

TC-KA2ES/KE600S

SERVICE MANUAL

US Model
Canadian Model
TC-KA2ES

AEP Model
UK Model
E Model
Australian Model
TC-KE600S



Photo: TC-KE600S

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-K661S
Tape Transport Mechanism Type	TCM-200V21

SPECIFICATIONS

System

Recording system

4-track 2-channel stereo

Fast winding time (approx.)

90 sec. (with Sony C-60 cassette)

High-speed fast-winding time (approx.)

45 sec. (with Sony C-60 cassette)

Bias

AC bias

Heads

Erasing head × 1 (S&F head)
Recording head × 1 (SD head)
Playing head × 1 (SD head)

Motors

Capstan motor × 1 (DC servo motor)
Reel motor × 1 (DC motor)
Assist (mechanism drive) motor × 1 (DC motor)

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

Type I tape, Sony Type I (NORMAL): 61 dB
Type II tape, Sony Type II (HIGH): 59 dB
Type IV tape, Sony Type IV (METAL): 57 dB

S/N ratio improvement (approximate values)

With Dolby B NR on: 5 dB at 1 kHz, 10 dB at 5 kHz
With Dolby C NR on: 15 dB at 500 Hz, 20 dB at 1 kHz
With Dolby S NR on: 10 dB at 100 Hz, 24 dB at 1 kHz

Harmonic distortion

0.4% (with Type I tape, Sony Type I (NORMAL):
160n Wb/m 315 Hz, 3rd H.D.)
1.5% (with Type IV tape, Sony Type IV (METAL):
250n Wb/m 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

Type I tape, Sony Type I (NORMAL):
15 - 17,000 Hz (±3 dB, IEC)
10 - 19,000 Hz (±6 dB)
Type II tape, Sony Type II (HIGH):
15 - 18,000 Hz (±3 dB, IEC)
10 - 20,000 Hz (±6 dB)
Type IV tape, Sony Type IV (METAL):
15 - 21,000 Hz (±3 dB, IEC)
15 - 16,000 Hz (±3 dB, -4dB recording)
10 - 22,000 Hz (±6 dB)

Wow and flutter

±0.065% W. Peak (IEC)
0.045% W. RMS (NAB)
±0.12% W. Peak (DIN)

— Continued next page —



STEREO CASSETTE DECK
SONY®

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

Headphones (stereo phone jack)

Output level: 0.25 mW at a load impedance of 32 ohms

General

Power requirements

Where purchased	Power requirements
US, Canadian model	120 V AC, 60 Hz
AEP, UK, German, Singapore model	220-230 V AC, 50/60 Hz
Australian model	240 V AC, 50/60 Hz
E model	120, 220, or 240 V AC, 50/60 Hz adjustable with the voltage selector

Power consumption

21W

Dimensions (approx.) (w/h/d)

430 × 120 × 310 mm (17 × 4 3/4 × 12 1/4 inches)
incl. projecting parts and controls

Mass (approx.)

4.6 kg (10 lbs 2 oz)

Supplied accessories

Audio connecting cords (2)

Design and specifications are subject to change without notice.

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.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks 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)

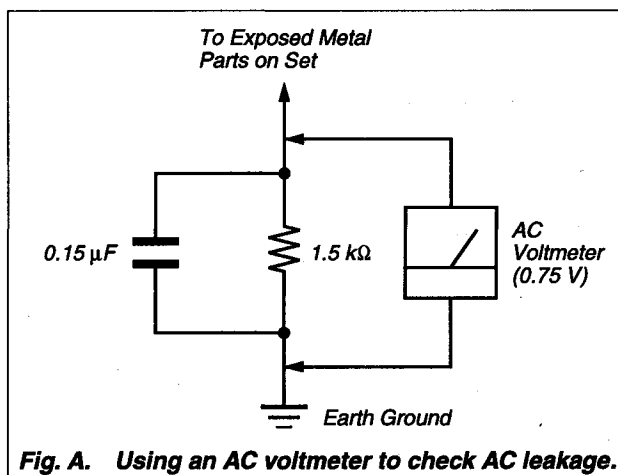


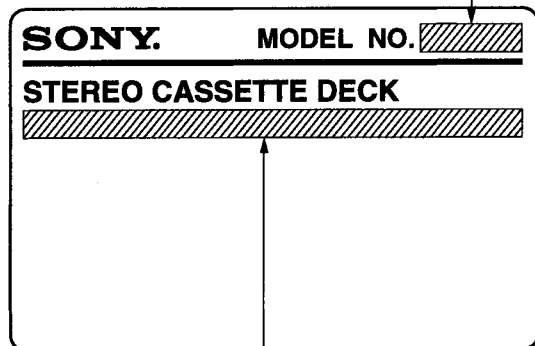
Fig. A. Using an AC voltmeter to check AC leakage.

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

US, Canadian model: TC-KA2ES
 Except US, Canadian model: TC-KE600S

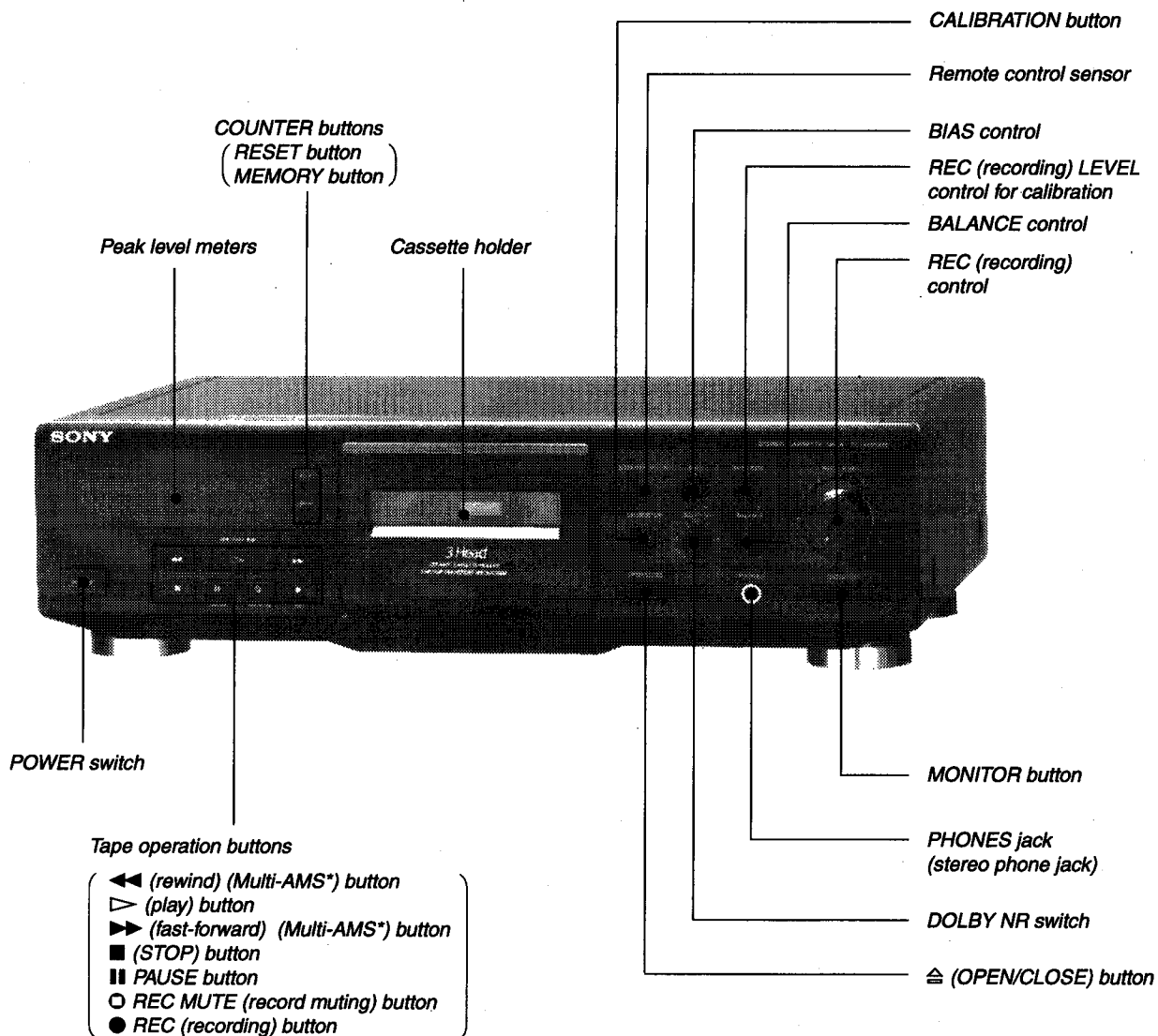


US, Canadian model: AC 120 V 60Hz 21W
 AEP, UK, German, Singapore model: AC 220-230 V ~50/60 Hz 21 W
 E model: AC 120, 220, 240 V ~50/60 Hz 21 W
 Australian model: AC 240 V ~50/60 Hz

TABLE OF CONTENTS

1.	GENERAL	4
2.	DISASSEMBLY	5
3.	MECHANICAL ADJUSTMENTS	8
4.	ELECTRICAL ADJUSTMENTS	9
5.	DIAGRAMS	
5-1.	IC Pin Function Description	12
5-2.	Printed Wiring Boards	17
5-3.	Schematic Diagram	
	- Audio Section -	21
5-4.	Schematic Diagram	
	- System Control Section -	25
6.	EXPLODED VIEWS	28
7.	ELECTRICAL PARTS LIST	32

SECTION 1 GENERAL



* AMS is an abbreviation for Automatic Music Sensor.

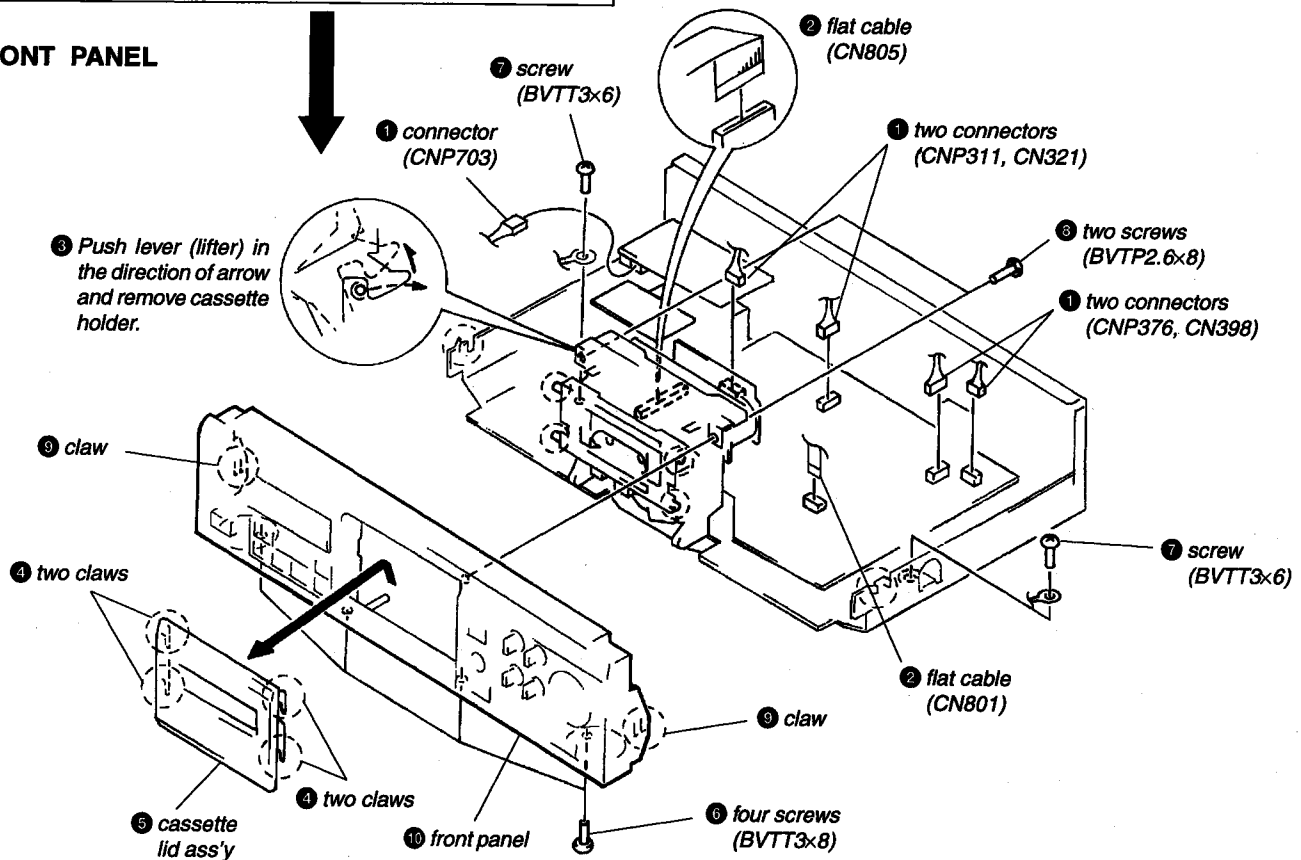
SECTION 2 DISASSEMBLY

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

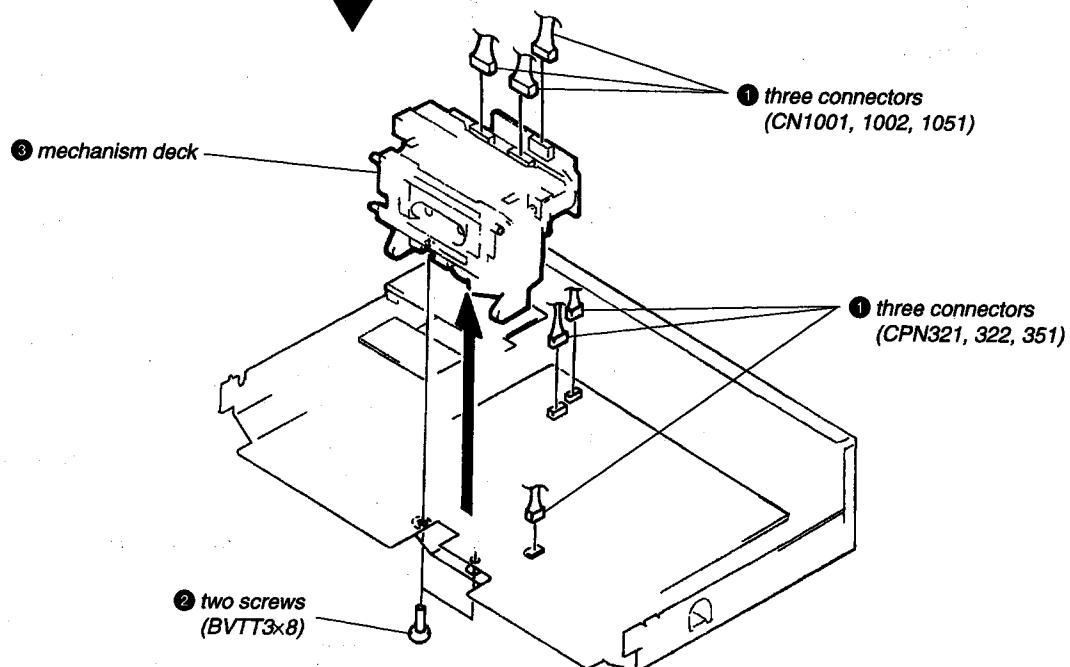
CASE

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

FRONT PANEL

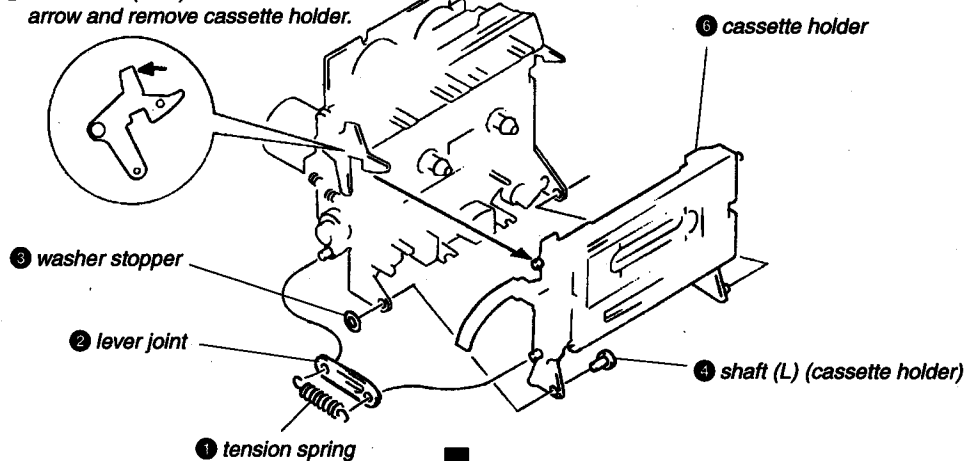


MECHANISM DECK



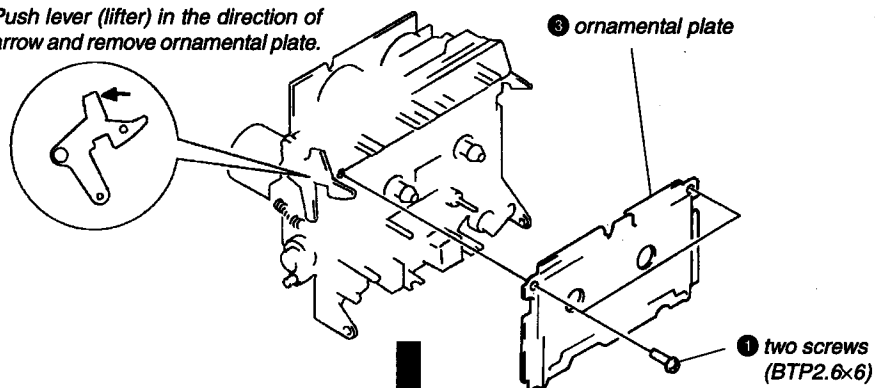
CASSETTE HOLDER

⑤ Push lever (lifter) in the direction of arrow and remove cassette holder.

