

TC-WR835S

SERVICE MANUAL

*AEP Model
UK Model
Australian Model*



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	NEW
Tape Transport Mechanism Type	TCM-200R5

SPECIFICATIONS

Recording system 4-track 2-channel stereo
Fast winding time Approx. 90 sec. (with Sony C-60 cassette)
Bias AC bias
Signal-to-noise ratio (at peak level and weighted)

Cassette (Dolby NR off)	Type IV	Type II	Type I
	59 dB	58 dB	56 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, 160 nWb/m, 315 Hz,
3rd H.D.)
1.8% (with type IV, 250 nWb/m, 315 Hz,
3rd H.D.)

Frequency response (Dolby NR off)

Type IV cassette	25 - 19,000 Hz (± 3 dB, IEC) 30 - 15,000 Hz (± 3 dB (-4 dB) recording)
Type II cassette	25 - 18,000 Hz (± 3 dB, IEC)
Type I cassette	25 - 16,000 Hz (± 3 dB, IEC)

Type IV : Sony METAL-S or ES-IV
Type II : Sony UX-S or UX
Type I : Sony HF-S

Wow and flutter $\pm 0.09\%$ W.Peak (IEC)
0.06% W.RMS (NAB)
 $\pm 0.16\%$ W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	0.16 V
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.5 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	0 — 3 mW at a load impedance of 32 ohms

General

Power requirements AEP model : 220 — 230V AC, 50/60Hz
UK, Australian models : 240V AC, 50/60Hz
Power consumption 30 W
Dimension 430 x 135 x 350 mm (w/h/d)
(17 x 5 $\frac{3}{8}$ x 13 $\frac{7}{8}$ inches) including projecting
parts and control
Mass 6.5 kg (14 lbs 6 oz)

Supplied accessories

Audio connecting cords (2)
Wireless remote commander (1)
Sony size SUM-3(NS) (2)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

STEREO CASSETTE DECK
SONY[®]

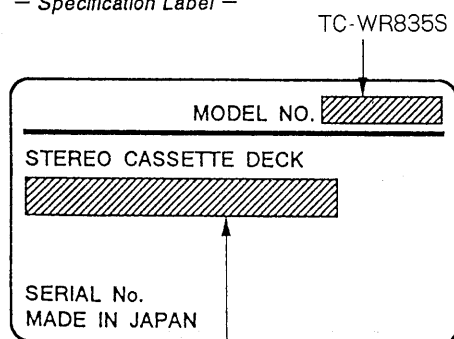


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MODEL IDENTIFICATION

– Specification Label –



AEP Model : AC 220 – 230V ~ 50/60Hz

UK, Australian Models : AC 240V ~ 50/60Hz

SAFETY - RELATED COMPONENT WARNING!!

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

SECTION 1 GENERAL

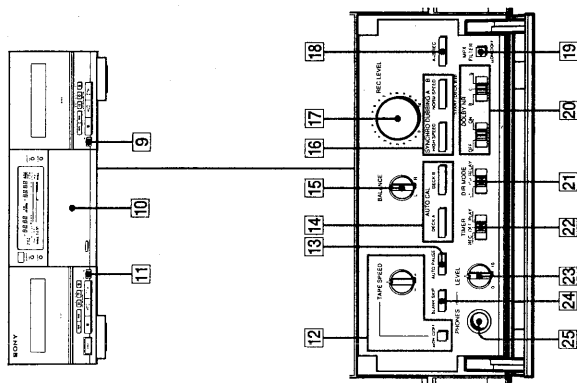
This section is extracted from instruction manual.

Identifying the Parts

Front Panel

For details, refer to the page number(s) indicated in parentheses.

- (Continued from previous page.)
- 9 OPEN/CLOSE button (deck B)
 - 10 Front cover
 - 11 OPEN/CLOSE button (deck A)
 - 12 TAPE SPEED control and button (26)
 - 13 AUTO PAUSE button (68)
 - 14 AUTO CAL buttons (58,60)
 - 15 BALANCE control (38)
 - 16 SYNCHRO DUBBING buttons (64)
 - HIGH SPEED button
 - NORM (normal) SPEED button
 - 17 REC (recording) LEVEL control (38,42)
 - 18 A-B REC (simultaneous recording) button (56)
 - 19 MPX (multiplex) FILTER ON/OFF switch (44)
 - 20 DOLBY NR (Dolby noise reduction) switches (22,38,50,54)
 - ON/OFF switch
 - B/C/S switch
 - 21 DIR (direction) MODE switch (22,28,38,50,54,64)
 - 22 TIMER switch (70)
 - 23 Headphone LEVEL control (24)
 - 24 BLANK SKIP button (30)
 - 25 PHONES (headphones) jack (stereo phone jack)



Identifying the Parts

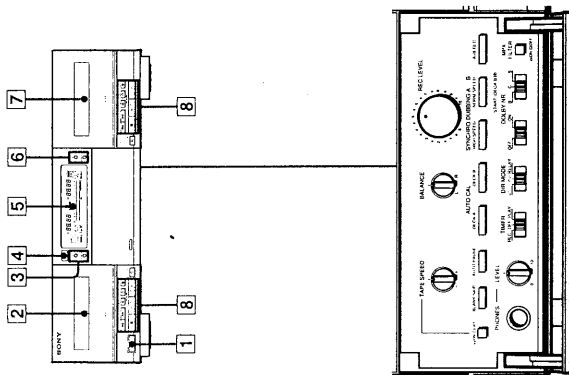
Front Panel

For details, refer to the page number(s) indicated in parentheses.

- 1 POWER switch
- 2 Deck A
- 3 COUNTER buttons (deck A) (36)
- RESET button
- MEMORY button
- 4 Remote control sensor
- You can remotely control this cassette deck with:
 - The supplied remote commander (Except for Canada).
 - A remote commander that came with a Sony amplifier or receiver if it has the mark and cassette deck control capability.
 - Any optional Sony remote commander with the mark and cassette deck control capability.
- 5 Display panel
- 6 COUNTER buttons (deck B) (36)
- RESET button
- MEMORY button
- 7 Deck B
- 8 Tape operation buttons
 - ◀ (stop) button
 - ▶ (reverse play) button
 - ▶ (forward play) button
 - ▶ (leftward fast winding) (Multi-AMS*) button
 - ▶ (rightward fast winding) (Multi-AMS*) button
- AMS*) button
- PAUSE button
- REC MUTE (record muting) button (56)
- REC (recording) button

* AMS is an abbreviation for Automatic Music Sensor.

(Continued on next page.)

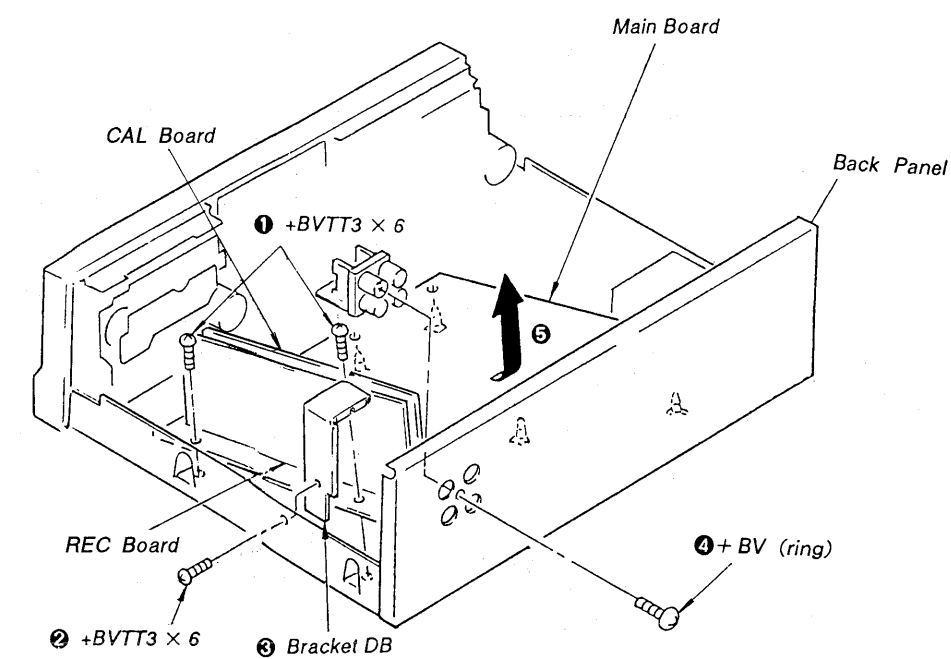


SECTION 2 DISASSEMBLY

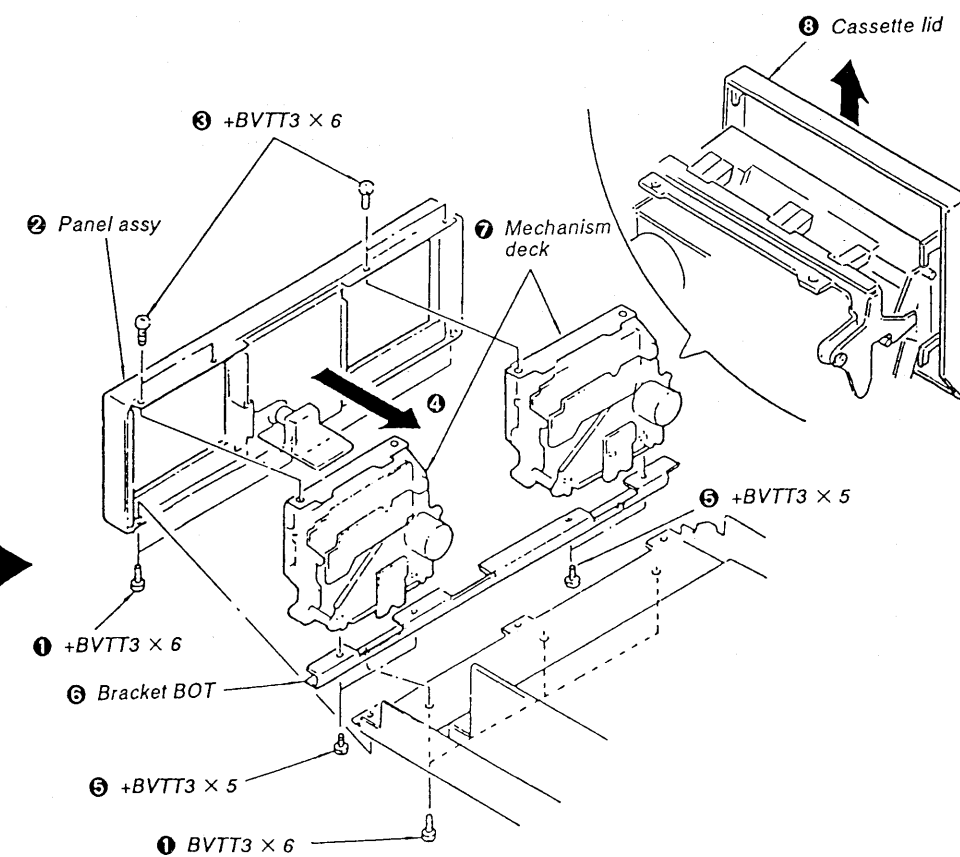
Note: Follow the disassembly procedure in the numerical order given.

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

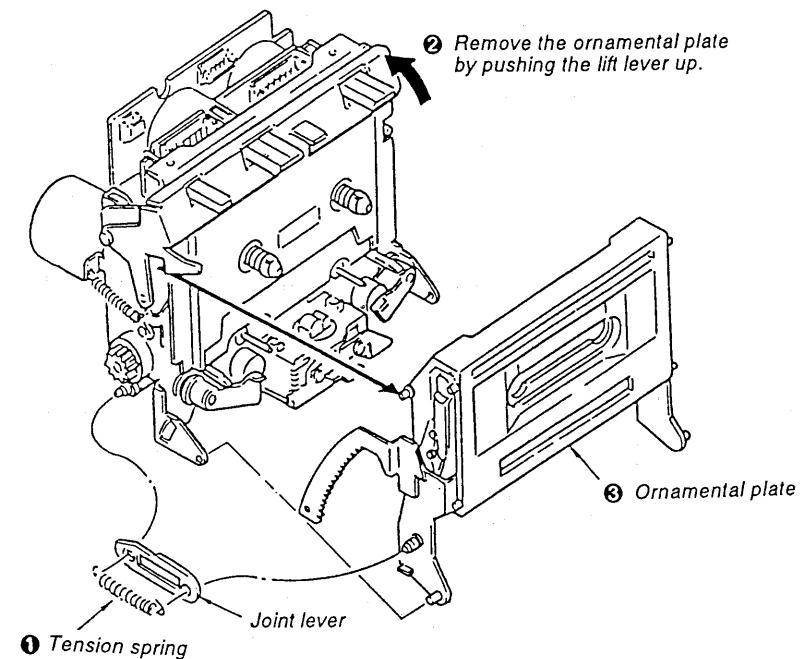
DOLBY BOARD, MAIN BOARD



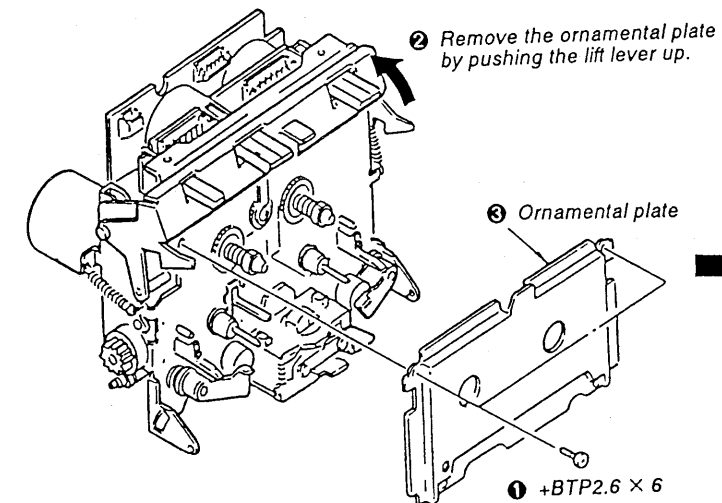
MECHANISM



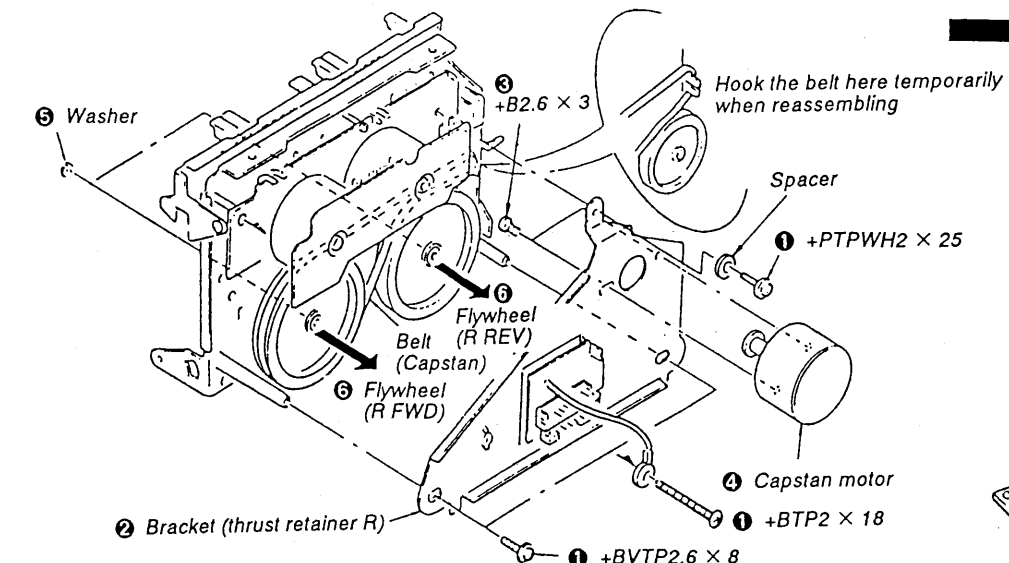
CASSETTE HOLDER



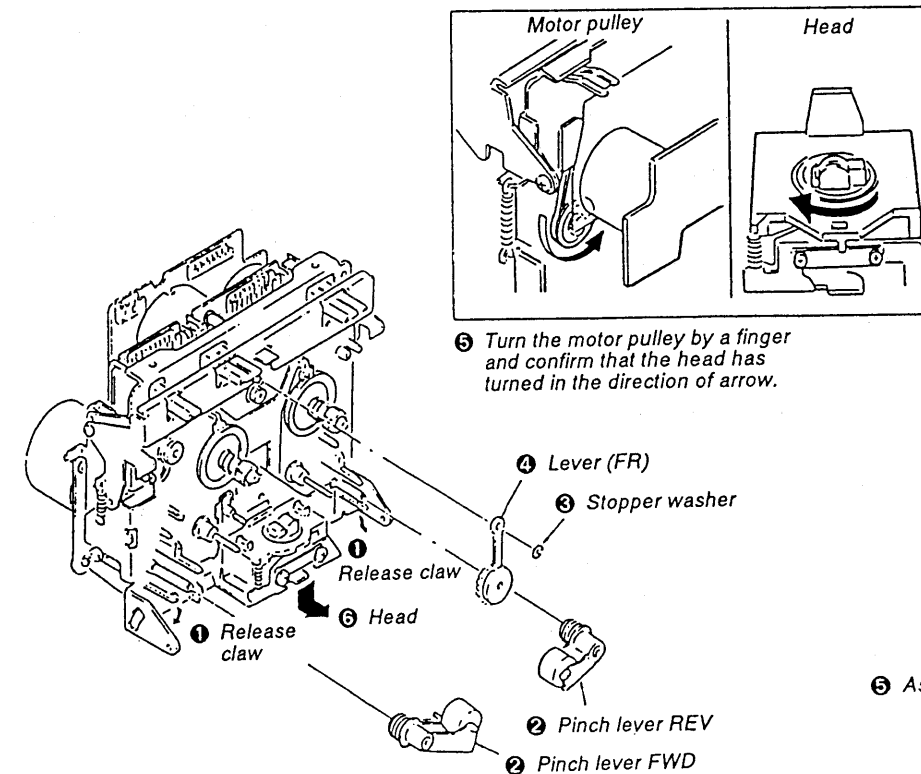
ORNAMENTAL PLATE



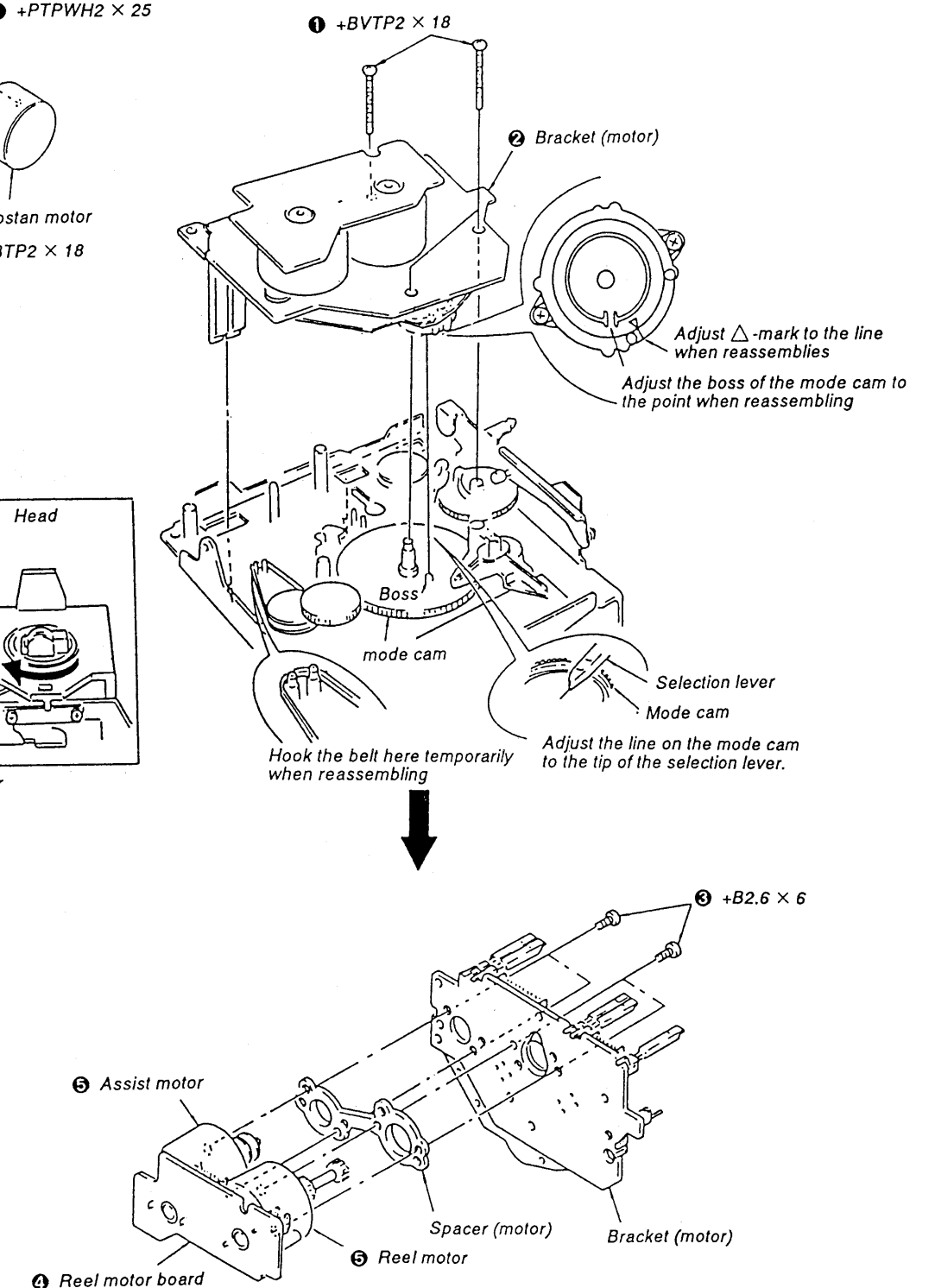
CAPSTAN PLATE, FLYWHEEL



PINCH LEVER, HEAD



REEL AND ASSIST MOTORS



SECTION 3

ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

PRECAUTIONS

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback and erase head 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.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	30 – 60g · cm (0.42 – 0.83oz · inch)
FWD Back tension	CQ-102C	1 – 5g · cm (0.014 – 0.063oz · inch)
REV	CQ-102RC	30 – 60g · cm (0.42 – 0.83oz · inch)
REV Back tension	CQ-102RC	1 – 5g · cm (0.014 – 0.063oz · inch)
FF, REW	CQ-201B	65 – 90g · cm (0.90 – 1.25oz · inch)

3-2. ELECTRICAL ADJUSTMENTS

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

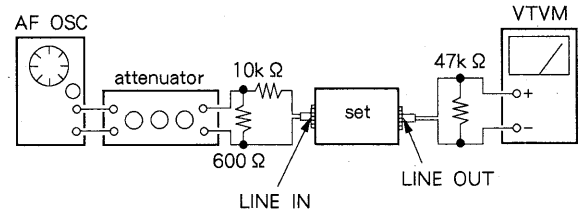
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch	: OFF
DIRECTION switch	: $\rightleftarrows$
MPX FILTER switch	: OFF
TIMER switch	: OFF

• 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 –



0dB=775mV

Standrad Input Level

Input Terminal	LINE IN
source impedance	10k Ω
input level	0.25V (– 10dB)

Standard Output Level

Output Terminal	LINE OUT
load impedance	47k Ω
output level	0.44V (– 5dB)

Test tape

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

The set will get into TEST MODE by shorting the pins of TP601 (TEST) on Main board before turning the power on, and TEST MODE functions as follows :

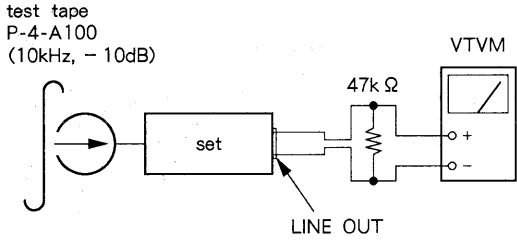
- High speed playback
Pressing HIGH SPEED (DUBBING) button while playback changes to high speed playback and another press of the button returns the set to normal speed playback.
- Record memory stop
When starting recording, tape counter is reset to zero and counter memory turned on.

