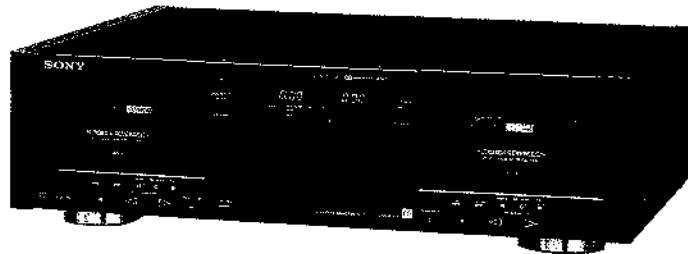


# TC-WR901ES

## SERVICE MANUAL

US Model  
Canadian Model  
E 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  $\square\square$  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-WR99ES
Tape Transport Mechanism Type	TCM-200R4

### 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 switch: OFF)	Type IV (Sony ES-IV)	Type II (Sony UX-S or UX)	Type I (Sony HF-S)
	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 Sony Type I, 160 nWb/m, 315 Hz, 3rd H.D.)  
1.8% (with Sony Type IV, 250 nWb/m, 315 Hz, 3rd H.D.)

Frequency response (DOLBY NR OFF)

Type IV cassette (Sony ES-IV)	20 - 20,000 Hz ( $\pm 3$ dB, IEC) 30 - 15,000 Hz [ $\pm 3$ dB (-4dB) recording]
Type II cassette (Sony UX-S or UX)	25 - 18,000 Hz ( $\pm 3$ dB, IEC)
Type I cassette (Sony HF-S)	25 - 16,000 Hz ( $\pm 3$ dB, IEC)

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 US, Canadian models: 120V AC, 60Hz  
E model: 120, 220 or 240V AC adjustable, 50/60Hz

Design and specifications are subject to change without notice.

#### Note

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

STEREO CASSETTE DECK  
**SONY**<sup>®</sup>

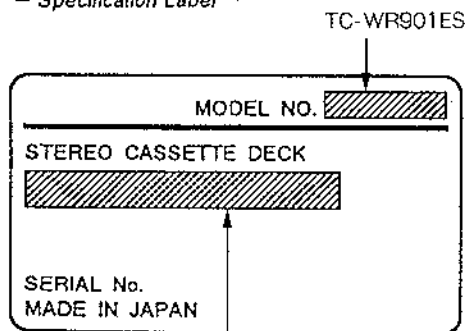


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## MODEL IDENTIFICATION

– Specification Label –



US, Canadian Models : AC : 120V 60Hz 30W  
 E Model : AC : 120, 220, 240V~50/60Hz 30W

### 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.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer :

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). 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 0.75V, so analog meters must have an accurate lowvoltage 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)

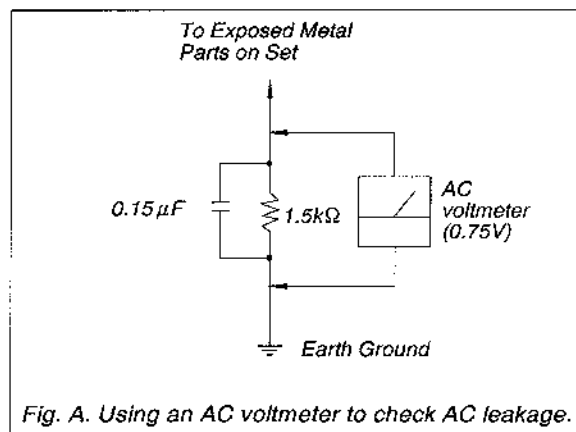



Fig. A. Using an AC voltmeter to check AC leakage.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  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.

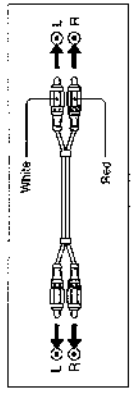
# SECTION 1 GENERAL

This section is extracted from instruction manual.

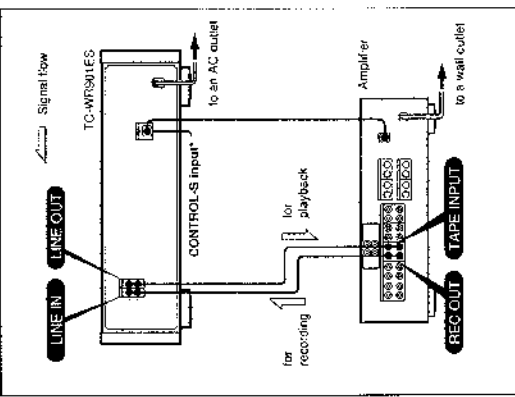
## Hooking Up the System

### Before You Begin

- Turn off the power to all equipment to be connected before making any connection.
- Note that the red plug of the supplied connecting cord is for right-channel (R) connection and the white plug for left-channel (L) connection.
- The connecting cord's should be fully inserted into the jacks. A loose connection may cause hum/pickup.



### Hook-up Example

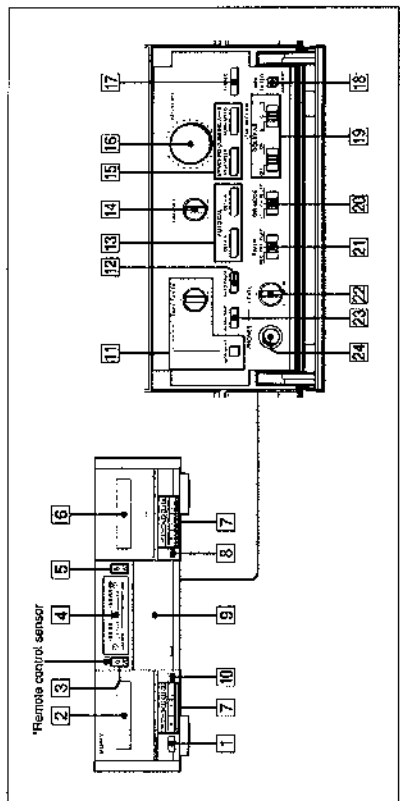


### Note on the CONTROLS Input

To remotely control this unit through a receiver or an amplifier, connect the front of this unit to the CONTROLS output on a Sony receiver or amplifier, with a CONTROLS cable. When this connection is used, only remote commands sent through the receiver or amplifier will be executed. The remote sensor on this unit will not function.

## 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) (page 11)
- 4 MEMORY button
- 5 Display panel
- 6 COUNTER buttons (deck B) (page 11)
- 7 RESET button
- 8 MEMORY button
- 9 Deck B
- 10 Tape operation buttons
- 11 (stop) button
- 12 (reverse play) button
- 13 (fast forward) button
- 14 (fast reverse) button
- 15 PAUSE button
- 16 REC MUTE (record muting) button (page 18)
- 17 REC (recording) button
- 18 OPEN/CLOSE button (deck B)
- 19 Front cover
- 20 OPEN/CLOSE button (deck A)
- 21 TAPE SPEED control and button (page 11)
- 22 AUTO PAUSE button (page 21)
- 23 BALANCE control (pages 18 and 19)
- 24 SYNCRO DUBBING buttons (page 20)
- 25 HIGH SPEED button
- 26 NORM (normal) button
- 27 SPEED button

### \*Remote control sensor

You can remotely control this cassette deck with:  
 — 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.

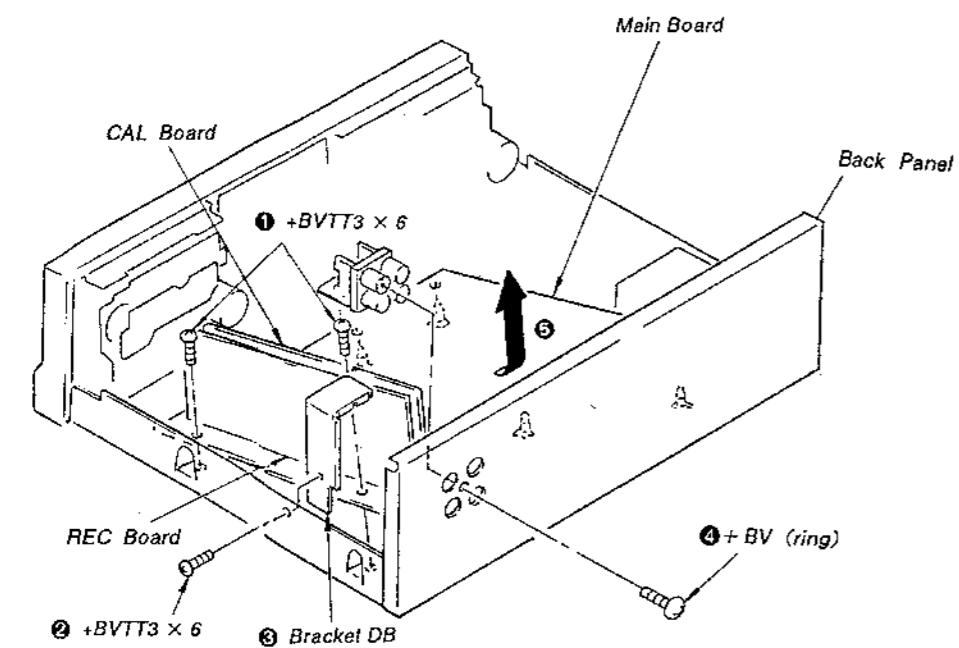
\*\*AMS is an abbreviation for Automatic Music Sensor.

## SECTION 2 DISASSEMBLY

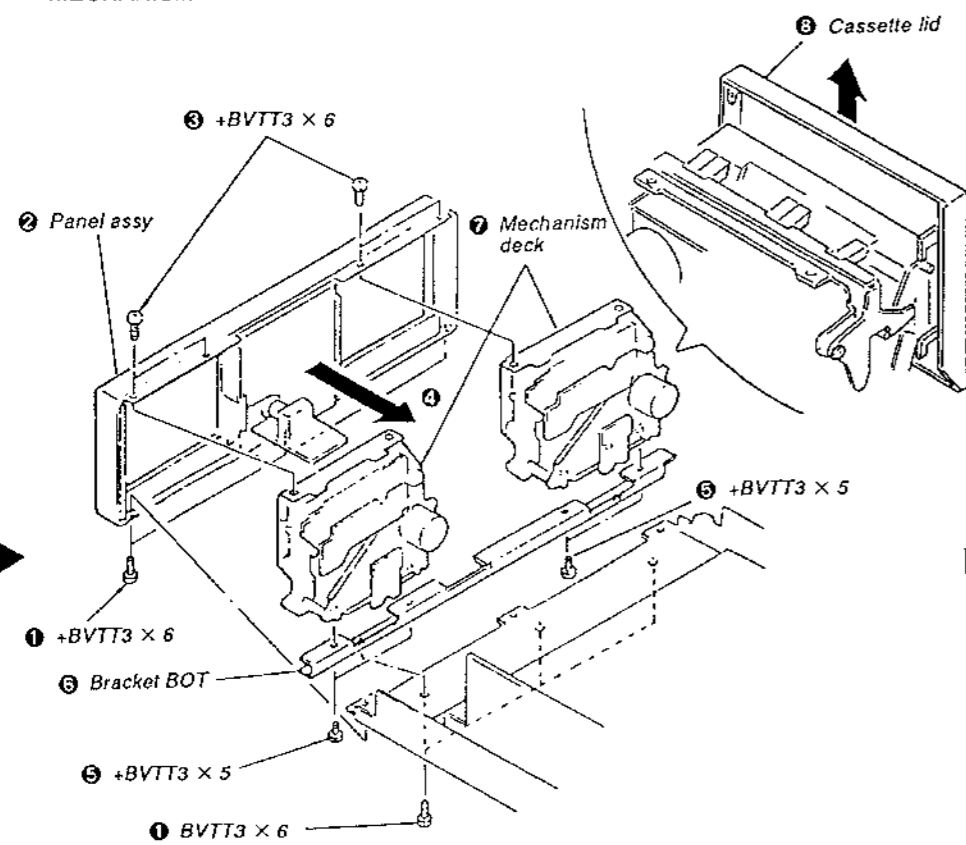
Note: Follow the disassembly procedure in the numerical order given.

