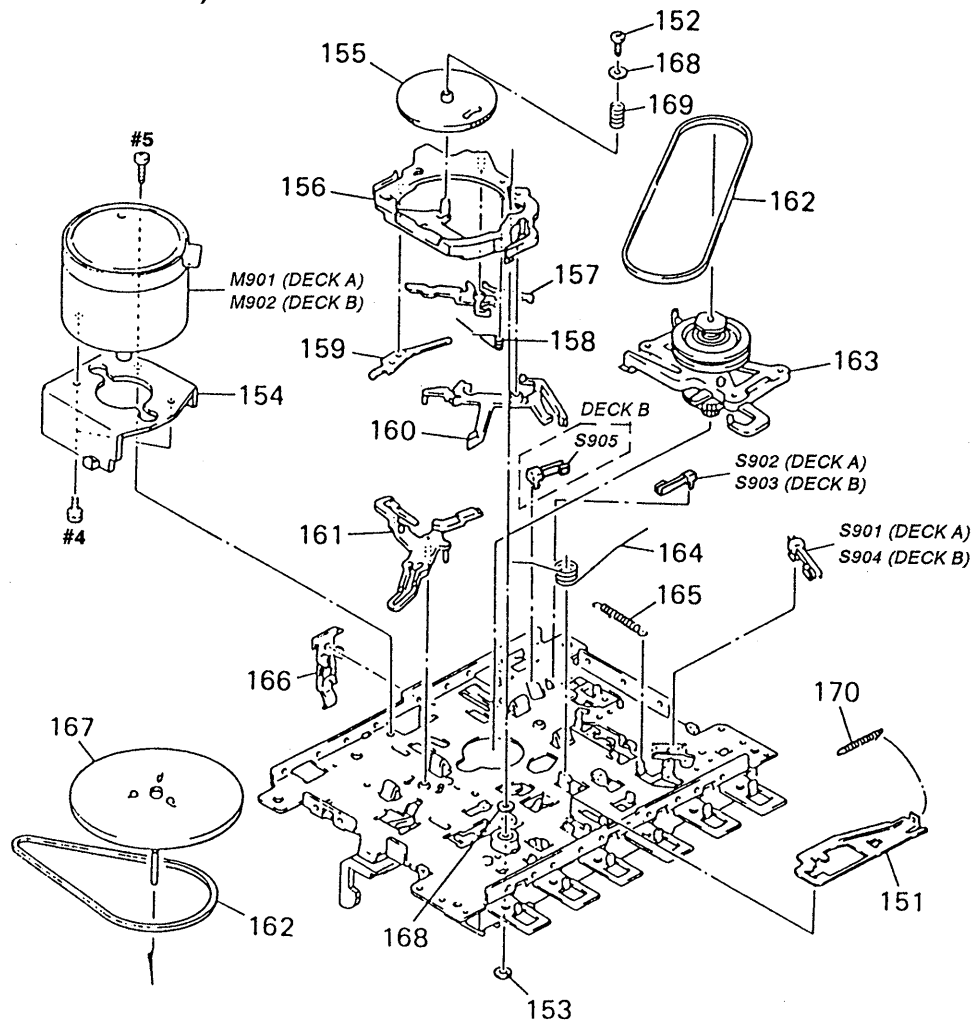
**5-2. FRONT PANEL SECTION**

▲ A : SW BOARD  
▲ B : METER BOARD



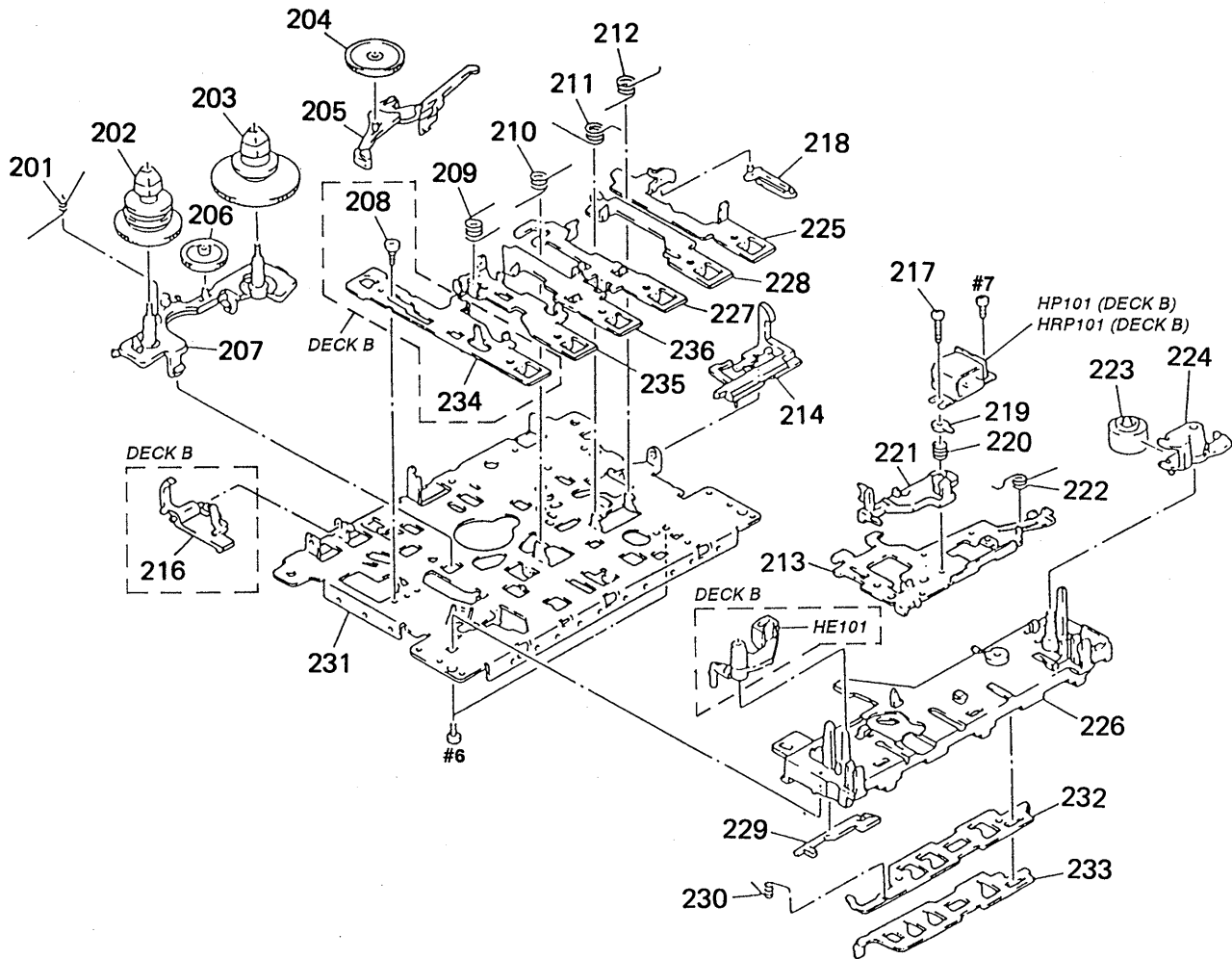
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 51	4-978-398-21	CUSHION		66	3-935-629-01	BUTTON (PAUSE)	
52	3-935-623-01	KNOB (REC)		67	3-935-631-31	BUTTON (MD)	
53	A-2004-584-A	PANEL ASSY, FRONT(US,CND)		68	1-251-440-11	COUNTER, TAPE	
53	A-2004-597-A	PANEL ASSY, FRONT (EXCEPT US,CND)		69	3-315-405-00	BELT	
54	A-2004-588-A	LID ASSY (R), CASSETTE		70	3-936-864-01	RING (L), ORNAMENTAL(EXCEPT US,CND)	
55	4-963-404-21	EMBLEM (5-A), SONY		71	3-918-741-01	SCREW	
56	A-2004-587-A	LID ASSY (L), CASSETTE		* 72	3-931-794-01	BUTTON, SHAFT	
57	3-931-429-11	BUTTON (POWER)		73	3-931-805-01	SPRING	
58	3-935-628-01	BUTTON (PLAY)		* 74	3-931-792-01	BUTTON (R), HOLDER	
59	3-935-631-01	BUTTON (MD)		* 75	3-931-793-01	BUTTON (L), HOLDER	
60	3-935-631-11	BUTTON (MD)		76	3-931-806-01	GEAR, HOLDER	
61	3-935-631-21	BUTTON (MD)		77	3-931-807-01	DAMPER, GEAR	
62	4-951-620-01	SCREW (2.6X8), +BVTP		78	3-931-790-01	SCREW	
63	3-935-625-01	KNOB (SL)		* 79	3-931-804-01	PLATE, KEEP	
64	3-935-624-01	BUTTON (DB)		80	3-931-803-01	CASE, CASSETTE	
65	3-935-630-01	BUTTON (REC)		#8	7-685-782-01	SCREW +PTT 2X5 (S)	

**5-3. MECHANISM DECK SECTION 1**  
**(TCM-YS47CZ-19 : DECK A)**  
**(TCM-YS47CZ-18 : DECK B)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-379-844-01	PLATE, STOP, FR		165	3-362-971-01	SPRING	
152	3-366-352-01	SCREW		166	3-911-189-01	CASSETTE SPRING	
153	3-362-980-01	WASHER		167	3-387-698-01	FW ASSY	
* 154	3-362-988-01	HOLDER, MOTOR		168	3-369-961-01	WASHER	
155	X-3363-315-1	GEAR, CAM		169	3-369-962-01	SPRING, COMPRESSION	
156	3-362-973-01	AS (BASE)		170	3-379-843-01	SPRING	
157	3-362-976-01	LEVER, CONTROL		M901	1-698-845-11	REEL/CAPSTAN MOTOR (DECK A)	
158	3-362-977-01	SPRING		M902	1-698-845-11	REEL/CAPSTAN MOTOR (DECK B)	
159	3-362-978-01	SPRING, PLATE		S901	1-692-434-11	LEAF SWITCH (MOTOR) (DECK A)	
160	3-362-975-01	LEVER, SENSOR		S902	1-692-434-11	LEAF SWITCH (PLAY) (DECK A)	
161	3-387-697-01	SENSOR		S903	1-692-434-11	LEAF SWITCH (MOTOR) (DECK B)	
162	3-362-989-01	BELT		S904	1-692-434-11	LEAF SWITCH (PLAY) (DECK B)	
163	3-362-969-01	IDLER ASSY, PF		S905	1-692-434-11	LEAF SWITCH (REC) (DECK B)	
164	3-362-970-01	SPRING					