Record/Playback Head Azimuth Adjustment

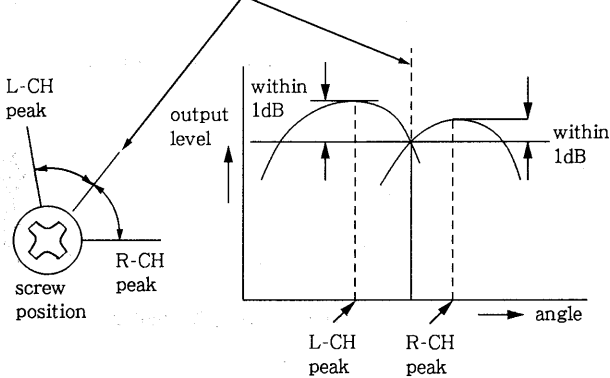
DECK A DECK B

Procedure:

1. Mode : FWD playback

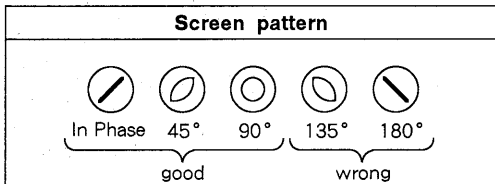
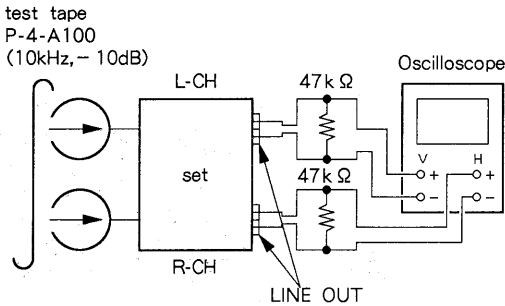


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



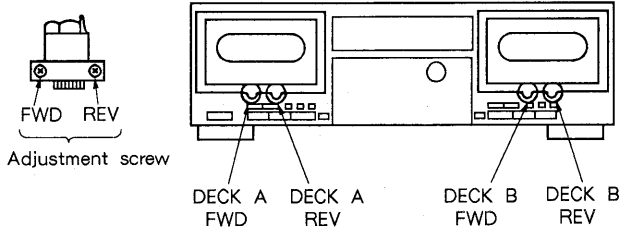
3. Phase Check

Mode : playback



4. Set in the REV mode and repeat the step 1-3.
5. After the adjustment, lock the screws with locking compound.

Adjustment Location: Record/Playback head



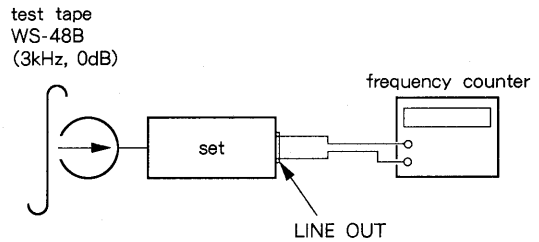
Tape Speed Adjustment

DECK A DECK B

Procedure:

Mode : FWD playback

Perform high speed adjustment before normal speed adjustment



(high speed adjustment)

1. Short test pin TP601 (TEST) on Main board.
2. Set to FWD playback mode.
3. Press the HIGH SPEED DUBBING switch.
4. Adjust RV801 (DECK A) and RV804 (DECK B) on Main board so that the frequency counter reading becomes $6,000 \pm 30\text{Hz}$.
5. After adjustment, disconnect TP601 shorted in step 1.

(normal speed adjustment)

1. Set to FWD playback mode.
2. Adjust RV802 (DECK A) and RV805 (DECK B) on Main board so that the frequency counter reading becomes $3,000 \pm 15\text{Hz}$.

Frequency difference between the beginning and the end of the tape should be within 5%.

Frequency difference between deck A and deck B should be within 20Hz (high speed) or 10Hz (normal speed).

REVISED

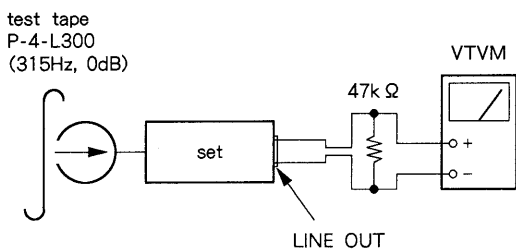
Pitch Control Speed Adjustment DECK A

1. Set TAPE SPEED (RV701) to the center and turn on S731.
2. Play back DECK A FWD and adjust RV803.
Adjustment value : $3000\text{Hz} \pm 15\text{Hz}$
A, B deviation within 10Hz
Speed difference : VOL MAX $3250\text{Hz} \pm 70\text{Hz}$
: VOL MIN $2710\text{Hz} \pm 70\text{Hz}$

Playback Level Adjustment DECK A DECK B

Procedure:

1. Mode : playback



Adjust RV101 (L-CH) and RV151 (R-CH) for DECK A and RV201 (L-CH) and RV251 (R-CH) for DECK B so that the reading on VTVM meter the adjustment limits below.

Adjustment Limits:

LINE OUT level : $-7.7\text{dB} \pm 0.5\text{dB}$ (0.3383 to 0.3015V)
Level difference between channels : less than 0.5dB
Check that the LINE OUT level does not change even if playback and stop operation is repeated several times.

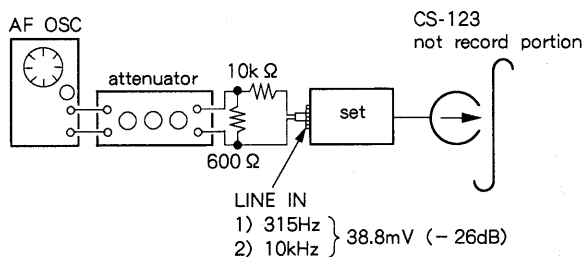
Record Bias Adjustment DECK A DECK B

Setting:

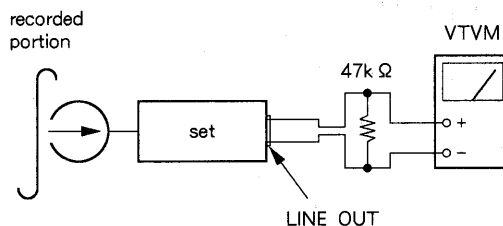
REC LEVEL control : standard record (See page 11.)
test pin TP601 : short

Procedure:

1. Mode : record



2. Mode : playback



3. Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV102 (L-CH) and RV152 (R-CH) for DECK A and RV202 (L-CH) and RV252 (R-CH) for DECK B, and repeat the steps given above.

Bias Current Adjustment

Procedure:

1. Set RV102 and RV152 (DECK A), RV202 and RV252 (DECK B) 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.

DECK	Mesurement Point	Adjustment	Value
A	L ①and②, TP101	T101	less than 80mV
	R ②and③, TP101	T151	
B	L ①and②, TP201	T201	
	R ②and③, TP201	T251	

(See page 11.)

Record Level Adjustment

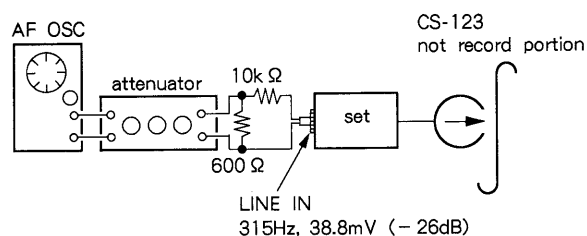
DECK A DECK B

Setting:

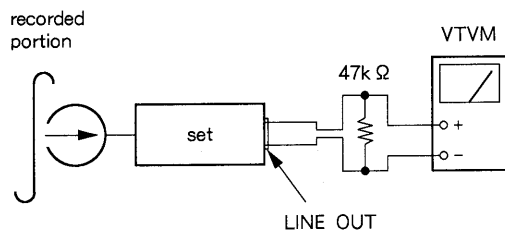
REC LEVEL control : standard record (See page 11.)
test pin TP601 : short

Procedure:

1. Mode : record



2. Mode : playback



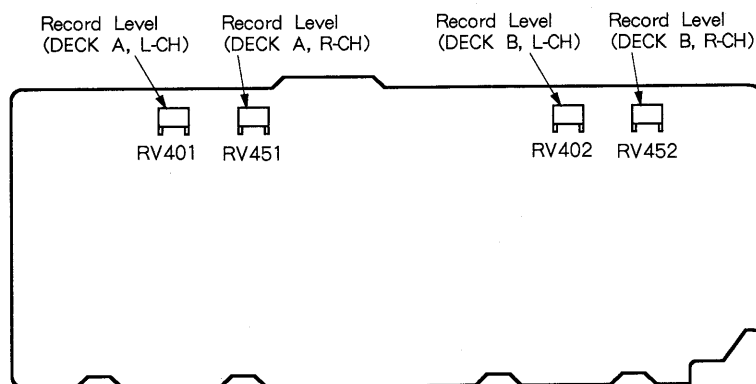
3. Playback the signal recorded in step 1.

Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV401 (L-CH) and RV451 (R-CH) for DECK A and RV402 (L-CH) and RV452 (R-CH) for DECK B, and repeat the step1-2.

Adjustment Limits: $-26\text{dB} \pm 0.5\text{dB}$ (36.7 to 41.1mV)

Adjustment Location:

[REC BOARD] – Component side –



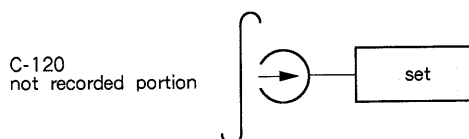
Quick Reverse Sensitivity Adjustment

DECK A DECK B

Conditions:

DIRECTION MODE switch : $\rightleftarrows$

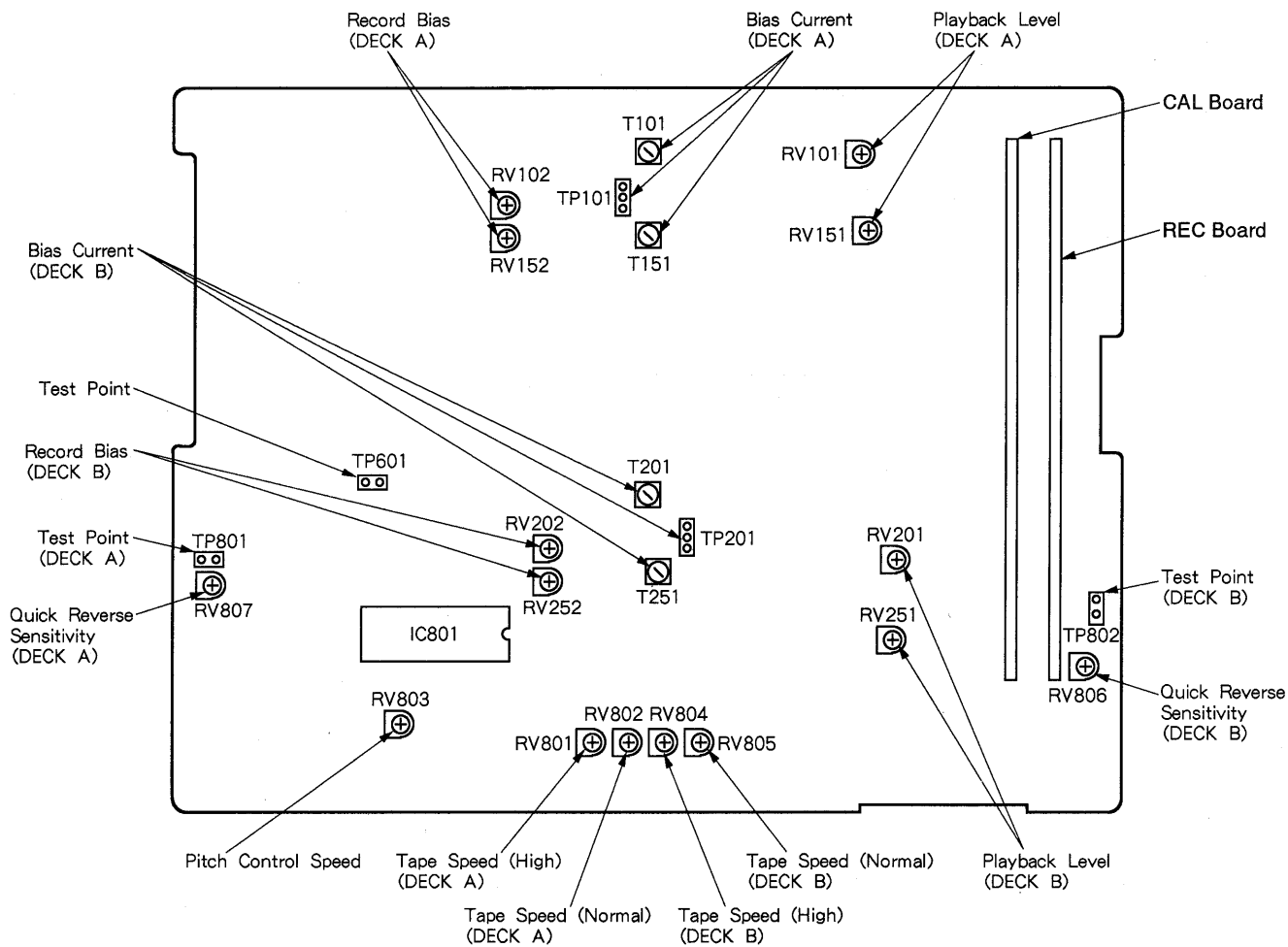
Adjustment procedure:



1. Connect the digital voltmeter to test point TP801 (DECK A) / TP802 (DECK B).
2. Load C-120 tape cassette and playback the leading portion in FWD mode.
3. Adjust the RV807 (DECK A), RV806 (DECK B) for $4.5 \pm 0.5\text{V}$ reading on the digital voltmeter.
4. Playback C-120 tape cassette in FWD mode again.
5. Confirm that the reading on the digital voltmeter is "L" level at the magnetic portion of the tape.
6. Confirm that the tape stop around the tape end (boder of the leading and the magnetic portions).

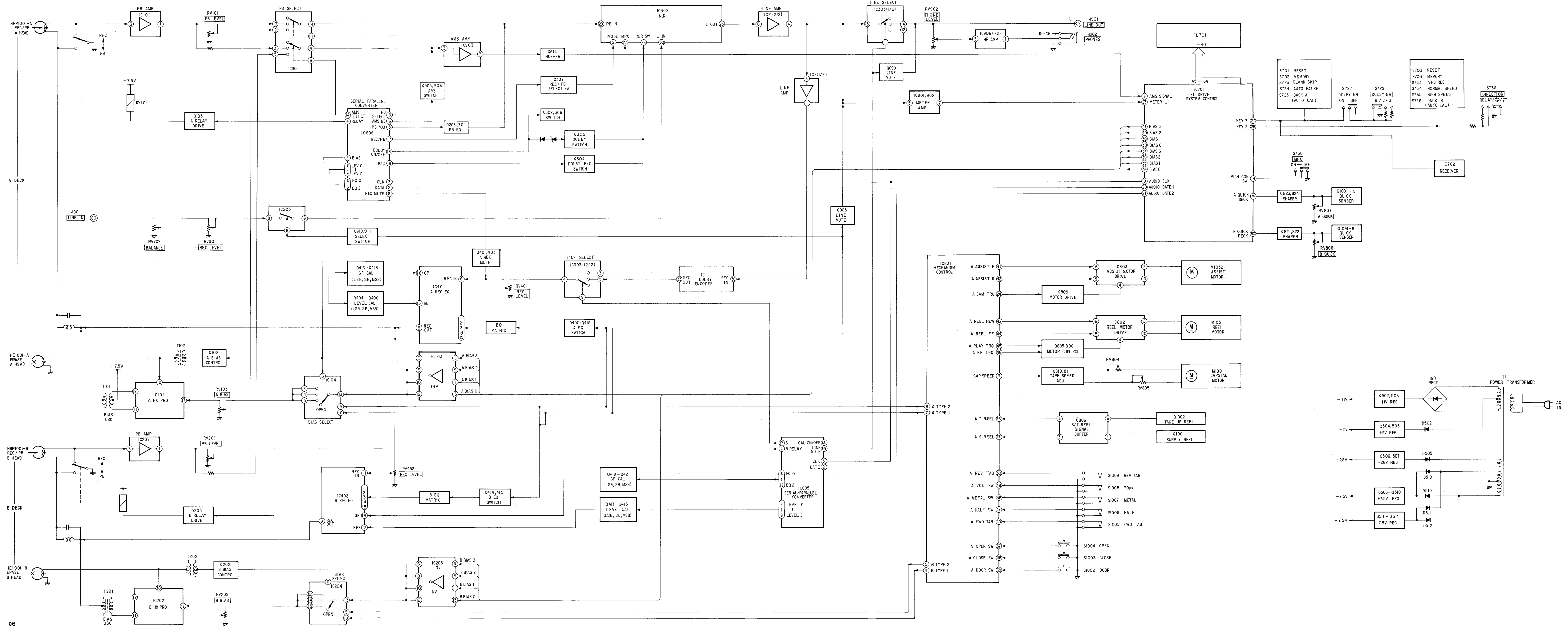
Adjustment Location:

【MAIN BOARD】 – Component side –



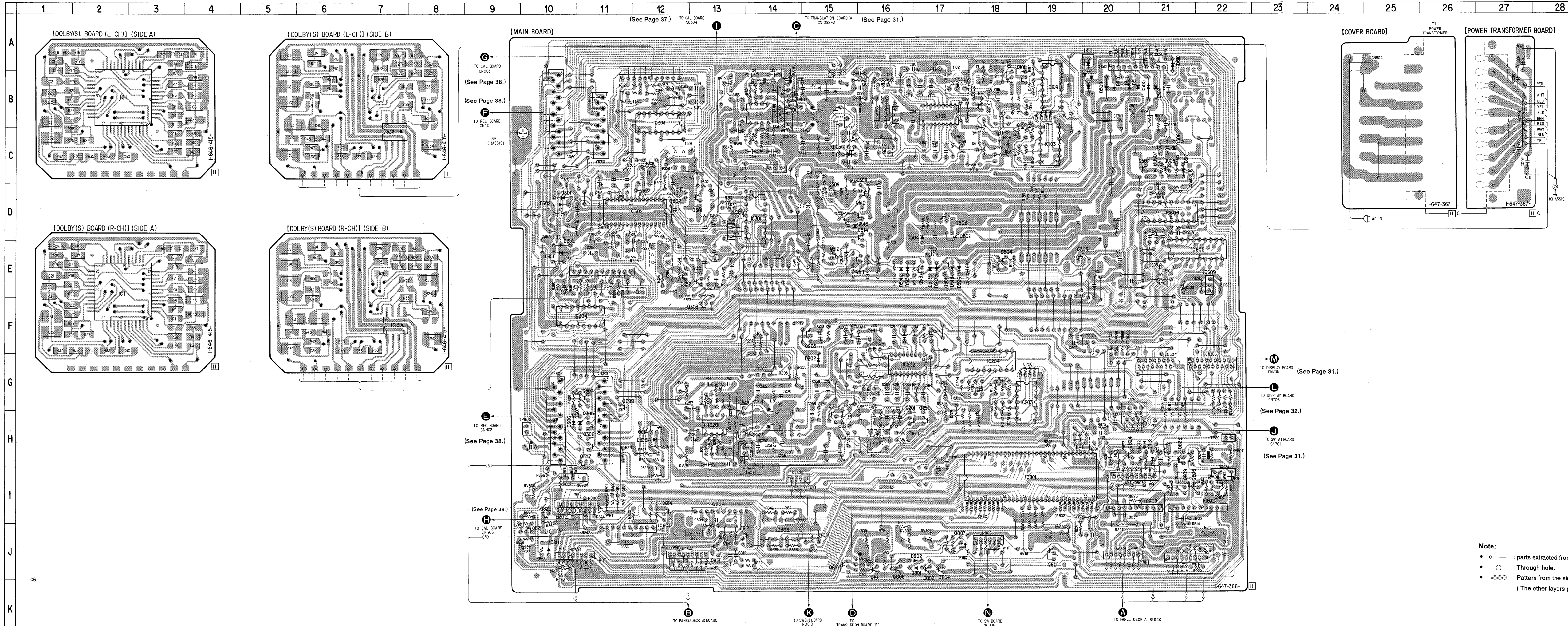
SECTION 4 DIAGRAMS

4-1. BLOCK DIAGRAM

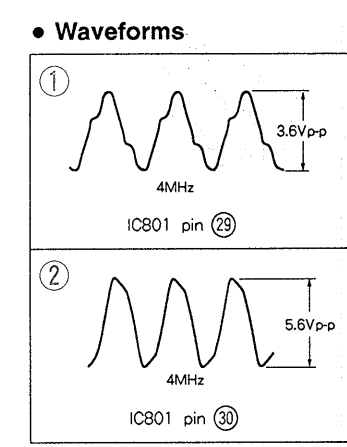
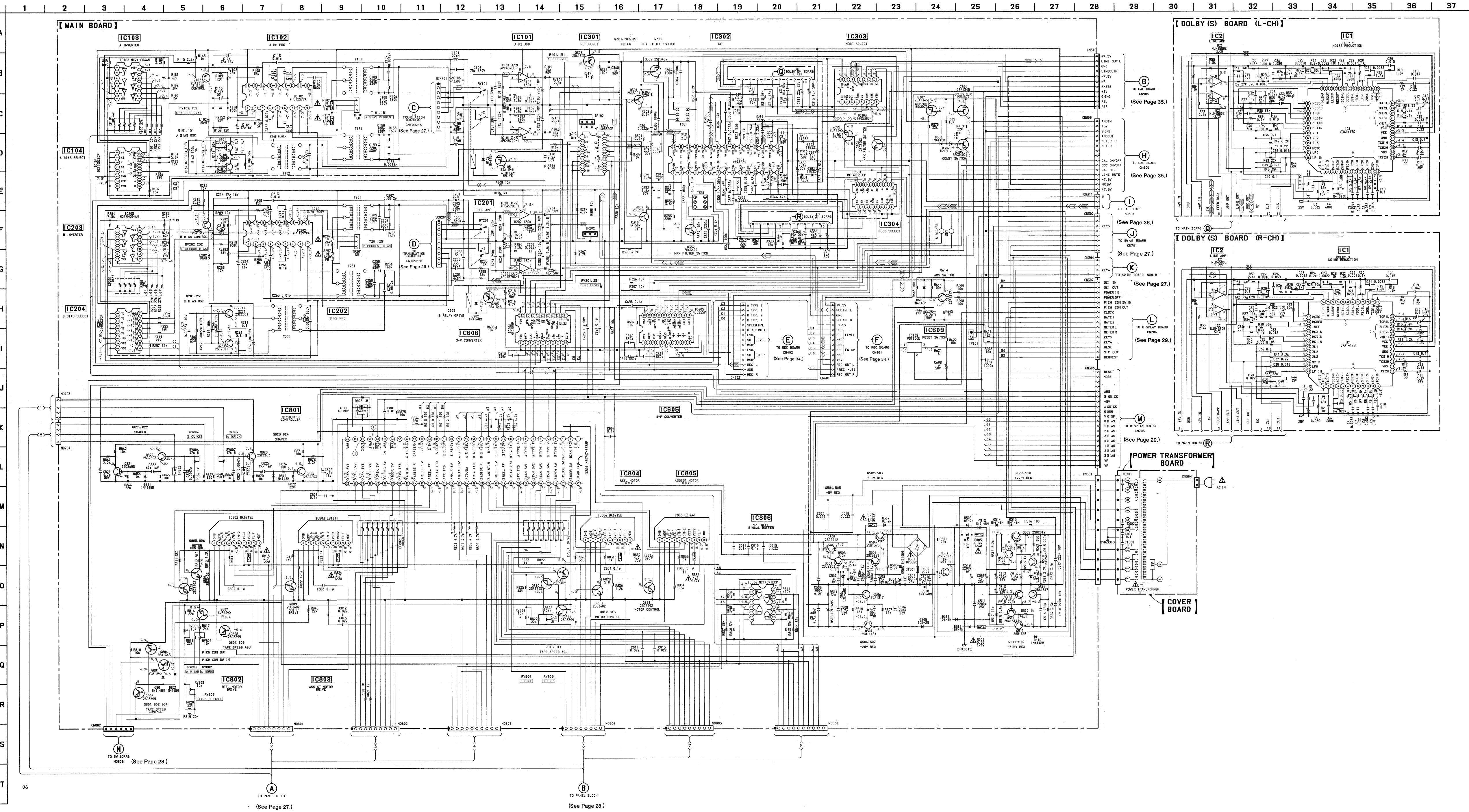


