

# TC-KA6ES

## SERVICE MANUAL

AEP Model

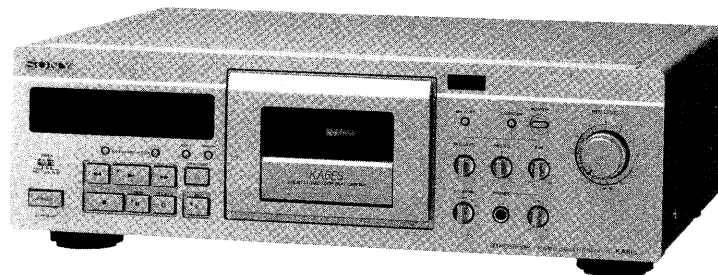


Photo : GOLD

Model Name Using Similar Mechanism	TC-K808ES
Tape Transport Mechanism Type	TCM-200D18

### SPECIFICATIONS

#### System

**Recording system**  
4-track 2-channel stereo

**Fast winding time (approx.)**  
90 sec. (with Sony C-60 cassette)

**Bias**  
AC bias

#### Heads

<b>Head (x1)</b>	
<b>Erasing</b>	S&F
<b>Recording</b>	SD
<b>Playing</b>	SD

#### Motors

Capstan motor × 1 (direct drive linear torque BSL motor)  
Reel motor × 1 (DC motor)  
Assist (mechanism drive) motor × 1 (DC motor)

**Signal-to-noise ratio (at peak level, weighted, and with Dolby NR off)**  
Type I tape, Sony Type I (NORMAL): 57 dB  
Type II tape, Sony Type II (HIGH): 59 dB  
Type IV tape, Sony Type IV (METAL): 61 dB

#### S/N ratio improvement

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

#### Harmonic distortion

Tape type	
Type I tape	0.4% (160 nWb/m 315 Hz, 3rd H.D.)
Sony Type I (NORMAL)	
Type IV tape	1.5% (250 nWb/m 315 Hz, 3rd H.D.)
Sony Type IV (METAL)	

#### Frequency response (Dolby NR off)

Tape type	
Type I tape	20 - 17,000 Hz
Sony Type I (NORMAL)	(±3 dB, IEC)
Type II tape	20 - 19,000 Hz
Sony Type II (HIGH)	(±3 dB, IEC)
Type IV tape	20 - 21,000 Hz
Sony Type IV (METAL)	(±3 dB, IEC)
	20 - 16,000 Hz
	(±3 dB, -4dB recording)

#### Wow and flutter

±0.05 % W. Peak (IEC)
0.025 % W. RMS (NAB)
±0.07 % W. Peak (DIN)

#### Inputs

**Line inputs (phono jacks)**  
Sensitivity: 0.16 V  
Input impedance: 47 kilohms

#### Outputs

**Line outputs (phono jacks)**  
Rated output level: 0.5 V at a load impedance of 47 kilohms  
Load impedance: Over 10 kilohms

**Headphones (stereo phone jack)**  
Output level: 0 - 3 mW at a load impedance of 32 ohms

#### General

**Power requirements** 220 - 230 V AC, 50/60 Hz

**Power consumption**  
30 W


**Dimensions (approx.) (w/h/d)**  
430 × 135 × 360 mm (17 × 5<sup>3</sup>/<sub>8</sub> × 14<sup>1</sup>/<sub>4</sub> inches)  
incl. projecting parts and controls

**Mass (approx.)**  
7.6 kg (16 lbs 13 oz)

#### Supplied accessories

Audio connecting cords (2)

Design and specifications are subject to change without notice.

\* 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.

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

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### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

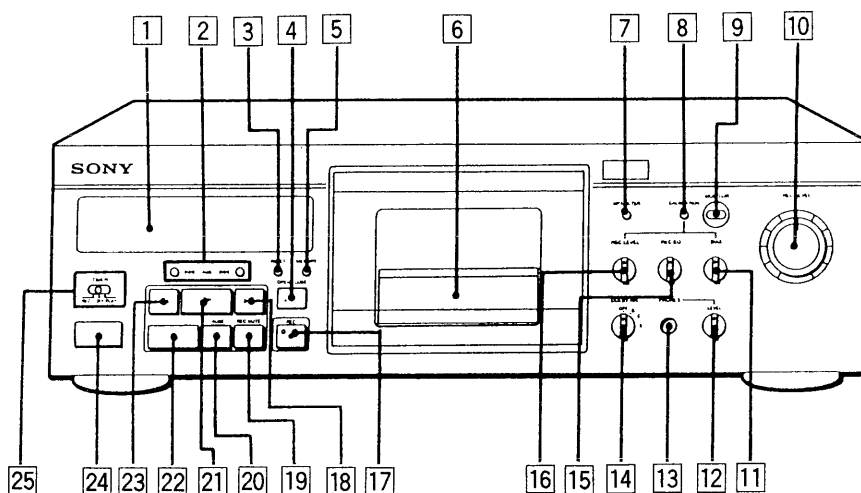
**SAFETY-RELATED COMPONENT WARNING !!**

**COMPONENTS IDENTIFIED BY MARK  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  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

### Identifying the Parts

#### FRONT PANEL



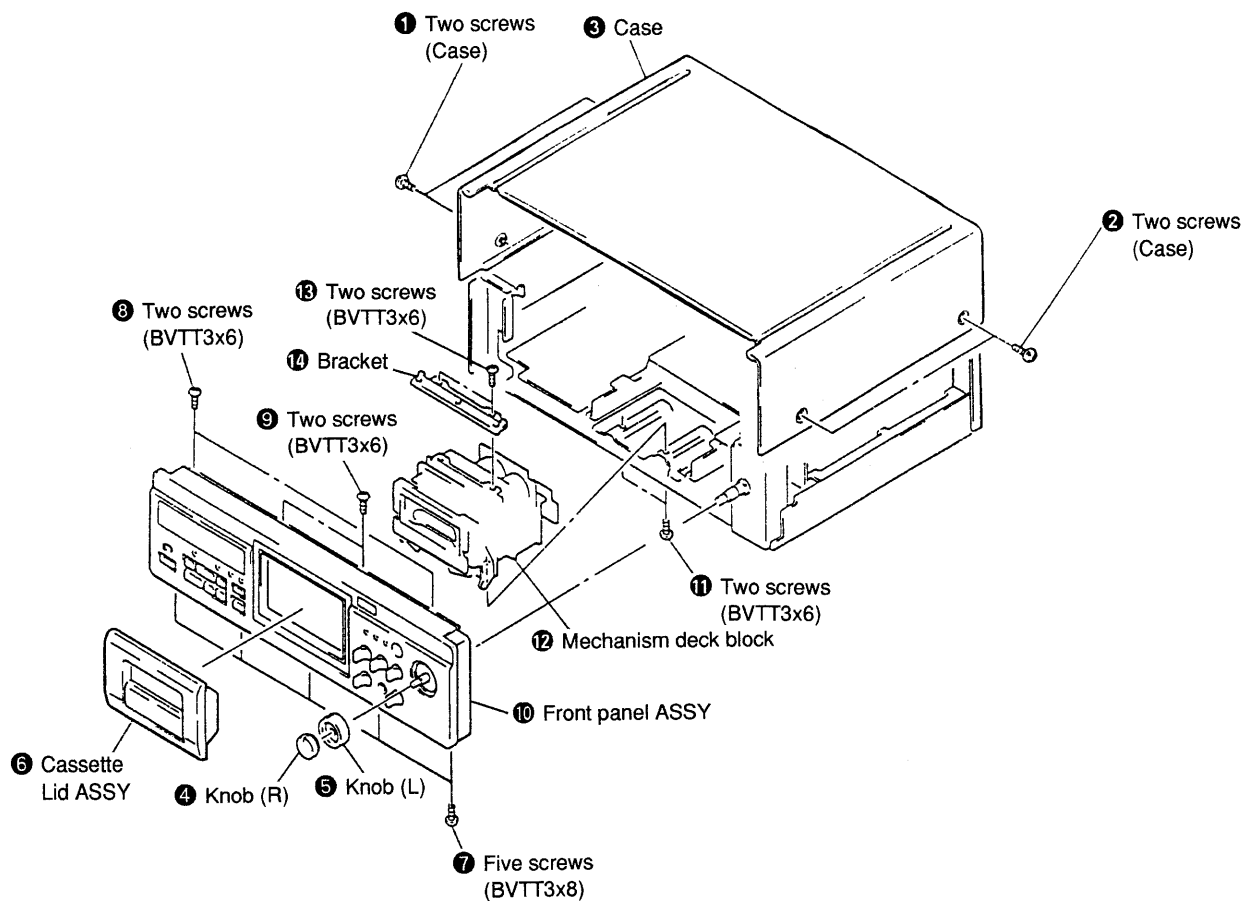
- 1 Level meter and Tape counter
- 2 ◀◀/▶▶ (AMS)\* buttons
- 3 RESET button
- 4 △ OPEN/CLOSE button
- 5 MEMORY button
- 6 Cassette holder
- 7 MPX (multiplex) FILTER button
- 8 CALIBRATION button
- 9 MONITOR button
- 10 REC (recording) LEVEL control
- 11 BIAS control
- 12 PHONES LEVEL control
- 13 PHONES jack
- 14 DOLBY NR (noise reduction) switch
- 15 REC (recording) EQ (equalizer) control
- 16 REC (recording) LEVEL (for calibration) control
- 17 ● REC (recording) button
- 18 ▶▶ (fast-forward) button
- 19 ○ REC MUTE (record muting) button
- 20 || PAUSE button
- 21 ▶ (play) button
- 22 ■ (stop) button
- 23 ◀◀ (rewind) button
- 24 POWER switch
- 25 TIMER switch

\* AMS is the abbreviation of Automatic Music Sensor.

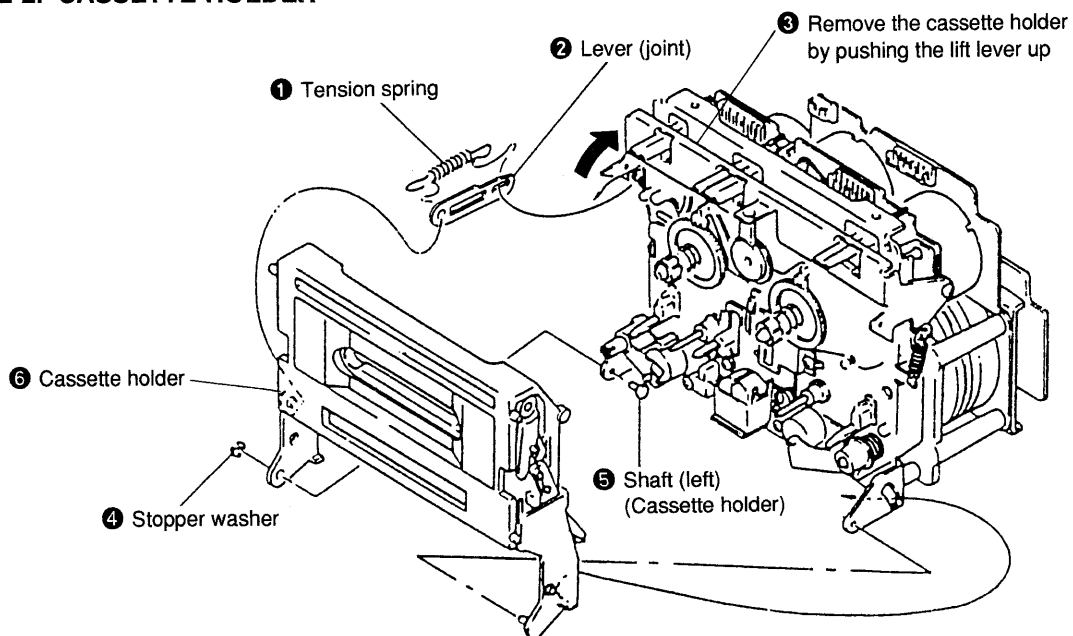
## SECTION 2 DISASSEMBLY

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

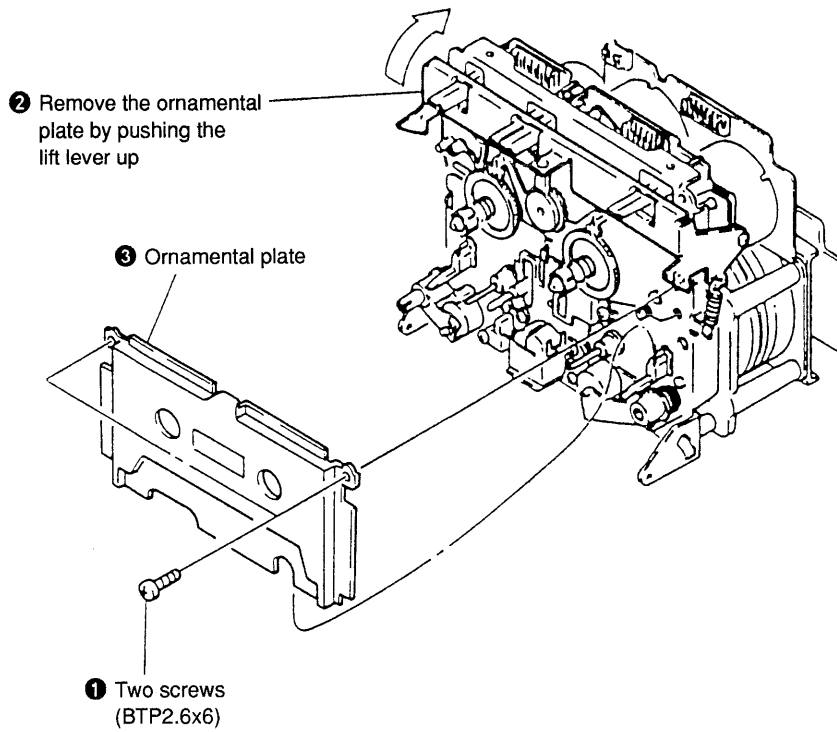
### 2-1. CASE AND FRONT PANEL



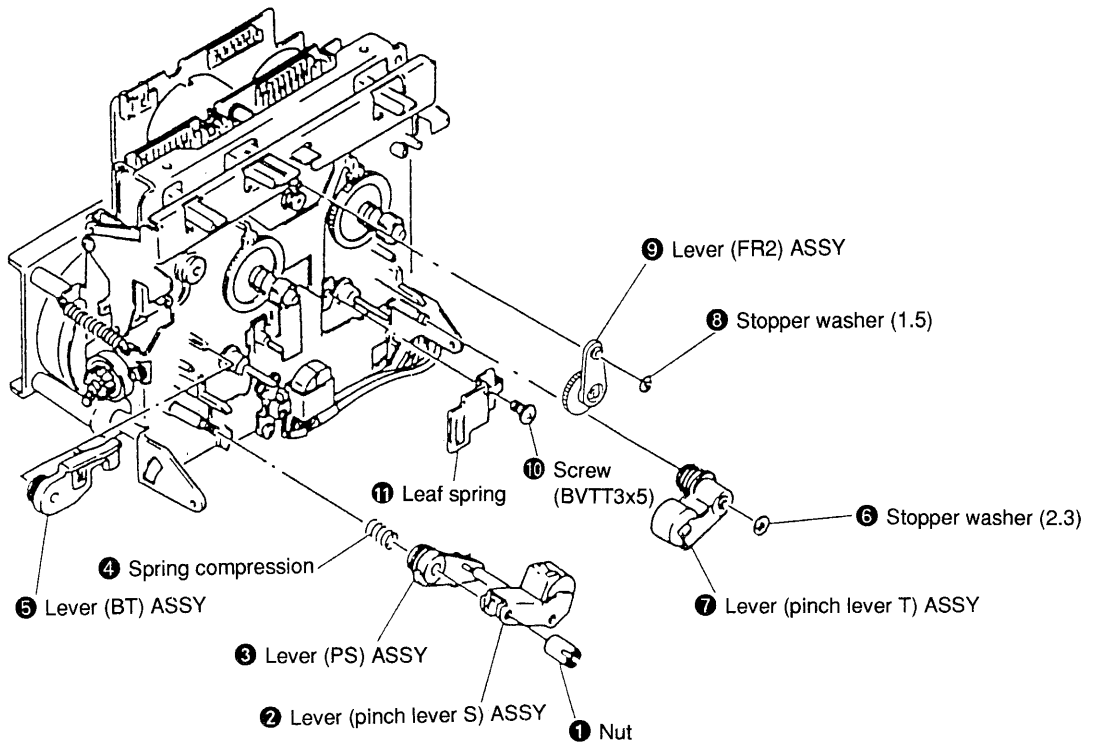
### 2-2. CASSETTE HOLDER



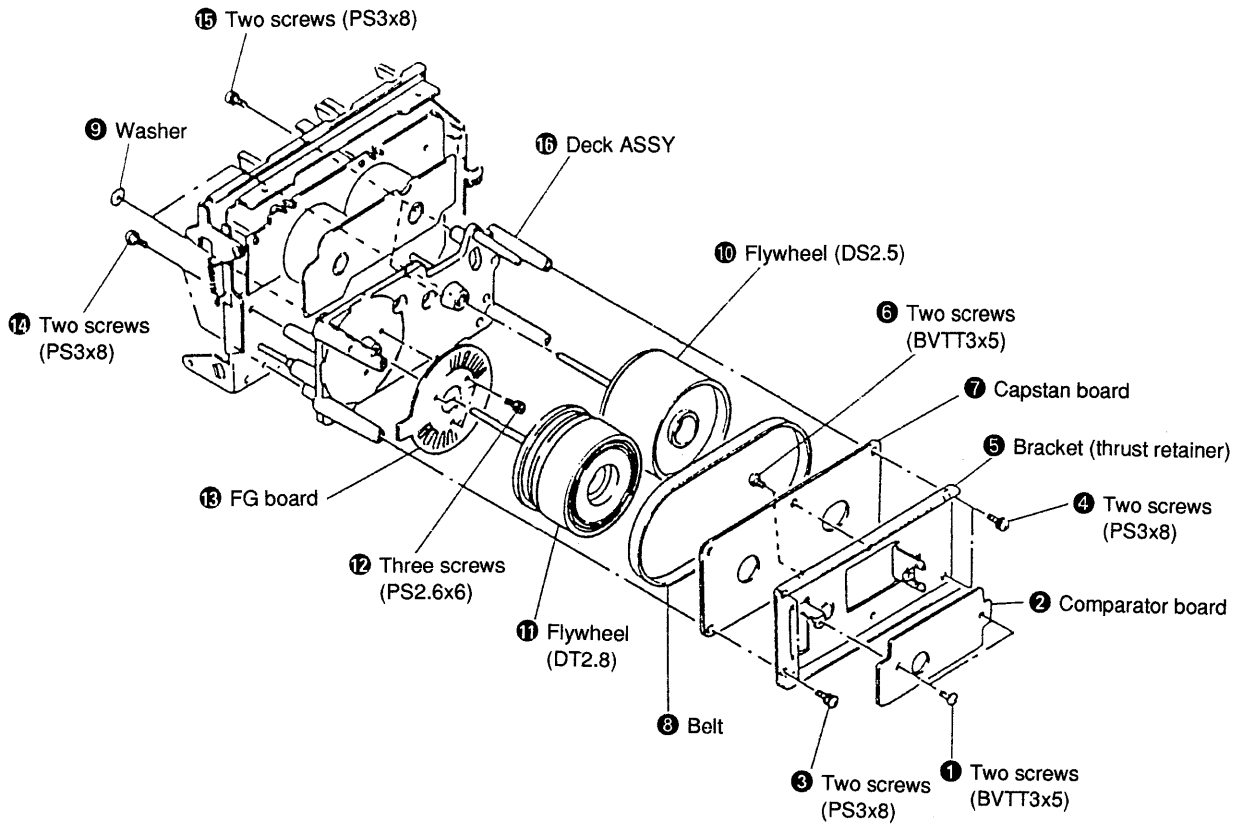
### 2-3. ORNAMENTAL PLATE



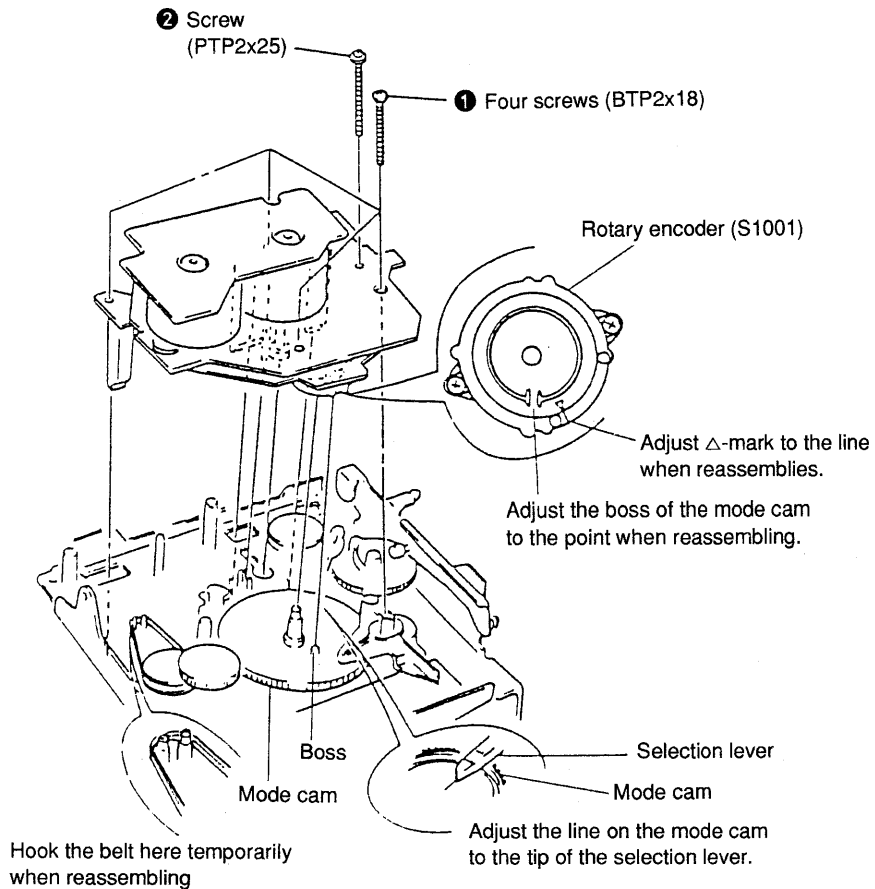
### 2-4. PINCH LEVER AND LEVER (FR)



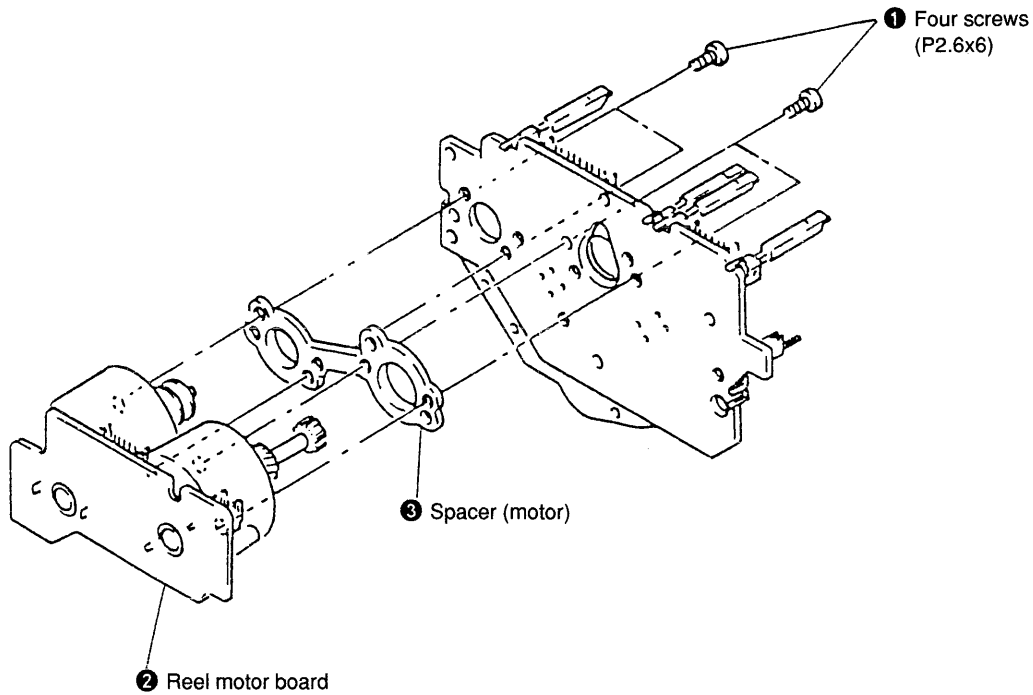
## 2-5. COMPARATOR BOARD, CAPSTAN BOARD AND FG BOARD



## 2-6. MD BOARD



## 2-7. REEL MOTOR BOARD

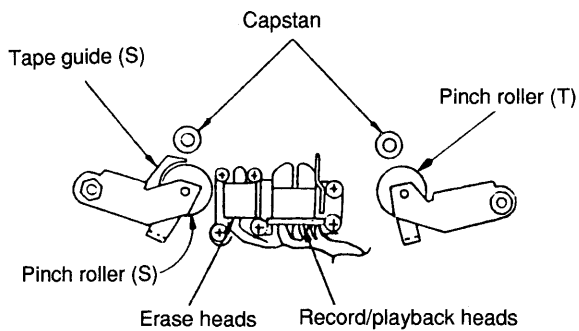


## SECTION 3 MECHANICAL ADJUSTMENTS

• Refer to page 9 for Adjustment Location.

### PRECAUTIONS

1. Clean the following parts with an alcohol-moistened swab. (tape sliding surface)
2. Demagnetize the record/playback heads, erase heads and the capstan using the head demagnetizer.
3. Do not use a magnetized screw driver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.