**5-4. MECHANISM DECK SECTION 2**  
 (TCM-YS47CZ-19 : DECK A)  
 (TCM-YS47CZ-18 : DECK B)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-917-805-01	SPRING		221	3-362-986-01	HOLDER, HEAD	
202	X-3363-611-1	REEL, S		222	3-362-983-01	SPRING	
203	3-362-962-01	REEL ASSY, T		223	3-362-982-01	PINCH ROLLER	
204	3-362-960-01	PULLEY, IDLER		224	3-362-981-01	PINCH ARM	
205	3-362-959-01	ARM, IDLER		* 225	3-362-952-01	LEVER, PAUSE	
206	3-362-965-01	IDLER, FF		226	3-362-942-01	FRAME ASSY	
207	3-362-961-01	SPINDLE (BASE)		* 227	3-362-950-01	LEVER, FF	
208	3-362-958-01	SCREW (DECK B)		* 228	3-362-951-01	LEVER, SE	
209	3-362-954-01	SPRING		229	3-362-944-01	STOPPER, REC	
210	3-362-955-01	SPRING		230	3-362-945-01	SPRING	
211	3-362-956-01	SPRING		* 231	3-362-941-01	CHASSIS	
212	3-362-957-01	SPRING		* 232	3-362-943-01	PLATE, FUNCTION	
* 213	3-362-984-01	HEAD (BASE)		* 233	3-362-946-01	LEVER, SW	
214	3-362-968-01	LEVER, EJECT		* 234	3-362-947-01	LEVER, REC (DECK B)	
216	3-362-966-01	INTER LOCK (DECK B)		* 235	3-362-948-01	LEVER, PLAY	
217	3-363-229-01	SCREW		* 236	3-362-949-01	LEVER, REW	
218	3-362-953-01	ARM, PAUSE		HE101	1-543-673-11	ERASE HEAD (DECK B)	
219	3-363-230-01	LUG		HP101	1-543-672-11	PLAYBACK HEAD (DECK A)	
220	3-362-985-01	SPRING		HRP101	1-543-672-11	PLAYBACK/RECORD HEAD (DECK B)	

## SECTION 6 ELECTRICAL PARTS LIST

MAIN	SW	METER
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**NOTE :**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL : Metal-film resistor  
METAL OXIDE :Metal oxide-film resistor  
F : nonflammable
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, u :  $\mu$  , for example :  
 uA..... :  $\mu$  A..... , uPA..... :  $\mu$  PA.....  
 uPB..... :  $\mu$  PB..... , uPC..... :  $\mu$  PC.....  
 uPD..... :  $\mu$  PD.....

● CAPACITORS

uF :  $\mu$  F

● COILS

uH :  $\mu$  H

● Abbreviation

CND : Canadian      SP : Singapore  
 AUS : Australian

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

Les composants identifiés par une marque  $\Delta$  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-2007-564-A	MAIN BOARD, COMPLETE (US,AUS)		C133	1-136-439-11	FILM	330PF 5% 630V
*	A-2007-589-A	MAIN BOARD, COMPLETE (AEP,E,SP,PX)		C134	1-124-903-11	ELECT	1uF 20% 50V
*	A-2007-594-A	MAIN BOARD, COMPLETE (CND)		C135	1-126-963-11	ELECT	4.7uF 20% 50V
		*****		C201	1-162-290-31	CERAMIC	470PF 10% 50V
		SW BOARD		C202	1-136-157-00	FILM	0.022uF 5% 50V
		*****					
		METER BOARD		C203	1-126-961-11	ELECT	2.2uF 20% 50V
		*****		C204	1-162-290-31	CERAMIC	470PF 10% 50V
				C205	1-124-443-00	ELECT	100uF 20% 10V
*	1-535-688-11	TERMINAL		C206	1-136-157-00	FILM	0.022uF 5% 50V
		< CAPACITOR >		C207	1-126-961-11	ELECT	2.2uF 20% 50V
				C208	1-124-907-11	ELECT	10uF 20% 50V
C101	1-162-290-31	CERAMIC	470PF 10% 50V	C209	1-124-907-11	ELECT	10uF 20% 50V
C102	1-136-157-00	FILM	0.022uF 5% 50V	C211	1-130-479-00	MYLAR	0.0047uF 5% 50V
C103	1-126-961-11	ELECT	2.2uF 20% 50V	C212	1-162-289-31	CERAMIC	390PF 10% 50V
C104	1-162-290-31	CERAMIC	470PF 10% 50V	C213	1-124-907-11	ELECT	10uF 20% 50V
C105	1-124-443-00	ELECT	100uF 20% 10V				
				C214	1-126-961-11	ELECT	2.2uF 20% 50V
C106	1-136-157-00	FILM	0.022uF 5% 50V	C215	1-136-165-00	FILM	0.1uF 5% 50V
C107	1-126-961-11	ELECT	2.2uF 20% 50V	C216	1-126-961-11	ELECT	2.2uF 20% 50V
C108	1-124-907-11	ELECT	10uF 20% 50V	C217	1-124-903-11	ELECT	1uF 20% 50V
C109	1-124-907-11	ELECT	10uF 20% 50V	C218	1-124-903-11	ELECT	1uF 20% 50V
C111	1-130-479-00	MYLAR	0.0047uF 5% 50V				
				C221	1-126-963-11	ELECT	4.7uF 20% 50V
C112	1-162-289-31	CERAMIC	390PF 10% 50V	C222	1-124-902-00	ELECT	0.47uF 20% 50V
C113	1-124-443-00	ELECT	100uF 20% 10V	C223	1-126-963-11	ELECT	4.7uF 20% 50V
C114	1-126-961-11	ELECT	2.2uF 20% 50V	C224	1-124-907-11	ELECT	10uF 20% 50V
C115	1-136-165-00	FILM	0.1uF 5% 50V	C225	1-162-600-11	CERAMIC	0.0047uF 30% 16V
C116	1-126-961-11	ELECT	2.2uF 20% 50V				
				C226	1-124-907-11	ELECT	10uF 20% 50V
C117	1-124-903-11	ELECT	1uF 20% 50V	C227	1-126-961-11	ELECT	2.2uF 20% 50V
C118	1-124-903-11	ELECT	1uF 20% 50V	C231	1-136-433-11	FILM	100PF 5% 630V
C121	1-126-963-11	ELECT	4.7uF 20% 50V	C232	1-162-284-31	CERAMIC	150PF 10% 50V
C122	1-124-902-00	ELECT	0.47uF 20% 50V	C233	1-136-439-11	FILM	330PF 5% 630V
C123	1-126-963-11	ELECT	4.7uF 20% 50V				
				C234	1-124-903-11	ELECT	1uF 20% 50V
C124	1-124-907-11	ELECT	10uF 20% 50V	C235	1-126-963-11	ELECT	4.7uF 20% 50V
C125	1-162-600-11	CERAMIC	0.0047uF 30% 16V	C501	1-126-233-11	ELECT	22uF 20% 50V
C126	1-124-907-11	ELECT	10uF 20% 50V	C502	1-124-907-11	ELECT	10uF 20% 50V
C127	1-126-961-11	ELECT	2.2uF 20% 50V	C503	1-126-233-11	ELECT	22uF 20% 50V
C131	1-136-433-11	FILM	100PF 5% 630V				
C132	1-162-284-31	CERAMIC	150PF 10% 50V	C504	1-124-902-00	ELECT	0.47uF 20% 50V



**MAIN SW METER**

Ref. No.	Part No.	Description	Remark
C505	1-124-907-11	ELECT	10uF 20% 50V
C511	1-136-601-11	FILM	0.01uF 5% 630V
C512	1-136-562-11	FILM	0.0082uF 5% 630V
C513	1-136-177-00	FILM	1uF 5% 50V
C514	1-136-174-00	FILM	0.56uF 5% 50V
C515	1-106-365-00	MYLAR	0.0082uF 5% 100V
C516	1-106-355-12	MYLAR	3300PF 5% 200V
C517	1-106-355-12	MYLAR	3300PF 5% 200V
C518	1-124-902-00	ELECT	0.47uF 20% 50V
C519	1-124-120-11	ELECT	220uF 20% 25V
C520	1-124-907-11	ELECT	10uF 20% 50V
C521	1-126-963-11	ELECT	4.7uF 20% 50V
C522	1-124-907-11	ELECT	10uF 20% 50V
C701	1-124-557-11	ELECT	1000uF 20% 25V
C702	1-124-557-11	ELECT	1000uF 20% 25V
C704	1-124-120-11	ELECT	220uF 20% 25V
C705	1-124-120-11	ELECT	220uF 20% 25V
C706	1-124-903-11	ELECT	1uF 20% 50V
C707	1-124-473-11	ELECT	1000uF 20% 10V
C708	1-124-472-11	ELECT	470uF 20% 10V
C710	1-126-963-11	ELECT	4.7uF 20% 50V
C711	1-124-119-00	ELECT	330uF 20% 16V
C712	1-124-443-00	ELECT	100uF 20% 10V
△C903	1-165-170-11	CERAMIC	0.0047uF 20% 400V (AEP,SP)
< CONNECTOR >			
CN501	1-506-986-11	PIN, CONNECTOR (PC BOARD)	4P
* CN502	1-691-577-11	PIN, CONNECTOR (PC BOARD)	6P
* CN503	1-691-573-11	PIN, CONNECTOR (PC BOARD)	2P
* CN504	1-691-579-11	PIN, CONNECTOR (PC BOARD)	8P
* CN505	1-691-581-11	PIN, CONNECTOR (PC BOARD)	10P
* CN506	1-560-060-00	PIN, CONNECTOR	2P
* CN701	1-691-573-11	PIN, CONNECTOR (PC BOARD)	2P (EXCEPT AEP,SP)
* CN702	1-535-116-00	TERMINAL(US,CND,AUS)	
* CN702	1-691-574-11	PIN, CONNECTOR (PC BOARD)	3P (AEP,E,SP,PX)
* CN801	1-691-581-11	PIN, CONNECTOR (PC BOARD)	10P
* CN802	1-691-577-11	PIN, CONNECTOR (PC BOARD)	6P
CN803	1-506-987-11	PIN, CONNECTOR (PC BOARD)	5P
< DIODE >			
D101	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D102	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D103	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D103	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D104	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D105	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D106	8-719-304-32	LED SEL4214S	(PEAK LEVEL METER)
D107	8-719-304-32	LED SEL4214S	(PEAK LEVEL METER)
D201	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D202	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)

Ref. No.	Part No.	Description	Remark
D203	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D204	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D205	8-719-304-37	LED SEL4414E-C	(PEAK LEVEL METER)
D206	8-719-304-32	LED SEL4214S	(PEAK LEVEL METER)
D207	8-719-304-32	LED SEL4214S	(PEAK LEVEL METER)
D501	8-719-987-63	DIODE	1N4148M
D502	8-719-987-63	DIODE	1N4148M
D503	8-719-987-63	DIODE	1N4148M
D504	8-719-987-63	DIODE	1N4148M
D505	8-719-987-63	DIODE	1N4148M
D506	8-719-987-63	DIODE	1N4148M
D507	8-719-987-63	DIODE	1N4148M
D508	8-719-987-63	DIODE	1N4148M
D509	8-719-987-63	DIODE	1N4148M
D510	8-719-987-63	DIODE	1N4148M
D511	8-719-987-63	DIODE	1N4148M
D701	8-719-024-99	DIODE	11ES2-NTA2B
D702	8-719-024-99	DIODE	11ES2-NTA2B
D703	8-719-024-99	DIODE	11ES2-NTA2B
D704	8-719-024-99	DIODE	11ES2-NTA2B
D705	8-719-000-75	DIODE	UZL-7L1
D706	8-719-987-63	DIODE	1N4148M
D711	8-719-024-99	DIODE	11ES2-NTA2B
D712	8-719-024-99	DIODE	11ES2-NTA2B
D713	8-719-987-63	DIODE	1N4148M
D714	8-719-987-63	DIODE	1N4148M
D715	8-719-987-63	DIODE	1N4148M
D716	8-719-933-47	DIODE	HZS7B2L
D717	8-719-987-63	DIODE	1N4148M
D718	8-719-933-33	DIODE	HZS6A1L
D801	8-719-987-63	DIODE	1N4148M
D802	8-719-987-63	DIODE	1N4148M
D803	8-719-987-63	DIODE	1N4148M
D804	8-719-987-63	DIODE	1N4148M
D807	8-719-302-46	LED SEL1210S-C-TP3	(RECORD)
D808	8-719-302-46	LED SEL1210S-C-TP3	(DUBBING SPEED HIGH)
D809	8-719-302-46	LED SEL1210S-C-TP3	(DUBBING SPEED NORMAL)
< IC >			
IC101	8-759-111-44	IC	uPC4570C-1
IC102	8-759-111-44	IC	uPC4570C-1
IC103	8-759-000-49	IC	MC14066BCP
IC104	8-752-056-08	IC	CXA1551P
IC105	8-752-064-96	IC	CXA1579P
IC106	8-759-634-51	IC	M5218AP
IC107	8-759-079-42	IC	uPC1330HA-NA
IC108	8-759-912-79	IC	IR2E02
IC208	8-759-912-79	IC	IR2E02
IC501	8-759-040-01	IC	MC14001BCP
IC502	8-759-140-11	IC	uPD4011BC