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D102	C-15	IC803	I-21
D202	G-15	IC804	I-13
D301	D-10	IC805	J-12
D302	D-10	IC806	J-14
D306	H-10		
D307	H-11	Q102	B-18
D351	E-10	Q105	C-15
D352	E-10	Q151	B-18
D501	A-20	Q201	H-16
D502	B-21	Q202	G-15
D503	E-17	Q205	F-15
D504	D-17	Q251	H-17
D505	B-21	Q301	D-13
D506	E-17	Q302	D-12
D507	C-21	Q303	F-13
D508	C-21	Q304	G-11
D509	B-20	Q305	H-11
D510	B-20	Q306	H-11
D511	B-20	Q307	H-11
D512	B-20	Q351	E-13
D513	E-17	Q352	E-12
D514	E-16	Q501	E-17
D515	E-16	Q502	D-17
D516	D-15	Q503	D-17
D517	C-21	Q504	E-18
D518	E-17	Q505	E-19
D609	H-12	Q506	C-21
D610	A-21	Q507	C-21
D801	J-16	Q508	C-16
D802	J-16	Q509	D-15
D811	J-10	Q510	D-16
D812	H-21	Q511	E-16
		Q512	E-15
		Q513	E-17
		Q514	D-16
IC1 (L-CH)	B-2	Q614	H-12
IC1 (R-CH)	E-2	Q699	G-11
IC2 (L-CH)	C-7	Q801	J-19
IC2 (R-CH)	F-7	Q802	J-17
IC101	B-14	Q804	J-17
IC102	B-17	Q805	I-22
IC103	C-19	Q806	I-21
IC104	B-19	Q807	J-17
IC201	H-13	Q808	J-16
IC202	G-16	Q809	I-21
IC203	G-18	Q810	J-15
IC204	G-18	Q811	J-16
IC301	D-14	Q812	J-13
IC302	D-12	Q813	J-13
IC303	B-12	Q814	I-12
IC304	F-11	Q821	J-10
IC605	E-22	Q822	I-10
IC606	D-21	Q823	H-21
IC609	E-22	Q824	H-20
IC801	I-19		
IC802	I-22		



4-3. SCHEMATIC DIAGRAMS - MAIN Section - • See Page 26 for IC Block Diagrams.



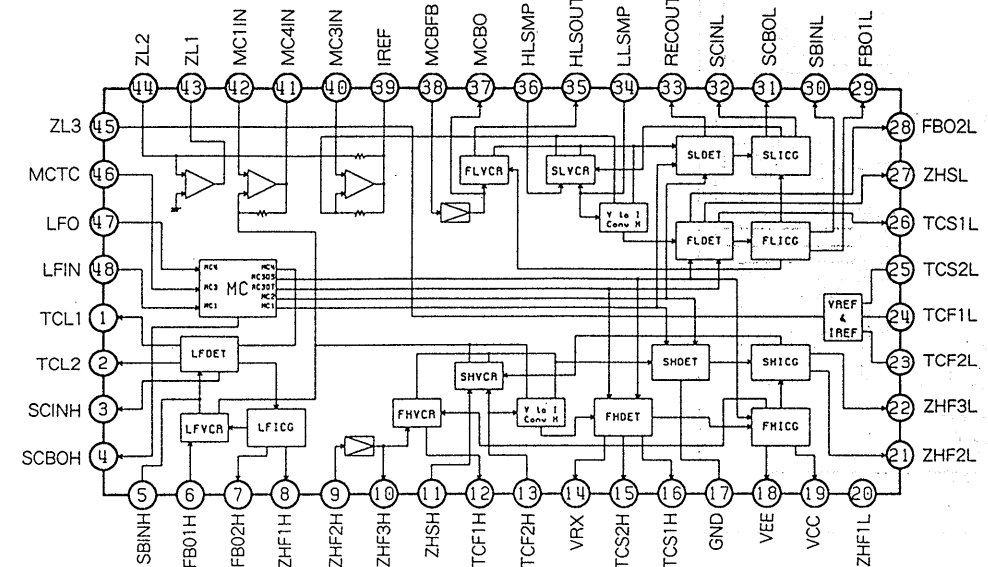
Note:

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

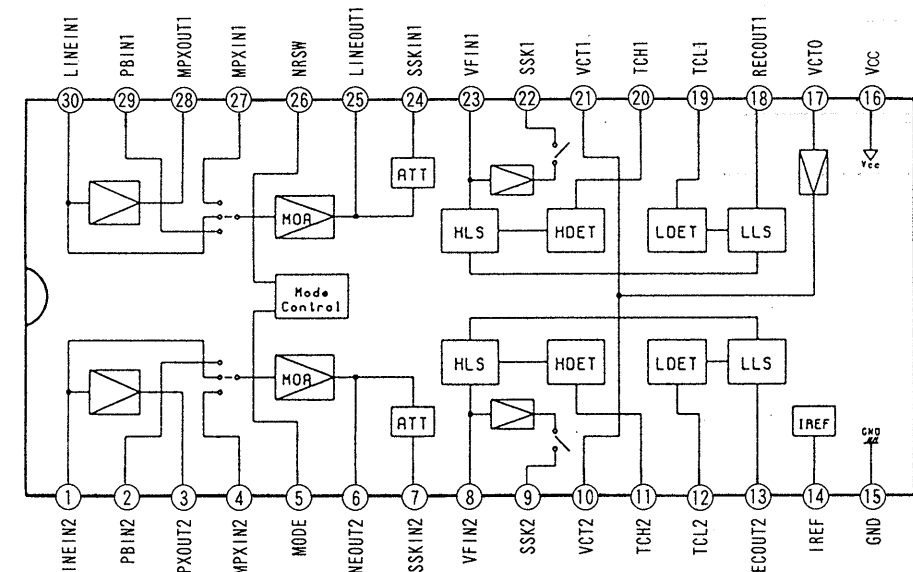
Note: The components identified by mark Δ or dotted line with mark $\sim$ are critical for safety. Replace only with part number specified.

- --- : B+ line.
- --- : B- line.
- --- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: PLAY (DECK A)
- --- : PLAY (DECK B)
- Voltages are taken with a VOM. (Input impedance 10M 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.
- --- : PB (DECK A)
- --- : REC (DECK A)
- --- : PB (DECK B)
- --- : REC (DECK B)

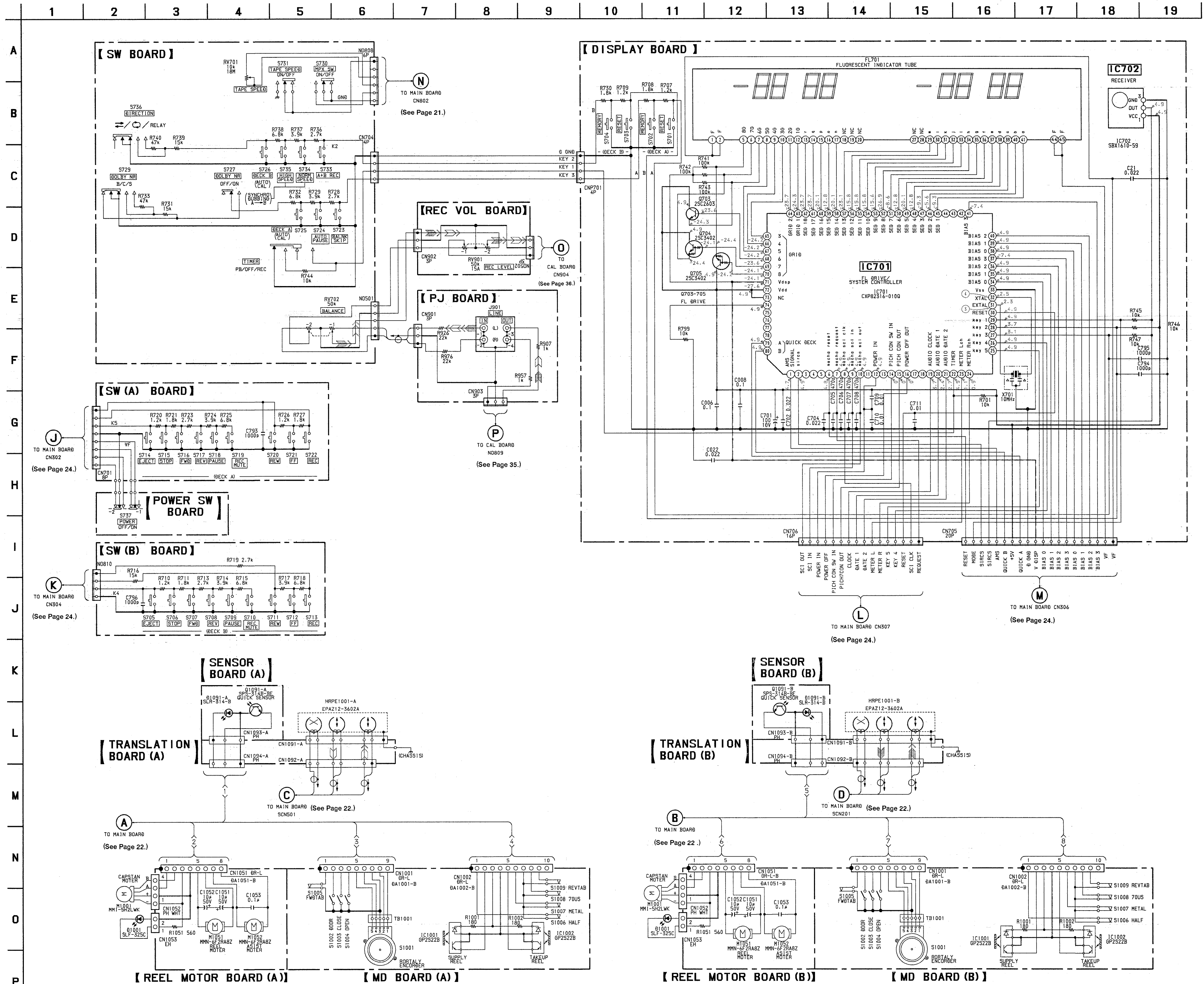
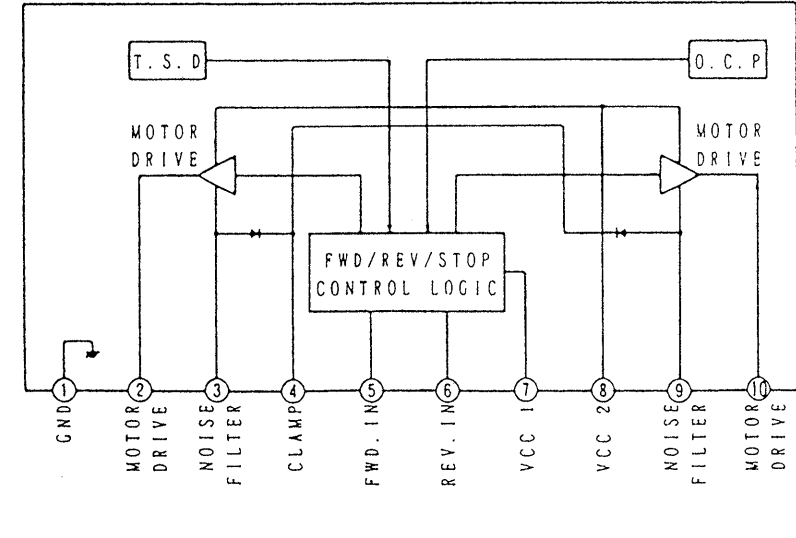
IC1 CXA1417Q



The block diagram illustrates the control system for the laser. It features two main signal paths. The top path starts with a 'PRE DRIVE' block connected to a 'GAIN AMP' block. The output of this 'GAIN AMP' is connected to a triangular buffer symbol, which then feeds into a 'PEAK DET' block. The 'PEAK DET' is connected to an 'ABSO DET' block, which outputs a 'YES' signal. The bottom path starts with a 'GAIN AMP' block connected to a 'THERMAL PROTECTION' block. The output of the 'THERMAL PROTECTION' block is connected to a 'REG' block. The 'REG' block is connected to the 'PEAK DET' block in the top path. Both the 'PEAK DET' and 'ABSO DET' blocks are connected to a common output line that leads to the 'LASER' block.



IC803, 805 LB1641



③

10MHz

IC701 pin ③

④

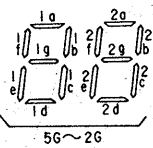
10MHz

IC701 pin ④

The diagram shows the front panel of a Sony DCC cassette deck. Key features include:

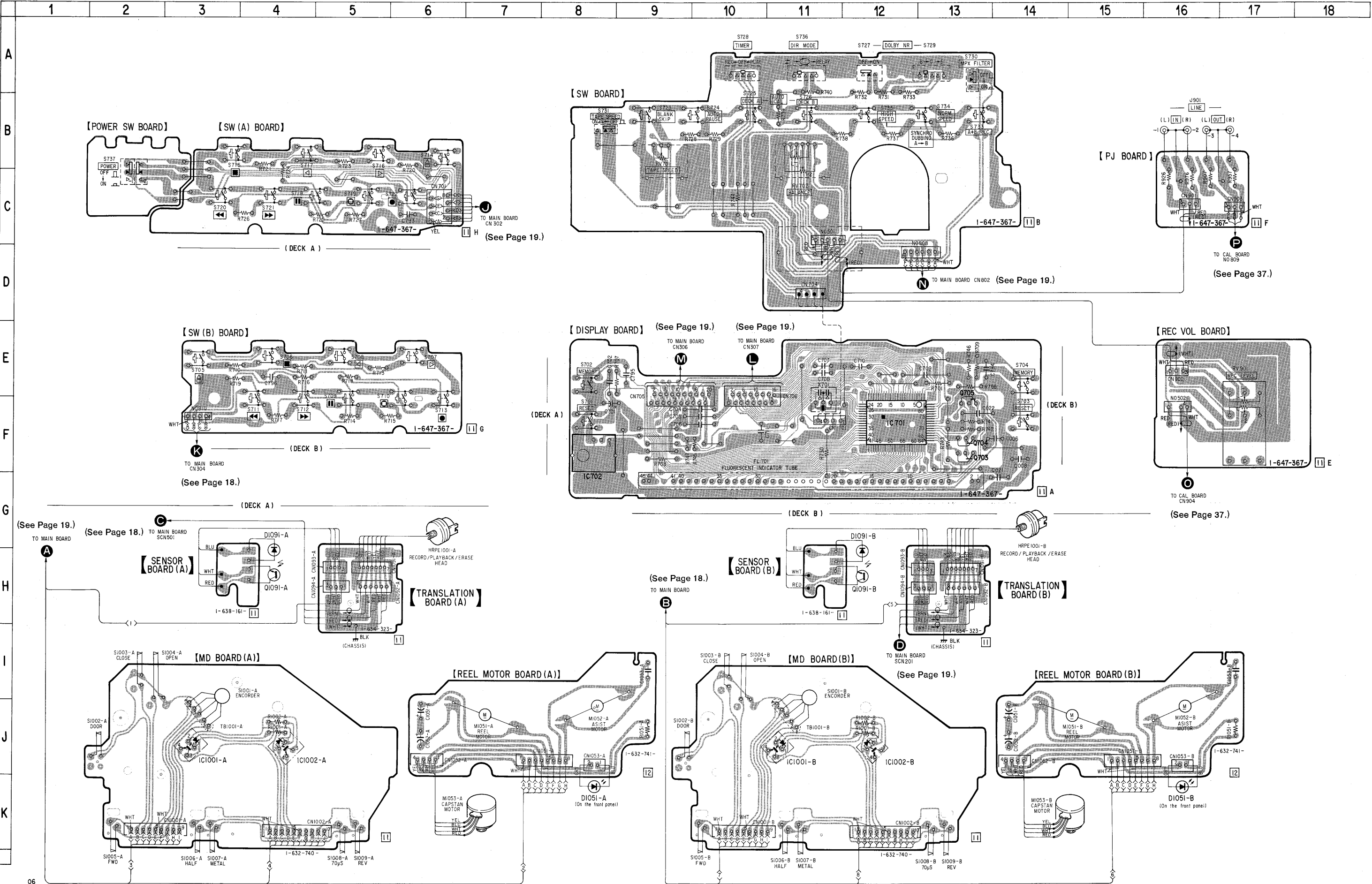
- MEMORY** indicator on the left.
- A digital display showing **00:00** with **TR** and **DP** indicators.
- A **A+B** indicator and a **HIGH**/**NORM** selector.
- A second digital display showing **00:00** with **DP** and **0** indicators.
- DOLBY NR** indicator with **B**, **C**, and **S** options.
- MEMORY** indicator on the right.
- Playback controls: **AUTO CAL**, **PLAY**, **REC**, **AUTO PAUSE**, and **SKIP**.
- A cassette tape is shown partially inserted into the deck.
- Technical markings include **dB**, **SC1**, **SC2**, and **SC3**.

ANODE CONNECTION								
	BG	7G	6G	5G	4G	3G	2G	1G
P1	SC1	SC1	MEMORY	1a	1a	1a	1a	DOLBY NR
P2	B1	B1	AUTO CAL	1b	1b	1b	1b	
P3	B4	B4	PLAY	1c	1c	1c	1c	MEMORY
P4	B6	B6		1d	1d	1d	1d	
P5	B5	B5		1e	1e	1e	1e	AUTO CAL
P6	B2	B2		1f	1f	1f	1f	
P7	B3	B3		1g	1g	1g	1g	
P8	B7	B7		—	—	—	—	
P9	B8	B8		2a	2a	2a	2a	PLAY
P10	B9	B9	RELAY	2b	2b	2b	2b	
P11	B12	B12	—	2c	2c	2c	2c	—
P12	B14	B14	—	2d	2d	2d	2d	—
P13	B13	B13	—	2e	2e	2e	2e	—
P14	B10	B10	AUTO PAUSE	2f	2f	2f	2f	
P15	B11	B11	BLANK SKIP	2g	2g	2g	2g	—
P16	B15	B15	—	Dp2		Dp1	—	—
P17	SC3	—	—	—		—	—	—
P18	SC2	—	—	—		—	—	—



- All capacitors are in μF unless otherwise noted. pF: $\mu F \times 1000$
- 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}W$ or less unless otherwise specified.
- $\triangle$: internal component.
- : B = line.
- : B = line.
- Voltage and waveforms are dc with respect to ground unless no signal conditions.
- no mark : PLAY (DECK A)
- Voltages are taken with a VOM. (Input impedance 10MQ)
- 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.
 - : PB (DECK A)
 - : REC (DECK A)
 - : PB (DECK B)
 - : REC (DECK B)

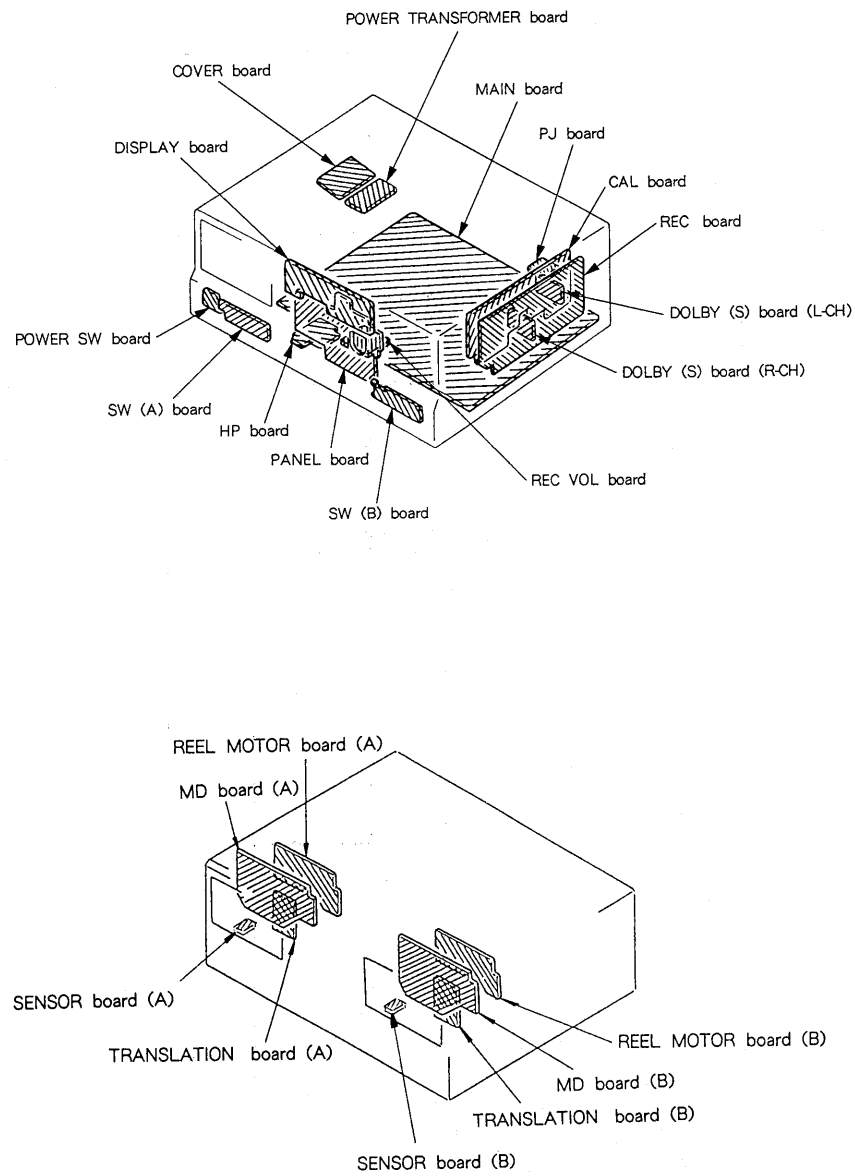
4-5. PRINTED WIRING BOARDS - PANEL Section - • See Page 40 for Semiconductor Lead Layouts.