## Tape Passing Adjustment

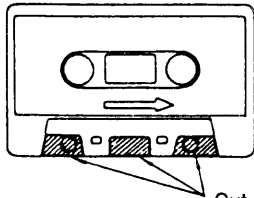
**Note:** For the following adjustments, use the jig as far as possible. Although the following methods are operable without using the jig, precise adjustment may not be completed, for example no compatibility to other decks is available even if self recording and playback is OK. In these adjustments, either the pinch roller guide in the S side or the record/playback head guide is referred to for tape pass. Therefore, do not unnecessarily rotate the adjustment screws including those of the erase heads unless any one is replaced. When 2 or more heads or pinch rollers out of these 2 heads and pinch rollers are to be adjusted or replaced, use the jig for the adjustments or replace one at first and then take complete tape pass and then replace the second one.

Head height adjusting jig: apex

### Preparation:

- Mirror cassette CQ009C 8-909-708-01  
(Or CQ012C 8-909-708-02)

If it is not available, cut a part of the half of a 120 minute cassette tape and use.

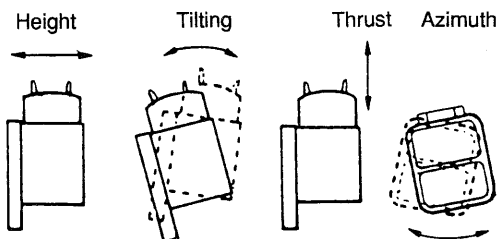


Cut and use.

- Plus screw driver  
Medium size ..... Apply to the head adjusting screw.
- Minus screw driver  
Large size..... Apply to the pinch roller adjusting screw in the S side.
- Pen light
- WS-48B (3kHz, 0dB)
- P-4-A100 (10kHz, -10dB)

### Definition:

The following view relates to record/playback heads.



For the locations of the adjusting screws, see the view "adjustment location" in the lower right corner of Page 9.

### Procedure:

#### Pinch roller in the S side

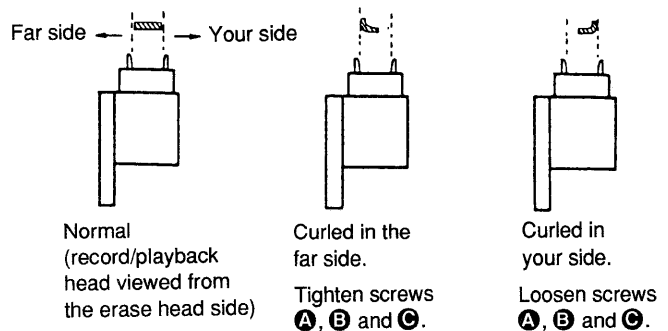
**Note:** It should be adjusted only when the pinch roller in the S side is replaced.

1. Mount the mirror cassette and set the equipment to playback state.
2. Check that the tape is curled in the pinch roller guide or the guide of the record/playback heads.  
If curled, remedy it by rotating the tape curl adjusting screw **H**. At that time, check that the tape runs near the center part of the erase heads.

## Record/playback heads

**Note:** The heads should be adjusted only when the record/playback head is replaced.

1. Mount the mirror cassette and set the equipment to playback state.
2. (Height adjustment) Check that the tape is curled in the tape guide of the heads. If curled, rotate screws **A**, **B** and **C** in the same angle and move the entire heads parallel. Check the mirror cassette where there is curling and, when curling exists in the lower side (actually in the deep side), tighten all screws slightly. If curled in the upper (your) side, loosen them.

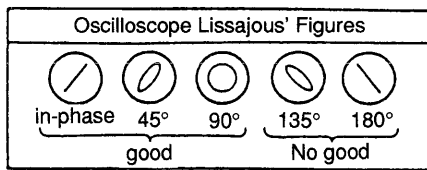
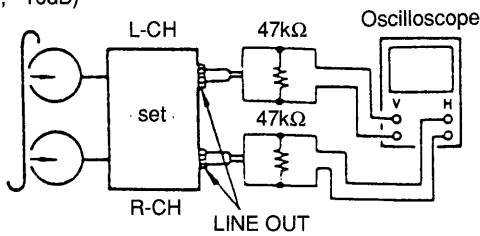


3. (Adjustment of tilting) Adjust back tension to 0 still in playback state (loosen the tape by rotating the reel in the S side using a small tip such as a pencil), and check that there is no curling or snaking (up or down) in the guide of the record/playback heads. Snaking of the tape may occur only within the range of a difference in the widths of the tape and the tape guide (it curls when rate slacks more than the range). Therefore, carefully check it because it may often be overlooked.  
If the tape is snaking, rotate screws **B** and **C** in the same angle and change the tilting of the heads. Tighten or loosen the screws to remedy up or down snaking, respectively.
4. Repeat the adjustment 2 and 3 again and converge the height and tilting to suitable positions.
5. (Tentative adjustments of azimuth) Demagnetize and clean the heads and playback WS-48B (3kHz, 0dB). Rotate the screw **C** so that the pointer or the level meter of the set or connected to LINE OUT becomes maximum. If the screw is rotated more than 1/2 turn, repeat the adjustments again from 1.
6. (Checking of tape pass) Connect an oscilloscope to LINE OUT, replay P-4-A100 (10kHz, -10dB) to describe Lissajous' figures.

At about 20 seconds after beginning playback (the tension in the loop becomes stable), check that the variation of the Lissajous' figures occur within  $\pm 90^\circ$  (more preferably within  $\pm 45^\circ$ ). If beyond  $\pm 90^\circ$ , adjustments of tilting or height will not be complete, so finely adjust the equipment again from 1.



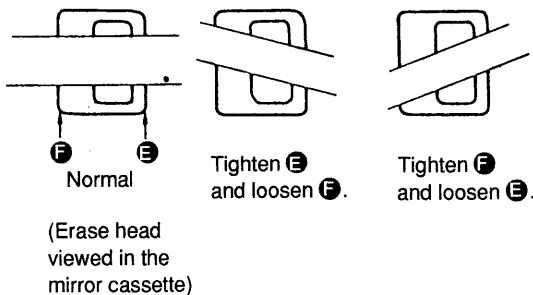
Standard adjustment tape  
P-4-A100  
(10kHz, -10dB)



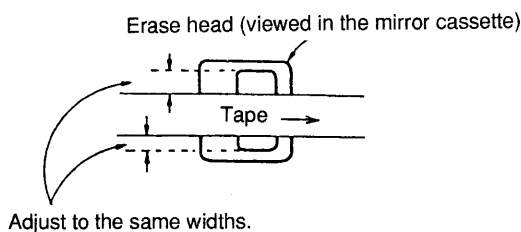
### Erase heads

**Note:** The heads should be adjusted only when the erase head is replaced.

1. Mount the mirror cassette and set the equipment to playback state.
2. (Azimuth adjustments) Adjust screws **E** or **F** so that the tape runs as parallel to the erase heads as possible.

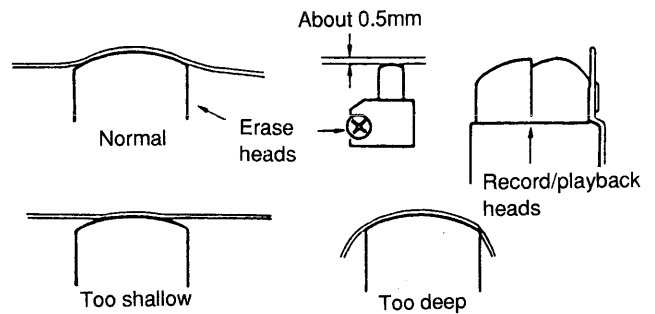


3. (Height adjustment) Rotate screws **D**, **E** and **F** in the same angle so that the widths of erase heads seen in the upper and lower sides of the tape become essentially the same. If the width in the upper or lower side is larger, tighten or loosen the screws, respectively.



4. (Adjustments of tilting) Adjust back tension to 0 still in playback state and check that there is no snaking in the erase heads and pinch roller guide in the S side. If there is, change tilting by rotating the screw **D**. When the tape moves up or down in the mirror tape, tighten or loosen the screw, respectively.

5. Repeat the adjustments again from 2. and converge the height and tilting to more suitable values. And, check that there are no tape curls in the pinch roller guide and the guide of the record/playback heads.
6. (Adjustments of thrust) Slightly loosen the screw **G** and finely adjust it so that the tape smoothly runs over the entire surfaces of the heads by adjusting the thrust of the erase heads to an optimum value relative to the tape.

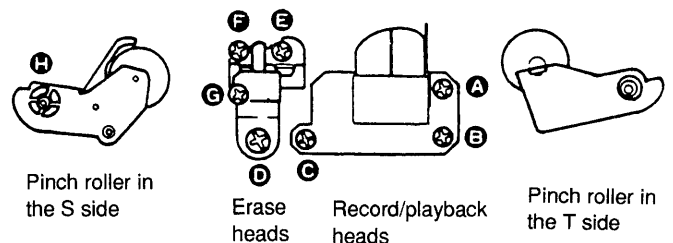
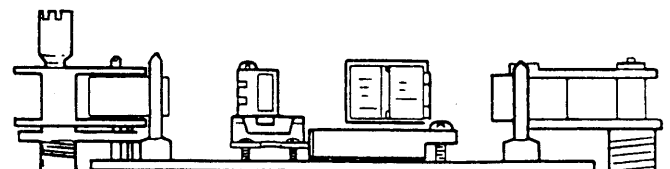


### Checking

1. Check that the tape smoothly runs over the entire tape pass without curling or snaking.
2. After the adjustments, apply the locking compound to the screws adjusted (apply the compound to the screw **C** only after the final azimuth adjustments are completed).

### Adjustment Location:

The following views relate to those in the mirror cassette (upper) and MD viewed from your side (lower).



### Torque Adjustment

1. Load the torque measuring tape CQ-102C, and play back. Adjust RV801 so that the torque meter reading is  $40 \pm 5g \cdot cm$ . ( $0.556 \pm 0.069 \text{ oz} \cdot \text{inch}$ )
2. After adjustment, measure back tension and FF/REW torque, and make sure that measured data satisfies the specification.

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 - 45g·cm (0.49 - 0.62 oz · inch)
FWD back tension	CQ-102C	7 - 11g·cm (0.10 - 0.15 oz · inch)
FF/REW	CQ-201B	65 - 90g·cm (0.91 - 1.25 oz · inch)

## SECTION 4

### ELECTRICAL ADJUSTMENTS

**• Note**

1. Perform adjustment in the order listed below. (As a rule, adjust the record system after adjustment of playback system has been completed.)
2. Adjust and measure both channels otherwise specified.
3. To perform simultaneous record and playback, select recording mode, and set MONITOR switch to TAPE, then play back immediately the recorded signal to take out from LINE OUT.

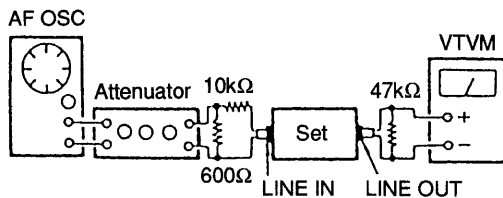
**• Switch position**

DOLBY NR ..... OFF  
 MPX FILTER ..... OFF  
 TIMER ..... OFF  
 MONITOR ..... TAPE  
 CALIBRATION ..... OFF  
 BIAS ..... CENTER CLICK  
 REC LEVEL ..... CENTER CLICK  
 REC EQ ..... CENTER CLICK

**• Standard Record**

Adjust the REC LEVEL (RV501) controls so that the I/O signal levels specified below can be attained.

**Record Mode**



0dB=0.775V

**Standard Input Level**

Input pin	LINE IN
Signal source impedance	10kΩ
Input signal level	0.5V (-3.8dB)

**Standard Output Level**

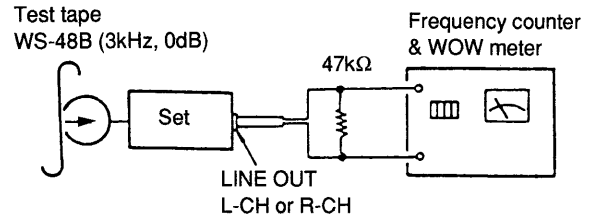
Output pin	LINE OUT
Load impedance	47kΩ
output signal level	0.5V (-3.8dB)

**Test Tape**

Type	Signal	Used for
WS-48B	3kHz, 0dB	Tape speed/WOW check
P-4-A100	10kHz, -10dB	Azimuth adjustment
P-4-L300	315Hz, 0dB	PB level adjustment

**Tape Speed/WOW check**

**Procedure:**



1. Play back the top of test tape to measure its output frequency and WOW value.
2. Invert test tape and perform same measurement, then check for difference between top and end of tape.

**Specification :**

Tape speed deviation : within 2,990 to 3,010Hz  
 Tape speed fluctuation : within 2,990 to 3,010Hz  
 WOW (WRMS) : 0.047% less

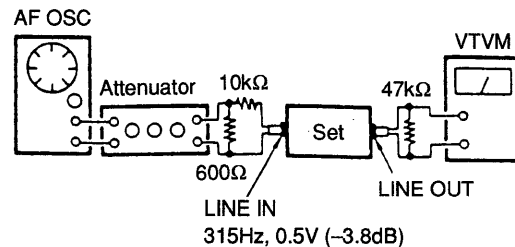
**MPX Filter Check**

**Condition :**

DOLBY NR switch : OFF  
 MPX FILTER switch : OFF  
 REC LEVEL control : Standard record  
 MONITOR switch : SOURCE

**Procedure :**

1. Mode : stop



2. Applying 19kHz, 0.5V (-3.8dB) signal, measure the LINE OUT level.

**Specification :**

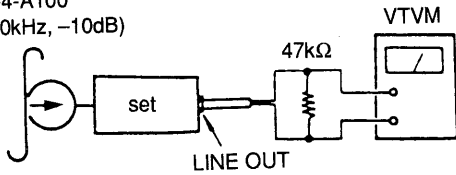
DOLBY NR switch : Either B, C or S  
 MPX FILTER switch : ON, LINE OUT level must be,  
 315Hz : within 0.44 to 0.56V (within -4.8 to -2.8dB)  
 19kHz : 15.8mV (-33.8dB) or less

### Record/Playback Head Azimuth Adjustment

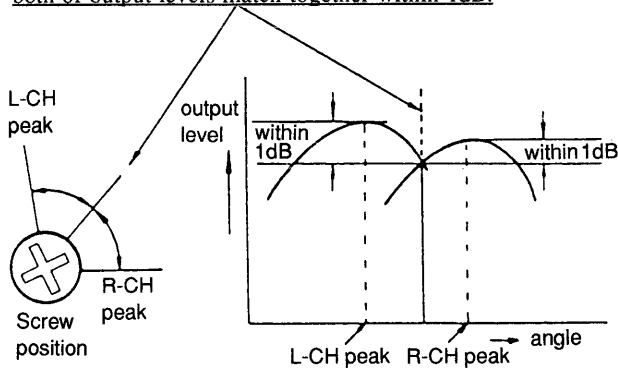
#### Procedure :

1. Mode : FWD playback

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

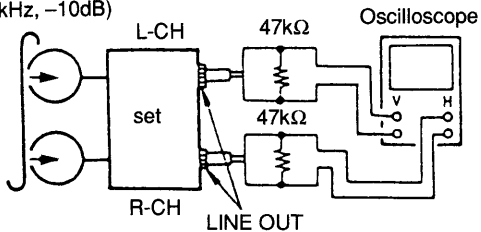


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

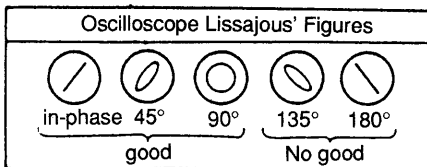


3. Phase Check  
Mode : playback

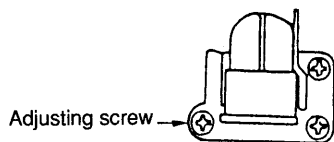
Test tape  
P-4-A100  
(10kHz, -10dB)



4. Confirm that the phase difference between L-CH and R-CH is in-phase to 90°.



#### Adjustment Location :

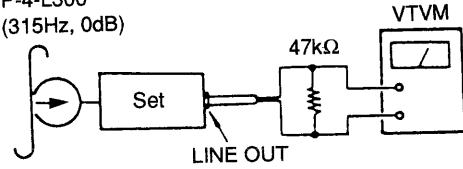


### Playback Level Adjustment

#### Procedure :

1. Mode : Playback

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



2. Adjust the RV101 (L-CH) and RV201 (R-CH) to satisfy the following specification.

#### Adjustment Value :

LINE OUT level : 0.3 to 0.34V (-8.2 to -7.2dB)

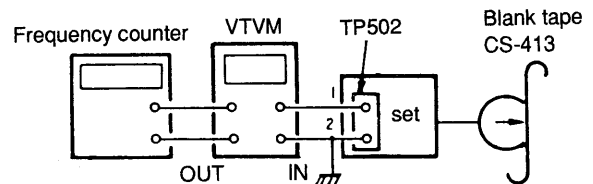
Level difference between channels : within 0.5dB

Confirm that the LINE OUT level does not change when playback and stop are repeated.

### Erase Current Adjustment

#### Procedure :

1. Mode : record



2. Adjust RV506 so that VTVM reading is 110mV (erase current 110mA).
3. At this time, confirm oscillation frequency.

#### Adjustment Value :

Erase current :  $110^{+0}_{-5}$  mA

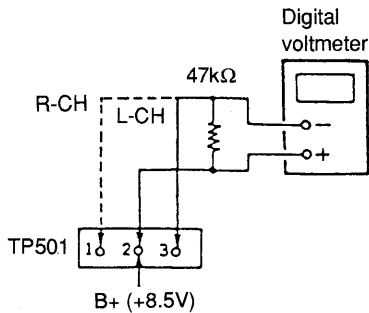
Oscillation frequency :  $160 \pm 6$  kHz

### Bias Consumption Current Adjustment

**Note :** The bias consumption current must be adjusted before adjusting the record bias. Retry record bias adjustment after the bias consumption current is adjusted.

**Procedure :**

1. Set semi-fixed resistors RV104 (L-CH), RV204 (R-CH) and RV505 for record bias adjustment to mechanical center, and select the recording mode without applying a signal.
2. Adjust T101 (L-CH) and T201 (R-CH) so that the digital voltmeter reading becomes minimum.



**Adjustment Value :** 120mV or less  
(This Value is measured using CS-413 after bias adjustment.)

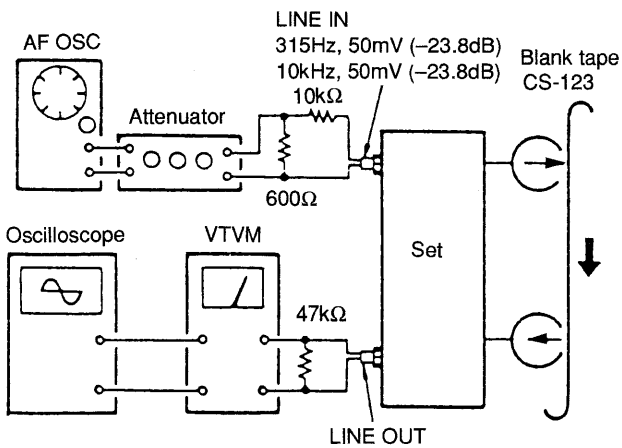
### Bias and Recording level adjustment

**Condition :**

REC LEVEL control : Specified recording position (page 10)

**Procedure :**

1. Mode : simultaneous record and playback



2. Adjust the following controls so that the minimum output becomes the specified output level.

- (1) RV104 (L-CH) and RV204 (R-CH) ..... Bias adjustment
- (2) RV103 (L-CH) and RV203 (R-CH) ..... Recording level adjustment

**Adjustment Value :**

- (1) Level of 10kHz against 315Hz :  $0 \pm 0.3\text{dB}$
- (2) 315Hz level : 48.3 to 51mV ( $-24.1$  to  $-23.5\text{dB}$ )

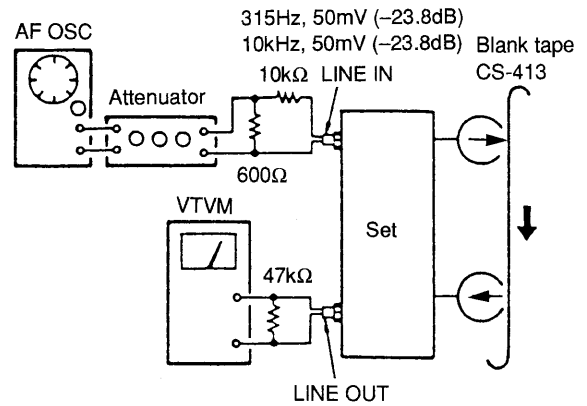
### Metal Bias Adjustment

**Condition :**

REC LEVEL control : Specified recording position (page 10)

**Procedure :**

1. Mode : simultaneous record and playback



2. Adjust RV505 so that 10kHz R-CH output is  $\pm 0.3\text{dB}$  relative to the 315Hz output.

### Calibration Adjustment

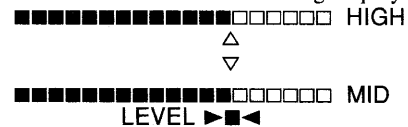
**Condition :**

CALIBRATION switch : ON

TP801 : The state of short-circuit

**Adjustment method (Oscillation input level) :**

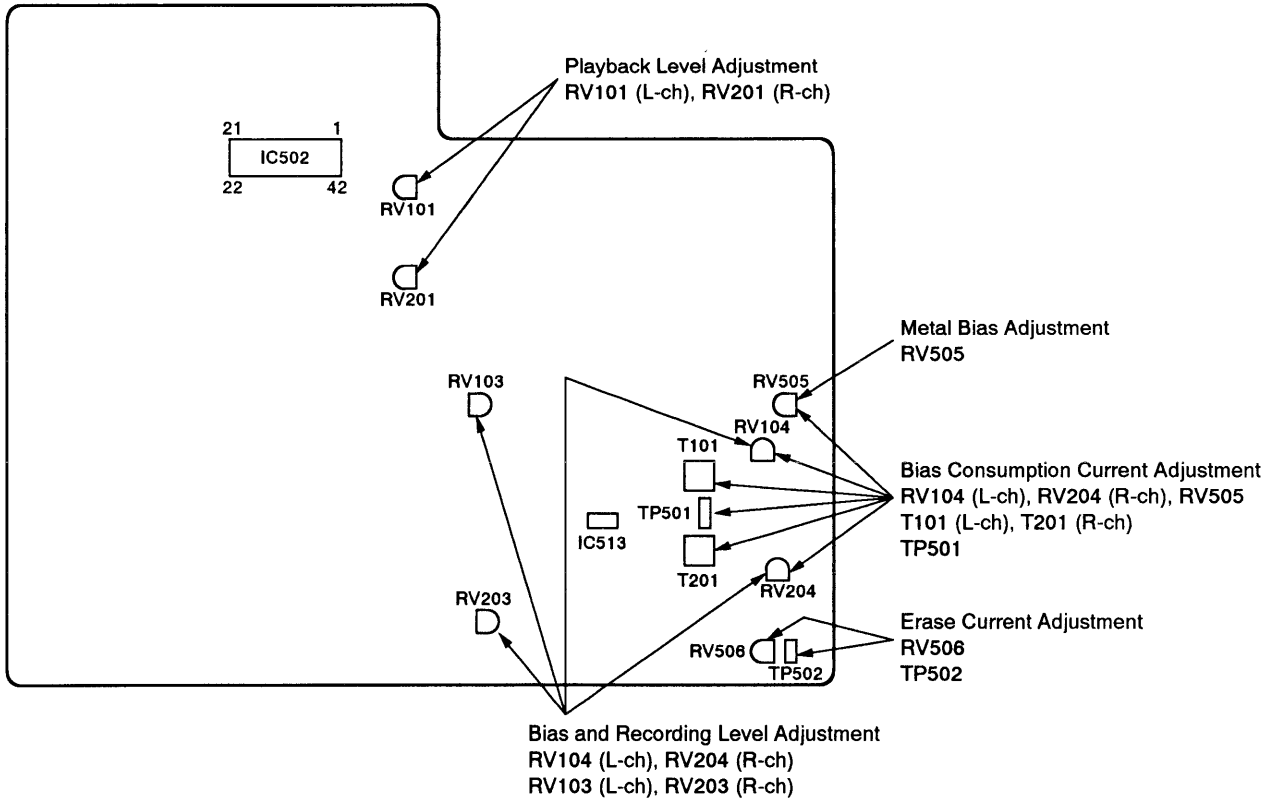
1. Short-circuit the test point TP801 of system control (A) board.
2. Adjust RV904 (HIGH), RV905 (MID) and RV906 (LEVEL) to become the level meter as the following display.



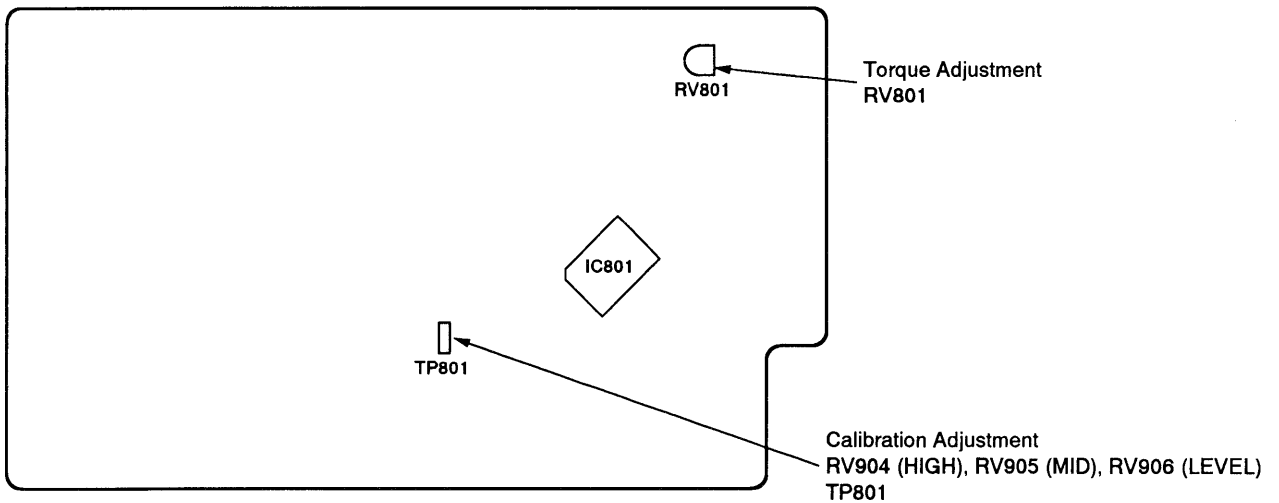
3. As for HIGH and MID, the segment with  $\Delta$   $\nabla$  mark in the left side should be lit. (approve of flashing)  
And when the left segment is flashing, the right segment is approved of flashing.
4. As for LEVEL,  $\blacksquare$  mark should be lit. (Both ends are approved of flashing.)
5. Release the short-circuit of TP801.