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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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< JACK >		R106	1-247-807-31	CARBON 100	5% 1/4W
J101	1-770-614-11	JACK, PIN 4P (LINE IN,OUT)		R107	1-249-433-11	CARBON 22K	5% 1/4W
		< COIL >		R108	1-247-881-00	CARBON 120K	5% 1/4W
L101	1-410-781-11	INDUCTOR 33mH		R109	1-247-850-11	CARBON 6.2K	5% 1/4W
L201	1-410-781-11	INDUCTOR 33mH		R110	1-247-856-00	CARBON 11K	5% 1/4W
		< FILTER >		R111	1-249-431-11	CARBON 15K	5% 1/4W
LPF101	1-233-380-11	FILTER, LOW PASS		R112	1-247-887-00	CARBON 220K	5% 1/4W
LPF201	1-233-380-11	FILTER, LOW PASS		R113	1-215-451-00	METAL 18K	1% 1/4W
		< IC LINK>		R114	1-249-433-11	CARBON 22K	5% 1/4W
△ P701	1-532-637-00	LINK, IC(1A)(CND,AEP,SP)		R115	1-249-441-11	CARBON 100K	5% 1/4W
△ P702	1-532-637-00	LINK, IC(1A)(CND,AEP,SP)		R116	1-249-429-11	CARBON 10K	5% 1/4W
		< TRANSISTOR >		R117	1-249-423-11	CARBON 3.3K	5% 1/4W
Q101	8-729-900-89	TRANSISTOR DTC144ES		R118	1-249-421-11	CARBON 2.2K	5% 1/4W
Q102	8-729-119-78	TRANSISTOR 2SC403SP-51		R120	1-249-434-11	CARBON 27K	5% 1/4W
Q103	8-729-119-78	TRANSISTOR 2SC403SP-51		R121	1-249-409-11	CARBON 220	5% 1/4W
Q201	8-729-900-89	TRANSISTOR DTC144ES		R122	1-249-425-11	CARBON 4.7K	5% 1/4W
Q202	8-729-119-78	TRANSISTOR 2SC403SP-51		R123	1-249-426-11	CARBON 5.6K	5% 1/4W
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51		R124	1-247-887-00	CARBON 220K	5% 1/4W
Q501	8-729-900-65	TRANSISTOR DTA144ES		R125	1-249-421-11	CARBON 2.2K	5% 1/4W
Q503	8-729-900-74	TRANSISTOR DTC143TS		R128	1-249-441-11	CARBON 100K	5% 1/4W
Q504	8-729-900-80	TRANSISTOR DTC114ES		R129	1-249-421-11	CARBON 2.2K	5% 1/4W
Q505	8-729-900-89	TRANSISTOR DTC144ES		R130	1-249-417-11	CARBON 1K	5% 1/4W
Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE		R131	1-249-428-11	CARBON 8.2K	5% 1/4W
Q507	8-729-119-76	TRANSISTOR 2SA1175-HFE		R133	1-249-429-11	CARBON 10K	5% 1/4W
Q508	8-729-900-65	TRANSISTOR DTA144ES		R135	1-247-840-00	CARBON 2.4K	5% 1/4W
Q509	8-729-119-78	TRANSISTOR 2SC403SP-51		R136	1-249-441-11	CARBON 100K	5% 1/4W
Q510	8-729-119-78	TRANSISTOR 2SC403SP-51		R137	1-247-883-00	CARBON 150K	5% 1/4W
Q511	8-729-900-89	TRANSISTOR DTC144ES		R138	1-249-433-11	CARBON 22K	5% 1/4W
Q512	8-729-900-89	TRANSISTOR DTC144ES		R141	1-249-428-11	CARBON 8.2K	5% 1/4W
Q515	8-729-142-46	TRANSISTOR 2SC2001-LK		R142	1-249-424-11	CARBON 3.9K	5% 1/4W
Q516	8-729-142-46	TRANSISTOR 2SC2001-LK		R201	1-247-889-00	CARBON 270K	5% 1/4W
Q517	8-729-142-46	TRANSISTOR 2SC2001-LK		R202	1-247-807-31	CARBON 100	5% 1/4W
Q518	8-729-900-65	TRANSISTOR DTA144ES		R203	1-247-850-11	CARBON 6.2K	5% 1/4W
Q701	8-729-119-78	TRANSISTOR 2SC403SP-51		R204	1-247-881-00	CARBON 120K	5% 1/4W
Q702	8-729-119-78	TRANSISTOR 2SC403SP-51		R205	1-247-889-00	CARBON 270K	5% 1/4W
Q703	8-729-141-83	TRANSISTOR 2SB1094-LK		R206	1-247-807-31	CARBON 100	5% 1/4W
Q704	8-729-119-76	TRANSISTOR 2SA1175-HFE		R207	1-249-433-11	CARBON 22K	5% 1/4W
Q705	8-729-119-76	TRANSISTOR 2SA1175-HFE		R208	1-247-881-00	CARBON 120K	5% 1/4W
Q706	8-729-209-15	TRANSISTOR 2SD2012		R209	1-247-850-11	CARBON 6.2K	5% 1/4W
		< RESISTOR >		R210	1-247-856-00	CARBON 11K	5% 1/4W
R101	1-247-889-00	CARBON 270K	5% 1/4W	R211	1-249-431-11	CARBON 15K	5% 1/4W
R102	1-247-807-31	CARBON 100	5% 1/4W	R212	1-247-887-00	CARBON 220K	5% 1/4W
R103	1-247-850-11	CARBON 6.2K	5% 1/4W	R213	1-247-807-31	CARBON 100	5% 1/4W
R104	1-247-881-00	CARBON 120K	5% 1/4W	R214	1-249-401-11	CARBON 47	5% 1/4W
R105	1-247-889-00	CARBON 270K	5% 1/4W	R215	1-249-441-11	CARBON 100K	5% 1/4W
				R216	1-249-429-11	CARBON 10K	5% 1/4W
				R217	1-249-423-11	CARBON 3.3K	5% 1/4W
				R218	1-249-421-11	CARBON 2.2K	5% 1/4W
				R220	1-249-434-11	CARBON 27K	5% 1/4W
				R221	1-249-409-11	CARBON 220	5% 1/4W
				R222	1-249-425-11	CARBON 4.7K	5% 1/4W

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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**MAIN SW METER**

Ref. No.	Part No.	Description			Remark
R223	1-249-426-11	CARBON	5.6K	5%	1/4W
R224	1-247-887-00	CARBON	220K	5%	1/4W
R225	1-249-421-11	CARBON	2.2K	5%	1/4W
R228	1-249-441-11	CARBON	100K	5%	1/4W
R229	1-249-421-11	CARBON	2.2K	5%	1/4W
R230	1-249-417-11	CARBON	1K	5%	1/4W
R231	1-249-428-11	CARBON	8.2K	5%	1/4W
R233	1-249-429-11	CARBON	10K	5%	1/4W
R235	1-247-840-00	CARBON	2.4K	5%	1/4W
R236	1-249-441-11	CARBON	100K	5%	1/4W
R237	1-247-883-00	CARBON	150K	5%	1/4W
R238	1-249-433-11	CARBON	22K	5%	1/4W
R241	1-249-428-11	CARBON	8.2K	5%	1/4W
R242	1-249-424-11	CARBON	3.9K	5%	1/4W
R501	1-249-425-11	CARBON	4.7K	5%	1/4W
R502	1-249-425-11	CARBON	4.7K	5%	1/4W
R503	1-249-437-11	CARBON	47K	5%	1/4W
R504	1-249-417-11	CARBON	1K	5%	1/4W
R505	1-249-425-11	CARBON	4.7K	5%	1/4W
R506	1-249-435-11	CARBON	33K	5%	1/4W
R507	1-249-431-11	CARBON	15K	5%	1/4W
R508	1-249-437-11	CARBON	47K	5%	1/4W
R509	1-249-433-11	CARBON	22K	5%	1/4W
R510	1-247-807-31	CARBON	100	5%	1/4W
R511	1-249-437-11	CARBON	47K	5%	1/4W
R512	1-249-393-11	CARBON	10	5%	1/4W
R513	1-249-437-11	CARBON	47K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W
R515	1-215-455-00	METAL	27K	1%	1/4W
R517	1-247-856-00	CARBON	11K	5%	1/4W
R518	1-247-852-11	CARBON	7.5K	5%	1/4W
R519	1-247-856-00	CARBON	11K	5%	1/4W
R520	1-247-852-11	CARBON	7.5K	5%	1/4W
R521	1-249-440-11	CARBON	82K	5%	1/4W
R522	1-249-429-11	CARBON	10K	5%	1/4W
R523	1-247-862-11	CARBON	20K	5%	1/4W
R524	1-249-429-11	CARBON	10K	5%	1/4W
R525	1-249-421-11	CARBON	2.2K	5%	1/4W
R526	1-249-437-11	CARBON	47K	5%	1/4W
△R527	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
△R528	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R529	1-249-435-11	CARBON	33K	5%	1/4W
R530	1-249-435-11	CARBON	33K	5%	1/4W
R531	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-249-417-11	CARBON	1K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R534	1-249-417-11	CARBON	1K	5%	1/4W
R535	1-249-425-11	CARBON	4.7K	5%	1/4W
R536	1-249-425-11	CARBON	4.7K	5%	1/4W
R701	1-249-421-11	CARBON	2.2K	5%	1/4W
R702	1-249-421-11	CARBON	2.2K	5%	1/4W
R703	1-249-421-11	CARBON	2.2K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R704	1-249-421-11	CARBON	2.2K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-249-423-11	CARBON	3.3K	5%	1/4W
R707	1-247-807-31	CARBON	100	5%	1/4W
R709	1-249-424-11	CARBON	3.9K	5%	1/4W
R710	1-249-421-11	CARBON	2.2K	5%	1/4W
R711	1-249-417-11	CARBON	1K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W
R713	1-249-433-11	CARBON	22K	5%	1/4W
R714	1-249-421-11	CARBON	2.2K	5%	1/4W
R715	1-249-421-11	CARBON	2.2K	5%	1/4W
R811	1-249-413-11	CARBON	470	5%	1/4W
R812	1-249-412-11	CARBON	390	5%	1/4W
R813	1-249-413-11	CARBON	470	5%	1/4W
R815	1-249-408-11	CARBON	180	5%	1/4W
R821	1-249-430-11	CARBON	12K	5%	1/4W
R822	1-249-424-11	CARBON	3.9K	5%	1/4W
R823	1-247-838-00	CARBON	2K	5%	1/4W
		< VARIABLE RESISTOR >			
RV101	1-241-630-11	RES, ADJ, CARBON 10K (PLAYBACK LEVEL(L-CH))(DECK A)			
RV102	1-241-630-11	RES, ADJ, CARBON 10K (PLAYBACK LEVEL(L-CH))(DECK B)			
RV103	1-241-630-11	RES, ADJ, CARBON 10K (REC LEVEL(L-CH))			
RV105	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS(L-CH))			
RV107	1-223-850-11	RES, VAR, CARBON 20K/20K(REC LEVEL)			
RV201	1-241-630-11	RES, ADJ, CARBON 10K (PLAYBACK LEVEL(R-CH))(DECK A)			
RV202	1-241-630-11	RES, ADJ, CARBON 10K (PLAYBACK LEVEL(R-CH))(DECK B)			
RV203	1-241-630-11	RES, ADJ, CARBON 10K (REC LEVEL(R-CH))			
RV205	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS(R-CH))			
RV501	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED(HIGH))(DECK A)			
RV502	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED(NORMAL))(DECK A)			
RV503	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED(HIGH))(DECK B)			
RV504	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED(NORMAL))(DECK B)			
		< SWITCH >			
S701	1-762-580-11	SWITCH, PUSH (1 KEY)(POWER) (US,CND,E,AUS,PX)			
△S702	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY)(POWER) (AEP,SP)			
△S703	1-692-155-11	SELECTOR POWER VOLTAGE (VOLTAGE SELECTOR) (E,PX)			
S801	1-762-251-11	SWITCH, SLIDE(DOLBY NR)			
S802	1-762-251-11	SWITCH, SLIDE(DECK A TAPE TYPE)			
S803	1-762-747-11	SWITCH, PUSH (DUBBING SPEED)			
S804	1-762-748-11	SWITCH, SLIDE(DECK B TAPE TYPE)			

