

# TC-K333ESG/K950ES

## SERVICE MANUAL



TC-K333ESG

*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*  
 TC-K950ES  
*E Model*  
 TC-K333ESG

Dolby noise reduction manufactured under license from  
 Dolby Laboratories Licensing Corporation.  
 "DOLBY" and the double-D symbol  are trademarks of  
 Dolby Laboratories Licensing Corporation.

| Model Name Using Similar Mechanism | New       |
|------------------------------------|-----------|
| Tape Transport Mechanism Type      | TCM-200D1 |

### SPECIFICATIONS

|                              |                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------|
| Recording system             | 4-track 2-channel stereo                                                                 |
| Bias                         | AC bias                                                                                  |
| Heads                        | Erase head × 1 (S&F head)<br>Recording head × 1 (LA head)<br>Playback head × 1 (LA head) |
| Motors                       | Capstan motor × 1<br>(direct drive linear torque BSL motor)<br>Reel motor × 1 (DC motor) |
| Wow and flutter              | 0.024% WRMS (NAB)                                                                        |
| Fast-forward and rewind time | Approx. 90 sec. (with C-60 cassette)                                                     |

#### Frequency response (DOLBY NR OFF)

|                                     |                                                           |
|-------------------------------------|-----------------------------------------------------------|
| TYPE IV cassette<br>(Sony METAL-ES) | 15–22,000 Hz (±3 dB, DIN)<br>15–16,000 Hz (OVU recording) |
| TYPE II cassette<br>(Sony UX-S)     | 15–20,000 Hz (±3 dB, DIN)                                 |
| TYPE I cassette<br>(Sony HF-S)      | 15–18,000 Hz (±3 dB, DIN)                                 |

#### Signal-to-noise ratio (at peak level)

| Dolby NR switch         | OFF   | B-TYPE<br>ON | C-TYPE<br>ON |
|-------------------------|-------|--------------|--------------|
| Cassette                |       |              |              |
| TYPE IV (Sony METAL-ES) | 61 dB | 70 dB        | 76 dB        |
| TYPE II (Sony UX-S)     | 59 dB | 68 dB        | 74 dB        |
| TYPE I (Sony HF-S)      | 57 dB | 66 dB        | 72 dB        |

#### Total harmonic distortion

0.8% (with Sony METAL-ES cassette)

#### Inputs

|                              |                 |                  |
|------------------------------|-----------------|------------------|
| Line inputs<br>(phono jacks) | Sensitivity     | 77.5 mV (–20 dB) |
|                              | Input impedance | 50k ohms         |
| CD DIRECT INPUT              | Input impedance | 50k ohms         |

#### Outputs

|                                   |                    |                                                   |
|-----------------------------------|--------------------|---------------------------------------------------|
| Line outputs<br>(phono jacks)     | Rated output level | 0.44 V (–5 dB) at a<br>load impedance<br>47k ohms |
|                                   | Load impedance     | Over 10k ohms                                     |
| Headphones<br>(stereo phone jack) | Output level       | 0–3 mW at a load<br>impedance of 32<br>ohms       |

#### General

##### Power requirements

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

##### Power consumption

31 W

##### Dimensions

Except UK model :  
 Approx. 470 × 140 × 380 mm (w/h/d)  
 (18 7/8 × 5 5/8 × 15 inches)  
 UK model :  
 Approx. 430 × 140 × 380  
 (17 × 5 5/8 × 15 inches)  
 including projecting parts and controls  
 Approx. 11.7 kg (25 lbs 13 oz)  
 Model for the United Kingdom:  
 Approx. 11 kg (24 lbs 5 oz)

##### Weight

##### Supplied accessories

Audio connecting cord (2)  
 Wireless remote control unit RM-J702 (1)  
 Sony R6 (size-AA) batteries (2)  
 Screws (8) (Except UK model)

A remote commander and Sony R6 batteries are supplied with  
 UK, E models.

Design and specifications subject to change without notice.

#### Note

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

STEREO CASSETTE DECK  
**SONY**®

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## SAFETY-RELATED COMPONENT WARNING!!

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

## Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

## Notes on chip component replacement

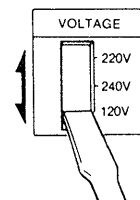
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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

## Operating voltage

Before connecting the unit to the power source, check that the operational voltage of your unit is the same as the local power supply.

| Where purchased       | Operating voltage                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AEP, WG model         | 220 V AC, 50/60 Hz                                                                                                                                                                                                |
| UK model              | 240 V AC, 50 Hz                                                                                                                                                                                                   |
| US,<br>Canadian model | 120 V AC, 60 Hz                                                                                                                                                                                                   |
| E model               | 120, 220 or 240 V AC adjustable, 50/60 Hz<br>A voltage selector is located on the rear panel. If the selector must be reset, <b>disconnect the AC power cord</b> and set the selector to the appropriate voltage. |



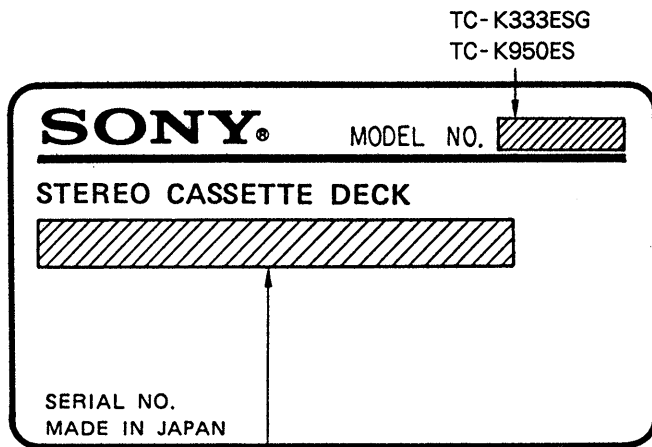
VOLTAGE selector

## ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## MODEL IDENTIFICATION

— Specification Label —



US, Canadian Models: AC: 120V 60Hz 31W

AEP, West Germany

Model: AC: 220V  $\sim$ 50/60Hz 31WUK Model: AC: 240V  $\sim$ 50/60Hz 31WE Model: AC: 120, 220, 240V  
 $\sim$ 50/60Hz 31W

## SAFETY CHECK-OUT

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

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

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

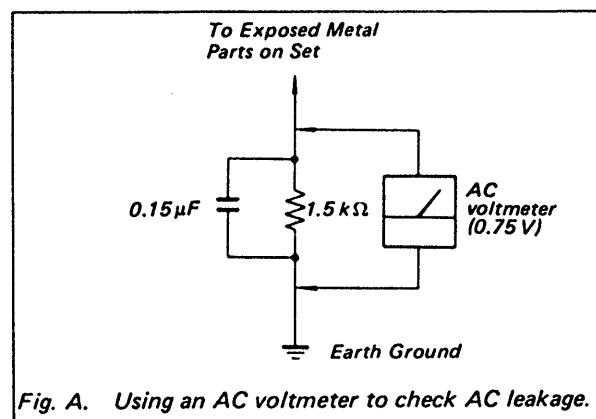
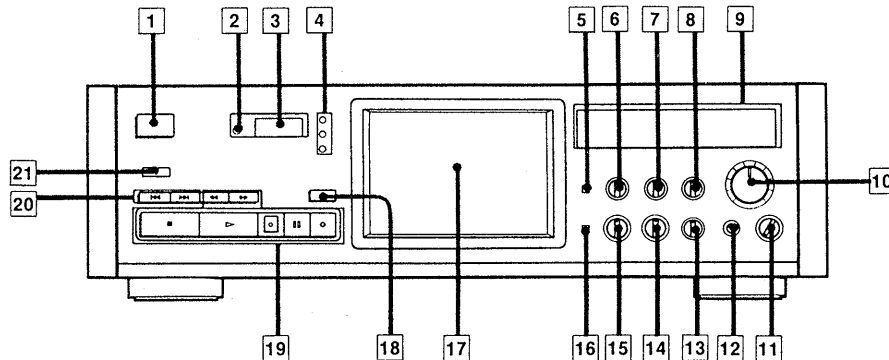


Fig. A. Using an AC voltmeter to check AC leakage.

## SECTION 1

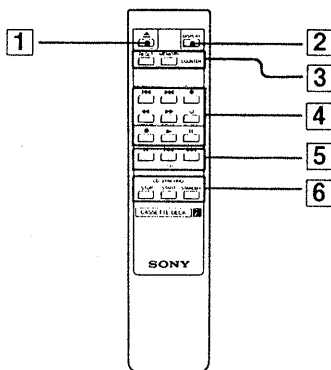
### GENERAL

#### LOCATION AND FUNCTION OF CONTROLS



- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1</b> POWER switch</p> <p><b>2</b> Remote sensor<br/>You can remotely control this cassette deck with:<br/>— A remote commander that has an  mark and comes with a Sony amplifier or receiver and which can be used to control a cassette deck.<br/>— An optional Sony remote commander that has an  mark.</p> <p><b>3</b> LINEAR COUNTER</p> <p><b>4</b> RESET button<br/>MEMORY button<br/>DISPLAY MODE button</p> <p><b>5</b> Dolby HX PRO button</p> <p><b>6</b> DOLBY NR (noise reduction)/ MPX FILTER switch</p> <p><b>7</b> MONITOR switch</p> <p><b>8</b> INPUT switch</p> <p><b>9</b> PEAK PROGRAM METER</p> <p><b>10</b> REC (recording) LEVEL</p> <p><b>11</b> PHONE (headphones) LEVEL control</p> | <p><b>12</b> HEADPHONES jack (stereo headphone jack)</p> <p><b>13</b> REC EQ CAL (recording equalization calibration) switch (LOW, NORMAL, HIGH)</p> <p><b>14</b> REC (recording) LEVEL control for calibration</p> <p><b>15</b> BIAS (bias adjust) control</p> <p><b>16</b> CALIBRATION button</p> <p><b>17</b> Cassette holder</p> <p><b>18</b>  OPEN/CLOSE button</p> <p><b>19</b> Tape operation buttons and indicators<br/>  (rewind) button<br/>  (stop) button<br/>  (play) button and indicator<br/>  (fast-forward) button<br/>  REC (record) button and indicator<br/>  PAUSE button and indicator<br/>  REC MUTE (record muting) button</p> <p><b>20</b> AMS (Automatic Music Sensor) buttons</p> <p><b>21</b> TIMER switch</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Remote Commander



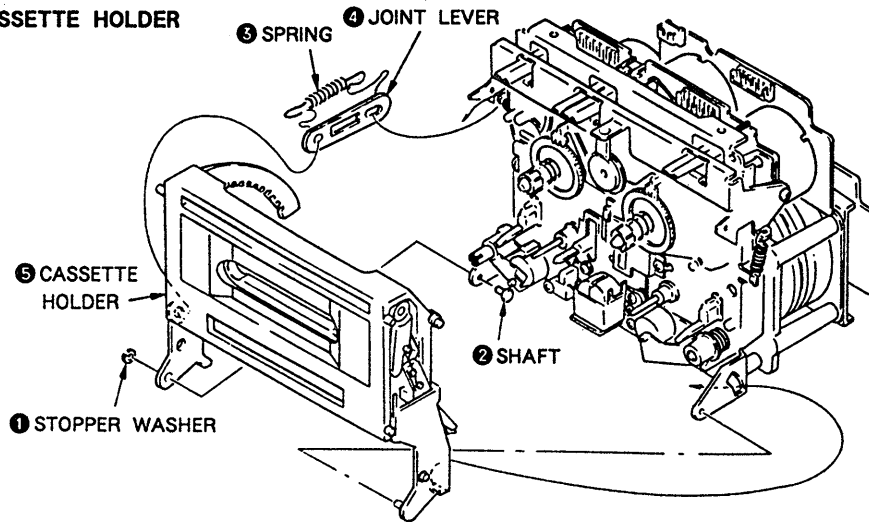
- |                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1</b>  (open/close) button<br/>for opening and closing the cassette holder</p> <p><b>2</b> DISPLAY button<br/>for selecting the display mode</p> <p><b>3</b> Counter buttons<br/>RESET button<br/>for resetting the counter to zero<br/>MEMORY button<br/>for activating and deactivating the Memory function</p> | <p><b>4</b> Tape operation buttons<br/>  (AMS*) buttons<br/>for locating selections sequentially<br/>  (leftward fast winding) button<br/>  (rightward fast winding) button<br/>  (forward play) button<br/>  (record) button<br/>  (stop) button<br/>  (pause) button<br/>  (record muting) button</p> <p><b>5</b> CD (Compact Disc) buttons (for Sony CD players)<br/>  (pause) button<br/>  (AMS) buttons<br/>for locating selections sequentially</p> <p><b>6</b> CD SYNCHRO buttons<br/>for synchronized recording with a Sony CD player (see procedure below)<br/>           STOP (synchronized recording stop) button<br/>           START (synchronized recording start) button<br/>           STANDBY (synchronized recording standby) button</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

\* AMS is an abbreviation for Automatic Music Sensor.  
Procedure for Synchronized Recording with a CD Player

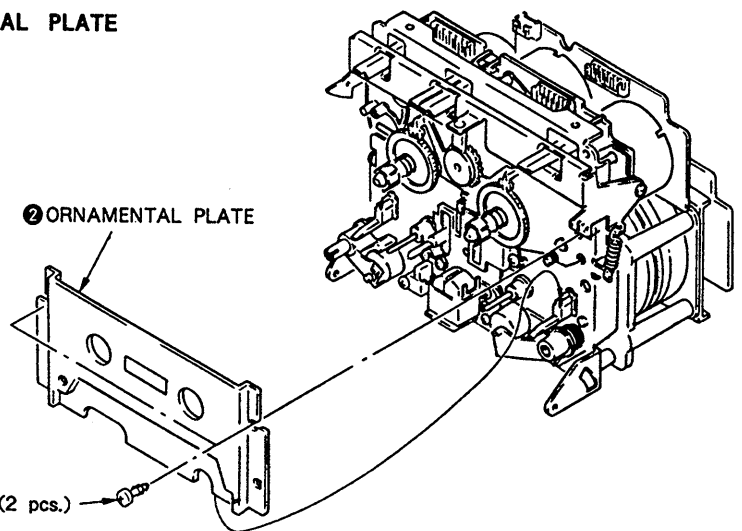
## SECTION 2 DISASSEMBLY

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

### CASSETTE HOLDER

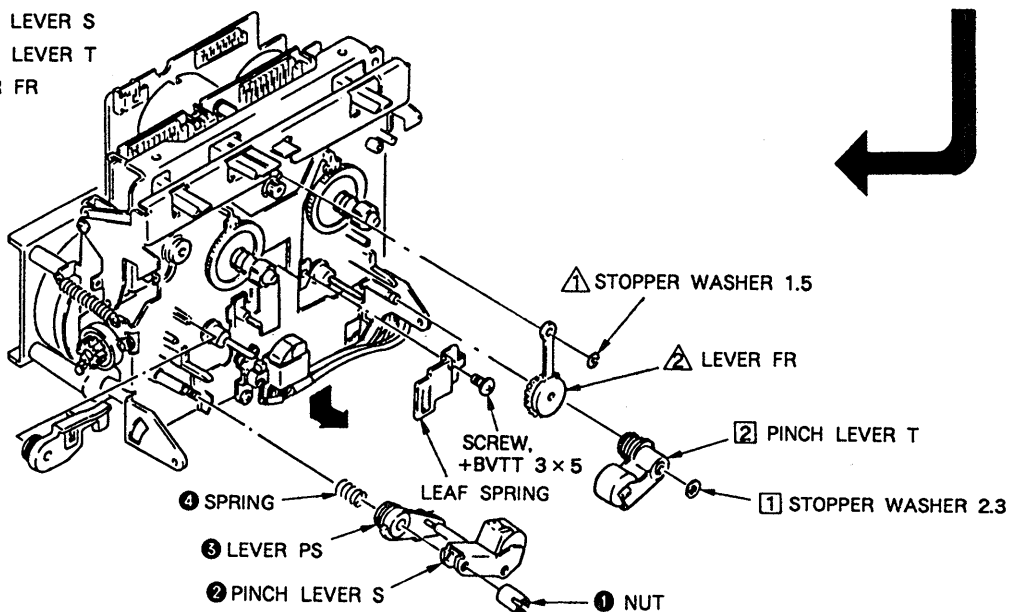


### ORNAMENTAL PLATE

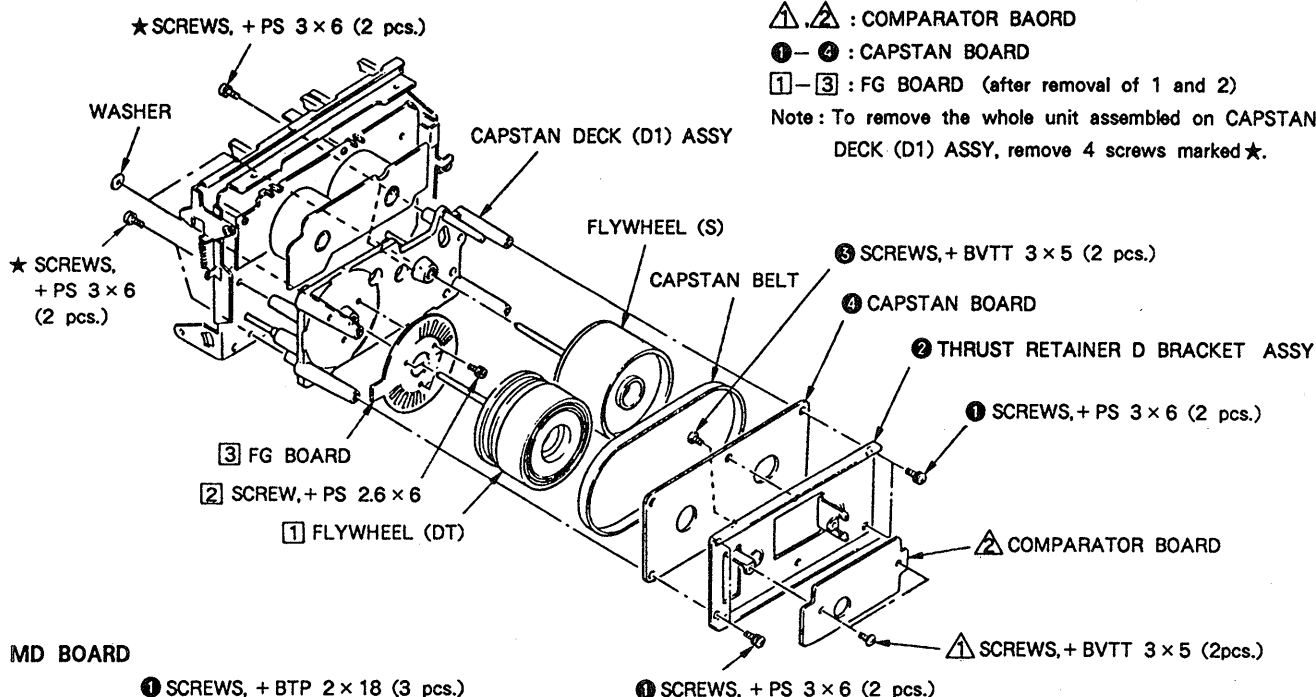


### PINCH LEVER/LEVER FR/HEAD

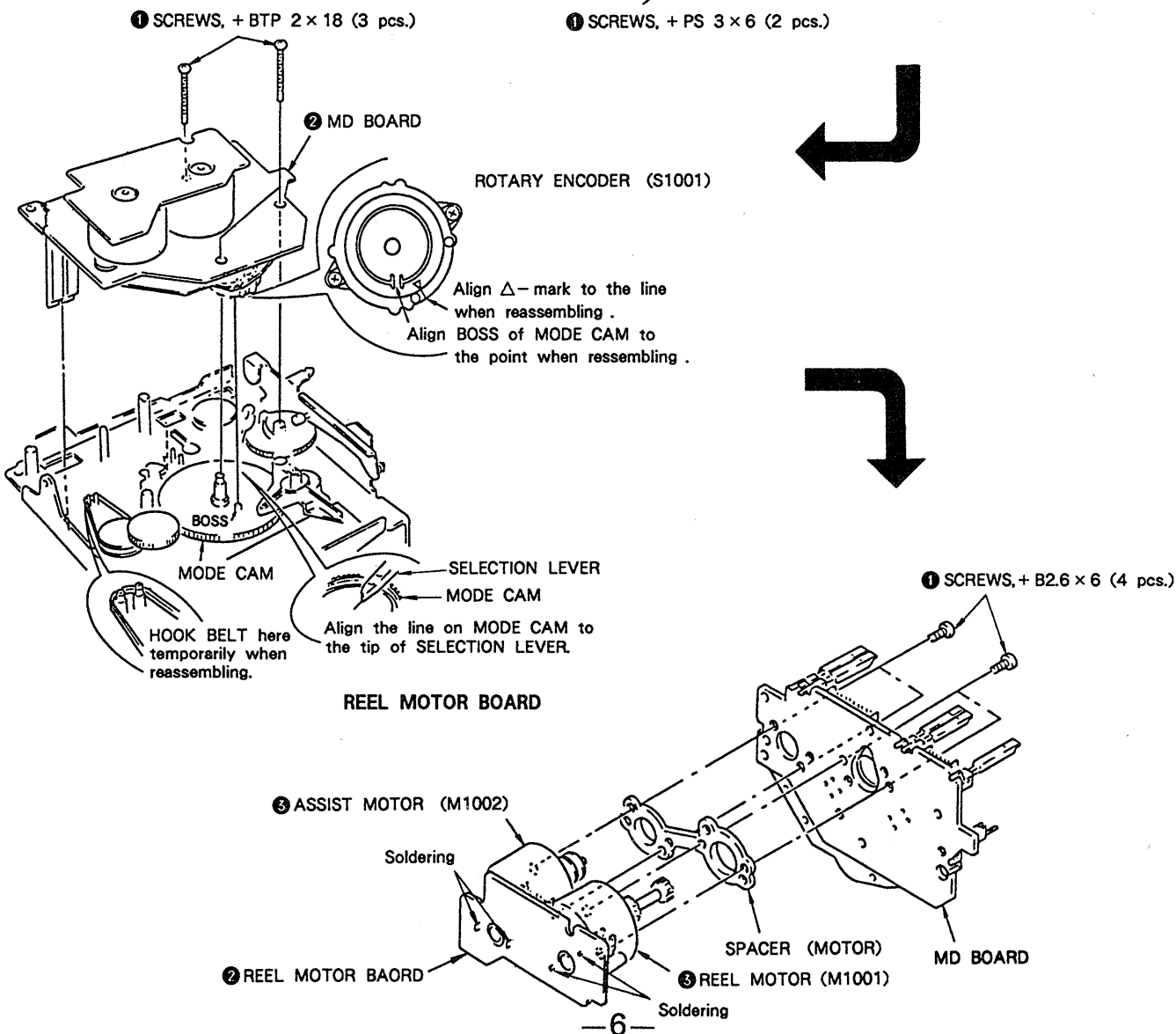
- ① - ④: PINCH LEVER S  
 ①, ②: PINCH LEVER T  
 △, △: LEVER FR



# COMPARATOR BOARD/CAPSTAN BOARD/FLYWHEELS/FG BOARD



## MD BOARD



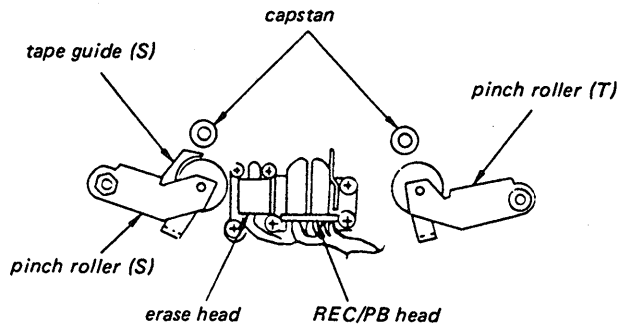
## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

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



#### Pinch Roller Pressing Force Measurement

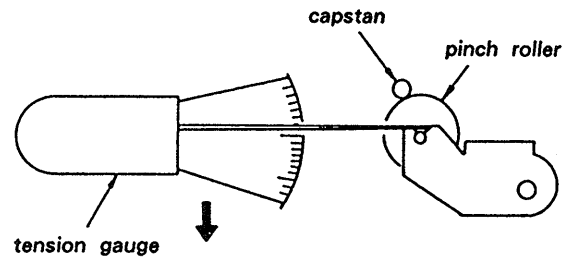
Mode : playback

Hook needle of the tension gauge to the pinch roller shaft and push back pinch roller to detach it from capstan. Then, return it gradually to capstan and read the gauge when the pinch roller begins turning.