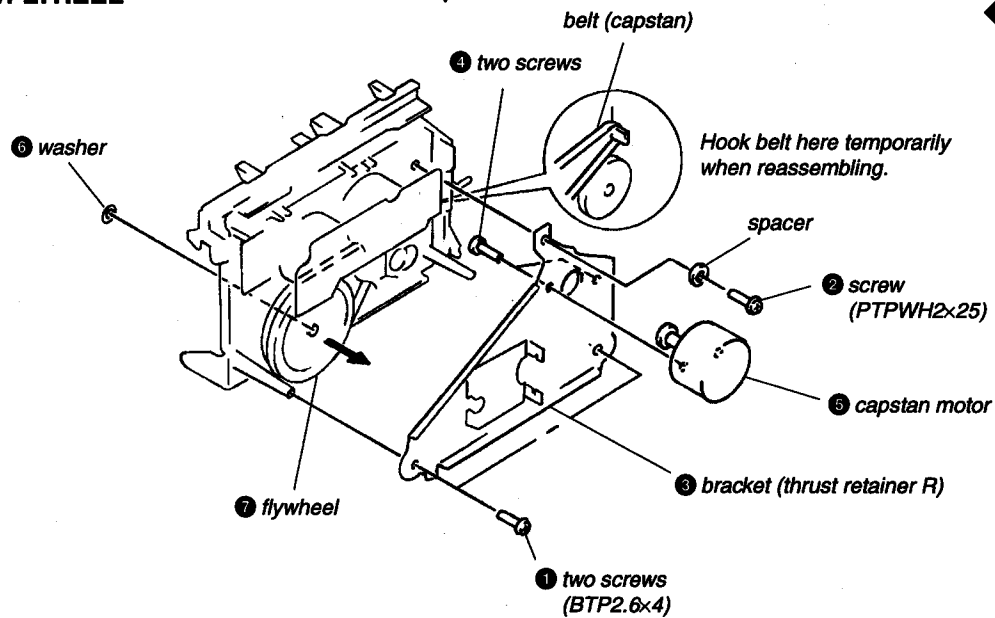


ORNAMENTAL PLATE

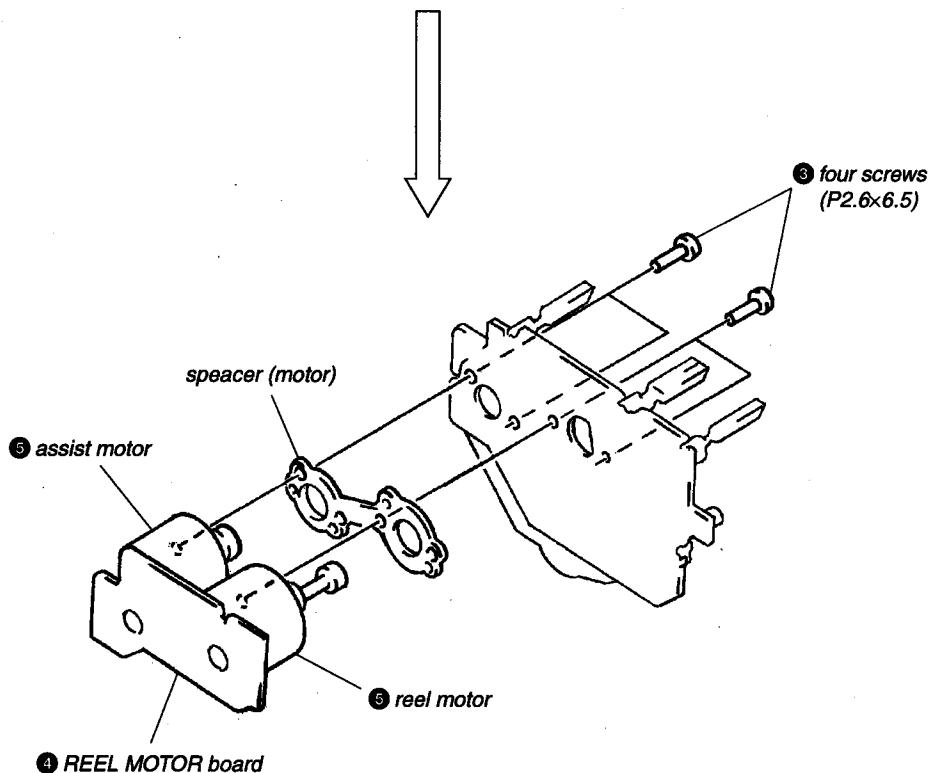
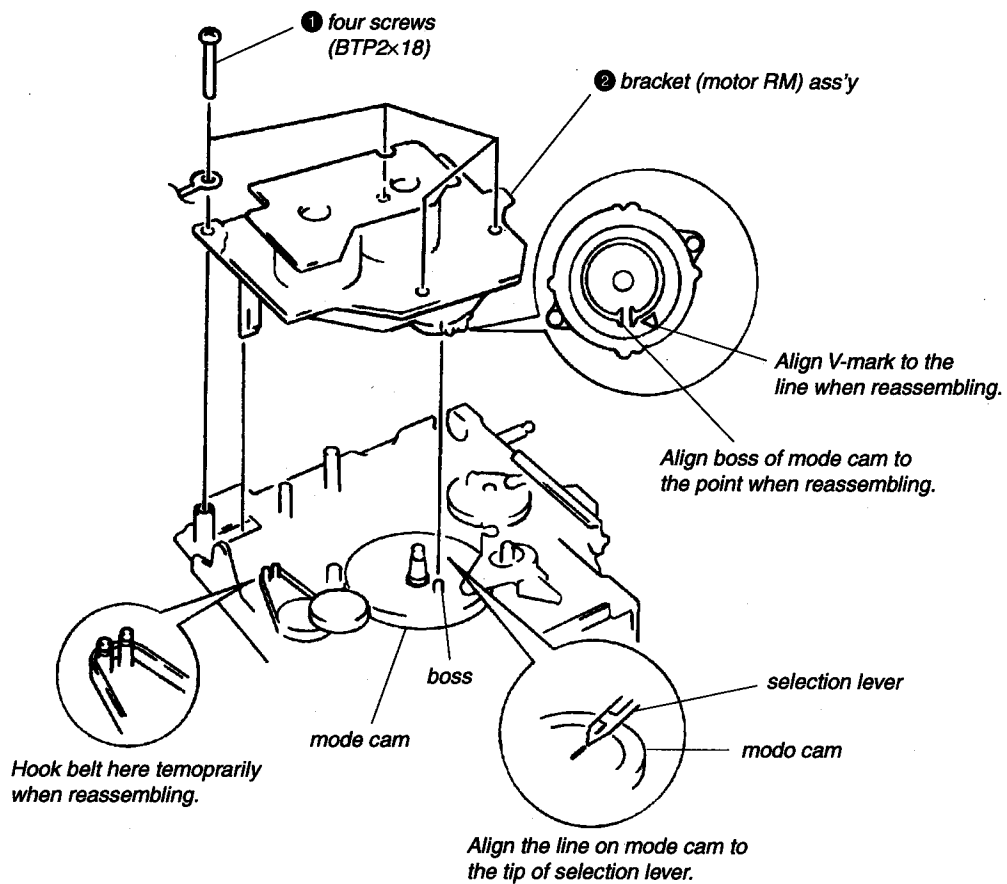
② Push lever (lifter) in the direction of arrow and remove ornamental plate.



CAPSTAN MOTOR/FLYHEEL



REEL AND ASSIST MOTOR



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback/erase head	pinch roller
rubber belts	capstan
idlers	
2. Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
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

Mode	Torque	Meter reading
Forward	CQ-102C	30 to 60 g•cm (0.42 to 0.83 oz•inch)
Forward back tension	CQ-102C	1 to 5 g•cm (0.014 to 0.069 oz•inch)
FF/REW	CQ-201B	65 to 90 g•cm (0.90 to 1.24 oz•inch)

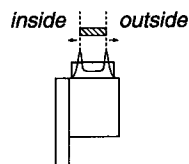
Record/Playback Head Height/Declination Adjustment

Procedures:

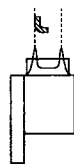
1. Test cassette: CQ-009C
2. Insert the mirror cassette and put the unit in record/Playback mode.

1) Height Adjustment:

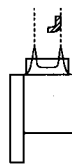
Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws **A**, **B** and **C**, respectively by the same angle, moving the head so that it remains at the same angle throughout the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally; but loosen them if the tape begins to curl on the top side. (outer side.)



Normal
(Record/playback head as seen from the side of the erasehead.)



Curling on the inner side
Tighten screws **A**, **B** and **C**.



Curling on the outer side
Loosen screws **A**, **B** and **C**.

2) Declination Adjustment:

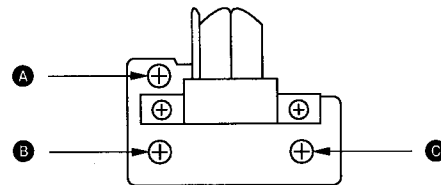
While in the record/playback position, set the back tension to 0 (wind the supply reel with something thin like a pencil in a counterclockwise direction) and make sure there is no curling or shifting (shifting up/shifting down) at the guide of the record/playback head.

Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked.

When there is a shift, tighten screws **B** and **C** equally and change the declination of the head. If the tape is shifting up, tighten the screws, and if it is shifting down, loosen them.

Repeat the adjustments in steps 1) to 2) and fine adjust the height and the declination.

Adjustment Location: – record/playback head –



SECTION 4 ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustments about playback should be performed before those about recording. The adjustments should be performed before for both L-CH and R-CH.

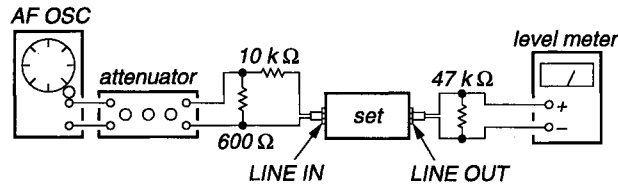
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF
MPX FILTER switch : OFF
MONITOR switch : Tape

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

– Record Mode –



0 dB=0.775 V

Standard Input Level

input terminal	LINE IN
source impedance	10 kΩ
input level	0.5 V (−3.8 dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47 kΩ
output level	0.5 V (−3.8 dB)

Test Tape

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

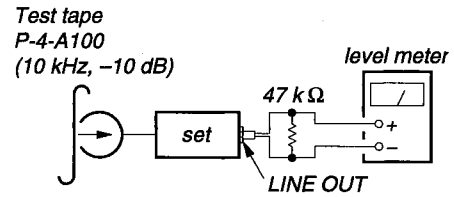
Test Mode

This set will get into test mode by shorting the pins of TP802 (TEST) on MAIN board before turning the power on.

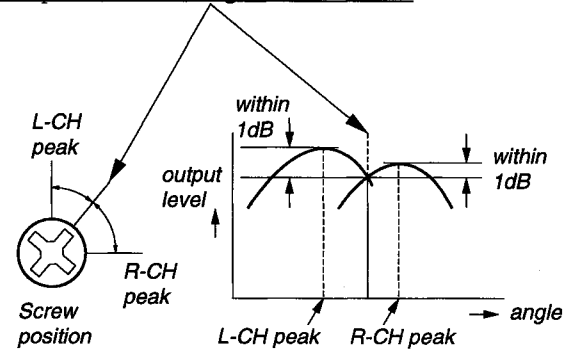
Record/Playback Head Azimuth Adjustment

Procedure:

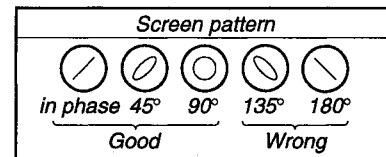
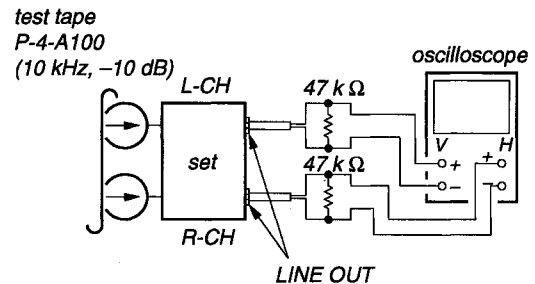
- Mode : FWD playback



- 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 1 dB.

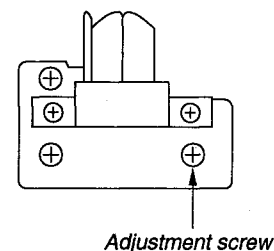


- Phase Check
Mode : playback



- After the adjustment, lock the screw with locking compound.

Adjustment Location: Record/Playback head

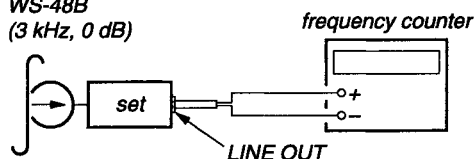


Tape Speed Check

Procedure:

Mode: playback

test tape
WS-48B
(3 kHz, 0 dB)



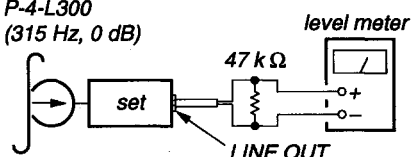
1. Short the connector TP802 (pins ① and ②). (test mode)
2. Set to FWD playback mode.
3. Confirm that the frequency counter reading becomes $3,000 \pm 30$ Hz.
4. After checked, open the connector TP802.

Playback Level Adjustment

Procedure:

Mode: playback

test tape
P-4-L300
(315 Hz, 0 dB)



Adjust RV151 (L-CH) and RV251 (R-CH) so that the reading on level meter meets the adjustment limits below.

Adjustment Limits:

LINE OUT level: -8.2 to -7.2 dB (0.301 to 0.338 V)

Level difference between channels: within 0.5 dB

Check that the LINE OUT level does not change even if Playback and Stop operation is repeated several times.

Adjustment Location: MAIN board

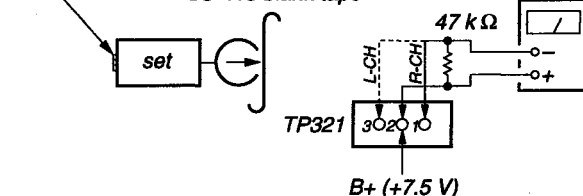
Bias Consumption Current Adjustment

Procedure:

LINE IN
(no signal)

CS-413 blank tape

digital voltmeter



1. Set RV121 (L-CH) and RV221 (R-CH) to mechanical center and turn the set recording mode.
2. Connect digital voltmeter as shown by the following table.
3. Adjust the following transformers for the minimum readings on the digital voltmeter.

	Measurement Point	Adjustment Part	Value
L-CH	② and ③, TP321	T121	less than 220 mV
R-CH	① and ②, TP321	T221	

Adjustment Location: MAIN board

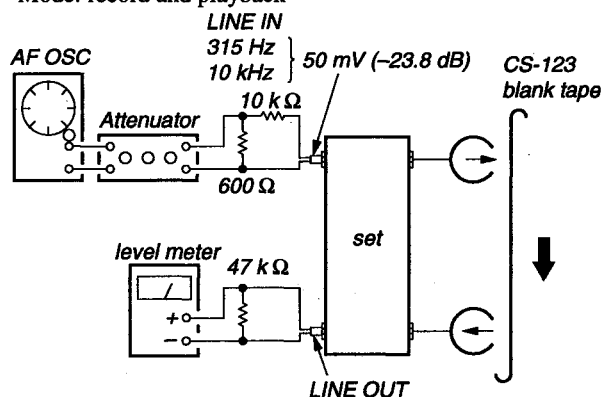
Record Bias Adjustment

Setting:

REC LEVEL control: Standard Record (See page 9.)

Procedure:

1. Mode: record and playback



2. Adjust RV121 (L-CH) and RV221 (R-CH) so that 10 kHz playback output is 0 ± 0.3 dB relative to the 315 Hz output.

Adjustment Location: MAIN board

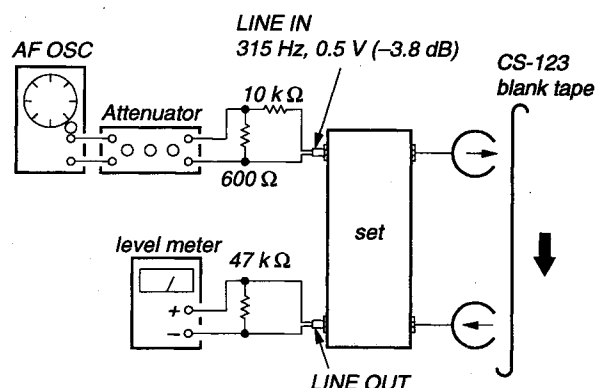
Record Level Adjustment

Setting:

REC LEVEL control: Standard Record (See page 9.)