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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Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark
		< TRANSFORMER >					***** <b>HARDWARE LIST</b> *****	
T501	1-427-780-11	TRANSFORMER, BIAS OSCILLATION			#1	7-682-548-04	SCREW +BVTT 3X8 (S)	
*****					#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
		MISCELLANEOUS *****			#3	7-621-255-45	SCREW +P 2X6 (E)	
△ 14	1-569-007-11	ADAPTOR, CONVERSION 2P (E)			#4	7-628-254-05	SCREW +PS 2.6X5	
68	1-251-440-11	COUNTER, TAPE			#5	7-685-861-01	SCREW +BVTT 2.6X5 (S)	
△ CNP1	1-558-945-21	CORD, POWER (POLAR.SPT-1)(US,CND)			#6	7-685-104-19	SCREW +P 2X6 TYPE2 NON SLIT	
△ CNP1	1-777-107-11	CORD, POWER (AEP,SP)			#7	7-621-255-25	SCREW +PTT 2X4 (S)	
△ CNP1	1-777-217-11	CORD, POWER (E,PX)			#8	7-685-782-01	SCREW +PTT 2X5 (S)	
△ CNP1	1-777-218-11	CORD, POWER (AUS)						
HE101	1-543-673-11	ERASE HEAD (DECK B)						
HP101	1-543-672-11	PLAYBACK HEAD (DECK A)						
HRP101	1-543-672-11	PLAYBACK/RECORD HEAD (DECK B)						
M901	1-698-845-11	REEL/CAPSTAN MOTOR (DECK A)						
M902	1-698-845-11	REEL/CAPSTAN MOTOR (DECK B)						
△ S703	1-692-155-11	SELECTOR,POWER VOLTAGE (VOLTAGE SELECTOR) (E,PX)						
S901	1-692-434-11	LEAF SWITCH (MOTOR) (DECK A)						
S902	1-692-434-11	LEAF SWITCH (PLAY) (DECK A)						
S903	1-692-434-11	LEAF SWITCH (MOTOR) (DECK B)						
S904	1-692-434-11	LEAF SWITCH (PLAY) (DECK B)						
S905	1-692-434-11	LEAF SWITCH (REC) (DECK B)						
△ T701	1-429-716-11	TRANSFORMER POWER (US,CND)						
△ T701	1-429-717-11	TRANSFORMER POWER (AEP,SP)						
△ T701	1-429-718-11	TRANSFORMER POWER (E,PX)						
△ T701	1-429-827-11	TRANSFORMER POWER (AUS)						
*****								
		ACCESSORIES & PACKING MATERIALS *****						
	1-558-271-11	CORD, CONNECTION						
	3-856-686-11	MANUAL, INSTRUCTION (US,CND,AUS,SP) (ENGLISH)						
	3-856-686-21	MANUAL, INSTRUCTION (CND) (FRENCH)						
	3-856-686-31	MANUAL, INSTRUCTION (AEP,E,PX) (ENGLISH,FRENCH,SPANISH,CHINESE)						
	3-856-686-41	MANUAL, INSTRUCTION (AEP,SP) (GERMAN,DUTCH,SWEDISH,ITALIAN)						
*	3-936-921-01	CUSHION						
*	3-936-940-01	INDIVIDUAL CARTON (AEP,SP)						
*	3-936-941-01	INDIVIDUAL CARTON (EXCEPT AEP,SP)						
*****								

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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# TC-WE305

**SONY**<sup>®</sup>

## **SERVICE MANUAL**

Ver 1.2 2003.12

*US Model*  
*Canadian Model*  
*AEP Model*  
*E Model*  
*Australian Model*  
*PX Model*

### **SUPPLEMENT - 1**

File this Supplement with the Service Manual.

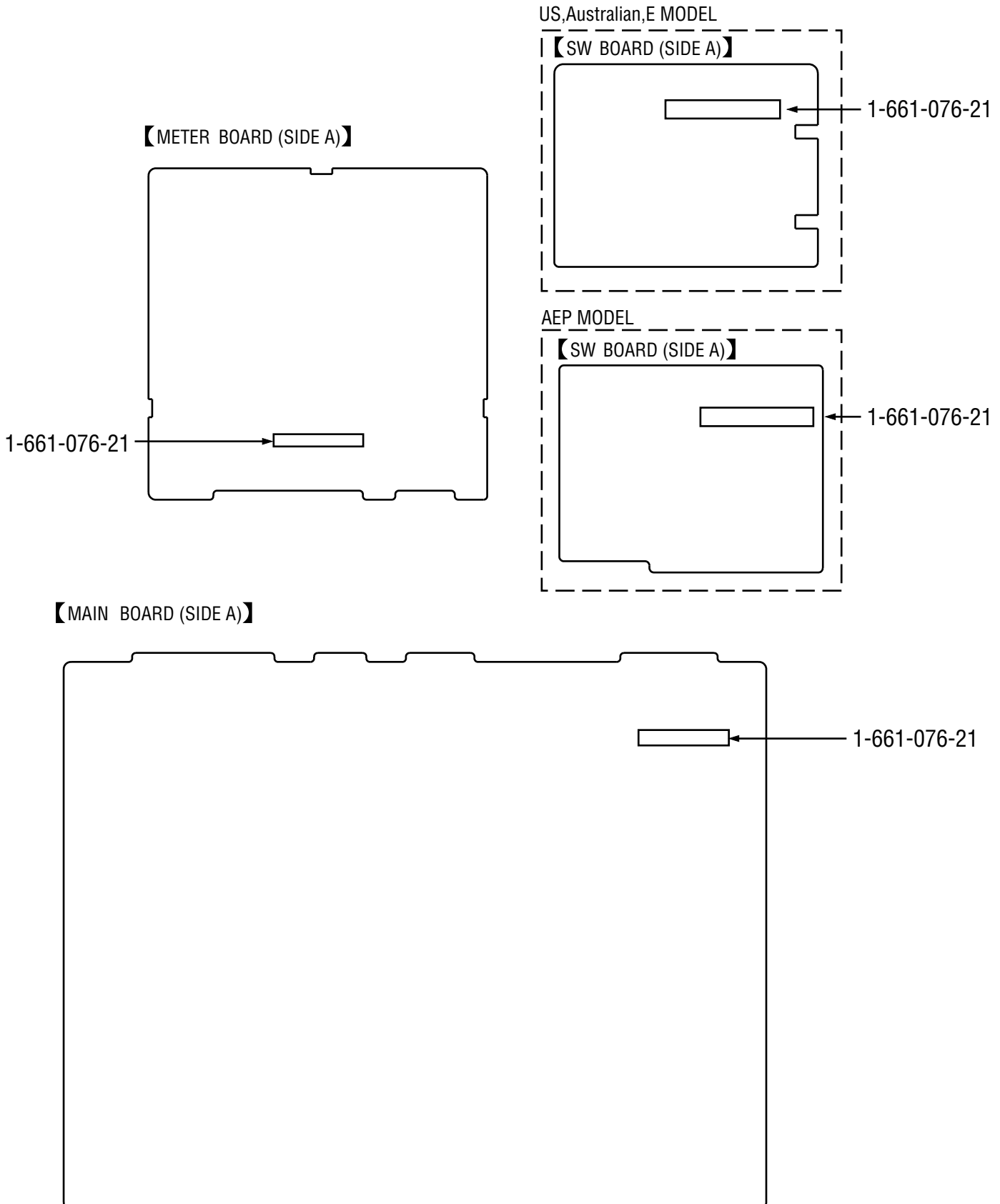
**Subject : SUFFIX CHANGE OF THE MAIN, SW AND METER  
BOARD**

(ECN-TCA00478)