#### Standard Limits :

Tape-up side : 270 – 350g (9.5 – 12oz)

Supply side : 180 – 280g (6.4 – 9.9oz)



#### FLYWHEELS T/S THRUST ADJUSTMENT

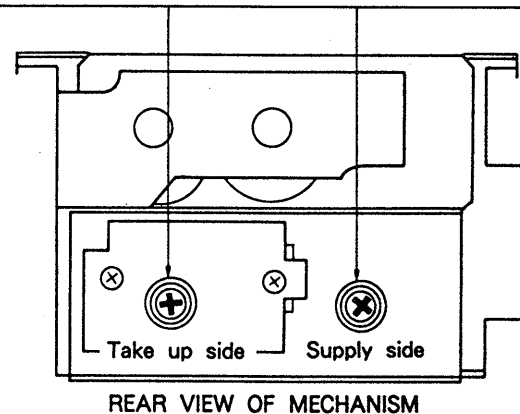
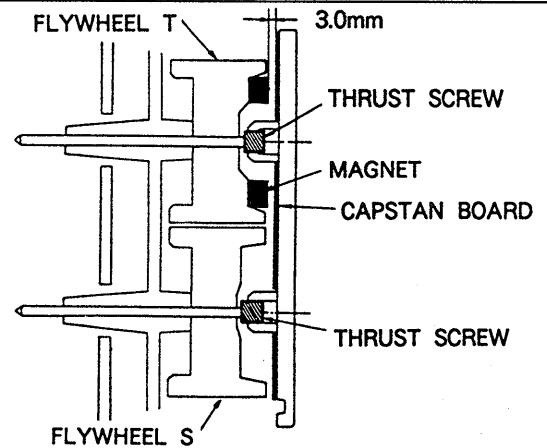
##### 1. FLYWHEEL T THRUST ADJUSTMENT :

Insert 3mm - thick spacer guage into the clearance between magnet of FLYWHEEL T and CAPSTAN Board, and adjust THRUST SCREW so that thrust play is 0.2 – 0.4mm .

##### 2. FLYWHEELS THRUST ADJUSTMENT :

Tighten THRUST SCREW lightly until the flywheel has no play and then loosen the screw by 1/2 – 3/4 turns.

3. After adjustments, apply locking compounce to the screws.



REAR VIEW OF MECHANISM

## Tape Path Adjustment

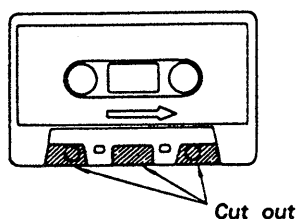
- Refer to Adjustment Position on page 10.

**Note:** When using the adjustment methods for other than replacement reasons, please do not tamper unnecessarily with the adjustment screws or the erasehead because either the supply pinch roller guide or the record/playback head will be made the standard tape paths. Moreover, when it is necessary to adjust and replace two or more of any of the heads and/or pinch rollers, replace them one by one, completely taking out the first tape path, and then replacing the second one.

### Preparation:

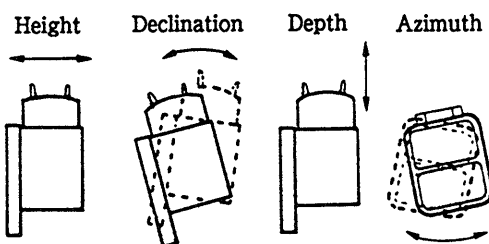
1. Mirror cassette CQ009C 8-909-708-01  
(or CQ012C 8-909-708-02)

If one does not have this, cut out the sections of a 120-minute cassette shell as indicated below and use that cassette.



2. Phillips screwdriver (medium-size):  
For the head adjustment screws  
Blade-type screwdriver (large-size):  
For the supply pinch roller adjustment screws
3. Pen light
4. WS-48B (3 kHz, 0 dB)
5. P-4-A100 (10 kHz, -10 dB)

**Definition of Terms:** The figures are of a record/playback head.



### Adjustment Method:

#### Supply Pinch Roller

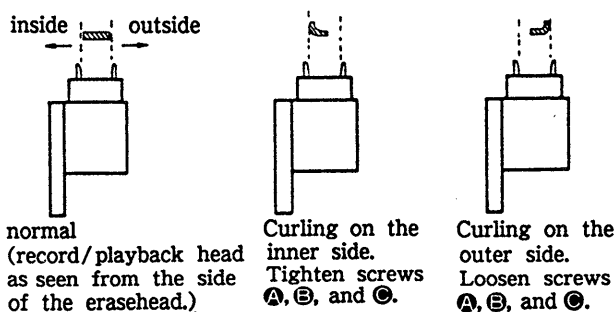
**Note:** Only perform this adjustment when the supply pinch roller is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. Check to see whether the tape is curling at the record/playback head guide or the pinch roller guide.  
If it is curling, remove the curl by adjusting the ④ tape curl adjustment screw. Then, check that the tape is running past the middle of the erasehead.

#### Record/playback Head

**Note:** Only perform this adjustment when the record/playback head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Height Adjustment)** Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws ①, ②, and ③, respectively by the same angle, moving the head so that it remains at the same angle throughout the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally; but loosen them if the tape begins to curl on the top side (outer side).



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

Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked. When there is a shift, tighten screws ② and ③ equally and change the declination of the head. If the tape is shifting up, tighten the screws, and if it is shifting down, loosen them.

4. Repeat the adjustments in steps 2 and 3 and fine adjust the height and the declination.

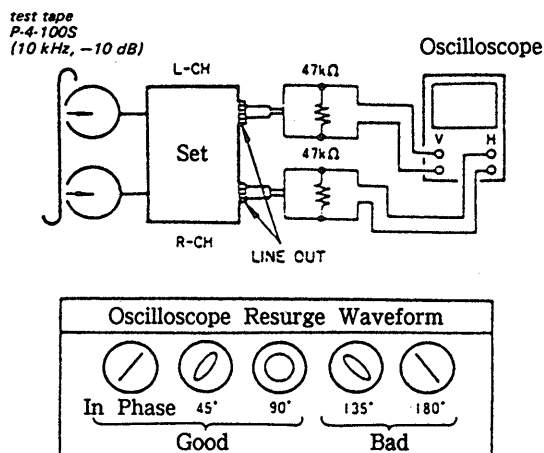
### 5. (Preliminary Azimuth Adjustment)

After demagnetizing and cleaning the adjustment head, play back WS-48B (3 kHz, 0 dB).

Turn screw ③ so that the reading on the level meter of the unit or that of the level meter connected to LINE OUT is maximized.

If the screw is turned at least half a revolution, repeat the adjustments from step 1.

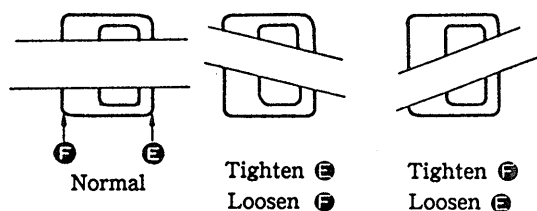
6. (Tape Path Check) Connect the oscilloscope to LINE OUT and play back P-4-A100 (10 kHz, -10 dB) to display a resurge waveform. After 20 seconds of record/playback (after the tension within the loop has been increased sufficiently), make sure the variation in the resurge is within  $\pm 90$  degrees (within  $\pm 45$  degrees is desired). If the variation is greater than this, it is because the declination and/or the height adjustment is not perfect. Repeat the adjustments from step 1.



### Erasehead

**Note:** Only perform this adjustment when the erasehead is to be replaced.

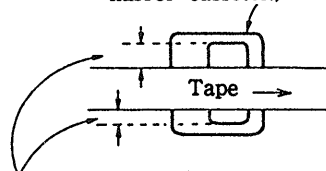
1. Insert the mirror cassette and put the unit in record/playback mode.
2. (Azimuth Adjustment) Adjust the azimuth of the erasehead by adjusting screws ⑤ and ⑥ so that the tape runs as evenly as possible.



(The erasehead as seen when erasing the mirror cassette.)

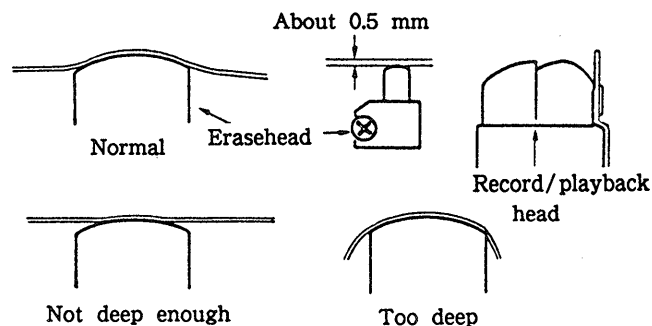
3. (Height adjustment) Turn screws ②, ③, and ④ all by the same angle so that the portions of the erasehead visible at top and bottom are nearly of equal width. If the width at the top is greater, tighten the screws; if the width at the bottom is greater, loosen the screws.

Erasehead (The erasehead as seen through the mirror cassette.)



Make these the same width.

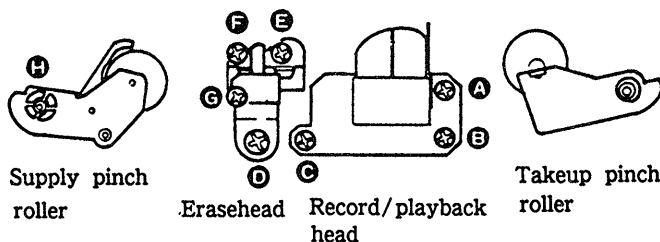
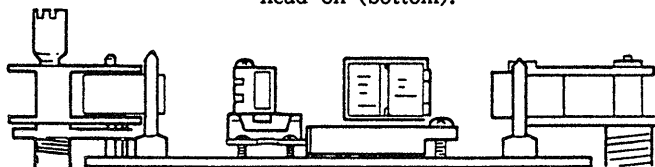
4. (Declination Adjustment) Leaving it in the playback position, put the back tension to 0 and make certain the erasehead part and supply pinch roller guide part do not shift. If there is a shift, turn the screw ⑦ and change the declination. Looking at it using the mirror cassette, if the tape shifts up, tighten the screw, and if it shifts down, loosen the screw.
5. Repeat the adjustments beginning with step 2 and fine adjust the height and declination. And make sure the tape does not curl up on the pinch roller guide or the guide part of the record/playback head.
6. (Depth Adjustment) In order to make the entire head play the tape smoothly, and to make sure the depth of the erasehead is neither too shallow nor too deep, loosen screw ⑧ a bit.



### Check

1. Check to make sure that there are no curls or shifts throughout the whole tape path and that the tape runs smoothly.
2. Reapply the locking compound to the adjusted screws. (The locking compound should only be applied to screw ⑧ after the azimuth has been adjusted.)

**Adjustment Position :** As seen from the cassette, side (top) and MD as seen head on (bottom).



### 3-2. ELECTRICAL ADJUSTMENTS

**Note:** The adjustment should be performed in the order given in this service manual.  
The adjustments should be performed for both L-CH and R-CH.

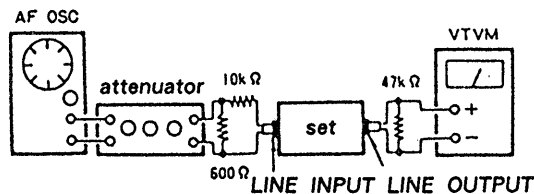
- **Simultaneous REC/PB Mode:**  
Input the signals to LINE IN terminal and set to REC mode. Set the monitor switch to TAPE, and monitor the recorded signal from LINE OUT terminal.
- **Switch Position:**
  - DOLBY NR..... OFF
  - MPX FILTER..... OFF
  - TIMER..... OFF
  - MONITOR..... TAPE
  - HX PRO..... OFF
  - CALIBRATION..... OFF
  - CD DIRECT..... OFF
  - BIAS..... CENTER CLICK
  - REC LEVEL..... CENTER CLICK
  - BALANCE..... CENTER CLICK
- **Standard Record:**  
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

| Input Terminal   | LINE IN         |
|------------------|-----------------|
| source impedance | 10 k $\Omega$   |
| input level      | 0.25 V (-10 dB) |

Standard Output Level

| Output Terminal | LINE OUT       |
|-----------------|----------------|
| load impedance  | 47 k $\Omega$  |
| output level    | 0.44 V (-5 dB) |



### Torque Adjustment and Measurement

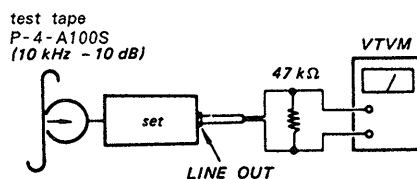
1. Load a torque meter cassette CQ-102C and push ► button.
2. Adjust RV801 so that the reading on the torque meter is  $40 \pm 3g \cdot cm$  ( $0.56 \pm 0.042oz \cdot inch$ ).
3. After the adjustment, apply suitable locking compound to RV803.

| Torque           | Torque Meter | Reading                           |
|------------------|--------------|-----------------------------------|
| FWD              | CQ-102C      | 35 - 45g·cm (0.49 - 0.64oz·inch)  |
| FWD Back tension | CQ-102C      | 6.5 - 11g·cm (0.09 - 0.15oz·inch) |
| FF/REW           | CQ-201B      | 70 - 120g·cm (0.97 - 1.67oz·inch) |

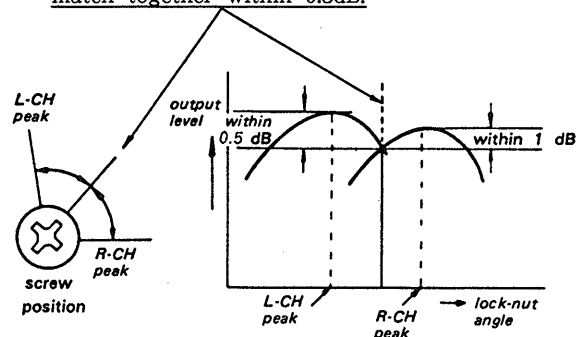
### Record/Playback Head Azimuth Adjustment

#### Procedure :

1. Mode : playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5dB.

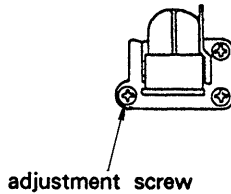


### 3. Phase check

By the means of 6. Tape Path check on page 9 confirm that phase difference is proper.

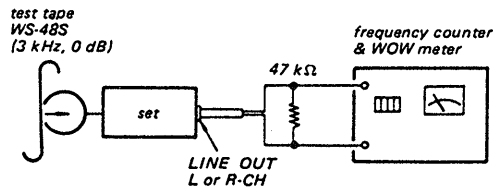
4. After the adjustment, lock the adjustment screw with locking compound.

#### Adjustment Location :



### Tape Speed/WOW Check

#### Procedure:



1. Measure the output frequency and the WOW value while playing back the tape top of the test tape.
2. Turn over the test tape, measure the output frequency and the WOW value, and check the difference from the values of the step 1.

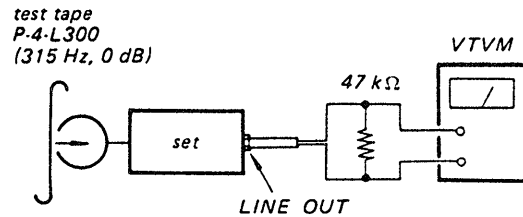
#### Adjustment Limits :

|                               |                          |
|-------------------------------|--------------------------|
| TAPE SPEED deviation:         | within 2,990 to 3,010 Hz |
| TAPE SPEED fluctuating width: | within 2,990 to 3,010 Hz |
| WOW (WRMS):                   | 0.037 % or less          |

### Playback Level Adjustment

#### Procedure:

Mode: playback



Adjust RV101 (L-CH) and RV201 (R-CH) to obtain the specified LINE OUT level.

#### Adjustment Limits :

LINE OUT level: 0.42 to 0.46 V  
(-5.3 to -4.7 dB)

Level difference between channels:  
less than 0.5 dB

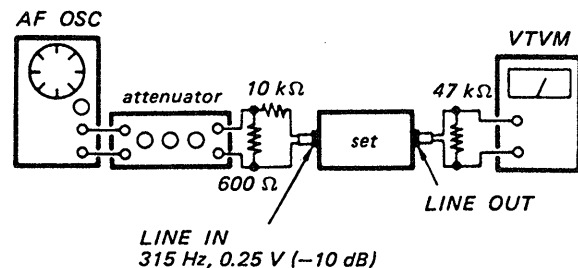
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

### MPX FILTER Check

Setting : DOLBY switch : OFF  
MPX FILTER switch : OFF

#### Procedure :

1. Mode: stop



2. Apply 315Hz, 0.25V (-10dB) signal and adjust REC LEVEL (RV501) control so that the LINE OUT level is 0.44V (-5dB).
3. Set DOLBY switch to B or C and MPX FILTER switch ON. Confirm that the LINE OUT level is 0.39V to 0.49V (-5dB ± 1dB).
4. Apply 19kHz 0.25V (-10dB) signal and confirm that the LINE OUT level is 0.013V (-35dB) or less.

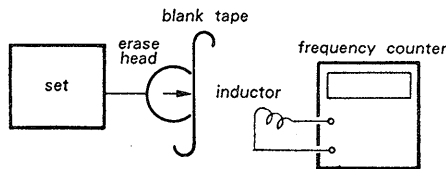
#### Adjustment Limits :

|                |                            |
|----------------|----------------------------|
| LINE OUT level |                            |
| 315Hz          | 0.39V - 0.49V (-5dB ± 1dB) |
| 19kHz          | 0.014V (-35dB)             |

### Bias OSC Frequency Adjustment

#### Procedure :

1. Record mode



1. Connect the frequency counter to the inductor which functions at 10 mH. (When the inductor is a closed magnetic circuit, redesign the inductor to be an open magnetic circuit.)
2. Remove the cassette lid, insert the cassette, and put the unit into REC mode.
3. Move the inductor from the side in close to the erase head to check the value of the bias.
4. Adjust CP501 so that the reading on the frequency counter is  $105\text{kHz} \pm 1\text{kHz}$ .

### CrO<sub>2</sub> Bias and Record Level Adjustment

**Note :** This adjustment should be made before Record Bias Adjustment.

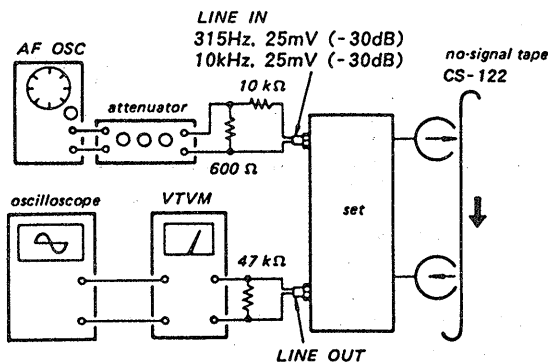
#### Setting:

REC LEVEL knob: standard record position  
(See page 10.)

HX PRO switch : ON

#### Procedure:

1. Mode: simultaneous REC/PB



2. Adjust RV105 (L-CH) and RV205 (R-CH) so that the playback output level of 10kHz signal is 0.3dB to 0.3dB with respect to that of 315Hz. . . . Record Bias Adjustment.
3. Adjust RV102 (L-CH) and RV202 (R-CH) so that the playback output level of 315Hz is -25.3dB to -24.7dB. . . . Record Level Adjustment.

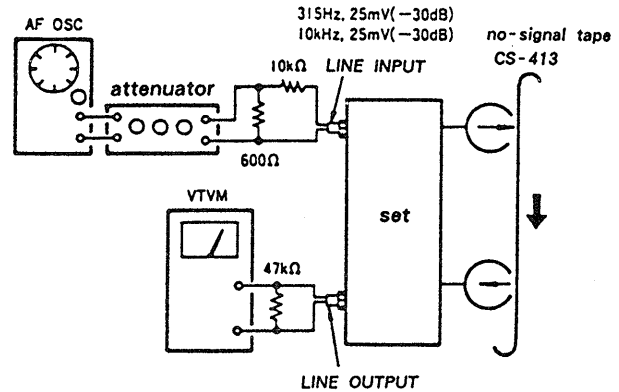
### Metal Bias Adjustment

#### Setting :

REC LEVEL Knob : standard record position  
(See page 10.)

#### Procedure :

1. Mode : simultaneous REC/PB



2. Only when the level difference of 10kHz playback output between L-ch and R-ch is 1dB or more short or open EQ-tap for TYPE-IV (on the conductor side of REC board).
3. Adjust RV510 so that the playback output level of 10kHz in R-CH is 0.5dB to -0.5dB with respect to that of 315Hz.

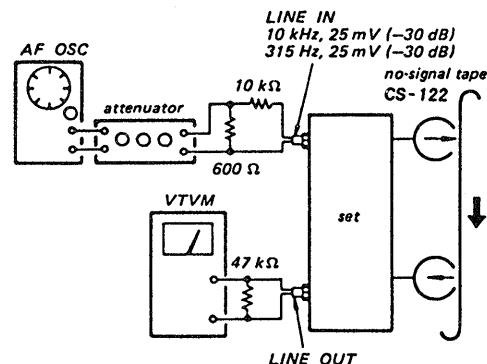
### Normal Bias Adjustment

#### Setting:

REC LEVEL knob: standard record position  
(See page 10.)

#### Procedure:

1. Mode: simultaneous REC/PB



2. Only when the level difference of 10kHz playback output between L-ch and R-ch is 1dB or more short or open EQ-tap for TYPE-I (on the conductor side of REC board).
3. Adjust RV509 so that the output level of 10kHz is 0.5dB to -0.5dB with respect to that of 315Hz.

## Meter Level Adjustment

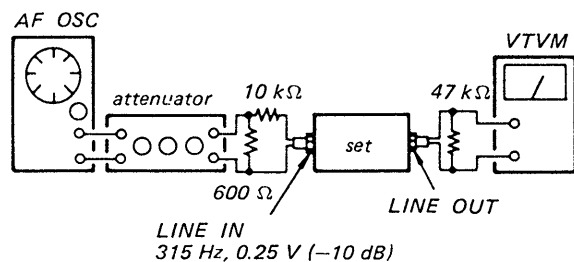
### Setting :

REC LEVEL Knob : standard record position  
(See page 10.)

MONITOR : SOURCE

### Procedure :

1. Stop mode



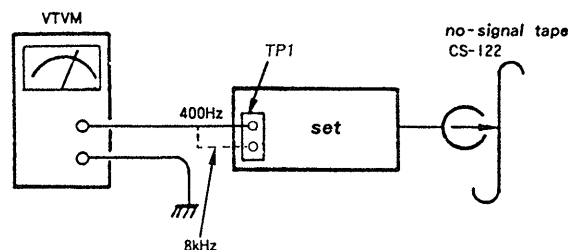
2. Adjust the REC LEVEL (RV501) control so that the LINE OUT level is 0.44V (-5 dB ). In this time adjust RV103 (L-CH) and RV203 (R-CH) so that the 0VU (-4 dB) segments of the meter light-up.
3. Adjust the REC LEVEL (RV501) control so that the LINE OUT level is 1.9V (8 dB ). In this time, make sure that all the segments of the meter light-up.

## Calibration OSC and Calibration Meter Adjustment

Setting : CALBRATION switch : ON

### Procedure (OSC OUT LEVEL) :

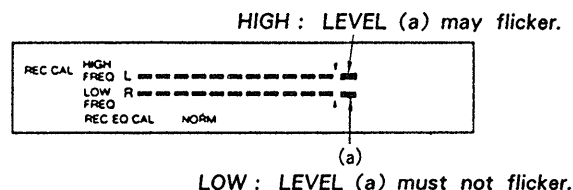
1. Mode : record (no-signal (LINE INPUT))



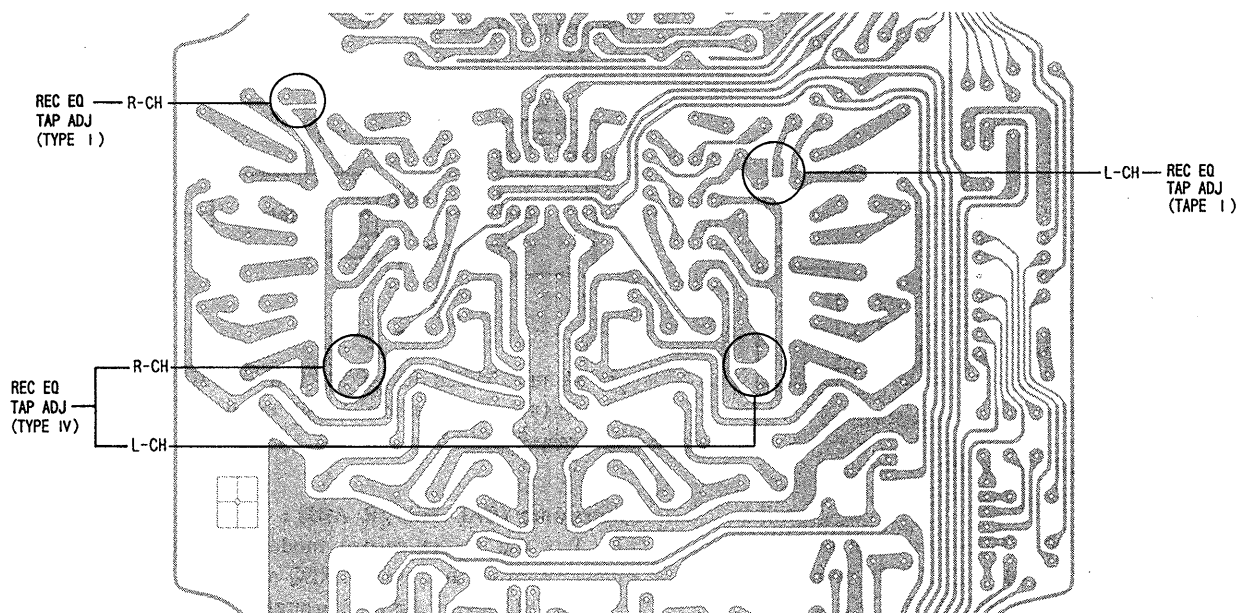
2. Adjust RV508 for 400Hz and RV507 for 8kHz to obtain oscillation level within  $10 \pm 0.5$ dB respectively.