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

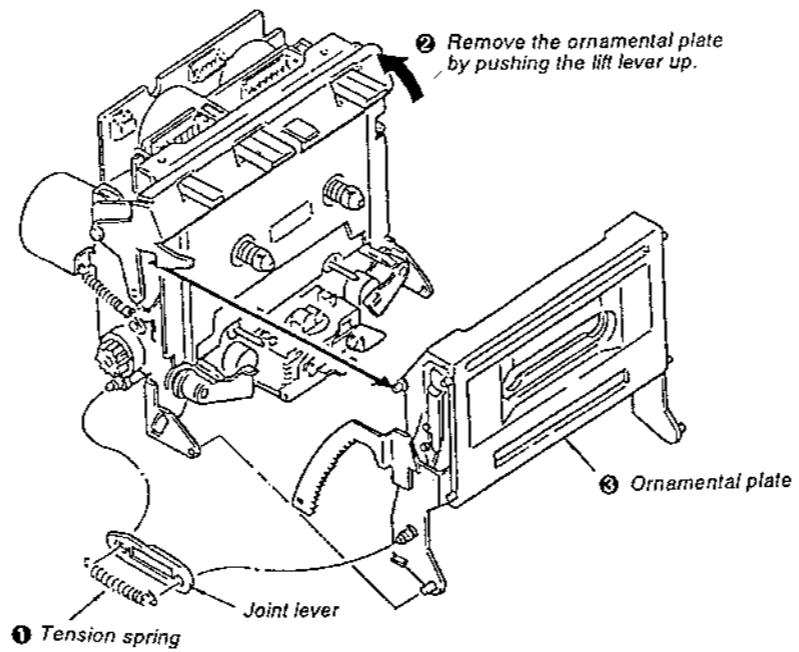
### DOLBY BOARD, MAIN BOARD



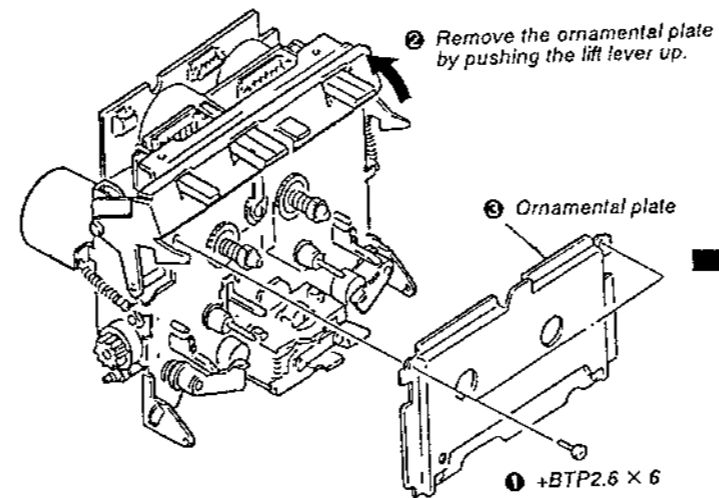
### MECHANISM



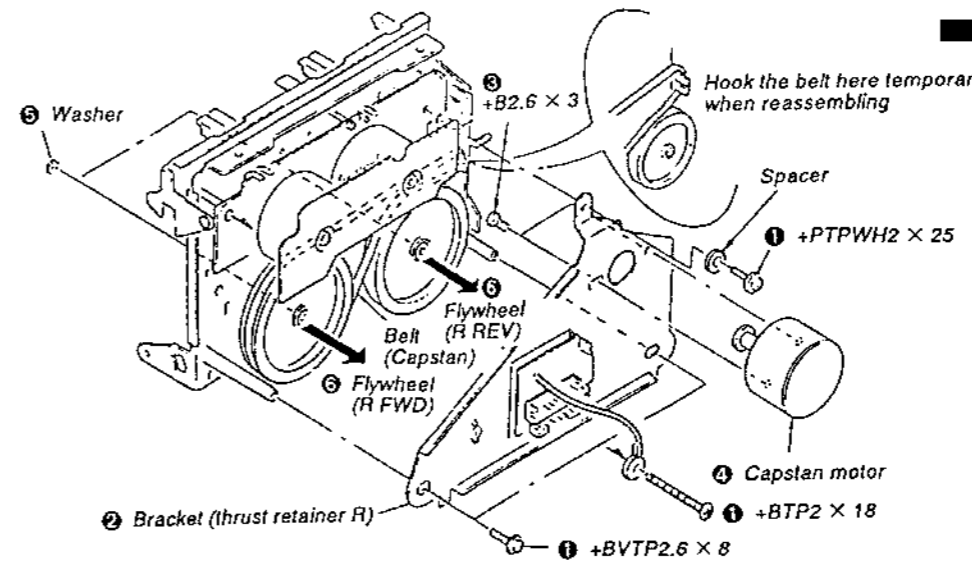
### CASSETTE HOLDER



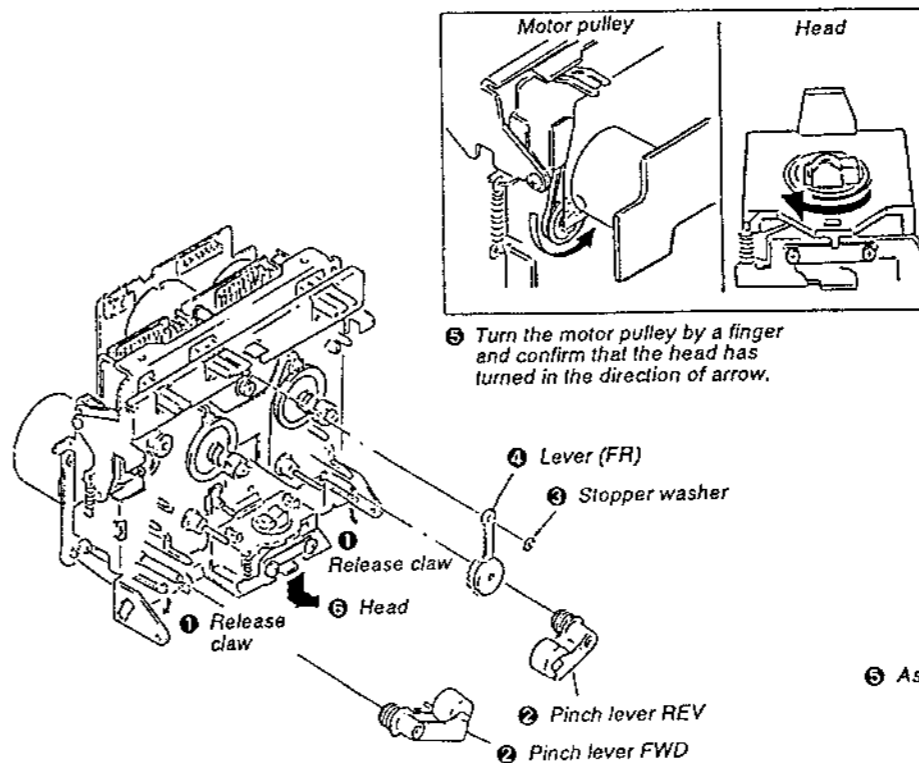
### ORNAMENTAL PLATE



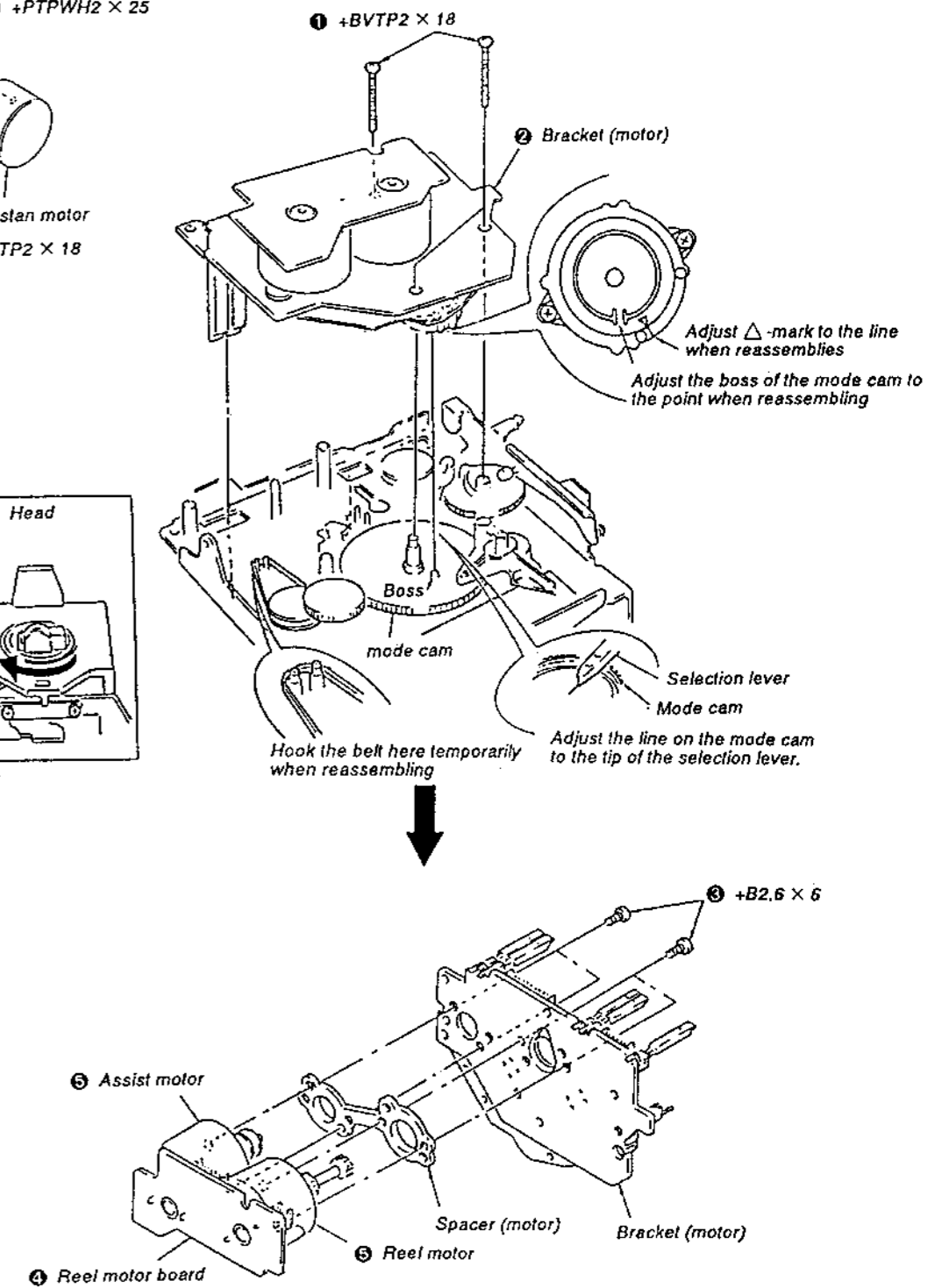
### CAPSTAN PLATE, FLYWHEEL



### PINCH LEVER, HEAD



### REEL AND ASSIST MOTORS



# SECTION 3 ADJUSTMENTS

## 3-1. MECHANICAL ADJUSTMENT

### PRECAUTIONS

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback and erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

Torque	Torque meter	Meter reading
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.

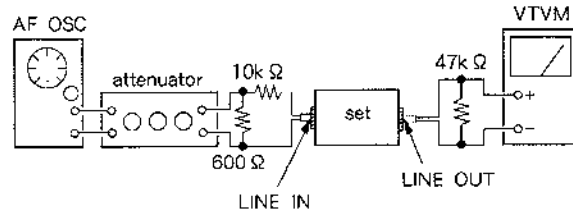
- Switches and controls should be set as follows unless otherwise specified.
 

DOLBY NR switch	: OFF
DIRECTION switch	: $\rightleftarrows$
MPX FILTER switch	: OFF
TIMBER 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**

Standard 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 :

1. 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.
2. Record memory stop  
When starting recording, tape counter is reset to zero and counter memory turned on.

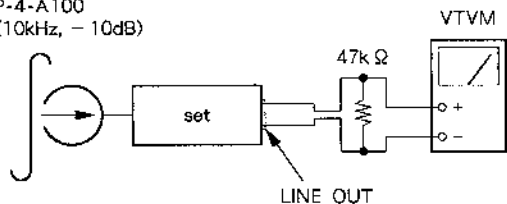
## Record/Playback Head Azimuth Adjustment

**DECK A DECK B**

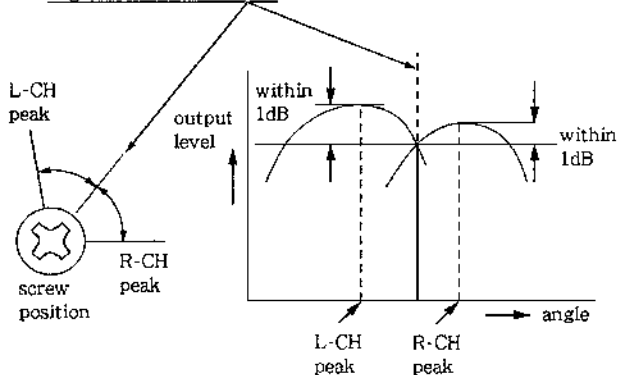
### Procedure:

1. Mode : FWD playback

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



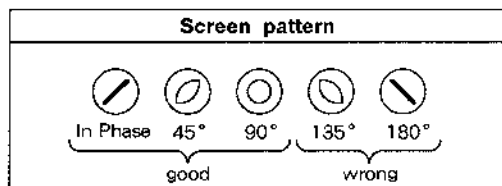
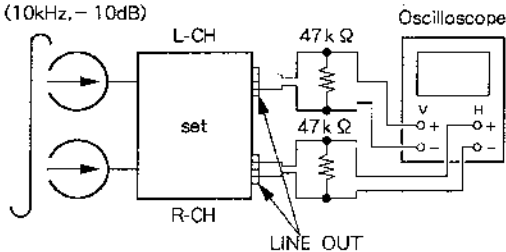
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



3. Phase Check

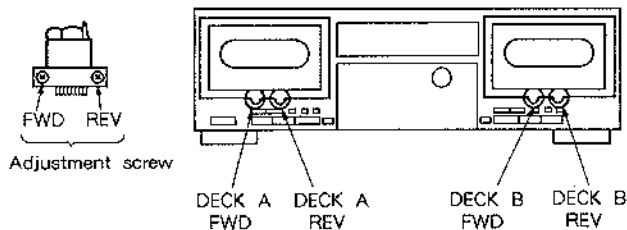
Mode : playback

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



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

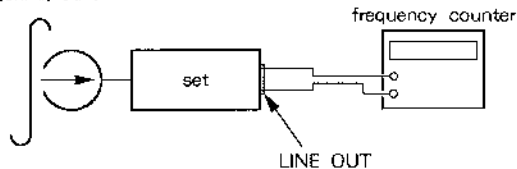
**DECK A DECK B**

### Procedure:

Mode : FWD playback

Perform high speed adjustment before normal speed adjustment

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



(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).

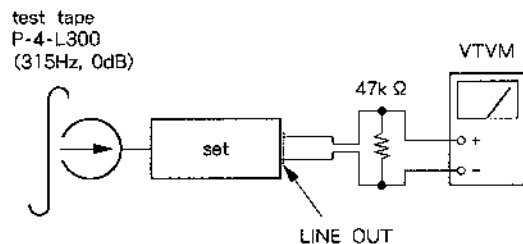
## Pitch Control Speed Adjustment DECK A

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

## 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 :  $-16\text{dB} \pm 0.5\text{dB}$  (0.116 to 0.130V)  
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.

## 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	① and ②, TP101	T101	less than 80mV
	R	② and ③, TP101	T151	
B	L	① and ②, TP201	T201	
	R	② and ③, TP201	T251	

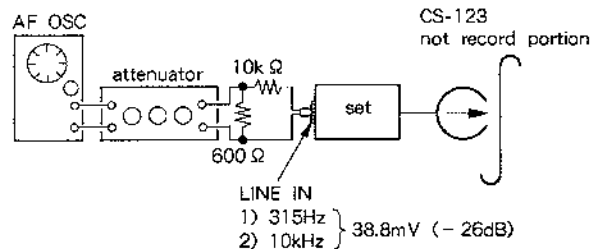
## Record Bias Adjustment DECK A DECK B

### Setting:

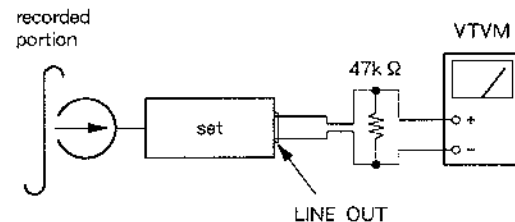
REC LEVEL control : standard record (See page 7.)  
test pin TP601 : short

### 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.

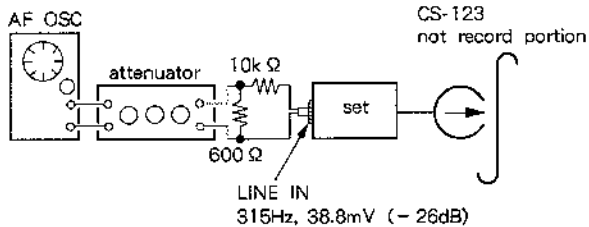
**Record Level Adjustment**    **DECK A** **DECK B**

**Setting:**

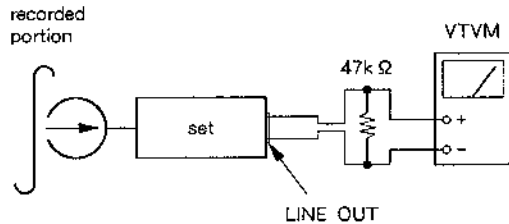
REC LEVEL control : standard record (See page 7.)  
 test pin TP601 : short

**Procedure:**

1. Mode : record



2. Mode : playback

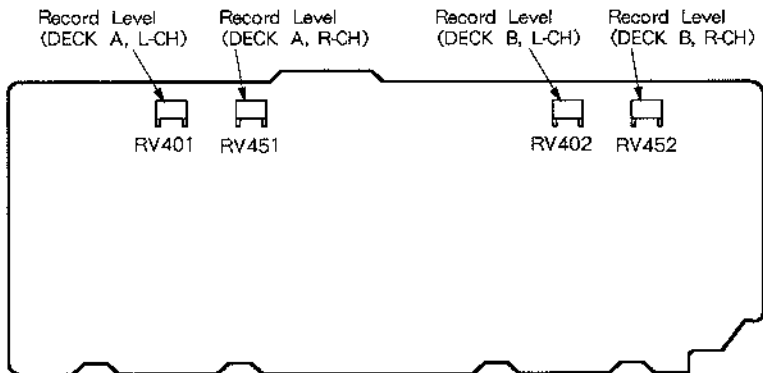


3. Playback the signal recorded in step 1.  
 Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV401 (L-CH) and RV451 (R-CH) for DECK A and RV402 (L-CH) and RV452 (R-CH) for DECK B, and repeat the step1-2.

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

**Adjustment Location:**

**[REC BOARD] – Component side –**



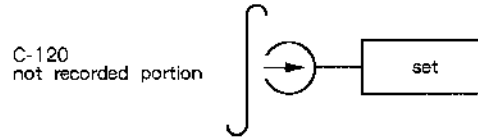
**Quick Reverse Sensitivity Adjustment**

**DECK A** **DECK B**

**Conditions:**

DIRECTION MODE switch :  $\rightleftarrows$

**Adjustment procedure:**

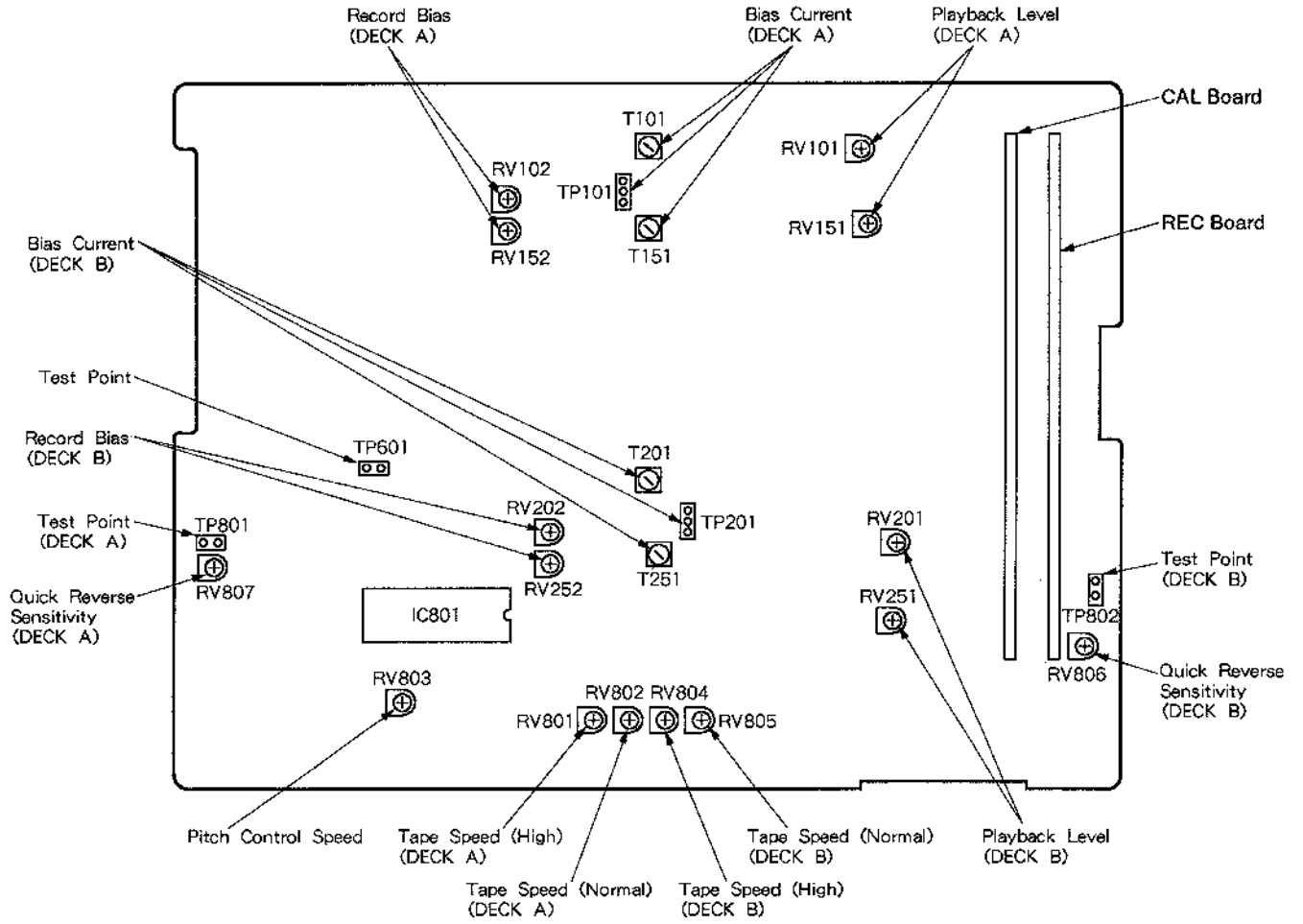


1. Connect the digital voltmeter to test point TP801 (DECK A) / TP802 (DECK B).
2. Load C-120 tape cassette and playback the leading portion in FWD mode.
3. Adjust the RV807 (DECK A), RV806 (DECK B) for  $4.5 \pm 0.5\text{V}$  reading on the digital voltmeter.
4. Playback C-120 tape cassette in FWD mode 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 (border of the leading and the magnetic portions).