Procedure:

1. Mode: record and playback



2. Adjust RV112 (L-CH) and RV212 (R-CH) so that the reading on level meter meets the adjustment limits below.

Adjustment Limits: -4.3 to -3.3 dB (0.47 to 0.53 V)

Adjustment Location: MAIN board

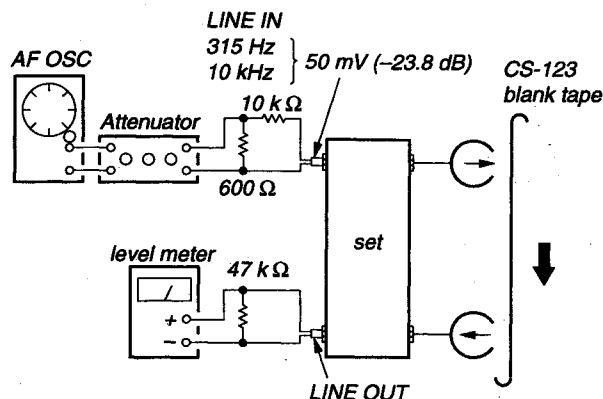
Record EQ (IV) Adjustment

Setting:

REC LEVEL control: Standard Record (See page 9.)

Procedure:

1. Mode: record and playback



2. Adjust RV111 and RV211 so that they become maximum.
3. Adjust RV111 (L-CH) and RV211 (R-CH) so that the difference between R-CH and L-CH at 10 kHz is within 1 dB.
4. Adjust RV312 so that the R-CH meet the specification.

Adjustment Limits:

10 kHz level difference against 315 Hz reference.

0±1.0 dB

Adjustment Location: MAIN board

Adjustment Location:

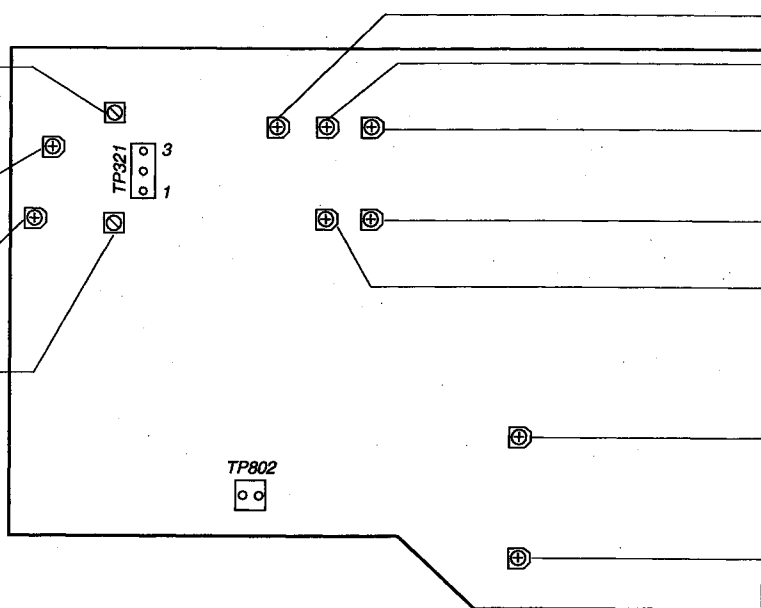
[MAIN BOARD] - COMPONENT SIDE -

T121
: Bias Consumption
Current Adjustment
(L-CH)

RV121
: Record Bias Adjustment
(L-CH)

RV221
: Record Bias Adjustment
(R-CH)

T221
: Bias Consumption
Current Adjustment
(R-CH)



RV312: Record EQ (IV)
Adjustment

RV111: Record EQ (IV)
Adjustment (L-CH)

RV112: Record Level
Adjustment (L-CH)

RV212: Record Level
Adjustment (R-CH)

RV211: Record EQ (IV)
Adjustment (R-CH)

RV151: Playback Level
Adjustment (L-CH)

RV251: Playback Level
Adjustment (R-CH)

5-1. IC MAIN BO.

Pin. No.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

SECTION 5 DIAGRAMS

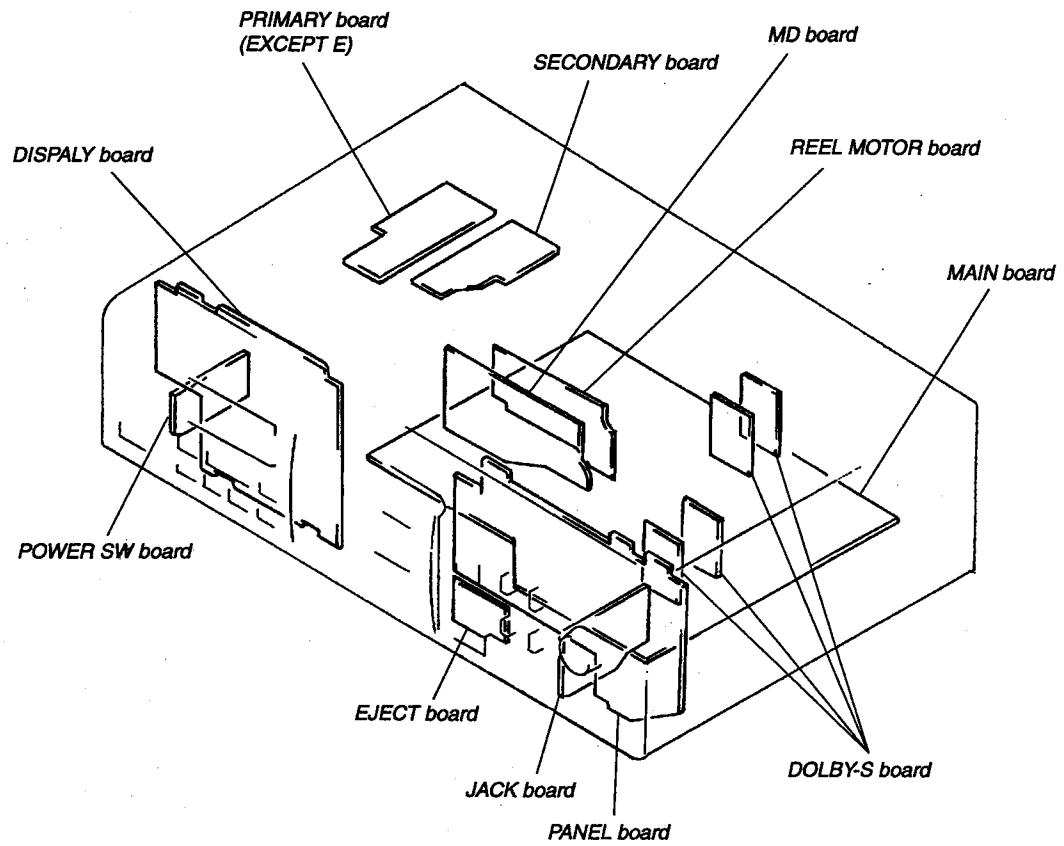
5-1. IC PIN FUNCTION DESCRIPTION

MAIN BOARD IC801 M38172M4-171FP (SYSTEM CONTROL)

Pin. No.	Pin Name	I/O	Function
1	T • REEL	I	Take up reel rotation detection input.
2	S • REEL	I	Supply reel rotation detection input.
3	METER L-CH	I	Meter level L-CH input.
4	METER R-CH	I	Meter level R-CH input.
5	AMS • IN	I	AMS signal input terminal.
6	STOP SW	I	Mechanism stop switch input terminal.
7	CLOSE SW	–	Not used. (H level)
8	OPEN SW	–	Not used. (H level)
9	CAM • SW3	–	Not used. (H level)
10	CAM • SW2	–	Not used. (H level)
11	CAM • SW1	–	Not used. (H level)
12	CAM • SW0	–	Not used. (H level)
13	CAP • M • ON/OFF	O	Capstan motor ON/OFF control. H: ON
14	ASIST M • UP	–	Not used. (L level)
15	ASIST M • DOWN	–	Not used. (L level)
16	REEL M • FWD	O	Reel motor FWD control.
17	REEL M • REV	O	Reel motor REW control.
18	EJECT • V (6.5 V)	O	Reel motor eject control.
19	FF/REW • V (4.4 V)	O	Reel motor FF/REW control.
20	PLAY • V (2.5 V)	O	Reel motor play control.
21	TYPE • IV	I	Type IV SW input terminal.
22	HALF SW	–	Not used. (Open)
23	TYPE • II	I	Type II SW input terminal.
24	TAB • SW	–	Not used. (H level)
25	POWER IN	I	Power OFF detection terminal.
26	SIRCS IN	I	Sircs signal input terminal.
27	RESET	I	System reset terminal.
28	XC IN	–	Not used. (Open)
29	XC OUT	–	Not used. (Open)
30	X IN	I	System clock oscillator input. (4.0 MHz)
31	X OUT	O	System clock oscillator output. (4.0 MHz)
32	VSS	–	Ground.
33	VER 200/190	I	Version selection input.
34	POWER OUT	O	Power hold output terminal.
35	MONITOR TAPE/SOURCE	O	Audio mode select terminal.
36	LINE M • ON/OFF	O	Line mute ON/OFF control.
37	OSC H/L	O	OSC frequency H/L selection terminal.
38	CAL ON/OFF	O	Calibration ON/OFF control.
39	REC • ON/OFF	O	REC mute ON/OFF control.
40	BIAS ON/OFF	O	Bias ON/OFF control.
41	DOL • CON (H-C, M, -B, L-OFF)	O	Dolby ON/OFF control.
42	SEG • IV	O	Bias EQ IV control.
43	SEG • DOL C (B/C • S)	O	VFD segment drive (Dolby C).
44	SEG • DOL B (B/C • S)	O	VFD segment drive (Dolby B).
45	SEG PROPER (I, II)	O	VFD segment drive (Type I, II).

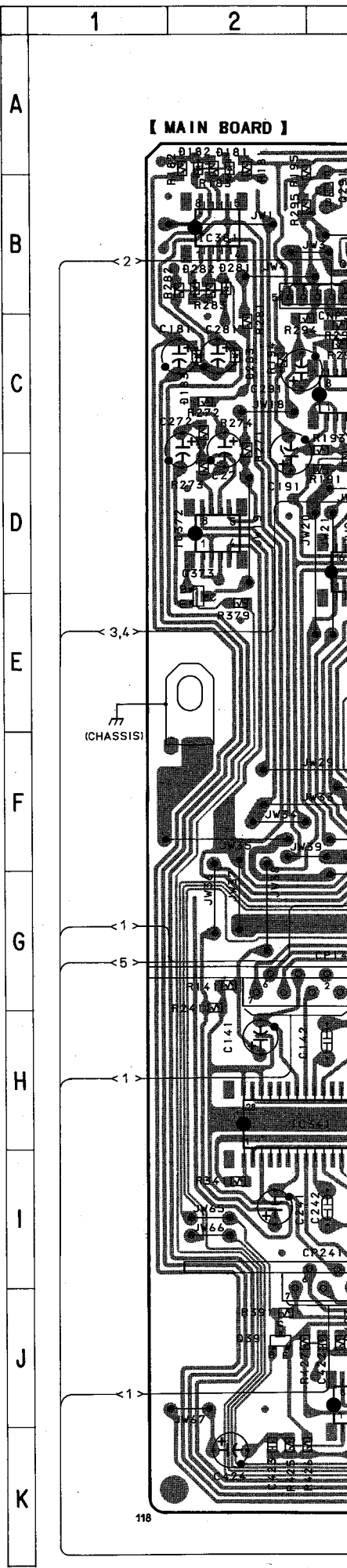
Pin. No.	Pin Name	I/O	Function
46	SEG • FIL ON/OFF	O	VFD segment drive (Filter).
47	SEG • DOL S ON/OFF	O	VFD segment drive (Dolby S).
48	–	–	Not used. (Open)
49	SEG01	O	VFD segment drive.
50	SEG02	O	VFD segment drive.
51	SEG06	O	VFD segment drive.
52	SEG07	O	VFD segment drive.
53	SEG03	O	VFD segment drive.
54	SEG05	O	VFD segment drive.
55	SEG04	O	VFD segment drive.
56	SEG08	O	VFD segment drive.
57	SEG16	O	VFD segment drive.
58	SEG09	O	VFD segment drive.
59	SEG10	O	VFD segment drive.
60	SEG14	O	VFD segment drive.
61	SEG15	O	VFD segment drive.
62	SEG11	O	VFD segment drive.
63	SEG13	O	VFD segment drive.
64	SEG12	O	VFD segment drive.
65	SEG • CAL	O	VFD segment drive. (calibration)
66	SEG • I	O	Bias EQ I control.
67	SEG • II	O	Bias EQ II control.
68	G5-HYOUJI	O	VFD colum display.
69	G4-SEC	O	VFD colum SEC.
70	G3-MIN	O	VFD colum MIN.
71	G2-RCH	O	VFD colum R-CH.
72	G1-LCH	O	VFD colum L-CH.
73	VCC	–	Power supply. (+5 V)
74	VEE	–	Power supply. (–24 V)
75	AVSS	–	Analog for power supply. (Ground)
76	VREF	–	A/D reference voltage. (+5 V)
77	KEY2	I	Key input terminal.
78	KEY1	I	Key input terminal.
79	HALF SW	I	Half pawl switch input terminal.
80	DOLBY SW	I	Dolby switch input terminal.