• Semiconductor Location

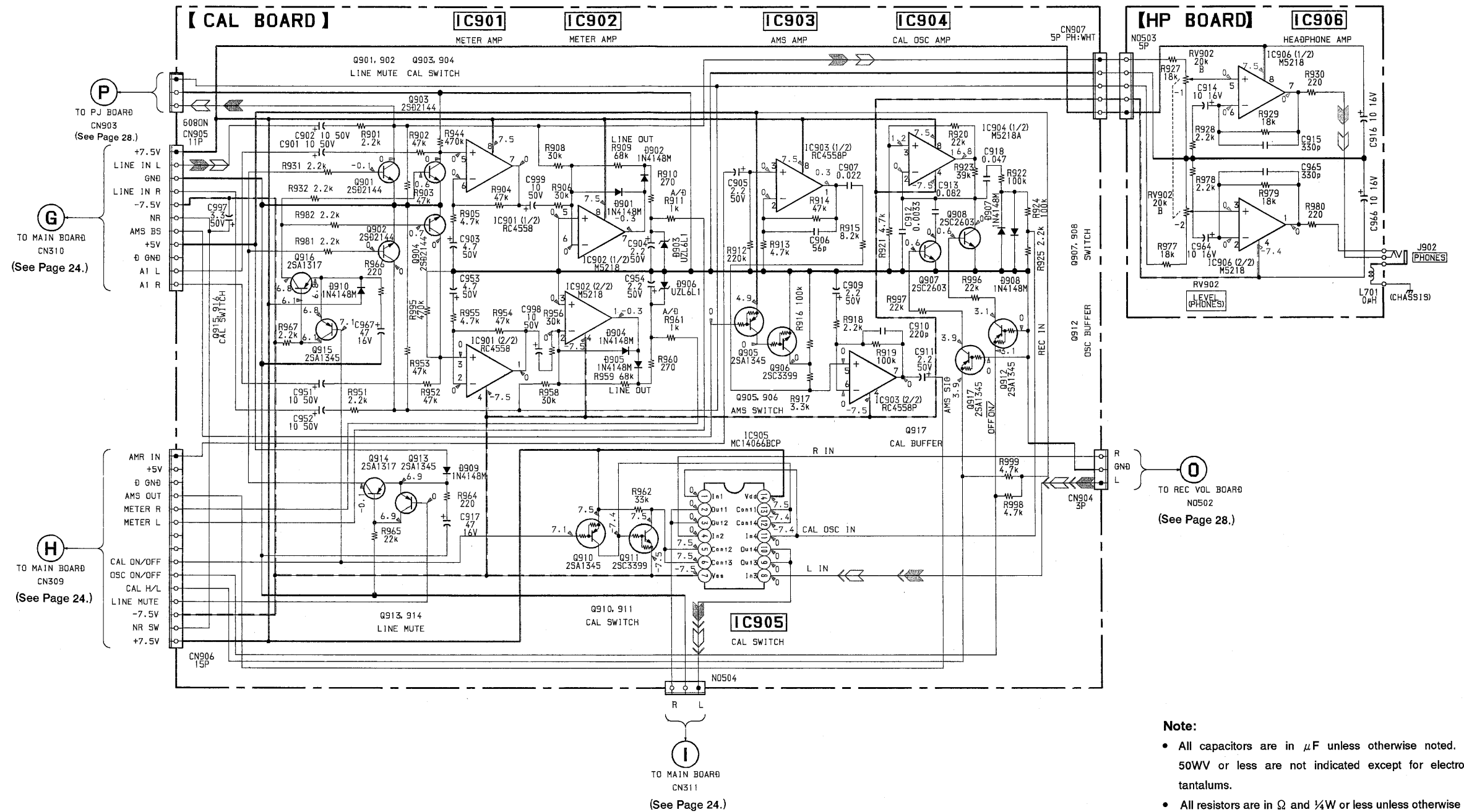
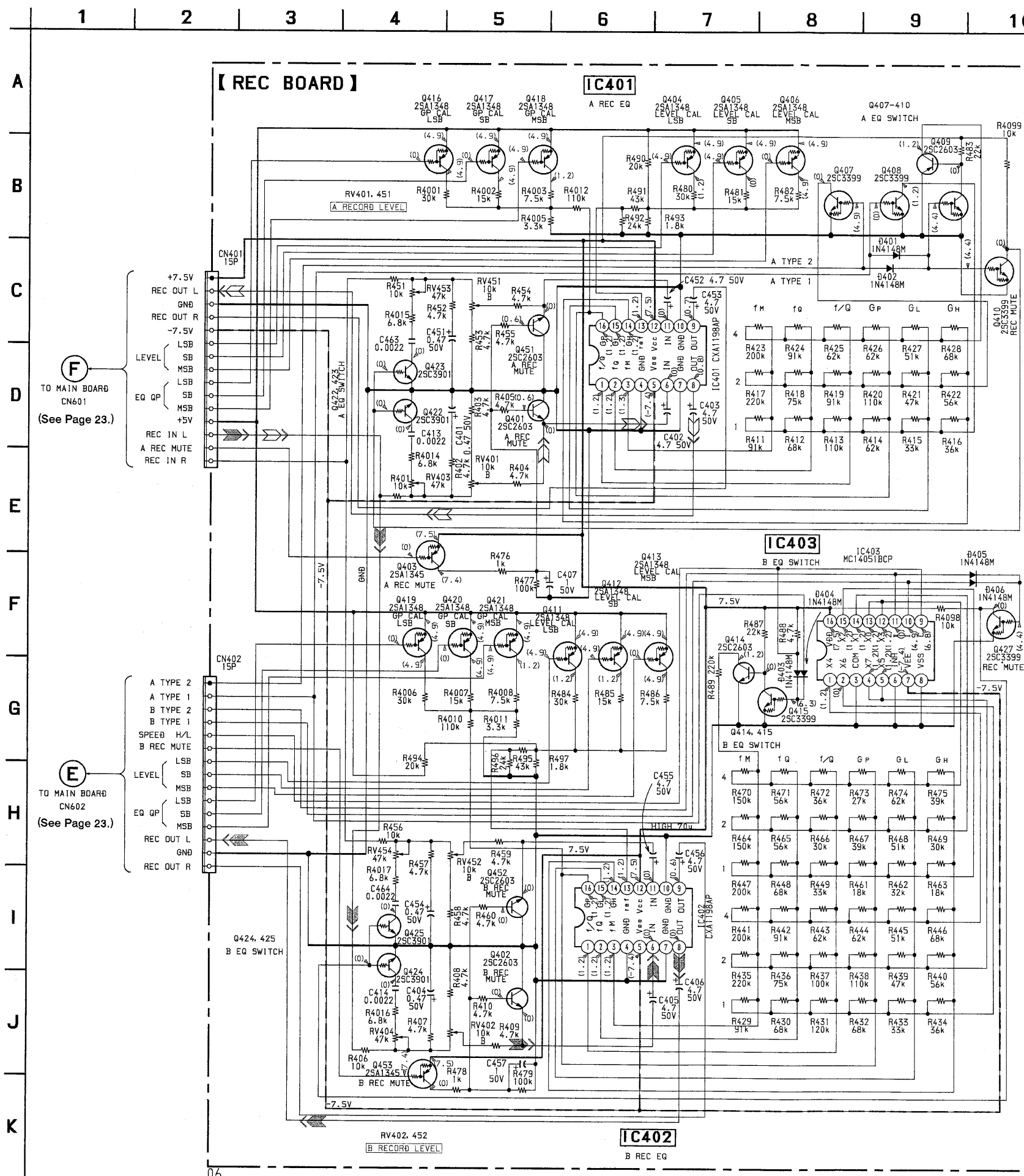
Ref. No.	Location
D1091-A	G-4
D1091-B	G-12
IC701	F-12
IC702	F-8
IC1001-A	J-3
IC1001-B	J-11
IC1002-A	J-4
IC1002-B	J-12
Q703	F-13
Q704	F-13
Q705	F-13
Q1091-A	H-4
Q1091-B	H-12

4-6. CIRCUIT BOARDS LOCATIONS



Note:
• — : parts extracted from the component side.

4-7. SCHEMATIC DIAGRAMS – REC/CAL Section –

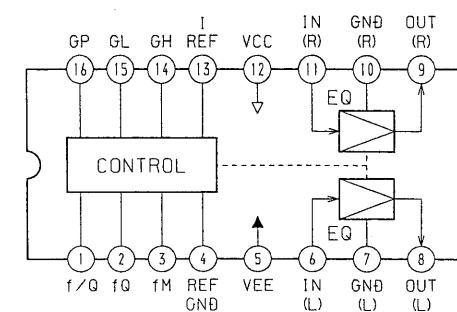


Note:

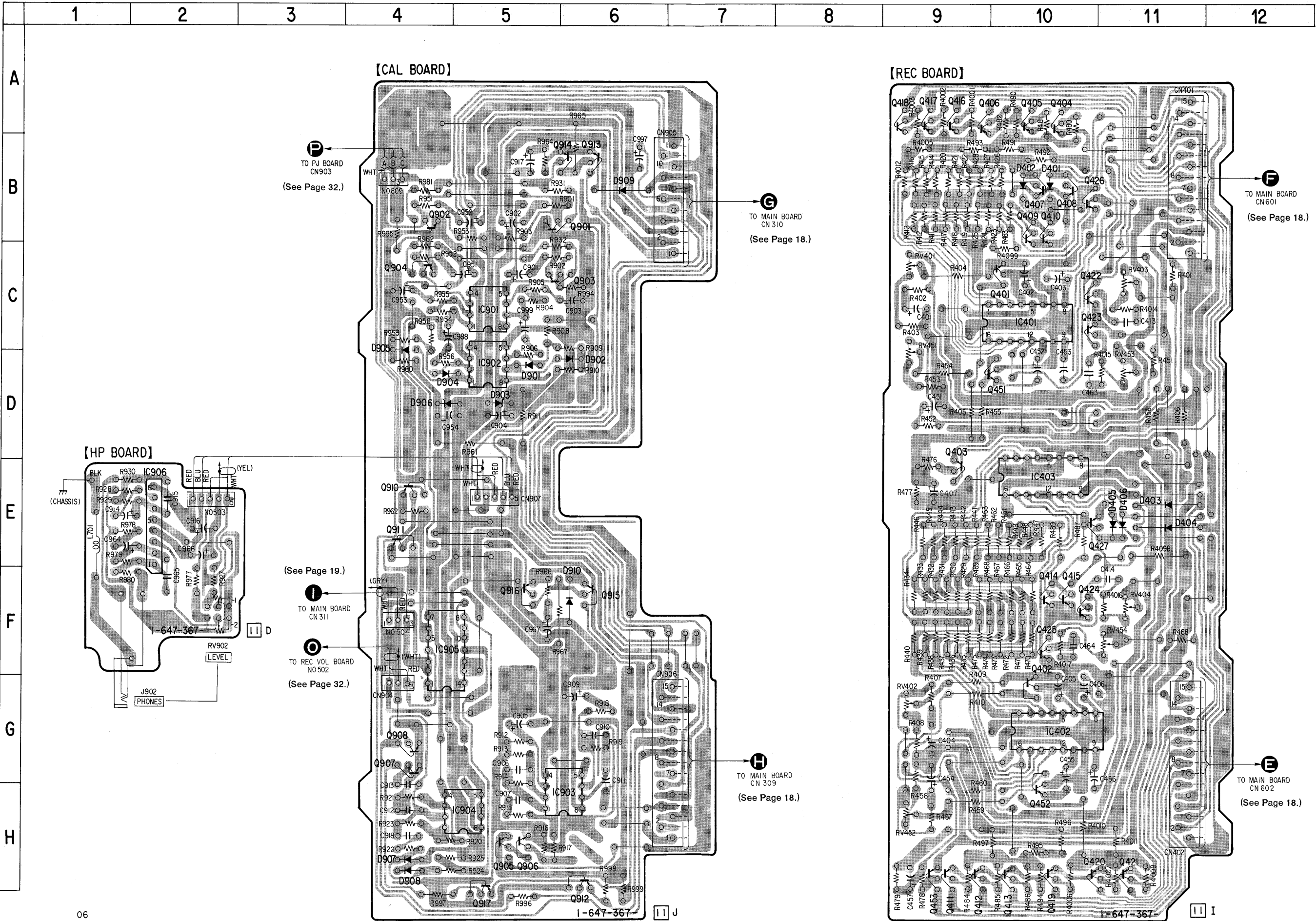
- All capacitors are in Ω unless otherwise noted. pF: $\mu\text{M F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 -  : B+ line.
 -  : B- line.
 -  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark : PLAY (DECK A)
() : NORMAL SPEED DUBBING
- Voltages are taken with a VOM. (Input impedance $10\text{M}\Omega$)
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 -  : PB (DECK A)
 -  : REC (DECK A)
 -  : PB (DECK B)
 -  : REC (DECK B)

- IC BLOCK DIAGRAMS

IC401, 402 CXA1198AP



4-8. PRINTED WIRING BOARDS - REC/CAL Section - • See Page 33 for Circuit Boards Locations.



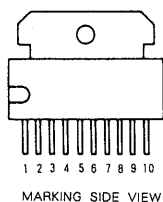
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	B-10	Q411	H-9
D402	B-10	Q412	H-9
D403	E-11	Q413	H-10
D404	E-11	Q414	F-10
D405	E-11	Q415	F-10
D406	E-11	Q416	A-9
D901	D-5	Q417	A-9
D902	D-6	Q418	A-9
D903	D-5	Q419	H-10
D904	D-4	Q420	H-10
D905	C-4	Q421	H-11
D906	D-4	Q422	C-10
D907	H-4	Q423	C-10
D908	H-4	Q424	F-10
D909	B-6	Q425	F-10
D910	F-6	Q426	B-10
		Q427	E-10
IC401	C-10	Q451	D-10
IC402	G-10	Q452	H-10
IC403	E-10	Q453	H-9
IC901	C-5	Q901	B-6
IC902	D-5	Q902	B-4
IC903	H-6	Q903	C-6
IC904	H-5	Q904	C-4
IC905	F-4	Q905	H-5
IC906	E-2	Q906	H-5
		Q907	G-4
Q401	C-10	Q908	G-4
Q402	F-10	Q910	E-4
Q403	D-9	Q911	E-4
Q404	A-10	Q912	H-6
Q405	A-10	Q913	B-6
Q406	A-9	Q914	B-6
Q407	B-10	Q915	F-6
Q408	B-10	Q916	F-5
Q409	B-10	Q917	H-5
Q410	B-10		

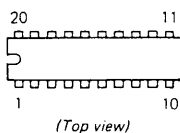
Note:
• — : parts extracted from the component side.

4-9. SEMICONDUCTOR LEAD LAYOUTS

BA6219B



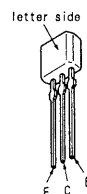
M50255P



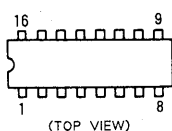
SBX1610-59



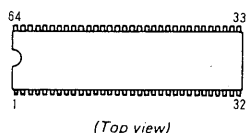
2SC3623A-LK



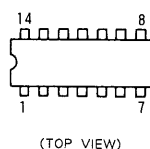
CXA1198AP
MC14051BCP
MC14052BCP
 μ PD4053BC



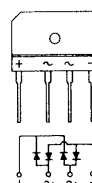
M50747-B83SP



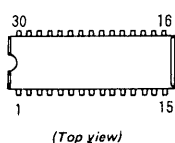
SN74HC04N
TC4071BP
 μ PD4066BC



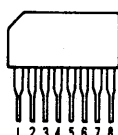
D2SB20



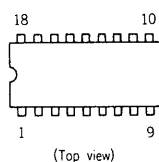
CXA1332S



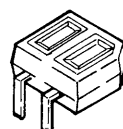
M5218AL



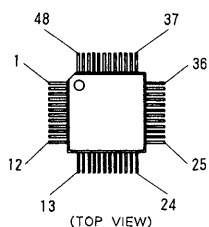
μPC1297CA



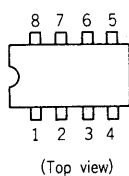
GP2S22B



CXA1417Q



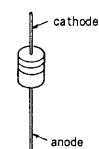
M5218AP
 μ PC4558C
 μ PC4570C-1



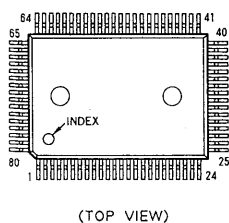
DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SA1317-STU
2SC2603-EF
2SD2144S



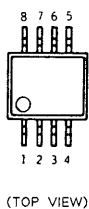
HZS6A1L
HZS6B3L
HZS6C3L
HZS9A2L
UZL-11H2
11ES2



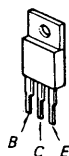
CXP82316-010Q



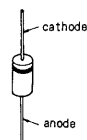
NJM4580E-D



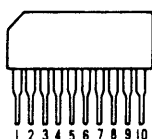
2SB1094-LK
2SD2012



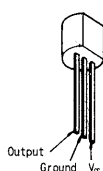
1N4148M
10E2N



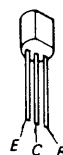
LB1641



PST600E-T



2SB1116A-L
2SC2001-LK



SECTION 5 EXPLODED VIEWS

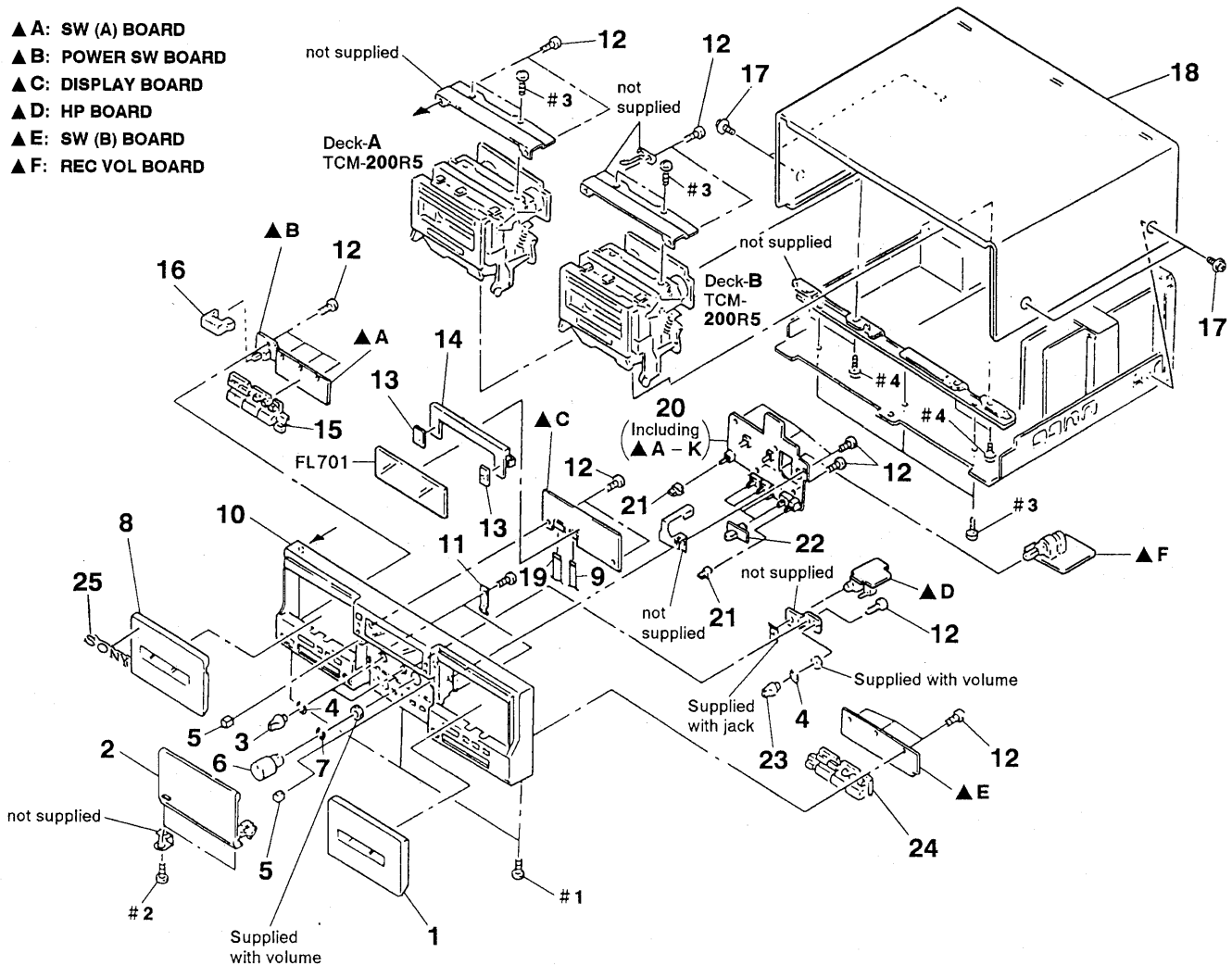
NOTE:

- -XX,-X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

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

5-1. CASE, FRONT PANEL SECTION

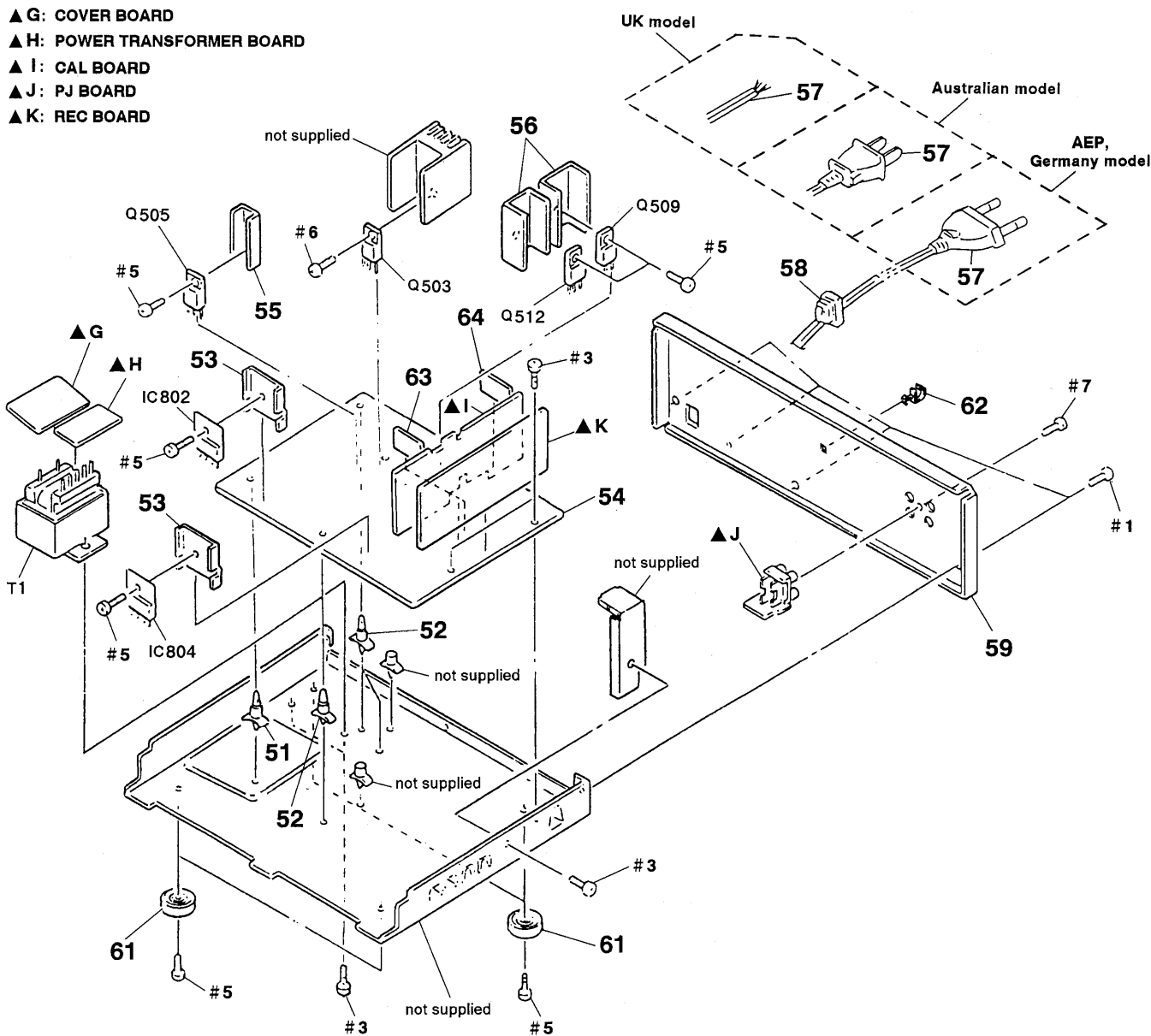
- ▲ A: SW (A) BOARD
- ▲ B: POWER SW BOARD
- ▲ C: DISPLAY BOARD
- ▲ D: HP BOARD
- ▲ E: SW (B) BOARD
- ▲ F: REC VOL BOARD



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	X-3366-592-1	LID (B) ASSY, CASSETTE		15	3-378-303-11	BUTTON (CONTROL)	
2	X-3366-106-2	LID (M) ASSY		16	3-354-932-01	BUTTON (POWER)	
3	3-354-931-01	KNOB (DIA.10)		17	3-704-366-01	SCREW (CASE) (M3X8)	
4	3-354-981-01	SPRING (SUS), RING		18	4-925-039-61	CASE	
5	3-322-044-01	SPACER, RUBBER		19	1-751-013-11	WIRE (FLAT TYPE) (20 CORE)	
6	3-359-932-01	KNOB (REC)		* 20	A-2007-014-A	PANEL BOARD, COMPLETE	(AEP, Germany, Australian)
7	3-362-235-01	SPRING (REC LEVEL), RING		* 20	A-2007-016-A	PANEL BOARD, COMPLETE	(UK)
8	X-3366-591-1	LID (A) ASSY, CASSETTE		21	3-378-285-01	BUTTON (CORNER 4)	
9	1-751-012-11	WIRE (FLAT TYPE) (10 CORE)		22	4-924-444-01	KNOB (TIMER)	
10	X-3366-107-1	PANEL ASSY, FRONT		23	3-354-931-11	KNOB (DIA.10)	
11	3-378-283-01	SPRING (M)		24	3-378-303-01	BUTTON (CONTROL)	
12	4-951-620-01	SCREW (2.6X8), +BVT		25	4-908-848-01	EMBLEM, SONY	
* 13	4-955-901-01	CUSHION (FL)		FL701	1-517-159-11	INDICATOR TUBE, FLUORESCENT	
* 14	3-386-474-01	HOLDER (FL)					

5-2. CHASSIS SECTION

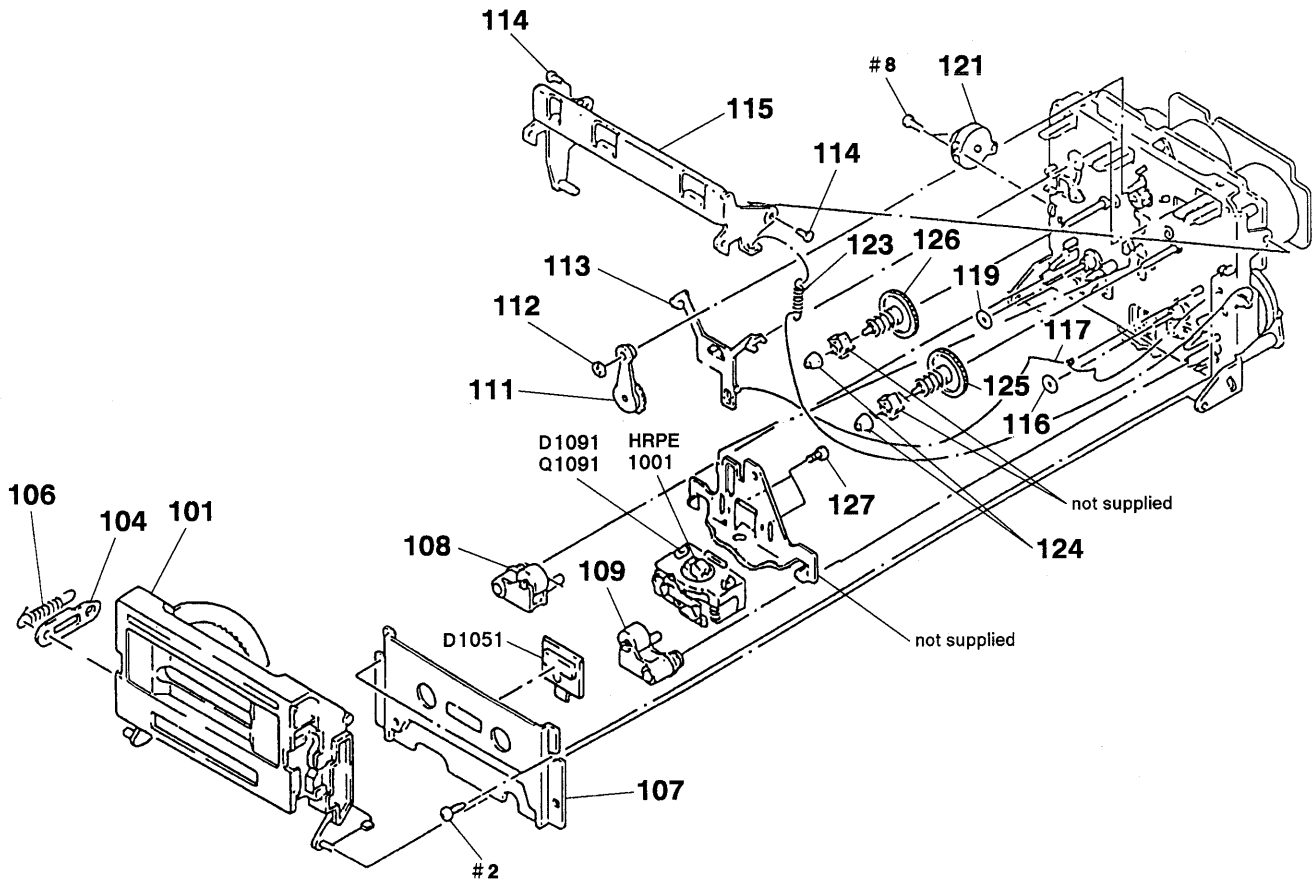
- ▲ G: COVER BOARD
- ▲ H: POWER TRANSFORMER BOARD
- ▲ I: CAL BOARD
- ▲ J: PJ BOARD
- ▲ K: REC BOARD



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
51	4-924-098-11	HOLDER, PC BOARD		* 62	4-949-235-01	HOOK	
* 52	3-346-265-11	HOLDER, PC BOARD		* 63	A-2006-954-A	DOLBY(S) BOARD, COMPLETE (R-CH)	
* 53	3-356-925-01	HEAT SINK		* 64	A-2006-954-A	DOLBY(S) BOARD, COMPLETE (L-CH)	
* 54	A-2007-013-A	MAIN BOARD, COMPLETE					
		(AEP, Germany, Australian)		IC802	8-759-973-95	IC	BA6219B
* 54	A-2007-015-A	MAIN BOARD, COMPLETE	(UK)	IC804	8-759-973-95	IC	BA6219B
* 55	3-309-144-21	HEAT SINK		Q503	8-729-141-83	TRANSISTOR	2SA473
* 56	4-880-403-11	HEAT SINK		Q505	8-729-209-15	TRANSISTOR	2SD2012
△ 57	1-575-651-21	CORD, POWER (AEP, Germany)		Q509	8-729-209-15	TRANSISTOR	2SD2012
△ 57	1-696-586-11	CORD, POWER (UK)		Q512	8-729-141-83	TRANSISTOR	2SA473
△ 57	1-696-845-11	CORD, POWER (Australian)		△ T1	1-450-446-11	TRANSFORMER, POWER	
* 58	3-703-244-00	BUSHING (2104), CORD					
* 59	3-385-958-21	PANEL, BACK (AEP, Germany)					
* 59	3-385-958-31	PANEL, BACK (UK, Australian)					
61	4-943-148-42	FOOT (F58175SW)					

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

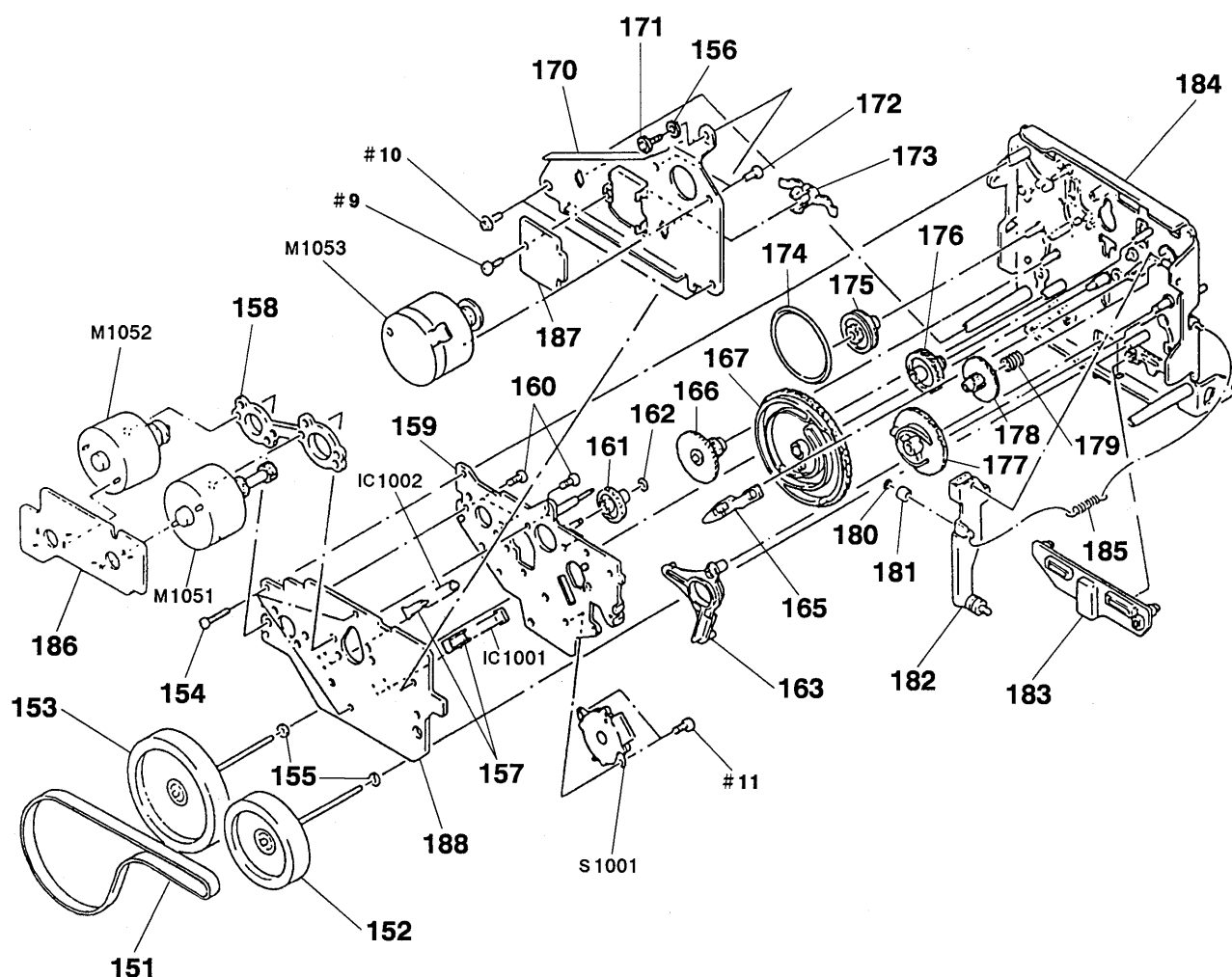
5-3. MECHANISM DECK SECTION-1 (TCM-200R5)



Ref. No.	Part No.	Description	Remark
101	X-3364-566-1	HOLDER (CD-W) ASSY, CASSETTE	
* 104	3-356-717-01	LEVER (JOINT)	
106	3-356-626-01	SPRING, TENSION	
107	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
108	X-3343-456-1	LEVER (PINCH R) ASSY	
109	X-3343-455-1	LEVER (PINCH F) ASSY	
111	X-3356-641-1	LEVER (FR2) ASSY	
112	3-669-465-11	WASHER (1.5), STOPPER	
113	3-356-614-01	SLIDER (BRAKE)	
114	3-356-601-11	SCREW, STEP	
* 115	X-3356-608-1	LEVER (LIFTER) ASSY	
116	3-356-713-01	WASHER	

Ref. No.	Part No.	Description	Remark
117	3-356-619-01	SPRING (B), TORSION	
119	3-356-714-01	WASHER	
121	3-712-786-01	DAMPER, OIL	
123	3-356-625-01	SPRING, TENSION	
124	3-362-308-01	CAP (REEL)	
125	X-3356-627-1	GEAR (T) ASSY	
126	X-3356-628-1	GEAR (S) ASSY	
127	3-388-848-01	SCREW (P2X6) (B TIGHT)	
D1051	8-719-980-85	DIODE SLF325C	
D1091	8-719-950-74	LED SLR314D	
HRPE1001	A-2003-723-H	DECK ASSY, HEAD	
Q1091	8-729-809-43	TRANSISTOR SPS-314B	

5-4. MECHANISM DECK SECTION-2 (TCM-200R5)



Ref. No.	Part No.	Description	Remark
151	3-356-604-01	BELT (CAPSTAN)	
152	X-3356-642-1	FLYWHEEL (R FWD) ASSY	
153	X-3356-643-1	FLYWHEEL (R REV) ASSY	
154	3-355-801-01	SCREW (BTP 2X18)	
155	3-356-705-01	WASHER (CAPSTAN)	
* 156	3-356-718-01	SPACER (THRUST RETAINER R)	
157	3-356-631-01	HOLDER (SENSOR)	
* 158	3-356-628-01	SPACER (MOTOR)	
* 159	X-3356-602-1	BRACKET (MOTOR R) ASSY	
160	3-363-804-01	SCREW (+P 2.6X6.5)	
161	3-356-702-01	GEAR (COMMUNICATION B)	
162	3-669-465-00	WASHER (1.5), STOPPER	
163	3-356-613-01	LEVER (MODE)	
165	3-356-617-01	LEVER (SELECTION)	
166	3-356-606-01	GEAR (MODE)	
167	3-356-615-01	GEAR (MODE CAM, RR)	
* 170	3-356-629-01	BRACKET (THRUST RETAINER R)	
171	3-356-707-01	SCREW (+PTWH 2X25)	
172	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
173	3-575-321-00	RETAINER, THRUST, CAPSTAN	
174	3-356-603-01	BELT (MODE)	

Ref. No.	Part No.	Description	Remark
175	3-356-607-01	PULLEY (MODE)	
176	3-356-703-01	GEAR (COMMUNICATION C)	
177	3-356-616-01	GEAR (LOADING CAM)	
178	3-356-609-01	GEAR (LOADING)	
179	3-356-605-01	SPRING, COMPRESSION	
180	3-558-708-11	WASHER, STOPPER	
181	3-356-630-01	ROLLER (LOADING)	
* 182	X-3356-606-1	LEVER (LOADING) ASSY	
183	3-356-612-01	SLIDER (REVERSE)	
184	X-3356-634-1	CHASSIS (R2) COMPLETE ASSY, MECH	
185	3-356-624-01	SPRING, TENSION	
* 186	1-632-741-11	REAL MOTOR BOARD	
* 187	1-634-323-11	TRANSLATION BOARD	
* 188	1-632-740-11	MD BOARD	
IC1001	8-749-920-97	DIODE GP2S22B	
IC1002	8-749-920-97	DIODE GP2S22B	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-605-1	MOTOR (CAPSTAN R) ASSY	
S1001	1-466-525-11	ENCODER, ROTARY	

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the part specified in the diagrams or the components used on the set.
- -XX,-X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : 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

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2006-954-A	DOLBY(S) BOARD, COMPLETE (L-CH, R-CH) *****		C31	1-104-555-11	FILM CHIP	0.022uF 5% 16V
		< CAPACITOR >		C32	1-104-563-11	FILM CHIP	0.1uF 5% 16V
C1	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C33	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V
C2	1-135-177-21	TANTALUM CHIP	1uF 20% 20V	C34	1-104-563-11	FILM CHIP	0.1uF 5% 16V
C3	1-104-558-91	FILM CHIP	0.039uF 5% 16V	C35	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V
C4	1-163-007-11	CERAMIC CHIP	680PF 10% 50V	C36	1-165-319-11	CERAMIC CHIP	0.1uF 50V
C5	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C37	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C6	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	C38	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V
C7	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C39	1-104-555-11	FILM CHIP	0.022uF 5% 16V
C8	1-104-562-11	FILM CHIP	0.082uF 5% 16V	C40	1-104-563-11	FILM CHIP	0.1uF 5% 16V
C9	1-104-553-11	FILM CHIP	0.015uF 5% 16V			< IC >	
C10	1-165-319-11	CERAMIC CHIP	0.1uF 50V	IC1	8-752-056-51	IC CXA1417Q	
C11	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	IC2	8-759-711-85	IC NJM4580E-D	
C12	1-164-222-11	CERAMIC CHIP	0.22uF 25V			< RESISTOR >	
C13	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R1	1-216-013-00	METAL CHIP	33 5% 1/10W
C14	1-162-568-11	CERAMIC CHIP	0.33uF 10% 16V	R2	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
C15	1-104-562-11	FILM CHIP	0.082uF 5% 16V	R3	1-216-681-11	METAL CHIP	18K 0.5% 1/10W
C16	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	R4	1-218-774-11	METAL CHIP	820K 0.50% 1/10W
C17	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R5	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W
C18	1-164-222-11	CERAMIC CHIP	0.22uF 25V	R6	1-216-656-11	METAL CHIP	1.6K 0.5% 1/10W
C19	1-163-035-00	CERAMIC CHIP	0.047uF 50V	R7	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W
C20	1-104-553-11	FILM CHIP	0.015uF 5% 16V	R8	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
C21	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	R9	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W
C22	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	R10	1-216-654-11	METAL CHIP	1.3K 0.5% 1/10W
C23	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	R11	1-216-013-00	METAL CHIP	33 5% 1/10W
C24	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R12	1-216-017-00	METAL CHIP	47 5% 1/10W
C25	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R13	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
C26	1-104-558-91	FILM CHIP	0.039uF 5% 16V	R14	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
C27	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R15	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W
C28	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R16	1-216-013-00	METAL CHIP	33 5% 1/10W
C29	1-104-563-11	FILM CHIP	0.1uF 5% 16V	R17	1-216-017-00	METAL CHIP	47 5% 1/10W
C30	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	R18	1-216-055-00	METAL CHIP	1.8K 5% 1/10W

Ref.No.	Part No.	Description	Remark		
R19	1-216-656-11	METAL CHIP	1.6K	0.5%	1/10W
R20	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W
R21	1-218-774-11	METAL CHIP	820K	0.50%	1/10W
R22	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R23	1-216-678-11	METAL CHIP	13K	0.5%	1/10W
R24	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W
R25	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R26	1-216-676-11	METAL CHIP	11K	0.5%	1/10W
R27	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W
R28	1-216-697-11	METAL CHIP	82K	0.5%	1/10W
R29	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W
R30	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R31	1-216-680-11	METAL CHIP	16K	0.5%	1/10W
R32	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R33	1-216-080-00	METAL CHIP	20K	5%	1/10W
R34	1-216-684-11	METAL CHIP	24K	0.5%	1/10W
R35	1-216-084-00	METAL CHIP	30K	5%	1/10W
R36	1-216-084-00	METAL CHIP	30K	5%	1/10W
R37	1-216-074-00	METAL CHIP	11K	5%	1/10W
R38	1-216-086-00	METAL GLAZE	36K	5%	1/10W
R39	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R40	1-216-084-00	METAL CHIP	30K	5%	1/10W
R41	1-216-078-00	METAL GLAZE	16K	5%	1/10W
R42	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R43	1-216-081-00	METAL CHIP	22K	5%	1/10W
R44	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R45	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R53	1-216-058-00	METAL GLAZE	2.4K	5%	1/10W
R54	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R55	1-216-666-11	METAL CHIP	4.3K	0.5%	1/10W

*	A-2007-013-A MAIN BOARD, COMPLETE				
	(AEP, Germany, Australian)				

*	A-2007-015-A MAIN BOARD, COMPLETE				
	(UK)				

*	3-309-144-21 HEAT SINK				
*	4-880-403-11 HEAT SINK				
*	3-356-925-01 HEAT SINK				
	7-685-646-79	SCREW +BVTP	3X8	TYPE2	IT-3
	7-682-548-04	SCREW +BVTT	3X8	(S)	
< CAPACITOR >					
C010	1-164-159-11	CERAMIC	0.1uF		50V
C011	1-164-159-11	CERAMIC	0.1uF		50V
C012	1-161-494-00	CERAMIC	0.022uF		25V
C013	1-161-494-00	CERAMIC	0.022uF		25V
C014	1-161-494-00	CERAMIC	0.022uF		25V
C015	1-161-494-00	CERAMIC	0.022uF		25V
C016	1-162-286-31	CERAMIC	220PF	10%	50V