**Adjustment Location :**

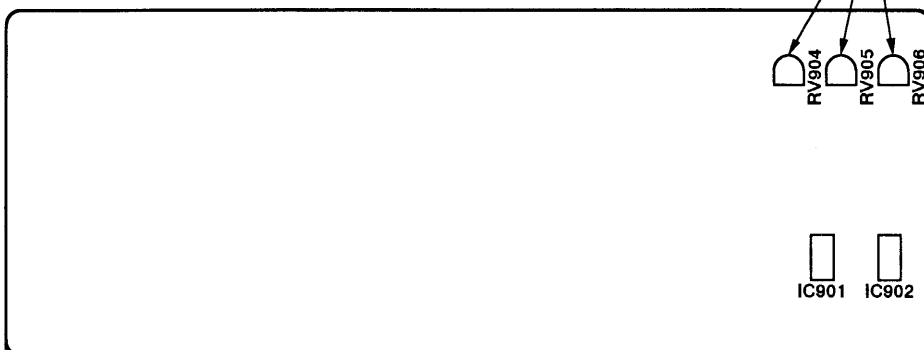
**AUDIO (A) BOARD — Component side —**



**SYSTEM CONTROL (A) BOARD — Component side —**

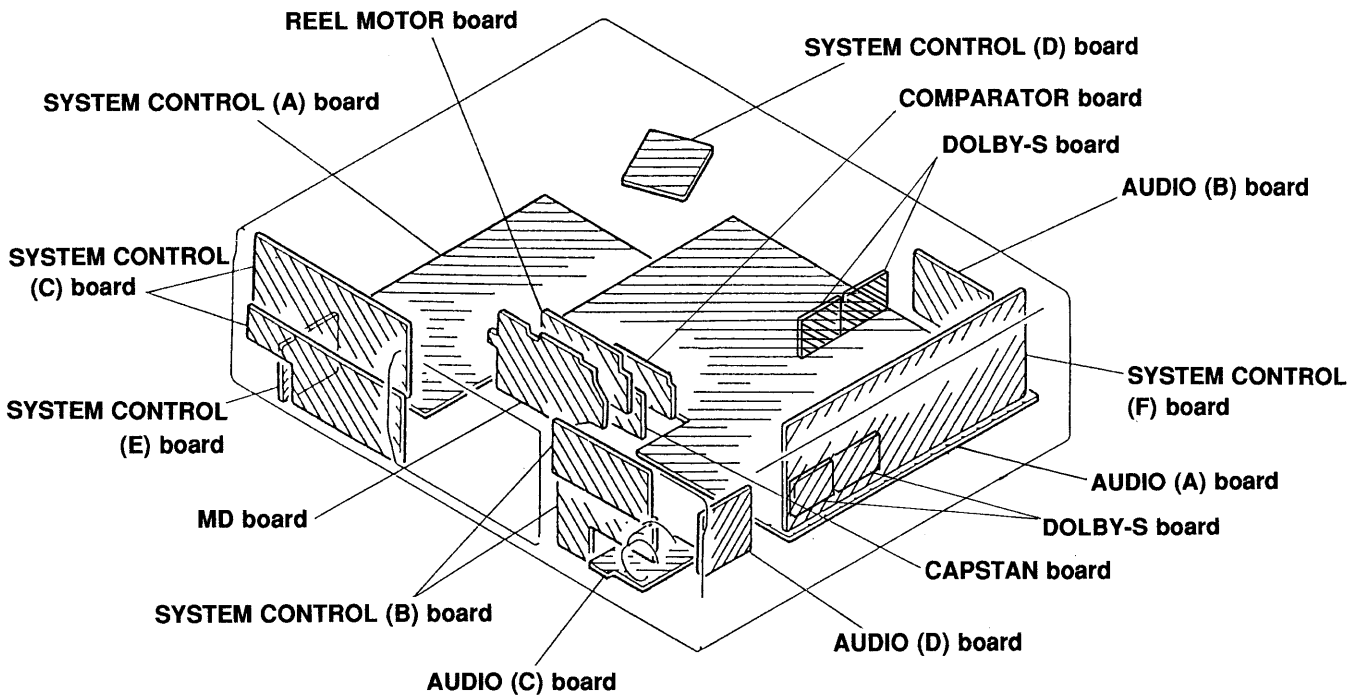


**SYSTEM CONTROL (F) BOARD — Component side —**

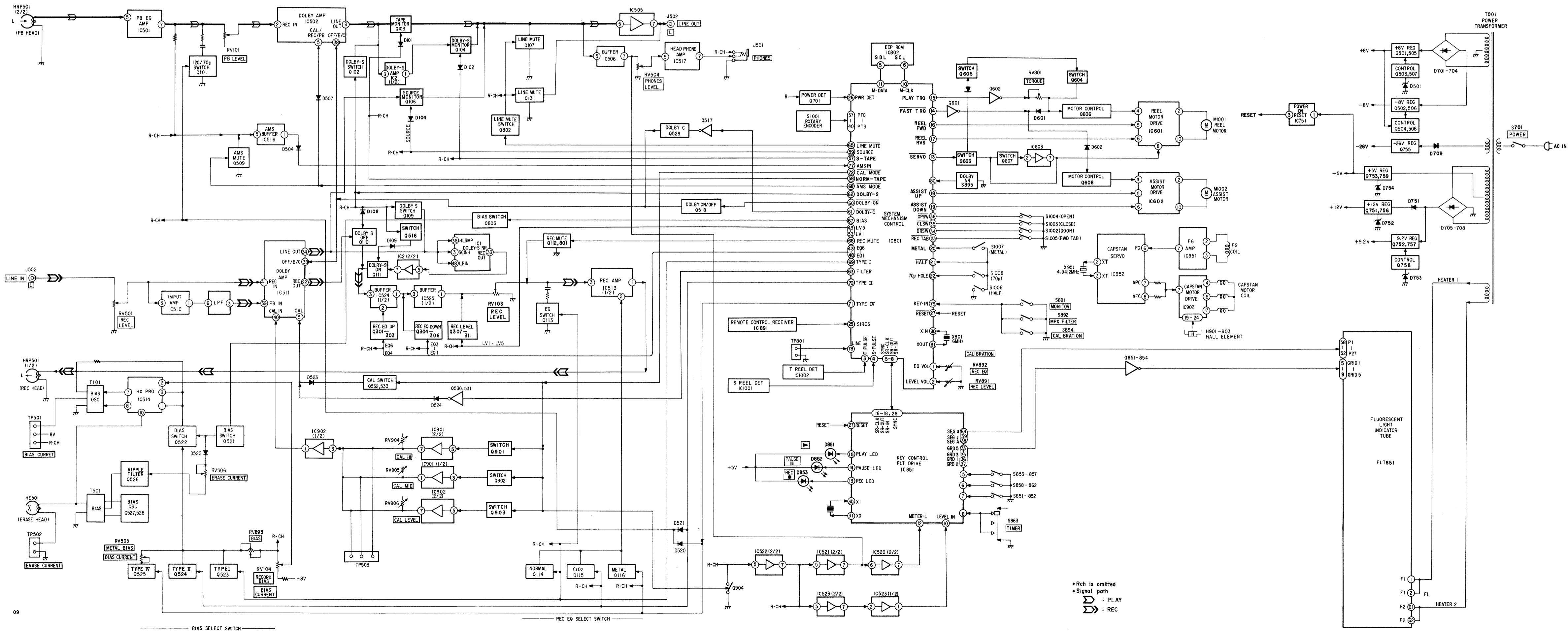


# SECTION 5 DIAGRAMS

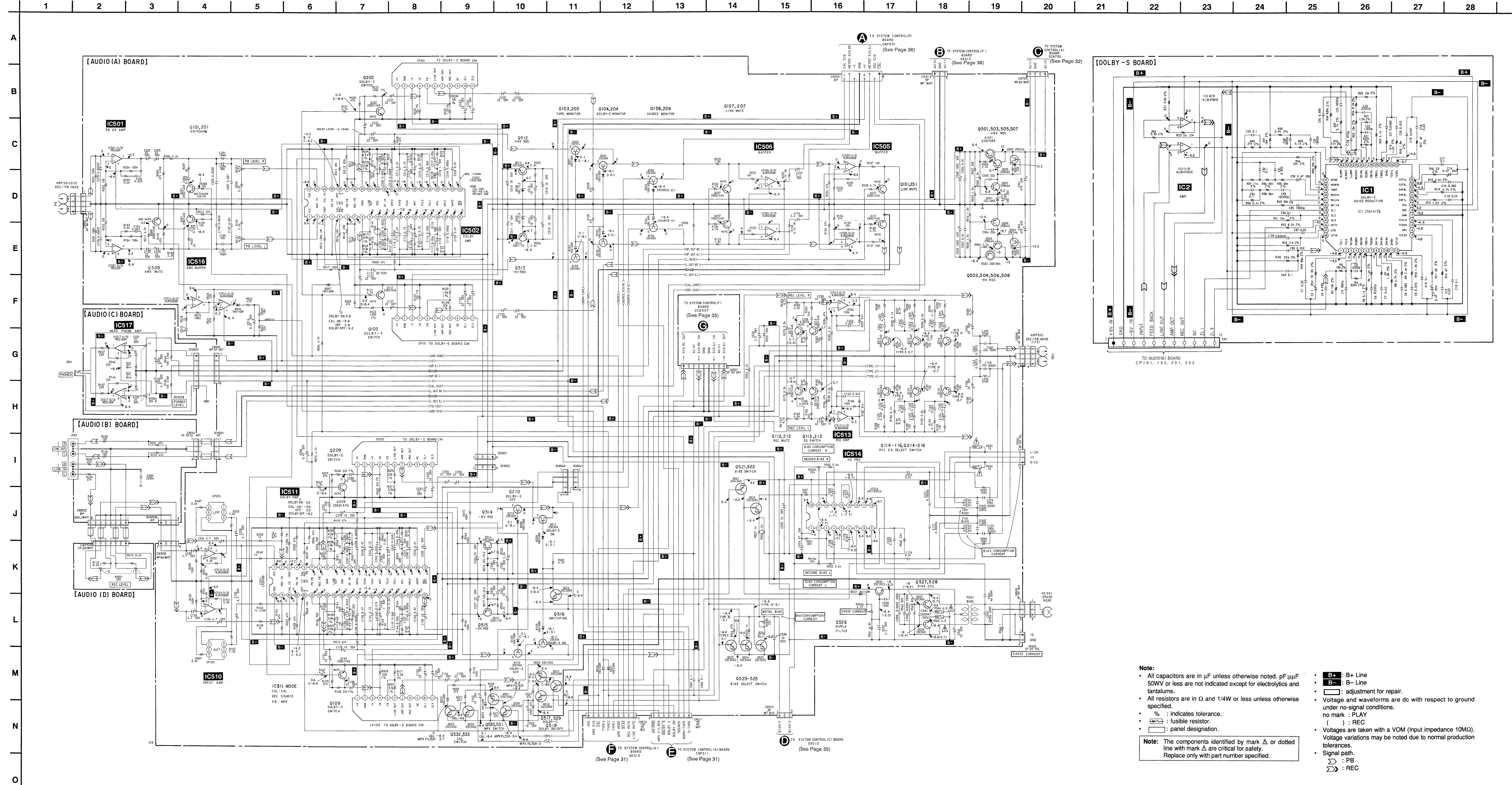
## 5-1. CIRCUIT BOARDS LOCATION



5-2. BLOCK DIAGRAM



5-3. SCHEMATIC DIAGRAM — AUDIO SECTION —



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

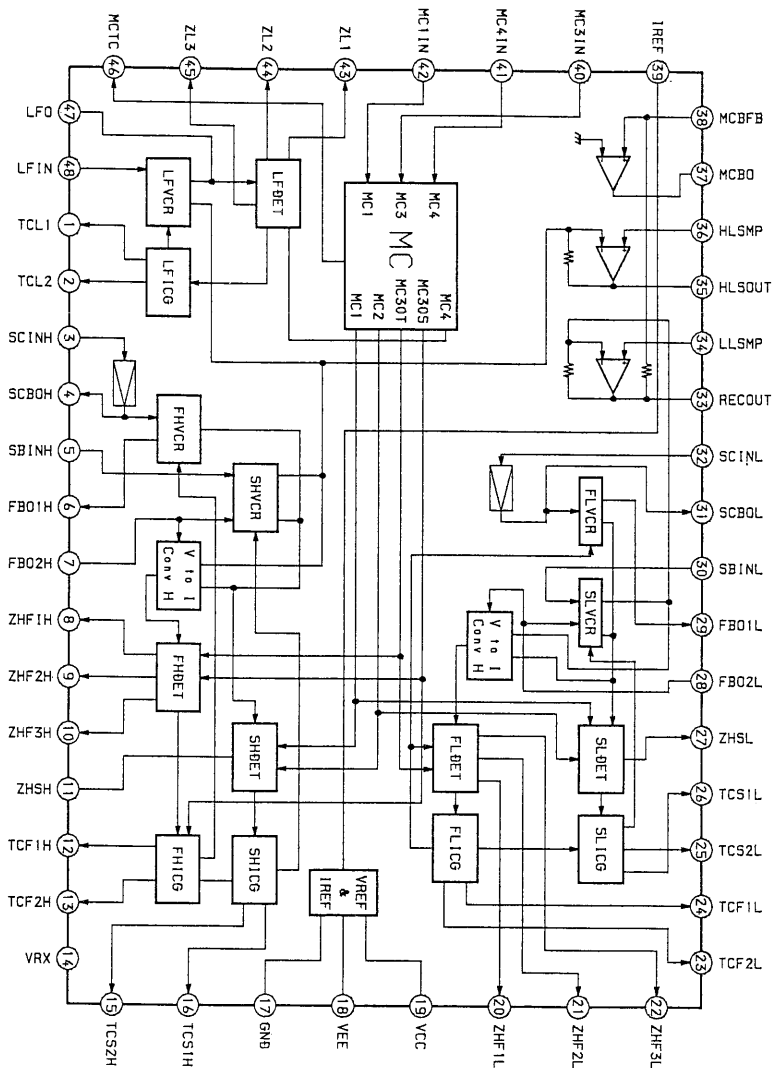
**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- B- : B- Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- ( ) : PLAY
- ( ) : REC
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\rightarrow$  : PB
- $\rightarrow$  : REC

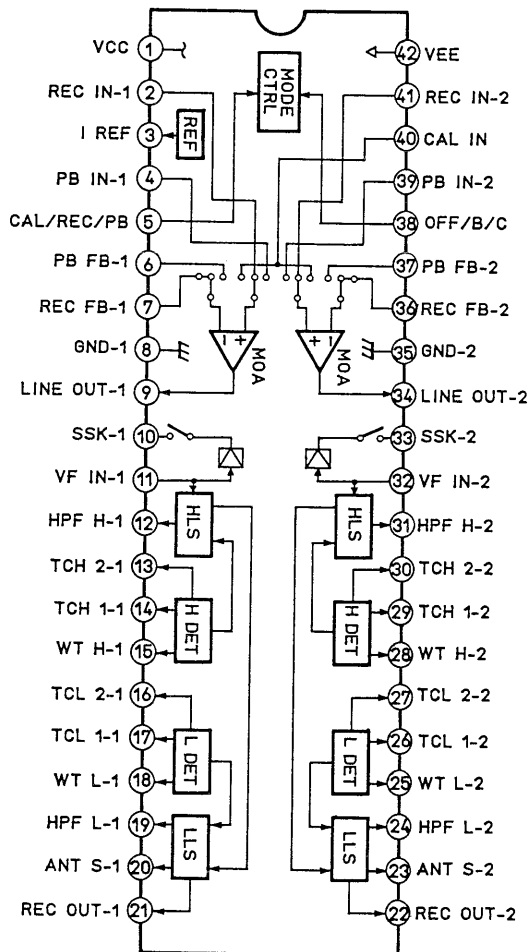


• IC Block Diagrams

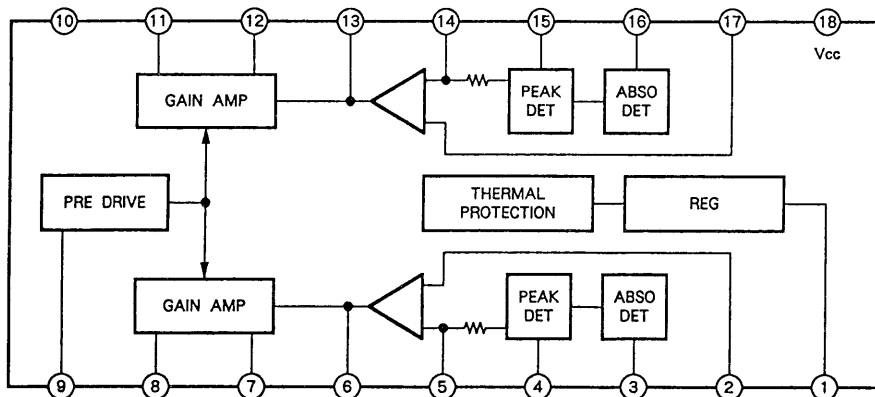
IC1 CXA1417Q



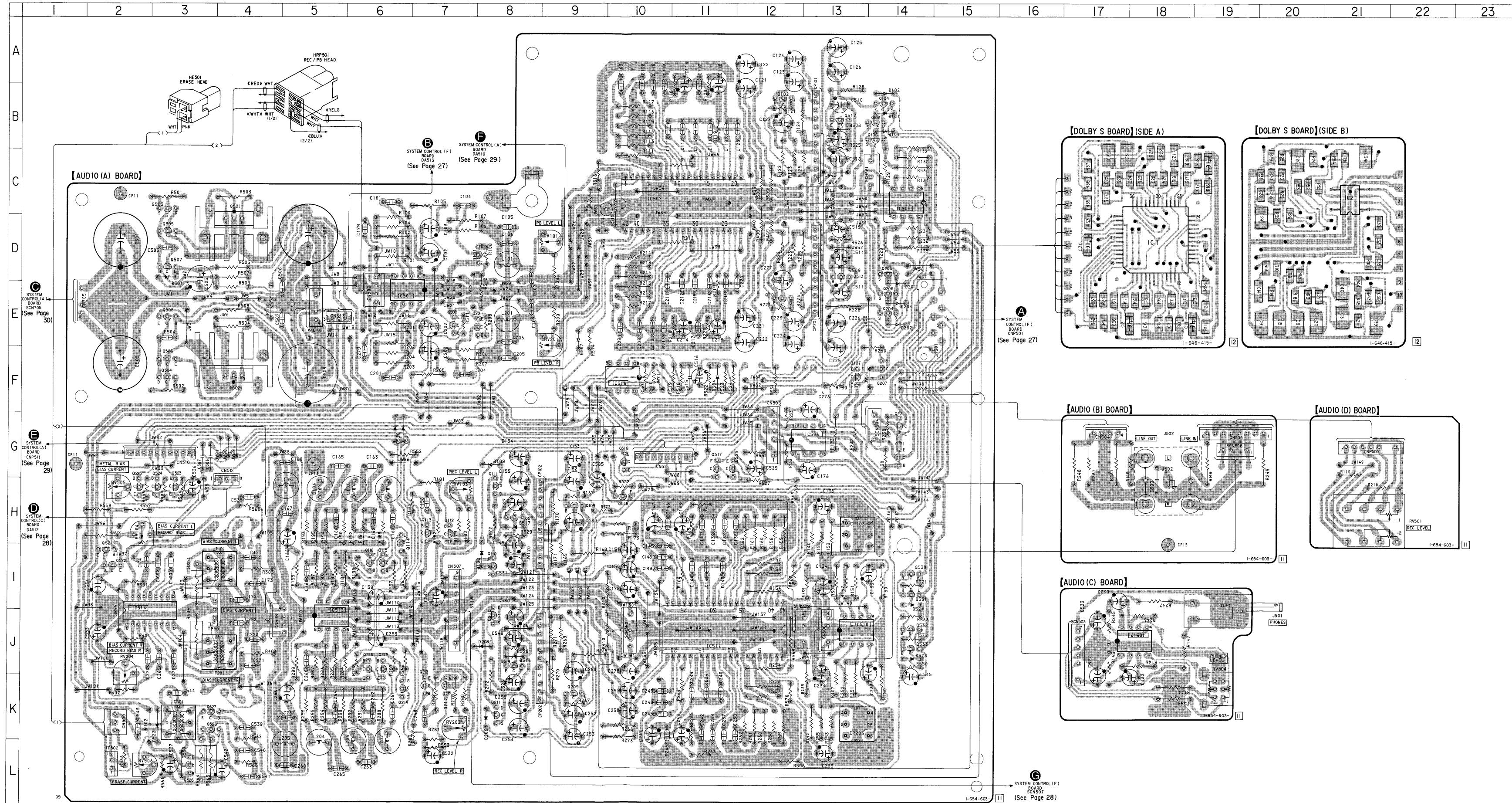
IC502/511 CX20188



IC514  $\mu$ PC1297CA



5-4. PRINTED WIRING BOARD — AUDIO SECTION —  
• See page 14 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	B-14	Q115	I-6
D102	B-14	Q116	I-6
D104	B-14	Q131	F-14
D108	I-8	Q201	E-7
D109	G-8	Q202	E-12
D201	E-14	Q203	D-14
D202	E-14	Q204	E-14
D204	E-14	Q206	E-14
D208	J-8	Q207	F-14
D209	K-8	Q209	K-9
D501	E-3	Q210	J-8
D504	F-11	Q211	K-8
D507	E-9	Q212	K-7
D508	B-13	Q213	J-7
D509	D-13	Q214	K-6
D516	J-8	Q215	J-6
D517	H-8	Q216	J-6
D520	G-6	Q231	F-14
D521	G-6	Q501	C-4
D522	K-3	Q502	F-4
D523	J-14	Q503	C-3
D524	I-14	Q504	F-3
		Q505	D-3
		Q506	F-3
IC1	D-18	Q507	D-3
IC2	D-21	Q508	E-3
IC501	E-6	Q509	E-7
IC502	C-10	Q512	B-13
IC505	C-14	Q513	D-13
IC506	G-13	Q514	J-8
IC510	J-13	Q515	H-8
IC511	J-11	Q516	G-10
IC513	I-5	Q517	G-11
IC514	I-2	Q518	G-10
IC516	F-10	Q521	H-2
IC517	J-18	Q522	I-2
		Q523	G-3
Q101	D-7	Q524	G-3
Q102	B-12	Q525	G-2
Q103	B-14	Q526	L-3
Q104	B-14	Q527	K-3
Q106	B-14	Q528	K-3
Q107	F-13	Q529	G-11
Q109	H-9	Q530	J-14
Q110	I-8	Q531	I-14
Q111	G-8	Q532	J-14
Q112	H-7	Q533	J-14
Q113	H-7		
Q114	H-6		

Note:  
 • ○ : parts extracted from the component side.  
 • ● : Through hole.  
 • [Pattern] : Pattern from the side which enable seeing.  
 (The other layer's patterns are not indicated.)