### Procedure (CAL METER ADJ) :

1. Put the set in record mode and adjust RV104 (HIGH) so that HIGH FREQ segments in the CAL LEVEL meter light thoroughly up to 0 VU as shown in the figure below. Segment (a) may flicker.
2. Preset RV204 (LOW) so that segment (a) in LOW FREQ CAL LEVEL meter lights. Then adjust RV204 to the point where segment (a) goes out.

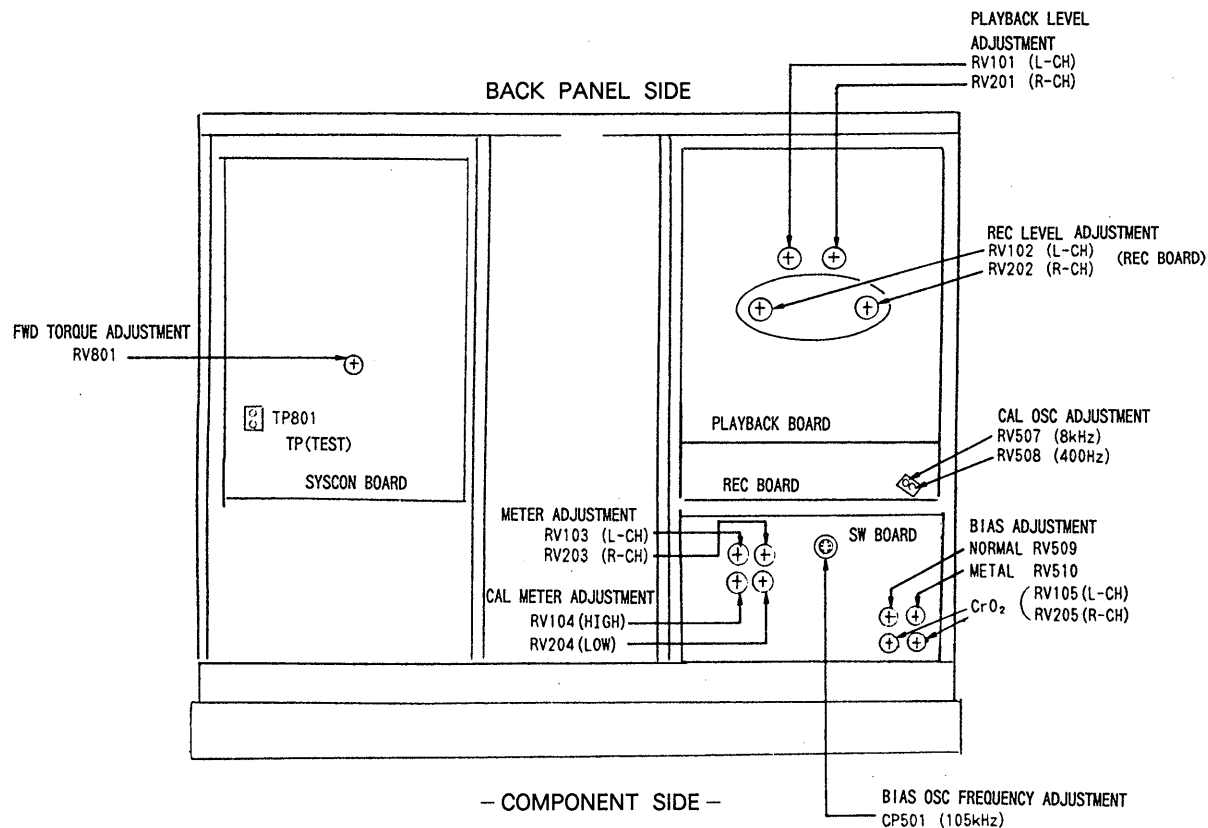


Adjustment Parts Location :



REC BOARD

— CONDUCTOR SIDE —



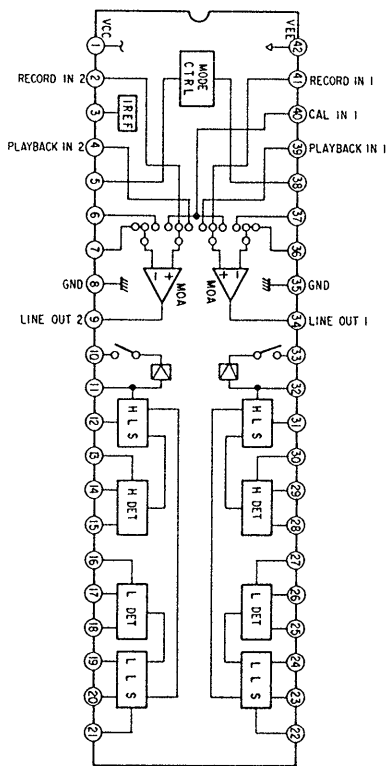
— COMPONENT SIDE —

## SECTION 4

### DIAGRAMS

#### 4-1-1. IC BLOCK DIAGRAMS

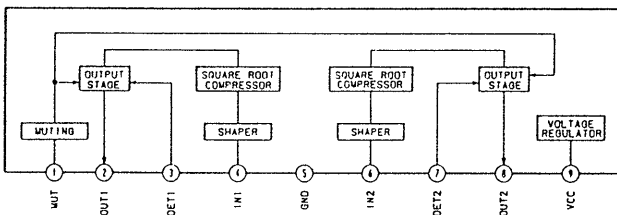
##### IC503, 505 CX20188



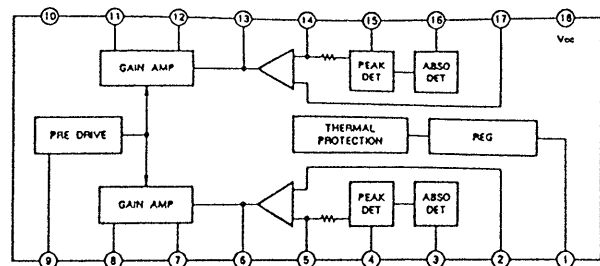
#### 4-2-1. IC503, 505 (CX20188) PIN FUNCTIONS

| CX20188 | Pin name   | Description                                    |
|---------|------------|------------------------------------------------|
| Pin No. |            |                                                |
| 1.      | Vcc        | Positive power supply terminal.                |
| 2, 41.  | REC IN     | Recording input terminal.                      |
| 3.      | I REF      | Reference current input terminal.              |
| 4, 39.  | PB IN      | Playback input terminal.                       |
| 5.      | CAL/REC/PB | Calibration/recording/playback select terminal |
| 6, 37.  | PB FB      | Playback feedback terminal.                    |
| 7, 36.  | REC FB     | Recording feedback terminal.                   |
| 8, 35.  | GND        | GND terminal.                                  |
| 9, 34.  | LINE OUT   | Line output (decode output) terminal.          |
| 10, 33. | SSK        | Spectral skewing switch terminal.              |
| 11, 32. | VF IN      | Encode circuit input terminal.                 |
| 12, 31. | HPF H      | HLS high-pass filter terminal.                 |
| 13, 30. | TCH 2      | HLS detector time constant terminal 2.         |
| 14, 29. | TCH 1      | HLS detector time constant terminal 1.         |
| 15, 28. | WT H       | HLS encoder error reduction terminal.          |
| 16, 27. | TCL 2      | LLS detector time constant terminal 2.         |
| 17, 26. | TCL 1      | LLS detector time constant terminal 1.         |
| 18, 25. | WT L       | LLS encoder error reduction terminal.          |
| 19, 24. | HPF L      | LLS high-pass filter terminal.                 |
| 20, 23. | ANT S      | Anti-saturation terminal.                      |
| 21, 22. | REC OUT    | Recording output (encode output) terminal.     |
| 38.     | OFF/B/C    | Dolby NR off/B type/C type select terminal.    |
| 40.     | CAL IN     | Calibration input terminal.                    |
| 42.     | Vee        | Negative power supply terminal.                |

##### IC512 BA6138

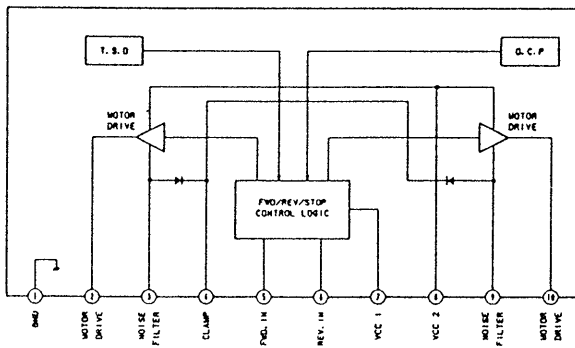


##### IC517 $\mu$ PC1297CA

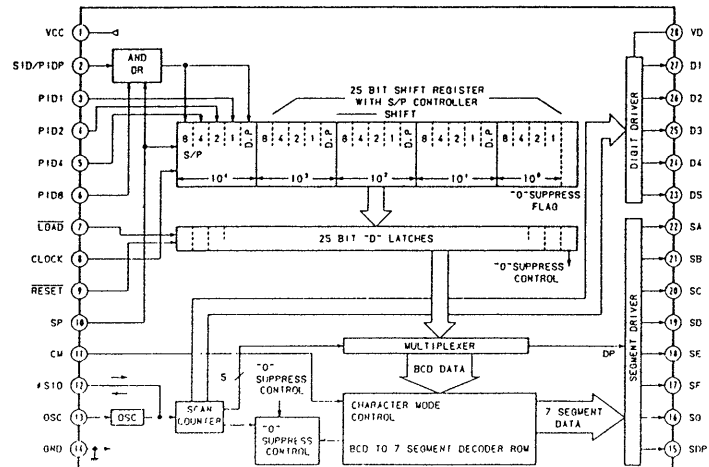


##### IC803 BA6219B

##### IC804 LB1641



##### IC806 MSL9512RS

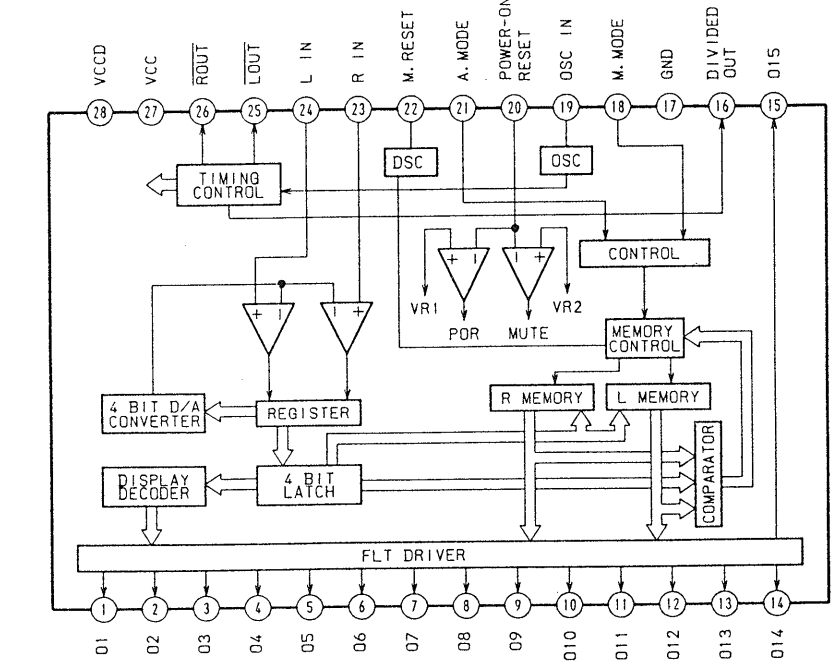


## 4-2-2. IC801 (M50964-220SP) PIN FUNCTIONS

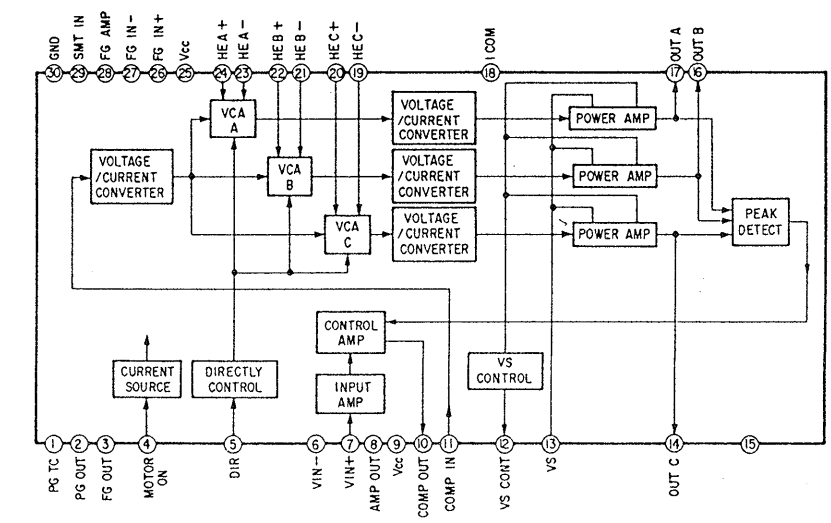
| Pin No. | Pin name | I/O | Description                                                                                 |
|---------|----------|-----|---------------------------------------------------------------------------------------------|
| 1.      | VCC      |     | Power supply: +5V.                                                                          |
| 2.      | AVss     |     | Analog GND.                                                                                 |
| 3.      | Vref     | I   | A/D port reference voltage input.                                                           |
| 4.      | DA       |     | Not used for this model.                                                                    |
| 5.      | PWM      |     | Not used for this model.                                                                    |
| 6.      | P.OFF    |     | Not used for this model. Connected to GND.                                                  |
| 7.      | LED      | 0   | PAUSE LED output.                                                                           |
| 8.      | LED      | 0   | REC LED output.                                                                             |
| 9.      | LED      | 0   | PLAY LED output.                                                                            |
| 10.     | AD1      | I   | Key input. 0V=▲, 1V=■, 2V=◀, 3V=▶, 4V=●.                                                    |
| 11.     | AD2      | I   | Key input. 0V=▶, 1V=■, 2V=◀, 3V=▶, 4V=○.                                                    |
| 12.     | AMS SIG  | I   | AMS signal input. No song detected = Low. Song detected = High.                             |
| 13.     | AD4      | I   | Key input. 2V = DISPLAY. 3V = MONITOR.                                                      |
| 14.     | CODE     | I   | Remote control category select switch.                                                      |
| 15.     | ALB      |     | Connected to 5V.                                                                            |
| 16.     | φR       | I   | Take-up reel base sensor input.                                                             |
| 17.     | φL       | I   | Supply reel base sensor input.                                                              |
| 18.     | C RESET  |     | Model select input. Connected to GND.                                                       |
| 19.     | C MEMORY |     | Model select input. Connected to GND.                                                       |
| 20.     | COO      |     | Not used for this model.                                                                    |
| 21.     | POWER IN | I   | Power on and off detection.                                                                 |
| 22.     | SIRW     | I   | SIRCS phase input.                                                                          |
| 23.     | SIRE     | I   | SIRCS reverse phase input.                                                                  |
| 24.     | T-REC    | I   | Timer REC switch input.                                                                     |
| 25.     | T-PLAY   | I   | Timer PLAY switch input.                                                                    |
| 26.     | INT      | I   | External interruption input. Interruption process is performed when the power is on or off. |
| 27.     | Vss      |     | GND.                                                                                        |
| 28.     | RESET    | I   | Reset input.                                                                                |
| 29.     | XIN      | I   | Clock input (4 MHz).                                                                        |
| 30.     | XOUT     | 0   | Clock output (4 MHz).                                                                       |
| 31.     | φout     |     | Not used for this model.                                                                    |
| 32.     | Vss      |     | GND.                                                                                        |
| 33.     | C1       | I   | Rotary encoder input to detect the position of the head base of the mechanical block.       |
| 34.     | C2       | I   | Rotary encoder input to detect the position of the head base of the mechanical block.       |
| 35.     | C3       | I   | Rotary encoder input to detect the position of the head base of the mechanical block.       |
| 36.     | C4       | I   | Rotary encoder input to detect the position of the head base of the mechanical block.       |
| 37.     | OPEN SW  | I   | OPEN switch input of the mechanical block.                                                  |
| 38.     | CLOSE SW | I   | CLOSE switch input of the mechanical block.                                                 |
| 39.     | DOOR SW  | I   | DOOR switch input of the mechanical block.                                                  |
| 40.     | REC SW   | I   | REC switch input of the mechanical block.                                                   |
| 41.     | M PLAY   | 0   | Reel motor rotates at PLAY speed.                                                           |
| 42.     | M FAST   | 0   | Reel motor rotates at FF/REW speed.                                                         |
| 43.     | M FWD    | 0   | Reel motor rotates.                                                                         |
| 44.     | M REV    | 0   | Reel motor rotates in reverse.                                                              |
| 45.     | CAM DOWN | 0   | Head base DOWN output of the mechanical block                                               |
| 46.     | CAM UP   | 0   | Head base UP output of the mechanical block                                                 |
| 47.     | C OFF    | 0   | Counter light-off output                                                                    |
| 48.     | M OFF    | 0   | Meter light-off output                                                                      |
| 49.     | BIAS     | 0   | Bias oscillation on and off control                                                         |
| 50.     | R MUTE   | 0   | REC MUTE.                                                                                   |
| 51.     | M MUTE   |     | Not used for this model.                                                                    |
| 52.     | T MUTE   | 0   | Tape MUTE. Goes to low when the tape is being played.                                       |
| 53.     | S MUTE   | 0   | Source MUTE. Goes to low three seconds after the power is on.                               |
| 54.     | AMS      | 0   | AMS switch output. Goes to low when AMS is being used.                                      |
| 55.     | MONITOR  |     | Not used for this model. Connected to GND.                                                  |
| 56.     | HALF     |     | Not used for this model. Connected to GND.                                                  |
| 57.     | DAT3     | 0   | Outputs parallel data for the counter display.                                              |
| 58.     | DAT2     | 0   | Outputs parallel data for the counter display.                                              |
| 59.     | DAT1     | 0   | Outputs parallel data for the counter display.                                              |
| 60.     | DAT0     | 0   | Outputs parallel data for the counter display.                                              |
| 61.     | DATD     | 0   | Outputs parallel data for the counter display.                                              |
| 62.     | CLK      | 0   | Clock output to transmit the parallel data.                                                 |
| 63.     | LATCH    | 0   | Output for latching the transmitted data.                                                   |
| 64.     | CAL IN   | I   | CAL switch input.                                                                           |