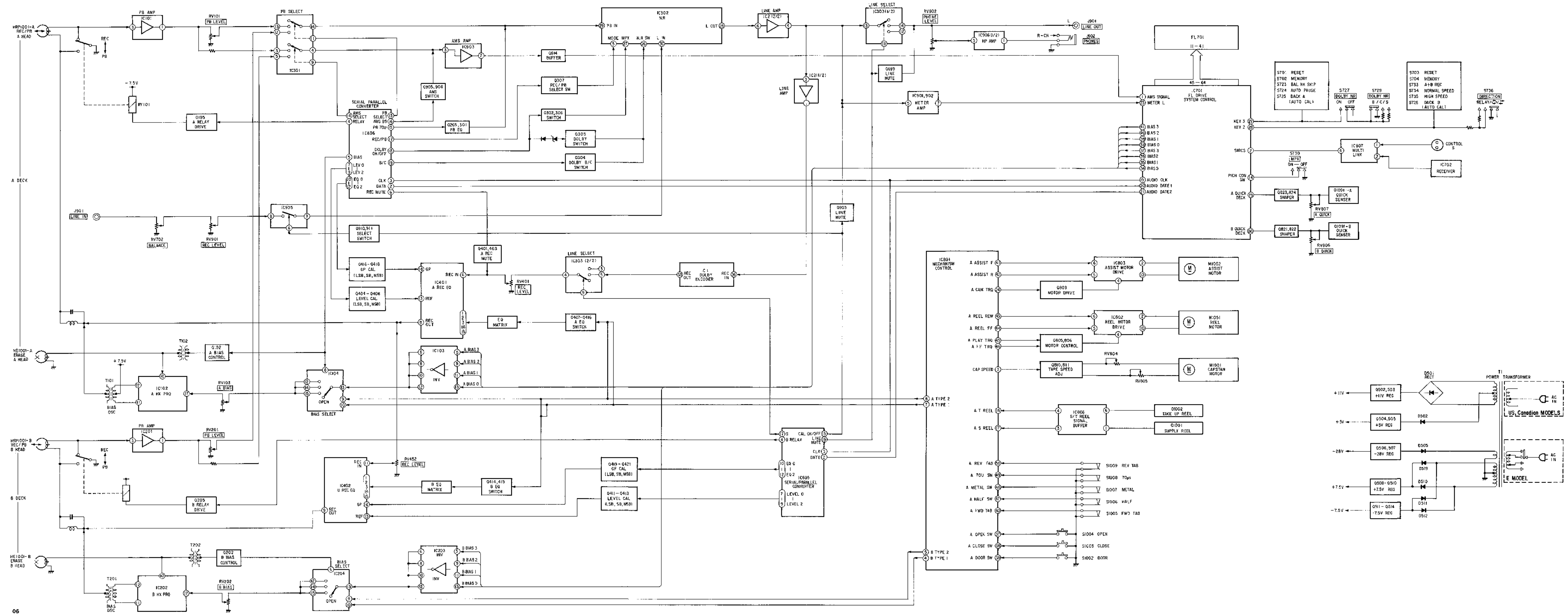
**Adjustment Location:**

**[MAIN BOARD] – Component side –**



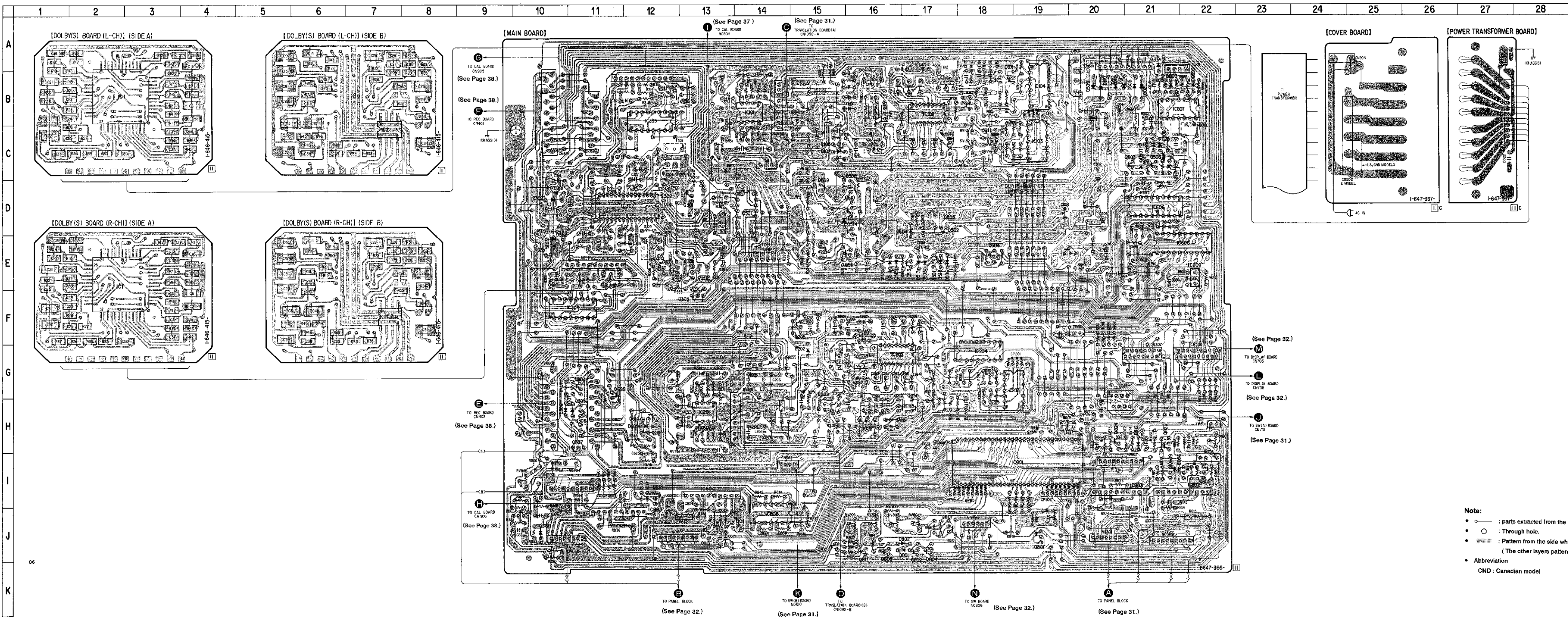
SECTION 4  
DIAGRAMS

4-1. BLOCK DIAGRAM



• Semiconductor Location

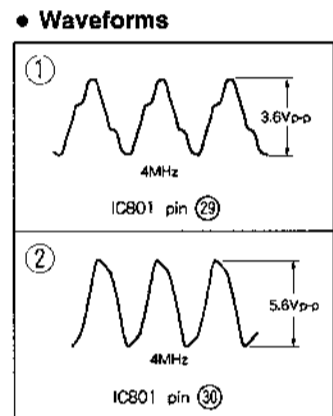
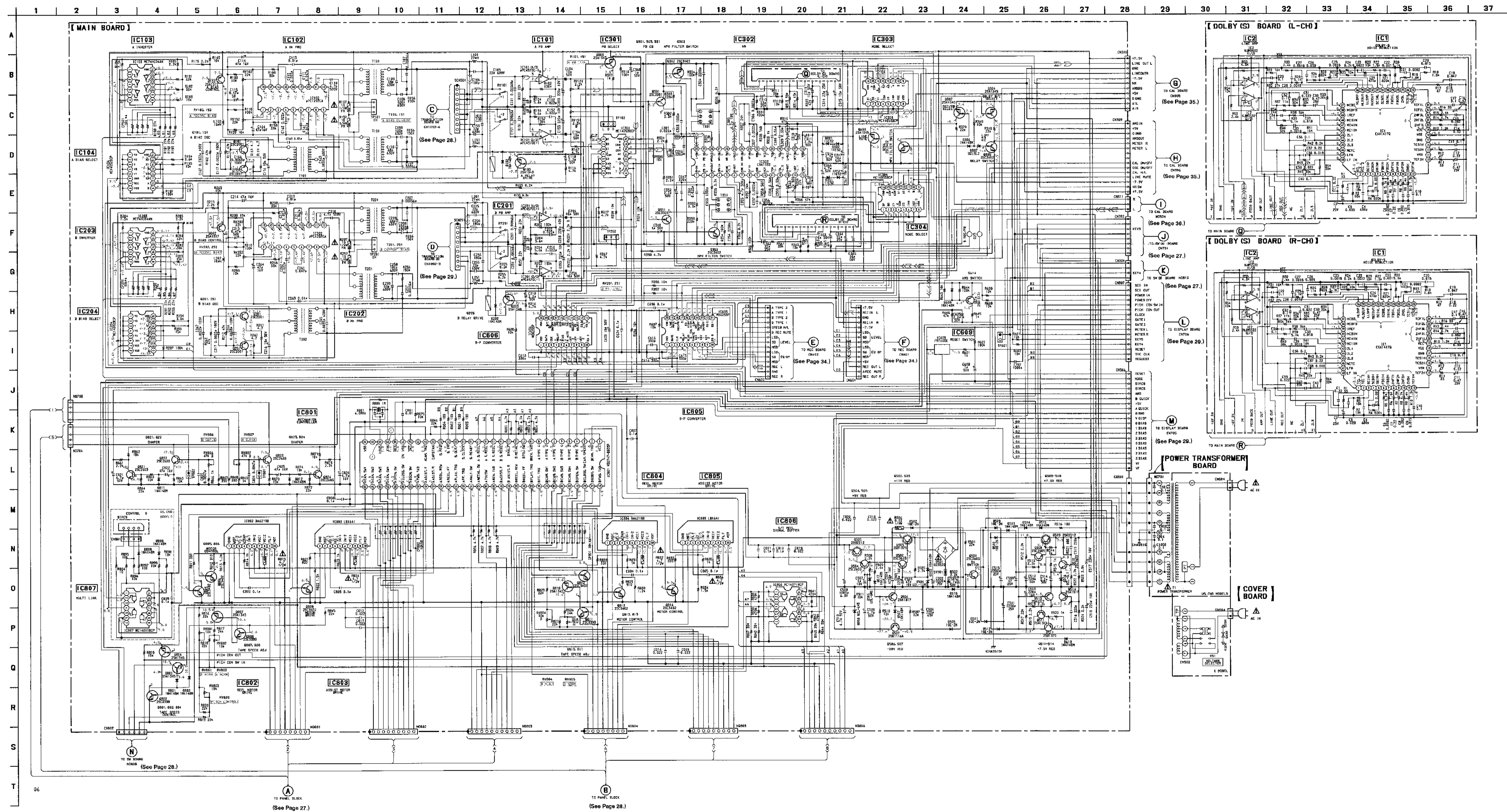
Ref. No.	Location	Ref. No.	Location
D102	C-15	IC803	I-21
D202	G-15	IC804	I-13
D301	D-10	IC805	J-11
D302	D-10	IC806	J-14
D306	H-10	IC807	B-21
D307	H-11		
D351	E-10	Q101	F-6
D352	E-10	Q102	B-18
D501	A-20	Q105	C-15
D502	B-21	Q151	B-18
D503	E-17	Q201	H-16
D504	D-17	Q202	G-15
D505	B-21	Q205	F-15
D506	E-17	Q251	H-17
D507	C-21	Q301	D-13
D508	C-21	Q302	D-12
D509	B-20	Q303	F-13
D510	B-20	Q304	G-11
D511	B-20	Q305	H-11
D512	B-20	Q306	H-11
D513	E-17	Q307	H-11
D514	E-16	Q351	E-13
D515	E-16	Q352	E-12
D516	D-15	Q501	F-17
D517	C-21	Q502	D-17
D518	E-17	Q503	D-17
D609	H-12	Q504	E-18
D610	A-21	Q505	E-19
D801	J-16	Q506	C-21
D802	J-16	Q507	C-21
D811	J-10	Q508	C-16
D812	H-21	Q509	D-15
D898	B-21	Q510	D-16
D899	B-22	Q511	E-16
		Q512	E-15
		Q513	E-17
IC1 (L-CH)	B-2	Q514	D-16
IC1 (R-CH)	E-2	Q614	H-12
IC2 (L-CH)	C-7	Q699	G-11
IC2 (R-CH)	F-7	Q801	J-19
IC101	B-14	Q802	J-17
IC102	B-17	Q804	J-17
IC103	C-19	Q805	I-22
IC104	B-19	Q806	I-21
IC201	H-13	Q807	J-17
IC202	G-16	Q808	J-16
IC203	G-18	Q809	I-21
IC204	G-18	Q810	J-15
IC301	D-14	Q811	J-16
IC302	D-12	Q812	J-13
IC303	B-12	Q813	J-13
IC304	F-11	Q814	I-12
IC605	E-22	Q821	J-10
IC606	D-21	Q822	I-10
IC609	E-22	Q823	H-21
IC801	I-19	Q824	H-20
IC802	I-22		



Note:

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern from the side which enables seeing. (The other layers patterns are not indicated.)
- Abbreviation
- CND : Canadian model

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



**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\text{k}\Omega$  or less unless otherwise specified.
- $\Delta$ : internal component.
- $\nabla$ : fusible resistor.

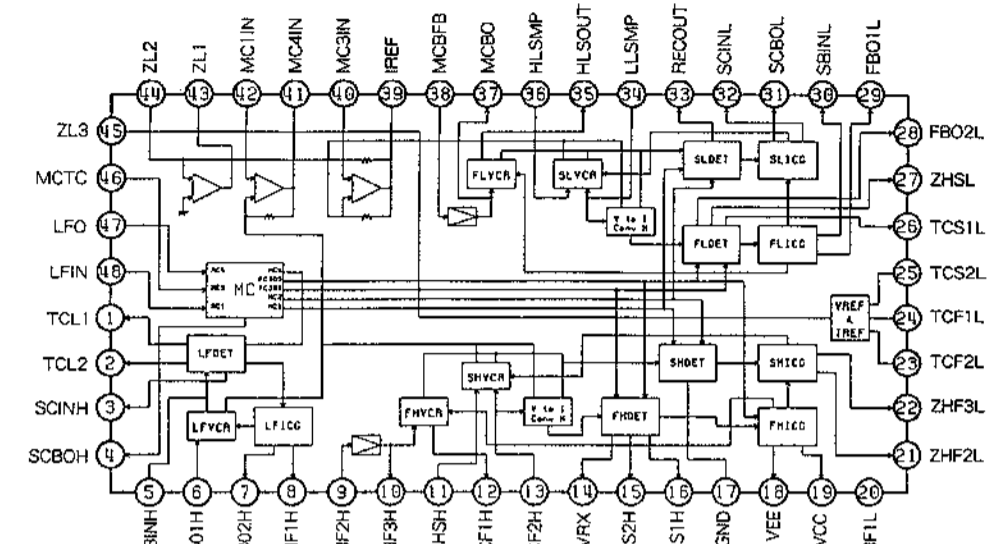
**Note:**  
The components identified by mark  $\Delta$  or dotted line with mark  $\nabla$  are critical for safety. Replace only with part number specified.

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

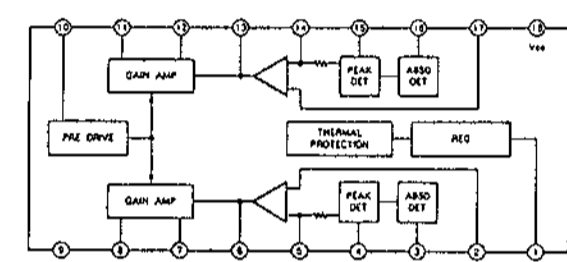
- B— line.
- B— line.
- adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: PLAY (DECK A)
- ( ): PLAY (DECK B)
- Voltages are taken with a VOM. (Input impedance 10M $\Omega$ )
- Voltage variations may be noted due to normal production tolerances.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