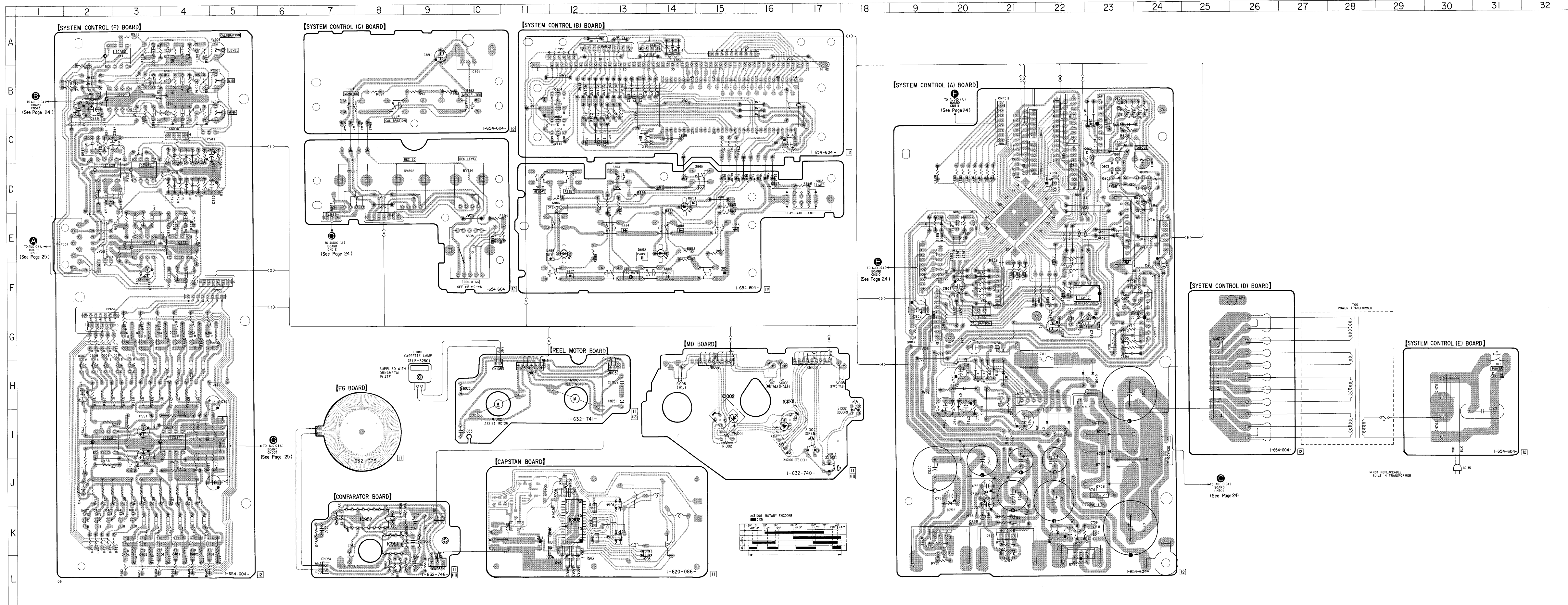
5-5. PRINTED WIRING BOARD — SYSTEM CONTROL SECTION —  
• See page 14 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D120	D-4	IC951	K-8
D121	D-4	IC952	K-8
D122	D-4	IC1001	H-16
D220	C-4	IC1002	H-15
D221	C-4		
D222	C-4	Q301	G-4
D514	C-2	Q302	G-4
D515	C-2	Q303	G-4
D601	C-23	Q304	G-3
D602	C-23	Q305	G-3
D603	D-23	Q306	G-3
D604	E-24	Q307	G-2
D701	I-23	Q308	G-2
D702	I-23	Q309	G-2
D703	J-23	Q310	G-3
D704	J-23	Q311	G-3
D705	I-22	Q401	K-4
D706	I-22	Q402	K-4
D707	H-22	Q403	K-4
D708	H-23	Q404	K-3
D709	H-21	Q405	K-3
D710	H-21	Q406	K-3
D751	I-20	Q407	K-2
D752	K-20	Q408	K-2
D753	J-20	Q409	K-2
D754	K-22	Q410	K-3
D756	H-20	Q411	K-3
D757	H-20	Q601	C-23
D758	H-20	Q602	C-22
D801	E-19	Q603	D-23
D851	D-14	Q604	D-23
D852	E-13	Q605	D-24
D853	E-11	Q606	D-24
D854	A-14	Q607	F-23
D855	A-14	Q608	B-23
D856	A-14	Q701	G-21
D1001	G-9	Q751	K-19
		Q752	K-20
IC520	D-3	Q753	K-21
IC521	E-4	Q755	H-21
IC522	E-3	Q756	K-19
IC523	D-2	Q757	K-21
IC524	I-4	Q758	K-20
IC525	I-2	Q759	K-23
IC601	E-23	Q801	E-20
IC602	C-23	Q802	E-20
IC603	G-24	Q803	G-19
IC751	G-22	Q851	C-12
IC801	E-21	Q852	C-12
IC802	F-22	Q853	B-12
IC851	B-15	Q854	B-12
IC891	B-10	Q901	B-4
IC901	B-3	Q902	B-4
IC902(A)	A-3	Q903	A-4
IC902(B)	K-12	Q904	E-2

**Note:**

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- ▨ : Pattern from the side which enable seeing.



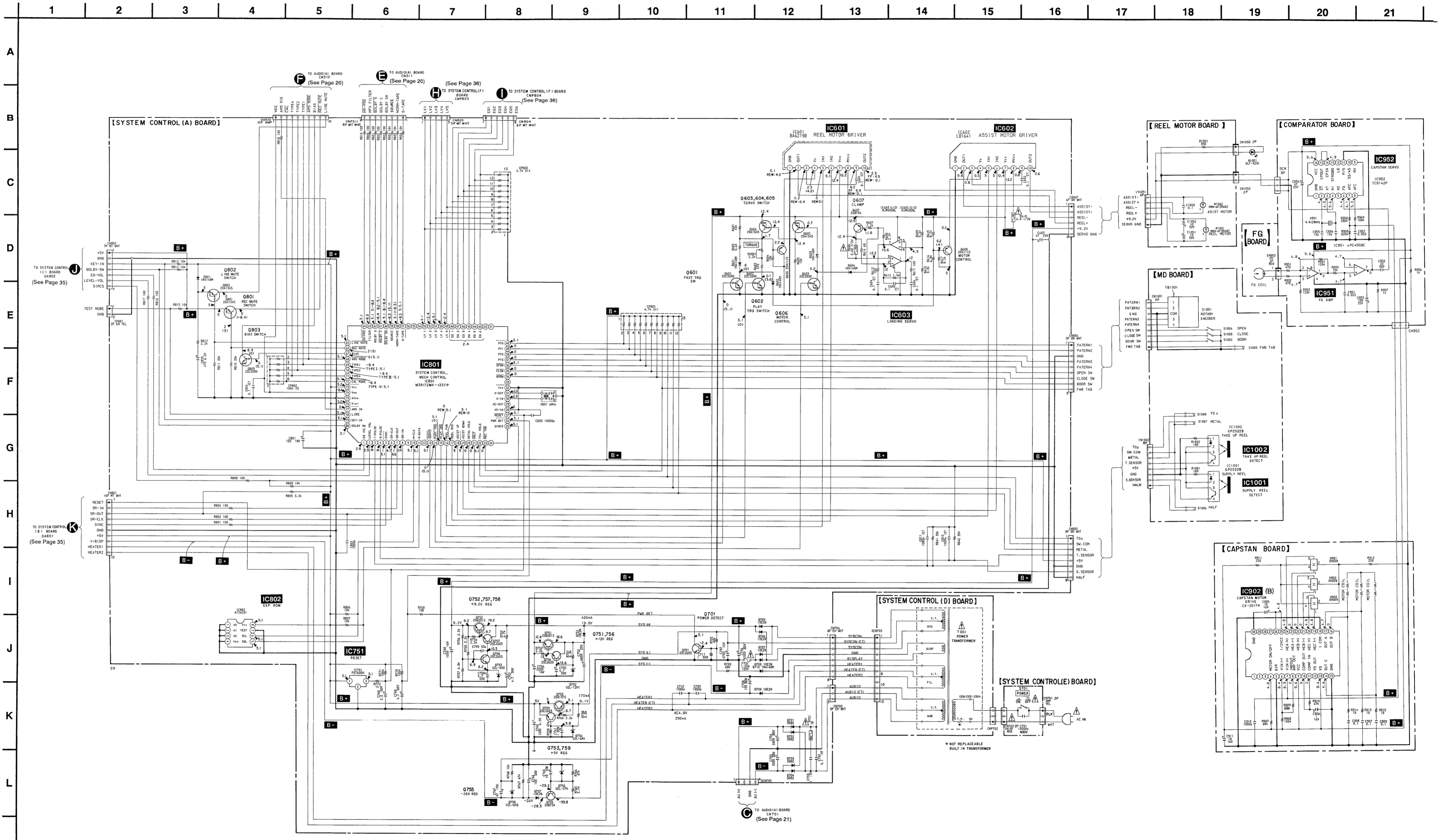
5-6. SCHEMATIC DIAGRAM — SYSTEM CONTROL (1/2) SECTION —  
• See page 34 for IC Block Diagrams.  
• See page 37 for IC Pin Function. (IC801)

Note:

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

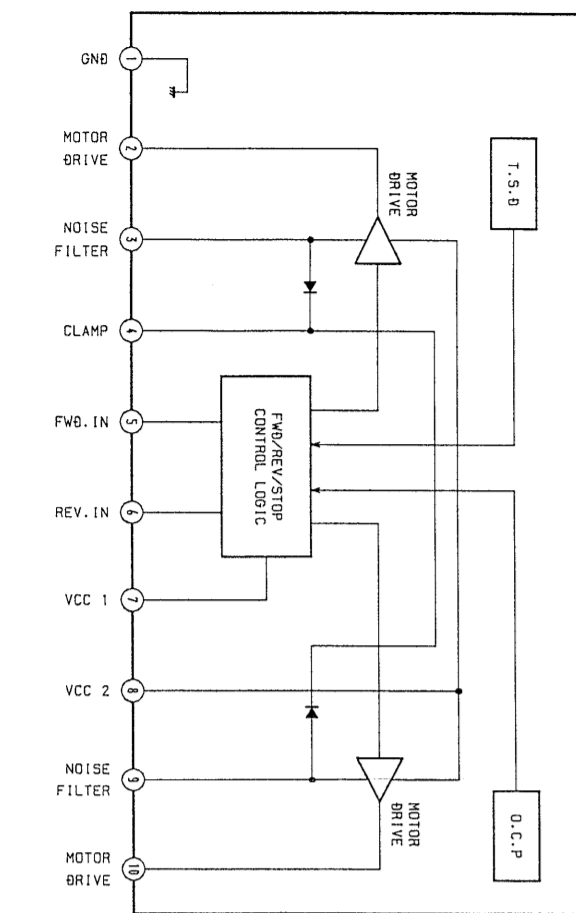
Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- **B+** : B+ Line
- **B-** : B- Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAY
- ( ) : REC
- \* : can not be measured.
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

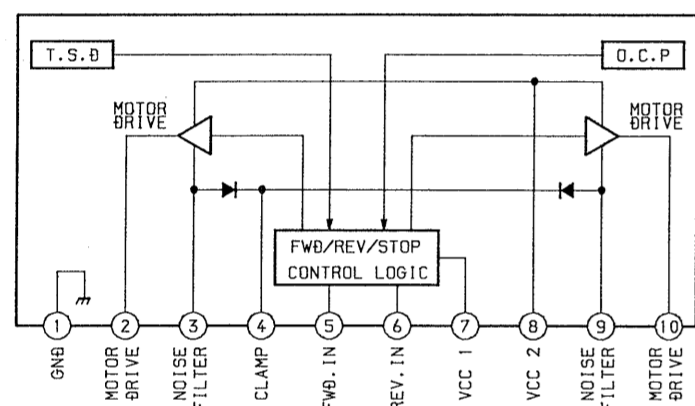


• IC Block Diagrams

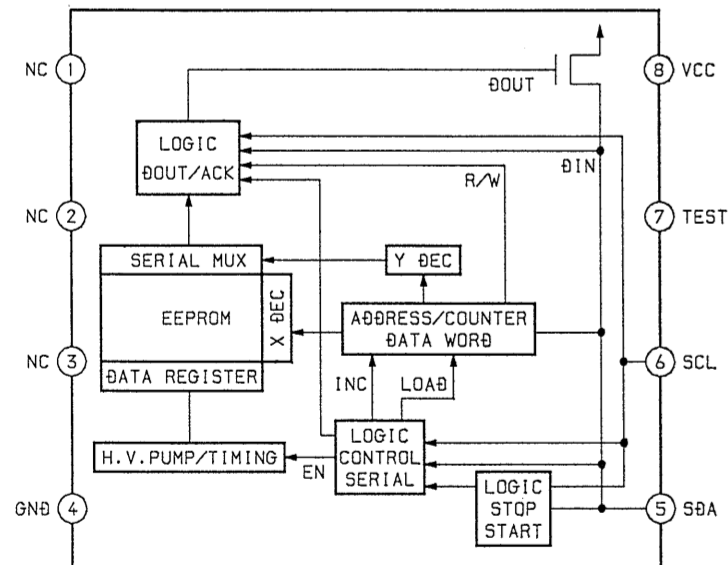
IC601 BA6219B



IC602 LB1641

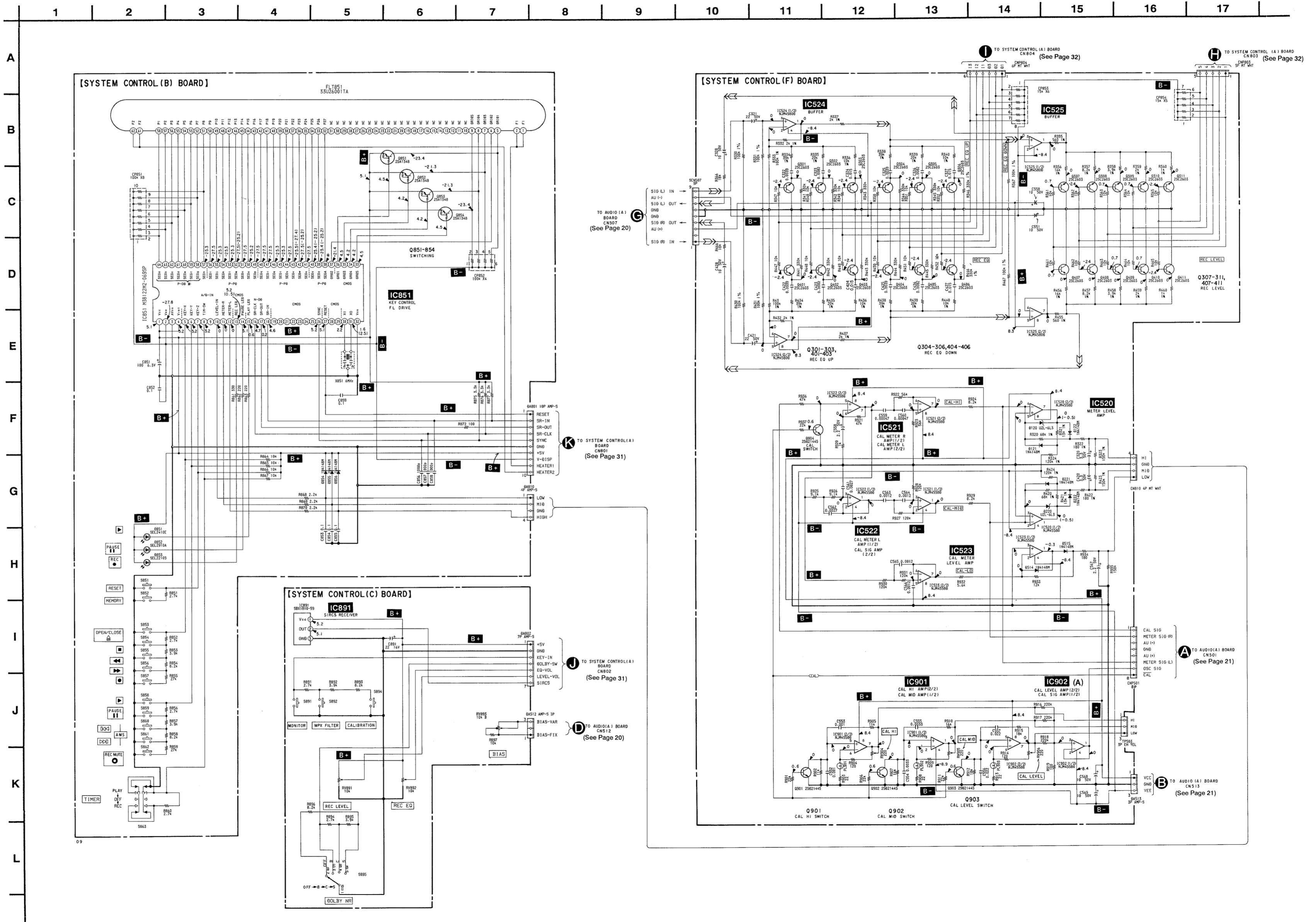


IC802 AT24C01



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
  - % : indicates tolerance.
  - $\Delta$  : internal component.
  - : panel designation.
  - B+ : B+ Line
  - B- : B- Line
  - : adjustment for repair.
  - Voltage and waveforms are dc with respect to ground under no-signal conditions.
  - no mark : PLAY
  - ( ) : REC
  - \* : can not be measured.
  - Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Signal path.
  - $\Rightarrow$  : REC

5-7. SCHEMATIC DIAGRAM — SYSTEM CONTROL (2/2) SECTION —  
• See page 39 for IC Pin Function. (IC851)



## 5-8. IC PIN FUNCTIONS

### • IC801 M38172M4-133FP

Pin No.	Pin Name	I/O	Function																																													
1	EQ VOL	I	Calibration volume (EQ) data input																																													
2	LEVEL VOL	I	Calibration volume (LEVEL) data input																																													
3	T-PULSE	I	Mechanism deck take-up reel table sensor pulse input																																													
4	S-PULSE	I	Mechanism deck supply reel table sensor pulse input																																													
5	SYNC	I	Serial timing clock input																																													
6	SR-CLK	I	Serial clock input																																													
7	SR-OUT	O	Serial clock data output																																													
8	SR-IN	I	Serial clock data input																																													
9	NC	I	Not used (open)																																													
10	M-CLK	I/O	Memory clock input																																													
11	M-DATA	I/O	Memory data input																																													
12	NC	—	Not used (open)																																													
13	$\overline{\text{SERVO}}$	O	Eject motor control L: EJECT																																													
14	$\overline{\text{FAST TRQ}}$	O	Motor speed control L: FAST																																													
15	$\overline{\text{PLAY TRQ}}$	O	Play motor control L: PLAY																																													
16	REEL FWD	O	Reel motor FWD control L: FWD																																													
17	REEL RVS	O	Reel motor REV control L: REV																																													
18	ASIST UP	O	Assist motor UP control L: UP																																													
19	ASIST DOWN	O	Assist motor DOWN control L: DOWN																																													
20	METAL HOLE	I	Mechanism deck METAL SW (S1007) input H: Metal tape, L: Normal or CrO <sub>2</sub> tape																																													
21	$\overline{\text{HALF}}$	I	Mechanism deck HALF SW (S1006) input L: Tape is loaded																																													
22	70 $\mu$ HOLE	I	Mechanism deck 70 $\mu$ SW (S1008) input H: 70 $\mu$ S L: 120 $\mu$ S (Constant when playback EQ)																																													
23	$\overline{\text{REC TAB}}$	I	Mechanism deck FWD TAB (S1005) input L: There is Rec protector																																													
24	NC	—	Not used (open)																																													
25	SIRCS	I	SIRCS signal input																																													
26	PWR DET	I	Power detect H: ON																																													
27	$\overline{\text{RESET}}$	I	RESET input																																													
28	XC-IN	I	Not used (Connect to GND)																																													
29	XC-OUT	O	Not used (open)																																													
30	X-IN	I	Clock input (6MHz)																																													
31	X-OUT	O	Clock output (6MHz)																																													
32	V <sub>ss</sub>	—	GND																																													
33	NC	—	Not used (open)																																													
34	$\overline{\text{DRSW}}$	I	Mechanism deck DOOR SW (S1002) input																																													
35	$\overline{\text{CLSW}}$	I	Mechanism deck CLOSE SW (S1003) input																																													
36	OPSW	I	Mechanism deck OPEN SW (S1004) input																																													
37 to 40	PT3 to PT0	O	Rotary encoder input for mechanism deck head base position detection <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>PAUSE</th> <th>AMS</th> <th>FF/REW</th> <th>STOP</th> <th colspan="2">PLAY</th> <th colspan="2">EJECT</th> </tr> </thead> <tbody> <tr> <td>PT3</td> <td>L</td> <td>L</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> <td>H</td> <td>H</td> </tr> <tr> <td>PT2</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> </tr> <tr> <td>PT1</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>PT0</td> <td>L</td> <td>H</td> <td>H</td> <td>L</td> <td>L</td> <td>L</td> <td>L</td> <td>L</td> </tr> </tbody> </table>		PAUSE	AMS	FF/REW	STOP	PLAY		EJECT		PT3	L	L	L	L	H	H	H	H	PT2	L	L	H	H	L	L	H	H	PT1	L	H	L	H	L	H	L	H	PT0	L	H	H	L	L	L	L	L
	PAUSE	AMS	FF/REW	STOP	PLAY		EJECT																																									
PT3	L	L	L	L	H	H	H	H																																								
PT2	L	L	H	H	L	L	H	H																																								
PT1	L	H	L	H	L	H	L	H																																								
PT0	L	H	H	L	L	L	L	L																																								

Pin No.	Pin Name	I/O	Function
41	NC	—	} Not used (open)
42	NC	—	
43 to 48	EQ6 to EQ1	O	Calibration EQ adjust output
49 to 53	LV5 to LV1	O	Calibration LEVEL adjust output
54 to 56	NC	O	Not used (open)
57	S-TAPE	O	DOLBY S monitor output
58	NORM- TAPE	O	DOLBY B, C monitor output
59	SOURCE	O	Source ON/OFF control H: ON
60	DOLBY ON	O	DOLBY B ON/OFF control H: ON
61	DOLBY C	O	DOLBY C ON/OFF control L: ON
62	DOLBY S	O	DOLBY S ON/OFF control H: ON
63	FILTER	O	MPX FILTER ON/OFF control H: ON
64	HX PRO	O	HX PRO ON/OFF control H: ON
65	LINE MUTE	O	LINE MUTE ON/OFF control L: ON
66	REC MUTE	O	REC MUTE ON/OFF control L: ON
67	BIAS	O	BIAS ON/OFF control H: ON
68	AMS MODE	O	AMS MODE ON/OFF control L: ON
69	TYPE 1	O	REC equalizer switching output H: TYPE 1
70	TYPE 2	O	REC equalizer switching output H: TYPE 2
71	TYPE 4	O	REC equalizer switching output H: TYPE 4
72	CAL MODE	O	Calibration control output
73	Vcc	—	Power supply (+5V)
74	Vee	—	Power supply (–25V)
75	AVss	—	GND
76	Vref	—	Reference voltage (+5V)
77	AMS IN	I	AMS signal input
78	LINE	I	Test terminal L: Test mode
79	KEY-IN	I	Key input
80	DOLBY SW	I	DOLBY SW detection input

• IC851 M38122M2-069SP

Pin No.	Pin Name	I/O	Function
1	Vcc	–	Power supply (+5V)
2	Vee	–	Power supply (–25V)
3	AVss	–	GND
4	Vref	–	Reference voltage (+5V)
5	KEY-X	I	Key switch input (A/D) OPEN/CLOSE, STOP, REW, FF, REC
6	KEY-Y	I	Key switch input (A/D) PLAY, PAUSE, REW AMS, FF AMS, REC MUTE
7	KEY-Z	I	Key switch input (A/D) RESET, MEMORY
8	TIM-SW	I	TIMER switch input (A/D) PLAY, OFF, REC
9	NC	–	Not used (open)
10	LEVEL-SW	I	Level meter input (Calibration)
11	METER-R	I	Level meter input (R CH)
12	METER-L	I	Level meter input (L CH)
13	REC LED	O	LED lights (REC)
14	PAUSE LED	O	LED lights (PAUSE)
15	PLAY LED	O	LED lights (PLAY)
16	SR-CLK	I	Serial clock input
17	SR-OUT	O	Serial data output
18	SR-IN	I	Serial data input
19 to 25	NC	–	Not used (open)
26	SYNC	I	Serial timing clock input
27	RESET	I	Reset signal input
28, 29	NC	–	Not used (open)
30	XI	I	Clock input (6MHz)
31	XO	O	Clock output (6MHz)
32	Vss	–	GND
33	GRD5	O	} FL tube grid output
34	GRD4	O	
35	GRD3	O	
36	GRD1	O	
37	GRD2	O	
38	SEG A	O	} FL tube segment output
39 to 64	SEGz to SEGa	O	



## SECTION 6 EXPLODED VIEWS

**NOTE:**

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) . . . (RED)

↑                    ↑  
Parts color    Cabinet's color

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

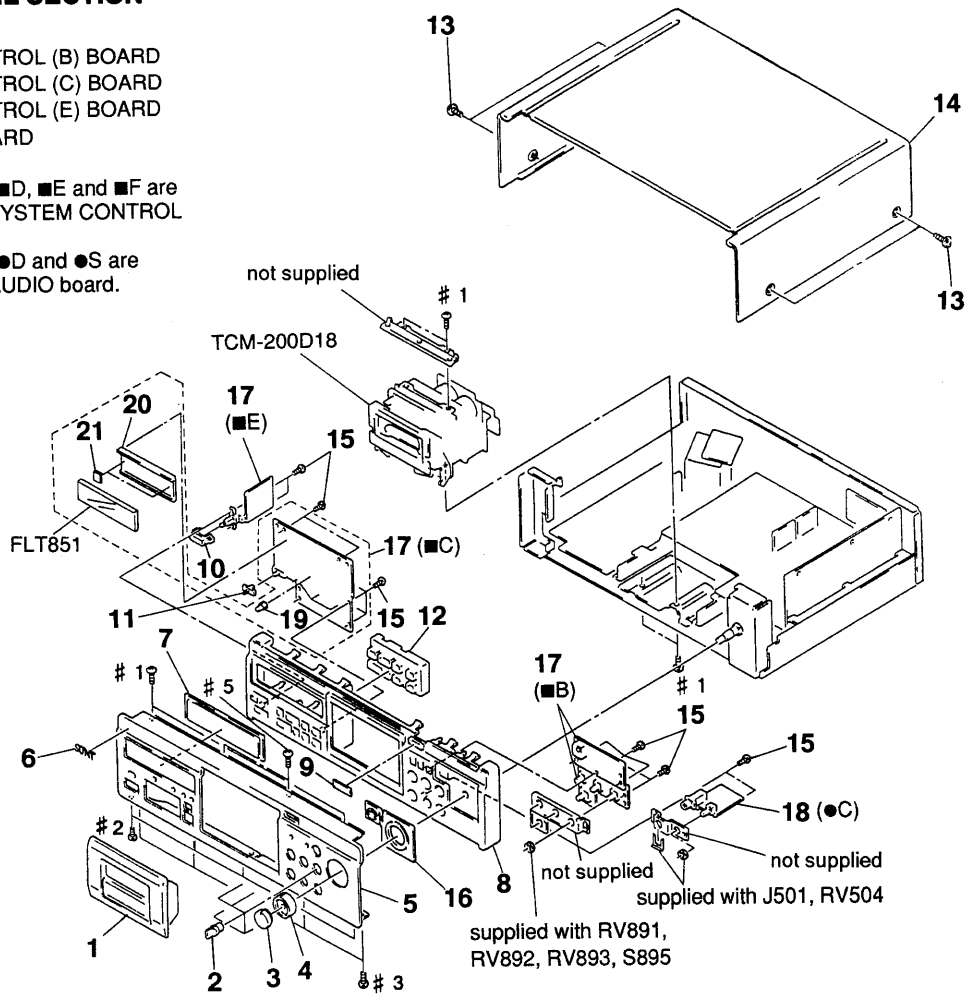
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

### 6-1. FRONT PANEL SECTION

- B SYSTEM CONTROL (B) BOARD
- C SYSTEM CONTROL (C) BOARD
- E SYSTEM CONTROL (E) BOARD
- C AUDIO (C) BOARD

**NOTE:** ■A, ■B, ■C, ■D, ■E and ■F are supplied as SYSTEM CONTROL board.

●A, ●B, ●C, ●D and ●S are supplied as AUDIO board.