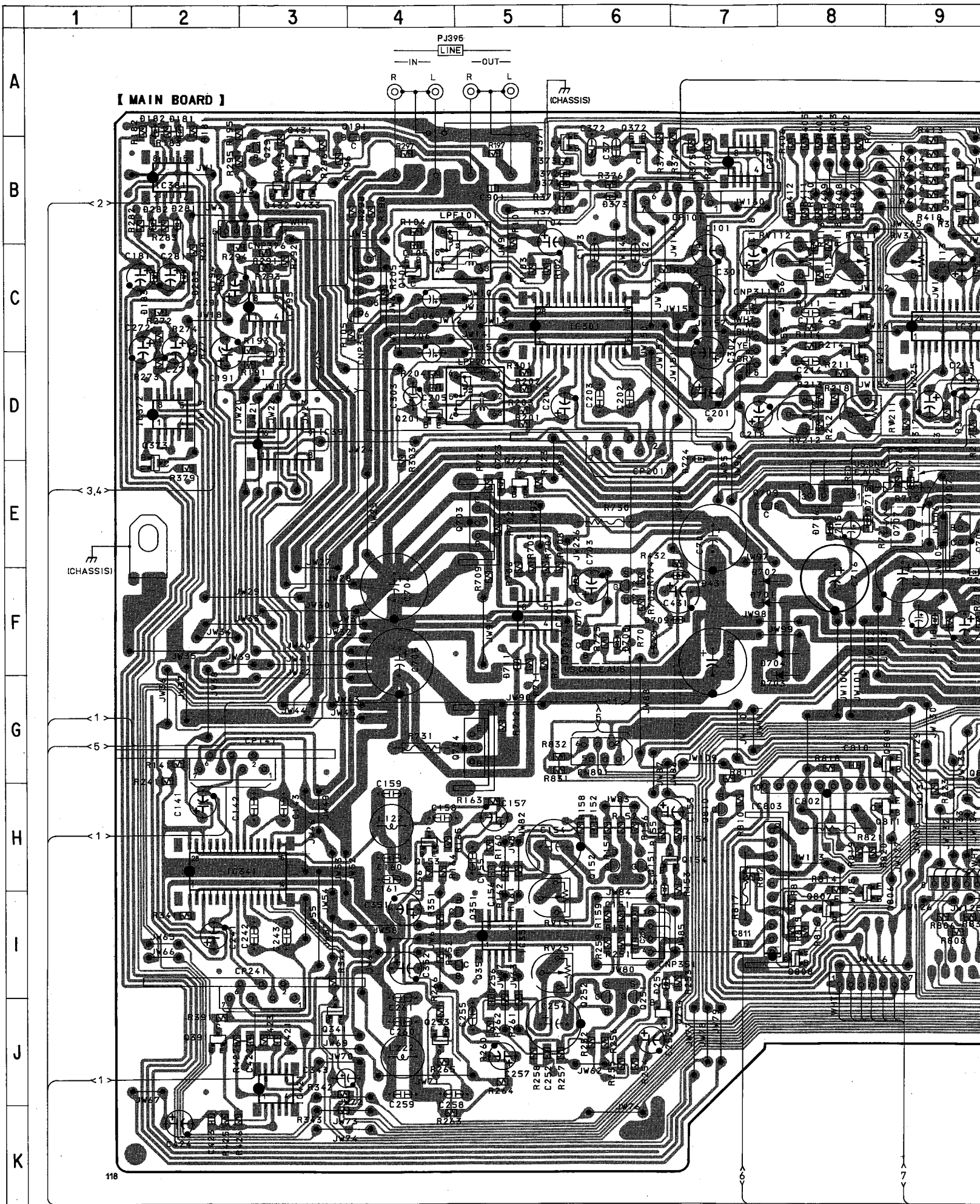
• **Circuit Boards Location**

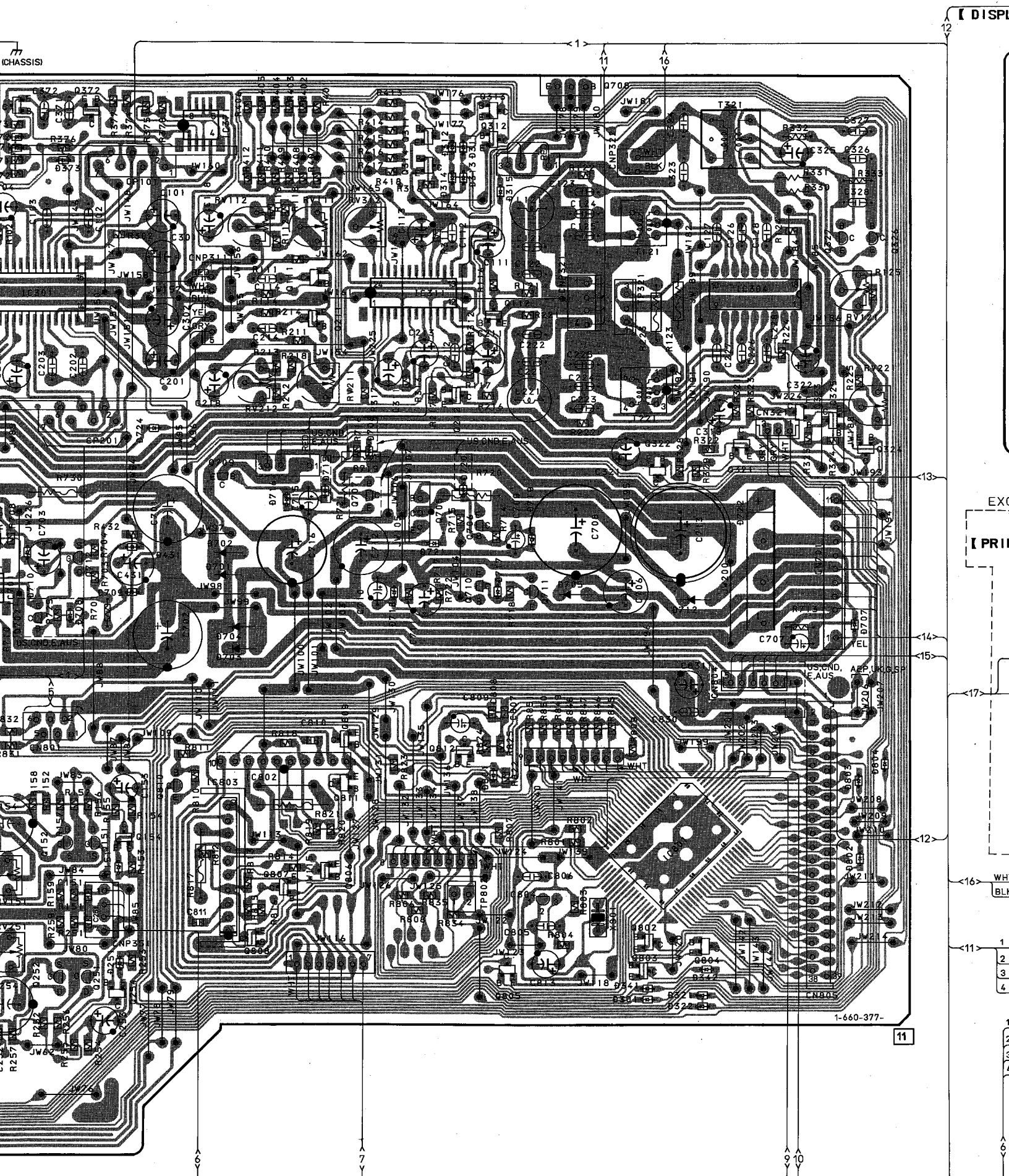


• Semiconductor Location

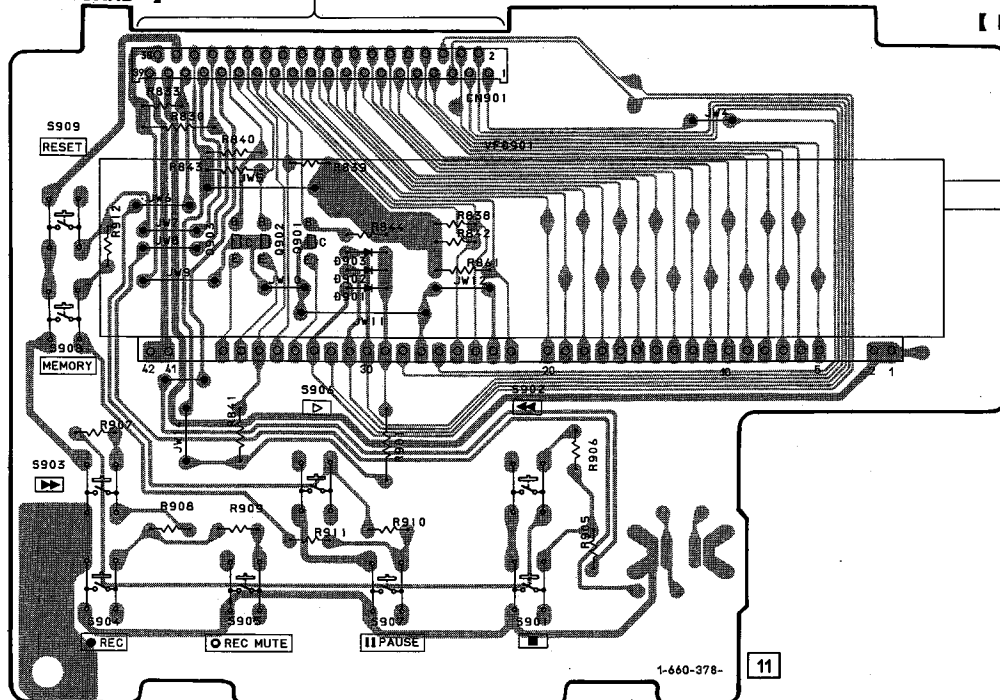
Ref. No.	Location	Ref. No.	Location
D151	H-6	IC803	H-7
D181	A-2	IC804	I-10
D182	A-2	IC901	B-25
D183	C-2	IC1001	B-28
D251	I-6	IC1002	B-29
D281	B-2		
D282	B-2	Q101	C-4
D283	C-2	Q111	C-8
D301	J-11	Q112	C-10
D311	B-10	Q151	H-6
D312	B-9	Q152	H-6
D313	B-10	Q153	H-4
D314	B-9	Q154	H-6
D315	B-10	Q191	A-4
D321	J-12	Q201	D-4
D322	J-12	Q211	C-8
D341	J-11	Q212	D-9
D342	J-12	Q251	I-6
D371	B-5	Q252	I-6
D372	B-5	Q253	J-4
D373	B-6	Q254	J-6
D431	F-7	Q291	B-3
D701	F-7	Q311	B-9
D702	F-7	Q312	B-10
D703	G-7	Q313	B-10
D704	F-7	Q314	B-9
D705	F-11	Q321	E-12
D706	E-9	Q322	E-11
D707	F-13	Q323	D-13
D708	F-6	Q324	E-13
D709	F-7	Q325	D-13
D710	F-6	Q326	C-13
D711	F-5	Q327	C-13
D712	F-12	Q341	J-3
D715	E-8	Q351	I-5
D716	E-8	Q352	I-5
D717	F-10	Q371	B-5
D718	F-9	Q372	B-6
D719	E-10	Q373	D-2
D720	E-10	Q391	J-2
D721	F-9	Q431	B-3
D722	E-12	Q432	B-3
D723	E-5	Q433	B-3
D724	D-7	Q702	F-6
D801	H-10	Q703	E-5
D802	H-13	Q704	G-5
D803	H-13	Q705	E-9
D804	H-13	Q706	E-10
D901	B-16	Q707	E-9
D902	B-16	Q708	A-11
D903	B-16	Q709	E-7
D1001	F-29	Q710	F-10
		Q711	F-10
IC1	H-29	Q712	F-6
IC301	C-6	Q722	E-5
IC304	C-12	Q802	I-11
IC311	C-9	Q803	I-11
IC341	H-2	Q804	I-12
IC351	I-5	Q805	J-10
IC371	B-7	Q806	I-8
IC372	D-2	Q807	I-8
IC381	B-2	Q808	I-8
IC385	J-25	Q809	G-8
IC391	D-3	Q810	H-7
IC395	C-3	Q811	H-8
IC421	J-3	Q812	G-10
IC701	F-5	Q901	B-16
IC801	H-11	Q902	B-16
IC802	H-8	Q903	B-16



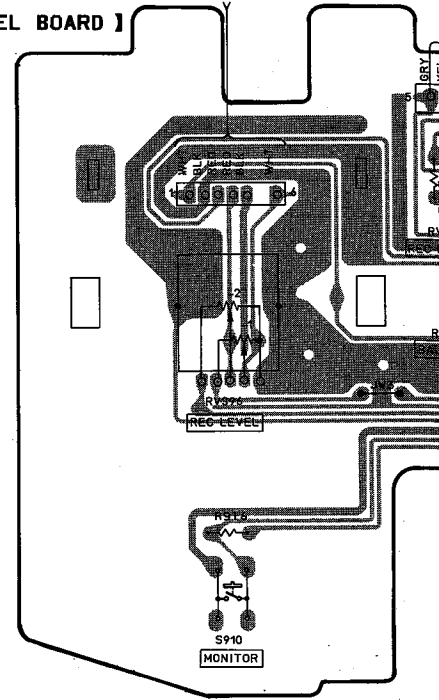




【 DISPLAY BOARD 】

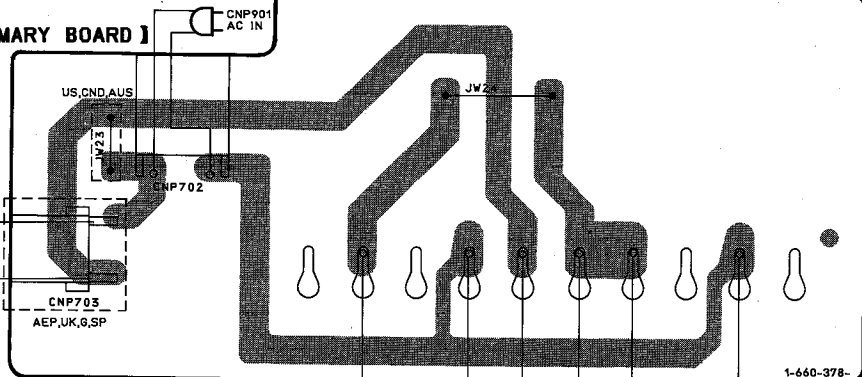


【 PANEL BOARD 】



EXCEPT E

【 PRIMARY BOARD 】

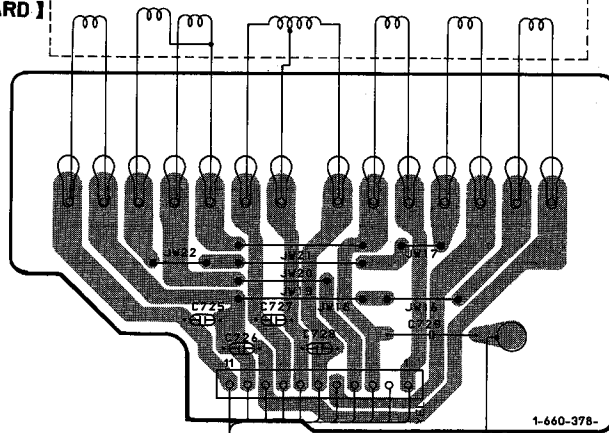


T701

POWER TRANSFORMER

* NOT REPLACEABLE:
BUILT IN TRANSFORMER

【 SECONDARY BOARD 】



(CHASSIS)

E

CNP901
AC IN

S701

VOLTAGE SELECTOR

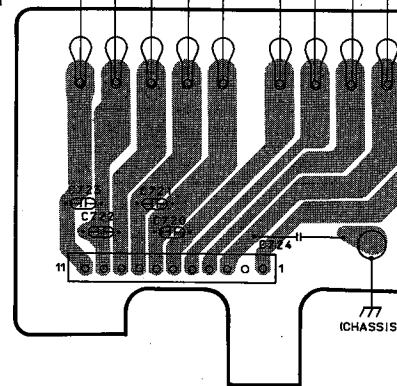
220V → 240V → 120V

T701

POWER TRANSFORMER

* NOT REPLACEABLE:
BUILT IN TRANSFORMER

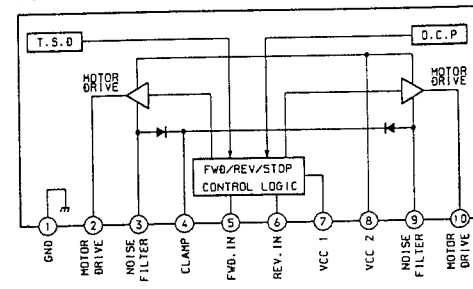
【 SECONDARY BOARD 】



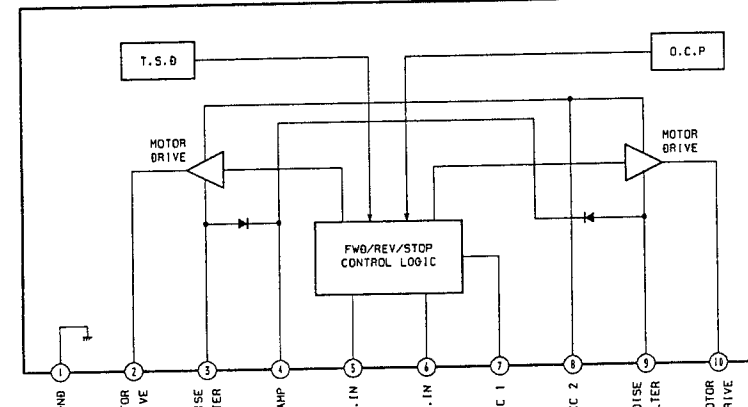
(CHASSIS)

• IC Block Diagrams

IC802 LB1641

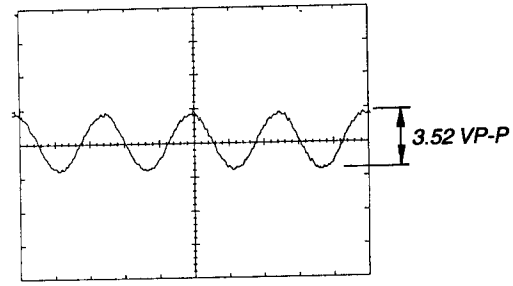


IC803 BA6219B



• Waveform

● IC801



Note:

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

Note:

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

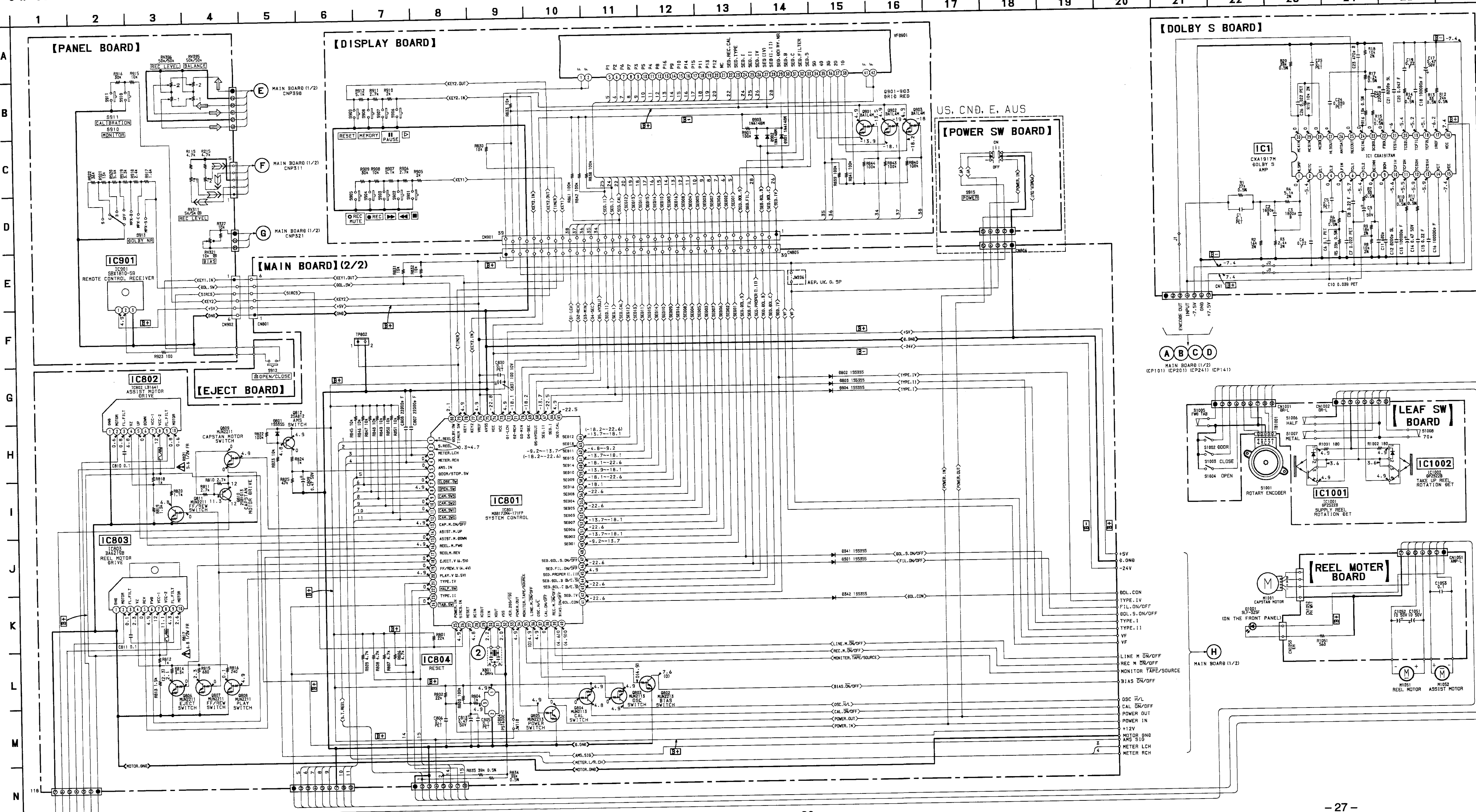
- Δ : fusible resistor.
- Δ : B+ Line.
- Δ : B- Line.
- Δ : panel designation.