● CHANGE OF MAIN BOARD

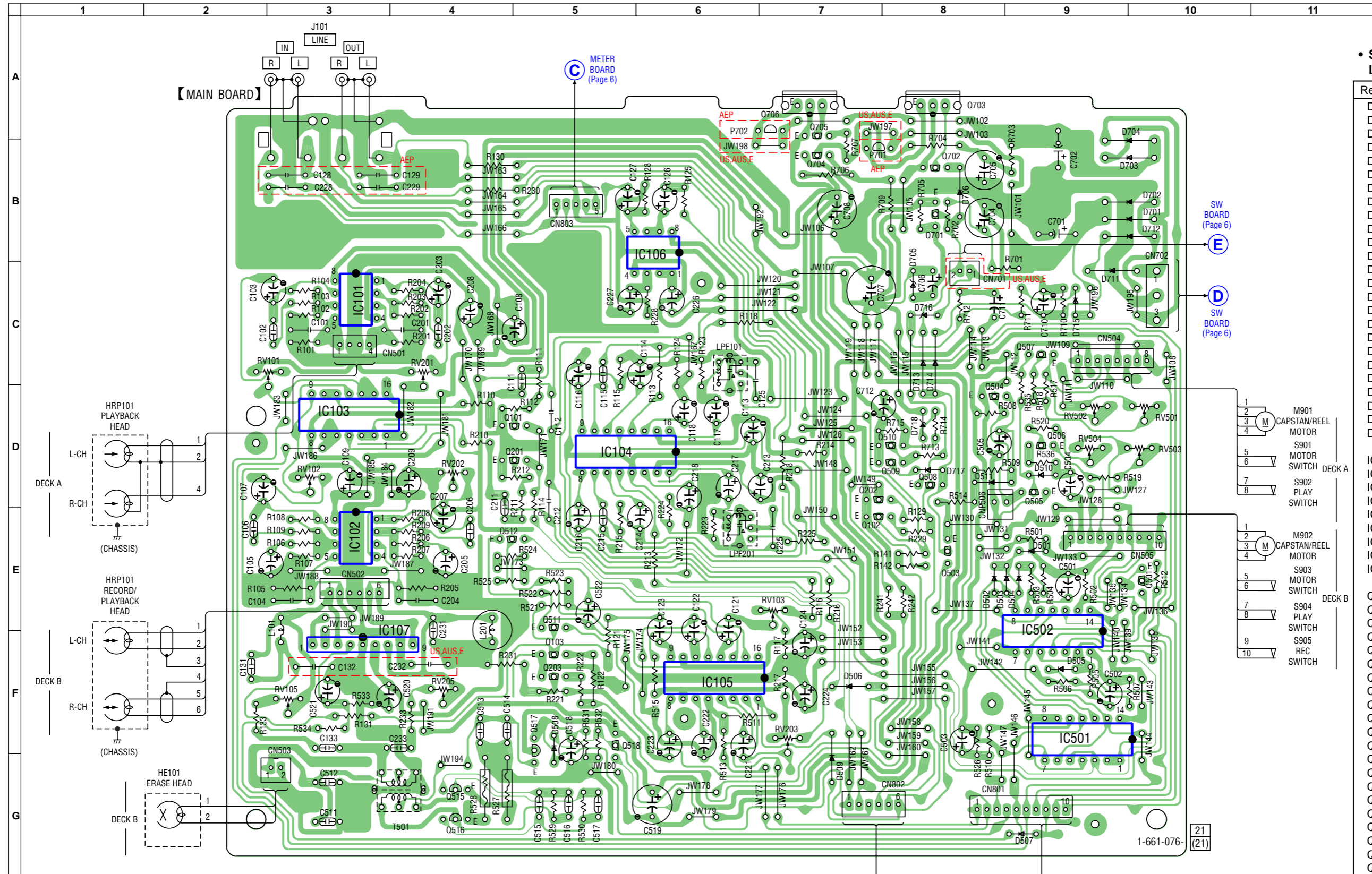
The main, SW and meter boards of US, AEP, Australian and E model were changed (CND, SP and PX model are not changed). Printed wiring board and schematic diagram of new type, and changed parts list are described in this Supplement-1. Refer to original service manual (9-960-691-13) previously issued for the other information.

NEW TYPE IDENTIFICATION  
(US, AEP, Australian, E model)



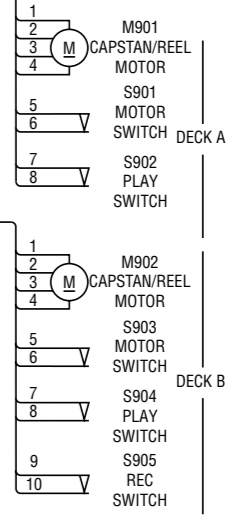
DIAGRAMS

PRINTED WIRING BOARDS -MAIN Section-

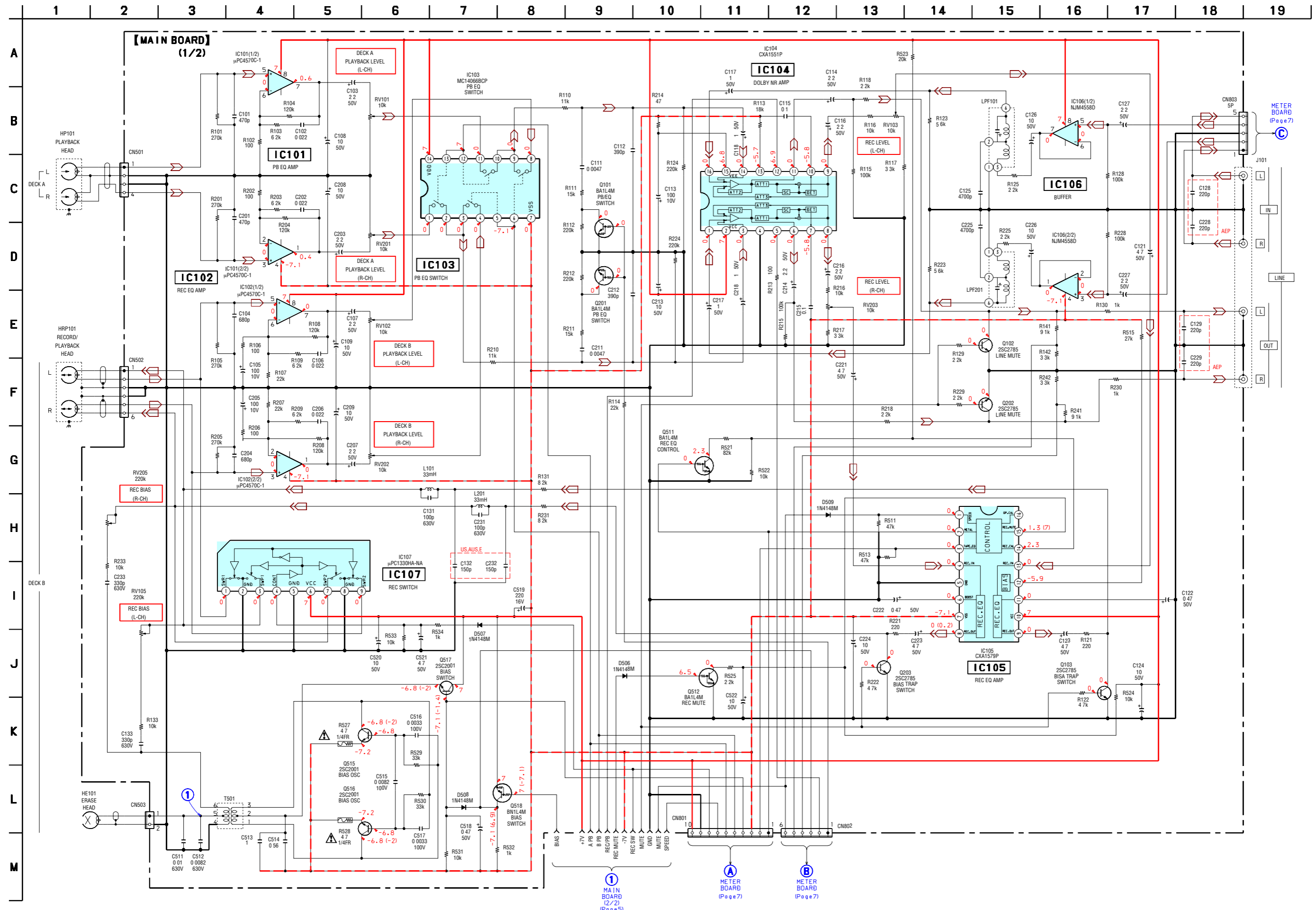


• Semiconductor Location

Ref. No.	Location
D501	E-9
D502	E-8
D503	E-9
D504	E-9
D505	F-9
D506	F-7
D507	G-9
D508	D-8
D509	G-7
D510	D-9
D511	D-8
D701	B-10
D702	B-10
D703	B-10
D704	B-10
D705	C-8
D706	B-8
D711	C-9
D712	B-10
D713	C-8
D714	C-8
D715	C-9
D716	C-8
D717	D-8
D718	D-8
IC101	C-3
IC102	E-3
IC103	D-3
IC104	D-5
IC105	F-5
IC106	B-6
IC107	F-3
IC501	F-9
IC502	E-9
Q101	D-5
Q102	E-7
Q103	F-5
Q201	D-5
Q202	D-7
Q203	F-5
Q501	E10
Q503	E-8
Q504	D-8
Q505	D-9
Q506	D-9
Q507	C-9
Q508	D-8
Q509	D-8
Q510	D-8
Q511	E-5
Q512	G-4
Q515	G-4
Q516	G-4
Q517	F-5
Q518	F-5
Q701	B-8
Q702	B-8
Q703	A-8
Q704	B-7
Q705	A-7
Q706	A-7