Ref.No.	Part No.	Description	Remark		
C017	1-162-286-31	CERAMIC	220PF	10%	50V
C018	1-161-494-00	CERAMIC	0.022uF		25V
C019	1-161-494-00	CERAMIC	0.022uF		25V
C020	1-161-494-00	CERAMIC	0.022uF		25V
C101	1-110-342-11	MYLAR	390PF	5%	50V
C102	1-136-157-00	FILM	0.022uF	5%	50V
C103	1-126-101-11	ELECT	100uF	20%	16V
C104	1-124-657-00	ELECT	10uF	20%	50V
C105	1-136-273-91	FILM	75PF	5%	630V
C106	1-162-288-31	CERAMIC	330PF	10%	50V
C107	1-130-472-00	MYLAR	0.0012uF	5%	50V
C108	1-136-433-11	FILM	100PF	5%	630V
C109	1-136-437-11	FILM	220PF	5%	630V
C110	1-107-045-00	MICA	3.9PF		500V
C111	1-136-165-00	FILM	0.1uF	5%	50V
C112	1-136-157-00	FILM	0.022uF	5%	50V
C113	1-136-153-00	FILM	0.01uF	5%	50V
C114	1-126-022-11	ELECT	47uF	20%	16V
C115	1-126-300-11	ELECT	0.47uF	20%	50V
C116	1-126-059-11	ELECT	10uF	20%	50V
C117	1-136-230-00	FILM	0.0022uF	5%	100V
C118	1-126-161-11	ELECT	2.2uF	20%	50V
C151	1-110-342-11	MYLAR	390PF	5%	50V
C152	1-136-157-00	FILM	0.022uF	5%	50V
C153	1-126-101-11	ELECT	100uF	20%	16V
C154	1-124-657-00	ELECT	10uF	20%	50V
C155	1-136-273-91	FILM	75PF	5%	630V
C156	1-162-288-31	CERAMIC	330PF	10%	50V
C157	1-130-472-00	MYLAR	0.0012uF	5%	50V
C158	1-136-433-11	FILM	100PF	5%	630V
C159	1-136-437-11	FILM	220PF	5%	630V
C161	1-136-165-00	FILM	0.1uF	5%	50V
C162	1-136-157-00	FILM	0.022uF	5%	50V
C163	1-136-153-00	FILM	0.01uF	5%	50V
C164	1-126-022-11	ELECT	47uF	20%	16V
C165	1-136-601-11	FILM	0.01uF	5%	630V
C166	1-130-856-00	FILM	0.0068uF	5%	100V
C167	1-136-230-00	FILM	0.0022uF	5%	100V
C201	1-110-342-11	MYLAR	390PF	5%	50V
C202	1-136-157-00	FILM	0.022uF	5%	50V
C203	1-126-101-11	ELECT	100uF	20%	16V
C204	1-124-657-00	ELECT	10uF	20%	50V
C205	1-136-273-91	FILM	75PF	5%	630V
C206	1-162-288-31	CERAMIC	330PF	10%	50V
C207	1-130-472-00	MYLAR	0.0012uF	5%	50V
C208	1-136-433-11	FILM	100PF	5%	630V
C209	1-136-437-11	FILM	220PF	5%	630V
C210	1-107-045-00	MICA	3.9PF		500V
C211	1-136-165-00	FILM	0.1uF	5%	50V
C212	1-136-157-00	FILM	0.022uF	5%	50V

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
C213	1-136-153-00	FILM	0.01uF	5%	50V	C361	1-126-161-11	ELECT	2.2uF	20%	50V
C214	1-126-022-11	ELECT	47uF	20%	16V	C362	1-126-049-11	ELECT	22uF	20%	25V
C215	1-126-300-11	ELECT	0.47uF	20%	50V	C363	1-126-059-11	ELECT	10uF	20%	50V
C216	1-126-059-11	ELECT	10uF	20%	50V	C364	1-126-049-11	ELECT	22uF	20%	25V
C217	1-136-230-00	FILM	0.0022uF	5%	100V	C365	1-126-059-11	ELECT	10uF	20%	50V
C218	1-126-161-11	ELECT	2.2uF	20%	50V	C366	1-126-163-11	ELECT	4.7uF	20%	50V
C251	1-110-342-11	MYLAR	390PF	5%	50V	C367	1-126-059-11	ELECT	10uF	20%	50V
C252	1-136-157-00	FILM	0.022uF	5%	50V	C368	1-126-301-11	ELECT	1uF	20%	50V
C253	1-126-101-11	ELECT	100uF	20%	16V	C501	1-126-163-11	ELECT	4.7uF	20%	50V
C254	1-124-657-00	ELECT	10uF	20%	50V	C502	1-124-772-11	ELECT	10000uF	20%	25V
C255	1-136-273-91	FILM	75PF	5%	630V	C503	1-126-022-11	ELECT	47uF	20%	10V
C256	1-162-288-31	CERAMIC	330PF	10%	50V	C504	1-126-937-11	ELECT	4700uF	20%	16V
C257	1-130-472-00	MYLAR	0.0012uF	5%	50V	C505	1-124-556-11	ELECT	2200uF	20%	16V
C258	1-136-433-11	FILM	100PF	5%	630V	C506	1-124-919-11	ELECT	220uF	20%	63V
C259	1-136-437-11	FILM	220PF	5%	630V	C507	1-126-301-11	ELECT	1uF	20%	50V
C261	1-136-165-00	FILM	0.1uF	5%	50V	C508	1-124-471-00	ELECT	1000uF	20%	6.3V
C262	1-136-157-00	FILM	0.022uF	5%	50V	C509	1-126-163-11	ELECT	4.7uF	20%	50V
C263	1-136-153-00	FILM	0.01uF	5%	50V	C510	1-126-163-11	ELECT	4.7uF	20%	50V
C264	1-126-022-11	ELECT	47uF	20%	16V	C511	1-124-556-11	ELECT	2200uF	20%	16V
C265	1-136-601-11	FILM	0.01uF	5%	630V	C512	1-126-024-11	ELECT	220uF	20%	16V
C266	1-130-856-00	FILM	0.0068uF	5%	100V	C513	1-126-024-11	ELECT	220uF	20%	16V
C267	1-136-230-00	FILM	0.0022uF	5%	100V	C514	1-126-161-11	ELECT	2.2uF	20%	50V
C301	1-136-157-00	FILM	0.022uF	5%	50V	C515	1-162-286-31	CERAMIC	220PF	10%	50V
C302	1-126-161-11	ELECT	2.2uF	20%	50V	C516	1-162-286-31	CERAMIC	220PF	10%	50V
C303	1-162-294-31	CERAMIC	0.001uF	10%	50V	C517	1-126-101-11	ELECT	100uF	20%	16V
C304	1-161-375-00	CERAMIC	0.0022uF	20%	50V	C518	1-126-101-11	ELECT	100uF	20%	16V
C305	1-126-163-11	ELECT	4.7uF	20%	50V	C519	1-124-556-11	ELECT	2200uF	20%	16V
C306	1-130-475-00	MYLAR	0.0022uF	5%	50V	C599	1-124-910-11	ELECT	47uF	20%	50V
C307	1-130-475-00	MYLAR	0.0022uF	5%	50V	C608	1-126-301-11	ELECT	1uF	20%	50V
C308	1-136-174-00	FILM	0.56uF	5%	50V	C613	1-162-288-31	CERAMIC	330PF	10%	50V
C309	1-136-171-00	FILM	0.33uF	5%	50V	C614	1-162-288-31	CERAMIC	330PF	10%	50V
C310	1-126-163-11	ELECT	4.7uF	20%	50V	C615	1-162-288-31	CERAMIC	330PF	10%	50V
C311	1-126-161-11	ELECT	2.2uF	20%	50V	C616	1-162-288-31	CERAMIC	330PF	10%	50V
C312	1-126-049-11	ELECT	22uF	20%	25V	C623	1-126-059-11	ELECT	10uF	20%	50V
C313	1-126-059-11	ELECT	10uF	20%	50V	C624	1-164-159-11	CERAMIC	0.1uF		50V
C314	1-126-049-11	ELECT	22uF	20%	25V	C625	1-126-161-11	ELECT	2.2uF	20%	50V
C315	1-126-059-11	ELECT	10uF	20%	50V	C698	1-164-159-11	CERAMIC	0.1uF		50V
C316	1-126-163-11	ELECT	4.7uF	20%	50V	C797	1-162-294-31	CERAMIC	0.001uF	10%	50V
C317	1-126-059-11	ELECT	10uF	20%	50V	C801	1-162-306-11	CERAMIC	0.01uF	20%	16V
C318	1-126-301-11	ELECT	1uF	20%	50V	C802	1-164-159-11	CERAMIC	0.1uF		50V
C351	1-136-157-00	FILM	0.022uF	5%	50V	C803	1-164-159-11	CERAMIC	0.1uF		50V
C352	1-126-161-11	ELECT	2.2uF	20%	50V	C804	1-164-159-11	CERAMIC	0.1uF		50V
C353	1-162-294-31	CERAMIC	0.001uF	10%	50V	C805	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-161-375-00	CERAMIC	0.0022uF	20%	50V	C807	1-164-159-11	CERAMIC	0.1uF		50V
C355	1-126-163-11	ELECT	4.7uF	20%	50V	C808	1-164-159-11	CERAMIC	0.1uF		50V
C356	1-130-475-00	MYLAR	0.0022uF	5%	50V	C821	1-126-163-11	ELECT	4.7uF	20%	50V
C357	1-130-475-00	MYLAR	0.0022uF	5%	50V	C822	1-126-022-11	ELECT	47uF	20%	16V
C358	1-136-174-00	FILM	0.56uF	5%	50V	C823	1-130-479-00	MYLAR	0.0047uF	5%	50V
C359	1-136-171-00	FILM	0.33uF	5%	50V	C824	1-130-479-00	MYLAR	0.0047uF	5%	50V
C360	1-126-163-11	ELECT	4.7uF	20%	50V	C825	1-126-022-11	ELECT	47uF	20%	16V

MAIN

Ref.No.	Part No.	Description	Remark
C826	1-126-163-11	ELECT 4.7uF	20% 50V
< CONNECTOR >			
* CN1	1-537-473-11	TERMINAL (LEAD PIN)	
CN302	1-691-908-21	CONNECTOR, WIRE TRAP 8P	
* CN304	1-564-338-71	PIN, CONNECTOR 4P	
CN306	1-580-462-11	SOCKET, CONNECTOR 20P	
CN307	1-580-463-11	SOCKET, CONNECTOR 16P	
* CN309	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P	
* CN310	1-573-978-11	CONNECTOR, BOARD TO BOARD 11P	
CN311	1-506-468-11	PIN, CONNECTOR 3P	
* CN501	1-564-513-11	PLUG, CONNECTOR 10P	
* CN601	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P	
* CN602	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P	
* CN802	1-568-955-11	PIN, CONNECTOR 6P	
< COMPOSITION CIRCUIT BLOCK >			
CP101	1-233-125-11	COMPOSITION CIRCUIT BLOCK	
CP201	1-233-125-11	COMPOSITION CIRCUIT BLOCK	
CP801	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
CP802	1-233-199-11	COMPOSITION CIRCUIT BLOCK	
< DIODE >			
D102	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D301	8-719-200-82	DIODE 11ES2	
D302	8-719-200-82	DIODE 11ES2	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-933-54	DIODE HZS9A2L	
D351	8-719-200-82	DIODE 11ES2	
D352	8-719-200-82	DIODE 11ES2	
△D501	8-719-500-36	DIODE D2SB20	
D502	8-719-200-77	DIODE 10E2N	
D503	8-719-987-63	DIODE 1N4148M	
D504	8-719-001-54	DIODE UZL-11H2	
D505	8-719-200-77	DIODE 10E2N	
D506	8-719-933-41	DIODE HZS6C3L	
D507	8-719-987-63	DIODE 1N4148M	
D508	8-719-933-38	DIODE HZS6B3L	
D509	8-719-200-77	DIODE 10E2N	
D510	8-719-200-77	DIODE 10E2N	
D511	8-719-200-77	DIODE 10E2N	
D512	8-719-200-77	DIODE 10E2N	
D513	8-719-987-63	DIODE 1N4148M	
D514	8-719-987-63	DIODE 1N4148M	
D515	8-719-987-63	DIODE 1N4148M	
D516	8-719-933-33	DIODE HZS6A1L	
D517	8-719-987-63	DIODE 1N4148M	
D518	8-719-987-63	DIODE 1N4148M	

Ref.No.	Part No.	Description	Remark
D609	8-719-987-63	DIODE 1N4148M	
D610	8-719-987-63	DIODE 1N4148M	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D811	8-719-987-63	DIODE 1N4148M	
D812	8-719-987-63	DIODE 1N4148M	
< IC >			
IC101	8-759-111-44	IC uPC4570C-1	
IC102	8-759-106-56	IC uPC1297CA	
IC103	8-759-916-14	IC SN74HC04N	
IC104	8-759-000-48	IC MC14052BCP	
IC201	8-759-111-44	IC uPC4570C-1	
IC202	8-759-106-56	IC uPC1297CA	
IC203	8-759-916-14	IC SN74HC04N	
IC204	8-759-000-48	IC MC14052BCP	
IC301	8-759-140-53	IC uPD4053BC	
IC302	8-752-059-54	IC CXA1332S	
IC303	8-759-140-53	IC uPD4053BC	
IC304	8-759-140-53	IC uPD4053BC	
IC605	8-759-634-84	IC M50255P	
IC606	8-759-634-84	IC M50255P	
IC609	8-759-165-82	IC PST600E-T	
IC801	8-759-633-86	IC M50747-B83SP	
IC802	8-759-973-95	IC BA6219B	
IC803	8-759-822-09	IC LB1641	
IC804	8-759-973-95	IC BA6219B	
IC805	8-759-822-09	IC LB1641	
IC806	8-759-240-71	IC TC4071BP	
< COIL >			
L101	1-410-780-11	INDUCTOR 27mH	
L102	1-410-971-11	INDUCTOR 10uH	
L151	1-410-780-11	INDUCTOR 27mH	
L201	1-410-780-11	INDUCTOR 27mH	
L202	1-410-971-11	INDUCTOR 10uH	
L251	1-410-780-11	INDUCTOR 27mH	
< TRANSISTOR >			
Q101	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q102	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q105	8-729-900-61	TRANSISTOR DTA114ES	
Q151	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q201	8-729-142-46	TRANSISTOR 2SC2001-LK	

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q202	8-729-821-04	TRANSISTOR	2SA1317-STU	R011	1-249-405-11	CARBON	100 5% 1/4W
Q205	8-729-900-61	TRANSISTOR	DTA114ES	R012	1-249-405-11	CARBON	100 5% 1/4W
Q251	8-729-142-46	TRANSISTOR	2SC2001-LK	R013	1-249-405-11	CARBON	100 5% 1/4W
Q301	8-729-900-74	TRANSISTOR	DTC143TS	R020	1-249-417-11	CARBON	1K 5% 1/4W
Q302	8-729-900-80	TRANSISTOR	DTC114ES	R021	1-249-417-11	CARBON	1K 5% 1/4W
Q303	8-729-900-65	TRANSISTOR	DTA144ES	R022	1-249-417-11	CARBON	1K 5% 1/4W
Q304	8-729-900-65	TRANSISTOR	DTA144ES	R023	1-249-417-11	CARBON	1K 5% 1/4W
Q305	8-729-900-80	TRANSISTOR	DTC114ES	R101	1-247-881-00	CARBON	120K 5% 1/4W
Q306	8-729-900-80	TRANSISTOR	DTC114ES	R102	1-247-882-11	CARBON	130K 5% 1/4W
Q307	8-729-900-65	TRANSISTOR	DTA144ES	R103	1-249-405-11	CARBON	100 5% 1/4W
Q351	8-729-900-74	TRANSISTOR	DTC143TS	R104	1-247-850-11	CARBON	6. 2K 5% 1/4W
Q352	8-729-900-80	TRANSISTOR	DTC114ES	R105	1-249-430-11	CARBON	12K 5% 1/4W
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF	R106	1-247-884-11	CARBON	160K 5% 1/4W
Q502	8-729-141-30	TRANSISTOR	2SC3623A-LK	△R107	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q503	8-729-141-83	TRANSISTOR	2SB1094-LK	R108	1-249-431-11	CARBON	15K 5% 1/4W
Q504	8-729-620-05	TRANSISTOR	2SC2603-EF	R109	1-249-430-11	CARBON	12K 5% 1/4W
Q505	8-729-209-15	TRANSISTOR	2SD2012	R110	1-249-441-11	CARBON	100K 5% 1/4W
Q506	8-729-821-04	TRANSISTOR	2SA1317-STU	R111	1-249-390-11	CARBON	5. 6 5% 1/6W
Q507	8-729-140-04	TRANSISTOR	2SB1116A-L	R112	1-249-441-11	CARBON	100K 5% 1/4W
Q508	8-729-620-05	TRANSISTOR	2SC2603-EF	R115	1-249-421-11	CARBON	2. 2K 5% 1/4W
Q509	8-729-209-15	TRANSISTOR	2SD2012	R116	1-249-425-11	CARBON	4. 7K 5% 1/4W
Q510	8-729-620-05	TRANSISTOR	2SC2603-EF	R117	1-249-425-11	CARBON	4. 7K 5% 1/4W
Q511	8-729-821-04	TRANSISTOR	2SA1317-STU	R151	1-247-881-00	CARBON	120K 5% 1/4W
Q512	8-729-141-83	TRANSISTOR	2SB1094-LK	R152	1-247-882-11	CARBON	130K 5% 1/4W
Q513	8-729-821-04	TRANSISTOR	2SA1317-STU	R153	1-249-405-11	CARBON	100 5% 1/4W
Q514	8-729-821-04	TRANSISTOR	2SA1317-STU	R154	1-247-850-11	CARBON	6. 2K 5% 1/4W
Q614	8-729-821-04	TRANSISTOR	2SA1317-STU	R155	1-249-430-11	CARBON	12K 5% 1/4W
Q699	8-729-900-65	TRANSISTOR	DTA144ES	R156	1-247-884-11	CARBON	160K 5% 1/4W
Q801	8-729-900-65	TRANSISTOR	DTA144ES	△R157	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q802	8-729-900-89	TRANSISTOR	DTC144ES	R158	1-249-431-11	CARBON	15K 5% 1/4W
Q804	8-729-900-65	TRANSISTOR	DTA144ES	R159	1-249-430-11	CARBON	12K 5% 1/4W
Q805	8-729-900-80	TRANSISTOR	DTC114ES	R161	1-249-390-11	CARBON	5. 6 5% 1/6W
Q806	8-729-900-80	TRANSISTOR	DTC114ES	R162	1-249-441-11	CARBON	100K 5% 1/4W
Q807	8-729-900-65	TRANSISTOR	DTA144ES	R165	1-249-429-11	CARBON	10K 5% 1/4W
Q808	8-729-900-89	TRANSISTOR	DTC144ES	R167	1-249-425-11	CARBON	4. 7K 5% 1/4W
Q809	8-729-900-80	TRANSISTOR	DTC114ES	R181	1-247-874-11	CARBON	62K 5% 1/4W
Q810	8-729-900-65	TRANSISTOR	DTA144ES	R182	1-247-866-11	CARBON	30K 5% 1/4W
Q811	8-729-900-89	TRANSISTOR	DTC144ES	R183	1-249-431-11	CARBON	15K 5% 1/4W
Q812	8-729-900-80	TRANSISTOR	DTC114ES	R184	1-247-852-11	CARBON	7. 5K 5% 1/4W
Q813	8-729-900-80	TRANSISTOR	DTC114ES	R185	1-249-421-11	CARBON	2. 2K 5% 1/4W
Q814	8-729-900-80	TRANSISTOR	DTC114ES	R190	1-249-434-11	CARBON	27K 5% 1/4W
Q821	8-729-620-05	TRANSISTOR	2SC2603-EF	R191	1-249-434-11	CARBON	27K 5% 1/4W
Q822	8-729-620-05	TRANSISTOR	2SC2603-EF	R192	1-249-434-11	CARBON	27K 5% 1/4W
Q823	8-729-620-05	TRANSISTOR	2SC2603-EF	R193	1-249-434-11	CARBON	27K 5% 1/4W
Q824	8-729-620-05	TRANSISTOR	2SC2603-EF	R194	1-249-426-11	CARBON	5. 6K 5% 1/4W

< RESISTOR >

△R005	1-219-137-11	FUSIBLE	0. 33	10%	1/4W	F
△R006	1-219-137-11	FUSIBLE	0. 33	10%	1/4W	F
R010	1-249-405-11	CARBON	100	5%	1/4W	