Note:

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

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAY
- () : REC
- Voltages are taken with a VOM (input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path
- $\rightarrow$: LINE
- $\rightarrow$: REC
- Abbreviation
- CND: Canadian model
- G: German model
- SP: Singapore model
- AUS: Australian model

5-4. SCHEMATIC DIAGRAM - SYSTEM CONTROL SECTION - • See page 12 for IC Pin Function Description.

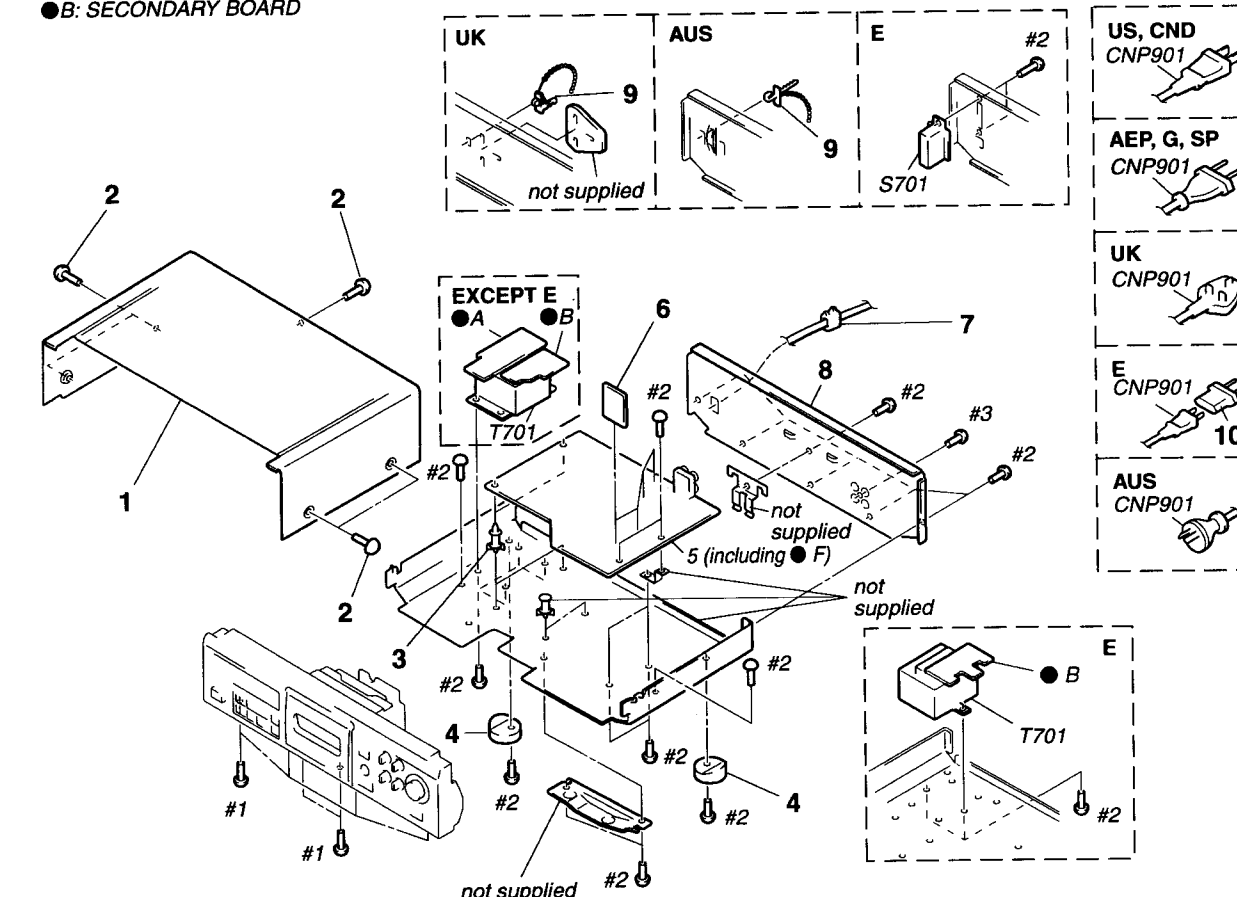
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE) ... (RED)
- Parts Color Cabinet's Color
- Abbreviation
- CND: Canadian G: German
- SP: Singapore AUS: Australian

(1) CHASSIS SECTION

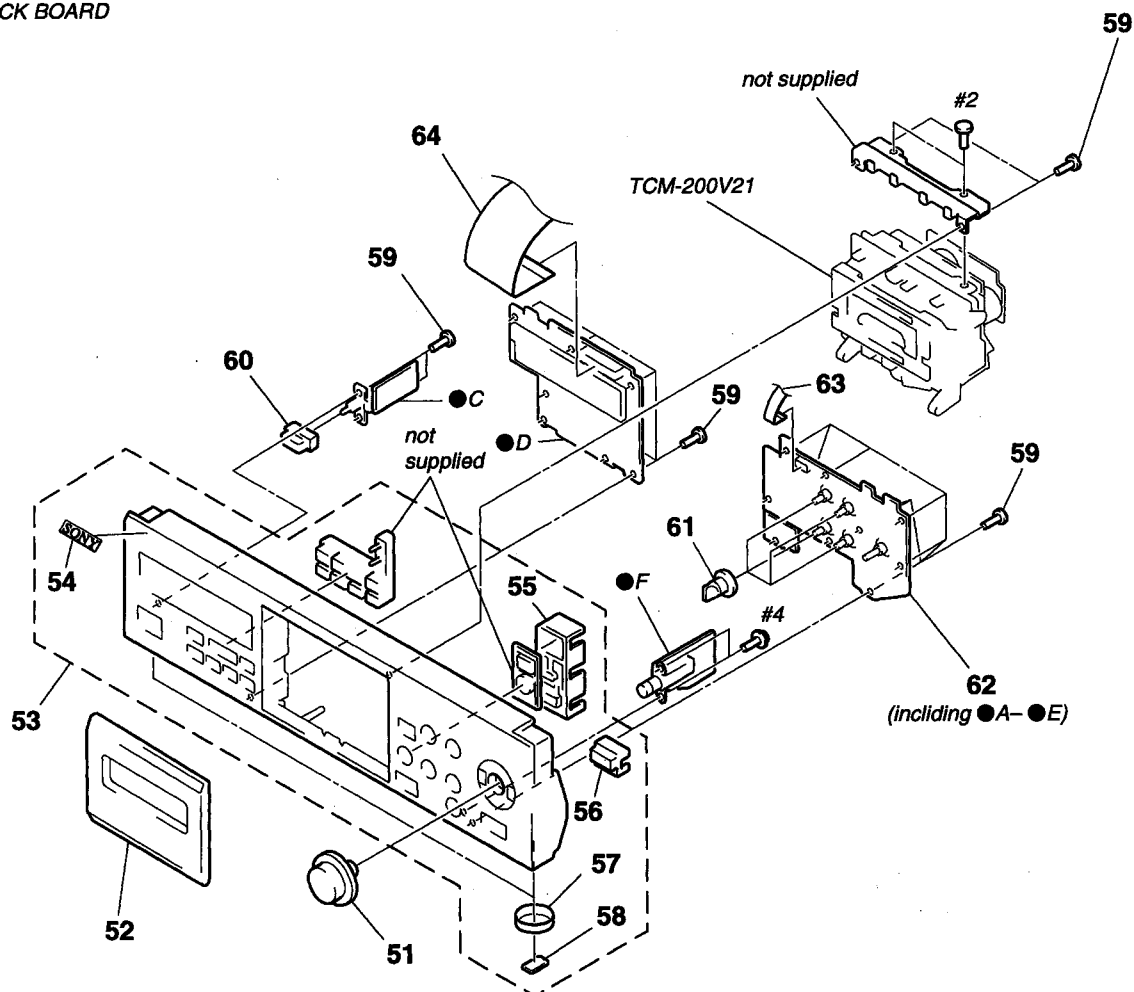
- A: PRIMARY BOARD
- B: SECONDARY BOARD



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-931-432-01	CASE (410726)		8	3-933-308-71	PANEL, BACK (US, CND)	
2	3-704-366-01	SCREW (CASE) (M3X8)		8	3-937-123-31	PANEL, BACK (AUS)	
3	3-946-265-31	HOLDER, PC BOARD		9	4-956-370-12	BAND, PLUG FIXED (UK, AUS)	
4	X-4947-208-1	FOOT ASSY (F50150S)(BLACK)(US, CND)		10	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
4	X-4947-207-1	FOOT ASSY (F50150S)(SILVER)	(AEP, UK, G, E, SP, AUS)	10	1-551-188-99	CORD, POWER (E)	
5	A-2007-535-A	MAIN BOARD, COMPLETE (AEP, UK, G, SP)		10	1-551-188-99	CORD, POWER (E)	
5	A-2007-537-A	MAIN BOARD, COMPLETE (E, AUS)		10	1-551-188-99	CORD, POWER (E)	
5	A-2007-539-A	MAIN BOARD, COMPLETE (US, CND)		10	1-551-188-99	CORD, POWER (E)	
6	A-2007-481-A	DOLBY-S BOARD, COMPLETE		10	1-551-188-99	CORD, POWER (E)	
7	3-703-244-00	BUSHING (2104), CORD (AEP, UK, G, SP, AUS)		10	1-551-188-99	CORD, POWER (E)	
7	3-703-571-11	BUSHING (S) (4516), CORD (US, CND, E)		10	1-551-188-99	CORD, POWER (E)	
8	3-937-123-01	PANEL, BACK (AEP, G, SP)		10	1-551-188-99	CORD, POWER (E)	
8	3-937-123-11	PANEL, BACK (UK)		10	1-551-188-99	CORD, POWER (E)	
8	3-937-123-21	PANEL, BACK (E)		10	1-551-188-99	CORD, POWER (E)	

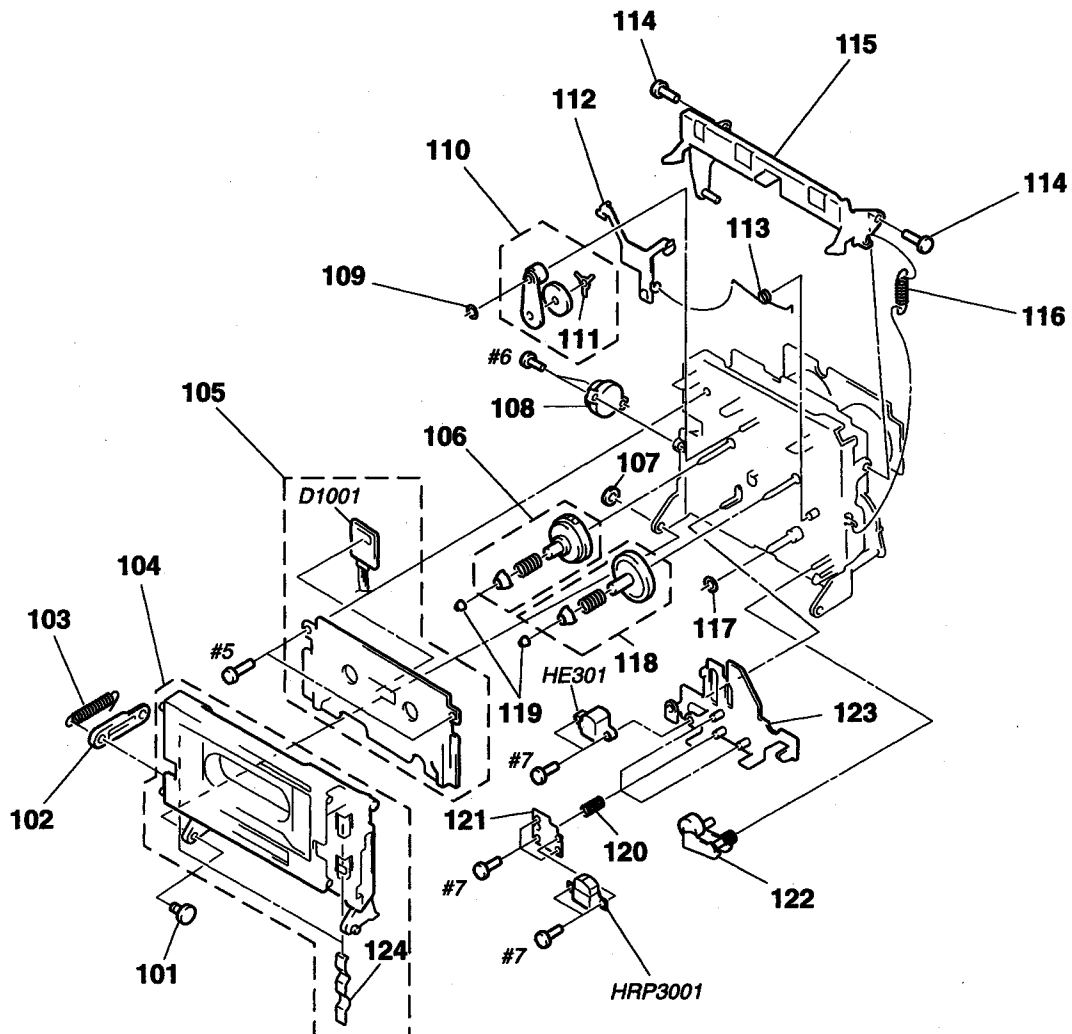
(2) FRONT PANEL SECTION

- C: POWER SW BOARD
- D: DISPLAY BOARD
- E: EJECT BOARD
- F: JACK BOARD



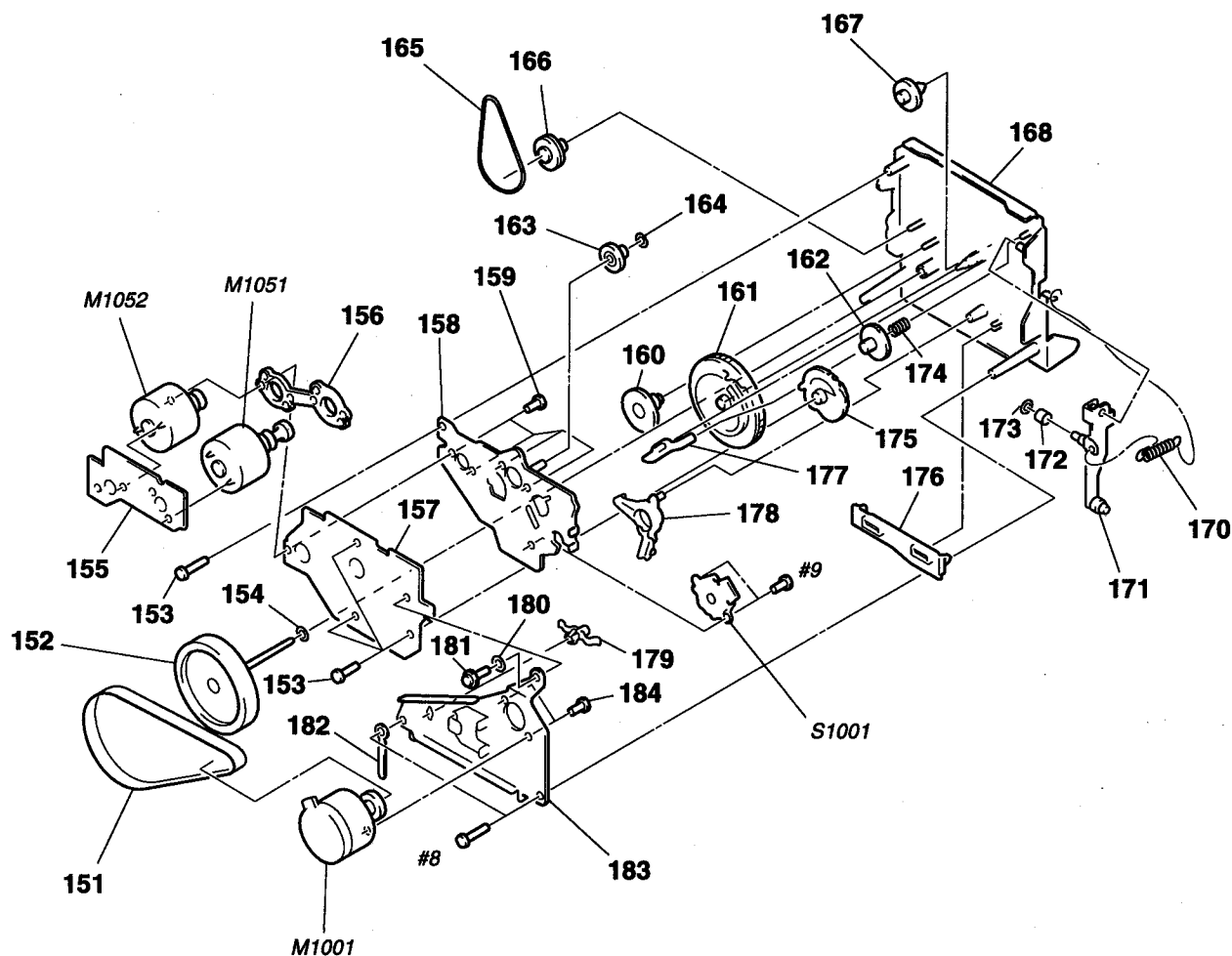
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-933-300-11	KNOB (REC)		58	4-977-358-11	CUSHION (8X12.5)	
52	X-3371-683-1	LID ASSY, CASSETTE (AEP, UK, G, E, SP, AUS)		59	4-951-620-01	SCREW (2.6X8), +BVTP	
52	X-3371-685-1	LID ASSY, CASSETTE (US, CND)		60	3-931-429-01	BUTTON (POWER)	
53	X-3371-675-1	PANEL ASSY, FRONT (AEP, UK, G, E, SP, AUS)		61	3-933-299-01	KNOB (DIA. 12)	
53	X-3371-680-1	PANEL ASSY, FRONT (US, CND)		* 62	A-2007-536-A	PANEL BOARD, COMPLETE (E)	
54	4-963-404-21	EMBLEM (5-A), SONY		* 62	A-2007-538-A	PANEL BOARD, COMPLETE (US, CND, AUS)	
55	3-933-298-01	BUTTON (C.E)		* 62	A-2007-540-A	PANEL BOARD, COMPLETE (AEP, UK, G, SP)	
56	3-933-296-01	BUTTON (MONITOR)		63	1-777-110-11	WIRE (FLAT TYPE)(6 CORE)	
57	4-977-593-11	RING (DIA 50), ORNAMENTAL (AEP, UK, G, E, SP, AUS)		64	1-777-109-11	WIRE (FLAT TYPE)(39 CORE)	