4-1-2. IC BLOCK DIAGRAMS

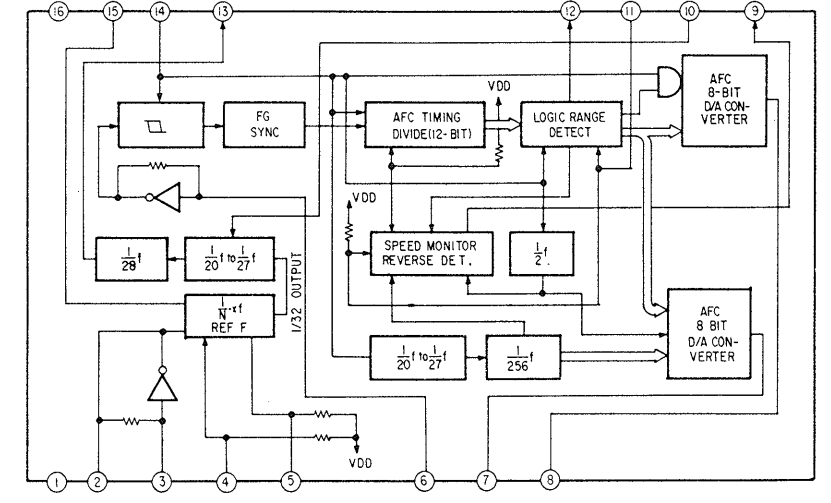
IC514 MSL9359RS



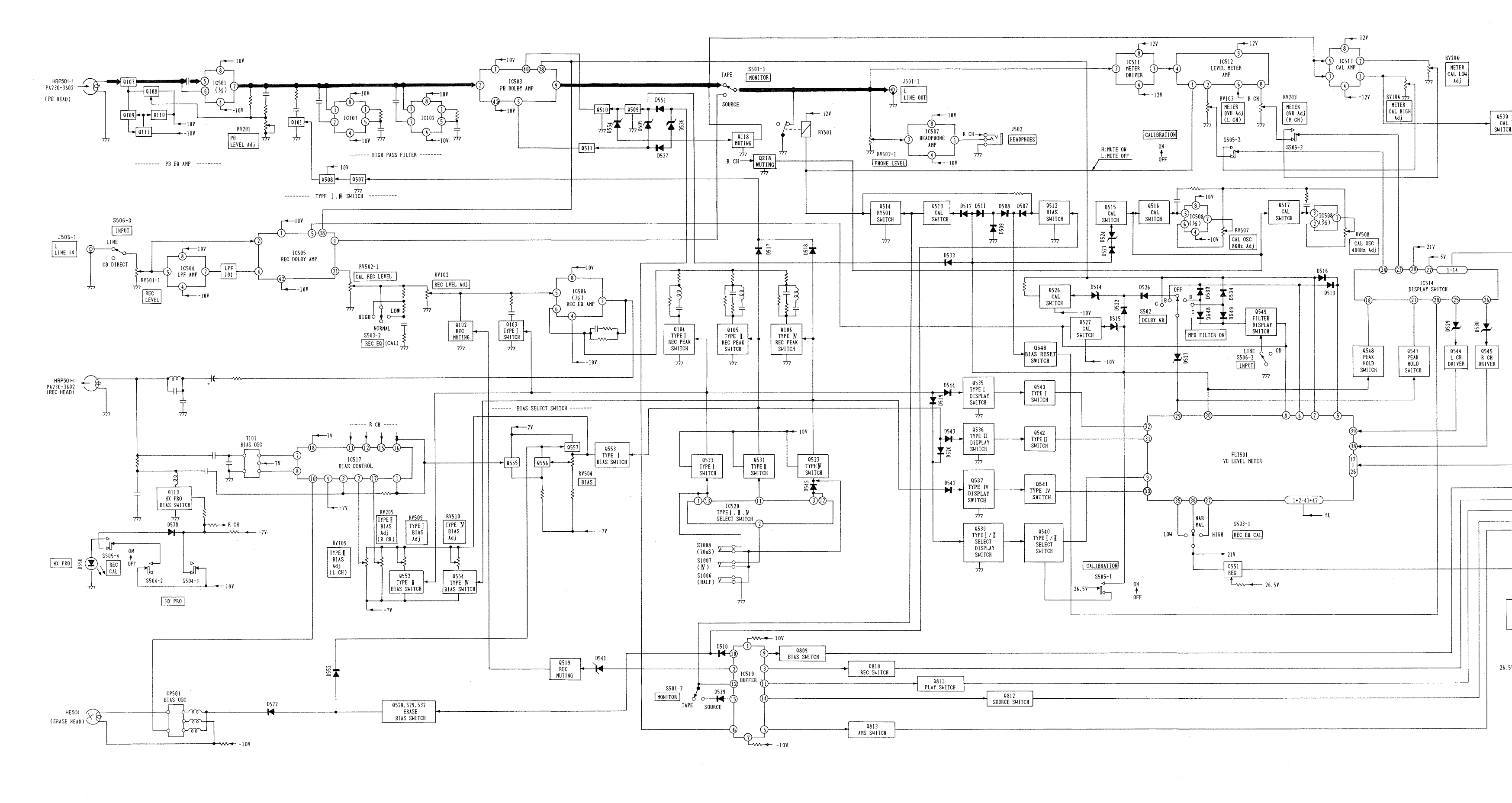
IC902 CX20174



IC952 TC9142P

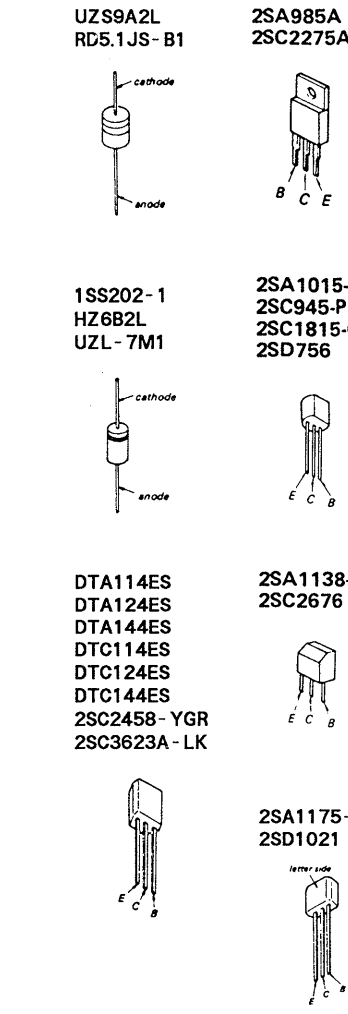


4-3. BLOCK DIAGRAM

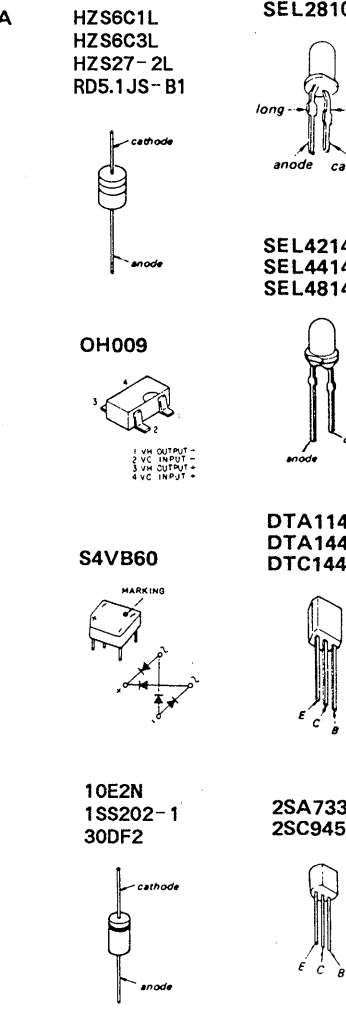


4-4. SEMICONDUCTOR LEAD LAYOUTS

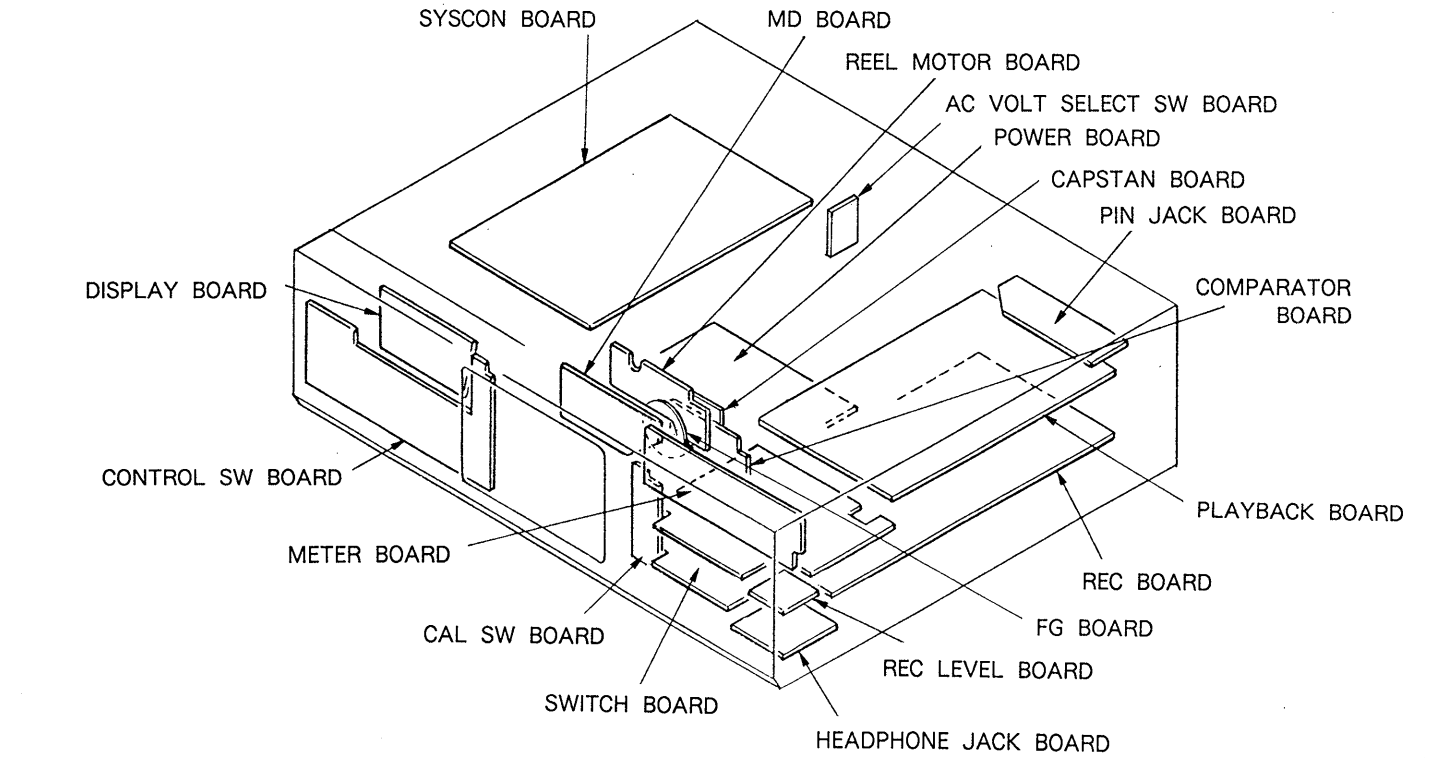
- AUDIO SECTION -



- SYSCON SECTION -



4-5. CIRCUIT BOARDS LOCATION

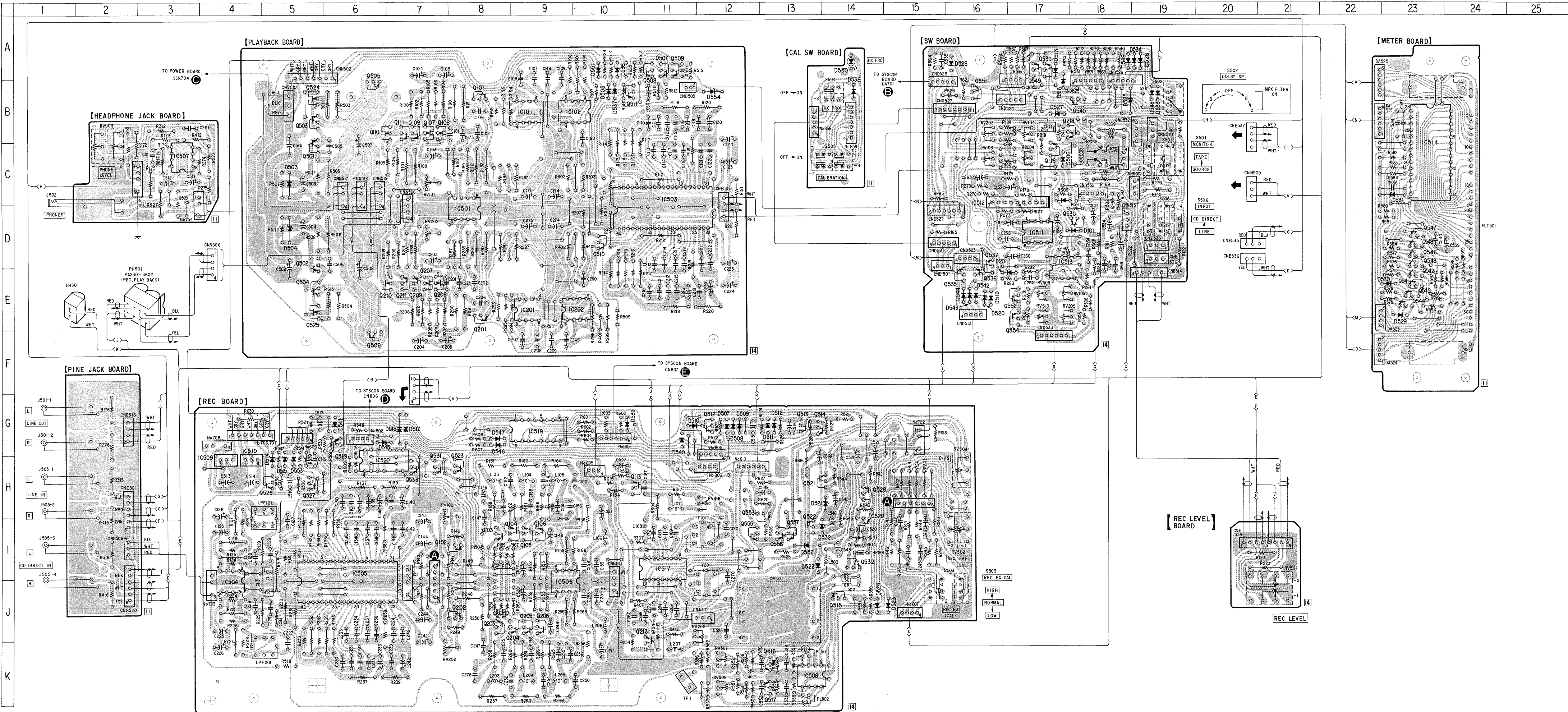


4-6. PRINTED WIRING BOARDS - AUDIO SECTION -

• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location | Ref. No. | Location | Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| D101     | D-18     | D532     | I-13     | IC505    | I-6      | Q205     | J-9      | Q525     | E-5      |
| D201     | D-16     | D533     | B-19     | IC506    | J-9      | Q206     | J-9      | Q526     | H-5      |
| D503     | C-5      | D534     | A-19     | IC507    | C-3      | Q207     | E-7      | Q527     | H-5      |
| D504     | D-5      | D535     |          | IC508    | K-13     | Q208     | E-7      | Q528     | H-14     |
| D505     | B-10     | D536     | A-10     | IC509    | H-4      | Q209     | E-7      | Q529     | I-14     |
| D506     | C-17     | D537     | B-10     | IC510    | G-4      | Q210     | E-6      | Q530     | D-17     |
| D507     | G-12     | D538     | B-14     | IC511    | D-17     | Q211     | E-7      | Q531     | H-7      |
| D508     | G-12     | D539     | G-10     | IC512    | C-16     | Q213     | J-11     | Q532     | I-14     |
| D509     | G-12     | D540     | G-11     | IC513    | D-17     | Q218     | B-17     | Q533     | H-7      |
| D510     | G-11     | D541     | G-6      | IC514    | C-23     | Q501     | C-5      | Q535     | E-16     |
| D511     | G-13     | D542     | E-16     | IC517    | I-11     | Q502     | D-5      | Q536     | E-16     |
| D512     | G-13     | D543     | E-16     | IC519    | G-9      | Q503     | B-5      | Q537     | D-16     |
| D513     | A-17     | D544     | E-16     | IC520    | H-6      | Q504     | E-5      | Q539     | A-17     |
| D514     | H-5      | D545     | G-6      |          |          | Q505     | A-6      | Q540     | B-18     |
| D515     | H-5      | D546     | G-8      | Q101     | B-8      | Q506     | F-6      | Q541     | E-23     |
| D516     | B-17     | D547     | G-8      | Q102     | I-7      | Q507     | A-11     | Q542     | E-23     |
| D517     | G-7      | D548     | B-19     | Q103     | I-8      | Q508     | B-11     | Q543     | D-23     |
| D518     | G-7      | D549     | A-18     | Q104     | I-8      | Q509     | A-11     | Q544     | E-23     |
| D519     | G-6      | D550     | A-14     | Q105     | I-9      | Q510     | D-10     | Q545     | E-23     |
| D520     | E-16     | D551     | A-10     | Q106     | I-9      | Q511     | B-10     | Q546     | D-23     |
| D521     | H-13     | D552     | I-13     | Q107     | B-7      | Q512     | G-12     | Q547     | D-23     |
| D522     | I-14     | D553     | H-5      | Q108     | B-7      | Q513     | G-13     | Q548     | D-23     |
| D523     | J-15     | D554     | B-12     | Q109     | B-7      | Q514     | G-13     | Q549     | A-17     |
| D524     | J-14     |          |          | Q110     | B-6      | Q515     | J-14     | Q551     | B-16     |
| D525     | B-18     | IC101    | B-9      | Q111     | B-7      | Q516     | K-13     | Q552     | E-17     |
| D526     | A-19     | IC102    | B-9      | Q113     | H-10     | Q517     | K-13     | Q553     | H-12     |
| D527     | B-17     | IC201    | E-9      | Q118     | C-17     | Q519     | G-6      | Q554     | E-17     |
| D528     | A-16     | IC202    | E-9      | Q201     | E-8      | Q521     | H-13     | Q555     | I-12     |
| D529     | E-23     | IC501    | D-8      | Q202     | J-8      | Q522     | I-13     | Q556     | I-13     |
| D530     | E-23     | IC503    | C-11     | Q203     | J-8      | Q523     | H-8      | Q523     | I-13     |
| D531     | C-23     | IC504    | J-4      | Q204     | J-9      | Q524     | B-5      | Q557     | I-13     |

Note on Mounting Diagram:  
● ○ — : parts extracted from the component side.



## 4-7. SCHEMATIC DIAGRAM - AUDIO SECTION -

A

B

C

D

E

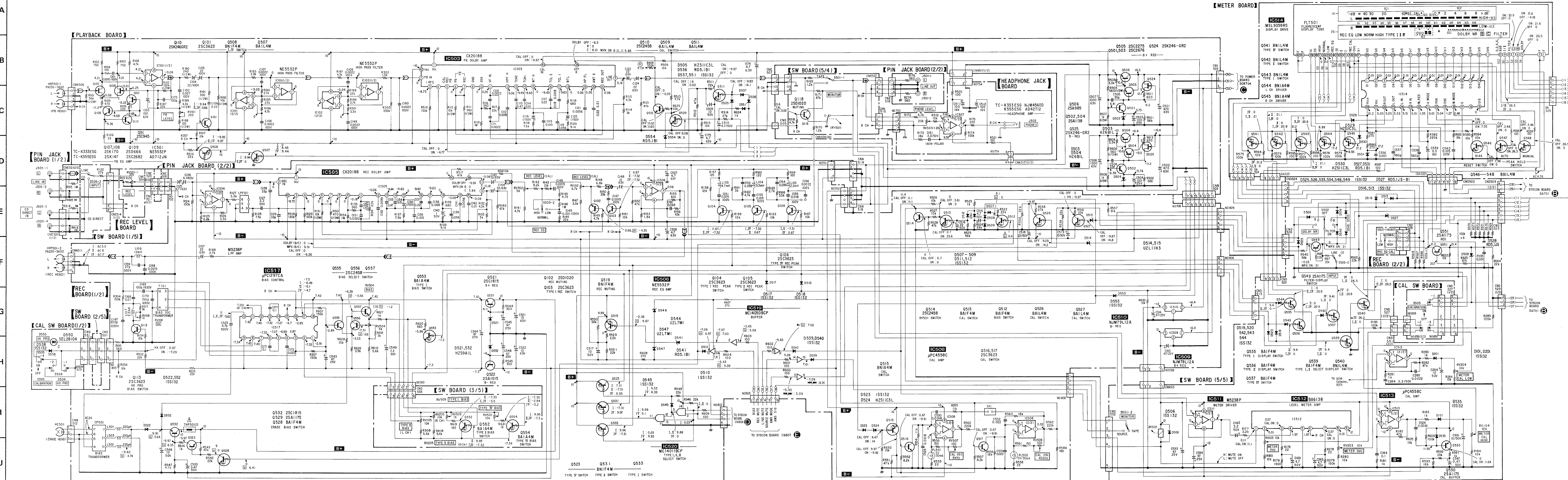
F

G

H

I

J



## Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted, pF:  $\mu\text{F}$ F 50VW or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{2}\text{W}$  or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200, 400.
- $\Delta$ : internal component.
- $\square$ : nonflammable resistor.
- $\square$ : fusible resistor.

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

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

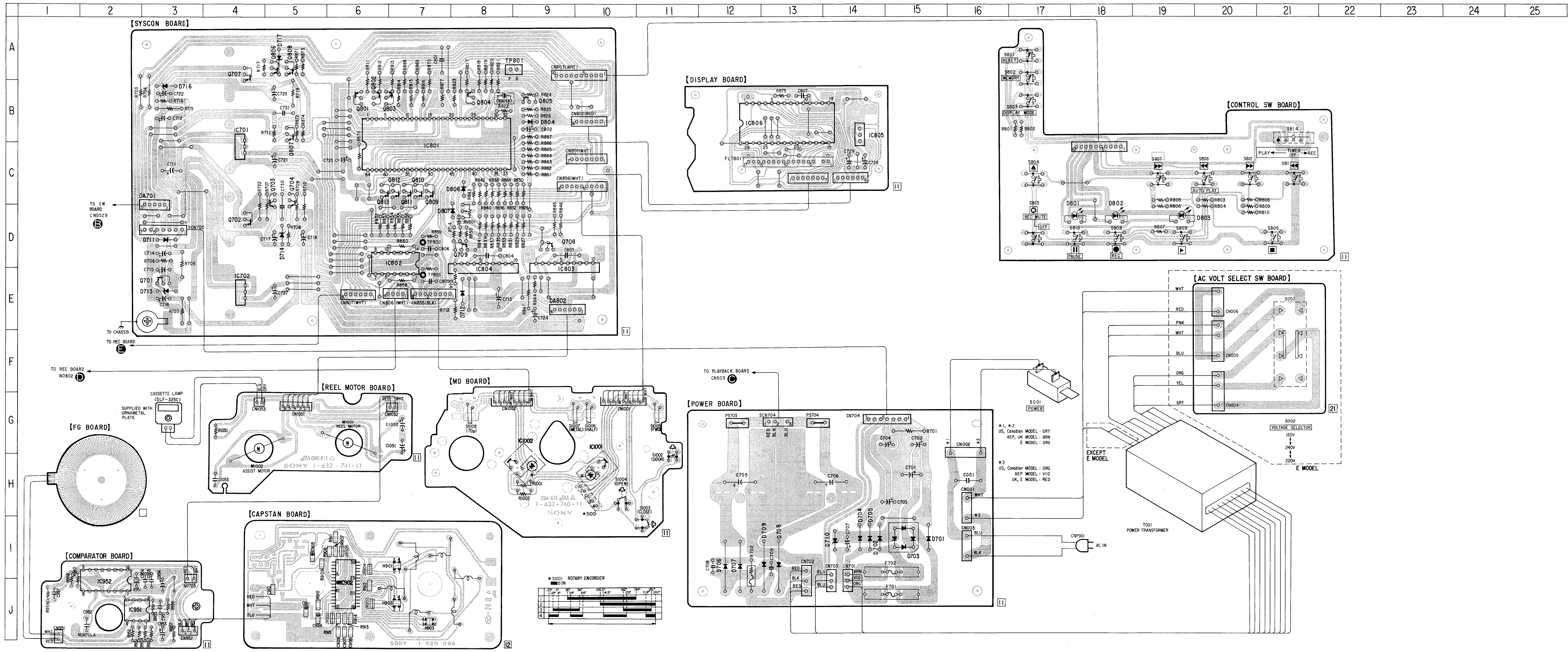
- B+: B + Line
- B-: B - Line
- $\square$ : adjustment for repair
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP
- $\square$ : PLAY
- $\square$ : REC
- $\square$ : FF
- $\square$ : REW
- $\square$ : EJECT
- Voltages are taken with a VOM (Input impedance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

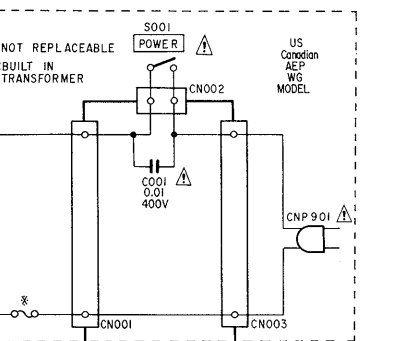
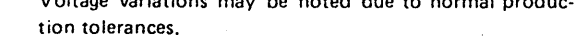
4-8. PRINTED WIRING BOARDS - SYSCON SECTION -

• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D701     | I-15     | IC805    | B-14     |
| D702     | I-14     | IC806    | B-12     |
| D703     | I-15     | IC902    | J-6      |
| D704     | I-14     | IC951    | J-2      |
| D705     | I-14     | IC952    | J-2      |
| D706     | I-12     | IC1001   | G-10     |
| D707     | I-12     | IC1002   | G-9      |
| D708     | I-13     |          |          |
| D709     | I-13     | Q701     | E-3      |
| D710     | I-14     | Q702     | D-4      |
| D711     | D-3      | Q703     | C-5      |
| D712     | E-8      | Q704     | C-5      |
| D713     | E-3      | Q707     | A-4      |
| D714     | D-5      | Q708     | D-9      |
| D716     | B-3      | Q709     | D-8      |
| D717     | A-5      | Q801     | B-6      |
| D801     | D-18     | Q802     | B-6      |
| D802     | D-18     | Q803     | B-6      |
| D803     | D-20     | Q804     | B-8      |
| D804     | B-9      | Q805     | B-9      |
| D806     | C-8      | Q806     | A-5      |
| D807     | D-7      | Q807     | C-5      |
|          |          | Q808     | A-5      |
| IC701    | B-4      | Q809     | C-7      |
| IC702    | E-4      | Q810     | C-7      |
| IC801    | C-7      | Q811     | C-7      |
| IC802    | D-7      | Q812     | C-7      |
| IC803    | E-9      | Q813     | C-6      |
| IC804    | E-8      |          |          |

Note on Mounting Diagram:  
● ○ : parts extracted from the component side.





