


TC-W365

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
Australian Model



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

Model Name Using Similar Mechanism	TC-W345	
Tape Transport Mechanism Type	DECK-A	TCM-180VA-H6
	DECK-B	TCM-180VB-H6

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 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

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 - 13,000 Hz (± 3 dB, IEC)
Type II tape, Sony Type II (HIGH): 30 - 14,000 Hz (± 3 dB, IEC)

SPECIFICATIONS

Type IV tape, Sony Type IV (METAL): 30 - 15,000 Hz (± 3 dB, IEC), 30 - 13,000 Hz (± 3 dB, -4 dB recording)

Wow and flutter

± 0.16 % W. Peak (IEC)
0.11 % W. RMS (NAB)
 ± 0.2 % W. Peak (DIN)

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: 1 mW at a load impedance of 32 ohms

General

Power requirements

Where purchased	Power requirements
U.S.A. and Canada	120 V AC, 60 Hz
Continental Europe	220 - 230 V AC, 50/60 Hz
Australia	240 V AC, 50/60 Hz
Other countries	120/220/240 V AC, 50/60 Hz

Power consumption
18 W

Dimensions (approx.) (w/h/d)
430 x 125 x 285 mm (w/h/d)
(17 x 5 x 11 1/4 inches)
including projecting parts and controls

Mass (approx.)
3.7 kg (8 lbs 3 oz)

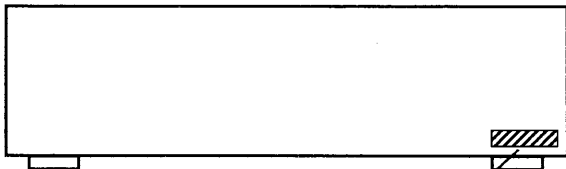
Supplied accessories

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

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK
SONY[®]

MODEL IDENTIFICATION
— BACK PANEL —



- 3-919-820-0□ : US model
- 3-919-820-1□ : AEP model
- 3-919-820-2□ : E model
- 3-919-820-3□ : Australian model
- 3-919-820-4□ : Canadian model

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SAFETY CHECK-OUT
(US model only)

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

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)

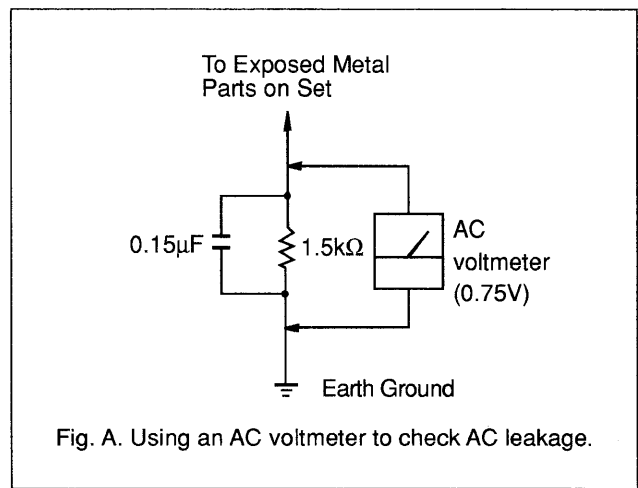


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ 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.

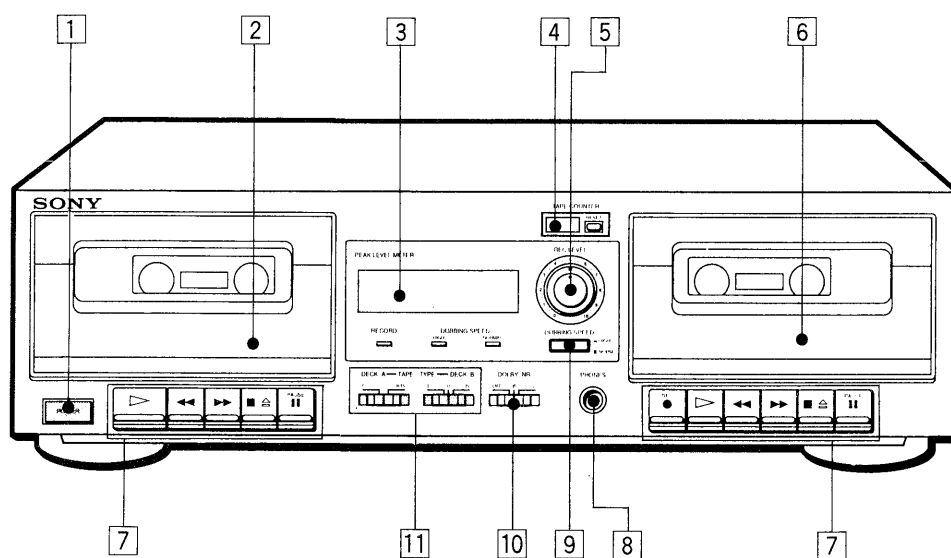
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ 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

Identification of Front Panel Parts



- 1 POWER switch
- 2 Cassette holder (deck A)
- 3 PEAK LEVEL METER
- 4 TAPE COUNTER and RESET button
- 5 REC (recording) LEVEL control
- 6 Cassette holder (deck B)
- 7 Tape operation buttons
 - REC (record) button (deck B only)
 - ▷ (play) button
 - ◀◀ (rewinding) button
 - ▶▶ (fast-forward) button
 - ▲ (stop) and (eject) button
 - || PAUSE button
- 8 HEADPHONES jack (stereo phone jack)
- 9 DUBBING SPEED button
HIGH/NORMAL speed button
- 10 DOLBY NR (Dolby noise reduction) buttons
- 11 TAPE TYPE SELECT switches

SECTION 2 MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belt
capstan	idler

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	30 — 70 g • cm (0.42 — 0.97 oz • inch)
FWD Back tension	CQ-102C	1.5 — 5.5 g • cm (DECK A) (0.020 — 0.076 oz • inch) 1.5 — 7 g • cm (DECK B) (0.020 — 0.096 oz • inch)
FF, REW	CQ-201B	60 g • cm or more (0.87 oz • inch or more)

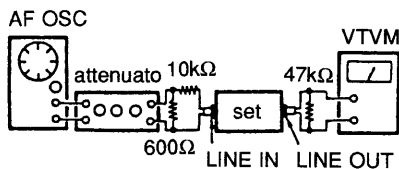
SECTION 3 ELECTRICAL ADJUSTMENTS

- Demagnetize the record/playback with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
- The adjustments should be performed for both L-CH and R-CH.

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

DOLBY NR switch	: OFF
TAPE TYPE switch	: TYPE 1 (NORMAL)
Rec Level	: min

Mode : record



Standard Input Level

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

Standard Output Level

	LINE OUT
load impedance	47kΩ
output 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

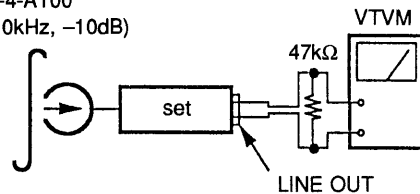
RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

DECK A

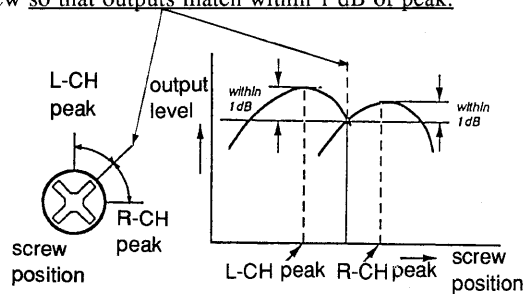
DECK B

Procedure :

- Mode : FWD playback
test tape
P-4-A100
(10kHz, -10dB)

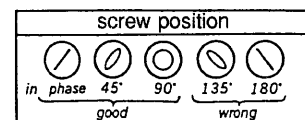
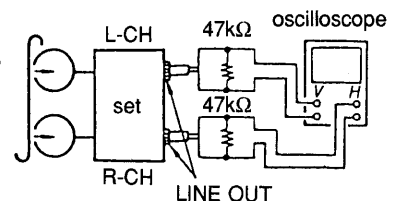


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



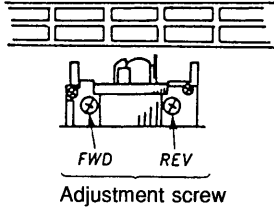
- Mode : play back

test tape
P-4-A100
(10kHz, -10dB)



4. After the adjustments, apply suitable locking compound to the parts adjusted.

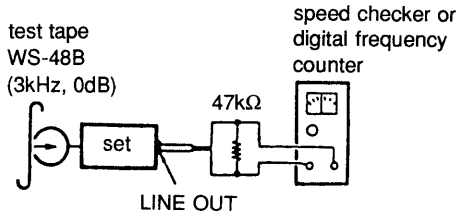
Adjustment Location :



TAPE SPEED ADJUSTMENT DECK A DECK B

Procedure :

Mode : FWD playback



1. Connect pin to with the lead wire. (CNP505)

Measurement Limit : high speed

Speed checker	Digital frequency counter
$0 \pm 0.3\%$	$6,000 \pm 20\text{Hz}$

Adjustment location :

DECK-A side RV501
DECK-B side RV503

2. Remove the wire in step 1. (CNP505)

Measurement Limit : normal speed

Speed checker	Digital frequency counter
$0 \pm 0.3\%$	$3,000 \pm 10\text{Hz}$

Adjustment Location :

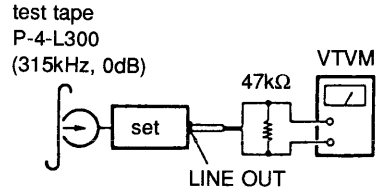
DECK-A side RV502
DECK-B side RV504

3. If the specifications are not satisfied, repeat step 1 and 2.

PLAYBACK LEVEL ADJUSTMENT DECK A DECK B

Procedure :

Mode : FWD playback



Adjust,

Deck A is RV101 (L-CH) and RV201 (R-CH),

Deck B is RV102 (L-CH) and RV202 (R-CH)

so that the adjustment within measurement limit as follows.