(3) MECHANISM DECK SECTION-1
(TCM-200V21)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-378-341-01	SHAFT (L) (CASSETTE HOLDER)		115	X-3371-408-1	LEVER (LIFTER) ASSY	
* 102	3-356-717-01	LEVER (JOINT)		116	3-356-625-01	SPRING, TENSION	
103	3-356-626-01	SPRING, TENSION		117	3-356-713-01	WASHER	
104	X-3371-433-1	HOLDER (CD-C) ASSY, CASSETTE		118	X-3356-627-1	GEAR (T) ASSY	
105	X-3371-412-1	PLATE ASSY, ORNAMENTAL		119	3-362-308-01	CAP (REEL)	
106	X-3356-628-1	GEAR (S) ASSY		120	3-356-659-11	SPRING (RPH), COMPRESSION	
107	3-558-708-21	WASHER, STOPPER		121	3-356-742-11	BRACKET (GUIDE R)	
108	3-712-786-01	DAMPER, OIL		122	X-3371-414-1	LEVER (PINCH LEVER T) ASSY	
109	3-669-465-11	WASHER (FR2)		123	X-3371-431-1	SLIDER (HEAD CHASSIS V21M) ASSY	
110	X-3371-411-1	LEVER (FR2) ASSY		124	3-356-691-11	SPRING (CASSETTE)	
111	3-356-644-11	SPRING (FR), LEAF		D1001	8-719-980-85	DIODE SLF-325C	
112	3-356-614-01	SLIDER (BRAKE)		HE301	1-543-673-11	HEAD, MAGNETIC (ERASE)	
113	3-356-619-01	SPRING (B), TORSION		HRP301	1-543-733-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
114	3-356-601-11	SCREW, STEP					

(4) MECHANISM DECK SECTION-2
(TCM-200V21)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-356-744-01	BELT (CAPSTAN V)		171	X-3371-407-1	LEVER (LOADING) ASSY	
152	X-3356-642-1	FLYWHEEL (R FWD) ASSY		172	3-356-630-01	ROLLER (LOADING)	
153	3-355-801-01	SCREW (BTP 2X18)		173	3-558-708-11	WASHER, STOPPER	
154	3-356-705-01	WASHER (CAPSTAN)		174	3-356-605-01	SPRING, COMPRESSION	
* 155	1-632-741-21	REEL MOTOR BOARD		175	3-356-616-01	GEAR (LOADING CAM)	
156	3-356-628-11	SPACER (MOTOR)		176	3-356-653-01	SLIDER (PAUSE)	
* 157	1-632-740-11	MD BOARD		177	3-356-617-01	LEVER (SELECTION)	
* 158	X-3371-426-1	BRACKET (MOTOR RM) ASSY		178	3-356-613-01	LEVER (MODE)	
159	3-363-804-01	SCREW (+P 2.6X6.5)		179	3-575-321-00	RETAINER, THRUST, CAPSTAN	
160	3-356-606-01	GEAR (MODE)		* 180	3-356-718-01	SPACER (THRUST RETAINER R)	
161	3-356-747-01	GEAR (MODE CAM C)		181	3-356-707-01	SCREW (+PTPWH 2X25)	
162	3-356-609-01	GEAR (LOADING)		182	3-703-397-01	STOPPER, WIRING	
163	3-356-702-11	GEAR (COMMUNICATION B)		183	3-356-629-31	BRACKET (THRUST RETAINER R)	
164	3-669-465-01	WASHER (1.5), STOPPER		184	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
165	3-356-603-01	BELT (MODE)		M1001	X-3371-423-1	MOTOR (CAPSTAN V21M) ASSY	
166	3-356-607-01	PULLEY (MODE)		M1051	X-3371-429-1	MOTOR (REEL RM) ASSY	
167	3-356-703-01	GEAR (COMMUNICATION C)		M1052	X-3371-428-1	MOTOR (ASSIST) ASSY	
168	X-3371-417-1	CHASSIS (V21M) COMPLETE ASSY		S1001	1-466-238-11	ENCODER, ROTARY	
170	3-356-624-01	SPRING, TENSION					

SECTION 7 ELECTRICAL PARTS LIST

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 SP : Singapore
G : German AUS : Australian

- 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
*	A-2007-481-A	DOLBY S BOARD, COMPLETE *****				< CHIP CONDUCTOR >	
		< CAPACITOR >		J1	1-216-296-00	CONDUCTOR, CHIP (3216)	
C1	1-136-165-00	FILM 0.1uF 5% 50V		J2	1-216-296-00	CONDUCTOR, CHIP (3216)	
C2	1-163-012-00	CERAMIC CHIP 0.0018uF 10% 50V		J3	1-216-296-00	CONDUCTOR, CHIP (3216)	
C3	1-163-012-00	CERAMIC CHIP 0.0018uF 10% 50V				< RESISTOR >	
C4	1-164-222-11	CERAMIC CHIP 0.22uF 25V		R1	1-216-685-11	METAL CHIP 27K 0.5% 1/10W	
C5	1-136-165-00	FILM 0.1uF 5% 50V		R2	1-208-811-11	METAL CHIP 16K 2% 1/10W	
C6	1-136-165-00	FILM 0.1uF 5% 50V		R3	1-208-791-11	METAL CHIP 2.4K 2% 1/10W	
C7	1-137-372-11	FILM 0.022uF 5% 50V		R4	1-208-799-11	METAL CHIP 5.1K 2% 1/10W	
C8	1-164-222-11	CERAMIC CHIP 0.22uF 25V		R5	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
C9	1-126-301-11	ELECT 1uF 20% 50V		R6	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
C10	1-137-442-11	FILM 0.039uF 5% 50V		R7	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C11	1-163-007-11	CERAMIC CHIP 680PF 10% 50V		R8	1-208-462-41	METAL CHIP 10K 2% 1/10W	
C12	1-164-717-11	CERAMIC CHIP 0.0082uF 5% 50V		R9	1-208-812-11	METAL CHIP 18K 2% 1/10W	
C13	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R10	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C14	1-124-465-00	ELECT 0.47uF 20% 50V		R11	1-216-619-11	METAL CHIP 47 0.5% 1/10W	
C15	1-164-222-11	CERAMIC CHIP 0.22uF 25V		R12	1-216-684-11	METAL CHIP 24K 0.5% 1/10W	
C16	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R13	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
C17	1-124-465-00	ELECT 0.47uF 20% 50V		R14	1-216-619-11	METAL CHIP 47 0.5% 1/10W	
C18	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R15	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
C19	1-164-222-11	CERAMIC CHIP 0.22uF 25V		R16	1-216-678-11	METAL CHIP 13K 0.5% 1/10W	
C20	1-163-035-00	CERAMIC CHIP 0.047uF 50V		R17	1-216-673-11	METAL CHIP 8.2K 0.5% 1/10W	
C21	1-164-717-11	CERAMIC CHIP 0.0082uF 5% 50V		R18	1-208-462-41	METAL CHIP 10K 2% 1/10W	
C22	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V		R19	1-208-462-41	METAL CHIP 10K 2% 1/10W	
C23	1-163-005-11	CERAMIC CHIP 470PF 10% 50V		R20	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
C24	1-137-442-11	FILM 0.039uF 5% 50V		*****			
C25	1-136-165-00	FILM 0.1uF 5% 50V		*	A-2007-539-A	MAIN BOARD, COMPLETE (US, CND)	
C26	1-137-372-11	FILM 0.022uF 5% 50V		*	A-2007-535-A	MAIN BOARD, COMPLETE (AEP, UK, G, SP)	
		< CONNECTOR >		*	A-2007-537-A	MAIN BOARD, COMPLETE (E, AUS)	
CN1	1-695-092-11	SOCKET, CONNECTOR 7P				*****	
		< IC >				HP JACK, BOARD	
IC1	8-752-077-95	IC CXA1917AM-T6				*****	
				*	1-537-770-11	TERMINAL BOARD, GROUND	
				*	3-923-762-11	HOLDER (TR)	
				*	7-682-548-04	SCREW +BVTT 3X8 (S)	
				*	3-356-925-01	HEAT SINK	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
< CAPACITOR >						C157	1-126-964-11	ELECT	10uF	20%	50V
C101	1-126-965-11	ELECT	22uF	20%	50V	C157	1-124-721-71	ELECT	10uF	20%	50V
C101	1-126-049-11	ELECT	22uF	20%	50V	C158	1-136-158-00	FILM	0.027uF	5%	50V
C102	1-136-495-11	FILM	0.068uF	5%	50V	C159	1-102-518-11	CERAMIC	33PF	5%	50V
C103	1-136-165-00	FILM	0.1uF	5%	50V	C160	1-137-434-11	FILM	0.0018uF	5%	50V
C104	1-126-964-11	ELECT	10uF	20%	50V	C161	1-137-434-11	FILM	0.0018uF	5%	50V
C104	1-124-721-71	ELECT	10uF	20%	50V	C181	1-124-925-11	ELECT	2.2uF	20%	100V
C105	1-163-014-00	CERAMIC CHIP	0.0027uF	5%	50V	C191	1-126-963-11	ELECT	4.7uF	20%	50V
C106	1-126-963-11	ELECT	4.7uF	20%	50V	C191	1-124-721-71	ELECT	10uF	20%	50V
C106	1-124-720-11	ELECT	4.7uF	20%	50V	C201	1-126-965-11	ELECT	22uF	20%	50V
C111	1-126-965-11	ELECT	22uF	20%	50V	C201	1-126-049-11	ELECT	22uF	20%	50V
C111	1-126-049-11	ELECT	22uF	20%	50V	C202	1-136-495-11	FILM	0.068uF	5%	50V
C112	1-136-173-00	FILM	0.47uF	5%	50V	C203	1-136-165-00	FILM	0.1uF	5%	50V
C113	1-126-964-11	ELECT	10uF	20%	50V	C204	1-126-964-11	ELECT	10uF	20%	50V
C114	1-137-366-11	FILM	0.0022uF	5%	50V	C204	1-124-721-71	ELECT	10uF	20%	50V
C118	1-124-902-00	ELECT	0.47uF	20%	100V	C205	1-163-014-00	CERAMIC CHIP	0.0027uF	5%	50V
C118	1-126-043-11	ELECT	0.47uF	20%	50V	C206	1-126-963-11	ELECT	4.7uF	20%	50V
C121	1-107-597-11	CERAMIC	22PF	5%	500V	C206	1-124-720-11	ELECT	4.7uF	20%	50V
C122	1-137-428-11	FILM	180PF	5%	50V	C211	1-126-965-11	ELECT	22uF	20%	50V
C123	1-137-431-11	FILM	560PF	5%	50V	C211	1-126-049-11	ELECT	22uF	20%	50V
C124	1-101-810-00	CERAMIC	100PF	5%	500V	C212	1-136-173-00	FILM	0.47uF	5%	50V
C125	1-136-803-11	FILM	560PF	5%	630V	C213	1-126-964-11	ELECT	10uF	20%	50V
C126	1-136-161-00	FILM	0.047uF	5%	50V	C214	1-137-366-11	FILM	0.0022uF	5%	50V
C127	1-136-157-00	FILM	0.022uF	5%	50V	C218	1-124-902-00	ELECT	0.47uF	20%	100V
C128	1-136-153-00	FILM	0.01uF	5%	50V	C218	1-126-045-11	ELECT	2.2uF	20%	50V
C141	1-124-925-11	ELECT	2.2uF	20%	50V	C221	1-107-597-11	CERAMIC	22PF	5%	500V
C141	1-124-720-11	ELECT	4.7uF	20%	50V	C222	1-137-428-11	FILM	180PF	5%	50V
C142	1-136-165-00	FILM	0.1uF	5%	50V	C223	1-137-431-11	FILM	560PF	5%	50V
C143	1-136-495-11	FILM	0.068uF	5%	50V	C224	1-101-810-00	CERAMIC	100PF	5%	500V
C151	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	C225	1-136-803-11	FILM	560PF	5%	630V
C152	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	C226	1-136-161-00	FILM	0.047uF	5%	50V
C153	1-104-665-11	ELECT	100uF	20%	25V	C227	1-136-157-00	FILM	0.022uF	5%	50V
C154	1-126-968-11	ELECT	100uF	20%	50V	C228	1-136-153-00	FILM	0.01uF	5%	50V
C154	1-126-052-11	ELECT	100uF	20%	50V	C241	1-124-925-11	ELECT	2.2uF	20%	50V
C155	1-136-157-00	FILM	0.022uF	5%	50V	C241	1-124-720-11	ELECT	4.7uF	20%	50V
C156	1-163-117-00	CERAMIC CHIP	100PF	5%	50V						