• IC BLOCK DIAGRAMS

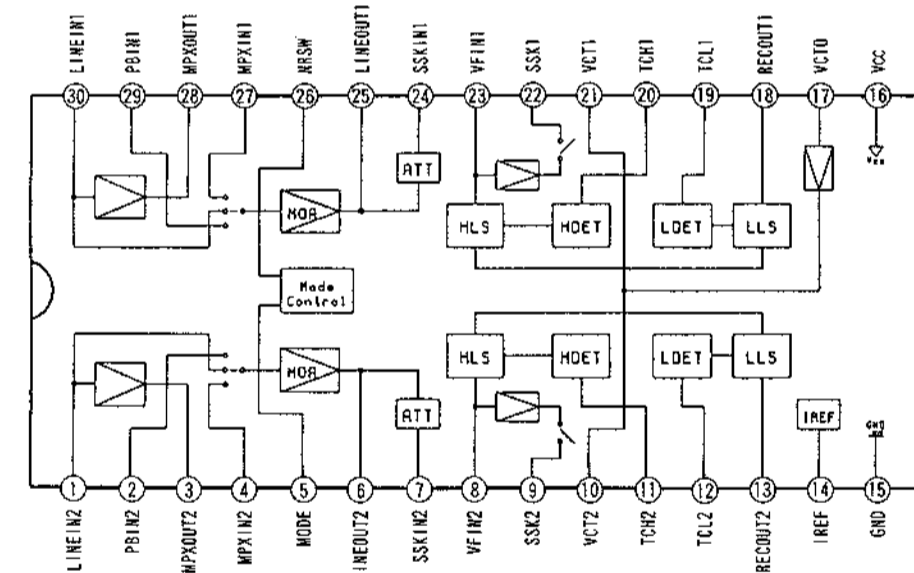
IC1 CXA1417Q



IC102, 202 μPC1297CA

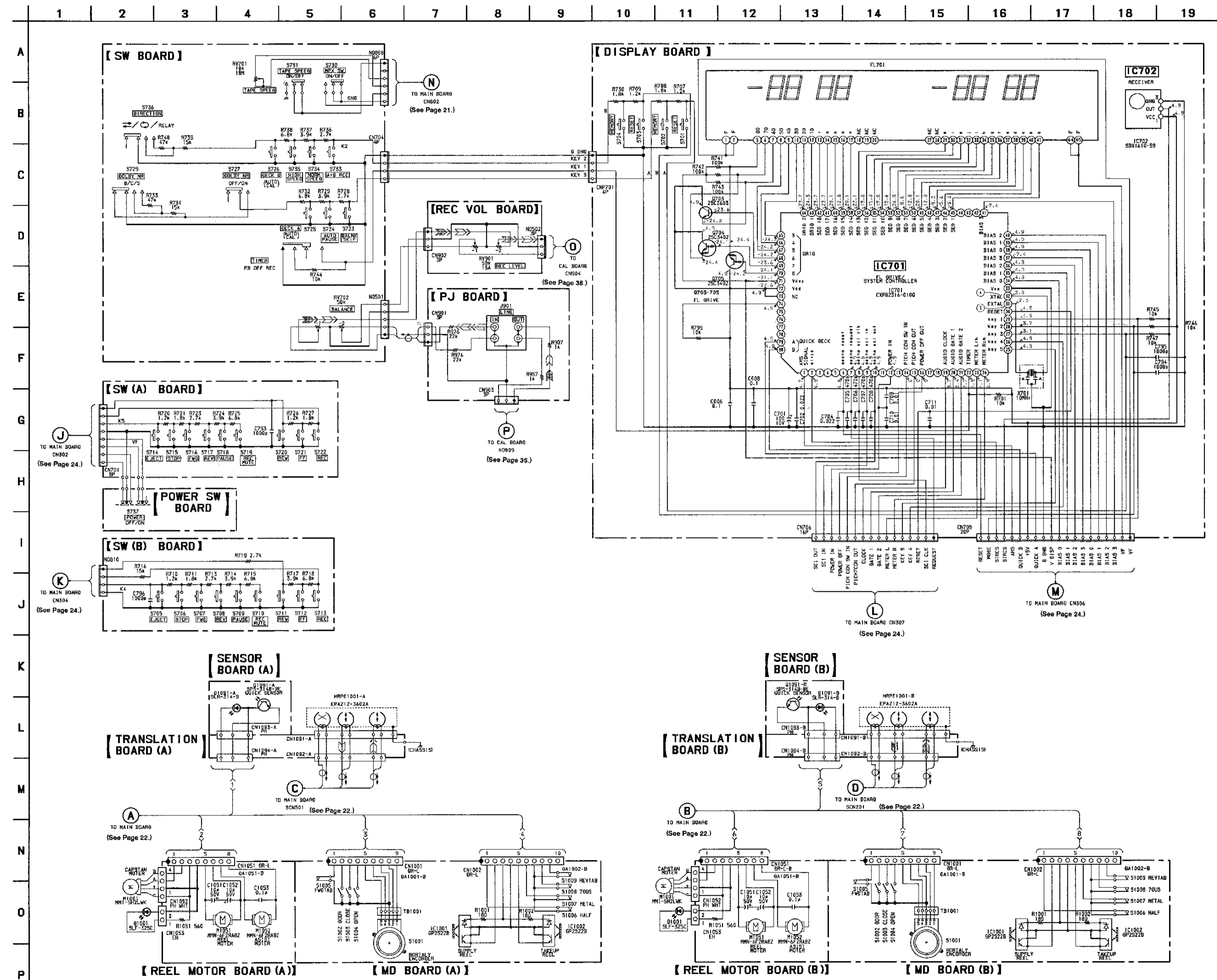
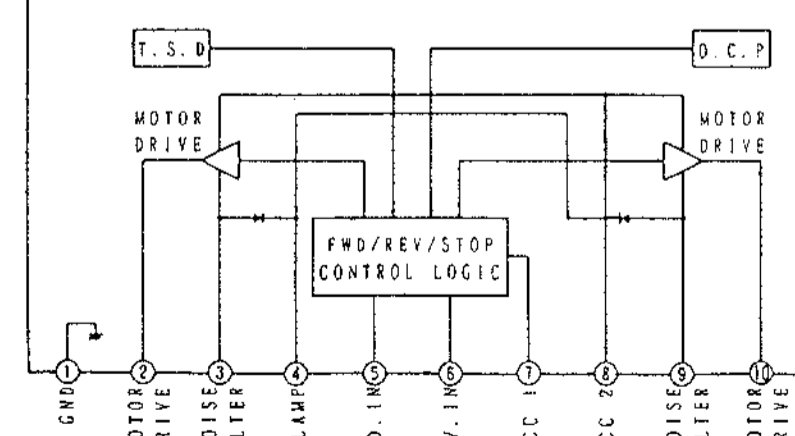


IC302 CXA1332S

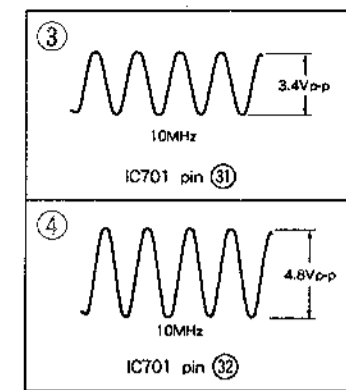


IC802, 804 BA6219B

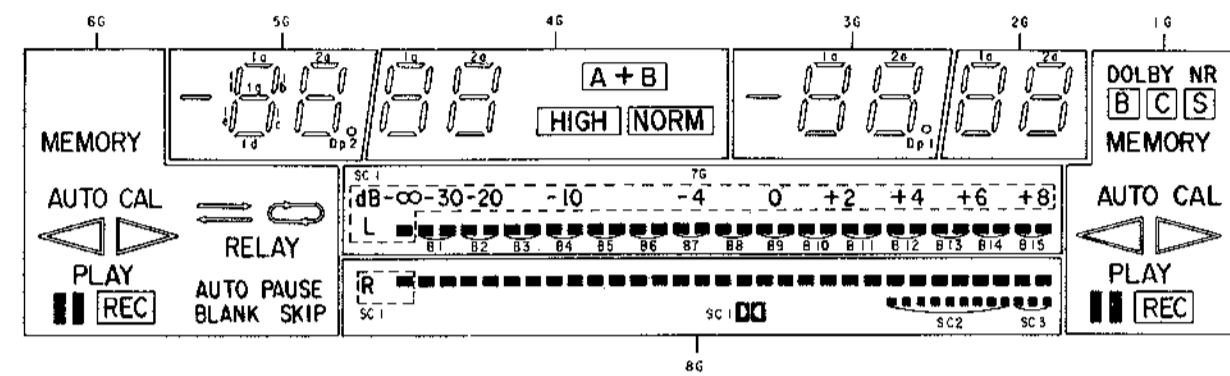
IC803, 805 LB1641



• Waveforms



• FL701 Internal Connection

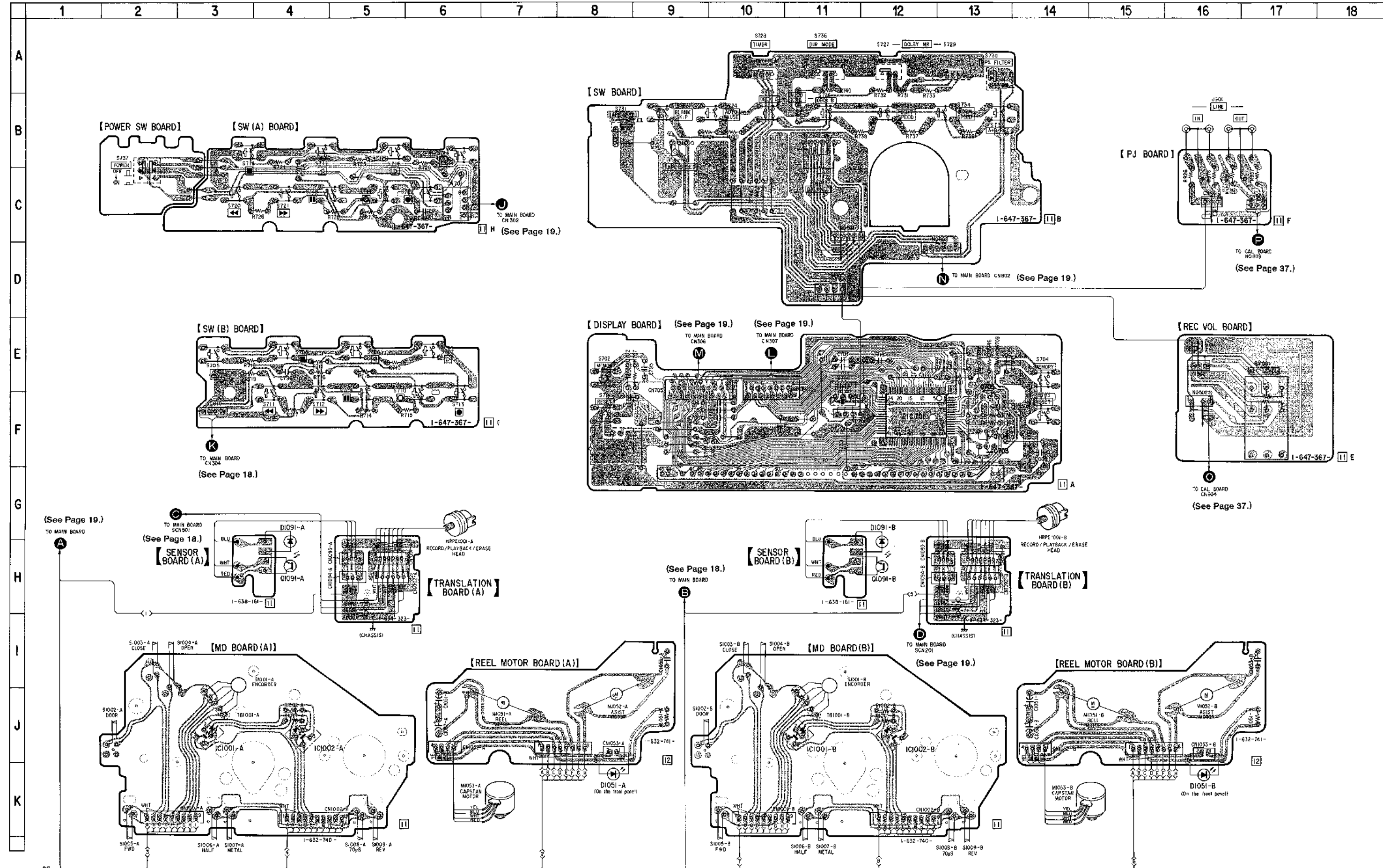


ANODE CONNECTION

	8G	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	MEMORY
P3	B4	B4	PLAY	1c	1c	1c	1c	MEMORY
P4	B6	B6	[REC]	1d	1d	1d	1d	MEMORY
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	[REC]
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	—	—	[HIGH]	—	—	—	—
P18	SC2	—	—	[NORMAL]	—	—	—	—

- Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in Ω and 1/4W or less unless otherwise specified.
  - Δ: internal component.
  - —: B-line.
  - —: B-line.
  - Voltage and waveforms are dc with respect to ground under no-signal conditions.
  - Voltages are taken with a VOM. (input impedance 10MΩ) 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)

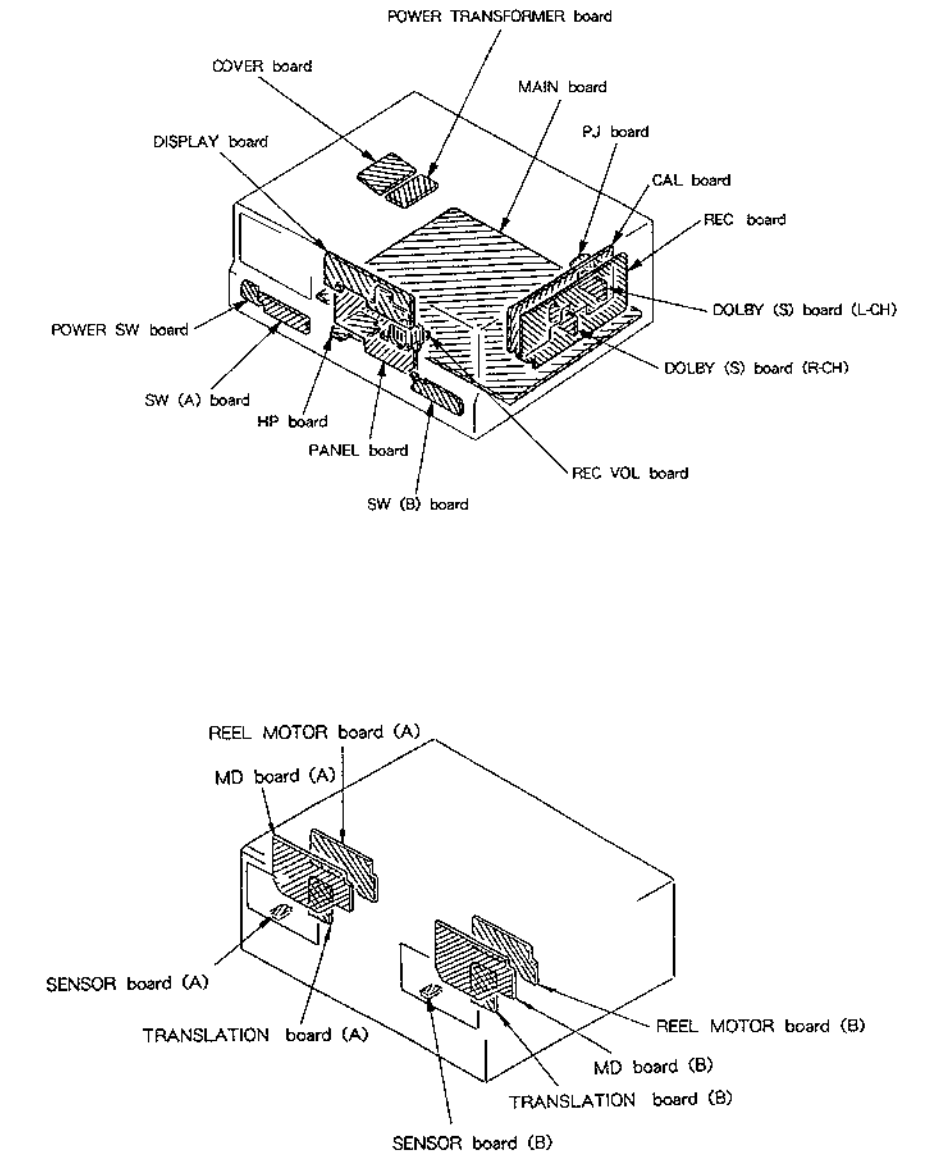
4-5. PRINTED WIRING BOARDS - PANEL Section - See Page 40 for Semiconductor Lead Layouts.