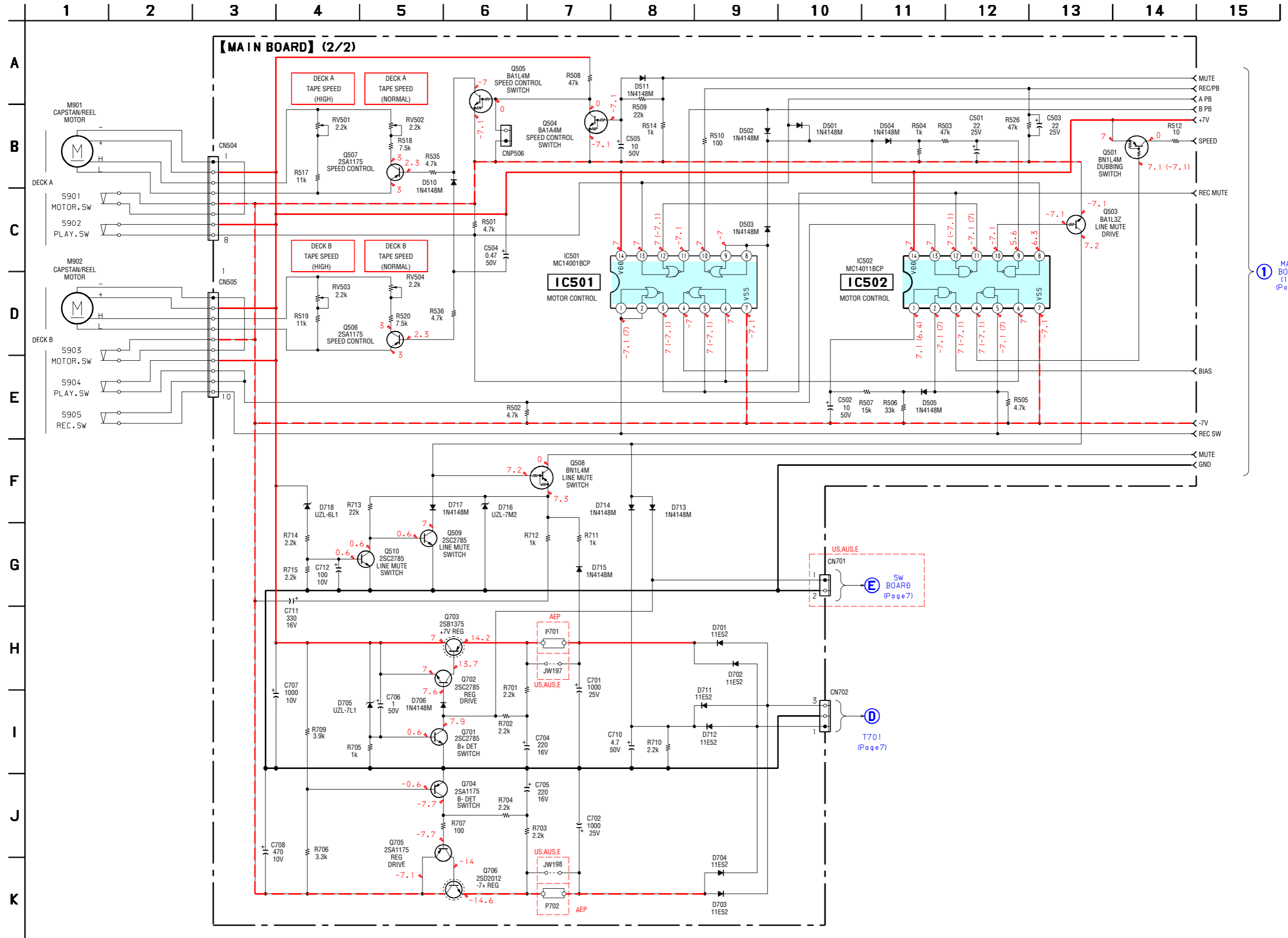


SCHEMATIC DIAGRAM - MAIN SECTION (1/2) -





SCHEMATIC DIAGRAM - MAIN SECTION (2/2) -

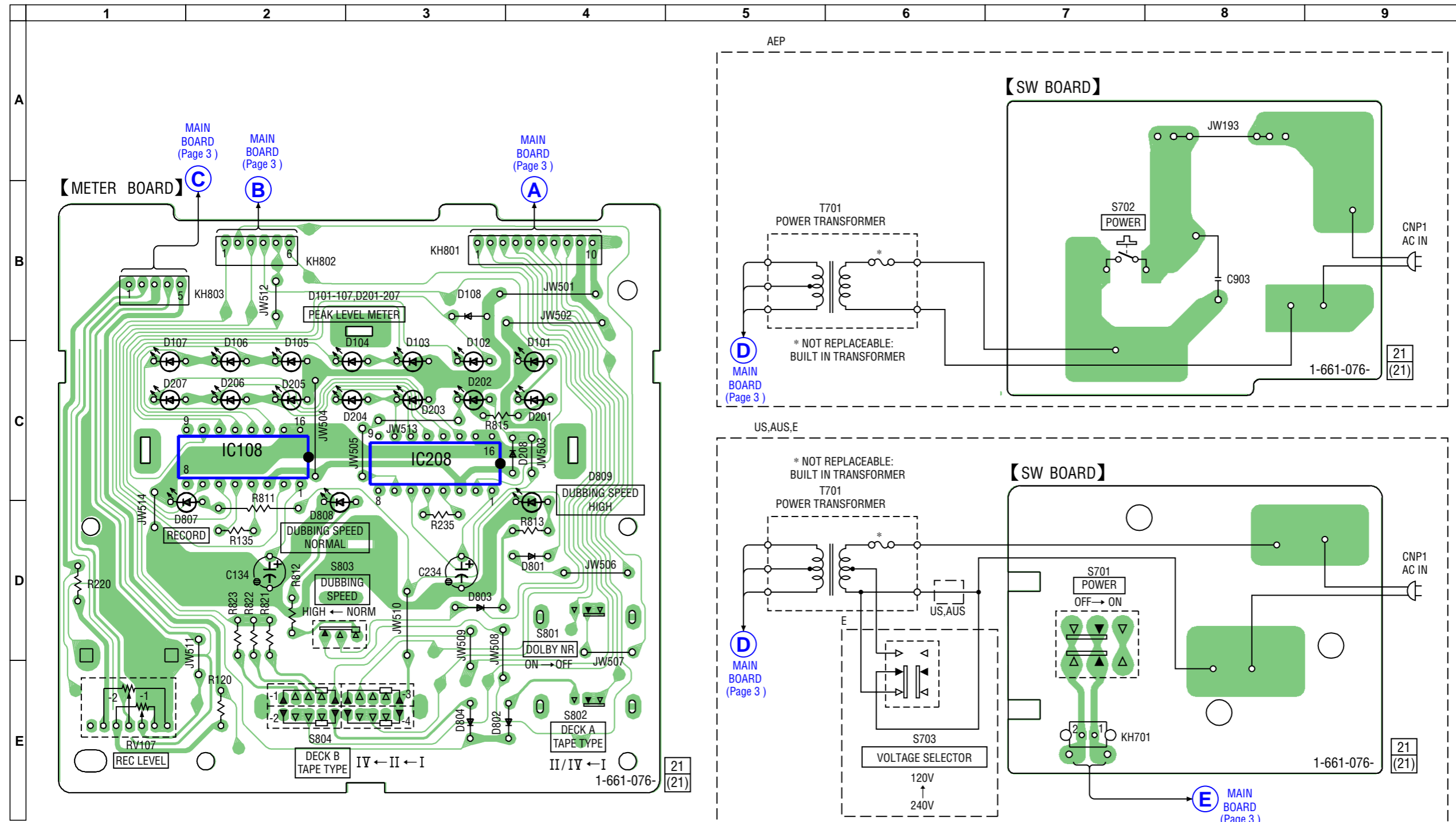


1 MAIN BOARD (1/2) (Page 4)

US.AUS.E CN701 SW BOARD (Page 7)

701 T701 (Page 7)

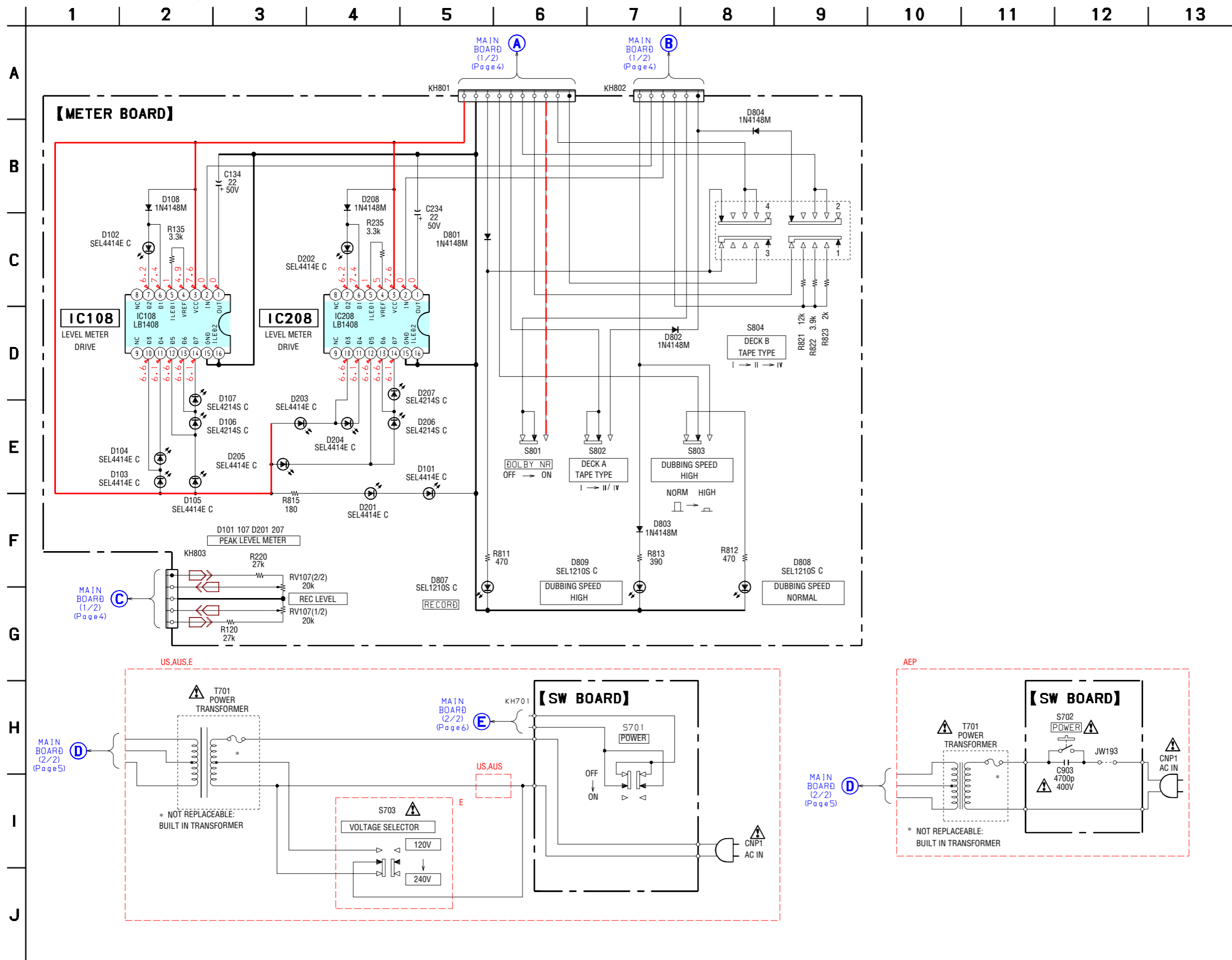
PRINTED WIRING BOARDS -SW, METER Section-



• Semiconductor Location



Ref. No.	Location
D101	C-4
D102	C-3
D103	C-3
D104	C-3
D105	C-2
D106	C-2
D107	C-1
D108	B-3
D201	C-4
D202	C-3
D203	C-3
D204	C-3
D205	C-2
D206	C-2
D207	C-1
D208	C-4
D801	D-4
D802	E-4
D803	D-3
D804	E-3
D807	D-2
D808	D-2
D809	C-4
IC108	C-2
IC208	C-3

SCHEMATIC DIAGRAM -SW, METER Section-









**For schematic diagrams.**

**Note:**



- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
- % : indicates tolerance.
- $\Delta$  : internal component.
-  : fusible resistor.
-  : panel designation.

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

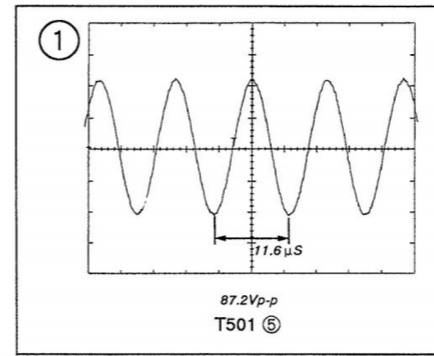
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages are dc with respect to ground under no-signal conditions.
- no mark : PLAY  
 ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ).  
 Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.  
 Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
-  : PB (DECK A)
-  : PB (DECK B)
-  : REC (DECK B)
- Abbreviation  
 AUS : Australian

**Note on Printed Wiring Boards:**

**Note:**

-  : parts extracted from the component side.
- $\Delta$  : internal component.
-  : Pattern from the side which enables seeing.
- Abbreviation  
 AUS : Australian

**● Waveforms**



ELECTRICAL PARTS LIST

MAIN

SW

METER

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL : Metal-film resistor  
METAL OXIDE :Metal oxide-film resistor  
F : nonflammable
- Items marked “ \* ”are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS  
In each case, u :  $\mu$  , for example :  
uA.... :  $\mu$  A.... , uPA.... :  $\mu$  PA....  
uPB.... :  $\mu$  PB.... , uPC.... :  $\mu$  PC....  
uPD.... :  $\mu$  PD....
- CAPACITORS  
uF :  $\mu$  F  
uH :  $\mu$  H
- COILS  
uH :  $\mu$  H
- Abbreviation  
AUS : Australian