Measurement Limit :

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

level difference between the channels : within 0.5dB.

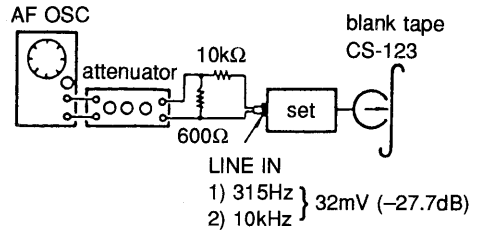
RECORD BIAS ADJUSTMENT DECK B

Setting :

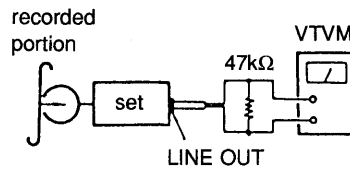
TAPE SELECT : TYPE-I (DECK-B)

Procedure :

1. Mode : record



2. Mode : playback



Play the tape recorded in step 1. If the specification is not satisfied, adjust RV151 (L-CH), RV251 (R-CH) and repeat steps 1 and 2.

Measurement Limit:

The LINE OUT level of 10kHz signal relative to that of 315Hz : -0.5dB to 0.5dB .

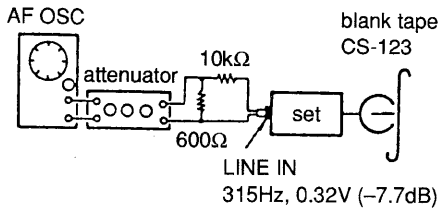
RECORD GAIN ADJUSTMENT DECK B

Setting :

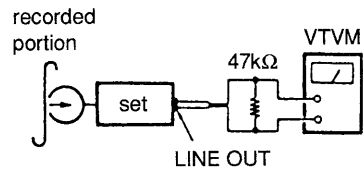
TAPE SELECT : TYPE-I (DECK-B)

Procedure :

1. Mode : record



2. Mode : playback



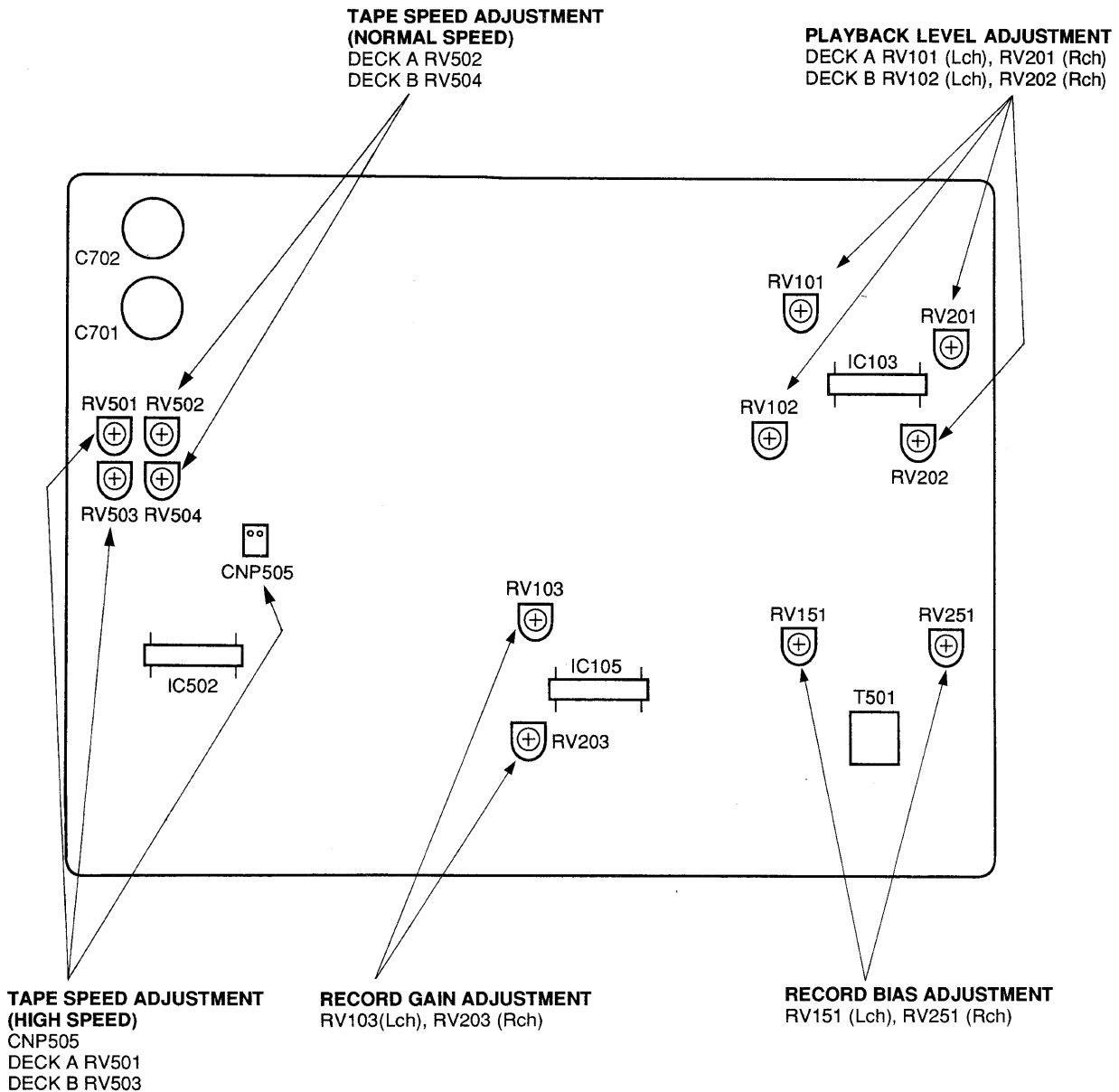
play the recorded in step 1. If the specification is not satisfied, adjust RV103 (L-CH), RV203 (R-CH) and repeat steps 1 and 2.

Measurement Limit:

LINE OUT level : -7.7dB to 0.5dB (0.30 to 0.34V)

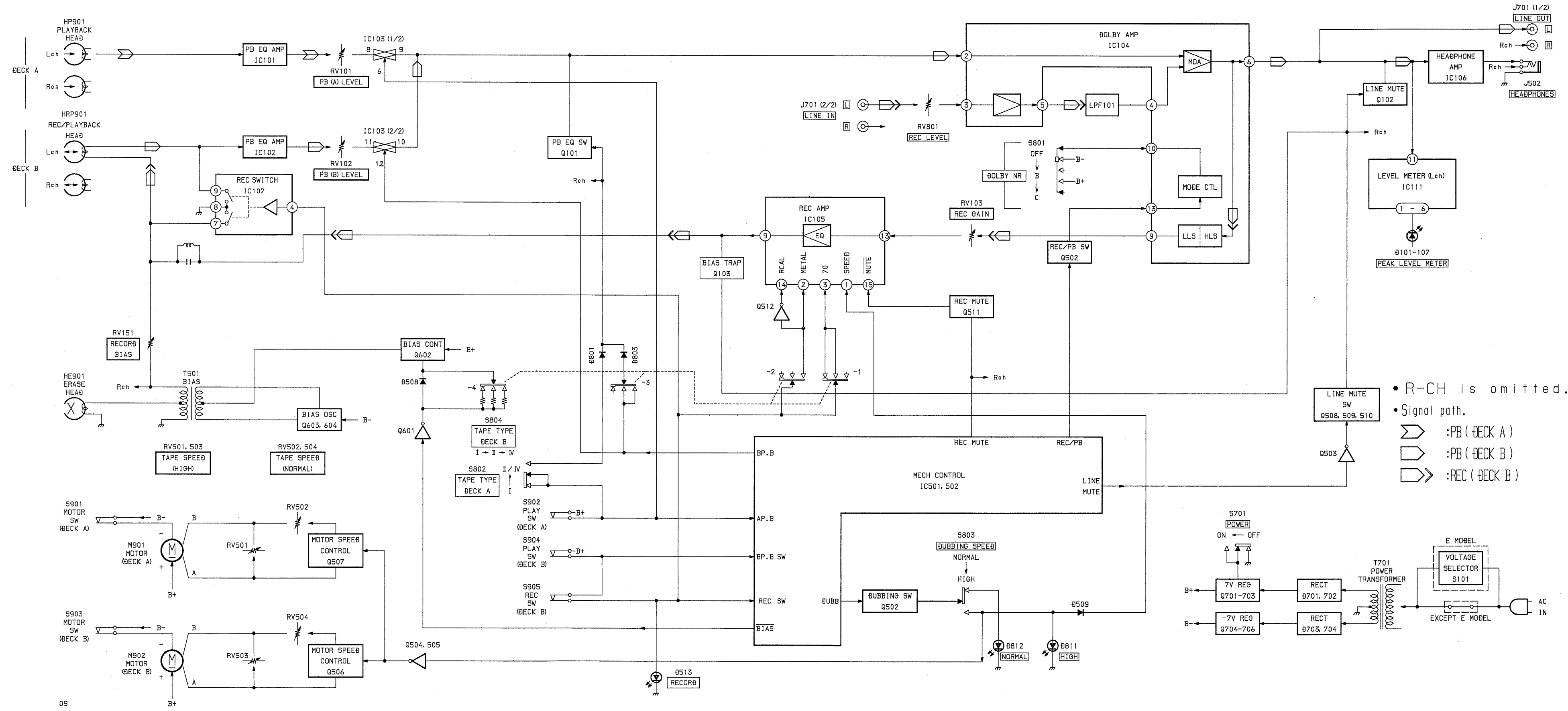
Adjustment Location : Main Board (1/5)