## SECTION 5

### EXPLODED VIEWS

## NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts  
Example:  
(RED) ... KNOB, BALANCE (WHITE)  
↑ Cabinet's Color      ↑ Parts' Color

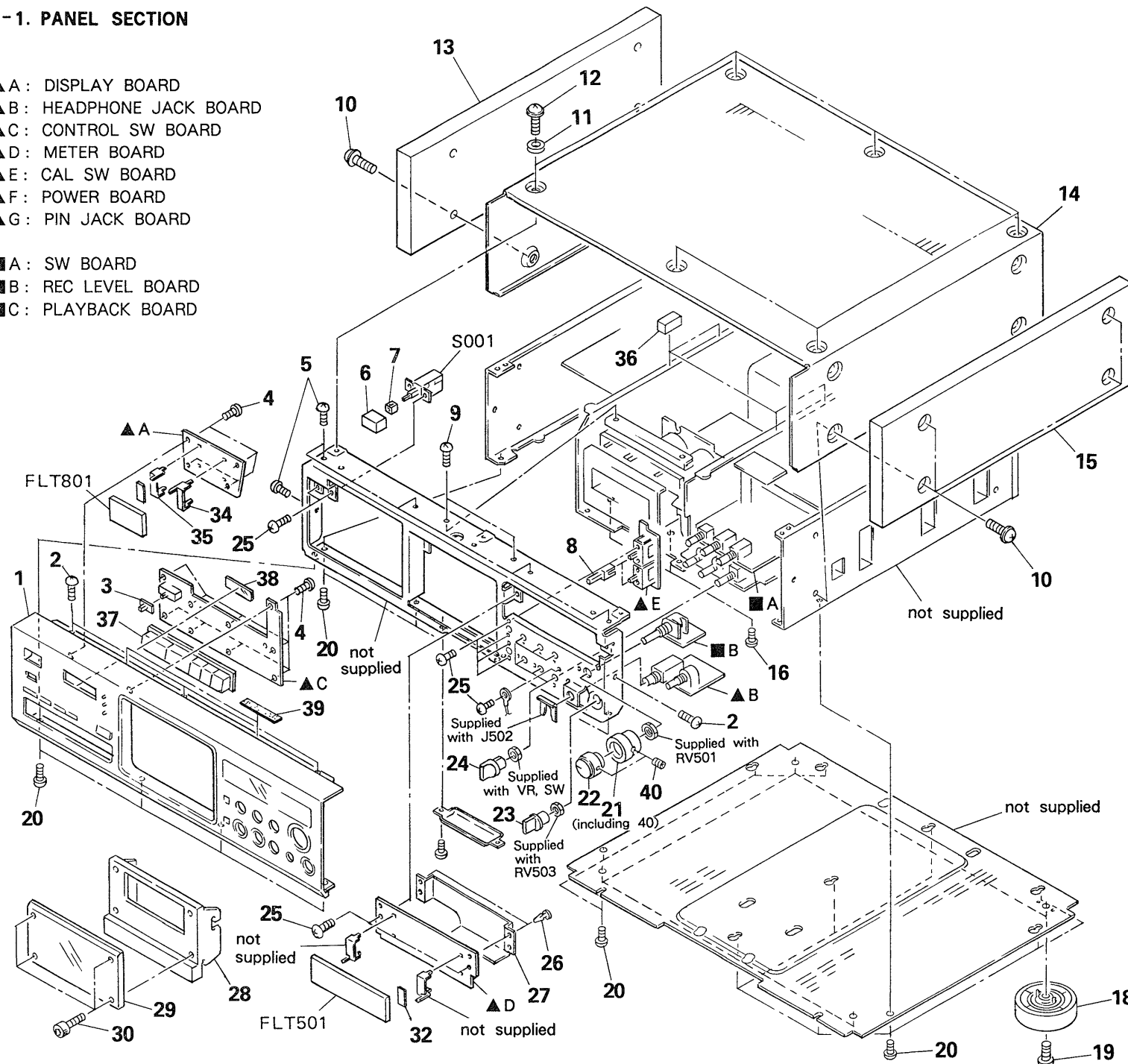
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

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

## 5-1. PANEL SECTION

- ▲A: DISPLAY BOARD
- ▲B: HEADPHONE JACK BOARD
- ▲C: CONTROL SW BOARD
- ▲D: METER BOARD
- ▲E: CAL SW BOARD
- ▲F: POWER BOARD
- ▲G: PIN JACK BOARD

- A: SW BOARD
- B: REC LEVEL BOARD
- C: PLAYBACK BOARD

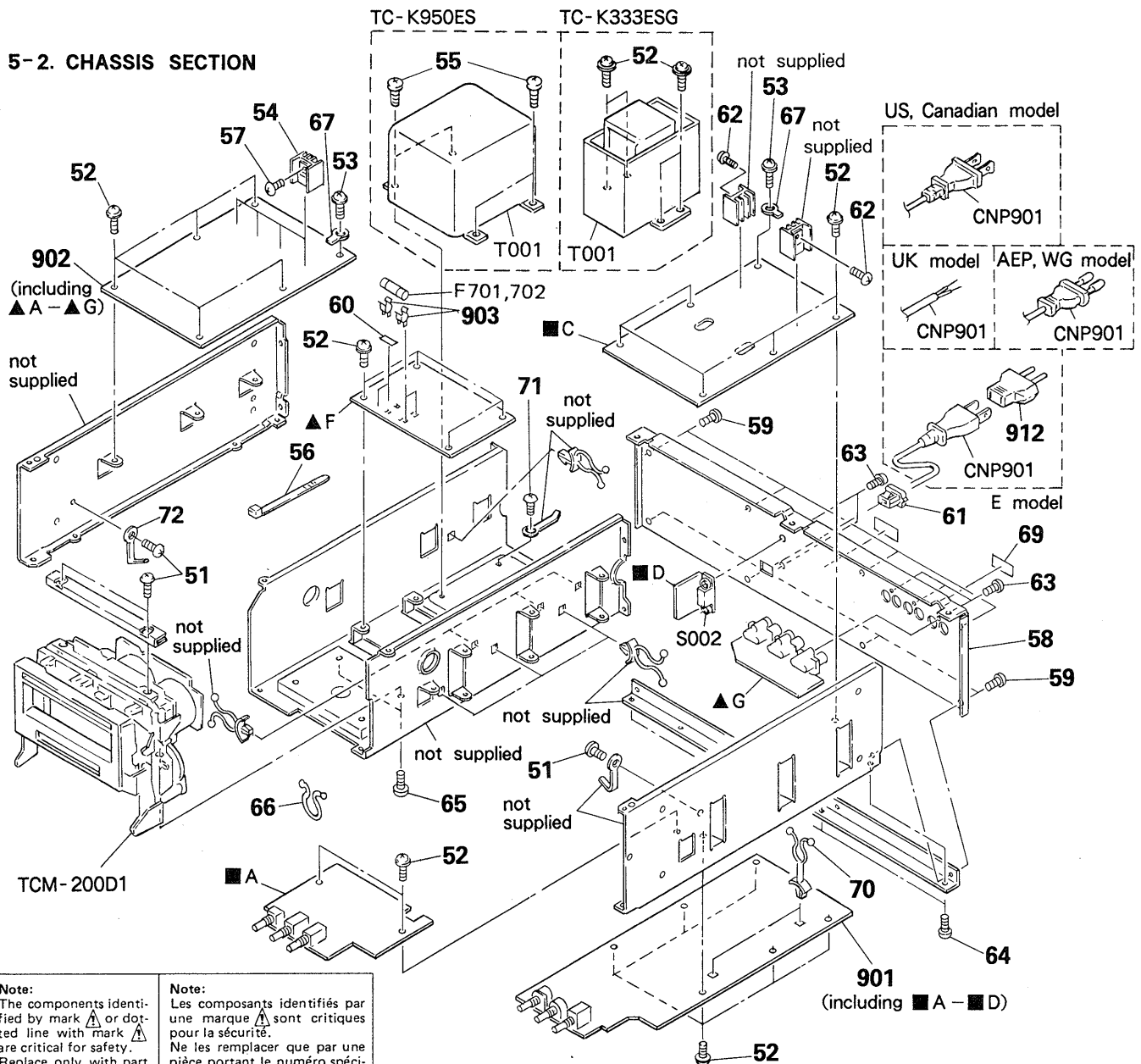


| No.    | Part No.      | Description                               | Remarks |
|--------|---------------|-------------------------------------------|---------|
| 1      | A-2003-464-A  | (E).....PANEL ASSY, FRONT                 |         |
|        | A-2003-549-A  | (US,Canadian)...PANEL ASSY, FRONT         | 38      |
|        | A-2003-551-A  | (AEP,WG).....PANEL ASSY, FRONT            | 38      |
|        | A-2003-631-A  | (UK).....PANEL ASSY, FRONT                |         |
| 2      | 7-682-547-09  | SCREW +B 3X6                              |         |
| 3      | 4-922-518-11  | KNOB (TIMER)                              |         |
| 4      | 7-685-133-19  | SCREW +BTP 2.6X6 TYPE2 N-S                |         |
| 5      | 7-682-547-09  | SCREW +BV 3X6, S TIGHT                    |         |
| 6      | 4-908-046-01  | KNOB, SQUARE                              |         |
| 7      | 4-864-307-00  | RING                                      |         |
| 8      | 3-350-473-01  | BUTTON                                    |         |
| 9      | 7-685-870-01  | SCREW +BVTT 3X5 (S)                       |         |
| 10     | 4-820-330-31  | (UK)....SCREW, BW, PLUS MINUS             |         |
|        | 4-885-979-11  | (EXCEPT UK).....SCREW (4X25)              |         |
| 11     | 4-923-474-01  | RING, ORNAMENTAL                          |         |
| 12     | 3-704-366-01  | SCREW (CASE) (M3X8)                       |         |
| 13     | X-3304-959-1  | (US,Canadian,AEP,E)..PANEL (L) ASSY, SIDE |         |
|        | X-3304-969-1  | (WG).....PANEL (L) ASSY, SIDE             |         |
| 14     | 3-350-489-01  | CASE                                      |         |
| 15     | X-3304-960-1  | (US,Canadian,AEP,E)..PANEL (R) ASSY, SIDE |         |
|        | X-3304-970-1  | (WG).....PANEL (R) ASSY, SIDE             |         |
| 16     | 7-682-548-04  | SCREW +BVTT 3X8 (S)                       |         |
| 18     | X-3304-944-1  | FOOT ASSY                                 |         |
| 19     | 7-685-882-09  | SCREW +BVTT 4X10 (S)                      |         |
| 20     | 3-703-685-21  | SCREW (+BV 3X8)                           |         |
| 21     | X-3304-924-1  | KNOB (LEFT) ASSY, REC                     |         |
| 22     | X-3304-925-1  | KNOB (RIGHT) ASSY, REC                    |         |
| 23     | 3-346-380-11  | KNOB (VOL)                                |         |
| 24     | 3-350-474-01  | KNOB (DIA. 12), FLAT                      |         |
| 25     | 7-685-870-09  | SCREW +BVTT 3X5 (S)                       |         |
| 26     | 4-812-134-11  | RIVET NYLON, 3.5                          |         |
| 27     | *3-356-940-01 | PLATE, SHIELD                             |         |
| 28     | 3-356-923-01  | LID, CASSETTE                             |         |
| 29     | 3-356-922-01  | (E).....WINDOW, CASSETTE                  |         |
|        | 3-356-922-21  | (EXCEPT E)...WINDOW, CASSETTE             |         |
| 30     | 3-356-942-01  | SCREW (2.6X6), TAPPING                    |         |
| 32     | 9-911-863-XX  | SPACER                                    |         |
| 34     | *3-350-476-01 | BRACKET (FL)                              |         |
| 35     | *3-356-938-01 | BRACKET (FL)                              |         |
| 36     | 9-911-842-XX  | CUSHION (S)                               |         |
| 37     | X-3304-958-4  | BUTTON ASSY                               |         |
| 38     | 3-350-471-11  | (EXCEPT UK,E)...WINDOW, COUNTER           |         |
| 39     | 9-911-835-XX  | CUSHION, F                                |         |
| 40     | 3-701-505-00  | SET SCREW, DOUBLE POINT 3X3               |         |
| FLT501 | 1-519-497-11  | INDICATOR TUBE, FLUORESCENT               |         |
| FLT801 | 1-519-567-11  | INDICATOR TUBE, FLUORESCENT               |         |
| S001   | ▲1-554-920-11 | SWITCH, PUSH (AC POWER)(1 KEY)            |         |

- ▲A: DISPLAY BOARD
- ▲B: HEADPHONE JACK BOARD
- ▲C: CONTROL SW BOARD
- ▲D: METER BOARD
- ▲E: CAL SW BOARD
- ▲F: POWER BOARD
- ▲G: PIN JACK BOARD

- A: SW BOARD
- B: REC LEVEL BOARD
- C: PLAYBACK BOARD
- D: AC VOLT SELECT SW BOARD

## 5-2. CHASSIS SECTION

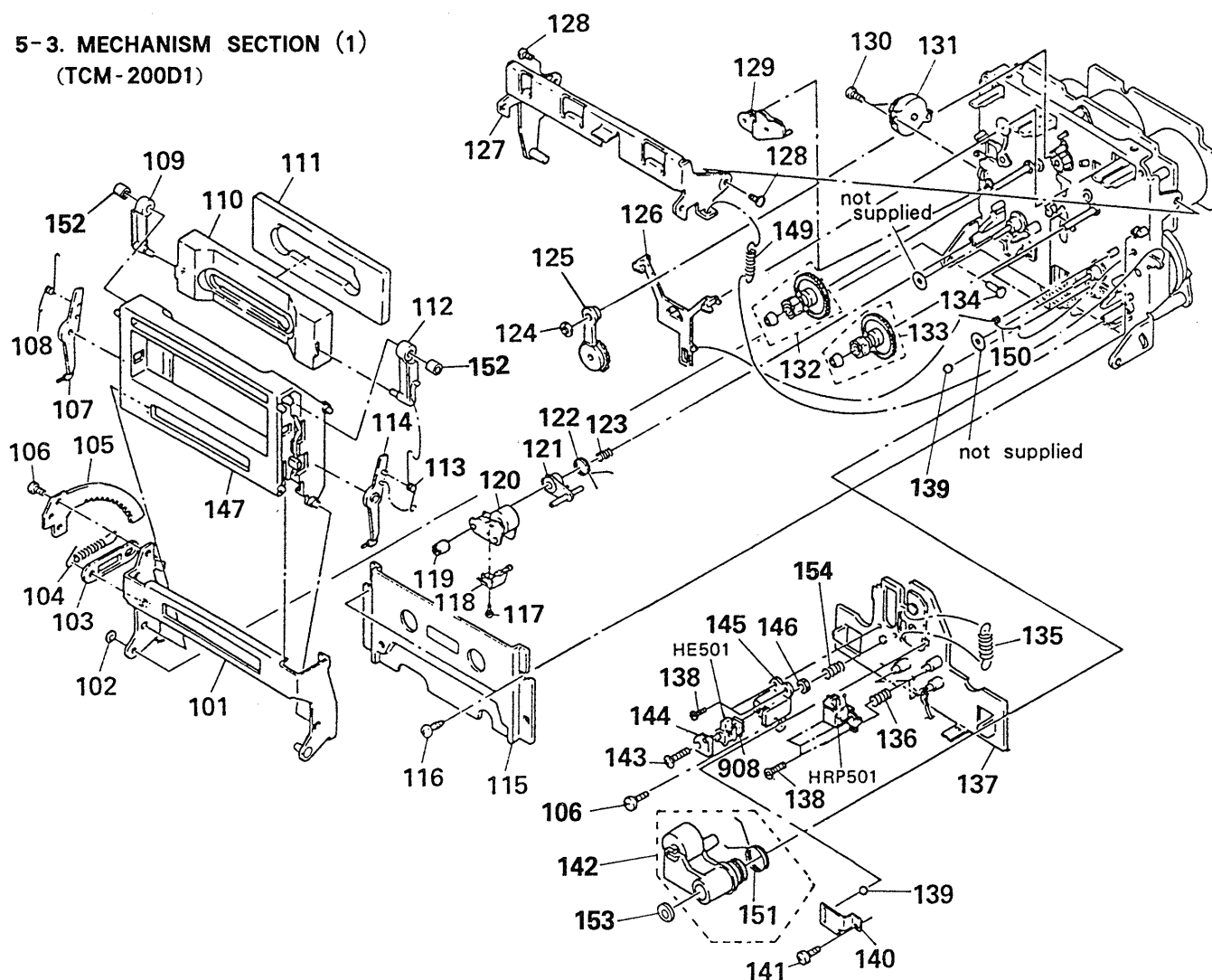


**Note:**  
The components identified by mark **▲** or dotted line with mark **▲** are critical for safety. Replace only with part number specified.

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

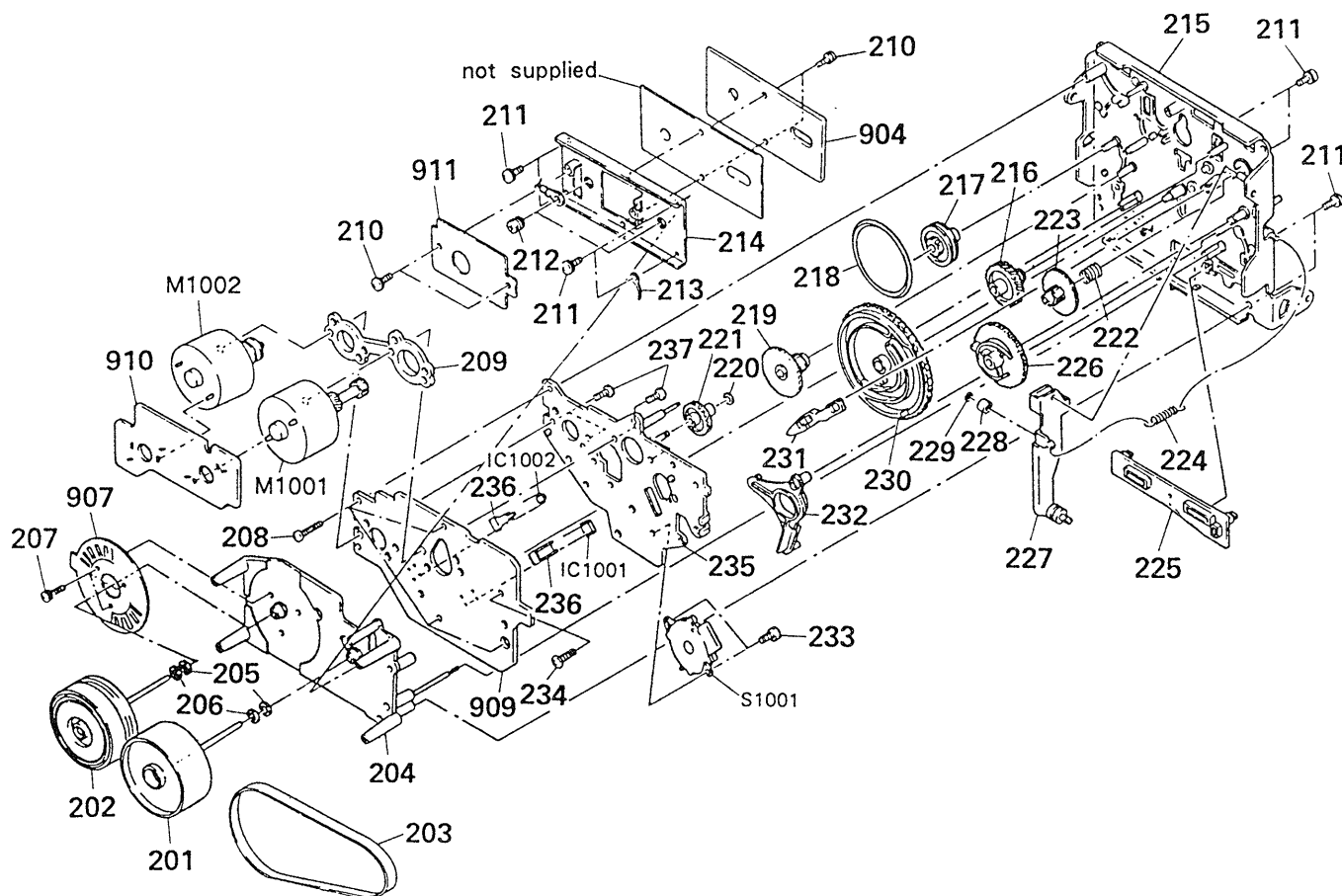
| No. | Part No.      | Description                         | Remarks | No.      | Part No.      | Description                              | Remarks |
|-----|---------------|-------------------------------------|---------|----------|---------------|------------------------------------------|---------|
| 51  | 7-685-870-09  | SCREW +BVTT 3X5 (S)                 |         | 70       | *4-308-851-00 | PURSE LOCK                               |         |
| 52  | 4-886-821-01  | SCREW, S TIGHT, +PTWH 3X6           |         | 71       | 7-682-548-04  | SCREW +BVTT 3X8 (S)                      |         |
| 53  | 7-682-548-04  | SCREW, TIGHT, S                     |         | 72       | *3-701-822-00 | HOLDER, WIRE                             |         |
| 54  | *4-363-146-21 | HEAT SINK, V.OUT                    |         | 901      | A-2006-185-A  | MOUNTED PCB, AUDIO                       |         |
| 55  | 4-820-330-31  | SCREW                               |         | 902      | A-2006-266-A  | (E).....MOUNTED PCB, SYSTEM CONTROL      |         |
| 56  | 3-655-653-21  | BAND (TAITON), BINDING              |         |          | A-2006-287-A  | (EXCEPT E)...MOUNTED PCB, SYSTEM CONTROL |         |
| 57  | 7-685-646-79  | SCREW +BVTP 3X8 TYPE2 IT-3          |         | 903      | 1-533-183-11  | HOLDER, FUSE                             |         |
| 58  | *3-350-482-01 | (EXCEPT E)...PANEL, BACK            |         | 912      | ▲1-569-007-11 | (E)...ADAPTOR, CONVERSION 2P             |         |
|     | *3-350-482-11 | (E).....PANEL, BACK                 |         | CNP901▲1 | 559-297-31    | (E).....CORD, POWER                      |         |
| 59  | 7-682-547-09  | SCREW +BV 3X6, S TIGHT              |         | CNP901▲1 | 559-479-11    | (US,Canadian)...CORD, POWER              |         |
| 60  | 3-701-947-15  | (AEP,UK,WG,E)...LABEL (T2.5A), FUSE |         | CNP901▲1 | 574-383-11    | (AEP,WG)...CORD, POWER                   |         |
|     | 3-703-044-26  | (US,Canadian)...LABEL, CAUTION      |         | CNP901▲1 | 574-384-11    | (UK).....CORD, POWER                     |         |
| 61  | *3-703-244-00 | (AEP,UK,WG)...BUSHING (2104), CORD  |         | F701     | ▲1-532-286-00 | (AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)    |         |
|     | 4-916-783-01  | (US,Canadian,E).....BUSHING, CORD   |         | F701     | ▲1-532-744-11 | (US,Canadian)...FUSE, GLASS TUBE (2.5A)  |         |
| 62  | 7-682-147-15  | SCREW, TR                           |         | F702     | ▲1-532-286-00 | (AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)    |         |
| 63  | 7-685-647-79  | SCREW +BVTP 3X10 TYPE2 N-S          |         | F702     | ▲1-532-744-11 | (US,Canadian)...FUSE, GLASS TUBE (2.5A)  |         |
| 64  | 3-703-685-21  | SCREW (+BV 3X8)                     |         | S002     | ▲1-570-307-11 | (E)...SWITCH, VOLTAGE CHANGE             |         |
| 65  | 7-685-645-79  | SCREW +BVTP 3X6 TYPE2 SLIT          |         | T001     | ▲1-449-981-11 | (US,Canadian)...TRANSFORMER, POWER       |         |
| 66  | 3-315-159-01  | PURSE LOCK (DIA. 14)                |         | T001     | ▲1-449-982-11 | (AEP,WG).....TRANSFORMER, POWER          |         |
| 67  | 4-870-539-00  | PLATE, GROUND                       |         | T001     | ▲1-449-983-11 | (UK).....TRANSFORMER, POWER              |         |
| 68  | 7-682-547-04  | SCREW +BVTT 3X6 (S)                 |         | T001     | ▲1-449-984-11 | (E).....TRANSFORMER, POWER               |         |
| 69  | *3-703-456-01 | (AEP,WG,UK)...LABEL, AMS LICENSE    |         |          |               |                                          |         |

5-3. MECHANISM SECTION (1)  
(TCM-200D1)



| No. | Part No.      | Description                     | Remarks | No.    | Part No.      | Description                     | Remarks |
|-----|---------------|---------------------------------|---------|--------|---------------|---------------------------------|---------|
| 101 | X-3356-612-1  | HOLDER (B) ASSY, CASSETTE       |         | 129    | X-3356-623-1  | LEVER (BT) ASSY                 |         |
| 102 | 3-558-708-21  | WASHER, STOPPER                 |         | 130    | 7-685-851-09  | SCREW +BVTT 2X4 (S)             |         |
| 103 | *3-356-717-01 | LEVER (JOINT)                   |         | 131    | 3-712-786-01  | DAMPER, OIL                     |         |
| 104 | 3-356-626-01  | SPRING, TENSION                 |         | 132    | X-3356-629-1  | GERA (S) ASSY                   |         |
| 105 | 3-356-708-01  | GEAR (SOFT EJECT)               |         | 133    | X-3356-627-1  | GEAR (T) ASSY                   |         |
| 106 | 7-621-775-10  | SCREW +B 2.6X4                  |         | 134    | 3-356-710-01  | SHAFT (LEFT) (CASSETTE HOLDER)  |         |
| 107 | 3-356-932-01  | LEVER (LA)                      |         | 135    | 3-356-658-01  | SPRING (LIMITER H), TENSION     |         |
| 108 | 3-356-927-01  | SPRING (LEFT), TORSION          |         | 136    | 3-356-659-01  | SPRING (RPH), COMPRESSION       |         |
| 109 | 3-356-933-01  | LEVER (LB)                      |         | 137    | *X-3356-617-1 | SLIDER (HEAD PC BOARD) ASSY     |         |
| 110 | 3-356-928-01  | PLATE (A), ORNAMENTAL           |         | 138    | 7-621-772-10  | SCREW +B 2X4                    |         |
| 111 | *3-356-929-01 | ABSORBENT, VIBRATION            |         | 139    | 7-671-154-01  | STENLESS BALL                   |         |
| 112 | 3-356-931-01  | LEVER (RB)                      |         | 140    | 3-356-656-01  | SPRING (HEAD PC BOARD), LEAF    |         |
| 113 | 3-356-926-01  | SPRING (RIGHT), TORSION         |         | 141    | 7-685-870-01  | SCREW +BVTT 3X5 (S)             |         |
| 114 | 3-356-930-01  | LEVER (RA)                      |         | 142    | X-3356-620-1  | LEVER (PINCH LEVER T) ASSY      |         |
| 115 | X-3356-613-1  | PLATE ASSY, ORNAMENTAL          |         | 143    | 7-621-772-70  | SCREW +B 2X14                   |         |
| 116 | 7-685-133-19  | SCREW +BTP 2.6X6 TYPE2 N-S      |         | 144    | 3-318-433-01  | SPRING                          |         |
| 117 | 7-628-253-00  | SCREW +PS 2X4                   |         | 145    | *3-576-977-00 | BRACKET, E. HEAD                |         |
| 118 | 3-564-138-00  | GUIDE (S), TAPE                 |         | 146    | 7-622-205-05  | NUT M2 TYPE2                    |         |
| 119 | 3-356-652-01  | NUT (PINCH LEVER S)             |         | 147    | X-3356-611-1  | HOLDER (A) ASSY, CASSETTE       |         |
| 120 | X-3356-621-1  | LEVER (PINCH LEVER S) ASSY      |         | 149    | 3-356-624-01  | SPRING, TENSION                 |         |
| 121 | 3-356-660-01  | LEVER (PS)                      |         | 150    | 3-356-619-01  | SPRING (B), TORSION             |         |
| 122 | 3-356-661-01  | SPRING (PINCH LEVER S), TORSION |         | 151    | 3-356-672-01  | SPRING (PINCH LEVER T), TORSION |         |
| 123 | 3-356-657-01  | SPRING (PS), COMPRESSION        |         | 152    | 3-356-946-01  | BUSHING                         |         |
| 124 | 3-669-465-00  | WASHER (1.5), STOPPER           |         | 153    | 3-669-596-00  | WASHER (2.3), STOPPER           |         |
| 125 | X-3356-641-1  | LEVER (FR2) ASSY                |         | 154    | 3-564-121-00  | SPRING, COMPRESSION             |         |
| 126 | 3-356-614-01  | SLIDER (BRAKE)                  |         | 908    | *1-608-268-00 | PC BOARD, ERASE HEAD            |         |
| 127 | *X-3356-608-1 | LEVER (LIFTER) ASSY             |         | HE501  | 1-543-358-11  | HEAD, MAGNETIC (ERASE)          |         |
| 128 | 3-356-601-11  | SCREW, STEP                     |         | HRP501 | 1-543-684-11  | HEAD, MAGNETIC (REC/PB)         |         |