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2007-564-A	MAIN BOARD, COMPLETE (US,AUS,E)		C202	1-136-157-00	MYLAR	0.022uF 5% 50V
*	A-2007-589-A	MAIN BOARD, COMPLETE (AEP)		C203	1-126-961-11	ELECT	2.2uF 20% 50V
		*****		C204	1-162-292-31	CERAMIC	680PF 10% 50V
		SW BOARD		C205	1-104-665-11	ELECT	100uF 20% 10V
		*****		C206	1-136-157-00	MYLAR	0.022uF 5% 50V
		METER BOARD		C207	1-126-961-11	ELECT	2.2uF 20% 50V
		*****		C208	1-126-964-11	ELECT	10uF 20% 50V
				C209	1-126-964-11	ELECT	10uF 20% 50V
*	1-535-688-11	TERMINAL (US,AUS,E)		C211	1-130-479-00	MYLAR	0.0047uF 5% 50V
		<CAPACITOR>		C212	1-162-289-31	CERAMIC	390PF 10% 50V
C101	1-162-290-31	CERAMIC	470PF 10% 50V	C213	1-126-964-11	ELECT	10uF 20% 50V
C102	1-136-157-00	MYLAR	0.022uF 5% 50V	C214	1-126-961-11	ELECT	2.2uF 20% 50V
C103	1-126-961-11	ELECT	2.2uF 20% 50V	C215	1-136-165-00	MYLAR	0.1uF 5% 50V
C104	1-162-292-31	CERAMIC	680PF 10% 50V	C216	1-126-961-11	ELECT	2.2uF 20% 50V
C105	1-104-665-11	ELECT	100uF 20% 10V	C217	1-126-960-11	ELECT	1uF 20% 50V
C106	1-136-157-00	MYLAR	0.022uF 5% 50V	C218	1-126-960-11	ELECT	1uF 20% 50V
C107	1-126-961-11	ELECT	2.2uF 20% 50V	C221	1-126-963-11	ELECT	4.7uF 20% 50V
C108	1-126-964-11	ELECT	10uF 20% 50V	C222	1-124-902-00	ELECT	0.47uF 20% 50V
C109	1-126-964-11	ELECT	10uF 20% 50V	C223	1-126-963-11	ELECT	4.7uF 20% 50V
C111	1-130-479-00	MYLAR	0.0047uF 5% 50V	C224	1-126-964-11	ELECT	10uF 20% 50V
C112	1-162-289-31	CERAMIC	390PF 10% 50V	C225	1-162-600-11	CERAMIC	0.0047uF 30% 16V
C113	1-104-665-11	ELECT	100uF 20% 10V	C226	1-126-964-11	ELECT	10uF 20% 50V
C114	1-126-961-11	ELECT	2.2uF 20% 50V	C227	1-126-961-11	ELECT	2.2uF 20% 50V
C115	1-136-165-00	MYLAR	0.1uF 5% 50V	C228	1-162-286-31	CERAMIC	220PF 10% 50V
C116	1-126-961-11	ELECT	2.2uF 20% 50V				(AEP)
C117	1-126-960-11	ELECT	1uF 20% 50V	C229	1-162-286-31	CERAMIC	220PF 10% 50V
C118	1-126-960-11	ELECT	1uF 20% 50V				(AEP)
C121	1-126-963-11	ELECT	4.7uF 20% 50V	C231	1-136-433-11	FILM	100PF 5% 630V
C122	1-124-902-00	ELECT	0.47uF 20% 50V	C232	1-162-284-31	CERAMIC	150PF 10% 50V
C123	1-126-963-11	ELECT	4.7uF 20% 50V				(US,AUS,E)
C124	1-126-964-11	ELECT	10uF 20% 50V	C233	1-136-439-11	FILM	330PF 5% 630V
C125	1-162-600-11	CERAMIC	0.0047uF 30% 16V	C234	1-126-233-11	ELECT	22uF 20% 50V
C126	1-126-964-11	ELECT	10uF 20% 50V	C501	1-126-233-11	ELECT	22uF 20% 50V
C127	1-126-961-11	ELECT	2.2uF 20% 50V	C502	1-126-964-11	ELECT	10uF 20% 50V
C128	1-162-286-31	CERAMIC	220PF 10% 50V	C503	1-126-233-11	ELECT	22uF 20% 50V
			(AEP)	C504	1-124-902-00	ELECT	0.47uF 20% 50V
				C505	1-126-964-11	ELECT	10uF 20% 50V
C129	1-162-286-31	CERAMIC	220PF 10% 50V	C511	1-136-601-11	FILM	0.01uF 5% 630V
			(AEP)	C512	1-136-562-11	FILM	0.0082uF 5% 630V
C131	1-136-433-11	FILM	100PF 5% 630V	C513	1-136-177-00	MYLAR	1uF 5% 50V
C132	1-162-284-31	CERAMIC	150PF 10% 50V	C514	1-136-174-00	MYLAR	0.56uF 5% 50V
			(US,AUS,E)	C515	1-106-365-00	MYLAR	0.0082uF 5% 100V
C133	1-136-439-11	FILM	330PF 5% 630V	C516	1-106-355-12	MYLAR	3300PF 5% 200V
C134	1-126-233-11	ELECT	22uF 20% 50V	C517	1-106-355-12	MYLAR	3300PF 5% 200V
C201	1-162-290-31	CERAMIC	470PF 10% 50V	C518	1-124-902-00	ELECT	0.47uF 20% 50V
				C519	1-104-666-11	ELECT	220uF 20% 16V

# TC-WE305

MAIN	SW	METER
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Ref. No.	Part No.	Description			Remark
C520	1-126-964-11	ELECT	10uF	20%	50V
C521	1-126-963-11	ELECT	4.7uF	20%	50V
C522	1-126-964-11	ELECT	10uF	20%	50V
C701	1-126-942-61	ELECT	1000uF	20%	25V
C702	1-126-942-61	ELECT	1000uF	20%	25V
C704	1-104-666-11	ELECT	220uF	20%	16V
C705	1-104-666-11	ELECT	220uF	20%	16V
C706	1-126-960-11	ELECT	1uF	20%	50V
C707	1-126-767-11	ELECT	1000uF	20%	10V
C708	1-126-935-11	ELECT	470uF	20%	10V
C710	1-126-963-11	ELECT	4.7uF	20%	50V
C711	1-126-940-11	ELECT	330uF	20%	16V
C712	1-104-665-11	ELECT	100uF	20%	10V
△C903	1-113-912-11	CERAMIC	0.0047uF	20%	400V (AEP)
<CONNECTOR>					
CN501	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P			
* CN502	1-691-577-11	PIN, CONNECTOR (PC BOARD) 6P			
* CN503	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P			
* CN504	1-691-579-11	PIN, CONNECTOR (PC BOARD) 8P			
* CN505	1-691-581-11	PIN, CONNECTOR (PC BOARD) 10P			
* CN701	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P			
* CN702	1-535-116-21	TERMINAL (US,AUS,E)			
* CN702	1-691-574-11	PIN, CONNECTOR (PC BOARD) 3P (AEP)			
* CN801	1-691-581-11	PIN, CONNECTOR (PC BOARD) 10P			
* CN802	1-691-577-11	PIN, CONNECTOR (PC BOARD) 6P			
CN803	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P			
* CNP506	1-560-060-00	PIN, CONNECTOR 2P			
<DIODE>					
D101	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D102	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D103	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D104	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D105	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D106	8-719-304-32	DIODE SEL4214S-C-TP (PEAK LEVEL METER)			
D107	8-719-304-32	DIODE SEL4214S-C-TP (PEAK LEVEL METER)			
D108	8-719-991-33	DIODE 1SS133T-72			
D201	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D202	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D203	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D204	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D205	8-719-304-37	DIODE SEL4414E-C-TP (PEAK LEVEL METER)			
D206	8-719-304-32	DIODE SEL4214S-C-TP (PEAK LEVEL METER)			
D207	8-719-304-32	DIODE SEL4214S-C-TP (PEAK LEVEL METER)			
D208	8-719-991-33	DIODE 1SS133T-72			
D501	8-719-991-33	DIODE 1SS133T-72			
D502	8-719-991-33	DIODE 1SS133T-72			
D503	8-719-991-33	DIODE 1SS133T-72			
D504	8-719-991-33	DIODE 1SS133T-72			
D505	8-719-991-33	DIODE 1SS133T-72			
D506	8-719-991-33	DIODE 1SS133T-72			
D507	8-719-991-33	DIODE 1SS133T-72			
D508	8-719-991-33	DIODE 1SS133T-72			
D509	8-719-991-33	DIODE 1SS133T-72			
D510	8-719-991-33	DIODE 1SS133T-72			
D511	8-719-991-33	DIODE 1SS133T-72			
D701	8-719-024-99	DIODE 11ES2-NTA2B			
D702	8-719-024-99	DIODE 11ES2-NTA2B			
D703	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description		Remark
D704	8-719-024-99	DIODE 11ES2-NTA2B		
D705	8-719-933-43	DIODE HZS7A1LTA		
D706	8-719-991-33	DIODE 1SS133T-72		
D711	8-719-024-99	DIODE 11ES2-NTA2B		
D712	8-719-024-99	DIODE 11ES2-NTA2B		
D713	8-719-991-33	DIODE 1SS133T-72		
D714	8-719-991-33	DIODE 1SS133T-72		
D715	8-719-991-33	DIODE 1SS133T-72		
D716	8-719-933-47	DIODE HZS7B2LTA		
D717	8-719-991-33	DIODE 1SS133T-72		
D718	8-719-933-33	DIODE HZS6A1LTA		
D801	8-719-991-33	DIODE 1SS133T-72		
D802	8-719-991-33	DIODE 1SS133T-72		
D803	8-719-991-33	DIODE 1SS133T-72		
D804	8-719-991-33	DIODE 1SS133T-72		
D807	8-719-302-46	DIODE SEL1210S-C-TP3 (RECORD)		
D808	8-719-302-46	DIODE SEL1210S-C-TP3 (DUBBING SPEED NORMAL)		
D809	8-719-302-46	DIODE SEL1210S-C-TP3 (DUBBING SPEED HIGH)		
<IC>				
IC101	8-759-111-44	IC	uPC4570C-1	
IC102	8-759-111-44	IC	uPC4570C-1	
IC103	8-759-000-49	IC	MC14066BCP	
IC104	8-752-056-08	IC	CXA1551P	
IC105	8-752-055-62	IC	CXA1579P	
IC106	8-759-634-51	IC	NJM4558D	
IC107	8-759-079-42	IC	uPC1330HA-NA	
IC108	6-703-632-01	IC	LB1408	
IC208	6-703-632-01	IC	LB1408	
IC501	8-759-040-01	IC	MC14001BCP	
IC502	8-759-140-11	IC	MC14011BCP	
<JACK>				
J101	1-770-614-11	JACK, PIN 4P (LINE IN/OUT)		
<CABLE HOLDER>				
* KH701	1-573-287-11	HOLDER, CABLE 2P		
<COIL>				
L101	1-410-781-11	INDUCTOR	33mH	
L201	1-410-781-11	INDUCTOR	33mH	
<FILTER>				
LPF101	1-233-380-11	FILTER, LOW PASS		
LPF201	1-233-380-11	FILTER, LOW PASS		
<IC LINK>				
△P701	1-532-984-11	IC LINK	2A	50V (AEP)
△P702	1-532-984-11	IC LINK	2A	50V (AEP)
<TRANSISTOR>				
Q101	8-729-900-89	TRANSISTOR BA1L4M-TP		
Q102	8-729-119-78	TRANSISTOR 2SC2785TP-HFE		
Q103	8-729-119-78	TRANSISTOR 2SC2785TP-HFE		
Q201	8-729-900-89	TRANSISTOR BA1L4M-TP		