— Component Side —



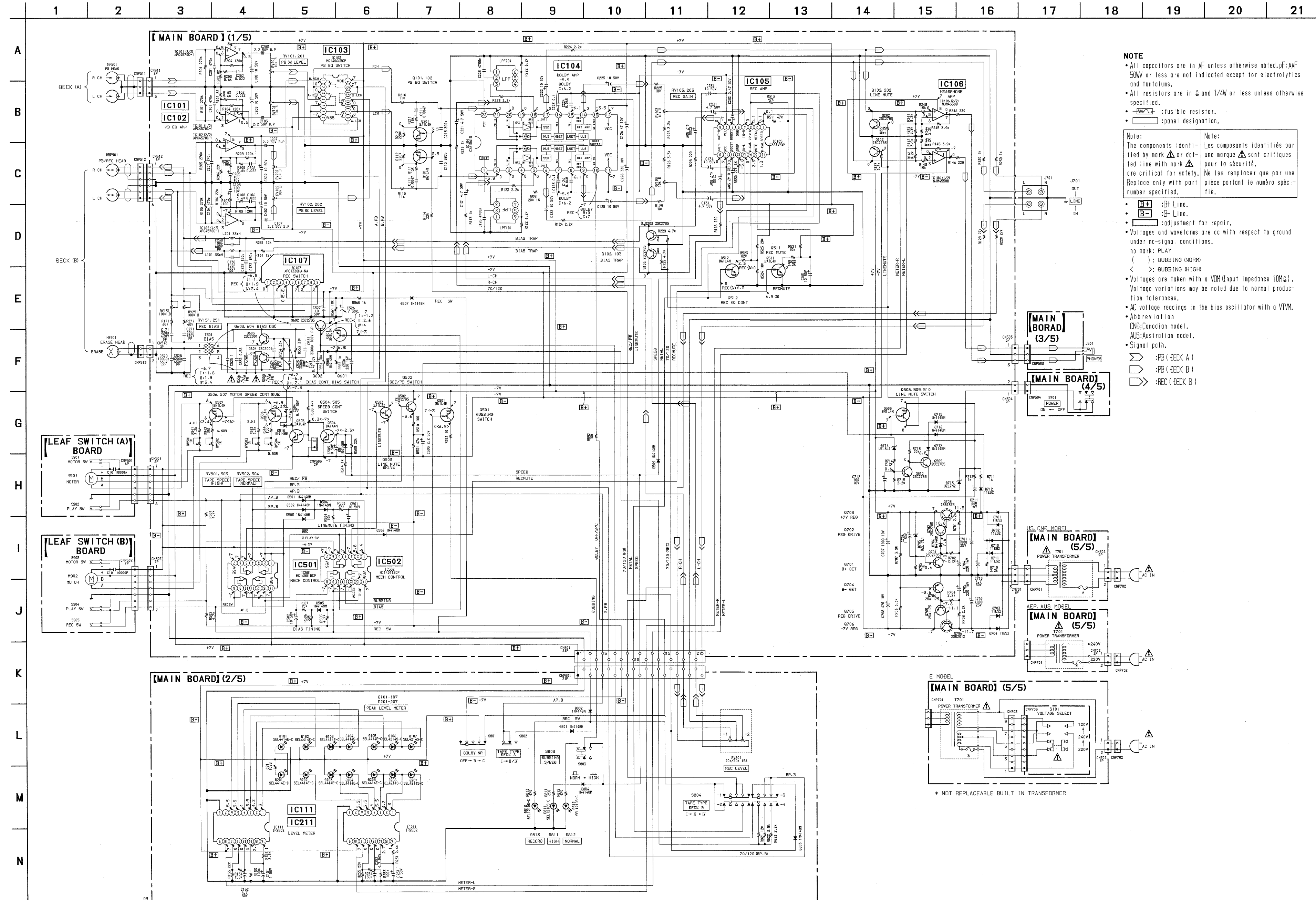
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM



- R-CH is omitted.
- Signal path.
- ▬ : PB (DECK A)
- - - : PB (DECK B)
- ▬▬ : REC (DECK B)

4-2. SCHEMATIC DIAGRAM
 See page 16 for IC Block Diagrams.



NOTE

- All capacitors are in μF unless otherwise noted. μF : μF , 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- R_{fus} : fusible resistor.
- P_{panel} : panel designation.

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

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

- $\text{B}+$: B+ Line.
- $\text{B}-$: B- Line.
- A : adjustment for repair.

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
 no mark: PLAY
 (): GUBBING INORM
 < >: GUBBING HIGH

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

• AC voltage readings in the bias oscillator with a VTVM.

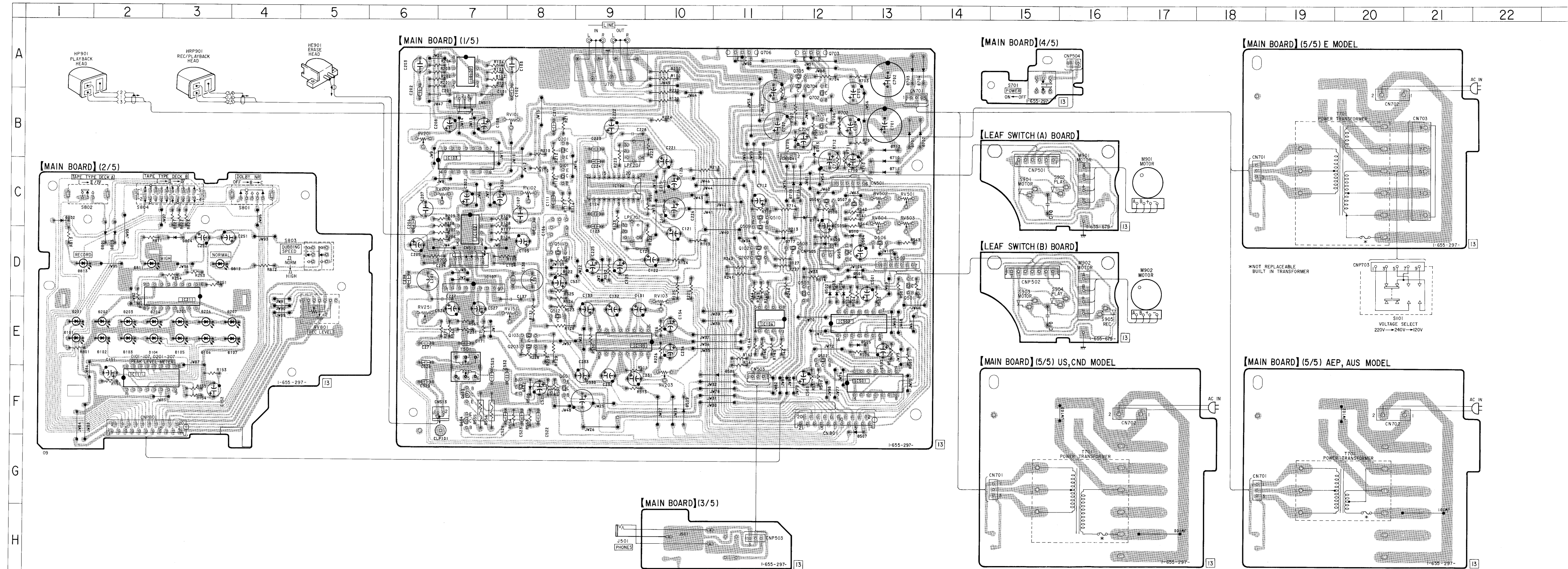
• Abbreviation
 CMB: Canadian model.
 AUS: Australian model.
 S: Signal path.

$\text{B}+$: PB (BECK A)
 $\text{B}-$: PB (BECK B)
 REC : REC (BECK B)

Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	E-1	D812	D-2
D102	E-2	D813	D-3
D103	E-2		
D104	E-2	IC101	A-7
D105	E-3	IC102	D-7
D106	E-3	IC103	C-7
D107	E-4	IC104	C-9
D201	E-1	IC105	E-9
D202	E-2	IC106	E-11
D203	E-2	IC107	D-7
D204	E-2	IC111	F-2
D205	E-3	IC211	E-3
D206	E-3	IC501	F-13
D207	E-4	IC502	E-12
D501	D-13		
D502	D-12	Q101	C-8
D503	D-12	Q102	D-11
D504	D-12	Q103	E-8
D505	E-13	Q201	B-8
D506	F-11	Q202	D-11
D507	F-13	Q203	E-8
D508	F-8	Q501	D-13
D509	F-10	Q502	E-12
D510	D-12	Q503	D-12
D511	D-12	Q504	C-12
D701	B-13	Q505	D-12
D702	B-13	Q506	D-12
D703	A-13	Q507	C-12
D704	A-13	Q508	D-12
D705	B-12	Q509	C-11
D706	B-12	Q510	C-11
D710	C-13	Q511	D-8
D711	C-13	Q512	E-8
D712	B-13	Q601	F-8
D713	B-12	Q602	F-8
D714	C-12	Q603	F-7
D715	C-12	Q604	F-7
D716	C-12	Q701	B-12
D717	D-12	Q702	B-12
D801	D-2	Q703	A-12
D802	C-1	Q704	A-12
D803	D-2	Q705	A-12
D804	D-3	Q706	A-11
D811	D-1		

4-3. PRINTED WIRING BOARD

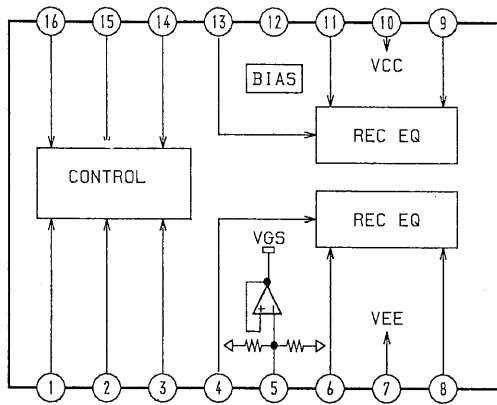


Note:

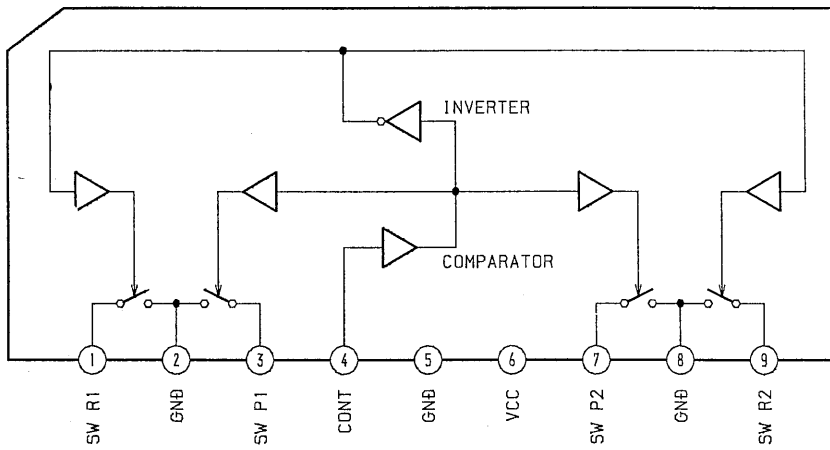
- : parts extracted from the component side.
- ▨ : Pattern from the side which enable seeing.
- Abbreviation
CND : Canadian model.
AUS : Australian model.