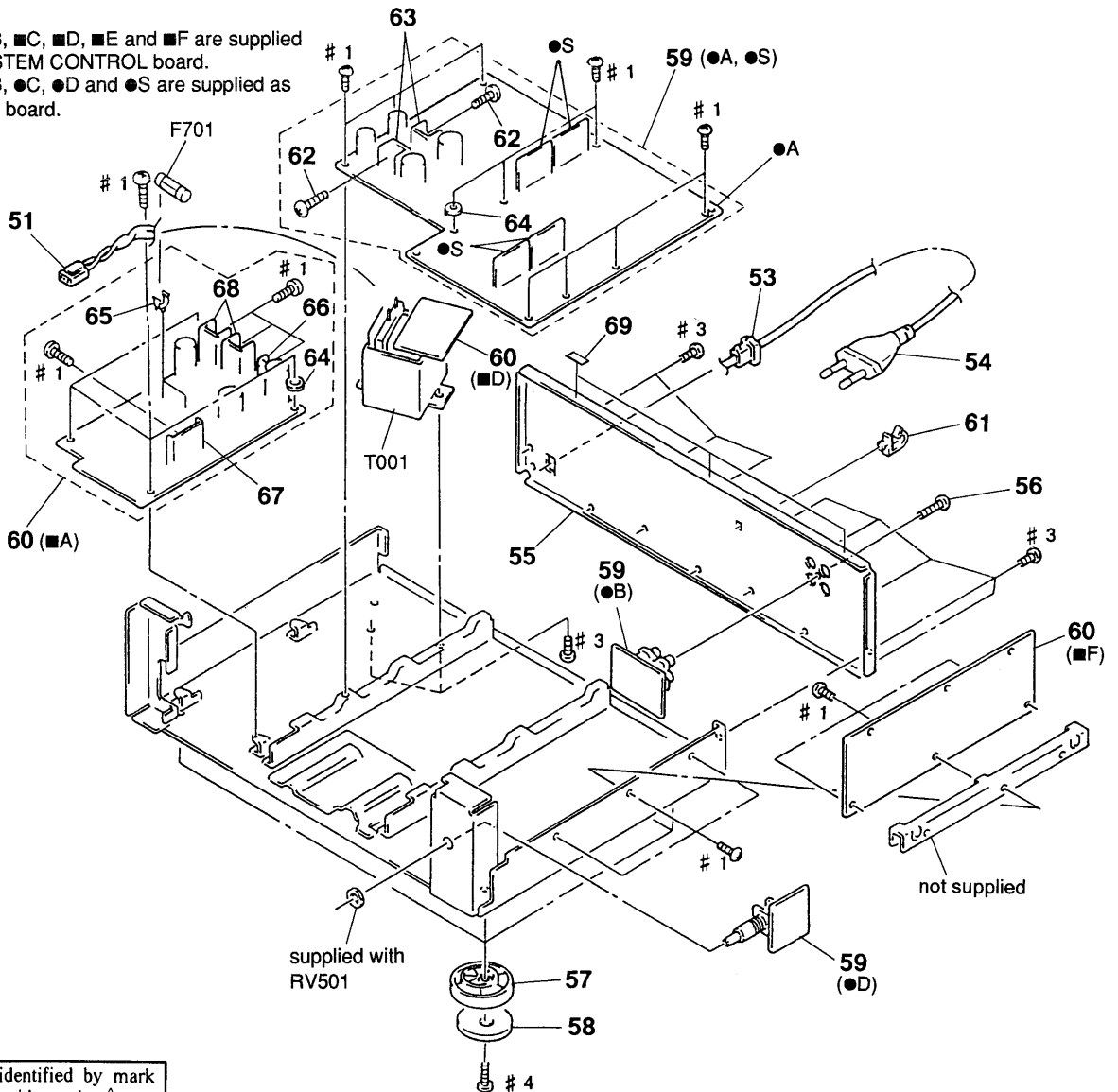


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3370-054-1	LID ASSY, CASSETTE (BLACK)		11	3-919-257-01	KNOB (TIMER) (BLACK)	
1	X-3370-055-1	LID ASSY, CASSETTE (GOLD)		11	3-919-257-11	KNOB (TIMER) (GOLD)	
2	X-3362-818-1	KNOB (DIA. 12) ASSY (B), FLAT (BLACK)		12	X-3369-438-1	BUTTON (CONTROL) ASSY (BLACK)	
2	X-3363-490-1	KNOB (DIA. 12) ASSY (B), FLAT (GOLD)		12	X-3369-452-1	BUTTON (CONTROL) ASSY (GOLD)	
3	3-919-248-01	KNOB (R) (BLACK)		13	3-704-366-01	SCREW (CASE) (M3X8) (BLACK).. (BLACK)	
3	3-919-248-11	KNOB (R) (GOLD)		13	3-704-366-11	SCREW (CASE) (M3X8) (SILVER).. (GOLD)	
4	3-919-247-01	KNOB (L) (BLACK)		14	3-919-386-21	CASE (BLACK)	
4	3-919-247-11	KNOB (L) (GOLD)		14	3-919-386-31	CASE (GOLD)	
5	3-919-383-11	PANEL, FRONT (BLACK)		15	4-951-620-01	SCREW (2.6X8), +BVTP	
5	3-919-383-21	PANEL, FRONT (GOLD)		16	3-919-384-01	ESCUTCHEON (VOL) (BLACK)	
6	4-942-568-01	EMBLEM (NO. 5), SONY (SILVER).. (BLACK)		16	3-919-384-11	ESCUTCHEON (VOL) (GOLD)	
6	4-942-568-21	EMBLEM (NO. 5), SONY (GOLD).. (GOLD)		* 17	A-2007-394-A	SYSTEM CONTROL BOARD, COMPLETE	
7	3-919-224-01	WINDOW (METER)		* 18	A-2007-393-A	AUDIO BOARD, COMPLETE	
8	3-919-385-11	PANEL (BASE) (BLACK)		* 19	3-362-478-31	HOLDER (T), LED	
8	3-919-385-21	PANEL (BASE) (GOLD)		* 20	3-385-607-01	HOLDER, FL TUBE	
9	3-385-600-01	WINDOW (R)		* 21	3-354-927-21	CUSHION	
10	3-354-932-01	BUTTON (POWER) (BLACK)		FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT	
10	3-354-932-11	BUTTON (POWER) (GOLD)					

## 6-2. CHASSIS SECTION

- A SYSTEM CONTROL (A) BOARD
- D SYSTEM CONTROL (D) BOARD
- F SYSTEM CONTROL (F) BOARD
- A AUDIO (A) BOARD
- B AUDIO (B) BOARD
- D AUDIO (D) BOARD
- S DOLBY-S BOARD

**NOTE:** ■A, ■B, ■C, ■D, ■E and ■F are supplied as SYSTEM CONTROL board.  
 ●A, ●B, ●C, ●D and ●S are supplied as AUDIO board.

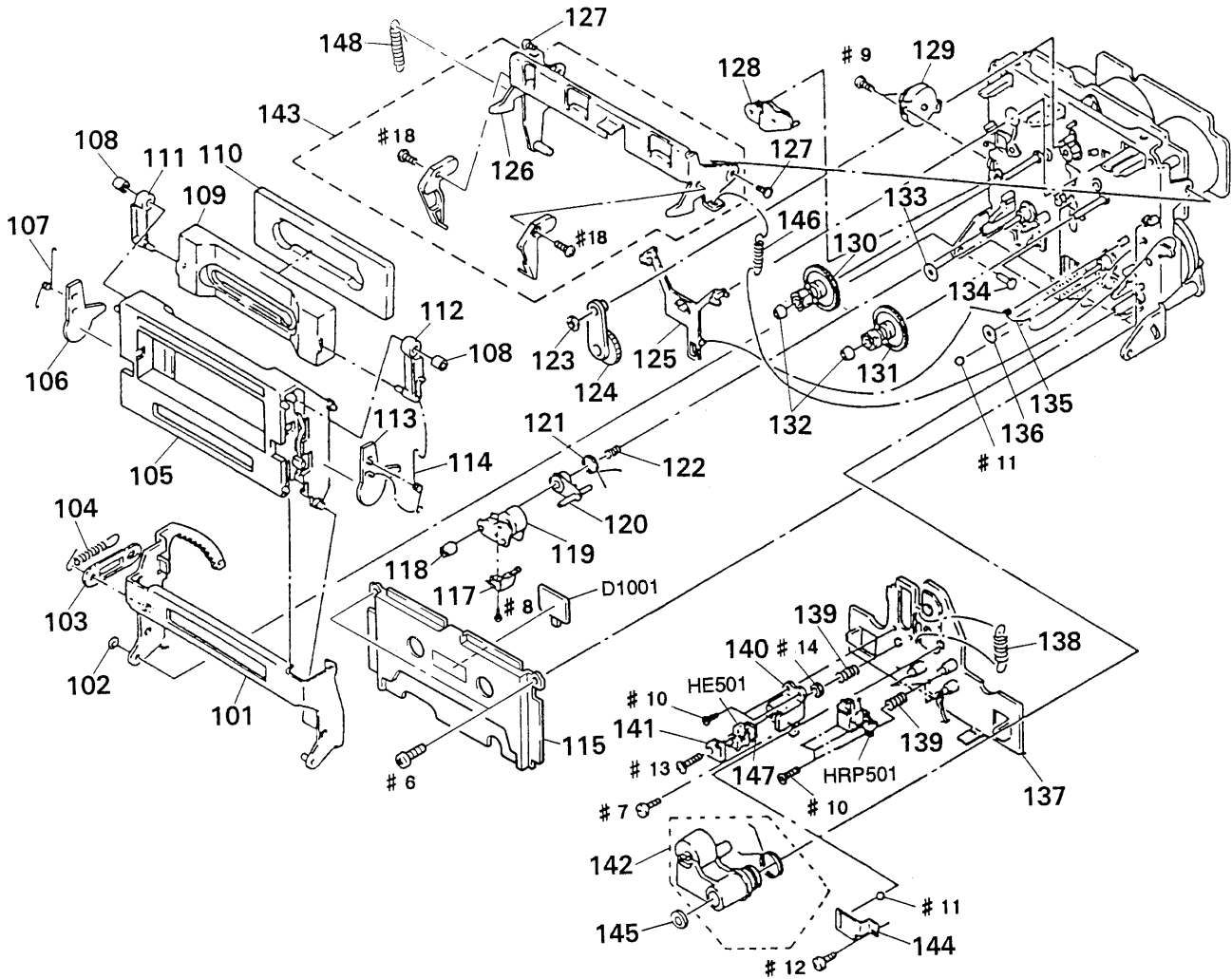


The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description
* 51	1-590-321-61	LEAD (WITH CONNECTOR)
*	1-537-473-11	TERMINAL (LEAD PIN)
* 53	3-703-244-00	BUSHING (2104), CORD
$\triangle$ 54	1-575-651-21	CORD, POWER
* 55	3-924-037-01	PANEL, BACK
56	3-704-515-01	SCREW (BV/RING)
57	4-970-123-01	FOOT (F50180S)
58	4-970-124-01	CUSHION (F50180S)
* 59	A-2007-393-A	AUDIO BOARD, COMPLETE
* 60	A-2007-394-A	SYSTEM CONTROL BOARD, COMPLETE
* 61	4-949-235-01	HOOK

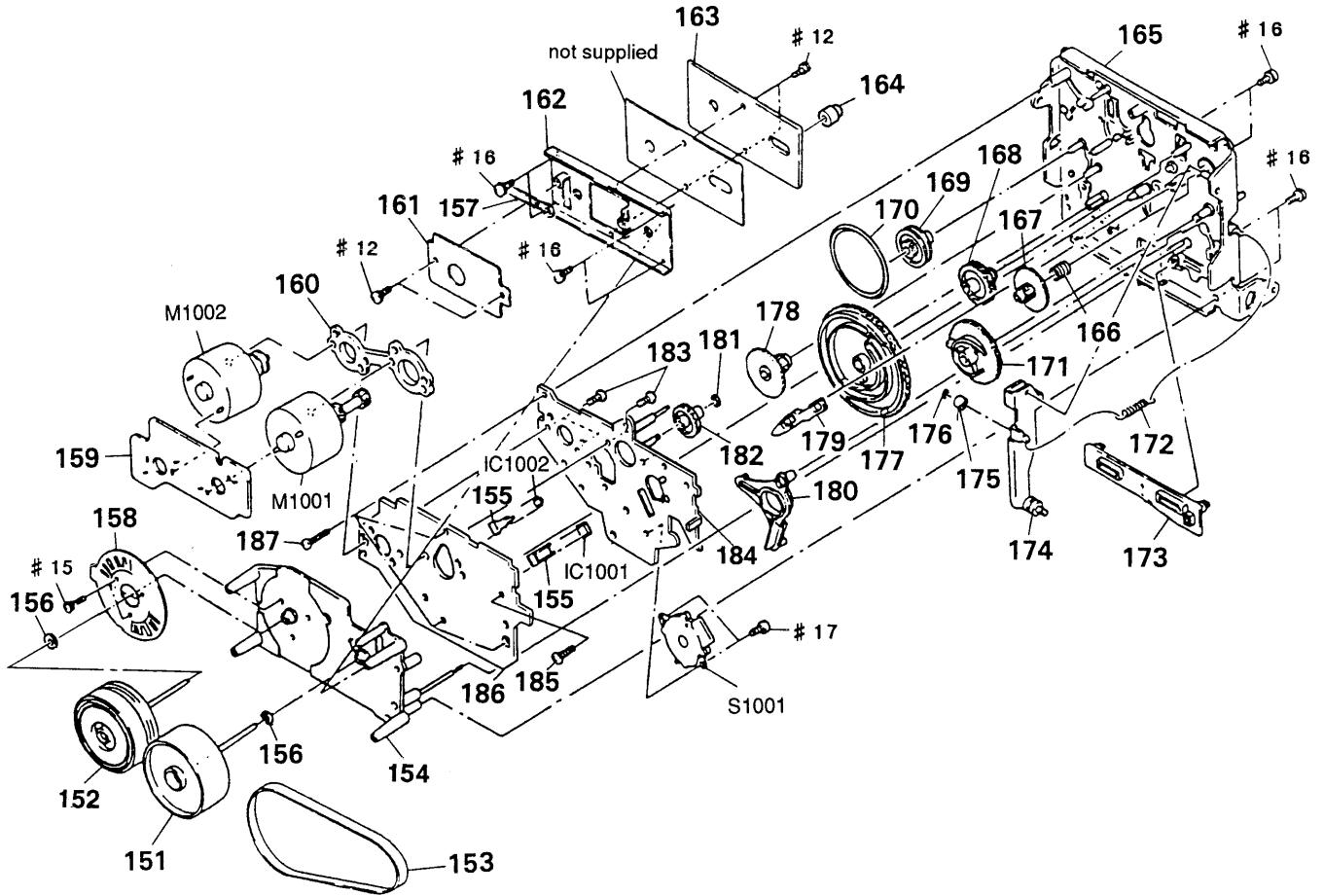
Remark	Ref. No.	Part No.	Description	Remark
	62	2-259-121-01	SCREW, TR	
	* 63	4-886-555-00	HEAT SINK	
	* 64	4-942-204-01	PLATE, GROUND	
	* 65	1-533-213-31	HOLDER, FUSE	
	* 66	3-309-144-21	HEAT SINK	
	* 67	3-356-925-01	HEAT SINK	
	* 68	4-880-403-11	HEAT SINK	
	69	3-831-441-XX	CUSHION, SPEAKER	
	$\triangle$ F701	1-532-285-00	FUSE, TIME-LAG (T1.25A 250V)	
	$\triangle$ T001	1-427-834-11	TRANSFORMER, POWER	

### 6-3. MECHANISM SECTION-1 (TCM-200D18)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-3362-671-1	HOLDER (BG) ASSY, CASSETTE		127	3-356-601-11	SCREW, STEP	
102	3-558-708-21	WASHER, STOPPER		128	X-3356-623-1	LEVER (BT) ASSY	
* 103	3-356-717-01	LEVER (JOINT)		129	3-319-224-41	DAMPER, SMALL	
104	3-356-626-01	SPRING, TENSION		130	X-3356-629-1	GEAR (S) ASSY	
105	X-3369-639-1	HOLDER (D15) ASSY, CASSETTE		131	X-3356-627-1	GEAR (T) ASSY	
106	3-920-319-01	LEVER (L-T)		132	3-362-308-01	CAP (REEL)	
107	3-920-363-01	SPRING (L), TORSION		133	3-332-763-01	RING, OIL RESERVOIR	
108	3-356-946-01	BUSHING		134	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
109	3-356-928-01	PLATE (A), ORNAMENTAL		135	3-356-619-01	SPRING (B), TORSION	
* 110	3-356-929-01	ABSORBENT, VIBRATION		136	3-920-322-01	WASHER (FELT RING T)	
111	3-356-933-01	LEVER (LB)		* 137	X-3362-199-1	SLIDER (HEAD CHASSIS D) ASSY	
112	3-356-931-01	LEVER (RB)		138	3-356-658-01	SPRING (LIMITER H), TENSION	
113	3-920-320-01	LEVER (R-T)		139	3-564-121-00	SPRING, COMPRESSION	
114	3-920-364-01	SPRING (R), TORSION		* 140	3-576-977-00	BRACKET, E. HEAD	
115	X-3356-613-1	PLATE ASSY, ORNAMENTAL		141	3-318-433-01	SPRING	
117	3-920-576-01	GUIDE (SL), TAPE		142	X-3367-095-1	LEVER (PINCH LEVER DT) ASSY	
118	3-356-652-01	NUT (PINCH LEVER S)		* 143	X-3369-638-1	LEVER (LIFTER) COMPLETE ASSY	
119	X-3356-621-1	LEVER (PINCH LEVER S) ASSY		144	3-356-656-01	SPRING (HEAD PC BOARD), LEAF	
120	3-356-660-01	LEVER (PS)		145	3-669-596-01	WASHER (2.3), STOPPER	
121	3-356-661-01	SPRING (PINCH LEVER S), TORSION		146	3-920-366-01	SPRING (LIFTER R), TENSION	
122	3-356-657-01	SPRING (PS), COMPRESSION		* 147	1-608-268-00	ERASE HEAD BOARD	
123	3-669-465-11	WASHER (1.5), STOPPER		148	3-920-365-01	SPRING (LIFTER L), TENSION	
124	X-3356-641-1	LEVER (FR2) ASSY		D1001	8-719-980-85	DIODE SLF325C	
125	3-356-614-01	SLIDER (BRAKE)		HE501	1-543-836-11	HEAD, MAGNETIC (ERASE)	
* 126	X-3356-608-1	LEVER (LIFTER) ASSY		HRP501	1-543-742-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	

6-4. MECHANISM SECTION-2 (TCM-200D18)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3369-635-1	FLYWHEEL (DS 2.5) ASSY		172	3-356-624-01	SPRING, TENSION	
152	X-3369-634-1	FLYWHEEL (DT 2.8) ASSY		173	3-356-653-01	SLIDER (PAUSE)	
153	3-364-600-01	BELT (CAPSTAN)		* 174	X-3356-606-1	LEVER (LOADING) ASSY	
* 154	X-3369-637-1	DECK (D 2.8) ASSY		175	3-356-630-01	ROLLER (LOADING)	
155	3-356-631-01	HOLDER (SENSOR)		176	3-558-708-11	WASHER, STOPPER	
156	3-356-705-51	WASHER (CAPSTAN)		177	3-356-654-01	GEAR (MODE CAM C)	
* 157	3-703-397-01	STOPPER, WIRING		178	3-356-606-01	GEAR (MODE)	
158	1-632-779-11	FG BOARD		179	3-356-617-01	LEVER (SELECTION)	
* 159	1-632-741-11	REEL MOTOR BOARD		180	3-356-613-01	LEVER (MODE)	
* 160	3-356-628-01	SPACER (MOTOR)		181	3-669-465-01	WASHER (1.5), STOPPER	
* 161	1-632-746-11	COMPARATOR BOARD		182	3-356-702-01	GEAR (COMMUNICATION B)	
* 162	X-3362-282-1	BRACKET (THRUST RETAINER) ASSY		183	3-363-804-01	SCREW (+P 2.6X6.5)	
* 163	A-2006-380-A	CAPSTAN BOARD, COMPLETE		* 184	X-3356-616-1	BRACKET (MOTOR D) ASSY	
164	3-364-135-01	RETAINER (S), THRUST		185	3-356-707-01	SCREW (+PTPWH 2X25)	
165	X-3356-622-1	CHASSIS (C) ASSY, MECHANICAL		* 186	1-632-740-11	MD BOARD	
166	3-356-605-01	SPRING, COMPRESSION		187	3-355-801-01	SCREW (BTP 2X18)	
167	3-356-609-01	GEAR (LOADING)		IC1001	8-749-920-97	DIODE GP2S22B	
168	3-356-703-01	GEAR (COMMUNICATION C)		IC1002	8-749-920-97	DIODE GP2S22B	
169	3-356-607-01	PULLEY (MODE)		M1001	X-3356-638-1	MOTOR (REEL R) ASSY	
170	3-356-603-01	BELT (MODE)		M1002	X-3356-604-1	MOTOR (ASSIST) ASSY	
171	3-356-616-01	GEAR (LOADING CAM)		S1001	1-466-238-11	ENCODER, ROTARY	

# AUDIO

## SECTION 7 ELECTRICAL PARTS LIST

**NOTE:**

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...:  $\mu$ PA..., uPB...:  $\mu$ PB...,  
uPC...:  $\mu$ PC..., uPD...:  $\mu$ PD...
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H
- Abbreviation  
G : German model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2007-393-A	AUDIO BOARD, COMPLETE AUDIO (A) BOARD AUDIO (B) BOARD AUDIO (C) BOARD AUDIO (D) BOARD DOLBY-S BOARD *****		C31	1-104-555-11	FILM CHIP	0.022uF 5% 16V
*	1-537-473-11	TERMINAL (LEAD PIN)		C32	1-104-563-11	FILM CHIP	0.1uF 5% 16V
*	2-259-121-01	SCREW, TR		C33	1-163-024-00	CERAMIC CHIP	0.018uF 10% 50V
*	4-886-555-00	HEAT SINK		C34	1-137-306-11	FILM CHIP	0.1uF 5% 16V
*	4-942-204-01	PLATE, GROUND		C35	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V
		< CAPACITOR >		C36	1-165-319-11	CERAMIC CHIP	0.1uF 50V
C1	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C37	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C2	1-135-177-21	TANTALUM CHIP	1uF 20% 20V	C38	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V
C3	1-137-301-11	FILM CHIP	0.039uF 5% 16V	C39	1-104-555-11	FILM CHIP	0.022uF 5% 16V
C4	1-163-007-11	CERAMIC CHIP	680PF 10% 50V	C40	1-137-306-11	FILM CHIP	0.1uF 5% 16V
C5	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C101	1-130-487-00	MYLAR	0.022uF 5% 50V
C6	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	C102	1-124-916-11	ELECT	22uF 20% 63V
C7	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C103	1-124-916-11	ELECT	22uF 20% 63V
C8	1-104-562-11	FILM CHIP	0.082uF 5% 16V	C104	1-130-489-00	MYLAR	0.033uF 5% 50V
C9	1-104-553-11	FILM CHIP	0.015uF 5% 16V	C105	1-130-477-00	MYLAR	0.0033uF 5% 50V
C10	1-165-319-11	CERAMIC CHIP	0.1uF 50V	C106	1-102-965-00	CERAMIC	39PF 5% 50V
C11	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	C107	1-106-343-00	MYLAR	1000PF 5% 200V
C12	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C108	1-130-475-00	MYLAR	0.0022uF 5% 50V
C13	1-165-319-11	CERAMIC CHIP	0.1uF 50V	C109	1-130-475-00	MYLAR	0.0022uF 5% 50V
C14	1-162-568-11	CERAMIC CHIP	0.33uF 10% 16V	C110	1-130-478-00	MYLAR	0.0039uF 5% 50V
C15	1-104-562-11	FILM CHIP	0.082uF 5% 16V	C111	1-136-173-00	FILM	0.47uF 5% 50V
C16	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	C112	1-136-167-00	FILM	0.15uF 5% 50V
C17	1-165-319-11	CERAMIC CHIP	0.1uF 50V	C113	1-136-155-00	FILM	0.015uF 5% 50V
C18	1-164-222-11	CERAMIC CHIP	0.22uF 25V	C114	1-124-903-11	ELECT	1uF 20% 50V
C19	1-163-035-00	CERAMIC CHIP	0.047uF 50V	C115	1-136-169-00	FILM	0.22uF 5% 50V
C20	1-104-553-11	FILM CHIP	0.015uF 5% 16V	C116	1-136-163-00	FILM	0.068uF 5% 50V
C21	1-164-717-11	CERAMIC CHIP	0.0082uF 5% 50V	C117	1-136-162-00	FILM	0.056uF 5% 50V
C22	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C118	1-124-903-11	ELECT	1uF 20% 50V
C23	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	C119	1-130-480-00	MYLAR	0.0056uF 5% 50V
C24	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	C120	1-136-153-00	FILM	0.01uF 5% 50V
C25	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	C121	1-126-049-11	ELECT	22uF 20% 50V
C26	1-137-301-11	FILM CHIP	0.039uF 5% 16V	C122	1-126-049-11	ELECT	22uF 20% 50V
C27	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	C123	1-126-049-11	ELECT	22uF 20% 50V
C28	1-163-012-00	CERAMIC CHIP	0.0018uF 10% 50V	C124	1-126-059-11	ELECT	10uF 20% 50V
C29	1-137-306-11	FILM CHIP	0.1uF 5% 16V	C125	1-126-049-11	ELECT	22uF 20% 50V
C30	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	C126	1-126-049-11	ELECT	22uF 20% 50V
				C127	1-126-049-11	ELECT	22uF 20% 50V
				C132	1-126-059-11	ELECT	10uF 20% 50V
				C133	1-126-163-11	ELECT	4.7uF 20% 50V
				C134	1-126-163-11	ELECT	4.7uF 20% 50V
				C135	1-126-163-11	ELECT	4.7uF 20% 50V
				C137	1-130-475-00	MYLAR	0.0022uF 5% 50V
				C138	1-130-475-00	MYLAR	0.0022uF 5% 50V