**5-4. MECHANISM SECTION (2)**  
(TCM-200D1)



| No. | Part No.      | Description                    | Remarks |
|-----|---------------|--------------------------------|---------|
| 201 | X-3356-626-1  | FLYWHEEL (S) ASSY              |         |
| 202 | X-3356-619-1  | FLYWHEEL (DT) ASSY             |         |
| 203 | 3-564-088-00  | BELT (2), CAPSTAN              |         |
| 204 | *X-3356-614-1 | DECK (D1) ASSY                 |         |
| 205 | 3-356-705-31  | WASHER (CAPSTAN)               |         |
| 206 | 3-356-705-21  | WASHER (CAPSTAN)               |         |
| 207 | 7-628-254-10  | SCREW +PS 2.6X6                |         |
| 208 | 3-355-801-01  | SCREW (BTP 2X18)               |         |
| 209 | *3-356-628-01 | SPACER (MOTOR)                 |         |
| 210 | 7-685-870-01  | SCREW +BVT 3X5 (S)             |         |
| 211 | 7-682-648-09  | SCREW +PS 3X8                  |         |
| 212 | 3-489-073-00  | SCREW, THRUST                  |         |
| 213 | *3-701-822-00 | HOLDER, WIRE                   |         |
| 214 | *X-3356-615-1 | BRACKET(THRUST RETAINER D)ASSY |         |
| 215 | X-3356-622-1  | CHASSIS (C) ASSY, MECHANICAL   |         |
| 216 | 3-356-703-01  | GEAR (COMMUNICATION C)         |         |
| 217 | 3-356-607-01  | PULLEY (MODE)                  |         |
| 218 | 3-356-603-01  | BELT (MODE)                    |         |
| 219 | 3-356-606-01  | GEAR (MODE)                    |         |
| 220 | 3-669-465-00  | WASHER (1.5), STOPPER          |         |
| 221 | 3-356-702-01  | GEAR (COMMUNICATION B)         |         |
| 222 | 3-356-605-01  | SPRING, COMPRESSION            |         |
| 223 | 3-356-609-01  | GEAR (LOADING)                 |         |

| No.   | Part No.      | Description                | Remarks |
|-------|---------------|----------------------------|---------|
| 224   | 3-356-625-01  | SPRING, TENSION            |         |
| 225   | 3-356-653-01  | SLIDER (PAUSE)             |         |
| 226   | 3-356-616-01  | GEAR (LOADING CAM)         |         |
| 227   | *X-3356-606-1 | LEVER (LOADING) ASSY       |         |
| 228   | 3-356-630-01  | ROLLER (LOADING)           |         |
| 229   | 3-558-708-11  | WASHER, STOPPER            |         |
| 230   | 3-356-654-01  | GEAR (MODE CAM C)          |         |
| 231   | 3-356-617-01  | LEVER (SELECTION)          |         |
| 232   | 3-356-613-01  | LEVER (MODE)               |         |
| 233   | 7-621-772-20  | SCREW +B 2X5               |         |
| 234   | 3-356-707-01  | SCREW (+PTPH 2X25)         |         |
| 235   | *X-3356-616-1 | BRACKET (MOTOR D) ASSY     |         |
| 236   | 3-356-631-01  | HOLDER (SENSOR)            |         |
| 237   | 7-621-773-95  | SCREW +B 2.6X6             |         |
| 904   | A-2006-154-A  | MOUNTED PCB, CAPSTAN C.O.C |         |
| 907   | 1-632-779-11  | PC BOARD, FG               |         |
| 909   | *1-632-740-11 | PC BOARD, MD               |         |
| 910   | *1-632-741-11 | PC BOARD, REEL MOTOR       |         |
| 911   | *1-632-746-11 | PC BOARD, COMPARATOR       |         |
| M1002 | X-3356-604-1  | MOTOR (ASSIST) ASSY        |         |
| M1001 | X-3356-638-1  | MOTOR (REEL R) ASSY        |         |
| S1001 | 1-466-238-11  | ENCODER, ROTARY            |         |

## SECTION 6

### ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

**CAPACITORS:**MF:  $\mu$ F, PF:  $\mu$ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

**COILS**

- MMH: mH, UH:  $\mu$ H

**SEMICONDUCTORS**In each case, U:  $\mu$ , for example:
 UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,  
 UPC...:  $\mu$ PC, UPD...:  $\mu$ PD...

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

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

| Ref.No. | Part No.              | Description                             | Ref.No. | Part No.     | Description           |
|---------|-----------------------|-----------------------------------------|---------|--------------|-----------------------|
| 901     | A-2006-185-A          | MOUNTED PCB, AUDIO                      | C133    | 1-136-173-00 | FILM 0.47MF 5% 50V    |
| 902     | A-2006-266-A          | (E).....MOUNTED PCB, SYSTEM CONTROL     | C134    | 1-136-167-00 | FILM 0.15MF 5% 50V    |
|         | A-2006-287-A          | (EXCEPT E)..MOUNTED PCB, SYSTEM CONTROL | C135    | 1-136-155-00 | FILM 0.015MF 5% 50V   |
| 903     | 1-533-183-11          | HOLDER, FUSE                            | C136    | 1-123-380-00 | ELECT 1MF 20% 50V     |
| 904     | A-2006-154-A          | MOUNTED PCB, CAPSTAN C.O.C              | C137    | 1-136-169-00 | FILM 0.22MF 5% 50V    |
| 907     | 1-632-779-11          | PC BOARD, FG                            | C138    | 1-136-163-00 | FILM 0.068MF 5% 50V   |
| 908     | *1-608-268-00         | PC BOARD, ERASE HEAD                    | C139    | 1-136-162-00 | FILM 0.056MF 5% 50V   |
| 909     | *1-632-740-11         | PC BOARD, MD                            | C140    | 1-123-380-00 | ELECT 1MF 20% 50V     |
| 910     | *1-632-741-11         | PC BOARD, REEL MOTOR                    | C141    | 1-130-480-00 | MYLAR 0.0056MF 5% 50V |
| 911     | *1-632-746-11         | PC BOARD, COMPARATOR                    | C142    | 1-136-153-00 | FILM 0.01MF 5% 50V    |
| 912     | $\Delta$ 1-569-007-11 | (E)...ADAPTOR, CONVERSION 2P            | C143    | 1-124-929-11 | ELECT 22MF 20% 63V    |
| C001    | 1-161-744-00          | CERAMIC 0.01MF 400V                     | C144    | 1-124-929-11 | ELECT 22MF 20% 63V    |
| C101    | 1-136-252-00          | FILM 0.0015MF 5% 100V                   | C145    | 1-136-250-11 | FILM 0.001MF 5% 100V  |
| C102    | 1-130-893-00          | FILM 0.027MF 3% 100V                    | C146    | 1-136-252-00 | FILM 0.0015MF 5% 100V |
| C103    | 1-124-130-00          | ELECT 100MF 20% 63V                     | C147    | 1-136-252-00 | FILM 0.0015MF 5% 100V |
| C104    | 1-124-748-11          | ELECT 22MF 20% 100V                     | C148    | 1-124-915-11 | ELECT 10MF 20% 63V    |
| C105    | 1-124-748-11          | ELECT 22MF 20% 100V                     | C149    | 1-136-230-00 | FILM 0.0022MF 5% 100V |
| C106    | 1-136-169-00          | FILM 0.22MF 5% 50V                      | C150    | 1-136-163-00 | FILM 0.068MF 5% 50V   |
| C107    | 1-136-230-00          | FILM 0.0022MF 5% 100V                   | C151    | 1-130-892-00 | FILM 0.015MF 5% 100V  |
| C108    | 1-136-230-00          | FILM 0.0022MF 5% 100V                   | C152    | 1-136-160-00 | FILM 0.039MF 5% 50V   |
| C109    | 1-136-230-00          | FILM 0.0022MF 5% 100V                   | C153    | 1-130-892-00 | FILM 0.015MF 5% 100V  |
| C110    | 1-130-475-00          | MYLAR 0.0022MF 5% 50V                   | C154    | 1-136-160-00 | FILM 0.039MF 5% 50V   |
| C111    | 1-130-475-00          | MYLAR 0.0022MF 5% 50V                   | C155    | 1-136-594-11 | FILM 0.018MF 5% 100V  |
| C112    | 1-130-478-00          | MYLAR 0.0039MF 5% 50V                   | C156    | 1-136-230-00 | FILM 0.0022MF 5% 100V |
| C113    | 1-136-173-00          | FILM 0.47MF 5% 50V                      | C157    | 1-124-929-11 | ELECT 22MF 20% 63V    |
| C114    | 1-136-167-00          | FILM 0.15MF 5% 50V                      | C158    | 1-136-252-00 | FILM 0.0015MF 5% 100V |
| C115    | 1-136-155-00          | FILM 0.015MF 5% 50V                     | C159    | 1-107-157-00 | MICA 27PF 5% 500V     |
| C116    | 1-123-380-00          | ELECT 1MF 20% 50V                       | C160    | 1-136-230-00 | FILM 0.0022MF 5% 100V |
| C117    | 1-136-169-00          | FILM 0.22MF 5% 50V                      | C161    | 1-124-767-00 | ELECT 2.2MF 20% 50V   |
| C118    | 1-136-163-00          | FILM 0.068MF 5% 50V                     | C162    | 1-124-925-11 | ELECT 2.2MF 20% 50V   |
| C119    | 1-136-162-00          | FILM 0.056MF 5% 50V                     | C163    | 1-124-927-11 | ELECT 4.7MF 20% 50V   |
| C120    | 1-123-380-00          | ELECT 1MF 20% 50V                       | C164    | 1-136-165-00 | FILM 0.1MF 5% 50V     |
| C121    | 1-130-480-00          | MYLAR 0.0056MF 5% 50V                   | C166    | 1-123-875-11 | ELECT 10MF 20% 50V    |
| C122    | 1-136-153-00          | FILM 0.01MF 5% 50V                      | C167    | 1-136-437-11 | FILM 220PF 5% 630V    |
| C123    | 1-124-929-11          | ELECT 22MF 20% 63V                      | C168    | 1-136-153-00 | FILM 0.01MF 5% 50V    |
| C124    | 1-124-929-11          | ELECT 22MF 20% 63V                      | C169    | 1-136-433-11 | FILM 100PF 5% 630V    |
| C125    | 1-123-369-00          | ELECT 4.7MF 20% 63V                     | C170    | 1-136-435-11 | FILM 150PF 5% 630V    |
| C126    | 1-123-369-00          | ELECT 4.7MF 20% 63V                     | C171    | 1-136-165-00 | FILM 0.1MF 5% 50V     |
| C127    | 1-124-767-00          | ELECT 2.2MF 20% 50V                     | C172    | 1-136-157-00 | FILM 0.022MF 5% 50V   |
| C128    | 1-107-159-00          | MICA 33PF 5% 500V                       | C173    | 1-107-169-00 | MICA 100PF 5% 500V    |
| C129    | 1-107-159-00          | MICA 33PF 5% 500V                       | C174    | 1-123-369-00 | ELECT 4.7MF 20% 63V   |
| C130    | 1-130-475-00          | MYLAR 0.0022MF 5% 50V                   | C175    | 1-123-369-00 | ELECT 4.7MF 20% 63V   |
| C131    | 1-130-475-00          | MYLAR 0.0022MF 5% 50V                   | C176    | 1-136-252-00 | FILM 0.0015MF 5% 100V |
| C132    | 1-130-478-00          | MYLAR 0.0039MF 5% 50V                   | C201    | 1-136-252-00 | FILM 0.0015MF 5% 100V |
|         |                       |                                         | C202    | 1-130-893-00 | FILM 0.027MF 3% 100V  |

| Ref.No. | Part No.     | Description |          |     |      | Ref.No. | Part No.     | Description |          |       |      |
|---------|--------------|-------------|----------|-----|------|---------|--------------|-------------|----------|-------|------|
| C203    | 1-124-130-00 | ELECT       | 100MF    | 20% | 63V  | C260    | 1-136-230-00 | FILM        | 0.0022MF | 5%    | 100V |
| C204    | 1-124-748-11 | ELECT       | 22MF     | 20% | 100V | C261    | 1-124-767-00 | ELECT       | 2.2MF    | 20%   | 50V  |
| C205    | 1-124-748-11 | ELECT       | 22MF     | 20% | 100V | C262    | 1-124-925-11 | ELECT       | 2.2MF    | 20%   | 50V  |
| C206    | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V  | C263    | 1-124-927-11 | ELECT       | 4.7MF    | 20%   | 50V  |
| C207    | 1-136-230-00 | FILM        | 0.0022MF | 5%  | 100V | C264    | 1-124-767-00 | ELECT       | 2.2MF    | 20%   | 50V  |
| C208    | 1-136-230-00 | FILM        | 0.0022MF | 5%  | 100V | C265    | 1-161-375-00 | CERAMIC     | 0.0022MF | 20%   | 16V  |
| C209    | 1-136-230-00 | FILM        | 0.0022MF | 5%  | 100V | C266    | 1-123-875-11 | ELECT       | 10MF     | 20%   | 50V  |
| C210    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  | C267    | 1-136-437-11 | FILM        | 220PF    | 5%    | 630V |
| C211    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  | C268    | 1-136-153-00 | FILM        | 0.01MF   | 5%    | 50V  |
| C212    | 1-130-478-00 | MYLAR       | 0.0039MF | 5%  | 50V  | C269    | 1-136-433-11 | FILM        | 100PF    | 5%    | 630V |
| C213    | 1-136-173-00 | FILM        | 0.47MF   | 5%  | 50V  | C270    | 1-136-435-11 | FILM        | 150PF    | 5%    | 630V |
| C214    | 1-136-167-00 | FILM        | 0.15MF   | 5%  | 50V  | C271    | 1-136-165-00 | FILM        | 0.1MF    | 5%    | 50V  |
| C215    | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V  | C272    | 1-136-157-00 | FILM        | 0.022MF  | 5%    | 50V  |
| C216    | 1-123-380-00 | ELECT       | 1MF      | 20% | 50V  | C273    | 1-107-169-00 | MICA        | 100PF    | 5%    | 500V |
| C217    | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V  | C274    | 1-123-369-00 | ELECT       | 4.7MF    | 20%   | 63V  |
| C218    | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V  | C275    | 1-123-369-00 | ELECT       | 4.7MF    | 20%   | 63V  |
| C219    | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V  | C276    | 1-136-252-00 | FILM        | 0.0015MF | 5%    | 100V |
| C220    | 1-123-380-00 | ELECT       | 1MF      | 20% | 50V  | C501    | 1-123-377-00 | ELECT       | 470MF    | 20%   | 63V  |
| C221    | 1-130-480-00 | MYLAR       | 0.0056MF | 5%  | 50V  | C502    | 1-123-377-00 | ELECT       | 470MF    | 20%   | 63V  |
| C222    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  | C503    | 1-123-333-00 | ELECT       | 100MF    | 20%   | 25V  |
| C223    | 1-124-929-11 | ELECT       | 22MF     | 20% | 63V  | C504    | 1-123-333-00 | ELECT       | 100MF    | 20%   | 25V  |
| C224    | 1-124-929-11 | ELECT       | 22MF     | 20% | 63V  | C505    | 1-107-159-00 | MICA        | 33PF     | 5%    | 500V |
| C225    | 1-123-369-00 | ELECT       | 4.7MF    | 20% | 63V  | C506    | 1-107-159-00 | MICA        | 33PF     | 5%    | 500V |
| C226    | 1-123-369-00 | ELECT       | 4.7MF    | 20% | 63V  | C507    | 1-124-922-11 | ELECT       | 1000MF   | 20%   | 63V  |
| C227    | 1-124-767-00 | ELECT       | 2.2MF    | 20% | 50V  | C508    | 1-124-922-11 | ELECT       | 1000MF   | 20%   | 63V  |
| C228    | 1-107-159-00 | MICA        | 33PF     | 5%  | 500V | C509    | 1-123-875-11 | ELECT       | 10MF     | 20%   | 50V  |
| C229    | 1-107-159-00 | MICA        | 33PF     | 5%  | 500V | C510    | 1-124-927-11 | ELECT       | 4.7MF    | 20%   | 50V  |
| C230    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  | C511    | 1-123-333-00 | ELECT       | 100MF    | 20%   | 16V  |
| C231    | 1-130-475-00 | MYLAR       | 0.0022MF | 5%  | 50V  | C512    | 1-123-333-00 | ELECT       | 100MF    | 20%   | 16V  |
| C232    | 1-130-478-00 | MYLAR       | 0.0039MF | 5%  | 50V  | C513    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |
| C233    | 1-136-173-00 | FILM        | 0.47MF   | 5%  | 50V  | C514    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |
| C234    | 1-136-167-00 | FILM        | 0.15MF   | 5%  | 50V  | C515    | 1-124-927-11 | ELECT       | 4.7MF    | 20%   | 50V  |
| C235    | 1-136-155-00 | FILM        | 0.015MF  | 5%  | 50V  | C516    | 1-126-233-11 | ELECT       | 22MF     | 20%   | 50V  |
| C236    | 1-123-380-00 | ELECT       | 1MF      | 20% | 50V  | C517    | 1-123-875-11 | ELECT       | 10MF     | 20%   | 50V  |
| C237    | 1-136-169-00 | FILM        | 0.22MF   | 5%  | 50V  | C518    | 1-126-233-11 | ELECT       | 22MF     | 20%   | 50V  |
| C238    | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V  | C519    | 1-123-875-11 | ELECT       | 10MF     | 20%   | 50V  |
| C239    | 1-136-162-00 | FILM        | 0.056MF  | 5%  | 50V  | C520    | 1-124-902-00 | ELECT       | 0.47MF   | 20%   | 50V  |
| C240    | 1-123-380-00 | ELECT       | 1MF      | 20% | 50V  | C521    | 1-124-915-11 | ELECT       | 10MF     | 20%   | 63V  |
| C241    | 1-130-480-00 | MYLAR       | 0.0056MF | 5%  | 50V  | C522    | 1-124-915-11 | ELECT       | 10MF     | 20%   | 63V  |
| C242    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  | C523    | 1-107-046-00 | MICA        | 4.7PF    | 0.5PF | 500V |
| C243    | 1-124-929-11 | ELECT       | 22MF     | 20% | 63V  | C524    | 1-130-478-00 | MYLAR       | 0.0039MF | 5%    | 50V  |
| C244    | 1-124-929-11 | ELECT       | 22MF     | 20% | 63V  | C527    | 1-123-369-00 | ELECT       | 4.7MF    | 20%   | 63V  |
| C245    | 1-136-250-11 | FILM        | 0.001MF  | 5%  | 100V | C528    | 1-123-369-00 | ELECT       | 4.7MF    | 20%   | 63V  |
| C246    | 1-136-252-00 | FILM        | 0.0015MF | 5%  | 100V | C529    | 1-130-474-00 | MYLAR       | 0.0018MF | 5%    | 50V  |
| C247    | 1-136-252-00 | FILM        | 0.0015MF | 5%  | 100V | C530    | 1-130-474-00 | MYLAR       | 0.0018MF | 5%    | 50V  |
| C248    | 1-124-915-11 | ELECT       | 10MF     | 20% | 63V  | C531    | 1-136-157-00 | FILM        | 0.022MF  | 5%    | 50V  |
| C249    | 1-136-230-00 | FILM        | 0.0022MF | 5%  | 100V | C532    | 1-136-157-00 | FILM        | 0.022MF  | 5%    | 50V  |
| C250    | 1-136-163-00 | FILM        | 0.068MF  | 5%  | 50V  | C533    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |
| C251    | 1-130-892-00 | FILM        | 0.015MF  | 5%  | 100V | C534    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |
| C252    | 1-136-160-00 | FILM        | 0.039MF  | 5%  | 50V  | C535    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10%   | 50V  |
| C253    | 1-130-892-00 | FILM        | 0.015MF  | 5%  | 100V | C536    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10%   | 50V  |
| C254    | 1-136-160-00 | FILM        | 0.039MF  | 5%  | 50V  | C537    | 1-162-291-31 | CERAMIC     | 560PF    | 10%   | 50V  |
| C255    | 1-136-594-11 | FILM        | 0.018MF  | 5%  | 100V | C538    | 1-162-291-31 | CERAMIC     | 560PF    | 10%   | 50V  |
| C256    | 1-136-230-00 | FILM        | 0.0022MF | 5%  | 100V | C539    | 1-131-368-00 | TANTALUM    | 3.3MF    | 20%   | 16V  |
| C257    | 1-124-929-11 | ELECT       | 22MF     | 20% | 63V  | C540    | 1-136-802-11 | FILM        | 0.015MF  | 5%    | 100V |
| C258    | 1-136-252-00 | FILM        | 0.0015MF | 5%  | 100V | C543    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |
| C259    | 1-107-157-00 | MICA        | 27PF     | 5%  | 500V | C544    | 1-124-477-11 | ELECT       | 47MF     | 20%   | 25V  |

| Ref.No. | Part No.     | Description  |         |     |      |
|---------|--------------|--------------|---------|-----|------|
| C545    | 1-124-477-11 | ELECT        | 47MF    | 20% | 25V  |
| C546    | 1-124-477-11 | ELECT        | 47MF    | 20% | 25V  |
| C547    | 1-124-902-00 | ELECT        | 0.47MF  | 20% | 50V  |
| C548    | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C549    | 1-124-925-11 | ELECT        | 2.2MF   | 20% | 50V  |
| C701    | 1-124-636-00 | ELECT        | 3300MF  | 20% | 25V  |
| C702    | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C703    | 1-124-911-11 | ELECT        | 220MF   | 20% | 50V  |
| C704    | 1-124-911-11 | ELECT        | 220MF   | 20% | 50V  |
| C705    | 1-126-982-11 | ELECT        | 5600MF  | 20% | 0    |
| C706    | 1-126-982-11 | ELECT        | 5600MF  | 20% | 0    |
| C707    | 1-124-443-00 | ELECT        | 100MF   | 20% | 10V  |
| C708    | 1-136-177-00 | FILM         | 1MF     | 5%  | 50V  |
| C709    | 1-136-165-00 | FILM         | 0.1MF   | 5%  | 50V  |
| C711    | 1-124-636-00 | ELECT        | 3300MF  | 20% | 25V  |
| C712    | 1-124-122-11 | ELECT        | 100MF   | 20% | 50V  |
| C713    | 1-124-898-11 | ELECT        | 4700MF  | 20% | 16V  |
| C714    | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C715    | 1-124-791-11 | ELECT        | 1MF     | 20% | 50V  |
| C716    | 1-124-443-00 | ELECT        | 100MF   | 20% | 10V  |
| C717    | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C718    | 1-124-472-11 | ELECT        | 470MF   | 20% | 10V  |
| C721    | 1-124-472-11 | ELECT        | 470MF   | 20% | 10V  |
| C722    | 1-124-791-11 | ELECT        | 1MF     | 20% | 50V  |
| C723    | 1-124-122-11 | ELECT        | 100MF   | 20% | 50V  |
| C724    | 1-124-443-00 | ELECT        | 100MF   | 20% | 10V  |
| C725    | 1-124-472-11 | ELECT        | 470MF   | 20% | 10V  |
| C727    | 1-124-477-11 | ELECT        | 47MF    | 20% | 25V  |
| C728    | 1-124-477-11 | ELECT        | 47MF    | 20% | 25V  |
| C729    | 1-126-177-11 | ELECT        | 100MF   | 20% | 6.3V |
| C730    | 1-162-211-31 | CERAMIC      | 33PF    | 5%  | 50V  |
| C731    | 1-164-159-11 | CERAMIC      | 0.1MF   |     | 50V  |
| C801    | 1-164-159-11 | CERAMIC      | 0.1MF   |     | 50V  |
| C802    | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C803    | 1-164-159-11 | CERAMIC      | 0.1MF   |     | 50V  |
| C804    | 1-164-159-11 | CERAMIC      | 0.1MF   |     | 50V  |
| C805    | 1-162-294-31 | CERAMIC      | 0.001MF | 10% | 50V  |
| C806    | 1-162-294-31 | CERAMIC      | 0.001MF | 10% | 50V  |
| C807    | 1-136-159-00 | FILM         | 0.033MF | 5%  | 50V  |
| C905    | 1-124-779-00 | ELECT CHIP   | 10MF    | 20% | 16V  |
| C906    | 1-135-091-00 | TANTAL. CHIP | 1MF     | 10% | 16V  |
| C907    | 1-163-077-00 | CERAMIC CHIP | 0.1MF   |     | 50V  |
| C908    | 1-163-077-00 | CERAMIC CHIP | 0.1MF   |     | 50V  |
| C909    | 1-163-077-00 | CERAMIC CHIP | 0.1MF   |     | 50V  |
| C910    | 1-163-205-00 | CERAMIC CHIP | 0.001MF | 10% | 50V  |
| C911    | 1-124-779-00 | ELECT CHIP   | 10MF    | 20% | 16V  |
| C951    | 1-136-157-00 | FILM         | 0.022MF | 5%  | 50V  |
| C952    | 1-124-282-00 | ELECT        | 22MF    | 20% | 25V  |
| C953    | 1-124-478-11 | ELECT        | 100MF   | 20% | 25V  |
| C954    | 1-124-477-11 | ELECT        | 47MF    | 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         | 0.033MF | 5%  | 50V  |
| C1051   | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C1052   | 1-123-875-11 | ELECT        | 10MF    | 20% | 50V  |
| C1053   | 1-164-159-11 | CERAMIC      | 0.1MF   |     | 50V  |