4-4. IC BLOCK DIAGRAMS

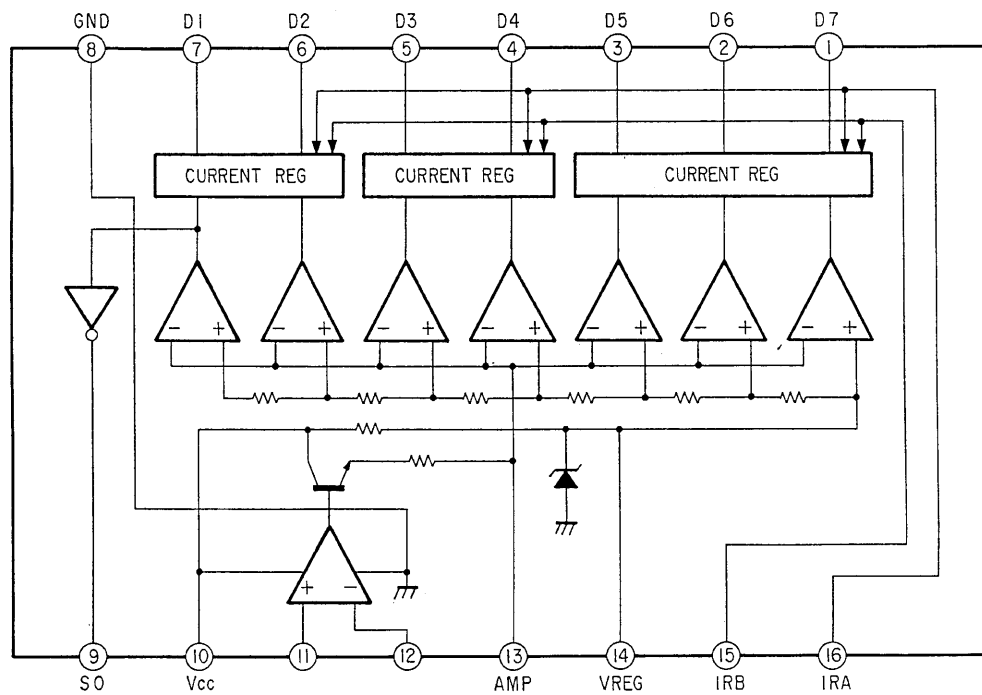
IC105 CXA1579P



IC107 μ PC1330HA-NA.



IC111,211 IR2E02



SECTION 5 EXPLODED VIEWS

NOTE:

- 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.

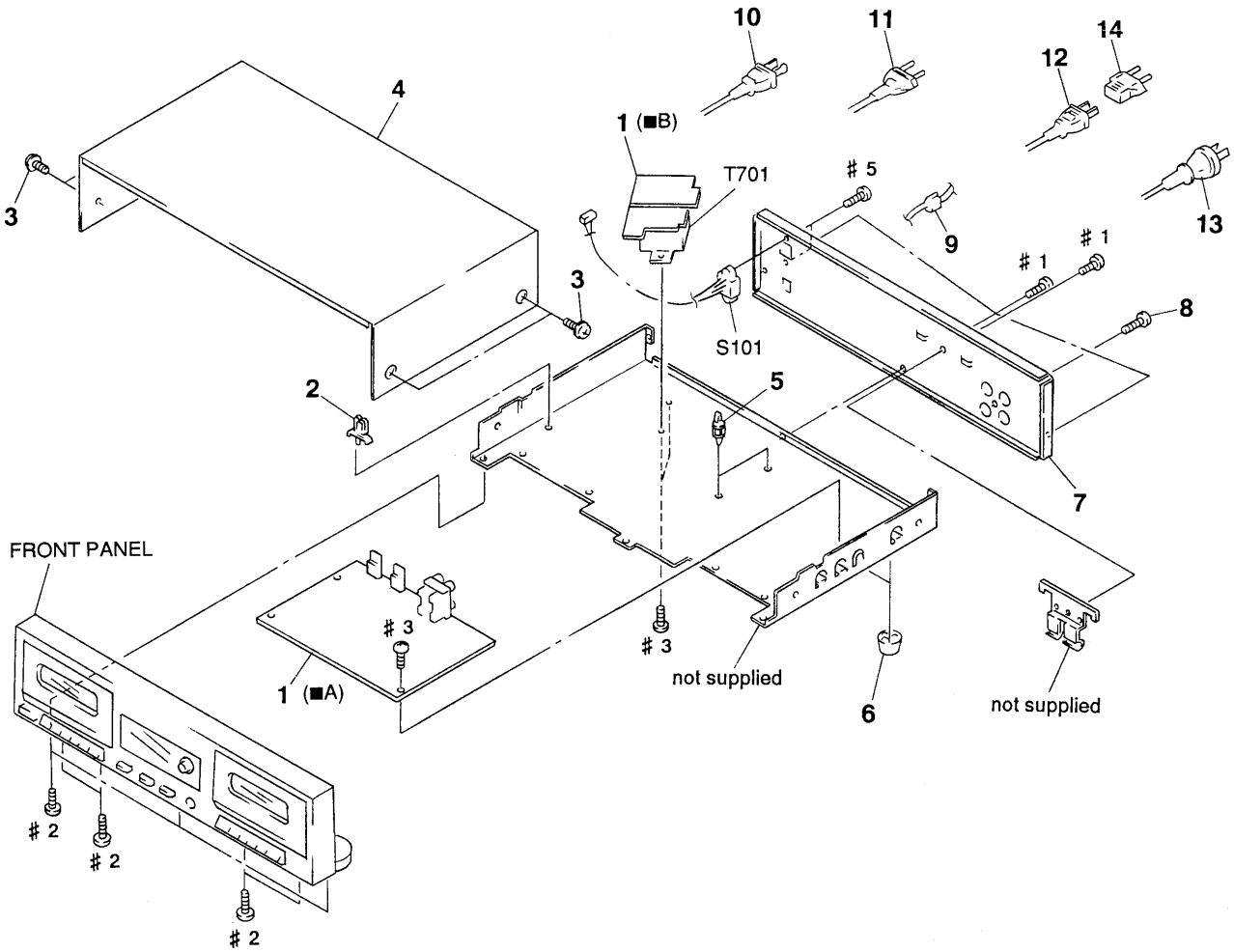
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
CND : Canadian model
AUS : Australian model

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.