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

MAIN

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
R195	1-247-860-11	CARBON	16K	5%	1/4W	R307	1-247-864-11	CARBON	24K	5%	1/4W
R196	1-249-412-11	CARBON	390	5%	1/4W	R308	1-249-414-11	CARBON	560	5%	1/4W
R197	1-249-431-11	CARBON	15K	5%	1/4W	R309	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-247-881-00	CARBON	120K	5%	1/4W	R310	1-249-441-11	CARBON	100K	5%	1/4W
R202	1-247-882-11	CARBON	130K	5%	1/4W	R311	1-249-436-11	CARBON	39K	5%	1/4W
R203	1-249-405-11	CARBON	100	5%	1/4W	R312	1-247-858-11	CARBON	13K	5%	1/4W
R204	1-247-850-11	CARBON	6. 2K	5%	1/4W	R313	1-249-436-11	CARBON	39K	5%	1/4W
R205	1-249-430-11	CARBON	12K	5%	1/4W	R314	1-247-858-11	CARBON	13K	5%	1/4W
R206	1-247-884-11	CARBON	160K	5%	1/4W	R315	1-249-437-11	CARBON	47K	5%	1/4W
△R207	1-219-153-11	FUSIBLE	10	5%	1/4W F	R316	1-249-437-11	CARBON	47K	5%	1/4W
R208	1-249-431-11	CARBON	15K	5%	1/4W	R317	1-249-417-11	CARBON	1K	5%	1/4W
R209	1-249-430-11	CARBON	12K	5%	1/4W	R318	1-249-441-11	CARBON	100K	5%	1/4W
R210	1-249-441-11	CARBON	100K	5%	1/4W	R319	1-249-433-11	CARBON	22K	5%	1/4W
R211	1-249-390-11	CARBON	5. 6	5%	1/6W	R320	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-249-441-11	CARBON	100K	5%	1/4W	R351	1-249-421-11	CARBON	2. 2K	5%	1/4W
R215	1-249-421-11	CARBON	2. 2K	5%	1/4W	R352	1-249-423-11	CARBON	3. 3K	5%	1/4W
R216	1-249-425-11	CARBON	4. 7K	5%	1/4W	R353	1-247-887-00	CARBON	220K	5%	1/4W
R217	1-249-425-11	CARBON	4. 7K	5%	1/4W	R354	1-249-441-11	CARBON	100K	5%	1/4W
R251	1-247-881-00	CARBON	120K	5%	1/4W	R355	1-249-423-11	CARBON	3. 3K	5%	1/4W
R252	1-247-882-11	CARBON	130K	5%	1/4W	R356	1-249-428-11	CARBON	8. 2K	5%	1/4W
R253	1-249-405-11	CARBON	100	5%	1/4W	R357	1-247-864-11	CARBON	24K	5%	1/4W
R254	1-247-850-11	CARBON	6. 2K	5%	1/4W	R358	1-249-414-11	CARBON	560	5%	1/4W
R255	1-249-430-11	CARBON	12K	5%	1/4W	R359	1-249-434-11	CARBON	27K	5%	1/4W
R256	1-247-884-11	CARBON	160K	5%	1/4W	R360	1-249-441-11	CARBON	100K	5%	1/4W
△R257	1-219-153-11	FUSIBLE	10	5%	1/4W F	R361	1-249-436-11	CARBON	39K	5%	1/4W
R258	1-249-431-11	CARBON	15K	5%	1/4W	R362	1-247-858-11	CARBON	13K	5%	1/4W
R259	1-249-430-11	CARBON	12K	5%	1/4W	R363	1-249-436-11	CARBON	39K	5%	1/4W
R261	1-249-390-11	CARBON	5. 6	5%	1/6W	R364	1-247-858-11	CARBON	13K	5%	1/4W
R262	1-249-441-11	CARBON	100K	5%	1/4W	R365	1-249-437-11	CARBON	47K	5%	1/4W
R265	1-249-429-11	CARBON	10K	5%	1/4W	R366	1-249-437-11	CARBON	47K	5%	1/4W
R267	1-249-425-11	CARBON	4. 7K	5%	1/4W	R369	1-249-429-11	CARBON	10K	5%	1/4W
R281	1-247-874-11	CARBON	62K	5%	1/4W	R370	1-249-433-11	CARBON	22K	5%	1/4W
R282	1-247-866-11	CARBON	30K	5%	1/4W	R390	1-249-425-11	CARBON	4. 7K	5%	1/4W
R283	1-249-431-11	CARBON	15K	5%	1/4W	R396	1-249-429-11	CARBON	10K	5%	1/4W
R284	1-247-852-11	CARBON	7. 5K	5%	1/4W	R397	1-249-429-11	CARBON	10K	5%	1/4W
R285	1-249-421-11	CARBON	2. 2K	5%	1/4W	R398	1-249-429-11	CARBON	10K	5%	1/4W
R290	1-249-434-11	CARBON	27K	5%	1/4W	R399	1-249-429-11	CARBON	10K	5%	1/4W
R291	1-249-434-11	CARBON	27K	5%	1/4W	R501	1-249-433-11	CARBON	22K	5%	1/4W
R292	1-249-434-11	CARBON	27K	5%	1/4W	R502	1-249-421-11	CARBON	2. 2K	5%	1/4W
R293	1-249-434-11	CARBON	27K	5%	1/4W	R505	1-249-422-11	CARBON	2. 7K	5%	1/4W
R294	1-249-426-11	CARBON	5. 6K	5%	1/4W	△R506	1-219-136-11	FUSIBLE	0. 22	10%	1/4W F
R295	1-247-860-11	CARBON	16K	5%	1/4W	R507	1-249-430-11	CARBON	12K	5%	1/4W
R296	1-249-412-11	CARBON	390	5%	1/4W	R508	1-249-421-11	CARBON	2. 2K	5%	1/4W
R297	1-249-431-11	CARBON	15K	5%	1/4W	R509	1-247-840-00	CARBON	2. 4K	5%	1/4W
R301	1-249-421-11	CARBON	2. 2K	5%	1/4W	R510	1-247-858-11	CARBON	13K	5%	1/4W
R302	1-249-423-11	CARBON	3. 3K	5%	1/4W	Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.					
R303	1-247-887-00	CARBON	220K	5%	1/4W						
R304	1-249-441-11	CARBON	100K	5%	1/4W						
R305	1-249-423-11	CARBON	3. 3K	5%	1/4W						
R306	1-249-428-11	CARBON	8. 2K	5%	1/4W						

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R511	1-249-436-11	CARBON	39K 5% 1/4W	△ R824	1-212-950-00	FUSIBLE	4.7 5% 1/2W F
R512	1-249-421-11	CARBON	2.2K 5% 1/4W	R825	1-249-433-11	CARBON	22K 5% 1/4W
R513	1-249-421-11	CARBON	2.2K 5% 1/4W	R826	1-247-864-11	CARBON	24K 5% 1/4W
R514	1-249-417-11	CARBON	1K 5% 1/4W	R827	1-249-433-11	CARBON	22K 5% 1/4W
R515	1-249-417-11	CARBON	1K 5% 1/4W	R828	1-249-411-11	CARBON	330 5% 1/4W
R516	1-249-405-11	CARBON	100 5% 1/4W	R829	1-247-830-11	CARBON	910 5% 1/4W
R517	1-249-433-11	CARBON	22K 5% 1/4W	R830	1-249-418-11	CARBON	1.2K 5% 1/4W
R518	1-249-421-11	CARBON	2.2K 5% 1/4W	R831	1-249-417-11	CARBON	1K 5% 1/4W
R519	1-249-421-11	CARBON	2.2K 5% 1/4W	△ R832	1-212-950-00	FUSIBLE	4.7 5% 1/2W F
R520	1-249-417-11	CARBON	1K 5% 1/4W	R833	1-249-416-11	CARBON	820 5% 1/4W
R521	1-249-415-11	CARBON	680 5% 1/4W	R834	1-249-419-11	CARBON	1.5K 5% 1/4W
R522	1-249-422-11	CARBON	2.7K 5% 1/4W	R835	1-249-417-11	CARBON	1K 5% 1/4W
R523	1-249-424-11	CARBON	3.9K 5% 1/4W	△ R836	1-212-950-00	FUSIBLE	4.7 5% 1/2W F
R524	1-249-423-11	CARBON	3.3K 5% 1/4W	R837	1-249-436-11	CARBON	39K 5% 1/4W
R601	1-249-429-11	CARBON	10K 5% 1/4W	R838	1-247-895-00	CARBON	470K 5% 1/4W
R602	1-249-429-11	CARBON	10K 5% 1/4W	R839	1-247-895-00	CARBON	470K 5% 1/4W
R621	1-249-417-11	CARBON	1K 5% 1/4W	R840	1-249-436-11	CARBON	39K 5% 1/4W
R622	1-249-441-11	CARBON	100K 5% 1/4W	R841	1-247-895-00	CARBON	470K 5% 1/4W
R643	1-249-429-11	CARBON	10K 5% 1/4W	R842	1-247-895-00	CARBON	470K 5% 1/4W
R644	1-249-441-11	CARBON	100K 5% 1/4W	R843	1-249-436-11	CARBON	39K 5% 1/4W
R645	1-249-417-11	CARBON	1K 5% 1/4W	R844	1-249-436-11	CARBON	39K 5% 1/4W
R646	1-249-437-11	CARBON	47K 5% 1/4W	R845	1-249-433-11	CARBON	22K 5% 1/4W
R695	1-249-429-11	CARBON	10K 5% 1/4W	R846	1-249-433-11	CARBON	22K 5% 1/4W
R696	1-249-429-11	CARBON	10K 5% 1/4W	R861	1-249-421-11	CARBON	2.2K 5% 1/4W
R697	1-249-429-11	CARBON	10K 5% 1/4W	R862	1-249-429-11	CARBON	10K 5% 1/4W
R698	1-249-429-11	CARBON	10K 5% 1/4W	R863	1-249-429-11	CARBON	10K 5% 1/4W
R699	1-249-429-11	CARBON	10K 5% 1/4W	R864	1-249-433-11	CARBON	22K 5% 1/4W
R801	1-249-425-11	CARBON	4.7K 5% 1/4W	R865	1-249-429-11	CARBON	10K 5% 1/4W
R802	1-249-425-11	CARBON	4.7K 5% 1/4W	R866	1-249-417-11	CARBON	1K 5% 1/4W
R803	1-249-425-11	CARBON	4.7K 5% 1/4W	R867	1-249-412-11	CARBON	390 5% 1/4W
R804	1-249-425-11	CARBON	4.7K 5% 1/4W	R868	1-249-412-11	CARBON	390 5% 1/4W
R805	1-247-903-00	CARBON	1M 5% 1/4W	R869	1-249-417-11	CARBON	1K 5% 1/4W
R806	1-249-425-11	CARBON	4.7K 5% 1/4W	R870	1-249-429-11	CARBON	10K 5% 1/4W
R807	1-249-425-11	CARBON	4.7K 5% 1/4W	R871	1-249-429-11	CARBON	10K 5% 1/4W
R808	1-249-425-11	CARBON	4.7K 5% 1/4W	R872	1-249-433-11	CARBON	22K 5% 1/4W
R809	1-249-425-11	CARBON	4.7K 5% 1/4W	R873	1-249-421-11	CARBON	2.2K 5% 1/4W
R810	1-249-429-11	CARBON	10K 5% 1/4W	R874	1-249-429-11	CARBON	10K 5% 1/4W
R811	1-249-411-11	CARBON	330 5% 1/4W	R875	1-249-429-11	CARBON	10K 5% 1/4W
R812	1-247-830-11	CARBON	910 5% 1/4W				
R813	1-249-418-11	CARBON	1.2K 5% 1/4W				
R814	1-249-417-11	CARBON	1K 5% 1/4W				
△ R815	1-212-950-00	FUSIBLE	4.7 5% 1/2W F				
R816	1-249-433-11	CARBON	22K 5% 1/4W				
R817	1-247-864-11	CARBON	24K 5% 1/4W				
R818	1-249-433-11	CARBON	22K 5% 1/4W				
R819	1-247-862-11	CARBON	20K 5% 1/4W				
R820	1-249-433-11	CARBON	22K 5% 1/4W				
R821	1-249-416-11	CARBON	820 5% 1/4W				
R822	1-249-419-11	CARBON	1.5K 5% 1/4W				
R823	1-249-417-11	CARBON	1K 5% 1/4W				

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

MD

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW (A) /SW (B))

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
< VARIABLE RESISTOR >			
RV101	1-241-628-11	RES, ADJ, CARBON 2.2K	
RV102	1-241-631-11	RES, ADJ, CARBON 22K	
RV151	1-241-628-11	RES, ADJ, CARBON 2.2K	
RV152	1-241-631-11	RES, ADJ, CARBON 22K	
RV201	1-241-628-11	RES, ADJ, CARBON 2.2K	
RV202	1-241-631-11	RES, ADJ, CARBON 22K	
RV251	1-241-628-11	RES, ADJ, CARBON 2.2K	
RV252	1-241-631-11	RES, ADJ, CARBON 22K	
RV801	1-241-630-11	RES, ADJ, CARBON 10K	
RV802	1-241-630-11	RES, ADJ, CARBON 10K	
RV803	1-241-630-11	RES, ADJ, CARBON 10K	
RV804	1-241-630-11	RES, ADJ, CARBON 10K	
RV805	1-241-630-11	RES, ADJ, CARBON 10K	
RV806	1-238-019-11	RES, ADJ, CARBON 47K	
RV807	1-238-019-11	RES, ADJ, CARBON 47K	
< RELAY >			
RY101	1-515-683-11	RELAY	
RY201	1-515-683-11	RELAY	
< THERMISTOR >			
ST501	1-808-065-11	THERMISTOR, POSITIVE	
< TRANSFORMER >			
T101	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	
T102	1-433-366-11	TRANSFORMER, BIAS OSCILLATION	
T151	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	
T202	1-433-366-11	TRANSFORMER, BIAS OSCILLATION	
T251	1-433-367-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-231-388-00	FILTER, LOW PASS	
T351	1-231-388-00	FILTER, LOW PASS	
< TEST PIN >			
* TP101	1-564-506-11	PLUG, CONNECTOR 3P	
* TP102	1-564-506-11	PLUG, CONNECTOR 3P	
* TP201	1-564-506-11	PLUG, CONNECTOR 3P	
* TP202	1-564-506-11	PLUG, CONNECTOR 3P	
* TP601	1-564-505-11	PLUG, CONNECTOR 2P	
* TP801	1-564-505-11	PLUG, CONNECTOR 2P	
* TP802	1-564-505-11	PLUG, CONNECTOR 2P	
< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

Ref. No.	Part No.	Description	Remark
*	1-632-740-11	MD BOARD (DECK A, DECK B) *****	
	3-356-631-01	HOLDER (SENSOR)	
		< CONNECTOR >	
	CN1001 1-506-615-11	PIN, CONNECTOR 9P	
*	CN1002 1-564-502-11	PIN, CONNECTOR 10P	
		< IC >	
	IC1001 8-749-920-97	DIODE	GP2S22B
	IC1002 8-749-920-97	DIODE	GP2S22B
		< RESISTOR >	
	R1001 1-249-408-11	CARBON	180 5% 1/4W
	R1002 1-249-408-11	CARBON	180 5% 1/4W
		< SWITCH >	
	S1002 1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
	S1003 1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)	
	S1004 1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
	S1005 1-572-125-11	SWITCH, LEAF (FWD)	
	S1006 1-572-202-11	SWITCH, LEAF (HALF)	
	S1007 1-572-125-11	SWITCH, LEAF (METAL)	
	S1008 1-572-125-11	SWITCH, LEAF (70us)	
	S1009 1-572-125-11	SWITCH, LEAF (REV)	
		< TERMINAL >	
*	TB1001 1-694-018-11	TERMINAL (5P) *****	
*	A-2007-014-A	PANEL BOARD, COMPLETE (AEP, Germany, Australian) *****	
*	A-2007-016-A	PANEL BOARD, COMPLETE (UK) ***** (Including CAL/COVER/DISPLAY/HP/PJ /POWER SW/POWER TRANSFORMER /REC/REC VOL/SW(A)/SW(B))	
*	3-386-474-01	HOLDER (FL)	
*	4-955-901-01	CUSHION (FL)	
		< CAPACITOR >	
	C001 1-164-159-11	CERAMIC	0.1uF 50V
	C002 1-164-159-11	CERAMIC	0.1uF 50V
	C004 1-164-159-11	CERAMIC	0.1uF 50V
	C006 1-164-159-11	CERAMIC	0.1uF 50V
	C008 1-164-159-11	CERAMIC	0.1uF 50V
	C021 1-161-494-00	CERAMIC	0.022uF 25V
	C022 1-161-494-00	CERAMIC	0.022uF 25V

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW(A)/SW(B))

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C401	1-126-300-11	ELECT	0.47uF 20% 50V	C952	1-126-059-11	ELECT 10uF 20% 50V	
C402	1-126-163-11	ELECT	4.7uF 20% 50V	C953	1-126-163-11	ELECT 4.7uF 20% 50V	
C403	1-126-163-11	ELECT	4.7uF 20% 50V	C954	1-126-161-11	ELECT 2.2uF 20% 50V	
C404	1-126-300-11	ELECT	0.47uF 20% 50V	C964	1-126-157-11	ELECT 10uF 20% 16V	
C405	1-126-163-11	ELECT	4.7uF 20% 50V	C965	1-162-288-31	CERAMIC 330PF 10% 50V	
C406	1-126-163-11	ELECT	4.7uF 20% 50V	C966	1-126-157-11	ELECT 10uF 20% 16V	
C407	1-126-301-11	ELECT	1uF 20% 50V	C967	1-126-022-11	ELECT 47uF 20% 16V	
C413	1-130-475-00	MYLAR	0.0022uF 5% 50V	C997	1-126-162-11	ELECT 3.3uF 20% 50V	
C414	1-130-475-00	MYLAR	0.0022uF 5% 50V	C998	1-126-059-11	ELECT 10uF 20% 50V	
C451	1-126-300-11	ELECT	0.47uF 20% 50V	C999	1-126-059-11	ELECT 10uF 20% 50V	
C452	1-126-163-11	ELECT	4.7uF 20% 50V	C1000	1-164-159-11	CERAMIC 0.1uF 50V	
C453	1-126-163-11	ELECT	4.7uF 20% 50V			< CONNECTOR >	
C454	1-126-300-11	ELECT	0.47uF 20% 50V	* CN401	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P	
C455	1-126-163-11	ELECT	4.7uF 20% 50V	* CN402	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P	
C456	1-126-163-11	ELECT	4.7uF 20% 50V	* CN504	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
C457	1-126-301-11	ELECT	1uF 20% 50V	* CN701	1-691-620-21	SOCKET, CONNECTOR 8P	
C463	1-130-475-00	MYLAR	0.0022uF 5% 50V	CN704	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)	
C464	1-130-475-00	MYLAR	0.0022uF 5% 50V	CN705	1-569-566-11	SOCKET, CONNECTOR 20P	
C701	1-124-994-11	ELECT	100uF 20% 10V	CN706	1-580-475-11	SOCKET, CONNECTOR 16P	
C702	1-161-494-00	CERAMIC	0.022uF 25V	* CN901	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C704	1-161-494-00	CERAMIC	0.022uF 25V	* CN902	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C705	1-162-290-31	CERAMIC	470PF 10% 50V	* CN903	1-564-337-00	PIN, CONNECTOR 3P	
C706	1-162-290-31	CERAMIC	470PF 10% 50V	* CN904	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C707	1-162-290-31	CERAMIC	470PF 10% 50V	* CN905	1-573-979-11	CONNECTOR, BOARD TO BOARD 11P	
C708	1-162-290-31	CERAMIC	470PF 10% 50V	* CN906	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P	
C709	1-162-306-11	CERAMIC	0.01uF 20% 16V	* CN907	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
C710	1-162-306-11	CERAMIC	0.01uF 20% 16V			< CONNECTOR >	
C711	1-162-306-11	CERAMIC	0.01uF 20% 16V	* CNP701	1-691-007-11	CONNECTOR (PC BOARD) (PLUG) 4P	
C793	1-162-294-31	CERAMIC	0.001uF 10% 50V			< DIODE >	
C794	1-162-294-31	CERAMIC	0.001uF 10% 50V	D401	8-719-987-63	DIODE 1N4148M	
C795	1-162-294-31	CERAMIC	0.001uF 10% 50V	D402	8-719-987-63	DIODE 1N4148M	
C796	1-162-294-31	CERAMIC	0.001uF 10% 50V	D403	8-719-987-63	DIODE 1N4148M	
C901	1-126-059-11	ELECT	10uF 20% 50V	D404	8-719-987-63	DIODE 1N4148M	
C902	1-126-059-11	ELECT	10uF 20% 50V	D405	8-719-987-63	DIODE 1N4148M	
C903	1-126-163-11	ELECT	4.7uF 20% 50V	D406	8-719-987-63	DIODE 1N4148M	
C904	1-126-161-11	ELECT	2.2uF 20% 50V	D901	8-719-987-63	DIODE 1N4148M	
C905	1-126-161-11	ELECT	2.2uF 20% 50V	D902	8-719-987-63	DIODE 1N4148M	
C906	1-162-217-31	CERAMIC	56PF 5% 50V	D903	8-719-933-33	DIODE HZS6AIL	
C907	1-136-157-00	FILM	0.022uF 5% 50V	D904	8-719-987-63	DIODE 1N4148M	
C909	1-126-161-11	ELECT	2.2uF 20% 50V	D905	8-719-987-63	DIODE 1N4148M	
C910	1-162-286-31	CERAMIC	220PF 10% 50V	D906	8-719-933-33	DIODE HZS6AIL	
C911	1-126-161-11	ELECT	2.2uF 20% 50V	D907	8-719-987-63	DIODE 1N4148M	
C912	1-130-477-00	MYLAR	0.0033uF 5% 50V	D908	8-719-987-63	DIODE 1N4148M	
C913	1-136-164-00	FILM	0.082uF 5% 50V	D909	8-719-987-63	DIODE 1N4148M	
C914	1-126-157-11	ELECT	10uF 20% 16V	D910	8-719-987-63	DIODE 1N4148M	
C915	1-162-288-31	CERAMIC	330PF 10% 50V				
C916	1-126-157-11	ELECT	10uF 20% 16V				
C917	1-126-022-11	ELECT	47uF 20% 16V				
C918	1-136-161-00	FILM	0.047uF 5% 50V				
C951	1-126-059-11	ELECT	10uF 20% 50V				

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW(A)/SW(B))

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
< FLUORESCENT INDICATOR TUBE >							
FL701	1-517-159-11	INDICATOR TUBE, FLUORESCENT		Q421	8-729-900-61	TRANSISTOR DTA114ES	
< IC >				Q422	8-729-900-74	TRANSISTOR DTC143TS	
IC401	8-752-060-64	IC CXA1198AP		Q423	8-729-900-74	TRANSISTOR DTC143TS	
IC402	8-752-060-64	IC CXA1198AP		Q424	8-729-900-74	TRANSISTOR DTC143TS	
IC403	8-759-000-47	IC MC14051BCP		Q425	8-729-900-74	TRANSISTOR DTC143TS	
IC701	8-752-842-00	IC CXP82316-010Q		Q426	8-729-900-89	TRANSISTOR DTC144ES	
IC702	8-741-100-48	IC SBX1610-59		Q427	8-729-900-89	TRANSISTOR DTC144ES	
IC901	8-759-145-58	IC uPC4558C		Q451	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC902	8-759-634-51	IC M5218AP		Q452	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC903	8-759-145-58	IC uPC4558C		Q453	8-729-900-65	TRANSISTOR DTA144ES	
IC904	8-759-634-51	IC M5218AP		Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC905	8-759-000-49	IC uPD4066BC		Q704	8-729-900-80	TRANSISTOR DTC114ES	
IC906	8-759-634-50	IC M5218AL		Q705	8-729-900-80	TRANSISTOR DTC114ES	
< JACK >				Q901	8-729-922-37	TRANSISTOR 2SD2144S	
J901	1-565-258-11	JACK, PIN 4P (LINE)		Q902	8-729-922-37	TRANSISTOR 2SD2144S	
J902	1-507-796-71	JACK (PHONES)		Q903	8-729-922-37	TRANSISTOR 2SD2144S	
< COIL >				Q904	8-729-922-37	TRANSISTOR 2SD2144S	
L701	1-412-473-21	INDUCTOR 0uH		Q905	8-729-900-65	TRANSISTOR DTA144ES	
< LEAD >				Q906	8-729-900-89	TRANSISTOR DTC144ES	
* N01	1-690-880-61	LEAD (WITH CONNECTOR)		Q907	8-729-620-05	TRANSISTOR 2SC2603-EF	
< TRANSISTOR >				Q908	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF		Q910	8-729-900-65	TRANSISTOR DTA144ES	
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF		Q911	8-729-900-89	TRANSISTOR DTC144ES	
Q403	8-729-900-65	TRANSISTOR DTA144ES		Q912	8-729-900-65	TRANSISTOR DTA144ES	
Q404	8-729-900-61	TRANSISTOR DTA114ES		Q913	8-729-900-65	TRANSISTOR DTA144ES	
Q405	8-729-900-61	TRANSISTOR DTA114ES		Q914	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q406	8-729-900-61	TRANSISTOR DTA114ES		Q915	8-729-900-65	TRANSISTOR DTA144ES	
Q407	8-729-900-89	TRANSISTOR DTC144ES		Q916	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q408	8-729-900-89	TRANSISTOR DTC144ES		Q917	8-729-900-65	TRANSISTOR DTA144ES	
Q409	8-729-620-05	TRANSISTOR 2SC2603-EF		< RESISTOR >			
Q410	8-729-900-89	TRANSISTOR DTC144ES		R401	1-249-429-11	CARBON 10K 5% 1/4W	
Q411	8-729-900-61	TRANSISTOR DTA114ES		R402	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q412	8-729-900-61	TRANSISTOR DTA114ES		R403	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q413	8-729-900-61	TRANSISTOR DTA114ES		R404	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q414	8-729-620-05	TRANSISTOR 2SC2603-EF		R405	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q415	8-729-900-89	TRANSISTOR DTC144ES		R406	1-249-429-11	CARBON 10K 5% 1/4W	
Q416	8-729-900-61	TRANSISTOR DTA114ES		R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q417	8-729-900-61	TRANSISTOR DTA114ES		R408	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q418	8-729-900-61	TRANSISTOR DTA114ES		R409	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q419	8-729-900-61	TRANSISTOR DTA114ES		R410	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q420	8-729-900-61	TRANSISTOR DTA114ES		R411	1-247-878-00	CARBON 91K 5% 1/4W	
				R412	1-249-439-11	CARBON 68K 5% 1/4W	
				R413	1-247-880-11	CARBON 110K 5% 1/4W	
				R414	1-247-874-11	CARBON 62K 5% 1/4W	
				R415	1-249-435-11	CARBON 33K 5% 1/4W	
				R416	1-247-868-11	CARBON 36K 5% 1/4W	
				R417	1-247-887-00	CARBON 220K 5% 1/4W	
				R418	1-247-876-11	CARBON 75K 5% 1/4W	
				R419	1-247-878-00	CARBON 91K 5% 1/4W	