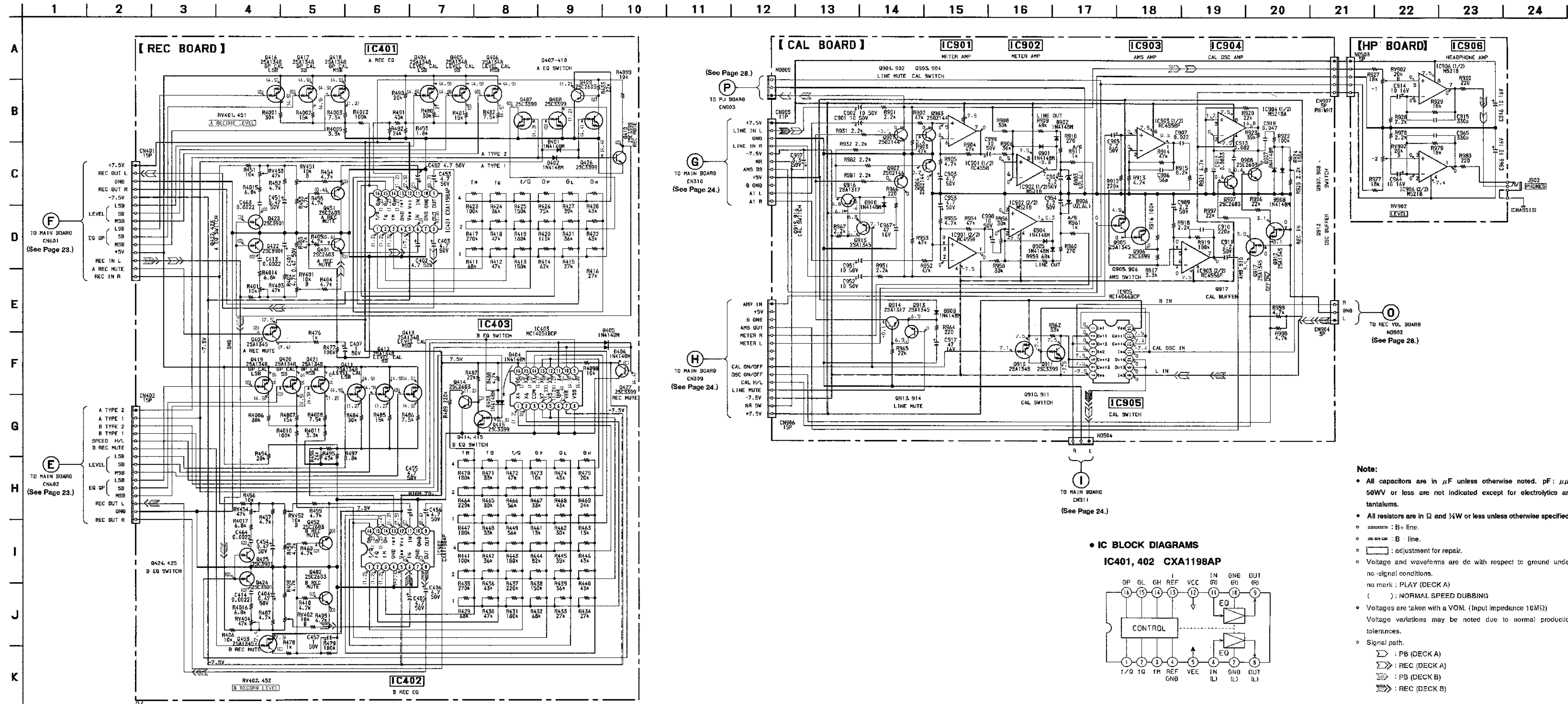
• Semiconductor Location

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

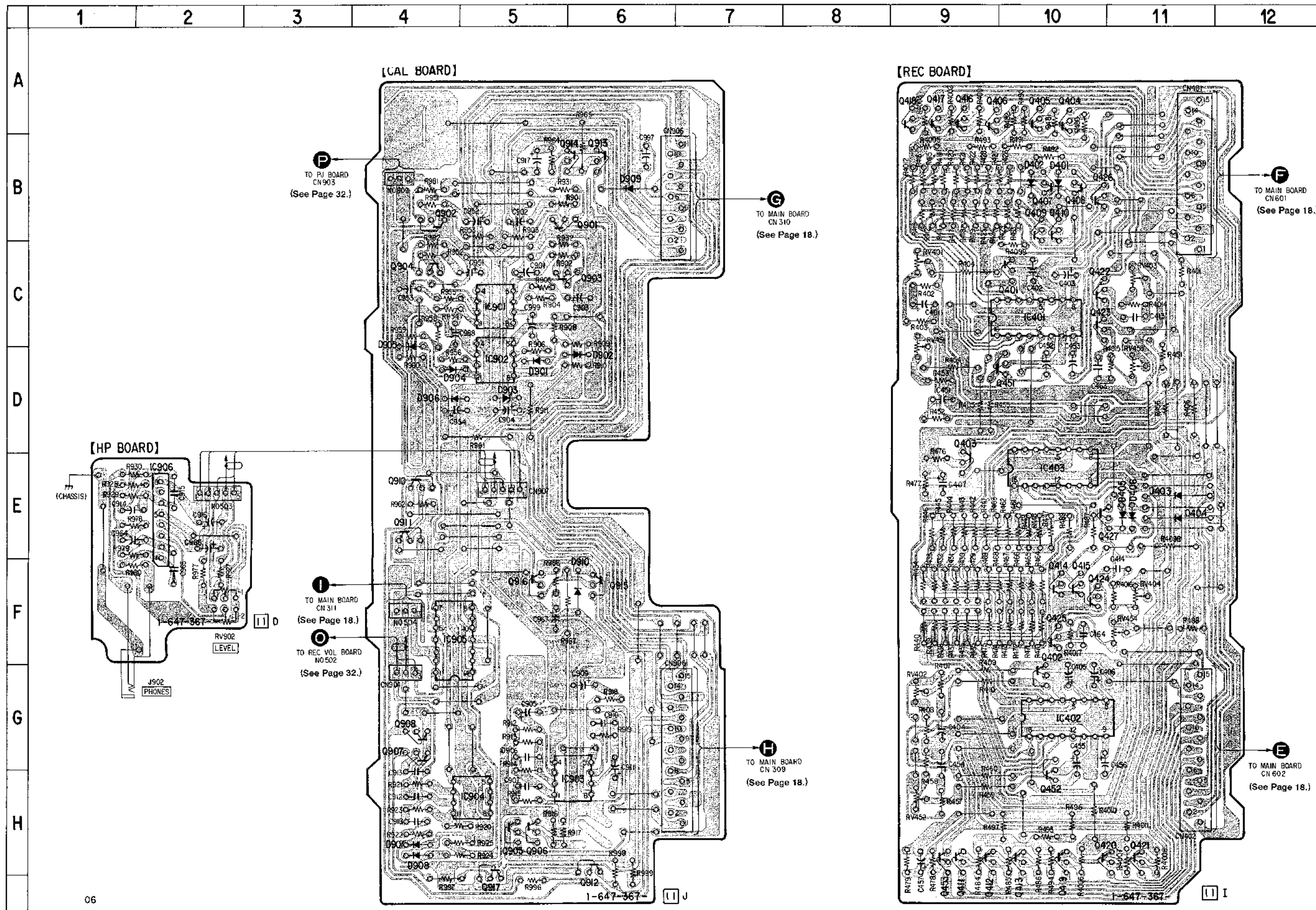


Note:  
 • ○ : parts extracted from the component side.



**Note:**

- All capacitors are in  $\mu F$  unless otherwise noted.  $pF$ :  $\mu\mu F$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4W$  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.
- ( ) : NORMAL SPEED DUBBING
- : Voltage variations may be noted due to normal production tolerances.
- : Signal path.
- ▷ : PB (DECK A)
- ▷ : REC (DECK A)
- ▷ : PB (DECK B)
- ▷ : REC (DECK B)



• Semiconductor Location

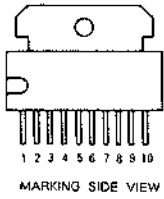
Ref. No.	Location	Ref. No.	Location
D401	B-10	Q411	H-9
D402	B-10	Q412	H-9
D403	E-11	Q413	H-10
D404	E-11	Q414	F-10
D405	E-11	Q415	F-10
D406	E-11	Q416	A-9
D901	D-5	Q417	A-9
D902	D-6	Q418	A-9
D903	D-5	Q419	H-10
D904	D-4	Q420	H-10
D905	C-4	Q421	H-11
D906	D-4	Q422	C-10
D907	H-4	Q423	C-10
D908	H-4	Q424	F-10
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.

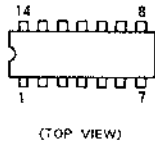


4-9. SEMICONDUCTOR LEAD LAYOUTS

BA6219B



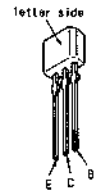
MC14066BCP  
SN74HC04H  
TC4071BP  
 $\mu$ PD4011BC



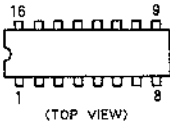
PST600E-T



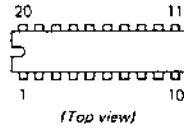
2SC3623A-LK



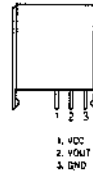
CXA1198AP  
MC14051BCP  
MC14052BCP  
 $\mu$ PD4053BC



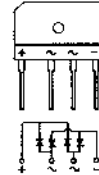
M50255P



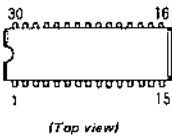
SBX1610-59



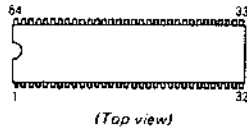
D2SB20



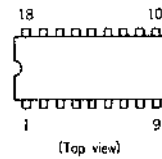
CXA1332S



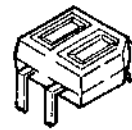
M50747-B83SP



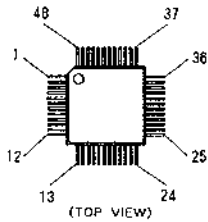
$\mu$ PC1297CA



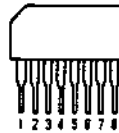
GP2S22B



CXA1417Q



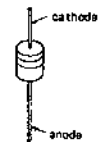
M5218AL



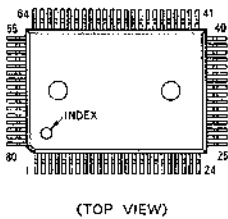
DTA114ES  
DTA144ES  
DTC114ES  
DTC143TS  
DTC144ES  
2SA1317-STU  
2SC2603-EF  
2SD2144S



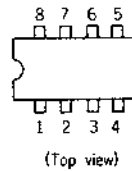
HZS6A1L  
HZS6B3L  
HZS6C3L  
HZS9A2L  
UZL-11H2  
11ES2



CXP82316-010Q



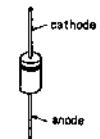
M5218AP  
 $\mu$ PC4558C  
 $\mu$ PC4570C-1



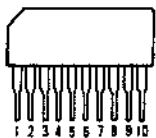
2SB1094-LK  
2SD2012



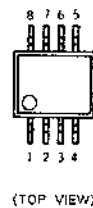
1N4148M  
10E2N



LB1641



NJM4580E-D



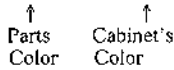
2SB1116A-L  
2SC2001-LK



# SECTION 5 EXPLODED VIEWS

**NOTE:**

- -XX,-X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts.  
Example:  
KNOB,BALANCE (WHITE) ... (RED)



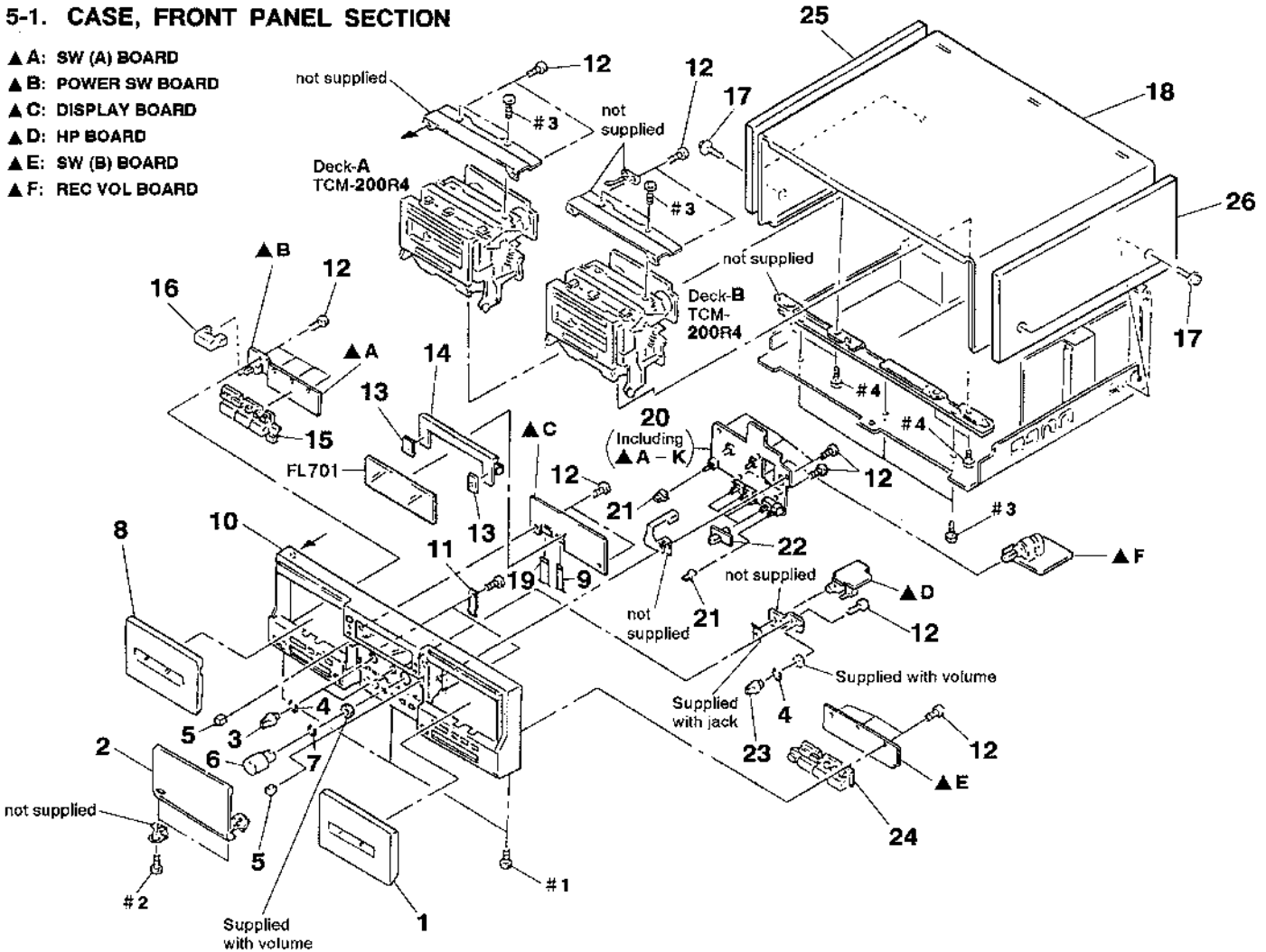
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

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

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, 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

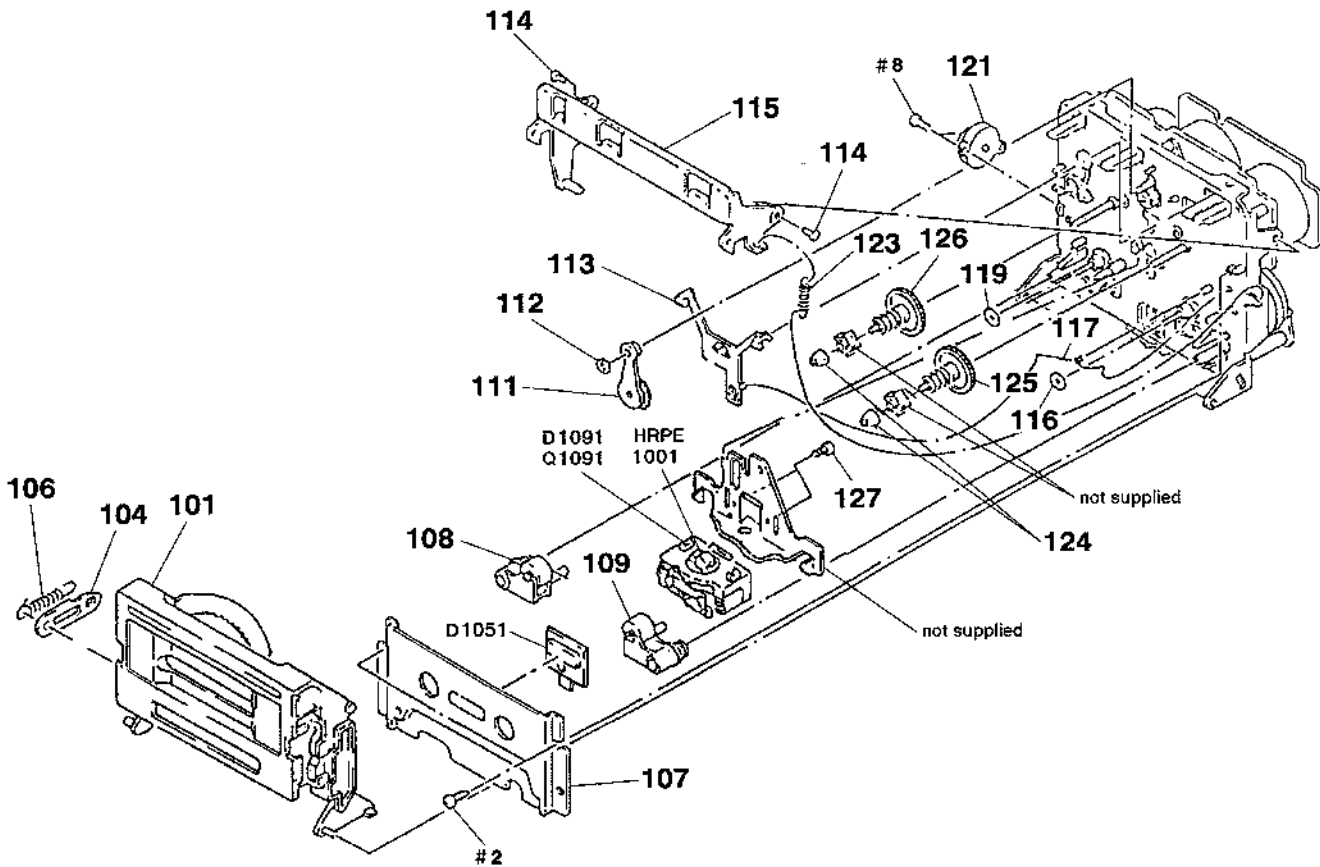


Ref. No.	Part No.	Description	Remark
1	X-3366-590-1	LID (B) ASSY, CASSETTE	
2	X-3366-103-2	LID (M) ASSY (US, Canadian)	
2	X-3366-801-2	LID (M) ASSY (E)	
3	3-354-931-11	KNOB (DIA. 10)	
4	3-354-981-01	SPRING (SUS), RING	
5	3-322-044-01	SPACER, RUBBER	
6	3-359-932-01	KNOB (REC)	
7	3-362-235-01	SPRING (REC LEVEL), RING	
8	X-3366-589-1	LID (A) ASSY, CASSETTE	
9	1-751-012-11	WIRE (FLAT TYPE) (16 CORE)	
10	X-3366-104-1	PANEL ASSY, FRONT (US, Canadian)	
10	X-3366-105-1	PANEL ASSY, FRONT (E)	
11	3-378-283-01	SPRING (M)	
12	4-951-620-01	SCREW (2. 6X8), +BVTP	
* 13	4-955-901-01	CUSHION (FL)	

Ref. No.	Part No.	Description	Remark
* 14	3-386-474-01	HOLDER (FL)	
15	3-378-303-11	BUTTON (CONTROL)	
16	3 354 932 01	BUTTON (POWER)	
17	4-933-446-01	SCREW (SIDE PANEL)	
18	4-925 039-61	CASE	
19	1-751-013-11	WIRE (FLAT TYPE) (20 CORE)	
* 20	A-2006-975-A	PANEL BOARD, COMPLETE (US, Canadian)	
* 20	A-2007-042-A	PANEL BOARD, COMPLETE (E)	
21	3-378-285-01	BUTTON (CORNER 4)	
22	4-924-444-01	KNOB (TIMER)	
23	3-354-931-01	KNOB (DIA. 10)	
24	3-378-303-01	BUTTON (CONTROL)	
25	X-3364-889-1	PANEL (L) ASSY, SIDE	
26	X-3364-890-1	PANEL (R) ASSY, SIDE	
FL701	i-517-159-11	INDICATOR TUBE, FLUORESCENT	