5-1. CASE SECTION

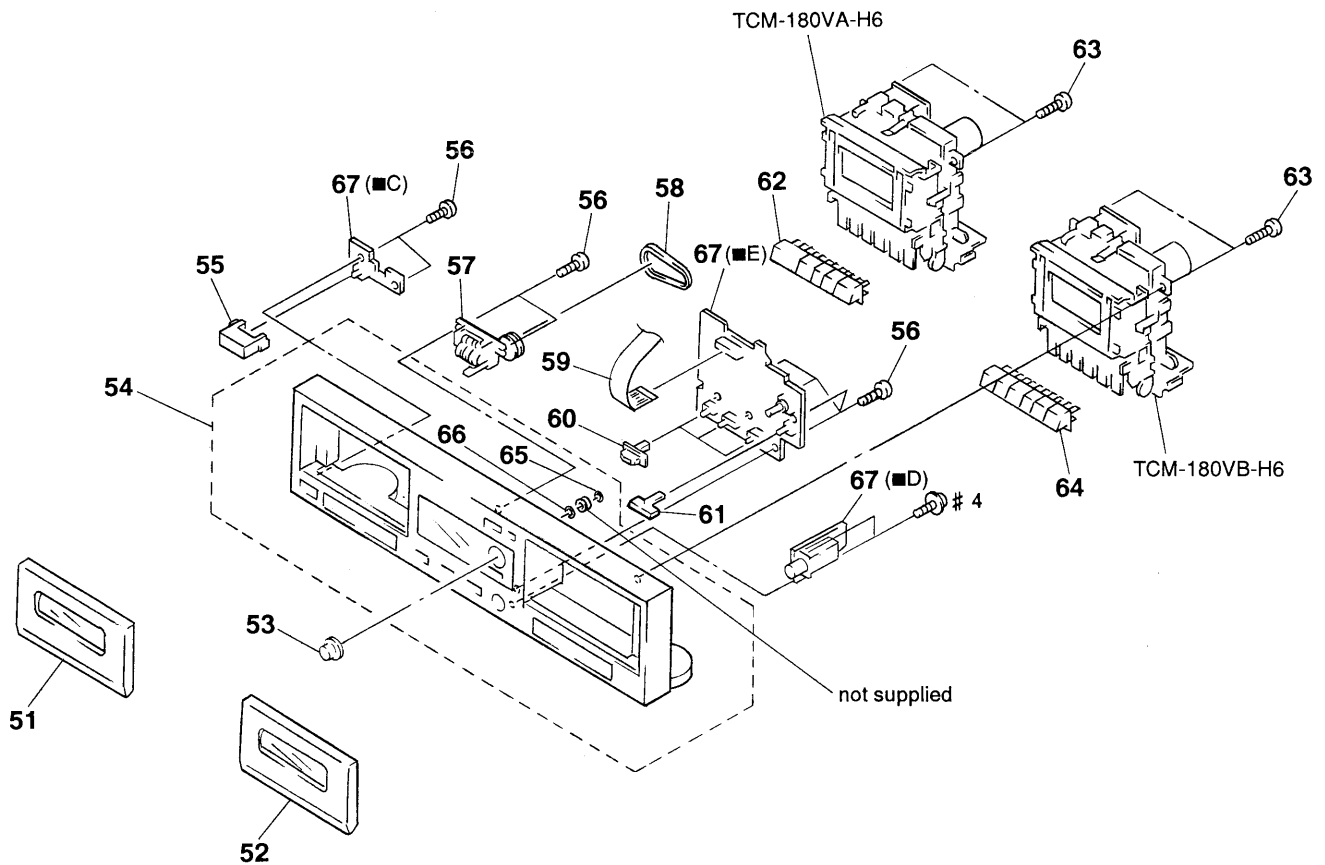
NOTE: ■ A, ■ B, ■ C, ■ D and ■ E are supplied as MAIN board.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	A-2007-307-A	MAIN BOARD, COMPLETE (US, CND)		8	3-704-515-01	SCREW (BV/RING)	
* 1	A-2007-308-A	MAIN BOARD, COMPLETE (AEP)		* 9	3-703-244-00	BUSHING (2104), CORD (AEP, AUS)	
* 1	A-2007-309-A	MAIN BOARD, COMPLETE (AUS)		9	3-703-571-11	BUSHING (S) (4516), CORD (US, CND, E)	
* 1	A-2007-392-A	MAIN BOARD, COMPLETE (E)			1-558-945-21	CORD, POWER (POLAR. SPT-1) (US, CND)	
2	2-122-805-01	CLAMP, CORD			1-575-651-21	CORD, POWER (AEP)	
3	3-363-099-01	SCREW (CASE 3 TP2)			1-558-943-41	CORD, POWER (E)	
* 4	4-943-088-41	CASE			1-696-845-11	CORD, POWER (AUS)	
* 5	3-346-265-31	HOLDER, PC BOARD			1-569-007-11	ADAPTER, CONVERSION 2P (E)	
6	4-930-848-01	FOOT			S101	SELECTOR, POWER VOLTAGE (E)	
* 7	3-919-820-01	PANEL, BACK (US)			T701	TRANSFORMER, POWER (US, CND)	
* 7	3-919-820-11	PANEL, BACK (AEP)			T701	TRANSFORMER, POWER (AEP, AUS)	
* 7	3-919-820-21	PANEL, BACK (E)			T701	TRANSFORMER, POWER (E)	
* 7	3-919-820-31	PANEL, BACK (AUS)					
* 7	3-919-820-41	PANEL, BACK (CND)					

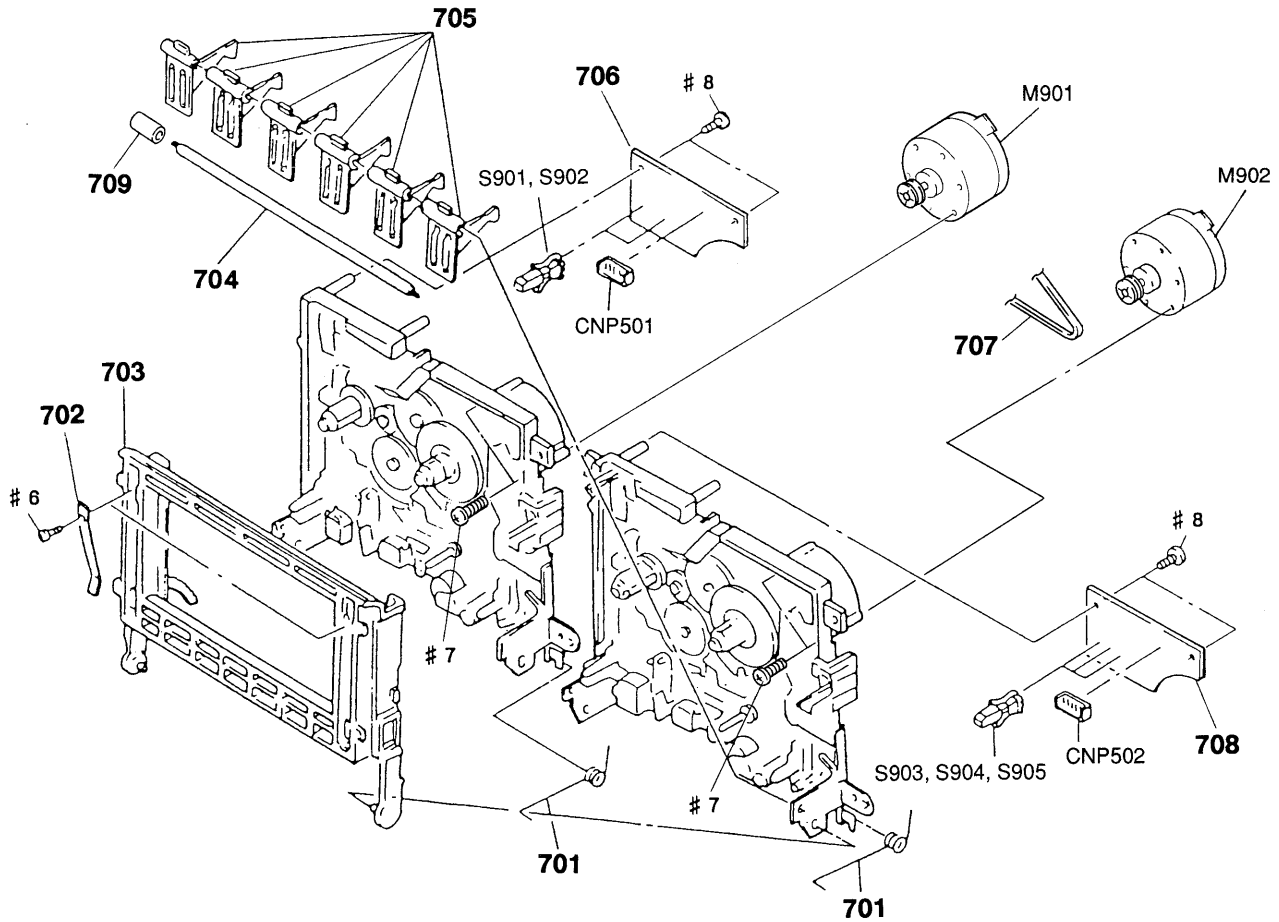
5-2. FRONT PANEL SECTION

NOTE: ■ A, ■ B, ■ C, ■ D and ■ E are supplied as MAIN board.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3369-525-1	LID (A) ASSY, CASSETTE		61	3-919-807-01	BUTTON (DB)	
52	X-3369-526-1	LID (B) ASSY, CASSETTE		62	3-919-815-01	BUTTON (BLOCK A)	
53	3-909-661-01	KNOB (REC)		63	4-951-620-11	SCREW (2.6X10), +BVTP	
54	X-3369-527-1	PANEL ASSY, FRONT (US,CND)		64	3-919-816-01	BUTTON (BLOCK B)	
54	X-3369-528-1	PANEL ASSY, FRONT (AEP, E, AUS)		65	3-558-708-11	WASHER, STOPPER	
55	3-354-932-01	BUTTON (POWER)		66	3-701-437-11	WASHER	
56	4-951-620-01	SCREW (2.6X8), +BVTP		* 67	A-2007-307-A	MAIN BOARD, COMPLETE (US,CND)	
57	1-548-596-61	COUNTER, TAPE (MIDDLE TYPE)		* 67	A-2007-308-A	MAIN BOARD, COMPLETE (AEP)	
58	3-453-112-00	BELT (CAPSTAN)		* 67	A-2007-309-A	MAIN BOARD, COMPLETE (AUS)	
59	1-769-348-11	WIRE (FLAT TYPE) (21 CORE)		* 67	A-2007-392-A	MAIN BOARD, COMPLETE (E)	
60	3-919-806-01	KNOB (SL)					