| Ref.No. | Part No.      | Description                    |
|---------|---------------|--------------------------------|
| CN001   | *1-564-321-00 | PIN, CONNECTOR 2P              |
| CN002   | *1-565-792-11 | PIN, CONNECTOR 2P              |
| CN003   | *1-564-321-00 | PIN, CONNECTOR 2P              |
| CN004   | *1-569-223-11 | PIN, CONNECTOR 4P              |
| CN005   | *1-569-223-11 | PIN, CONNECTOR 4P              |
| CN006   | *1-568-226-11 | PIN, CONNECTOR 2P              |
| CN701   | *1-564-506-11 | PLUG, CONNECTOR 3P             |
| CN702   | *1-564-104-00 | PIN, CONNECTOR 3P              |
| CN703   | *1-564-506-11 | PLUG, CONNECTOR 3P             |
| CN704   | *1-564-510-11 | PLUG, CONNECTOR 7P             |
| CN801   | *1-564-341-11 | PIN, CONNECTOR 7P              |
| CN802   | *1-564-340-71 | PIN, CONNECTOR 6P              |
| CN803   | *1-564-666-11 | PIN, CONNECTOR 10P             |
| CN806   | *1-564-338-00 | PIN, CONNECTOR 4P              |
| CN807   | *1-564-340-00 | PIN, CONNECTOR 6P              |
| CN855   | *1-564-342-61 | PIN, CONNECTOR 8P              |
| CN856   | *1-506-503-11 | PIN, CONNECTOR 9P              |
| CN951   | *1-564-718-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN952   | *1-564-518-11 | PLUG, CONNECTOR 3P             |
| CN1001  | 1-506-615-11  | PIN, CONNECTOR 9P              |
| CN1002  | 1-564-501-11  | PIN, CONNECTOR 8P              |
| CN1051  | *1-564-499-11 | PIN, CONNECTOR 6P              |
| CN1052  | *1-564-718-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN1053  | *1-564-718-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CND501  | *1-564-337-71 | PIN, CONNECTOR 3P              |
| CND505  | *1-564-336-61 | PIN, CONNECTOR 2P              |
| CND513  | *1-564-338-61 | PIN, CONNECTOR 4P              |
| CND522  | *1-564-340-71 | PIN, CONNECTOR 6P              |
| CND523  | *1-564-338-00 | PIN, CONNECTOR 4P              |
| CND524  | *1-564-339-00 | PIN, CONNECTOR 5P              |
| CND525  | *1-564-340-61 | PIN, CONNECTOR 6P              |
| CND526  | *1-564-340-81 | PIN, CONNECTOR 6P              |
| CND527  | *1-564-341-11 | PIN, CONNECTOR 7P              |
| CND528  | *1-564-338-71 | PIN, CONNECTOR 4P              |
| CND529  | *1-564-339-71 | PIN, CONNECTOR 5P              |
| CND531  | *1-564-339-61 | PIN, CONNECTOR 5P              |
| CND532  | *1-564-339-81 | PIN, CONNECTOR 5P              |
| CND533  | *1-564-340-00 | PIN, CONNECTOR 6P              |
| CNE507  | *1-564-507-11 | PLUG, CONNECTOR 4P             |
| CNE508  | *1-564-506-11 | PLUG, CONNECTOR 3P             |
| CNE514  | *1-564-508-11 | PLUG, CONNECTOR 5P             |
| CNE516  | *1-564-507-11 | PLUG, CONNECTOR 4P             |
| CNE520  | *1-564-509-11 | PLUG, CONNECTOR 6P             |
| CNE521  | *1-564-509-11 | PLUG, CONNECTOR 6P             |
| CNE534  | *1-564-511-11 | PLUG, CONNECTOR 8P             |
| CNE535  | *1-564-506-11 | PLUG, CONNECTOR 3P             |
| CNE536  | *1-564-506-11 | PLUG, CONNECTOR 3P             |
| CNE537  | *1-564-507-11 | PLUG, CONNECTOR 4P             |
| CNN502  | *1-560-338-00 | PIN, CONNECTOR 7P              |
| CNN506  | *1-560-062-00 | PIN, CONNECTOR 4P              |
| CNN509  | *1-560-061-00 | PIN, CONNECTOR 3P              |
| CNN510  | *1-560-061-00 | PIN, CONNECTOR 3P              |
| CNN511  | *1-560-062-00 | PIN, CONNECTOR 4P              |
| CNN512  | *1-560-061-00 | PIN, CONNECTOR 3P              |
| CNN515  | *1-560-061-00 | PIN, CONNECTOR 3P              |
| CNN517  | *1-560-062-00 | PIN, CONNECTOR 4P              |
| CNN518  | *1-560-062-00 | PIN, CONNECTOR 4P              |
| CNN519  | *1-560-062-00 | PIN, CONNECTOR 4P              |

| Ref.No.  | Part No.     | Description                 |
|----------|--------------|-----------------------------|
| CNP901A1 | 559-297-31   | (E).....CORD, POWER         |
| CNP901A1 | 559-479-11   | (US,Canadian)...CORD, POWER |
| CNP901A1 | 574-383-11   | (AEP,WG).....CORD, POWER    |
| CNP901A1 | 574-384-11   | (UK).....CORD, POWER        |
| CNV503*1 | 564-104-00   | PIN, CONNECTOR 3P           |
| CP501    | 1-466-252-11 | OSCILLATION UNIT, BIAS      |
| D101     | 8-719-107-94 | DIODE 1SS202-1              |
| D201     | 8-719-107-94 | DIODE 1SS202-1              |
| D503     | 8-719-910-65 | DIODE HZ6B2L                |
| D504     | 8-719-910-65 | DIODE HZ6B2L                |
| D505     | 8-719-001-57 | DIODE UZL-11H3              |
| D506     | 8-719-107-94 | DIODE 1SS202-1              |
| D507     | 8-719-107-94 | DIODE 1SS202-1              |
| D508     | 8-719-107-94 | DIODE 1SS202-1              |
| D509     | 8-719-107-94 | DIODE 1SS202-1              |
| D510     | 8-719-107-94 | DIODE 1SS202-1              |
| D511     | 8-719-107-94 | DIODE 1SS202-1              |
| D512     | 8-719-107-94 | DIODE 1SS202-1              |
| D513     | 8-719-107-94 | DIODE 1SS202-1              |
| D514     | 8-719-001-57 | DIODE UZL-11H3              |
| D515     | 8-719-001-57 | DIODE UZL-11H3              |
| D516     | 8-719-107-94 | DIODE 1SS202-1              |
| D517     | 8-719-107-94 | DIODE 1SS202-1              |
| D518     | 8-719-107-94 | DIODE 1SS202-1              |
| D519     | 8-719-107-94 | DIODE 1SS202-1              |
| D520     | 8-719-107-94 | DIODE 1SS202-1              |
| D521     | 8-719-933-54 | DIODE UZS9A2L               |
| D522     | 8-719-107-94 | DIODE 1SS202-1              |
| D523     | 8-719-107-94 | DIODE 1SS202-1              |
| D524     | 8-719-001-57 | DIODE UZL-11H3              |
| D525     | 8-719-107-94 | DIODE 1SS202-1              |
| D526     | 8-719-107-94 | DIODE 1SS202-1              |
| D527     | 8-719-114-29 | DIODE RD5.1JS-B1            |
| D528     | 8-719-114-29 | DIODE RD5.1JS-B1            |
| D529     | 8-719-001-57 | DIODE UZL-11H3              |
| D530     | 8-719-001-57 | DIODE UZL-11H3              |
| D531     | 8-719-114-29 | DIODE RD5.1JS-B1            |
| D532     | 8-719-933-54 | DIODE UZS9A2L               |
| D533     | 8-719-107-94 | DIODE 1SS202-1              |
| D534     | 8-719-107-94 | DIODE 1SS202-1              |
| D535     | 8-719-107-94 | DIODE 1SS202-1              |
| D536     | 8-719-114-29 | DIODE RD5.1JS-B1            |
| D537     | 8-719-107-94 | DIODE 1SS202-1              |
| D538     | 8-719-107-94 | DIODE 1SS202-1              |
| D539     | 8-719-107-94 | DIODE 1SS202-1              |
| D540     | 8-719-107-94 | DIODE 1SS202-1              |
| D541     | 8-719-114-29 | DIODE RD5.1JS-B1            |
| D542     | 8-719-107-94 | DIODE 1SS202-1              |
| D543     | 8-719-107-94 | DIODE 1SS202-1              |
| D544     | 8-719-107-94 | DIODE 1SS202-1              |
| D545     | 8-719-107-94 | DIODE 1SS202-1              |
| D546     | 8-719-000-84 | DIODE UZL-7M1               |
| D547     | 8-719-000-84 | DIODE UZL-7M1               |
| D548     | 8-719-107-94 | DIODE 1SS202-1              |
| D549     | 8-719-107-94 | DIODE 1SS202-1              |
| D550     | 8-719-301-52 | LED SEL2810A-C              |
| D551     | 8-719-107-94 | DIODE 1SS202-1              |

| Ref.No. | Part No.      | Description                             |
|---------|---------------|-----------------------------------------|
| D552    | 8-719-107-94  | DIODE 1SS202-1                          |
| D553    | 8-719-107-94  | DIODE 1SS202-1                          |
| D554    | 8-719-114-29  | DIODE RD5.1JS-B1                        |
| D701    | 8-719-107-94  | DIODE 1SS202-1                          |
| D702    | 8-719-107-94  | DIODE 1SS202-1                          |
| D703    | 8-719-504-60  | DIODE S4VB60                            |
| D704    | 8-719-200-77  | DIODE 10E2N                             |
| D705    | 8-719-200-77  | DIODE 10E2N                             |
| D706    | 8-719-230-02  | DIODE 30DF2                             |
| D707    | 8-719-230-02  | DIODE 30DF2                             |
| D708    | 8-719-230-02  | DIODE 30DF2                             |
| D709    | 8-719-230-02  | DIODE 30DF2                             |
| D710    | 8-719-933-41  | DIODE HZS6C3L                           |
| D711    | 8-719-107-94  | DIODE 1SS202-1                          |
| D712    | 8-719-200-77  | DIODE 10E2N                             |
| D713    | 8-719-933-39  | DIODE HZS6C1L                           |
| D714    | 8-719-933-39  | DIODE HZS6C1L                           |
| D716    | 8-719-934-18  | DIODE HZS27-2L                          |
| D717    | 8-719-114-29  | DIODE RD5.1JS-B1                        |
| D801    | 8-719-312-76  | LED SEL4814A-CD                         |
| D802    | 8-719-304-32  | LED SEL4214S                            |
| D803    | 8-719-304-37  | LED SEL4414E-C                          |
| D804    | 8-719-107-94  | DIODE 1SS202-1                          |
| D806    | 8-719-107-94  | DIODE 1SS202-1                          |
| D807    | 8-719-107-94  | DIODE 1SS202-1                          |
| F701    | A1-532-286-00 | (AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)   |
| F701    | A1-532-744-11 | (US,Canadian)...FUSE, GLASS TUBE (2.5A) |
| F702    | A1-532-286-00 | (AEP,WG,UK,E)...FUSE, TIME-LAG (2.5A)   |
| F702    | A1-532-744-11 | (US,Canadian)...FUSE, GLASS TUBE (2.5A) |
| FLT501  | 1-519-497-11  | INDICATOR TUBE, FLUORESCENT             |
| FLT801  | 1-519-567-11  | INDICATOR TUBE, FLUORESCENT             |
| H901    | 8-719-403-79  | HOLE ELEMENT OH009                      |
| H902    | 8-719-403-79  | HOLE ELEMENT OH009                      |
| H903    | 8-719-403-79  | HOLE ELEMENT OH009                      |
| HE501   | 1-543-358-11  | HEAD, MAGNETIC (ERASE)                  |
| HRP501  | 1-543-684-11  | HEAD, MAGNETIC (REC/PB)                 |
| IC101   | 8-759-900-72  | IC NE5532P                              |
| IC102   | 8-759-900-72  | IC NE5532P                              |
| IC201   | 8-759-900-72  | IC NE5532P                              |
| IC202   | 8-759-900-72  | IC NE5532P                              |
| IC501   | 8-759-900-72  | IC NE5532P                              |
| IC503   | 8-752-018-80  | IC CX20188                              |
| IC504   | 8-759-602-83  | IC M5238P                               |
| IC505   | 8-752-018-80  | IC CX20188                              |
| IC506   | 8-759-900-72  | IC NE5532P                              |
| IC507   | 8-759-981-96  | IC RC4560D                              |
| IC508   | 8-759-945-58  | IC RC4558P                              |
| IC509   | 8-759-982-26  | IC RC78L12A                             |
| IC510   | 8-759-982-48  | IC RC79L12A                             |
| IC511   | 8-759-602-83  | IC M5238P                               |
| IC512   | 8-759-961-38  | IC BA6138                               |
| IC513   | 8-759-945-58  | IC RC4558P                              |
| IC514   | 8-759-904-72  | IC MSL9359RS                            |
| IC517   | 8-759-106-56  | IC UPC1297CA                            |

**Note:**

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

**Note:**

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

| Ref.No. | Part No.      | Description                         |
|---------|---------------|-------------------------------------|
| IC519   | 8-759-240-50  | IC UPD14050BC                       |
| IC520   | 8-759-140-11  | IC MC14011BCP                       |
| IC701   | 8-759-604-29  | IC M5F7805L                         |
| IC702   | 8-759-604-33  | IC M5F7812L                         |
| IC801   | 8-759-634-78  | IC M50964-222SP                     |
| IC802   | 8-759-240-69  | IC TC14069UBP                       |
| IC803   | 8-759-973-95  | IC BA6219B                          |
| IC804   | 8-759-973-95  | IC BA6219B                          |
| IC805   | 8-749-920-83  | IC GP1U52XB                         |
| IC806   | 8-759-905-48  | IC MSL9512RS                        |
| IC902   | 8-752-017-40  | IC CX20174                          |
| IC951   | 8-759-995-08  | IC MC4558                           |
| IC952   | 8-759-201-58  | IC TC9142P                          |
| IC1001  | 8-749-920-97  | PHOTO REFLECTOR GP2S22B             |
| IC1002  | 8-749-920-97  | PHOTO REFLECTOR GP2S22B             |
| J501    | *1-568-250-21 | JACK, PIN 2P (LINE OUT)             |
| J502    | 1-569-140-11  | JACK (LARGE TYPE) (PHONES)          |
| J505    | *1-569-186-11 | JACK, PIN 4P (LINE IN/CD DIRECT IN) |
| JR901   | 1-216-296-00  | METAL GLAZE 0 5% 1/8W               |
| JR902   | 1-216-296-00  | METAL GLAZE 0 5% 1/8W               |
| JR903   | 1-216-296-00  | METAL GLAZE 0 5% 1/8W               |
| JR904   | 1-216-296-00  | METAL GLAZE 0 5% 1/8W               |
| JR905   | 1-216-296-00  | METAL GLAZE 0 5% 1/8W               |
| L103    | 1-408-920-00  | INDUCTOR 4.7MMH                     |
| L104    | 1-408-918-11  | INDUCTOR 3.3MMH                     |
| L105    | 1-408-916-11  | INDUCTOR 2.2MMH                     |
| L106    | 1-408-925-11  | INDUCTOR 12MMH                      |
| L107    | 1-408-916-11  | INDUCTOR 2.2MMH                     |
| L203    | 1-408-920-00  | INDUCTOR 4.7MMH                     |
| L204    | 1-408-918-11  | INDUCTOR 3.3MMH                     |
| L205    | 1-408-916-11  | INDUCTOR 2.2MMH                     |
| L206    | 1-408-925-11  | INDUCTOR 12MMH                      |
| L207    | 1-408-916-11  | INDUCTOR 2.2MMH                     |
| L501    | 1-410-525-11  | INDUCTOR 220UH                      |
| L502    | 1-410-525-11  | INDUCTOR 220UH                      |
| L503    | 1-410-525-11  | INDUCTOR 220UH                      |
| LPF101  | 1-236-087-11  | FILTER, LOW PASS                    |
| LPF201  | 1-236-087-11  | FILTER, LOW PASS                    |
| M1001   | X-3356-604-1  | MOTOR (ASSIST) ASSY                 |
| M1002   | X-3356-638-1  | MOTOR (REEL R) ASSY                 |
| PL501   | 1-518-471-31  | LAMP, PILOT                         |
| PL502   | 1-518-471-31  | LAMP, PILOT                         |
| PS703   | 1-532-685-00  | LINK, IC                            |
| PS704   | 1-532-685-00  | LINK, IC                            |
| Q101    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q102    | 8-729-102-14  | TRANSISTOR 2SD1021                  |
| Q103    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q104    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q105    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q106    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q107    | 8-729-217-03  | TRANSISTOR 2SK170                   |
| Q108    | 8-729-217-03  | TRANSISTOR 2SK170                   |
| Q109    | 8-729-375-61  | TRANSISTOR 2SD756                   |
| Q110    | 8-729-201-56  | TRANSISTOR 2SK246-GR2               |
| Q111    | 8-729-194-57  | TRANSISTOR 2SC945                   |
| Q113    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q118    | 8-729-102-14  | TRANSISTOR 2SD1021                  |
| Q201    | 8-729-141-30  | TRANSISTOR 2SC3623A-LK              |
| Q202    | 8-729-102-14  | TRANSISTOR 2SD1021                  |

| Ref.No. | Part No.     | Description            |
|---------|--------------|------------------------|
| Q203    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q204    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q205    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q206    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q207    | 8-729-217-03 | TRANSISTOR 2SK170      |
| Q208    | 8-729-217-03 | TRANSISTOR 2SK170      |
| Q209    | 8-729-375-61 | TRANSISTOR 2SD756      |
| Q210    | 8-729-201-56 | TRANSISTOR 2SK246-GR2  |
| Q211    | 8-729-194-57 | TRANSISTOR 2SC945      |
| Q213    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q218    | 8-729-102-14 | TRANSISTOR 2SD1021     |
| Q501    | 8-729-167-62 | TRANSISTOR 2SC2676     |
| Q502    | 8-729-113-82 | TRANSISTOR 2SA1138     |
| Q503    | 8-729-167-62 | TRANSISTOR 2SC2676     |
| Q504    | 8-729-113-82 | TRANSISTOR 2SA1138     |
| Q505    | 8-729-107-53 | TRANSISTOR 2SC2275A    |
| Q506    | 8-729-190-53 | TRANSISTOR 2SA985A     |
| Q507    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q508    | 8-729-900-63 | TRANSISTOR DTA124ES    |
| Q509    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q510    | 8-729-230-45 | TRANSISTOR 2SC2458-YGR |
| Q511    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q512    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q513    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q514    | 8-729-230-45 | TRANSISTOR 2SC2458-YGR |
| Q515    | 8-729-900-61 | TRANSISTOR DTA114ES    |
| Q516    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q517    | 8-729-141-30 | TRANSISTOR 2SC3623A-LK |
| Q519    | 8-729-900-63 | TRANSISTOR DTA124ES    |
| Q521    | 8-729-281-53 | TRANSISTOR 2SC1815-GR  |
| Q522    | 8-729-201-53 | TRANSISTOR 2SA1015-GR  |
| Q523    | 8-729-900-63 | TRANSISTOR DTA124ES    |
| Q524    | 8-729-201-56 | TRANSISTOR 2SK246-GR2  |
| Q525    | 8-729-201-56 | TRANSISTOR 2SK246-GR2  |
| Q526    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q527    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q528    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q529    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q530    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q531    | 8-729-900-63 | TRANSISTOR DTA124ES    |
| Q532    | 8-729-281-53 | TRANSISTOR 2SC1815-GR  |
| Q533    | 8-729-900-63 | TRANSISTOR DTA124ES    |
| Q535    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q536    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q537    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q539    | 8-729-900-36 | TRANSISTOR DTC124ES    |
| Q540    | 8-729-900-65 | TRANSISTOR DTA144ES    |
| Q541    | 8-729-900-65 | TRANSISTOR DTA144ES    |
| Q542    | 8-729-900-65 | TRANSISTOR DTA144ES    |
| Q543    | 8-729-900-65 | TRANSISTOR DTA144ES    |
| Q544    | 8-729-900-61 | TRANSISTOR DTA114ES    |
| Q545    | 8-729-900-61 | TRANSISTOR DTA114ES    |
| Q546    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q547    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q548    | 8-729-900-89 | TRANSISTOR DTC144ES    |
| Q549    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |
| Q551    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |

| Ref.No. | Part No.     | Description            |      |    |      |
|---------|--------------|------------------------|------|----|------|
| Q552    | 8-729-900-80 | TRANSISTOR DTC114ES    |      |    |      |
| Q553    | 8-729-900-80 | TRANSISTOR DTC114ES    |      |    |      |
| Q554    | 8-729-900-80 | TRANSISTOR DTC114ES    |      |    |      |
| Q555    | 8-729-230-45 | TRANSISTOR 2SC2458-YGR |      |    |      |
| Q556    | 8-729-230-45 | TRANSISTOR 2SC2458-YGR |      |    |      |
| Q557    | 8-729-230-45 | TRANSISTOR 2SC2458-YGR |      |    |      |
| Q701    | 8-729-141-03 | TRANSISTOR 2SA733-QP   |      |    |      |
| Q702    | 8-729-920-97 | TRANSISTOR 2SB1187-EF  |      |    |      |
| Q703    | 8-729-194-57 | TRANSISTOR 2SC945-P    |      |    |      |
| Q704    | 8-729-194-57 | TRANSISTOR 2SC945-P    |      |    |      |
| Q707    | 8-729-920-98 | TRANSISTOR 2SD1761-EF  |      |    |      |
| Q709    | 8-729-141-03 | TRANSISTOR 2SA733-QP   |      |    |      |
| Q709    | 8-729-141-03 | TRANSISTOR 2SA733-QP   |      |    |      |
| Q801    | 8-729-900-61 | TRANSISTOR DTA114ES    |      |    |      |
| Q802    | 8-729-900-61 | TRANSISTOR DTA114ES    |      |    |      |
| Q803    | 8-729-900-61 | TRANSISTOR DTA114ES    |      |    |      |
| Q804    | 8-729-900-61 | TRANSISTOR DTA114ES    |      |    |      |
| Q805    | 8-729-194-57 | TRANSISTOR 2SC945-P    |      |    |      |
| Q806    | 8-729-141-03 | TRANSISTOR 2SA733-QP   |      |    |      |
| Q807    | 8-729-194-57 | TRANSISTOR 2SC945-P    |      |    |      |
| Q808    | 8-729-194-57 | TRANSISTOR 2SC945-P    |      |    |      |
| Q809    | 8-729-900-65 | TRANSISTOR DTA144ES    |      |    |      |
| Q810    | 8-729-900-65 | TRANSISTOR DTA144ES    |      |    |      |
| Q811    | 8-729-900-65 | TRANSISTOR DTA144ES    |      |    |      |
| Q812    | 8-729-900-65 | TRANSISTOR DTA144ES    |      |    |      |
| Q813    | 8-729-900-65 | TRANSISTOR DTA144ES    |      |    |      |
| R101    | 1-249-844-11 | CARBON                 | 56K  | 5% | 1/2W |
| R102    | 1-247-128-00 | CARBON                 | 750  | 5% | 1/4W |
| R103    | 1-247-128-00 | CARBON                 | 750  | 5% | 1/4W |
| R104    | 1-247-700-11 | CARBON                 | 100  | 5% | 1/4W |
| R105    | 1-247-708-11 | CARBON                 | 470  | 5% | 1/4W |
| R106    | 1-249-518-11 | CARBON                 | 39   | 5% | 1/4W |
| R107    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |
| R108    | 1-247-721-11 | CARBON                 | 4.7K | 5% | 1/4W |
| R109    | 1-247-704-11 | CARBON                 | 220  | 5% | 1/4W |
| R110    | 1-249-723-11 | CARBON                 | 120K | 5% | 1/2W |
| R111    | 1-247-749-11 | CARBON                 | 560  | 5% | 1/2W |
| R112    | 1-247-764-11 | CARBON                 | 10K  | 5% | 1/2W |
| R113    | 1-247-146-00 | CARBON                 | 4.3K | 5% | 1/4W |
| R114    | 1-247-142-00 | CARBON                 | 3K   | 5% | 1/4W |
| R115    | 1-246-545-00 | CARBON                 | 1M   | 5% | 1/4W |
| R116    | 1-247-710-11 | CARBON                 | 560  | 5% | 1/4W |
| R117    | 1-249-462-11 | CARBON                 | 22K  | 5% | 1/4W |
| R118    | 1-247-152-00 | CARBON                 | 7.5K | 5% | 1/4W |
| R119    | 1-247-711-11 | CARBON                 | 680  | 5% | 1/4W |
| R120    | 1-247-154-00 | CARBON                 | 9.1K | 5% | 1/4W |
| R121    | 1-249-465-11 | CARBON                 | 47K  | 5% | 1/4W |
| R122    | 1-249-586-11 | CARBON                 | 27K  | 5% | 1/4W |
| R123    | 1-247-152-00 | CARBON                 | 8.2K | 5% | 1/4W |
| R124    | 1-249-469-11 | CARBON                 | 100K | 5% | 1/4W |
| R125    | 1-247-723-11 | CARBON                 | 6.8K | 5% | 1/4W |
| R126    | 1-247-720-11 | CARBON                 | 3.9K | 5% | 1/4W |
| R127    | 1-247-719-11 | CARBON                 | 3.3K | 5% | 1/4W |