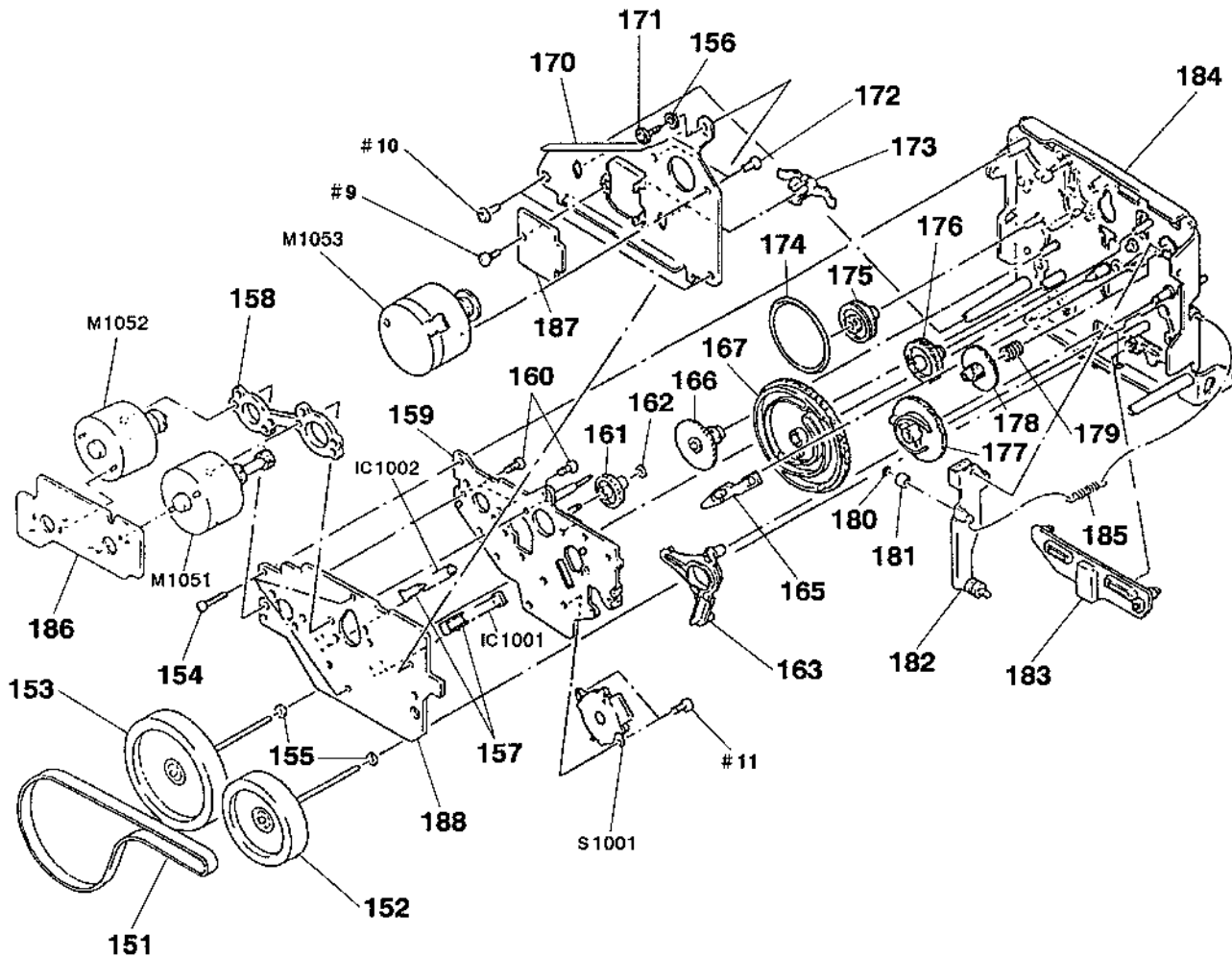


5-3. MECHANISM DECK SECTION-1 (TCM-200R4)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-3364-566-1	HOLDER (CD-W) ASSY, CASSETTE		117	3-356-619-01	SPRING (B), TORSION	
* 104	3-356-717-01	LEVER (JOINT)		119	3-356-714-01	WASHER	
106	3-356-626-01	SPRING, TENSION		121	3-712-786-01	DAMPER, OIL	
107	X-3356-613-1	PLATE ASSY, ORNAMENTAL		123	3-356-625-01	SPRING, TENSION	
108	X-3343-456-1	LEVER (PINCH R) ASSY		124	3-362-308-01	CAP (REEL)	
109	X-3343-455-1	LEVER (PINCH F) ASSY		125	X-3356-627-1	GEAR (T) ASSY	
111	X-3356-641-1	LEVER (FR2) ASSY		126	X-3356-628-1	GEAR (S) ASSY	
112	3-669-465-11	WASHER (I.5), STOPPER		127	3-356-716-01	SCREW (2X4) (B TIGHT), +P	
113	3-356-614-01	SLIDER (BRAKE)		D1051	8-719-980-85	DIODE SLF325C	
114	3-356-601-11	SCREW, STEP		D1091	8-719-950-74	LED SLR314D	
* 115	X-3356-608-1	LEVER (LIFTER) ASSY		HRPE1001	A-2003-722-A	DECK ASSY, HEAD	
116	3-356-713-01	WASHER		Q1091	8-729-809-43	TRANSISTOR SFS-314B	

### 5-4. MECHANISM DECK SECTION-2 (TCM-200R4)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-356-604-01	BELT (CAPSTAN)		175	3-356-607-01	PULLEY (MODE)	
152	X-3356-642-1	FLYWHEEL (R FWD) ASSY		176	3-356-703-01	GEAR (COMMUNICATION C)	
153	X-3356-643-1	FLYWHEEL (R REV) ASSY		177	3-356-616-01	GEAR (LOADING CAM)	
154	3-355-801-01	SCREW (BTP 2X18)		178	3-356-609-01	GEAR (LOADING)	
155	3-356-705-01	WASHER (CAPSTAN)		179	3-356-605-01	SPRING, COMPRESSION	
* 156	3-356-718-01	SPACER (THRUST RETAINER R)		180	3-558-708-11	WASHER, STOPPER	
157	3-356-631-01	HOLDER (SENSOR)		181	3-356-630-01	ROLLER (LOADING)	
* 158	3-356-628-01	SPACER (MOTOR)		* 182	X-3356-606-1	LEVER (LOADING) ASSY	
* 159	X-3356-602-1	BRACKET (MOTOR R) ASSY		183	3-356-612-01	SLIDER (REVERSE)	
160	3-363-804-01	SCREW (+P 2.6X6.5)		184	X-3356-634-1	CHASSIS (R2) COMPLETE ASSY, MECH	
161	3-356-702-01	GEAR (COMMUNICATION B)		185	3-356-624-01	SPRING, TENSION	
162	3-669-465-00	WASHER (1.5), STOPPER		* 186	1-632-741-11	REAL MOTOR BOARD	
163	3-356-613-01	LEVER (MODE)		* 187	1-634-323-11	TRANSLATION BOARD	
165	3-356-617-01	LEVER (SELECTION)		* 188	1-632-740-11	MD BOARD	
166	3-356-606-01	GEAR (MODE)		IC1001	8-749-920-97	DIODE GP2S22B	
167	3-356-615-01	GEAR (MODE CAM RR)		IC1002	8-749-920-97	DIODE GP2S22B	
* 170	3-356-629-01	BRACKET (THRUST RETAINER R)		M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
171	3-356-707-01	SCREW (+PTPWH 2X25)		M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
172	4-885-599-00	SCREW, FITTING, REINFORCEMENT		M1053	X-3356-605-1	MOTOR (CAPSTAN R) ASSY	
173	3-575-321-00	RETAINER, THRUST, CAPSTAN		S1001	1-466-525-11	ENCODER, ROTARY	
174	3-356-603-01	BELT (MODE)					

## 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,  $\mu$  for example :  
uA... :  $\mu$ A..., uPA... :  $\mu$ PA...,  
uPB... :  $\mu$ PB..., uPC... :  $\mu$ PC...,  
uPD... :  $\mu$ PD...
- **CAPACITORS**  
uF :  $\mu$ F
- **COILS**  
uH :  $\mu$ H

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

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

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

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
		*****		C32	1-104-563-11	FILM CHIP	0.1uF 5% 16V
		< CAPACITOR >		C33	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V
C1	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C34	1-104-563-11	FILM CHIP	0.1uF 5% 16V
C2	1-135-177-21	TANTALUM CHIP	1uF 20% 20V	C35	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V
C3	1-104-558-91	FILM CHIP	0.039uF 5% 16V	C36	1-165-319-11	CERAMIC CHIP	0.1uF 50V
C4	1-163-007-11	CERAMIC CHIP	680PF 10% 50V	C37	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C5	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C38	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V
C6	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	C39	1-104-555-11	FILM CHIP	0.022uF 5% 16V
C7	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C40	1-104-563-11	FILM CHIP	0.1uF 5% 16V
C8	1-104-562-11	FILM CHIP	0.082uF 5% 16V			< IC >	
C9	1-104-553-11	FILM CHIP	0.015uF 5% 16V	IC1	8-752-056-51	IC CXA1417Q	
C10	1-165-319-11	CERAMIC CHIP	0.1uF 50V	IC2	8-759-711-85	IC NJM4580E-D	
C11	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V			< RESISTOR >	
C12	1-164-222-11	CERAMIC CHIP	0.22uF 25V	R1	1-216-013-00	METAL CHIP	33 5% 1/10W
C13	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R2	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
C14	1-162-568-11	CERAMIC CHIP	0.33uF 10% 16V	R3	1-216-681-11	METAL CHIP	18K 0.5% 1/10W
C15	1-104-562-11	FILM CHIP	0.082uF 5% 16V	R4	1-218-774-11	METAL CHIP	820K 0.5% 1/10W
C16	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	R5	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W
C17	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R6	1-216-656-11	METAL CHIP	1.6K 0.5% 1/10W
C18	1-164-222-11	CERAMIC CHIP	0.22uF 25V	R7	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W
C19	1-163-035-00	CERAMIC CHIP	0.047uF 50V	R8	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
C20	1-104-553-11	FILM CHIP	0.015uF 5% 16V	R9	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W
C21	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	R10	1-216-654-11	METAL CHIP	1.3K 0.5% 1/10W
C22	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	R11	1-216-013-00	METAL CHIP	33 5% 1/10W
C23	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	R12	1-216-017-00	METAL CHIP	47 5% 1/10W
C24	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	R13	1-216-051-00	METAL CHIP	1.2K 5% 1/10W
C25	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R14	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
C26	1-104-558-91	FILM CHIP	0.039uF 5% 16V	R15	1-216-058-00	METAL GLAZE	2.4K 5% 1/10W
C27	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R16	1-216-013-00	METAL CHIP	33 5% 1/10W
C28	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	R17	1-216-017-00	METAL CHIP	47 5% 1/10W
C29	1-104-563-11	FILM CHIP	0.1uF 5% 16V	R18	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
C30	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V				

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	0.5%	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-2006-972-A	MAIN BOARD, COMPLETE (US)			
		*****			
*	A-2006-973-A	MAIN BOARD, COMPLETE (Canadian)			
		*****			
*	A-2006-974-A	MAIN BOARD, COMPLETE (E)			
		*****			
	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
C017	1-162-286-31	CERAMIC	220PF	10%	50V
C018	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description	Remark		
C019	1-161-494-00	CERAMIC	0.022uF		25V
C020	1-161-494-00	CERAMIC	0.022uF		25V
C101	1-130-469-00	MYLAR	680PF	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	1-136-935-11	FILM	22PF	5%	630V
C106	1-162-285-31	CERAMIC	180PF	10%	50V
C107	1-130-468-00	MYLAR	560PF	5%	50V
C108	1-136-433-11	FILM	100PF	5%	630V
C109	1-136-272-00	FILM	68PF	5%	630V
C110	1-107-046-00	MICA	4.7PF		500V
C111	1-136-161-00	FILM	0.047uF	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	1-130-469-00	MYLAR	680PF	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	1-136-935-11	FILM	22PF	5%	630V
C156	1-162-285-31	CERAMIC	180PF	10%	50V
C157	1-130-468-00	MYLAR	560PF	5%	50V
C158	1-136-433-11	FILM	100PF	5%	630V
C159	1-136-272-00	FILM	68PF	5%	630V
C161	1-136-161-00	FILM	0.047uF	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	1-136-558-11	FILM	0.0039uF	5%	630V
C166	1-130-856-00	FILM	0.0068uF	5%	100V
C167	1-136-230-00	FILM	0.0022uF	5%	100V
C201	1-130-469-00	MYLAR	680PF	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	1-136-935-11	FILM	22PF	5%	630V
C206	1-162-285-31	CERAMIC	180PF	10%	50V
C207	1-130-468-00	MYLAR	560PF	5%	50V
C208	1-136-433-11	FILM	100PF	5%	630V
C209	1-136-272-00	FILM	68PF	5%	630V
C210	1-107-046-00	MICA	4.7PF		500V
C211	1-136-161-00	FILM	0.047uF	5%	50V
C212	1-136-157-00	FILM	0.022uF	5%	50V
C213	1-136-153-00	FILM	0.01uF	5%	50V
C214	1-126-022-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
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	1-130-469-00	MYLAR	680PF	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	1-136-935-11	FILM	22PF	5%	630V	C503	1-126-022-11	ELECT	47uF	20%	10V
C256	1-162-285-31	CERAMIC	180PF	10%	50V	C504	1-126-937-11	ELECT	4700uF	20%	16V
C257	1-130-468-00	MYLAR	560PF	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	1-136-272-00	FILM	68PF	5%	630V	C507	1-126-301-11	ELECT	1uF	20%	50V
C261	1-136-161-00	FILM	0. 047uF	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	1-136-558-11	FILM	0. 0039uF	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
C361	1-126-161-11	ELECT	2. 2uF	20%	50V	C826	1-126-163-11	ELECT	4. 7uF	20%	50V
C362	1-126-049-11	ELECT	22uF	20%	25V	C899	1-164-159-11	CERAMIC	0. 1uF	50V	(US, Canadian)



# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< CONNECTOR >							
* CN1	1-537-473-11	TERMINAL (LEAD PIN)		D609	8-719-987-63	DIODE 1N4148M	
CN302	1-691-908-21	CONNECTOR, WIRE TRAP 8P		D610	8-719-987-63	DIODE 1N4148M	
* CN304	1-564-338-71	PIN, CONNECTOR 4P		D801	8-719-987-63	DIODE 1N4148M	
CN306	1-580-462-11	SOCKET, CONNECTOR 20P		D802	8-719-987-63	DIODE 1N4148M	
CN307	1-580-463-11	SOCKET, CONNECTOR 16P		D811	8-719-987-63	DIODE 1N4148M	
* CN309	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P		D812	8-719-987-63	DIODE 1N4148M	
* CN310	1-573-978-11	CONNECTOR, BOARD TO BOARD 11P		D898	8-719-987-63	DIODE 1N4148M (US, Canadian)	
CN311	1-506-468-11	PIN, CONNECTOR 3P		D899	8-719-987-63	DIODE 1N4148M (US, Canadian)	
* CN501	1-564-513-11	PLUG, CONNECTOR 10P		< IC >			
* CN601	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P		IC101	8-759-111-44	IC UPC4570C-1	
* CN602	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P		IC102	8-759-106-56	IC UPC1297CA	
CN801	1-565-951-11	SOCKET, CONNECTOR (PC BOARD) 4P (US, Canadian)		IC103	8-759-916-14	IC SN74HC04AN	
* CN802	1-568-955-11	PIN, CONNECTOR 6P		IC104	8-759-000-48	IC MC14052BCP	
< COMPOSITION CIRCUIT BLOCK >				IC201	8-759-111-44	IC UPC4570C-1	
CP101	1-233-125-11	COMPOSITION CIRCUIT BLOCK		IC202	8-759-106-56	IC UPC1297CA	
CP201	1-233-125-11	COMPOSITION CIRCUIT BLOCK		IC203	8-759-916-14	IC SN74HC04AN	
CP801	1-233-199-11	COMPOSITION CIRCUIT BLOCK		IC204	8-759-000-48	IC MC14052BCP	
CP802	1-233-199-11	COMPOSITION CIRCUIT BLOCK		IC301	8-759-140-53	IC UPD4053BC	
< DIODE >				IC302	8-752-059-54	IC CXA1332S	
D102	8-719-987-63	DIODE 1N4148M		IC303	8-759-140-53	IC UPD4053BC	
D202	8-719-987-63	DIODE 1N4148M		IC304	8-759-140-53	IC UPD4053BC	
D301	8-719-200-82	DIODE 11ES2		IC605	8-759-634-84	IC M50255P	
D302	8-719-200-82	DIODE 11ES2		IC606	8-759-634-84	IC M50255P	
D306	8-719-987-63	DIODE 1N4148M		IC609	8-759-165-82	IC PST600E-T	
D307	8-719-933-54	DIODE HZS9A2L		IC801	8-759-633-86	IC M50747-B83SP	
D351	8-719-200-82	DIODE 11ES2		IC802	8-759-973-95	IC BA6219B	
D352	8-719-200-82	DIODE 11ES2		IC803	8-759-822-09	IC LB1641	
△D501	8-719-500-36	DIODE D25B20		IC804	8-759-973-95	IC BA6219B	
D502	8-719-200-77	DIODE 10E2N		IC805	8-759-822-09	IC LB1641	
D503	8-719-987-63	DIODE 1N4148M		IC806	8-759-240-71	IC TC4071BP	
D504	8-719-001-54	DIODE UZL-11H2		IC807	8-759-140-11	IC UPD4011BC (US, Canadian)	
D505	8-719-200-77	DIODE 10E2N		< COIL >			
D506	8-719-933-41	DIODE HZS6C3L		L101	1-410-780-11	INDUCTOR 27mH	
D507	8-719-987-63	DIODE 1N4148M		L102	1-410-971-11	INDUCTOR 10uH	
D508	8-719-933-38	DIODE HZS6B3L		L151	1-410-780-11	INDUCTOR 27mH	
D509	8-719-200-77	DIODE 10E2N		L201	1-410-780-11	INDUCTOR 27mH	
D510	8-719-200-77	DIODE 10E2N		L202	1-410-971-11	INDUCTOR 10uH	
D511	8-719-200-77	DIODE 10E2N		L251	1-410-780-11	INDUCTOR 27mH	
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					