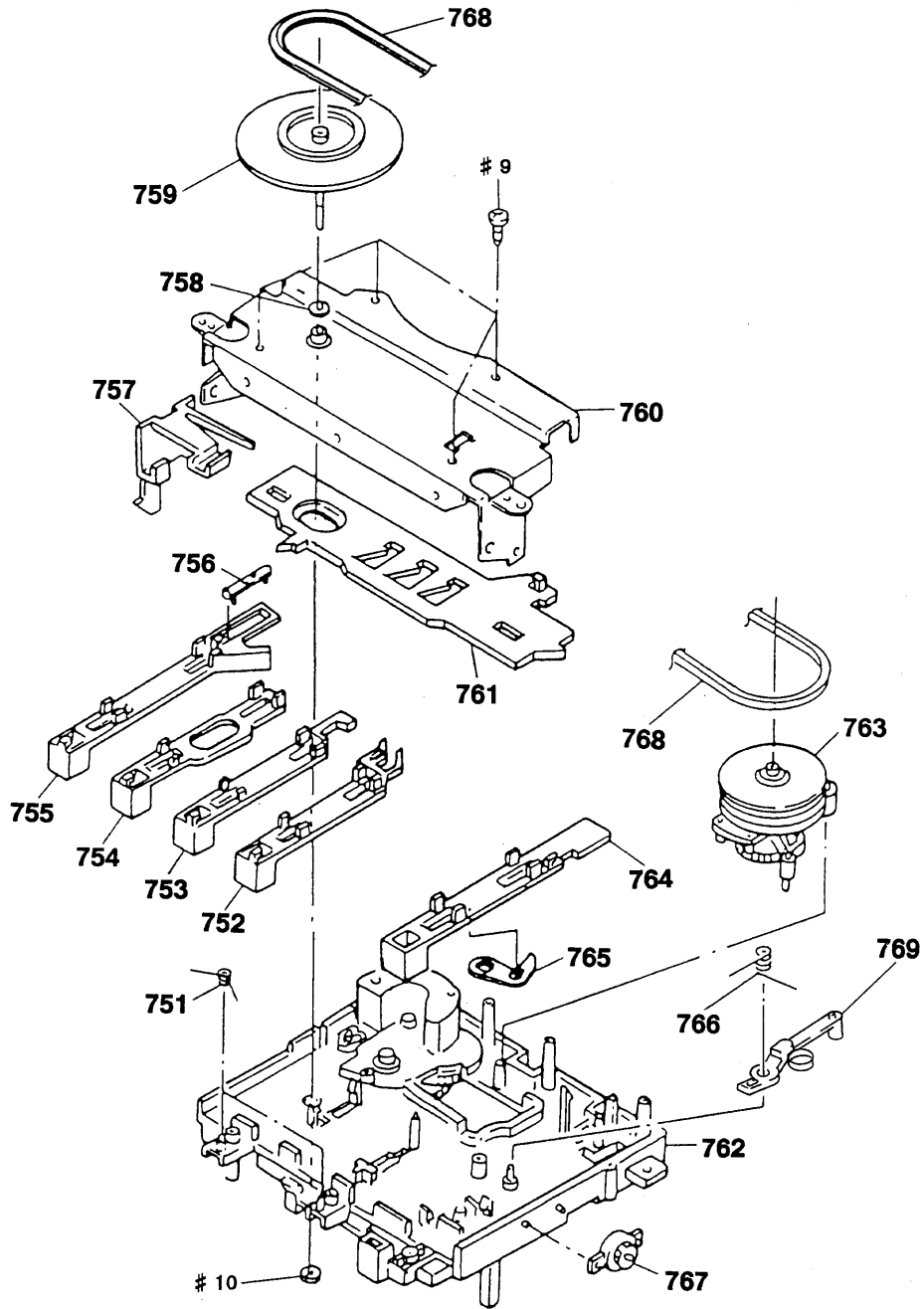
5-3. MECHANISM DECK SECTION 1
(DECK A: TCM-180VA-H6)
(DECK B: TCM-180VB-H6)



Ref. No.	Part No.	Description
701	3-358-287-01	SPRING (LOADING A), TORSION
702	3-358-209-01	SPRING (CASSETTE HOLDER), LEAF
703	3-358-266-02	HOLDER, CASSETTE
704	3-371-917-01	SHAFT (BUTTON SHAFT 4)
705	3-369-333-01	LEVER (BUTTON BASE D)
* 706	1-655-679-13	LEAF SWITCH (A) BOARD
707	3-358-272-01	BELT (A2)
* 708	1-655-679-13	LEAF SWITCH (B) BOARD
* 709	3-358-216-01	COLLAR (DECK A)
* CNP501	1-564-499-11	PIN, CONNECTOR 6P

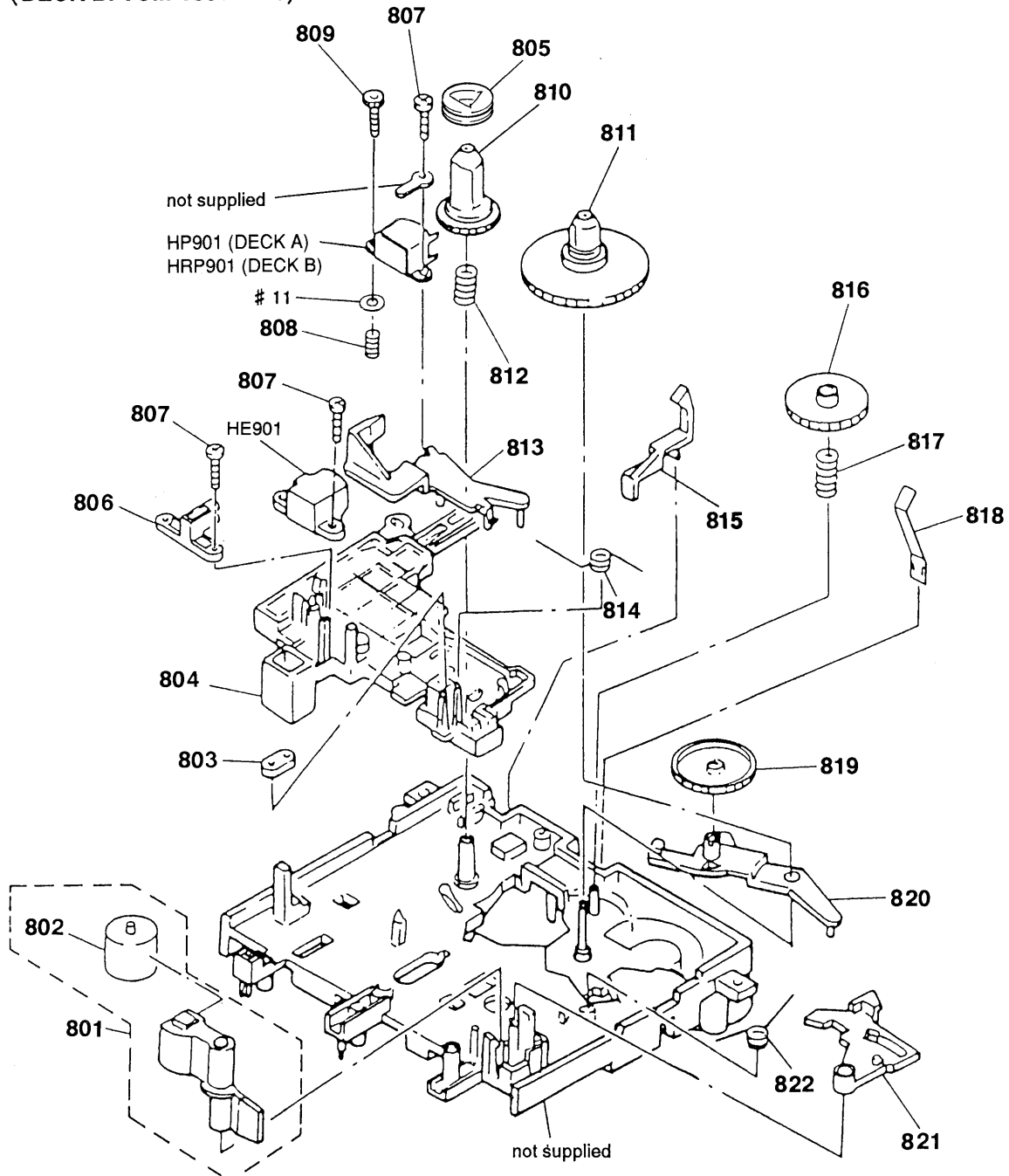
Ref. No.	Part No.	Description	Remark
* CNP502	1-564-500-11	PIN, CONNECTOR 7P	
M901	X-3358-212-1	MOTOR (A) ASSY (DECK A)	
M902	X-3358-212-1	MOTOR (B) ASSY (DECK B)	
S901	1-571-736-11	SWITCH, LEAF (MOTOR)	
S902	1-571-736-11	SWITCH, LEAF (PLAY)	
S903	1-571-736-11	SWITCH, LEAF (MOTOR)	
S904	1-571-736-11	SWITCH, LEAF (PLAY)	
S905	1-571-736-11	SWITCH, LEAF (REC)	

5-4. MECHANISM DECK SECTION 2
 (DECK A: TCM-180VA-H6)
 (DECK B: TCM-180VB-H6)



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
751	3-358-232-01	SPRING (S-P F-R), TORSION		* 761	3-358-249-01	SLIDER (LOCK PLATE)	
752	3-358-258-01	SLIDER (REW)		762	X-3358-207-2	CHASSIS (A) ASSY	
753	3-358-257-01	SLIDER (FF)		763	X-3358-202-1	LEVER (FR ARM) ASSY	
754	3-358-256-01	SLIDER (STOP/EJECT)		764	3-358-259-01	SLIDER (REC)(DECK B)	
755	3-358-260-01	SLIDER (PAUSE)		* 765	3-358-204-01	LEVER (REC SAFETY)(DECK B)	
* 756	3-358-226-01	LEVER (PAUSE LEVER)		766	3-358-214-01	SPRING (LOCK), TORSION (DECK A)	
* 757	3-358-261-02	SLIDER (HOLDER LOCK)		766	3-358-233-01	SPRING (REC-LOCK), TORSION (DECK B)	
758	3-701-437-01	WASHER		767	3-319-224-51	DAMPER, SMALL	
759	X-3358-205-1	FLY WHEEL (A) ASSY		768	3-358-230-01	BELT (A1)	
* 760	X-3358-213-1	BRACKET (A) ASSY		769	3-358-286-01	LEVER (MOTOR LEVER)	

5-5. MECHANISM DECK SECTION 3
(DECK A: TCM-180VA-H6)
(DECK B: TCM-180VB-H6)



Ref. No.	Part No.	Description
	801	X-3358-204-1 LEVER (PINCH LEVER) ASSY
	802	3-578-143-11 PINCH ROLLER
*	803	3-358-215-01 BUSHING (WIRE KIT RETAINER)
	804	3-358-265-01 SLIDER (HEAD PC BOARD A)
*	805	3-358-270-01 PULLEY (COUNTER PULLEY) (DECK B)
*	806	3-363-931-01 GUIDE, TAPE (DECK A)
	807	3-358-288-11 SCREW (T), AZIMUTH
	808	3-358-234-01 SPRING (AZIMUTH), COMPRESSION
	809	3-358-288-01 SCREW (T), AZIMUTH
	810	3-358-248-01 GEAR (SUPPLY REEL)
	811	X-3358-203-1 TABLE (T) ASSY, REEL
	812	3-358-208-01 SPRING (SUPPLY), COMPRESSION
*	813	3-358-251-01 LEVER (TENSION DETECTION ARM)

Ref. No.	Part No.	Description
	814	3-358-228-01 SPRING, TORSION
*	815	3-358-255-01 LEVER (GB LEVER) (DECK B)
*	816	3-358-224-01 GEAR (FF GEAR)
	817	3-358-207-01 SPRING (FF GEAR), COMPRESSION
	818	3-358-227-01 SPRING, LEAF
*	819	3-358-284-01 GEAR (TU GEAR)
*	820	3-358-252-01 LEVER (TU ARM)
*	821	3-358-253-01 LEVER (SHUT-OFF LEVER)
	822	3-358-243-01 SPRING (FU-SHUT), TORSION
	HE901	1-543-673-11 HEAD, MAGNETIC (ERASE) (DECK B)
	HP901	1-543-319-11 HEAD, MAGNETIC (PB) (DECK A)
	HRP901	1-543-319-11 HEAD, MAGNETIC (REC/PB) (DECK B)

LEAF SWITCH (A)

LEAF SWITCH (B)

MAIN

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

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 name.