MAIN

HP JACK

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C242	1-136-165-00	FILM	0.1uF	5%	50V	C352	1-126-965-11	ELECT	22uF	20%	50V
C243	1-136-495-11	FILM	0.068uF	5%	50V						(US, CND, E, AUS)
C251	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	C352	1-126-049-11	ELECT	22uF	20%	50V
C252	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V						(AEP, UK, G, SP)
C253	1-104-665-11	ELECT	100uF	20%	25V						
C254	1-126-968-11	ELECT	100uF	20%	50V	C371	1-130-494-11	MYLAR	0.082uF	5%	50V
					(US, CND, E, AUS)	C372	1-137-436-11	FILM	0.0039uF	5%	50V
C254	1-126-052-11	ELECT	100uF	20%	50V	C386	1-126-923-11	ELECT	220uF	20%	10V
					(AEP, UK, G, SP)	C387	1-126-923-11	ELECT	220uF	20%	10V
C255	1-136-157-00	FILM	0.022uF	5%	50V	C421	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C256	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C422	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C257	1-126-964-11	ELECT	10uF	20%	50V	C423	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
					(US, CND, E, AUS)	C424	1-124-925-11	ELECT	2.2uF	20%	100V
C257	1-124-721-71	ELECT	10uF	20%	50V	C431	1-126-916-11	ELECT	1000uF	20%	6.3V
					(AEP, UK, G, SP)	C701	1-126-768-11	ELECT	2200uF	20%	16V
C258	1-136-158-00	FILM	0.027uF	5%	50V						(US, CND, E, AUS)
C259	1-102-518-11	CERAMIC	33PF	5%	50V	C701	1-124-556-11	ELECT	2200uF	20%	16V
C260	1-137-434-11	FILM	0.0018uF	5%	50V						(AEP, UK, G, SP)
C261	1-137-434-11	FILM	0.0018uF	5%	50V	C702	1-126-936-11	ELECT	3300uF	20%	16V
											(US, CND, E, AUS)
C271	1-126-964-11	ELECT	10uF	20%	50V	C702	1-126-015-11	ELECT	3300uF	20%	16V
C272	1-124-925-11	ELECT	2.2uF	20%	100V						(AEP, UK, G, SP)
C281	1-124-925-11	ELECT	2.2uF	20%	100V	C703	1-104-664-11	ELECT	47uF	20%	25V
C291	1-126-963-11	ELECT	4.7uF	20%	50V						(US, CND, E, AUS)
					(US, CND, E, AUS)	C703	1-124-910-11	ELECT	47uF	20%	50V
C291	1-124-721-71	ELECT	10uF	20%	50V						(AEP, UK, G, SP)
					(AEP, UK, G, SP)						
C301	1-126-965-11	ELECT	22uF	20%	50V	C704	1-126-027-11	ELECT	1000uF	20%	25V
					(US, CND, E, AUS)	C705	1-126-027-11	ELECT	1000uF	20%	25V
C301	1-126-049-11	ELECT	22uF	20%	50V	C706	1-126-968-11	ELECT	100uF	20%	50V
					(AEP, UK, G, SP)	C707	1-126-964-11	ELECT	10uF	20%	50V
C302	1-126-965-11	ELECT	22uF	20%	50V	C708	1-126-937-11	ELECT	4700uF	20%	16V
					(US, CND, E, AUS)						
C302	1-126-049-11	ELECT	22uF	20%	50V	C709	1-126-964-11	ELECT	10uF	20%	50V
					(AEP, UK, G, SP)	C710	1-126-963-11	ELECT	4.7uF	20%	50V
C303	1-124-903-11	ELECT	1uF	20%	50V	C711	1-126-967-11	ELECT	47uF	20%	35V
						C712	1-126-927-11	ELECT	2200uF	20%	10V
C311	1-124-903-11	ELECT	1uF	20%	50V	C713	1-126-946-11	ELECT	6800uF	20%	25V
C319	1-126-964-11	ELECT	10uF	20%	50V						
C321	1-126-967-11	ELECT	47uF	20%	35V	C715	1-126-964-11	ELECT	10uF	20%	50V
C322	1-126-967-11	ELECT	47uF	20%	35V	C716	1-126-768-11	ELECT	2200uF	20%	16V
C323	1-107-584-11	CERAMIC	4PF	0.25PF	500V	C805	1-136-165-00	FILM	0.1uF	5%	50V
						C806	1-136-165-00	FILM	0.1uF	5%	50V
C324	1-136-558-11	FILM	0.0039uF	5%	630V	C807	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C325	1-126-965-11	ELECT	22uF	20%	50V						
C326	1-106-359-00	MYLAR	4700PF	5%	200V	C808	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C327	1-106-349-00	MYLAR	0.0018uF	5%	100V	C809	1-124-902-00	ELECT	0.47uF	20%	50V
C328	1-106-349-00	MYLAR	0.0018uF	5%	100V	C810	1-165-319-11	CERAMIC CHIP	0.1uF		50V
						C811	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C343	1-124-925-11	ELECT	2.2uF	20%	100V	C813	1-124-902-00	ELECT	0.47uF	20%	50V
C351	1-126-965-11	ELECT	22uF	20%	50V						
					(US, CND, E, AUS)	C830	1-136-165-00	FILM	0.1uF	5%	50V
C351	1-126-049-11	ELECT	22uF	20%	50V	C831	1-126-933-11	ELECT	100uF	20%	10V
					(AEP, UK, G, SP)	C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< CONNECTOR >							
CN321	1-506-468-11	PIN, CONNECTOR 3P		D709	8-719-019-12	DIODE ZSML-5.6X-T1	
CN701	1-766-272-11	PIN, CONNECTOR (PC BOARD) 10P		D710	8-719-019-12	DIODE ZSML-5.6X-T1	
CN801	1-568-825-11	CONNECTOR, FFC/FPC 6P		D711	8-719-019-12	DIODE ZSML-5.6X-T1	
* CN804	1-568-954-11	PIN, CONNECTOR 5P (US, CND, E, AUS)		D712	8-719-200-02	DIODE 10E2	
CN805	1-778-065-11	SOCKET, CONNECTOR 39P		D715	8-719-988-62	DIODE 1SS355 (US, CND, E, AUS)	
CNP311	1-764-328-11	PIN, CONNECTOR (PCB)(V TYPE)5P		D716	8-719-019-46	DIODE ZSML-12Z-T1	
* CNP321	1-560-062-00	PIN, CONNECTOR 4P		D717	8-719-988-62	DIODE 1SS355	
* CNP322	1-560-060-00	PIN, CONNECTOR 2P		D718	8-719-019-25	DIODE ZSML-7.5Y-T1	
* CNP351	1-560-062-00	PIN, CONNECTOR 4P		D719	8-719-019-18	DIODE ZSML-6.2Z-T1	
* CNP376	1-568-954-11	PIN, CONNECTOR 5P		D720	8-719-988-62	DIODE 1SS355 (US, CND, E, AUS)	
* CNP398	1-691-462-11	PIN, CONNECTOR (PC BOARD) 6P		D721	8-719-988-62	DIODE 1SS355	
CP101	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		D722	8-719-025-03	DIODE RBA-402-SL	
CP141	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		D723	8-719-019-12	DIODE ZSML-5.6X-T1	
CP201	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		D724	8-719-988-62	DIODE 1SS355	
CP241	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		D801	8-719-988-62	DIODE 1SS355	
< DIODE >							
D151	8-719-019-12	DIODE ZSML-5.6X-T1		< IC >			
D181	8-719-988-62	DIODE 1SS355		IC301	8-752-066-36	IC CXA1563M	
D182	8-719-988-62	DIODE 1SS355		IC304	8-759-106-56	IC uPC1297CA	
D183	8-719-019-12	DIODE ZSML-5.6X-T1		IC311	8-752-070-68	IC CXA1598M	
D251	8-719-019-12	DIODE ZSML-5.6X-T1		IC341	8-752-066-36	IC CXA1563M	
D281	8-719-988-62	DIODE 1SS355		IC351	8-759-636-55	IC M5218AFP	
D282	8-719-988-62	DIODE 1SS355		IC371	8-759-100-96	IC uPC4558G2	
D283	8-719-019-12	DIODE ZSML-5.6X-T1		IC372	8-759-100-96	IC uPC4558G2	
D301	8-719-988-62	DIODE 1SS355		IC381	8-759-100-96	IC uPC4558G2	
D311	8-719-988-62	DIODE 1SS355		IC385	8-759-100-96	IC uPC4558G2	
D312	8-719-988-62	DIODE 1SS355		IC391	8-759-300-71	IC HD14053BFP	
D313	8-719-988-62	DIODE 1SS355		IC395	8-759-636-55	IC M5218AFP	
D314	8-719-988-62	DIODE 1SS355		IC421	8-759-100-96	IC uPC4558G2	
D315	8-719-988-62	DIODE 1SS355		IC701	8-759-100-96	IC uPC4558G2	
D321	8-719-988-62	DIODE 1SS355		IC801	8-759-422-06	IC M38172M4-171FP	
D322	8-719-988-62	DIODE 1SS355		IC802	8-759-822-09	IC LB1641	
D341	8-719-988-62	DIODE 1SS355		IC803	8-759-973-95	IC BA6219B	
D342	8-719-988-62	DIODE 1SS355		IC804	8-759-165-82	IC PST600E-T	
D371	8-719-988-62	DIODE 1SS355		< JACK >			
D372	8-719-988-62	DIODE 1SS355		J385	1-568-519-41	JACK, LARGE TYPE (PHONES)	
D373	8-719-988-62	DIODE 1SS355		< COIL >			
D431	8-719-988-62	DIODE 1SS355		L121	1-410-780-11	INDUCTOR 27mH	
D701	8-719-200-02	DIODE 10E2		L122	1-410-778-11	INDUCTOR 18mH	
D702	8-719-200-02	DIODE 10E2		L221	1-410-780-11	INDUCTOR 27mH	
D703	8-719-200-02	DIODE 10E2		L222	1-410-778-11	INDUCTOR 18mH	
D704	8-719-200-02	DIODE 10E2					
D705	8-719-200-02	DIODE 10E2					
D706	8-719-988-62	DIODE 1SS355 (US, CND, E, AUS)					
D707	8-719-988-62	DIODE 1SS355					
D708	8-719-988-62	DIODE 1SS355 (US, CND, E, AUS)					

MAIN

HP JACK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< LOW-PASS FILTER >							
LPF101	1-236-147-11	FILTER, LOW-PASS		Q705	8-729-209-15	TRANSISTOR 2SD2012	
LPF201	1-236-147-11	FILTER, LOW-PASS		Q706	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< JACK >				Q707	8-729-900-80	TRANSISTOR DTC114ES(US, CND, E, AUS)	
PJ395	1-770-614-12	JACK, PIN 4P (LINE IN/OUT)		Q708	8-729-141-83	TRANSISTOR 2SB1094-LK	
< TRANSISTOR >				Q709	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q101	8-729-421-22	TRANSISTOR UN2211		Q710	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q711	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q112	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q712	8-729-224-63	TRANSISTOR 2SK246-BL	
Q151	8-729-217-03	TRANSISTOR 2SK170		Q722	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q152	8-729-217-03	TRANSISTOR 2SK170		Q802	8-729-421-19	TRANSISTOR UN2213	
Q153	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q803	8-729-901-06	TRANSISTOR DTA144EK	
Q154	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q804	8-729-901-06	TRANSISTOR DTA144EK	
Q191	8-729-922-37	TRANSISTOR 2SD2144S		Q805	8-729-421-19	TRANSISTOR UN2213	
Q201	8-729-421-22	TRANSISTOR UN2211		Q806	8-729-421-22	TRANSISTOR UN2211	
Q211	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q807	8-729-421-22	TRANSISTOR UN2211	
Q212	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q808	8-729-421-22	TRANSISTOR UN2211	
Q251	8-729-217-03	TRANSISTOR 2SK170		Q809	8-729-421-22	TRANSISTOR UN2211	
Q252	8-729-217-03	TRANSISTOR 2SK170		Q810	8-729-801-84	TRANSISTOR 2SB1013-4	
Q253	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q811	8-729-421-22	TRANSISTOR UN2211	
Q254	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q812	8-729-216-22	TRANSISTOR 2SA1162-G	
Q291	8-729-922-37	TRANSISTOR 2SD2144S		< RESISTOR >			
Q311	8-729-421-19	TRANSISTOR UN2213		R101	1-216-097-00	METAL CHIP 100K	5% 1/10W
Q312	8-729-421-19	TRANSISTOR UN2213		R102	1-216-071-00	METAL CHIP 8.2K	5% 1/10W
Q313	8-729-421-19	TRANSISTOR UN2213		R103	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
Q314	8-729-421-19	TRANSISTOR UN2213		R104	1-216-105-00	METAL CHIP 220K	5% 1/10W
Q321	8-729-421-19	TRANSISTOR UN2213		R105	1-216-049-00	METAL CHIP 1K	5% 1/10W
Q322	8-729-216-22	TRANSISTOR 2SA1162-G		R111	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
Q323	8-729-421-19	TRANSISTOR UN2213		R112	1-216-073-00	METAL CHIP 10K	5% 1/10W
Q324	8-729-421-19	TRANSISTOR UN2213		R113	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
Q325	8-729-421-19	TRANSISTOR UN2213		R114	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
Q326	8-729-194-57	TRANSISTOR 2SC945-P		R116	1-216-058-00	METAL CHIP 2.4K	5% 1/10W
Q327	8-729-194-57	TRANSISTOR 2SC945-P		R116	1-216-058-00	METAL CHIP 2.4K	5% 1/10W
Q341	8-729-421-19	TRANSISTOR UN2213		R117	1-216-073-00	METAL CHIP 10K	5% 1/10W
Q351	8-729-620-05	TRANSISTOR 2SC2603-EF		R118	1-216-089-00	METAL CHIP 47K	5% 1/10W
Q352	8-729-821-04	TRANSISTOR 2SA1317-STU		R121	1-216-058-00	METAL CHIP 2.4K	5% 1/10W
Q371	8-729-107-43	TRANSISTOR 2SC3624-L18		R122	1-216-101-00	METAL CHIP 150K	5% 1/10W
Q372	8-729-107-43	TRANSISTOR 2SC3624-L18		△R123	1-219-153-11	FUSIBLE 10	5% 1/4W F
Q373	8-729-107-43	TRANSISTOR 2SC3624-L18		R124	1-216-085-00	METAL CHIP 33K	5% 1/10W
Q391	8-729-421-19	TRANSISTOR UN2213		R125	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
Q431	8-729-216-22	TRANSISTOR 2SA1162-G		R141	1-216-097-00	METAL CHIP 100K	5% 1/10W
Q432	8-729-901-06	TRANSISTOR DTA144EK		R151	1-216-097-00	METAL CHIP 100K	5% 1/10W
Q433	8-729-421-19	TRANSISTOR UN2213		R152	1-216-029-00	METAL CHIP 150	5% 1/10W
Q702	8-729-900-80	TRANSISTOR DTC114ES (US, CND, E, AUS)		R153	1-216-041-00	METAL CHIP 470	5% 1/10W
Q703	8-729-141-83	TRANSISTOR 2SB1094-LK		R154	1-216-066-00	METAL CHIP 5.1K	5% 1/10W
Q704	8-729-209-15	TRANSISTOR 2SD2012		R155	1-216-066-00	METAL CHIP 5.1K	5% 1/10W
				R156	1-216-046-00	METAL CHIP 750	5% 1/10W
				R157	1-216-046-00	METAL CHIP 750	5% 1/10W
				R158	1-216-025-00	METAL CHIP 100	5% 1/10W

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

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

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R159	1-216-021-00	METAL CHIP	68	5%	1/10W	R258	1-216-025-00	METAL CHIP	100	5%	1/10W
R160	1-216-068-00	METAL CHIP	6.2K	5%	1/10W	R259	1-216-021-00	METAL CHIP	68	5%	1/10W
R161	1-216-081-00	METAL CHIP	22K	5%	1/10W	R260	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
						R261	1-216-081-00	METAL CHIP	22K	5%	1/10W
R162	1-216-100-00	METAL CHIP	130K	5%	1/10W	R262	1-216-100-00	METAL CHIP	130K	5%	1/10W
R163	1-216-055-00	METAL CHIP	1.8K	5%	1/10W						
R164	1-216-073-00	METAL CHIP	10K	5%	1/10W	R263	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R165	1-216-056-00	METAL CHIP	2K	5%	1/10W	R264	1-216-073-00	METAL CHIP	10K	5%	1/10W
R166	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R265	1-216-056-00	METAL CHIP	2K	5%	1/10W
						R266	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R181	1-216-083-00	METAL CHIP	27K	5%	1/10W	R271	1-216-089-00	METAL CHIP	47K	5%	1/10W
R182	1-216-035-00	METAL CHIP	270	5%	1/10W						
R183	1-216-092-00	METAL CHIP	62K	5%	1/10W	R272	1-216-083-00	METAL CHIP	27K	5%	1/10W
R185	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	R273	1-216-088-00	METAL CHIP	43K	5%	1/10W
R186	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R274	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
						R281	1-216-083-00	METAL CHIP	27K	5%	1/10W
R187	1-216-033-00	METAL CHIP	220	5%	1/10W	R282	1-216-035-00	METAL CHIP	270	5%	1/10W
R188	1-216-067-00	METAL CHIP	5.6K	5%	1/10W						
R191	1-216-097-00	METAL CHIP	100K	5%	1/10W	R283	1-216-092-00	METAL CHIP	62K	5%	1/10W
R192	1-216-082-00	METAL CHIP	24K	5%	1/10W	R285	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R193	1-216-073-00	METAL CHIP	10K	5%	1/10W	R286	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
						R287	1-216-033-00	METAL CHIP	220	5%	1/10W
R194	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R288	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R195	1-216-079-00	METAL CHIP	18K	5%	1/10W						
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R291	1-216-097-00	METAL CHIP	100K	5%	1/10W
R197	1-216-049-00	METAL CHIP	1K	5%	1/10W	R292	1-216-082-00	METAL CHIP	24K	5%	1/10W
R198	1-216-081-00	METAL CHIP	22K	5%	1/10W	R293	1-216-073-00	METAL CHIP	10K	5%	1/10W
						R294	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R201	1-216-097-00	METAL CHIP	100K	5%	1/10W	R295	1-216-079-00	METAL CHIP	18K	5%	1/10W
R202	1-216-071-00	METAL CHIP	8.2K	5%	1/10W						
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R296	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R204	1-216-105-00	METAL CHIP	220K	5%	1/10W	R297	1-216-049-00	METAL CHIP	1K	5%	1/10W
R205	1-216-049-00	METAL CHIP	1K	5%	1/10W	R298	1-216-081-00	METAL CHIP	22K	5%	1/10W
						R301	1-208-813-11	METAL CHIP	20K	2%	1/10W
R211	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R302	1-216-081-00	METAL CHIP	22K	5%	1/10W
R212	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R213	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	R303	1-216-049-00	METAL CHIP	1K	5%	1/10W
R214	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R311	1-216-685-11	METAL CHIP	27K	2%	1/10W
R216	1-216-058-00	METAL CHIP	2.4K	5%	1/10W	R312	1-216-081-00	METAL CHIP	22K	5%	1/10W
						R313	1-216-049-00	METAL CHIP	1K	5%	1/10W
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W	R316	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R218	1-216-089-00	METAL CHIP	47K	5%	1/10W						
R221	1-216-058-00	METAL CHIP	2.4K	5%	1/10W	R317	1-216-097-00	METAL CHIP	100K	5%	1/10W
R222	1-216-101-00	METAL CHIP	150K	5%	1/10W	R321	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
△ R223	1-219-153-11	FUSIBLE	10	5%	1/4W F	R322	1-216-049-00	METAL CHIP	1K	5%	1/10W
						R323	1-216-040-00	METAL CHIP	470	5%	1/10W
R224	1-216-085-00	METAL CHIP	33K	5%	1/10W	R324	1-216-050-00	METAL CHIP	1.1K	5%	1/10W
R225	1-216-067-00	METAL CHIP	5.6K	5%	1/10W						
R241	1-216-097-00	METAL CHIP	100K	5%	1/10W	R325	1-216-080-00	METAL CHIP	20K	5%	1/10W
R251	1-216-097-00	METAL CHIP	100K	5%	1/10W	R328	1-216-049-00	METAL CHIP	1K	5%	1/10W
R252	1-216-029-00	METAL CHIP	150	5%	1/10W	R329	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
						R330	1-249-390-11	CARBON	5.6	5%	1/4W
R253	1-216-041-00	METAL CHIP	470	5%	1/10W	R331	1-249-390-11	CARBON	5.6	5%	1/4W
R254	1-216-066-00	METAL CHIP	5.1K	5%	1/10W						
R255	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	R332	1-249-440-11	CARBON	82K	5%	1/4W
R256	1-216-046-00	METAL CHIP	750	5%	1/10W	R333	1-249-440-11	CARBON	82K	5%	1/4W
R257	1-216-046-00	METAL CHIP	750	5%	1/10W	R341	1-208-813-11	METAL CHIP	20K	2%	1/10W
						R342	1-216-069-00	METAL CHIP	6.8K	5%	1/10W

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.