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW(A)/SW(B))

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R420	1-247-880-11	CARBON	110K	5%	1/4W	R471	1-249-438-11	CARBON	56K	5%	1/4W
R421	1-249-437-11	CARBON	47K	5%	1/4W	R472	1-247-868-11	CARBON	36K	5%	1/4W
R422	1-249-438-11	CARBON	56K	5%	1/4W	R473	1-249-434-11	CARBON	27K	5%	1/4W
R423	1-247-886-11	CARBON	200K	5%	1/4W	R474	1-247-874-11	CARBON	62K	5%	1/4W
R424	1-247-878-00	CARBON	91K	5%	1/4W	R475	1-249-436-11	CARBON	39K	5%	1/4W
R425	1-247-874-11	CARBON	62K	5%	1/4W	R476	1-249-417-11	CARBON	1K	5%	1/4W
R426	1-247-874-11	CARBON	62K	5%	1/4W	R477	1-249-441-11	CARBON	100K	5%	1/4W
R427	1-247-872-11	CARBON	51K	5%	1/4W	R478	1-249-417-11	CARBON	1K	5%	1/4W
R428	1-249-439-11	CARBON	68K	5%	1/4W	R479	1-249-441-11	CARBON	100K	5%	1/4W
R429	1-247-878-00	CARBON	91K	5%	1/4W	R480	1-247-866-11	CARBON	30K	5%	1/4W
R430	1-249-439-11	CARBON	68K	5%	1/4W	R481	1-249-431-11	CARBON	15K	5%	1/4W
R431	1-247-881-00	CARBON	120K	5%	1/4W	R482	1-247-852-11	CARBON	7.5K	5%	1/4W
R432	1-249-439-11	CARBON	68K	5%	1/4W	R483	1-249-433-11	CARBON	22K	5%	1/4W
R433	1-249-435-11	CARBON	33K	5%	1/4W	R484	1-247-866-11	CARBON	30K	5%	1/4W
R434	1-247-868-11	CARBON	36K	5%	1/4W	R485	1-249-431-11	CARBON	15K	5%	1/4W
R435	1-247-887-00	CARBON	220K	5%	1/4W	R486	1-247-852-11	CARBON	7.5K	5%	1/4W
R436	1-247-876-11	CARBON	75K	5%	1/4W	R487	1-249-433-11	CARBON	22K	5%	1/4W
R437	1-249-441-11	CARBON	100K	5%	1/4W	R488	1-249-425-11	CARBON	4.7K	5%	1/4W
R438	1-247-880-11	CARBON	110K	5%	1/4W	R489	1-247-887-00	CARBON	220K	5%	1/4W
R439	1-249-437-11	CARBON	47K	5%	1/4W	R490	1-247-862-11	CARBON	20K	5%	1/4W
R440	1-249-438-11	CARBON	56K	5%	1/4W	R491	1-247-870-11	CARBON	43K	5%	1/4W
R441	1-247-886-11	CARBON	200K	5%	1/4W	R492	1-247-864-11	CARBON	24K	5%	1/4W
R442	1-247-878-00	CARBON	91K	5%	1/4W	R493	1-249-420-11	CARBON	1.8K	5%	1/4W
R443	1-247-874-11	CARBON	62K	5%	1/4W	R494	1-247-862-11	CARBON	20K	5%	1/4W
R444	1-247-874-11	CARBON	62K	5%	1/4W	R495	1-247-870-11	CARBON	43K	5%	1/4W
R445	1-247-872-11	CARBON	51K	5%	1/4W	R496	1-247-864-11	CARBON	24K	5%	1/4W
R446	1-249-439-11	CARBON	68K	5%	1/4W	R497	1-249-420-11	CARBON	1.8K	5%	1/4W
R447	1-247-886-11	CARBON	200K	5%	1/4W	R701	1-249-429-11	CARBON	10K	5%	1/4W
R448	1-249-439-11	CARBON	68K	5%	1/4W	R707	1-249-418-11	CARBON	1.2K	5%	1/4W
R449	1-249-435-11	CARBON	33K	5%	1/4W	R708	1-249-420-11	CARBON	1.8K	5%	1/4W
R451	1-249-429-11	CARBON	10K	5%	1/4W	R709	1-249-418-11	CARBON	1.2K	5%	1/4W
R452	1-249-425-11	CARBON	4.7K	5%	1/4W	R710	1-249-418-11	CARBON	1.2K	5%	1/4W
R453	1-249-425-11	CARBON	4.7K	5%	1/4W	R711	1-249-420-11	CARBON	1.8K	5%	1/4W
R454	1-249-425-11	CARBON	4.7K	5%	1/4W	R713	1-249-422-11	CARBON	2.7K	5%	1/4W
R455	1-249-425-11	CARBON	4.7K	5%	1/4W	R714	1-249-424-11	CARBON	3.9K	5%	1/4W
R456	1-249-429-11	CARBON	10K	5%	1/4W	R715	1-249-427-11	CARBON	6.8K	5%	1/4W
R457	1-249-425-11	CARBON	4.7K	5%	1/4W	R716	1-249-431-11	CARBON	15K	5%	1/4W
R458	1-249-425-11	CARBON	4.7K	5%	1/4W	R717	1-249-424-11	CARBON	3.9K	5%	1/4W
R459	1-249-425-11	CARBON	4.7K	5%	1/4W	R718	1-249-427-11	CARBON	6.8K	5%	1/4W
R460	1-249-425-11	CARBON	4.7K	5%	1/4W	R719	1-249-422-11	CARBON	2.7K	5%	1/4W
R461	1-249-432-11	CARBON	18K	5%	1/4W	R720	1-249-418-11	CARBON	1.2K	5%	1/4W
R462	1-247-868-11	CARBON	36K	5%	1/4W	R721	1-249-420-11	CARBON	1.8K	5%	1/4W
R463	1-249-432-11	CARBON	18K	5%	1/4W	R723	1-249-422-11	CARBON	2.7K	5%	1/4W
R464	1-247-883-00	CARBON	150K	5%	1/4W	R724	1-249-424-11	CARBON	3.9K	5%	1/4W
R465	1-249-438-11	CARBON	56K	5%	1/4W	R725	1-249-427-11	CARBON	6.8K	5%	1/4W
R466	1-247-866-11	CARBON	30K	5%	1/4W	R726	1-249-418-11	CARBON	1.2K	5%	1/4W
R467	1-249-436-11	CARBON	39K	5%	1/4W	R727	1-249-420-11	CARBON	1.8K	5%	1/4W
R468	1-247-872-11	CARBON	51K	5%	1/4W	R728	1-249-422-11	CARBON	2.7K	5%	1/4W
R469	1-247-866-11	CARBON	30K	5%	1/4W	R729	1-249-424-11	CARBON	3.9K	5%	1/4W
R470	1-247-883-00	CARBON	150K	5%	1/4W	R730	1-249-420-11	CARBON	1.8K	5%	1/4W

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW(A)/SW(B))

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R731	1-249-431-11	CARBON	15K 5% 1/4W	R953	1-249-437-11	CARBON	47K 5% 1/4W
R732	1-249-427-11	CARBON	6.8K 5% 1/4W	R954	1-249-437-11	CARBON	47K 5% 1/4W
R733	1-249-437-11	CARBON	47K 5% 1/4W	R955	1-249-425-11	CARBON	4.7K 5% 1/4W
R736	1-249-422-11	CARBON	2.7K 5% 1/4W	R956	1-247-866-11	CARBON	30K 5% 1/4W
R737	1-249-424-11	CARBON	3.9K 5% 1/4W	R957	1-249-417-11	CARBON	1K 5% 1/4W
R738	1-249-427-11	CARBON	6.8K 5% 1/4W	R958	1-247-866-11	CARBON	30K 5% 1/4W
R739	1-249-431-11	CARBON	15K 5% 1/4W	R959	1-249-439-11	CARBON	68K 5% 1/4W
R740	1-249-437-11	CARBON	47K 5% 1/4W	R960	1-249-410-11	CARBON	270 5% 1/4W
R741	1-249-441-11	CARBON	100K 5% 1/4W	R961	1-249-417-11	CARBON	1K 5% 1/4W
R742	1-249-441-11	CARBON	100K 5% 1/4W	R962	1-249-435-11	CARBON	33K 5% 1/4W
R743	1-249-441-11	CARBON	100K 5% 1/4W	R964	1-249-409-11	CARBON	220 5% 1/4W
R744	1-249-429-11	CARBON	10K 5% 1/4W	R965	1-249-433-11	CARBON	22K 5% 1/4W
R745	1-249-429-11	CARBON	10K 5% 1/4W	R966	1-249-409-11	CARBON	220 5% 1/4W
R746	1-249-429-11	CARBON	10K 5% 1/4W	R967	1-249-433-11	CARBON	22K 5% 1/4W
R747	1-249-429-11	CARBON	10K 5% 1/4W	R976	1-249-433-11	CARBON	22K 5% 1/4W
R799	1-249-429-11	CARBON	10K 5% 1/4W	R977	1-249-432-11	CARBON	18K 5% 1/4W
R901	1-249-421-11	CARBON	2.2K 5% 1/4W	R978	1-249-421-11	CARBON	2.2K 5% 1/4W
R902	1-249-437-11	CARBON	47K 5% 1/4W	R979	1-249-432-11	CARBON	18K 5% 1/4W
R903	1-249-437-11	CARBON	47K 5% 1/4W	R980	1-249-409-11	CARBON	220 5% 1/4W
R904	1-249-437-11	CARBON	47K 5% 1/4W	R981	1-249-421-11	CARBON	2.2K 5% 1/4W
R905	1-249-425-11	CARBON	4.7K 5% 1/4W	R982	1-249-421-11	CARBON	2.2K 5% 1/4W
R906	1-247-866-11	CARBON	30K 5% 1/4W	R994	1-247-895-00	CARBON	470K 5% 1/4W
R907	1-249-417-11	CARBON	1K 5% 1/4W	R995	1-247-895-00	CARBON	470K 5% 1/4W
R908	1-247-866-11	CARBON	30K 5% 1/4W	R996	1-249-433-11	CARBON	22K 5% 1/4W
R909	1-249-439-11	CARBON	68K 5% 1/4W	R997	1-249-433-11	CARBON	22K 5% 1/4W
R910	1-249-410-11	CARBON	270 5% 1/4W	R998	1-249-425-11	CARBON	4.7K 5% 1/4W
R911	1-249-417-11	CARBON	1K 5% 1/4W	R999	1-249-425-11	CARBON	4.7K 5% 1/4W
R912	1-247-887-00	CARBON	220K 5% 1/4W	R4001	1-247-866-11	CARBON	30K 5% 1/4W
R913	1-249-425-11	CARBON	4.7K 5% 1/4W	R4002	1-249-431-11	CARBON	15K 5% 1/4W
R914	1-249-437-11	CARBON	47K 5% 1/4W	R4003	1-247-852-11	CARBON	7.5K 5% 1/4W
R915	1-249-428-11	CARBON	8.2K 5% 1/4W	R4005	1-249-423-11	CARBON	3.3K 5% 1/4W
R916	1-249-441-11	CARBON	100K 5% 1/4W	R4006	1-247-866-11	CARBON	30K 5% 1/4W
R917	1-249-423-11	CARBON	3.3K 5% 1/4W	R4007	1-249-431-11	CARBON	15K 5% 1/4W
R918	1-249-421-11	CARBON	2.2K 5% 1/4W	R4008	1-247-852-11	CARBON	7.5K 5% 1/4W
R919	1-249-441-11	CARBON	100K 5% 1/4W	R4010	1-247-880-11	CARBON	110K 5% 1/4W
R920	1-249-433-11	CARBON	22K 5% 1/4W	R4011	1-249-423-11	CARBON	3.3K 5% 1/4W
R921	1-249-425-11	CARBON	4.7K 5% 1/4W	R4012	1-247-880-11	CARBON	110K 5% 1/4W
R922	1-249-441-11	CARBON	100K 5% 1/4W	R4014	1-249-427-11	CARBON	6.8K 5% 1/4W
R923	1-249-436-11	CARBON	39K 5% 1/4W	R4015	1-249-427-11	CARBON	6.8K 5% 1/4W
R924	1-249-441-11	CARBON	100K 5% 1/4W	R4016	1-249-427-11	CARBON	6.8K 5% 1/4W
R925	1-249-421-11	CARBON	2.2K 5% 1/4W	R4017	1-249-427-11	CARBON	6.8K 5% 1/4W
R926	1-249-433-11	CARBON	22K 5% 1/4W	R4098	1-249-429-11	CARBON	10K 5% 1/4W
R927	1-249-432-11	CARBON	18K 5% 1/4W	R4099	1-249-429-11	CARBON	10K 5% 1/4W
R928	1-249-421-11	CARBON	2.2K 5% 1/4W	< VARIABLE RESISTOR >			
R929	1-249-432-11	CARBON	18K 5% 1/4W	RV401	1-241-136-11	RES, ADJ, CARBON 10K	
R930	1-249-409-11	CARBON	220 5% 1/4W	RV402	1-241-136-11	RES, ADJ, CARBON 10K	
R931	1-249-421-11	CARBON	2.2K 5% 1/4W	RV403	1-238-019-11	RES, ADJ, CARBON 47K	
R932	1-249-421-11	CARBON	2.2K 5% 1/4W	RV404	1-238-019-11	RES, ADJ, CARBON 47K	
R951	1-249-421-11	CARBON	2.2K 5% 1/4W	RV451	1-241-136-11	RES, ADJ, CARBON 10K	
R952	1-249-437-11	CARBON	47K 5% 1/4W				

PANEL (including CAL/COVER/DISPLAY/HP/PJ/POWER SW/POWER TRANSFORMER/REC/REC VOL/SW(A)/SW(B))

REAL MOTOR

TRANSLATION

Ref.No.	Part No.	Description	Remark
RV452	1-241-136-11	RES, ADJ, CARBON 10K	
RV453	1-238-019-11	RES, ADJ, CARBON 47K	
RV454	1-238-019-11	RES, ADJ, CARBON 47K	
RV701	1-241-896-11	RES, VAR, CARBON 10K (TAPE SPEED)	
RV702	1-241-897-11	RES, VAR, CARBON 50K/50K (BALANCE)	
RV901	1-241-899-11	RES, VAR, CARBON 50K/50K (REC LEVEL)	
RV902	1-238-085-11	REA, VAR, CARBON 20K/20K (LEVEL (PHONES))	
< SWITCH >			
S701	1-554-303-21	SWITCH, TACTILE (RESET (DECK A))	
S702	1-554-303-21	SWITCH, TACTILE (MEMORY (DECK A))	
S703	1-554-303-21	SWITCH, TACTILE (RESET (DECK B))	
S704	1-554-303-21	SWITCH, TACTILE (MEMORY (DECK B))	
S705	1-554-303-21	SWITCH, TACTILE (△ (DECK B))	
S706	1-554-303-21	SWITCH, TACTILE (■ (DECK B))	
S707	1-554-303-21	SWITCH, TACTILE (▷ (DECK B))	
S708	1-554-303-21	SWITCH, TACTILE (◁ (DECK B))	
S709	1-554-303-21	SWITCH, TACTILE (▣ (DECK B))	
S710	1-554-303-21	SWITCH, TACTILE (● (DECK B))	
S711	1-554-303-21	SWITCH, TACTILE (◀ (DECK B))	
S712	1-554-303-21	SWITCH, TACTILE (▶ (DECK B))	
S713	1-554-303-21	SWITCH, TACTILE (● (DECK B))	
S714	1-554-303-21	SWITCH, TACTILE (△ (DECK A))	
S715	1-554-303-21	SWITCH, TACTILE (■ (DECK A))	
S716	1-554-303-21	SWITCH, TACTILE (▷ (DECK A))	
S717	1-554-303-21	SWITCH, TACTILE (◁ (DECK A))	
S718	1-554-303-21	SWITCH, TACTILE (▣ (DECK A))	
S719	1-554-303-21	SWITCH, TACTILE (● (DECK A))	
S720	1-554-303-21	SWITCH, TACTILE (◀ (DECK A))	
S721	1-554-303-21	SWITCH, TACTILE (▶ (DECK A))	
S722	1-554-303-21	SWITCH, TACTILE (● (DECK A))	
S723	1-554-303-21	SWITCH, TACTILE (BLANK SKIP)	
S724	1-554-303-21	SWITCH, TACTILE (AUTO PAUSE)	
S725	1-554-303-21	SWITCH, TACTILE (AUTO CAL DECK A)	
S726	1-554-303-21	SWITCH, TACTILE (AUTO CAL DECK B)	
S727	1-571-640-11	SWITCH, SLIDE (DOLBY ON/OFF)	
S728	1-571-452-11	SWITCH, SLIDE (TIMER)	
S729	1-571-452-11	SWITCH, SLIDE (DOLBY B/C/S)	
S730	1-554-118-00	SWITCH, PUSH (1 KEY) (MPX FILTER)	
S731	1-554-118-00	SWITCH, PUSH (1 KEY) (TAPE SPEED)	
S733	1-554-303-21	SWITCH, TACTILE (A+B REC)	
S734	1-554-303-21	SWITCH, TACTILE (NORM SPEED)	
S735	1-554-303-21	SWITCH, TACTILE (HIGH SPEED)	
S736	1-571-452-11	SWITCH, SLIDE (DIR MODE)	
S737	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
< VIBRATOR >			
X701	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	

Ref.No.	Part No.	Description	Remark
*	1-632-741-11	REAL MOTOR BOARD (DECK A, DECK B)	

< 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	1-564-501-11	PIN, CONNECTOR 8P	
* CN1052	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
< RESISTOR >			
R1051	1-249-414-11	CARBON 560 5% 1/4W	

*	1-634-323-11	TRANSLATION BOARD (DECK A, DECK B)	

< CONNECTOR >			
* CN1091	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P	
* CN1092	1-564-509-11	PLUG, CONNECTOR 6P	
* CN1093	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN1094	1-564-506-11	PLUG, CONNECTOR 3P	

Ref.No. Part No. Description Remark

MISCELLANEOUS

9 1-751-012-11 WIRE (FLAT TYPE) (10 CORE)
19 1-751-013-11 WIRE (FLAT TYPE) (20 CORE)
△57 1-575-651-21 CORD, POWER (AEP, Germany)
△57 1-696-586-11 CORD, POWER (UK)
△57 1-696-845-11 CORD, POWER (Australian)

D1051 8-719-980-85 DIODE SLF325C
D1091 8-719-950-74 LED SLR314D
HRPE1001A-2003-723-H DECK ASSY, HEAD
IC802 8-759-973-95 IC BA6219B
IC804 8-759-973-95 IC BA6219B

M1051 X-3356-638-1 MOTOR (REEL R) ASSY
M1052 X-3356-604-1 MOTOR (ASSIST) ASSY
M1053 X-3356-605-1 MOTOR (CAPSTAN R) ASSY
Q1091 8-729-809-43 TRANSISTOR SPS-314B
Q503 8-729-141-83 TRANSISTOR 2SA473

Q505 8-729-209-15 TRANSISTOR 2SD2012
Q509 8-729-209-15 TRANSISTOR 2SD2012
Q512 8-729-141-83 TRANSISTOR 2SA473

S1001 1-466-525-11 ENCODER, ROTARY
△T1 1-450-446-11 TRANSFORMER, POWER

ACCESSORIES & PACKING MATERIALS

1-465-738-11 REMOTE COMMANDER (RM-J903)
1-558-271-11 CORD, CONNECTION
1-558-271-11 CORD, CONNECTION
2-181-754-01 COVER, BATTERY
* 3-354-913-01 CUSHION

* 3-376-746-21 INDIVIDUAL CARTON
3-677-503-00 SHEET (LARGE), PROTECTION
3-756-405-11 MANUAL, INSTRUCTION (AEP)
(ENGLISH, FRENCH, SPANISH, PORTUGUESE)
3-756-405-21 MANUAL, INSTRUCTION (UK, Australian)
(ENGLISH)
3-756-405-41 MANUAL, INSTRUCTION (AEP)
(GERMAN, DUTCH, SWEDISH, ITALIAN)
3-756-405-51 MANUAL, INSTRUCTION (Germany)
(GERMAN)

Ref.No. Part No. Description Remark

HARDWARE LIST

#1 7-682-548-09 SCREW +BVTT 3X8 (S)
#2 7-685-133-19 SCREW +BTP 2.6X6 TYPE2 N-S
#3 7-682-547-09 SCREW +BVTT 3X6 (S)
#4 7-685-870-01 SCREW +BVTT 3X5 (S)
#5 7-682-548-04 SCREW +BVTT 3X8 (S)
#6 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3
#7 7-621-849-00 SCREW (BV/RING)
#8 7-621-255-20 SCREW +BVTT 2X4 (S)
#9 7-621-770-67 SCREW +BVTT 2.6X6 (S)
#10 7-685-131-19 SCREW +BTP 2.6X4 TYPE2 N-S
#11 7-621-255-35 SCREW +BVTT 2X5 (S)
#12 7-621-283-00 SCREW +BVTT 2X5 (S)

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

TC-WR835S

SONY SERVICE MANUAL

*AEP Model
UK Model
Australian Model*

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT	CORRECT
9	Playback Level Adjustment	Playback Level Adjustment
	:	:
	:	:
	:	:
	:	:
	Adjustment limits :	Adjustment limits :
	LINE OUT level : $-16\text{dB} \pm 0.5\text{dB}$ (0.116 to 0.130V)	LINE OUT level : $-7.7\text{dB} \pm 0.5\text{dB}$ (0.3383 to 0.3015V) 