- 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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H
- Abbreviation
CND : Canadian model
AUS : Australian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-655-679-13	LEAF SWITCH (A) BOARD *****		*	A-2007-307-A	MAIN BOARD, COMPLETE (US, CND) *****	
		< CAPACITOR >		*	A-2007-308-A	MAIN BOARD, COMPLETE (AEP) *****	
C10	1-162-306-11	CERAMIC 0.01uF 30% 16V		*	A-2007-309-A	MAIN BOARD, COMPLETE (AUS) *****	
		< CONNECTOR >		*	A-2007-392-A	MAIN BOARD, COMPLETE (E) *****	
* CNP501	1-564-499-11	PIN, CONNECTOR 6P				< CAPACITOR >	
		< SWITCH >		C101	1-162-290-31	CERAMIC 470PF 10% 50V	
S901	1-571-736-11	SWITCH, LEAF (MOTOR)		C102	1-136-157-00	FILM 0.022uF 5% 50V	
S902	1-571-736-11	SWITCH, LEAF (PLAY)		C103	1-124-767-00	ELECT 2.2uF 20% 50V	
*****				C104	1-162-290-31	CERAMIC 470PF 10% 50V	
*	1-655-679-13	LEAF SWITCH (B) BOARD *****		C105	1-124-443-00	ELECT 100uF 20% 10V	
		< CAPACITOR >		C106	1-136-157-00	FILM 0.022uF 5% 50V	
C10	1-162-306-11	CERAMIC 0.01uF 30% 16V		C107	1-124-767-00	ELECT 2.2uF 20% 50V	
		< CONNECTOR >		C108	1-124-907-11	ELECT 10uF 20% 50V	
* CNP502	1-564-500-11	PIN, CONNECTOR 7P		C111	1-130-479-00	MYLAR 0.0047uF 5% 50V	
		< SWITCH >		C115	1-162-289-31	CERAMIC 390PF 10% 50V	
S903	1-571-736-11	SWITCH, LEAF (MOTOR)		C121	1-124-927-11	ELECT 4.7uF 20% 100V	
S904	1-571-736-11	SWITCH, LEAF (PLAY)		C122	1-124-907-11	ELECT 10uF 20% 50V	
S905	1-571-736-11	SWITCH, LEAF (REC)		C123	1-136-165-00	FILM 0.1uF 5% 50V	
*****				C124	1-136-163-00	FILM 0.068uF 5% 50V	
		< CAPACITOR >		C125	1-124-907-11	ELECT 10uF 20% 50V	
		< CONNECTOR >		C126	1-126-803-11	ELECT 47uF 20% 10V	
		< SWITCH >		C128	1-162-600-11	CERAMIC 0.0047uF 30% 16V	
		< MOTOR >		C131	1-124-927-11	ELECT 4.7uF 20% 100V	
		< PLAY >		C132	1-124-902-00	ELECT 0.47uF 20% 50V	
		< REC >		C133	1-124-927-11	ELECT 4.7uF 20% 100V	
		< BOARD >		C134	1-124-907-11	ELECT 10uF 20% 50V	
		< BOARD >		C137	1-162-284-31	CERAMIC 150PF 10% 50V	
		< BOARD >		C138	1-136-433-11	FILM 100PF 5% 630V	
		< BOARD >		C151	1-124-903-11	ELECT 1uF 20% 50V	
		< BOARD >		C152	1-124-927-11	ELECT 4.7uF 20% 100V	
		< BOARD >		C171	1-136-439-11	FILM 330PF 5% 630V	
		< BOARD >		C201	1-162-290-31	CERAMIC 470PF 10% 50V	
		< BOARD >		C202	1-136-157-00	FILM 0.022uF 5% 50V	
		< BOARD >		C203	1-124-767-00	ELECT 2.2uF 20% 50V	
		< BOARD >		C204	1-162-290-31	CERAMIC 470PF 10% 50V	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C205	1-124-443-00	ELECT	100uF 20% 10V	C712	1-124-443-00	ELECT 100uF 20% 10V	
C206	1-136-157-00	FILM	0.022uF 5% 50V			< CONNECTOR >	
C207	1-124-767-00	ELECT	2.2uF 20% 50V				
C208	1-124-907-11	ELECT	10uF 20% 50V				
C211	1-130-479-00	MYLAR	0.0047uF 5% 50V	CN503	1-506-468-11	PIN, CONNECTOR 3P	
				* CN504	1-568-951-11	PIN, CONNECTOR 2P	
C215	1-162-289-31	CERAMIC	390PF 10% 50V	* CN511	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C221	1-124-927-11	ELECT	4.7uF 20% 100V	* CN512	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
C222	1-124-907-11	ELECT	10uF 20% 50V	* CN513	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
C223	1-136-165-00	FILM	0.1uF 5% 50V				
C224	1-136-163-00	FILM	0.068uF 5% 50V	CN701	1-506-468-11	PIN, CONNECTOR 3P	
				* CN702	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	
C225	1-124-907-11	ELECT	10uF 20% 50V	CN703	1-573-565-11	PIN, CONNECTOR 5P	
C226	1-124-604-00	ELECT	330uF 20% 10V	CN801	1-568-838-11	SOCKET, CONNECTOR 21P	
C228	1-162-600-11	CERAMIC	0.0047uF 30% 16V	* CNP505	1-535-115-00	TERMINAL	
C231	1-124-927-11	ELECT	4.7uF 20% 100V				
C232	1-124-902-00	ELECT	0.47uF 20% 50V	CNP801	1-568-838-11	SOCKET, CONNECTOR 21P	
						< DIODE >	
C233	1-124-927-11	ELECT	4.7uF 20% 100V	D101	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C234	1-124-907-11	ELECT	10uF 20% 50V	D102	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C237	1-162-284-31	CERAMIC	150PF 10% 50V	D103	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C238	1-136-433-11	FILM	100PF 5% 630V	D104	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C251	1-124-903-11	ELECT	1uF 20% 50V	D105	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C252	1-124-927-11	ELECT	4.7uF 20% 100V	D106	8-719-304-32	LED SEL4214S (GREEN) (PEAK LEVEL METER)	
C271	1-136-439-11	FILM	330PF 5% 630V	D107	8-719-304-32	LED SEL4214S (GREEN) (PEAK LEVEL METER)	
C302	1-124-907-11	ELECT	10uF 20% 50V	D201	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C402	1-124-907-11	ELECT	10uF 20% 50V	D202	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C501	1-124-907-11	ELECT	10uF 20% 50V	D203	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C502	1-124-907-11	ELECT	10uF 20% 50V	D204	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C503	1-124-925-11	ELECT	2.2uF 20% 100V	D205	8-719-304-37	LED SEL4414E (RED) (PEAK LEVEL METER)	
C504	1-124-902-00	ELECT	0.47uF 20% 50V	D206	8-719-304-32	LED SEL4214S (GREEN) (PEAK LEVEL METER)	
C505	1-124-907-11	ELECT	10uF 20% 50V	D207	8-719-304-32	LED SEL4214S (GREEN) (PEAK LEVEL METER)	
C521	1-124-902-00	ELECT	0.47uF 20% 50V	D501	8-719-987-63	DIODE 1N4148M	
C522	1-106-355-12	MYLAR	3300PF 5% 200V	D502	8-719-987-63	DIODE 1N4148M	
C523	1-106-355-12	MYLAR	3300PF 5% 200V	D503	8-719-987-63	DIODE 1N4148M	
C524	1-106-365-00	MYLAR	0.0082uF 5% 100V	D504	8-719-987-63	DIODE 1N4148M	
C525	1-136-177-00	FILM	1uF 5% 50V	D505	8-719-987-63	DIODE 1N4148M	
C526	1-124-927-11	ELECT	4.7uF 20% 100V	D506	8-719-987-63	DIODE 1N4148M	
C527	1-124-907-11	ELECT	10uF 20% 50V	D507	8-719-987-63	DIODE 1N4148M	
C528	1-136-562-11	FILM	0.0082uF 5% 630V	D508	8-719-987-63	DIODE 1N4148M	
C529	1-136-601-11	FILM	0.01uF 5% 630V	D509	8-719-987-63	DIODE 1N4148M	
C530	1-124-120-11	ELECT	220uF 20% 25V	D510	8-719-987-63	DIODE 1N4148M	
C531	1-124-907-11	ELECT	10uF 20% 50V	D511	8-719-987-63	DIODE 1N4148M	
C532	1-136-174-00	FILM	0.56uF 5% 50V	D701	8-719-024-99	DIODE 11ES2-NTA2B	
C701	1-124-557-11	ELECT	1000uF 20% 25V	D702	8-719-024-99	DIODE 11ES2-NTA2B	
C702	1-124-557-11	ELECT	1000uF 20% 25V	D703	8-719-024-99	DIODE 11ES2-NTA2B	
C704	1-124-120-11	ELECT	220uF 20% 25V	D704	8-719-024-99	DIODE 11ES2-NTA2B	
C705	1-124-120-11	ELECT	220uF 20% 25V	D705	8-719-000-75	DIODE UZL-7L1	
C706	1-124-903-11	ELECT	1uF 20% 50V	D706	8-719-987-63	DIODE 1N4148M	
C707	1-124-473-11	ELECT	1000uF 20% 10V	D710	8-719-024-99	DIODE 11ES2-NTA2B	
C708	1-124-472-11	ELECT	470uF 20% 10V	D711	8-719-024-99	DIODE 11ES2-NTA2B	
C710	1-124-927-11	ELECT	4.7uF 20% 100V	D712	8-719-024-99	DIODE 11ES2-NTA2B	
C711	1-124-119-00	ELECT	330uF 20% 16V				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D713	8-719-933-47	DIODE	HZS7B2L	Q505	8-729-900-89	TRANSISTOR	DTC144ES
D714	8-719-933-33	DIODE	HZS6A1L	Q506	8-729-900-65	TRANSISTOR	DTA144ES
D715	8-719-987-63	DIODE	IN4148M	Q507	8-729-900-65	TRANSISTOR	DTA144ES
D716	8-719-987-63	DIODE	IN4148M	Q508	8-729-900-65	TRANSISTOR	DTA144ES
D717	8-719-987-63	DIODE	IN4148M	Q509	8-729-119-78	TRANSISTOR	2SC2785-HFE
D801	8-719-987-63	DIODE	IN4148M	Q510	8-729-119-78	TRANSISTOR	2SC2785-HFE
D802	8-719-987-63	DIODE	IN4148M	Q511	8-729-900-89	TRANSISTOR	DTC144ES
D803	8-719-987-63	DIODE	IN4148M	Q512	8-729-900-89	TRANSISTOR	DTC144ES
D804	8-719-987-63	DIODE	IN4148M	Q601	8-729-900-65	TRANSISTOR	DTA144ES
D811	8-719-302-46	DIODE	SEL1210S-C (HIGH)	Q602	8-729-119-78	TRANSISTOR	2SC2785-HFE
D812	8-719-302-46	DIODE	SEL1210S-C (NORMAL)	Q603	8-729-142-46	TRANSISTOR	2SC2001-LK
D813	8-719-302-46	DIODE	SEL1210S-C (RECORD)	Q604	8-729-142-46	TRANSISTOR	2SC2001-LK
		< IC >		Q701	8-729-119-78	TRANSISTOR	2SC2785-HFE
IC101	8-759-111-44	IC	uPC4570C-1	Q702	8-729-119-78	TRANSISTOR	2SC2785-HFE
IC102	8-759-111-44	IC	uPC4570C-1	Q703	8-729-141-83	TRANSISTOR	2SB1094-LK
IC103	8-759-000-49	IC	MC14066BCP	Q704	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC104	8-752-060-46	IC	CXA1561S	Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC105	8-752-055-62	IC	CXA1579P	Q706	8-729-209-15	TRANSISTOR	2SD2012
IC106	8-759-634-51	IC	M5218AP			< RESISTOR >	
IC107	8-759-079-42	IC	uPC1330HA-NA	R101	1-247-889-00	CARBON	270K 5% 1/4W
IC111	8-759-912-79	IC	IR2E02	R102	1-249-404-00	CARBON	82 5% 1/4W F
IC211	8-759-912-79	IC	IR2E02	R103	1-249-426-11	CARBON	5.6K 5% 1/4W
IC501	8-759-040-01	IC	MC14001BCP	R104	1-247-881-00	CARBON	120K 5% 1/4W
IC502	8-759-140-11	IC	uPD4011BC	R105	1-247-889-00	CARBON	270K 5% 1/4W
		< JACK >		R106	1-249-433-11	CARBON	22K 5% 1/4W
J501	1-568-519-41	JACK, LARGE TYPE (PHONES)		R107	1-247-807-31	CARBON	100 5% 1/4W
J701	1-565-258-11	JACK, PIN 4P (LINE)		R108	1-249-426-11	CARBON	5.6K 5% 1/4W
		< COIL >		R109	1-247-881-00	CARBON	120K 5% 1/4W
L101	1-410-781-11	INDUCTOR	33mH	R110	1-247-856-00	CARBON	11K 5% 1/4W
L201	1-410-781-11	INDUCTOR	33mH	R111	1-249-431-11	CARBON	15K 5% 1/4W
		< FILTER >		R112	1-247-887-00	CARBON	220K 5% 1/4W
LPF101	1-233-275-11	FILTER, LOW PASS		R113	1-249-417-11	CARBON	1K 5% 1/4W F
LPF201	1-233-275-11	FILTER, LOW PASS		R114	1-249-433-11	CARBON	22K 5% 1/4W
		< TRANSISTOR >		R120	1-249-434-11	CARBON	27K 5% 1/4W
Q101	8-729-900-89	TRANSISTOR	DTC144ES	R122	1-247-850-11	CARBON	6.2K 5% 1/4W
Q102	8-729-119-78	TRANSISTOR	2SC2785-HFE	R123	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q103	8-729-119-78	TRANSISTOR	2SC2785-HFE	R124	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q201	8-729-900-89	TRANSISTOR	DTC144ES	R125	1-249-429-11	CARBON	10K 5% 1/4W
Q202	8-729-119-78	TRANSISTOR	2SC2785-HFE	R126	1-249-423-11	CARBON	3.3K 5% 1/4W F
Q203	8-729-119-78	TRANSISTOR	2SC2785-HFE	R127	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q501	8-729-900-65	TRANSISTOR	DTA144ES	R128	1-249-409-11	CARBON	220 5% 1/4W F
Q502	8-729-119-78	TRANSISTOR	2SC2785-HFE	R129	1-249-425-11	CARBON	4.7K 5% 1/4W F
Q503	8-729-900-74	TRANSISTOR	DTC143TS	R130	1-249-417-11	CARBON	1K 5% 1/4W F
Q504	8-729-900-80	TRANSISTOR	DTC114ES	R131	1-249-430-11	CARBON	12K 5% 1/4W
				R141	1-249-428-11	CARBON	8.2K 5% 1/4W F
				R142	1-249-424-11	CARBON	3.9K 5% 1/4W F
				R143	1-249-429-11	CARBON	10K 5% 1/4W
				R144	1-249-421-11	CARBON	2.2K 5% 1/4W F
				R145	1-249-424-11	CARBON	3.9K 5% 1/4W F