**Note:**

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

**Note:**

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

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
< TRANSISTOR >							
Q101	8-729-142-46	TRANSISTOR	2SC2001-LK	Q823	8-729-620-05	TRANSISTOR	2SC2603-EF
Q102	8-729-821-04	TRANSISTOR	2SA1317-STU	Q824	8-729-620-05	TRANSISTOR	2SC2603-EF
Q105	8-729-900-61	TRANSISTOR	DTA114ES	< RESISTOR >			
Q151	8-729-142-46	TRANSISTOR	2SC2001-LK	R010	1-249-405-11	CARBON	100 5% 1/4W
Q201	8-729-142-46	TRANSISTOR	2SC2001-LK	R011	1-249-405-11	CARBON	100 5% 1/4W
Q202	8-729-821-04	TRANSISTOR	2SA1317-STU	R012	1-249-405-11	CARBON	100 5% 1/4W
Q205	8-729-900-61	TRANSISTOR	DTA114ES	R013	1-249-405-11	CARBON	100 5% 1/4W
Q251	8-729-142-46	TRANSISTOR	2SC2001-LK	R020	1-249-417-11	CARBON	1K 5% 1/4W
Q301	8-729-900-74	TRANSISTOR	DTC143TS	R021	1-249-417-11	CARBON	1K 5% 1/4W
Q302	8-729-900-80	TRANSISTOR	DTC114ES	R022	1-249-417-11	CARBON	1K 5% 1/4W
Q303	8-729-900-65	TRANSISTOR	DTA144ES	R023	1-249-417-11	CARBON	1K 5% 1/4W
Q304	8-729-900-65	TRANSISTOR	DTA144ES	R101	1-249-433-11	CARBON	22K 5% 1/4W
Q305	8-729-900-80	TRANSISTOR	DTC114ES	R102	1-247-882-11	CARBON	130K 5% 1/4W
Q306	8-729-900-80	TRANSISTOR	DTC114ES	R103	1-249-403-11	CARBON	68 5% 1/4W
Q307	8-729-900-65	TRANSISTOR	DTA144ES	R104	1-249-426-11	CARBON	5.6K 5% 1/4W
Q351	8-729-900-74	TRANSISTOR	DTC143TS	R105	1-249-428-11	CARBON	8.2K 5% 1/4W
Q352	8-729-900-80	TRANSISTOR	DTC114ES	R106	1-247-883-00	CARBON	150K 5% 1/4W
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF	△R107	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q502	8-729-141-30	TRANSISTOR	2SC3623A-LK	R108	1-249-435-11	CARBON	33K 5% 1/4W
Q503	8-729-141-83	TRANSISTOR	2SB1094-LK	R109	1-249-429-11	CARBON	10K 5% 1/4W
Q504	8-729-620-05	TRANSISTOR	2SC2603-EF	R110	1-249-441-11	CARBON	100K 5% 1/4W
Q505	8-729-209-15	TRANSISTOR	2SD2012	R111	1-249-389-11	CARBON	4.7 5% 1/4W
Q506	8-729-821-04	TRANSISTOR	2SA1317-STU	R112	1-249-437-11	CARBON	47K 5% 1/4W
Q507	8-729-140-04	TRANSISTOR	2SB1116A-L	R115	1-249-421-11	CARBON	2.2K 5% 1/4W
Q508	8-729-620-05	TRANSISTOR	2SC2603-EF	R116	1-249-425-11	CARBON	4.7K 5% 1/4W
Q509	8-729-209-15	TRANSISTOR	2SD2012	R117	1-249-425-11	CARBON	4.7K 5% 1/4W
Q510	8-729-620-05	TRANSISTOR	2SC2603-EF	R151	1-249-433-11	CARBON	22K 5% 1/4W
Q511	8-729-821-04	TRANSISTOR	2SA1317-STU	R152	1-247-882-11	CARBON	130K 5% 1/4W
Q512	8-729-141-83	TRANSISTOR	2SB1094-LK	R153	1-249-403-11	CARBON	68 5% 1/4W
Q513	8-729-821-04	TRANSISTOR	2SA1317-STU	R154	1-249-426-11	CARBON	5.6K 5% 1/4W
Q514	8-729-821-04	TRANSISTOR	2SA1317-STU	R155	1-249-428-11	CARBON	8.2K 5% 1/4W
Q614	8-729-821-04	TRANSISTOR	2SA1317-STU	R156	1-247-883-00	CARBON	150K 5% 1/4W
Q699	8-729-900-65	TRANSISTOR	DTA114ES	△R157	1-219-153-11	FUSIBLE	10 5% 1/4W F
Q801	8-729-900-65	TRANSISTOR	DTA144ES	R158	1-249-435-11	CARBON	33K 5% 1/4W
Q802	8-729-900-89	TRANSISTOR	DTC144ES	R159	1-249-429-11	CARBON	10K 5% 1/4W
Q804	8-729-900-65	TRANSISTOR	DTA144ES	R161	1-249-389-11	CARBON	4.7 5% 1/4W
Q805	8-729-900-80	TRANSISTOR	DTC114ES	R162	1-249-437-11	CARBON	47K 5% 1/4W
Q806	8-729-900-80	TRANSISTOR	DTC114ES	R165	1-249-429-11	CARBON	10K 5% 1/4W
Q807	8-729-900-65	TRANSISTOR	DTA144ES	R167	1-249-425-11	CARBON	4.7K 5% 1/4W
Q808	8-729-900-89	TRANSISTOR	DTC144ES	R181	1-247-874-11	CARBON	62K 5% 1/4W
Q809	8-729-900-80	TRANSISTOR	DTC114ES	R182	1-247-866-11	CARBON	30K 5% 1/4W
Q810	8-729-900-65	TRANSISTOR	DTA144ES	R183	1-249-431-11	CARBON	15K 5% 1/4W
Q811	8-729-900-89	TRANSISTOR	DTC144ES	R184	1-247-852-11	CARBON	7.5K 5% 1/4W
Q812	8-729-900-80	TRANSISTOR	DTC114ES				
Q813	8-729-900-80	TRANSISTOR	DTC114ES				
Q814	8-729-900-80	TRANSISTOR	DTC114ES				
Q821	8-729-620-05	TRANSISTOR	2SC2603-EF				
Q822	8-729-620-05	TRANSISTOR	2SC2603-EF				

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

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R185	1-249-421-11	CARBON	2.2K	5%	1/4W	R303	1-247-887-00	CARBON	220K	5%	1/4W
R190	1-249-434-11	CARBON	27K	5%	1/4W	R304	1-249-441-11	CARBON	100K	5%	1/4W
R191	1-249-434-11	CARBON	27K	5%	1/4W	R305	1-249-423-11	CARBON	3.3K	5%	1/4W
R192	1-249-434-11	CARBON	27K	5%	1/4W	R306	1-249-428-11	CARBON	8.2K	5%	1/4W
R193	1-249-434-11	CARBON	27K	5%	1/4W	R307	1-247-864-11	CARBON	24K	5%	1/4W
R194	1-247-844-11	CARBON	3.6K	5%	1/4W	R308	1-249-414-11	CARBON	560	5%	1/4W
R195	1-249-431-11	CARBON	15K	5%	1/4W	R309	1-249-417-11	CARBON	1K	5%	1/4W
R197	1-249-441-11	CARBON	100K	5%	1/4W	R310	1-249-441-11	CARBON	100K	5%	1/4W
R201	1-249-433-11	CARBON	22K	5%	1/4W	R311	1-249-436-11	CARBON	39K	5%	1/4W
R202	1-247-882-11	CARBON	130K	5%	1/4W	R312	1-247-858-11	CARBON	13K	5%	1/4W
R203	1-249-403-11	CARBON	68	5%	1/4W	R313	1-249-436-11	CARBON	39K	5%	1/4W
R204	1-249-426-11	CARBON	5.6K	5%	1/4W	R314	1-247-858-11	CARBON	13K	5%	1/4W
R205	1-249-428-11	CARBON	8.2K	5%	1/4W	R315	1-249-437-11	CARBON	47K	5%	1/4W
R206	1-247-883-00	CARBON	150K	5%	1/4W	R316	1-249-437-11	CARBON	47K	5%	1/4W
▲R207	1-219-153-11	FUSIBLE	10	5%	1/4W F	R317	1-249-417-11	CARBON	1K	5%	1/4W
R208	1-249-435-11	CARBON	33K	5%	1/4W	R318	1-249-441-11	CARBON	100K	5%	1/4W
R209	1-249-429-11	CARBON	10K	5%	1/4W	R319	1-249-433-11	CARBON	22K	5%	1/4W
R210	1-249-441-11	CARBON	100K	5%	1/4W	R320	1-249-429-11	CARBON	10K	5%	1/4W
R211	1-249-389-11	CARBON	4.7	5%	1/4W	R351	1-249-421-11	CARBON	2.2K	5%	1/4W
R212	1-249-437-11	CARBON	47K	5%	1/4W	R352	1-249-423-11	CARBON	3.3K	5%	1/4W
R215	1-249-421-11	CARBON	2.2K	5%	1/4W	R353	1-247-887-00	CARBON	220K	5%	1/4W
R216	1-249-425-11	CARBON	4.7K	5%	1/4W	R354	1-249-441-11	CARBON	100K	5%	1/4W
R217	1-249-425-11	CARBON	4.7K	5%	1/4W	R355	1-249-423-11	CARBON	3.3K	5%	1/4W
R251	1-249-433-11	CARBON	22K	5%	1/4W	R356	1-249-428-11	CARBON	8.2K	5%	1/4W
R252	1-247-882-11	CARBON	130K	5%	1/4W	R357	1-247-864-11	CARBON	24K	5%	1/4W
R253	1-249-403-11	CARBON	68	5%	1/4W	R358	1-249-414-11	CARBON	560	5%	1/4W
R254	1-249-426-11	CARBON	5.6K	5%	1/4W	R359	1-249-434-11	CARBON	27K	5%	1/4W
R255	1-249-428-11	CARBON	8.2K	5%	1/4W	R360	1-249-441-11	CARBON	100K	5%	1/4W
R256	1-247-883-00	CARBON	150K	5%	1/4W	R361	1-249-436-11	CARBON	39K	5%	1/4W
▲R257	1-219-153-11	FUSIBLE	10	5%	1/4W F	R362	1-247-858-11	CARBON	13K	5%	1/4W
R258	1-249-435-11	CARBON	33K	5%	1/4W	R363	1-249-436-11	CARBON	39K	5%	1/4W
R259	1-249-429-11	CARBON	10K	5%	1/4W	R364	1-247-858-11	CARBON	13K	5%	1/4W
R261	1-249-389-11	CARBON	4.7	5%	1/4W	R365	1-249-437-11	CARBON	47K	5%	1/4W
R262	1-249-437-11	CARBON	47K	5%	1/4W	R366	1-249-437-11	CARBON	47K	5%	1/4W
R265	1-249-429-11	CARBON	10K	5%	1/4W	R369	1-249-429-11	CARBON	10K	5%	1/4W
R267	1-249-425-11	CARBON	4.7K	5%	1/4W	R370	1-249-433-11	CARBON	22K	5%	1/4W
R281	1-247-874-11	CARBON	62K	5%	1/4W	R390	1-249-425-11	CARBON	4.7K	5%	1/4W
R282	1-247-866-11	CARBON	30K	5%	1/4W	R396	1-249-429-11	CARBON	10K	5%	1/4W
R283	1-249-431-11	CARBON	15K	5%	1/4W	R397	1-249-429-11	CARBON	10K	5%	1/4W
R284	1-247-852-11	CARBON	7.5K	5%	1/4W	R398	1-249-429-11	CARBON	10K	5%	1/4W
R285	1-249-421-11	CARBON	2.2K	5%	1/4W	R399	1-249-429-11	CARBON	10K	5%	1/4W
R290	1-249-434-11	CARBON	27K	5%	1/4W	R501	1-249-433-11	CARBON	22K	5%	1/4W
R291	1-249-434-11	CARBON	27K	5%	1/4W	R502	1-249-421-11	CARBON	2.2K	5%	1/4W
R292	1-249-434-11	CARBON	27K	5%	1/4W	R505	1-249-422-11	CARBON	2.7K	5%	1/4W
R293	1-249-434-11	CARBON	27K	5%	1/4W	▲R506	1-219-136-11	FUSIBLE	0.22	10%	1/4W
R294	1-247-844-11	CARBON	3.6K	5%	1/4W						
R295	1-249-431-11	CARBON	15K	5%	1/4W						
R297	1-249-441-11	CARBON	100K	5%	1/4W						
R301	1-249-421-11	CARBON	2.2K	5%	1/4W						
R302	1-249-423-11	CARBON	3.3K	5%	1/4W						

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Ref. No.	Part No.	Description			Remark
R507	1-249-430-11	CARBON	12K	5%	1/4W
R508	1-249-421-11	CARBON	2. 2K	5%	1/4W
R509	1-247-840-00	CARBON	2. 4K	5%	1/4W
R510	1-247-858-11	CARBON	13K	5%	1/4W
R511	1-249-436-11	CARBON	39K	5%	1/4W
R512	1-249-421-11	CARBON	2. 2K	5%	1/4W
R513	1-249-421-11	CARBON	2. 2K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W
R515	1-249-417-11	CARBON	1K	5%	1/4W
R516	1-249-405-11	CARBON	100	5%	1/4W
R517	1-249-433-11	CARBON	22K	5%	1/4W
R518	1-249-421-11	CARBON	2. 2K	5%	1/4W
R519	1-249-421-11	CARBON	2. 2K	5%	1/4W
R520	1-249-417-11	CARBON	1K	5%	1/4W
R521	1-249-415-11	CARBON	680	5%	1/4W
R522	1-249-422-11	CARBON	2. 7K	5%	1/4W
R523	1-249-424-11	CARBON	3. 9K	5%	1/4W
R524	1-249-423-11	CARBON	3. 3K	5%	1/4W
R601	1-249-429-11	CARBON	10K	5%	1/4W
R602	1-249-429-11	CARBON	10K	5%	1/4W
R621	1-249-417-11	CARBON	1K	5%	1/4W
R622	1-249-441-11	CARBON	100K	5%	1/4W
R643	1-249-429-11	CARBON	10K	5%	1/4W
R644	1-249-441-11	CARBON	100K	5%	1/4W
R645	1-249-417-11	CARBON	1K	5%	1/4W
R646	1-249-437-11	CARBON	47K	5%	1/4W
R695	1-249-429-11	CARBON	10K	5%	1/4W
R696	1-249-429-11	CARBON	10K	5%	1/4W
R697	1-249-429-11	CARBON	10K	5%	1/4W
R698	1-249-429-11	CARBON	10K	5%	1/4W
R699	1-249-429-11	CARBON	10K	5%	1/4W
R801	1-249-425-11	CARBON	4. 7K	5%	1/4W
R802	1-249-425-11	CARBON	4. 7K	5%	1/4W
R803	1-249-425-11	CARBON	4. 7K	5%	1/4W
R804	1-249-425-11	CARBON	4. 7K	5%	1/4W
R805	1-247-903-00	CARBON	1M	5%	1/4W
R806	1-249-425-11	CARBON	4. 7K	5%	1/4W
R807	1-249-425-11	CARBON	4. 7K	5%	1/4W
R808	1-249-425-11	CARBON	4. 7K	5%	1/4W
R809	1-249-425-11	CARBON	4. 7K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-249-411-11	CARBON	330	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

Ref. No.	Part No.	Description			Remark
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
△R824	1-212-950-00	FUSIBLE	4. 7	5%	1/2W F
R825	1-249-433-11	CARBON	22K	5%	1/4W
R826	1-247-864-11	CARBON	24K	5%	1/4W
R827	1-249-433-11	CARBON	22K	5%	1/4W
R828	1-249-411-11	CARBON	330	5%	1/4W
R829	1-247-830-11	CARBON	910	5%	1/4W
R830	1-249-418-11	CARBON	1. 2K	5%	1/4W
R831	1-249-417-11	CARBON	1K	5%	1/4W
△R832	1-212-950-00	FUSIBLE	4. 7	5%	1/2W F
R833	1-249-416-11	CARBON	820	5%	1/4W
R834	1-249-419-11	CARBON	1. 5K	5%	1/4W
R835	1-249-417-11	CARBON	1K	5%	1/4W
△R836	1-212-950-00	FUSIBLE	4. 7	5%	1/2W F
R837	1-249-436-11	CARBON	39K	5%	1/4W
R838	1-247-895-00	CARBON	470K	5%	1/4W
R839	1-247-895-00	CARBON	470K	5%	1/4W
R840	1-249-436-11	CARBON	39K	5%	1/4W
R841	1-247-895-00	CARBON	470K	5%	1/4W
R842	1-247-895-00	CARBON	470K	5%	1/4W
R843	1-249-436-11	CARBON	39K	5%	1/4W
R844	1-249-436-11	CARBON	39K	5%	1/4W
R845	1-249-433-11	CARBON	22K	5%	1/4W
R846	1-249-433-11	CARBON	22K	5%	1/4W
R861	1-249-421-11	CARBON	2. 2K	5%	1/4W
R862	1-249-429-11	CARBON	10K	5%	1/4W
R863	1-249-429-11	CARBON	10K	5%	1/4W
R864	1-249-433-11	CARBON	22K	5%	1/4W
R865	1-249-429-11	CARBON	10K	5%	1/4W
R866	1-249-417-11	CARBON	1K	5%	1/4W
R867	1-249-412-11	CARBON	390	5%	1/4W
R868	1-249-412-11	CARBON	390	5%	1/4W
R869	1-249-417-11	CARBON	1K	5%	1/4W
R870	1-249-429-11	CARBON	10K	5%	1/4W
R871	1-249-429-11	CARBON	10K	5%	1/4W
R872	1-249-433-11	CARBON	22K	5%	1/4W
R873	1-249-421-11	CARBON	2. 2K	5%	1/4W
R874	1-249-429-11	CARBON	10K	5%	1/4W
R875	1-249-429-11	CARBON	10K	5%	1/4W
R894	1-249-393-11	CARBON	10K	5%	1/4W(US, Canadian)
R895	1-249-429-11	CARBON	10K	5%	1/4W(US, Canadian)
R896	1-249-429-11	CARBON	10K	5%	1/4W(US, Canadian)