MAIN

HP JACK

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R343	1-216-081-00	METAL CHIP	22K 5% 1/10W	R710	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R344	1-216-081-00	METAL CHIP	22K 5% 1/10W	R711	1-216-049-00	METAL CHIP	1K 5% 1/10W
R351	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R712	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R352	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R713	1-249-417-11	CARBON	1K 5% 1/4W
R371	1-216-054-00	METAL CHIP	1.6K 5% 1/10W	R714	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R372	1-216-097-00	METAL CHIP	100K 5% 1/10W	R715	1-216-072-00	METAL CHIP	9.1K 5% 1/10W
R373	1-216-097-00	METAL CHIP	100K 5% 1/10W	R716	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R374	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R717	1-216-089-00	METAL CHIP	47K 5% 1/10W
R375	1-216-081-00	METAL CHIP	22K 5% 1/10W	R718	1-216-081-00	METAL CHIP	22K 5% 1/10W
R376	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	△ R719	1-219-135-11	FUSIBLE	0.15 10% 1/4W F
R377	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	△ R720	1-219-137-11	FUSIBLE	0.33 10% 1/4W F
R378	1-216-066-00	METAL CHIP	5.1K 5% 1/10W	R721	1-249-425-11	CARBON	4.7K 5% 1/4W
R379	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R722	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R385	1-247-696-11	CARBON	47 5% 1/4W	R723	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R391	1-216-081-00	METAL CHIP	22K 5% 1/10W	R724	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R401	1-216-080-00	METAL CHIP	20K 5% 1/10W	R725	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R402	1-216-078-00	METAL CHIP	16K 5% 1/10W	△ R730	1-219-139-11	FUSIBLE	0.68 10% 1/4W F
R403	1-216-070-00	METAL CHIP	7.5K 5% 1/10W	△ R731	1-219-139-11	FUSIBLE	0.68 10% 1/4W F
R404	1-216-089-00	METAL CHIP	47K 5% 1/10W	R801	1-216-081-00	METAL CHIP	22K 5% 1/10W
R405	1-216-080-00	METAL CHIP	20K 5% 1/10W	R802	1-216-081-00	METAL CHIP	22K 5% 1/10W
R406	1-216-092-00	METAL CHIP	62K 5% 1/10W	R803	1-216-097-00	METAL CHIP	100K 5% 1/10W
R407	1-216-082-00	METAL CHIP	24K 5% 1/10W	R804	1-216-049-00	METAL CHIP	1K 5% 1/10W
R408	1-216-079-00	METAL CHIP	18K 5% 1/10W	R806	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R409	1-216-074-00	METAL CHIP	11K 5% 1/10W	R807	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R410	1-216-085-00	METAL CHIP	33K 5% 1/10W	R808	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R411	1-216-689-11	METAL CHIP	39K 5% 1/10W	R809	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R412	1-216-082-91	METAL CHIP	24K 5% 1/10W	R810	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R413	1-216-085-00	METAL CHIP	33K 5% 1/10W	R811	1-216-059-00	METAL CHIP	2.7K 5% 1/10W
R414	1-216-090-00	METAL CHIP	51K 5% 1/10W	R812	1-216-049-00	METAL CHIP	1K 5% 1/10W
R415	1-216-084-00	METAL CHIP	30K 5% 1/10W	R813	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R416	1-216-090-00	METAL CHIP	51K 5% 1/10W	R814	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R417	1-216-083-00	METAL CHIP	27K 5% 1/10W	R815	1-216-045-00	METAL CHIP	680 5% 1/10W
R418	1-216-081-00	METAL CHIP	22K 5% 1/10W	R816	1-216-034-00	METAL CHIP	240 5% 1/10W
R423	1-216-089-00	METAL CHIP	47K 5% 1/10W	△ R817	1-212-954-11	FUSIBLE	6.8 5% 1/2W F
R425	1-216-097-00	METAL CHIP	100K 5% 1/10W	R818	1-216-049-00	METAL CHIP	1K 5% 1/10W
R426	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R819	1-216-052-00	METAL CHIP	1.3K 5% 1/10W
R427	1-216-069-00	METAL CHIP	6.8K 5% 1/10W	R820	1-216-050-00	METAL CHIP	1.1K 5% 1/10W
R431	1-216-081-00	METAL CHIP	22K 5% 1/10W	△ R821	1-212-952-00	FUSIBLE	5.6 5% 1/2W F
R432	1-216-033-00	METAL CHIP	220 5% 1/10W	R822	1-216-097-00	METAL CHIP	100K 5% 1/10W
R701	1-249-417-11	CARBON	1K 5% 1/4W	R823	1-216-073-00	METAL CHIP	10K 5% 1/10W
R702	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	R824	1-216-049-00	METAL CHIP	1K 5% 1/10W
R703	1-216-055-00	METAL CHIP	1.8K 5% 1/10W	R825	1-216-089-00	METAL CHIP	47K 5% 1/10W
R704	1-216-030-00	METAL CHIP	160 5% 1/10W	R831	1-216-073-00	METAL CHIP	10K 5% 1/10W
R705	1-216-069-00	METAL CHIP	6.8K 5% 1/10W	R832	1-216-073-00	METAL CHIP	10K 5% 1/10W
R706	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R834	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R707	1-216-073-00	METAL CHIP	10K 5% 1/10W	R835	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R708	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R845	1-216-073-00	METAL CHIP	10K 5% 1/10W
R709	1-216-069-00	METAL CHIP	6.8K 5% 1/10W				

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R846	1-216-073-00	METAL CHIP	10K 5% 1/10W	< SWITCH >			
R847	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1001	1-466-238-11	ENCODER, ROTARY	
R848	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
R849	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1003	1-572-126-11	SWITCH, PUSH (1 KEY) (CLOSE)	
R850	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1004	1-571-958-11	SWITCH, PUSH (1 KEY) (OPEN)	
R851	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1005	1-572-125-11	SWITCH, LEAF (ERASE PROOF)	
< VARIABLE RESISTOR >				S1006	1-572-202-11	SWITCH, LEAF (HALF)	
RV111	1-238-019-11	RES, ADJ, CARBON 47K		S1007	1-572-125-11	SWITCH, LEAF (METAL)	
RV112	1-241-765-11	RES, ADJ, CARBON 22K		S1008	1-572-125-11	SWITCH, LEAF (70μS)	
RV121	1-241-765-11	RES, ADJ, CARBON 22K		< TERMINAL >			
RV151	1-241-759-21	RES, ADJ, CARBON 220		* TB1001	1-694-018-11	TERMINAL (5P)	
RV211	1-238-019-11	RES, ADJ, CARBON 47K		*****			
RV212	1-241-765-11	RES, ADJ, CARBON 22K		< TRANSFORMER >			
RV221	1-241-765-11	RES, ADJ, CARBON 22K		*****			
RV251	1-241-759-21	RES, ADJ, CARBON 220		* A-2007-538-A PANEL BOARD, COMPLETE (US, CND, AUS)			
RV312	1-241-763-11	RES, ADJ, CARBON 4.7K		* A-2007-540-A PANEL BOARD, COMPLETE (AEP, UK, G, SP)			
< TRANSFORMER >				* A-2007-536-A PANEL BOARD, COMPLETE (E)			
T121	1-433-344-11	TRANSFORMER, BIAS OSCILLATION		*****			
T221	1-433-344-11	TRANSFORMER, BIAS OSCILLATION		DISPLAY BOARD			
T321	1-423-614-11	TRANSFORMER, BIAS OSCILLATION		*****			
< CONNECTOR >				EJECT BOARD			
* TP321	1-564-506-11	PLUG, CONNECTOR 3P		*****			
* TP802	1-560-060-00	PIN, CONNECTOR 2P		POWER SW BOARD			
< VIBRATOR >				*****			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHZ)		PRIMARY BOARD (EXCEPT E)			
*****				*****			
* 1-632-740-11	MD BOARD			SECONDARY BOARD			
*****				*****			
3-356-631-01	HOLDER (SENSOR)			* 3-386-245-11	HOLDER (FL)		
< CONNECTOR >				< CAPACITOR >			
CN1001	1-506-615-11	PIN, CONNECTOR 9P		△ C717	1-113-925-11	ELECT	0.01uF 20% 250V (AEP, UK, G, SP)
CN1002	1-564-501-11	PIN, CONNECTOR 8P		C720	1-136-165-00	FILM	0.1uF 5% 50V (E)
< IC >				C721	1-136-165-00	FILM	0.1uF 5% 50V (E)
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B		C722	1-136-165-00	FILM	0.1uF 5% 50V (E)
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B		C723	1-136-165-00	FILM	0.1uF 5% 50V (E)
< RESISTOR >				C724	1-164-159-11	CERAMIC	0.1uF 50V (E)
R1001	1-247-810-11	CARBON	130 5% 1/4W	C725	1-136-165-00	FILM	0.1uF 5% 50V (US, CND, AEP, UK, G, SP, AUS)
R1002	1-247-810-11	CARBON	130 5% 1/4W	C726	1-136-165-00	FILM	0.1uF 5% 50V (US, CND, AEP, UK, G, SP, AUS)

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.

PANEL
DISPLAY
EJECT
POWER SW
PRIMARY
SECONDARY

Ref. No.	Part No.	Description	Remark		
C727	1-136-165-00	FILM	0.1uF	5%	50V
			(US, CND, AEP, UK, G, SP, AUS)		
C728	1-136-165-00	FILM	0.1uF	5%	50V
			(US, CND, AEP, UK, G, SP, AUS)		
C729	1-164-159-11	CERAMIC	0.1uF		50V
			(US, CND, AEP, UK, G, SP, AUS)		
< CONNECTOR >					
* CN901	1-750-444-11	CONNECTOR, FFC/FPC 39P (AEP, UK, G, SP)			
CN901	1-778-065-11	SOCKET, CONNECTOR 39P (US, CND, E, AUS)			
CN902	1-568-825-11	CONNECTOR, FFC/FPC 6P			
* CNP702	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P			
		(US, CND, AEP, UK, G, SP, AUS)			
CNP703	1-568-226-11	PIN, CONNECTOR 2P (AEP, UK, G, SP)			
< DIODE >					
D901	8-719-987-63	DIODE 1N4148M			
D902	8-719-987-63	DIODE 1N4148M			
D903	8-719-987-63	DIODE 1N4148M			
< IC >					
IC901	8-741-810-59	IC SBX1810-59			
< TRANSISTOR >					
Q901	8-729-900-89	TRANSISTOR DTC144ES			
Q902	8-729-900-89	TRANSISTOR DTC144ES			
Q903	8-729-900-89	TRANSISTOR DTC144ES			
< RESISTOR >					
R115	1-249-425-11	CARBON	4.7K	5%	1/4W
R215	1-249-425-11	CARBON	4.7K	5%	1/4W
R327	1-249-429-11	CARBON	10K	5%	1/4W
R830	1-249-429-11	CARBON	10K	5%	1/4W
R833	1-249-429-11	CARBON	10K	5%	1/4W
R838	1-249-441-11	CARBON	100K	5%	1/4W
R839	1-249-441-11	CARBON	100K	5%	1/4W
R840	1-249-441-11	CARBON	100K	5%	1/4W
R841	1-249-441-11	CARBON	100K	5%	1/4W
R842	1-249-441-11	CARBON	100K	5%	1/4W
R843	1-249-441-11	CARBON	100K	5%	1/4W
R844	1-249-441-11	CARBON	100K	5%	1/4W
R861	1-249-441-11	CARBON	100K	5%	1/4W
R901	1-249-441-11	CARBON	100K	5%	1/4W
R905	1-247-838-00	CARBON	2K	5%	1/4W
R906	1-249-422-11	CARBON	2.7K	5%	1/4W
R907	1-247-848-11	CARBON	5.1K	5%	1/4W
R908	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-247-866-11	CARBON	30K	5%	1/4W
R910	1-247-838-00	CARBON	2K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R911	1-249-422-11	CARBON	2.7K	5%	1/4W
R912	1-247-848-11	CARBON	5.1K	5%	1/4W
R915	1-249-429-11	CARBON	10K	5%	1/4W
R916	1-247-866-11	CARBON	30K	5%	1/4W
R917	1-247-836-11	CARBON	1.6K	5%	1/4W
R918	1-247-840-00	CARBON	2.4K	5%	1/4W
R919	1-249-423-11	CARBON	3.3K	5%	1/4W
R920	1-249-426-11	CARBON	5.6K	5%	1/4W
R921	1-247-858-11	CARBON	13K	5%	1/4W
R922	1-247-868-11	CARBON	36K	5%	1/4W
R923	1-247-807-31	CARBON	100	5%	1/4W
< VARIABLE RESISTOR >					
RV311	1-225-221-11	RES, VAR, CARBON 5K/5K (REC LEVEL)			
RV321	1-225-222-11	RES, VAR, CARBON 5K/5K (BIAS)			
RV395	1-225-219-11	RES, VAR, CARBON 50K/50K (BALANCE)			
RV396	1-225-220-11	RES, VAR, CARBON 50K/50K (REC LEVEL)			
< SWITCH >					
S901	1-554-303-21	SWITCH, TACTILE (■)			
S902	1-554-303-21	SWITCH, TACTILE (◀◀)			
S903	1-554-303-21	SWITCH, TACTILE (▶▶)			
S904	1-554-303-21	SWITCH, TACTILE (● REC)			
S905	1-554-303-21	SWITCH, TACTILE (○ REC MUTE)			
S906	1-554-303-21	SWITCH, TACTILE (▷▷)			
S907	1-554-303-21	SWITCH, TACTILE (■ PAUSE)			
S908	1-554-303-21	SWITCH, TACTILE (MEMORY)			
S909	1-554-303-21	SWITCH, TACTILE (RESET)			
S910	1-554-303-21	SWITCH, TACTILE (MONITOR)			
S911	1-554-303-21	SWITCH, TACTILE (CALIBRATION)			
S912	1-554-303-21	SWITCH, TACTILE (≡ OPEN/CLOSE)			
S913	1-762-647-11	SWITCH, ROTARY (DOLBY NR)			
S915	1-762-580-11	SWITCH, PUSH (1 KEY) (POWER)			
		(US, CND, E, AUS)			
△ S922	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY) (POWER)			
		(AEP, UK, G, SP)			
< TRANSFORMER >					
△ T701	1-429-502-11	TRANSFORMER, POWER (US, CND)			
△ T701	1-429-503-11	TRANSFORMER, POWER (AEP, UK, G, SP)			
△ T701	1-426-613-11	TRANSFORMER, POWER (E)			
△ T701	1-429-656-11	TRANSFORMER, POWER (AUS)			
< FLUORESCENT INDICATOR TUBE >					
VFD901	1-517-163-11	INDICATOR TUBE, FLUORESCENT			

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.

REEL MOTOR

Ref. No.	Part No.	Description	Remark
*	1-632-741-21	REEL MOTOR BOARD *****	
		< CAPACITOR >	
C1051	1-124-907-11	ELECT 10uF 20% 50V	
C1052	1-124-907-11	ELECT 10uF 20% 50V	
C1053	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
* CN1051	1-568-945-11	PIN, CONNECTOR 7P	
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< DIODE >	
D1001	8-719-980-85	DIODE SLF-325C (ON THE FRONT PANEL)	
		< RESISTOR >	
R1051	1-247-825-31	CARBON 560 5% 1/4W	

		MISCELLANEOUS *****	
△ 10	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
63	1-777-110-11	WIRE (FLAT TYPE)(6 CORE)	
64	1-777-109-11	WIRE (FLAT TYPE)(39 CORE)	
△ CNP901	1-551-188-99	CORD, POWER (E)	
△ CNP901	1-558-945-21	CORD, POWER (POLAR.SPT-1)(US, CND)	
△ CNP901	1-575-651-21	CORD, POWER (AEP, G, SP)	
△ CNP901	1-696-586-11	CORD, POWER (UK)	
△ CNP901	1-696-845-11	CORD, POWER (AUS)	
D1001	8-719-980-85	DIODE SLF-325C	
HE301	1-543-673-11	HEAD, MAGNETIC (ERASE)	
HRP301	1-543-733-11	HEAD, MAGNETIC(RECORD/PLAYBACK)	
M1001	X-3371-423-1	MOTOR (CAPSTAN V21M) ASSY	
M1051	X-3371-429-1	MOTOR (REEL RM) ASSY	
M1052	X-3371-428-1	MOTOR (ASSIST) ASSY	
S1001	1-466-238-11	ENCODER, ROTARY	
△ S701	1-692-155-11	SELECTOR, POWER VOLTAGE (E)	
△ T701	1-429-502-11	TRANSFORMER, POWER (US, CND)	
△ T701	1-429-503-11	TRANSFORMER, POWER (AEP, UK, G, SP)	
△ T701	1-429-613-11	TRANSFORMER, POWER (E)	
△ T701	1-429-656-11	TRANSFORMER, POWER (AUS)	

Ref. No.	Part No.	Description	Remark
		***** HARDWARE LIST *****	
#1	7-682-548-04	SCREW +BVTT 3X8 (S)	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#4	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#5	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#6	7-621-255-20	SCREW +BVTT 2X4 (S)	
#7	7-621-772-20	SCREW +B 2X5	
#8	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#9	7-621-255-35	SCREW +BVTT 2X5 (S)	

		ACCESSORIES & PACKING MATERIALS *****	
	1-551-734-11	CORD, CONNECTION	
	3-856-296-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)(CND, AEP)	
	3-856-296-21	MANUAL, INSTRUCTION (ENGLISH) (US, UK, AUS)	
	3-856-296-31	MANUAL, INSTRUCTION (GERMAN, DATCH, SWEDISH, ITALIAN)(AEP)	
	3-856-296-41	MANUAL, INSTRUCTION (GERMAN)(G)	
	3-856-296-51	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE)(E, SP)	
*	3-932-083-01	CUSHION (AEP, UK, E, SP, AUS)	
*	3-935-037-01	INDIVIDUAL CARTON (AEP, UK, G, SP)	
*	3-935-039-01	INDIVIDUAL CARTON (US, CND)	
*	3-935-041-01	INDIVIDUAL CARTON (E, AUS)	
*	3-936-086-01	CUSHION (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.