# AUDIO

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
C139	1-130-478-00	MYLAR	0.0039uF	5%	50V	C213	1-136-155-00	FILM	0.015uF	5%	50V
C140	1-136-173-00	FILM	0.47uF	5%	50V	C214	1-124-903-11	ELECT	1uF	20%	50V
C141	1-136-167-00	FILM	0.15uF	5%	50V	C215	1-136-169-00	FILM	0.22uF	5%	50V
C142	1-136-155-00	FILM	0.015uF	5%	50V	C216	1-136-163-00	FILM	0.068uF	5%	50V
C143	1-124-903-11	ELECT	1uF	20%	50V	C217	1-136-162-00	FILM	0.056uF	5%	50V
C144	1-136-169-00	FILM	0.22uF	5%	50V	C218	1-124-903-11	ELECT	1uF	20%	50V
C145	1-136-163-00	FILM	0.068uF	5%	50V	C219	1-130-480-00	MYLAR	0.0056uF	5%	50V
C146	1-136-162-00	FILM	0.056uF	5%	50V	C220	1-136-153-00	FILM	0.01uF	5%	50V
C147	1-124-903-11	ELECT	1uF	20%	50V	C221	1-126-049-11	ELECT	22uF	20%	50V
C148	1-130-480-00	MYLAR	0.0056uF	5%	50V	C222	1-126-049-11	ELECT	22uF	20%	50V
C149	1-136-153-00	FILM	0.01uF	5%	50V	C223	1-126-049-11	ELECT	22uF	20%	50V
C150	1-126-059-11	ELECT	10uF	20%	50V	C224	1-126-059-11	ELECT	10uF	20%	50V
C151	1-126-059-11	ELECT	10uF	20%	50V	C225	1-126-049-11	ELECT	22uF	20%	50V
C152	1-126-049-11	ELECT	22uF	20%	50V	C226	1-126-049-11	ELECT	22uF	20%	50V
C153	1-126-059-11	ELECT	10uF	20%	50V	C227	1-126-049-11	ELECT	22uF	20%	50V
C154	1-126-049-11	ELECT	22uF	20%	50V	C232	1-126-059-11	ELECT	10uF	20%	50V
C155	1-126-049-11	ELECT	22uF	20%	50V	C233	1-126-163-11	ELECT	4.7uF	20%	50V
C158	1-130-474-00	MYLAR	0.0018uF	5%	50V	C234	1-126-163-11	ELECT	4.7uF	20%	50V
C159	1-126-059-11	ELECT	10uF	20%	50V	C235	1-126-163-11	ELECT	4.7uF	20%	50V
C160	1-130-491-00	MYLAR	0.047uF	5%	50V	C237	1-130-475-00	MYLAR	0.0022uF	5%	50V
C161	1-130-485-00	MYLAR	0.015uF	5%	50V	C238	1-130-475-00	MYLAR	0.0022uF	5%	50V
C162	1-130-487-00	MYLAR	0.022uF	5%	50V	C239	1-130-478-00	MYLAR	0.0039uF	5%	50V
C163	1-130-486-00	MYLAR	0.018uF	10%	50V	C240	1-136-173-00	FILM	0.47uF	5%	50V
C164	1-130-487-00	MYLAR	0.022uF	5%	50V	C241	1-136-167-00	FILM	0.15uF	5%	50V
C165	1-130-486-00	MYLAR	0.018uF	10%	50V	C242	1-136-155-00	FILM	0.015uF	5%	50V
C166	1-126-049-11	ELECT	22uF	20%	50V	C243	1-124-903-11	ELECT	1uF	20%	50V
C167	1-106-347-00	MYLAR	1500PF	5%	200V	C244	1-136-169-00	FILM	0.22uF	5%	50V
C168	1-107-597-11	CERAMIC	22PF	5%	500V	C245	1-136-163-00	FILM	0.068uF	5%	50V
C169	1-136-157-00	FILM	0.022uF	5%	50V	C246	1-136-162-00	FILM	0.056uF	5%	50V
C170	1-136-161-00	FILM	0.047uF	5%	50V	C247	1-124-903-11	ELECT	1uF	20%	50V
C171	1-130-468-00	MYLAR	560PF	5%	50V	C248	1-130-480-00	MYLAR	0.0056uF	5%	50V
C172	1-136-803-11	FILM	560PF	5%	630V	C249	1-136-153-00	FILM	0.01uF	5%	50V
C173	1-107-612-11	CERAMIC	100PF	5%	500V	C250	1-126-059-11	ELECT	10uF	20%	50V
C174	1-136-153-00	FILM	0.01uF	5%	50V	C251	1-126-059-11	ELECT	10uF	20%	50V
C176	1-124-925-11	ELECT	2.2uF	20%	100V	C252	1-126-049-11	ELECT	22uF	20%	50V
C178	1-126-059-11	ELECT	10uF	20%	50V	C253	1-126-059-11	ELECT	10uF	20%	50V
C179	1-110-340-11	MYLAR	270PF	5%	50V	C254	1-126-049-11	ELECT	22uF	20%	50V
C180	1-126-049-11	ELECT	22uF	20%	50V	C255	1-126-049-11	ELECT	22uF	20%	50V
C201	1-130-487-00	MYLAR	0.022uF	5%	50V	C258	1-130-474-00	MYLAR	0.0018uF	5%	50V
C202	1-124-916-11	ELECT	22uF	20%	63V	C259	1-126-059-11	ELECT	10uF	20%	50V
C203	1-124-916-11	ELECT	22uF	20%	63V	C260	1-130-491-00	MYLAR	0.047uF	5%	50V
C204	1-130-489-00	MYLAR	0.033uF	5%	50V	C261	1-130-485-00	MYLAR	0.015uF	5%	50V
C205	1-130-477-00	MYLAR	0.0033uF	5%	50V	C262	1-130-487-00	MYLAR	0.022uF	5%	50V
C206	1-102-965-00	CERAMIC	39PF	5%	50V	C263	1-130-486-00	MYLAR	0.018uF	10%	50V
C207	1-106-343-00	MYLAR	1000PF	5%	200V	C264	1-130-487-00	MYLAR	0.022uF	5%	50V
C208	1-130-475-00	MYLAR	0.0022uF	5%	50V	C265	1-130-486-00	MYLAR	0.018uF	10%	50V
C209	1-130-475-00	MYLAR	0.0022uF	5%	50V	C266	1-126-049-11	ELECT	22uF	20%	50V
C210	1-130-478-00	MYLAR	0.0039uF	5%	50V	C267	1-106-347-00	MYLAR	1500PF	5%	200V
C211	1-136-173-00	FILM	0.47uF	5%	50V	C268	1-107-597-11	CERAMIC	22PF	5%	500V
C212	1-136-167-00	FILM	0.15uF	5%	50V	C269	1-136-157-00	FILM	0.022uF	5%	50V

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C270	1-136-161-00	FILM	0.047uF 5% 50V	C586	1-164-159-11	CERAMIC 0.1uF 50V	
C271	1-130-468-00	MYLAR	560PF 5% 50V	C587	1-164-159-11	CERAMIC 0.1uF 50V	
C272	1-136-803-11	FILM	560PF 5% 630V	C599	1-162-302-11	CERAMIC 0.0022uF 20% 16V	
C273	1-107-612-11	CERAMIC	100PF 5% 500V	< CONNECTOR >			
C274	1-136-153-00	FILM	0.01uF 5% 50V	CN501	1-764-817-11	CONNECTOR, BOARD TO BOARD 8P	
C276	1-124-925-11	ELECT	2.2uF 20% 100V	* CN502	1-560-062-00	PIN, CONNECTOR 4P	
C278	1-126-059-11	ELECT	10uF 20% 50V	CN503	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
C279	1-110-340-11	MYLAR	270PF 5% 50V	* CN504	1-564-519-11	PLUG, CONNECTOR 4P	
C280	1-126-049-11	ELECT	22uF 20% 50V	CN505	1-564-523-11	PLUG, CONNECTOR 8P	
C501	1-126-066-11	ELECT	470uF 20% 63V	CN506	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
C502	1-126-066-11	ELECT	470uF 20% 63V	CN507	1-691-770-11	PLUG (MICRO CONNECTOR) 8P	
C503	1-102-518-11	CERAMIC	33PF 5% 50V	* CN508	1-560-062-00	PIN, CONNECTOR 4P	
C504	1-102-518-11	CERAMIC	33PF 5% 50V	* CN509	1-560-061-00	PIN, CONNECTOR 3P	
C505	1-124-122-11	ELECT	100uF 20% 50V	* CN510	1-568-937-21	PIN, CONNECTOR 10P	
C506	1-136-153-00	FILM	0.01uF 5% 50V	* CN511	1-568-935-11	PIN, CONNECTOR 8P	
C507	1-136-153-00	FILM	0.01uF 5% 50V	CN512	1-506-468-11	PIN, CONNECTOR 3P	
C508	1-124-922-11	ELECT	1000uF 20% 63V	CN513	1-506-468-11	PIN, CONNECTOR 3P	
C509	1-124-922-11	ELECT	1000uF 20% 63V	CN705	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
C510	1-126-059-11	ELECT	10uF 20% 50V	CNP505	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
C511	1-126-059-11	ELECT	10uF 20% 50V	< FILTER >			
C513	1-126-059-11	ELECT	10uF 20% 50V	CP103	1-236-087-11	FILTER, LOW PASS	
C514	1-126-059-11	ELECT	10uF 20% 50V	CP203	1-236-087-11	FILTER, LOW PASS	
C515	1-164-159-11	CERAMIC	0.1uF 50V	< DIODE >			
C516	1-124-902-00	ELECT	0.47uF 20% 50V	D101	8-719-987-63	DIODE 1N4148M	
C518	1-126-059-11	ELECT	10uF 20% 50V	D102	8-719-987-63	DIODE 1N4148M	
C519	1-126-059-11	ELECT	10uF 20% 50V	D104	8-719-987-63	DIODE 1N4148M	
C522	1-126-163-11	ELECT	4.7uF 20% 50V	D108	8-719-987-63	DIODE 1N4148M	
C523	1-126-163-11	ELECT	4.7uF 20% 50V	D109	8-719-987-63	DIODE 1N4148M	
C526	1-126-059-11	ELECT	10uF 20% 50V	D201	8-719-987-63	DIODE 1N4148M	
C527	1-126-059-11	ELECT	10uF 20% 50V	D202	8-719-987-63	DIODE 1N4148M	
C529	1-124-907-11	ELECT	10uF 20% 50V	D204	8-719-987-63	DIODE 1N4148M	
C530	1-126-059-11	ELECT	10uF 20% 50V	D208	8-719-987-63	DIODE 1N4148M	
C531	1-126-059-11	ELECT	10uF 20% 50V	D209	8-719-987-63	DIODE 1N4148M	
C532	1-124-925-11	ELECT	2.2uF 20% 100V	D501	8-719-933-41	DIODE HZS6C3L	
C533	1-126-059-11	ELECT	10uF 20% 50V	D504	8-719-987-63	DIODE 1N4148M	
C534	1-124-477-11	ELECT	47uF 20% 25V	D507	8-719-987-63	DIODE 1N4148M	
C535	1-136-161-00	FILM	0.047uF 5% 50V	D508	8-719-000-81	DIODE UZL-7L3	
C536	1-124-907-11	ELECT	10uF 20% 50V	D509	8-719-000-81	DIODE UZL-7L3	
C537	1-124-925-11	ELECT	2.2uF 20% 100V	D516	8-719-000-81	DIODE UZL-7L3	
C538	1-162-282-31	CERAMIC	100PF 10% 50V	D517	8-719-000-81	DIODE UZL-7L3	
C539	1-136-228-11	FILM	0.0012uF 5% 100V	D520	8-719-987-63	DIODE 1N4148M	
C540	1-136-228-11	FILM	0.0012uF 5% 100V	D521	8-719-987-63	DIODE 1N4148M	
C541	1-136-233-11	FILM	0.0047uF 5% 100V	D522	8-719-987-63	DIODE 1N4148M	
C542	1-124-907-11	ELECT	10uF 20% 50V	D523	8-719-987-63	DIODE 1N4148M	
C543	1-136-559-11	FILM	0.0047uF 5% 630V	D524	8-719-987-63	DIODE 1N4148M	
C544	1-107-584-11	CERAMIC	4PF 0.25PF 500V				
C545	1-124-907-11	ELECT	10uF 20% 50V				
C548	1-126-059-11	ELECT	10uF 20% 50V				
C549	1-126-059-11	ELECT	10uF 20% 50V				
C585	1-124-902-00	ELECT	0.47uF 20% 50V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< IC >							
IC1	8-752-056-51	IC CXA1417Q		Q206	8-729-203-06	TRANSISTOR 2SK30A-GR2	
IC2	8-759-711-85	IC NJM4580E-D		Q207	8-729-922-37	TRANSISTOR 2SD2144S	
IC501	8-759-602-01	IC M5220P		Q209	8-729-922-37	TRANSISTOR 2SD2144S	
IC502	8-752-018-80	IC CX20188		Q210	8-729-203-06	TRANSISTOR 2SK30A-GR2	
IC505	8-759-711-35	IC NJM4580D		Q211	8-729-203-06	TRANSISTOR 2SK30A-GR2	
IC506	8-759-634-51	IC M5218AP		Q212	8-729-922-37	TRANSISTOR 2SD2144S	
IC510	8-759-711-35	IC NJM4580D		Q213	8-729-922-37	TRANSISTOR 2SD2144S	
IC511	8-752-018-80	IC CX20188		Q214	8-729-922-37	TRANSISTOR 2SD2144S	
IC513	8-759-711-35	IC NJM4580D		Q215	8-729-922-37	TRANSISTOR 2SD2144S	
IC514	8-759-106-56	IC uPC1297CA		Q216	8-729-922-37	TRANSISTOR 2SD2144S	
IC516	8-759-634-51	IC M5218AP		Q231	8-729-922-37	TRANSISTOR 2SD2144S	
IC517	8-759-634-51	IC M5218AP		Q501	8-729-141-89	TRANSISTOR 2SD1585-LK	
< JACK >				Q502	8-729-141-83	TRANSISTOR 2SB1094-LK	
J501	1-507-796-71	JACK (PHONES)		Q503	8-729-224-62	TRANSISTOR 2SK246-GR	
* J502	1-573-142-31	JACK, PIN 4P (LINE)		Q504	8-729-224-62	TRANSISTOR 2SK246-GR	
< COIL >				Q505	8-729-620-05	TRANSISTOR 2SC2603-EF	
L101	1-408-927-11	INDUCTOR 18mH		Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L102	1-408-920-00	INDUCTOR 4.7mH		Q507	8-729-620-05	TRANSISTOR 2SC2603-EF	
L103	1-408-918-11	INDUCTOR 3.3mH		Q508	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L104	1-408-916-11	INDUCTOR 2.2mH		Q509	8-729-922-37	TRANSISTOR 2SD2144S	
L105	1-408-929-00	INDUCTOR 27mH		Q512	8-729-620-05	TRANSISTOR 2SC2603-EF	
L201	1-408-927-11	INDUCTOR 18mH		Q513	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L202	1-408-920-00	INDUCTOR 4.7mH		Q514	8-729-620-05	TRANSISTOR 2SC2603-EF	
L203	1-408-918-11	INDUCTOR 3.3mH		Q515	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L204	1-408-916-11	INDUCTOR 2.2mH		Q516	8-729-900-89	TRANSISTOR DTC144ES	
L205	1-408-929-00	INDUCTOR 27mH		Q517	8-729-900-89	TRANSISTOR DTC144ES	
< TRANSISTOR >				Q518	8-729-900-89	TRANSISTOR DTC144ES	
Q101	8-729-922-37	TRANSISTOR 2SD2144S		Q521	8-729-900-61	TRANSISTOR DTA114ES	
Q102	8-729-922-37	TRANSISTOR 2SD2144S		Q522	8-729-900-80	TRANSISTOR DTC114ES	
Q103	8-729-203-06	TRANSISTOR 2SK30A-GR2		Q523	8-729-900-80	TRANSISTOR DTC114ES	
Q104	8-729-203-06	TRANSISTOR 2SK30A-GR2		Q524	8-729-900-80	TRANSISTOR DTC114ES	
Q106	8-729-203-06	TRANSISTOR 2SK30A-GR2		Q525	8-729-900-80	TRANSISTOR DTC114ES	
Q107	8-729-922-37	TRANSISTOR 2SD2144S		Q526	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q109	8-729-922-37	TRANSISTOR 2SD2144S		Q527	8-729-194-57	TRANSISTOR 2SC945-P	
Q110	8-729-203-06	TRANSISTOR 2SK30A-GR2		Q528	8-729-194-57	TRANSISTOR 2SC945-P	
Q111	8-729-203-06	TRANSISTOR 2SK30A-GR2		Q529	8-729-900-65	TRANSISTOR DTA144ES	
Q112	8-729-922-37	TRANSISTOR 2SD2144S		Q530	8-729-900-80	TRANSISTOR DTC114ES	
Q113	8-729-922-37	TRANSISTOR 2SD2144S		Q531	8-729-900-61	TRANSISTOR DTA114ES	
Q114	8-729-922-37	TRANSISTOR 2SD2144S		Q532	8-729-900-80	TRANSISTOR DTC114ES	
Q115	8-729-922-37	TRANSISTOR 2SD2144S		Q533	8-729-900-80	TRANSISTOR DTC114ES	
Q116	8-729-922-37	TRANSISTOR 2SD2144S		< RESISTOR >			
Q131	8-729-922-37	TRANSISTOR 2SD2144S		R1	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
Q201	8-729-922-37	TRANSISTOR 2SD2144S		R2	1-208-806-11	METAL GLAZE 10K 2% 1/10W	
Q202	8-729-922-37	TRANSISTOR 2SD2144S		R3	1-208-812-11	METAL GLAZE 18K 2% 1/10W	
Q203	8-729-203-06	TRANSISTOR 2SK30A-GR2		R4	1-208-556-41	METAL GLAZE 820K 2% 1/10W	
Q204	8-729-203-06	TRANSISTOR 2SK30A-GR2		R5	1-208-799-11	METAL GLAZE 5.1K 2% 1/10W	
				R6	1-208-787-11	METAL GLAZE 1.6K 2% 1/10W	
				R7	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	
				R8	1-216-667-11	METAL CHIP 4.7K 0.5% 1/10W	



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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R9	1-208-791-11	METAL GLAZE	2.4K 2% 1/10W	R111	1-247-710-11	CARBON	560 5% 1/4W F
R10	1-208-440-41	METAL GLAZE	1.3K 2% 1/10W	R112	1-247-725-11	CARBON	10K 5% 1/4W F
R11	1-216-615-11	METAL CHIP	33 0.5% 1/10W	R113	1-249-932-11	CARBON	2.4K 1% 1/4W
R12	1-216-619-11	METAL CHIP	47 0.5% 1/10W	R114	1-249-938-91	CARBON	4.3K 1% 1/4W
R13	1-208-784-11	METAL GLAZE	1.2K 2% 1/10W	R115	1-259-500-11	CARBON	1M 5% 1/6W
R14	1-216-667-11	METAL CHIP	4.7K 0.5% 1/10W	R116	1-259-422-11	CARBON	560 5% 1/6W
R15	1-208-791-11	METAL GLAZE	2.4K 2% 1/10W	R117	1-259-460-11	CARBON	22K 5% 1/6W
R16	1-216-615-11	METAL CHIP	33 0.5% 1/10W	R118	1-259-449-11	CARBON	7.5K 5% 1/6W
R17	1-216-619-11	METAL CHIP	47 0.5% 1/10W	R119	1-259-424-11	CARBON	680 5% 1/6W
R18	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W	R120	1-259-451-11	CARBON	9.1K 5% 1/6W
R19	1-208-787-11	METAL GLAZE	1.6K 2% 1/10W	R121	1-249-425-11	CARBON	4.7K 5% 1/4W F
R20	1-208-799-11	METAL GLAZE	5.1K 2% 1/10W	R122	1-249-973-11	CARBON	120K 1% 1/4W
R21	1-208-556-41	METAL GALZE	820K 2% 1/10W	R123	1-249-951-11	CARBON	15K 1% 1/4W
R22	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W	R124	1-249-949-11	CARBON	12K 1% 1/4W
R23	1-216-678-11	METAL CHIP	13K 0.5% 1/10W	R125	1-249-927-11	CARBON	1.5K 1% 1/4W
R24	1-216-673-11	METAL CHIP	8.2K 0.5% 1/10W	R128	1-259-468-11	CARBON	47K 5% 1/6W
R25	1-208-806-11	METAL GLAZE	10K 2% 1/10W	R129	1-247-716-11	CARBON	1.8K 5% 1/4W F
R26	1-216-676-11	METAL CHIP	11K 0.5% 1/10W	R130	1-249-425-11	CARBON	4.7K 5% 1/4W F
R27	1-208-799-11	METAL GLAZE	5.1K 2% 1/10W	R131	1-259-468-11	CARBON	47K 5% 1/6W
R28	1-216-695-11	METAL CHIP	68K 0.5% 1/10W	R132	1-259-452-11	CARBON	10K 5% 1/6W
R29	1-208-799-11	METAL GLAZE	5.1K 2% 1/10W	R133	1-215-438-00	METAL	5.1K 1% 1/4W
R30	1-208-791-11	METAL GLAZE	2.4K 2% 1/10W	R134	1-259-468-11	CARBON	47K 5% 1/6W
R31	1-208-811-11	METAL GLAZE	16K 2% 1/10W	R135	1-247-725-11	CARBON	10K 5% 1/4W F
R32	1-216-685-11	METAL CHIP	27K 0.5% 1/10W	R136	1-249-465-11	CARBON	47K 5% 1/4W
R33	1-208-813-11	METAL GLAZE	20K 2% 1/10W	R137	1-247-700-11	CARBON	100 5% 1/4W F
R34	1-216-684-11	METAL CHIP	24K 0.5% 1/10W	R138	1-249-425-11	CARBON	4.7K 5% 1/4W F
R35	1-208-817-11	METAL GLAZE	30K 2% 1/10W	R139	1-247-713-11	CARBON	1K 5% 1/4W F
R36	1-208-817-11	METAL GLAZE	30K 2% 1/10W	R140	1-259-428-11	CARBON	1K 5% 1/6W
R37	1-216-676-11	METAL CHIP	11K 0.5% 1/10W	R144	1-259-452-11	CARBON	10K 5% 1/6W
R38	1-208-819-11	METAL GLAZE	36K 2% 1/10W	R145	1-259-438-11	CARBON	2.7K 5% 1/6W
R39	1-208-799-11	METAL GLAZE	5.1K 2% 1/10W	R146	1-259-460-11	CARBON	22K 5% 1/6W
R40	1-208-817-11	METAL GLAZE	30K 2% 1/10W	R147	1-259-412-11	CARBON	220 5% 1/6W
R41	1-208-811-11	METAL GLAZE	16K 2% 1/10W	R148	1-247-700-11	CARBON	100 5% 1/4W F
R42	1-216-673-11	METAL CHIP	8.2K 0.5% 1/10W	R149	1-249-586-11	CARBON	27K 5% 1/4W
R43	1-216-676-11	METAL CHIP	11K 0.5% 1/10W	R150	1-259-476-11	CARBON	100K 5% 1/6W
R44	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R151	1-259-448-11	CARBON	6.8K 5% 1/6W
R45	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R152	1-259-442-11	CARBON	3.9K 5% 1/6W
R51	1-208-800-11	METAL GLAZE	5.6K 2% 1/10W	R153	1-259-449-11	CARBON	7.5K 5% 1/6W
R52	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W	R154	1-259-468-11	CARBON	47K 5% 1/6W
R55	1-208-789-11	METAL GLAZE	2K 2% 1/10W	R155	1-259-468-11	CARBON	47K 5% 1/6W
R101	1-259-476-11	CARBON	100K 5% 1/6W	R156	1-247-128-00	CARBON	750 5% 1/4W
R102	1-247-702-11	CARBON	150 5% 1/4W F	R157	1-247-725-11	CARBON	10K 5% 1/4W F
R103	1-247-722-11	CARBON	5.6K 5% 1/4W F	R158	1-249-932-11	CARBON	2.4K 1% 1/4W
R104	1-249-603-11	CARBON	130K 5% 1/4W	R159	1-249-938-91	CARBON	4.3K 1% 1/4W
R105	1-259-468-11	CARBON	47K 5% 1/6W	R160	1-259-500-11	CARBON	1M 5% 1/6W
R106	1-247-717-11	CARBON	2.2K 5% 1/4W F	R161	1-259-422-11	CARBON	560 5% 1/6W
R107	1-259-435-11	CARBON	2K 5% 1/6W	R162	1-259-460-11	CARBON	22K 5% 1/6W
R108	1-249-429-11	CARBON	10K 5% 1/4W	R163	1-259-449-11	CARBON	7.5K 5% 1/6W
R109	1-259-436-11	CARBON	2.2K 5% 1/6W	R164	1-259-424-11	CARBON	680 5% 1/6W
R110	1-247-152-00	CARBON	8.2K 5% 1/4W	R165	1-259-451-11	CARBON	9.1K 5% 1/6W