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

					MAIN		SW		METER		
Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
Q202	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R204	1-247-881-00	CARBON	120K	5%	1/4W
Q203	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R205	1-247-889-00	CARBON	270K	5%	1/4W
Q501	8-729-900-65	TRANSISTOR	BN1L4M-TP			R206	1-247-807-31	CARBON	100	5%	1/4W
Q503	8-729-029-94	TRANSISTOR	BA1L3Z-TP			R207	1-249-433-11	CARBON	22K	5%	1/4W
Q504	8-729-116-02	TRANSISTOR	BA1A4M-TP			R208	1-247-881-00	CARBON	120K	5%	1/4W
Q505	8-729-900-89	TRANSISTOR	BA1L4M-TP			R209	1-247-850-11	CARBON	6.2K	5%	1/4W
Q506	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			R210	1-247-856-00	CARBON	11K	5%	1/4W
Q507	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			R211	1-249-431-11	CARBON	15K	5%	1/4W
Q508	8-729-900-65	TRANSISTOR	BN1L4M-TP			R212	1-247-887-00	CARBON	220K	5%	1/4W
Q509	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R213	1-247-807-31	CARBON	100	5%	1/4W
Q510	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R214	1-249-401-11	CARBON	47	5%	1/4W F
Q511	8-729-900-89	TRANSISTOR	BA1L4M-TP			R215	1-249-441-11	CARBON	100K	5%	1/4W
Q512	8-729-900-89	TRANSISTOR	BA1L4M-TP			R216	1-249-429-11	CARBON	10K	5%	1/4W
Q515	8-729-142-46	TRANSISTOR	2SC2001TP-LK			R217	1-247-843-11	CARBON	3.3K	5%	1/4W
Q516	8-729-142-46	TRANSISTOR	2SC2001TP-LK			R218	1-249-421-11	CARBON	2.2K	5%	1/4W F
Q517	8-729-142-46	TRANSISTOR	2SC2001TP-LK			R220	1-249-434-11	CARBON	27K	5%	1/4W
Q518	8-729-900-65	TRANSISTOR	BN1L4M-TP			R221	1-249-409-11	CARBON	220	5%	1/4W F
Q701	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R222	1-249-425-11	CARBON	4.7K	5%	1/4W F
Q702	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			R223	1-249-426-11	CARBON	5.6K	5%	1/4W
Q703	8-729-209-60	TRANSISTOR	2SB1375			R224	1-247-887-00	CARBON	220K	5%	1/4W
Q704	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			R225	1-249-421-11	CARBON	2.2K	5%	1/4W F
Q705	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			R228	1-249-441-11	CARBON	100K	5%	1/4W
Q706	8-729-209-15	TRANSISTOR	2SD2012			R229	1-249-421-11	CARBON	2.2K	5%	1/4W F
<RESISTOR>						R230	1-249-417-11	CARBON	1K	5%	1/4W F
R101	1-247-889-00	CARBON	270K	5%	1/4W	R231	1-249-428-11	CARBON	8.2K	5%	1/4W F
R102	1-247-807-31	CARBON	100	5%	1/4W	R233	1-249-429-11	CARBON	10K	5%	1/4W
R103	1-247-850-11	CARBON	6.2K	5%	1/4W	R235	1-247-843-11	CARBON	3.3K	5%	1/4W
R104	1-247-881-00	CARBON	120K	5%	1/4W	R241	1-247-854-11	CARBON	9.1K	5%	1/4W
R105	1-247-889-00	CARBON	270K	5%	1/4W	R242	1-247-843-11	CARBON	3.3K	5%	1/4W
R106	1-247-807-31	CARBON	100	5%	1/4W	R501	1-249-425-11	CARBON	4.7K	5%	1/4W F
R107	1-249-433-11	CARBON	22K	5%	1/4W	R502	1-249-425-11	CARBON	4.7K	5%	1/4W F
R108	1-247-881-00	CARBON	120K	5%	1/4W	R503	1-249-437-11	CARBON	47K	5%	1/4W
R109	1-247-850-11	CARBON	6.2K	5%	1/4W	R504	1-249-417-11	CARBON	1K	5%	1/4W F
R110	1-247-856-00	CARBON	11K	5%	1/4W	R505	1-249-425-11	CARBON	4.7K	5%	1/4W F
R111	1-249-431-11	CARBON	15K	5%	1/4W	R506	1-249-435-11	CARBON	33K	5%	1/4W
R112	1-247-887-00	CARBON	220K	5%	1/4W	R507	1-249-431-11	CARBON	15K	5%	1/4W
R113	1-215-451-00	METAL	18K	1%	1/4W	R508	1-249-437-11	CARBON	47K	5%	1/4W
R114	1-249-433-11	CARBON	22K	5%	1/4W	R509	1-249-433-11	CARBON	22K	5%	1/4W
R115	1-249-441-11	CARBON	100K	5%	1/4W	R510	1-247-807-31	CARBON	100	5%	1/4W
R116	1-249-429-11	CARBON	10K	5%	1/4W	R511	1-249-437-11	CARBON	47K	5%	1/4W
R117	1-247-843-11	CARBON	3.3K	5%	1/4W	R512	1-249-393-11	CARBON	10	5%	1/4W F
R118	1-249-421-11	CARBON	2.2K	5%	1/4W F	R513	1-249-437-11	CARBON	47K	5%	1/4W
R120	1-249-434-11	CARBON	27K	5%	1/4W	R514	1-249-417-11	CARBON	1K	5%	1/4W F
R121	1-249-409-11	CARBON	220	5%	1/4W F	R515	1-215-455-00	METAL	27K	1%	1/4W
R122	1-249-425-11	CARBON	4.7K	5%	1/4W F	R517	1-247-856-00	CARBON	11K	5%	1/4W
R123	1-249-426-11	CARBON	5.6K	5%	1/4W	R518	1-247-852-11	CARBON	7.5K	5%	1/4W
R124	1-247-887-00	CARBON	220K	5%	1/4W	R519	1-247-856-00	CARBON	11K	5%	1/4W
R125	1-249-421-11	CARBON	2.2K	5%	1/4W F	R520	1-247-852-11	CARBON	7.5K	5%	1/4W
R128	1-249-441-11	CARBON	100K	5%	1/4W	R521	1-249-440-11	CARBON	82K	5%	1/4W
R129	1-249-421-11	CARBON	2.2K	5%	1/4W F	R522	1-249-429-11	CARBON	10K	5%	1/4W
R130	1-249-417-11	CARBON	1K	5%	1/4W F	R523	1-247-862-11	CARBON	20K	5%	1/4W
R131	1-249-428-11	CARBON	8.2K	5%	1/4W F	R524	1-249-429-11	CARBON	10K	5%	1/4W
R133	1-249-429-11	CARBON	10K	5%	1/4W	R525	1-249-421-11	CARBON	2.2K	5%	1/4W F
R135	1-247-843-11	CARBON	3.3K	5%	1/4W	R526	1-249-437-11	CARBON	47K	5%	1/4W
R141	1-247-854-11	CARBON	9.1K	5%	1/4W	△R527	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R142	1-247-843-11	CARBON	3.3K	5%	1/4W	△R528	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R201	1-247-889-00	CARBON	270K	5%	1/4W	R529	1-249-435-11	CARBON	33K	5%	1/4W
R202	1-247-807-31	CARBON	100	5%	1/4W	R530	1-249-435-11	CARBON	33K	5%	1/4W
R203	1-247-850-11	CARBON	6.2K	5%	1/4W	The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.					

# TC-WE305

**MAIN**    **SW**    **METER**

Ref. No.	Part No.	Description			Remark
R531	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-249-417-11	CARBON	1K	5%	1/4W F
R533	1-249-429-11	CARBON	10K	5%	1/4W
R534	1-249-417-11	CARBON	1K	5%	1/4W F
R535	1-249-425-11	CARBON	4.7K	5%	1/4W F
R536	1-249-425-11	CARBON	4.7K	5%	1/4W F
R701	1-249-421-11	CARBON	2.2K	5%	1/4W F
R702	1-249-421-11	CARBON	2.2K	5%	1/4W F
R703	1-249-421-11	CARBON	2.2K	5%	1/4W F
R704	1-249-421-11	CARBON	2.2K	5%	1/4W F
R705	1-249-417-11	CARBON	1K	5%	1/4W F
R706	1-247-843-11	CARBON	3.3K	5%	1/4W
R707	1-247-807-31	CARBON	100	5%	1/4W
R709	1-249-424-11	CARBON	3.9K	5%	1/4W F
R710	1-249-421-11	CARBON	2.2K	5%	1/4W F
R711	1-249-417-11	CARBON	1K	5%	1/4W F
R712	1-249-417-11	CARBON	1K	5%	1/4W F
R713	1-249-433-11	CARBON	22K	5%	1/4W
R714	1-249-421-11	CARBON	2.2K	5%	1/4W F
R715	1-249-421-11	CARBON	2.2K	5%	1/4W F
R811	1-249-413-11	CARBON	470	5%	1/4W F
R812	1-249-413-11	CARBON	470	5%	1/4W F
R813	1-249-412-11	CARBON	390	5%	1/4W F
R815	1-249-408-11	CARBON	180	5%	1/4W F
R821	1-249-430-11	CARBON	12K	5%	1/4W
R822	1-249-424-11	CARBON	3.9K	5%	1/4W F
R823	1-247-838-00	CARBON	2K	5%	1/4W
<VARIABLE RESISTOR>					
RV101	1-241-764-11	RES, ADJ, CARBON 10K (PB LEVEL L-CH)			(DECK A)
RV102	1-241-764-11	RES, ADJ, CARBON 10K (PB LEVEL L-CH)			(DECK B)
RV103	1-241-764-11	RES, ADJ, CARBON 10K (REC LEVEL L-CH)			
RV105	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS L-CH)			
RV107	1-223-850-11	RES, VAR, CARBON 20K/20K (REC LEVEL)			
RV201	1-241-764-11	RES, ADJ, CARBON 10K (PB LEVEL R-CH)			(DECK A)
RV202	1-241-764-11	RES, ADJ, CARBON 10K (PB LEVEL R-CH)			(DECK B)
RV203	1-241-764-11	RES, ADJ, CARBON 10K (REC LEVEL R-CH)			
RV205	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS R-CH)			
RV501	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED HIGH)			(DECK A)
RV502	1-241-762-11	RES, ADJ, CARBON 2.2K			(TAPE SPEED NORMAL) (DECK A)
RV503	1-241-762-11	RES, ADJ, CARBON 2.2K (TAPE SPEED HIGH)			(DECK B)
RV504	1-241-762-11	RES, ADJ, CARBON 2.2K			(TAPE SPEED NORMAL) (DECK B)
<SWITCH>					
S701	1-762-580-11	SWITCH, PUSH (1 KEY) (POWER) (US,AUS,E)			
△S702	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY) (POWER)			(AEP)
S801	1-762-251-11	SWITCH, SLIDE (DOLBY NR)			
S802	1-762-251-11	SWITCH, SLIDE (DECK A TAPE TYPE)			
S803	1-762-747-11	SWITCH, PUSH (1 KEY) (DUBBING SPEED)			
S804	1-762-748-11	SWITCH, SLIDE (DECK B TAPE TYPE)			
<TRANSFORMER>					
T501	1-427-780-11	TRANSFORMER, BIAS OSCILLATION			

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



MEMO