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

MD

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

Ref. No.	Part No.	Description	Remark
R897	1-249-405-11	CARBON 100 5%	1/4W(US, Canadian)
R898	1-249-429-11	CARBON 10K 5%	1/4W(US, Canadian)
R899	1-249-429-11	CARBON 10K 5%	1/4W(US, Canadian)
< 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	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T102	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T151	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T201	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T202	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
T251	1-433-382-11	TRANSFORMER, BIAS OSCILLATION	
T301	1-236-147-11	FILTER, LOW PASS	
T351	1-236-147-11	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	

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X801	1-577-358-21	VIBRATOR, CERAMIC (4.0MHz)	
*****			
*	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	
< DIODE >			
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-2006-975-A	PANEL BOARD, COMPLETE (US, Canadian)	*****
*****			
*	A-2007-042-A	PANEL BOARD, COMPLETE (E)	*****
*****			
(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

**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
C006	1-164-159-11	CERAMIC	0.1uF 50V	C916	1-126-157-11	ELECT	10uF 20% 16V
C008	1-164-159-11	CERAMIC	0.1uF 50V	C917	1-126-022-11	ELECT	47uF 20% 16V
C021	1-161-494-00	CERAMIC	0.022uF 25V	C918	1-136-161-00	FILM	0.047uF 5% 50V
C022	1-161-494-00	CERAMIC	0.022uF 25V	C951	1-126-059-11	ELECT	10uF 20% 50V
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	* CN502	1-573-565-11	PIN, CONNECTOR 5P (E)	
C457	1-126-301-11	ELECT	1uF 20% 50V	* CN504	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
C463	1-130-475-00	MYLAR	0.0022uF 5% 50V	* CN701	1-691-620-21	SOCKET, CONNECTOR 8P	
C464	1-130-475-00	MYLAR	0.0022uF 5% 50V	CN704	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)	
C701	1-124-994-11	ELECT	100uF 20% 10V	CN705	1-569-566-11	SOCKET, CONNECTOR 20P	
C702	1-161-494-00	CERAMIC	0.022uF 25V	CN706	1-580-475-11	SOCKET, CONNECTOR 16P	
C704	1-161-494-00	CERAMIC	0.022uF 25V	* CN901	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C705	1-162-290-31	CERAMIC	470PF 10% 50V	* CN902	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C706	1-162-290-31	CERAMIC	470PF 10% 50V	* CN903	1-564-337-00	PIN, CONNECTOR 3P	
C707	1-162-290-31	CERAMIC	470PF 10% 50V	* CN904	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C708	1-162-290-31	CERAMIC	470PF 10% 50V	* CN905	1-573-979-11	CONNECTOR, BOARD TO BOARD 11P	
C709	1-162-306-11	CERAMIC	0.01uF 20% 16V	* CN906	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P	
C710	1-162-306-11	CERAMIC	0.01uF 20% 16V	* CN907	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
C711	1-162-306-11	CERAMIC	0.01uF 20% 16V	< CONNECTOR >			
C793	1-162-294-31	CERAMIC	0.001uF 10% 50V	* CNP701	1-691-007-11	CONNECTOR (PC BOARD) (PLUG) 4P	
C794	1-162-294-31	CERAMIC	0.001uF 10% 50V	< DIODE >			
C795	1-162-294-31	CERAMIC	0.001uF 10% 50V	D401	8-719-987-63	DIODE 1N4148M	
C796	1-162-294-31	CERAMIC	0.001uF 10% 50V	D402	8-719-987-63	DIODE 1N4148M	
C901	1-126-059-11	ELECT	10uF 20% 50V	D403	8-719-987-63	DIODE 1N4148M	
C902	1-126-059-11	ELECT	10uF 20% 50V	D404	8-719-987-63	DIODE 1N4148M	
C903	1-126-163-11	ELECT	4.7uF 20% 50V	D405	8-719-987-63	DIODE 1N4148M	
C904	1-126-161-11	ELECT	2.2uF 20% 50V	D406	8-719-987-63	DIODE 1N4148M	
C905	1-126-161-11	ELECT	2.2uF 20% 50V	D901	8-719-987-63	DIODE 1N4148M	
C906	1-162-217-31	CERAMIC	56PF 5% 50V	D902	8-719-987-63	DIODE 1N4148M	
C907	1-136-157-00	FILM	0.022uF 5% 50V	D903	8-719-933-33	DIODE HZS6A1L	
C909	1-126-161-11	ELECT	2.2uF 20% 50V	D904	8-719-987-63	DIODE 1N4148M	
C910	1-162-286-31	CERAMIC	220PF 10% 50V	D905	8-719-987-63	DIODE 1N4148M	
C911	1-126-161-11	ELECT	2.2uF 20% 50V	D906	8-719-933-33	DIODE HZS6A1L	
C912	1-130-477-00	MYLAR	0.0033uF 5% 50V	D907	8-719-987-63	DIODE 1N4148M	
C913	1-136-164-00	FILM	0.082uF 5% 50V				
C914	1-126-157-11	ELECT	10uF 20% 16V				
C915	1-162-288-31	CERAMIC	330PF 10% 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
D908	8-719-987-63	DIODE 1N4148M		Q422	8-729-900-74	TRANSISTOR DTC143TS	
D909	8-719-987-63	DIODE 1N4148M		Q423	8-729-900-74	TRANSISTOR DTC143TS	
D910	8-719-987-63	DIODE 1N4148M		Q424	8-729-900-74	TRANSISTOR DTC143TS	
		< FILTER >		Q425	8-729-900-74	TRANSISTOR DTC143TS	
FL701	1-517-159-11	INDICATOR TUBE, FLUORESCENT		Q426	8-729-900-89	TRANSISTOR DTC144ES	
		< IC >		Q427	8-729-900-89	TRANSISTOR DTC144ES	
IC401	8-752-060-64	IC CXA1198AP		Q451	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC402	8-752-060-64	IC CXA1198AP		Q452	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC403	8-759-900-47	IC MC14051BCP		Q453	8-729-900-65	TRANSISTOR DTA144ES	
IC701	8-752-842-00	IC CXP82316-010Q		Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC702	8-741-100-48	IC SBX1610-59		Q704	8-729-900-80	TRANSISTOR DTC114ES	
IC901	8-759-145-58	IC UPC4558C		Q705	8-729-900-80	TRANSISTOR DTC114ES	
IC902	8-759-634-51	IC M5218AP		Q901	8-729-922-37	TRANSISTOR 2SD2144S	
IC903	8-759-145-58	IC UPC4558C		Q902	8-729-922-37	TRANSISTOR 2SD2144S	
IC904	8-759-634-51	IC M5218AP		Q903	8-729-922-37	TRANSISTOR 2SD2144S	
IC905	8-759-000-49	IC MC14066BCP		Q904	8-729-922-37	TRANSISTOR 2SD2144S	
IC906	8-759-634-50	IC M5218AL		Q905	8-729-900-65	TRANSISTOR DTA144ES	
		< JACK >		Q906	8-729-900-89	TRANSISTOR DTC144ES	
J901	1-573-070-11	JACK, PIN 4P (LINE)		Q907	8-729-620-05	TRANSISTOR 2SC2603-EF	
J902	1-507-796-71	JACK (PHONES)		Q908	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< LEAD >		Q910	8-729-900-65	TRANSISTOR DTA144ES	
* NO1	1-690-880-61	LEAD (WITH CONNECTOR)		Q911	8-729-900-89	TRANSISTOR DTC144ES	
		< TRANSISTOR >		Q912	8-729-900-65	TRANSISTOR DTA144ES	
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF		Q913	8-729-900-65	TRANSISTOR DTA144ES	
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF		Q914	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q403	8-729-900-65	TRANSISTOR DTA144ES		Q915	8-729-900-65	TRANSISTOR DTA144ES	
Q404	8-729-900-61	TRANSISTOR DTA114ES		Q916	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q405	8-729-900-61	TRANSISTOR DTA114ES		Q917	8-729-900-65	TRANSISTOR DTA144ES	
Q406	8-729-900-61	TRANSISTOR DTA114ES				< RESISTOR >	
Q407	8-729-900-89	TRANSISTOR DTC144ES		R401	1-249-429-11	CARBON 10K 5% 1/4W	
Q408	8-729-900-89	TRANSISTOR DTC144ES		R402	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q409	8-729-620-05	TRANSISTOR 2SC2603-EF		R403	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q410	8-729-900-89	TRANSISTOR DTC144ES		R404	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q411	8-729-900-61	TRANSISTOR DTA114ES		R405	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q412	8-729-900-61	TRANSISTOR DTA114ES		R406	1-249-429-11	CARBON 10K 5% 1/4W	
Q413	8-729-900-61	TRANSISTOR DTA114ES		R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q414	8-729-620-05	TRANSISTOR 2SC2603-EF		R408	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q415	8-729-900-89	TRANSISTOR DTC144ES		R409	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q416	8-729-900-61	TRANSISTOR DTA114ES		R410	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q417	8-729-900-61	TRANSISTOR DTA114ES		R411	1-249-439-11	CARBON 68K 5% 1/4W	
Q418	8-729-900-61	TRANSISTOR DTA114ES		R412	1-249-437-11	CARBON 47K 5% 1/4W	
Q419	8-729-900-61	TRANSISTOR DTA114ES		R413	1-247-883-00	CARBON 150K 5% 1/4W	
Q420	8-729-900-61	TRANSISTOR DTA114ES		R414	1-247-874-11	CARBON 62K 5% 1/4W	
Q421	8-729-900-61	TRANSISTOR DTA114ES		R415	1-249-434-11	CARBON 27K 5% 1/4W	
				R416	1-249-434-11	CARBON 27K 5% 1/4W	
				R417	1-247-889-00	CARBON 270K 5% 1/4W	
				R418	1-249-437-11	CARBON 47K 5% 1/4W	
				R419	1-247-885-00	CARBON 180K 5% 1/4W	
				R420	1-247-880-11	CARBON 110K 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
R421	1-247-868-11	CARBON	36K	5%	1/4W	R472	1-249-437-11	CARBON	47K	5%	1/4W
R422	1-247-870-11	CARBON	43K	5%	1/4W	R473	1-249-429-11	CARBON	10K	5%	1/4W
R423	1-249-441-11	CARBON	100K	5%	1/4W	R474	1-247-870-11	CARBON	43K	5%	1/4W
R424	1-247-868-11	CARBON	36K	5%	1/4W	R475	1-247-862-11	CARBON	20K	5%	1/4W
R425	1-247-883-00	CARBON	150K	5%	1/4W	R476	1-249-417-11	CARBON	1K	5%	1/4W
R426	1-247-876-11	CARBON	75K	5%	1/4W	R477	1-249-441-11	CARBON	100K	5%	1/4W
R427	1-249-436-11	CARBON	39K	5%	1/4W	R478	1-249-417-11	CARBON	1K	5%	1/4W
R428	1-247-870-11	CARBON	43K	5%	1/4W	R479	1-249-441-11	CARBON	100K	5%	1/4W
R429	1-249-439-11	CARBON	68K	5%	1/4W	R480	1-247-866-11	CARBON	30K	5%	1/4W
R430	1-249-437-11	CARBON	47K	5%	1/4W	R481	1-249-431-11	CARBON	15K	5%	1/4W
R431	1-247-885-00	CARBON	180K	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	1-249-434-11	CARBON	27K	5%	1/4W	R484	1-247-866-11	CARBON	30K	5%	1/4W
R34	1-249-434-11	CARBON	27K	5%	1/4W	R485	1-249-431-11	CARBON	15K	5%	1/4W
R435	1-247-889-00	CARBON	270K	5%	1/4W	R486	1-247-852-11	CARBON	7.5K	5%	1/4W
R436	1-247-870-11	CARBON	43K	5%	1/4W	R487	1-249-433-11	CARBON	22K	5%	1/4W
R437	1-247-887-00	CARBON	220K	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	1-247-868-11	CARBON	36K	5%	1/4W	R490	1-247-862-11	CARBON	20K	5%	1/4W
R440	1-247-870-11	CARBON	43K	5%	1/4W	R491	1-247-870-11	CARBON	43K	5%	1/4W
R441	1-249-441-11	CARBON	100K	5%	1/4W	R492	1-247-864-11	CARBON	24K	5%	1/4W
R442	1-247-868-11	CARBON	36K	5%	1/4W	R493	1-249-420-11	CARBON	1.8K	5%	1/4W
R443	1-247-885-00	CARBON	180K	5%	1/4W	R494	1-247-862-11	CARBON	20K	5%	1/4W
R444	1-249-440-11	CARBON	82K	5%	1/4W	R495	1-247-870-11	CARBON	43K	5%	1/4W
R445	1-249-436-11	CARBON	39K	5%	1/4W	R496	1-247-864-11	CARBON	24K	5%	1/4W
R446	1-247-870-11	CARBON	43K	5%	1/4W	R497	1-249-420-11	CARBON	1.8K	5%	1/4W
R447	1-247-885-00	CARBON	180K	5%	1/4W	R701	1-249-429-11	CARBON	10K	5%	1/4W
R448	1-249-435-11	CARBON	33K	5%	1/4W	R707	1-249-418-11	CARBON	1.2K	5%	1/4W
R449	1-249-438-11	CARBON	56K	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	1-247-858-11	CARBON	13K	5%	1/4W	R720	1-249-418-11	CARBON	1.2K	5%	1/4W
R462	1-247-866-11	CARBON	30K	5%	1/4W	R721	1-249-420-11	CARBON	1.8K	5%	1/4W
R463	1-247-858-11	CARBON	13K	5%	1/4W	R723	1-249-422-11	CARBON	2.7K	5%	1/4W
R464	1-247-887-00	CARBON	220K	5%	1/4W	R724	1-249-424-11	CARBON	3.9K	5%	1/4W
R465	1-247-866-11	CARBON	30K	5%	1/4W	R725	1-249-427-11	CARBON	6.8K	5%	1/4W
R466	1-249-438-11	CARBON	56K	5%	1/4W	R726	1-249-418-11	CARBON	1.2K	5%	1/4W
R467	1-249-435-11	CARBON	33K	5%	1/4W	R727	1-249-420-11	CARBON	1.8K	5%	1/4W
R468	1-247-870-11	CARBON	43K	5%	1/4W	R728	1-249-422-11	CARBON	2.7K	5%	1/4W
R469	1-247-864-11	CARBON	24K	5%	1/4W	R729	1-249-424-11	CARBON	3.9K	5%	1/4W
R470	1-247-885-00	CARBON	180K	5%	1/4W	R730	1-249-420-11	CARBON	1.8K	5%	1/4W
R471	1-249-435-11	CARBON	33K	5%	1/4W	R731	1-249-431-11	CARBON	15K	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 NR OFF/ON)	
S728	1-571-452-11	SWITCH, SLIDE (TIMER)	
S729	1-571-452-11	SWITCH, SLIDE (DOLBY NR 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)	

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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) (16 CORE)	
19	1-751-013-11	WIRE (FLAT TYPE) (20 CORE)	
△57	1-590-836-11	CORD, POWER (US, Canadian)	
△57	1-696-027-11	CORD, POWER (E)	
△60	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
CNJ1	1-558-350-21	CORD (WITH CONNECTOR) (US, Canadian)	
D1051	8-719-980-85	DIODE SLP325C	
D1091	8-719-950-74	LED SLR314D	
HRPE1001	A-2003-722-A	DECK ASSY, HEAD	
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	
S1001	1-466-525-11	ENCODER, ROTARY	
△T1	1-450-444-11	TRANSFORMER, POWER (US, Canadian)	
△T1	1-450-445-11	TRANSFORMER, POWER (E)	
△VS1	1-692-155-11	SELECTOR, POWER VOLTAGE (E)	

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ACCESSORIES & PACKING MATERIALS  
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	1-465-738-11	REMOTE COMMANDER (E)	
	1-558-271-11	CORD, CONNECTION	
	1-558-271-11	CORD, CONNECTION	
	2-181-754-01	COVER, BATTERY (E)	
*	3-354-915-01	CUSHION	
*	3-354-919-71	INDIVIDUAL CARTON	
	3-677-503-00	SHEET (LARGE), PROTECTION	
	3-704-366-01	SCREW (CASE) (M3X8)	
	3-756-405-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (Canadian, E)	
	3-756-405-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-756-405-61	MANUAL, INSTRUCTION (CHINESE) (E)	

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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	7-685-871-01	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)	

**Note:**

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

**Note:**

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

# TC-WR901ES


## SONY SERVICE MANUAL

US Model  
Canadian Model  
E Model

### CORRECTION-1

Correct your service manual as shown below.

 : Indicates corrected portion.

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

# TC-WR901ES

## SONY SERVICE MANUAL

US Model  
Canadian Model  
E Model

### CORRECTION-2

Correct your service manual as shown below.

\_\_\_\_\_ (Under line) : indicates corrected portion.

Page	INCORRECT			CORRECT		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
44	152	X-3356-642-1	FLYWHEEL (R FWD) ASSY	152	<u>X-3356-643-1</u>	<u>FLYWHEEL (R REV) ASSY</u>
44	153	X-3356-643-1	FLYWHEEL (R REV) ASSY	153	<u>X-3356-642-1</u>	<u>FLYWHEEL (R FWD) ASSY</u>

(RPC-96006)