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<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>
R166	1-259-476-11	CARBON	100K	5%	1/6W		R223	1-249-951-11	CARBON	15K	1%	1/4W	
R167	1-249-425-11	CARBON	4.7K	5%	1/4W F		R224	1-249-949-11	CARBON	12K	1%	1/4W	
R168	1-249-955-11	CARBON	22K	1%	1/4W		R225	1-249-927-11	CARBON	1.5K	1%	1/4W	
R169	1-249-955-11	CARBON	22K	1%	1/4W		R228	1-259-468-11	CARBON	47K	5%	1/6W	
R170	1-249-935-11	CARBON	3.3K	1%	1/4W		R229	1-247-716-11	CARBON	1.8K	5%	1/4W F	
R171	1-249-935-11	CARBON	3.3K	1%	1/4W		R230	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R172	1-259-476-11	CARBON	100K	5%	1/6W		R231	1-259-468-11	CARBON	47K	5%	1/6W	
R173	1-249-465-11	CARBON	47K	5%	1/4W		R232	1-259-452-11	CARBON	10K	5%	1/6W	
R179	1-259-440-11	CARBON	3.3K	5%	1/6W		R233	1-215-438-00	METAL	5.1K	1%	1/4W	
R180	1-247-723-11	CARBON	6.8K	5%	1/4W F		R234	1-259-468-11	CARBON	47K	5%	1/6W	
R181	1-249-421-11	CARBON	2.2K	5%	1/4W F		R235	1-247-725-11	CARBON	10K	5%	1/4W F	
R182	1-259-461-11	CARBON	24K	5%	1/6W		R236	1-249-465-11	CARBON	47K	5%	1/4W	
R183	1-249-429-11	CARBON	10K	5%	1/4W		R237	1-247-700-11	CARBON	100	5%	1/4W F	
R184	1-259-468-11	CARBON	47K	5%	1/6W		R238	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R185	1-259-436-11	CARBON	2.2K	5%	1/6W		R239	1-247-713-11	CARBON	1K	5%	1/4W F	
R186	1-259-476-11	CARBON	100K	5%	1/6W		R240	1-259-428-11	CARBON	1K	5%	1/6W	
R187	1-259-469-11	CARBON	51K	5%	1/6W		R244	1-259-452-11	CARBON	10K	5%	1/6W	
R188	1-249-782-11	CARBON	150	5%	1/6W		R245	1-259-438-11	CARBON	2.7K	5%	1/6W	
R190	1-249-782-11	CARBON	150	5%	1/6W		R246	1-259-460-11	CARBON	22K	5%	1/6W	
R191	1-259-450-11	CARBON	8.2K	5%	1/6W		R247	1-259-412-11	CARBON	220	5%	1/6W	
R192	1-259-445-11	CARBON	5.1K	5%	1/6W		R248	1-247-700-11	CARBON	100	5%	1/4W F	
R193	1-259-407-91	CARBON	130	5%	1/6W		R249	1-249-586-11	CARBON	27K	5%	1/4W	
R194	1-259-444-11	CARBON	4.7K	5%	1/6W		R250	1-259-476-11	CARBON	100K	5%	1/6W	
R195	1-259-442-11	CARBON	3.9K	5%	1/6W		R251	1-259-448-11	CARBON	6.8K	5%	1/6W	
R196	1-249-429-11	CARBON	10K	5%	1/4W		R252	1-259-442-11	CARBON	3.9K	5%	1/6W	
R197	1-249-429-11	CARBON	10K	5%	1/4W		R253	1-259-449-11	CARBON	7.5K	5%	1/6W	
R198	1-249-429-11	CARBON	10K	5%	1/4W		R254	1-259-468-11	CARBON	47K	5%	1/6W	
R199	1-247-721-11	CARBON	4.7K	5%	1/4W F		R255	1-259-468-11	CARBON	47K	5%	1/6W	
R201	1-259-476-11	CARBON	100K	5%	1/6W		R256	1-247-128-00	CARBON	750	5%	1/4W	
R202	1-247-702-11	CARBON	150	5%	1/4W F		R257	1-247-725-11	CARBON	10K	5%	1/4W F	
R203	1-247-722-11	CARBON	5.6K	5%	1/4W F		R258	1-249-932-11	CARBON	2.4K	1%	1/4W	
R204	1-249-603-11	CARBON	130K	5%	1/4W		R259	1-249-938-91	CARBON	4.3K	1%	1/4W	
R205	1-259-468-11	CARBON	47K	5%	1/6W		R260	1-259-500-11	CARBON	1M	5%	1/6W	
R206	1-247-717-11	CARBON	2.2K	5%	1/4W F		R261	1-259-422-11	CARBON	560	5%	1/6W	
R207	1-259-435-11	CARBON	2K	5%	1/6W		R262	1-259-460-11	CARBON	22K	5%	1/6W	
R208	1-249-429-11	CARBON	10K	5%	1/4W		R263	1-259-449-11	CARBON	7.5K	5%	1/6W	
R209	1-259-436-11	CARBON	2.2K	5%	1/6W		R264	1-259-424-11	CARBON	680	5%	1/6W	
R210	1-247-152-00	CARBON	8.2K	5%	1/4W		R265	1-259-451-11	CARBON	9.1K	5%	1/6W	
R211	1-247-710-11	CARBON	560	5%	1/4W F		R266	1-259-476-11	CARBON	100K	5%	1/6W	
R212	1-247-725-11	CARBON	10K	5%	1/4W F		R267	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R213	1-249-932-11	CARBON	2.4K	1%	1/4W		R268	1-249-955-11	CARBON	22K	1%	1/4W	
R214	1-249-938-91	CARBON	4.3K	1%	1/4W		R269	1-249-955-11	CARBON	22K	1%	1/4W	
R215	1-259-500-11	CARBON	1M	5%	1/6W		R270	1-249-935-11	CARBON	3.3K	1%	1/4W	
R216	1-259-422-11	CARBON	560	5%	1/6W		R271	1-249-935-11	CARBON	3.3K	1%	1/4W	
R217	1-259-460-11	CARBON	22K	5%	1/6W		R272	1-259-476-11	CARBON	100K	5%	1/6W	
R218	1-259-449-11	CARBON	7.5K	5%	1/6W		R273	1-249-465-11	CARBON	47K	5%	1/4W	
R219	1-259-424-11	CARBON	680	5%	1/6W		R279	1-259-440-11	CARBON	3.3K	5%	1/6W	
R220	1-259-451-11	CARBON	9.1K	5%	1/6W		R280	1-247-723-11	CARBON	6.8K	5%	1/4W F	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W F		R281	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R222	1-249-973-11	CARBON	120K	1%	1/4W		R282	1-259-461-11	CARBON	24K	5%	1/6W	

# AUDIO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R283	1-249-429-11	CARBON	10K 5% 1/4W	R520	1-249-433-11	CARBON	22K 5% 1/4W
R284	1-259-468-11	CARBON	47K 5% 1/6W	R521	1-249-413-11	CARBON	470 5% 1/4W F
R285	1-259-436-11	CARBON	2. 2K 5% 1/6W	R522	1-249-413-11	CARBON	470 5% 1/4W F
R286	1-259-476-11	CARBON	100K 5% 1/6W	R523	1-249-432-11	CARBON	18K 5% 1/4W
R287	1-259-469-11	CARBON	51K 5% 1/6W	R524	1-249-433-11	CARBON	22K 5% 1/4W
R288	1-249-782-11	CARBON	150 5% 1/6W	R525	1-259-436-11	CARBON	2. 2K 5% 1/6W
R290	1-249-782-11	CARBON	150 5% 1/6W	R526	1-259-436-11	CARBON	2. 2K 5% 1/6W
R291	1-259-450-11	CARBON	8. 2K 5% 1/6W	R527	1-249-437-11	CARBON	47K 5% 1/4W
R292	1-259-445-11	CARBON	5. 1K 5% 1/6W	R528	1-259-436-11	CARBON	2. 2K 5% 1/6W
R293	1-259-407-91	CARBON	130 5% 1/6W	R529	1-259-436-11	CARBON	2. 2K 5% 1/6W
R294	1-259-444-11	CARBON	4. 7K 5% 1/6W	R530	1-259-468-11	CARBON	47K 5% 1/6W
R295	1-259-442-11	CARBON	3. 9K 5% 1/6W	R532	1-249-425-11	CARBON	4. 7K 5% 1/4W F
R296	1-249-429-11	CARBON	10K 5% 1/4W	R533	1-249-437-11	CARBON	47K 5% 1/4W
R297	1-249-429-11	CARBON	10K 5% 1/4W	R534	1-249-425-11	CARBON	4. 7K 5% 1/4W F
R298	1-249-429-11	CARBON	10K 5% 1/4W	R550	1-249-437-11	CARBON	47K 5% 1/4W
R299	1-247-721-11	CARBON	4. 7K 5% 1/4W F	R551	1-249-437-11	CARBON	47K 5% 1/4W
R301	1-249-435-11	CARBON	33K 5% 1/4W	R552	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R302	1-249-426-11	CARBON	5. 6K 5% 1/4W	R553	1-249-441-11	CARBON	100K 5% 1/4W
R303	1-247-883-00	CARBON	150K 5% 1/4W	R554	1-249-413-11	CARBON	470 5% 1/4W F
△R304	1-212-857-00	FUSIBLE	10 5% 1/4W F	R555	1-249-417-11	CARBON	1K 5% 1/4W F
R307	1-259-440-11	CARBON	3. 3K 5% 1/6W	R556	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R308	1-259-468-11	CARBON	47K 5% 1/6W	R557	1-249-417-11	CARBON	1K 5% 1/4W F
R309	1-249-963-11	CARBON	47K 1% 1/4W	R558	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R310	1-259-468-11	CARBON	47K 5% 1/6W	R560	1-249-433-11	CARBON	22K 5% 1/4W
R401	1-249-435-11	CARBON	33K 5% 1/4W	R561	1-249-427-11	CARBON	6. 8K 5% 1/4W F
R402	1-249-426-11	CARBON	5. 6K 5% 1/4W	R562	1-249-440-11	CARBON	82K 5% 1/4W
R403	1-247-883-00	CARBON	150K 5% 1/4W	R563	1-249-440-11	CARBON	82K 5% 1/4W
△R404	1-212-857-00	FUSIBLE	10 5% 1/4W F	△R564	1-212-853-00	FUSIBLE	6. 8 5% 1/4W F
R407	1-259-440-11	CARBON	3. 3K 5% 1/6W	△R565	1-212-853-00	FUSIBLE	6. 8 5% 1/4W F
R408	1-259-468-11	CARBON	47K 5% 1/6W	R566	1-249-381-11	CARBON	1 5% 1/4W F
R409	1-249-963-11	CARBON	47K 1% 1/4W	R567	1-249-437-11	CARBON	47K 5% 1/4W
R410	1-259-468-11	CARBON	47K 5% 1/6W	R568	1-215-472-00	METAL	130K 1% 1/4W
R501	1-247-704-11	CARBON	220 5% 1/4W F	R569	1-249-429-11	CARBON	10K 5% 1/4W
R502	1-247-704-11	CARBON	220 5% 1/4W F	R570	1-249-429-11	CARBON	10K 5% 1/4W
R503	1-247-717-11	CARBON	2. 2K 5% 1/4W F	R571	1-249-437-11	CARBON	47K 5% 1/4W
R504	1-247-717-11	CARBON	2. 2K 5% 1/4W F	R572	1-249-437-11	CARBON	47K 5% 1/4W
R505	1-247-717-11	CARBON	2. 2K 5% 1/4W F	R573	1-249-425-11	CARBON	4. 7K 5% 1/4W F
R506	1-249-437-11	CARBON	47K 5% 1/4W	< VARIABLE RESISTOR >			
R507	1-247-706-11	CARBON	330 5% 1/4W F	RV101	1-228-993-00	RES, ADJ, METAL	4. 7K
R508	1-249-926-11	CARBON	1. 3K 5% 1/4W	RV103	1-228-993-00	RES, ADJ, METAL	4. 7K
R509	1-249-556-11	CARBON	1. 5K 5% 1/4W	RV104	1-241-765-11	RES, ADJ, CARBON	22K
R510	1-249-556-11	CARBON	1. 5K 5% 1/4W	RV201	1-228-993-00	RES, ADJ, METAL	4. 7K
R511	1-249-425-11	CARBON	4. 7K 5% 1/4W F	RV203	1-228-993-00	RES, ADJ, METAL	4. 7K
R512	1-249-437-11	CARBON	47K 5% 1/4W	RV204	1-241-765-11	RES, ADJ, CARBON	22K
R514	1-249-429-11	CARBON	10K 5% 1/4W	RV501	1-230-344-11	RES, VAR, CARBON	20K/20K (REC LEVEL)
R515	1-215-472-00	METAL	130K 1% 1/4W	RV504	1-223-797-11	RES, VAR, CARBON	20K/20K (PHONES LEVEL)
R516	1-249-429-11	CARBON	10K 5% 1/4W	RV505	1-241-765-11	RES, ADJ, CARBON	22K
R517	1-249-441-11	CARBON	100K 5% 1/4W	RV506	1-241-763-11	RES, ADJ, CARBON	4. 7K
R518	1-249-417-11	CARBON	1K 5% 1/4W F				
R519	1-247-885-00	CARBON	180K 5% 1/4W				

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

**AUDIO**

**CAPSTAN**

**COMPARATOR**

**FG**

**MD**

Ref. No.	Part No.	Description	Remark
< TRANSFORMER >			
T101	1-433-384-11	TRANSFORMER, BIAS OSCILLATOR	
T201	1-433-384-11	TRANSFORMER, BIAS OSCILLATOR	
T501	1-433-359-11	TRANSFORMER, BIAS OSCILLATION	
< TEST PIN >			
* TP501	1-564-506-11	PLUG, CONNECTOR 3P	
* TP502	1-564-505-11	PLUG, CONNECTOR 2P	
*****			
*	A-2006-380-A	CAPSTAN BOARD, COMPLETE	
*****			
< CAPACITOR >			
C905	1-124-779-00	ELECT CHIP 10uF 20% 16V	
C906	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
C907	1-163-077-91	CERAMIC CHIP 0.1uF 50V	
C908	1-163-077-91	CERAMIC CHIP 0.1uF 50V	
C909	1-163-077-91	CERAMIC CHIP 0.1uF 50V	
C910	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C911	1-124-779-00	ELECT CHIP 10uF 20% 16V	
< HALL ELEMENT >			
H901	8-759-100-96	IC uPC4558G2	
H902	8-759-100-96	IC uPC4558G2	
H903	8-759-100-96	IC uPC4558G2	
< IC >			
IC902	8-752-064-50	IC CX20174	
< JUMPER RESISTOR >			
JR901	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR902	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR903	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR904	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR905	1-216-296-00	METAL CHIP 0 5% 1/8W	
< RESISTOR >			
R907	1-216-242-91	METAL GLAZE 68K 5% 1/8W	
R908	1-216-246-91	METAL GLAZE 100K 5% 1/8W	
R909	1-216-242-91	METAL GLAZE 68K 5% 1/8W	
R910	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R911	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R912	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R913	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R914	1-216-150-00	METAL GLAZE 10 5% 1/8W	
R915	1-216-150-00	METAL GLAZE 10 5% 1/8W	
*****			

Ref. No.	Part No.	Description	Remark
*	1-632-746-11	COMPARATOR BOARD	
*****			
< CAPACITOR >			
C951	1-136-157-00	FILM 0.022uF 5% 50V	
C952	1-124-282-00	ELECT 22uF 20% 25V	
C953	1-124-478-11	ELECT 100uF 20% 25V	
C954	1-124-477-11	ELECT 47uF 20% 25V	
C955	1-162-203-31	CERAMIC 15PF 5% 50V	
C956	1-162-203-31	CERAMIC 15PF 5% 50V	
C957	1-136-159-00	FILM 0.033uF 5% 50V	
< CONNECTOR >			
* CN951	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN952	1-564-518-11	PLUG, CONNECTOR 3P	
< IC >			
IC951	8-759-145-58	IC uPC4558C	
IC952	8-759-201-58	IC TC9142P	
< RESISTOR >			
R951	1-249-413-11	CARBON 470 5% 1/4W F	
R952	1-249-413-11	CARBON 470 5% 1/4W F	
R953	1-247-881-00	CARBON 120K 5% 1/4W	
R954	1-247-881-00	CARBON 120K 5% 1/4W	
R955	1-249-429-11	CARBON 10K 5% 1/4W	
R956	1-249-417-11	CARBON 1K 5% 1/4W F	
R957	1-249-417-11	CARBON 1K 5% 1/4W F	
R958	1-247-891-00	CARBON 330K 5% 1/4W	
R959	1-247-901-11	CARBON 820K 5% 1/4W	
R960	1-249-441-11	CARBON 100K 5% 1/4W	
< VIBRATOR >			
X951	1-760-560-11	VIBRATOR, CRYSTAL (4.412MHz)	
*****			
1-632-779-11 FG BOARD			
*****			
*****			
*	1-632-740-11	MD BOARD	
*****			
3-356-631-01 HOLDER (SENSOR)			
< CONNECTOR >			
CN1001	1-506-615-11	PIN, CONNECTOR 9P	
CN1002	1-564-501-11	PIN, CONNECTOR 8P	

**MD**

**REEL MOTOR**

**SYSTEM CONTROL**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< IC >		*	3-356-925-01	HEAT SINK	
IC1001	8-749-920-97	DIODE GP2S22B		*	3-362-478-31	HOLDER (T), LED	
IC1002	8-749-920-97	DIODE GP2S22B					
		< RESISTOR >		*	3-385-607-01	HOLDER, FL TUBE	
R1001	1-249-408-11	CARBON 180 5% 1/4W F		*	4-880-403-11	HEAT SINK	
R1002	1-249-408-11	CARBON 180 5% 1/4W F		*	4-942-204-01	PLATE, GROUND	
		< SWITCH >			7-685-871-01	SCREW +BVT 3X6 (S)	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)				< CAPACITOR >	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)		C320	1-126-962-11	ELECT 3.3uF 20% 50V	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)		C321	1-126-049-11	ELECT 22uF 20% 50V	
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)		C322	1-130-478-00	MYLAR 0.0039uF 5% 50V	
S1006	1-572-202-11	SWITCH, LEAF (HALF)		C323	1-130-482-00	MYLAR 0.0082uF 5% 50V	
S1007	1-572-125-11	SWITCH, LEAF (METAL)		C324	1-130-485-00	MYLAR 0.015uF 5% 50V	
S1008	1-572-125-11	SWITCH, LEAF (70u)		C325	1-130-478-00	MYLAR 0.0039uF 5% 50V	
		< TERMINAL >		C326	1-130-482-00	MYLAR 0.0082uF 5% 50V	
* TB1001	1-694-018-11	TERMINAL (5P) (ROTARY ENCODER)		C327	1-130-485-00	MYLAR 0.015uF 5% 50V	
		*****		C328	1-126-059-11	ELECT 10uF 20% 50V	
*	1-632-741-11	REEL MOTOR BOARD		C420	1-126-962-11	ELECT 3.3uF 20% 50V	
		*****		C421	1-126-049-11	ELECT 22uF 20% 50V	
		< CAPACITOR >		C422	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C1051	1-124-907-11	ELECT 10uF 20% 50V		C423	1-130-482-00	MYLAR 0.0082uF 5% 50V	
C1052	1-124-907-11	ELECT 10uF 20% 50V		C424	1-130-485-00	MYLAR 0.015uF 5% 50V	
C1053	1-164-159-11	CERAMIC 0.1uF 50V		C425	1-130-478-00	MYLAR 0.0039uF 5% 50V	
		< CONNECTOR >		C426	1-130-482-00	MYLAR 0.0082uF 5% 50V	
* CN1051	1-564-499-11	PIN, CONNECTOR 6P		C427	1-130-485-00	MYLAR 0.015uF 5% 50V	
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P		C428	1-126-059-11	ELECT 10uF 20% 50V	
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P		C550	1-126-059-11	ELECT 10uF 20% 50V	
		< RESISTOR >		C551	1-126-059-11	ELECT 10uF 20% 50V	
R1051	1-249-412-11	CARBON 390 5% 1/4W F		C552	1-130-471-00	MYLAR 0.001uF 5% 50V	
		*****		C553	1-130-471-00	MYLAR 0.001uF 5% 50V	
*	A-2007-394-A	SYSTEM CONTROL BOARD, COMPLETE		C554	1-130-477-00	MYLAR 0.0033uF 5% 50V	
		SYSTEM CONTROL (A) BOARD		C555	1-130-477-00	MYLAR 0.0033uF 5% 50V	
		SYSTEM CONTROL (B) BOARD		C556	1-136-157-00	FILM 0.022uF 5% 50V	
		SYSTEM CONTROL (C) BOARD		C557	1-136-157-00	FILM 0.022uF 5% 50V	
		SYSTEM CONTROL (D) BOARD		C558	1-124-925-11	ELECT 2.2uF 20% 100V	
		SYSTEM CONTROL (E) BOARD		C559	1-130-467-00	MYLAR 470PF 5% 50V	
		SYSTEM CONTROL (F) BOARD		C560	1-130-467-00	MYLAR 470PF 5% 50V	
		*****		C561	1-130-476-00	MYLAR 0.0027uF 5% 50V	
*	1-533-213-31	HOLDER, FUSE		C562	1-130-476-00	MYLAR 0.0027uF 5% 50V	
*	3-309-144-21	HEAT SINK		C563	1-130-472-00	MYLAR 0.0012uF 5% 50V	
*	3-354-927-21	CUSHION		C564	1-130-472-00	MYLAR 0.0012uF 5% 50V	
				C565	1-130-472-00	MYLAR 0.0012uF 5% 50V	
				C566	1-130-472-00	MYLAR 0.0012uF 5% 50V	
				C567	1-124-925-11	ELECT 2.2uF 20% 100V	
				C568	1-124-907-11	ELECT 10uF 20% 50V	
				C569	1-124-907-11	ELECT 10uF 20% 50V	
				C601	1-164-159-11	CERAMIC 0.1uF 50V	
				C602	1-164-159-11	CERAMIC 0.1uF 50V	
				C603	1-124-477-11	ELECT 47uF 20% 25V	
				C604	1-164-159-11	CERAMIC 0.1uF 50V	

# SYSTEM CONTROL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
C605	1-164-159-11	CERAMIC	0.1uF	50V	* CN801	1-568-937-11	PIN, CONNECTOR 10P	
C606	1-164-159-11	CERAMIC	0.1uF	50V	* CN802	1-568-934-11	PIN, CONNECTOR 7P	
△C701	1-161-744-51	CERAMIC	0.01uF	400V	* CN803	1-568-954-11	PIN, CONNECTOR 5P	
C702	1-136-165-00	FILM	0.1uF	5%	50V	* CN804	1-568-955-11	PIN, CONNECTOR 6P
C703	1-136-177-00	FILM	1uF	5%	50V	* CN805	1-564-342-11	PIN, CONNECTOR 8P
C704	1-104-644-11	ELECT	3300uF	20%	35	* CN806	1-506-503-11	PIN, CONNECTOR 9P
C705	1-104-644-11	ELECT	3300uF	20%	35	* CN807	1-564-340-00	PIN, CONNECTOR 6P
C706	1-126-105-11	ELECT	1000uF	20%	35V	CN810	1-506-469-11	PIN, CONNECTOR 4P
C707	1-124-898-11	ELECT	4700uF	20%	16V	< CONNECTOR >		
C708	1-124-122-11	ELECT	100uF	20%	50V	CNP501	1-764-810-11	CONNECTOR, BOARD TO BOARD 8P
C709	1-162-294-31	CERAMIC	0.001uF	10%	50V	* CNP511	1-568-935-11	PIN, CONNECTOR 8P
C710	1-162-294-31	CERAMIC	0.001uF	10%	50V	* CNP803	1-568-954-11	PIN, CONNECTOR 5P
C711	1-109-889-11	ELECT	1uF	20%	50V	* CNP804	1-568-955-11	PIN, CONNECTOR 6P
C752	1-126-946-11	ELECT	6800uF	20%	25V	< COMPOSITION CIRCUIT BLOCK >		
C755	1-124-927-11	ELECT	4.7uF	20%	100V	CP801	1-236-984-11	COMPOSITION CIRCUIT BLOCK
C756	1-124-556-11	ELECT	2200uF	20%	16V	CP802	1-239-822-11	COMPOSITION CIRCUIT BLOCK
C757	1-124-927-11	ELECT	4.7uF	20%	100V	CP803	1-236-984-11	COMPOSITION CIRCUIT BLOCK
C758	1-124-927-11	ELECT	4.7uF	20%	100V	CP851	1-239-598-11	COMPOSITION CIRCUIT BLOCK
C759	1-162-211-31	CERAMIC	33PF	5%	50V	CP852	1-233-252-11	CIRCUIT BLOCK, COMPOSITION
C760	1-124-360-00	ELECT	1000uF	20%	16V	CP853	1-233-267-11	CIRCUIT BLOCK, COMPOSITION
C761	1-124-903-11	ELECT	1uF	20%	50V	CP854	1-233-266-11	CIRCUIT BLOCK, COMPOSITION
C762	1-124-471-00	ELECT	1000uF	20%	6.3V	< DIODE >		
C765	1-124-907-11	ELECT	10uF	20%	50V	D120	8-719-000-54	DIODE UZL-6L3
C766	1-124-122-11	ELECT	100uF	20%	50V	D121	8-719-987-63	DIODE 1N4148M
C767	1-126-803-11	ELECT	47uF	20%	10V	D122	8-719-987-63	DIODE 1N4148M
C768	1-124-927-11	ELECT	4.7uF	20%	100V	D220	8-719-000-54	DIODE UZL-6L3
C769	1-124-925-11	ELECT	2.2uF	20%	100V	D221	8-719-987-63	DIODE 1N4148M
C801	1-124-443-00	ELECT	100uF	20%	10V	D222	8-719-987-63	DIODE 1N4148M
C802	1-162-294-31	CERAMIC	0.001uF	10%	50V	D514	8-719-987-63	DIODE 1N4148M
C803	1-124-472-11	ELECT	470uF	20%	10V	D515	8-719-987-63	DIODE 1N4148M
C804	1-164-159-11	CERAMIC	0.1uF	50V	D601	8-719-987-63	DIODE 1N4148M	
C805	1-161-379-00	CERAMIC	0.01uF	20%	25V	D602	8-719-987-63	DIODE 1N4148M
C811	1-162-294-31	CERAMIC	0.001uF	10%	50V	D603	8-719-987-63	DIODE 1N4148M
C812	1-162-294-31	CERAMIC	0.001uF	10%	50V	D604	8-719-987-63	DIODE 1N4148M
C851	1-124-584-00	ELECT	100uF	20%	10V	D701	8-719-230-02	DIODE 30DF2
C852	1-164-159-11	CERAMIC	0.1uF	50V	D702	8-719-230-02	DIODE 30DF2	
C853	1-164-159-11	CERAMIC	0.1uF	50V	D703	8-719-230-02	DIODE 30DF2	
C854	1-164-159-11	CERAMIC	0.1uF	50V	D704	8-719-230-02	DIODE 30DF2	
C855	1-164-159-11	CERAMIC	0.1uF	50V	D705	8-719-200-77	DIODE 10E2N	
C856	1-162-294-31	CERAMIC	0.001uF	10%	50V	D706	8-719-200-77	DIODE 10E2N
C857	1-162-294-31	CERAMIC	0.001uF	10%	50V	D707	8-719-200-77	DIODE 10E2N
C858	1-162-294-31	CERAMIC	0.001uF	10%	50V	D708	8-719-200-77	DIODE 10E2N
C859	1-164-159-11	CERAMIC	0.1uF	50V	D709	8-719-200-77	DIODE 10E2N	
C891	1-124-234-00	ELECT	22uF	20%	16V	D710	8-719-987-63	DIODE 1N4148M
< CONNECTOR >								
* CN701	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P			D751	8-719-200-77	DIODE 10E2N	
CN702	1-568-226-11	PIN, CONNECTOR 2P			D752	8-719-001-79	DIODE UZL-12H1	
CN703	1-564-506-11	PLUG, CONNECTOR 3P			D753	8-719-933-41	DIODE HZS6C3L	
CN704	1-564-511-11	PLUG, CONNECTOR 8P						