MAIN

Ref. No.	Part No.	Description	Remark
RV103	1-241-630-11	RES, ADJ, CARBON 10K	
RV151	1-241-767-21	RES, ADJ, CARBON 100K	
RV201	1-241-630-11	RES, ADJ, CARBON 10K	
RV202	1-241-630-11	RES, ADJ, CARBON 10K	
RV203	1-241-630-11	RES, ADJ, CARBON 10K	
RV251	1-241-767-21	RES, ADJ, CARBON 100K	
RV501	1-241-761-11	RES, ADJ, CARBON 1K	
RV502	1-241-761-11	RES, ADJ, CARBON 1K	
RV503	1-241-761-11	RES, ADJ, CARBON 1K	
RV504	1-241-761-11	RES, ADJ, CARBON 1K	
RV801	1-223-850-11	RES, VAR, CARBON 20K/20K (REC LEVEL)	
< SWITCH >			
S701	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
S801	1-762-252-11	SWITCH, SLIDE (DOLBY NR)	
S802	1-762-251-11	SWITCH, SLIDE (TAPE TYPE DECK A)	
S803	1-554-118-00	SWITCH, PUSH (1 KEY) (DUBBING SPEED)	
S804	1-762-253-11	SWITCH, SLIDE (TAPE TYPE DECK B)	
< TRANSFORMER >			
T501	1-427-780-11	TRANSFORMER, BIAS OSCILLATION	

MISCELLANEOUS			

△10	1-558-945-21	CORD, POWER (POLAR. SPT-1) (US, CND)	
△11	1-575-651-21	CORD, POWER (AEP)	
△12	1-558-943-41	CORD, POWER (E)	
△13	1-696-845-11	CORD, POWER (AUS)	
△14	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
59	1-769-348-11	WIRE (FLAT TYPE) (21 CORE)	
* CNP501	1-564-499-11	PIN, CONNECTOR 6P	
* CNP502	1-564-500-11	PIN, CONNECTOR 7P	
HE901	1-543-673-11	HEAD, MAGNETIC (ERASE) (DECK B)	
HP901	1-543-319-11	HEAD, MAGNETIC (PB) (DECK A)	
HRP901	1-543-319-11	HEAD, MAGNETIC (REC/PB) (DECK B)	
M901	X-3358-212-1	MOTOR (A) ASSY (DECK A)	
M902	X-3358-212-1	MOTOR (B) ASSY (DECK B)	
△S101	1-692-155-11	SELECTOR, POWER VOLTAGE (E)	
△T701	1-427-777-11	TRANSFORMER, POWER (US, CND)	
△T701	1-427-778-11	TRANSFORMER, POWER (AEP, AUS)	
△T701	1-427-779-11	TRANSFORMER, POWER (E)	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)	
*	3-376-136-01	CUSHION (HALF)	
	3-759-823-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, E)	
	3-759-823-21	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AUS)	
	3-759-823-31	MANUAL, INSTRUCTION (FRENCH) (CND)	
	3-759-823-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
	3-759-823-51	MANUAL, INSTRUCTION (CHINESE) (E)	
*	3-912-048-01	CUSHION	
*	3-921-800-61	INDIVIDUAL CARTON (US, CND, E, AUS)	
*	3-921-800-71	INDIVIDUAL CARTON (AEP)	

HARDWARE LIST			

#1	7-682-547-09	SCREW +BVTT 3X6 (S)	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-685-134-19	SCREW (+ PTPWH) (2. 6X8)	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S (E)	
#6	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
#7	7-621-775-20	SCREW +B 2. 6X5	
#8	7-685-533-19	SCREW +BTP 2. 6X6 TYPE2 N-S	
#9	7-685-133-19	SCREW +P 2. 6X6 TYPE2	
#10	7-623-921-01	RING, RETAINING, CAPSTAN	
#11	7-688-001-01	W 2, SMALL	

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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