| Ref.No. | Part No.     | Description |      |    |      |
|---------|--------------|-------------|------|----|------|
| R128    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |
| R129    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R130    | 1-247-747-11 | CARBON      | 470  | 5% | 1/2W |
| R131    | 1-247-764-11 | CARBON      | 10K  | 5% | 1/2W |
| R132    | 1-247-146-00 | CARBON      | 4.3K | 5% | 1/4W |
| R133    | 1-247-142-00 | CARBON      | 3K   | 5% | 1/4W |
| R134    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |
| R135    | 1-247-710-11 | CARBON      | 560  | 5% | 1/4W |
| R136    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |
| R137    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |
| R138    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |
| R139    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |
| R140    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R141    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R142    | 1-247-152-00 | CARBON      | 8.2K | 5% | 1/4W |
| R143    | 1-247-725-11 | CARBON      | 10K  | 5% | 1/4W |
| R144    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |
| R145    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R146    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |
| R147    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |
| R148    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |
| R149    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |
| R150    | 1-249-590-11 | CARBON      | 39K  | 5% | 1/4W |
| R151    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R152    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R153    | 1-247-716-11 | CARBON      | 1.9K | 5% | 1/4W |
| R154    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R155    | 1-249-598-11 | CARBON      | 82K  | 5% | 1/4W |
| R156    | 1-249-467-11 | CARBON      | 43K  | 5% | 1/4W |
| R157    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R158    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |
| R159    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R160    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |
| R161    | 1-247-142-00 | CARBON      | 3K   | 5% | 1/4W |
| R162    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R163    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R164    | 1-247-700-11 | CARBON      | 100  | 5% | 1/4W |
| R165    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |
| R166    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |
| R167    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R168    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |
| R169    | 1-247-714-11 | CARBON      | 1.2K | 5% | 1/4W |
| R170    | 1-247-714-11 | CARBON      | 1.2K | 5% | 1/4W |
| R171    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |
| R172    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |
| R173    | 1-249-461-11 | CARBON      | 18K  | 5% | 1/4W |
| R174    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |
| R175    | 1-247-704-11 | CARBON      | 220  | 5% | 1/4W |
| R176    | 1-247-710-11 | CARBON      | 560  | 5% | 1/4W |
| R177    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |
| R178    | 1-249-397-11 | CARBON      | 22   | 5% | 1/4W |
| R179    | 1-247-883-00 | CARBON      | 150K | 5% | 1/4W |
| R180    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R181    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |
| R182    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/4W |
| R183    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |
| R184    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |

| Ref.No. | Part No.     | Description |      |    |      |  |
|---------|--------------|-------------|------|----|------|--|
| R185    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R187    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R188    | 1-247-740-11 | CARBON      | 120  | 5% | 1/2W |  |
| R189    | 1-247-255-00 | CARBON      | 4.3K | 5% | 1/2W |  |
| R190    | 1-249-658-11 | CARBON      | 240  | 5% | 1/2W |  |
| R191    | 1-214-851-00 | CARBON      | 300  | 5% | 1/2W |  |
| R192    | 1-247-764-11 | CARBON      | 10K  | 5% | 1/2W |  |
| R193    | 1-247-720-11 | CARBON      | 3.9K | 5% | 1/4W |  |
| R194    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R195    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R196    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R197    | 1-247-146-00 | CARBON      | 4.3K | 5% | 1/4W |  |
| R198    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R199    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R201    | 1-249-844-11 | CARBON      | 56K  | 5% | 1/2W |  |
| R202    | 1-247-128-00 | CARBON      | 750  | 5% | 1/4W |  |
| R203    | 1-247-128-00 | CARBON      | 750  | 5% | 1/4W |  |
| R204    | 1-247-700-11 | CARBON      | 100  | 5% | 1/4W |  |
| R205    | 1-247-708-11 | CARBON      | 470  | 5% | 1/4W |  |
| R206    | 1-249-518-11 | CARBON      | 39   | 5% | 1/4W |  |
| R207    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R208    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R209    | 1-247-704-11 | CARBON      | 220  | 5% | 1/4W |  |
| R210    | 1-249-723-11 | CARBON      | 120K | 5% | 1/2W |  |
| R211    | 1-247-749-11 | CARBON      | 560  | 5% | 1/2W |  |
| R212    | 1-247-764-11 | CARBON      | 10K  | 5% | 1/2W |  |
| R213    | 1-247-146-00 | CARBON      | 4.3K | 5% | 1/4W |  |
| R214    | 1-247-142-00 | CARBON      | 3K   | 5% | 1/4W |  |
| R215    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R216    | 1-247-710-11 | CARBON      | 560  | 5% | 1/4W |  |
| R217    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R218    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |  |
| R219    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |  |
| R220    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |  |
| R221    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |  |
| R222    | 1-249-586-11 | CARBON      | 27K  | 5% | 1/4W |  |
| R223    | 1-247-152-00 | CARBON      | 8.2K | 5% | 1/4W |  |
| R224    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |  |
| R225    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |  |
| R226    | 1-247-720-11 | CARBON      | 3.9K | 5% | 1/4W |  |
| R227    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R228    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |  |
| R229    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |  |
| R230    | 1-247-747-11 | CARBON      | 470  | 5% | 1/2W |  |
| R231    | 1-247-764-11 | CARBON      | 10K  | 5% | 1/2W |  |
| R232    | 1-247-146-00 | CARBON      | 4.3K | 5% | 1/4W |  |
| R233    | 1-247-142-00 | CARBON      | 3K   | 5% | 1/4W |  |
| R234    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R235    | 1-247-710-11 | CARBON      | 560  | 5% | 1/4W |  |
| R236    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R237    | 1-247-152-00 | CARBON      | 7.5K | 5% | 1/4W |  |
| R238    | 1-247-711-11 | CARBON      | 680  | 5% | 1/4W |  |
| R239    | 1-247-154-00 | CARBON      | 9.1K | 5% | 1/4W |  |
| R240    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |  |
| R241    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R242    | 1-247-152-00 | CARBON      | 8.2K | 5% | 1/4W |  |
| R243    | 1-247-725-11 | CARBON      | 10K  | 5% | 1/4W |  |

| Ref.No. | Part No.     | Description |      |    |      |  |
|---------|--------------|-------------|------|----|------|--|
| R244    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R245    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R246    | 1-246-545-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R247    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R248    | 1-247-723-11 | CARBON      | 6.8K | 5% | 1/4W |  |
| R249    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R250    | 1-249-590-11 | CARBON      | 39K  | 5% | 1/4W |  |
| R251    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R252    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |  |
| R253    | 1-247-716-11 | CARBON      | 1.8K | 5% | 1/4W |  |
| R254    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R255    | 1-249-598-11 | CARBON      | 82K  | 5% | 1/4W |  |
| R256    | 1-259-467-11 | CARBON      | 43K  | 5% | 1/4W |  |
| R257    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |  |
| R258    | 1-249-459-11 | CARBON      | 12K  | 5% | 1/4W |  |
| R259    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R260    | 1-247-701-11 | CARBON      | 120  | 5% | 1/4W |  |
| R261    | 1-247-142-00 | CARBON      | 3K   | 5% | 1/4W |  |
| R262    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R263    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R264    | 1-247-700-11 | CARBON      | 100  | 5% | 1/4W |  |
| R265    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R266    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R267    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R268    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R269    | 1-247-714-11 | CARBON      | 1.2K | 5% | 1/4W |  |
| R270    | 1-247-714-11 | CARBON      | 1.2K | 5% | 1/4W |  |
| R271    | 1-249-465-11 | CARBON      | 47K  | 5% | 1/4W |  |
| R272    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R273    | 1-249-461-11 | CARBON      | 18K  | 5% | 1/4W |  |
| R274    | 1-249-469-11 | CARBON      | 100K | 5% | 1/4W |  |
| R275    | 1-247-704-11 | CARBON      | 220  | 5% | 1/4W |  |
| R276    | 1-247-710-11 | CARBON      | 560  | 5% | 1/4W |  |
| R277    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |  |
| R278    | 1-249-397-11 | CARBON      | 22   | 5% | 1/4W |  |
| R279    | 1-247-883-00 | CARBON      | 150K | 5% | 1/4W |  |
| R280    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R281    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  |
| R282    | 1-249-437-11 | CARBON      | 47K  | 5% | 1/4W |  |
| R283    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  |
| R284    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R285    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R287    | 1-249-462-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R288    | 1-247-740-11 | CARBON      | 120  | 5% | 1/2W |  |
| R289    | 1-247-255-00 | CARBON      | 4.3K | 5% | 1/2W |  |
| R290    | 1-249-658-11 | CARBON      | 240  | 5% | 1/2W |  |
| R291    | 1-214-851-00 | CARBON      | 300  | 5% | 1/2W |  |
| R292    | 1-247-764-11 | CARBON      | 10K  | 5% | 1/2W |  |
| R293    | 1-247-720-11 | CARBON      | 3.9K | 5% | 1/4W |  |
| R294    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R295    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R296    | 1-247-721-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R297    | 1-247-146-00 | CARBON      | 4.3K | 5% | 1/4W |  |
| R298    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R299    | 1-247-718-11 | CARBON      | 2.7K | 5% | 1/4W |  |
| R301    | 1-247-719-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R302    | 1-249-926-11 | CARBON      | 1.3K | 5% | 1/4W |  |



| Ref.No. | Part No.       | Description |      |    |      |
|---------|----------------|-------------|------|----|------|
| R602    | 1-249-405-11   | CARBON      | 100  | 5% | 1/4W |
| R603    | 1-249-405-11   | CARBON      | 100  | 5% | 1/4W |
| R604    | 1-249-405-11   | CARBON      | 100  | 5% | 1/4W |
| R605    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R606    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R607    | 1-249-410-11   | CARBON      | 270  | 5% | 1/4W |
| R608    | 1-249-410-11   | CARBON      | 270  | 5% | 1/4W |
| R609    | 1-249-405-11   | CARBON      | 100  | 5% | 1/4W |
| R611    | 1-249-547-11   | CARBON      | 620  | 5% | 1/4W |
| R613    | 1-249-547-11   | CARBON      | 620  | 5% | 1/4W |
| R614    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R615    | 1-249-414-11   | CARBON      | 560  | 5% | 1/4W |
| R616    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R617    | 1-249-433-11   | CARBON      | 22K  | 5% | 1/4W |
| R618    | 1-247-842-11   | CARBON      | 3K   | 5% | 1/4W |
| R619    | 1-247-812-11   | CARBON      | 160  | 5% | 1/4W |
| R620    | 1-249-414-11   | CARBON      | 560  | 5% | 1/4W |
| R621    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R622    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R623    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R624    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R625    | 1-249-433-11   | CARBON      | 22K  | 5% | 1/4W |
| R626    | 1-249-424-11   | CARBON      | 3.9K | 5% | 1/4W |
| R627    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R628    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R629    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R630    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R701    | 1-247-752-11   | CARBON      | 1K   | 5% | 1/2W |
| R702    | △ 1-212-863-00 | FUSIBLE     | 18   | 5% | 1/4W |
| R703    | 1-249-397-11   | CARBON      | 22   | 5% | 1/4W |
| R704    | 1-249-397-11   | CARBON      | 22   | 5% | 1/4W |
| R705    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R706    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R707    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R708    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R709    | 1-249-422-11   | CARBON      | 2.7K | 5% | 1/4W |
| R710    | 1-249-427-11   | CARBON      | 6.8K | 5% | 1/4W |
| R711    | 1-249-412-11   | CARBON      | 390  | 5% | 1/4W |
| R712    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R713    | 1-247-856-00   | CARBON      | 11K  | 5% | 1/4W |
| R714    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R715    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R716    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R717    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R719    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R720    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R722    | 1-249-421-11   | CARBON      | 2.2K | 5% | 1/4W |
| R801    | 1-249-422-11   | CARBON      | 2.7K | 5% | 1/4W |
| R802    | 1-249-424-11   | CARBON      | 3.9K | 5% | 1/4W |
| R803    | 1-249-422-11   | CARBON      | 2.7K | 5% | 1/4W |
| R804    | 1-249-424-11   | CARBON      | 3.9K | 5% | 1/4W |
| R805    | 1-249-428-11   | CARBON      | 8.2K | 5% | 1/4W |
| R806    | 1-249-434-11   | CARBON      | 27K  | 5% | 1/4W |
| R807    | 1-249-422-11   | CARBON      | 2.7K | 5% | 1/4W |
| R808    | 1-249-424-11   | CARBON      | 3.9K | 5% | 1/4W |
| R809    | 1-249-428-11   | CARBON      | 8.2K | 5% | 1/4W |
| R810    | 1-249-434-11   | CARBON      | 27K  | 5% | 1/4W |
| R811    | 1-249-412-11   | CARBON      | 390  | 5% | 1/4W |

| Ref.No. | Part No.     | Description |      |    |      |
|---------|--------------|-------------|------|----|------|
| R812    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |
| R813    | 1-249-410-11 | CARBON      | 270  | 5% | 1/4W |
| R814    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R815    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R816    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R817    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R818    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R819    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R820    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R821    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R822    | 1-247-903-00 | CARBON      | 1M   | 5% | 1/4W |
| R823    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R824    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/4W |
| R825    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |
| R826    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R827    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R828    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R829    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R830    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R831    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R832    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R833    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R834    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R835    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R836    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R837    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R838    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R839    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R840    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R841    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R842    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R843    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |
| R844    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |
| R845    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |
| R846    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |
| R847    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |
| R849    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |
| R850    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |
| R852    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R853    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R854    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R855    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R856    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |
| R857    | 1-249-436-11 | CARBON      | 39K  | 5% | 1/4W |
| R858    | 1-247-891-00 | CARBON      | 330K | 5% | 1/4W |
| R859    | 1-249-436-11 | CARBON      | 39K  | 5% | 1/4W |
| R860    | 1-247-891-00 | CARBON      | 330K | 5% | 1/4W |
| R861    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R862    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R863    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R864    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R865    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R866    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R867    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R868    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R869    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |
| R870    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |

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

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

| Ref.No. | Part No.      | Description                                   |
|---------|---------------|-----------------------------------------------|
| R871    | 1-249-429-11  | CARBON 10K 5% 1/4W                            |
| R872    | 1-249-429-11  | CARBON 10K 5% 1/4W                            |
| R873    | 1-249-426-11  | CARBON 5.6K 5% 1/4W                           |
| R874    | 1-249-426-11  | CARBON 5.6K 5% 1/4W                           |
| R875    | 1-249-429-11  | CARBON 10K 5% 1/4W                            |
| R876    | 1-249-429-11  | CARBON 10K 5% 1/4W                            |
| R877    | 1-249-429-11  | CARBON 10K 5% 1/4W                            |
| R907    | 1-216-242-00  | METAL GLAZE 68K 5% 1/8W                       |
| R908    | 1-216-246-00  | METAL GLAZE 100K 5% 1/8W                      |
| R909    | 1-216-246-00  | METAL GLAZE 100K 5% 1/8W                      |
| R910    | 1-216-238-00  | 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                        |
| R951    | 1-249-413-11  | CARBON 470 5% 1/4W                            |
| R952    | 1-249-413-11  | CARBON 470 5% 1/4W                            |
| 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                             |
| R957    | 1-249-417-11  | CARBON 1K 5% 1/4W                             |
| 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                           |
| R1001   | 1-249-408-11  | CARBON 180 5% 1/4W                            |
| R1002   | 1-249-408-11  | CARBON 180 5% 1/4W                            |
| R1051   | 1-249-412-11  | CARBON 390 5% 1/4W                            |
| RV101   | 1-224-550-21  | RES, ADJ, METAL GLAZE 220(PB LEVEL ADJ)       |
| RV102   | 1-224-251-XX  | RES, ADJ, METAL GLAZE 4.7K<br>(REC LEVEL ADJ) |
| RV103   | 1-237-459-11  | RES, ADJ, CARBON 10K (METER ADJ)              |
| RV104   | 1-237-459-11  | RES, ADJ, CARBON 10K (CAL METER ADJ)          |
| RV105   | 1-237-459-11  | RES, ADJ, CARBON 10K (CrO2 BIAS ADJ)          |
| RV108   | 1-237-456-11  | RES, ADJ, CARBON 1K (OA ADJ)                  |
| RV201   | 1-224-550-21  | RES, ADJ, METAL GLAZE 220(PB LEVEL ADJ)       |
| RV202   | 1-224-251-XX  | RES, ADJ, METAL GLAZE 4.7K<br>(REC LEVEL ADJ) |
| RV203   | 1-237-459-11  | RES, ADJ, CARBON 10K (METER ADJ)              |
| RV204   | 1-237-459-11  | RES, ADJ, CARBON 10K (CAL METER ADJ)          |
| RV205   | 1-237-459-11  | RES, ADJ, CARBON 10K (CrO2 BIAS ADJ)          |
| RV208   | 1-237-456-11  | RES, ADJ, CARBON 1K (OA ADJ)                  |
| RV501   | 1-230-344-11  | RES, VAR, CARBON 20K/20K (REC LEVEL)          |
| RV502   | 1-238-840-11  | RES, VAR, CARBON 5K/5K (CAL/REC LEVEL)        |
| RV503   | 1-238-841-11  | RES, VAR, CARBON 20K/20K (PHONE LEVEL)        |
| RV504   | 1-238-839-11  | RES, VAR, CARBON 5K (BIAS)                    |
| RV507   | 1-237-873-11  | RES, ADJ, CARBON 100 (CAL ADJ)                |
| RV508   | 1-237-873-11  | RES, ADJ, CARBON 100 (CAL ADJ)                |
| RV509   | 1-237-456-11  | RES, ADJ, CARBON 1K (NORMAL BIAS ADJ)         |
| RV510   | 1-237-459-11  | RES, ADJ, CARBON 10K (METEL BIAS ADJ)         |
| RV801   | 1-237-457-21  | RES, ADJ, CARBON 2K (TORQUE ADJ)              |
| RY501   | 1-515-614-11  | RELAY                                         |
| S001    | △1-554-920-11 | SWITCH, PUSH (AC POWER)(1 KEY)                |
| S002    | △1-570-307-11 | (E)...SWITCH, VOLTAGE CHANGE                  |
| S501    | 1-572-163-11  | SWITCH, ROTARY (MONITOR)                      |
| S502    | 1-572-162-11  | SWITCH, ROTARY (DOLBY NR)                     |
| S503    | 1-572-164-11  | SWITCH, ROTARY (REC EQ CAL)                   |

| Ref.No. | Part No.      | Description                        |
|---------|---------------|------------------------------------|
| S504    | 1-572-165-11  | SWITCH, PUSH (1 KEY)(HX PRO)       |
| S505    | 1-554-833-11  | SWITCH, PUSH (1 KEY)(CALIBRATION)  |
| S506    | 1-572-163-11  | SWITCH, ROTARY (INPUT)             |
| S801    | 1-554-303-21  | SWITCH, KEY BOARD (RESET)          |
| S802    | 1-554-303-21  | SWITCH, KEY BOARD (MEMORY)         |
| S803    | 1-554-303-21  | SWITCH, KEY BOARD (DISPLAY MODE)   |
| S804    | 1-554-303-21  | SWITCH, KEY BOARD (▲)              |
| S805    | 1-554-303-21  | SWITCH, KEY BOARD (STOP)           |
| S806    | 1-554-303-21  | SWITCH, KEY BOARD (▶▶)             |
| S807    | 1-554-303-21  | SWITCH, KEY BOARD (▶▶)             |
| S808    | 1-554-303-21  | SWITCH, KEY BOARD (REC)            |
| S809    | 1-554-303-21  | SWITCH, KEY BOARD (▶)              |
| S810    | 1-554-303-21  | SWITCH, KEY BOARD (PAUSE)          |
| S811    | 1-554-303-21  | SWITCH, KEY BOARD (◀◀)             |
| S812    | 1-554-303-21  | SWITCH, KEY BOARD (▶▶)             |
| S813    | 1-554-303-21  | SWITCH, KEY BOARD (REC MUTE)       |
| S814    | 1-571-908-11  | SWITCH, SLIDE (TIMER)              |
| S1001   | 1-466-238-11  | ENCODER, ROTARY                    |
| S1002   | 1-570-953-11  | SWITCH, PUSH (1 KEY)(DOOR)         |
| S1003   | 1-571-958-11  | SWITCH, PUSH (1 KEY)(CLOSE)        |
| S1004   | 1-572-126-11  | SWITCH, PUSH (1 KEY)(OPEN)         |
| S1005   | 1-572-125-11  | SWITCH, LEAF (FWD)                 |
| S1006   | 1-572-202-11  | SWITCH, LEAF (HALF)                |
| S1007   | 1-572-125-11  | SWITCH, LEAF (METAL)               |
| S1008   | 1-572-125-11  | SWITCH, LEAF (70U)                 |
| T001    | △1-449-981-11 | (US,Canadian)...TRANSFORMER, POWER |
| T001    | △1-449-982-11 | (AEP,WG).....TRANSFORMER, POWER    |
| T001    | △1-449-983-11 | (UK).....TRANSFORMER, POWER        |
| T001    | △1-449-984-11 | (E).....TRANSFORMER, POWER         |
| T101    | 1-433-361-11  | TRANSFORMER, BIAS OSCILLATION      |
| T201    | 1-433-361-11  | TRANSFORMER, BIAS OSCILLATION      |
| THP501  | △1-202-856-00 | SOLID 22 1/4W F                    |
| TP1     | *1-535-115-00 | TERMINAL                           |
| TP801   | *1-564-505-11 | PLUG, CONNECTOR 2P                 |
| X801    | 1-577-358-21  | VIBRATOR, CERAMIC                  |
| X951    | 1-577-615-11  | VIBRATOR, CRYSTAL (4.934MHz)       |

#### ACCESSORY & PACKING MATERIAL

|               |                                           |
|---------------|-------------------------------------------|
| 1-465-325-11  | (UK,E)...REMOTE COMMANDER (RM-J702)       |
| 2-181-754-01  | (UK,E)...COVER, BATTERY                   |
| 1-551-734-11  | CORD, CONNECTION (RK-74A)                 |
| *3-350-465-01 | CUSHION                                   |
| *3-356-964-01 | (K333ESG)...INDIVIDUAL CARTON             |
| *3-356-966-01 | (K950ES)....INDIVIDUAL CARTON             |
| *3-703-456-01 | LABEL, AMS LICENSE                        |
| *3-703-710-41 | STICKER, SONY SYMBOL (12)                 |
| 3-751-126-11  | (Canadian,AEP,UK,E)...MANUAL, INSTRUCTION |
| 3-751-126-21  | (US).....MANUAL, INSTRUCTION              |
| 3-751-126-41  | (AEP,WG).....MANUAL, INSTRUCTION          |
| 3-703-450-01  | (US)...INSTRUCTION                        |
| 3-793-481-13  | INSTRUCTION                               |
| 4-847-802-00  | (EXCEPT UK)...SCREW (CASE)                |

**Note:**  
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