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

# SYSTEM CONTROL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D754	8-719-933-36	DIODE		Q311	8-729-620-05	TRANSISTOR	2SC2603-EF
D756	8-719-002-48	DIODE		Q401	8-729-620-05	TRANSISTOR	2SC2603-EF
D757	8-719-200-77	DIODE		Q402	8-729-620-05	TRANSISTOR	2SC2603-EF
D758	8-719-933-41	DIODE		Q403	8-729-620-05	TRANSISTOR	2SC2603-EF
D801	8-719-987-63	DIODE		Q404	8-729-620-05	TRANSISTOR	2SC2603-EF
D851	8-719-301-44	LED	SEL2410E-D (▶)	Q405	8-729-620-05	TRANSISTOR	2SC2603-EF
D852	8-719-301-61	DIODE	SEL2910A-D (PAUSE   )	Q406	8-729-620-05	TRANSISTOR	2SC2603-EF
D853	8-719-301-39	LED	SEL2210S (REC ●)	Q407	8-729-620-05	TRANSISTOR	2SC2603-EF
D854	8-719-987-63	DIODE		Q408	8-729-620-05	TRANSISTOR	2SC2603-EF
D855	8-719-987-63	DIODE		Q409	8-729-620-05	TRANSISTOR	2SC2603-EF
D856	8-719-987-63	DIODE		Q410	8-729-620-05	TRANSISTOR	2SC2603-EF
< FLUORESCENT INDICATOR >				Q411	8-729-620-05	TRANSISTOR	2SC2603-EF
FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT		Q601	8-729-900-89	TRANSISTOR	DTC144ES
< IC >				Q602	8-729-900-89	TRANSISTOR	DTC144ES
IC520	8-759-634-51	IC	M5218AP	Q603	8-729-900-89	TRANSISTOR	DTC144ES
IC521	8-759-634-51	IC	M5218AP	Q604	8-729-900-65	TRANSISTOR	DTA144ES
IC522	8-759-634-51	IC	M5218AP	Q605	8-729-900-65	TRANSISTOR	DTA144ES
IC523	8-759-634-51	IC	M5218AP	Q606	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC524	8-759-711-35	IC	NJM4580D	Q607	8-729-140-97	TRANSISTOR	2SB734-34
IC525	8-759-711-35	IC	NJM4580D	Q608	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC601	8-759-973-95	IC	BA6219B	Q701	8-729-620-05	TRANSISTOR	2SC2603-EF
IC602	8-759-822-09	IC	LB1641	Q751	8-729-209-15	TRANSISTOR	2SD2012
IC603	8-759-505-55	IC	NJM4558L	Q752	8-729-209-15	TRANSISTOR	2SD2012
IC751	8-759-165-85	IC	PST600H	Q753	8-729-141-83	TRANSISTOR	2SB1094-LK
IC801	8-759-331-29	IC	M38172M4-133FP	Q755	8-729-140-97	TRANSISTOR	2SB734-34
IC802	8-759-248-66	IC	AT24C01-10PC	Q756	8-729-620-05	TRANSISTOR	2SC2603-EF
IC851	8-759-291-05	IC	M38122M2-069SP	Q757	8-729-620-05	TRANSISTOR	2SC2603-EF
IC891	8-741-810-59	IC	SBX1810-59	Q758	8-729-620-05	TRANSISTOR	2SC2603-EF
IC901	8-759-634-51	IC	M5218AP	Q759	8-729-620-05	TRANSISTOR	2SC2603-EF
IC902	8-759-634-51	IC	M5218AP	Q801	8-729-900-65	TRANSISTOR	DTA144ES
< PILOT LAMP >				Q802	8-729-900-65	TRANSISTOR	DTA144ES
PL901	1-518-471-31	LAMP, PILOT		Q803	8-729-900-89	TRANSISTOR	DTC144ES
PL902	1-518-471-31	LAMP, PILOT		Q851	8-729-900-61	TRANSISTOR	DTA114ES
PL903	1-518-471-31	LAMP, PILOT		Q852	8-729-900-61	TRANSISTOR	DTA114ES
< TRANSISTOR >				Q853	8-729-900-61	TRANSISTOR	DTA114ES
Q301	8-729-620-05	TRANSISTOR	2SC2603-EF	Q854	8-729-900-61	TRANSISTOR	DTA114ES
Q302	8-729-620-05	TRANSISTOR	2SC2603-EF	Q901	8-729-922-37	TRANSISTOR	2SD2144S
Q303	8-729-620-05	TRANSISTOR	2SC2603-EF	Q902	8-729-922-37	TRANSISTOR	2SD2144S
Q304	8-729-620-05	TRANSISTOR	2SC2603-EF	Q903	8-729-922-37	TRANSISTOR	2SD2144S
Q305	8-729-620-05	TRANSISTOR	2SC2603-EF	Q904	8-729-922-37	TRANSISTOR	2SD2144S
Q306	8-729-620-05	TRANSISTOR	2SC2603-EF	< RESISTOR >			
Q307	8-729-620-05	TRANSISTOR	2SC2603-EF	R320	1-215-465-00	METAL	68K 1% 1/4W
Q308	8-729-620-05	TRANSISTOR	2SC2603-EF	R321	1-215-448-00	METAL	13K 1% 1/4W
Q309	8-729-620-05	TRANSISTOR	2SC2603-EF	R322	1-215-403-00	METAL	180 1% 1/4W
Q310	8-729-620-05	TRANSISTOR	2SC2603-EF	R323	1-215-473-00	METAL	150K 1% 1/4W
				R324	1-215-471-00	METAL	120K 1% 1/4W
				R330	1-249-971-11	CARBON	100K 1% 1/4W
				R331	1-249-971-11	CARBON	100K 1% 1/4W
				R332	1-249-930-11	CARBON	2K 1% 1/4W
				R333	1-249-971-11	CARBON	100K 1% 1/4W

# SYSTEM CONTROL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R334	1-249-961-11	CARBON	39K 1% 1/4W	R443	1-247-891-00	CARBON	330K 5% 1/4W
R335	1-249-954-11	CARBON	20K 1% 1/4W	R444	1-247-891-00	CARBON	330K 5% 1/4W
R336	1-249-947-11	CARBON	10K 1% 1/4W	R445	1-247-891-00	CARBON	330K 5% 1/4W
R337	1-249-930-11	CARBON	2K 1% 1/4W	R446	1-247-891-00	CARBON	330K 5% 1/4W
R338	1-249-961-11	CARBON	39K 1% 1/4W	R447	1-249-429-11	CARBON	10K 5% 1/4W
R339	1-249-954-11	CARBON	20K 1% 1/4W	R448	1-249-429-11	CARBON	10K 5% 1/4W
R340	1-249-947-11	CARBON	10K 1% 1/4W	R449	1-249-429-11	CARBON	10K 5% 1/4W
R341	1-247-891-00	CARBON	330K 5% 1/4W	R450	1-249-429-11	CARBON	10K 5% 1/4W
R342	1-247-891-00	CARBON	330K 5% 1/4W	R451	1-249-429-11	CARBON	10K 5% 1/4W
R343	1-247-891-00	CARBON	330K 5% 1/4W	R452	1-249-429-11	CARBON	10K 5% 1/4W
R344	1-247-891-00	CARBON	330K 5% 1/4W	R455	1-249-917-11	CARBON	560 1% 1/4W
R345	1-247-891-00	CARBON	330K 5% 1/4W	R456	1-249-952-11	CARBON	16K 1% 1/4W
R346	1-247-891-00	CARBON	330K 5% 1/4W	R457	1-249-945-11	CARBON	8. 2K 1% 1/4W
R347	1-249-429-11	CARBON	10K 5% 1/4W	R458	1-249-937-11	CARBON	3. 9K 1% 1/4W F
R348	1-249-429-11	CARBON	10K 5% 1/4W	R459	1-249-930-11	CARBON	2K 1% 1/4W
R349	1-249-429-11	CARBON	10K 5% 1/4W	R460	1-249-923-11	CARBON	1K 1% 1/4W
R350	1-249-429-11	CARBON	10K 5% 1/4W	R461	1-249-429-11	CARBON	10K 5% 1/4W
R351	1-249-429-11	CARBON	10K 5% 1/4W	R462	1-249-429-11	CARBON	10K 5% 1/4W
R352	1-249-429-11	CARBON	10K 5% 1/4W	R463	1-249-429-11	CARBON	10K 5% 1/4W
R355	1-249-917-11	CARBON	560 1% 1/4W	R464	1-249-429-11	CARBON	10K 5% 1/4W
R356	1-249-952-11	CARBON	16K 1% 1/4W	R465	1-249-429-11	CARBON	10K 5% 1/4W
R357	1-249-945-11	CARBON	8. 2K 1% 1/4W	R466	1-249-461-11	CARBON	18K 5% 1/4W
R358	1-249-937-11	CARBON	3. 9K 1% 1/4W F	R467	1-249-971-11	CARBON	100K 1% 1/4W
R359	1-249-930-11	CARBON	2K 1% 1/4W	R601	1-249-429-11	CARBON	10K 5% 1/4W
R360	1-249-923-11	CARBON	1K 1% 1/4W	R602	1-249-426-11	CARBON	5. 6K 5% 1/4W
R361	1-249-429-11	CARBON	10K 5% 1/4W	R603	1-249-413-11	CARBON	470 5% 1/4W F
R362	1-249-429-11	CARBON	10K 5% 1/4W	R604	1-249-429-11	CARBON	10K 5% 1/4W
R363	1-249-429-11	CARBON	10K 5% 1/4W	R605	1-249-429-11	CARBON	10K 5% 1/4W
R364	1-249-429-11	CARBON	10K 5% 1/4W	△R606	1-219-139-11	FUSIBLE	0. 68 10% 1/4W
R365	1-249-429-11	CARBON	10K 5% 1/4W	R607	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R366	1-249-461-11	CARBON	18K 5% 1/4W	R608	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R367	1-249-971-11	CARBON	100K 1% 1/4W	R609	1-249-426-11	CARBON	5. 6K 5% 1/4W
R420	1-215-465-00	METAL	68K 1% 1/4W	R610	1-249-423-11	CARBON	3. 3K 5% 1/4W F
R421	1-215-448-00	METAL	13K 1% 1/4W	R611	1-247-807-31	CARBON	100 5% 1/4W
R422	1-215-403-00	METAL	180 1% 1/4W	R612	1-249-419-11	CARBON	1. 5K 5% 1/4W F
R423	1-215-473-00	METAL	150K 1% 1/4W	R613	1-247-807-31	CARBON	100 5% 1/4W
R424	1-215-471-00	METAL	120K 1% 1/4W	R614	1-249-403-11	CARBON	68 5% 1/4W F
R430	1-249-971-11	CARBON	100K 1% 1/4W	R615	1-249-428-11	CARBON	8. 2K 5% 1/4W F
R431	1-249-971-11	CARBON	100K 1% 1/4W	R616	1-249-427-11	CARBON	6. 8K 5% 1/4W F
R432	1-249-930-11	CARBON	2K 1% 1/4W	R617	1-249-428-11	CARBON	8. 2K 5% 1/4W F
R433	1-249-971-11	CARBON	100K 1% 1/4W	△R618	1-212-954-11	FUSIBLE	6. 8 5% 1/2W F
R434	1-249-961-11	CARBON	39K 1% 1/4W	△R701	1-212-863-00	FUSIBLE	18 5% 1/4W F
R435	1-249-954-11	CARBON	20K 1% 1/4W	R702	1-249-439-11	CARBON	68K 5% 1/4W
R436	1-249-947-11	CARBON	10K 1% 1/4W	R703	1-249-439-11	CARBON	68K 5% 1/4W
R437	1-249-930-11	CARBON	2K 1% 1/4W	R751	1-249-423-11	CARBON	3. 3K 5% 1/4W F
R438	1-249-961-11	CARBON	39K 1% 1/4W	R752	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R439	1-249-954-11	CARBON	20K 1% 1/4W	R753	1-249-425-11	CARBON	4. 7K 5% 1/4W F
R440	1-249-947-11	CARBON	10K 1% 1/4W	R754	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R441	1-247-891-00	CARBON	330K 5% 1/4W	R755	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R442	1-247-891-00	CARBON	330K 5% 1/4W	R756	1-249-421-11	CARBON	2. 2K 5% 1/4W F

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



# SYSTEM CONTROL

<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>
R757	1-249-427-11	CARBON	6. 8K	5%	1/4W	F	R862	1-249-409-11	CARBON	220	5%	1/4W	F
R758	1-249-423-11	CARBON	3. 3K	5%	1/4W	F	R863	1-249-409-11	CARBON	220	5%	1/4W	F
R759	1-249-437-11	CARBON	47K	5%	1/4W		R864	1-249-429-11	CARBON	10K	5%	1/4W	
R760	1-249-421-11	CARBON	2. 2K	5%	1/4W	F	R865	1-249-429-11	CARBON	10K	5%	1/4W	
R765	1-249-422-11	CARBON	2. 7K	5%	1/4W	F	R866	1-249-429-11	CARBON	10K	5%	1/4W	
R766	1-249-437-11	CARBON	47K	5%	1/4W		R867	1-249-429-11	CARBON	10K	5%	1/4W	
R767	1-249-437-11	CARBON	47K	5%	1/4W		R868	1-249-421-11	CARBON	2. 2K	5%	1/4W	F
R768	1-249-429-11	CARBON	10K	5%	1/4W		R869	1-249-421-11	CARBON	2. 2K	5%	1/4W	F
R769	1-247-807-31	CARBON	100	5%	1/4W		R870	1-249-421-11	CARBON	2. 2K	5%	1/4W	F
R770	1-249-441-11	CARBON	100K	5%	1/4W		R872	1-247-807-31	CARBON	100	5%	1/4W	
R771	1-249-441-11	CARBON	100K	5%	1/4W		R875	1-249-423-11	CARBON	3. 3K	5%	1/4W	F
R772	1-249-417-11	CARBON	1K	5%	1/4W	F	R876	1-249-423-11	CARBON	3. 3K	5%	1/4W	F
R801	1-247-807-31	CARBON	100	5%	1/4W		R877	1-249-423-11	CARBON	3. 3K	5%	1/4W	F
R802	1-247-807-31	CARBON	100	5%	1/4W		R891	1-249-422-11	CARBON	2. 7K	5%	1/4W	F
R804	1-247-807-31	CARBON	100	5%	1/4W		R892	1-249-424-11	CARBON	3. 9K	5%	1/4W	F
R805	1-249-423-11	CARBON	3. 3K	5%	1/4W	F	R893	1-249-428-11	CARBON	8. 2K	5%	1/4W	F
R806	1-249-429-11	CARBON	10K	5%	1/4W		R894	1-249-422-11	CARBON	2. 7K	5%	1/4W	F
R807	1-249-429-11	CARBON	10K	5%	1/4W		R895	1-249-424-11	CARBON	3. 9K	5%	1/4W	F
R808	1-247-807-31	CARBON	100	5%	1/4W		R896	1-249-428-11	CARBON	8. 2K	5%	1/4W	F
R809	1-249-429-11	CARBON	10K	5%	1/4W		R897	1-249-429-11	CARBON	10K	5%	1/4W	
R810	1-249-436-11	CARBON	39K	5%	1/4W		R901	1-249-433-11	CARBON	22K	5%	1/4W	
R811	1-249-436-11	CARBON	39K	5%	1/4W		R902	1-247-856-00	CARBON	11K	5%	1/4W	
R812	1-249-421-11	CARBON	2. 2K	5%	1/4W	F	R903	1-249-397-11	CARBON	22	5%	1/4W	F
R813	1-249-429-11	CARBON	10K	5%	1/4W		R904	1-249-406-11	CARBON	120	5%	1/4W	F
R814	1-249-429-11	CARBON	10K	5%	1/4W		R905	1-247-856-00	CARBON	11K	5%	1/4W	
R815	1-249-429-11	CARBON	10K	5%	1/4W		R906	1-249-433-11	CARBON	22K	5%	1/4W	
R816	1-247-807-31	CARBON	100	5%	1/4W		R907	1-247-860-11	CARBON	16K	5%	1/4W	
R817	1-247-807-31	CARBON	100	5%	1/4W		R908	1-249-397-11	CARBON	22	5%	1/4W	F
R818	1-247-807-31	CARBON	100	5%	1/4W		R909	1-249-406-11	CARBON	120	5%	1/4W	F
R819	1-247-807-31	CARBON	100	5%	1/4W		R910	1-247-860-11	CARBON	16K	5%	1/4W	
R820	1-247-807-31	CARBON	100	5%	1/4W		R911	1-249-433-11	CARBON	22K	5%	1/4W	
R821	1-247-807-31	CARBON	100	5%	1/4W		R912	1-249-432-11	CARBON	18K	5%	1/4W	
R822	1-247-807-31	CARBON	100	5%	1/4W		R913	1-249-397-11	CARBON	22	5%	1/4W	F
R823	1-247-807-31	CARBON	100	5%	1/4W		R914	1-249-406-11	CARBON	120	5%	1/4W	F
R824	1-249-429-11	CARBON	10K	5%	1/4W		R915	1-249-432-11	CARBON	18K	5%	1/4W	
R825	1-249-429-11	CARBON	10K	5%	1/4W		R916	1-247-887-00	CARBON	220K	5%	1/4W	
R826	1-249-429-11	CARBON	10K	5%	1/4W		R917	1-247-887-00	CARBON	220K	5%	1/4W	
R841	1-249-436-11	CARBON	39K	5%	1/4W		R918	1-247-887-00	CARBON	220K	5%	1/4W	
R842	1-249-436-11	CARBON	39K	5%	1/4W		R919	1-247-807-31	CARBON	100	5%	1/4W	
R851	1-249-422-11	CARBON	2. 7K	5%	1/4W	F	R920	1-249-417-11	CARBON	1K	5%	1/4W	F
R852	1-249-422-11	CARBON	2. 7K	5%	1/4W	F	R921	1-249-437-11	CARBON	47K	5%	1/4W	
R853	1-249-424-11	CARBON	3. 9K	5%	1/4W	F	R922	1-249-438-11	CARBON	56K	5%	1/4W	
R854	1-249-428-11	CARBON	8. 2K	5%	1/4W	F	R923	1-249-438-11	CARBON	56K	5%	1/4W	
R855	1-249-434-11	CARBON	27K	5%	1/4W		R924	1-249-428-11	CARBON	8. 2K	5%	1/4W	F
R856	1-249-422-11	CARBON	2. 7K	5%	1/4W	F	R925	1-247-854-11	CARBON	9. 1K	5%	1/4W	
R857	1-249-424-11	CARBON	3. 9K	5%	1/4W	F	R926	1-247-854-11	CARBON	9. 1K	5%	1/4W	
R858	1-249-428-11	CARBON	8. 2K	5%	1/4W	F	R927	1-247-881-00	CARBON	120K	5%	1/4W	
R859	1-249-434-11	CARBON	27K	5%	1/4W		R928	1-247-881-00	CARBON	120K	5%	1/4W	
R860	1-249-422-11	CARBON	2. 7K	5%	1/4W	F	R929	1-249-428-11	CARBON	8. 2K	5%	1/4W	F
R861	1-249-411-11	CARBON	330	5%	1/4W		R930	1-247-881-00	CARBON	120K	5%	1/4W	

# SYSTEM CONTROL

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R931	1-247-881-00	CARBON	120K 5% 1/4W	△54	1-575-651-21	CORD, POWER	
R932	1-249-426-11	CARBON	5.6K 5% 1/4W	* 65	1-533-213-31	HOLDER, FUSE	
R933	1-249-430-11	CARBON	12K 5% 1/4W	D1001	8-719-980-85	DIODE SLF325C	
R934	1-249-408-11	CARBON	180 5% 1/4W	△F701	1-532-285-00	FUSE, TIME-LAG (T1. 25A 250V)	
R935	1-247-883-00	CARBON	150K 5% 1/4W	FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT	
R936	1-249-465-11	CARBON	47K 5% 1/4W	HE501	1-543-836-11	HEAD, MAGNETIC (ERASE)	
R937	1-249-433-11	CARBON	22K 5% 1/4W	HRP501	1-543-742-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
< VARIABLE RESISTOR >				IC1001	8-749-920-97	DIODE GP2S22B	
RV801	1-241-762-11	RES, ADJ, CARBON 2.2K		IC1002	8-749-920-97	DIODE GP2S22B	
RV891	1-223-266-11	RES, VAR, CARBON 10K (REC LEVEL)		M1001	X-3356-638-1	MOTOR (REEL R) ASSY	
RV892	1-223-266-11	RES, VAR, CARBON 10K (REC EQ)		M1002	X-3356-604-1	MOTOR (ASSIST) ASSY	
RV893	1-223-266-11	RES, VAR, CARBON 10K (BIAS)		S1001	1-466-238-11	ENCODER, ROTARY	
RV904	1-241-759-21	RES, ADJ, CARBON 220		△T001	1-427-834-11	TRANSFORMER, POWER	
RV905	1-241-759-21	RES, ADJ, CARBON 220		*****			
RV906	1-241-759-21	RES, ADJ, CARBON 220		ACCESSORIES & PACKING MATERIALS			
< SWITCH >				*****			
△S701	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)		1-558-271-11	CORD, CONNECTION (AUDIO 108cm)		
S851	1-554-303-21	SWITCH, TACTILE (RESET)		3-759-737-11	MANUAL, INSTRUCTION		
S852	1-554-303-21	SWITCH, TACTILE (MEMORY)		(ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP)			
S853	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE △)		3-759-737-41	MANUAL, INSTRUCTION		
S854	1-554-303-21	SWITCH, TACTILE (■)		(GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)			
S855	1-554-303-21	SWITCH, TACTILE (◀◀)		3-759-737-51	MANUAL, INSTRUCTION (GERMAN) (G)		
S856	1-554-303-21	SWITCH, TACTILE (▶▶)		* 3-919-601-01	CUSHION		
S857	1-554-303-21	SWITCH, TACTILE (●)		* 3-919-604-21	INDIVIDUAL CARTON		
S858	1-554-303-21	SWITCH, TACTILE (▶)		*****			
S859	1-554-303-21	SWITCH, TACTILE (PAUSE ■■)		*****			
S860	1-554-303-21	SWITCH, TACTILE (◀◀◀)		*****			
S861	1-554-303-21	SWITCH, TACTILE (▶▶▶)		HARDWARE LIST			
S862	1-554-303-21	SWITCH, TACTILE (REC MUTE ●)		*****			
S863	1-572-268-11	SWITCH, SLIDE (TIMER)		#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
S891	1-554-303-21	SWITCH, TACTILE (MONITOR)		#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
S892	1-554-303-21	SWITCH, TACTILE (MPX FILTER)		#3	7-682-548-09	SCREW +BVTT 3X8 (S)	
S894	1-554-303-21	SWITCH, TACTILE (CALIBRATION)		#4	7-682-565-09	SCREW +BVTT 4X16 (S)	
S895	1-692-368-11	SWITCH, ROTARY (DOLBY NR)		#5	7-682-547-09	SCREW +BV 3X6, S TIGHT	
< TEST PIN >				#6	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
* TP503	1-564-506-11	PLUG, CONNECTOR 3P		#7	7-621-775-20	SCREW +B 2.6X5	
* TP801	1-564-505-11	PLUG, CONNECTOR 2P		#8	7-628-253-00	SCREW +PS 2X4	
< VIBRATOR >				#9	7-621-255-20	SCREW +BVTT 2X4 (S)	
X801	1-577-360-11	VIBRATOR, CERAMIC (6MHz)		#10	7-621-772-20	SCREW +B 2X5	
X851	1-577-360-11	VIBRATOR, CERAMIC (6MHz)		#11	7-671-154-01	STENLESS BALL	
*****				#12	7-685-870-01	SCREW +BVTT 3X5 (S)	
MISCELLANEOUS				#13	7-621-772-70	SCREW +B 2X14	
*****				#14	7-622-205-05	NUT M2 TYPE2	
* 51	1-590-321-61	LEAD (WITH CONNECTOR)		#15	7-628-254-10	SCREW +PS 2.6X6	
*****				#16	7-682-648-09	SCREW +PS 3X8	
*****				#17	7-621-255-35	SCREW +BVTT 2X5 (S)	
*****				#18	7-685-861-01	SCREW +BVTT 2.6X5 (S)	

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

